PROJECT ID:
WITH:

COUNTY: MILWAUKEE

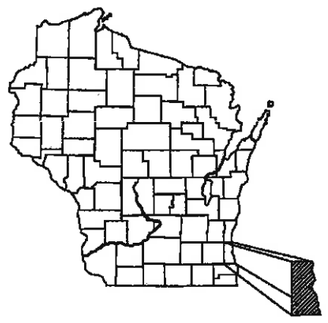
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

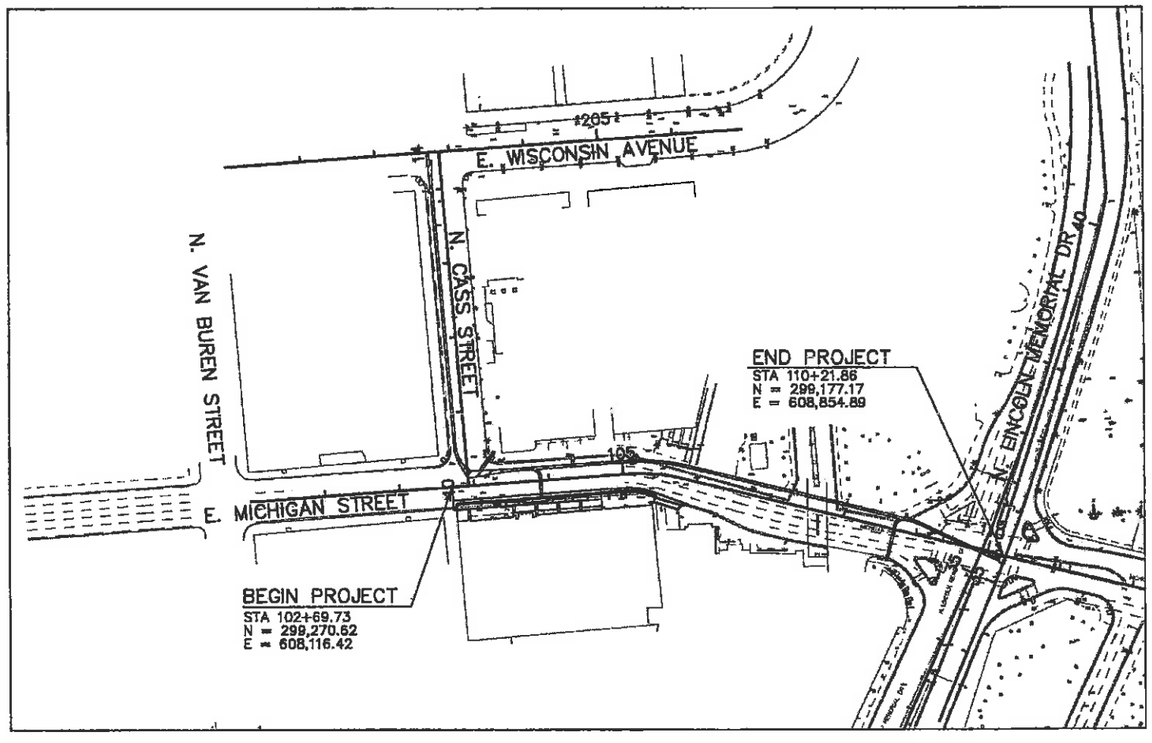
PLAN OF PROPOSED IMPROVEMENT

LAKEFRONT GATEWAY LOCAL ROADS

N. CASS ST & E. MICHIGAN STREET STREETSCAPING
MILWAUKEE COUNTY

CONTRACT A





CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
COMBUSTIBLE FLUIDS	CAUTION

PROFILE

GRADE LINE	
ORIGINAL GROUND	
GRADE ELEVATION	95.36

UTILITIES

CITY COMMUNICATIONS	CUC
ELECTRIC	E
FIBER OPTIC	FO
GAS	G
STEAM	STEAM
GAS	CMB
COMBINED SEWER	SAN
STORM SEWER	SS
TELEPHONE	T
WATER	W
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 1983 (2007).

ELEVATIONS SHOWN ON THIS PLAN AR REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (1991).

CH2MHILL
MILWAUKEE, WISCONSIN

WISCONSIN
KERRY C. MEYER
E-36986
MILWAUKEE, WI
PROFESSIONAL ENGINEER

9/13/2015 (Date) (Signature)

CITY OF MILWAUKEE
Department of Public Works
Infrastructure Services Division

APPROVED BY:

CITY ENGINEER

COMMISSIONER OF PUBLIC WORKS
FOR

1 E

FILE NAME : ch_A_010101_t1.DGN | PLOT DATE : 13-SEP-2015 | PLOT BY : kmeyer1 | PLOT NAME : | PLOT SCALE : 200:1

WISDOT/CADDS SHEET 10

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STATE OF WISCONSIN, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2015 EDITION AND THE CITY OF MILWAUKEE STREET SPECIFICATIONS, DATED JULY 1, 1992.

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

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.

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

PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL FIELD VERIFY RELATED INFORMATION IN THE PLAN WITH THE ENGINEER.

DRAINAGE STRUCTURES SHOWN ON THE PLAN WILL BE PLACED BY CITY OF MILWAUKEE FORCES.

THE COST OF ANY AND ALL EROSION CONTROL MEASURES NEEDED FOR THIS CONSTRUCTION PROJECT SHALL BE INCLUDED IN THE ITEM 619.1000 MOBILIZATION. ALL EROSION CONTROL MEASURES AS REQUIRED BY FEDERAL OR STATE LAW SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. ALL TRAFFIC CONTROL SHALL CONFORMA TO MUTCD AND CITY OF MILWAUKEE REQUIREMENTS.

EXISTING ELEVATIONS SHALL BE VERIFIED IN THE FIELD.

A SAWED JOINT IS REQUIRED WHERE NEW HMA OR CONCRETE PAVEMENT SURFACE MEETS EXISTING HMA OR CONCRETE PAVEMENT SURFACE.

ALL SAWCUTS AND RESTORATION WORK NECESSARY FOR CITY COMMUNICATION CONDUIT INSTALLATION SHALL BE INCIDENTAL TO THE COMMUNICATIONS BID ITEMS.

STANDARD ABBREVATIONS

AGG	AGGREGATE
AH	AHEAD
ASP	ASPHALTIC
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BT	BEGIN TRANSITION
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L OR ℄	C/L OR ℄ CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
DISH	DISCHARGE
ET	END TRANSITION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
HP	HIGH POINT
HT	HEIGHT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NORM	NORMAL
O/S	OFFSET
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
POB	POINT OF BEGINNING
PT	POINT OF TANGENT
PUU	PIPE UNDERDRAIN UNPERFORATED
PVC	POLYVINYL CHLORIDE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
SVD	SLOTTED VANE DRAIN
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPRC	POINT OF VERTICAL REVERSE CURVE
VPT	POINT OF VERTICAL TANGENT

UTILITIES

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MILWAUKEE, WI 53203
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ken.franecki@we-energies.com

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333 W. EVERETT STREET - A299
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cd8729@att.com

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PAETEC BUSINESS SERVICES,
PROJECT MANAGER-
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WINDSTREAM KDL, INC.
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james.kostuch@windstream.com

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PHONE (414) 278-4788

ORDER OF SECTION 2 SHEETS

PROJECT CONTACTS

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michael.loughran@milwaukee.gov

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

202 204 E. WISCONSIN AVENUE 206

END CONSTRUCTION
STA 14+49.97

14

CASS STREET

R/L E. WISCONSIN AVENUE

R/L CASS STREET

12

BEGIN CONSTRUCTION
STA 10+00.00

R/L E. MICHIGAN STREET

R/W

PROPOSED CITY COMMUNICATIONS CONDUIT WORK (TYP)

102 104 106 108 110 112

E. MICHIGAN STREET

R/W

BEGIN PROJECT
STA 102+69.73
N = 299,270.62
E = 608,116.42

PROPOSED FUTURE R/W

END CONSTRUCTION
STA 105+41.00

PROPOSED FUTURE R/W

END PROJECT
STA 110+21.86
N = 299,177.17
E = 608,854.89

N

38 N. LINCOLN MEMORIAL DRIVE

40

38

36

36

34

MICHIGAN ST

N. LINCOLN MEMORIAL DR

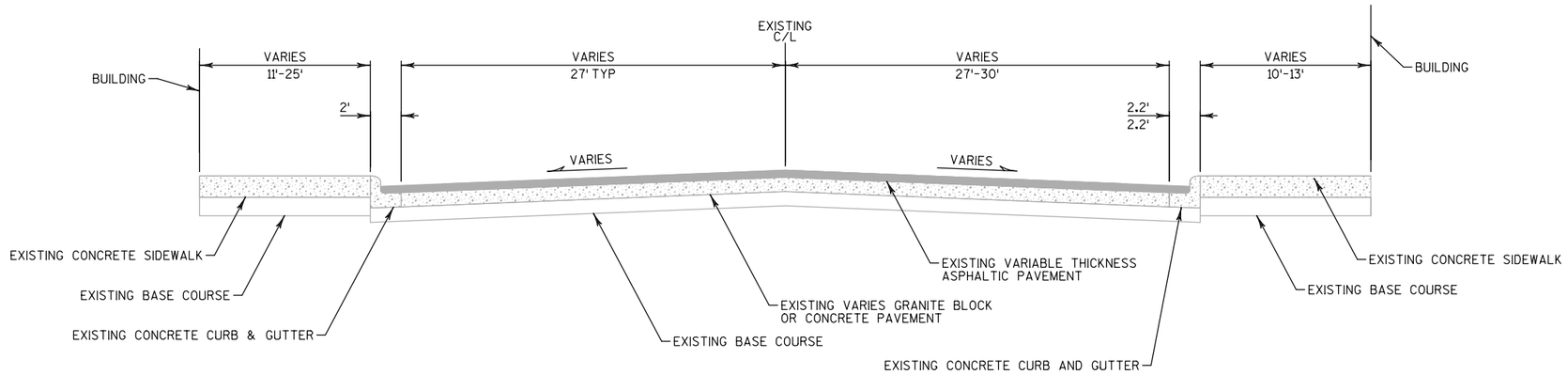
R/W

R/W

112 MICHIGAN ST

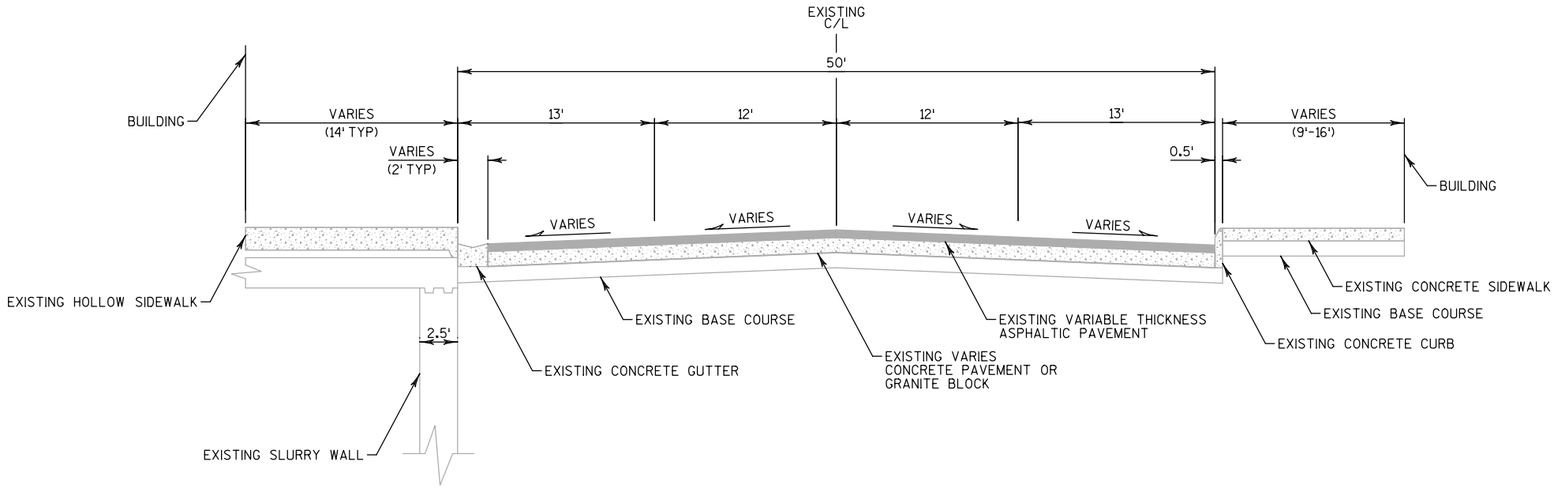
2

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION

E. MICHIGAN STREET
STA 102+70 TO STA 104+80

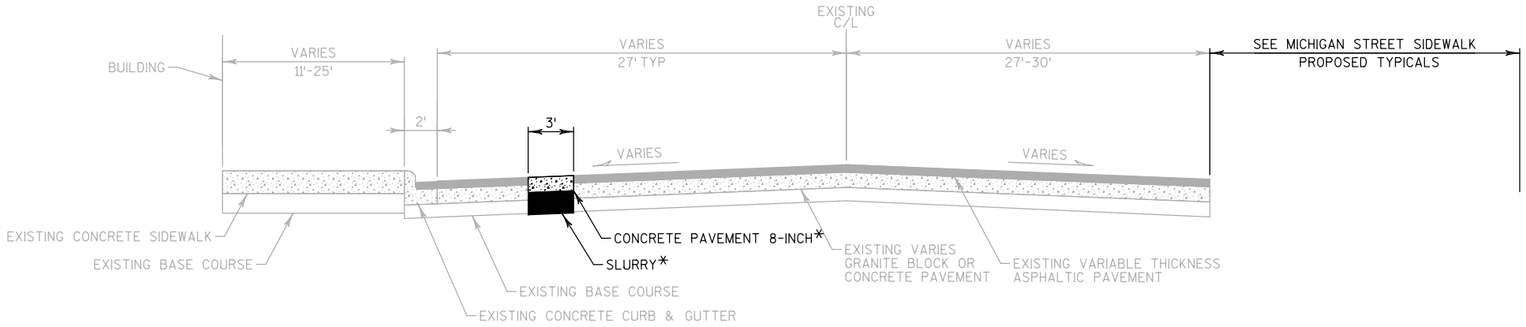


EXISTING TYPICAL SECTION

N. CASS STREET
STA 10+25 TO STA 14+25

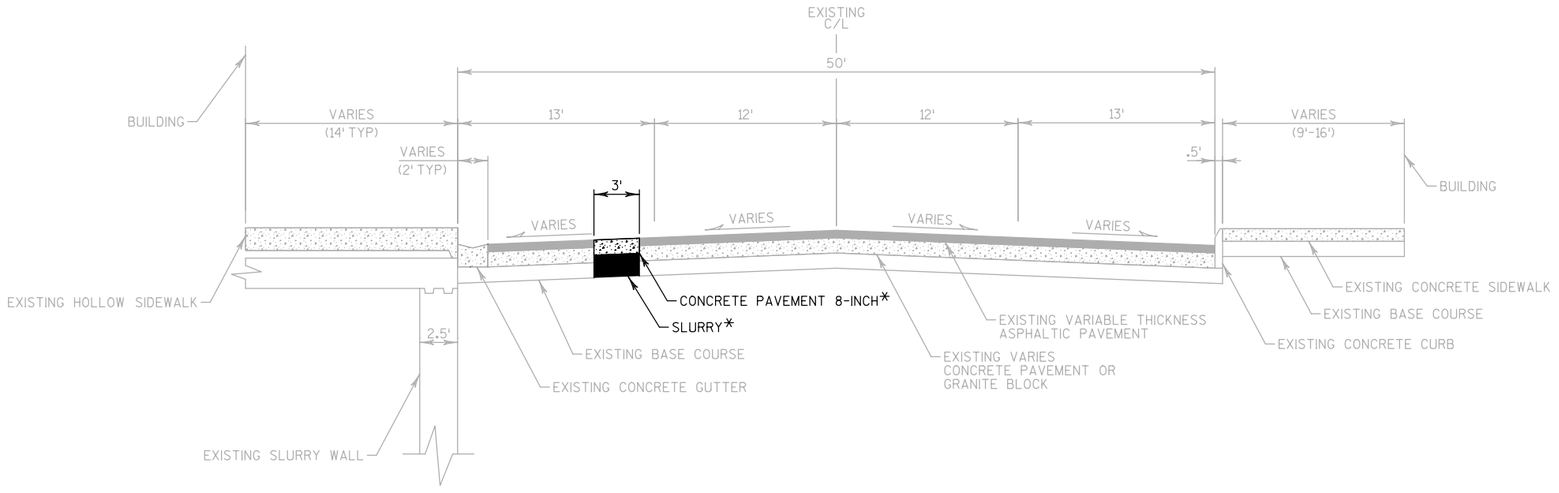
PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 4	E

* COSTS OF RESTORATION MATERIALS FOR CONDUIT INSTALLATION INCLUDING, BUT NOT LIMITED TO, CONCRETE PAVEMENT, CURB, CURB AND GUTTER, CONCRETE SIDEWALK, AND SLURRY ARE INCLUDED IN THE UNIT BID ITEMS FOR CEMENT ENCASED CONDUIT AND TES MANHOLES.



PROPOSED TYPICAL SECTION

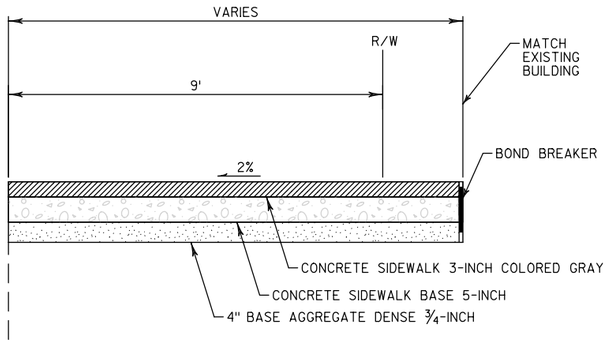
E. MICHIGAN STREET
STA 102+70 TO STA 105+50



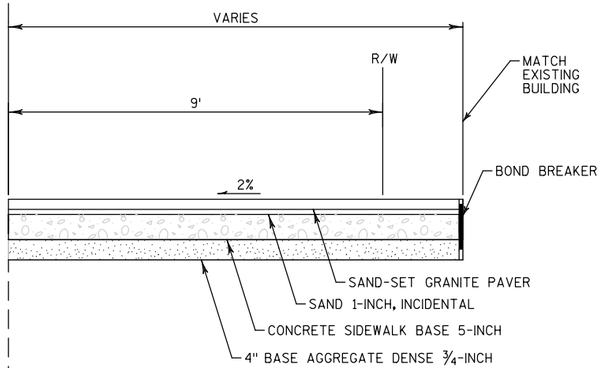
PROPOSED TYPICAL SECTION

N. CASS STREET
STA 10+25 TO STA 14+50

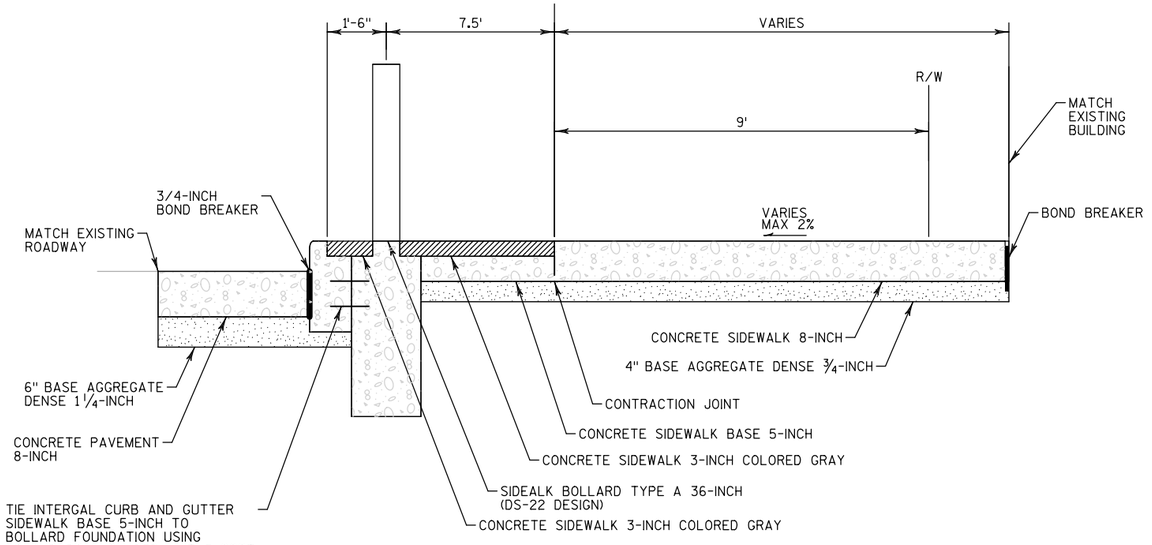
PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E



MICHIGAN STREET SIDEWALK
STA 102+89 TO STA 102+92

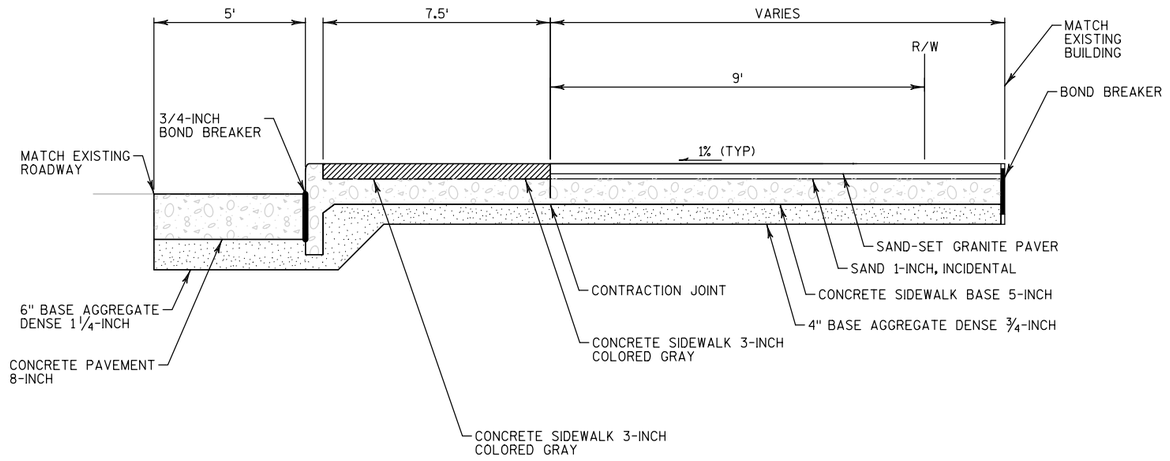


MICHIGAN STREET SIDEWALK
STA 102+92 TO STA 103+22



PROPOSED TYPICAL SECTION

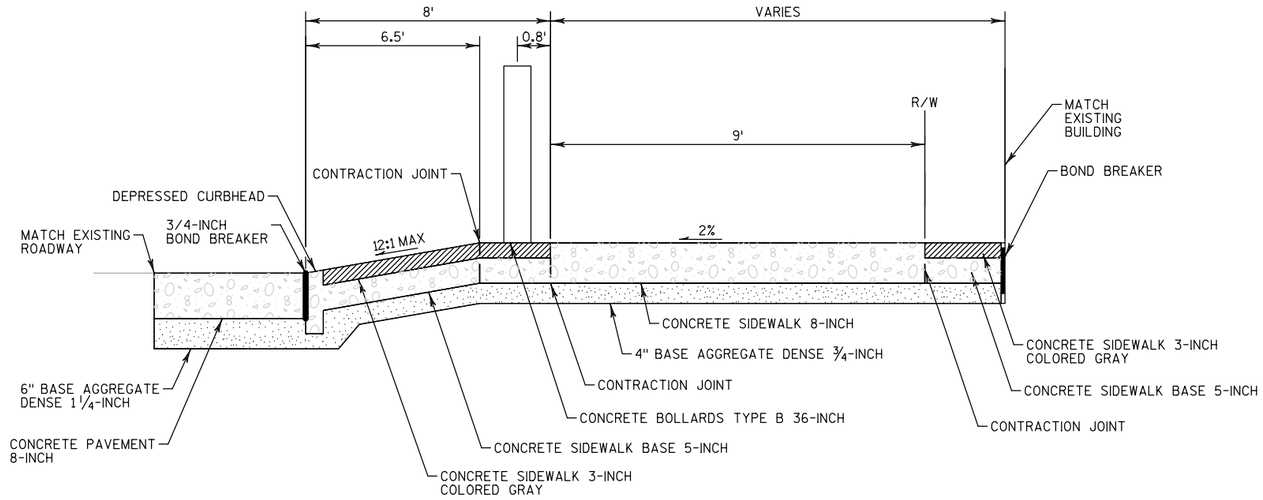
MICHIGAN STREET SIDEWALK
STA 102+70 TO STA 102+89



PROPOSED TYPICAL SECTION

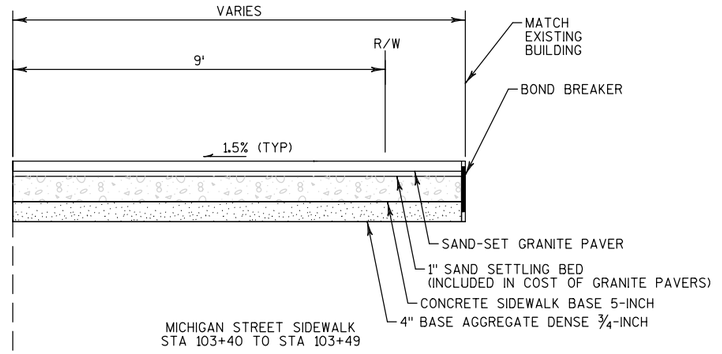
MICHIGAN STREET SIDEWALK
STA 103+22 TO STA 103+40

