WKE Dec 13, 2022

PROJECT ID: 2410-13-70
WITH: N/A

COUNTY: MILWAUKEE

ORDER OF SHEETS

TOTAL SHEETS = 208

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

W NATIONAL AVENUE

S 62ND STREET TO S 65TH STREET

LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2410-13-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2410-13-70	WISC 2023099	1

ACCEPTED FOR
CITY of WEST ALLIS
7/22/2022 (Date)
Traci Zengler
Principal Engineer
(Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
GRAEF
WISCONSIN
STEVE L. HUBERTY 32396 WAUWATOSA, WI
PROFESSIONAL ENGINEER
7/22/22 (Date)
(Signature)

CITY OF WEST ALLIS
(STORM SEWER, SANITARY SEWER & WATER MAIN PLANS)
WISCONSIN
HEATH BROZOVICH 45339 OCONOMOWOC, WI
PROFESSIONAL ENGINEER
7/22/2022 (Date)
(Signature)

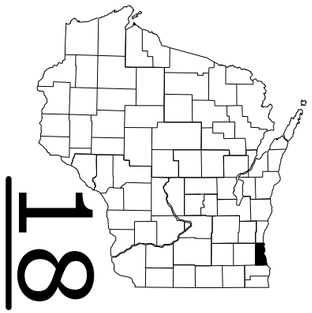
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GRAEF
Designer	GRAEF
Project Manager	MICHAEL BAIRD
Regional Examiner	
Regional Supervisor	JEFFREY BOHEN
C.O. Examiner	

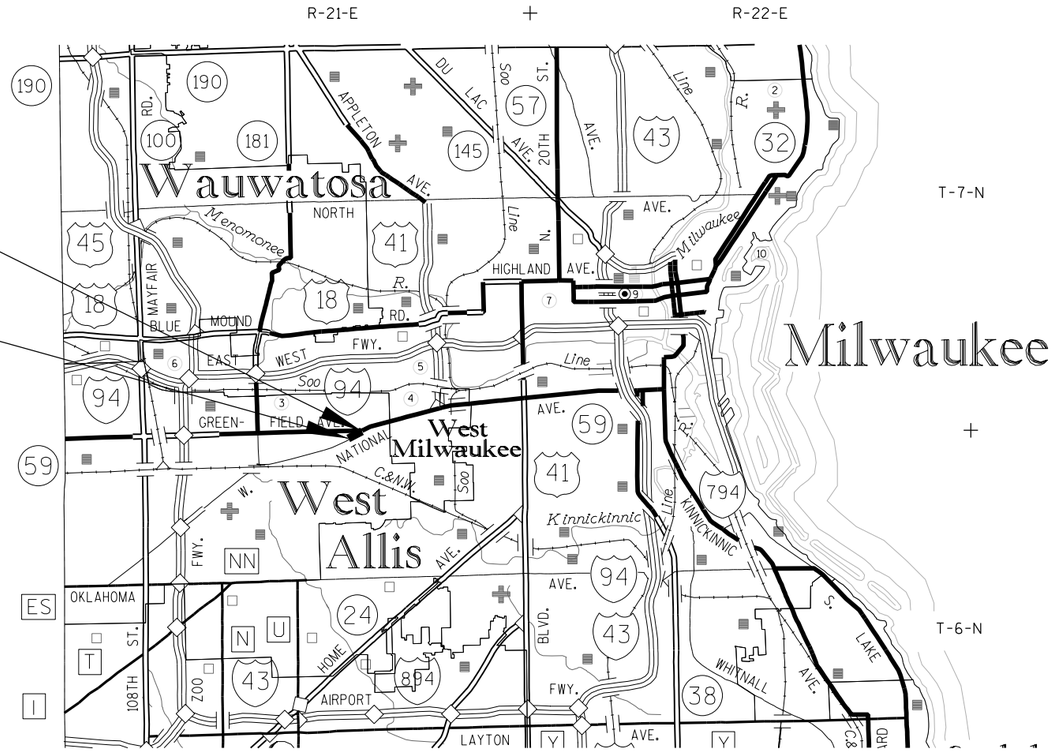
APPROVED FOR THE DEPARTMENT
DATE: 7/22/22
(Signature)

E



END PROJECT
STA. 14+94.13

BEGIN PROJECT
STA. 5+69.07
Y = 376,550.82
X = 2,536,943.85



LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.175 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), SOUTH' ZONE, NAD27, GROUND, US SURVEY FOOT

VERTICAL DATUM - CITY OF WEST ALLIS. (NGVD29 - 580.56)

DESIGN DESIGNATION

A.A.D.T. 2023	=	8,500
A.A.D.T. 2043	=	10,400
D.H.V.	=	1,040
D.D.	=	59/41
T.	=	5.9%
DESIGN SPEED	=	35 MPH
ESALS	=	1,100,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

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

GENERAL NOTES

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

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

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

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

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

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

2" DEPTH - 2" OF HMA PAVEMENT 4 LT 58-28 S AS THE UPPER LAYER

ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

ASPHALT AND CONCRETE DRIVEWAYS SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

ALL TIE OR DOWEL BARS INSERTED INTO A HOLE DRILLED IN THE EXISTING CONCRETE SHALL BE PAID FOR UNDER THE ITEM "DRILLED TIE BARS" AND "DRILLED DOWEL BARS." ALL OTHER TIE OR DOWEL BARS INCORPORATED INTO NEW POURED CONCRETE SHALL BE INCIDENTAL TO THE APPROPRIATE ITEM.

STANDARD ABBREVIATIONS

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

INDEX OF DETAIL SHEETS

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

CITY OF WEST ALLIS

TRACI GENGLER
CITY OF WEST ALLIS ENGINEERING DEPARTMENT
7525 W GREENFIELD AVENUE
WEST ALLIS, WI 53214
(414) 302-8372
TGENGLER@WESTALLISWI.GOV

DESIGN CONTACT

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GRAEF
275 W. WISCONSIN AVENUE, SUITE 300
MILWAUKEE, WI 53203
(414) 266-9090
STEVE.HUBERTY@GRAEF-USA.COM

DEPARTMENT OF NATURAL RESOURCES

KRISTINA BETZOLD
WISCONSIN DEPT. OF NATURAL RESOURCES
2300 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
(414) 507-4946
KRISTINA.BETZOLD@WISCONSIN.GOV

MILW COUNTY TRANSIT SYSTEM

DAVID LOCHER
MCTS (BUS STOPS)
1942 N. 17TH STREET
MILWAUKEE, WI 53205
(414) 343-1727
DLOCHER@MCTS.ORG

ARMOND SENSABAUGH
MCTS (DETOURS)
1942 N. 17TH STREET
MILWAUKEE, WI 53205
(414) 343-1728
ASENSABAUGH@MCTS.ORG

OTHER CONTACTS

WEST ALLIS - STREET LIGHTING
DON MOLLESON
6300 MCGOECH AVENUE
WEST ALLIS, WI 53219
(414) 302-8873; MOBILE (414) 239-4751
DMOLLESON@WESTALLIS.GOV

UTILITIES

AT&T WISCONSIN
ROBERT KOSANKE
435 S. 95TH STREET
MILWAUKEE, WI 53214
(414) 257-0206; MOBILE (414) 534-7746
RK1462@ATT.COM

CHARTER COMMUNICATIONS
NEIL LONG
1320 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
(414) 430-7189
WIS.ENGINEERING@CHARTER.COM
NEIL.LONG@CHARTER.COM

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
MICKI KLAPPA-SULLIVAN
260 W. SEEBOOTH STREET
MILWAUKEE, WI 53204
(414) 225-2178; (414) 416-5389 (MOBILE)
MKLAPPASULLIVAN@MMSD.COM

VERIZON
RJ CICATELLO
15725 WEST RYERSON ROAD
NEW BERLIN, WI 53151
(262) 232-1323
RANDY.CICATELLO@VERIZON.COM

WE ENERGIES (ELECTRIC)
SEND ALL CORRESPONDENCE TO:

WE ENERGIES UTILITY COORDINATOR
500 S. 116TH STREET
WEST ALLIS, WI 53214
(414) 221-2738
WE ENERGIES ELECTRICAL DISPATCH
1-800-662-4797
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
WE ENERGIES - ELECTRIC
ALEX DANTINNE
500 S. 116TH STREET
WEST ALLIS, WI 53214
(920) 621-6903
ALEX.DANTINNE@WE-ENERGIES.COM

WE ENERGIES (GAS OPERATIONS)
SEND ALL CORRESPONDENCE TO:

WE ENERGIES UTILITY COORDINATOR
500 S. 116TH STREET
WEST ALLIS, WI 53214
(414) 221-2738
WE ENERGIES GAS DISPATCH
1-800-261-5325
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
WE ENERGIES - GAS
ALEX DANTINNE
500 S. 116TH STREET
WEST ALLIS, WI 53214
(920) 621-6903
ALEX.DANTINNE@WE-ENERGIES.COM

WEST ALLIS - SANITARY
TIM LAST
6300 MCGOECH AVENUE
WEST ALLIS, WI 53219
(414) 302-8815
TLAST@WESTALLIS.GOV

WEST ALLIS - WATER
MIKE BROFKA
6300 MCGOECH AVENUE
WEST ALLIS, WI 53219
(414) 302-8827; MOBILE (414) 312-0459
MBROFKA@WESTALLIS.GOV

2

2

N

S. 64TH ST

S. 63RD ST

S. 62ND ST

S. 61ST ST

S. 60TH ST

W. GREENFIELD AVE

END CONSTRUCTION
STA. 14+94.13

SIX POINTS CROSSING

S. 65TH ST

W. NATIONAL AVENUE

W. ORCHARD ST

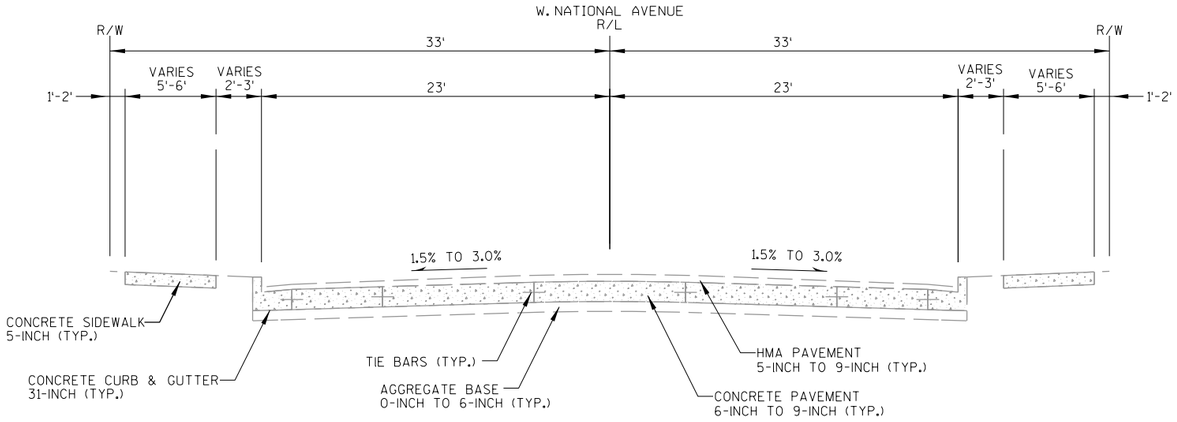
BEGIN CONSTRUCTION
STA. 5+69.07
Y = 376,550.82
X = 2,536,943.85

S. 64TH ST

S. 63RD ST

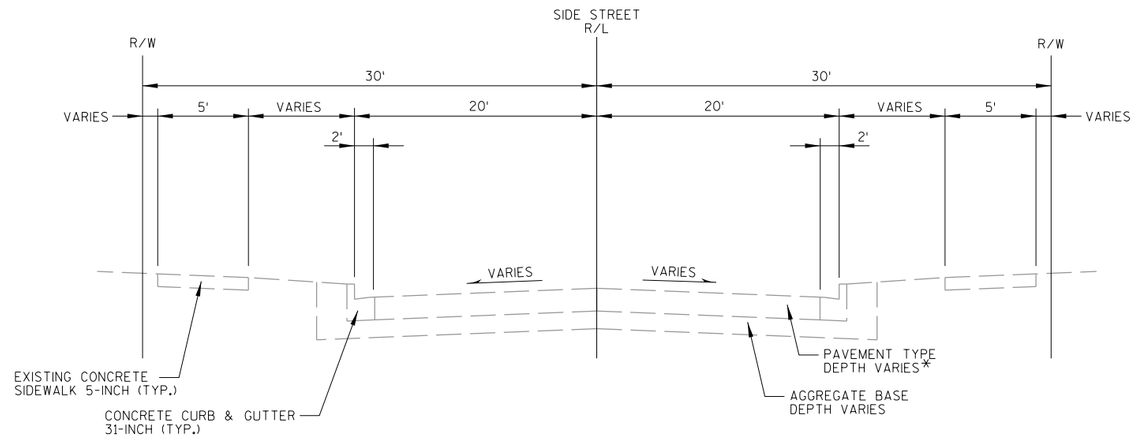
S. 62ND ST

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION

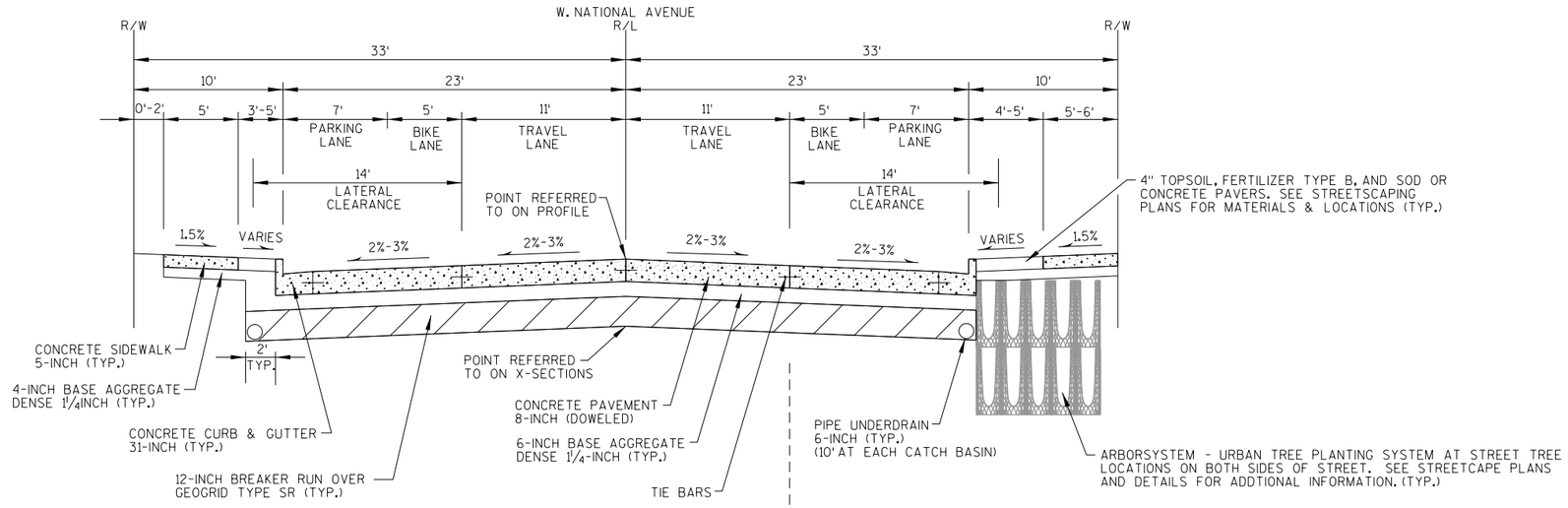
STA 5+69 TO STA 14+94



TYPICAL EXISTING SECTION
SIDEROADS

SIDE STREET	PAVEMENT TYPE *
S. 64TH STREET	ASPHALT ON CONCRETE
S. 63RD STREET	ASPHALT ON CONCRETE

2



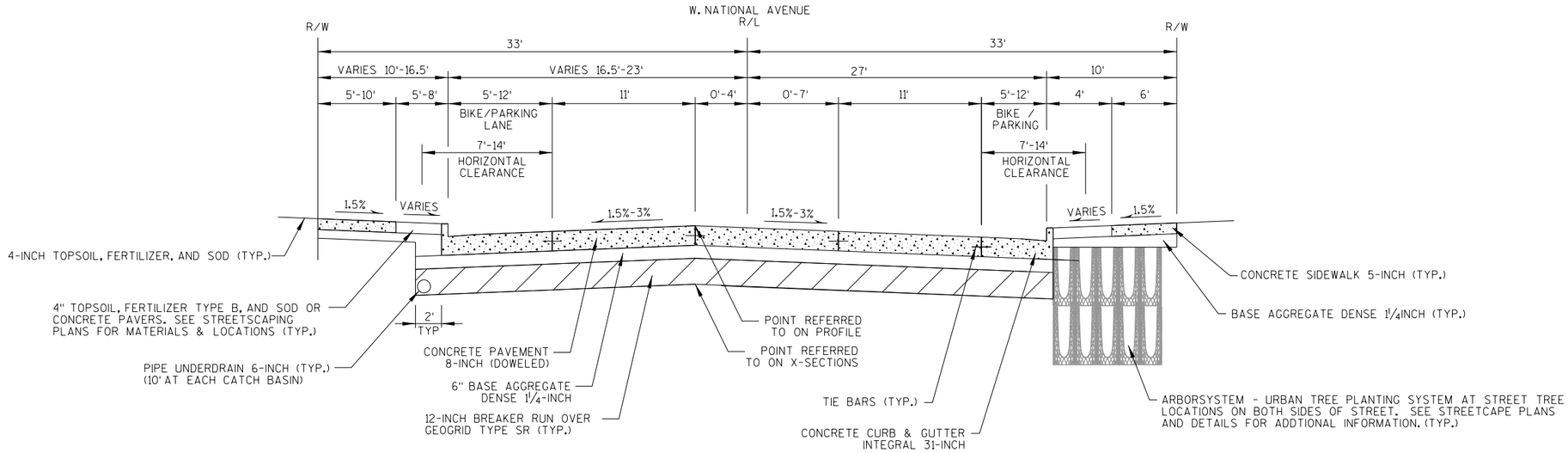
AT BUMP OUT LOCATIONS (NO PARKING)

TYPICAL FINISHED SECTION

STA 5+69 TO STA 12+78

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

2



TYPICAL FINISHED SECTION

STA 12+78 TO STA 14+94

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E

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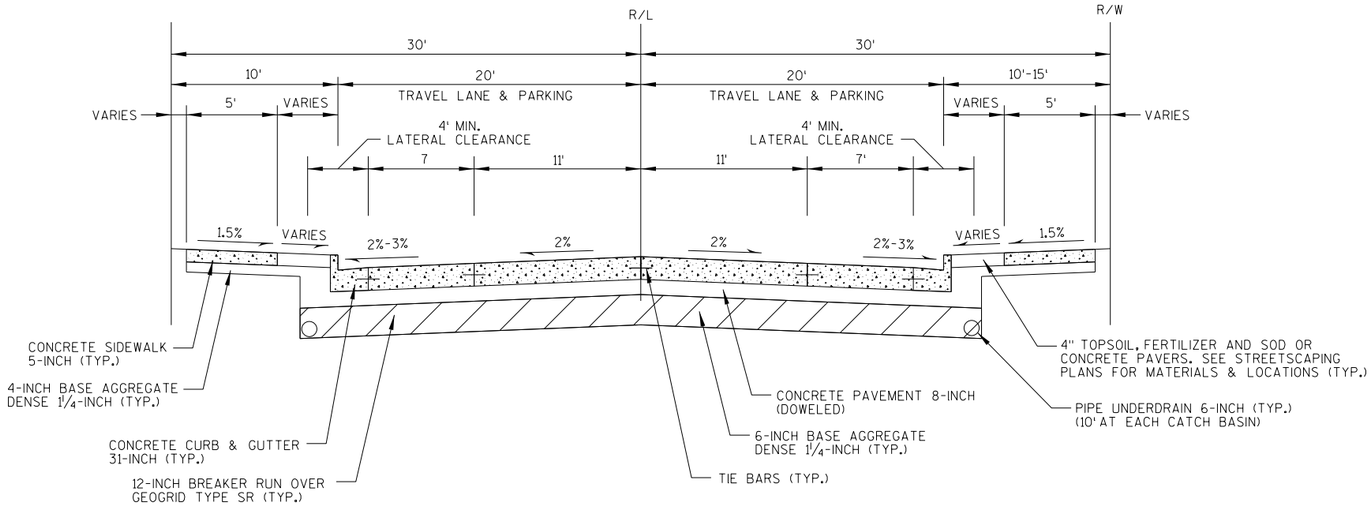
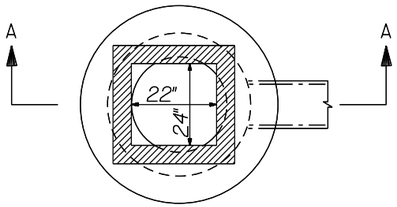
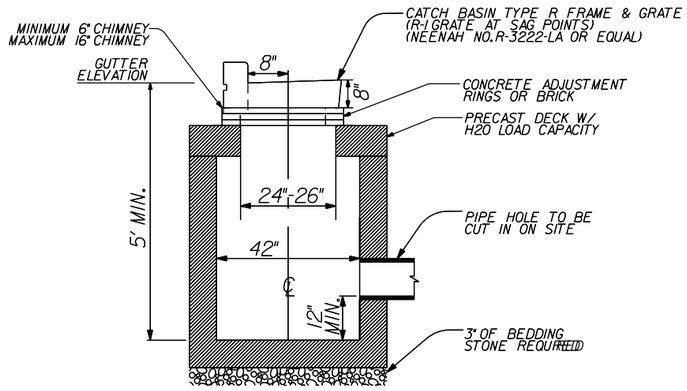


TYPICAL FINISHED SECTION SIDE ROADS

S. 64TH STREET
S. 63RD STREET



PLAN VIEW

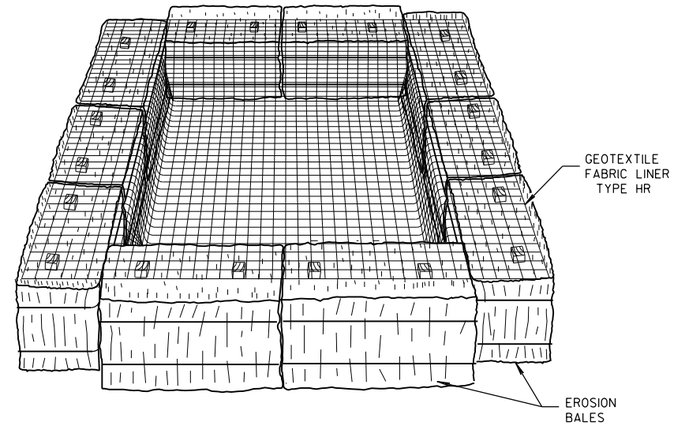


SECTION A-A

REVISED JAN.2016
CITY OF WEST ALLIS

ROAD TYPE CATCH BASIN
FIGURE V-117

CATCH BASIN, SPECIAL



TEMPORARY SETTLING BASIN

(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

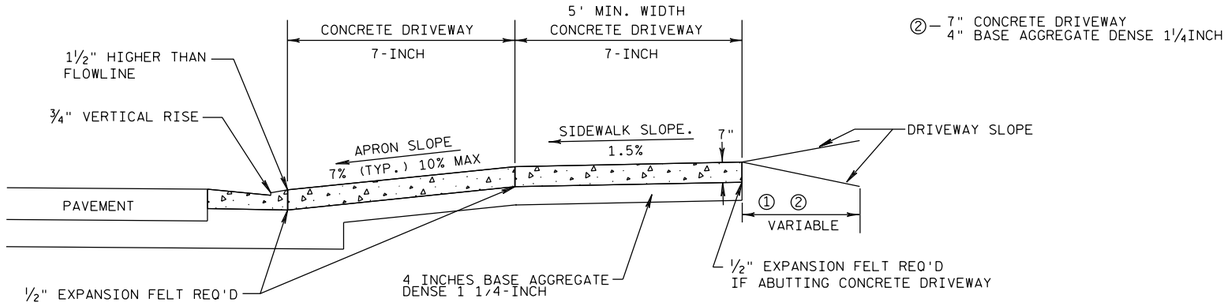
SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}}$ = 533 S.F.

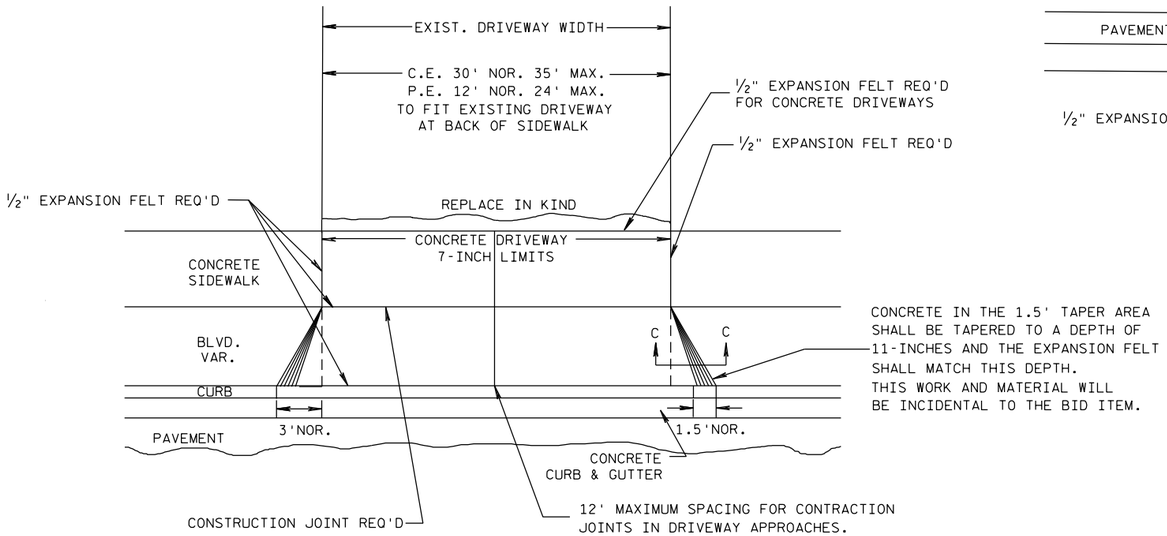
USE A 20 FT. X 27 FT. BASIN

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 8	E

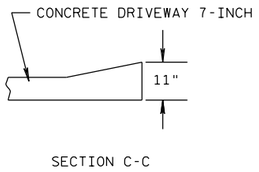
2



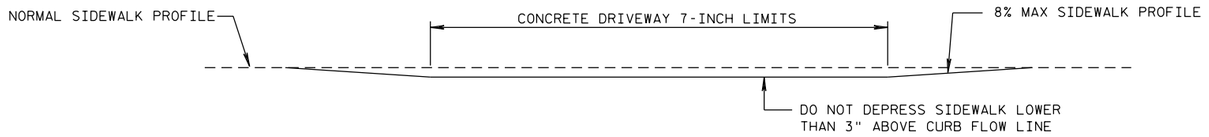
TYPICAL SIDEWALK SECTION



PLAN VIEW



SECTION C-C

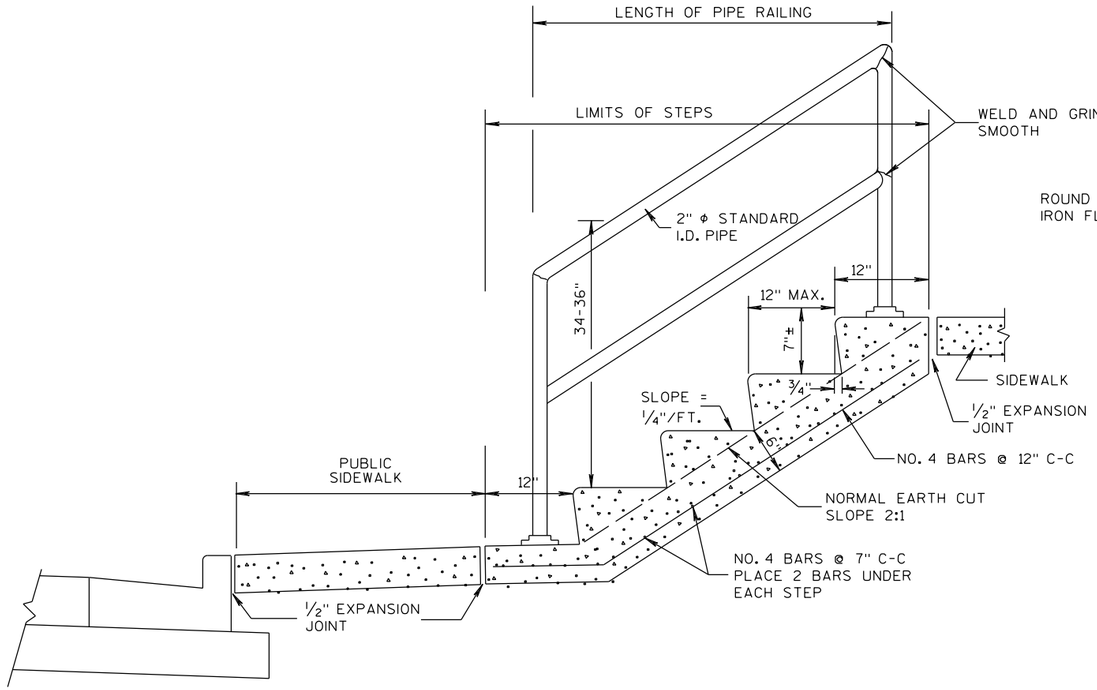


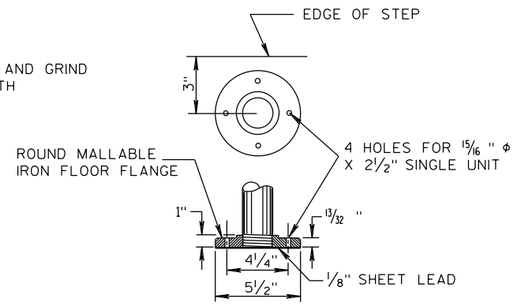
DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 9	E

2





FLANGE DETAIL

NOTE:

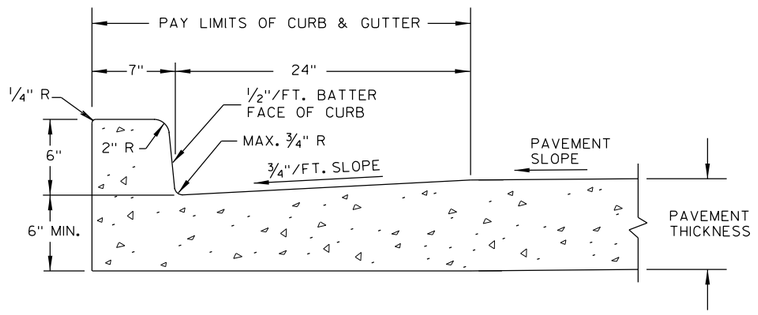
THE EXACT LOCATION, WIDTHS, & NUMBER OF STEPS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

STEEL REINFORCEMENT AND PIPE RAILING NOT REQUIRED ON STEPS WITH 2 RISERS OR LESS.

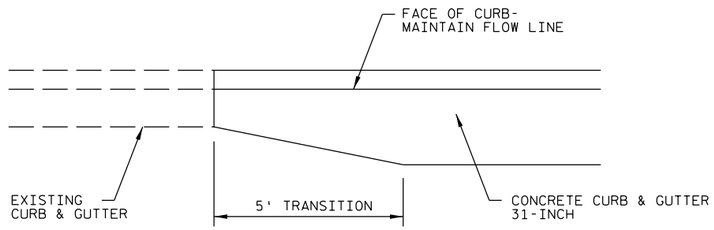
WIDTH OF STEP TO MATCH EXISTING WALK.

RAILING TO BE PLACED ON LEFT ASCENDING SIDE OF STEPS ONLY.

CONCRETE STEPS DETAIL

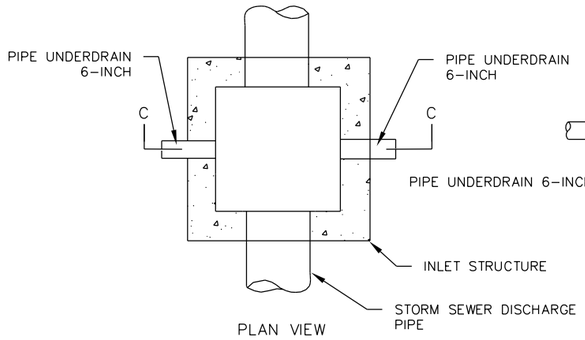


CONCRETE CURB & GUTTER INTEGRAL 31-INCH

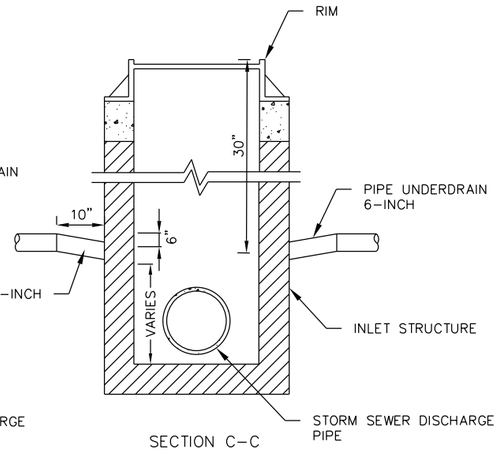


CONCRETE CURB AND GUTTER TRANSITION

(PAYMENT INCIDENTAL TO CURB AND GUTTER)



PLAN VIEW



SECTION C–C

UNDERDRAIN OUTFALL AT INLET

NOTES:

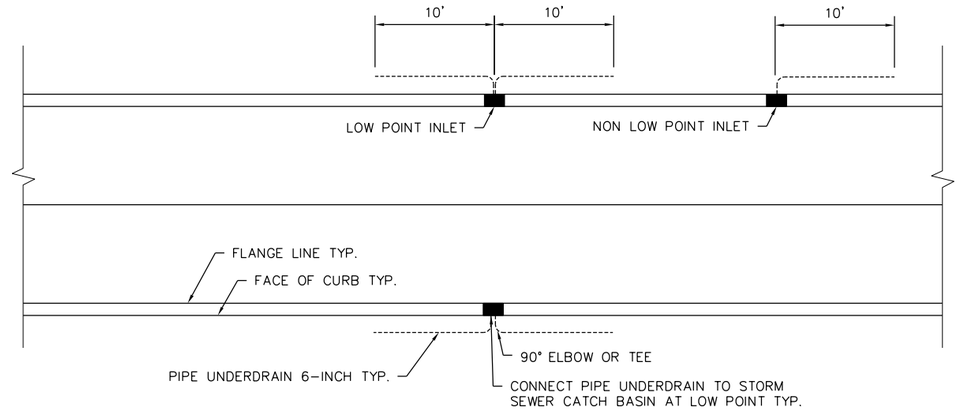
1. CONNECTIONS TO INLETS SHALL USE PIPE UNDERDRAIN, 6–INCH

2. PROVIDE 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 30" BELOW THE RIM ELEVATION. CORE INTO EXISTING INLETS TO REMAIN.

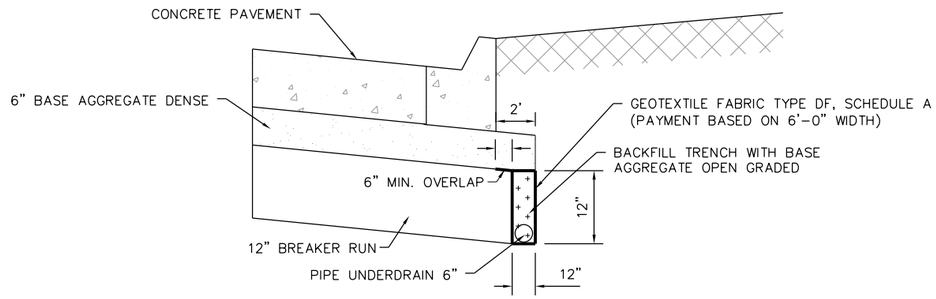
3. SEE MISCELLANEOUS QUANTITIES AND STORM SEWER PLANS FOR PIPE UNDERDRAIN LOCATIONS.

4. PIPE UNDERDRAIN ONLY REQUIRED ON HIGH SIDE OF INLET IN SLOPED CONDITION.

5. PIPE UNDERDRAIN REQUIRED ON BOTH SIDES OF INLET IN SAG CONDITION.

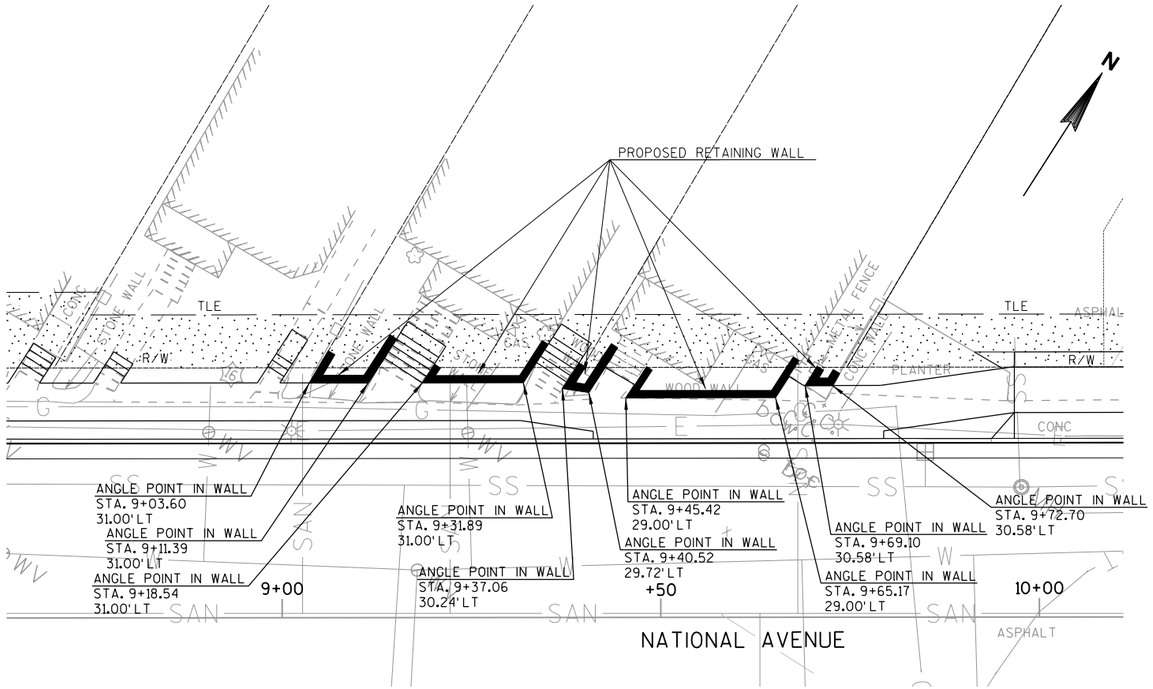


PLAN

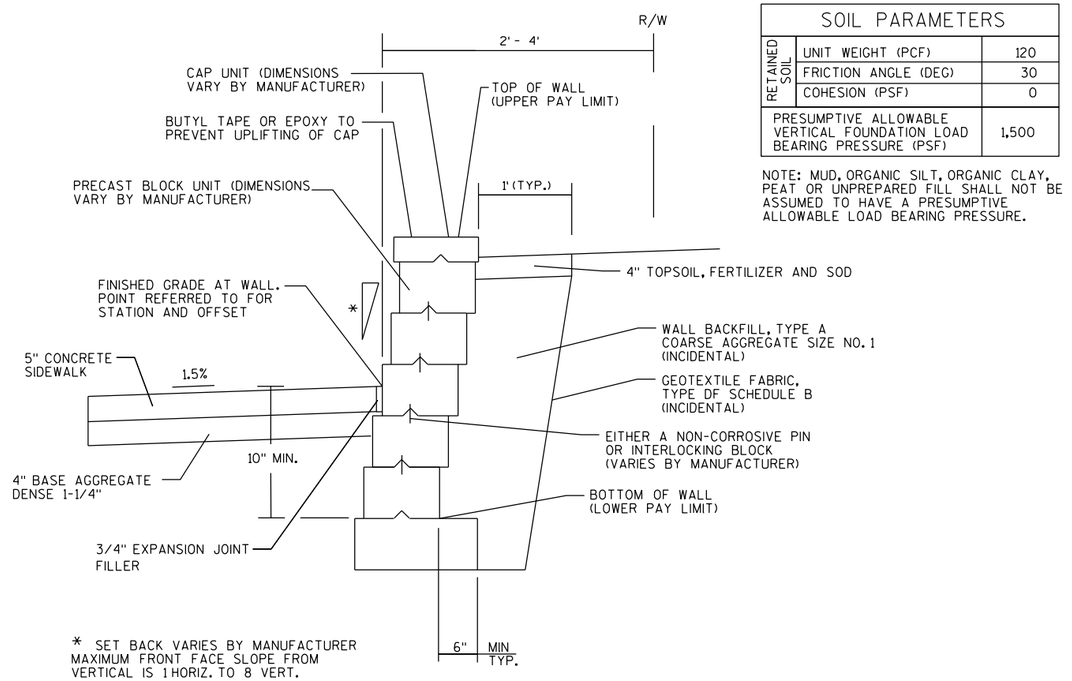


UNDERDRAIN TRENCH DETAIL

10' EACH SIDE OF INLET AT LOW POINTS.
10' ON HIGH SIDE OF INLET AT ALL OTHER INLETS
CONNECT PIPE UNDERDRAIN TO INLETS



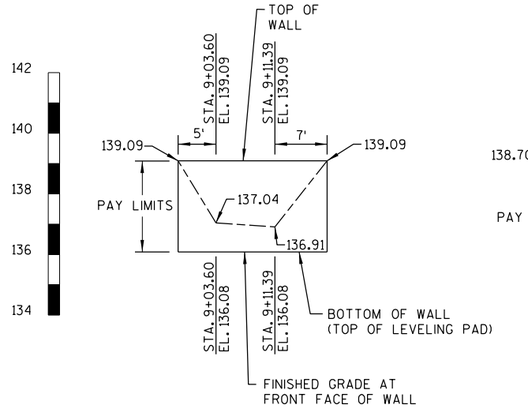
PLAN



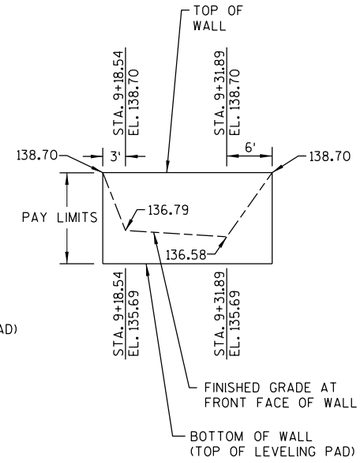
SOIL PARAMETERS		
RETAINED SOIL	UNIT WEIGHT (PCF)	120
	FRICTION ANGLE (DEG)	30
	COHESION (PSF)	0
PRESUMPTIVE ALLOWABLE VERTICAL FOUNDATION LOAD BEARING PRESSURE (PSF)		1,500

NOTE: MUD, ORGANIC SILT, ORGANIC CLAY, PEAT OR UNPREPARED FILL SHALL NOT BE ASSUMED TO HAVE A PRESUMPTIVE ALLOWABLE LOAD BEARING PRESSURE.

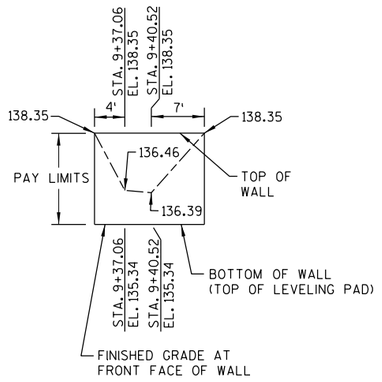
TYPICAL SECTION
MODULAR CONCRETE UNIT
N.T.S.



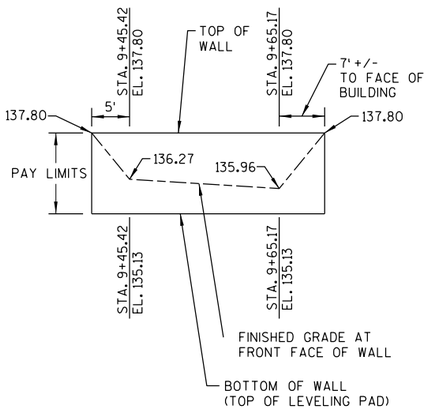
PROFILE
(LOOKING NORTH AT WALL)



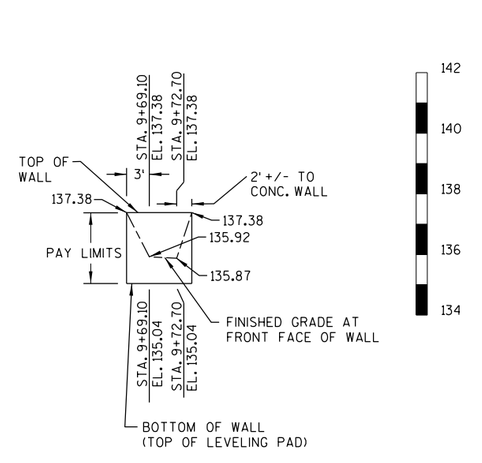
PROFILE
(LOOKING NORTH AT WALL)



PROFILE
(LOOKING NORTH AT WALL)



PROFILE
(LOOKING NORTH AT WALL)



PROFILE
(LOOKING NORTH AT WALL)

MODULAR BLOCK RETAINING WALL

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 12	E

2

LEGEND

APPROXIMATE EXTENT OF HAZMAT SOILS THAT MAY BE ENCOUNTERED DURING EXCAVATION OPERATIONS

N

W. GREENFIELD AVENUE

S. 62ND STREET

W. NATIONAL AVENUE

S. 63RD STREET

AREA 1 - HAZMAT SOILS
1' - 8' BELOW GROUND SURFACE

AREA 2 - HAZMAT SOILS
4' - 10+' BELOW GROUND SURFACE

MATCH LINE STA. 10+50

R/W

TLE

RAMP W/HANDRAIL

BRICK PAVERS

ASPHALT

PLANTER

CONC

F BAR

10'

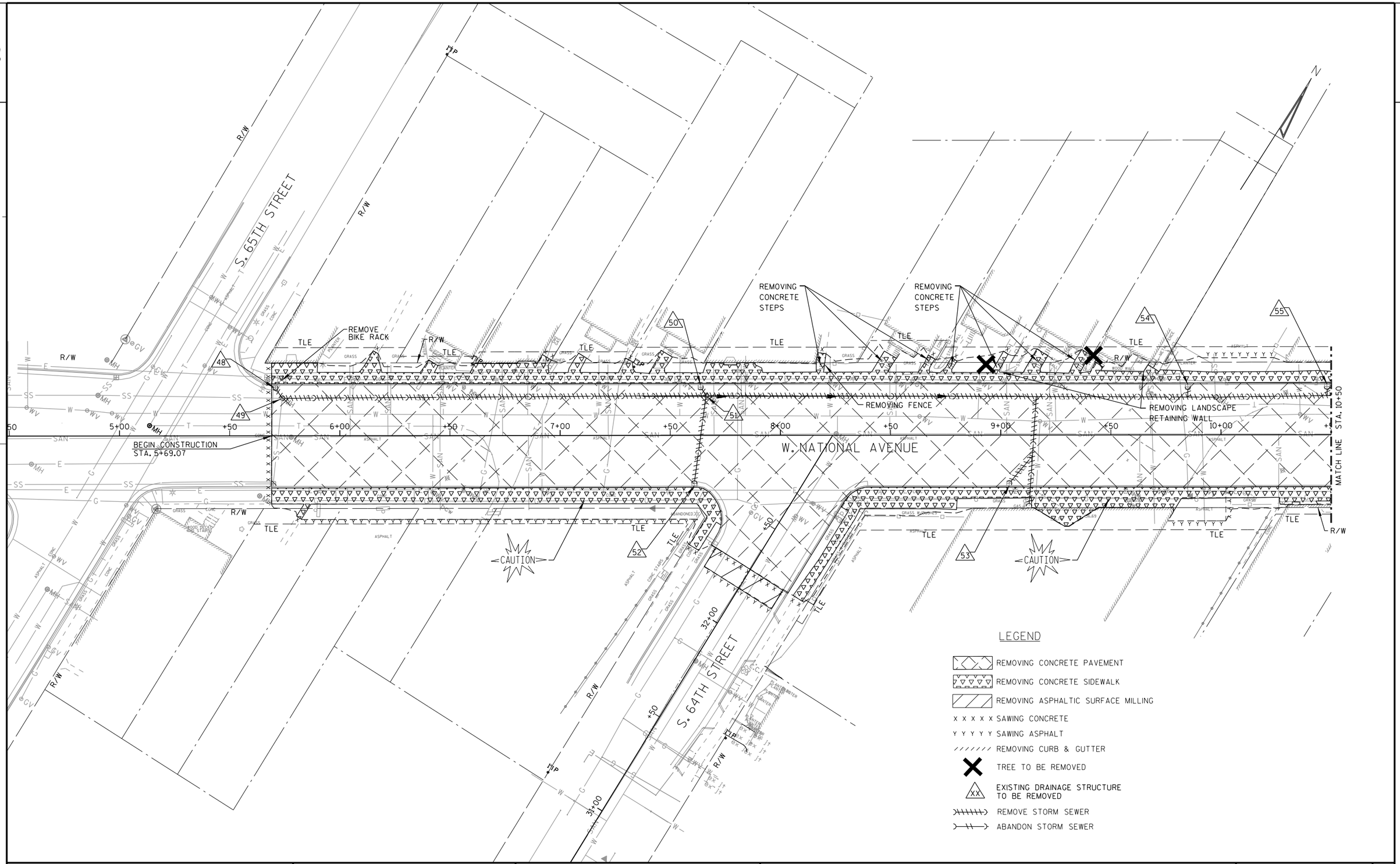
6'

23'

66'

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - HAZMAT SOIL LOCATIONS	SHEET 13	E

2



LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- X X X X X SAWING CONCRETE
- Y Y Y Y Y SAWING ASPHALT
- REMOVING CURB & GUTTER
- TREE TO BE REMOVED
- XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- REMOVE STORM SEWER
- ABANDON STORM SEWER

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 14	E

2

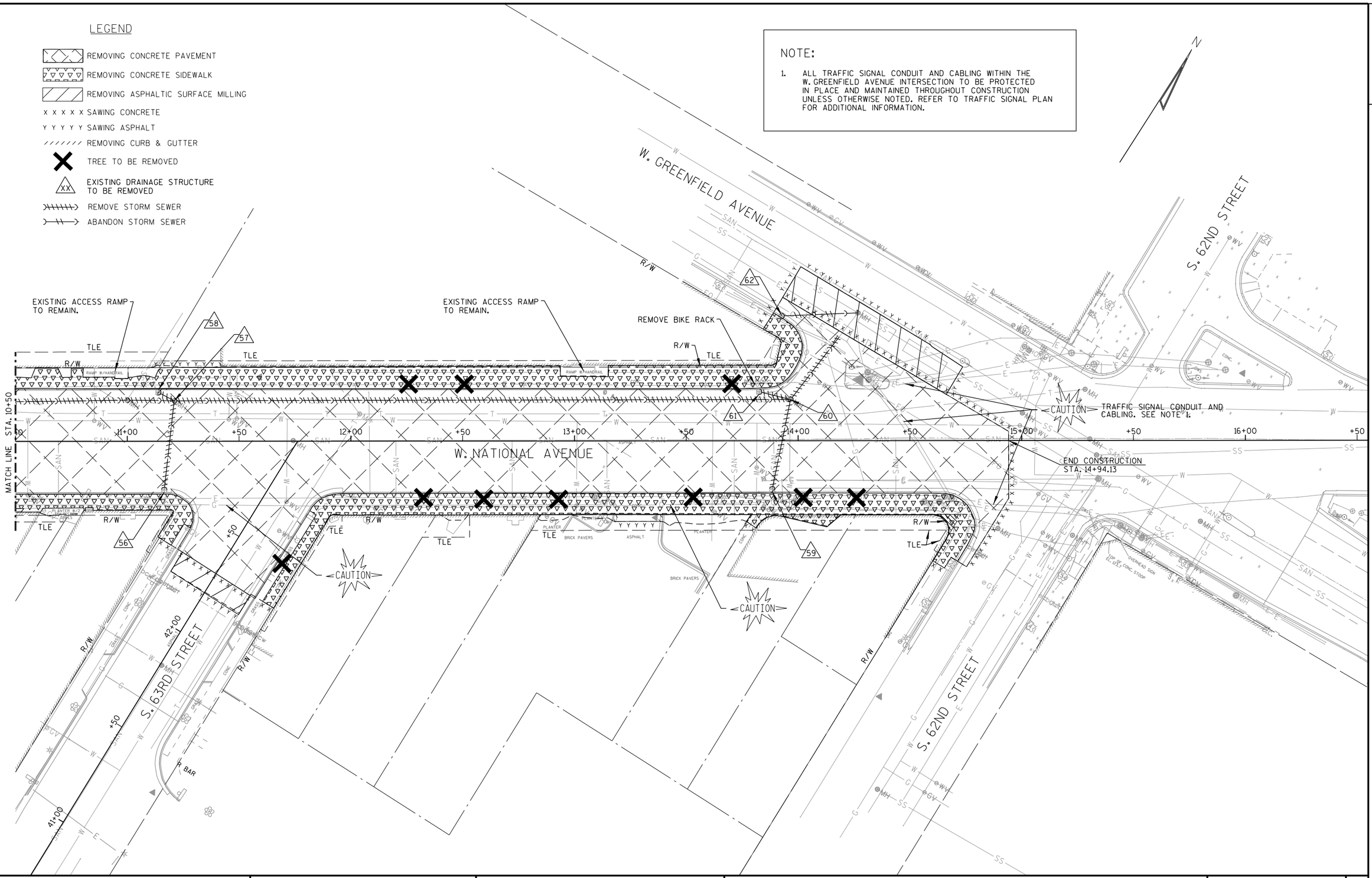
2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- X X X X X SAWING CONCRETE
- Y Y Y Y Y SAWING ASPHALT
- REMOVING CURB & GUTTER
- TREE TO BE REMOVED
- XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- REMOVE STORM SEWER
- ABANDON STORM SEWER

NOTE:

1. ALL TRAFFIC SIGNAL CONDUIT AND CABLING WITHIN THE W. GREENFIELD AVENUE INTERSECTION TO BE PROTECTED IN PLACE AND MAINTAINED THROUGHOUT CONSTRUCTION UNLESS OTHERWISE NOTED. REFER TO TRAFFIC SIGNAL PLAN FOR ADDITIONAL INFORMATION.



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 15	E

NOTE:

1. REFER TO INTERSECTION CURB RAMP DETAILS AND STREETSCAPE PLANS FOR ADDITIONAL LAYOUT INFORMATION.

S. 65TH STREET

W. NATIONAL AVENUE

S. 64TH STREET

BEGIN CONSTRUCTION STA. 5+69.07

MATCH LINE STA. 10+50

SLOPE INTERCEPT (TYP.)

CONCRETE STEPS

REPLACE EXISTING FENCE & GATE

PROPOSED RETAINING WALL

SAWCUT ASPHALT PARKING LOT

STA. 6+21.8 24' DWY

STA. 9+29.8 24' DWY

STA. 9+90.1 24' DWY

STA. 10+08.7 24' DWY

LEGEND

18D	CONCRETE CURB AND GUTTER 18-INCH TYPE D
31IC	CONCRETE CURB AND GUTTER INTEGRAL 31-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH
31G	CONCRETE CURB AND GUTTER 6-INCH SLOPED 30-INCH TYPE G
SW5	CONCRETE SIDEWALK 5-INCH
DRW	CONCRETE DRIVEWAY 7-INCH
PC	CONCRETE CURB PEDESTRIAN
AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH, OVER 12" BREAKER RUN & GEOGRID
PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
PAV 3	2" HMA PAVEMENT, OVER 9" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
CR1 *	(MODIFIED CURB RAMP, SEE DETAIL) CURB RAMP TYPE
1	POINT NUMBER

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 16	E

2

2

DATA TABLE

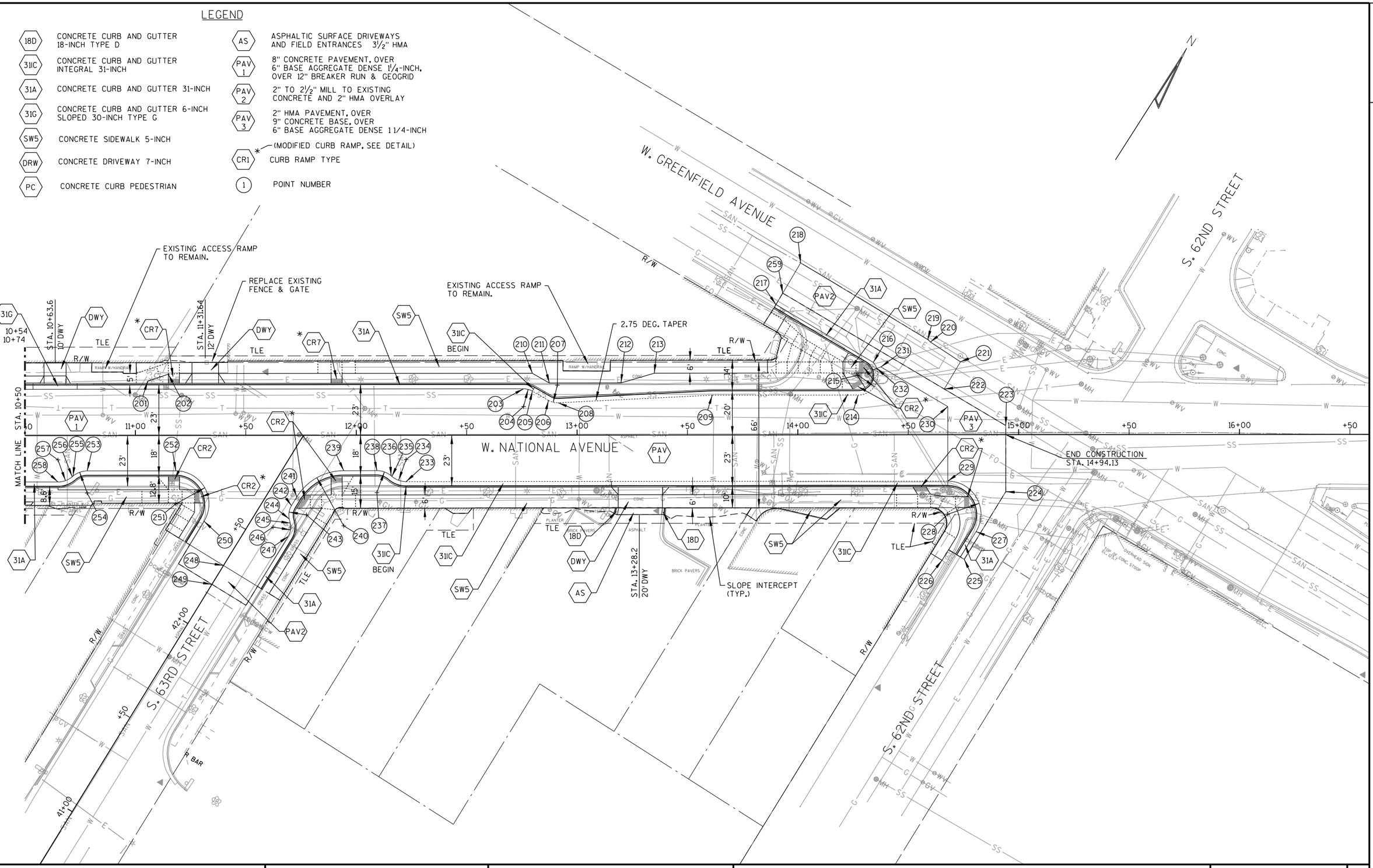
POINT NUMBER	STATION	OFFSET		DESCRIPTION
101	5+69.07	26.00	LT	BEGIN SIDEWALK
102	5+89.77	31.00	LT	SIDEWALK ANGLE POINT
103	6+10.92	31.00	LT	SIDEWALK ANGLE POINT
104	6+38.55	31.00	LT	SIDEWALK ANGLE POINT
105	7+04.83	31.00	LT	SIDEWALK ANGLE POINT
106	7+27.93	31.00	LT	SIDEWALK ANGLE POINT
107	7+41.89	31.00	LT	SIDEWALK ANGLE POINT
108	8+43.52	31.00	LT	SIDEWALK ANGLE POINT
109	8+63.80	31.00	LT	SIDEWALK ANGLE POINT
110	8+75.11	31.00	LT	SIDEWALK ANGLE POINT
111	8+96.75	31.00	LT	SIDEWALK ANGLE POINT
112	9+79.45	24.58	LT	BEGIN SIDEWALK TAPER
113	9+96.72	27.00	LT	END SIDEWALK TAPER
114	10+30.47	25.58	RT	END SIDEWALK TAPER
115	10+20.47	27.00	RT	BEGIN SIDEWALK TAPER
116	8+70.03	21.00	RT	END 10' RADIUS
117	8+70.03	11.00	RT	10' RADIUS
118	8+63.60	18.66	RT	BEGIN 10' RADIUS
119	8+63.22	18.34	RT	END 10' RADIUS
120	8+56.79	26.00	RT	10' RADIUS
121	8+56.79	16.00	RT	BEGIN 10' RADIUS
122	8+48.44	16.00	RT	END 25' RADIUS
123	8+48.44	41.00	RT	25' RADIUS
124	32+78.03	17.50	RT	BEGIN 25' RADIUS
125	32+28.65	0.00	RT	SAWCUT & END NEW PAVEMENT
126	32+18.65	0.00	RT	SAWCUT & MATCH AT BUTT JOINT
127	32+23.64	29.50	LT	END SIDEWALK
128	32+42.95	18.50	LT	END 15' RADIUS
129	7+65.33	31.00	RT	15' RADIUS
130	7+65.33	16.00	RT	BEGIN 15' RADIUS
131	7+45.03	16.00	RT	END 10' RADIUS
132	7+45.03	26.00	RT	10' RADIUS
133	7+38.61	18.34	RT	BEGIN 10' RADIUS
134	7+38.22	18.66	RT	END 10' RADIUS
135	7+31.80	11.00	RT	10' RADIUS
136	7+31.80	21.00	RT	BEGIN 10' RADIUS
137	5+83.13	28.00	RT	END SIDEWALK TAPER

NOTE: ALL RADII AND STATION / OFFSETS MEASURED TO THE FLANGE LINE OF CURB (WHERE APPLICABLE)

2

LEGEND

18D	CONCRETE CURB AND GUTTER 18-INCH TYPE D
31IC	CONCRETE CURB AND GUTTER INTEGRAL 31-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH
31G	CONCRETE CURB AND GUTTER 6-INCH SLOPED 30-INCH TYPE G
SW5	CONCRETE SIDEWALK 5-INCH
DRW	CONCRETE DRIVEWAY 7-INCH
PC	CONCRETE CURB PEDESTRIAN
AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH, OVER 12" BREAKER RUN & GEOGRID
PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
PAV 3	2" HMA PAVEMENT, OVER 9" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
* CR1	(MODIFIED CURB RAMP, SEE DETAIL) CURB RAMP TYPE
1	POINT NUMBER



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 18	E

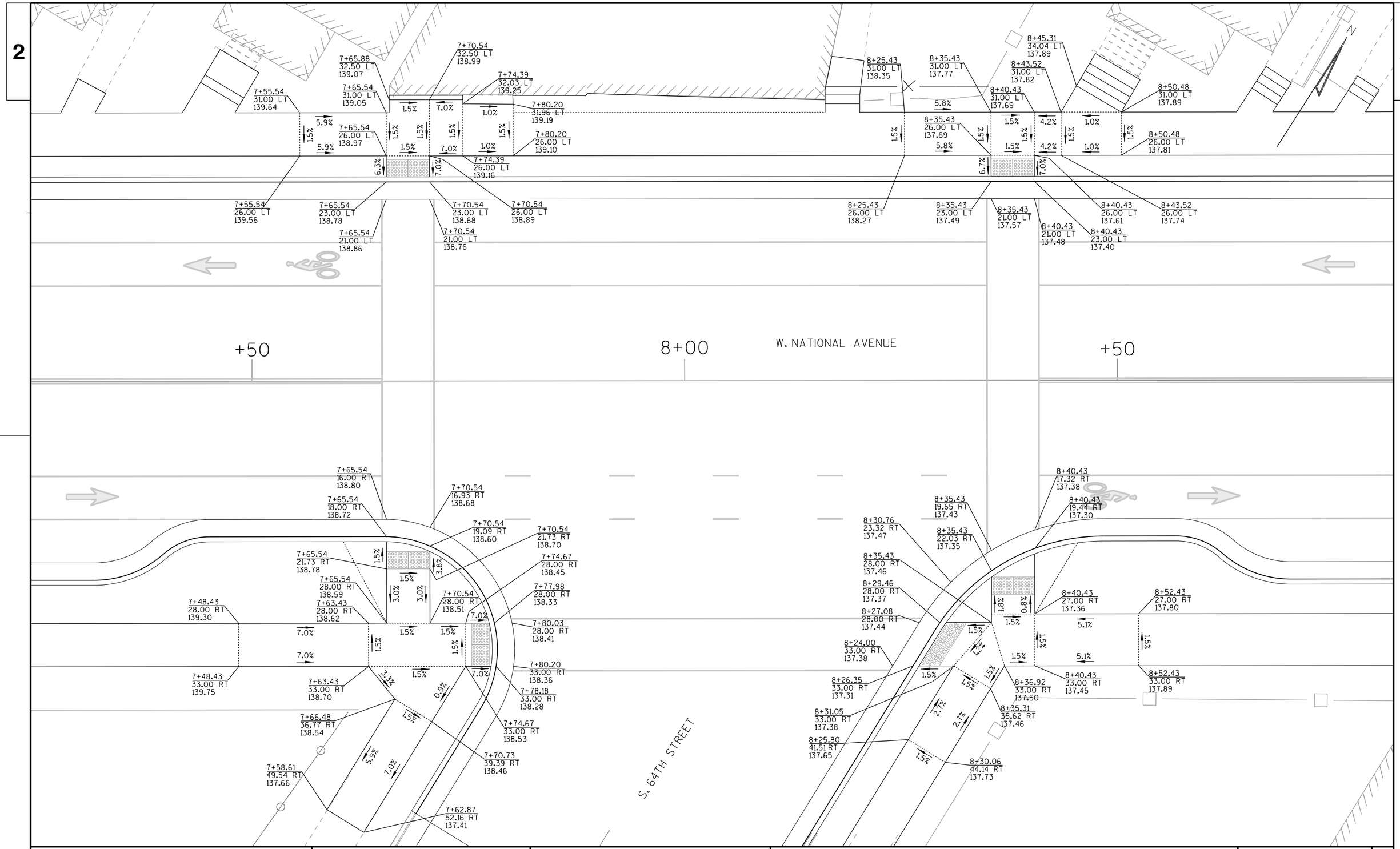
2

2

DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
201	11+05.54	24.58	LT	BEGIN SIDEWALK TAPER
202	11+14.95	27.73	LT	END SIDEWALK TAPER
203	12+75.81	21.00	LT	BEGIN 8' RADIUS
204	12+75.81	13.00	LT	8' RADIUS
205	12+79.81	19.93	LT	END 8' RADIUS, BEGIN INTEGRAL C&G
206	12+87.11	15.71	LT	BEGIN 8' RADIUS
207	12+91.11	22.64	LT	8' RADIUS
208	12+91.50	14.65	LT	END 8' RADIUS
209	13+61.27	18.00	LT	END CURB TAPER
210	12+79.83	28.00	LT	BEGIN SIDEWALK TAPER
211	12+87.48	23.58	LT	END SIDEWALK TAPER
212	13+19.94	23.58	LT	BEGIN SIDEWALK TAPER
213	13+35.01	28.00	LT	END SIDEWALK TAPER
214	14+27.31	18.00	LT	BEGIN 9' RADIUS
215	14+27.31	27.00	LT	9' RADIUS
216	14+34.20	32.79	LT	END 9' RADIUS
217	13+90.12	59.01	LT	END CURB
218	14+01.31	77.82	LT	SAW CUT/MATCH POINT
219	14+58.91	43.12	LT	SAW CUT/MATCH POINT
220	14+60.06	42.00	LT	SAW CUT/MATCH POINT
221	14+73.64	33.04	LT	SAW CUT/MATCH POINT
222	14+66.30	20.69	LT	SAW CUT/MATCH POINT
223	14+94.13	4.13	LT	SAW CUT/MATCH POINT
224	14+94.13	25.82	RT	SAW CUT/MATCH POINT
225	14+75.28	56.42	RT	SAW CUT/MATCH POINT
226	14+65.26	56.88	RT	END SIDEWALK
227	14+80.67	43.87	RT	END 15' RADIUS
228	14+67.89	36.00	RT	15' RADIUS
229	14+67.89	21.00	RT	BEGIN 15' RADIUS, END INTEGRAL C&G
230	14+67.89	12.76	LT	CONC. PVMT MATCH PNT
231	14+37.66	30.74	LT	CONC. PVMT MATCH PNT
232	14+35.78	30.06	LT	CONC. PVMT MATCH PNT, END INTEGRAL C&G
233	12+22.57	21.00	RT	END 10' RADIUS, BEGIN INTEGRAL C&G
234	12+22.57	11.00	RT	10' RADIUS
235	12+16.14	18.66	RT	BEGIN 10' RADIUS
236	12+15.76	18.34	RT	END 10' RADIUS
237	12+09.33	26.00	RT	10' RADIUS
238	12+09.33	16.00	RT	BEGIN 10' RADIUS
239	11+94.33	16.00	RT	END 25' RADIUS
240	11+94.33	41.00	RT	25' RADIUS
241	42+74.64	12.00	RT	BEGIN 25' RADIUS
242	42+70.03	12.00	RT	END 8' RADIUS
243	42+70.03	20.00	RT	8' RADIUS
244	42+64.37	14.34	RT	BEGIN 8' RADIUS
245	42+63.06	15.66	RT	END 8' RADIUS
246	42+57.40	10.00	RT	8' RADIUS
247	42+57.40	18.00	RT	BEGIN 8' RADIUS
248	42+30.82	0.00	RT	SAWCUT & END NEW PAVEMENT
249	42+20.82	0.00	RT	SAWCUT & MATCH AT BUTT JOINT
250	42+43.26	18.00	LT	END 15' RADIUS
251	11+18.28	23.69	RT	15' RADIUS
252	11+18.28	31.00	RT	BEGIN 15' RADIUS
253	10+78.15	16.00	RT	END 10' RADIUS
254	10+78.15	26.00	RT	10' RADIUS
255	10+71.73	18.34	RT	BEGIN 10' RADIUS
256	10+71.34	18.66	RT	END 10' RADIUS
257	10+64.92	11.00	RT	10' RADIUS
258	10+64.92	21.00	RT	BEGIN 10' RADIUS
259	13+93.19	61.16	LT	SAW CUT/MATCH POINT

NOTE: ALL RADII AND STATION / OFFSETS MEASURED TO THE FLANGE LINE OF CURB (WHERE APPLICABLE)



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 20	E

2

11+00.37
33.00 LT
133.77

11+09.57
33.00 LT
133.61

11+14.95
33.00 LT
133.31

11+14.95
27.73 LT
133.23

11+19.95
33.00 LT
133.23

11+25.66
33.00 LT
133.29

11+09.57
31.20 LT
133.58

11+27.59
29.81 LT
133.21

11+00.41
28.10 LT
133.69

11+11.16
26.46 LT
133.50

11+82.63
33.64 LT
132.15

11+88.63
33.65 LT
131.73

11+93.63
33.65 LT
131.65

11+99.63
33.65 LT
131.83

11+82.63
28.00 LT
132.07

11+88.63
28.00 LT
131.65

11+93.63
28.00 LT
131.57

11+99.63
28.00 LT
131.75

11+02.55
23.58 LT
133.59

11+14.95
23.00 LT
132.90

11+14.95
21.00 LT
132.98

11+19.95
23.00 LT
132.81

11+19.95
21.00 LT
132.89

11+19.95
28.00 LT
133.15

11+88.63
23.00 LT
131.34

11+88.63
21.00 LT
131.42

11+93.63
23.00 LT
131.22

11+93.63
21.00 LT
131.30

11+00

+50

12+00

W. NATIONAL AVENUE

11+14.95
16.00 RT
132.82

11+14.95
18.00 RT
132.74

11+19.95
18.11 RT
132.66

11+19.95
16.09 RT
132.74

11+19.95
20.70 RT
132.74

11+19.95
24.58 RT
132.56

11+14.95
20.70 RT
132.82

11+29.58
24.58 RT
132.42

11+02.95
24.58 RT
133.48

11+14.95
24.58 RT
132.64

11+21.12
24.58 RT
132.55

11+31.84
24.58 RT
132.51

11+31.27
30.58 RT
132.36

11+33.27
30.58 RT
132.44

11+02.95
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11+14.95
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11+21.12
30.58 RT
132.64

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132.40

11+18.18
33.36RT
132.56

11+26.76
30.58 RT
132.55

11+26.76
34.77 RT
132.51

11+13.63
42.74 RT
132.16

11+24.14
39.03 RT
132.46

11+19.59
46.41 RT
132.00

S. 63RD STREET

11+88.63
16.66 RT
131.71

11+93.63
16.01 RT
131.61

11+88.63
18.72 RT
131.63

11+93.63
18.01 RT
131.53

11+80.15
20.41 RT
131.82

11+79.21
27.00 RT
131.73

11+88.63
27.00 RT
132.06

11+73.62
27.00 RT
131.75

11+84.29
27.00 RT
132.02

11+93.63
27.00 RT
132.11

11+76.09
27.00 RT
131.68

11+99.63
27.00 RT
132.22

11+70.03
33.00 RT
131.71

11+99.63
33.00 RT
132.31

11+72.25
33.00 RT
131.64

11+79.21
33.00 RT
131.75

11+84.29
33.00 RT
132.11

11+93.63
32.72 RT
132.20

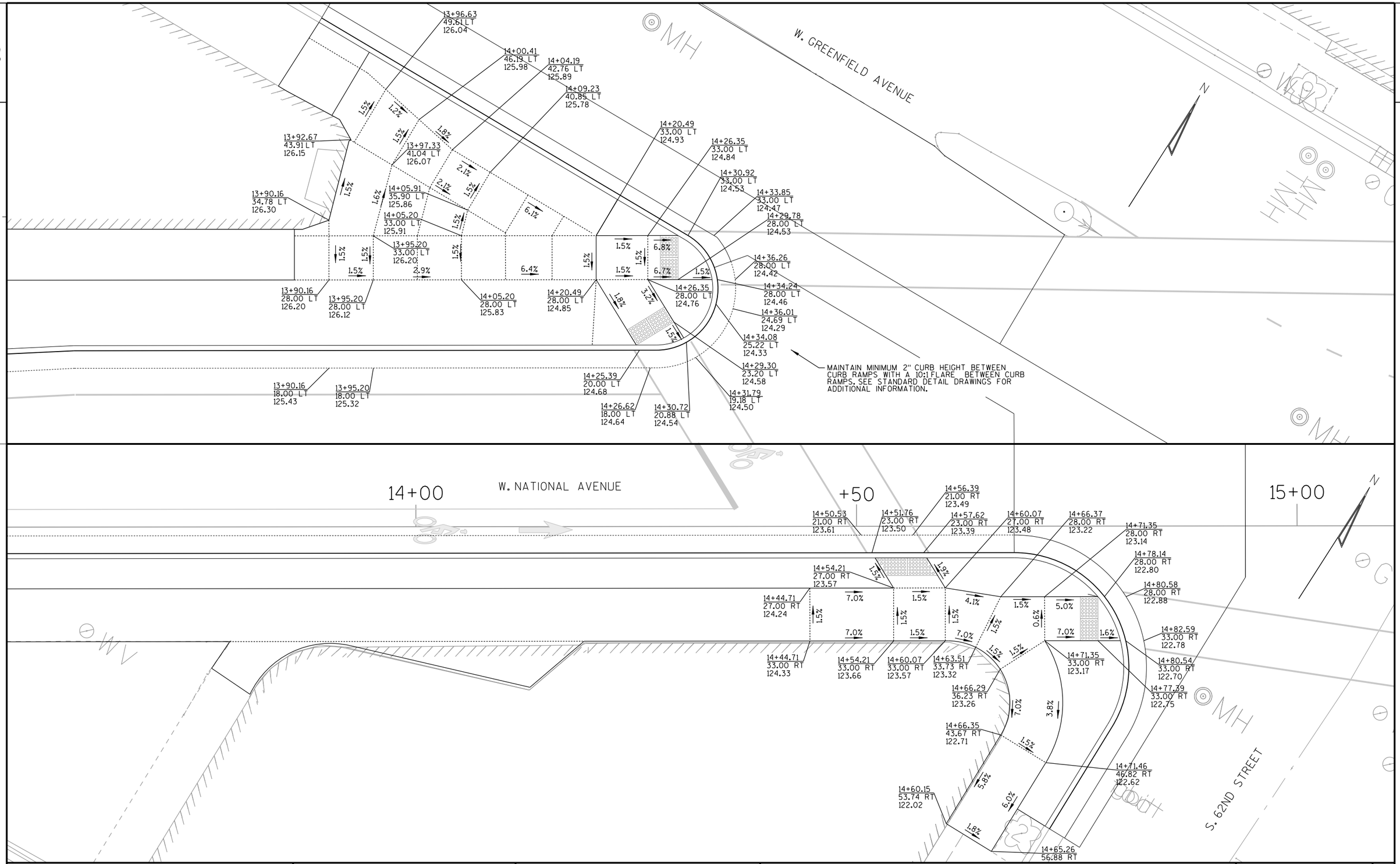
11+81.67
37.26 RT
132.27

11+89.18
36.02 RT
132.20

11+86.56
40.27 RT
132.36

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 21	E

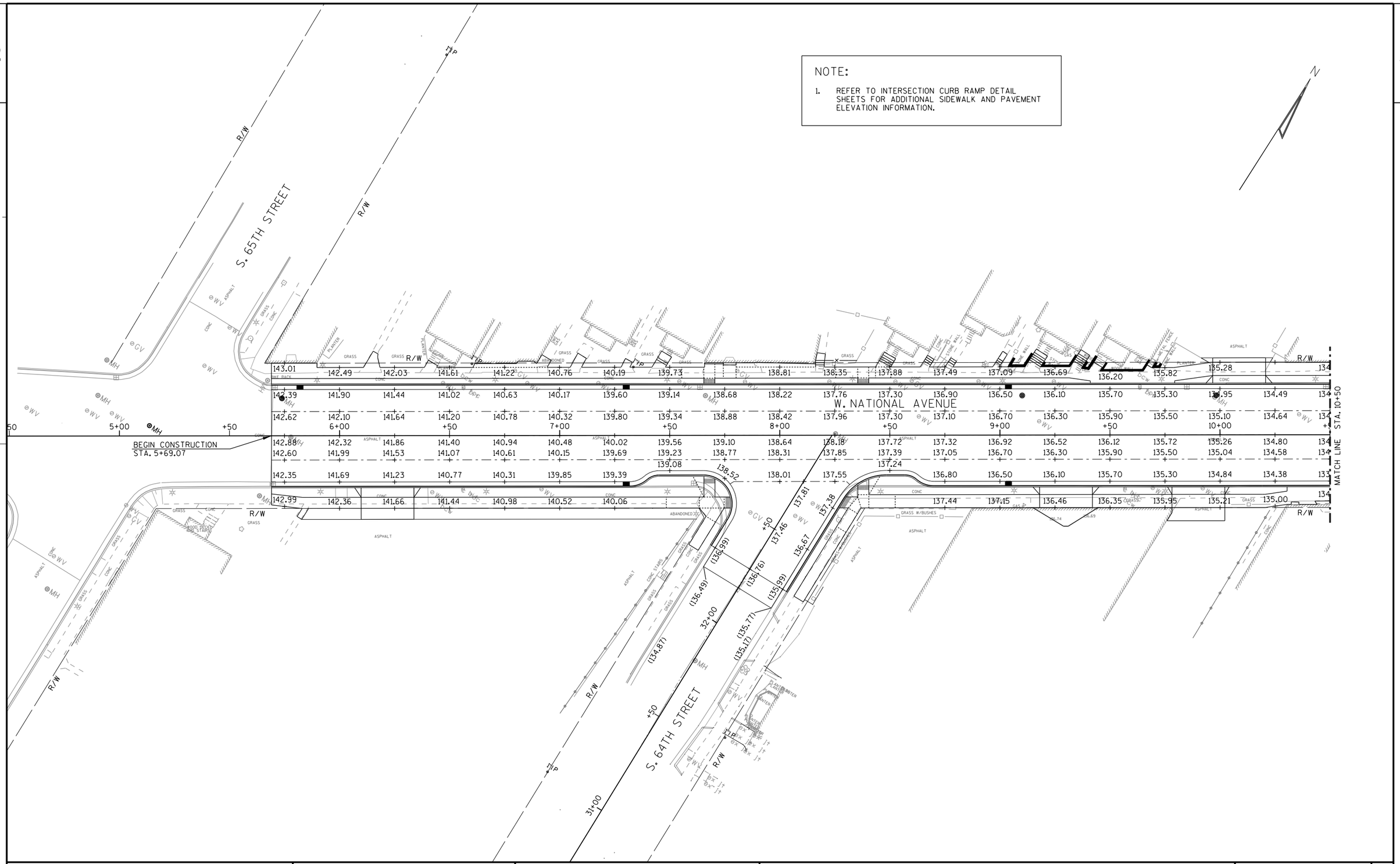
2



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 22	E

NOTE:

1. REFER TO INTERSECTION CURB RAMP DETAIL SHEETS FOR ADDITIONAL SIDEWALK AND PAVEMENT ELEVATION INFORMATION.



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET 23	E

NOTE:

1. REFER TO INTERSECTION CURB RAMP DETAIL SHEETS FOR ADDITIONAL SIDEWALK AND PAVEMENT ELEVATION INFORMATION.

W. GREENFIELD AVENUE

W. NATIONAL AVENUE

S. 63RD STREET

S. 62ND STREET

END CONSTRUCTION
STA. 14+94.13

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET 24	E

2

2

LEGEND

- INLET PROTECTION
- (A) INLET PROTECTION TYPE
- SLOPE INTERCEPT
- SOD LAWN

S. 65TH STREET

R/W

SLOPE INTERCEPT (TYP.)

INSTALL TOPSOIL FOR PLANTER BED ONLY

TLE

BEGIN CONSTRUCTION STA. 5+69.07

W. NATIONAL AVENUE

MATCH LINE STA. 10+50

PLACE TYPE C INLET PROTECTION AT THE NEXT INLET SOUTH OF NATIONAL AVENUE

S. 64TH STREET

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 25	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\022001_ec.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2

2

LEGEND

INLET PROTECTION

(A) INLET PROTECTION TYPE

SLOPE INTERCEPT

SOD LAWN

N

W. NATIONAL AVENUE

S. 62ND STREET

S. 63RD STREET

MATCH LINE STA. 10+50

11+00 +50 12+00 +50 13+00 +50 14+00 +50 15+00 +50 16+00

41+00 42+00

TLE R/W RAMP W/HANDRAIL

INSTALL TOPSOIL FOR PLANTER BED ONLY

SLOPE INTERCEPT (TYP.)

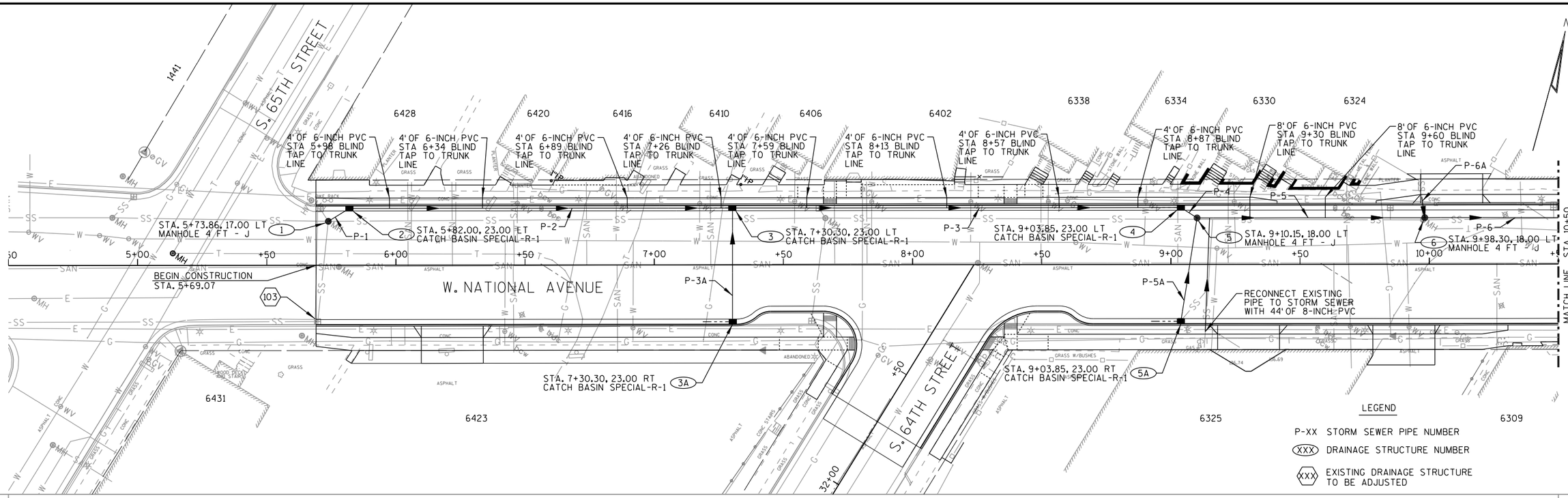
PLACE TYPE C INLET PROTECTION AT THE NEXT INLET SOUTH OF NATIONAL AVENUE

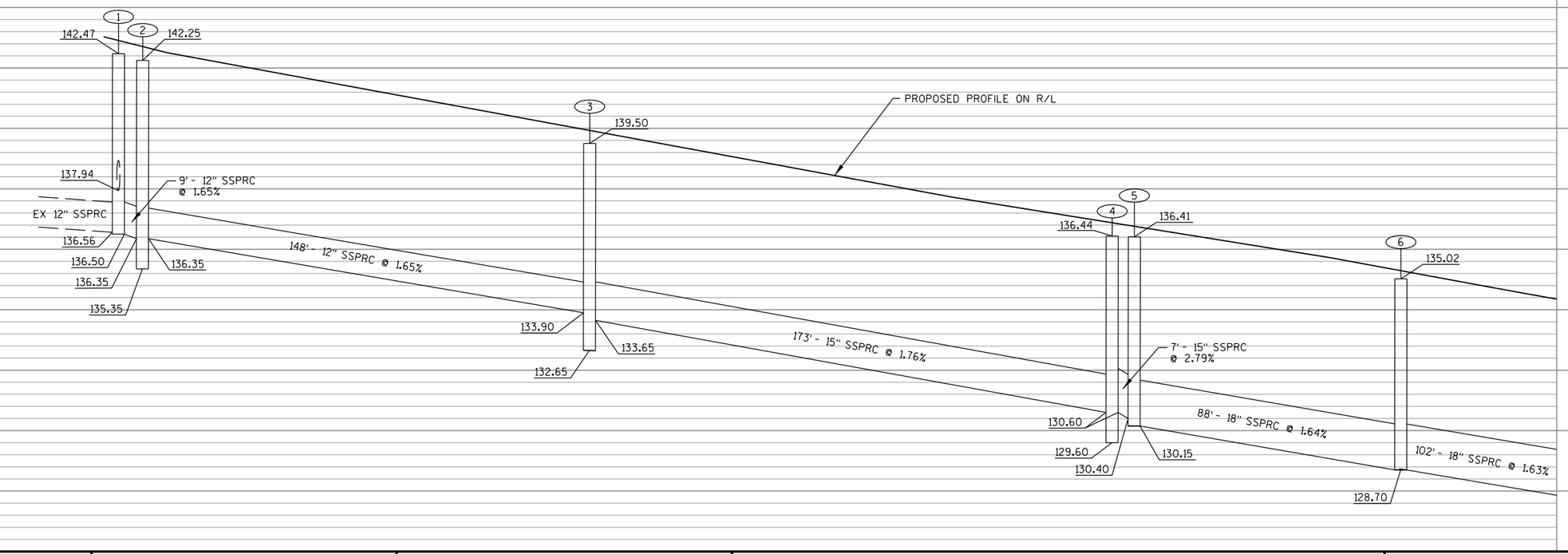
END CONSTRUCTION STA. 14+94.13

PLACE TYPE C INLET PROTECTION AT THE NEXT INLET SOUTH OF NATIONAL AVENUE

R BAR

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 26	E





PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 27	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

6309 6217

STA. 10+92.82, 23.00 LT
CATCH BASIN SPECIAL-R-1 (7A)

P-7A

P-7C

P-6

(7) STA. 10+99.84, 18.00 LT
MANHOLE 7 FT - J

P-7

P-8

(8) STA. 13+95.79, 18.33 LT
MANHOLE 4 FT - R-1

(9) STA. 14+15.84, 43.91 LT
MANHOLE 4 FT - R-1

(10) STA. 14+26.82, 57.19 LT
EXISTING MANHOLE

P-9

STA: 10+50

MATCH LINE

P-7B

(7B) STA. 10+99.84, 18.00 RT
CATCH BASIN SPECIAL-R-1

(8A) STA. 13+88.42, 23.00 RT
CATCH BASIN SPECIAL-R-1

P-8A

W. NATIONAL AVENUE

END CONSTRUCTION
STA. 14+94.13

44' OF 6-INCH PVC
STA 10+66 BLIND
TAP TO TRUNK
LINE

RECONNECT EXISTING
PIPE TO STORM SEWER
WITH 44' OF 8-INCH PVC

44' OF 6-INCH PVC
STA 12+82 BLIND
TAP TO TRUNK
LINE

S. 63RD STREET

S. 62ND STREET

S. 62ND STREET

W. GREENFIELD AVENUE

6301 6233 6227 6215 6207 6203

11+00 +50 12+00 +50 13+00 +50 14+00 +50 15+00 +50 16+00

42+00

N

134 132 130 128 126 124 122 120 118 116

(7) 133.26

PROPOSED PROFILE ON R/L

102' - 18" SSPRC @ 1.63%

127.05

296' - 18" SSPRC @ 2.75%

(8) 125.31

(9) 124.74

(10) 125.21

4' - 21" SSPRC @ 3.48%
CONC. COLLAR REQUIRED

118.90

118.65

33' - 18" SSPRC @ 2.14%

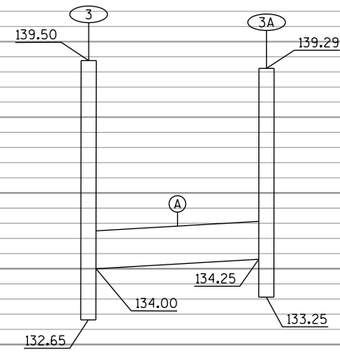
117.95

117.57

117.43

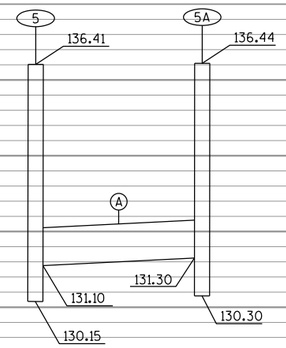
117.00

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 28 E

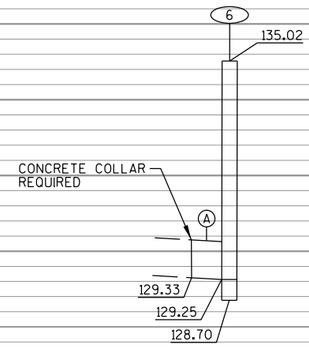


Ⓐ 43' - 12" SSPRC @ 0.58%

Ⓐ 40' - 12" SSPRC @ 0.50%

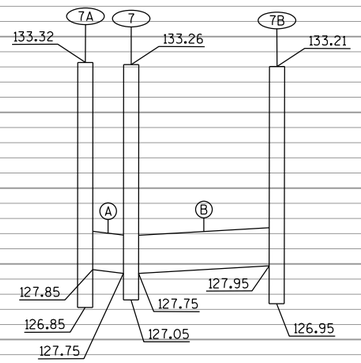


Ⓐ 8' - 12" SSPRC @ 1.00%

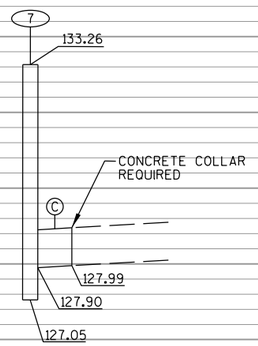


Ⓐ 8' - 12" SSPRC @ 1.23%

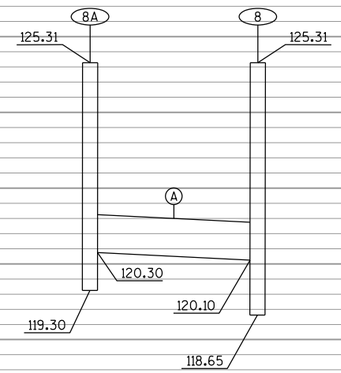
Ⓑ 35' - 12" SSPRC @ 0.58%



Ⓒ 9' - 12" SSPRC @ 1.00%



Ⓐ 40' - 12" SSPRC @ 0.50%

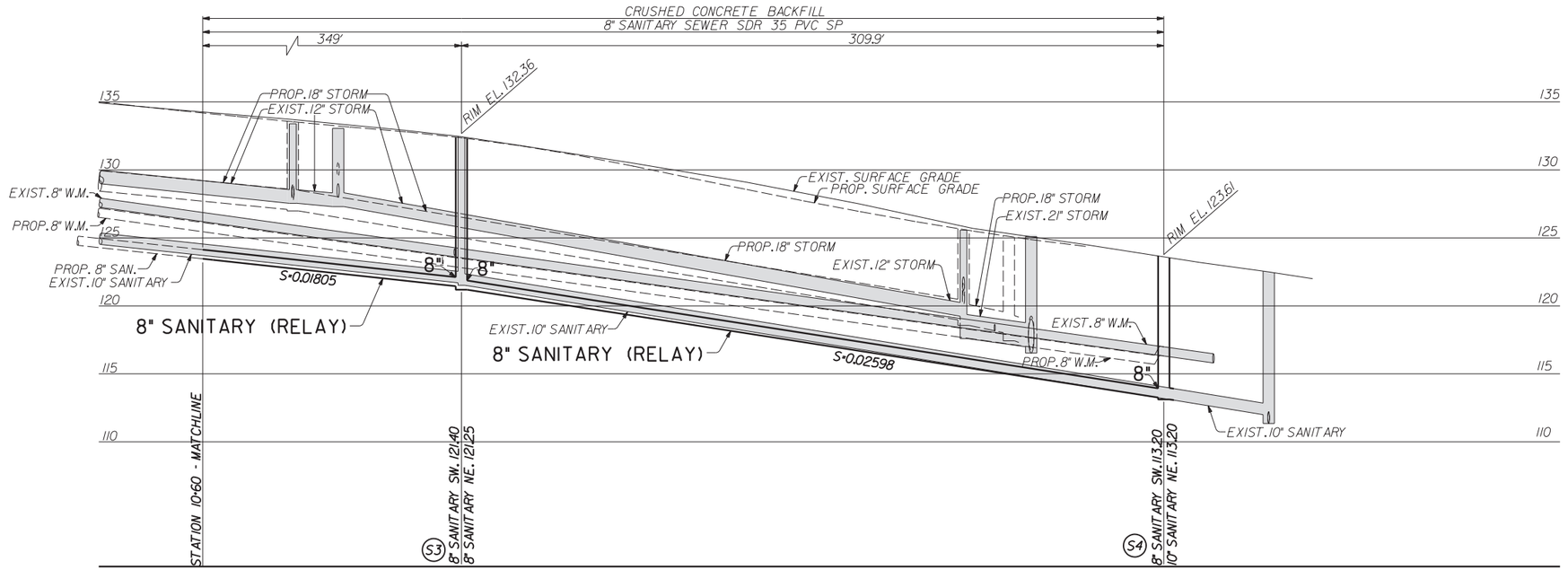


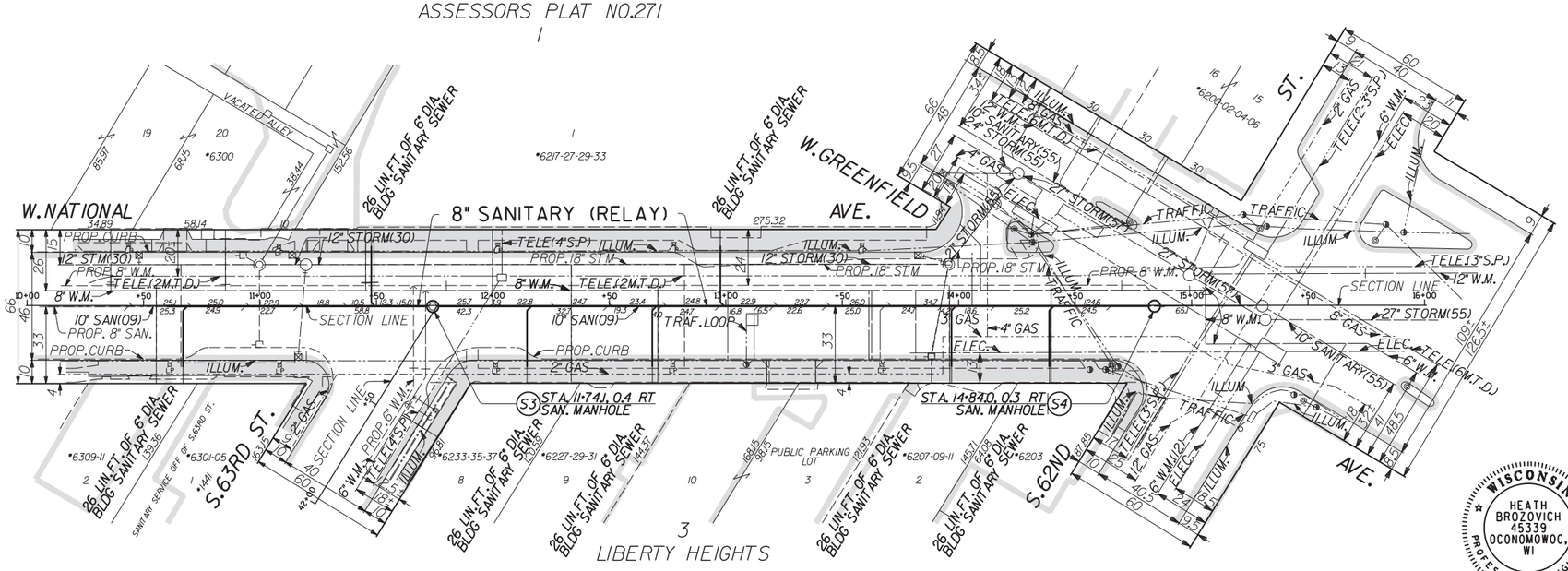
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER PROFILES	SHEET 29	E

STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	CB TYPE & COVER		MH TYPE & COVER		RIM/ GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
1	5+73.86	17.00' LT	P-1	9	2	--	--	4 FT	J	142.47	5.97	12	136.50	136.35	9	1.65	V	CONNECT TO EX. STORM SEWER, 12" SW I.E.=136.56, 12" SE I.E.=137.94
2	5+82.00	23.00' LT	P-2	148	3	SPECIAL	R-1	--	--	142.25	5.90	12	136.35	133.90	148	1.65	V	
3	7+30.30	23.00' LT	P-3	173	4	SPECIAL	R-1	--	--	139.50	5.85	15	133.65	130.60	173	1.76	V	
3A	7+30.30	23.00' RT	P-3A	43	3	SPECIAL	R-1	--	--	139.29	5.04	12	134.25	134.00	43	0.58	V	
4	9+03.85	23.00' LT	P-4	7	5	SPECIAL	R-1	--	--	136.44	5.84	15	130.60	130.40	7	2.79	V	
5	9+10.15	18.00' LT	P-5	88	6	--	--	4 FT	J	136.41	6.26	18	130.15	128.70	88	1.64	IV	
5A	9+03.85	23.00' RT	P-5A	40	5	SPECIAL	R-1	--	--	136.44	5.14	12	131.30	131.10	40	0.50	V	
6	9+98.30	18.00' LT	P-6	102	7	--	--	4 FT	J	135.02	6.32	18	128.70	127.05	102	1.63	IV	
--	--	--	P-6A	8	6	--	--	--	--	--	--	12	129.33	129.25	8	1.00	V	CONCETE COLLAR REQUIRED
7	10+99.84	18.00' LT	P-7	296	8	--	--	7 FT	J	133.26	6.21	18	127.05	118.90	296	2.75	IV	
7A	10+92.82	23.00' LT	P-7A	8	7	SPECIAL	R-1	--	--	133.32	5.47	12	127.85	127.75	8	1.23	V	
7B	10+99.84	18.00' RT	P-7B	35	7	SPECIAL	R-1	--	--	133.21	5.26	12	127.95	127.75	35	0.58	V	
--	--	--	P-7C	9	7	--	--	--	--	--	--	12	127.99	127.90	9	1.00	V	CONCETE COLLAR REQUIRED
8	13+95.79	18.33' LT	P-8	33	9	--	--	4 FT	R-1	125.31	6.66	18	118.65	117.95	33	2.14	IV	
8A	13+88.42	23.00' RT	P-8A	40	8	SPECIAL	R-1	--	--	125.31	5.01	12	120.30	120.10	40	0.50	V	
9	14+15.84	43.91' LT	P-9	4	10	--	--	4 FT	R-1	124.74	7.17	21	117.57	117.43	4	3.48	IV	CONCETE COLLAR REQUIRED

STORM SEWER NOTES:

1. STATION / OFFSETS TO MANHOLES ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATION / OFFSETS TO CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF THE STRUCTURE.
4. CATCH BASIN RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
5. DEPTH OF MANHOLES, CATCH BASINS AND INLETS ARE MEASURED FROM THE LOWEST INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
6. PIPE LENGTHS FOR STRUCTURES ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
7. CONTRACTOR SHALL VERIFY DEPTH OF ALL EXISTING STORM SEWER STRUCTURES BEFORE BEGINNING WORK AND SHALL REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO BEGINNING WORK.





