WKE JAN 2014

PROJECT ID 2265-08-70

ORDER OF SHEETS

SECTION NO.	1	TITLE
SECTION NO.	2	TYPICAL SECTIONS AND DETAILS
SECTION NO.	3	ESTIMATE OF QUANTITIES
SECTION NO.	3	MISCELLANEOUS QUANTITIES
SECTION NO.	4	RIGHT OF WAY PLAT
SECTION NO.	5	PLAN AND PROFILE
SECTION NO.	6	STANDARD DETAIL DRAWINGS
SECTION NO.	7	SIGN PLATES
SECTION NO.	8	STRUCTURE PLANS
SECTION NO.	9	COMPUTER EARTHWORK DATA
~~SECTION NO.~~	~~9~~	~~CROSS SECTIONS~~

TOTAL: 490



05

COUNTY MILWAUKEE

DESIGN DESIGNATION

A.D.T. (CURRENT)	=	41,500
A.D.T. (2031)	=	47,200
D.H.V.	=	3,700
D.	=	54%
T.	=	3.6%
DESIGN SPEED	=	40 M.P.H.
ESALS	=	3,168,200

CONVENTIONAL SYMBOLS

PLAN

COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
CORPORATE OR CITY LIMITS
PROPERTY LINE — P.L.
STANDARD BENCH MARK
EXISTING RIGHT OF WAY LINE — R/W
PROPOSED SEWER LATERAL — (SIZE)
REFERENCE LINE
CONCRETE WALK/DWY. REMOVAL
LIMITS OF CONCRETE PAVEMENT REMOVAL — X X X X X X
COMBUSTIBLE FLUIDS — CAUTION
RAILROADS
FENCE — (TYPE)
CATCH BASIN OR INLET — EXISTING — PROPOSED

PROFILE

GRADE LINE
ORIGINAL GROUND
GRADE ELEVATION — 95.36

UTILITIES

CITY UNDERGROUND CONDUIT	CUC
ELECTRIC	E
FIBER OPTIC	FO
GAS	G
SANITARY SEWER	SAN
STORM SEWER	STO
TELEPHONE	T
WATER	W
TRAFFIC & ELECTRICAL SERVICES	TE&ES
MILWAUKEE METRO SEWERAGE DIST	MMSD
CABLE TELEVISION	TV
WISCONSIN DEPT. OF TRANS.	WISDOT
FIRE & POLICE CALL BOX	
LIGHT POLE	
POWER POLE	
TELEPHONE OR TELEGRAPH POLE	
TRAFFIC SIGNAL	
TRAFFIC SIGNAL CONTROL BOX	
HYDRANT	
GAS OR WATER GATE VALVE	
MANHOLES - SEWER ○ UTILITY (TYPE) □	
TREES - EXISTING ◑ TO BE REMOVED	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

27TH STREET - CITY OF MILWAUKEE

HOWARD AVENUE TO UNION PACIFIC RAILROAD

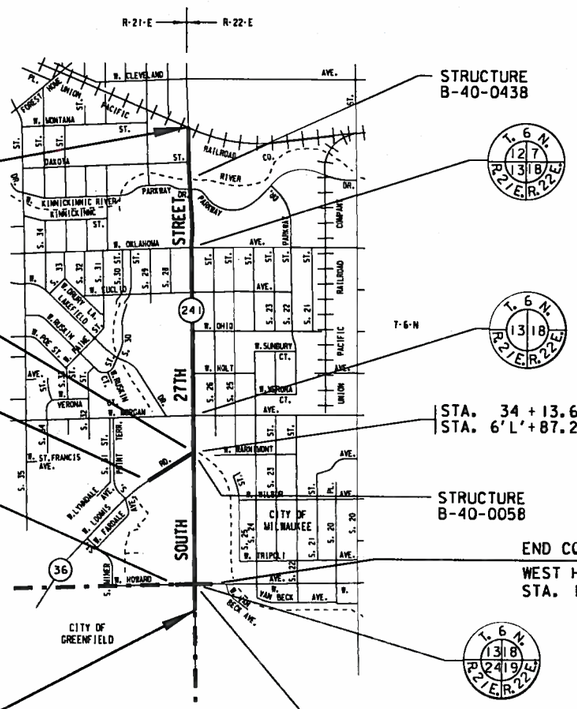
STH 241

MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2265-08-70	WISC 2014001	1

STATE PROJECT NUMBER
2265-08-70

N



END PROJECT
STA. 85+16.0, T/L

END CONSTRUCTION
WEST LOOMIS ROAD
STA. 6'L' + 87.24

BEGIN CONSTRUCTION
WEST LOOMIS ROAD
STA. 1'L' + 25

BEGIN CONSTRUCTION
WEST HOWARD AVENUE
STA. 96'H' + 58.87

BEGIN PROJECT
STA. 09+00.0, T/L
Y. = 361,441.323
X. = 2,548,876.642

STA. 34 + 13.63 = EQUATION
STA. 6'L'+87.24

STRUCTURE B-40-0058

END CONSTRUCTION
WEST HOWARD AVENUE
STA. 102'H' + 99.80

STA. 13 +27.74 = EQUATION
STA. 100'H'+00.00

LAYOUT
SCALE 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.442 MI. (URBAN)

THE COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 27 SOUTH ZONE.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE CITY OF MILWAUKEE DATUM.

TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO NATIONAL GEODEDIC VERTICAL DATUM OF 1929, ADD 580.603 TO ELEVATIONS SHOWN ON THIS PLAN.

Accepted For
City of Milwaukee

10/23/13 [signature]
(Date) Commissioner of Public Works

Original Plans Prepared By

WISCONSIN JEFFREY S. POLENSKE E-33528 MILWAUKEE WIS. PROFESSIONAL ENGINEER

10/24/13 [signature]
(Date) City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	City of Milwaukee
Designer	City of Milwaukee
Project Manager	Mohammad Hossain
Region Examiner	
Region Supervisor	Reem Shahin
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 10/24/2013 [signature]
(Signature)

E

FILE NAME:

PLOT DATE:

GENERAL NOTES

1. ALL OPENINGS BELOW SUBGRADE, RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO SUBGRADE ELEVATION.

2. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH 4"OF TOPSOIL, SODDED AND FERTILIZED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. TOPSOILED AREAS SHALL BE SODDED AND FERTILIZED WITHIN 5 CALENDAR DAYS.

3. WHEN THE QUANTITY OF ITEMS OF BASE & / OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIALS AS DIRECTED BY THE ENGINEER.

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

5. ALL ELEVATIONS ARE REFERENCED TO CITY OF MILWAUKEE DATUM.

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

7. ALL LONGITUDINAL AND TRANSVERSE JOINTS REQUIRING SEALING SHALL BE SEALED IN ACCORDANCE WITH THE DETAIL.

8. 'PAVEMENT TIES' AS SHOWN ON STANDARD DETAIL DRAWING 'CONCRETE GUTTER,CURB AND GUTTER AND PAVEMENT TIES' ARE REQUIRED TO TIE EXISTING CONCRETE TO NEW CONCRETE CURB AND GUTTER.

9. THE LOCATION OF LONGITUDINAL JOINTS IN ASPHALTIC CONCRETE SHALL BE APPROVED BY THE ENGINEER.

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

11. ALL COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM, SOUTH ZONE. THE CONTROL SURVEY FOR THIS IMPROVEMENT PROJECT WAS CONDUCTED UNDER AND MET SPECIFICATIONS FOR THIRD ORDER CONTROL SURVEYS.

12. REPLACE ALL CONCRETE CURB AND GUTTER INDICATED FOR REMOVAL AND REPLACEMENT IN EXISTING LOCATION UNLESS OTHERWISE NOTED ON PLAN.

13. CONSTRUCTION PERMITS FOR CONCRETE WALK &/ OR CONCRETE DRIVEWAY WORK HAVE BEEN OBTAINED, WHICH RIGHTS SHALL BE EXTENDED TO THE CONTRACTORS.

14. INLET SCREENS ARE TO BE PLACED BETWEEN THE FRAME AND GRATE OF CATCH BASINS / INLETS TO PREVENT SOIL FROM ENTERING THE SEWERS.

15. ALL CURB AND GUTTER SHOULD HAVE A FLANGE THICKNESS OF 8.5'.

16. CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER AND SEWRPC AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

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

18. EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS 'ECIP' AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGATATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

19. RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOIL AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER

20. STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION.

STANDARD ABBREVIATIONS

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

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
UTILITY CONTACTS
PROJECT OVERVIEW
CONSTUCTION PERMITS
TYPICAL SECTIONS
CONSTRUCTION DETAILS
BANNER POLE DETAIL
DRAINAGE DETAILS
LANDMARK REFERENCE MONUMENTS
WALK AND DRIVEWAY REMOVAL
PLAN DETAILS
EROSION CONTROL PLAN
UTILITIES AND DRAINAGE
BIO-SWALES
BIO-SWALE LANDSCAPE
MEDIAN LANSCAPING
PERMANENT SIGNING
HOWARD AND 27TH TRAFFIC SIGNAL
HOWARD AND 27TH INTERCONNECT
SREET LIGHTING & TRAFFIC SIGNAL CONDUIT
CITY UNDERGROUND CONDUIT (TES)
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT PLAN

2

UTILITY CONTACTS

CITY OF MILWAUKEE, SEWER, WATER AND TRAFFIC ENGINEERING AND ELECTRIC SERVICES

ANTHONY KOTECKI
841 N. BROADWAY,
MILWAUKEE, WI 53202
PHONE: 414-708-3886

CITY OF MILWAUKEE - WATER

CARRIE LEWIS
841 N. BROADWAY, RM. 409
MILWAUKEE, WI 53202
PHONE: 414-286-2801

AURORA ST LUKES MEDICAL CENTER

NOLAN HARP
2900 W. OKLAHOMA AVE.
MILWAUKEE, WI 53215
PHONE: 414-649-7238

CITY OF GREENFIELD - ENGINEERING DIVISION

BILL HOPPE
7325 W. FOREST HOME AVE.
GREENFIELD, WI 53220
PHONE: 414-939-8322

WE ENERGIES - ELECTRIC

MICHAEL MLINAR,
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-944-5537

CHRIS SCHULTZ
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-944-5553

WE ENERGIES - GAS

TOM MINESAL
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-540-5377

MIDWEST FIBER NETWORKS (CABLE COM, LLC)

RICHARD TRGOVEC
3701 W. BURNHAM ST., SUITE C
MILWAUKEE, WI 53215
PHONE: 414-672-5612

MI-TECH SERVICES INC.

LORI WITTHUHN
1700 INDUSTRIAL DR.
GREEN BAY, WI 54302
PHONE: 920-288-8935

SBC/AT&T

MARK EDER
2005 PEWAUKEE RD.
WAUKESHA, WI 53188
PHONE: 262-896-7434

TIME WARNER CABLE

LUKAS LACROSSE
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-908-4766

TIME WARNER TELECOM OF WISCONSIN LP

JOHN COTTRELL
3235 INTERTECH DR., STE 600
BROOKFIELD, WI 53045
PHONE: 414-908-1011

OTHER CONTACTS

CITY OF MILWAUKEE - DESIGN

CHAD CHRISBAUM
841 N. BROADWAY, RM. 902
MILWAUKEE, WI 53202
PHONE: 414-286-0470

MILWAUKEE COUNTY TRANSIT SYSTEM - ROUTES

DAVID ZIAREK
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-343-1764

MILWAUKEE COUNTY TRANSIT SYSTEM - BUS STOPS

WILLIAM LOCHER
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-937-3217

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

DEBRA JENSEN
200 W. SEEBOTH ST.
MILWAUKEE, WI 53204
PHONE: 414-225-2143

SEWRPC - LAND MONUMENTS

JOHN WASHBURN
W239 N1812 ROCKWOOD DR.
WAUKESHA, WI 53187
PHONE: 262-547-6722 EXT 295

DON SIMON
W239 N1812 ROCKWOOD DR.
WAUKESHA, WI 53187
PHONE: 262-547-6722 EXT 249

WISDOT - DESIGN

SCOTT STEVENSON (AECOM)
1555 N. RIVERCENTER DR.
MILWAUKEE, WI 53212
PHONE: 414-944-6080

WISCONSIN DEPT. OF NATURAL RESOURCES

KRISTINA BETZOLD
2300 N. DR. MARTIN LUTHER KING, JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-263-8517

WISDOT - TRAFFIC SIGNALS

JEFF MADSON
433 W. ST. PAUL AVE., STE 300
MILWAUKEE, WI 53203
PHONE: 414-221-4578

WISDOT - PROJECT MANAGER

MOHAMMAD HOSSAIN
141 NW BARSTOW ST.
WAUKESHA, WI 53187
PHONE: 262-548-8783

CLEAR CHANNEL OUTDOOR - BUS SHELTERS

DAVID JASENSKI
908 SILVERNAIL RD.
PEWAUKEE, WI 53072
PHONE: 262-506-9031

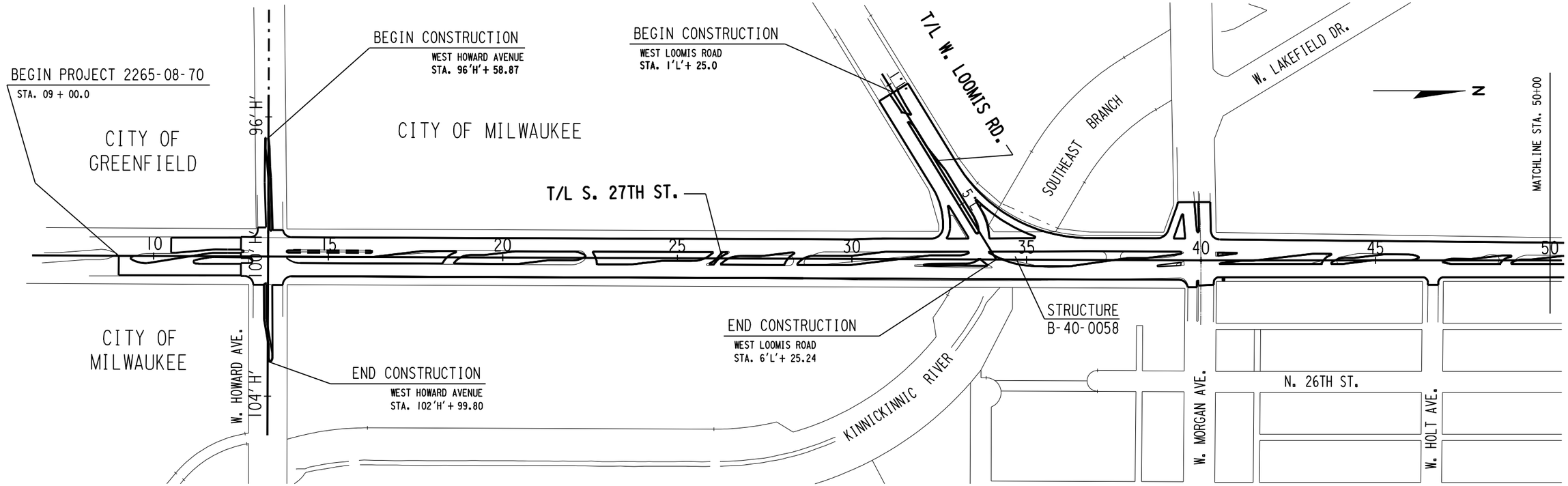
DIGGERS HOTLINE

Call 811 3 Work Days Before You Dig
Or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITY CONTACTS	SCALE FEET	SHEET NO: 3	E

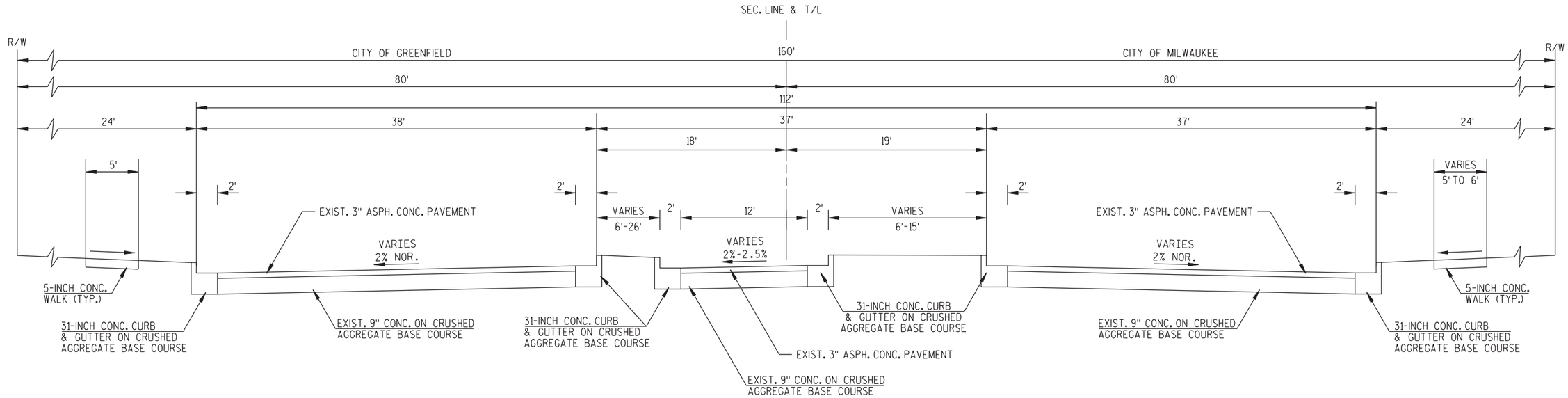
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2



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SCALE FEET 0' 300'	SHEET NO: 4	E

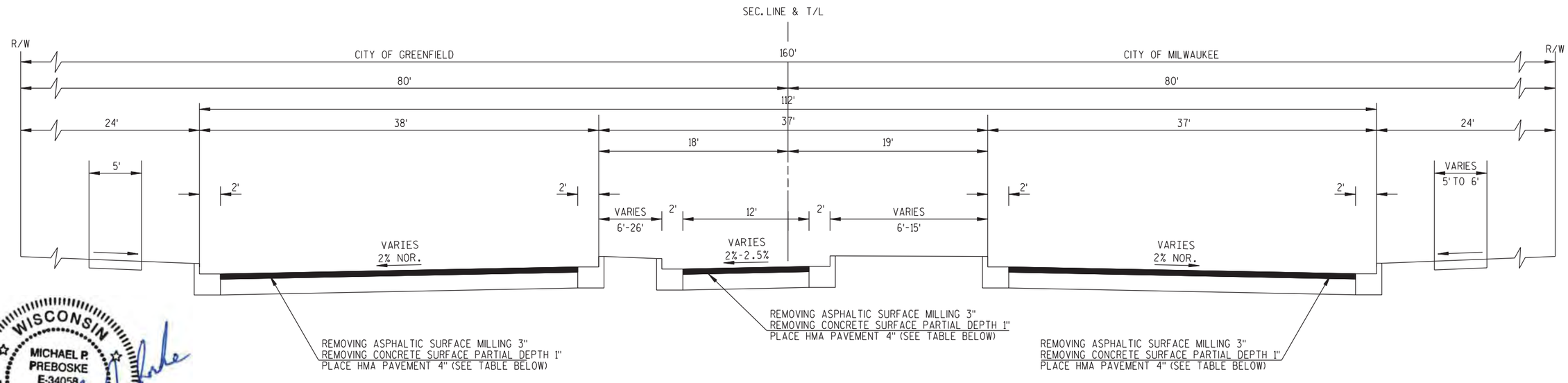
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TYPICAL EXISTING SECTION

SOUTH 27TH STREET

STA. 9+00 TO STA. 12+50



WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER
08/26/2013

TYPICAL FINISHED SECTION

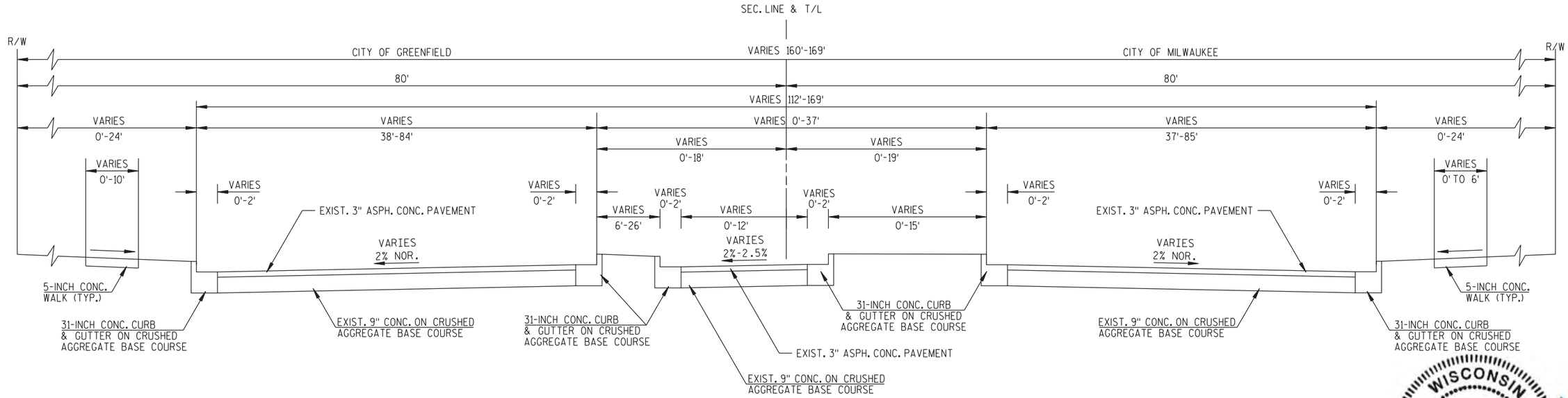
SOUTH 27TH STREET

STA. 9+00 TO STA. 12+50

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	AC MATERIAL	HMA TYPE
4"	1¾" UPPER LAYER 2¼" LOWER LAYER	12.5 MM 19.0 MM	12.5 MM 19.0 MM	E-3 E-3

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 5 E

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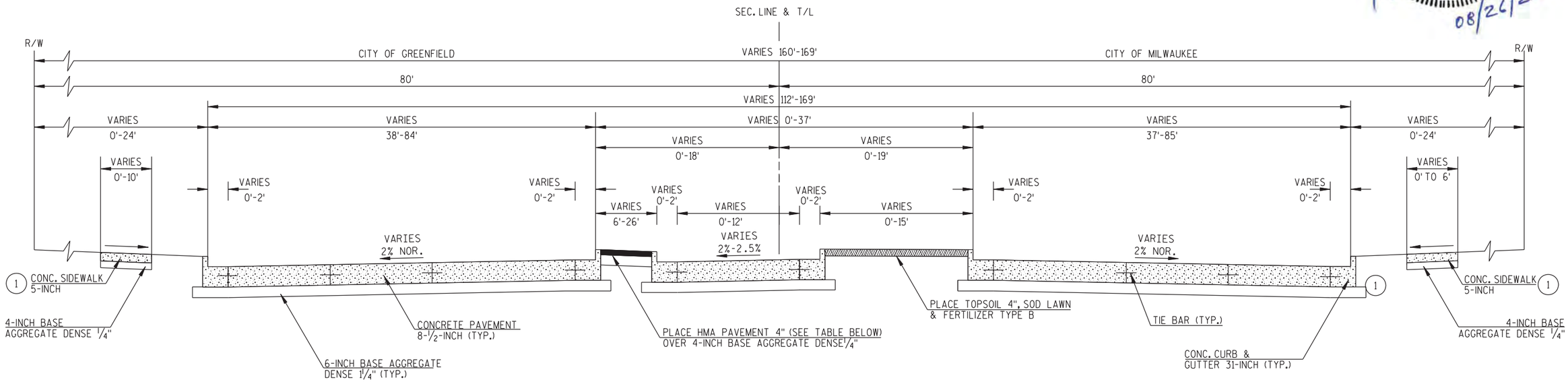


TYPICAL EXISTING SECTION

SOUTH 27TH STREET

STA. 12+50 TO STA. 13+25





1 SEE PLAN SHEETS FOR LOCATIONS

TYPICAL FINISHED SECTION

SOUTH 27TH STREET

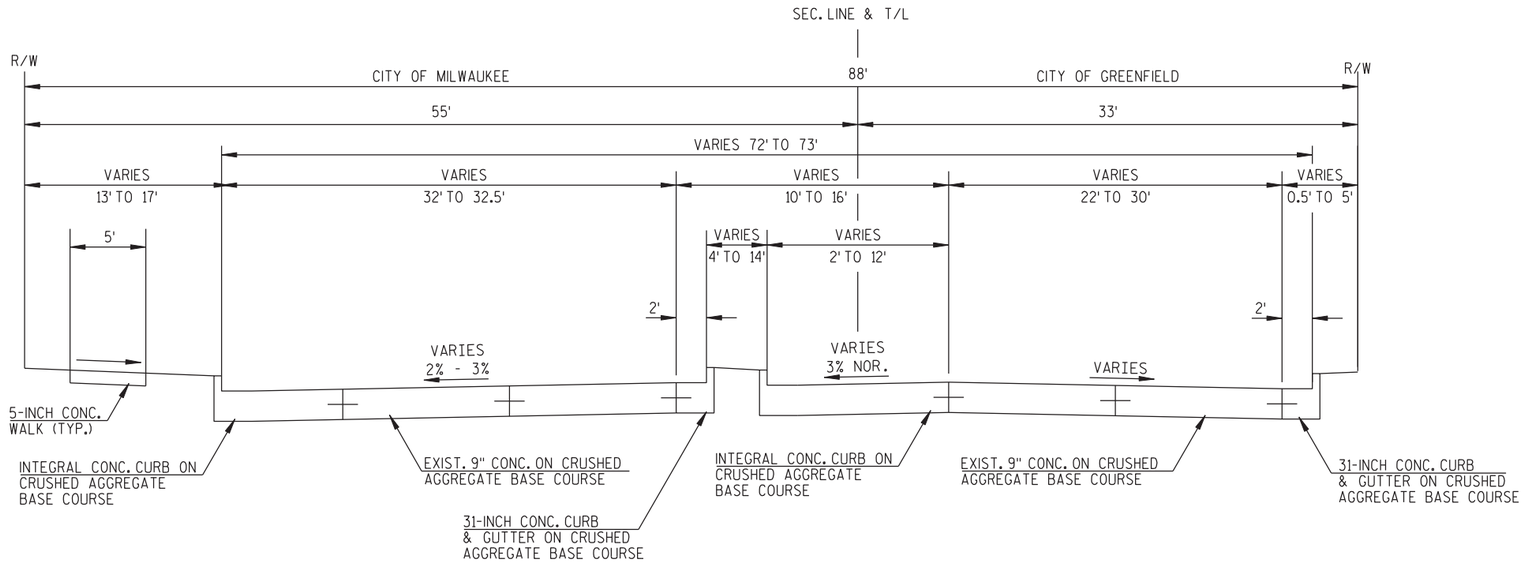
STA. 12+50 TO STA. 13+25

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	AC MATERIAL	HMA TYPE
4"	1¾" UPPER LAYER 2¼" LOWER LAYER	12.5 MM 19.0 MM	12.5 MM 19.0 MM	E-3 E-3

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 6	E

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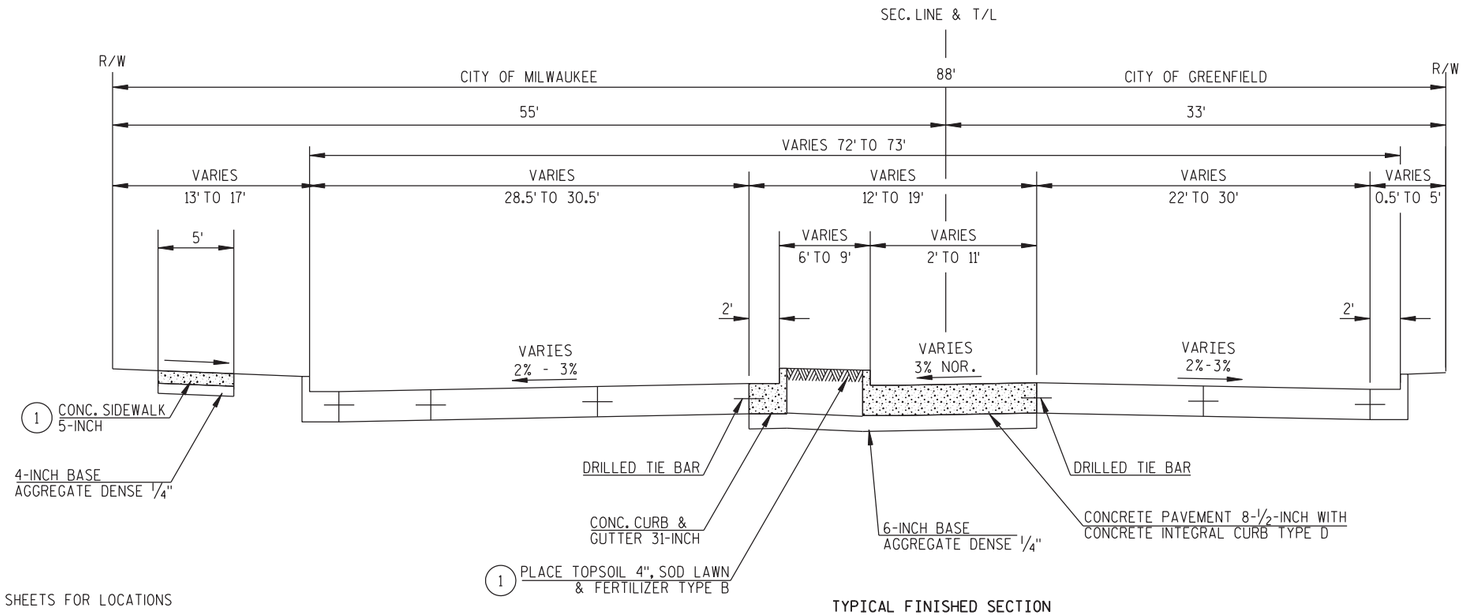
2



TYPICAL EXISTING SECTION

WEST HOWARD AVENUE

STA. 96'H'+58.87 TO STA. 100'H'+00



(1) SEE PLAN SHEETS FOR LOCATIONS

TYPICAL FINISHED SECTION

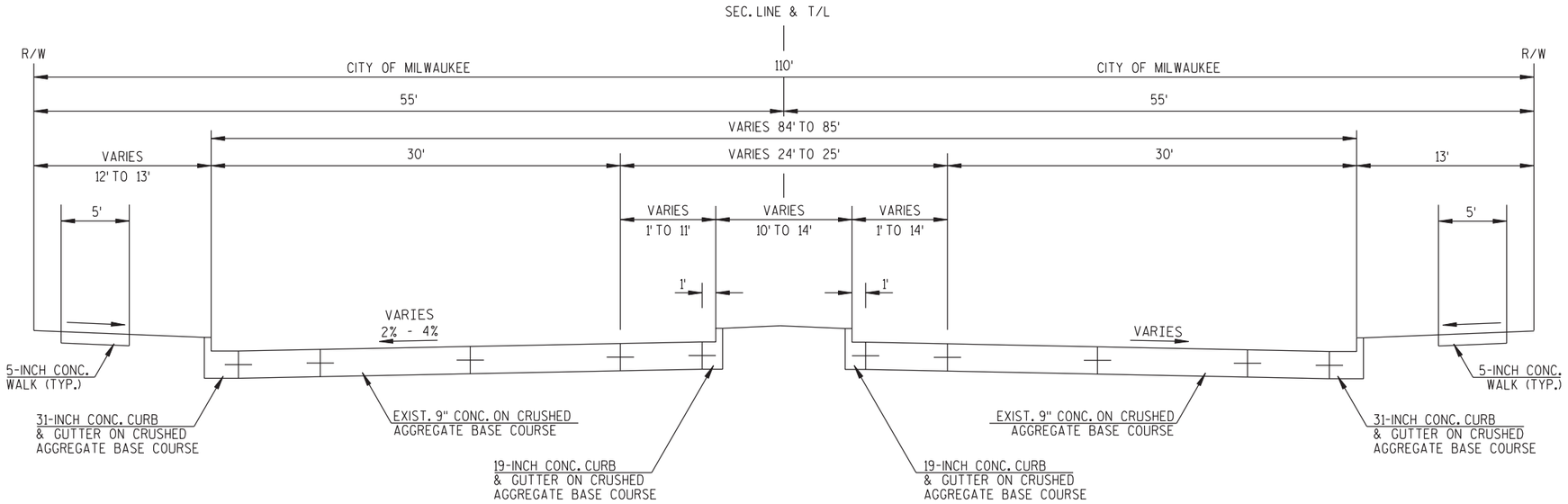
WEST HOWARD AVENUE

STA. 96'H'+58.87 TO STA. 100'H'+00



STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 7 E

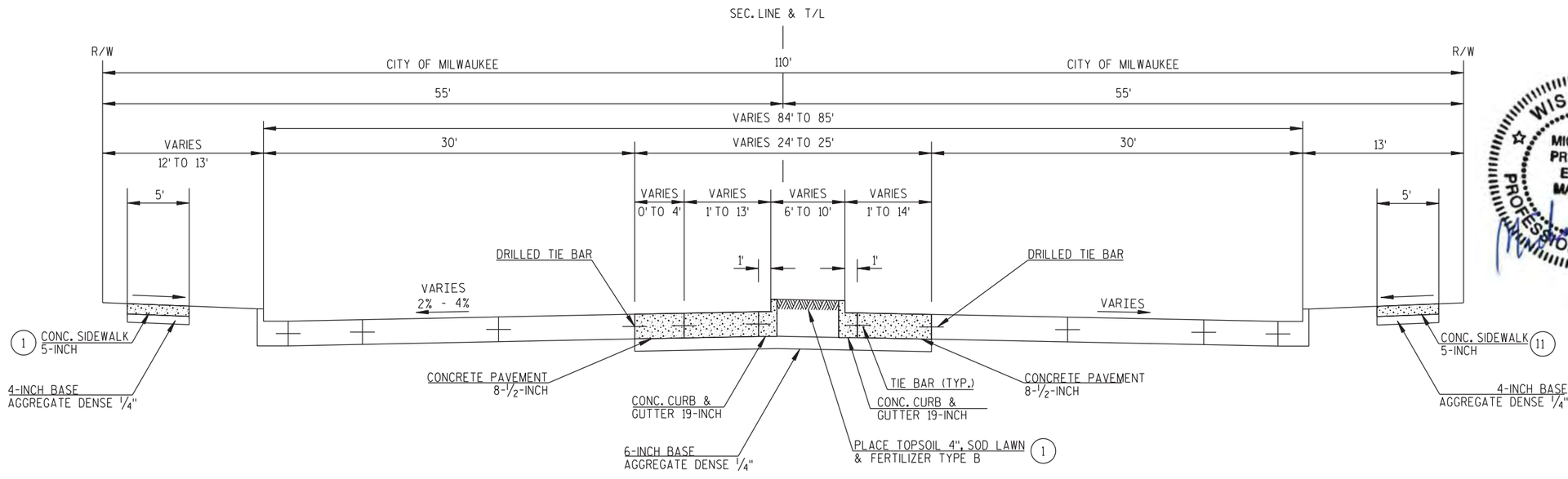
FILE NAME=



TYPICAL EXISTING SECTION

WEST HOWARD AVENUE

STA. 100'H'+00 TO STA. 102'H'+99.80



1 SEE PLAN SHEETS FOR LOCATIONS

WISCONSIN MICHAEL P. PREBOSKE E-34058 MADISON WI PROFESSIONAL ENGINEER

08/26/2013

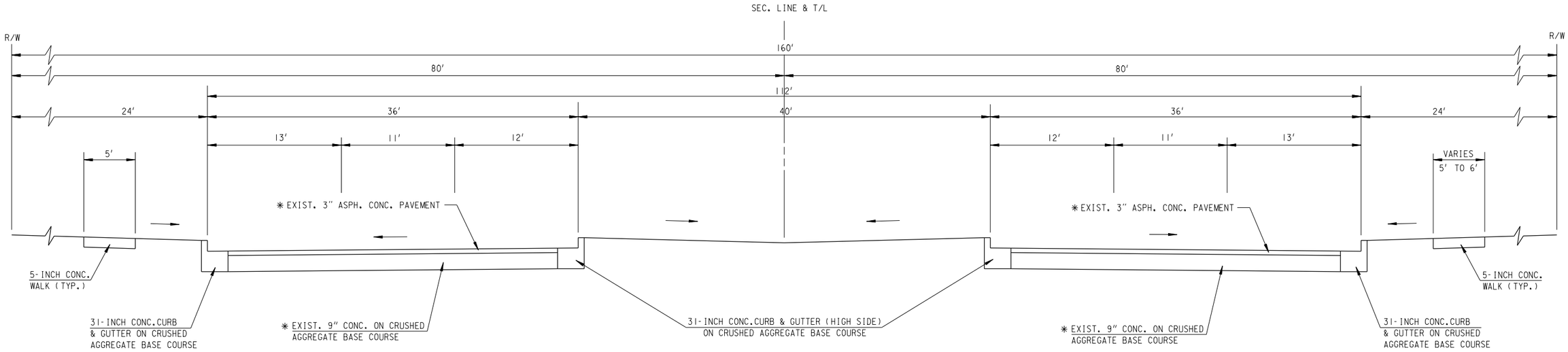
TYPICAL FINISHED SECTION

WEST HOWARD AVENUE

STA. 100'H'+00 TO STA. 102'H'+99.80

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 8 E

FILE NAME=



TYPICAL EXISTING SECTION

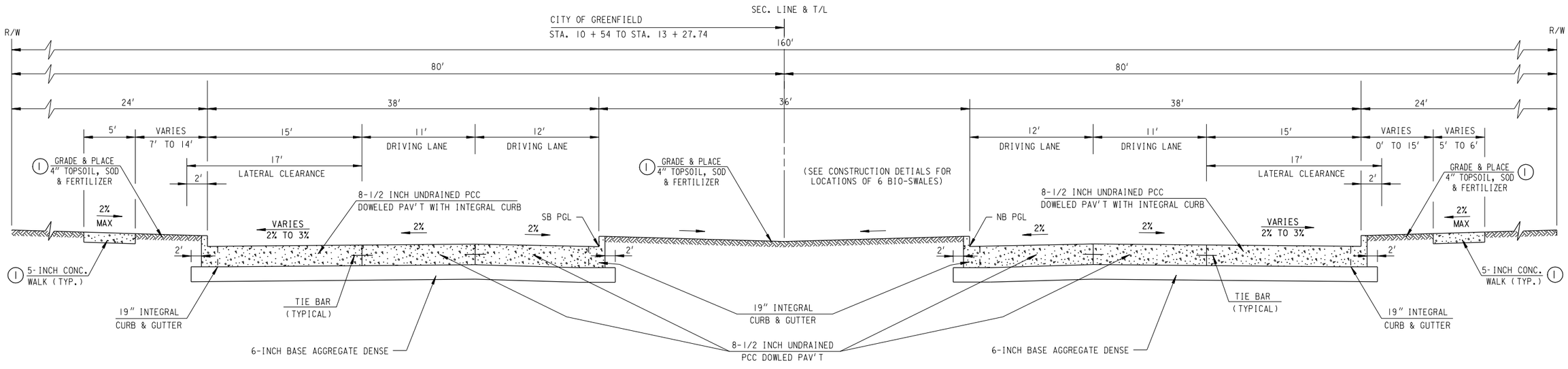
SOUTH 27TH STREET

STA. 13+25 TO STA. 40+00

* EXISTING PAVEMENT DEPTHS VARY FROM THE TYPICAL AT THE FOLLOWING LOCATIONS:

- SB SOUTH 27TH STREET FROM APPROXIMATELY STATION 13+50 TO APPROXIMATELY STATION 33+50 IS AN AVERAGE OF 7 INCHES OF HOT MIX ASPHALT OVER 8.5 INCHES OF CONCRETE.
- NB SOUTH 27TH STREET FROM APPROXIMATELY STATION 13+50 TO APPROXIMATELY STATION 28+00 IS AN AVERAGE OF 9.8 INCHES OF HOT MIX ASPHALT OVER 8 INCHES B.A.D.

NOTE: PAVEMENT DEPTHS AND LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM PAVEMENT CORE DATA, NOT FROM AS-BUILT PLANS. CONCRETE PAVEMENT NORTH OF OKLAHOMA CONTAINS REINFORCEMENT STEEL.



TYPICAL FINISHED SECTION

SOUTH 27TH STREET

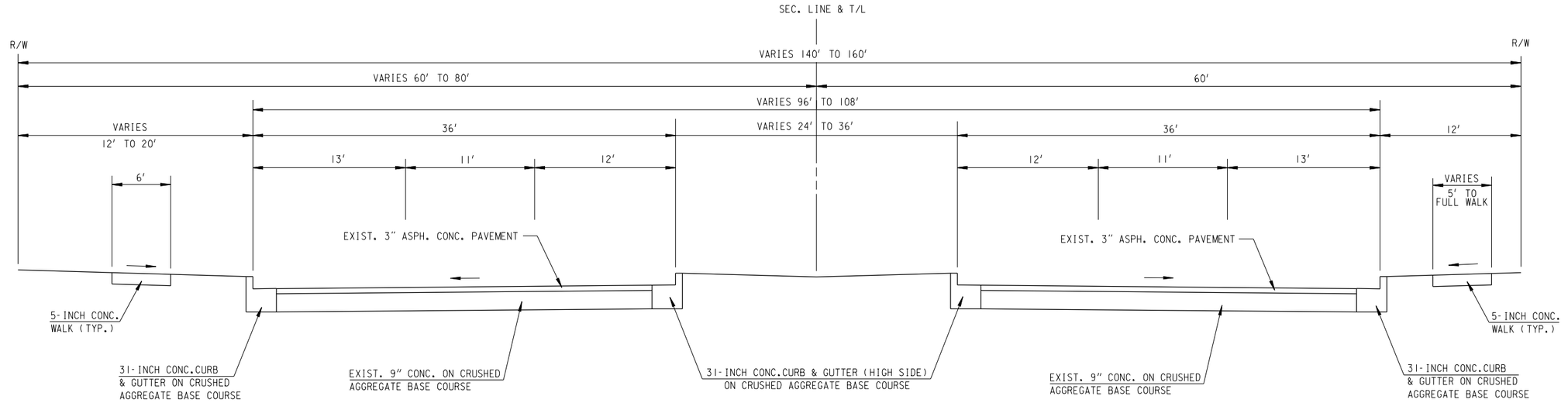
STA. 13+25 TO STA. 40+00

(1) SEE PAVING PLAN FOR LOCATIONS

NB PGL = POINT REFERRED TO ON NORTHBOUND PROFILE
SB PGL = POINT REFERRED TO ON SOUTHBOUND PROFILE

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 9	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\TYPSEC.DGN

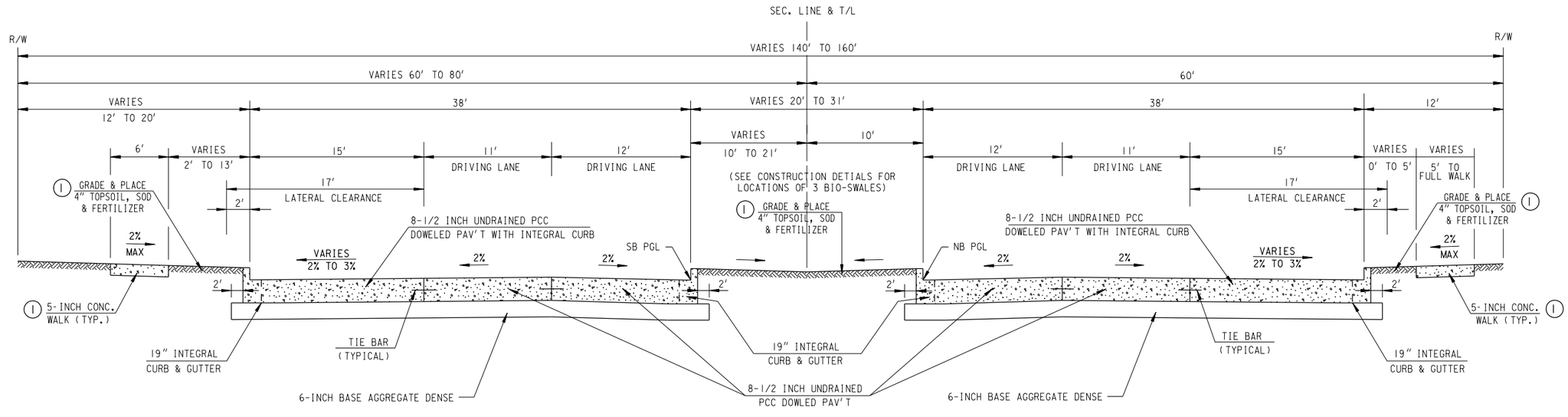


TYPICAL EXISTING SECTION

SOUTH 27TH STREET

STA. 40+00 TO STA. 66+50

NOTE: PAVEMENT DEPTHS AND LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM PAVEMENT CORE DATA, NOT FROM AS-BUILT PLANS. CONCRETE PAVEMENT NORTH OF OKLAHOMA CONTAINS REINFORCEMENT STEEL.



(1) SEE PAVING PLAN FOR LOCATIONS

NB PGL = POINT REFERRED TO ON NORTHBOUND PROFILE
SB PGL = POINT REFERRED TO ON SOUTHBOUND PROFILE

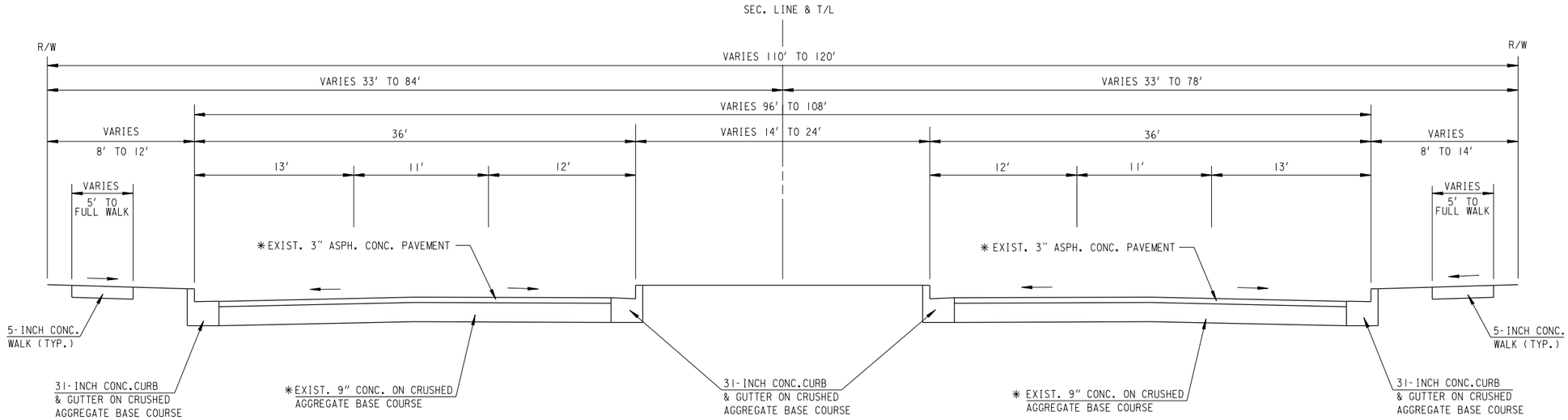
TYPICAL FINISHED SECTION

SOUTH 27TH STREET

STA. 40+00 TO STA. 66+50

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 10	E

FILE NAME: W:\SPR\27TH HOWARD OKLA TYPSEC.DGN



TYPICAL EXISTING SECTION

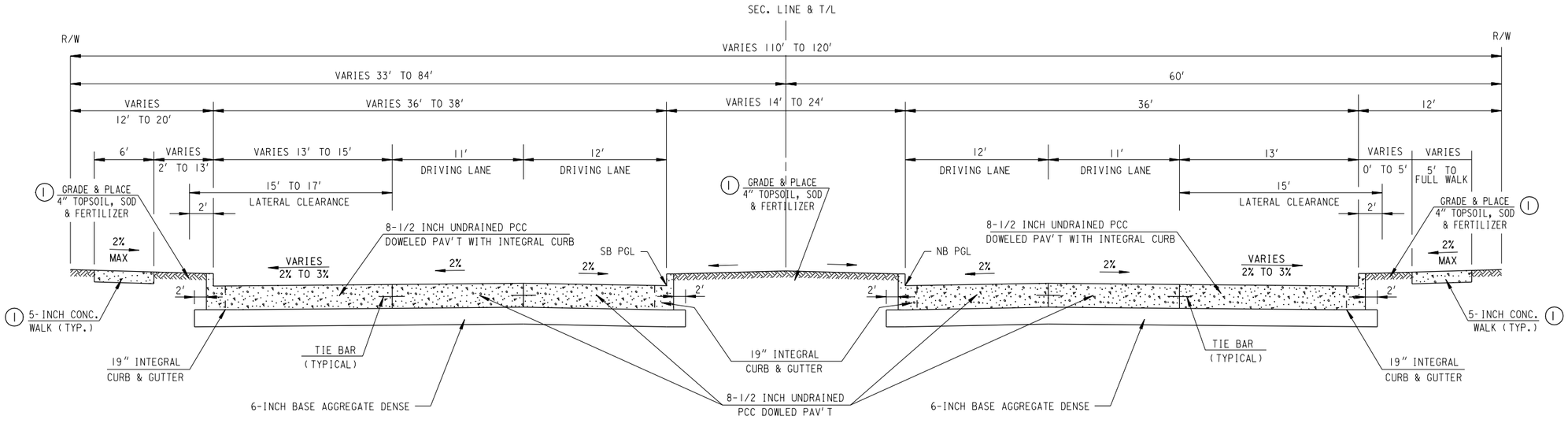
SOUTH 27TH STREET

STA. 66+50 TO STA. 75+75

✳ EXISTING PAVEMENT DEPTHS VARY FROM THE TYPICAL AT THE FOLLOWING LOCATIONS:

- SB SOUTH 27TH STREET FROM APPROXIMATELY STATION 68+50 TO APPROXIMATELY STATION 85+16 IS AN AVERAGE OF 8.75 INCHES OF CONCRETE OVER 6 INCHES B.A.D.

NOTE: PAVEMENT DEPTHS AND LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM PAVEMENT CORE DATA, NOT FROM AS-BUILT PLANS. CONCRETE PAVEMENT NORTH OF OKLAHOMA CONTAINS REINFORCEMENT STEEL.



TYPICAL FINISHED SECTION

SOUTH 27TH STREET

STA. 66+50 TO STA. 75+75

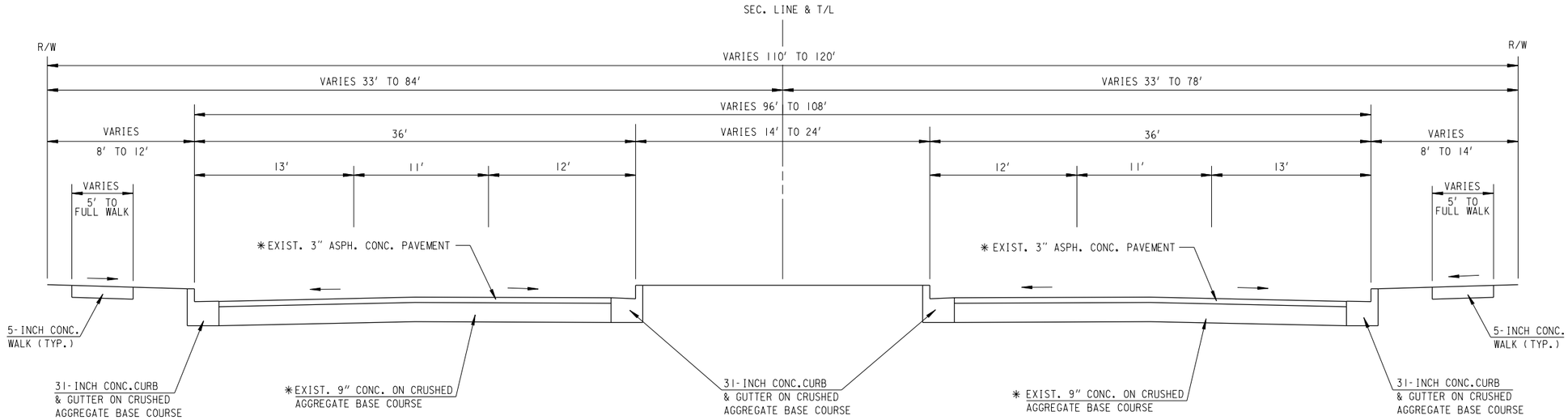
Ⓘ SEE PAVING PLAN FOR LOCATIONS

NB PGL = POINT REFERRED TO ON NORTHBOUND PROFILE

SB PGL = POINT REFERRED TO ON SOUTHBOUND PROFILE

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 11	E

FILE NAME: W:\SPR\27TH HOWARD OKLA TYPSEC.DGN



TYPICAL EXISTING SECTION

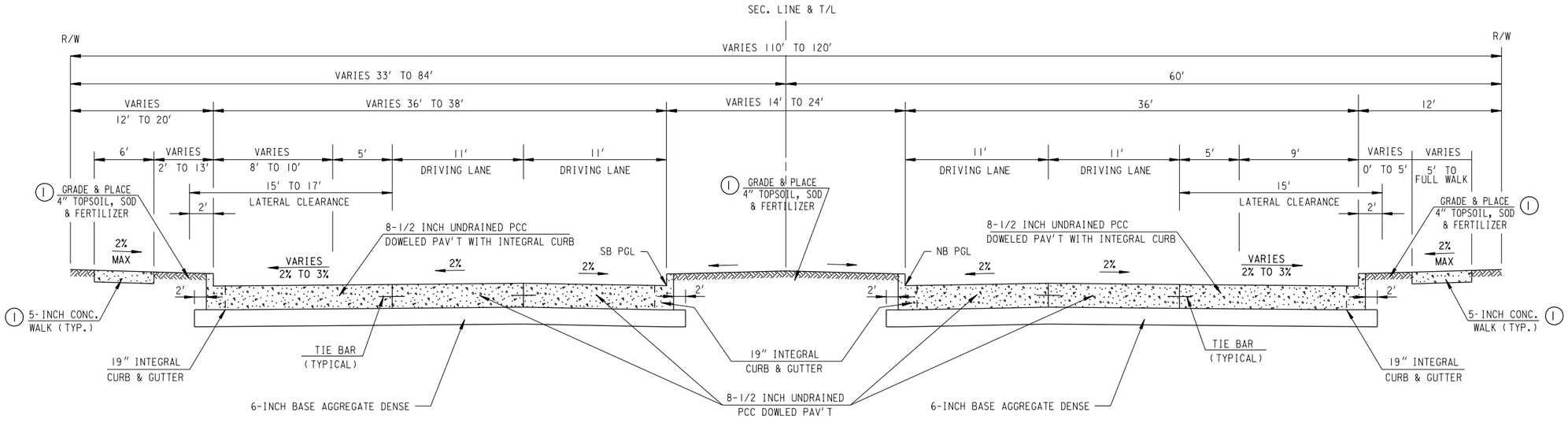
SOUTH 27TH STREET

STA. 75+75 TO STA. 85+16

∗ EXISTING PAVEMENT DEPTHS VARY FROM THE TYPICAL AT THE FOLLOWING LOCATIONS:

- SB SOUTH 27TH STREET FROM APPROXIMATELY STATION 68+50 TO APPROXIMATELY STATION 85+16 IS AN AVERAGE OF 8.75 INCHES OF CONCRETE OVER 6 INCHES B.A.D.

NOTE: PAVEMENT DEPTHS AND LOCATIONS ARE APPROXIMATE AND WERE TAKEN FROM PAVEMENT CORE DATA, NOT FROM AS-BUILT PLANS. CONCRETE PAVEMENT NORTH OF OKLAHOMA CONTAINS REINFORCEMENT STEEL.



TYPICAL FINISHED SECTION

SOUTH 27TH STREET

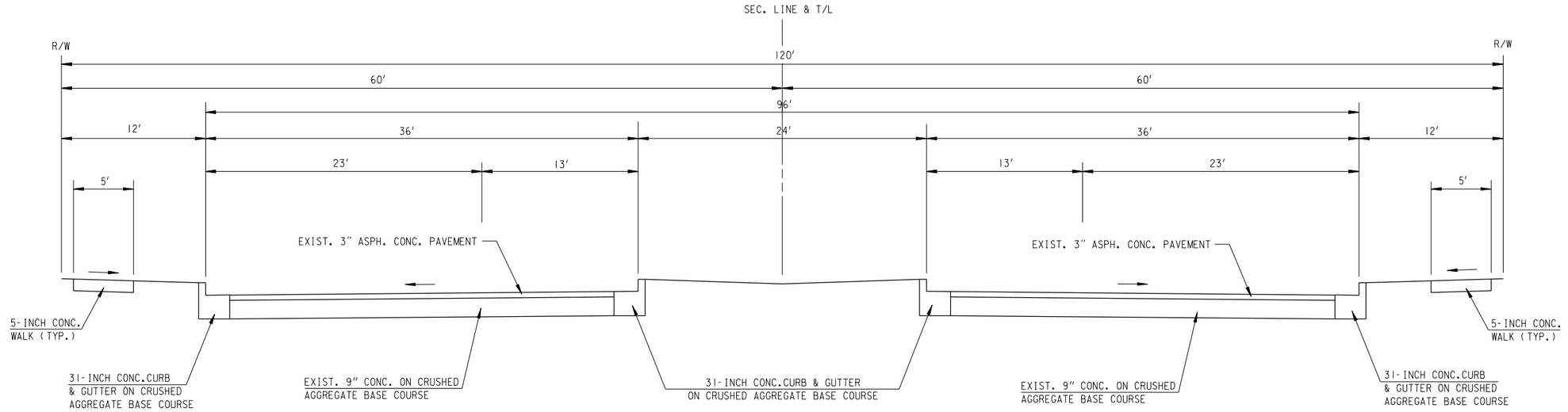
STA. 75+75 TO STA. 85+16

(1) SEE PAVING PLAN FOR LOCATIONS

NB PGL = POINT REFERRED TO ON NORTHBOUND PROFILE
SB PGL = POINT REFERRED TO ON SOUTHBOUND PROFILE

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 12	E

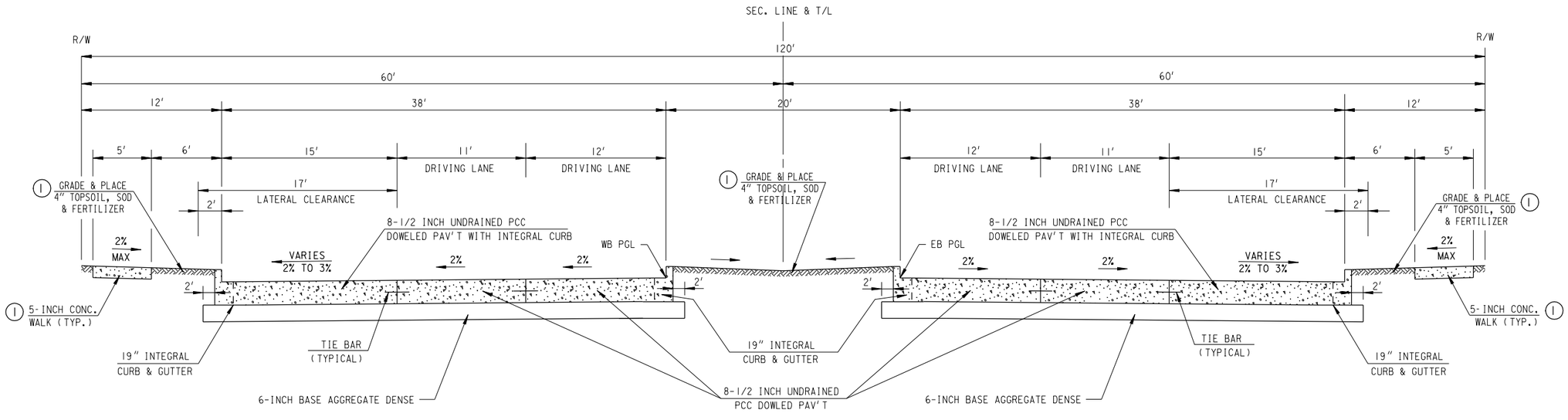
FILE NAME: W:\SPR\27TH HOWARD OKLA TYPSEC.DGN



TYPICAL EXISTING SECTION

WEST LOOMIS ROAD

STA. 01′L′+ 25.0 TO STA. 04′L′+ 50



(1) SEE PAVING PLAN FOR LOCATIONS

EB PGL = POINT REFERRED TO ON EASTBOUND PROFILE
WB PGL = POINT REFERRED TO ON WESTBOUND PROFILE

TYPICAL FINISHED SECTION

WEST LOOMIS ROAD

STA. 01′L′+ 25.0 TO STA. 04′L′+ 50

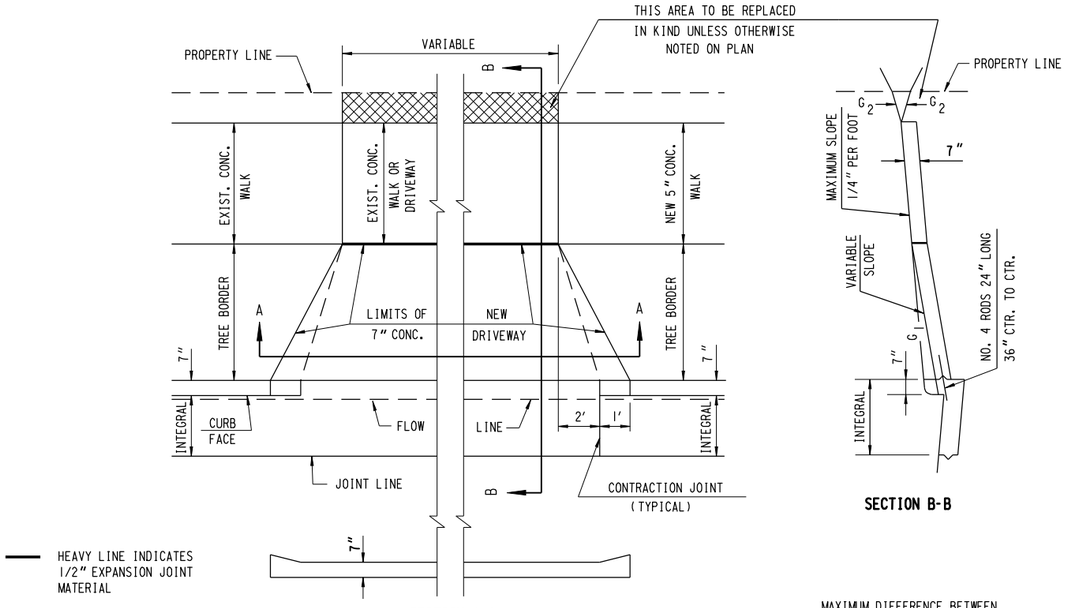
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET	SHEET NO: 13	E

FILE NAME: W:\SPR\27TH HOWARD OKLA TYPSEC.DGN

2

CONSTRUCTION PERMITS TO REMOVE AND REPLACE CONCRETE WALK AND/OR DRIVEWAY

PARCEL NO.	ADDRESS OF PROPERTY	STATION	OFFSET
1	#2700 W. OKLAHOMA AVE.	67+10.0 - 70+10.0	LT.
2	#3025 S. 27TH ST.	70+10.0 - 72+05.0	LT.
3	#3514 S. 27TH ST.	37+68.0 - 38+70.0	RT.
4	#3555 S. 27TH ST.	38+40.0 - 38+77.0	LT.
5	#3340 S. 27TH ST.	48+75.0 - 50+12.0	RT.
6	#3300 S. 27TH ST.	52+40.0 - 52+59.0	RT.
7	#3236 S. 27TH ST.	56+65.0 - 56+72.0	RT.
8	#3233 S. 27TH ST.	56+37.0 - 56+72.0	LT.
9	#3232 S. 27TH ST.	57+08.0 - 57+87.0	RT.
10	#2733 W. EUCLID AVE.	57+59.0 - 58+90.0	LT.
11	#3151 S. 27TH ST.	62+46.0 - 62+71.0	LT.
12	#3146 S. S 27TH ST.	62+33.0 - 62+45.0	RT.
13	#3120 S. 27TH ST.	63+58.0 - 63+89.0	RT.
14	#3119 S. 27TH ST.	65+59.0 - 64+72.0	LT.
15	#3105 S. 27TH ST.	64+90.0 - 65+04.0	LT.
16	#2856 S. 27TH ST.	79+75.0 - 80+25.0	RT.



HEAVY LINE INDICATES 1/2" EXPANSION JOINT MATERIAL

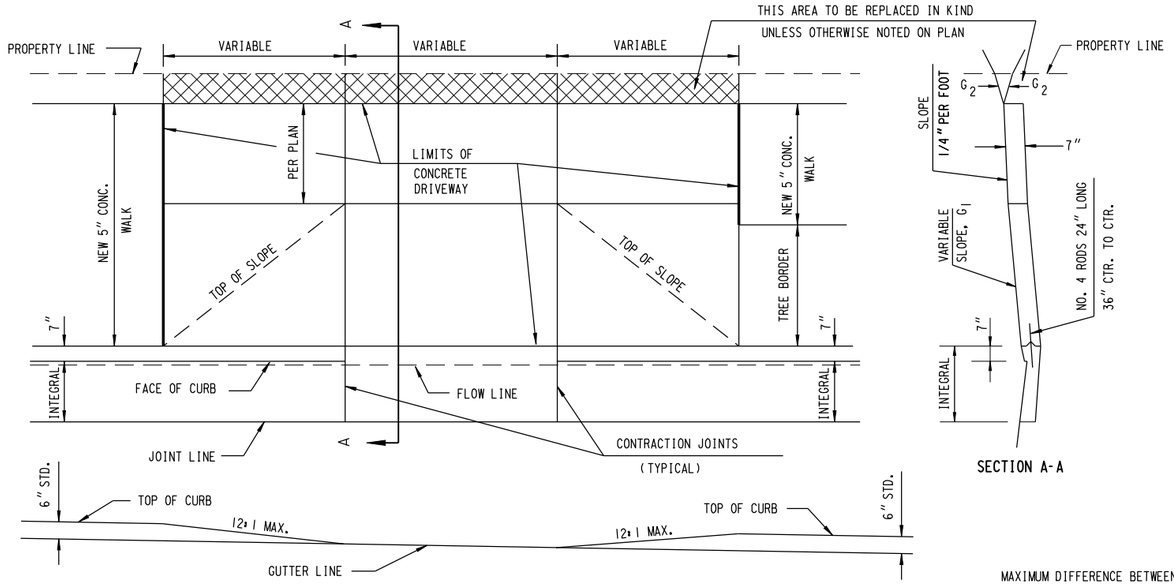
PLACE DUMMY JOINTS AT CENTER OF DRIVEWAY AND/OR AT ALL JOINTS IN THE GUTTER

MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 NOT TO EXCEED 15% DESIRABLE MAXIMUM - 10%

MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 IN FILL - 14%

FLARED CONCRETE DRIVEWAY

Ⓕ



HEAVY LINE INDICATES 1/2" EXPANSION JOINT MATERIAL

DRIVEWAY CONSTRUCTION NOTES

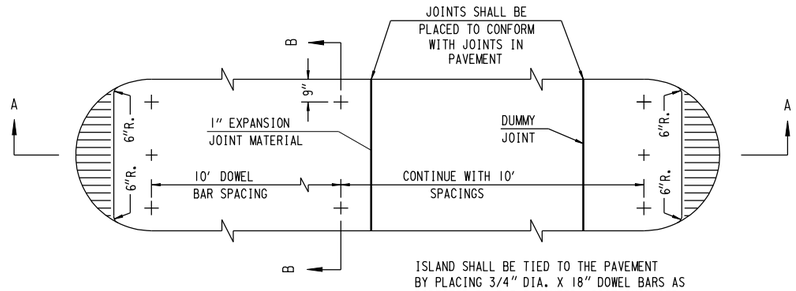
CONSTRUCT DRIVEWAY TO PROPERTY LINE ONLY WHEN MATCHING EXISTING DRIVEWAY AND INSTALL 1/2" EXPANSION JOINT MATERIAL BETWEEN NEW AND OLD DRIVEWAY, PLACE DUMMY JOINT AT CENTER OF DRIVEWAY AND AT ALL JOINTS IN THE GUTTER

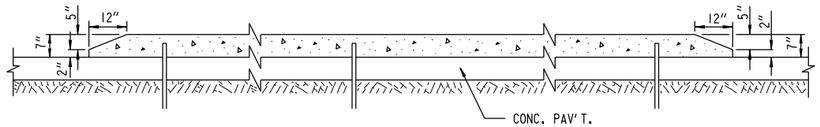
MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 NOT TO EXCEED 15% DESIRABLE MAXIMUM - 10%

MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 IN FILL - 14%

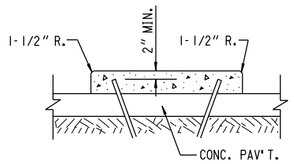
DEPRESSED CONCRETE DRIVEWAY (MODIFIED)

D23





SECTION A - A

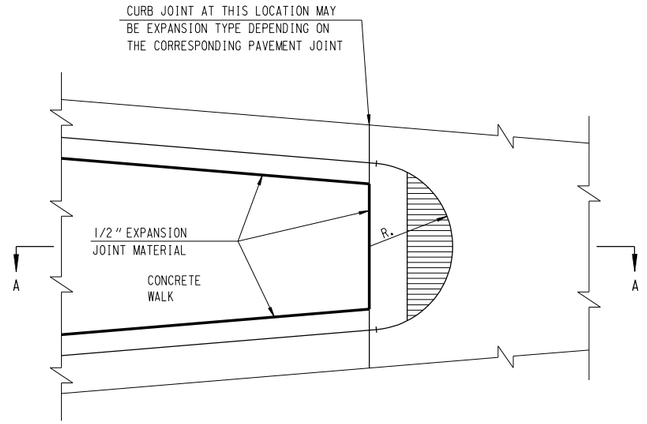


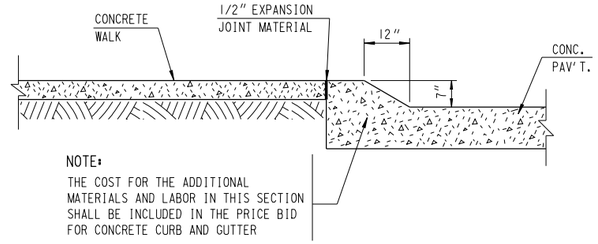
SECTION B - B

NOTE :
SIZE AND LOCATION OF CITY OF MILWAUKEE
ELECTRICAL SERVICES BOXOUTS IN CONCRETE
ISLANDS ON BASE TO BE DETERMINED IN FIELD
AT THE TIME OF CONSTRUCTION

CONCRETE LOADING ZONE
(WITH SNOWPLOWABLE NOSE)

Ⓩ



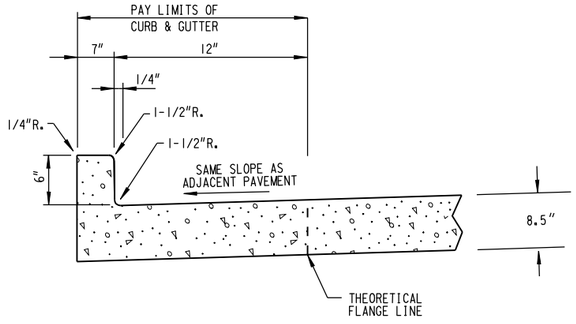


SECTION A-A

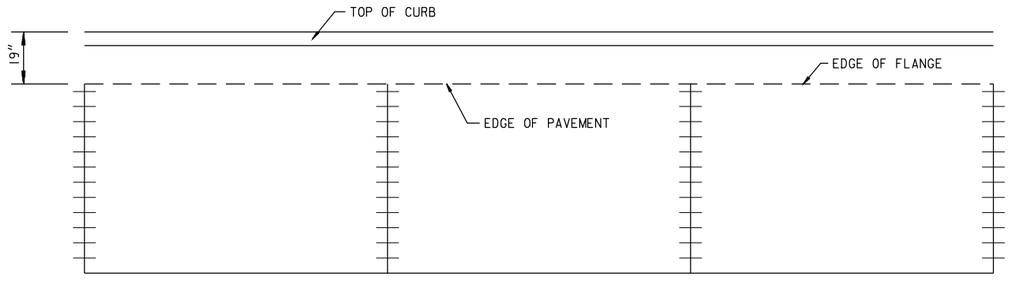
SNOWPLOWABLE MEDIAN ISLAND NOSE

(TYPICAL SECTION OF CONCRETE CURB & GUTTER
TO BE CONSTRUCTED AT END OF MEDIAN ISLAND)

Ⓨ



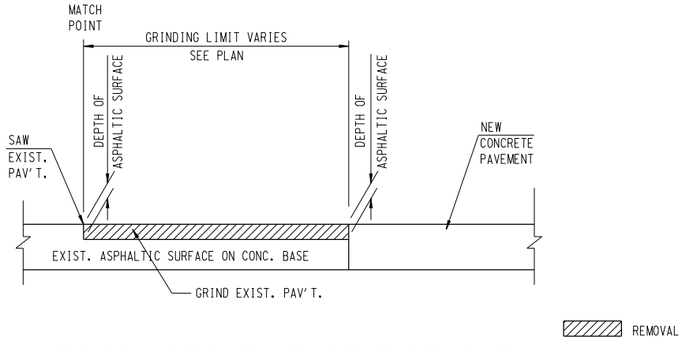
CONCRETE CURB & GUTTER INTEGRAL 19-INCH



CONTRACTION JOINT LOCATIONS

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET	SHEET NO: 16	E

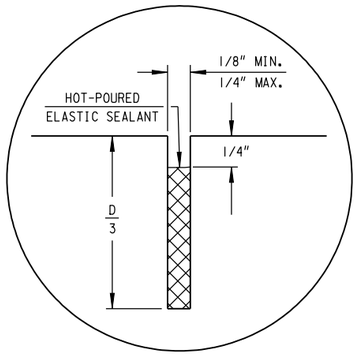
FILE NAME: W:\SPR\27TH HOWARD OKLA\CONDET.DGN



REMOVING PAVEMENT/ASPHALTIC SURFACE BUTT JOINTS

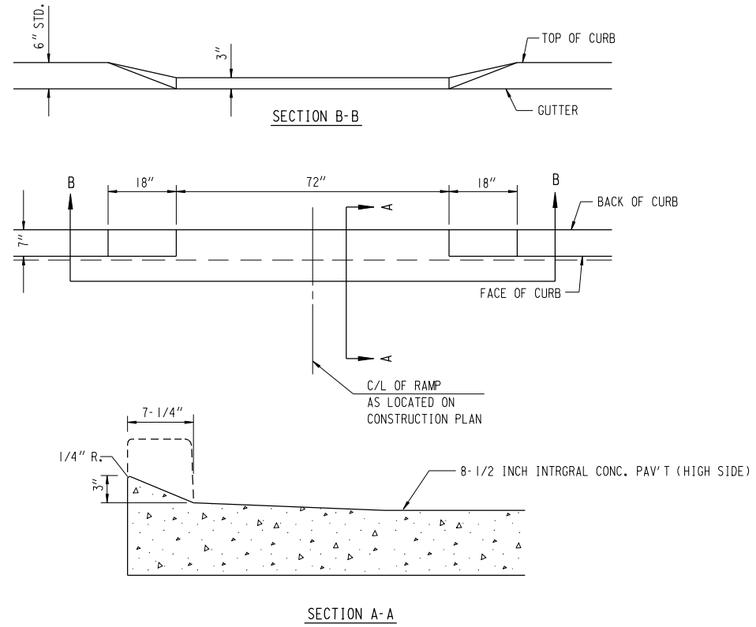
IN ROADWAY AT INTERSECTIONS AND ABUTTING PAVEMENT

(G3)



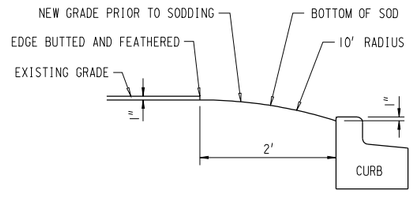
JOINT SEALING DETAIL

PAVEMENT DEPTH AND JOINT SPACING TABLE	
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6"	12'
7"	14'
8"	15'
9"	15'
10" & ABOVE	18'



MAINTENANCE RAMP

(X)

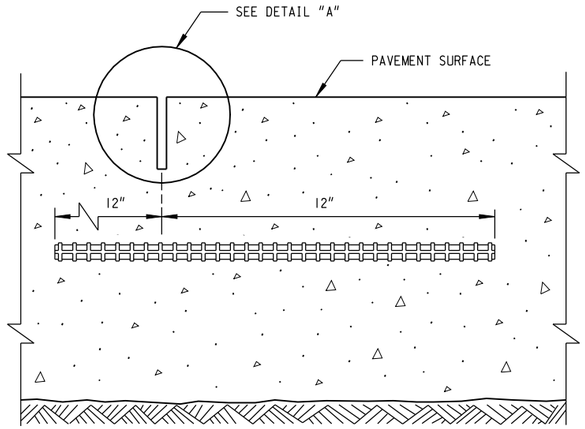


NOTE:
SOIL TO BE COMPACTED PRIOR TO PLACEMENT OF SOD.
SOIL LEVEL OF SOD TO BE FLUSH WITH TOP OF CURB.

GRADING DETAIL

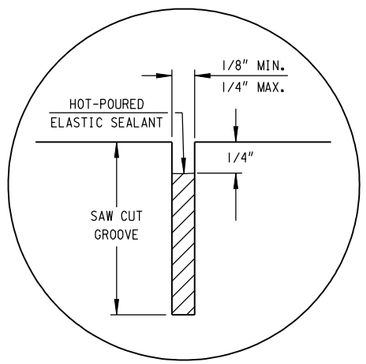
2

JOINTS WITH HOT POURED SEALANT

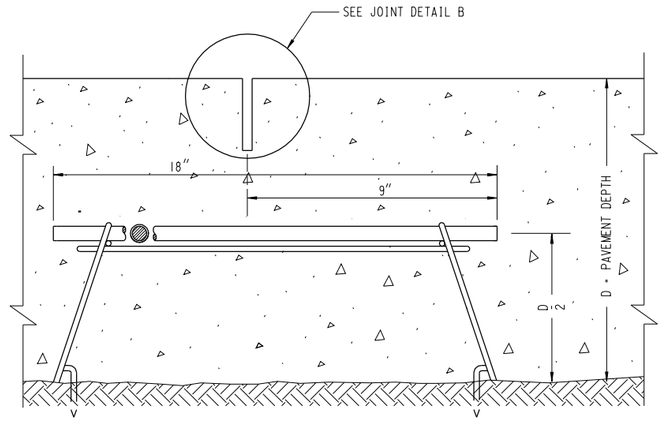


SAWED JOINT

NOTE: DETAIL 'A' SHOWN IN S.D.D. "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES" HAS BEEN REVISED AND SHOWN AS 'JOINT DETAIL A'.

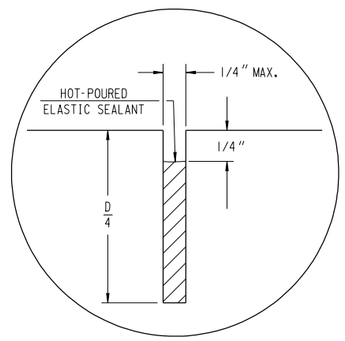


JOINT DETAIL "A"

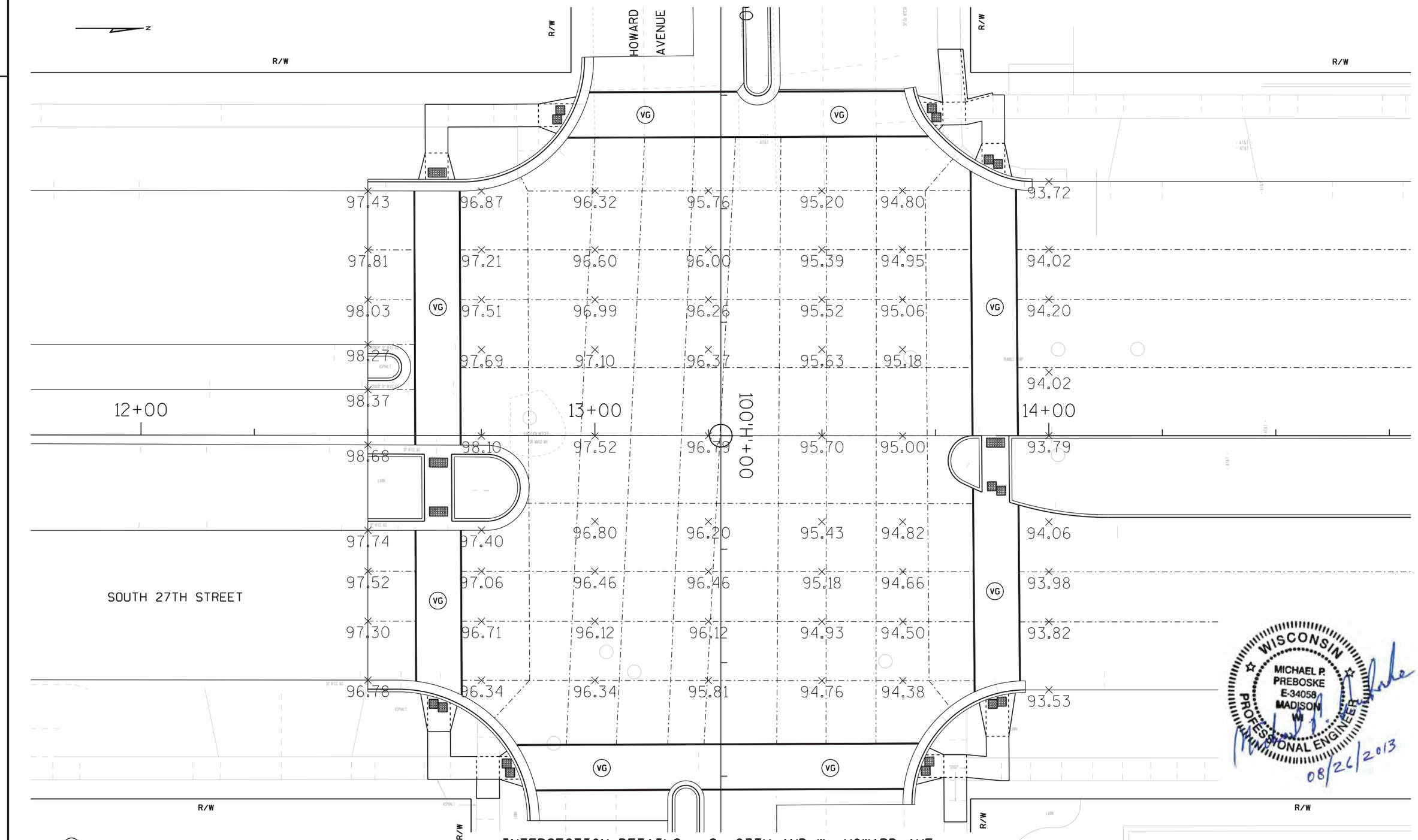


DOWELED CONTRACTION JOINT

NOTE: 'JOINT DETAIL' SHOWN IN S.D.D. "URBAN DOWELED CONCRETE PAVEMENT" HAS BEEN REVISED AND SHOWN AS 'JOINT DETAIL B'.



JOINT DETAIL "B"



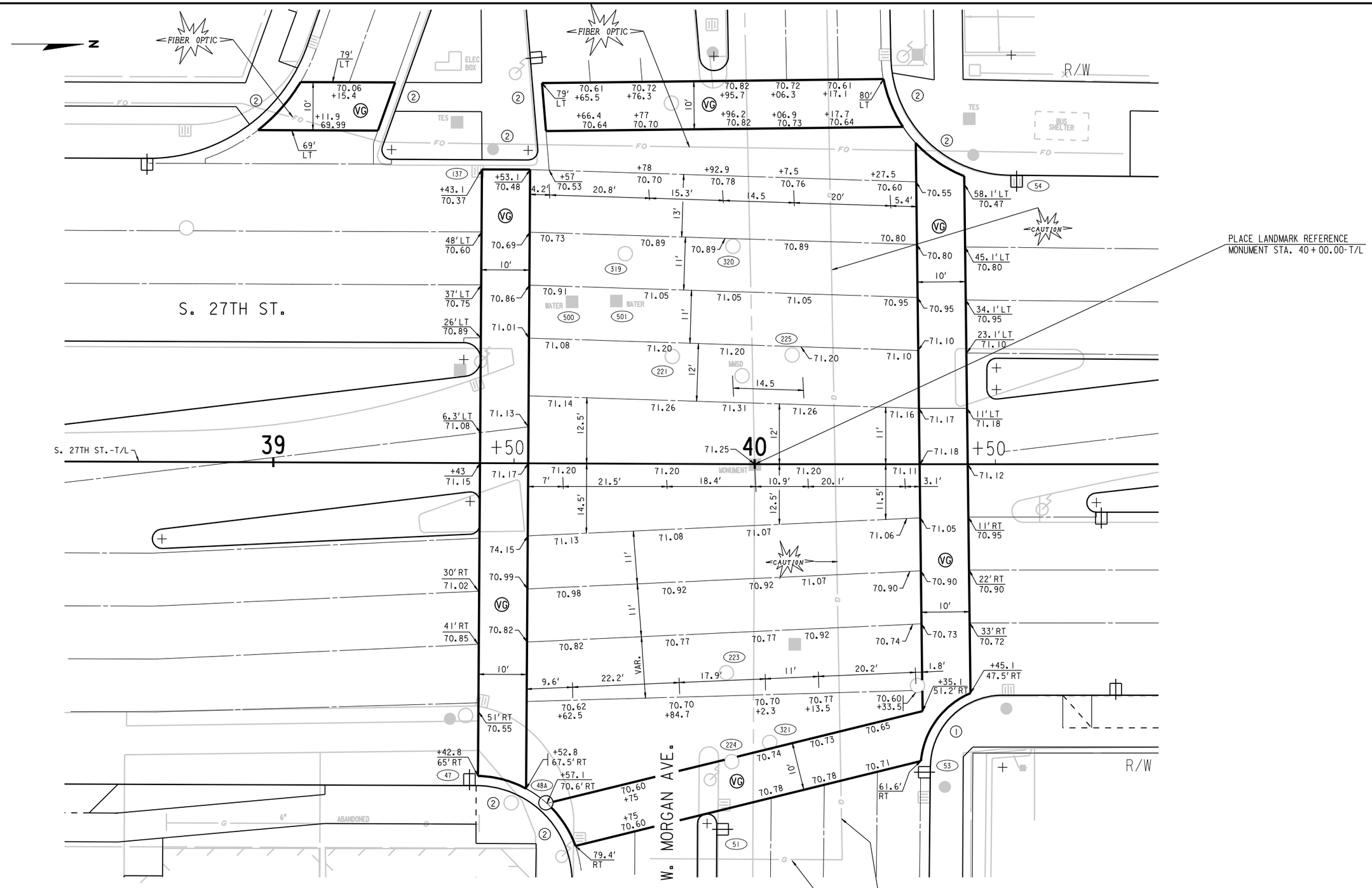
VG CONST. 8-½ -INCH COLORED CONC. PAVEMENT

INTERSECTION DETAILS - S. 27TH AND W. HOWARD AVE.