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E

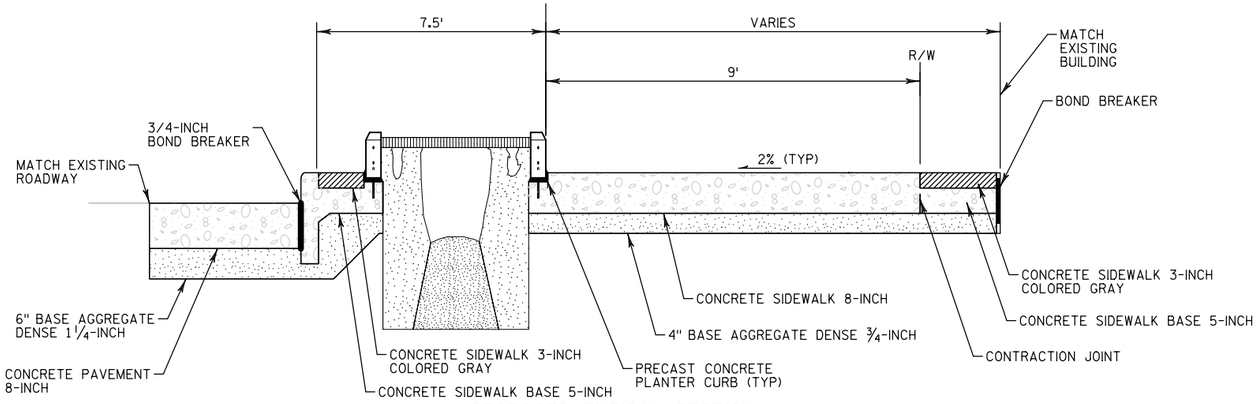


PROPOSED TYPICAL SECTION

MICHIGAN STREET SIDEWALK
STA 103+61 TO STA 104+00



MICHIGAN STREET SIDEWALK
STA 103+40 TO STA 103+49

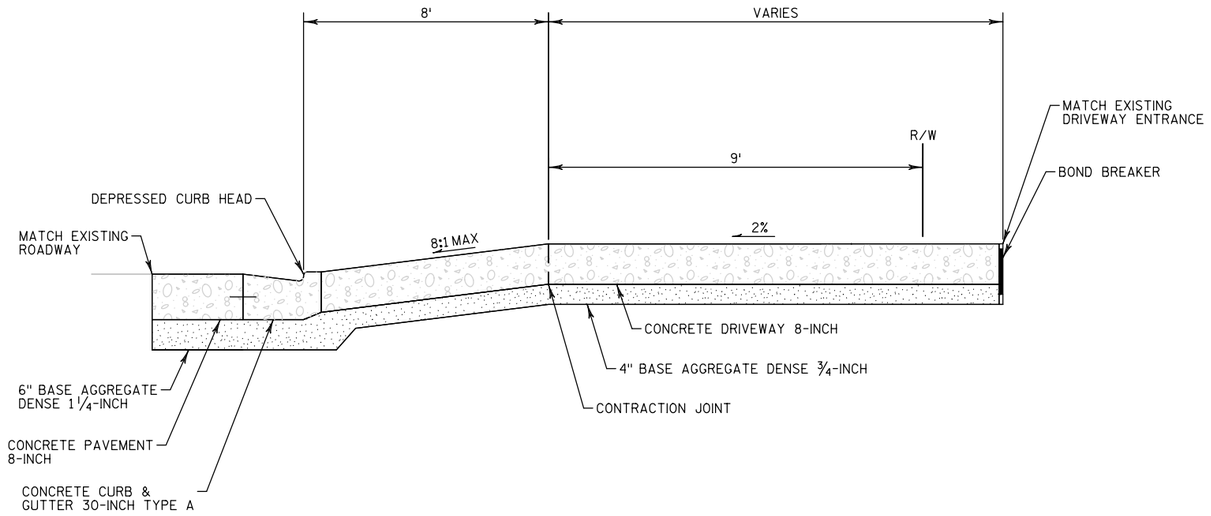


PROPOSED TYPICAL SECTION

MICHIGAN STREET SIDEWALK
STA 103+49 TO STA 103+61
STA 104+00 TO STA 104+21
STA 104+30 TO STA 104+51

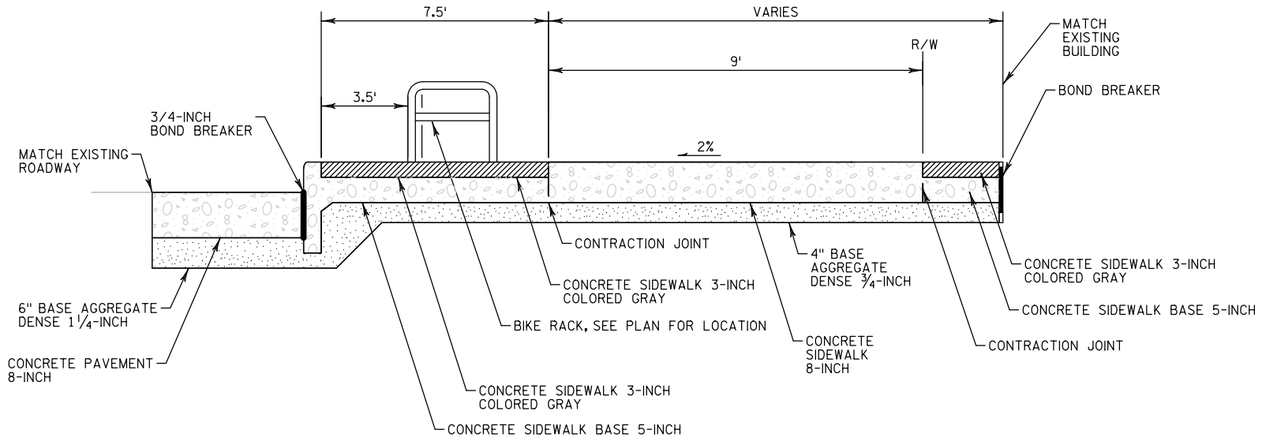
PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 8	E

2



PROPOSED TYPICAL SECTION

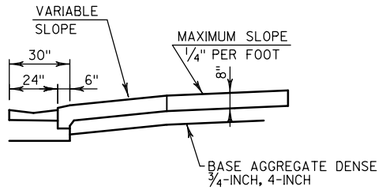
MICHIGAN STREET SIDEWALK
STA 104+69 TO STA 105+41



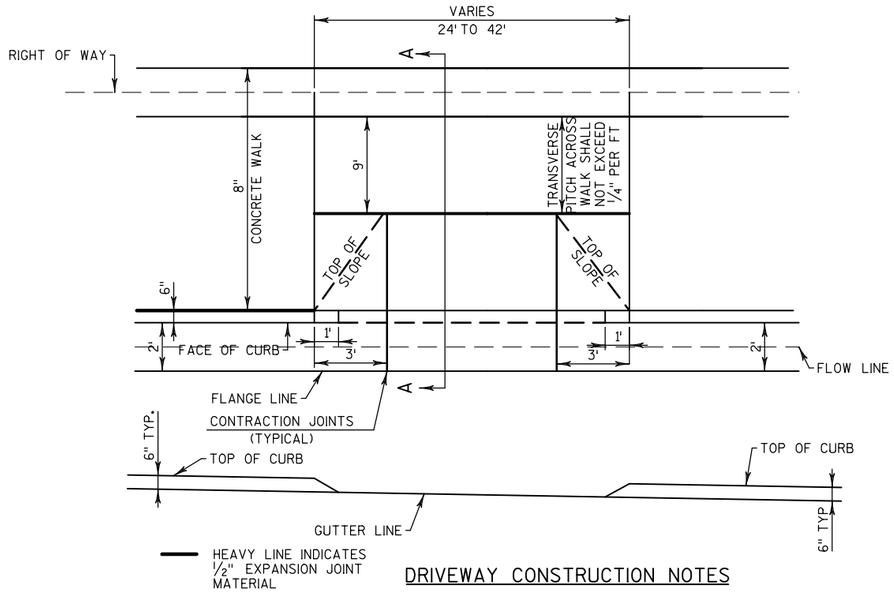
PROPOSED TYPICAL SECTION

MICHIGAN STREET SIDEWALK
STA 104+21 TO STA 104+30
STA 104+51 TO STA 104+69

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 9	E



SECTION A-A



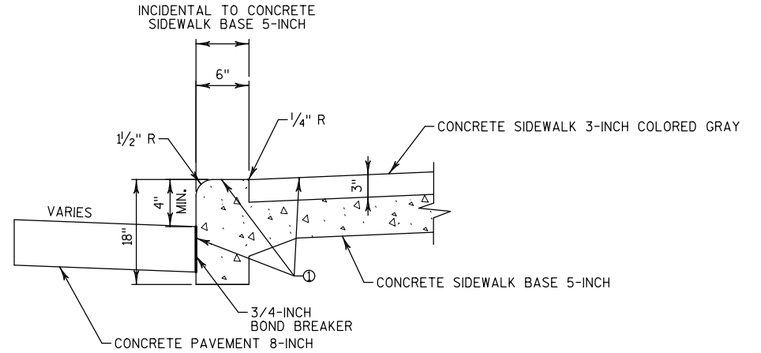
DRIVEWAY CONSTRUCTION NOTES

PLACE DUMMY JOINT AT CENTER LINE OF DRIVEWAY AND / OR AT ALL JOINTS IN THE GUTTER

DEPRESSED CONCRETE DRIVEWAY

NOTE

1. PROTECT INTEGRAL CURB, CONCRETE BASE AND DECORATIVE CONCRETE BY PLACING A SINGLE SHEET OF POLYETHYLENE OVER EXPOSED SURFACES PRIOR TO POURING CONCRETE PAVEMENT 8-INCH. (INCIDENTAL TO CONCRETE PAVEMENT BID ITEM)

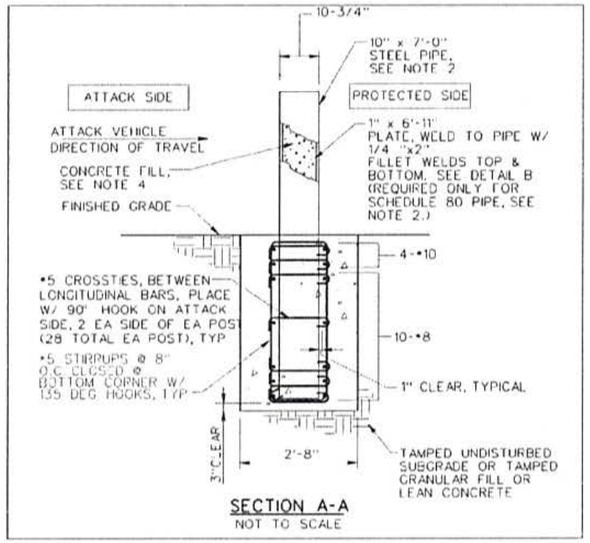


CONCRETE CURB INTEGRAL DETAIL

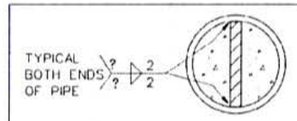
GENERAL NOTES

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

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

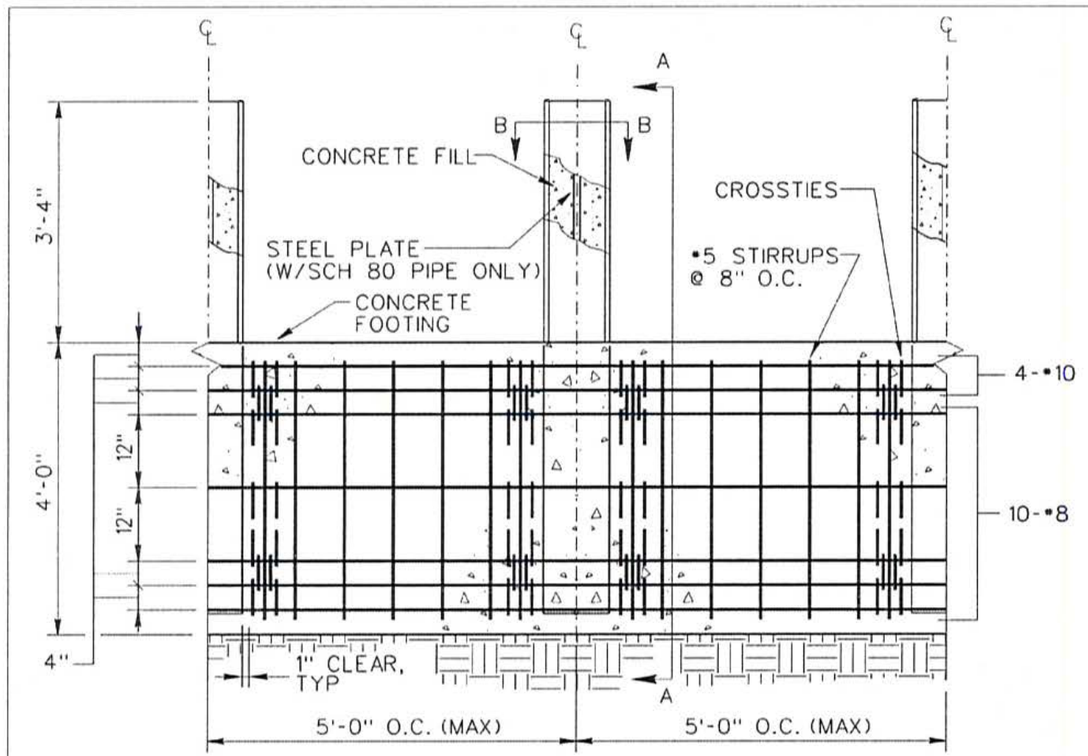


SECTION A-A
NOT TO SCALE



WELD STEEL PLATE WITHIN STEEL PIPE PARALLEL TO VEHICLE TRAVEL DIRECTION. PLATE REQUIRED ONLY FOR SCHEDULE 80 PIPE. (SEE NOTE 2, OPTION 2)

SECTION B-B
NOT TO SCALE



ELEVATION (ATTACK SIDE)
NOT TO SCALE

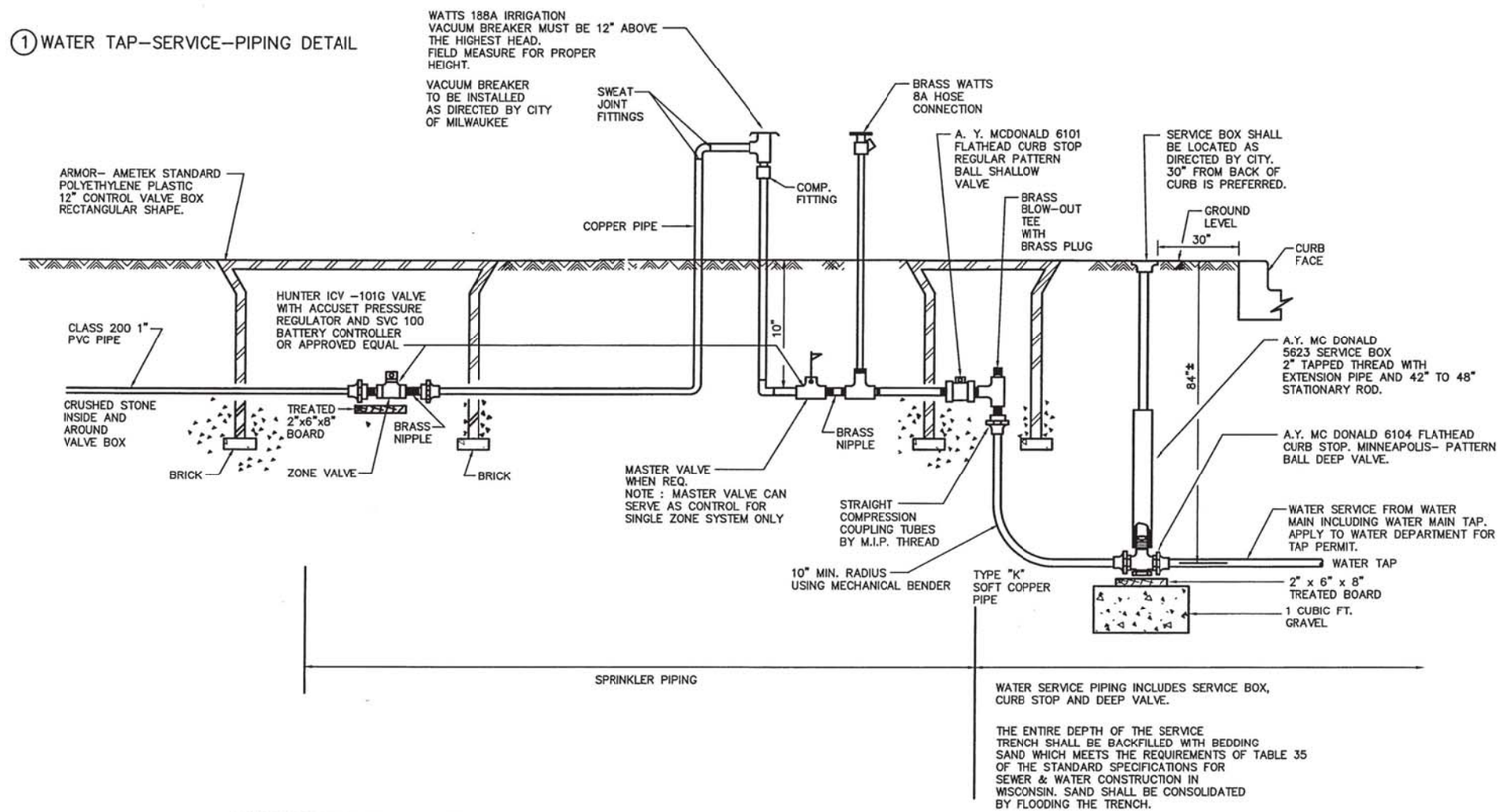
GENERAL NOTES:

1. REINFORCING SHALL BE ASTM A-615, Fy = 60 KSI.
2. STEEL PIPE SHALL BE ASTM A-53 GRADE B, Fy = 36 KSI
   OPTION 1: SCHEDULE 140 (1" WALL THICKNESS).
   OPTION 2: SCHEDULE 80 (1.5" WALL THICKNESS) WITH 1" x 83" PLATE (SEE DETAILS).
3. STEEL PLATE SHALL BE ASTM A-36, Fy = 36 KSI.
4. CONCRETE MINIMUM F'c = 24,130 kPa (3500 PSI) IN ACCORDANCE WITH ASTM C31, C39 AND C470.
5. SOILS SHALL BE COMPACTED TO 90% MAXIMUM DENSITY.
6. STAGGERED CLASS A TENSION SPLICES SHALL BA ALLOWED FOR HORIZONTAL REINFORCING.
7. CROSSTIES SHALL HAVE STANDARD 90° AND 180° BENDS AND SHALL BE PLACED WITH 90° BEND TOWARD THE ATTACK SIDE OF THE FOOTING. PROVIDE 7 PAIRS OF CROSSTIES COMBINED WITH FIRST STIRRUP EACH SIDE OF EACH BOLLARD (SEE ELEVATION).
8. ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER.

DS-22 BOLLARD: K12 RATING
NOT TO SCALE

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	DS-22 BOLLARD DETAIL - FOR INFORMATION ONLY	SHEET 11	E

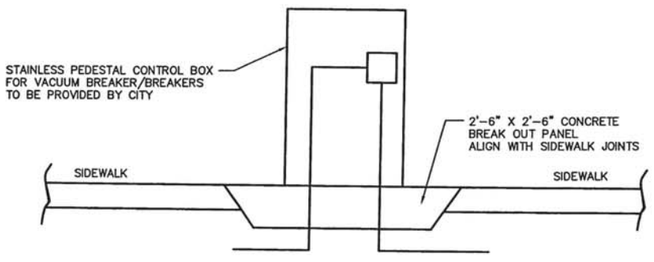
① WATER TAP–SERVICE–PIPING DETAIL



WATER SERVICE PIPING INCLUDES SERVICE BOX, CURB STOP AND DEEP VALVE.

THE ENTIRE DEPTH OF THE SERVICE TRENCH SHALL BE BACKFILLED WITH BEDDING SAND WHICH MEETS THE REQUIREMENTS OF TABLE 35 OF THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN. SAND SHALL BE CONSOLIDATED BY FLOODING THE TRENCH.

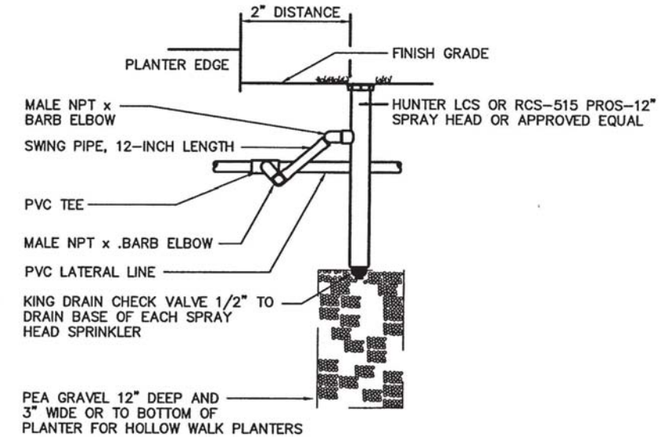
LOCATION OF VALVE BOXES & PEDESTAL TO BE LOCATED ON JOB SITE TO PROVIDE BEST LOCATION AND ACCESS CONTACT: PAUL ILLEMAN



SPECIAL PROVISION NOTES:

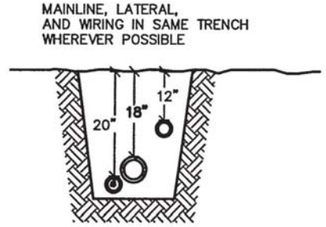
1. STANDARD SPECIAL PROVISIONS, PLAN FILE NUMBER 52–4–51, DATED JUNE 10, 2003, OR THE LATEST REVISION THEREOF ARE PART OF THIS CONTRACT. ALL WATER SERVICE WORK SHALL BE IN COMPLIANCE WITH THE CITY OF MILWAUKEE WATER SERVICE PIPING SPECIFICATIONS.
2. A SEPARATE WATER SERVICE PERMIT MUST BE ISSUED FOR EACH SERVICE TO BE INSTALLED. THE CONTRACTOR IS REQUIRED TO CONTACT THE PERMIT SECTION AT 414– 286–2854 FOR PERMIT FEES.
3. THE WORK IN THIS CONTRACT SHALL BE COMPLETED BY A CONTRACTOR WITH AT LEAST A "MASTER PLUMBING LICENSE RESTRICTED ISSUED BY THE STATE OF WISCONSIN" AND PROPERLY PROCURED PLUMBING PERMITS FROM THE CITY OF MILWAUKEE PERMIT CENTER. CONTRACTOR SHALL INCLUDE COSTS FOR ALL PERMITS AND THE WATER MAIN TAPPING CHARGE.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS FOR THIS WORK.
5. CURB STOP LOCATIONS SHALL BE COORDINATED WITH THE LOCATION OF EXISTING UTILITIES AND HOLLOW WALKS.
6. AS A PART OF THE WATER SERVICE PIPING, INSTALL A SERVICE INSULATOR AT THE CURB STOP. THE INSULATOR SHALL BE PLACED ON THE STREET SIDE OF THE CURB STOP.
7. THE SERVICE MUST RUN PERPENDICULAR TO THE WATER MAIN AND MUST REMAIN STRAIGHT TO THE CURB STOP. CONTRACTOR US RESPONSIBLE FOR THE EXCAVATION DOWN TO THE WATER MAIN.
8. NOTIFY MR. PAUL ILLEMAN AT 414– 708–3795 OF THE FORESTRY DIVISION AT LEAST TEN (10) WORKING DAYS PRIOR TO CONSTRUCTION.
9. NOTIFY MR. MARK SCHELLER AT 414–286–2427 AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION FOR THE WATER MATERIALS INSPECTION.
10. NOTIFY MR. GHASSAN KORBAN AT 414– 286–2461 AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION FOR A PUBLIC WORKS INSPECTOR TO BE PROVIDED.
11. ALL IRRIGATION SLEEVING SHALL BE PVC CLASS 200 AND 2 TIMES THE DIAMETER OF THE PIPE WITHIN.
12. ALL PVC JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
13. MECHANICALLY TAMP SOIL TO 95% PROCTOR DENSITY.

IRRIGATION HEAD DETAIL TYPICAL



PIPE AND WIRE TRENCHING

SECTION VIEW



PLAN VIEW

RUN WIRING UNDER MAINLINE. TAPE AND BUNDLE AT 10' O.C.

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	IRRIGATION DETAILS	SHEET 12	E

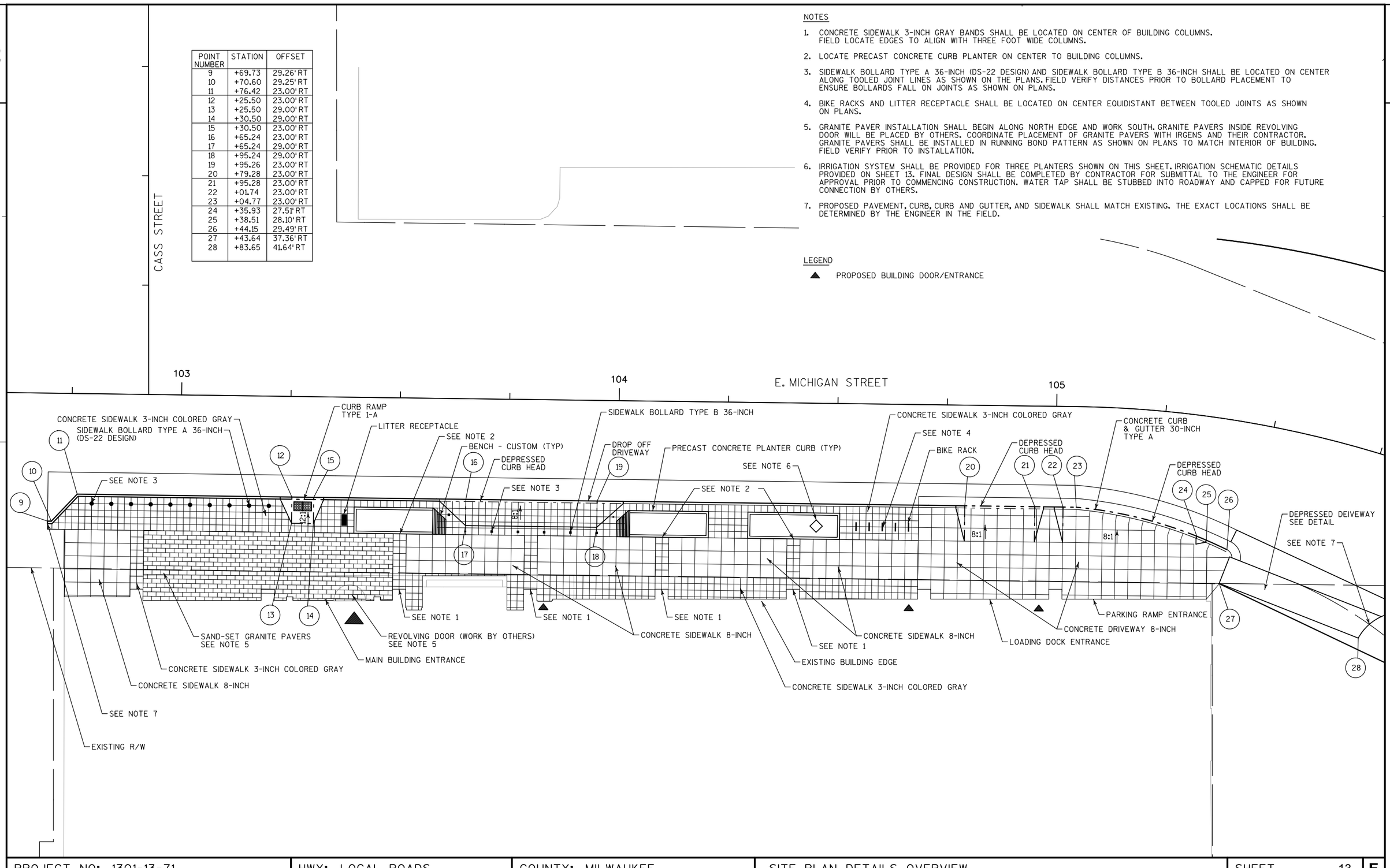
POINT NUMBER	STATION	OFFSET
9	+69.73	29.26' RT
10	+70.60	29.25' RT
11	+76.42	23.00' RT
12	+25.50	23.00' RT
13	+25.50	29.00' RT
14	+30.50	29.00' RT
15	+30.50	23.00' RT
16	+65.24	23.00' RT
17	+65.24	29.00' RT
18	+95.24	29.00' RT
19	+95.26	23.00' RT
20	+79.28	23.00' RT
21	+95.28	23.00' RT
22	+01.74	23.00' RT
23	+04.77	23.00' RT
24	+35.93	27.51' RT
25	+38.51	28.10' RT
26	+44.15	29.49' RT
27	+43.64	37.36' RT
28	+83.65	41.64' RT

NOTES

1. CONCRETE SIDEWALK 3-INCH GRAY BANDS SHALL BE LOCATED ON CENTER OF BUILDING COLUMNS. FIELD LOCATE EDGES TO ALIGN WITH THREE FOOT WIDE COLUMNS.
2. LOCATE PRECAST CONCRETE CURB PLANTER ON CENTER TO BUILDING COLUMNS.
3. SIDEWALK BOLLARD TYPE A 36-INCH (DS-22 DESIGN) AND SIDEWALK BOLLARD TYPE B 36-INCH SHALL BE LOCATED ON CENTER ALONG TOOLED JOINT LINES AS SHOWN ON THE PLANS. FIELD VERIFY DISTANCES PRIOR TO BOLLARD PLACEMENT TO ENSURE BOLLARDS FALL ON JOINTS AS SHOWN ON PLANS.
4. BIKE RACKS AND LITTER RECEPTACLE SHALL BE LOCATED ON CENTER EQUIDISTANT BETWEEN TOOLED JOINTS AS SHOWN ON PLANS.
5. GRANITE PAVER INSTALLATION SHALL BEGIN ALONG NORTH EDGE AND WORK SOUTH. GRANITE PAVERS INSIDE REVOLVING DOOR WILL BE PLACED BY OTHERS. COORDINATE PLACEMENT OF GRANITE PAVERS WITH IRGENS AND THEIR CONTRACTOR. GRANITE PAVERS SHALL BE INSTALLED IN RUNNING BOND PATTERN AS SHOWN ON PLANS TO MATCH INTERIOR OF BUILDING. FIELD VERIFY PRIOR TO INSTALLATION.
6. IRRIGATION SYSTEM SHALL BE PROVIDED FOR THREE PLANTERS SHOWN ON THIS SHEET. IRRIGATION SCHEMATIC DETAILS PROVIDED ON SHEET 13. FINAL DESIGN SHALL BE COMPLETED BY CONTRACTOR FOR SUBMITTAL TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION. WATER TAP SHALL BE STUBBED INTO ROADWAY AND CAPPED FOR FUTURE CONNECTION BY OTHERS.
7. PROPOSED PAVEMENT, CURB, CURB AND GUTTER, AND SIDEWALK SHALL MATCH EXISTING. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

