SEL

JULY 2014

ORDER OF SHEETS

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

TOTAL SHEETS = 130

14

N

DESIGN DESIGNATION

A.A.D.T.	2013	=	8,700
A.A.D.T.	2033	=	9,600
D.H.V.	2033	=	1,000
D.D.		=	58/42
T.		=	3.6%
DESIGN SPEED		=	35 MPH
ESALS		=	744,600

CONVENTIONAL SYMBOLS

COUNTY LINE
CORPORATE LIMITS
PROPERTY LINE
LIMITED EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
FENCE
GUARD RAIL
SLOPE INTERCEPT
ORIGINAL GROUND
MARSH OR ROCK PROFILE (To be noted as such) — ROCK
MARSH AREA
WOODED OR SHRUB AREA
STREAM OR WATER EDGE
BUSH
PINE TREE (SIZE)
TREE (SIZE)
TRAFFIC SIGNAL CONTROL CABINET
TRAFFIC SIGNAL
TRAFFIC SIGNAL MAST-ARM
TRAFFIC SIGNAL WITH LIGHT
EXISTING PULL BOX
BOLLARD

COMBUSTIBLE FLUIDS
UNDERGROUND UTILITIES
GAS — (SIZE) G
SANITARY SEWER — (SIZE) SAN
STORM SEWER — (SIZE) SS
WATER — (SIZE) W
ELECTRIC — E
TELEPHONE — T
FIBER OPTIC — FO
CABLE TELEVISION — TV
FORCE MAIN — FM
MANHOLE — MH
UTILITY PEDESTAL
FIBER OPTIC HAND HOLE — HH
POWER POLE
TELEPHONE POLE
RAILROAD
HYDRANT
LIGHT POLE
RAILROAD SIGNAL
SIGN
TRANSMISSION TOWER
VALVE — (TYPE)
CURB STOP — CS
EXISTING CULVERT — (SIZE, TYPE)
PROPOSED CULVERT (Box or Pipe)

PROJECT ID: 2160-14-70

WITH: N/A

COUNTY: MILWAUKEE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

S 76TH STREET

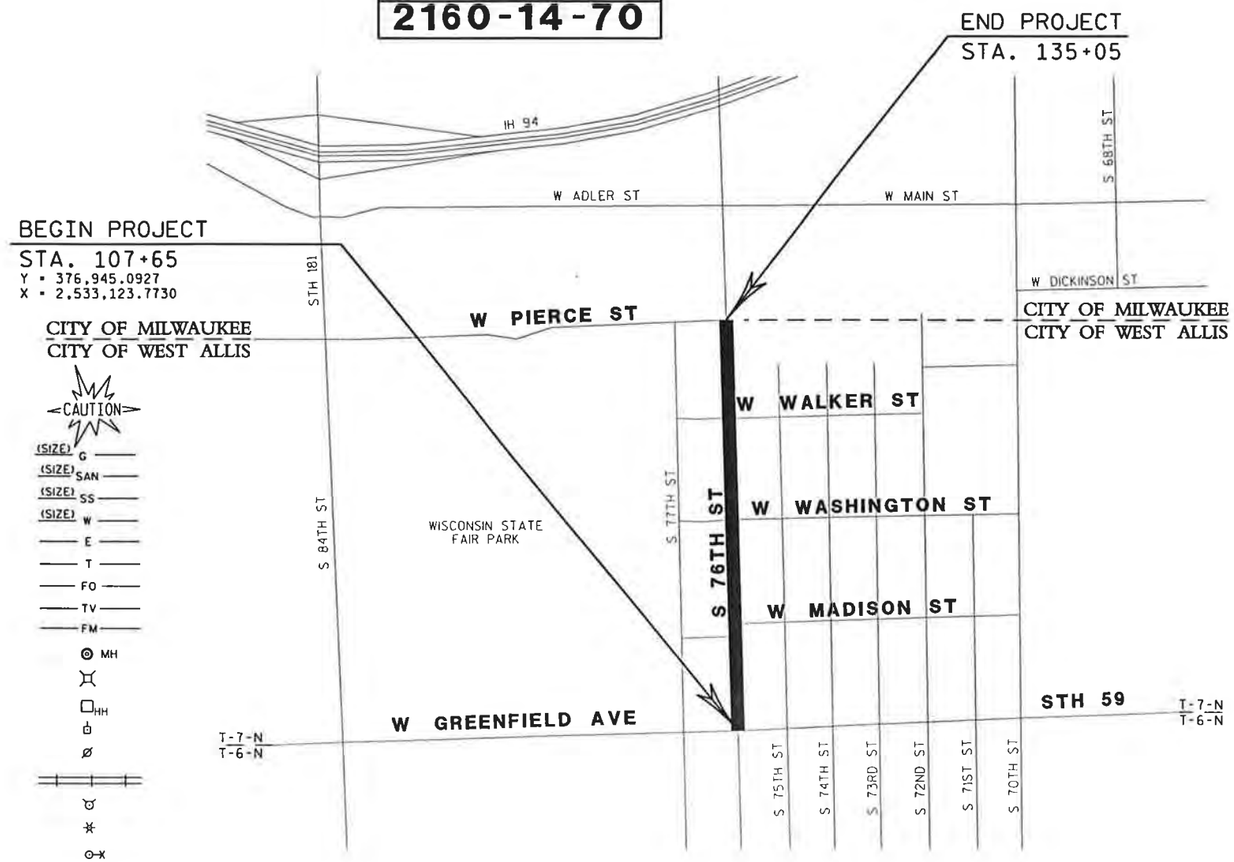
W GREENFIELD AVE TO W PIERCE ST

LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2160-14-70	WISC 2014265	1

STATE PROJECT NUMBER
2160-14-70



LAYOUT
SCALE 0 500 FT.

TOTAL NET LENGTH OF CENTERLINE = 0.519 MI. (URBAN)

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WCCS), GROUND, SOUTH ZONE (NAD 1927).

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE CITY OF WEST ALLIS VERTICAL DATUM. TO CONVERT TO NGVD 1929, ADD 580.56 TO ELEVATIONS IN THIS PLAN.

ACCEPTED FOR
CITY of WEST ALLIS
1/28/2014 DPW/City Engineer
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
R.A. Smith National
Beyond Surveying and Engineering
16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

WISCONSIN
JOHN A. ELKIN
E-27876
BROOKFIELD
WI
PROFESSIONAL ENGINEER

1/27/14 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GAK/R.A. SMITH NATIONAL
Designer	AJZ/DGW/R.A. SMITH NATIONAL
Management Consultant	DAAR ENGINEERING
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 1/28/2014 (Management Consultant Signature)

E

FILE NAME : K:\1102714\Cadd\sheets\COVER\010101_ti.DGN PLOT DATE : 1/27/2014 PLOT BY : wdw PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 10

2

STANDARD ABBREVIATIONS

AP	ACCESS POINT
AC	ACRE
ADJ	ADJUST
AECPRC	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE
AH	AHEAD
ASPH	ASPHALTIC
ACP	ASPHALTIC CONCRETE PAVEMENT
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CB	CATCH BASIN
C/L	CENTER LINE
C/L CONST	CENTER LINE CONSTRUCTION
△	CENTRAL ANGLE OR DELTA
CL	CLASS
CONC	CONCRETE
CONST	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CTH	COUNTY TRUNK HIGHWAY
CABC	CRUSHED AGGREGATE BASE COURSE
CFS	CUBIC FEET PER SECOND
CY	CUBIC YARD
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
EL	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FPS	FEET PER SECOND
FERT	FERTILIZE
FE	FIELD ENTRANCE
FL	FLOW LINE
FT	FOOT
GN	GRID NORTH
HES	HIGH EARLY STRENGTH
HP	HIGH POINT
HW	HIGH WATER
HMA	HOT MIX ASPHALT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
INV	INVERT
IP	IRON PIPE OR PIN
JT	JOINT
LT	LEFT
L	LENGTH OF CURVE
LF	LINEAR FOOT
LP	LOW POINT
LS	LUMP SUM
MH	MANHOLE
MAX	MAXIMUM
Mgal	MEGAGALLON
MPH	MILES PER HOUR
MIN	MINIMUM
MON	MONUMENT
NOM	NOMINAL
NC	NORMAL CROWN
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OPT	OPTIONAL
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PACS	PIPE ARCH CORRUGATED STEEL
PT	POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PL	PROPERTY LINE
Q100	100-YEAR FLOW RATE
R	RADIUS
RR	RAILROAD
R	RANGE
R/L	REFERENCE LINE
REINF	REINFORCING OR REINFORCEMENT
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
SEC	SECTION
SHLDR	SHOULDER
S	SOUTH
SB	SOUTHBOUND
SQ	SQUARE
SF	SQUARE FEET
SW	SIDEWALK
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
ST	STREET
STR	STRUCTURE OR STRUCTURAL
SE	SUPERELEVATION
T	TANGENT
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TEMPORARY LIMITED EASEMENT
t	TON
T	TOWN
T/L	TRANSIT LINE
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
V	VELOCITY OF DESIGN SPEED
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

GENERAL NOTES

1. NO SHRUBS OR TREES ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
2. EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.
3. ALL OPENINGS OF HOLES BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. GRANULAR BACKFILL SHALL BE INCIDENTAL TO THE REMOVAL ITEM.
4. STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
5. THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LB/SY/IN.
6. HMA PAVEMENT TYPE E-1 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

		NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
4-INCH	ONE 1.75" UPPER LAYER	9.5 mm	PG 64-22
	ONE 2.25" LOWER LAYER	19.0 mm	PG 64-22

7. SEE SUBSURFACE EXPLORATION REPORTS FROM GILES ENGINEERING ASSOCIATES, WAUKESHA. REPORTS ARE AVAILABLE FROM DAAR ENGINEERING AT 414-225-9817.
8. CURB AND GUTTER STATION/OFFSETS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
9. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
10. THE LOCATIONS OF CURB & GUTTER, SIDEWALK, AND DRIVEWAY REMOVALS ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
11. EXISTING R/W LINES SHOWN FROM GIS DATA PROVIDED BY MILWAUKEE COUNTY.
12. CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE AND ALL UTILITIES LISTED BELOW TO VERIFY UTILITY WORK STATUS PRIOR TO BIDDING.
13. CONTACT SEWRPC PRIOR TO CONSTRUCTION TO COORDINATE THE PROTECTION, PRESERVATION AND RESTORATION OF THE LANDMARK MONUMENTS IN PROJECT LIMITS.
14. SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. THE MINIMUM GUTTER SLOPE AT THE FLOW LINE IS 0.5%. THE CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE IS +/-0.5%.

ORDER OF SECTION 2 SHEETS

CORING LOG SUMMARY (APPROXIMATE LOCATIONS)

STATION	OFFSET	EXISTING CONCRETE THICKNESS (IN)	EXISTING BASE THICKNESS (IN)
109+72	0' LT	8	5
111+06	12' RT	6	2
113+91	23' LT	7	5
116+12	13' RT	8	3
118+24	11' LT	7	6
120+83	24' RT	8	3
123+35	12' LT	7	4
126+12	13' RT	8	8
127+68	10' LT	8	4
129+76	10' RT	2*	7
130+90	11' LT	7	7
133+81	10' RT	8	7

*ASPHALT PAVEMENT

UTILITIES

ELECTRIC
WE ENERGIES
500 S. 116TH STREET
WEST ALLIS, WI 53214
MR. BRYAN STOEHR
(414) 944-5516
bryan.stoehr@we-energies.com

GAS
WE ENERGIES
2425 S. 35TH STREET
MILWAUKEE, WI 53215
MR. NATHAN SCHKERYANTZ
(414) 389-4373

STORM SEWER* / SANITARY SEWER* / WATER
CITY OF WEST ALLIS
7525 W. GREENFIELD AVENUE
WEST ALLIS, WI 53214
MR. PETER DANIELS, PRINCIPAL ENGINEER
(414) 302-8374
pdaniels@westalliswi.gov

TELEPHONE/FIBER OPTIC
TDS TELECOM
20875 CROSSROADS CIRCLE
WAUKESHA, WI 53186
MR. MICHAEL JOHNSON
(262) 754-3052
michael.johnson@tdstelecom.com

CABLE TV
TIME WARNER CABLE
1320 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
MR. LUKAS LACROSSE
(414) 908-4766
lukas.lacrosse@twcable.com

TELEPHONE/FIBER OPTIC
AT&T WISCONSIN
7721 W FOND DU LAC AVE
MILWAUKEE, WI 53218-2602
MR. JAY BULANEK
(414) 535-7407
jb5175@att.com

WINDSTREAM (PAETEC)
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
MR. JIM KOSTUCH
(262) 792-7938
james.kostuch@windstream.com

*NOT A MEMBER OF DIGGERS HOTLINE

DESIGNER CONTACT

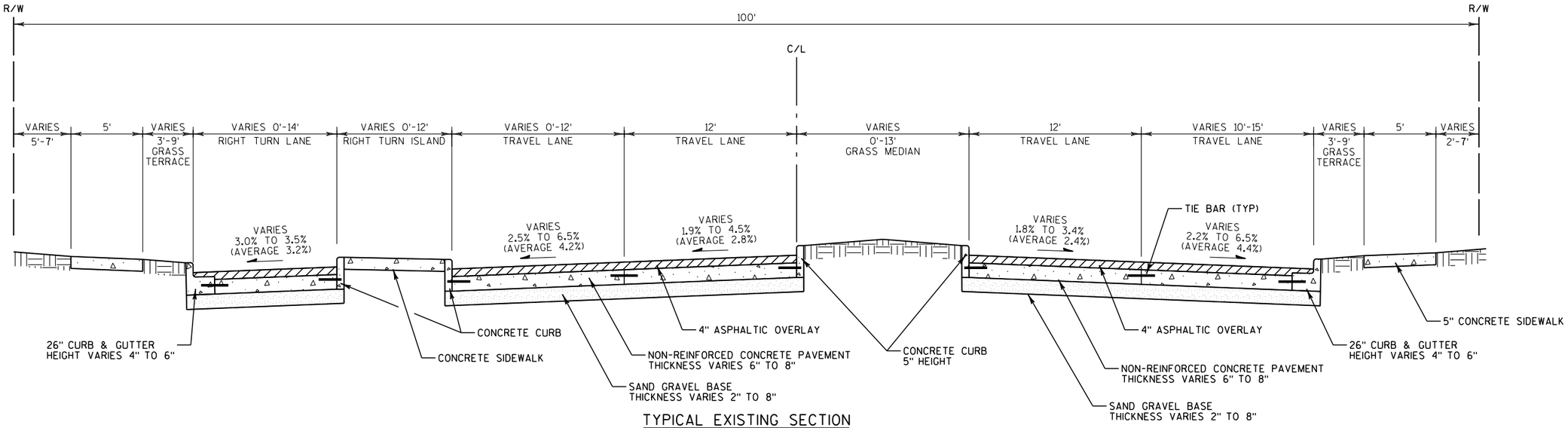
R.A. SMITH NATIONAL
16745 W BLUEMOUND ROAD, SUITE 200
BROOKFIELD, WI 53005
MR. JOHN ELKIN, P.E.
PROJECT MANAGER
(262) 317-3312
john.elkin@rasmithnational.com

DNR LIASON

WISCONSIN DEPT OF NATURAL RESOURCES
2300 NORTH DR. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
MS. KRISTINA BETZOLD
PHONE: (414) 263-8517
Kristina.Betzold@Wisconsin.gov

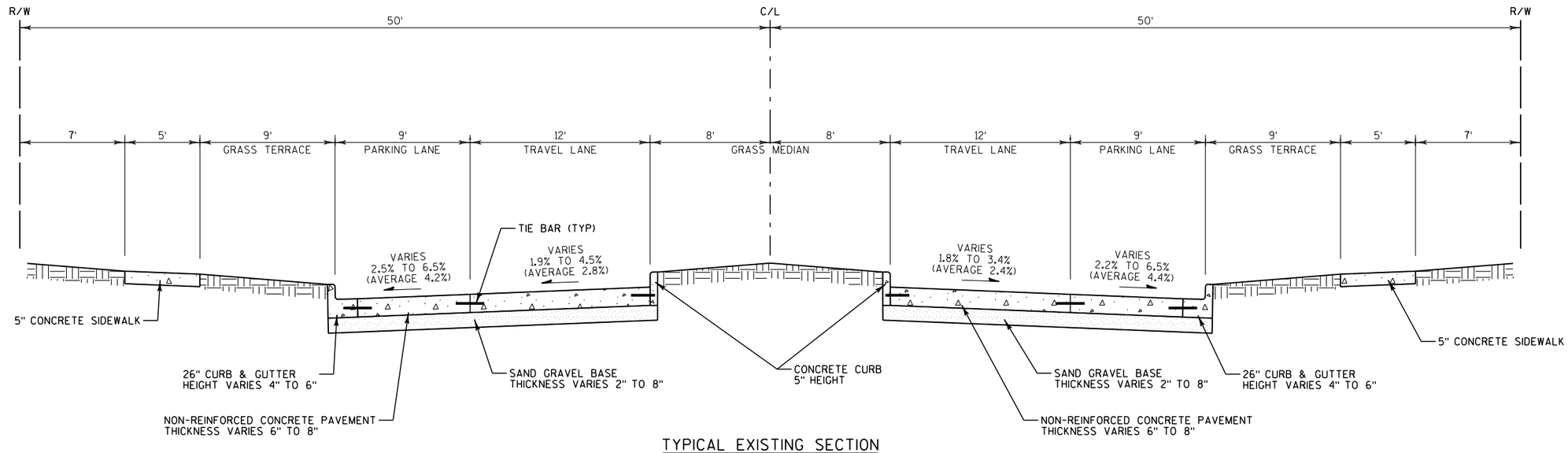
OTHER CONTACTS

MILWAUKEE COUNTY TRANSIT SYSTEM
1942 NORTH 17TH STREET
MILWAUKEE, WI 53205
MR. DAVE ZIAREK
(414) 343-1764



TYPICAL EXISTING SECTION
SOUTH 76TH STREET

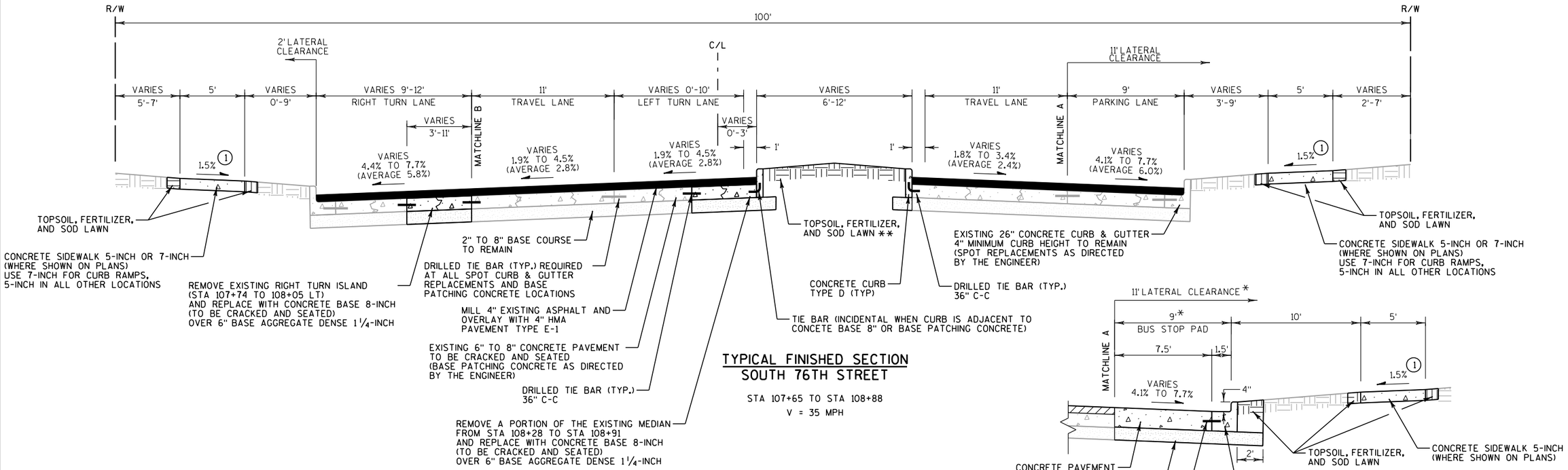
STA 107+65 TO STA 108+88



TYPICAL EXISTING SECTION
SOUTH 76TH STREET

STA 108+88 TO STA 135+05

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 3	E



TYPICAL FINISHED SECTION SOUTH 76TH STREET

STA 107+65 TO STA 108+88

V = 35 MPH

BUS STOP PAD DETAIL

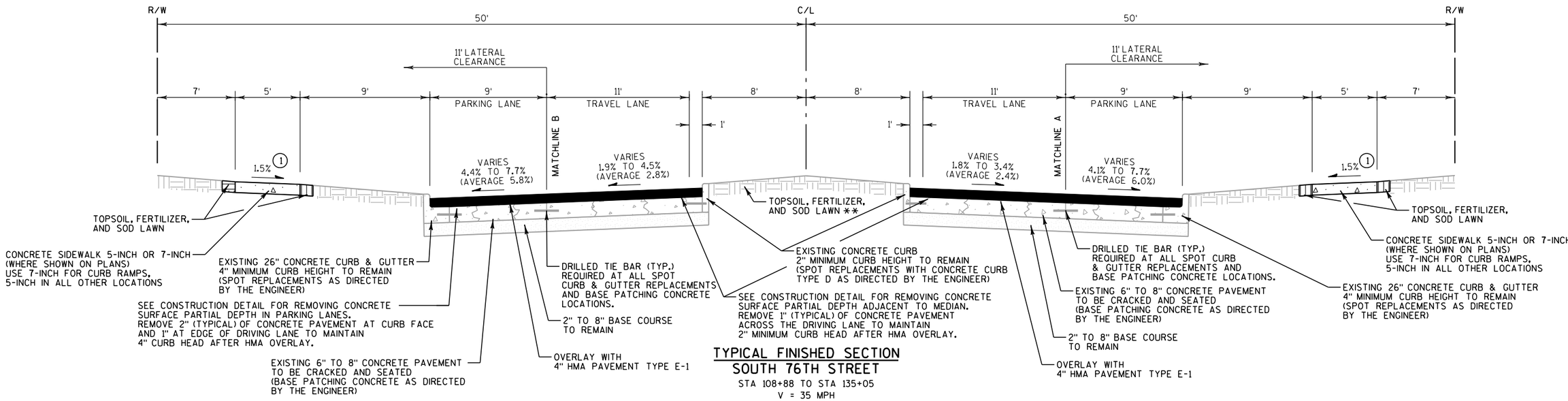
(MATCHLINE B IS A MIRROR IMAGE)

STA 107+90 TO STA 108+70 LT
STA 113+67 TO STA 114+47 LT
STA 113+18 TO STA 113+98 RT
STA 133+27 TO STA 134+07 LT & RT

(1) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE.

* 12' BUS STOP PAD AND 14' LATERAL CLEARANCE STA 107+90 TO STA 108+70 LT

** WHERE DISTURBED BY CONSTRUCTION, TYPICAL

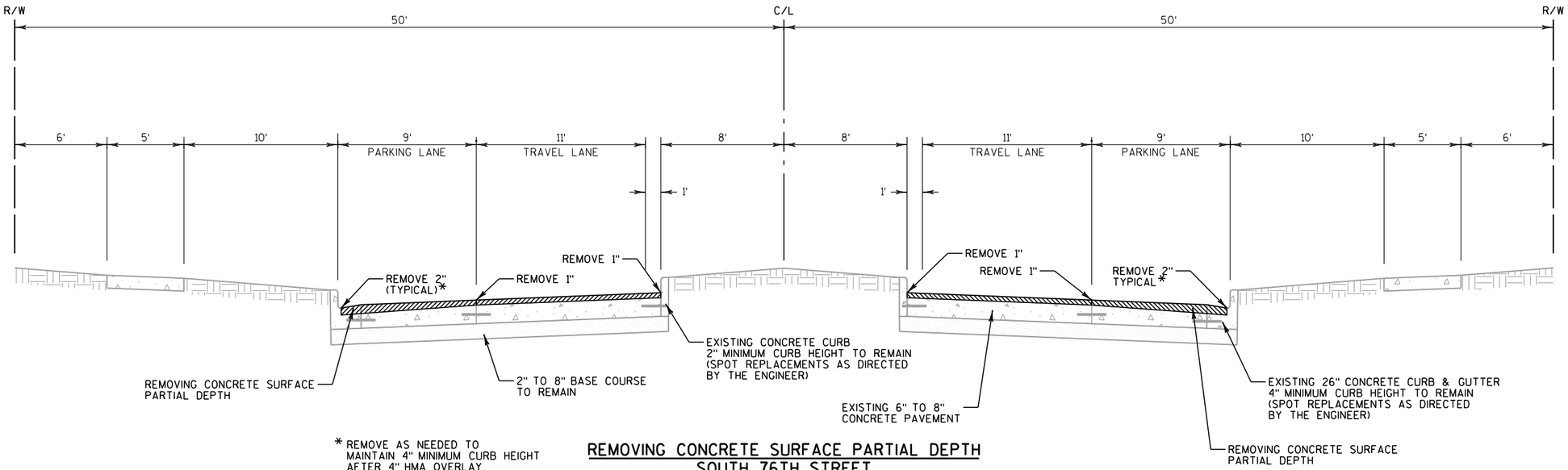


TYPICAL FINISHED SECTION SOUTH 76TH STREET

STA 108+88 TO STA 135+05

V = 35 MPH

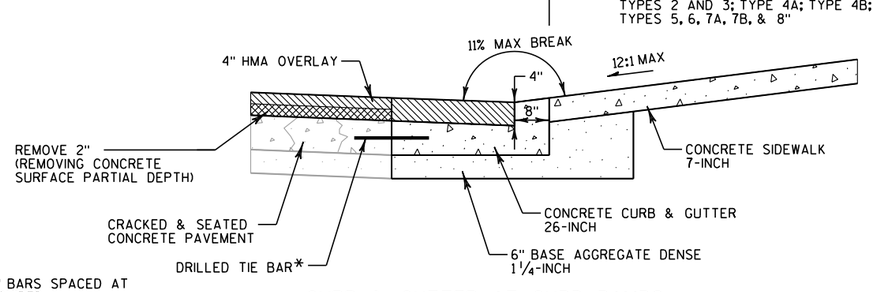
PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 4	E



* REMOVE AS NEEDED TO MAINTAIN 4" MINIMUM CURB HEIGHT AFTER 4" HMA OVERLAY (AS DIRECTED BY THE ENGINEER)

REMOVING CONCRETE SURFACE PARTIAL DEPTH
SOUTH 76TH STREET

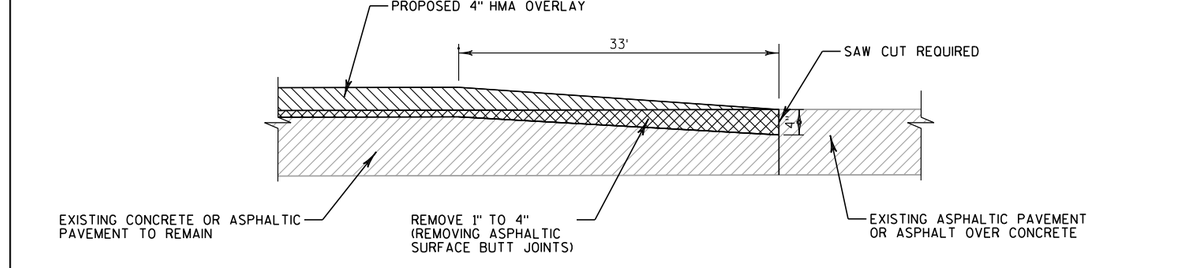
STA 108+88 TO STA 134+55



* NO 4 X 2'-0" BARS SPACED AT 3'-0" C-C REQUIRED (INCIDENTAL WHEN NEW C&G IS ADJACENT TO BUS STOP PADS, CONCRETE BASE 8-INCH, OR BASE PATCHING CONCRETE LOCATIONS)

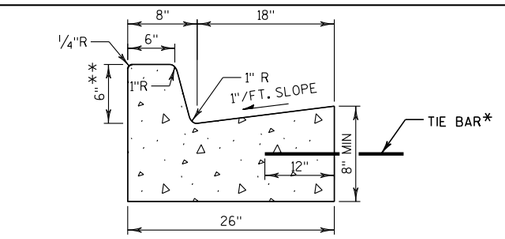
CURB & GUTTER AT CURB RAMPS

REQUIRED FOR ALL CURB RAMPS
(EXACT LIMITS OF CURB & GUTTER REPLACEMENT TO BE DETERMINED BY THE ENGINEER)



ASPHALT BUTT JOINT DETAIL

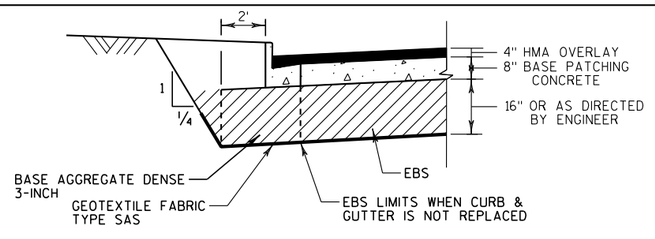
W WASHINGTON STREET (RT ONLY)



* NO 4 X 2'-0" BARS SPACED AT 3'-0" C-C REQUIRED (INCIDENTAL WHEN NEW C&G IS ADJACENT TO BUS STOP PADS, CONCRETE BASE 8-INCH, OR BASE PATCHING CONCRETE LOCATIONS)

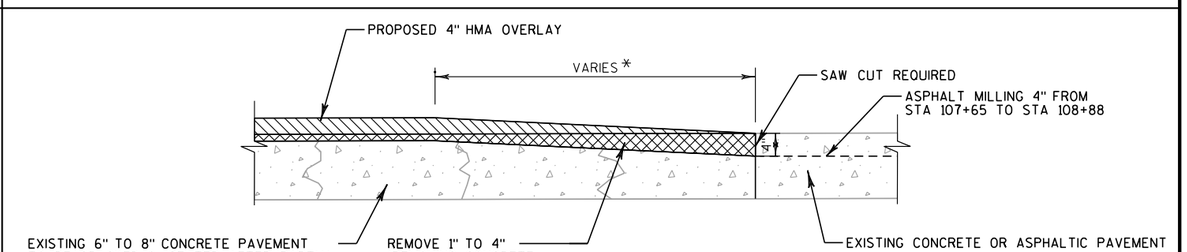
** 4" WHEN ADJACENT TO BUS STOP PADS

CURB & GUTTER 26-INCH DETAIL



NOTES:
1. USE AS DIRECTED BY ENGINEER FOR AREAS OF UNSTABLE SUBGRADE ENCOUNTERED DURING CRACKING & SEATING OR BASE PATCHING.
2. AFTER BACKFILLING EBS AREAS, POUR CONCRETE BASE PATCH FLUSH WITH ADJACENT CONCRETE SURFACE.
3. CRACK & SEAT CONCRETE BASE PATCHES AFTER CURING IN PREPARATION FOR 4" HMA OVERLAY.

EXCAVATION BELOW SUBGRADE (EBS)

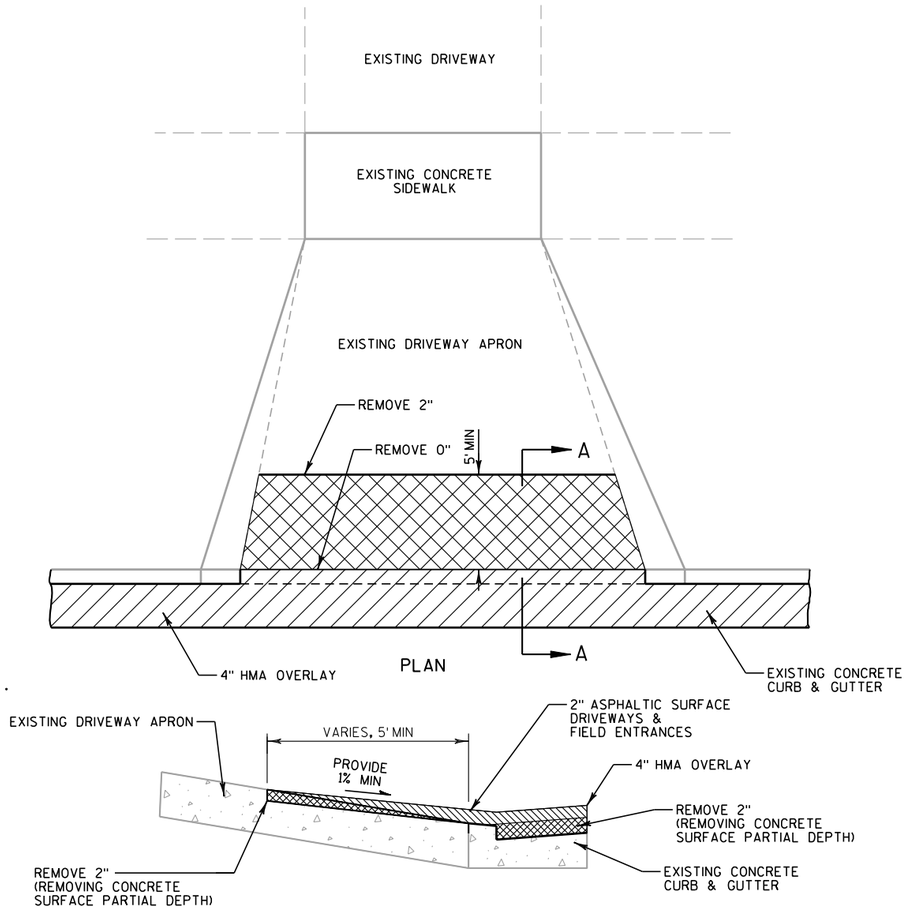


CONCRETE BUTT JOINT DETAIL

W MADISON STREET (LT & RT)
W WASHINGTON STREET (LT ONLY)
W WALKER STREET (LT & RT)
W PIERCE STREET (LT ONLY)
STA 108+88 TO STA 109+38 (LT & RT)
STA 134+55 TO STA 135+05 (LT & RT)

* SEE PLAN SHEETS FOR LENGTHS

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE, FEET 0 NTS	SHEET 5	E

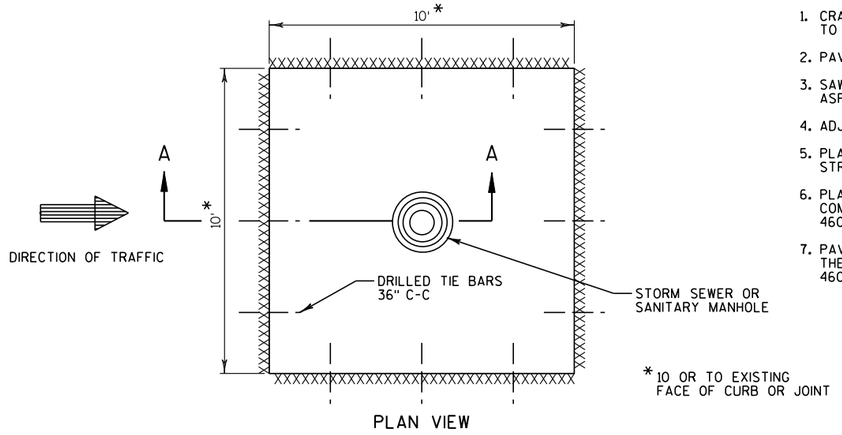


PLAN

SECTION A-A

DRIVEWAY BUTT JOINT DETAIL

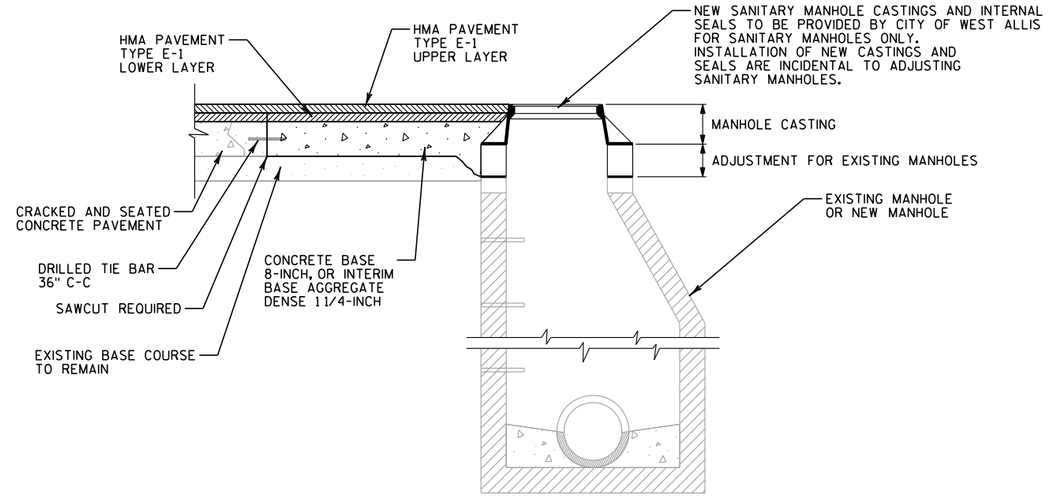
REQUIRED FOR ALL DRIVEWAYS



PLAN VIEW

ADJUSTMENT PROCEDURE

1. CRACK AND SEAT EXISTING CONCRETE PAVEMENT TO WITHIN 5' OF MANHOLES.
2. PAVE LOWER LAYER OF HMA PAVEMENT TYPE E-1.
3. SAWCUT 10' X 10' SQUARE AROUND MANHOLE AND REMOVE ASPHALT AND EXISTING CONCRETE PAVEMENT.
4. ADJUST MANHOLE FRAME TO FINISHED GRADE.
5. PLACE CONCRETE BASE. CURE UNTIL A VERIFIED COMPRESSIVE STRENGTH OF 2700 PSI IS ATTAINED.
6. PLACE LOWER LAYER OF HMA PAVEMENT OVER THE CONCRETE BASE. COMPACT WITH A SELF-PROPELLED PNEUMATIC ROLLER (PAID UNDER ITEM 460.1101 HMA PAVEMENT TYPE E-1).
7. PAVE UPPER LAYER OF HMA PAVEMENT CONTINUOUSLY WITH THE REMAINDER OF THE ROADWAY (PAID UNDER ITEM 460.1101 HMA PAVEMENT TYPE E-1).



SECTION A-A

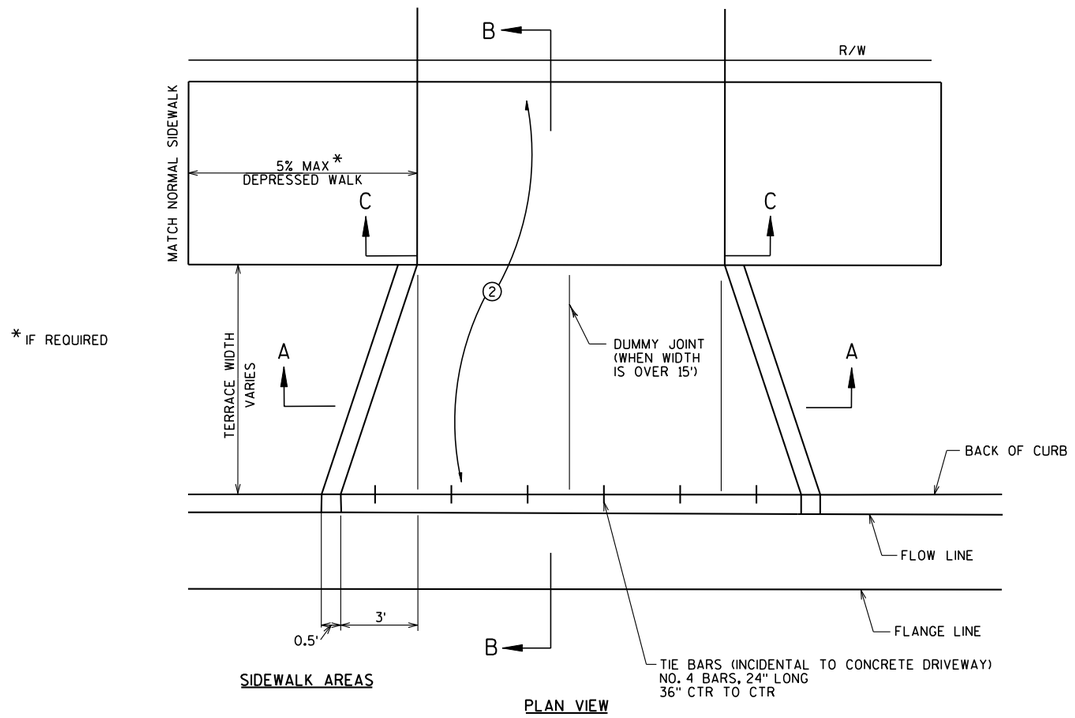
MANHOLE COVER PLACEMENT DETAIL

FOR ADJUSTING MANHOLE COVERS AND ALL NEW MANHOLE COVERS

CONTROL POINT TABLE

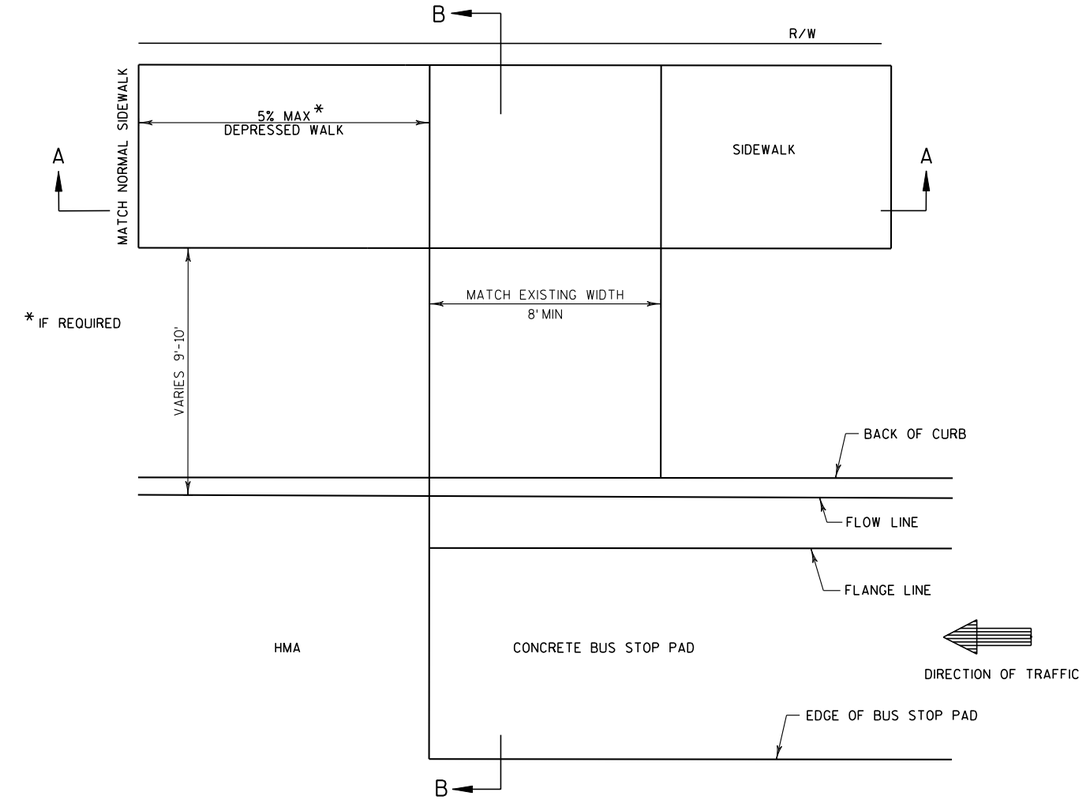
NAME	STA/OFFSET	ELEVATION	DESCRIPTION	N	E
CP3	108+69.94 0.02'	146.37	BRASS CAP WITNESS MON.	377048.80	2533109.34
CP1	113+96.94 33.07'	138.07	SET CROSS IN CONC. AT BUS STOP	377576.21	2533135.11
CP4	128+43.86 3.48'	134.02	SET CROSS IN CONC. MEDIAN TIP	379022.59	2533085.44
CP6	135+07.55 0.40'	129.96	SECTION CORNER CONC. MON. W/ BRASS CAP	379686.16	2533072.75

SEE PLAN SHEETS FOR CONTROL POINT LOCATIONS.

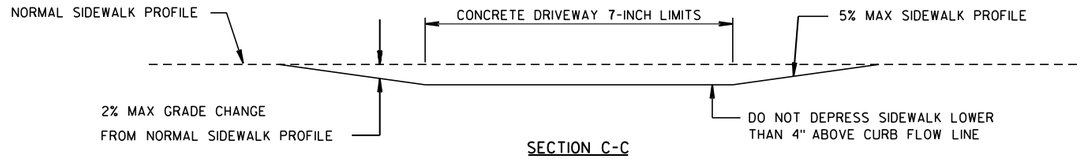


SIDEWALK AREAS

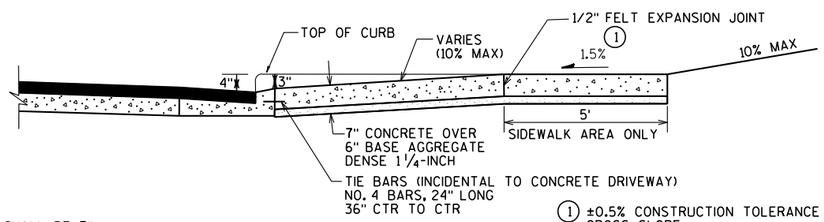
PLAN VIEW



PLAN VIEW



SECTION C-C

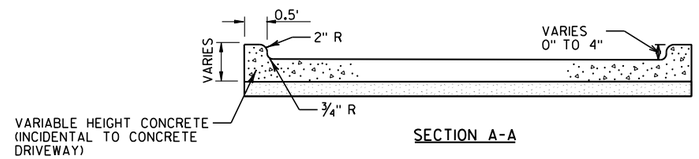


SECTION B-B

NOTES:

(2) ALL DRIVEWAY APPROACHES SHALL BE 7" CONCRETE ON 6" BASE AGGREGATE DENSE 1 1/4-INCH.

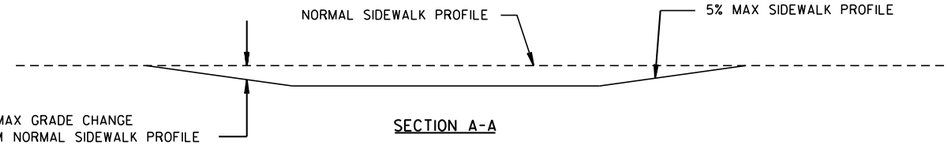
(1) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE.



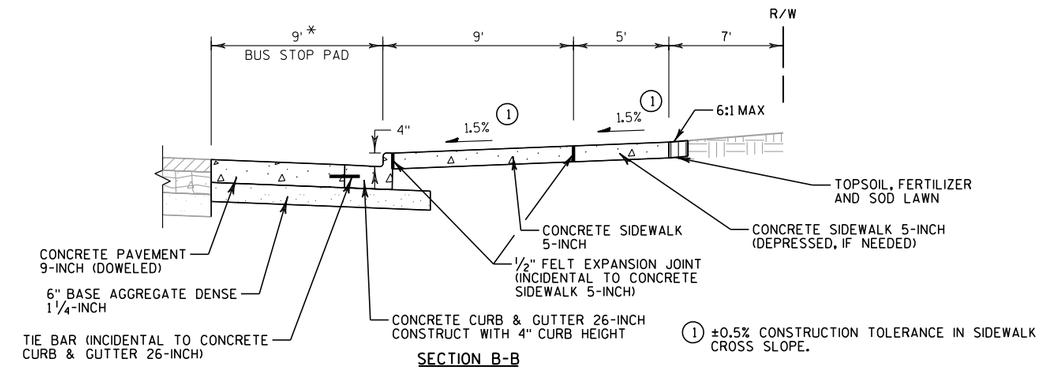
SECTION A-A

DRIVEWAY REPLACEMENT DETAIL

STA 108+10 TO STA 108+45 LT
STA 108+43 TO STA 108+66 LT
STA 109+50 RT
STA 134+52 TO STA 135+08 RT



SECTION A-A



SECTION B-B

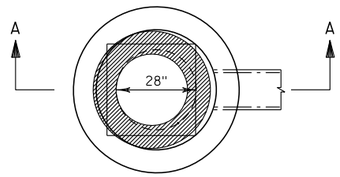
(1) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE.

BUS STOP LANDING DETAIL

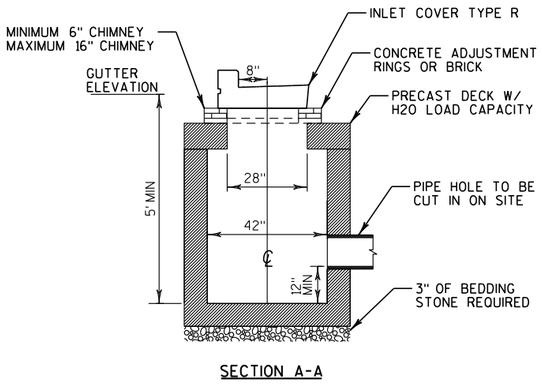
STA 107+90 TO STA 108+14 LT
STA 113+67 TO STA 113+77 LT
STA 113+88 TO STA 113+98 RT
STA 133+27 TO STA 133+42 LT
STA 133+82 TO STA 134+07 RT

* 12' STA 107+90 TO STA 108+70 LT

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE, FEET 0 NTS	SHEET 7	E



PLAN VIEW



SECTION A-A

CATCH BASIN DETAIL

ANY TREE TAGS OR RIBBONS ON TREE SHALL BE REMOVED.

BROKEN BRANCHES SHALL BE REMOVED

BUD/GRAFT UNION. USE TO LOCATE THE ROOT FLARE ON BALLED AND BURLAPPED TREES. ESTIMATE ROOT FLARE AT 6" BELOW THE BUD/GRAFT UNION.

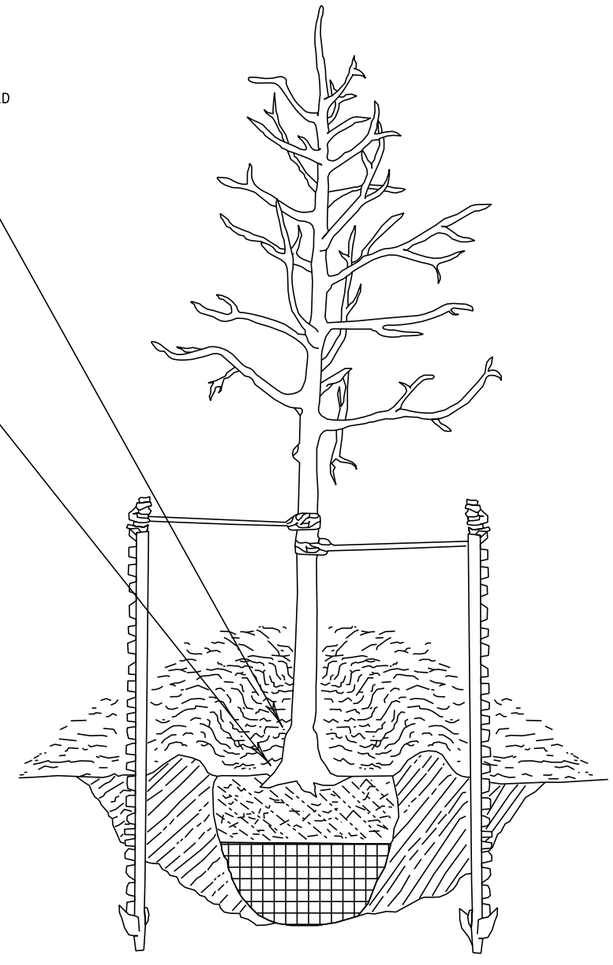
ROOT FLARE MUST BE EXPOSED AND SLIGHTLY ABOVE THE FINISHED GRADE. NO FILL SHOULD BE PLACED ON TOP OF THE ROOT BALL.

WITH THE TREE IN THE UPRIGHT POSITION, CUT OPENINGS INTO THE BURLAP ON TOP OF BALL TO SHOW THE LOCATION OF THE ROOT FLARE. MEASURE FROM BOTTOM OF BALL TO ROOT FLARE TO DETERMINE DEPTH OF PLANTING HOLE.

GLAZED SOIL ON SIDE OF PLANTING HOLE SHALL BEBROKEN UP.

FLARE THE PLANTING HOLE EDGES IN ALL SOILS.

REMOVE THE BOTTOM HALF OF THE WIRE BASKET, LEAVING THE BURLAP INTACT. SET THE BALL IN THE HOLE AT THE PROPER DEPTH PREVIOUSLY ESTABLISHED. PLACE 6" TO 10" OF SOIL AROUND THE BALL TO STABILIZE IT. THEN REMOVE THE REMAINING WIRE BASKET AND BURLAP ABOVE THE SOIL JUST ADDED.



PLANTING BASE UNDER ROOT BALL SHALL BE UNDISTURBED. IF THE HOLE IS TOO DEEP, COMPACT FILL BENEATH THE TREE.

GUYING CONSISTS OF STRAPS ATTACHED WITH WIRE. SPACE STRAPS SEVERAL INCHES APART WHERE POSSIBLE. DO NOT OVER TIGHTEN. THE TREE SHOULD BE ABLE TO MOVE SLIGHTLY.

TWISTED WIRE SHALL BE BENT BACK TO AVOID INJURY. METAL 'T' POST STAKES ARE PARALLEL TO THE TRUNK AND INSTALLED OUTSIDE THE ROOT BALL WITH THE FLANGES FACING OUT.

MULCH IS PLACED OVER SOIL 4" THICK, NO DEEPER THAN 1" DEEP NEXT TO THE TRUNK AND DISHED AWAY.

WATER THOROUGHLY

PLANTING DETAIL

NOTE:

CONTRACTOR TO VERIFY ALL ELEVATIONS PRIOR TO MEDIAN CONSTRUCTION

ELEVATIONS SHOWN FOR CURB AND GUTTER FLOW LINE ARE FINISHED GRADE ELEVATION AFTER MILL AND OVERLAY

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

SEE OTHER CONSTRUCTION DETAILS FOR CURB RAMPS

N

W. GREENFIELD AVE

S 76TH ST

S 76TH STREET C/L

BS

CA08

RC

RP

SC

SOD

CCD

CSO1

+00, 0.2' RT
FLOW 148.15
TOC 148.32

108

+00, 9.2' RT
FLOW 148.01
TOC 148.18

PT:
+00.8, 9.3' RT
FLOW 147.99
TOC 148.16

+25, 1.6' RT
FLOW 147.50
TOC 147.67

+25, 11.4' RT
FLOW 147.31
TOC 147.48

+50, 3.4' RT
FLOW 146.90
TOC 147.07

+50, 13.1' RT
FLOW 146.70
TOC 146.87

+75, 3.0' RT
FLOW 146.29
TOC 146.46

PT:
+72.0, 3.0' RT
FLOW 146.36
TOC 146.53

+75, 11.2' RT
FLOW 146.11
TOC 146.28

PI:
+00, 3.0' RT
FLOW 145.59
TOC 145.76

109

+00, 9.4' RT
FLOW 145.59
TOC 145.76

+25, 0.5' RT
FLOW 144.97
TOC 145.14

PI:
+19.7, 8.0' RT
FLOW 145.09
TOC 145.26

+25, 8.0' RT
FLOW 144.96
TOC 145.13

+50, 2.0' LT
FLOW 144.40
TOC 144.57

+50, 8.0' RT
FLOW 144.37
TOC 144.54

+75, 4.5' LT
FLOW 143.79
TOC 143.96

+75, 8.0' RT
FLOW 143.88
TOC 144.05

PI:
+09.8, 8.0' LT
FLOW 142.96
TOC 143.13

+00, 7.0' LT
FLOW 143.20
TOC 143.37

110

+00, 8.0' RT
FLOW 143.30
TOC 143.47

+25, 8.0' LT
FLOW 142.59
TOC 142.76

+25, 8.0' RT
FLOW 142.68
TOC 142.85

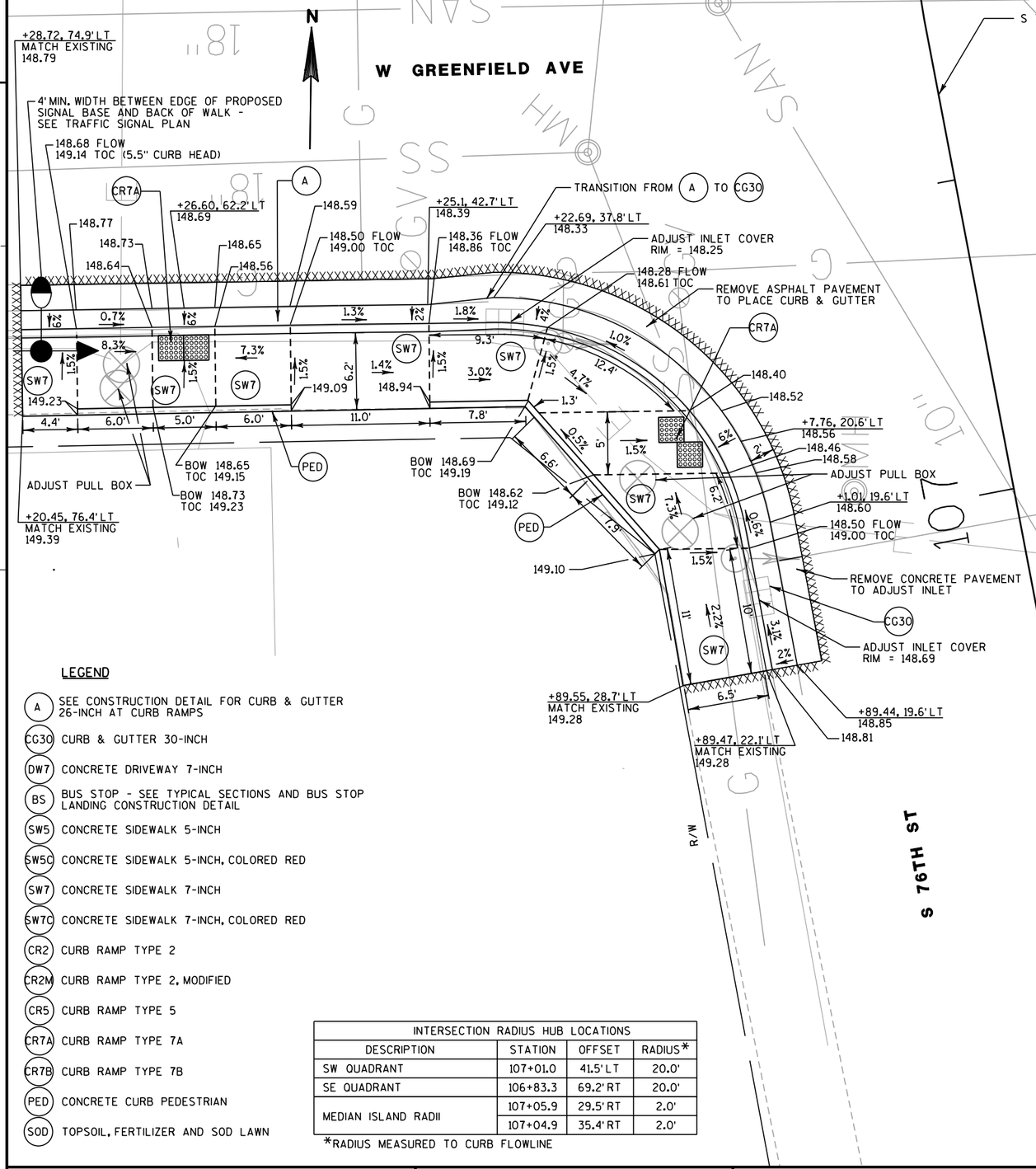
+50, 8.0' LT
FLOW 142.02
TOC 142.19

SEE OTHER CONSTRUCTION DETAILS FOR CURB RAMPS

LEGEND

RC	REMOVING CURB
RP	REMOVING PAVEMENT
CA08	CONCRETE BASE 8-INCH
CCD	CONCRETE CURB TYPE D
BS	BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
CSO1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
SC	SAWING CONCRETE
SOD	TOPSOIL, FERTILIZER AND SOD LAWN

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - S 76TH ST MEDIAN RECONSTRUCTION	SHEET 9 E



LEGEND

A	SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS
CG30	CURB & GUTTER 30-INCH
DW7	CONCRETE DRIVEWAY 7-INCH
BS	BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
SW5	CONCRETE SIDEWALK 5-INCH
SW5C	CONCRETE SIDEWALK 5-INCH, COLORED RED
SW7	CONCRETE SIDEWALK 7-INCH
SW7C	CONCRETE SIDEWALK 7-INCH, COLORED RED
CR2	CURB RAMP TYPE 2
CR2M	CURB RAMP TYPE 2, MODIFIED
CR5	CURB RAMP TYPE 5
CR7A	CURB RAMP TYPE 7A
CR7B	CURB RAMP TYPE 7B
PED	CONCRETE CURB PEDESTRIAN
SOD	TOPSOIL, FERTILIZER AND SOD LAWN

INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
SW QUADRANT	107+01.0	41.5' LT	20.0'
SE QUADRANT	106+83.3	69.2' RT	20.0'
MEDIAN ISLAND RADII	107+05.9	29.5' RT	2.0'
	107+04.9	35.4' RT	2.0'

*RADIUS MEASURED TO CURB FLOWLINE

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

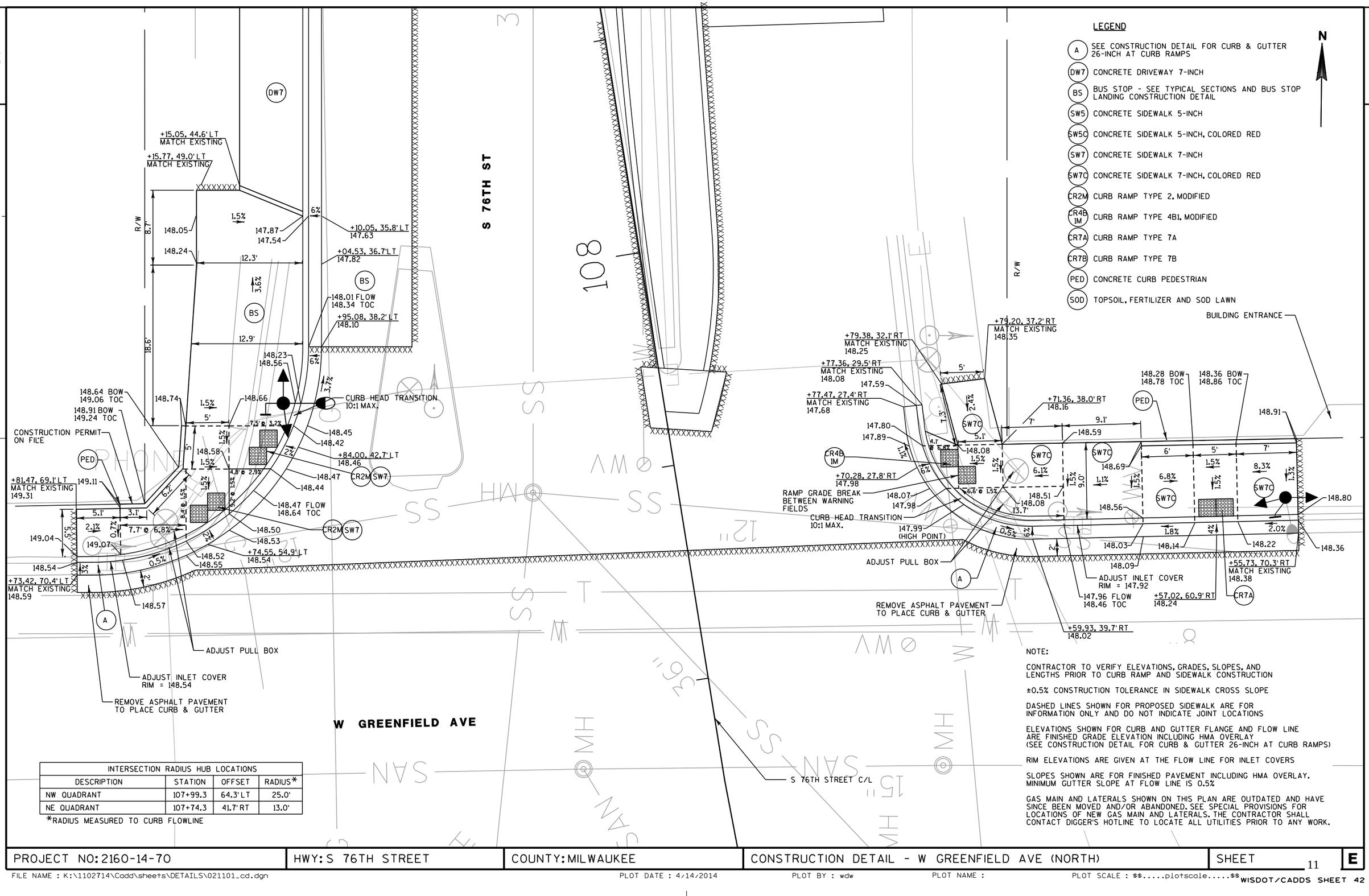
ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W GREENFIELD AVE (SOUTH)	SHEET 10	E



INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
NW QUADRANT	107+99.3	64.3' LT	25.0'
NE QUADRANT	107+74.3	41.7' RT	13.0'

*RADIUS MEASURED TO CURB FLOWLINE

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

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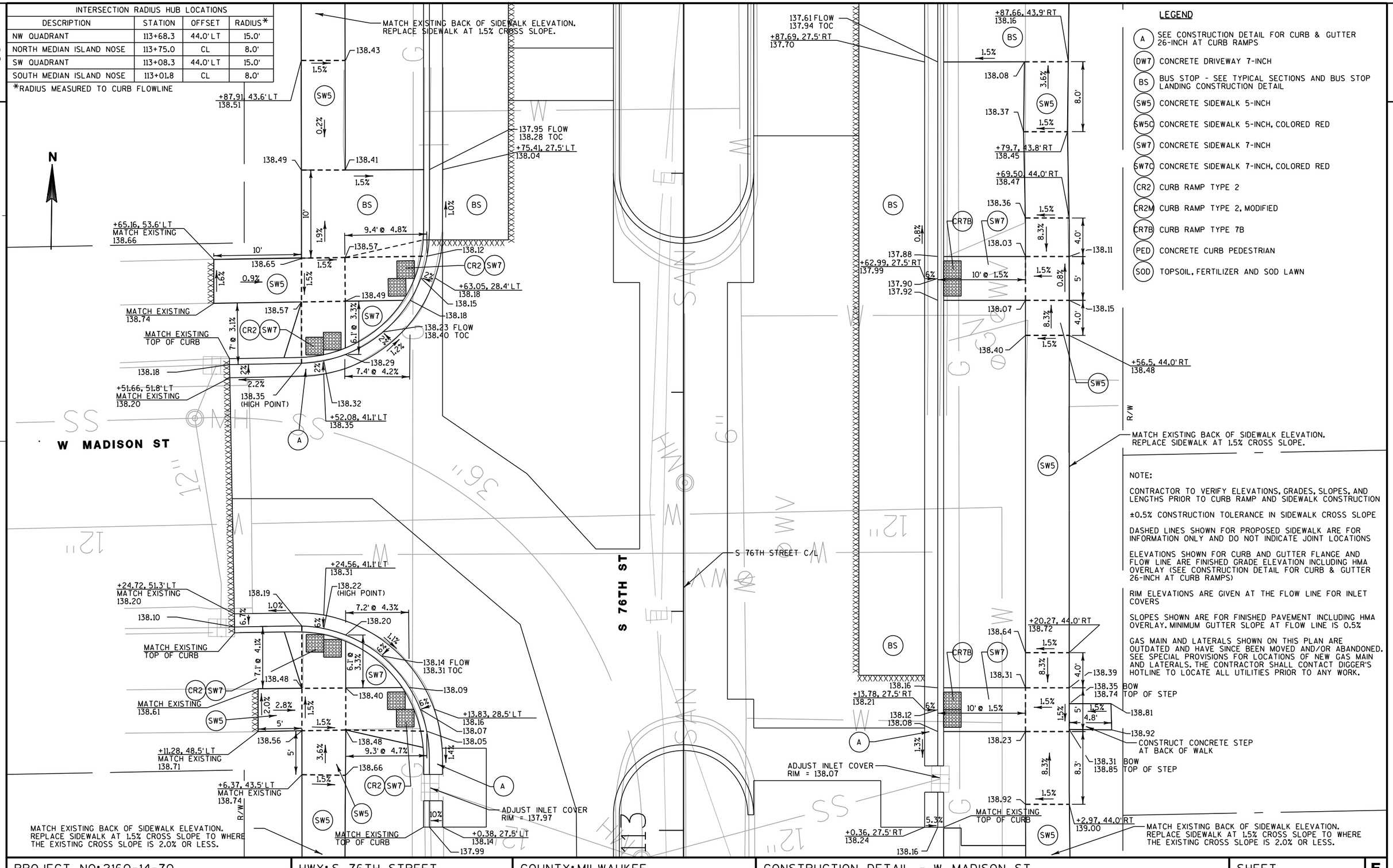
PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W GREENFIELD AVE (NORTH)	SHEET 11	E

INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
NW QUADRANT	113+68.3	44.0' LT	15.0'
NORTH MEDIAN ISLAND NOSE	113+75.0	CL	8.0'
SW QUADRANT	113+08.3	44.0' LT	15.0'
SOUTH MEDIAN ISLAND NOSE	113+01.8	CL	8.0'

*RADIUS MEASURED TO CURB FLOWLINE



LEGEND

A	SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS
DW7	CONCRETE DRIVEWAY 7-INCH
BS	BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
SW5	CONCRETE SIDEWALK 5-INCH
SW5C	CONCRETE SIDEWALK 5-INCH, COLORED RED
SW7	CONCRETE SIDEWALK 7-INCH
SW7C	CONCRETE SIDEWALK 7-INCH, COLORED RED
CR2	CURB RAMP TYPE 2
CR2M	CURB RAMP TYPE 2, MODIFIED
CR7B	CURB RAMP TYPE 7B
PED	CONCRETE CURB PEDESTRIAN
SOD	TOPSOIL, FERTILIZER AND SOD LAWN

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W MADISON ST	SHEET 12 E

2

INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
NORTH MEDIAN ISLAND NOSE	114+67.7	CL	8.0'
NE QUADRANT	114+63.8	46.0' RT	17.0'
SE QUADRANT	114+00.7	46.0' RT	17.0'
SOUTH MEDIAN ISLAND NOSE	113+96.8	CL	8.0'

*RADIUS MEASURED TO CURB FLOWLINE

LEGEND

- (A) SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS
- (DW7) CONCRETE DRIVEWAY 7-INCH
- (BS) BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
- (SW5) CONCRETE SIDEWALK 5-INCH
- (SW5C) CONCRETE SIDEWALK 5-INCH, COLORED RED
- (SW7) CONCRETE SIDEWALK 7-INCH
- (SW7C) CONCRETE SIDEWALK 7-INCH, COLORED RED
- (CR2) CURB RAMP TYPE 2
- (CR2M) CURB RAMP TYPE 2, MODIFIED
- (CR7B) CURB RAMP TYPE 7B
- (PED) CONCRETE CURB PEDESTRIAN
- (SOD) TOPSOIL, FERTILIZER AND SOD LAWN

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

S 76TH STREET C/L

S 76TH ST

W MADISON ST

MATCH EXISTING BACK OF SIDEWALK ELEVATION. REPLACE SIDEWALK AT 1.5% CROSS SLOPE TO WHERE THE EXISTING CROSS SLOPE IS 2.0% OR LESS.

MATCH EXISTING BACK OF SIDEWALK ELEVATION. REPLACE SIDEWALK AT 1.5% CROSS SLOPE.