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 20'	SHEET NO: 19 E

FILE NAME=

2



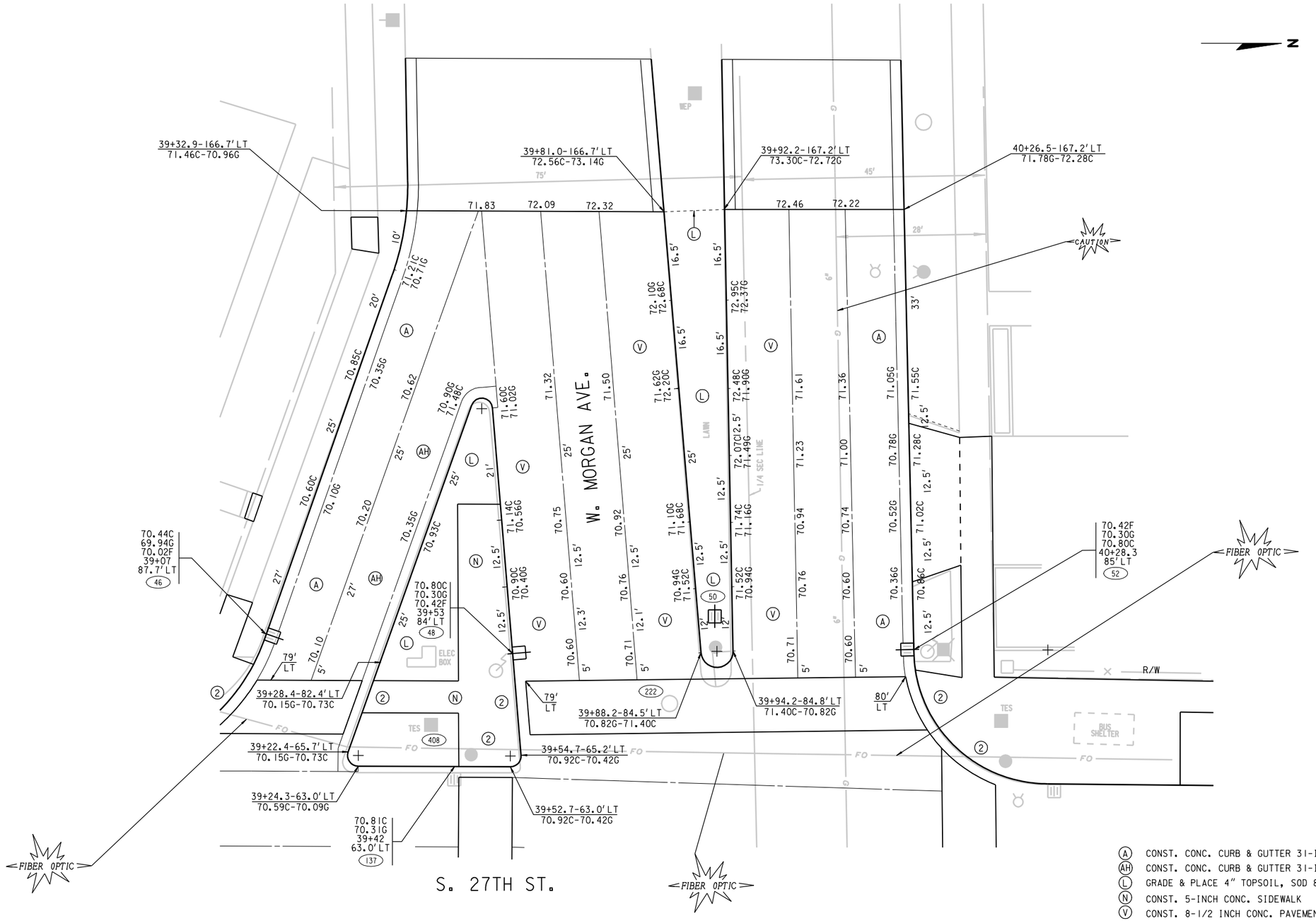
VG CONST. 8-1/2 -INCH COLORED CONC. PAVEMENT

INTERSECTION DETAILS - S. 27TH ST AND W. MORGAN AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 20'	SHEET NO: 20	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\CONDET.DGN

2

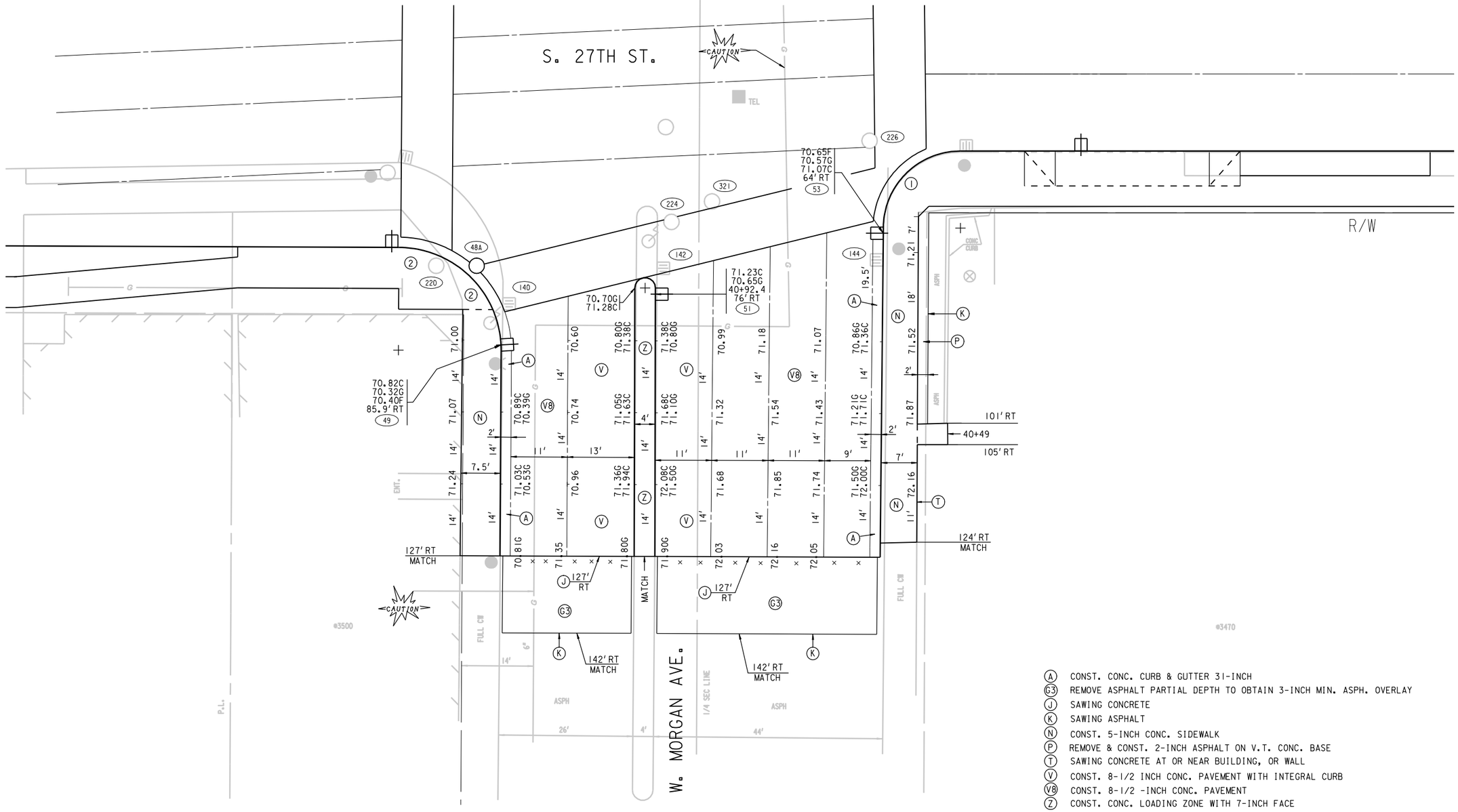


(A) CONST. CONC. CURB & GUTTER 31-INCH
(AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB

PAVEMENT AND MEDIAN DETAILS - S. 27TH ST AND W. MORGAN AVE. (W/S)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 20'	SHEET NO: 21	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\CONDET.DGN



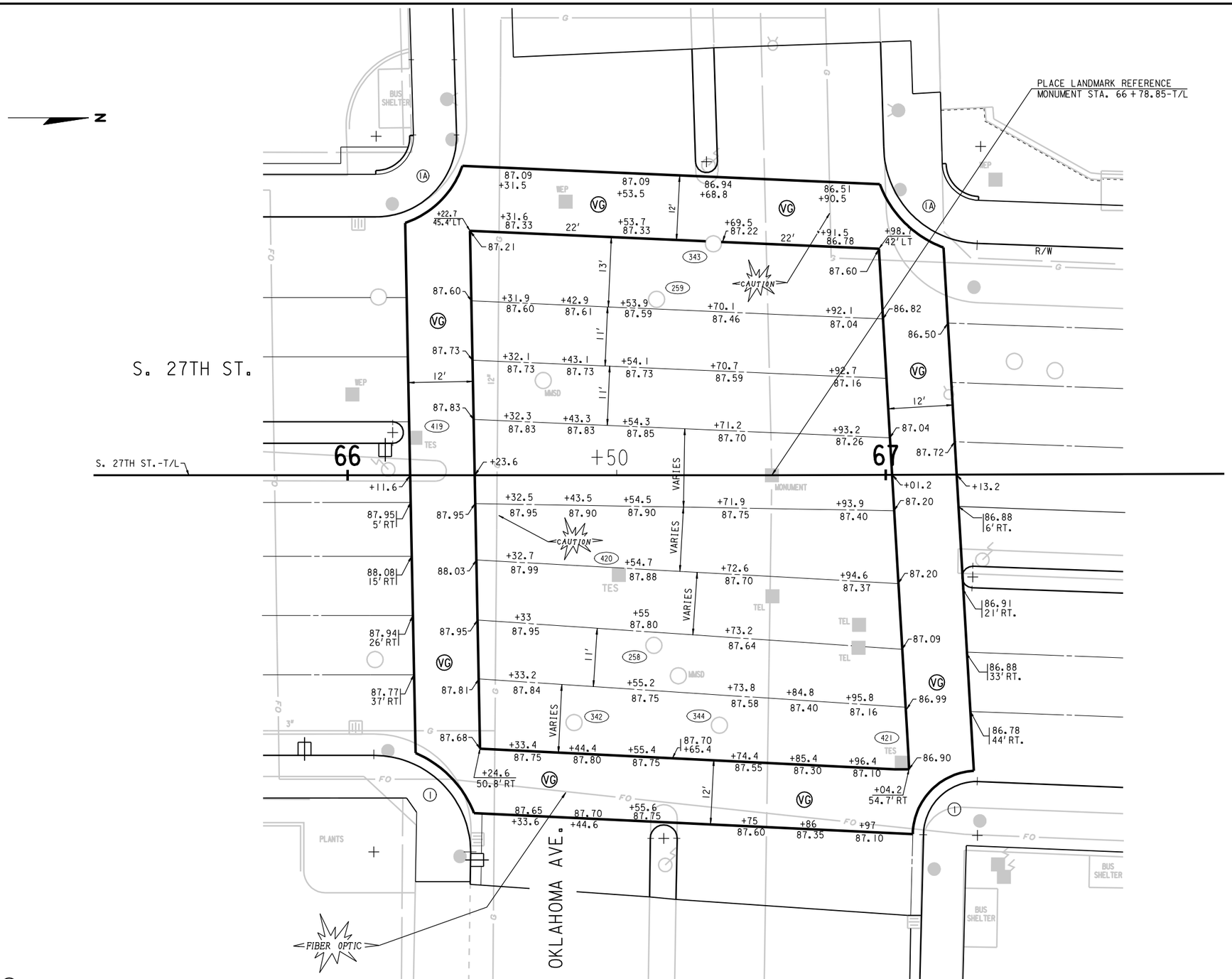
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3-INCH MIN. ASPH. OVERLAY
- (J) SAWING CONCRETE
- (K) SAWING ASPHALT
- (N) CONST. 5-INCH CONC. SIDEWALK
- (P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE
- (T) SAWING CONCRETE AT OR NEAR BUILDING, OR WALL
- (V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
- (V8) CONST. 8-1/2 -INCH CONC. PAVEMENT
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

WALK, PAVEMENT AND MEDIAN DETAILS - S. 27TH ST AND W. MORGAN AVE. (E/S)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 20'	SHEET NO: 22	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\CONDET.DGN

2



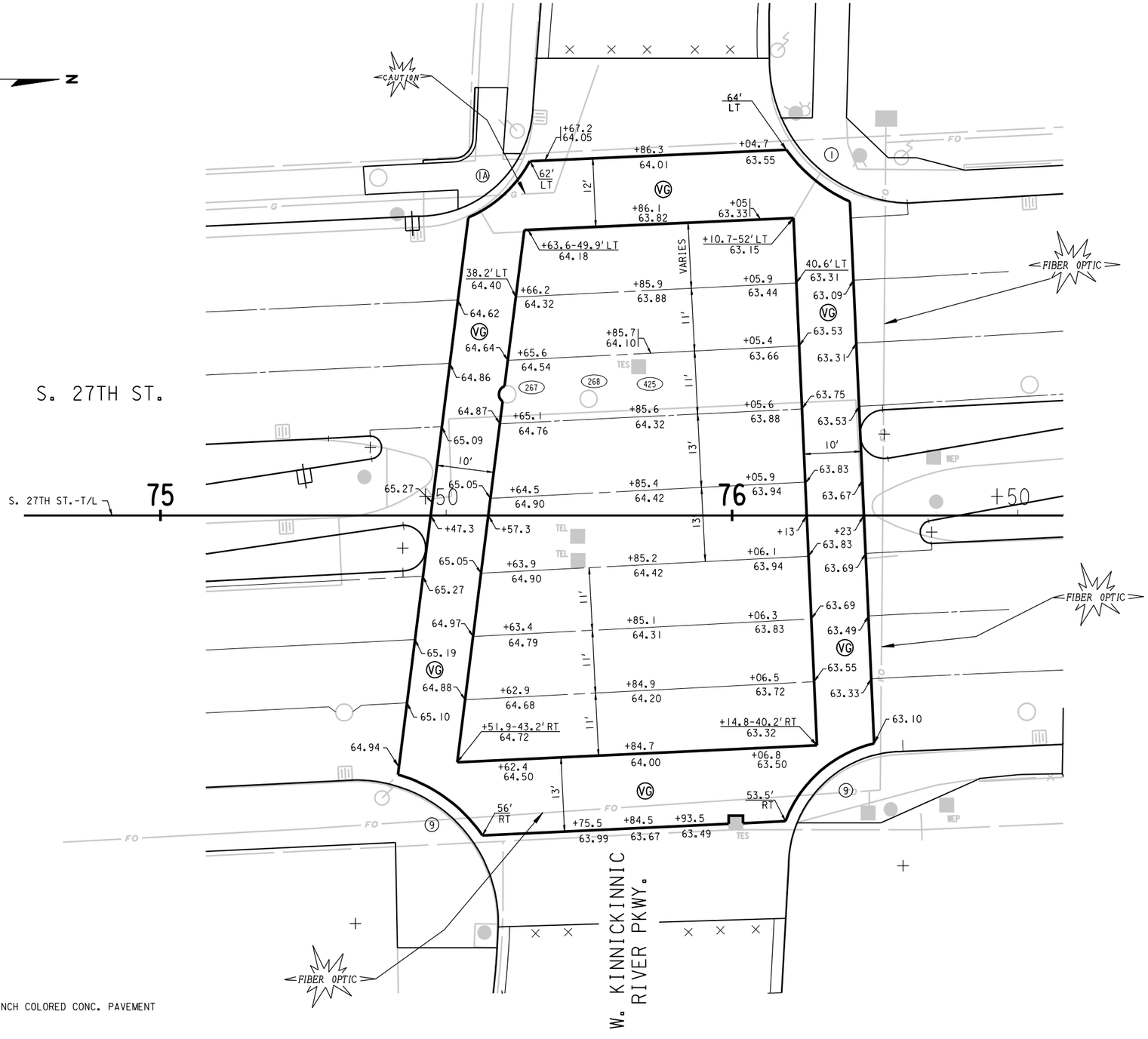
VG CONST. 8-1/2 -INCH COLORED CONC. PAVEMENT

INTERSECTION DETAILS - S. 27TH ST AND W. OKLAHOMA AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 20'	SHEET NO: 23	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\CONDET.DGN

2

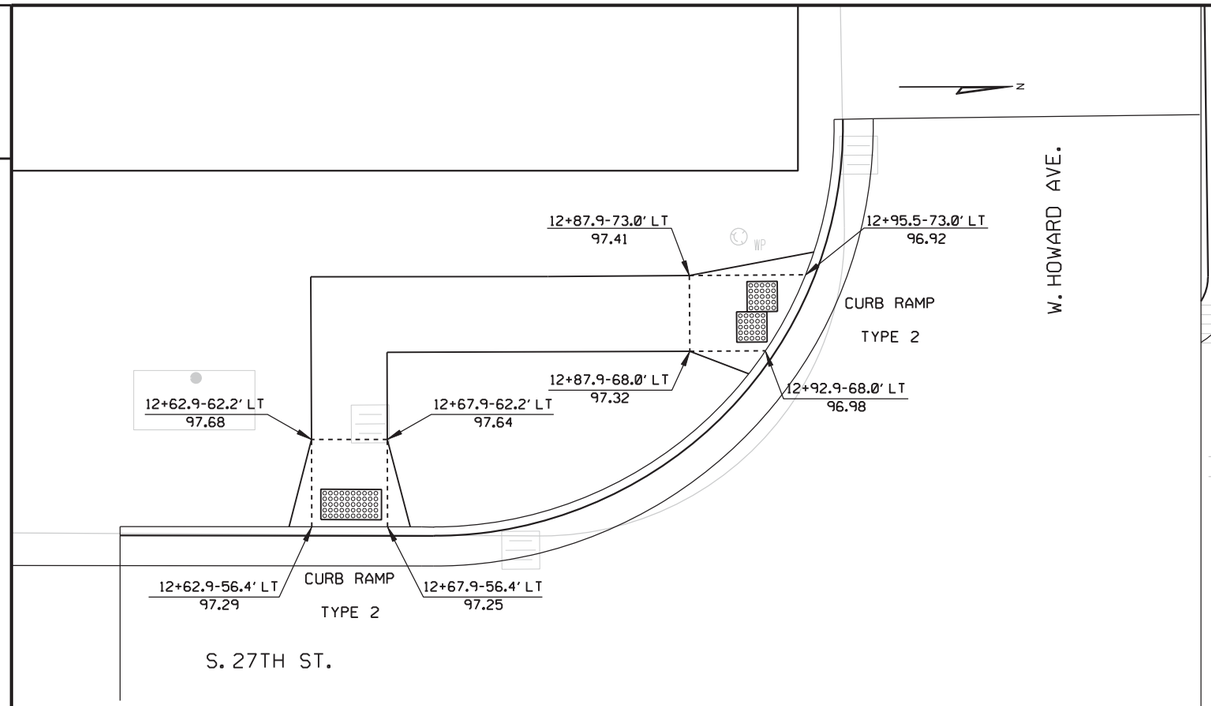


VG CONST. 8-1/2 -INCH COLORED CONC. PAVEMENT

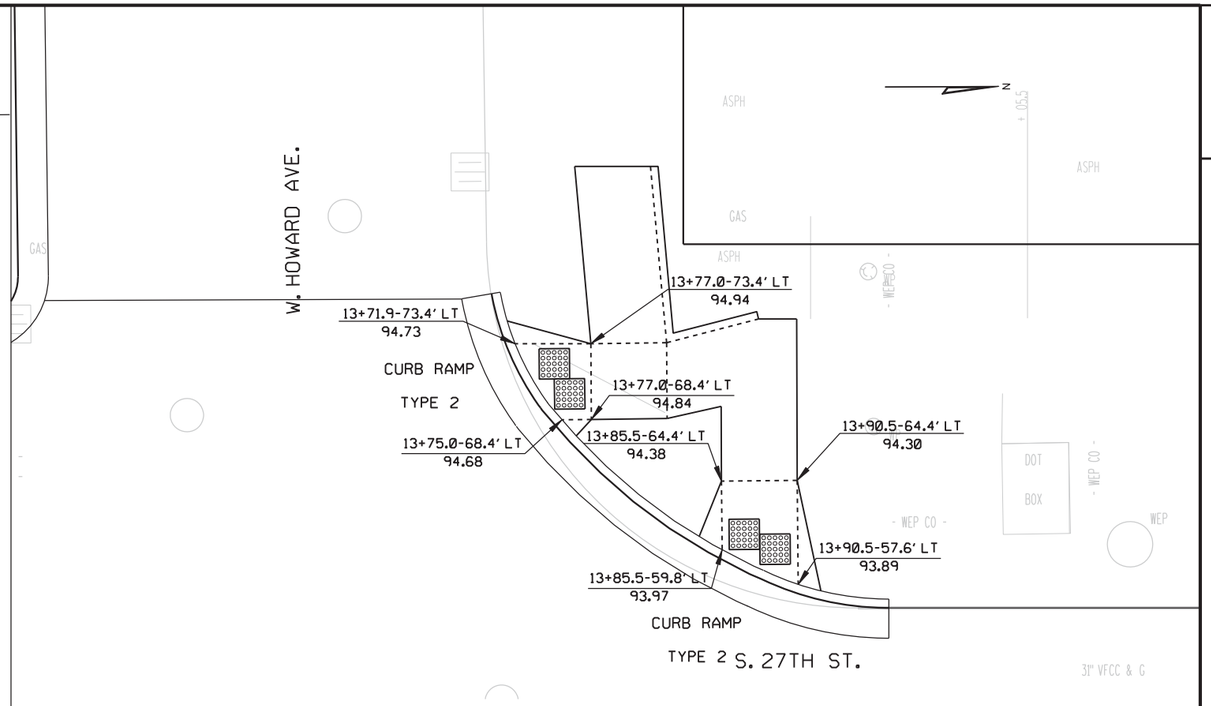
INTERSECTION DETAILS - S. 27TH ST AND W. KINNICKINNIC RIVER PKWY.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 20'	SHEET NO: 24	E

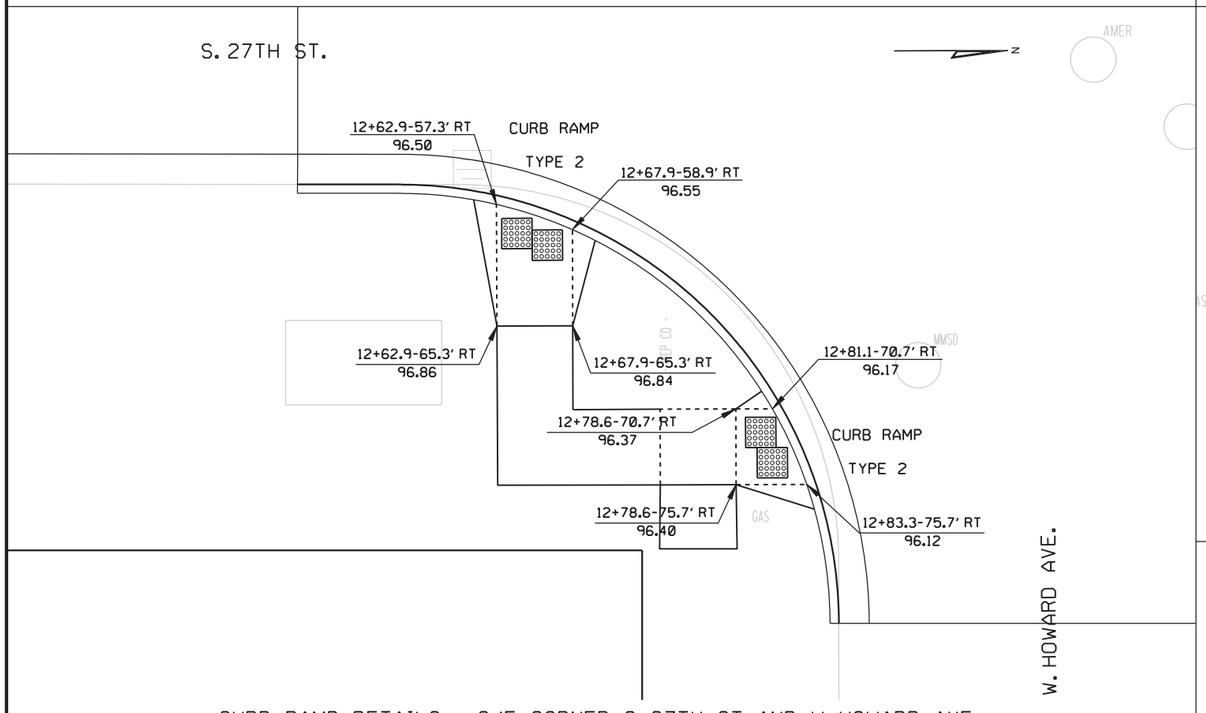
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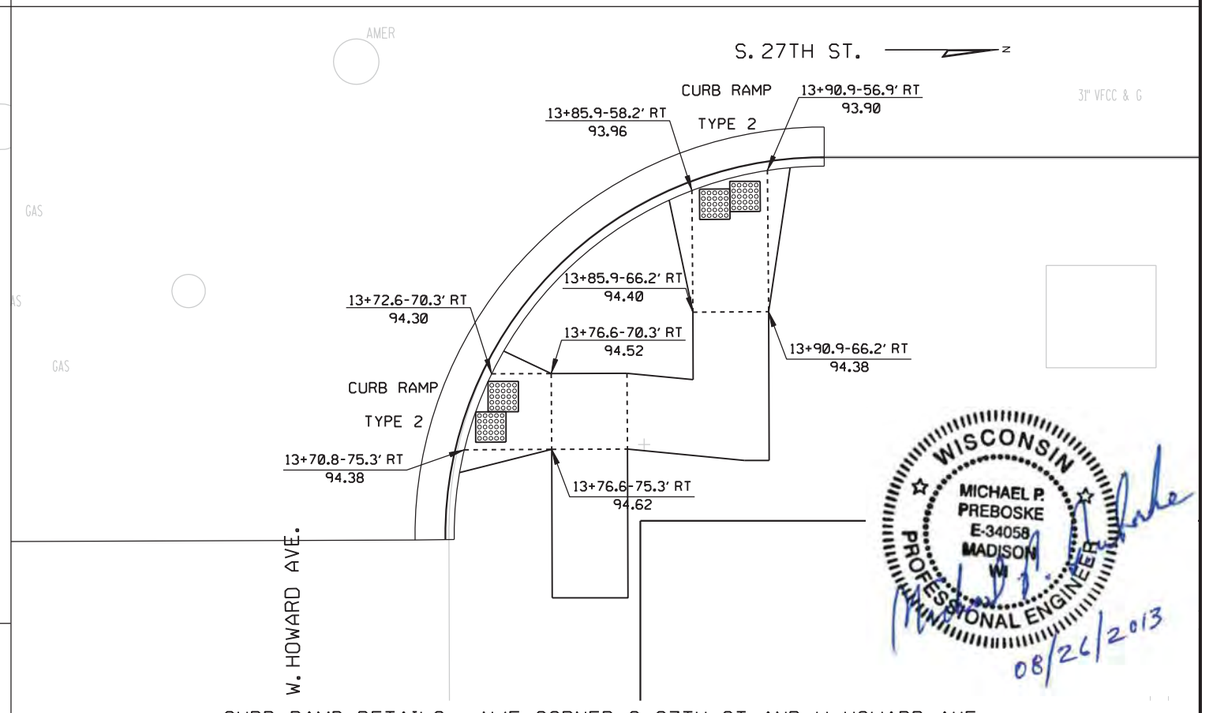
CURB RAMP DETAILS - S/W CORNER S. 27TH ST. AND W. HOWARD AVE.



CURB RAMP DETAILS - N/W CORNER S. 27TH ST. AND W. HOWARD AVE.



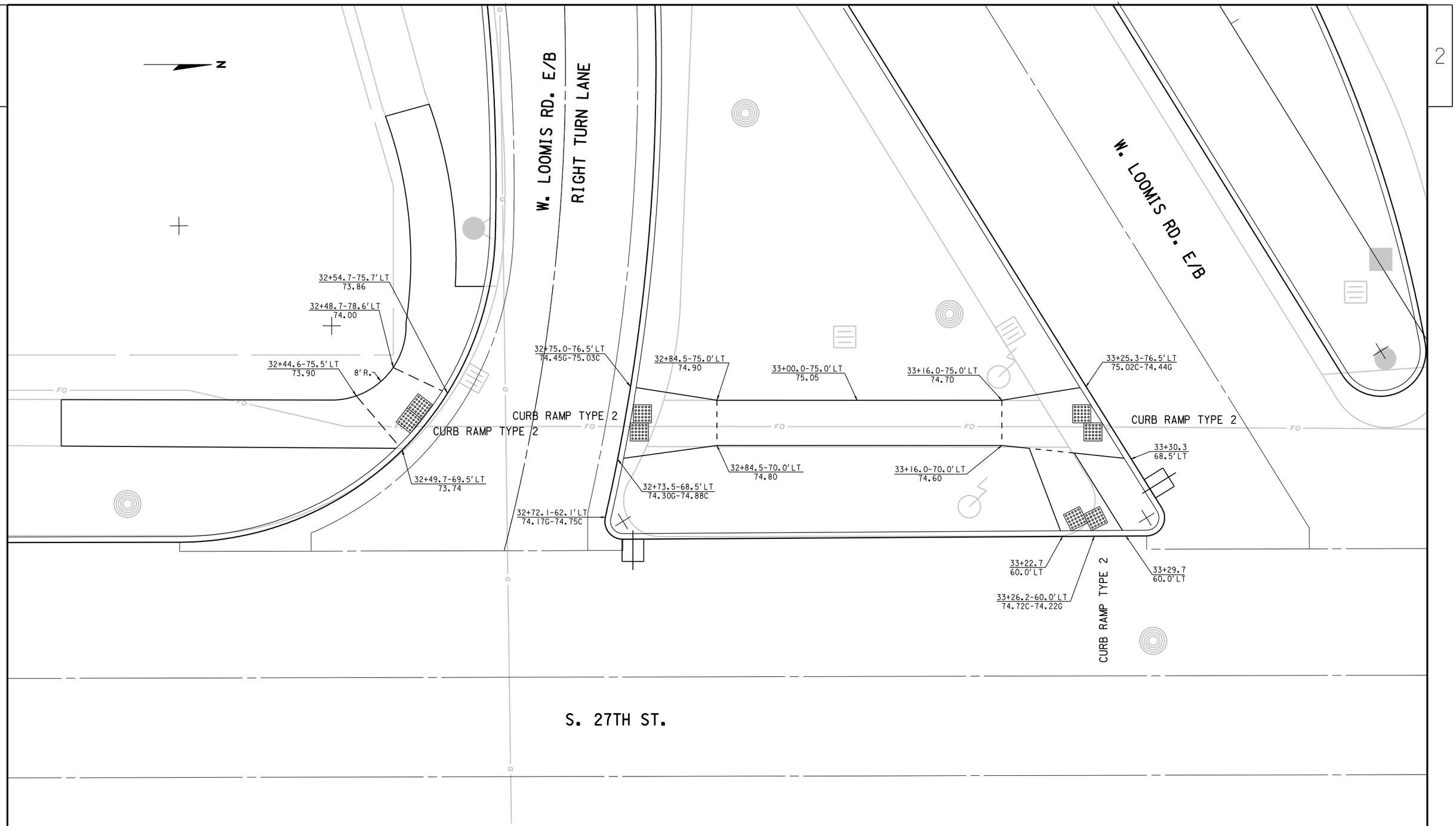
CURB RAMP DETAILS - S/E CORNER S. 27TH ST. AND W. HOWARD AVE.



CURB RAMP DETAILS - N/E CORNER S. 27TH ST. AND W. HOWARD AVE.

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 10'	SHEET NO: 25	E

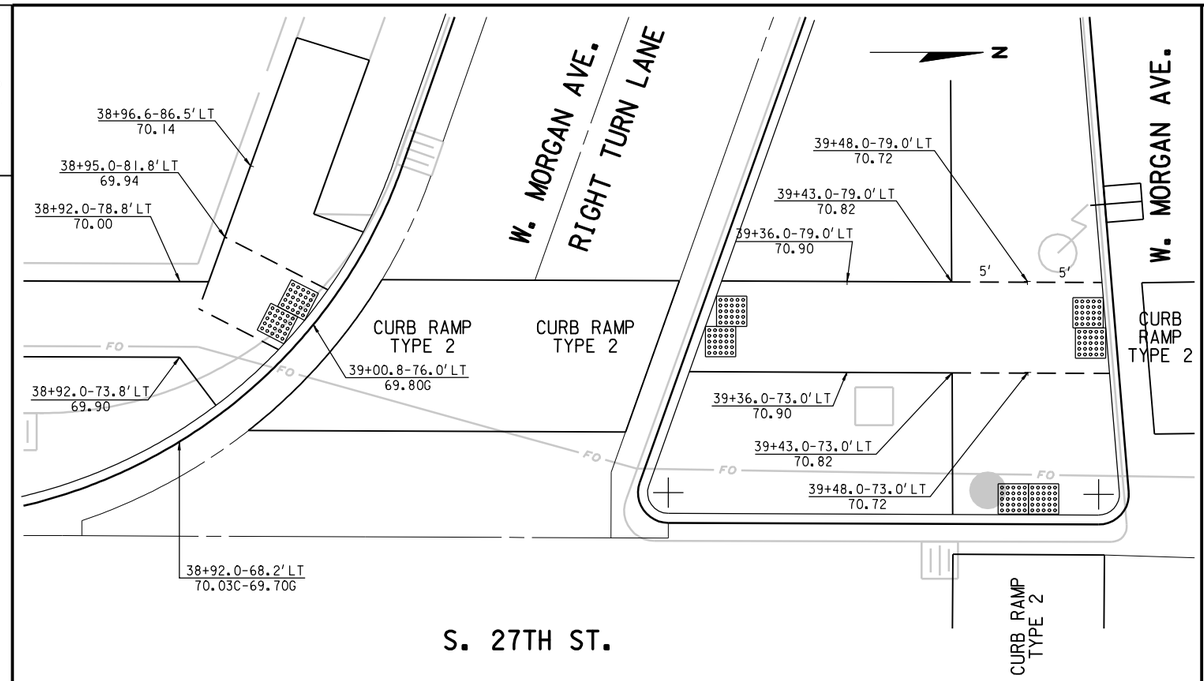
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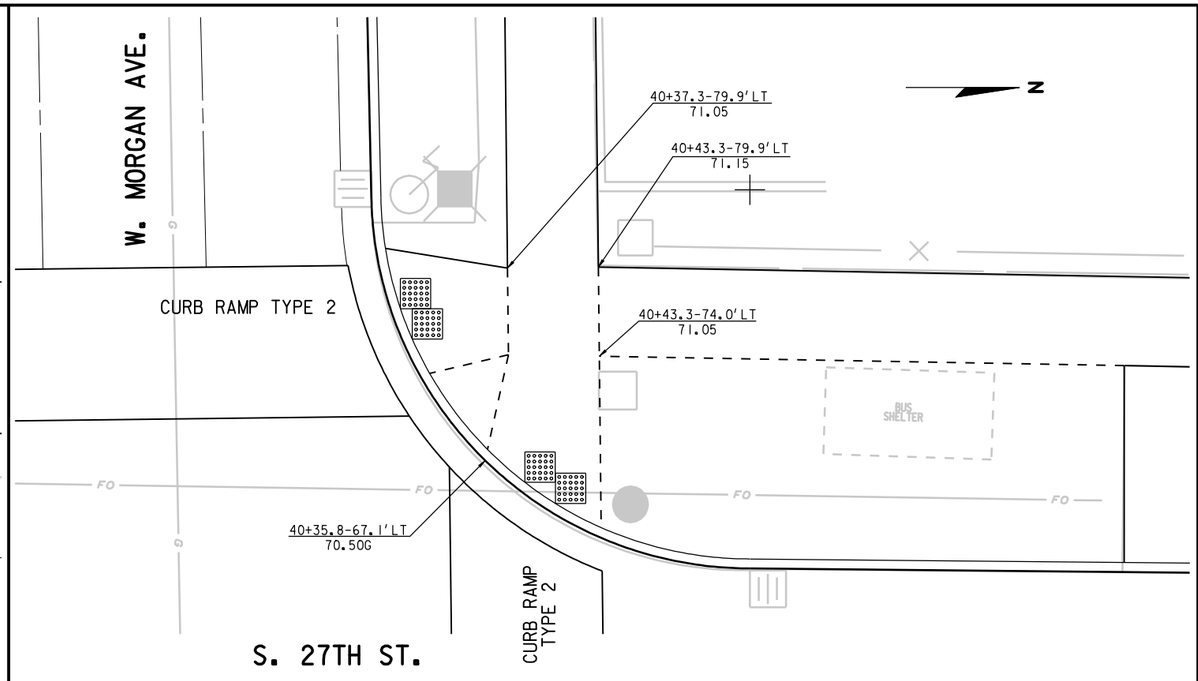
CURB RAMP DETAILS - S/W CORNER S. 27TH ST AND W. LOOMIS RD.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 26	E

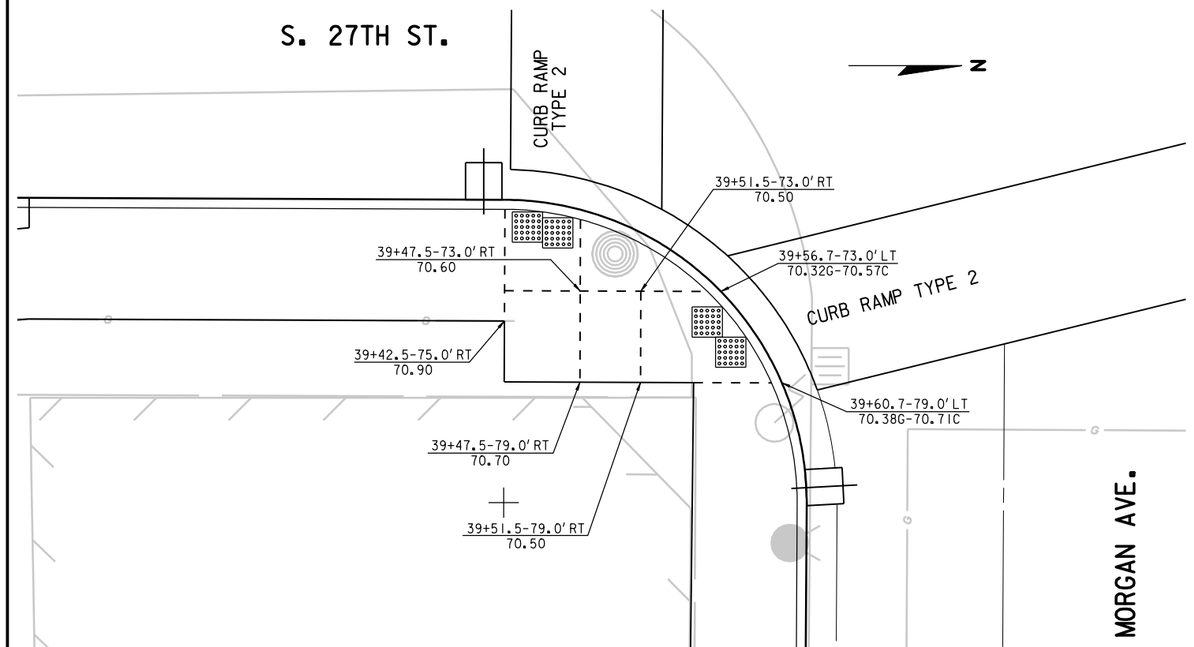
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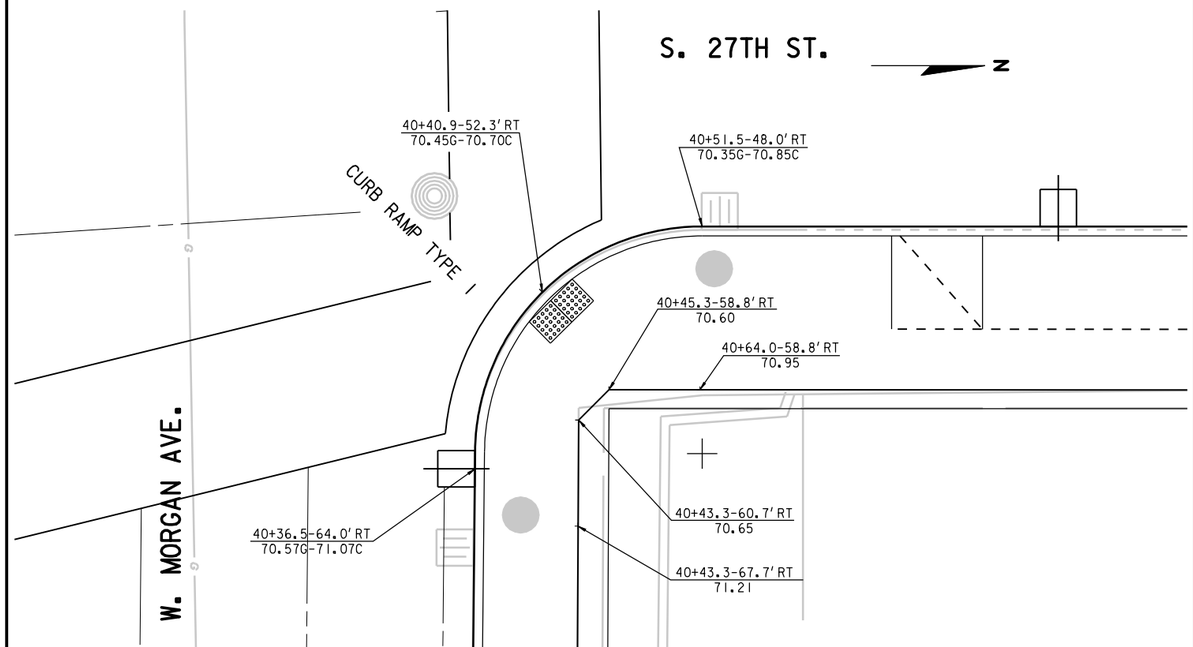
CURB RAMP DETAILS - S/W CORNER S. 27TH ST AND W. MORGAN AVE.



CURB RAMP DETAILS - N/W CORNER S. 27TH ST AND W. MORGAN AVE.



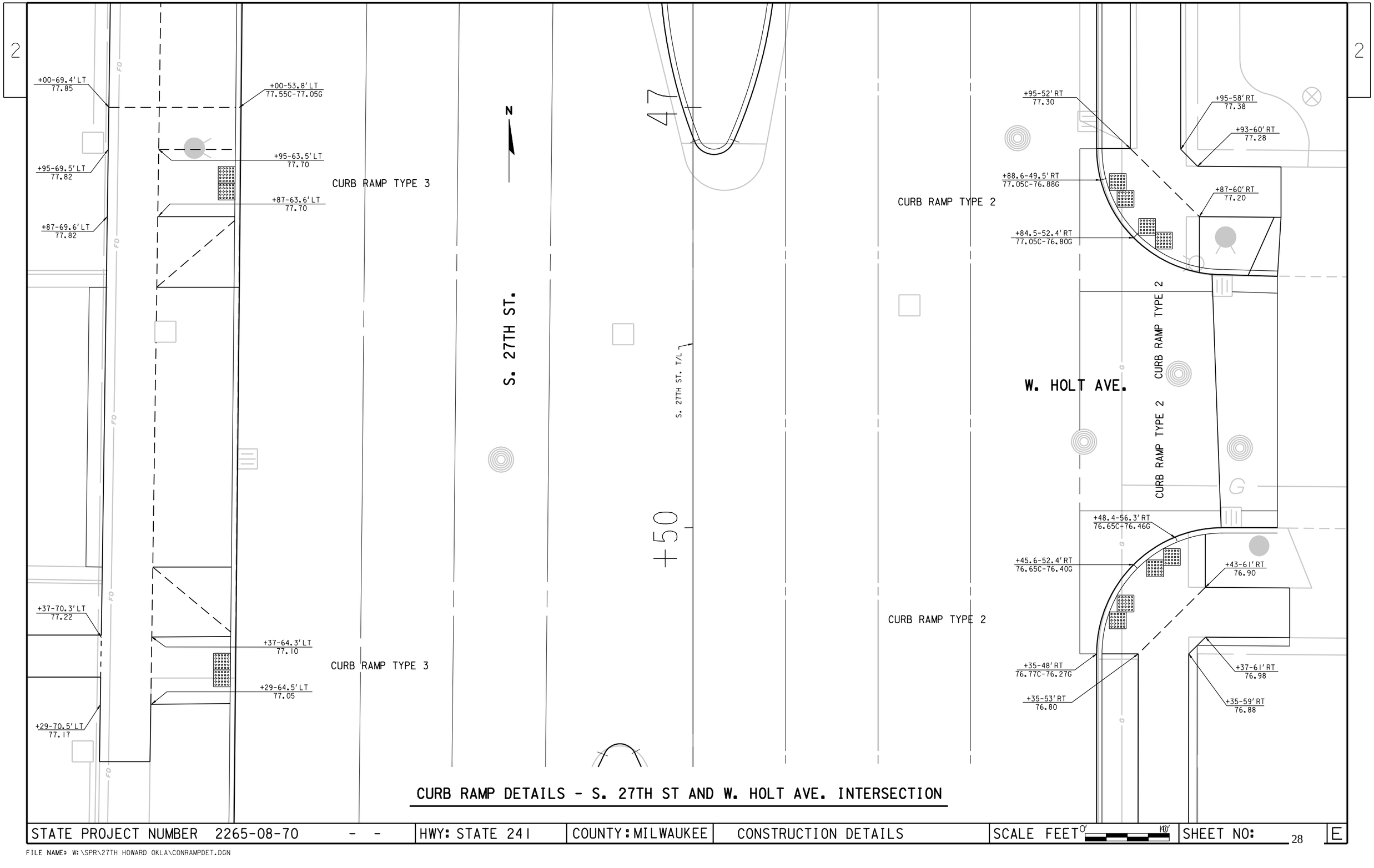
CURB RAMP DETAILS - S/E CORNER S. 27TH ST AND W. MORGAN AVE.



CURB RAMP DETAILS - N/E CORNER S. 27TH ST AND W. MORGAN AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 27	E

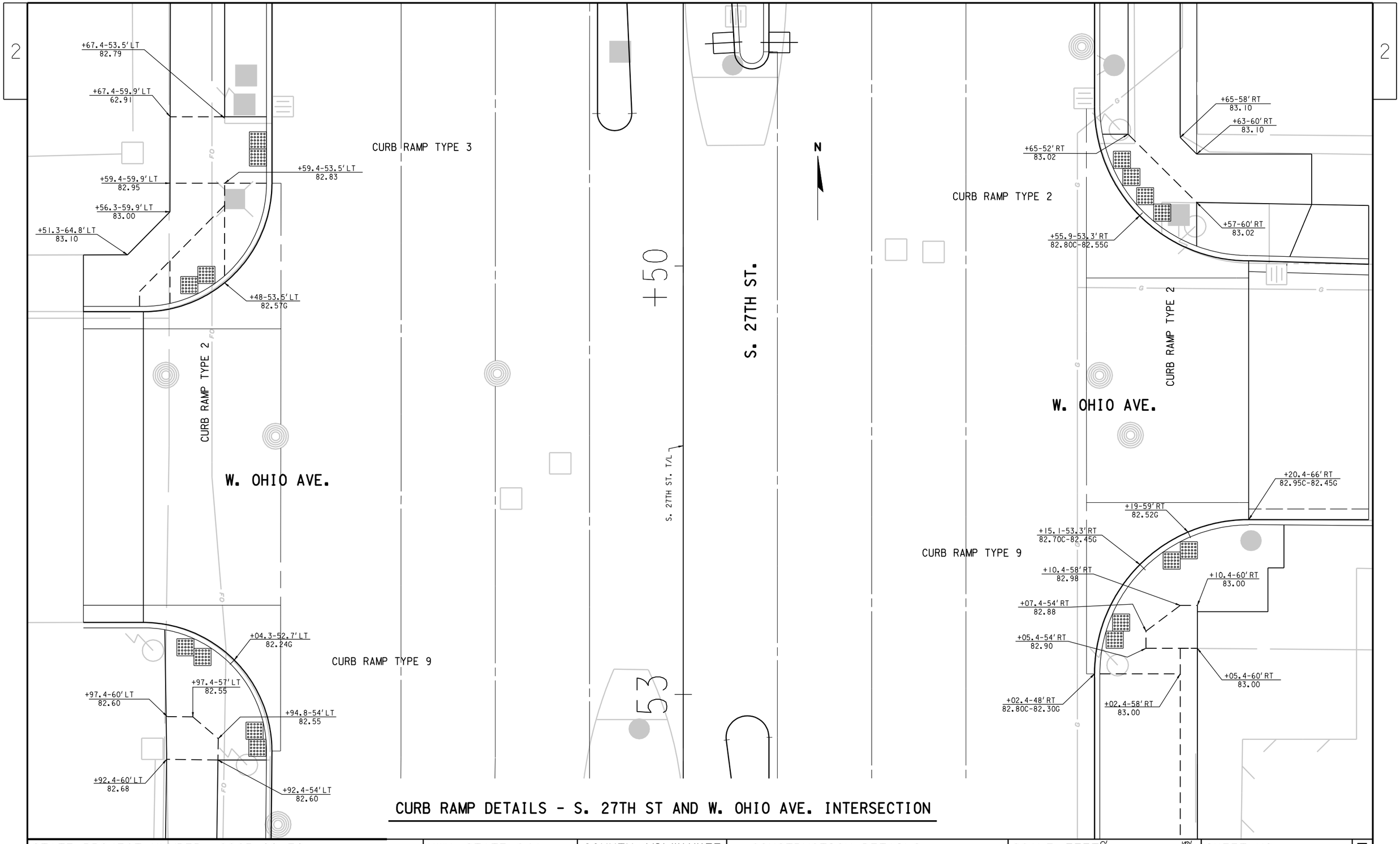
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CURB RAMP DETAILS - S. 27TH ST AND W. HOLT AVE. INTERSECTION

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 28 E

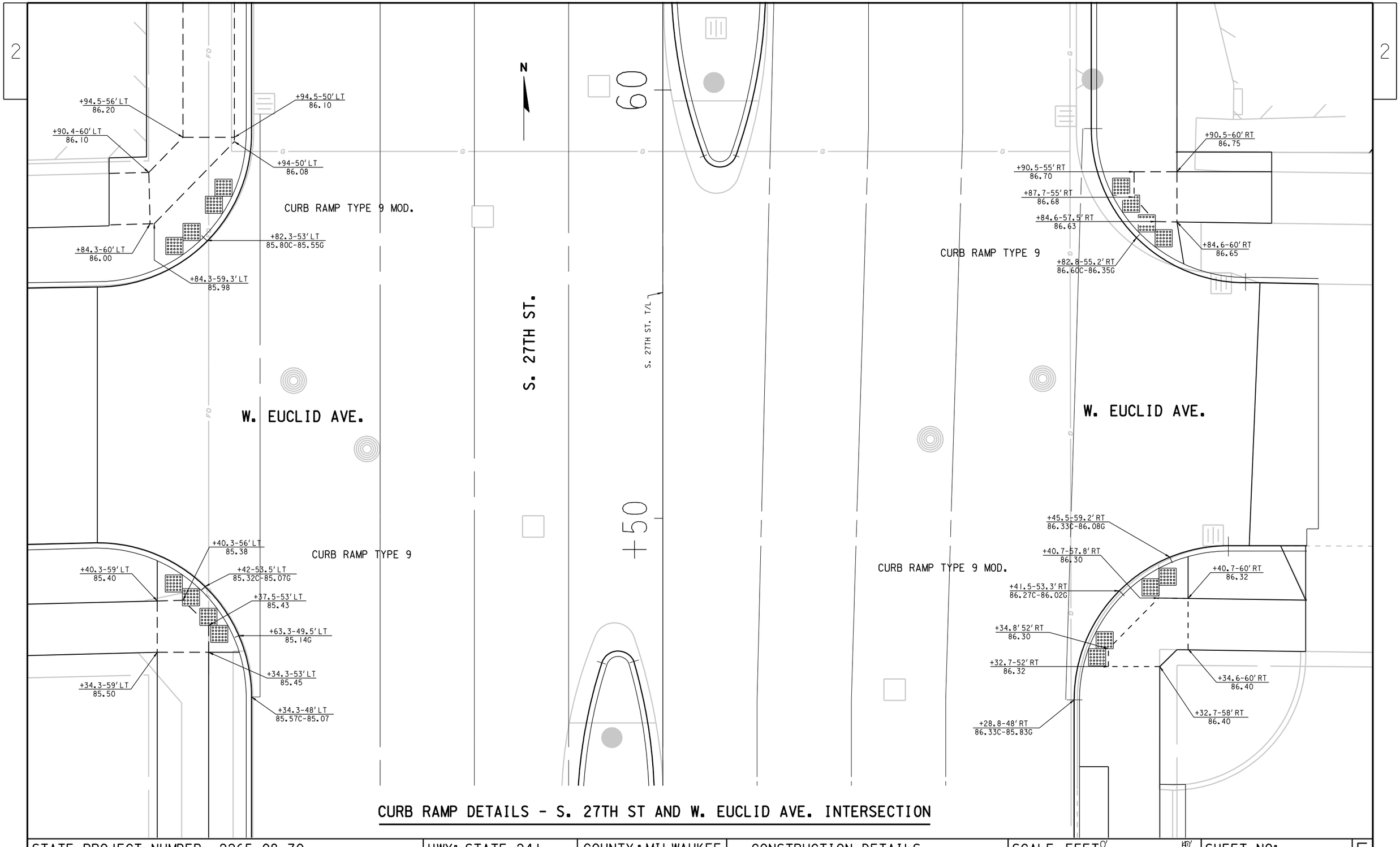
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CURB RAMP DETAILS - S. 27TH ST AND W. OHIO AVE. INTERSECTION

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 29 E

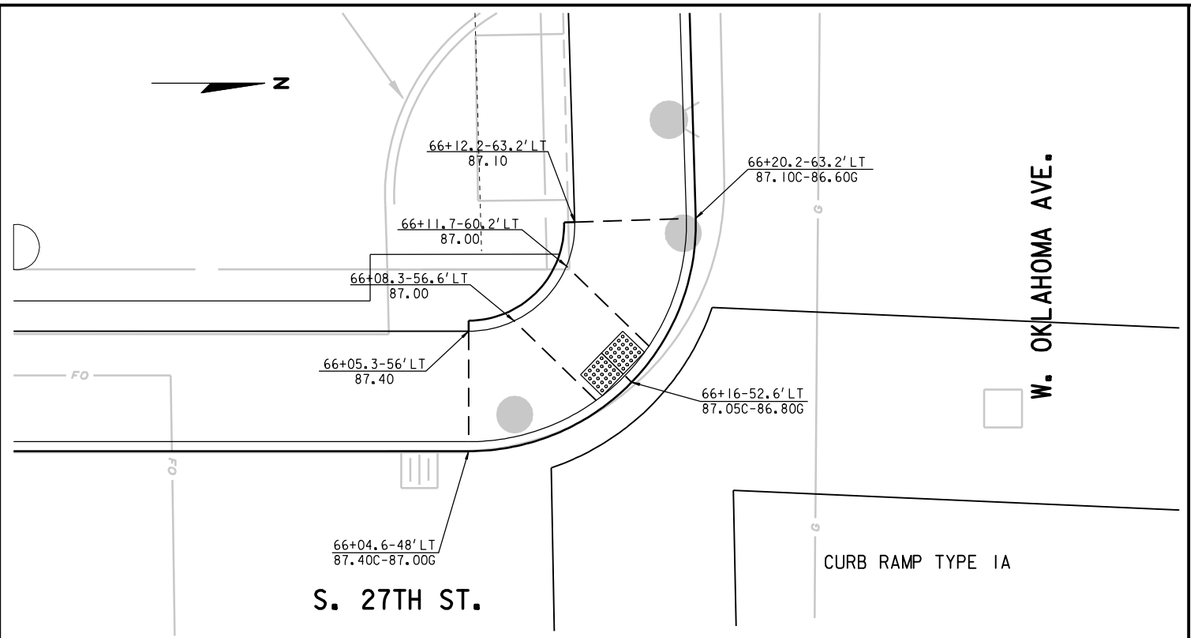
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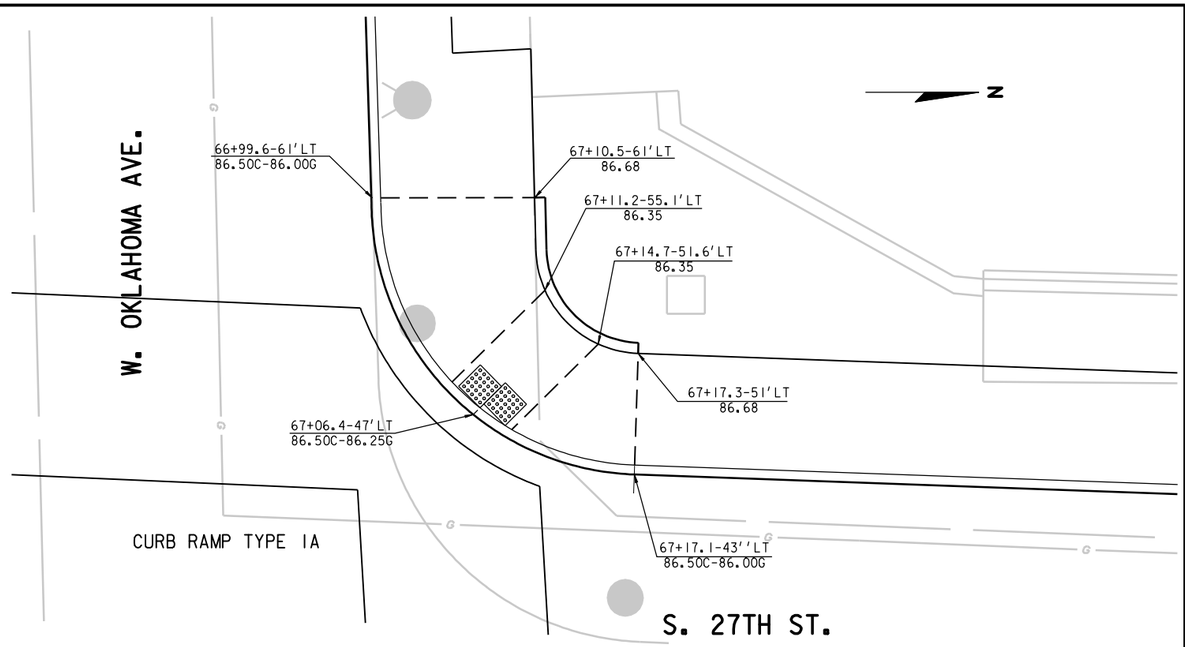
CURB RAMP DETAILS - S. 27TH ST AND W. EUCLID AVE. INTERSECTION

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 30	E

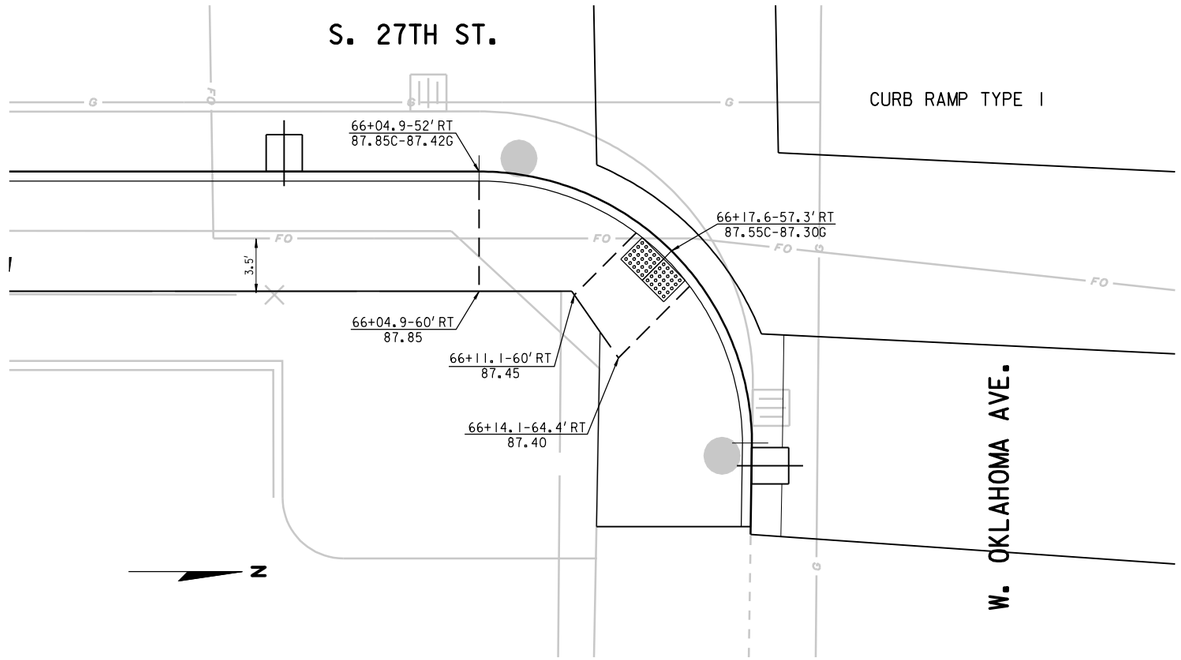
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CURB RAMP DETAILS - S/W CORNER S. 27TH ST AND W. OKLAHOMA AVE.



CURB RAMP DETAILS - N/W CORNER S. 27TH ST AND W. OKLAHOMA AVE.

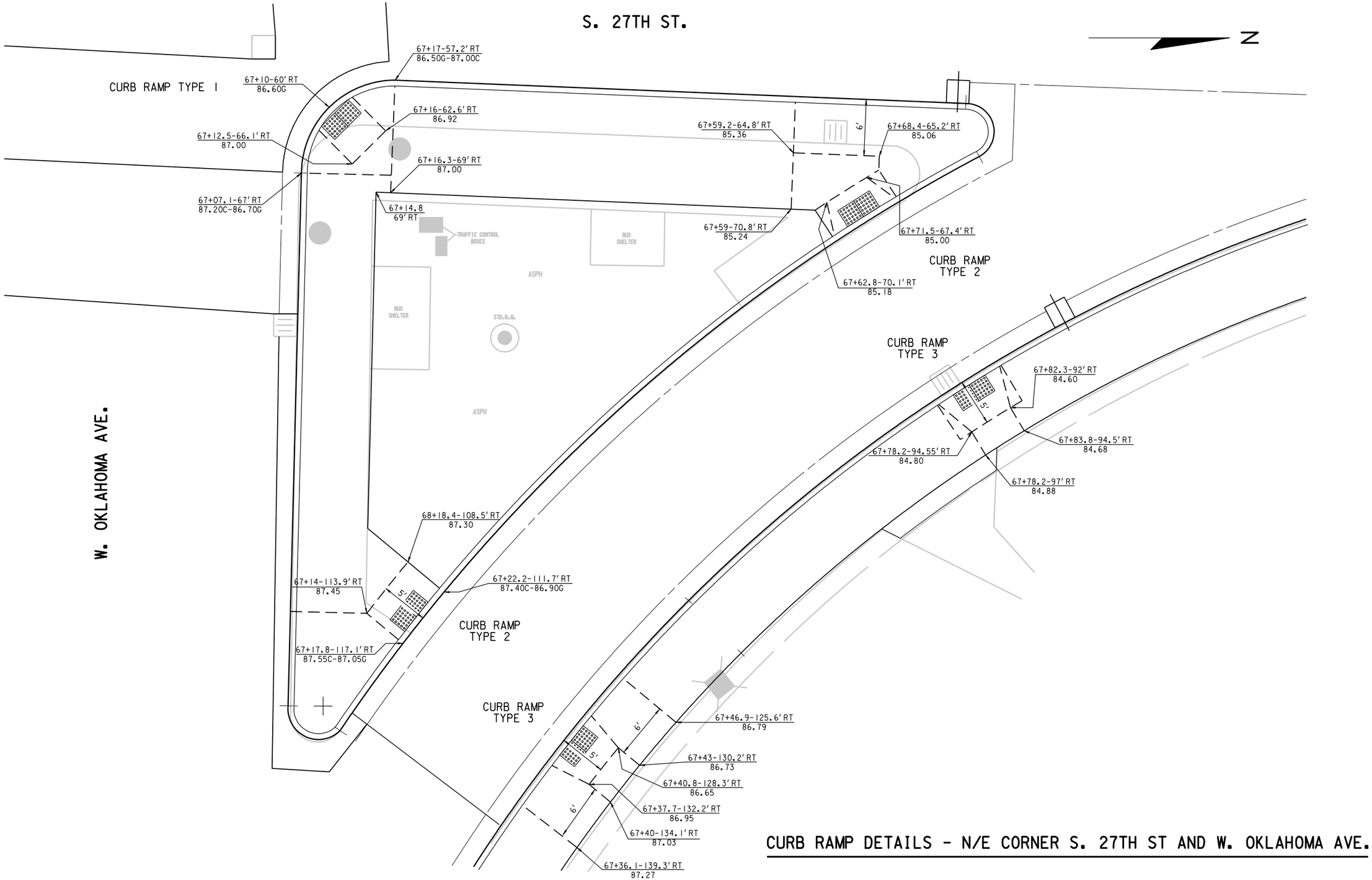


CURB RAMP DETAILS - S/E CORNER S. 27TH ST AND W. OKLAHOMA AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 31	E

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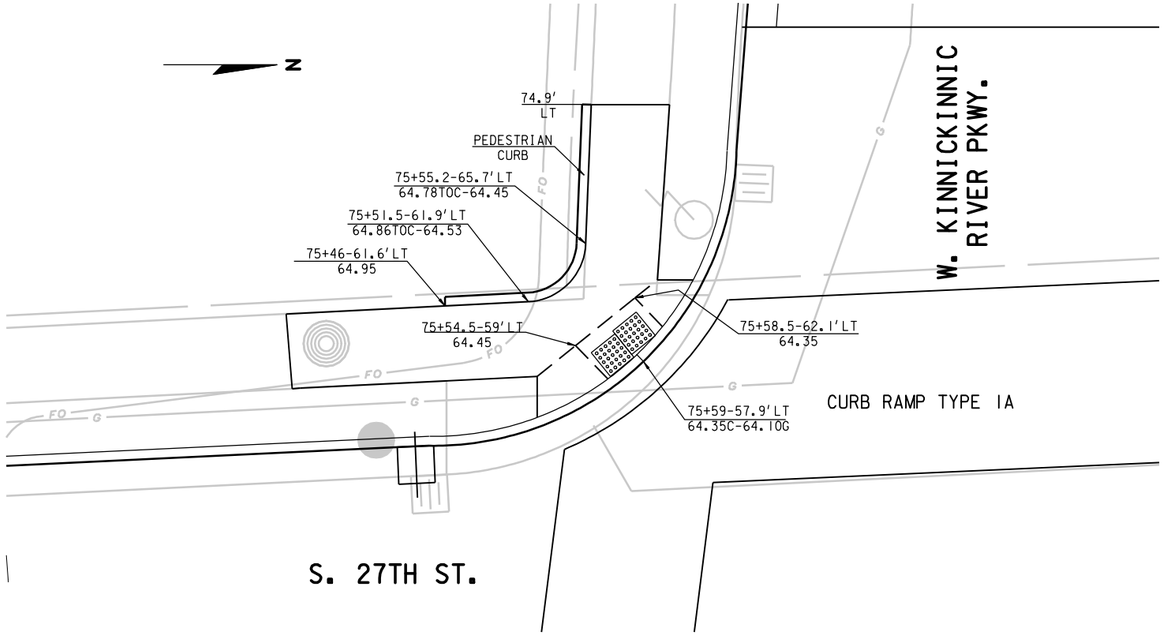
2



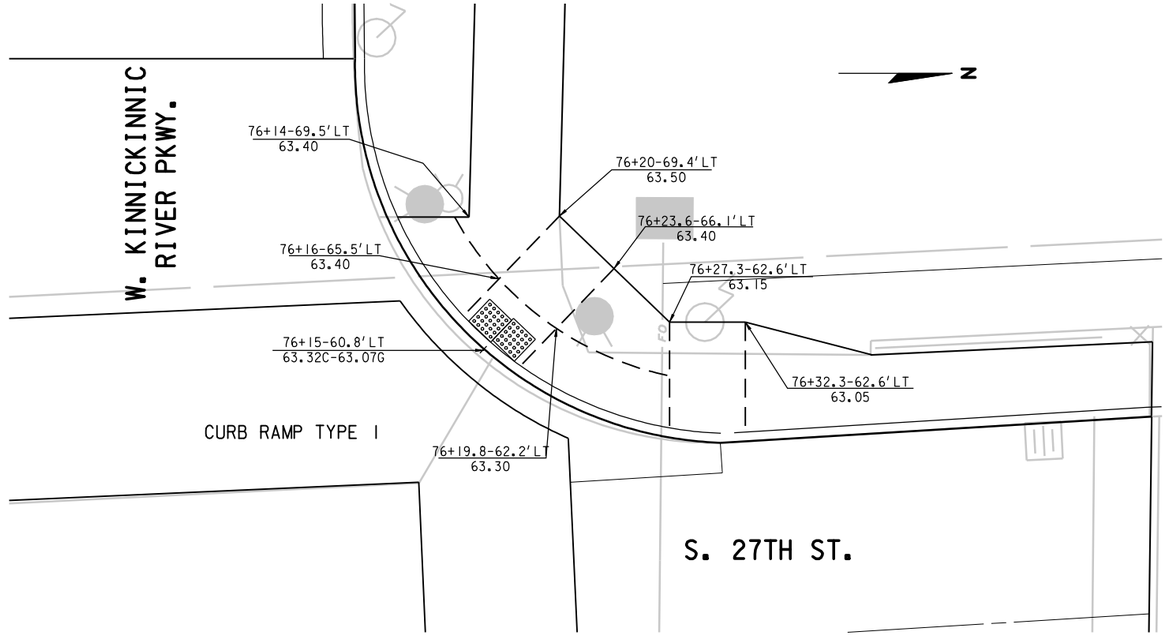
CURB RAMP DETAILS - N/E CORNER S. 27TH ST AND W. OKLAHOMA AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 32	E

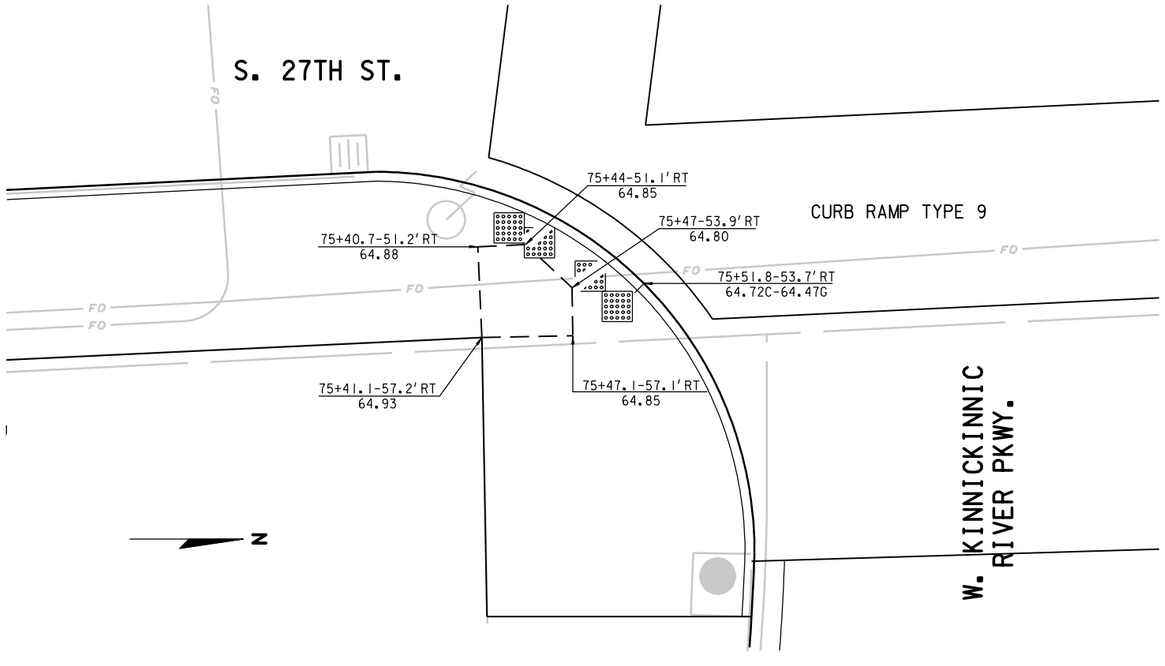
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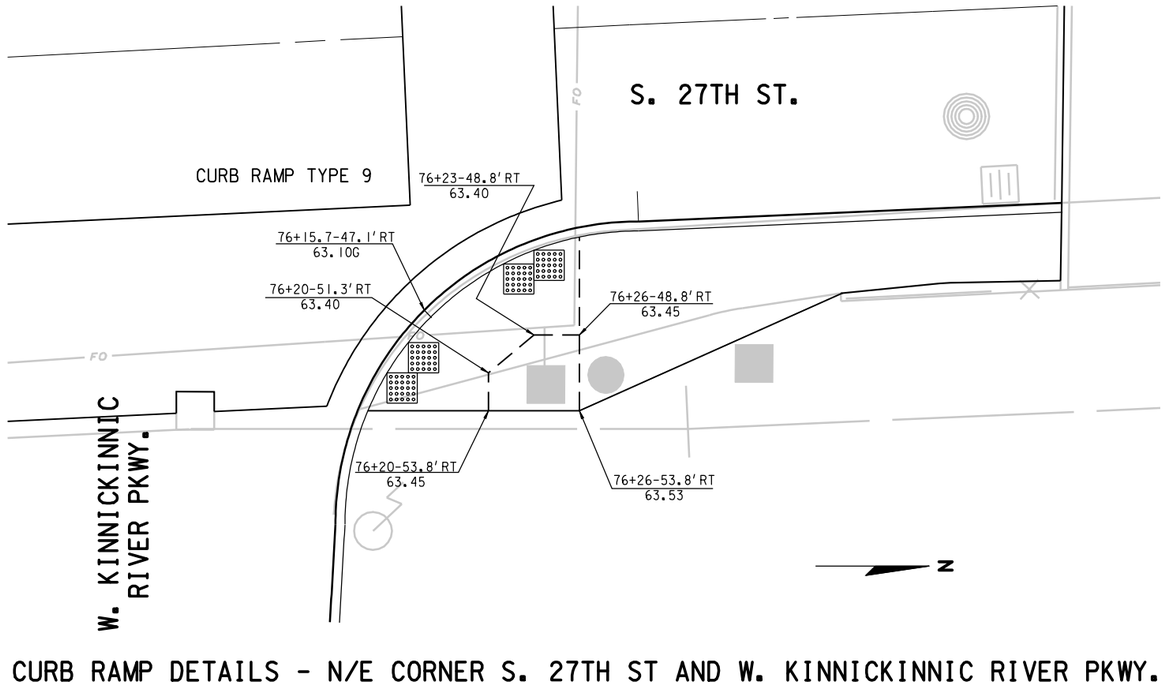
CURB RAMP DETAILS - S/W CORNER S. 27TH ST AND W. KINNICKINNIC RIVER PKWY.



CURB RAMP DETAILS - N/W CORNER S. 27TH ST AND W. KINNICKINNIC RIVER PKWY.



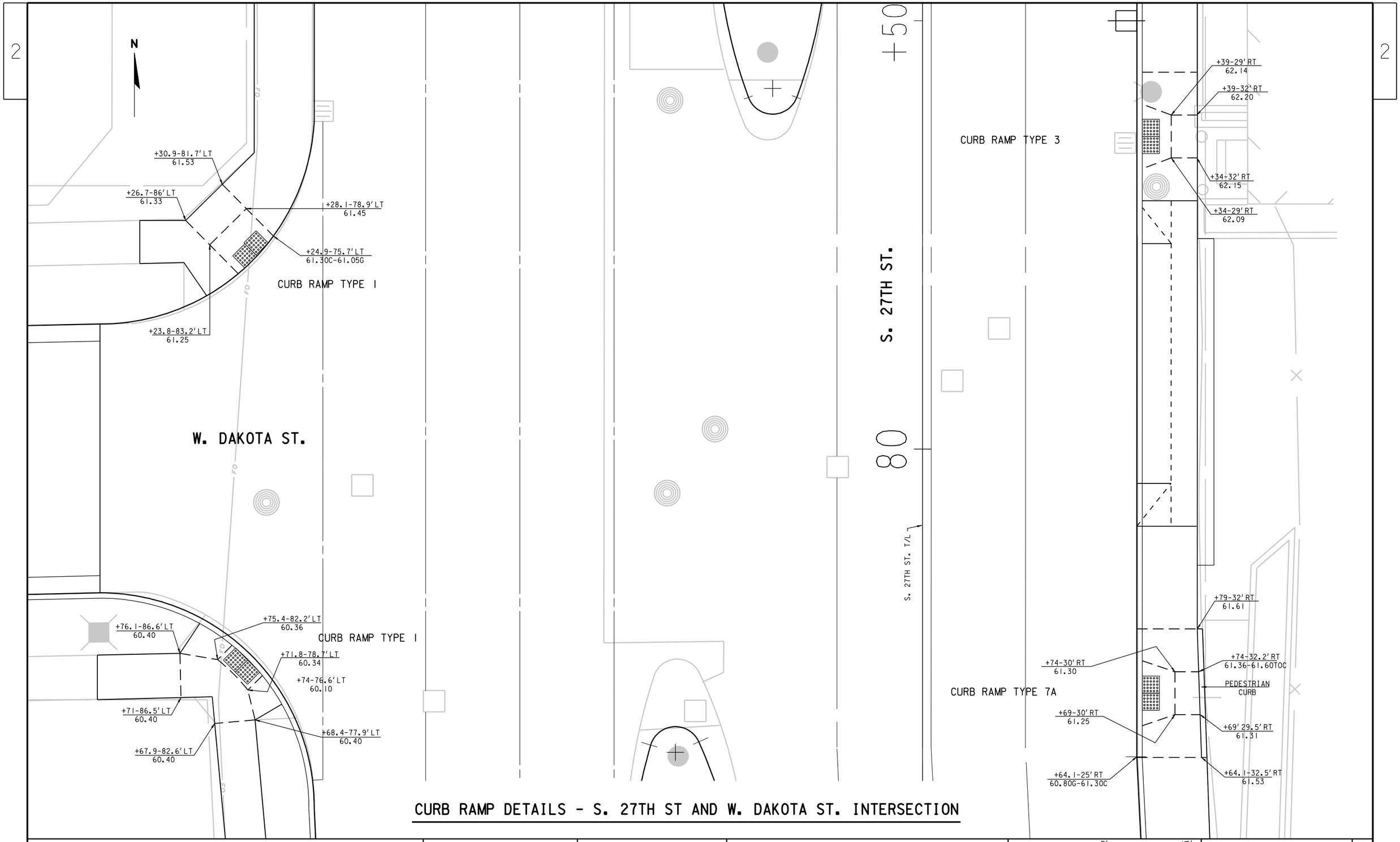
CURB RAMP DETAILS - S/E CORNER S. 27TH ST AND W. KINNICKINNIC RIVER PKWY.



CURB RAMP DETAILS - N/E CORNER S. 27TH ST AND W. KINNICKINNIC RIVER PKWY.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 33	E

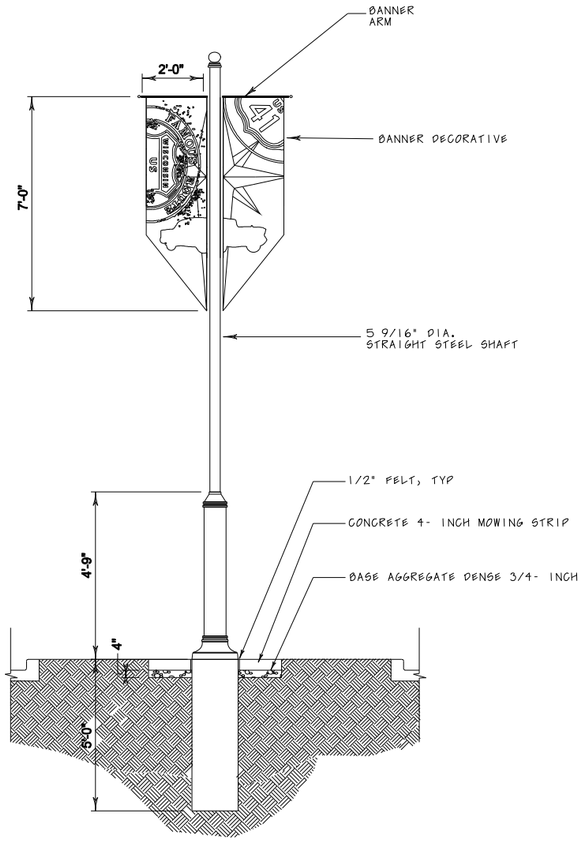
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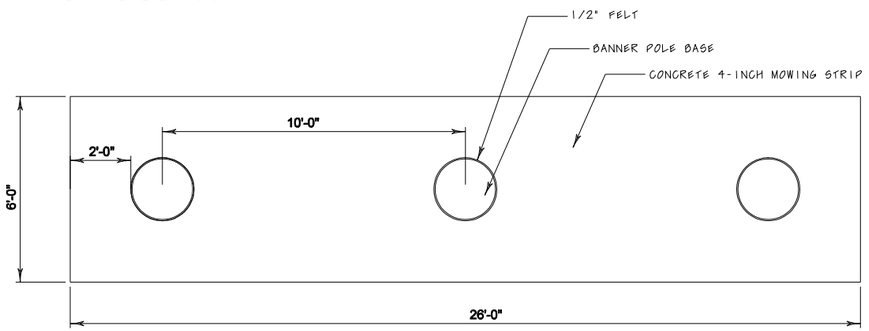
CURB RAMP DETAILS - S. 27TH ST AND W. DAKOTA ST. INTERSECTION

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET 0' 40'	SHEET NO: 34 E

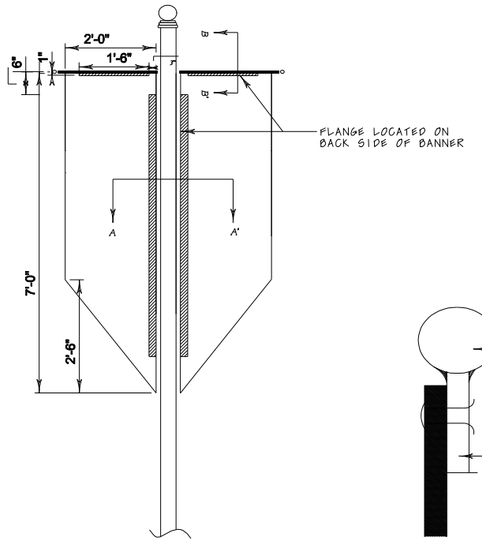
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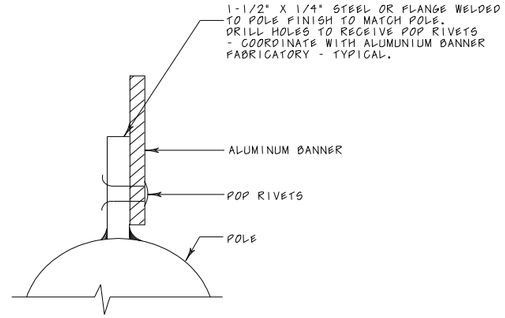


BANNER POLE ELEVATION
NOT TO SCALE

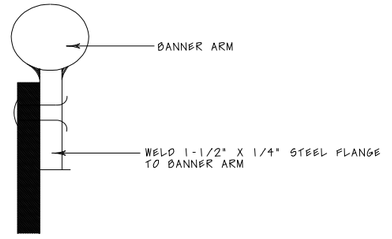


PLAN VIEW OF BANNER POLE
NOT TO SCALE



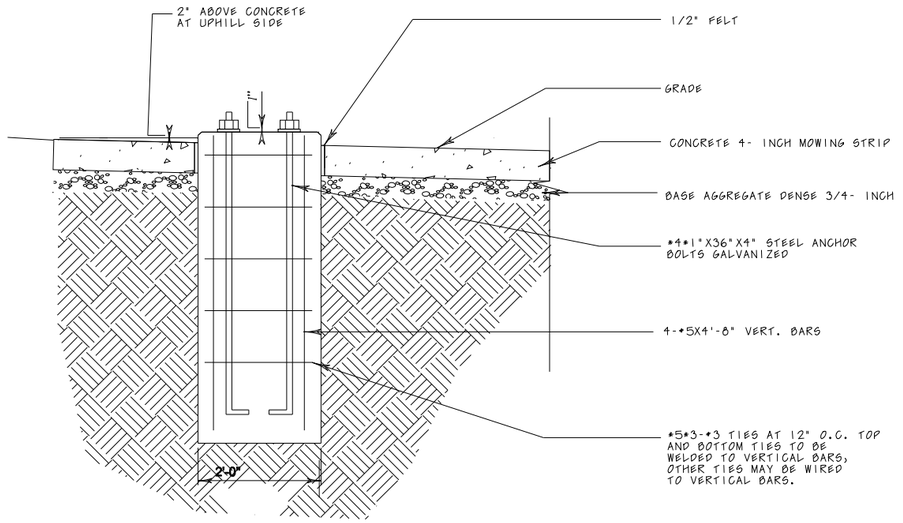


SECTION A-A'



SECTION B-B'

BANNER POLE FLANGE DETAIL
NOT TO SCALE

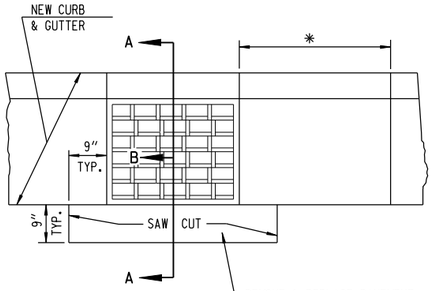


BANNER POLE FOOTING SECTION
NOT TO SCALE

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	BANNER POLE DETAIL	SCALE FEET NTS	SHEET NO: 35	E

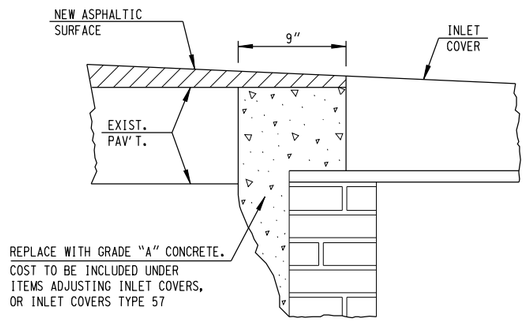
FILE NAME: W:\SPR\27TH HOWARD OKLA\CONDET.DGN

* REMOVE 3'-0" CURB & GUTTER MIN. OR TO THE NEAREST JOINT, 6'-0" MAX. UNLESS OTHERWISE DIRECTED ON THE PLAN.