NOTES: 1. THE EXISTING ROADWAY SURFACE IN WEST NATIONAL AVENUE FROM SOUTH 62ND STREET TO SOUTH 63RD STREET IS ASPHALT OVER A CONCRETE BASE.

2. ALL EXISTING AND PROPOSED CATCH BASINS SHALL HAVE INLET PROTECTION BARRIERS.

11" x 17" SCALE: HOR. 1"=60' VERT. 1"=10'

24" x 36" SCALE: HOR. 1"=30' VERT. 1"=5'

CITY OF WEST ALLIS ENGINEERING DEPARTMENT

PLAN & PROFILE

SANITARY SEWER RELAY & BLDG. SERV. IN WEST NATIONAL AVENUE

FROM SOUTH 62ND STREET
TO SOUTH 63RD STREET

STATE CONT.
ACCOUNT NO. P2327N

CONTRACTOR
INSPECTOR
AS-BUILT ENT'D BY
AS-BUILT CHK'D BY
GIS ENTERED BY

SYSTEM NO. SS-14
¼ SEC. NO. 454

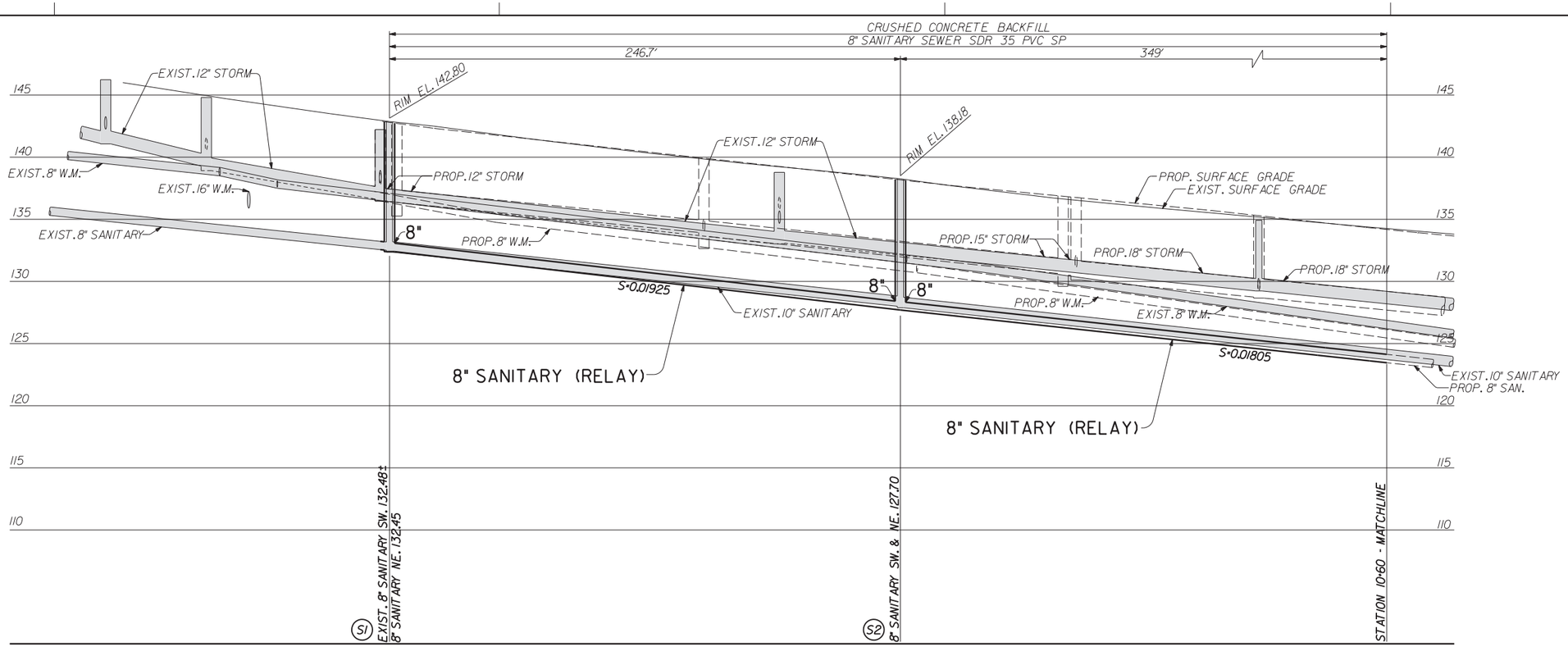
DRAWN BY FL
DATE DRAWN 7-20
DESIGNED BY AJW
CHECKED BY HMB
SURVEY
FINAL PLAN DATE

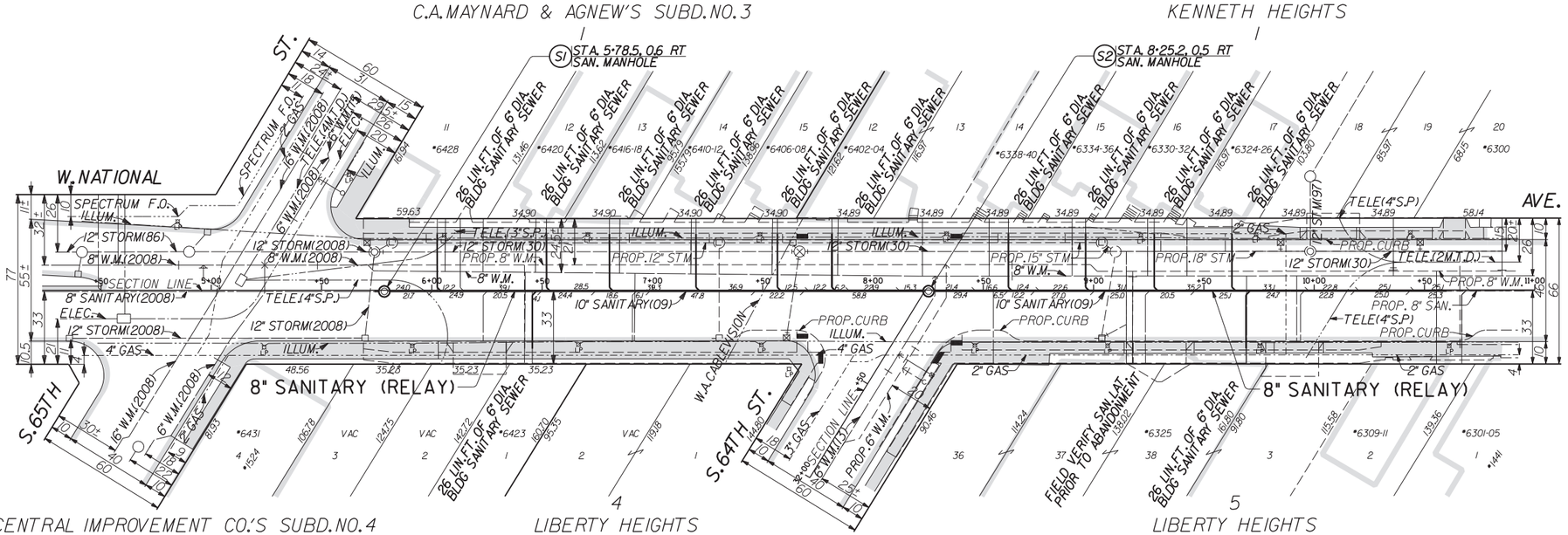
Kathy Brozovich — APPROVED PRINCIPAL ENGINEER — 7-12-22 DATE
Peter C Daniels — APPROVED CITY ENGINEER — 7-12-22 DATE

PLAN FILE NO. S-1660

HEATH BROZOVICH 45339 OCONOMOWOC, WI — WISCONSIN — PROFESSIONAL ENGINEER

PROJECT NO: 2410-13-70	HWY: WEST NATIONAL AVENUE	COUNTY: MILWAUKEE	SANITARY SEWER PLAN	SHEET 31





NOTES: 1. THE EXISTING ROADWAY SURFACE IN WEST NATIONAL AVENUE FROM SOUTH 63RD STREET TO SOUTH 65TH STREET IS ASPHALT OVER A CONCRETE BASE.

2. ALL EXISTING AND PROPOSED CATCH BASINS SHALL HAVE INLET PROTECTION BARRIERS.

HEATH BROZOVICH 45339 OCONOMOWOC, WI — WISCONSIN PROFESSIONAL ENGINEER

N

SCALE FT. 0 30 60

11" x 17" SCALE: HOR. 1"=60' VERT. 1"=10'

24" x 36" SCALE: HOR. 1"=30' VERT. 1"=5'

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
SANITARY SEWER RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 63RD STREET
TO SOUTH 65TH STREET

STATE CONT
ACCOUNT NO. P2327N

CONTRACTOR
INSPECTOR
AS-BUILT ENT'D. BY
AS-BUILT CHK'D. BY
GIS ENTERED BY

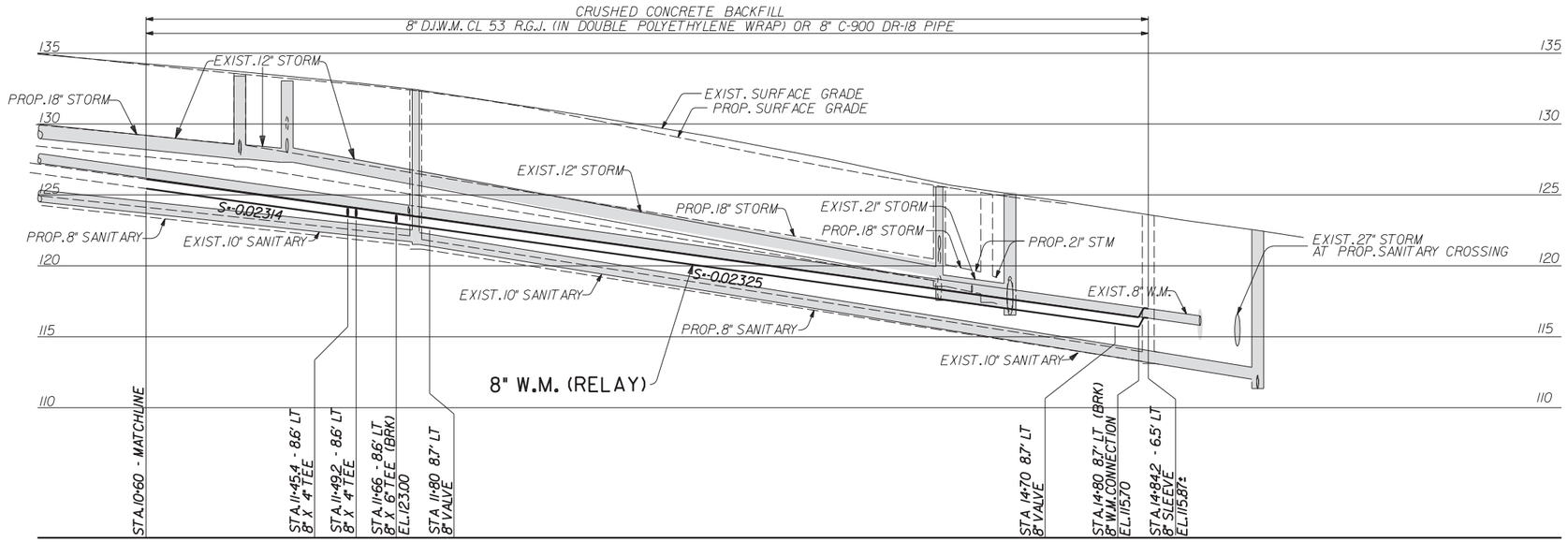
SCALE: HOR. 1"=60' VERT. 1"=10'
SYSTEM NO. SS-14
¼ SEC. NO. 454

DRAWN BY FL
DATE DRAWN 7-20
DESIGNED BY AJW
CHECKED BY HMB
SURVEY
FINAL PLAN DATE

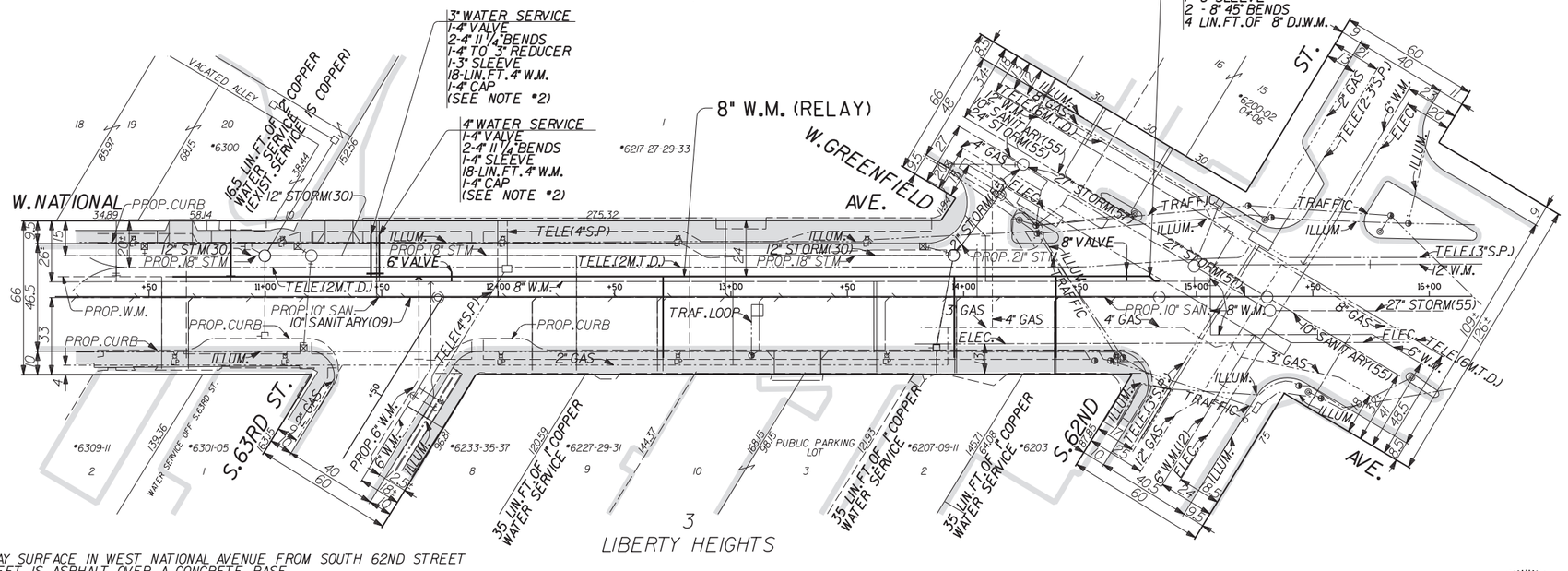
Heath Brozovich — APPROVED PRINCIPAL ENGINEER — 7-12-22 DATE
Peter C Daniels — APPROVED CITY ENGINEER — 7-12-22 DATE

PLAN FILE NO. S-1661

PROJECT NO: 2410-13-70	HWY: WEST NATIONAL AVENUE	COUNTY: MILWAUKEE	SANITARY SEWER PLAN	SHEET 32



ASSESSORS PLAT NO.271



3
LIBERTY HEIGHTS

SCALE FT.
0 30 60

11" x 17" SCALE: HOR. 1"=60' VERT. 1"=10'
24" x 36" SCALE: HOR. 1"=30' VERT. 1"=5'

NOTES:
1. THE EXISTING ROADWAY SURFACE IN WEST NATIONAL AVENUE FROM SOUTH 62ND STREET TO SOUTH 63RD STREET IS ASPHALT OVER A CONCRETE BASE.
2. INSTALL ONE TEMPORARY 4" CAP ON NEW ANCHOR TEE DURING CONSTRUCTION AND REPLACE WITH 4" VALVE AFTER PRESSURE AND SAFE WATER TESTING. 4" AND 3" WATER SERVICE RECONNECT TO BE INSTALLED AFTER ABANDONMENT OF EXISTING WATER MAIN
3. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER MAIN AT CONNECTION AND CROSSING POINTS TO VERIFY ELEVATIONS PRIOR TO INSTALLATION OF THE WATER MAIN.
4. AT CROSSINGS, ONE FULL LENGTH (SOLID PIECE) OF WATER PIPE SHALL BE CENTERED ABOVE OR BELOW THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
5. WET CONNECTS ARE TO BE LIMITED TO ONE PIPE LENGTH.
6. A NO-CONTACT LEAD PAK COMPRESSION FITTING SHALL BE USED TO PREVENT THE DIRECT CONTACT OF THE LEAD PLUMBING LINE WITH OTHER METALLIC WATER SYSTEM COMPONENTS. AN APPROVED PRODUCT IS MADE BY THE FORD METER COMPANY.
7. ALL RECONNECTS MUST BE LEAK CHECKED PRIOR TO TAPING AND BACKFILL.

WISCONSIN
HEATH BROZOVICH 45339 OCONOMOWOC, WI
PROFESSIONAL ENGINEER

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 62ND STREET
TO SOUTH 63RD STREET

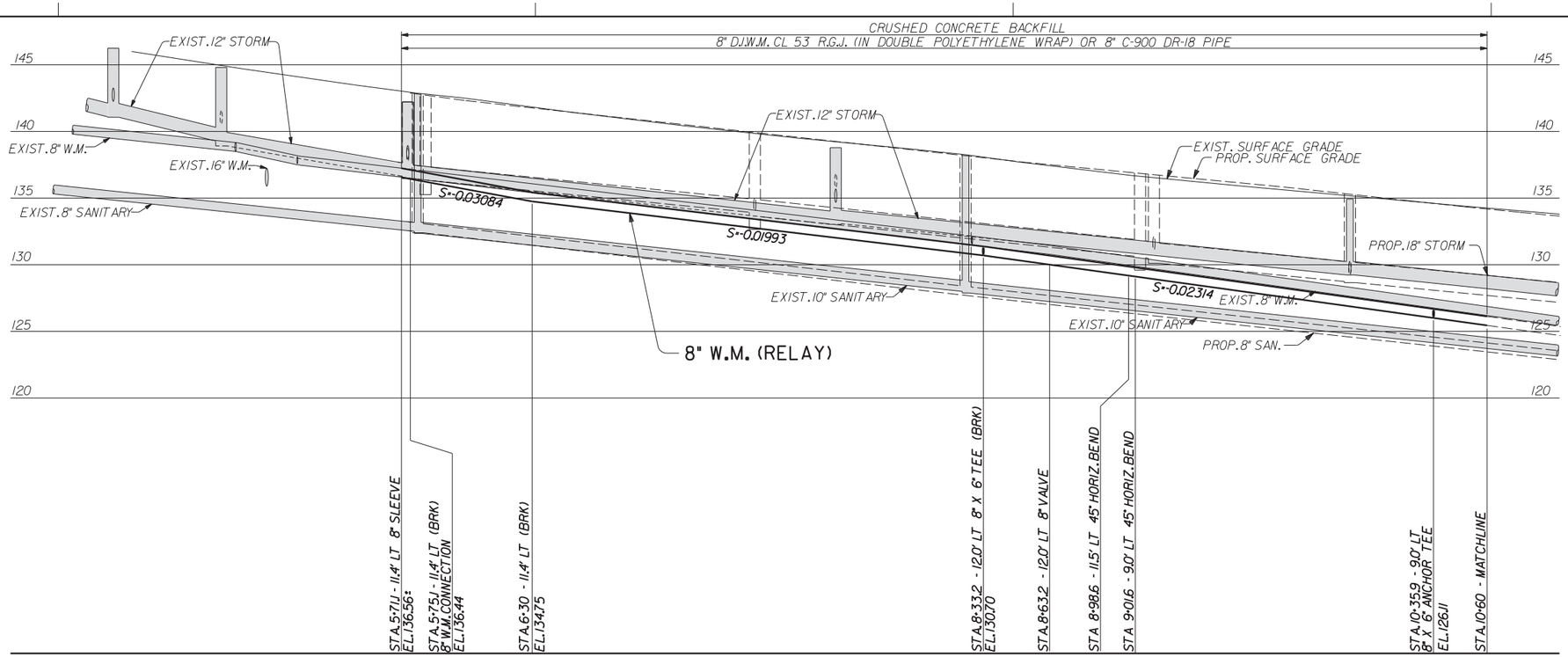
STATE CONT
ACCOUNT NO. P2327H
CONTRACTOR
INSPECTOR
AS-BUILT ENT'D BY
AS-BUILT CHK'D BY
GIS ENTERED BY
SYSTEM NO. SS-14
¼ SEC. NO. 454

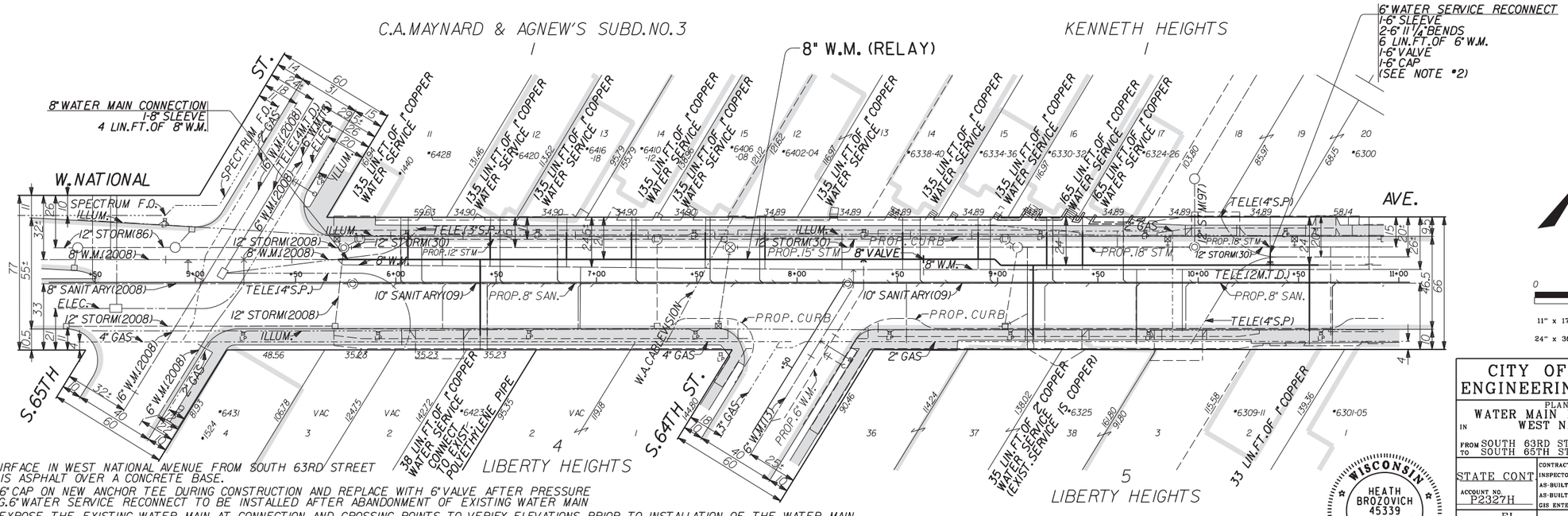
DRAWN BY FL
DATE DRAWN 7-20
DESIGNED BY MIZ
CHECKED BY HMB
SURVEY
FINAL PLAN DATE

Heath Brozovich 7-12-22
APPROVED PRINCIPAL ENGINEER DATE
Peter C Swiela 7-12-22
APPROVED CITY ENGINEER DATE

PLAN FILE NO. W-1429

PROJECT NO: 2410-13-70	HWY: WEST NATIONAL AVENUE	COUNTY: MILWAUKEE	WATER MAIN PLAN	SHEET 33





NOTES:

1. THE EXISTING ROADWAY SURFACE IN WEST NATIONAL AVENUE FROM SOUTH 63RD STREET TO SOUTH 65TH STREET IS ASPHALT OVER A CONCRETE BASE.
2. INSTALL ONE TEMPORARY 6" CAP ON NEW ANCHOR TEE DURING CONSTRUCTION AND REPLACE WITH 6" VALVE AFTER PRESSURE AND SAFE WATER TESTING. 6" WATER SERVICE RECONNECT TO BE INSTALLED AFTER ABANDONMENT OF EXISTING WATER MAIN
3. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER MAIN AT CONNECTION AND CROSSING POINTS TO VERIFY ELEVATIONS PRIOR TO INSTALLATION OF THE WATER MAIN.
4. AT CROSSINGS, ONE FULL LENGTH (SOLID PIECE) OF WATER PIPE SHALL BE CENTERED ABOVE OR BELOW THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
5. WET CONNECTS ARE TO BE LIMITED TO ONE PIPE LENGTH.
6. A NO-CONTACT LEAD PAK COMPRESSION FITTING SHALL BE USED TO PREVENT THE DIRECT CONTACT OF THE LEAD PLUMBING LINE WITH OTHER METALLIC WATER SYSTEM COMPONENTS. AN APPROVED PRODUCT IS MADE BY THE FORD METER COMPANY.
7. ALL RECONNECTS MUST BE LEAK CHECKED PRIOR TO TAPING AND BACKFILL.

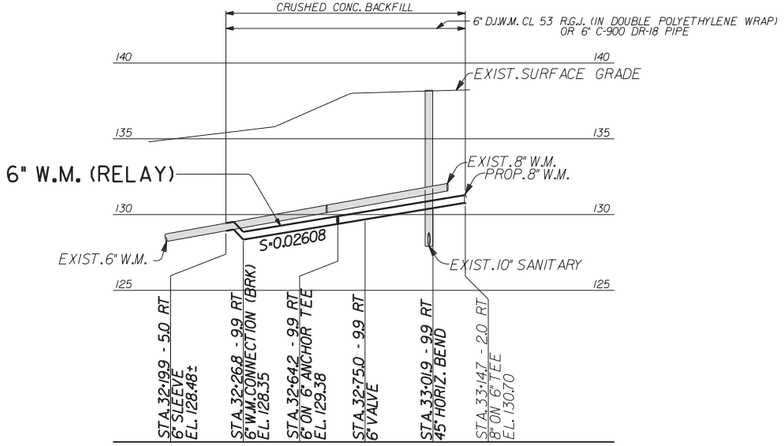
HEATH BROZOVICH 45339 OCONOMOWOC, WI — WISCONSIN PROFESSIONAL ENGINEER

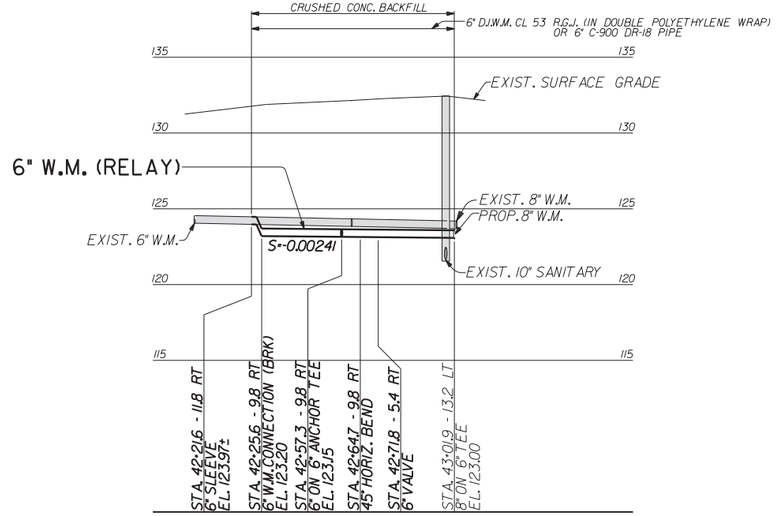
CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

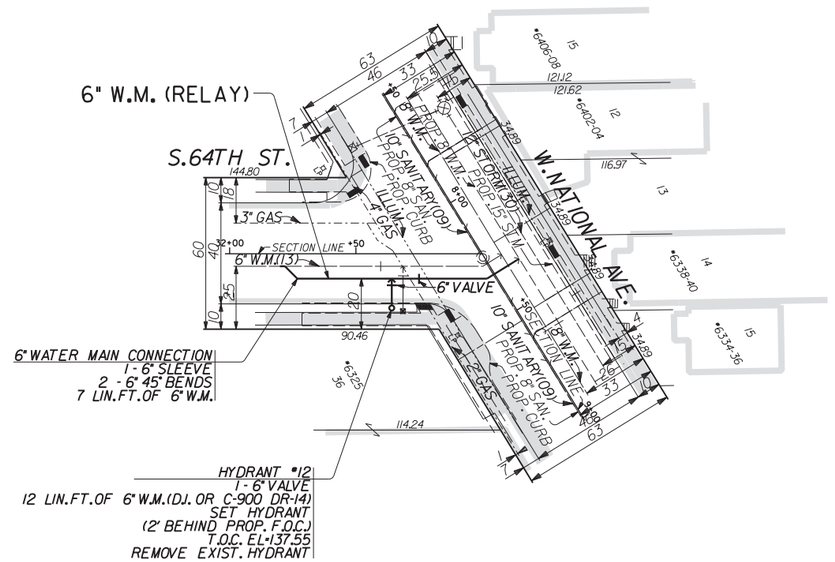
PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 63RD STREET
TO SOUTH 65TH STREET

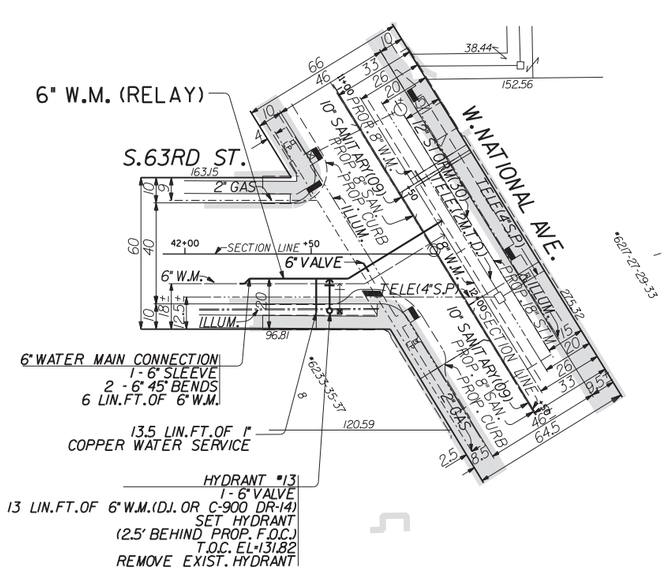
STATE CONT	CONTRACTOR	SYSTEM NO. SS-14
ACCOUNT NO. P2327H	INSPECTOR	¼ SEC. NO. 454
	AS-BUILT ENT'D BY	
	AS-BUILT CH'D BY	
	GIS ENTERED BY	
DRAWN BY FL	Heath Brozovich PRINCIPAL ENGINEER	7-12-22 DATE
DATE DRAWN 7-20		
DESIGNED BY MIZ		
CHECKED BY HMB	Peter C Daniels CITY ENGINEER	7-12-22 DATE
SURVEY FINAL PLAN DATE		PLAN FILE NO. W-1430

PROJECT NO: 2410-13-70	HWY: WEST NATIONAL AVENUE	COUNTY: MILWAUKEE	WATER MAIN PLAN	SHEET 34









N

SCALE FT.
0 30 60

11" x 17" SCALE: HOR. 1"=60'
VERT. 1"=10'

24" x 36" SCALE: HOR. 1"=30'
VERT. 1"=5'

NOTES:

1. THE EXISTING ROADWAY SURFACE IN SOUTH 63RD STREET FROM WEST NATIONAL AVENUE TO 90' SOUTH OF WEST NATIONAL AVENUE IS ASPHALT OVER A CONCRETE BASE.
2. THE EXISTING ROADWAY SURFACE IN SOUTH 64TH STREET FROM WEST NATIONAL AVENUE TO 90' SOUTH OF WEST NATIONAL AVENUE IS ASPHALT OVER A CONCRETE BASE.
3. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER MAIN AT CONNECTION AND CROSSING POINTS TO VERIFY ELEVATIONS PRIOR TO INSTALLATION OF THE WATER MAIN.
4. AT CROSSINGS, ONE FULL LENGTH (SOLID PIECE) OF WATER PIPE SHALL BE CENTERED ABOVE OR BELOW THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
5. WET CONNECTS ARE TO BE LIMITED TO ONE PIPE LENGTH.
6. A NO-CONTACT LEAD PAK COMPRESSION FITTING SHALL BE USED TO PREVENT THE DIRECT CONTACT OF THE LEAD PLUMBING LINE WITH OTHER METALLIC WATER SYSTEM COMPONENTS. AN APPROVED PRODUCT IS MADE BY THE FORD METER COMPANY.

WISCONSIN
HEATH BROZOVICH 45339 OCONOMOWOC, WI
PROFESSIONAL ENGINEER

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN SOUTH 63RD STREET
SOUTH 64TH STREET
FROM WEST NATIONAL AVENUE
TO WEST LAPHAM STREET

STATE CONT
ACCOUNT NO. P2327H

CONTRACTOR
INSPECTOR
AS-BUILT ENT'D BY
AS-BUILT CHK'D BY
GIS ENTERED BY
SYSTEM NO. SS-14
¼ SEC. NO. 454

DRAWN BY FL
DATE DRAWN 7-20
DESIGNED BY MIZ
CHECKED BY HMB
SURVEY
FINAL PLAN DATE

Heath Brozovich 7-12-22
APPROVED PRINCIPAL ENGINEER DATE

Peter C Daniels 7-12-22
APPROVED CITY ENGINEER DATE

PLAN FILE NO. W-1431

PROJECT NO: 2410-13-70 | HWY: WEST NATIONAL AVENUE | COUNTY: MILWAUKEE | WATER MAIN PLAN | SHEET 35

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

SHADE TREE

ORNAMENTAL TREE

ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)

ROADWAY LIGHT FIXTURES - SEE ELECTRICAL

PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

N

S. 65TH STREET

W. NATIONAL AVENUE

S. 64TH STREET

3-GTD

3-NWL/9-NYJ

4-PVS/12-NYJ

STREET TREE 6+49.00, 26.0 RT

STREET TREE 6+87.50, 26.0 RT

STREET TREE 7+26.00, 26.0 RT

MATCH LINE STA. 8+00

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 36	E

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

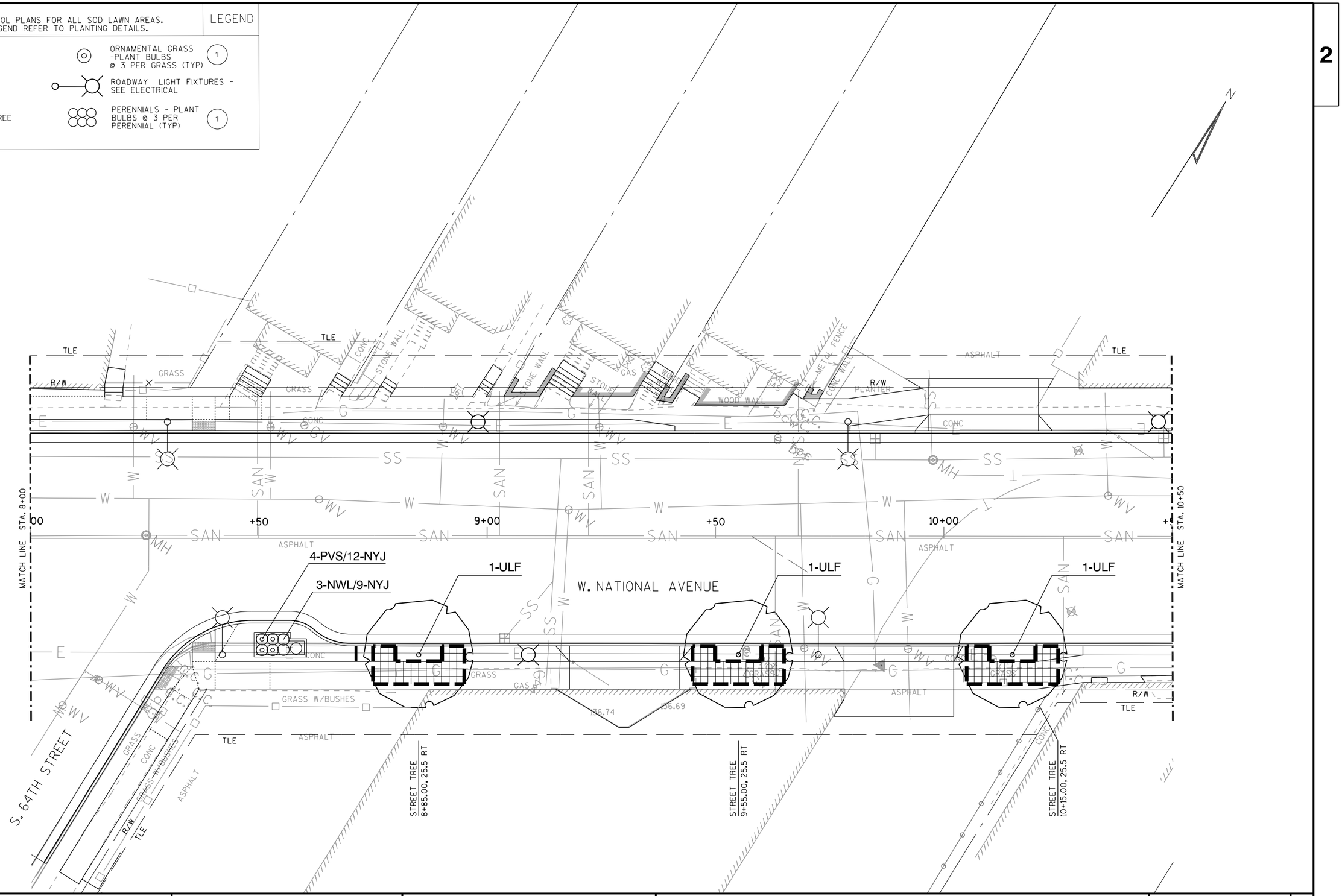
SHADE TREE

ORNAMENTAL TREE

ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)

ROADWAY LIGHT FIXTURES - SEE ELECTRICAL

PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 37	E

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

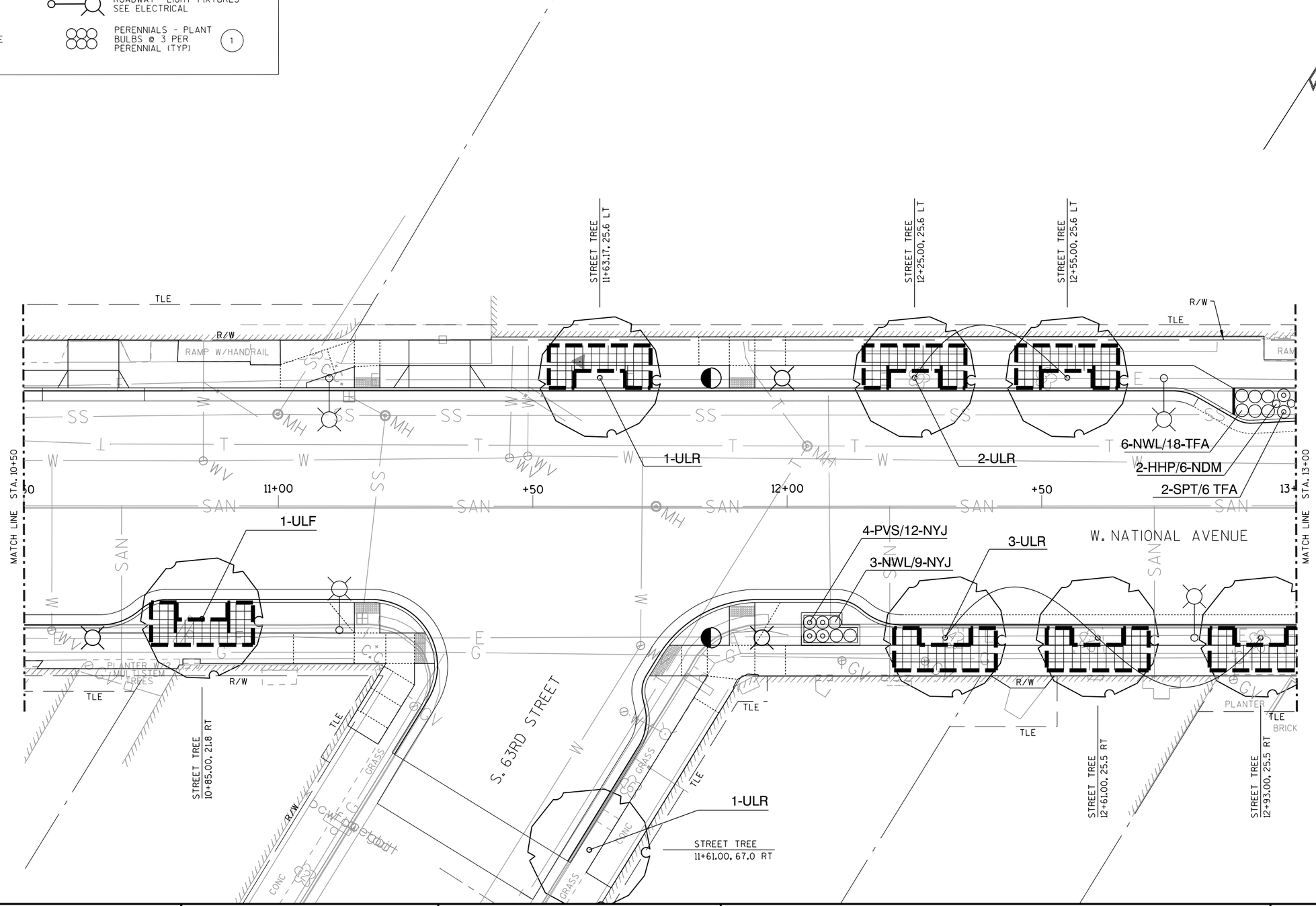
SHADE TREE

ORNAMENTAL TREE

ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)

ROADWAY LIGHT FIXTURES - SEE ELECTRICAL

PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 38	E

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)
- ROADWAY LIGHT FIXTURES - SEE ELECTRICAL
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

W. GREENFIELD AVENUE

STREET TREE 13+11.00, 20.9 LT

STREET TREE 13+46.00, 22.8 LT

STREET TREE 13+82.40, 23.1 LT

3-SPM

26-HMS/60-TFA/18-NDM

6-CAK/18-NDM

16-HMS/48-TFA

4-CAK/12-NDM

7-NWL/21-TFA

20-SPT/60-TFA

10-HHP/30-NDM

3-ULR

R/W

TLE

P W/HANDRAIL

CONC

ASPHALT

PLANTER

PAVERS

BRICK PAVERS

MATCH LINE STA. 10+50

13+00 +50 14+00 +50 15+00 +50 16+00

W. NATIONAL AVENUE

STREET TREE 13+50.00, 25.5 RT

STREET TREE 13+80.00, 25.5 RT

STREET TREE 14+10.00, 25.5 RT

BIKE RACK

CONC.

TOP OF CONC. STOOP EL. 123.7

OVERHEAD SIGN

S. 62ND STREET

N

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 39	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\023104_pl.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

PLANT DATA CHART

SYMBOL	COMMON NAME	SCIENTIFIC NAME	ANS TYPE	MATURE HEIGHT	SIZE WHEN PLANTED	ROOT CONDITION	MINIMUM SIZE BALL/POT ROOT DIAM.	BALL/POT ROOT DEPTH	PLANT HOLE DIAM.	PLANT HOLE DEPTH	BRACE OR GUY	FERTILIZER UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAM.	SPACING
	LARGE DECIDUOUS TREES														
ULF	ELM, FONTIER	ULMUS 'FRONTIER'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
ULR	ELM, REGAL	ULMUS X 'REGAL'	1T	60'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
GTD	HONEYLOCUST, STREETKEEPER	GLEDITSIA TRIACANTHOS INERMIS 'DRAVES'	1T	40'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
	SMALL DECIDUOUS TREES														
SPM	LILAC, CHINA SNOW PEKING	SYRINGA PEKINENSIS 'MORTON'	3T	25'	8'-10' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
	PERENNIALS														
NWL	CATMINT, WALKER'S LOW	NEPETA RACEMOSA 'WALKER'S LOW'	1S	24"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
HMS	DAYLILY, STRAWBERRY CANDY	HEMEROCALLIS 'STRAWBERRY CANDY'	1S	26"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
HHP	DAYLILY, HYPERION	HEMEROCALLIS 'HYPERION'	1S	40"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
	ORNAMENTAL GRASSES														
CAK	FEATHER REED GRASS	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	1S	5'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	36"
SPT	PRAIRIE DROPSEED, TARA DWARF	SPOROBOLIS HETEROLEPSIS 'TARA'	1S	24"	4" POT	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
PVS	SWITCHGRASS, SHENANDOAH	PANICUM VIRGATUM 'SHENANDOAH'	1S	30"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
	SPRING BULBS														
NDM	DAFFODIL, DUTCH MASTER	NARCISSUS 'DUTCH MASTER'	1S	16"	MIN. 4" CIRCUMF.	BULB	X	X	4"	6"	NO	1	NO	NONE	PER LEGEND
NYJ	DAFFODIL, YELLOW JONQUILS	NARCISSUS 'YELLOW JONQUILS'	1S	16"	MIN. 4" CIRCUMF.	BULB	X	X	4"	6"	NO	1	NO	NONE	PER LEGEND
TFA	TULIP, ALBERT HEIJN	TULIPA 'ALBERT HEIJN	1S	16"	MIN. 4" CIRCUMF.	BULB	X	X	4"	6"	NO	1	NO	NONE	PER LEGEND

B&B: BALLED AND BURLAPED
CG: CONTAINER GROWN

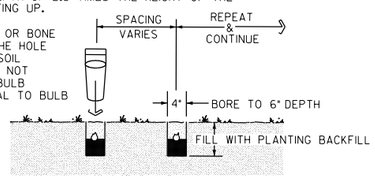
* MULCH RING ONLY APPLICABLE IF PLANTED OUTSIDE OF A PLANTING BED

CONTRACTOR TO TRIANGULATE BULBS BETWEEN ORNAMENTAL GRASSES AND PERENNIALS IN QUANTITIES NOTED ON LANDSCAPE PLAN (TYP)

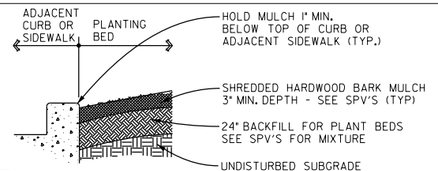
INSTALL BULBS IN FALL

SET PERENNIAL BULBS @ DEPTH OF 2.5 TIMES THE HEIGHT OF THE BULB W/ GROWTH TIP POINTING UP.

PROVIDE EITHER BULB FOOD OR BONE MEAL IN THE BOTTOM OF THE HOLE AND THEN COVER WITH TOPSOIL BEFORE PLANTING BULB. DO NOT PLANT BULB DIRECTLY ON BULB FOOD/BONE MEAL. INCIDENTAL TO BULB PLANTING.



1 **FALL BULB PLANTING DETAIL**



2 **MULCH EDGE AT CURB OR SIDEWALK**

LANDSCAPING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL RELATED EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES, INCLUDING DEPTHS, PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY AND ALL COST OR OTHER LIABILITIES INCURRED DUE TO DAMAGE OF SAID UTILITIES/STRUCTURES/ETC.

2. SEE STANDARD SPECIFICATIONS, SPV'S, AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, PLANT STAKING METHODS, PLANT PIT DIMENSIONS, BACKFILL AND OTHER RELATED REQUIREMENTS.

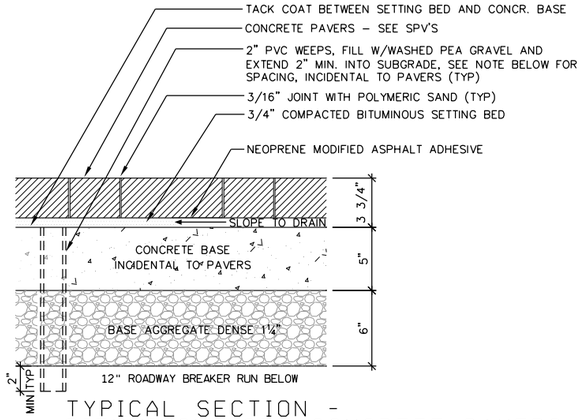
3. PLANT NAMES ARE ABBREVIATED ON THE DRAWINGS. SEE PLANT LEGEND FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES AND OTHER REMARKS.

   IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH ALL PLANT MATERIALS FREE OF PESTS OR PLANT DISEASES. IT IS THE CONTRACTOR'S OBLIGATION TO MAINTAIN AND WARRANTY ALL PLANT MATERIALS PER THE SPECIFICATIONS. ALL PLANTS SHALL BE SUBJECT TO OWNER'S APPROVAL PRIOR TO INSTALLATION.

4. THE CONTRACTOR SHALL FINE GRADE, RAKE AND BE RESPONSIBLE FOR POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND THROUGHOUT SITE, WITH ACCURATELY SET FLOW LINES. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN THE FINAL WORK.

5. COORDINATE INSTALLATION OF ALL PLANT MATERIAL WITH INSTALLATION OF ALL ADJACENT PAVEMENTS, PLANTER CURBING, ROADWAY CURB & GUTTER AND RELATED STRUCTURES. ANY DAMAGE TO EXISTING IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.

6. ALL PLANTING BEDS ARE TO BE EXCAVATED TO A DEPTH OF 24-INCHES AND REPLACED WITH BACKFILL FOR PLANT BEDS.



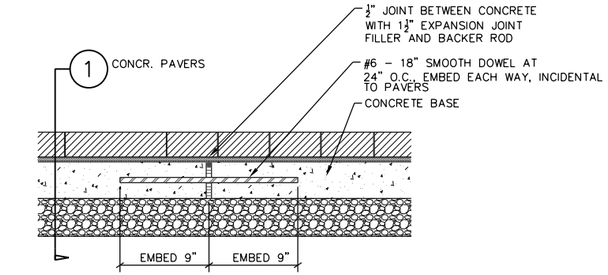
TYPICAL SECTION - BITUMINOUS-SET CONCRETE PAVERS OVER CONCRETE BASE

1

REFER TO LAYOUT AND MATERIALS PLANS FOR LOCATION OF CONCRETE PAVERS. PROVIDE CONTROL JOINTS AT 4'-0" O.C. PROVIDE EXPANSION JOINTS AT 24'-0" O.C. MAX. UNLESS OTHERWISE INDICATED ON DRAWINGS.

DETAIL SHEET NOTE:

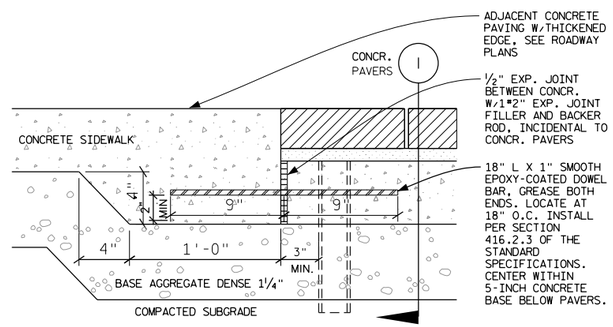
XX DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)



BITUMINOUS-SET CONCRETE PAVERS CONSTRUCTION/EXPANSION JOINT

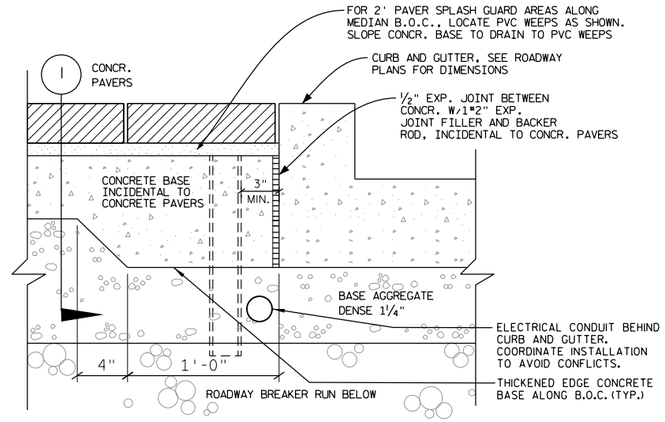
2

PROVIDE AT 25' O.C. UNLESS OTHERWISE NOTED ON STREETSCAPE LAYOUT AND MATERIALS PLANS



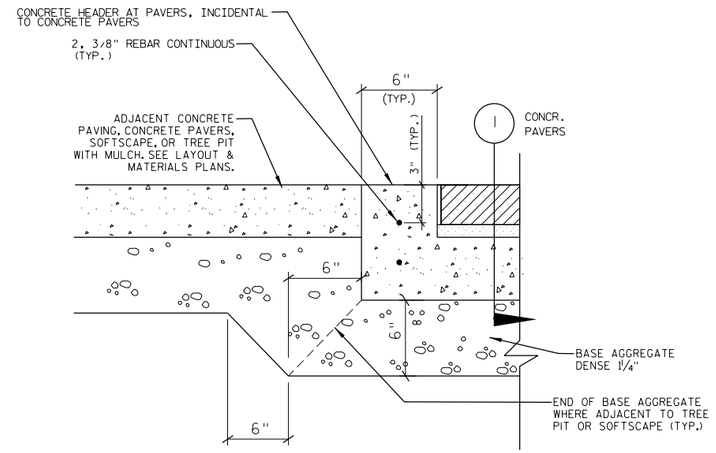
TYPICAL SECTION - CONCRETE PAVERS AT CONCRETE SIDEWALK

3

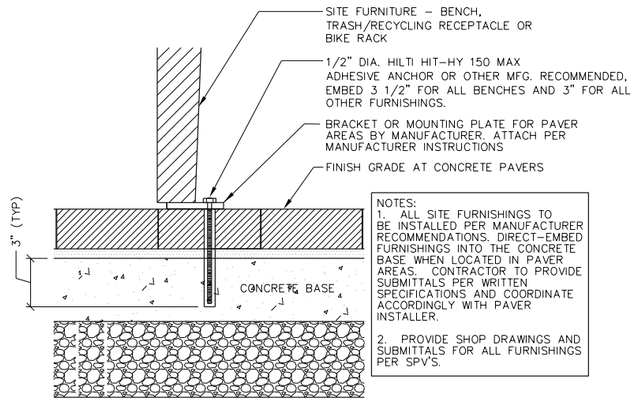


TYPICAL SECTION - CONCRETE PAVERS AT BACK OF CURB

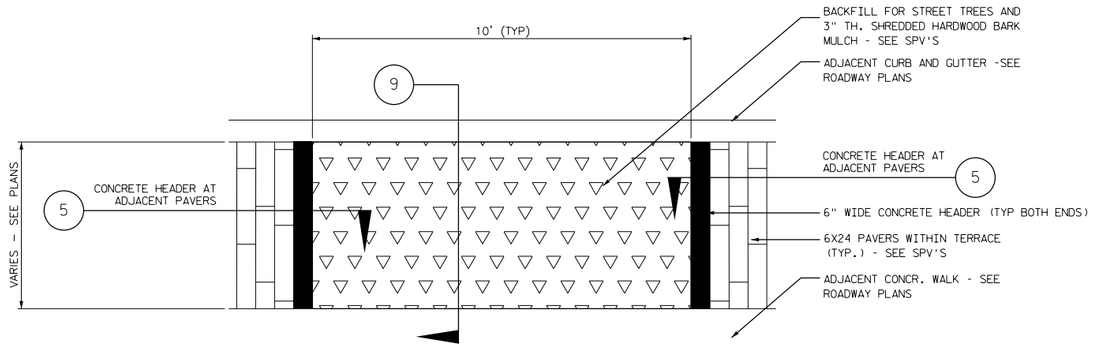
4



5 TYPICAL SECTION - CONCRETE HEADER AT CONCRETE PAVERS



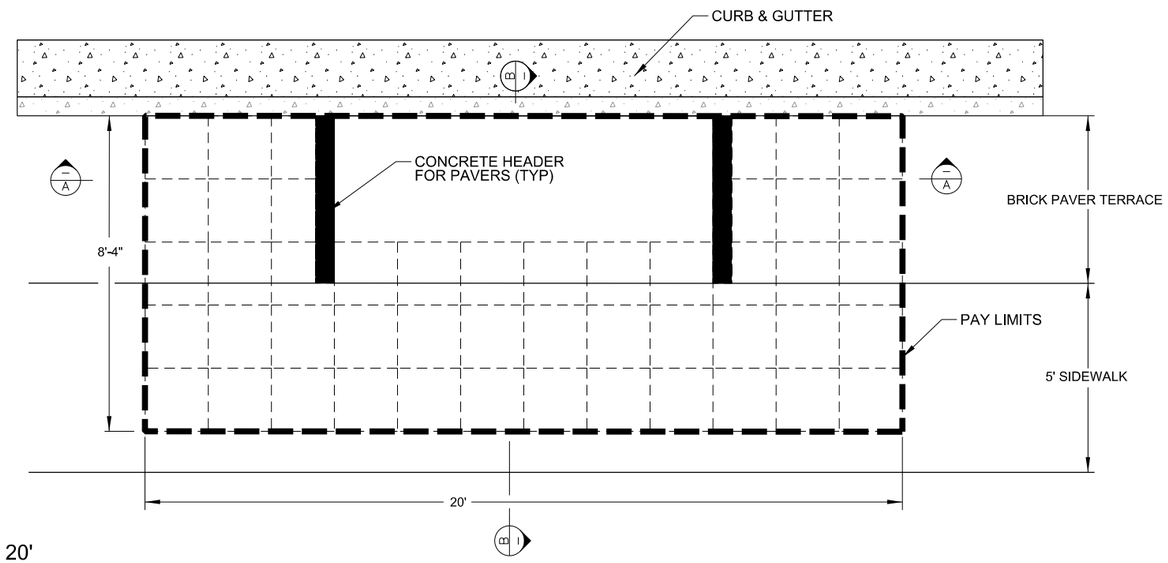
6 TYPICAL SITE FURNITURE MOUNTING



7 TYPICAL LAYOUT PLAN – STREET TREE PLANTER WITH MULCH BED

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR TREE PLANTER LOCATIONS AND DIMENSIONS

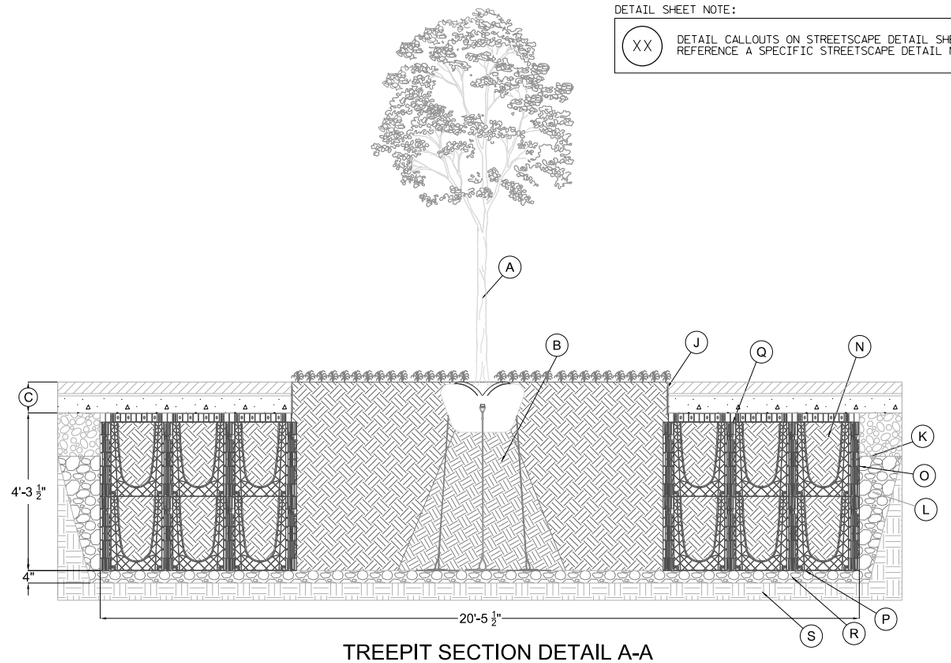
N.T.S.



TREEPIT LAYOUT

DETAIL SHEET NOTE:

XX DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)



TREEPIT SECTION DETAIL A-A

KEYED NOTES

A TREE (SEE DETAILS FOR SPECIES AND PROPER PLANTING DEPTH.)

B COMPACTED SOIL BASE TO SUPPORT ROOTBALL, OR AS SPECIFIED.

C SURFACE & COMPACTED AGGREGATE PAVEMENT BASE - (DESIGN PER SPECIFICATIONS. THICKEN EDGE AT TREEPIT OPENING. COMPACT TO 95% MINIMUM STANDARD PROCTOR DENSITY.)

D NOT USED

E NOT USED

F NOT USED

G NOT USED

H NOT USED

I NOT USED

J REROOT™ 300 ROOT BARRIER (GREENBLUE.COM/REROOT) (PLACED VERTICALLY AROUND THE INSIDE OF THE TREEPIT OPENING WITH THE RIBS FACING THE TREE. TOP OF BARRIER MUST BE FLUSH WITH THE PLANTING SOIL. SEAMS MUST OVERLAP 6" - 8" AND BE SEALED WITH JOINING TAPE.)

K COMBIGRID GEOCOMPOSITE/GRID (GREENBLUE.COM) (PLACED HORIZONTALLY ON TOP OF THE SOIL CELLS. FOLD THE GEOCOMPOSITE/GRID DOWNTHE OUTER EDGE OF ROOTSPACE 10" - 12" AND FOLD IT OUT HORIZONTALLY 10" - 12". OVERLAP SEAMS 10" - 12") (OPTION - SOIL GEOGRID)

L COMPACTED BACKFILL - BACKFILL MATERIAL FOR OUTER PERIMETER ADJACENT TO SOIL CELLS SHALL BE FREE OF ORGANIC MATERIAL, TRASH AND OTHER DEBRIS, SHALL BE FREE OF TOXIC MATERIAL HARMFUL TO PLANT GROWTH. (COMPACTABLE FILL OR AS SPECIFIED.) (COMPACT TO 95% MINIMUM STANDARD PROCTOR DENSITY)

M ARBORVENT™ 150 AERATION INLET & PIPE (SOIL AERATION AND IRRIGATION SYSTEM.) (LOCATION AS PER PLANS.) CAST-IN-PLACE SUPPORT COLLAR IF REQUIRED.

KEYED NOTES (CONT'D)

N PLANTING SOIL (SCREENED SANDY LOAM WITH 4-8% ORGANICS BY VOLUME. SEE PLANTING SOIL SPECIFICATION.) (FOOT COMPACTION ONLY.)

O ROOTSTOP™ 1200 ROOT BARRIER (GREENBLUE.COM/ROOTSTOP) (WRAPS VERTICALLY AROUND THE SOIL CELLS. SEAMS MUST OVERLAP 10" - 12" AND BE SEALED WITH JOINING TAPE.)

P ARBORMESH (SOIL REINFORCEMENT MESH) LAID ON TOP OF COMPACTED BASE COURSE.

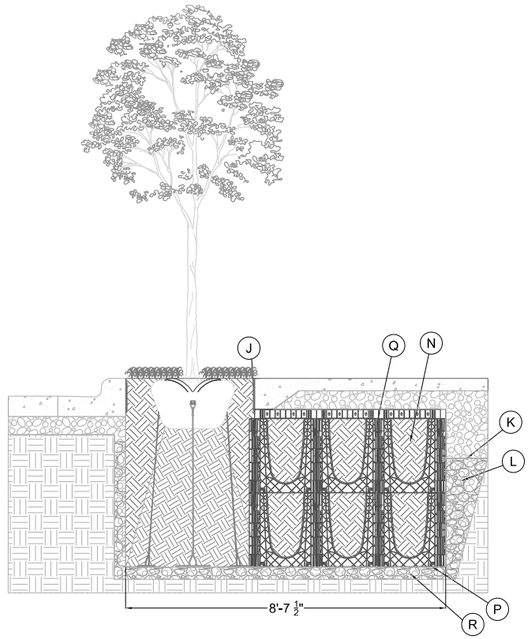
Q ROOTSPACE® 600 PAVEMENT SUPPORT SYSTEM / 2-LAYERS (GREENBLUE.COM/ROOTSPACE) (FILLED WITH PLANTING SOIL AS SPECIFIED.)

R AGGREGATE SUB-BASE / DRAINAGE LAYER - FREE DRAINING, 1/4" TO 1" CRUSHED ANGULAR STONE. COMPACT TO MINIMUM OF 95% STANDARD PROCTOR DENSITY.

S COMPACTED SUB-GRADE

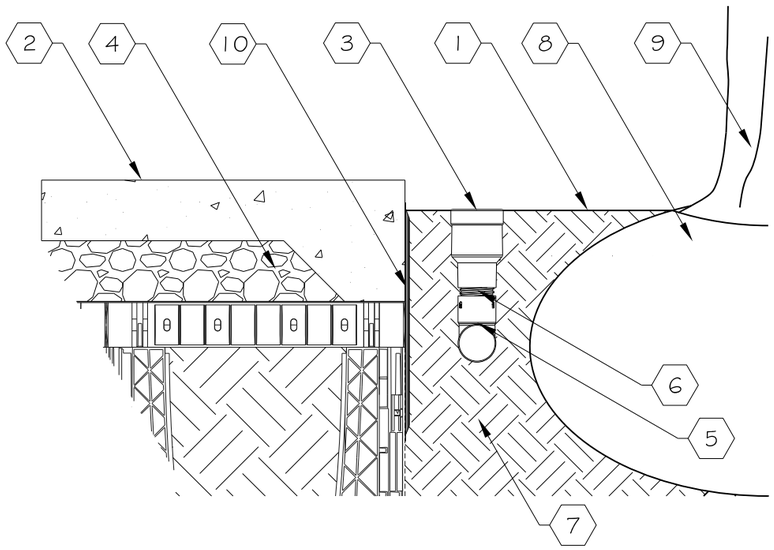
INSTALLATION/EXCAVATION NOTES:

1. ADD 6" MINIMUM TO OUTER PERIMETER DIMENSIONS WHEN EXCAVATING THE PIT.
2. ALWAYS CHECK THE PIT DIMENSIONS AT THE BASE OF THE PIT, ENSURING THAT SIDES ARE CLEAN AND SQUARE.
3. ENSURE THE AGGREGATE BASE IS SCREEDED, LEVELED AND COMPACTED PROPERLY BEFORE INSTALLING THE ROOTSPACE® SYSTEM.
4. USE ROOTSPACE® INFILL PANELS ADJACENT TO VEHICLE TRAFFIC AREAS.
5. WHERE A SINGLE ROW OF ROOTSPACE® IS USED, ANCHOR THE UPRIGHT PANELS TO THE PIT BASE USING 3/8" X 8" GALVANIZED SPIRAL SPIKES.
6. SEE THE ROOTSPACE® INSTALLATION & MAINTENANCE MANUAL AND/OR THE UTILITIES & ROOTSPACE® GUIDE FOR ADDITIONAL DETAILS.



TREEPIT SECTION DETAIL B-B

8 ARBORSYSTEM - ROOTSPACE URBAN TREE SYSTEM DETAIL



SECTION VIEW

KEYED NOTES

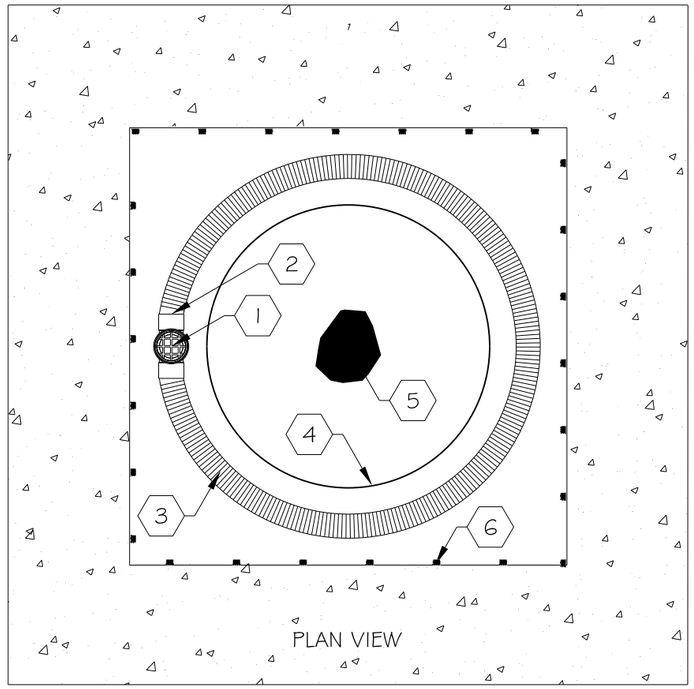
1. FINISH GRADE, SEE PLAN
2. PAVEMENT SURFACE
3. ROOTRAIN™ AERATION/IRRIGATION SYSTEM INLET.
4. COMPACTED AGGREGATE PAVEMENT BASE
5. ROOTRAIN™ AERATION/IRRIGATION SYSTEM TEE.
6. ROOTRAIN™ AERATION/IRRIGATION SYSTEM PIPE, 2 3/8" DIA. FIELD CUT TO FIT AS NEEDED.
7. PLANTING SOIL
8. TREE ROOTBALL
9. TREE TRUNK
10. REROOT™ URBAN ROOT MANAGEMENT SYSTEM.

GENERAL NOTES

A. ROOTBALL AERATION SYSTEM SHALL BE ROOTRAIN™ AERATION/IRRIGATION SYSTEM AS AVAILABLE FROM GREENBLUE URBAN (866-282-2743).

A ROOTRAIN™ AERATION SYSTEM

SCALE: N.T.S.



PLAN VIEW

KEYED NOTES

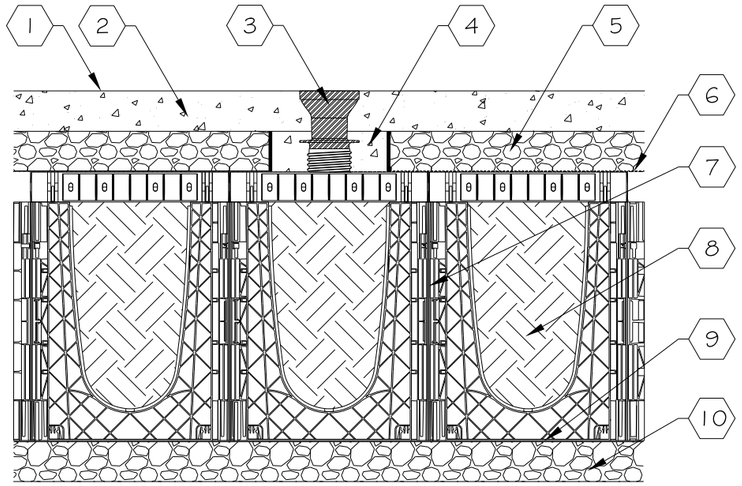
1. ROOTRAIN™ AERATION/IRRIGATION SYSTEM INLET.
2. ROOTRAIN™ AERATION/IRRIGATION SYSTEM TEE.
3. ROOTRAIN™ AERATION/IRRIGATION SYSTEM PIPE2 3/8" DIA. FIELD CUT TO FIT AS NEEDED.
4. TREE ROOTBALL
5. TREE TRUNK
6. REROOT™ URBAN ROOT MANAGEMENT SYSTEM.

GENERAL NOTES

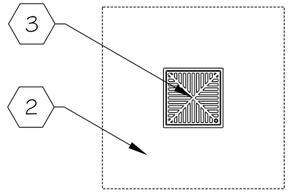
A. ROOTBALL AERATION SYSTEM SHALL BE ROOTRAIN™ AERATION/IRRIGATION SYSTEM AS AVAILABLE FROM GREENBLUE URBAN (866-282-2743).

B ROOTRAIN™ AERATION SYSTEM

SCALE: N.T.S.



SECTION VIEW



PLAN VIEW

KEYED NOTES

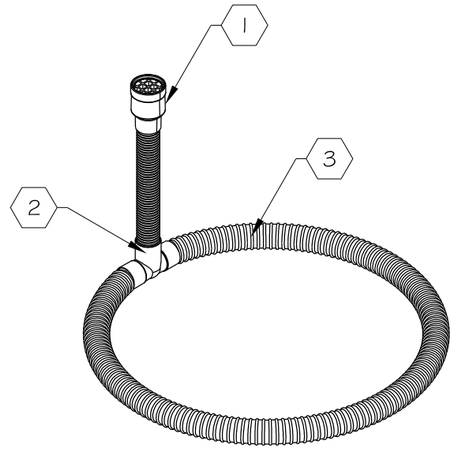
1. FINISH GRADE, SEE PLAN
2. PAVEMENT SURFACE
3. ARBORVENT™ 150 SOIL AERATION/IRRIGATION SYSTEM INLET, (SEE NOTE A).
4. CONCRETE COLLAR TO SUPPORT ARBORVENT™ 150 (TYP. 12" DIAMETER).
5. COMPACTED AGGREGATE PAVEMENT BASE.
6. GEOGRID/FABRIC COMPOSITE
7. ROOTSPACE® PAVEMENT SUPPORT SYSTEM
8. PLANTING SOIL
9. GEOGRID/SOIL REINFORCEMENT
10. AGGREGATE SUB-BASE

GENERAL NOTES

A. AERATION INLET SHALL BE ARBORVENT™ 150 SOIL AERATION INLET AS AVAILABLE FROM GREENBLUE URBAN (866-282-2743).

A ARBORVENT™ 150 SOIL AERATION INLET

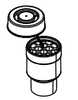
SCALE: N.T.S.



INLETS

ARBORVENT™ 100 (4" square)

PRECINCT™ (4" round)



CIVIC™ (3 ½" round)

URBAN™ (3 ½" round)

KEYED NOTES

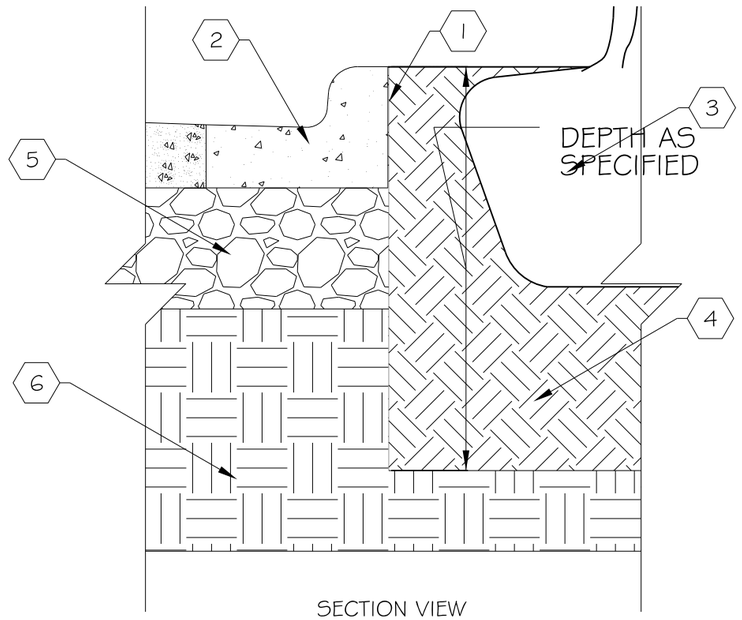
1. ROOTRAIN™ AERATION/IRRIGATION SYSTEM INLET.
2. ROOTRAIN™ AERATION/IRRIGATION SYSTEM TEE.
3. ROOTRAIN™ AERATION/IRRIGATION SYSTEM PIPE2 ⅜" DIA. FIELD CUT TO FIT AS NEEDED.

GENERAL NOTES

A. ROOTBALL AERATION SYSTEM SHALL BE ROOTRAIN™ AERATION/IRRIGATION SYSTEM AS AVAILABLE FROM GREENBLUE URBAN (866-282-2743).

A ROOTRAIN™ AERATION SYSTEM

SCALE: N.T.S.



SECTION VIEW

KEYED NOTES

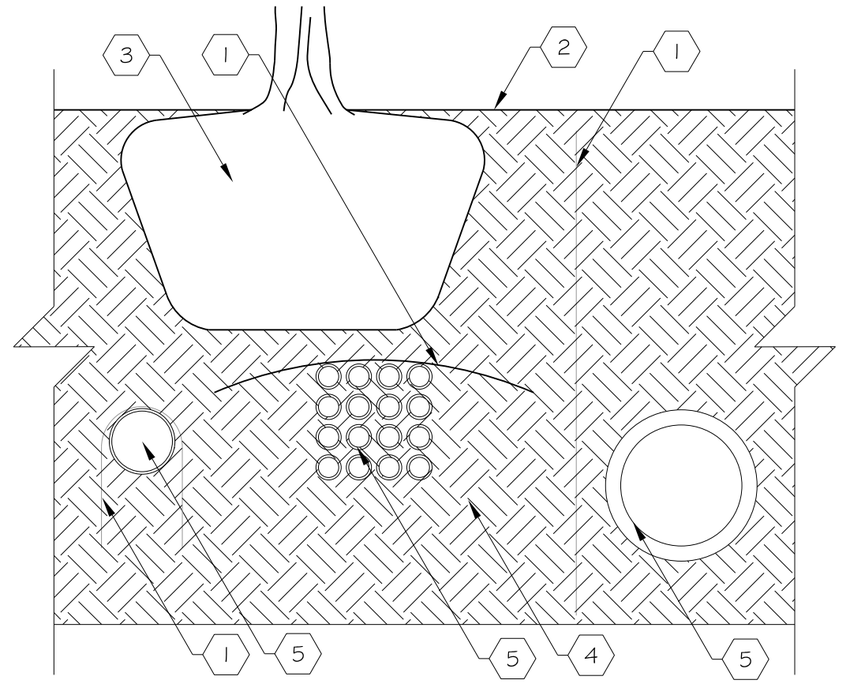
1. ROOTSTOP™ ROOT AND MOISTURE BARRIER, INSTALL WITHIN 2" OF FINISH GRADE. OVERLAP SEAMS BY 8" AND SEAL WITH FUSION TAPE. MINIMUM 24" DEPTH RECOMMENDED. (SEE NOTE A).
2. CURB & GUTTER
3. TREE ROOTBALL
4. PLANTING SOIL
5. PAVEMENT AGGREGATE BASE
6. NATIVE SOIL

GENERAL NOTES

A. ROOT AND MOISTURE BARRIER SHALL BE ROOTSTOP™ (SPECIFY DEPTH) AS AVAILABLE FROM GREENBLUE URBAN (866-282-2743).

A ROOT BARRIER AT CURB

SCALE: N.T.S.



SECTION VIEW

KEYED NOTES

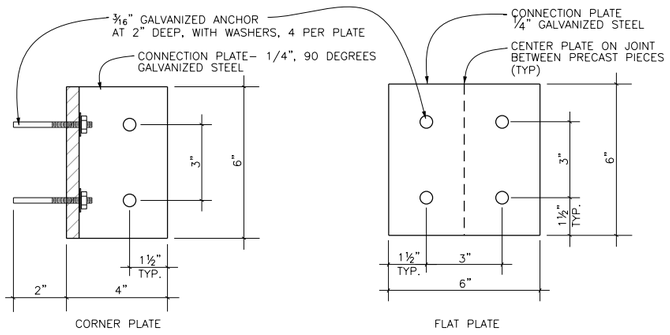
1. ROOTSTOP™ ROOT AND MOISTURE BARRIER, INSTALL WITHIN 2" OF FINISH GRADE. OVERLAP SEAMS BY 8" AND SEAL WITH FUSION TAPE. (SEE NOTE A).
2. FINISH GRADE
3. TREE ROOTBALL
4. PLANTING SOIL
5. UTILITY

GENERAL NOTES

A. ROOT AND MOISTURE BARRIER SHALL BE ROOTSTOP™ (SPECIFY DEPTH) AS AVAILABLE FROM GREENBLUE URBAN (866-282-2743).

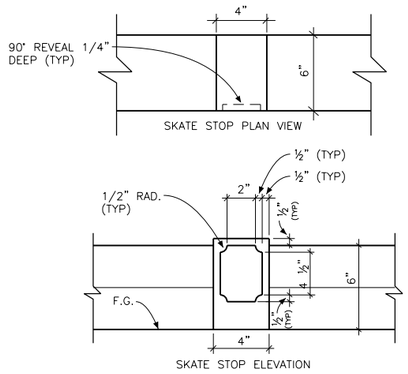
F ROOT BARRIER AT UTILITY

SCALE: N.T.S.



9 PRECAST CONCRETE PLANTER CONNECTION PLATE DETAIL

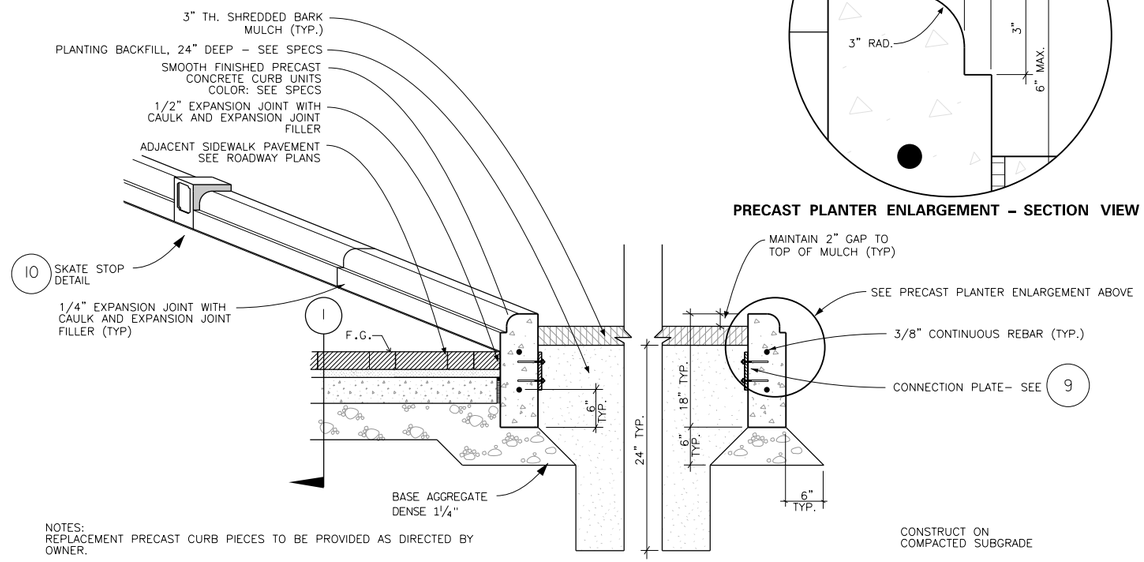
ALL PLATE HARDWARE AND FASTENERS ARE INCIDENTAL TO PRECAST CONCRETE PLANTERS.



10 PRECAST CONCRETE PLANTER SKATE STOP DETAIL

DETAIL SHEET NOTE:

(XX) DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)

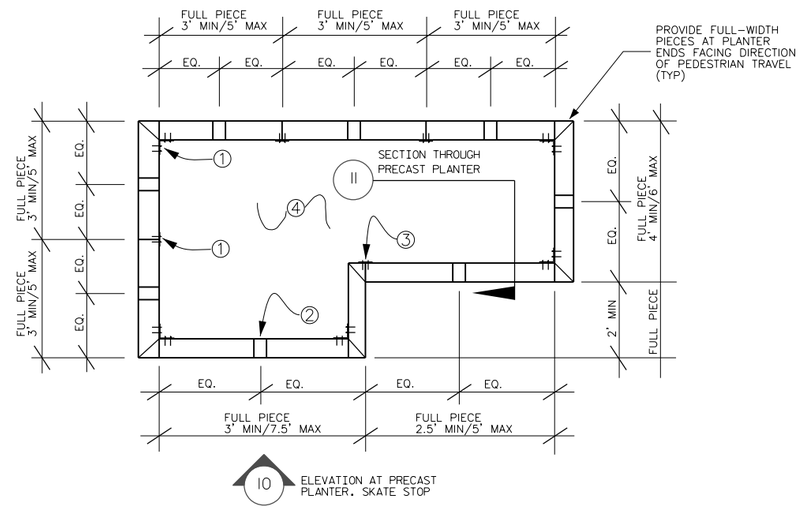


NOTES:
REPLACEMENT PRECAST CURB PIECES TO BE PROVIDED AS DIRECTED BY OWNER.

TOP OF ALL PRECAST CONCRETE PLANTERS TO BE HELD CONSISTENT AT 6" ABOVE ADJACENT F.G. (TYP). PRECAST PIECES TO BE MANUFACTURED TO MATCH PROPOSED GRADING AS BEST AS POSSIBLE. SEE GRADING PLANS FOR PROPOSED ADJACENT GRADING.

CAULK FOR PRECAST CONCRETE TO MATCH COLOR OF PRECAST CONCRETE. SUBMIT SAMPLES TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION.

11 TYPICAL SECTION - PRECAST CONCRETE CURB PLANTER



NOTES

1. CONNECTION PLATE – SEE 9
2. SKATE STOP DETAIL (TYP SYMB) PROVIDE ONE SKATE STOP PER EACH FULL-SIZED PRECAST PIECE. – SEE 10
3. 1/4" EXPANSION JOINT WITH CAULK & EXPANSION JOINT SEALANT BETWEEN PRECAST PIECES (TYP.)
4. 3" TH. SHREDDED BARK MULCH AND BACKFILL FOR PLANT BEDS, 24" DEEP (SEE LS PLANS FOR PLANTING & DETAILS)

SUBMIT DETAILED SHOP DRAWINGS FOR EACH INDIVIDUAL PRECAST CONCRETE PLANTER AS DESCRIBED IN SPV'S

12 TYPICAL LAYOUT PLAN - PRECAST CONCRETE CURB PLANTER

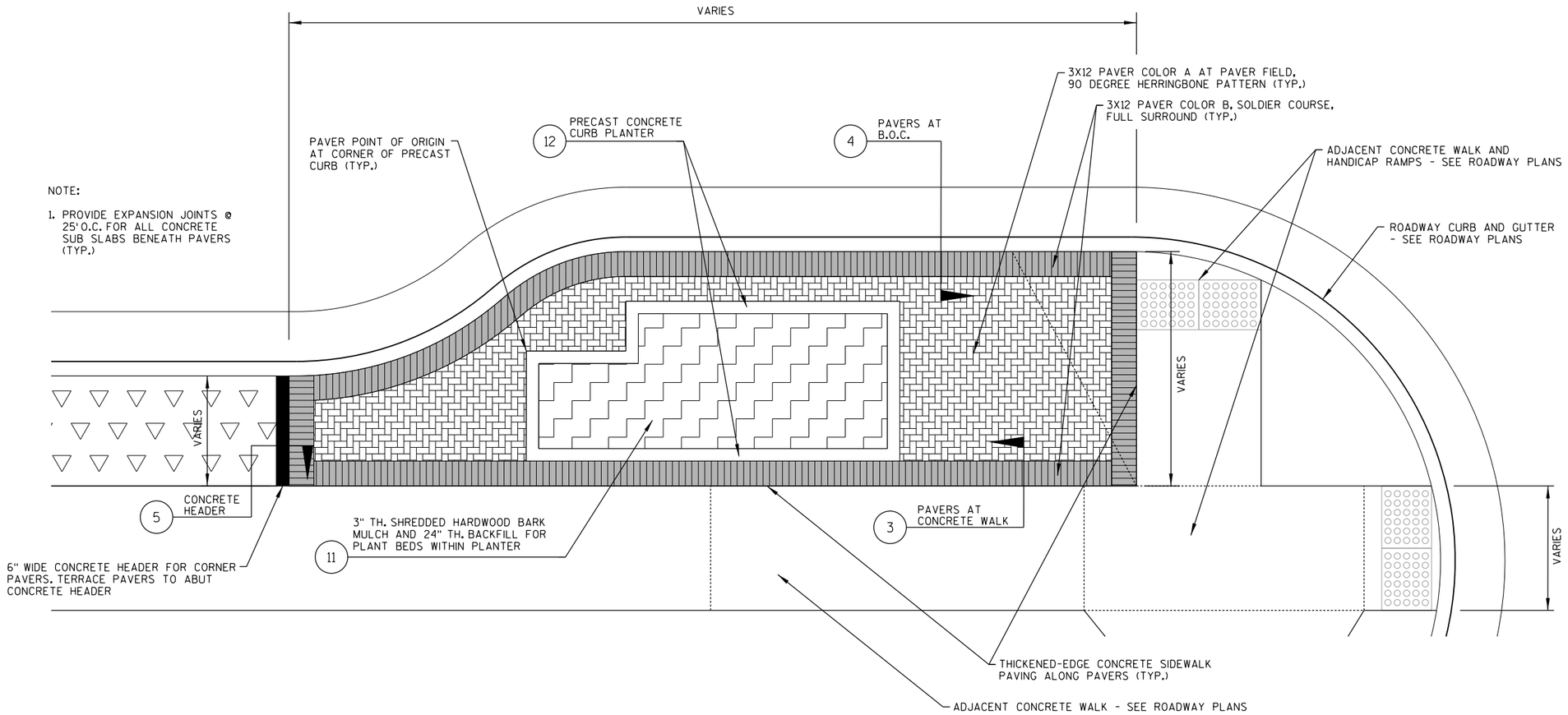
REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS AND DIMENSIONS OF PRECAST CONCRETE PLANTERS

DETAIL SHEET NOTE:

(XX) DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)

NOTE:

1. PROVIDE EXPANSION JOINTS @ 25'O.C. FOR ALL CONCRETE SUB SLABS BENEATH PAVERS (TYP.)



13 TYPICAL LAYOUT PLAN - CONCRETE PAVERS AT ROADWAY CORNER AND TERRACE AREA

N.T.S.

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS OF CONCRETE PAVERS. PRECAST CONCRETE PLANTER CONFIGURATIONS VARY PER EACH LOCATION.

2

2

STREETSCAPE LAYOUT NOTES

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

ALL DIMENSIONS SHOWN ARE IN FEET AND INCHES

UNLESS INDICATED OTHERWISE, ALL DIMENSIONS SHOWN ALONG THE ROADWAYS ARE TAKEN FROM THE BACK OF THE CURB.

UNLESS SHOWN OTHERWISE. ALL DIMENSIONS ARE GIVEN FOR THE CENTER POINT OF SITE ELEMENTS & STRUCTURES SUCH AS BIKE RACKS, UNIT PAVERS, TREE PLANTING PITS ETC.

LOCATE EXPANSION AND CONTROL JOINTS PER PLANS AND DETAILS.

REFER TO ROADWAY PLANS FOR THE LOCATIONS OF PROPOSED UTILITY LINES, STRUCTURES, GRADING AND SITE ELEVATIONS.

ALL PAVING SURFACES SHALL BE FLUSH AND MEET SMOOTHLY AND EVENLY.

SMOOTH, SQUARE AND EVEN JOINTS SHALL BE PROVIDED WHERE MATCHING EXISTING PAVEMENT AND SIDEWALK BY SAWCUTTING.

LOCATE ALL SITE FURNISHINGS A MINIMUM OF 18" CLEAR FROM B.O.C. TO MEET WISDOT CLEARANCE STANDARDS.

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

ALL UTILITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL VERIFY LAYOUT PATTERN FOR ALL PAVER PAVING WITH OWNER'S REPRESENTATIVE PRIOR TO START OF INSTALLATION. CONTRACTOR TO PROVIDE MOCK-UPS, SAMPLES, AND INFORMATION FOR PAVER PAVING AS DIRECTED IN THE PROJECT SPECIAL PROVISIONS.

PROVIDE ENOUGH PAVERS TO COVER REQUIRED CUTTING IN ORDER TO ACHIEVE PAVING PATTERNS AS SHOWN ON PLANS.

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

- CONCRETE PAVERS AT ROADWAY TERRACE - SEE SPV'S (1) (5)
- CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1) (5)
- BACKFILL FOR PLANT BEDS, 24" TH. AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (11)
- BACKFILL FOR STREET TREES AND 3" TH. SHREDDED BARK MULCH OR 3" DECORATIVE STONE MULCH - SEE SPV'S (7) (8)
- ROOTSPACE PAVEMENT SUPPORT SYSTEM AT STREET TREES. SEE SPV'S (7) (8)
- PRECAST CONCR. PLANTER CURB - SEE SPV'S (12)
- B — BICYCLE RACK - SEE SPV'S. PROVIDE MIN 18" CLEAR BETWEEN RACKS AND B.O.C. (TYP.)
- R T — TRASH & RECYCLING RECEPTACLES - SEE SPV'S. PROVIDE 3" CLEAR BETWEEN UNITS' AND MIN. 18" CLEAR BETWEEN UNITS AND B.O.C. (TYP.)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

S. 65TH STREET

W. NATIONAL AVENUE

S. 64TH STREET

TLE

R/W

ABANDONED

STA 6+25.00

(5) CONCRETE HEADER (TYP.)

STA 6+39.00

STA 6+77.50

STA 7+16.00

STA 7+34.75

STA 7+41.0, 22.6'RT

(7) (8) STREET TREE IN 10'L. MULCH BED & ROOTSPACE SYSTEM

(11) (12) PRECAST CONCRETE PLANTER

9.5' 4' 11' 9.5'

(13) CONCRETE PAVER LAYOUT AT ROADWAY CORNER

MATCH LINE STA. 8+00

5+00 +50 6+00 +50 7+00 +50 8+

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 50	E

2

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

- CONCRETE PAVERS AT ROADWAY TERRACE - SEE SPV'S (1) (5)
- CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1) (5)
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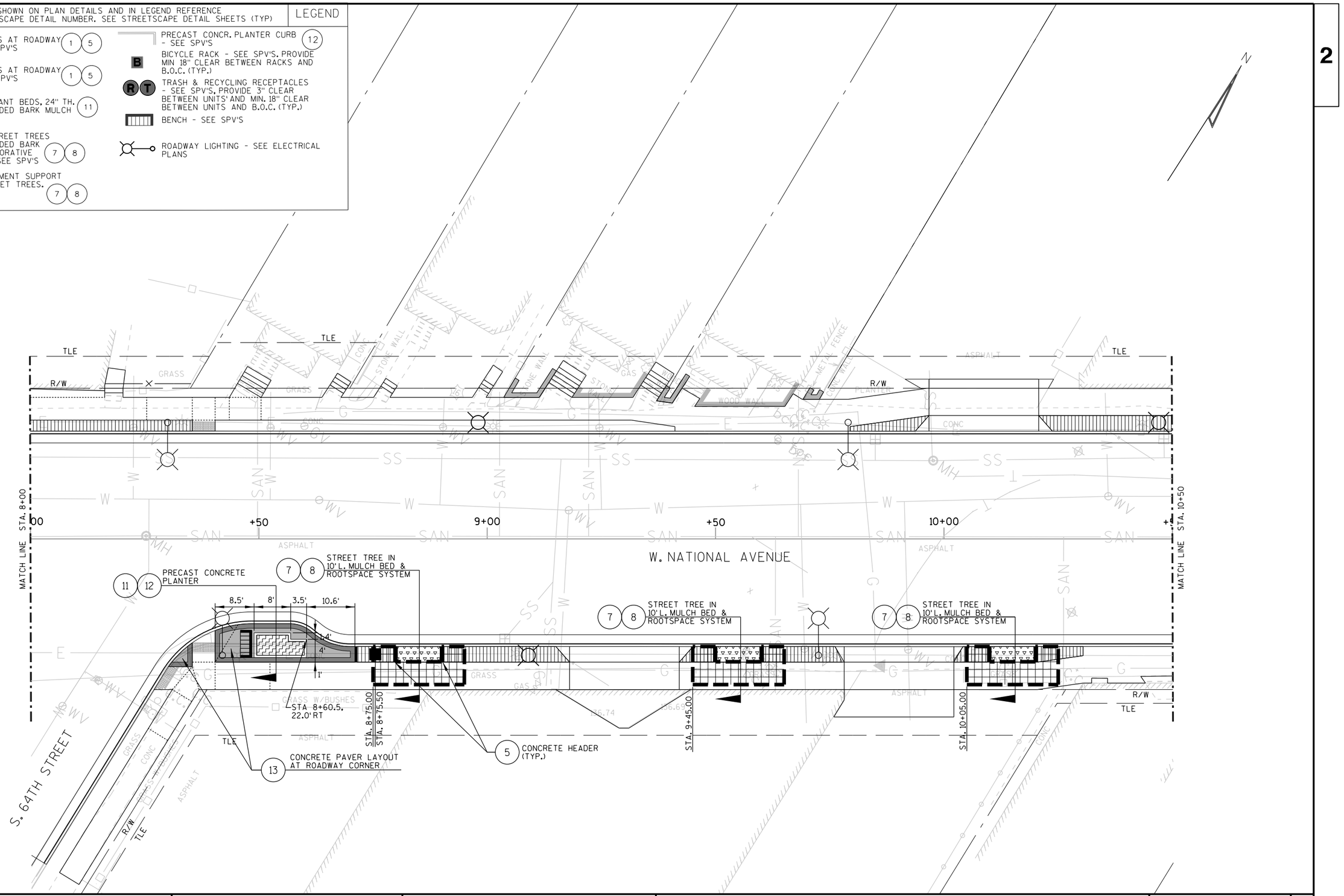
- BACKFILL FOR STREET TREES AND 3" TH. SHREDDED BARK MULCH OR 3" DECORATIVE STONE MULCH - SEE SPV'S (7) (8)
- ROOTSPACE PAVEMENT SUPPORT SYSTEM AT STREET TREES. SEE SPV'S (7) (8)
- PRECAST CONCR. PLANTER CURB - SEE SPV'S (12)
- (B) BICYCLE RACK - SEE SPV'S. PROVIDE MIN 18" CLEAR BETWEEN RACKS AND B.O.C. (TYP.)
- (R) (T) TRASH & RECYCLING RECEPTACLES - SEE SPV'S, PROVIDE 3" CLEAR BETWEEN UNITS AND MIN. 18" CLEAR BETWEEN UNITS AND B.O.C. (TYP.)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 51	E

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

- CONCRETE PAVERS AT ROADWAY TERRACE - SEE SPV'S (1) (5)
- CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1) (5)
- BACKFILL FOR PLANT BEDS, 24" TH. AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (11)
- BACKFILL FOR STREET TREES AND 3" TH. SHREDDED BARK MULCH OR 3" DECORATIVE STONE MULCH - SEE SPV'S (7) (8)
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- B — BICYCLE RACK - SEE SPV'S. PROVIDE MIN 18" CLEAR BETWEEN RACKS AND B.O.C. (TYP.)
- R T — TRASH & RECYCLING RECEPTACLES - SEE SPV'S, PROVIDE 3" CLEAR BETWEEN UNITS AND MIN. 18" CLEAR BETWEEN UNITS AND B.O.C. (TYP.)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

N

MATCH LINE STA. 10+50

11+00 +50 12+00 +50 13+

MATCH LINE STA. 13+00

(7) (8) STREET TREE IN 10'L. MULCH BED & ROOTSPACE SYSTEM

(5) CONCRETE HEADER (TYP.)