+62.41, 43.5' LT MATCH EXISTING 138.32
MATCH EXISTING 138.24
138.56
138.58
137.99
137.91
+63.41, 43.5' LT 138.34
138.01
137.93
138.26
+37.3, 43.6' LT MATCH EXISTING 138.44
MATCH EXISTING 138.34
+47.42, 27.5' LT 137.92 (HIGH POINT)
ADJUST INLET COVER RIM = 137.63
137.77
+55.69, 27.5' LT 137.87
137.78
137.79
+19.98, 43.5' LT MATCH EXISTING 138.63
MATCH EXISTING 138.55
137.92
137.84
137.96
137.88
+99.48, 43.7' LT 138.53
138.45
137.70
+8.77, 27.5' LT 137.81
137.72
137.74
+63.81, 27.5' RT 137.67
137.55
137.63
137.64
+55.48, 29.5' RT 137.73
137.65
137.67 FLOW 137.84 TOC
137.69
+46.35, 39.9' RT 137.79
138.05
137.98
137.88
137.71
137.70
+63.43, 43.9' RT 138.13
+58.55, 48.9' RT MATCH EXISTING 138.22
138.08
MATCH EXISTING 138.20
MATCH EXISTING TOP OF CURB
137.75
+45.23, 50.2' RT MATCH EXISTING 137.84
ADJUST INLET COVER RIM = 137.73
1.5' MIN CURB HEAD TAPER TO ALLOW FOR INLET CASTING
+18.28, 40.3' RT 137.69
137.60
137.62
+19.35, 50.2' RT MATCH EXISTING 137.76
137.58
137.66
MATCH EXISTING TOP OF CURB
137.55 FLOW 137.75 TOC
ADJUST INLET COVER RIM = 137.64
137.73
137.81
137.83
137.53
MATCH EXISTING 138.40
+8.70, 29.3' RT 137.60
137.51
137.49
137.81
9.9'
BOW 137.91 TOC 138.33
+6.50, 54.0' RT MATCH EXISTING 138.44
+99.59, 27.5' RT 137.55
137.44 FLOW 137.94 TOC
138.06
138.14
ADJUST INLET COVER RIM = 137.44
TRANSITION FROM 4" CURB HEAD AT START OF BUS LANDING TO 6" CURB HEAD AT INLET
137.61 FLOW 137.94 TOC
138.08
+87.66, 43.9' RT 138.16

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W MADISON ST	SHEET 13 E

INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
NW QUADRANT	121+51.5	44.0' LT	15.0'
NORTH MEDIAN ISLAND NOSE	121+60.3	CL	8.0'
NE QUADRANT	121+54.1	44.0' RT	15.0'
SW QUADRANT	120+91.6	44.0' LT	15.0'
SOUTH MEDIAN ISLAND NOSE	120+88.2	CL	8.0'
SE QUADRANT	120+93.9	44.0' RT	15.0'

*RADIUS MEASURED TO CURB FLOWLINE

LEGEND

A	SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS
DW7	CONCRETE DRIVEWAY 7-INCH
BS	BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
SW5	CONCRETE SIDEWALK 5-INCH
SW5C	CONCRETE SIDEWALK 5-INCH, COLORED RED
SW7	CONCRETE SIDEWALK 7-INCH
SW7C	CONCRETE SIDEWALK 7-INCH, COLORED RED
CR1A	CURB RAMP TYPE 1A
CR2	CURB RAMP TYPE 2
CR2M	CURB RAMP TYPE 2, MODIFIED
CR7B	CURB RAMP TYPE 7B
PED	CONCRETE CURB PEDESTRIAN
SOD	TOPSOIL, FERTILIZER AND SOD LAWN

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

W WASHINGTON ST

S 76TH ST

S 76TH STREET C/L

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W WASHINGTON ST	SHEET 14 E

FILE NAME : k:\1102714\cadd\sheets\details\021103_cd.dgn PLOT DATE : 1/30/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
NW QUADRANT	128+43.3	44.0' LT	15.0'
NE QUADRANT	128+45.5	44.0' RT	15.0'
SW QUADRANT	127+83.5	44.0' LT	15.0'
SE QUADRANT	127+85.7	44.0' RT	15.0'

*RADIUS MEASURED TO CURB FLOWLINE

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

S 76TH STREET C/L

S 76TH ST

W WALKER ST

ADJUST SANITARY MANHOLE COVER RIM = 133.41

MATCH EXISTING 133.53

+43.43, 43.9' LT MATCH EXISTING 133.56

+38.2, 48.9' LT MATCH EXISTING 133.55

MATCH EXISTING 133.52

MATCH EXISTING TOP OF CURB

132.91

+26.71, 46.0' LT MATCH EXISTING 133.00

132.99

133.04

+26.97, 41.4' LT 133.07

133.09

133.41

133.33

133.14 FLOW (HIGH POINT) 133.31 TOC

MATCH EXISTING TOP OF CURB 132.95

+43.28, 27.5' LT MATCH EXISTING 133.12

133.41

133.06

133.08

+36.59, 28.9' LT 133.17

133.10

UTILITY MANHOLE ADJUSTMENTS DONE BY OTHERS. NOTIFY UTILITY 10 WORKING DAYS PRIOR TO PLACING CONCRETE.

MATCH EXISTING TOP OF CURB 133.51

+45.81, 27.5' RT 133.54

MATCH EXISTING 134.09

+48.82, 44.0' RT MATCH EXISTING 134.12

134.10

134.18

134.05

133.54

133.56

+37.8, 29.4' RT 133.59

133.58

133.97

133.61 FLOW 133.94 TOC

133.64

133.05

134.10

+43.82, 49.0' RT MATCH EXISTING 134.40

MATCH EXISTING 134.39

MATCH EXISTING TOP OF CURB 133.76

133.68

133.66

+29.17, 41.5' RT 133.69

+29.00, 50.5' RT MATCH EXISTING 133.86

+2.17, 50.5' RT MATCH EXISTING 134.12

+2.03, 41.6' RT 134.00

134.00

MATCH EXISTING TOP OF CURB

133.93

133.95

133.91

133.87 FLOW 134.04 TOC

134.10

134.18

133.84

133.82

133.80

+93.24, 29.3' RT 133.88

134.18

134.45

+85.7, 27.5' RT 133.81

133.77

+85.99, 43.9' RT 134.53

+91.15, 52.9' RT MATCH EXISTING 134.86

BOW 134.26
TOC 134.59
9.0'

MATCH EXISTING TOP OF CURB

ADJUST INLET COVER RIM = 133.74

MATCH EXISTING BACK OF SIDEWALK ELEVATION. REPLACE SIDEWALK AT 1.5% CROSS SLOPE TO WHERE THE EXISTING CROSS SLOPE IS 2.0% OR LESS.

REPLACE SIDEWALK AT 1.5% CROSS SLOPE TO WHERE THE EXISTING CROSS SLOPE IS 2.0% OR LESS.

+99.88, 46.0' LT MATCH EXISTING 133.28

133.23

MATCH EXISTING TOP OF CURB

MATCH EXISTING 133.57

133.89

133.72

+87.98, 48.7' LT 133.97

133.80

+87.47, 63.7' LT MATCH EXISTING 133.65

EXSTING RETAINING WALL TO REMAIN

+83.20, 43.7' LT 134.15

+73.41, 43.8' LT MATCH EXISTING 134.19

MATCH EXISTING 134.13

+99.71, 41.2' LT 133.37

133.32

133.34

133.39

133.45 FLOW (HIGH POINT) 133.62 TOC

133.64

133.40

+91.36, 29.5' LT 133.48

133.39

133.38

133.72

134.07

ADJUST INLET COVER RIM = 133.34

+77.65, 27.5' LT MATCH EXISTING 133.48

133.39

MATCH EXISTING TOP OF CURB

LEGEND

A	SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS
DW7	CONCRETE DRIVEWAY 7-INCH
BS	BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
SW5	CONCRETE SIDEWALK 5-INCH
SW5C	CONCRETE SIDEWALK 5-INCH, COLORED RED
SW7	CONCRETE SIDEWALK 7-INCH
SW7C	CONCRETE SIDEWALK 7-INCH, COLORED RED
CR1A	CURB RAMP TYPE 1A
CR2	CURB RAMP TYPE 2
CR2M	CURB RAMP TYPE 2, MODIFIED
CR7B	CURB RAMP TYPE 7B
PED	CONCRETE CURB PEDESTRIAN
SOD	TOPSOIL, FERTILIZER AND SOD LAWN

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W WALKER ST	SHEET 15	E

NOTE:

CONTRACTOR TO VERIFY ELEVATIONS, GRADES, SLOPES, AND LENGTHS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS

ELEVATIONS SHOWN FOR CURB AND GUTTER FLANGE AND FLOW LINE ARE FINISHED GRADE ELEVATION INCLUDING HMA OVERLAY (SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS)

RIM ELEVATIONS ARE GIVEN AT THE FLOW LINE FOR INLET COVERS

SLOPES SHOWN ARE FOR FINISHED PAVEMENT INCLUDING HMA OVERLAY. MINIMUM GUTTER SLOPE AT FLOW LINE IS 0.5%

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

A.D.A. COMPLIANT RAMP WITH DETECTABLE WARNING FIELD INSTALLED WITH PREVIOUS PROJECT

LEGEND

- (A) SEE CONSTRUCTION DETAIL FOR CURB & GUTTER 26-INCH AT CURB RAMPS
- (DW7) CONCRETE DRIVEWAY 7-INCH
- (BS) BUS STOP - SEE TYPICAL SECTIONS AND BUS STOP LANDING CONSTRUCTION DETAIL
- (SW5) CONCRETE SIDEWALK 5-INCH
- (SW5C) CONCRETE SIDEWALK 5-INCH, COLORED RED
- (SW7) CONCRETE SIDEWALK 7-INCH
- (SW7C) CONCRETE SIDEWALK 7-INCH, COLORED RED
- (CR1A) CURB RAMP TYPE 1A
- (CR2) CURB RAMP TYPE 2
- (CR2M) CURB RAMP TYPE 2, MODIFIED
- (CR7B) CURB RAMP TYPE 7B
- (PED) CONCRETE CURB PEDESTRIAN
- (SOD) TOPSOIL, FERTILIZER AND SOD LAWN

INTERSECTION RADIUS HUB LOCATIONS			
DESCRIPTION	STATION	OFFSET	RADIUS*
SW QUADRANT	134+16.8	44.0' LT	15.0'
SOUTH MEDIAN ISLAND	134+13.6	CL	8.0'

*RADIUS MEASURED TO CURB FLOWLINE

W PIERCE ST

S 76TH ST

S 76TH STREET C/L

N

+33.08, 51.8' LT
MATCH EXISTING
128.75

+33.08, 41.2' LT
128.93

128.90

128.87

128.69

128.93

129.01 FLOW
129.34 TOC

129.09

129.45

129.37

129.41

MATCH EXISTING
129.12

MATCH EXISTING
TOP OF CURB

+22.94, 28.7' LT
129.15

129.12

129.15

+19.57, 47.7' LT
129.49

129.53

129.45

MATCH EXISTING BACK OF SIDEWALK ELEVATION.
REPLACE SIDEWALK AT 1.5% CROSS SLOPE.

+19.32, 82.5' LT
MATCH EXISTING
129.22

+15.91, 43.9' LT
MATCH EXISTING
129.74

MATCH EXISTING
129.68

ADJUST INLET COVER
RIM = 129.34

MATCH EXISTING
130.09

+35.0, 43.9' RT
MATCH EXISTING
130.19

129.64

+28.5, 29.8' RT
129.69

129.66

129.68

129.76

129.80

129.84

129.88

+25.0, 29.5' RT
129.74

129.71

130.13

130.21

MATCH EXISTING
TOP OF CURB

R/W

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W PIERCE ST	SHEET 16 E

PLANT DATA CHART

NUM	BOTANICAL NAME	COMMON NAME	TYPE	AVG MATURE HEIGHT	SIZE WHEN PLANTING	ROOT ZONE MODE	MINIMUM SIZE BALL/POT DIAM	MINIMUM SIZE BALL/POT DEPTH	MINIMUM HOLE SIZE DIAM	MINIMUM HOLE SIZE DEPTH	BRACE OR GUY	FERT UNIT REQ'D	RODENT PROTCT REQ'D	MULCH RING DIAM
1	PYRUS CALLERYANA 'CHANTICLEER'	CHANTICLEER CALLERY PEAR	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
2	ZELKOVA SERRATA 'MUSASHINO'	MUSASHINO ZELKOVA	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
3	AMELANCHER LAEVIS 'CUMULUS'	CUMULUS SERVICEBERRY	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"

B&B: BALLED AND BURLAPPED

PLANTING LEGEND

= TREE = TREE TO BE REMOVED

1). NOTE: TREE LOCATIONS ARE APPROXIMATE- EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER AND THE PROPERTY OWNER.

2). PLANT SPECIES AND LOCATIONS PROVIDED BY THE CITY OF WEST ALLIS.

N

W GREENFIELD AVE

S 76TH ST

S 76TH STREET C/L

PT 106+38.10

PI 106+04.15

PI 107+37.97

PI 108+46.64

STA 112+00

MATCHLINE

R/W

ASPH

BORE

106 107 108 109 110 111 112

1 2 3

21' 16' 21'

100'

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLANTING/ENHANCEMENTS PLAN	SCALE, FEET 0 20 40	SHEET 17	E

PLANT DATA CHART

NUM	BOTANICAL NAME	COMMON NAME	TYPE	AVG MATURE HEIGHT	SIZE WHEN PLANTING	ROOT ZONE MODE	MINIMUM SIZE BALL/POT DIAM	MINIMUM SIZE BALL/POT DEPTH	MINIMUM HOLE SIZE DIAM	MINIMUM HOLE SIZE DEPTH	BRACE OR GUY	FERT UNIT REQ'D	RODENT PROTCT REQ'D	MULCH RING DIAM
2	ZELKOVA SERRATA 'MUSASHINO'	MUSASHINO ZELKOVA	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
4	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE LILAC	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
5	LIRODENDRON TULIPIFERA'FASTIGIATUM'	FASTIGATE TULIP TREE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
6	MALUS 'SPRING SNOW'	SPRING SNOW CRABAPPLE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
7	PLATANUS X ACERFOLIA 'MORTON CIRCLE'	EXCLAMATION LONDON PLANETREE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
8	GLEDITSIA TRICANTHOS 'DRAVES'	STREET KEEPER HONEYLOCUST	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
9	BETULA NIGRA 'DURA-HEAT'	DURA-HEAT RIVER BIRCH	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
10	ROBINIA PSEUDOACACIA 'PURPLE ROBE'	PURPLE ROBE BLACK LOCUST	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"

B&B: BALLED AND BURLAPPED

N

PLANTING LEGEND

= TREE = TREE TO BE REMOVED

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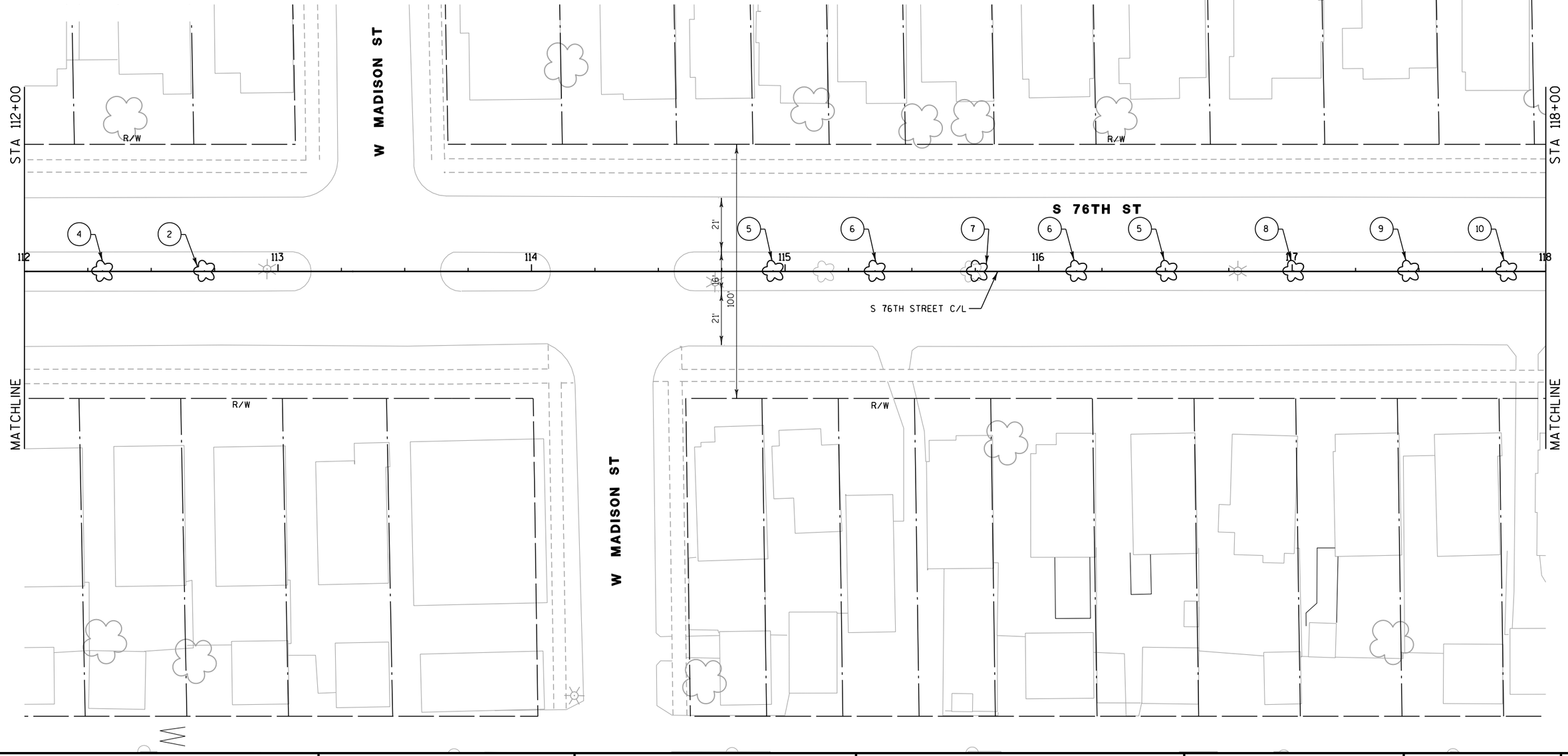
2). PLANT SPECIES AND LOCATIONS PROVIDED BY THE CITY OF WEST ALLIS.



PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLANTING/ENHANCEMENTS PLAN	SCALE, FEET 0 20 40	SHEET 18	E

PLANT DATA CHART

NUM	BOTANICAL NAME	COMMON NAME	TYPE	AVG MATURE HEIGHT	SIZE WHEN PLANTING	ROOT ZONE MODE	MINIMUM SIZE BALL/POT DIAM	MINIMUM SIZE BALL/POT DEPTH	MINIMUM HOLE SIZE DIAM	MINIMUM HOLE SIZE DEPTH	BRACE OR GUY	FERT UNIT REQ'D	RODENT PROTCT REQ'D	MULCH RING DIAM
8	GLEDITSIA TRICANTHOS 'DRAVES'	STREET KEEPER HONEYLOCUST	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
11	GYMNOCLADUS DIOICUS 'ESPRESSO'	ESPRESSO KENTUCKY COFFEETREE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
12	QUERCUS ROBUR 'PYRAMICH'	SKYMASTER ENGLISH OAK	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
13	MACLURA POMIFER 'WHITE SHIELD'	WHITE SHIELD OSAGE ORANGE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
14	MAGNOLIA LILIIFLORA 'ELIZABETH'	ELIZABETH MAGNOLIA	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
15	TILIA PLAYPHYLLOS 'LACINIATA'	SPLITLEAF LINDEN	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
16	GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY GINKGO	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
17	MALUS 'PRAIRIFIRE'	PRAIRIFIRE CRABAPPLE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
18	CORYLUS COLURNA	TURKISH FILBERT	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
19	TILIA CORDATA 'CORZAM'	CORINTHIAN LITTLELEAF LINDEN	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"

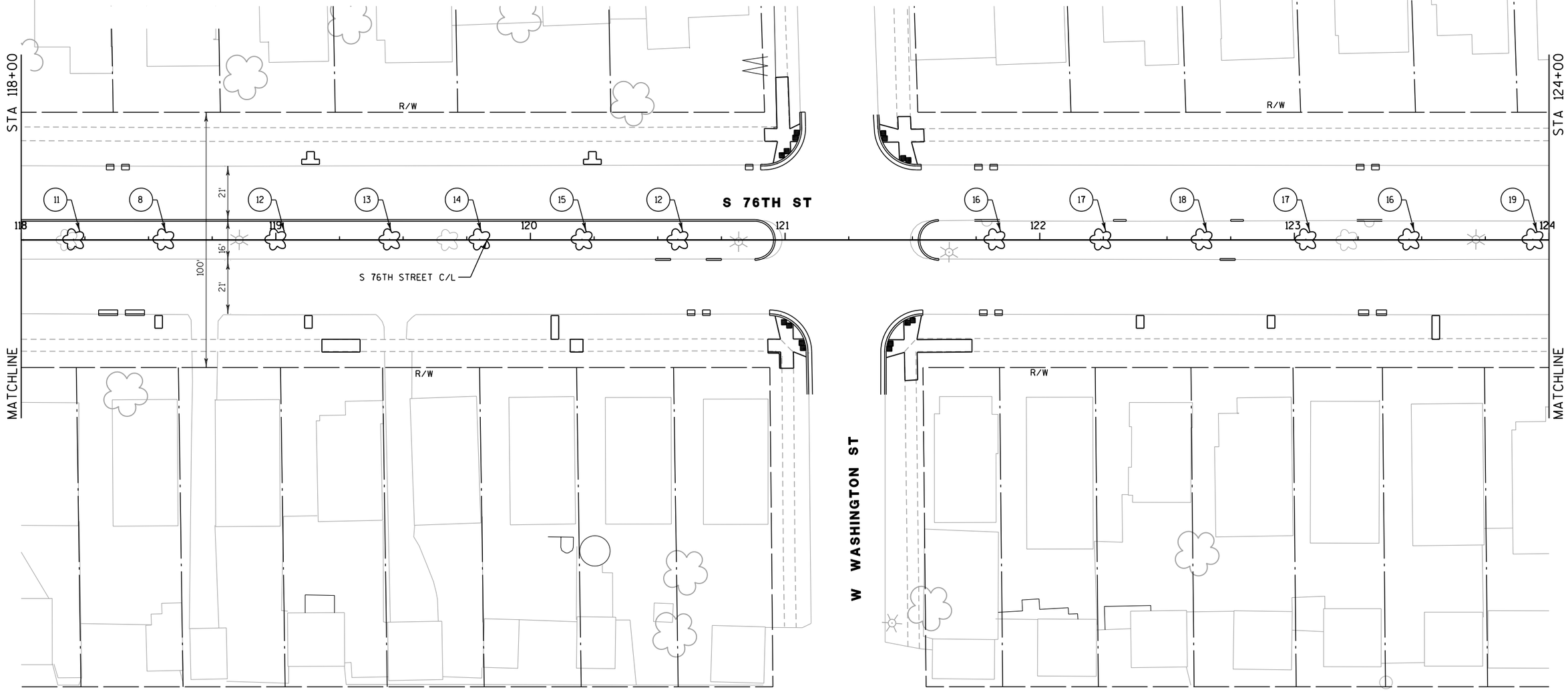
B&B: BALLED AND BURLAPPED

PLANTING LEGEND

= TREE = TREE TO BE REMOVED

1). NOTE: TREE LOCATIONS ARE APPROXIMATE- EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER AND THE PROPERTY OWNER.

2). PLANT SPECIES AND LOCATIONS PROVIDED BY THE CITY OF WEST ALLIS.



PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLANTING/ENHANCEMENTS PLAN	SCALE, FEET 0 20 40	SHEET 19	E

PLANT DATA CHART

NUM	BOTANICAL NAME	COMMON NAME	TYPE	AVG MATURE HEIGHT	SIZE WHEN PLANTING	ROOT ZONE MODE	MINIMUM SIZE BALL/POT DIAM	MINIMUM SIZE BALL/POT DEPTH	MINIMUM HOLE SIZE DIAM	MINIMUM HOLE SIZE DEPTH	BRACE OR GUY	FERT UNIT REQ'D	RODENT PROTCT REQ'D	MULCH RING DIAM
19	TILIA CORDATA 'CORZAM'	CORINTHIAN LITTLELEAF LINDEN	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
20	AESCULUS X 'HOMESTEAD'	HOMESTEAD BUCKEYE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
21	OSTRYA VIRGINIANA	IRONWOOD	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
22	GLEDITSIA TRICANTHOS 'SUNBURST'	SURNBURST HONEYLOCUST	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
23	AESCULUS GLABRA 'J.N. SELECT'	SUNSET BUCKEYE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
24	ULMUS X 'FRONTIER'	FRONTIER HYBRID ELM	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
25	MALUS 'JFS-KW5'	ROYAL RAINDROPS CRABAPPLE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
26	LARIX LARICINA	AMERICAN LARCH	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
27	CELTIS OCCIDENTALIS 'JFS-KSU1'	PRAIRIE SENTINEL HACKBERRY	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
28	PHELLONDENDRON AMURENSE 'HIS MAJESTY'	HIS MAJESTY CORKTREE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
29	FAGUS SYLVATICA 'RIVERSII'	RIVERSII BEECH	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
30	PHELLODENDRON LAVALLEI 'LONGNECKER'	EYESTOPPER CORKTREE	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"

B&B: BALLED AND BURLAPPED

N

PLANTING LEGEND

= TREE = TREE TO BE REMOVED

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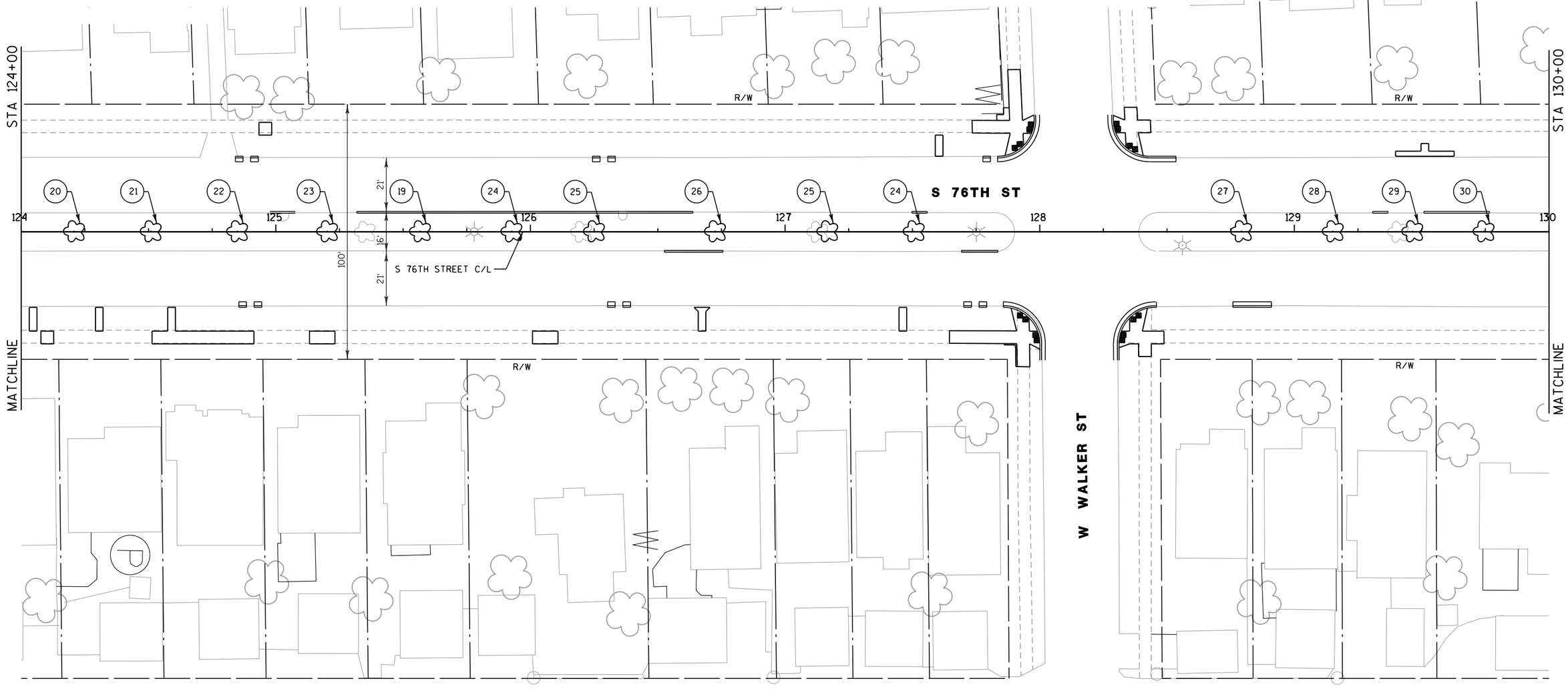
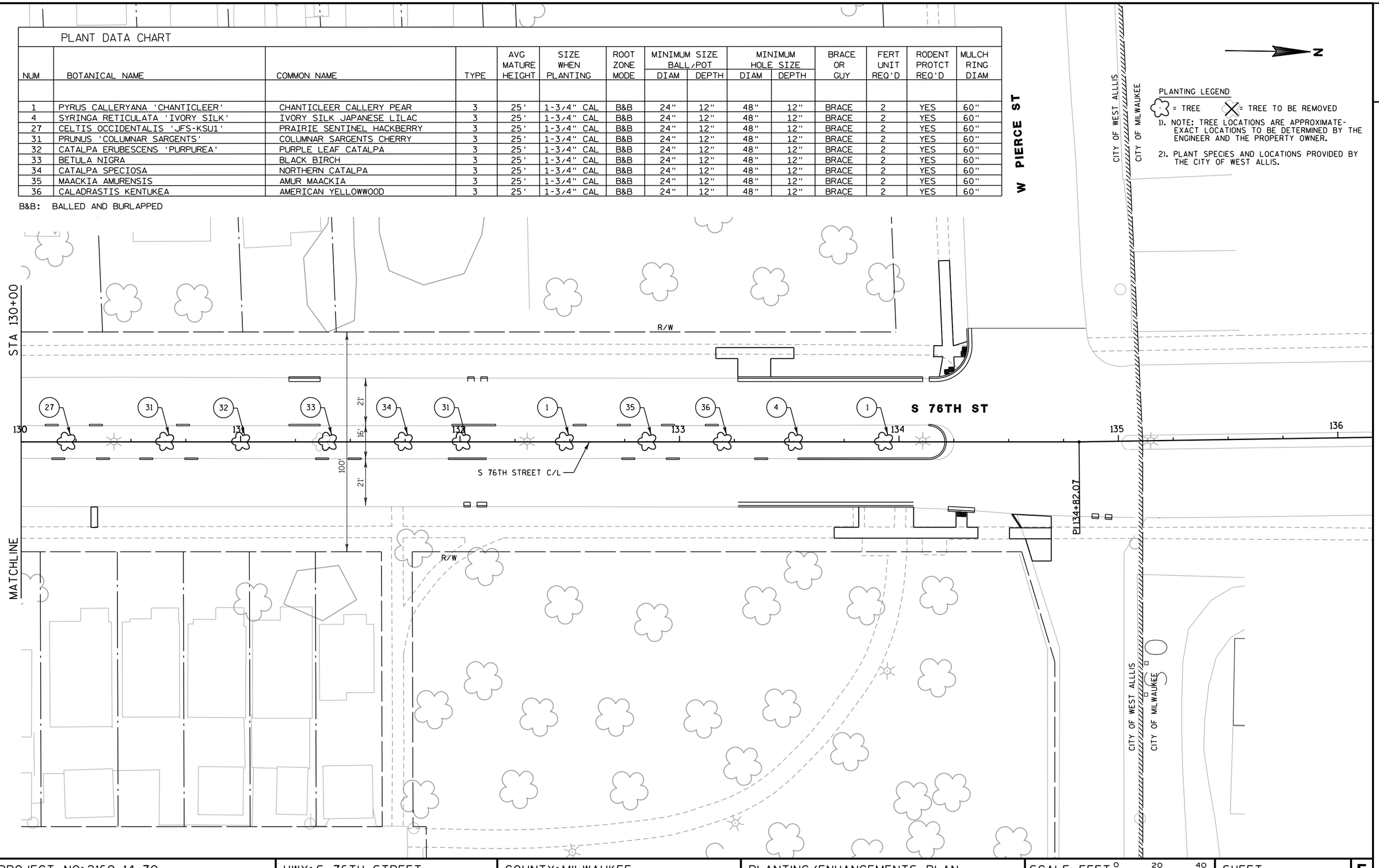


PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLANTING/ENHANCEMENTS PLAN	SCALE, FEET 0 20 40	SHEET 20	E

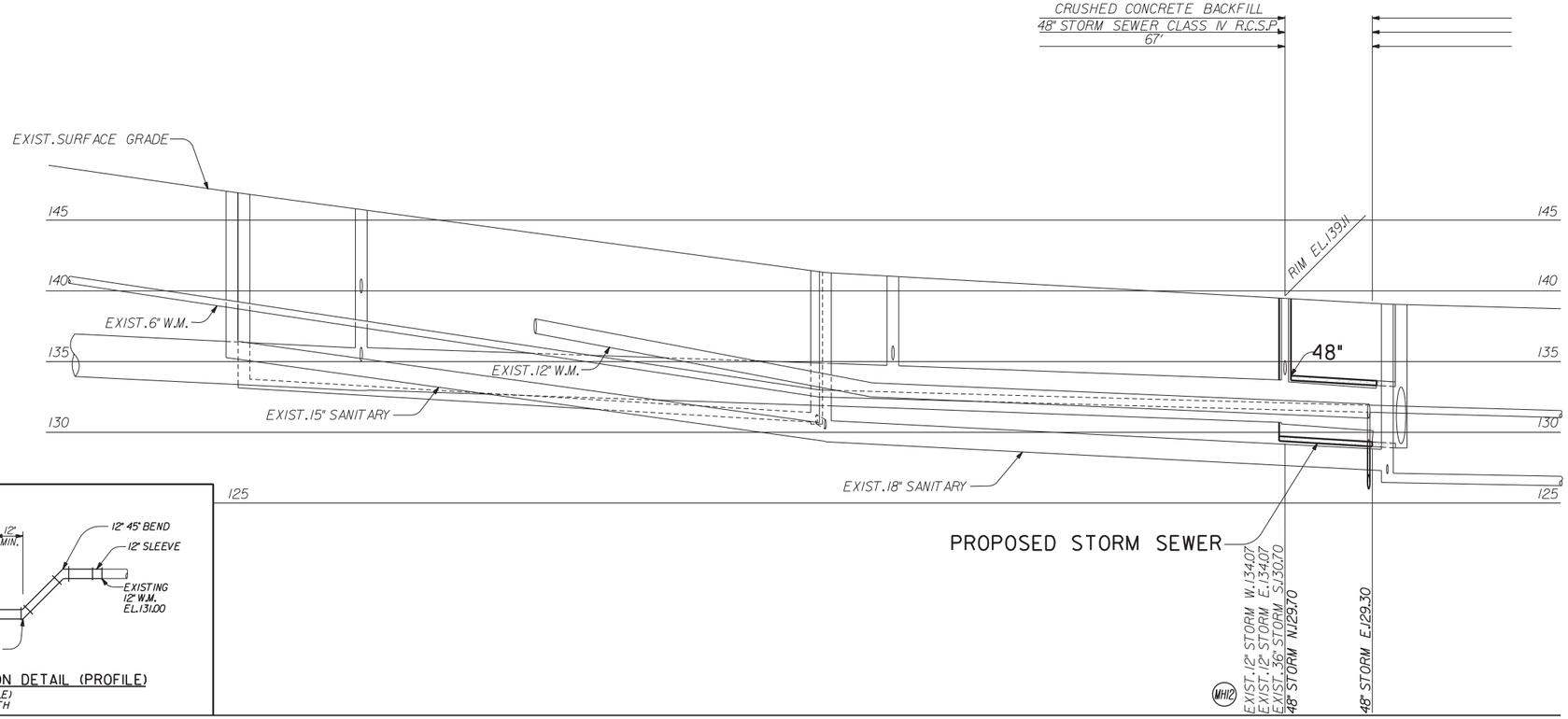
PLANT DATA CHART

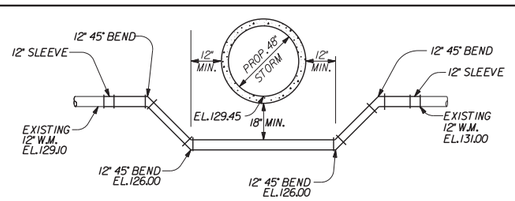
NUM	BOTANICAL NAME	COMMON NAME	TYPE	AVG MATURE HEIGHT	SIZE WHEN PLANTING	ROOT ZONE MODE	MINIMUM SIZE BALL/POT DIAM	MINIMUM SIZE BALL/POT DEPTH	MINIMUM HOLE SIZE DIAM	MINIMUM HOLE SIZE DEPTH	BRACE OR GUY	FERT UNIT REQ'D	RODENT PROTCT REQ'D	MULCH RING DIAM
1	PYRUS CALLERYANA 'CHANTICLEER'	CHANTICLEER CALLERY PEAR	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
4	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE LILAC	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
27	CELTIS OCCIDENTALIS 'JFS-KSU1'	PRAIRIE SENTINEL HACKBERRY	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
31	PRUNUS 'COLUMNAR SARGENTS'	COLUMNAR SARGENTS CHERRY	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
32	CATALPA ERUBESCENS 'PURPUREA'	PURPLE LEAF CATALPA	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
33	BETULA NIGRA	BLACK BIRCH	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
34	CATALPA SPECIOSA	NORTHERN CATALPA	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
35	MAACKIA AMURENSIS	AMUR MAACKIA	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"
36	CALADRASTIS KENTUKEA	AMERICAN YELLOWWOOD	3	25'	1-3/4" CAL	B&B	24"	12"	48"	12"	BRACE	2	YES	60"

B&B: BALLED AND BURLAPPED

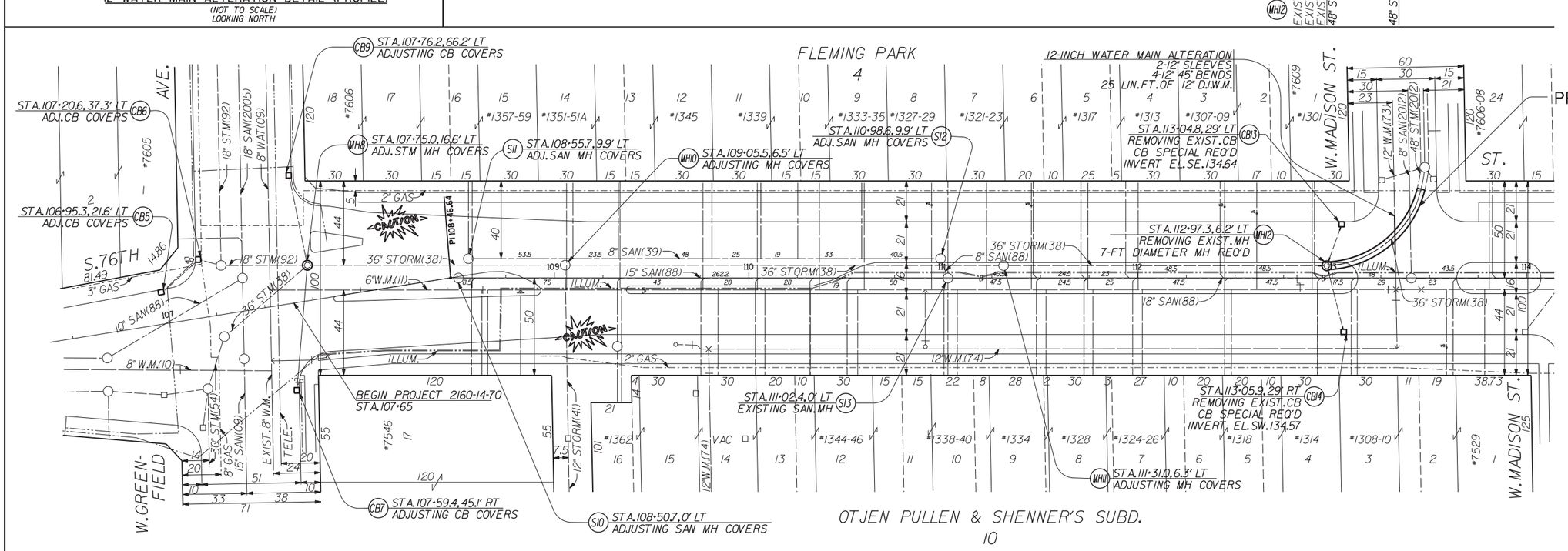


PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLANTING/ENHANCEMENTS PLAN	SCALE, FEET 0 20 40	SHEET 21	E



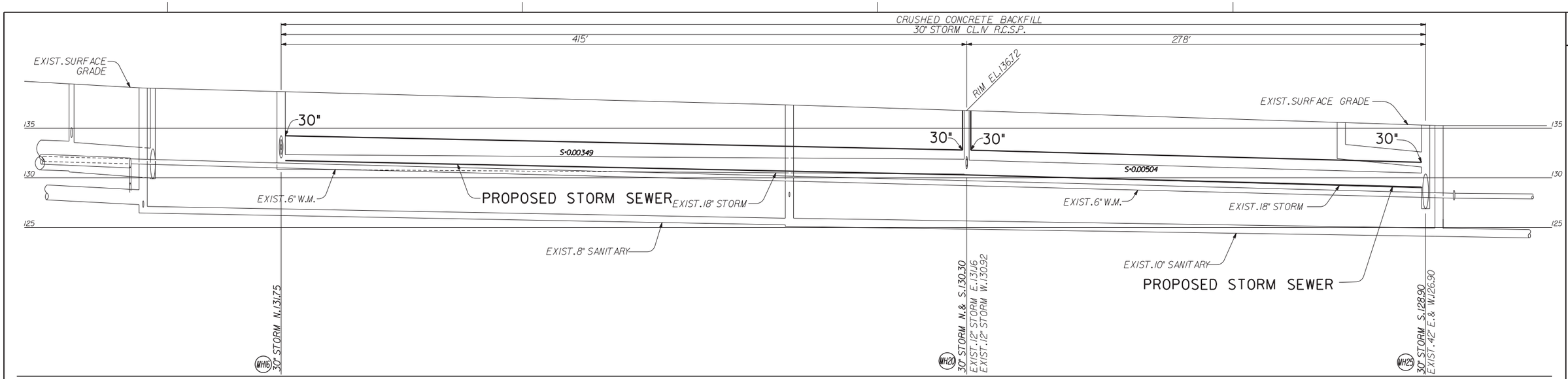


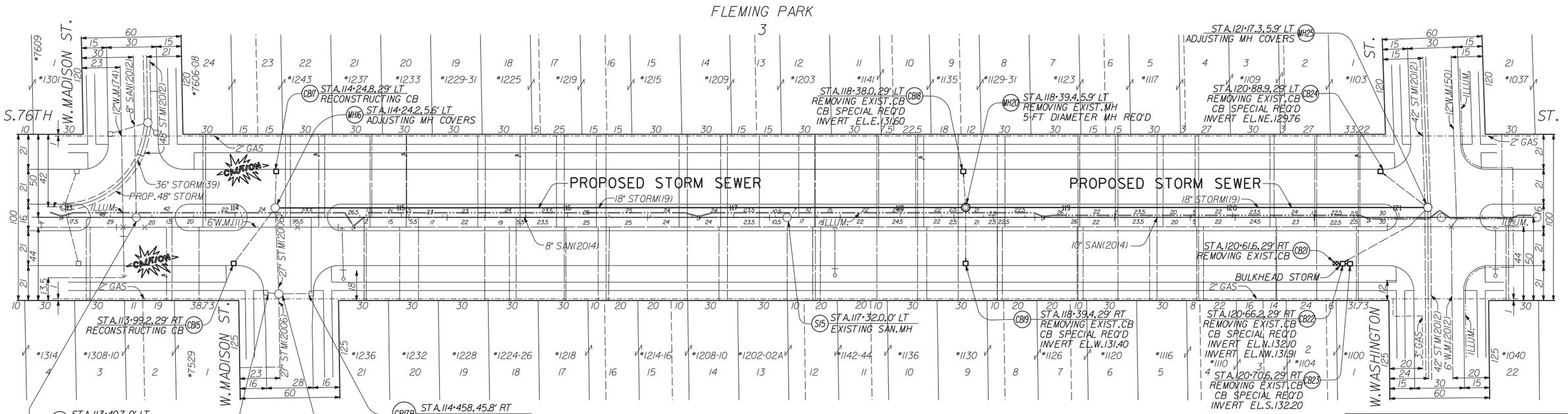
12" WATER MAIN ALTERATION DETAIL (PROFILE)
(NOT TO SCALE)
LOOKING NORTH



CITY OF WEST ALLIS ENGINEERING DEPARTMENT		
PLAN & PROFILE STORM SEWER RELAY & MISC. ADJ. IN SOUTH 76TH STREET FROM WEST MADISON STREET TO WEST GREENFIELD AVENUE		
CONTRACT NO. STATE CONT ACCOUNT NO. P0526H	CONTRACTOR INSPECTOR AS-BUILT ENT'D BY AS-BUILT CHK'D BY GIS ENTERED BY	HOR. 1"=30' SCALE: VERT. 1"=5' SYSTEM NO. SS-5 ¼ SEC. NO. 440
DRAWN BY RFS DATE DRAWN 12-10 DESIGNED BY RJH CHECKED BY SURVEY FINAL PLAN DATE	APPROVED CHIEF DESIGN ENGINEER DATE APPROVED CITY ENGINEER DATE	PLAN FILE NO. U-2575

PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 22





PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
STORM SEWER RELAY & MISC. ADJ.
IN SOUTH 76TH STREET
FROM WEST WASHINGTON STREET
TO WEST MADISON STREET

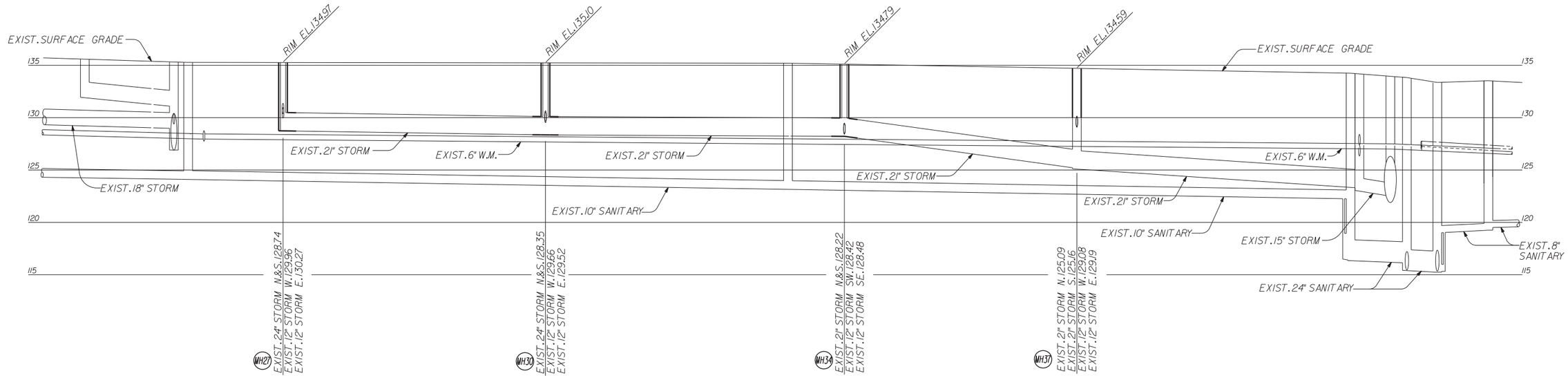
CONTRACT NO. STATE CONT
ACCOUNT NO. P0940R
CONTRACTOR
INSPECTOR
AS-BUILT ENT'D. BY
AS-BUILT CHK'D. BY
GIS ENTERED BY
SCALE: HOR. 1"=30' VERT. 1"=5'
SYSTEM NO. SS-5
¼ SEC. NO. 440

DRAWN BY RFS
DATE DRAWN 12-10
DESIGNED BY RJH
CHECKED BY
SURVEY
FINAL PLAN DATE

APPROVED CHIEF DESIGN ENGINEER DATE
APPROVED CITY ENGINEER DATE

PLAN FILE NO. U-2576

SHEET 23



FLEMING PARK

S16 STA. 121+24.4, 0' LT
ADJ. SAN MH COVERS

CB26 STA. 121+78.9, 29' LT
REMOVING CATCH BASINS
CB SPECIAL REQ'D
INVERT EL. E. 129.90

CB29 STA. 123+28.8, 29' LT
REMOVING CATCH BASINS
CB SPECIAL REQ'D
INVERT EL. E. 129.71

CB32 STA. 124+88.6, 29' LT
REMOVING CATCH BASINS
CB SPECIAL REQ'D
INVERT EL. NE. 129.83

CB35 STA. 126+28.7, 29' LT
REMOVING CATCH BASINS
CB SPECIAL REQ'D
INVERT EL. E. 129.35

CB39 STA. 127+82.2, 29' LT
ADJUSTING CB COVERS

S. 76TH ST.

W. WASHINGTON ST.

W. WALKER ST.

WH27 STA. 121+79.9, 5.9' LT
REMOVING EXIST. MH
4-FT DIAMETER MH REQ'D.
STRAIGHT SIDE EAST

WH30 STA. 121+79.9, 5.9' LT
REMOVING EXIST. MH
4-FT DIAMETER MH REQ'D.
STRAIGHT SIDE EAST

WH34 STA. 121+79.9, 5.9' LT
REMOVING EXIST. MH
4-FT DIAMETER MH REQ'D.
STRAIGHT SIDE EAST

WH37 STA. 126+34.9, 6.2' LT
RECONSTRUCTING MANHOLE
STRAIGHT SIDE EAST

WH40 STA. 127+96.9, 23.6' LT
ADJUSTING MH COVERS

S17 STA. 124+69.3, 0' LT
EXISTING SAN. MH

CB28 STA. 121+80.6, 29' RT
ADJUSTING CB COVERS

CB31 STA. 123+30.7, 29' RT
ADJUSTING CB COVERS

CB33 STA. 124+90.0, 29' RT
REMOVING CATCH BASINS
CB SPECIAL REQ'D
INVERT EL. NW. 128.51

CB36 STA. 126+34.8, 29' RT
REMOVING CATCH BASINS
CB SPECIAL REQ'D
INVERT EL. W. 129.50
*928

CB38 STA. 127+74.7, 29' RT
ADJUSTING CB COVERS

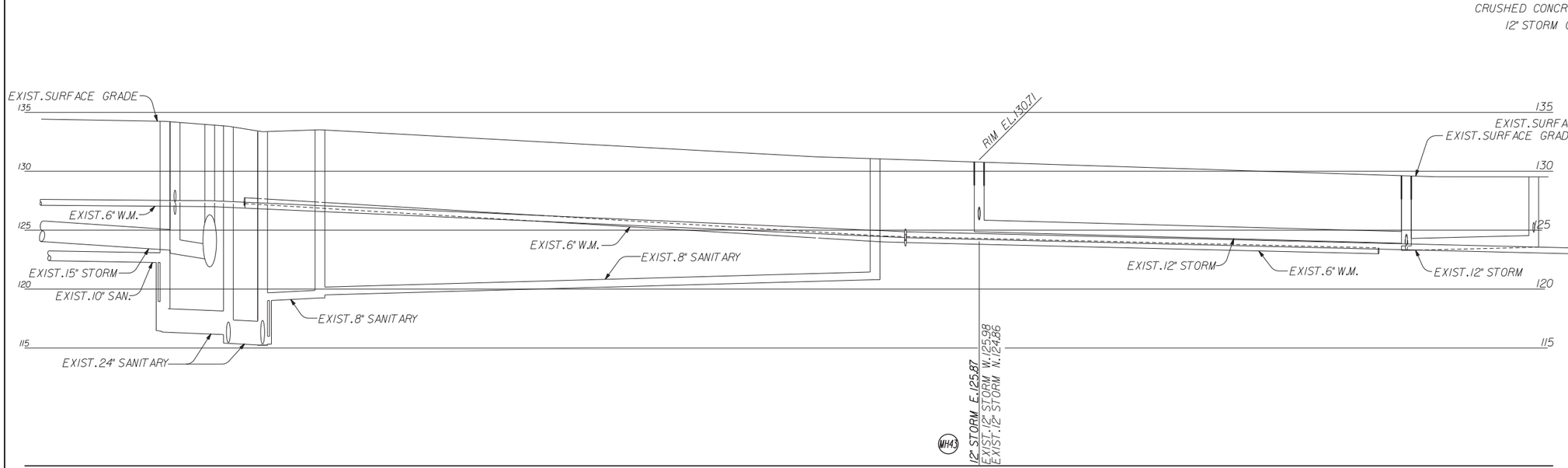
S18 STA. 127+91.8, 0' LT
ADJ. SAN MH FRAMES

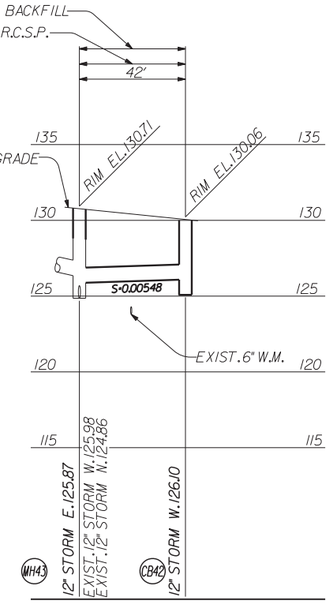
WEST ALLIS LAND CO.'S SUBD.
4

SCALE FT.
0 30 60

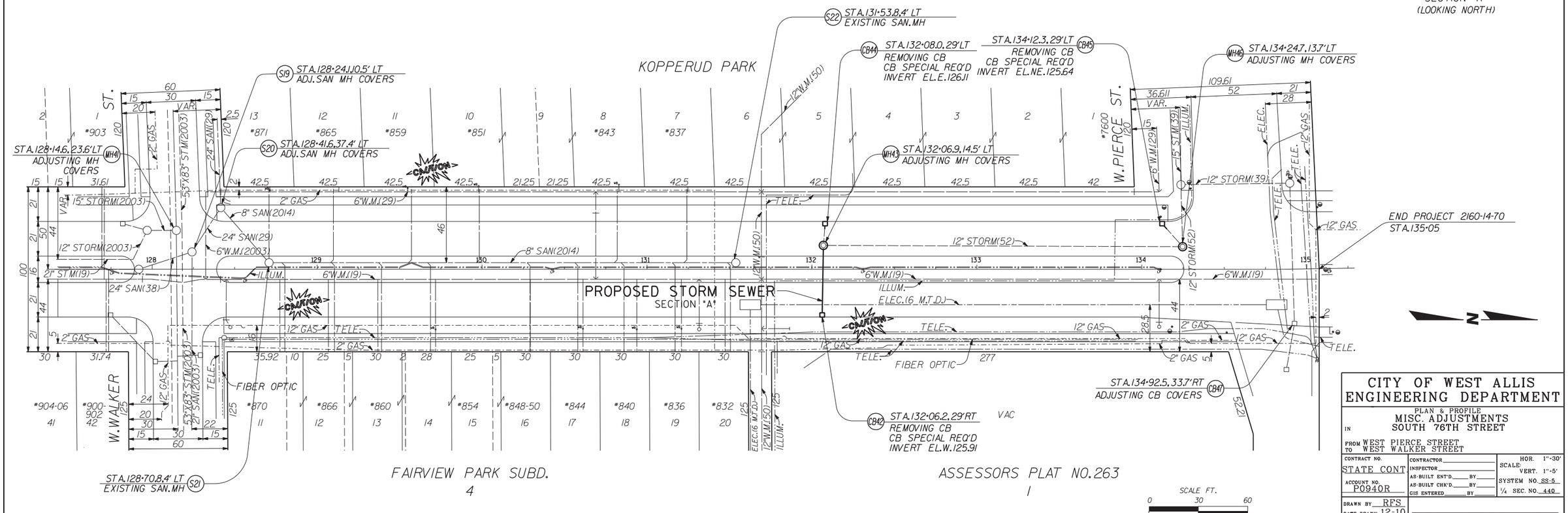
CITY OF WEST ALLIS ENGINEERING DEPARTMENT	
PLAN & PROFILE MISC. ADJUSTMENTS IN SOUTH 76TH STREET FROM WEST WALKER STREET TO WEST WASHINGTON STREET	
CONTRACT NO. STATE CONT ACCOUNT NO. P0940R	CONTRACTOR INSPECTOR AS-BUILT ENT'D. BY AS-BUILT CHK'D. BY GIS ENTERED BY SCALE: HOR. 1"=30' VERT. 1"=5' SYSTEM NO. SS-5 ¼ SEC. NO. 440
DRAWN BY RFS DATE DRAWN 12-10 DESIGNED BY RJH CHECKED BY SURVEY FINAL PLAN DATE	APPROVED CHIEF DESIGN ENGINEER DATE APPROVED CITY ENGINEER DATE PLAN FILE NO. X-831 SHEET 24

PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN





SECTION "A"
(LOOKING NORTH)



CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
MISC. ADJUSTMENTS
IN SOUTH 76TH STREET
FROM WEST PIERCE STREET
TO WEST WALKER STREET

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=30'
ACCOUNT NO. P0940R	INSPECTOR	SCALE: VERT. 1"=5'
	AS-BUILT ENT'D. BY	SYSTEM NO. SS-5
	AS-BUILT CHK'D. BY	1/4 SEC. NO. 440
	GIS ENTERED BY	
DRAWN BY RFS		
DATE DRAWN 12-10	APPROVED CHIEF DESIGN ENGINEER DATE	
DESIGNED BY RJH		
CHECKED BY	APPROVED CITY ENGINEER DATE	
SURVEY FINAL PLAN DATE		PLAN FILE NO. X-832

PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET 25

LEGEND

1. (2) #6 AND #6 GROUND IN 2" CONDUIT SCHEDULE 40
2. (4) #6 AND #6 GROUND IN 2" CONDUIT SCHEDULE 40
3. (8) #6 AND (2) #6 GROUND IN (2) 3" CONDUIT SCHEDULE 40
4. #8 AWG CABLE (SERIES CIRCUIT) AND 2" CONDUIT SCHEDULE 40, SPLICE TO EXISTING CIRCUIT CABLE

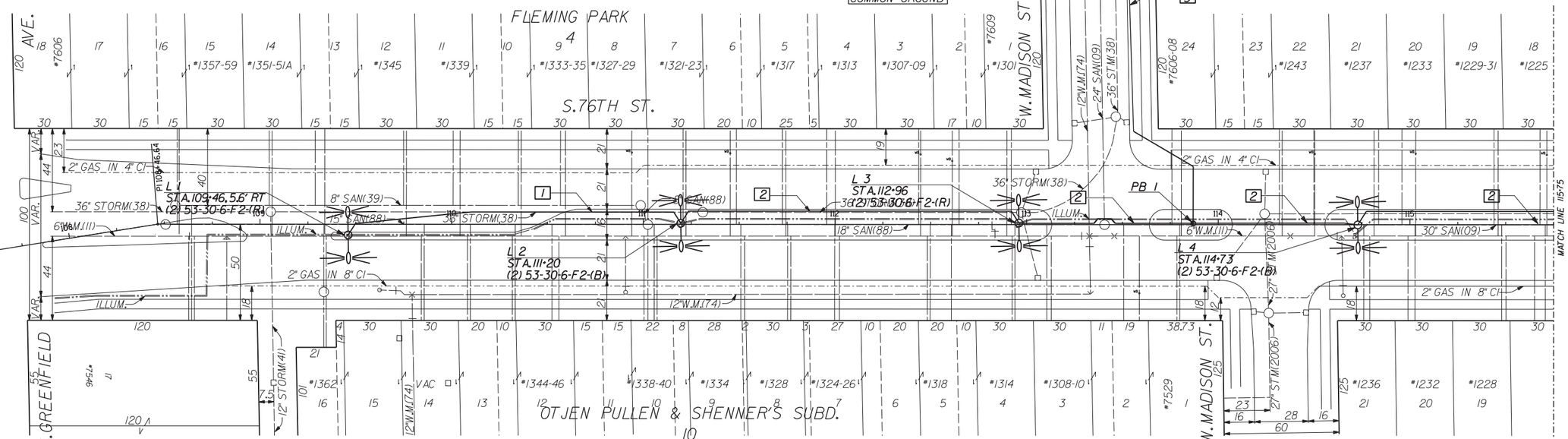
CONDUIT
ELECTRIC UTILITY SERVICE CABINET
PULL BOX
SINGLE ARM, ONE FIXTURE LIGHT POLE
TWIN ARM, TWO FIXTURE LIGHT POLE

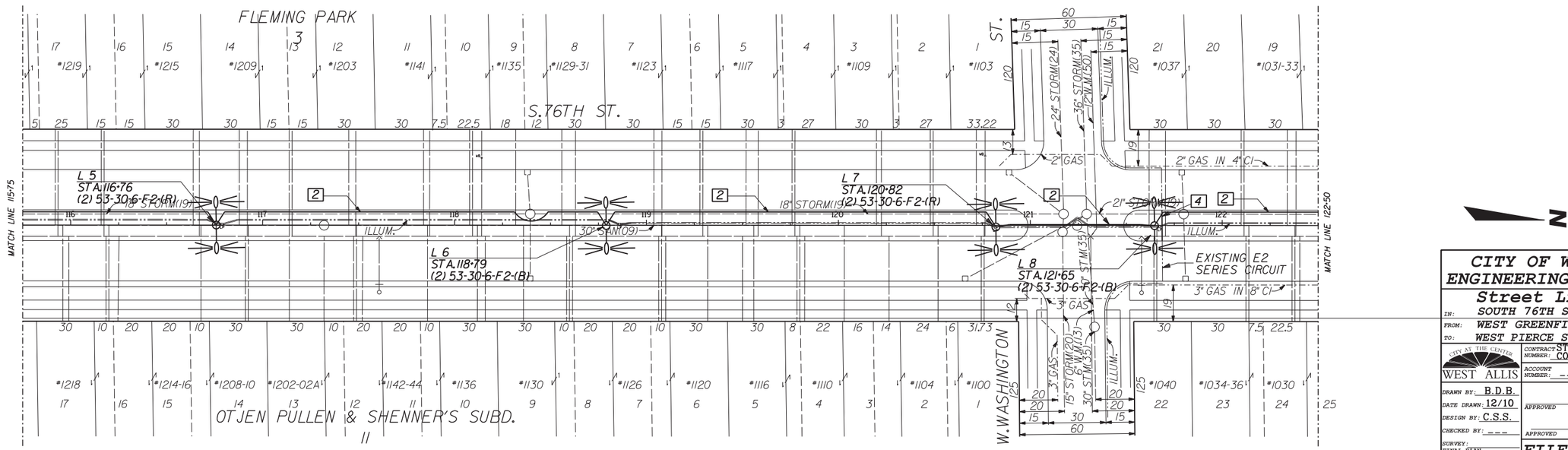
LIGHT NAME
L 1
STATION — STA.109+00.30'RT — OFFSET
NUMBER OF LIGHTS — (2) 53-30-6-F2-(R) or (B) — BLACK CIRCUIT
LIGHT WATTAGE — RED CIRCUIT
MOUNTING HEIGHT — POWER SORCE
ARM LENGTH

WEST ALLIS
AC BLACK B,D RED G GROUND
120/240 V AC COMMON GROUND

L 16
(1) 40-20-6-F2-(B)

120V/240V SERVICE FROM WE ENERGIES
PROPOSED STREET LIGHTING CABINET
F2
PB 2
3





N

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

Street Lighting

IN: SOUTH 76TH STREET
FROM: WEST GREENFIELD AVENUE
TO: WEST PIERCE STREET

WEST ALLIS — CITY AT THE CENTER

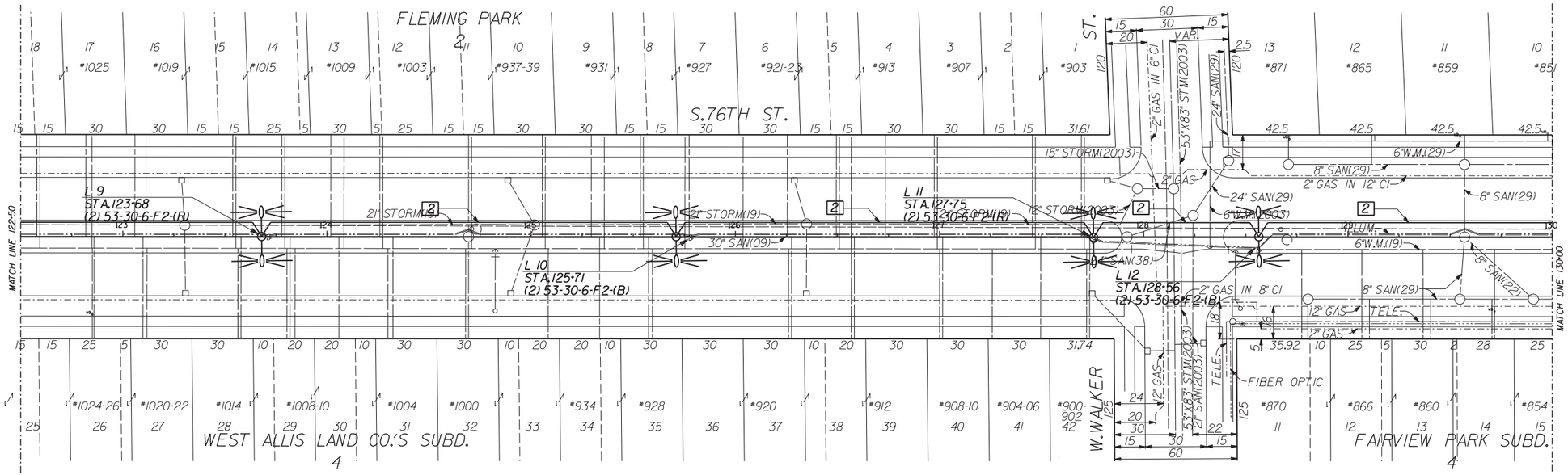
CONTRACT NUMBER: STATE CONTRACT
ACCOUNT NUMBER: ---
HORIZ. SCALE:
SHEET NO. 1 of 2
1/4 SEC. NO 4408441

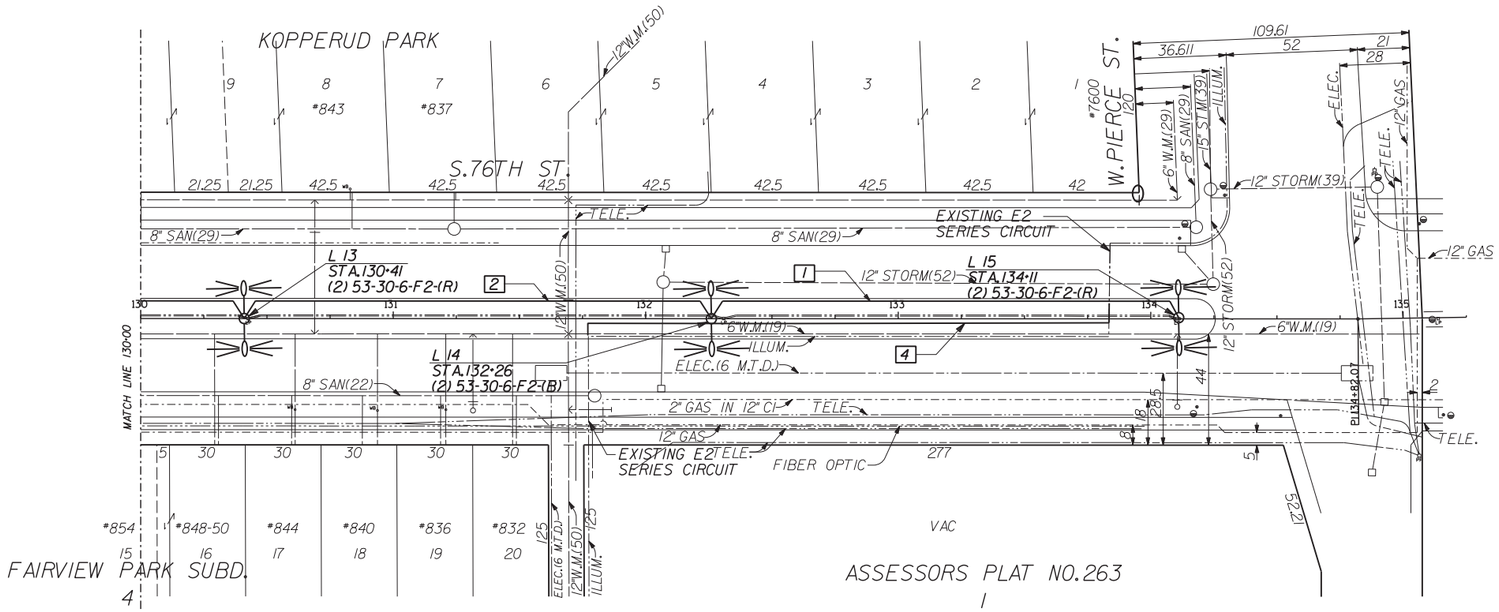
DRAWN BY: B.D.B.
DATE DRAWN: 12/10
DESIGN BY: C.S.S.
CHECKED BY: ---
SURVEY:
FINAL PLAN DATE: ---

APPROVED CHIEF DESIGN ENGINEER DATE
APPROVED CITY ENGINEER DATE

FILE NO. I-968

PROJECT NO: 2160-14-70	HWY: S. 76Th STREET	COUNTY: MILWAUKEE	STREET LIGHTING PLANS: STA. 107+75 TO STA. 122+50	SHEET 26

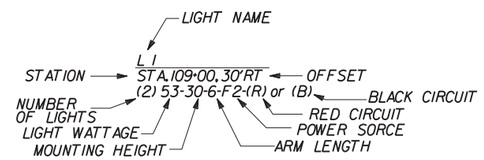




LEGEND

1. (2) #6 AND #6 GROUND IN 2" CONDUIT SCHEDULE 40
2. (4) #6 AND #6 GROUND IN 2" CONDUIT SCHEDULE 40
3. (8) #6 AND (2) #6 GROUND IN (2) 3" CONDUIT SCHEDULE 40
4. #8 AWG CABLE (SERIES CIRCUIT) AND 2" CONDUIT SCHEDULE 40, SPLICE TO EXISTING CIRCUIT CABLE

WEST ALLIS
AC BLACK B,D RED G GROUND
120/240 V AC COMMON GROUND



- CONDUIT
- ELECTRIC UTILITY SERVICE CABINET
- PULL BOX
- SINGLE ARM, ONE FIXTURE LIGHT POLE
- TWIN ARM, TWO FIXTURE LIGHT POLE

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

Street Lighting

IN: SOUTH 76TH STREET
FROM: WEST GREENFIELD AVENUE
TO: WEST PIERCE STREET

CITY AT THE CENTER
WEST ALLIS

CONTRACT NUMBER: STATE CONTRACT
ACCOUNT NUMBER: ---
HORIZ. SCALE:
SHEET NO. 2 of 2
1/4 SEC. NO 4408441

DRAWN BY: B.D.B.
DATE DRAWN: 12/10
DESIGN BY: C.S.S.
CHECKED BY: ---
SURVEY: FINAL PLAN
DATE: ---

APPROVED CHIEF DESIGN ENGINEER DATE
APPROVED CITY ENGINEER DATE

FILE NO. I-968

PROJECT NO: 2160-14-70	HWY: S. 76Th STREET	COUNTY: MILWAUKEE	STREET LIGHTING PLANS: STA. 122+50 TO STA. 135+25	SHEET 27

WEST ALLIS
AC BLACK B,D RED G GROUND
120/240 V AC COMMON GROUND

◇1 "BLACK" POLE SHOWN (EVERY OTHER POLE)

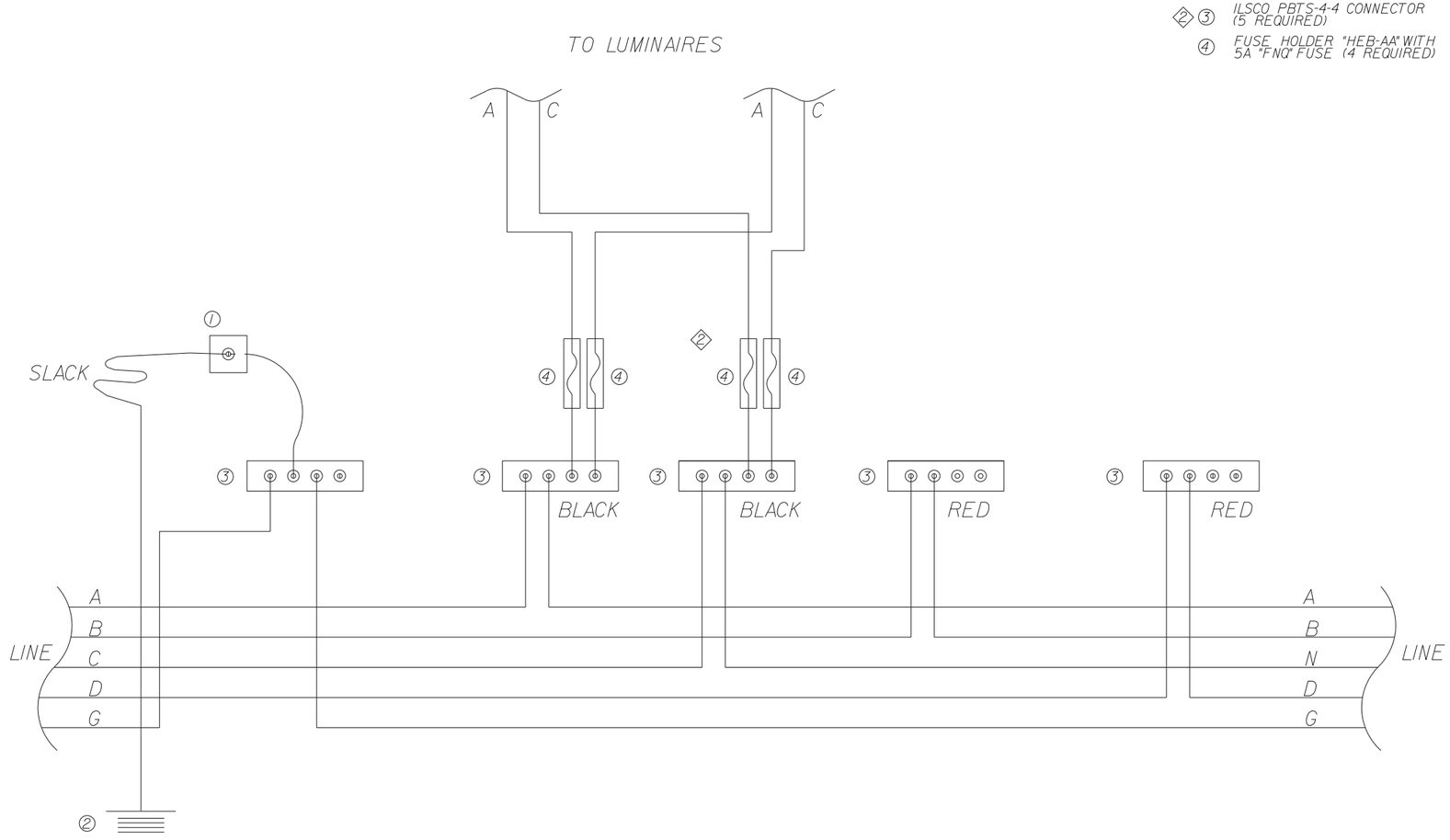
◇1 "RED" POLE SIMILAR (EVERY OTHER POLE)

① POLE LUG

② EXOTHERMIC WELD

◇2 ③ ILSCO PBTS-4-4 CONNECTOR (5 REQUIRED)

④ FUSE HOLDER "HEB-AA" WITH 5A "FNQ" FUSE (4 REQUIRED)



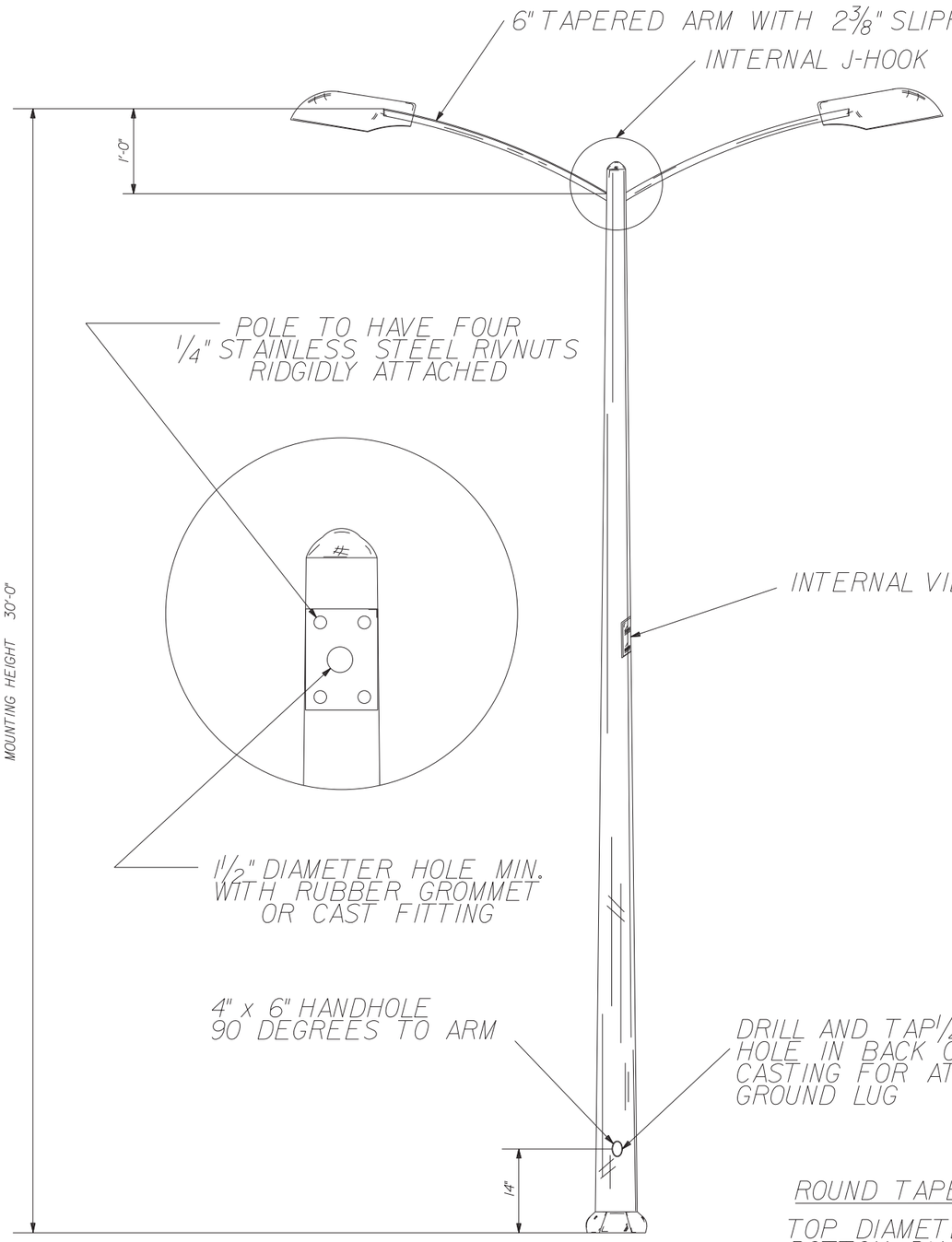
STREET LIGHT HANDHOLE WIRING
CITY OF WEST ALLIS
120/240 VAC

PLAN NOTES:

◇1 POLE IDENTIFICATION (R OR B) WILL BE SHOWN ON STREET LIGHTING PLANS.