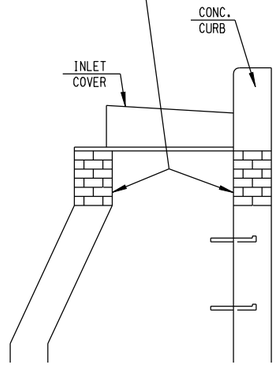


PLAN VIEW

REPAIR BY REMOVING & REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO DEPTH AS DIRECTED BY ENGINEER. WORK UNDER ADJUSTING CATCH BASIN COVERS SHALL BE CONFINED TO THE BRICK SHIMMING ABOVE THE STRUCTURE CORBEL. THIS SHIMMING SHALL NOT EXCEED 1 FOOT BETWEEN THE TOP OF THE CORBEL AND THE FRAME BOTTOM. ANY WORK MORE EXTENSIVE THAN DESCRIBED IMMEDIATELY ABOVE SHALL BE CONSTRUED AS WORK UNDER RECONSTRUCTING CATCH BASINS. DEPTHS OF BRICKWORK TO BE REPAIRED, AS INDICATED ON THE PLAN, ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

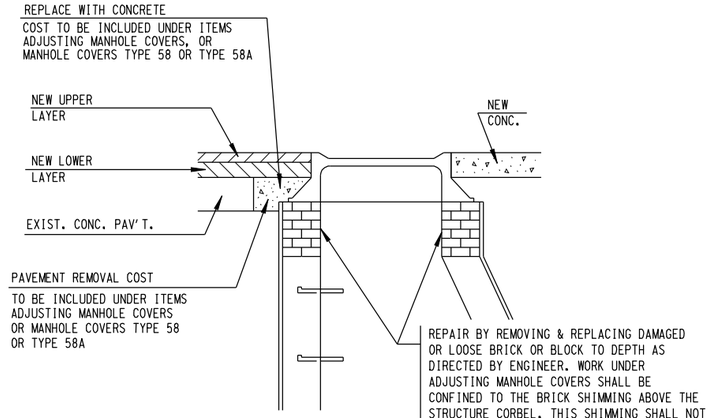


SECTION A-B

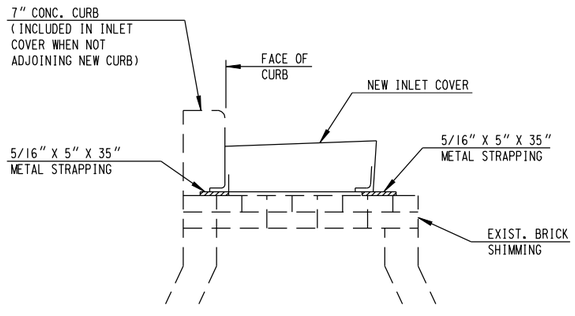


SECTION A-A

ADJUSTING INLET COVERS



ADJUSTING MANHOLE COVERS OR MANHOLE COVERS TYPE 58 OR TYPE 58A

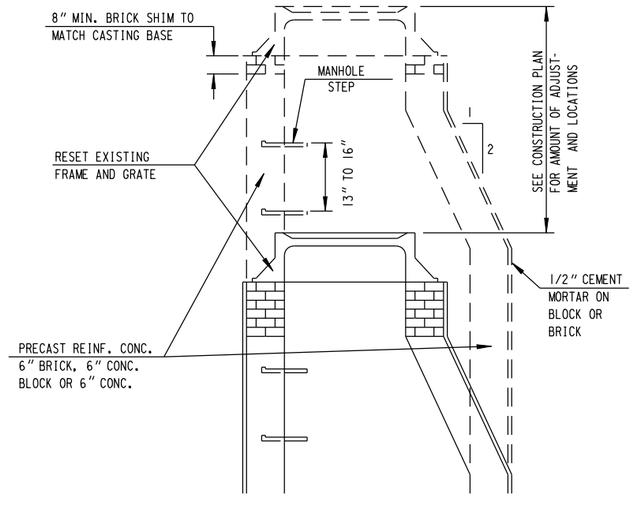


EXIST. DRAINAGE STRUCTURE

NOTES:

1. METAL STRAPPING TO BE 5/16" X 5" X 35" FLAT STEEL, HOT ROLLED (ASTM A36).
2. METAL STRAPPING TO BE PLACED ACROSS EXISTING DRAINAGE STRUCTURE TO SUPPORT NEW COVER. THE METAL STRAPPING SHALL BE SET ON A BED OF MORTAR.
3. PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURE. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.
4. COST OF MATERIALS AND LABOR TO BE INCLUDED IN PRICE BID FOR INLET COVER, TYPE 57.

DETAIL FOR PLACING NEW INLET COVER ON EXISTING INLET USING METAL STRAPPING MATERIALS



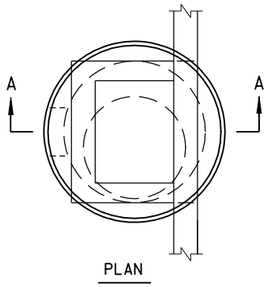
CORBEL MAY BE REVERSED STRAIGHT SIDE LEANED SLIGHTLY TO CLEAR CURB HEAD.

REPAIR BY REMOVING AND REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO THE DEPTH AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. DEPTHS AS INDICATED ON PLAN ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

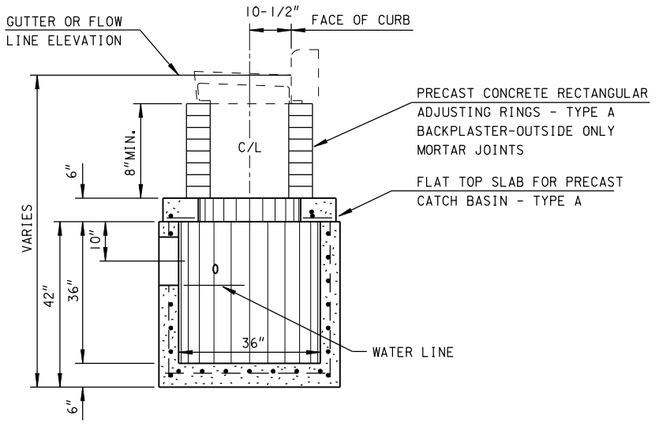
RECONSTRUCTING MANHOLES AND INLETS

CONSTRUCTION NOTES

1. LOCATIONS OF STRUCTURES IN CURB & GUTTER SECTIONS REFER TO FACE OF CURB.
2. LOCATIONS OF STRUCTURES NOT IN CURB AND GUTTER SECTIONS REFER TO CENTERLINE OF STRUCTURE.
3. PIPE LENGTHS GIVEN ARE APPROXIMATE OUT TO OUT OF STRUCTURE.
4. GRATE & RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET COVER OR AT CENTER-LINE OF MANHOLE COVER.
5. WHEN NEW COVERS ARE PLACED, THE FIRST 12" OF ADJUSTMENT OR REPAIRING SHALL BE INCLUDED IN THE COST OF THE NEW COVER. ANY ADJUSTMENT OR REPAIR OF BRICKWORK 12" OR LESS WILL BE PAID AS ADJUSTING COVERS WHEN RESETTING EXISTING COVERS, ANY ADJUSTMENT OR REPAIR OF BRICKWORK MORE THAN 12" WILL BE PAID AS A RECONSTRUCT.
6. MANHOLE ADJUSTMENTS IN ASPHALTIC PAVEMENT WILL BE MADE AFTER THE LOWER LAYER IS PLACED.
7. WHEN CONSTRUCTING CONCRETE CURB ADJACENT TO INLET COVER TYPE 57, TWO (2) DEFORMED TIE BARS SHALL BE PLACED LONGITUDINALLY THROUGH THE CURB SECTION AND EXTENDED ONE (1) FOOT BEYOND EACH SIDE OF THE FRAME. A DUMMY JOINT SHALL BE CUT IN THE CURB AT EACH SIDE OF THE FRAME.



PLAN



SECTION A-A

INLET - TYPE 45A

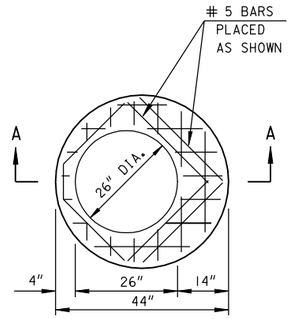
GENERAL NOTES

1. PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199 AND ASTM DESIGNATION C-478 AND THESE DETAILED REQUIREMENTS WHICH SHALL GOVERN WHERE THEY ALTER THE AASHTO AND ASTM STANDARDS.

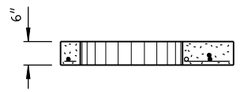
2. ALL REINFORCEMENT STEEL SHALL BE GRADE 60 OR GREATER AND EMBEDDED AT LEAST 1" CLEAR.

3. PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 4 IN DEPTH WHICH MEETS REQUIREMENTS FOR GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

4. SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON PLAN.



PLAN



SECTION A-A

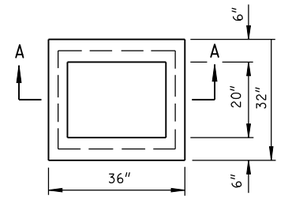
TOP SLAB - TYPE A

FLAT TOP SLAB SHALL BE 6" THICK REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.32 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED NEAR THE BOTTOM OF THE SLAB WITH 1" CLEAR COVER.

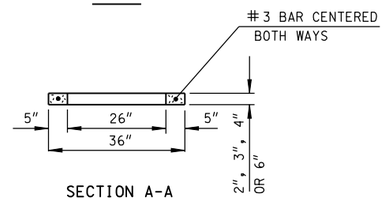
ADDITIONALLY, NO. 5 BARS SHALL BE PLACED AROUND TOP SLAB OPENING AS SHOWN.

REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

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



PLAN

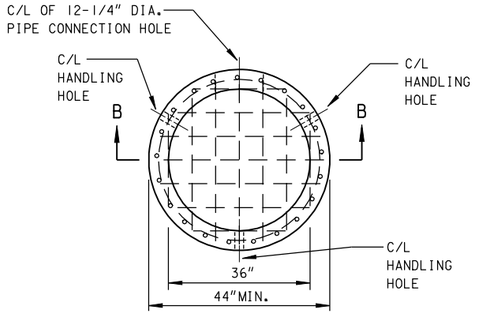


SECTION A-A

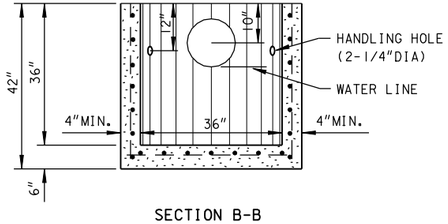
RECTANGULAR ADJUSTING RING - TYPE A

THE ADJUSTING RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



RISER SECTION WITH INTEGRAL BASE PLAN



SECTION B-B

CIRCUMFERENTIAL AND LONGITUDINAL REINFORCEMENT IN THE RISER SECTON SHALL EACH CONSIST OF ONE LAYER OF STEEL NOT LESS THAN 0.12 SQ. IN. PER FOOT AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

THE BASE SLAB SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.32 SQ. IN. PER FOOT IN BOTH DIRECTIONS, PLACED ABOVE THE MIDPOINT OF THE SLAB.

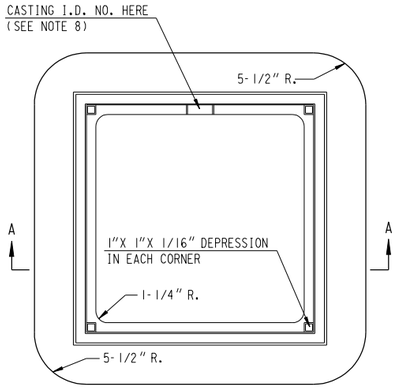
RISER SECTION AND BASE SLAB REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

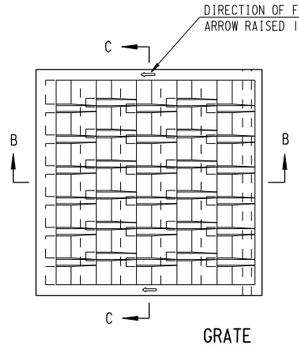
TWO TO THREE HANDLING HOLES 2-1/4" IN DIAMETER AND A PIPE CONNECTION HOLE 12-1/4" IN DIAMETER SHALL BE CAST OR CORED IN THE RISER SECTION AT THE LOCATIONS SHOWN. LIFTING DEVICES MAY BE SUBSTITUTED FOR HANDLING HOLES.

NO JOINTS OR HOLES SHALL BE BELOW THE WATERLINE.

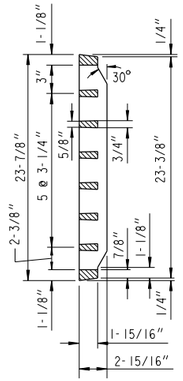
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 4000 P.S.I.

RISER SECTION MAY TAPER TO A 33" INTERNAL DIAMETER AT IT'S BOTTOM PROVIDED A 44" MINIMUM OUTSIDE DIAMETER IS MAINTAINED.

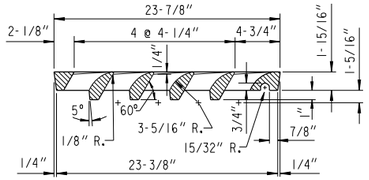




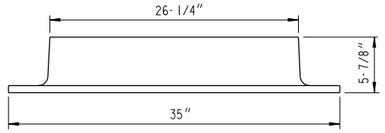
GRATE



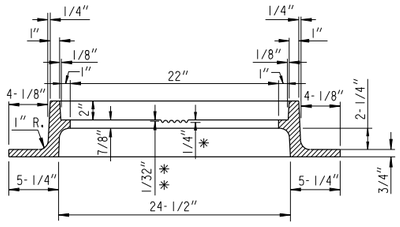
SECTION C-C



SECTION B-B



FRAME



* DEPRESSION FOR LETTERS

** CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

SECTION A-A

INLET COVER - TYPE 55

LID-180 LBS., FRAME-315 LBS.

GENERAL NOTES

ALL EDGES ARE TO BE GROUND.

ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8 INCH

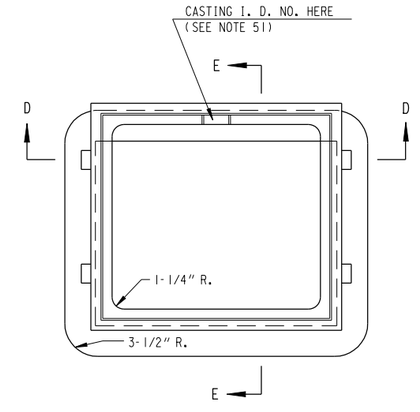
ON THE FRAME

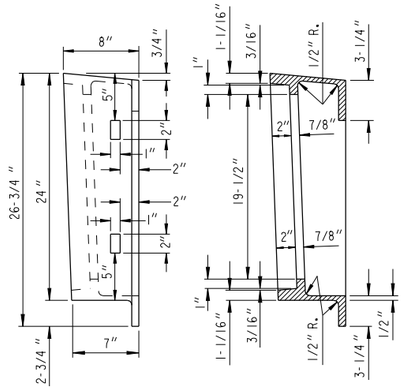
1. ON THE UPPER FACE OF THE FLANGE IN 1 INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

2. ON THE SEAT OF THE FRAME IN 3/4 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (8).

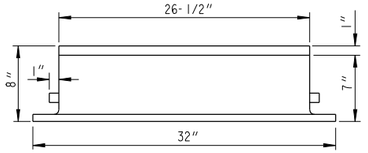
ON THE GRATE

1. ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (55) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

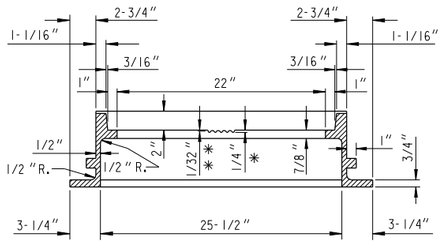




SECTION E-E



FRAME



SECTION D-D

* DEPRESSION FOR LETTERS

** CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

GENERAL NOTES

ALL EDGES ARE TO BE GROUND

ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8"

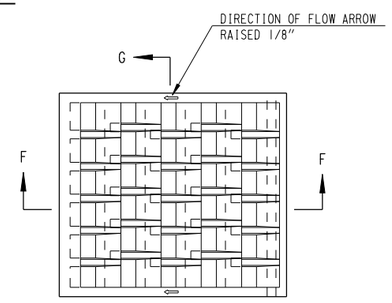
ON THE FRAME

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

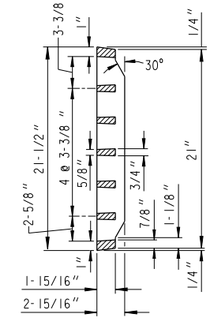
2. ON THE SEAT OF THE FRAME IN 1 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (51).

ON THE GRATE

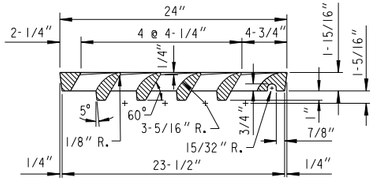
1. ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.



GRATE



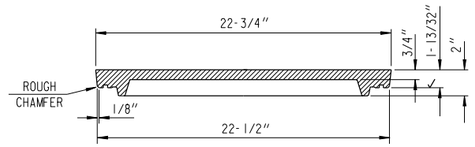
SECTION G-G



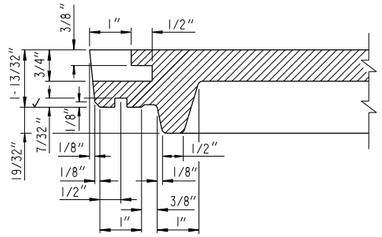
SECTION F-F

INLET COVER - TYPE 57

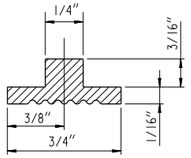
LID-145 LBS., FRAME-204 LBS.

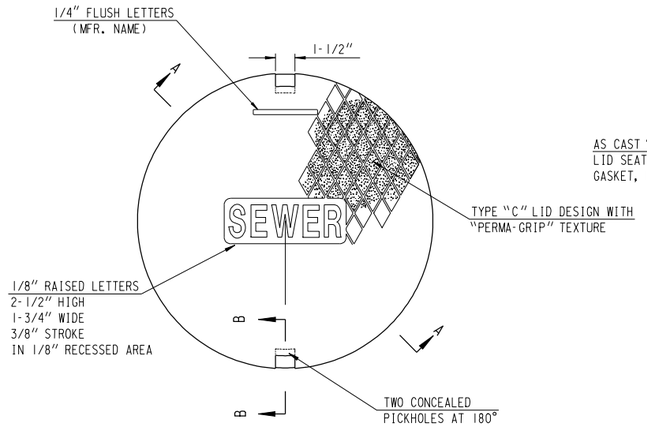


SECTION A-A

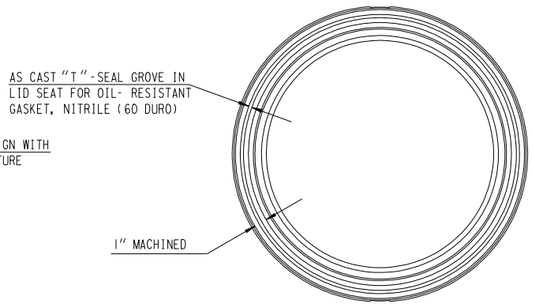


SECTION B-B





TOP VIEW



BOTTOM VIEW

MANHOLE COVER - TYPE 58-A

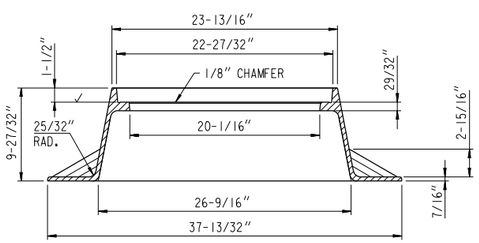
LID - 107 LBS.

NOTE:

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

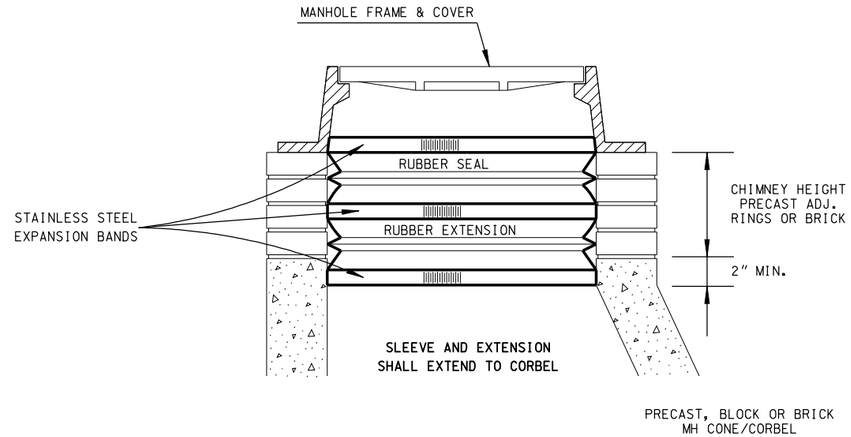
1. THE INITIALS OR MONOGRAM OF THE FOUNDRY.
2. THE CONTRACT NUMBER AND YEAR MADE.
3. THE CASTING IDENTIFICATION NUMBER.
4. THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

NOTE: ALL EXTERIOR EDGES SHALL BE GROUND.

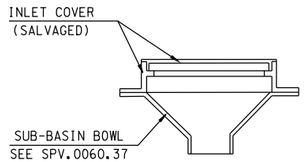


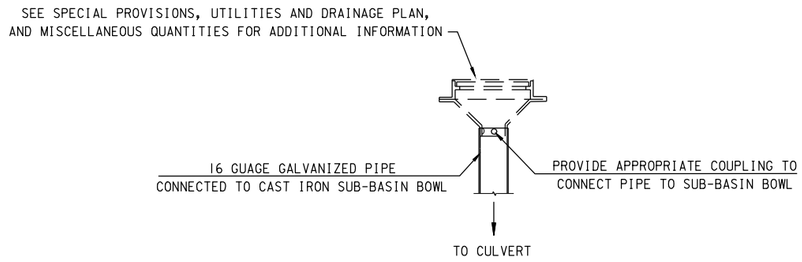
MANHOLE FRAME - TYPE MS21

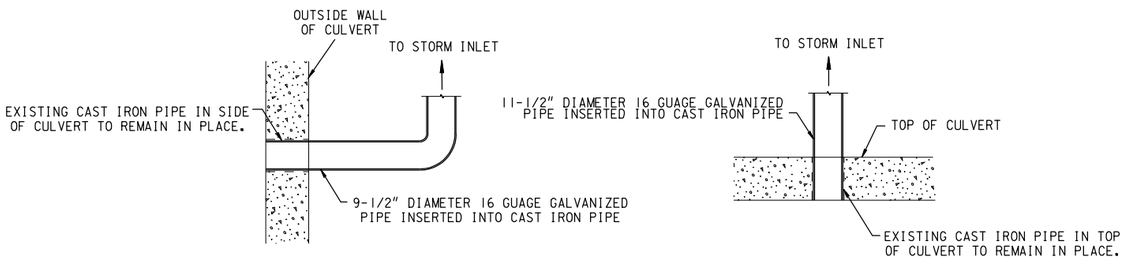
FRAME - 182 LBS.



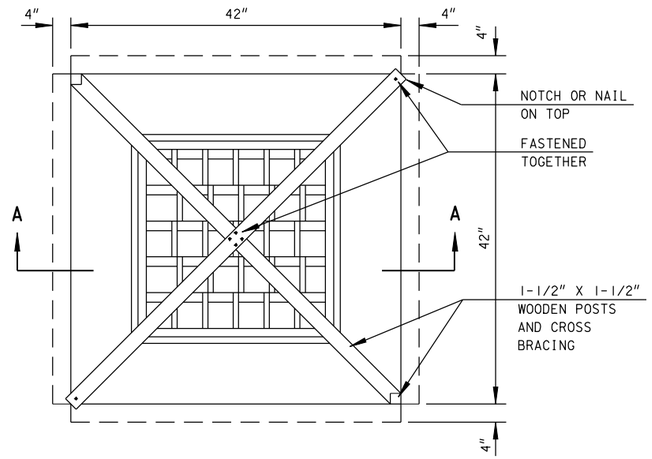
INTERNAL SANITARY MANHOLE SEAL

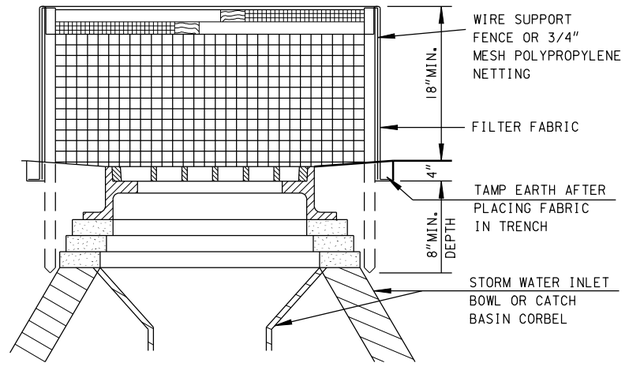






PROPOSED STORM INLET CONNECTIONS AT CULVERT



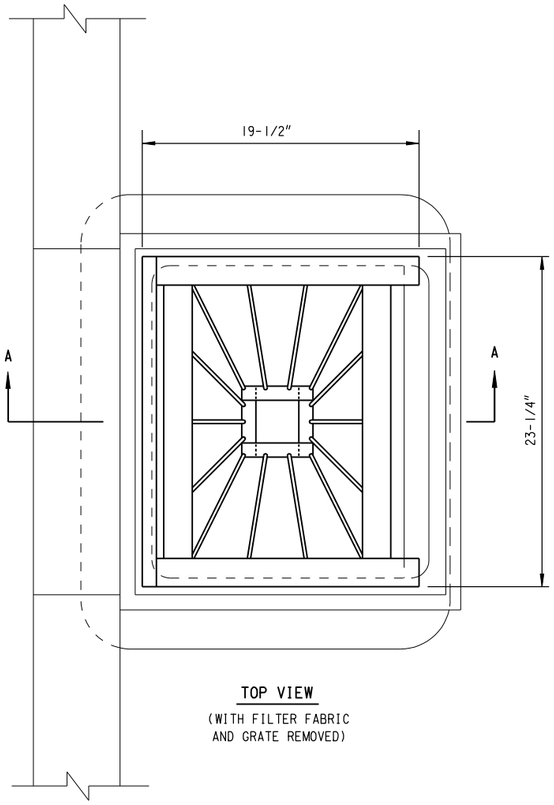


SECTION A-A

INLET SCREEN

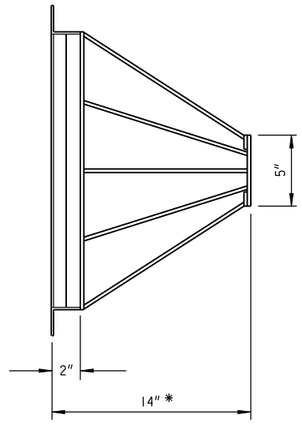
(NOT PAVED) (TYPE R)

2



TOP VIEW

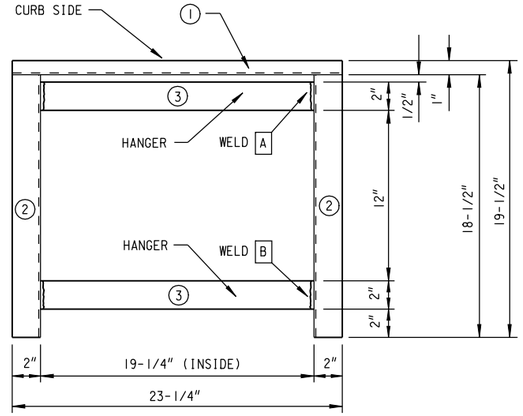
(WITH FILTER FABRIC AND GRATE REMOVED)



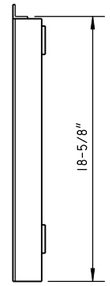
FRONT VIEW

(BASKET ONLY)

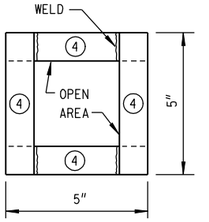
* MAY BE DECREASED IF INLET IS OF INSUFFICIENT DEPTH



TOP VIEW



SIDE VIEW



TOP VIEW

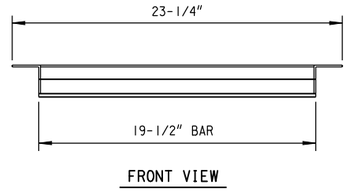


SIDE VIEW

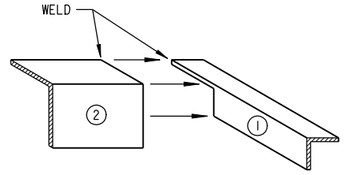
BAR SCHEDULE

NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
4	BAR	1"	1/4"	5"	4

BASKET BOTTOM



FRONT VIEW

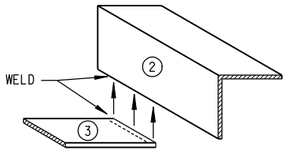


WELD CONNECTION - A

TOP FRAME

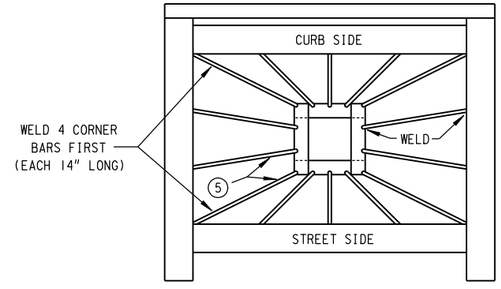
BAR SCHEDULE

NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
1	ANGLE	1" X 1"	1/8"	23-1/4"	1
2	ANGLE	2" X 2"	1/8"	18-1/2"	2
3	BAR	2"	1/4"	19-1/2"	2



WELD CONNECTION - B

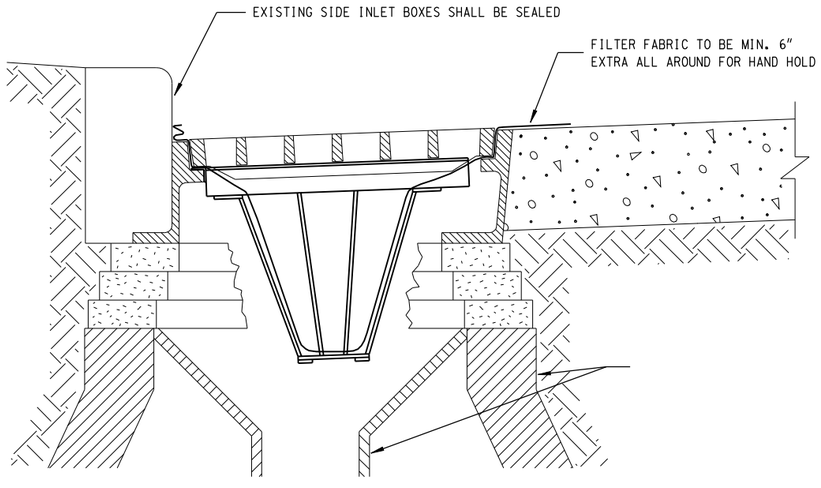
BASKET HANGER TO TOP FRAME



ROD PLACEMENT

ROD SCHEDULE

NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
5	ROD	1/4" MIN.	1/8"	12" TO 14" (CUT TO FIT)	14



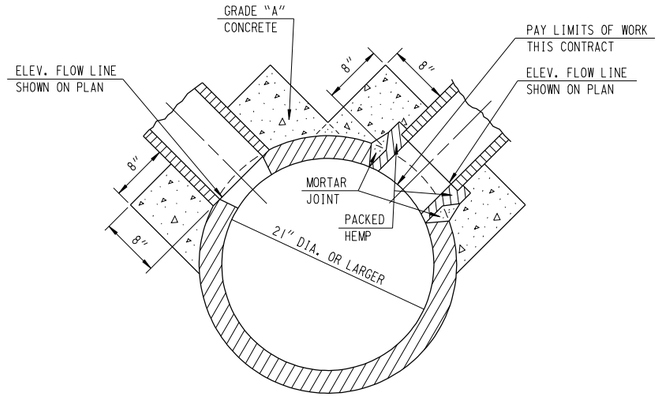
SECTION A-A

TYPE M INLET BASKET

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	DRAINAGE DETAILS	SCALE FEET	SHEET NO: 41	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\DRAINDET.DGN

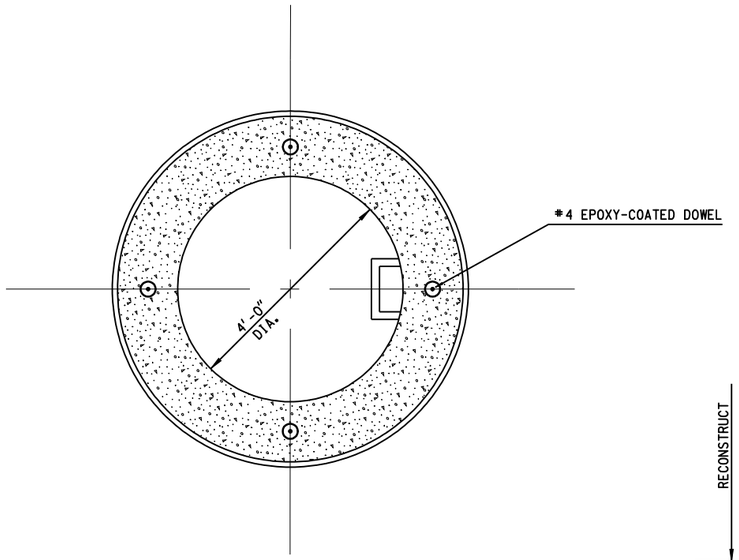
2



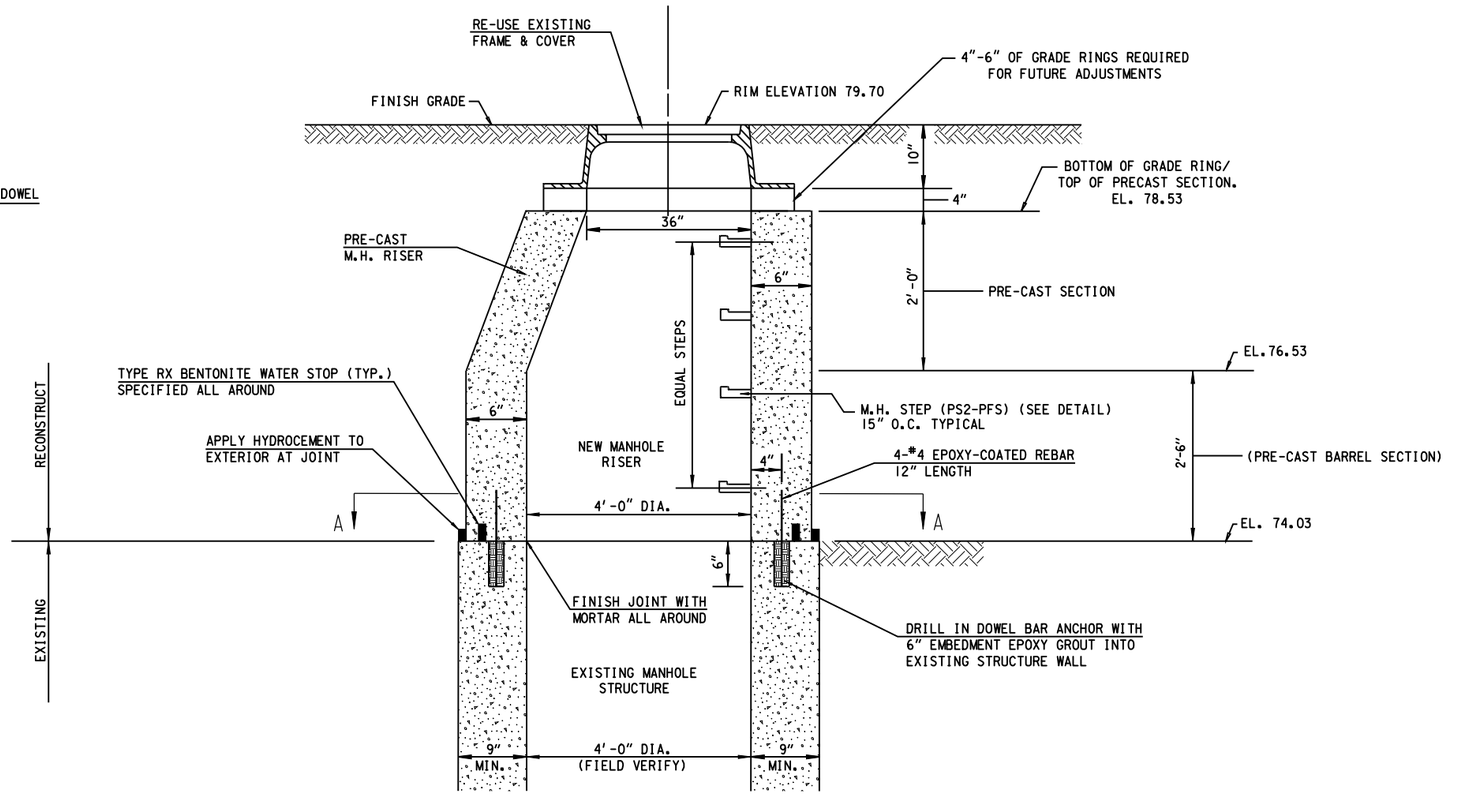
DETAIL OF CONNECTION TO STORM SEWER

(TO BE PAID AS CONCRETE COLLAR SPECIAL, SPV.0060.34)

2



SECTION A-A



DETAIL OF MIS MANHOLE RISER EXTENSION

(21+65.0 - 18.5'LT.)

10102

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	DRAINAGE DETAILS	SCALE FEET	SHEET NO: 43	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\DRAINDET.DGN

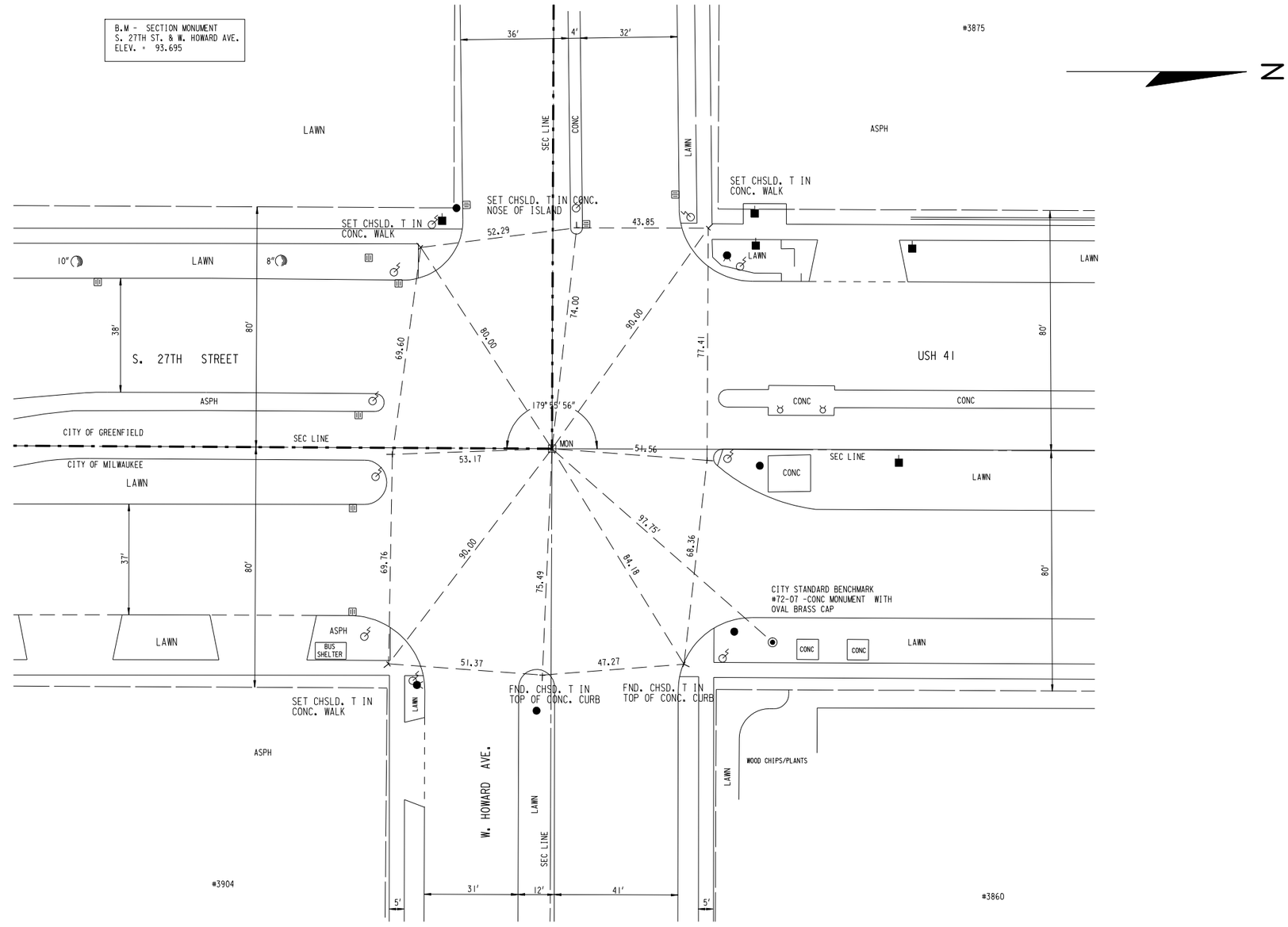
2



TOWNSHIP 6 NORTH, RANGE $\frac{21}{22}$ EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ ALUMINUM CAP

STATE PLANE COORDINATES OF QUARTER SECTION CORNER
NORTH: 361,714.28
EAST: 2,549,027.78

SURVEY DATE; APRIL 22, 1988
REVISED: NOVEMBER 13, 1991



U.S. PUBLIC LAND SURVEY CORNER
N. 27TH ST. AND W. HOWARD AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	LANDMARK REFERENCE MONUMENT	SCALE FEET 0' 40'	SHEET NO: 44	E

FILE NAME: W:\SPR\27TH HOWARD OKLA LANDMARK.DGN

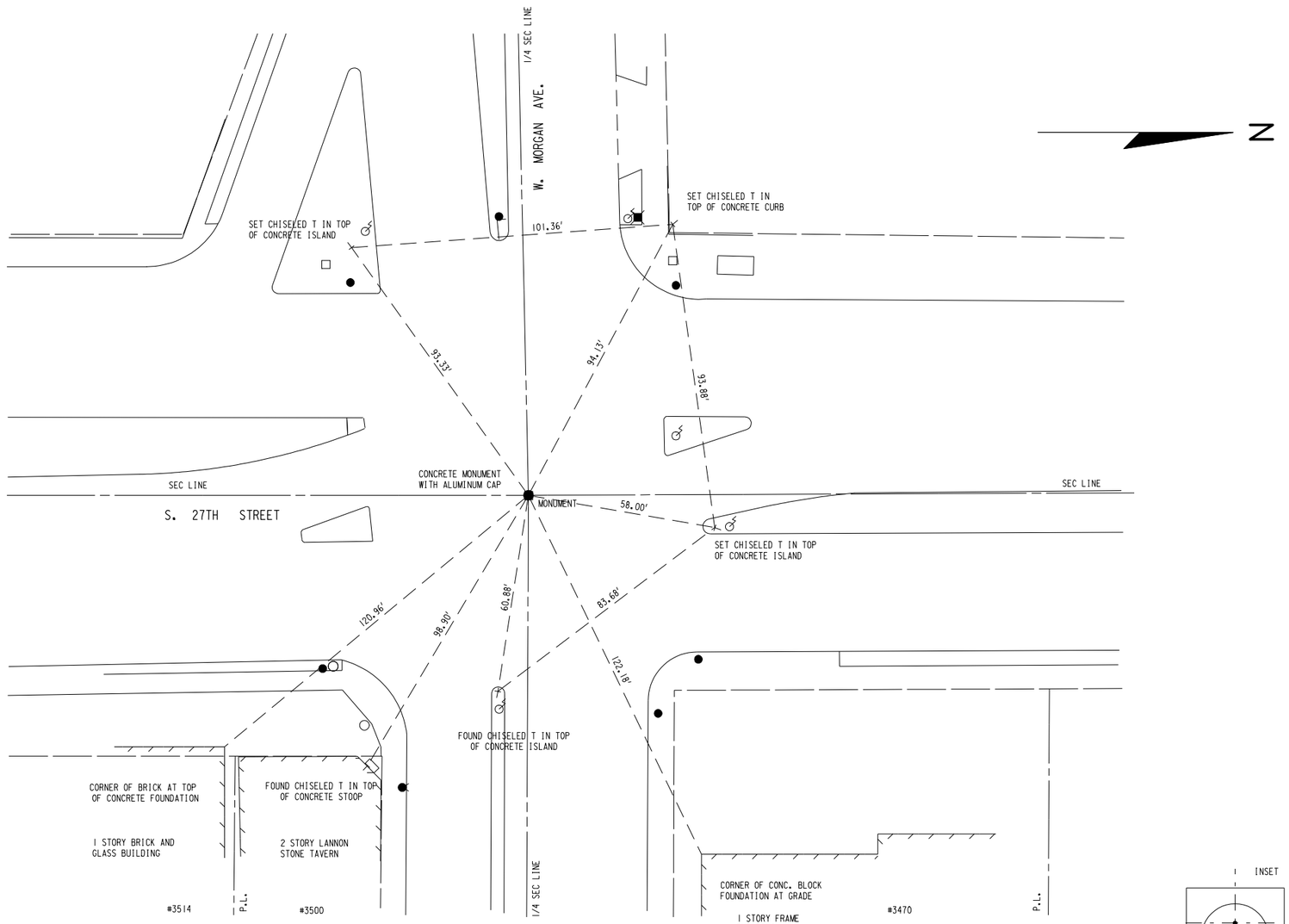
2



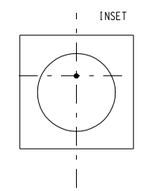
TOWNSHIP 6 NORTH, RANGE $\frac{21}{22}$ EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ ALUMINUM CAP

STATE PLANE COORDINATES OF QUARTER SECTION CORNER
NORTH: 364,386.13
EAST: 2,548,996.72

SURVEY DATE; APRIL 22, 1988
REVISED: OCTOBER 21, 1997



U.S. PUBLIC LAND SURVEY CORNER
N. 27TH ST. AND W. MORGAN AVE.



NOTE: CORNER LOCATION MARK OFFSET ON MONUMENT CAP AS SHOWN

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	LANDMARK REFERENCE MONUMENT	SCALE FEET 0' 40'	SHEET NO: 45	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\LANDMARK.DGN

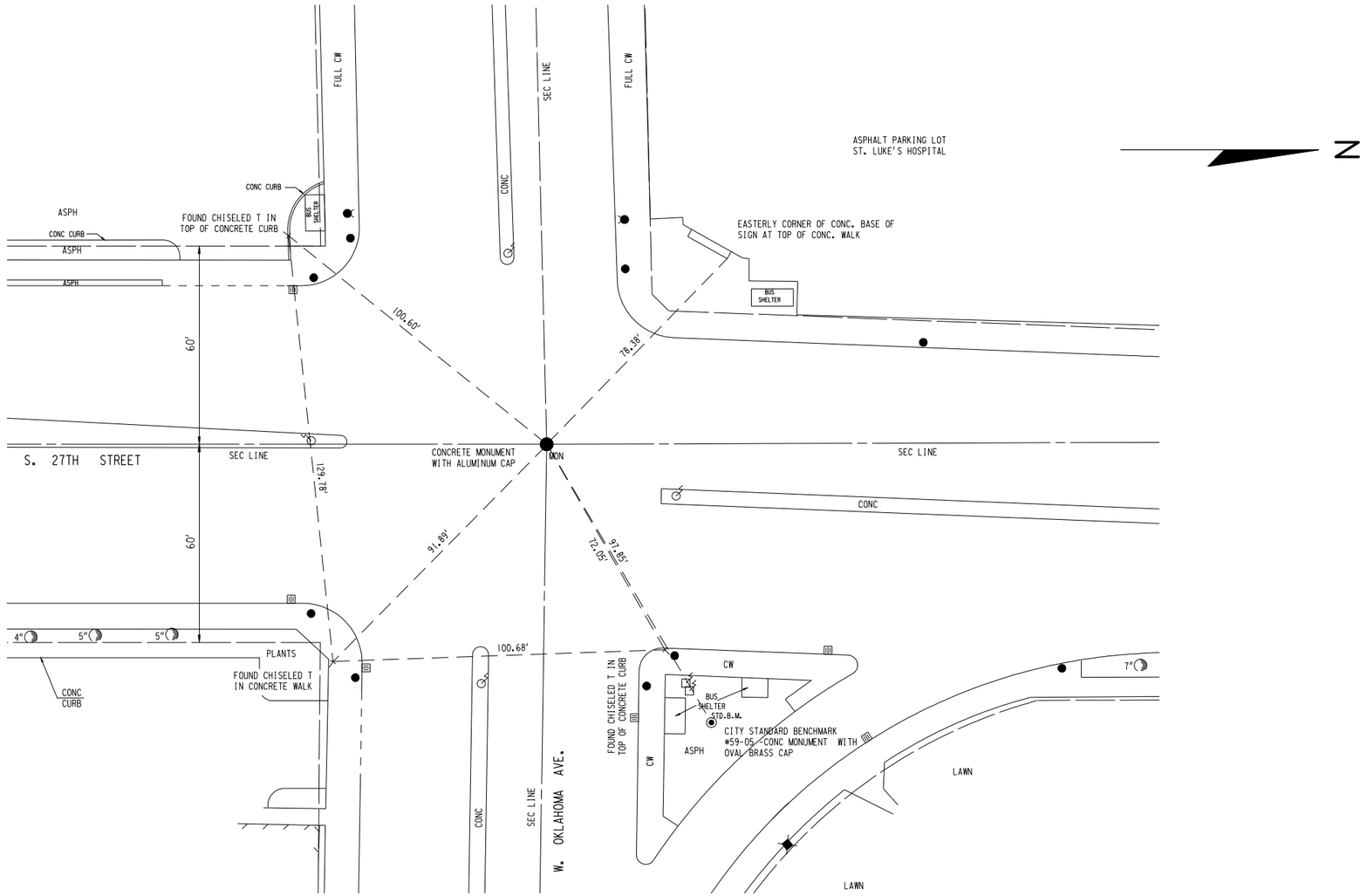
2



TOWNSHIP 6 NORTH, RANGE $\frac{21}{22}$ EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ ALUMINUM CAP

STATE PLANE COORDINATES OF SECTION CORNER
NORTH: 367,064.36
EAST: 2,548,955.09

SURVEY DATE; APRIL 22, 1988
REVISED: OCTOBER 21, 1997

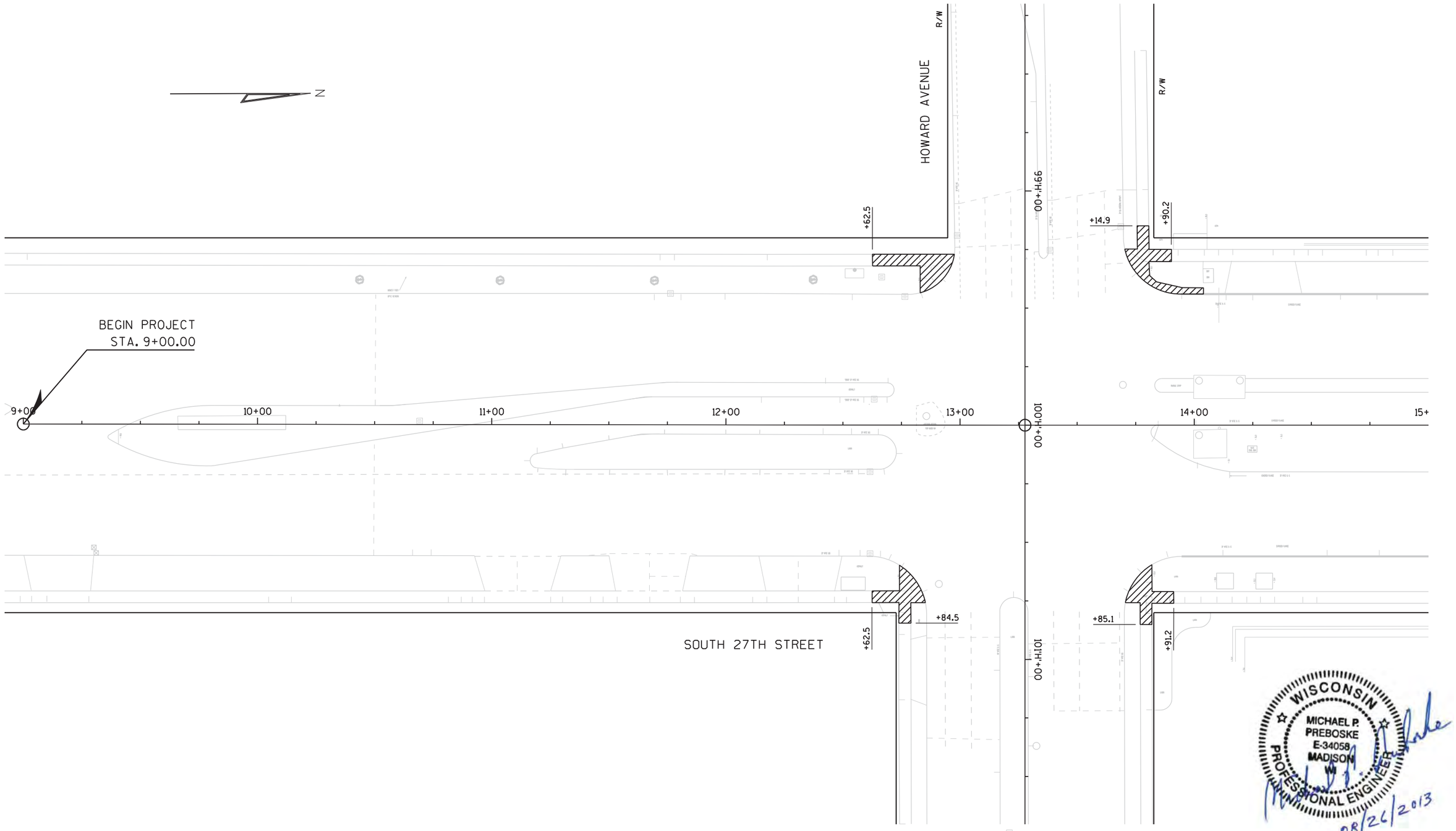


U.S. PUBLIC LAND SURVEY CORNER
N. 27TH ST. AND W. OKLAHOMA AVE.

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	LANDMARK REFERENCE MONUMENT	SCALE FEET 0' 40'	SHEET NO: 46	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\LANDMARK.DGN

2



STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 47	E

FILE NAME=

SOUTH 27TH STREET

N

#3875 #3849 #3821 #3801

B.W. NW BOL
STA. 20+25
ELEV. 81.8

CAUTION FIBER OPTIC CAUTION

P.I. P.I. P.I.

CONC CURB +27 +38.5 +51 +77.7 ASPH +34.8 +01.2 ASPH CONC CW CW DRAIN DRAIN +35.2 +71.3 ASPH +83.5 +95.7 +18.8 +25.2 +25.7 +37.5 +49.5 R/W

LAWN FO FO G 24' 2% 7' 5' 14'

80' 36' 6' 14' 20'

15 +50 16 +50 17 +50 18 +50 19 +50 20

MMSD ?? TES

?? N 00°39' 58"W N 00°39' 58"W T/L

8" 8" 1" 1" 1" 10" 8" 9" 10"

LAWN CONC. PAD/W BANNERS

WOOD CHIPS/PLANTS

WALL +71.7 +95.2 +19 CONC CURB +24.5 ASPH CONC CURB +66.7 ASPH +92.6 +98.1 +39.6 +58.2 +71.2 +18.9 +08.3 +39.9 R/W

6" 7' 3%

CAUTION CAUTION

#3860 #3804 #3800

P.I. P.I.

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 48	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 15_20.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.20+25 - 63' LT.
ELEV. 81.86

#3801 #3775-85-89-95 #2917-19 W. LOOMIS RD.

N

CAUTION SAW CURB @ L/L AND REMOVE CAUTION FIBER OPTIC

+23.8 CURB +64.8 CURB P.L. G G CURB P.L. GRASS +60 ASPH +94.5 GRASS LAWN +86 LAWN TIMBER WALL +01.5 LAWN CONC CURB +24.3 ASPH

FO FO FO FO FO FO FO

ASPH ASPH ASPH LAWN LAWN

EXIST. 27" STO. EXIST. 36" STO.

36' 80' 36'

MMSD TES

20 +50 21 +50 22 +50 23 +50 24 +50 25 +50 26

15" 18" 19" 12" 14" 14" 13" 10" 14" 10" 9"

16" 8" SEC LINE N 00°39' 58"W

TEL

DIRT BOS 3749

LAWN LAWN

6" G 24' 7" 8" 6" G G 6" G 7" 8" G

+32.8 +10.5 +16.3 +64.6 +70.9 +82.8 +54.5 +66.5 +72.5 +32.9 +39 +74.6

PLANTS PLANTS

ASPH ASPH ASPH ASPH ASPH ASPH ASPH

2" G

CAUTION CAUTION

#3800 #3774 #3700 TO 3736

P.L. P.L.

20 +50 21 +50 22 +50 23 +50 24 +50 25 +50 26

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 49 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 20_26.DGN

2

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.26+40 - 60' LT.
ELEV. 78.67

#2917-19 W. LOOMIS RD.

B.M. NW BOLT HYD SW CORNER
W. LOOMIS RD. & S. 27TH ST.
STA.32+58 - 94' LT.
ELEV. 76.85

#3605

N

P.L.

FIBER OPTIC

SAW CURB @ L/L AND REMOVE ASPH.

CONC. CURB
TIMBER WALL
ASPH
+56
R/W
LAWN
FO
+87.5
+84
+45
+93.3
+17.6
+23.2
+84
+1.7
+20.5
TEL PEDESTAL
+80.9

MMSD
CONC.
26
+50
27
T/L
SEC LINE
11"
5"
4"
28
29
1"
30
TES
12"
10"
31
32
CONC. PAD/W BANNERS
N 00° 39' 58" W
36'
80'

ASPH
6"
G
R/W
12"
5"
10"
GRAVEL/WEEDS
7"
8"
9"
+52
+35
+58.9
+07
+36.5
+88.6
CW
LAWN
CAUTION
#3702
#3636
P.L.

B.M. NW BOLT HYD E/S
STA.30+30 - 64' RT.
ELEV. 75.44

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 50 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 26_32.DGN

SEE WEST LOOMIS ROAD PLAN SHEET
(STA. 1'L'+25.00 TO STA. 6'L'+87.24)

STD. B.M. #340
S. 27TH ST. AND W. LOOMIS RD.
CHISELED SQUARE ON SOUTHWEST
CORNER OF CONCRETE BRIDGE.
ELEV. 73.34

SOUTH 27TH STREET

W. LOOMIS RD.

#3555 S. 27TH ST.

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

34+71.3
132.2' LT

35+42.4
103.4' LT

106.4'
LT

5'L'

6'L'

+50

+80

ASPH

HIGHWAY EASEMENT

BRIDGE WALL

LAWN

CAUTION

FIBER OPTIC

R/W

FO

MMSD

TES

ELEC

CONC PAD W/ BANNERS

121° 47' 21"

58° 12' 39"

SEC LINE

N 00° 39' 58" W

T/L

CONC

36'

80'

EXIST. 21" STO.

TEL

TEL PEDESTAL

3-SPAN CONCRETE BOX CULVERT

CONC CURB

CONC DRAINAGE DITCH

STRUCTURE
B-40-0058

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

#2536 W. WARNIMONT AVE.

#3540

#3514

BLDG OVERHANGS
CW 6'+/-

FIRESTONE

P.I.

32 +50 33 +50 34 +50 35 +50 36 +50 37 +50 38

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 51	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 32_38.DGN

SOUTH

27TH

STREET

B.M. NW BOLT HYD NW CORNER
S. 27TH ST. & W. MORGAN AV.
STA.40+30 - 156'LT.
ELEV. 72.86

B.M. NW BOLT HYD W/S
STA.43+65 - 61' LT.
ELEV. 76.46

#3473

N

CAUTION

FIBER OPTIC

75'

45'

28'

6"

114' LT

94.9' LT

125' LT

ASPH

PLANTS

R/W

FO

CONC

ELEC BOX

TES

LAWN

6" G

CONC CURB

BUS SHELTER

+28.5

+59

+65

+43

+50

+01

+41.6

+78

10%

6"

7"

WATER

WATER

1/4 SEC LINE

VARIES

80'

LAWN

??

MMSD

179° 46' 32"

MON

38

+50 T/L

39

+50

40

+50

41

+50

42

+50

12"

T/L

43

+50

44

SEC LINE

N 00° 53' 26" W

CONC. PAD/W BANNERS

36'

60'

TEL

EXIST. 15" STD.

EXT.

ABANDONED

+09

93' RT

+69.3

127' RT

101' RT

105' RT

124' RT

GOOD YEAR #3514

STEIN OPTICAL #3500

FULL CW

18'

6"

4'

ASPH 26'

ASPH 44'

45'

45'

W. MORGAN AVE.

#3470

#3456

#3450

#3440

P.L.

CONC BLOCK

REMOVE CONC. BLOCK @ L/L

RR TIES

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 52	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 38_44.DGN

SOUTH 27TH STREET

2 2

P.L. #3355 N

FIBER OPTIC

CONC CURB ASPH CONC CURB

+32.2 +37.2 +79.8 +85.8 +22.2 +28 +01.4

R/W 6' 11' FO FO FO FO FO FO FO FENCE 1.5' R/W

TES LAWN ABANDONED

VARIES 36' VARIES 36'

MMSD

44 +50 T/L 45 +50 46 +50 47 +50 48 +50 49 +50 50

LAWN 18" 13" LAWN 1" 1" 13" LAWN 8" 2' LAWN T/L 5" 4"

SEC LINE

TES TEL

60' 48" 36' 60' 2" 36'

G 3" G LAWN 3" G ASPH 3" G G 3" G

R/W RR TIES CONC CURB SIGN ASPH CW ICR ASPH ASPH RR TIE PLANTER LAWN ASPH ASPH DECO STONE/PLANTS ASPH ASPH SIGN CONC CURB ASPH LAWN ASPH

71' RT 69.9' RT SAW CURB @ L/L AND REMOVE SAW CURB @ L/L AND REMOVE 62.4' RT

#3418 #3432 #3404 #3368-78 #3360 #3340

P.L. P.L. P.L. P.L. P.L. P.L.

CAUTION CAUTION

ASPH

W. HOLT AVE. 20' 6' 30' 6' 60'

B.M. NW BOLT HYD NE CORNER
W. HOLT AV. & S. 27TH ST.
STA. 46+85 - 63' RT.
ELEV. 78.47

44 +50 45 +50 46 +50 47 +50 48 +50 49 +50 50

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 53 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 44_50.DGN

2

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.50+15 - 55' LT.
ELEV. 82.43

FIBER OPTIC

+01.4 R/W FENCE 6' FO CW COLORED PLANTS FENCE +71 4" 1.5' FO 6' 7' FO LAWN LAWN LAWN

+36 +64

36'

TES 50 4" 4" +50 SIGNATURE PLANTER T/L 51 LAWN +50 52 LAWN +50 53

N 00° 53' 26"W

WEP WEP

SEC LINE +50 TES 54 +50 T/L 55 +50 LAWN 56

P.L. 58' CW +96.1 FENCE +21 +32.8 LAWN CW 8" LAWN +84.9 +06.4 FENCE +43.7 8" R/W +97.8

60' 48' 12' 5' FO LAWN LAWN MMSD MMSD

WALGREENS
#3233

N

36' 36' 60'

TEL TEL

G 3" G G 3" G G

ASPH 5' DECO STONE R/W ASPH CONC CURB ASPH CONC CURB GRANITE 14' BARK BARK 14' 61' RT 61.2' RT CONC CURB ENT PLANTER DRIVE THRU 68'+ RT 70' RT REMOVE CURB SAW CURB @ L/L AND REMOVE

LAWN LAWN 12' 2" 3" GAS 73.3' RT 80.4' RT DIRT LAWN R/W

ASPH ASPH 30' 1-1/4" 6' 18' 60'

W. OHIO AVE.

CAUTION CAUTION

#3334 #3300 #3270 #3246

P.L. P.L. P.L. P.L.

B.M. NW BOLT HYD NE CORNER
W. OHIO AV. & S. 27TH ST.
STA.53+73 - 50'RT.
ELEV. 85.13

50 +50 51 +50 52 +50 53 +50 54 +50 55 +50 56

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 54	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 50_56.DGN

2

SOUTH 27TH STREET

N

#2733 W. EUCLID AVE. #3179-81 #3165

REMOVE & DISPOSE CONC. PAD

FIBER OPTIC

CAUTION

CONC CURB ASPH LAWN CONC CURB ASPH LAWN ASPH LAWN ASPH LAWN ASPH LAWN ASPH ASPH PARKING

+97.8 +22.7 +95.1 +53 +81.5 CW +89.5 +84

63.5' LT 78' LT 81.5' LT 64.6' LT

R/W 1" WOOD 1" CHIPS

FO

P.L.

36' 60' 48'

WEP MMSD TES TEL

CONC. PAD PLANTER CONC. WALL CONC. PAD/W BANNERS

56 +50 57 +50 T/L SEC LINE 58 +50 59 +50 60 +50 61 +50 T/L 62

LAWN 12' 24' 17" 5" 2' G

SAW CURB @ L/L AND REMOVE

63.3' RT 63.7' RT 75' RT 60' RT 71' RT

R/W 3" 12" 2" 3"GAS PLANTS CONC PATIO CONC CURB CONC BLOCK WALL ENT COLORED CONC

#3236 #3232 #3200 #3178-80 #3172-74 #3168 #3164 #3158

W. EUCLID AVE.

6' 30' 6' 60'

B.M. NW BOLT HYD NE CORNER
S. 27TH ST. & W. OHIO AV.
STA.60+01 - 50' RT.
ELEV. 88.60

56 +50 57 +50 58 +50 59 +50 60 +50 61 +50 62

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 55	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 56_62.DGN

2

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA. 63+13 - 51' LT.
ELEV. 91.07

#3151 #3119 #3105

P.L.

18' CONC ALLEY

SAW CURB @ L/L AND REMOVE

60' LT

182.2' LT

176.7' LT

+98

67'

33'

21'

SEC LINE

FULL CW

+04.7
80.7' LT

68' LT

PROP. R.O.W. LINE

CONC WALL

HUSH

BUS SHELTER

7.29'

8" 10" 12"

LAWN

CAUTION

FIBER OPTIC

ASPH CONC CONC CURB BRICK

1" CHIPS

36' 46' 60'

62 +50 63 +50 64 +50 65 +50 66 +50 67 +50 68

TES WEP MMSD TEL MON

N 00°53'26"W

179°53'29"

10" 15" 24" 12"

CONC. CONC CURB

5" PLANTS 4" 5" 5" 5.5"

CONC PLATFORM BLOCK WALL STONE WALL CONC CURB

ENT

65' RT 76.1' RT 171.3' RT

17'

#3152 #3146 #3142 #3120 #3104 S. 27TH ST. & 2619-27 W. OKLAHOMA AVE.

18' ALLEY

STD. B.M. #59-05
S. 27TH ST.& W. OKLAHOMA AV.
IN BY-PASS ISLAND ON NORTHEAST CORNER OF S. 27TH ST. AND W. OKLAHOMA AV., 22.07' NORTH OF SOUTH CURB AND 21.95' EAST OF WEST CURB.
ELEV. - 86.646

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 56	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 62_68.DGN

SOUTH 27TH STREET

N

B.M. NW BOLT HYD W/S
STA. 71+34 - 45' LT.
ELEV. 69.32

CAUTION

PROP. R.O.W. LINE

SAW CURB @ L/L AND REMOVE

59.5' LT

10' SEWER EASEMENT

P.L.

BRICK WALL

PLANTER

BUSHES

ASPH

CONC

LAWN

R/W

DWY NOT IN USE

ELEC BOX

SIGN

ENT

WEP

T/L

SEC LINE

N 00°59'57"W

CONC PAD/W BANNERS

TEL

TES

FO

FIBER OPTIC

WAT

VARIES

175.32'

61.76'

33'

78'

309.72'

28°

+35.3

+88.4

+21.1

+75.4

+58

+75.2

+21

+40.2

+62.4

+80.4

+91.3

+97.4

+55.8

+91

+31.6

+43.6

+78.1

68 +50 69 +50 70 +50 71 +50 72 +50 73 +50 74

PULASKI HIGH SCHOOL
(CITY OF MILWAUKEE)

6TH DISTRICT POLICE STATION

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 57 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 68_74.DGN

2

SOUTH 27TH STREET

KINNICKINNIC RIVER PARKWAY

N

B.M. NW BOLT HYD
(NORTHERLY HYD) NW CORNER
S. 27TH ST. & W. K.K. PKWY.
STA. 76+22 - 63' LT.
ELEV. 65.52

HYD W/S
55' LT.

CAUTION

FIBER OPTIC

P.I.

(N.E. 365)

KINNICKINNIC RIVER

ASPH

91.7'
LT

74.9'
LT

LAWN

FIBER
OPTIC

+58.5

+18.6

R/W

FO

24"

DECORATIVE
LOT LIGHT

PLANTER

SIGN

+35.5

+54.6

+44.7

10"

7"

6"

5"

9"

CONC

TES

WEP

VARIES

BRIDGE

CONC

LAWN

1"

74 +50 75 +50 76 +50 77 +50 78 +50 79 +50

T/L

N 00°59'57"W

SEC LINE

TEL

STRUCTURE
B-40-0438

CONC

BRIDGE GUARD RAIL

+57.3

+17.4

ASPH

BUSHES

FENCE

PLANTER

WAT

+13.7

+30.8

+36.8

+42.6

+48.3

4'

75.6'
RT

KINNICKINNIC RIVER
PARKWAY

W. KINNICKINNIC RIVER PKWY.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 58	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 74_79+50.DGN

2

SOUTH 27TH STREET

W. DAKOTA ST.

N

B.M. NW BOLT HYD W/S
STA. 83+63 - 66' LT.
ELEV. 77.67

96.3' LT

91.3' LT

FIBER OPTIC

P.L.

FENCE

LOCATION UNKNOWN

BUS STOP

FO

LAWN

WEP

TES

CONC

4" RR TIE WALL

GRAVEL DWY

+45.8
66.7' LT

+42.8
60.2' LT

+26.5
23.9' LT

WATER

+20.6
11.0' LT

+04.6
25' RT

+01.5
31.9' RT

79'

VARIES

36'

33'

+50 80 +50 81 +50 82 +50 83 +50 84 +50 85 +50

SEC LINE

TEL

MMSD

PLANTER

BUSHES

ASPH

2GR

CONC PILLARS

12"

CONC WALL

UNION PACIFIC
RAILROAD COMPANY

B.M. NW BOLT HYD E/S
STA. 84+90 - 27' RT.
ELEV. 79.53

#2856 S. 27TH ST.
MAYNARD STEEL

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 59	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM 79+50_85+50.DGN

2

STD. B.M. #340
S. 27TH ST. AND W. LOOMIS RD.
CHISELED SQUARE ON SOUTHWEST
CORNER OF CONCRETE BRIDGE.
ELEV. 73.34

END CONSTRUCTION
WEST LOOMIS ROAD T/L = 6'L' + 87.24
SOUTH 27TH STREET T/L = 34 + 13.63

BEGIN CONSTRUCTION
WEST LOOMIS ROAD T/L = 1'L' + 25.00

WEST LOOMIS ROAD

KINNICKINNIC RIVER (SOU

BRIDGE WALL

HIGHWAY EASEMENT

102.4'LT
+75.3

78.7'LT
+14.8

62.1'LT
+37

+81.2

+23.4
+34.6
+44.6

WOOD CHIPS

ASPH.

LAWN

CAUTION

P.L.

1'L'
2'L'
3'L'
4'L'
5'L'
6'L'

+50

N 57° 32' 41" E

MMSD

FO

CONC

TES

+50 BANNERS

121°41'21"

58°12'39"

34

33

32

SEE SOUTH 27TH STREET PLAN SHEET
(STA. 32+00 TO STA. 38+00)

B.M. NW BOLT HYD SW CORNER
W. LOOMIS RD. & S. 27TH ST.
STA. 32+58.94 Lt.
ELEV. 76.85

#36105

SOUTH 27TH STREET

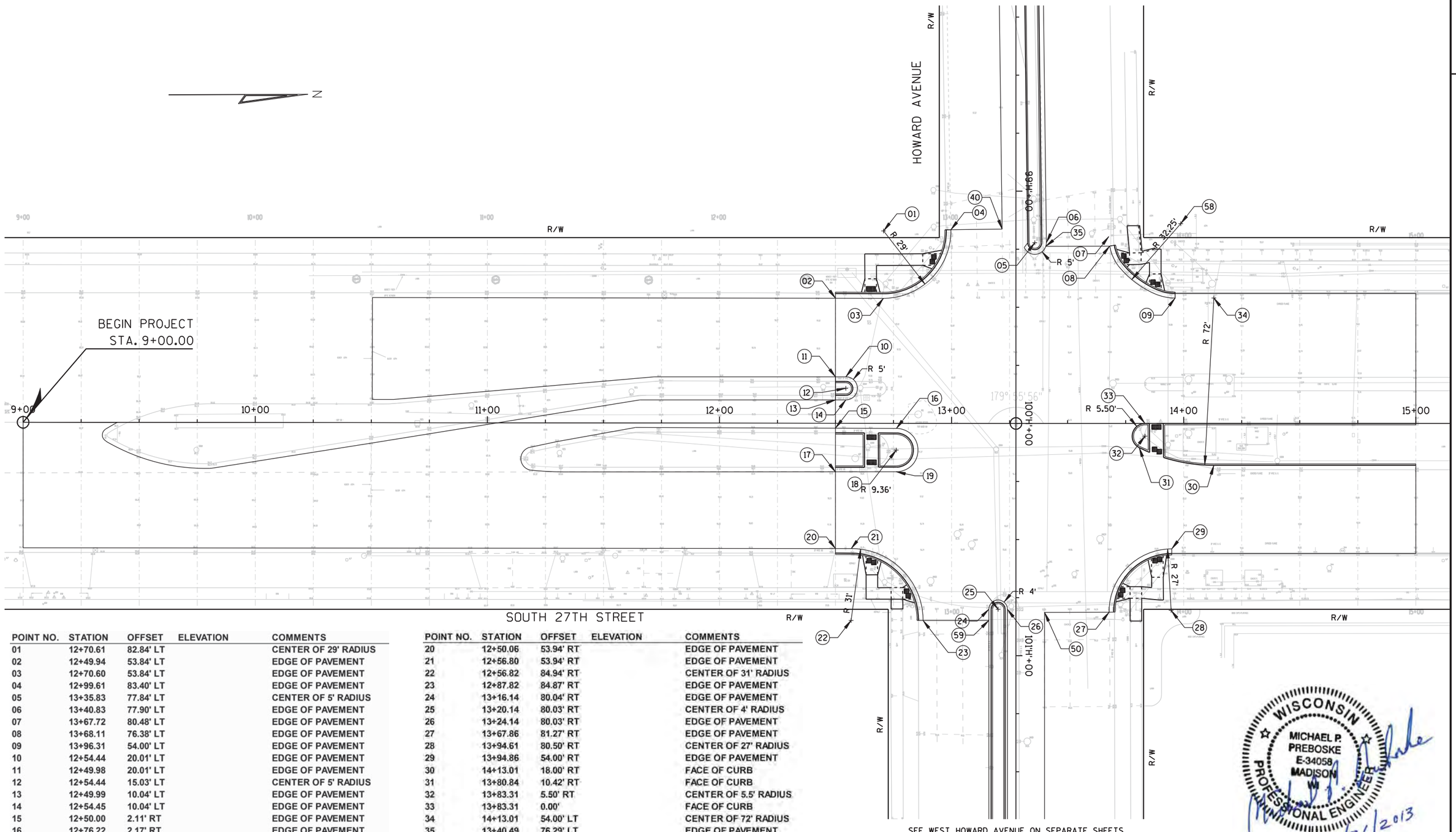
+64.3
71.7'RT
+84.3
77.6'RT
+89.1
79'RT
+9.4
84.8'RT
+29.5
88.2'RT

+22.8
+19.6
+25.6
+87.6
+93.5
+9.0

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	WALK AND DRIVEWAY REMOVAL	SCALE FEET 0' 40'	SHEET NO: 60	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\REM LI_L6.DGN

SEE WEST HOWARD AVENUE ON SEPARATE SHEETS



POINT NO.	STATION	OFFSET	ELEVATION	COMMENTS
01	12+70.61	82.84' LT		CENTER OF 29' RADIUS
02	12+49.94	53.84' LT		EDGE OF PAVEMENT
03	12+70.60	53.84' LT		EDGE OF PAVEMENT
04	12+99.61	83.40' LT		EDGE OF PAVEMENT
05	13+35.83	77.84' LT		CENTER OF 5' RADIUS
06	13+40.83	77.90' LT		EDGE OF PAVEMENT
07	13+67.72	80.48' LT		EDGE OF PAVEMENT
08	13+68.11	76.38' LT		EDGE OF PAVEMENT
09	13+96.31	54.00' LT		EDGE OF PAVEMENT
10	12+54.44	20.01' LT		EDGE OF PAVEMENT
11	12+49.98	20.01' LT		EDGE OF PAVEMENT
12	12+54.44	15.03' LT		CENTER OF 5' RADIUS
13	12+49.99	10.04' LT		EDGE OF PAVEMENT
14	12+54.45	10.04' LT		EDGE OF PAVEMENT
15	12+50.00	2.11' RT		EDGE OF PAVEMENT
16	12+76.22	2.17' RT		EDGE OF PAVEMENT
17	12+50.02	20.94' RT		EDGE OF PAVEMENT
18	12+76.20	11.49' RT		CENTER OF 9.36' RADIUS
19	12+76.17	20.90' RT		EDGE OF PAVEMENT

POINT NO.	STATION	OFFSET	ELEVATION	COMMENTS
20	12+50.06	53.94' RT		EDGE OF PAVEMENT
21	12+56.80	53.94' RT		EDGE OF PAVEMENT
22	12+56.82	84.94' RT		CENTER OF 31' RADIUS
23	12+87.82	84.87' RT		EDGE OF PAVEMENT
24	13+16.14	80.04' RT		EDGE OF PAVEMENT
25	13+20.14	80.03' RT		CENTER OF 4' RADIUS
26	13+24.14	80.03' RT		EDGE OF PAVEMENT
27	13+67.86	81.27' RT		EDGE OF PAVEMENT
28	13+94.61	80.50' RT		CENTER OF 27' RADIUS
29	13+94.86	54.00' RT		EDGE OF PAVEMENT
30	14+13.01	18.00' RT		FACE OF CURB
31	13+80.84	10.42' RT		FACE OF CURB
32	13+83.31	5.50' RT		CENTER OF 5.5' RADIUS
33	13+83.31	0.00'		FACE OF CURB
34	14+13.01	54.00' LT		CENTER OF 72' RADIUS
35	13+40.49	76.29' LT		EDGE OF PAVEMENT
40	13+21.65	83.70' LT		EDGE OF PAVEMENT
50	13+40.15	81.37' RT		EDGE OF PAVEMENT
58	13+98.64	86.03' LT		CENTER OF 32.25' RADIUS
59	13+16.05	84.84' RT		EDGE OF PAVEMENT

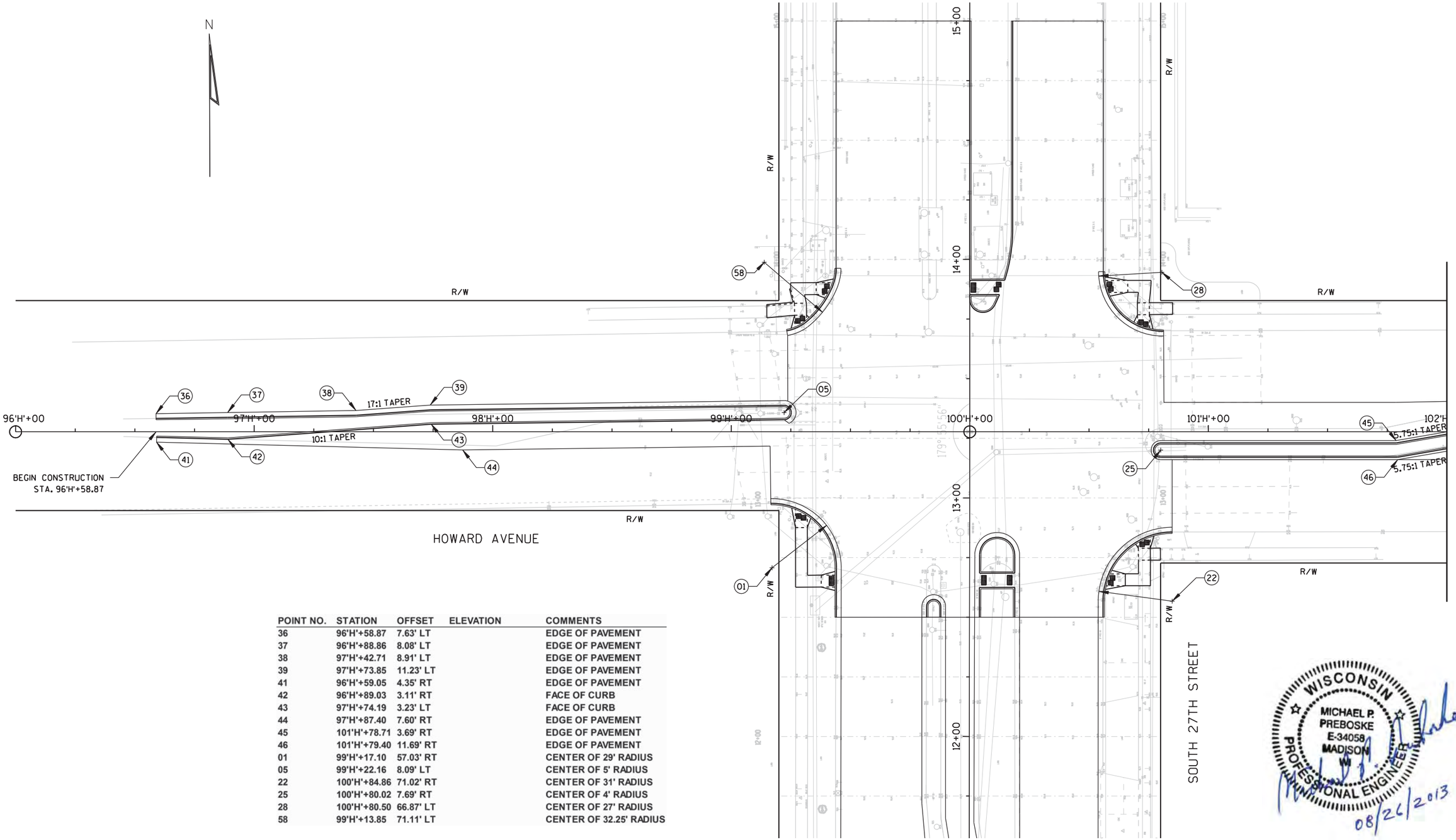
SEE WEST HOWARD AVENUE ON SEPARATE SHEETS

WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER
08/26/2013

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 61	E

FILE NAME=

SEE SOUTH 27TH STREET ON SEPARATE SHEETS



POINT NO.	STATION	OFFSET	ELEVATION	COMMENTS
36	96'H'+58.87	7.63' LT		EDGE OF PAVEMENT
37	96'H'+88.86	8.08' LT		EDGE OF PAVEMENT
38	97'H'+42.71	8.91' LT		EDGE OF PAVEMENT
39	97'H'+73.85	11.23' LT		EDGE OF PAVEMENT
41	96'H'+59.05	4.35' RT		EDGE OF PAVEMENT
42	96'H'+89.03	3.11' RT		FACE OF CURB
43	97'H'+74.19	3.23' LT		FACE OF CURB
44	97'H'+87.40	7.60' RT		EDGE OF PAVEMENT
45	101'H'+78.71	3.69' RT		EDGE OF PAVEMENT
46	101'H'+79.40	11.69' RT		EDGE OF PAVEMENT
01	99'H'+17.10	57.03' RT		CENTER OF 29' RADIUS
05	99'H'+22.16	8.09' LT		CENTER OF 5' RADIUS
22	100'H'+84.86	71.02' RT		CENTER OF 31' RADIUS
25	100'H'+80.02	7.69' RT		CENTER OF 4' RADIUS
28	100'H'+80.50	66.87' LT		CENTER OF 27' RADIUS
58	99'H'+13.85	71.11' LT		CENTER OF 32.25' RADIUS

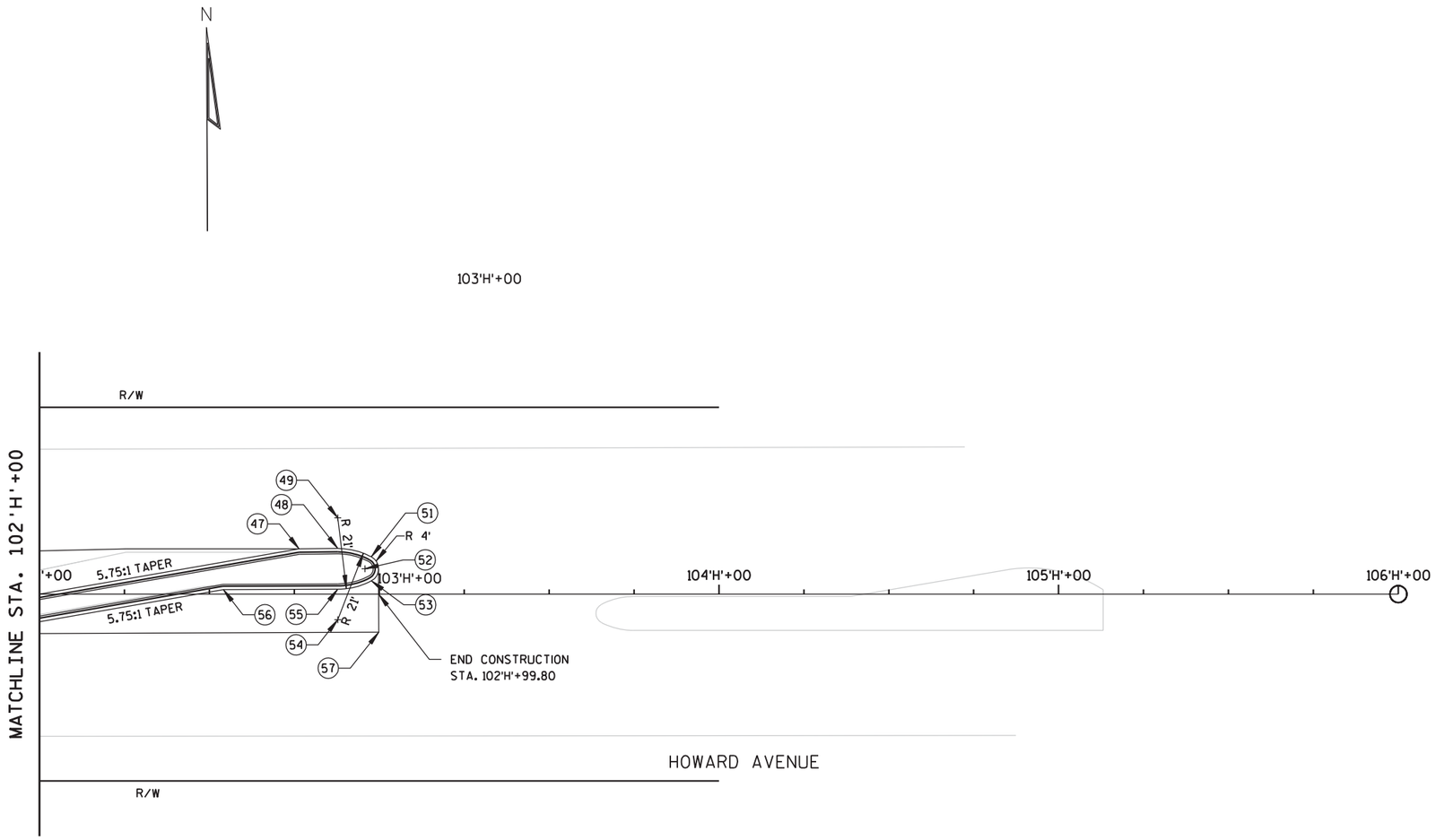
WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER
08/26/2013

SEE SOUTH 27TH STREET ON SEPARATE SHEETS

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 62	E

FILE NAME=

2



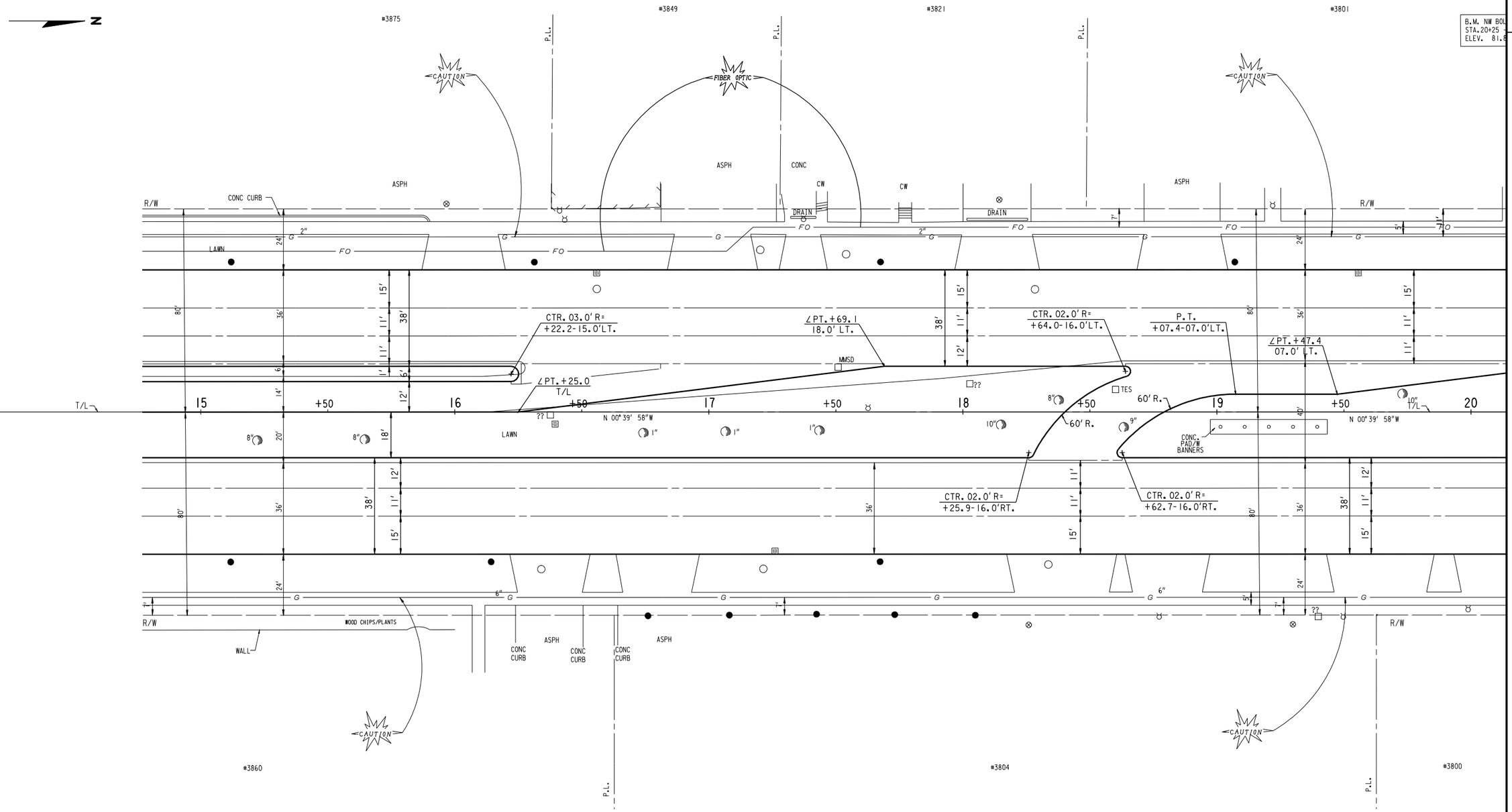
POINT NO.	STATION	OFFSET	ELEVATION	COMMENTS
47	102'H'+76.42	13.31' LT		EDGE OF PAVEMENT
48	102'H'+87.79	13.44' LT		EDGE OF PAVEMENT
49	102'H'+87.80	22.44' LT		CENTER OF 21' RADIUS
51	102'H'+97.68	10.97' LT		EDGE OF PAVEMENT
52	102'H'+95.80	7.44' LT		CENTER OF 4' RADIUS
53	102'H'+97.68	3.91' LT		EDGE OF PAVEMENT
54	102'H'+87.80	7.56' RT		CENTER OF 21' RADIUS
55	102'H'+87.80	1.44' LT		EDGE OF PAVEMENT
56	102'H'+54.12	1.31' LT		EDGE OF PAVEMENT
57	102'H'+99.87	11.22'RT		EDGE OF PAVEMENT



STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 63	E

FILE NAME=

SOUTH 27TH STREET



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 64	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\15_20PDET.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA. 20+25 - 63' LT.
ELEV. 81.86

#3801 #3775-85-89-95 #2917-19 W. LOOMIS RD.