(13) CONCRETE PAVER LAYOUT AT ROADWAY CORNER

(11) (12) PRECAST CONCRETE PLANTER

W. NATIONAL AVENUE

S. 64TH STREET

STA. 10+75.00 STA. 10+97.50 STA. 11+05.70 STA. 11+53.00 STA. 11+73.45 STA. 12+14.3, 23.0' RT STA. 11+77.40, 40.50' RT STA. 12+15.00 STA. 12+21.00 STA. 12+45.00 STA. 12+51.00 STA. 12+83.00 STA. 12+88.00

9.1' 8' 3.5' 11.2' 2.4' 4'

TLE R/W RAMP W/HANDRAIL PLANTER BRICK AT-GRADE PLANTER

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 52	E

2

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

- CONCRETE PAVERS AT ROADWAY TERRACE - SEE SPV'S (1) (5)
- CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1) (5)
- BACKFILL FOR PLANT BEDS, 24" TH. AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (11)
- BACKFILL FOR STREET TREES AND 3" TH. SHREDDED BARK MULCH OR 3" DECORATIVE STONE MULCH - SEE SPV'S (7) (8)
- ROOTSPACE PAVEMENT SUPPORT SYSTEM AT STREET TREES. SEE SPV'S (7) (8)
- PRECAST CONCR. PLANTER CURB - SEE SPV'S (12)
- (B) BICYCLE RACK - SEE SPV'S. PROVIDE MIN 18" CLEAR BETWEEN RACKS AND B.O.C. (TYP.)
- (R) (T) TRASH & RECYCLING RECEPTACLES - SEE SPV'S. PROVIDE 3" CLEAR BETWEEN UNITS AND MIN. 18" CLEAR BETWEEN UNITS AND B.O.C. (TYP.)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

DATA TABLE

POINT NUMBER	STATION	OFFSET
10	13+87.25	32.72 LT
11	13+91.00	34.00 LT
12	13+93.62	44.26 LT
13	13+91.98	47.18 LT
14	13+95.12	52.45 LT
15	14+05.21	46.45 LT
16	14+02.79	42.36 LT
17	14+19.49	32.43 LT
18	14+19.49	27.72 LT
19	14+23.25	21.58 LT
20	13+87.25	21.58 LT

W. GREENFIELD AVENUE

W. NATIONAL AVENUE

S. 64TH STREET

MATCH LINE STA. 13+00

STA. 13+36.00

STA. 13+72.42

STA. 13+86.25

STA. 14+15.00

STA. 14+02.77
47.69' LT

STA. 14+22.92
37.08' LT

18.5'

14'

13'

AT-GRADE PLANTING BED

STREET TREE IN 10' L. MULCH BED & ROOTSPACE SYSTEM (7) (8)

CONCRETE PAVER LAYOUT AT ROADWAY CORNER (13)

PRECAST CONCRETE PLANTER (11) (12)

CONCRETE HEADER (TYP.) (5)

STA. 13+40.00

STA. 13+70.00

STA. 14+00.00

TLE

R/W

P W/HANDRAIL

PAVERS

ASPHALT

BRICK PAVERS

CONC

PLANTER

13+00

+50

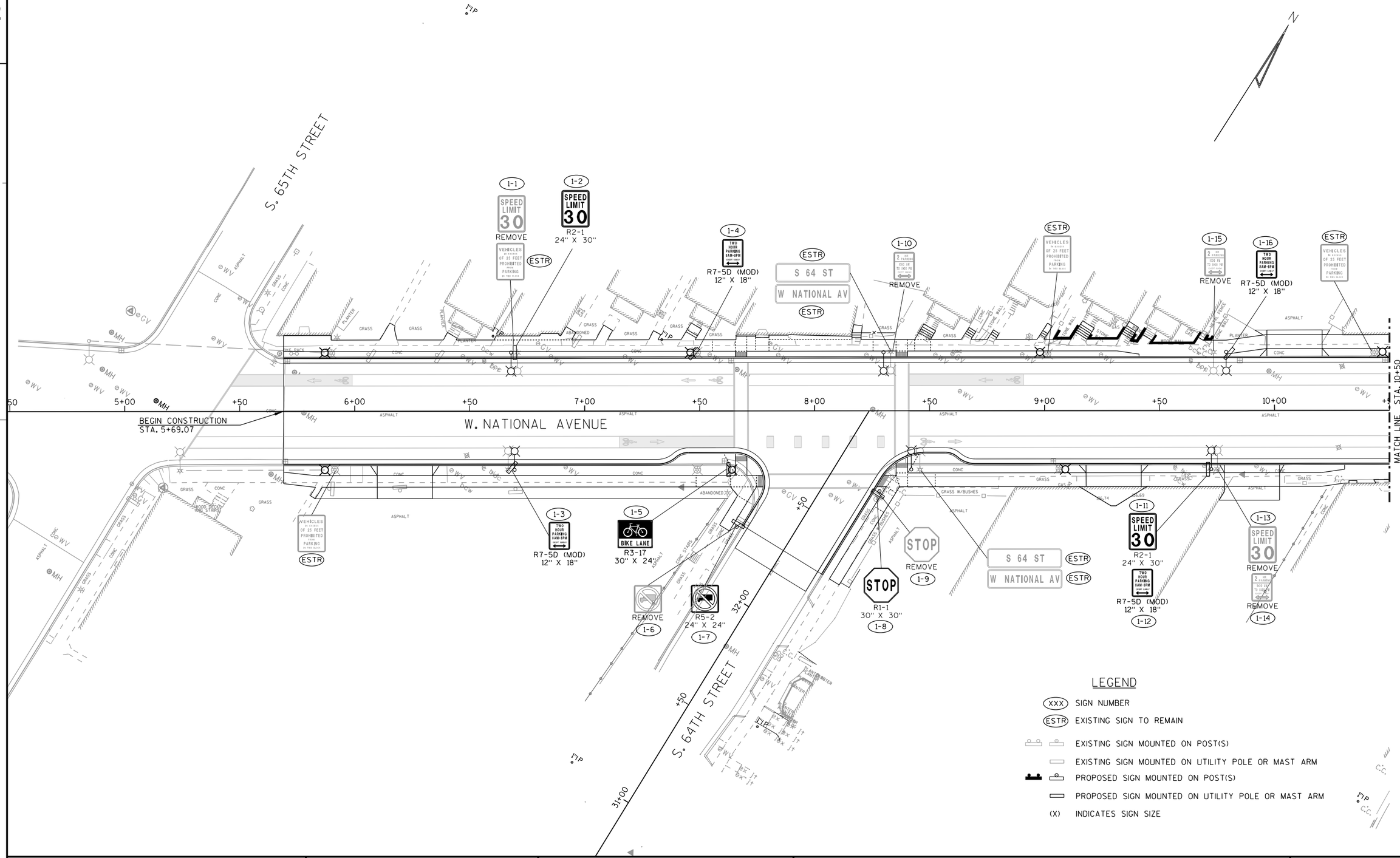
14+00

15+00

16+00

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 53	E

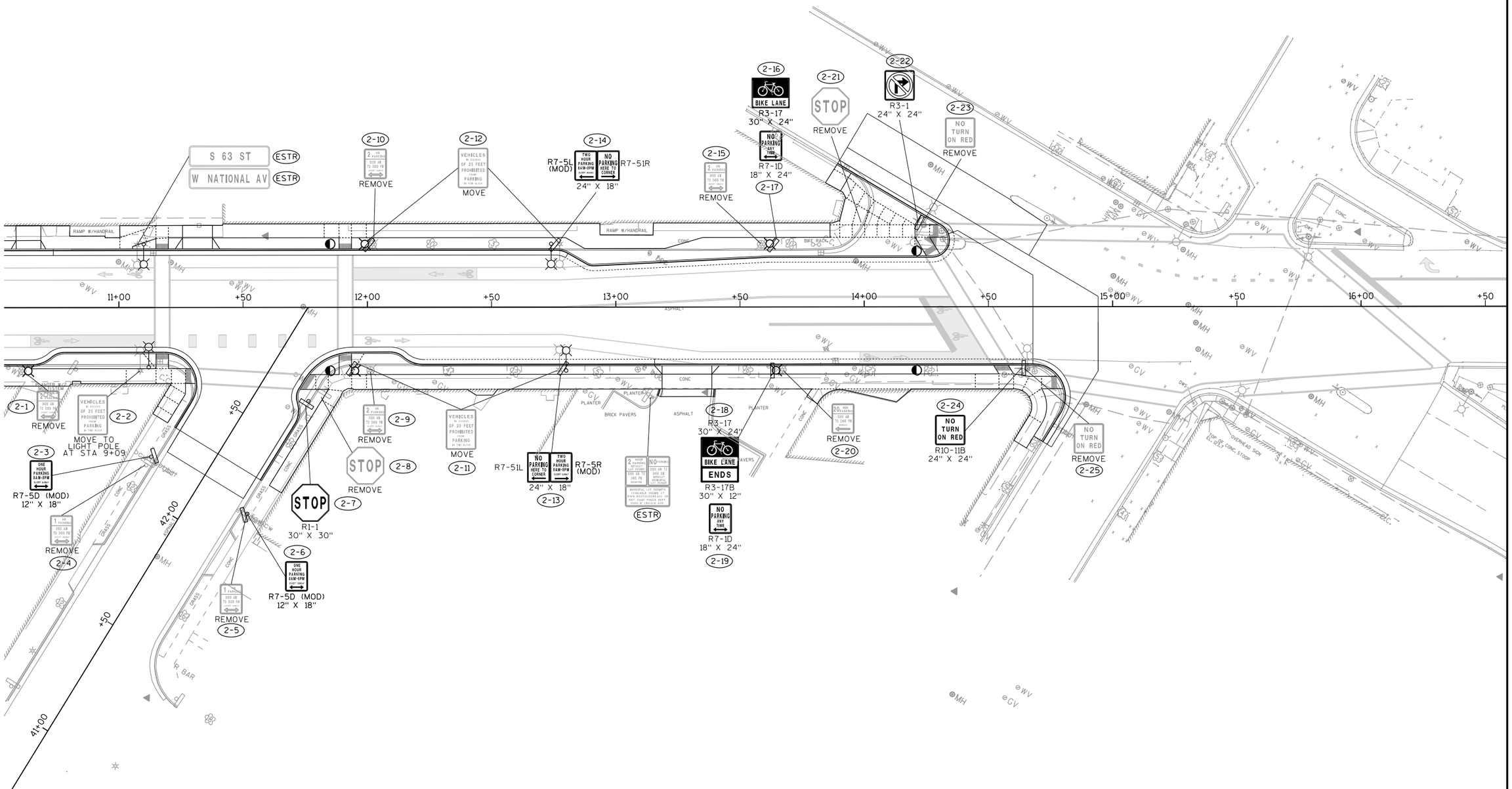
2



PROJECT NO: 2410-00-77	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 54	E

LEGEND

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



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 55	E

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON PLANS.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1". ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

IF BASE REQUIRES DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND BASE BACKFILL SHALL BE TAMPED TIGHT AGAINST BARE CONCRETE BASE IN LAYERS OF 1'-0" OR LESS.

#4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER BASE OF TYPE 2 AND TYPE 5 BASES THROUGH 1" CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING 4 FOOT COIL OF WIRE ABOVE CONCRETE BASE. EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF ROD, ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS

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

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

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

(1) MINIMUM DEPTH OF CONDUIT EXITING CONCRETE BASE AND INSTALLED BELOW TRAVELED WAY SHALL BE 24". MINIMUM DEPTH OF CONDUIT EXITING CONCRETE BASE NOT INSTALLED BELOW TRAVELED WAY SHALL BE 18". MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36" EXCEPT WITH WRITTEN APPROVAL BY ENGINEER.

(2) (4) 1" DIAMETER X 3'-6" ANCHOR RODS WITH 4" L BEND.

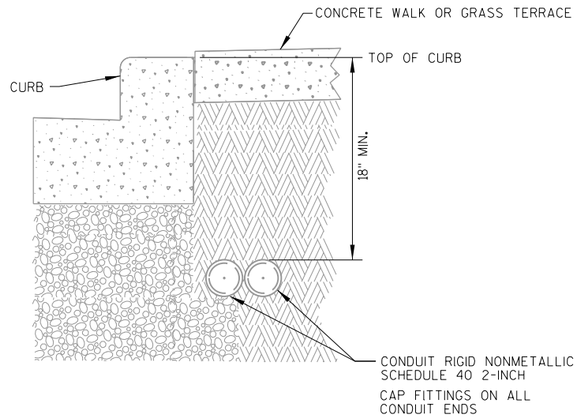
(3) (6) NO. 4 X 4'-8" BAR STEEL REINFORCEMENT.

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

NOTE:

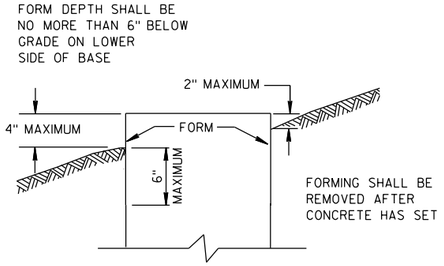
1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.

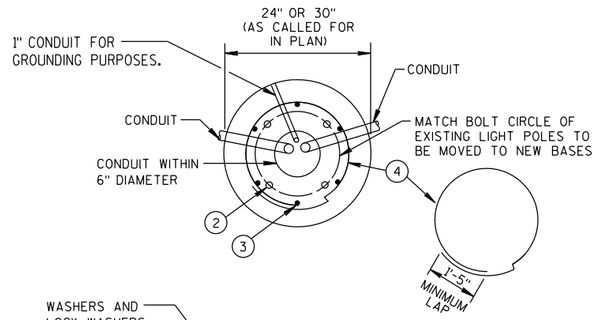


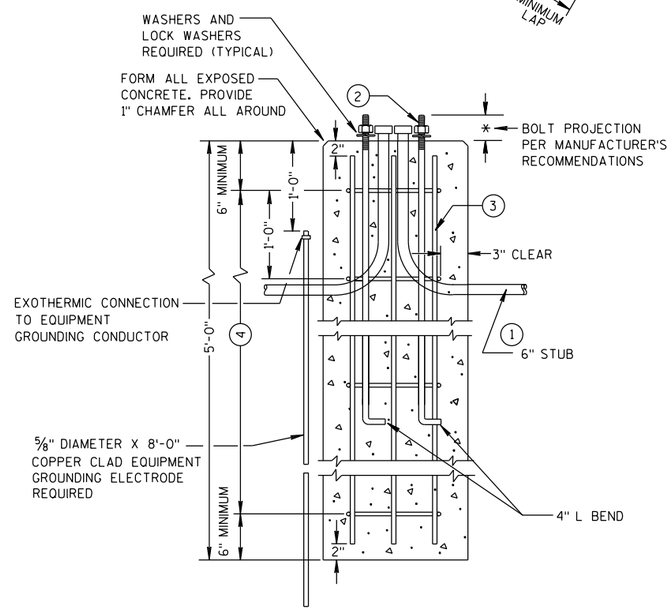
TYPICAL CONDUIT INSTALLATION

NTS



FORMING DETAIL





CONCRETE BASE TYPE 5, 24-INCH & 30-INCH

NTS

2

LIGHTING PLAN LEGEND

- MOVED DECORATIVE POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW CONCRETE BASE TYPE 5, 30-INCH.
- EXISTING DECORATIVE POLE, ARM, AND LUMINAIRE.
- MOVED DECORATIVE POST TOP POLE. PROVIDE NEW CONCRETE BASE TYPE 5, 24-INCH.
- EXISTING DECORATIVE POST TOP POLE.
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- PULL BOXES STEEL 24X36-INCH

B ∮ XXXX
- LIGHTING AREA
- CONTROL CABINET/BREAKER NUMBER
- POLE NUMBER

STA. XX+XX.XX, XX.X LT = LOCATION (CENTER OF POLE)

CABLE AND CONDUIT LEGEND

- (A) 2 #6 AWG AND 1 #6 GROUND IN CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH
- (B) MAINTAIN CONDUIT. CITY TO REMOVE HIGH VOLTAGE CABLING.
- (C) CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH WITH PULL WIRE. HIGH VOLTAGE CABLING INSTALLED BY CITY
- (D) 4 #6 AWG AND 1 #6 GROUND IN CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH
- (E) 4 #6 AWG AND 1 #6 GROUND IN EXISTING CONDUIT

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. MOVE EXISTING LIGHT POLE. INSTALL ON NEW BASE. REMOVE EXISTING BASE AND CABLING.

S. 65TH STREET

BEGIN CONSTRUCTION
STA. 5+69.07

B ∮ 6429
STA. 5+87.00, 25.50 RT
CONCRETE BASE TYPE 5, 24-INCH

B ∮ 6430
STA. 5+87.00, 25.50 LT
CONCRETE BASE TYPE 5, 24-INCH

B ∮ 6418
STA. 6+68.00, 25.50 LT
CONCRETE BASE TYPE 5, 30-INCH

B ∮ 6423
STA. 6+69.50, 25.50 RT
CONCRETE BASE TYPE 5, 30-INCH

B ∮ 6405
STA. 7+64.00, 25.50 RT
CONCRETE BASE TYPE 5, 24-INCH

REMOVING CONCRETE BASE
STA. 7+62.00, 35.60 RT

B ∮ 6406
STA. 7+46.00, 25.50 LT
CONCRETE BASE TYPE 5, 24-INCH

B ∮ 6340
STA. 8+30.00, 25.50 LT
CONCRETE BASE TYPE 5, 30-INCH

B ∮ 6332
STA. 8+98.00, 25.50 LT
CONCRETE BASE TYPE 5, 24-INCH

B ∮ 6331
STA. 9+09.00, 25.50 RT
CONCRETE BASE TYPE 5, 24-INCH

B ∮ 6337
STA. 8+42.00, 25.50 RT
CONCRETE BASE TYPE 5, 30-INCH

B ∮ 6324
STA. 9+79.00, 25.50 LT
CONCRETE BASE TYPE 5, 30-INCH

B ∮ 6312
STA. 10+47.00, 25.50 LT
CONCRETE BASE TYPE 5, 24-INCH

B ∮ 6325
STA. 9+72.50, 25.50 RT
CONCRETE BASE TYPE 5, 30-INCH

W. NATIONAL AVENUE

S. 64TH STREET

MATCH LINE STA. 10+50

CONTRACTOR TO DOCUMENT BOLT CIRCLE PATTERN OF EXISTING LIGHT POLE MOUNTINGS PRIOR TO REMOVING EXISTING CONCRETE BASES.

PROVIDE MATCHING BOLT CIRCLE PATTERN ON NEW CONCRETE BASES TYPE 5, 24-INCH & 30-INCH.

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 57	E

LIGHTING PLAN LEGEND

- MOVED DECORATIVE POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW CONCRETE BASE TYPE 5, 30-INCH.
- EXISTING DECORATIVE POLE, ARM, AND LUMINAIRE.
- MOVED DECORATIVE POST TOP POLE. PROVIDE NEW CONCRETE BASE TYPE 5, 24-INCH.
- EXISTING DECORATIVE POST TOP POLE.
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- PULL BOXES STEEL 24X36-INCH

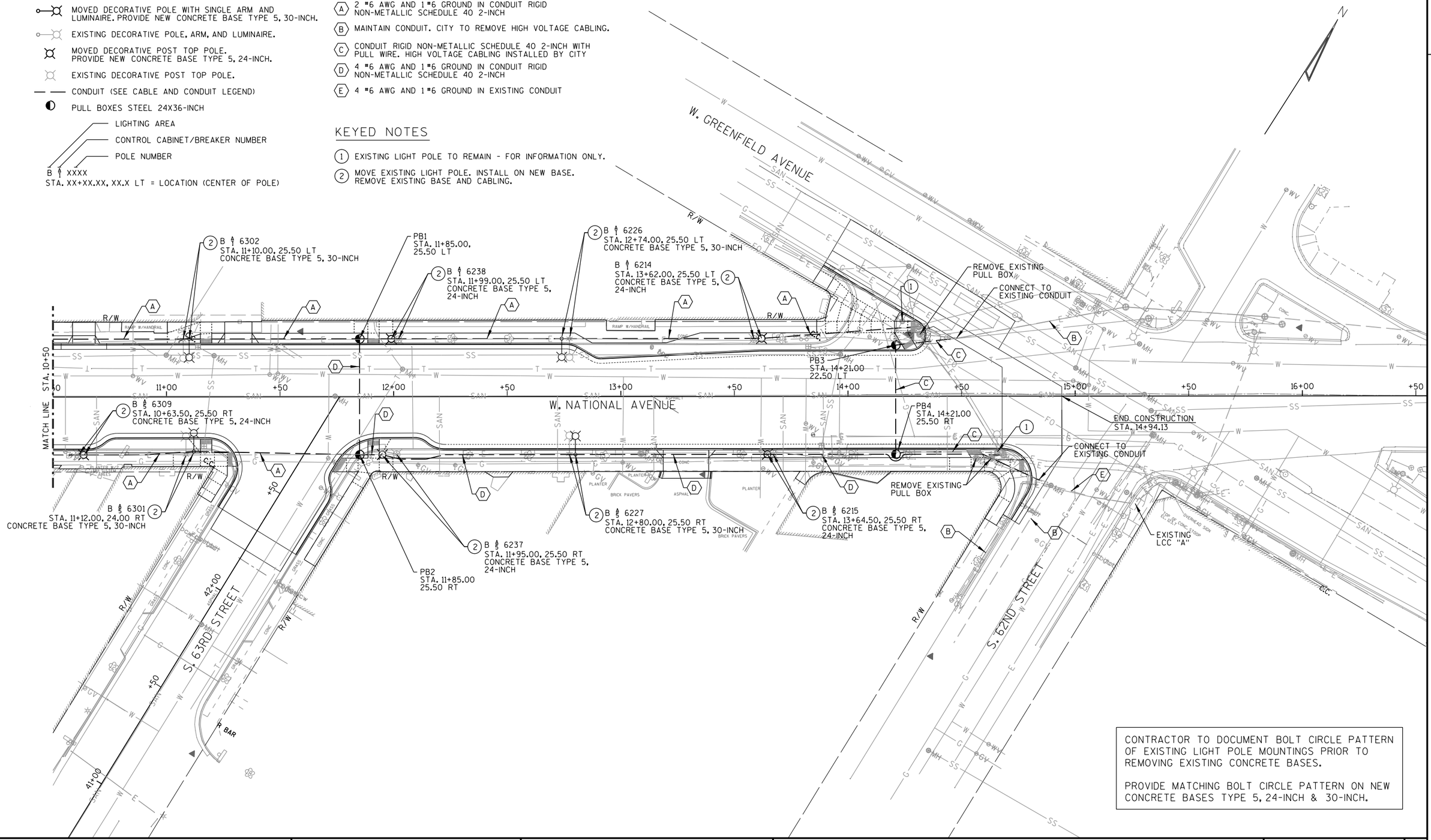
B ∱ XXXX
STA. XX+XX.XX, XX.X LT = LOCATION (CENTER OF POLE)
- LIGHTING AREA
- CONTROL CABINET/BREAKER NUMBER
- POLE NUMBER

CABLE AND CONDUIT LEGEND

- (A) 2 #6 AWG AND 1 #6 GROUND IN CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH
- (B) MAINTAIN CONDUIT. CITY TO REMOVE HIGH VOLTAGE CABLING.
- (C) CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH WITH PULL WIRE. HIGH VOLTAGE CABLING INSTALLED BY CITY
- (D) 4 #6 AWG AND 1 #6 GROUND IN CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH
- (E) 4 #6 AWG AND 1 #6 GROUND IN EXISTING CONDUIT

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. MOVE EXISTING LIGHT POLE. INSTALL ON NEW BASE. REMOVE EXISTING BASE AND CABLING.



CONTRACTOR TO DOCUMENT BOLT CIRCLE PATTERN OF EXISTING LIGHT POLE MOUNTINGS PRIOR TO REMOVING EXISTING CONCRETE BASES.

PROVIDE MATCHING BOLT CIRCLE PATTERN ON NEW CONCRETE BASES TYPE 5, 24-INCH & 30-INCH.

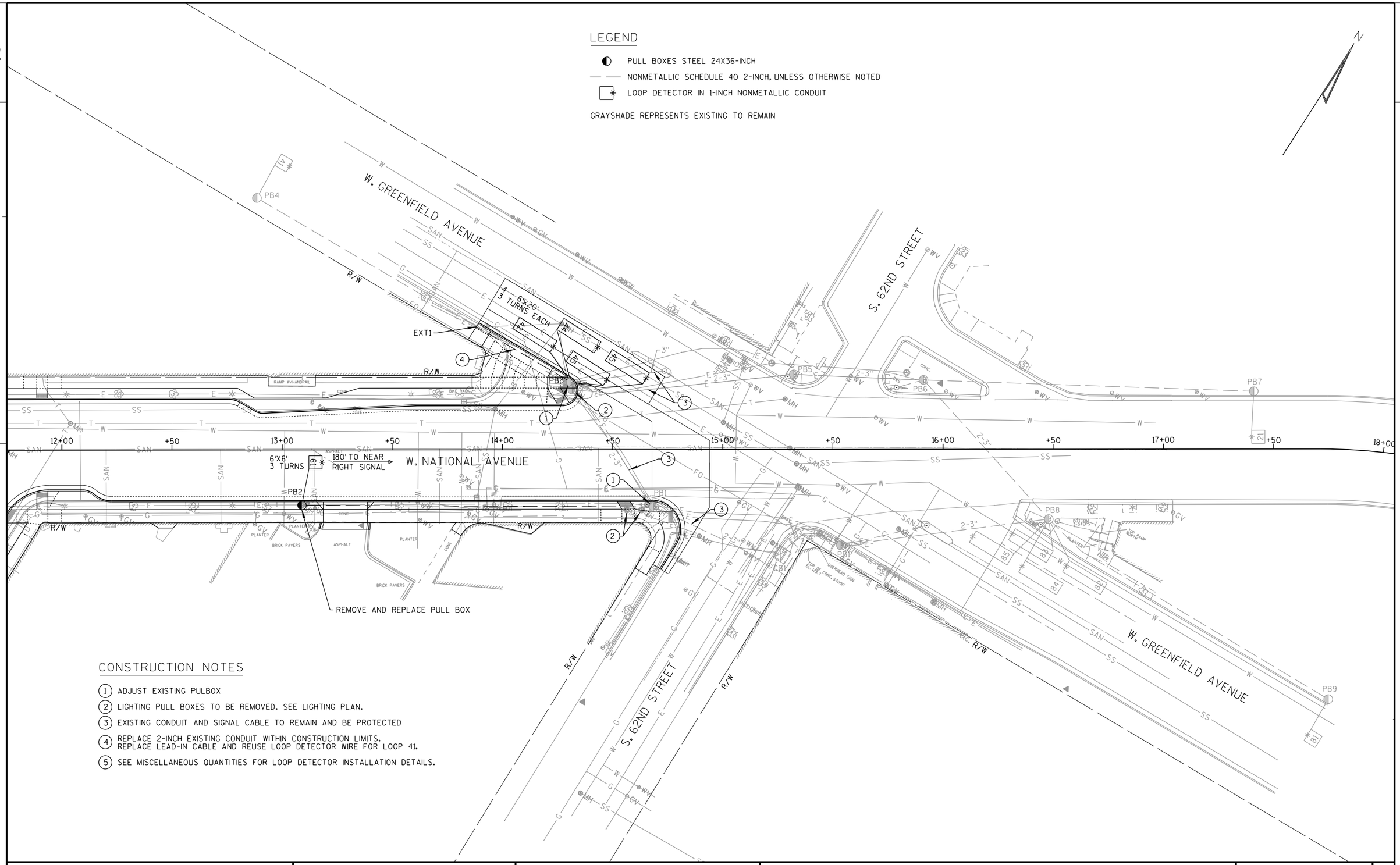
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 58	E

2

LEGEND

- PULL BOXES STEEL 24X36-INCH
- NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED
- LOOP DETECTOR IN 1-INCH NONMETALLIC CONDUIT

GRAYSHADE REPRESENTS EXISTING TO REMAIN

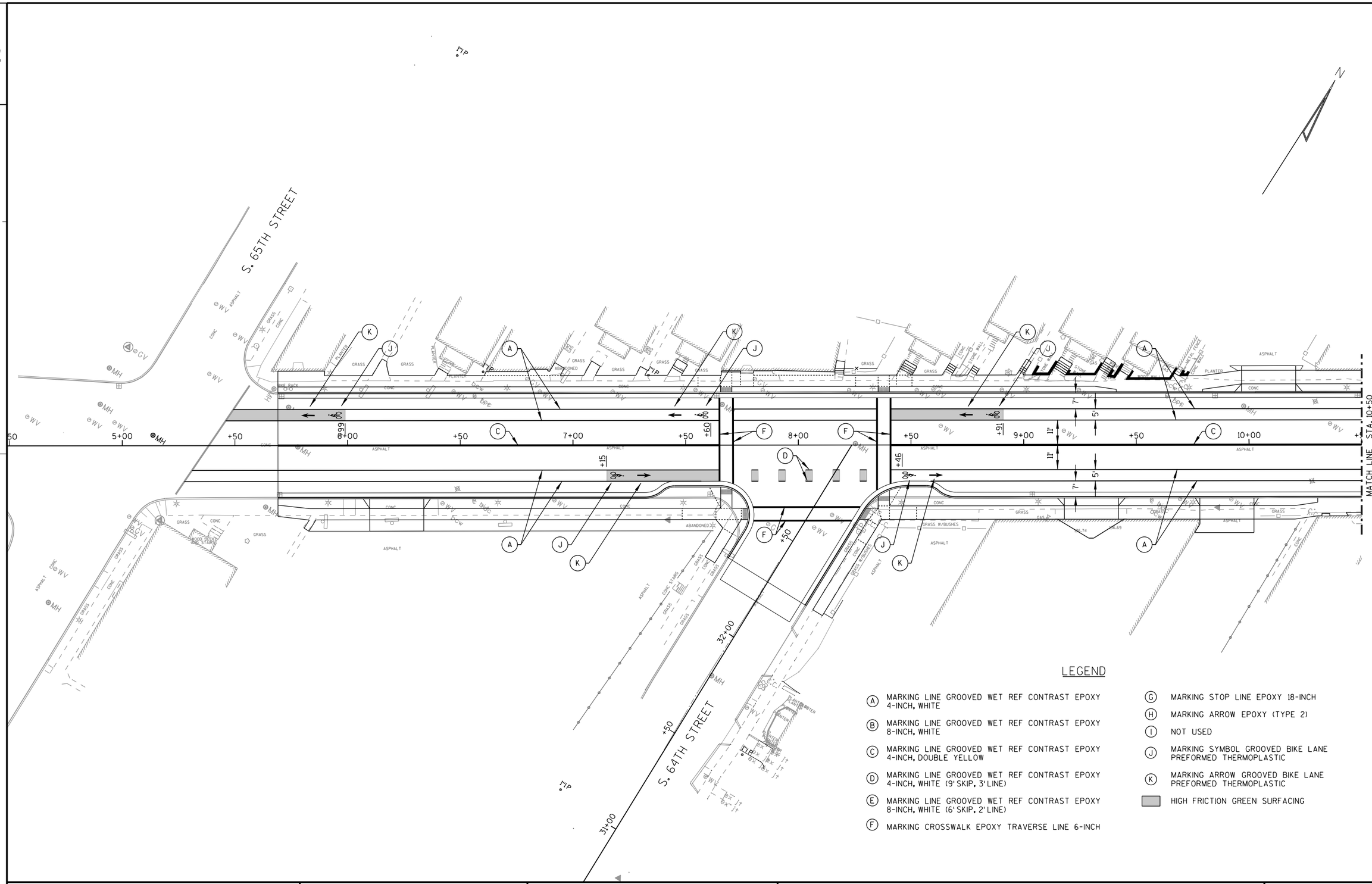


CONSTRUCTION NOTES

1. ADJUST EXISTING PULBOX
2. LIGHTING PULL BOXES TO BE REMOVED. SEE LIGHTING PLAN.
3. EXISTING CONDUIT AND SIGNAL CABLE TO REMAIN AND BE PROTECTED
4. REPLACE 2-INCH EXISTING CONDUIT WITHIN CONSTRUCTION LIMITS. REPLACE LEAD-IN CABLE AND REUSE LOOP DETECTOR WIRE FOR LOOP 41.
5. SEE MISCELLANEOUS QUANTITIES FOR LOOP DETECTOR INSTALLATION DETAILS.

PROJECT NO: 2410-13-70	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETECTION PLAN	SHEET 59	E

2

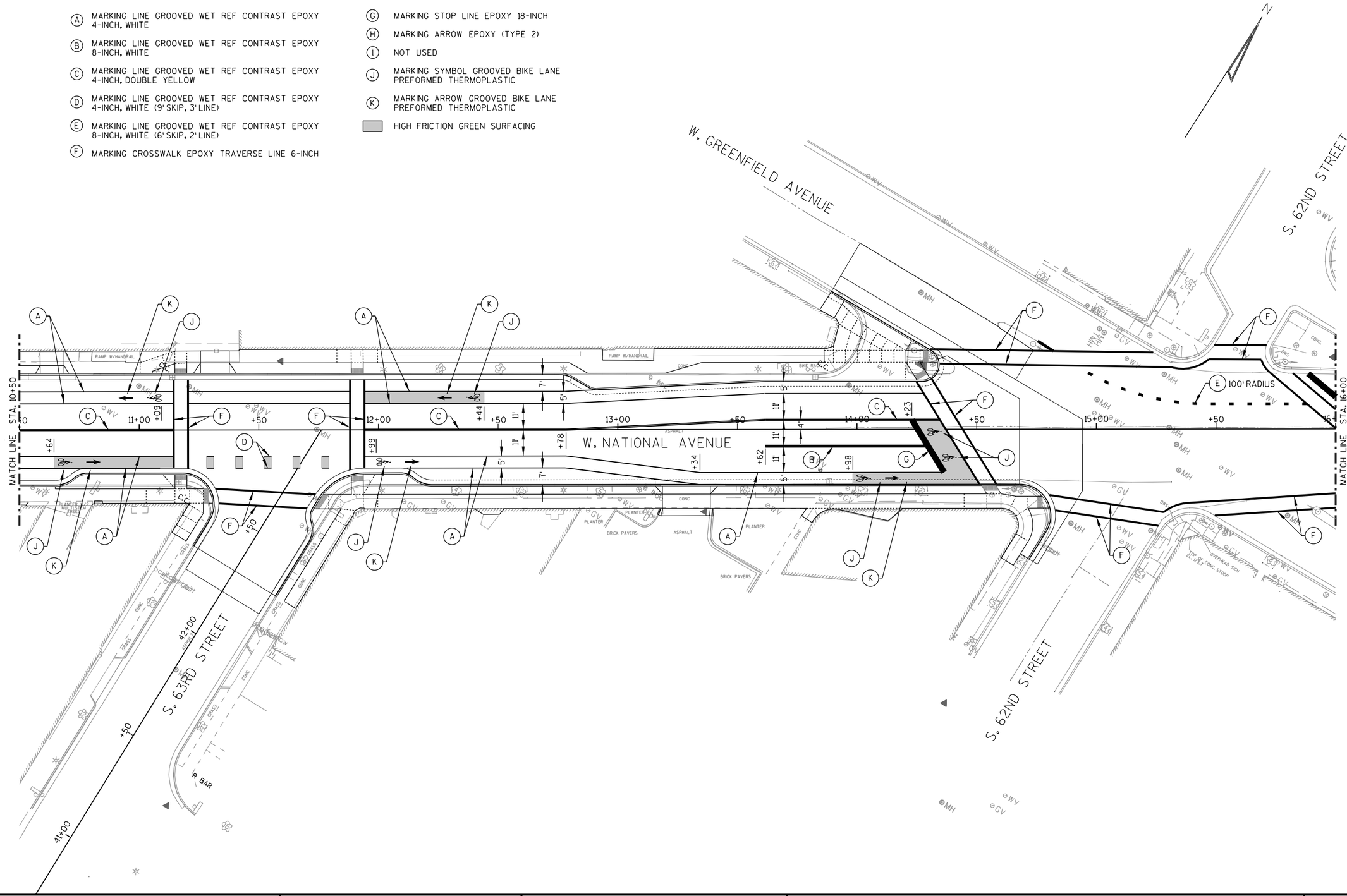


PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 60	E

2

LEGEND

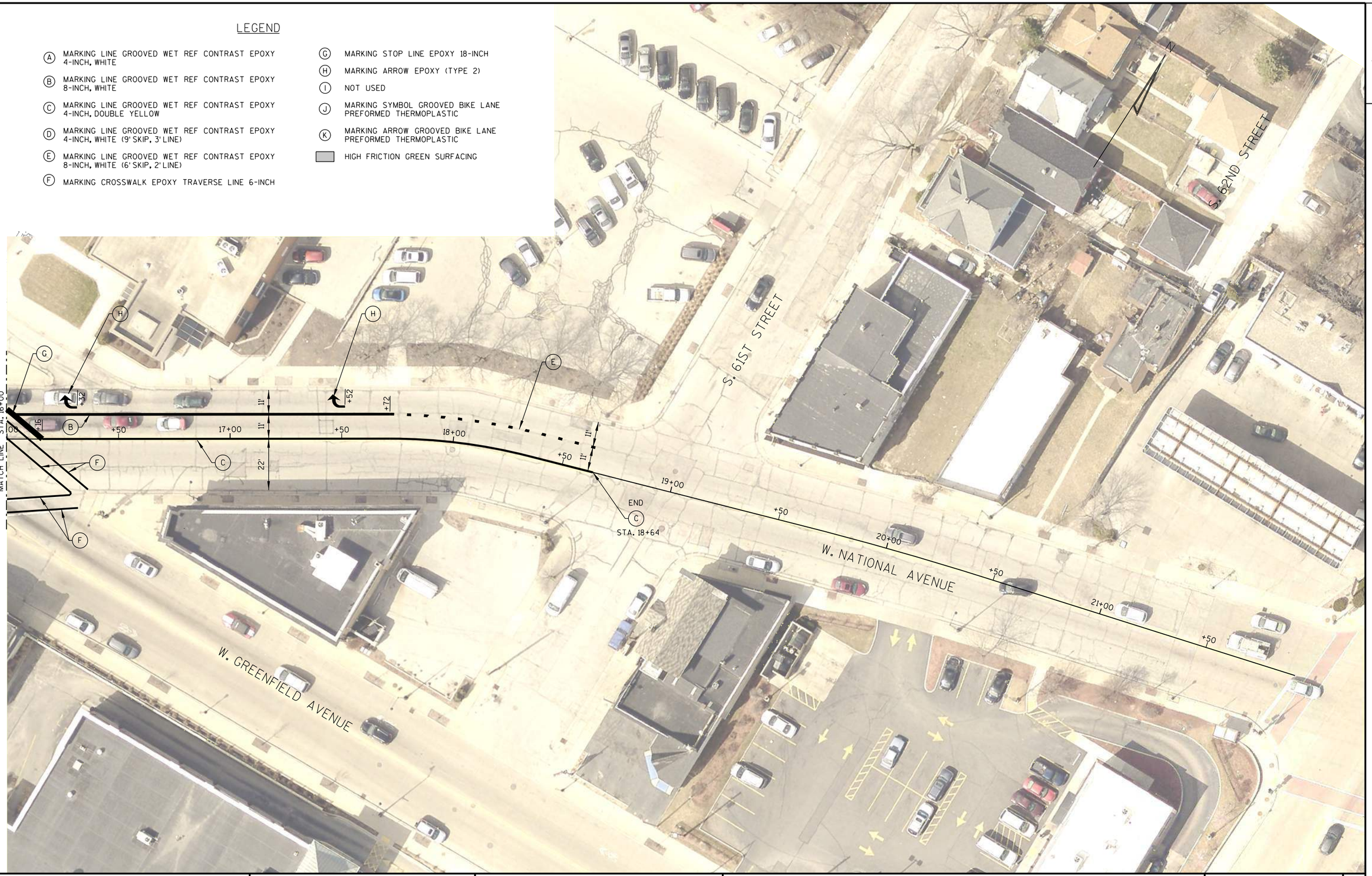
- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, DOUBLE YELLOW
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE (6' SKIP, 2' LINE)
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING STOP LINE EPOXY 18-INCH
- (H) MARKING ARROW EPOXY (TYPE 2)
- (I) NOT USED
- (J) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (K) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- HIGH FRICTION GREEN SURFACING



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 61	E

LEGEND

- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, DOUBLE YELLOW
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE (6' SKIP, 2' LINE)
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING STOP LINE EPOXY 18-INCH
- (H) MARKING ARROW EPOXY (TYPE 2)
- (I) NOT USED
- (J) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (K) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- HIGH FRICTION GREEN SURFACING

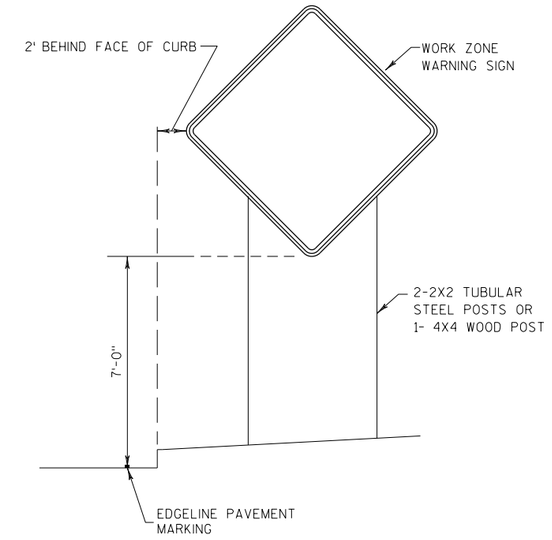


PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 62	E

2

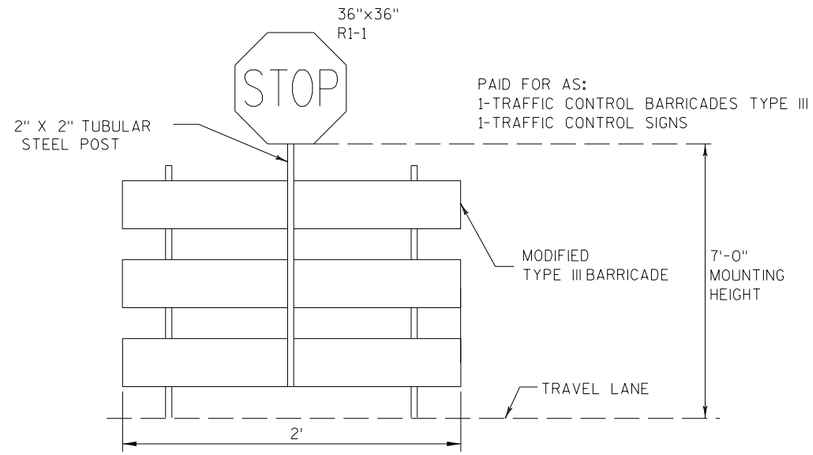
TRAFFIC CONTROL NOTES

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



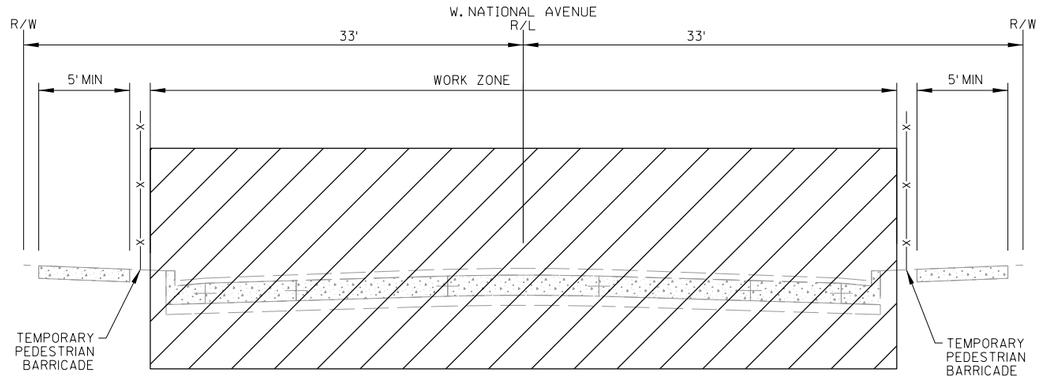
TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



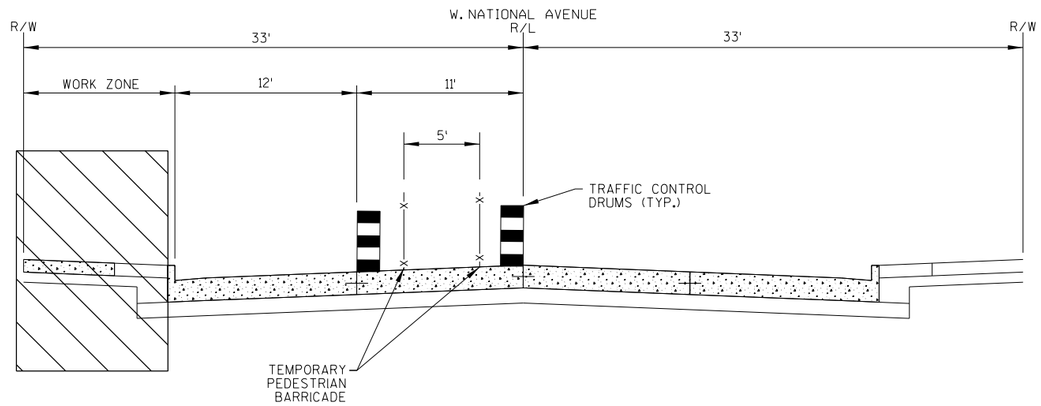
TEMPORARY STOP SIGN

2



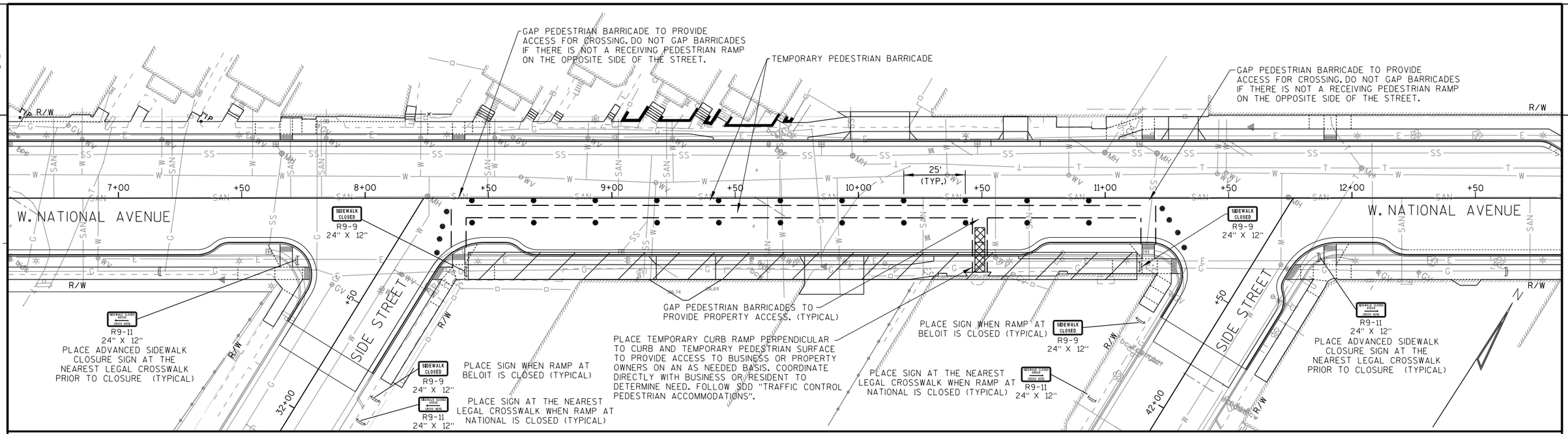
STAGING TYPICAL SECTION - ROADWAY

W. NATIONAL AVENUE
(MAINTAIN PEDESTRIAN ACCESS ON EXISTING SIDEWALK)



STAGING TYPICAL SECTION - SIDEWALK CLOSURE

W. NATIONAL AVENUE
(MAINTAIN PEDESTRIAN ACCESS IN DRIVING LANE. CONSTRUCT ONE SIDE AT A TIME.)

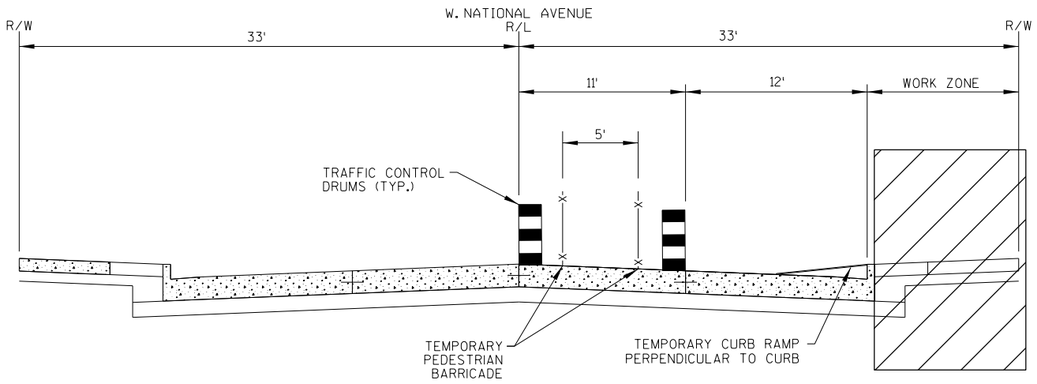


PEDESTRIAN ACCOMMODATION NOTES

1. SIDEWALK CONSTRUCTION - COORDINATE WITH PROPERTY OWNERS ON SCHEDULE: MAINTAIN SIDEWALK ACCESS ALONG NATIONAL AVENUE ON EXISTING SIDEWALK WHILE ROADWAY IS BEING RECONSTRUCTED. ONCE DRIVING LANES ARE COMPLETED, RECONSTRUCT THE SIDEWALKS BY DETOURING PEDESTRIANS TO THE FINISHED DRIVING LANE. PROVIDE TEMPORARY CURB RAMPS, TEMPORARY PEDESTRIAN SURFACE AND TEMPORARY PEDESTRIAN BARRICADES PAST THE WORK ZONE FOR PROPERTY ACCESS. THE SIDEWALK STAGING SECTION DETAIL AND PLAN VIEW SHOWN SHALL BE FLIPPED TO CONSTRUCT THE SIDEWALK ON THE OPPOSITE SIDE OF THE ROAD.
2. SIDEWALK TO BE CONSTRUCTED WHILE ROAD REMAINS CLOSED TO TRAFFIC. CONSTRUCT SIDEWALK ONE BLOCK AND ONE SIDE OF THE STREET AT A TIME.
3. MAINTAIN PEDESTRIAN ACCESS BY ONLY CLOSING ONE SIDE OF THE INTERSECTION AT A TIME OR BY DETOURING PEDESTRIANS TO NEXT SIDE STREET. DO NOT CLOSE TWO ADJACENT SIDE ROADS AT THE SAME TIME.
4. SEE SDD "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL INFORMATION.

LEGEND

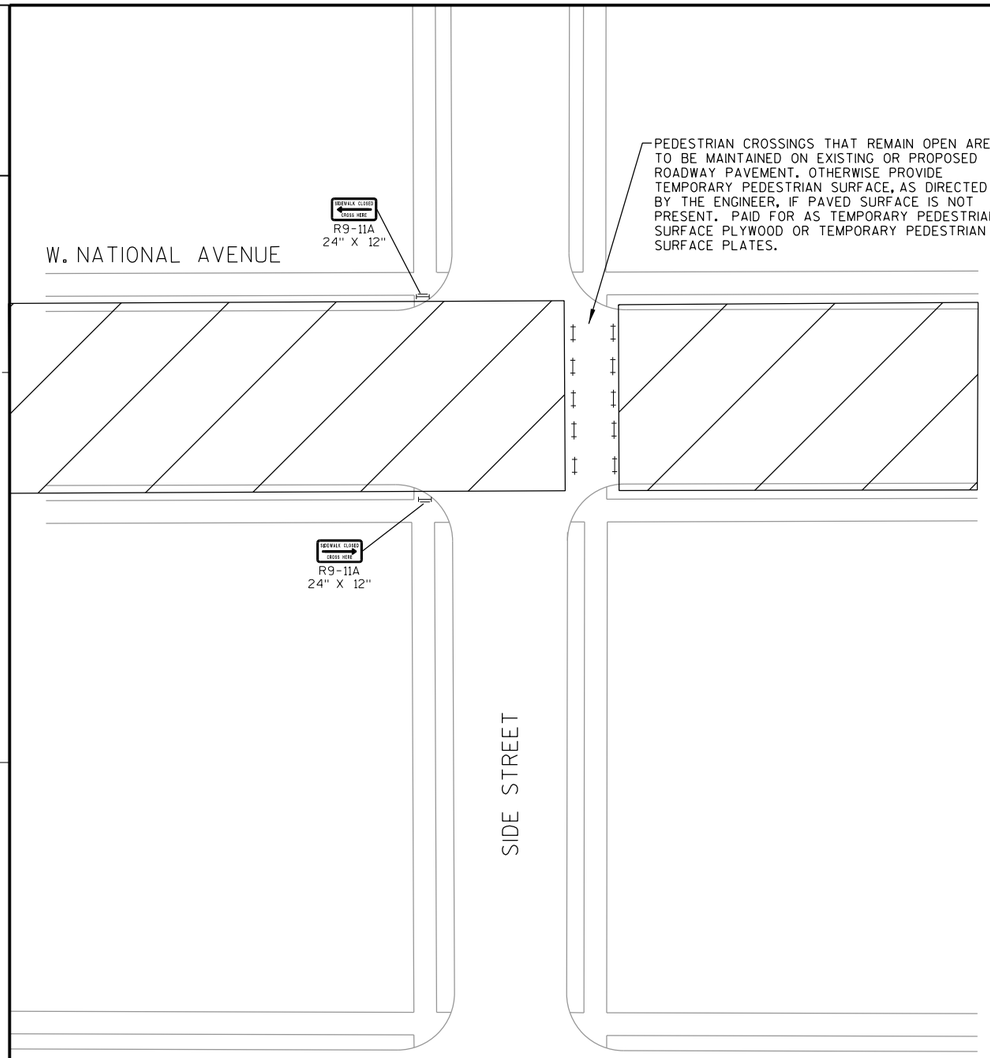
- WORK ZONE
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/WITHOUT ATTACED SIGN AND ONE TYPE A LIGHT
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN AND TWO TYPE A LIGHTS



STAGING TYPICAL SECTION - SIDEWALK CLOSURE

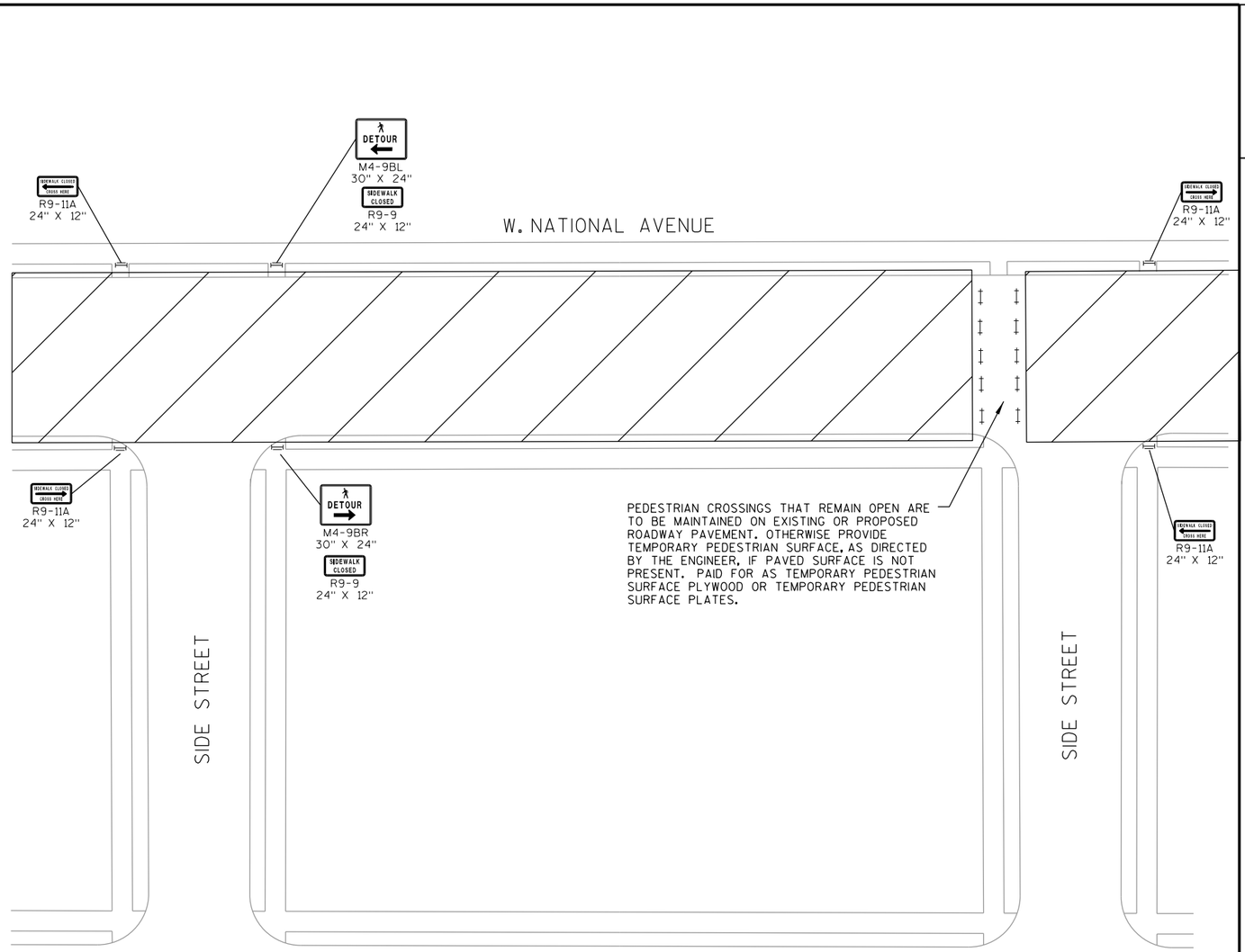
W. NATIONAL AVENUE
(MAINTAIN PEDESTRIAN ACCESS IN DRIVING LANE. CONSTRUCT ONE SIDE AT A TIME.)

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL: SIDEWALK CLOSURE CONSTRUCTION DETAIL	SHEET 65	E



PARTIAL SIDEWALK CROSSING CLOSURE - NO DETOUR

TYPICAL SIDEWALK CLOSURE WHEN ONLY CLOSING ONE SIDE OF THE INTERSECTION



FULL SIDEWALK CROSSING CLOSURE - DETOUR

TYPICAL SIDEWALK DETOUR WHEN COMPLETELY CLOSING ONE OF THE SIDE ROADS

PEDESTRIAN ACCOMMODATION NOTES

1. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES BY ONLY CLOSING ONE SIDE OF THE INTERSECTION AT A TIME OR BY DETOURING PEDESTRIANS TO NEXT SIDE STREET. DO NOT CLOSE TWO ADJACENT SIDE ROADS AT THE SAME TIME.
2. SEE STANARD DETAIL DRAWING "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL DETAILS.

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL: SIDEWALK DETOUR CONSTRUCTION DETAIL	SHEET 66	E

FRAME 1	FRAME 2
ROAD TO CLOSE	XXXDAY XX XX XX

W. MADISON STREET

W. GREENFIELD AVENUE

W. NATIONAL AVENUE

W. ORCHARD STREET

W. LAPHAM STREET

UNION PACIFIC RAILROAD

S. 65TH STREET

S. 64TH STREET

S. 63RD STREET

S. 62ND STREET

S. 60TH STREET

S. 59TH STREET

S. 66TH STREET

ROAD WORK AHEAD W20-1A

RIGHT LANE CLOSED AHEAD W20-5A

END ROAD WORK G20-2A 48" X 24"

W04-2R

180' TAPER

50' BUFFER

200'

200'

200'

PCMS

ROAD CLOSED AHEAD W20-3A

NATIONAL AVE

ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"

END ROAD WORK G20-2A 48" X 24"

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE

DO NOT PLACE TRAFFIC CONTROL DEVICES, ADVANCE WARNING SIGNING, OR DETOUR SIGNING WITHIN 50 FEET OF RAILROAD RIGHT-OF-WAY.

ROAD CLOSED 500 FT W20-3D

LEGEND

- WORK ZONE
- SIGN MOUNTED ON POST
- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN AND TWO TYPE A LIGHTS
- DIRECTION OF TRAFFIC

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - OVERVIEW	SHEET 67	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\026001_s1.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

NOTES

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

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

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

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

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

① NATIONAL AVE / DETOUR AHEAD (W20-2) 30" X 18"

② DETOUR (M4-8) 24" X 12" / NATIONAL AVE 30" X 18" / M05-1L 21" X 21"

③ DETOUR (M4-8) 24" X 12" / NATIONAL AVE 30" X 18" / M06-1 21" X 21"

④ DETOUR (M4-8) 24" X 12" / NATIONAL AVE 30" X 18" / M05-1R 21" X 21"

⑤ DETOUR (M4-8) 24" X 12" / NATIONAL AVE 30" X 18" / M06-1 21" X 21"

⑥ DETOUR (M4-8) 24" X 12" / NATIONAL AVE 30" X 18" / M06-1 21" X 21"

⑦ DETOUR (M4-8) 24" X 12" / NATIONAL AVE 30" X 18" / M05-2R 21" X 21"

⑧ END DETOUR (M4-8A) 24" X 18" / NATIONAL AVE 30" X 18"

⑨ ROAD CLOSED AT 65TH ST LOCAL TRAFFIC ONLY 54" X 24"

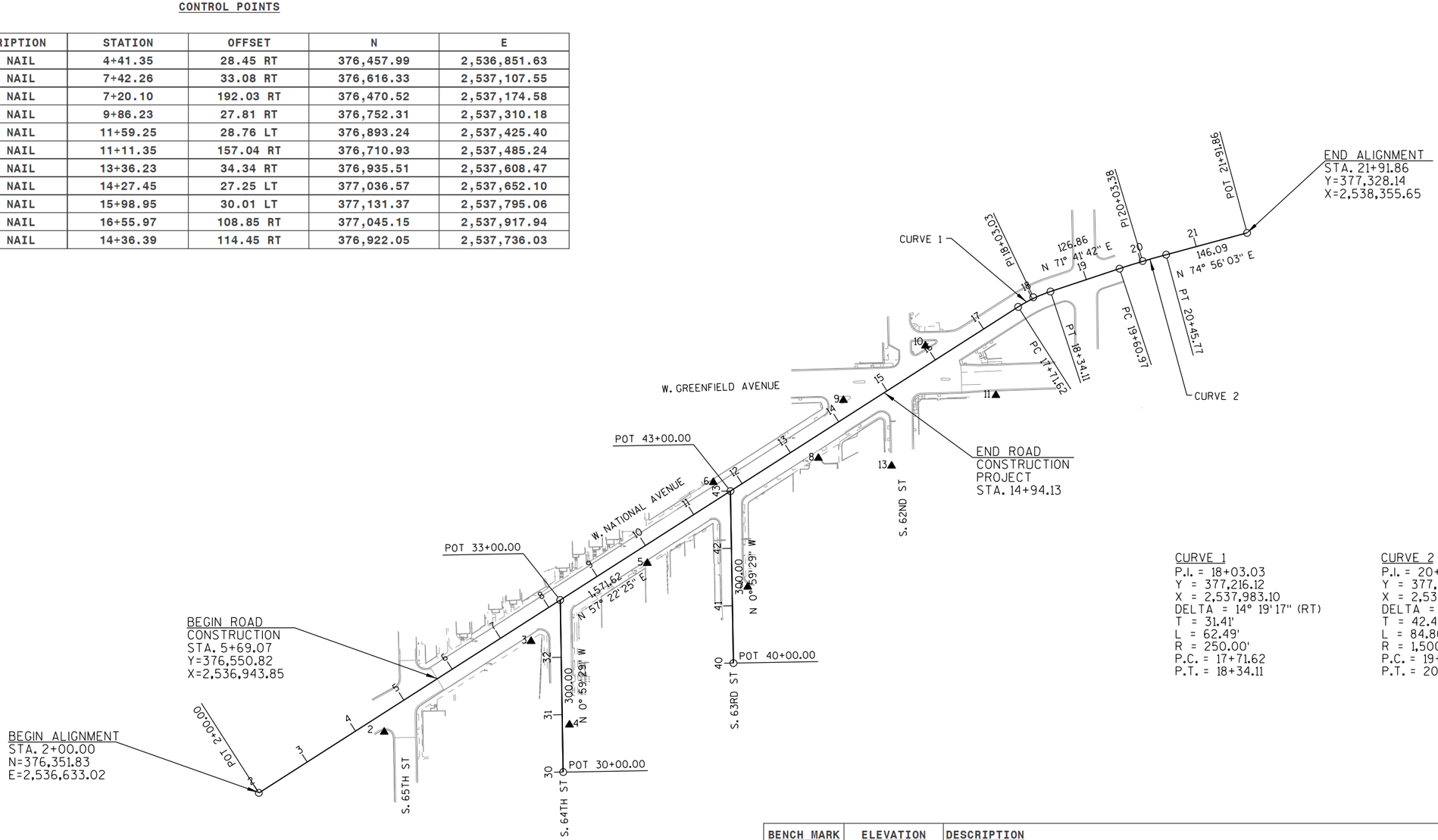
LEGEND

- DETOUR ROUTE
- WORK ZONE
- TEMPORARY TRAFFIC CONTROL SIGN POST
- TYPE III BARRICADE WITH ATTACHED SIGN AND TWO TYPE A LIGHTS

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	DETOUR PLAN	SHEET 68 E

CONTROL POINTS

POINT #	DESCRIPTION	STATION	OFFSET	N	E
CP2	MAG NAIL	4+41.35	28.45 RT	376,457.99	2,536,851.63
CP3	MAG NAIL	7+42.26	33.08 RT	376,616.33	2,537,107.55
CP4	MAG NAIL	7+20.10	192.03 RT	376,470.52	2,537,174.58
CP5	MAG NAIL	9+86.23	27.81 RT	376,752.31	2,537,310.18
CP6	MAG NAIL	11+59.25	28.76 LT	376,893.24	2,537,425.40
CP7	MAG NAIL	11+11.35	157.04 RT	376,710.93	2,537,485.24
CP8	MAG NAIL	13+36.23	34.34 RT	376,935.51	2,537,608.47
CP9	MAG NAIL	14+27.45	27.25 LT	377,036.57	2,537,652.10
CP10	MAG NAIL	15+98.95	30.01 LT	377,131.37	2,537,795.06
CP11	MAG NAIL	16+55.97	108.85 RT	377,045.15	2,537,917.94
CP13	MAG NAIL	14+36.39	114.45 RT	376,922.05	2,537,736.03



CURVE 1
P.I. = 18+03.03
Y = 377,216.12
X = 2,537,983.10
DELTA = 14° 19' 17" (RT)
T = 31.41'
L = 62.49'
R = 250.00'
P.C. = 17+71.62
P.T. = 18+34.11

CURVE 2
P.I. = 20+03.38
Y = 377,279.15
X = 2,538,173.62
DELTA = 3° 14' 21" (RT)
T = 42.41'
L = 84.80'
R = 1,500.00'
P.C. = 19+60.97
P.T. = 20+45.77

BENCH MARK	ELEVATION	DESCRIPTION
102	132.62'	TOP NW. BOLT OF LIGHT POLE #B4-1527 W. SIDE OF S. 64TH ST. AT HOUSE #1527.
103	129.15'	TOP NW. BOLT OF LIGHT POLE #B4-1441 AT NW. CORNER S. 63RD ST. AND W. ORCHARD ST.
104	114.01'	TOP NW. BOLT OF LIGHT POLE AT NE. CORNER S 62ND ST. AND W. ORCHARD ST.
1	120.49'	CITY BENCH MARK - TOP NE. STOOP TO 6125 W. GREENFIELD AVE.
3	133.96'	CITY BENCH MARK - TOP NE. CORNER BOTTOM STEP 6301 W. NATIONAL AVE.
4	140.11'	CITY BENCH MARK - TOP SE. CORNER STOOP AT 6404 W. NATIONAL AVE. 2ND STEP UP FROM SIDEWALK.
5	143.25'	CITY BENCH MARK - SW. CORNER OF STOOP 6430 W. NATIONAL AVE.

2410-13-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0120	Clearing	ID	38.000	38.000
0006	201.0205	Grubbing	STA	3.000	3.000
0008	201.0220	Grubbing	ID	38.000	38.000
0010	204.0100	Removing Concrete Pavement	SY	5,393.000	5,393.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	227.000	227.000
0014	204.0150	Removing Curb & Gutter	LF	6.000	6.000
0016	204.0155	Removing Concrete Sidewalk	SY	1,568.000	1,568.000
0018	204.0170	Removing Fence	LF	15.000	15.000
0020	204.0195	Removing Concrete Bases	EACH	23.000	23.000
0022	204.0210	Removing Manholes	EACH	4.000	4.000
0024	204.0215	Removing Catch Basins	EACH	11.000	11.000
0026	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	1,052.000	1,052.000
0028	204.0245	Removing Storm Sewer (size) 02. 24-Inch	LF	35.000	35.000
0030	204.0291.S	Abandoning Sewer	CY	1.000	1.000
0032	204.9060.S	Removing (item description) 01. Bike Rack	EACH	2.000	2.000
0034	204.9060.S	Removing (item description) 02. Loop Detector Lead-In-Cable National & Greenfield Avenue	EACH	1.000	1.000
0036	204.9090.S	Removing (item description) 01. Landscape Retaining Wall	LF	99.000	99.000
0038	204.9165.S	Removing (item description) 01. Concrete Steps	SF	198.000	198.000
0040	205.0100	Excavation Common	CY	4,575.000	4,575.000
0042	213.0100	Finishing Roadway (project) 2410-13-70	EACH	1.000	1.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,138.000	2,138.000
0046	310.0110	Base Aggregate Open-Graded	TON	6.000	6.000
0048	311.0110	Breaker Run	TON	3,643.000	3,643.000
0050	320.0155	Concrete Base 9-Inch	SY	182.000	182.000
0052	415.0080	Concrete Pavement 8-Inch	SY	4,420.000	4,420.000
0054	415.4100	Concrete Pavement Joint Filling	SY	4,420.000	4,420.000
0056	416.0170	Concrete Driveway 7-Inch	SY	184.000	184.000
0058	416.0610	Drilled Tie Bars	EACH	51.000	51.000
0060	416.0620	Drilled Dowel Bars	EACH	115.000	115.000
0062	455.0605	Tack Coat	GAL	20.000	20.000
0064	460.2000	Incentive Density HMA Pavement	DOL	40.000	40.000
0066	460.5224	HMA Pavement 4 LT 58-28 S	TON	49.000	49.000
0068	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	6.000	6.000
0070	513.2001	Railing Pipe	LF	10.000	10.000
0072	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0074	601.0331	Concrete Curb & Gutter 31-Inch	LF	1,542.000	1,542.000
0076	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	6.000	6.000
0078	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	20.000	20.000
0080	601.0600	Concrete Curb Pedestrian	LF	9.000	9.000
0082	602.0410	Concrete Sidewalk 5-Inch	SF	10,365.000	10,365.000
0084	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	168.000	168.000
0086	602.1500	Concrete Steps	SF	96.000	96.000
0088	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	519.000	519.000
0090	608.0421	Storm Sewer Pipe Reinforced Concrete Class IV 21-Inch	LF	4.000	4.000
0092	608.0512	Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	LF	340.000	340.000
0094	608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	LF	180.000	180.000
0096	611.0530	Manhole Covers Type J	EACH	4.000	4.000

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Line	Item	Item Description	Unit	Total	Qty
0098	611.0648	Inlet Covers Type R	EACH	10.000	10.000
0100	611.2004	Manholes 4-FT Diameter	EACH	5.000	5.000
0102	611.2007	Manholes 7-FT Diameter	EACH	1.000	1.000
0104	611.8105	Adjusting Catch Basin Covers	EACH	1.000	1.000
0106	612.0106	Pipe Underdrain 6-Inch	LF	90.000	90.000
0108	616.0204	Fence Chain Link 4-FT	LF	15.000	15.000
0110	618.0100	Maintenance And Repair of Haul Roads (project) 2410-13-70	EACH	1.000	1.000
0112	619.1000	Mobilization	EACH	1.000	1.000
0114	624.0100	Water	MGAL	21.000	21.000
0116	625.0100	Topsoil	SY	350.000	350.000
0118	627.0200	Mulching	SY	25.000	25.000
0120	628.1104	Erosion Bales	EACH	50.000	50.000
0122	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0124	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0126	628.7005	Inlet Protection Type A	EACH	12.000	12.000
0128	628.7015	Inlet Protection Type C	EACH	28.000	28.000
0130	628.7560	Tracking Pads	EACH	2.000	2.000
0132	629.0210	Fertilizer Type B	CWT	0.200	0.200
0134	630.0200	Seeding Temporary	LB	4.000	4.000
0136	631.0300	Sod Water	MGAL	15.700	15.700
0138	631.1000	Sod Lawn	SY	350.000	350.000
0140	632.0101	Trees (species) (size) (root) 01. Elm, Frontier, 2.5" Cal, B&B	EACH	4.000	4.000
0142	632.0101	Trees (species) (size) (root) 02. Elm, Regal, 2.5" Cal, B&B	EACH	10.000	10.000
0144	632.0101	Trees (species) (size) (root) 03. Honeylocust, Streetkeeper, 2.5" Cal, B&B	EACH	3.000	3.000
0146	632.0101	Trees (species) (size) (root) 04. Lilac, China Snow Peking, 8'-10' HT Clump, B&B	EACH	3.000	3.000
0148	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	15.000	15.000
0150	637.2210	Signs Type II Reflective H	SF	68.000	68.000
0152	638.2102	Moving Signs Type II	EACH	3.000	3.000
0154	638.2602	Removing Signs Type II	EACH	18.000	18.000
0156	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0158	642.5401	Field Office Type D	EACH	1.000	1.000
0160	643.0300	Traffic Control Drums	DAY	3,882.000	3,882.000
0162	643.0410	Traffic Control Barricades Type II	DAY	189.000	189.000
0164	643.0420	Traffic Control Barricades Type III	DAY	1,625.000	1,625.000
0166	643.0705	Traffic Control Warning Lights Type A	DAY	2,620.000	2,620.000
0168	643.0715	Traffic Control Warning Lights Type C	DAY	917.000	917.000
0170	643.0900	Traffic Control Signs	DAY	10,329.000	10,329.000
0172	643.0920	Traffic Control Covering Signs Type II	EACH	10.000	10.000
0174	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0176	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	180.000	180.000
0178	643.5000	Traffic Control	EACH	1.000	1.000
0180	644.1420	Temporary Pedestrian Surface Plywood	SF	1,000.000	1,000.000
0182	644.1430	Temporary Pedestrian Surface Plate	SF	768.000	768.000
0184	644.1601	Temporary Pedestrian Curb Ramp	DAY	240.000	240.000
0186	644.1810	Temporary Pedestrian Barricade	LF	2,350.000	2,350.000
0188	645.0111	Geotextile Type DF Schedule A	SY	45.000	45.000
0190	645.0120	Geotextile Type HR	SY	150.000	150.000
0192	645.0220	Geogrid Type SR	SY	5,419.000	5,419.000
0194	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	5,108.000	5,108.000

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Line	Item	Item Description	Unit	Total	Qty
0196	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	442.000	442.000
0198	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0200	646.6120	Marking Stop Line Epoxy 18-Inch	LF	62.000	62.000
0202	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	1,250.000	1,250.000
0204	650.4000	Construction Staking Storm Sewer	EACH	14.000	14.000
0206	650.4500	Construction Staking Subgrade	LF	925.000	925.000
0208	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,972.000	1,972.000
0210	650.7000	Construction Staking Concrete Pavement	LF	925.000	925.000
0212	650.8501	Construction Staking Electrical Installations (project) 2410-13-70	EACH	1.000	1.000
0214	650.9000	Construction Staking Curb Ramps	EACH	16.000	16.000
0216	650.9500	Construction Staking Sidewalk (project) 2410-13-70	EACH	1.000	1.000
0218	650.9911	Construction Staking Supplemental Control (project) 2410-13-70	EACH	1.000	1.000
0220	650.9920	Construction Staking Slope Stakes	LF	925.000	925.000
0222	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,379.000	2,379.000
0224	652.0800	Conduit Loop Detector	LF	446.000	446.000
0226	652.0900	Loop Detector Slots	LF	282.000	282.000
0228	653.0135	Pull Boxes Steel 24x36-Inch	EACH	5.000	5.000
0230	653.0900	Adjusting Pull Boxes	EACH	2.000	2.000
0232	653.0905	Removing Pull Boxes	EACH	1.000	1.000
0234	655.0610	Electrical Wire Lighting 12 AWG	LF	2,172.000	2,172.000
0236	655.0625	Electrical Wire Lighting 6 AWG	LF	7,227.000	7,227.000
0238	655.0700	Loop Detector Lead In Cable	LF	1,139.000	1,139.000
0240	655.0800	Loop Detector Wire	LF	1,388.000	1,388.000
0242	690.0150	Sawing Asphalt	LF	474.000	474.000
0244	690.0250	Sawing Concrete	LF	886.000	886.000
0246	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	1,326.000	1,326.000
0248	999.1501.S	Crack and Damage Survey	EACH	12.000	12.000
0250	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,000.000	1,000.000
0252	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	2,400.000
0254	SPV.0025	Special 01. Arborsystem - Urban Tree Planting System	CF	14,715.000	14,715.000
0256	SPV.0035	Special 01. Backfill for Plant Beds - 24-Inch Depth	CY	43.000	43.000
0258	SPV.0060	Special 02. Catch Basin Special	EACH	8.000	8.000
0260	SPV.0060	Special 03. Storm Sewer Reconnect	EACH	2.000	2.000
0262	SPV.0060	Special 04. Relocate Lighting Units	EACH	22.000	22.000
0264	SPV.0060	Special 05. Internal Sanitary Manhole Seal	EACH	4.000	4.000
0266	SPV.0060	Special 06. Adjust Sanitary Manhole Frame	EACH	4.000	4.000
0268	SPV.0060	Special 07. Sanitary Manhole Frame with Solid Gasketed Lid	EACH	4.000	4.000
0270	SPV.0060	Special 08. Valve 6-Inch	EACH	2.000	2.000
0272	SPV.0060	Special 09. Valve 8-Inch	EACH	3.000	3.000
0274	SPV.0060	Special 10. Hydrant	EACH	2.000	2.000
0276	SPV.0060	Special 11. Adjust Water Valve Box	EACH	10.000	10.000
0278	SPV.0060	Special 12. Water Main Connection, 6-Inch	EACH	2.000	2.000
0280	SPV.0060	Special 13. Water Main Connection, 8-Inch	EACH	2.000	2.000
0282	SPV.0060	Special 14. Water Service 3-Inch	EACH	1.000	1.000
0284	SPV.0060	Special 15. Water Service 4-Inch	EACH	1.000	1.000
0286	SPV.0060	Special 16. Water Service Reconnect 6-Inch	EACH	1.000	1.000
0288	SPV.0060	Special 17. Marking Symbol Grooved Bike Lane Preformed Thermoplastic	EACH	12.000	12.000
0290	SPV.0060	Special 18. Marking Arrow Grooved Bike Lane Preformed Thermoplastic	EACH	10.000	10.000
0292	SPV.0060	Special 19. Bench	EACH	6.000	6.000

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Line	Item	Item Description	Unit	Total	Qty
0294	SPV.0060	Special 20. Trash Receptacle	EACH	3.000	3.000
0296	SPV.0060	Special 21. Recycling Receptacle	EACH	3.000	3.000
0298	SPV.0060	Special 22. Bicycle Rack	EACH	5.000	5.000
0300	SPV.0060	Special 23. Round Steel Sign Post System	EACH	5.000	5.000
0302	SPV.0060	Special 24. Catmint, Walker's Low 1 Gal CG	EACH	22.000	22.000
0304	SPV.0060	Special 25. Daylily, Strawberry Candy 1 Gal CG	EACH	42.000	42.000
0306	SPV.0060	Special 26. Daylily, Hyperion 1 Gal CG	EACH	12.000	12.000
0308	SPV.0060	Special 27. Feather Reed Grass 1 Gal CG	EACH	10.000	10.000
0310	SPV.0060	Special 28. Prairie Dropseed, Tara Dwarf 4" Pot CG	EACH	22.000	22.000
0312	SPV.0060	Special 29. Switchgrass, Shenandoah 1 Gal CG	EACH	12.000	12.000
0314	SPV.0060	Special 30. Daffodil, Dutch Master Min 4" Circ Bulb	EACH	84.000	84.000
0316	SPV.0060	Special 31. Daffodil, Yellow Jonquils Min 4" Circ Bulb	EACH	63.000	63.000
0318	SPV.0060	Special 32. Tulip, Albert Heijn Min 4" Circ Bulb	EACH	213.000	213.000
0320	SPV.0060	Special 33. Concrete Base Type 5, 24-Inch	EACH	12.000	12.000
0322	SPV.0060	Special 34. Concrete Base Type 5, 30-Inch	EACH	10.000	10.000
0324	SPV.0090	Special 01. 6-Inch PVC Storm Sewer Lateral	LF	128.000	128.000
0326	SPV.0090	Special 02. 8-Inch PVC Storm Sewer Lateral	LF	88.000	88.000
0328	SPV.0090	Special 03. Concrete Curb & Gutter Integral 31-Inch	LF	412.000	412.000
0330	SPV.0090	Special 04. Sanitary Sewer Relay SDR 35 PVC SP 8-Inch	LF	906.000	906.000
0332	SPV.0090	Special 05. Building Sanitary Sewer 6-Inch	LF	494.000	494.000
0334	SPV.0090	Special 06. Water Main Relay, 6-Inch	LF	173.000	173.000
0336	SPV.0090	Special 07. Water Main Relay, 8-Inch	LF	907.000	907.000
0338	SPV.0090	Special 08. Water Service Copper 1-Inch	LF	331.000	331.000
0340	SPV.0090	Special 09. Water Service Copper 2-Inch	LF	52.000	52.000
0342	SPV.0090	Special 10. Precast Concrete Planter Curbing	LF	149.000	149.000
0344	SPV.0165	Special 01. 3X12 Concrete Pavers over Concrete Base	SF	1,626.000	1,626.000
0346	SPV.0165	Special 02. 6X24 Concrete Pavers over Concrete Base	SF	2,530.000	2,530.000
0348	SPV.0165	Special 03. High Friction Green Surfacing	SF	1,921.000	1,921.000
0350	SPV.0165	Special 04. Wall Modular Block Gravity Landscape, STA. 9+40	SF	275.000	275.000
0352	SPV.0180	Special 01. Shredded Hardwood Bark Mulch	SY	1,361.000	1,361.000
0354	SPV.0195	Special 01. Management of Solid Waste	TON	311.000	311.000
0356	SPV.0200	Special 01. Sanitary Manhole 48-Inch Diameter	VF	43.000	43.000

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CLEARING AND GRUBBING

STREET	STATION	TO	STATION	OFFSET	201.0105 CLEARING STATION	201.0120 CLEARING I.D.	201.0205 GRUBBING STATION	201.0220 GRUBBING I.D.
W. NATIONAL AVENUE	8+93			32 LT		16		16
W. NATIONAL AVENUE	9+42			37 LT		6		6
W. NATIONAL AVENUE	11+69			55 RT		16		16
W. NATIONAL AVENUE	12+00	-	15+00		3		3	
PROJECT TOTAL					3	38	3	38

REMOVING ASPHALTIC SURFACE MILLING

STREET	FROM	TO	204.0120 SY
W. NATIONAL AVENUE	5+50	15+00	227
		PROJECT TOTALS	227

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MISCELLANEOUS REMOVALS

STREET	STATION	OFFSET	204.9060.S.01 REMOVING BIKE RACK EACH	204.9090.S.01 REMOVING LANDSCAPE RETAINING WALL LF	204.9165.S.01 REMOVING CONCRETE STEPS SF
W. NATIONAL AVENUE	5+74	25' LT	1	-	-
W. NATIONAL AVENUE	8+16	32' LT	-	-	32
W. NATIONAL AVENUE	8+45	34' LT	-	-	37
W. NATIONAL AVENUE	8+66	34' LT	-	-	13
W. NATIONAL AVENUE	8+70 - 8+76	LT	-	11	-
W. NATIONAL AVENUE	8+77	33' LT	-	-	14
W. NATIONAL AVENUE	8+98	33' LT	-	-	23
W. NATIONAL AVENUE	9+00 - 9+13	LT	-	19	-
W. NATIONAL AVENUE	9+14	34' LT	-	-	40
W. NATIONAL AVENUE	9+18 - 9+33	LT	-	20	-
W. NATIONAL AVENUE	9+34	34' LT	-	-	39
W. NATIONAL AVENUE	9+37 - 9+44	LT	-	12	-
W. NATIONAL AVENUE	9+45 - 9+67	LT	-	30	-
W. NATIONAL AVENUE	9+69 - 9+74	LT	-	7	-
W. NATIONAL AVENUE	13+81	25' LT	1	-	-
	PROJECT TOTAL:		2	99	198

REMOVING CURB & GUTTER

STREET	LOCATION	204.0150 LF
W. NATIONAL AVENUE	13+18 RT	3
W. NATIONAL AVENUE	13+40 RT	3
	PROJECT TOTAL	6

REMOVING CONCRETE SIDEWALK

STREET	FROM STATION	TO STATION	204.0155 SY
W. NATIONAL AVENUE	5+50 -	15+00	1,568
		PROJECT TOTAL	1,568

REMOVING CONCRETE PAVEMENT

STREET	FROM	TO	204.0100 SY
W. NATIONAL AVENUE	5+50	15+00	5,393
		PROJECT TOTALS	5,393

REMOVING FENCE

STREET	LOCATION	204.0170 LF
W. NATIONAL AVENUE	8+20 LT	15
	PROJECT TOTAL	15

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

REMOVING MANHOLES

STREET	STATION	OFFSET	REMOVING MANHOLES 204.0210 EACH
W. NATIONAL AVENUE	5+74	17' LT	1
W. NATIONAL AVENUE	7+66	18' LT	1
W. NATIONAL AVENUE	11+21	18' LT	1
W. NATIONAL AVENUE	13+97	18' LT	1
PROJECT TOTAL			4

REMOVING CATCH BASINS

STREET	STATION	OFFSET	REMOVING CATCH BASINS 204.0215 EACH
W.NATIONAL AVENUE	5+71	22' LT	1
W.NATIONAL AVENUE	7+64	22' LT	1
W.NATIONAL AVENUE	7+61	22' RT	1
W.NATIONAL AVENUE	9+04	22' RT	1
W.NATIONAL AVENUE	9+85	22' LT	1
W.NATIONAL AVENUE	10+48	22' LT	1
W.NATIONAL AVENUE	11+17	22' RT	1
W.NATIONAL AVENUE	11+14	22' LT	1
W.NATIONAL AVENUE	13+88	22' RT	1
W.NATIONAL AVENUE	13+83	22' LT	1
W.NATIONAL AVENUE	13+93	56' LT	1
PROJECT TOTAL			11

ADJUSTING CATCH BASIN COVERS

STREET	STATION	OFFSET	611.8105 EACH
W. NATIONAL AVENUE	5+70	22' RT	1
PROJECT TOTAL			1

REMOVING STORM SEWER

STREET	STATION	-	STATION	LOCATION	204.0245.01 12-INCH LF	204.0245.02 24-INCH LF
W. NATIONAL AVENUE	5+50	-	15+00	LT & RT	1052	35
				PROJECT TOTAL	1052	35

ABANDONING SEWER

STREET	STATION	204.0291.S CY
W. NATIONAL AVENUE	14+00	1
	PROJECT TOTAL	1

FINISHING ROADWAY - 2410-13-70

LOCATION	213.0100 EACH
W. NATIONAL AVENUE	1
PROJECT TOTAL	1

BASE AGGREGATE DENSE 1-1/4 INCH

STREET	STATION	TO	STATION	305.0120 TON
W. NATIONAL AVENUE	5+50	-	15+00	2,138
			PROJECT TOTAL	2,138

BREAKER RUN

STREET	STATION	TO	STATION	311.0110* TON
W. NATIONAL AVENUE	5+50	-	15+00	3,251
			PROJECT TOTAL	3,251

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

NATIONAL AVENUE	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2)	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.25	311.0110 BREAKER RUN *	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW	COMMENT
	5+70 to 14+75	NATIONAL AVENUE	4,357	0	1,358	2,999	52	65	0	2,934	2,934	0	
	UNDISTRIBUTED	EBS		218					392				ASSUMED 5% OF CUT
GRAND TOTAL			4,357	218	1,358	2,999	52	65	392	2,934			
TOTAL COMMON EXC			4,575										

* ADDITIONAL QUANTITIES SHOWN ELESEWHERE

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(6) EXPANDED FILL FACTOR = 1.25

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

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CONCRETE BASE 9-INCH

STREET	STATION	TO	STATION	320.0155 SY
NATIONAL AVENUE	5+50	-	15+00	182
PROJECT TOTAL				182

DRILLED TIE BARS

STREET	STATION	TO	STATION	416.0610 EACH
W. NATIONAL AVENUE	5+50	-	15+00	51
PROJECT TOTAL				51

3

CONCRETE PAVEMENT

STREET	STATION	TO	STATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.4100 CONCRETE PAVEMENT JOINT FILLING SY
W. NATIONAL AVENUE	5+50	-	15+00	4,420	4,420
			PROJECT TOTAL	4,420	4,420

DRILLED DOWEL BARS

STREET	STATION	TO	STATION	416.0620 EACH
W. NATIONAL AVENUE	5+50	-	15+00	115
PROJECT TOTAL				115

CONCRETE DRIVEWAY 7-INCH

STREET	STATION	TO	STATION	416.0170 CONCRETE DRIVEWAY 7-INCH SY
W. NATIONAL AVENUE	5+50	-	15+00	184
			PROJECT TOTAL	184

ASPHALT

STREET	STATION	TO	STATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
W. NATIONAL AVENUE	5+50	-	15+00	20	49	6
			PROJECT TOTAL	20	49	6

CONCRETE CURB & GUTTER

STREET	STATION	TO	STATION	601.0331 CONCRETE CURB AND GUTTER 31-INCH LF	601.0407 CONCRETE CURB AND GUTTER 18-INCH TYPE D LF	601.0413 CONCRETE CURB AND GUTTER 6-INCH SLOPED 30-INCH TYPE G LF	601.0600 CONCRETE CURB PEDESTRIAN LF	SPV.0090.03 CONCRETE CURB AND GUTTER INTEGRAL 31-INCH LF
W. NATIONAL AVENUE	5+00	-	15+00	1542	6	20	9	412
PROJECT TOTAL				1542	6	20	9	412

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CONCRETE SIDEWALK 5-INCH

STREET	STATION	TO	STATION	602.0410 SF
W. NATIONAL AVENUE	5+50	-	15+00	10,365
			PROJECT TOTAL	10,365

CURB RAMP DETECTABLE WARNING FIELD

STREET	STATION	TO	STATION	YELLOW 602.0505 SF
W. NATIONAL AVENUE	5+50	-	15+00	168
PROJECT TOTAL				168

CONCRETE STEPS

STREET	STA.	OFF	513.2001 RAILING PIPE LF	602.1500 CONCRETE STEPS SF
W. NATIONAL AVENUE	7+44	35' LT	--	5
W. NATIONAL AVENUE	8+16	32' LT	--	8
W. NATIONAL AVENUE	8+45	34' LT	--	18
W. NATIONAL AVENUE	8+66	34' LT	--	11
W. NATIONAL AVENUE	8+77	33' LT	--	6
W. NATIONAL AVENUE	8+98	33' LT	--	5
W. NATIONAL AVENUE	9+14	34' LT	6	24
W. NATIONAL AVENUE	9+34	34' LT	4	19
		PROJECT TOTAL	10	96

STORM SEWER SUMMARY

ITEM NUMBER	ITEM	PROJECT TOTAL	UNIT
520.8000	Concrete Collars for Pipe	3	EACH
608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	519	LF
608.0421	Storm Sewer Pipe Reinforced Concrete Class IV 21-Inch	4	LF
608.0512	Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	340	LF
608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	180	LF
611.0530	Manhole Covers Type J	4	EACH
611.0648	Inlet Covers Type R	10	EACH
611.2004	Manholes 4-FT Diameter	5	EACH
611.2007	Manholes 7-FT Diameter	1	EACH
SPV.0060.02	Catch Basin Special	8	EACH

(REFER TO STORM SEWER PLAN DRAINAGE TABLE FOR ADDITIONAL INFORMATION)

PIPE UNDERDRAIN, GEOTEXTILE FABRIC & GEOGRID

STREET	STATION	TO	STATION	310.0110 BASE AGGREGATE OPEN GRADE TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY	645.0220 GEOGRID TYPE SR SY
W. NATIONAL AVENUE	5+50	-	15+00	6	90	45	5419
PROJECT TOTAL				6	90	45	5419

FENCE CHAIN LINK 4-FT

STREET	LOCATION	616.0204 LF
W. NATIONAL AVENUE	8+20 LT	15
	PROJECT TOTAL:	15

MAINTENANCE AND REPAIR OF HAUL ROADS - 2410-13-70

CAT	LOCATION	618.0100 EACH
0040	NATIONAL AVENUE	1
	PROJECT TOTAL	1

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

WATER

STREET	LOCATION	TO	STATTION	624.0100 MGAL
W. NATIONAL AVENUE	5+50	-	15+00	21
			PROJECT TOTAL	21

TOPSOIL

STREET	STATION	TO	STATION	625.0100 SY
W. NATIONAL AVENUE	5+50	-	15+00	319
UNDISTRIBUTED				31
			PROJECT TOTAL	350

TEMPORARY SEEDING AND MULCH

STREET	STATION	TO	STATTION	627.0200 MULCHING SY	630.0200 SEEDING TEMPORARY LB
UNDISTRIBUTED				25	4
			PROJECT TOTAL	25	4

TRACKING PAD

STREET	LOCATION	628.7560 EACH
NATIONAL AVENUE	UNDISTRIBUTED	2
	PROJECT TOTAL	2

TEMPORARY SETTLING BASINS

STREET	628.1104 EROSION BALES EACH	645.0120 GEOTEXTILE TYPE HR SY
UNDISTRIBUTED	50	150
PROJECT TOTAL	50	150

EROSION CONTROL MOBILIZATIONS

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

INLET PROTECTION

STREET	STATION	TO	STATION	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH
W. NATIONAL AVENUE	5+50	-	15+00	10	26
UNDISTRIBUTED				2	2
			PROJECT TOTAL	12	28

SOD QUANTITIES

STREET	STATION	TO	STATTION	629.0210 FERTILIZER TYPE B CWT	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
W. NATIONAL AVENUE	5+50	-	15+00	0.2	14.3	319
UNDISTRIBUTED				0.0	1.4	31
			PROJECT TOTAL	0.2	15.7	350