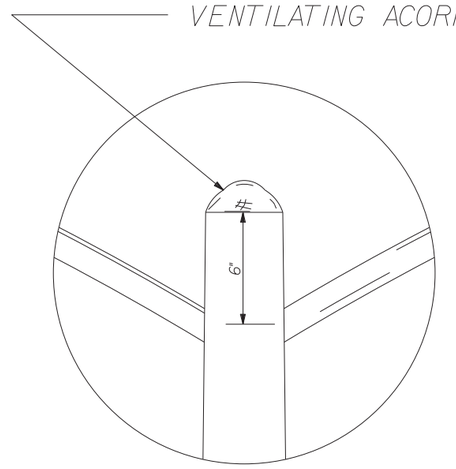
◇2 DETAIL SHOWN IS FOR TWO LAMP POLE, SINGLE LAMP POLE ONLY 2 OF ITEM ④ ARE REQUIRED FOR ONE LUMINAIRE

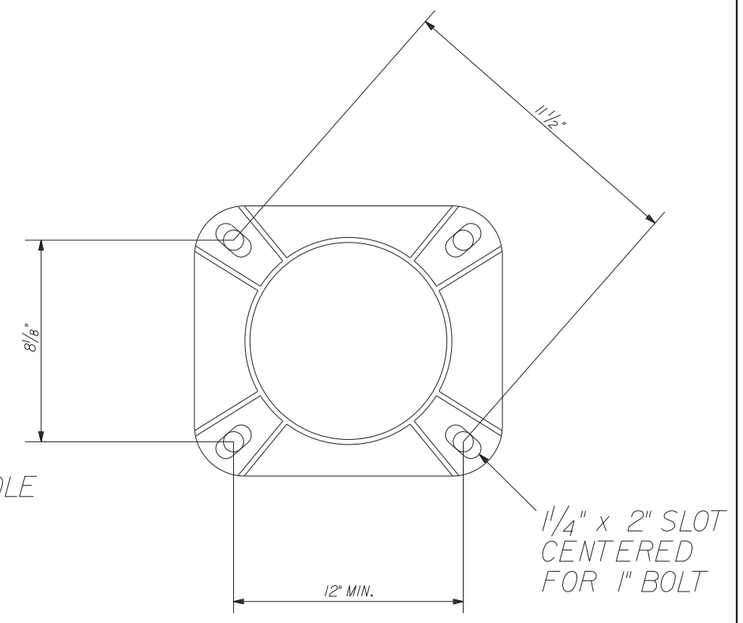
I968.DGN 1/8/2014 8:49:42 AM



LIGHTING UNIT TWIN

N.T.S.

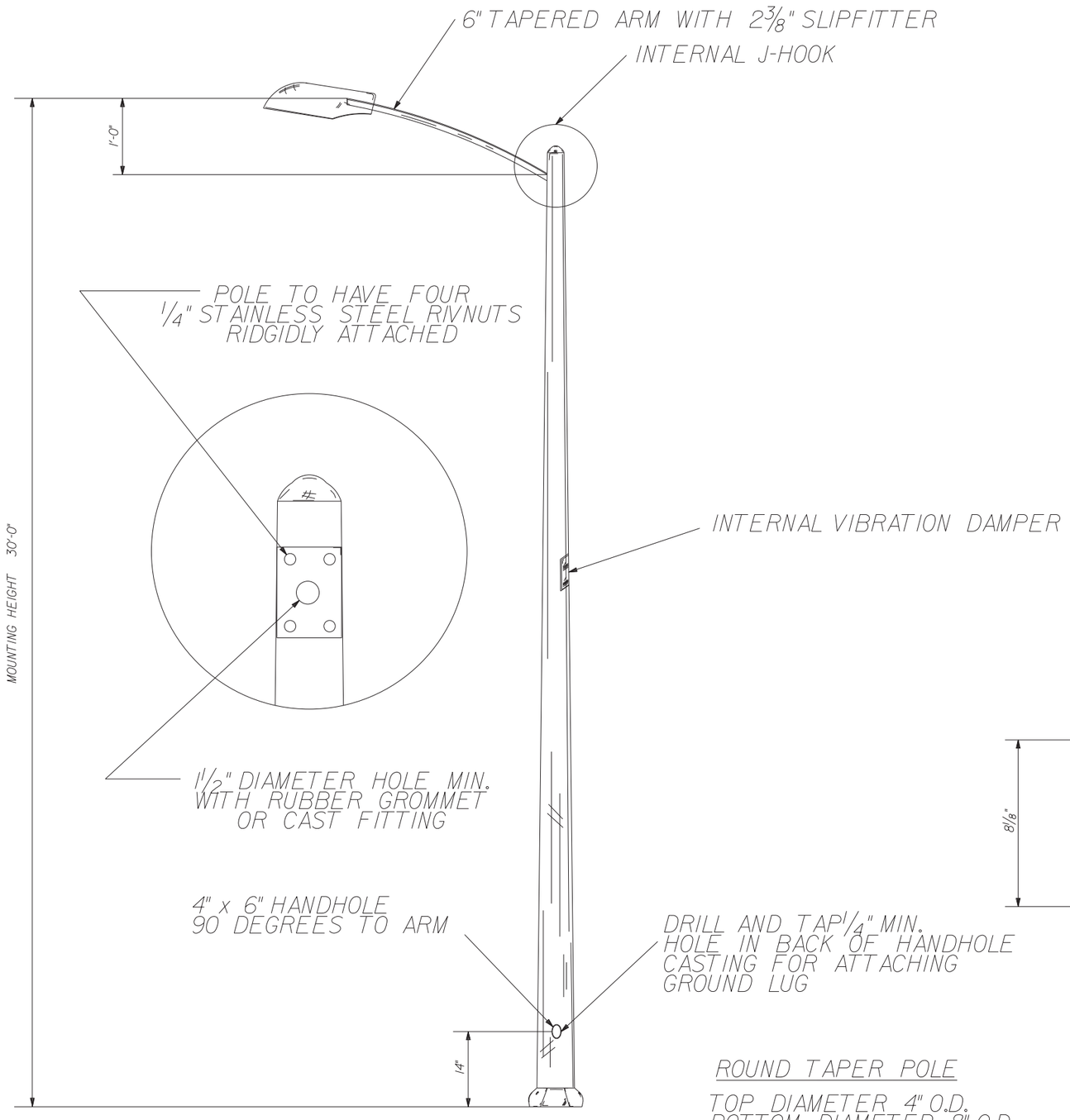




ROUND TAPER POLE

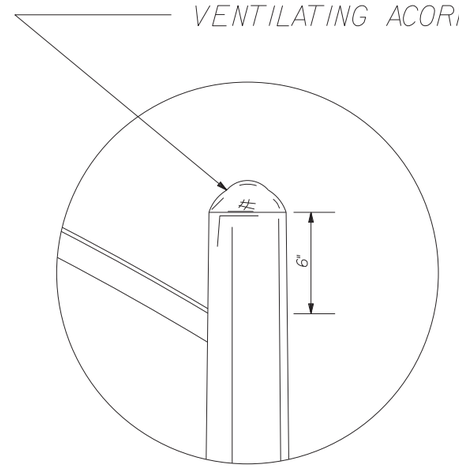
TOP DIAMETER 4" O.D.
BOTTOM DIAMETER 8" O.D.
WALL THICKNESS .250"
DARK BROWN ANODIZED ALUMINUM
LUMINAIRE PAID SEPARATELY

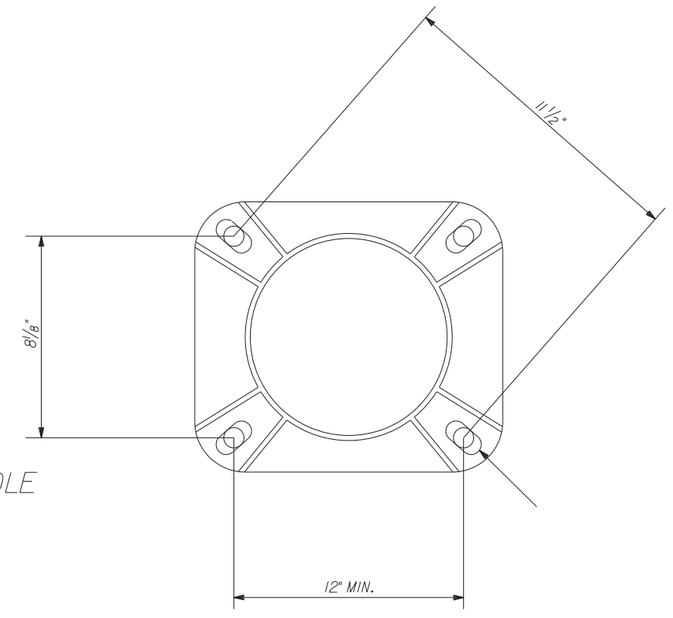
PROJECT NO: 2160-14-70	HWY: S. 76Th STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 29



LIGHTING UNIT TWIN

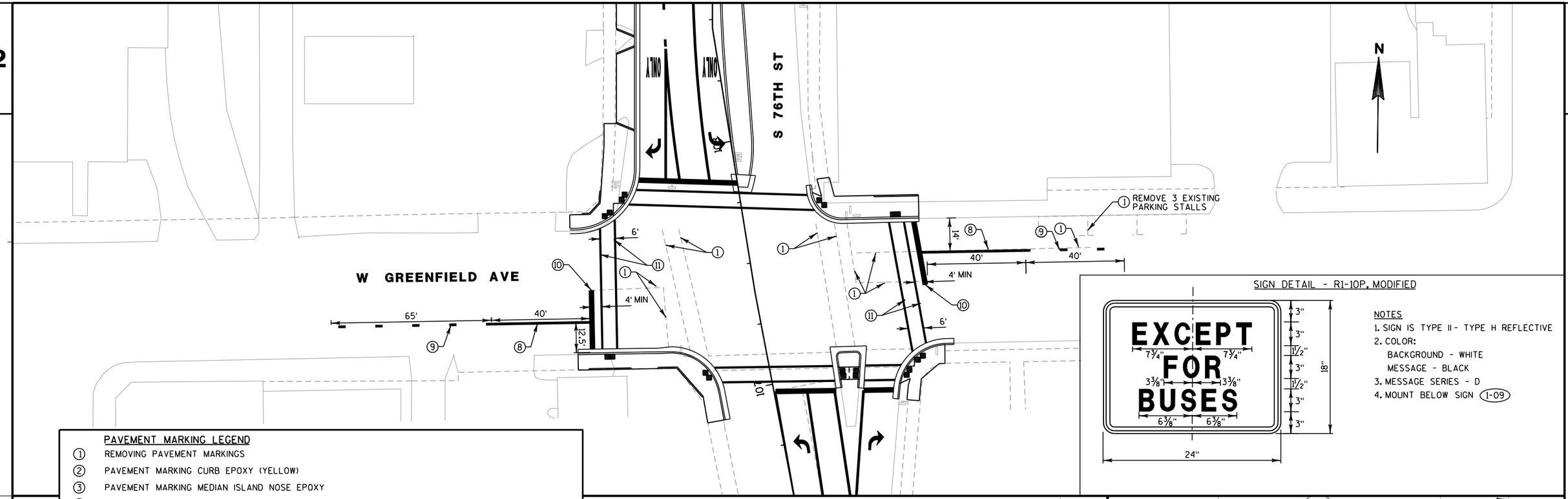
N.T.S.





ROUND TAPER POLE

TOP DIAMETER 4" O.D.
BOTTOM DIAMETER 8" O.D.
WALL THICKNESS .250"
DARK BROWN ANODIZED ALUMINUM
LUMINAIRE PAID SEPARATELY



PAVEMENT MARKING LEGEND

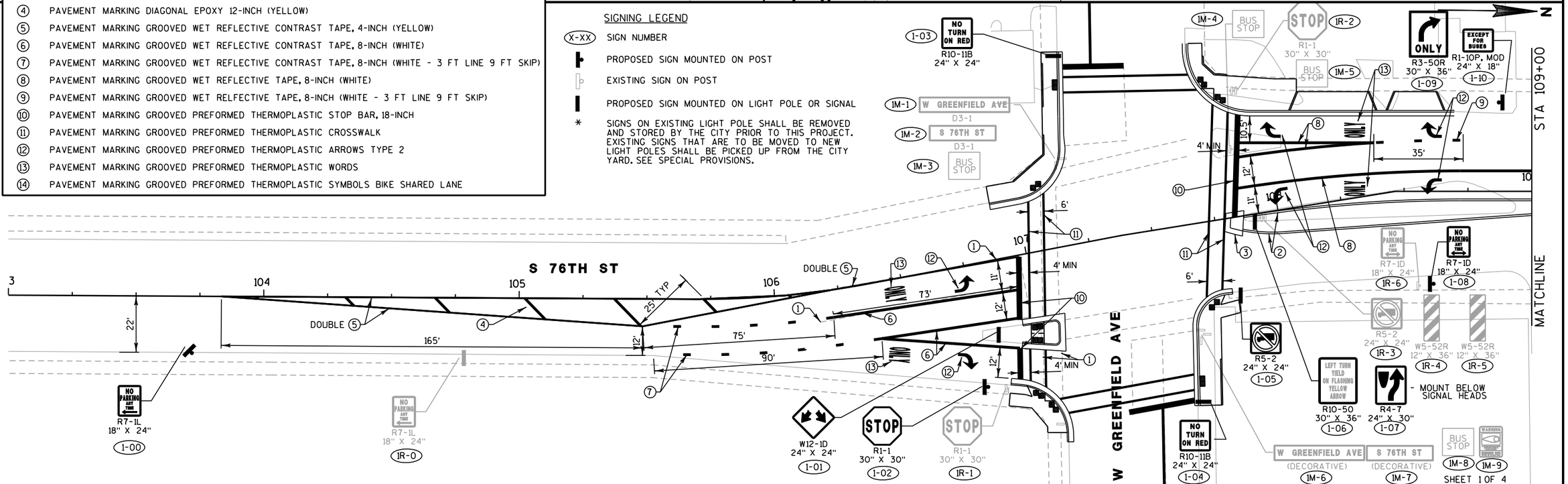
1. REMOVING PAVEMENT MARKINGS
2. PAVEMENT MARKING CURB EPOXY (YELLOW)
3. PAVEMENT MARKING MEDIAN ISLAND NOSE EPOXY
4. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH (YELLOW)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE)
9. PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
10. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR, 18-INCH
11. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK
12. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
14. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS BIKE SHARED LANE

SIGN DETAIL - R1-10P, MODIFIED

NOTES
1. SIGN IS TYPE II - TYPE H REFLECTIVE
2. COLOR:
   BACKGROUND - WHITE
   MESSAGE - BLACK
3. MESSAGE SERIES - D
4. MOUNT BELOW SIGN (1-09)

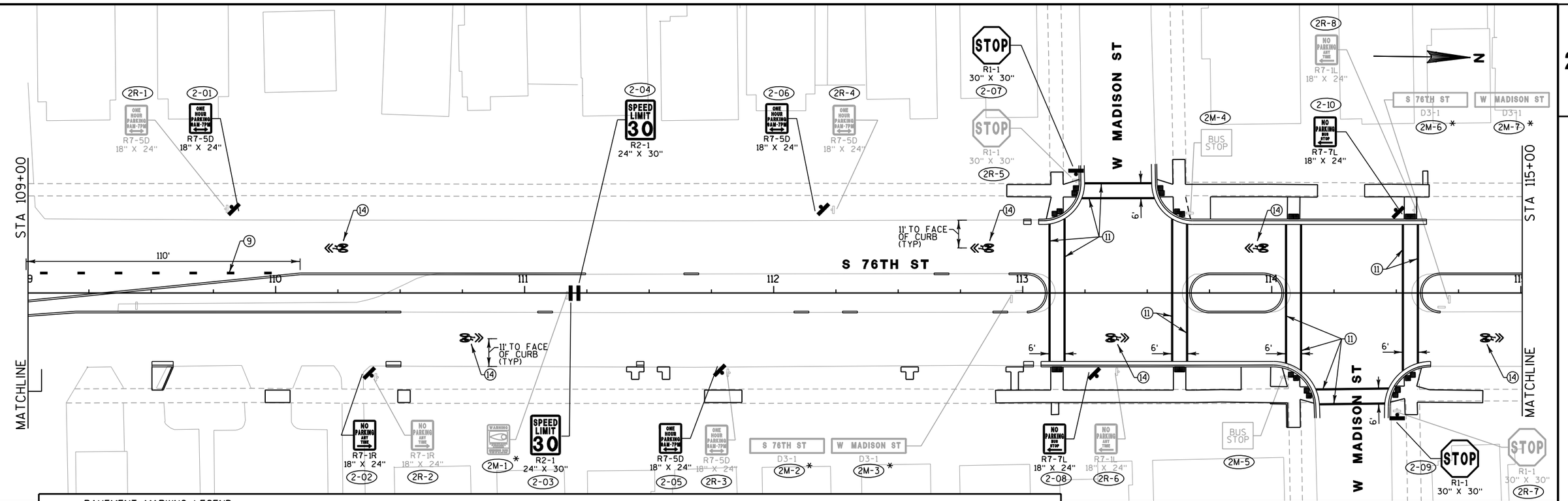
SIGNING LEGEND

- (X-XX) SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN ON POST
- PROPOSED SIGN MOUNTED ON LIGHT POLE OR SIGNAL
- * SIGNS ON EXISTING LIGHT POLE SHALL BE REMOVED AND STORED BY THE CITY PRIOR TO THIS PROJECT. EXISTING SIGNS THAT ARE TO BE MOVED TO NEW LIGHT POLES SHALL BE PICKED UP FROM THE CITY YARD. SEE SPECIAL PROVISIONS.



PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	SIGNING & PAVEMENT MARKING	SCALE, FT 0 20 40	SHEET E

FILE NAME : k:\1102714\cadd\sheets\pavement marking\024511_pm.dgn PLOT DATE : 4/1/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



PAVEMENT MARKING LEGEND

1. REMOVING PAVEMENT MARKINGS
2. PAVEMENT MARKING CURB EPOXY (YELLOW)
3. PAVEMENT MARKING MEDIAN ISLAND NOSE EPOXY
4. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH (YELLOW)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE)
9. PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
10. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR, 18-INCH
11. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK
12. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
14. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS BIKE SHARED LANE

SIGNING LEGEND

- (X-XX) SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN ON POST
- PROPOSED SIGN MOUNTED ON LIGHT POLE OR SIGNAL
- * SIGNS ON EXISTING LIGHT POLE SHALL BE REMOVED AND STORED BY THE CITY PRIOR TO THIS PROJECT. EXISTING SIGNS THAT ARE TO BE MOVED TO NEW LIGHT POLES SHALL BE PICKED UP FROM THE CITY YARD. SEE SPECIAL PROVISIONS.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	SIGNING & PAVEMENT MARKING	SCALE, FT 0 20 40	SHEET 32	E

PAVEMENT MARKING LEGEND

(1)	REMOVING PAVEMENT MARKINGS
(2)	PAVEMENT MARKING CURB EPOXY (YELLOW)
(3)	PAVEMENT MARKING MEDIAN ISLAND NOSE EPOXY
(4)	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(5)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH (YELLOW)
(6)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE)
(7)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
(8)	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE)
(9)	PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
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(12)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
(13)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
(14)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS BIKE SHARED LANE

SIGNING LEGEND

- (X-XX) SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN ON POST
- PROPOSED SIGN MOUNTED ON LIGHT POLE OR SIGNAL
- * SIGNS ON EXISTING LIGHT POLE SHALL BE REMOVED AND STORED BY THE CITY PRIOR TO THIS PROJECT. EXISTING SIGNS THAT ARE TO BE MOVED TO NEW LIGHT POLES SHALL BE PICKED UP FROM THE CITY YARD. SEE SPECIAL PROVISIONS.

W WASHINGTON ST
S 76TH ST
W WALKER ST
STA 121+00
STA 127+00
STA 133+00
MATCHLINE
STOP R1-1 30" X 30" (3-01)
STOP R1-1 30" X 30" (3R-1)
3M-1 * S 76TH ST D3-1
3M-2 * W WASHINGTON ST D3-1
SPEED LIMIT 30 R2-1 24" X 30" (3-04)
SPEED LIMIT 30 R2-1 24" X 30" (3-03)
11' TO FACE OF CURB (TYP)
3R-2 STOP R1-1 30" X 30"
3-02 STOP R1-1 30" X 30"
3M-3 *
3M-7 * CITY OF WEST ALLIS SIGN
3M-8 * CITY OF WEST ALLIS SIGN
3M-9 * CITY OF WEST ALLIS SIGN
3M-10 * CITY OF WEST ALLIS SIGN - FOR SB TRAFFIC
3-08 SPEED LIMIT 30 R2-1 24" X 30" - FOR SB TRAFFIC
STOP R1-1 30" X 30" (3-05)
STOP R1-1 30" X 30" (3R-3)
3R-4 STOP R1-1 30" X 30"
3-06 STOP R1-1 30" X 30"
W WALKER ST D3-1 (3M-4) *
R5-53A 18" X 24" (3M-5) *
CITY OF WEST ALLIS SIGN (3M-6) *
SPEED LIMIT 30 R2-1 24" X 30" (3-07) - FOR NB TRAFFIC
SHEET 3 OF 4

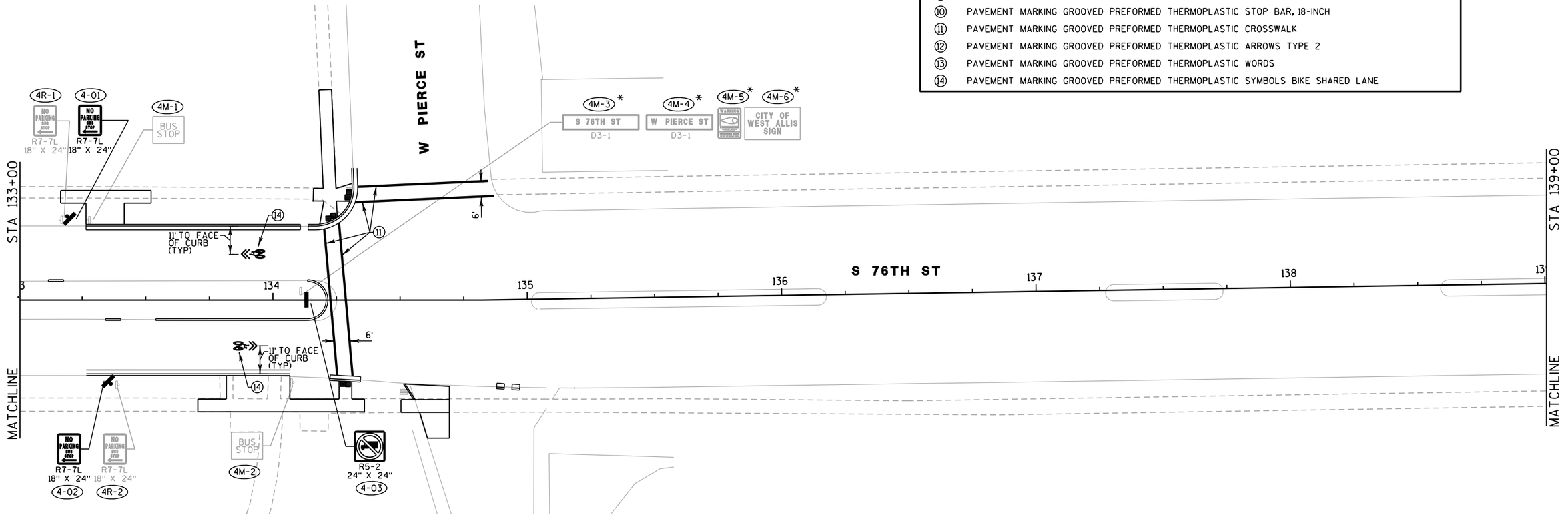
PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	SIGNING & PAVEMENT MARKING	SCALE, FT 0 20 40	SHEET 33	E

SIGNING LEGEND

- (X-XX) SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN ON POST
- PROPOSED SIGN MOUNTED ON LIGHT POLE OR SIGNAL
- * SIGNS ON EXISTING LIGHT POLE SHALL BE REMOVED AND STORED BY THE CITY PRIOR TO THIS PROJECT. EXISTING SIGNS THAT ARE TO BE MOVED TO NEW LIGHT POLES SHALL BE PICKED UP FROM THE CITY YARD. SEE SPECIAL PROVISIONS.

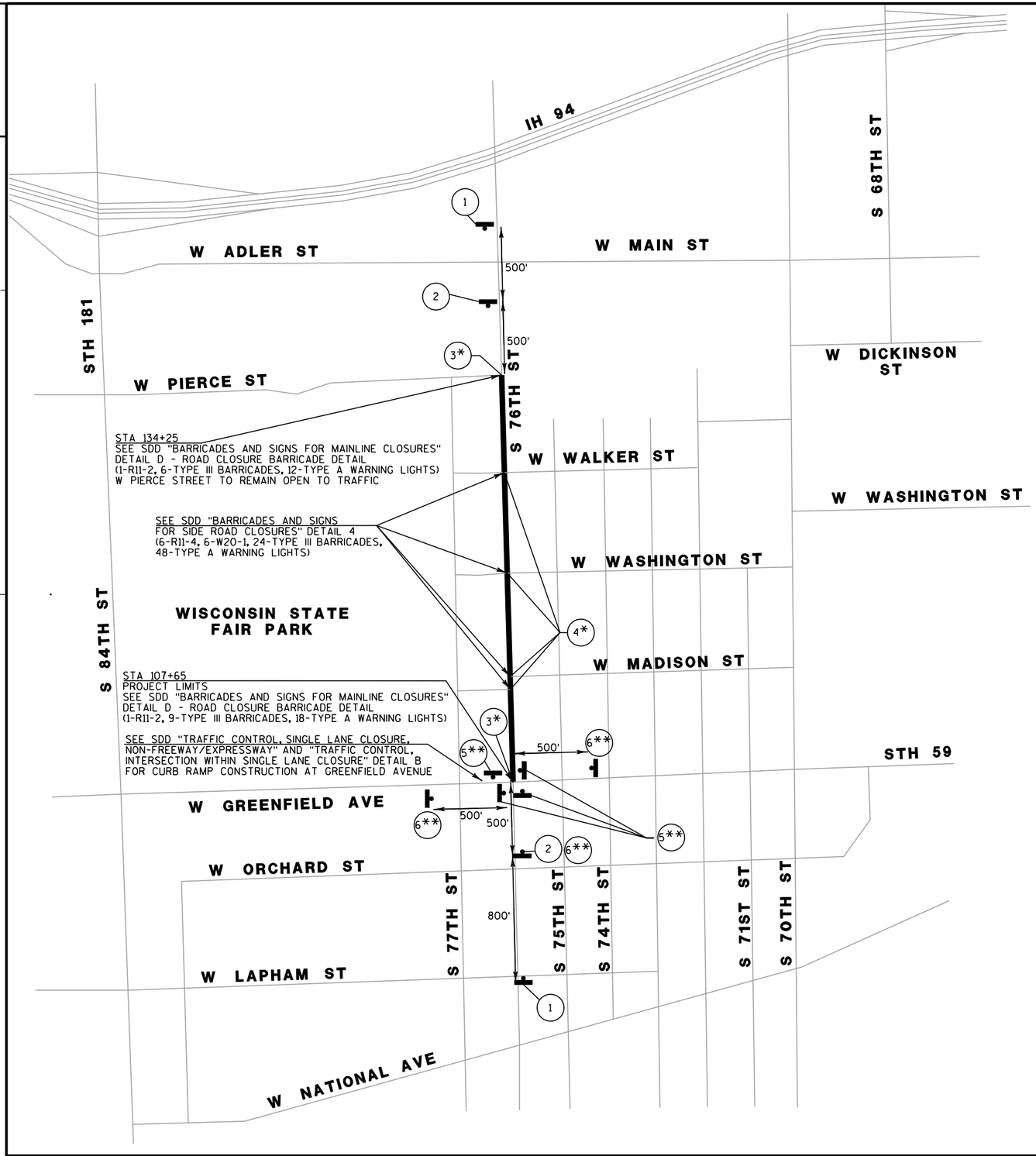
PAVEMENT MARKING LEGEND

(1)	REMOVING PAVEMENT MARKINGS
(2)	PAVEMENT MARKING CURB EPOXY (YELLOW)
(3)	PAVEMENT MARKING MEDIAN ISLAND NOSE EPOXY
(4)	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(5)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH (YELLOW)
(6)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE)
(7)	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
(8)	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE)
(9)	PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE - 3 FT LINE 9 FT SKIP)
(10)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR, 18-INCH
(11)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK
(12)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
(13)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
(14)	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS BIKE SHARED LANE

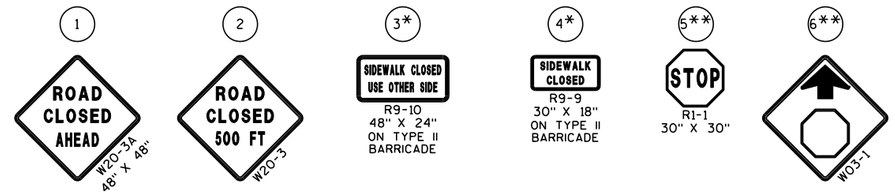


SHEET 4 OF 4

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	SIGNING & PAVEMENT MARKING	SHEET 34	E



THE DETOUR ROUTE FOR WISDOT PROJECT *1060-33-78 (76TH STREET BRIDGE OVER IH-94) WILL BE USED AS THE DETOUR ROUTE FOR THIS PROJECT AND WILL REMAIN IN PLACE FOR THE PROJECT DURATION. THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL PLACEMENT WITH THE 76TH STREET BRIDGE PROJECT. SEE THE PROSECUTION AND PROGRESS SECTION OF THE SPECIAL PROVISIONS FOR FURTHER GUIDANCE.



* CLOSE SIDEWALK ON ONLY ONE SIDE OF S 76TH STREET AT A TIME. SEE SDD "TRAFFIC CONTROL, SIDEWALK CLOSURE" FOR SIGNS AND BARRICADES AT LOCALIZED SIDEWALK WORK AREAS.

** REQUIRED DURING TRAFFIC SIGNAL SHUTDOWN ONLY.

LEGEND

PROJECT LIMITS

SIGN ON WOOD POST

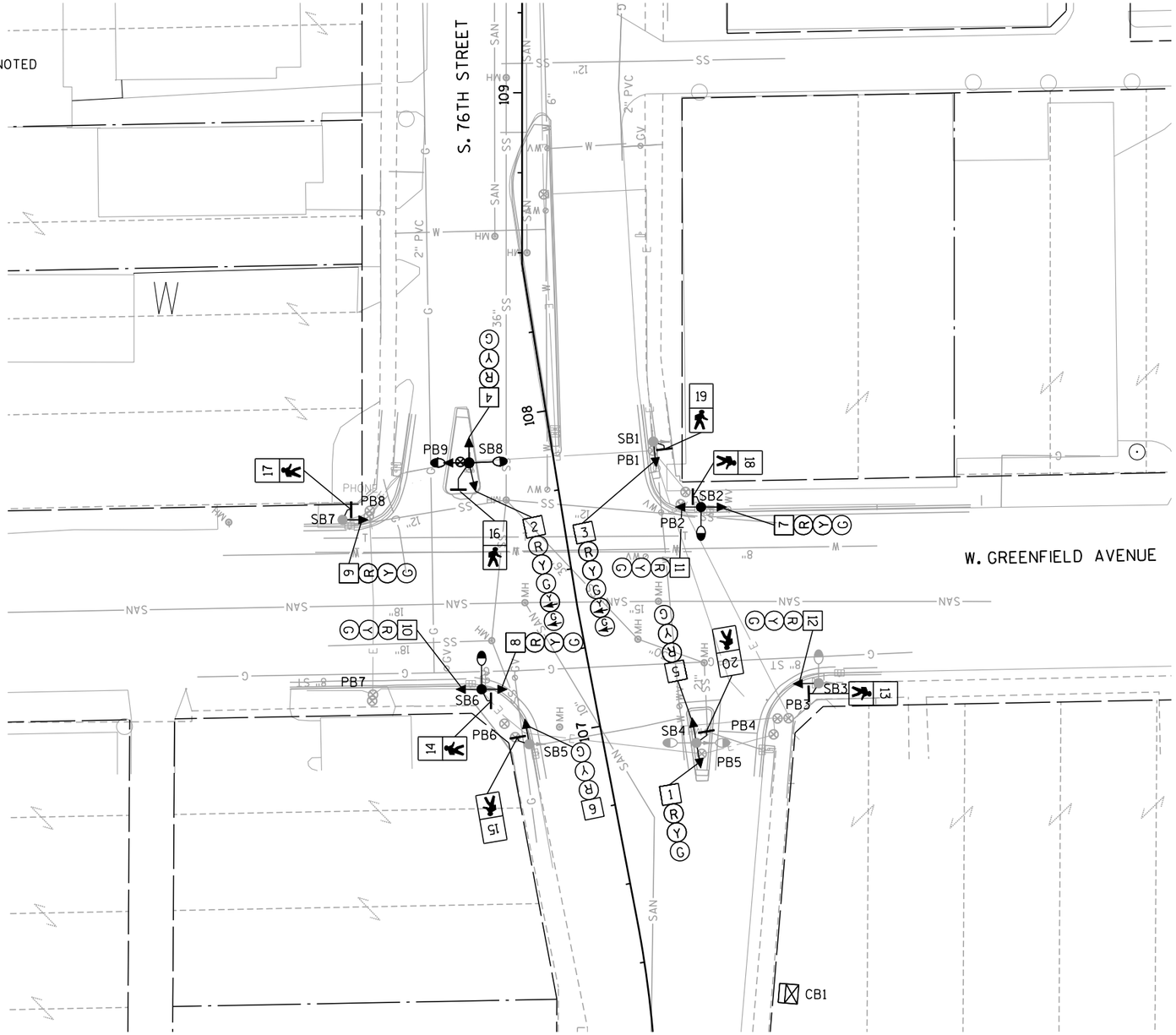
PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL OVERVIEW	SHEET 35	E

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- LUMINAIRE
- PULL BOX 18" X 36"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- PEDESTRIAN HEAD
- WALK/DON'T WALK INDICATOR 12"

CONSTRUCTION NOTES:

1. CABINET AND CONTROLLER TO BE REMOVED BY CONTRACTOR AND RETURNED TO THE CITY OF WEST ALLIS.
2. CONTRACTOR SHALL CONTACT CITY OF WEST ALLIS ENGINEERING DEPARTMENT 5 WORKING DAYS PRIOR TO BEGINNING REMOVALS.



NOTE : GRAYSHADE REPRESENTS EXISTING
BOLD REPRESENTS ITEMS TO BE REMOVED

ALL SIGNAL BASES AND SIGNAL POLES TO REMAIN, EXCEPT SB2, SB6, SB8. (BOLD INDICATES SIGNAL HEAD REMOVAL ONLY)

TRAFFIC CONTROL SIGNAL

S. 76TH STREET & GREENFIELD AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. TS036 SCALE 0 20

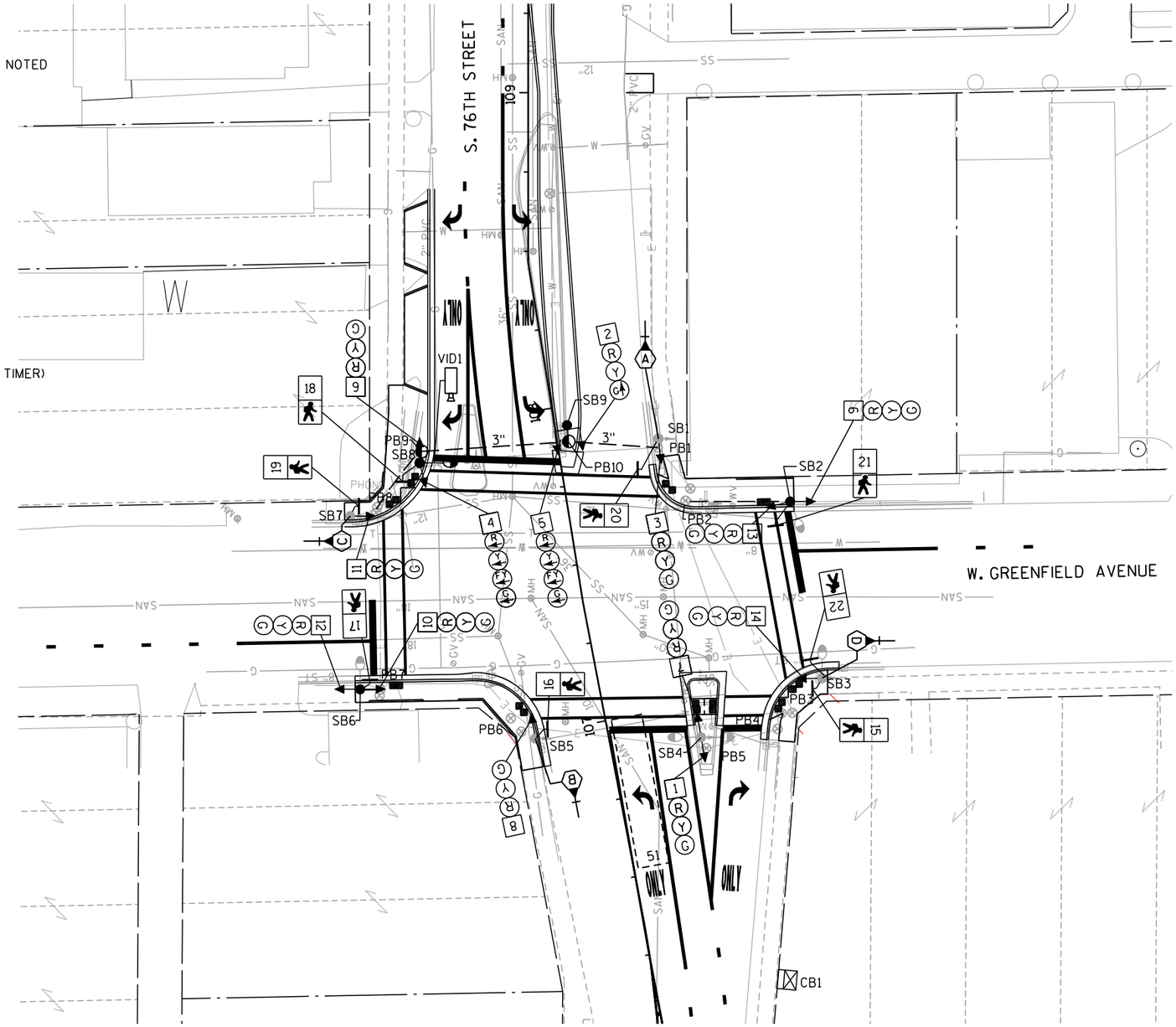
PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET E

FILE NAME : PLOT DATE : 4/1/2014 PLOT BY : trg PLOT SCALE :

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- LUMINAIRE
- PULL BOX 18" X 36"
- PULL BOX 24" X 36"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- FLASHING YELLOW ARROW
- YELLOW ARROW
- GREEN ARROW
- PEDESTRIAN HEAD
- WALK/DON'T WALK INDICATOR 12" (COUNTDOWN TIMER)
- VIDEO DETECTION CAMERA
- VIDEO DETECTION ZONE
- EVP DETECTOR HEAD
- EVP DESIGNATOR



N

NOTE : ALL LENSES ARE 12 - INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL

S. 76TH STREET & GREENFIELD AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. TS036

SCALE 0 20

PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 37	E

FILE NAME :

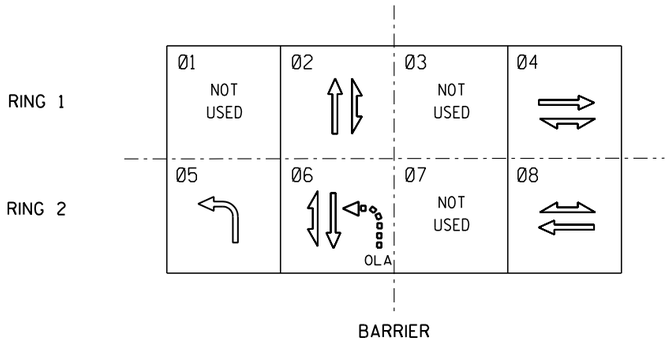
PLOT DATE : 4/14/2014

PLOT BY : wdw

PLOT SCALE :

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATIONS



	HEAD NUMBERS	FLASH
Ø1		
Ø2	1, 2, 3	R
Ø3		
Ø4	12, 13, 14	R
Ø5	4, 5	-
Ø6	6, 7, 8	R
Ø7		
Ø8	9, 10, 11	R
Ø2P	21, 22	
Ø4P	15, 16	
Ø6P	17, 18	
Ø8P	19, 20	
OLA	4, 5	R ←
OLB		
OLC		
OLD		

N

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

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

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

NOTE: LUMINAIRE ON SB8 POWERED FROM SIGNAL CABINET. ALL OTHER INTERSECTION LIGHTING TO REMAIN ON EXISTING ROADWAY LIGHTING SYSTEMS.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	51							
ASSIGNED PHASE	3							
OPERATION MODE	VEH							
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)								
ASSIGNED PHASE								
OPERATION MODE								
SWITCH								
EXTEND								
DELAY								

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	↖ ↑	↓ FY ↑	← →	← →
PHASE	2+5	2+6	4+8	4+8

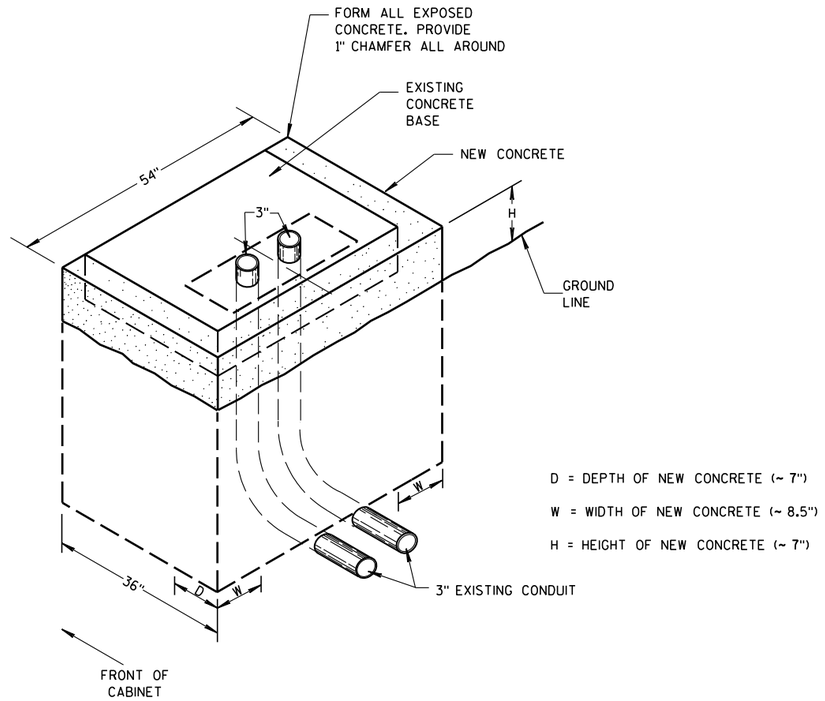
AFTER PREEMPTION SEQUENCE 2+5 OR 2+6, CONTROLLER SHALL RETURN TO PHASES 2+6
AFTER PREEMPTION SEQUENCE 4+8, CONTROLLER SHALL RETURN TO PHASES 4+8

TRAFFIC CONTROL SIGNAL
S. 76TH STREET &
GREENFIELD AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. TS036

CABINET TYPE: TS2
CONTROLLER TYPE: EPAC M51

DATE MARCH 2014 PAGE NO. 2 OF 2



D = DEPTH OF NEW CONCRETE (~ 7")

W = WIDTH OF NEW CONCRETE (~ 8.5")

H = HEIGHT OF NEW CONCRETE (~ 7")

ISOMETRIC VIEW

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 9 BASE. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

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

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

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

CONCRETE CONTROL CABINET BASE TYPE 9 MODIFIED

PROJECT NO: 2160-14-70	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 39	E

PROJECT ID:	2160-14-70
INTERSECTION:	S. 76th Street & W. Greenfield Avenue

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

DATE 3/17/14

CB1 TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
					RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB2		12	9	8	RED	ORG	GRN								
			13	4	RED/BLK	ORG/BLK	GRN/BLK								
			21	2								BLK	BLU		
SB6		12	10	8	RED	ORG	GRN								
			12	4	RED/BLK	ORG/BLK	GRN/BLK								
			17	6								BLK	BLU		
SB8		12	6	6	RED	ORG	GRN								
			4	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
			18	6								BLK	BLU		
SB9		12	2	2	RED	ORG				GRN					
			5	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				

Note: All remaining conductors shall be reconnected with the installation of new traffic signal heads

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
SB1	SB2
SB2	SB3
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB2	SB2
PB7	SB6
PB9	SB8
PB10	SB9

VIDEO VEHICLE DETECTOR CABLE	
FROM	TO
CB1	SB8

LIGHTING UF 12 AWG W/GROUND	
FROM	TO
CB1	SB2
CB1	SB6
CB1	SB8

EMERGENCY VEHICLE PREEMPTION CABLE	
FROM	TO
CB1	SB1
CB1	SB3
CB1	SB5
CB1	SB7

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications

*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.

DATE 12MAY14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2160-14-70 QUANTITY
0010	201.0120	CLEARING	ID	10.000	10.000
0020	201.0220	GRUBBING	ID	10.000	10.000
0030	204.0100	REMOVING PAVEMENT	SY	1,265.000	1,265.000
0040	204.0105	REMOVING PAVEMENT BUTT JOINTS	SY	1,355.000	1,355.000
0050	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	SF	112,300.000	112,300.000
0060	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	35.000	35.000
0070	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	810.000	810.000
0080	204.0130	REMOVING CURB	LF	1,930.000	1,930.000
0090	204.0150	REMOVING CURB & GUTTER	LF	1,060.000	1,060.000
0100	204.0155	REMOVING CONCRETE SIDEWALK	SY	1,040.000	1,040.000
0110	204.0195	REMOVING CONCRETE BASES	EACH	3.000	3.000
0120	204.0210	REMOVING MANHOLES	EACH	5.000	5.000
0130	204.0215	REMOVING CATCH BASINS	EACH	17.000	17.000
0140	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	42.000	42.000
0150	204.0245	REMOVING STORM SEWER (SIZE) 02. 18-INCH	LF	693.000	693.000
0160	204.0245	REMOVING STORM SEWER (SIZE) 03. 36-INCH	LF	67.000	67.000
0170	205.0100	EXCAVATION COMMON	CY	820.000	820.000
0180	205.0501.S	EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	TON	340.000	340.000
0190	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 2160-14-70	LS	1.000	1.000
0200	213.0100	FINISHING ROADWAY (PROJECT) 01. 2160-14-70	EACH	1.000	1.000
0210	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,235.000	1,235.000
0220	305.0130	BASE AGGREGATE DENSE 3-INCH	TON	800.000	800.000
0230	320.0145	CONCRETE BASE 8-INCH	SY	380.000	380.000
0240	340.0100	CRACKING AND SEATING	SY	12,950.000	12,950.000
0250	390.0303	BASE PATCHING CONCRETE	SY	2,900.000	2,900.000
0260	405.0100	COLORING CONCRETE RED	CY	14.000	14.000
0270	415.0090	CONCRETE PAVEMENT 9-INCH	SY	395.000	395.000
0280	416.0270	CONCRETE DRIVEWAY HES 7-INCH	SY	130.000	130.000
0290	416.0610	DRILLED TIE BARS	EACH	2,630.000	2,630.000
0300	455.0115	ASPHALTIC MATERIAL PG64-22	TON	183.000	183.000
0310	455.0605	TACK COAT	GAL	900.000	900.000
0320	460.1101	HMA PAVEMENT TYPE E-1	TON	3,300.000	3,300.000
0330	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	2,120.000	2,120.000
0340	465.0110	ASPHALTIC SURFACE PATCHING	TON	16.000	16.000
0350	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	11.000	11.000
0360	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	37.000	37.000
0370	601.0110	CONCRETE CURB TYPE D	LF	2,285.000	2,285.000
0380	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	120.000	120.000
0390	601.0600	CONCRETE CURB PEDESTRIAN	LF	111.000	111.000
0400	602.0410	CONCRETE SIDEWALK 5-INCH	SF	6,380.000	6,380.000
0410	602.0420	CONCRETE SIDEWALK 7-INCH	SF	2,750.000	2,750.000
0420	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	328.000	328.000
0430	608.0430	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH	LF	693.000	693.000
0440	608.0448	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 48-INCH	LF	67.000	67.000
0450	608.0512	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	LF	42.000	42.000
0460	611.0410	RECONSTRUCTING CATCH BASINS	EACH	2.000	2.000
0470	611.0420	RECONSTRUCTING MANHOLES	EACH	3.000	3.000

3

DATE 12MAY14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2160-14-70 QUANTITY
0480	611.0530	MANHOLE COVERS TYPE J	EACH	15.000	15.000
0490	611.0648	INLET COVERS TYPE R	EACH	27.000	27.000
0500	611.2004	MANHOLES 4-FT DIAMETER	EACH	3.000	3.000
0510	611.2005	MANHOLES 5-FT DIAMETER	EACH	1.000	1.000
0520	611.2007	MANHOLES 7-FT DIAMETER	EACH	1.000	1.000
0530	611.8105	ADJUSTING CATCH BASIN COVERS	EACH	29.000	29.000
0540	611.8110	ADJUSTING MANHOLE COVERS	EACH	16.000	16.000
0550	619.1000	MOBILIZATION	EACH	1.000	1.000
0560	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	60.000	60.000
0570	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	2.000	2.000
0580	623.0200	DUST CONTROL SURFACE TREATMENT	SY	12,950.000	12,950.000
0590	625.0100	TOPSOIL	SY	4,720.000	4,720.000
0600	627.0200	MULCHING	SY	1,180.000	1,180.000
0610	628.1504	SILT FENCE	LF	200.000	200.000
0620	628.1520	SILT FENCE MAINTENANCE	LF	100.000	100.000
0630	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	5.000	5.000
0640	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	3.000	3.000
0650	628.7005	INLET PROTECTION TYPE A	EACH	47.000	47.000
0660	628.7015	INLET PROTECTION TYPE C	EACH	45.000	45.000
0670	629.0210	FERTILIZER TYPE B	CWT	7.000	7.000
0680	630.0140	SEEDING MIXTURE NO. 40	LB	30.000	30.000
0690	631.0300	SOD WATER	MGAL	150.000	150.000
0700	631.1000	SOD LAWN	SY	4,720.000	4,720.000
0710	632.0101	TREES (SPECIES, ROOT, SIZE) 01. CHANTICLEER CALLERY PEAR B&B 1-3/4-INCH CAL	EACH	3.000	3.000
0720	632.0101	TREES (SPECIES, ROOT, SIZE) 02. MUSASHINO ZELKOVA B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0730	632.0101	TREES (SPECIES, ROOT, SIZE) 03. CUMULUS SERVICEBERRY B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0740	632.0101	TREES (SPECIES, ROOT, SIZE) 04. IVORY SILK JAPANESE LILAC B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0750	632.0101	TREES (SPECIES, ROOT, SIZE) 05. FASTIGATE TULIP B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0760	632.0101	TREES (SPECIES, ROOT, SIZE) 06. SPRING SNOW CRABAPPLE B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0770	632.0101	TREES (SPECIES, ROOT, SIZE) 07. EXCLAMATION LONDON PLANETREE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0780	632.0101	TREES (SPECIES, ROOT, SIZE) 08. STREET KEEPER HONEYLOCUST B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0790	632.0101	TREES (SPECIES, ROOT, SIZE) 09. DURA-HEAT RIVER BIRCH B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0800	632.0101	TREES (SPECIES, ROOT, SIZE) 10. PURPLE ROBE BLACK LOCUST B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0810	632.0101	TREES (SPECIES, ROOT, SIZE) 11. ESPRESSO KENTUCKY COFFEETREE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0820	632.0101	TREES (SPECIES, ROOT, SIZE) 12. SKYMASTER ENGLISH OAK B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0830	632.0101	TREES (SPECIES, ROOT, SIZE) 13. WHITE SHIELD OSAGE ORANGE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0840	632.0101	TREES (SPECIES, ROOT, SIZE) 14. ELIZABETH MAGNOLIA B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0850	632.0101	TREES (SPECIES, ROOT, SIZE) 15. SPLITLEAF LINDEN B&B 1-3/4-INCH CAL	EACH	1.000	1.000

3

DATE 12MAY14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2160-14-70 QUANTITY
0860	632.0101	TREES (SPECIES, ROOT, SIZE) 16. PRINCETON SENTRY GINKGO B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0870	632.0101	TREES (SPECIES, ROOT, SIZE) 17. PRAIRIFIRE CRABAPPLE B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0880	632.0101	TREES (SPECIES, ROOT, SIZE) 18. TURKISH FILBERT B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0890	632.0101	TREES (SPECIES, ROOT, SIZE) 19. CORINTHIAN LITTLELEAF LINDEN B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0900	632.0101	TREES (SPECIES, ROOT, SIZE) 20. HOMESTEAD BUCKEYE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0910	632.0101	TREES (SPECIES, ROOT, SIZE) 21. IRONWOOD B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0920	632.0101	TREES (SPECIES, ROOT, SIZE) 22. SURNBURST HONEYLOCUST B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0930	632.0101	TREES (SPECIES, ROOT, SIZE) 23. SUNSET BUCKEYE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0940	632.0101	TREES (SPECIES, ROOT, SIZE) 24. FRONTIER HYBRID ELM B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0950	632.0101	TREES (SPECIES, ROOT, SIZE) 25. ROYAL RAINDROPS CRABAPPLE B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0960	632.0101	TREES (SPECIES, ROOT, SIZE) 26. AMERICAN LARCH B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0970	632.0101	TREES (SPECIES, ROOT, SIZE) 27. PRAIRIE SENTINEL HACKBERRY B&B 1-3/4-INCH CAL	EACH	2.000	2.000
0980	632.0101	TREES (SPECIES, ROOT, SIZE) 28. HIS MAJESTY CORKTREE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
0990	632.0101	TREES (SPECIES, ROOT, SIZE) 29. RIVERSII BEECH B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1000	632.0101	TREES (SPECIES, ROOT, SIZE) 30. EYESTOPPER CORKTREE B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1010	632.0101	TREES (SPECIES, ROOT, SIZE) 31. COLUMNAR SARGENTS CHERRY B&B 1-3/4-INCH CAL	EACH	2.000	2.000
1020	632.0101	TREES (SPECIES, ROOT, SIZE) 32. PURPLE LEAF CATALPA B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1030	632.0101	TREES (SPECIES, ROOT, SIZE) 33. BLACK BIRCH B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1040	632.0101	TREES (SPECIES, ROOT, SIZE) 34. NORTHERN CATALPA B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1050	632.0101	TREES (SPECIES, ROOT, SIZE) 35. AMUR MAACKIA B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1060	632.0101	TREES (SPECIES, ROOT, SIZE) 36. AMERICAN YELLOWWOOD B&B 1-3/4-INCH CAL	EACH	1.000	1.000
1070	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	26.000	26.000
1080	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	18.000	18.000
1090	637.2210	SIGNS TYPE II REFLECTIVE H	SF	140.000	140.000
1100	638.2102	MOVING SIGNS TYPE II	EACH	34.000	34.000
1110	638.2602	REMOVING SIGNS TYPE II	EACH	21.000	21.000
1120	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	17.000	17.000
1130	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
1140	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
1150	643.0100	TRAFFIC CONTROL (PROJECT) 01. 2160-14-70	EACH	1.000	1.000
1160	643.0300	TRAFFIC CONTROL DRUMS	DAY	800.000	800.000
1170	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	580.000	580.000
1180	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,877.000	2,877.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2160-14-70 QUANTITY
1190	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	6,150.000	6,150.000
1200	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	200.000	200.000
1210	643.0900	TRAFFIC CONTROL SIGNS	DAY	2,142.000	2,142.000
1220	645.0140	GEOTEXTILE FABRIC TYPE SAS	SY	760.000	760.000
1230	646.0600	REMOVING PAVEMENT MARKINGS	LF	1,100.000	1,100.000
1240	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	1,110.000	1,110.000
1250	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	340.000	340.000
1260	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	280.000	280.000
1270	647.0456	PAVEMENT MARKING CURB EPOXY	LF	30.000	30.000
1280	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	1.000	1.000
1290	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	480.000	480.000
1300	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	26.000	26.000
1310	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	3,541.000	3,541.000
1320	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	400.000	400.000
1330	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	2,740.000	2,740.000
1340	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2160-14-70	LS	1.000	1.000
1350	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2160-14-70	LS	1.000	1.000
1360	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	2,890.000	2,890.000
1370	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	180.000	180.000
1380	652.0615	CONDUIT SPECIAL 3-INCH	LF	80.000	80.000
1390	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	4.000	4.000
1400	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	2.000	2.000
1410	653.0900	ADJUSTING PULL BOXES	EACH	11.000	11.000
1420	653.0905	REMOVING PULL BOXES	EACH	1.000	1.000
1430	654.0102	CONCRETE BASES TYPE 2	EACH	4.000	4.000
1440	654.0105	CONCRETE BASES TYPE 5	EACH	16.000	16.000
1450	654.0200	CONCRETE CONTROL CABINET BASES TYPE 6	EACH	1.000	1.000
1460	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	203.000	203.000
1470	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	1,202.000	1,202.000
1480	655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	899.000	899.000
1490	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	805.000	805.000
1500	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	2,676.000	2,676.000
1510	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	12,610.000	12,610.000
1520	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. STREET LIGHTING (W MADISON STREET)	LS	1.000	1.000
1530	657.0100	PEDESTAL BASES	EACH	1.000	1.000
1540	657.0305	POLES TYPE 2	EACH	1.000	1.000
1550	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	12.000	12.000
1560	658.0115	TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	EACH	2.000	2.000
1570	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	12.000	12.000
1580	658.0220	BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	EACH	2.000	2.000
1590	658.0412	PEDESTRIAN SIGNAL FACE 12-INCH	EACH	8.000	8.000
1600	658.0600	LED MODULES 12-INCH RED BALL	EACH	12.000	12.000
1610	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	12.000	12.000
1620	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	11.000	11.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2160-14-70 QUANTITY
1630	658.0615	LED MODULES 12-INCH RED ARROW	EACH	2.000	2.000
1640	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	4.000	4.000
1650	658.0625	LED MODULES 12-INCH GREEN ARROW	EACH	3.000	3.000
1660	658.0660	LED MODULES COUNTDWN TIMER 12-INCH	EACH	8.000	8.000
1670	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 01. S. 76TH STREET & W. GREENFIELD AVE.	LS	1.000	1.000
1680	690.0250	SAWING CONCRETE	LF	9,890.000	9,890.000
1690	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	500.000	500.000
1700	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	150.000	150.000
1710	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	200.000	200.000
1720	SPV.0060	SPECIAL 01. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2	EACH	6.000	6.000
1730	SPV.0060	SPECIAL 02. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	EACH	4.000	4.000
1740	SPV.0060	SPECIAL 03. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS BIKE SHARED LANE	EACH	23.000	23.000
1750	SPV.0060	SPECIAL 04. REMOVING AND SALVAGING LIGHT POLES, LUMINAIRES, AND ARMS	EACH	1.000	1.000
1760	SPV.0060	SPECIAL 05. INSTALL CITY-FURNISHED LIGHT POLE, LUMINAIRE & ARM	EACH	1.000	1.000
1770	SPV.0060	SPECIAL 06. CONCRETE BASE TYPE 9, MODIFIED	EACH	1.000	1.000
1780	SPV.0060	SPECIAL 07. CATCH BASIN SPECIAL	EACH	16.000	16.000
1790	SPV.0060	SPECIAL 08. WATERMAIN ALTERATION 12-INCH	EACH	1.000	1.000
1800	SPV.0060	SPECIAL 09. CIRCUIT BREAKER PANEL AND PHOTO CONTROL SYSTEM	EACH	1.000	1.000
1810	SPV.0060	SPECIAL 10. LIGHTING CONTROL CABINET TYPE 3060	EACH	1.000	1.000
1820	SPV.0060	SPECIAL 11. LIGHT UNITS SINGLE	EACH	1.000	1.000
1830	SPV.0060	SPECIAL 12. LIGHT UNITS TWIN	EACH	15.000	15.000
1840	SPV.0060	SPECIAL 13. LUMINAIRES UTILITY LED CATEGORY A	EACH	1.000	1.000
1850	SPV.0060	SPECIAL 14. LUMINAIRES UTILITY LED CATEGORY A BRONZE	EACH	30.000	30.000
1860	SPV.0060	SPECIAL 15. CONSTRUCTION STAKING CURB RAMPS	EACH	41.000	41.000
1870	SPV.0060	SPECIAL 16. ADJUST SANITARY MANHOLE COVERS	EACH	8.000	8.000
1880	SPV.0060	SPECIAL 17. ADJUST WATER VALVE BOX	EACH	16.000	16.000
1890	SPV.0060	SPECIAL 18. REMOVE AND REINSTALL EXISTING LIGHT POLE LUMINAIRE AND ARM	EACH	2.000	2.000
1900	SPV.0090	SPECIAL 01. CONCRETE CURB & GUTTER 26-INCH	LF	1,425.000	1,425.000
1910	SPV.0090	SPECIAL 02. TREE ROOT SAWING	LF	300.000	300.000
1920	SPV.0090	SPECIAL 03. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	2,030.000	2,030.000
1930	SPV.0090	SPECIAL 04. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH	LF	140.000	140.000
1940	SPV.0090	SPECIAL 05. SERIES CIRCUIT POWER CABLE	LF	255.000	255.000
1950	SPV.0105	SPECIAL 01. REMOVE TRAFFIC SIGNALS S. 76TH STREET & W. GREENFIELD AVE.	LS	1.000	1.000
1960	SPV.0105	SPECIAL 02. TRAFFIC SIGNAL CABINET & CONTROLLER S. 76TH STREET & W. GREENFIELD AVE.	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2160-14-70 QUANTITY
1970	SPV.0105	SPECIAL 03. EMERGENCY VEHICLE PREEMPTION SYSTEM S. 76TH STREET & W. GREENFIELD AVE.	LS	1.000	1.000
1980	SPV.0105	SPECIAL 04.TRAFFIC SIGNAL CONTROLLER, CABINET & VIDEO DETECTION TRAINING	LS	1.000	1.000
1990	SPV.0105	SPECIAL 05. TRAFFIC SIG CONTROLLER PROGRAMMING S. 76TH ST & W. GREENFIELD AVE.	LS	1.000	1.000
2000	SPV.0105	SPECIAL 06. FURNISH & INSTALL VIDEO DETECTION SY SYSTEM S 76TH ST & W. GREENFIELD AVE.	LS	1.000	1.000

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CLEARING AND GRUBBING

LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID
S 76TH STREET		
106+00 - 112+00	10	10
112+00 - 118+00	---	---
118+00 - 124+00	---	---
124+00 - 130+00	---	---
130+00 - 135+05	---	---
TOTALS	**10**	**10**

REMOVING PAVEMENT

LOCATION	204.0100 SY
S 76th STREET	
106+00 - 112+00	580
112+00 - 118+00	230
118+00 - 124+00	75
124+00 - 130+00	80
130+00 - 135+05	300
TOTAL	**1,265**

REMOVING CONCRETE SURFACE PARTIAL DEPTH

LOCATION	204.0109.S SF
S 76th STREET	
107+65 - 112+00	13,000
112+00 - 118+00	27,100
118+00 - 124+00	26,200
124+00 - 130+00	26,200
130+00 - 135+05	19,800
TOTAL	**112,300**

REMOVING PAVEMENT BUTT JOINTS

LOCATION	201.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY
S 76TH STREET		
108+88 - 109+38	340	---
134+55 - 135+05	360	---
W MADISON STREET (LT)	90	---
W MADISON STREET (RT)	85	---
W WASHINGTON STREET (LT)	80	---
W WASHINGTON STREET (RT)	85	35
W WALKER STREET (LT)	70	---
W WALKER STREET (RT)	85	---
W PIERCE STREET (LT)	160	---
TOTAL	**1,355**	**35**

REMOVING ASPHALTIC SURFACE MILLING

LOCATION	204.0120 SY
S 76th STREET	
107+65 - 108+88 LT & RT	810
TOTAL	**810**

REMOVING CURB

LOCATION	204.0130 LF
S 76TH STREET	
106+00 - 112+00	270
112+00 - 118+00	540
118+00 - 124+00	400
124+00 - 130+00	220
130+00 - 135+05	240
UNDISTRIBUTED	260
TOTAL	**1,930**

REMOVING CURB & GUTTER

LOCATION	204.0150 LF
S 76TH STREET	
106+00 - 112+00	230
112+00 - 118+00	170
118+00 - 124+00	230
124+00 - 130+00	190
130+00 - 135+05	100
UNDISTRIBUTED	140
TOTAL	**1,060**

REMOVING CONCRETE SIDEWALK

LOCATION	204.0155 SY
S 76TH STREET	
106+00 - 112+00	180
112+00 - 118+00	260
118+00 - 124+00	130
124+00 - 130+00	170
130+00 - 135+05	160
UNDISTRIBUTED	140
TOTAL	**1,040**

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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REMOVING STORM SEWER STRUCTURES

STUCTURE NUMBER	STATION	LOCATION		204.0210 REMOVING MANHOLES EACH	204.0215 REMOVING CATCH BASINS EACH
MH12	112+97.3	6.2'	LT	1	---
CB13	113+04.8	29'	LT	---	1
CB14	113+05.9	29'	RT	---	1
CB18	118+38.0	29'	LT	---	1
CB19	118+39.4	29'	RT	---	1
MH20	118+39.4	5.9'	RT	1	---
CB21	120+61.6	29'	RT	---	1
CB22	120+66.2	29'	RT	---	1
CB23	120+70.6	29'	RT	---	1
CB24	120+88.9	29'	LT	---	1
CB26	121+78.9	29'	LT	---	1
MH27	121+79.9	5.9'	LT	1	---
CB29	123+28.8	29'	LT	---	1
MH30	123+30.4	5.5'	LT	1	---
CB32	124+88.6	29'	LT	---	1
CB33	124+90.0	29'	RT	---	1
MH34	125+01.7	5.7'	LT	1	---
CB35	126+28.7	29'	LT	---	1
CB36	126+34.8	29'	RT	---	1
CB42	132+06.2	29'	RT	---	1
CB44	132+08.0	29'	LT	---	1
CB45	134+12.3	29'	LT	---	1
TOTALS				**5**	**17**

EARTHWORK SUMMARY

ID 2160-14-70 CATEGORY 0010			A	B	C
			Item #205.0100		*
Stage	From/To Station	Location	Excavation Common CY (1)(2)		Waste (6)
			Cut CY	EBS (3)(4)(5) CY	CY
1	107+65 - 112+00	S 76TH STREET	115	50	165
	112+00 - 118+00	S 76TH STREET	95	100	195
	118+00 - 124+00	S 76TH STREET	0	60	60
	124+00 - 130+00	S 76TH STREET	0	40	40
	130+00 - 135+05	S 76TH STREET	110	130	240
	UNDISTRIBUTED	S 76TH STREET	0	120	120
		TOTALS	**820**		**820**

* NOT A BID ITEM. COLUMN SHOWN FOR INFORMATION ONLY.
1) EXCAVATION COMMON IS THE SUM OF THE CUT(A) AND EBS (B) COLUMNS (ITEM #205.0100).
2) IT IS ASSUMED THAT ALL CUT (A) AND ALL EBS (B) WILL BE WASTED.
3) EBS (B) TO BE PAID AS EXCAVATION COMMON (ITEM #205.0100).
4) IT IS ESTIMATED THAT 25% OF THE BASE PATCHING (ITEM #390.0303) AREAS WILL REQUIRE EBS TO A DEPTH OF 24 INCHES. AN UNDISTRIBUTED AMOUNT OF EBS HAS BEEN INCLUDED FOR THE UNDISTRIBUTED BASE PATCHING AREAS (SEE "CONCRETE BASE ITEMS").
5) EBS (B) TO BE BACKFILLED WITH 3-INCH BASE AGGREGATE DENSE (ITEM #305.0130 - SEE "BASE COURSE ITEMS").
6) WASTE (C) = CUT (A) + EBS (B). POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.