LEGEND

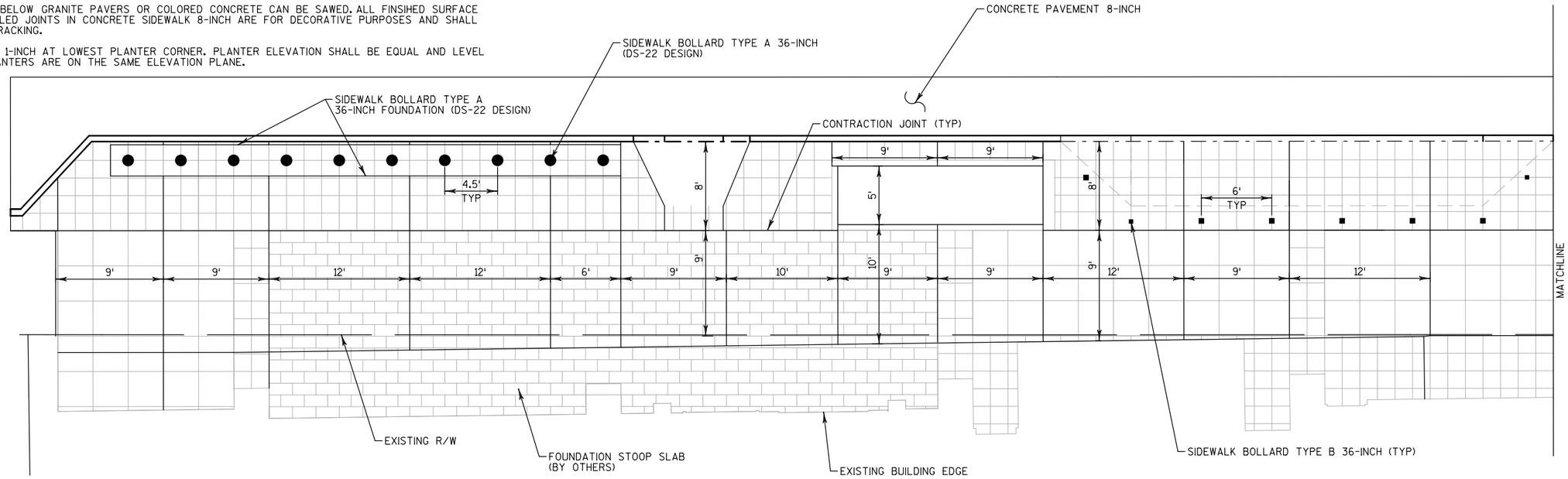
▲ PROPOSED BUILDING DOOR/ENTRANCE

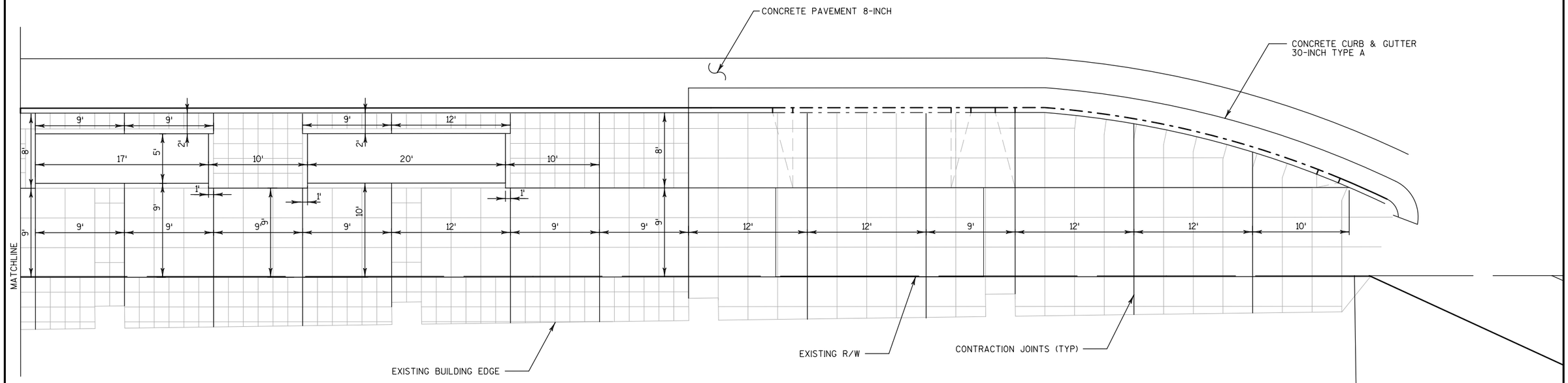


PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	SITE PLAN DETAILS OVERVIEW	SHEET 13	E

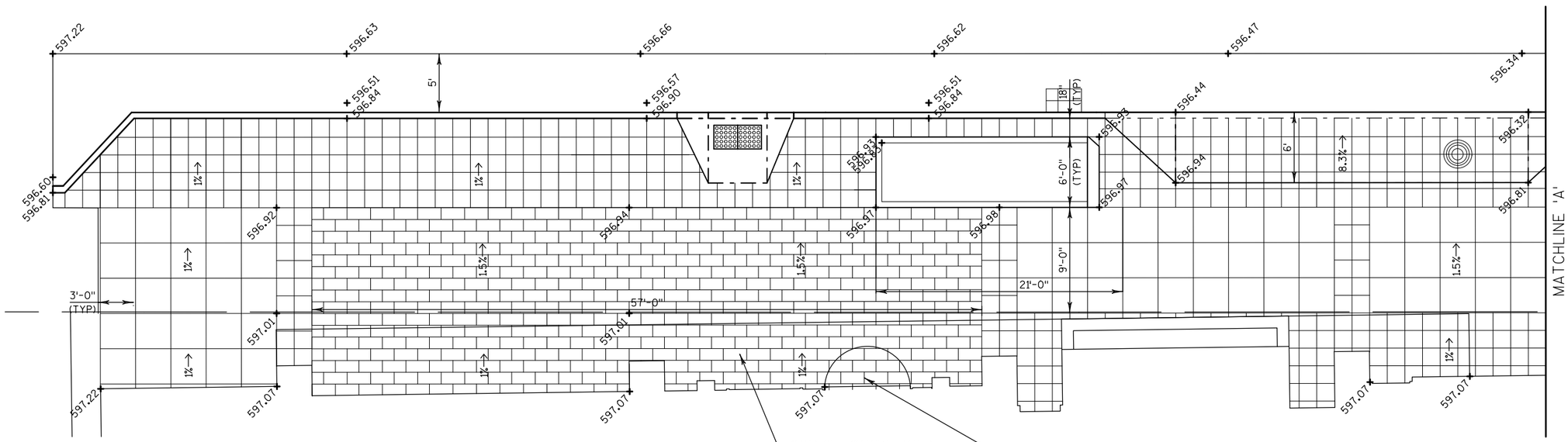
NOTES

1. PLACE CONTRACTION JOINTS A EVERY 9-FT AT MINIMUM ALONG JOINT ALONG THE LENGTH OF THE BUILDING (SEE DETAIL).
2. CONTRACTION JOINTS LOCATED BELOW GRANITE PAVERS OR COLORED CONCRETE CAN BE SAWED. ALL FINSIHED SURFACE JOINTS SHALL BE TOOLED. TOOLED JOINTS IN CONCRETE SIDEWALK 8-INCH ARE FOR DECORATIVE PURPOSES AND SHALL NOT BE USING FOR CONTROL CRACKING.
3. CONCRETE SHALL BE RECESSED 1-INCH AT LOWEST PLANTER CORNER. PLANTER ELEVATION SHALL BE EQUAL AND LEVEL AT ALL FOUR CORNERS SO PLANTERS ARE ON THE SAME ELEVATION PLANE.



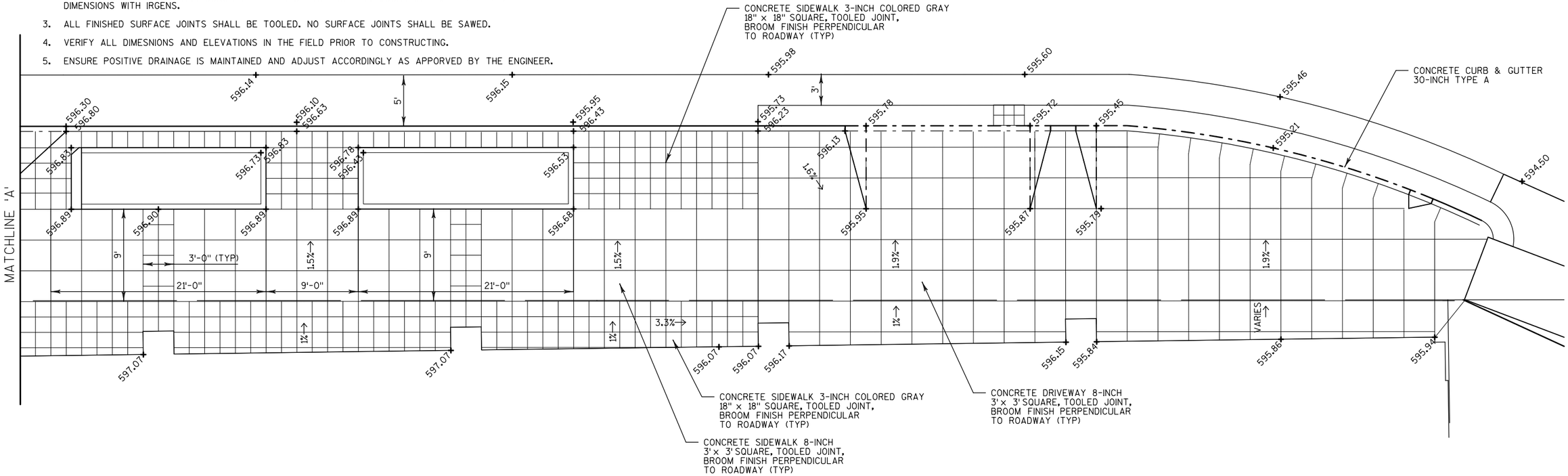


PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	JOINT DETAILS	SHEET 14	E

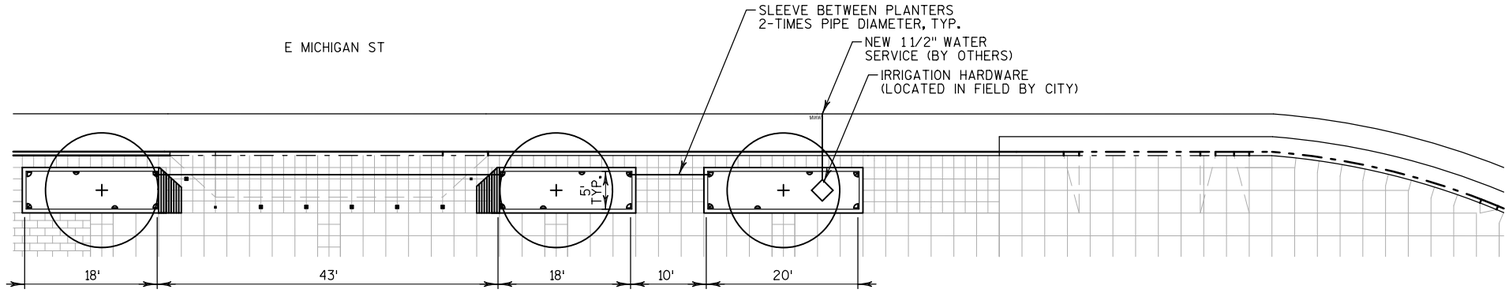


NOTES

1. GRANITE PAVERS INSIDE REVOLVING DOOR WILL BE INSTALLED BY OTHERS. COORDIANTE WITH IRGENS AND THIER DESIGNATED CONTRACTOR PRIOR TO BEGINNING PAVER INSTALLATION.
2. PLACE A TEAR AWAY BOND BREAKER AND EPOXY SEALANT ALONG ENTIRE THE BUILDING EDGE WHERE GRANITE PAVERS AND CONCRETE WILL ABUT THE BUILDING. COORDINATE MATERIAL AND DIMENSIONS WITH IRGENS.
3. ALL FINISHED SURFACE JOINTS SHALL BE TOOLED. NO SURFACE JOINTS SHALL BE SAWED.
4. VERIFY ALL DIMESNIONS AND ELEVATIONS IN THE FIELD PRIOR TO CONSTRUCTING.
5. ENSURE POSITIVE DRAINAGE IS MAINTAINED AND ADJUST ACCORDINGLY AS APPORVED BY THE ENGINEER.



PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	JOINT DETAILS	SHEET 15	E



IRRIGATION PLAN

SCALE: 1" = 10'-0"

PLANT SCHEDULE

KEY	UNIT	QUA.	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	NOTES	ITEM NUMBER
SHADE TREES								
TAX	EACH	3	TAXODIUM DISTICHUM 'MICKELSON'	SHAWNEE BRAVE BALD CYPRESS	AS SHOWN	4" CAL.	B & B	SPV.0060.09
ORNAMENTAL GRASSES								
CAK	EACH	6	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	18" O.C.	#1	INTERPLANT WITH APS	SPV.0060.10
CAR	EACH	116	CAREX FLACCA	BLUE SEDGE	12" O.C.	12 FLAT	INTERPLANT WITH NAR	SPV.0060.11
SPH	EACH	48	SPOROBOLUS HETEROLEPIS 'TARA'	TARA PRAIRIE DROPSEED	12" O.C.	12 FLAT	INTERPLANT WITH ALC	SPV.0060.12
PERENNIALS								
HHR	EACH	21	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILIES	12" O.C.	#1	INTERPLANT WITH NAR	SPV.0060.13
HOS	EACH	43	HOSTA 'GOLDEN TIARA'	GOLDEN TIARA HOSTA	12" O.C.	#1	INTERPLANT WITH NAR	SPV.0060.14
SAL	EACH	22	SALVIA NEMOROSA 'WESUWE'	WESUWE SALVIA	12" O.C.	#1	INTERPLANT WITH NAR	SPV.0060.15
BULBS								
APS	EACH	8	ALLIUM 'PURPLE SENSATION'	PURPLE SENSATION ALLIUM	18" O.C.	TOP SIZE	INTERPLANT WITH CAK	SPV.0060.16
ASB	EACH	48	ALLIUM 'SUMMER BEAUTY'	SUMMER BEAUTY ALLIUM	12" O.C.	TOP SIZE	INTERPLANT WITH SPH	SPV.0060.17
NAR	EACH	606	NARCISSUS 'ALL SPRING MIX'	ALL SPRING MIX DAFFODILS	VARIES	TOP SIZE	INTERPLANT WITH CAR AND PERENNIALS	SPV.0060.18
MISC								
	CY	32		PLANTING SOIL MIX				SPV.0035.02
	SY	32		SHREDDED HARDWOOD BARK MULCH, 2"				SPV.0180.01

IRRIGATION NOTES:

1. PIPE LOCATIONS ARE DIAGRAMMATIC. ALL VALVES AND MAINLINE SHALL BE INSTALLED WITHIN LANDSCAPE AREAS.

2. IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION (P.O.C.).

3. ALL HEADS TO BE INSTALLED ON SWING JOINTS.

4. ALL ELECTRIC VALVES SHALL BE LOCATED IN VALVE BOXES THAT ARE INSTALLED FLUSH WITH GRADE.

5. ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH WATERPROOF WIRE CONNECTORS AND BE IN VALVE OR SPLICE BOXES.

6. PIPE CROSSING UNDER CONCRETE OR ASPHALT SHALL BE IN RIGID SLEEVING.

7. FLOW PATTERN AND DISTANCE OF SPRAY SHALL BE REGULATED WITH THE USE OF ADJUSTMENT SCREW(S) TO MINIMIZE OVERTHROW ONTO PAVED AREAS. HOWEVER, RADIUS SHALL NOT BE REDUCED MORE THAN 25% OR ALLOWED TO CAUSE A LACK OF COVERAGE.

8. NO ALLOWANCES MADE FOR OBSTRUCTIONS NOT SHOWN ON PLANS. ADJUSTMENTS NECESSARY IN THE FIELD SHALL BE MADE BY THE CONTRACTOR.

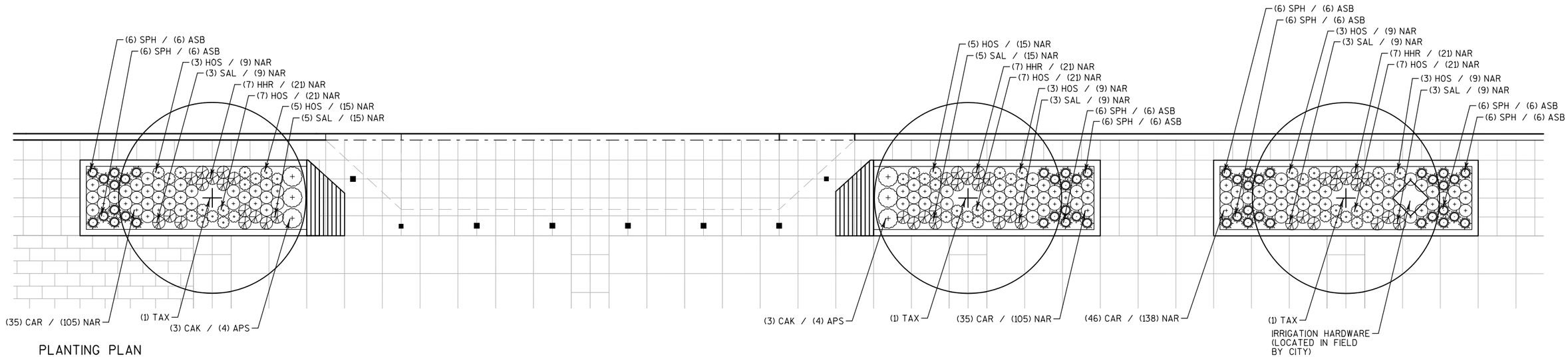
9. NO CHANGES TO PLAN OR MATERIALS ARE ALLOWED WITHOUT PRIOR CONSENT OF CITY OF MILWAUKEE REPRESENTATIVE.

10. BIDDING CONTRACTORS SHOULD BECOME THOROUGHLY FAMILIAR WITH ALL FACETS OF THE PROPOSED IRRIGATION SYSTEM. FAILURE TO CLARIFY MISUNDERSTANDINGS, OR INTENT OF THESE DRAWINGS AND SPECIFICATIONS BEFORE SUBMITTAL OF BID SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. IRRIGATION CONTRACTOR WILL ARRANGE INSPECTIONS REQUIRED BY LOCAL AGENCIES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION AS REQUIRED. ALL WIRING PER LOCAL CODE. BACKFLOW PREVENTION AS PER LOCAL CODE.

IRRIGATION LEGEND (SEE IRRIGATION DETAILS:

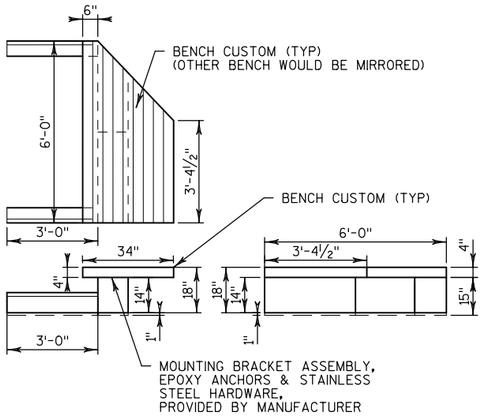
QUA.	SYM.	DESCRIPTION	PRESSURE	FLOW
6	⧈	HUNTER LCS-515 PRO-S 12	30	0.65
6	◭	HUNTER RCS-515 PRO-S 12	30	0.65
6	◠	HUNTER SS-530 PRO-S 12	30	0.65
1	WWW	MILWAUKEE WATER WORKS P.O.C.		
1	◇	IRRIGATION HARDWARE (VACUUM BREAKER, VALVE, CONTROLLER)		
-	-	MAINLINE AND LATERALS CLASS 200 1-1/2" PVC PIPE		



PLANTING PLAN

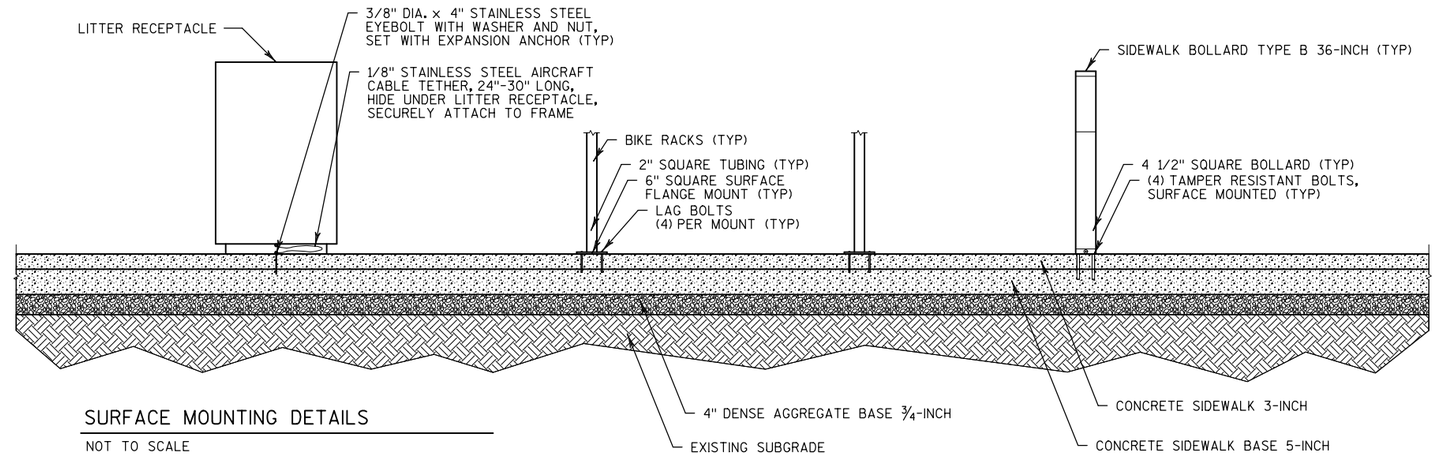
SCALE: 1/4" = 1'-0"

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	IRRIGATION AND PLANTING PLAN	SHEET 16	E



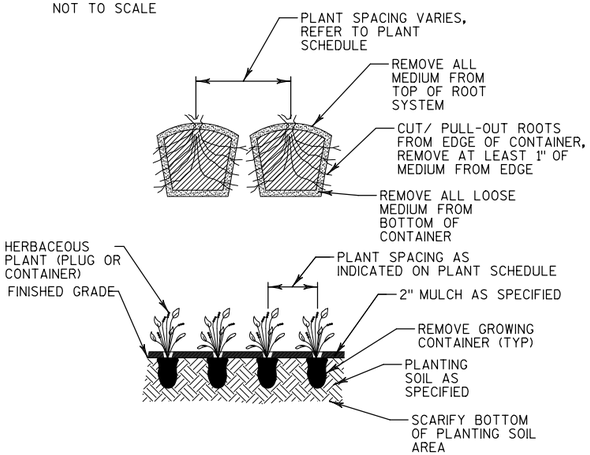
CUSTOM BENCH DETAIL

NOT TO SCALE



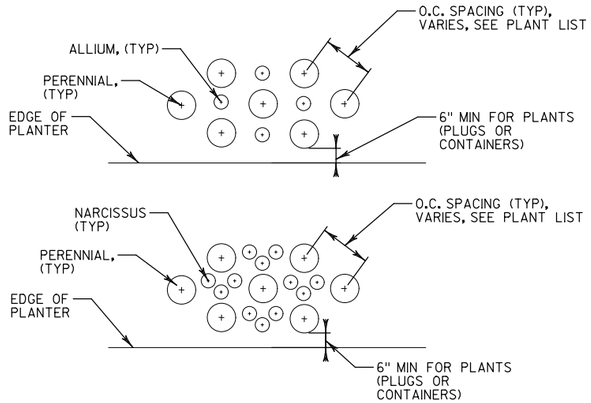
SURFACE MOUNTING DETAILS

NOT TO SCALE



PERENNIAL PLANTING DETAILS

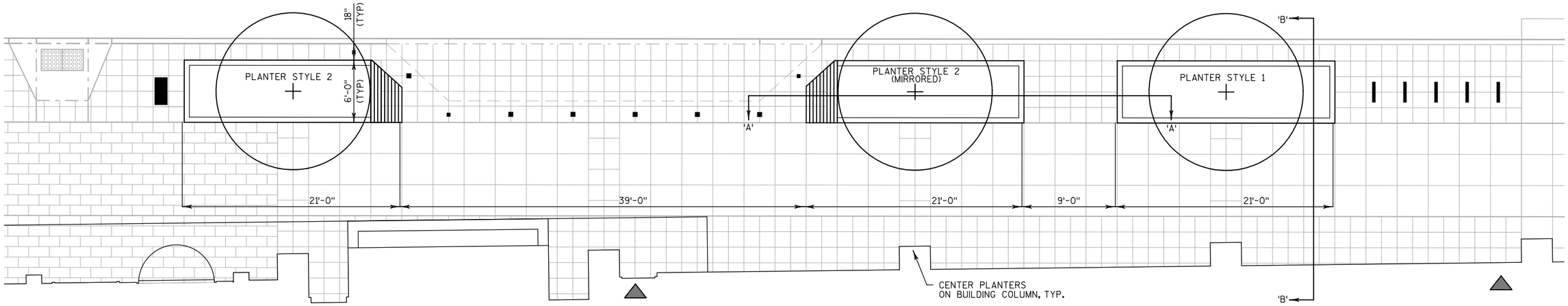
NOT TO SCALE



INTERPLANTING DETAILS

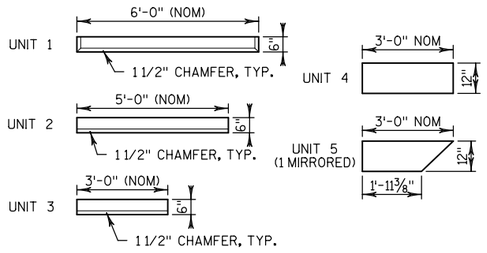
NOT TO SCALE

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	LANDSCAPE AND SITE FURNITURE DETAILS	SHEET 17	E



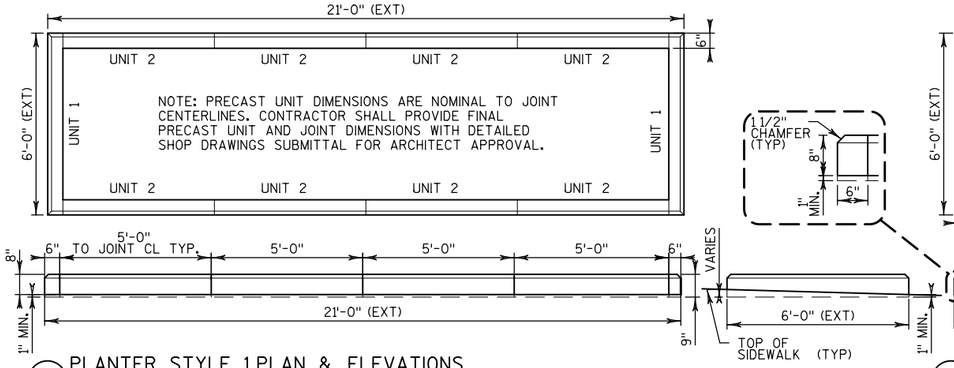
PLANTER LAYOUT PLAN

SCALE: 1" = 20'-0"



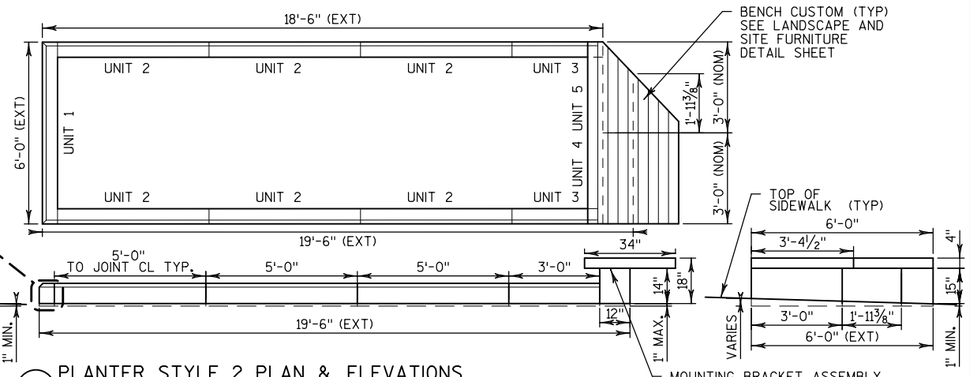
1 PRECAST CONCRETE PLANTER UNIT SIZES (PLAN VIEW)