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

TYPE II SIGNS

SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE		637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SPV.0060.23 ROUND STEEL SIGN POST SYSTEM EACH	POLE HEIGHT FOR INFORMATION ONLY CONTRACTOR TO VERIFY POLE HEIGHT WITH MUTCD REQUIREMENTS PRIOR TO ORDERING		REMARKS
													10 ft	12 ft	
1-1	W. NATIONAL AVE	6+68	LT	-	-	-	-	-	-	1	-	-	-	-	
1.2	W. NATIONAL AVE	6+68	LT	R2-1	30	24	X 30	5.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
1-3	W. NATIONAL AVE	6+69	RT	R7-5DMOD	2 HOUR, 8AM - 8PM, DA	12	X 18	1.5	-	-	-	-	-	-	ATTACH TO LIGHT POLE
1-4	W. NATIONAL AVE	7+46	LT	R7-5DMOD	2 HOUR, 8AM - 8PM, DA	12	X 18	1.5	-	-	-	-	-	-	ATTACH TO LIGHT POLE
1-5	W. NATIONAL AVE	7+64	RT	R3-17	-	30	X 24	5.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
1-6	W. NATIONAL AVE	7+66	RT	-	-	-	-	-	-	1	1	-	-	-	-
1-7	W. NATIONAL AVE	7+66	RT	R5-2	-	24	X 24	4.0	-	-	-	1	-	1	-
1-8	W. NATIONAL AVE	8+28	RT	R1-1	-	30	X 30	6.25	-	-	-	1	-	1	-
1-9	W. NATIONAL AVE	8+28	RT	-	-	-	-	-	-	1	1	-	-	-	-
1-10	W. NATIONAL AVE	8+34	LT	-	-	-	-	-	-	1	-	-	-	-	-
1-11	W. NATIONAL AVE	9+72	RT	R2-1	30	24	X 30	5.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
1-12	W. NATIONAL AVE	9+72	RT	R7-5DMOD	2 HOUR, 8AM - 8PM, DA	12	X 18	1.5	-	-	-	-	-	-	ATTACH TO LIGHT POLE
1-13	W. NATIONAL AVE	9+75	RT	-	-	-	-	-	-	1	-	-	-	-	-
1-14	W. NATIONAL AVE	9+75	RT	-	-	-	-	-	-	1	-	-	-	-	-
1-15	W. NATIONAL AVE	9+74	LT	-	-	-	-	-	-	1	-	-	-	-	-
1-16	W. NATIONAL AVE	9+79	LT	R7-5DMOD	2 HOUR, 8AM - 8PM, DA	12	X 18	1.5	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-1	W. NATIONAL AVE	10+61	RT	-	-	-	-	-	-	1	-	-	-	-	-
2-2	W. NATIONAL AVE	11+09	RT	-	-	-	-	-	1	-	-	-	-	-	MOVE SIGN TO LIGHT POLE AT STA 9+09
2-3	W. NATIONAL AVE	11+13	RT	R7-5DMOD	1 HOUR, 8AM - 8PM, DA	12	X 18	1.5	-	-	-	1	1	-	-
2-4	W. NATIONAL AVE	11+13	RT	-	-	-	-	-	-	1	1	-	-	-	-
2-5	W. NATIONAL AVE	11+52	RT	-	-	-	-	-	-	1	1	-	-	-	-
2-6	W. NATIONAL AVE	11+52	RT	R7-5DMOD	1 HOUR, 8AM - 8PM, DA	12	X 18	1.5	-	-	-	1	1	-	-
2-7	W. NATIONAL AVE	11+76	RT	R1-1	-	30	X 30	6.25	-	-	-	1	-	1	-
2-8	W. NATIONAL AVE	11+76	RT	-	-	-	-	-	-	1	1	-	-	-	-
2-9	W. NATIONAL AVE	12+01	RT	-	-	-	-	-	-	1	-	-	-	-	-
2-10	W. NATIONAL AVE	12+03	LT	-	-	-	-	-	-	1	-	-	-	-	-
2-11	W. NATIONAL AVE	12+77	RT	-	-	-	-	-	1	-	-	-	-	-	MOVE SIGN TO LIGHT POLE AT STA 11+95
2-12	W. NATIONAL AVE	12+77	RT	-	-	-	-	-	1	-	-	-	-	-	MOVE SIGN TO LIGHT POLE AT STA 11+99
2-13	W. NATIONAL AVE	12+77	RT	R7-51L, R7-5RMOD	2 HOUR, 8AM - 8PM, RA	24	X 18	3.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-14	W. NATIONAL AVE	12+77	LT	R7-5LMOD, R7-51R	2 HOUR, 8AM - 8PM, LA	24	X 18	3.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-15	W. NATIONAL AVE	13+58	LT	-	-	-	-	-	-	1	-	-	-	-	
2-16	W. NATIONAL AVE	13+62	LT	R3-17	-	30	X 24	5.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-17	W. NATIONAL AVE	13+62	LT	R7-1D	-	18	X 24	3.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-18	W. NATIONAL AVE	13+65	RT	R3-17B	-	30	X 12	2.5	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-19	W. NATIONAL AVE	13+65	RT	R7-1D	-	18	X 24	3.0	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-20	W. NATIONAL AVE	13+67	RT	-	-	-	-	-	-	1	-	-	-	-	-
2-21	W. NATIONAL AVE	13+99	LT	-	-	-	-	-	-	1	1	-	-	-	-
2-22	W. NATIONAL AVE	14+24	LT	R3-1	-	24	X 24	4.0	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-23	W. NATIONAL AVE	14+24	LT	-	-	-	-	-	-	1	-	-	-	-	-
2-24	W. NATIONAL AVE	14+66	RT	R10-11B	-	24	X 24	4.0	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-25	W. NATIONAL AVE	14+66	RT	-	-	-	-	-	-	1	-	-	-	-	-
					TOTAL			68.0	3	18	6	5	2	3	

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II NO.	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II CYCLES	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) LF
	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	NO.	CYCLES	EACH	DAY	LF
STAGE 1	131	12	1,572			10	1,310	20	2,620	7	917	75	9,825	10	2	10	14	180
SIDEWALK CONSTRUCTION	21	110	2,310	9	189	15	315					24	504					
PROJECT TOTALS			3,882		189		1,625		2,620		917		10,329			10	14	180

TRAFFIC CONTROL

LOCATION	643.5000 EACH
NATIONAL AVENUE	1
PROJECT TOTAL	1

TEMPORARY PEDESTRIAN ACCOMMODATIONS

STREET	644.1420 TEMPORARY PEDESTRIAN SURFACE PLYWOOD SF	644.1430 TEMPORARY PEDESTRIAN SURFACE PLATE SF	644.1601 TEMPORARY PEDESTRIAN CURB RAMP DAY	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
UNDISTRIBUTED	1000	768	240	2350
PROJECT TOTAL	1000	768	240	2350

PAVEMENT MARKING

STREET	FROM	TO	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH SOLID WHITE LF	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH YELLOW LF	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH SKIP-DASH (9'X 3') WHITE LF	646.3545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH WHITE (SOLID) LF	646.3545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH SKIP-DASH (9'X 3') WHITE LF	646.5020 MARKING ARROW EPOXY WHITE EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH WHITE LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH WHITE LF	CAT 0040 SPV.0060.17 MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC WHITE EACH	CAT 0040 SPV.0060.18 MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC WHITE EACH	SPV.0165.03 HIGH FRICTION GREEN SURFACING GREEN SF
W. NATIONAL AVENUE	5+00 -	19+00	2932	1917	259	244	198	2	62	1250	12	10	1921
	SUB TOTALS		2932	1917	259	244	198	2	62	1250	12	10	1921
	PROJECT TOTALS			5108			442	2	62	1250	12	10	1921

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

FIELD OFFICE TYPE D

LOCATION	642.5401 EACH
NATIONAL AVENUE	1
PROJECT TOTAL	1

CONSTRUCTION STAKING MAINLINE ITEMS

ITEM	QUANTITY	UNIT	DESCRIPTION
650.4000	14	EACH	CONSTRUCTION STAKING STORM SEWER
650.4500	925	LF	CONSTRUCTION STAKING SUBGRADE
650.5500	1,972	LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER
650.7000	925	LF	CONSTRUCTION STAKING CONCRETE PAVEMENT
650.8501	1	EACH	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (2410-13-70)
650.9000	16	EACH	CONSTRUCTION STAKING CURB RAMPS
650.9500	1	EACH	CONSTRUCTION STAKING SIDEWALK
650.9911	1	EACH	CONSTRUCTION STAKING SUPLEMENTAL CONTROL (2410-13-70)
650.9920	925	LF	CONSTRUCTION STAKING SLOPE STAKES

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LIGHTING REMOVAL/RELOCATION

STATION	OFFSET		SPV.0060.04 RELOCATE LIGHTING UNITS EACH	204.0195 REMOVING CONCRETE BASES EACH
5+87.00	25.5	LT	1	1
6+68.00	25.5	LT	1	1
7+46.00	25.5	LT	1	1
7+62.00	35.6	RT	--	1
8+30.00	25.5	LT	1	1
8+98.00	25.5	LT	1	1
9+79.00	25.5	LT	1	1
10+47.00	25.5	LT	1	1
11+10.00	25.5	LT	1	1
11+99.00	25.5	LT	1	1
12+74.00	25.5	LT	1	1
13+62.00	25.5	LT	1	1
5+87.00	25.5	RT	1	1
6+69.50	25.5	RT	1	1
7+64.00	25.5	RT	1	1
8+42.00	25.5	RT	1	1
9+09.00	25.5	RT	1	1
9+72.50	25.5	RT	1	1
10+63.50	25.5	RT	1	1
11+12.00	25.5	RT	1	1
11+95.00	25.5	RT	1	1
12+80.00	25.5	RT	1	1
13+64.50	25.5	RT	1	1
		TOTALS	22	23

CONCRETE BASES

DESCRIPTION	STATION	OFFSET		SPV.0060.33 CONCRETE BASE TYPE 5, 24-INCH EACH	SPV.0060.34 CONCRETE BASE TYPE 5, 30-INCH EACH
B A/1 6430	5+87.00	25.50	LT	1	
B A/1 6418	6+68.00	25.50	LT		1
B A/1 6406	7+46.00	25.50	LT	1	
B A/1 6340	8+30.00	25.50	LT		1
B A/1 6332	8+98.00	25.50	LT	1	
B A/1 6324	9+79.00	25.50	LT		1
B A/1 6312	10+47.00	25.50	LT	1	
B A/1 6302	11+10.00	25.50	LT		1
B A/1 6238	11+99.00	25.50	LT	1	
B A/1 6226	12+74.00	25.50	LT		1
B A/1 6214	13+62.00	25.50	LT	1	
B A/5 6429	5+87.00	25.50	RT	1	
B A/5 6423	6+69.50	25.50	RT		1
B A/5 6405	7+64.00	25.50	RT	1	
B A/5 6337	8+42.00	25.50	RT		1
B A/5 6331	9+09.00	25.50	RT	1	
B A/5 6325	9+72.50	25.50	RT		1
B A/5 6309	10+63.50	25.50	RT	1	
B A/5 6301	11+12.00	25.50	RT		1
B A/5 6237	11+95.00	25.50	RT	1	
B A/5 6227	12+80.00	25.50	RT		1
B A/5 6215	13+64.50	25.50	RT	1	
			TOTALS	12	10

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

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STREET LIGHTING WIRING AND CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG (UNDERGROUND PHASE AND NEUTRAL WIRES) LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG (UNDERGROUND GROUND WIRES) LF
B A/1 6430	B A/1 6418	92	204	102
B A/1 6418	B A/1 6406	89	198	99
B A/1 6406	B A/1 6340	95	210	105
B A/1 6340	B A/1 6332	79	178	89
B A/1 6332	B A/1 6324	92	204	102
B A/1 6324	B A/1 6312	79	178	89
B A/1 6312	B A/1 6302	74	168	84
B A/1 6302	B A/1 6238	100	220	110
PB1	PB2	62	144	72
B A/1 6238	B A/1 6226	86	192	96
B A/1 6226	B A/1 6214	99	218	109
B A/1 6214	Existing Conduit	99	218	109
PB3	PB4	62	144	72
B A/5 6429	B A/5 6423	94	208	104
B A/5 6423	B A/5 6405	106	232	116
B A/5 6405	B A/5 6337	89	198	99
B A/5 6337	B A/5 6331	78	176	88
B A/5 6331	B A/5 6325	75	170	85
B A/5 6325	B A/5 6309	102	224	112
B A/5 6309	B A/5 6301	60	140	70
B A/5 6301	B A/5 6237	94	208	104
B A/5 6237	B A/5 6227	96	212	106
B A/5 6227	B A/5 6215	95	210	105
B A/5 6215	Existing LCC	172	364	182
	SUBTOTAL	2,169	4,818	2,409
	TOTAL	2,169	7,227	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

STREET LIGHTING WIRING

DESCRIPTION	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (POLE PHASE AND NEUTRAL WIRES) LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (POLE GROUND WIRES) LF
B A/1 6430	44	22
B A/1 6418	92	46
B A/1 6406	44	22
B A/1 6340	92	46
B A/1 6332	44	22
B A/1 6324	92	46
B A/1 6312	44	22
B A/1 6302	92	46
B A/1 6238	44	22
B A/1 6226	92	46
B A/1 6214	44	22
B A/5 6429	44	22
B A/5 6423	92	46
B A/5 6405	44	22
B A/5 6337	92	46
B A/5 6331	44	22
B A/5 6325	92	46
B A/5 6309	44	22
B A/5 6301	92	46
B A/5 6237	44	22
B A/5 6227	92	46
B A/5 6215	44	22
SUBTOTAL	1,448	724
TOTAL	2,172	

3

PULL BOXES - STREET LIGHTING

DESCRIPTION	STATION	OFFSET	653.0135* STEEL 24X36 EACH
PB1	11+85.00	25.50 LT	1
PB2	11+85.00	25.50 RT	1
PB3	14+21.00	22.50 LT	1
PB4	14+21.00	25.50 RT	1
			4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

PULL BOXES - TRAFFIC SIGNALS

PULL BOX NO.	STATION	LOCATION	653.0135* PULL BOXES STEEL 24X36-INCH EACH
PB2	13+08.89	25.10' RT	1
		TOTALS	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

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CONDUIT - TRAFFIC SIGNALS

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.
PB1	PB2	160
PB3	EXT1	50
	TOTALS	210

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ADJUSTING PULL BOXES

PULL BOX NO.	653.0900 ADJUSTING PULL BOXES EACH
PB2	1
PB3	1
TOTAL	2

REMOVING PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB2	1
TOTAL	1

REMOVING LOOP DETECTOR LEAD IN CABLE, NATIONAL & GREENFIELD AVENUE

204.9060.S.02

LOCATION (INTERSECTION)	EACH
NATIONAL & GREENFIELD AVENUE	1
	1

3

CONDUIT LOOP DETECTOR
LOOP DETECTOR SLOTS
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	652.0900 LOOP DETECTOR SLOTS L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
41	PB4	13+03.5	128.7' LT	6'X6'	--	N/A	--	--	312	***
42	PB3	14+23.2	46.9' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY	86	65	147	268
43	PB3	14+47.4	31.7' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY	82	63	147	256
44	PB3	14+43.2	46.4' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY	102	73	147	316
45	PB3	14+65.2	32.3' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY	118	81	147	364
61	PB2	13+18.1	5.6' RT	6'X6'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	58	--	239	184
						TOTALS	446	282	1,139	1,388

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** REUSE LOOP DETECTOR WIRE FOR LOOP 41

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

SAWCUTTING

STREET	STATION	TO	STATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
W. NATIONAL AVENUE	5+50	-	15+00	474	886
			PROJECT TOTAL	474	886

CRACK AND DAMAGE SURVEY

LOCATION	999.1501.S EACH
6428 W. NATIONAL AVE	1
6416 W. NATIONAL AVE	1
6402 W. NATIONAL AVE	1
6325 W. NATIONAL AVE	1
6309 W. NATIONAL AVE	1
6309 W. GREENFIELD AVE	1
6301 W. NATIONAL AVE	1
6217 W. GREENFIELD AVE	1
6233 W. NATIONAL AVE	1
6227 W. NATIONAL AVE	1
6207 W. NATIONAL AVE	1
6203 W. NATIONAL AVE	1
PROJECT TOTAL	12

ARBORSYSTEM - URBAN TREE PLANTING SYSTEM

LOCATION		CAT 0010 SPV.0025.01 CF
6+49	RT	818
6+88	RT	818
7+26	RT	818
8+85	RT	818
9+55	RT	818
10+15	RT	818
10+85	RT	818
11+63	LT	818
12+25	LT	818
12+31	RT	818
12+55	LT	818
12+61	RT	818
12+93	RT	818
13+46	LT	818
13+50	RT	818
13+80	RT	818
13+81	LT	818
14+10	RT	818
PROJECT TOTAL		14,715

PVC STORM SEWER LATERALS

STREET	STATION	LOCATION	SPV.0060.03 STORM SEWER RECONNECT EACH	SPV.0090.01 6-INCH PVC STORM SEWER LATERAL LF	SPV.0090.02 8-INCH PVC STORM SEWER LATERAL LF
W. NATIONAL AVENUE	5+98	LT	-	4	-
W. NATIONAL AVENUE	6+34	LT	-	4	-
W. NATIONAL AVENUE	6+90	LT	-	4	-
W. NATIONAL AVENUE	7+26	LT	-	4	-
W. NATIONAL AVENUE	7+59	LT	-	4	-
W. NATIONAL AVENUE	8+13	LT	-	4	-
W. NATIONAL AVENUE	8+57	LT	-	4	-
W. NATIONAL AVENUE	8+87	LT	-	4	-
W. NATIONAL AVENUE	9+15	LT	1	-	44
W. NATIONAL AVENUE	9+30	LT	-	4	-
W. NATIONAL AVENUE	9+60	LT	-	4	-
W. NATIONAL AVENUE	10+66	LT	-	44	-
W. NATIONAL AVENUE	12+34	LT	1	-	44
W. NATIONAL AVENUE	12+82	LT	-	44	-
		PROJECT TOTAL	2	128	88

WALL MODULAR BLOCK GRAVITY LANDSCAPE, STA. 9+40

STREET	STATION	TO	STATION	SPV.0165.04 SF
W. NATIONAL AVENUE	5+50	-	15+00	275
			PROJECT TOTAL	275

MANAGEMENT OF SOLID WASTE

STREET	STATION	TO	STATION	LOCATION	SPV.0195.01 MANAGEMENT OF SOLID WASTE TON
NATIONAL AVENUE	13+45	-	13+80	LT	278
NATIONAL AVENUE	13+40	-	13+80	RT	33
				PROJECT TOTAL	311

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

3

PLANT QUANTITIES

CATEGORY	BID NUMBER	SYMBOL	COMMON NAME	SIZE WHEN PLANTED	ROOT CONDITION	UNIT	TOTALS
			LARGE DECIDUOUS TREES				
0010	632.0101.01	ULF	ELM, FRONTIER	2.5" CAL	B&B	EA	4
0010	632.0101.02	ULR	ELM, REGAL	2.5" CAL	B&B	EA	10
0010	632.0101.03	GTD	HONEYLOCUST, STREETKEEPER	2.5" CAL	B&B	EA	3
			SMALL DECIDUOUS TREES				
0010	632.0101.04	SPM	LILAC, CHINA SNOW PEKING	8'-10' HT CLUMP	B&B	EA	3
			PERENNIALS				
0040	SPV.0060.24	NWL	CATMINT, WALKER'S LOW	1 GAL.	CG	EA	22
0040	SPV.0060.25	HMS	DAYLILY, STRAWBERRY CANDY	1 GAL.	CG	EA	42
0040	SPV.0060.26	HHP	DAYLILY, HYPERION	1 GAL.	CG	EA	12
			ORNAMENTAL GRASSES				
0040	SPV.0060.27	CAK	FEATHER REED GRASS	1 GAL.	CG	EA	10
0040	SPV.0060.28	SPT	PRAIRIE DROPSEED, TARA DWARF	4" POT	CG	EA	22
0040	SPV.0060.29	PVS	SWITCHGRASS, SHENANDOAH	1 GAL.	CG	EA	12
			SPRING BULBS				
0040	SPV.0060.30	NDM	DAFFODIL, DUTCH MASTER	MIN. 4" CIRCUMF.	BULB	EA	84
0040	SPV.0060.31	NYJ	DAFFODIL, YELLOW JONQUILS	MIN. 4" CIRCUMF.	BULB	EA	63
0040	SPV.0060.32	TFA	TULIP, ALBERT HEIJN	MIN. 4" CIRCUMF.	BULB	EA	213

B&B: BALLED AND BURLAPED
CG: CONTAINER GROWN

MISCELLANEOUS LS QUANTITIES

LOCATION	CATEGORY 0010 632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH	CATEGORY 0040 SPV.0035.01 BACKFILL FOR PLANT BEDS - 24 INCH DEPTH CY	CATEGORY 0040 SPV.0060.19 BENCH EACH	CATEGORY 0040 SPV.0060.20 TRASH RECEPTACLE EACH	CATEGORY 0040 SPV.0060.21 RECYCLING RECEPTACLE EACH
PROJECT ID 2410-13-70	15	43	6	3	3
PROJECT TOTAL:	15	43	6	3	3

LOCATION	CATEGORY 0040 SPV.0060.22 BICYCLE RACK EACH	CATEGORY 0040 SPV.0090.10 PRECAST CONCRETE PLANTER CURBING LF	CATEGORY 0040 SPV.0165.01 3X12 CONCRETE PAVERS OVER CONCRETE BASE SF	CATEGORY 0040 SPV.0165.02 6X24 CONCRETE PAVERS OVER CONCRETE BASE SF	CATEGORY 0010 SPV.0180.01 SHREDDED HARDWOOD BARK MULCH SY
PROJECT ID 2410-13-70	5	149	1,626	2,530	1,361
PROJECT TOTAL:	5	149	1,626	2,530	1,361

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

SANITARY SEWER STRUCTURES

CATEGORY	STRUCTURE NUMBER	STATION	LOCATION	SPV.0200.01 SANITARY MANHOLE 48" DIA. VERT. FT.	SPV.0060.05 INTERNAL SANITARY MANHOLE SEAL EACH	SPV.0060.06 ADJUST SANITARY MANHOLE FRAME EACH	SPV.0060.07 SANITARY MH FRAMES W/ SOLID GASKETTED LID EACH	RIM ELEV.	STRUCTURE BOTTOM ELEV.
0020	S1	5+78.5	0.6 RT	10.35	1	1	1	142.80	132.45
	S2	8+25.2	0.5 RT	10.48	1	1	1	138.18	127.70
	S3	11+74.1	0.4 RT	11.11	1	1	1	132.36	121.25
	S4	14+84.0	0.3 RT	10.41	1	1	1	123.61	113.20
			PROJECT TOTALS	43	4	4	4		

SANITARY SEWER PIPES

CATEGORY	UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	SPV.0090.04 SANITARY SEWER RELAY SDR 35 PVC SP 8-INCH LF
0020	S1	S2	246.7
	S2	S3	349
	S3	S4	309.9
		PROJECT TOTALS	906

BUILDING SANITARY SEWER

CATEGORY	STATION	LOCATION	SPV.0090.05 BUILDING SANITARY SEWER 6-INCH LF	ADDRESSES
0020	6+04.3	LT	26	#6428
	6+47.4	RT	26	#6423
	6+53.9	LT	26	#6420
	6+82.4	LT	26	#6416-18
	7+21.7	LT	26	#6410-12
	7+58.6	LT	26	#6406-08
	7+83.3	LT	26	#6402-04
	8+63.3	LT	26	#6334-36
	8+98.3	LT	26	#6338-40
	9+29.4	LT	26	#6330-32
	9+64.6	LT	26	#6324-26
	9+71	RT	26	#6325 LOT 38
	10+68.8	RT	26	#6309-11
	11+49.7	LT	26	#6217-27-29-33 W Greenfield Ave
	12+16.5	RT	26	#6233-35-37
	12+70.3	RT	26	#6227-29-31
	12+99.5	LT	26	#6217-27-29-33 W Greenfield Ave
	13+98.8	RT	26	#6207-09-11
	14+40.8	RT	26	#6203
		PROJECT TOTALS	494	

ALL ITEMS CATEGORY 0020

WATER MAIN RELAY

CATEGORY	FROM STA.	TO STA.	SPV.0090.06 WATER MAIN RELAY 6-INCH LF	SPV.0090.07 WATER MAIN RELAY 8-INCH LF	SPV.0060.08 WATER MAIN VALVE 6-INCH EACH	SPV.0060.09 WATER MAIN VALVE 8-INCH EACH	SPV.0060.10 HYDRANT EACH	SPV.0060.11 ADJUST WATER VALVE BOX EACH	SPV.0060.12 WATER MAIN CONNECTION 6-INCH EACH	SPV.0060.13 WATER MAIN CONNECTION 8-INCH EACH
0030	5+75.1	14+80		906.3		3		6		2
	32+26.8	33+14.7	90.1		1		1	2	1	
	42+25.6	43+01.9	82.8		1		1	2	1	
		PROJECT TOTALS	173	907	2	3	2	10	2	2

3

WATER SERVICES

CATEGORY	STATION	LOCATION	SPV.0090.08 WATER SERVICE COPPER 1-INCH LF	SPV.0090.09 WATER SERVICE COPPER 2-INCH LF	SPV.0060.14 WATER SERVICE 3-INCH EACH	SPV.0060.15 WATER SERVICE 4-INCH EACH	SPV.0060.16 WATER SERVICE RECONNECT 6-INCH EACH	ADDRESSES
0030	6+06.0	LT	13.5					#6428
	6+42.0	RT	38					#6423
	6+47	LT	13.5					#6420
	6+85	LT	13.5					#6416-18
	7+17.5	LT	13.5					#6410-12
	7+54.3	LT	13.5					#6406-08
	7+84	LT	13.5			`		#6402-04
	8+52.7	LT	13.5					#6338-40
	8+90.3	LT	13.5					#6334-36
	9+17.7	RT		35				#6325
	9+24.5	LT	16.5					#6330-32
	9+42.4	LT	16.5					#6324-26
	10+35.9	LT					1	#6300
	10+55.5	RT	33					#6309-11
	10+85.2	LT		16.5				#6300
	11+45.4	LT			1			#6217-27-29-33 W Greenfield Ave
	11+48.9	LT				1		#6217-27-29-33 W Greenfield Ave
	12+70.9	RT	35					#6227-29-31
	13+96	RT	35					#6207-09-11
	14+39.7	RT	35					#6203
	42+52.0	RT	13.5					#6233-35-37
		PROJECT TOTALS	331	52	1	1	1	

ALL ITEMS CATEGORY 0030

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

W. NATIONAL AVENUE

S. 62ND STREET TO S. 65TH STREET

LOCAL ROAD

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2410-13-70

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2410-13-00	4.01	6
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT OF WAY REQUIRED FOR
W. NATIONAL AVENUE
S. 62ND STREET TO S. 65TH STREET
W. NATIONAL AVENUE — MILWAUKEE CO.

CONSTRUCTION PROJECT NUMBER
2410-13-70

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

CONVENTIONAL SYMBOLS

- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- NEW REFERENCE LINE
- NEW R/W LINE
- EXISTING R/W OR HE LINE
- PRDPERTY LINE (P.L.)
- LOT, TIE & OTHER MINOR LINES
- SLOPE INTERCEPT
- CORPORATE LIMITS
- UNDERGRDUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) — W (TYPE)
- NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
- TEMPORARY LIMITED EASEMENT AREA
- EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
- TRANSMISSION STRUCTURES
- BUILDING — TO BE REMOVED
- BRIDGE
- SECTION CORNER SYMBOL (18 / 23 / 26 / 16 / 15 / 9)
- SECTION CORNER MDNUMENT
- R/W MONUMENT (TO BE SET)
- NON-MONUMENTED R/W POINT
- FDUND IRON PIN (1-INCH UNLESS NOTED) IP
- GEODETIC SURVEY MONUMENT
- SIXTEENTH CORNER MONUMENT
- SIGN — SIGN
- OFF-PREMISE SIGN (41-23 — 1/2 SIGN)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHDNE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

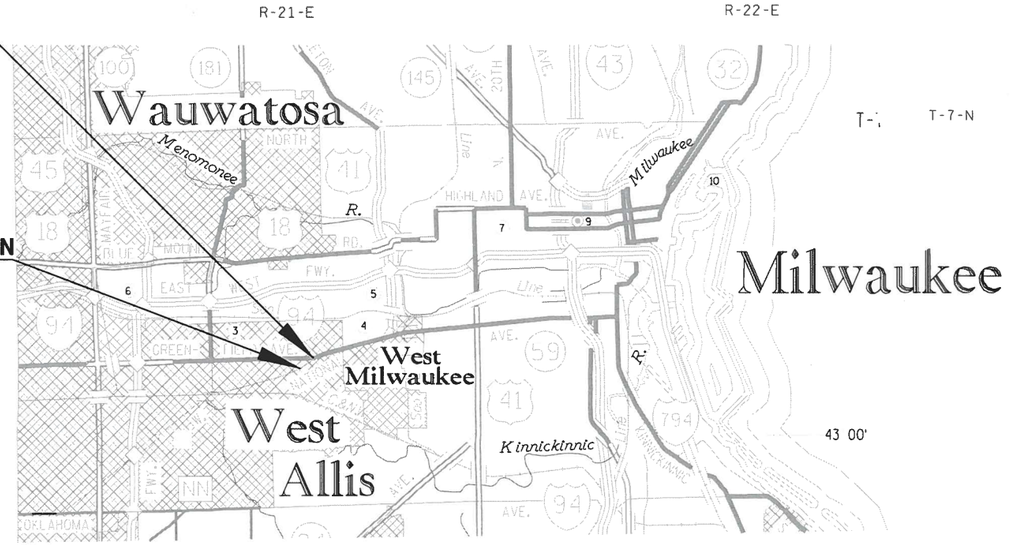
- ACCESS RESTRICTED BY ACQUISITION
- NO ACCESS (BY STATUTORY AUTHORITY)
- ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
- NO ACCESS (NEW HIGHWAY)
- PARCEL NUMBER (25) — UTILITY NUMBER (40)
- PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

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

END RELOCATION ORDER
STA. 14+72.93
44' SOUTH OF AND 722' WEST OF THE NE. CORNER OF THE NE.1/4, SECTION 3, T.6N., R.21E.
N= 377,038.14
E=2,537,705.09

BEGIN RELOCATION ORDER
STA. 5+61.01
454' SOUTH OF AND AND 1,160' EAST OF THE NW. CORNER OF THE NE.1/4, SECTION 3, T.6N., R.21E.
N= 376,546.47
E=2,536,937.07



N

LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.173 MI.

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

- WATER — W
- GAS — G
- TELEPHDNE — T
- DVERHEAD TRANSMISSIDN LINES — OH
- ELECTRIC — E
- CABLE TELEVISIDN — TV
- FIBER OPTIC — FO
- SANITARY SEWER — SAN
- STORM SEWER — SS

NOTES:

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

ALL NEW RIGHT OF WAY MONUMENTS WILL BE TYPE 2 MONUMENTS AND WILL BE PLACED PRIDR TO THE COMPLETIDN OF THE PROJECT. NEW RIGHT DF WAY MONUMENTATION THAT FALLS DN CONCRETE SURFACES WILL BE MDNUMENTED BY A CHISILED CROSS ON 5' OFFSETS.

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

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

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

ORIGINAL PLAT PREPARED BY
GRAEF

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

1/29/2021 (Date) (Signature)

REVISIDN DATE
03/09/2022

CITY OF WEST ALLIS

APPROVED FOR THE CITY
DATE: _____ Traci Gengler (Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	NEW	EXISTING	TOTAL	REMAINING ACRES	TEMP. ACRES	PERM. ACRES	PARCEL NUMBER
1	4.04	National Avenue North, LLC	TLE	0.172	0.000	0.000	0.000	0.172	0.010	0.000	1
2	4.04	National Avenue North, LLC	TLE	0.084	0.000	0.000	0.000	0.084	0.002	0.000	2
3	4.04	Midwest Commercial Funding, LLC	TLE	0.072	0.000	0.000	0.000	0.072	0.004	0.000	3
4	4.04	Nicholas J. Linz and Carrie L. Linz, husband and wife	TLE	0.110	0.000	0.000	0.000	0.110	0.004	0.000	4
5	4.04	Enhanced Properties II LLC	TLE	0.098	0.000	0.000	0.000	0.098	0.006	0.000	5
6	4.04	Juan J. Sendejo, Jr	TLE	0.164	0.000	0.000	0.000	0.164	0.011	0.000	6
7	4.04	INTENTIONALLY OMITTED	TLE	0.089	0.000	0.000	0.000	0.089	0.000	0.000	7
8	4.04	National Avenue South, LLC	TLE	0.080	0.000	0.000	0.000	0.080	0.006	0.000	8
9	4.04	National Avenue South, LLC	TLE	0.092	0.000	0.000	0.000	0.092	0.006	0.000	9
10	4.04	National Avenue South, LLC	TLE	0.103	0.000	0.000	0.000	0.103	0.006	0.000	10
11	4.04	National Avenue South, LLC	TLE	0.229	0.000	0.000	0.000	0.229	0.017	0.000	11
12	4.05	Brandon Viliunas	TLE	0.080	0.000	0.000	0.000	0.080	0.008	0.000	12
13	4.05	Jorge Avila, a single individual	TLE	0.080	0.000	0.000	0.000	0.080	0.006	0.000	13
14	4.05	Lacy Properties LLC	TLE	0.080	0.000	0.000	0.000	0.080	0.006	0.000	14
15	4.05	Brandon W. Masch, a single person	TLE	0.074	0.000	0.000	0.000	0.074	0.006	0.000	15
16	4.05	WFFI, LLC, a Wisconsin limited liability company	TLE	0.517	0.000	0.000	0.000	0.517	0.022	0.000	16
17	4.05	Motor Castings Company, a Wisconsin corporation	TLE	0.442	0.000	0.000	0.000	0.442	0.047	0.000	17
18	4.05	Z's Bar LLC	TLE	0.117	0.000	0.000	0.000	0.117	0.003	0.000	18
19	4.05	J & S 2008 LLC	TLE	0.138	0.000	0.000	0.000	0.138	0.001	0.000	19
20	4.06	Epikos, a Wisconsin religious organization	TLE	0.443	0.000	0.000	0.000	0.443	0.020	0.000	20
21	4.06	Daniel McGuire	TLE	0.099	0.000	0.000	0.000	0.099	0.003	0.000	21
22	4.06	BB5 Properties LLC, a Wisconsin limited liability company	TLE	0.121	0.000	0.000	0.000	0.121	0.004	0.000	22
23	4.06	City of West Allis, a Wisconsin municipal body corporate	R.O.E. PERMIT	0.243	0.000	0.000	0.000	0.243	0.000	0.000	23
24	4.06	Delton Properties, LLC	TLE	0.122	0.000	0.000	0.000	0.122	0.008	0.000	24
25	4.06	Richard A. Libbey and Eva A. Libbey, Trustees of the Richard A. Libbey and Eva A. Libbey Revocable Trust dated January 16, 2002, as amended and/or restated	FEE & TLE	0.069	0.001	0.000	0.001	0.068	0.007	0.000	25
50	4.04, 4.06	AT&T Wisconsin	Release of Rights	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
51	4.06	WE Energies-Electric	Release of Rights	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
52	4.06	WE Energies-Gas	Release of Rights	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
53	4.05	City of West Allis	Release of Rights	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
54	4.06	Milwaukee Metropolitan Sewerage District	Release of Rights	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

4

4

REVISION DATE
03/09/2022

DATE: 01/29/2021

SCALE, FEET
0 N/A

HWY: W NATIONAL AVENUE
COUNTY: MILWAUKEE

R/W PROJECT NUMBER: 2410-13-00
CONSTRUCTION PROJECT NUMBER: 2410-13-70

PLAT SHEET 4.02
PS&E SHEET 90

E

4

CONCRETE MONUMENT
W/BRASS CAP
N=377,005.18
E=2,535,783.84

T 6 N R 21 E
3 3

CITY

1/4 SECTION LINE

NW-NE
SEC 3-6-21

1/16 LINE

W. GREENFIELD AVENUE
SECTION LINE

OF

GN

CONCRETE MONUMENT
W/BRASS CAP
N=377,093.51
E=2,538,444.98

T 6 N R 21 E
3 2

BEGIN RELOCATION ORDER
STA. 5+61.01
N=376,546.47
E=2,536,937.07

1 2 3 4 5 6 12 13 14 15 16 20

4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

W. NATIONAL AVENUE

S. 65TH STREET

S. 64TH STREET

S. 63RD STREET

S. 62ND STREET

7 8 9 10 11 17 18 19 21 22 23 24 25

END RELOCATION ORDER
STA. 14+72.93
N=377,038.14
E=2,537,705.09

NE-NE
SEC 3-6-21

WEST ALLIS

SECTION LINE

1/16 LINE

CONCRETE MONUMENT
W/BRASS CAP
N=377,005.18
E=2,535,783.84

T 6 N R 21 E
3 3 3 3

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

T 6 N R 21 E
3 2 3 2

REVISION DATE	DATE: 01/29/2021	SCALE, FEET 0 50 100	HWY: W NATIONAL AVENUE	R/W PROJECT NUMBER: 2410-13-00	PLAT SHEET 4.03	
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER: 2410-13-70	PS&E SHEET 91	E

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

RECIPROCAL EASEMENT BETWEEN OWNERS OF LOTS 14 AND 15, BLOCK 1, C.A. MAYNARD'S SUBDIVISION NO. 3 FOR USE, REPAIR AND MAINTENANCE OF WATER LINES AND LATERALS THROUGH BUILDINGS AND REAL ESTATE THEREON WHICH CONNECT TO MUNICIPAL WATER SYSTEM AND MUNICIPAL WATER METERS PER DOCUMENT NO. 4751790.

CONCRETE MONUMENT
W/BRASS CAP
N=377,005.18
E=2,535,783.84

T 6 N R 21 E (33)

NW-NE SEC 3-6-21

CITY

C.A. MAYNARD AND AGNEW'S SUBDIVISION NO. 3

BLOCK 1

KENNETH HEIGHTS

BLOCK 1

1/16 LINE

N 0° 48' 19" W 1,186.42'

60'

BEGIN RELOCATION ORDER
STA. 5+61.01
N=376,546.47
E=2,536,937.07

50

1 NATIONAL AVENUE NORTH, LLC
2 NATIONAL AVENUE NORTH, LLC
3 MIDWEST COMMERCIAL FUNDING, LLC
4 NICHOLAS J LINZ AND CARRIE L LINZ
5 ENHANCED PROPERTIES II LLC
6 JUAN J SENDEJO JR

PL

LOT 11 | LOT 12 | LOT 13 | LOT 14 | LOT 15 | LOT 12 | LOT 13

5+70.17 40.00' BLD.
6+29.79 40.00'
6+27.41 36.00 BLD.
6+98.40 38.00'
6+63.50 38.00 BLD.
7+33.30 38.00' BLD.
7+34.49 40.00' BLD.
7+69.38 40.00' BLD.
8+04.26 40.00
8+39.15 40.00'
8+34.99 33.00'
5+66.01 33.00'
6+60.53 33.00'
6+25.63 33.00'
6+62.31 36.00
6+95.43 33.00
7+30.33 33.00'
7+65.22 33.00'
8+00.09 33.00'

33.00'

1,354.50' 5+00 1,353.83' 6+00 249.37' 7+00 8+00

STA. 5+65.34

N 57° 22' 25" E 223.20'

W. NATIONAL AVENUE

5+65.34 33.00'
6+00.65 33.00'
6+35.95 33.00'
6+71.26 33.00'
7+63.21 33.00'
7+65.59 37.26'
7+58.03 40.00'
7+54.42 55.39'
7+50.16 52.77'
5+96.32 40.00'
5+61.01 40.00'
6+31.63 40.00'
6+66.95 40.00'

TLE SLOPES (TYP)
SLOPE INTERCEPT (TYP)

BLD.

LOT 4 | LOT 3 | LOT 2 | LOT 1 | LOT 2 | LOT 1

7 NATIONAL AVENUE SOUTH, LLC
8 NATIONAL AVENUE SOUTH, LLC
9 NATIONAL AVENUE SOUTH, LLC
10 NATIONAL AVENUE SOUTH, LLC
11 NATIONAL AVENUE SOUTH, LLC

S. 65TH STREET

N 0° 48' 19" W 1,211.94'

T 6 N R 21 E (33)

CONCRETE MONUMENT
W/BRASS CAP
N=374,607.06
E=2,535,817.55

CENTRAL IMPROVEMENT COMPANY'S SUBDIVISION NUMBER 4

BLOCK 4

LIBERTY HEIGHTS

NW-NE SEC 3-6-21

NE-NE SEC 3-6-21

S. 64TH STREET

MATCH LINE

1/16 LINE

SEE SHEET 4.05

WEST ALLIS

UTILITY NO.	OWNER	WIDTH	DOCUMENT NO.	PARCEL
50	AT&T WISCONSIN	BLANKET EASEMENT	713610	1

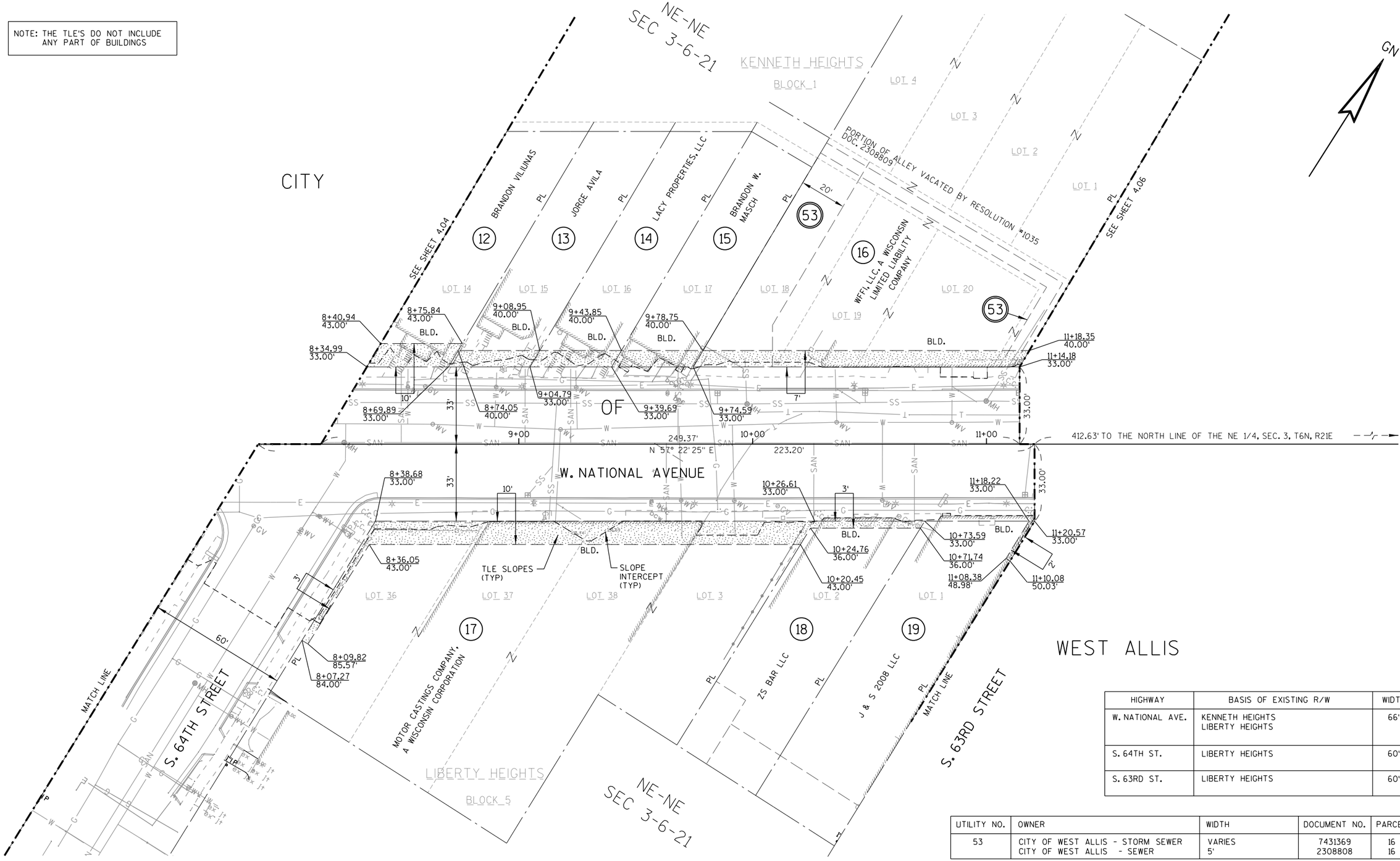
HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	C.A. MAYNARD AND AGNEW'S SUBDIVISION NO. 3 CENTRAL IMPROVEMENT COMPANY'S SUBDIVISION NUMBER FOUR LIBERTY HEIGHTS	66'
S. 65TH ST. NE OF NATIONAL SW OF NATIONAL	C.A. MAYNARD AND AGNEW'S SUBDIVISION NO. 3 CENTRAL IMPROVEMENT COMPANY'S SUBDIVISION NUMBER FOUR	60'
S. 64TH ST.	LIBERTY HEIGHTS	60'

REVISION DATE	DATE: 01/29/2021	SCALE: FEET 0 20 40	HWY: W NATIONAL AVENUE	R/W PROJECT NUMBER: 2410-13-00	PLAT SHEET 4.04	
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER: 2410-13-70	PS&E SHEET 92	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\040110_rp.dgn PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75

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



HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	KENNETH HEIGHTS LIBERTY HEIGHTS	66'
S. 64TH ST.	LIBERTY HEIGHTS	60'
S. 63RD ST.	LIBERTY HEIGHTS	60'

UTILITY NO.	OWNER	WIDTH	DOCUMENT NO.	PARCEL
53	CITY OF WEST ALLIS - STORM SEWER CITY OF WEST ALLIS - SEWER	VARIES 5'	7431369 2308808	16 16

REVISION DATE	DATE: 01/29/2021	SCALE: FEET 0 20 40	HWY: W NATIONAL AVENUE	R/W PROJECT NUMBER: 2410-13-00	PLAT SHEET 4.05	
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER: 2410-13-70	PS&E SHEET 93	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\040111_rp.dgn PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE :

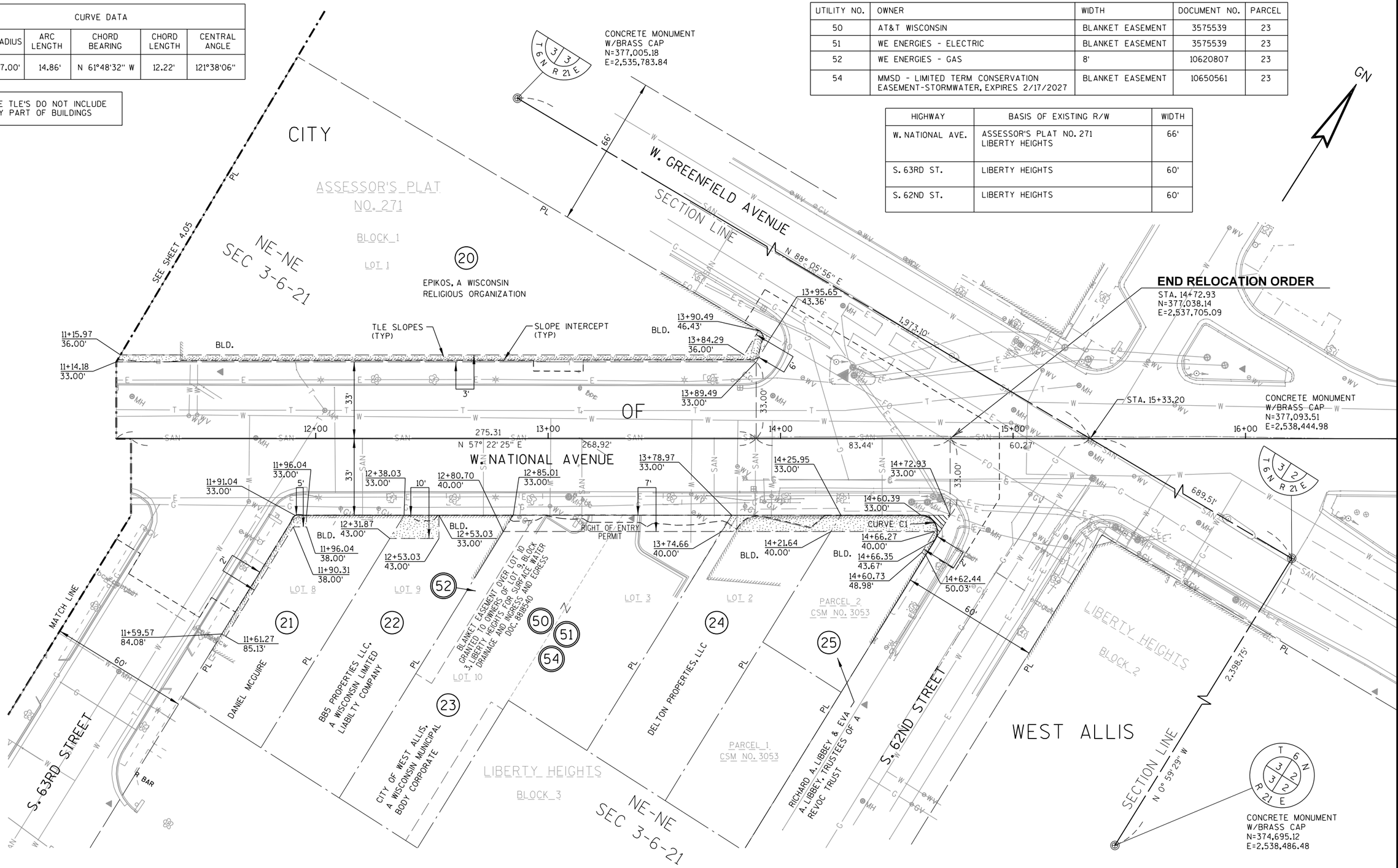
WISDOT/CADDS SHEET 75

CURVE DATA					
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	CENTRAL ANGLE
C1	7.00'	14.86'	N 61°48'32" W	12.22'	121°38'06"

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

UTILITY NO.	OWNER	WIDTH	DOCUMENT NO.	PARCEL
50	AT&T WISCONSIN	BLANKET EASEMENT	3575539	23
51	WE ENERGIES - ELECTRIC	BLANKET EASEMENT	3575539	23
52	WE ENERGIES - GAS	8'	10620807	23
54	MMSD - LIMITED TERM CONSERVATION EASEMENT-STORMWATER, EXPIRES 2/17/2027	BLANKET EASEMENT	10650561	23

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	ASSESSOR'S PLAT NO. 271 LIBERTY HEIGHTS	66'
S. 63RD ST.	LIBERTY HEIGHTS	60'
S. 62ND ST.	LIBERTY HEIGHTS	60'



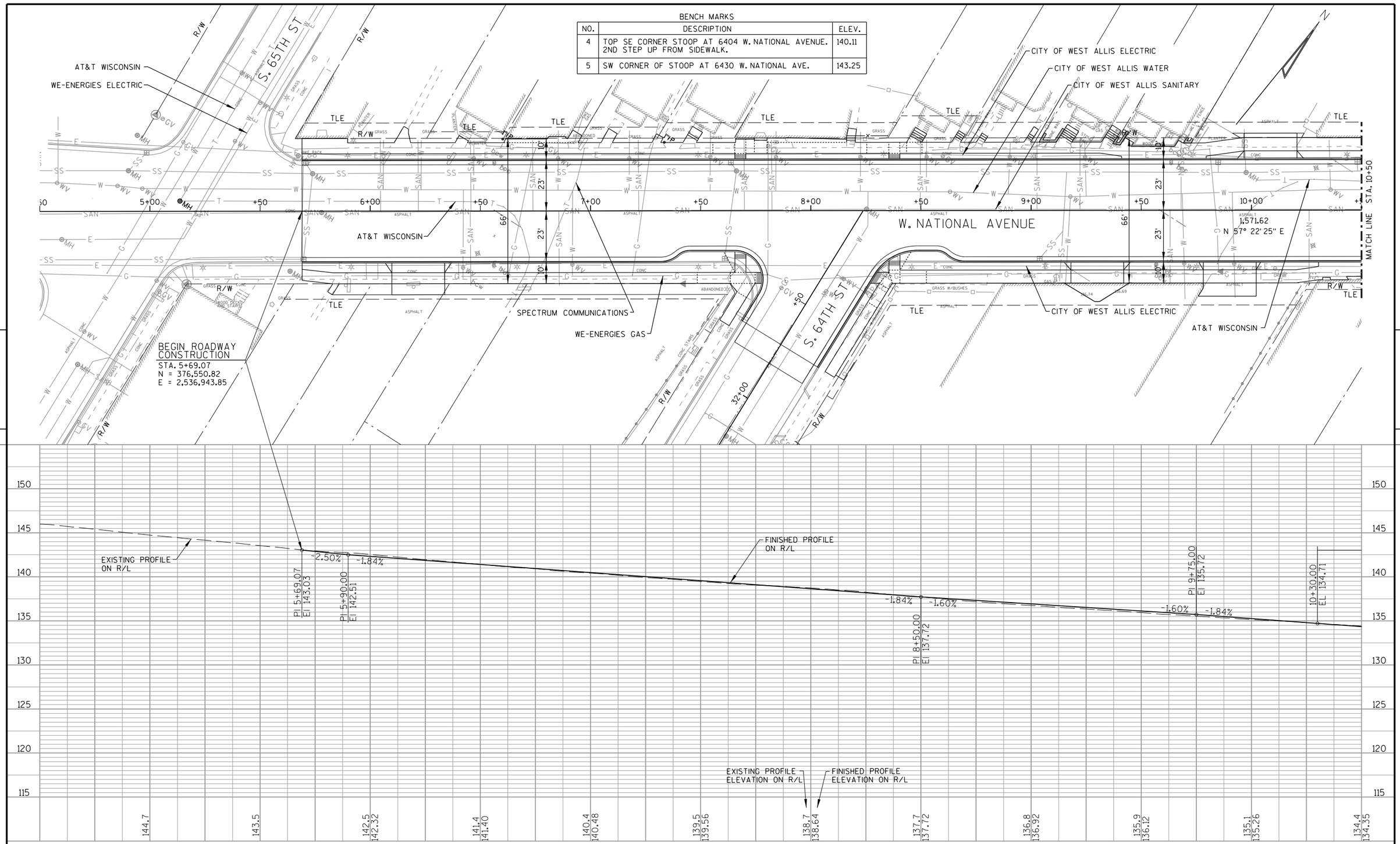
REVISION DATE 03/09/2022	DATE: 01/29/2021	SCALE, FEET 0 20 40	HWY: W NATIONAL AVENUE	R/W PROJECT NUMBER: 2410-13-00	PLAT SHEET 4.06	
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER: 2410-13-70	PS&E SHEET 94	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\040112_rp.dgn PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75

BENCH MARKS

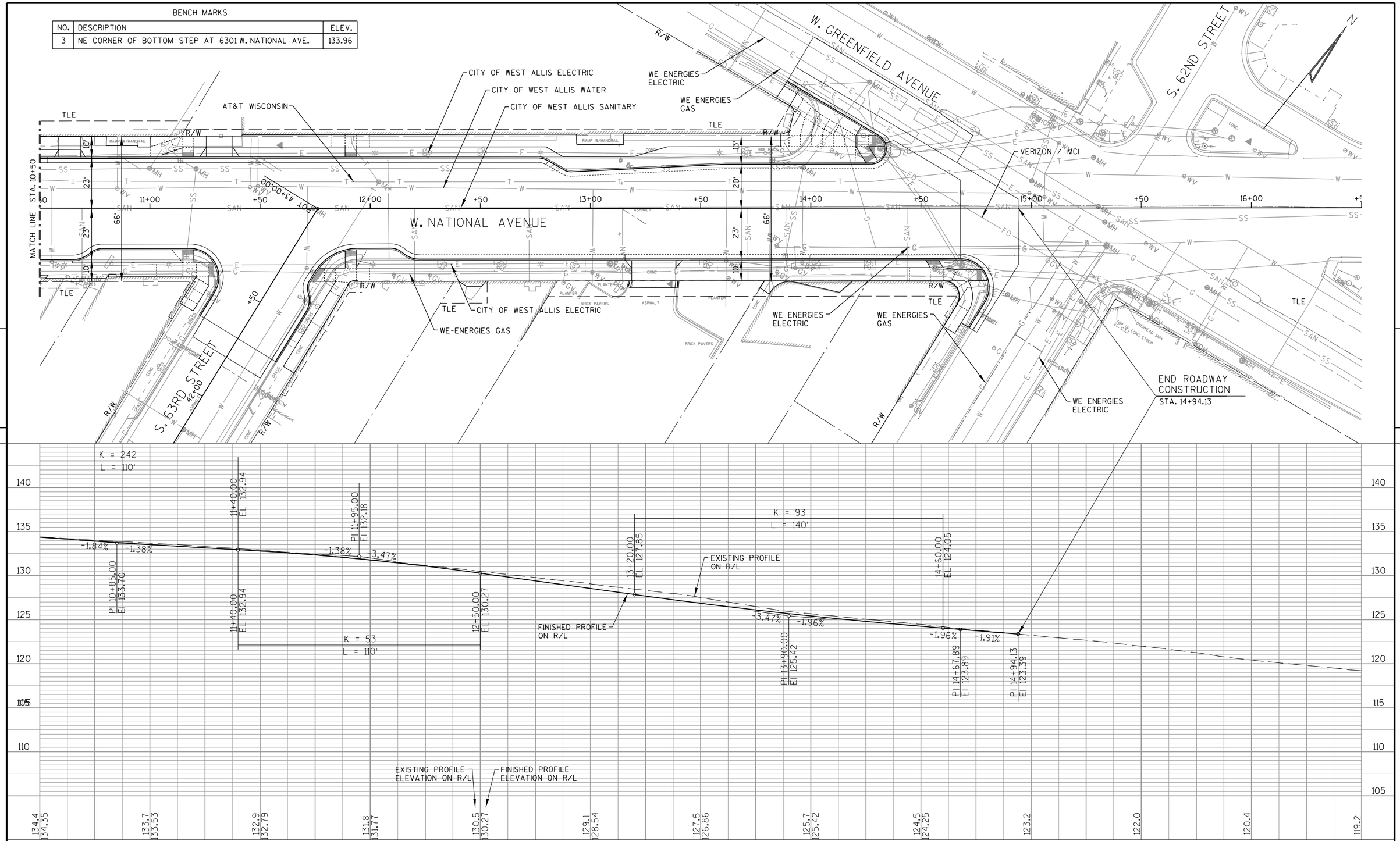
NO.	DESCRIPTION	ELEV.
4	TOP SE CORNER STOOP AT 6404 W. NATIONAL AVENUE. 2ND STEP UP FROM SIDEWALK.	140.11
5	SW CORNER OF STOOP AT 6430 W. NATIONAL AVE.	143.25



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 95	E

BENCH MARKS

NO.	DESCRIPTION	ELEV.
3	NE CORNER OF BOTTOM STEP AT 6301 W. NATIONAL AVE.	133.96

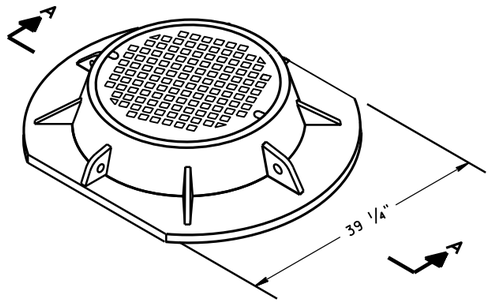


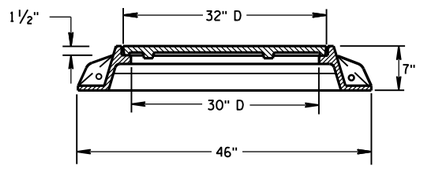
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 96	E

Standard Detail Drawing List

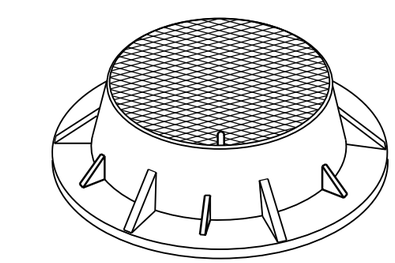
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-10	URBAN DOWELED CONCRETE PAVEMENT
13C15-07A	CONCRETE BASE
13C15-07B	CONCRETE BASE
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C18-07F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14A02-01	TREE PLANTING DETAIL
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15C	PAVEMENT MARKING ARROWS
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C08-21D	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C29-07A	BICYCLE LANE MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-06B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-07A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-07C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

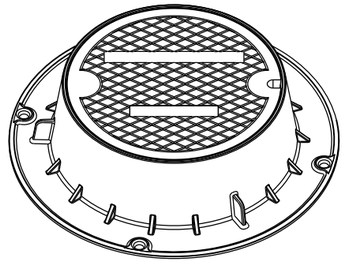
6

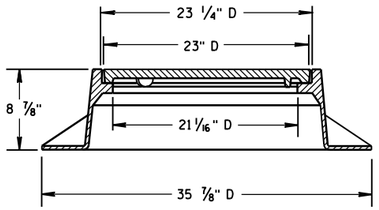


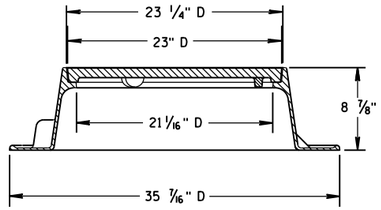


SECTION A-A
TYPE "K"









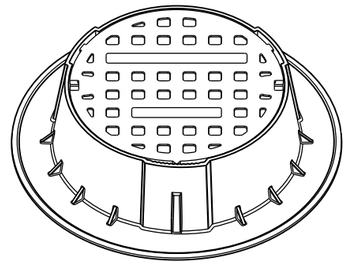
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

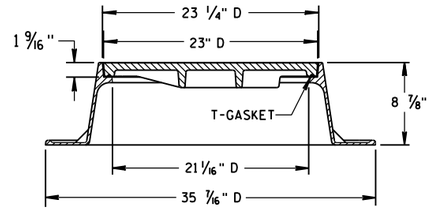
GENERAL NOTES

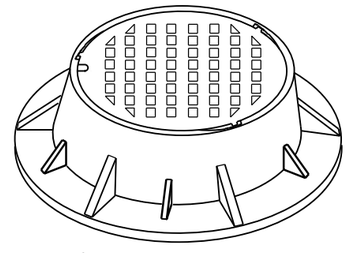
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

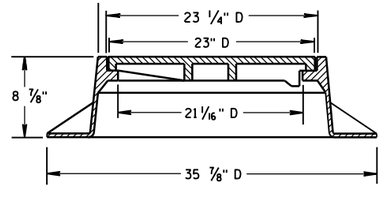
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

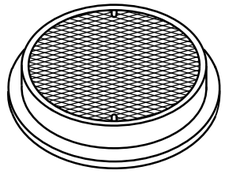


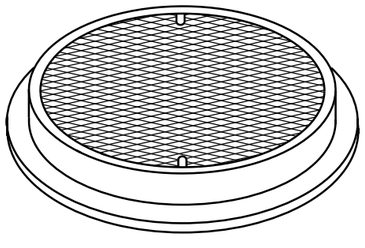


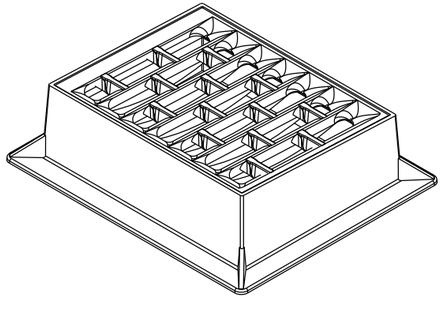


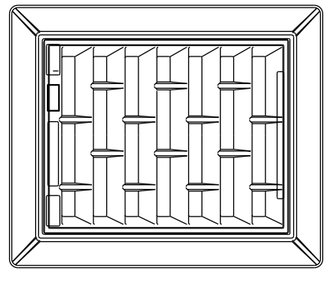


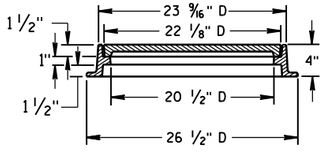
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



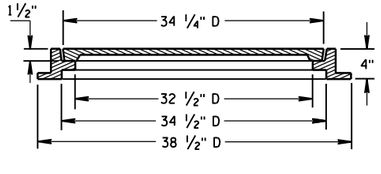








TYPE "L"



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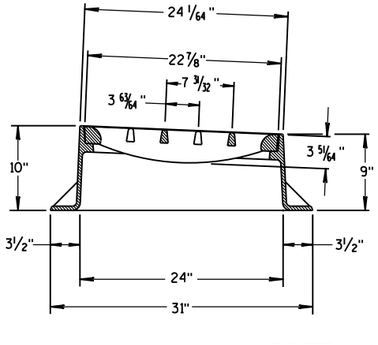
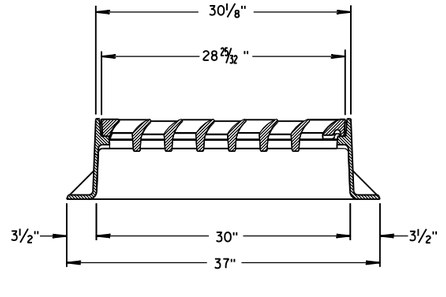




INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

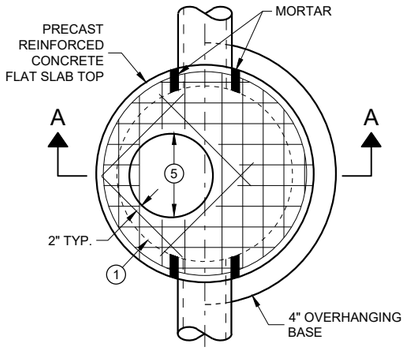
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

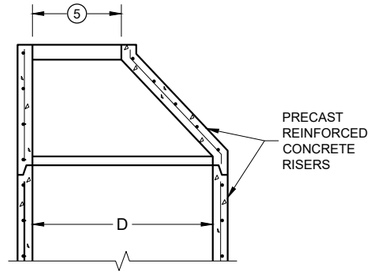
S.D.D. 8 A 5-19d

6

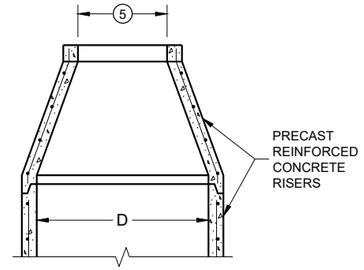
S.D.D. 8 A 5-19d



PLAN VIEW
CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

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

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

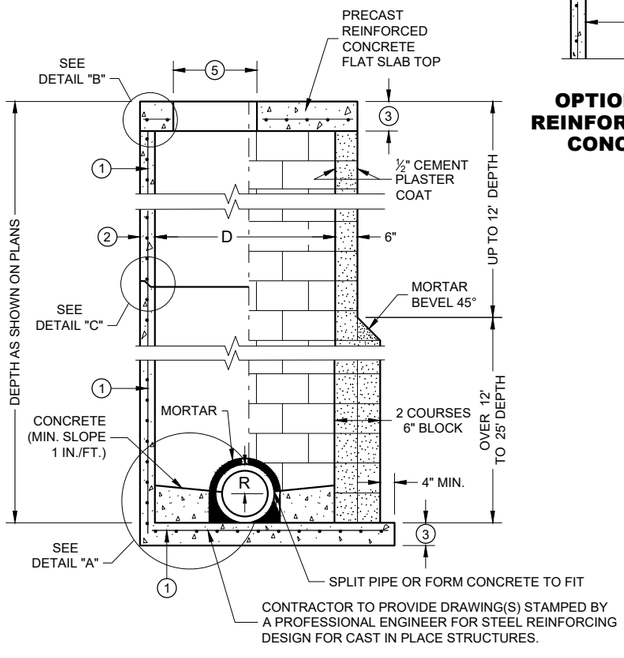
(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

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

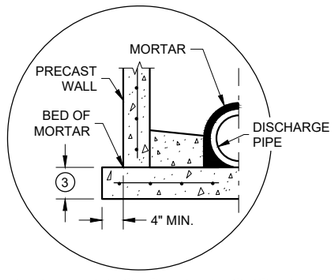
(5) SEE MANHOLE COVER OPENING MATRIX.



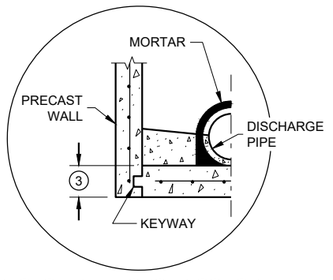
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

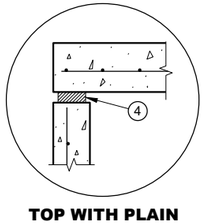


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

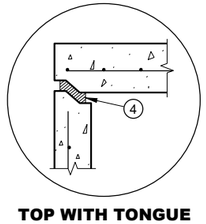


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

DETAIL "A"

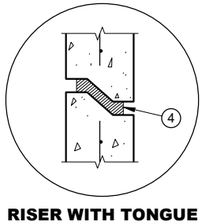


TOP WITH PLAIN END JOINT



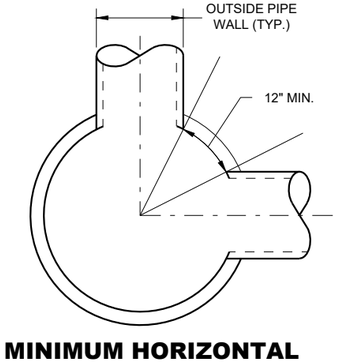
TOP WITH TONGUE AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "C"



MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

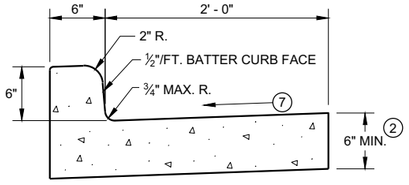
APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

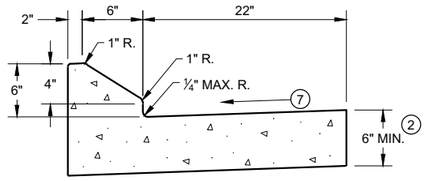
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

6

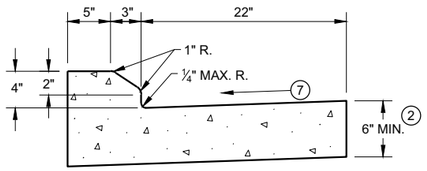
SDD 08B09 - 03



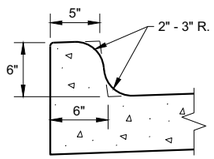
TYPES A (1) & D



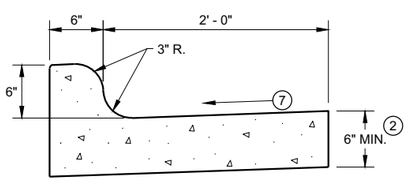
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

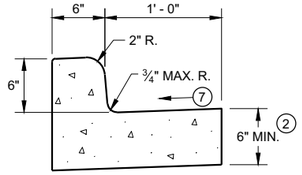


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



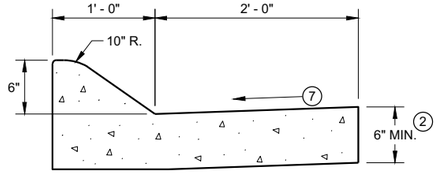
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"



TYPES A (1) & D

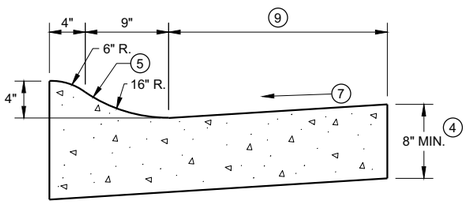
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

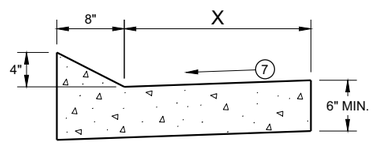
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

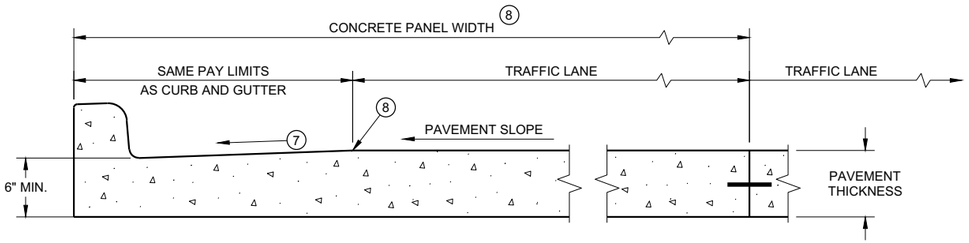


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

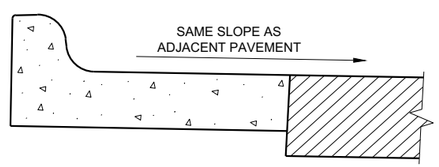
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

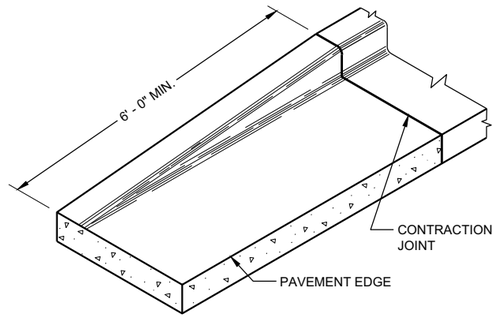
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

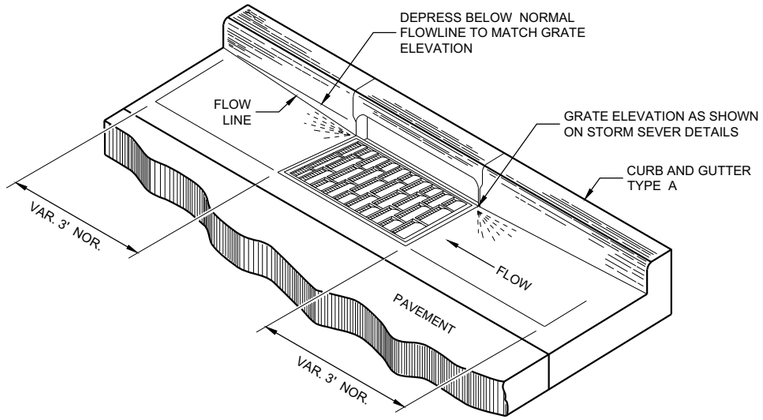
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

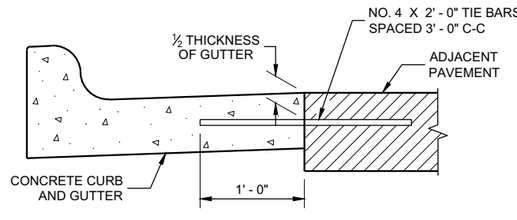
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

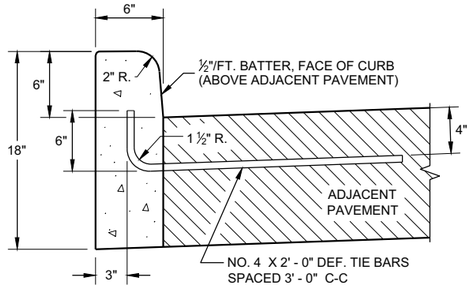
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

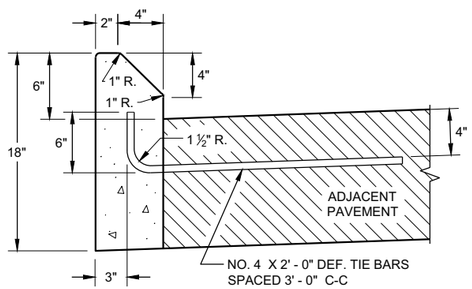
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

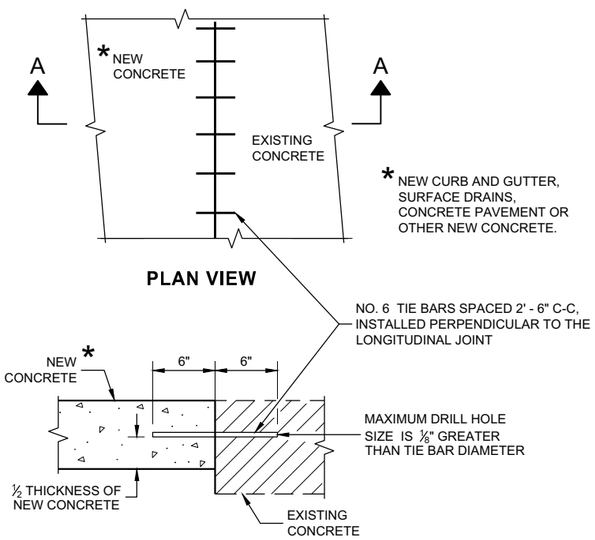


TYPES A (1) & D



TYPES G (1) & J

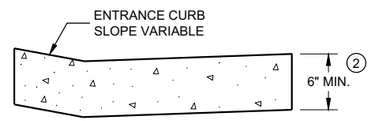
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



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

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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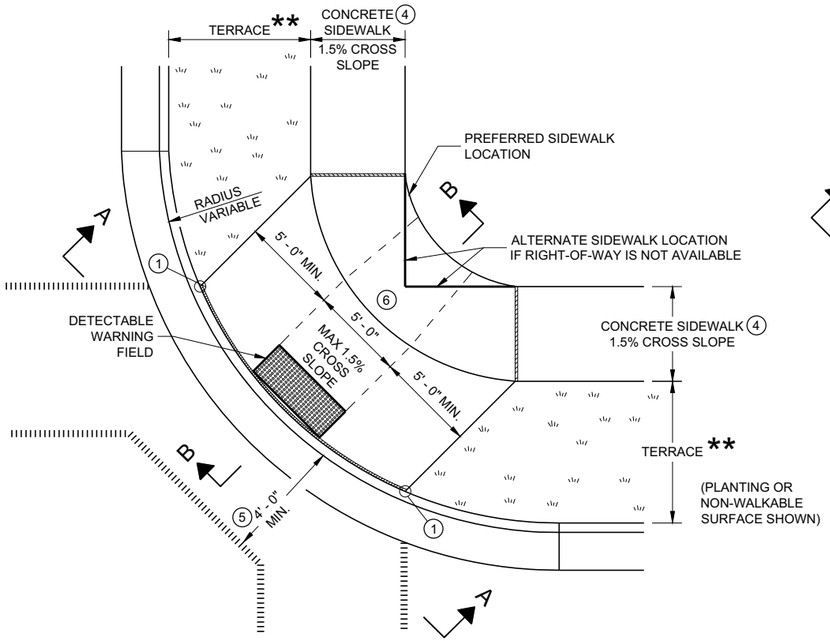
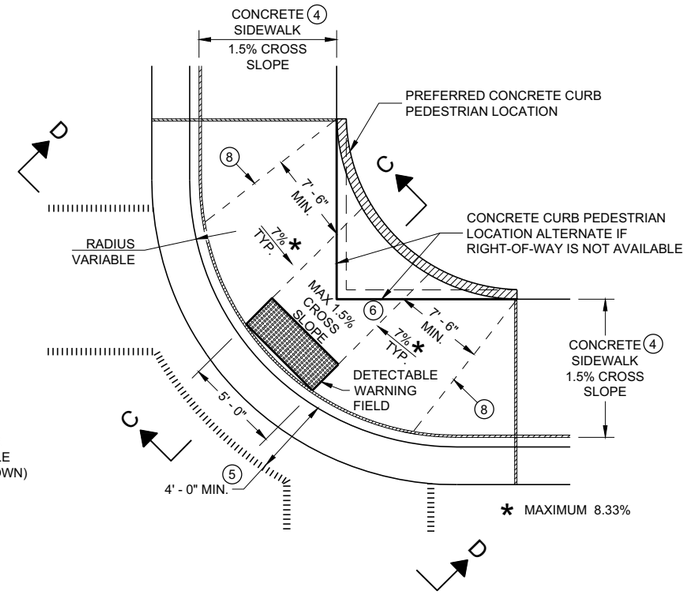
SDD08D01 - 22b



PLAN VIEW

CURB RAMP TYPE 1

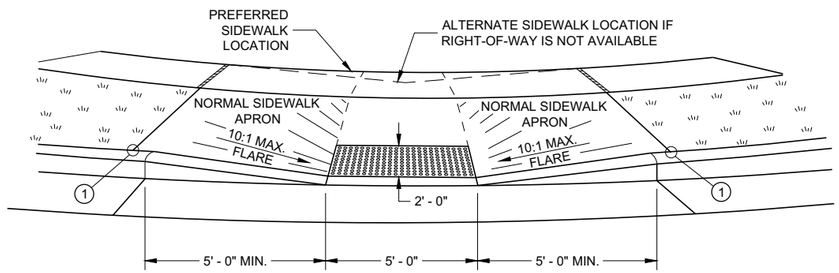
(CENTER OF CORNER RADIUS)



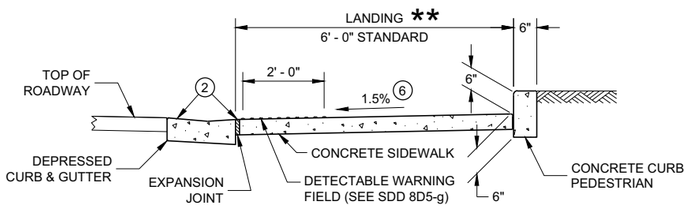
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

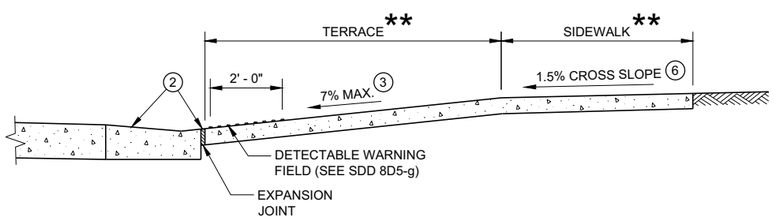


VIEW A - A FOR TYPE 1

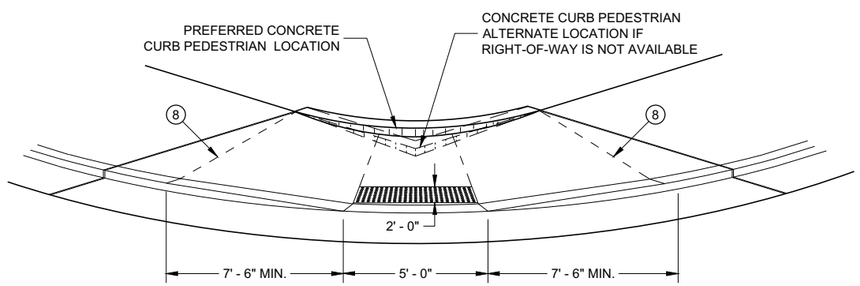


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

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

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

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

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

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE 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 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) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

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

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

LEGEND

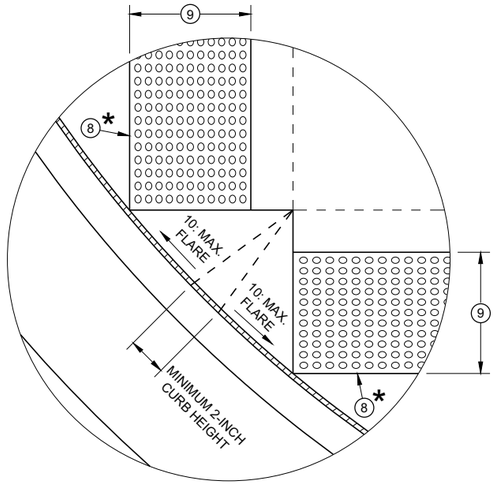
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

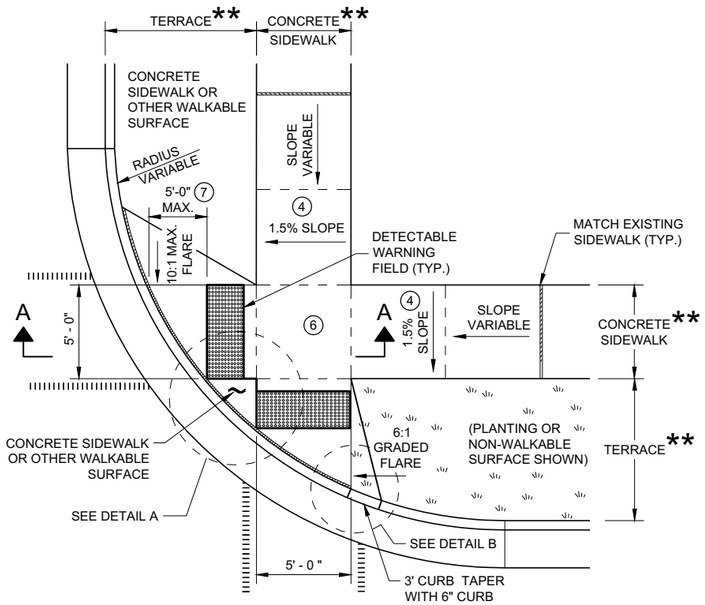
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a



DETAIL A



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

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 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) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

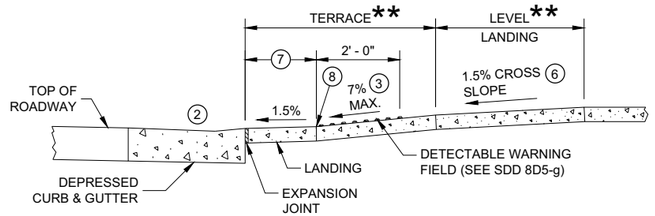
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

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

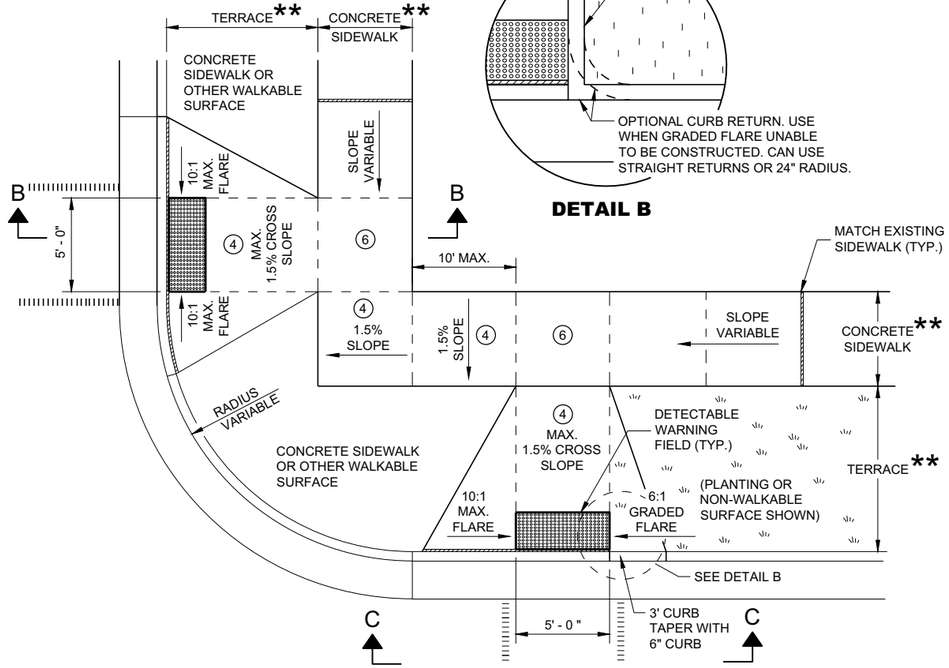
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

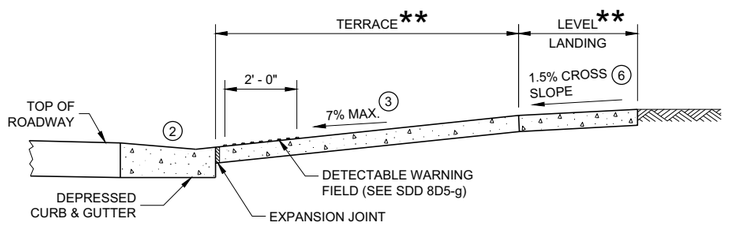
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS



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

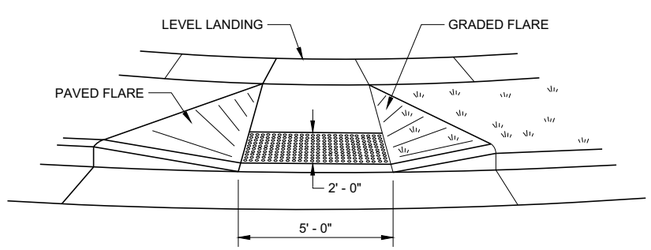
DETAIL B



SECTION B - B FOR TYPE 3

LEGEND

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



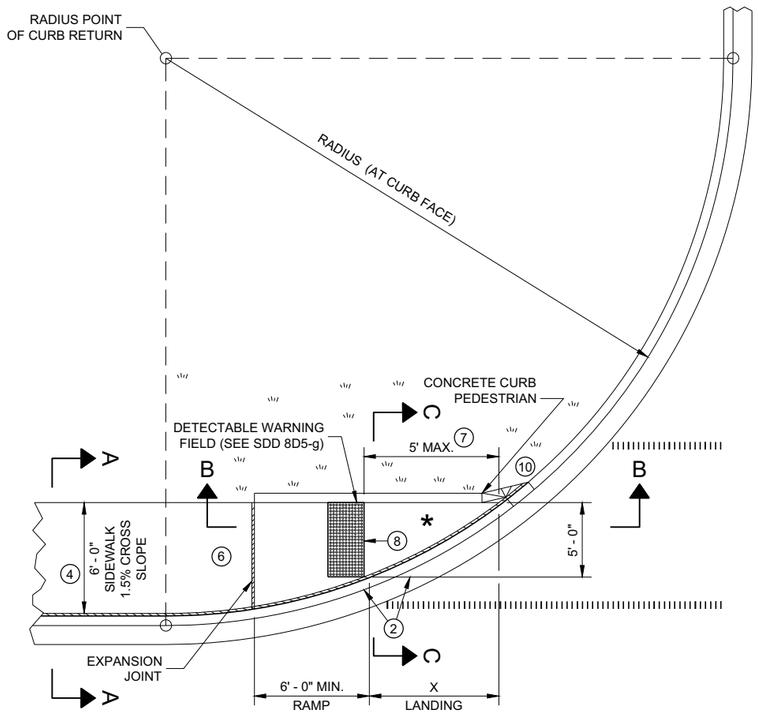
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

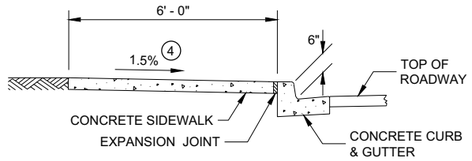


PLAN VIEW

CURB RAMP TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 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) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

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

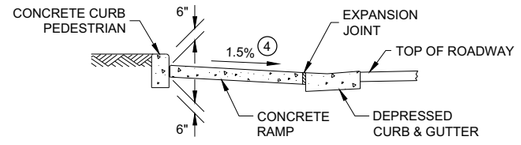
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

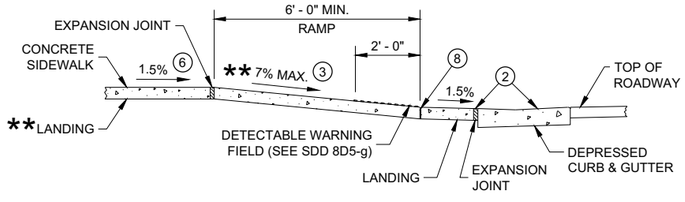
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



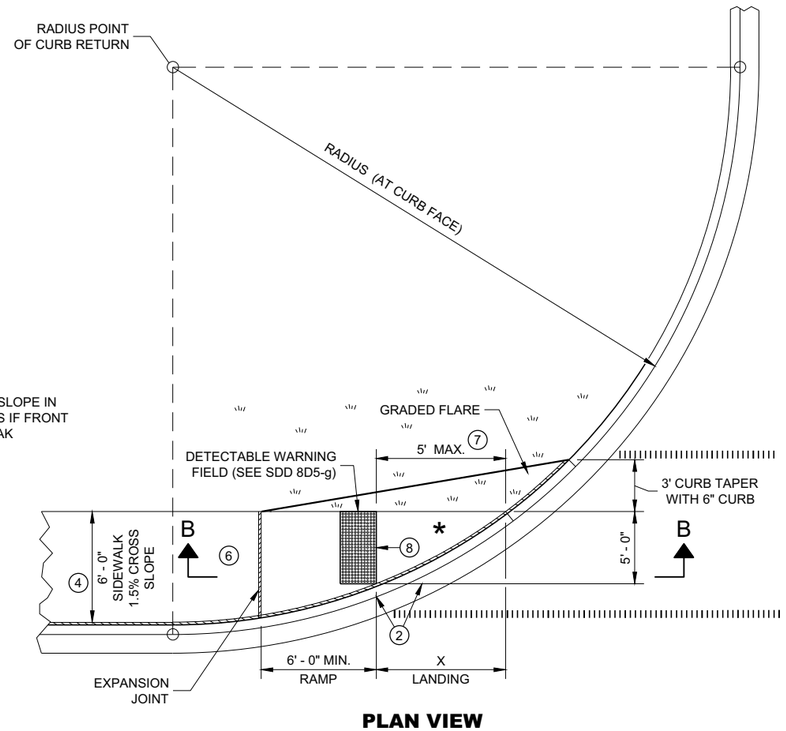
SECTION C - C FOR TYPE 4A



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

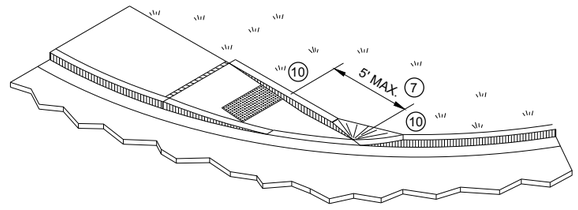
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

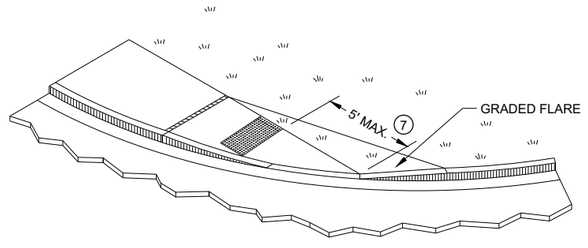


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



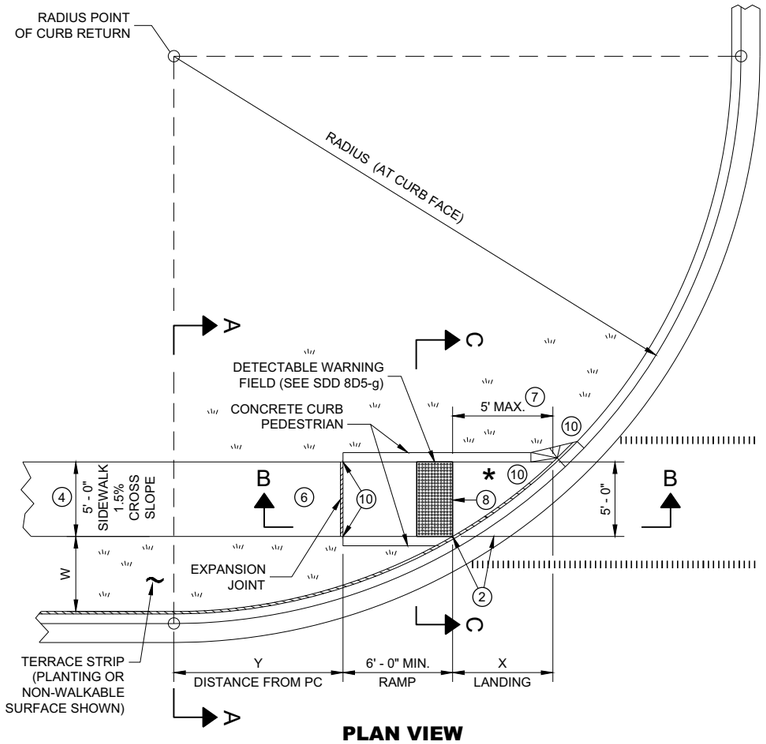
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

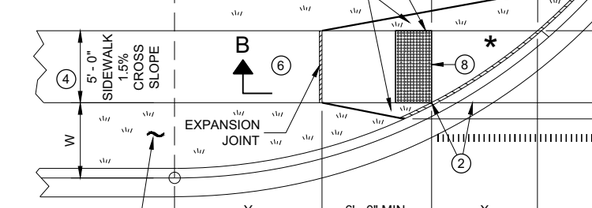


PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	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



SECTION C - C FOR TYPE 4B

LEGEND

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

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 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) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

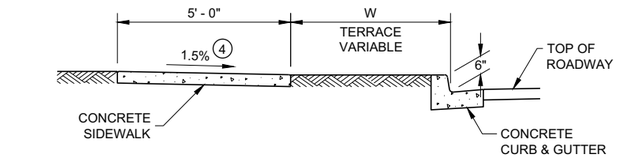
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

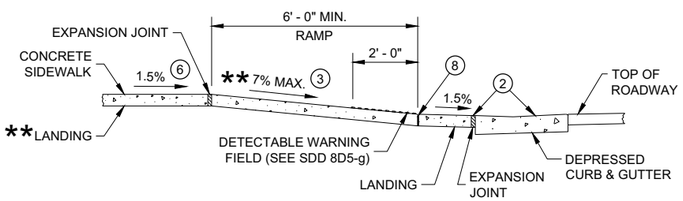
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

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



SECTION A - A FOR TYPE 4B



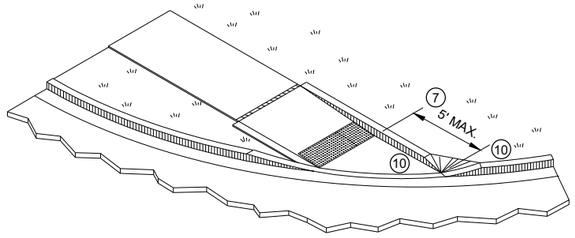
SECTION B - B FOR TYPE 4B AND TYPE 4B1

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

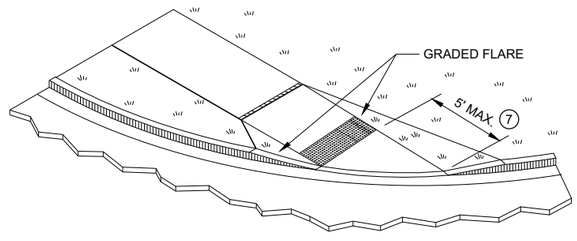
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



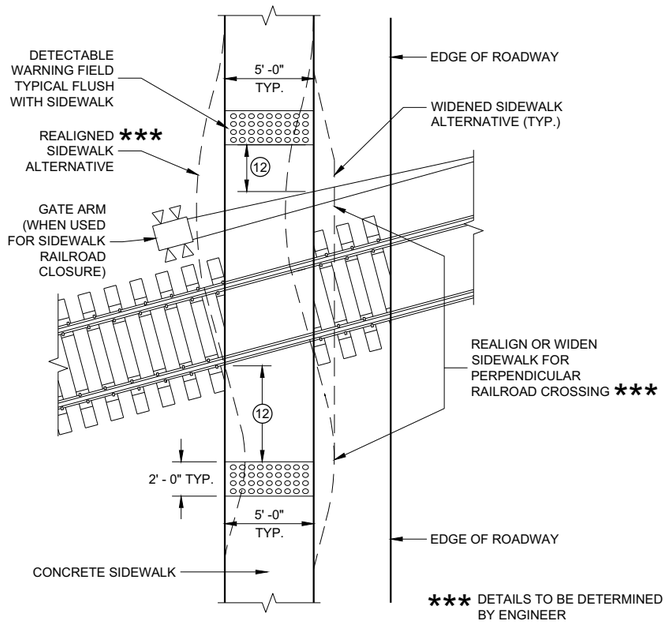
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