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REMOVING STORM SEWER

UPSTREAM STRUCTURE	-	DOWNSTREAM STRUCTURE	DIAMETER IN.	204.0245.01 REMOVING STORM SEWER 12-INCH L.F.	204.0245.02 REMOVING STORM SEWER 18-INCH L.F.	204.0245.03 REMOVING STORM SEWER 36-INCH L.F.
MH12	-	PIPE CONN.	36	---	---	67
MH16	-	MH20	18	---	415	---
MH20	-	MH25	18	---	278	---
CB42	-	MH43	12	42	---	---
TOTALS				**42**	**693**	**67**

EXCAVATION OF CONTAMINATED MATERIAL

LOCATION	* 205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON
S 76TH STREET	
107+65 - 112+00	340
112+00 - 118+00	---
118+00 - 124+00	---
124+00 - 130+00	---
130+00 - 135+05	---
TOTALS	**340**

*SEE SPECIAL PROVISIONS FOR LOCATION.

GEOTEXTILE FABRIC

LOCATION	* 645.0140 GEOTEXTILE FABRIC TYPE SAS SY
S 76TH STREET	
107+65 - 112+00	80
112+00 - 118+00	150
118+00 - 124+00	90
124+00 - 130+00	60
130+00 - 135+05	200
UNDISTRIBUTED	180
TOTALS	**760**

*TO BE USED UNDER EBS AREAS.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PREPARE FOUNDATION FOR ASPHALTIC PAVING

PROJECT	211.0100 EACH
2160-14-70	1
TOTAL	**1**

NOTE: TO BE USED AS DIRECTED BY ENGINEER.

FINISHING ROADWAY

PROJECT	213.0100 EACH
2160-14-70	1
TOTAL	**1**

BASE COURSE ITEMS

LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	* 305.0130 BASE AGGREGATE DENSE 3-INCH TON
S 76TH STREET		
106+00 - 112+00	200	80
112+00 - 118+00	320	160
118+00 - 124+00	155	100
124+00 - 130+00	120	70
130+00 - 135+05	240	200
UNDISTRIBUTED	200	190
TOTALS	**1,235**	**800**

*TO BE USED FOR EBS AREAS.

CONCRETE BASE ITEMS

LOCATION	320.0145 CONCRETE BASE 8-INCH SY	390.0303 BASE PATCHING CONCRETE SY
S 76TH STREET		
107+65 - 112+00	105	280
112+00 - 118+00	55	600
118+00 - 124+00	65	340
124+00 - 130+00	80	230
130+00 - 135+05	75	780
UNDISTRIBUTED*	---	670
TOTALS	**380**	**2,900**

*UNDISTRIBUTED AMOUNT IS 30% OF ALL BASE PATCHING AREAS. LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

CRACKING AND SEATING

LOCATION	340.0100 CRACKING AND SEATING SY
S 76TH STREET	
107+65 - 112+00	2,100
112+00 - 118+00	2,850
118+00 - 124+00	2,850
124+00 - 130+00	2,800
130+00 - 135+05	2,350
TOTAL	**12,950**

COLORING CONCRETE RED

LOCATION	* 405.0100 CY
S 76th STREET	
106+82 - 107+03 RT	5
107+60 - 107+73 RT	9
TOTAL	**14**

*MATCH ADJACENT COLOR

CONCRETE PAVEMENT 9-INCH

LOCATION	415.0090 CONCRETE PAVEMENT 9-INCH SY
S 76TH STREET	
107+18 - 108+70 LT	95
113+18 - 113+98 RT	70
113+67 - 114+47 LT	70
133+27 - 134+07 LT & RT	140
134+70 - 134+84 LT	20
TOTAL	**395**

CONCRETE DRIVEWAY HES 7-INCH

LOCATION	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY
S 76TH STREET	
108+10 - 108+45 LT	30
108+98 - 108+66 LT	20
109+00 - 109+06 RT	10
109+50 - 109+59 RT	10
109+96 - 110+06 RT	10
134+52 - 135+12 RT	30
UNDISTRIBUTED	20
TOTAL	**130**

HMA PAVEMENT ITEMS

LOCATION	455.0115 ASPHALTIC MATERIAL PG 64-22 TON	455.0605 TACK COAT GAL	460.1101 HMA PAVEMENT TYPE E-1 TON	* 465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	** 465.0125 ASPHALTIC SURFACE TEMPORARY TON
S 76th STREET						
106+00 - 112+00	30	150	540	---	6	---
112+00 - 118+00	40	200	710	---	2	---
118+00 - 124+00	40	200	730	---	2	---
124+00 - 130+00	40	200	720	---	1	---
130+00 - 135+05	33	150	600	---	---	---
UNDISTRIBUTED	---	---	---	16	---	37
TOTALS	**183**	**900**	**3300**	**16**	**11**	**37**

*USED TO PATCH EXISTING CONCRETE JOINTS PRIOR TO FINAL PAVING THAT ARE AT LEAST 1.5 INCHES DEEP BUT LESS THAN 4 INCHES DEEP

**UNDISTRIBUTED AMOUNT TO BE USED FOR ASPHATLIC WEDGING SIDEROADS, PROJECT ENDS & DRIVEWAYS.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

DRILLED TIE BARS

LOCATION	416.0610 * EACH
S 76th STREET	
106+00 - 112+00	480
112+00 - 118+00	490
118+00 - 124+00	390
124+00 - 130+00	370
130+00 - 135+05	550
UNDISTRIBUTED	350
TOTAL	**2,630**

*TIE BARS REQUIRED TO CONNECT ALL CONCRETE BASE PATCHES, CONCRETE BASE, CURB AND CURB & GUTTER TO EXISTING CRACKED AND SEATED PAVEMENT. ALL TIE BARS PLACED IN FRESH CONCRETE ARE INCIDENTAL.

INCENTIVE DENSITY HMA PAVEMENT

HMA PAVEMENT TYPE	460.2000 DOL
TYPE E-1	$2,120
TOTAL	**$2,120**

CONCRETE ITEMS

LOCATION	601.0110 CONCRETE CURB TYPE D LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	SPV.0090.01 CONCRETE CURB & GUTTER 26-INCH LF	601.0600 CONCRETE CURB PEDESTRIAN	650.5500 CONSTRUCTION STAKING CURB, GUTTER & CURB AND GUTTER LF
S 76TH STREET					
106+00 - 112+00	630	120	230	72	972
112+00 - 118+00	510	---	330	16	696
118+00 - 124+00	390	---	225	10	625
124+00 - 130+00	220	---	190	13	423
130+00 - 135+05	235	---	260	---	335
UNDISTRIBUTED	300	---	190	---	490
TOTALS	**2,285**	**120**	**1,425**	**111**	**3,541**

3

CONCRETE SIDEWALK

LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0420 CONCRETE SIDEWALK 7-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	SPV.0060.15 CONSTRUCTION STAKING CURB RAMPS EACH
S 76TH STREET				
106+00 - 112+00	480	1,350	80	10
112+00 - 118+00	1,900	540	96	12
118+00 - 124+00	760	400	64	8
124+00 - 130+00	1,200	320	64	8
130+00 - 135+05	1,200	140	24	3
UNDISTRIBUTED	840	---	---	---
TOTALS	**6,380**	**2,750**	**328**	**41**

STORM SEWER PIPES

UPSTREAM STRUCTURE	-	DOWNSTREAM STRUCTURE	**608.0512** STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH L.F.	**608.0430** STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH L.F.	**608.0448** STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 48-INCH L.F.
MH12	-	PIPE CONN.	--	---	67
MH16	-	MH20	--	415	---
MH20	-	MH25	--	278	---
CB42	-	MH43	42	---	---
TOTALS			**42**	**693**	**67**

ALL ITEMS CATEGORY 0010 UNLESS NOTED

STORM SEWER STRUCTURES

STUCTURE NUMBER	STATION	LOCATION		SPV.0060.07 CATCH BASIN SPECIAL EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.0410 RECONSTRUCTING CATCH BASINS EACH	611.0420 RECONSTRUCTING MANHOLES EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0648 INLET COVERS TYPE R-1 EACH	* 611.8105 ADJUSTING CATCH BASIN COVERS EACH	** 611.8110 ADJUSTING MANHOLE COVERS EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	RIM ELEV.	STR DEPTH FEET
CB5	106+95.3	21.6'	LT	---	---	---	---	---	---	---	1	1	---	---	148.62	---
CB6	107+20.6	37.3'	LT	---	---	---	---	---	---	---	1	1	---	---	148.25	---
CB7	107+59.4	45.1'	RT	---	---	---	---	---	---	---	1	1	---	---	147.92	---
MH8	107+75.0	16.6'	LT	---	---	---	---	---	---	1	---	---	1	---	148.87	---
CB9	107+76.2	66.2'	LT	---	---	---	---	---	---	---	1	1	---	---	148.52	---
MH10	109+05.5	6.5'	LT	---	---	---	---	---	---	1	---	---	1	---	145.40	---
MH11	111+31.0	6.3'	LT	---	---	---	---	---	---	1	---	---	1	---	140.56	---
MH12	112+97.3	6.2'	LT	---	---	---	1	---	---	1	---	---	1	1	139.11	8.8
CB13	113+04.8	29'	LT	1	---	---	---	---	---	---	1	1	---	1	137.81	5.0
CB14	113+05.9	29'	RT	1	---	---	---	---	---	---	1	1	---	1	138.08	5.0
CB15	113+99.2	29'	RT	---	---	---	---	1	---	---	1	1	---	1	137.23	---
CB15A	114+17.7	45.5'	RT	---	---	---	---	---	---	---	---	1	---	---	137.60	---
MH16	114+24.2	5.6'	LT	---	---	---	---	---	---	1	---	---	1	---	138.40	---
CB17	114+24.8	29'	LT	---	---	---	---	1	---	---	1	1	---	1	137.48	---
CB17A	114+26.4	46.2'	RT	---	---	---	---	---	---	---	---	---	1	---	137.88	---
CB17B	114+45.8	45.8'	RT	---	---	---	---	---	---	---	---	1	---	---	137.71	---
CB18	118+38.0	29'	LT	1	---	---	---	---	---	---	1	1	---	1	135.36	5.0
CB19	118+39.4	29'	RT	1	---	---	---	---	---	---	1	1	---	1	135.26	5.0
MH20	118+39.4	5.9'	LT	---	---	1	---	---	---	1	---	---	1	1	136.72	5.7
CB22	120+66.2	29'	RT	1	---	---	---	---	---	---	1	1	---	1	134.53	5.0
CB23	120+70.6	29'	RT	1	---	---	---	---	---	---	1	1	---	1	134.46	5.0
CB24	120+88.9	29'	LT	1	---	---	---	---	---	---	1	1	---	1	134.48	5.3
MH25	121+17.3	5.9'	LT	---	---	---	---	---	---	1	---	---	1	---	135.16	---
CB26	121+78.9	29'	LT	1	---	---	---	---	---	---	1	1	---	1	133.95	5.0
MH27	121+79.9	5.9'	LT	---	1	---	---	---	---	1	---	---	1	1	134.97	5.6
CB28	121+80.8	29'	RT	---	---	---	---	---	---	---	1	1	---	---	134.09	---
CB29	123+28.8	29'	LT	1	---	---	---	---	---	---	1	1	---	1	133.84	5.0
MH30	123+30.4	5.5'	LT	---	1	---	---	---	---	1	---	---	1	1	135.10	6.0
CB31	123+30.7	29'	RT	---	---	---	---	---	---	---	1	1	---	---	133.88	---
CB32	124+88.6	29'	LT	1	---	---	---	---	---	---	1	1	---	1	133.59	5.0
CB33	124+90.0	29'	RT	1	---	---	---	---	---	---	1	1	---	1	133.69	5.7
MH34	125+01.7	5.7'	LT	---	1	---	---	---	---	1	---	---	1	1	134.79	5.9
CB35	126+28.7	29'	LT	1	---	---	---	---	---	---	1	1	---	1	133.39	5.0
CB36	126+34.8	29'	RT	1	---	---	---	---	---	---	1	1	---	1	133.53	5.0
MH37	126+34.9	6.2'	LT	---	---	---	---	---	1	1	---	---	1	1	134.59	---
CB38	127+74.7	29'	RT	---	---	---	---	---	---	---	1	1	---	---	133.34	---
CB39	127+82.2	29'	LT	---	---	---	---	---	---	---	1	1	---	---	133.06	---
MH40	127+96.9	23.6'	LT	---	---	---	---	---	---	1	---	---	1	---	133.69	---
MH41	128+14.6	23.6'	LT	---	---	---	---	---	---	1	---	---	1	---	133.63	---
CB42	132+06.2	29'	RT	1	---	---	---	---	---	---	1	1	---	1	130.06	5.0
MH43	132+06.9	14.5'	LT	---	---	---	---	---	1	1	---	---	1	1	130.71	---
CB44	132+08.0	29'	LT	1	---	---	---	---	---	---	1	1	---	1	129.78	5.0
CB45	134+12.3	29'	LT	1	---	---	---	---	---	---	1	1	---	1	129.09	5.0
MH46	134+24.7	13.7'	LT	---	---	---	---	---	1	1	---	---	1	1	129.59	---
CB47	134+92.5	33.7'	RT	---	---	---	---	---	---	---	1	1	---	---	128.93	---
TOTALS				**16**	**3**	**1**	**1**	**2**	**3**	**15**	**27**	**29**	**16**	**26**		

1. RIM ELEVATIONS ARE TO EXISTING CASTING ELEVATION AT FLOW LINE AND DO NOT ACCOUNT FOR ELEVATION CHANGE DUE TO ASPHALT OVERLAY.
2. STR DEPTH = RIM ELEV - INV - CASTING HEIGHT + SUMP FOR CATCH BASINS (VARIES)
   CASTING HEIGHT = 9" FOR MANHOLE COVERS, 7" FOR INLET COVERS

*SEE THE CONSTRUCTION DETAILS AND SPECIAL PROVISIONS FOR NEW OR EXISTNG CATCH BASIN COVER INSTALLATION PROCEDURE.

**SEE THE CONSTRUCTION DETAILS AND SPECIAL PROVISIONS FOR NEW OR EXISTING MANHOLE COVER INSTALLATION PROCEDURE.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

DUST CONTROL SURFACE TREATMENT

LOCATION	623.0200 SY
S 76TH STREET	
107+65 - 112+00	2,100
112+00 - 118+00	2,850
118+00 - 124+00	2,850
124+00 - 130+00	2,800
130+00 - 135+05	2,350
TOTAL	**12,950**

NOTE: TO BE PLACED AS DIRECTED
BY THE ENGINEER FOR DUST CONTROL.

RESTORATION ITEMS

LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE No. 40 LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
S 76th STREET						
106+00 - 112+00	540	---	1	---	20	540
112+00 - 118+00	960	---	1	---	30	960
118+00 - 124+00	970	---	1	---	30	970
124+00 - 130+00	1,000	---	1	---	30	1,000
130+00 - 135+05	820	---	1	---	30	820
UNDISTRIBUTED	430	1180	2	30	10	430
TOTALS	**4,720**	**1,180**	**7**	**30**	**150**	**4,720**

3

CONCRETE MEDIAN SLOPED NOSE

LOCATION	620.0300 TYPE 1 SF
S 76TH STREET	
107+80 RT	60
TOTAL	**60**

EROSION CONTROL ITEMS

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	* 628.7005 INLET PROTECTION TYPE A EACH	* 628.7015 INLET PROTECTION TYPE C EACH
S 76th STREET						
106+00 - 112+00	---	---	---	---	6	6
112+00 - 118+00	---	---	---	---	8	8
118+00 - 124+00	---	---	---	---	10	9
124+00 - 130+00	---	---	---	---	8	8
130+00 - 135+05	---	---	---	---	5	5
UNDISTRIBUTED	200	100	5	3	10	9
TOTALS	**200**	**100**	**5**	**3**	**47**	**45**

*UNDISTRIBUTED INLET PROJECTION AMOUNTS INCLUDE ONE INLET BEYOND PROJECT LIMITS ON DOWNSTREAM SIDE ROADS: WASHINGTON (4), WALKER (2), PIERCE (2)

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TREE SUMMARY

LOCATION	632.0101.01 TREE (CHANTICLEER CALLERY PEAR) B&B, 1-3/4-INCH CAL EACH	632.0101.02 TREE (MUSASHINO ZELKOVA) B&B, 1-3/4-INCH CAL EACH	632.0101.03 TREE (CUMULUS SERVICEBERRY) B&B, 1-3/4-INCH CAL EACH	632.0101.04 TREE (IVORY SILK JAPANESE LILAC) B&B, 1-3/4-INCH CAL EACH	632.0101.05 TREE (FASTIGATE TULIP) B&B, 1-3/4-INCH CAL EACH	632.0101.06 TREE (SPRING SNOW CRABAPPLE) B&B, 1-3/4-INCH CAL EACH	632.0101.07 TREE (EXCLAMATION LONDON PLANETREE) B&B, 1-3/4-INCH CAL EACH	632.0101.08 TREE (STREET KEEPER HONEYLOCUST) B&B, 1-3/4-INCH CAL EACH	632.0101.09 TREE (DURA-HEAT RIVER BIRCH) B&B, 1-3/4-INCH CAL EACH
STA 107+65 - STA 112+00	1	1	1	---	---	---	---	---	---
STA 112+00 - STA 118+00	---	1	---	1	2	2	1	1	1
STA 118+00 - STA 124+00	---	---	---	---	---	---	---	1	---
STA 124+00 - STA 130+00	---	---	---	---	---	---	---	---	---
STA 130+00 - STA 135+05	2	---	---	1	---	---	---	---	---
TOTALS	**3**	**2**	**1**	**2**	**2**	**2**	**1**	**2**	**1**

LOCATION	632.0101.10 TREE (PURPLE ROBE BLACK LOCUST) B&B, 1-3/4-INCH CAL EACH	632.0101.11 TREE (ESPRESSO KENTUCKY COFFEETREE) B&B, 1-3/4-INCH CAL EACH	632.0101.12 TREE (SKYMASTER ENGLISH OAK) B&B, 1-3/4-INCH CAL EACH	632.0101.13 TREE (WHITE SHIELD OSAGE ORANGE) B&B, 1-3/4-INCH CAL EACH	632.0101.14 TREE (ELIZABETH MAGNOLIA) B&B, 1-3/4-INCH CAL EACH	632.0101.15 TREE (SPLITLEAF LINDEN) B&B, 1-3/4-INCH CAL EACH	632.0101.16 TREE (PRINCETON SENTRY GINKGO) B&B, 1-3/4-INCH CAL EACH	632.0101.17 TREE (PRAIRIFIRE CRABAPPLE) B&B, 1-3/4-INCH CAL EACH	632.0101.18 TREE (TURKISH FILBERT) B&B, 1-3/4-INCH CAL EACH
STA 107+65 - STA 112+00	---	---	---	---	---	---	---	---	---
STA 112+00 - STA 118+00	1	---	---	---	---	---	---	---	---
STA 118+00 - STA 124+00	---	1	2	1	1	1	2	2	1
STA 124+00 - STA 130+00	---	---	---	---	---	---	---	---	---
STA 130+00 - STA 135+05	---	---	---	---	---	---	---	---	---
TOTALS	**1**	**1**	**2**	**1**	**1**	**1**	**2**	**2**	**1**

LOCATION	632.0101.19 TREE (CORINTHIAN LITTLELEAF LINDEN) B&B, 1-3/4-INCH CAL EACH	632.0101.20 TREE (HOMESTEAD BUCKEYE) B&B, 1-3/4-INCH CAL EACH	632.0101.21 TREE (IRONWOOD) B&B, 1-3/4-INCH CAL EACH	632.0101.22 TREE (SURNBURST HONEYLOCUST) B&B, 1-3/4-INCH CAL EACH	632.0101.23 TREE (SUNSET BUCKEYE) B&B, 1-3/4-INCH CAL EACH	632.0101.24 TREE (FRONTIER HYBRID ELM) B&B, 1-3/4-INCH CAL EACH	632.0101.25 TREE (ROYAL RAINDROPS CRABAPPLE) B&B, 1-3/4-INCH CAL EACH	632.0101.26 TREE (AMERICAN LARCH) B&B, 1-3/4-INCH CAL EACH	632.0101.27 TREE (PRAIRIE SENTINEL HACKBERRY) B&B, 1-3/4-INCH CAL EACH
STA 107+65 - STA 112+00	---	---	---	---	---	---	---	---	---
STA 112+00 - STA 118+00	---	---	---	---	---	---	---	---	---
STA 118+00 - STA 124+00	1	---	---	---	---	---	---	---	---
STA 124+00 - STA 130+00	1	1	1	1	1	2	2	1	1
STA 130+00 - STA 135+05	---	---	---	---	---	---	---	---	1
TOTALS	**2**	**1**	**1**	**1**	**1**	**2**	**2**	**1**	**2**

LOCATION	632.0101.28 TREE (HIS MAJESTY CORKTREE) B&B, 1-3/4-INCH CAL EACH	632.0101.29 TREE (RIVERSII BEECH) B&B, 1-3/4-INCH CAL EACH	632.0101.30 TREE (EYESTOPPER CORKTREE) B&B, 1-3/4-INCH CAL EACH	632.0101.31 TREE (COLUMNAR SARGENTS CHERRY) B&B, 1-3/4-INCH CAL EACH	632.0101.32 TREE (PURPLE LEAF CATALPA) B&B, 1-3/4-INCH CAL EACH	632.0101.33 TREE (BLACK BIRCH) B&B, 1-3/4-INCH CAL EACH	632.0101.34 TREE (NORTHERN CATALPA) B&B, 1-3/4-INCH CAL EACH	632.0101.35 TREE (AMUR MAACKIA) B&B, 1-3/4-INCH CAL EACH	632.0101.36 TREE (AMERICAN YELLOWWOOD) B&B, 1-3/4-INCH CAL EACH
STA 107+65 - STA 112+00	---	---	---	---	---	---	---	---	---
STA 112+00 - STA 118+00	---	---	---	---	---	---	---	---	---
STA 118+00 - STA 124+00	---	---	---	---	---	---	---	---	---
STA 124+00 - STA 130+00	1	1	1	---	---	---	---	---	---
STA 130+00 - STA 135+05	---	---	---	2	1	1	1	1	1
TOTALS	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1**

NOTE: FOR SPECIES, SEE THE PLANT DATA CHARTS ON THE PLANTING/ENHANCEMENTS PLAN.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES

PROJECT	CYCLES
*2160-14-70	
YEAR 2014	13
YEAR 2015	13
TOTAL	**26**

*PROJECT CONTAINS 51 PLANTS, SEE "TREE SUMMARY" SPREADSHEET AND PLANTING/ENHANCEMENTS PLAN FOR ADDITIONAL INFORMATION.

PERMANENT SIGNING

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE (in)	637.2210 SIGNS TYPE II REFLECTIVE H SIGN AREA (SF)	634.0816 POST TUBULAR STEEL POSTS 2X2-INCH X 16 FT (EACH)	SIGN MOUNTED ON SAME POST AS #	REMARKS
1-00	R7-1L	(2S)	18X24	3.00	1	---	NO PARKING ANY TIME LEFT ARROW
1-01	W12-1D	(2S)	24X24	4.00	---	ON SIGNAL POLE	DOUBLE ARROW DOWN
1-02	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
1-03	R10-11B	(2S)	24X24	4.00	---	ON SIGNAL POLE	NO TURN ON RED
1-04	R10-11B	(2S)	24X24	4.00	---	ON SIGNAL POLE	NO TURN ON RED
1-05	R5-2	(2S)	24X24	4.00	---	ON SIGNAL POLE	NO TRUCKS SYMBOL
1-06	R10-50	(2S)	30X36	7.50	---	ON SIGNAL POLE - MOUNT BELOW SIGNAL HEADS	LEFT TURN YIELD ON FLASHING YELLOW ARROW
1-07	R4-7	(2S)	12X36	5.00	---	ON SIGNAL POLE - MOUNT BELOW SIGNAL HEADS	KEEP RIGHT SYMBOL
1-08	R7-1D	(2S)	18X24	3.00	1	---	NO PARKING ANY TIME DOUBLE ARROW
1-09	53-50R	(2S)	30X36	7.50	1	---	RIGHT TURN ONLY
1-10	R1-10P, MOD	(2S)	18X24	3.00	---	1-09	EXCEPT FOR BUSES
2-01	R7-5D	(2S)	18X24	3.00	1	---	__ HOUR PARKING TIME TO TIME DOUBLE ARROW
2-02	R7-1R	(2S)	18X24	3.00	1	---	NO PARKING ANY TIME RIGHT ARROW
2-03	R2-1	(2S)	24X30	5.00	---	ON LIGHT POLE	SPEED LIMIT __ MPH
2-04	R2-1	(2S)	24X30	5.00	---	ON LIGHT POLE	SPEED LIMIT __ MPH
2-05	R7-5D	(2S)	18X24	3.00	1	---	__ HOUR PARKING TIME TO TIME DOUBLE ARROW
2-06	R7-5D	(2S)	18X24	3.00	1	---	__ HOUR PARKING TIME TO TIME DOUBLE ARROW
2-07	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
2-08	R7-7L	(2S)	18X24	3.00	1	---	NO PARKING BUS STOP LEFT ARROW
2-09	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
2-10	R7-7L	(2S)	18X24	3.00	1	---	NO PARKING BUS STOP LEFT ARROW
3-01	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
3-02	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
3-03	R2-1	(2S)	24X30	5.00	---	ON LIGHT POLE	SPEED LIMIT __ MPH
3-04	R2-1	(2S)	24X30	5.00	---	ON LIGHT POLE	SPEED LIMIT __ MPH
3-05	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
3-06	R1-1	(2S)	30X30	5.18	1	---	STOP SIGN
3-07	R2-1	(2S)	24X30	5.00	---	ON LIGHT POLE - FOR NB TRAFFIC	SPEED LIMIT __ MPH
3-08	R2-1	(2S)	24X30	5.00	---	ON LIGHT POLE - FOR SB TRAFFIC	SPEED LIMIT __ MPH
4-01	R7-7R	(2S)	18X24	3.00	1	---	NO PARKING BUS STOP RIGHT ARROW
4-02	R7-7L	(2S)	18X24	3.00	1	---	NO PARKING BUS STOP LEFT ARROW
4-03	R5-2	(2S)	24X24	4.00	---	ON LIGHT POLE	NO TRUCKS SYMBOL
TOTALS				**140.00**	**18**		

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

REMOVING SIGNS

SIGN #	SIGN CODE	SIGN MOUNTED ON SAME POST AS #	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	638.2102 MOVING SIGNS TYPE II (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)	REMARKS
1R-0	R7-1L	ON LIGHT POLE	1	--	--	--	NO PARKING ANY TIME LEFT ARROW
1R-1	R1-1	--	1	1	--	--	STOP SIGN
1M-1	D3-1	ON SIGNAL POLE	--	--	1	--	W GREENFIELD AVE - MOVE WITH SIGNAL POLE
1M-2	D3-1	ON SIGNAL POLE	--	--	1	--	S 76 ST - MOVE WITH SIGNAL POLE
1M-3	N/A	ON SIGNAL POLE	--	--	1	--	BUS STOP SIGN - MOVE WITH SIGNAL POLE
1M-4	N/A	ON SIGNAL POLE	--	--	1	--	BUS STOP SIGN - MOVE WITH SIGNAL POLE
1R-2	R1-1	1M-5	1	1	--	--	STOP SIGN
1M-5	N/A	1R-2	--	--	1	--	BUS STOP SIGN - MOVE TO SIGNAL POLE
1R-3	R5-2	--	1	1	--	--	NO TRUCKS SYMBOL
1R-4	OM-3L	1R-3	1	--	--	--	OBSTRUCTION WITHIN THE ROADWAY
1R-5	OM-3R	1R-3	1	--	--	--	OBSTRUCTION WITHIN THE ROADWAY
1R-6	R7-1D	--	1	--	--	--	NO PARKING ANY TIME DOUBLE ARROW
1M-6	N/A	ON SIGNAL POLE	--	--	1	--	W GREENFIELD AVE (DECORATIVE) - MOVE WITH SIGNAL POLE
1M-7	N/A	ON SIGNAL POLE	--	--	1	--	S 76 ST (DECORATIVE) - MOVE WITH SIGNAL POLE
1M-8	N/A	ON SIGNAL POLE	--	--	1	--	BUS STOP SIGN - MOVE WITH SIGNAL POLE
1M-9	N/A	ON SIGNAL POLE	--	--	1	--	NEIGHBORHOOD WATCH SIGN - MOVE WITH SIGNAL POLE
2R-1	R7-5D	--	1	1	--	--	2 HOUR PARKING 8 AM TO 4 PM
2R-2	R7-1R	--	1	1	--	--	NO PARKING ANY TIME RIGHT ARROW
2M-1*	N/A	ON LIGHT POLE	--	--	1	--	NEIGHBORHOOD WATCH SIGN
2R-3	R7-5D	--	1	1	--	--	2 HOUR PARKING 8 AM TO 4 PM
2R-4	R7-5D	--	1	1	--	--	2 HOUR PARKING 8 AM TO 4 PM
2M-2*	D3-1	ON LIGHT POLE	--	--	1	--	S 76 ST
2M-3*	D3-1	ON LIGHT POLE	--	--	1	--	W MADISON ST
2R-5	R1-1	--	1	1	--	--	STOP SIGN
2R-6	R7-1L	--	1	1	--	--	NO PARKING ANY TIME LEFT ARROW
2M-4	N/A	--	--	--	1	1	BUS STOP SIGN
2M-5	N/A	--	--	--	1	1	BUS STOP SIGN
2R-7	R1-1	--	1	1	--	--	STOP SIGN
2R-8	R7-1L	--	1	1	--	--	NO PARKING ANY TIME LEFT ARROW
2M-6*	D3-1	ON LIGHT POLE	--	--	1	--	S 76 ST
2M-7*	D3-1	ON LIGHT POLE	--	--	1	--	W MADISON ST
2M-8*	N/A	ON LIGHT POLE	--	--	1	--	NEIGHBORHOOD WATCH SIGN
2M-9*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS BIKE SIGN
3R-1	R1-1	--	1	1	--	--	STOP SIGN
3R-2	R1-1	--	1	1	--	--	STOP SIGN
3M-1*	D3-1	ON LIGHT POLE	--	--	1	--	S 76 ST
3M-2*	D3-1	ON LIGHT POLE	--	--	1	--	W WASHINGTON ST
3M-3*	N/A	ON LIGHT POLE	--	--	1	--	NEIGHBORHOOD WATCH SIGN
SUBTOTALS			**17**	**13**	**21**	**2**	

*SIGNS ON EXISTING LIGHT POLES WILL BE REMOVED AND STORED BY THE CITY PRIOR TO THIS PROJECT. EXISTING SIGNS THAT ARE TO BE MOVED TO NEW LIGHT POLES MUST BE PICKED UP FROM THE CITY YARD. SEE SPECIAL PROVISIONS.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

REMOVING SIGNS (CONT'D)

SIGN #	SIGN CODE	SIGN MOUNTED ON SAME POST AS #	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	638.2102 MOVING SIGNS TYPE II (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)	REMARKS
3M-4*	D3-1	ON LIGHT POLE	--	--	1	--	W WALKER ST
3M-5*	N/A	ON LIGHT POLE	--	--	1	--	SEAT BELT SIGN
3M-6*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS SIGN
3R-3	R1-1	--	1	1	--	--	STOP SIGN
3R-4	R1-1	--	1	1	--	--	STOP SIGN
3M-7*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS SIGN
3M-8*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS SIGN
3M-9*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS SIGN
3M-10*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS SIGN
4R-1	R7-7R	--	1	1	--	--	NO PARKING BUS STOP RIGHT ARROW
4M-1	N/A	--	--	--	1	1	BUS STOP SIGN
4R-2	R7-7L	--	1	1	--	--	NO PARKING BUS STOP LEFT ARROW
4M-2	N/A	--	--	--	1	1	BUS STOP SIGN
4M-3*	D3-1	ON LIGHT POLE	--	--	1	--	S 76 ST
4M-4*	D3-1	ON LIGHT POLE	--	--	1	--	W MADISON ST
4M-5*	N/A	ON LIGHT POLE	--	--	1	--	NEIGHBORHOOD WATCH SIGN
4M-6*	N/A	ON LIGHT POLE	--	--	1	--	CITY OF WEST ALLIS BIKE SIGN
SUBTOTALS			**4**	**4**	**13**	**2**	
TOTALS			**21**	**17**	**34**	**4**	

*SIGNS ON EXISTING LIGHT POLES WILL BE REMOVED AND STORED BY THE CITY PRIOR TO THIS PROJECT. EXISTING SIGNS THAT ARE TO BE MOVED TO NEW LIGHT POLES MUST BE PICKED UP FROM THE CITY YARD. SEE SPECIAL PROVISIONS.

LANDMARK REFERENCE MONUMENTS

STATION	621.0100 LANDMARK REFERENCE MONUMENTS EACH	COMMENT
S 76th STREET		
STA 108+69.94 0.02' RT	1	Witness Monument
STA 135+07.55 0.40' LT	1	Witness Monument
TOTAL	**2**	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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TRAFFIC CONTROL ITEMS

LOCATION	* ESTIMATED DURATION DAYS	643.0300 DRUMS DAYS	643.0410 BARRICADES TYPE II DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS DAYS
S. 76TH STREET	65	---	520	2,535	5,590	---	1,690
GREENFIELD AVENUE SINGLE LANE CLOSURES	12	720	---	72	---	180	180
TRAFFIC SIGNAL SHUTDOWN	12	---	---	---	---	---	72
UNDISTRIBUTED	---	80	60	270	560	20	200
TOTALS		**800**	**580**	**2,877**	**6,150**	**200**	**2,142**

* FOR INFORMATION PURPOSES ONLY

3

PAVEMENT MARKING

LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH YELLOW LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE LF	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH WHITE LF	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	SPV.0060.01 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 EACH	SPV.0060.02 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS EACH	SPV.0060.03 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS BIKE SHARED LANE EACH	SPV.0090.03 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH LF	SPV.0090.04 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH LF
S 76th STREET												
103+00 - 109+00	1,100	1,110	340	260	30	1	480	6	4	---	540	140
109+00 - 121+00	---	---	---	20	---	---	---	---	---	11	625	---
121+00 - 133+00	---	---	---	---	---	---	---	---	---	10	640	---
133+00 - 139+00	---	---	---	---	---	---	---	---	---	2	225	---
TOTALS	**1,100**	**1,110**	**340**	**280**	**30**	**1**	**480**	**6**	**4**	**23**	**2,030**	**140**

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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CONSTRUCTION STAKING

LOCATION	650.7000 CONCRETE PAVEMENT LF
S 76TH STREET	
107+90 - 108+70 LT	80
113+18 -113+98 RT	80
113+67 - 114+47 LT	80
133+27 - 134+07 LT & RT	160
TOTAL	**400**

CONSTRUCTION STAKING

LOCATION	650.8000 RESURFACING REFERENCE LF
S 76TH STREET	
107+65 - 135+05	2,740
TOTAL	**2,740**

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

PROJECT	650.8500 LS
2160-14-70	1
TOTAL	**1**

CONSTRUCTION STAKING

PROJECT	650.9910 SUPPLEMENTAL CONTROL LS
2160-14-70	1
TOTAL	**1**

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ADJUSTING PULL BOXES

STATION	LOCATION	653.0900 EACH
S 76TH STREET		
106+87	53' RT	1
106+91	58' RT	1
106+92	55' RT	1
107+02	27' LT	1
107+06	29' LT	1
107+21	69' LT	1
107+23	68' LT	1
107+63	37' RT	1
107+67	39' RT	1
107+78	60' RT	1
107+80	59' RT	1
TOTAL		**11**

SAWING CONCRETE

LOCATION	690.0250 LF
*SIDEWALK REMOVALS	730
*CURB & GUTTER REMOVALS	1,200
MANHOLE & CATCH BASIN ADJUSTMENTS	1,150
BUTT JOINTS	560
*BASE PATCHING	5,050
REMOVING PAVEMENT	1,200
TOTAL	**9,890**

*SIDEWALK REMOVALS, CURB AND GUTTER REMOVALS, & BASE PATCHING TOTALS INCLUDE A 15% UNDISTRIBUTED AMOUNT.

QMP CONCRETE PAVEMENT

LOCATION	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT DOL
UNDISTRIBUTED	$500
TOTAL	**$500**

TREE ROOT SAWING

LCOATION	SPV.0090.02 TREE ROOT SAWING LF
S 76TH STREET	
UNDISTRIBUTED	300
TOTAL	**300**

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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REMOVING CONCRETE BASES

LOCATION	SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
S. 76TH STREET & W. GREENFIELD AVE.	SB2	1
	SB6	1
	SB8	1
TOTAL		**3**

REMOVING PULL BOXES

LOCATION	653.0905 REMOVING PULL BOXES EACH
PB9	1
TOTAL	1

3

REMOVING & SALVAGING LIGHT POLES, LUMINAIRES & ARMS

LOCATION	SPV.0060.04 REMOVING AND SALVAGING LIGHT POLES, LUMINAIRES, AND ARMS EACH	SPV.0060.18 REMOVE & REINSTALL EXISTING LIGHT POLE, LUMINAIRE, AND ARM EACH
SB2	0	1
SB6	0	1
SB8	1	0
TOTAL	**1**	**2**

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.01 REMOVE TRAFFIC SIGNALS L.S.
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	**1**

CONCRETE BASES

LOCATION	SIGNAL BASE NO.	654.0102 CONCRETE BASES TYPE 2 EACH	SPV.0060.06 CONCRETE BASES TYPE 9 MODIFIED EACH
S. 76TH STREET & W. GREENFIELD AVE.	SB2	1	0
	SB6	1	0
	SB8	1	0
	SB9	1	0
	CB1	0	1
TOTAL		**4**	**1**

SIGNAL BASES, MAST ARMS & LUMINAIRES

LOCATION	SIG. BASE NO.	657.0100 PEDESTAL BASES EACH	657.0305 POLES TYPE 2 EACH	SPV.0060.05 INSTALL CITY-FURNISHED LIGHT POLE, LUMINAIRE, AND ARM EACH
S. 76TH STREET & W. GREENFIELD AVE.	SB8			1
	SB9	1	1	
TOTALS		**1**	**1**	**1**

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC SIGNAL FACES

LOCATION	SIG. BASE NO.	SIG. HEAD NO.	TYPE OF MOUNT	658.0110 3-12" VERT. EACH	658.0115 4-12" VERT. EACH	658.0600 LED RED BALL EACH	658.0605 LED YELLOW BALL EACH	658.0610 LED GREEN BALL EACH	658.0615 LED RED ARROW EACH	658.0620 LED YELLOW ARROW EACH	658.0625 LED GREEN ARROW EACH	658.0215 BCKPLT 3-SEC. EACH	658.0220 BCKPLT 4-SEC. EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	658.0660 PEDESTRIAN COUNTDOWN TIMER 12" EACH
AVE.	SB1	3	POST MOUNT VERTICAL	1		1	1	1				1			
		20	PEDESTRIAN											1	1
	SB2	9	POST MOUNT VERTICAL	1		1	1	1				1			
		13	POST MOUNT VERTICAL	1		1	1	1				1			
		21	PEDESTRIAN											1	1
	SB3	14	POST MOUNT VERTICAL	1		1	1	1				1			
		15	PEDESTRIAN											1	1
	SB4	1	POST MOUNT VERTICAL	1		1	1	1				1			
		7	POST MOUNT VERTICAL	1		1	1	1				1			
		22	PEDESTRIAN											1	1
	SB5	8	POST MOUNT VERTICAL	1		1	1	1				1			
		16	PEDESTRIAN											1	1
	SB6	10	POST MOUNT VERTICAL	1		1	1	1				1			
		12	POST MOUNT VERTICAL	1		1	1	1				1			
		17	PEDESTRIAN											1	1
	SB7	11	POST MOUNT VERTICAL	1		1	1	1				1			
		19	PEDESTRIAN											1	1
	SB 8	4	POST MOUNT VERTICAL		1				1	2	1		1		
		6	POST MOUNT VERTICAL	1		1	1	1				1			
		18	PEDESTRIAN											1	1
	SB9	2	POST MOUNT VERTICAL	1		1	1				1	1			
		5	POST MOUNT VERTICAL		1				1	2	1		1		
TOTALS				**12**	**2**	**12**	**12**	**11**	**2**	**4**	**3**	**12**	**2**	**8**	**8**

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	1

TRAFFIC SIGNAL CONTROLLER, CABINET, AND VIDEO DETECTION TRAINING

LOCATION	SPV.0105.04 TRAFFIC SIGNAL CONTROLLER, CABINET & VIDEO DETECTION TRAINING LS
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	1

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TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

LOCATION	LOC.	TO	LOC.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG L.F.	VIDEO DETECTION CABLE** L.F.	EMERGENCY VEHICLE PREEMPTION CABLE*** L.F.
S. 76TH ST & GREENFIELD AVE	CB1		SB1							268
	CB1		SB2		233	233				
	CB1		SB3							158
	CB1		SB5							228
	CB1		SB6		303	303				
	CB1		SB7							378
	CB1		SB8		363	363			400	
	CB1		SB9		303					
	SB1		SB2				95			
	SB2		SB3				165			
	SB5		SB6				105			
	SB6		SB7				115			
	SB7		SB8				75			
	SB8		SB9				95			
	SB9		SB1				75			
	PB2		SB2				35			
	PB7		SB6				15			
	PB9		SB8				15			
	PB10		SB9				15			
	SB2		HEAD 9	19						
	SB2		HEAD 13	19						
	SB2		HEAD 21	15						
	SB2		LUMINAIRE					117		
	SB6		HEAD 10	19						
	SB6		HEAD 12	19						
	SB6		HEAD 17	15						
	SB6		LUMINAIRE					117		
	SB8		HEAD 6	19						
	SB8		HEAD 4	22						
	SB8		HEAD 18	15						
	SB8		LUMINAIRE					117		
	SB9		HEAD 2	19						
	SB9		HEAD 5	22						
TOTALS				**203**	**1202**	**899**	**805**	**351**	**400**	**1032**

*SEE ADDITIONAL QUANTITIES LISTED ELSEWHERE "LIGHT POLE QUANTITIES".
**INCIDENTAL TO FURNISH & INSTALL VIDEO DETECTION SYSTEM.
***INCIDENTAL TO EMERGENCY VEHICLE PREEMPTION SYSTEM.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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3

CONDUIT ITEMS

LOCATION	FROM	TO	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.	CONSTRUCTION METHOD
S. 76TH STREET & W. GREENFIELD AVE.	PB2	SB2	1	35		TRENCH
	PB7	SB6	1	5		TRENCH
	PB8	PB9	1	40		TRENCH
	PB9	SB8		5		TRENCH
	PB9	PB10			50	DIRECTIONAL BORE
	PB9	SB9		5		TRENCH
	PB10	PB1	1		30	DIRECTIONAL BORE
TOTALS			**4**	**90**	**80**	

*SEE ADDITIONAL QUANTITIES LISTED ELSEWHERE "NON-METALLIC CONDUIT".

TRAFFIC SIGNAL CABINET & CONTROLLER

LOCATION	SPV.0105.02 TRAFFIC SIGNAL CABINET & CONTROLLER LS
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	1

TRAFFIC SIGNAL CONTROLLER PROGRAMMING

LOCATION	SPV.0105.05 TRAFFIC SIGNAL CONTROLLER PROGRAMMING L.S.
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	1

EMERGENCY VEHICLE PREEMPTION SYSTEM

LOCATION	SPV.0105.03 EMERGENCY VEHICLE PREEMPTION SYSTEM LS
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	1

TRAFFIC SIGNAL VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.06 FURNISH & INSTALL VIDEO DETECTION SYSTEM LS
S. 76TH STREET & W. GREENFIELD AVE.	1
TOTAL	1

ALL ITEMS CATEGORY 0010 UNLESS NOTED

ELECTRICAL POWER AND CONTROLS
100 AMPERE 120 /240 VAC

ITEM	DESCRIPTION	UNIT	QUANTITY
654.0200	CONCRETE CONTROL CABINET BASE TYPE 6	EACH	1
656.0200	ELECTRICAL SERVICE METER BREAKER (Street Lighting W Madison St)	LS	1
SPV.0060.09	CIRCUIT BREAKER PANEL AND PHOTO CONTROL SYSTEM	EACH	1
SPV.0060.10	LIGHTING CONTROL CABINET TYPE 3060	EACH	1

LIGHT POLE QUANTITIES
*

BRANCH CIRCUIT	POLE I.D.	LOCATION C.I.M.= CENTER IN MEDIAN	654.0105 CONCRETE BASES TYPE 5 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	SPV. 0060.11 LIGHT UNITS SINGLE EACH	SPV.0060.12 LIGHT UNITS TWIN EACH	SPV.0060.13 LUMINAIRES UTILITY LED CATEGORY A EACH	SPV.0060.14 LUMINAIRES UTILITY LED CATEGORY A BRONZE EACH
RED	1	109+46 C.I.M.	1	150	---	1	---	2
BLACK	2	111+20 C.I.M.	1	150	---	1	---	2
RED	3	112+96 C.I.M.	1	150	---	1	---	2
BLACK	4	114+73 C.I.M.	1	150	---	1	---	2
RED	5	116+73 C.I.M.	1	150	---	1	---	2
BLACK	6	118+79 C.I.M.	1	150	---	1	---	2
RED	7	120+82 C.I.M.	1	150	---	1	---	2
BLACK	8	121+65 C.I.M.	1	150	---	1	---	2
RED	9	123+68 C.I.M.	1	150	---	1	---	2
BLACK	10	125+71 C.I.M.	1	150	---	1	---	2
RED	11	127+75 C.I.M.	1	150	---	1	---	2
BLACK	12	128+56 C.I.M.	1	150	---	1	---	2
RED	13	130+41 C.I.M.	1	150	---	1	---	2
BLACK	14	132+26 C.I.M.	1	150	---	1	---	2
RED	15	134+11 C.I.M.	1	150	---	1	---	2
BLACK	16	W Madison St. Behind North Curb	1	75	1	---	1	---
TOTALS			**16**	**2325**	**1**	**15**	**1**	**30**

*SEE ADDITIONAL QUANTITIES LISTED ELSEWHERE "TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE".

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

NON-METALLIC CONDUIT

*

STRUCTURE	STATION	to	STATION	STRUCTURE	DISTANCE	652.0225 CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIDGID NON-METALLIC SCHEDULE 40 3-INCH LF	COMMENTS
L1	109+46	-	111+20	L2	177	180	---	---
L2	111+20	-	112+96	L3	177	180	---	---
L3	112+96	-		PB 1	93	95	---	---
PB 1		-	114+73	L4	86	90	---	---
L4	114+73	-	116+76	L5	203	210	---	---
L5	116+76	-	118+79	L6	205	210	---	---
L6	118+79	-	120+82	L7	203	210	---	---
L7	120+82	-	121+65	L8	83	85	---	---
L8	121+65	-	123+68	L9	203	210	---	---
L9	123+68	-	125+71	L10	206	210	---	---
L10	125+71	-	127+75	L11	204	210	---	---
L11	127+75	-	128+56	L12	83	85	---	---
L12	128+56	-	130+41	L13	187	190	---	---
L13	130+41	-	132+26	L14	185	190	---	---
L14	132+26	-	134+26	L15	185	190	---	---
EXISTING 'E2'	121+69	-	121+69	EXISTING 'E2'	16	20	---	SPLICE TO EXISTING SERIES CABLE
EXISTING 'E2'	131+77		133+83	EXISTING 'E2'	219	225	---	SPLICE TO EXISTING SERIES CABLE
PB 1	112+96	-		F2	170		180	STUB CONDUIT FOR FUTURE USE
F2		-		L16	9	10		
TOTALS						**2,800**	**180**	

*SEE ADDITIONAL QUANTITIES LISTED ELSEWHERE "CONDUIT ITEMS".

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PULL BOX QUANTITIES

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24 x 36 INCH EACH
4	114+73	CENTER IN MEDIAN	1
	W. MADISON ST.	BEHIND CURB	1
TOTALS			**2**

LIGHTING WIRE QUANTITIES

STRUCTURE	STATION	to	STATION	STRUCTURE	DISTANCE	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	SPV.0090.05 SERIES CABLE LIGHTING 8 AWG LF	COMMENTS
L1	109+46	-	111+20	L2	177	570	---	---
L2	111+20	-	112+96	L3	177	940	---	---
L3	112+96	-		PB 1	93	495	---	---
PB 1		-	114+73	L4	86	460	---	---
L4	114+73	-	116+76	L5	203	1,080	---	---
L5	116+76	-	118+79	L6	205	1,085	---	---
L6	118+79	-	120+82	L7	203	1,080	---	---
L7	120+82	-	121+65	L8	83	440	---	---
L8	121+65	-	123+68	L9	203	1,080	---	---
L9	123+68	-	125+71	L10	206	1,095	---	---
L10	125+71	-	127+75	L11	204	1,085	---	---
L11	127+75	-	128+56	L12	83	440	---	---
L12	128+56	-	130+41	L13	187	995	---	---
L13	130+41	-	132+26	L14	185	985	---	---
L14	132+26	-	134+26	L15	185	590	---	---
EXISTING 'E2'	121+69	-	121+69	EXISTING '2'	16	---	20	SPLICE TO EXISTING SERIES CABLE
EXISTING 'E2'	131+77		133+83	EXISTING '2'	219	---	235	SPLICE TO EXISTING SERIES CABLE
SUBTOTALS						**12,420**	**255**	
PB 1	112+96	-		F2	170	180	---	STUB CONDUIT FOR FUTURE USE
F2		-		L16	9	10	---	---
SUBTOTAL						**190**	**---**	
TOTALS						**12,610**	**255**	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

WATER MAIN

S. 76th STREET		SPV.0060.08 WATERMAIN ALTERATION 12-INCH EACH
CATEGORY 0020		
STATION	LOCATION	
113+32.0, 31.8' LT	113+32.4, 11.8' LT	1
TOTALS (CAT 0020)		**1**

ADJUSTING SANITARY MANHOLES

S 76th STREET			SPV.0060.16 ADJUST SANITARY MANHOLE COVERS EACH	COMMENTS
CATEGORY 0020				
STUCTURE NUMBER	STATION	LOCATION		
S10	108+50.7	CL	1	EXISTING MH
S11	108+55.7	9.9' LT	1	EXISTING MH
S12	110+98.6	9.9' LT	1	EXISTING MH
S13	111+02.4	CL	---	NO CHANGE REQ'D
S14	113+40.7	CL	1	EXISTING MH
S15	117+32.0	CL	---	NO CHANGE REQ'D
S16	121+24.4	CL	1	EXISTING MH
S17	124+69.3	CL	---	NO CHANGE REQ'D
S18	127+91.8	CL	1	EXISTING MH
S19	128+24.1	10.5' LT	1	EXISTING MH
S20	128+41.6	37.4' LT	1	EXISTING MH
S21	128+70.8	8.4' LT	---	NO CHANGE REQ'D
S22	131+53.8	4.0' LT	---	NO CHANGE REQ'D
TOTALS (CAT 0020)			**8**	

ADJUSTING WATER VALVES

S 76th STREET		SPV.0060.17 ADJUST WATER VALVE BOX EACH
CATEGORY 0020		
STATION	LOCATION	
107+63	30.5' RT	1
107+76	3.4' LT	1
108+63	7.4' RT	1
108+83	7.9' RT	1
112+84	3.5' RT	1
113+29	7.0' RT	1
113+31	11.5' RT	1
113+59	35.8' RT	1
114+50	36.8' LT	1
114+62	7.0' RT	1
120+94	7.7' RT	1
121+62	7.7' RT	1
127+94	5.9' RT	1
128+41	6.2' RT	1
128+42	46.1' LT	1
134+11	32.0' RT	1
TOTAL (CAT 0020)		**16**

3

ALL ITEMS CATEGORY 0010 UNLESS NOTED

BENCHMARKS

NO.	DESCRIPTION	ELEV
4	SEWRPC CONCRETE WITNESS MONUMENT W/ BRASS CAP 130'N OF THE SW CORNER OF SECTION 34-7-21; INTERSECTION OF S 76TH STREET AND W GREENFIELD AVENUE	146.37

N

W GREENFIELD AVE

S 76TH ST

STA 112+00

MATCHLINE

BEGIN PROJECT 2160-14-70
STA. 107+65
Y = 376,945.0927
X = 2,533,123.7730

CURB RAMP TYPE 7A
CURB RAMP TYPE 7A
CONCRETE CURB PEDESTRIAN
CURB RAMP TYPE 5
CONCRETE CURB & GUTTER 30-INCH
CURB RAMP TYPE 2, MODIFIED
CONCRETE SIDEWALK 7-INCH COLORED
CONCRETE CURB PEDESTRIAN
CURB RAMP TYPE 2, MODIFIED
REMOVE EXISTING RIGHT TURN ISLAND
POTENTIAL AREA OF PETROLEUM CONTAMINATED SOIL
ASPHALT MILLING 4"
50' BUTT JOINT REQUIRED
REMOVING CONCRETE SURFACE PARTIAL DEPTH. SEE CONSTRUCTION DETAIL
CURB RAMP TYPE 4B1, MODIFIED
CONCRETE SIDEWALK 7-INCH COLORED
CONCRETE CURB PEDESTRIAN
CURB RAMP TYPE 7A
POTENTIAL AREA OF PETROLEUM CONTAIMINATED SOIL
REMOVE EXISTING CONCRETE PAVEMENT. RECONSTRUCT MEDIAN. SEE CONSTRUCTION DETAILS.
60' RADIUS
550' RADIUS
N9°56'30.1"W
170°51'12.4"
N0°47'42.5"W
S 76TH STREET C/L
BORE
CAUTION

7623
7606
7605
1413
NAIMON 7546
FIRST CHOICE REMODELING LLP 1362
VAC
BANASZYNSKI REVOC LIV TRUST 1359 1357
MLNARIK 1351A 1351
MILLER / SCHANK 1345
BIGELOW 1339
PIPP 1335 1333
LA FOND 1329 1327
TICCIONI 1323 1321
GRITZMACHER / TEBBE 1317
SEIVERT 1313
CERVANTES 1346 1344
RASCHING 1340 1338
BARNEY 1334
KOWAL 1328
SCHERZER TRU 1326 132
R/W

PT 106+38.10
PI 107+37.97
PI 106+04.15
106
107
108
109
110
111
112

LEGEND
- CONCRETE SIDEWALK 5-INCH
- CONCRETE SIDEWALK 7-INCH
- BASE PATCHING CONCRETE
- CONCRETE PAVEMENT 9-INCH (FOR BUS STOP)
- CONCRETE BASE 8-INCH
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CONCRETE CURB TYPE D
- CONCRETE CURB & GUTTER 26-INCH
- XXXXXXX SAWING CONCRETE, FULL DEPTH

NOTE:
GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLAN SHEET	SCALE, FEET 0 20 40	SHEET	E

FILE NAME : K:\1102714\Cadd\sheets\PLANPROF\050201_pn.dgn PLOT DATE : 4/1/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 44

LEGEND

- CONCRETE SIDEWALK 5-INCH
- CONCRETE SIDEWALK 7-INCH
- BASE PATCHING CONCRETE
- CONCRETE PAVEMENT 9-INCH (FOR BUS STOP)
- CONCRETE BASE 8-INCH
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CONCRETE CURB TYPE D
- CONCRETE CURB & GUTTER 26-INCH
- XXXXXXX SAWING CONCRETE, FULL DEPTH

BENCHMARKS

NO.	DESCRIPTION	ELEV
1	WEST END OF DOOR SILL OF 7606 W MADISON STREET, LOCATED AT THE NW QUADRANT OF THE INTERSECTION OF S 76TH STREET AND W MADISON STREET	142.30

N

STA 112+00

STA 118+00

W MADISON ST

HILLEBRAND 7609

SEIVERT 1313

ZEPHIRIN 1309 1307

HILLEBRAND 1301

7608

MRG INVESTMENTS LLC

7606

EICHLER 1243

EICHLER 1237

MALLON TRUST 1233

MESSENGER 1231 1229

WOJTCZAK 1225

CHRISTIANSON 1219

PAPLHAM REVOC LIVING TRUST 1215

KUPINSKI 1209

RIVERA 1203

LANZ 1141

24' BUTT JOINT REQUIRED

CURB RAMP TYPE 2

CURB RAMP TYPE 2

CURB RAMP TYPE 7B

CURB RAMP TYPE 7B

CAUTION

ASPH

30'

R/W

S 76TH ST

112 113 114 115 116 117 118

NO°47'42.5"W

S 76TH STREET C/L

BORE

16'

21'

100'

50'

MATCHLINE

MATCHLINE

SCHERZER TRUST 1326 1324

CERVANTES 1318

DIEHN 1314

GANSER BROTHERS PROPERTIES LLC 1310 1308

BAUMAN 7529

CURB RAMP TYPE 7B

CONCRETE CURB PEDESTRIAN

CURB RAMP TYPE 2, MODIFIED

CP1

W MADISON ST

AYEN 1236

DEBERRY 1232

CHANDLER 1228

CURB RAMP TYPE 2

CURB RAMP TYPE 2, MODIFIED

23' BUTT JOINT REQUIRED

NIKCEVICH 1226 1224

SCHAEFER 1218

SCHMAY 1216 1214

SCHOLZEN 1210 1208

KROGGEL 1202 A 1202

BROWN 1144 1142

BECKER 1136

NOTE:

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLAN SHEET	SCALE, FEET 0 20 40	SHEET 68 E

FILE NAME : k:\1102714\cadd\sheets\PLANPROF\050202_pn.dgn PLOT DATE : 1/30/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 44

LEGEND

- CONCRETE SIDEWALK 5-INCH
- CONCRETE SIDEWALK 7-INCH
- BASE PATCHING CONCRETE
- CONCRETE PAVEMENT 9-INCH (FOR BUS STOP)
- CONCRETE BASE 8-INCH
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CONCRETE CURB TYPE D
- CONCRETE CURB & GUTTER 26-INCH
- XXXXXXX SAWING CONCRETE, FULL DEPTH

BENCHMARKS

NO.	DESCRIPTION	ELEV
2	NORTH END OF DOOR SILL OF 1103 S 76TH STREET, LOCATED AT THE SW QUADRANT OF THE INTERSECTION OF S 76TH STREET AND W WASHINGTON STREET	138.37

N

STA 118+00

STA 124+00

MANTEAU 1135

JUDKINS 1131 1129

MALVITZ 1123

TIMLIN 1117

SCZERZEN 1109

ROTH 1103

MILLER 1037

ROLFSON 1033 1031

D'AQUISTO IRREVOC TRUST 1025

WELDY 1019

LANG / MIKE 1015

RYBACK 1009

22' BUTT JOINT REQUIRED

CURB RAMP TYPE 2

CURB RAMP TYPE 2

ASPH 30'

R/W

CAUTION

2" PVC

BORE

S 76TH ST

118 119 120 121 122 123 124

NO°47'42.5"W

S 76TH STREET C/L

100'

16'

21'

21'

49'

61'

MATCHLINE

MATCHLINE

CONCRETE CURB PEDESTRIAN

CURB RAMP TYPE 2, MODIFIED

ASPH 30'

W WASHINGTON ST

CURB RAMP TYPE 2

33' BUTT JOINT REQUIRED

BECKER 1136

GARNER 1130

PRUITT / BECKER 1126

LAUGHLIN 1120

NITZSCHE 1116

MARTINEZ 1110

LOVRINE 1104

BOUGHNER 1100

HART 1040

BERTHER 1036 1034

PAPE 1030

DORSHA / KONINGS 1026 1024

REINKE 1022 1020

MATSON 1014

KEAST 1010 1008

NOTE:

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLAN SHEET	SCALE, FEET 0 20 40	SHEET 69 E

FILE NAME : k:\1102714\cadd\sheets\PLANPROF\050203_pn.dgn PLOT DATE : 1/8/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 44

BENCHMARKS		
NO.	DESCRIPTION	ELEV
3	SOUTH END OF DOOR SILL OF 871 S 76TH STREET, LOCATED AT THE NW QUADRANT OF THE INTERSECTION OF S 76TH STREET AND W WALKER STREET	136.20

LEGEND

- CONCRETE SIDEWALK 5-INCH
- CONCRETE SIDEWALK 7-INCH
- BASE PATCHING CONCRETE
- CONCRETE PAVEMENT 9-INCH (FOR BUS STOP)
- CONCRETE BASE 8-INCH
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CONCRETE CURB TYPE D
- CONCRETE CURB & GUTTER 26-INCH
- XXXXXXX SAWING CONCRETE, FULL DEPTH

N

STA 124+00

STA 130+00

MATCHLINE

MATCHLINE

RYBACK 1009

RATZ 1003

NAVIN 939 937

ZYCH 931

BRUCH 927

BUDISH 923 921

POST 913

HOMAN 907

DREW 903

DREW 871

CAREY TRUST 865

CARPENTER 859

RADEMAN / BLOEDEL 851

19' BUTT JOINT REQUIRED

CURB RAMP TYPE 2

CURB RAMP TYPE 2

R/W

R/W

CAUTION

ASPH

30'

S 76TH ST

BORE

124 125 126 127 128 129 130

N0°47'42.5"W

S 76TH STREET C/L

CP4

CAUTION

CAUTION

BORE

100'

21'

16'

55'

30'

R/W

R/W

CONCRETE CURB PEDESTRIAN

CURB RAMP TYPE 2, MODIFIED

ASPH

CURB RAMP TYPE 2, MODIFIED

CURB RAMP TYPE 2

23' BUTT JOINT REQUIRED

W WALKER ST

KEAST 1010 1008

WALLOCH 1004

FORD 1000

FRITSCH / COLEMAN 934

MATTHEWS 928

MANTHEY 920

NAVARRETE 912

FIEDLER 910 908

FISERV ISS & CO 906 904

DASCENZO 902 900

WINKLER 870

SCHUSTER 866

GOEHRIG 860

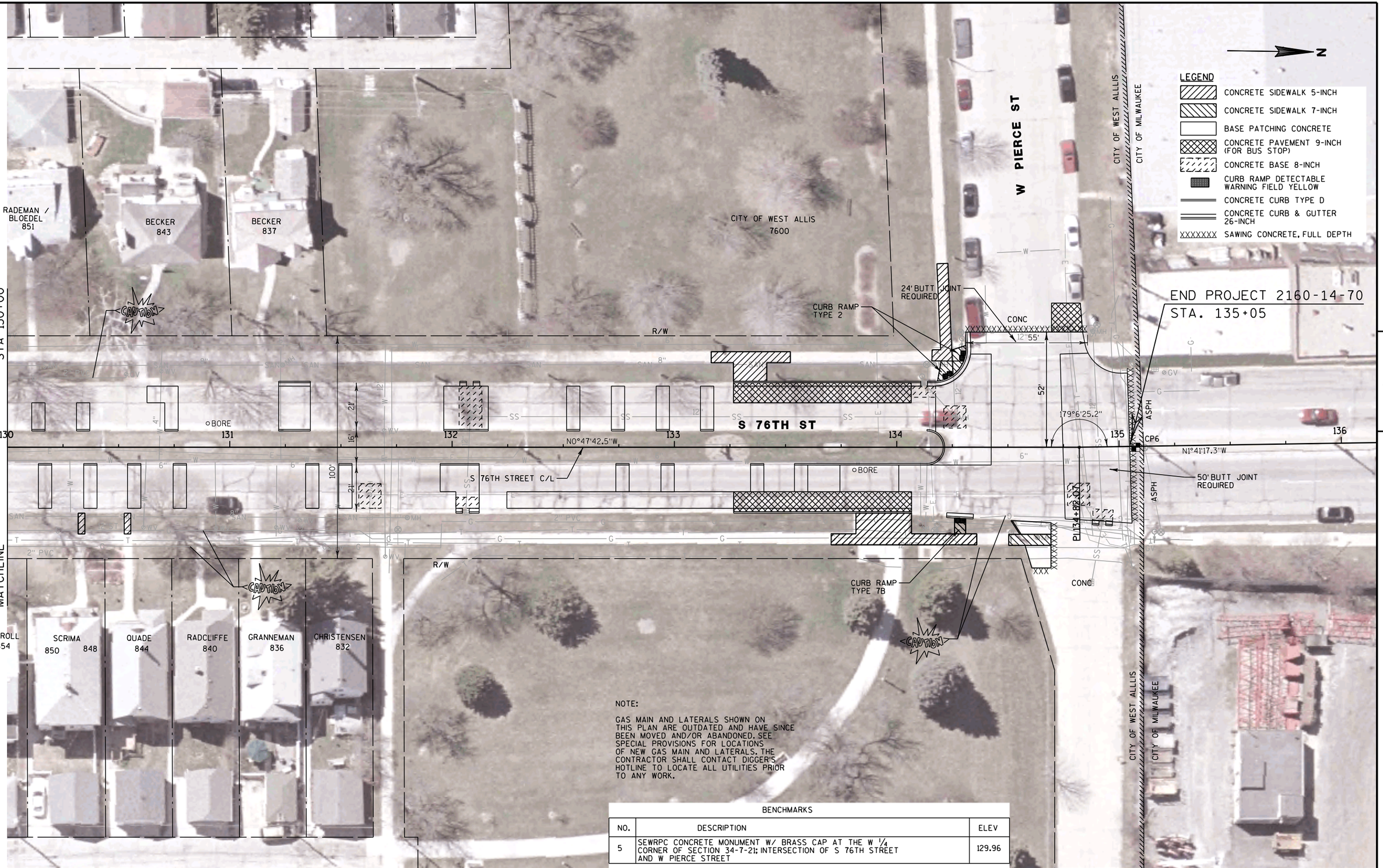
CARROLL 854

NOTE:

GAS MAIN AND LATERALS SHOWN ON THIS PLAN ARE OUTDATED AND HAVE SINCE BEEN MOVED AND/OR ABANDONED. SEE SPECIAL PROVISIONS FOR LOCATIONS OF NEW GAS MAIN AND LATERALS. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE TO LOCATE ALL UTILITIES PRIOR TO ANY WORK.

PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLAN SHEET	SCALE, FEET 0 20 40	SHEET 70 E

FILE NAME : k:\1102714\cadd\sheets\PLANPROF\050204_pn.dgn PLOT DATE : 1/8/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$



BENCHMARKS

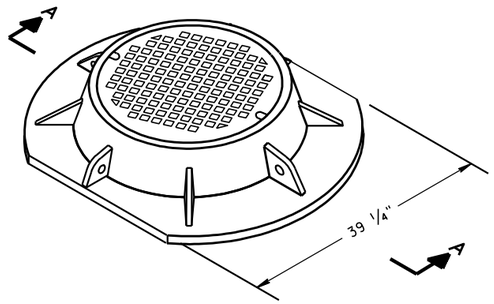
NO.	DESCRIPTION	ELEV
5	SEWRPC CONCRETE MONUMENT W/ BRASS CAP AT THE W 1/4 CORNER OF SECTION 34-7-21; INTERSECTION OF S 76TH STREET AND W PIERCE STREET	129.96

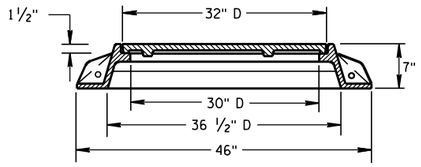
PROJECT NO: 2160-14-70	HWY: S 76TH STREET	COUNTY: MILWAUKEE	PLAN SHEET	SCALE, FEET 0 20 40	SHEET 71 E

FILE NAME : k:\1102714\cadd\sheets\PLANPROF\050205_pn.dgn PLOT DATE : 1/30/2014 PLOT BY : trg PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-12A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
11B02-02	CONCRETE MEDIAN NOSE
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE
13C14-04C	BASE PATCHING CONCRETE
13C15-05A	CONCRETE BASE
13C15-05B	CONCRETE BASE
14A02-01	TREE PLANTING DETAIL
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C29-03F	PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS



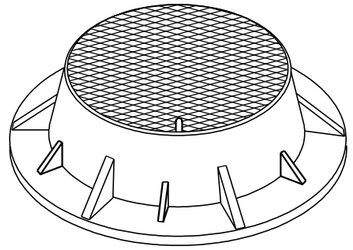


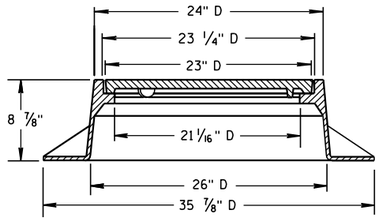
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

FRAME.....216 LBS.
LID.....223 LBS.

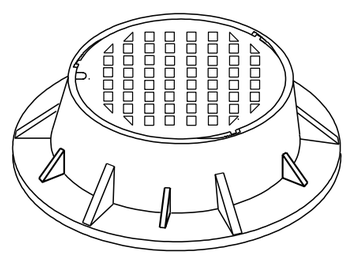


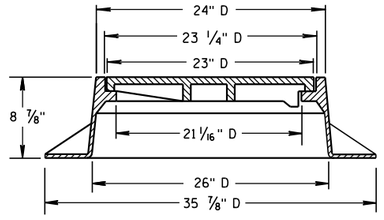


TYPE "J"

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....152 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....158 LBS.
LID.....109 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

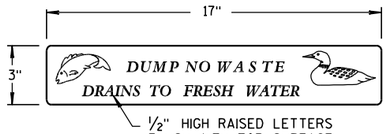
GENERAL NOTES

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.

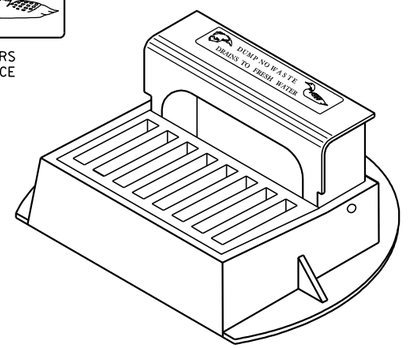
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

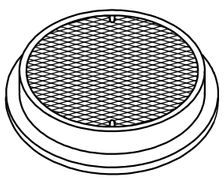
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

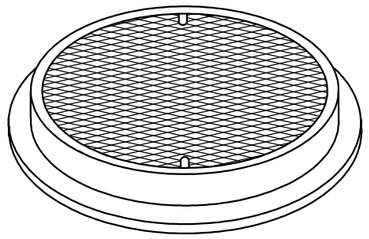
THE ACTUAL WEIGHT OF COVERS MAY VARY WITH 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

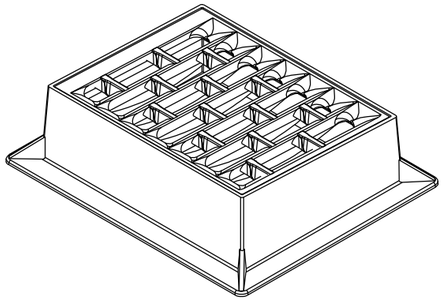


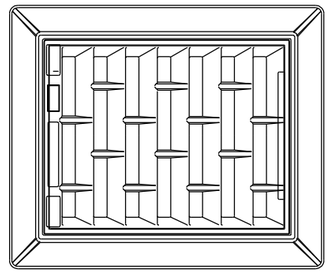
LOGO DETAIL

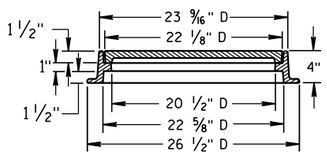








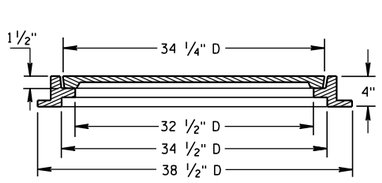




TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

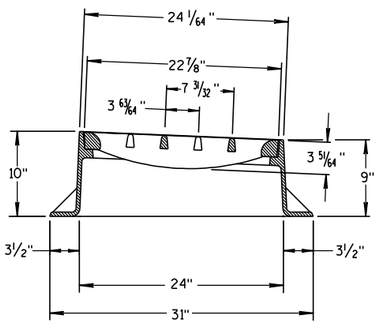
FRAME.....81 LBS.
LID.....77 LBS.

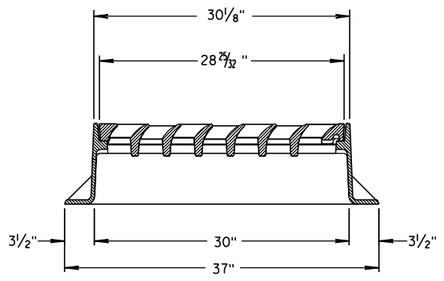


TYPE "M"

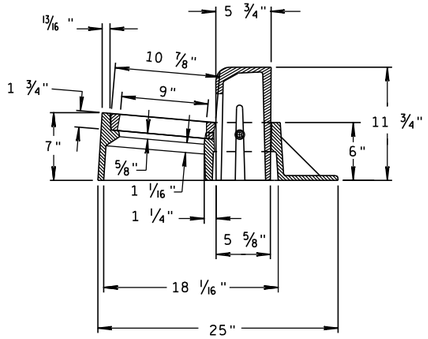
(APPROXIMATE WEIGHT 377 LBS.)

FRAME..... 125 LBS.
LID..... 252 LBS.





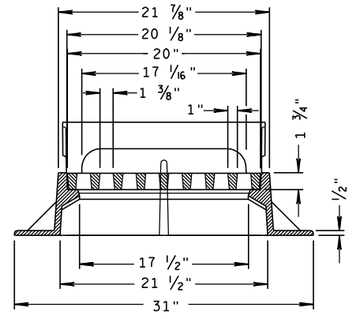
INLET COVER TYPE "BW"



INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 344 LBS.)

FRAME.....206 LBS.
GRATE..... 46 LBS.
CURB BOX..... 92 LBS.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

NT

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S.D.D. 8 A 5-18d

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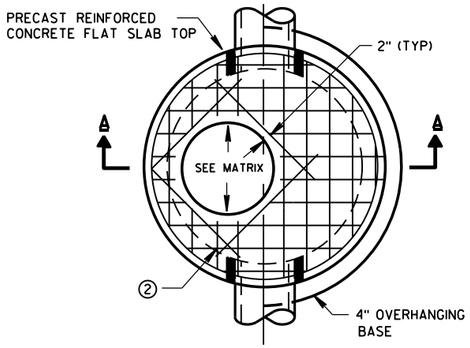
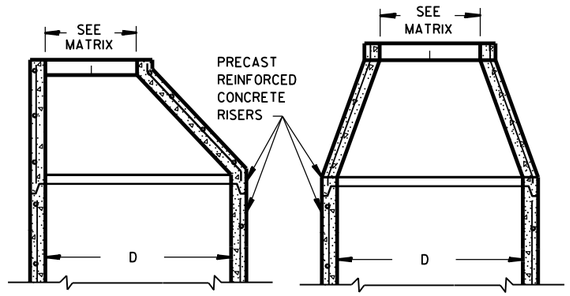
S.D.D. 8 A 5-18d

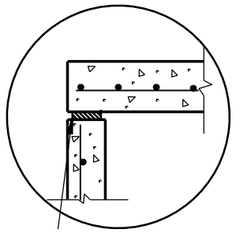


PLAN VIEW CIRCULAR OPENING

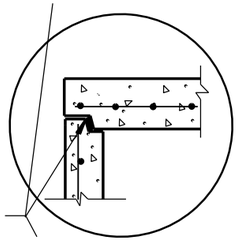


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

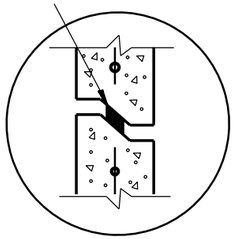


TOP WITH PLAIN END JOINT



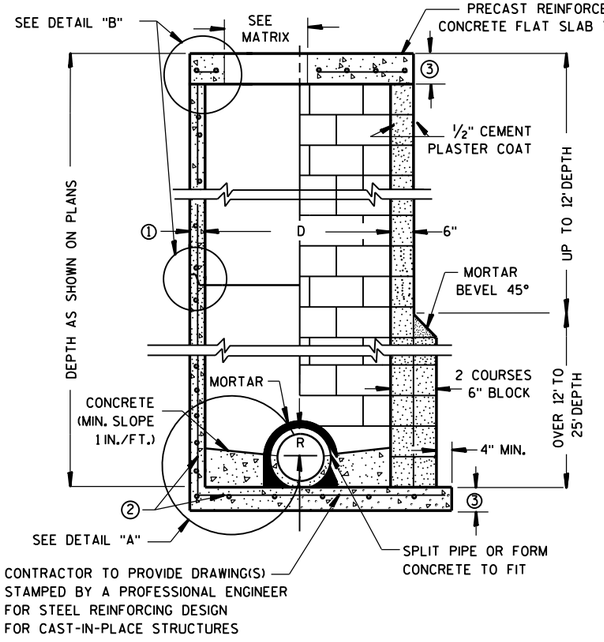
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



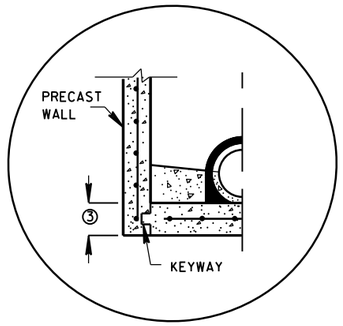
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

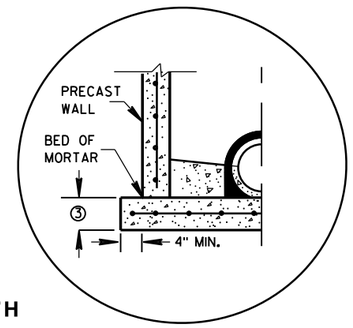


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

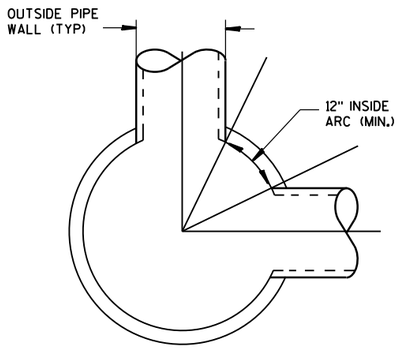


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND 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" 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.

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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 "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

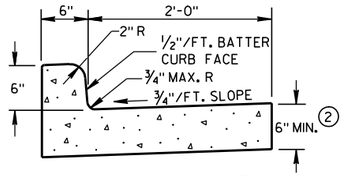
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

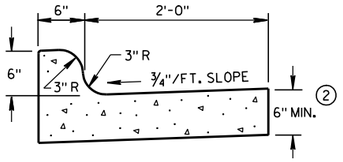
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

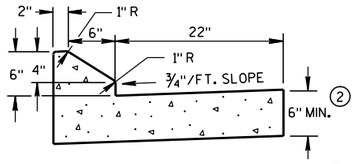
6
S.D.D. 8 B 9-1



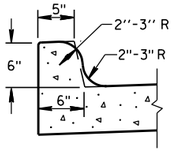
TYPES A & D (1)



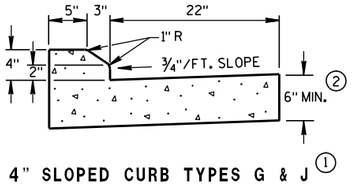
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

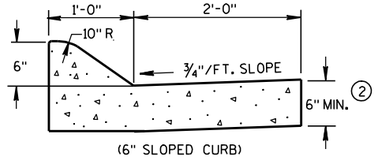


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

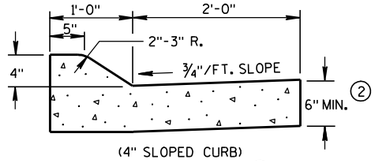


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

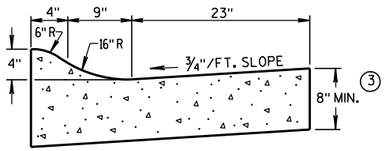


(6" SLOPED CURB)



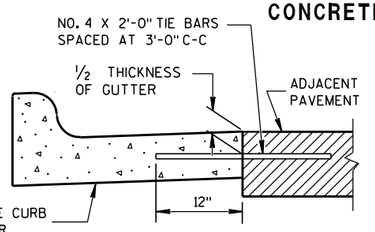
(4" SLOPED CURB)

TYPES A & D (1)

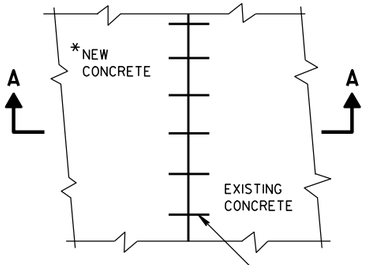


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

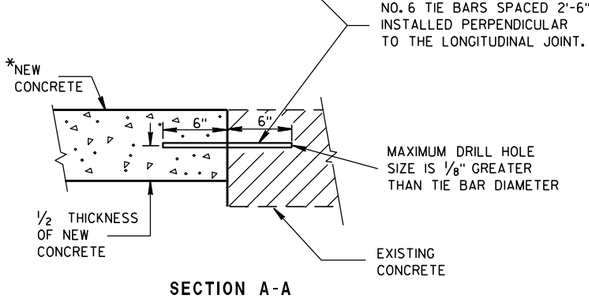


TYPICAL TIE BAR LOCATION (1)



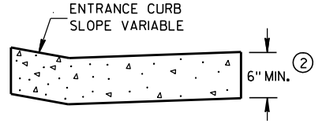
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

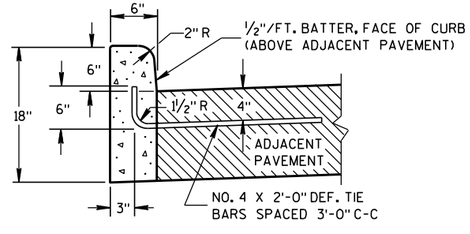


SECTION A-A

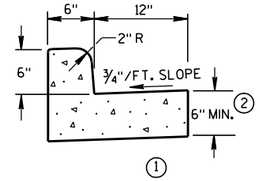
TIE BARS DRILLED INTO EXISTING PAVEMENT



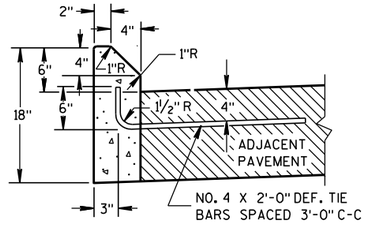
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D

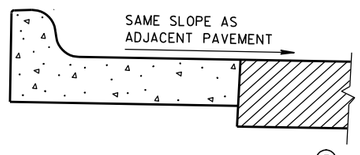


(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES G & J

CONCRETE CURB



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

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

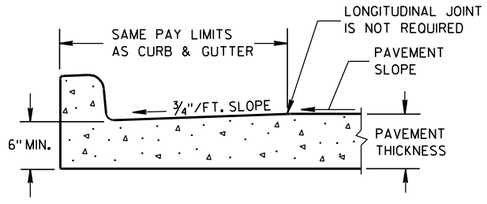
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

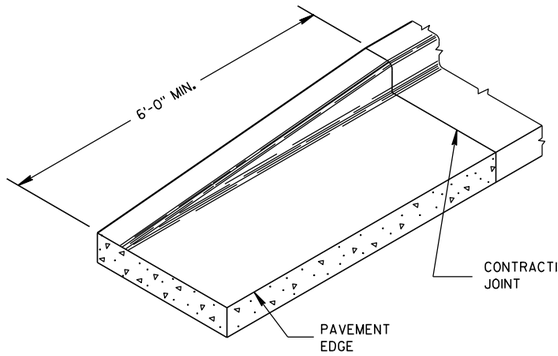
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

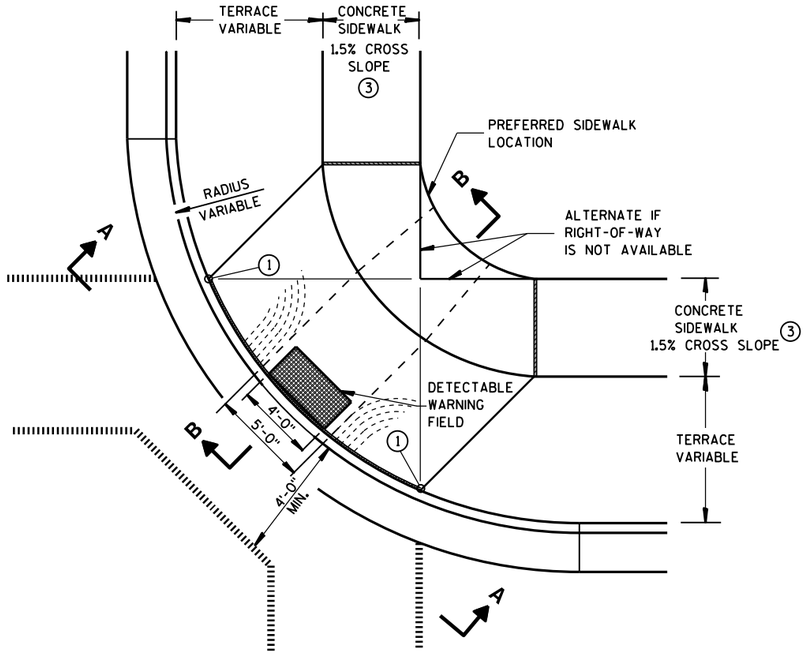
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

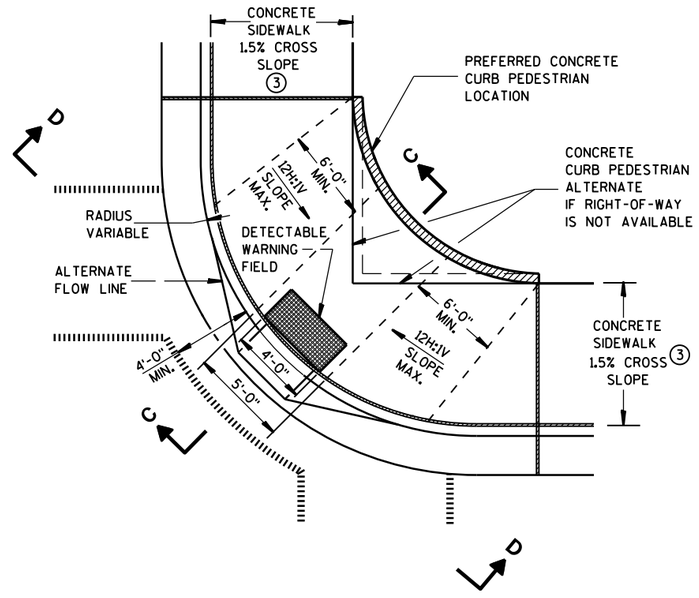
S.D.D. 8 D 1-17



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

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

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

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

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

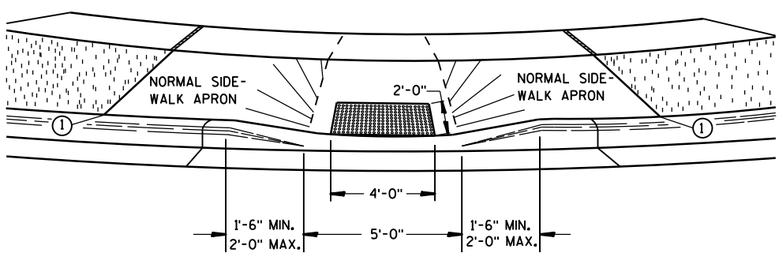
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

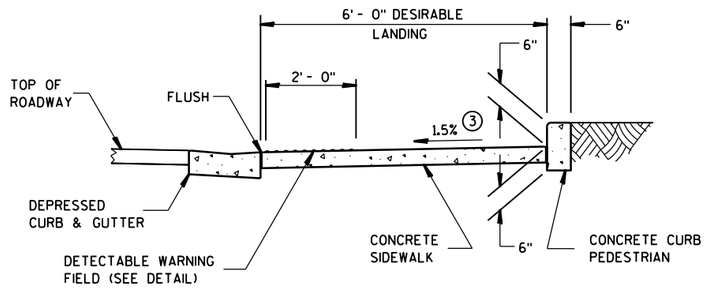
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

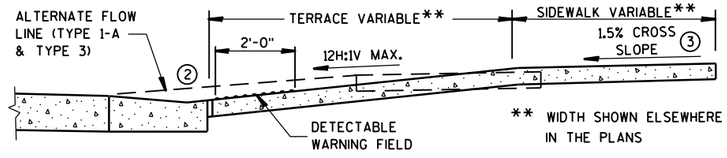
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



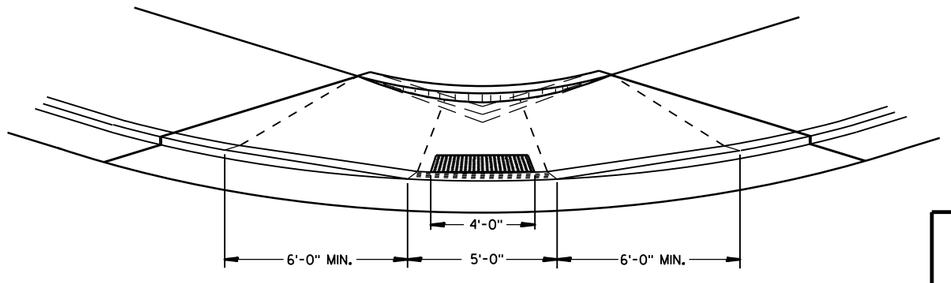
VIEW A-A



SECTION C-C



SECTION B-B



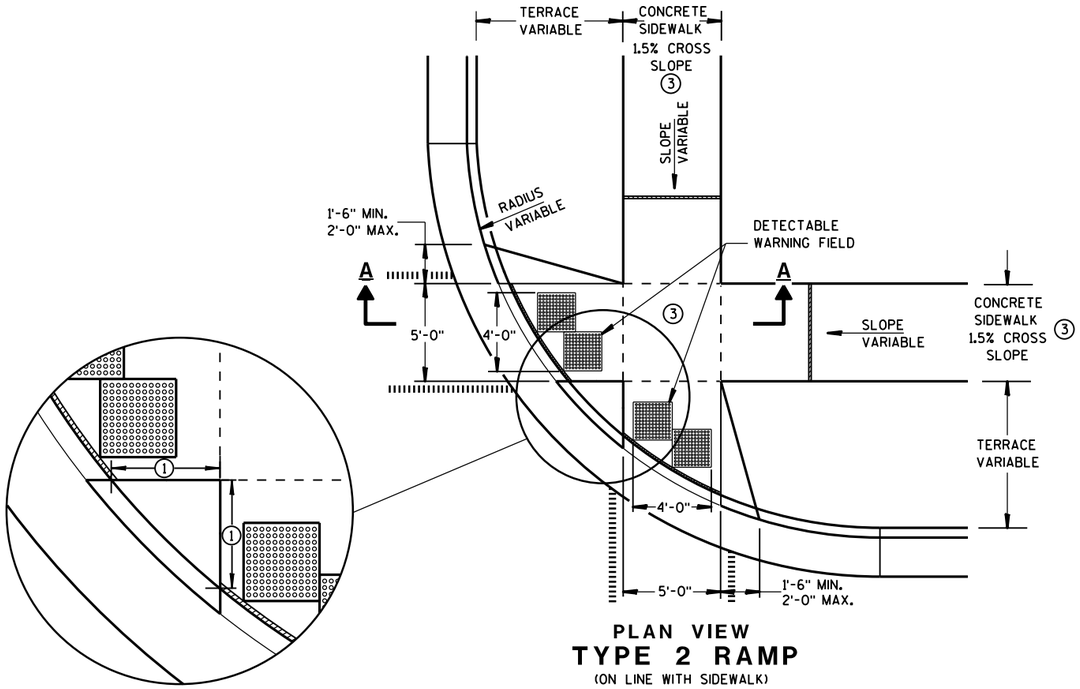
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

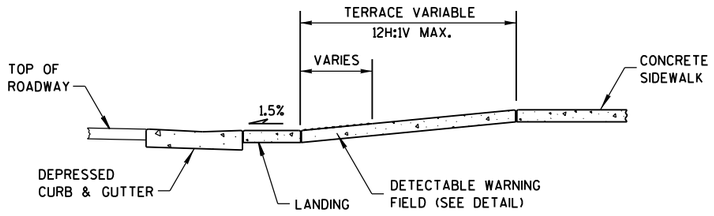
S.D.D. 8 D 5-15a



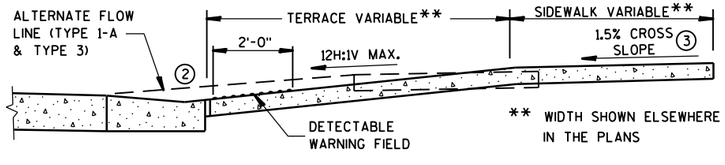
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

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

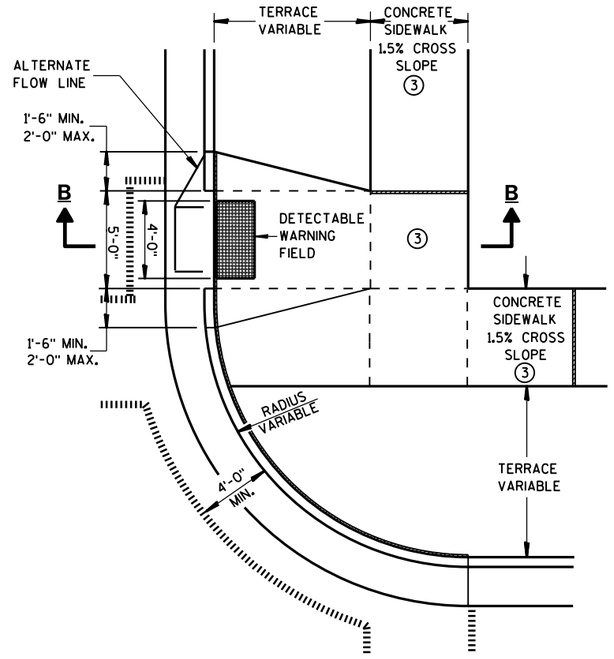
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

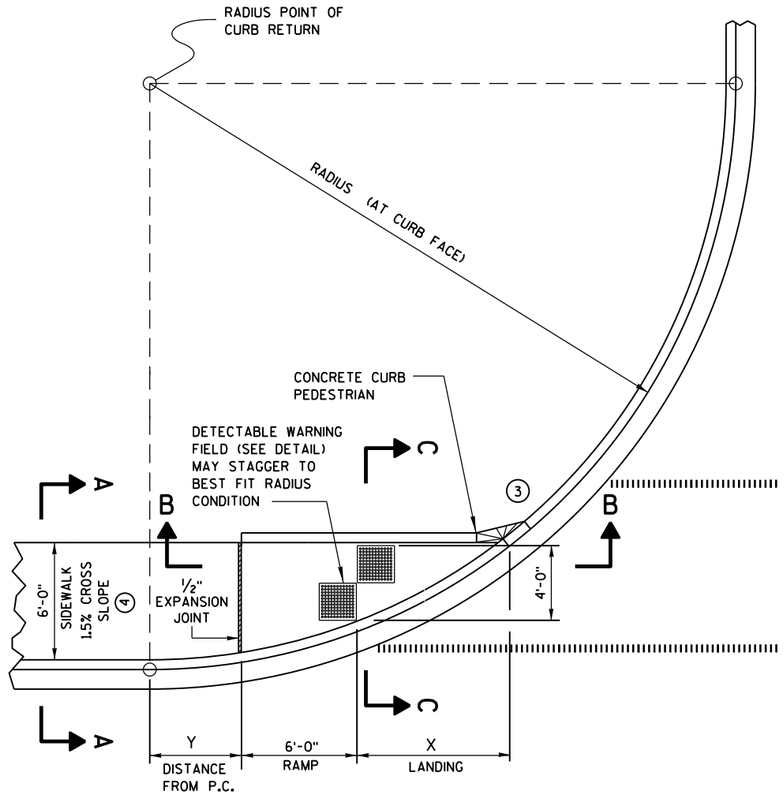
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

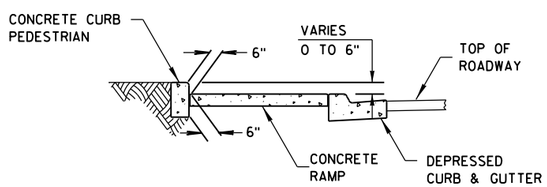
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

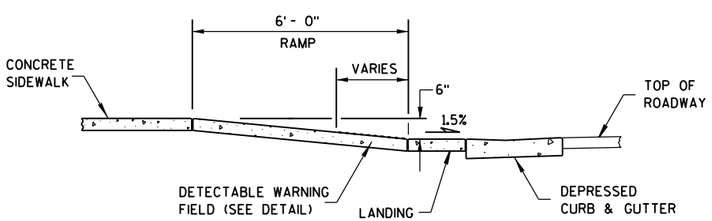
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



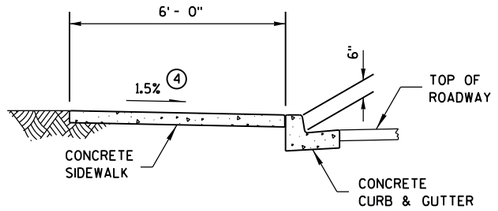
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

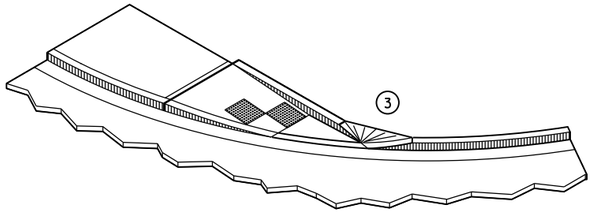
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

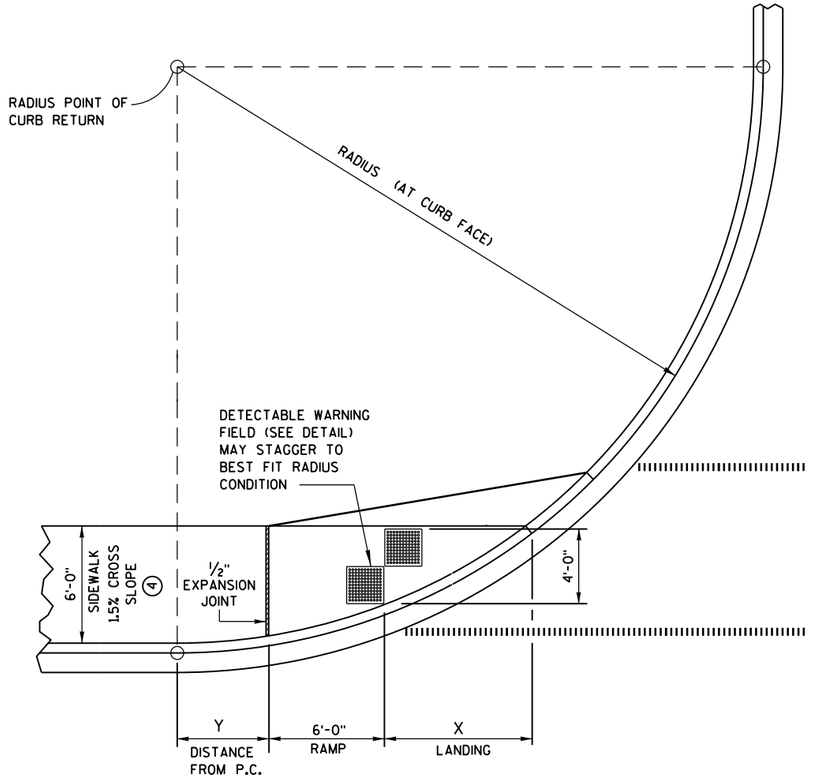
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

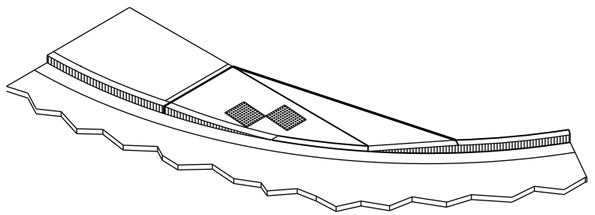
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

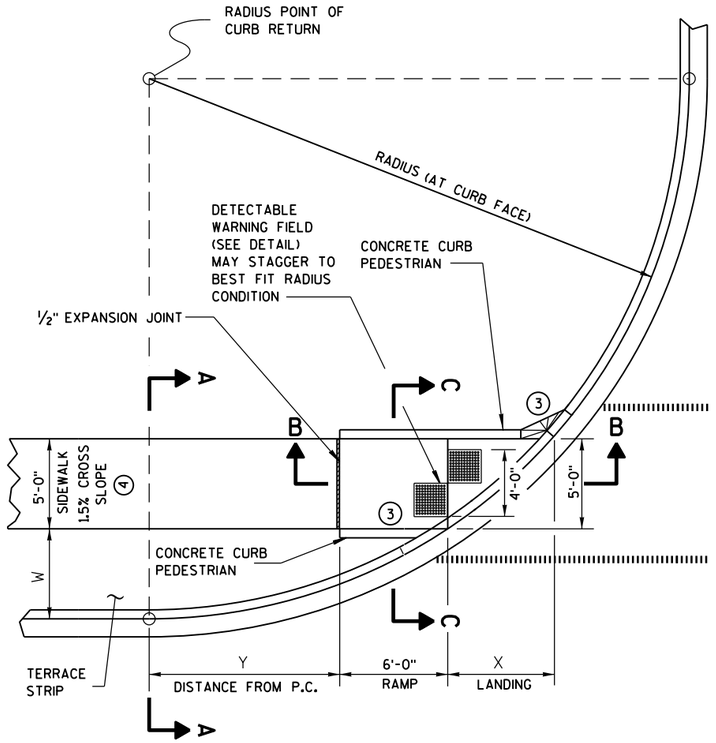
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

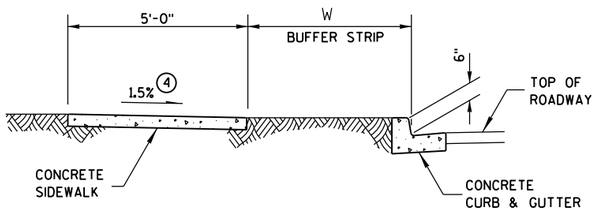
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

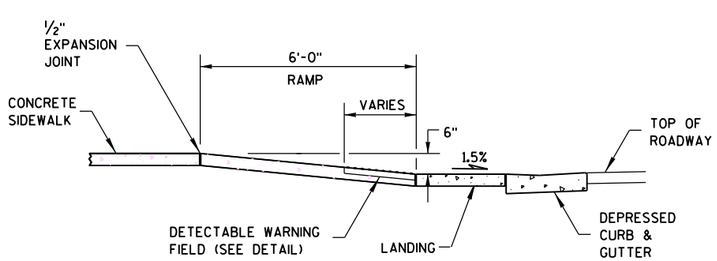
S.D.D. 8 D 5-15c



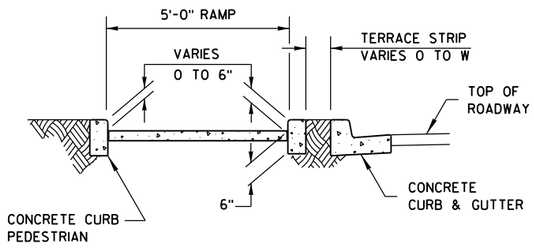
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

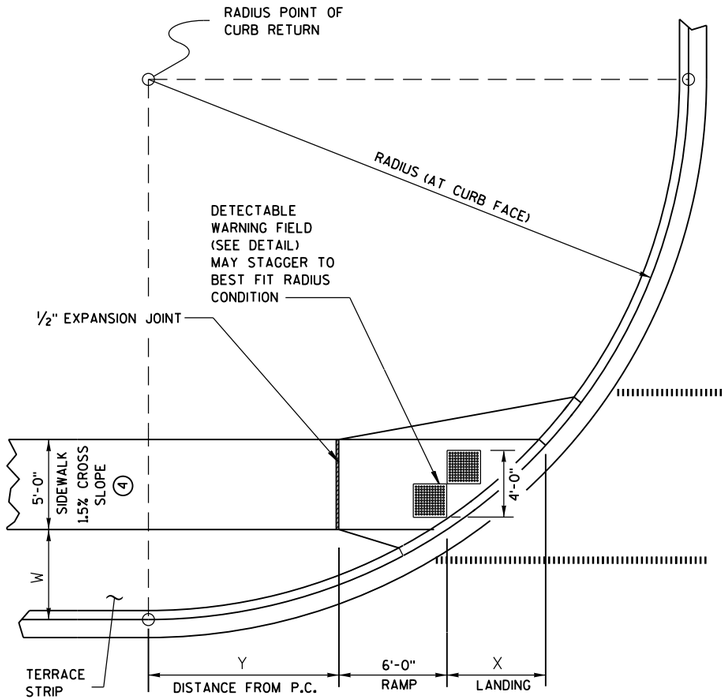
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

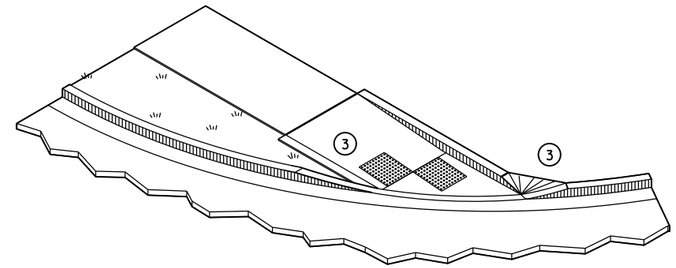
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

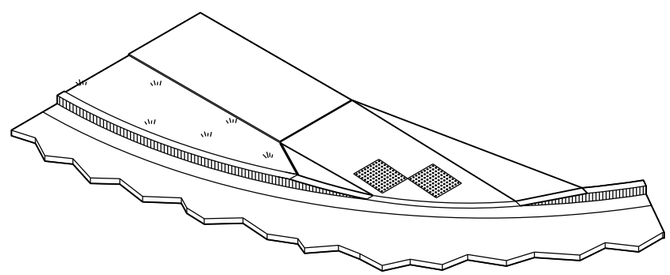
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



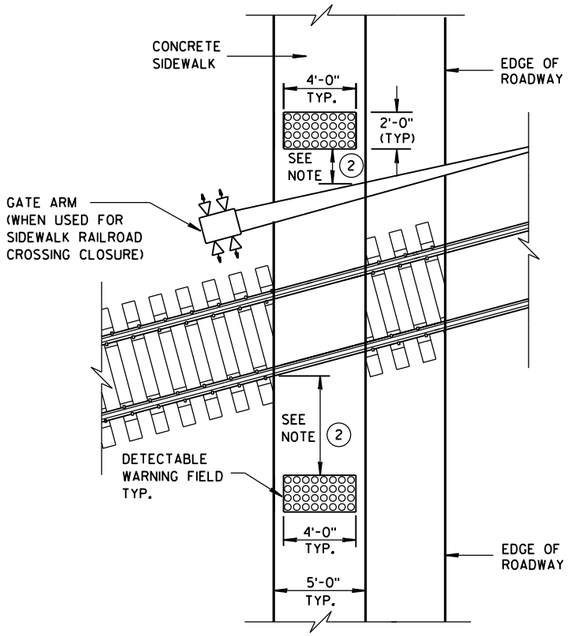
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

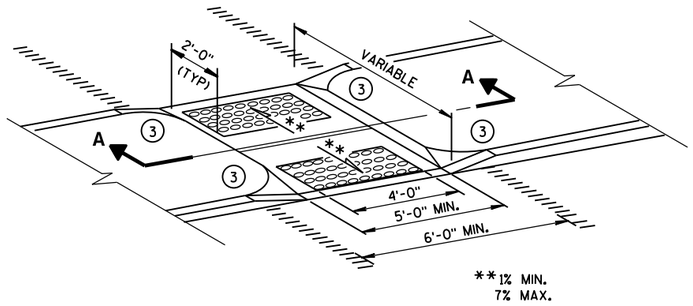
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

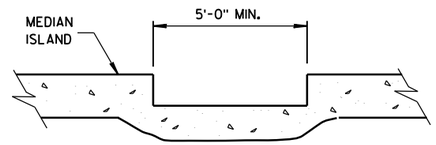
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

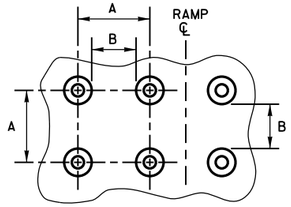
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



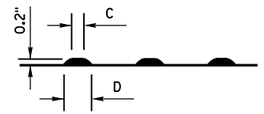
SECTION A-A



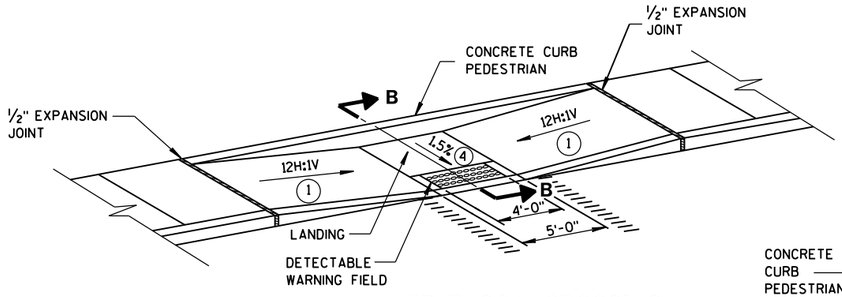
PLAN VIEW

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

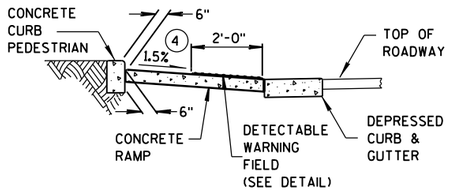
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

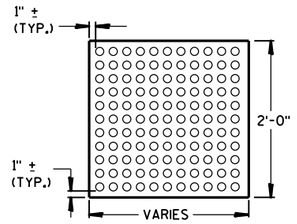


MID-BLOCK CROSSING
TYPE 7A



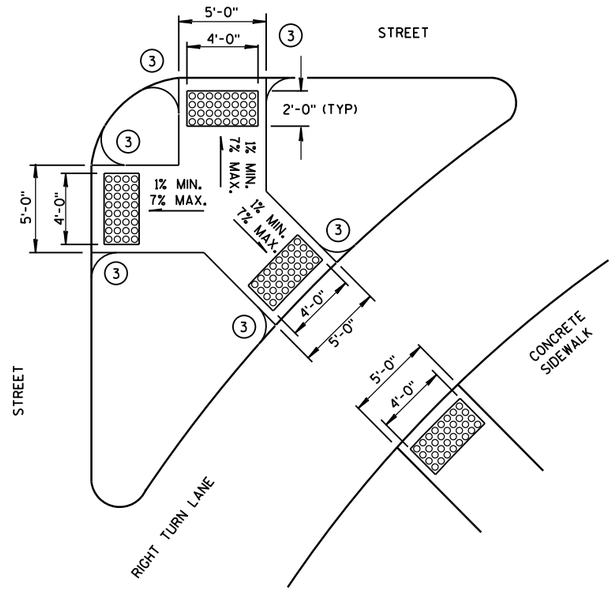
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

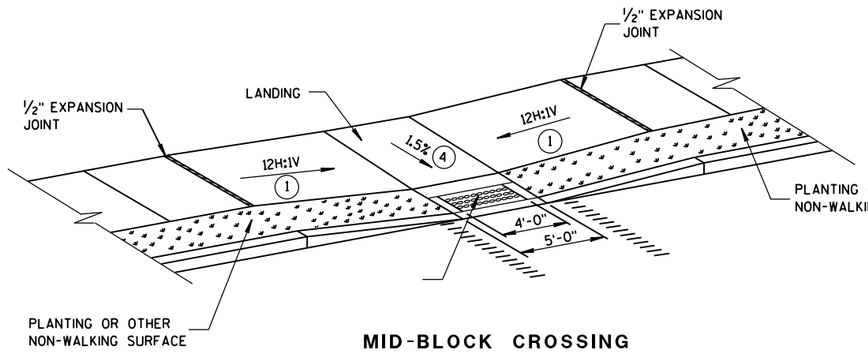


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

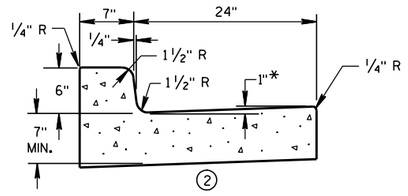
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

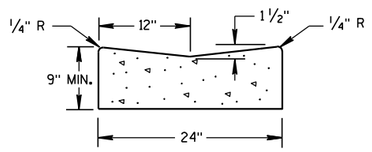
S.D.D. 8 D 5-15e

6

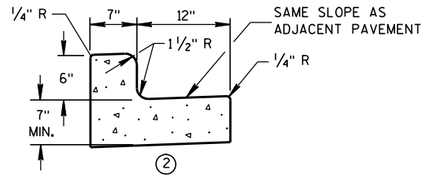
S.D.D. 8 D 5-15e



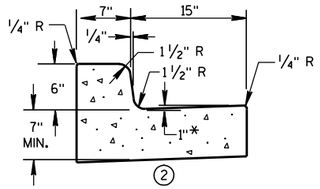
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

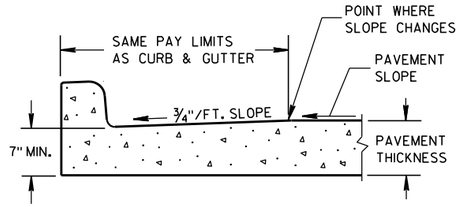


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

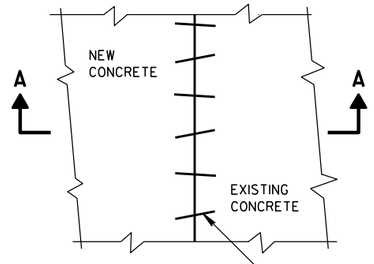
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

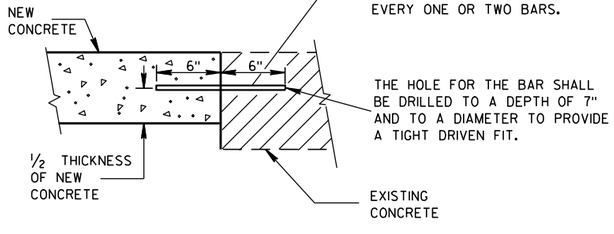
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

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

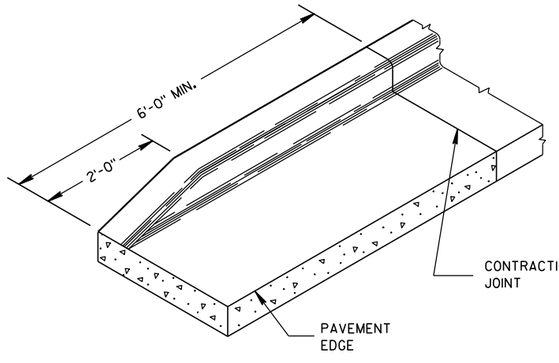
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



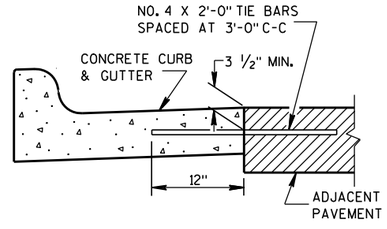
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

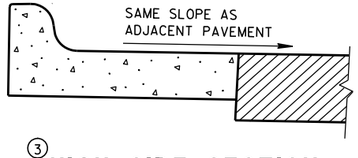
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zoon — ROADWAY STANDARDS ENGINEER

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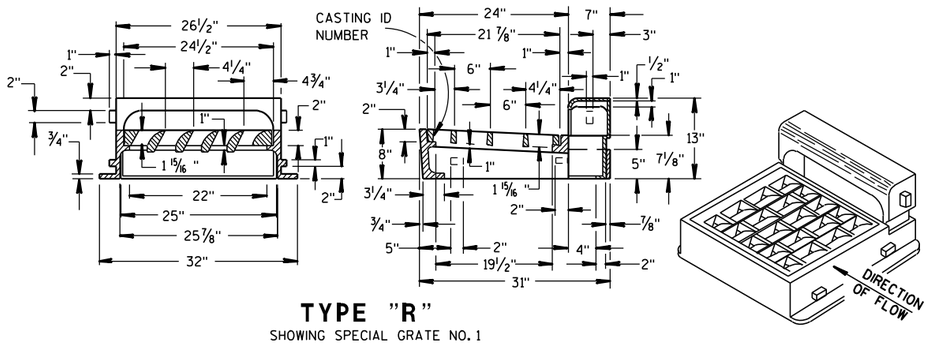
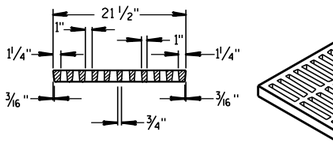
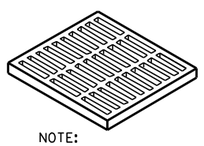
INLET COVERS



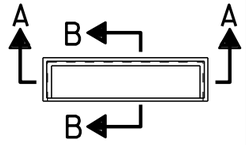
TYPE "R"

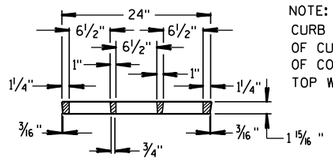
SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



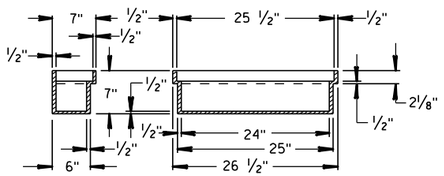


(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.





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

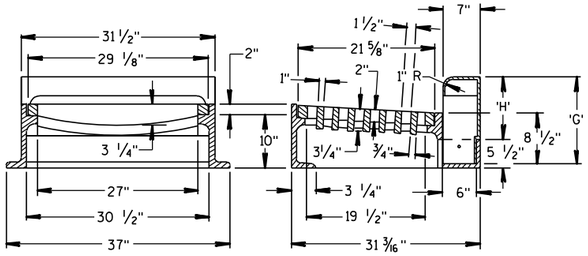
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

SPECIAL CURB PLUG "P"

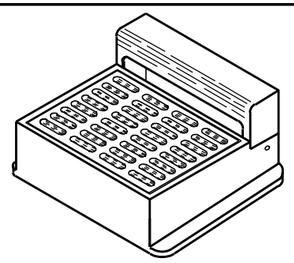
(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

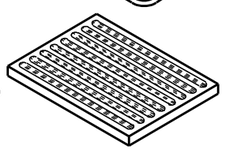
'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



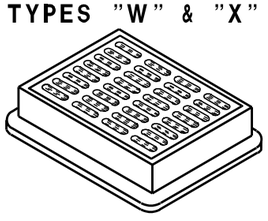
TYPE "W"

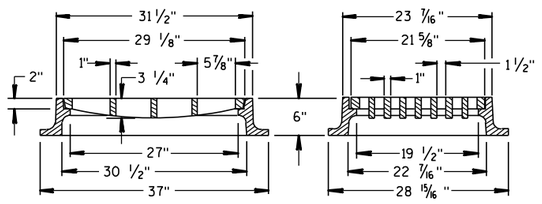
(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.





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

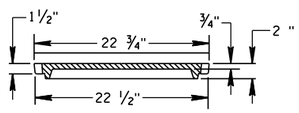




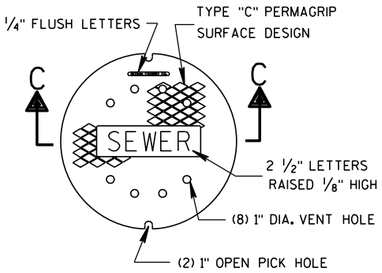
TYPE "X"

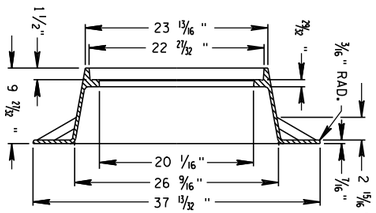
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

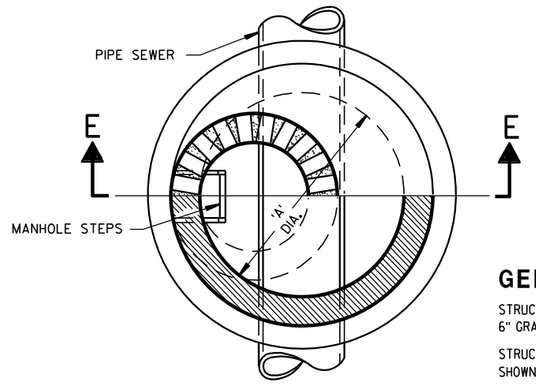
TABLE OF DIMENSIONS

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.

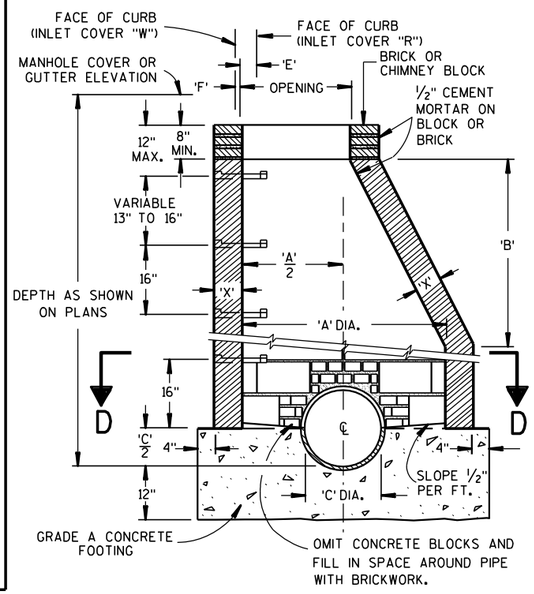
MANHOLE



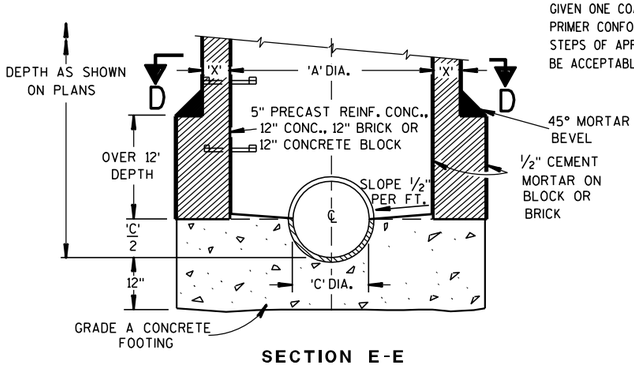
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

COVER 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 5/8 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
82
FHWA

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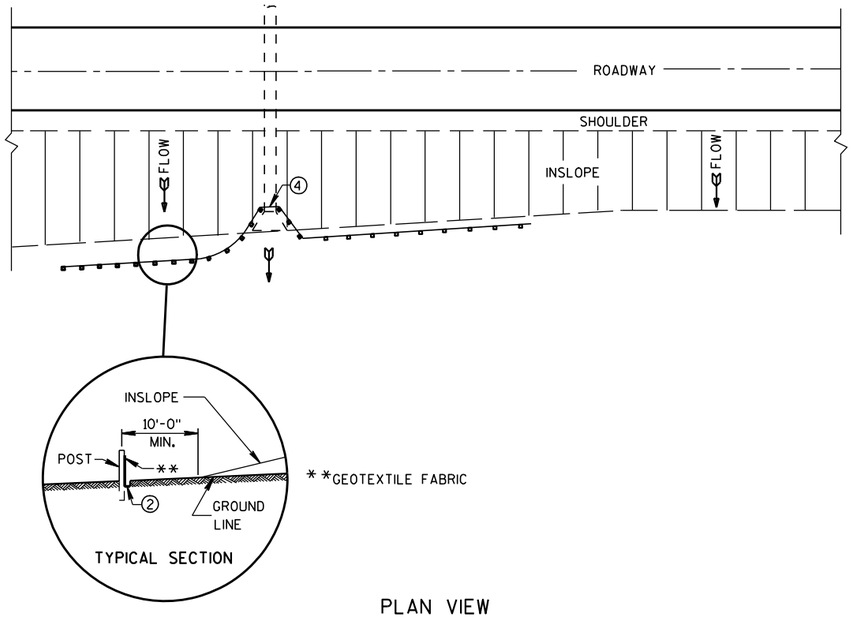
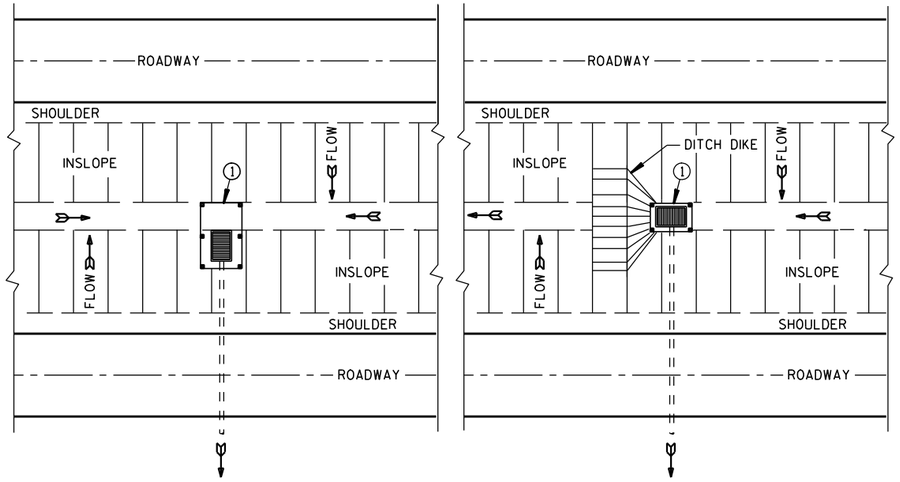
S.D.D. 8 D 17-6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

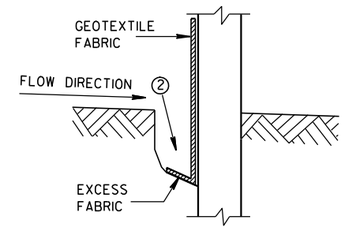
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

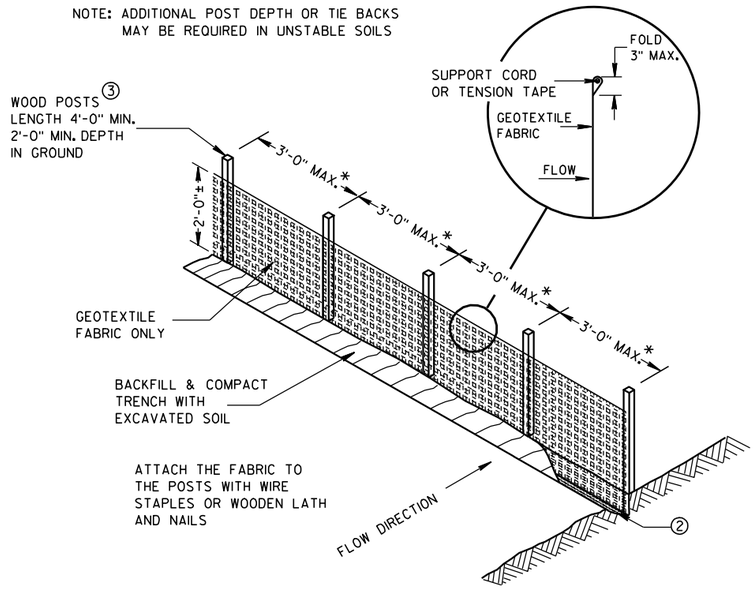
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

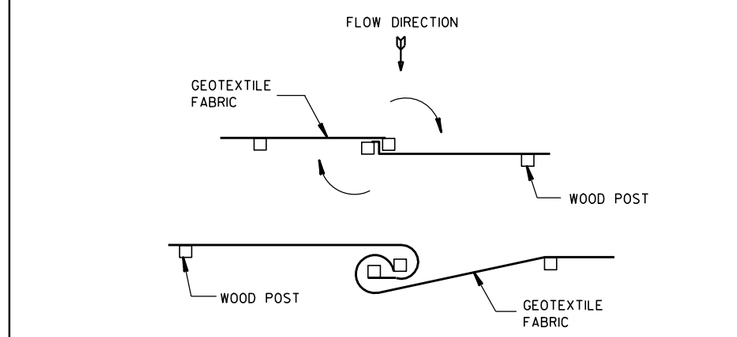


TRENCH DETAIL

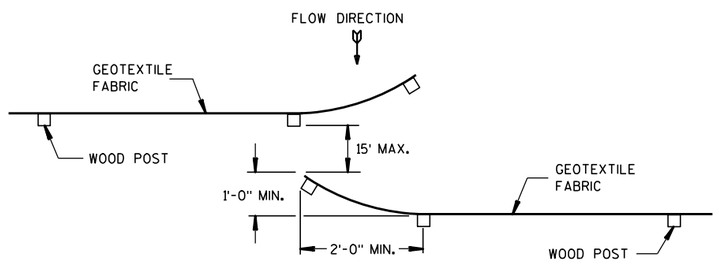


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

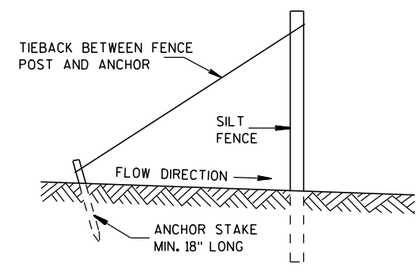


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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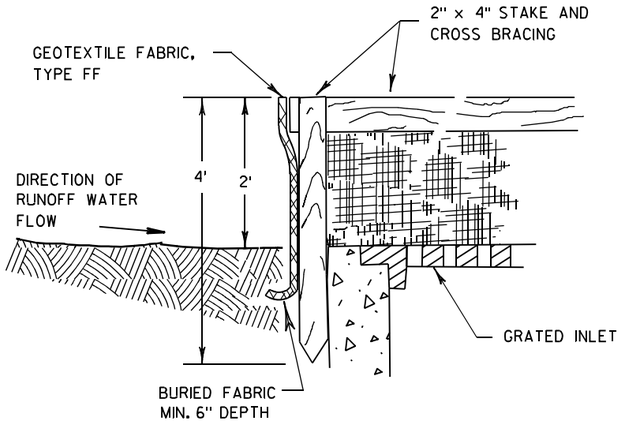
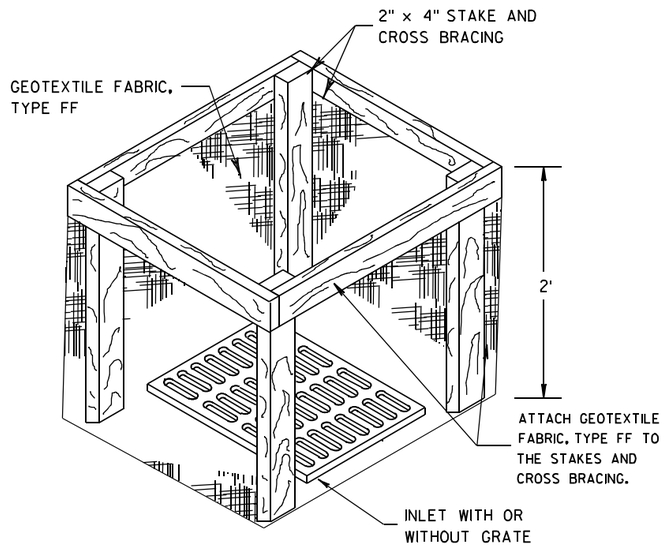
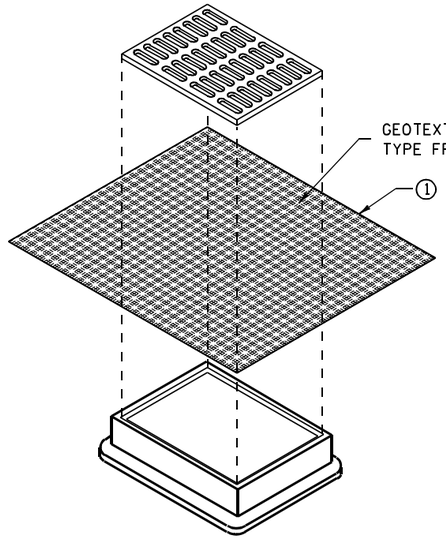


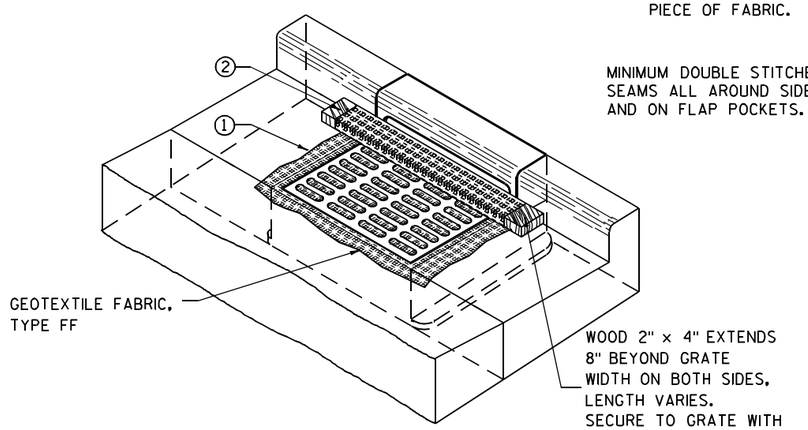


INLET PROTECTION, TYPE A

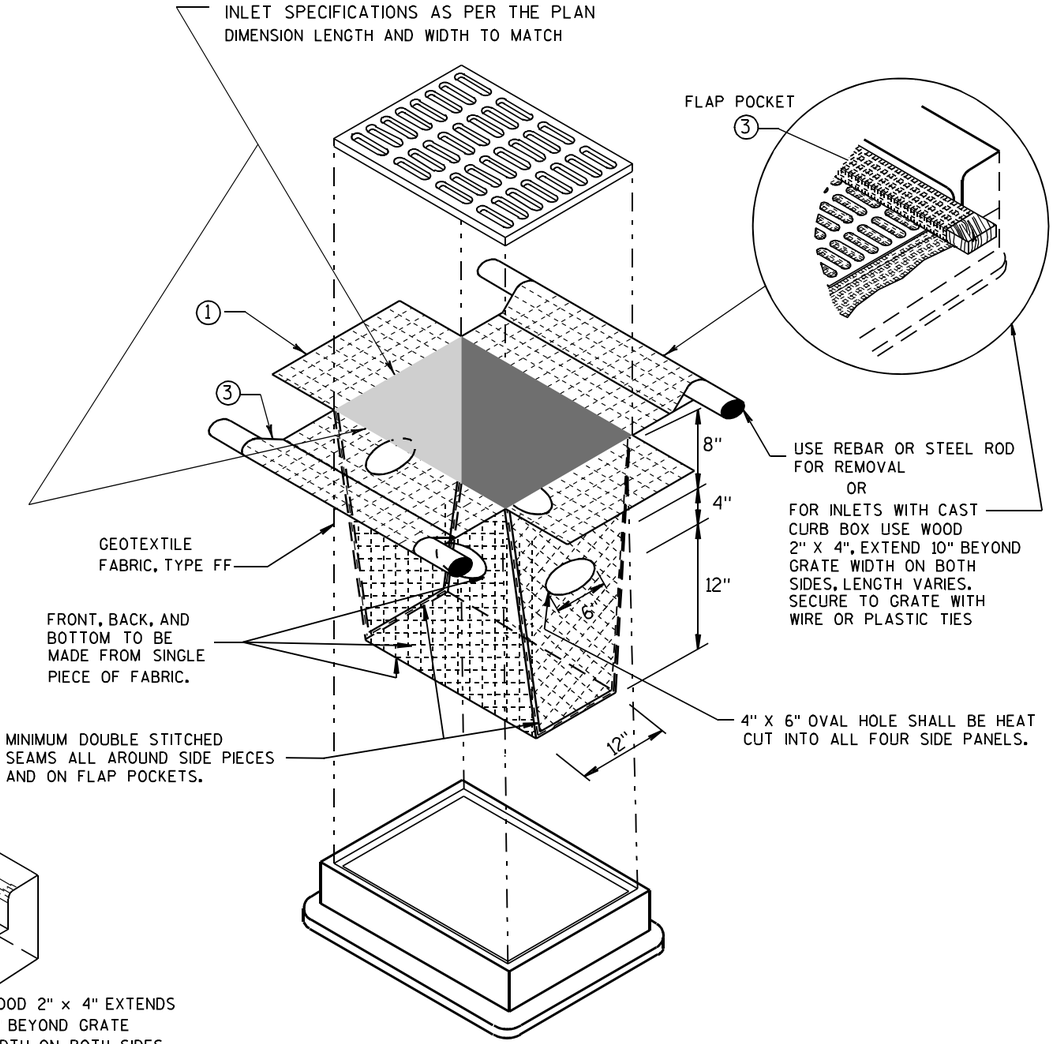


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

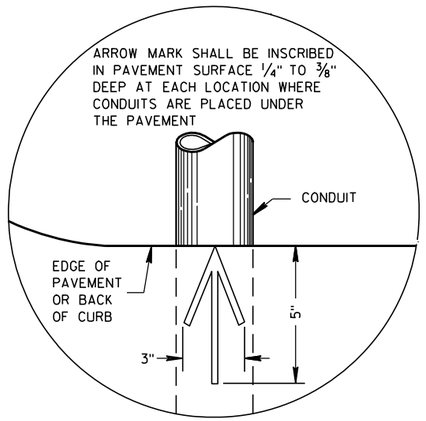
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

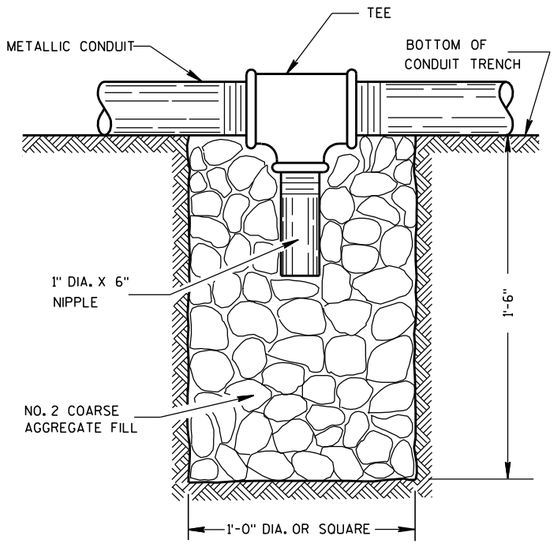
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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



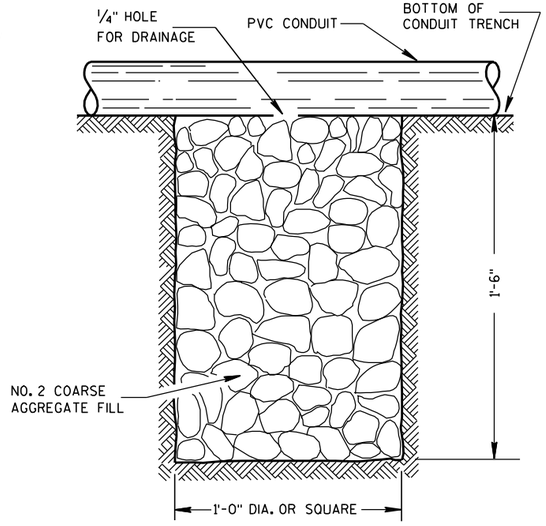
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

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.