N

CAUTION FIBER OPTIC

P.L. P.L.

CURB CURB CURB GRASS ASPH GRASS LAWN LAWN TIMBER WALL CONC CURB ASPH

R/W

FO FO FO FO FO FO

ASPH ASPH ASPH LAWN LAWN

∠PT. +35.5
18.0' LT.

CTR. 12.5' R=
+25.0-05.5'LT.

CTR. 02.0' R=
+60.3-16.0'LT.

CTR. 02.0' R=
+98.0-16.0'LT.

MMSD

20 +50 21 +50 22 +50 23 +50 24 +50 25 +50 26

SEC LINE CW N 00°39' 58"W TES

∠PT. +43.6
18.0' RT.

∠PT. +31.6
07.0' RT.

CTR. 02.0' R=
+71.7-16.0'RT.

∠PT. +71.6
18.0' RT.

∠PT. +59.6
07.0' RT.

P.C.
+47.1-07.0'RT.

95' R.
75' R.

CTR. 02.0' R=
+95.0-16.0'RT.

CTR. 02.0' R=
+03.0-16.0'RT.

DIRT BUS STOP TEL

PLANTS PLANTS

ASPH ASPH ASPH ASPH ASPH ASPH ASPH

LAWN LAWN

CAUTION CAUTION

#3800 #3774 #3700 TO 3736

P.L. P.L.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 65	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\20_26PDET.DGN

2

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.26+40 - 60' LT.
ELEV. 78.67

#2917-19 W. LOOMIS RD.

B.M. NW BOLT HYD SW CORNER
W. LOOMIS RD. & S. 27TH ST.
STA.32+58 - 94'LT.
ELEV. 76.85

#3605

N

P.I.

FIBER OPTIC

ASPH CONC CURB TIMBER WALL LAWN R/W FO TEL PEDESTAL

∠PT.+00.0 56.0' LT.

∠PT.+87.5 59.0' LT.

CTR. 02.0' R= +98.0-16.0'LT.
CTR. 02.0' R= +28.5-16.0'LT.
CTR. 02.0' R= +41.5-16.0'LT.
P.T. +79.0-07.0'LT.
∠PT.+39.0 07.0' LT.
∠PT.+27.0 18.0' LT.
CTR. 02.0' R= +33.0-16.0'LT.
P.T. +90.2-07.0'LT.
∠PT.+00.0 41.0' LT.
∠PT.+00.0 30.0' LT.
∠PT.+00.0 19.0' LT.
∠PT.+00.0 07.0' LT.
∠PT.+87.8 44.0' LT.
∠PT.+88.0 33.0' LT.
∠PT.+96.3 21.0' LT.

MMSB TES

95' R. 75' R. 90' R. 60' R. 60' R.

26 +50 27 +50 28 +50 29 +50 30 +50 31 +50 32

T/L SEC LINE N 00°39' 58" W

CONC. PAD/W BANNERS

CTR. 02.0' R= +27.4-16.0'RT.
CTR. 02.0' R= +03.0-16.0'RT.
CTR. 02.0' R= +95.0-16.0'RT.
CTR. 02.0' R= +04.9-16.0'RT.
CTR. 02.0' R= +45.9-16.0'RT.
∠PT.+92.9 18.0' RT.

ASPH GRAVEL/WEEDS LAWN CW

CAUTION

#3702 #3636

P.I.

B.W. NW BOLT HYD E/S
STA.30+30 - 64' RT.
ELEV. 75.44

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 66	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\26_32PDET.DGN

SEE WEST LOOMIS ROAD PLAN SHEET
(STA. 1'L'+25.00 TO STA. 6'L'+87.24)

STD. B.M. #340
S. 27TH ST. AND W. LOOMIS RD.
CHISELED SQUARE ON SOUTHWEST
CORNER OF CONCRETE BRIDGE.
ELEV. 73.34

SOUTH 27TH STREET

#3555 S. 27TH ST.

W. LOOMIS RD.

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

P.C.C.
+60.0-93.3'LT.

CTR. 35.0' R=
+25.0-94.3'LT.

P.T.
+25.0-59.3'LT.

CTR. 02.0' R=
+74.1-61.6'LT.

CTR. 02.0' R=
+32.0-62.0'LT.

CTR. 02.5' R=
+32.1-19.5'LT.

CTR. 02.0' R=
+96.0-20.6'LT.

CTR. 02.0' R=
+65.2- T/L

CTR. 03.0' R=
+96.5-63.6'LT.

CTR. 03.0' R=
+26.8-64.7'LT.

P.T.
+77.7-63.0'LT.

℄PT. +77.5
25.0' LT.

℄PT. +25.0
12.0' LT.+50

℄PT. +25.0
12.0' RT.

P.C. 60.0' R=
+10.1-12.0'LT.

P.C. 63.0' R=
+25.0-12.0'RT.

CTR. 02.0' R=
+29.0-15.2'RT.

CTR. 02.0' R=
+85.9-16.0'RT.

P.T.
+25.0-18.0'RT.

℄PT. +15.0
18.0' RT.

℄PT. +95.0
56.0' RT.

℄PT. +15.0
67.0' RT.

439' R.

250' R.

162' R.

58° 12' 39"

121° 47' 21"

N 00° 39' 58" W

3-SPAN CONCRETE BOX CULVERT

STRUCTURE
B-40-0058

SOUTH 27TH STREET T/L = 34 + 13.63
WEST LOOMIS ROAD T/L = 6'L' + 87.24

BRIDGE WALL

CONC DRAINAGE DITCH

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

#2536 W. WARNIMONT AVE.

#3540

#3514

BLDG OVERHANGS CW 6'+/-

FIRESTONE

CONC PAD W/ BANNERS

TEL PEDESTAL

CONC CURB

HIGHWAY EASEMENT

SEC LINE

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 67	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\32_38PDET.DGN

2

SOUTH 27TH STREET

195.2' LT

P.T. +33.1-172.4'LT.

166.7' LT 75'

166.7' LT 45'

WEP

50' R.

P.C. +30.3-154.6'LT.

CTR. 02.0' R= +47.1-129.8'LT.

28'

6'

CAUTION

B.M. NW BOLT HYD NW CORNER
S. 27TH ST. & W. MORGAN AV.
STA.40+30 - 156'LT.
ELEV. 72.86

#3473

N

B.M. NW BOLT HYD W/S
STA.43+65 - 61' LT.
ELEV. 76.46

FIBER OPTIC

CTR. 35.0' R= +73.6-98.0'LT.

CTR. 25.0' R= +53.3-85.0'LT.

PLACE LANDMARK REFERENCE
MONUMENT STA. 40+00.00-T/L

12' VAR. 9'

ASPH

2'

35'

12' 11' 12'

LAWN

CONC

CTR. 03.0' R= +91.2-84.7'LT.

ELEC BOX

PLANTS

R/W

TES

BUS SHELTER

CONC CURB

FO

CTR. 02.0' R= +24.3-65.0'LT.

CTR. 02.0' R= +52.7-65.0'LT.

80'

38'

15' 11' 12'

CTR. 03.5' R= +39.5-21.5'LT.

WATER

1/4 SEC LINE

CTR. 02.0' R= +46.0-20.0'LT.

VARIES

CTR. 02.0' R= +85.7-19.7'LT.

∠PT. +48.3 01.0' RT.

∠PT. +18.3 00.7' RT.

CTR. 02.0' R= +50.2-15.5'LT.

∠PT. +24.3 19.4' LT.

CTR. 02.0' R= +71.0-17.0'LT.

MMSD

179° 46' 32"

38 +50 T/L 39 +50 40 +50 41 +50 42 +50 T/L 43 +50 44

12' 24' 12'

MON

N 00° 53' 26"W

SEC LINE

40' R.

60' R.

∠PT. +07.0 06.0' LT.

∠PT. +43.0 06.0' LT.

CTR. 02.0' R= +40.9-08.0'RT.

CTR. 02.0' R= +76.9-16.0'RT.

CTR. 02.0' R= +40.9-12.8'RT.

∠PT. +75.3 30.0' LT.

∠PT. +75.5 41.0' LT.

∠PT. +75.0 52.0' LT.

CTR. 02.0' R= +71.0-08.0'RT.

CONC. PAD/W BANNERS

CTR. 02.0' R= +43.7-08.0'RT.

CTR. 02.0' R= +75.0-08.0'RT.

11' 11' 11' 11' 80'

15' 11' 11' 11' 38' 12'

60'

LAWN

ASPH

CONC BLOCK

RR TIES

CTR. 02.0' R= +90.4-74.7'RT.
EXIST. 15" STO.

6" VARIES

ABANDONED

R/W

CONC CURB

CONC BLOCK

P.L.

#3456

#3450

#3440

CTR. 20.0' R= +42.4-87.0'RT.

CTR. 15.0' R= +51.5-63.0'RT.

CAUTION

GOOD YEAR #3514

STEIN OPTICAL #3500

#3470

127' RT

142' RT. MATCH

FULL CW

W. MORGAN AVE.

ASPH 26' 4' ASPH 44'

45' 45'

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 68 E

FILE NAME: W:\SPR\27TH HOWARD OKLA 38 44PDET.DGN

SOUTH 27TH STREET

#3355

N

FIBER OPTIC

P.L.

R/W

6'

11'

FO

CONC CURB

ASPH

FENCE

1.5'

TES

LAWN

ABANDONED

15'

11'

12'

VARIES

36'

P.T. +12.5-07.6'LT.

∠PT.+72.5 07.0' LT.

∠PT.+60.5 17.2' LT.

P.C. 60.0' R= +96.4-16.8'LT.

CTR. 02.0' R= +22.3-08.7'LT.

44 +50 T/L 45 +50 46 +50 47 +50 48 +50 49 60' R. 50

18" 13" 1" 1" 13" 40' R. 8" 1" 5"

SEC LINE

∠PT.+06.2 10.0' RT.

∠PT.+94.3 01.0' LT.

P.C. 60.0' R= +96.4-01.0'LT.

CTR. 02.0' R= +96.9-02.5'RT.

TEL

P.T. 60.0' R= +21.8-04.6'LT.

∠PT.+94.9 03.9' LT.

∠PT.+82.9 14.1' LT.

MMSD

CTR. 02.0' R= +86.6-12.1'LT.

P.T. +21.7-02.5'LT.

∠PT.+46.7 02.5' LT.

48" 60' 38' 36'

14'

2" 3"

P.T. 60.0' R= +21.8-10.0'RT.

CTR. 02.0' R= +55.3-08.0'RT.

CTR. 02.0' R= +91.0-08.0'RT.

G

9"

6'

LAWN

ASPH

14"

RR TIES

CONC CURB

SIGN

CW ICR

RR TIE PLANTER

62.8' RT

69.5' RT

61.7' RT

DECO STONE/PLANTS

CONC CURB

#3418

#3432

#3404

#3368-78

#3360

#3340

P.L.

CTR. 15.0' R= +35.0-63.0'RT.

CTR. 15.0' R= +95.0-63.0'RT.

CAUTION

W. HOLT AVE.

20'

6'

30'

60'

B.M. NW BOLT HYD NE CORNER
W. HOLT AV. & S. 27TH ST.
STA.46+85 - 63'RT.
ELEV. 78.47

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 69	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\44_50PDET.DGN

2

SOUTH 27TH STREET

N

WALGREENS #3233

B.M. NW BOLT HYD W/S
STA.50+15 - 55' LT.
ELEV. 82.43

FIBER OPTIC

CTR. 15.0' R=
+93.4-63.0'LT.

70' LT

CTR. 15.0' R=
+60.2-63.0'LT.

63'

R/W FENCE FO 6' LAWN

COLORED CW BUS SHELTER 1.5'

PLANTS FENCE 4" 7' FO 6'

CW FENCE 10" LAWN 8" LAWN FENCE 8" R/W

MMSD

∠PT.+92.7
33.0' LT.

∠PT.+92.6
22.0' LT.

CTR. 02.0' R=
+67.8-08.0'LT.

∠PT.+34.7
12.7' LT.

CTR. 02.0' R=
+86.4-08.0'LT.

WEP

CTR. 01.5' R=
+91.0-08.5'LT.

∠PT.+65.4
01.0' RT.

∠PT.+90.4
01.0' RT.

∠PT.+78.7
10.0' LT.

TES

50 +50 51 +50 52 +50 53 SEC LINE +50 54 +50 55 +50 56

T/L SIGNATURE PLANTER LAWN N 00°53'26"W T/L LAWN N 00°53'26"W

∠PT.+04.3
10.0' RT.

∠PT.+92.4
01.0' LT.

∠PT.+46.4
01.0' LT.

CTR. 01.5' R=
+79.5-08.5'RT.

CTR. 02.5' R=
+95.0-07.5'RT.

TEL

CTR. 02.0' R=
+75.0-08.0'RT.

ASPH 3" G DECO STONE 6' GRANITE BARK R/W BARK 14' BUS SHELTER

ASPH CONC CURB CONC CURB CONC CURB ENT PLANTER DRIVE THRU

66' RT

LAWN DIRT LAWN 12' 5' 2" 3" GAS R/W

CTR. 18.0' R=
+02.4-66.0'RT.

80' RT

CTR. 18.0' R=
+68.6-66.0'RT.

ASPH

CAUTION

30' 1-1/4" 6' 18' 60'

W. OHIO AVE.

#3334 #3300 #3270 #3246

P.L.

B.M. NW BOLT HYD NE CORNER
W. OHIO AV. & S. 27TH ST.
STA.53+73 - 50'RT.
ELEV. 85.13

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 70	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\50_56PDET.DGN

SOUTH 27TH STREET

N

#2733 W. EUCLID AVE. #3179-81 #3165

FIBER OPTIC CAUTION CAUTION

CTR. 18.0' R= +29.1-66.0'LT.

CTR. 18.0' R= +95.0-66.0'LT.

81' LT.

66.5' LT

CONC CURB ASPH LAWN R/W CW FO G 1" WOOD 1" CHIPS ASPH PARKING

P.C. 60.0' R= +15.0-10.0'LT.

CTR. 02.0' R= +93.0-06.6'RT.

P.T. 60.0' R= +11.2-01.0'RT.

∠PT. +91.0 01.0' RT.

∠PT. +79.0 10.0' LT.

BIO-SWALE NO. 11 SEE CONST. DETAIL

56 57 58 59 60 61 62 SEC LINE +50 T/L

CONC. PAD 5" PLANTER CONC. WALL TES WEP MMSD CONC. PAD/W BANNERS

CTR. 02.0' R= +32.5-05.2'LT.

∠PT. +28.8 11.0' RT.

∠PT. +85.0 01.0' LT.

∠PT. +28.8 22.0' RT.

∠PT. +97.0 10.0' RT.

P.C. 60.0' R= +15.0-01.0'LT.

P.T. 60.0' R= +11.2-12.0'RT.

∠PT. +72.0 01.0' RT.

∠PT. +95.5 24.0' RT.

∠PT. +84.0 12.0' RT.

∠PT. +28.8 33.0' RT.

∠PT. +95.5 35.0' RT.

TEL

CONC PATIO PLANTS 3"GAS CONC CURB

CTR. 18.0' R= +28.8-66.0'XT.

CONC 76.5' RT

BLOCK WALL

CTR. 18.0' R= +95.5-68.0'RT.

COLORED CONC

#3236 #3232 #3200 #3178-80 #3172-74 #3168 #3164 #3158

W. EUCLID AVE.

B.M. NW BOLT HYD NE CORNER S. 27TH ST. & W. OHIO AV. STA.60+01 - 50'RT. ELEV. 88.60

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 71	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\56_62PDET.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA. 63+13 - 51' LT.
ELEV. 91.07

N

#3151 #3119 #3105

P.L.

18' CONC ALLEY

FIBER OPTIC

CAUTION

ASPH CONC

1" CHIPS 1"

FO 2" G

R/W

CTR. 02.0' R=
+70.0-08.0'LT.

CTR. 02.0' R=
+93.0-08.0'LT.

CTR. 02.0' R=
+73.7-10.0'RT.

P.C.
+42.0-01.0'RT.

65' R.

60' R.

T/L

N 00°53'26"W

10" +50

15" 24"

62 63 64 65 66 67 68

+50

∠PT.+69.0
06.0' LT.

∠PT.+72.7
15.0' RT.

∠PT.+72.7
26.0' RT.

∠PT.+25.0
12.0' RT.

∠PT.+25.0
24.0' RT.

∠PT.+25.0
35.0' RT.

∠PT.+25.0
50.0' RT.

∠PT.+72.7
37.0' RT.

∠PT.+72.7
52.0' RT.

CONC. SEC LINE

CTR. 02.0' R=
+08.4-08.0'LT.

∠PT.+17.3
160.0' LT.

+27.7
180.5' LT

CTR. 15.0' R=
+05.3-63.0'LT.

CONC CURB

BUS SHELTER

+30.8
77.7' LT

CTR. 02.0' R=
+66.7-58.2'LT.

+99
80.5' LT

PLACE LANDMARK REFERENCE
MONUMENT STA. 66+78.80-T/L

CTR. 18.0' R=
+17.7-61.0'LT.

PROP. R.O.W. LINE

HOSE

7.29'

LAWN

CTR. 18.0' R=
+04.9-70.0'RT.

+22.7
76' RT

+06.5
82' RT

CTR. 02.5' R=
+58.7-67.5'RT.

179°53'29"

∠PT.+68.07
T/L

MMSD MON

CTR. 02.0' R=
+16.1-19.0'RT.

CTR. 10.0' R=
+16.9-67.0'RT.

CTR. 03.0' R=
+77.6-62.6'RT.

CTR. 03.0' R=
+09.1-123.6'RT.

189.4' R.

169.4' R.

124.5' RT

136.5' RT

159.3' RT

CONC PLATFORM

BLOCK WALL

STONE WALL

5" PLANTS

CONC CURB

#3152 #3146 #3142 #3120

#3104 S. 27TH ST. &
2619-27 W. OKLAHOMA AVE.

W. OKLAHOMA AVE.

17' FULL CW

67'

33' 21' 11'

STD. B.M. #59-05
S. 27TH ST. & W. OKLAHOMA AV.
IN BY-PASS ISLAND ON NORTHEAST CORNER
OF S. 27TH ST. AND W. OKLAHOMA AV.,
22.07' NORTH OF SOUTH CURB AND 21.95'
EAST OF WEST CURB.
ELEV. - 86.646

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 72	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\62_68PDET.DGN

SOUTH 27TH STREET

N

B.M. NW BOLT HYD W/S
STA. 71+34 - 45' LT.
ELEV. 69.32

WEST CURB
CURVE DATA = C-1
RAD. = 1500
I ∠ = 5° 15' 32"
L.C. = 137.63'
P.C. = 69+98.88, 31.70' LT
P.T. = 71+36.59, 32.20' LT
ARC = 137.68'

MEDIAN - WEST CURB
CURVE DATA = C-2
RAD. = 1538
I ∠ = 5° 15' 32"
L.C. = 141.12'
P.C. = 69+97.45, 6.30' RT
P.T. = 71+38.54, 5.80' RT
ARC = 141.16'

MEDIAN - EAST CURB
CURVE DATA = C-3
RAD. = 2000
I ∠ = 5° 06' 10"
L.C. = 178.06'
P.C. = 69+58.81, 30.75' RT
P.T. = 71+36.86, 29.00' RT
ARC = 178.12'

EAST CURB
CURVE DATA = C-4
RAD. = 2036
I ∠ = 5° 06' 10"
L.C. = 181.27'
P.C. = 69+57.44, 66.75' RT
P.T. = 71+38.71, 65.00' RT
ARC = 181.33'

CAUTION
CAUTION
FIBER OPTIC

P.C. +98.88 - 31.70' LT.
PROP. R.O.W. LINE
P.T. +36.59 - 32.20' LT.
P.C. +97.4-06.3' RT.
P.C. +38.0-05.7' RT.
P.T. +38.45 - 05.80' LT.
P.C. +58.81 - 30.75' RT.
P.T. +36.86-29.00' RT.
P.C. +57.44-66.75' RT.
P.T. +38.71-65.00' RT.
CTR. 02.0' R= +44.9-02.5' RT.
P.T. +93.0-09.2' RT.
P.T. +61.5-05.8' RT.
P.T. +75.0-07.1' RT.
CTR. 02.0' R= +25.4-23.5' RT.
CTR. 02.0' R= +62.7-21.7' RT.
∠PT. +87.1 22.5' RT.
P.T. +67.8-63.3' RT.
∠PT. +38.3 21.6' RT.
CTR. 169.4' R= +67.3-232.7' RT.

169.4' R.
1500' R.
2000' R.
2036' R.
1538' R.
64' R.
60' R.

C-1
C-2
C-3
C-4

68 69 70 71 72 73 74
+50 T/L

P.L.
10' SEWER EASEMENT
BRICK WALL
PLANTER
ASPH
CONC
LAWN
BUSHES
ENT
SIGN
ELEC BOX
DWY NOT IN USE
CONC. PAD/W BANNERS
TEL
TES
FO
WAT
WEP
R/W
VARIES
SEC LINE
175.32'
61.76'
309.73'

PULASKI HIGH SCHOOL (CITY OF MILWAUKEE)

6TH DISTRICT POLICE STATION

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 73	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\68_74PDET.DGN

2

SOUTH 27TH STREET

KINNICKINNIC RIVER PARKWAY

B.M. NW BOLT HYD
(NORTHERLY HYD) NW CORNER
S. 27TH ST. & W. K.K. PKWY.
STA. 76+22 - 63' LT.
ELEV. 65.52

HYD W/S
55' LT.

N

CAUTION

FIBER OPTIC

P.I.

(W.E. 365)

KINNICKINNIC RIVER

ASPH

97.4'
LT.

80'
LT.

CTR. 25.0' R=
+30.6-80.0'LT.

CTR. 20.0' R=
+45.1-72.4'LT.

CTR. 04.0' R=
+26.6-14.2'LT.

LAWN

DECORATIVE
LOT LIGHT

PLANTER

SIGN

FIBER
OPTIC

FO

R/W

10"

7"

6"

5"

9"

+58.4
56.4'LT

+18.5
64.2'LT

CONC

BRIDGE STRUCTURE
B-40-0438

VARIES

∠PT.+18.1
28.1' LT.

P.C. 60.0' R=
+43.0-33.9'LT.

P.C. 60.0' R=
+43.0-20.9'LT.

T/L

38'

47'

36'

15'

13'

12'

11'

CTR. 02.0' R=
+36.7-11.9'LT.

∠PT.+50.0
09.6' LT.

74

+50

4"

N 00°59'57"W

75

2'

76

TEL

TES

WEP

+57.8

77

78

+17.8

79

SEC LINE

∠PT.+77.1
01.8' LT.

∠PT.+75.0
18.0' LT.

∠PT.+50.0
03.5' RT.

CTR. 02.0' R=
+99.4-10.0'RT.

CTR. 04.0' R=
+36.7-11.9'LT.

+17.5
32.2' RT

+36.4
40' RT

CTR. 02.5' R=
+55.6-17.5'LT.

BRIDGE GUARD RAIL

BUSHES

FENCE

PLANTER

WAT

72'
RT

70.5'
RT

84.9'
RT

CTR. 02.0' R=
+34.9-02.9'RT.

CTR. 20.0' R=
+29.9-61.3'RT.

CTR. 25.0' R=
+34.1-71.4'RT.

KINNICKINNIC RIVER
PARKWAY

W. KINNICKINNIC RIVER PKWY.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 74	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\74_79+50PDET.DGN

2

SOUTH 27TH STREET

W. DAKOTA ST.

WEST CURB
CURVE DATA = C-5
RAD.= 1500
I ∠ = 2° 11' 25"
L.C.=57.33'
P.C.=81+72.05, 71.00'LT
P.T.=82+29.36, 70.07'LT
ARC =57.34'

MEDIAN - WEST CURB (EXT'D)
CURVE DATA = C-6
RAD.= 1464
I ∠ = 2° 11' 25"
L.C.=55.96'
P.C.=81+72.00, 36.00'LT
P.T.=82+27.94, 35.07'LT
ARC =55.97'

B.M. NW BOLT HYD W/S
STA. 83+63 - 66' LT.
ELEV. 77.67

N

P.L.

CTR. 25.0' R= +58.1-96.0'LT.
111.5' LT.
CTR. 25.0' R= +38.3-96.0'LT.
96' LT
LAWN
FENCE
LOCATION UNKNOWN
R/W
BUS STOP
FIBER OPTIC
C-5
P.C. +72.05-71.00'LT.
1500' R.
P.T. +29.36-70.07'LT.
4" RR TIE WALL
∠PT.+67.5 60.6' LT.
GRAVEL DWY
∠PT.+58.4 58.0' LT.
WEP
TES
∠PT.+58.7 47.0' LT.
CONC
∠PT.+59.0 36.0' LT.
P.T. 60.0' R= +61.5-24.0'LT.
P.C. +72.00-36.00'LT.
1464' R.
C-6
VARIES
∠PT.+50.0 24.0' LT.
∠PT.+50.0 33.5' LT.
P.T. +27.94-35.07'LT.
∠PT.+67.2 47.6' LT.
∠PT.+67.0 36.6' LT.
CTR. 03.0' R= +15.9-21.0'LT.
∠PT.+66.7 25.6' LT.
+42.8 60.1'LT
+26.5 24.0'LT
CTR. 03.0' R= +42.1-17.5'LT.
CTR. 03.0' R= +64.6-28.8'LT.
CTR. 01.5' R= +52.7-23.7'LT.
CW
WATER
+20.6 11.0'LT
∠PT.+63.2 10.0' LT.
∠PT.+63.2 01.0' RT.
∠PT.+63.5 12.0' RT.
P.T. 60.0' R= +61.5-11.0'LT.
∠PT.+87.5 11.0' LT.
∠PT.+75.0 22.0' LT.
SEC LINE
CTR. 03.0' R= +13.4-14.0'LT.
TEL
MMSD
+04.6 25.0' RT
PLANTER
BUSHES
ASPH
∠PT.+64.1 25.0' RT.
2CR
CONC PILLARS
PLANTER 12"
CONC WALL
UNION PACIFIC RAILROAD COMPANY
END PROJECT
STA. 85 + 16.0 T/L

B.M. NW BOLT HYD E/S
STA. 84+90 - 27' RT.
ELEV. 79.53

#2856 S. 27TH ST.
MAYNARD STEEL

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 75	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\79+50_85+50PDET.DGN

WEST LOOMIS ROAD

BEGIN CONSTRUCTION
WEST LOOMIS ROAD T/L = 1'L' + 25.00

END CONSTRUCTION
WEST LOOMIS ROAD T/L = 6'L' + 87.24
SOUTH 27TH STREET T/L = 34 + 13.63

KINNICKINNIC RIVER (SOU

P.L.

CAUTION

WOOD CHIPS

ASPH.

BRIDGE WALL

HIGHWAY EASEMENT

LAWN

P.C.
+00.8-48.0'LT.

CTR. 02.0' R=
+10.8-40.0'LT.

CTR. 02.0' R=
+03.4-08.0'LT.

P.T.
+45.9-01.0'RT.

∠PT. +04.8
01.0' RT.

∠PT. +92.7
10.0' LT.

P.C.
+41.6-10.0'LT.

1'L'

2'L'

3'L'

4'L'

5'L'

6'L'

N 57° 32' 41" E

MMSD

60' R.

65' R.

439' R.

459' R.

181' R.

153' R.

204.4' R.

224.4' R.

CTR. 02.0' R=
+85.4-08.0'RT.

CTR. 02.0' R=
+21.9-08.0'RT.

CTR. 02.0' R=
+86.2-37.0'RT.

CTR. 05.0' R=
+89.5-05.0'RT.

P.C.
+24.9-48.0'LT.

B.M. NW BOLT HYD SW CORNER
W. LOOMIS RD. & S. 27TH ST.
STA. 32+58 94' LT.
ELEV. 716.85

FIBER OPTIC

CONC. CURB

SEE SOUTH 27TH STREET PLAN SHEET
(STA. 32+00 TO STA. 38+00)

FLYING FLAG & BANNERS

58° 12' 39"

121° 41' 21"

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 76 E

FILE NAME: W:\SPR\27TH HOWARD OKLA 09 15.DGN

2

2

N

EROSION CONTROL LEGEND

INLET PROTECTION TYPE B	B
INLET PROTECTION TYPE C	C
INLET SCREEN TYPE M	M
INLET SCREEN TYPE R	R
INLET COVER TYPE 57	57
CATCH BASIN TYPE 45A	45A

R/W

R/W

R/W

R/W

R/W

R/W

R/W

R/W

R/W

R/W

15+00

14+00

13+00

12+00

96'H'+00

97'H'+00

98'H'+00

99'H'+00

100'H'+00

101'H'+00

102'H'+00

17:1 TAPER

10:1 TAPER

5.75:1 TAPER

5.75:1 TAPER

179° 55'56"

BEGIN CONSTRUCTION
STA. 96'H'+58.87

HOWARD AVENUE

SOUTH 27TH STREET

MATCHLINE STA. 102'H'+00

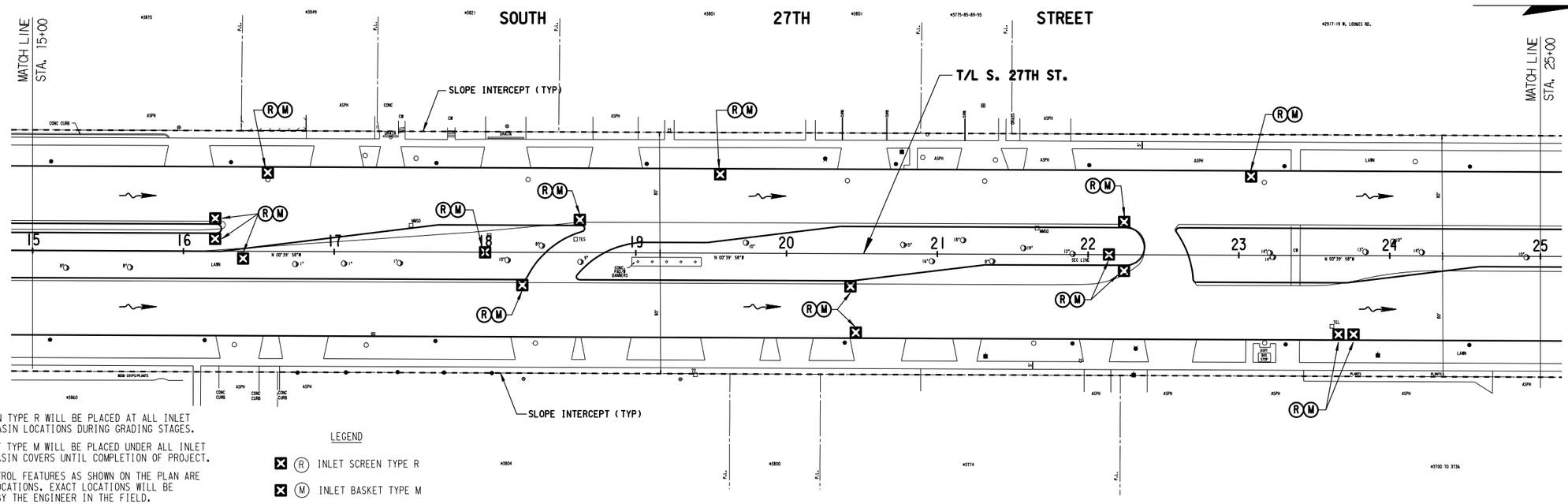
M
45A
2
103
C
M
102
M
57
45A
101A
D
C
C
C
B
B
C
A
AA
C
100
101
M
57
M
57
R
101B

WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER

08/26/2013

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	EROSION CONTROL PLAN	SCALE FEET 0' 40'	SHEET NO: 77 E

FILE NAME=



1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

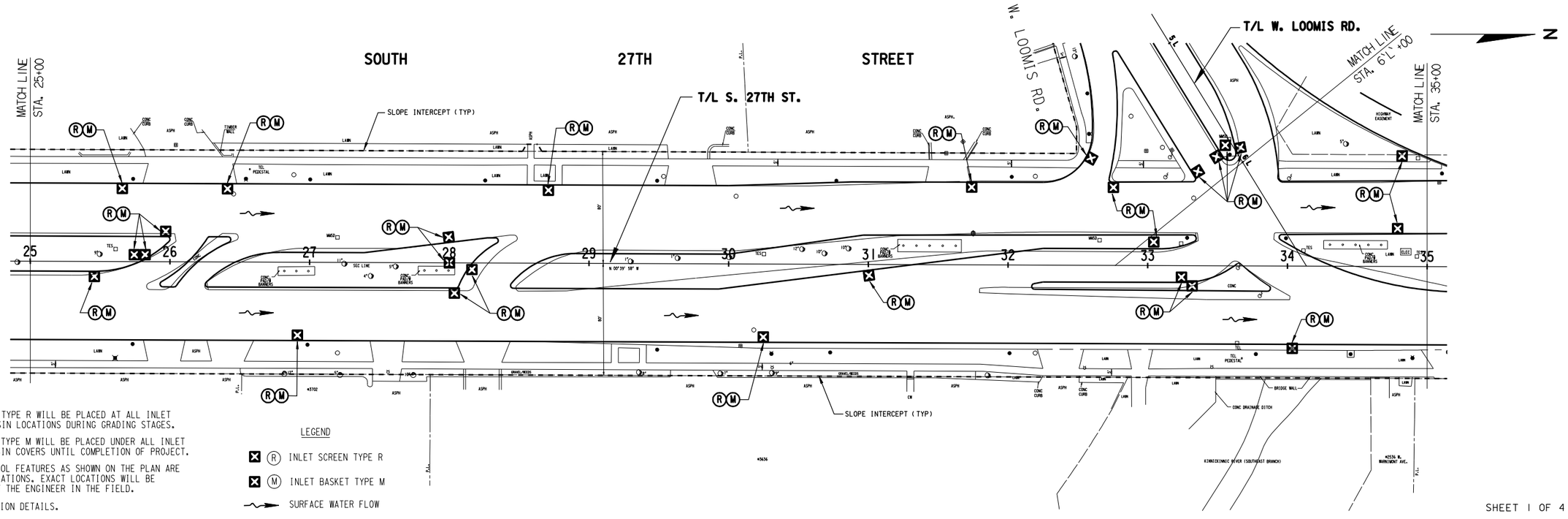
2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

LEGEND

- (R) INLET SCREEN TYPE R
- (M) INLET BASKET TYPE M
- SURFACE WATER FLOW



1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

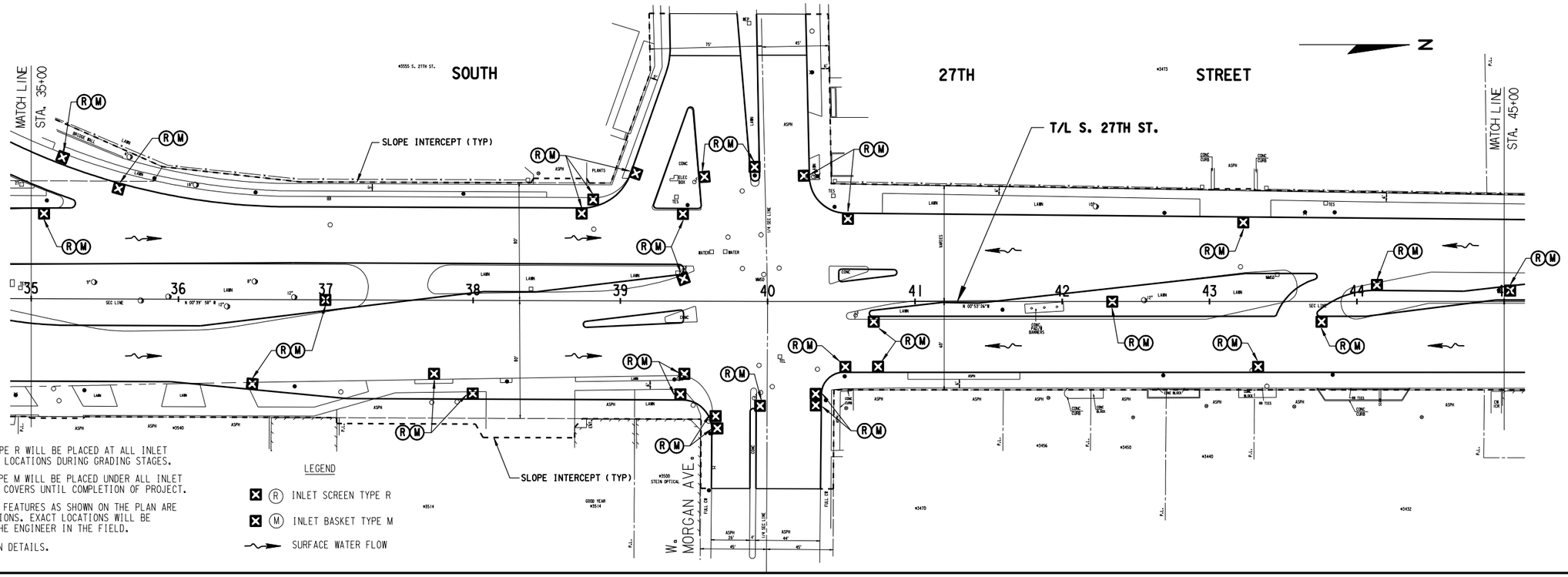
LEGEND

- (R) INLET SCREEN TYPE R
- (M) INLET BASKET TYPE M
- SURFACE WATER FLOW

SHEET 1 OF 4

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	EROSION CONTROL PLAN	SCALE FEET 0' 40'	SHEET NO: 78	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\EROSION.DGN

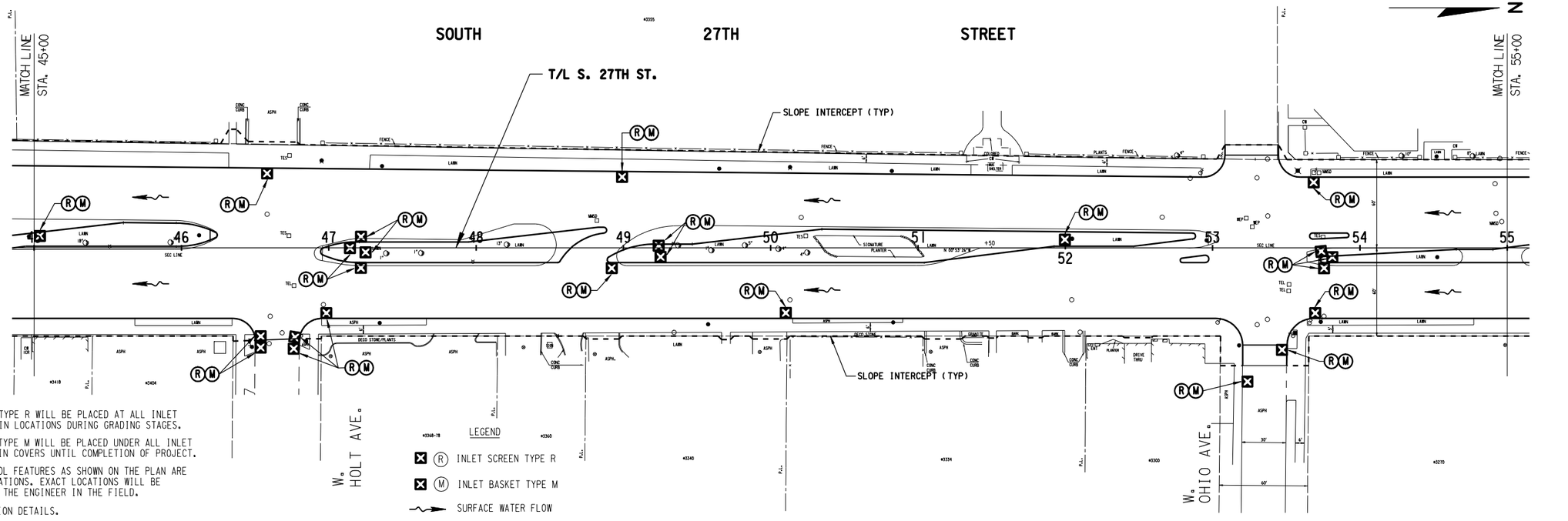


1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.



1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

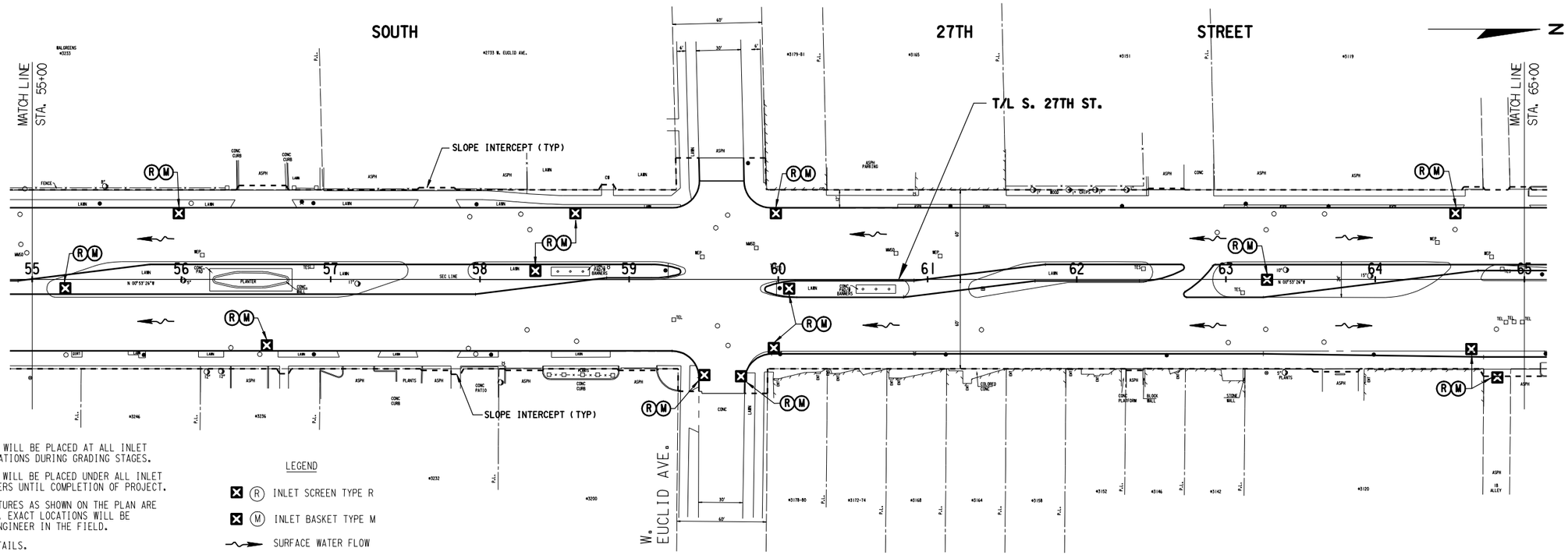
3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

SHEET 2 OF 4

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	EROSION CONTROL PLAN	SCALE FEET 0 40 80	SHEET NO: 79	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\EROSION.DGN

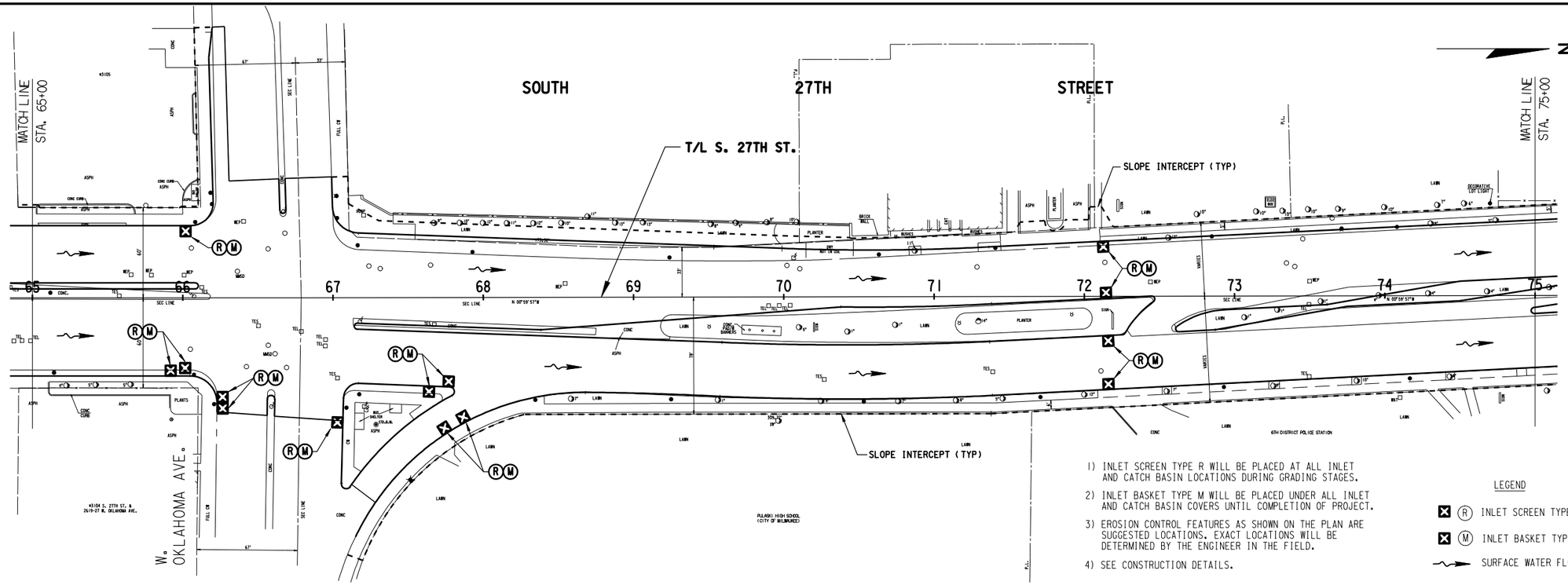


1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.



1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

LEGEND

R INLET SCREEN TYPE R

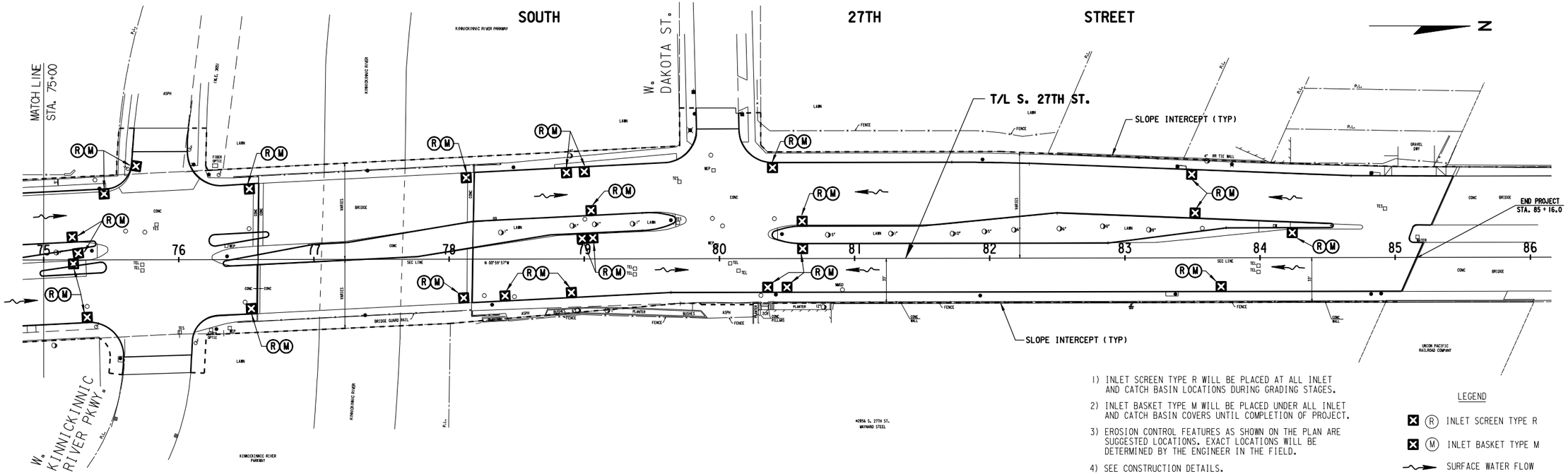
M INLET BASKET TYPE M

SURFACE WATER FLOW

SHEET 3 OF 4

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	EROSION CONTROL PLAN	SCALE FEET 0' 40'	SHEET NO: 80	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\EROSION.DGN



1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

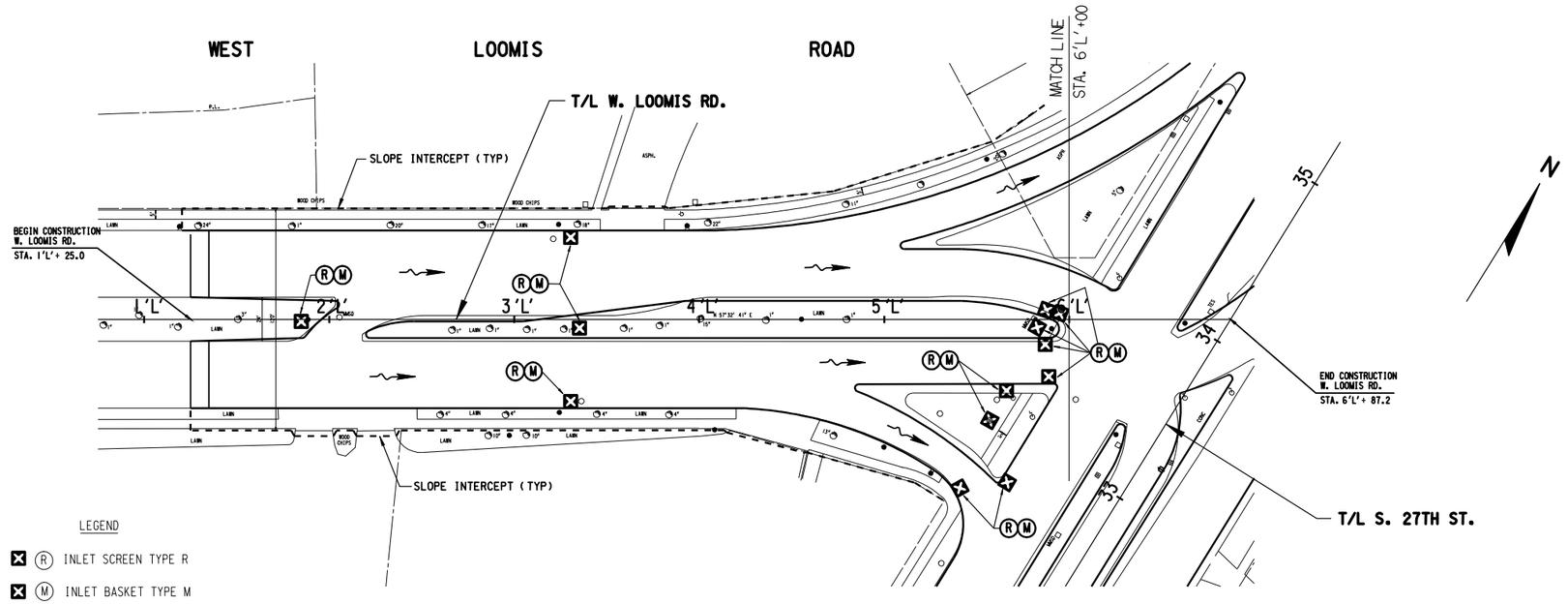
2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

LEGEND

- (R) INLET SCREEN TYPE R
- (M) INLET BASKET TYPE M
- SURFACE WATER FLOW



1) INLET SCREEN TYPE R WILL BE PLACED AT ALL INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

LEGEND

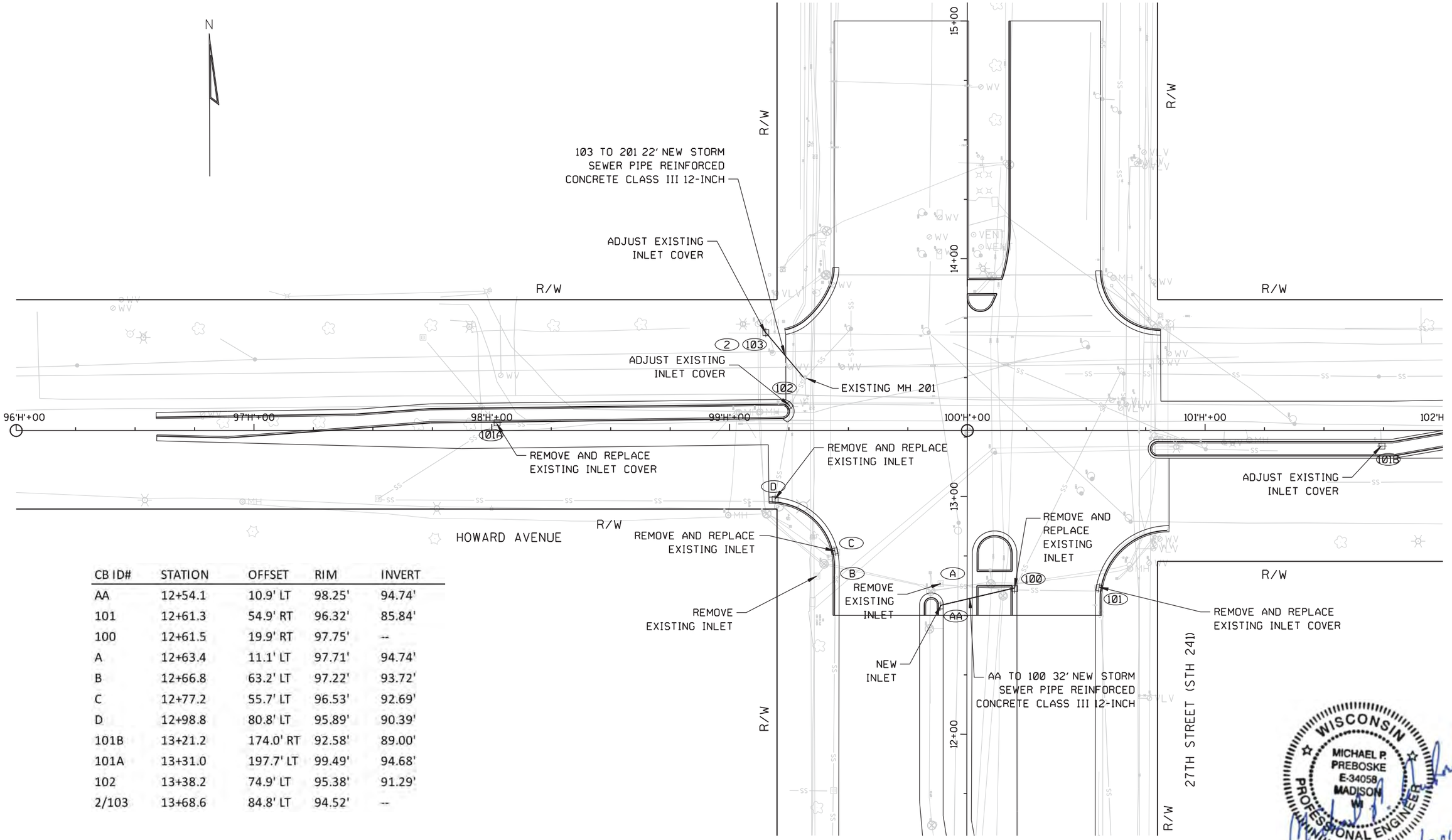
- (R) INLET SCREEN TYPE R
- (M) INLET BASKET TYPE M
- SURFACE WATER FLOW

SHEET 4 OF 4

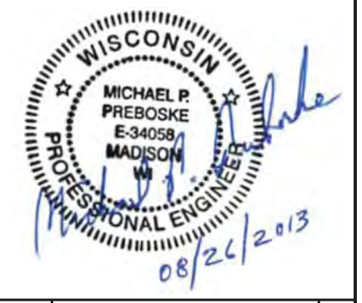
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	EROSION CONTROL PLAN	SCALE FEET 0' 40'	SHEET NO: 81	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\EROSION.DGN

2

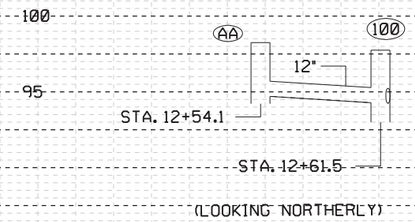


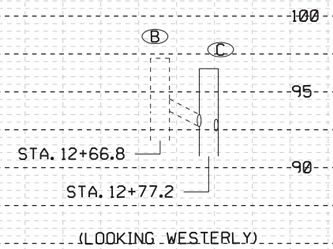
CB ID#	STATION	OFFSET	RIM	INVERT
AA	12+54.1	10.9' LT	98.25'	94.74'
101	12+61.3	54.9' RT	96.32'	85.84'
100	12+61.5	19.9' RT	97.75'	--
A	12+63.4	11.1' LT	97.71'	94.74'
B	12+66.8	63.2' LT	97.22'	93.72'
C	12+77.2	55.7' LT	96.53'	92.69'
D	12+98.8	80.8' LT	95.89'	90.39'
101B	13+21.2	174.0' RT	92.58'	89.00'
101A	13+31.0	197.7' LT	99.49'	94.68'
102	13+38.2	74.9' LT	95.38'	91.29'
2/103	13+68.6	84.8' LT	94.52'	--



STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 82	E

FILE NAME=





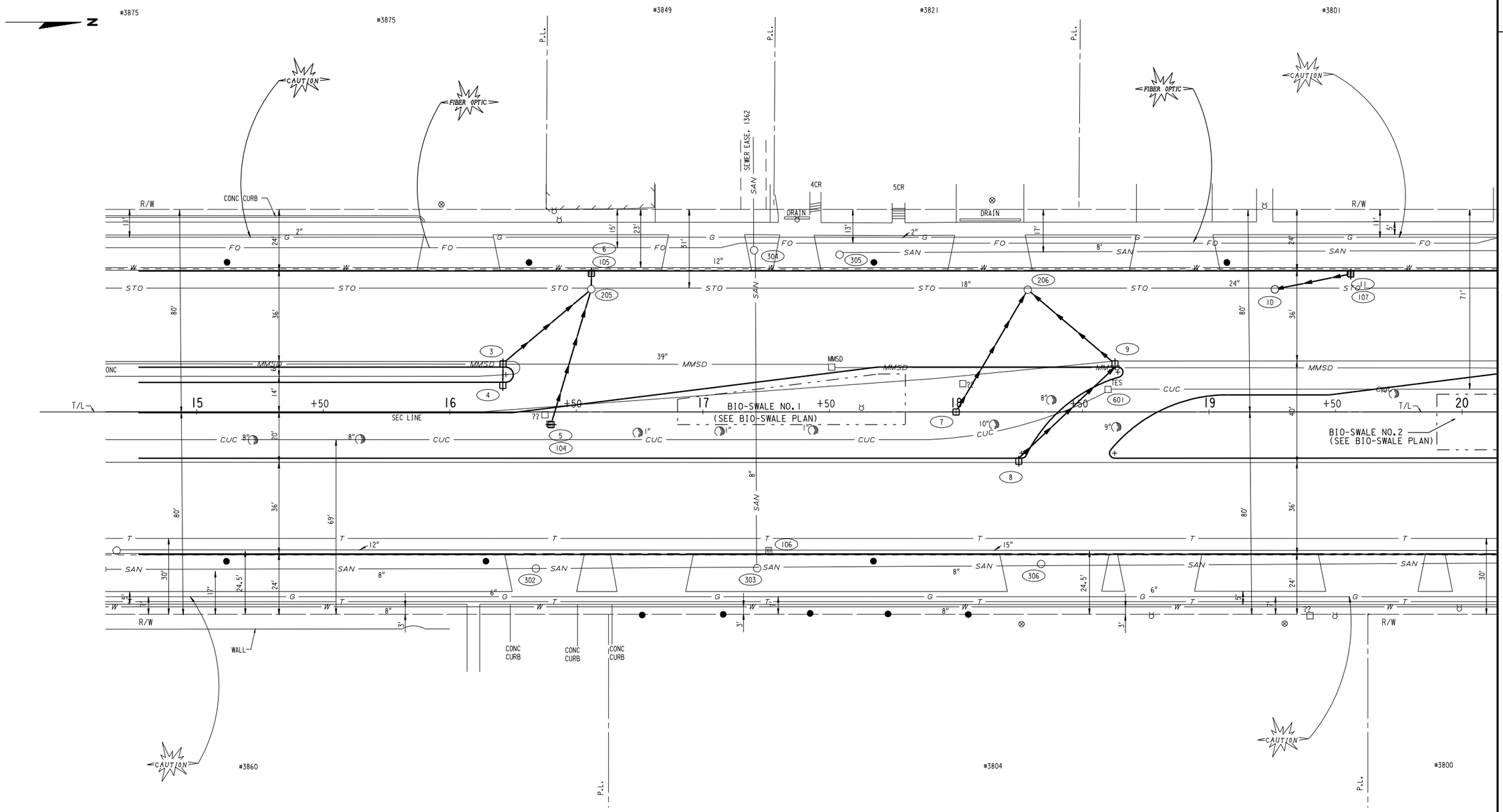
WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER

08/26/2013

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 83	E

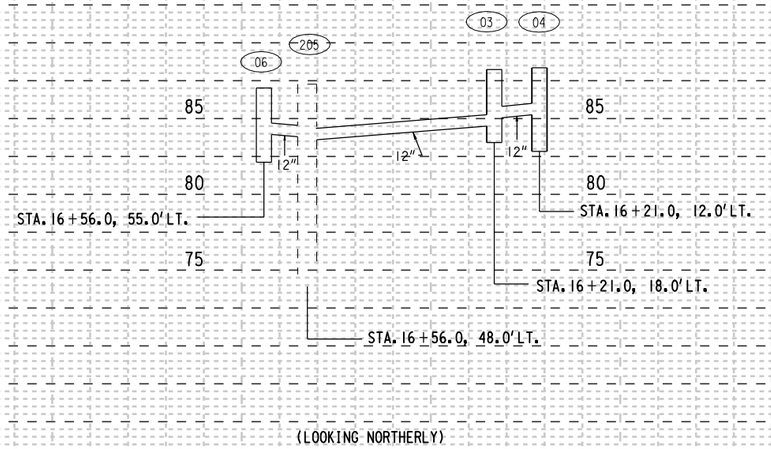
FILE NAME:

SOUTH 27TH STREET

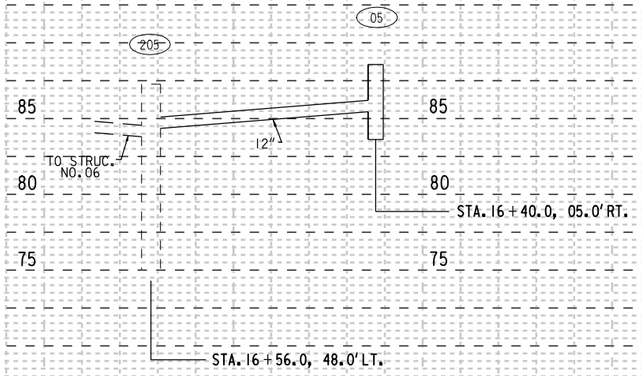


STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 84	E

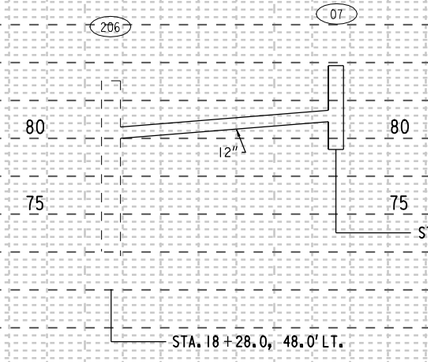
FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 15_20.DGN



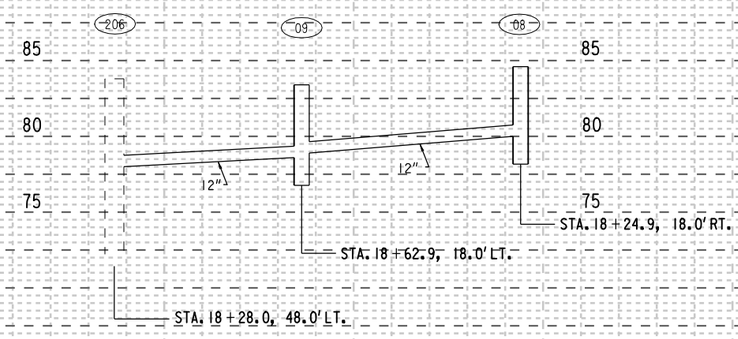
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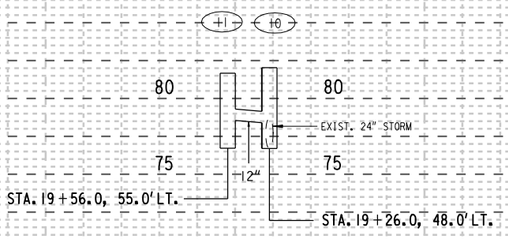
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(LOOKING NORTHERLY)



(LOOKING NORTHERLY)



(LOOKING NORTHERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 85	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 15_20.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.20+25 - 63' LT.
ELEV. 81.86

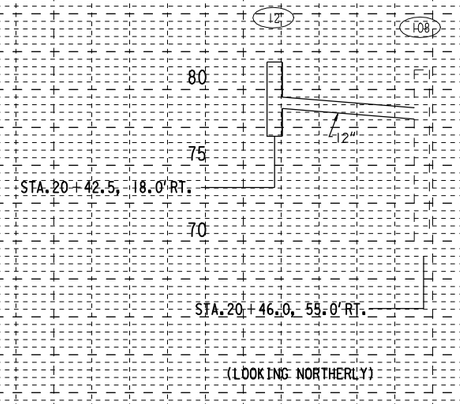
#3801 #3775-85-89-95 #2917-19 W. LOOMIS RD.

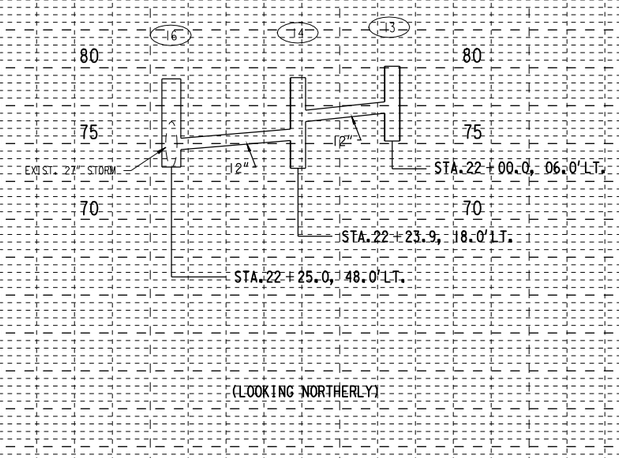
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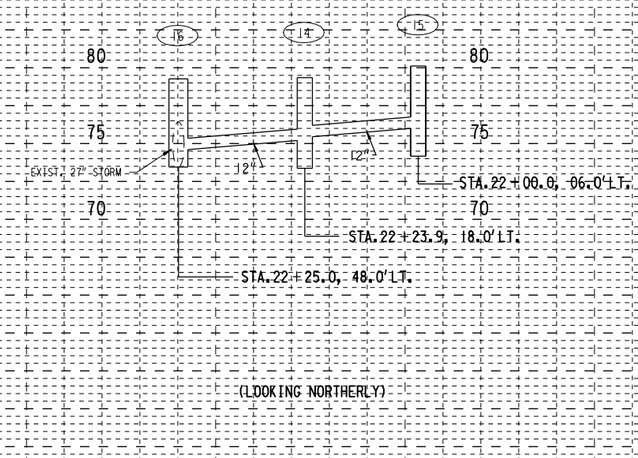
CAUTION FIBER OPTIC FIBER OPTIC

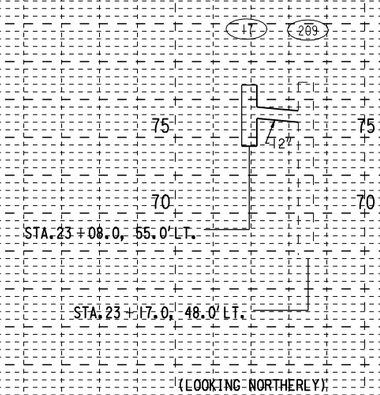
P.L. P.L. P.L.

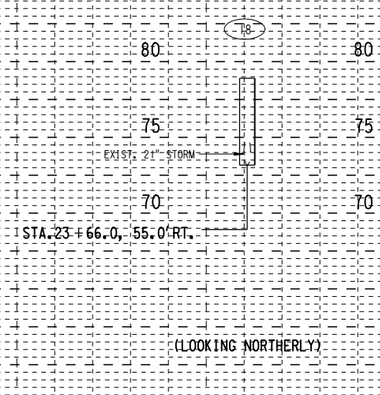
CURB WATER EASE. 417 8" W 15" PRIVATE MAIN STO FO FO F

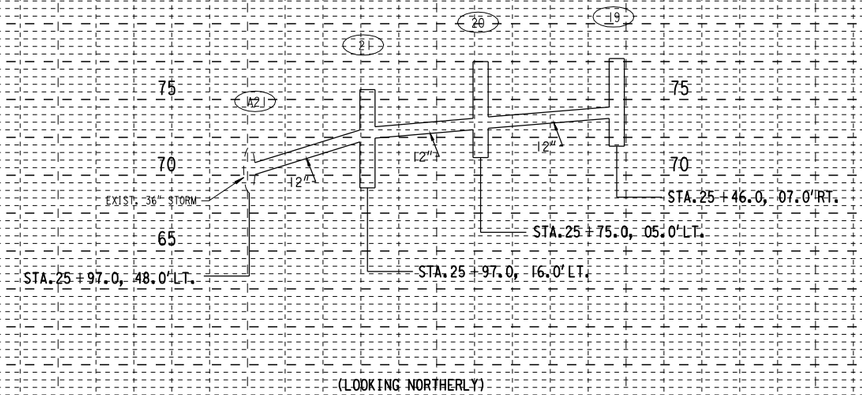












STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 87	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 20_26.DGN

2

SOUTH 27TH STREET

#2917-19 W. LOOMIS RD.

B.M.- HYD. W/S @
STA.26+40- 60'LT.
N.W. BOLT
ELEV.= 78.67

#3605

B.M.- HYD. @
STA.32+58- 94'LT.
N.W. BOLT
ELEV.= 76.85

N

P.L.

FIBER OPTIC

CONC CURB

TIMBER WALL

FIBER OPTIC

R/W

FO

E

TEL PEDESTAL

SAN

W

STO

TE&ES

MMSD

CUC

CONC

SAN

T

G

BIO-SWALE NO.6
(SEE BIO-SWALE PLAN)

BIO-SWALE NO.5
(SEE BIO-SWALE PLAN)

TES

LAWN

CAUTION

#3702

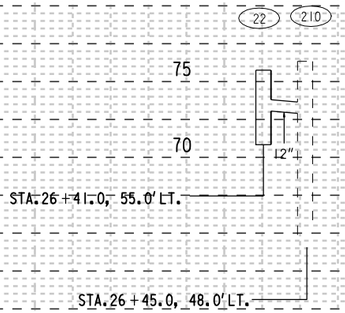
#3636

B.M.- HYD. E/S @
STA.30+30- 64'RT.
N.W. BOLT
ELEV.= 75.44

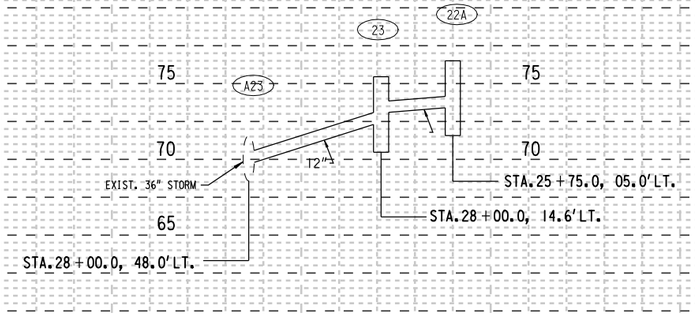
26 +50 27 +50 28 +50 29 +50 30 +50 31 +50 32

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 88	E

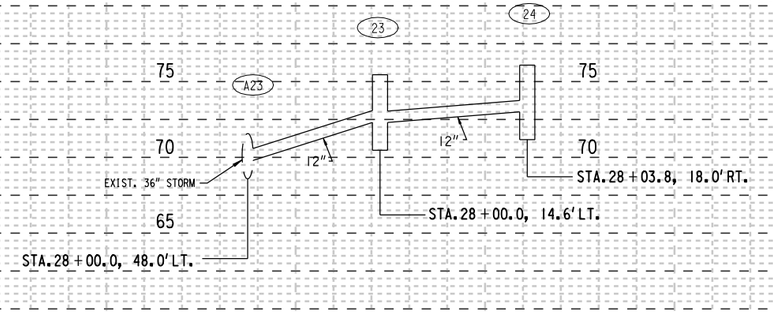
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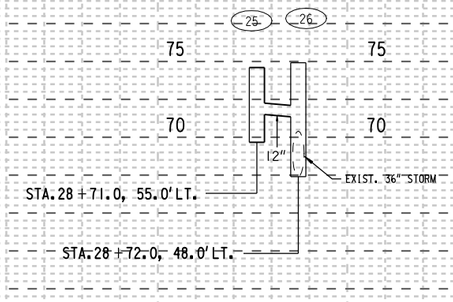
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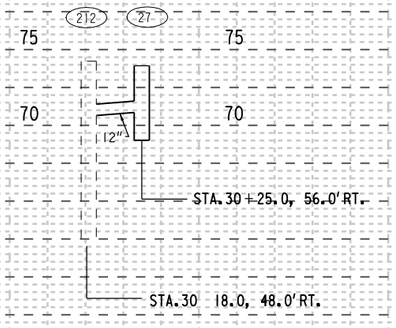
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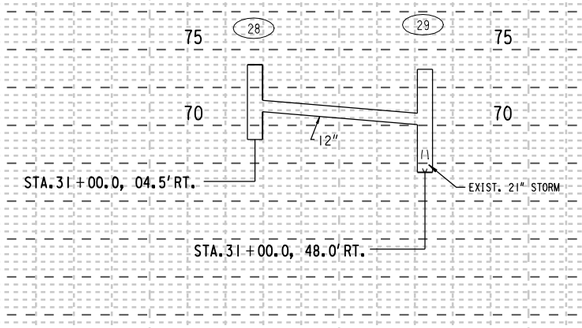
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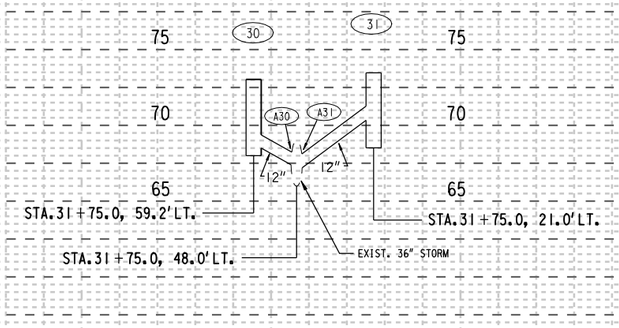
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(LOOKING NORTHERLY)



(LOOKING NORTHERLY)



(LOOKING NORTHERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITES AND DRAINAGE	SCALE FEET	SHEET NO: 89	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 26_32.DGN

SOUTH 27TH STREET

W. LOOMIS RD.

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

3 X 11'-6" DIA. CORREGATED METAL PIPE

BRIDGE WALL

BEING USED FOR STREET

LAWN

MONOTUBE

3-SPAN CONCRETE BOX CULVERT

CONC. SIGN POLES

TEL

TEL PEDESTAL

CONC CURB

CONCRETE DRAINAGE DITCH

BLDG OVERHANGS CW 6'

#2536 W. WARNIMONT AVE.

#3540

#3514

#2565 W. LOOMIS BD.