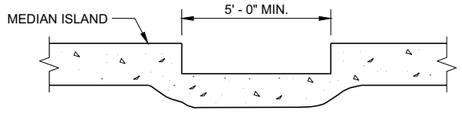
6

SDD 08D05 - 20d

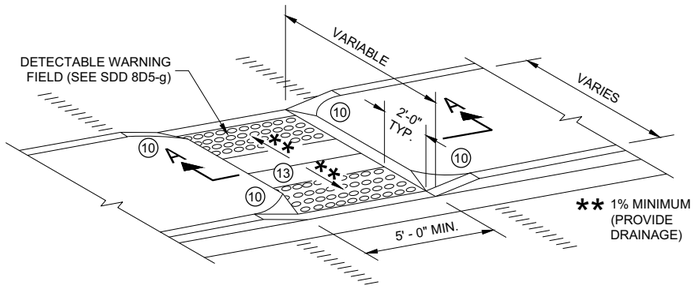


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

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

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

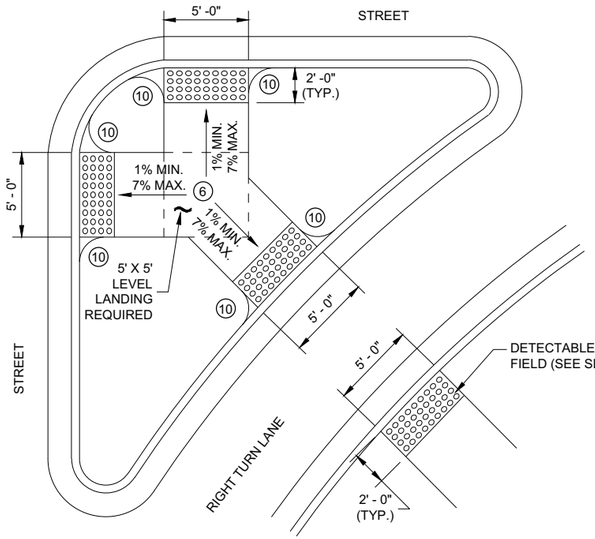
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. 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 STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

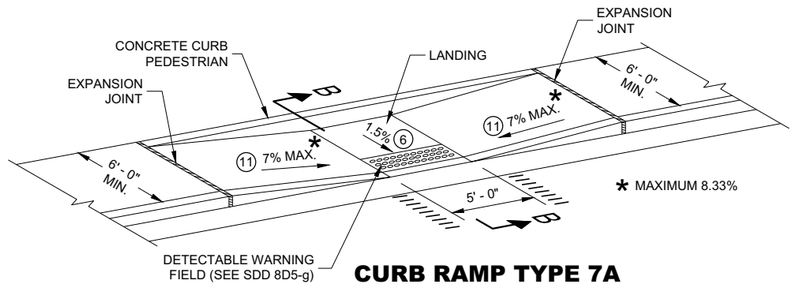
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

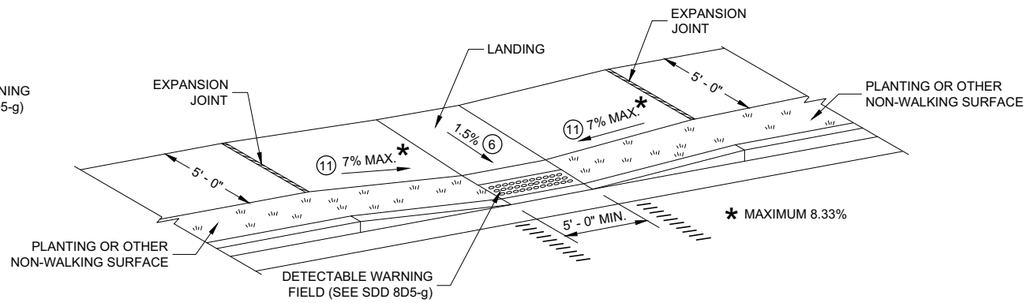
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

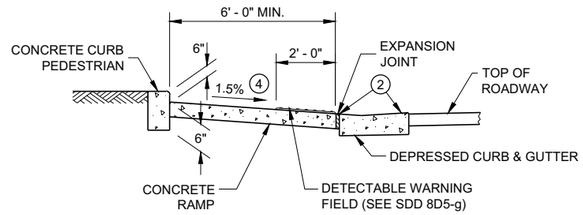
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

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



SECTION B - B FOR TYPE 7A

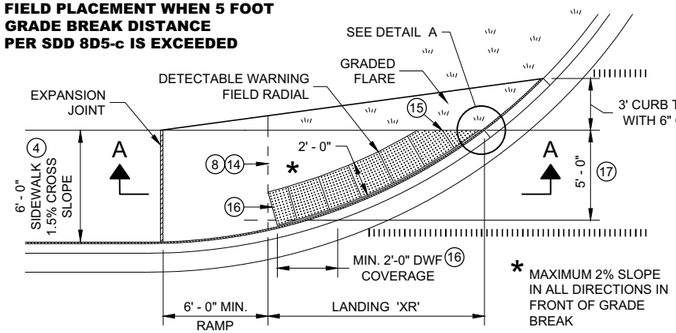
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20e

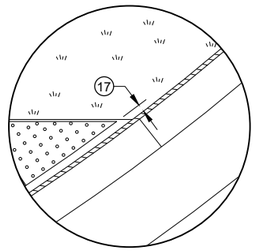
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



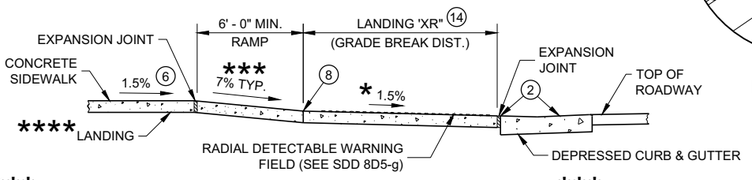
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

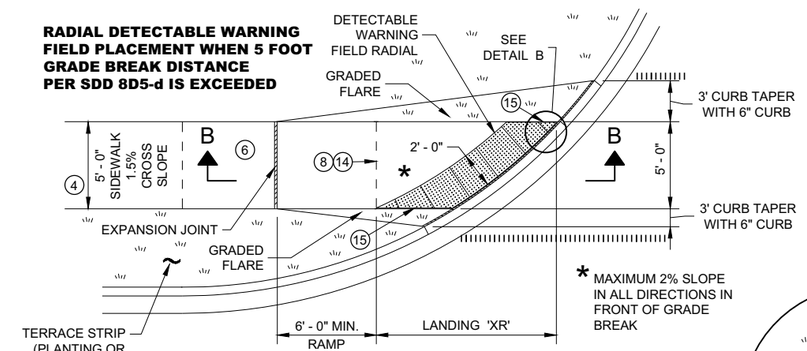


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

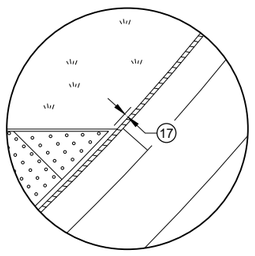
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



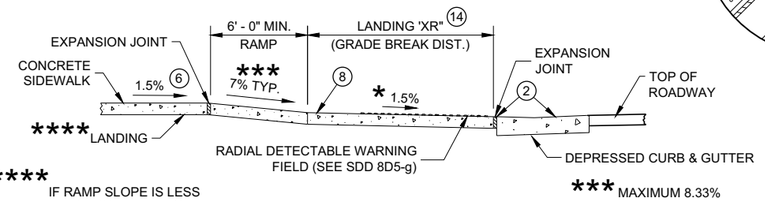
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



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

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER 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) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

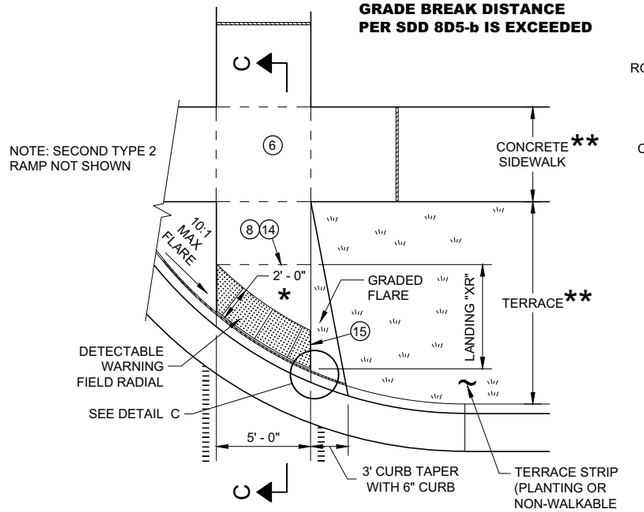
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

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

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

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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

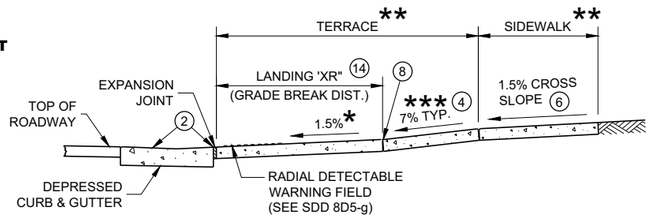


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

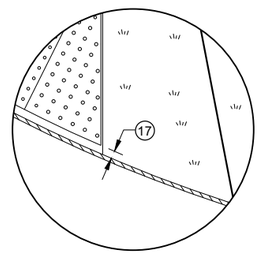


SECTION C - C FOR TYPE 2

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

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

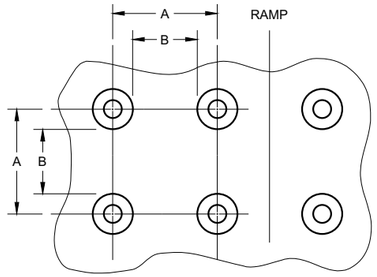
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20f

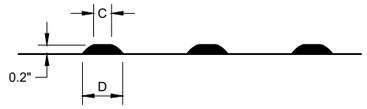
SDD 08D05 - 20f

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

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

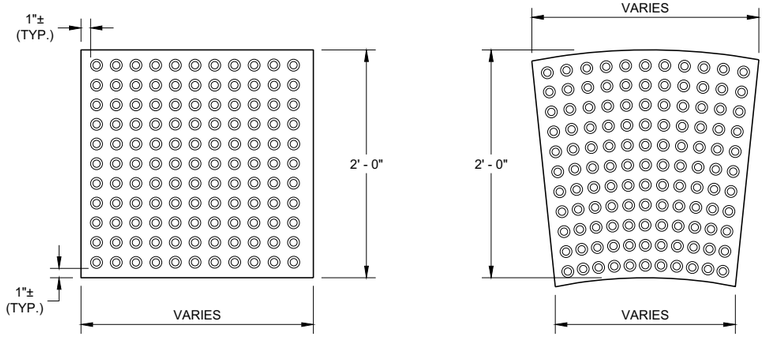


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

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

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

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

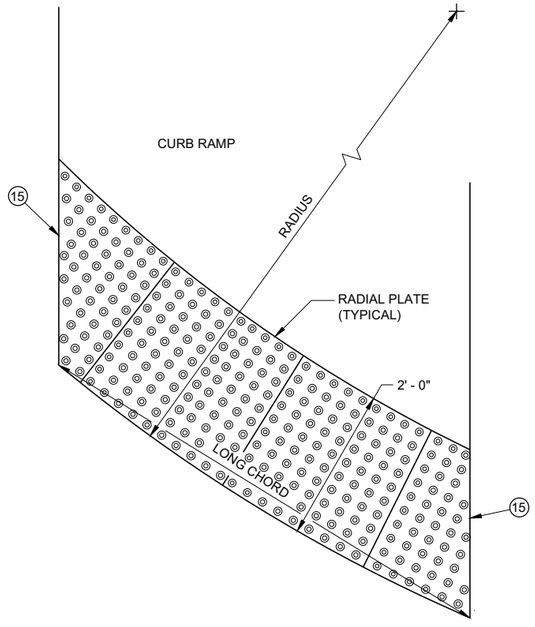
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

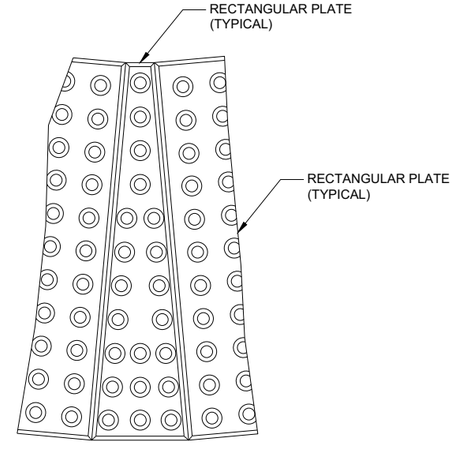
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



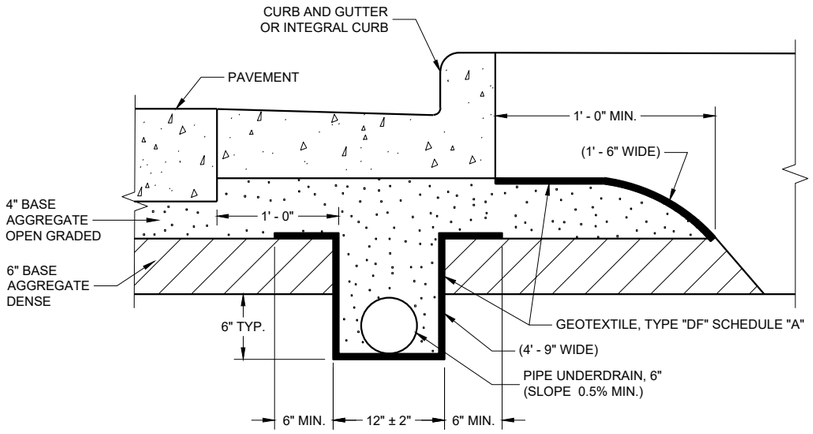
PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA



EDGEDRAIN IN URBAN ROADWAY

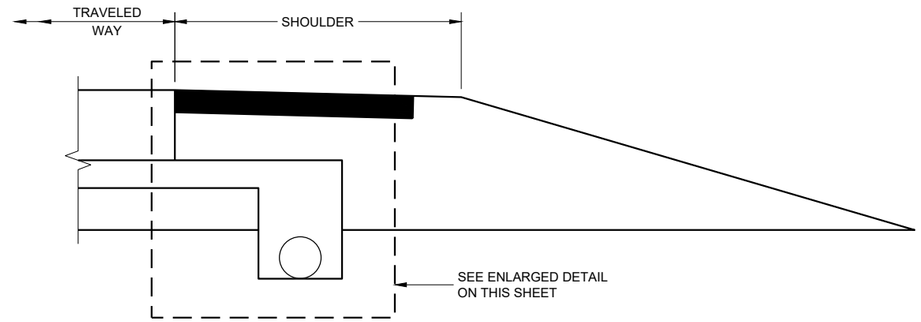
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

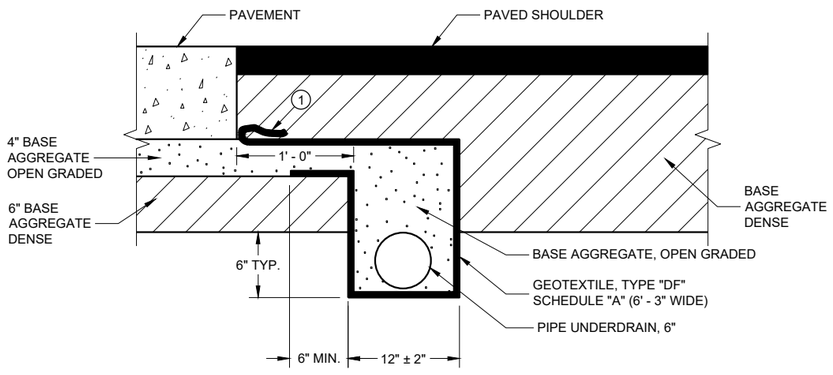
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

(1) FOLD OVER EXCESS GEOTEXTILE AT THIS LOCATION.

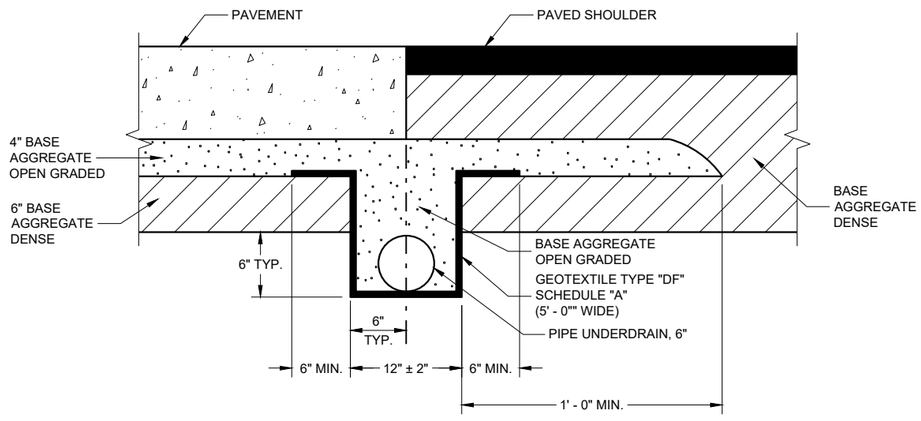
(2) TOTAL GEOTEXTILE WIDTH IS 6'-3" FOR PAYMENT.



RURAL CROSS SECTION



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

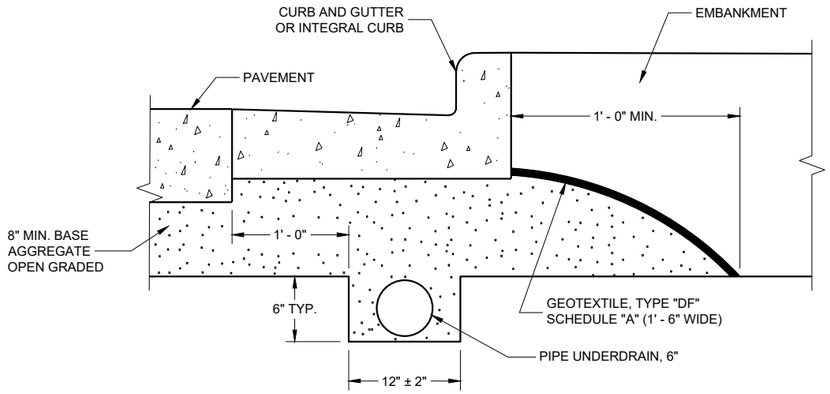
EDGEDRAIN IN RURAL ROADWAY

EGEDRAIN AND BASE AGGREGATE OPEN GRADED

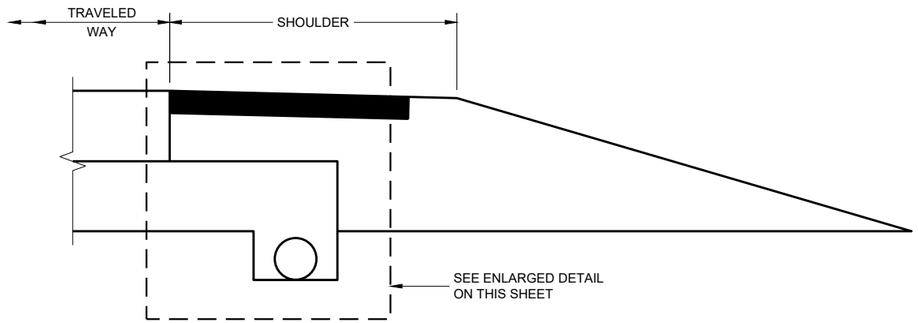
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

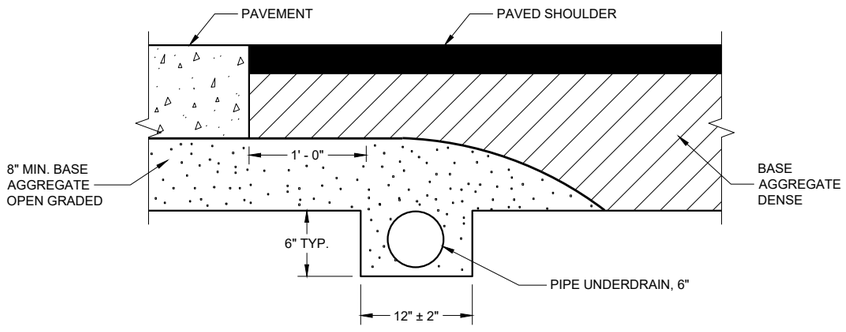
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY

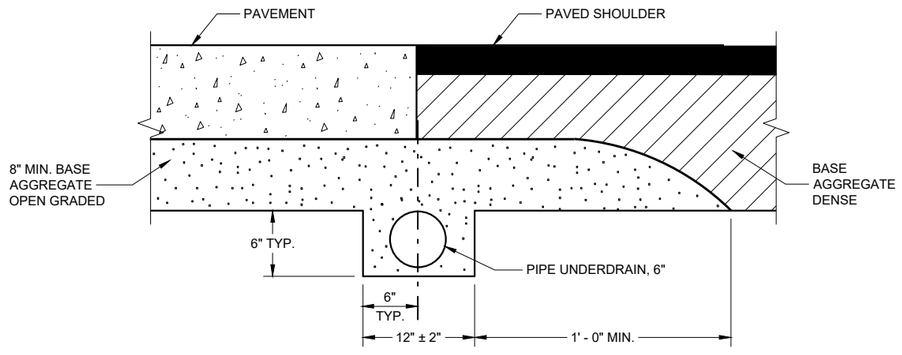


RURAL CROSS SECTION



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

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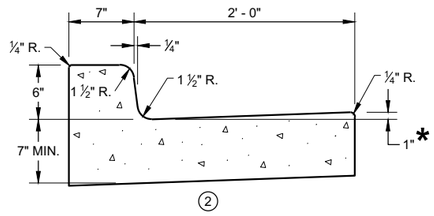
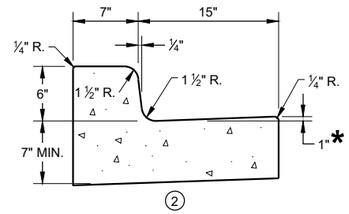
SDD 08D15 - 05c

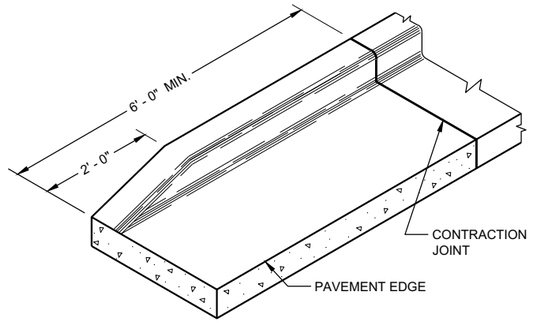


CONCRETE CURB AND GUTTER 31" ①

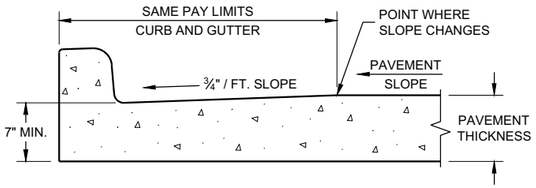
*TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



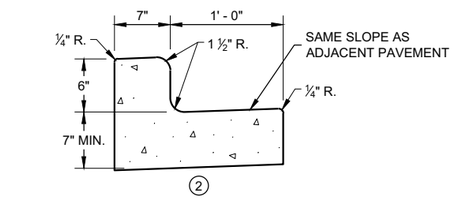
CONCRETE CURB AND GUTTER 22" ①



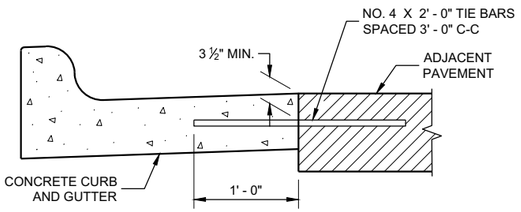
END SECTIONCURB AND GUTTER



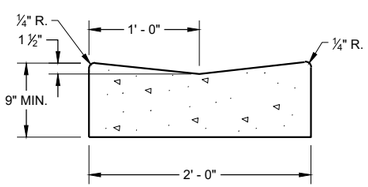
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



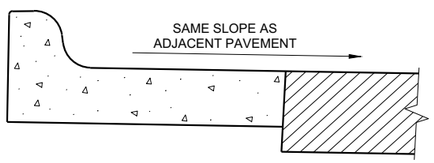
CONCRETE CURB AND GUTTER 19" ①



TYPICAL TIE BAR LOCATION ①



CONCRETE GUTTER 24" ①



HIGH SIDE SECTION ③

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

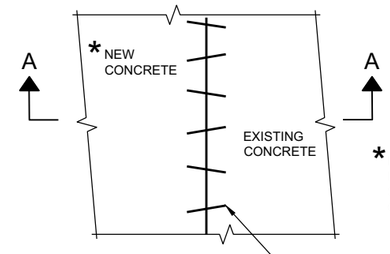
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

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

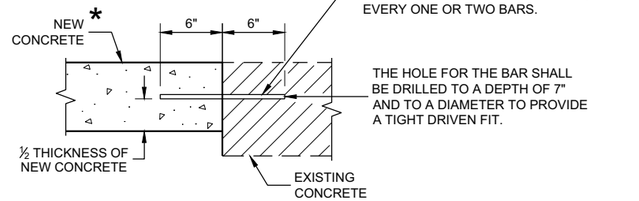
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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



PLAN VIEW

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



SECTION A - A

PAVEMENT TIES

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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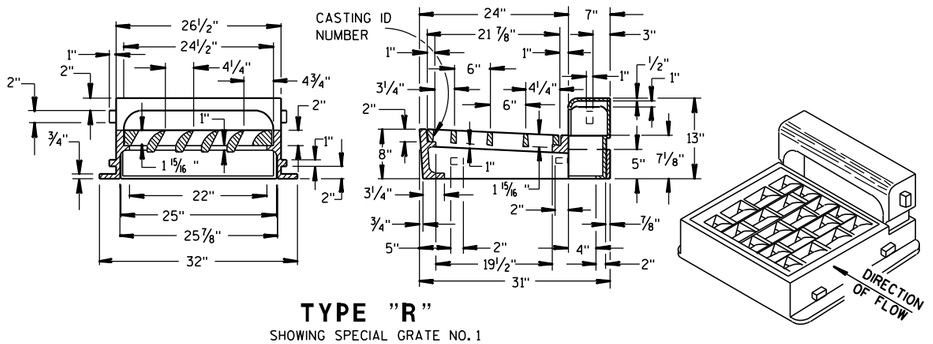
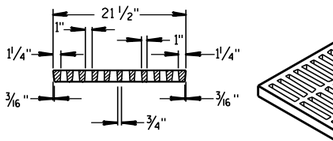
SDD 08D16 - 11
SDD 08D16 - 11

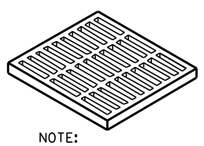
INLET COVERS



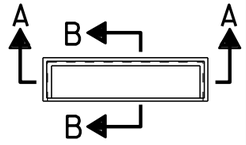
TYPE "R"

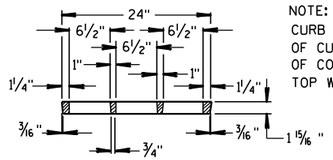
SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



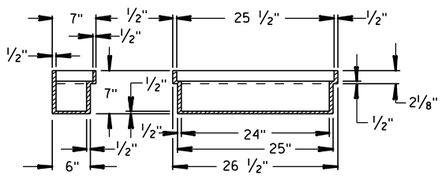


(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.





NOTE:
CURB PLUG USED IN PLACE OF CURB BOX IN ABSENCE OF CONC. CURB. FILL TO TOP WITH CONCRETE.



GRATE FOR TYPE "R" INLET COVER

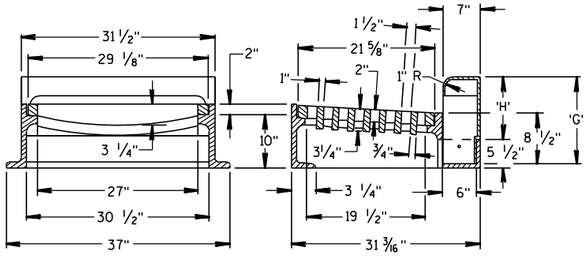
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

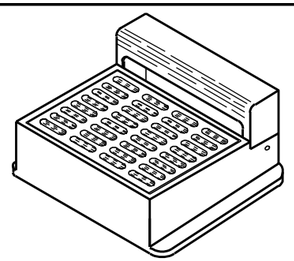
SPECIAL CURB PLUG "P"

(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

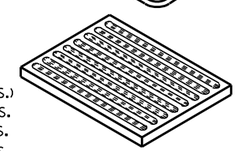
'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



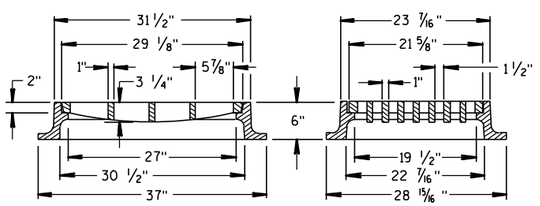
TYPE "W"



(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.



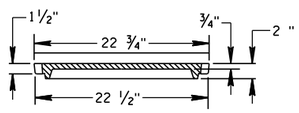
ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)
TYPES "W" & "X"



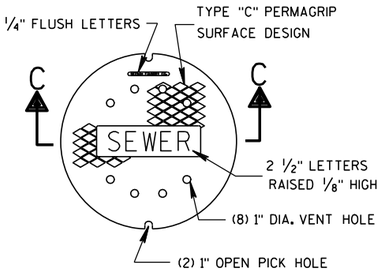
TYPE "X"

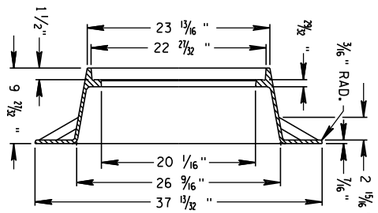
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

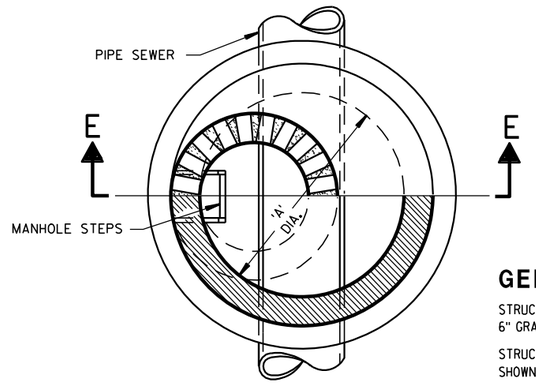
TABLE OF DIMENSIONS

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

* 12" - 21" FOR PRECAST MANHOLES
** 12" - 24" FOR PRECAST MANHOLES

THE FIRST STEP SHALL BE PLACED 16" ABOVE THE BENCH.

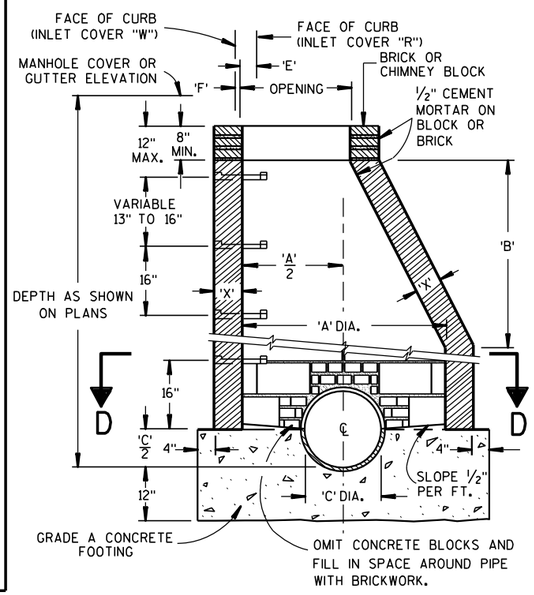
MANHOLE



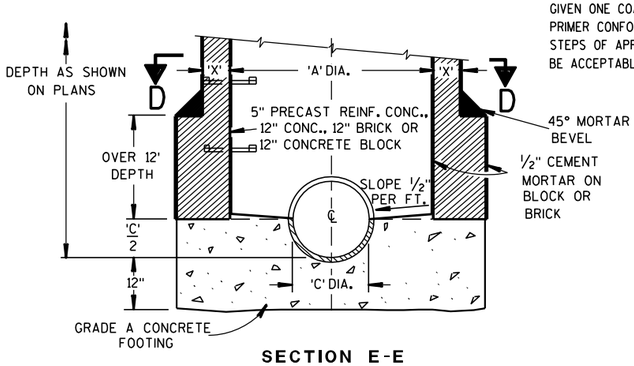
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

TYPE	COVER DESCRIPTION	OPENING	'E'	'F'
"O"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1"
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

GENERAL NOTES

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK, 6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6" IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR GRANULAR BACK-FILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF 3/4 INCH HIGH BY 3/4 INCH WIDE HAVING A MINIMUM THICKNESS OF 3/8 INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

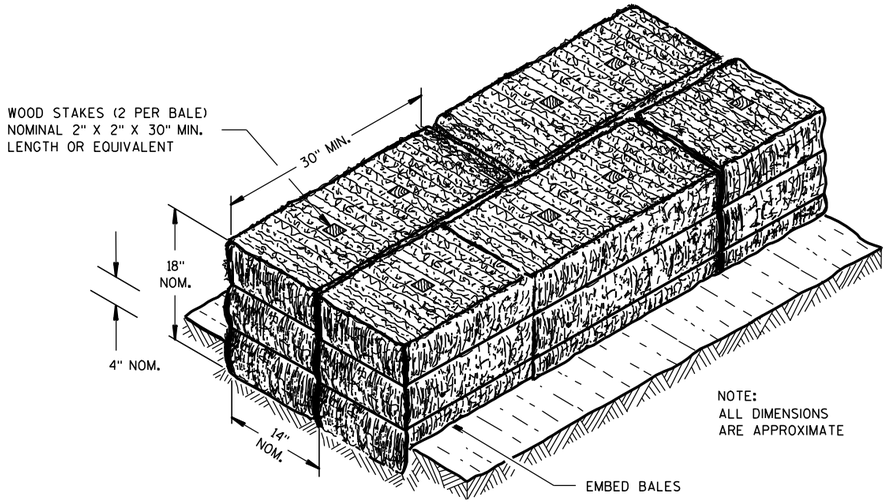
SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

MANHOLES, MANHOLE & INLET COVERS

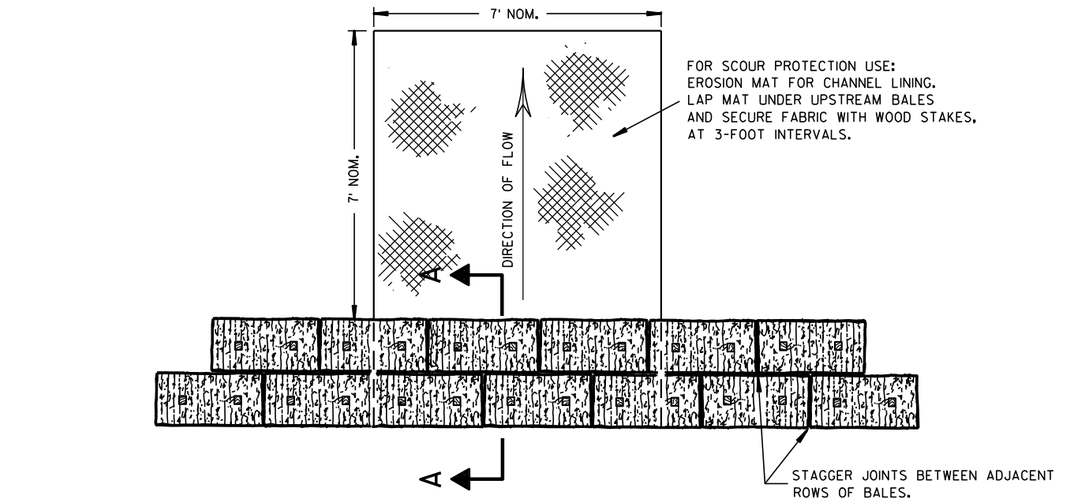
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2011 — DATE
/S/ Jerry H. Zogg — ROADSIDE STANDARDS ENGINEER
FHWA

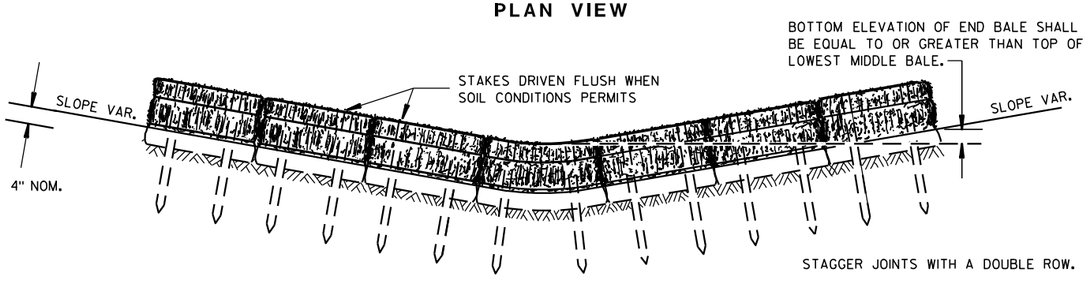
6
S.D.D. 8 D 17-6



SECTION A-A



PLAN VIEW



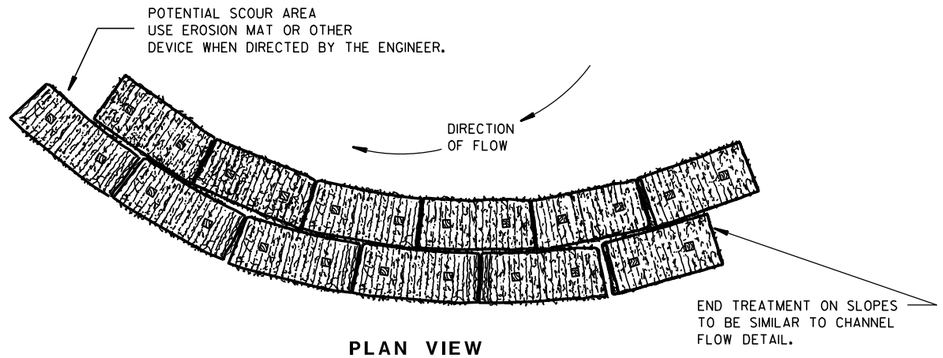
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

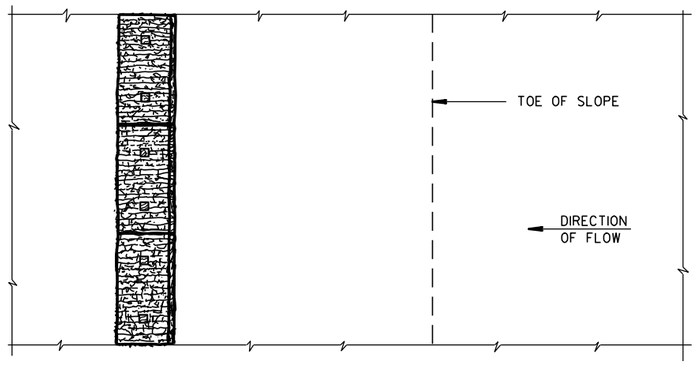
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

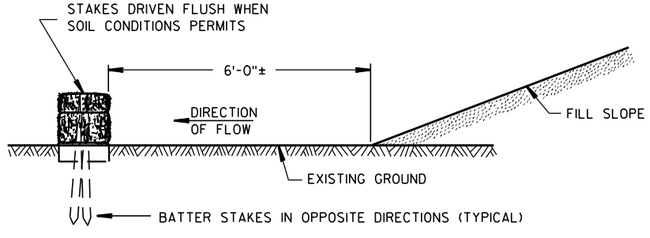


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

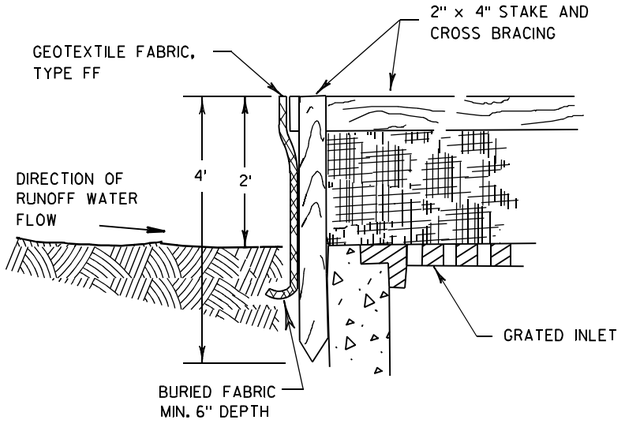
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

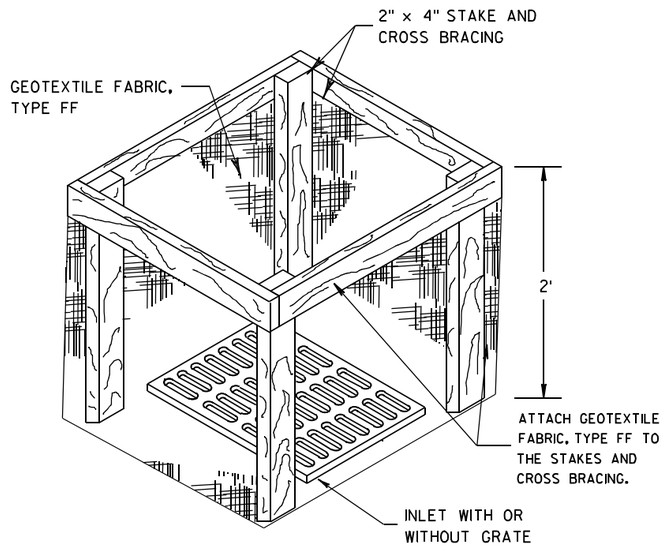
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

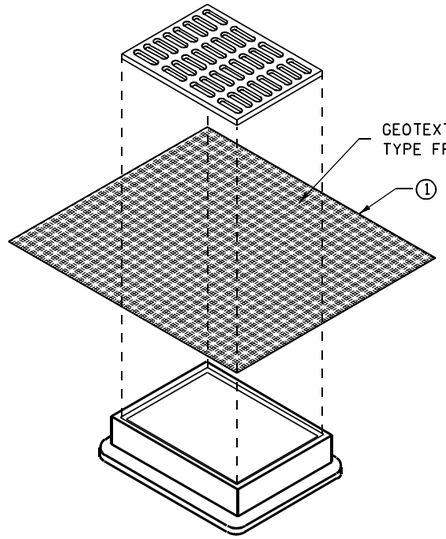
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



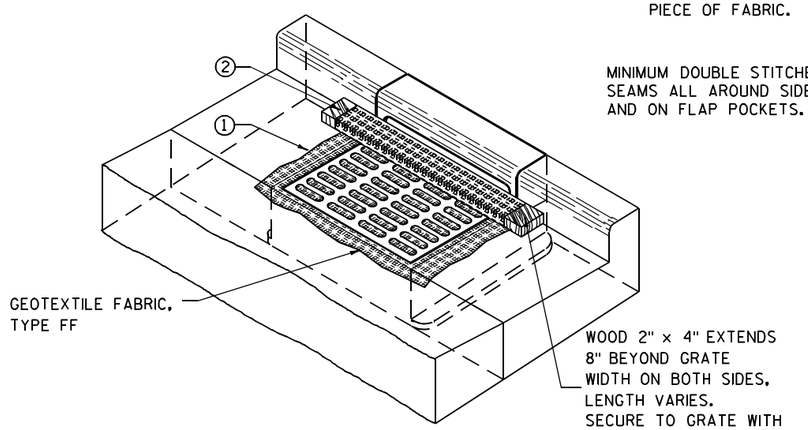


INLET PROTECTION, TYPE A

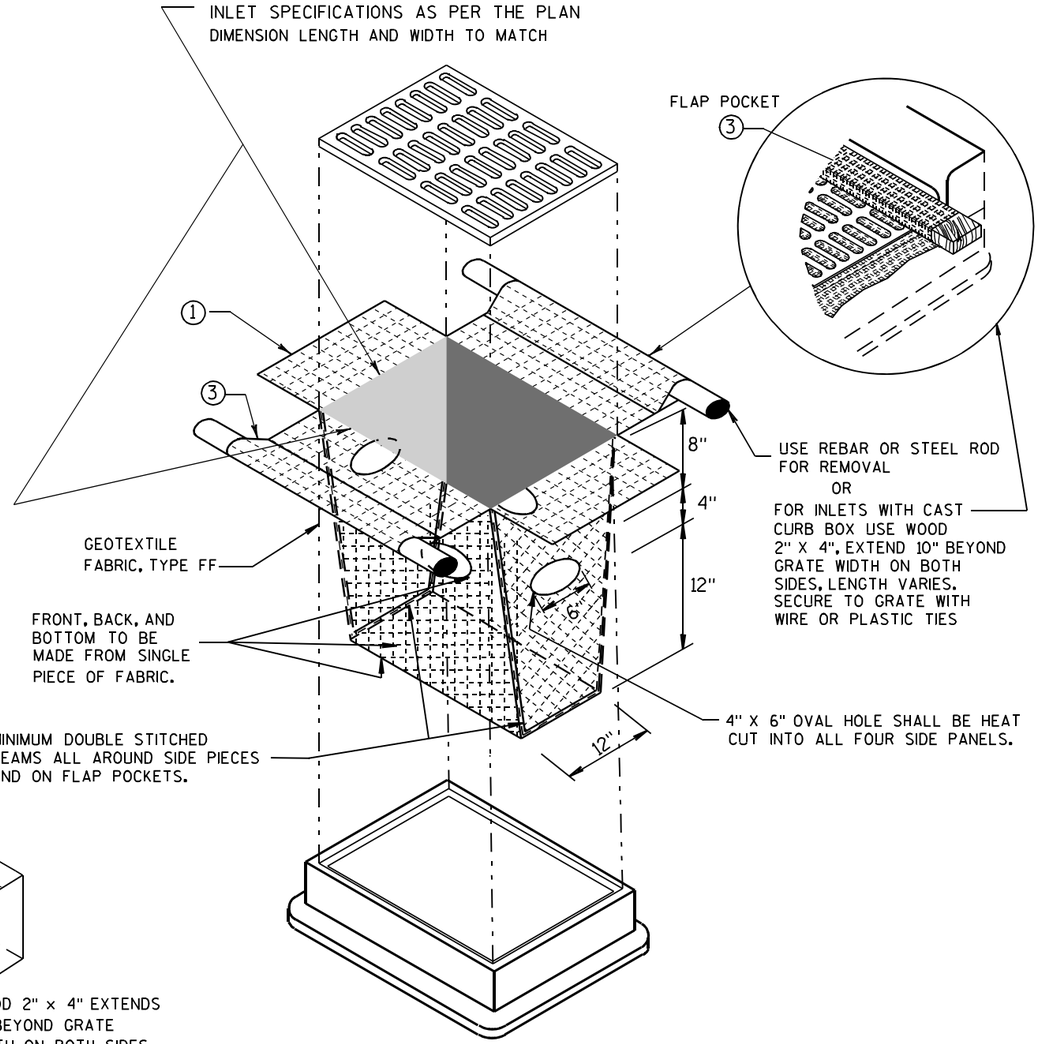


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

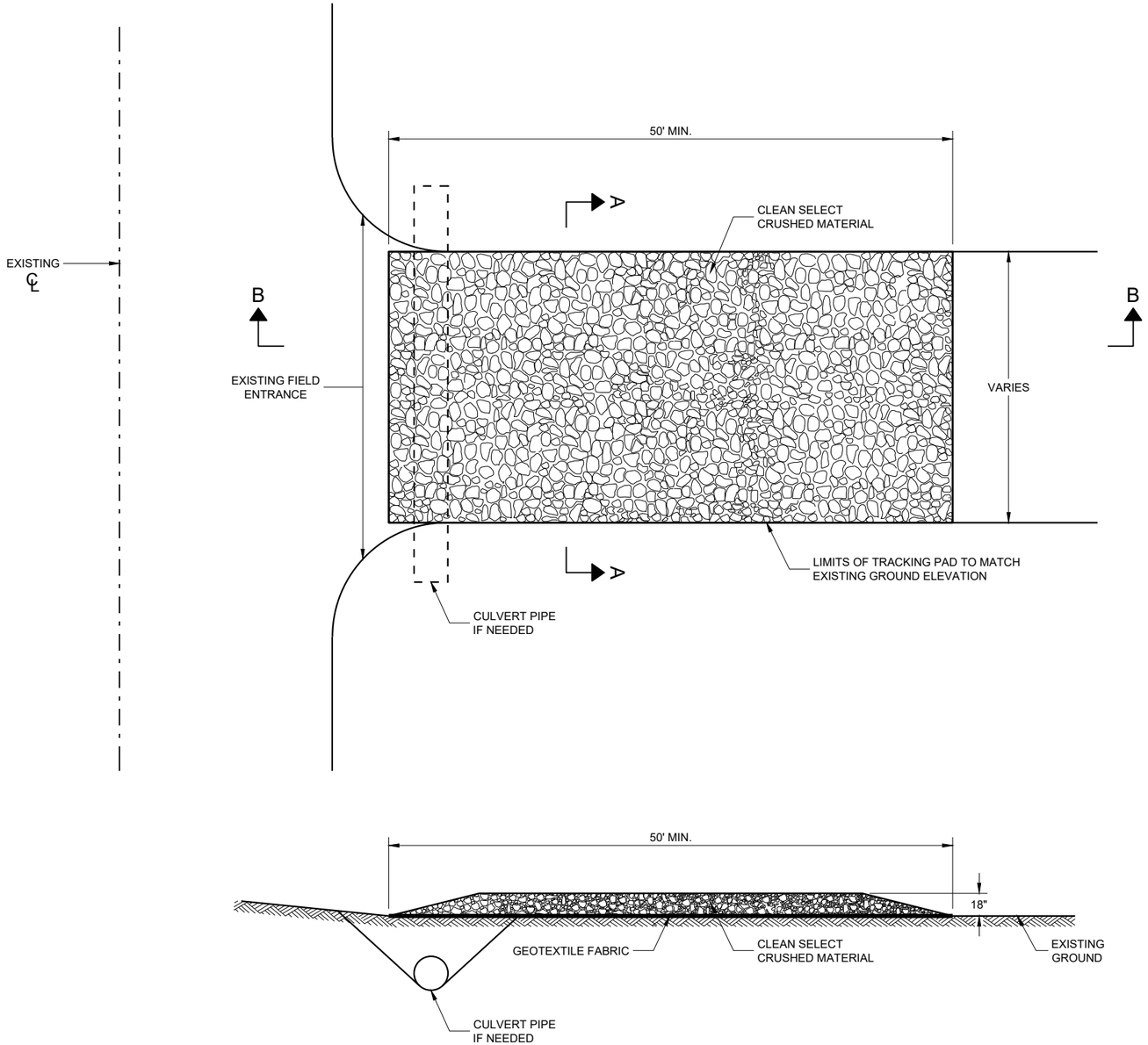
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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



SECTION B - B

GENERAL NOTES

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

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

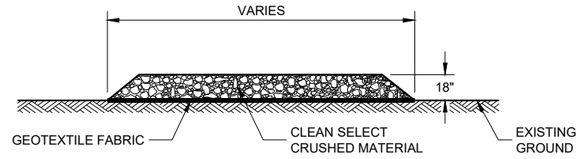
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A - A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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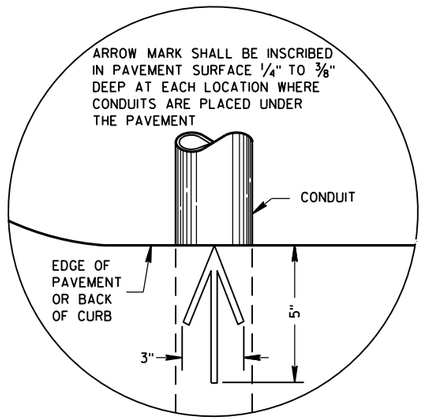
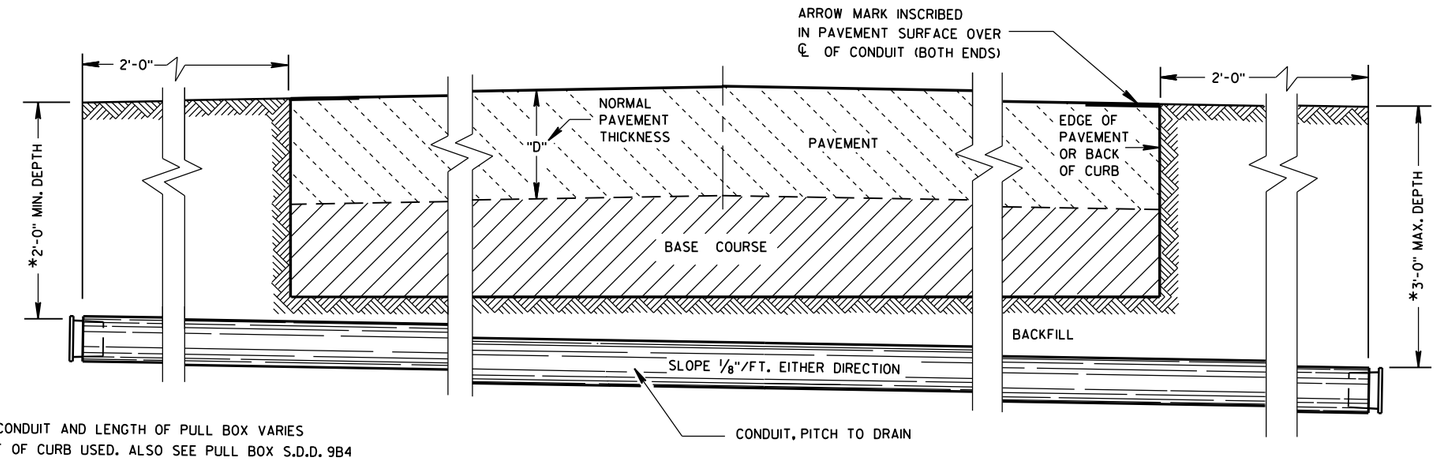
SDD 08E14 - 01



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

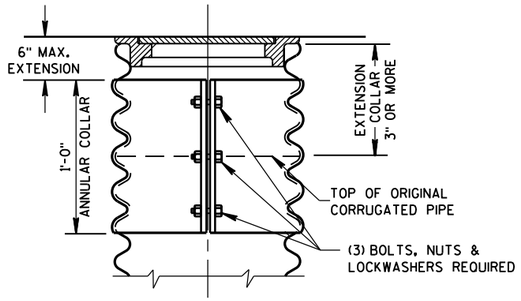
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

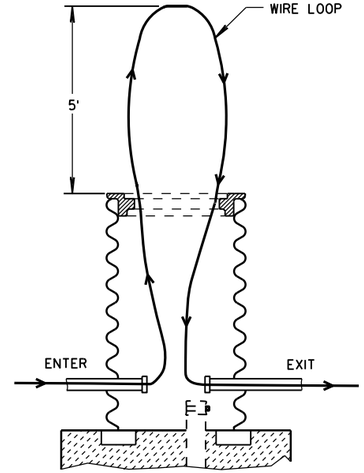
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

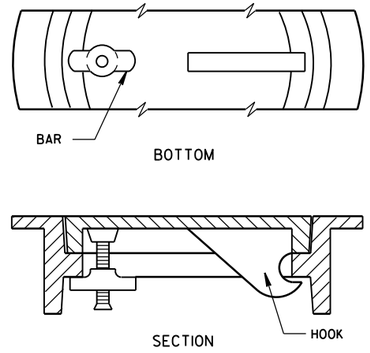
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

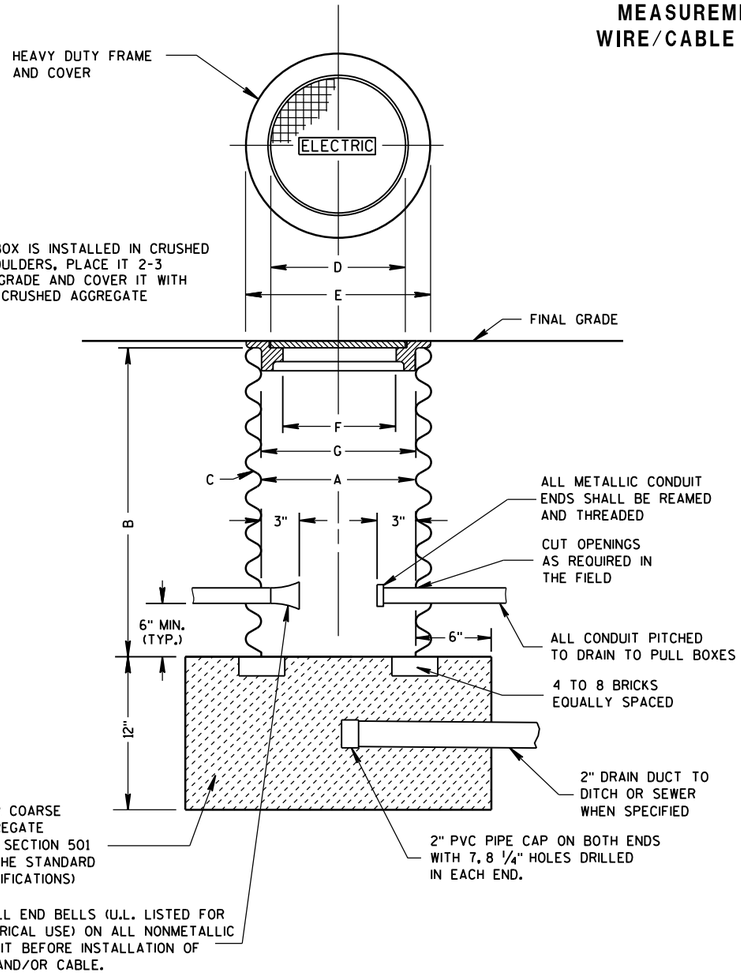


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



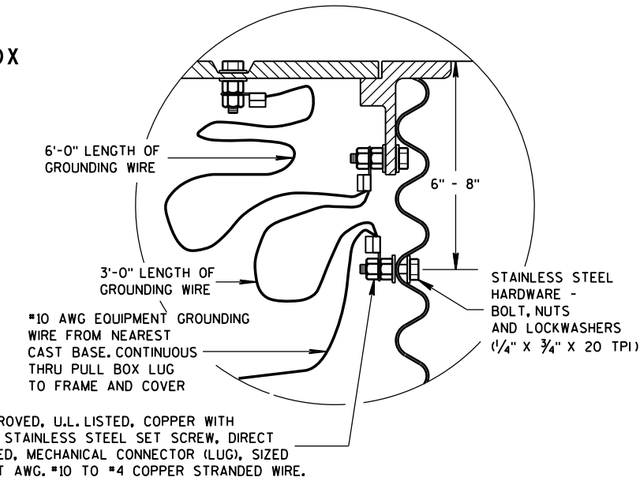
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

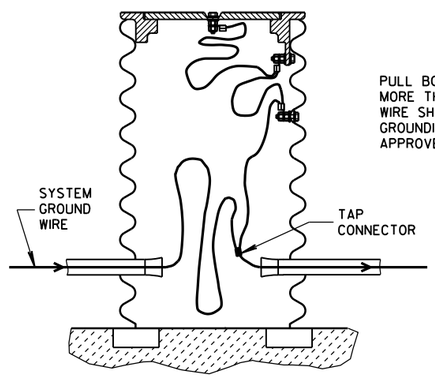


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

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

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

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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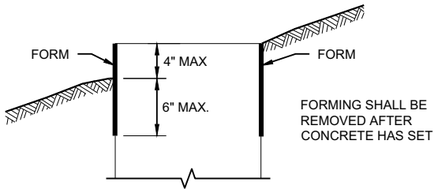
FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

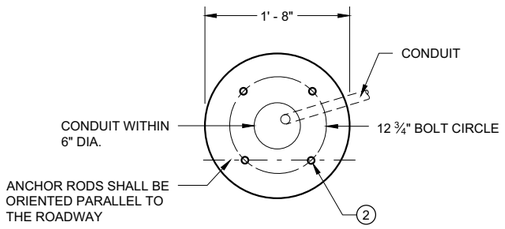
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

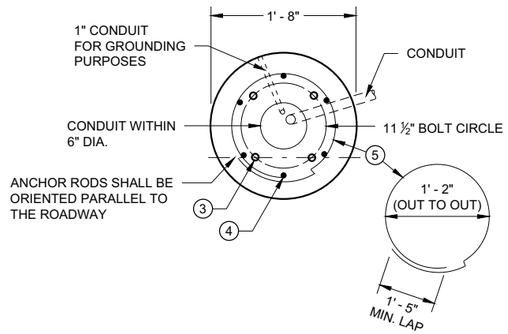
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

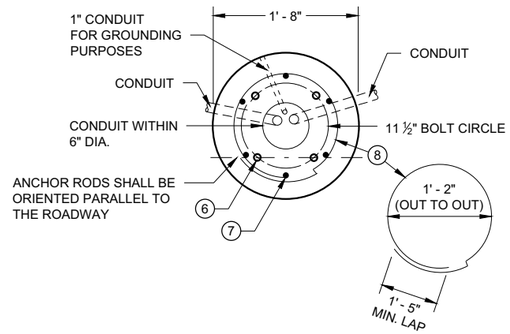
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

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







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

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

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

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

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

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

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

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

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

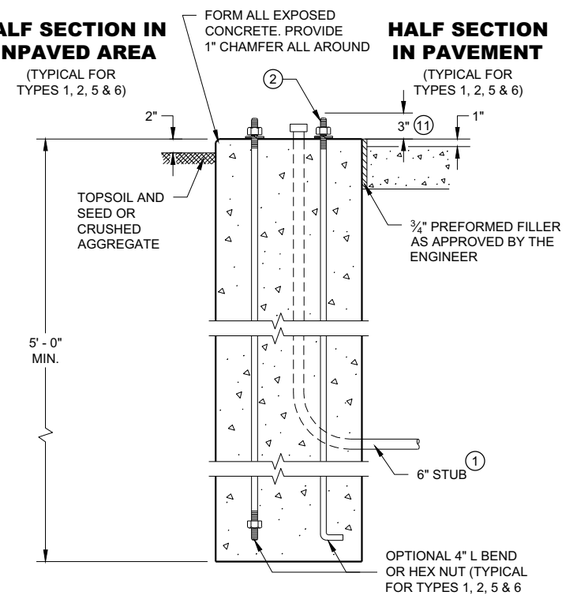
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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

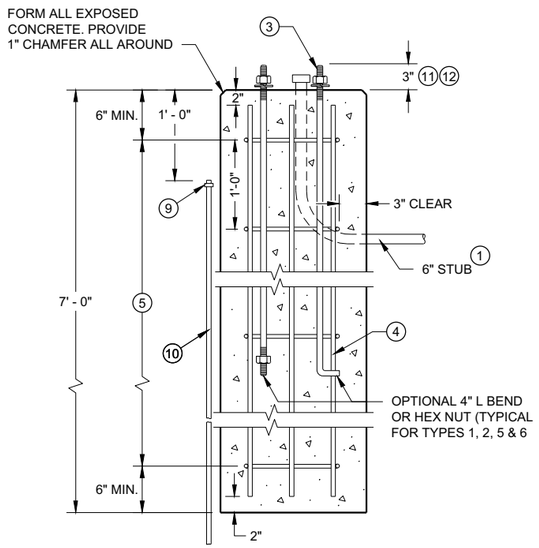
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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

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



TYPE 1



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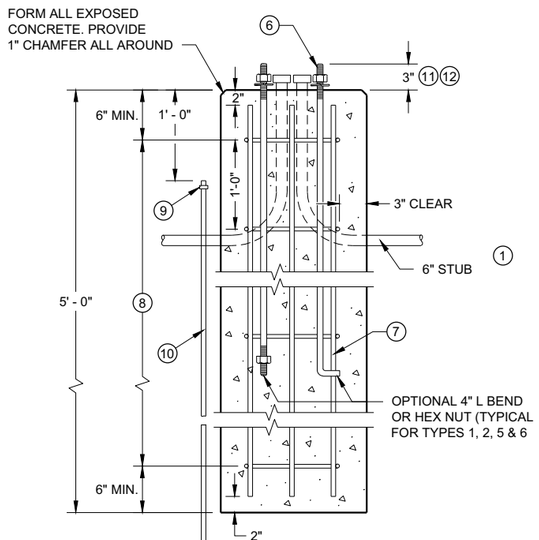


TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

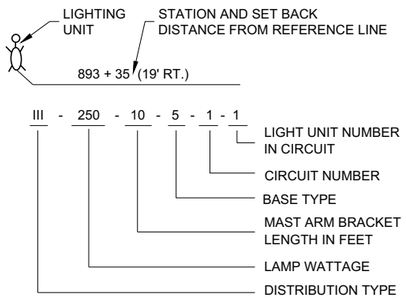
FHWA

GENERAL NOTES

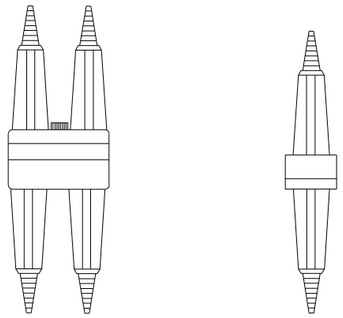
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

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

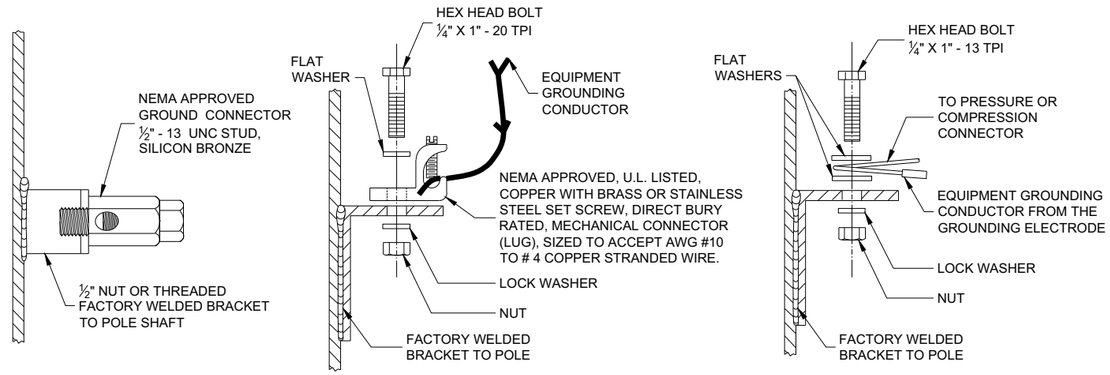


LIGHTING UNIT CODE
(TYPICAL)

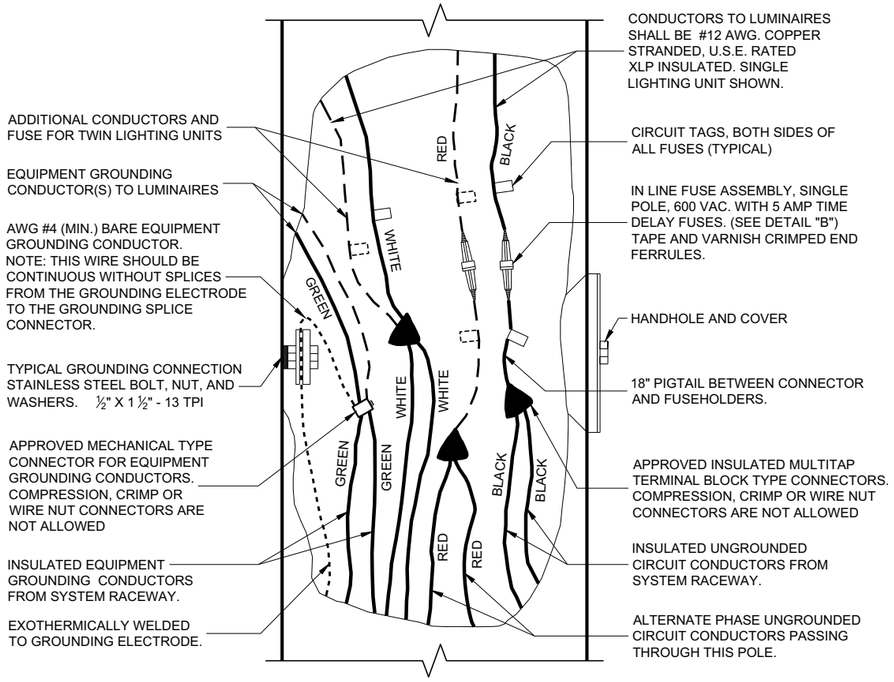


DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT

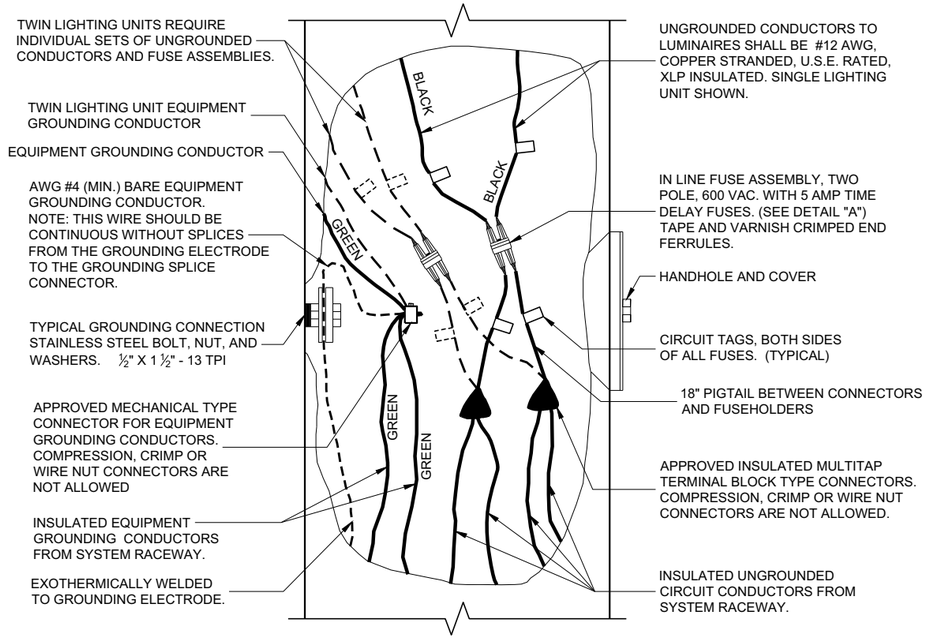
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



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



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



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

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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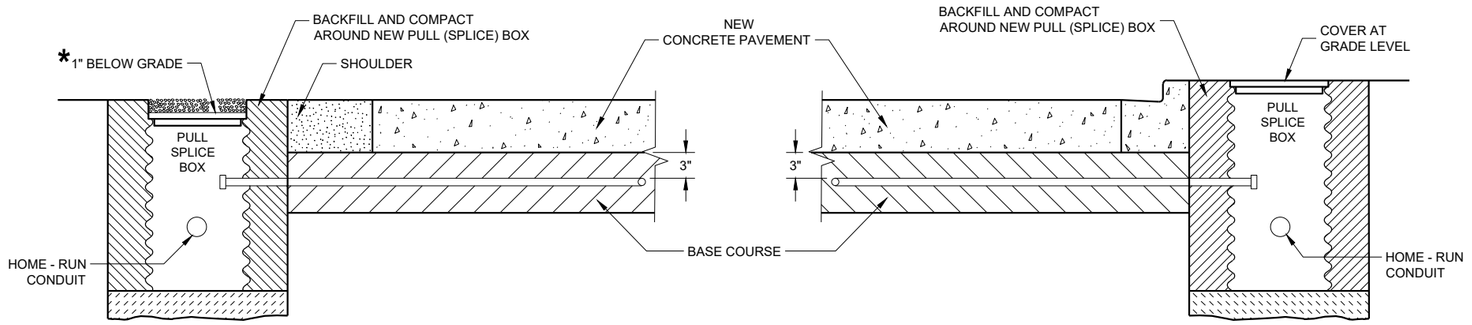


SECTION A - A
NO CURB AND GUTTER

SECTION B - B
CURB AND GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

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 READING TO THE PROJECT ENGINEER FOR EVALUATION.

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

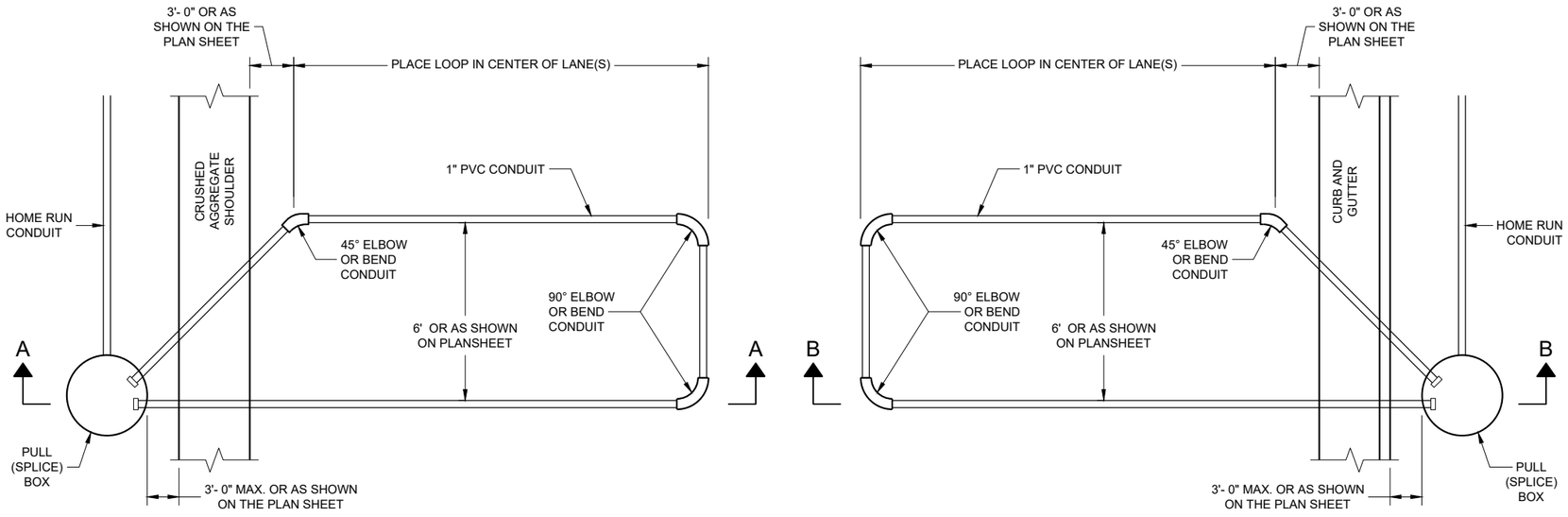
THE #12 AWG LOOP WIRE IN THE ROADSIDE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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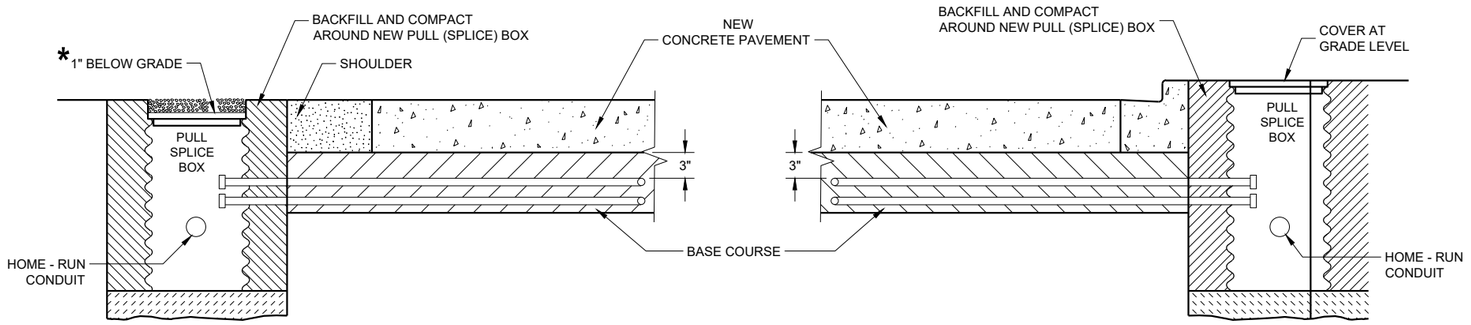


SECTION A - A
NO CURB AND GUTTER

SECTION B - B
CURB AND GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

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 READING TO THE PROJECT ENGINEER FOR EVALUATION.

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

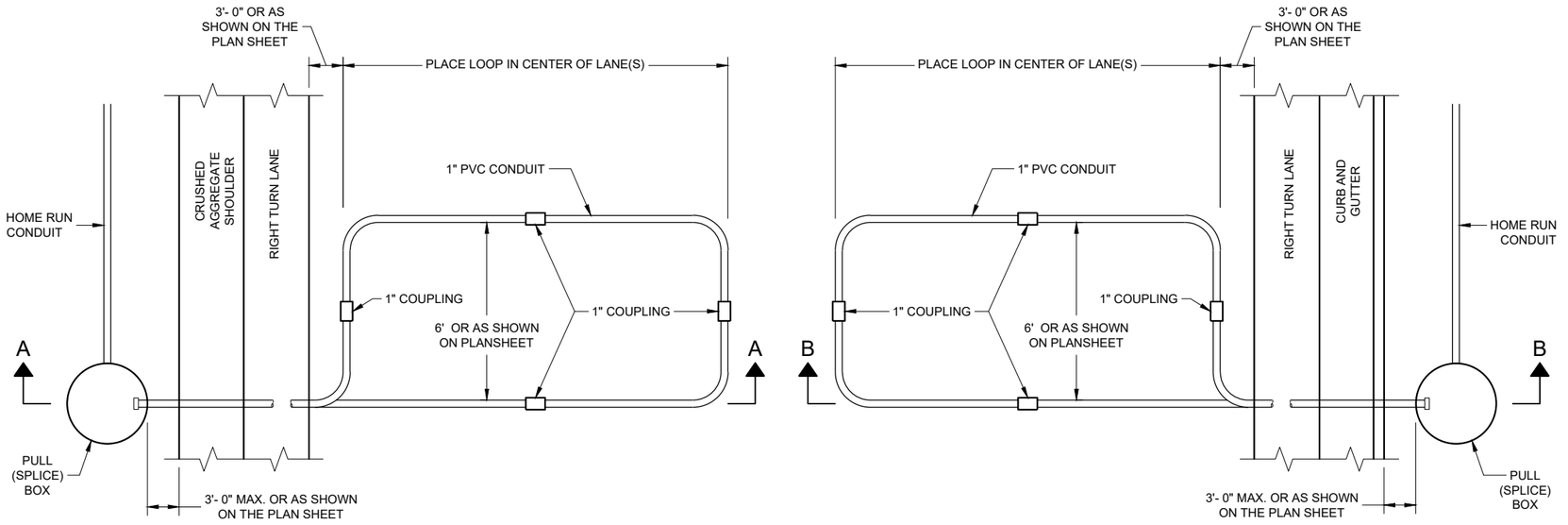
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

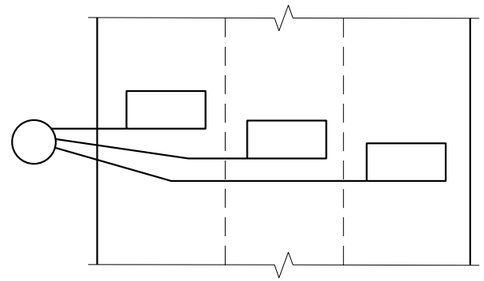
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

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

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



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



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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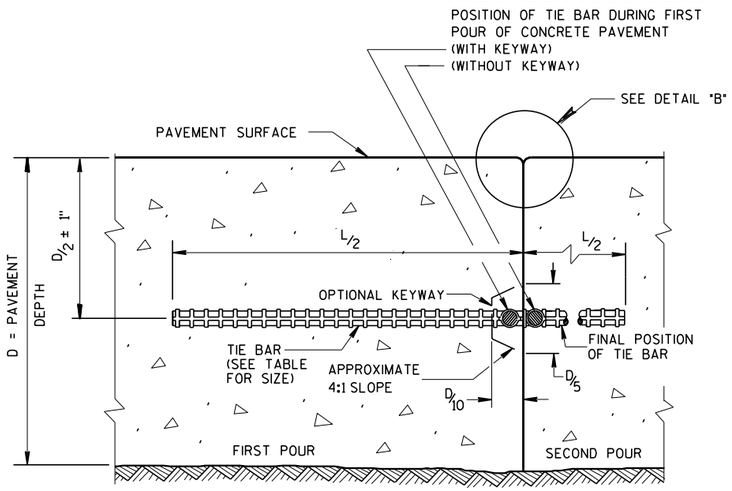
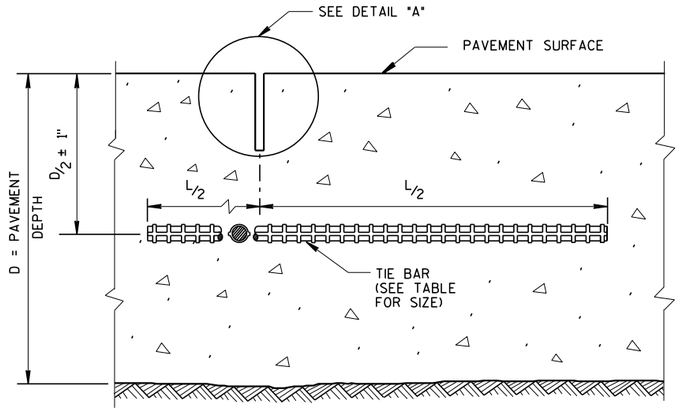
SDD 09F15 - 04b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

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

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

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

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Peter Kemp PE
PAVEMENT SUPE
FHWA

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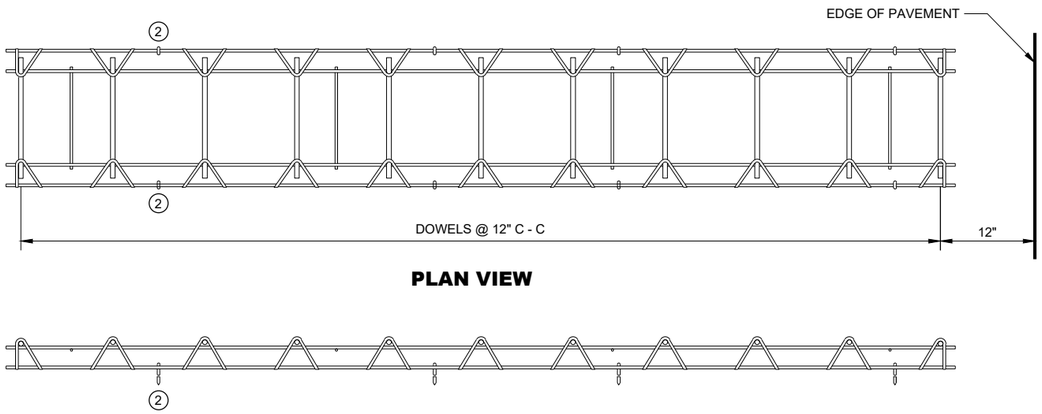
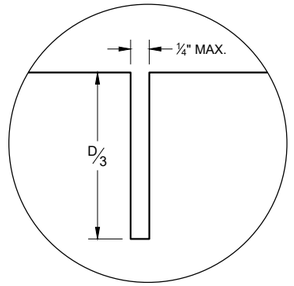


PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY (1)



JOINT DETAIL

GENERAL NOTES

CONTRACTION JOINTS

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

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

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

CONSTRUCTION JOINTS

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

(1) OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.

(2) SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

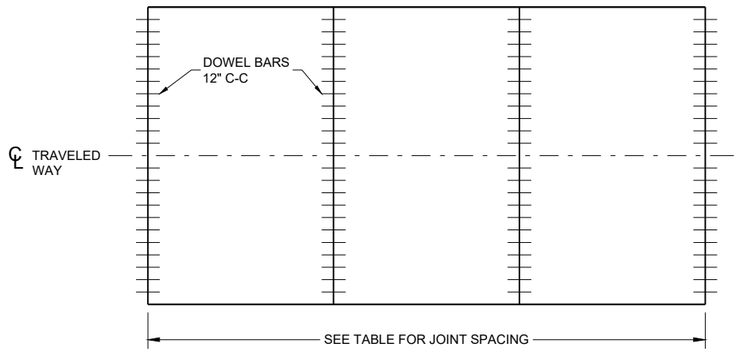
(3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.

(4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

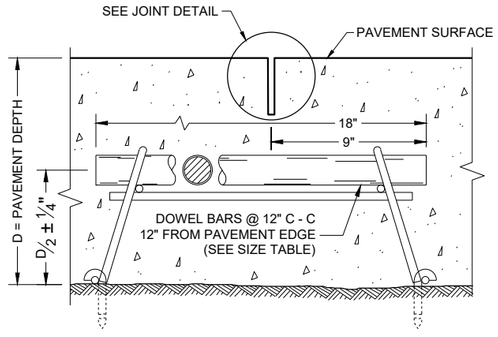
(5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.

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

(7) ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



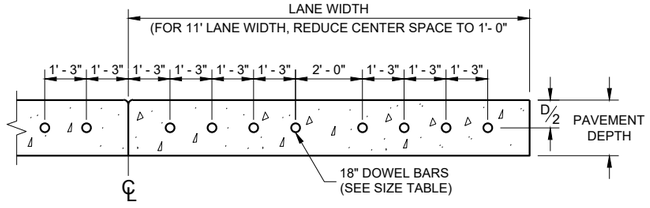
CONTRACTION JOINT LOCATIONS



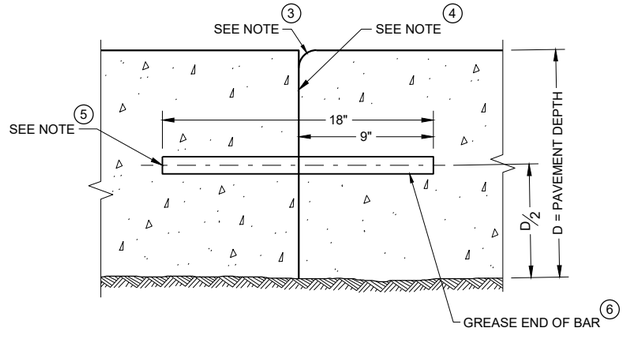
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9" & ABOVE	1 ¼"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



TRANSVERSE CONSTRUCTION JOINT

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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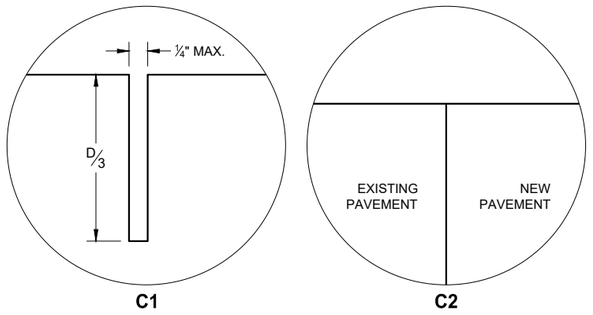
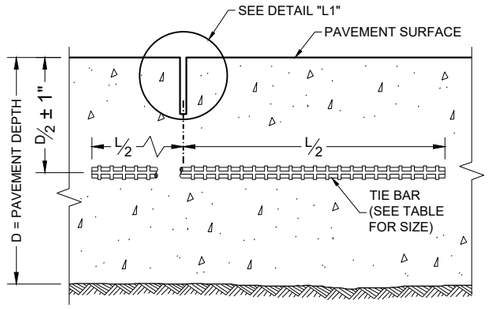
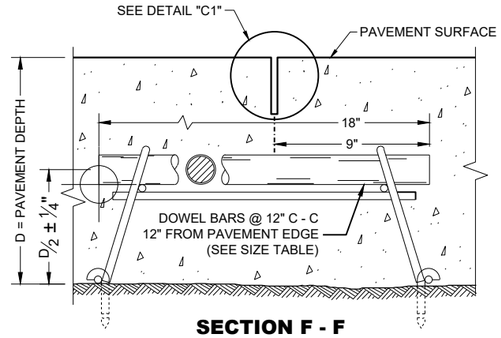
SDD 13C13 - 10



TRANSVERSE JOINTS



SECTION C - C
SAWED JOINT



SECTION F - F
CONTRACTION JOINT

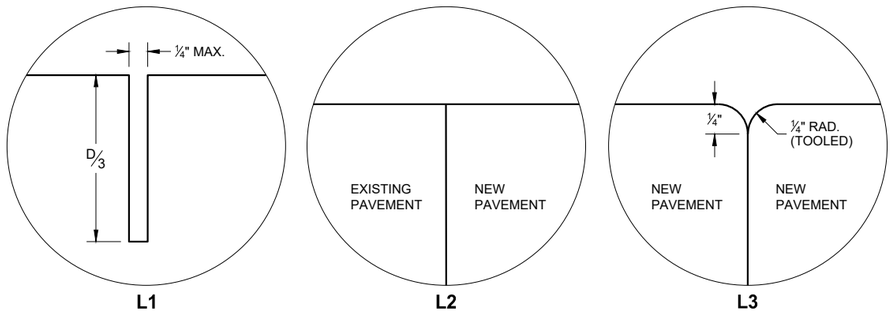
GENERAL NOTES

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

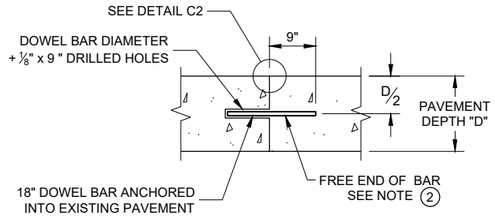
PROVIDE A MIMIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

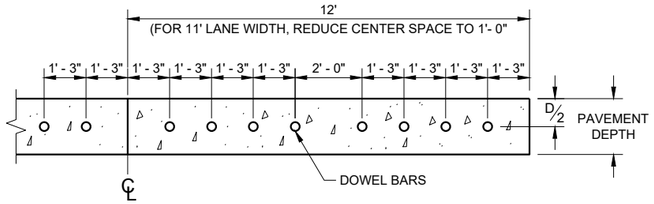
(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



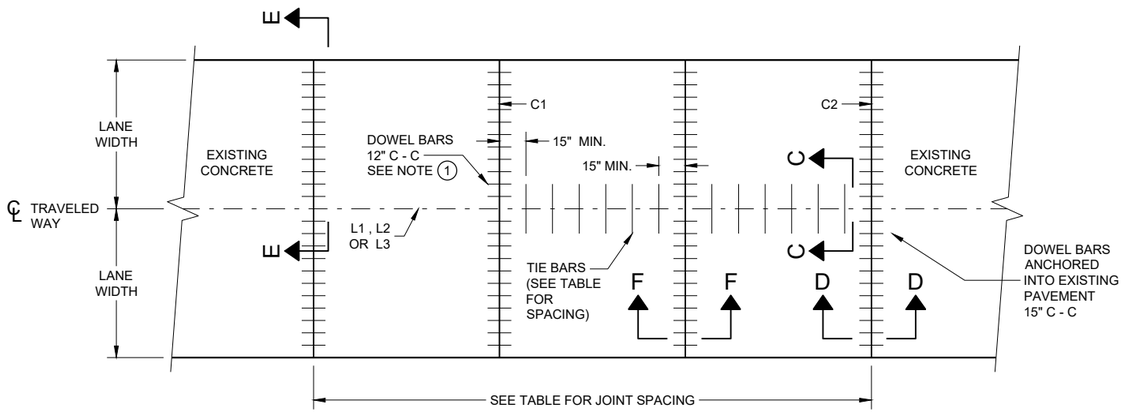
LONGITUDINAL JOINTS



SECTION D - D



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



PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

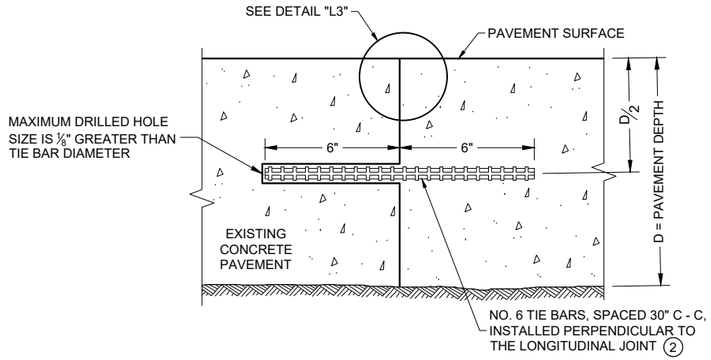
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9" & ABOVE	1 ¼"	15'

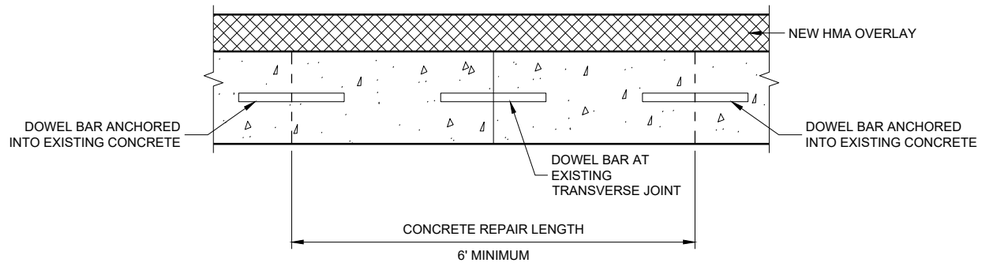
GENERAL NOTES

1. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
2. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
3. PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

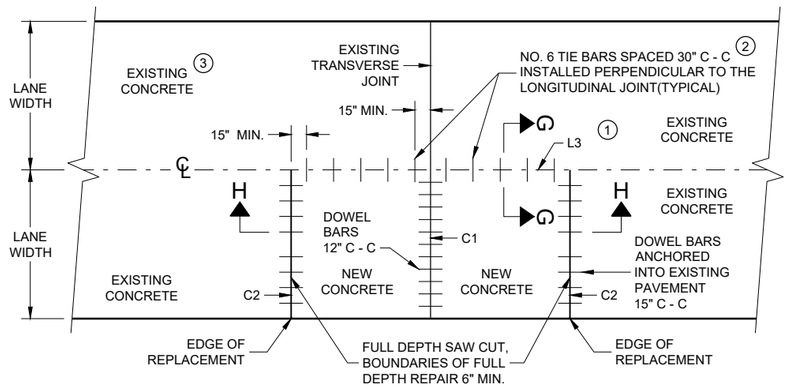


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H - H



PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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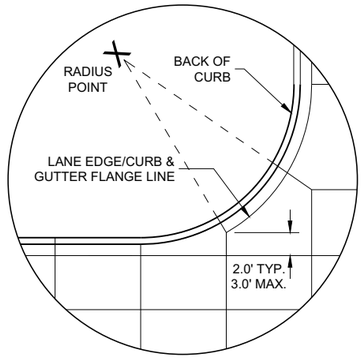
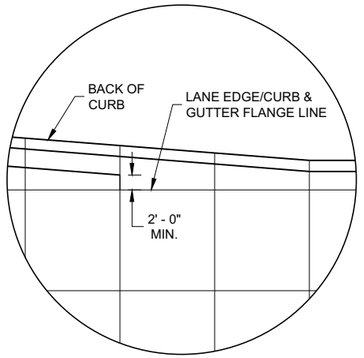
SDD 13C15 - 07b



DETAIL "A"



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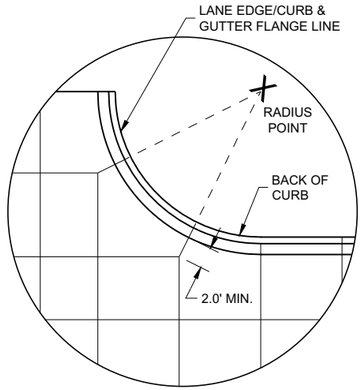
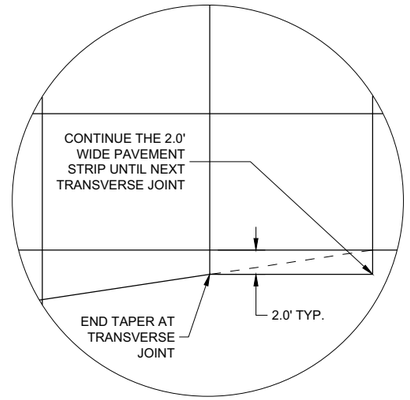


DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

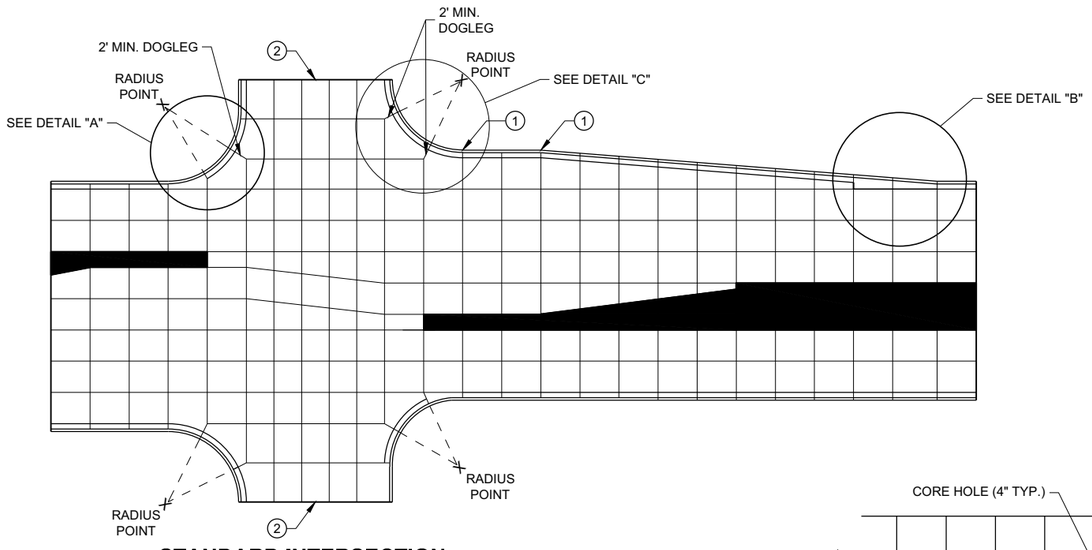
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

(2) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITHEDGE OF RADIUS.