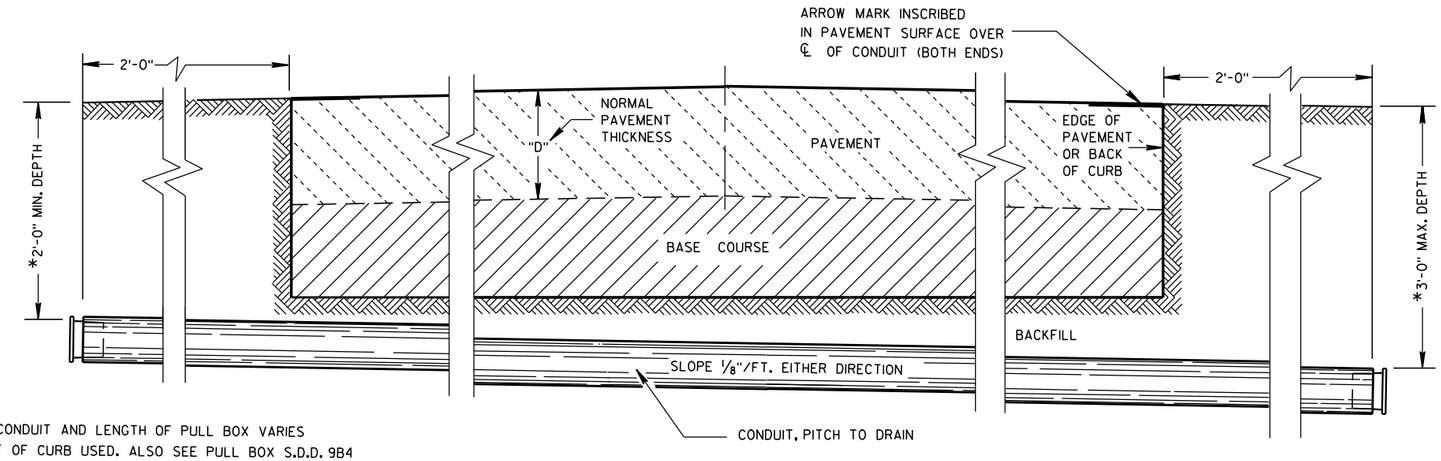
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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.



*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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI 85 HWYS

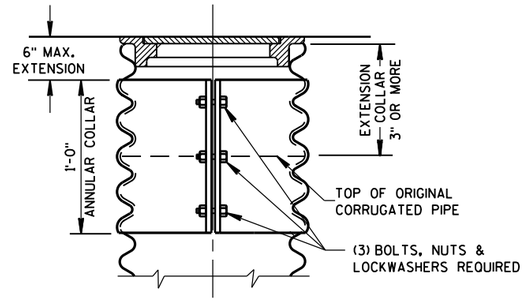
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

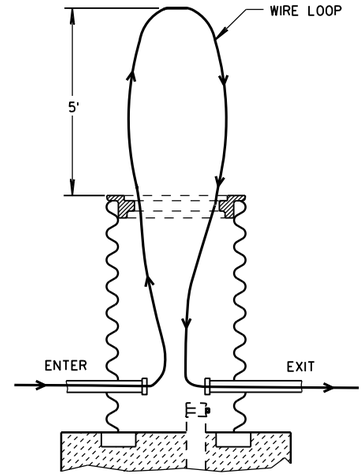
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

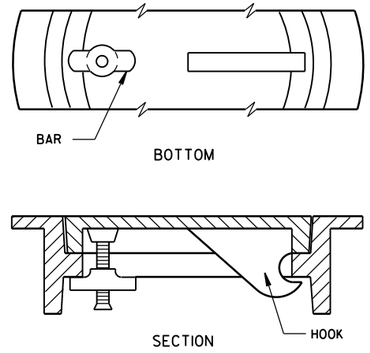
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

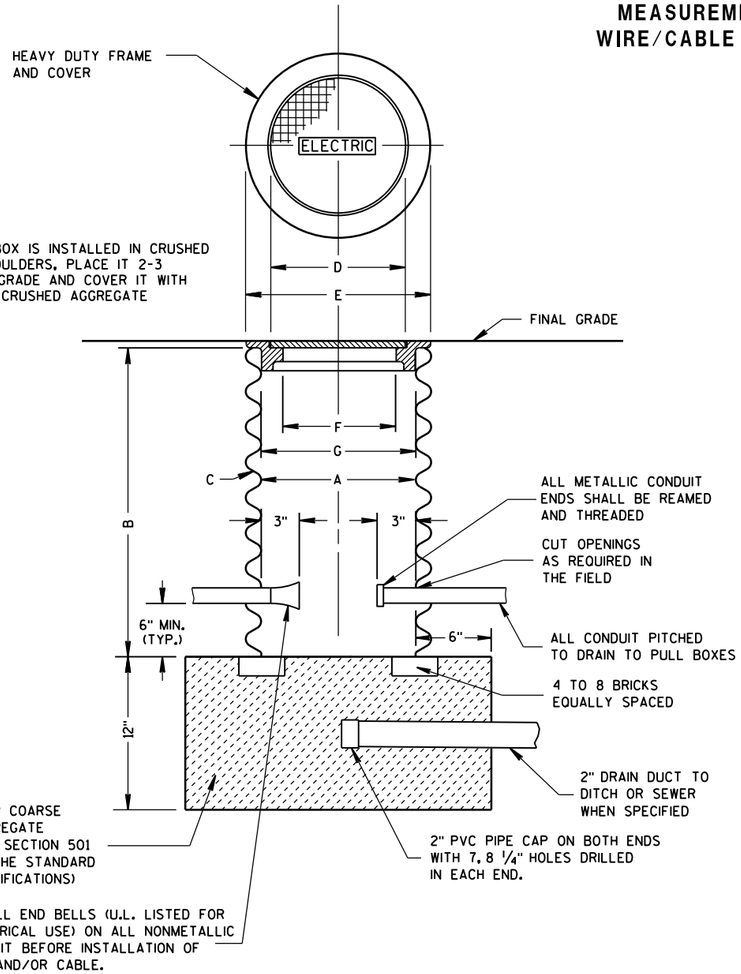


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



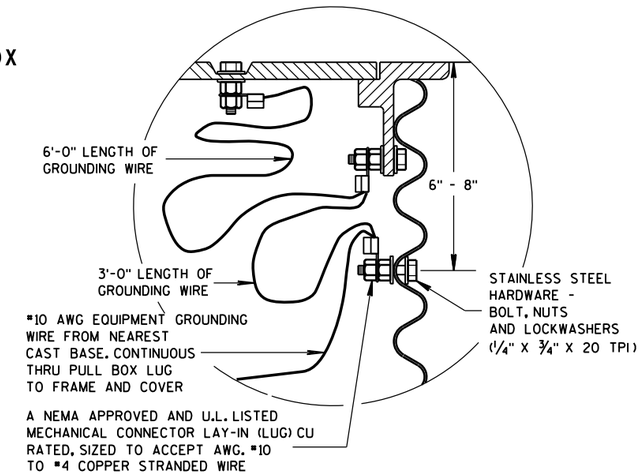
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

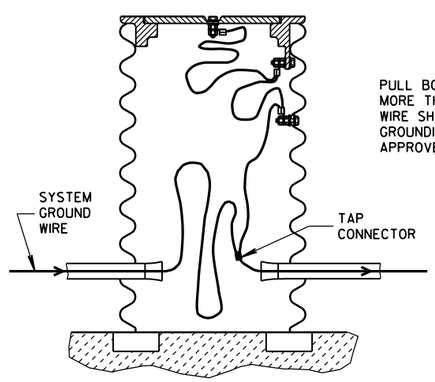


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

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.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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

2-7-2013 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

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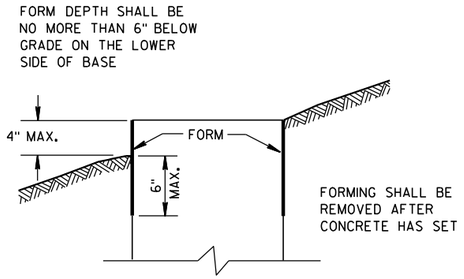
S.D.D. 9 B 4-10



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
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 DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

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

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

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

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

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

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES 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 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END 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 BY THE ENGINEER.

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

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

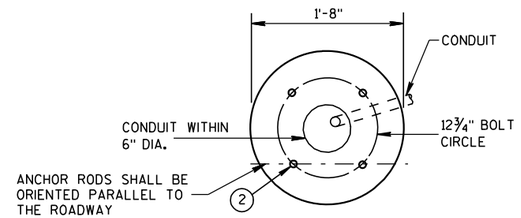
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

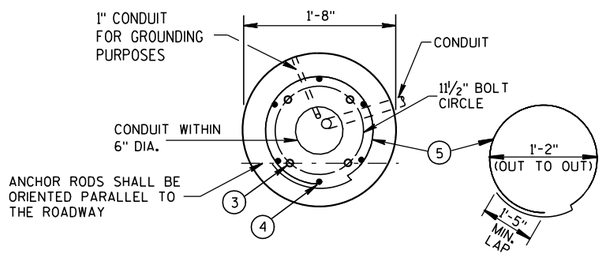
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

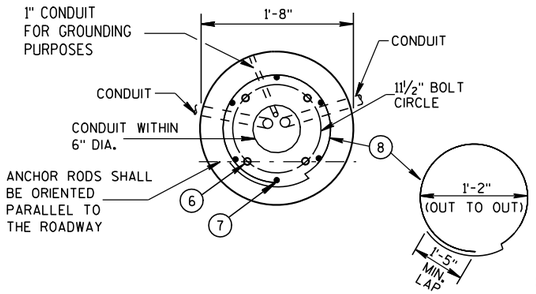
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

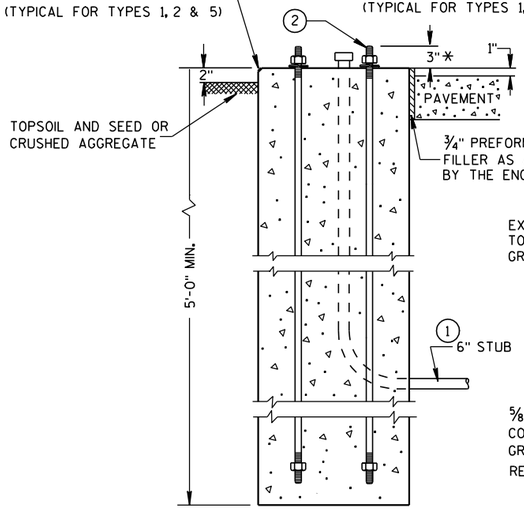






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

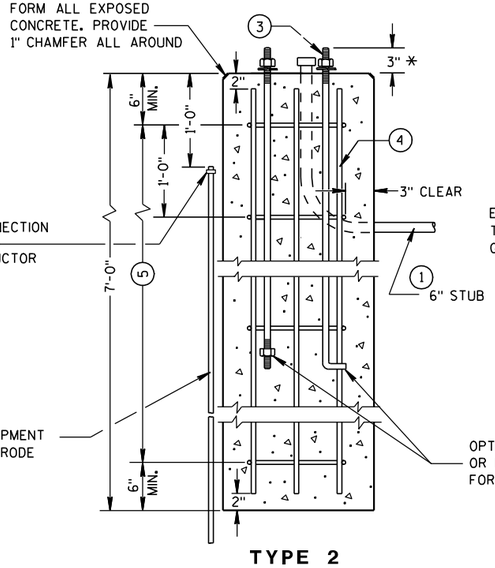
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



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

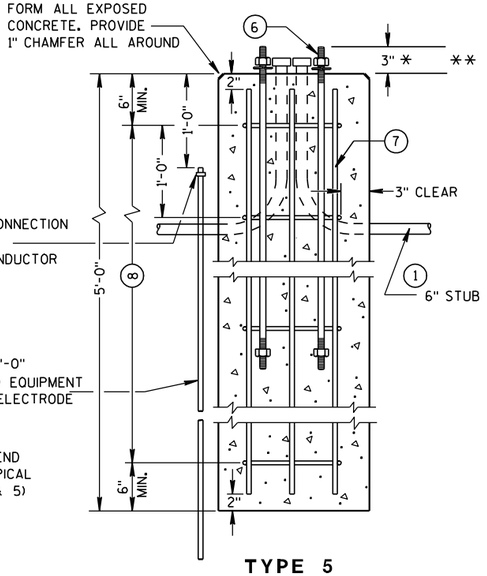
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
87
HWYS
FHWA

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S.D.D. 9 C 2-6

6

S.D.D. 9 C 2-6

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

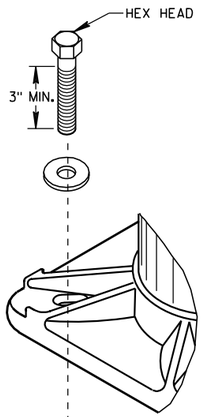
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

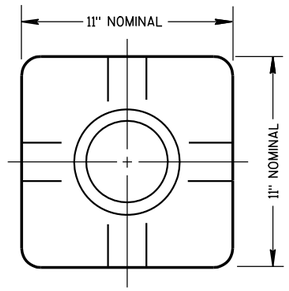
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

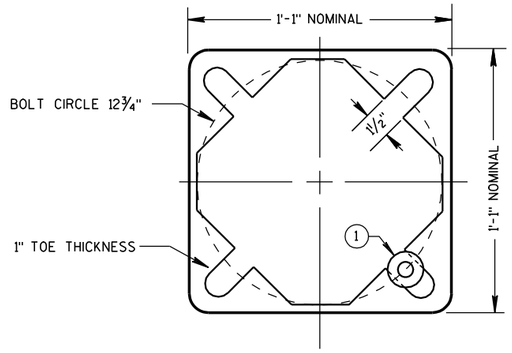
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

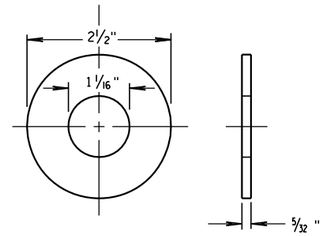




TOP VIEW
(PEDESTAL BASE)

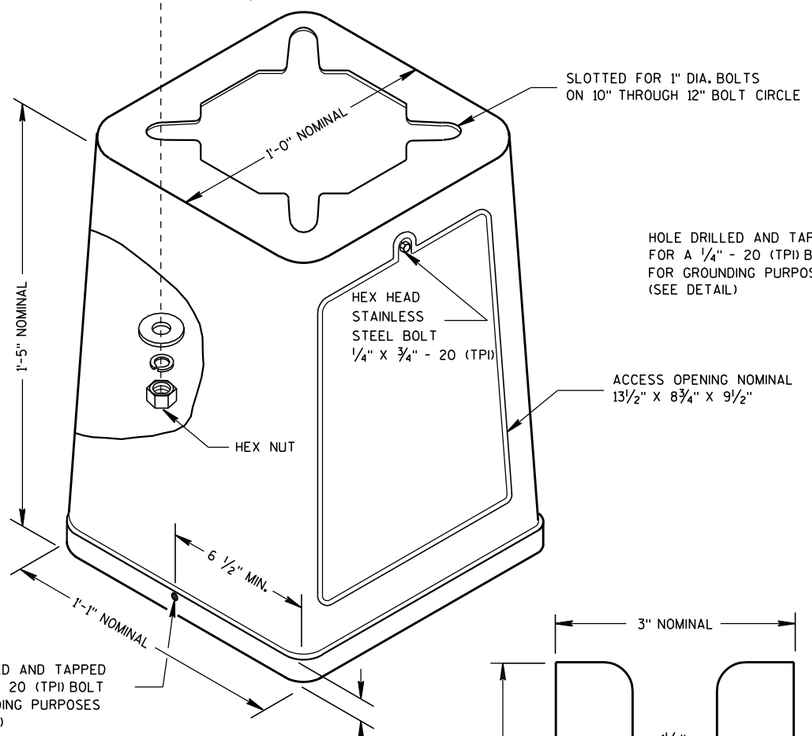


BOTTOM VIEW
(PEDESTAL BASE)

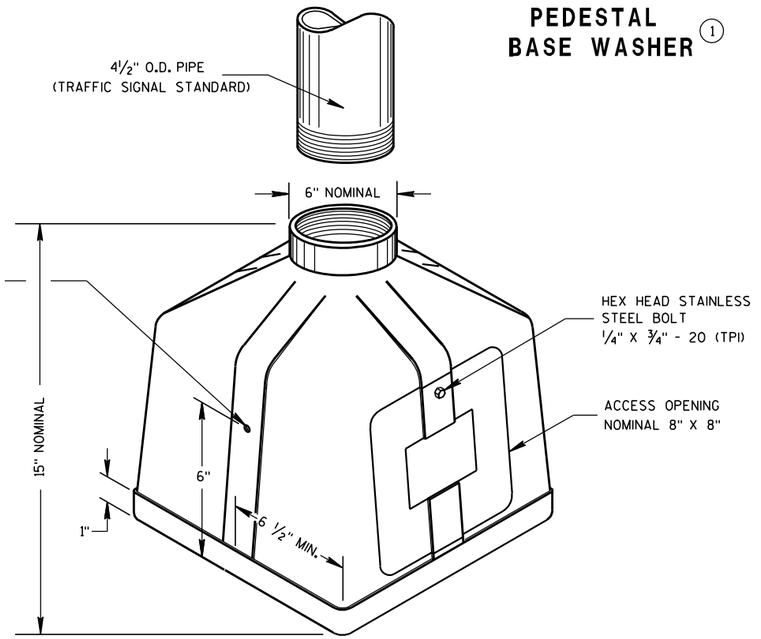


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

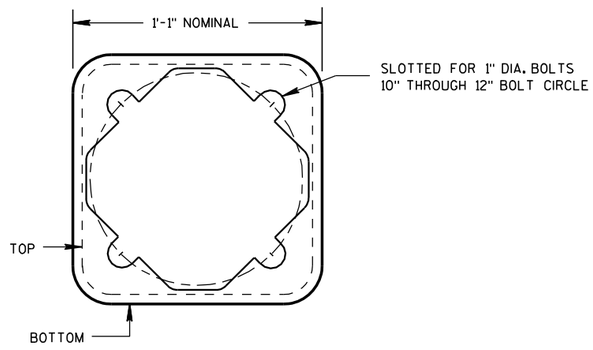


ISOMETRIC VIEW

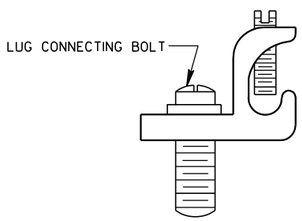


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

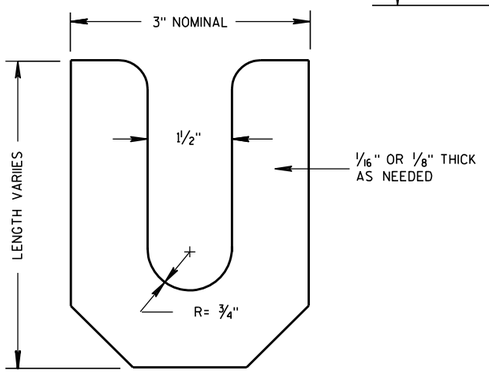


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI
88 — HWYS
FHWA

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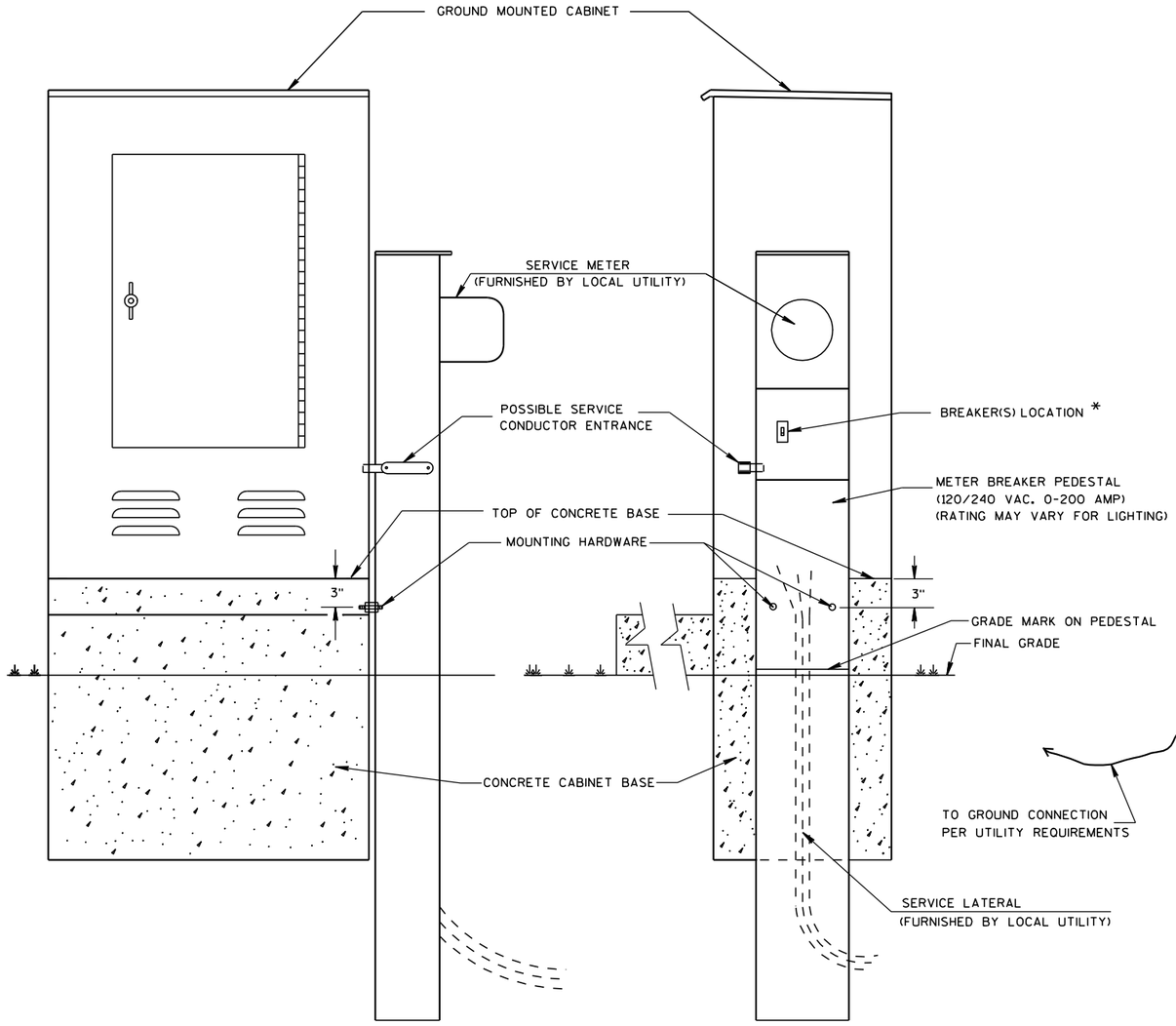

TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/27/09 DATE

/S/ Joanna L. Bush STATE ELECTRICAL ENGI

HWYS

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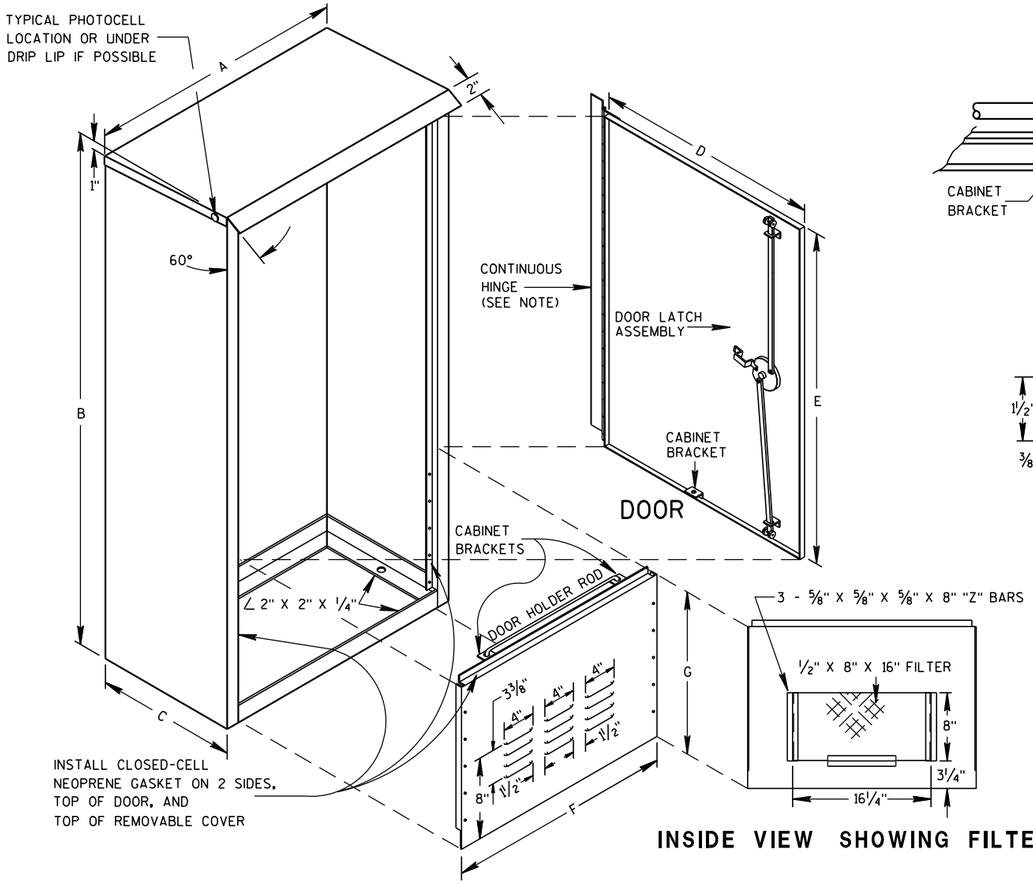
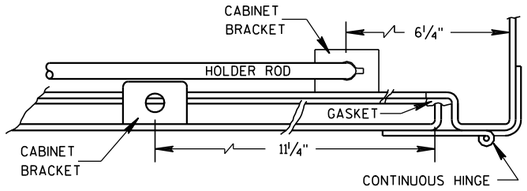
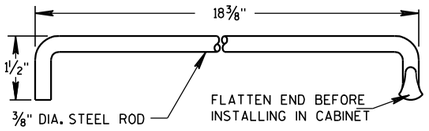


REMOVABLE COVER

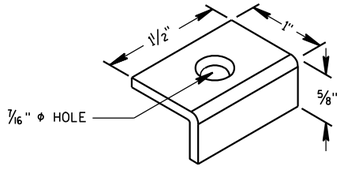
INSIDE VIEW SHOWING FILTER



HINGE & DOOR HOLDER



HOLDER ROD

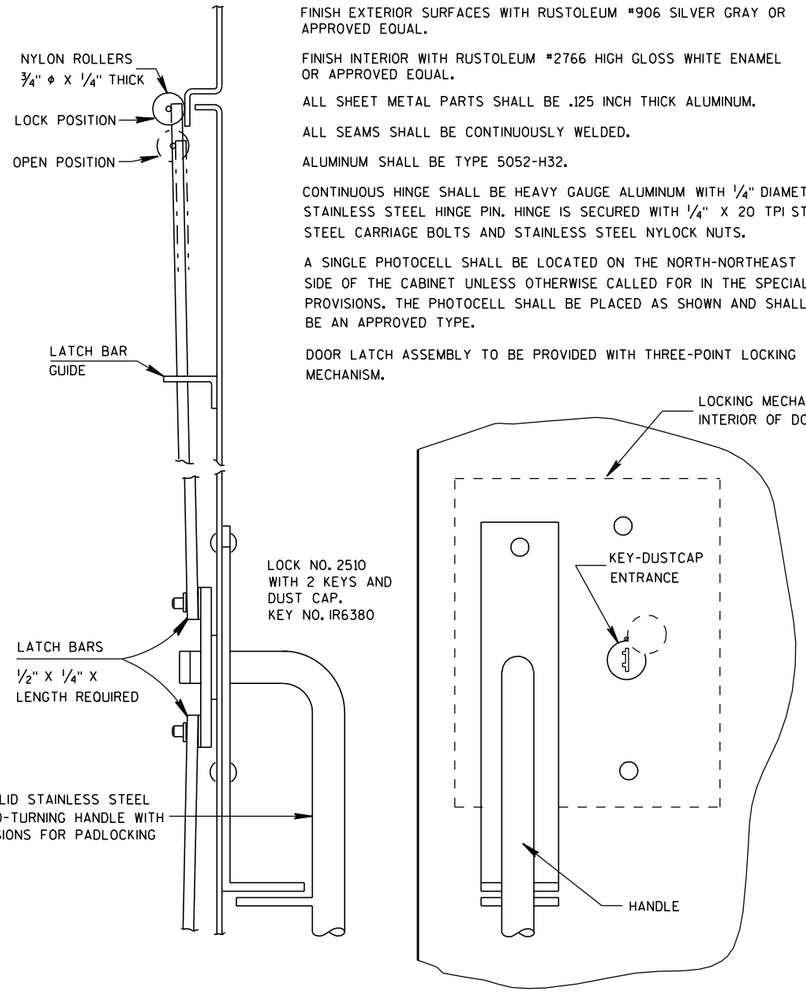


CABINET BRACKET

MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

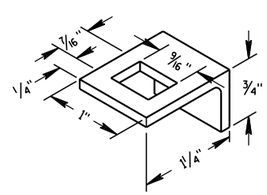
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

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

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

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

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

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

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

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

SIGNAL OR LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI
HWYS
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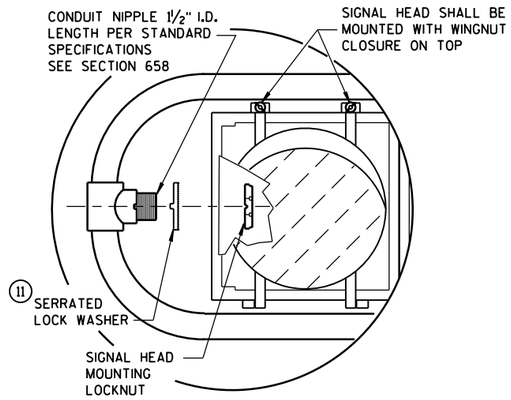
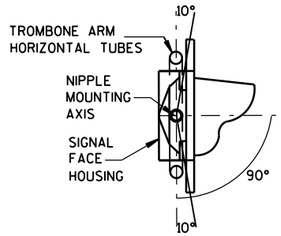


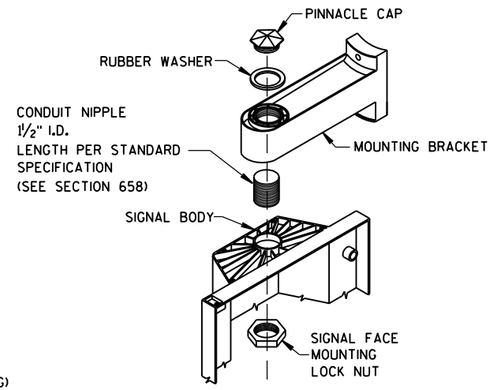
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

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

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

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

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

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

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

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

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

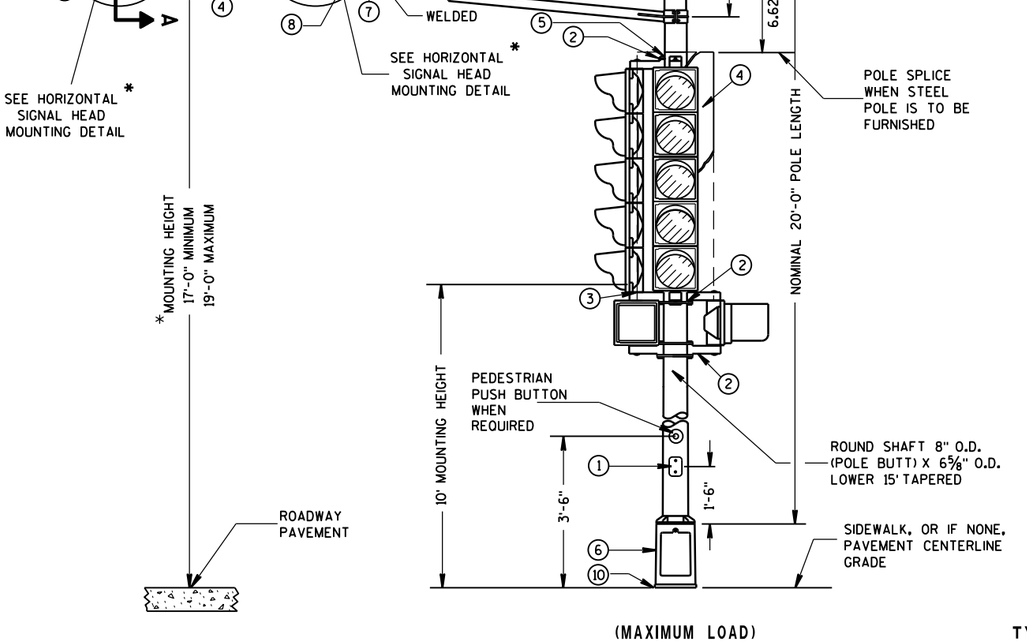
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

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

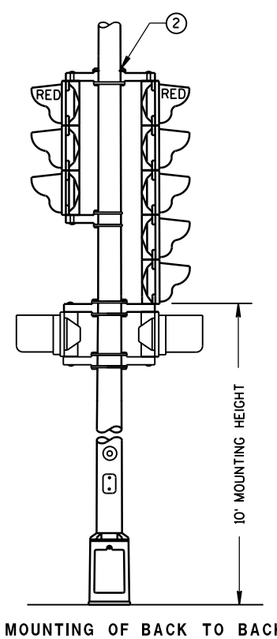
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

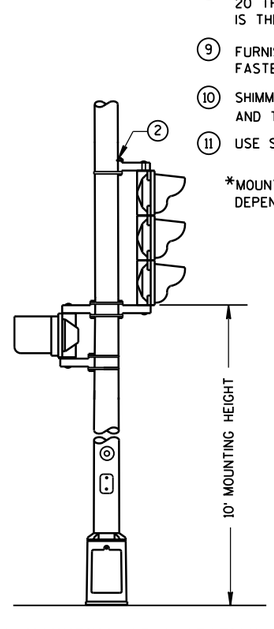
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



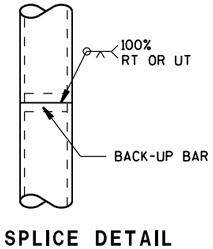
(MAXIMUM LOAD)



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



POLE SPLICE DETAIL

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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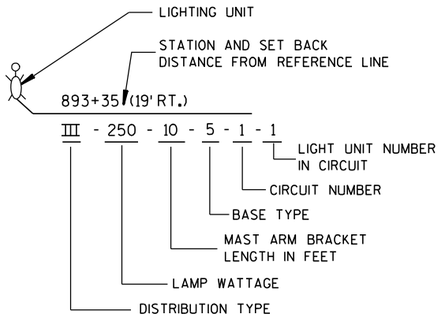
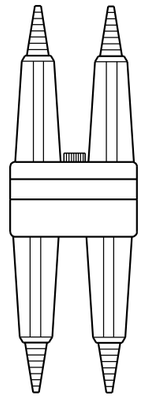
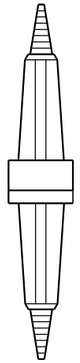


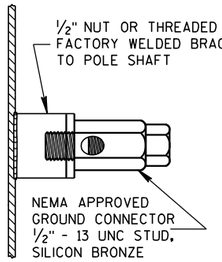
LIGHTING UNIT CODE
(TYPICAL)

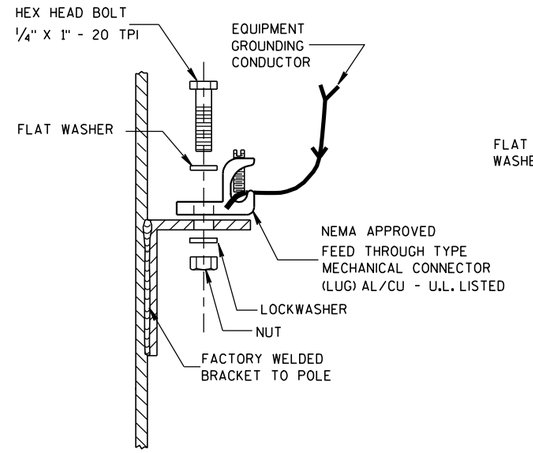


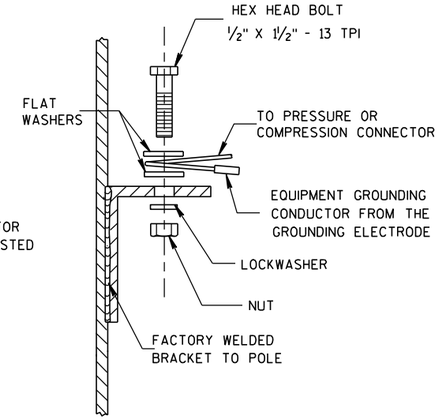
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



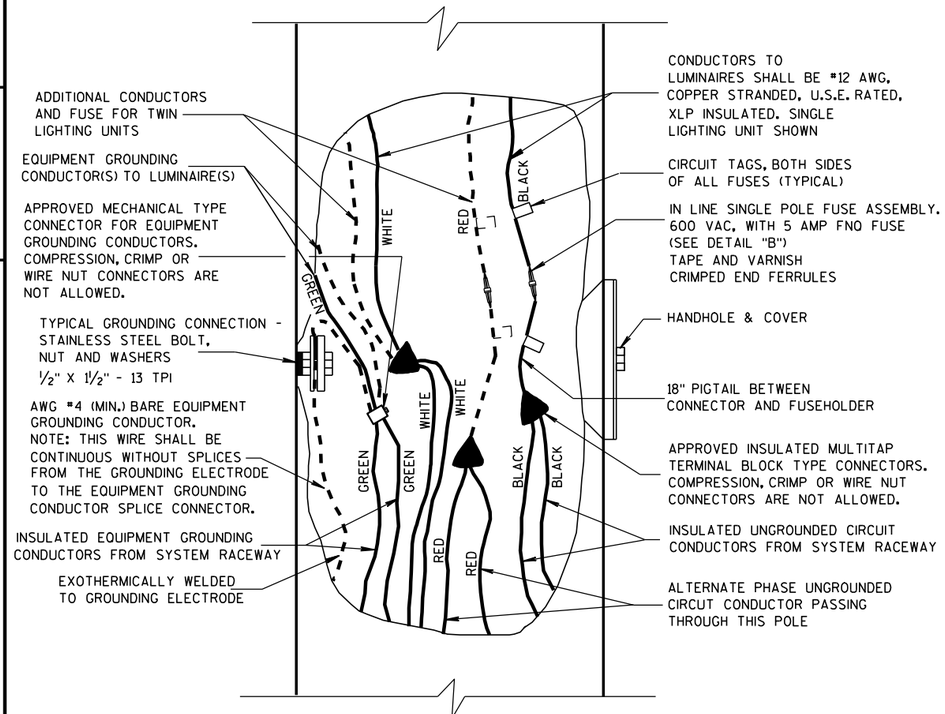
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



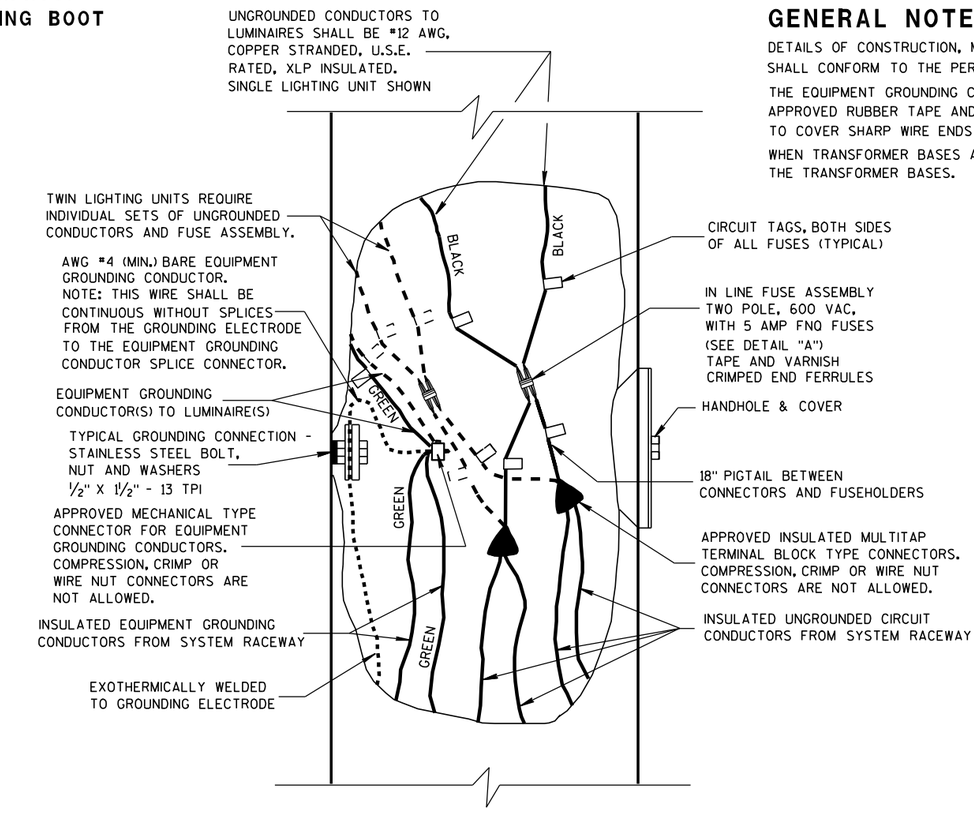




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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



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

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 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.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 — DATE

/S/ Thomas J. Gosnine — STATE ELECTRICAL ENGI

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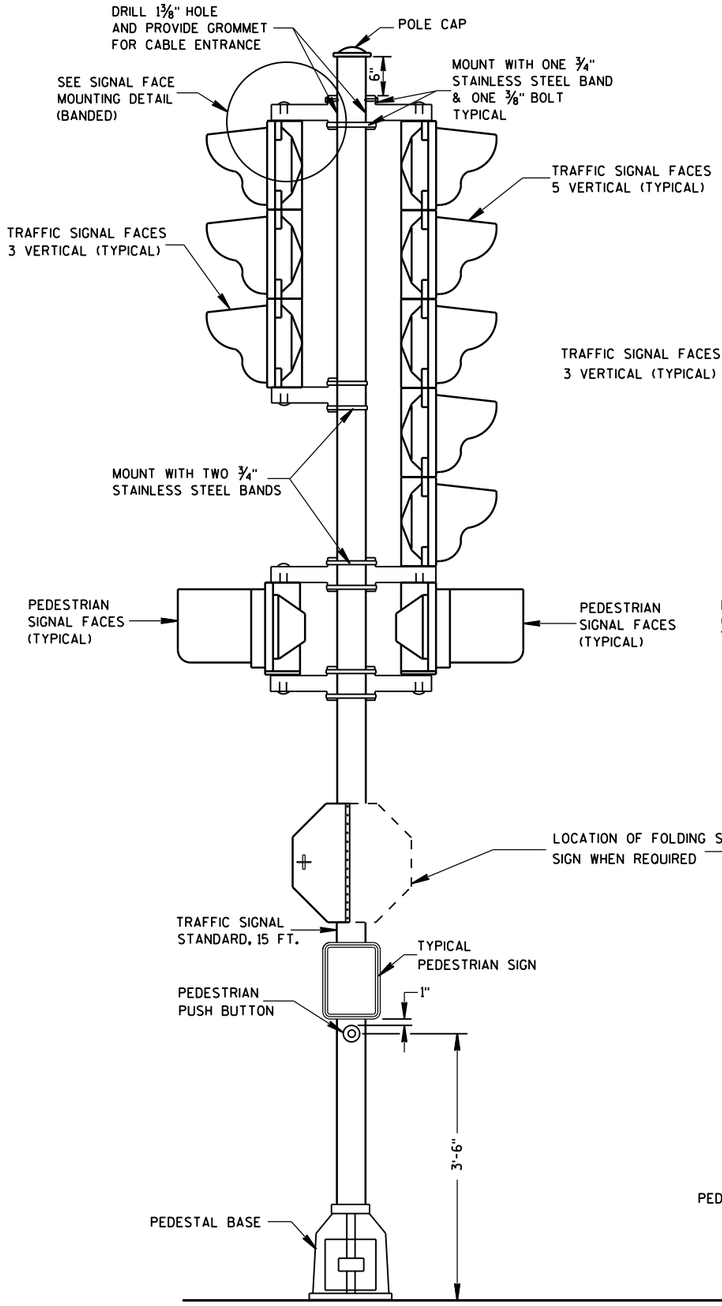
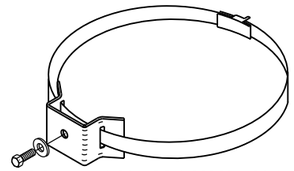
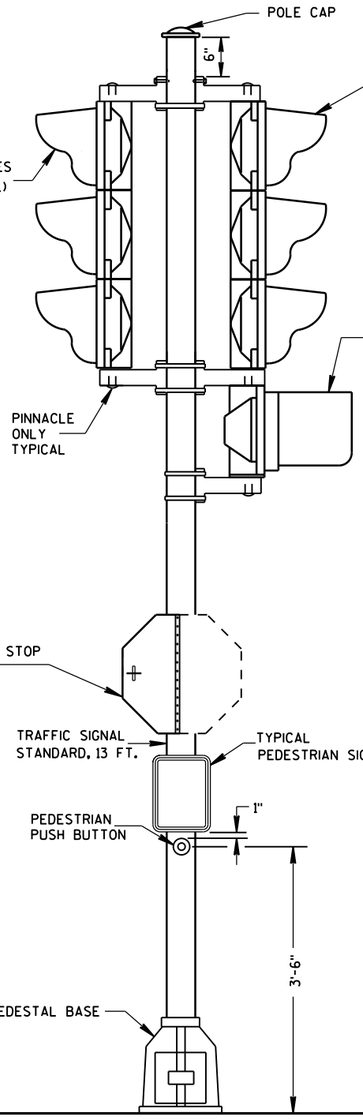


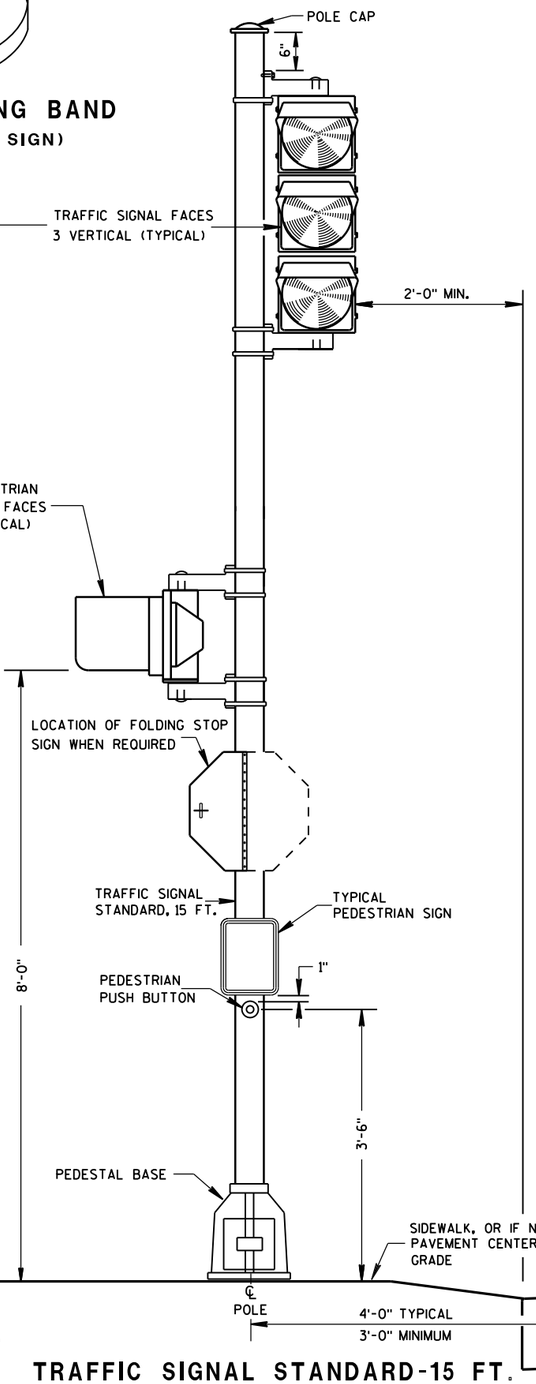
TRAFFIC SIGNAL STANDARD-15 FT.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-13 FT.



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

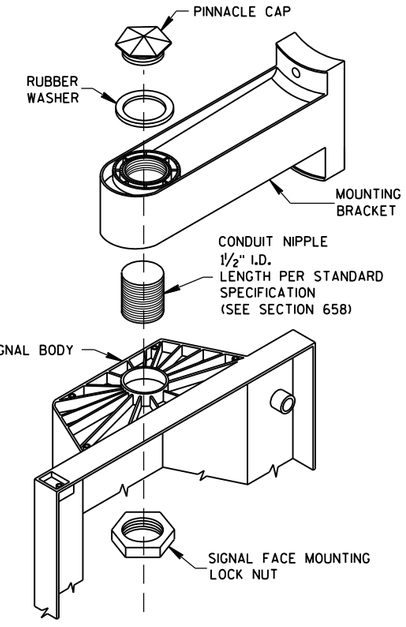
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

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

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



SIGNAL FACE MOUNTING DETAIL
(BANDED)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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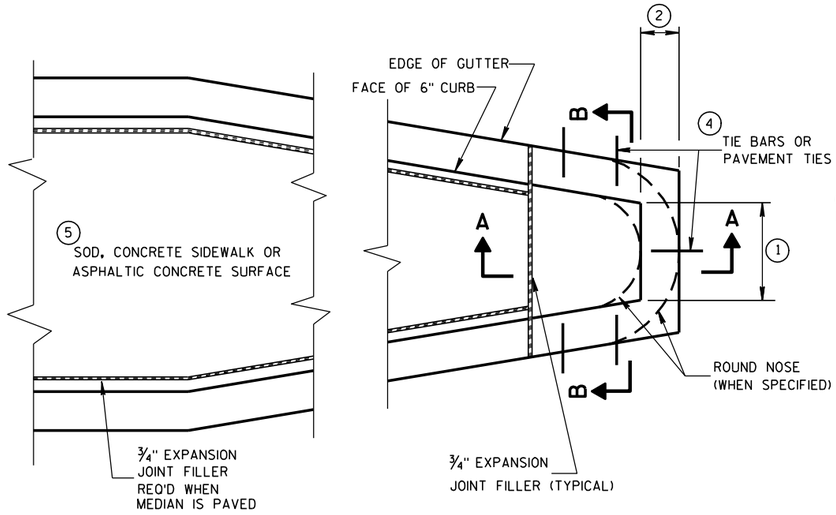
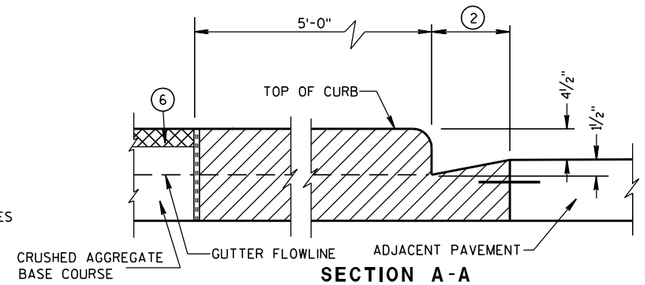
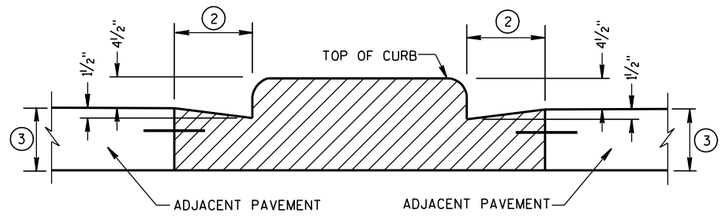




SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

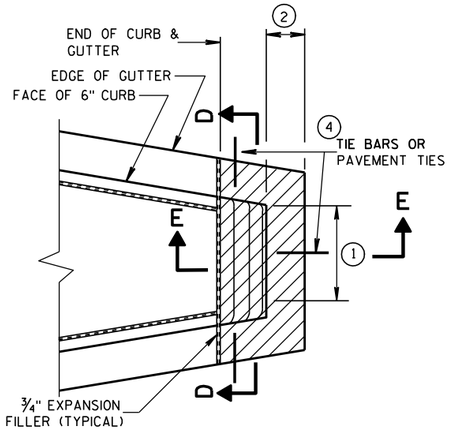
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

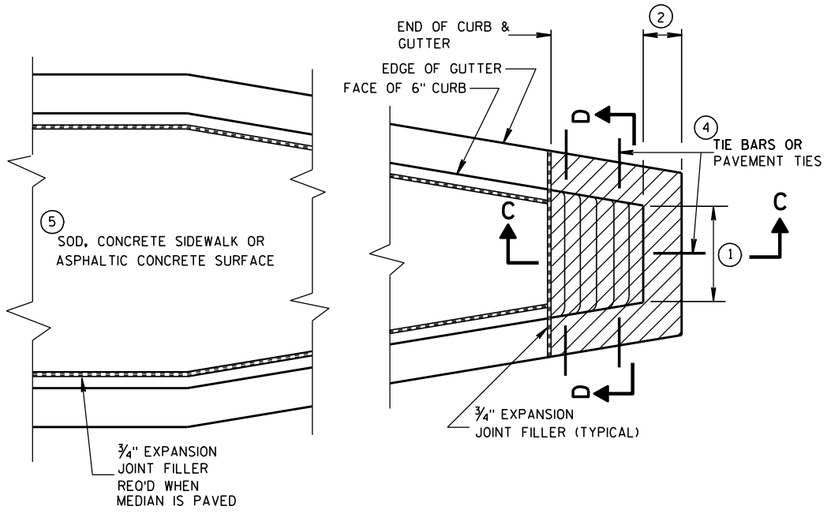
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

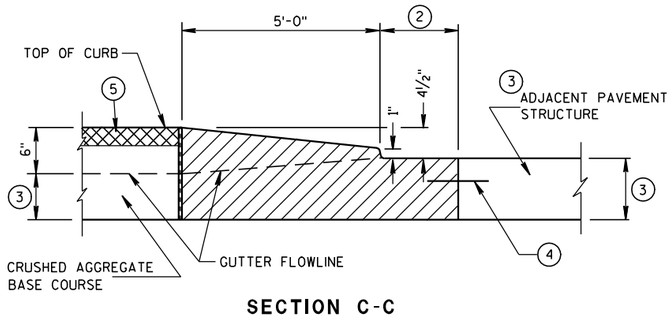
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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

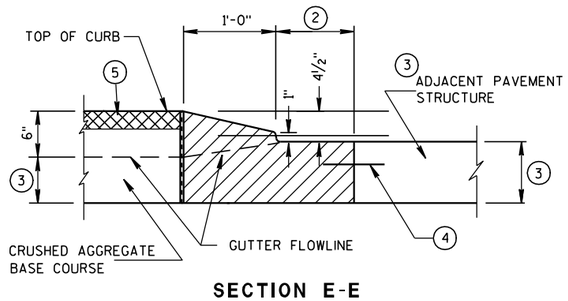
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.







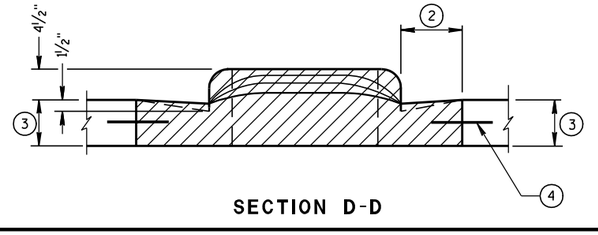
SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
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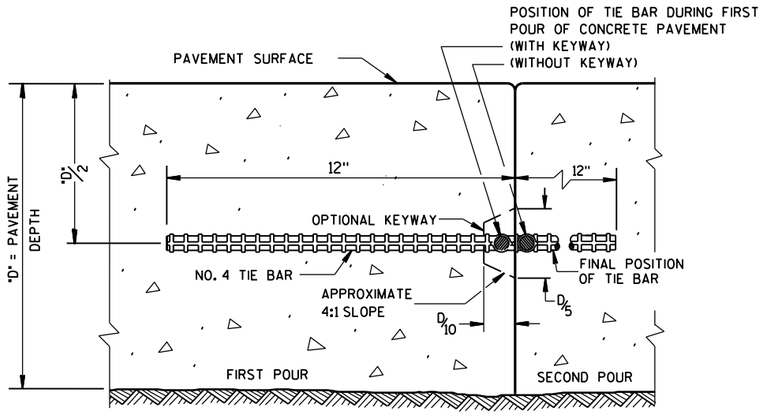
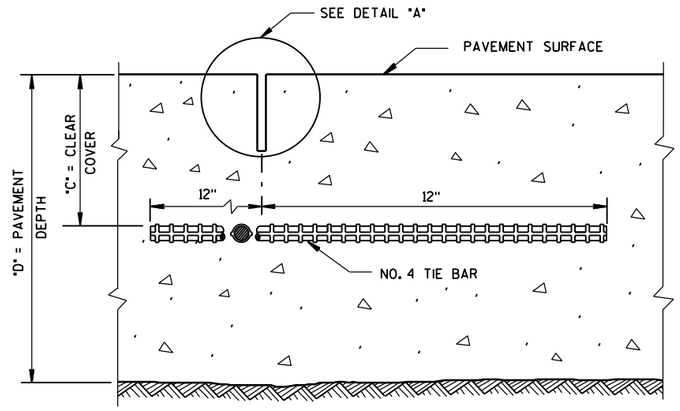


CONSTRUCTION JOINT



SAWED JOINT

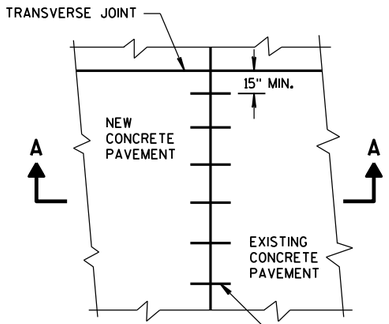
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

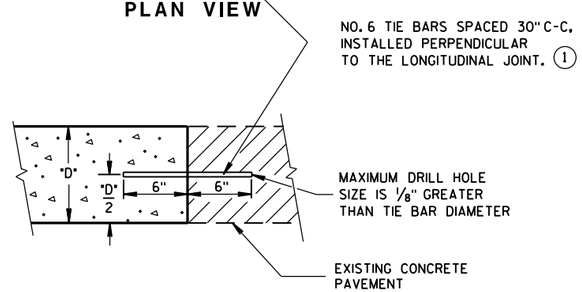
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

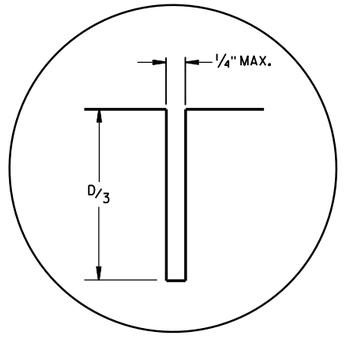


PLAN VIEW



SECTION A-A

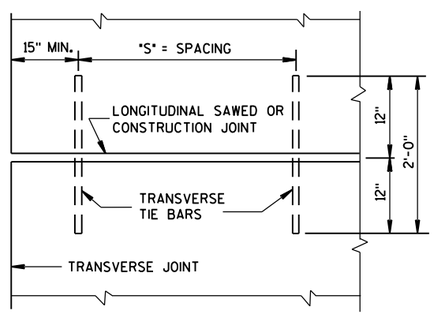
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ...NEER

FHWA

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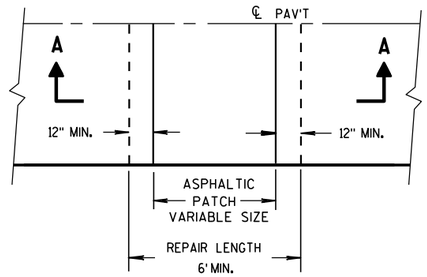
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

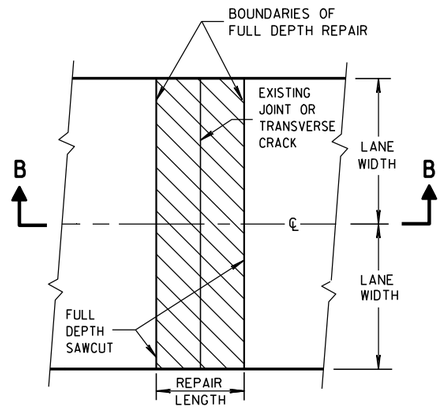
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

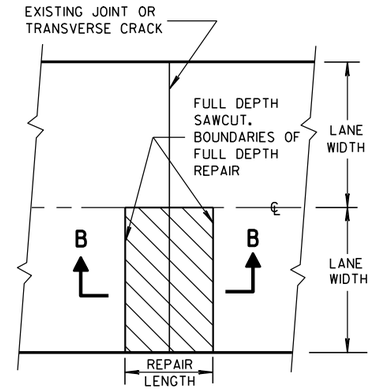
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



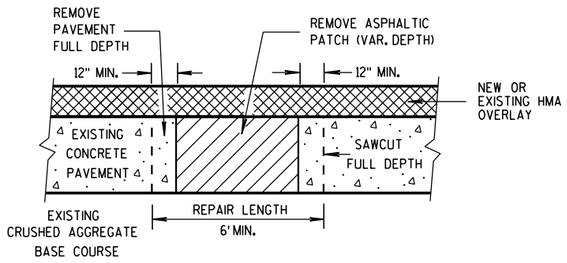
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

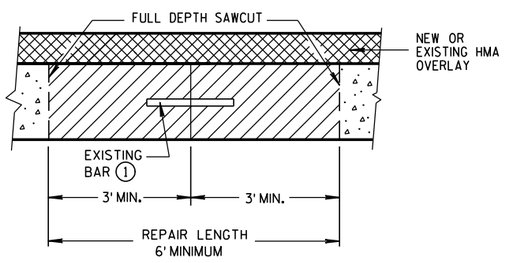
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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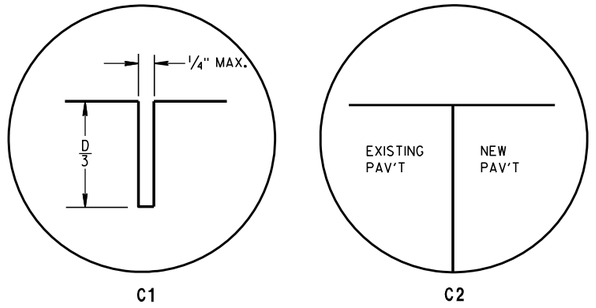
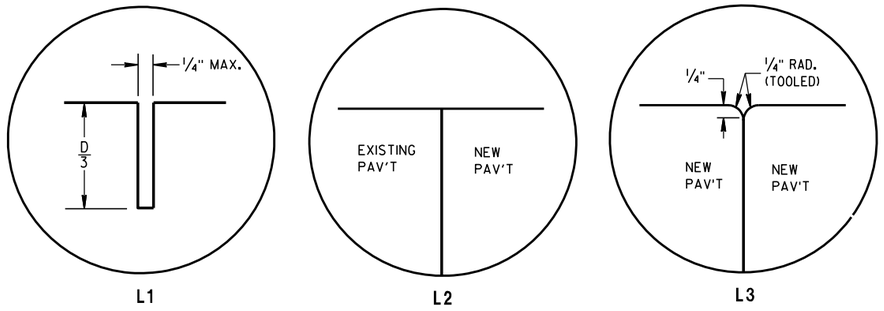
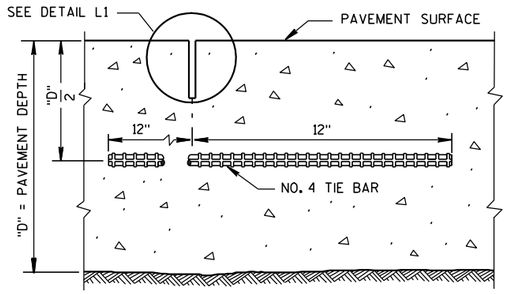


TRANSVERSE JOINTS

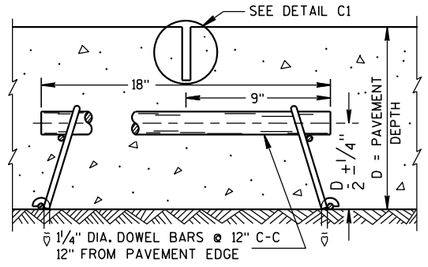


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

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

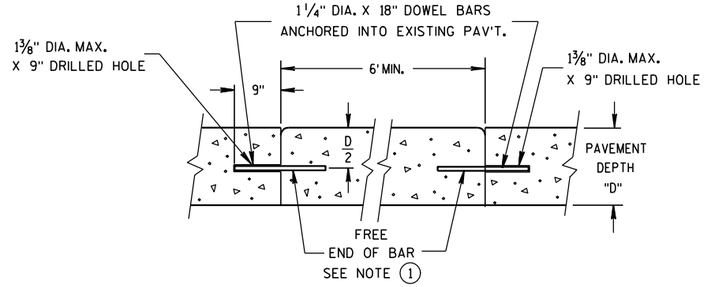
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

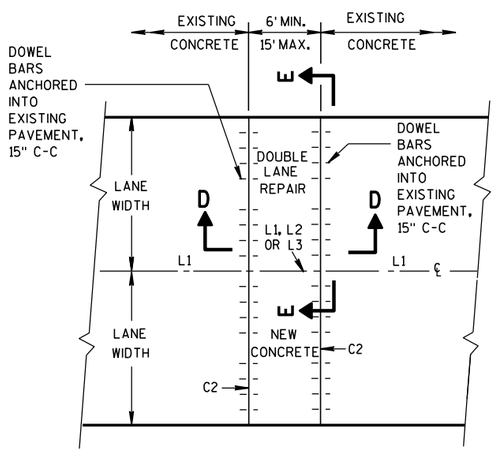
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

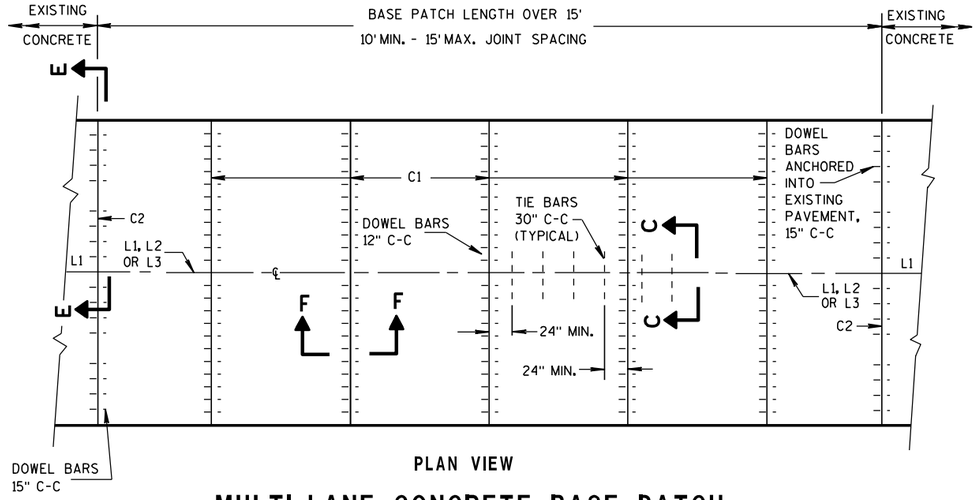


SECTION D-D



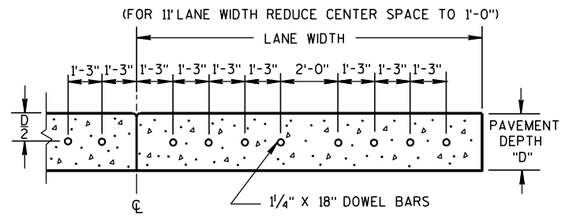
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

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



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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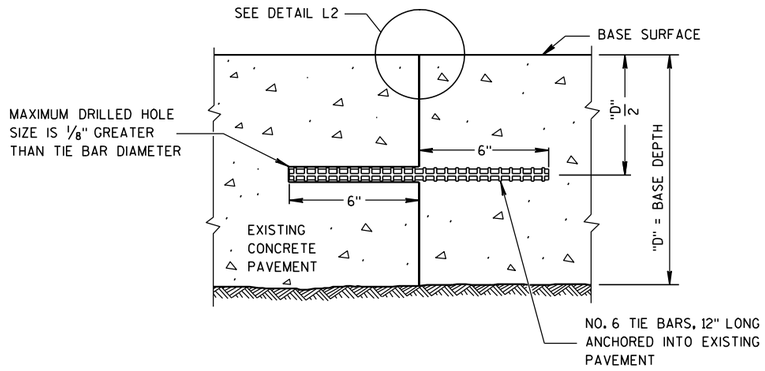


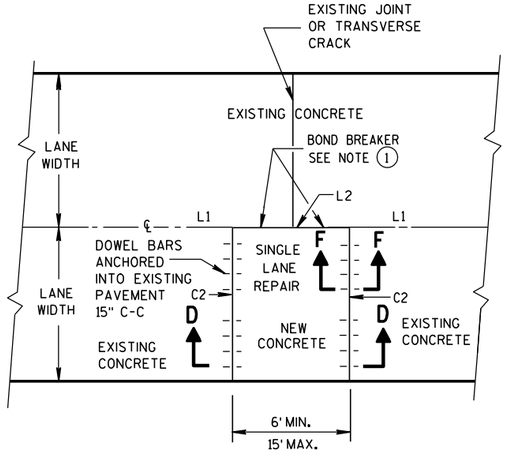
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

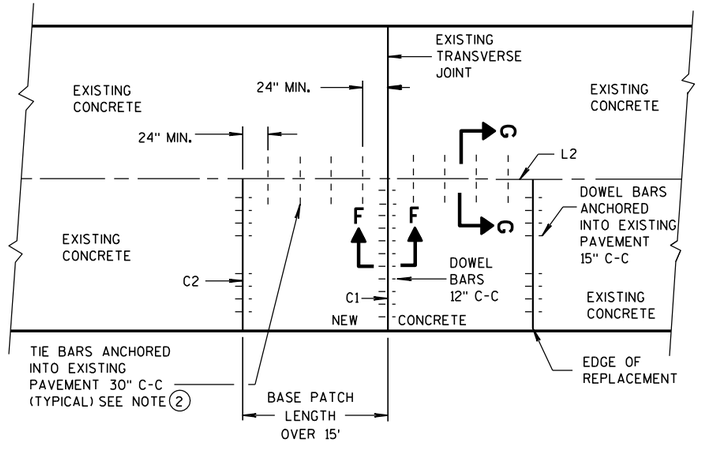
1. USE AN ENGINEER-APPROVED BOND BREAKER FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

2. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-11-2009 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE NEER

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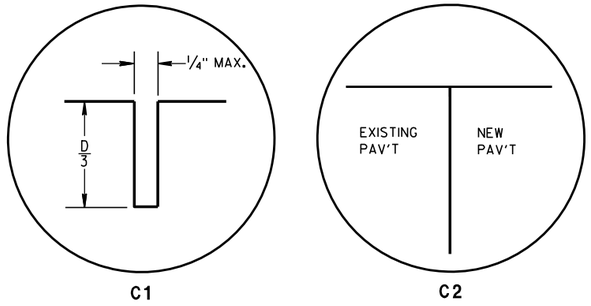
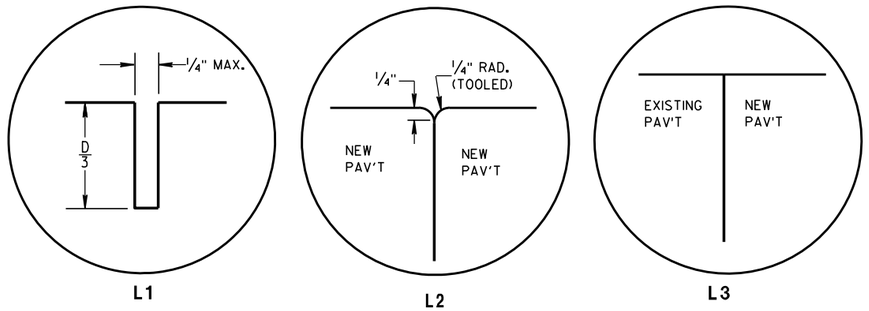
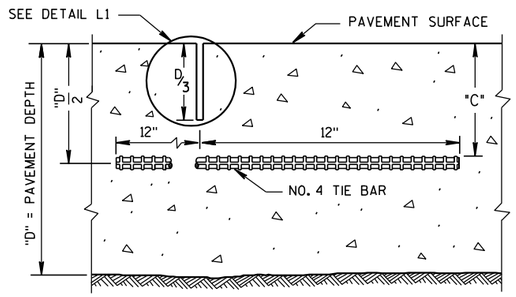


TRANSVERSE JOINTS

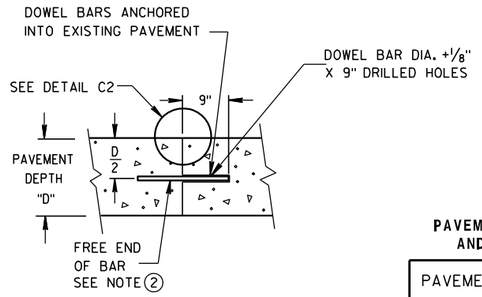


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

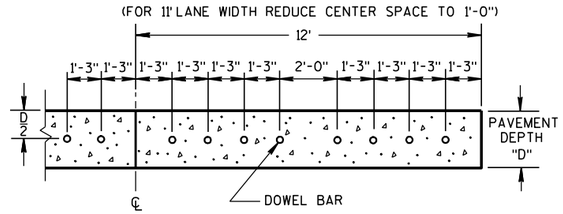
GENERAL NOTES

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

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE 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.