FIBER OPTIC

CAUTION

R/W

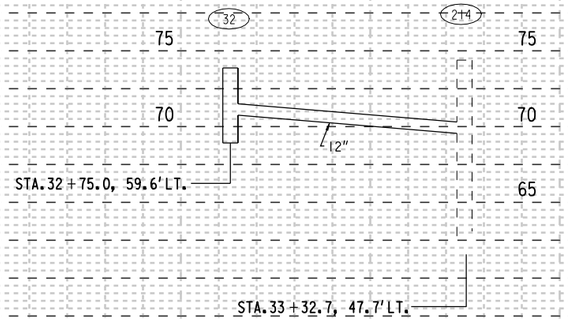
SEC LINE

STD. B.M. #340
E/S S. 27TH ST. CHISELED SQUARE ON S.W. CORNER OF CONC. BRIDGE
ELEV.= 73.652
(NOT LOCATED ON PLAN)

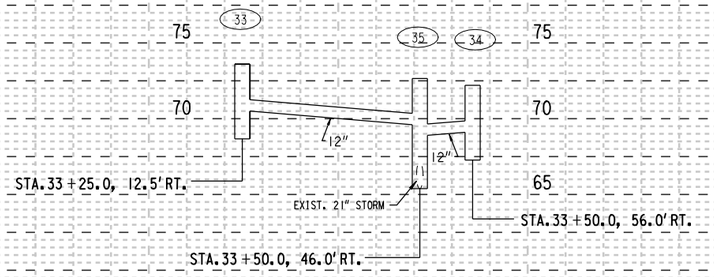
32 +50 33 +50 34 +50 35 +50 36 +50 37 +50 38

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 90 E

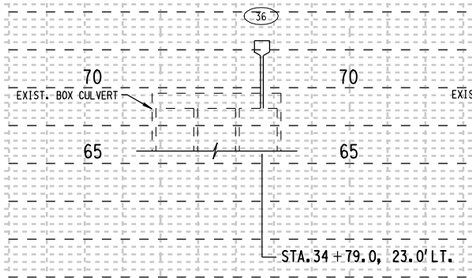
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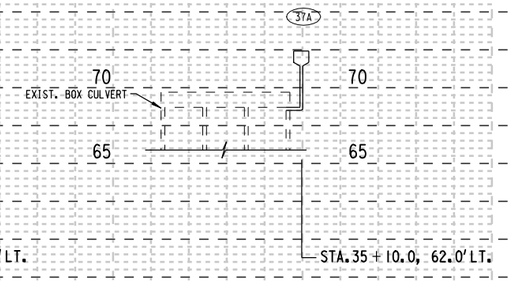
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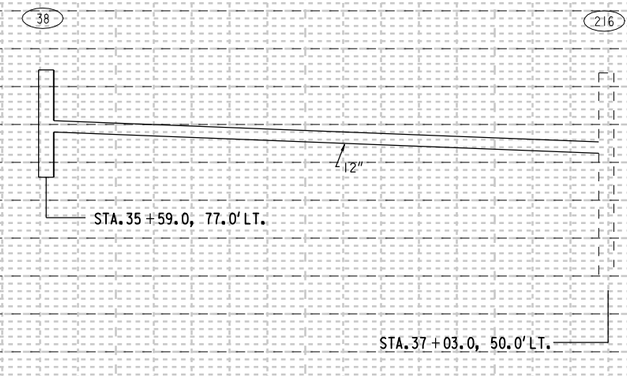
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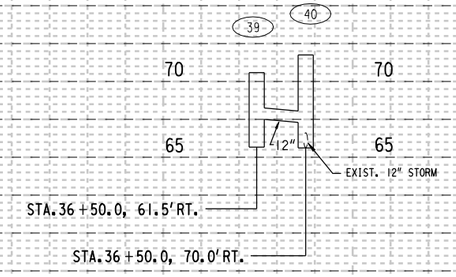
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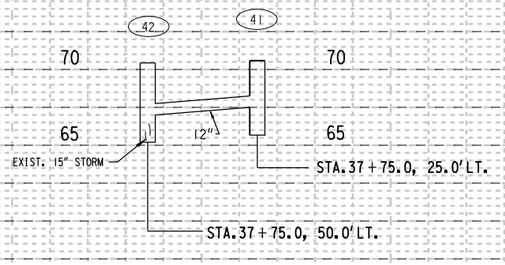
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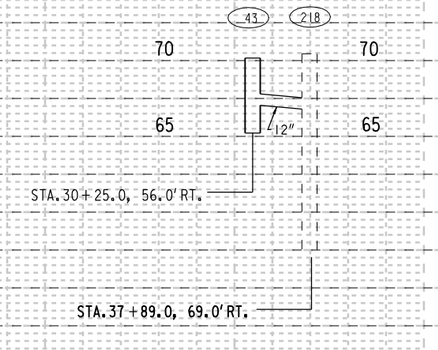
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(LOOKING NORTHERLY)



(LOOKING NORTHERLY)



(LOOKING NORTHERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 91	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 32_38.DGN

SOUTH 27TH STREET

B.M.- HYD. N.W. CORNER
S. 27TH ST. & W. MORGAN AVE.
STA.40+30- 156'LT.
N.W. BOLT
ELEV.= 72.86

B.M.- HYD. W/S @
STA.43+65- 61'LT.
N.W. BOLT
ELEV.= 76.46

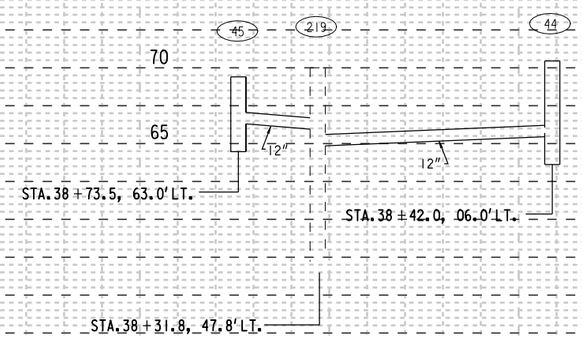
#3473

FIBER OPTIC
CAUTION
MONOTUBE
CONC CURB
ELEC BOX
FIBER OPTIC
BIO-SWALE NO.7 (SEE BIO-SWALE PLAN)
BIO-SWALE NO.8 (SEE BIO-SWALE PLAN)
WATER
CONC BLOCK
RR TIES
ABANDONED
LAWN
ASPH
1/4 SEC LINE
SEC LINE
W. MORGAN AVE.
#3514 #3500 #3470 #3456 #3450 #3440

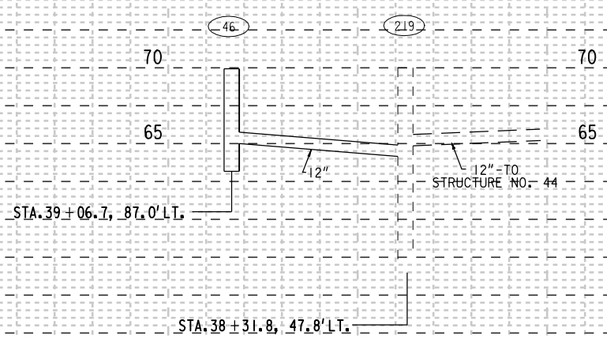
38 +50 39 +50 40 +50 41 +50 42 +50 43 +50 44

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 92 E

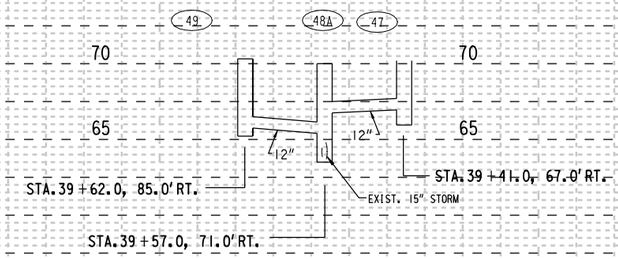
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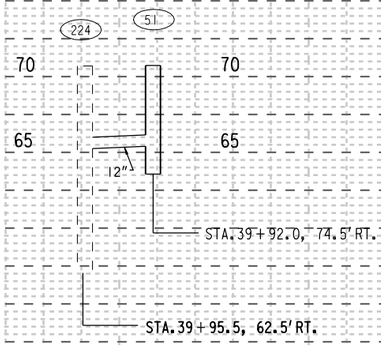
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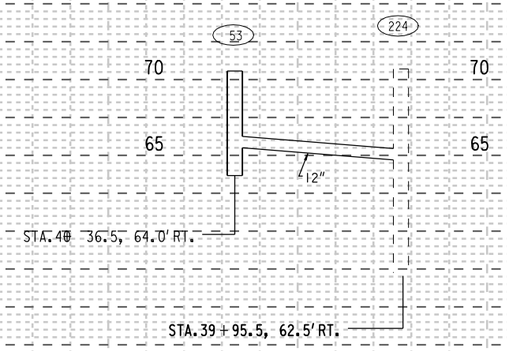
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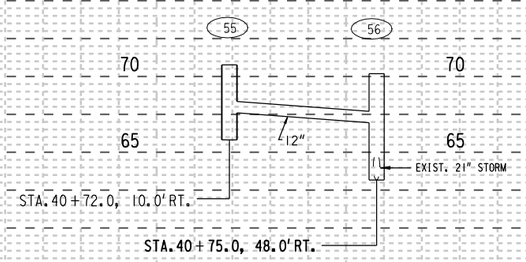
(LOOKING EASTERLY)



(LOOKING NORTHERLY)



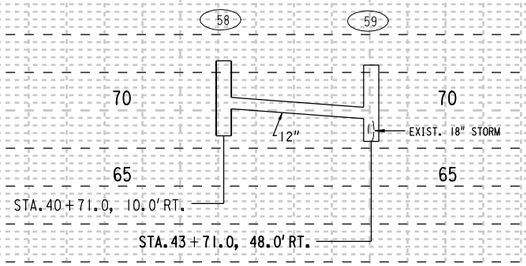
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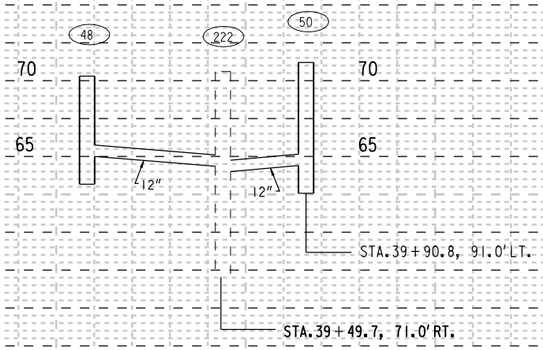
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STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 93	E

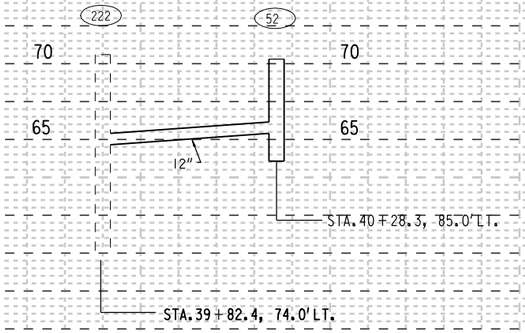
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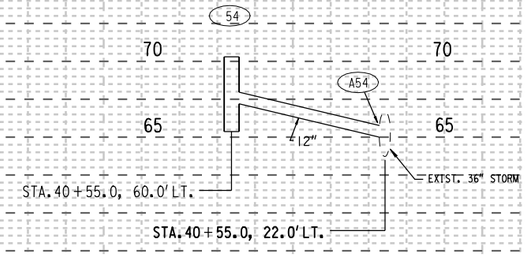
(LOOKING WESTERLY)



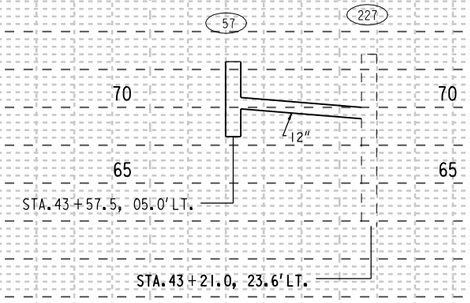
(LOOKING WESTERLY)



(LOOKING WESTERLY)



(LOOKING NORTHERLY)



(LOOKING WESTERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 94	E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL 38 44.DGN

SOUTH 27TH STREET

#3355

N

FIBER OPTIC

FIBER OPTIC

P.L.

CONC CURB

CONC CURB

ABANDONED

R/W

CUC FO W

TES 616

WEP

12" W

VARIES

TE&ES

CUC

E

8" W

62 152

229

69 156

A69

A60 60

STO MMSD 39" 36"

45 150

18"

46

13"

47

65

155 67

1" 1"

48

13"

49

157

8"

70

5"

50

4"

+50 T/L

SEC LINE

TES 615

BIO-SWALE NO.8
(SEE BOI-SWALE PLAN)

BIO-SWALE NO.9
(SEE BIO-SWALE PLAN)

TEL

T

60' 48' 36'

8" 66 68

68.5'

232 71

37'± 2'

STO 18"

230

G 8"

64 154

323 324

61 151

231

63 155

ASPH

SAN 8" 10' 14'

DECO STONE/PLANTS

2.5' 2.5'

RR TIES SIGN

CW ICR

#3418

#3432

#3404

#3368-78

#3360

#3340

P.L.

CAUTION

CAUTION

B.M.- HYD. N.E. CORNER
S. 27TH ST. & W. HOLT AVE.
STA. 46+85- 63' RT.
N.W. BOLT
ELEV.= 78.47

W. HOLT AVE.

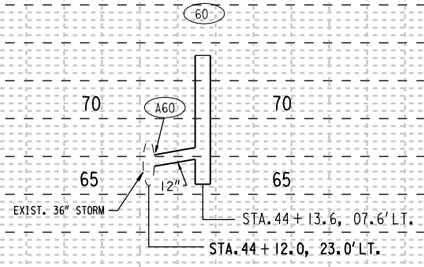
6" G 15" STO 8" SAN 8" W 202

9'± 20' 22' 25' 27' 30' 60'

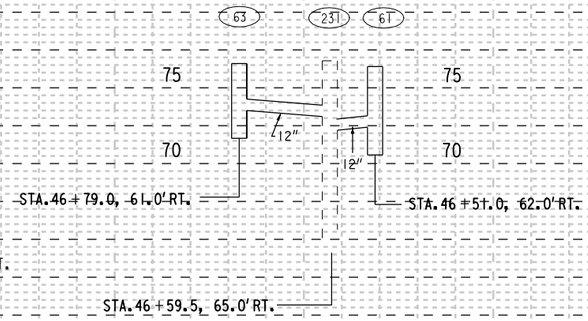
44 +50 45 +50 46 +50 47 +50 48 +50 49 +50 50

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 95 E

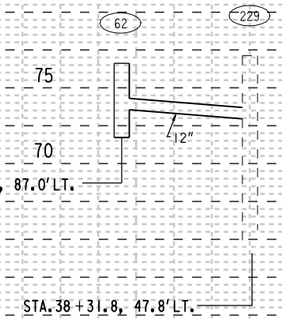
FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 44_50.DGN



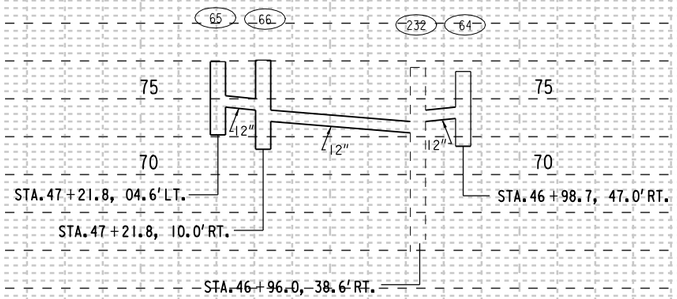
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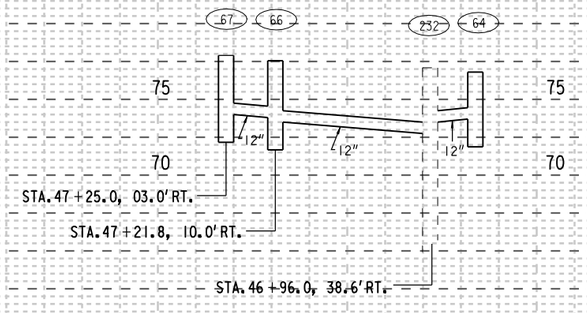
(LOOKING EASTERLY)



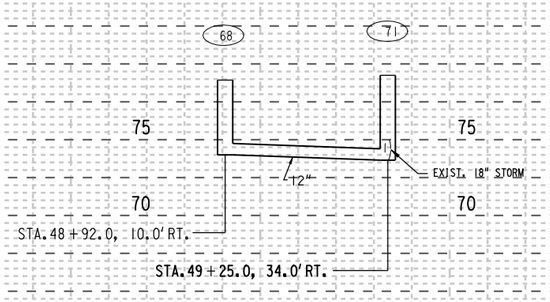
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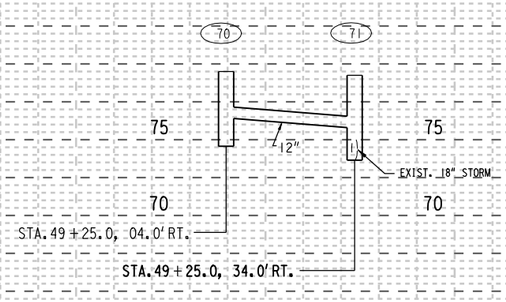
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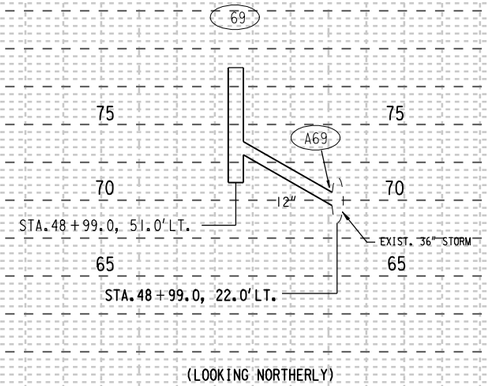
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(LOOKING WESTERLY)



(LOOKING WESTERLY)



(LOOKING NORTHERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 96	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 44_50.DGN

SOUTH 27TH STREET

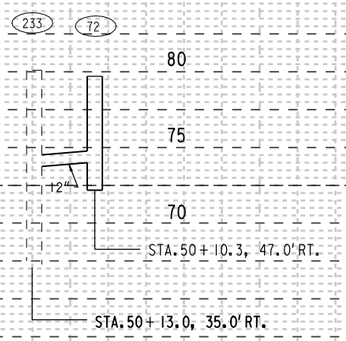
B.M.- HYD. W/S @
STA.50+15- 55'LT.
N.W. BOLT
ELEV.= 82.43

B.M.- HYD. N.E. CORNER
S. 27TH ST. & W. OHIO AVE.
STA.53+73- 50'RT.
N.W. BOLT
ELEV.= 85.13

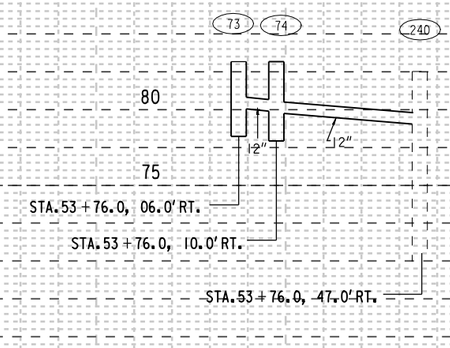
50	+50	51	+50	52	+50	53	+50	54	+50	55	+50	56

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0 40'	SHEET NO: 97 E

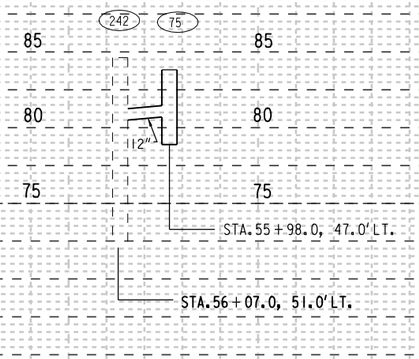
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(LOOKING WESTERLY)



(LOOKING NORTHERLY)



(LOOKING WESTERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 98	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 50_56.DGN

SOUTH 27TH STREET

N

#2733 W. EUCLID AVE. | #3179-81 | #3165

#3236 | #3232 | #3200 | #3178-80 | #3172-74 | #3168 | #3164 | #3158

B.M.- HYD. N.E. CORNER S. 27TH ST. & W. EUCLID AVE. STA.60+01- 50' RT. N.W. BOLT ELEV.- 88.60

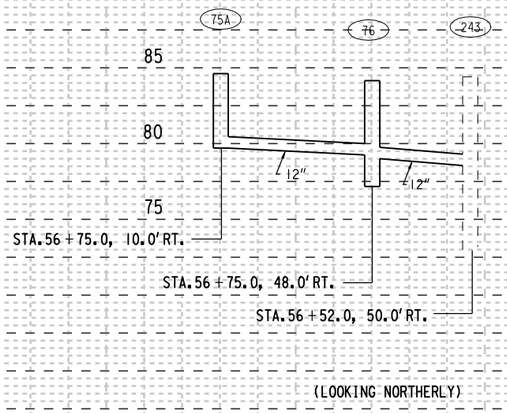
W. EUCLID AVE.

LOCATION UNKNOWN

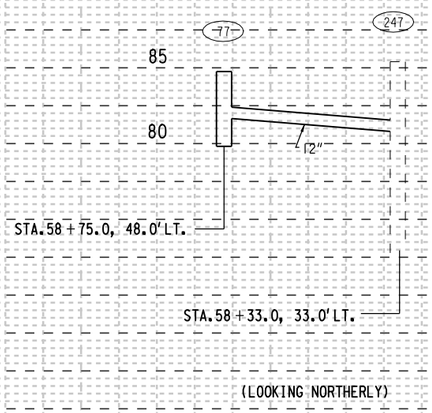
56 +50 57 +50 58 +50 59 +50 60 +50 61 +50 62

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 99 E

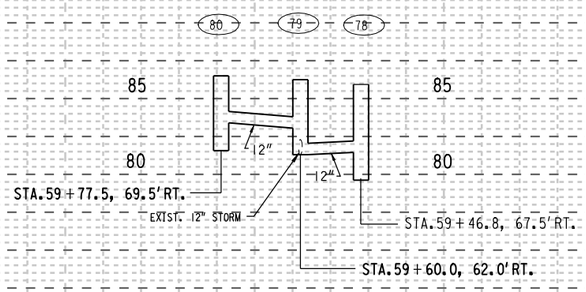
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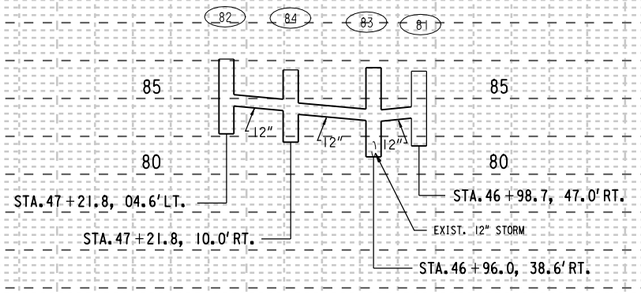
(LOOKING NORTHERLY)



(LOOKING NORTHERLY)



(LOOKING WESTERLY)



(LOOKING NORTHERLY)

SOUTH 27TH STREET

B.M.- HYD. W/S @ STA.63+13- 51' LT. N.W. BOLT ELEV.= 91.07

#3151 #3119 #3105

P.L. 18' CONC ALLEY

CAUTION FIBER OPTIC CAUTION

ASPH CONC ASPH ASPH ASPH R/W CONC CURB

MONOTUBE MONOTUBE

BUS SHELTER HOSP (PRIVATE) SEC LINE

62 +50 63 +50 64 +50 65 +50 66 +50 67 +50 68

SEC LINE

CONC PLATFORM BLOCK WALL STONE WALL R/W

CONC CURB FIBER OPTIC

ASPH LOCATION?? ASPH 18 ALLEY

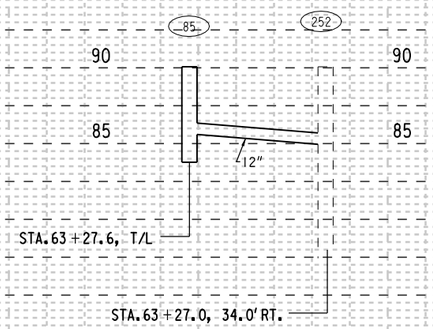
#3152 #3146 #3142 #3120 #3104 S. 27TH ST. & 2619-27 W. OKLAHOMA AVE.

W. OKLAHOMA AVE.

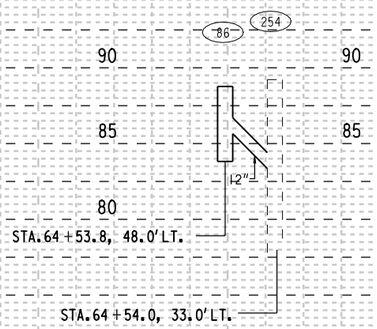
STD. B.M. #59-05
S.27TH ST. & W. OKLAHOMA AVE.
IN BY-PASS ISLAND ON N.E. CORNER
22.07' NORTH OF SOUTH CURB &
21.95' EAST OF WEST CURB
APPROX. STA.51+30- 84' LT.
ELEV. = 86.646

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 101 E

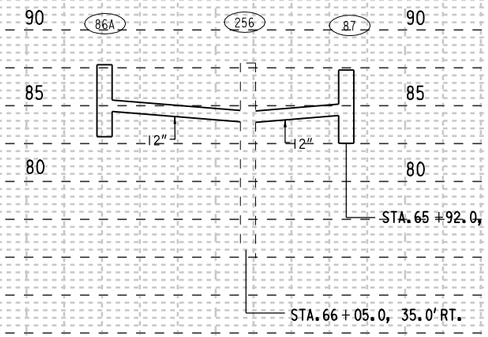
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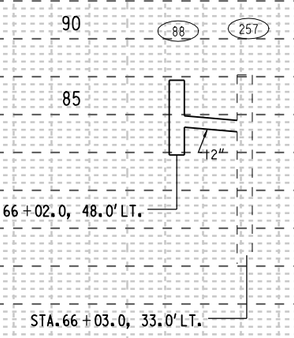
(LOOKING NORTHERLY)



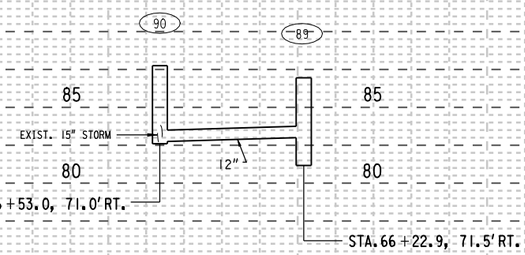
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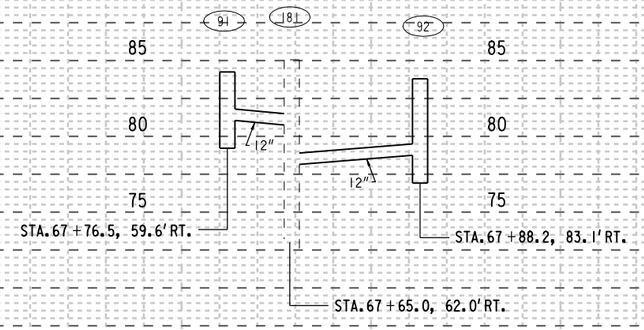
(LOOKING NORTHERLY)



(LOOKING NORTHERLY)



(LOOKING EASTERLY)



(LOOKING NORTHERLY)

STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 102	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 62_68.DGN

SOUTH 27TH STREET

N

PROP. R.O.W. LINE

10' SEWER EASEMENT

CAUTION

(PRIVATE)

WEP

R/W

175.32'

61.76'

309.72'

SEC LINE

ASPH

CONC

PULASKI HIGH SCHOOL
(CITY OF MILWAUKEE)

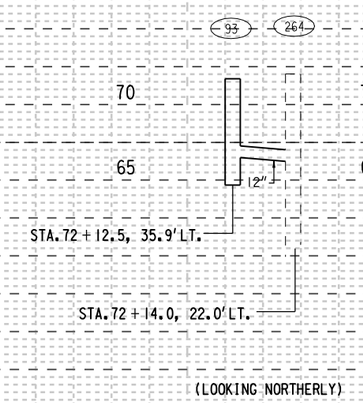
6TH DISTRICT POLICE STATION

FIBER OPTIC

68 T/L +50 69 +50 70 +50 71 +50 72 +50 73 T/L +50 74

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 103	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 68_74.DGN



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 104	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 68_74.DGN

SOUTH 27TH STREET

KINNICKINNIC RIVER PARKWAY

KINNICKINNIC RIVER

N

FIBER OPTIC

R/W

SAN

FO

CUC

STO

TEL

TES

MONOTUBE

ASPH

BRIDGE

CONC

WEP

SEC. LINE

T/L

P.L.

72" MMSD

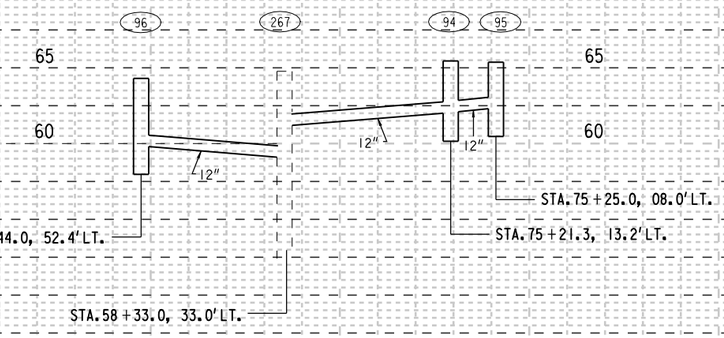
TWT VAULT

W. KINNICKINNIC RIVER PKWY.

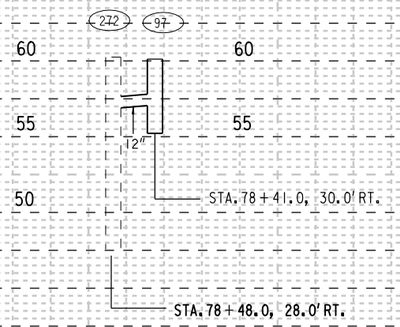
74 +50 75 +50 76 +50 77 +50 78 +50 79 +50

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 105 E

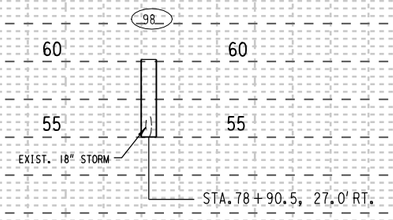
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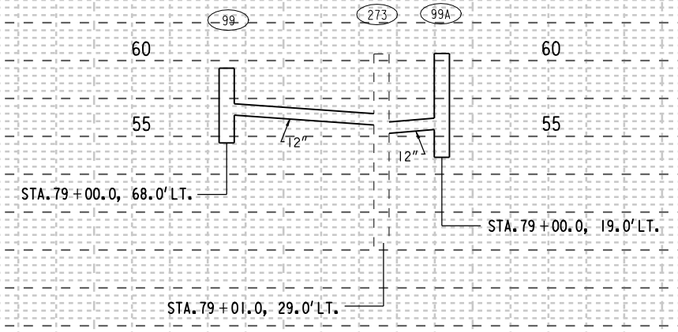
(LOOKING NORTHERLY)



(LOOKING WESTERLY)



(LOOKING WESTERLY)



(LOOKING NORTHERLY)

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 106	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\UTIL 74_79+50.DGN

SOUTH 27TH STREET

W. DAKOTA ST.

N

P.L.

FIBER OPTIC

LOCATION UNKNOWN

R/W

FIBER OPTIC

LOCATION UNKNOWN

R/W

FO

CUC

STO

SAN

W

G

E

T

TEL

TES

CONC

WEP

CW

WATER

6"(H.P.)

72" MWSD

66" MWSD

MWSD

42.5'

79'

VARIES

36'

36.5'

23±

26.5'

42"

48'

61'

52'

33'

17'

SEC LINE

+50 80 +50 81 +50 82 +50 83 +50 84 +50 85 +50

274 275 276 277 352 634 635 637 99B 99C 99D 99E 99F 99G 99H 199A 199B 199C 199D 199E 199F 199G 199H

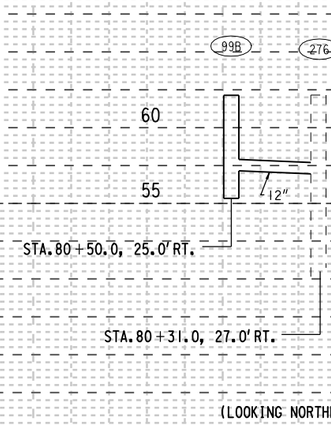
BRIDGE

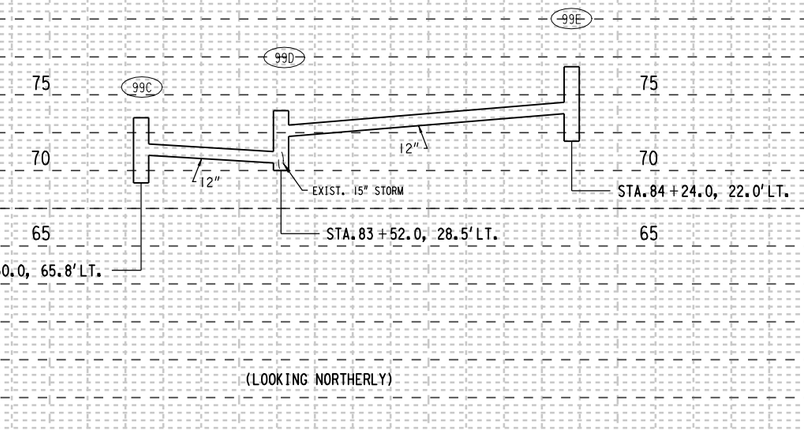
END PROJECT
STA. 85 + 16.0 T/L

#2856 S. 27TH ST.
MAYNARD STEEL

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 107	E

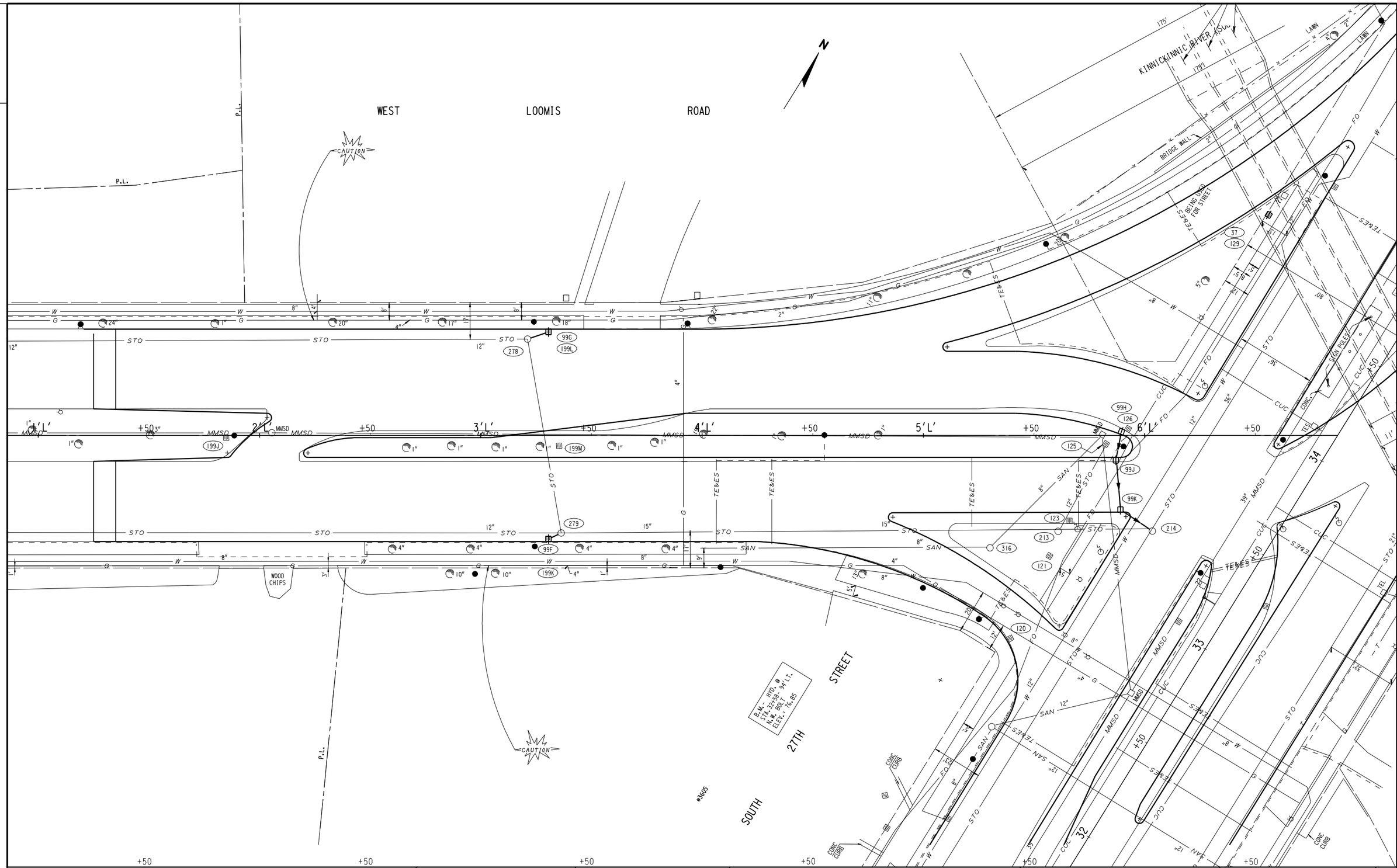
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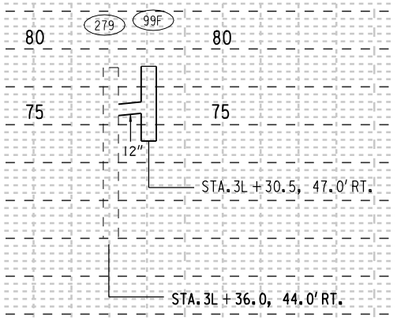
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET	SHEET NO: 108	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA UTIL\79+50_85+50.DGN

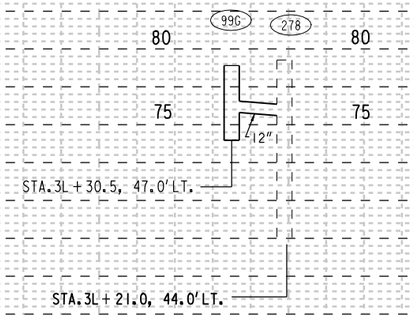


STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0 40'	SHEET NO: 109 E

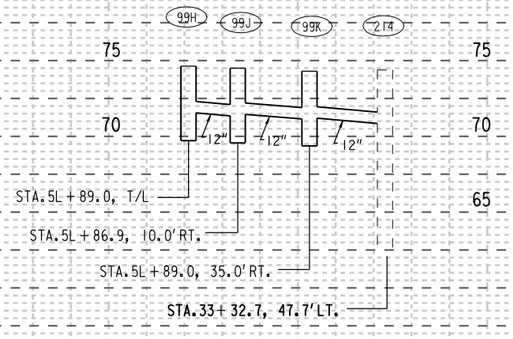
FILE NAME: W:\SPR\27TH HOWARD OKLA 09 15.DGN



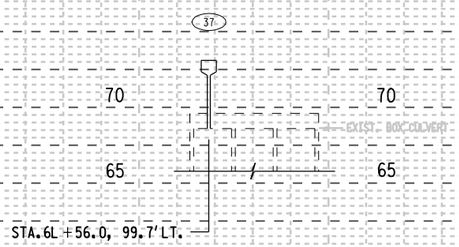
(LOOKING EASTERLY)



(LOOKING EASTERLY)



(LOOKING EASTERLY)



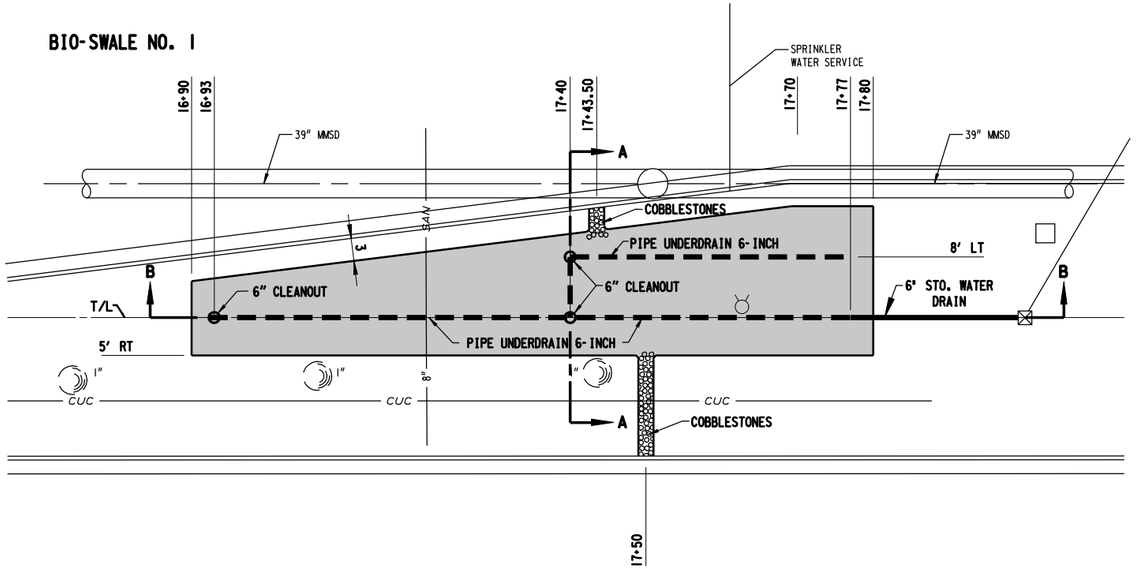
(LOOKING WESTERLY)

1'L' +50 2'L' +50 3'L' +50 4'L' +50 5'L' +50 6'L' +50

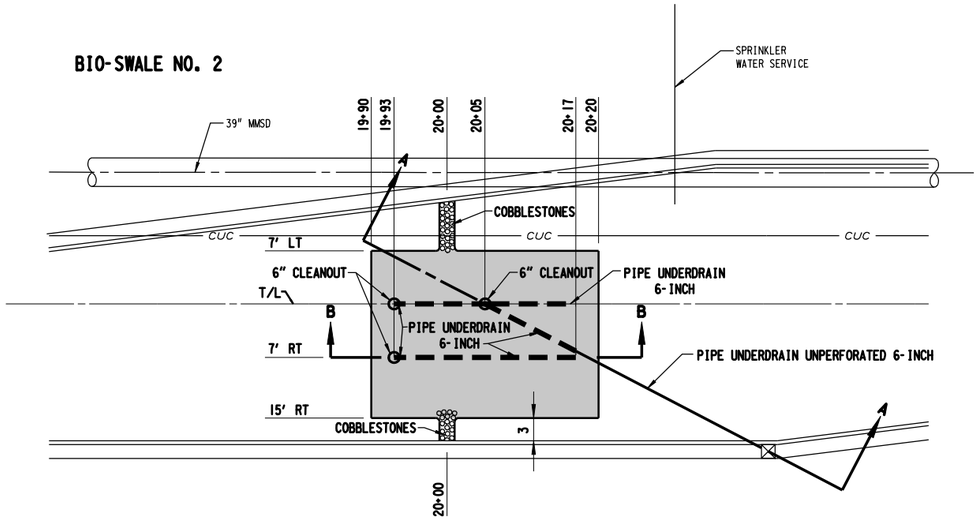
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 110	E

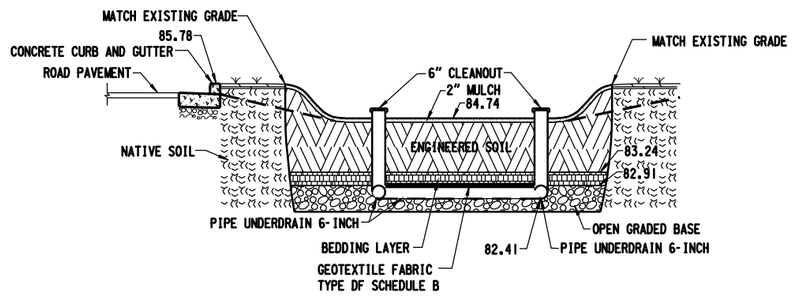
FILE NAME: W:\SPR\27TH HOWARD OKLA 09 15.DGN

BIO-SWALE NO. 1

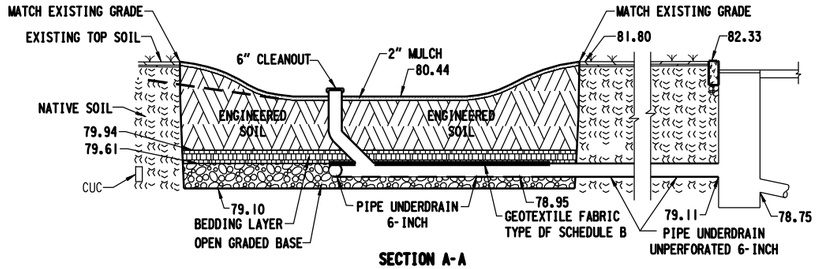


BIO-SWALE NO. 2

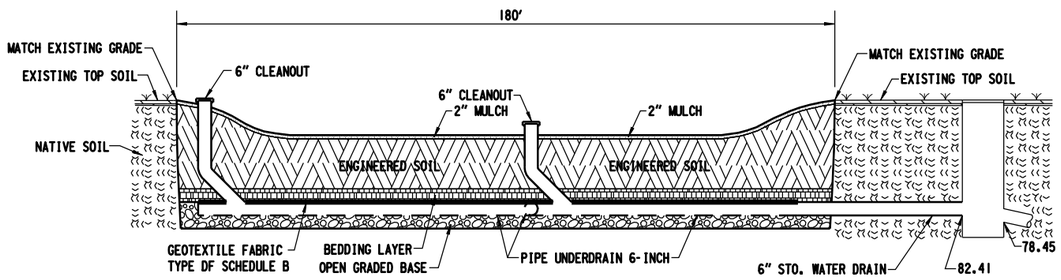




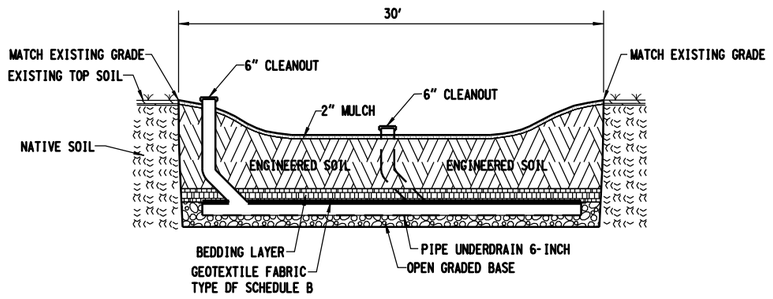
SECTION A-A
SCALE - N.T.S.



SECTION A-A
SCALE - N.T.S.



SECTION B-B
SCALE - N.T.S.

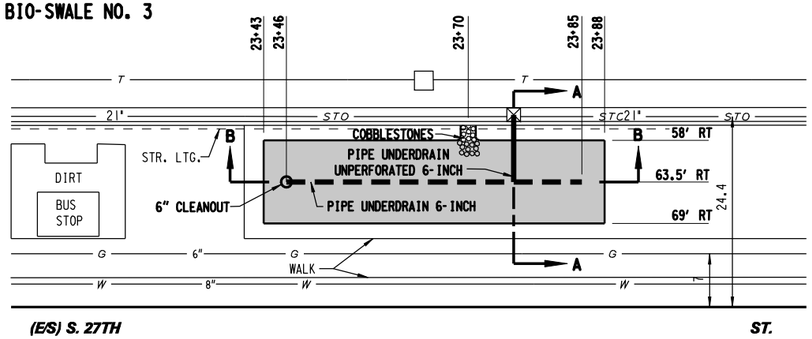


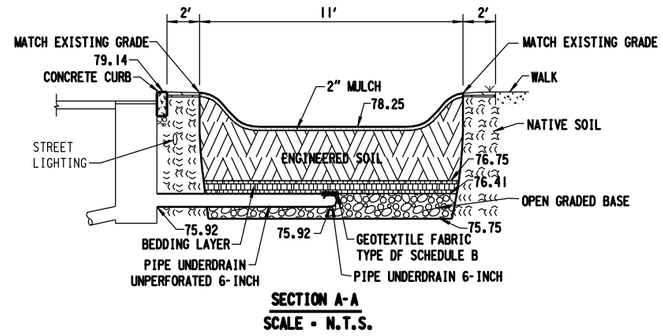
SECTION B-B
SCALE - N.T.S.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE PLAN	SCALE FEET 0' 20'	SHEET NO: 111	E

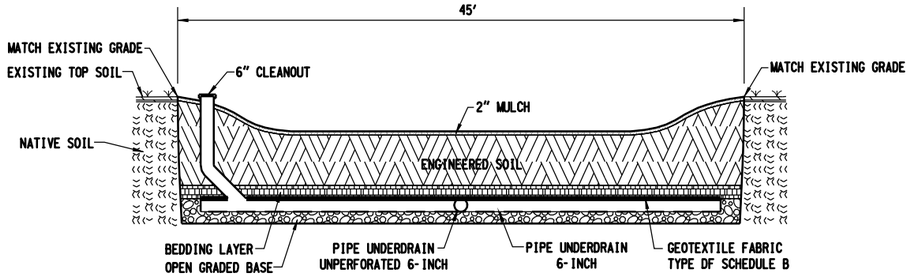
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BIO-SWALE NO. 3



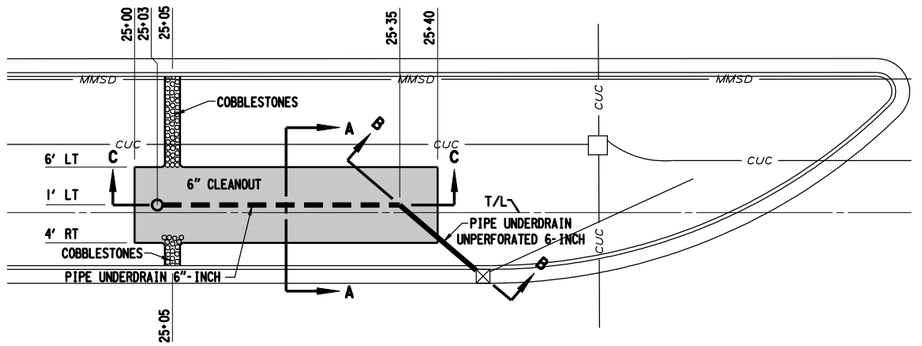


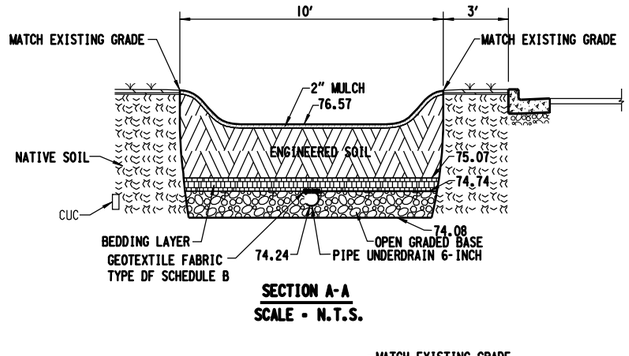
SECTION A-A
SCALE - N.T.S.



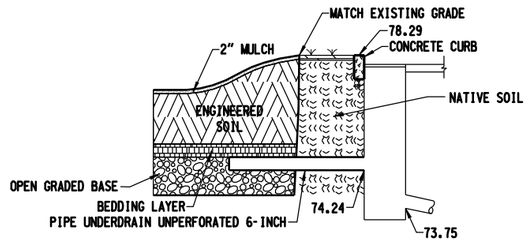
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SCALE - N.T.S.

BIO-SWALE NO. 4

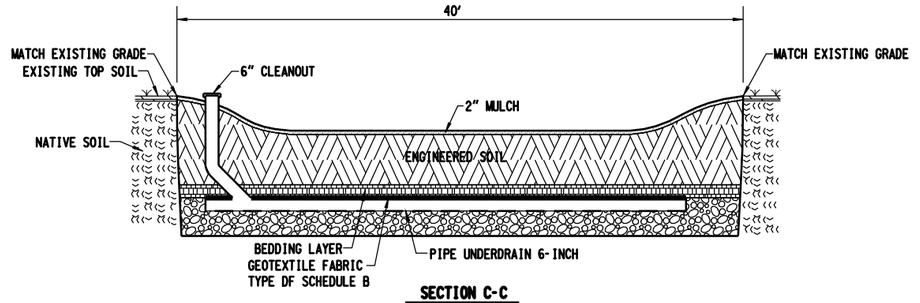




SECTION A-A
SCALE - N.T.S.



SECTION B-B
SCALE - N.T.S.



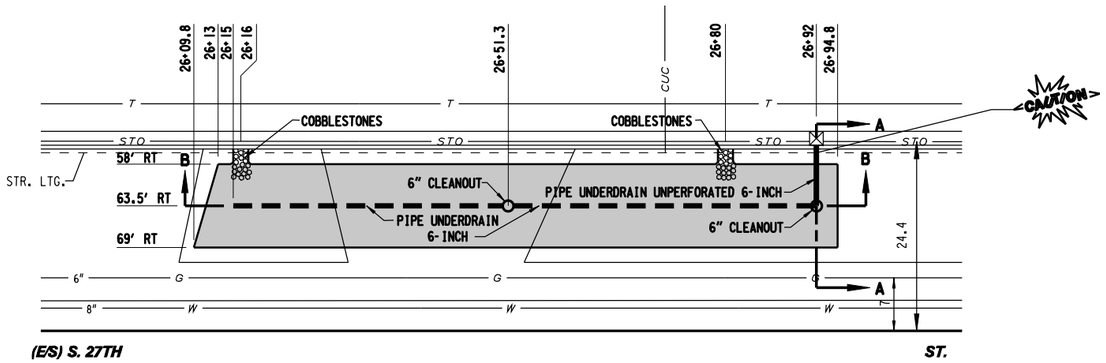
SECTION C-C
SCALE - N.T.S.

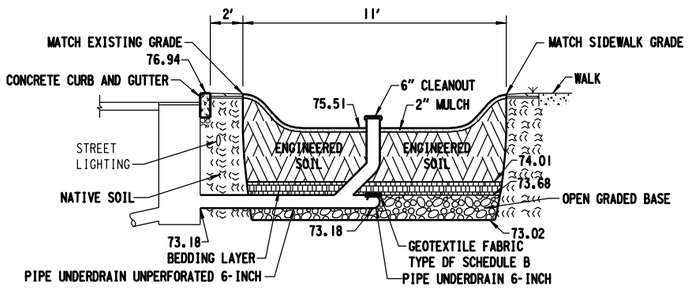
STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE PLAN	SCALE FEET 0 20'	SHEET NO: 112	E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

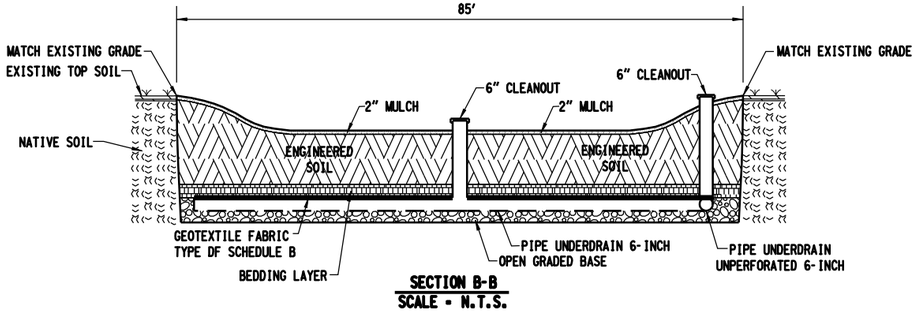
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BIO-SWALE NO. 5



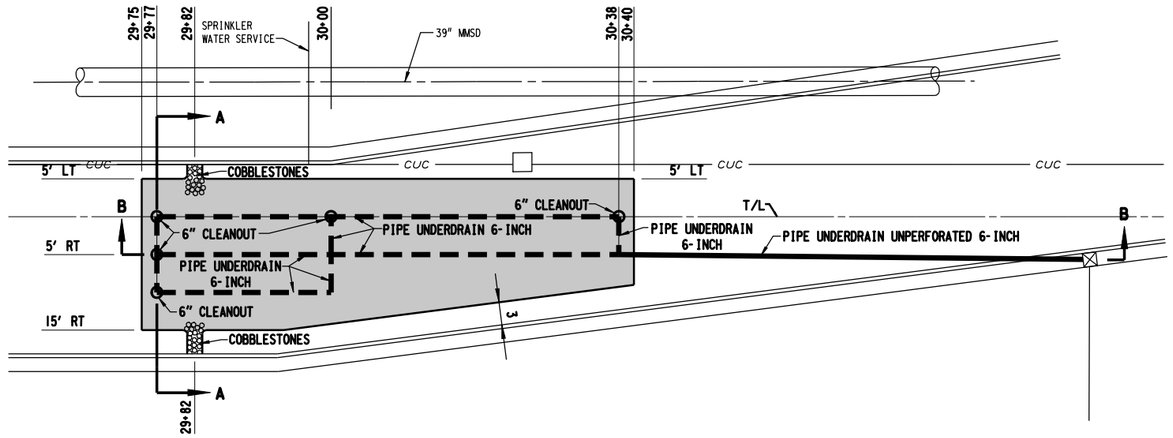


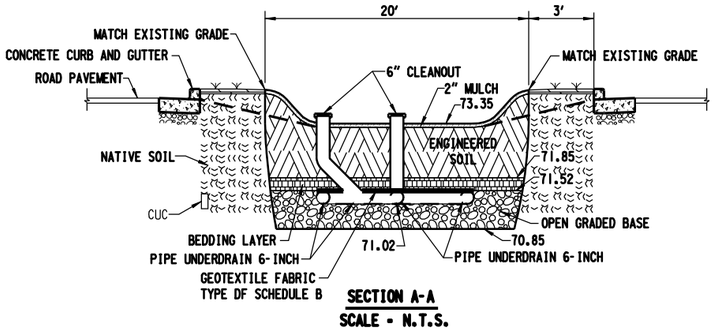
SECTION A-A
SCALE - N.T.S.



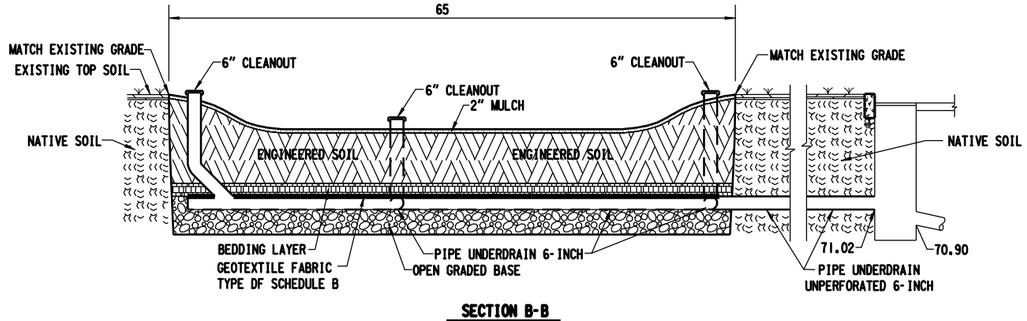
SECTION B-B
SCALE - N.T.S.

BIO-SWALE NO. 6





SECTION A-A
SCALE - N.T.S.

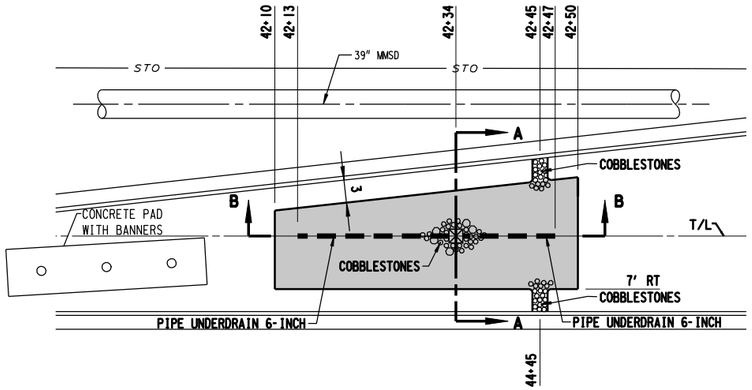


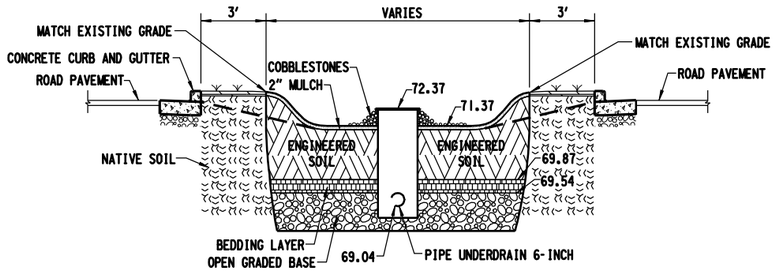
SECTION B-B
SCALE - N.T.S.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE PLAN	SCALE FEET 0 20'	SHEET NO: 113	E

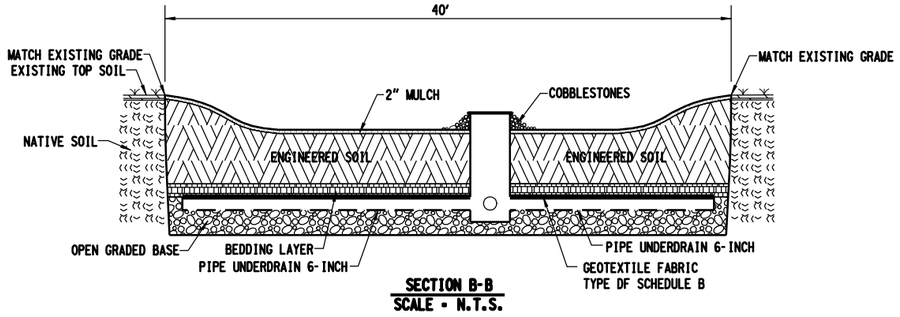
FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

BIO-SWALE NO. 7



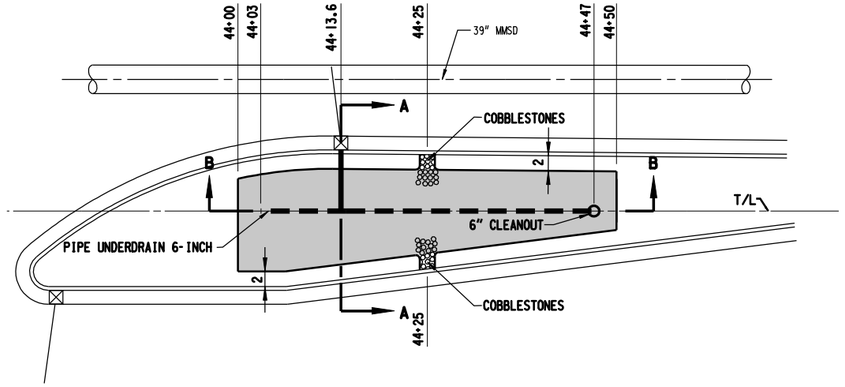


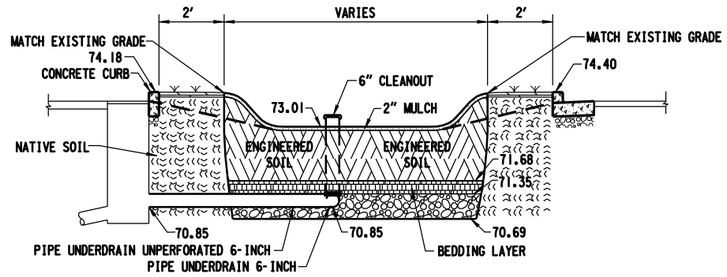
SECTION A-A
SCALE • N.T.S.



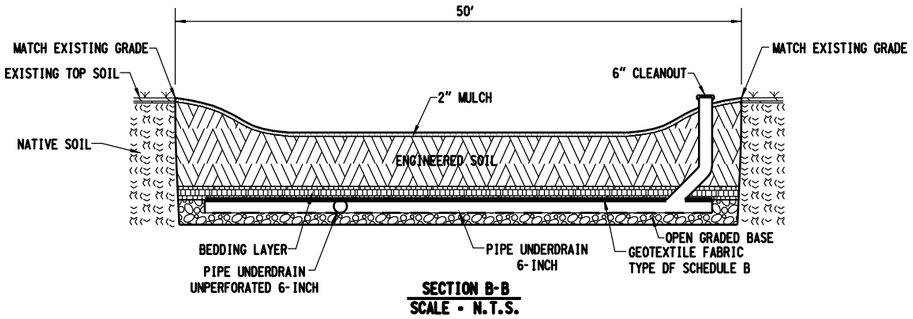
SECTION B-B
SCALE • N.T.S.

BIO-SWALE NO. 8





SECTION A-A
SCALE • N.T.S.



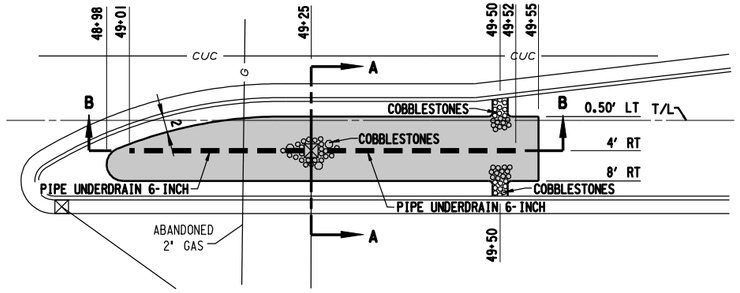
SECTION B-B
SCALE • N.T.S.

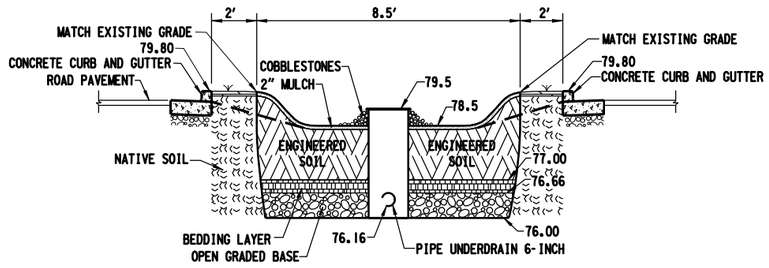
STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE PLAN	SCALE FEET 0' 20'	SHEET NO: 114 E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

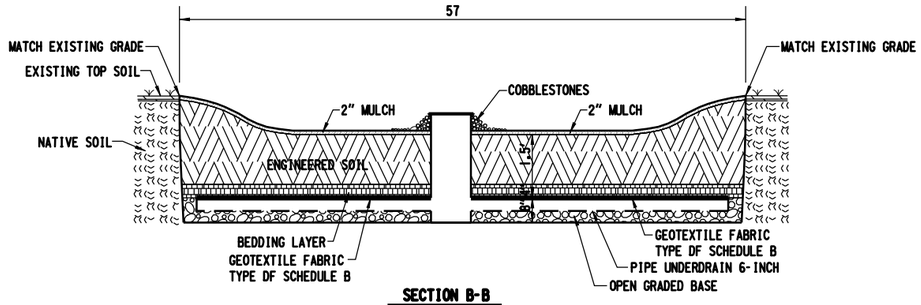
BIO-SWALE DETAILS

BIO-SWALE NO. 9

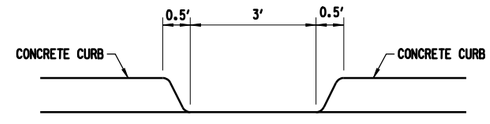




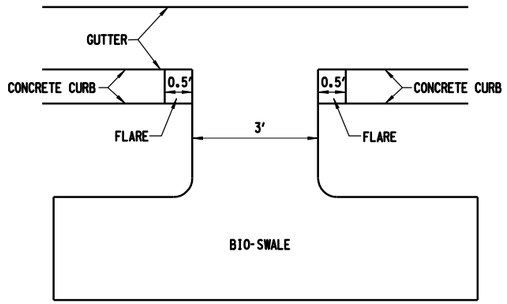
SECTION A-A
SCALE - N.T.S.



SECTION B-B
SCALE - N.T.S.

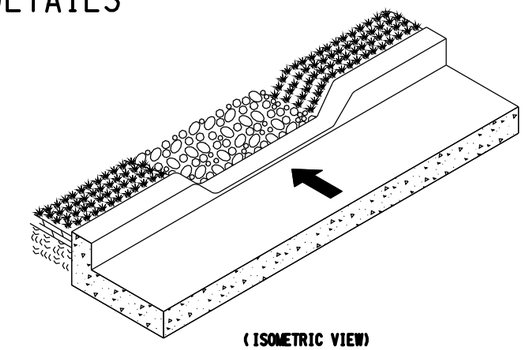


(FRONT VIEW)



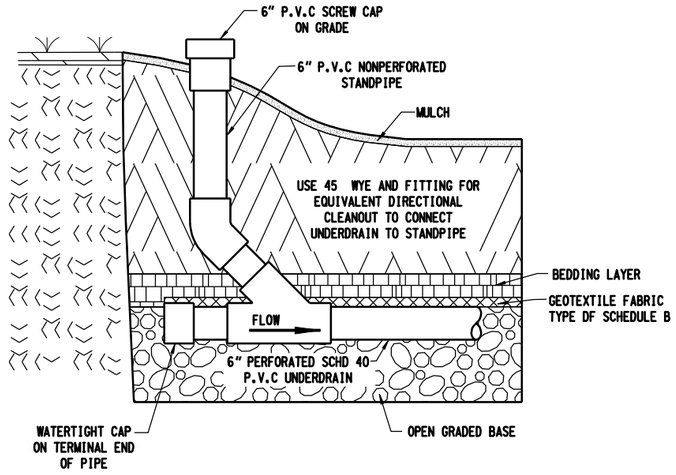
(TOP VIEW)

DETAIL OF CURB CUT
SCALE - N.T.S.

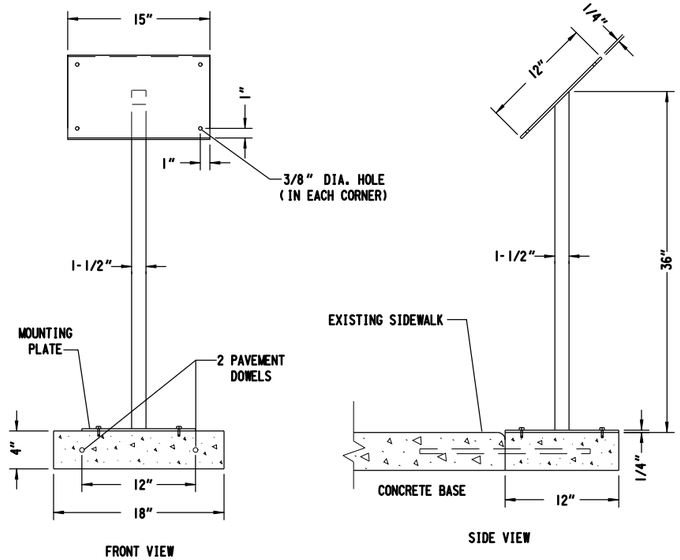


(ISOMETRIC VIEW)

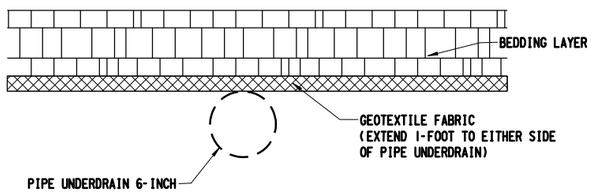
DETAIL OF CURB CUT
SCALE - N.T.S.



DETAIL OF CLEANOUT
SCALE - N.T.S.



DETAIL OF INFORMATIONAL SIGN
SCALE - N.T.S.

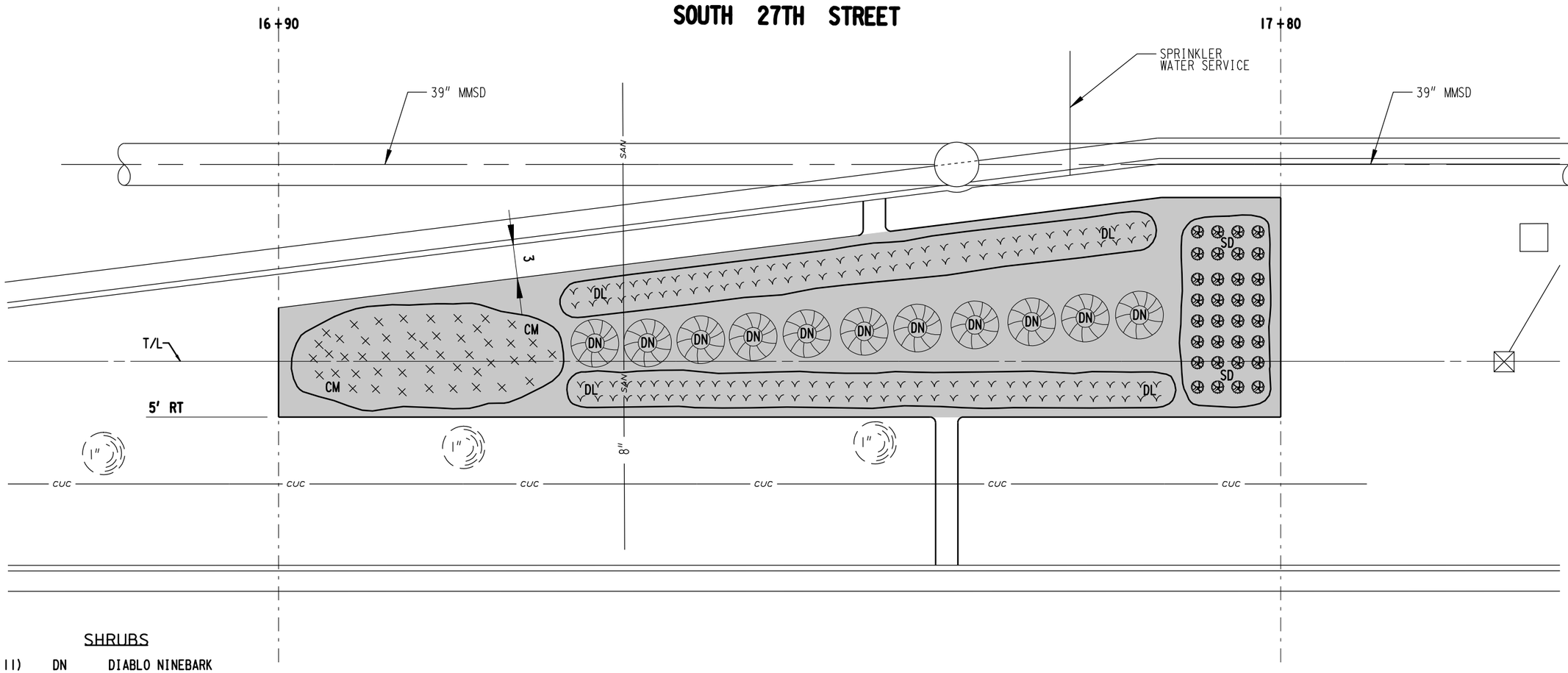


DETAIL OF GEOTEXTILE FABRIC
SCALE - N.T.S.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE PLAN AND DETAILS	SCALE FEET 0 20	SHEET NO: 115 E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

BIO-SWALE NO. 1



SHRUBS

(11)	DN	DIABLO NINEBARK

PERENNIALS, GRASS, AND BULBS

(48)	CM	BLUE WONDER CATMINT
(48)	SD	BECKY SHASTA DAISY
(144)	DL	DAYLILIES

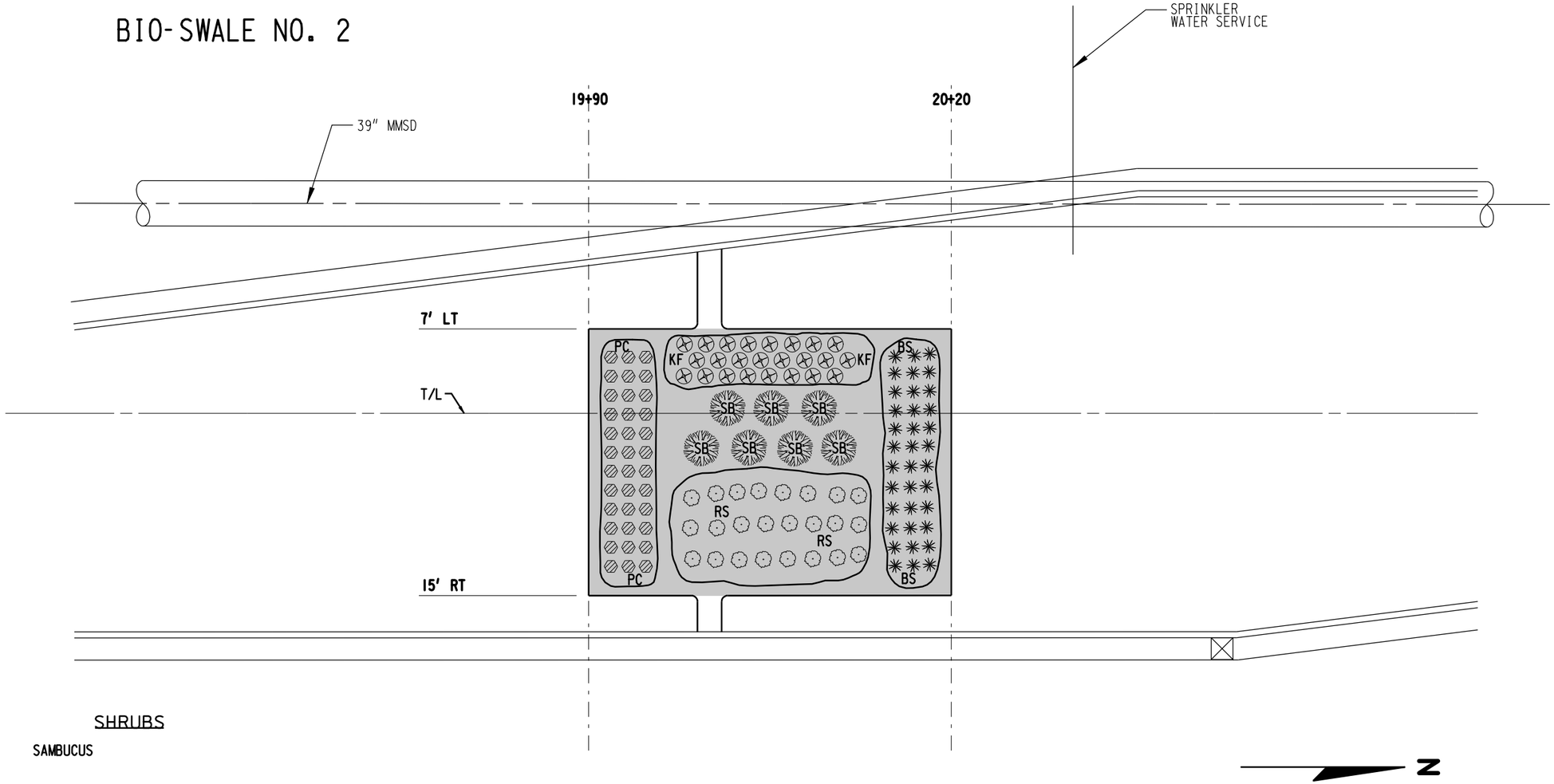
STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 116 E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

SOUTH 27TH STREET

BIO-SWALE NO. 2



SHRUBS

(07)	SB	SAMBUCUS

PERENNIALS, GRASS, AND BULBS

(24)	KF	KARL FOERSTER GRASS
(36)	PC	PURPLE CONEFLOWER
(36)	BS	BLACK EYED SUSANS
(24)	RS	RUSSIAN SAGE

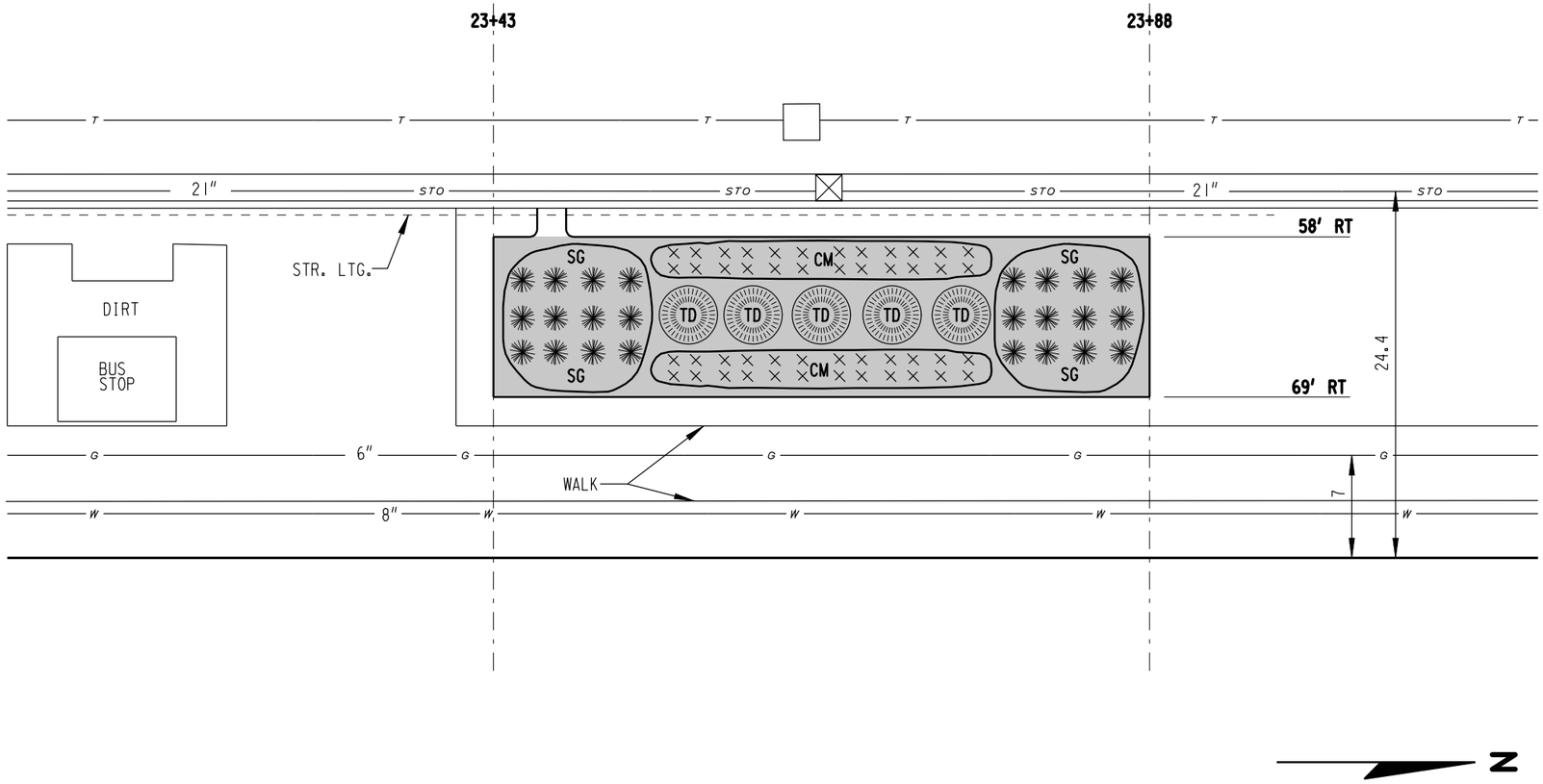
STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 117	E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

BIO-SWALE NO. 3

SOUTH 27TH STREET



SHRUBS

(05)	TD	RED TWIG DOGWOOD

PERENNIALS, GRASS, AND BULBS

(24)	SG	SWITCH GRASS
(48)	CM	BLUE WONDER CATMINT

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: E

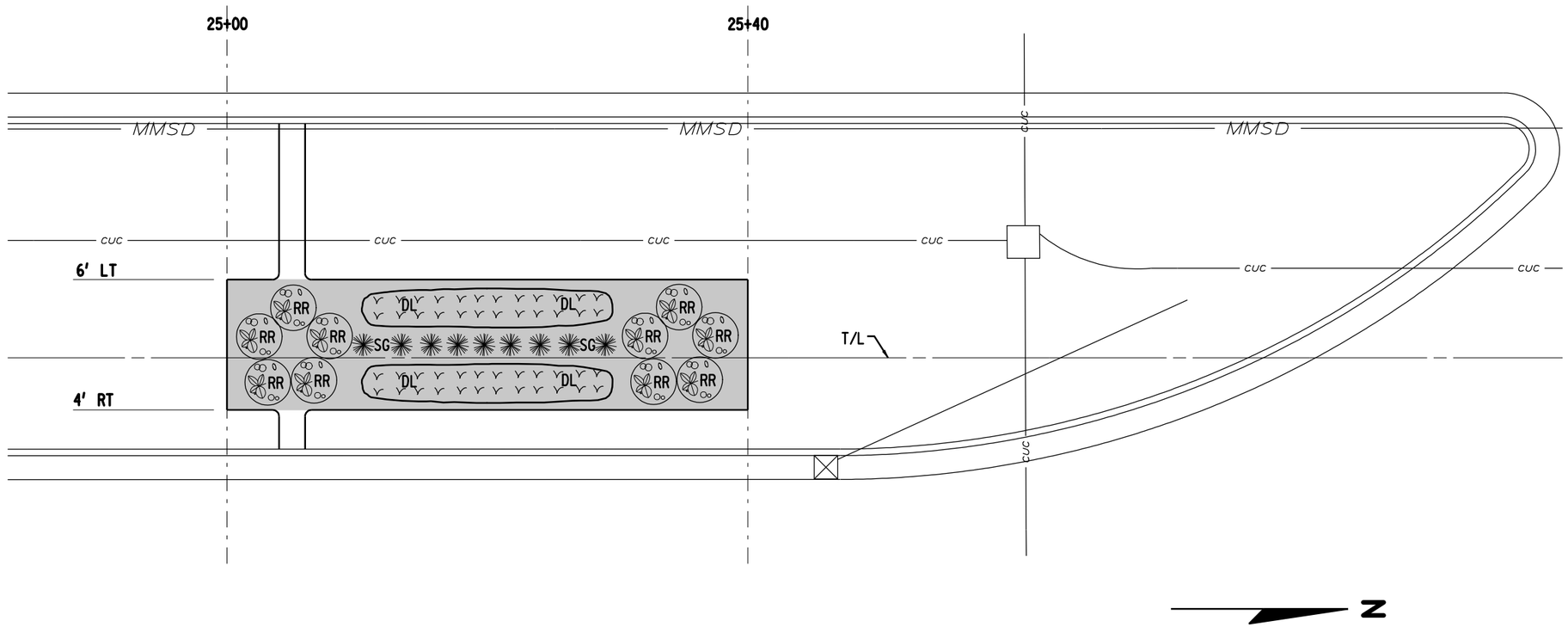
FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

2

BIO-SWALE NO. 4

SOUTH 27TH STREET



PERENNIALS, GRASS, AND BULBS

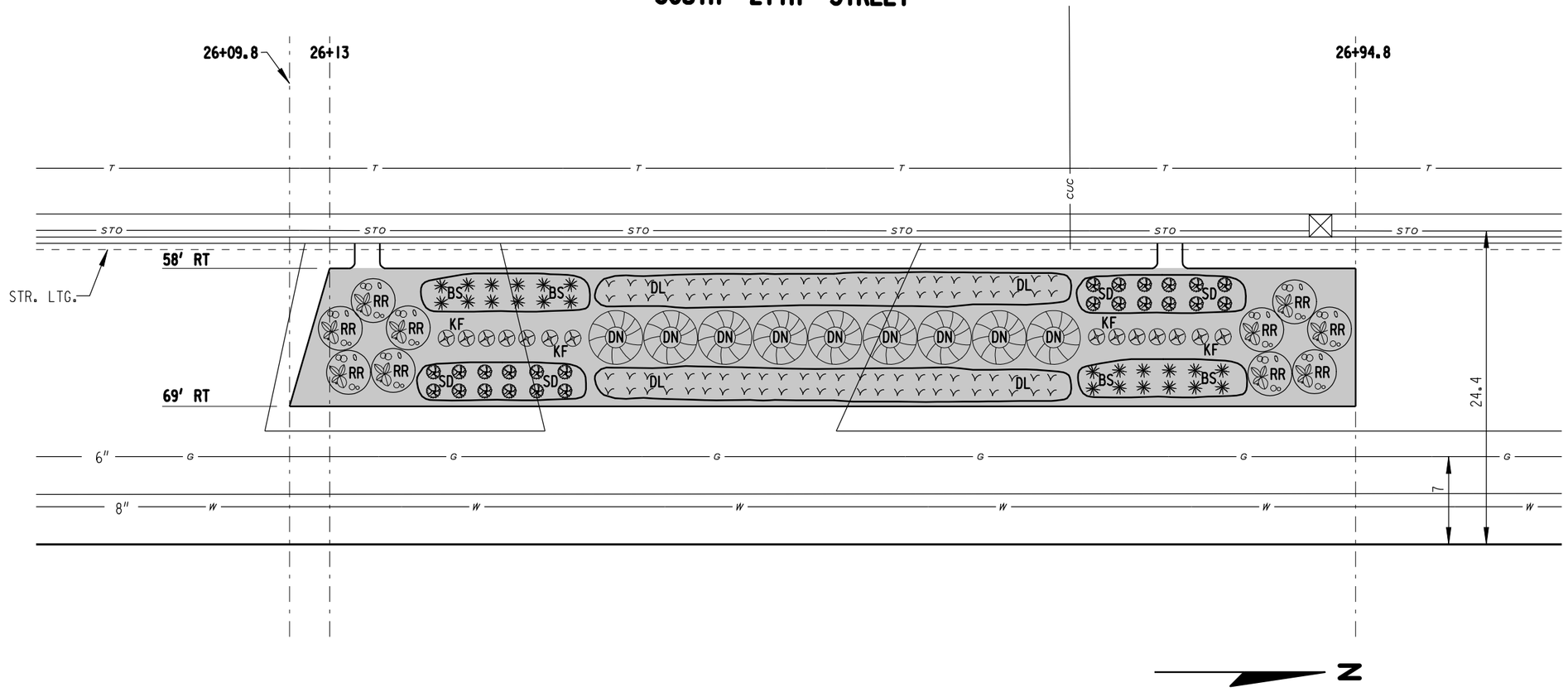
(48)	DL	DAYLILIES
(10)	RR	RUGOSA ROSES
(09)	SG	SWITCH GRASS

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 119 E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

BIO-SWALE NO. 5

SOUTH 27TH STREET



SHRUBS

(09)	DN	DIABLO NINEBARK

PERENNIALS, GRASS, AND BULBS

(10)	RR	RUGOSA ROSES
(24)	SD	BECKY SHASTA DAISY
(96)	DL	DAYLILIES
(24)	BS	BLACK EYED SUSAN
(14)	KF	KARL FOERSTER GRASS

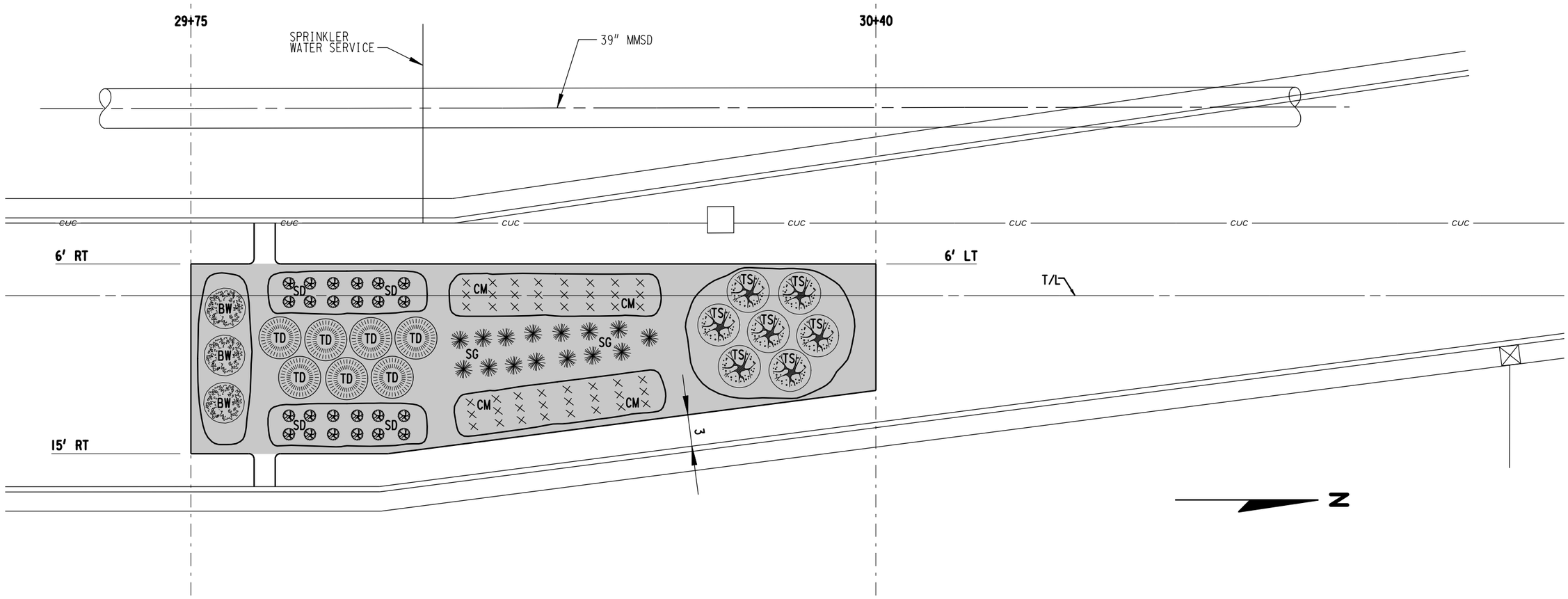
STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0 10	SHEET NO: 120 E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