NOT TO SCALE



2 PLANTER STYLE 1 PLAN & ELEVATIONS

NOT TO SCALE

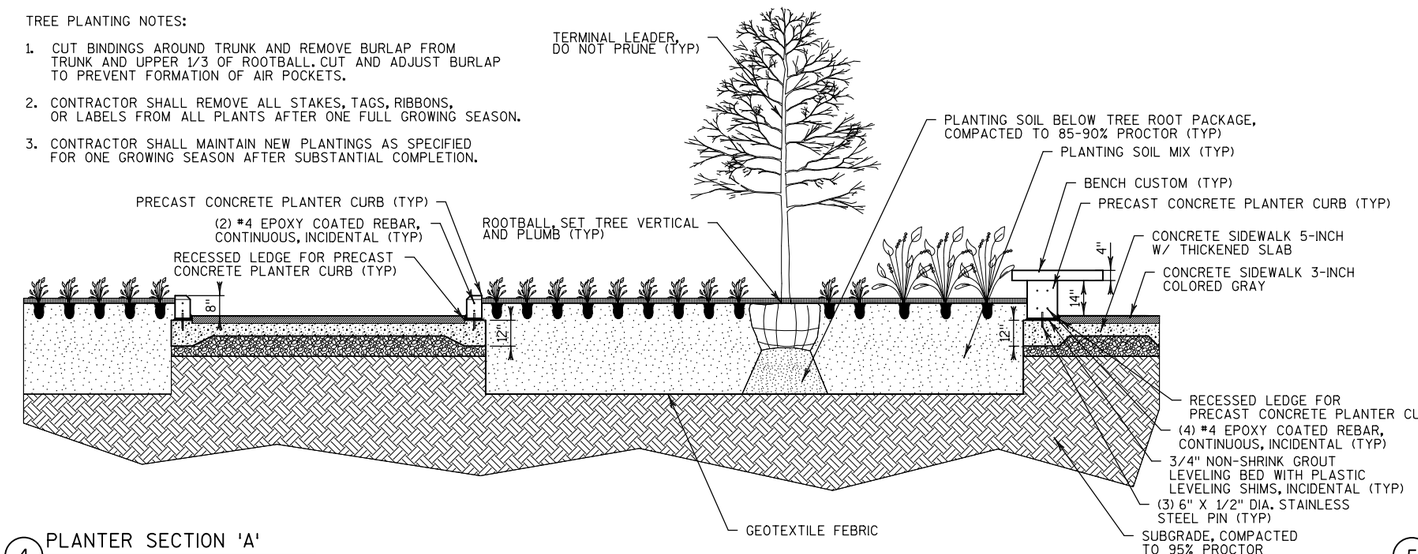


3 PLANTER STYLE 2 PLAN & ELEVATIONS

NOT TO SCALE

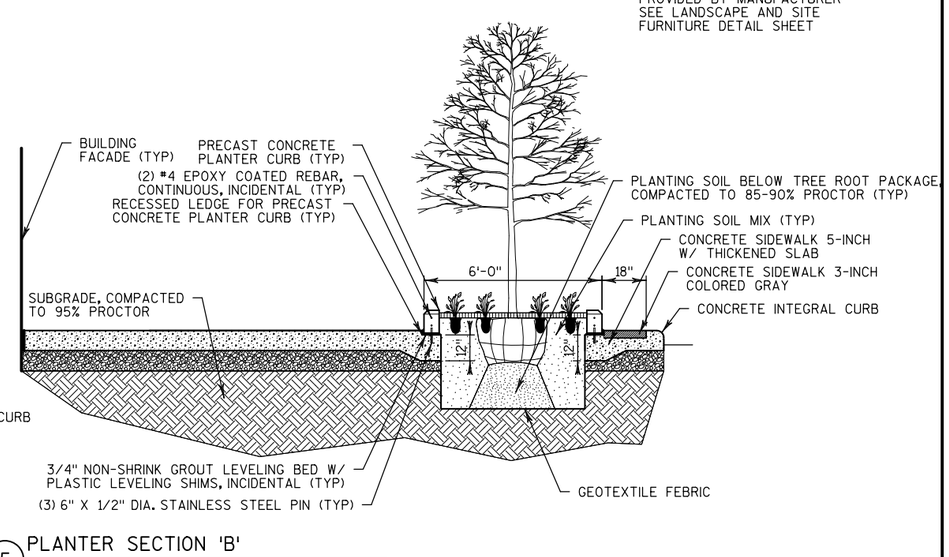
TREE PLANTING NOTES:

1. CUT BINDINGS AROUND TRUNK AND REMOVE BURLAP FROM TRUNK AND UPPER 1/3 OF ROOTBALL. CUT AND ADJUST BURLAP TO PREVENT FORMATION OF AIR POCKETS.
2. CONTRACTOR SHALL REMOVE ALL STAKES, TAGS, RIBBONS, OR LABELS FROM ALL PLANTS AFTER ONE FULL GROWING SEASON.
3. CONTRACTOR SHALL MAINTAIN NEW PLANTINGS AS SPECIFIED FOR ONE GROWING SEASON AFTER SUBSTANTIAL COMPLETION.



4 PLANTER SECTION 'A'

NOT TO SCALE



5 PLANTER SECTION 'B'

NOT TO SCALE

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	PLANTER DETAILS	SHEET 18	E

TRAFFIC & STREET LIGHTING GENERAL NOTES:

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

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

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

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

2 LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.

3 TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 1.5-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.

4 DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

5 CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT THE BASE OF THE BACKSIDE OF THE CURB/GUTTER SECTION.

6 WHEN THERE IS MORE THAN ONE CONDUIT TO BE LAID BEHIND THE CURB, PLACE ALL CONDUITS IN THE SAME TRENCH.

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

8 THE TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

9 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.

10 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)

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

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

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

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

15 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 UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

16 WHEN ENDS OF CONDUIT DO NOT CONNECT TO A VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(1) GRANULAR BACKFILL)

17 ALL PIPE CROSSINGS AND VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

18 ALL POLES AND TRAFFIC STANDARDS IN CONCRETE ARE REQUIRED TO HAVE A 30"X30" BOX SHAPED JOINT PLACED AROUND THEM USING AN EXPANSION JOINT FILLER. UNLESS NOTED OTHERWISE (SEE DETAIL 122)

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

TRAFFIC & STREET LIGHTING GENERAL NOTES:

20 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687

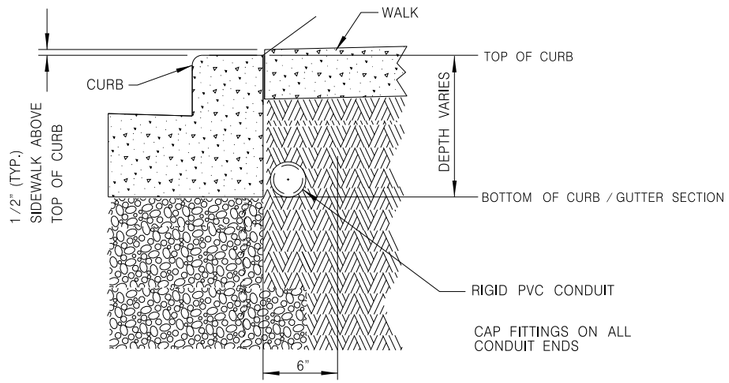
21 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL VAULT, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

22 CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

UTILITY LINE CODE

SAN	SANITARY SEWER
STO	STORM SEWER
W	WATER
G	GAS
G	PROPOSED GAS
E	ELECTRIC
TE&ES	TRAFFIC & STREET LIGHTING
	OLD CITY UNDERGROUND CONDUIT
CUC	PROPOSED CITY UNDERGROUND CONDUIT
T	TELEPHONE
TV	CABLE

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



100 DETAIL "A"

TYPICAL CONDUIT INSTALLATION
BEHIND CURB

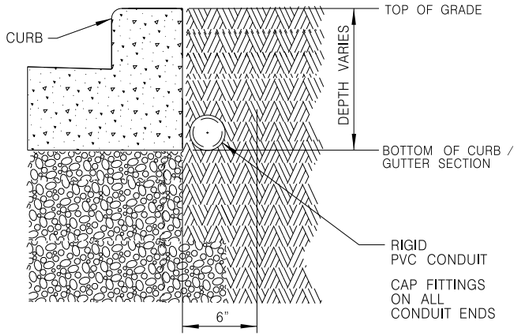
NOT TO SCALE

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

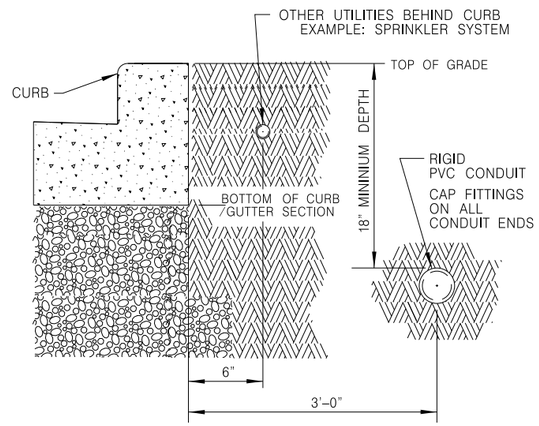
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

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



DETAIL "C"

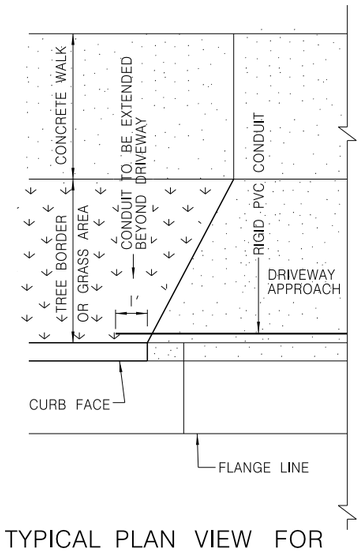


100 DETAIL "B" & "C"

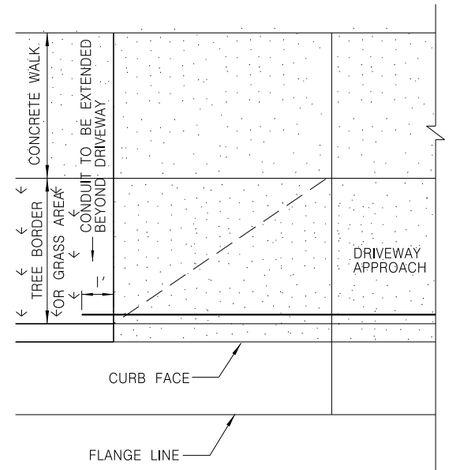
TYPICAL CONDUIT INSTALLATION
BEHIND CURB

NOT TO SCALE

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

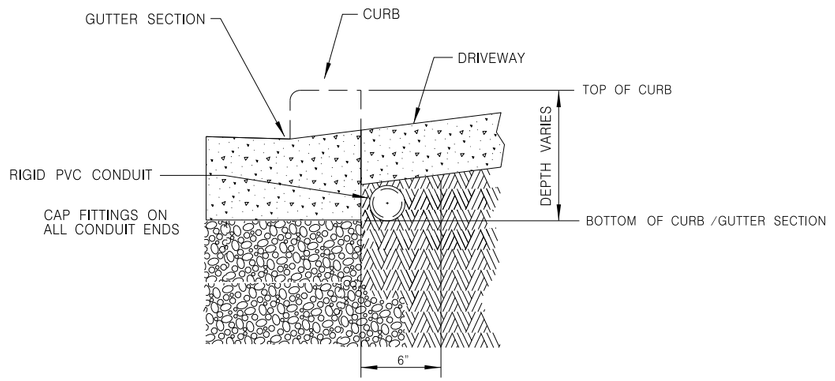


TYPICAL PLAN VIEW FOR
FLARED DRIVEWAY



TYPICAL PLAN VIEW FOR
DEPRESSED DRIVEWAY

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



100 DETAIL

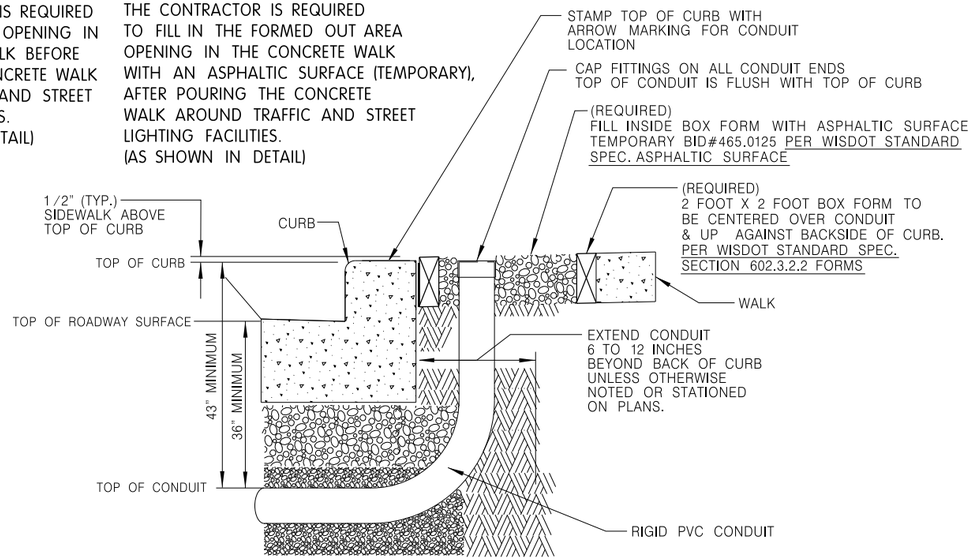
TYPICAL CONDUIT INSTALLATION
UNDER DRIVEWAYS OR PEDESTRIAN RAMPS

NOT TO SCALE

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

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH AN ASPHALTIC SURFACE (TEMPORARY), AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

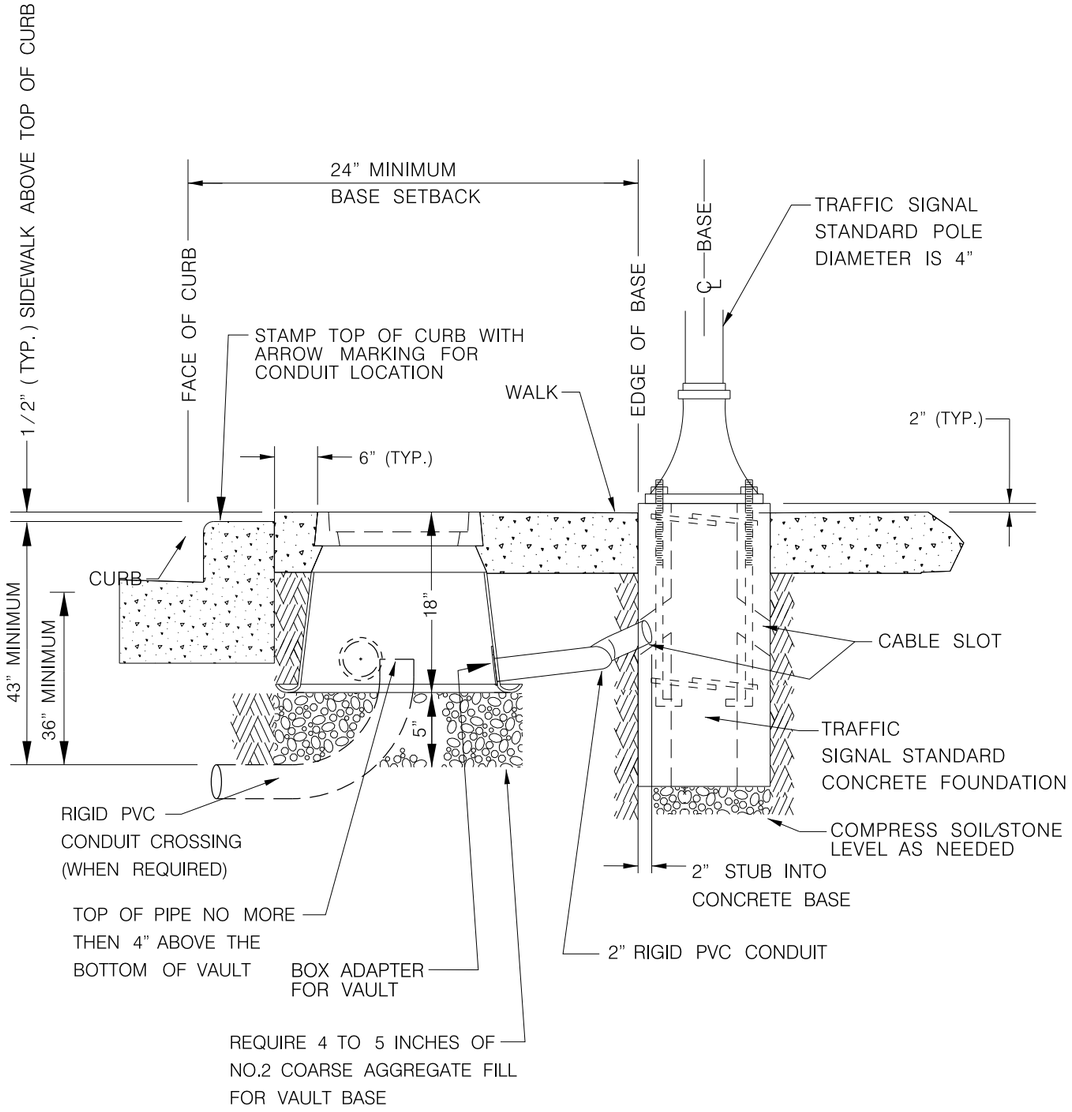


102 DETAIL VERSION #2(S)

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS FROM FULL WALK AREAS

NOT TO SCALE

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

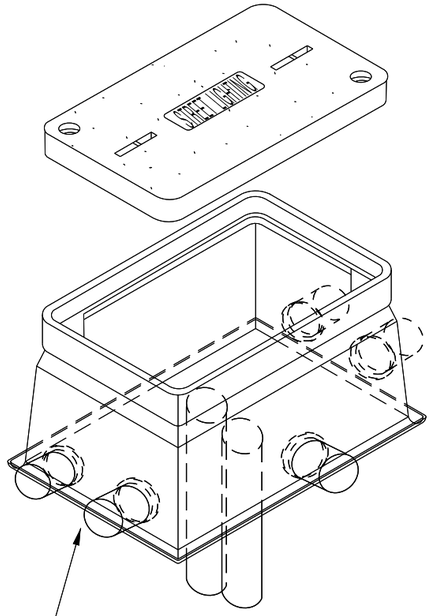


109 DETAIL VERSION #2(S)

TYPICAL CONDUIT INSTALLATION FROM VAULT TO SIGNAL STANDARD AND TYPICAL BASE INSTALLATION

NOT TO SCALE

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



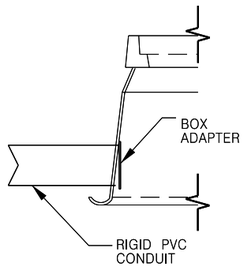
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY

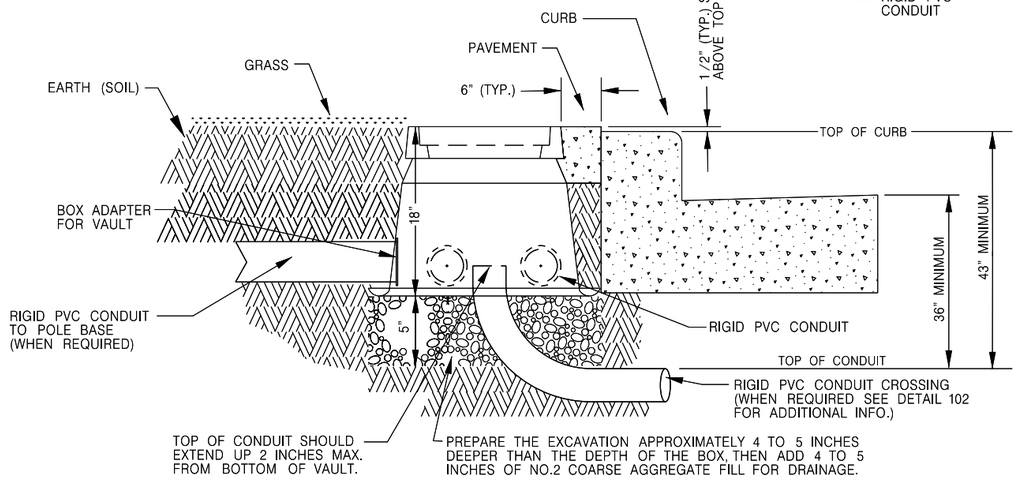
ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS



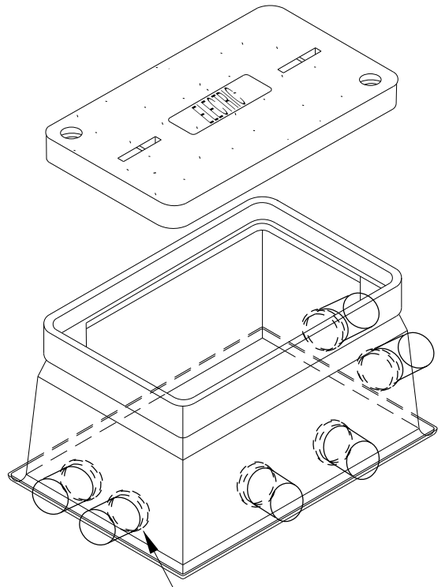


112 DETAIL VERSION #2(S)

NOT TO SCALE

TYPICAL VAULT INSTALLATION IN EITHER PAVEMENT OR GRASS AREAS

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

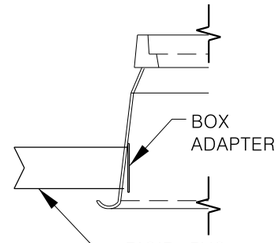


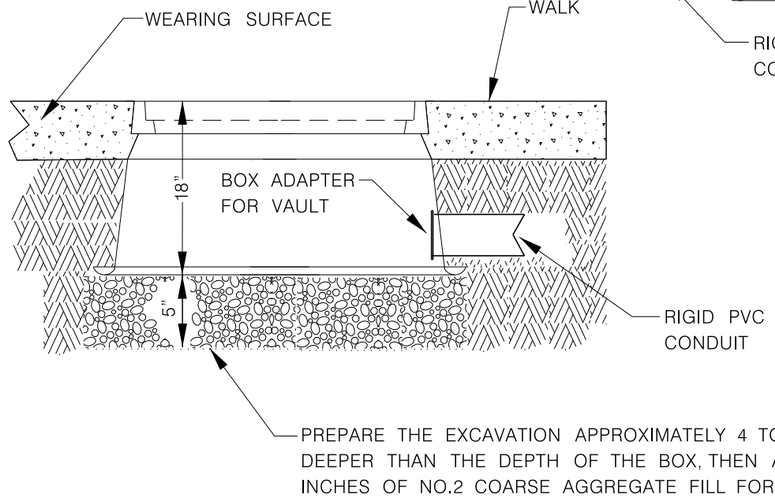
HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W / 2 BOLTS
COLOR: GRAY

ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS





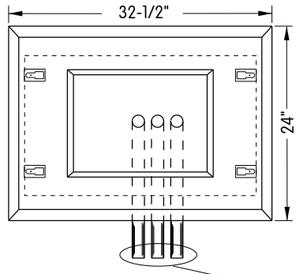
113 DETAIL

NOT TO SCALE

TYPICAL VAULT INSTALLATION IN SIDEWALK

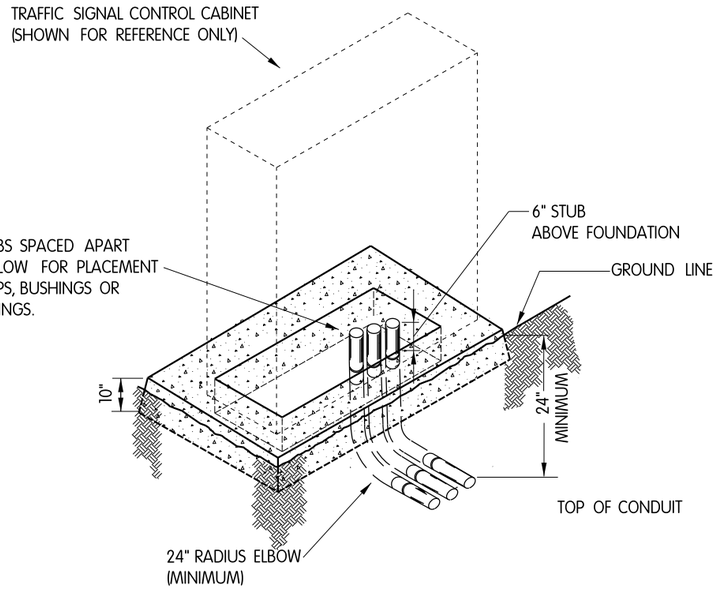
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

REFERENCE FOR CONTRACTOR ONLY



NOTE:
REFER TO STREET LIGHTING AND TRAFFIC SIGNAL CONDUIT PLAN FOR THE QUANTITY & SIZE OF CONDUIT REQUIRED IN THE CONCRETE CONTROL CABINET BASE

PLAN VIEW



ISOMETRIC VIEW

125A

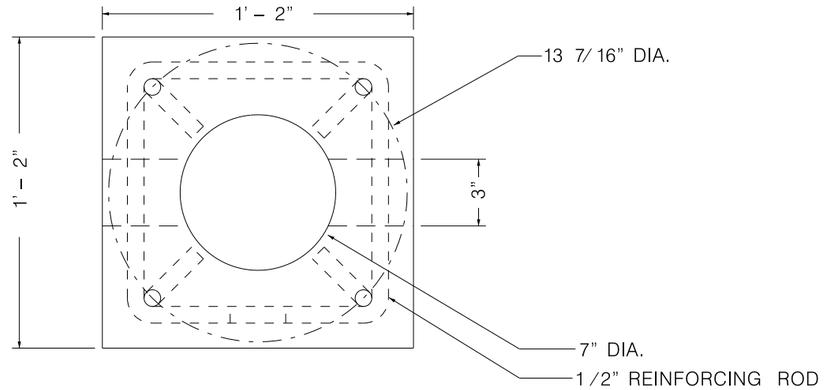
TYPICAL DETAIL

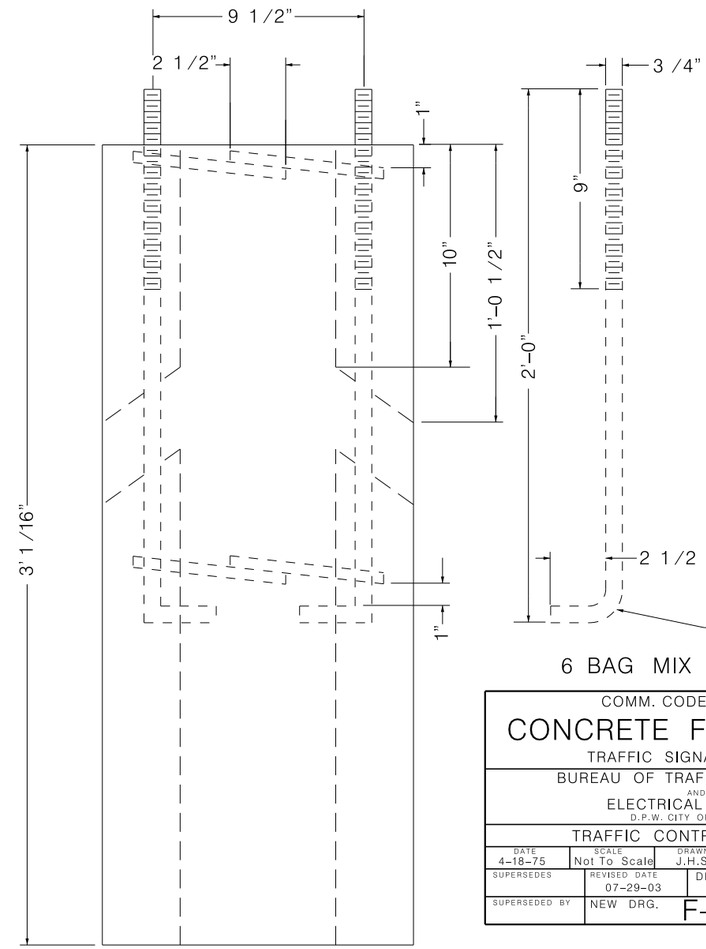
NOT TO SCALE

CONDUIT INSTALLATION TO TRAFFIC CONTROL CABINET CONCRETE FOUNDATION

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

REFERENCE FOR CONTRACTOR ONLY
(CITY FURNISHED)





NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE 1238–936

CONCRETE FOUNDATION

TRAFFIC SIGNAL STANDARD

BUREAU OF TRAFFIC ENGINEERING
AND
ELECTRICAL SERVICES
D.P.W. CITY OF MILWAUKEE

TRAFFIC CONTROL MATERIAL

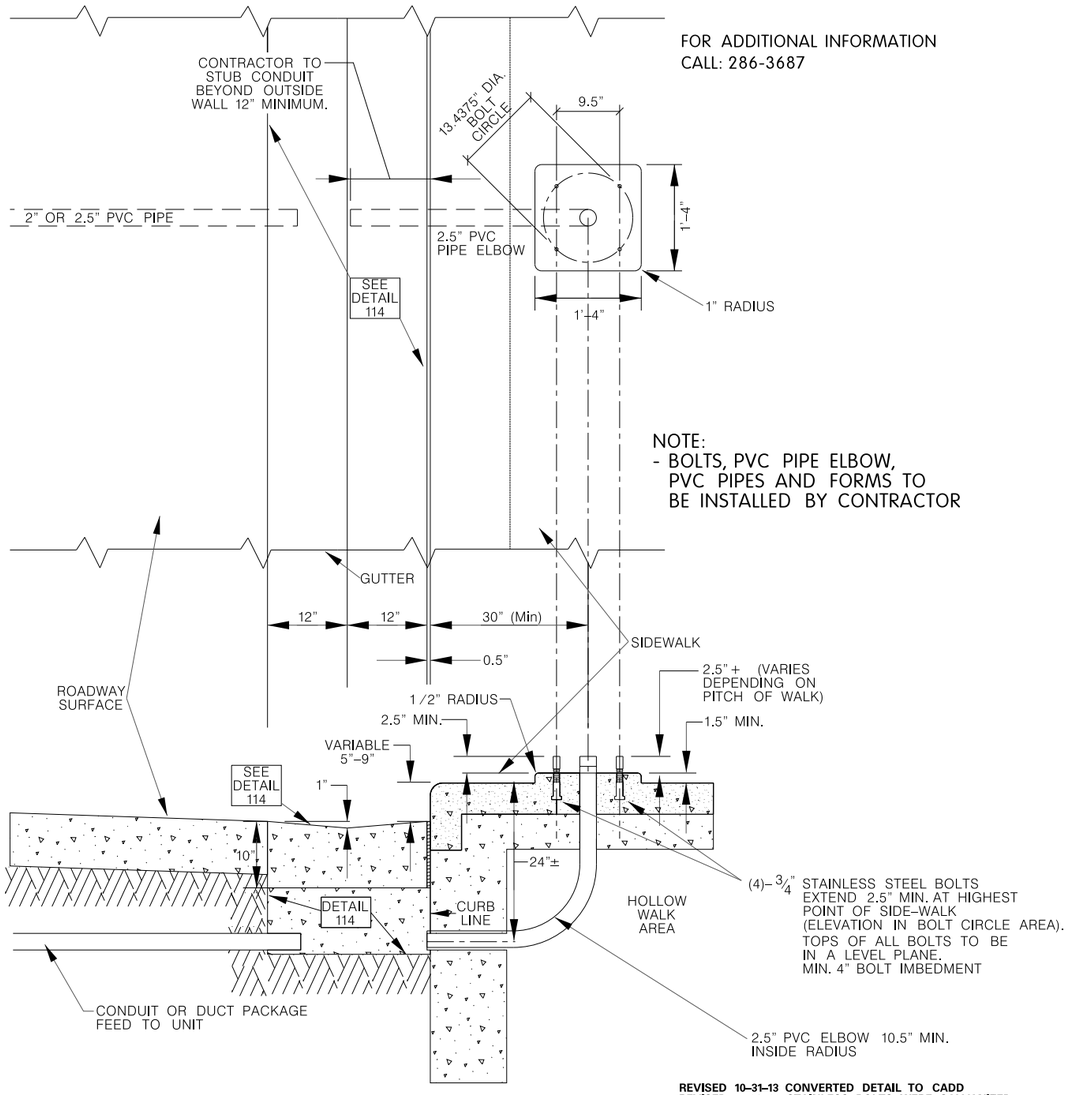
DATE	SCALE	DRAWN	CHECKED	APPROVED
4-18-75	Not To Scale	J.H.S.	B.J.T.	R.J.B.

SUPERSEDES	REVISED DATE	DRG.
	07-29-03	C-75-563-T
SUPERSEDED BY	NEW DRG.	
		F-82-535-T

REFERENCE FOR CONTRACTOR ONLY

2

FOR ADDITIONAL INFORMATION
CALL: 286-3687



NOTE:
- BOLTS, PVC PIPE ELBOW, PVC PIPES AND FORMS TO BE INSTALLED BY CONTRACTOR

NOT TO SCALE

REVISED 10-31-13 CONVERTED DETAIL TO CADD
REVISED 11-03-69 STAINLESS BOLTS WERE GALVANIZED
REVISED 01-070-69 GALVANIZED BOLTS ADDED

Typical Bolt Circle and Elbow Installation In Hollow Walks				
TRAFFIC SIGNAL STANDARD				
BUREAU OF TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 12-3-59	SCALE Not To Scale	DRAWN R.W.G.	CHECKED B.J.T.	APPROVED D.A.K.
SUPERSEDES		DRG. C-59-549-T		

134 DETAIL

TYPICAL BOLT CIRCLE AND ELBOW INSTALLATION ON HOLLOW WALK

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

PLOTDATE

2

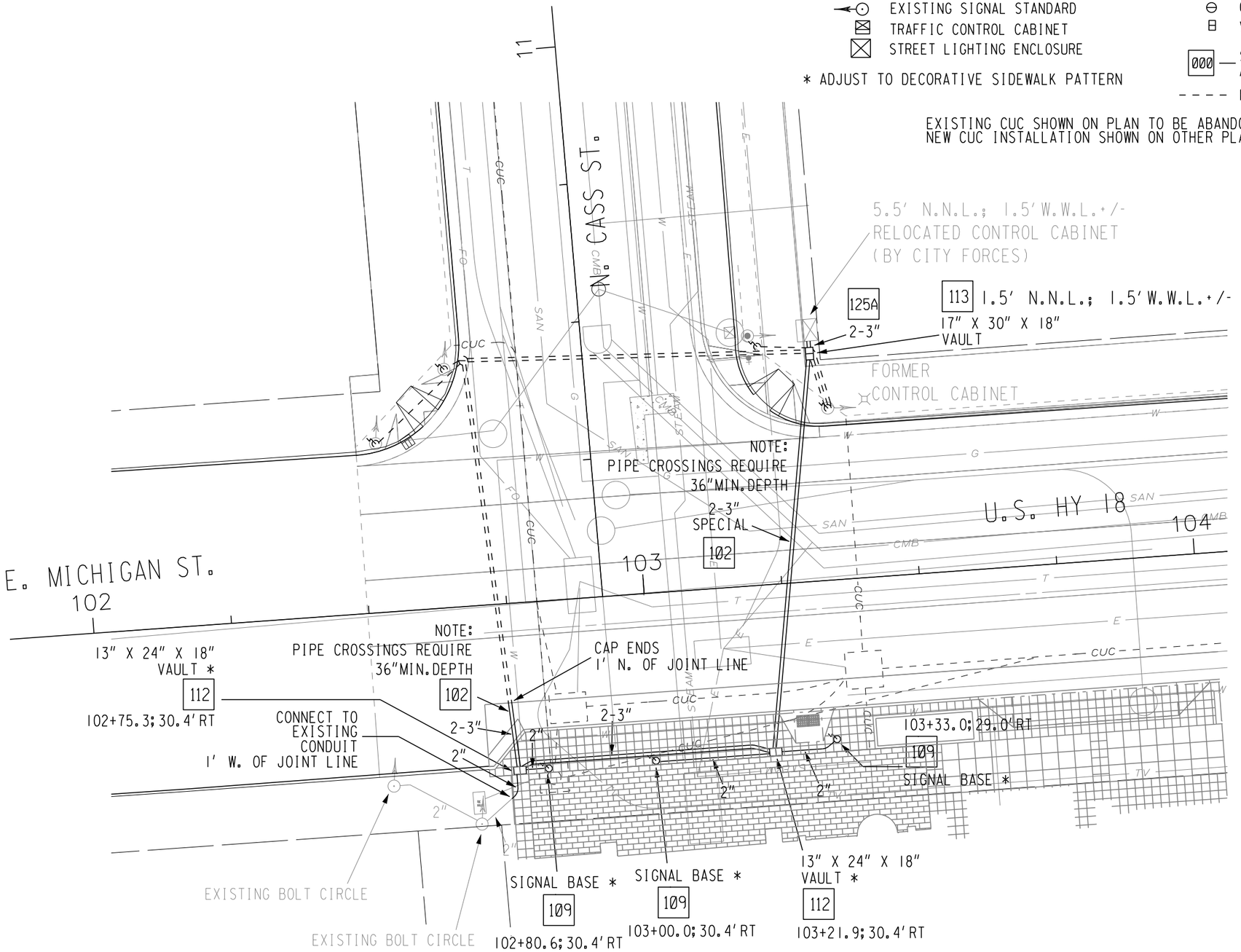
LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE

* ADJUST TO DECORATIVE SIDEWALK PATTERN

- PVC CONDUIT TO BE INSTALLED
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- GUTTER VAULT TO BE INSTALLED
- VAULT TO BE INSTALLED
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION
- - - - FUTURE MATERIAL (PHASE 2)

EXISTING CUC SHOWN ON PLAN TO BE ABANDONDED
NEW CUC INSTALLATION SHOWN ON OTHER PLAN SHEET



N. CASS STREET &
E. MICHIGAN STREET (US 18)
PHASE 1

NOTE:

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

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

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

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

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

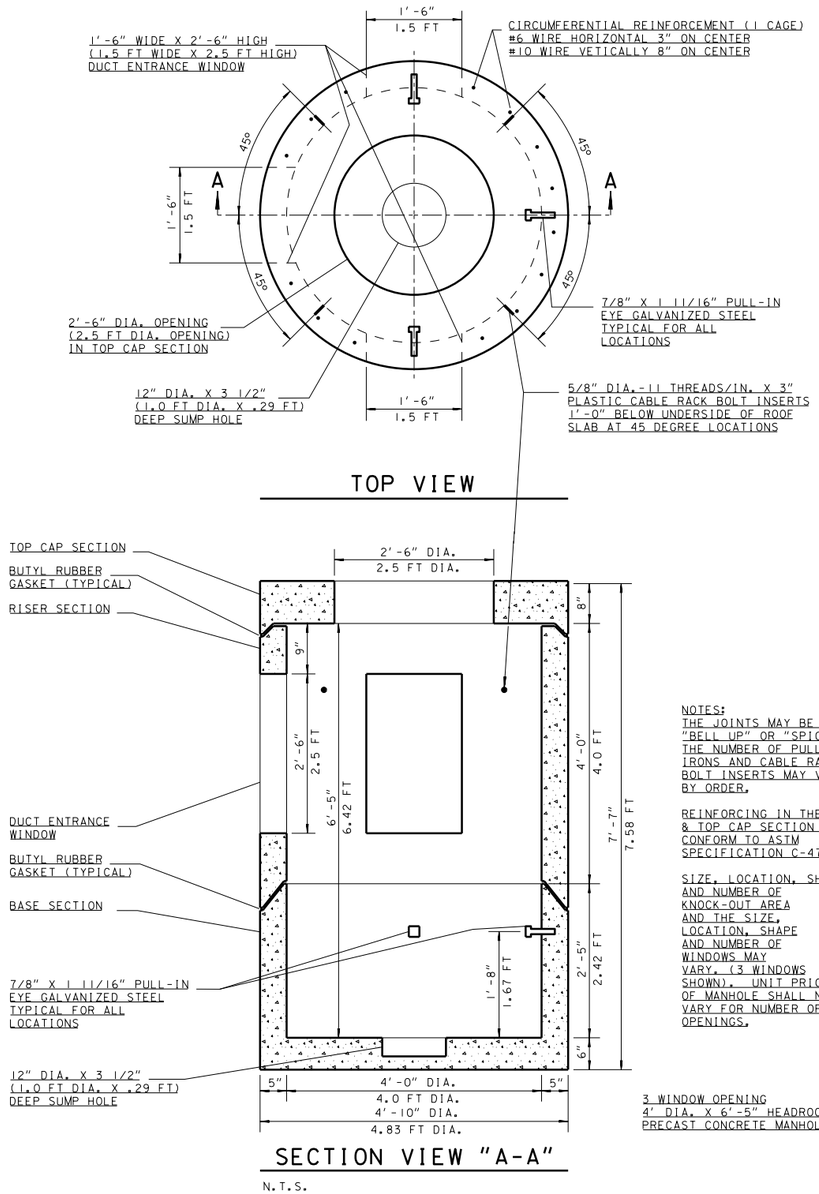
CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

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

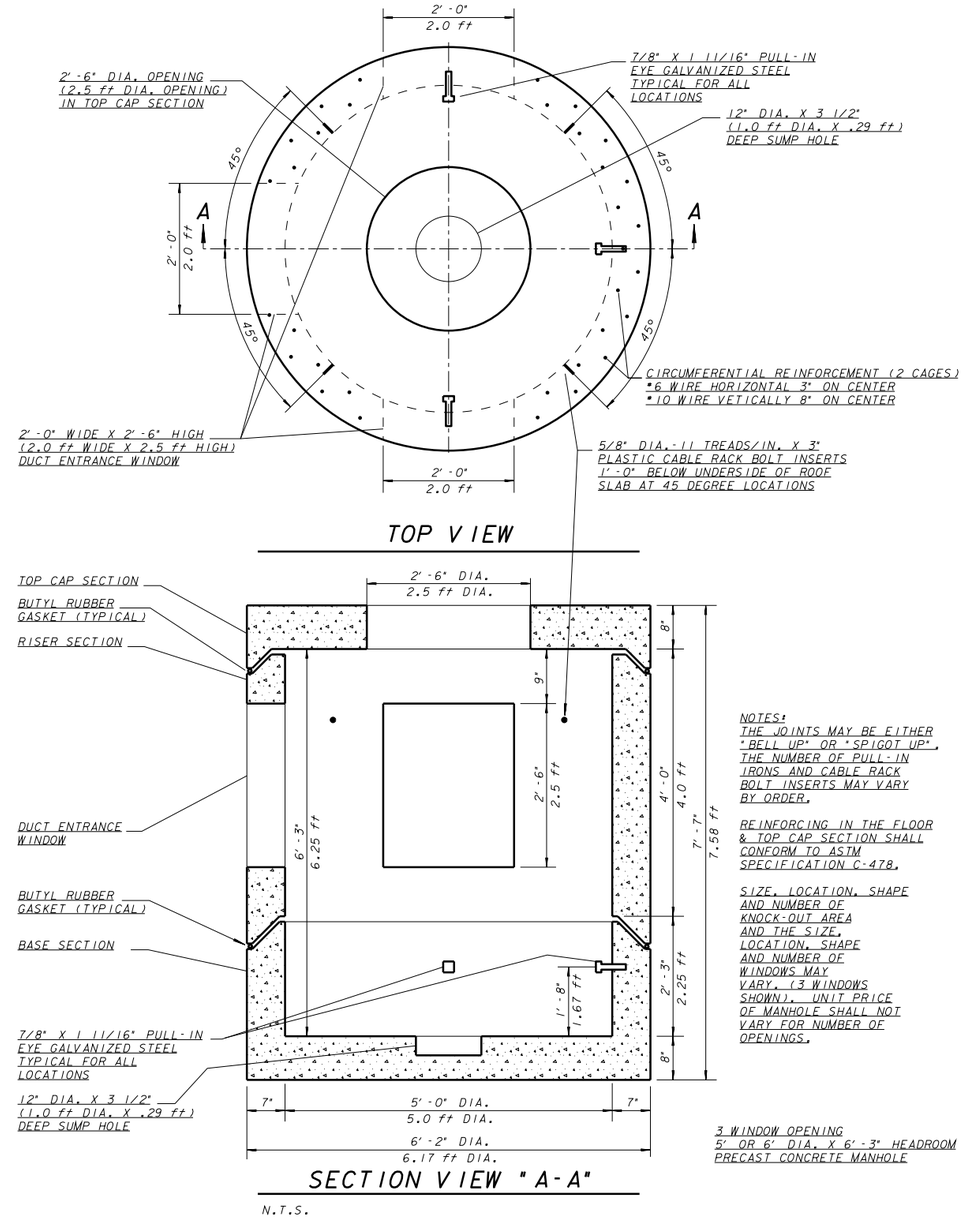
LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT ARE BOXED OUT AND FILLED WITH A 4" THICK ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

PROJECT NO: 1300–13–71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT PLAN	SHEET 25	E

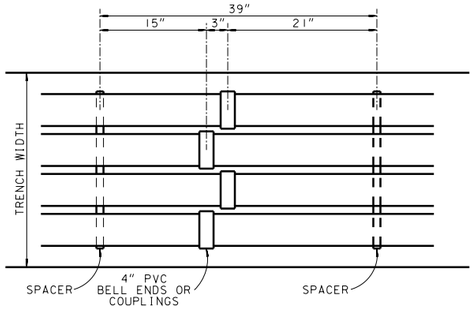
FILE NAME : W:\bte\signals\PAVING AND DESIGN\Cass & Michigan (833 E. Michigan)\Cass & Michigan Phase1 Conduit.dgn
PLOT DATE : 11-SEP-2015 11:44
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 20.000000:1.000000
WISDOT/CADDS SHEET 42



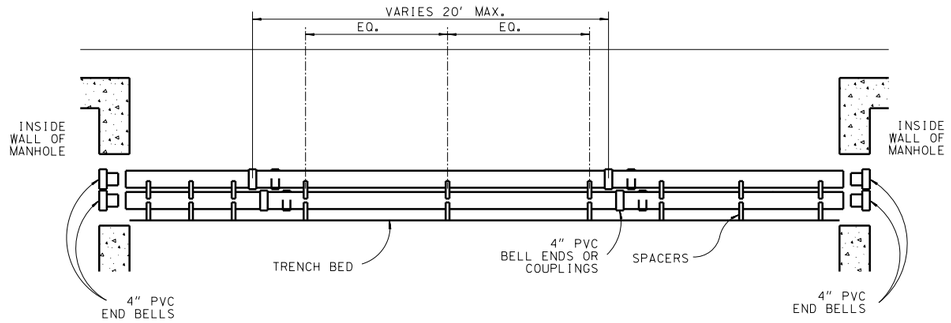
4' DIAMETER MANHOLE TYPE TES DETAIL



5' DIAMETER MANHOLE TYPE TES DETAIL

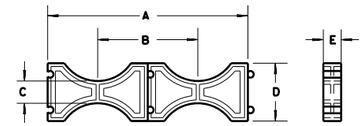


PLAN VIEW
N.T.S.



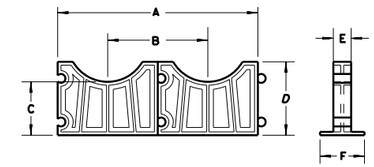
SECTION VIEW
N.T.S.

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	1 ½"	1 ½"
D	3 ½"	3 ½"
E	1"	1"



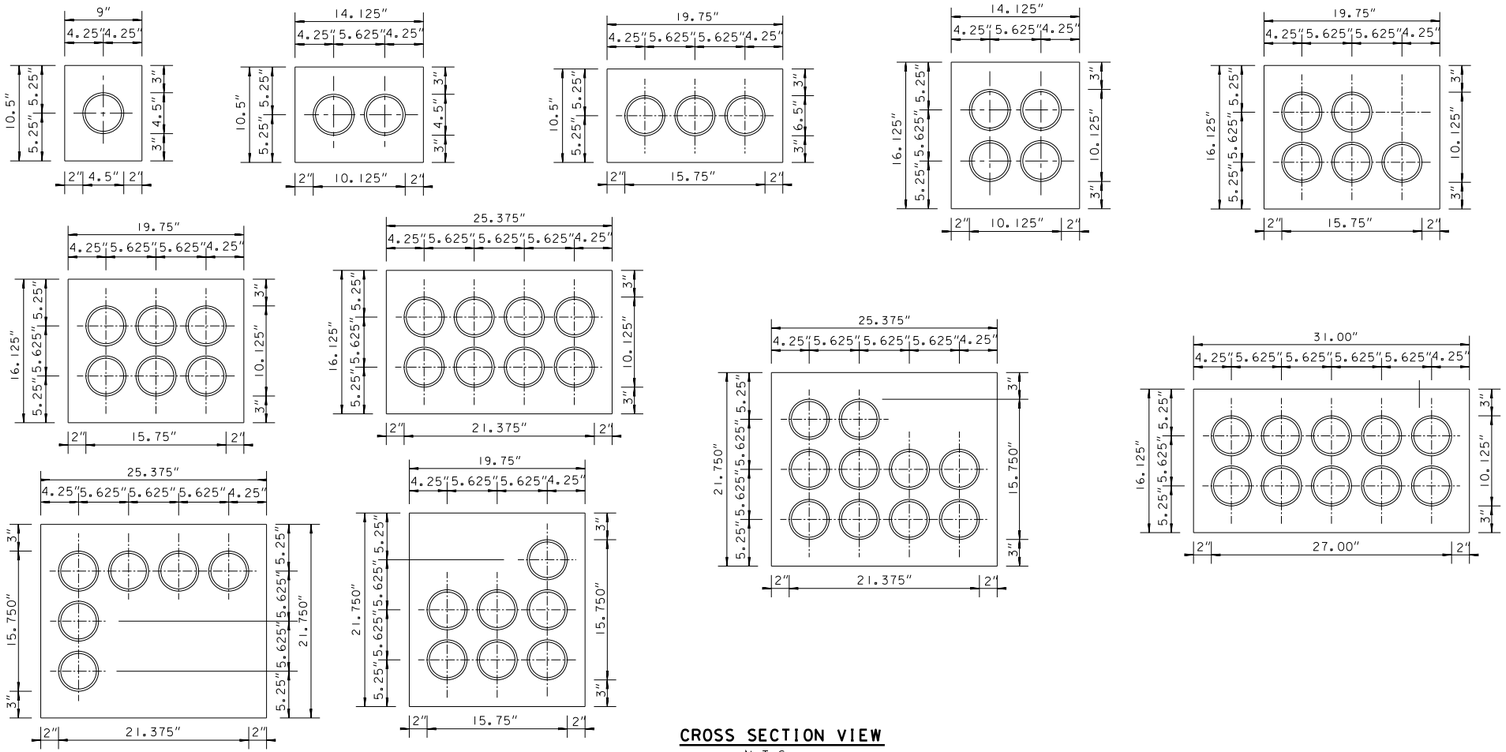
INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	3"	3"
D	3 ⅝"	4 ½"
E	1"	1"
F	2 ½"	2 ½"

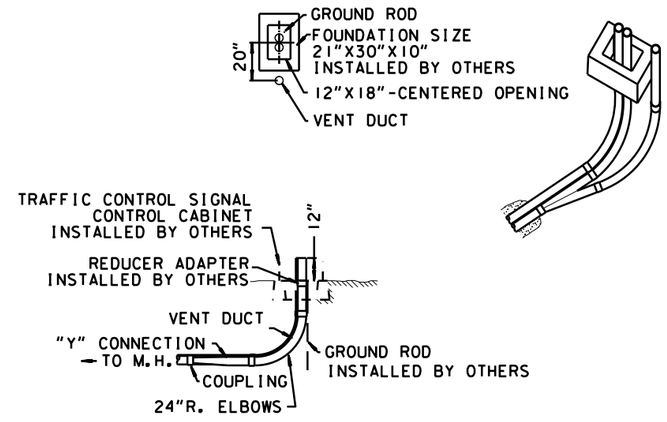


BASE SPACER

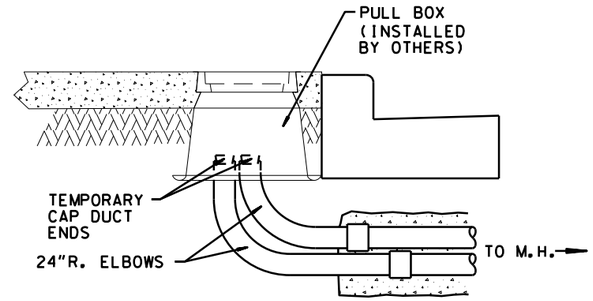
INTERMEDIATE AND BASE SPACER DETAIL



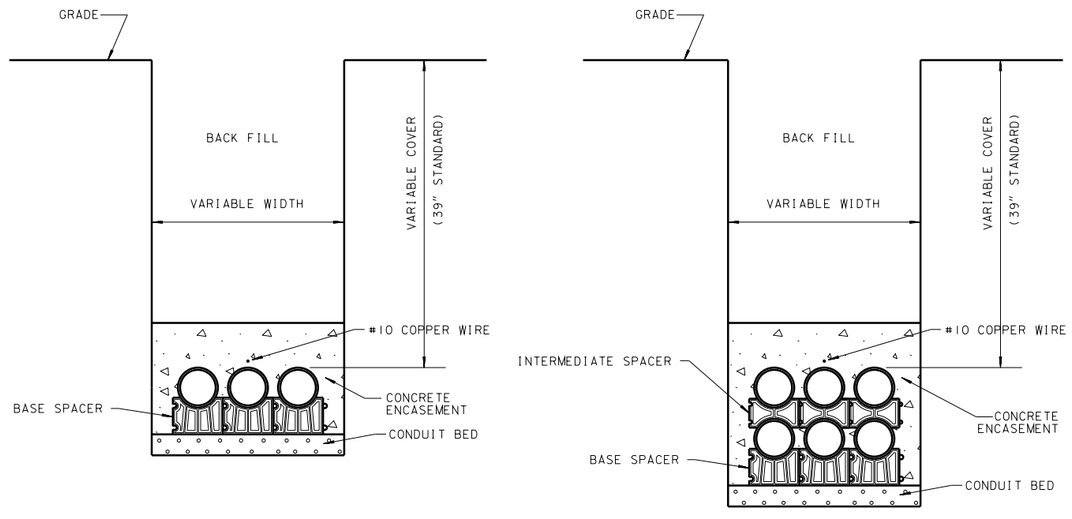
CROSS SECTION VIEW
N.T.S.



TRAFFIC CONTROL CABINET INSTALLATION DETAILS



STREET LIGHTING POLYMER CONC. VAULT



CROSS SECTION VIEW, TYP.
N.T.S.

STATE PROJECT NUMBER	HWY:	COUNTY: MILWAUKEE		SCALE FEET 0' 40'	SHEET NO: 28	E

STA 102+84.8,
19.7' RT.
EXIST
TES MH #1831

STA 102+81.3,
32.1' RT
EXIST
TES MH #1830

STA 103+38.3,
16.6' RT
EXIST
TES MH #1832

STA.14+42.3, 11.6' LT.
exist. tes mh #1292

STA.14+50.5, 15.4' LT.
EXIST. TES MH #1291

EXIST. COMM. M.H. #1290
STA. 14+48.4, 45.1' RT.

N. CASS ST. STREET

E. MICHIGAN AVE.

E. WISCONSIN AVE.

SKYWALK

1/4 SECTION LINE

NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4) MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT.
5) ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING APPROPRIATE ADAPTOR. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
●	PROPOSED TES MANHOLE
— CUC —	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

STATE PROJECT NUMBER 1301-13-71	HWY: LOCAL STREET	COUNTY : MILWAUKEE	CITY UG CONDUIT (TES)	SCALE FEET	SHEET NO: 29 E

N. CASS ST.

E. MICHIGAN

N. MARSHALL ST. (VAC.)

STREET

LOCATION UNKNOWN

12" W.M.

102 103 104 105 106 107 108

CUC

NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
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●	PROPOSED TES MANHOLE
—CUC—	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

STATE PROJECT NUMBER 1301-13-71	HWY: LOCAL STREET	COUNTY : MILWAUKEE	CITY UG CONDUIT (TES)	SCALE FEET	SHEET NO: 30 E

2

N. LINCOLN MEMORIAL DR.

E. MICHIGAN ST.

MICHIGAN ST.