SECTION E-E

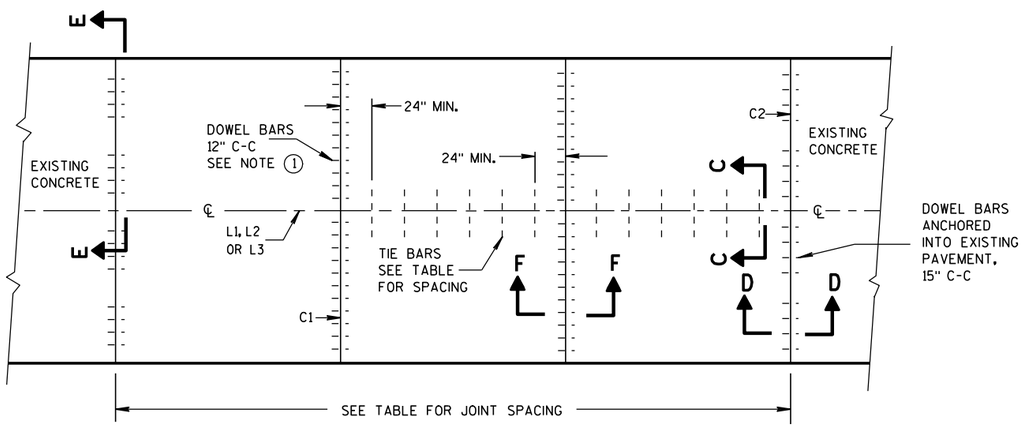
SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH "D"	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 6, 6 ½"	NONE	12'
7, 7 ½"	1"	14'
8, 8 ½"	1 ¼"	15'
9, 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

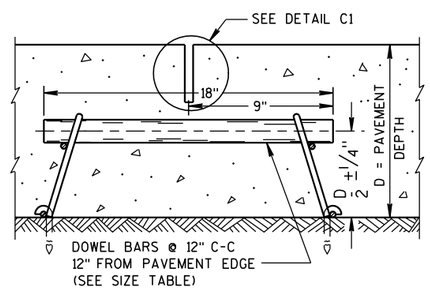
TIE BAR LOCATION TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING C-C	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 ½"	3"±½"	48"	42"
7, 7 ½"	3 ¼"±1"	45"	36"
8, 8 ½"	3 ¾"±1"	39"	30"
9, 9 ½"	4 ¼"±1"	33"	27"
10, 10 ½"	4 ¾"±1"	30"	24"
11, 11 ½"	5 ¼"±1"	27"	21"
12"	5 ¾"±1"	24"	21"



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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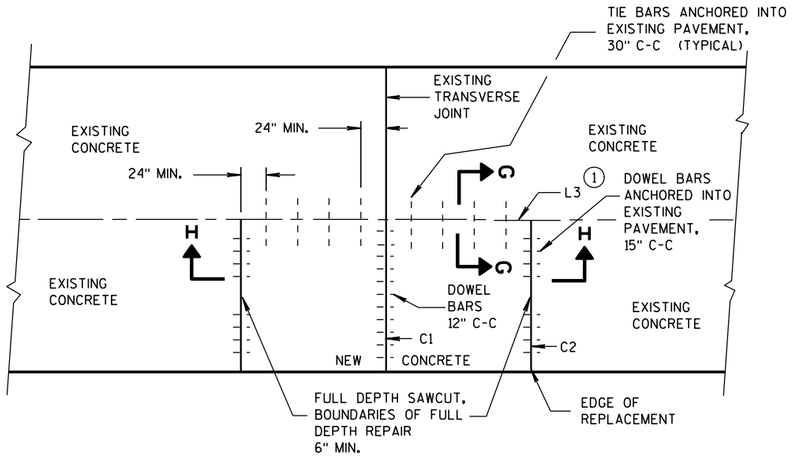
S.D.D. 13 C 15-5a

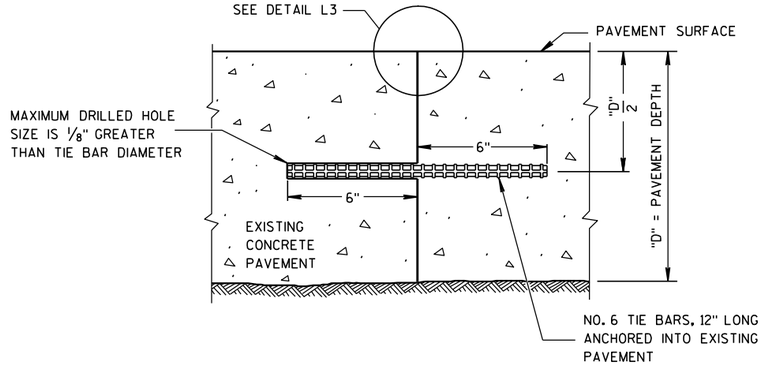
GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.



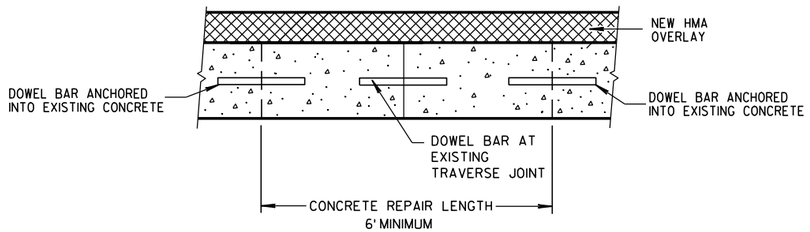
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-11-2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & D 100 INEER
FHWA

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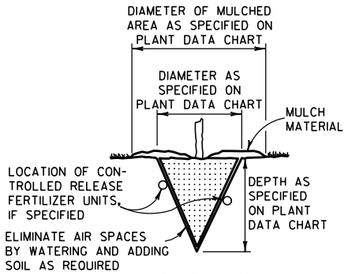
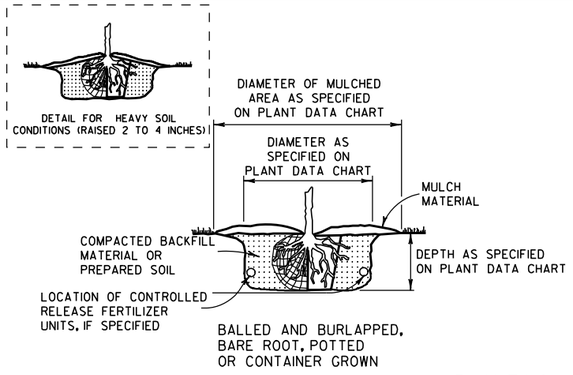
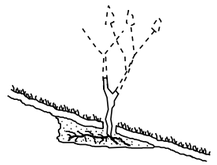
S.D.D. 13 C 15-5b



MACHINE MOVED

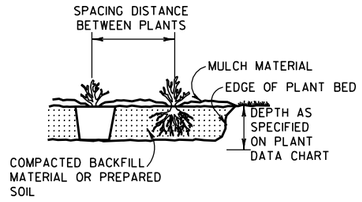


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



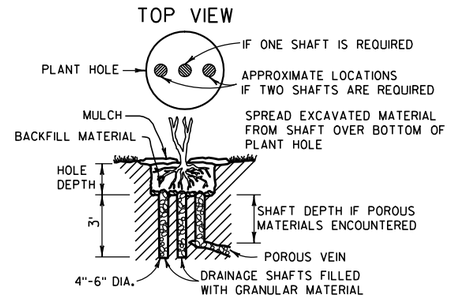
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

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



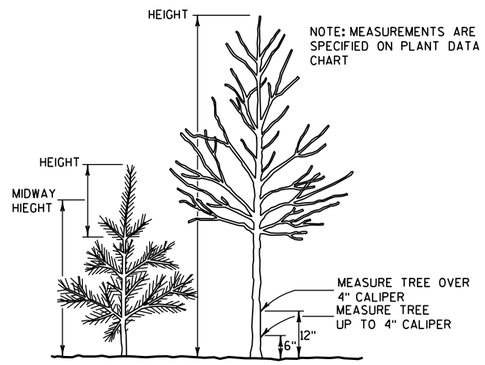
PREPARED BED (BARE ROOT AND POTTED)

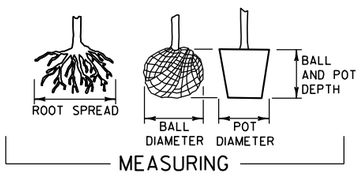
PLANTING



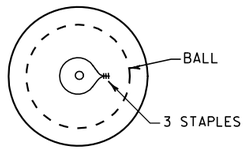
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

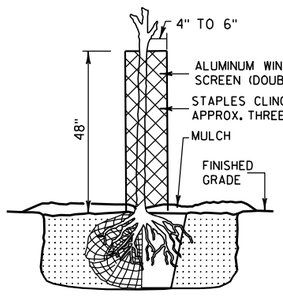




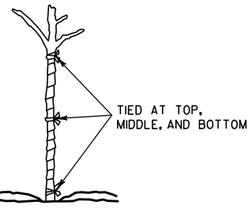
MEASURING



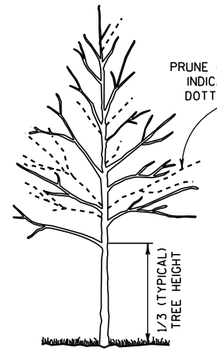
TOP VIEW



RODENT PROTECTION



WRAPPING

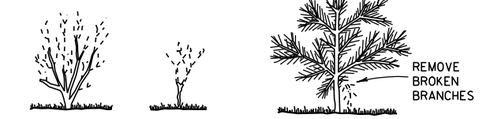


TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

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

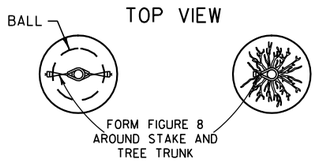


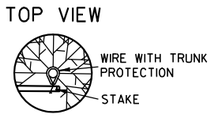
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

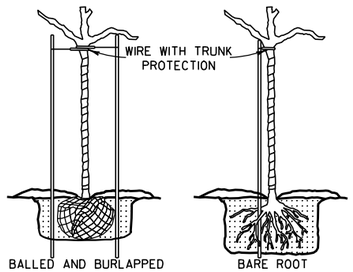
SUMAC

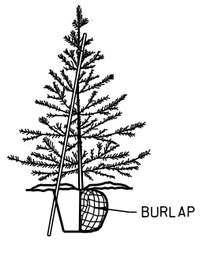
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



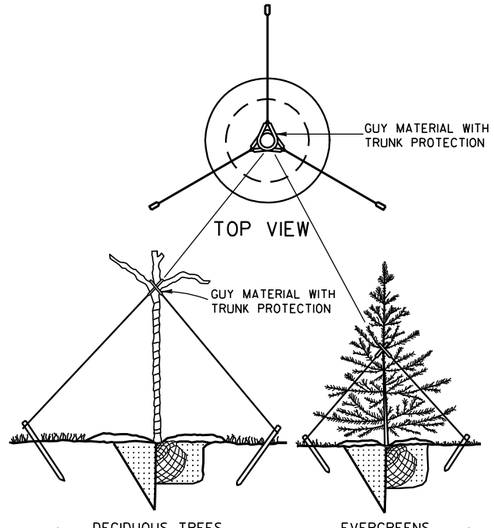






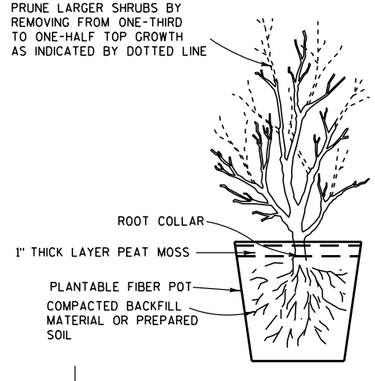
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE 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.

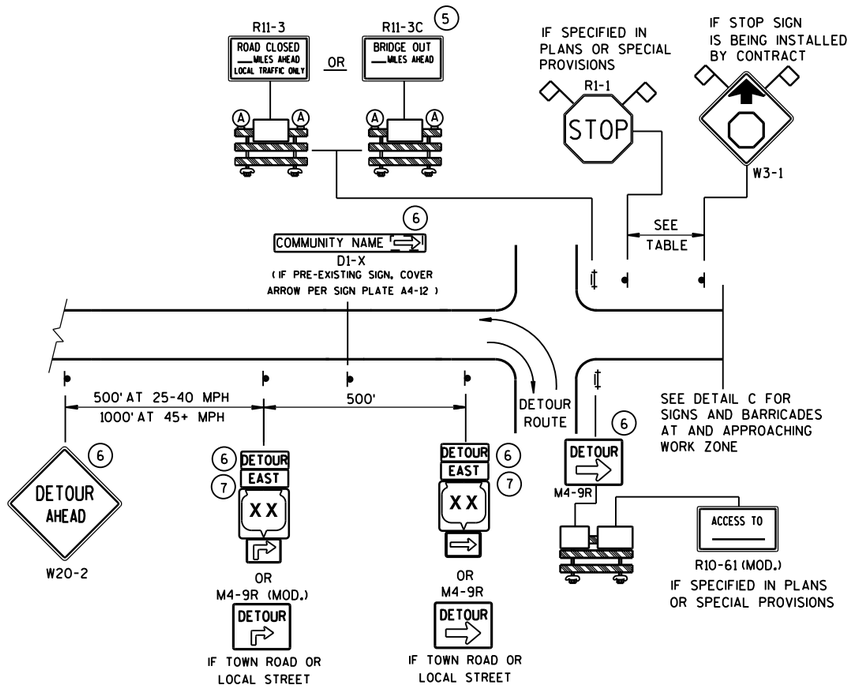
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94
DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

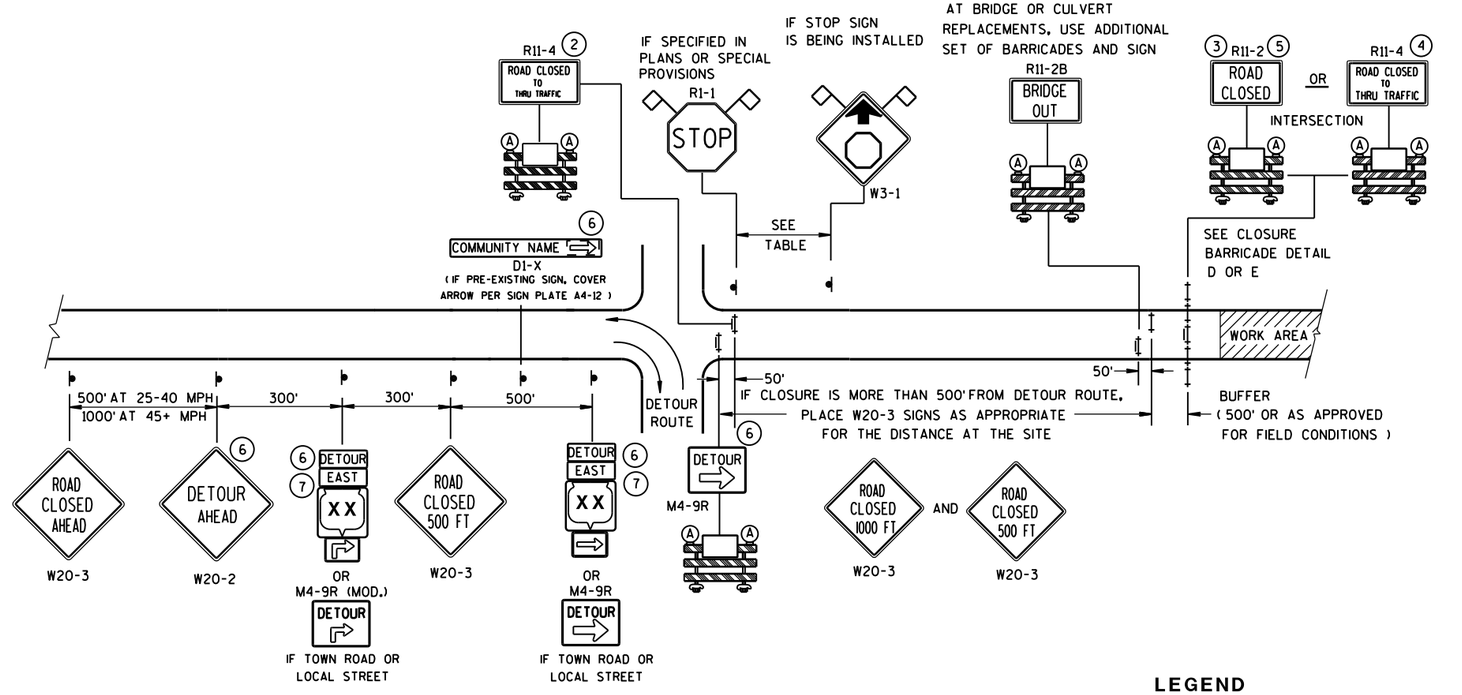
S.D.D. 14 A 2-1

6
S.D.D. 14 A 2-1



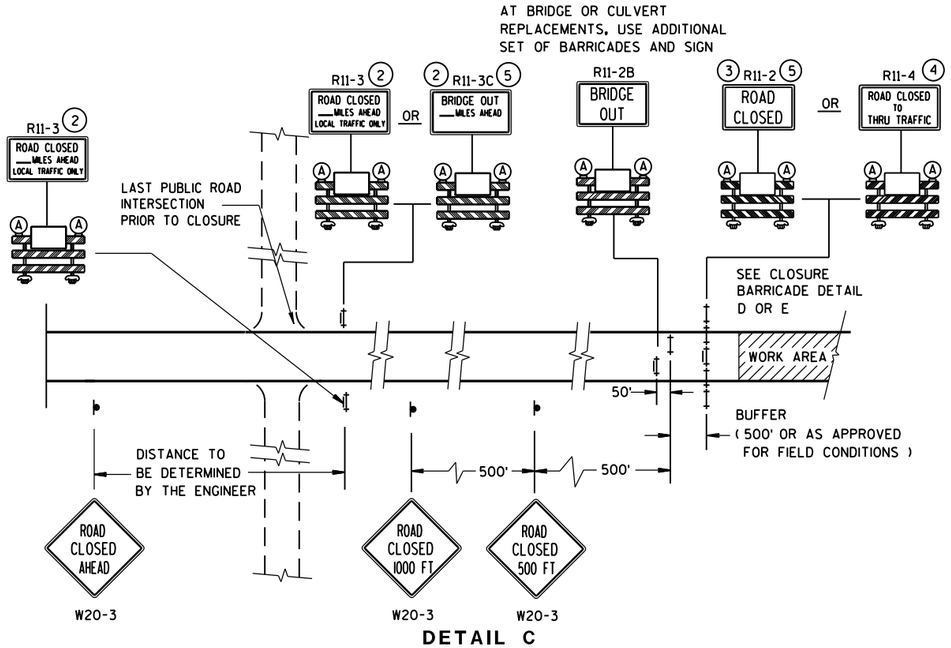
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

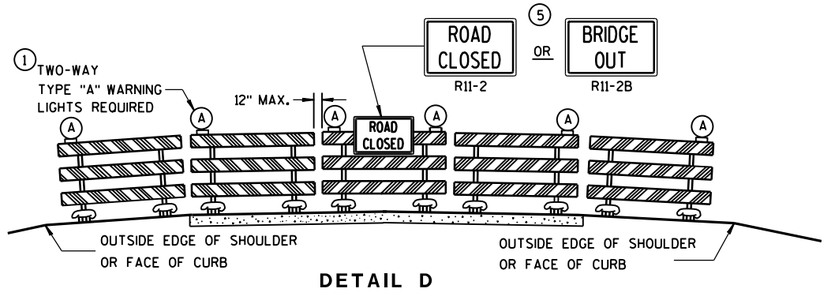
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

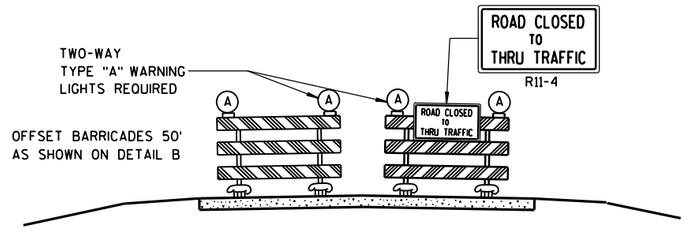
S.D.D. 15 C 2-5a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

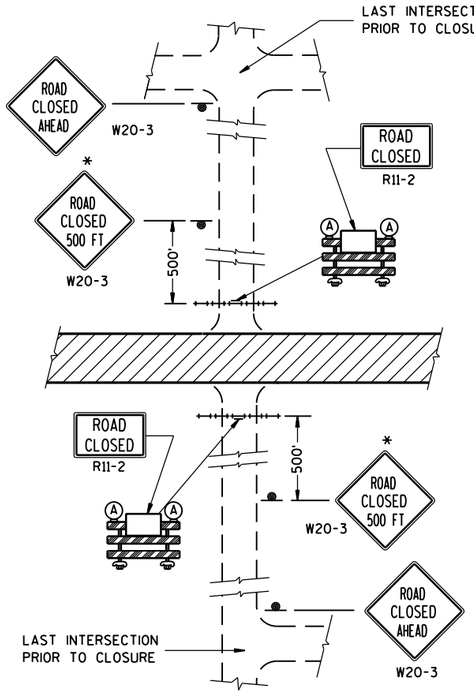
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

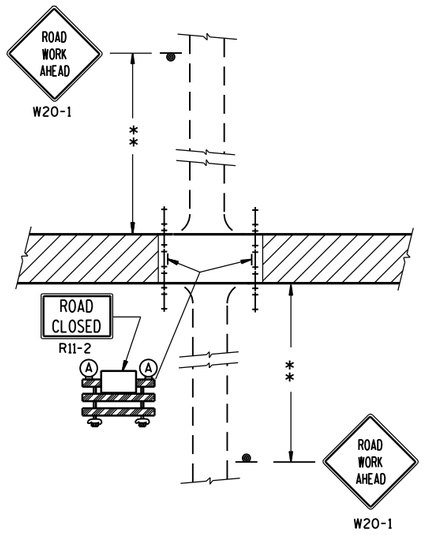
6

S.D.D. 15 C 2-5b



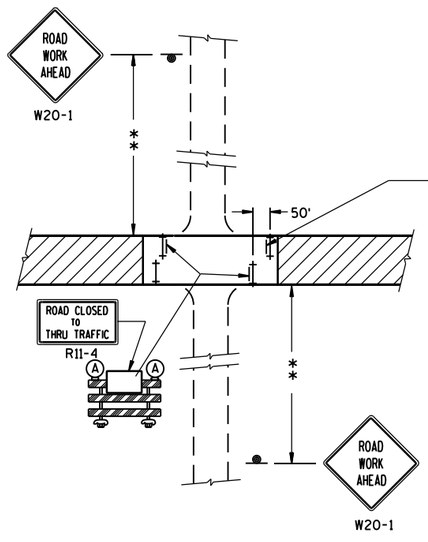
DETAIL 1

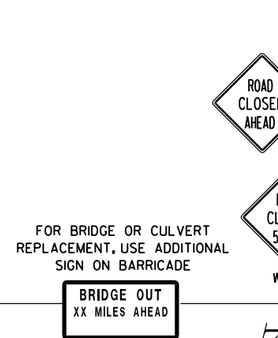
(NO ACCESS TO PROJECT)



DETAIL 2

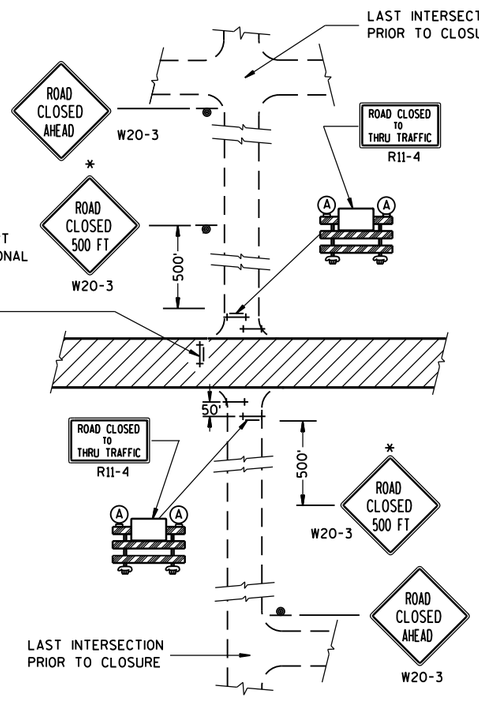
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT 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 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 RE-ESTABLISHED.

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 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 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

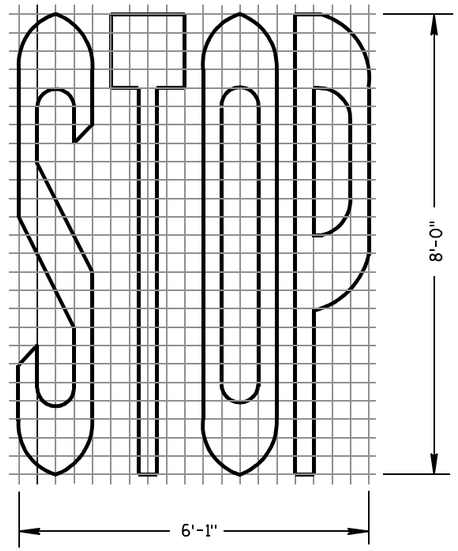
6

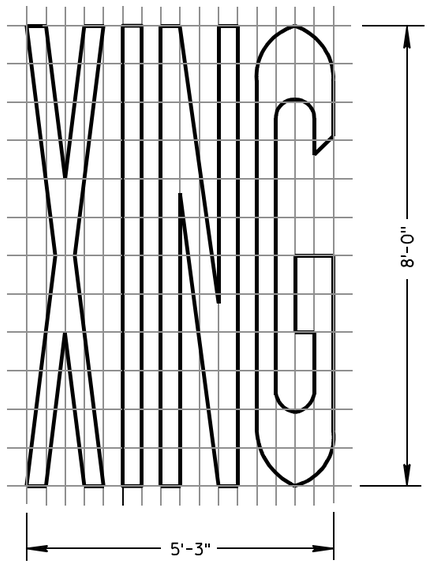
S.D.D. 15 C 3-2

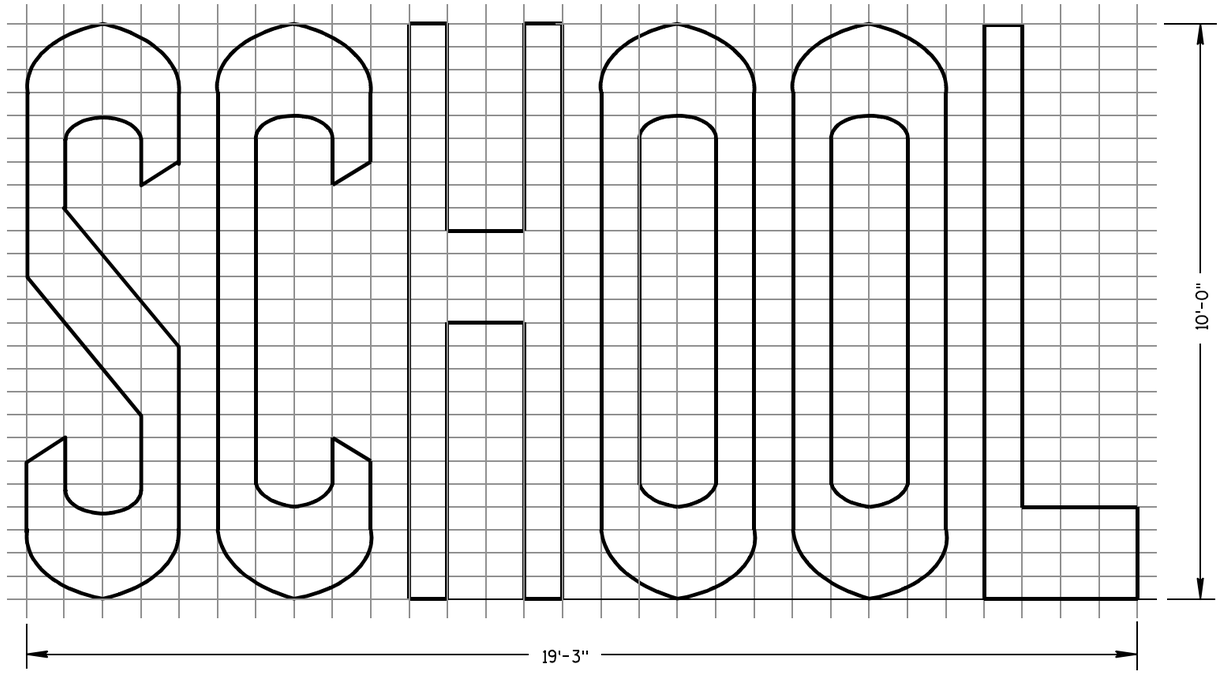
GENERAL NOTES

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.

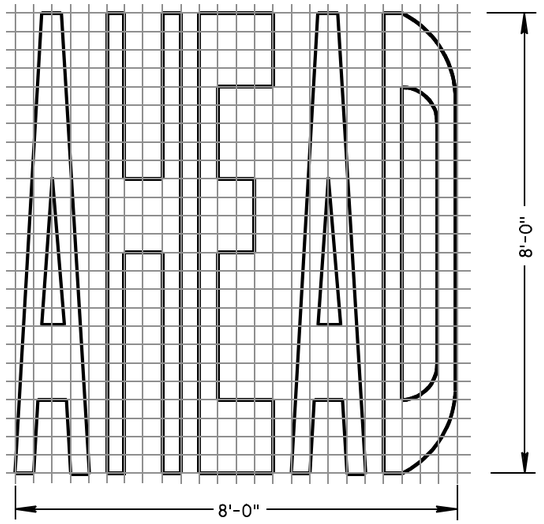
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

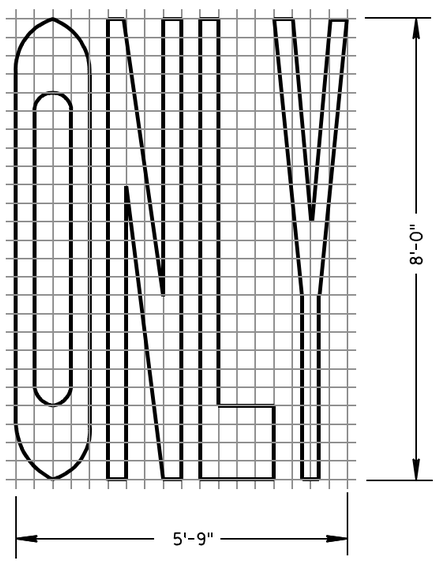


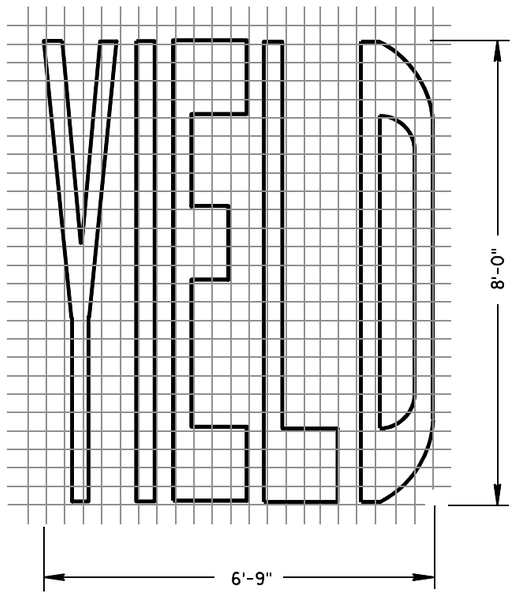


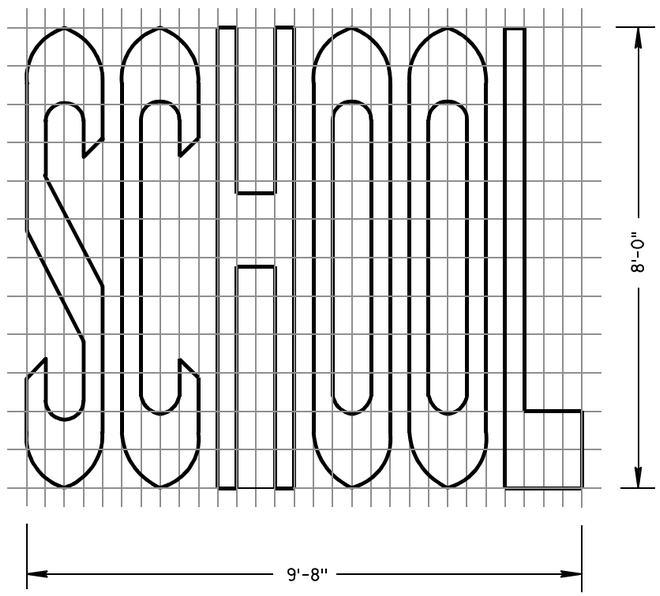


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER

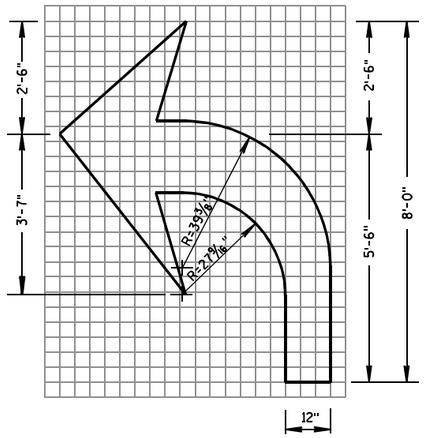
FHWA

6

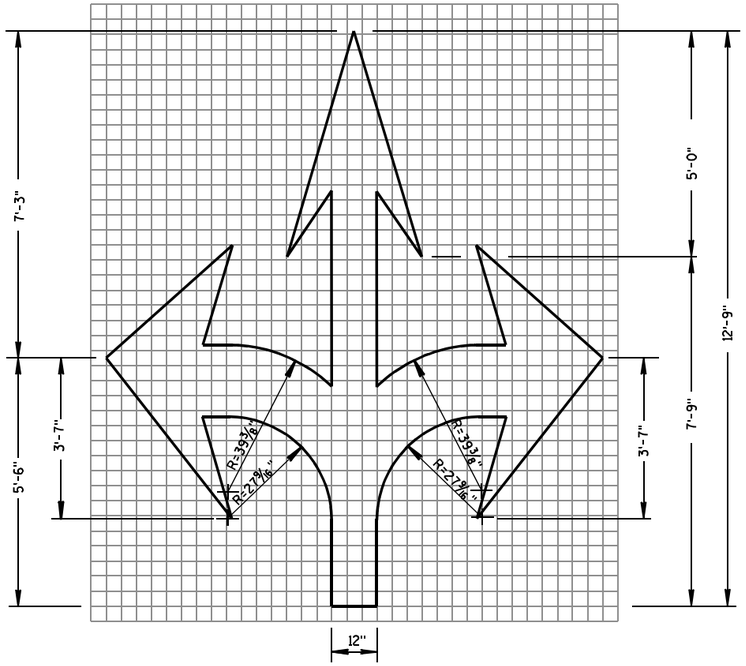
S.D.D. 15 C 7-12b

6

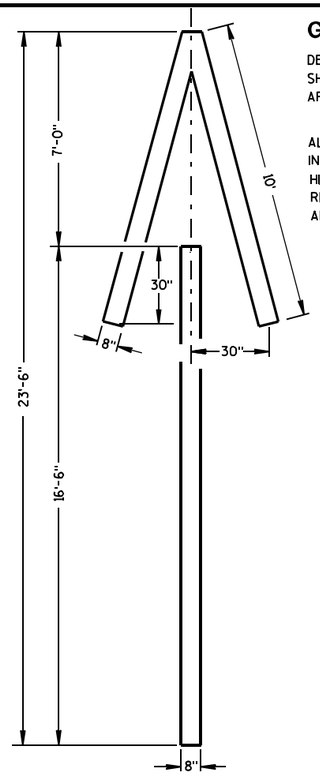
S.D.D. 15 C 7-12b



TYPE 2



TYPE 6

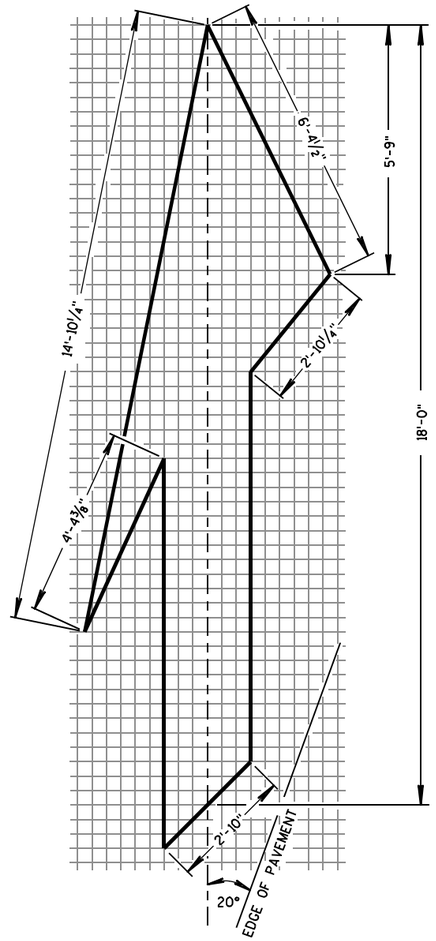


TYPE 4

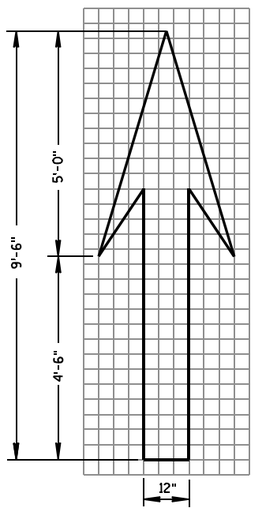
GENERAL NOTES

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

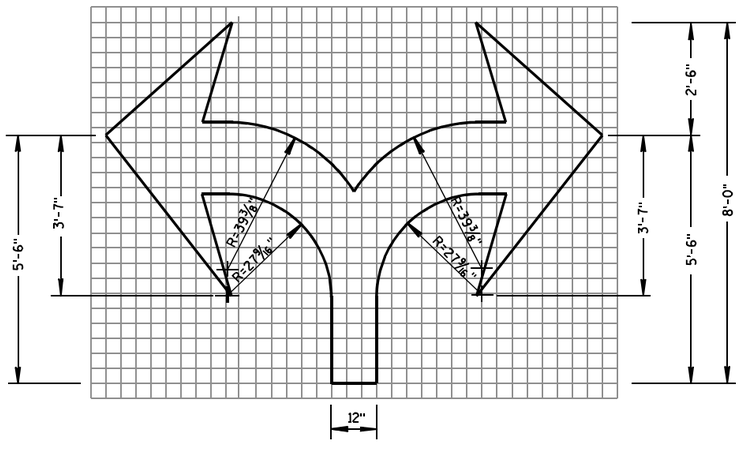
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW



TYPE 1



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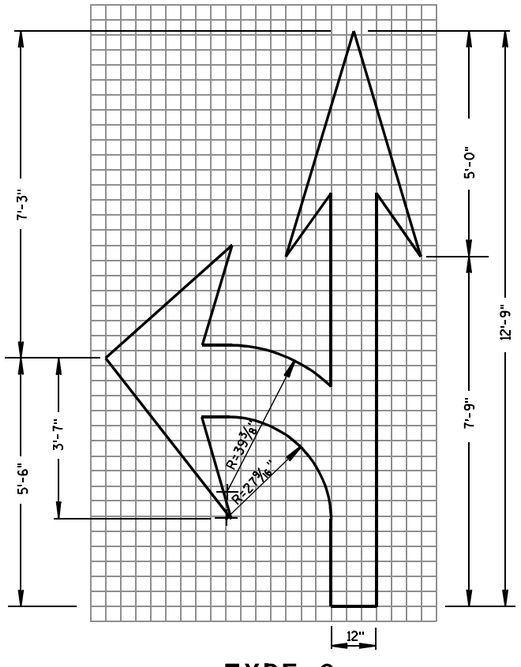


TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

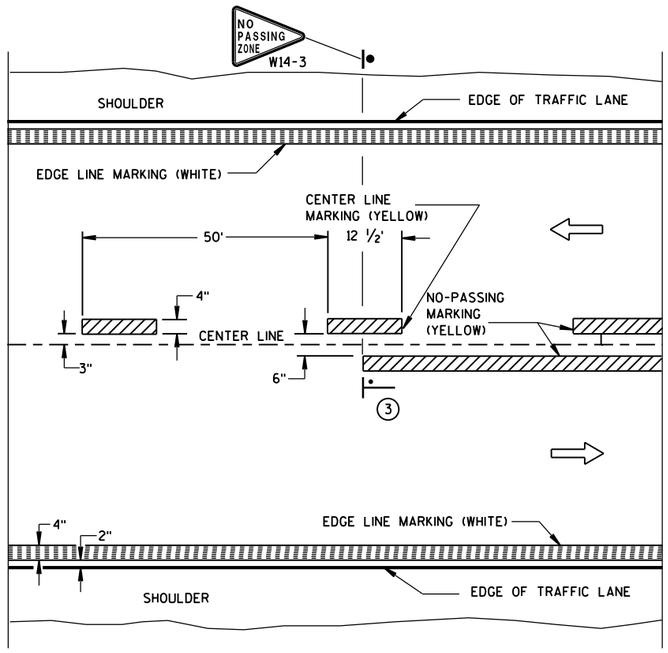
FHWA

6

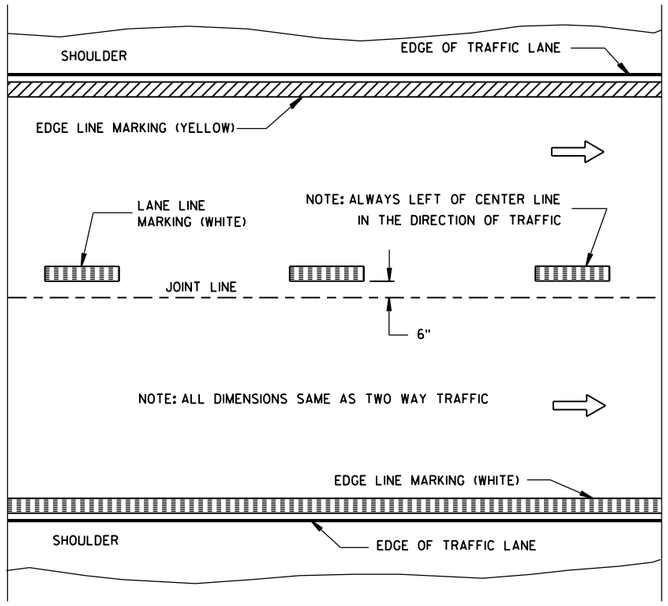
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

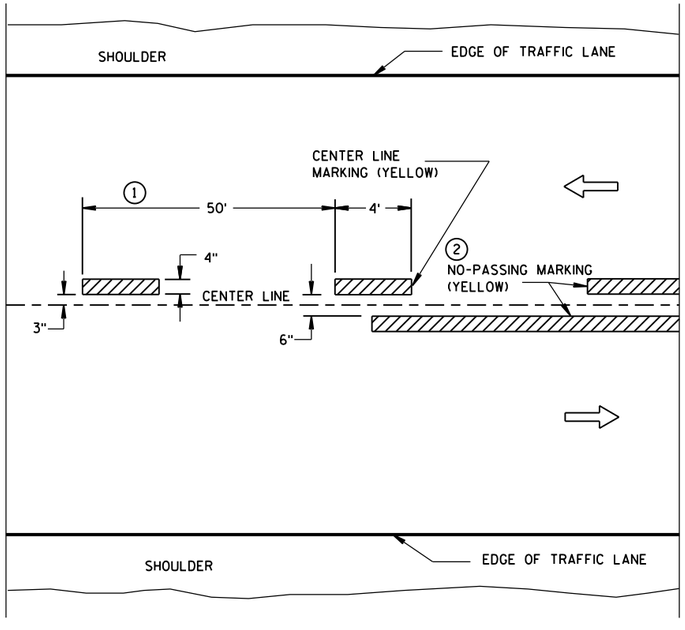


TWO WAY TRAFFIC

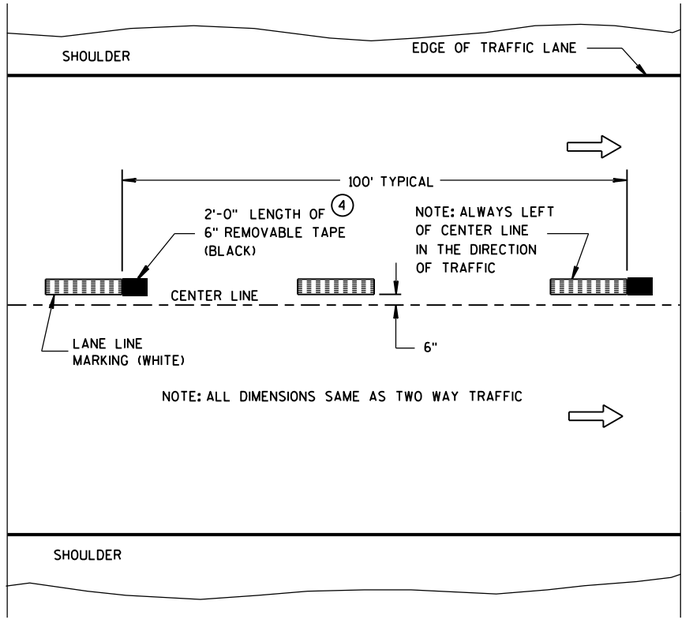


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

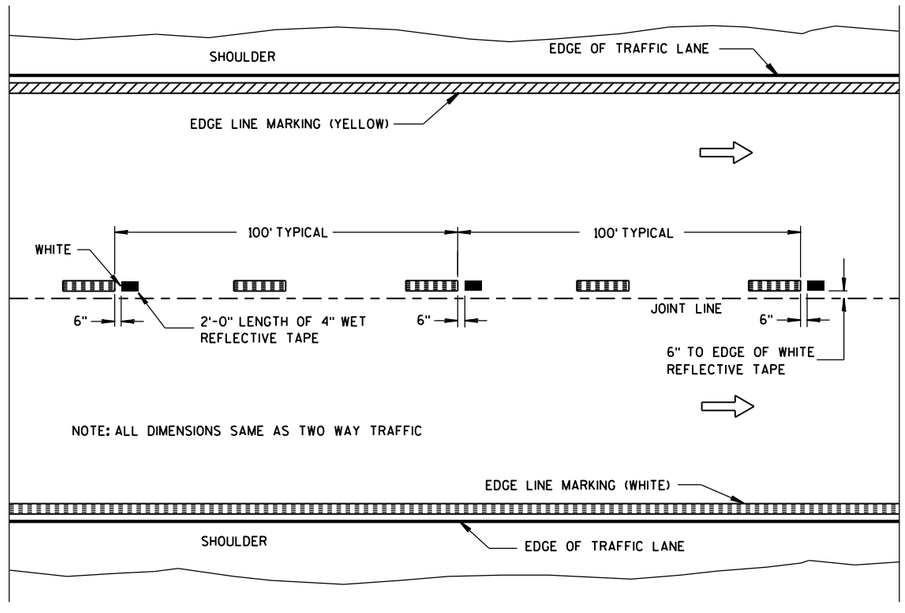
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

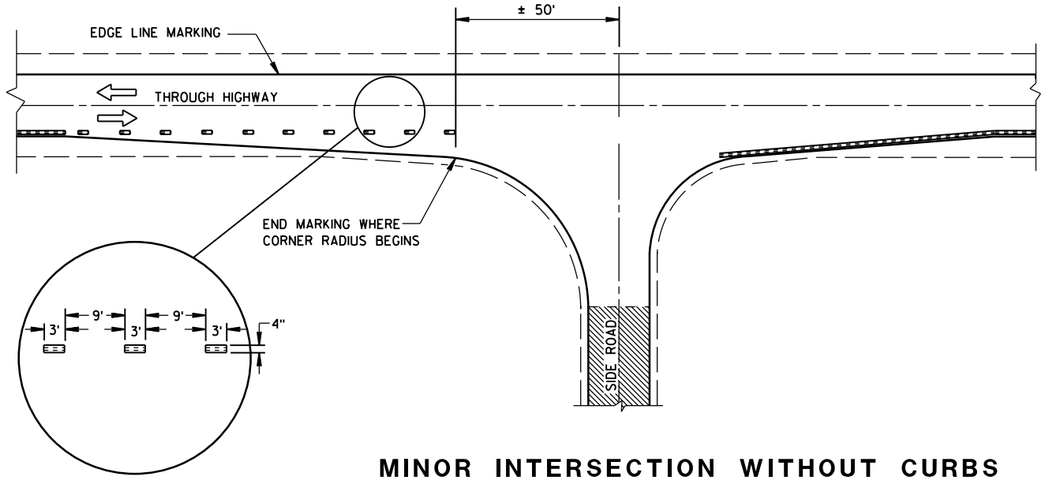
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

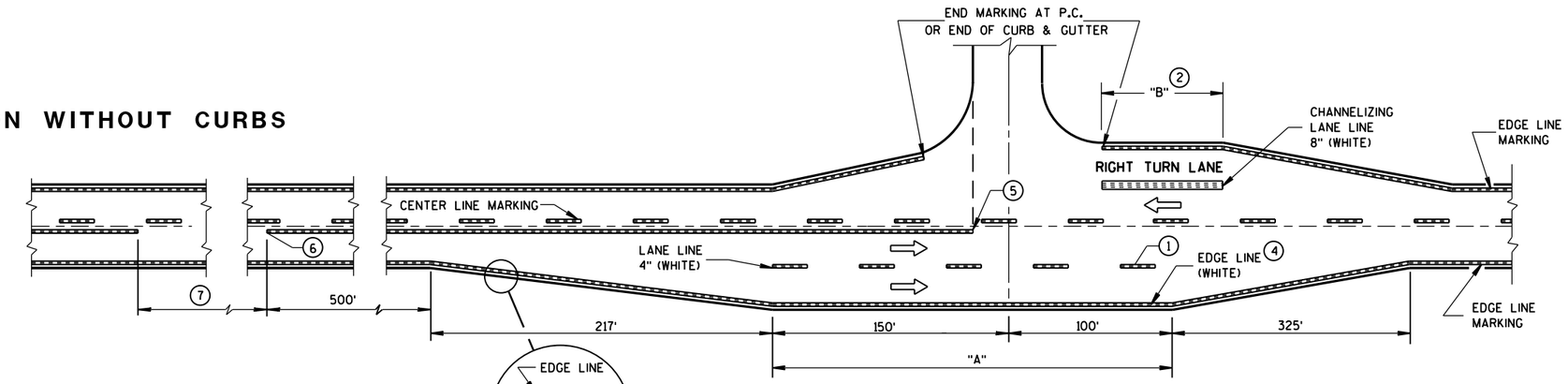
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

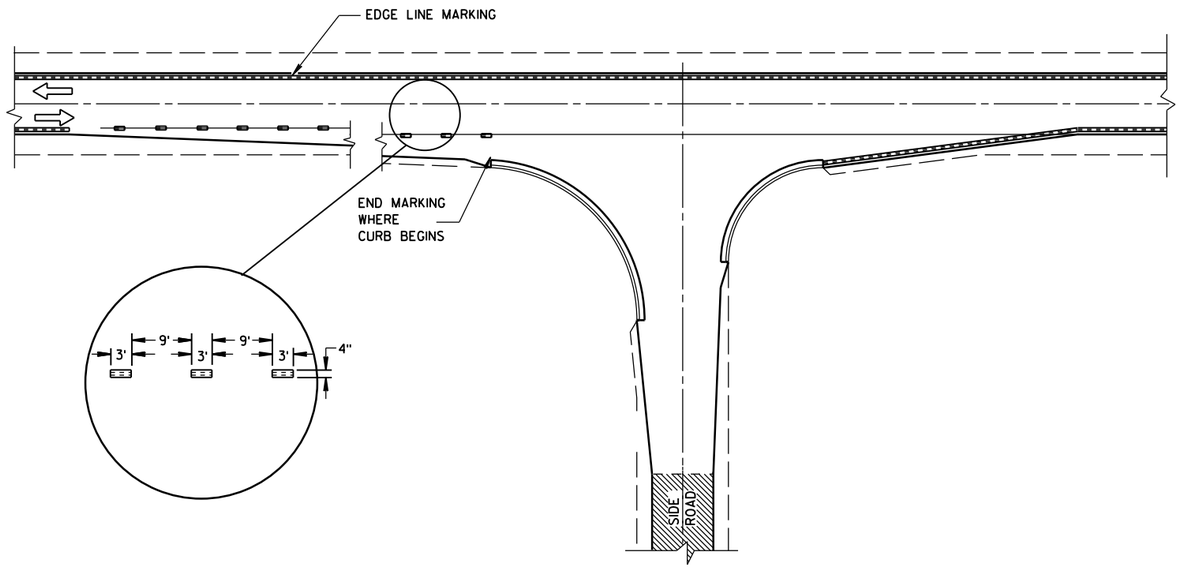
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



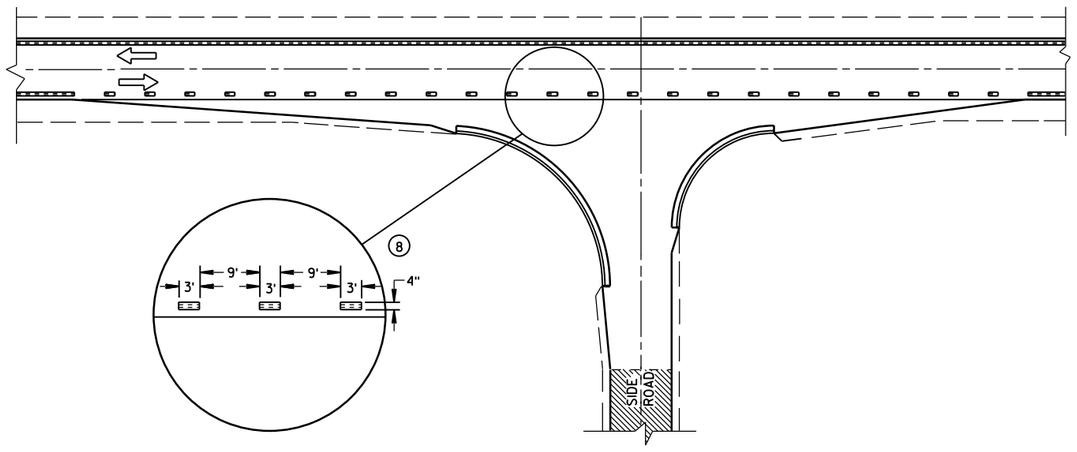
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

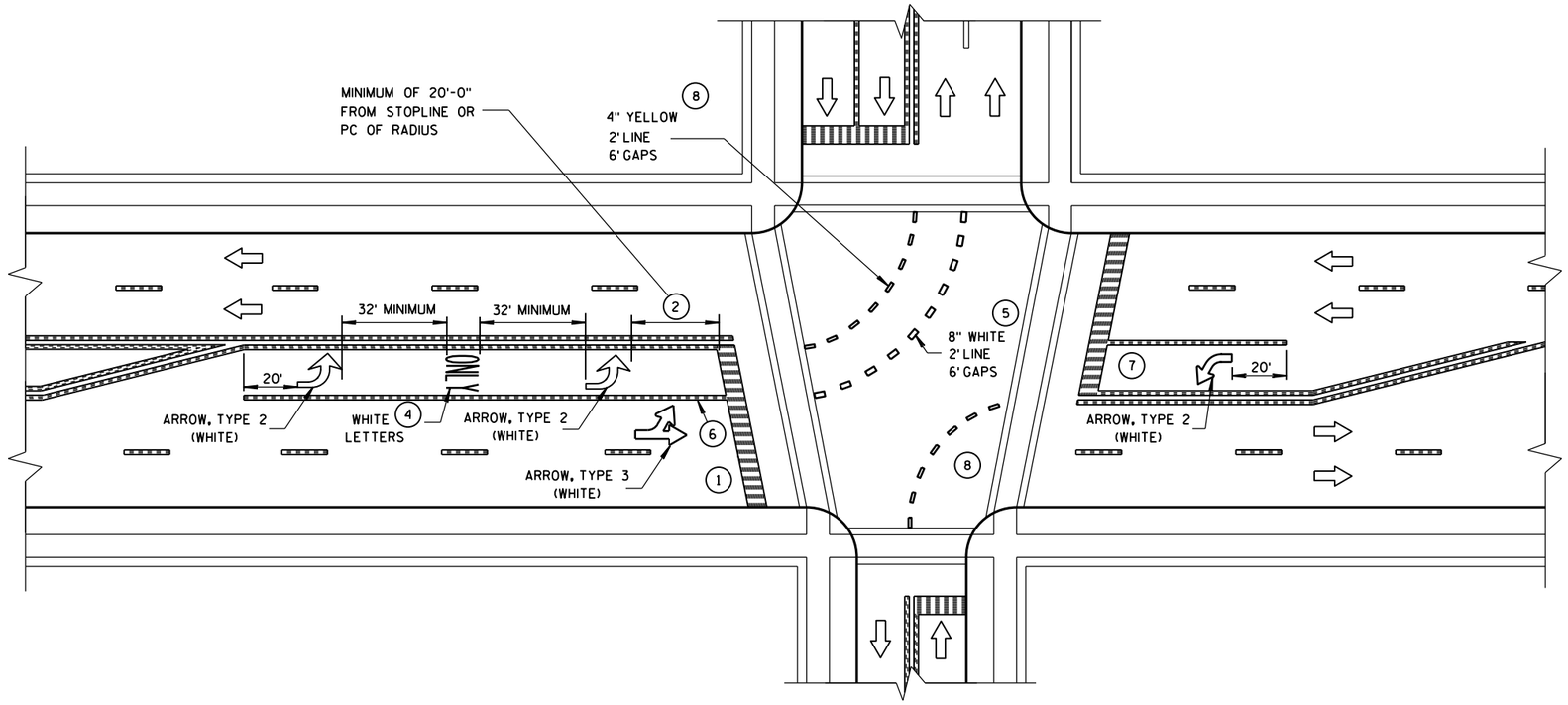
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 108

6

S.D.D. 15 C 8-16b

6

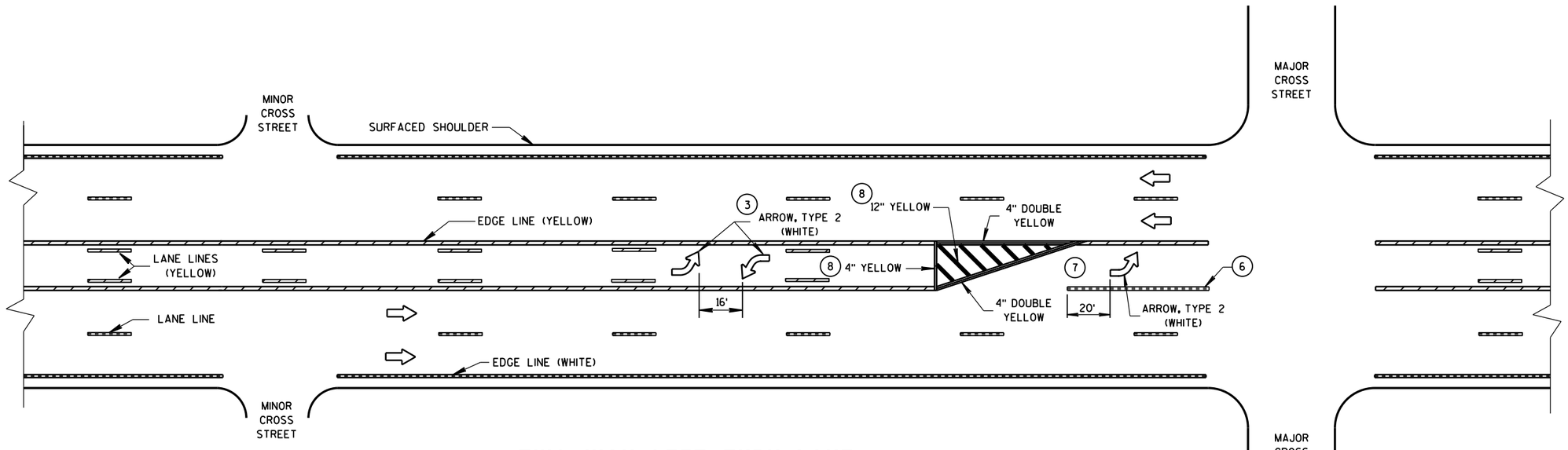
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-16e

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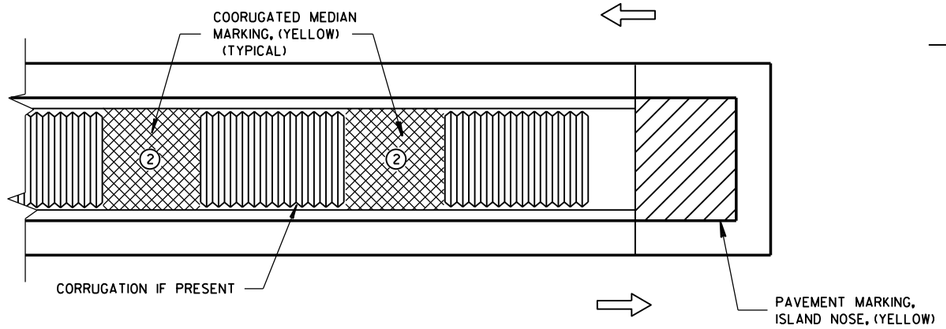
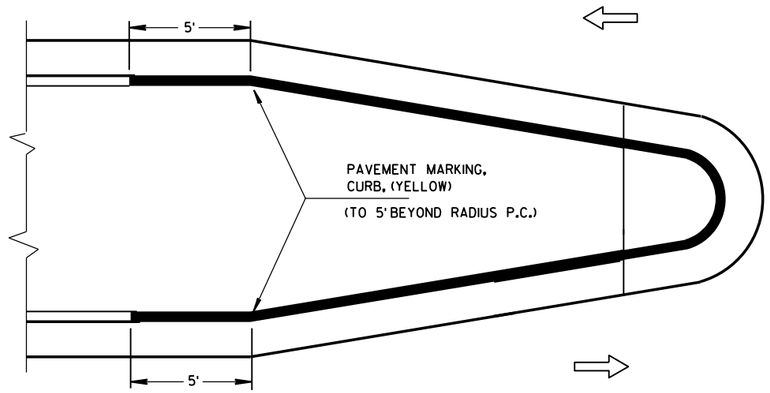
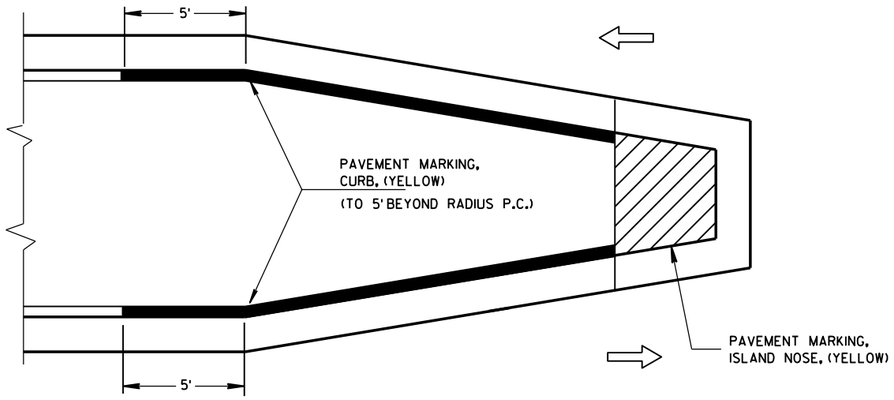
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

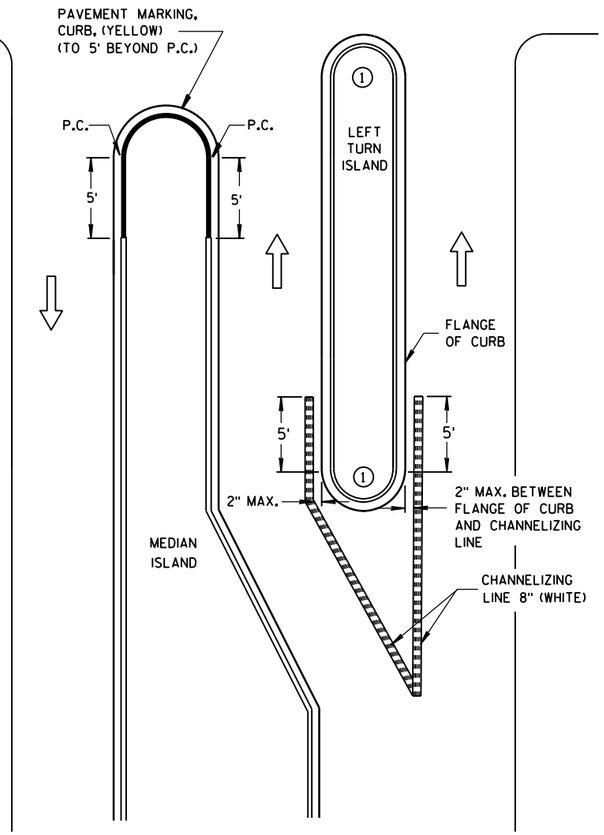


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

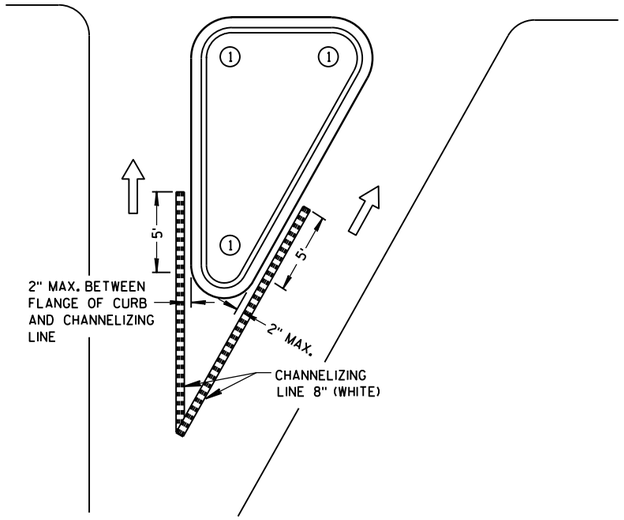


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

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



RIGHT TURN ISLAND

LEGEND

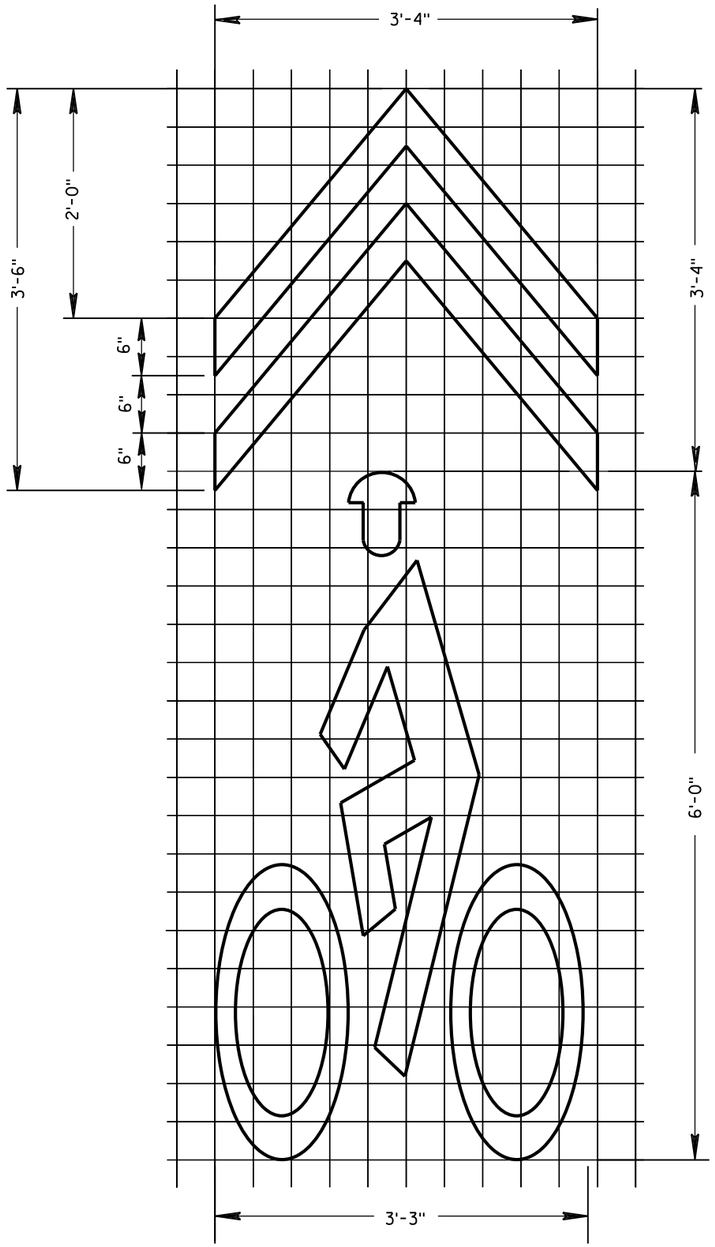
- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 8-16f



BIKE SYMBOL FOR SHARED LANE

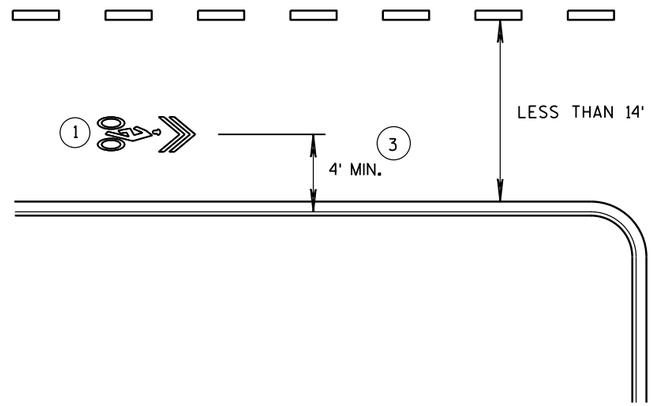
GENERAL NOTES

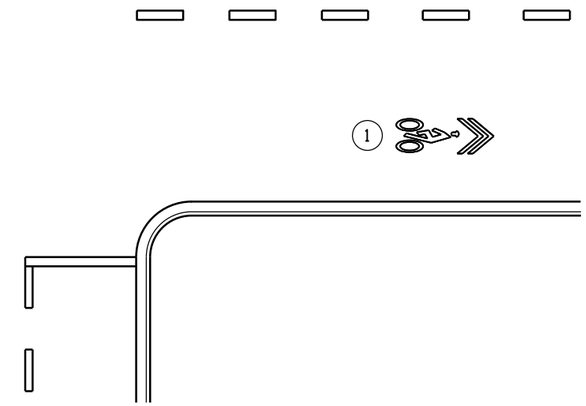
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

(1) SPACED A MAXIMUM OF 250 FEET.