BIO-SWALE NO. 6

SOUTH 27TH STREET



SHRUBS

(03)	BW	ARCTIC BLUE WILLOW
(07)	TS	TIGERS EYE SUMAC
(07)	TD	RED TWIG DOGWOOD

PERENNIALS, GRASS, AND BULBS

(24)	SD	BECKY SHASTA DAISY
(48)	CM	BLUE WONDER CATMINT
(15)	SG	SWITCH GRASS

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 121	E

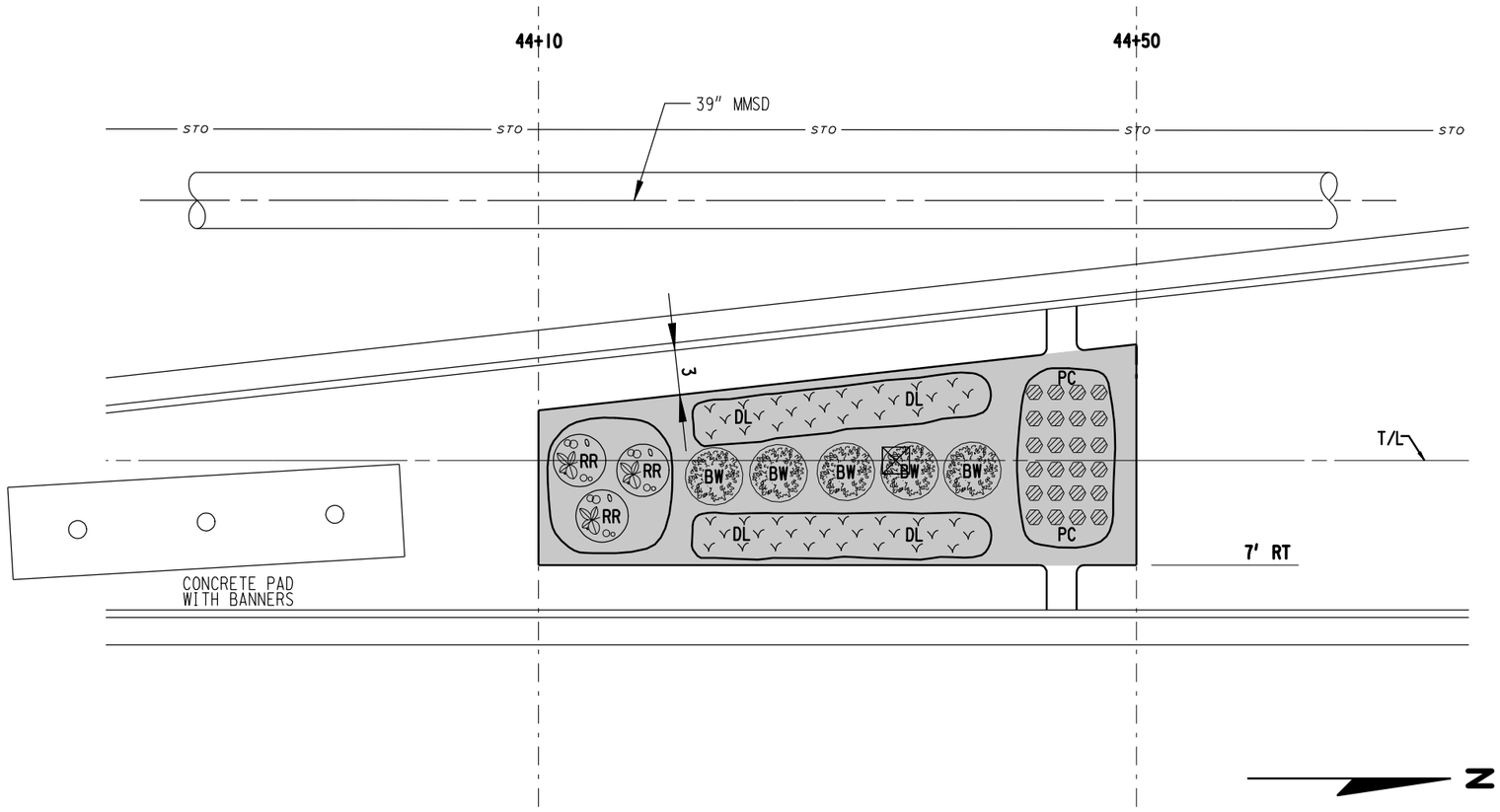
FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

2

BIO-SWALE NO. 7

SOUTH 27TH STREET



SHRUBS

(05)	BW	ARCTIC BLUE WILLOW

PERENNIALS, GRASS, AND BULBS

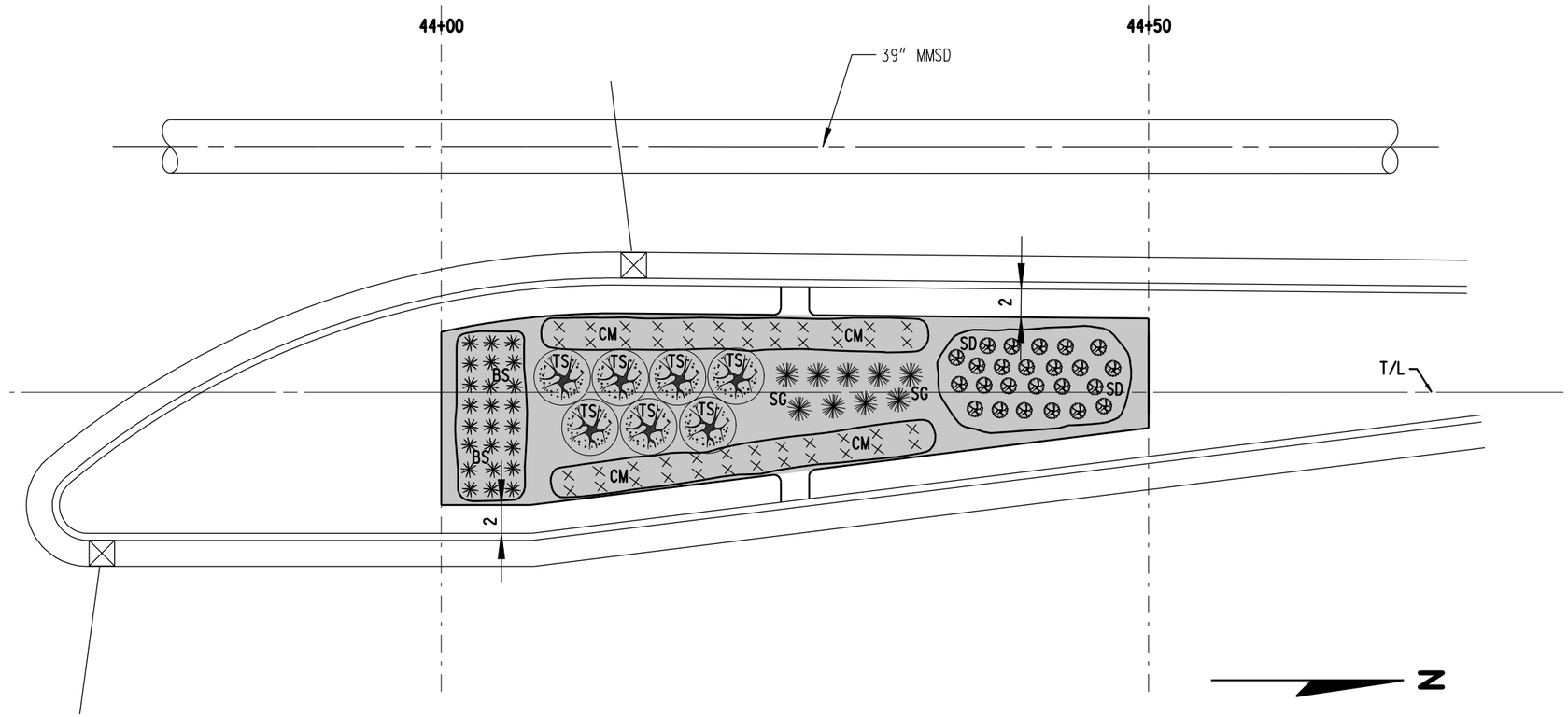
(03)	RR	RUGOSA ROSES
(48)	DL	DAYLILIES
(24)	PC	PURPLE CONEFLOWER

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 122 E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

BIO-SWALE NO. 8

SOUTH 27TH STREET



SHRUBS

(07)	TS	TIGERS EYE SUMAC

PERENNIALS, GRASS, AND BULBS

(48)	CM	BLUE WONDER CATMINT
(24)	BS	BLACK EYED SUSAN
(24)	SD	BECKY SHASTA DAISY
(09)	SG	SWITCH GRASS

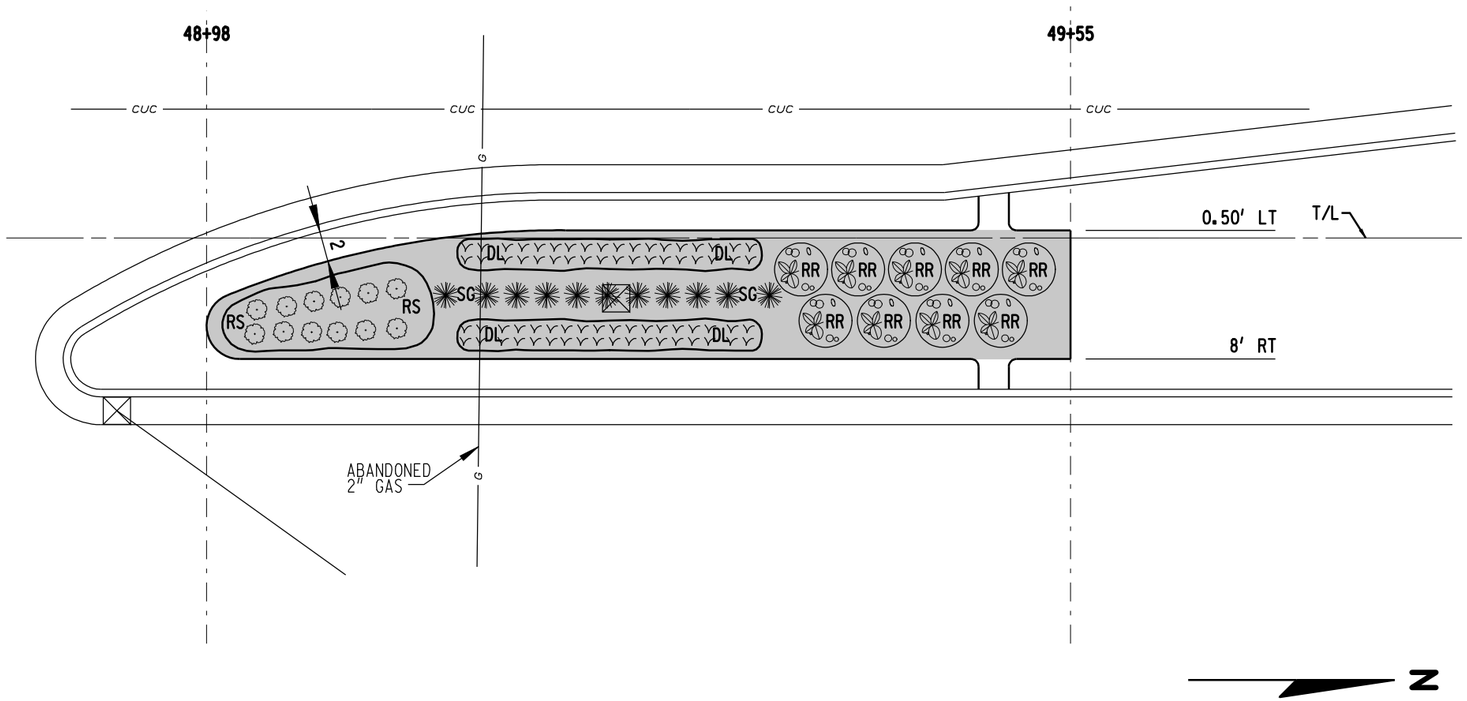
STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 123	E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

BIO-SWALE NO. 9

SOUTH 27TH STREET



PERENNIALS, GRASS, AND BULBS

(09)	RR	RUGOSA ROSES
(72)	DL	DAYLILIES
(12)	RS	RUSSIAN SAGE
(11)	SG	SWITCH GRASS

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	BIO-SWALE LANDSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: 124	E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

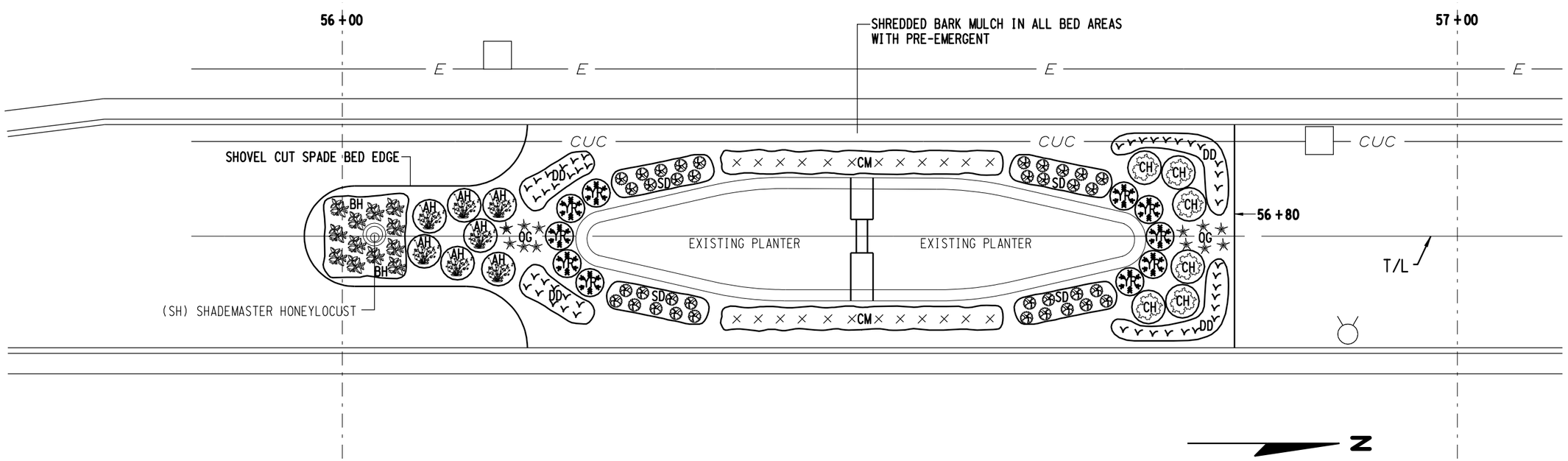
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2

PLANTING DATA TABLE - BIOSWALES

LOCATION	SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE WHEN PLANTED	ROOT ZONE MODE	BALL/POT (MIN. SIZE)		HOLE (MIN. SIZE)		ROOT SPREAD	BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAMETER	REMARKS
							DIA.	DEPTH	DIA.	DEPTH						
VARIOUS	BW	SHRUB	ARCTIC BLUE WILLOW	SALIX SPECIES	#5	CG	12"	12"	36"	9"	36"	NO	2 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	DN	SHRUB	DIABLO NINEBARK	PHYSOCARPUS	#5	CG	12"	12"	36"	9"	36"	NO	2 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	RR	SHRUB	RUGOSA ROSES	ROSA SPECIES	#3	CG	12"	12"	36"	9"	36"	NO	2 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	SB	SHRUB	SAMBUCUS	SAMBUCUS CANADENSIS	#5	CG	12"	12"	36"	9"	36"	NO	2 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	TD	SHRUB	RED TWIG DOGWOOD	CORNUS SERICEA	#5	CG	12"	12"	36"	9"	36"	NO	2 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	TS	SHRUB	TIGERS EYE SUMAC	RHUS TYPHINA	#5	CG	12"	12"	36"	9"	36"	NO	2 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	BS	PERENNIAL	BLACK EYED SUSAN	RUDBECKIA	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	CM	PERENNIAL	BLUE WONDER CATMINT	NEPETA "WALKERS LOW"	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	DL	PERENNIAL	DAYLILLIES	HEMEROCALLIS	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	PC	PERENNIAL	PURPLE CONEFLOWER	ECHINACEA	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	RS	PERENNIAL	RUSSIAN SAGE	PEROUSKIA	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	SD	PERENNIAL	BECKY SHASTA DAISY	LEUCANTHEMUM "ALASKA"	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	KF	GRASS	KARL FOERSTER GRASS	CELAMERGROSTIS	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY
VARIOUS	SG	GRASS	SWITCH GRASS	PANICUM	#1	CG	9"	6"	30"	9"	24"	NO	1 EACH	NONE	24"	SPECIMEN QUALITY

SOUTH 27TH STREET



SHRUBS

(10)	YR	YELLOW KNOCKOUT ROSE

PERENNIALS, GRASS, AND BULBS

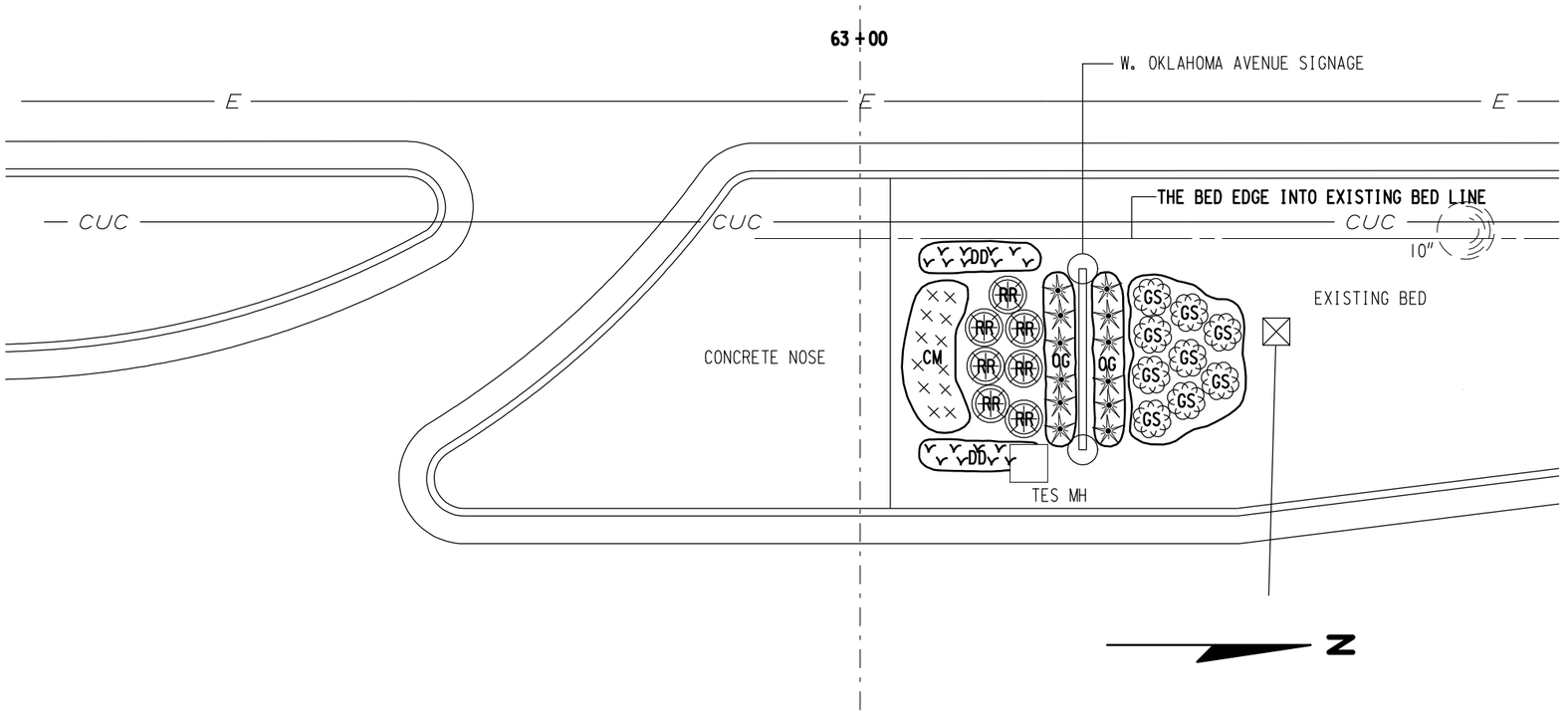
(24)	CM	BLUE WONDER CATMINT
(36)	SD	BECKY SHASTA DAISY
(12)	BH	GIANT BLUE HOSTA
(07)	AH	ANNABELLE HYDRANGEAS
(12)	OG	ORNAMENTAL GRASS
(48)	DD	DWARF DAYLILIES
(06)	CH	"COOL SPLASH" HONEYSUCKLE

STATE PROJECT NUMBER 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	MEDIAN STREETSCAPE PLAN	SCALE FEET 0' 10'	SHEET NO: E

FILE NAME: W:\SPR\27TH HOWARD OKLA UTIL\BIO SWALES.SMP

2

SOUTH 27TH STREET



SHRUBS

(07)	RR	RED KNOCKOUT ROSES

PERENNIALS, GRASS, AND BULBS

(12)	CM	BLUE WONDER CATMINT
(09)	GS	GROW LOW SUMAC
(12)	OG	ORNAMENTAL GRASS
(18)	DD	DWARF DAYLILIES

PLANTING DATA TABLE - STREETSCAPE

LOCATION	SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE WHEN PLANTED	ROOT ZONE MODE	BALL/POT (MIN. SIZE)		HOLE (MIN. SIZE)		ROOT SPREAD	BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAMETER	REMARKS
							DIA.	DEPTH	DIA.	DEPTH						
STA. 19+65 CENTER OF MEDIAN	JL	TREE	JAPANESE TREE LILAC	SYRINGA RETICULATA 'IVORY SILK'	3.0" CAL.	B&B	24"	18"	48"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 21+84 CENTER OF MEDIAN	JL	TREE	JAPANESE TREE LILAC	SYRINGA RETICULATA 'IVORY SILK'	3.0" CAL.	B&B	24"	18"	48"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 37+61 CENTER OF MEDIAN	SH	TREE	SHADEMASTER HONEYLOCUST	GLEDITSIA TRIACANTHOS 'INFERMIS'	3.0" CAL.	B&B	24"	18"	36"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 44+36 CENTER OF MEDIAN	CP	TREE	CALLERY PEAR	PYRUS CALLERYANA "CLEVELAND SELECT"	3.0" CAL.	B&B	24"	18"	48"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 44+56 CENTER OF MEDIAN	CP	TREE	CALLERY PEAR	PYRUS CALLERYANA "CLEVELAND SELECT"	3.0" CAL.	B&B	24"	18"	48"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 47+90 CENTER OF MEDIAN	CP	TREE	CALLERY PEAR	PYRUS CALLERYANA "CLEVELAND SELECT"	3.0" CAL.	B&B	24"	18"	48"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 54+88 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 55+36 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 55+61 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 56+02 CENTER OF MEDIAN	SH	TREE	SHADEMASTER HONEYLOCUST	GLEDITSIA TRIACANTHOS 'INFERMIS'	3.0" CAL.	B&B	24"	18"	36"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 57+62 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 57+88 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 58+13 CENTER OF MEDIAN	AC	TREE	ADIRONDACK CRABAPPLE	MALUS SPECIES	3.0" CAL.	B&B	24"	20"	36"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 60+29 CENTER OF MEDIAN	AC	TREE	ADIRONDACK CRABAPPLE	MALUS SPECIES	3.0" CAL.	B&B	24"	20"	36"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 61+07 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 63+94 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 73+28 CENTER OF MEDIAN	CO	TREE	CRIMSON SPIRE ENGLISH OAK	QUERCUS ROBUR 'FASTIGIATA'	3.0" CAL.	B&B	24"	20"	42"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 80+80 CENTER OF MEDIAN	SH	TREE	SHADEMASTER HONEYLOCUST	GLEDITSIA TRIACANTHOS 'INERMIS'	3.0" CAL.	B&B	24"	18"	36"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY
STA. 81+27 CENTER OF MEDIAN	SH	TREE	SHADEMASTER HONEYLOCUST	GLEDITSIA TRIACANTHOS 'INERMIS'	3.0" CAL.	B&B	24"	18"	36"	24"	INDEFINITE	BRACE	3 EACH	NONE	48"	SPECIMEN QUALITY

2

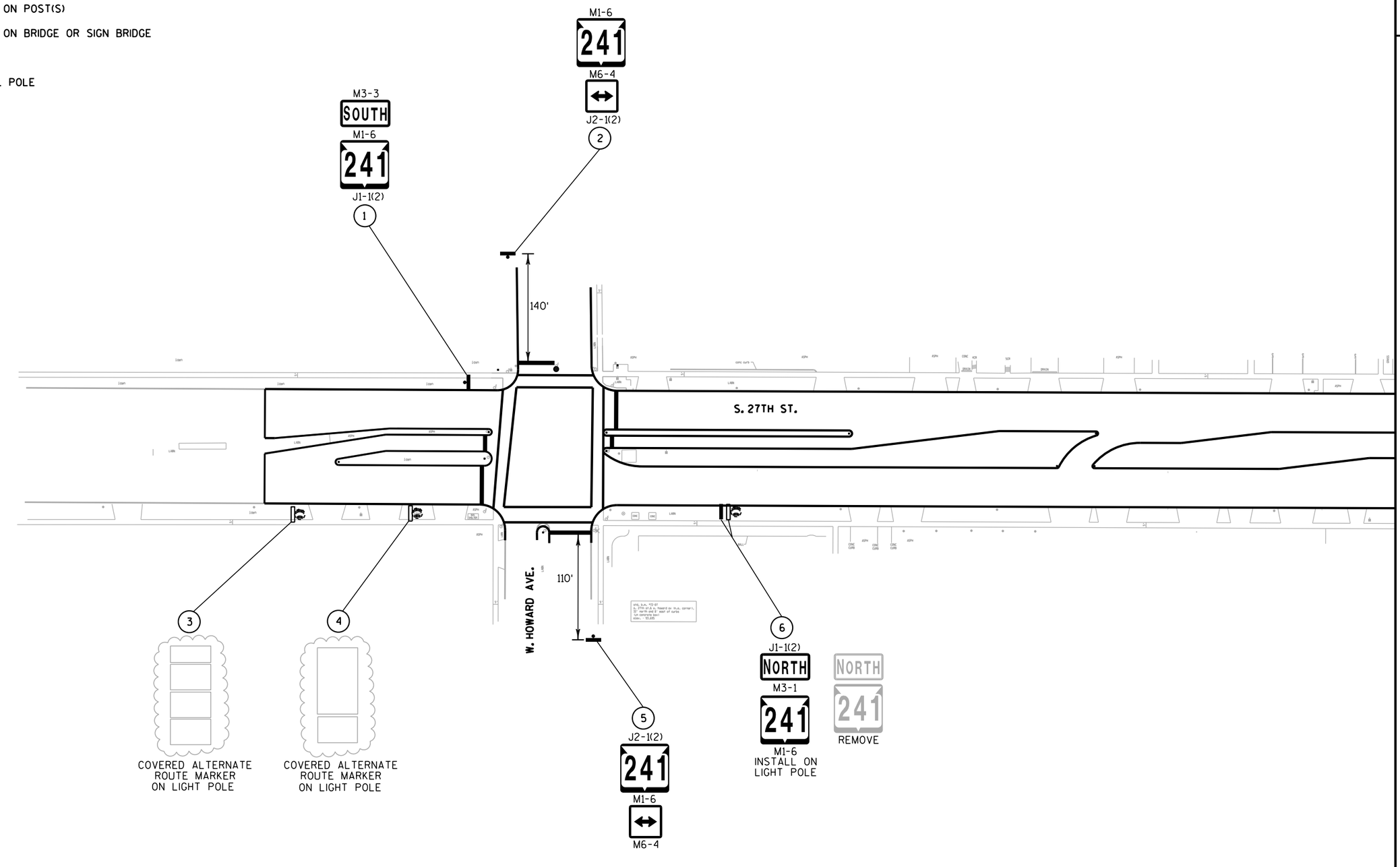
PLANTING DATA TABLE - STREETSCAPE

LOCATION	SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE WHEN PLANTED	ROOT ZONE MODE	BALL/POT (MIN. SIZE)		HOLE (MIN. SIZE)		ROOT SPREAD	BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAMETER	REMARKS
							DIA.	DEPTH	DIA.	DEPTH						
VARIOUS	AH	SHRUB	ANNABELLE HYDRANGEAS	HYDRANGEAS	#5	CG	12"	12"	36"	9"	36"	N/A	1 EACH	NONE	48"	SPECIMEN QUALITY
VARIOUS	CH	SHRUB	"COOL SPLASH" HONEYSUCKLE	DIERVILLA	#5	CG	12"	12"	36"	9"	36"	N/A	1 EACH	NONE	48"	SPECIMEN QUALITY
VARIOUS	GS	SHRUB	GROW LOW SUMAC	RHUS AROMATIC 'GROW LOW'	#3	CG	12"	12"	36"	9"	36"	N/A	1 EACH	NONE	48"	SPECIMEN QUALITY
VARIOUS	RR	SHRUB	RED KNOCKOUT ROSES	ROSA SPECIES	#5	CG	12"	12"	36"	9"	36"	N/A	1 EACH	NONE	48"	SPECIMEN QUALITY
VARIOUS	YR	SHRUB	YELLOW KNOCKOUT ROSES	ROSA SPECIES	#5	CG	12"	12"	36"	9"	36"	N/A	1 EACH	NONE	48"	SPECIMEN QUALITY
VARIOUS	BH	PERENNIAL	GIANT BLUE HOSTAS	HOSTA ELEGANS	#1	CG	9"	6"	30"	9"	24"	N/A	1 EACH	NONE	36"	SPECIMEN QUALITY
VARIOUS	CM	PERENNIAL	BLUE WONDER CATMINT	NEPETA "WALKERS LOW"	#1	CG	9"	6"	30"	9"	24"	N/A	1 EACH	NONE	36"	SPECIMEN QUALITY
VARIOUS	DD	PERENNIAL	DWARF DAYLILLIES	HEMEROCALLIS "STELLA DORO"	#1	CG	9"	6"	30"	9"	24"	N/A	1 EACH	NONE	36"	SPECIMEN QUALITY
VARIOUS	SD	PERENNIAL	BECKY SHASTA DAISY	LEUCANTHEMUM "ALASKA"	#1	CG	9"	6"	30"	9"	24"	N/A	1 EACH	NONE	36"	SPECIMEN QUALITY
VARIOUS	OG	GRASS	ORNAMENTAL GRASS	PENNISETUM "HAMLEN"	#5	CG	9"	6"	30"	9"	24"	N/A	1 EACH	NONE	36"	SPECIMEN QUALITY
VARIOUS	DB	BULB	DAFFODIL	NARCISSUS	3" x 3"	BULB	3"	3"	4"	4"	N/A	N/A	N/A	NONE	N/A	PLANTED IN NEW BED AREAS

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN



SHEET 1 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 130	E

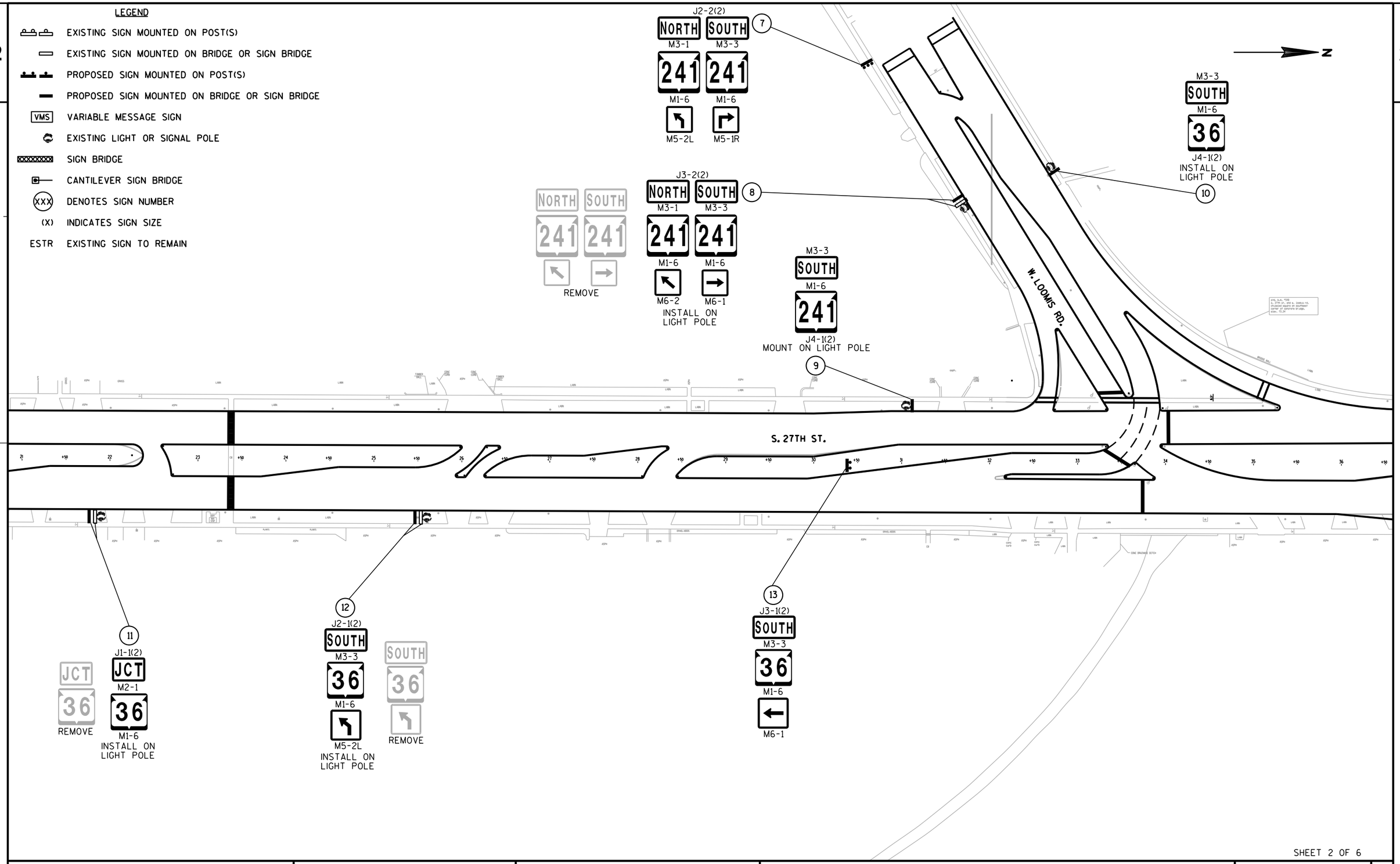
FILE NAME : J:\projects\d2_226508241\Sign\023201_ps.dgn PLOT DATE : 08-MAY-2013 06:15 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN



SHEET 2 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 131	E

2

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

M1-6 241
M6-4
J2-1(2)
15

185'

M3-3 SOUTH
M3-3 SOUTH
M1-6 241
M1-6 36
M6-1
M5-2R
J2-2(2)
INSTALL ON LIGHT POLE
14

SOUTH 241
SOUTH 36
REMOVE

W. MORGAN AVE.

S. 27TH ST.

M2-1 JCT
M1-6 36
J1-1(2)
INSTALL ON LIGHT POLE
16

JCT 36
REMOVE

17
INSTALL ON LIGHT POLE
J4-1(2)
NORTH
M3-1
241
M1-6

NORTH 241
REMOVE

170'

18
J2-1(2)
241
M1-6
M6-4
MOUNT ON LIGHT POLE

SHEET 3 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 132	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

2

M3-3
SOUTH
M1-6
241
J4-1(2)
MOUNT ON LIGHT POLE
19

W. OHIO AVE.

W. EUCLID AVE

S. 27TH ST.

S. 27TH ST.

SHEET 4 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 133	E

FILE NAME : J:\projects\d2_226508241\Sign\023204_ps.dgn PLOT DATE : 08-MAY-2013 06:15 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

2

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

M1-6
241
M6-4
J2-1(2)
MOUNT ON LIGHT POLE
20

132'

W. DAKOTA ST.

S. 27TH ST.

W. OKLAHOMA AVE.

213'

W. KINNICKINNIC RIVER PKWY.

22
J4-1(2)
NORTH
M3-1
241
M1-6
INSTALL ON LIGHT POLE

21
J2-1(2)
241
M1-6
M6-4
MOUNT ON LIGHT POLE

SHEET 5 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 134	E

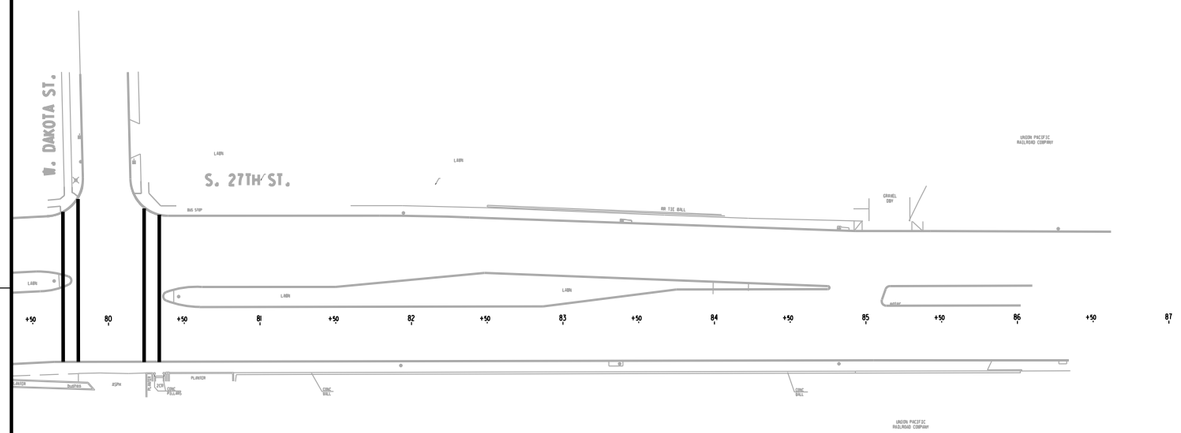
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2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N



2

SHEET 6 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 135	E

FILE NAME : J:\projects\d2_226508241\Sign\023206_ps.dgn PLOT DATE : 08-MAY-2013 06:15 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

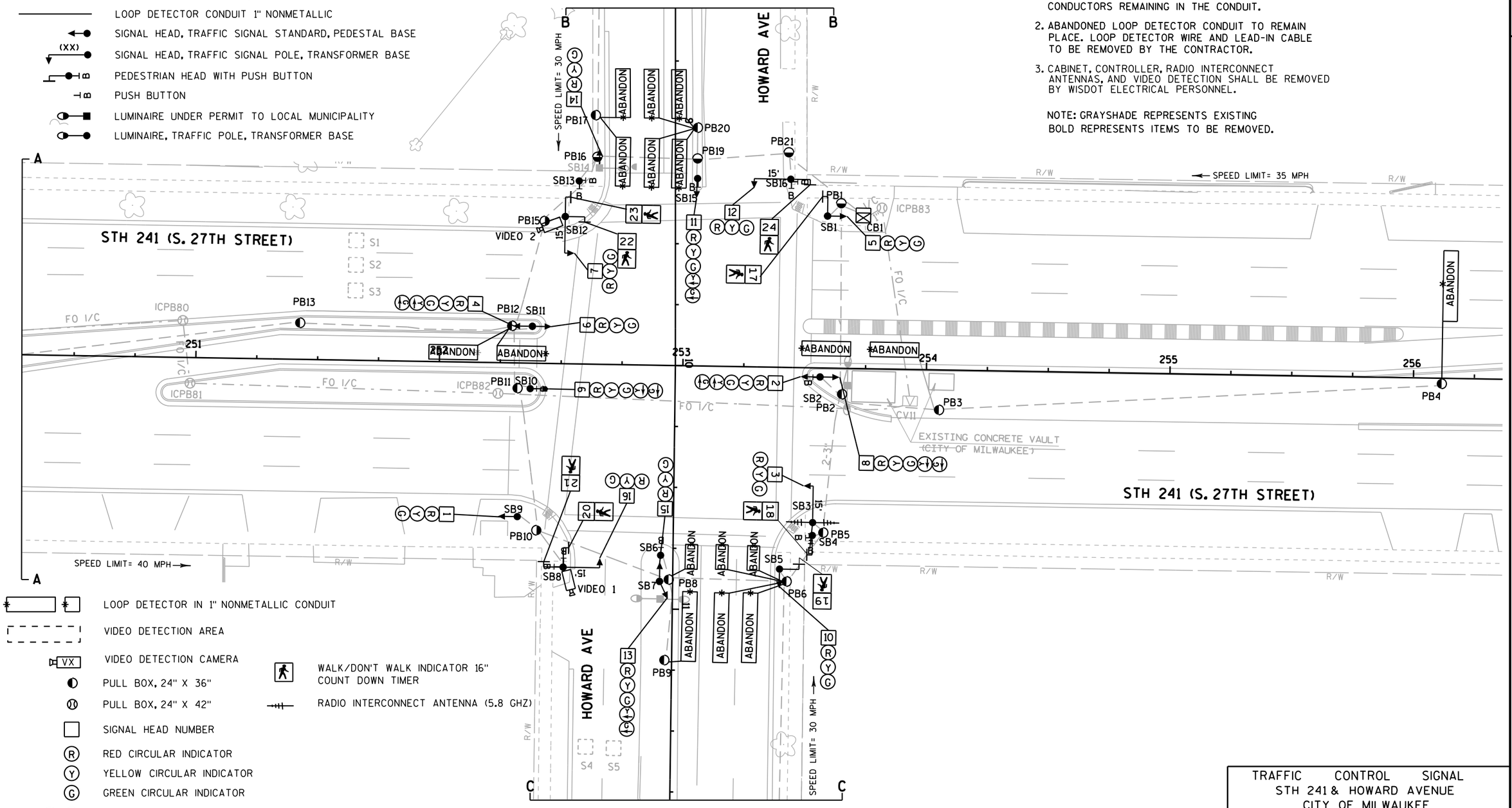
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET, CONTROLLER, RADIO INTERCONNECT ANTENNAS, AND VIDEO DETECTION SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.

NOTE: GRAYSHADE REPRESENTS EXISTING
BOLD REPRESENTS ITEMS TO BE REMOVED.



- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" COUNT DOWN TIMER
- RADIO INTERCONNECT ANTENNA (5.8 GHZ)

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 136	E

FILE NAME : J:\projects\d2_226508241\Signal\S1086_Removal.dgn PLOT DATE : 23-AUG-2013 07:29 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

A

STH 241 (S. 27TH STREET)

19

250

FO I/C

ICPB79

PB14

ABANDON

SPEED LIMIT= 40 MPH

A

C

C

12

HOWARD AVE

R/W

13

ABANDON

PB22

SPEED LIMIT= 30 MPH

14

PB18

ABANDON

7

8

HOWARD AVE

R/W

SPEED LIMIT= 30 MPH

R/W

B

B

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

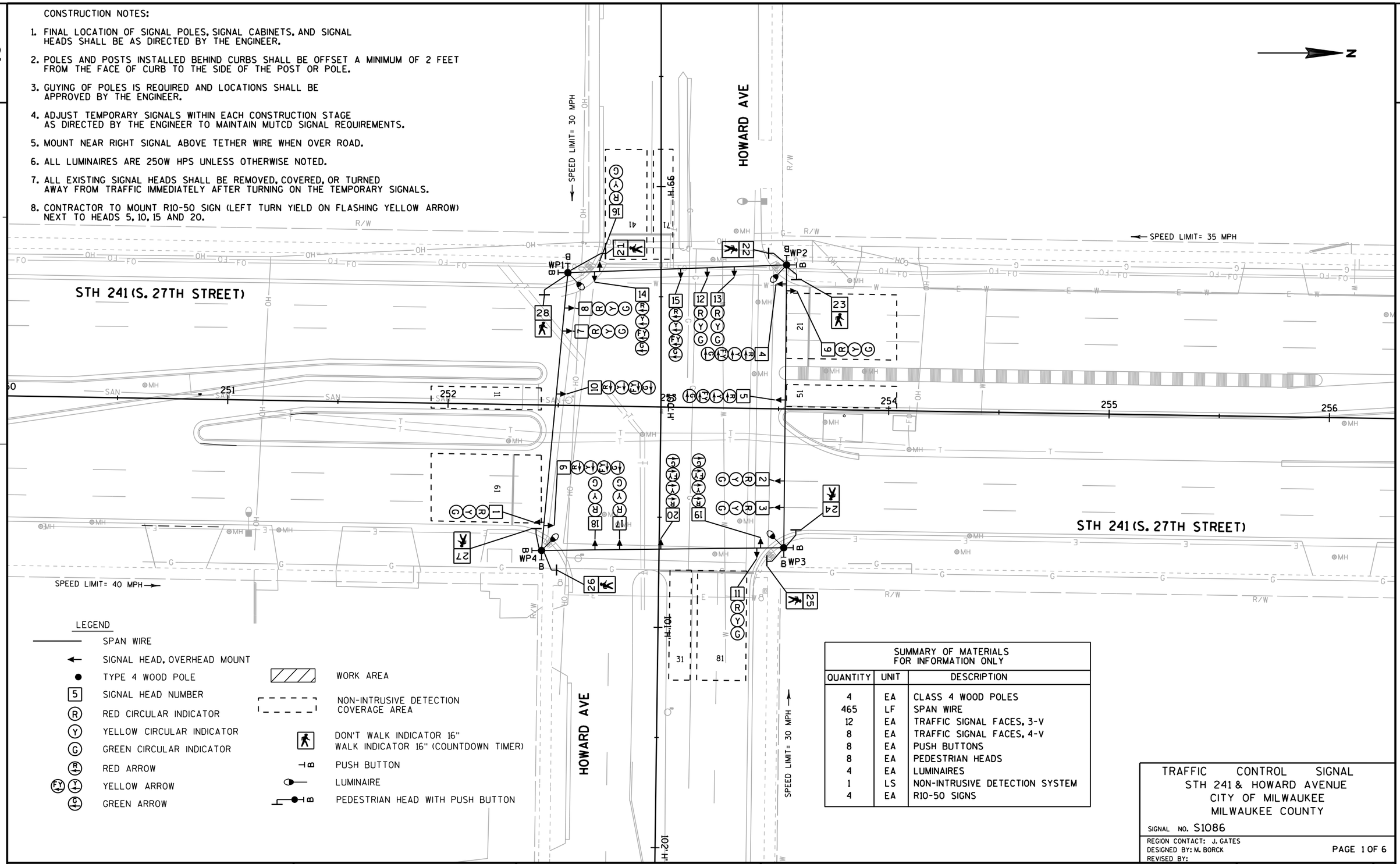
REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 137	E

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
6. ALL LUMINAIRES ARE 250W HPS UNLESS OTHERWISE NOTED.
7. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON THE TEMPORARY SIGNALS.
8. CONTRACTOR TO MOUNT R10-50 SIGN (LEFT TURN YIELD ON FLASHING YELLOW ARROW) NEXT TO HEADS 5, 10, 15 AND 20.



LEGEND

- SPAN WIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- TYPE 4 WOOD POLE
- [5] SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WORK AREA
- NON-INTRUSIVE DETECTION COVERAGE AREA
- DON'T WALK INDICATOR 16" / WALK INDICATOR 16" (COUNTDOWN TIMER)
- PUSH BUTTON
- LUMINAIRE
- PEDESTRIAN HEAD WITH PUSH BUTTON

SUMMARY OF MATERIALS FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
4	EA	CLASS 4 WOOD POLES
465	LF	SPAN WIRE
12	EA	TRAFFIC SIGNAL FACES, 3-V
8	EA	TRAFFIC SIGNAL FACES, 4-V
8	EA	PUSH BUTTONS
8	EA	PEDESTRIAN HEADS
4	EA	LUMINAIRES
1	LS	NON-INTRUSIVE DETECTION SYSTEM
4	EA	R10-50 SIGNS

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 1 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION	SHEET 138 E

FILE NAME : J:\projects\d2_226508241\Signal\Temp\Preconstruction.dgn PLOT DATE : 23-AUG-2013 07:29 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

SPEED LIMIT= 30 MPH

HOWARD AVE

SPEED LIMIT= 35 MPH

STH 241 (S. 27TH STREET)

SPEED LIMIT= 40 MPH

HOWARD AVE

SPEED LIMIT= 30 MPH

STH 241 (S. 27TH STREET)

LEGEND

- SPAN WIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- TYPE 4 WOOD POLE
- 5 SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW
- (G) GREEN ARROW
- WORK AREA
- NON-INTRUSIVE DETECTION COVERAGE AREA
- DON'T WALK INDICATOR 16" / WALK INDICATOR 16" (COUNTDOWN TIMER)
- PUSH BUTTON
- LUMINAIRE
- PEDESTRIAN HEAD WITH PUSH BUTTON

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 2 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 139 E

FILE NAME : J:\projects\d2_226508241\Signal\Temp\Temp_Stage1a.dgn PLOT DATE : 23-AUG-2013 07:29 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

2

N

HOWARD AVE

SPEED LIMIT= 30 MPH

SPEED LIMIT= 35 MPH

STH 241 (27TH STREET)

STH 241 (S. 27TH STREET)

SPEED LIMIT= 40 MPH

HOWARD AVE

SPEED LIMIT= 30 MPH

99' H.

102' H.

WP1

WP2

WP3

WP4

LEGEND

- SPAN WIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- TYPE 4 WOOD POLE
- [5] SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW
- (G) GREEN ARROW
- WORK AREA
- NON-INTRUSIVE DETECTION COVERAGE AREA
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16" (COUNTDOWN TIMER)
- PUSH BUTTON
- LUMINAIRE
- PEDESTRIAN HEAD WITH PUSH BUTTON

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 3 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET 140 E

FILE NAME : J:\projects\d2_226508241\Signal\Temp\Temp_Stage1b.dgn PLOT DATE : 23-AUG-2013 07:29 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

2

N

2

HOWARD AVE

SPEED LIMIT= 30 MPH

SPEED LIMIT= 35 MPH

SPEED LIMIT= 40 MPH

SPEED LIMIT= 30 MPH

STH 241 (S. 27TH STREET)

STH 241 (S. 27TH STREET)

HOWARD AVE

WP1

WP2

WP3

WP4

LEGEND

- SPAN WIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- TYPE 4 WOOD POLE
- 5 SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RA RED ARROW
- FY YELLOW ARROW
- GA GREEN ARROW
- WORK AREA
- NON-INTRUSIVE DETECTION COVERAGE AREA
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16" (COUNTDOWN TIMER)
- PUSH BUTTON
- LUMINAIRE

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 4 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2A	SHEET 141 E

FILE NAME : J:\projects\d2_226508241\Signal\Temp\Temp_Stage2a.dgn PLOT DATE : 23-AUG-2013 07:29 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

2

N

2

STH 241 (S. 27TH STREET)

HOWARD AVE

SPEED LIMIT= 30 MPH

SPEED LIMIT= 35 MPH

SPEED LIMIT= 40 MPH

SPEED LIMIT= 30 MPH

99' H.

101' H.

102' H.

WP1

WP2

WP3

WP4

ONLY

31

81

LEGEND

- SPAN WIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- TYPE 4 WOOD POLE
- [5] SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WORK AREA
- NON-INTRUSIVE DETECTION COVERAGE AREA
- DON'T WALK INDICATOR 16" / WALK INDICATOR 16" (COUNTDOWN TIMER)
- PUSH BUTTON
- LUMINAIRE
- PEDESTRIAN HEAD WITH PUSH BUTTON

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

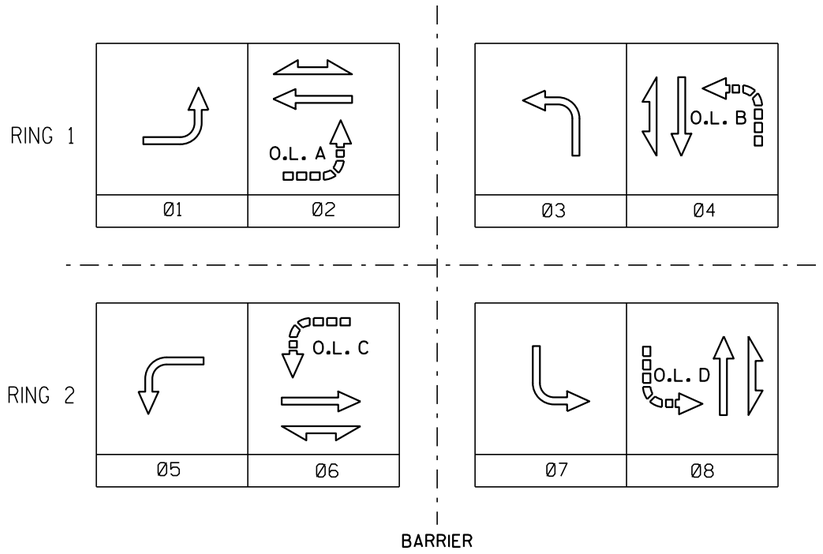
PAGE 5 OF 6

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2B	SHEET 142 E

FILE NAME : J:\projects\d2_226508241\Signal\Temp\Temp_Stage2b.dgn PLOT DATE : 23-AUG-2013 07:29 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3	14,15	-
Ø4	16,17,18	R
Ø5	9,10	-
Ø6	1,2,3	R
Ø7	19,20	-
Ø8	11,12,13	R
Ø2P	21,22	
Ø4P	27,28	
Ø6P	25,26	
Ø8P	23,24	
OLA	4,5	R
OLB	14,15	R
OLC	9,10	R
OLD	19,20	R



N

CONTROLLER LOGIC

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

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

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

TYPE OF LIGHTING	
BY OTHER AGENCY	x
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

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

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11		X			1	1					
21		X			2	2					
31		X			3	3					
41		X			4	4					
51		X			5	5					
61		X			6	6					
71		X			7	7					
81		X			8	8					

STH 241 (27TH ST.) & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086 CABINET TYPE:

CONTROLLER TYPE:

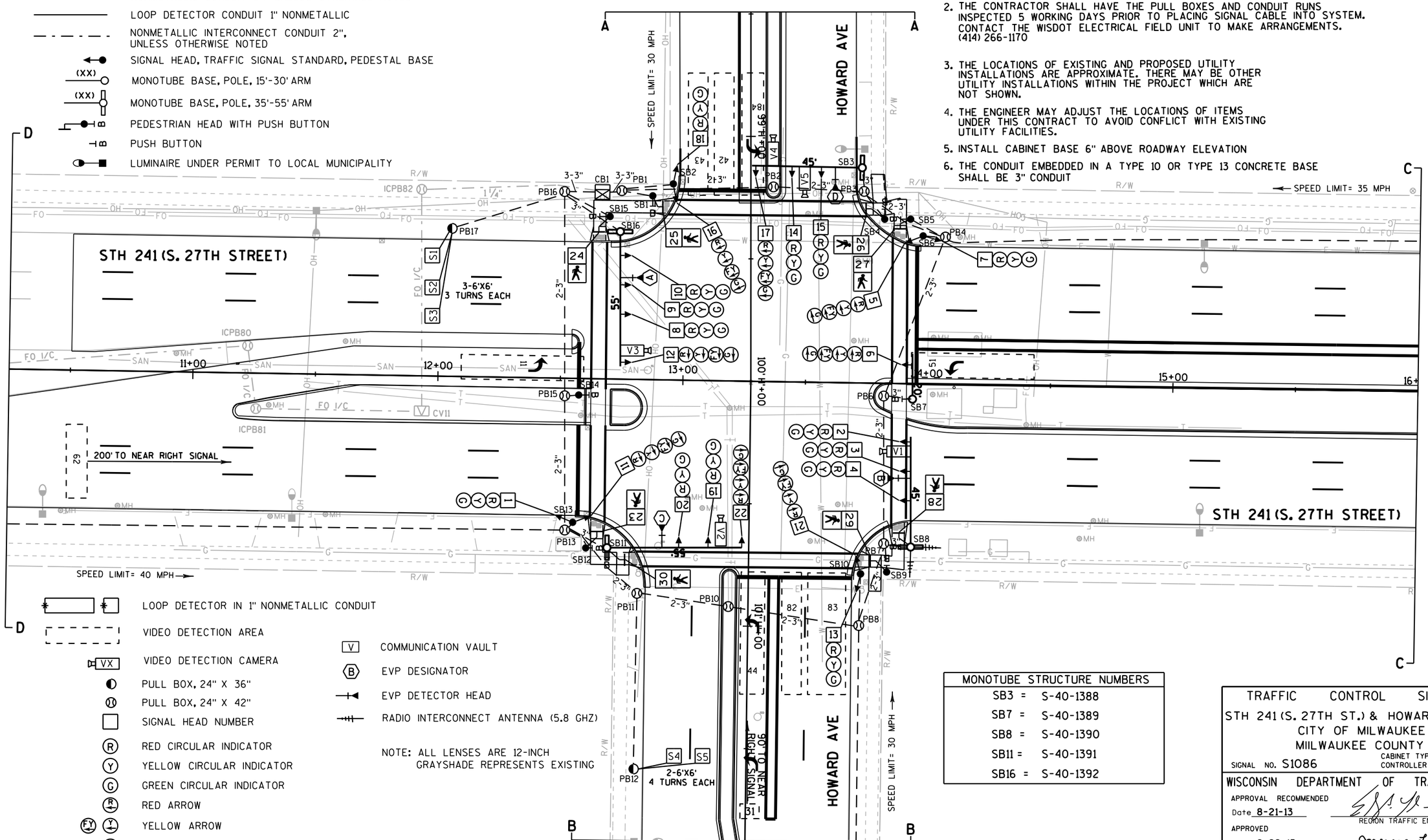
DATE 8/13 PAGE NO. 6 OF 6

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT



- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW
- (G) GREEN ARROW
- DON'T WALK INDICATOR 16" WALK INDICATOR 16" (COUNTDOWN TIMER)
- V COMMUNICATION VAULT
- (B) EVP DESIGNATOR
- EVP DETECTOR HEAD
- RADIO INTERCONNECT ANTENNA (5.8 GHZ)

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

MONOTUBE STRUCTURE NUMBERS	
SB3 =	S-40-1388
SB7 =	S-40-1389
SB8 =	S-40-1390
SB11 =	S-40-1391
SB16 =	S-40-1392

TRAFFIC CONTROL SIGNAL

STH 241 (S. 27TH ST.) & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086
CABINET TYPE: TS2
CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 8-21-13
REGION TRAFFIC ENGINEER

APPROVED
Date 8-22-13
STATE TRAFFIC ENGINEER

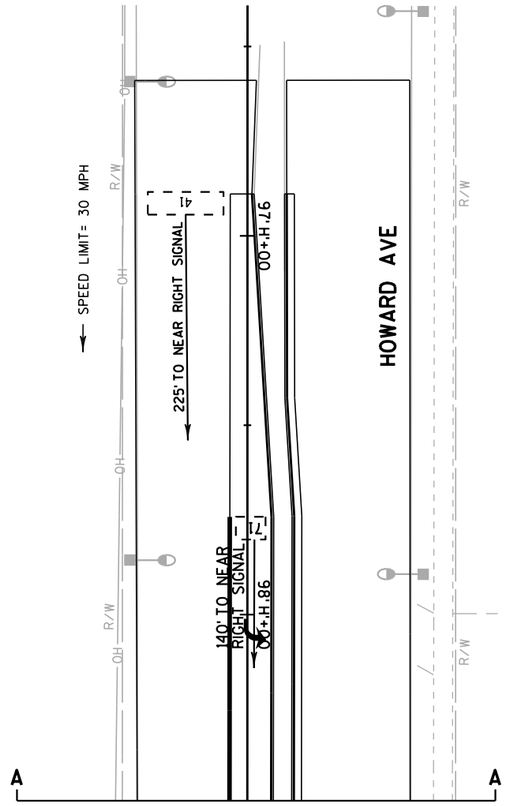
REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

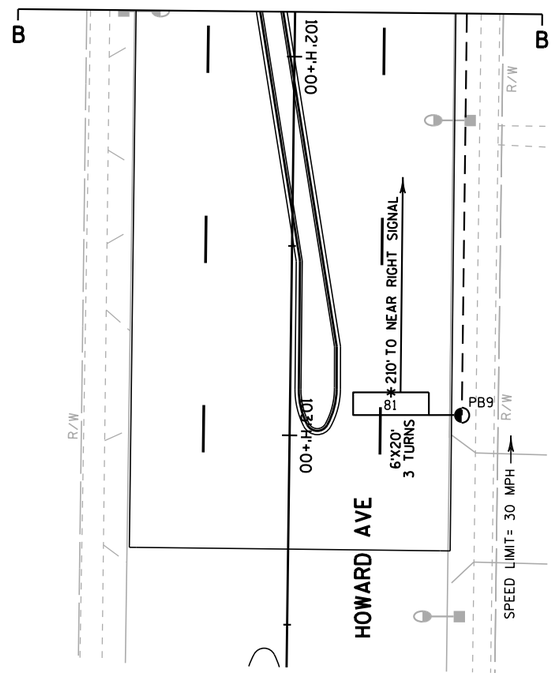
PAGE 1 OF 4

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 144 E

FILE NAME : J:\projects\d2_226508241\Signal\S1086_I .dgn PLOT DATE : 23-AUG-2013 07:28 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42





N

TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

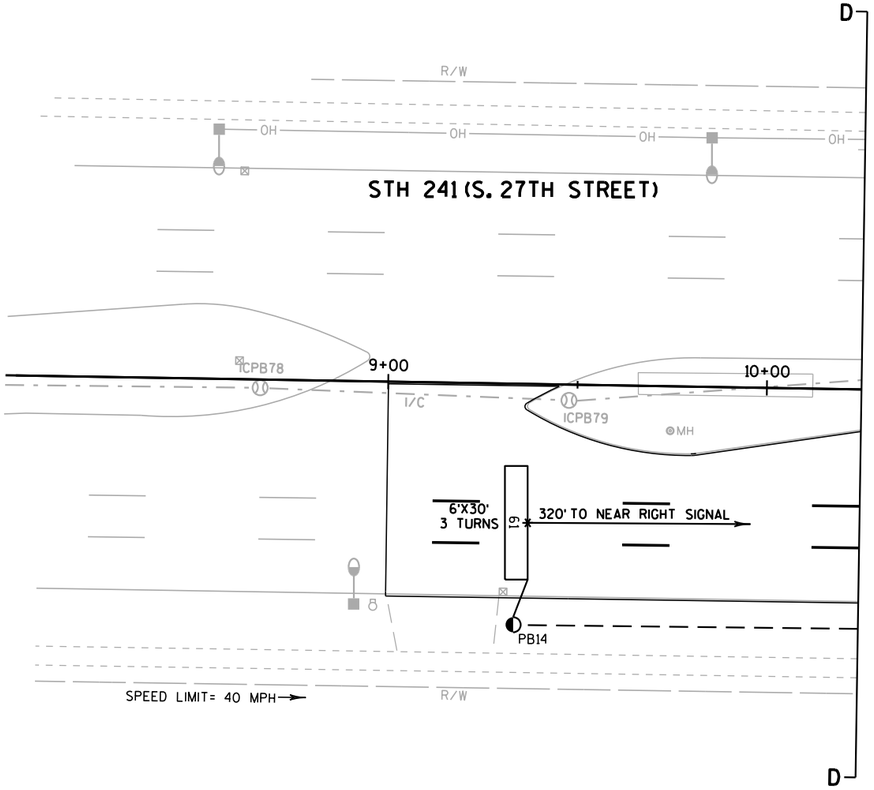
REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

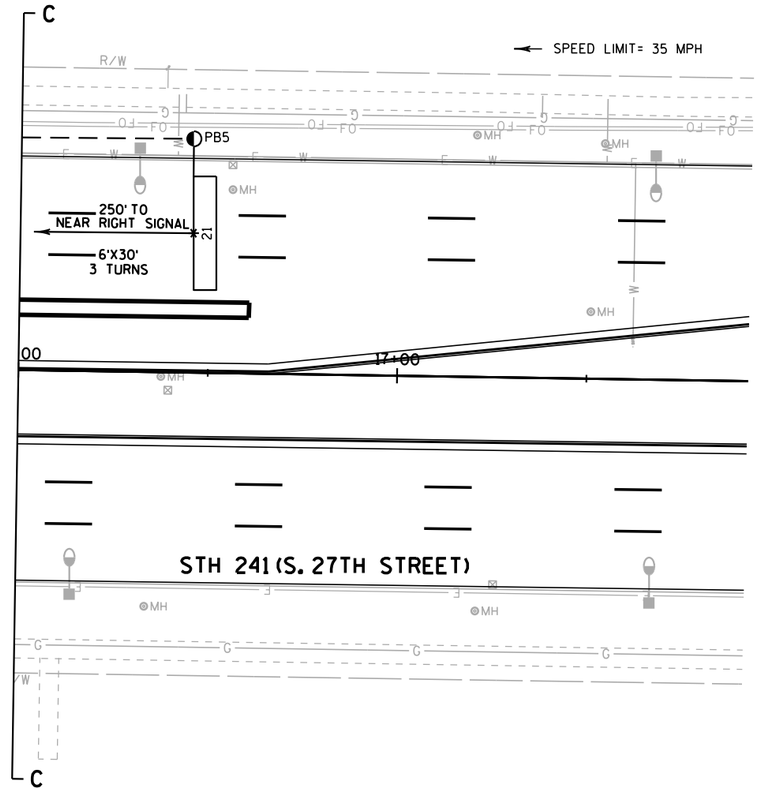
PAGE 2 OF 4

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 145	E

N

2





TRAFFIC CONTROL SIGNAL
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

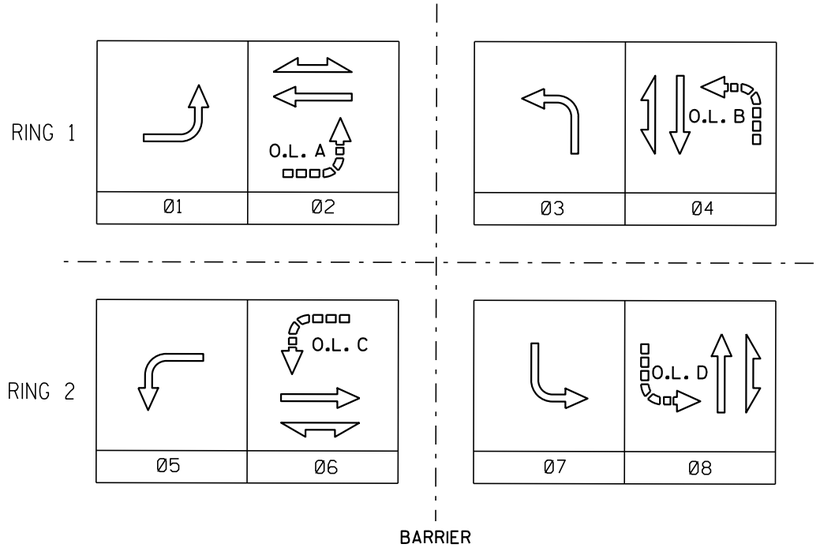
SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 3 OF 4

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 146	E

	HEAD NUMBERS	FLASH
Ø1	5,6	-
Ø2	7,8,9,10	R
Ø3	16,17	-
Ø4	18,19,20	R
Ø5	11,12	-
Ø6	1,2,3,4	R
Ø7	21,22	-
Ø8	13,14,15	R
Ø2P	25,26	
Ø4P	23,24	
Ø6P	29,30	
Ø8P	27,28	
OLA	5,6	R
OLB	16,17	R
OLC	11,12	R
OLD	21,22	R



N

CONTROLLER LOGIC

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

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

TYPE OF COORDINATION	
NONE	
TBC	x
TRAFFIC RESPONSIVE	x
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS-00-22

TYPE OF LIGHTING	
BY OTHER AGENCY	x
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	21	61	81			S1	S3	S5
ASSIGNED PHASE	2	6	8					
OPERATION MODE	VEH	VEH	VEH					
SWITCH								
EXTEND			X					
DELAY								

19	17	23	21	27	25	31	29	DETECTOR INPUT
11	31	41	42	44	62	82	84	PLAN LOOP DETECTOR *(S)
1	3	4	4	4	6	8	8	ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
		X						EXTEND
	X							DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)						S2	S4	
ASSIGNED PHASE								
OPERATION MODE								
SWITCH								
EXTEND								
DELAY								

20	18	24	22	28	26	32	30	DETECTOR INPUT
51	71		43			83		PLAN LOOP DETECTOR *(S)
5	7		4			8		ASSIGNED PHASE
VEH	VEH		VEH			VEH		OPERATION MODE
								SWITCH
								EXTEND
	X		X			X		DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT	FY	FY	FY	FY
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 241 (27TH ST.) & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086 CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 8/13 PAGE NO. 4 OF 4

PROJECT ID:	2265-08-70
INTERSECTION:	STH 241 & Howard Ave.

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

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	JUMPER	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK		
SB1	7	25									BLK	BLU		
		BUTTON											WHT/BLK	
SB2	12	16					RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		18		RED	ORG	GRN								
SB3	12	14		RED	ORG	GRN								
		15		RED	ORG	GRN								
		17					RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB4	7	26									BLK	BLU		
		BUTTON											WHT/BLK	
SB5	7	27									BLK	BLU		
		BUTTON											WHT/BLK	
SB6	12	5					RED	ORG	GRN	BLK/WHT				
		7		RED/BLK	ORG/BLK	GRN/BLK								
SB7	12	6					RED	ORG	GRN	BLK/WHT				
		BUTTON											WHT/BLK	
SB8	12	2		RED	ORG	GRN								
		3		RED	ORG	GRN								
		4		RED	ORG	GRN								
		28									BLK	BLU		
		BUTTON											WHT/BLK	
SB9	7	29									BLK	BLU		
		BUTTON											WHT/BLK	
SB10	12	13		RED/BLK	ORG/BLK	GRN/BLK								
		21					RED	ORG	GRN	BLK/WHT				
SB11	12	19		RED	ORG	GRN								
		20		RED	ORG	GRN								
		22					RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		30									BLK	BLU		
		BUTTON											WHT/BLK	
SB12	7	23									BLK	BLU		
		BUTTON											WHT/BLK	
SB13	12	1		RED	ORG	GRN								
		11					RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB14	7	BUTTON											WHT/BLK	
SB15	7	24									BLK	BLU		
		BUTTON											WHT/BLK	
SB16	12	8		RED	ORG	GRN								
		9		RED	ORG	GRN								
		10		RED	ORG	GRN								
		12					RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				

Equipment grounding conductor 10 AWG Green XLP

From	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	CB1

Pull Box Bonding Jumper 10 AWG Green XLP

From	To
PB1	CB1
PB2	SB3
PB3	SB3
PB4	SB6
PB6	SB7
PB7	SB8
PB8	SB10
PB10	SB10
PB11	SB13
PB13	SB13
PB15	SB14
PB16	CB1

Video Detector Cable

From	To
CB1	VID1
CB1	VID2
CB1	VID3
CB1	VID4
CB1	VID5

EVP Detector Cable

From	To
CB1	HEAD A
CB1	HEAD B
CB1	HEAD C
CB1	HEAD D

***Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications**
***Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.**
***At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.**
***Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.**

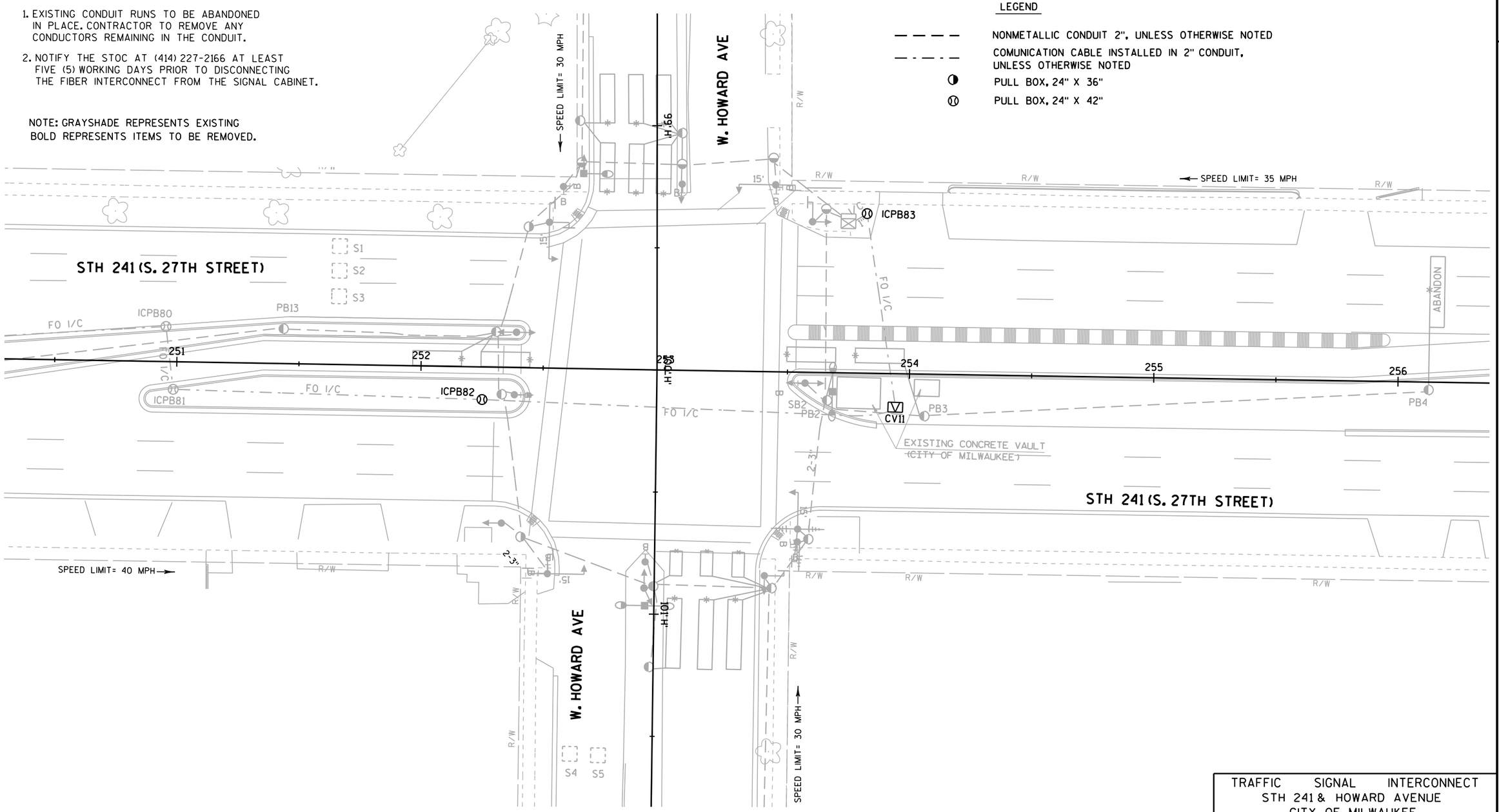
CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. NOTIFY THE STOC AT (414) 227-2166 AT LEAST FIVE (5) WORKING DAYS PRIOR TO DISCONNECTING THE FIBER INTERCONNECT FROM THE SIGNAL CABINET.

NOTE: GRAYSHADE REPRESENTS EXISTING
BOLD REPRESENTS ITEMS TO BE REMOVED.

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- COMUNICATION CABLE INSTALLED IN 2" CONDUIT, UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"



TRAFFIC SIGNAL INTERCONNECT
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1086

REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK
REVISED BY:

PAGE 1 OF 1

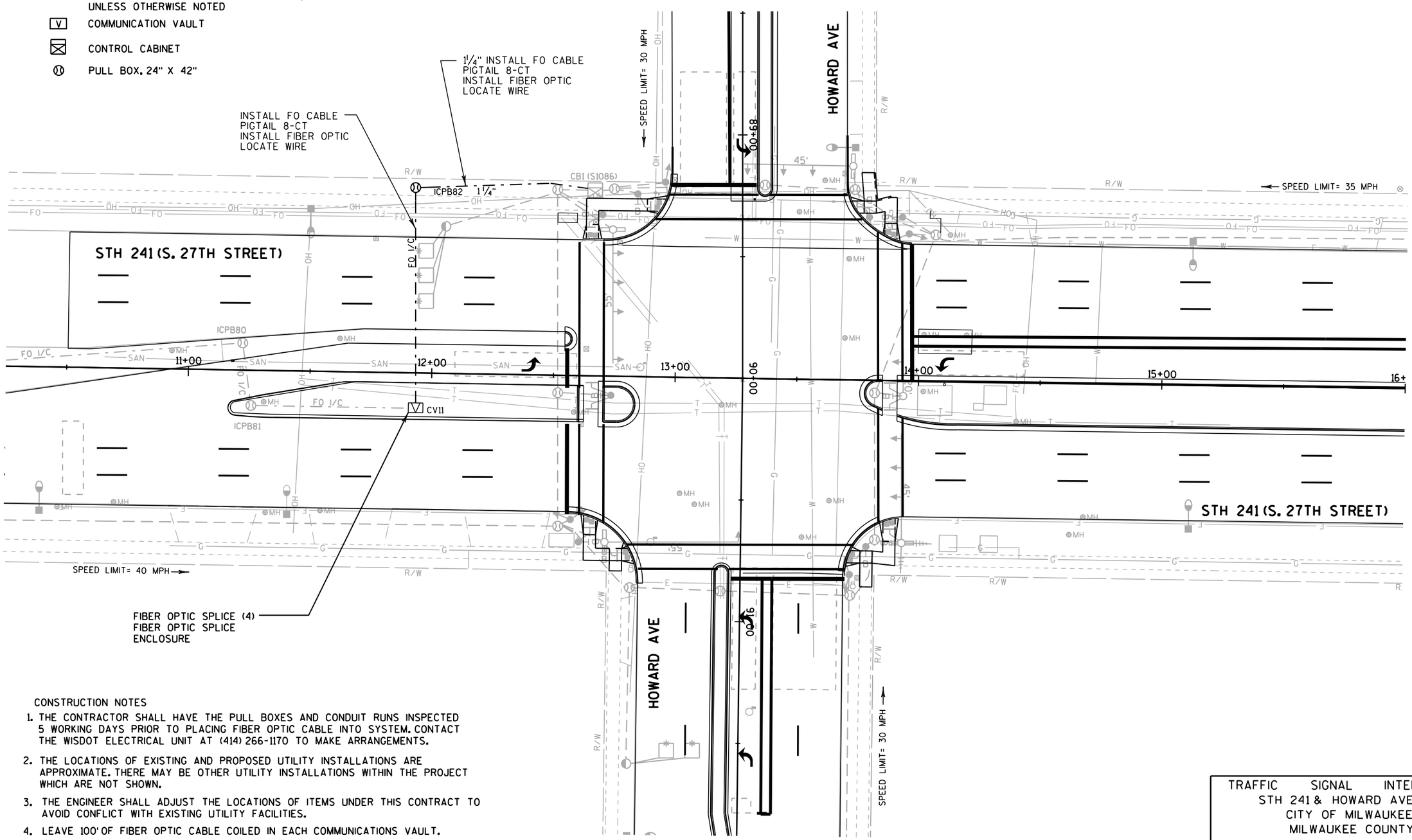
PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	INTERCONNECT REMOVAL PLAN	SHEET 149	E

FILE NAME : J:\projects\d2_226508241\Signal\Interconnect\Interconnect_Removal.dgn PLOT DATE : 23-AUG-2013 08:36 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- COMMUNICATION VAULT
- CONTROL CABINET
- PULL BOX, 24" X 42"



CONSTRUCTION NOTES

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

TRAFFIC SIGNAL INTERCONNECT
STH 241 & HOWARD AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

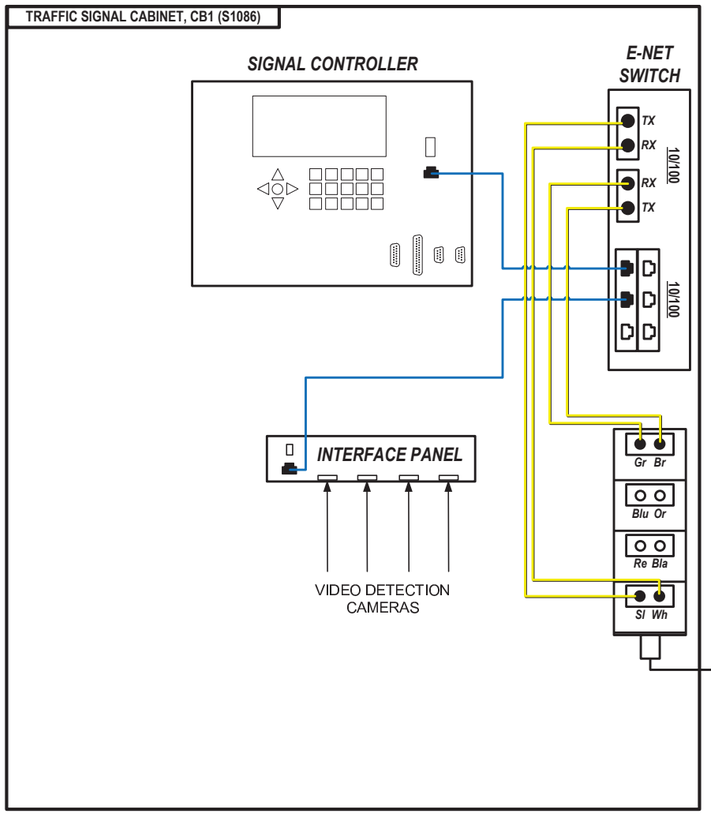
SIGNAL NO. S1086

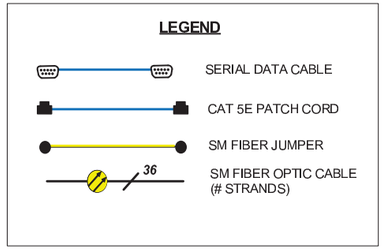
REGION CONTACT: J. GATES
DESIGNED BY: M. BORCK

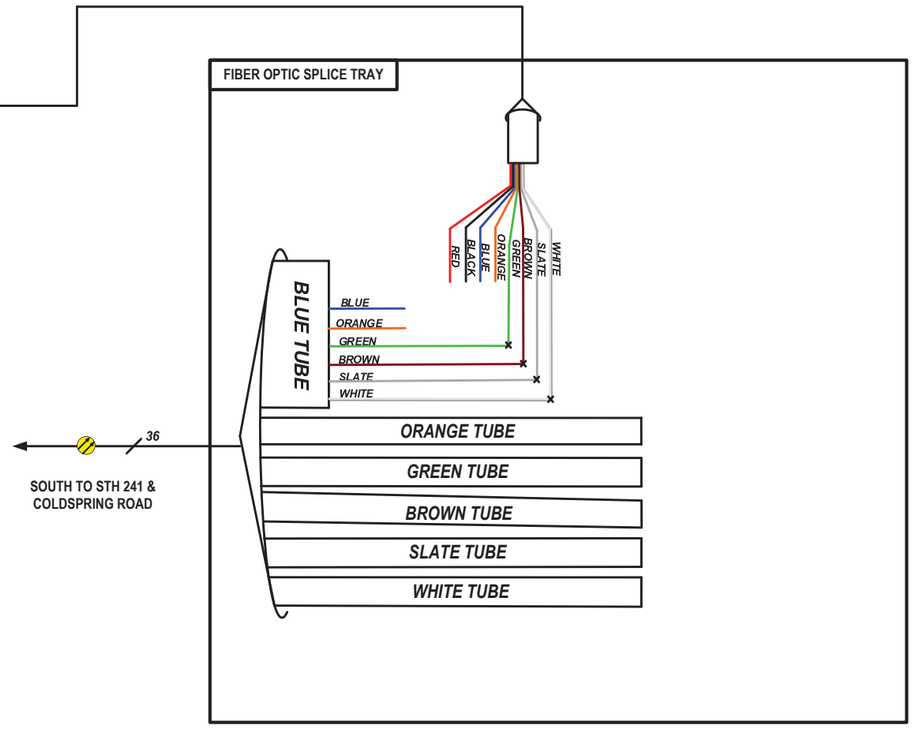
PAGE 1 OF 1

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	INTERCONNECT PLAN	SHEET 150	E

FILE NAME : J:\projects\d2_226508241\Signal\Interconnect\Interconnect .dgn | PLOT DATE : 23-AUG-2013 08:36 | PLOT BY : MSCMWB | PLOT NAME : | PLOT SCALE : 40:1







NOTES:
1. COORDINATE FIBER ASSIGNMENTS WITH MARIE TREAZISE, STOC AT (414) 416-5387 BEFORE SPLICING FIBER OPTIC CABLE
2. MAXIMUM SPLICE LOSS SHALL BE 0.1 dB
3. NO INTERMEDIATE SPLICES ALLOWED
4. ALL SPLICES SHALL BE FUSION SPLICES

2

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:

2

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.

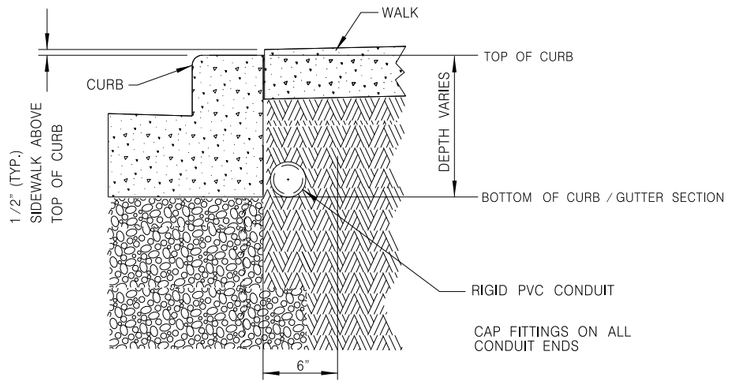
UTILITY LINE CODE

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

SHEET 1 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 152	E

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

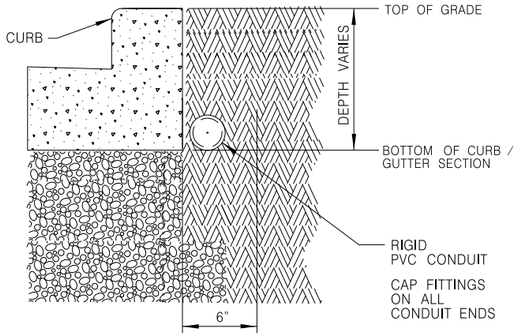
NOT TO SCALE

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

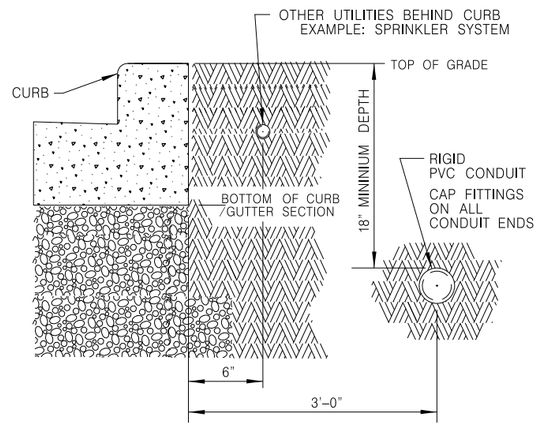
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

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



DETAIL "C"

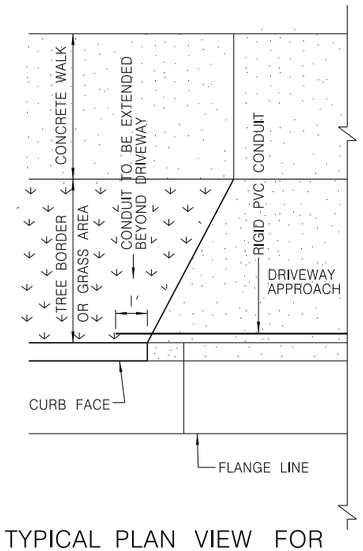


100 DETAIL "B" & "C"

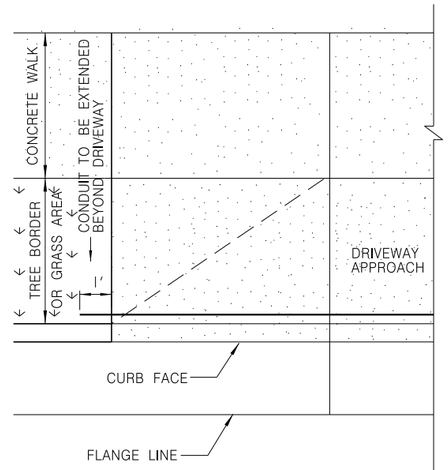
TYPICAL CONDUIT INSTALLATION
BEHIND CURB

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.