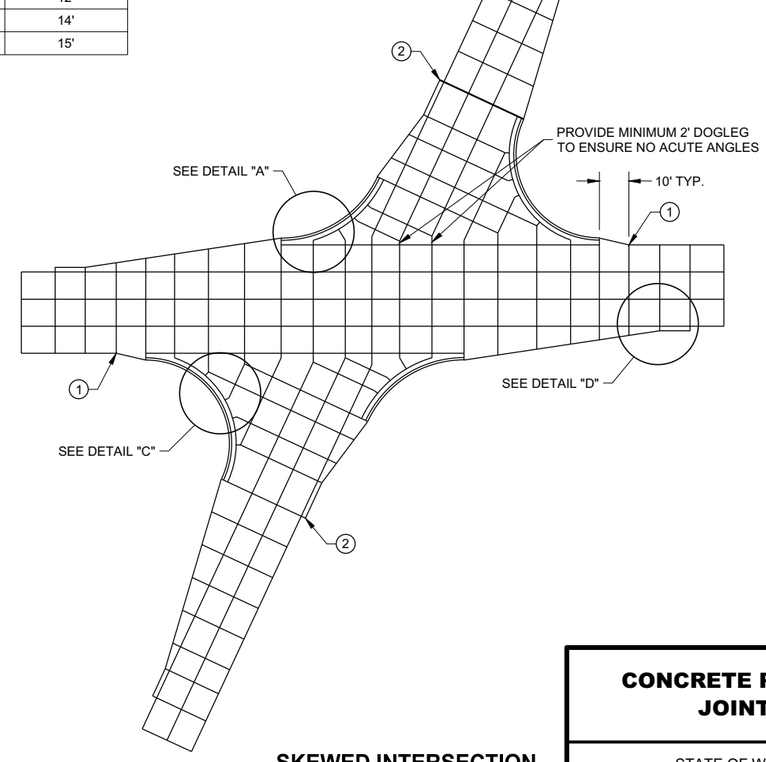
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



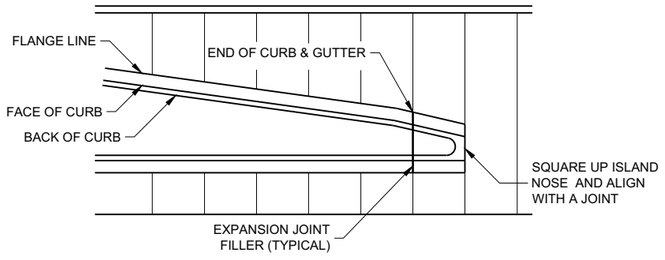
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

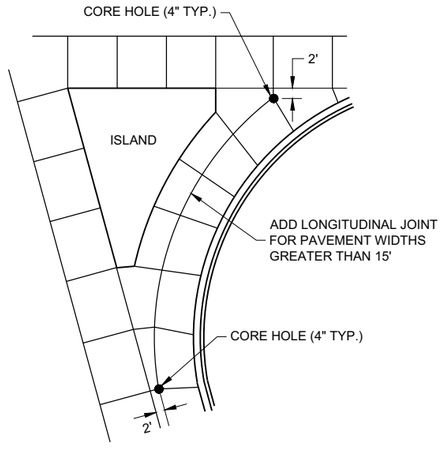
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C18 - 07a

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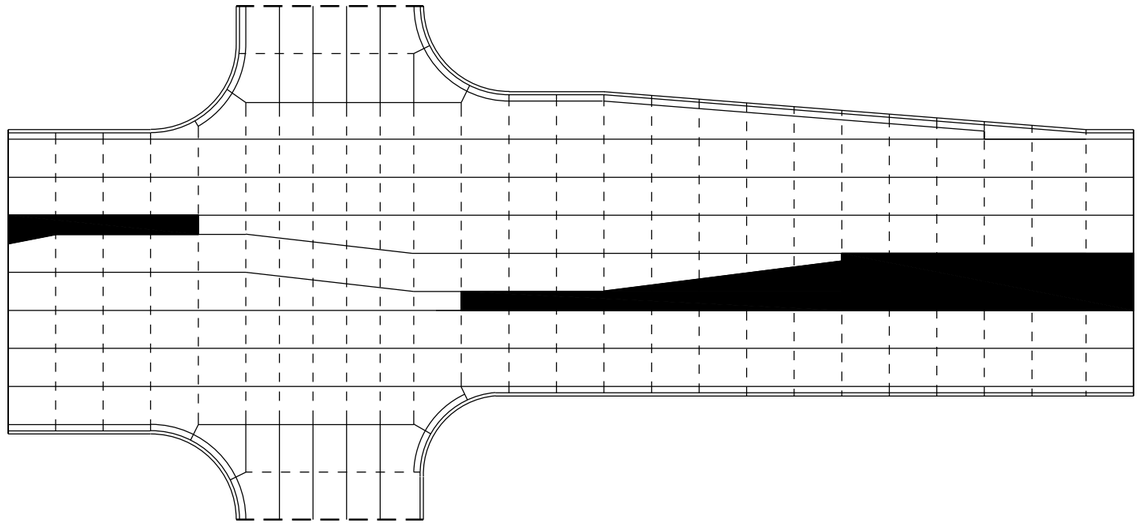
SDD 13C18 - 07a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

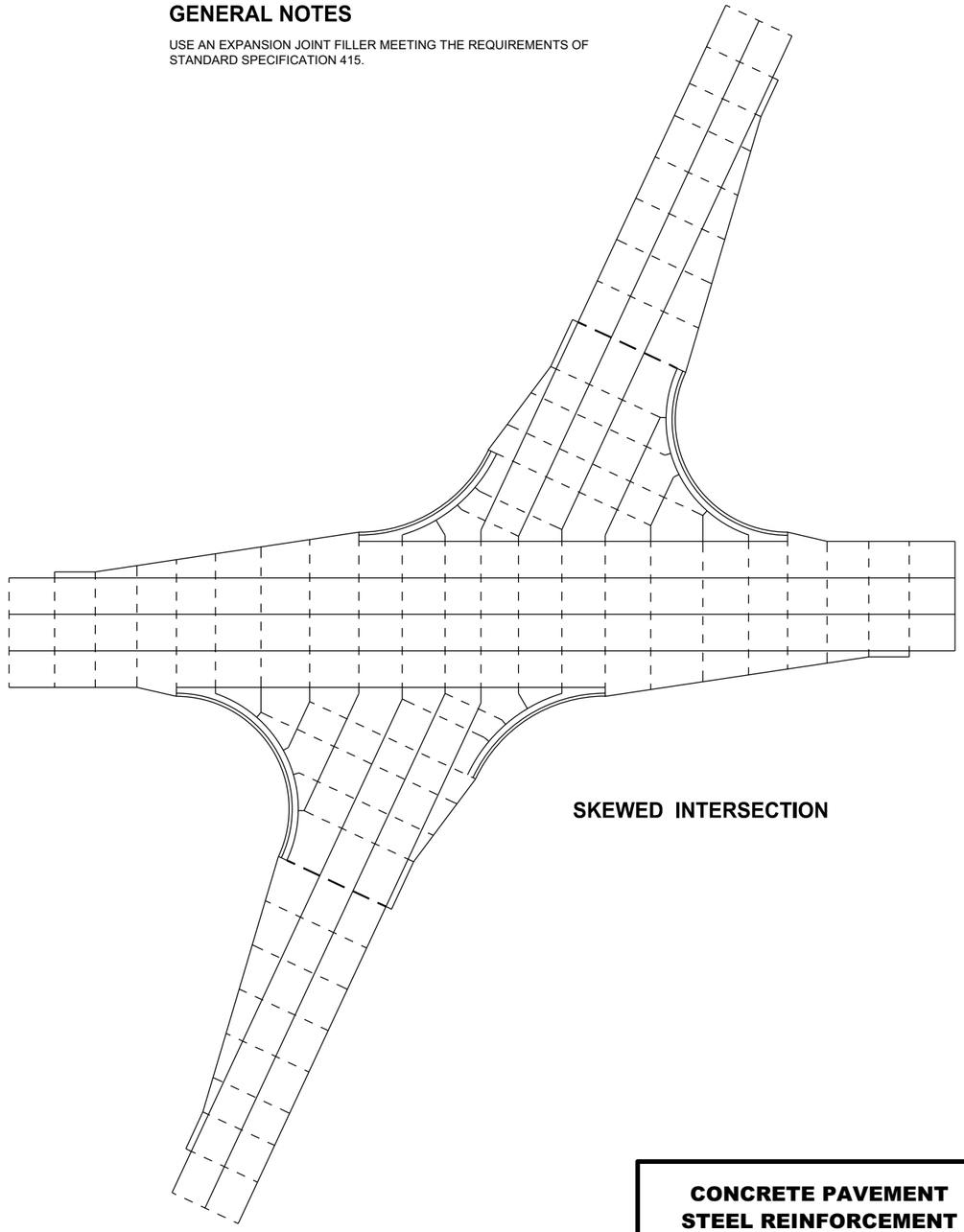
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

6

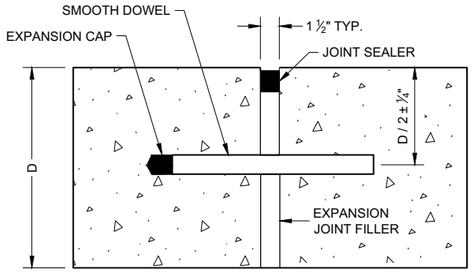
SDD 13C18 - 07b

CONCRETE PAVEMENT STEEL REINFORCEMENT

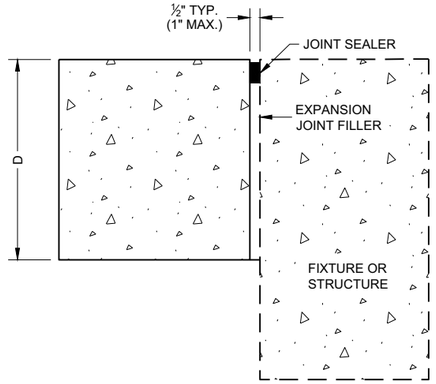
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 07b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

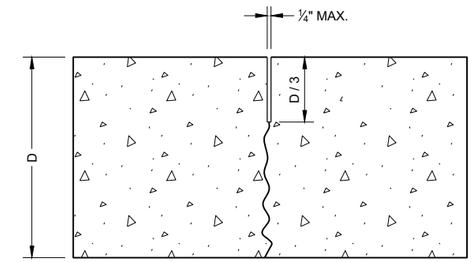
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

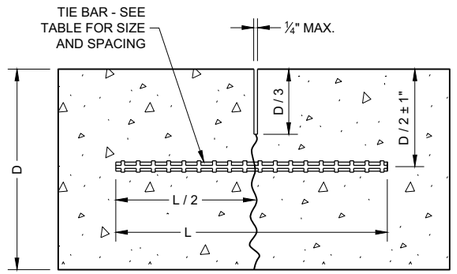
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

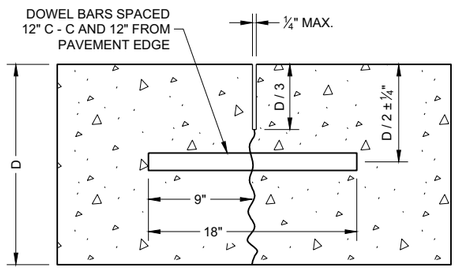
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



UNDOWELED TRANSVERSE

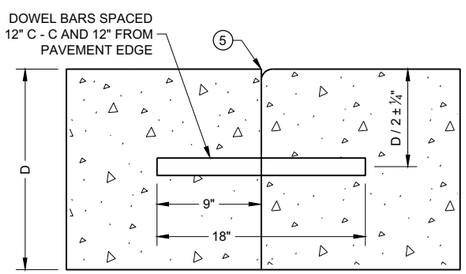


TIED LONGITUDINAL

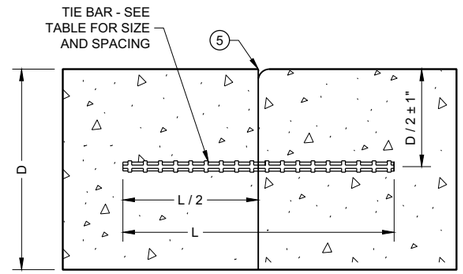


DOWELED TRANSVERSE

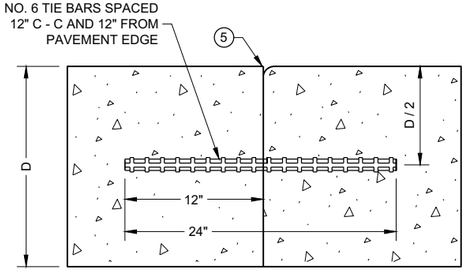
CONTRACTION JOINTS (2)



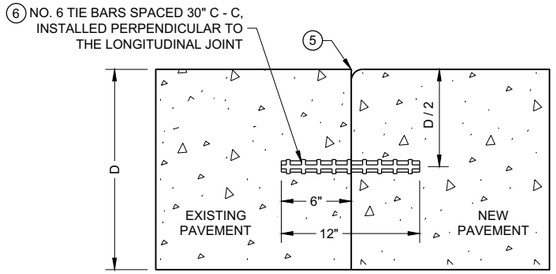
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



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



TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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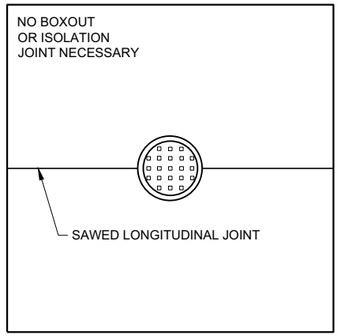
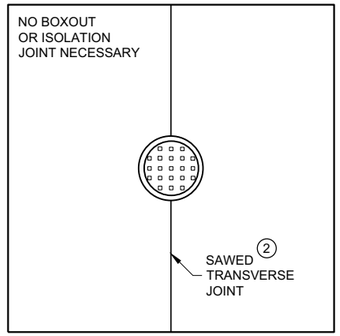
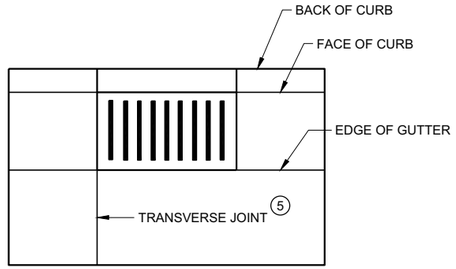
SDD 13C18 - 07c



MANHOLE WITH LONGITUDINAL JOINT



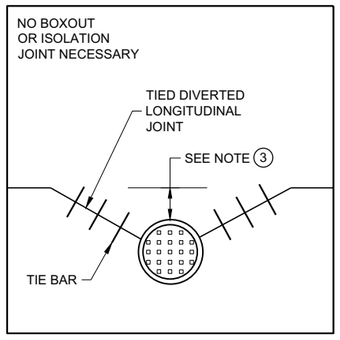
MANHOLE WITH TRANSVERSE JOINT



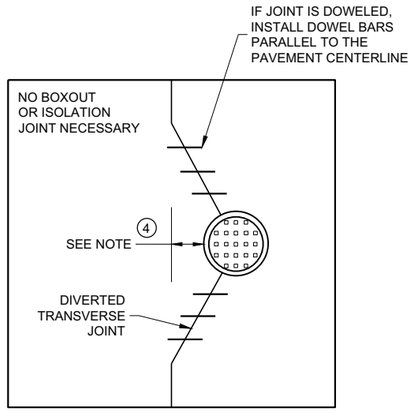
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

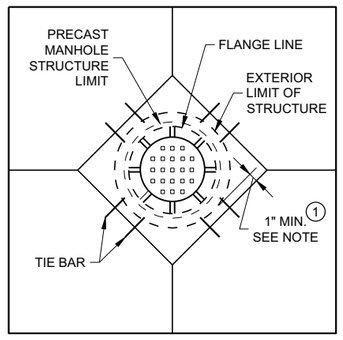
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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SDD13C18 - 07d

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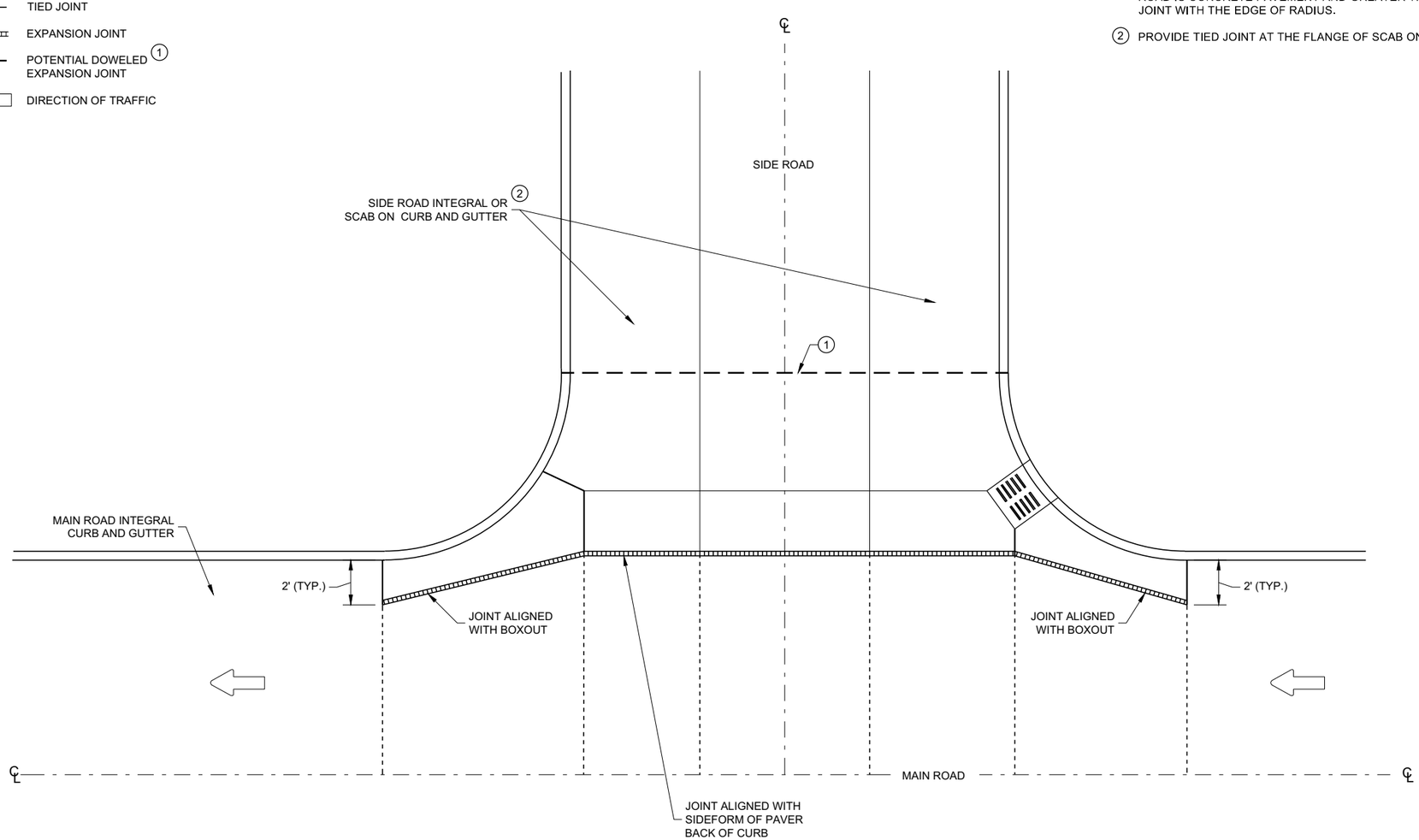
LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 13C18 - 07f

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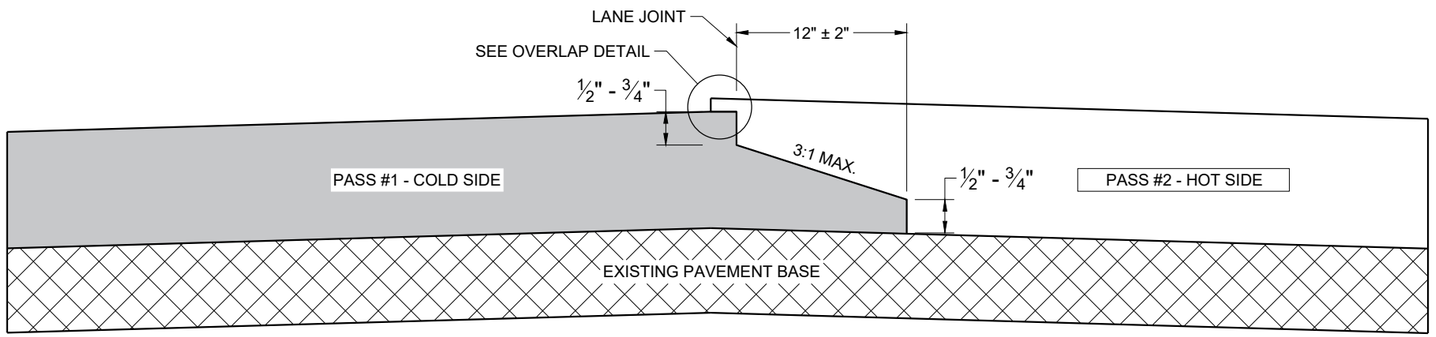
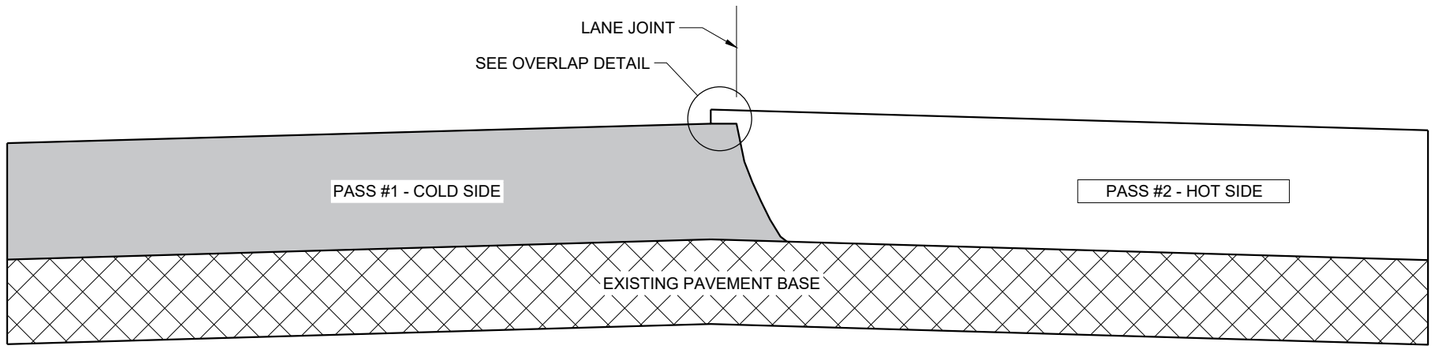
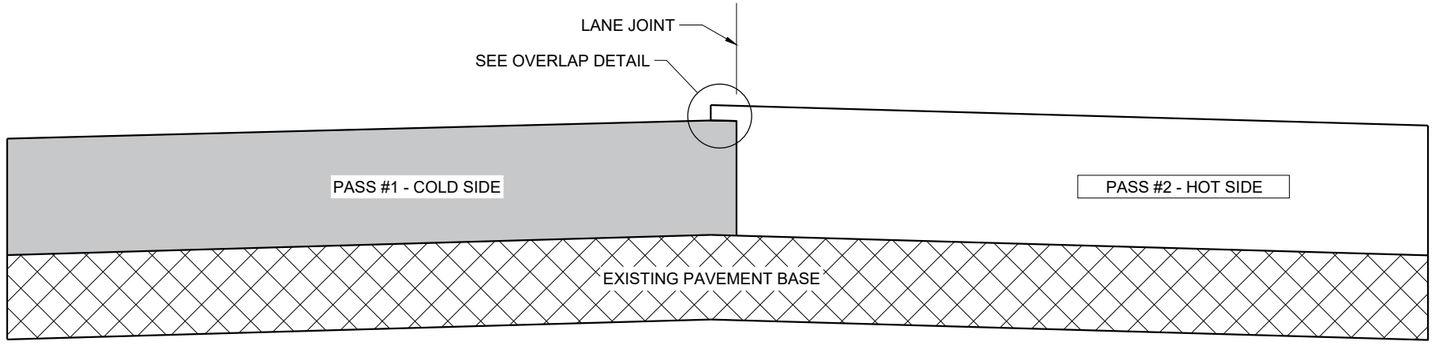
SDD 13C18 - 07f



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

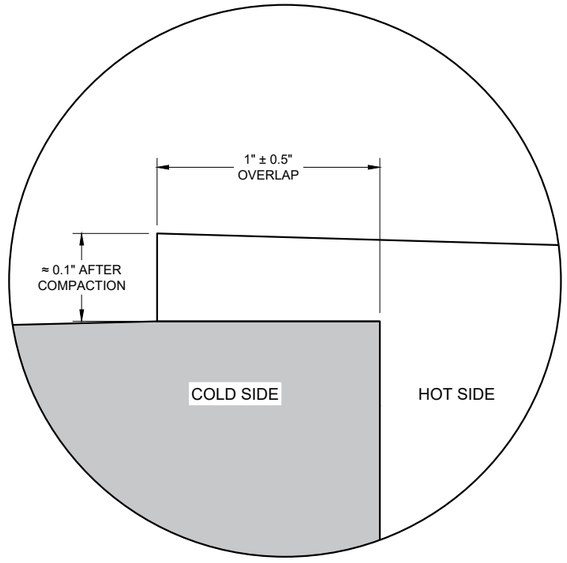
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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SDD 13C19 - 03

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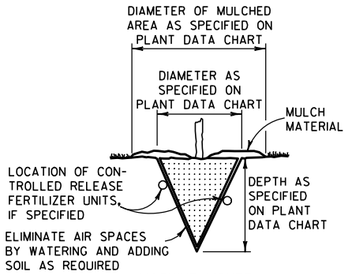
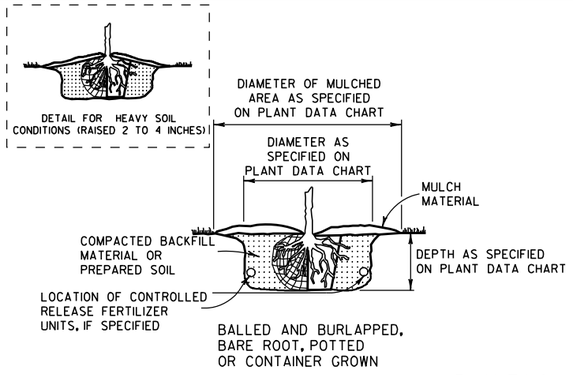
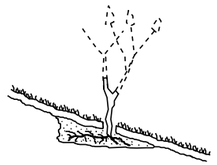
SDD 13C19 - 03



MACHINE MOVED

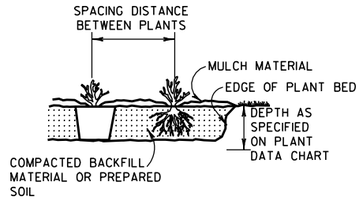


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN

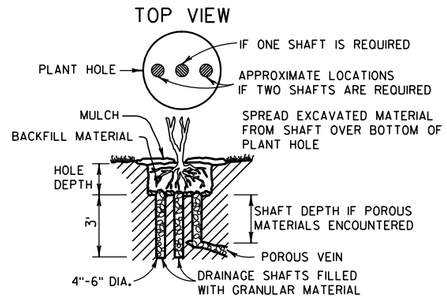


ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



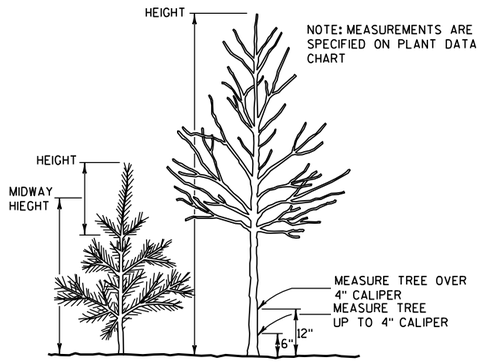
PREPARED BED (BARE ROOT AND POTTED)



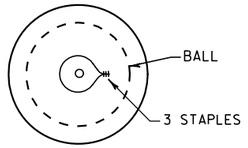
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

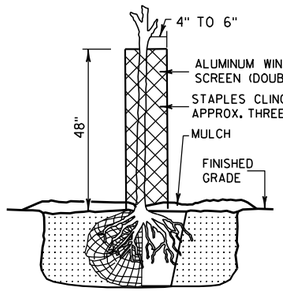
PLANTING



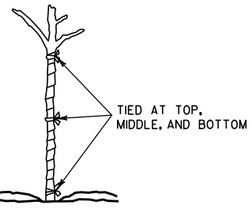
MEASURING



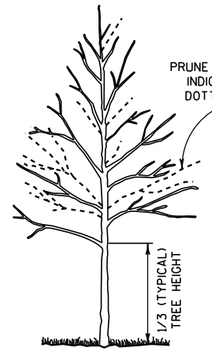
TOP VIEW



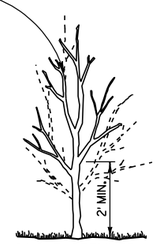
RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)



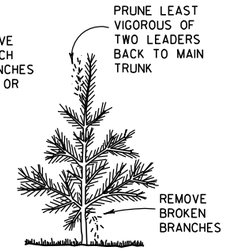
SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

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

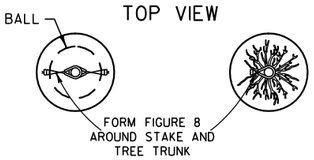
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

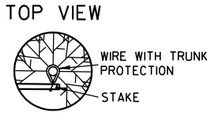
SUMAC

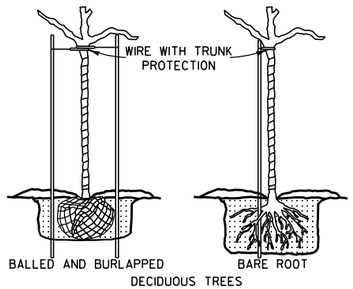


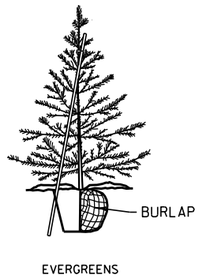
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



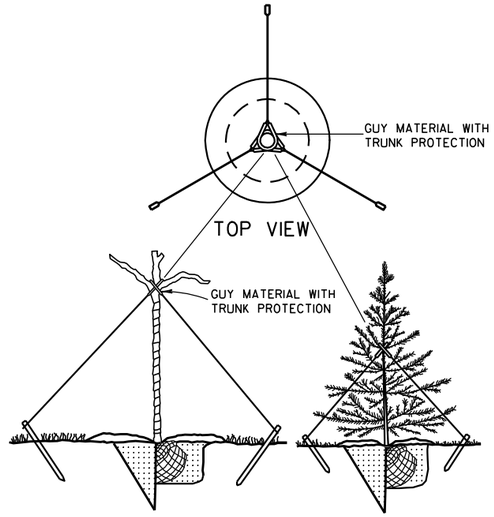






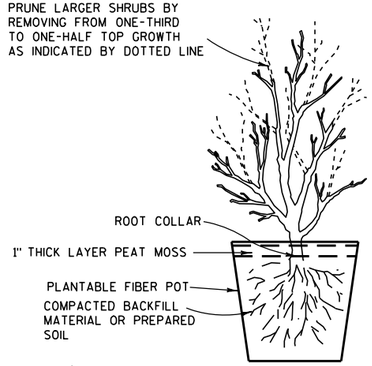
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE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

BRACING



GUYING

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



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

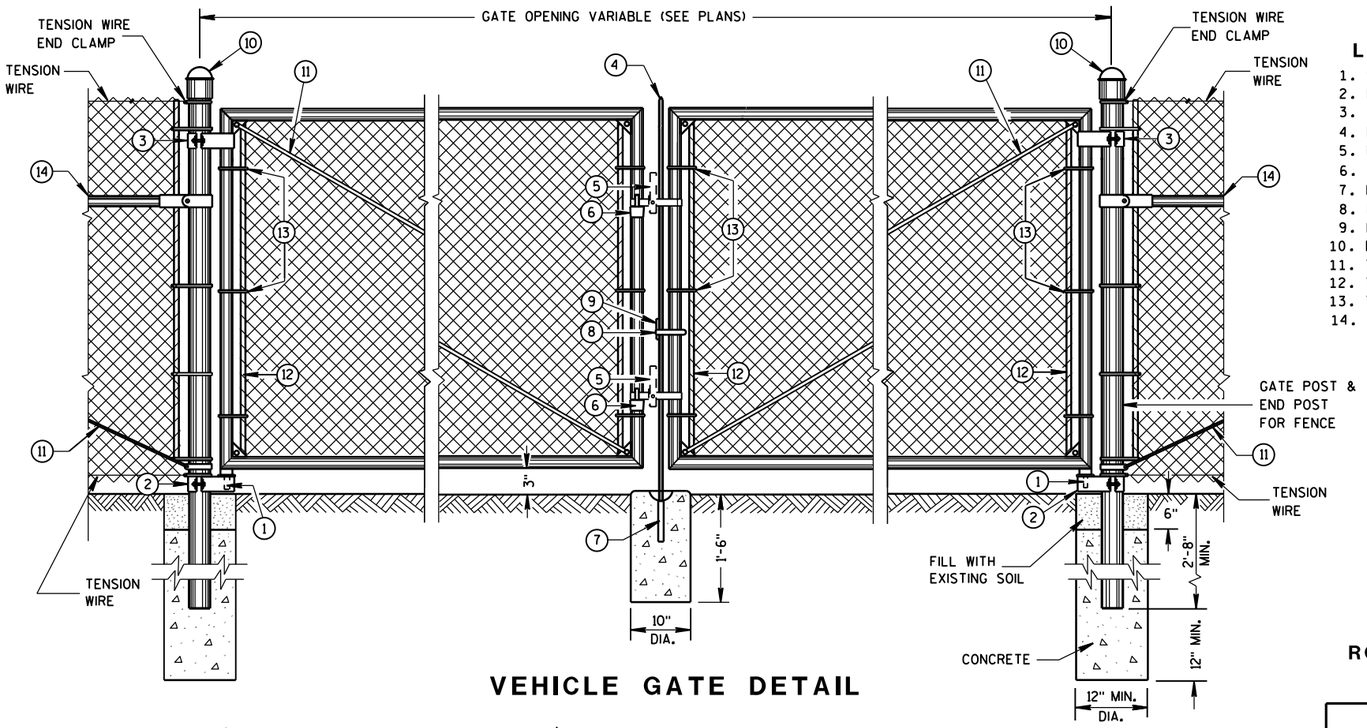
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

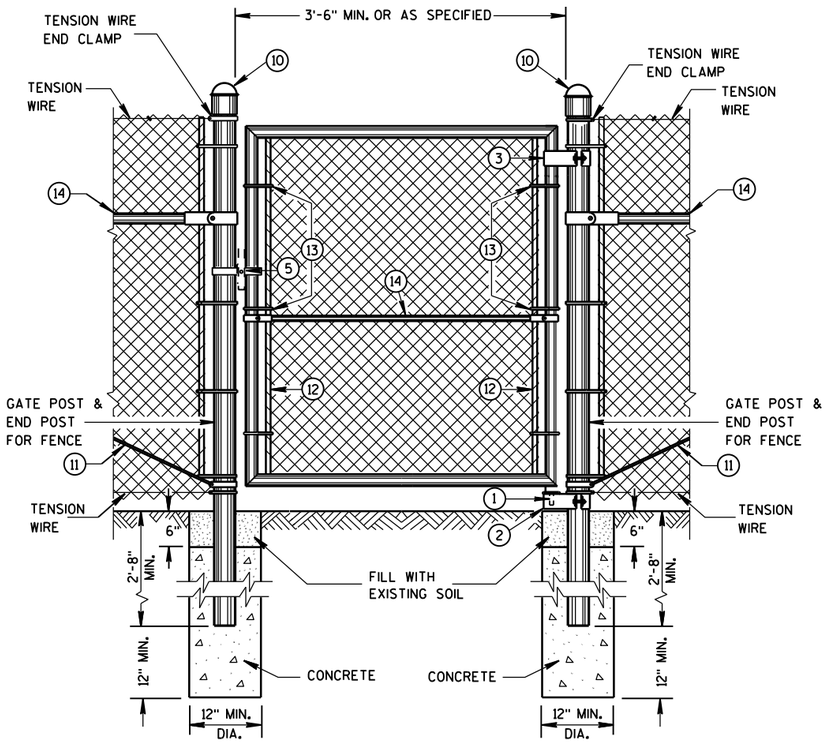
APPROVED
4/11/94
DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

S.D.D. 14 A 2-1



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

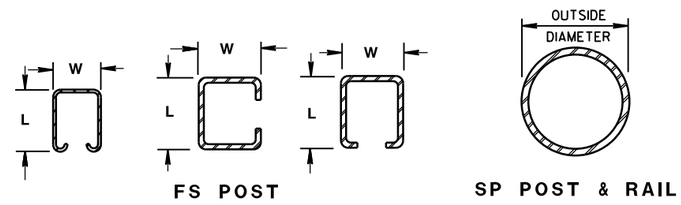
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST — SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

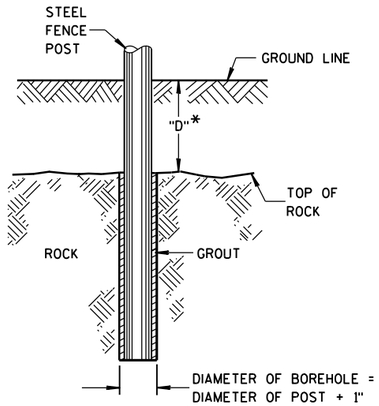
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

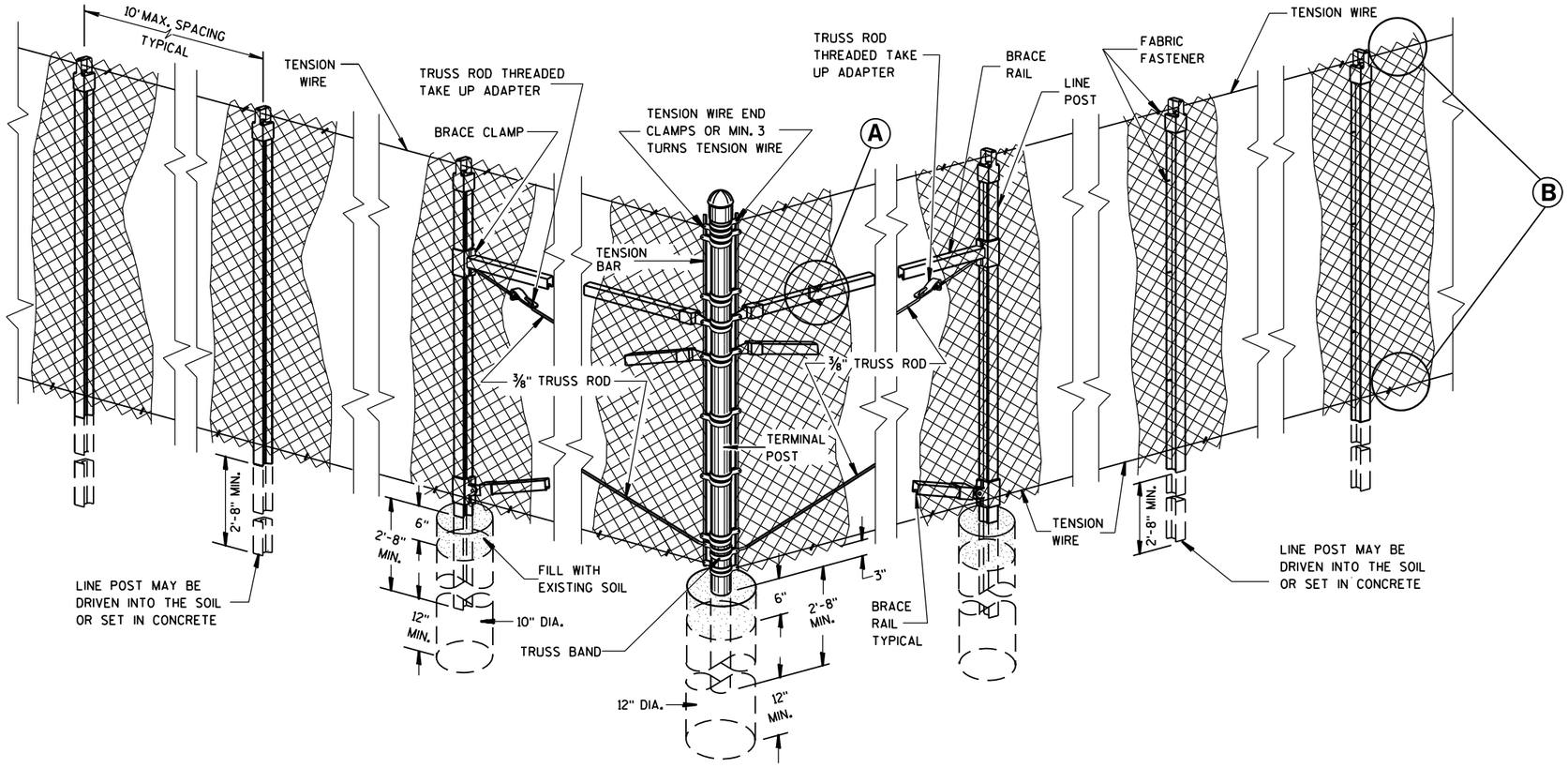
6

S.D.D. 15 B 3-15a

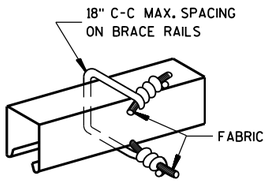


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



BRACE RAIL

FABRIC FASTENER

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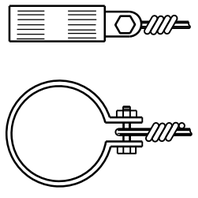
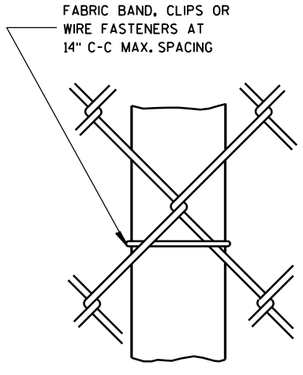


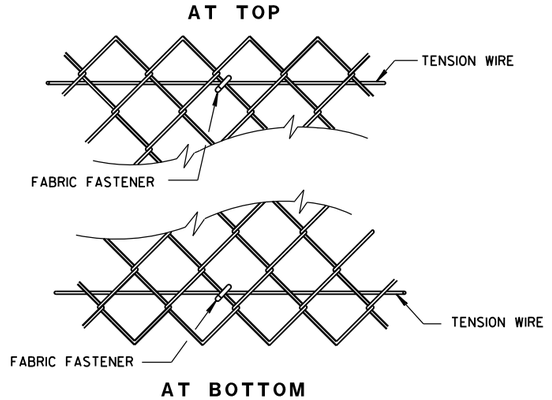
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

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FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 15 B 3-15b

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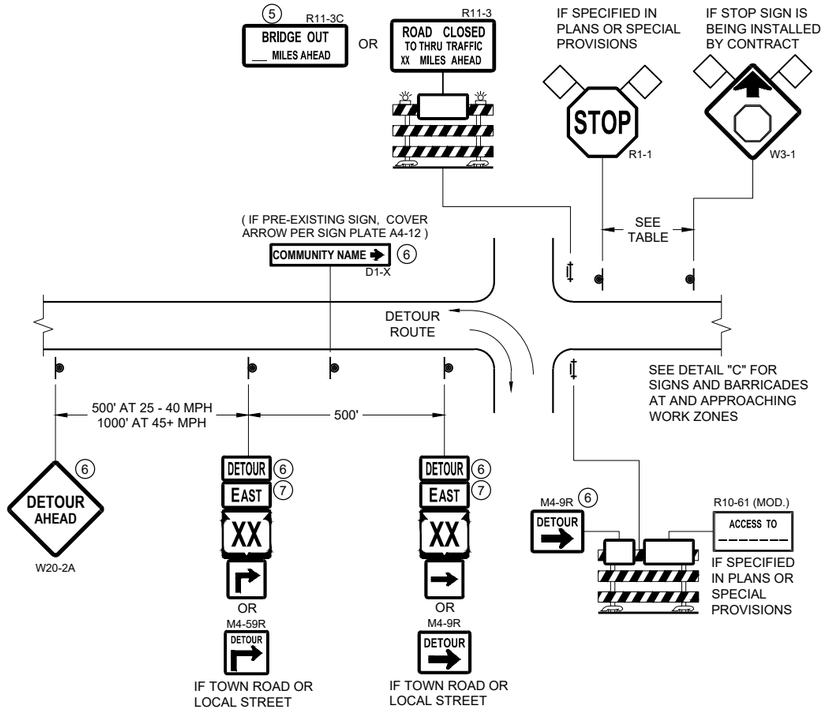
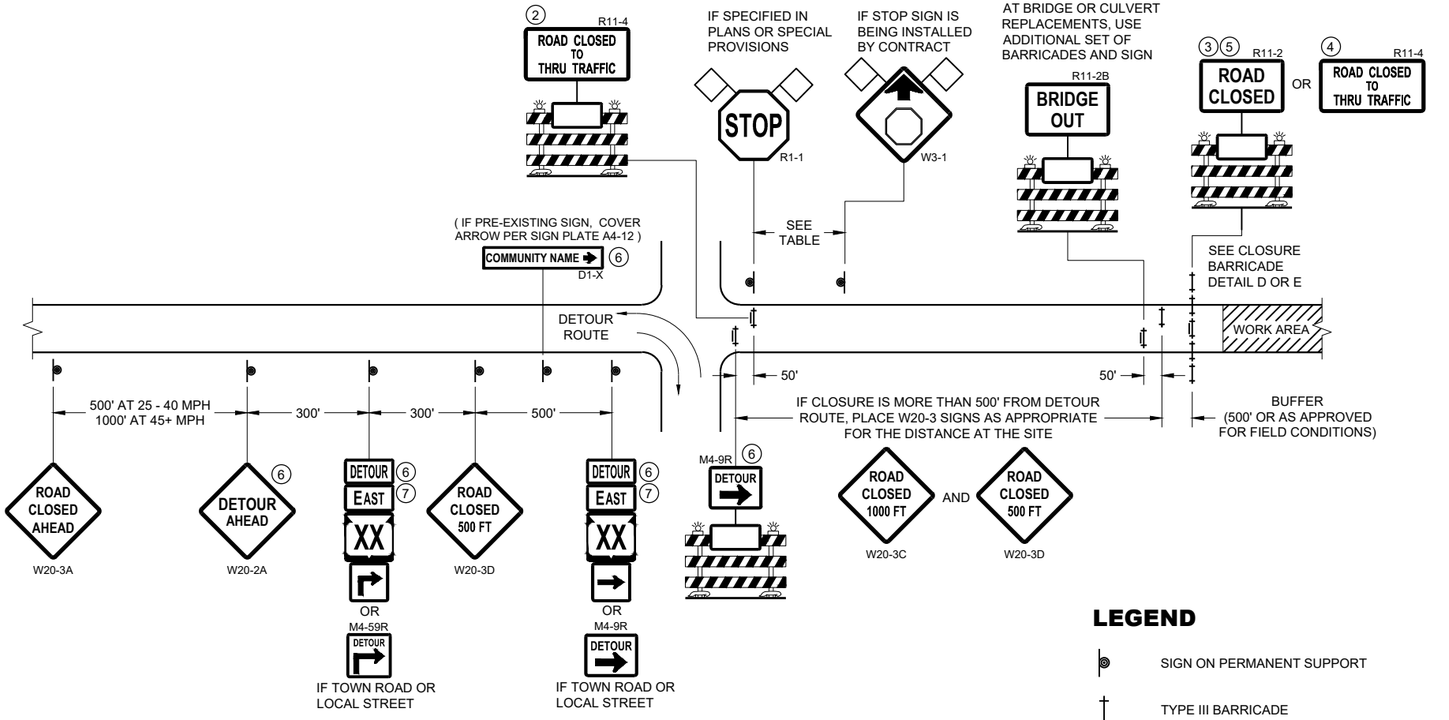
S.D.D. 15 B 3-15b



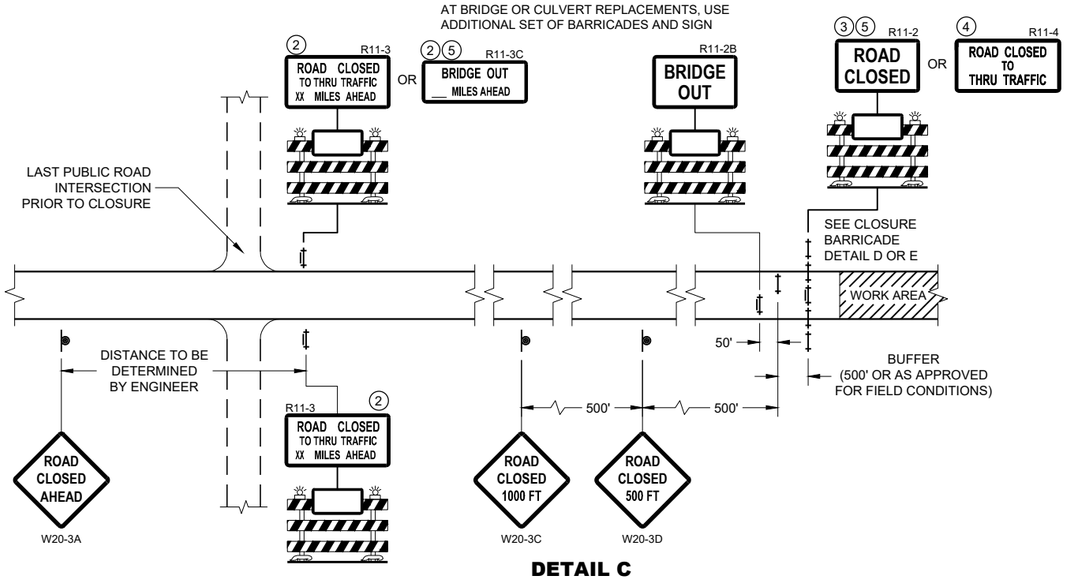
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

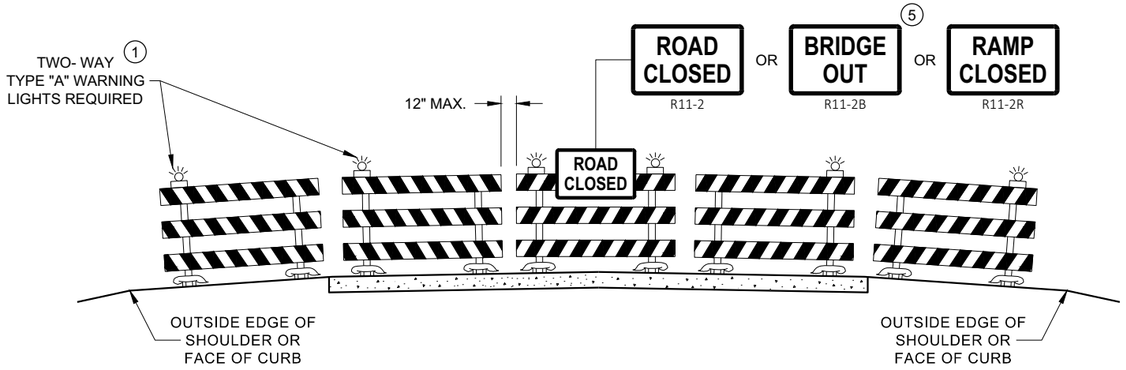
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

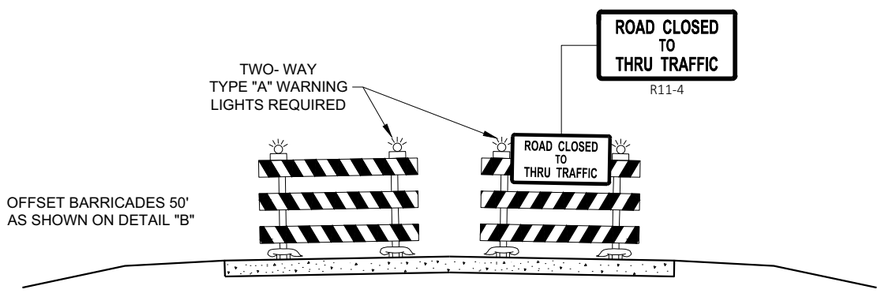
6

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4
- XX — M1 - 6
- COUNTY / X — M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
M4-9 AND M4-59 SHALL BE 30" X 24"
M4-8a SHALL BE 24" X 18"
G20-51 SHALL BE 60" X 24"
W20-2A SHALL BE 48" X 48"
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST *

DETOUR ROUTE

WORK AREA

DETOUR NEXT X MILES *
G20-51

M4-9L DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

M4-59L DETOUR * ** OR
IF TOWN ROAD OR LOCAL STREET

MATCH POINT

M4-59L DETOUR * ** OR
IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-9L DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

M4-9R DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

M4-59R DETOUR * ** OR
IF TOWN ROAD OR LOCAL STREET

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR ROUTE

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

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

500' AT 25 - 40 MPH
1000' AT 45+ MPH

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

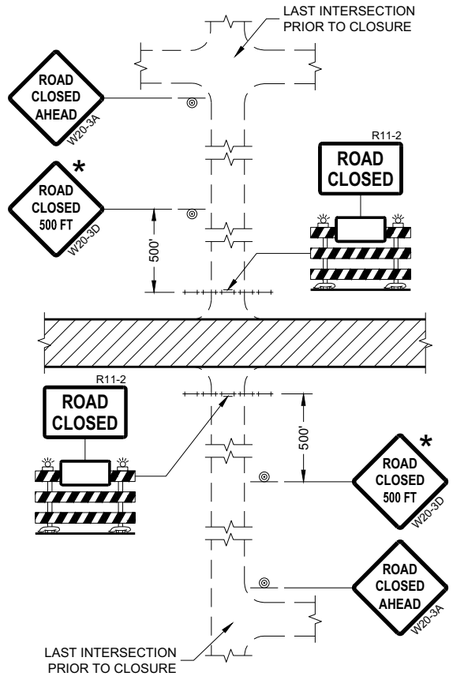
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

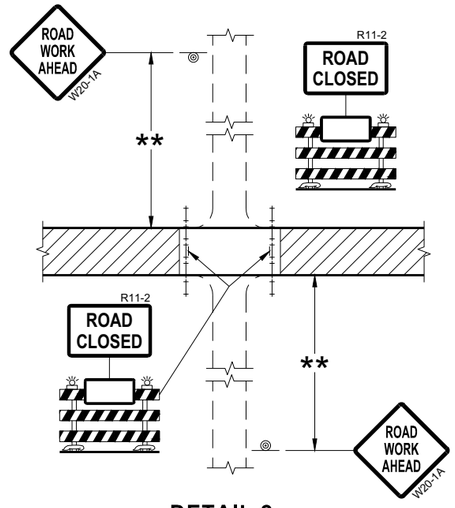
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 08c



DETAIL 1
(NO ACCESS TO PROJECT)



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

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

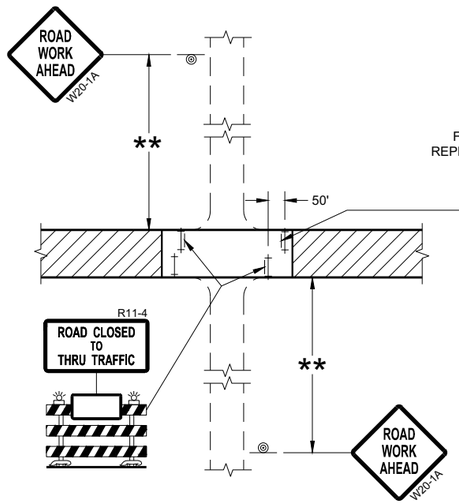
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

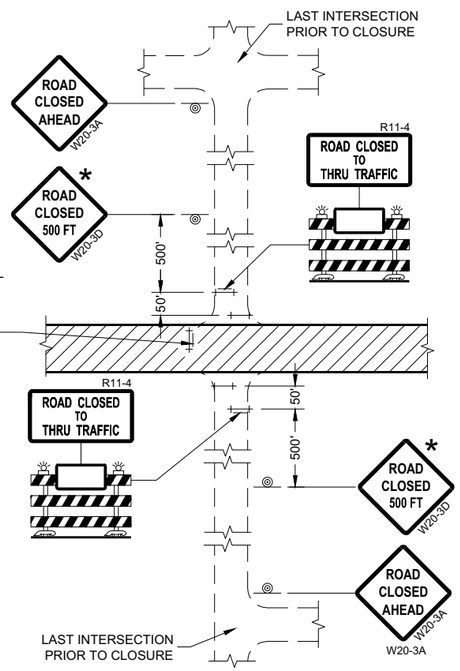
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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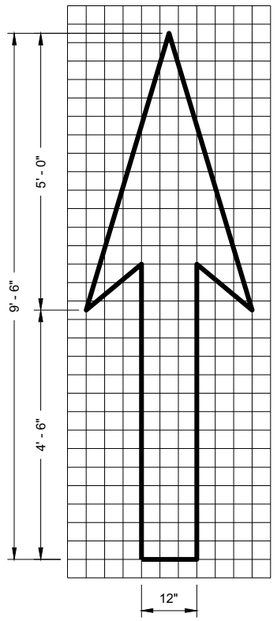
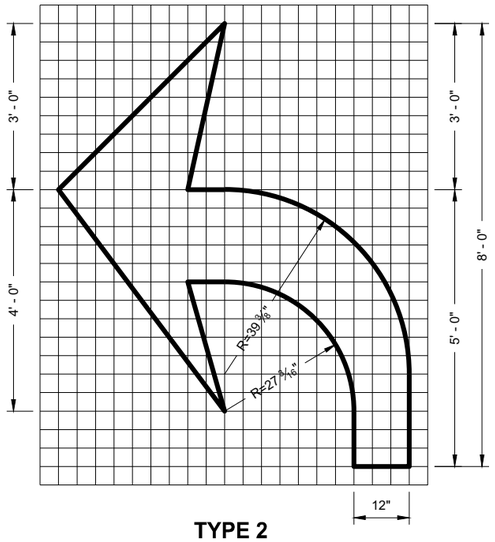
SDD 15C03 - 05

SDD 15C03 - 05



TYPE 1



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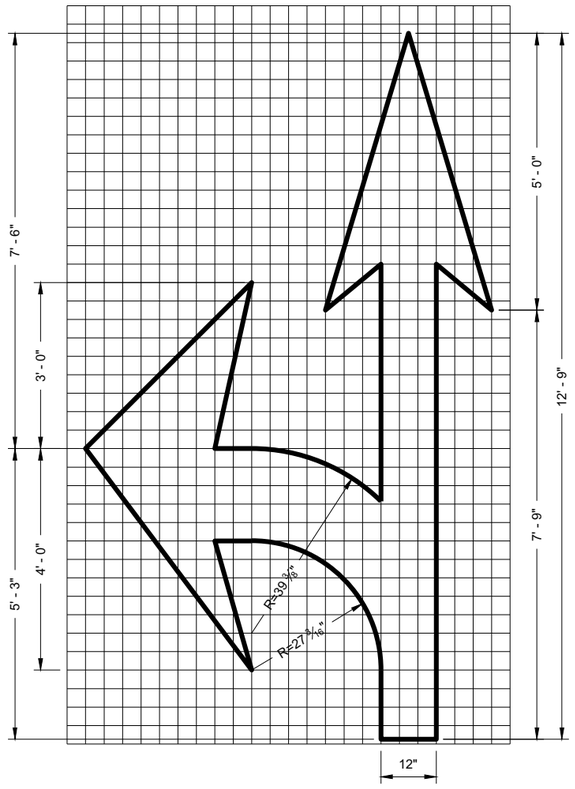
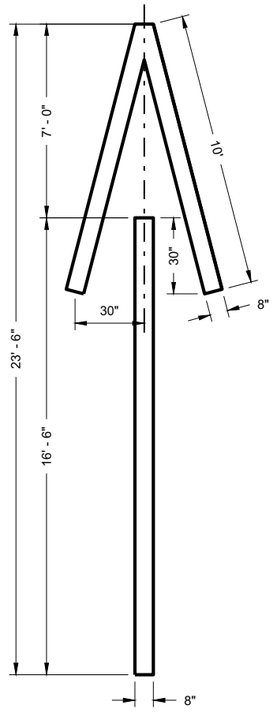


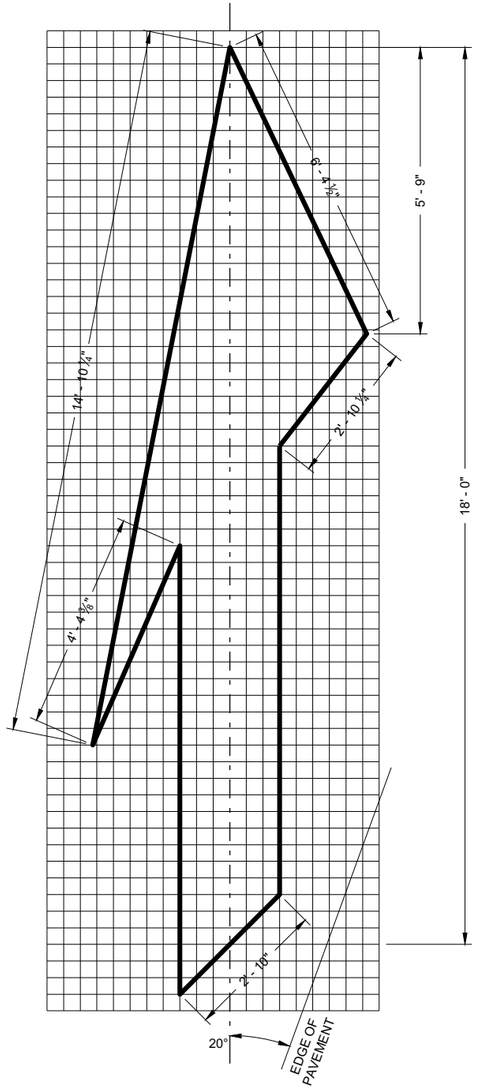
TYPE 3

GENERAL NOTES

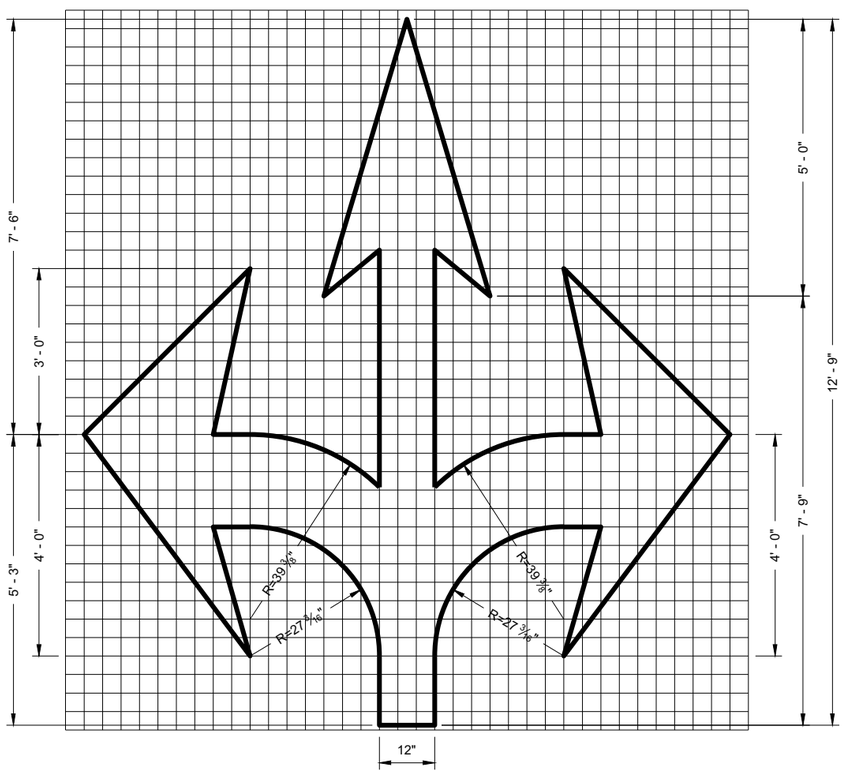
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



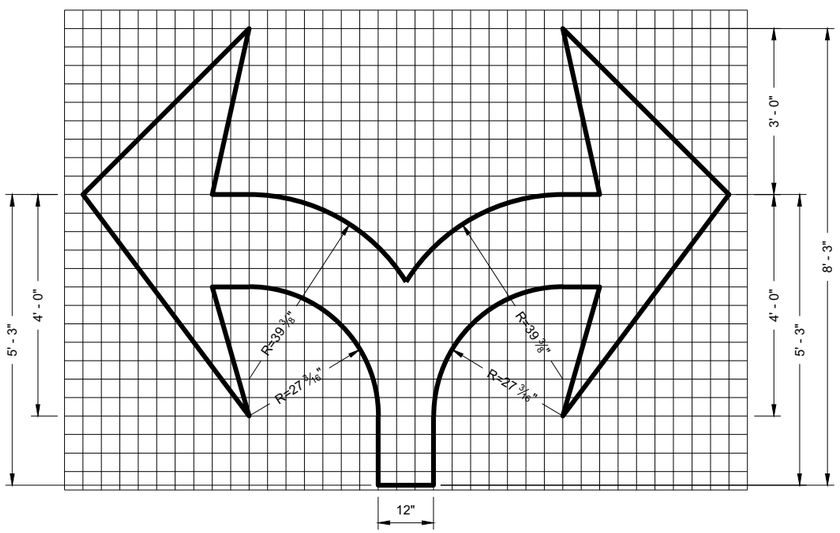
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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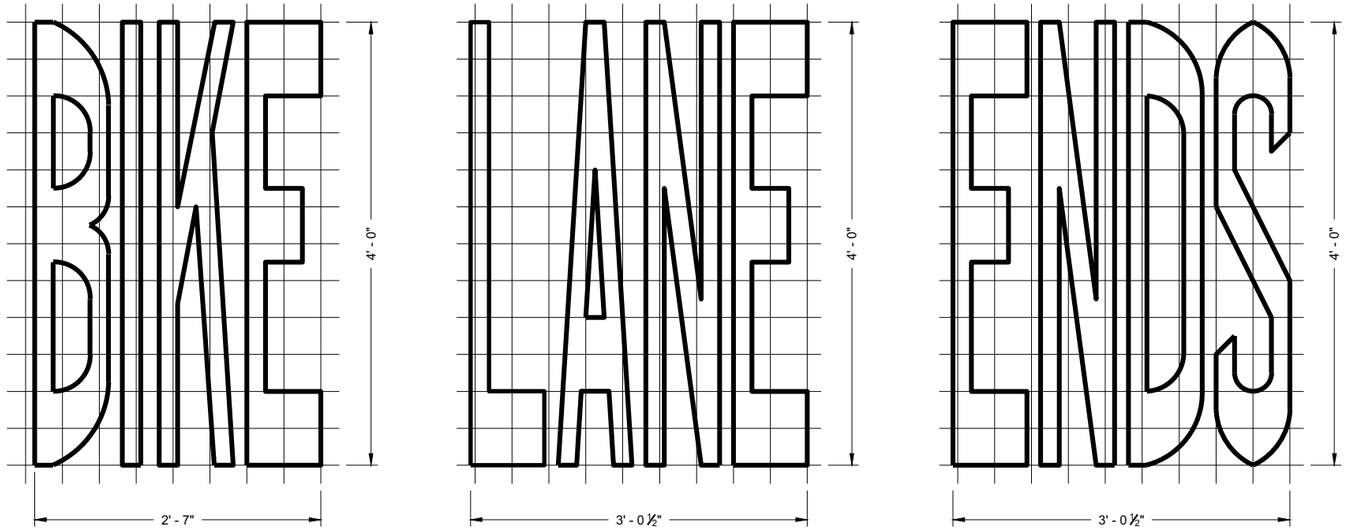
SDD 15C07 - 15c

6

SDD 15C07 - 15c

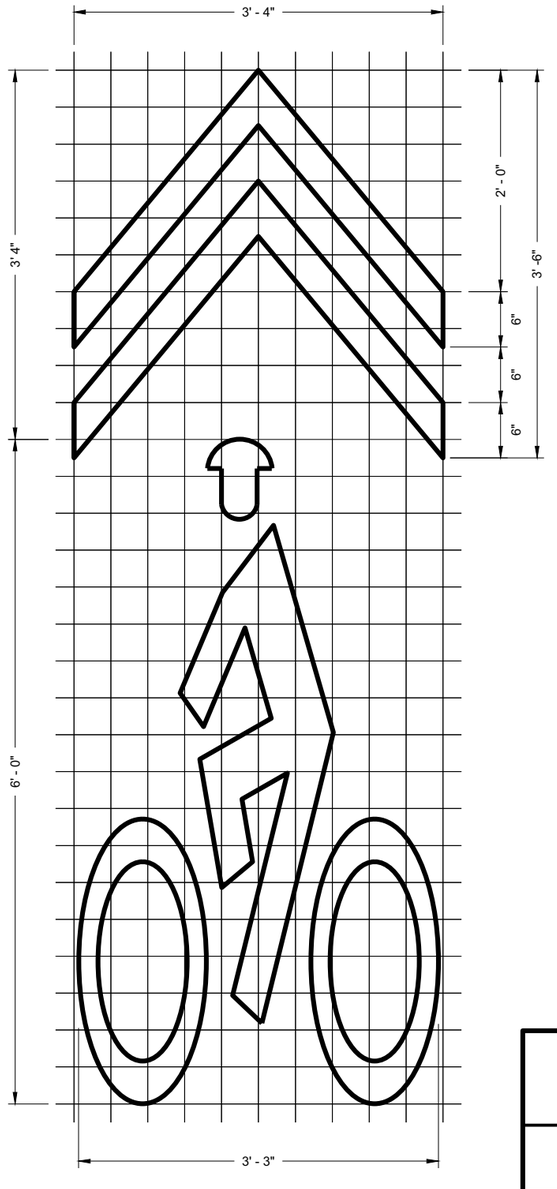
SDD 15C7-e Pavement Marking For Bike Lanes

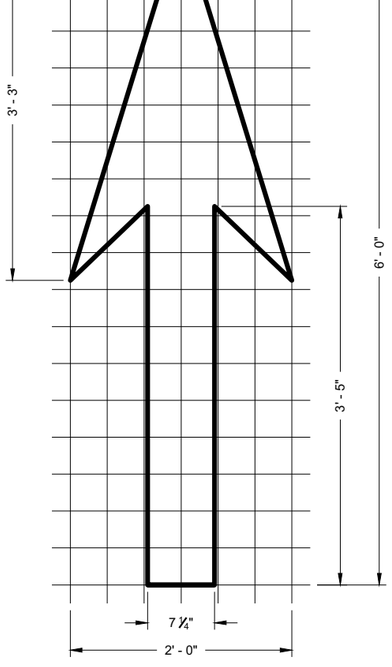


BIKE LANE WORDS

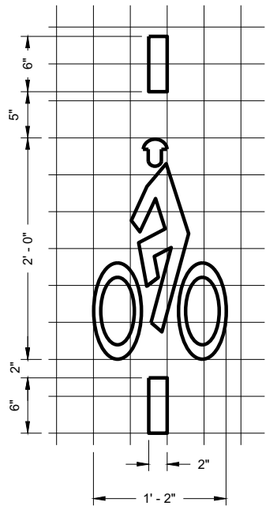
GENERAL NOTES

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

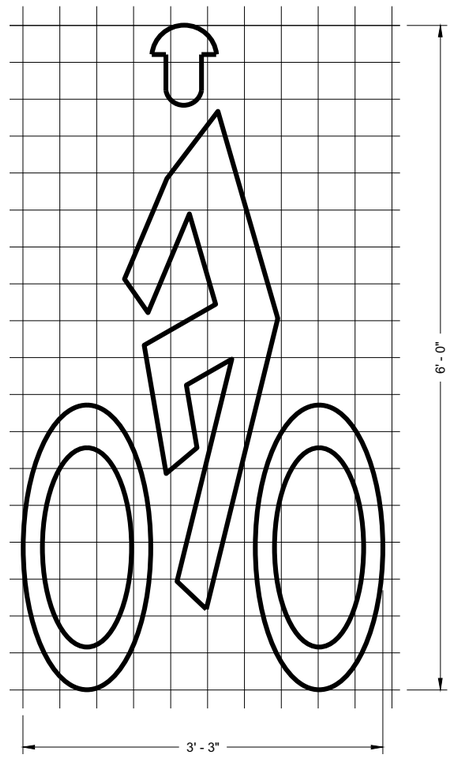




BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL

BIKE LANE SYMBOL FOR SHARED LANE

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 15C07 - 15e

GENERAL NOTES

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

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

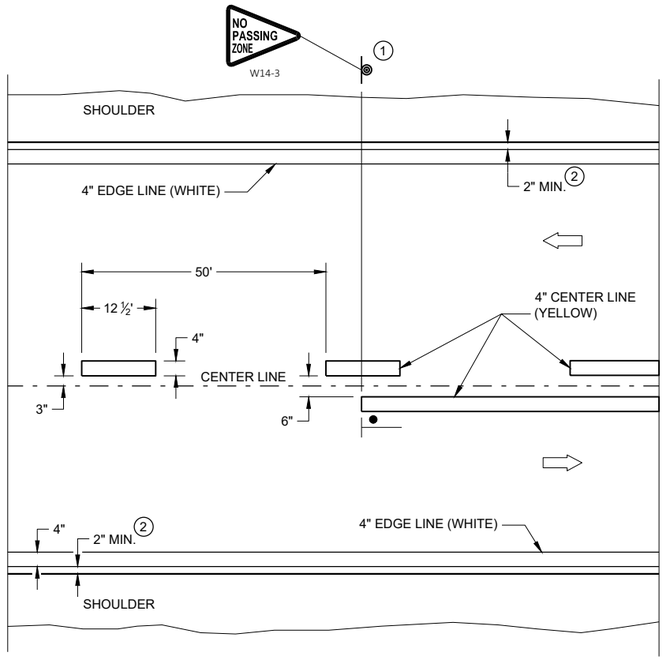
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

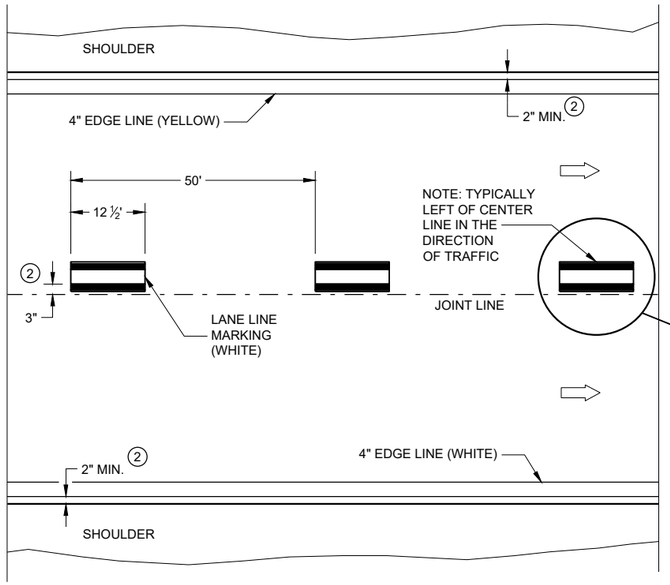
"T" MARKING

SIGN ON PERMANENT SUPPORT

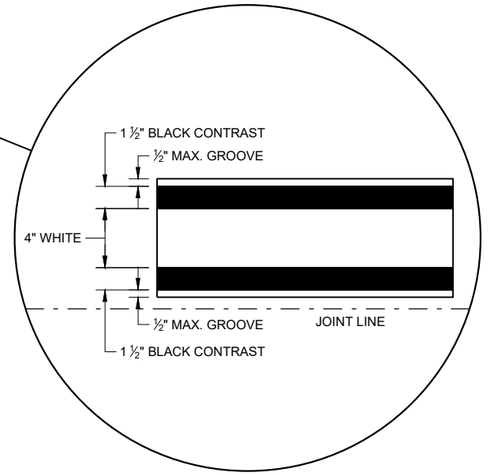
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

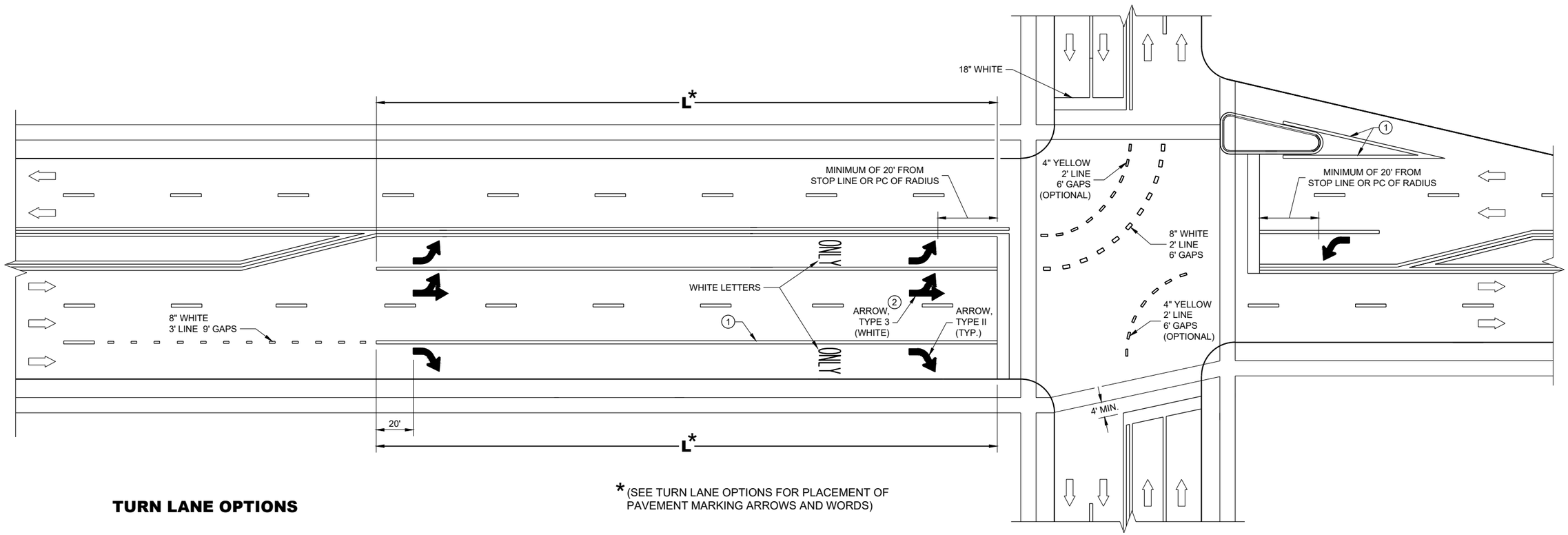
APPROVED
May 2022
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M
ENGINEER

FHWA

SDD 15C08 - 21a

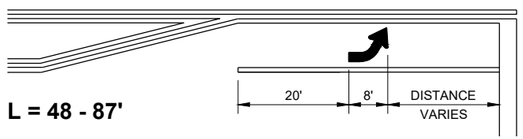
SDD 15C08 - 21a



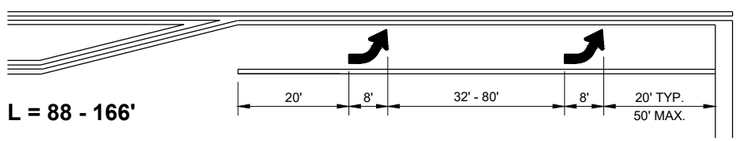
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

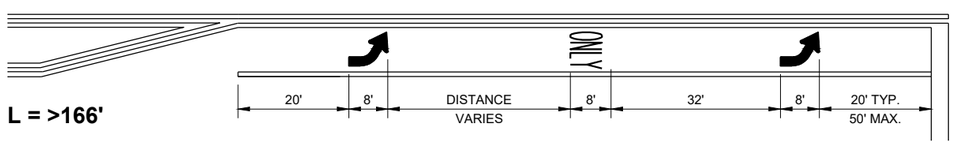
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

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

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

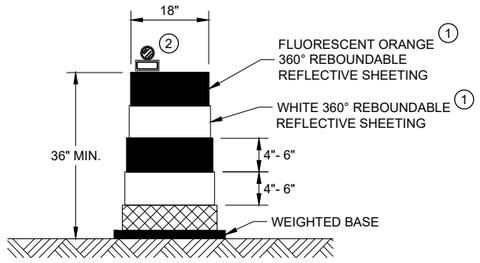
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

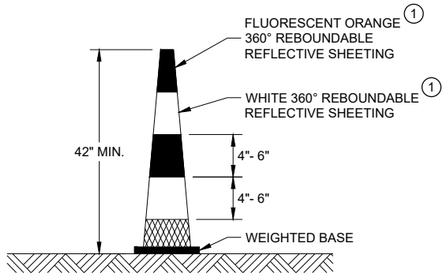
SDD 15C08 - 21d

GENERAL NOTES

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

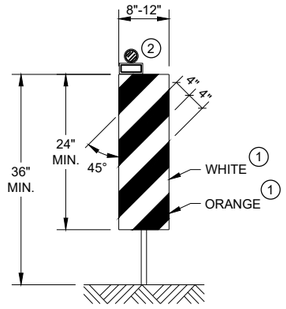


DRUM



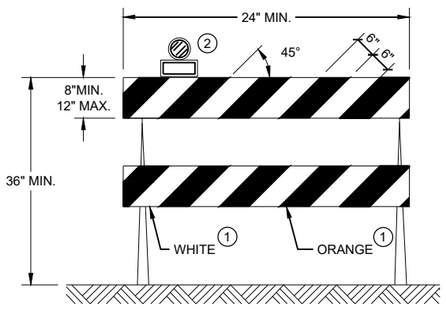
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



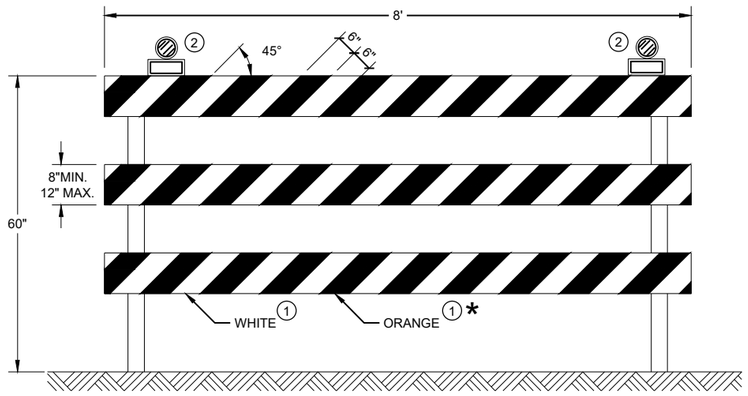
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 09b

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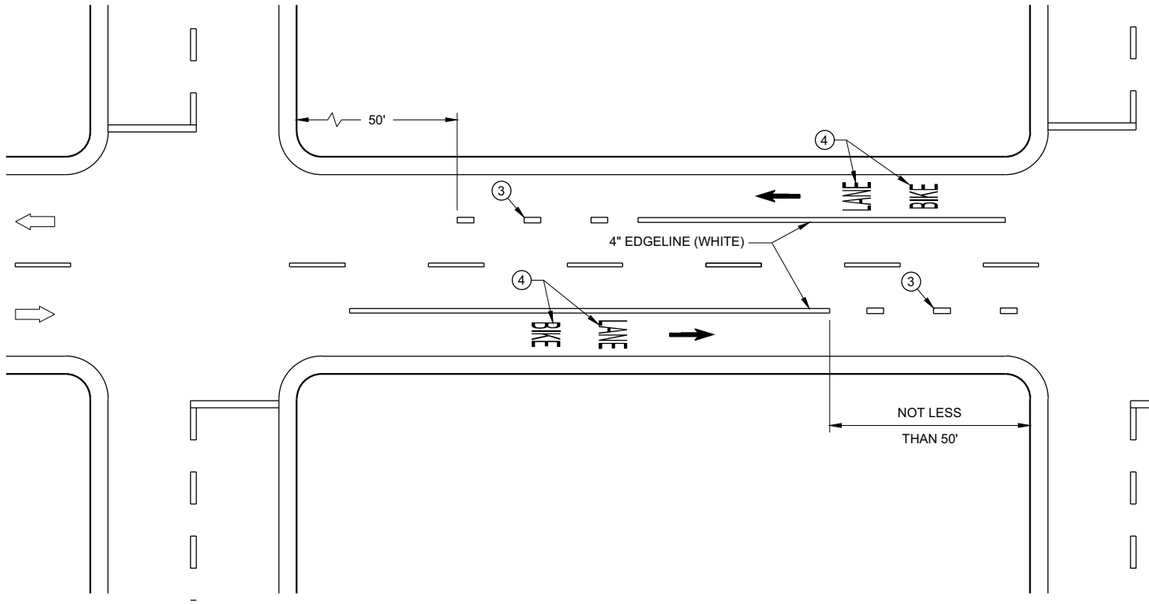
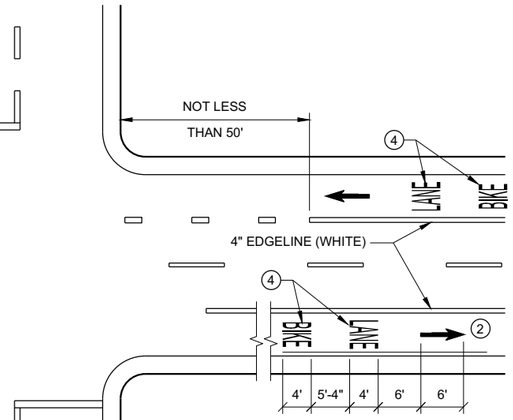
SDD 15C11 - 09b



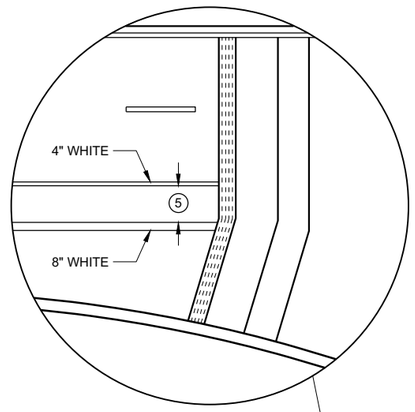


GENERAL NOTES

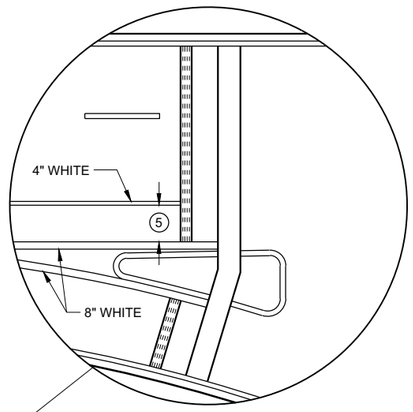
1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY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

DIRECTION OF TRAVEL

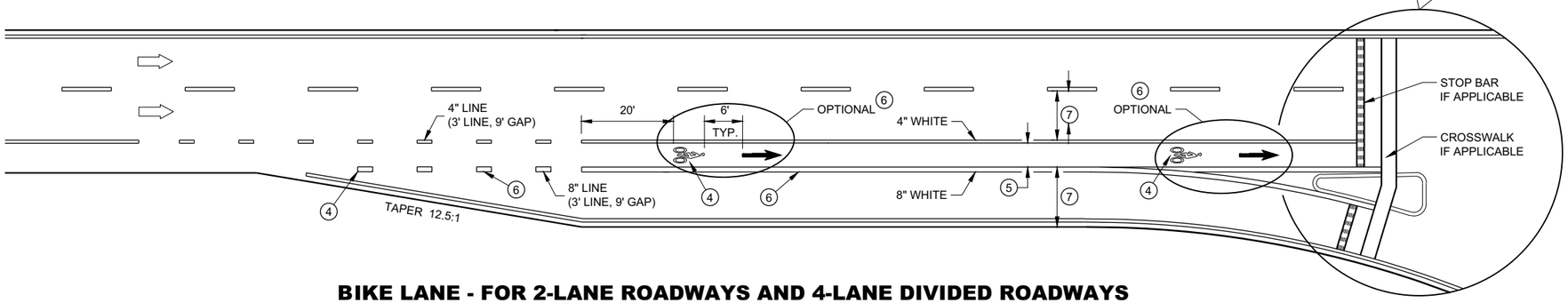
DESIGNATED BIKE LANE - NO PARKING



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



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

BIKE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

FHWA

6

SDD 15C29 - 07a

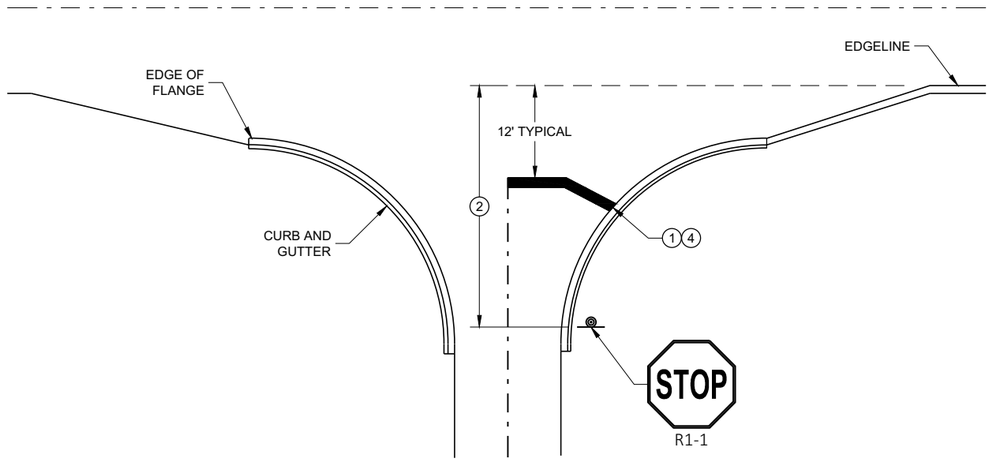
6

SDD 15C29 - 07a

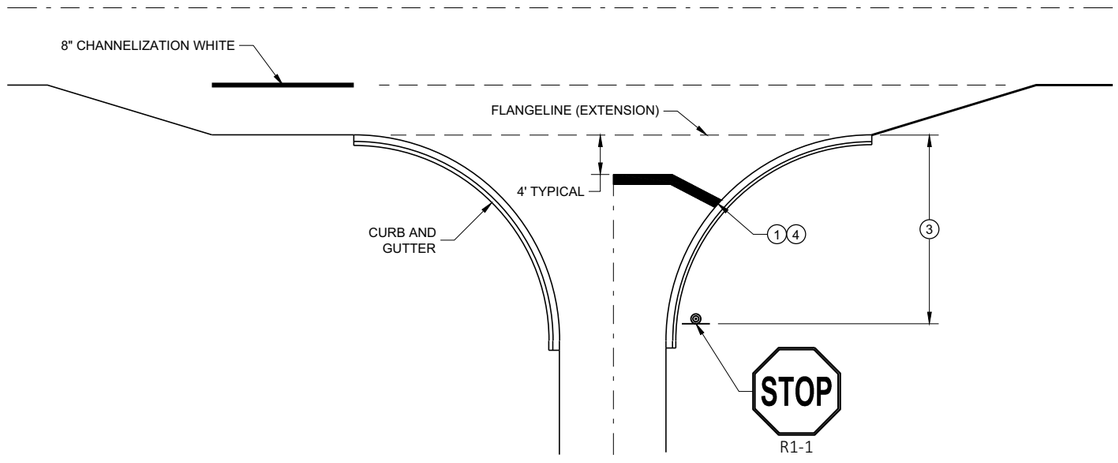
GENERAL NOTES

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

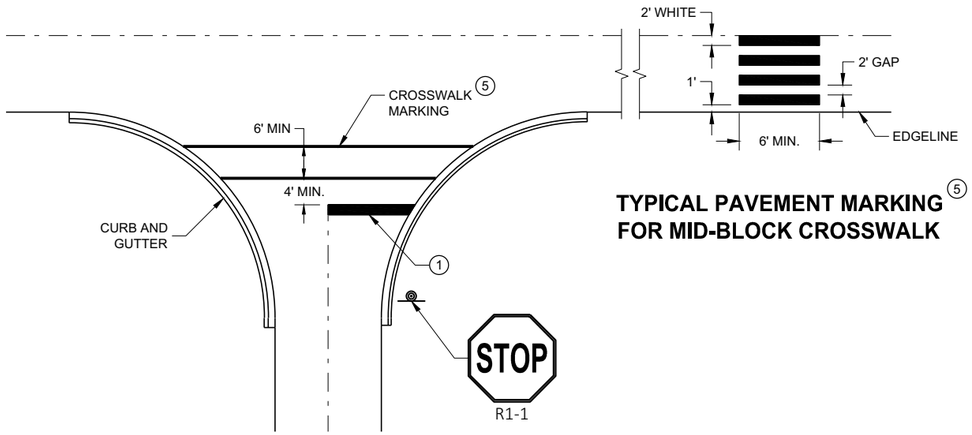
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

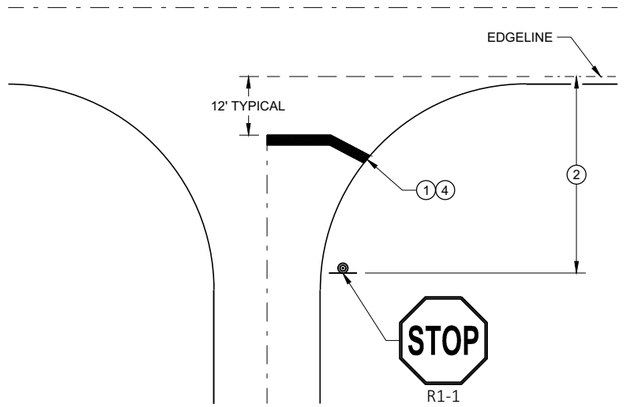


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C33 - 04

6

SDD 15C33 - 04

LEGEND

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

GENERAL NOTES

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

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

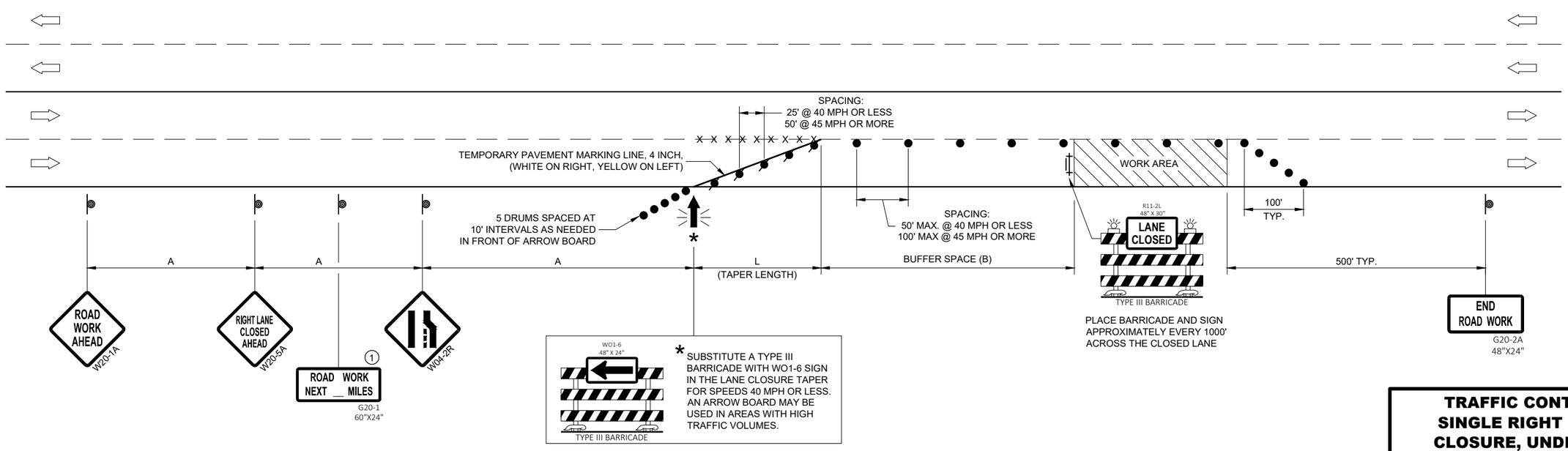
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D20 - 06b

SDD 15D20 - 06b

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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

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

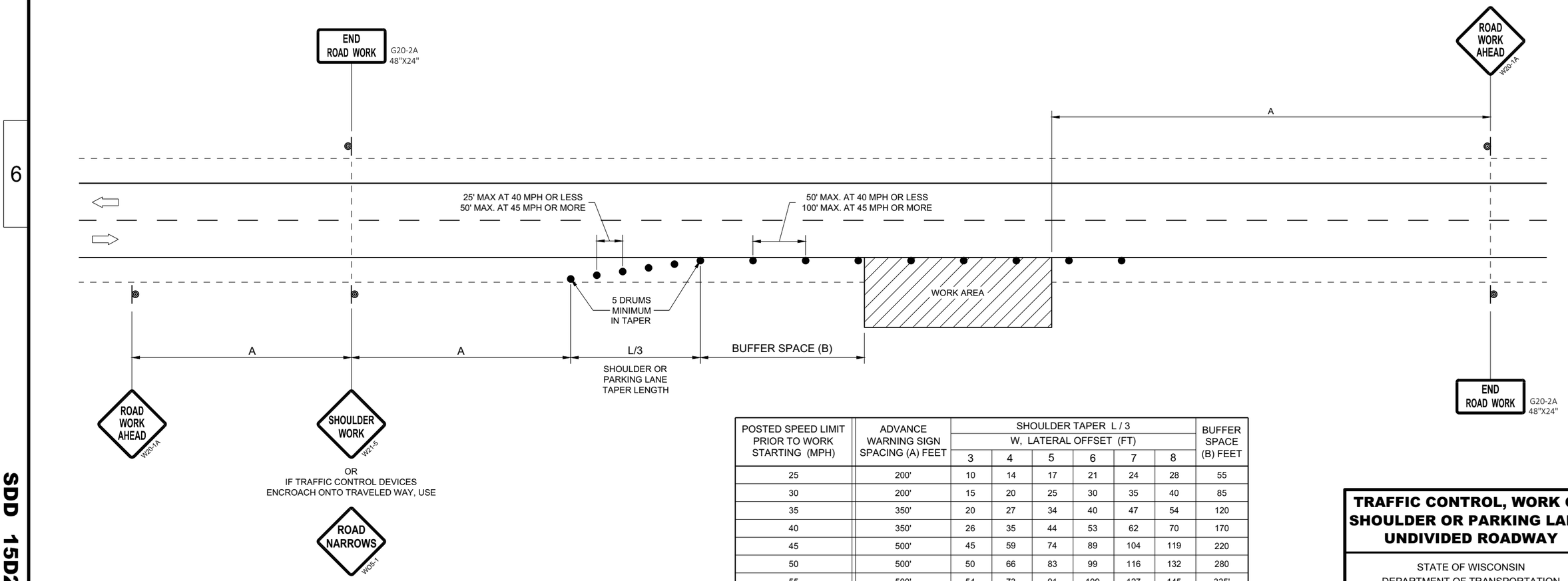
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

GENERAL NOTES

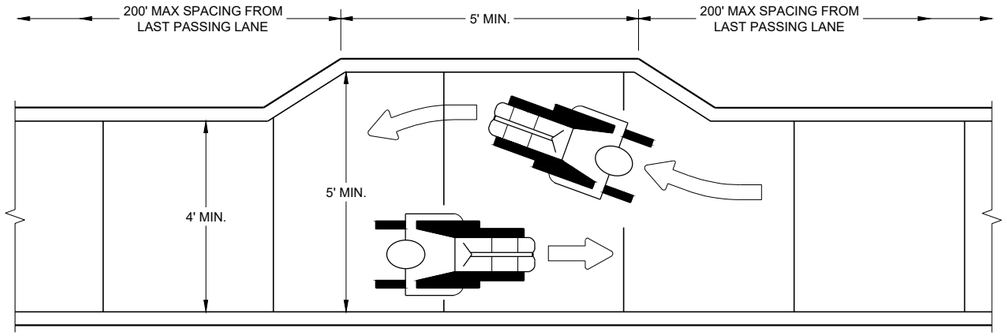
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

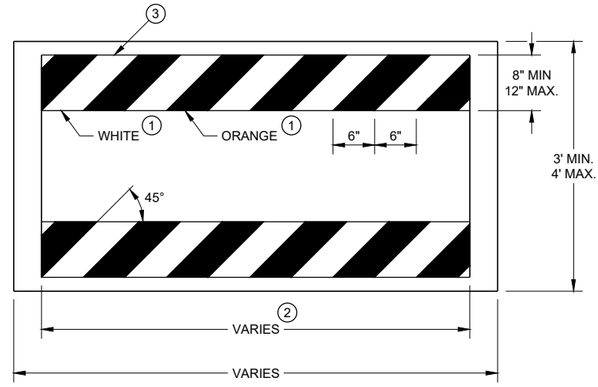
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

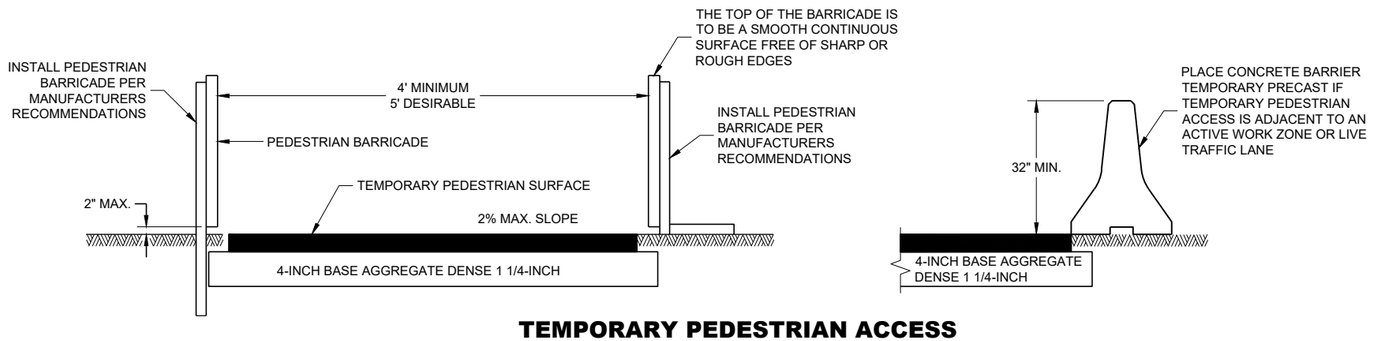
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*



TEMPORARY PEDESTRIAN ACCESS

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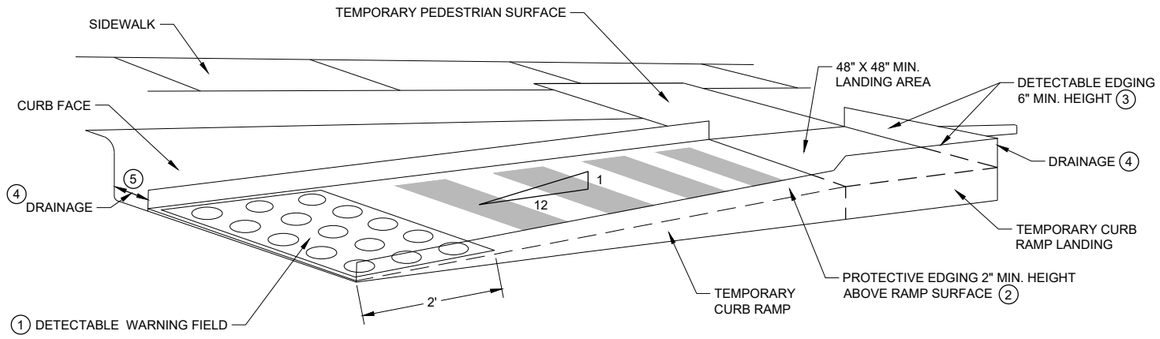
SDD 15D30 - 07a

SDD 15D30 - 07a

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



PERSPECTIVE VIEW

GENERAL NOTES

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

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

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.