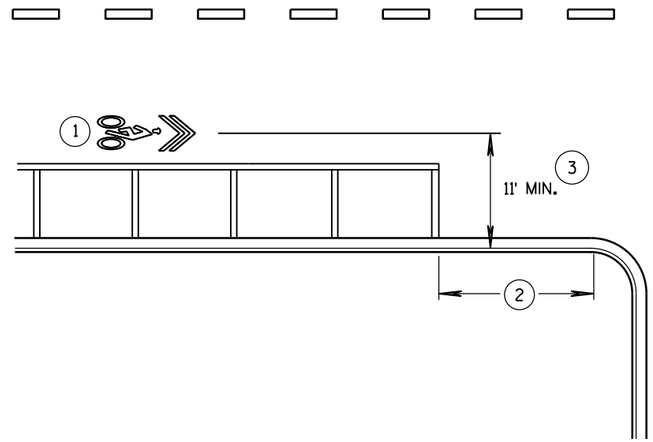
(2) 20 FOOT MINIMUM FROM CURB RADIUS.

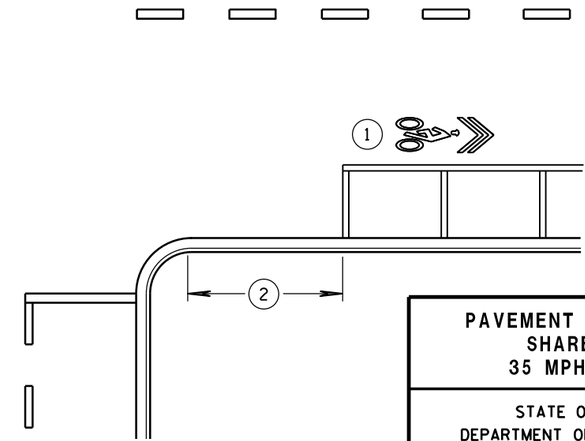
(3) OR TO EDGE OF PAVEMENT WITHOUT CURB.





WITHOUT PARKING





WITH PARKING

PAVEMENT MARKING FOR
SHARED LANE
35 MPH OR LESS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE
/S/ Travis Feltes
STATE TRAFFIC EN
FHWA

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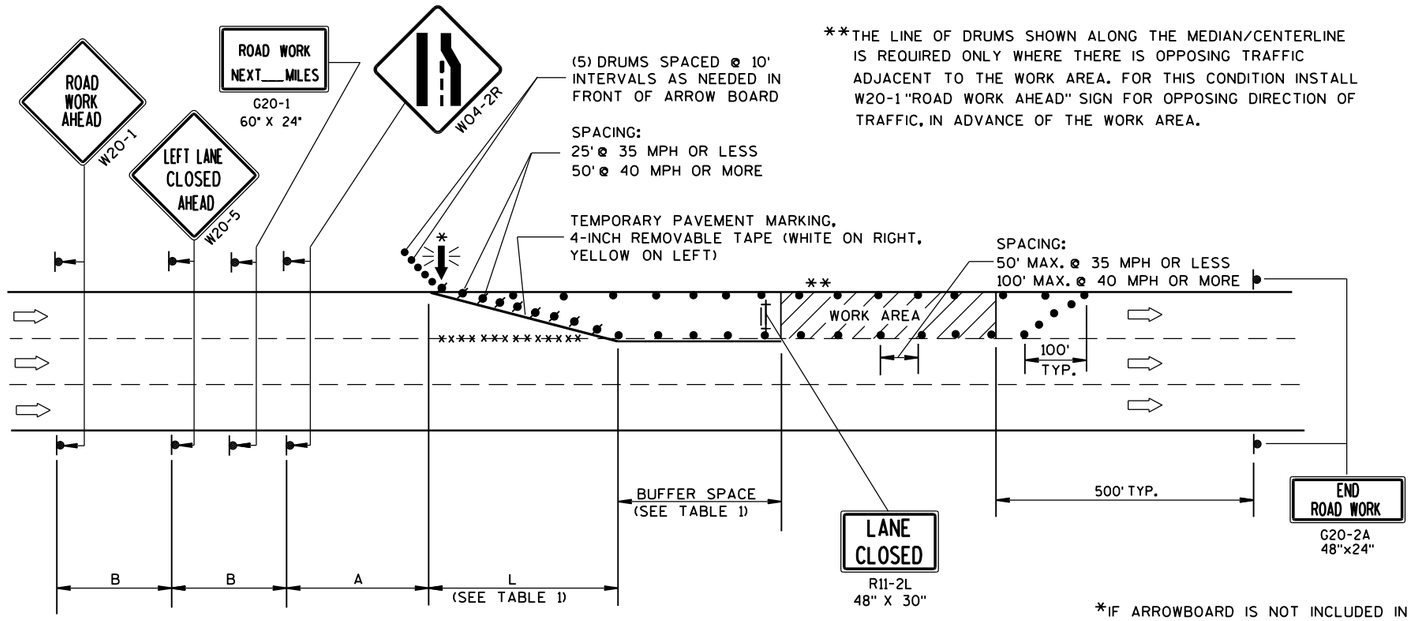
S.D.D. 15 C 29-3f

6

S.D.D. 15 C 29-3f



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

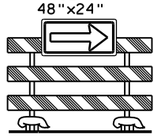


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

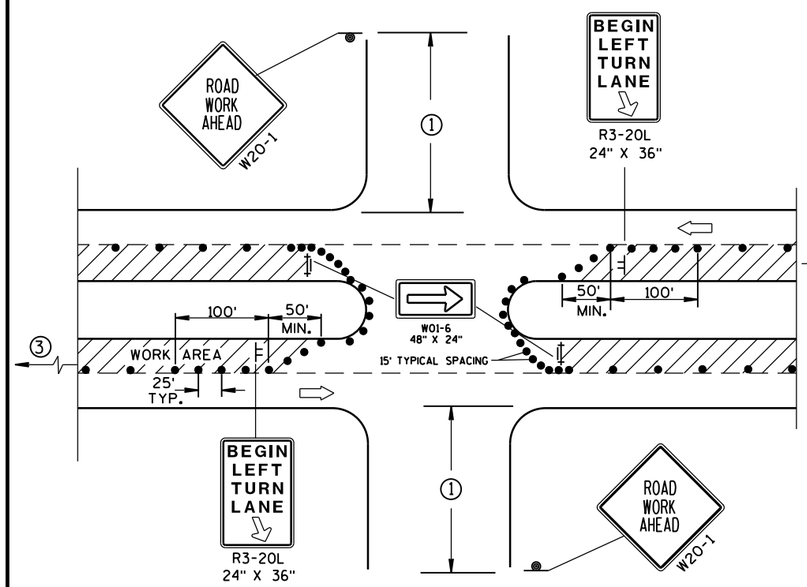
TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

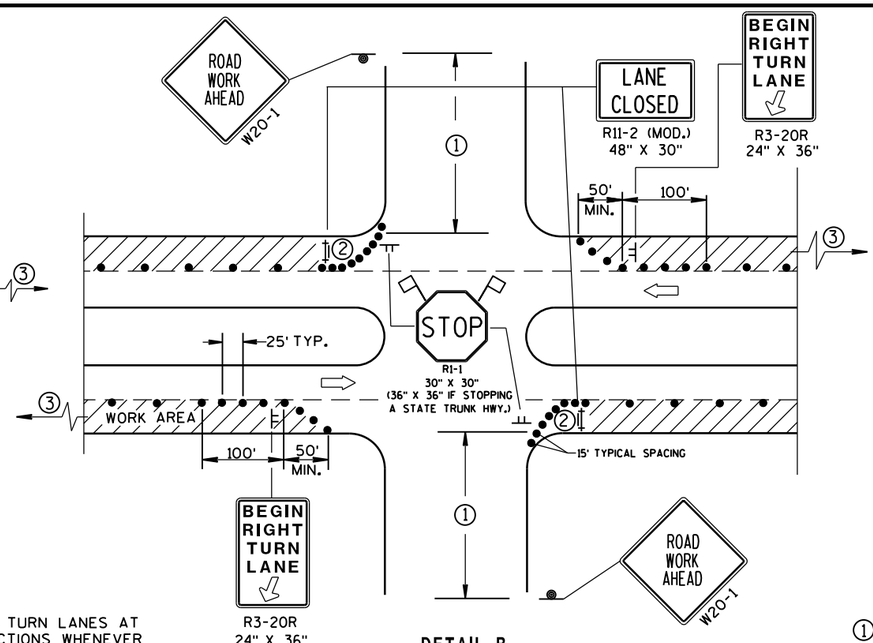
S.D.D. 15 D 20-2



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

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

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

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

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

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

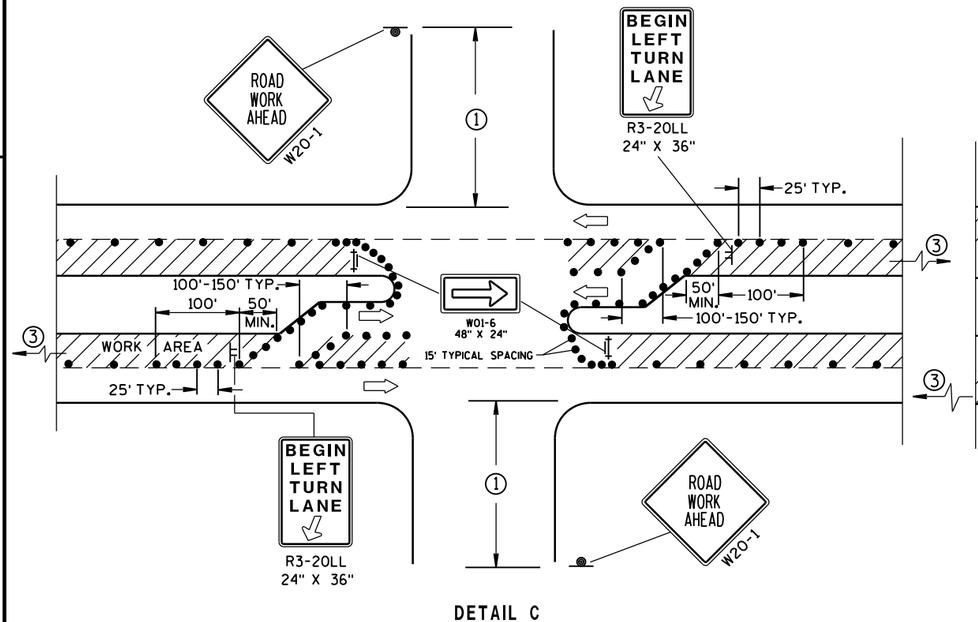
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

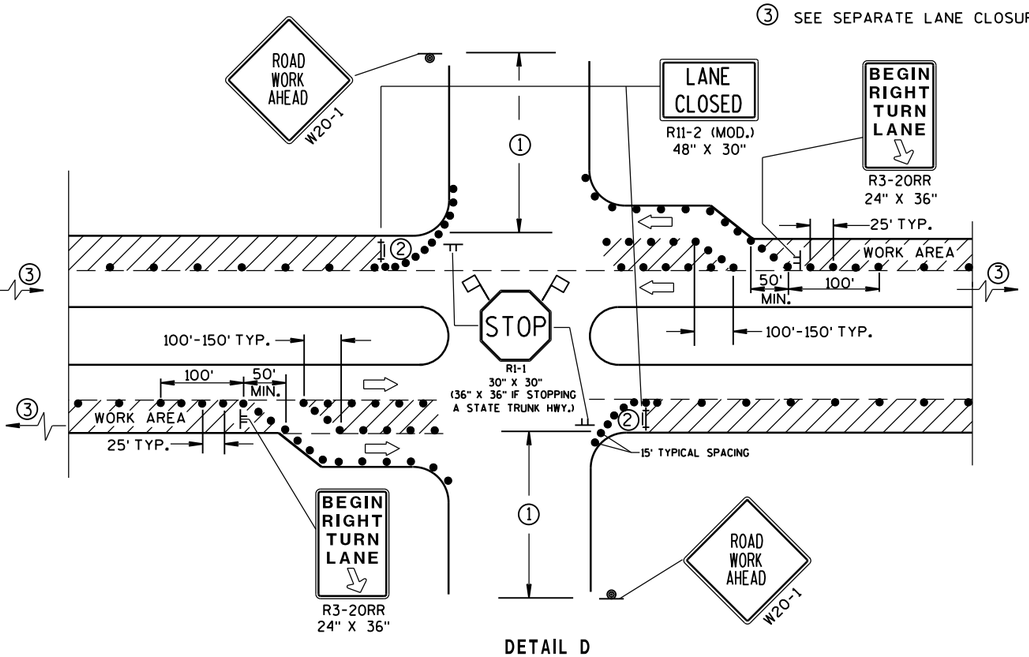
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

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



DETAIL D

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

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

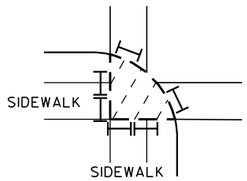
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

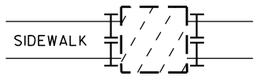
FHWA

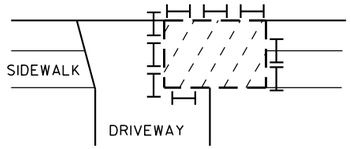
6

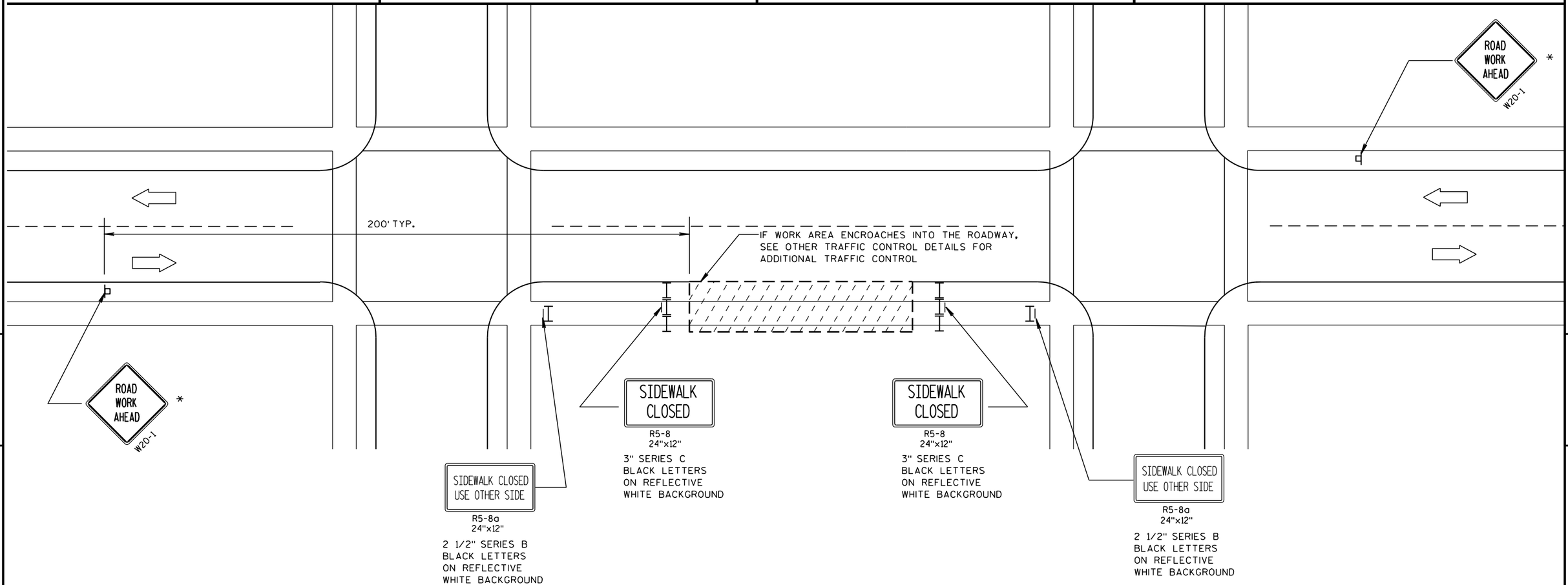
S.D.D. 15 D 21-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

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

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

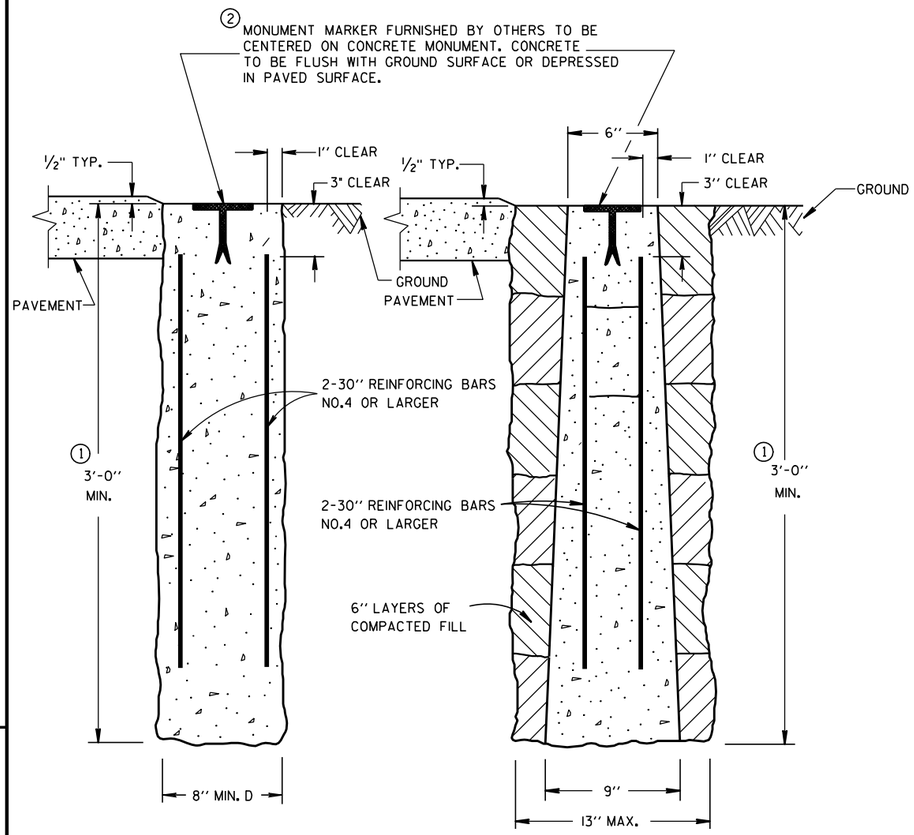
5/23/2000 DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible]NEER

FHWA

6

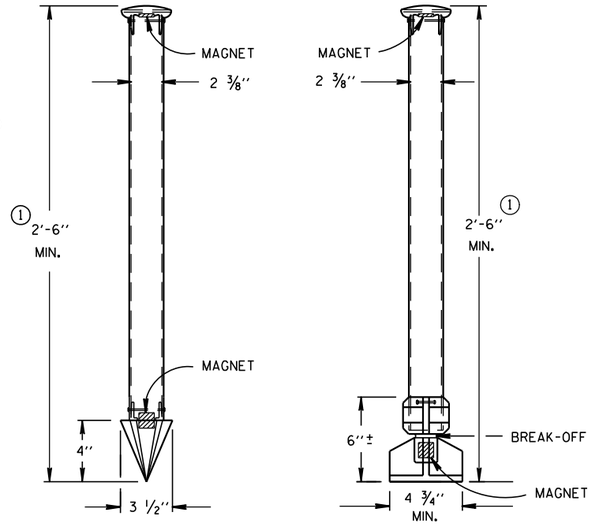
S.D.D. 15 D 30-1



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

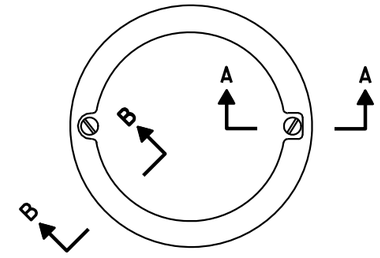
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

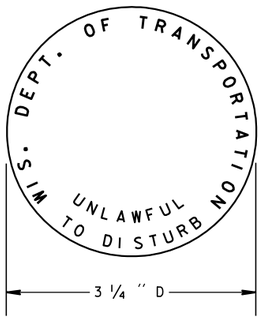
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

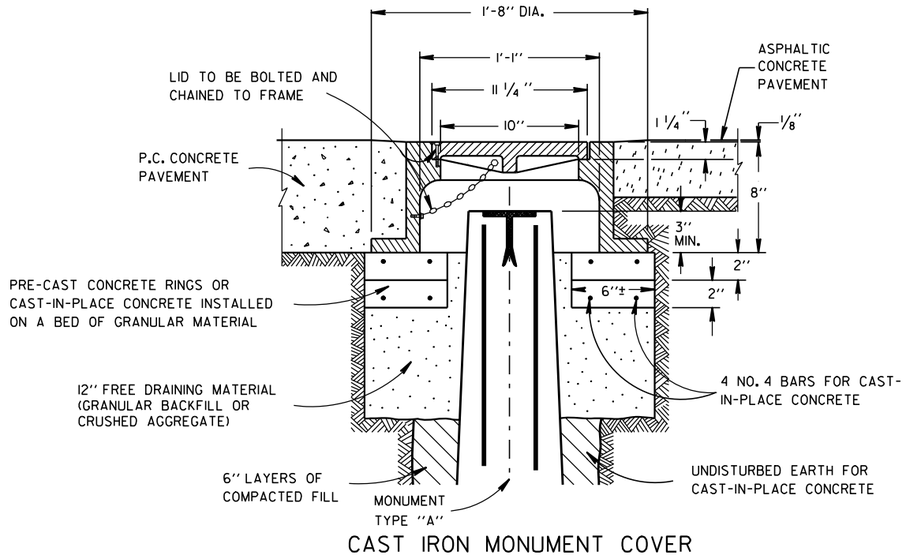
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

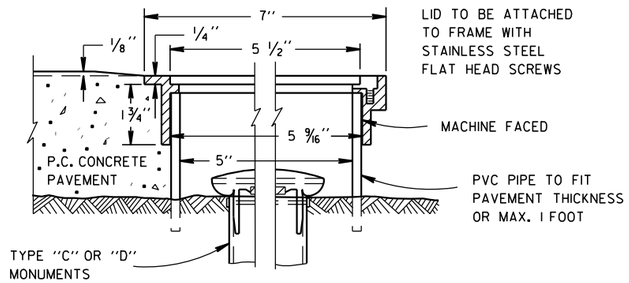


② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

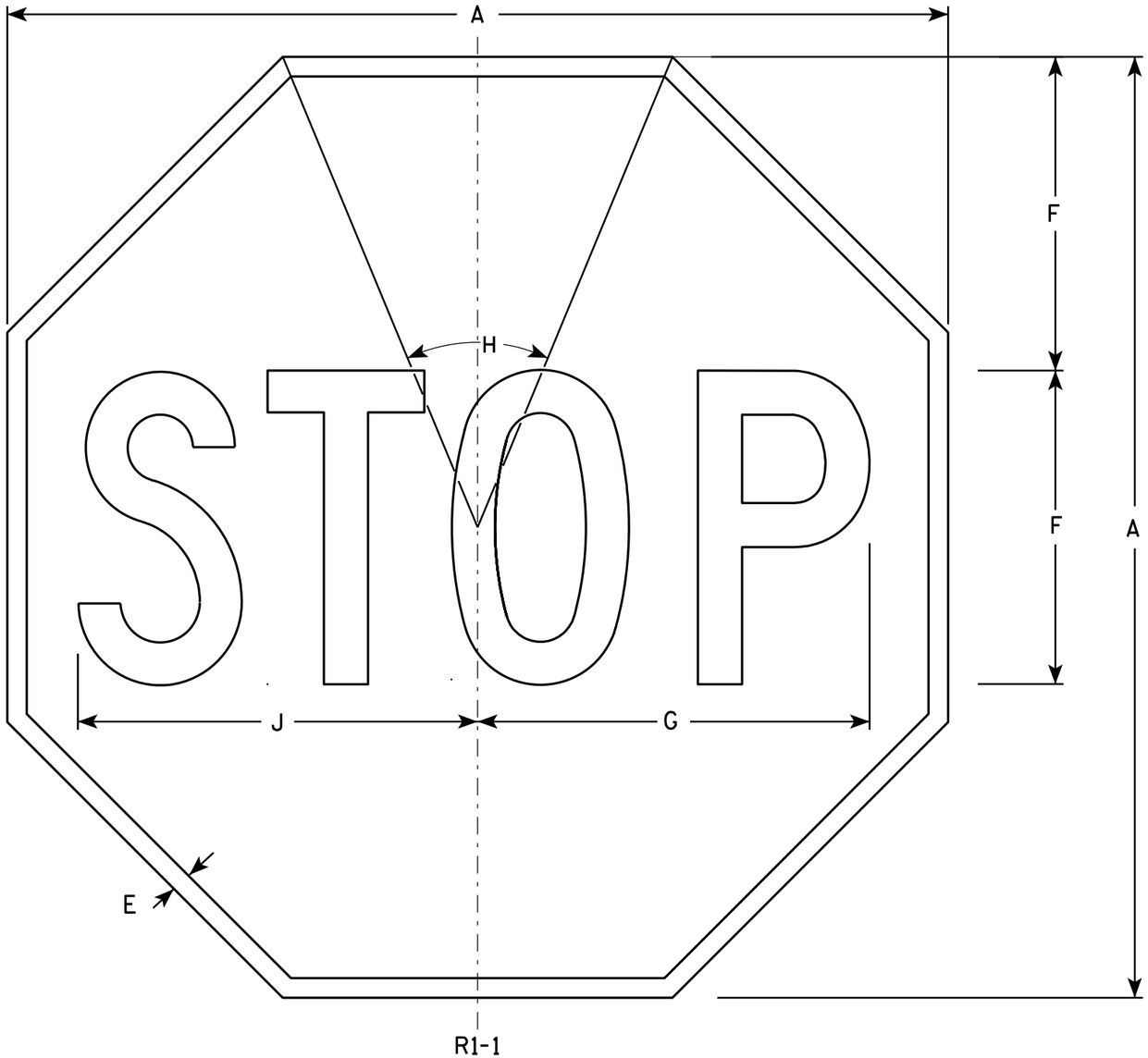
9/22/1999 DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 16 A 1-6



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	24				3/8	8	10	45°		10 1/4																	3.31
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

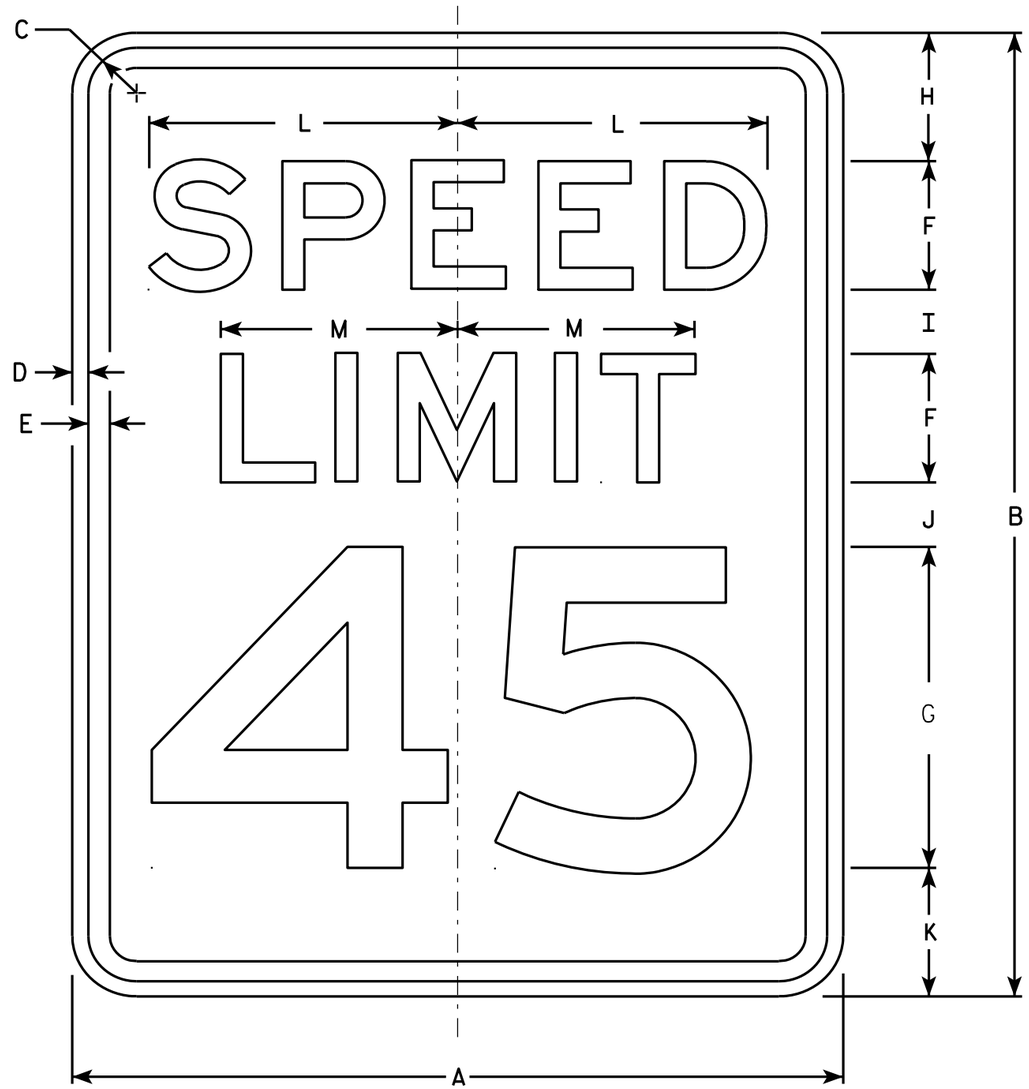
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 116	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

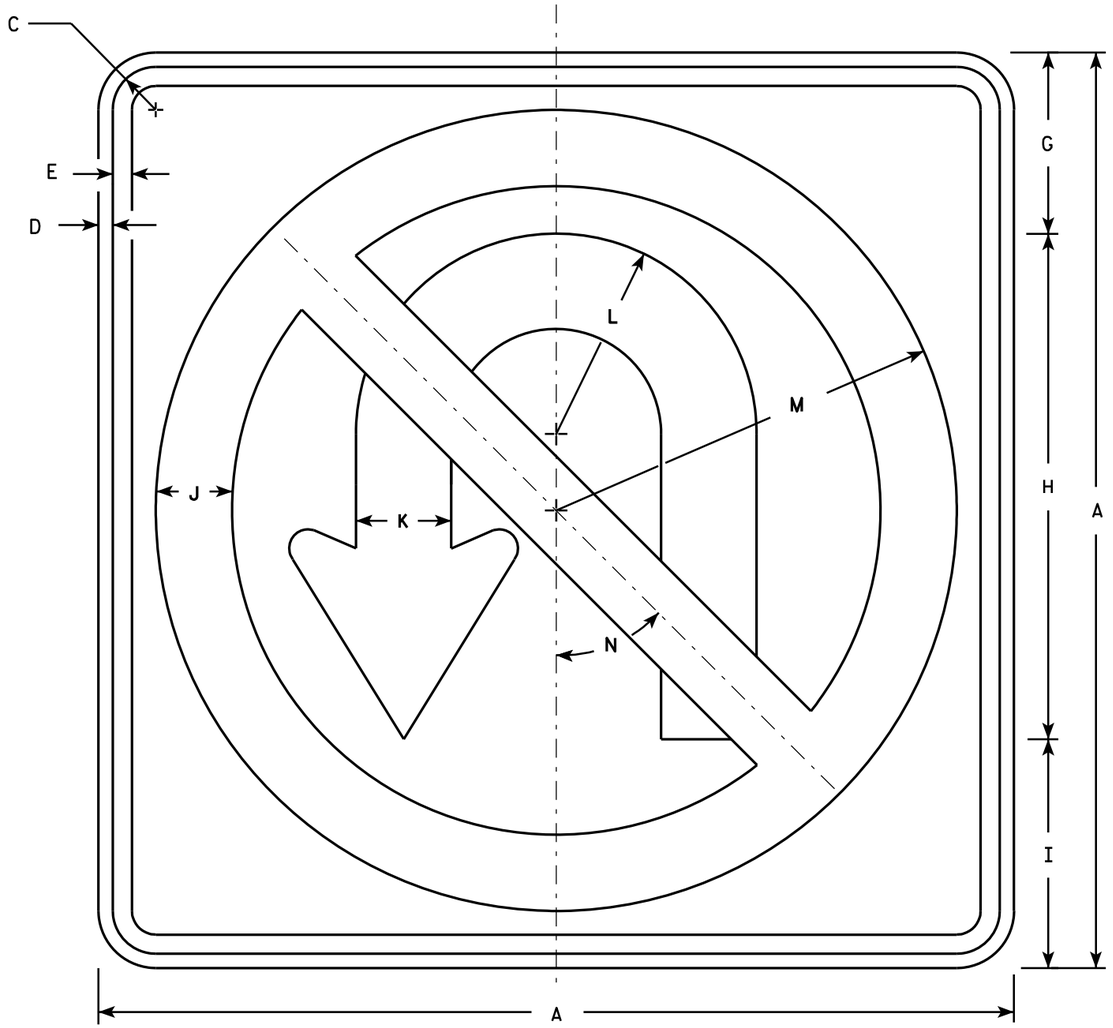
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

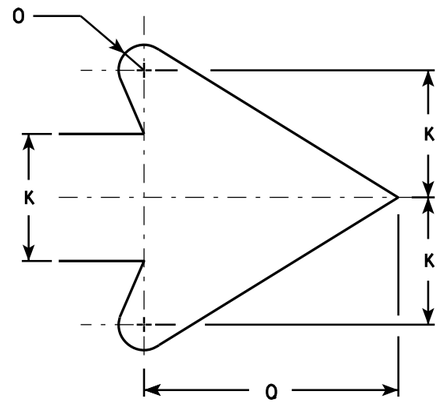
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 117 | E



R3-4

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 - 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

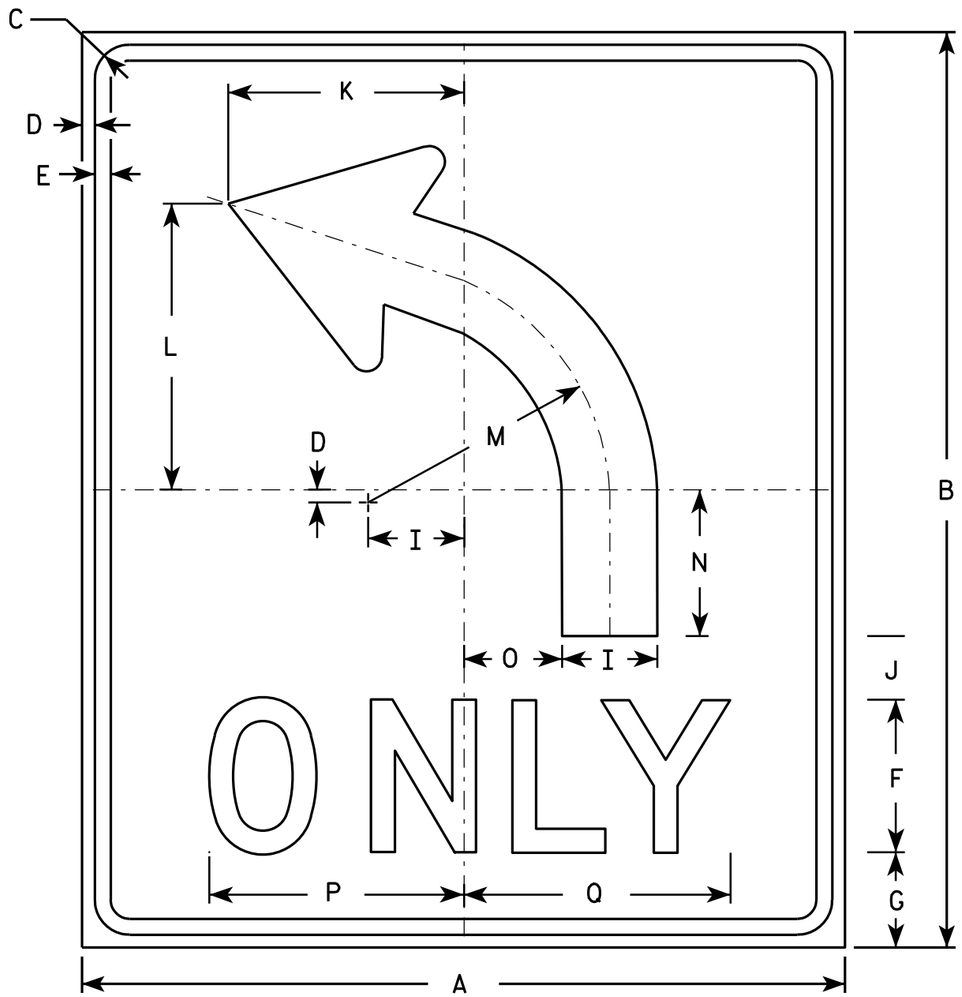
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

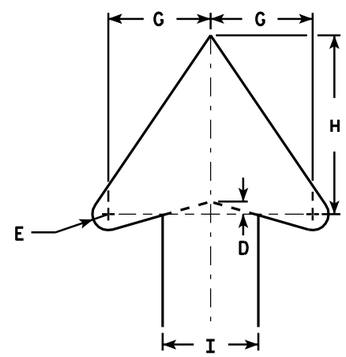
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 118	E



R3-50L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-50R is the same as R3-50L except curved portion of arrow points right.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
2M	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
3																											
4																											
5																											

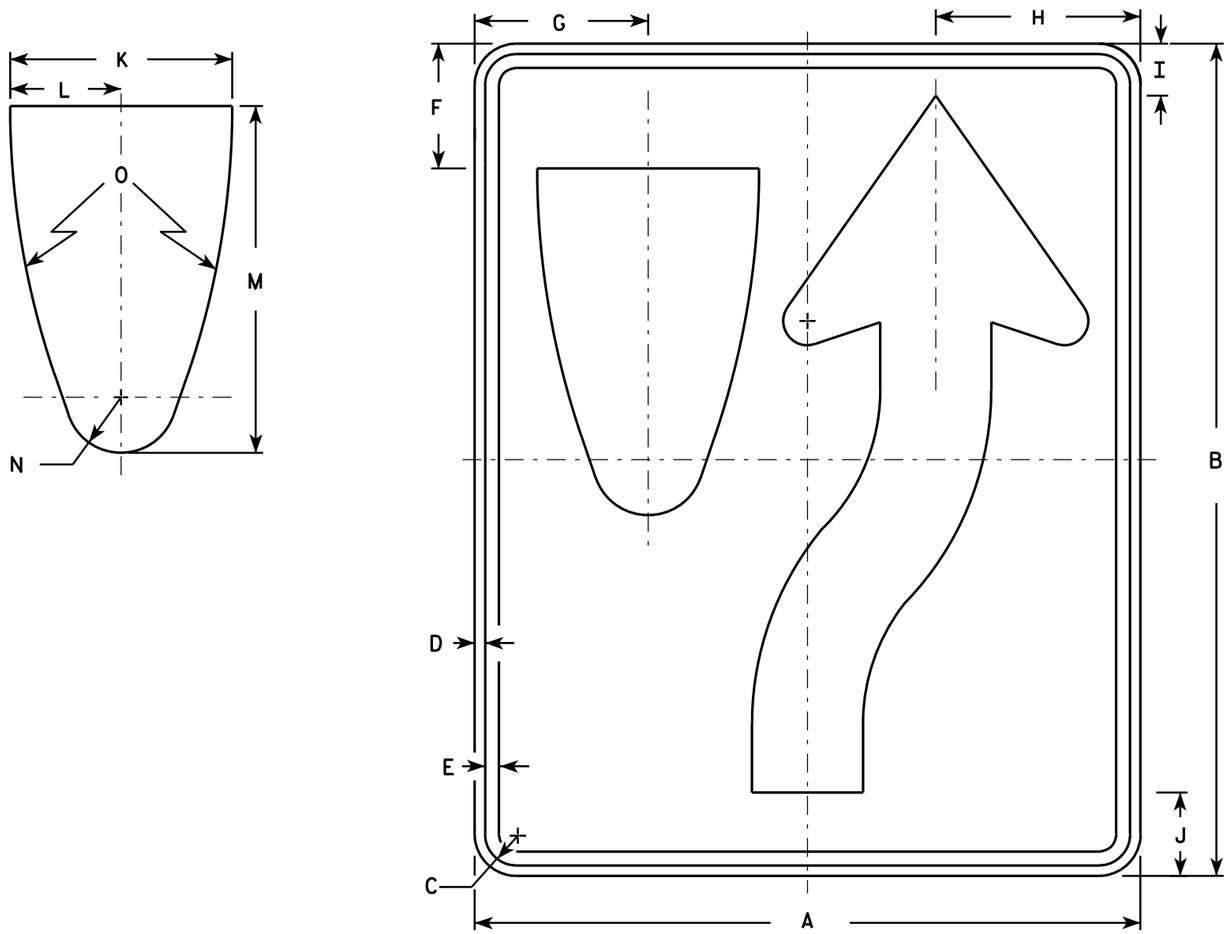
STANDARD SIGN
R3-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-50.2

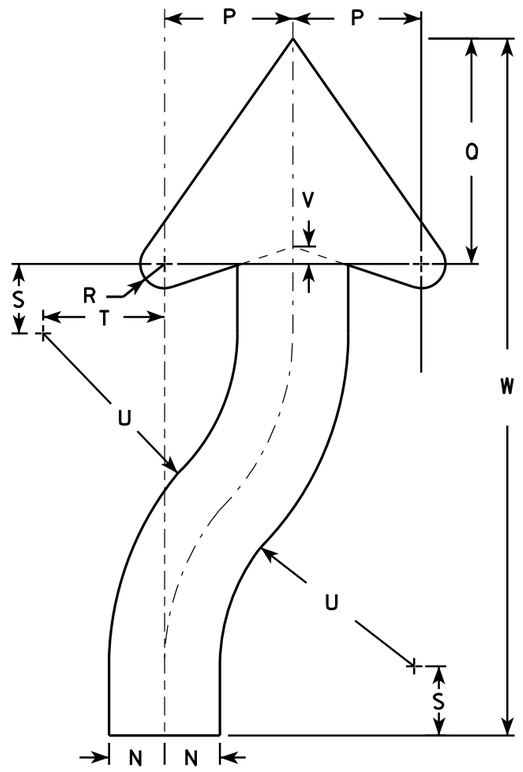
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 119 | E



R4-7

NOTES

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



ARROW DETAIL

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

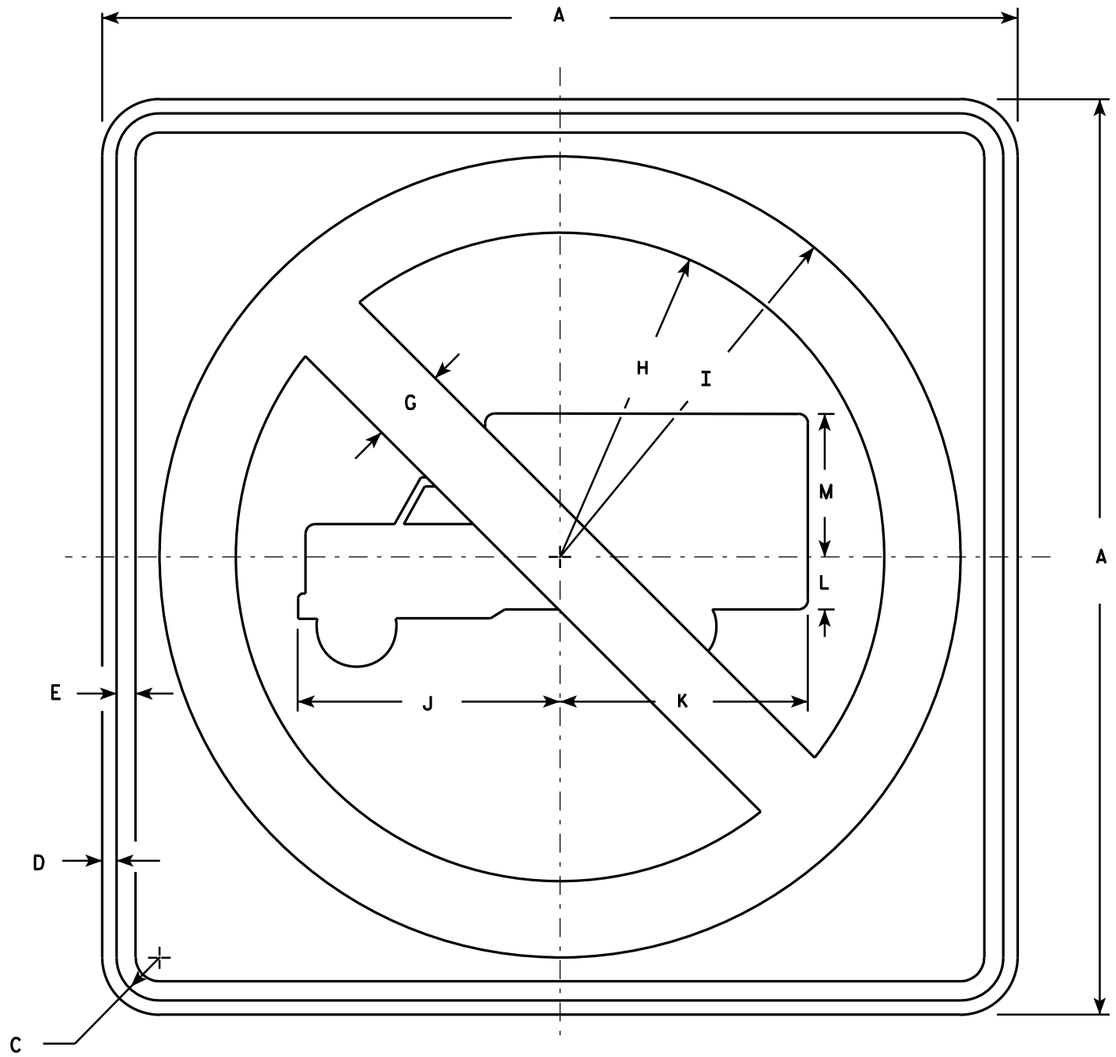
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 120	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

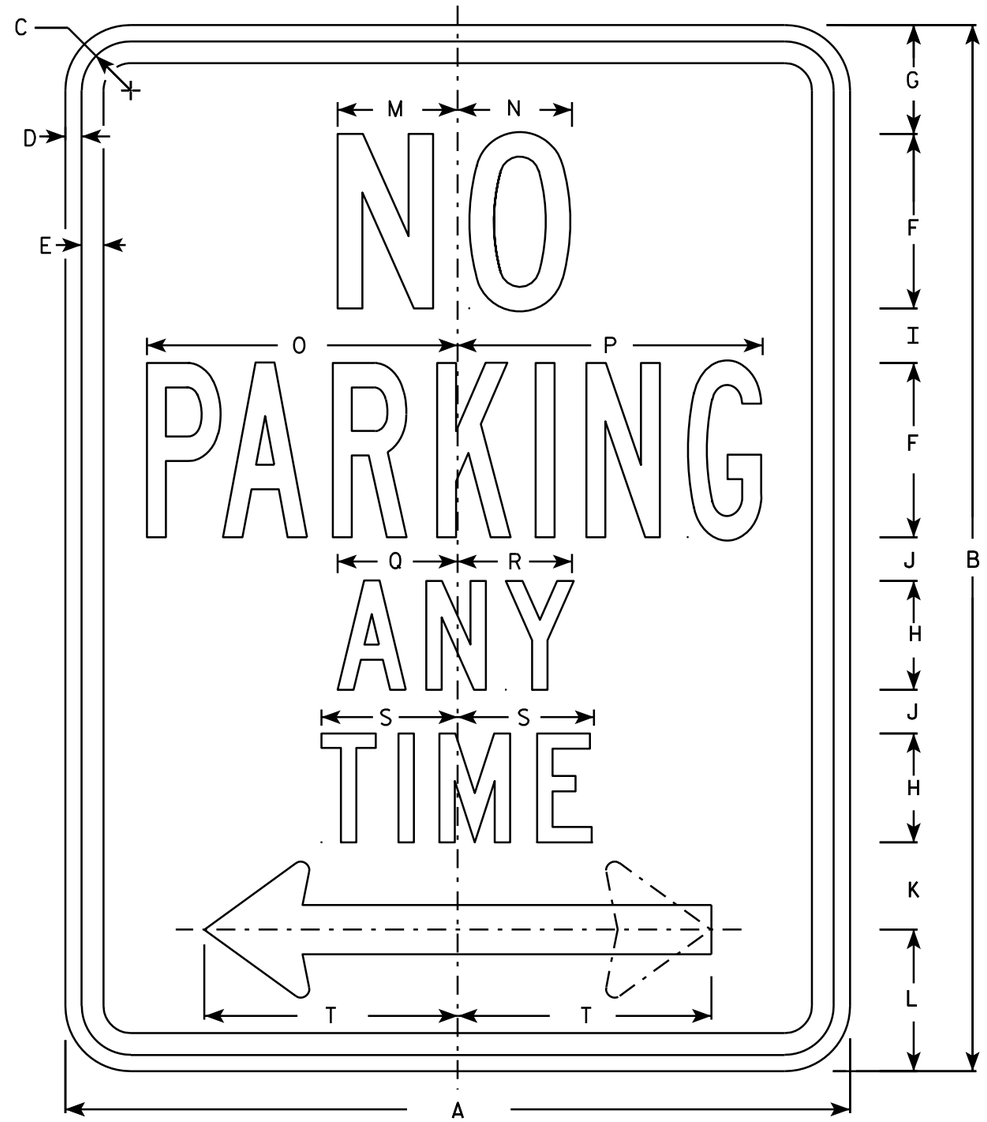
STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

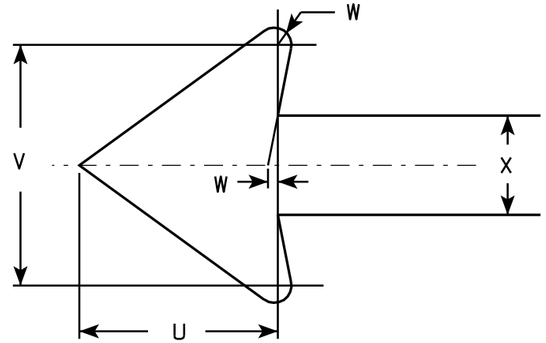
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 121	E



R7-1

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 - Red
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, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 122 | E

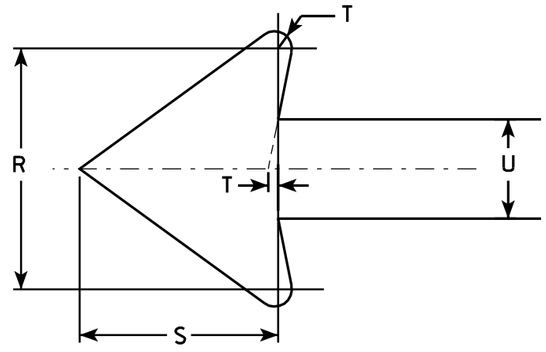
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42

R7-5

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 - Green
3. Message Series - See Note 7
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 as required & adjust spacing to achieve proper balance.
6. R7-5D (double arrow)
   R7-5L (left arrow)
   R7-5R (right arrow)
7. Lines 1, 2 & 3 are series C Copy
   Line 4 Series B Copy.



* - See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	2	2	2 1/4	1 1/4	4	2 1/2	2 1/8	2	2 7/8	4 5/8	4 1/2	3 7/8	1 3/4	1 1/2	1/8	3/4						1.5
2S	18	24	1 1/8	3/8	1/2	3	3	2 5/8	1 1/4	5 5/8	3 1/4	3 1/8	3 1/8	4 1/4	6 7/8	6 3/4	5 7/8	2 5/8	2 1/4	1/4	1 1/8						3.0
2M	24	30	1 1/8	3/8	1/2	4	3	3	2	6	3 1/2	4 1/4	4 1/8	5 3/4	9 1/8	9 1/8	7 3/4	3 1/2	3	1/4	1 1/2						5.0
3	24	30	1 1/8	3/8	1/2	4	3	3	2	6	3 1/2	4 1/4	4 1/8	5 3/4	9 1/8	9 1/8	7 3/4	3 1/2	3	1/4	1 1/2						5.0
4																											
5																											

STANDARD SIGN
R7-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

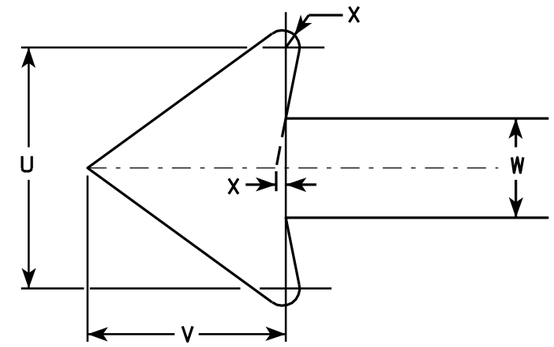
DATE 03/31/2011 PLATE NO. R7-5.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 123	E

R7-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - 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. R7-7D (double arrow)
   R7-7R (right arrow)
   R7-7L (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	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	2	1 7/8	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2	2 3/4	2 5/8	3 7/8	1 3/4	1 1/2	3/4	1/8			1.50
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	2 1/2	3 3/8	3 3/8	5 7/8	2 5/8	2 1/4	1 1/8	1/4			3.00
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	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
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	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
4																											
5																											

STANDARD SIGN
R7-7

WISCONSIN DEPT OF TRANSPORTATION

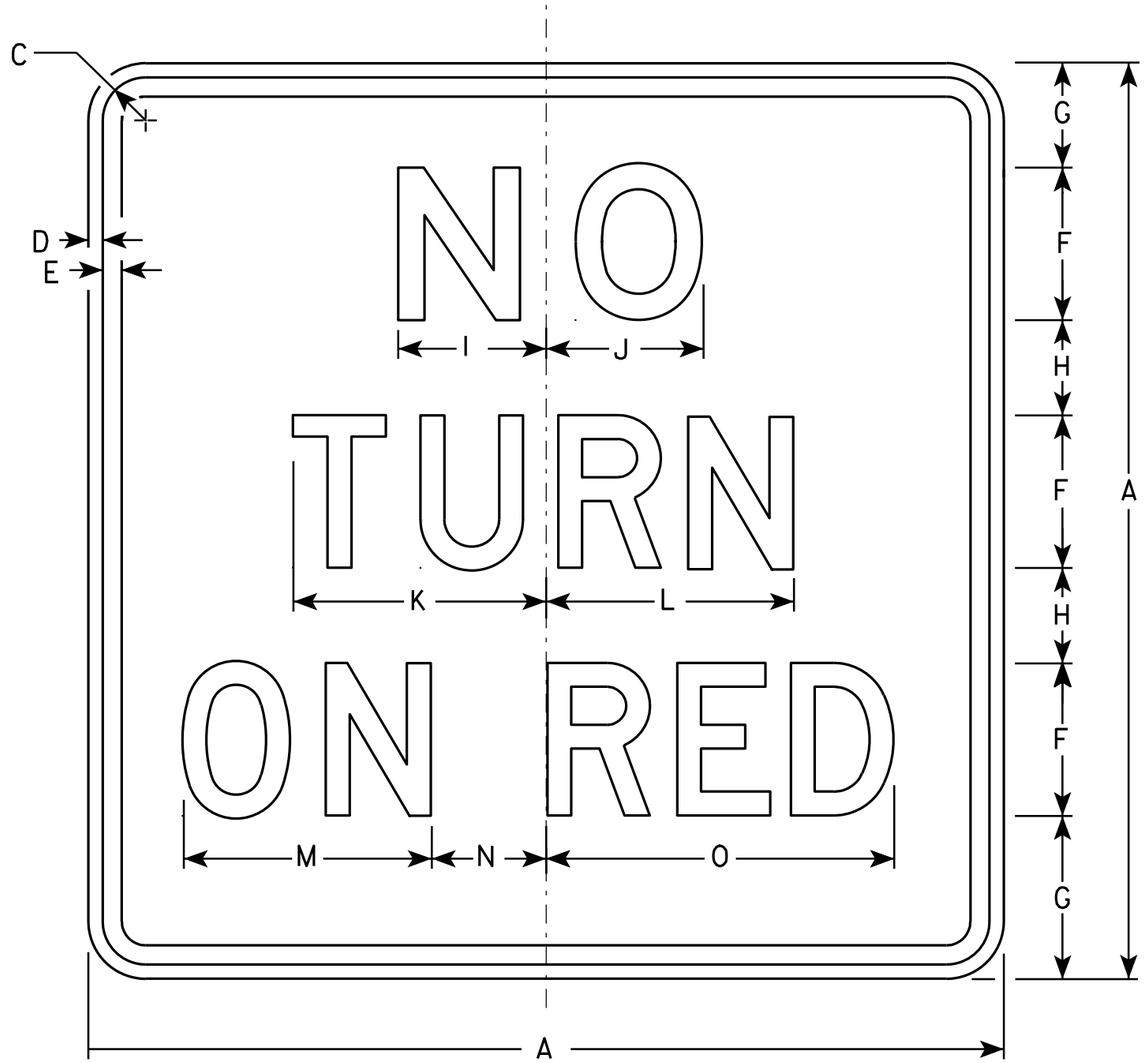
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-7.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 124 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R77.DGN PLOT DATE : 31-MAR-2011 10:59 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



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																											

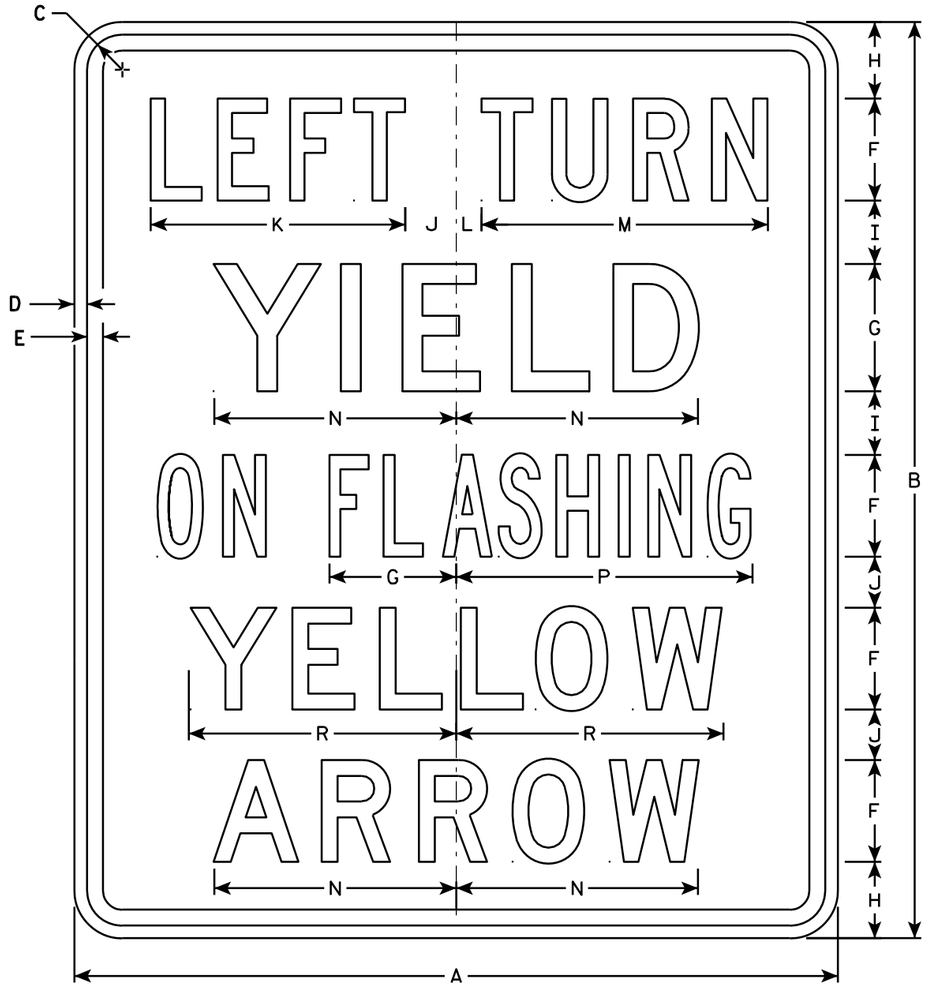
STANDARD SIGN
R10-11B

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: 125 | E

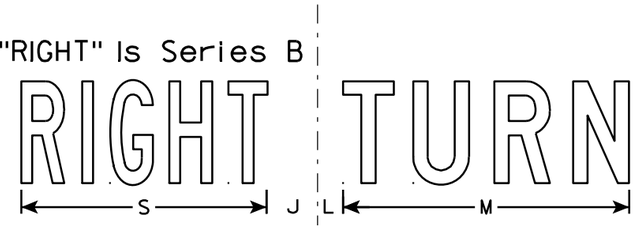


R10-50L

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 C.
   Lines 2, 4 and 5 are Series D.
   Line 3 is Series B.

"RIGHT" Is Series B



R10-50R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
3																											
4																											
5																											

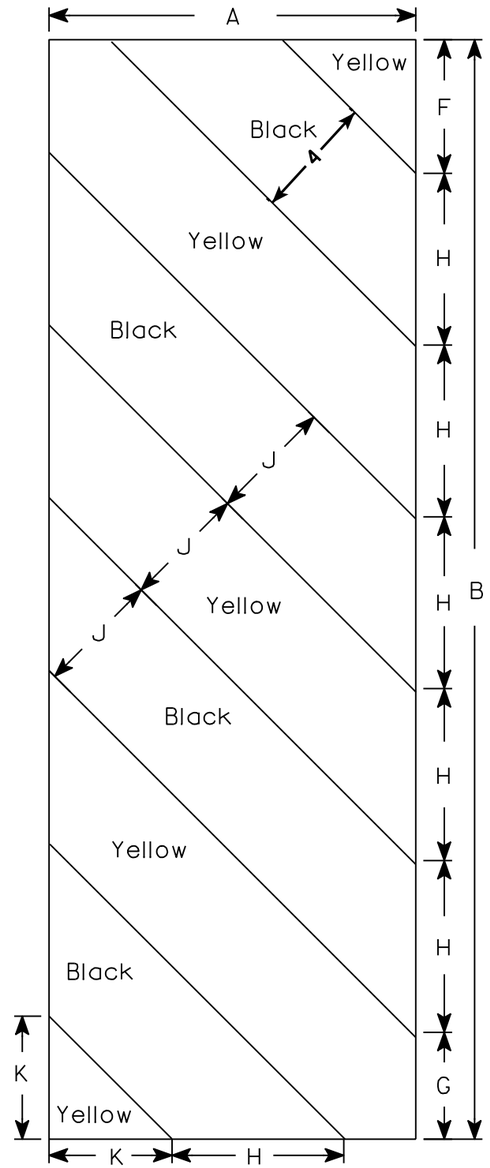
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

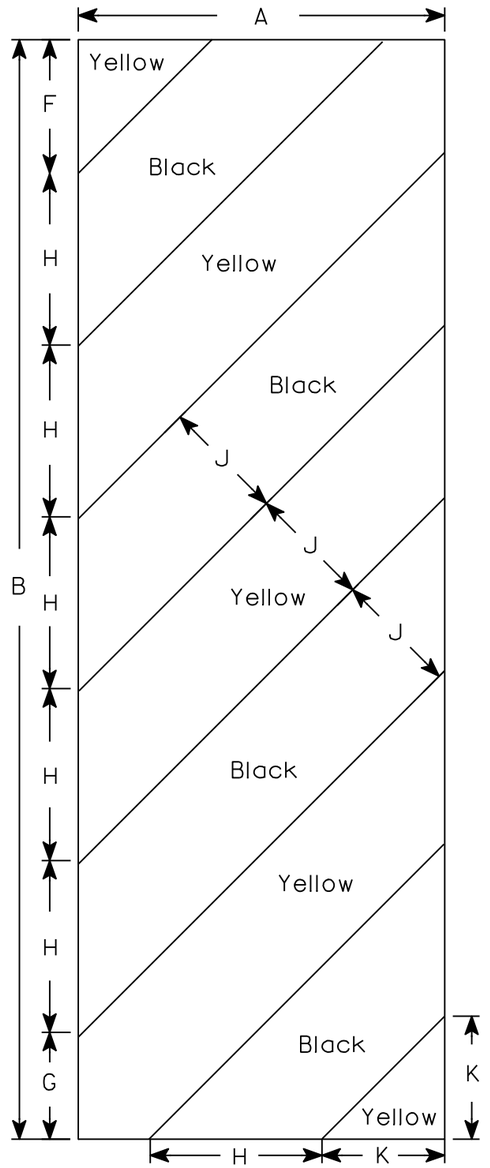
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 126	E



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

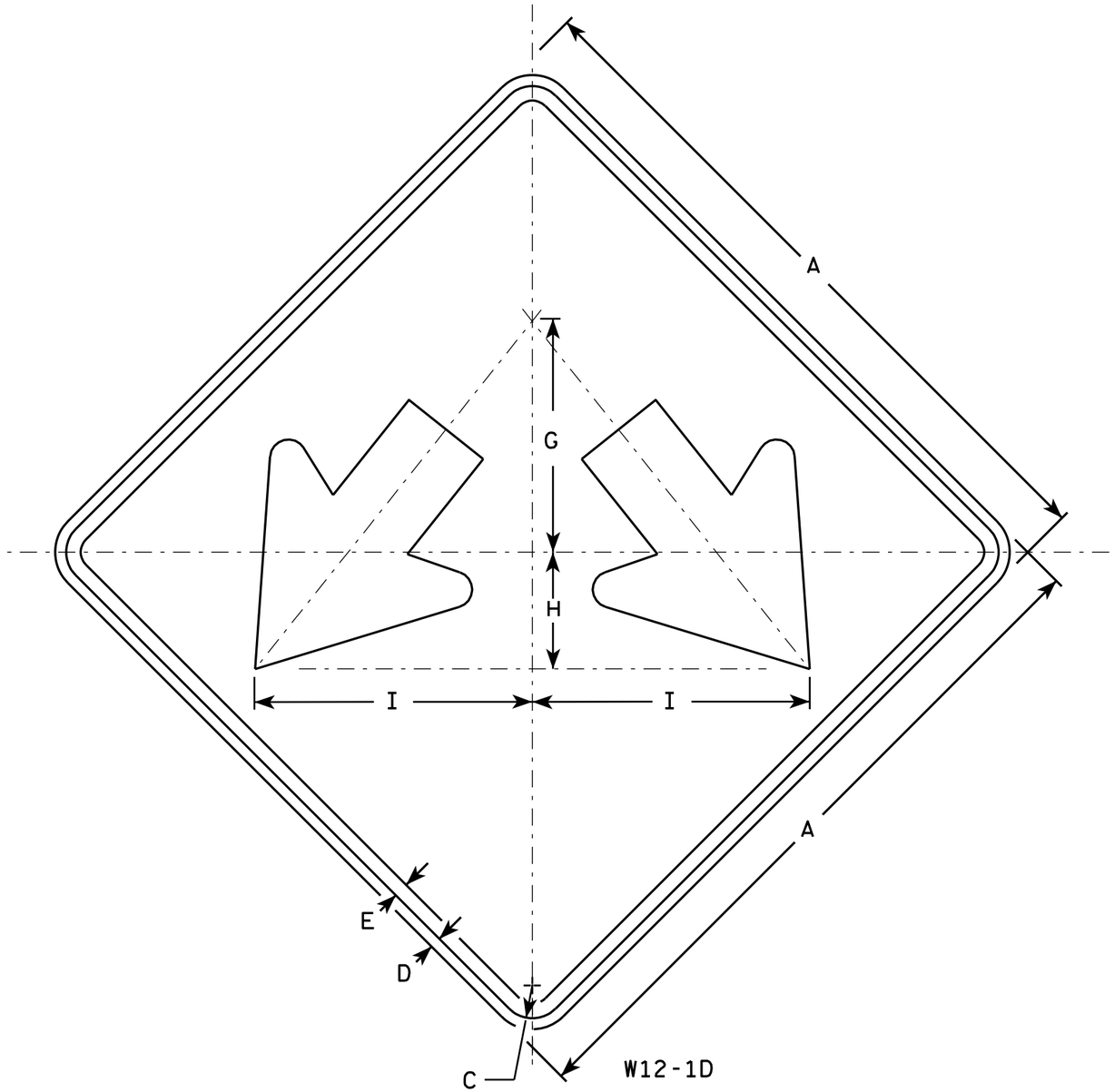
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

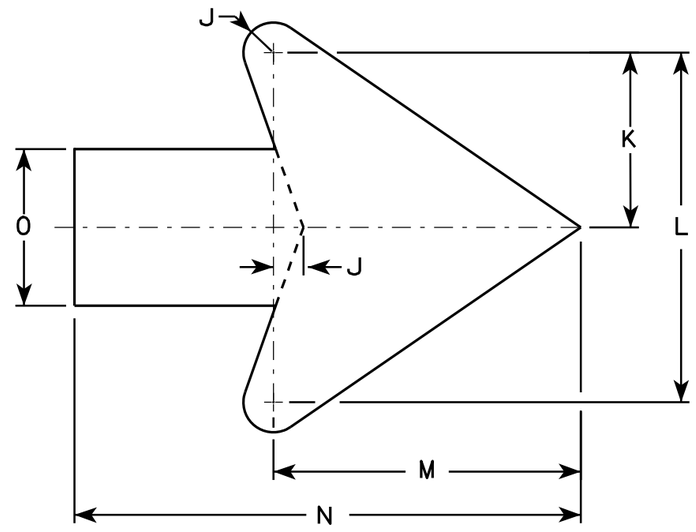
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 127	E



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 128	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

WISDOT/CADDS SHEET 42

7

7

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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