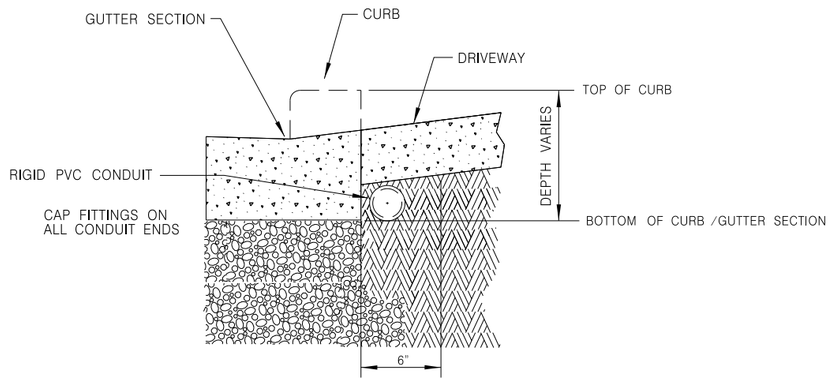


TYPICAL PLAN VIEW FOR
FLARED DRIVEWAY



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.



101 DETAIL

TYPICAL CONDUIT INSTALLATION
UNDER DRIVEWAYS OR PEDESTRIAN RAMPS

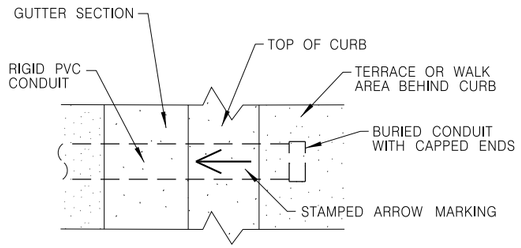
NOT TO SCALE

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

SHEET 2 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 153	E

2

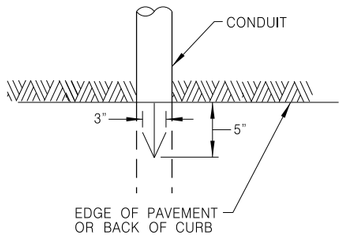


TOP VIEW OF CURB STAMPING

NOT TO SCALE

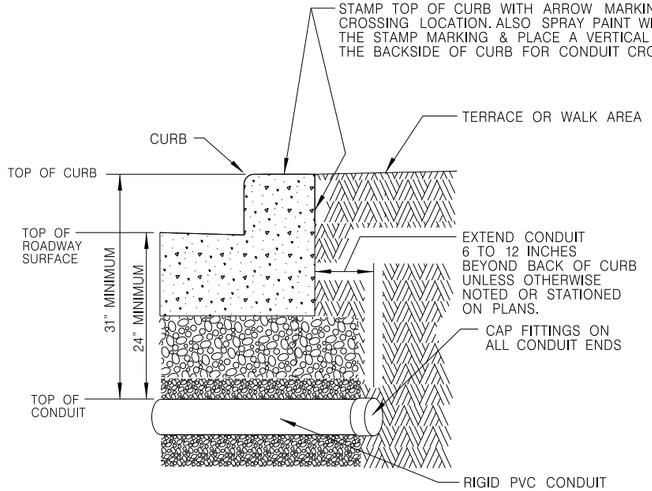
NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4–INCH TO 3/8–INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

NOT TO SCALE



102

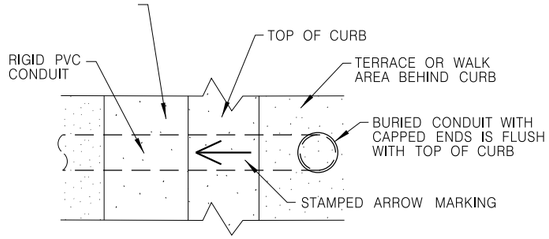
DETAIL VERSION #1

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS

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.

2

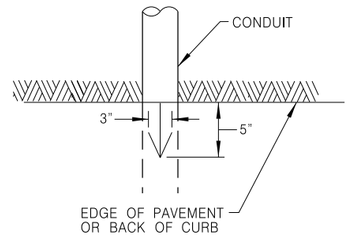


TOP VIEW OF CURB STAMPING

NOT TO SCALE

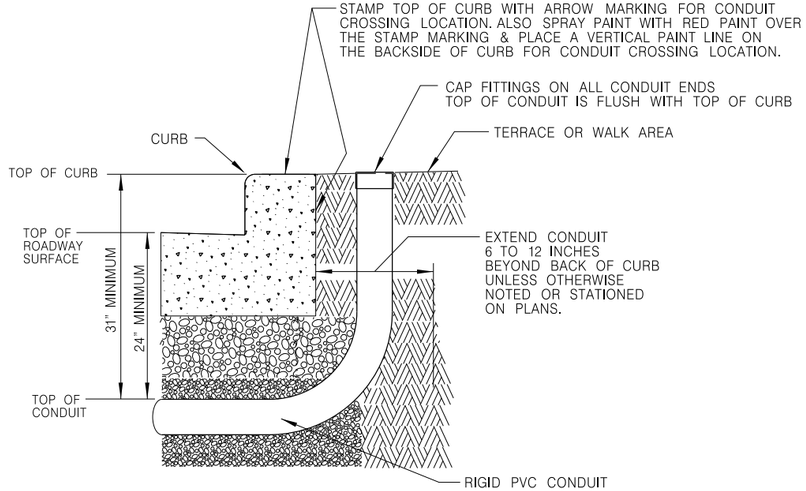
NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4–INCH TO 3/8–INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

NOT TO SCALE



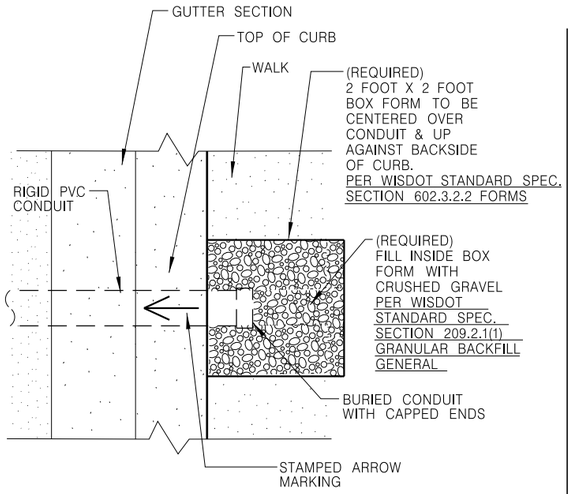
102

DETAIL VERSION #2

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS

NOT TO SCALE

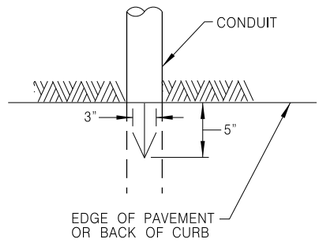
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



TOP VIEW OF CURB STAMPING

NOT TO SCALE

NOTE:
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.

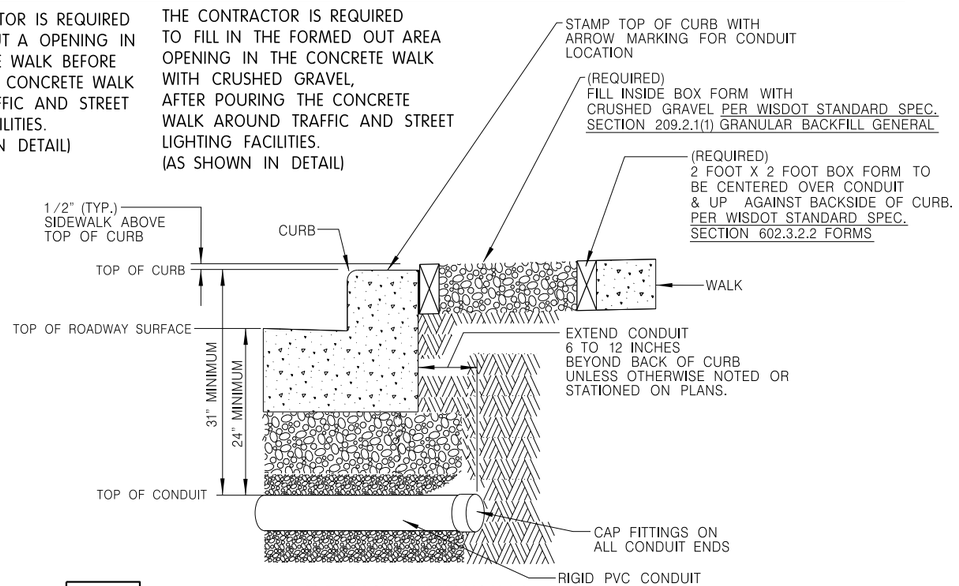


ARROW MARK

NOT TO SCALE

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 CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.
(AS SHOWN IN DETAIL)



103

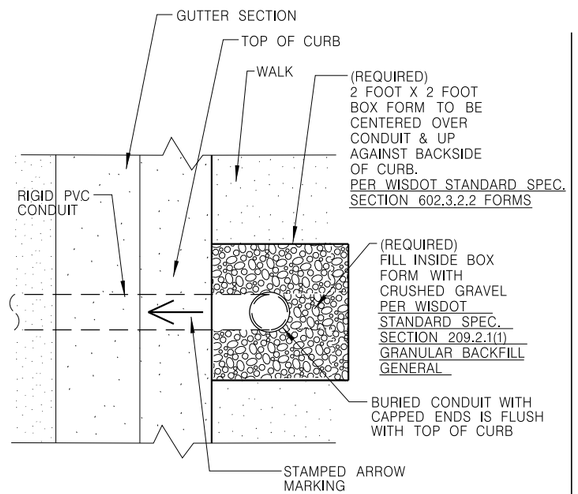
DETAIL VERSION 1

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.

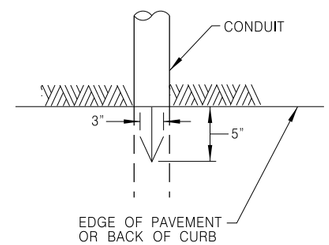
2



TOP VIEW OF CURB STAMPING

NOT TO SCALE

NOTE:
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.

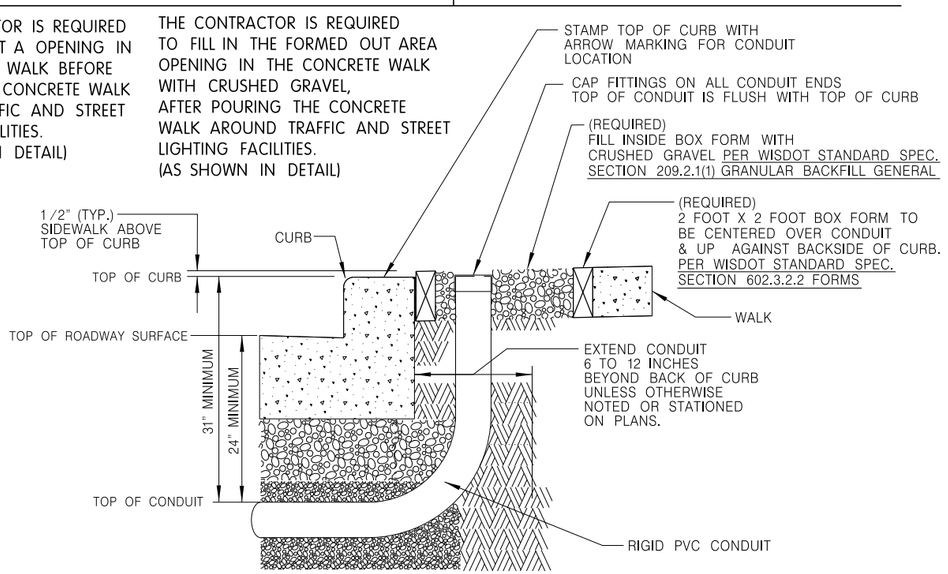


ARROW MARK

NOT TO SCALE

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 CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.
(AS SHOWN IN DETAIL)



103

DETAIL VERSION #2

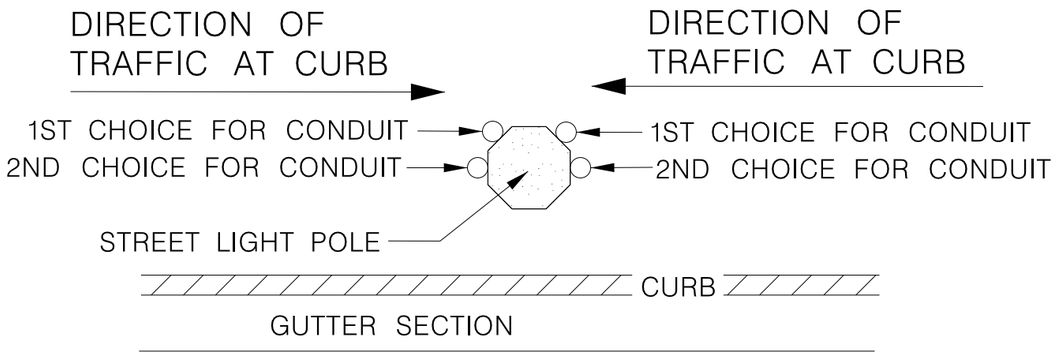
TYPICAL CONDUIT INSTALLATION
FOR CROSSING ROADWAYS
FROM FULL WALK AREAS

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.

SHEET 4 OF 32

NOTE: CAP FITTINGS ON CONDUIT ENDS



104 DETAIL

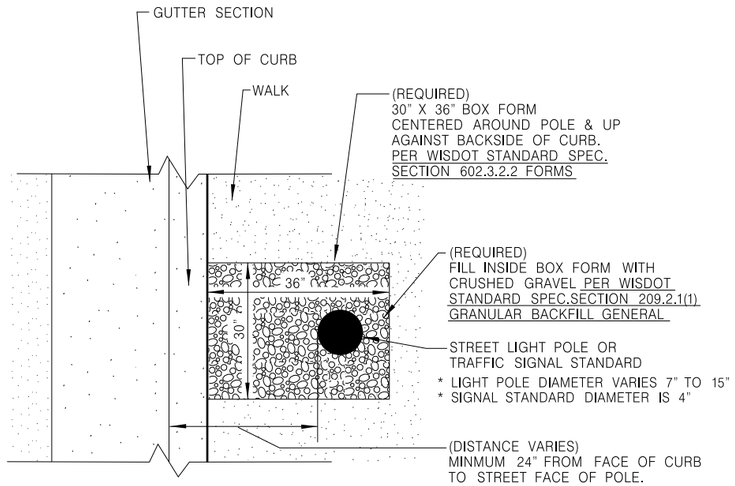
TYPICAL TRAFFIC SIGNAL RISER CONDUIT LOCATIONS ON STREET LIGHT POLE DEPENDING ON DIRECTION OF TRAFFIC AT CURB

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC / 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 ADJACENT DETAIL)

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



105 DETAIL

TYPICAL 30" X 36" BOX FORM AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

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.

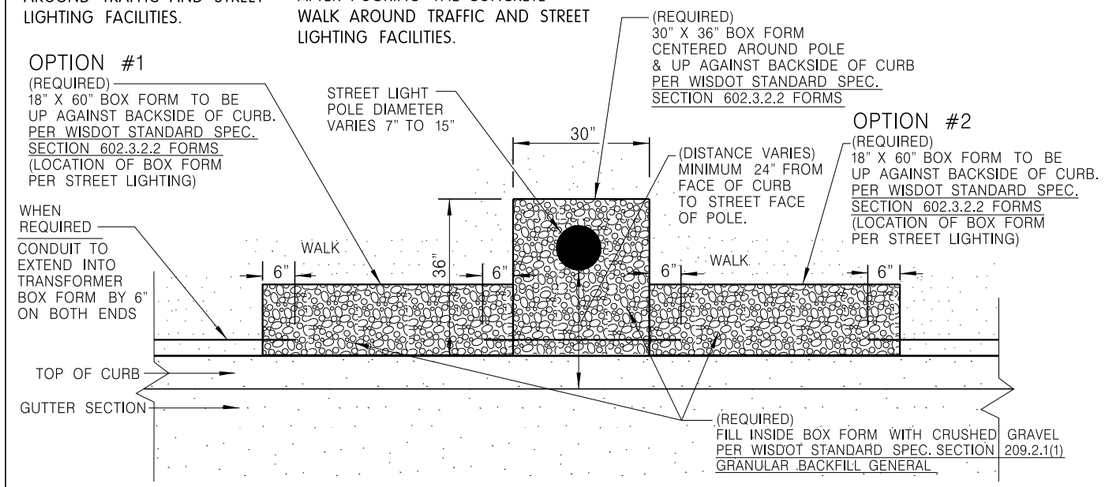
THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

STREET LIGHTING FORCES TO DETERMINE LOCATION OF TRANSFORMER BOX FORM

OPTION #1
(REQUIRED)
18" X 60" BOX FORM TO BE UP AGAINST BACKSIDE OF CURB. PER WISDOT STANDARD SPEC. SECTION 602.3.2.2 FORMS
(LOCATION OF BOX FORM PER STREET LIGHTING)

OPTION #2
(REQUIRED)
18" X 60" BOX FORM TO BE UP AGAINST BACKSIDE OF CURB. PER WISDOT STANDARD SPEC. SECTION 602.3.2.2 FORMS
(LOCATION OF BOX FORM PER STREET LIGHTING)



106 DETAIL VERSION #1

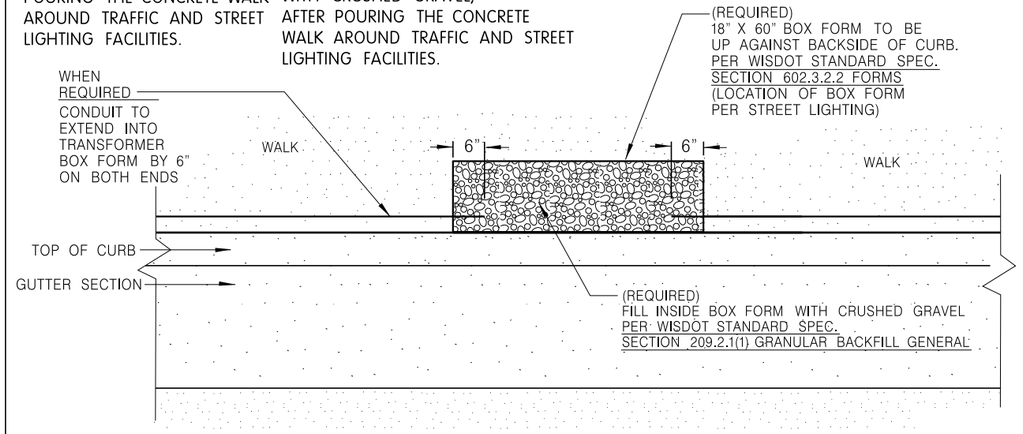
TYPICAL 18" X 60" BOX FORM FOR STREET LIGHTING TRANSFORMER

NOT TO SCALE

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

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

STREET LIGHTING FORCES TO DETERMINE LOCATION OF TRANSFORMER BOX FORM



106 DETAIL VERSION #2

TYPICAL 18" X 60" BOX FORM FOR STREET LIGHTING TRANSFORMER

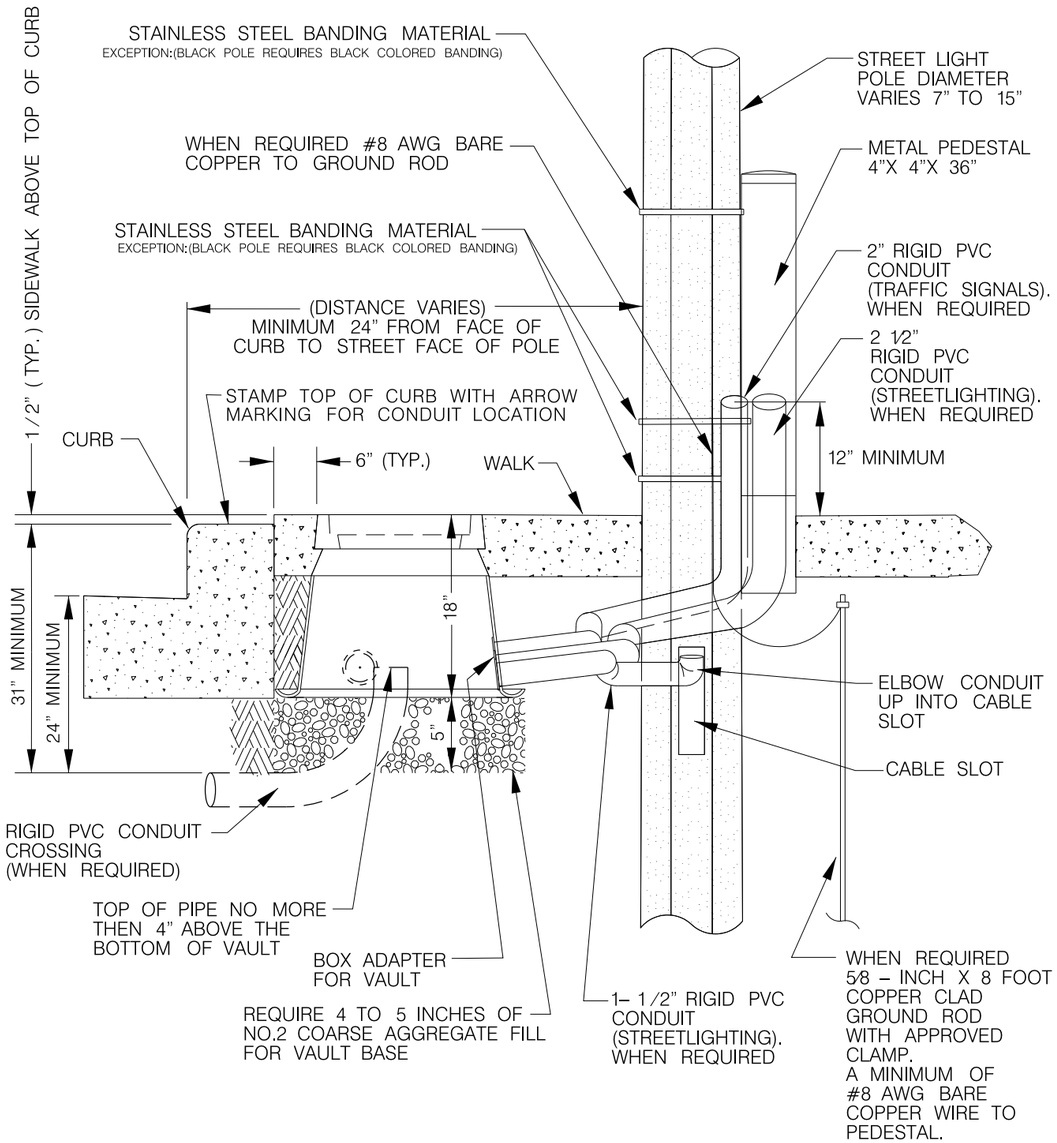
NOT TO SCALE

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

SHEET 5 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 156	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27–AUG–2013 15:52
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 20.000000:1.000000
WISDOT/CADDS SHEET 42

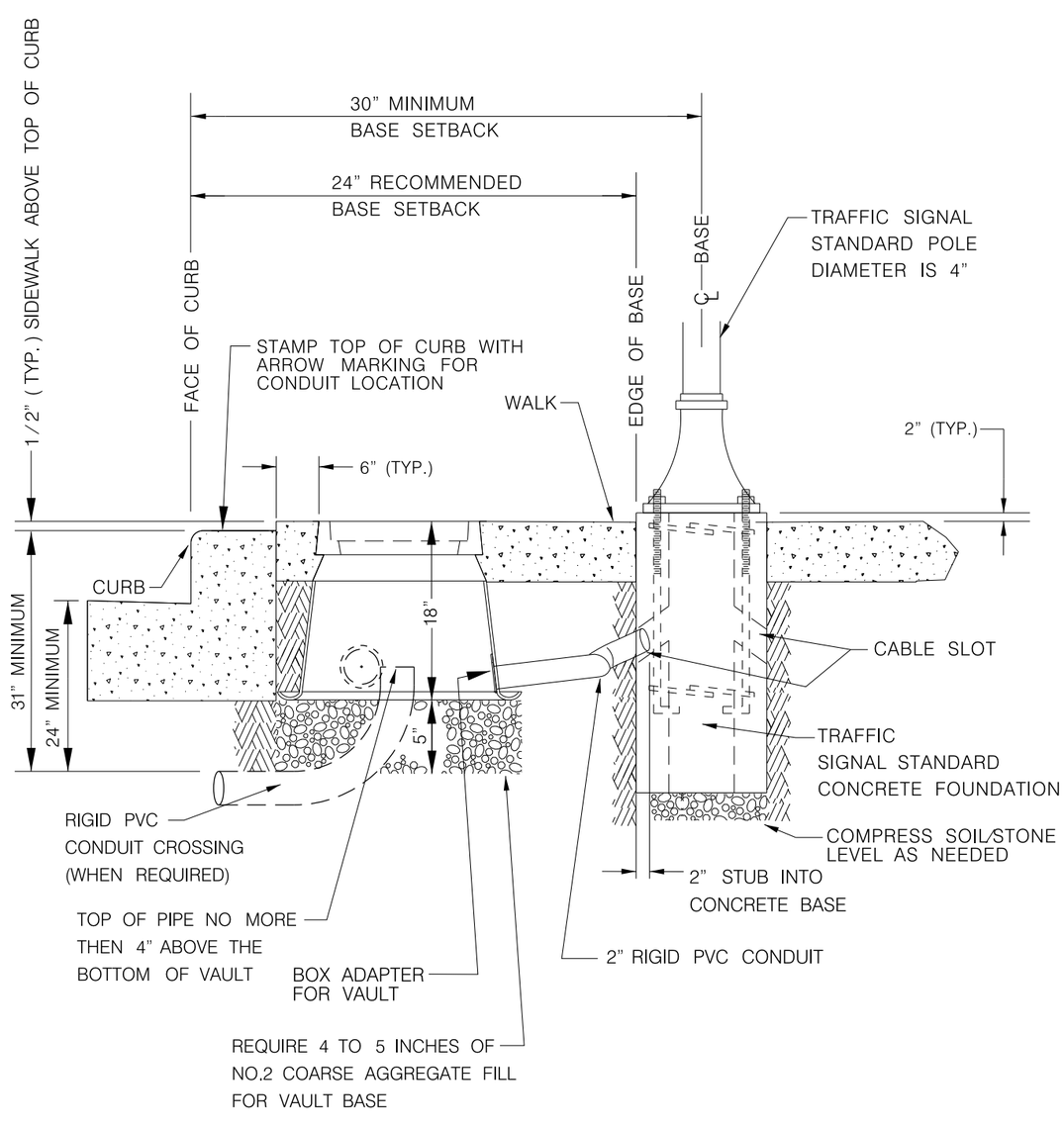


108 DETAIL

TYPICAL CONDUIT INSTALLATION FROM VAULT TO POLE

NOT TO SCALE

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



109 DETAIL

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.

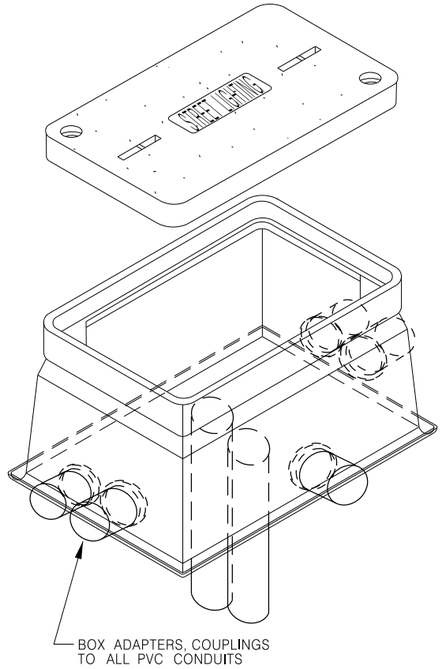
2

SHEET 6 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 157	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2265-08-90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27-AUG-2013 15:52
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 20.000000:1.000000
WISDOT/CADDS SHEET 42

2



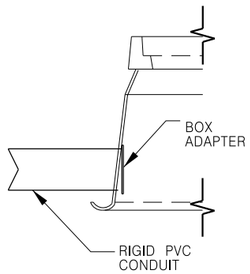
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY

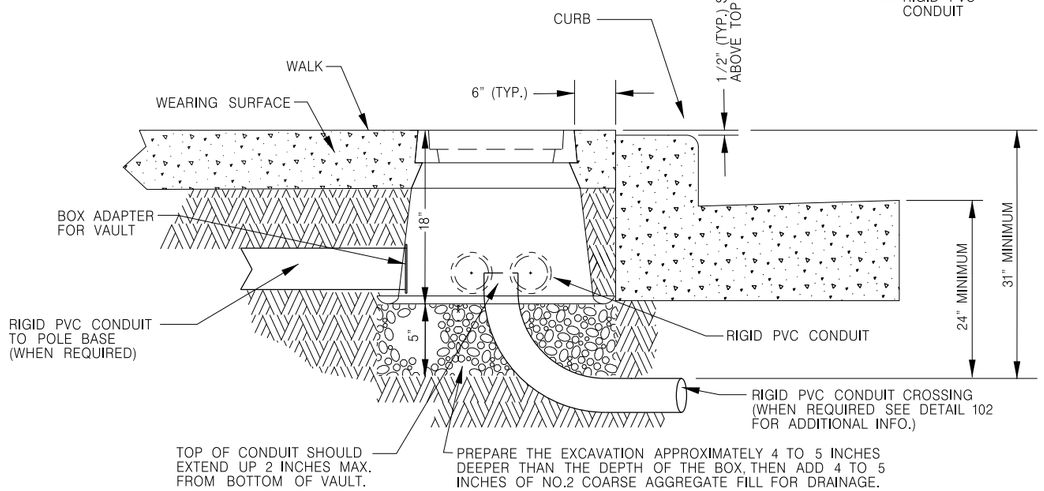
ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS



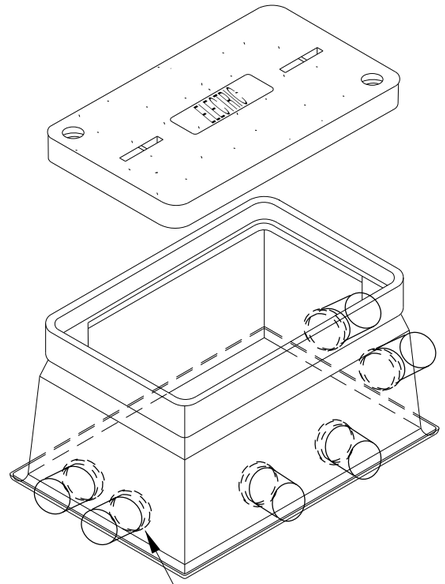


112 DETAIL

TYPICAL VAULT INSTALLATION IN WALK

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.

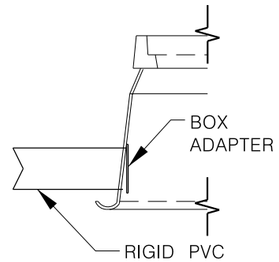


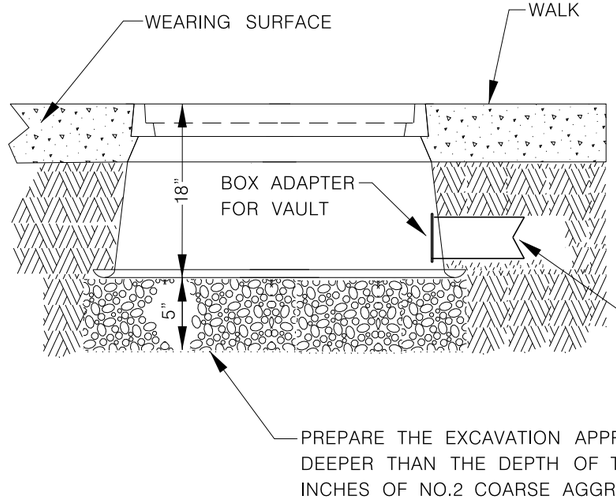
HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W / 2 BOLTS
COLOR: GRAY

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



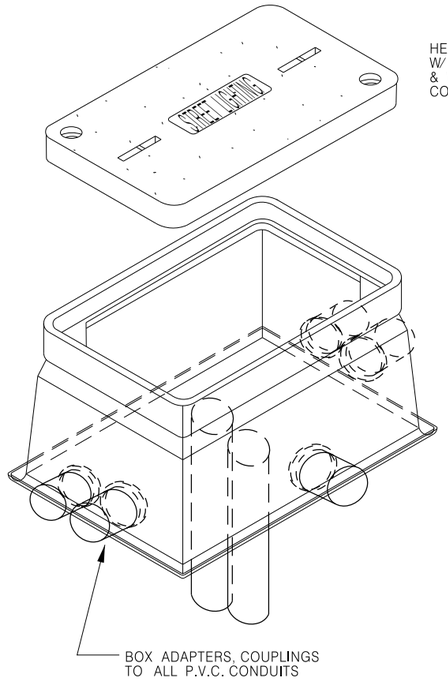


113 DETAIL

TYPICAL VAULT INSTALLATION
IN SIDEWALK

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.



121 DETAIL

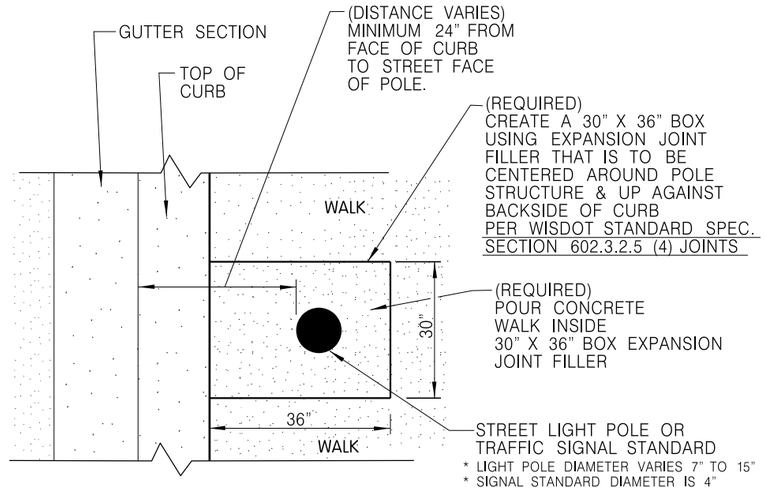
TYPICAL VAULT INSTALLATION IN GRASS AREA

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

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



122 DETAIL VERSION #1

TYPICAL 30" X 36" BOX EXPANSION JOINT FILLER AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

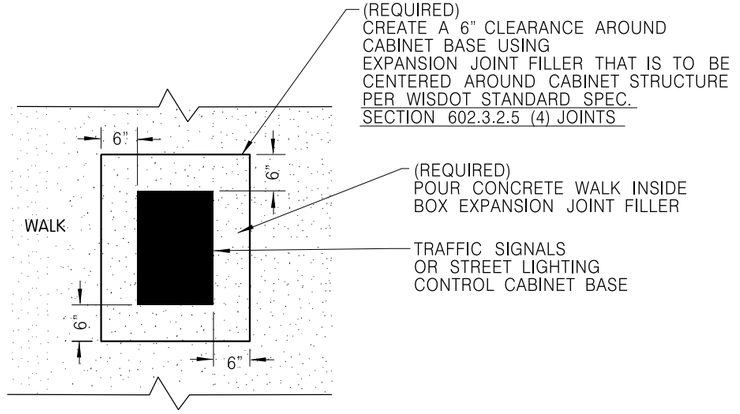
NOT TO SCALE

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

PLOTDATE

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

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



122 DETAIL VERSION #2

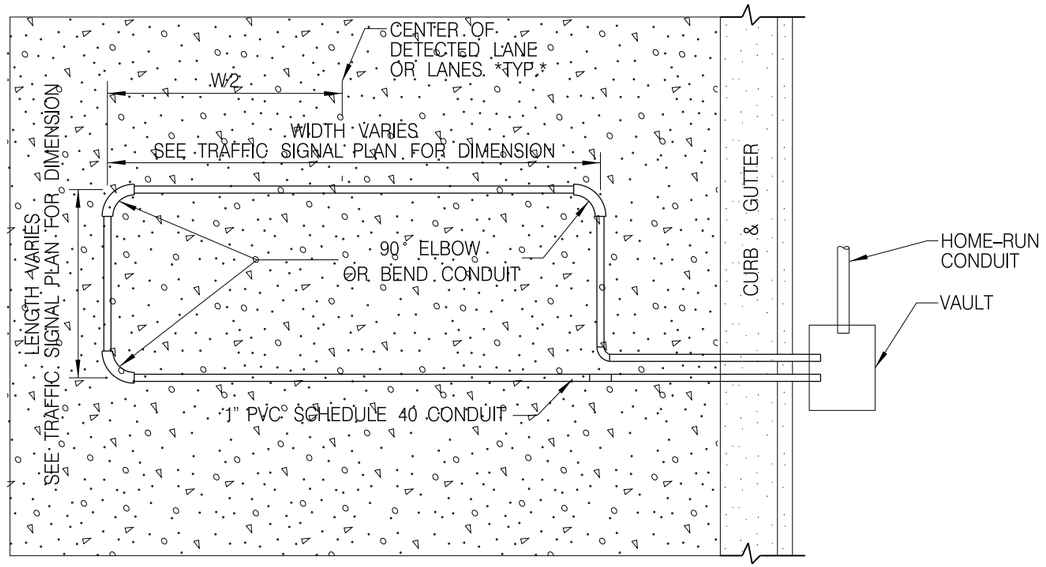
TYPICAL BOX EXPANSION JOINT FILLER AROUND TRAFFIC SIGNAL OR STREET LIGHTING CONTROL CABINET

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.

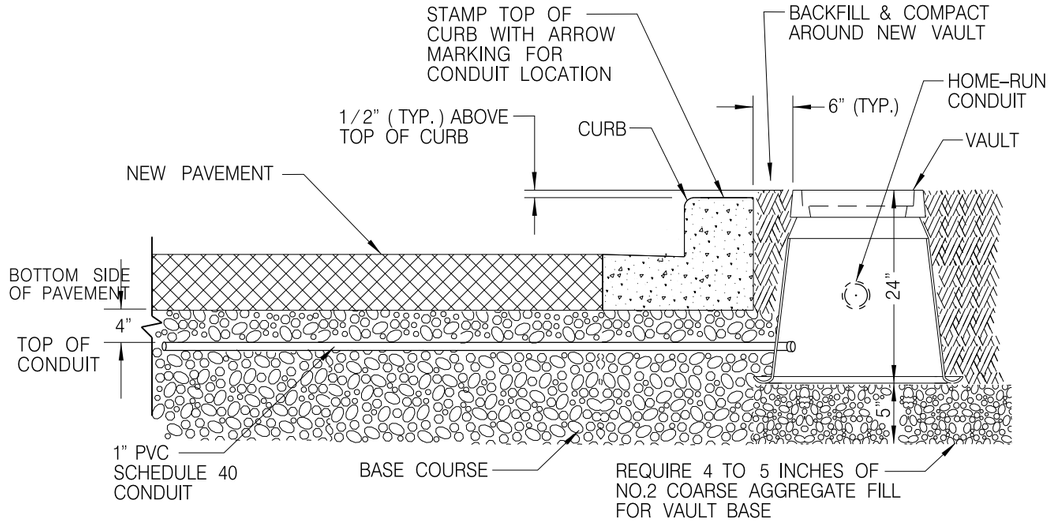
SHEET 8 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 159	E



TYPICAL PLAN VIEW OF LOOP DETECTOR

NOT TO SCALE



127 DETAIL

TYPICAL TRAFFIC SIGNAL LOOP DETECTOR INSTALLATION

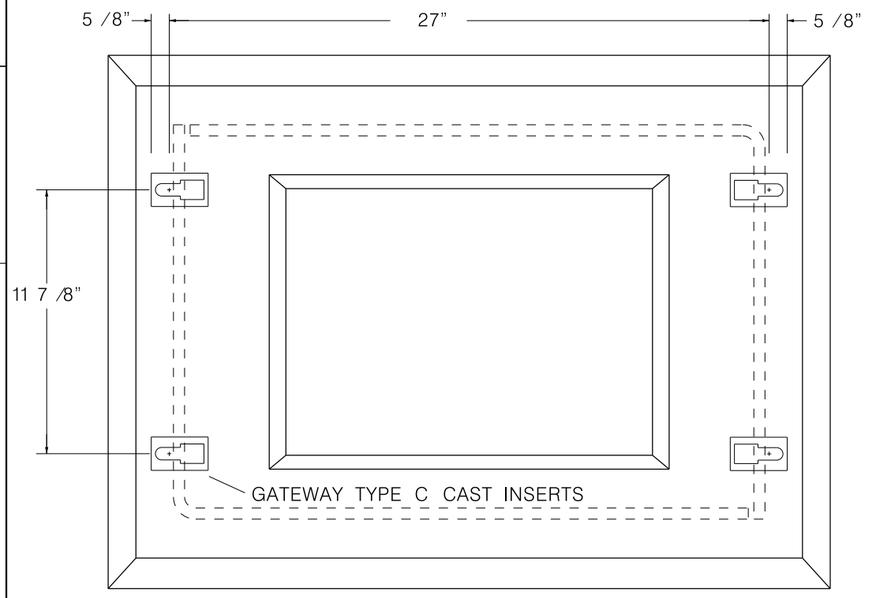
NOT TO SCALE

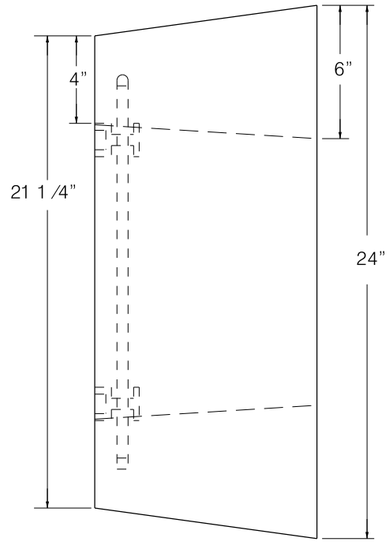
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC SIGNAL FORCES. CONTACT DISPATCHER AT (414) 286-3687 FOR SHOP SUPERVISOR.

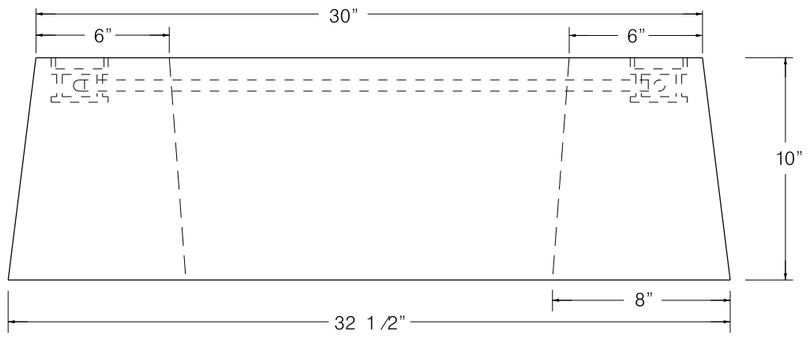
PLOTDATE

SHEET 9 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 160	E



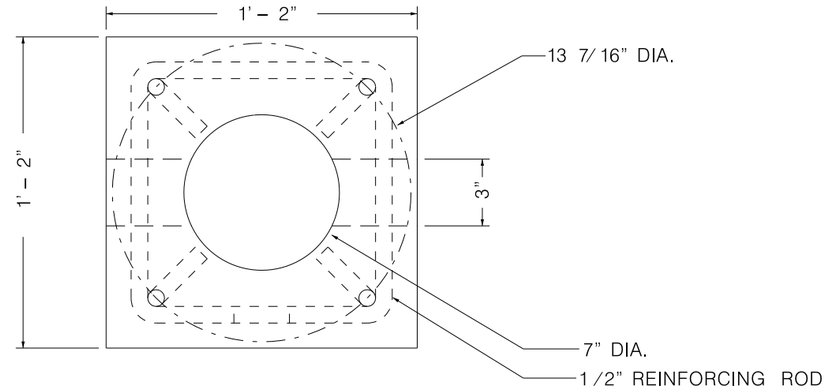


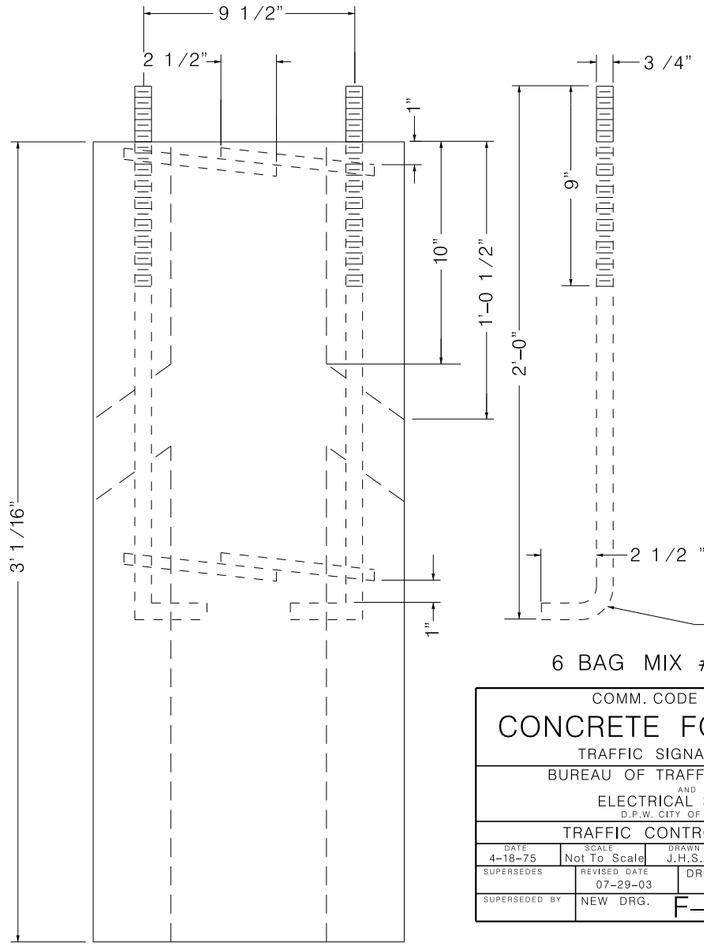


NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE 1238-927				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL CONTROL CABINET				
BUREAU OF TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-22-75	SCALE 1/4" = 1"	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES C-65-546-T	REVISED DATE 01-30-02	DRG. C-75-564-T		
SUPERSEDED BY	NEW DRG. F-82-536-T			





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 4-18-75	SCALE Not To Scale	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES	REVISED DATE 07-29-03	DRG. C-75-563-T		
SUPERSEDED BY	NEW DRG. F-82-535-T			

SHEET 10 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 161 E

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER. CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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

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

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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

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

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

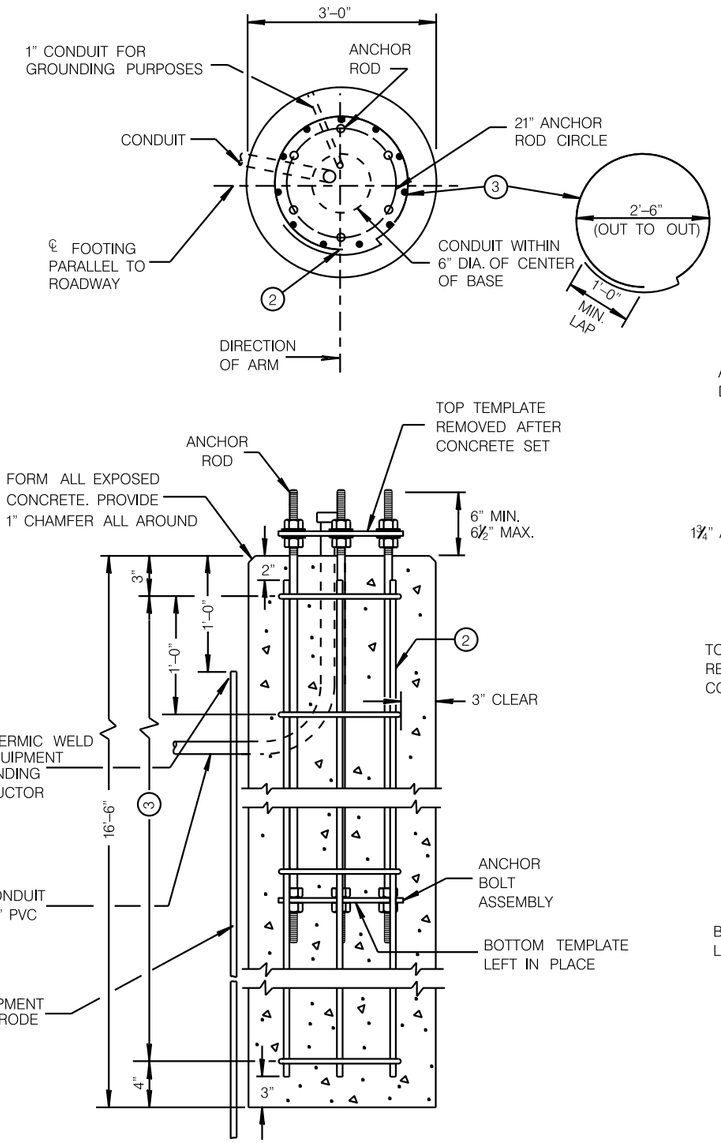
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER–RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

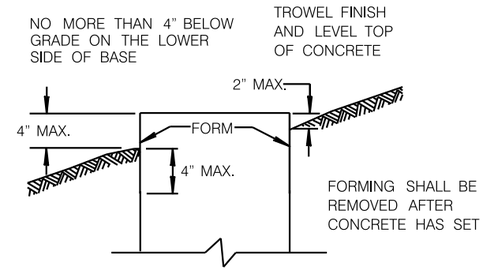
(2) (11) NO. 8 X 16'–1" BAR STEEL REINFORCEMENT.

(3) (17) NO. 4 X 9'–0" BAR STEEL REINFORCEMENT @ 1'–0" C–C.

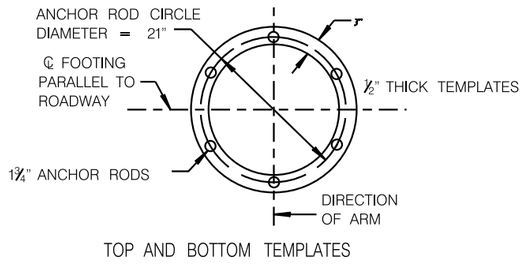
CONCRETE MASONRY	fc = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy = 55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy = 36,000 p.s.i.



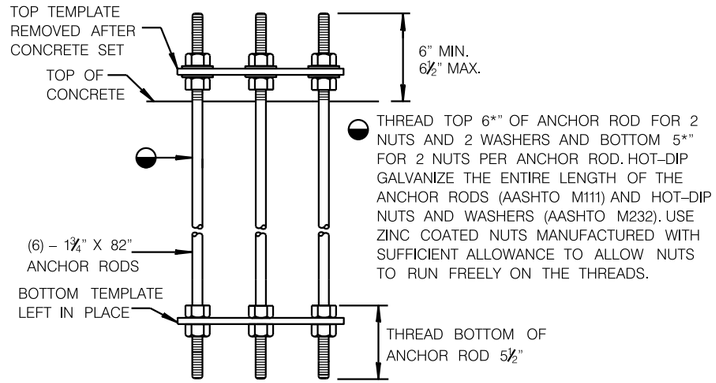
CONCRETE BASE TYPE 10 SPECIAL



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 SPECIAL

ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	4.32
LBS. OF HOOP BAR STEEL	103
LBS. OF VERTICAL BAR STEEL	473

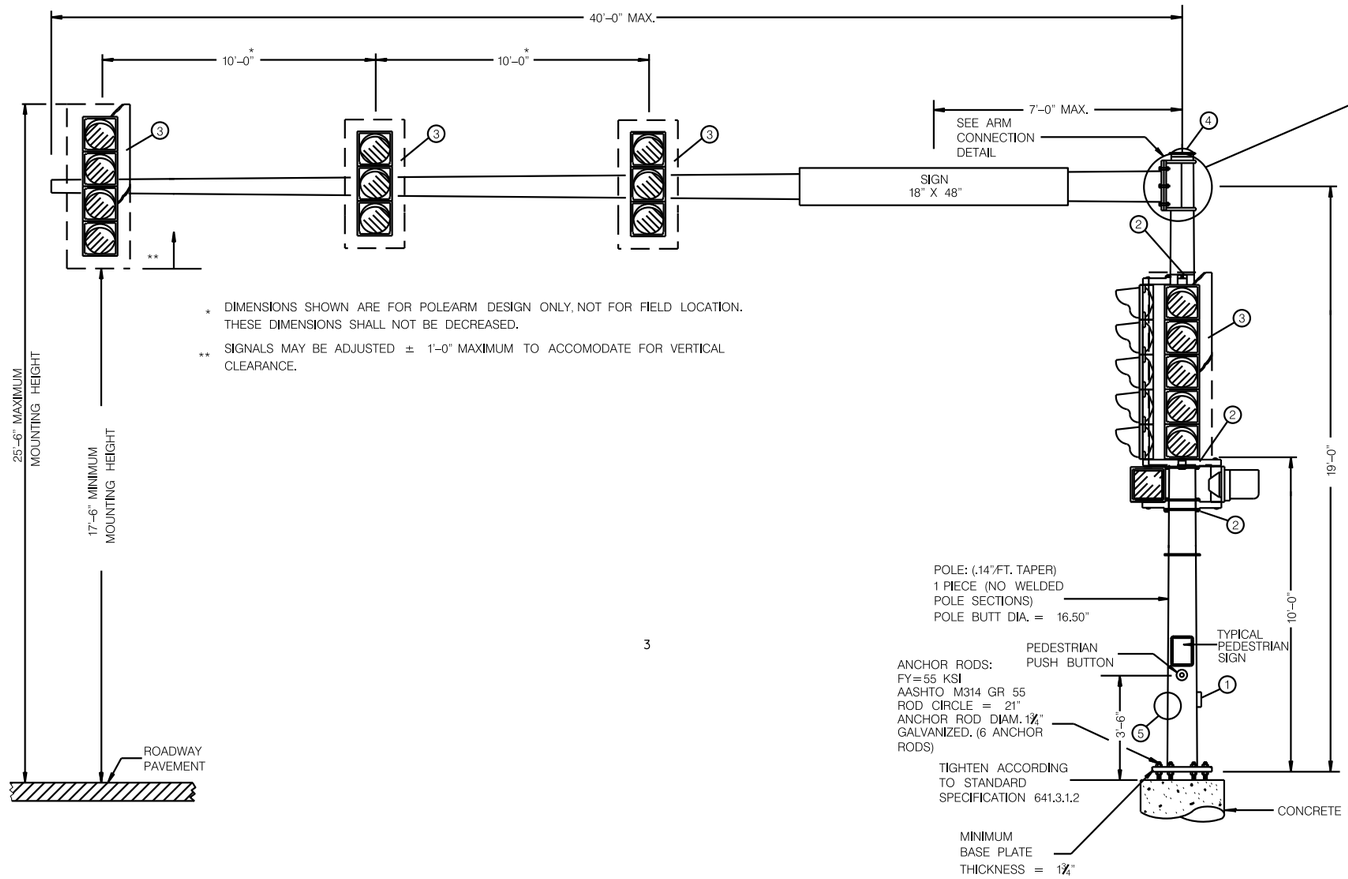
SHEET 11 OF 32

CONCRETE BASE TYPE 10 SPECIAL

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 162	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27–AUG–2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 20.000000:1.000000
WISDOT/CADDS SHEET 42



3

(MAXIMUM LOAD)

TYPE 12 POLE SPECIAL
35'– 40' MONOTUBE ARM

6 BOLT ARM CONNECTION DETAIL

ANCHOR ROD LOCATION

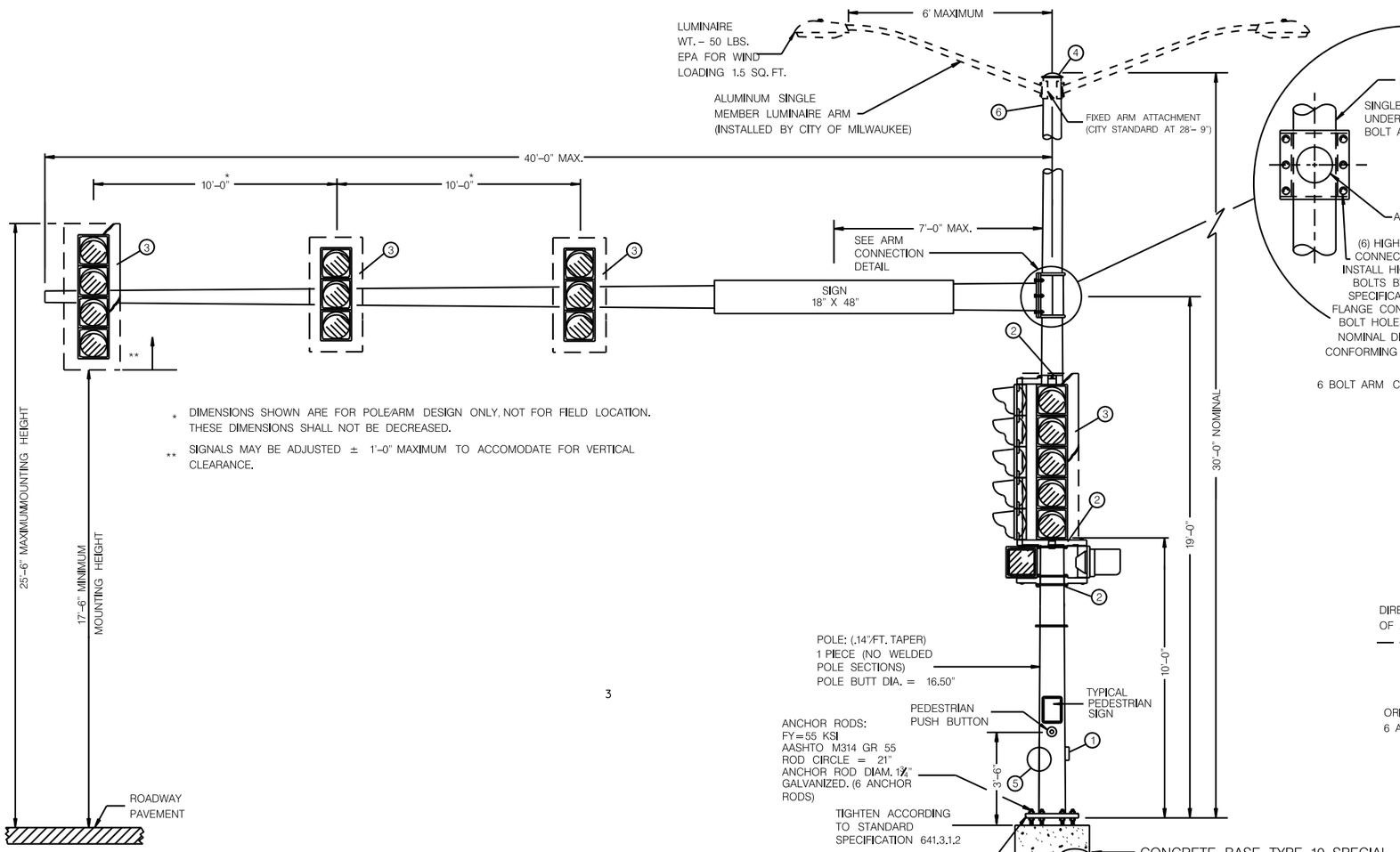
SHEET 12 OF 32

TYPE 12 POLE SPECIAL
35'– 40' MONOTUBE ARM

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 163	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 20.000000:1.000000
WISDOT/CADDS SHEET 42

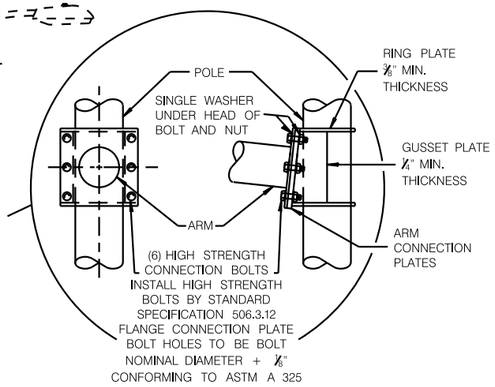


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

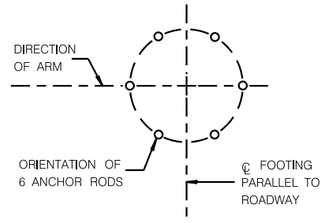
** SIGNALS MAY BE ADJUSTED ± 1'–0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

TYPE 13 POLE SPECIAL
35'– 40' MONOTUBE ARM



6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION

SHEET 13 OF 32

TYPE 13 POLE SPECIAL
35'– 40' MONOTUBE ARM

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 164	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27–AUG–2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 20.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

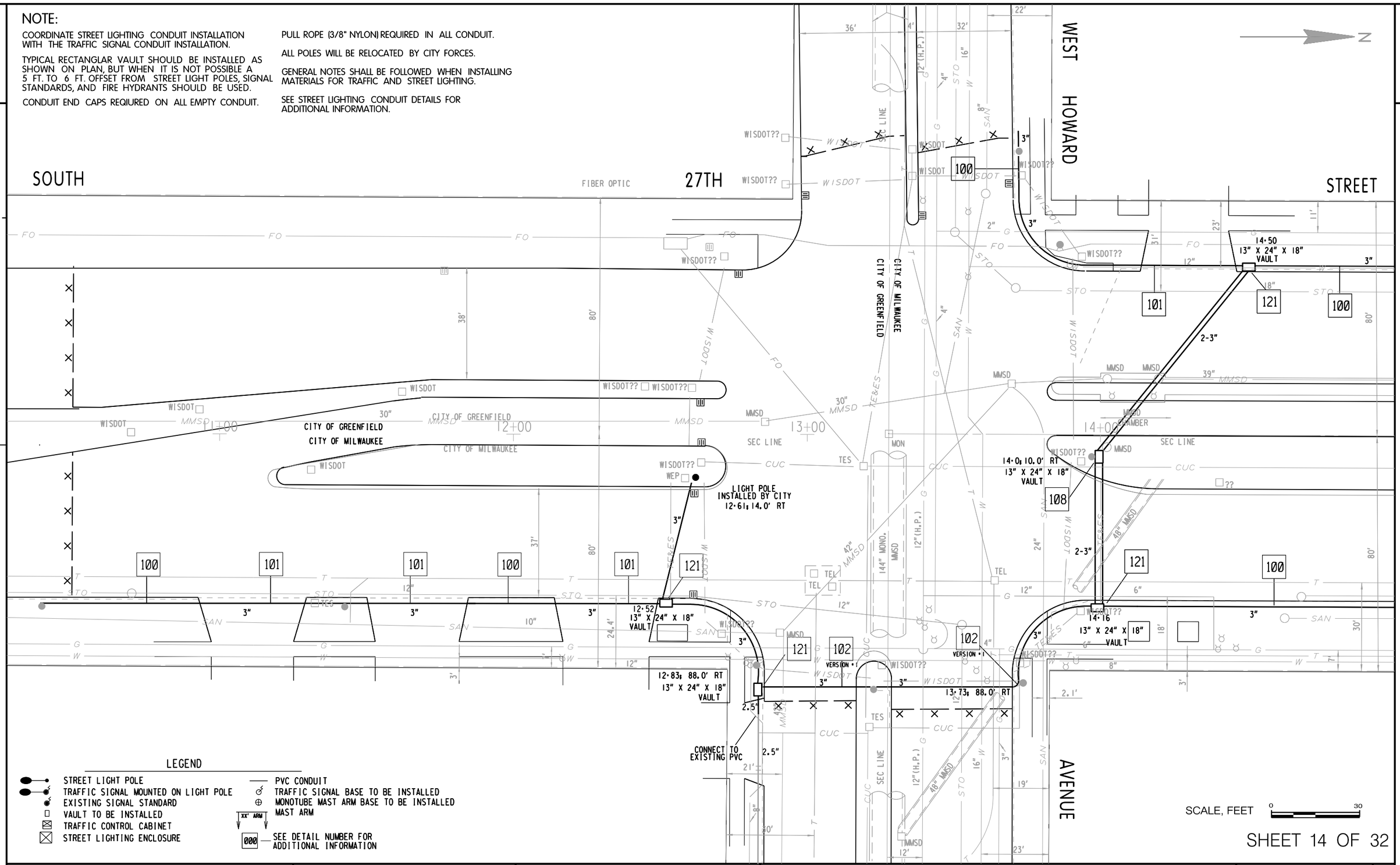
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 14 OF 32

PROJECT NO:2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 165	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

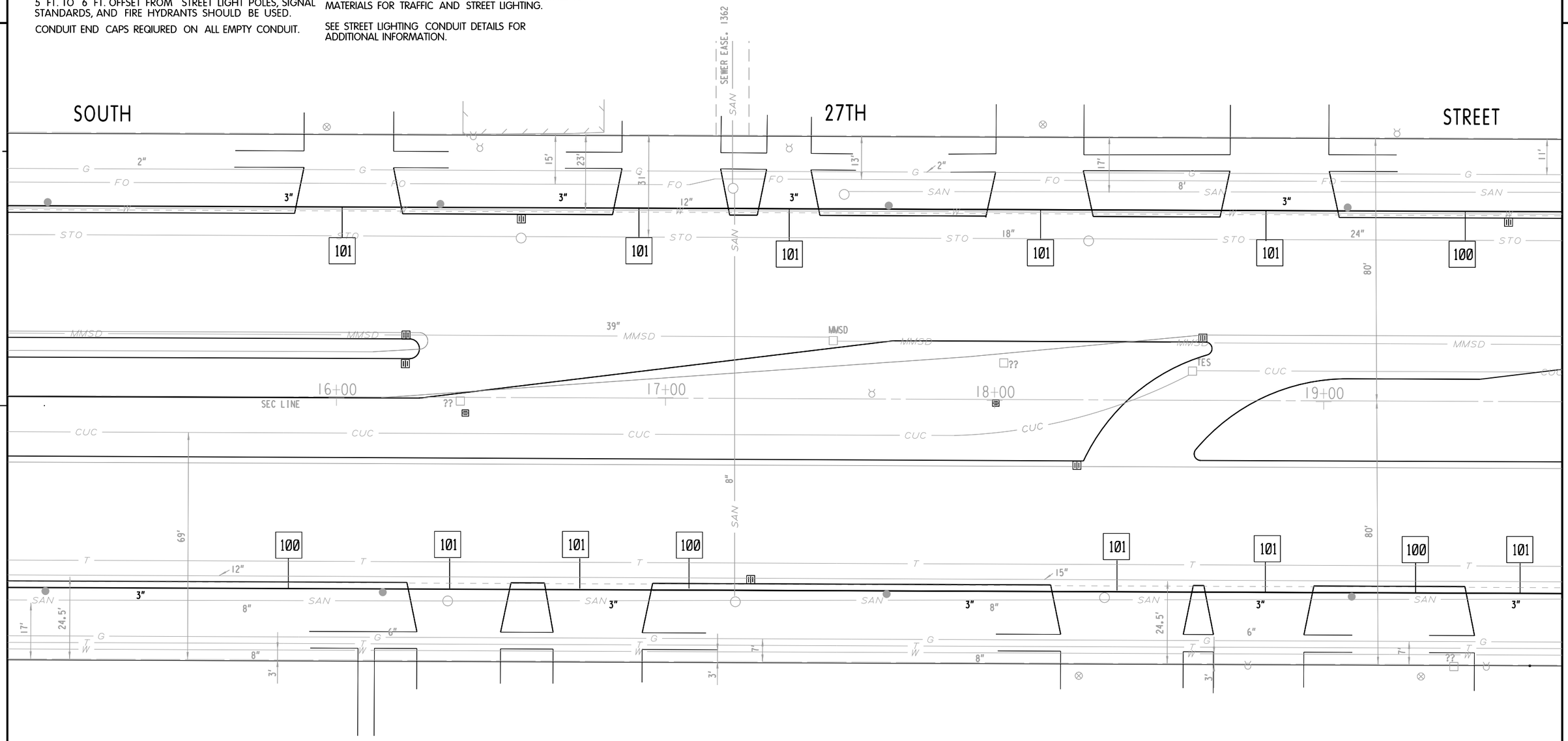
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- MAST ARM (xx' ARM)
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 15 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 166	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

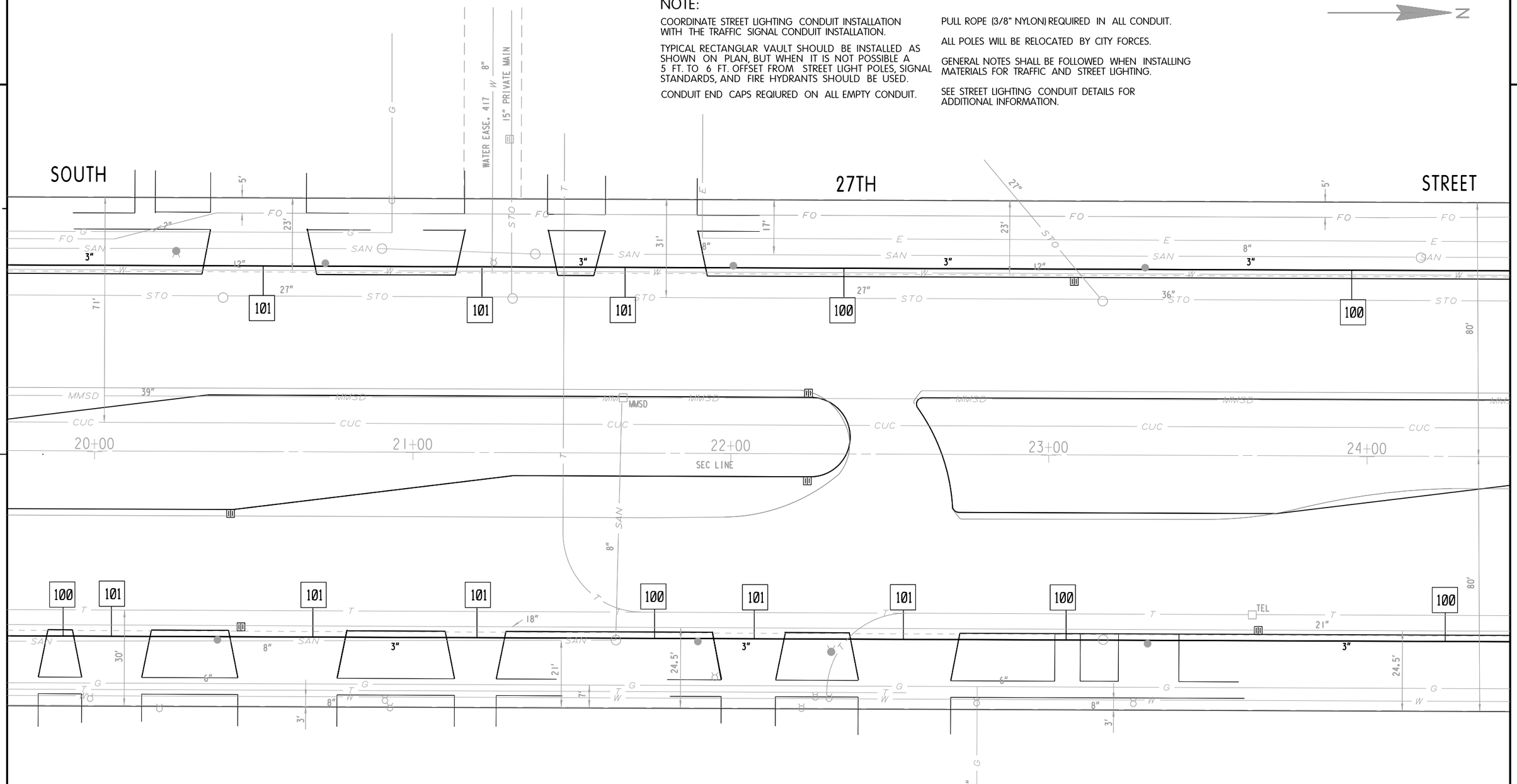
PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

N



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 16 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 167	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2265-08-90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27-AUG-2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

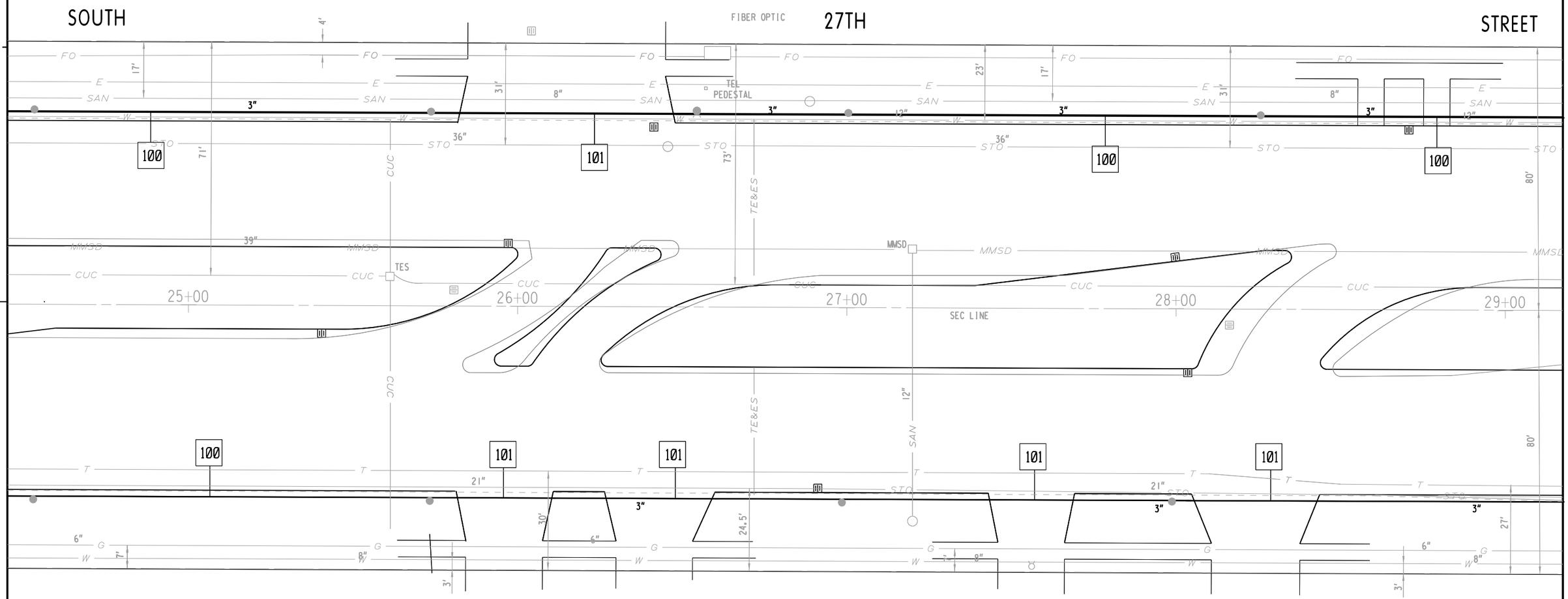
PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

N



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- xx' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 17 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 168	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2265-08-90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27-AUG-2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

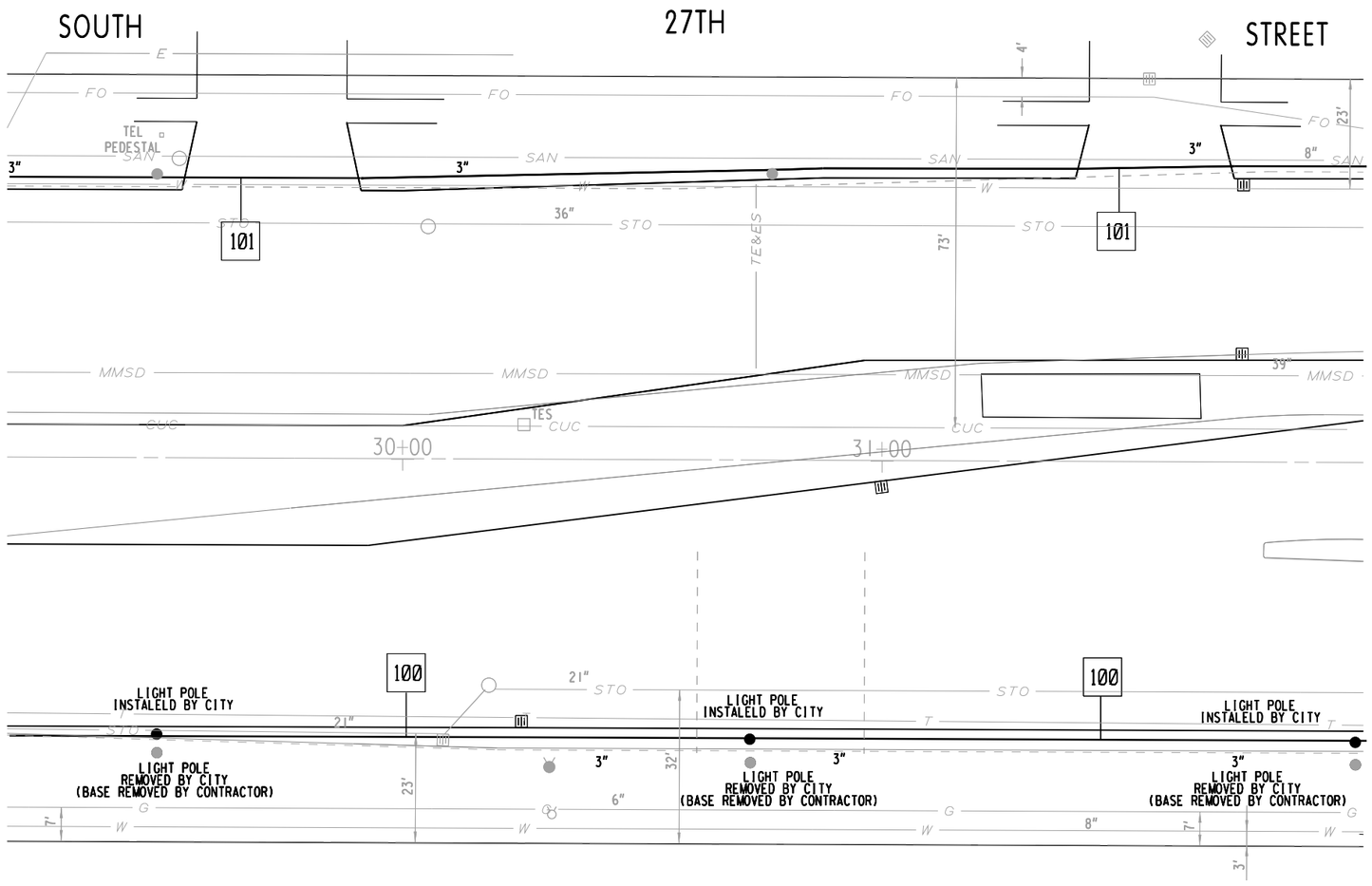
PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

N



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 18 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 169	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

CONTINUED ON SHEET #20

N

WEST LOOMIS ROAD

LIGHT POLE INSTALLED BY CITY

LIGHT POLE REMOVED BY CITY (BASE REMOVED BY CONTRACTOR)

BEING USED FOR STREET

RELOCATED CONTROL CABINET

32-24; 13" X 24" X 18" VAULT

33-21; 80.6' LT 17" X 30" X 18" VAULT

33-54; 82.7' LT 17" X 30" X 18" VAULT

33-92; 89.4' LT 17" X 30" X 18" VAULT

33-21; 76.7' LT SIGNAL BASE

33-19.5 SIGNAL BASE

33-04 17" X 30" X 18" VAULT

33-12; 64.0' LT TYPE 10 SPECIAL BASE TYPE 12 SPECIAL POLE

33-96; 76.7' LT SIGNAL BASE

34-09 17" X 30" X 18" VAULT

35-25 13" X 24" X 18" VAULT

35-15 13" X 24" X 18" VAULT

40' ARM

33-17; 20.0' LT 17" X 30" X 18" VAULT

34-09; 21.0' LT 17" X 30" X 18" VAULT

34-96; 21.0' LT 17" X 30" X 18" VAULT

3' FROM CURB

33-50; 10.6' RT SIGNAL BASE

33-29; 13.3' RT 17" X 30" X 18" VAULT

34-96; 14.4' RT 17" X 30" X 18" VAULT

3-SPAN CONCRETE BOX CULVERT

32-84; 69.0' RT 13" X 24" X 18" VAULT

33-06 17" X 30" X 18" VAULT

33-50 SIGNAL BASE

33-41 17" X 30" X 18" VAULT

34-83 17" X 30" X 18" VAULT

LIGHT POLE INSTALLED BY CITY

LIGHT POLE REMOVED BY CITY (BASE REMOVED BY CONTRACTOR)

34-77; 60.0' RT TYPE 10 SPECIAL BASE TYPE 12 SPECIAL POLE

NEW STREET LIGHTING ENCLOSURE INSTALLED BY CITY 3' EAST OF SIDEWALK

SOUTH 27TH STREET

CONCRETE DRAINAGE DITCH

BRIDGE WALL

SUBSTATION T-6-S

EXISTING POLE BOLT DOWN

EXISTING BASE

REDESTAL

LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM MAST ARM
- 000 SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

SCALE, FEET 0 30

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 170	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2265-08-90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27-AUG-2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000

WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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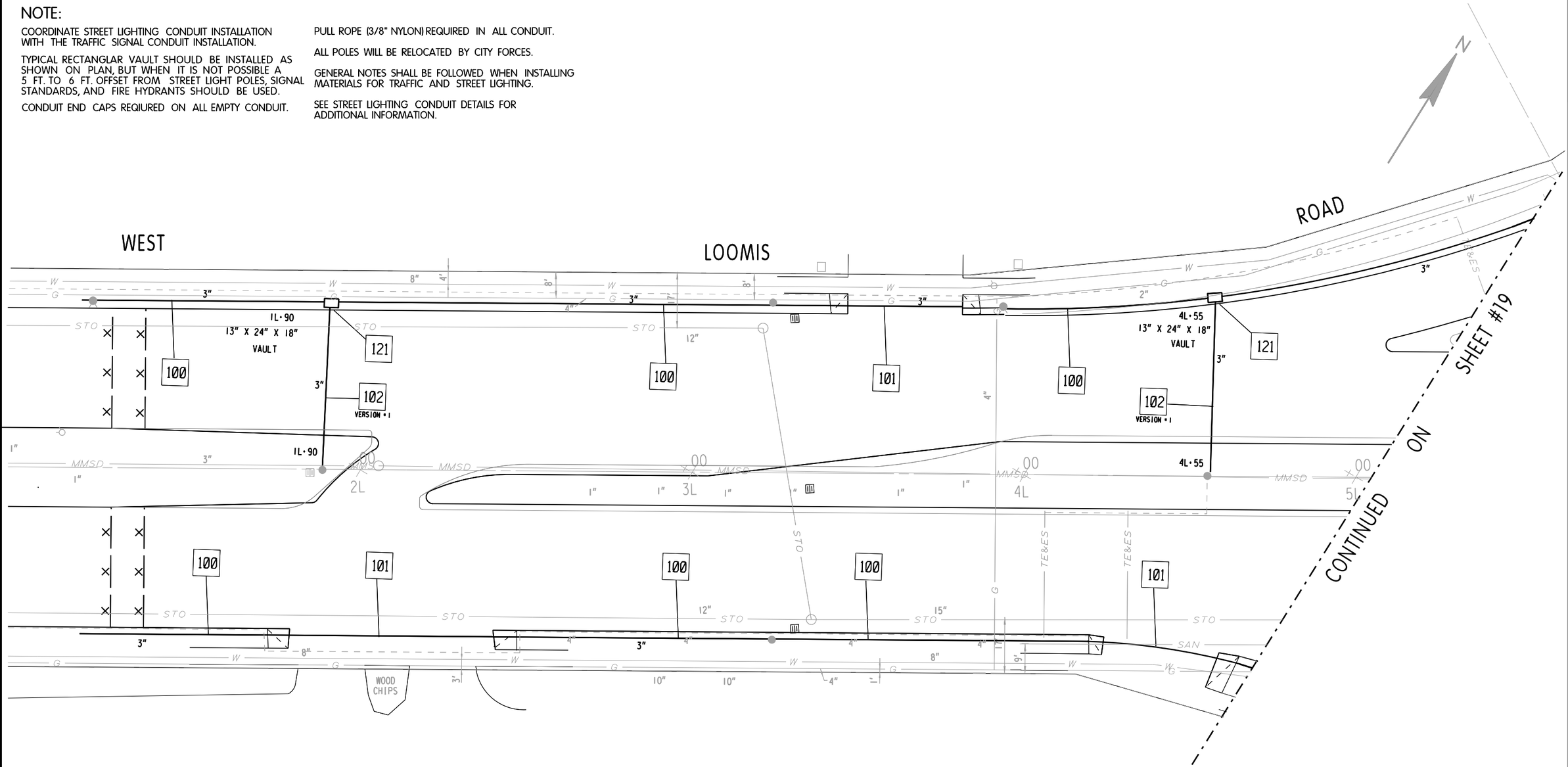
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 171	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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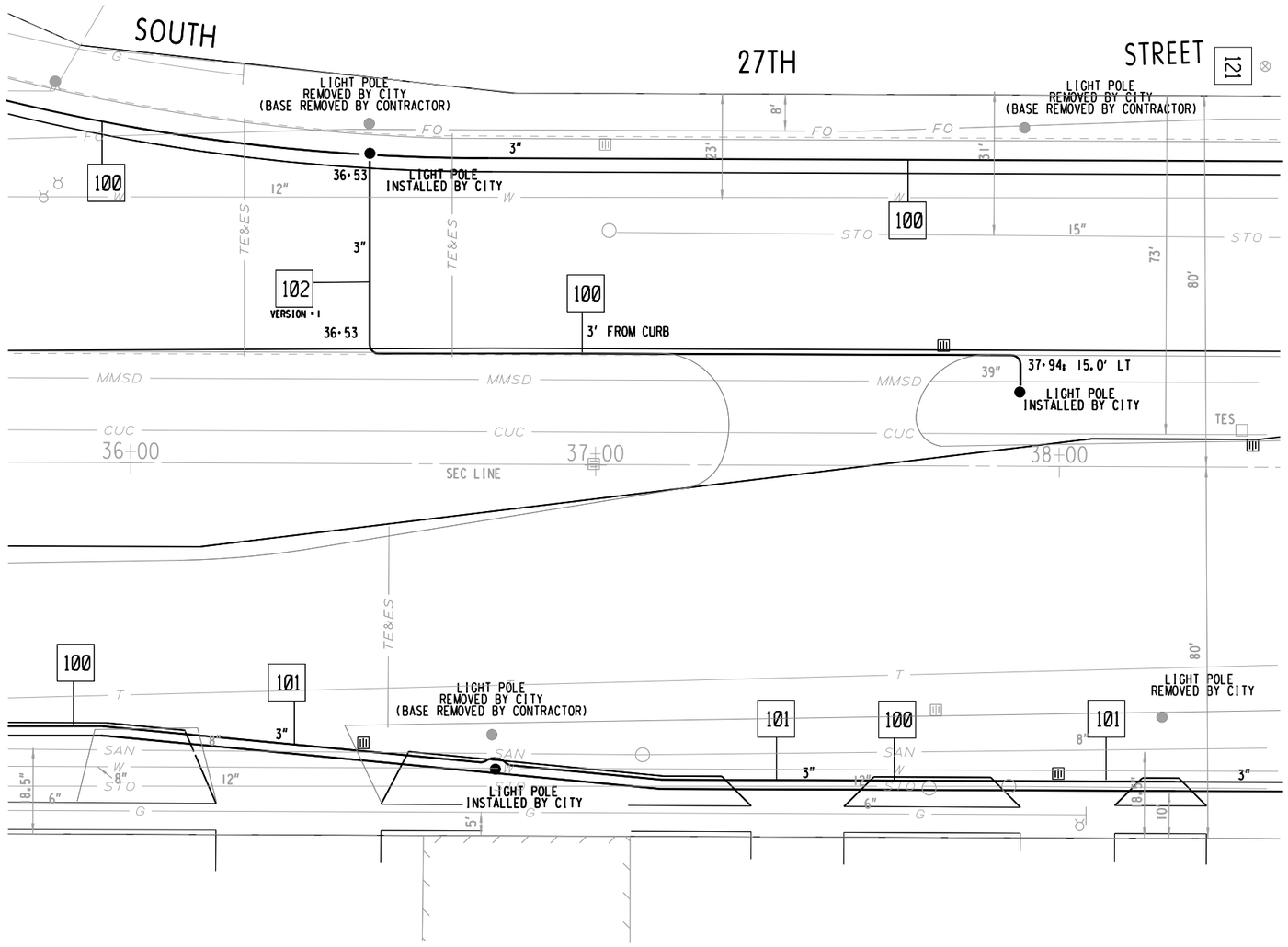
PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