N. LINCOLN MEMORIAL DR.

1836 ELEC

1837 COMM

107 108 109 110 111 112

34 35 36 37

NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
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LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
	PROPOSED TES MANHOLE
— cuc —	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

STATE PROJECT NUMBER 1301-13-71	HWY: LOCAL STREET	COUNTY : MILWAUKEE	CITY UG CONDUIT (TES)	SCALE FEET	SHEET NO: 31 E

2

N VAN BUREN STREET

11

N4°56'14"W

CASS STREET

N

2

101

102

N85°52'55"E

103

104

10

N85°50'45"E

MATCHLINE STA 105+00

E. MICHIGAN STREET

BEGIN PROJECT
STA 102+69.26
N = 299,270.62
E = 608,116.42

N

PI CURVE 1

MATCHLINE STA 105+00

10

106

107

108

109

110

S76°19'11"E

PC CURVE 1

PT CURVE 1

R/L E. MICHIGAN STREET

E. MICHIGAN STREET

END PROJECT
STA 110+21.86
N = 299,177.17
E = 608,854.89

36

N. LINCOLN MEMORIAL DRIVE

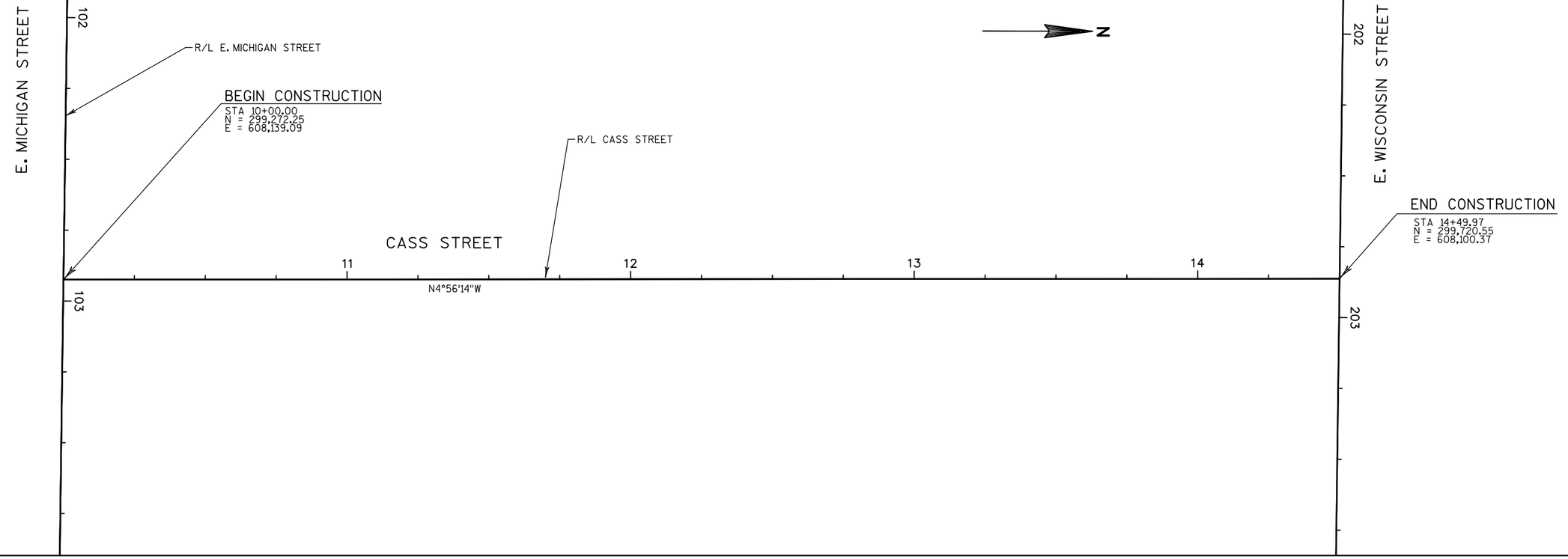
36

35

35

E. MICHIGAN ST
CURVE 1
PI= STA 105+43.65
N = 299290.42
E = 608389.62
Δ = 22°55'05.9"
T = 39.23'
L = 77.82'
R = 250.00'
PC = STA 105+04.42
N = 299287.58
E = 608350.50
PT = STA 105+82.24
N = 299281.14
E = 608427.74
BK = N 85°50'45.4" E
AH = S 76°19'11.4" E
SE = N/A

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	ALIGNMENT: E. MICHIGAN STREET	SHEET 32	E

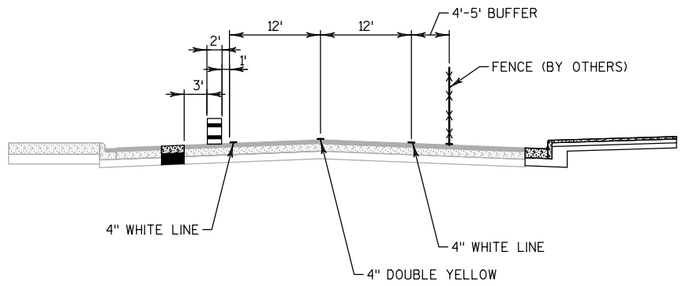


2

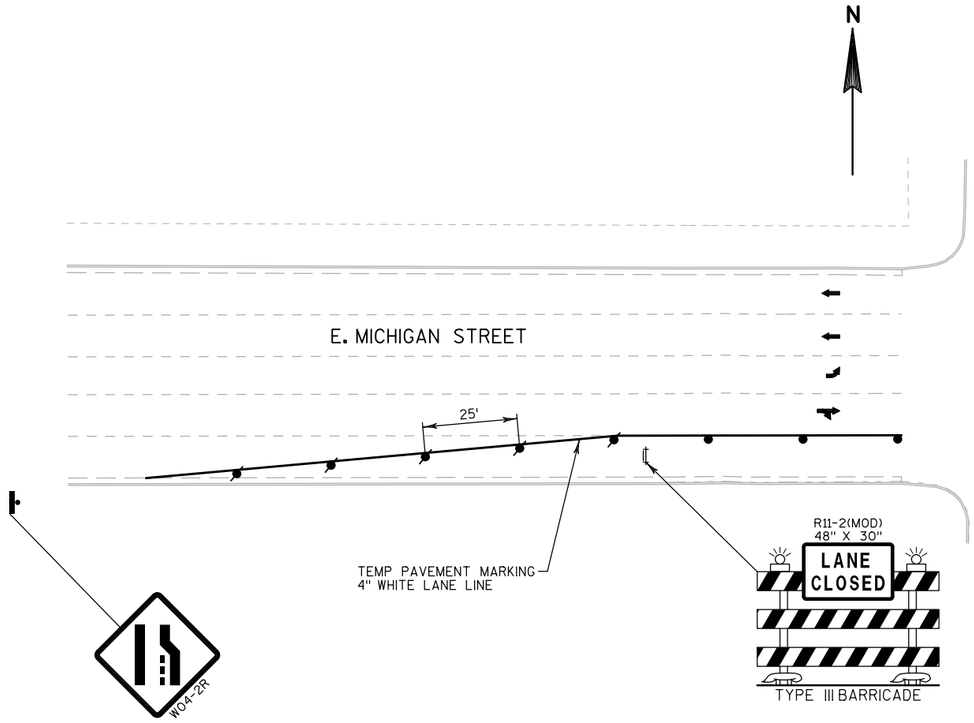
PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	ALIGNMENT: CASS STREET	SHEET 33	E

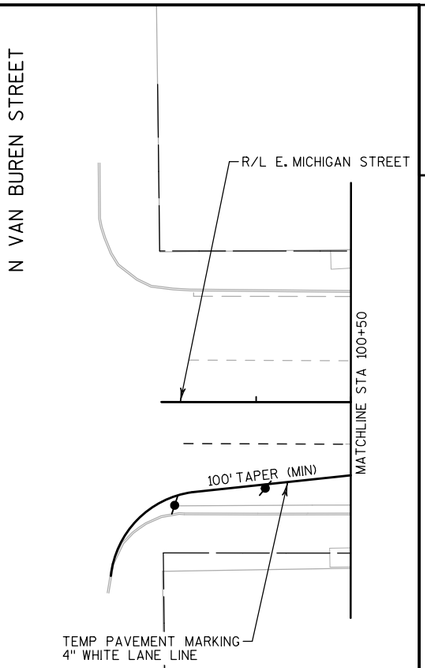
LEGEND

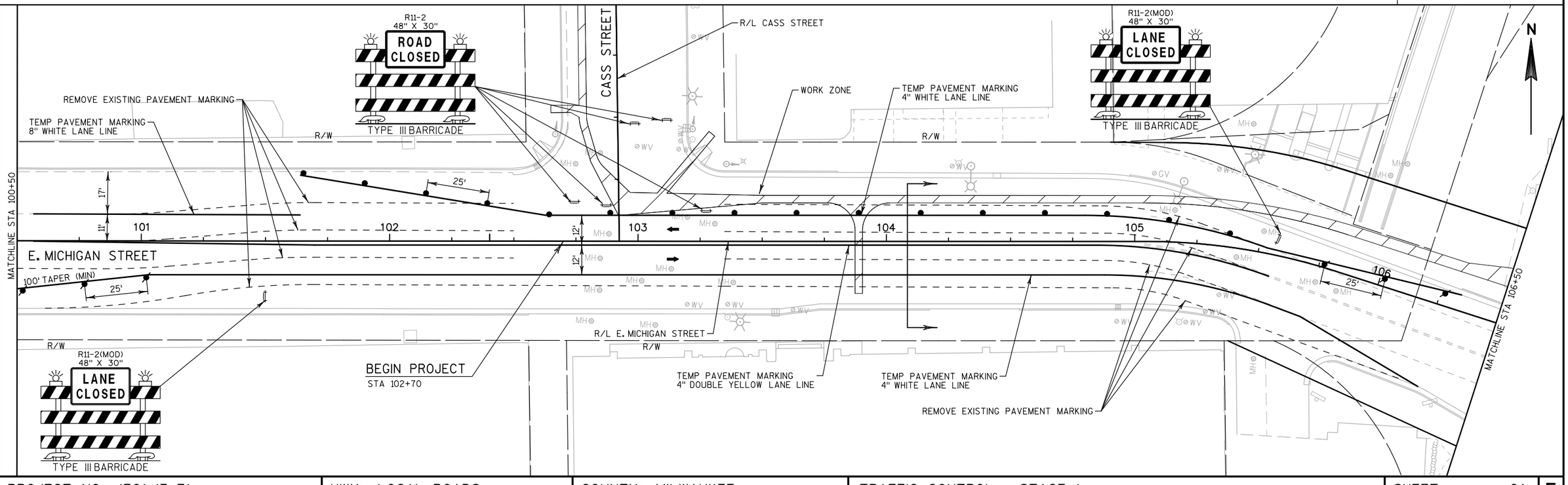
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/TYPE "C" STEADY BURN LIGHT
- POST MOUNTED TRAFFIC CONTROL SIGN
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS WITH/WITHOUT ATTACHED SIGN
- WORK ZONE



TYPICAL SECTION - TRAFFIC CONTROL STAGE 1







PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 34	E

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/TYPE "C" STEADY BURN LIGHT
- POST MOUNTED TRAFFIC CONTROL SIGN
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS WITH/WITHOUT ATTACHED SIGN
- WORK ZONE

END PROJECT
STA 110+21.86

MATCHLINE STA 106+50

MICHIGAN ST.
E. MICHIGAN STREET

N. LINCOLN MEMORIAL DR

R/W

TEMP TRAFFIC LIGHT

W04-2R

R/L E. MICHIGAN STREET

SIDEWALK CLOSED
R9-9

R11-2
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

WORK ZONE

R/L CASS STREET

CASS STREET

25'

BEGIN CONSTRUCTION
STA 10+00.00

TEMP PAVEMENT MARKING
4" WHITE LANE LINE

R11-2
48" X 30"
ROAD CLOSED TO THRU TRAFFIC

TYPE III BARRICADE

SIDEWALK CLOSED

END CONSTRUCTION
STA 14+49.97

ROAD OPEN TO US BANK CUSTOMERS ONLY

R5-2

2

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 35	E

FILE NAME : ch_A_026002_s1.DGN PLOT DATE : 14-SEP-2015 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

2

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/TYPE "C" STEADY BURN LIGHT
- POST MOUNTED TRAFFIC CONTROL SIGN
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS WITH/WITHOUT ATTACHED SIGN
- WORK ZONE

N. LINCOLN MEMORIAL DR

E. MICHIGAN STREET

MICHIGAN ST

W4-2L
36" X 36"

RXL MICHIGAN STREET

TEMP PAVEMENT MARKING 4" WHITE LANE LINE

10'

W12-1D
24" X 24"

R11-2(MOD)
48" X 30"
LANE CLOSED

TYPE III BARRICADE

N. HARBOR DR.

33 34 35 36 37 38

109 110 111 112

2

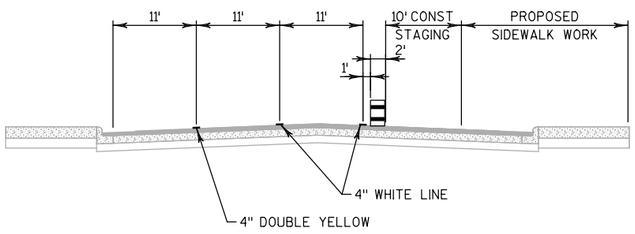
PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 36	E

FILE NAME : ch_A_026004_s1.DGN PLOT DATE : 14-SEP-2015 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

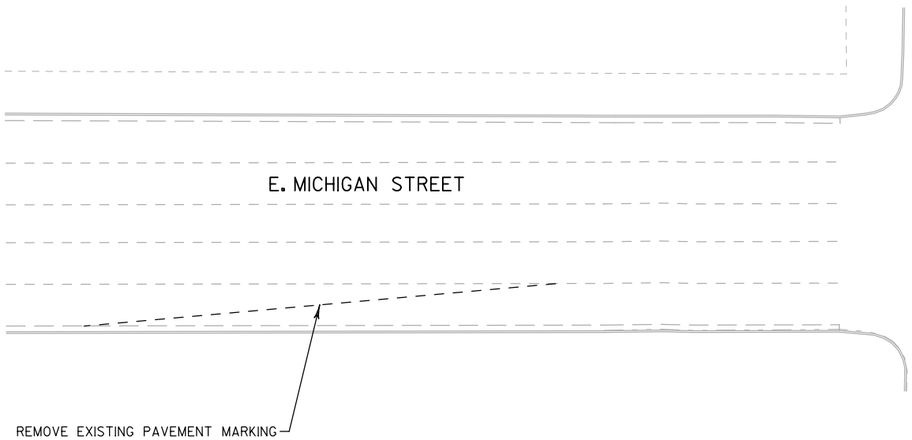
2

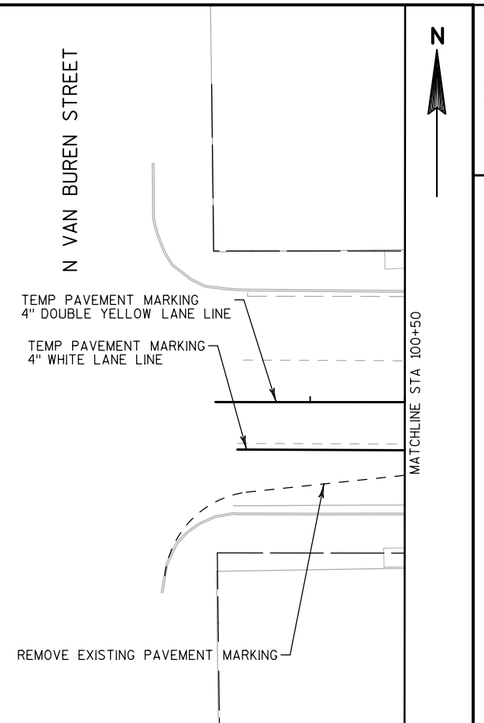
LEGEND

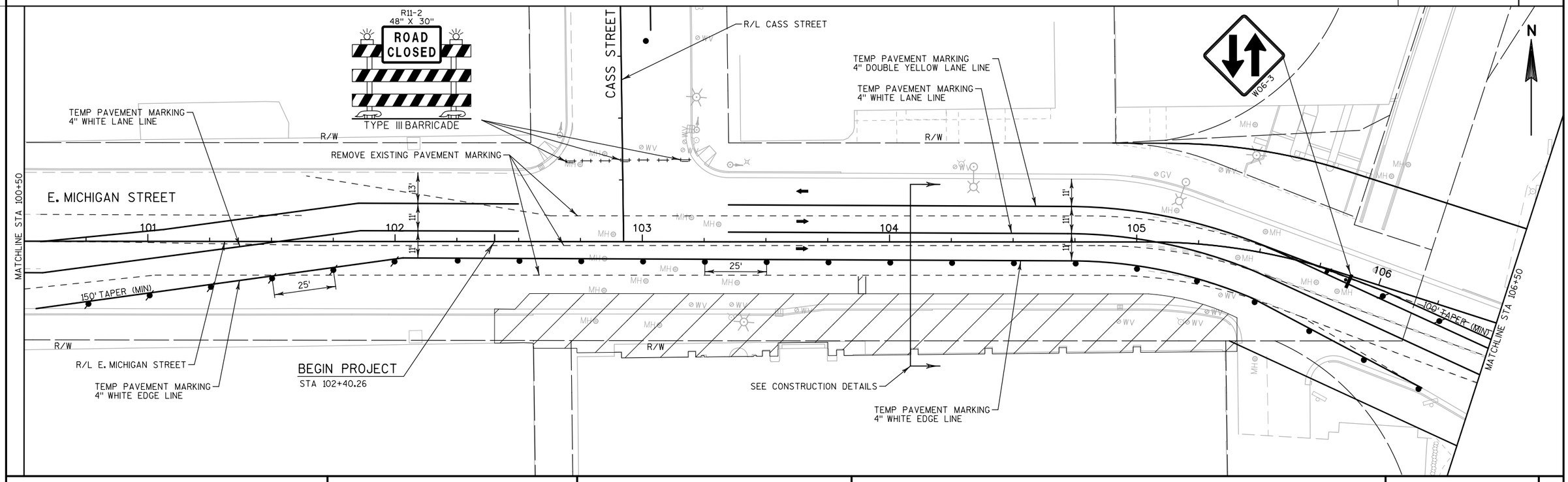
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/TYPE "C" STEADY BURN LIGHT
- POST MOUNTED TRAFFIC CONTROL SIGN
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS WITH/WITHOUT ATTACHED SIGN
- WORK ZONE



TYPICAL SECTION - TRAFFIC CONTROL STAGE 2







PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 37	E

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/TYPE "C" STEADY BURN LIGHT
- POST MOUNTED TRAFFIC CONTROL SIGN
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS WITH/WITHOUT ATTACHED SIGN
- WORK ZONE

W01-6 48" X 24"

TYPE III BARRICADE

W04-2L

END PROJECT
STA 110+21.86

R/W

TEMP TRAFFIC LIGHT

MATCHLINE STA 106+50

REMOVE EXISTING PAVEMENT MARKINGS

100' TAPER (MIN)

MICHIGAN ST.
E. MICHIGAN STREET

PED OVERHEAD

N. LINCOLN MEMORIAL DR.

TEMP PAVEMENT MARKING
4" DOUBLE YELLOW LANE LINE

TEMP PAVEMENT MARKING
4" WHITE LANE LINE

REMOVE EXISTING PAVEMENT MARKINGS

R/L E. MICHIGAN STREET

BENCH

GATE

PHONE

POSTS

MP

VLV

FO

BEGIN CONSTRUCTION
STA 10+00.00

R/L CASS STREET

R11-2 48" X 30"
ROAD CLOSED TO THRU TRAFFIC

TYPE III BARRICADE

END CONSTRUCTION
STA 14+49.97

25'

CASS STREET

R11-2 48" X 30"
ROAD CLOSED

TYPE III BARRICADE

TEMP PAVEMENT MARKING
4" WHITE LANE LINE

ROAD OPEN TO US BANK CUSTOMERS ONLY

R5-2

PROJECT NO: 1301-13-71	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 38	E

FILE NAME : ch_A_026102_s2.DGN PLOT DATE : 14-SEP-2015 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40.000011:1

WISDOT/CADDS SHEET 42

REMOVAL ITEMS

204.0100	REMOVING PAVEMENT	SY	**251**
204.0150	REMOVING CURB & GUTTER	LF	**280**
204.0155	REMOVING CONCRETE SIDEWALK	SY	**331**

EARTHWORK

205.0100	EXCAVATION COMMON	CY	**180**

BASE AGGREGATE ITEMS

211.0500	PREPARE FOUNDATION FOR BASE AGGREGATE	STA	**3**
213.0100	FINISHING ROADWAY	EACH	**1**
305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	**116**
305.0110	BASE AGGREGATE DENSE 1 1/4-INCH	TON	**53**

ROADWAY MISCELLANEOUS ITEMS

415.0080	CONCRETE PAVEMENT 8-INCH	SY	**138**
416.0180	CONCRETE DRIVEWAY 8-INCH	SY	**192**
601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	**78**
602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	**8**
690.0250	SAWING CONCRETE	LF	**367**
SPV.0165.01	CONCRETE SIDEWALK 3-INCH COLORED GRAY	SF	**1,869**
SPV.0165.02	CONCRETE PAVEMENT 8-INCH COLORED RED	SF	**140**
SPV.0165.03	SAND-SET GRANITE PAVER	SF	**880**
SPV.0165.04	CONCRETE SIDEWALK BASE 5-INCH	SF	**2,635**
SPV.0165.05	CONCRETE SIDEWALK 8-INCH	SF	**1,305**

MOBILIZATION

619.1000	MOBILIZATION	LS	**1**

EROSION CONROL ITEMS

628.7010	INLET PROTECTION TYPE B	EACH	**4**

TRAFFIC CONTROL ITEMS

643.0100	TRAFFIC CONTROL	EACH	**1**
643.0300	TRAFFIC CONTROL DRUMS	DAY	**6,076**
643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	**1,258**
643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	**838**
643.0410	TRAFFIC CONTROL BARRICADES TYPE I	DAY	**834**
643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	**629**
643.0900	TRAFFIC CONTROL SIGNS	DAY	**1,445**

PAVEMENT MARKING ITEMS

646.0103	PAVEMENT MARKING PAINT 4-INCH	LF	**2,270**
646.0159	REMOVING PAVEMENT MARKINGS	LF	**4,095**
647.0553	PAVEMENT MARKING STOP LINE PAINT 12-INCH	LF	**140**
647.0766	PAVEMENT MARKINGS CROSSWALK PAINT 6-INCH	LF	**300**
649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	**4,555**

SURVEY

SPV.0105.02	SURVEY PROJECT	LS	**1**

LANDSCAPING EARTHWORK

SPV.0035.01	PLANTING SOIL MIX	CY	**32**
SPV.0105.03	IRRIGATION SYSTEM	LS	**1**
SPV.0180.01	SHREDDED HARDWOOD BARK MULCH 2"	SY	**32**

LANDSCAPE PLANTINGS

SPV.0060.09	TREE TAXODIUM DISTICHUM 'MICKELSON'	EACH	**3**
SPV.0060.10	ORNAMENTAL GRASS, CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	EACH	**6**
SPV.0060.11	ORNAMENTAL GRASS, CAREX FLACCA 'BLUE SEDGE'	EACH	**116**
SPV.0060.12	ORNAMENTAL GRASS, SPOROBOLUS HETEROLEPIS 'TARA'	EACH	**48**
SPV.0060.13	PERENNIALS, HEMEROCALLIS 'HAPPY RETURNS'	EACH	**21**
SPV.0060.14	PERENNIALS, HOSTA 'GOLDEN TIARA'	EACH	**43**
SPV.0060.15	PERENNIALS, SALVIA NEMOROSA 'WESUWE'	EACH	**22**
SPV.0060.16	BULB, ALLIUM 'PURPLE SENSATION'	EACH	**8**
SPV.0060.17	BULB, ALLIUM 'SUMMER BEAUTY'	EACH	**48**
SPV.0060.18	BULB, NARCISSUS 'ALL SPRING MIX'	EACH	**606**

CITY UNDERGROUND CONDUIT

204.0250	ABANDON MANHOLES	EACH	**3**
SPV.0060.21	4' DIAMETER MANHOLE TYPE TES	EACH	**1**
SPV.0060.22	5' DIAMETER MANHOLE TYPE TES	EACH	**1**
SPV.0060.23	CORED HOLE 5-INCH DIAMETER	EACH	**1**
SPV.0060.24	INSTALLING CONDUIT INTO EXISTING MANHOLE	EACH	**5**
SPV.0090.01	14-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**109**
SPV.0090.02	10-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**463**
SPV.0090.03	8-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**524**
SPV.0090.04	6-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**101**
SPV.0090.05	4-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**28**
SPV.0090.06	3-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**38**
SPV.0090.07	2-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**352**
SPV.0090.08	1-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	**59**

TRAFFIC SIGNALS ITEMS

652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	**50**
652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	**140**
652.0615	CONDUIT SPECIAL 3-INCH	LF	**150**
SPV.0060.19	STREET LIGHTING POLYMER CONCRETE VAULT 13-INCH X 24-INCH X 18-INCH	EACH	**2**
SPV.0060.20	STREET LIGHTING POLYMER CONCRETE VAULT 17-INCH X 30-INCH X 18-INCH	EACH	**1**
SPV.0060.25	INSTALL TRAFFIC SIGNAL BASE	EACH	**3**

SURFACE TREATMENTS

SPV.0060.01	PRECAST CONCRETE PLANTER CURB, UNIT 1	EACH	**4**
SPV.0060.02	PRECAST CONCRETE PLANTER CURB, UNIT 2	EACH	**20**
SPV.0060.03	PRECAST CONCRETE PLANTER CURB, UNIT 3	EACH	**4**
SPV.0060.04	PRECAST CONCRETE PLANTER CURB, UNIT 4	EACH	**2**
SPV.0060.05	PRECAST CONCRETE PLANTER CURB, UNIT 5	EACH	**2**

SITE FURNITURE

SPV.0060.06	BENCH - CUSTOM	EACH	**2**
SPV.0060.07	BIKE RACK	EACH	**5**
SPV.0060.08	LITTER RECEPTACLE	EACH	**1**

BOLLARDS

SPV.0105.01	SIDEWALK BOLLARD TYPE A 36-INCH (DS-22 DESIGN)	LS	**1**
SPV.0060.26	SIDEWALK BOLLARD TYPE B 36-INCH	EACH	**8**

U.S.BANK

JUNEAU SQUARE SOUTH

PARKING GARAGE

CASS STREET

R/L CASS STREET

PAVEMENT MARKING CROSSWALK PAINT 6-INCH (WHITE)

PROPOSED CITY COMMUNICATION CONDUIT

R/L E. MICHIGAN STREET

PAVEMENT MARKING STOP LINE PAINT 12-INCH

PAVEMENT MARKING PAINT 4-INCH (WHITE SKIP) (10'SEGMENT, 30'GAP)

PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)

COMMUNICATIONS MANHOLE

TES MANHOLE

PAVEMENT MARKING STOP LINE PAINT 12-INCH

PAVEMENT MARKING CROSSWALK PAINT 6-INCH (WHITE)

PAVEMENT MARKING STOP LINE PAINT 12-INCH

101 102 103 104 105

12' 11' 12' 11' 8' 9'

E. MICHIGAN STREET

MATCH LINE STA 106+00

R/W R/W

CE

BEGIN PROJECT
STA 102+69.26
N = 299,270.62
E = 608,116.42

EXISTING SIGNAL TO REMAIN

ABANDON MANHOLE

ABANDON MANHOLE

PROPOSED CATCH BASIN (BY OTHERS)

INLET PROTECTION REQUIRED

REMOVE CATCH BASIN (BY OTHERS)

REMOVE CONCRETE SIDEWALK AND CONCRETE CURB & GUTTER

SAWING CONCRETE

PROPOSED MANHOLE (BY OTHERS)

CATCH BASIN (BY OTHERS)

INLET PROTECTION REQUIRED

REMOVE CATCH BASIN (BY OTHERS)