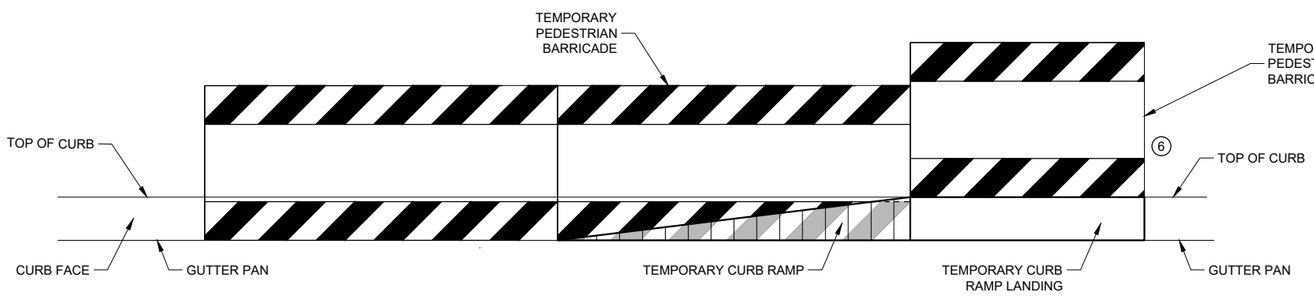
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

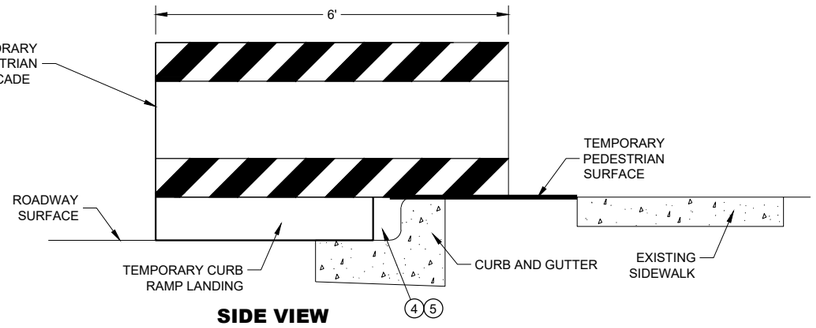
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) 6" MINIMUM BETWEEN CURB FACE AND EDGE OF RAMP

(6) IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



FRONT VIEW



SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

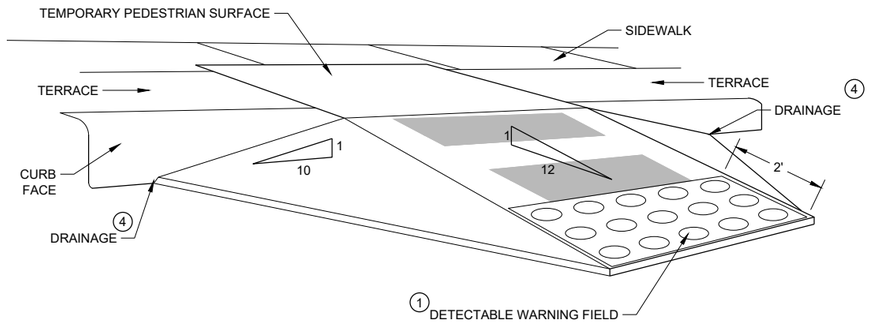
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

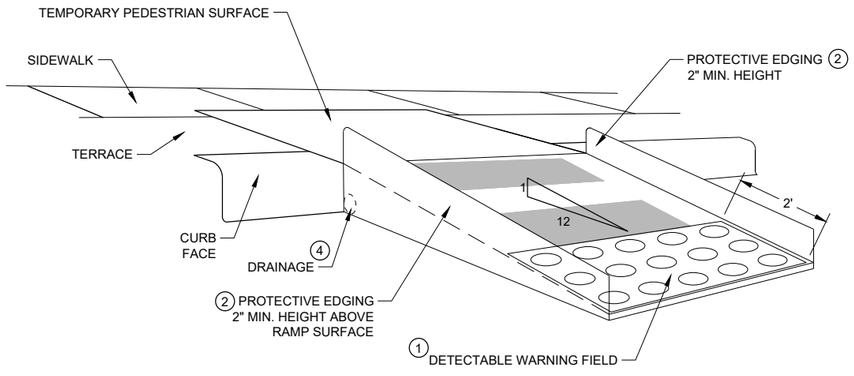
SDD 15D30 - 07b

6

SDD 15D30 - 07b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

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

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

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

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

6

SDD 15D30 - 07c

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

GENERAL NOTES

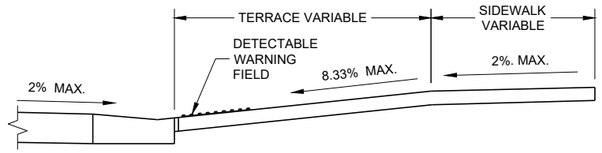
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

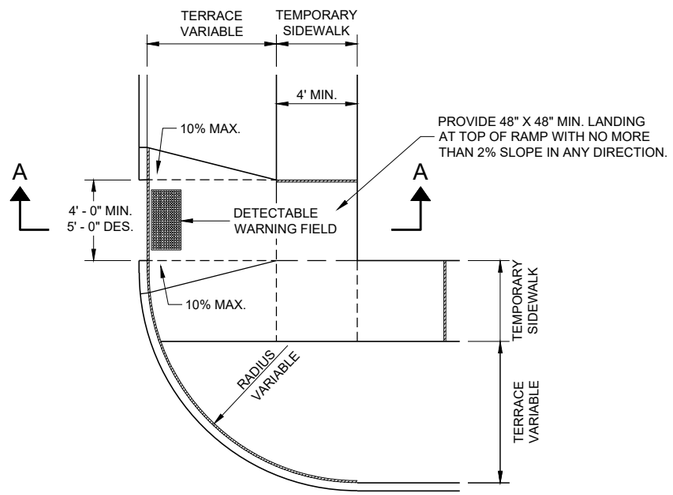
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



SECTION A - A



PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

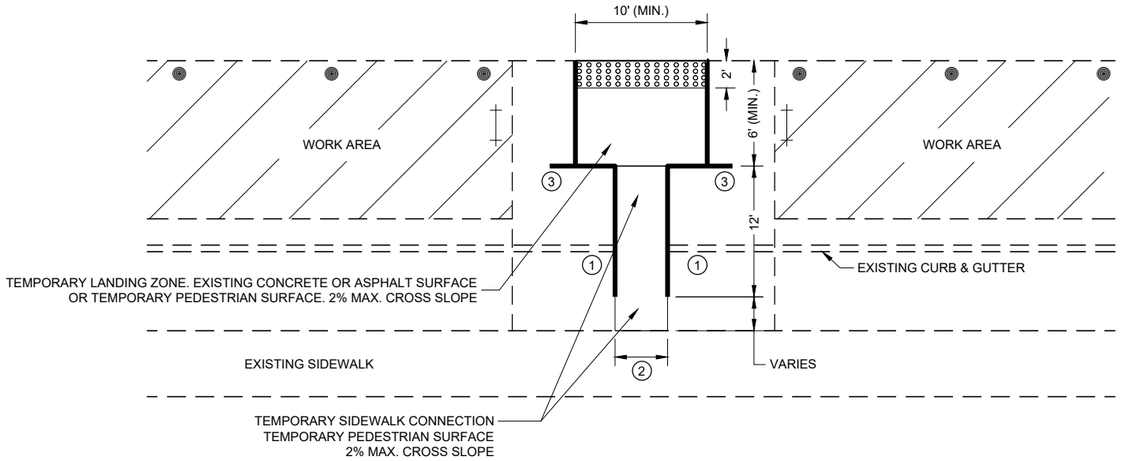
FHWA

6

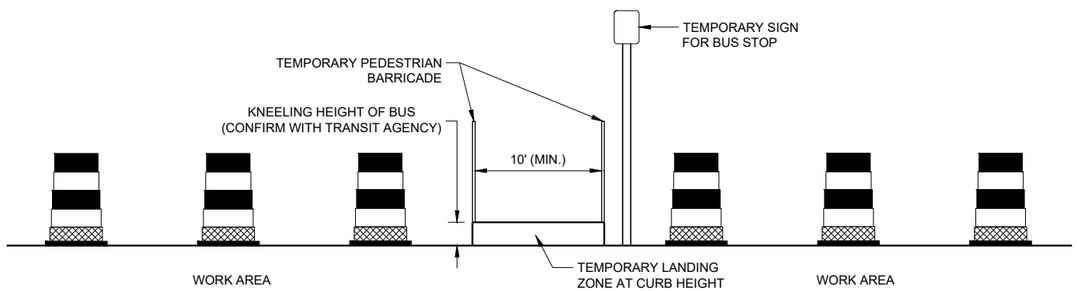
SDD 15D30 - 07d

6

SDD 15D30 - 07d



PLAN VIEW



PROFILE VIEW

TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

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

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA

6

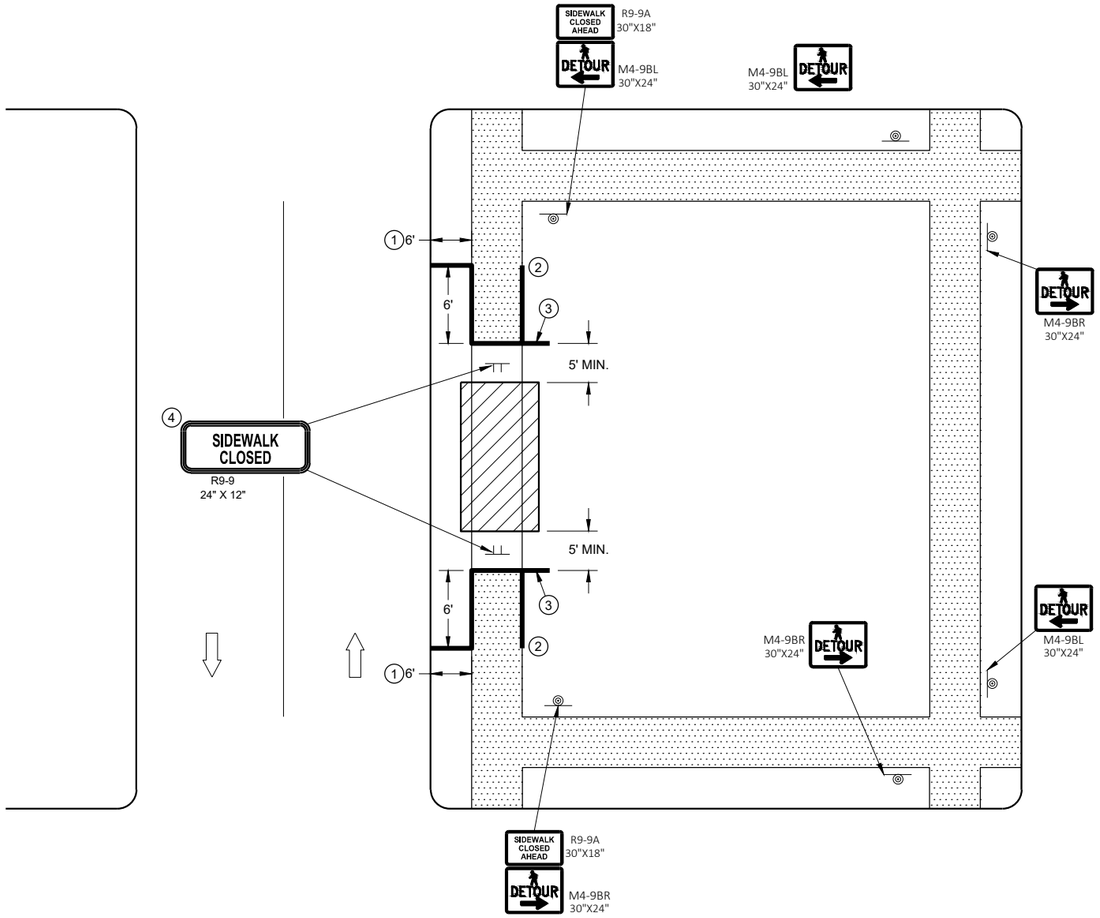
SDD 15D30 - 07e

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

LEGEND

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



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 07f

LEGEND

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

GENERAL NOTES

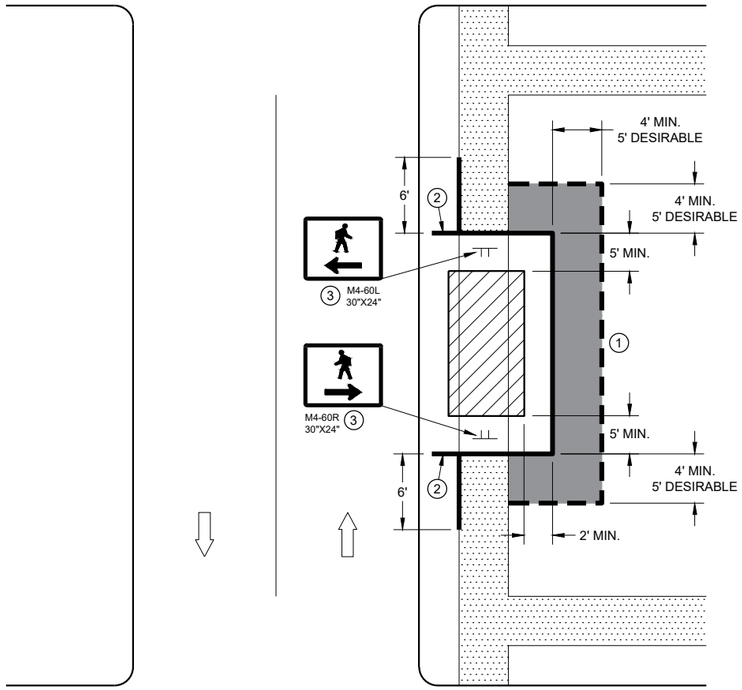
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

1. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
2. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DIVERSION
SINGLE SIDE

6

6

SDD 15D30 - 07g

SDD15D30 - 07g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

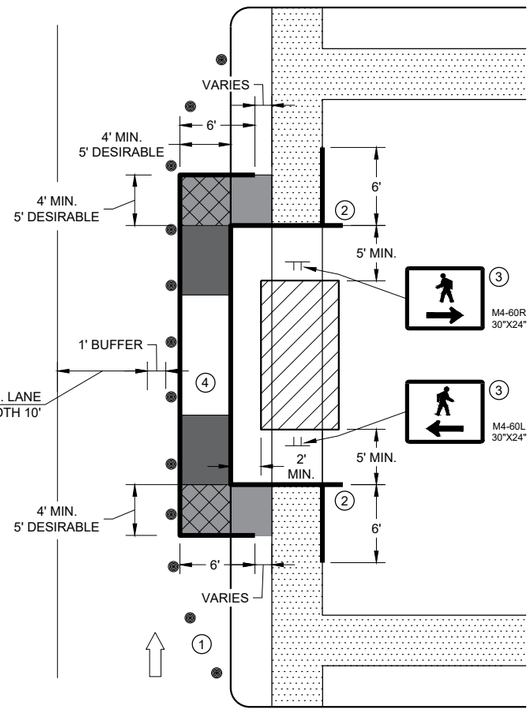
GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
2. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
4. USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



SIDEWALK DIVERSION, SINGLE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

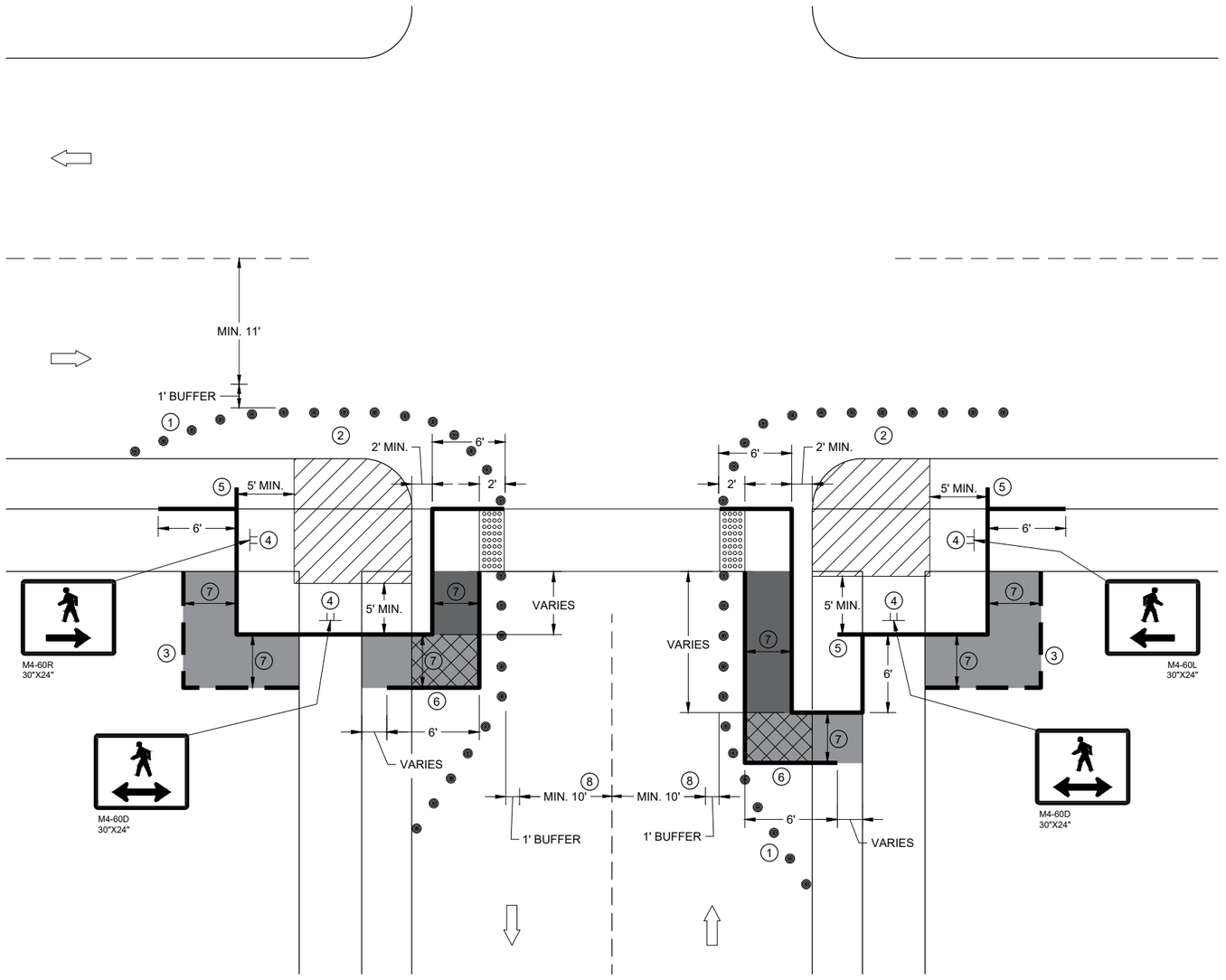
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 07h

6

SDD 15D30 - 07h



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

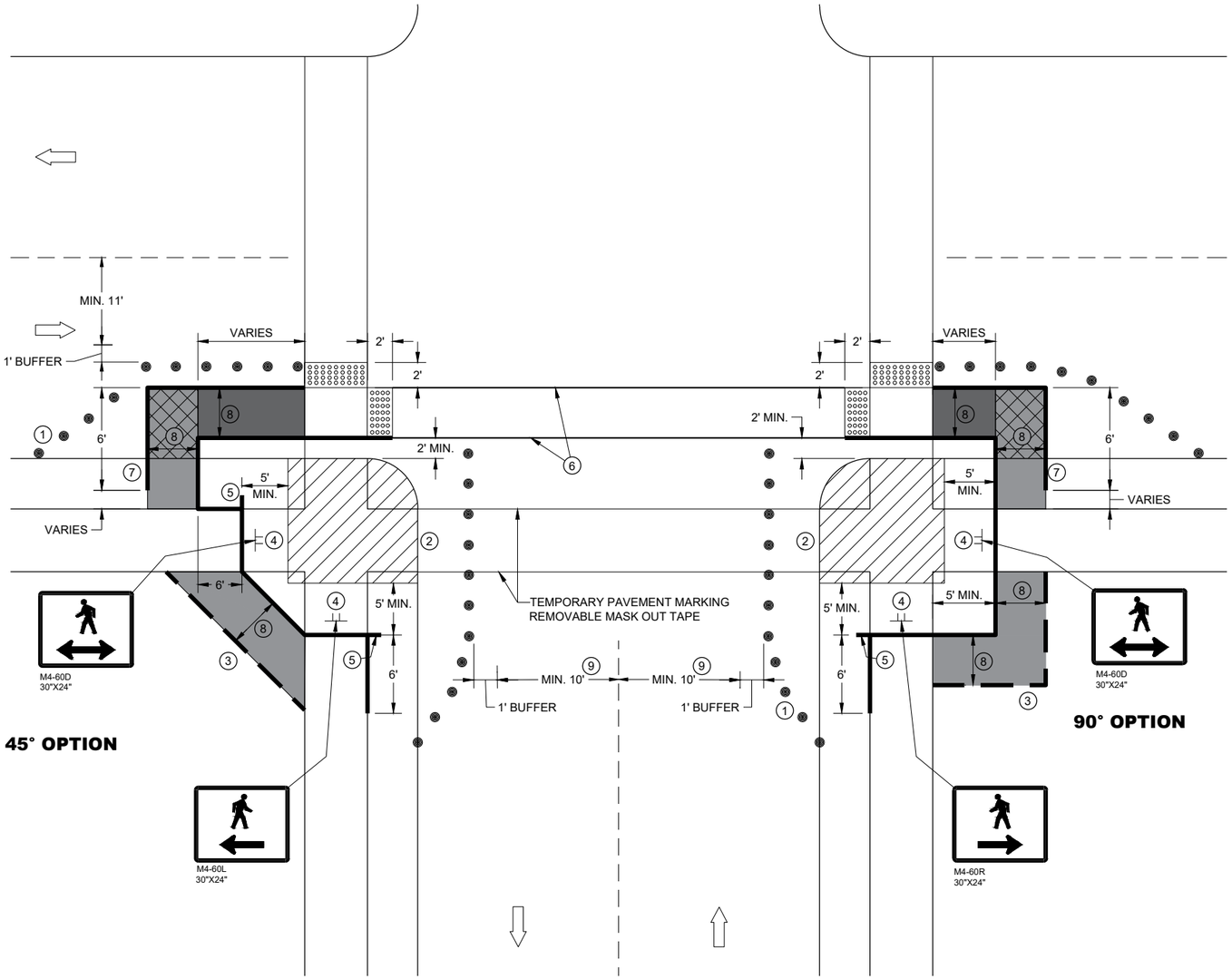
1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
7. 4 FEET MINIMUM, 5 FEET DESIRABLE
8. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

6
SDD 15D30 - 07i



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. WHITE 6" TEMPORARY PAVEMENT MARKING
7. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
8. 4 FEET MINIMUM, 5 FEET DESIRABLE
9. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

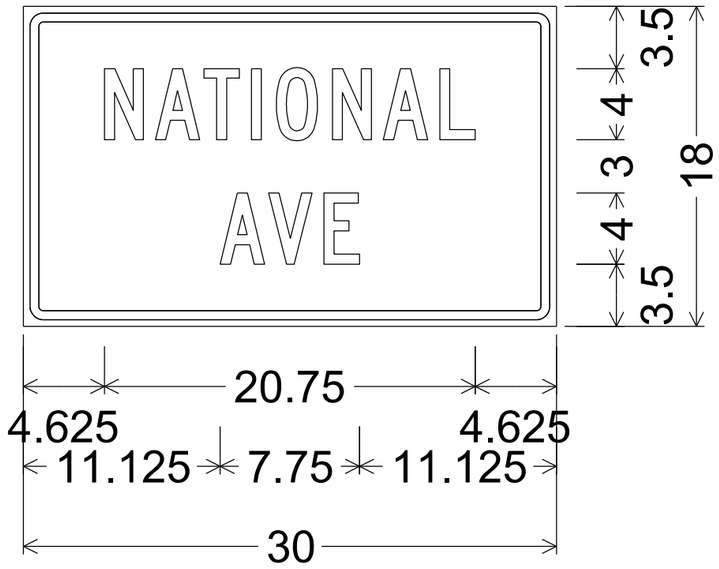
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

SDD 15D30 - 07j

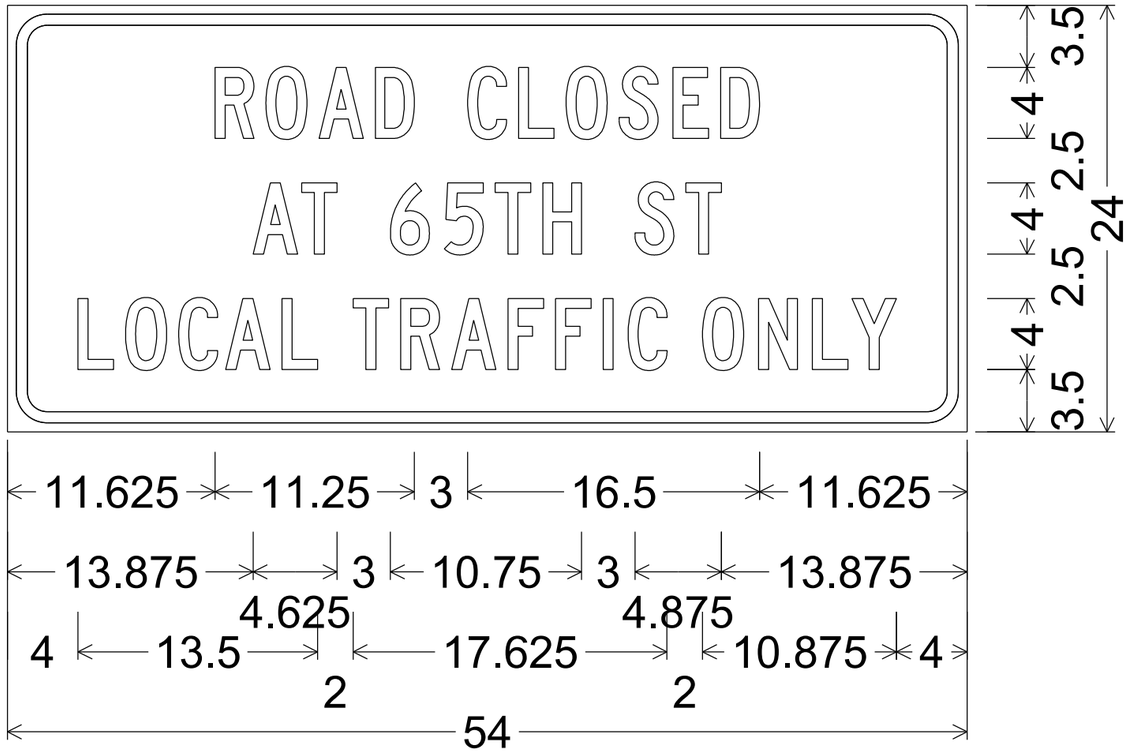
6



1.125" Radius, 0.500" Border, 0.375" Indent, Black on Fluorescent orange;

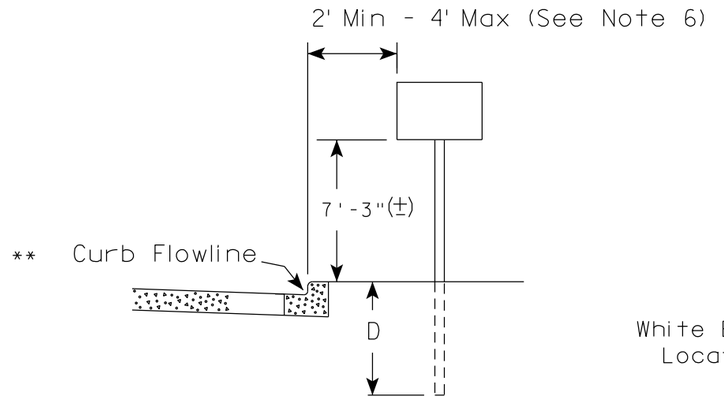
NOTES

1. Fixed Message signs are Type II - Type F Reflective except as noted
2. Color:
   Background - Orange or White- Type H Reflective
   Message - Black
3. Message Series - C

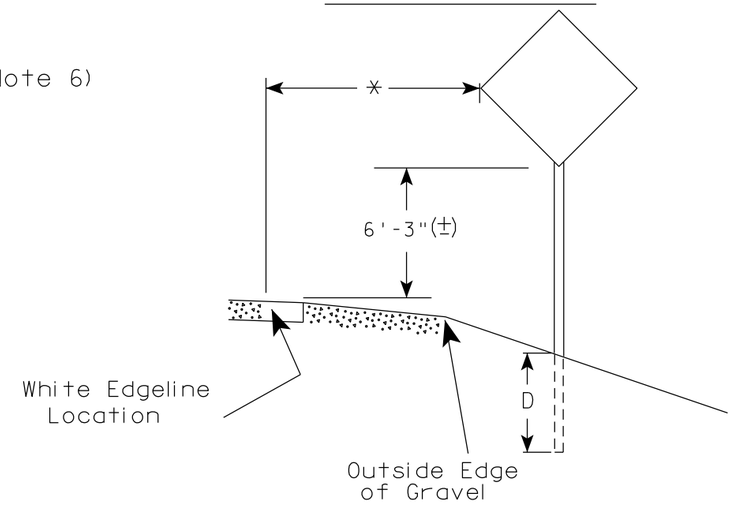


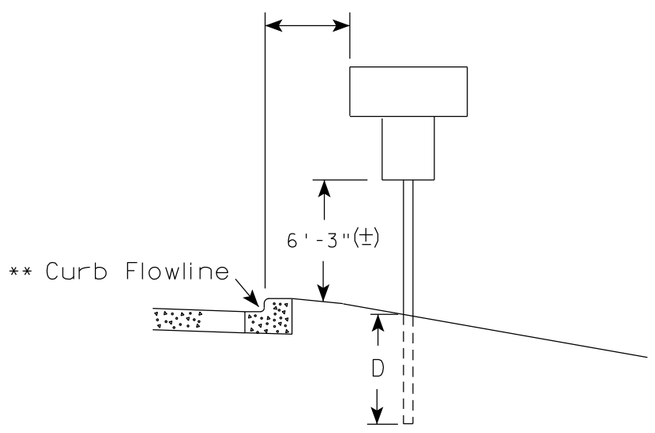
2.250" Radius, 0.625" Border, 0.500" Indent, Black on, White;

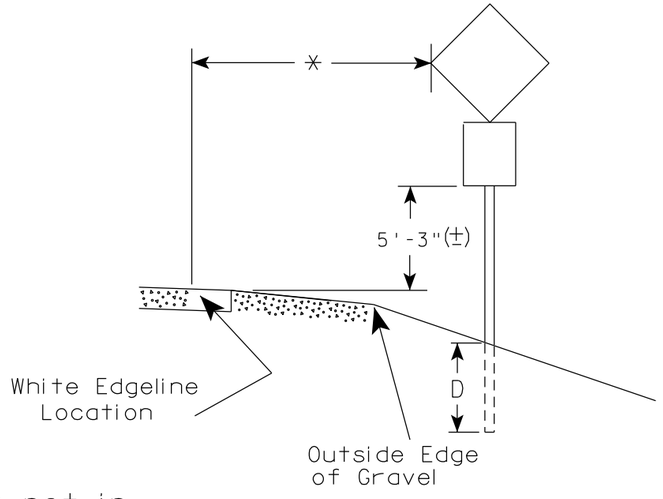
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

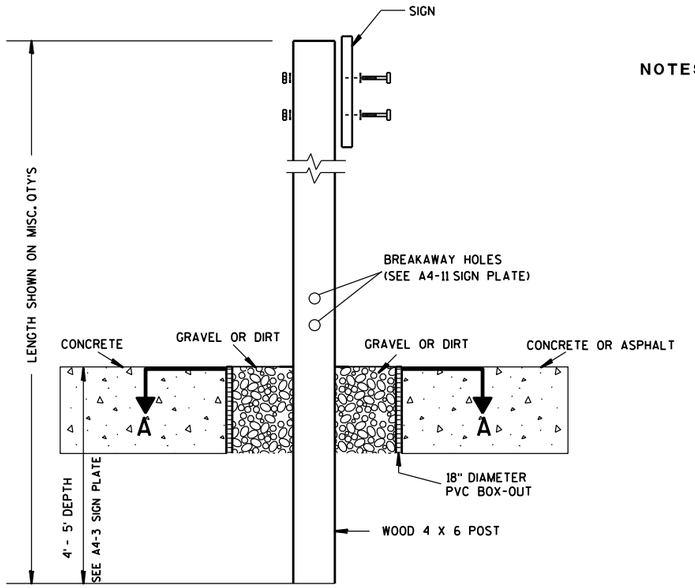
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

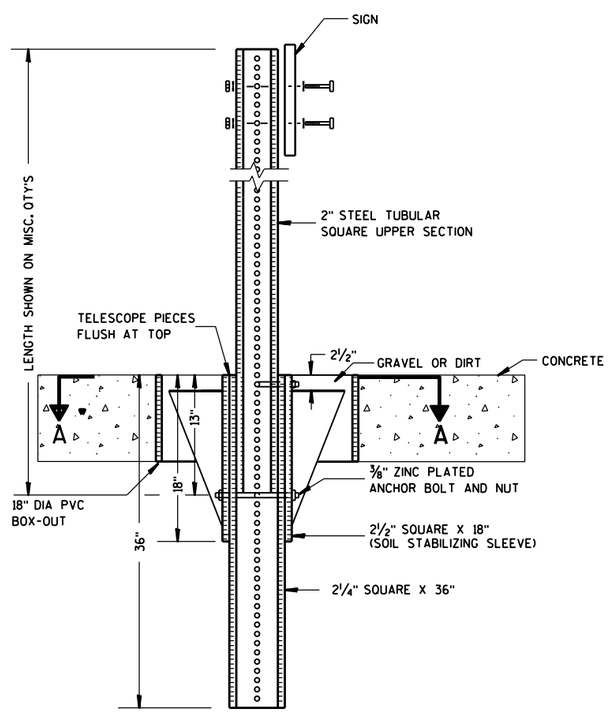
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 159	E



ELEVATION VIEW

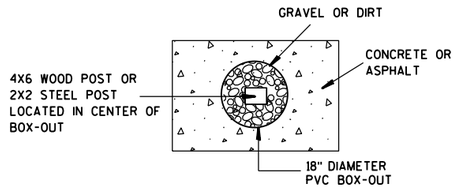
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

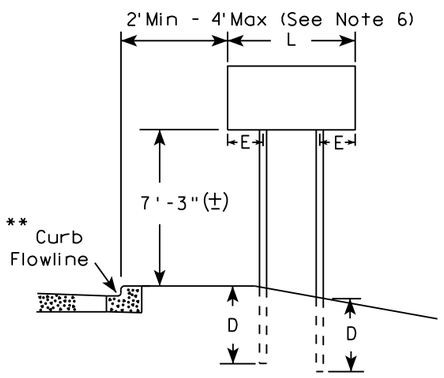
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

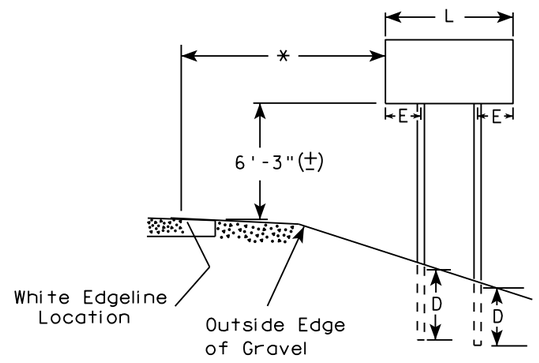
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

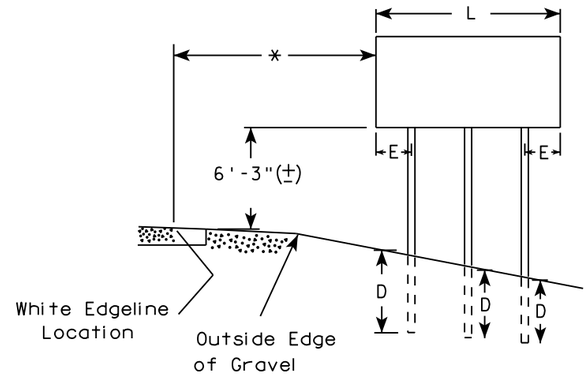
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

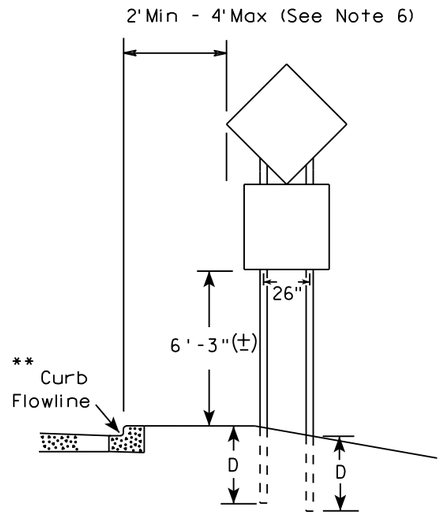
URBAN AREA



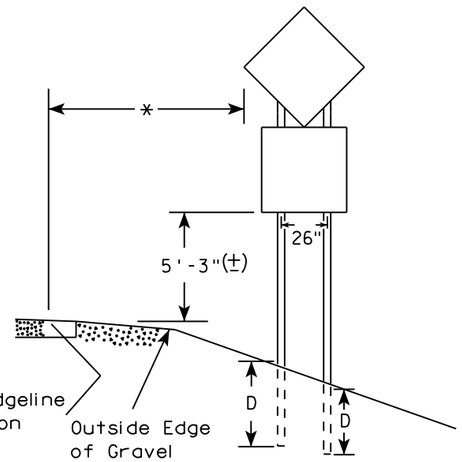
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

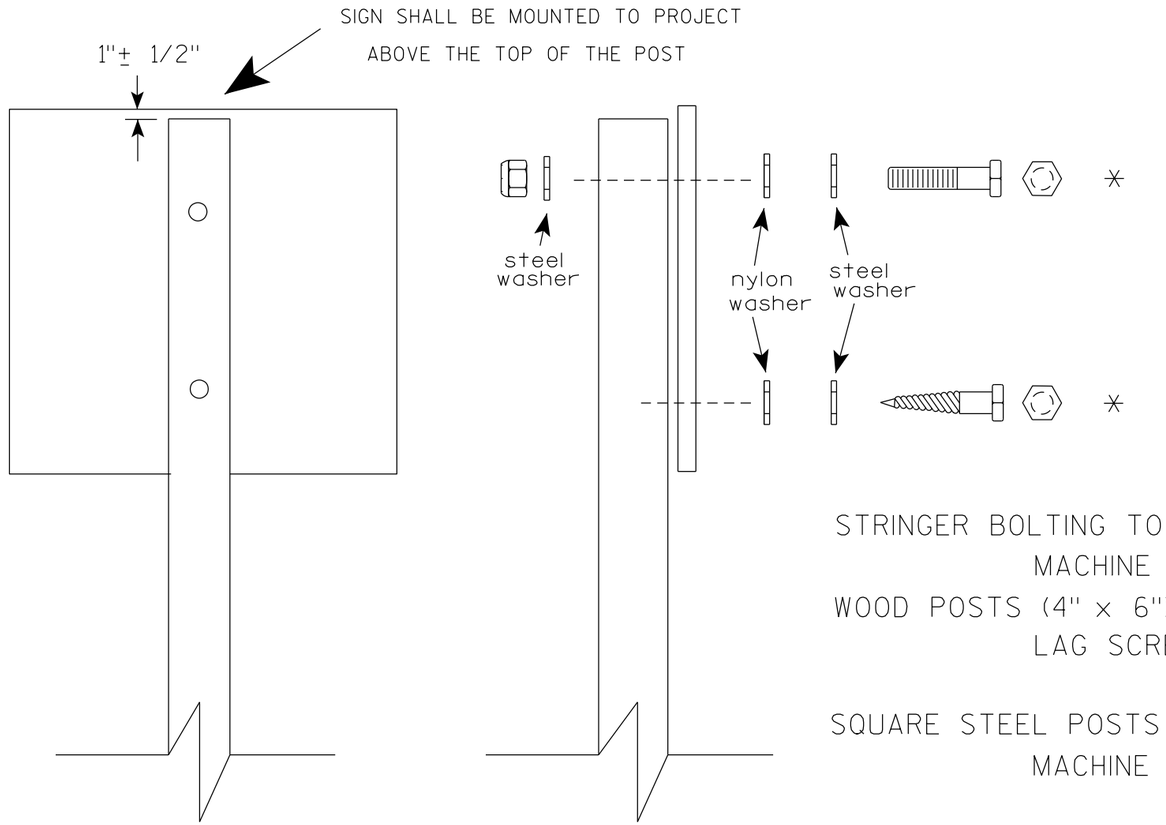
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 161	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

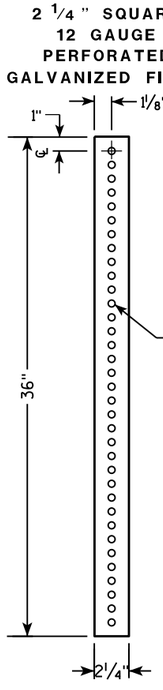
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

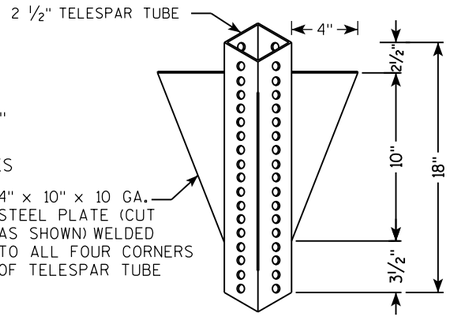
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

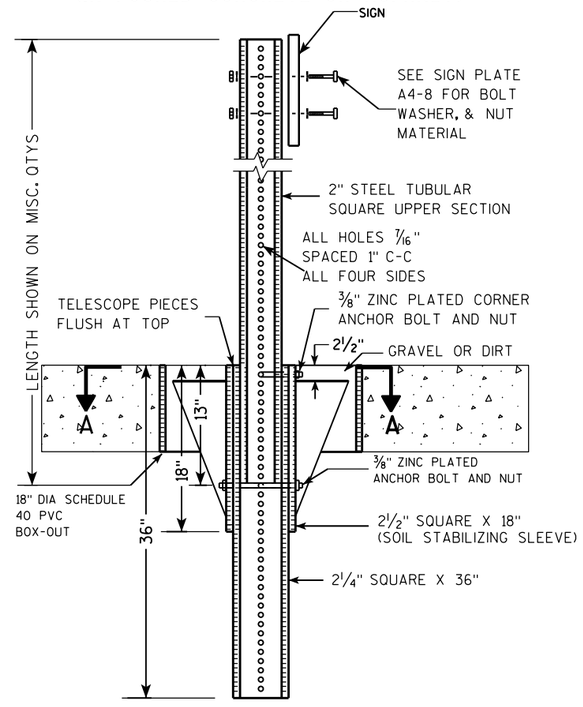
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



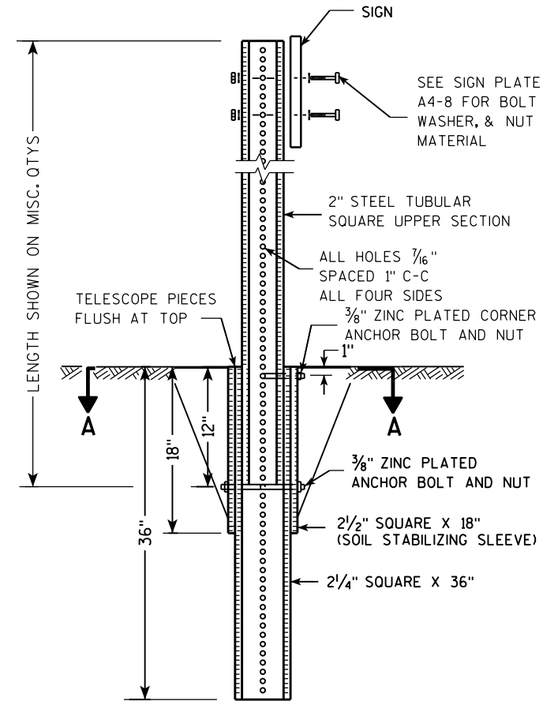
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

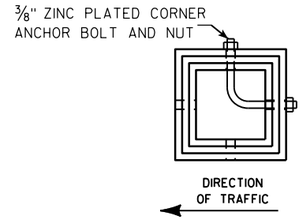


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

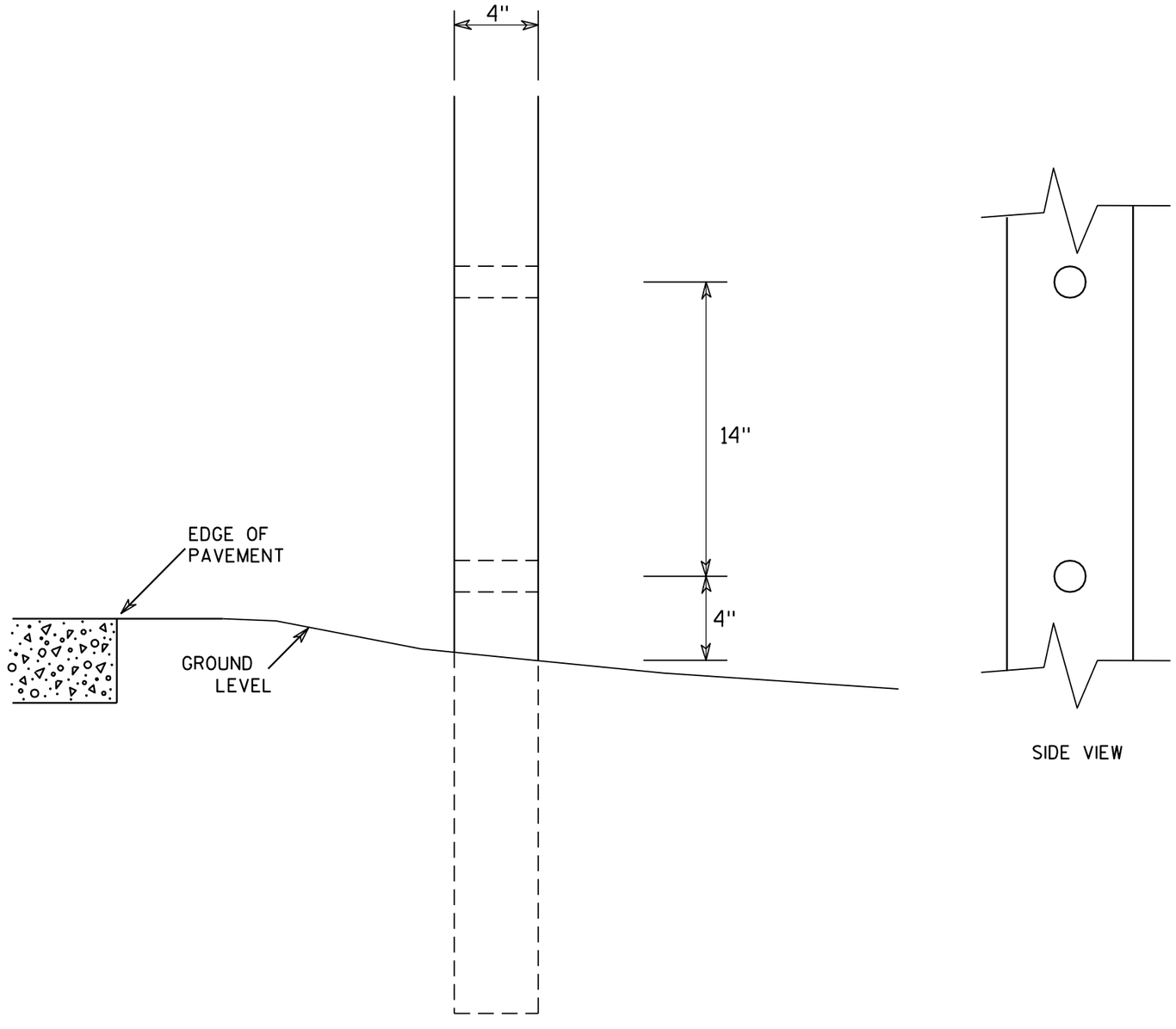
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

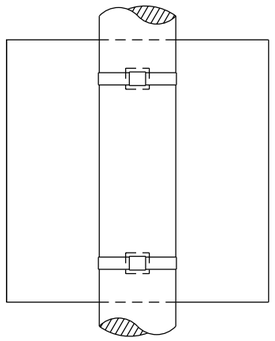
APPROVED Chester J Spang for State Traffic Engineer

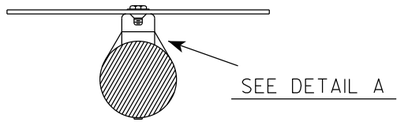
DATE 3/27/97 PLATE NO. A4-11.2

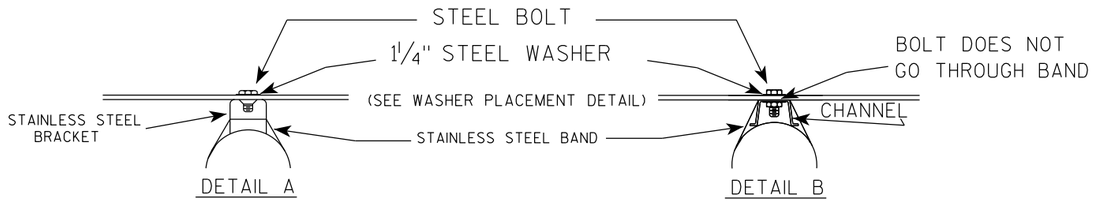
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 164	E

BANDING

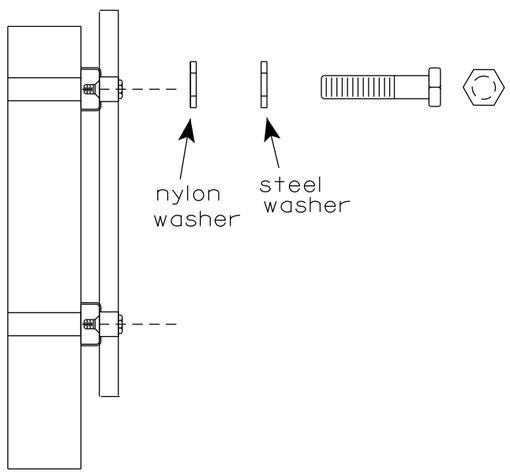
SINGLE SIGN







WASHER PLACEMENT

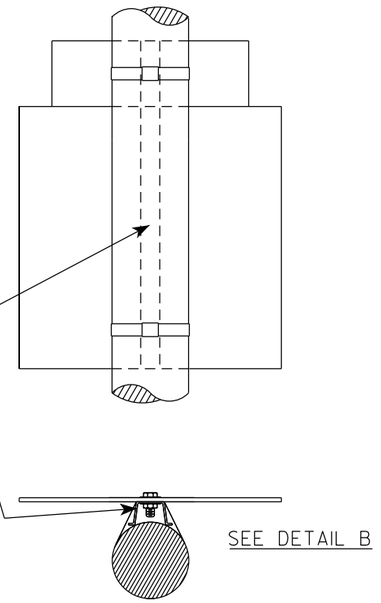


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

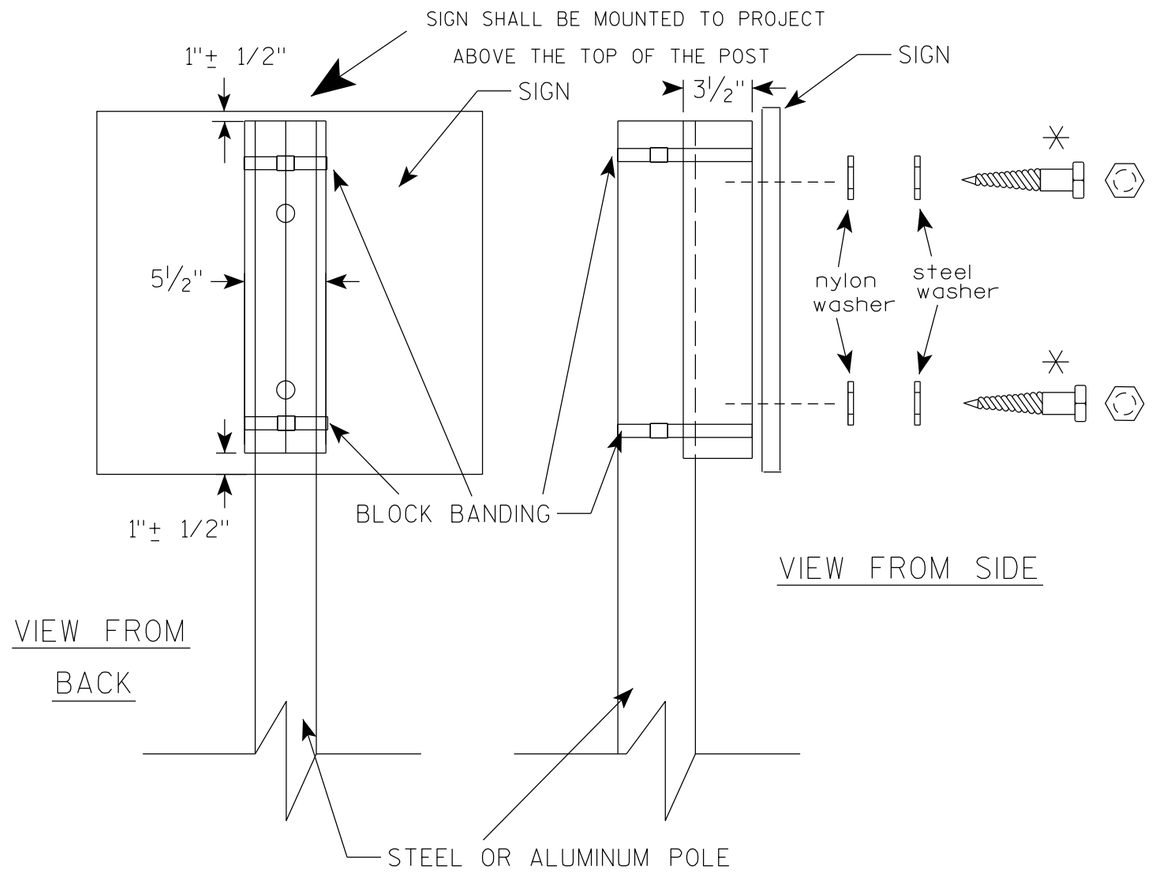
DATE 6/10/19 PLATE NO. A5-9.4

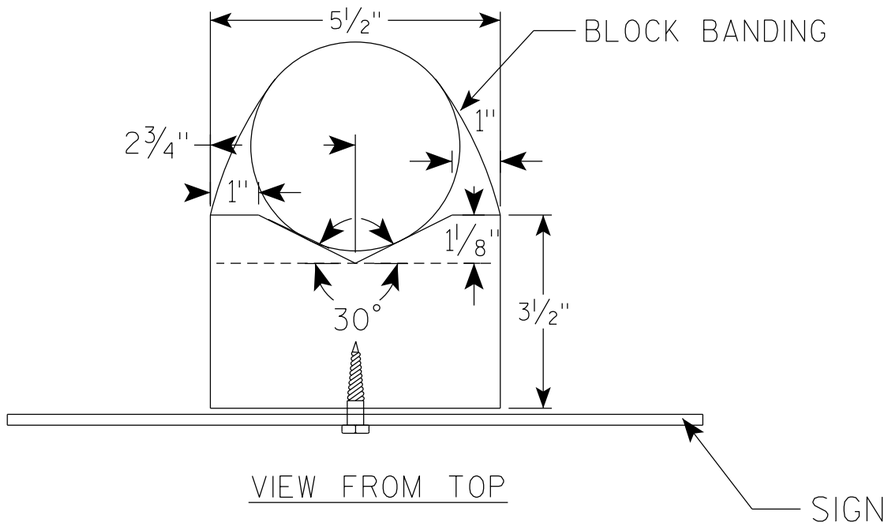
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 165	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

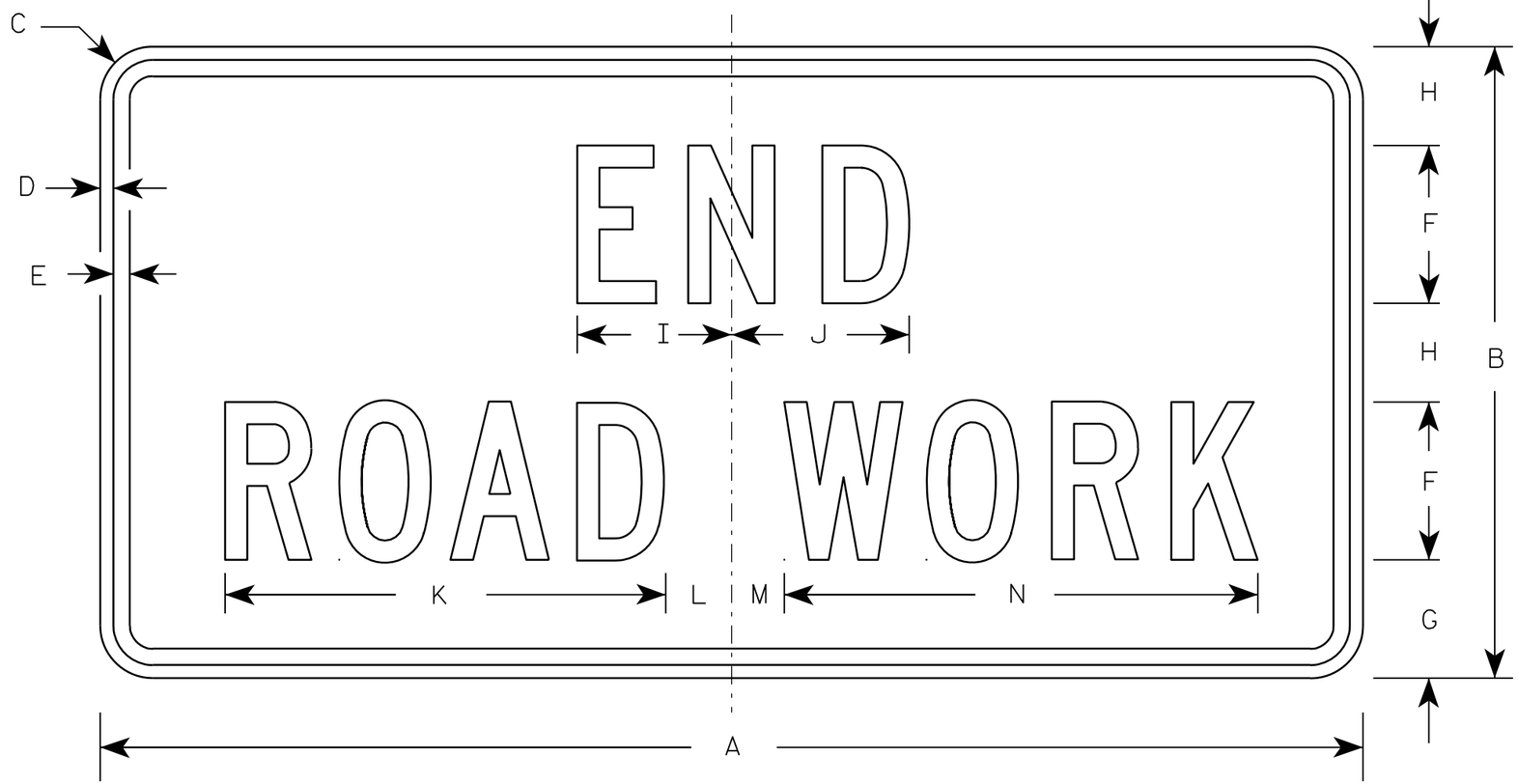
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 166 E



G20-2A

NOTES

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

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

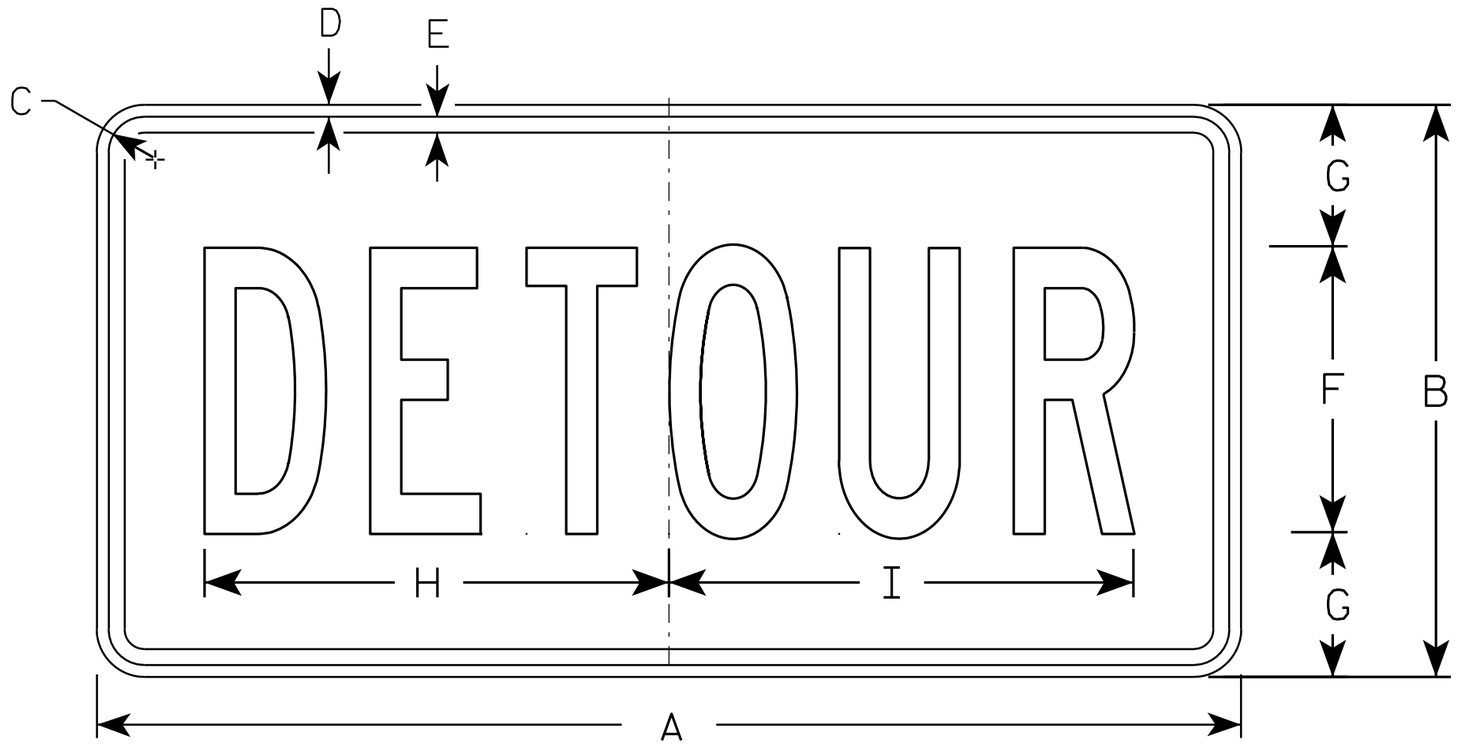
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 167	E



M4-8

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.

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

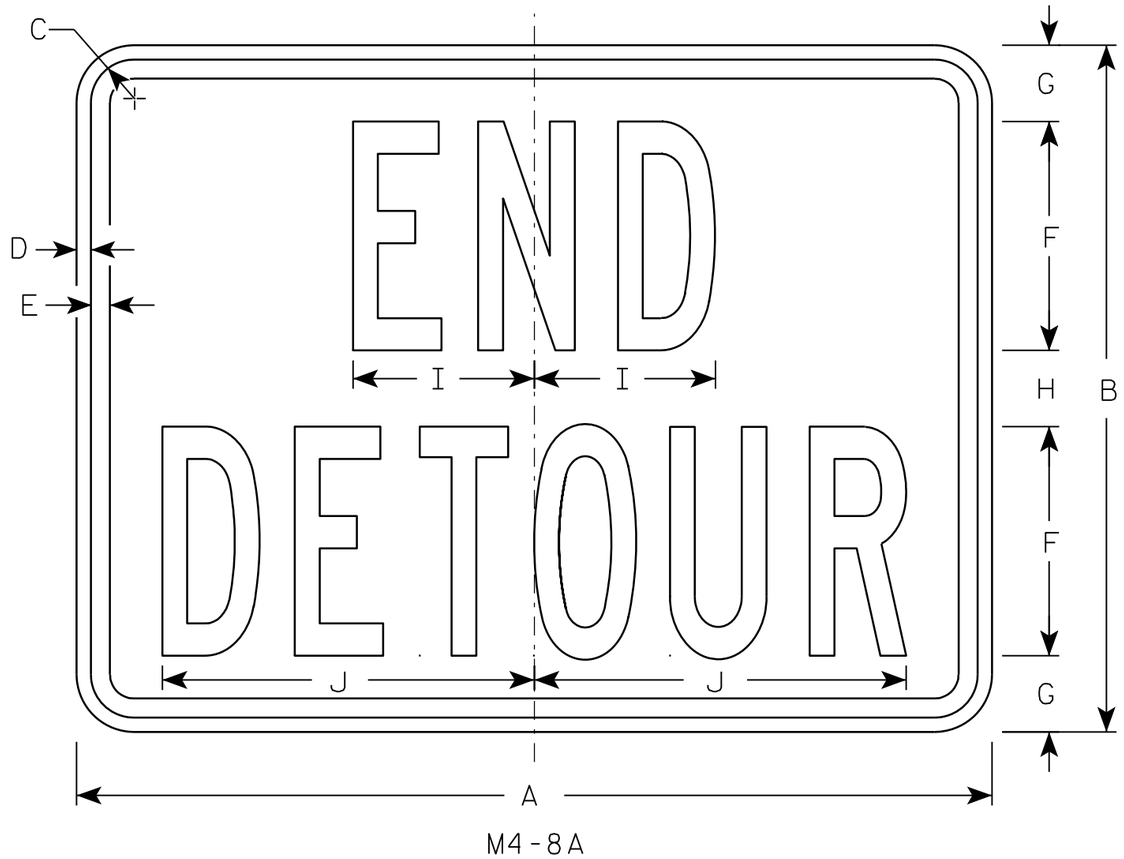
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 168	E



M4-8A

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																											

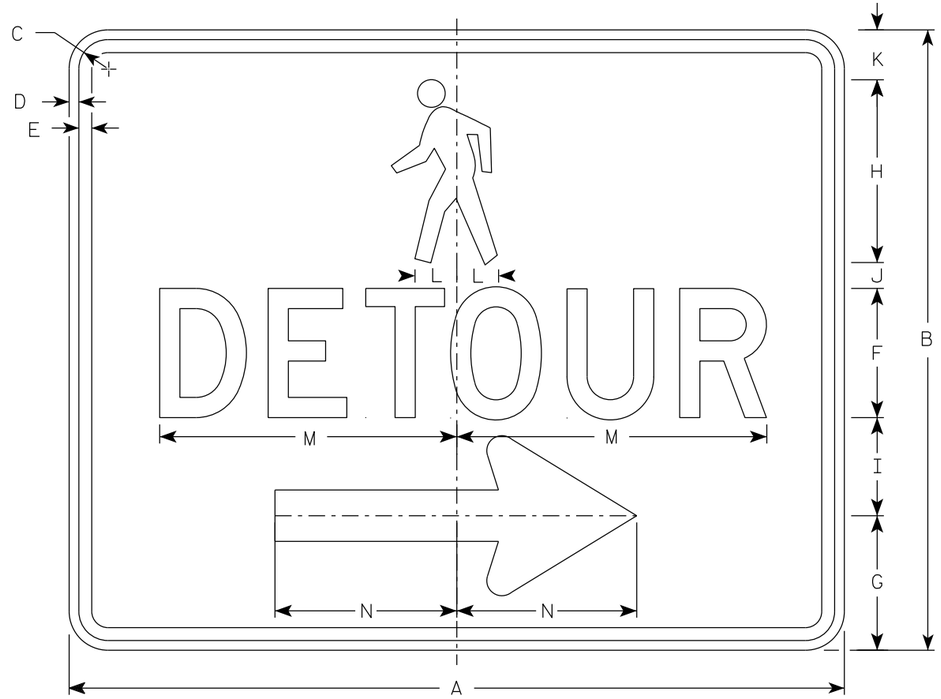
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

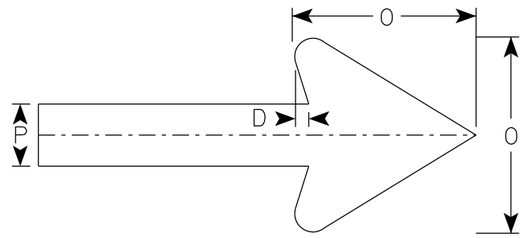
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 169	E



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

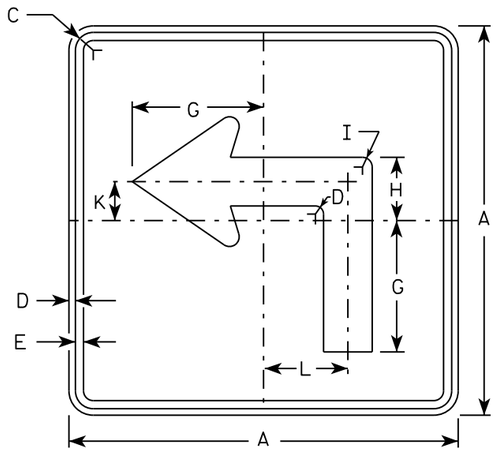
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

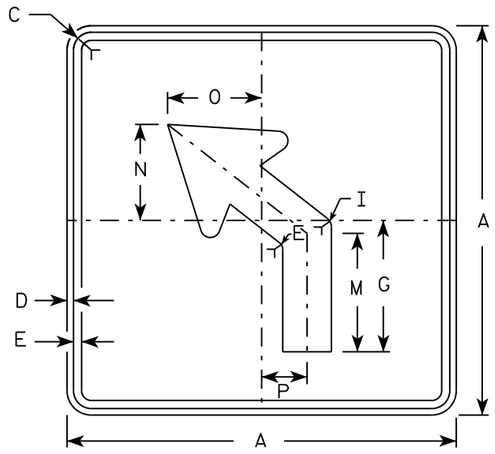
APPROVED Matthew R Rauch
For State Traffic Engineer

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

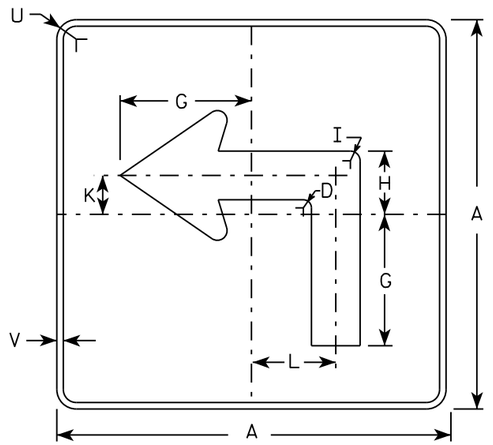
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 170 | E



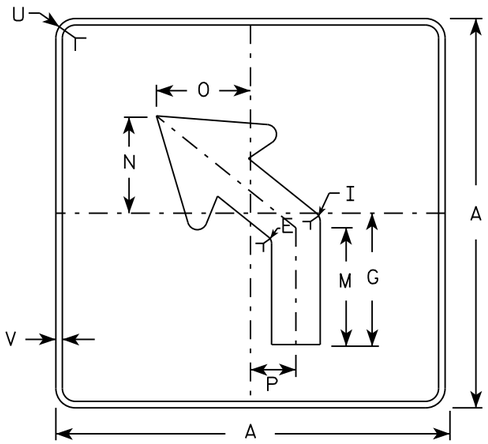
M5-1L
MM5-1L
MO5-1L
MP5-1L



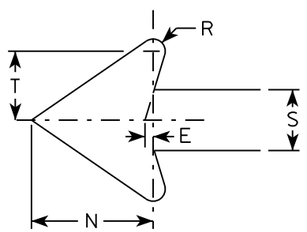
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

STANDARD SIGN
M5-1 & M5-2

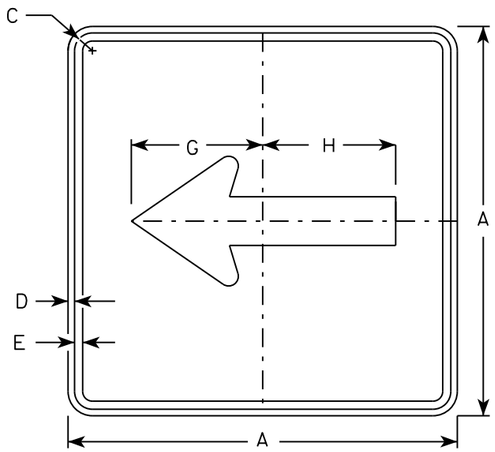
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

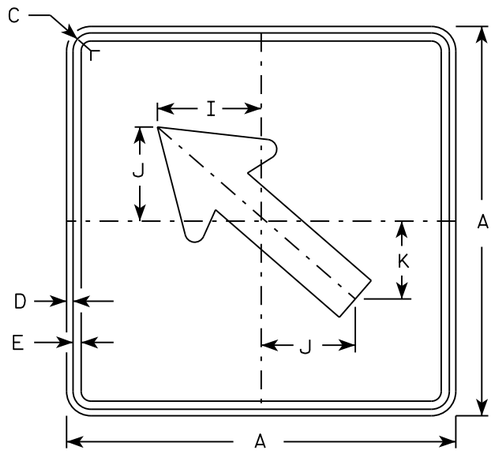
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



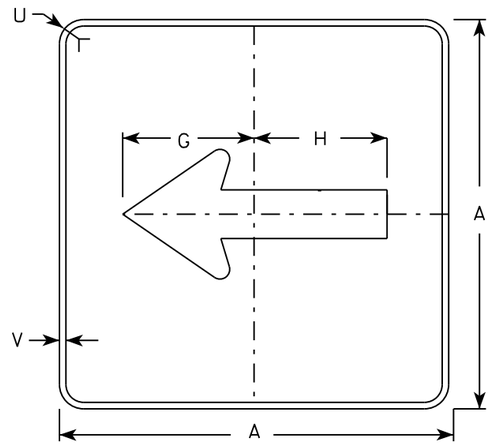
M6-1
MM6-1
MO6-1
MP6-1



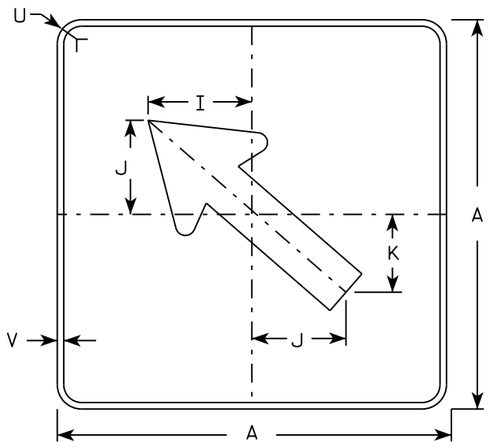
M6-2
MM6-2
MO6-2
MP6-2

NOTES

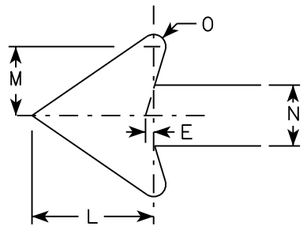
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



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



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



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

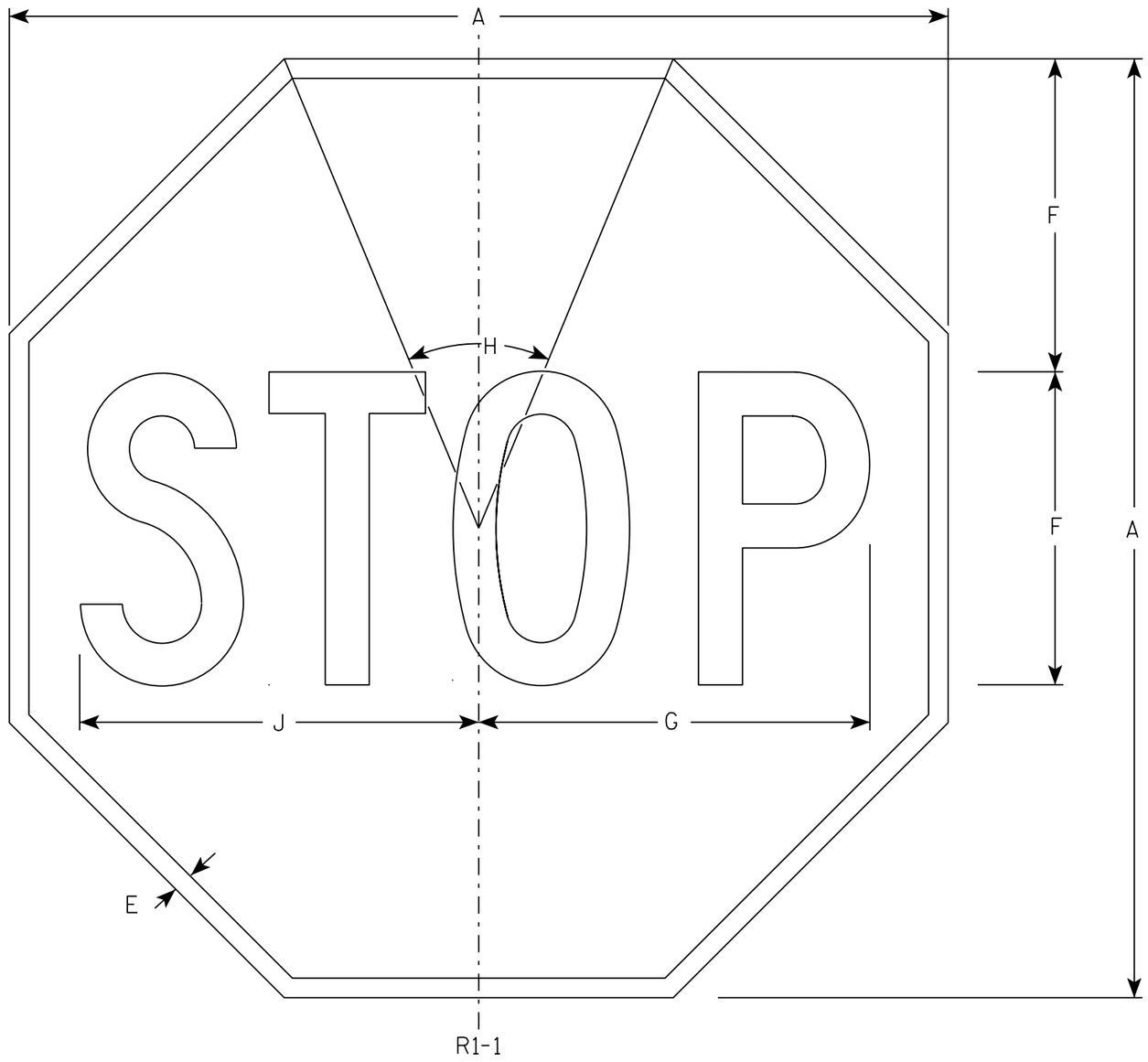
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 172 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



NOTES

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

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

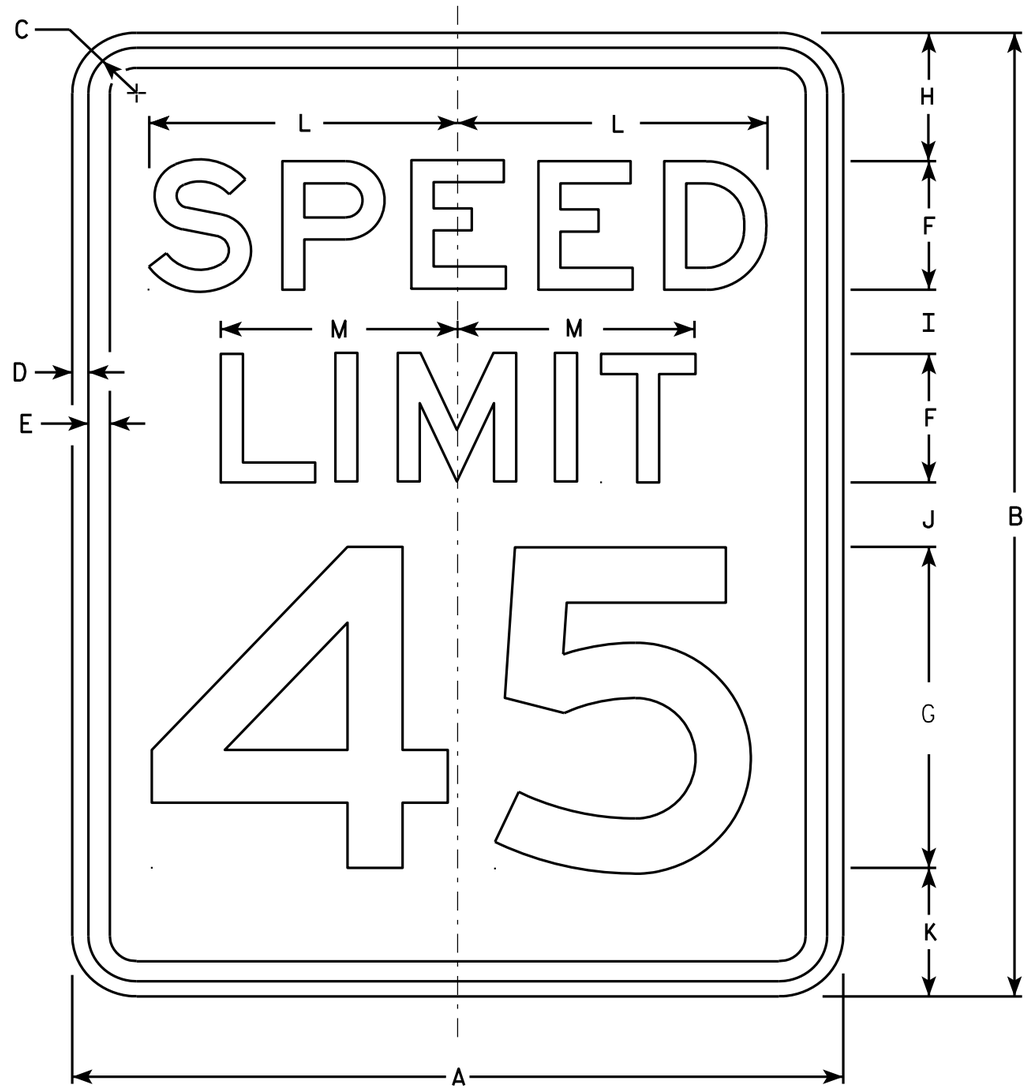
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 173	E



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

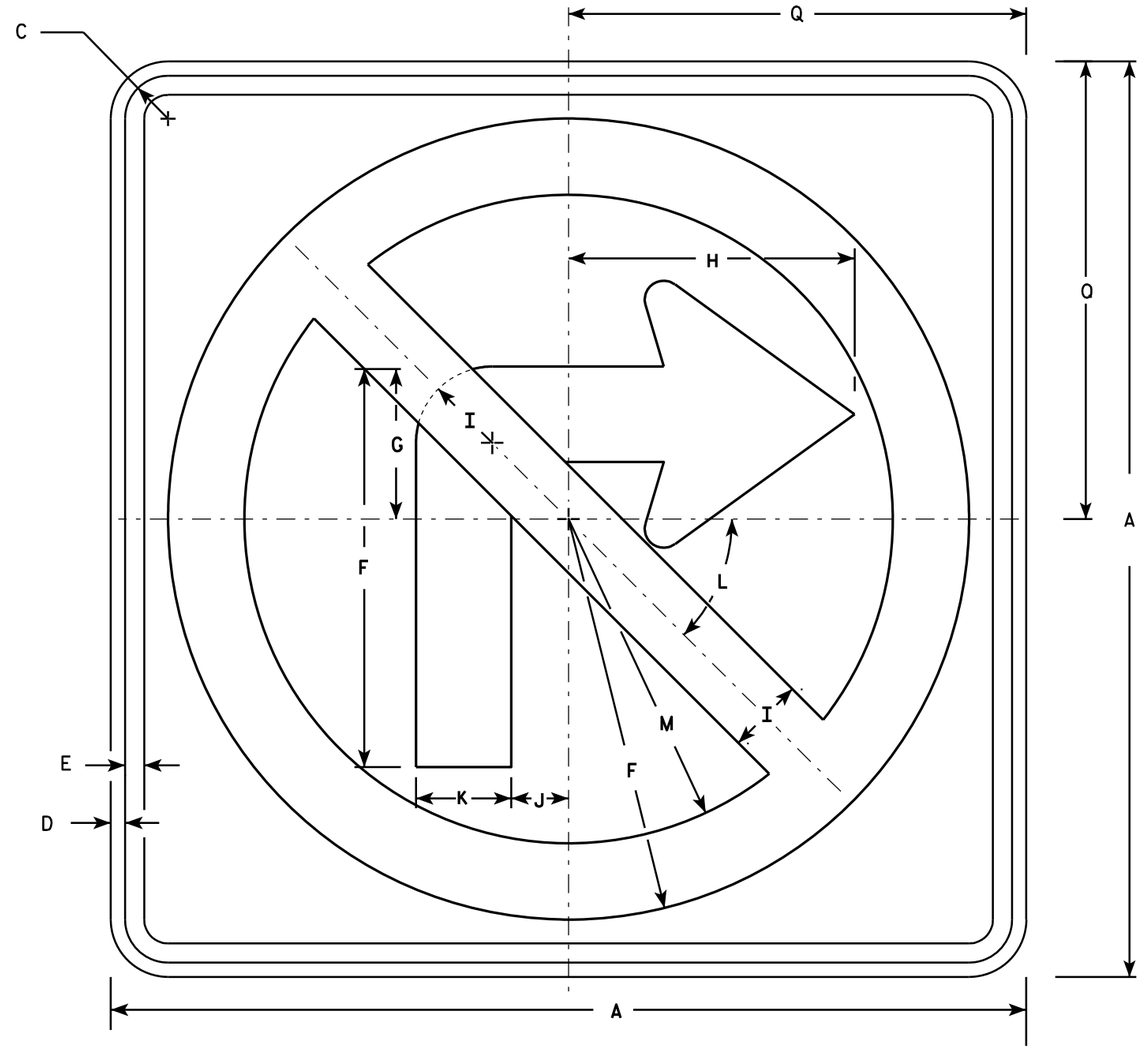
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

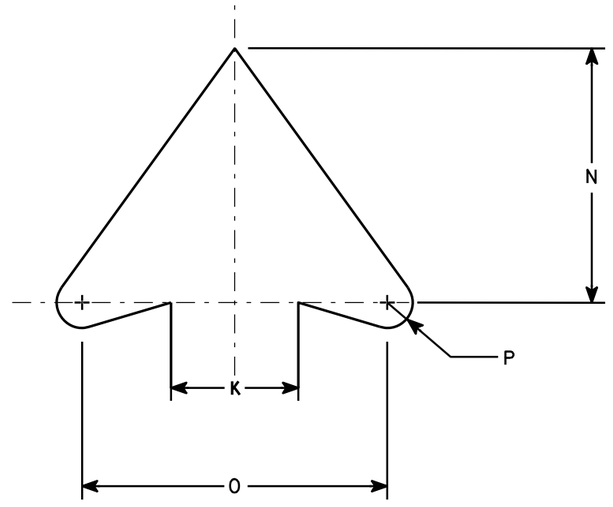
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 174 | E



R3-1

NOTES

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



ARROW DETAIL

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

STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

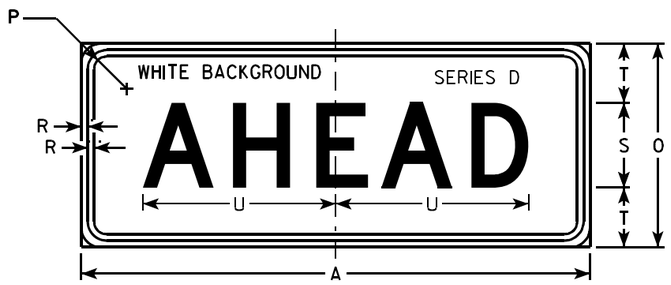
DATE 12/08/10 PLATE NO. R3-1.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 175	E

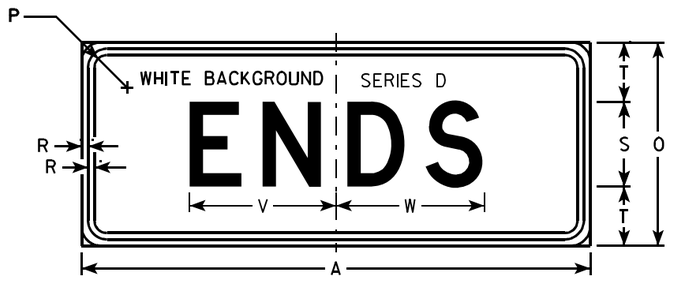
R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
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.