833 E. MICHIGAN ST

EXISTING PROFILE

EXISTING PROFILE ELEVATION AT R/L

604 602 600 598 596 594 592 590

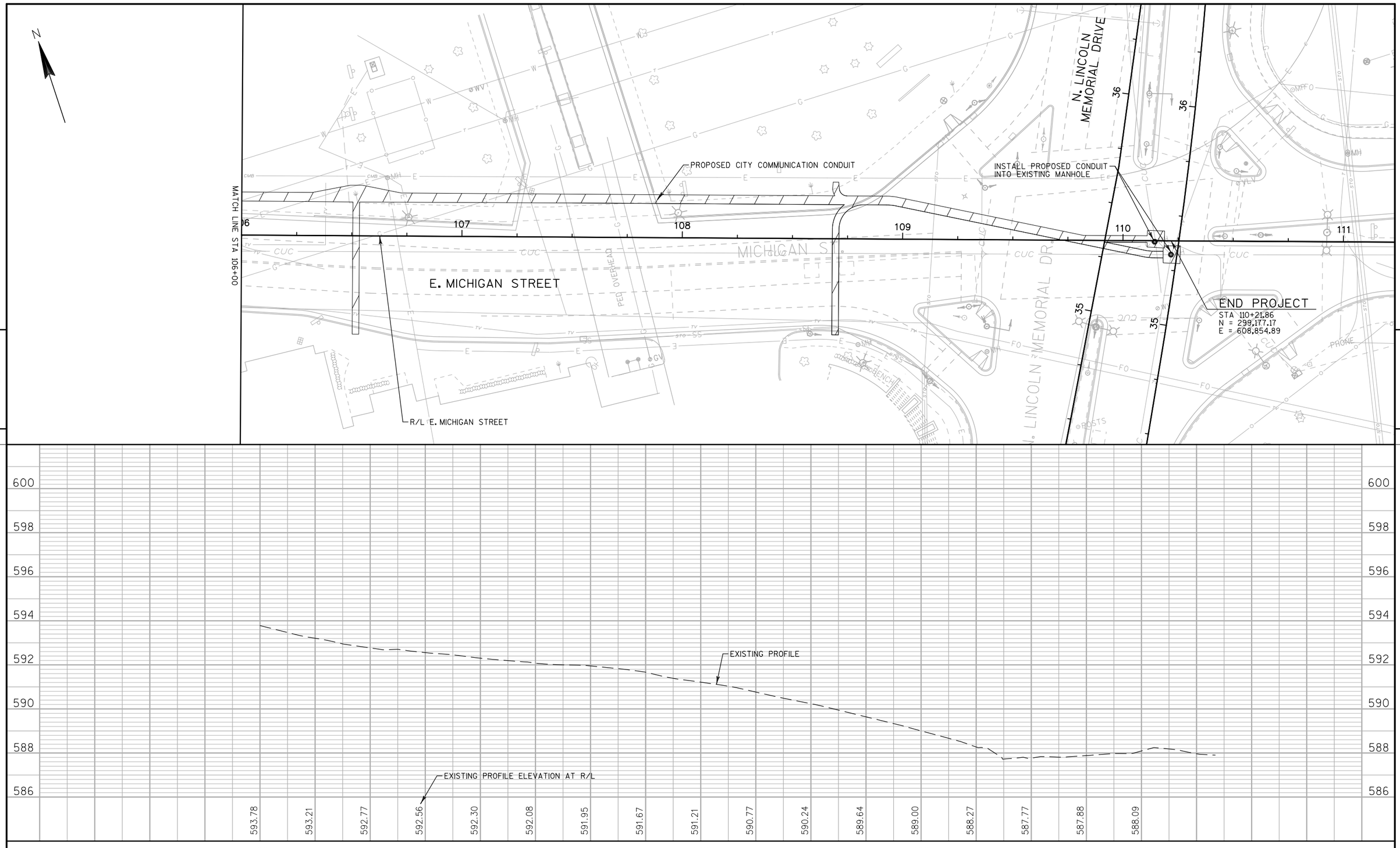
597.20 597.23 597.13 597.12 597.02 596.91 596.78 596.58 596.43 596.20 595.78 595.32 594.84 594.30 593.78

103 104 105 106

PROJECT NO: 1301-13-01	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	PLAN & PROFILE: E. MICHIGAN STREET	SHEET 40	E

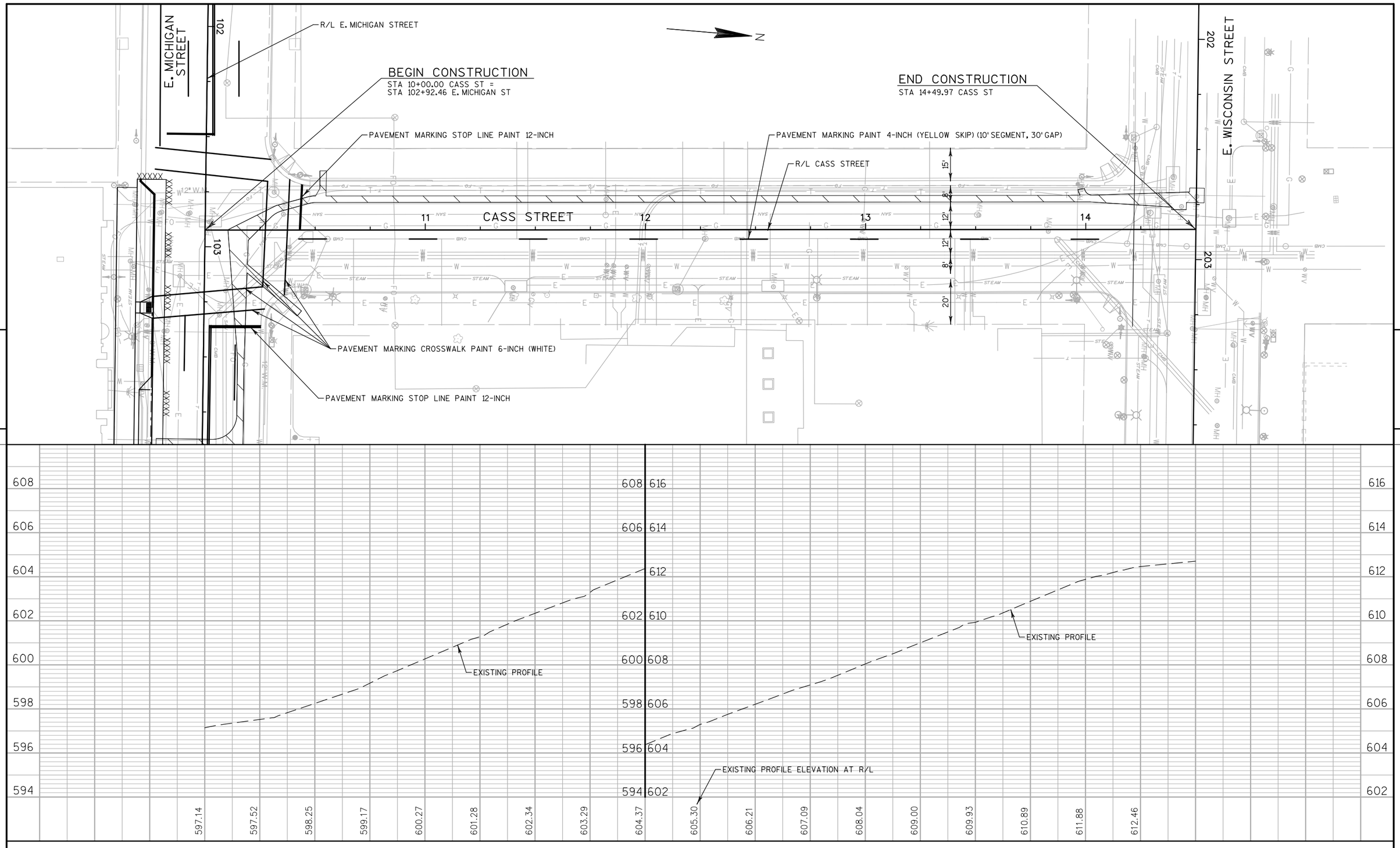
FILE NAME : ch_A_050101_pp.DGN PLOT DATE : 14-SEP-2015 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 30



PROJECT NO: 1301-13-01	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	PLAN & PROFILE: E. MICHIGAN ST	SHEET 41	E

FILE NAME : ch_A_050102-pp.DGN PLOT DATE : 14-SEP-2015 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

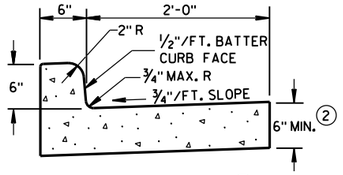


PROJECT NO: 1301-13-01	HWY: LOCAL ROADS	COUNTY: MILWAUKEE	PLAN & PROFILE: CASS STREET	SHEET 42	E

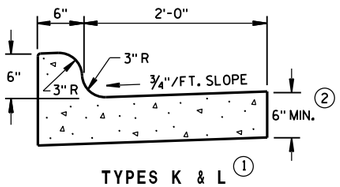
FILE NAME : ch_A_050103-pp.DGN PLOT DATE : 14-SEP-2015 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 30

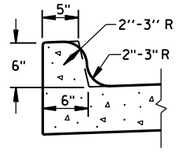
8D1: Concrete Curb, Concrete Curb & Gutter and Ties



TYPES A & D ①

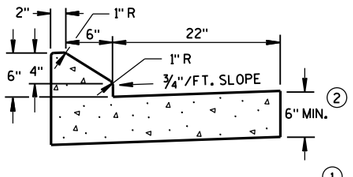


TYPES K & L ①

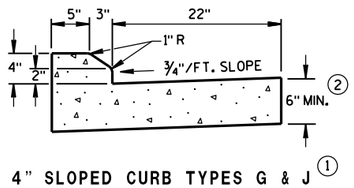


OPTIONAL CURB SHAPE FOR TYPES K & L ①

CONCRETE CURB & GUTTER 30"

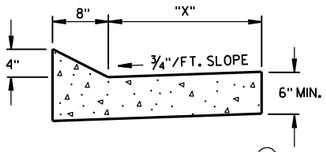


6" SLOPED CURB TYPES G & J ①



4" SLOPED CURB TYPES G & J ①

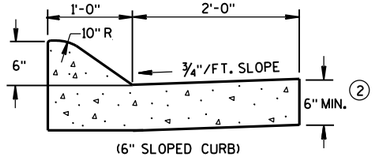
CONCRETE CURB & GUTTER 30"



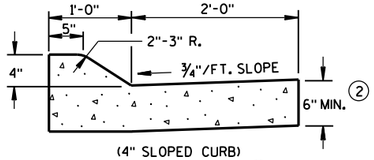
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

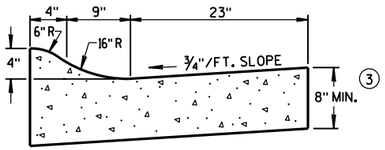


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

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.

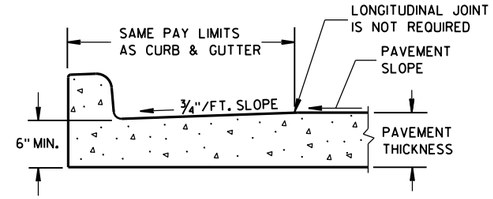
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

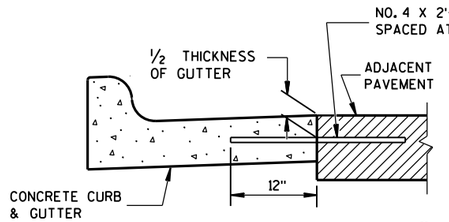
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

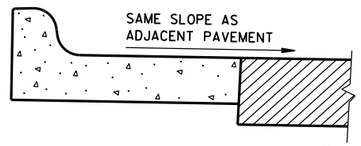
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



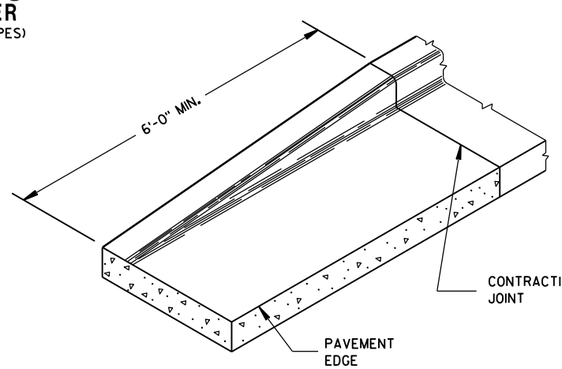
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



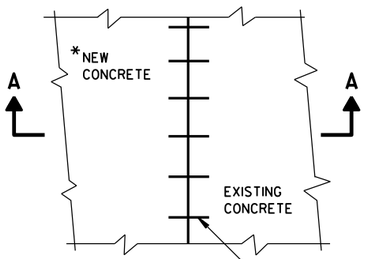
TYPICAL TIE BAR LOCATION ①



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

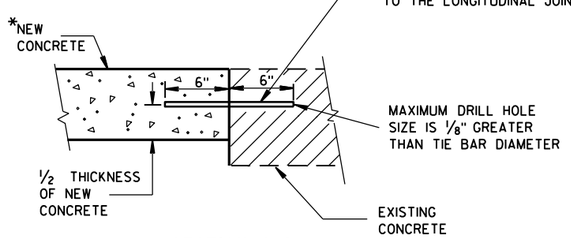


END SECTION CURB & GUTTER



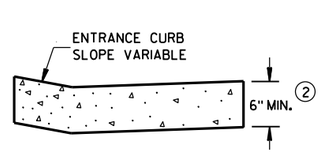
PLAN VIEW

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

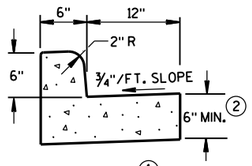


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

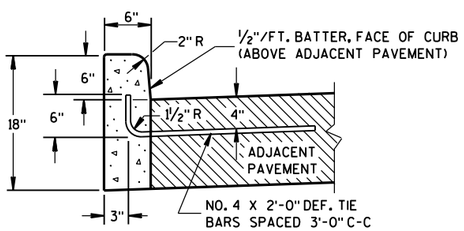


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

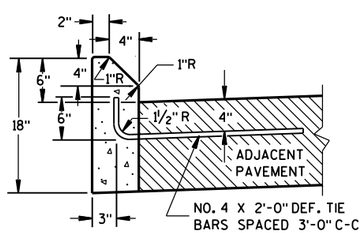


① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES A & D

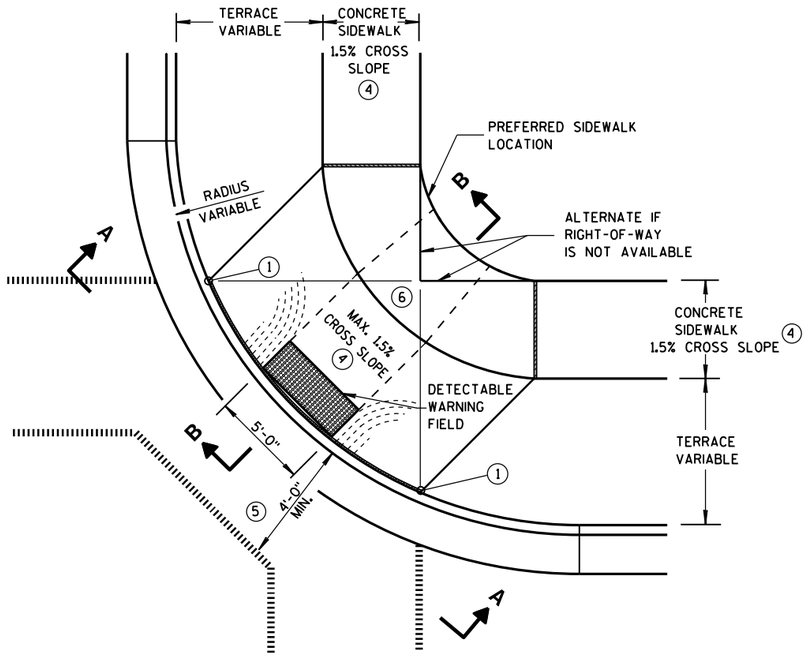


① TYPES G & J

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

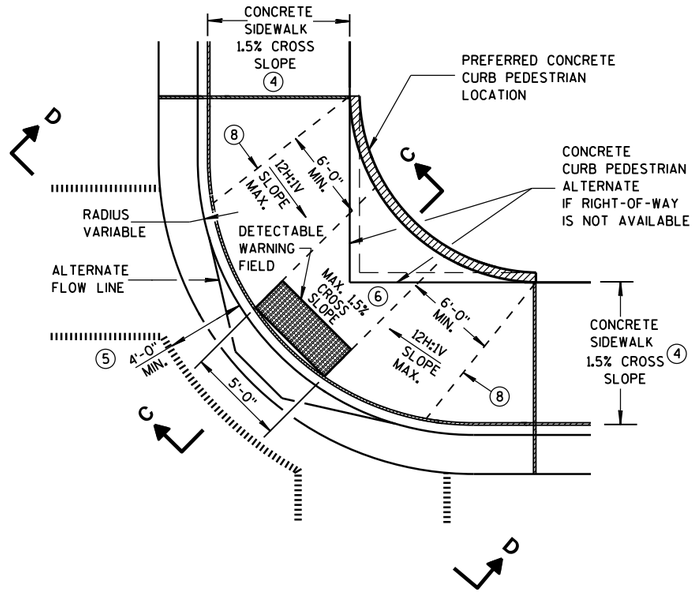
8D5 sheet a: Curb Ramps Types 1 and 1-A



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.

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%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

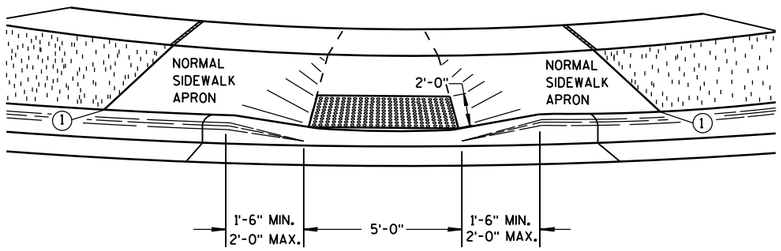
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

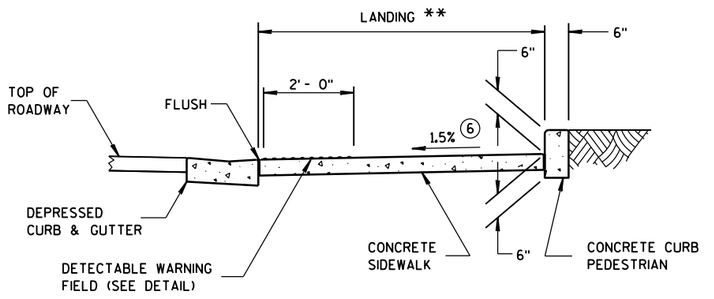
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

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



VIEW A-A

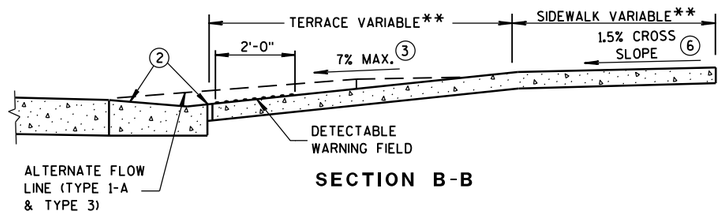
** WIDTH SHOWN ELSEWHERE IN THE PLANS



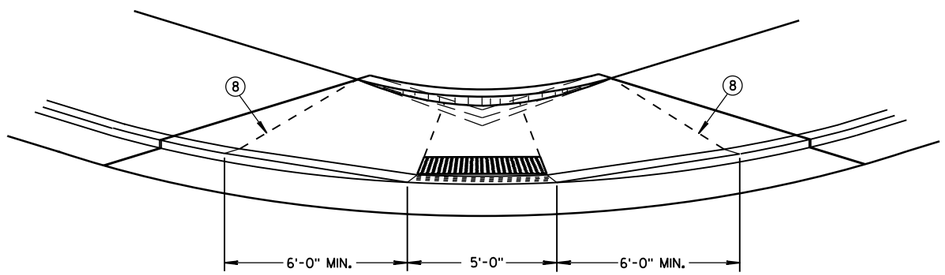
SECTION C-C

LEGEND

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



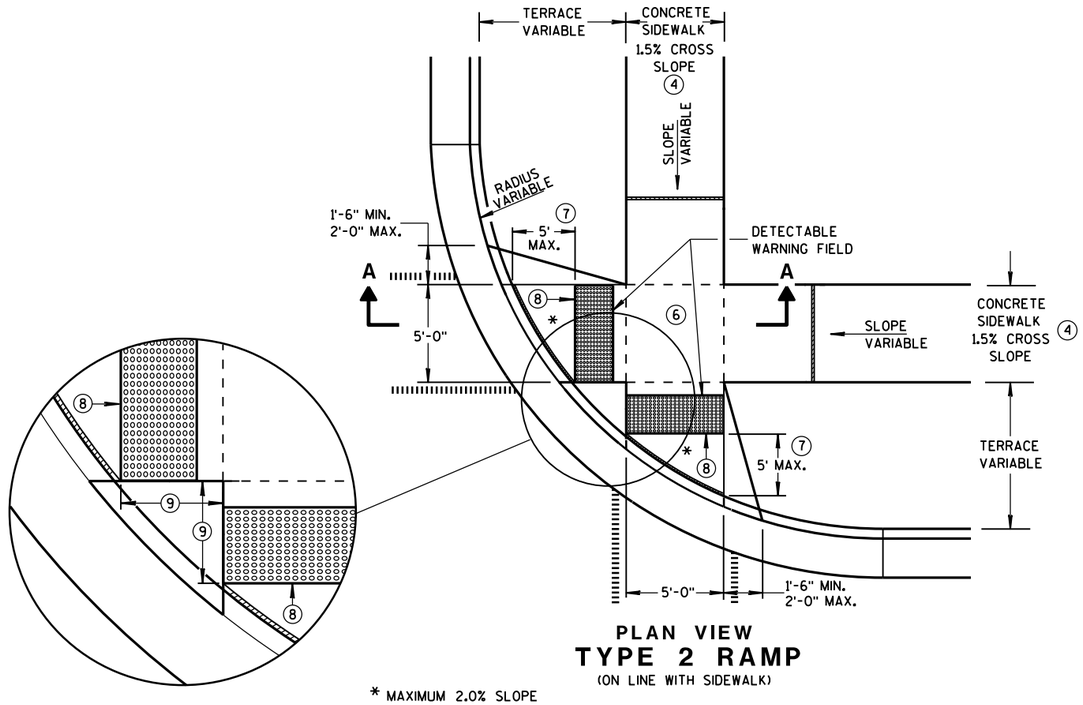
SECTION B-B



VIEW D-D

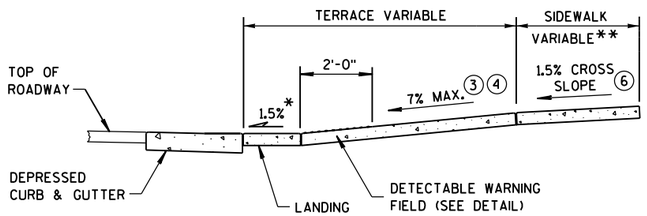
CURB RAMPS
TYPES 1 AND 1-A

8D5 sheet b: Curb Ramps Types 2 and 3



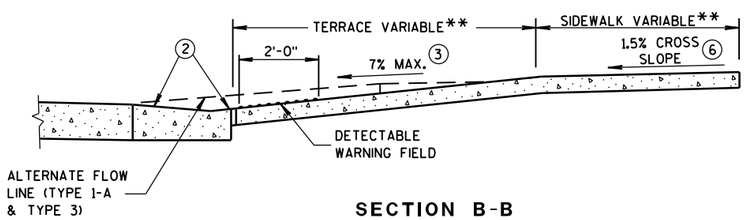
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

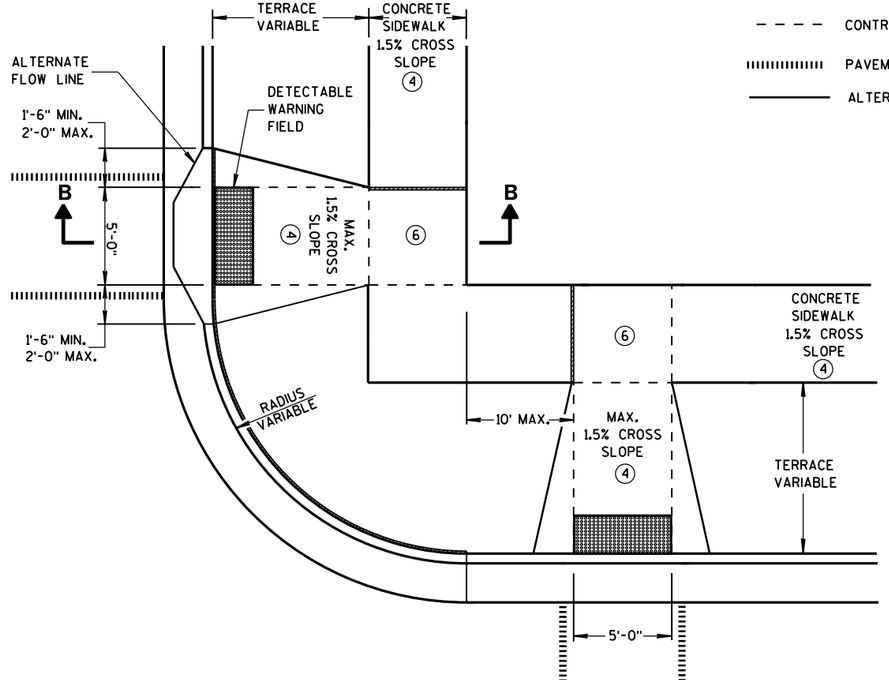
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

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

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 45
DEPARTMENT OF TRANSPORTATION

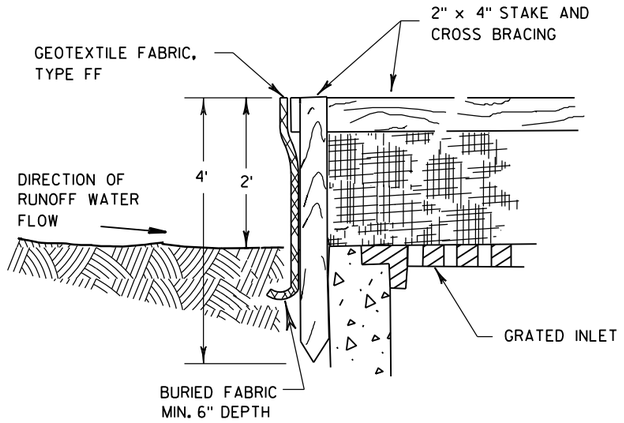
6

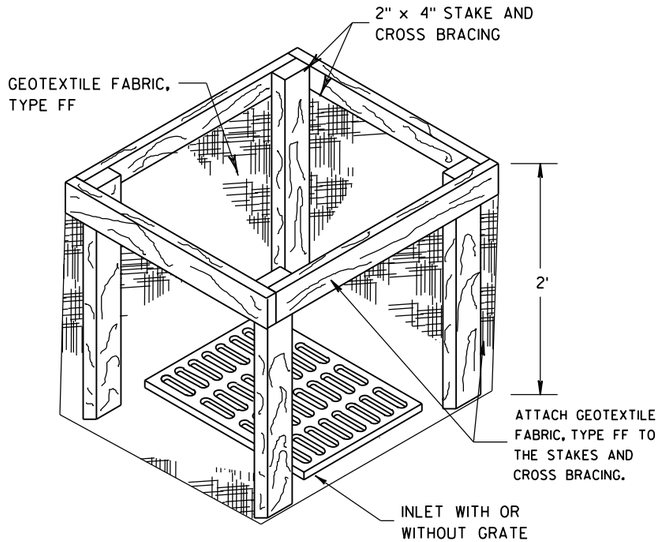
S.D.D. 8 D 5-16b

6

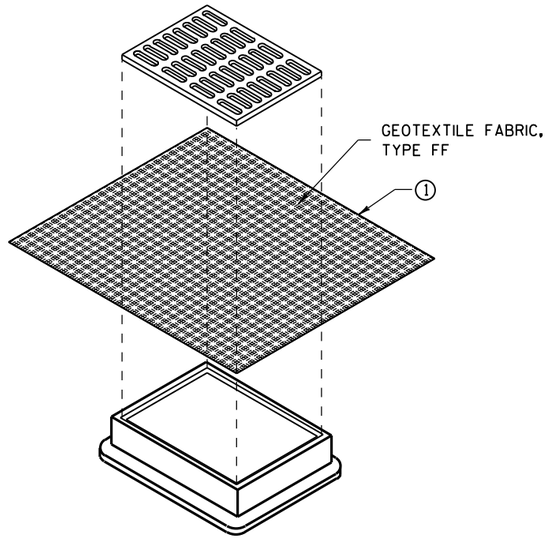
S.D.D. 8 D 5-16b

8E10: Inlet Protection Type A, B, C and D

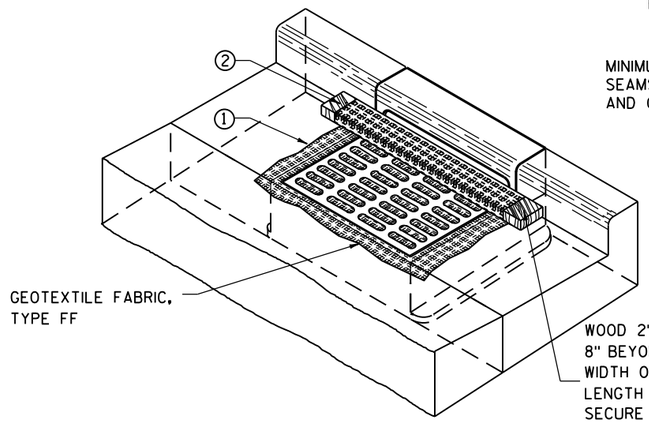




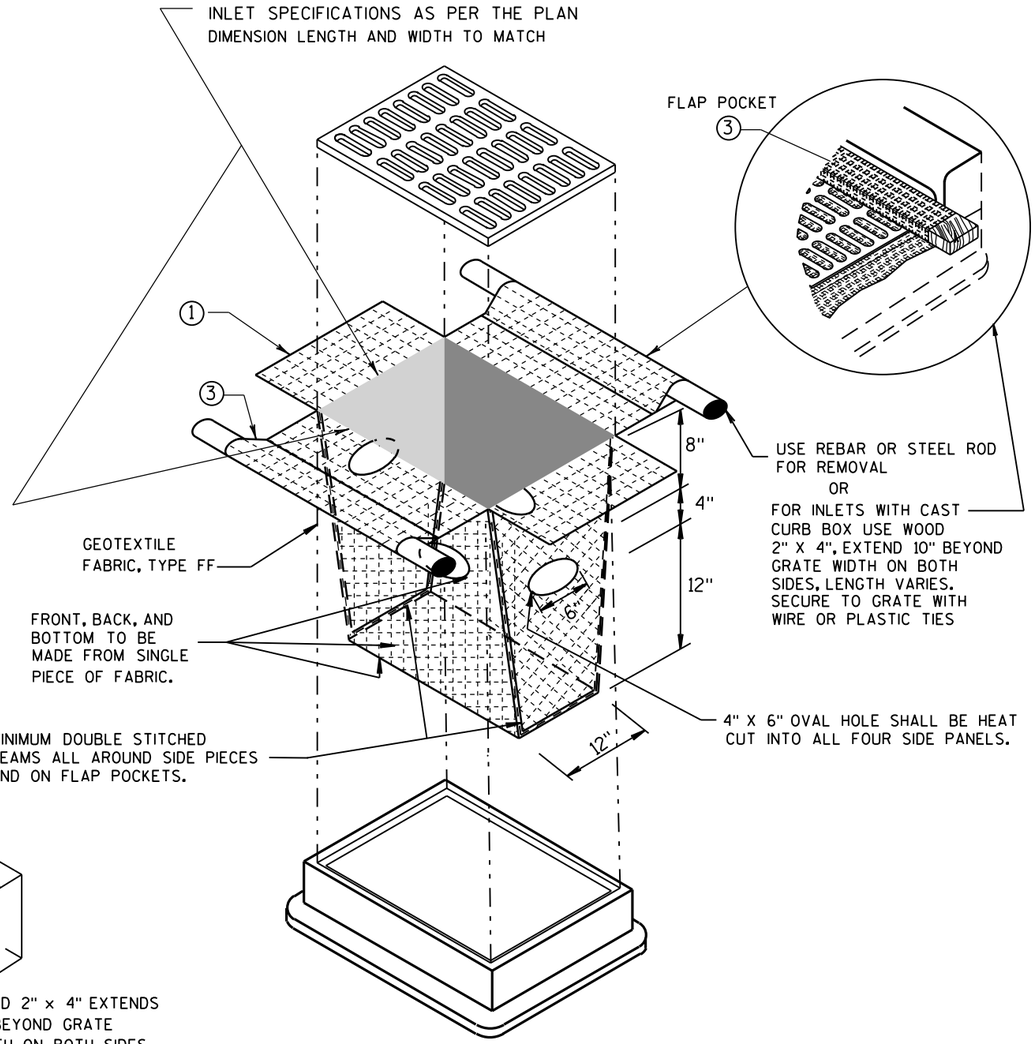
INLET PROTECTION, TYPE A



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

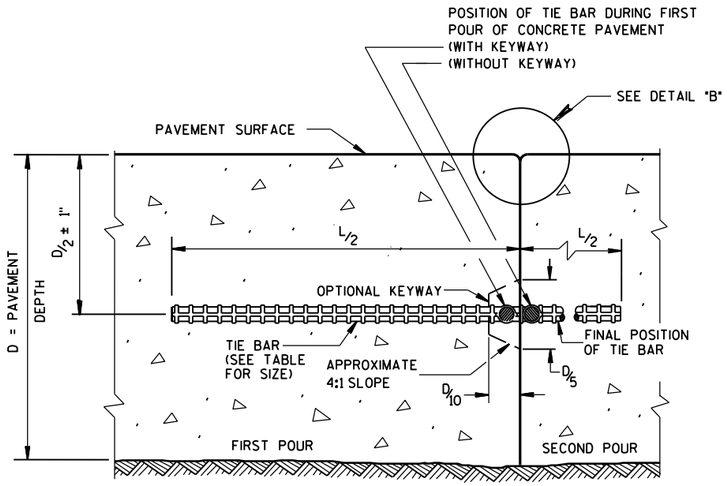
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

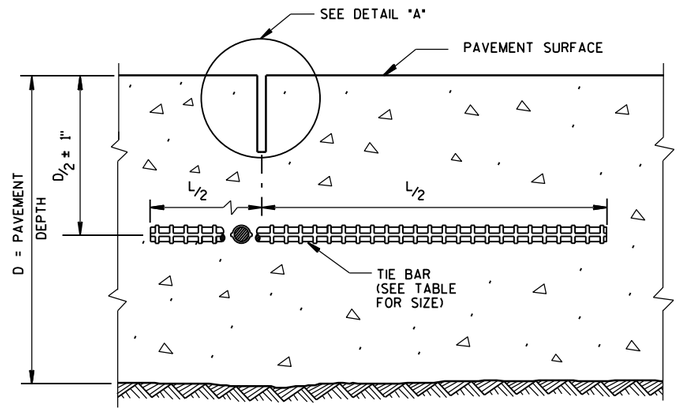
6

S.D.D. 8 E 10-2

13C1: Concrete Pavement Longitudinal Joints and Ties



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.

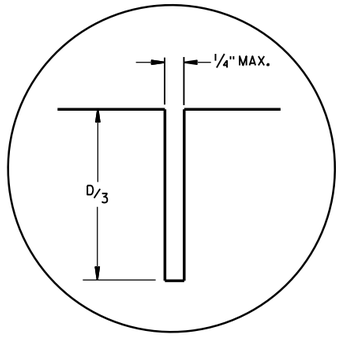
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

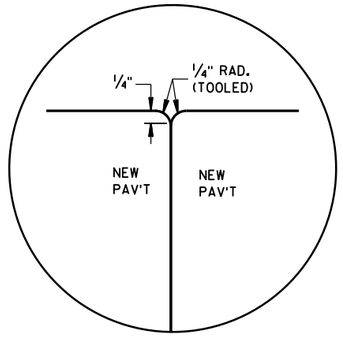
PLAN VIEW

SECTION A-A

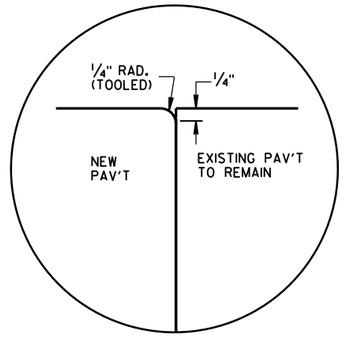
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



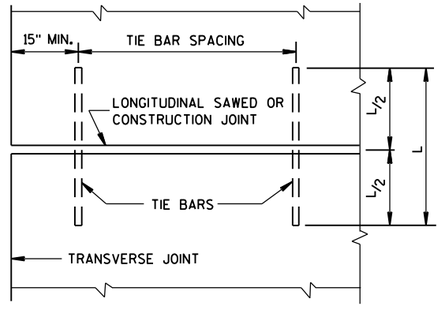
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERVISOR
FHWA

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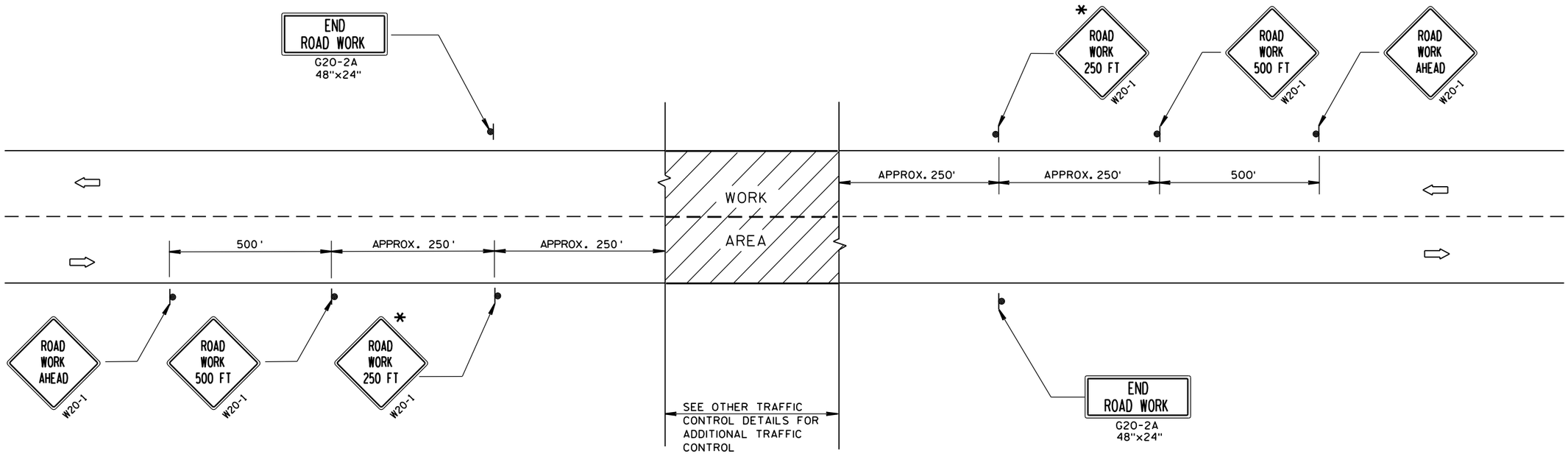
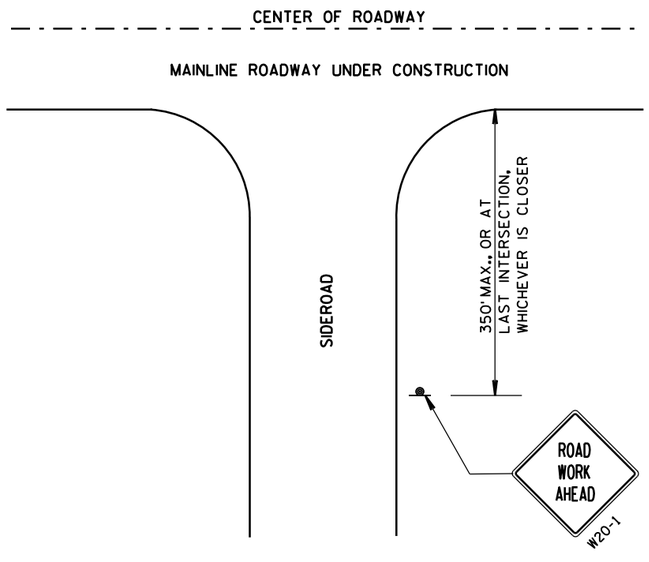
S.D.D. 13 C 1-18

15C5: Traffic Control, Advance Warning Signs 40 M.P.H. or Less, Two Way Undivided Road Open to Traffic



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A 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, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

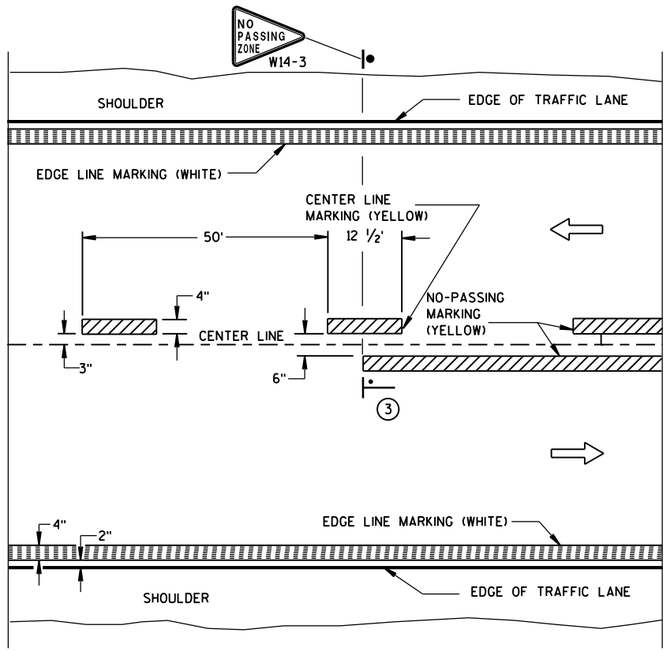
APPROVED

8/2013 — DATE

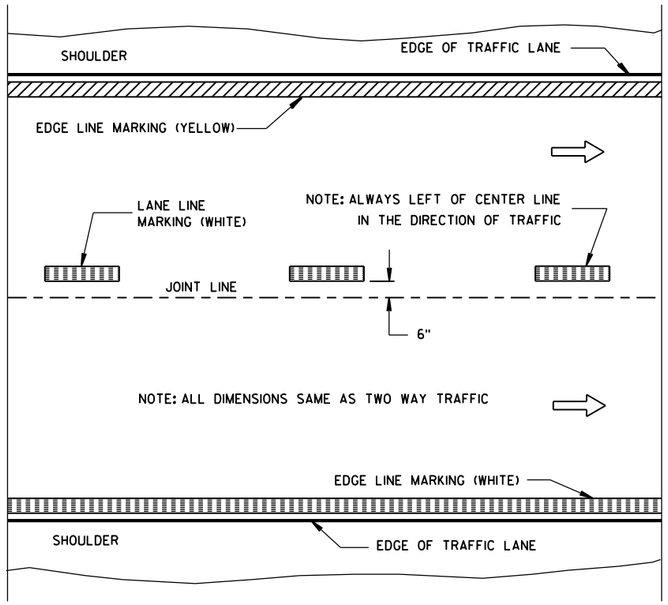
/S/ Travis Feltes — STATE TRAFFIC ENGINEER OF DESIGN

FHWA

15C8 sheet a: Pavement Marking (Mainline)



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

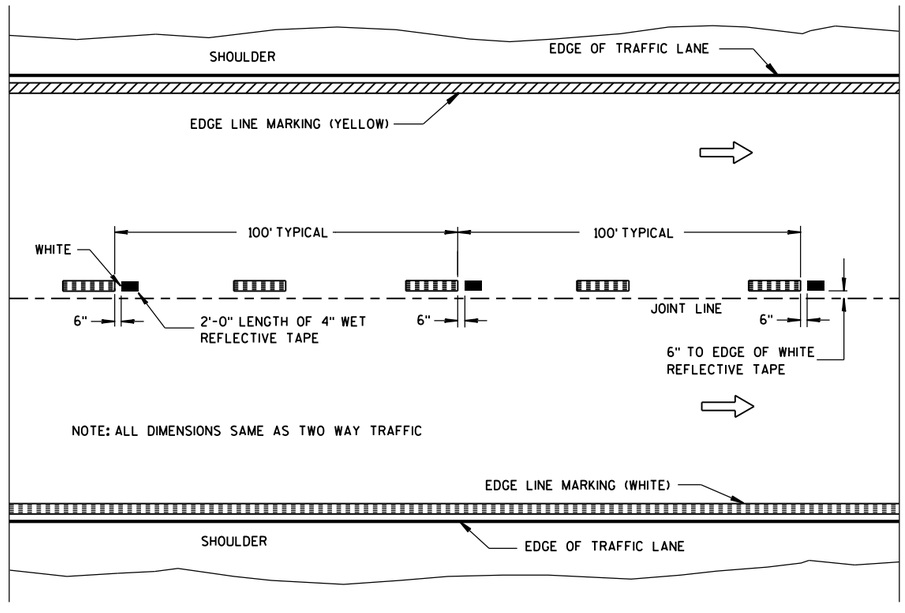
GENERAL NOTES

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

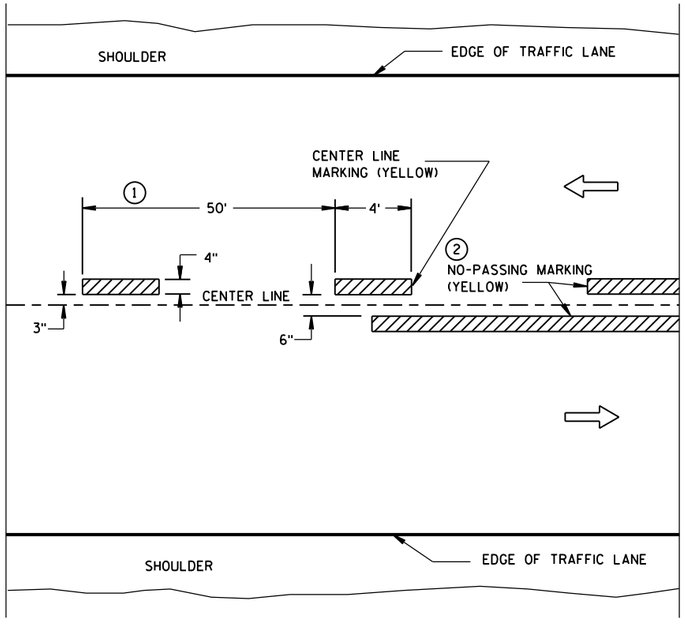
1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING 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

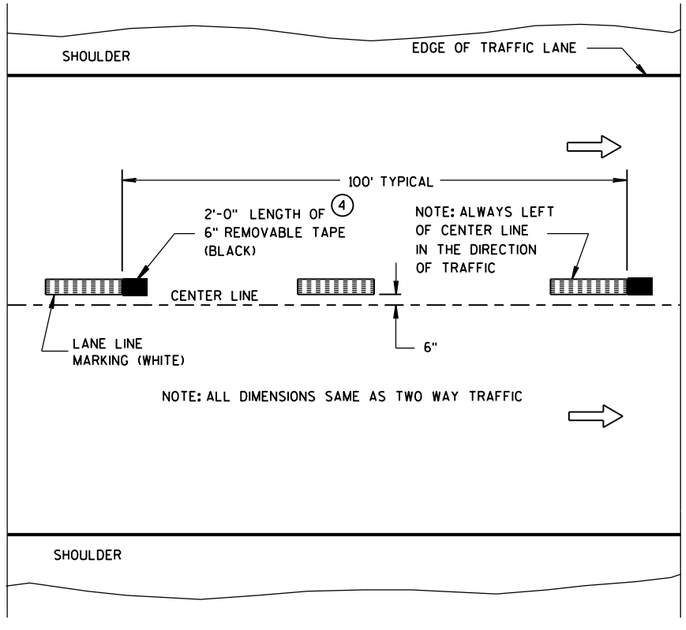
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Felten — STATE TRAFFIC ENGINEER

FHWA

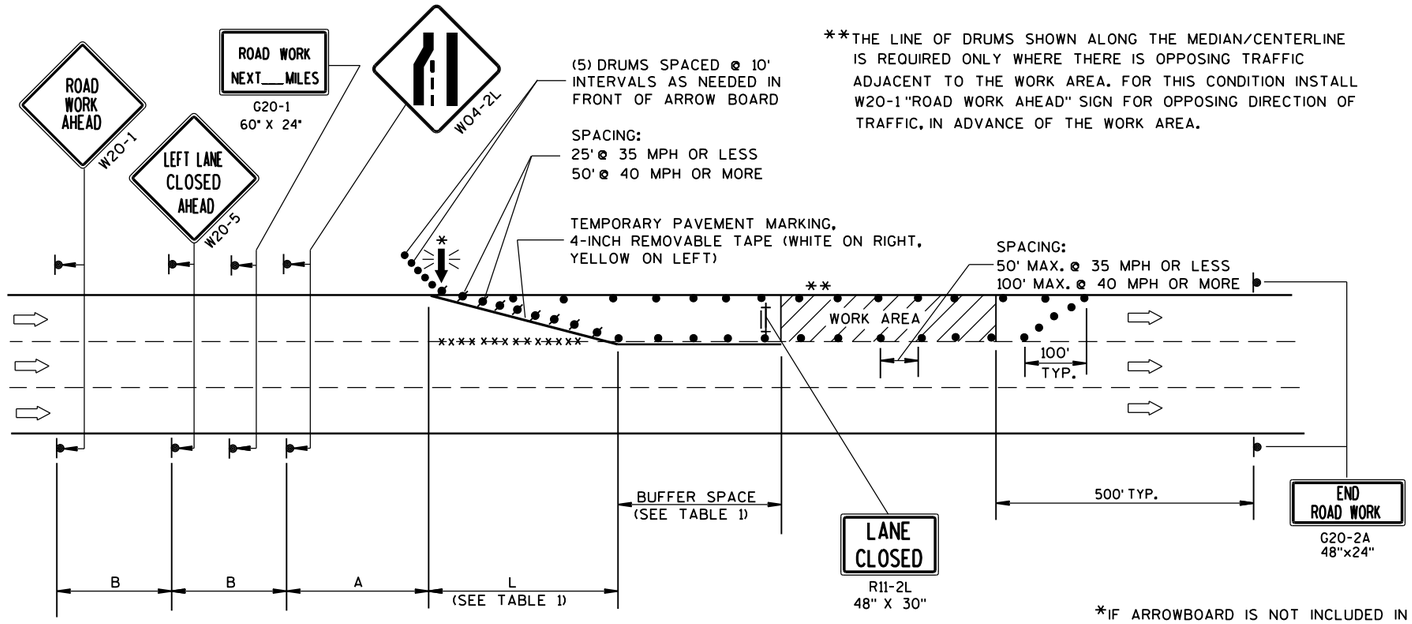
6

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

6

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

15D20: Traffic Control, Single Lane Closure, Non Freeway/Expressway



**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"

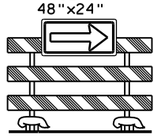


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER OF DESIGN
FHWA

6

S.D.D. 15 D 20-3

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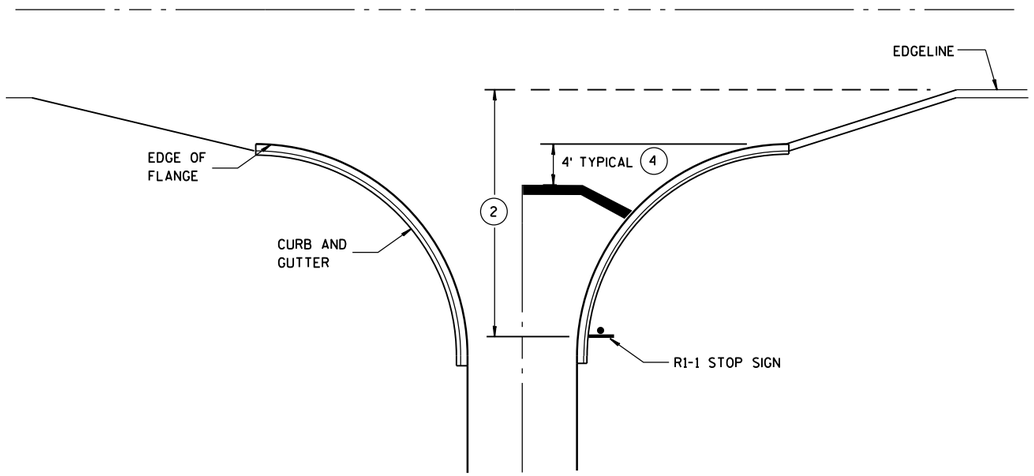
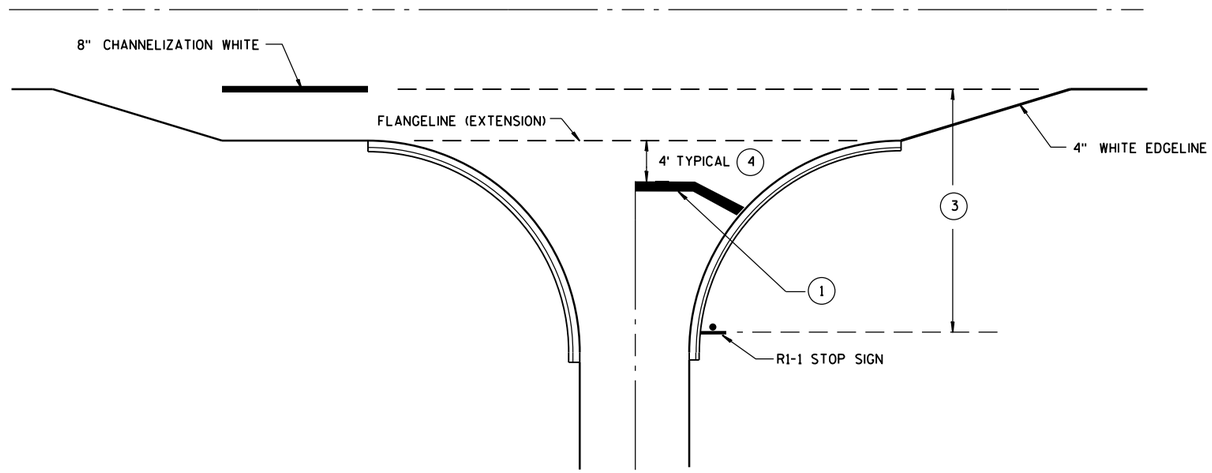
S.D.D. 15 D 20-3

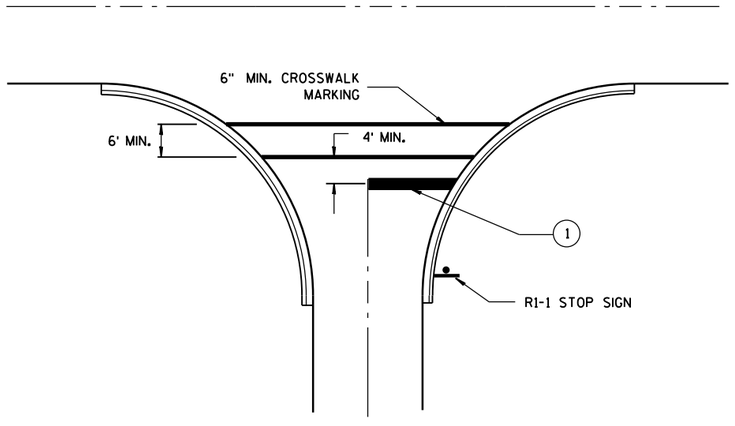
15C33: Stop Line and Crosswalk Pavement Marking



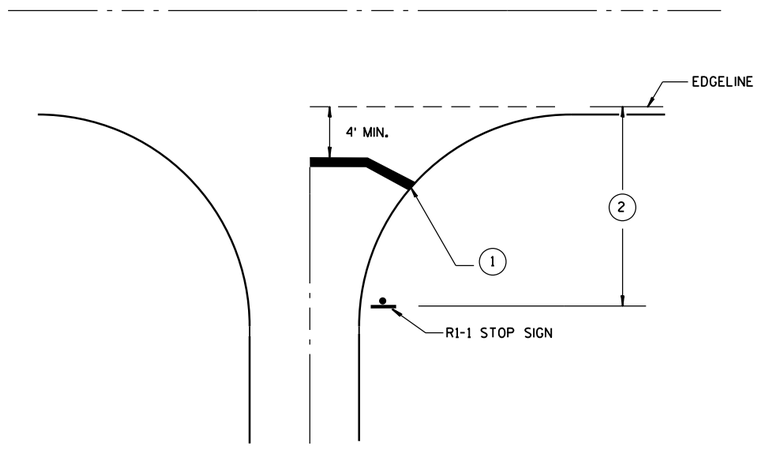
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 33-1

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S.D.D. 15 C 33-1