R3-17ap



R3-17bp

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	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

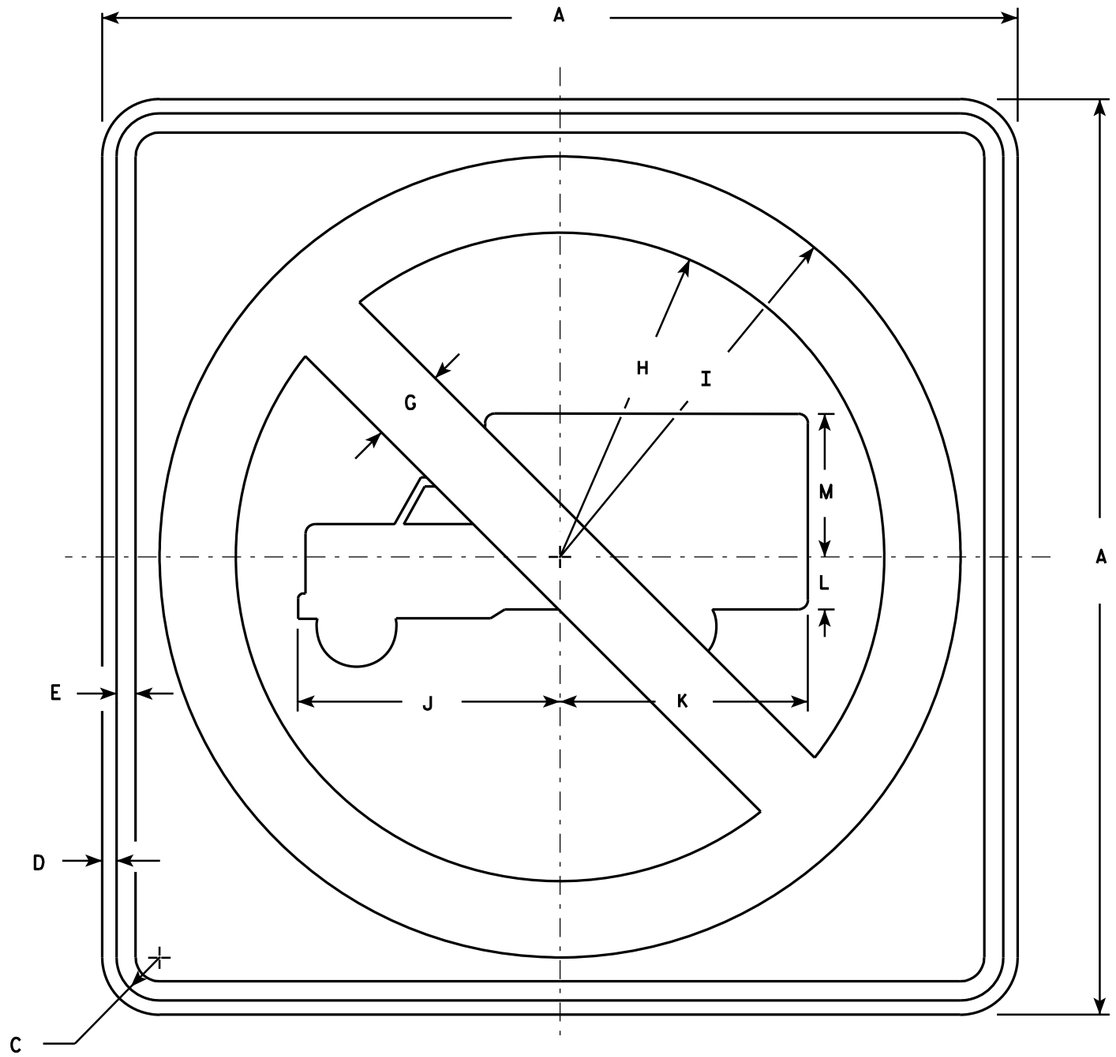
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2

PROJECT NO:

SHEET NO: 176 E



R5-2

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. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

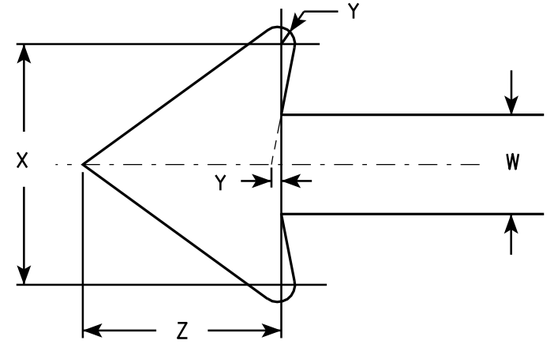
DATE 3/29/2011 PLATE NO. R5-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E

R7-51

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 - Red
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R7-51D (double arrow)
   R7-51R (right arrow)
   R7-51L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	4 7/8	5/8	1 3/4	2 1/2	4 3/8	3 7/8	3/4	1 3/4	1/8	1 1/2	1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	5 3/4	1 1/8	1 1/2	3 1/8	5 1/2	5 7/8	1 1/8	2 5/8	1/4	2 1/4	3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
4																											
5																											

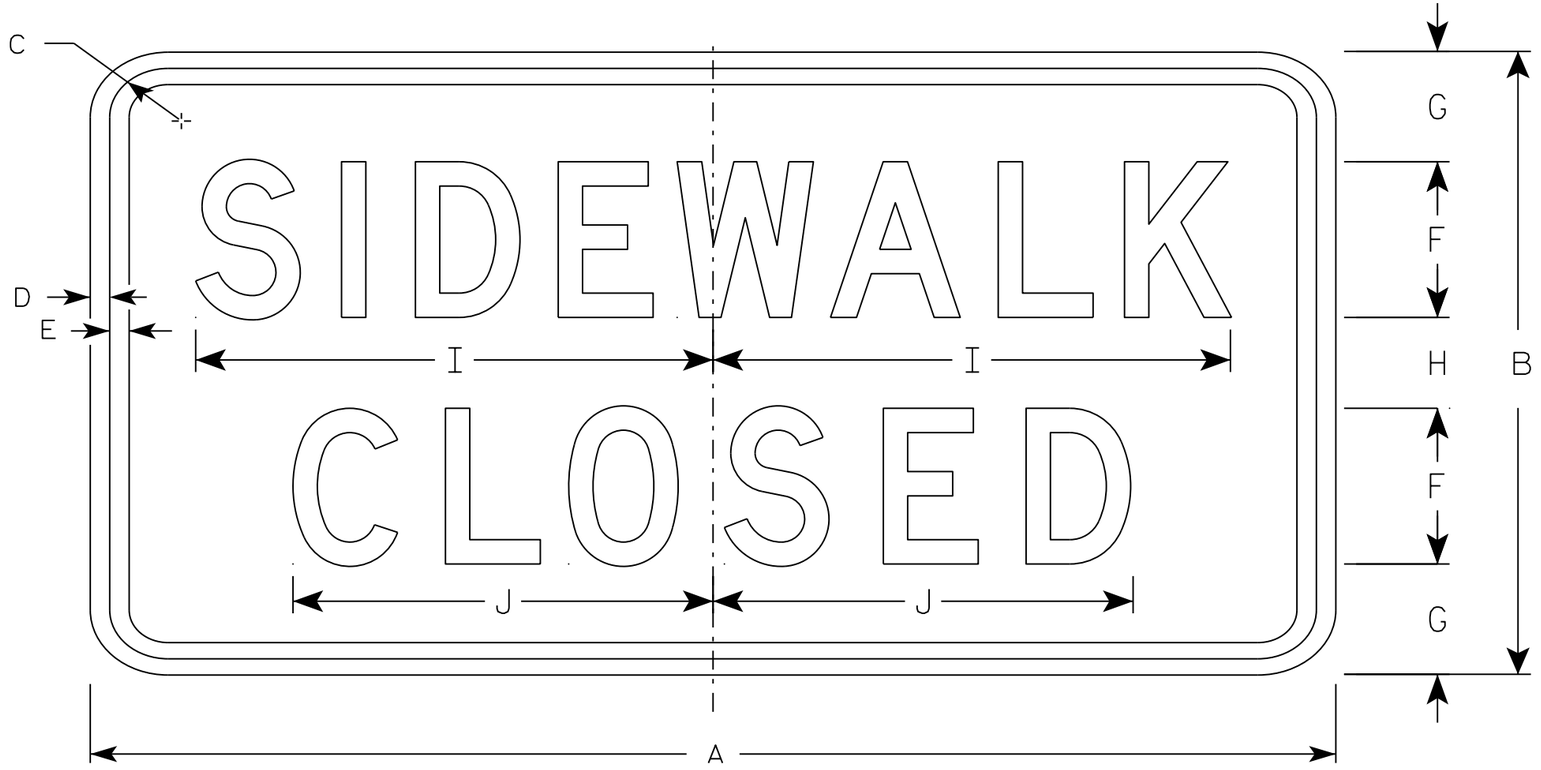
STANDARD SIGN
R7-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-51.6

PROJECT NO:	HWY:	COUNTY:			SHEET NO: 178	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																											

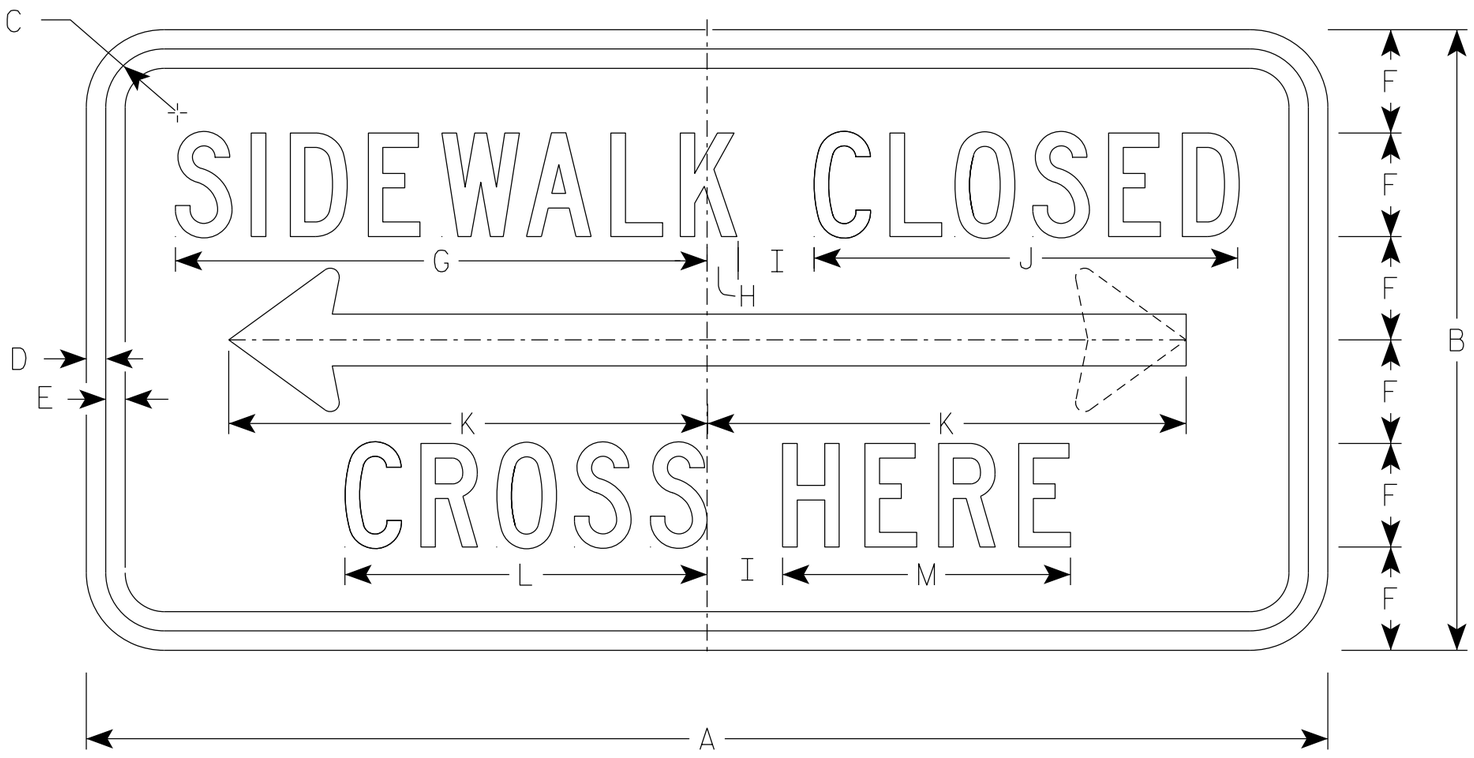
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 179 R9-9.6

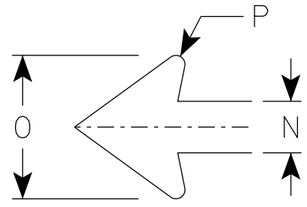
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



R9-11A

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.
6. R9-11AD (double arrow)
   R9-11AL (left arrow)
   R9-11AR (right arrow)



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	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 1/2	12 3/4	1/2	2	10 1/4	12 3/8	8 5/8	6 3/4	1 1/4	3 5/8	1/4											3.125
4																											
5																											

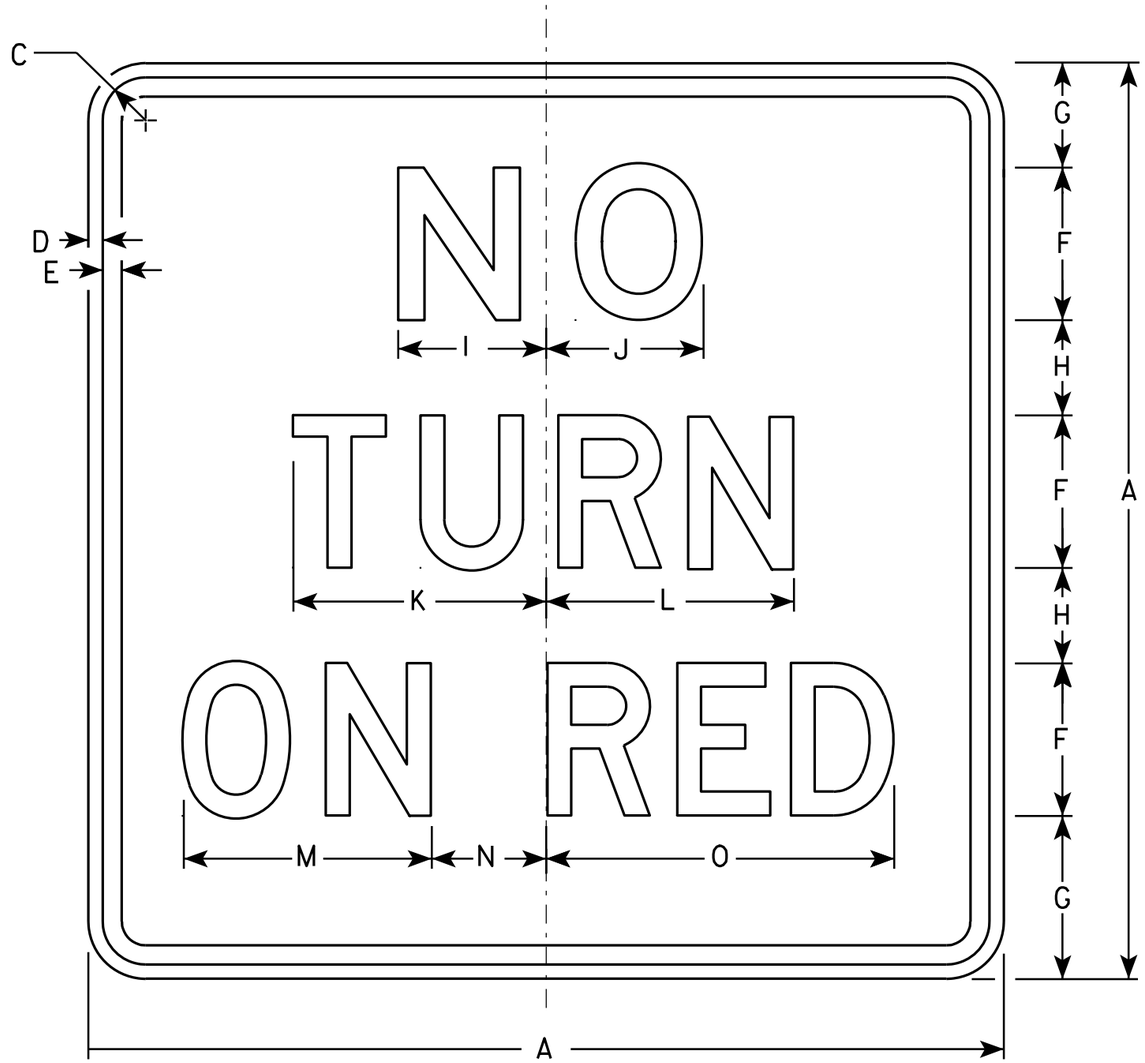
STANDARD SIGN
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R9-11A.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E



R10-11B

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

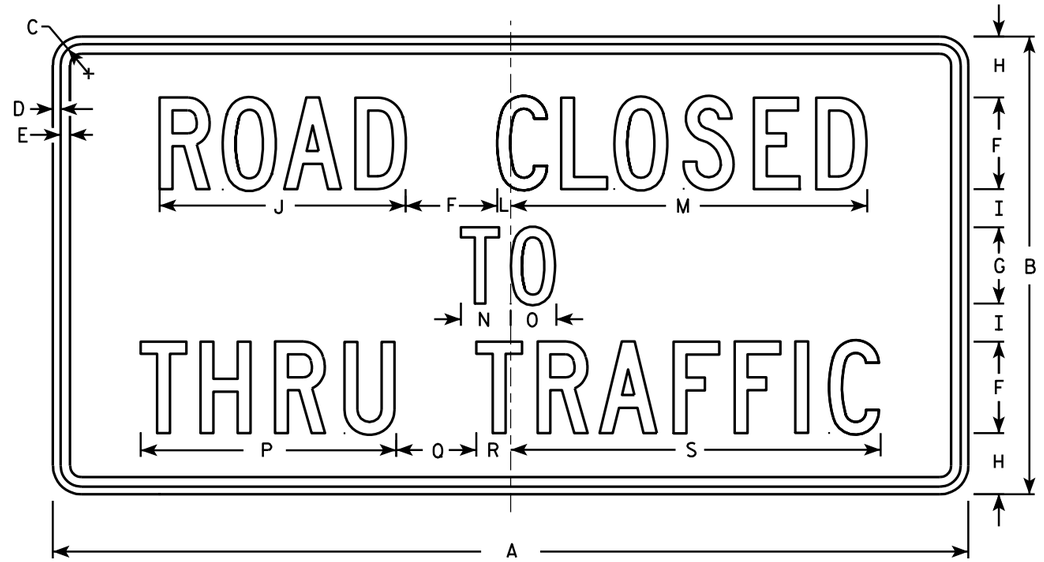
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E



R11-4

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

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

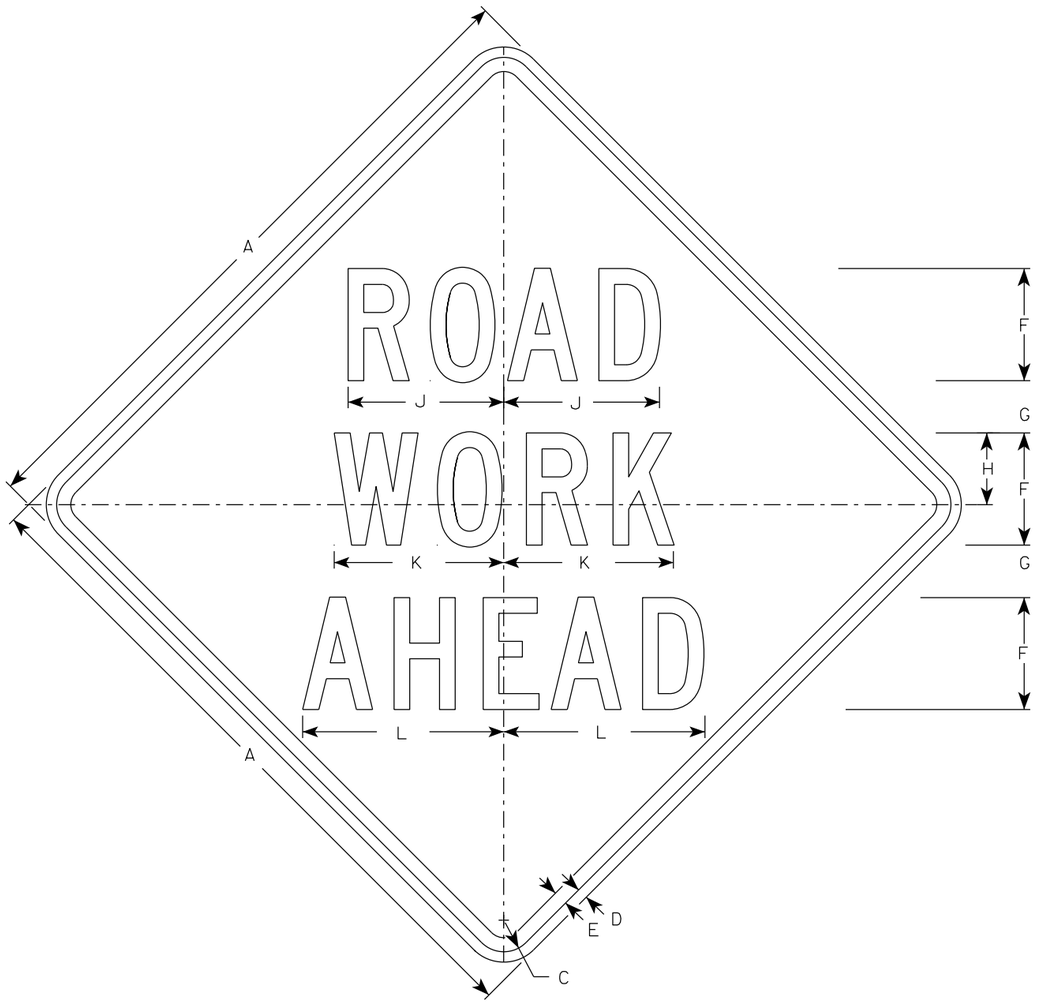
APPROVED Matthew R Rauch for State Traffic Engineer

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

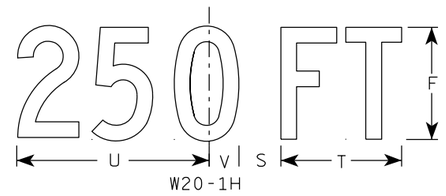
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | E

NOTES

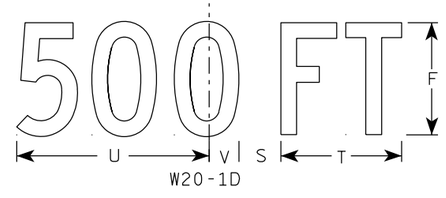
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

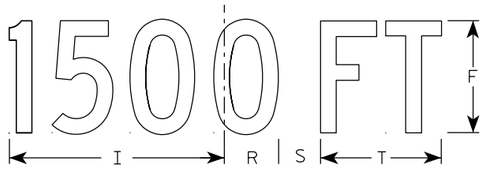


W20-1H

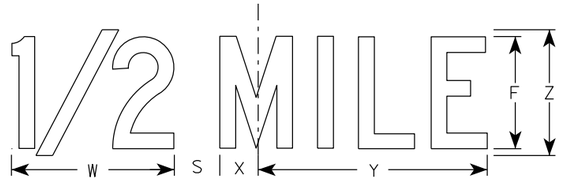


W20-1D

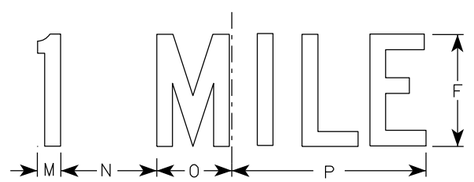
W20-1C



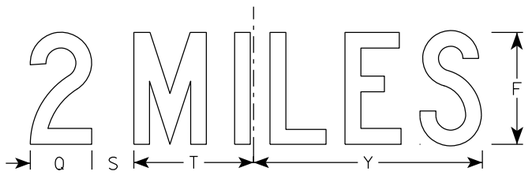
W20-1B



W20-1G



W20-1F



W20-1E

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

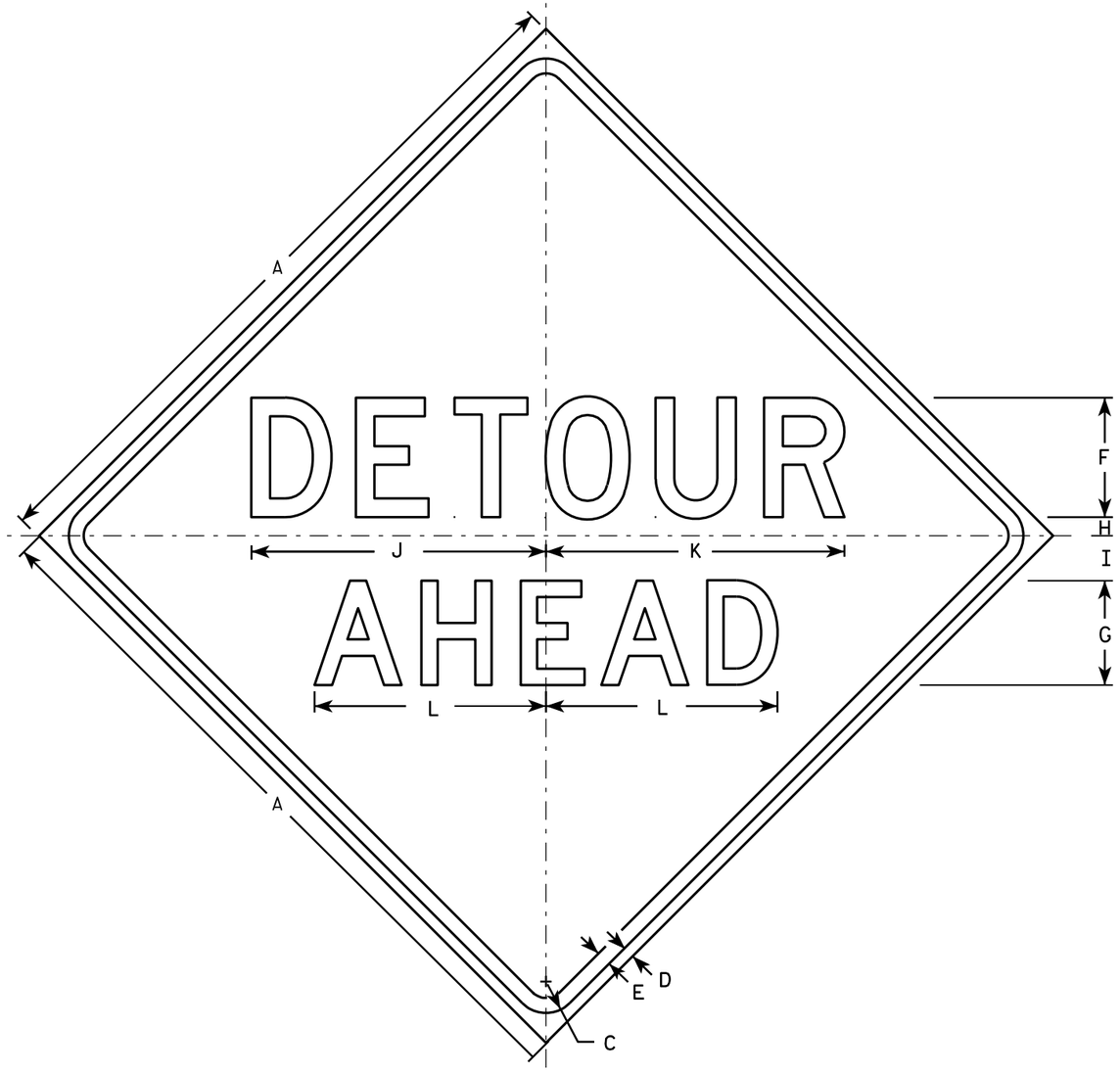
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

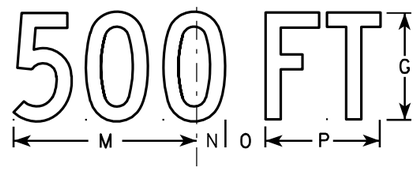
WISDOT/CADDS SHEET 42

7

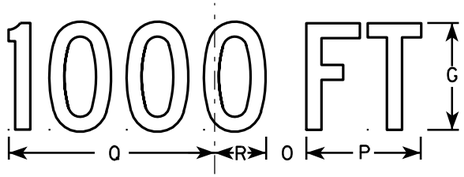
7



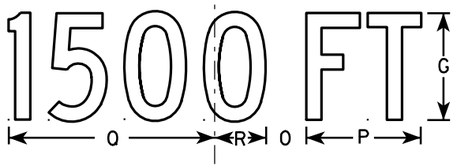
W20-2A



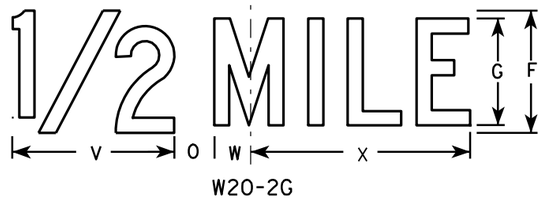
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

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. Line 1 is Series D.
   Line 2 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

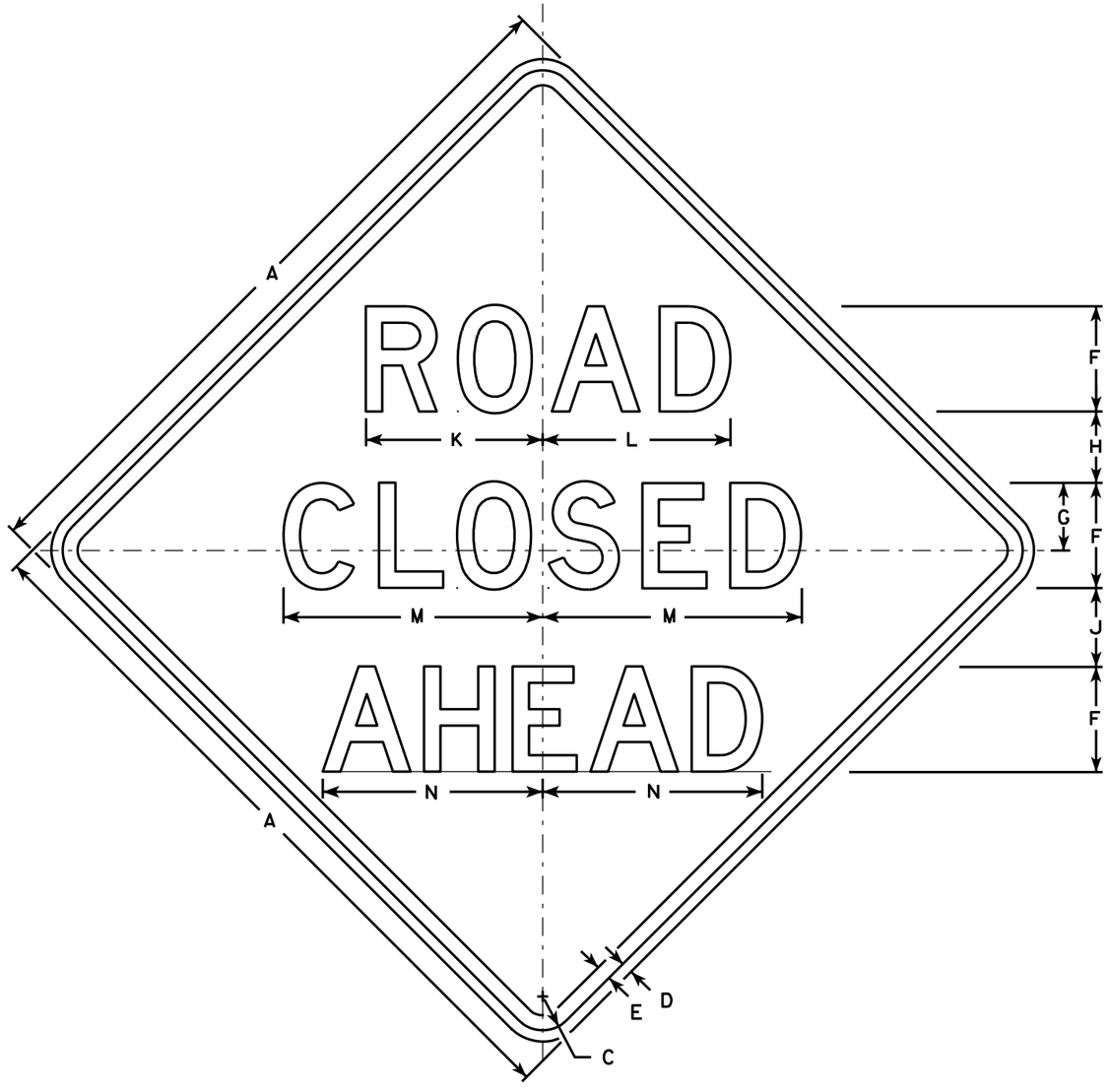
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

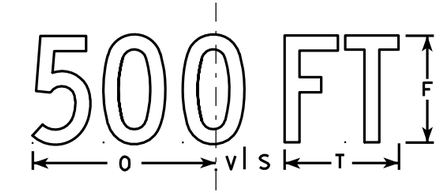
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

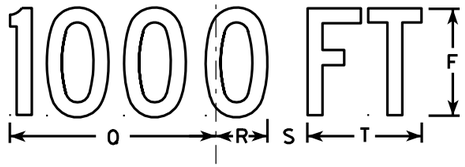
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 184	E



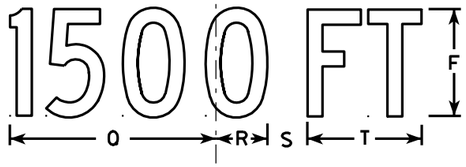
W20-3A



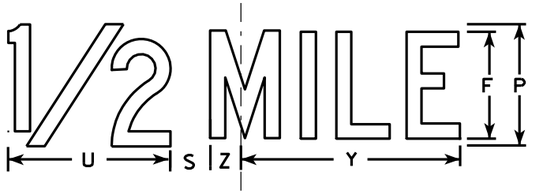
W20-3D



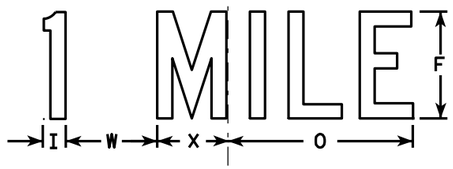
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

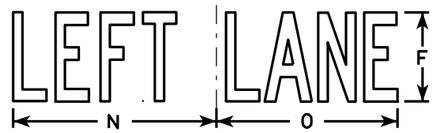
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 185 | E

7

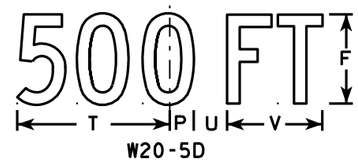
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

W20-56A

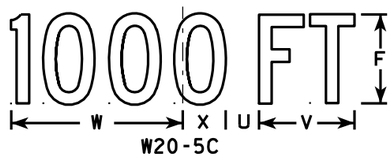


W20-55A

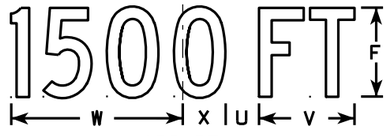
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

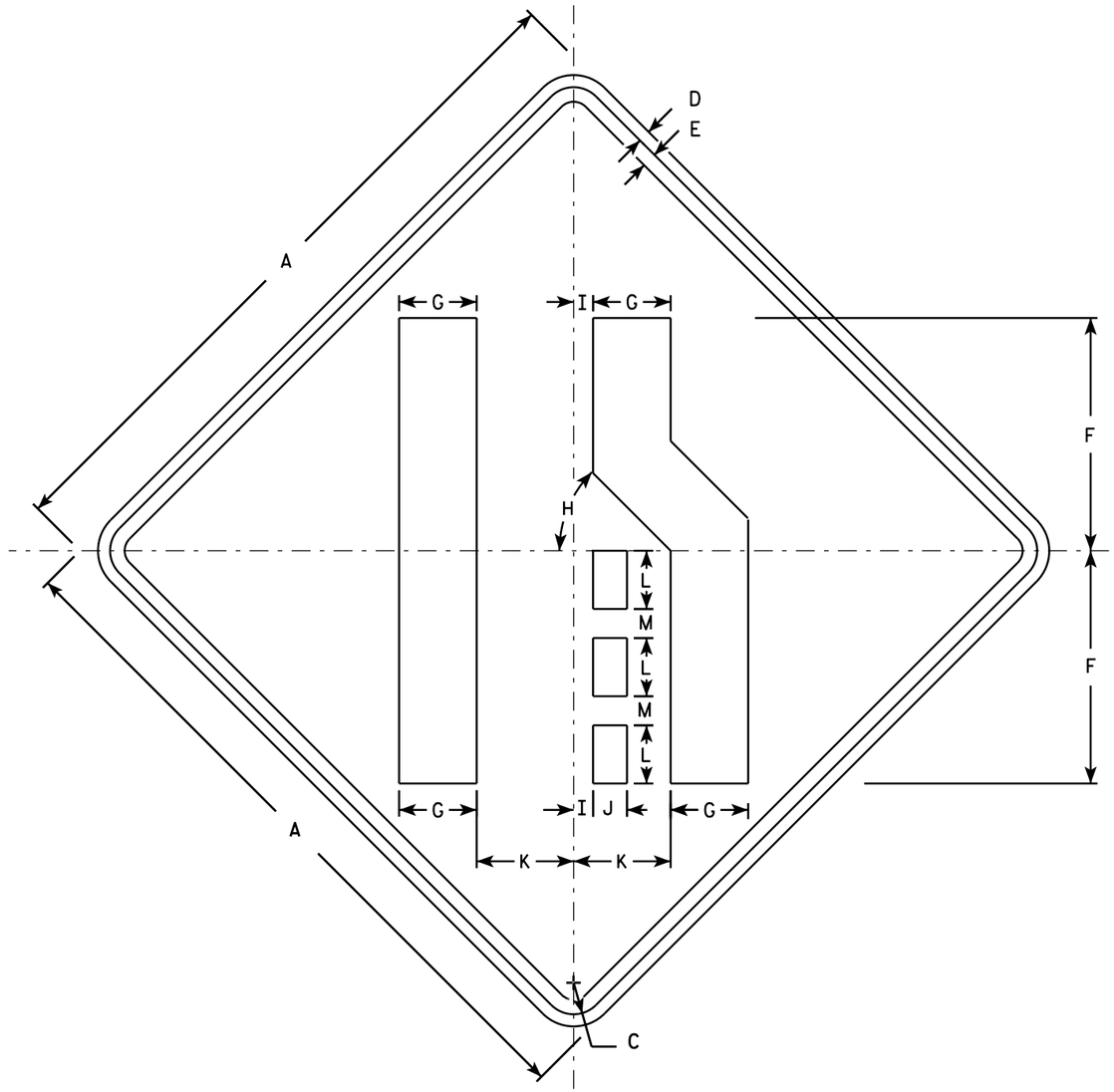
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 186	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000 WISDOT/CADDS SHEET 42



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 187 W04-2.1

PROJECT NO:

SHEET NO: E

NATIONAL AVENUE

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
5+70.0		117	37	0	0	0	0	0	0	0
5+75.0	5	119	37	0	22	7	0	22	0	15
6+00.0	25	131	39	0	116	35	0	137	0	95
6+25.0	25	133	42	0	122	37	0	260	0	180
6+50.0	25	122	39	1	118	37	0	377	1	260
6+75.0	25	116	39	1	110	36	1	487	2	333
7+00.0	25	115	39	1	107	36	1	594	3	403
7+25.0	25	116	39	1	107	36	1	701	4	473
7+50.0	25	104	35	6	102	34	3	803	8	537
7+75.0	25	165	52	8	124	41	6	928	15	613
8+00.0	25	216	65	0	176	54	4	1104	20	730
8+25.0	25	144	47	0	166	52	0	1270	20	845
8+50.0	25	109	33	8	117	37	4	1387	25	920
8+75.0	25	109	37	0	100	32	4	1487	30	983
9+00.0	25	107	39	2	100	35	1	1587	31	1047
9+25.0	25	124	46	0	107	39	1	1694	32	1114
9+50.0	25	110	40	1	108	39	0	1802	32	1182
9+75.0	25	107	37	0	100	36	0	1903	33	1247
10+00.0	25	128	46	0	109	39	0	2012	33	1317
10+25.0	25	113	37	1	112	38	0	2123	33	1390
10+50.0	25	120	37	0	108	34	0	2231	33	1463
10+75.0	25	122	39	0	112	35	0	2343	33	1539
11+00.0	25	109	33	5	107	33	2	2450	36	1610
11+25.0	25	137	43	2	114	35	3	2563	40	1685
11+50.0	25	207	62	3	159	49	2	2723	43	1793
11+75.0	25	138	44	6	160	49	4	2883	48	1899
12+00.0	25	107	34	6	113	36	6	2996	55	1969
12+25.0	25	123	37	0	106	33	3	3102	58	2039
12+50.0	25	131	38	0	118	35	0	3220	58	2122
12+75.0	25	138	37	0	125	35	0	3345	58	2212
13+00.0	25	127	33	2	122	32	1	3467	59	2302
13+25.0	25	148	39	1	127	33	1	3594	60	2394
13+50.0	25	141	35	0	134	34	0	3728	61	2494
13+75.0	25	134	35	0	128	32	0	3856	61	2590
14+00.0	25	150	49	2	132	39	1	3988	62	2681
14+25.0	25	148	45	0	138	44	1	4126	63	2774
14+50.0	25	121	36	0	124	37	0	4250	63	2861
14+75.0	25	110	34	3	107	32	1	4357	65	2934
						0				
						0				
					4357	1358	52			

9

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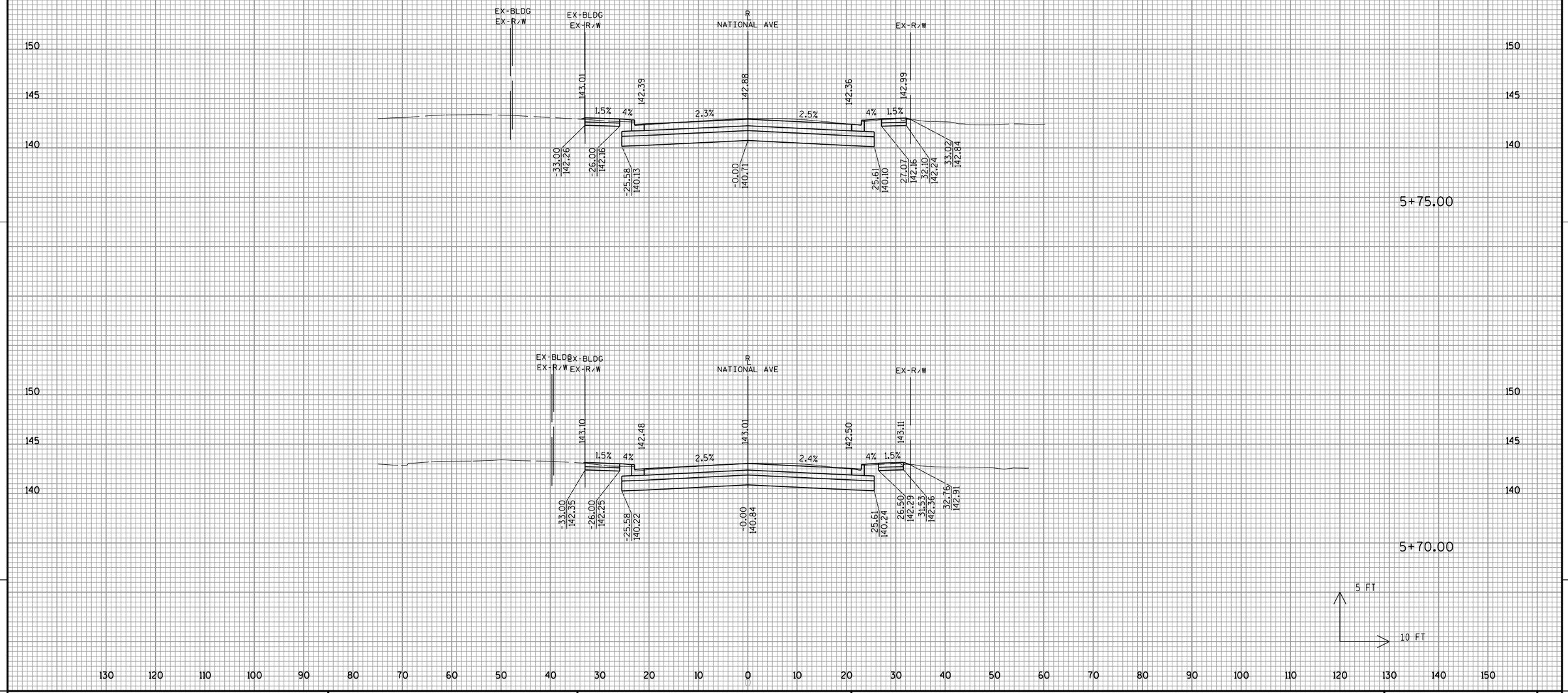
ALL CATEGORY 0010

PROJECT NO: 2410-13-70	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	EARTHWORK DATA	SHEET: 188 E

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



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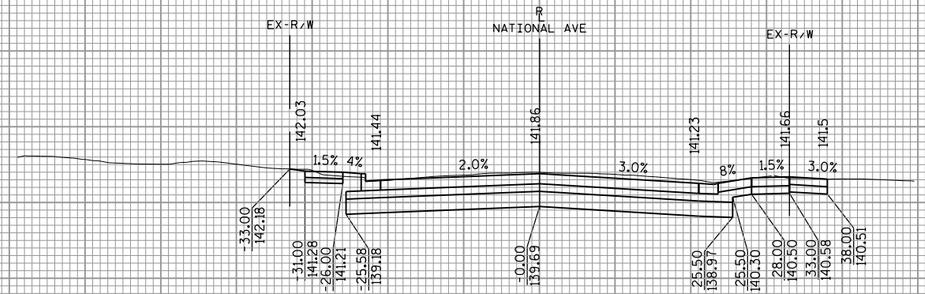
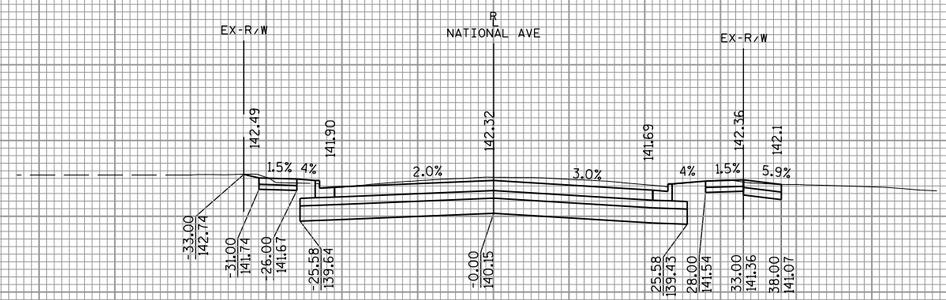
130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 189	E





5 FT

10 FT

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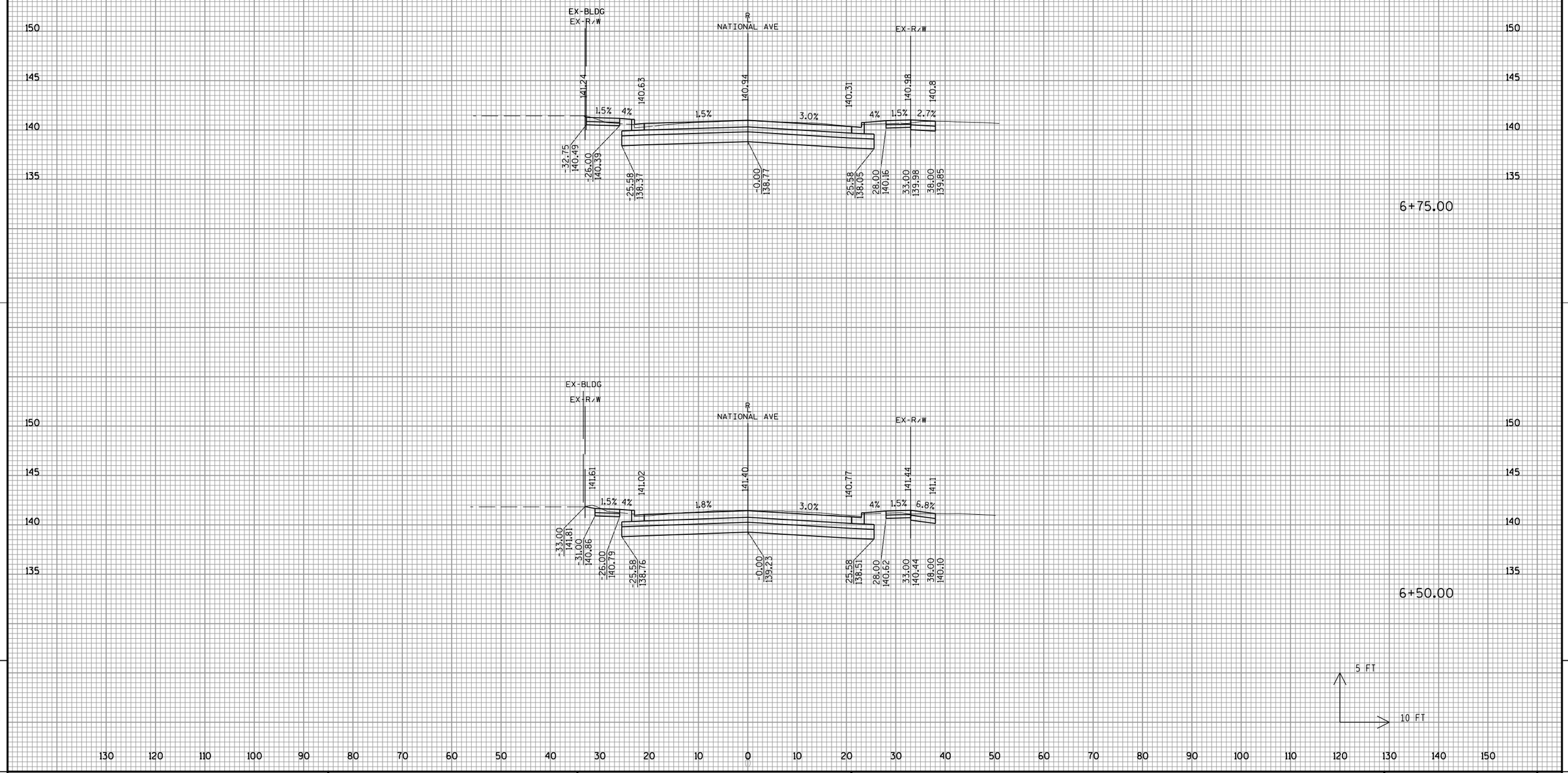
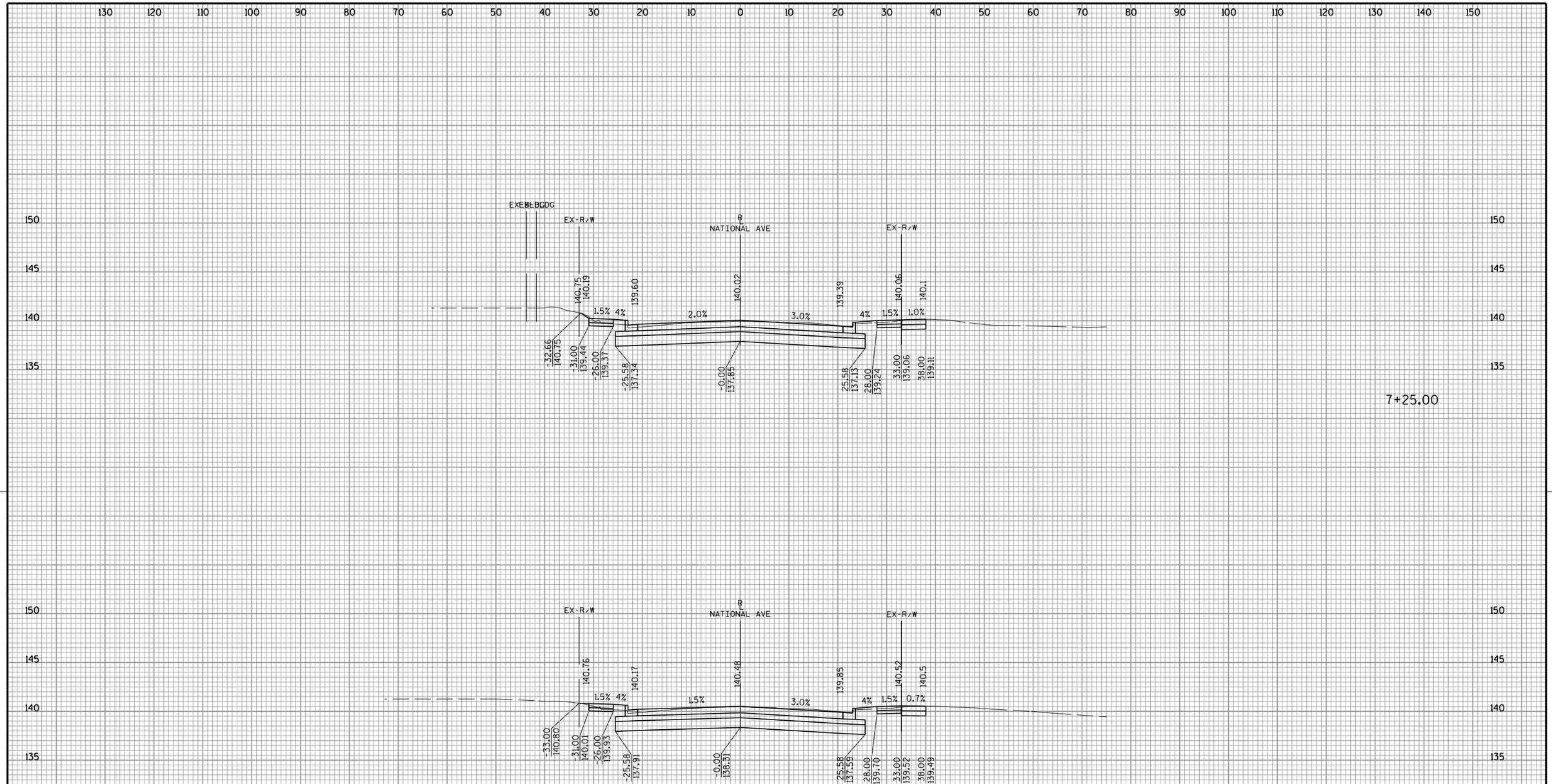
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 190	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 191	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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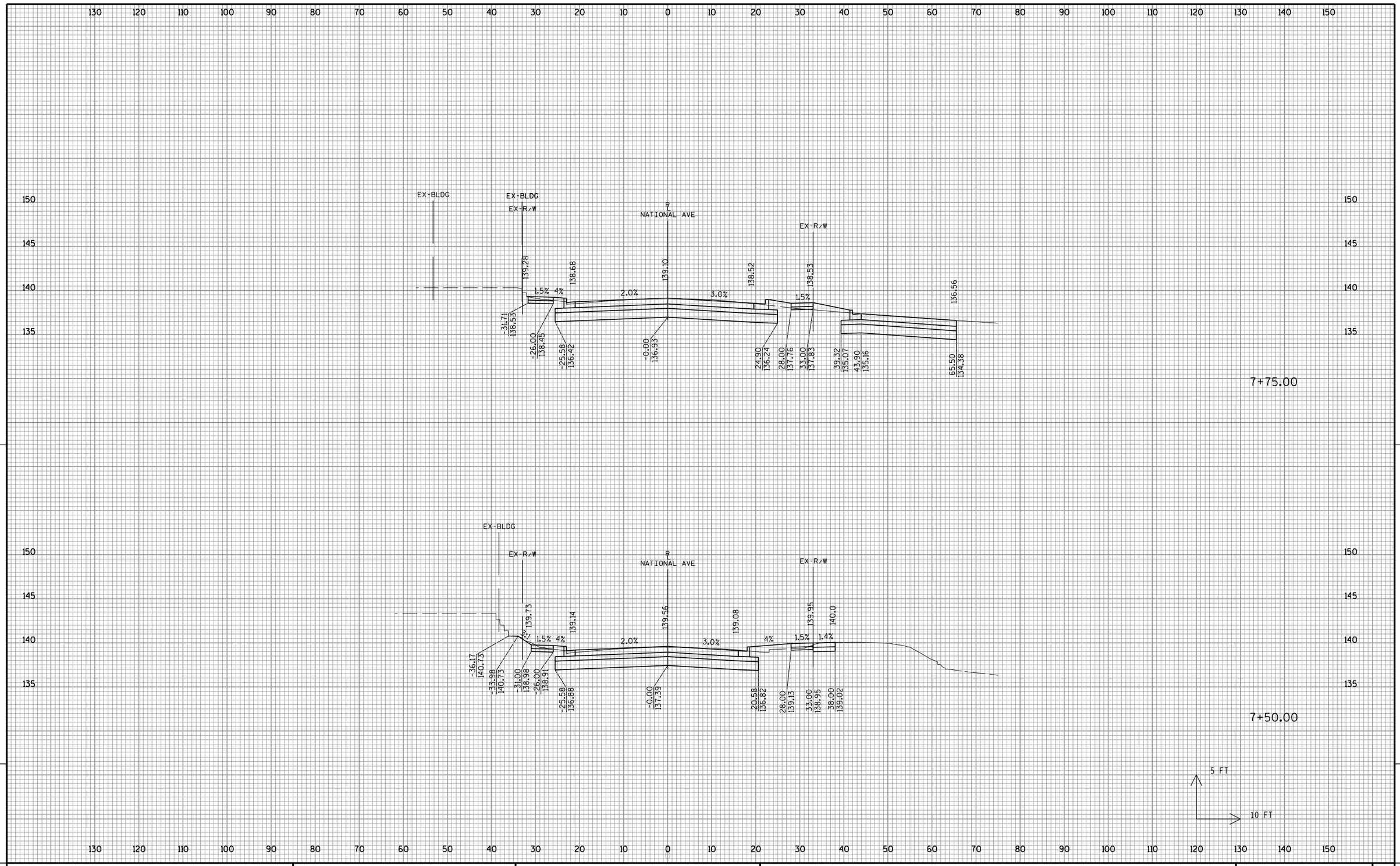
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 192	E



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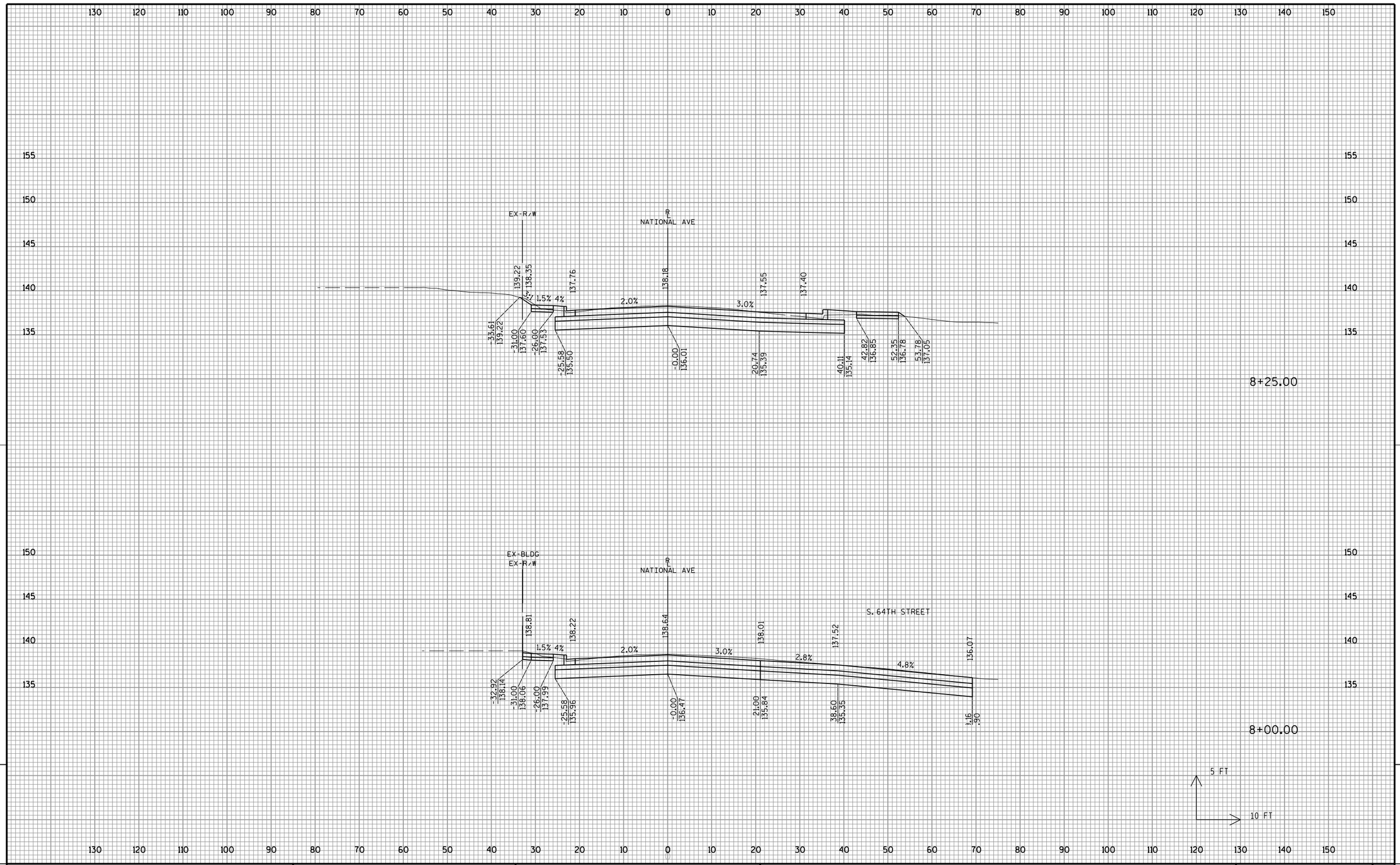
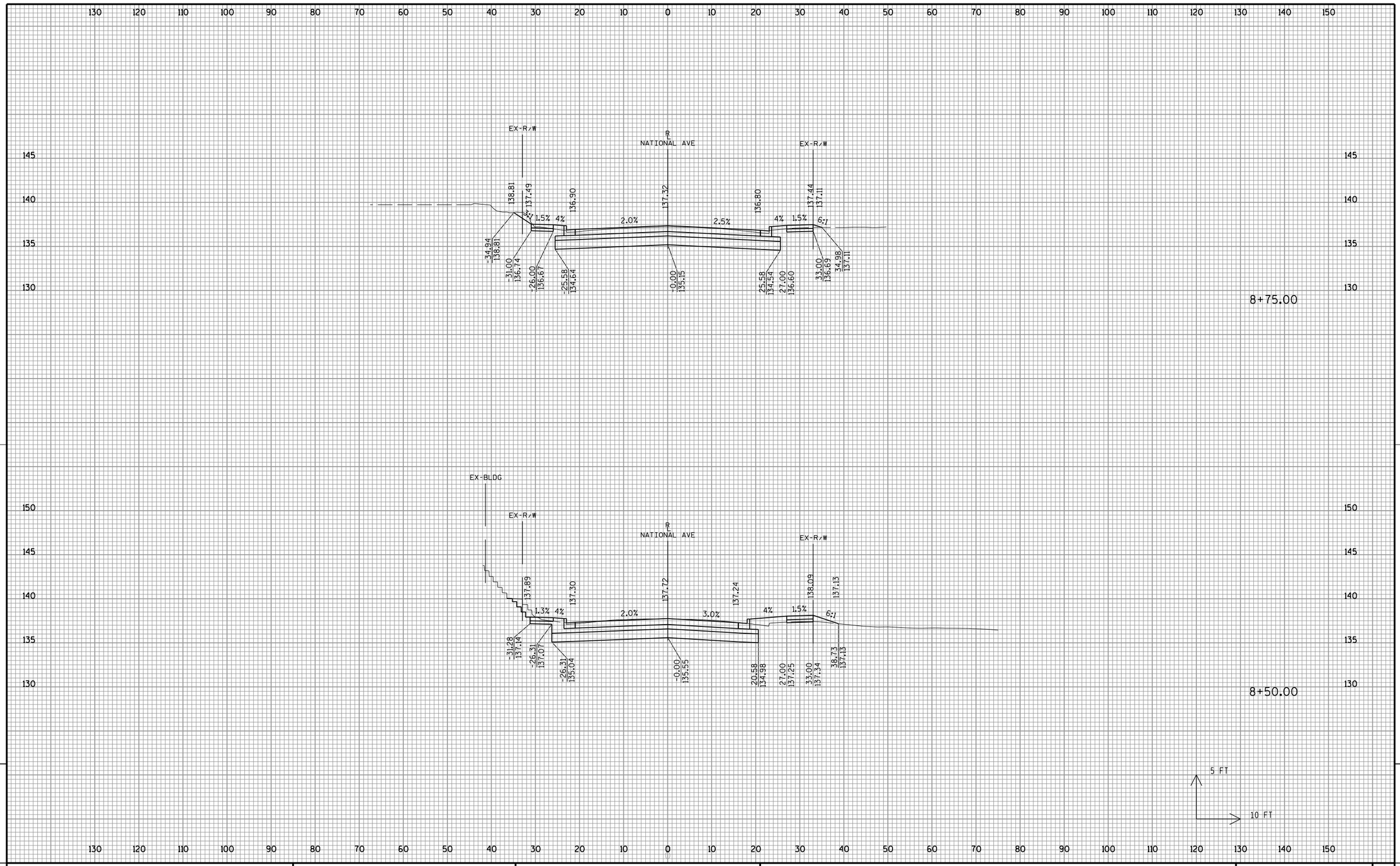
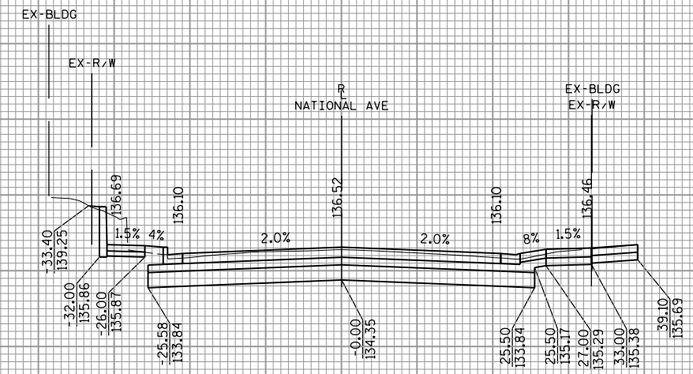
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 193	E


EX-R/W
NATIONAL AVE
139.22
138.35
137.76
138.18
137.55
137.40
1.5%
4%
2.0%
3.0%
33.61
139.22
31.00
137.60
26.00
137.53
25.58
135.50
0.00
136.01
20.74
135.39
40.11
135.14
42.82
136.85
52.35
136.78
53.78
137.05
8+25.00
EX-BLDG
EX-R/W
NATIONAL AVE
S. 64TH STREET
138.81
138.22
138.64
138.01
137.52
136.07
1.5%
4%
2.0%
3.0%
2.8%
4.8%
32.92
138.14
31.00
136.06
26.00
137.99
25.58
135.96
0.00
136.47
21.00
135.84
38.60
135.35
1.16
1.90
8+00.00
5 FT
10 FT

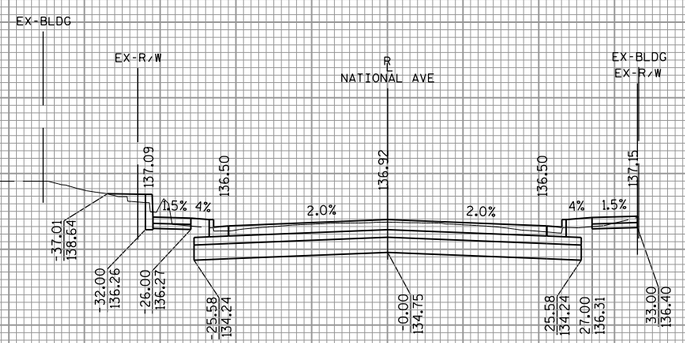


PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 195	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



9+25.00



9+00.00

5 FT

10 FT

9

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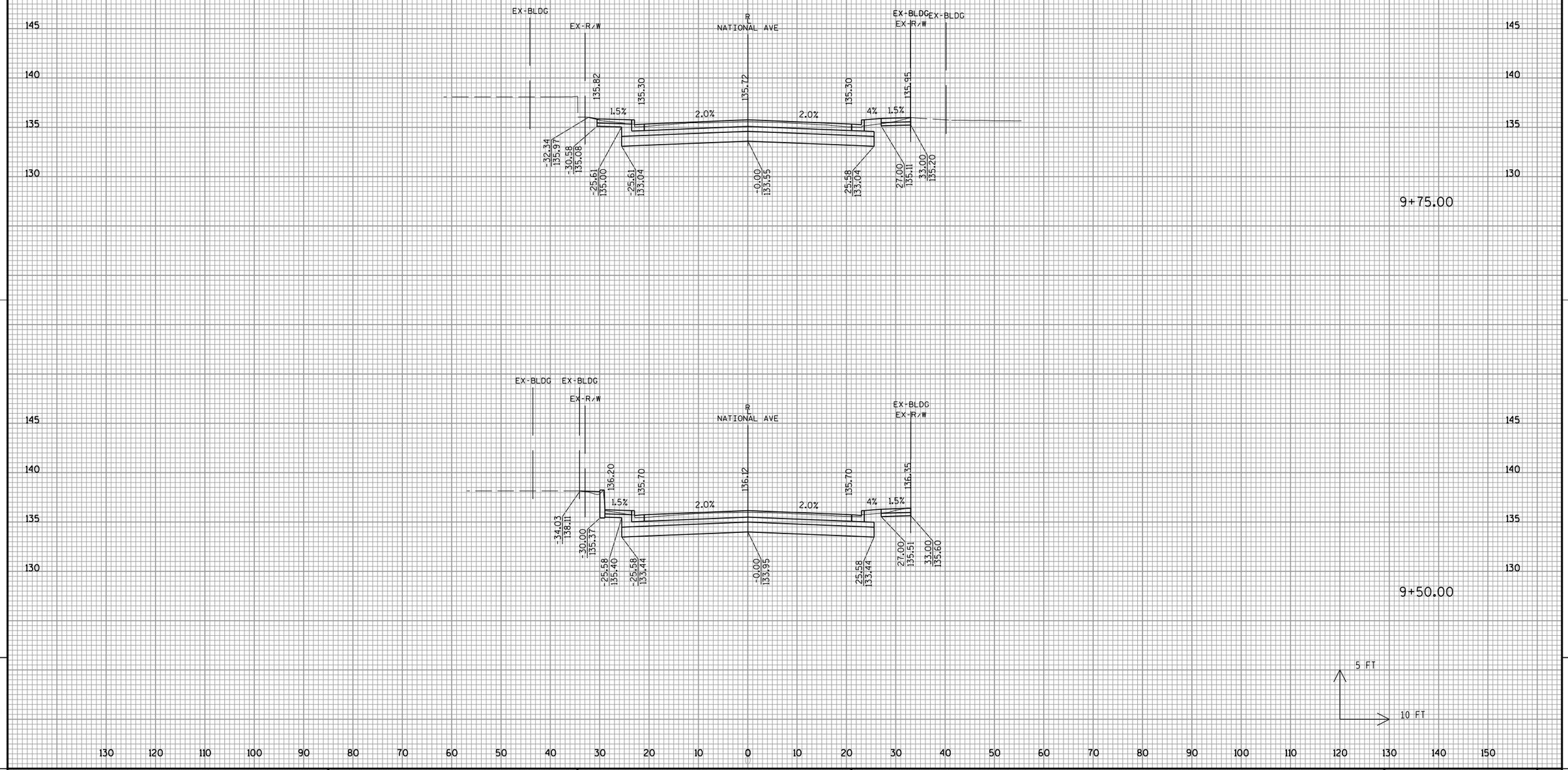
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 196	E



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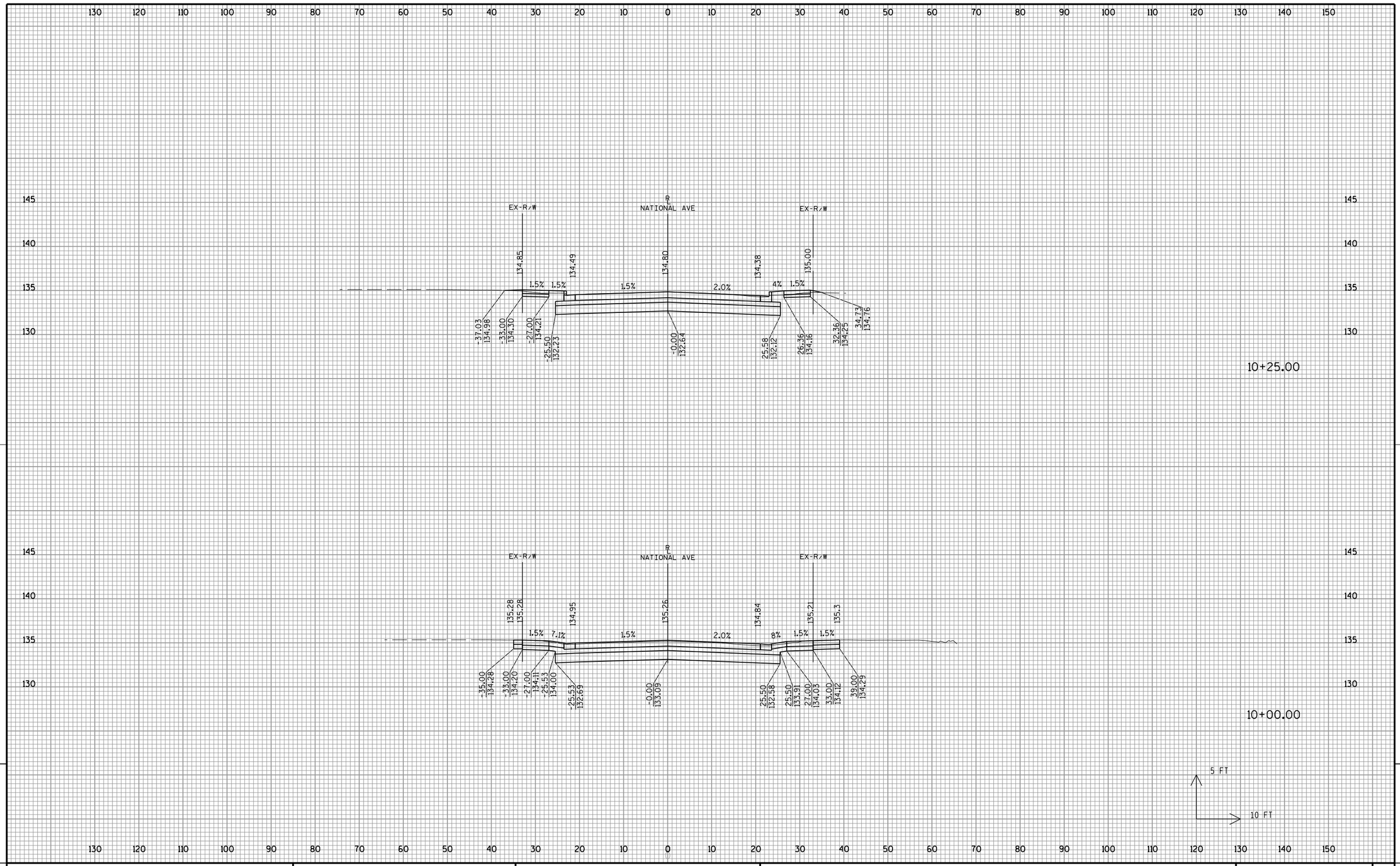
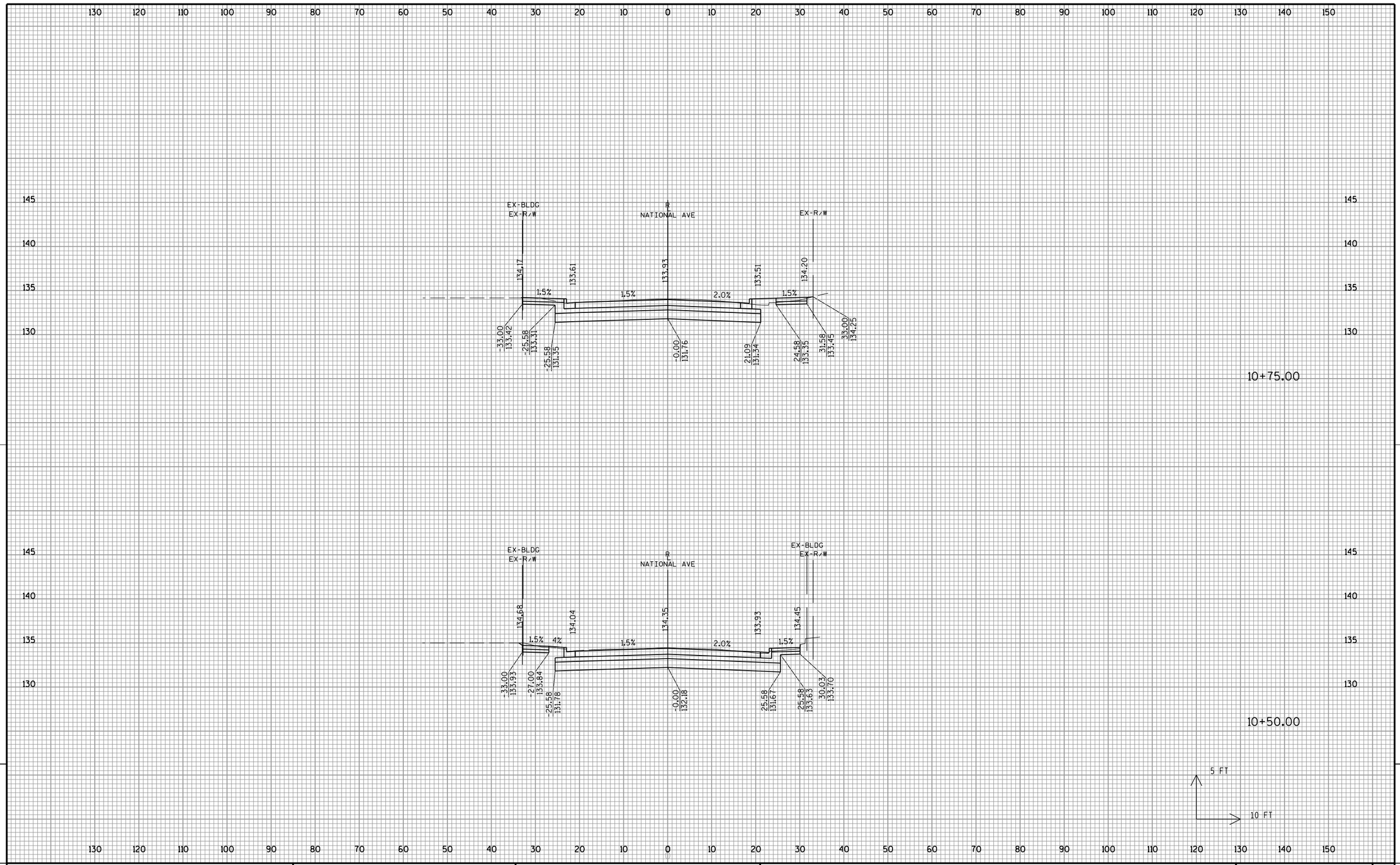
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 197	E



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 198	E



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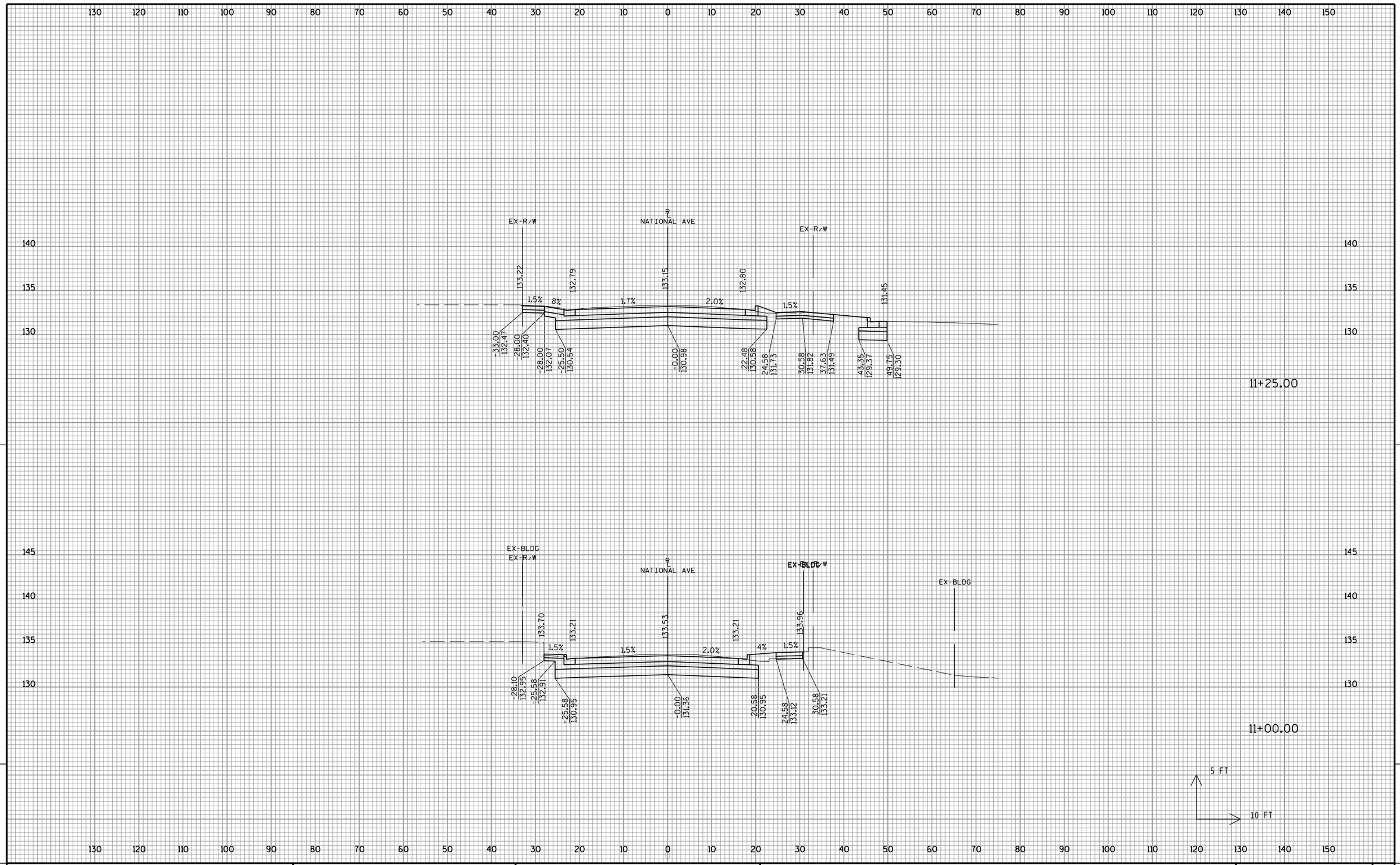
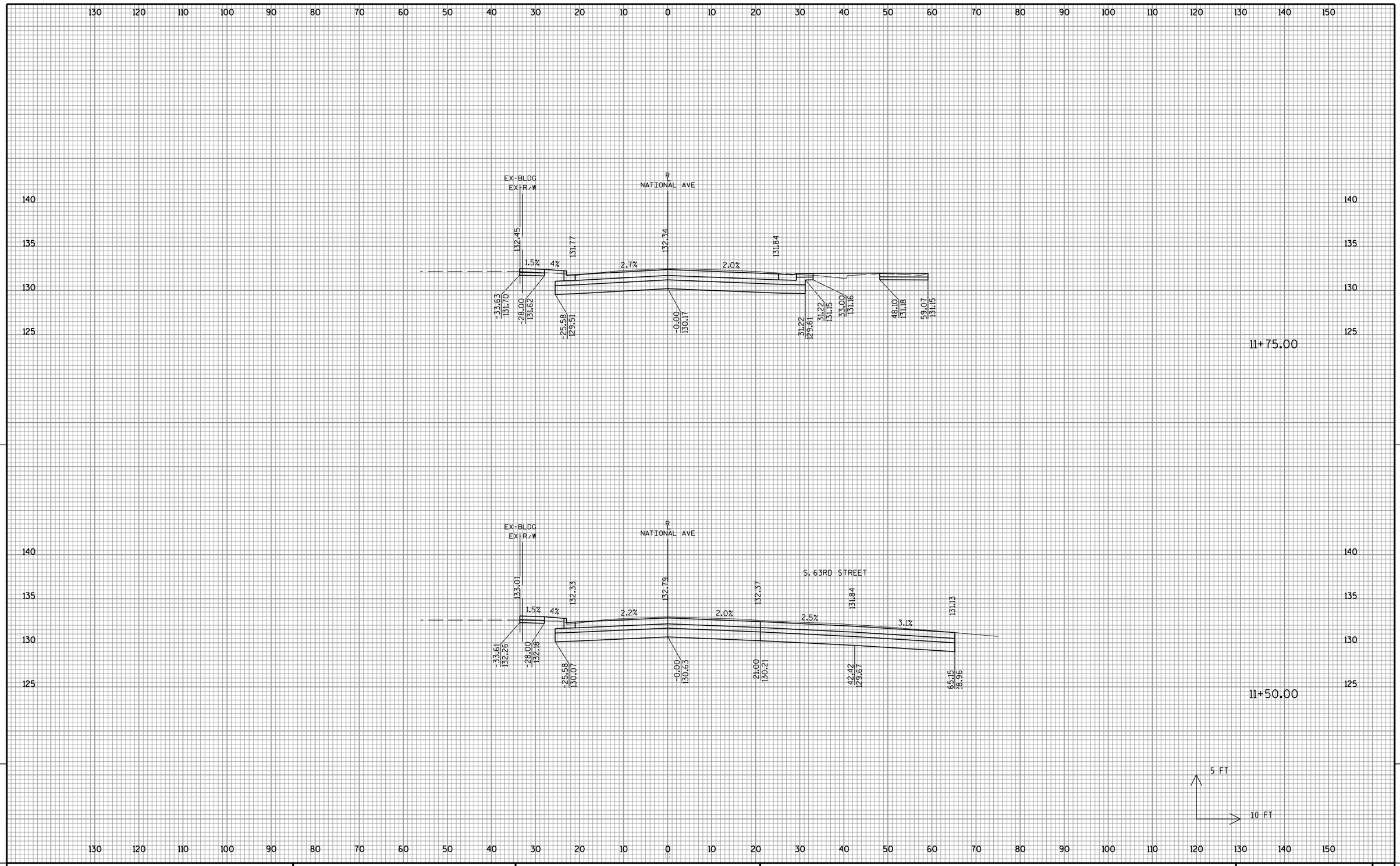
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 199	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$


130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
140
135
130
EX-R/W
NATIONAL AVE
℄
EX-R/W
133.22
132.79
133.15
132.80
131.45
1.5%
8%
1.7%
2.0%
1.5%
-33.00
132.41
-28.00
132.40
-28.00
132.07
-25.50
130.54
-0.00
130.98
22.48
130.58
24.58
131.73
30.58
131.82
37.63
131.49
43.35
129.37
49.75
129.30
11+25.00
145
140
135
130
EX-BLDG
EX-R/W
NATIONAL AVE
℄
EX-BLDG
EX-R/W
EX-BLDG
133.70
133.21
133.53
133.21
133.96
1.5%
1.5%
2.0%
4%
1.5%
-28.10
132.95
-25.58
132.91
-25.58
130.95
-0.00
131.36
20.58
130.95
24.58
133.12
30.58
133.21
11+00.00
5 FT
10 FT
9
9
PROJECT NO:2410-13-70
HWY: W NATIONAL AVENUE
COUNTY:MILWAUKEE
CROSS SECTIONS: W NATIONAL AVENUE
SHEET
200
E
FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn
PLOT DATE : 7/31/2022
PLOT BY : $$...plotuser...$$
PLOT NAME :
PLOT SCALE : $$.....plotscale.....$$
WISDOT/CADDS SHEET 21



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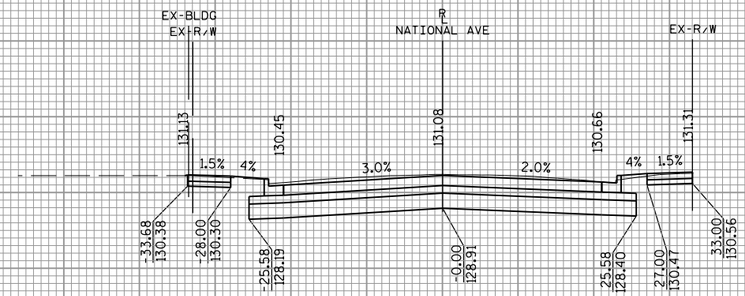
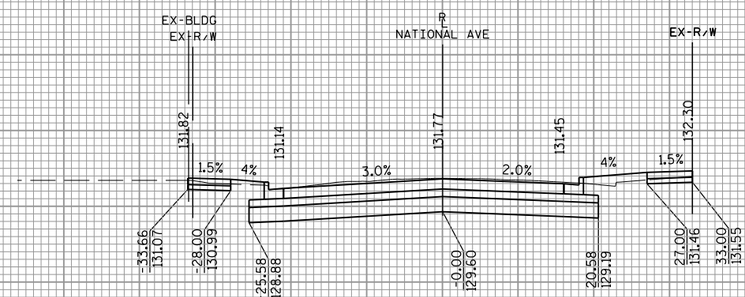
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 201	E



12+25.00



12+00.00

5 FT

10 FT

9

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PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 202	E

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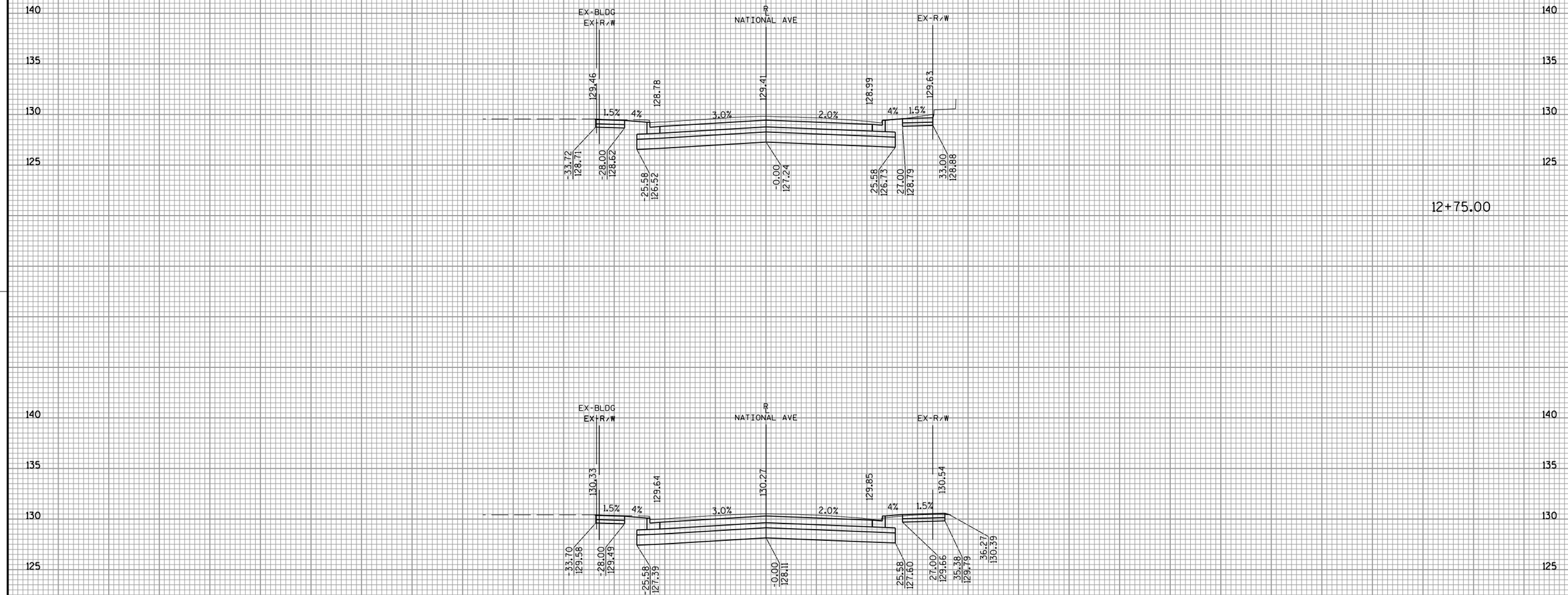
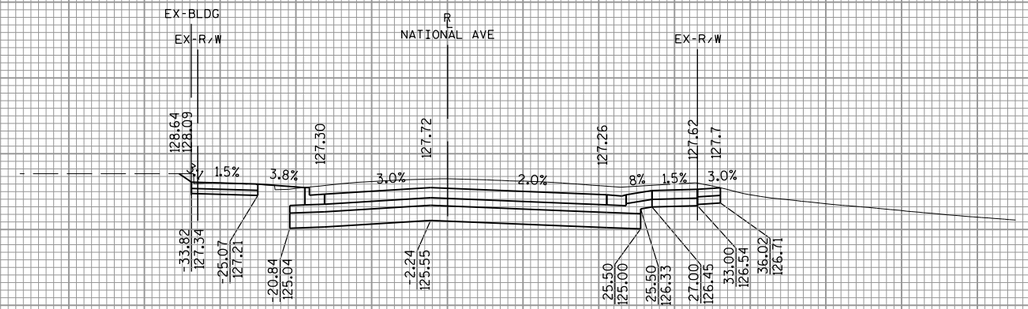
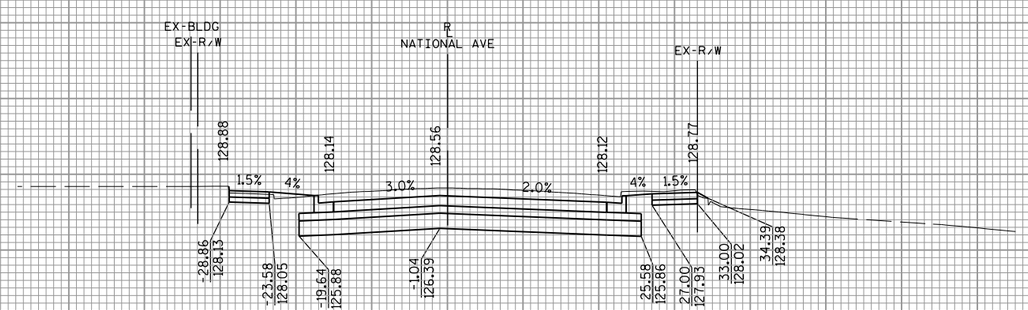


PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 203	E



13+25.00



13+00.00

5 FT

10 FT

9

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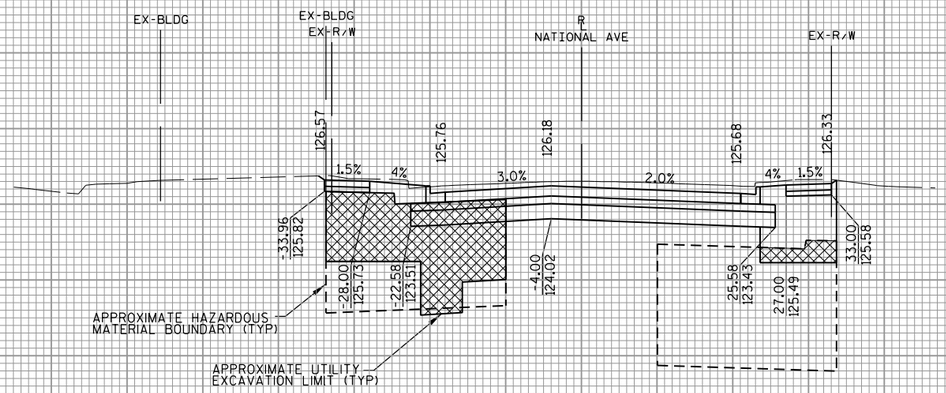
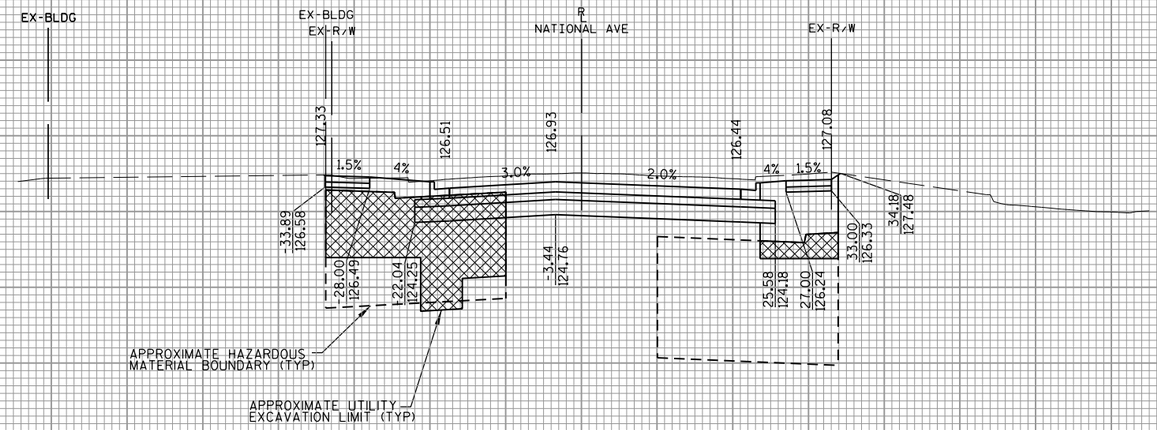
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 204	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



13+75.00



13+50.00

5 FT

10 FT

9

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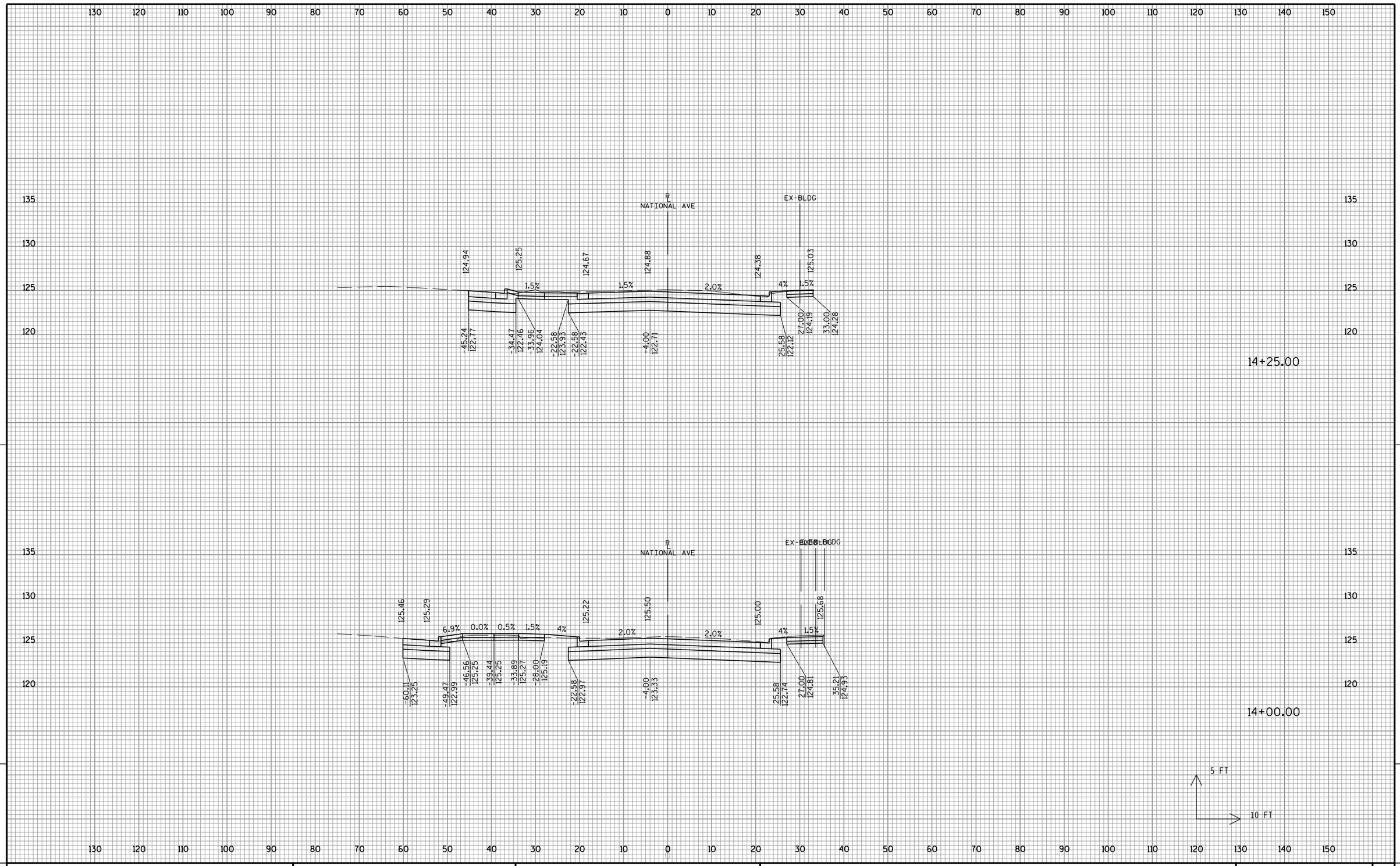
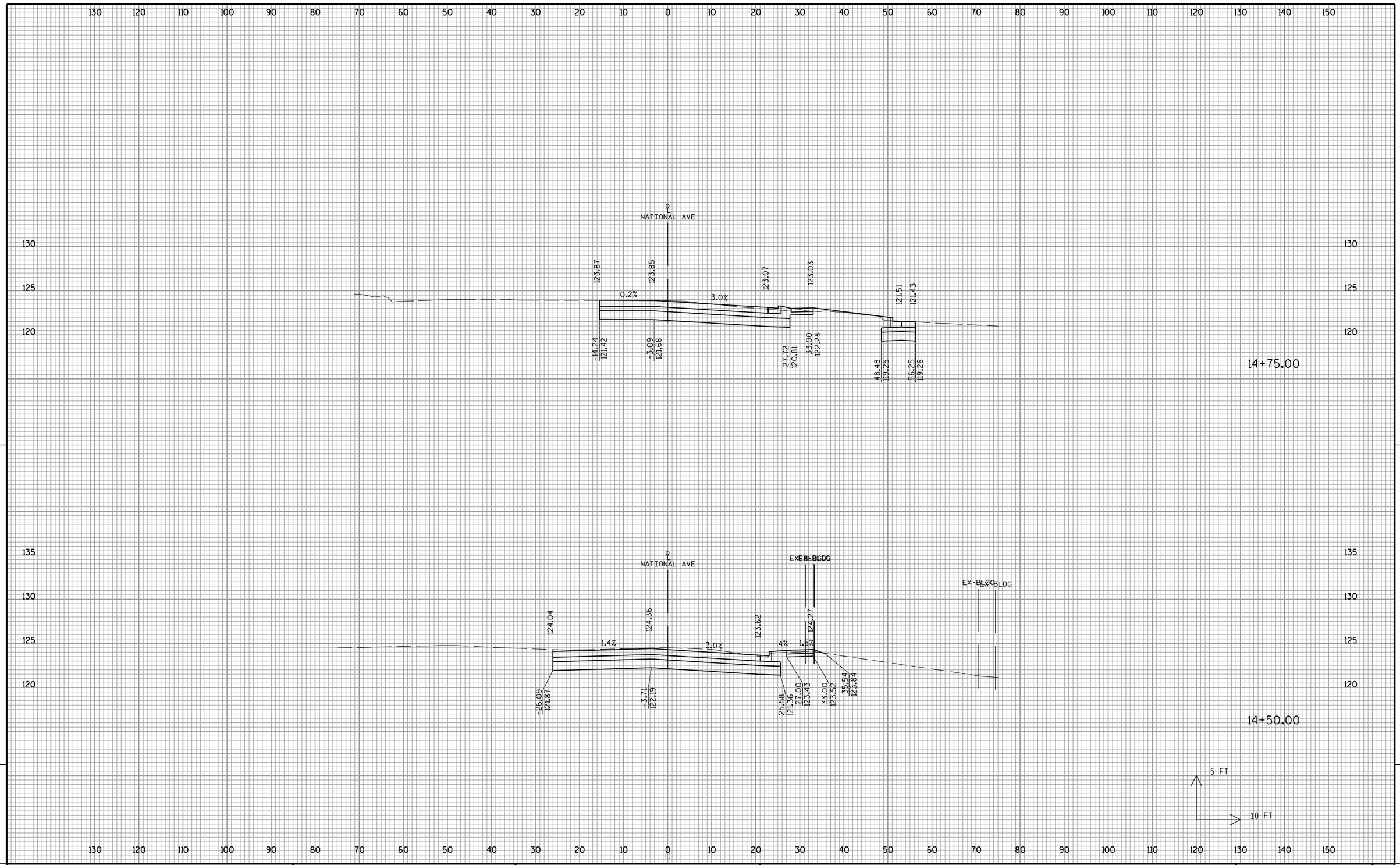
PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 205	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 206	E



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PROJECT NO: 2410-13-70	HWY: W NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W NATIONAL AVENUE	SHEET 207	E

FILE NAME : X:\ML\2019\20190098\Design\Transportation\SheetsPlan\090201_xs_National.dgn PLOT DATE : 7/31/2022 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

Wisconsin Department of Transportation

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