N



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 21 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 172	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2265-08-90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27-AUG-2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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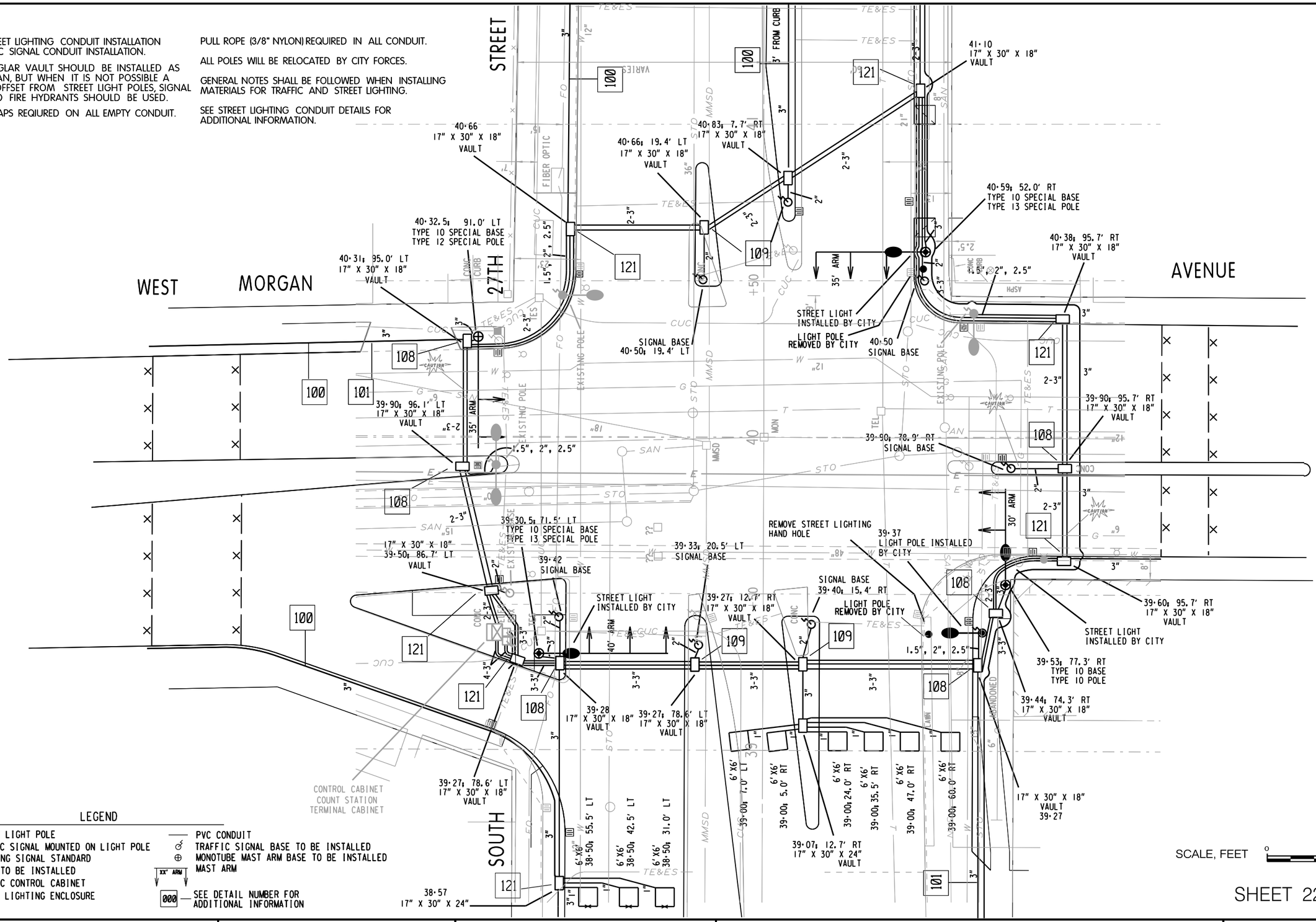
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 22 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 173	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 29–AUG–2013 10:25
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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

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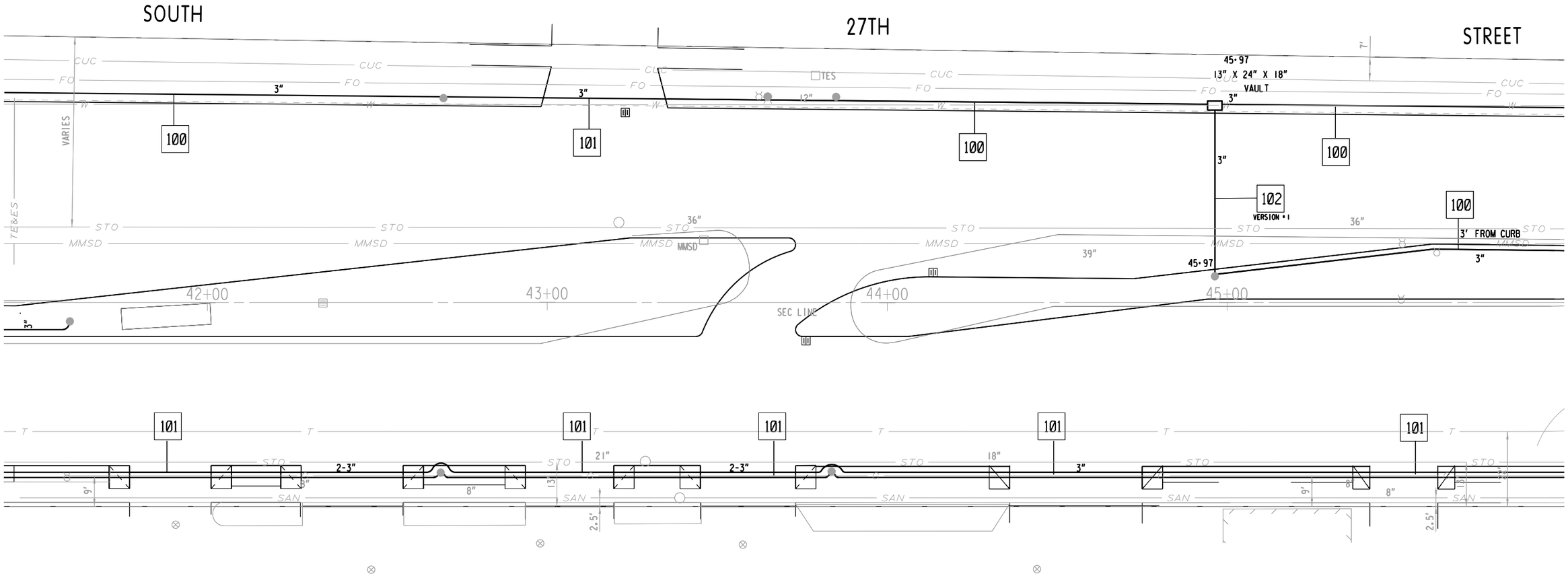
PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

N



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 23 OF 32

PROJECT NO:2265–08–70'	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 174	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

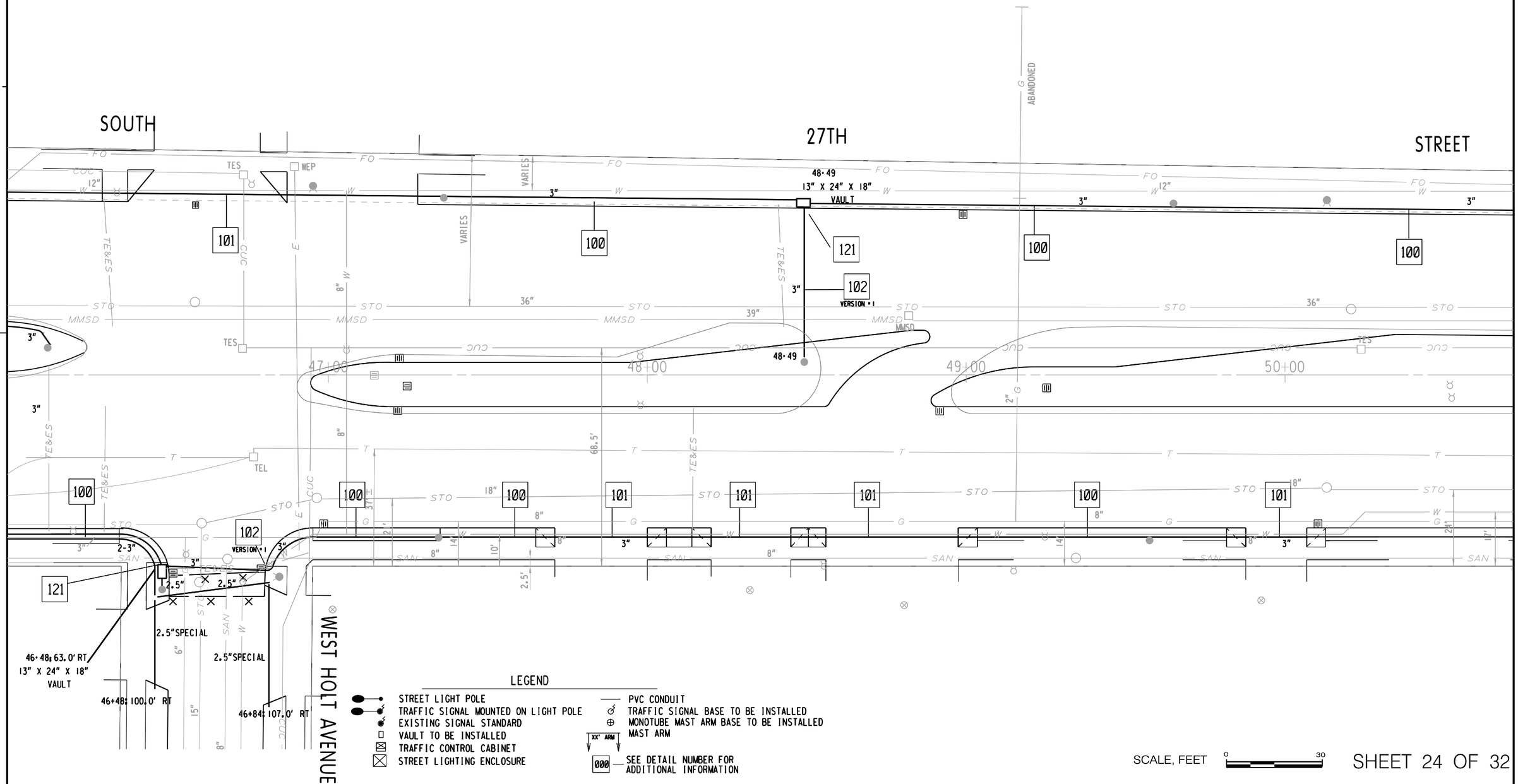
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



SHEET 24 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 175	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000

WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

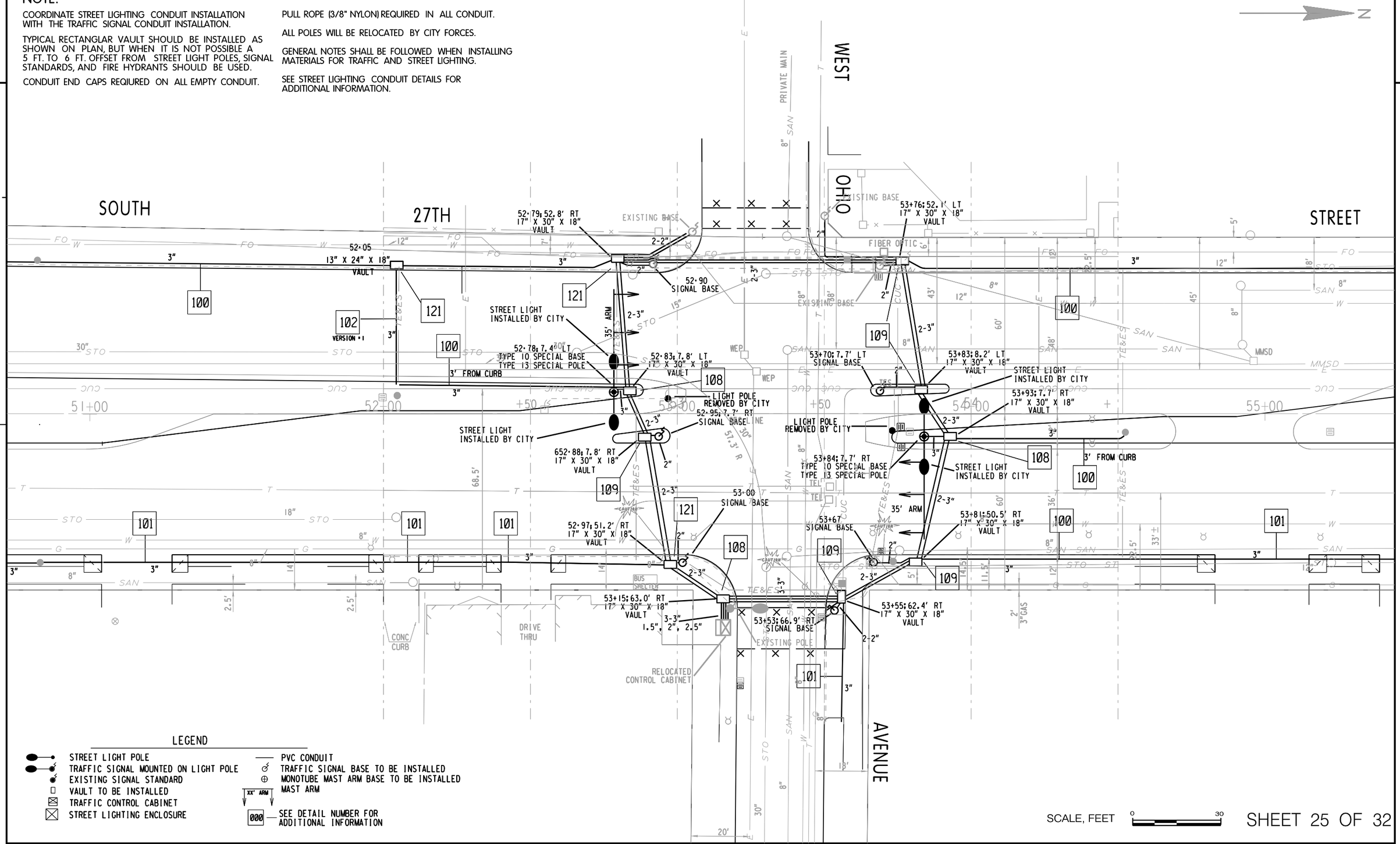
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 25 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 176	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27–AUG–2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

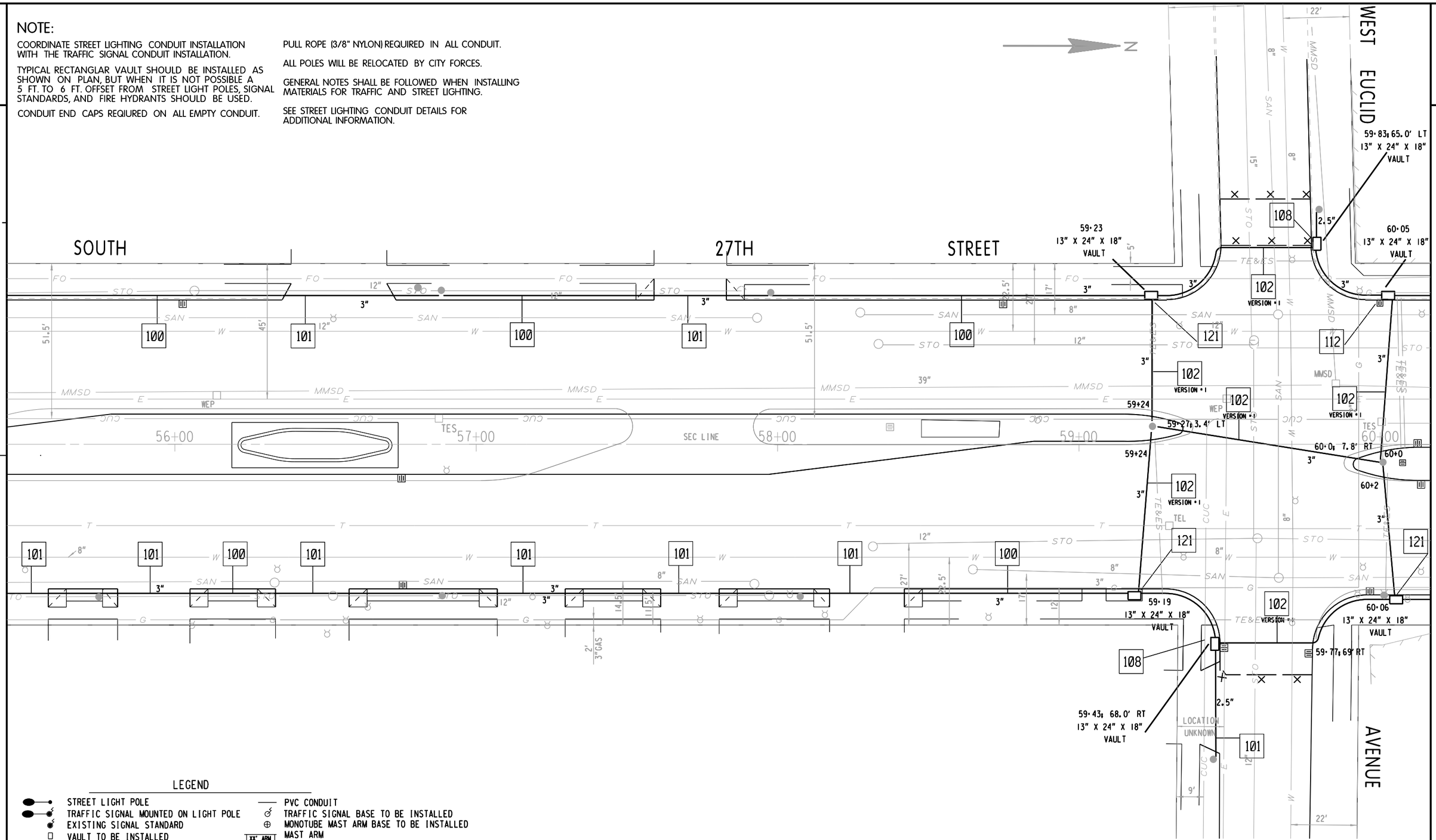
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 26 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 177	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000

WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

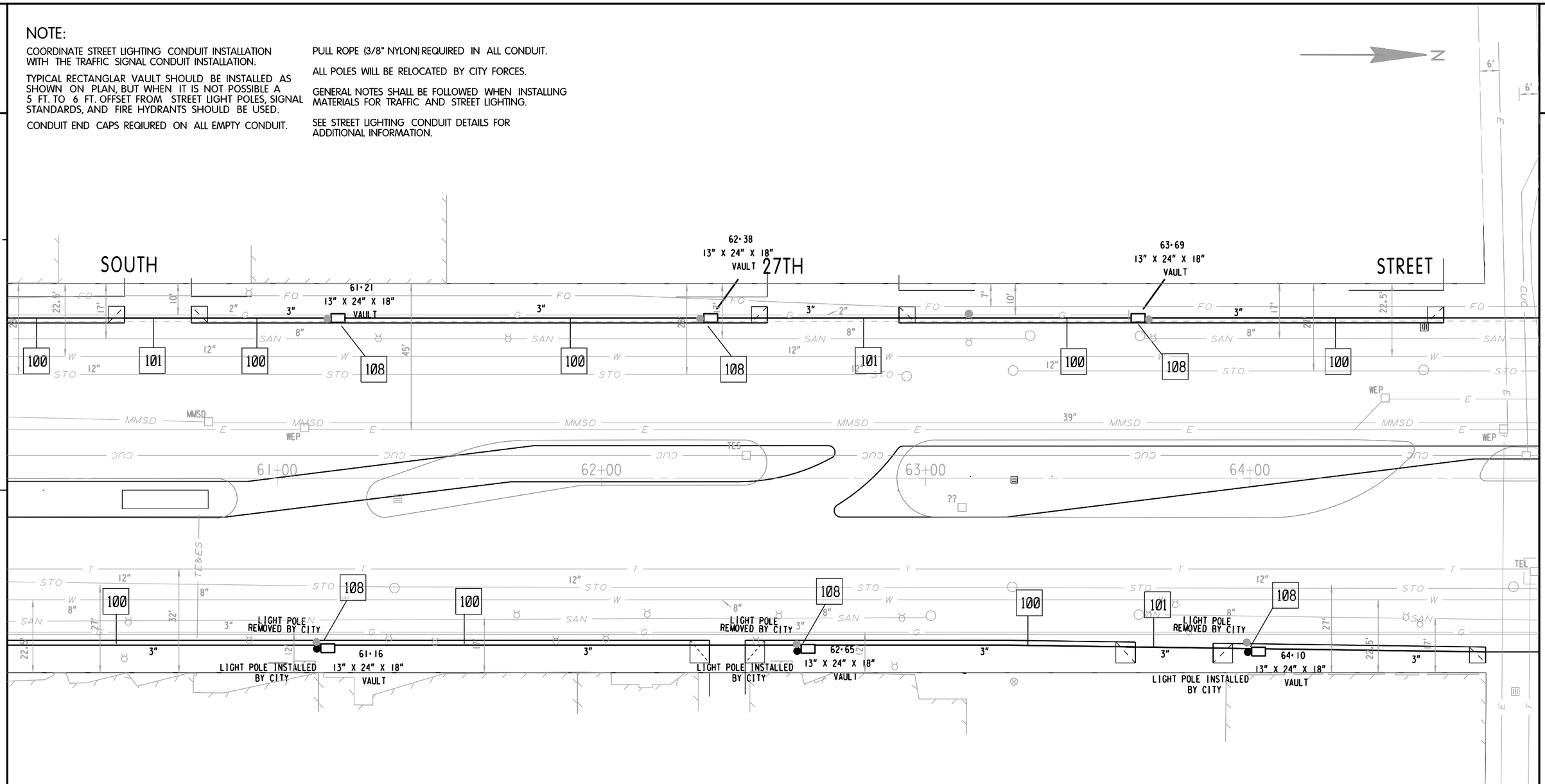
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

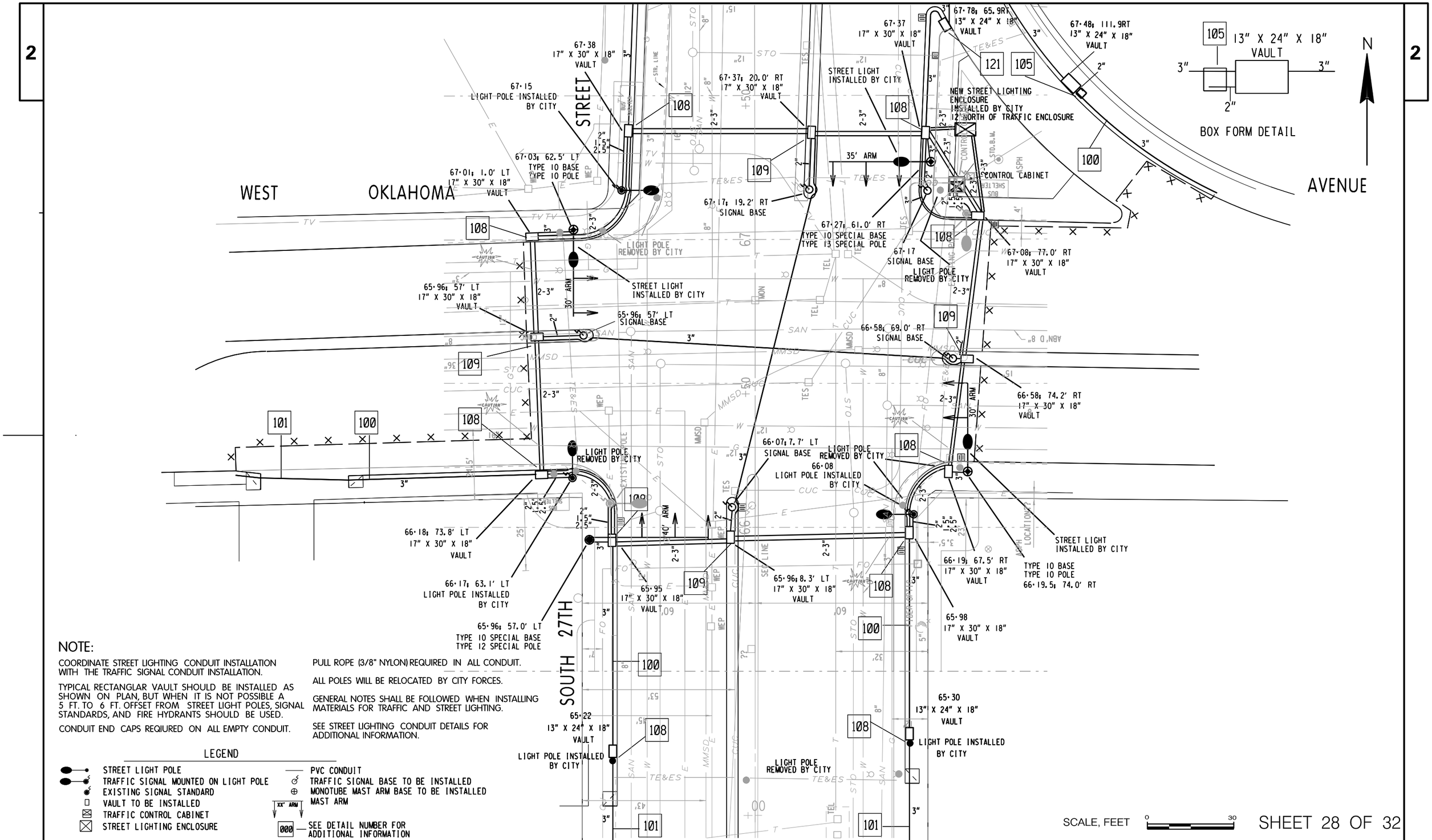
- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 30

SHEET 27 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 178	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42



NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SCALE, FEET 0 — 30

SHEET 28 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 179	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27–AUG–2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

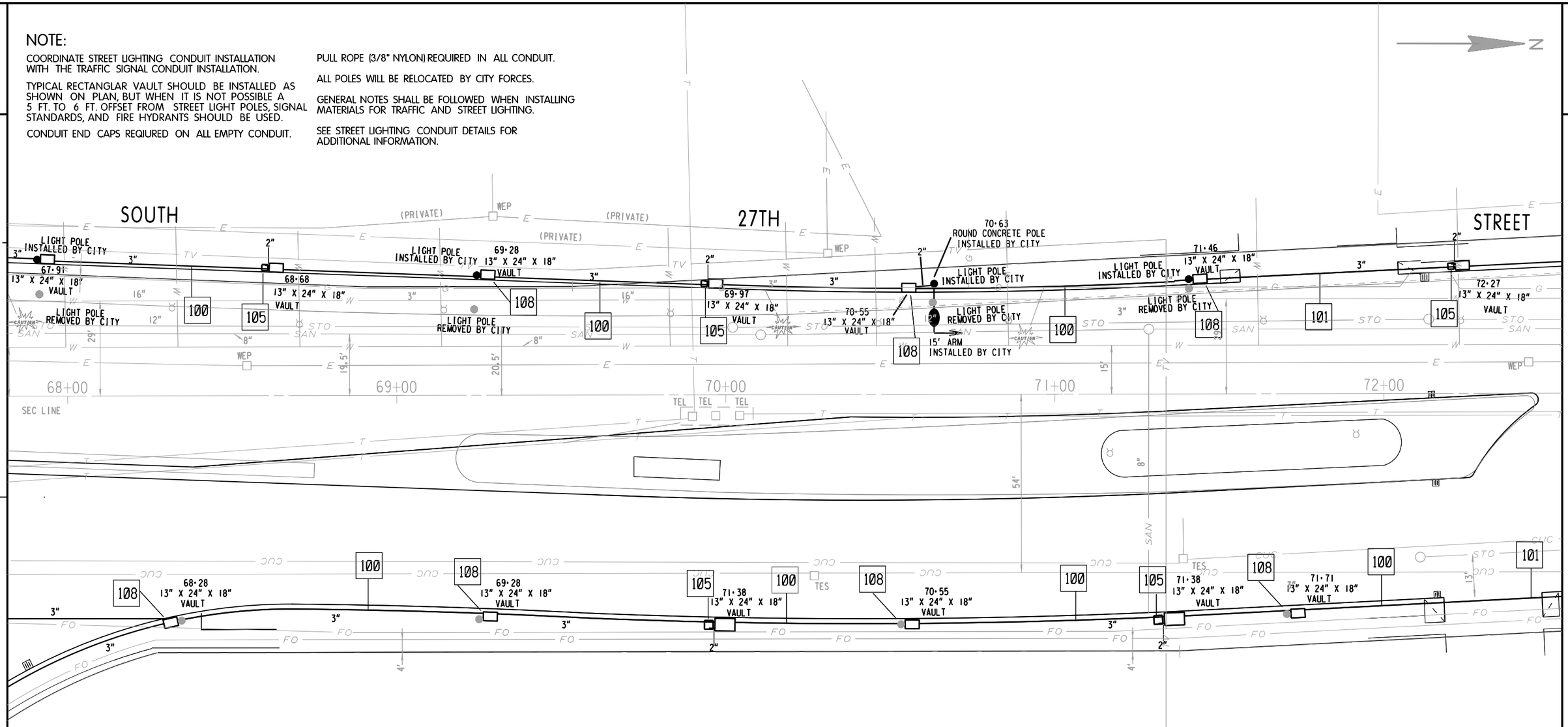
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

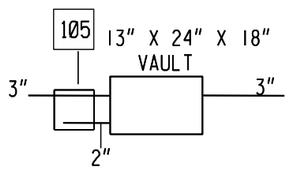
GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION



BOX FORM DETAIL

SCALE, FEET 0 30

SHEET 29 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 180	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27–AUG–2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000

WISDOT/CADDS SHEET 42

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

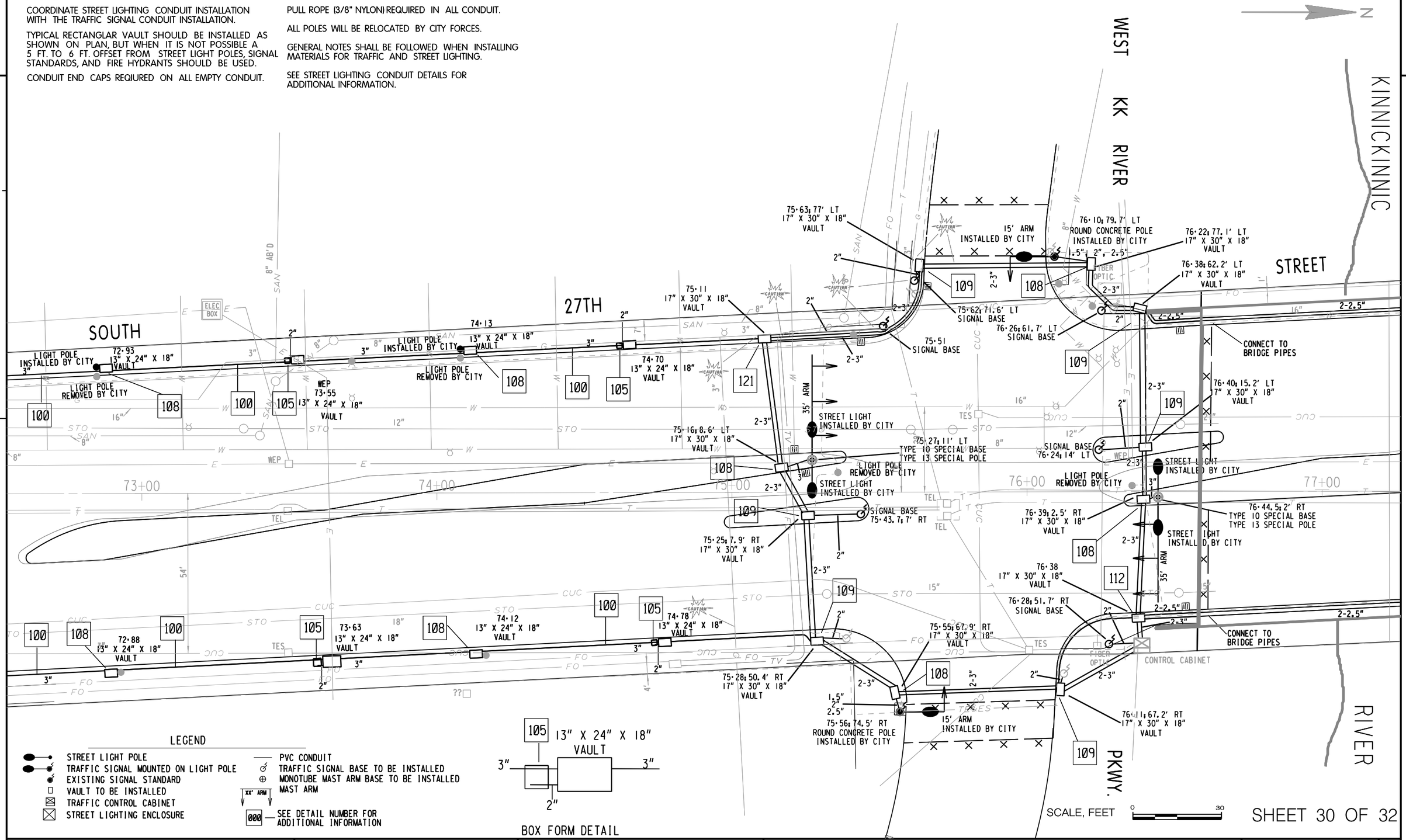
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

BOX FORM DETAIL

SHEET 30 OF 32

PROJECT NO: 2265–08–70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 181	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\2265–08–90 S. 27th St. STH 241\TR & SL Plan Set.dgn
PLOT DATE : 27–AUG–2013 15:53
PLOT BY : elee
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

2

KINNICKINNIC

COORDINATE WORK WITH
BRIDGE CONTRACTOR

WEST DAKOTA STREET

27TH STREET

SOUTH

N

2.5"PVC INSTALLED ON KK BRIDGE PROJECT

1' BACK OF CURB

4' BACK OF CURB

CONNECT TO BRIDGE PIPES

78+00 79+00 80+00 81+00

SEC LINE

78·44 13" X 24" X 18" VAULT

79·23 13" X 24" X 18" VAULT

79·52 13" X 24" X 18" VAULT

79·79; 94.0LT 13" X 24" X 18" VAULT

80·47 13" X 24" X 18" VAULT

81·00 13" X 24" X 18" VAULT

81·95 13" X 24" X 18" VAULT

79·52; 30' LT

79·67; 30' LT

79·52; 27' LT

80·46; 16' LT

80·47; 17' LT

78·28 13" X 24" X 18" VAULT

79·25 13" X 24" X 18" VAULT

79·53 13" X 24" X 18" VAULT

80·96 13" X 24" X 18" VAULT

81·89 13" X 24" X 18" VAULT

72" MMSD

12" SAN

LOCATION UNKNOWN

COORDINATE WORK WITH BRIDGE CONTRACTOR

RIVER

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

105 13" X 24" X 18" VAULT

3" 3" 2"

BOX FORM DETAIL

SCALE, FEET 0 30

SHEET 31 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 182	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

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.

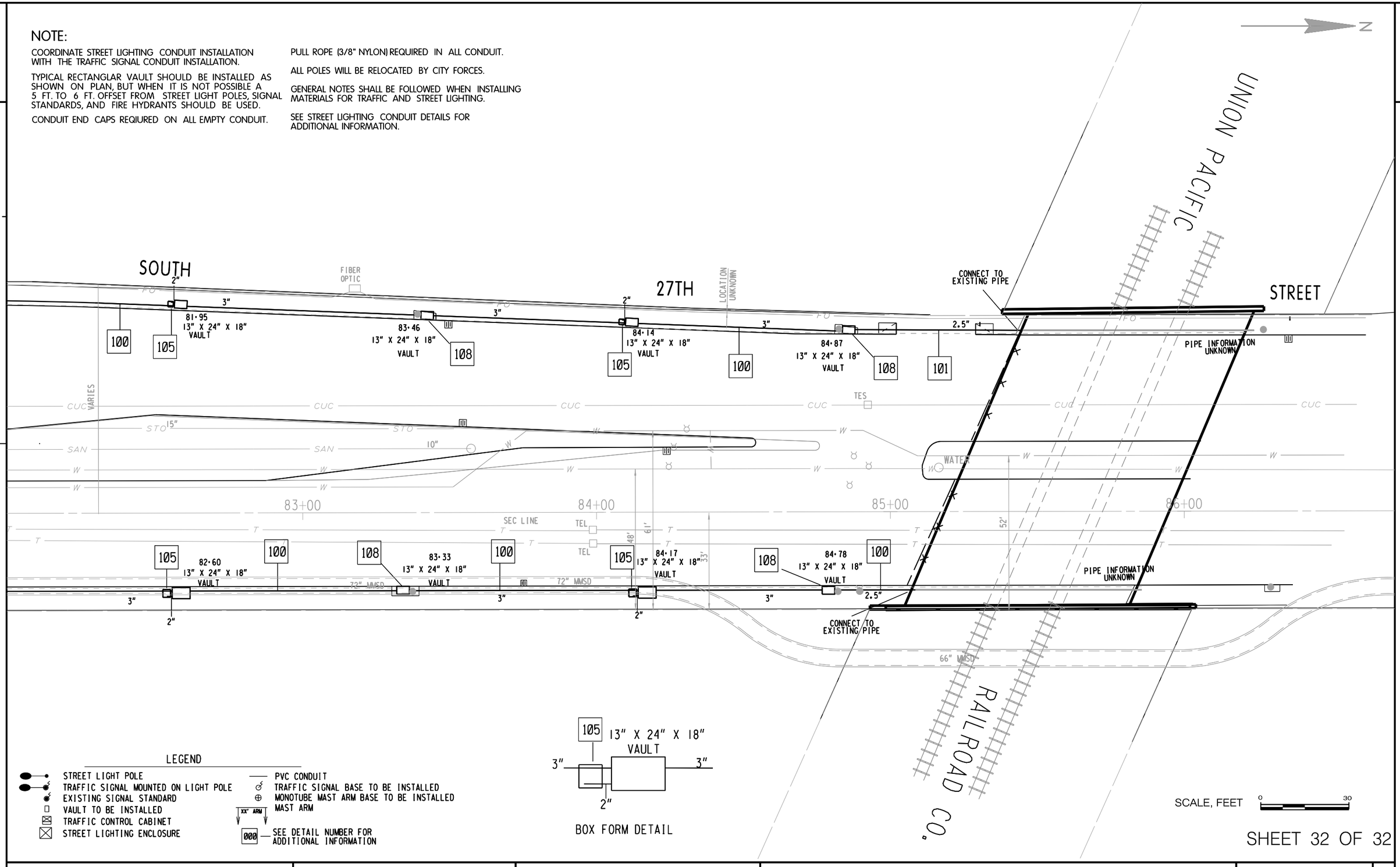
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

BOX FORM DETAIL

SCALE, FEET 0 30

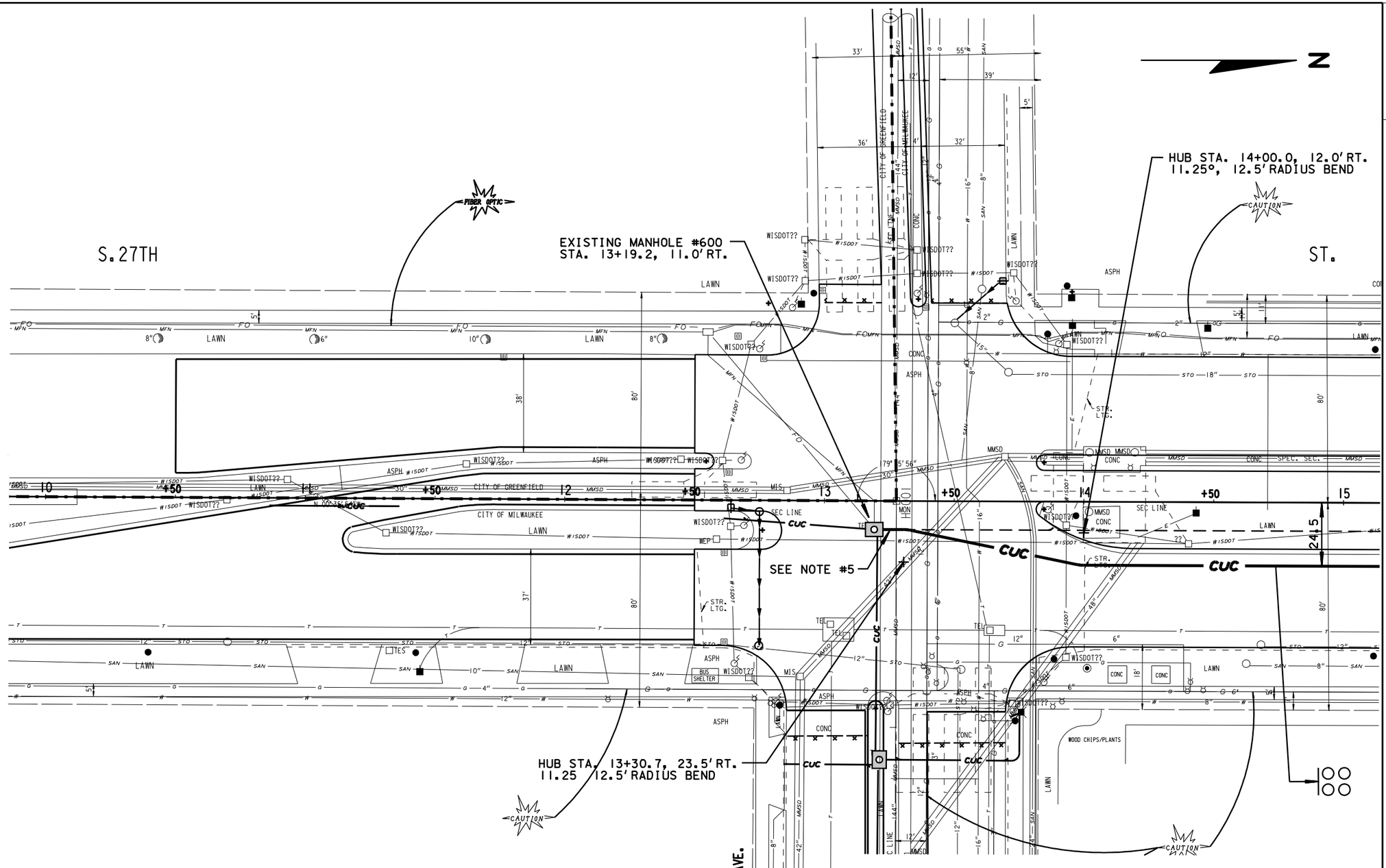
SHEET 32 OF 32

PROJECT NO: 2265-08-70	HWY: S.T.H. 241	COUNTY: MILWAUKEE	STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 183	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2265-08-90 S. 27th St. STH 241\TR & SL Plan Set.dgn PLOT DATE : 27-AUG-2013 15:53 PLOT BY : elee PLOT NAME : PLOT SCALE : 30.000000:1.000000

WISDOT/CADDS SHEET 42

2



NOTES:

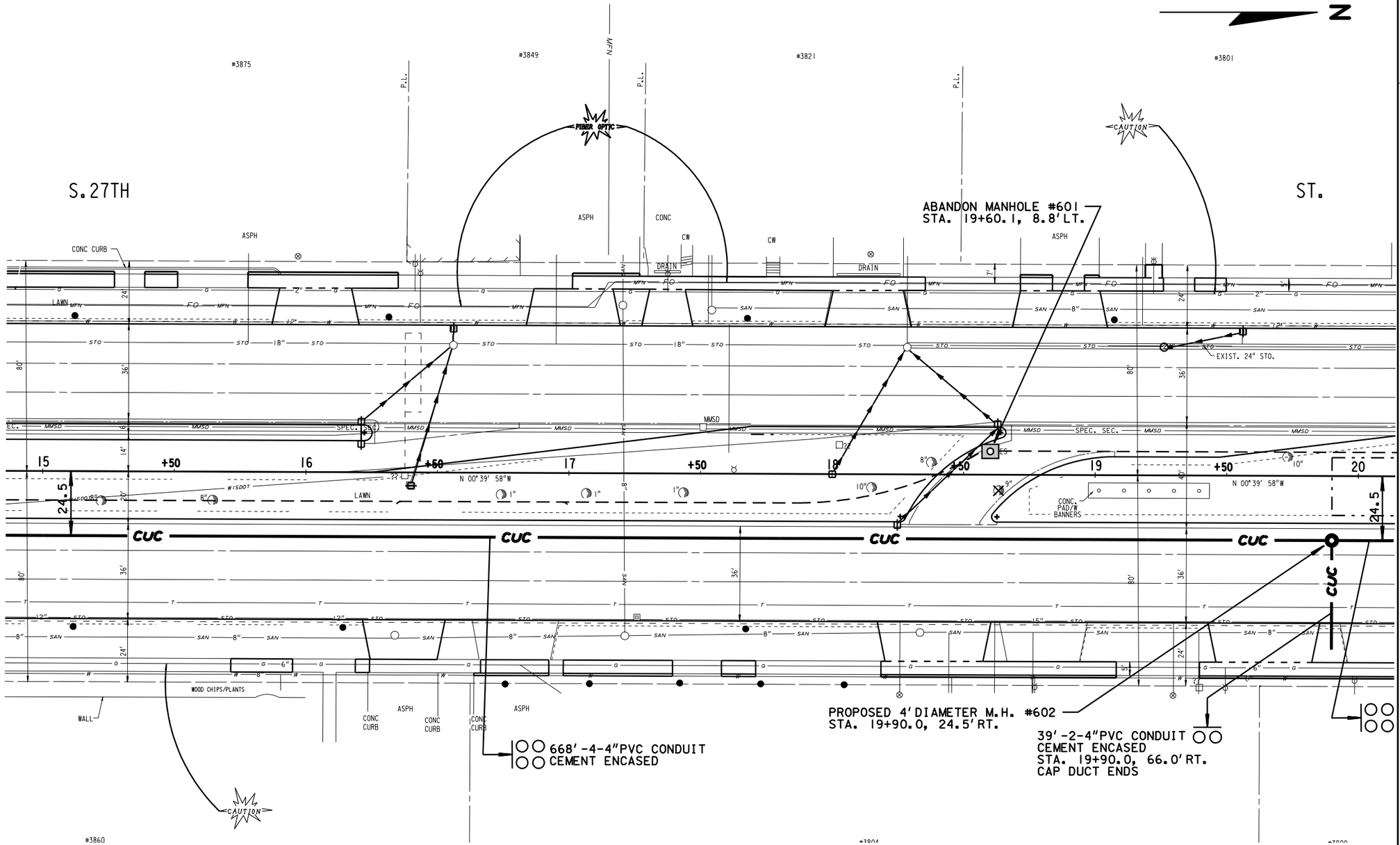
1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3) DIMENSIONS 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) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND TO THE NORTH AS NEEDED. INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION OF THE ABANDONED CONDUIT.

LEGEND

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

SHEET 1 OF 16

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 184 E



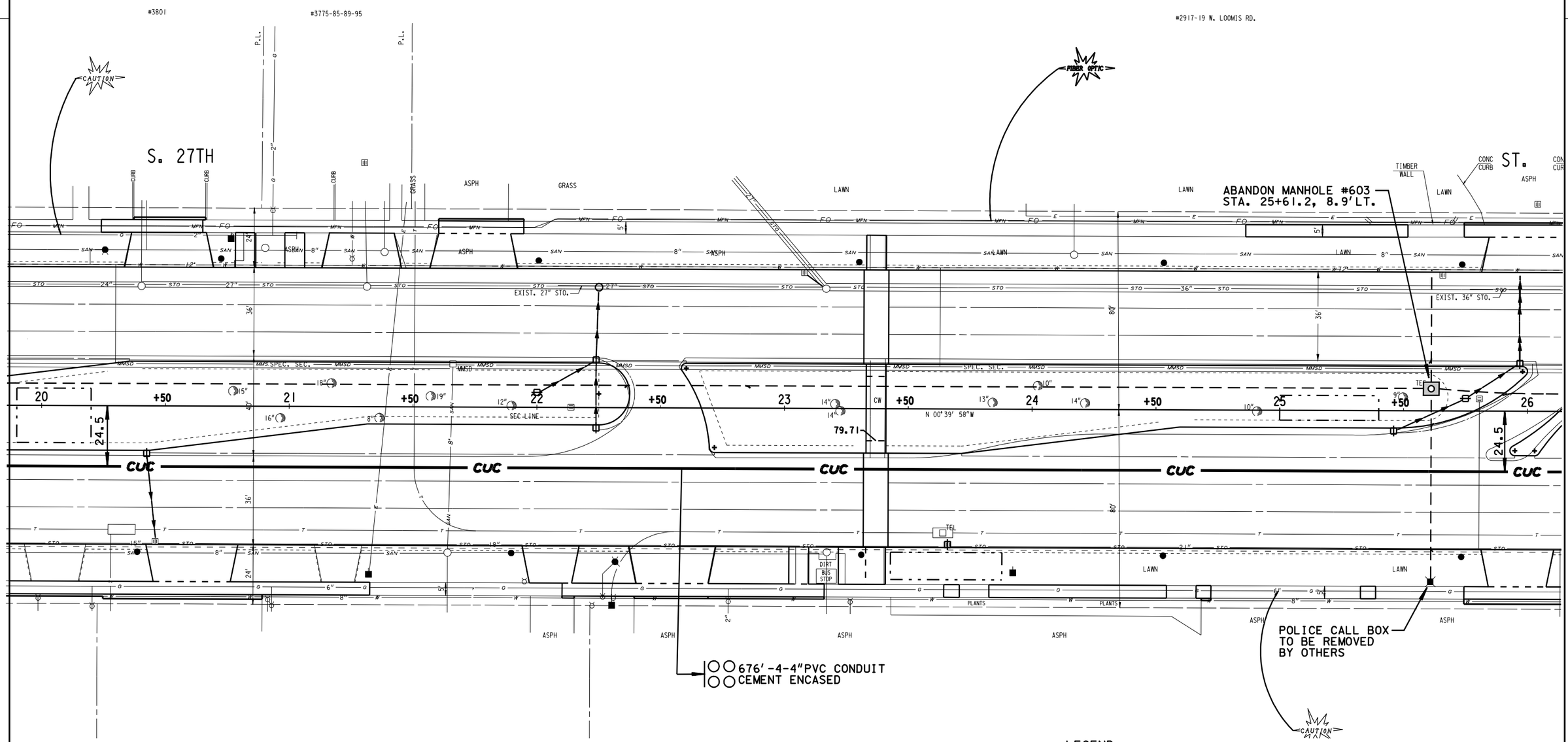
NOTES:

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.

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
⊙	PROPOSED TES MANHOLE
— — — —	CONDUIT TO BE ABANDONED IN PLACE

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 185 E



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.

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
⊙	PROPOSED TES MANHOLE
— — — —	CONDUIT TO BE ABANDONED IN PLACE

SHEET 3 OF 16

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 186 E

#2917-19 W. LOOMIS RD.

#3605

S. 27TH

82'-2-4"PVC CONDUIT
CEMENT ENCASED
STA. 26+65.0, 59.0'LT.
CAP DUCT ENDS

ABANDON MANHOLE #605
STA. 30+25.2, 7.2'LT.

ASPH. ST.

PROPOSED 4'DIAMETER M.H. #604
STA. 26+65.0, 24.5'RT.

627'-4-4"PVC CONDUIT
CEMENT ENCASED

N 00°39' 58" W

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.

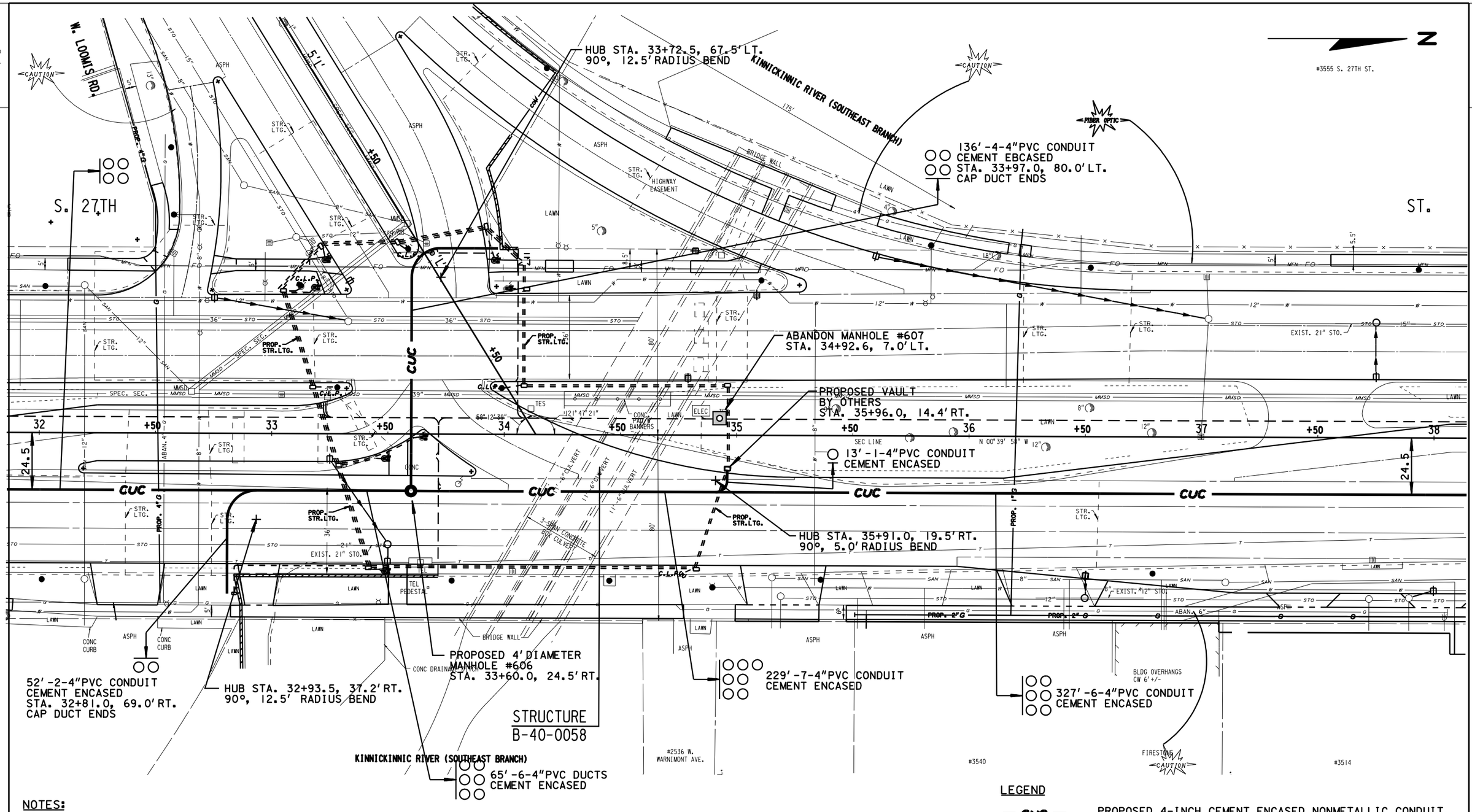
LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

PROPOSED TES MANHOLE

— — — — CONDUIT TO BE ABANDONED IN PLACE

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40	SHEET NO: 187 E



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.

LEGEND

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

2

N

#3473

HUB STA. 39+32.9, 64.4' LT.
22.5°, 5.0' RADIUS BEND

92'-4-4"PVC CONDUIT
CEMENT ENCASED

S. 27TH AVE.

EXISTING MANHOLE #610
STA. 39+37.9, 70.8' LT.
SEE NOTE #5

EXISTING MANHOLE #612
STA. 40+44.5, 71.8' LT.

ABANDON MANHOLE #613
STA. 43+78.9, 66.8' LT.

ST.

HUB STA. 39+32.0, 15.3' LT.
22.5°, 12.5' RADIUS BEND

ABANDON MANHOLE #608
STA. 38+39.3, 7.9' LT.

ANGLE POINT 5° BEND
STA. 38+94.7, 24.5' RT.

PROPOSED 4' DIAMETER MANHOLE #609
STA. 39+19.5, 22.3' RT.

113'-6-4"PVC CONDUIT
CEMENT ENCASED

PROPOSED 4' DIAMETER
"DOGHOUSE" MANHOLE #611
STA. 40+36.3, 16.5' RT.

593'-6-4"PVC CONDUIT
CEMENT ENCASED

W. MORGAN

179°46'32"

N 00°53'26"W

SEC LINE

EXIST. 36" STO.

EXIST. 21" STO.

60
534-0099
#3456

51.14
534-0098-100
#3450

59.86
534-0097-100
#3440

156
534-0095-110-8

NOTES:

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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) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND TO THE NORTH AS NEEDED. INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION OF THE ABANDONED CONDUIT.

LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

PROPOSED TES MANHOLE

— — — — CONDUIT TO BE ABANDONED IN PLACE

2

N

S. 27TH ST.

W. HOLT AVE.

HUB STA. 46+31.5, 11.5' RT.
90 , 5.0' RADIUS BEND

ABANDON MANHOLE #616
STA. 46+73.3, 62.7' LT.

ABANDON MANHOLE #615
STA. 46+73.0, 8.3' LT.

82'-2-4" PVC CONDUIT
CEMENT ENCASED
STA. 46+26.5, 62.0' LT.
CAP DUCT ENDS

11'-8-4" PVC CONDUIT
CEMENT ENCASED

PROPOSED 4' DIAMETER MANHOLE #614
STA. 46+44.0, 16.5' RT.

45'-2-4" PVC CONDUIT
CEMENT ENCASED
STA. 46+44.0, 63.0' RT.
CAP DUCT ENDS

712'-6-4" PVC CONDUIT
CEMENT ENCASED

EXIST. 36" STO.

EXIST. 18" STO.

PROP. 4"G

CUC

SEC LINE

CAUTION

#3418
53
534-0094-111-0

#3432

#3404

#3368-78

60
534-0005
#3360

#3340

NOTES:

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LEGEND

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

SHEET 7 OF 16

2

WALGREENS #3233

N

S. 27TH ST.

ABANDON MANHOLE #617
STA. 50+23.9, 8.1'LT.

ABANDON MANHOLE #619
STA. 53+75.0, 7.4'LT.

POLICE CALL BOX TO BE RELOCATED BY OTHERS

FIBER OPTIC

PROPOSED 4' DIAMETER MANHOLE #618
STA. 53+60.0, 16.5'RT.

W. OHIO AVE.

SEE DETAIL

33'-3-4"PVC CONDUIT CEMENT ENCASED

HUB STA. 53+47.5, 51.9'RT.
30°, 12.5'RADIUS BEND

12'-1-4"PVC CONDUIT CEMENT ENCASED

HUB STA. 53+47.5, 57.4'RT.
30°, 12.5'RADIUS BEND

PROPOSED VAULT BY OTHERS
STA. 53+55.8, 62.4'RT.

19'-2-4"PVC CONDUIT CEMENT ENCASED

PROPOSED POLICE CALL BOX BY OTHERS
STA. 53+54.9, 69.5'RT.

DETAIL

NOTES:

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LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

PROPOSED TES MANHOLE

— — — — CONDUIT TO BE ABANDONED IN PLACE

S. 27TH ST.

#2733 W. EUCLID AVE.

#3179-81

#3165

ABANDON MANHOLE #620
STA. 56+87.5, 8.6'LT.

HUB STA. 59+26.0, 31.8'LT.
22.5°, 12.5' RADIUS BEND

66'-2-4"PVC CONDUIT
CEMENT ENCASED
STA. 59+32.0, 50.2'LT.
CAP DUCT ENDS

ABANDON MANHOLE #622
STA. 60+00.5, 7.5'LT.

575'-6-4"PVC CONDUIT
CEMENT ENCASED

42'-2-4"PVC CONDUIT
CEMENT ENCASED
STA. 59+41.9, 61.0'RT.
CAP DUCT ENDS

ROUTE CONDUIT AROUND WATER GATE VALVE
TO MAINTAIN 1' OF CLEARANCE

PROPOSED 4' DIAMETER MANHOLE #621
STA. 59+38.5, 16.5'RT.

W. EUCLID AVE.

#3236

#3232

#3200

NOTES:

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LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

PROPOSED TES MANHOLE

— — — — CONDUIT TO BE ABANDONED IN PLACE

SHEET 9 OF 16

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40	SHEET NO: 192 E

2

S. 27TH ST.

W. OKLAHOMA AVE.

ABANDON MANHOLE #623
STA. 62+44.7, 7.1'LT.

ABANDON MANHOLE #624
STA. 64+85.2, 6.9'LT.

ABANDON MANHOLE #625
STA. 66+12.6, 6.9'LT.

ANGLE POINT
STA. 63+25.0, 16.5'RT.

670'-6-4"PVC CONDUIT
CEMENT ENCASED

PROPOSED 4' DIAMETER
"DOGHOUSE" MANHOLE #626
STA. 66+12.2, 22.5'RT.

58.0'-4-4"PVC CONDUIT
CEMENT ENCASED
STA. 66+50.0, 77.5'RT.
CAP DUCT ENDS

34'-6-4"PVC CONDUIT
CEMENT ENCASED

EXISTING MANHOLE #628
STA. 67+03.0, 53.5'RT.

EXISTING MANHOLE #627
STA. 66+50.4, 18.5'RT.

PROP. R.O.W. LINE

3"FIBER DUCT

#3151 | #3119 | #3105 | #3152 | #3146 | #3142 | #3120 | #3104 S. 27TH ST. & 2619-27 W. OKLAHOMA AVE.

40 534-0408 | 40 534-0407 | 40 534-0406 | 160 534-0404-100-9 | 120 534-0403

NOTES:

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LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

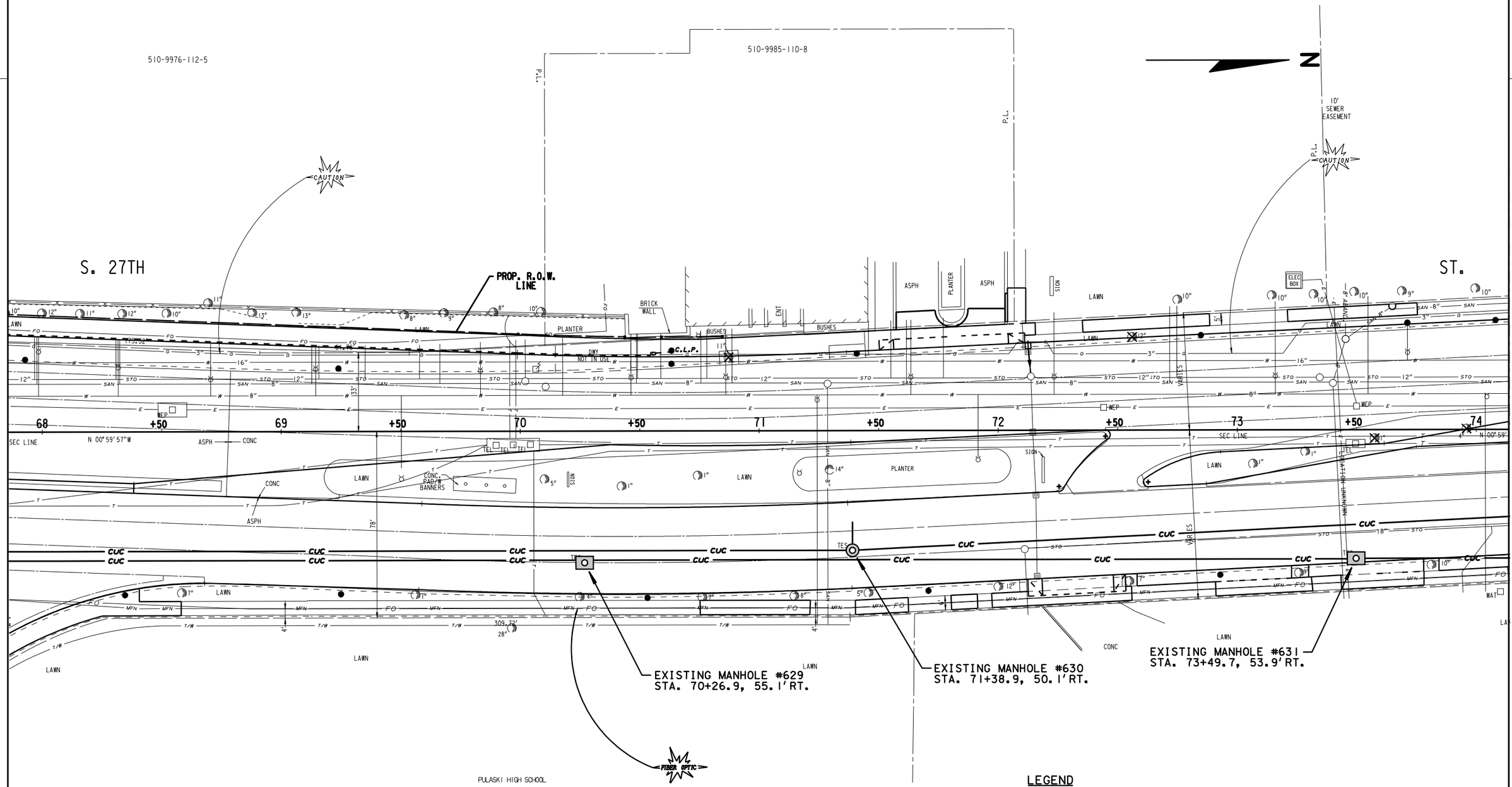
PROPOSED TES MANHOLE

— — — — CONDUIT TO BE ABANDONED IN PLACE

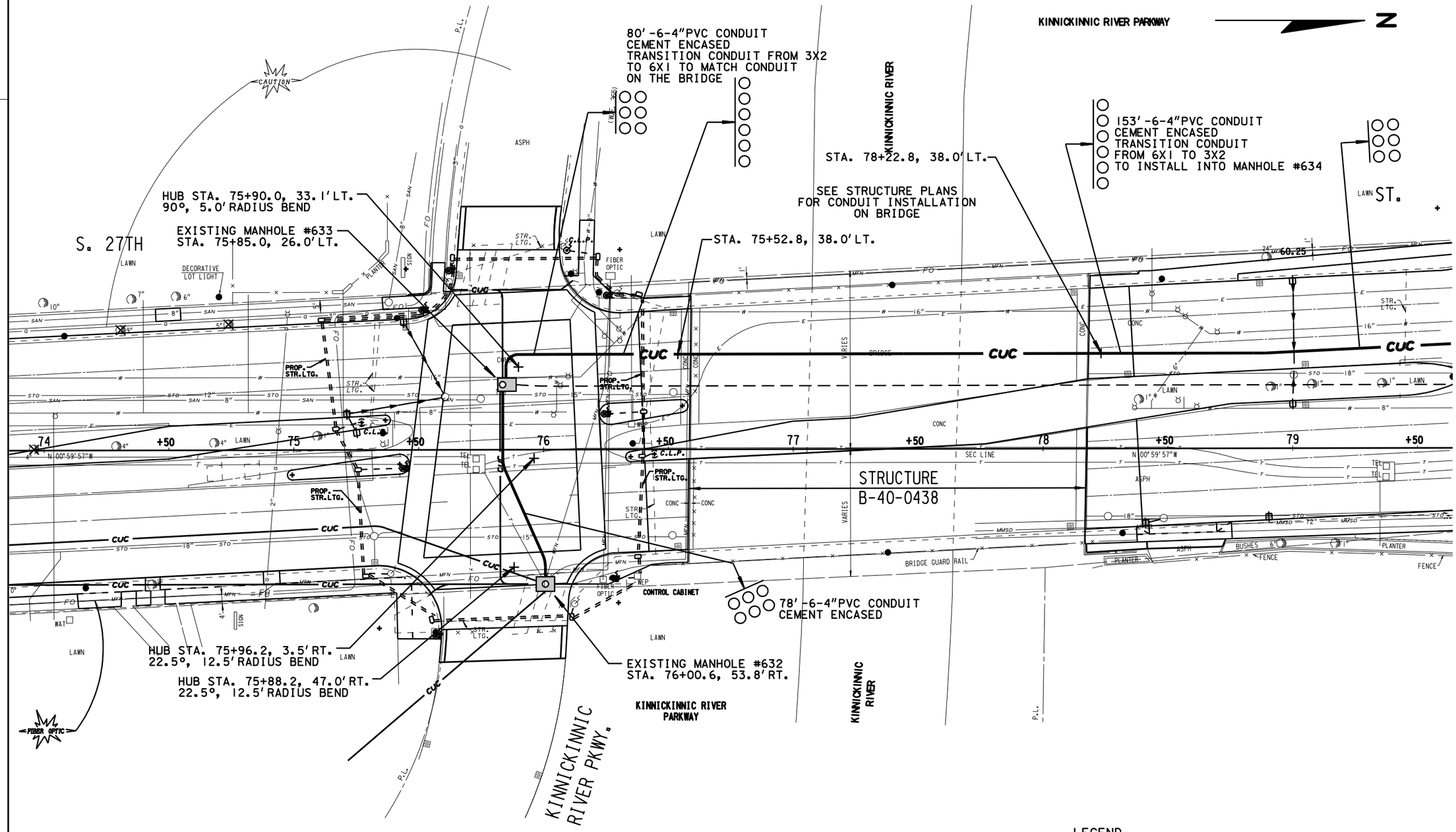
SHEET 10 OF 16

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40	SHEET NO: 193	E

2


510-9976-112-5
510-9985-110-8
P.L.
P.L.
N
10' SEWER EASEMENT
CAUTION
CAUTION
S. 27TH
ST.
PROP. R.O.W. LINE
BRICK WALL
PLANTER
DWY NOT IN USE
C.L.P.
BUSHES
ENT
ASPH
PLANTER
ASPH
SIGN
LAWN
ELEC BOX
VAULT
VAULT
VAULTS
68
+50
69
+50
70
+50
71
+50
72
+50
73
+50
74
SEC LINE
N 00°59'57"W
SEC LINE
N 00°59'
ASPH
CONC
CONC
ASPH
LAWN
CONC PAD W/ BANNERS
SIGN
LAWN
PLANTER
SIGN
LAWN
LOCATION UNKNOWN
CUC
CUC
CUC

2



NOTES:

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LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
○	PROPOSED TES MANHOLE
— — — —	CONDUIT TO BE ABANDONED IN PLACE

SHEET 12 OF 16

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 195	E

SAW CUT EXISTING CONDUIT
STA. 79+71.4, 96.0'LT.

EXISTING POLICE
CALL BOX

52'-2-4"PVC CONDUIT
CEMENT ENCASED
SEE NOTE #6

2-4"PVC CONDUIT
CEMENT ENCASED

S. 27TH

W. DAKOTA ST.

510-0187-200
207.64

510-0101-100

509'-6-4"PVC CONDUIT
CEMENT ENCASED

B.M. NW BOLT HYD W/S
STA. 83+63 - 66' LT.
ELEV. 77.67

EXISTING MANHOLE #637
STA. 84+92.5, 36.2'RT.
SEE NOTE #5

ANGLE POINT
STA. 84+63.9, 39.9'LT.
5° BEND

ABANDON - LOCATION UNKNOWN

4" RR TIE WALL

GRAVEL DWY

ST.

PROPOSED 4'DIAMETER MANHOLE #636
STA. 79+78.0, 42.5'LT.

ABANDON MANHOLE #634
STA. 79+70.6, 57.0'LT.

ABANDON MANHOLE #635
STA. 79+71.2, 25.3'LT.

UNION PACIFIC
RAILROAD COMPANY

B.M. NW BOLT HYD E/S
STA. 84+90 - 27' RT.
ELEV. 79.53

509-9991-110

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5) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND TO THE NORTH AS NEEDED. INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION OF THE ABANDONED CONDUIT.
6) ATTACH PROPOSED 4"PVC CONDUIT TO EXISTING CLAY TILE DUCT USING APPROPRIATE ADAPTOR. REMOVE ABANDONED CONDUIT AS NEEDED FOR PORPER INSTALLATION.

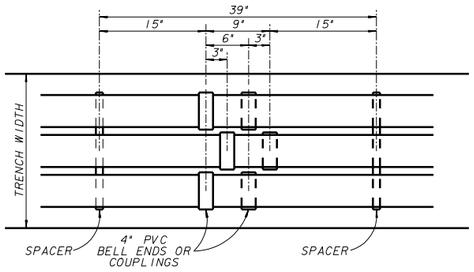
LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

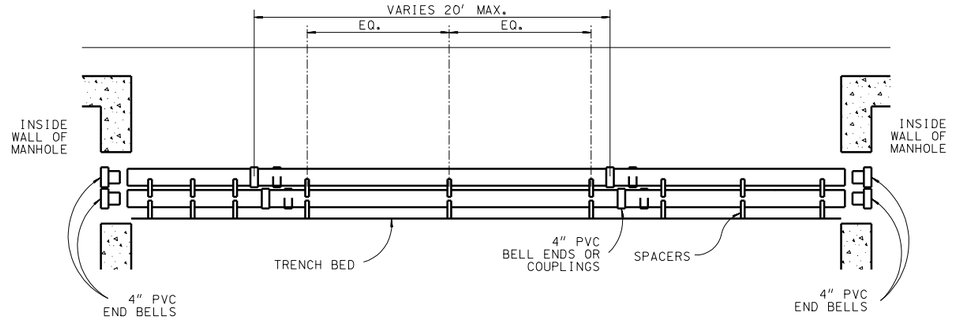
PROPOSED TES MANHOLE

— — — — CONDUIT TO BE ABANDONED IN PLACE

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40	SHEET NO: 196	E

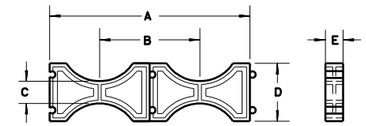


PLAN VIEW
N.T.S.



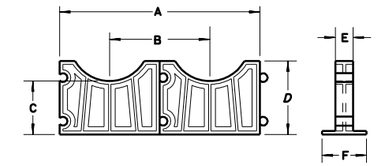
SECTION VIEW
N.T.S.

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 9/16"
C	1 1/2"	1 1/4"
D	3 1/4"	3 1/4"
E	1"	1"



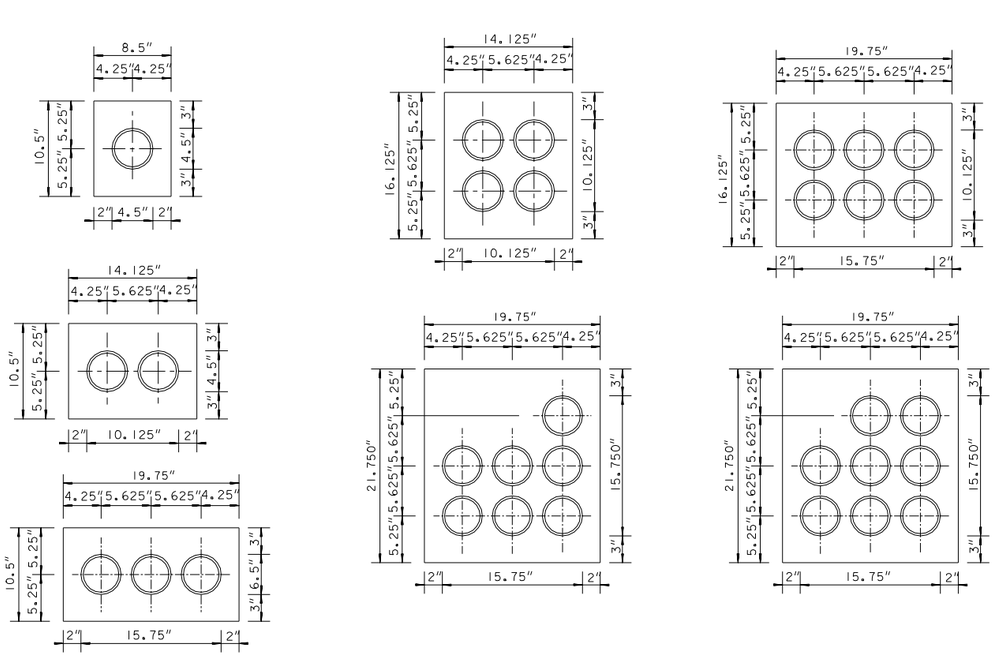
INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 9/16"
C	3"	3"
D	3 7/16"	4 1/4"
E	1"	1"
F	2 1/2"	2 1/2"

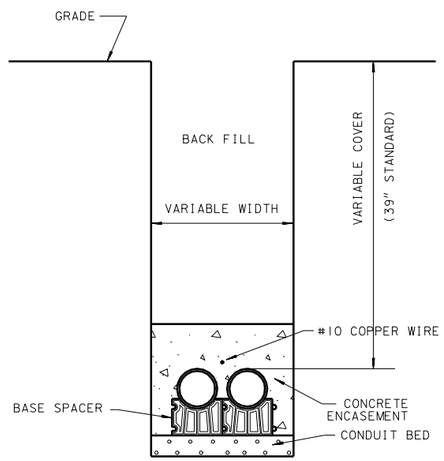


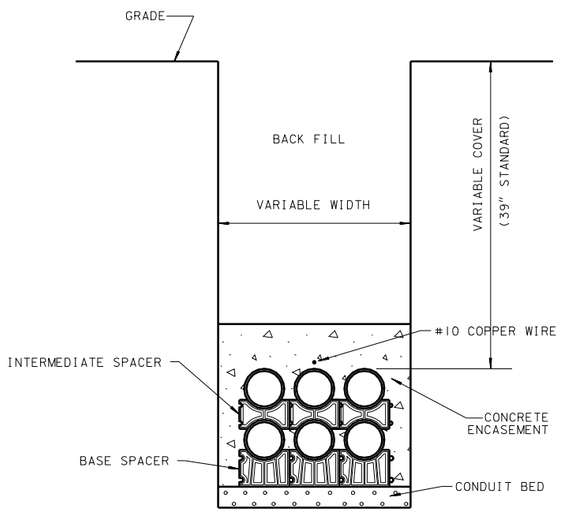
BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL



CROSS SECTION VIEW
N.T.S.

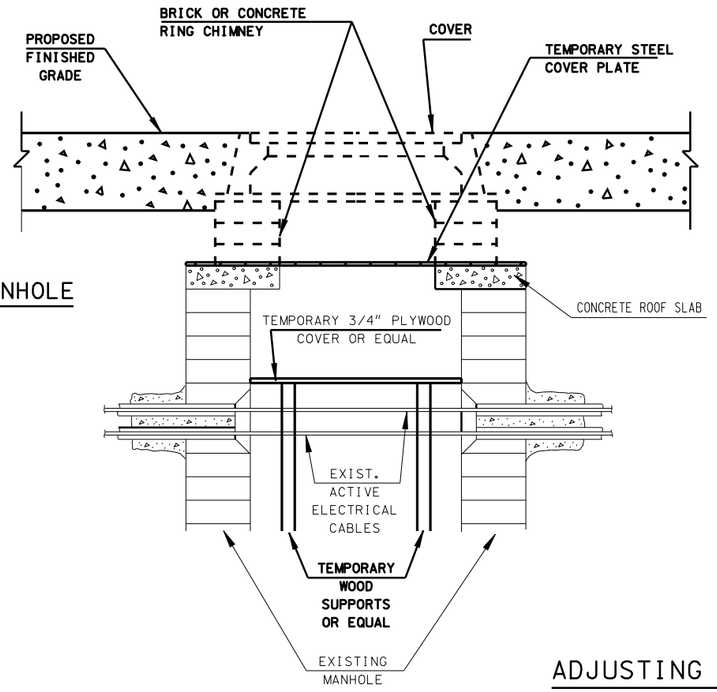




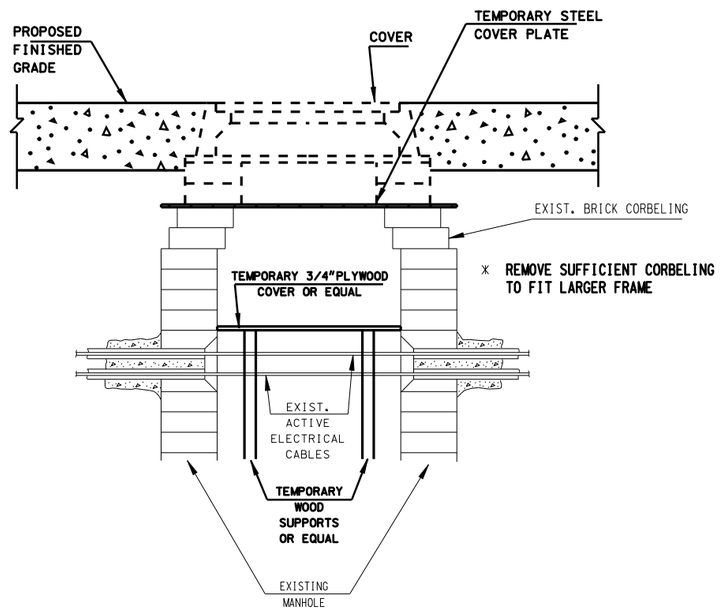
CROSS SECTION VIEW, TYP.
N.T.S.

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 197	E

2

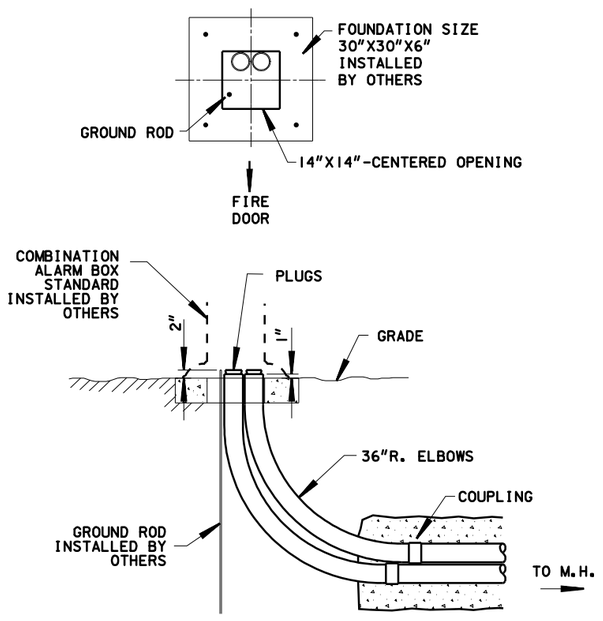


BLOCK OR PRECAST MANHOLE

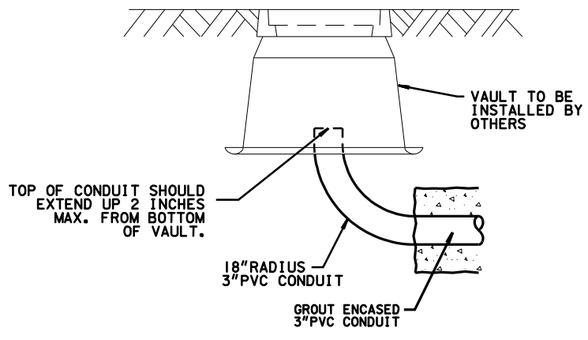


BRICK ROUND MANHOLE

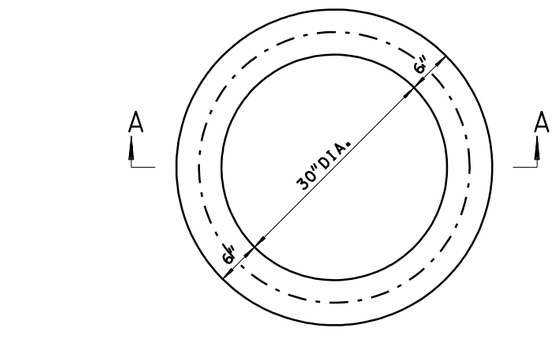
ADJUSTING TES MANHOLES



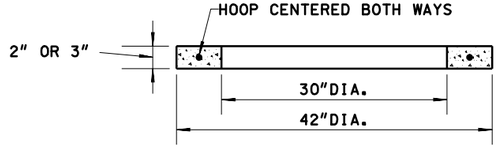
POLICE CALL BOX DETAIL



TYPICAL CONDUIT - VAULT ENTRY



PLAN



SECTION A-A

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

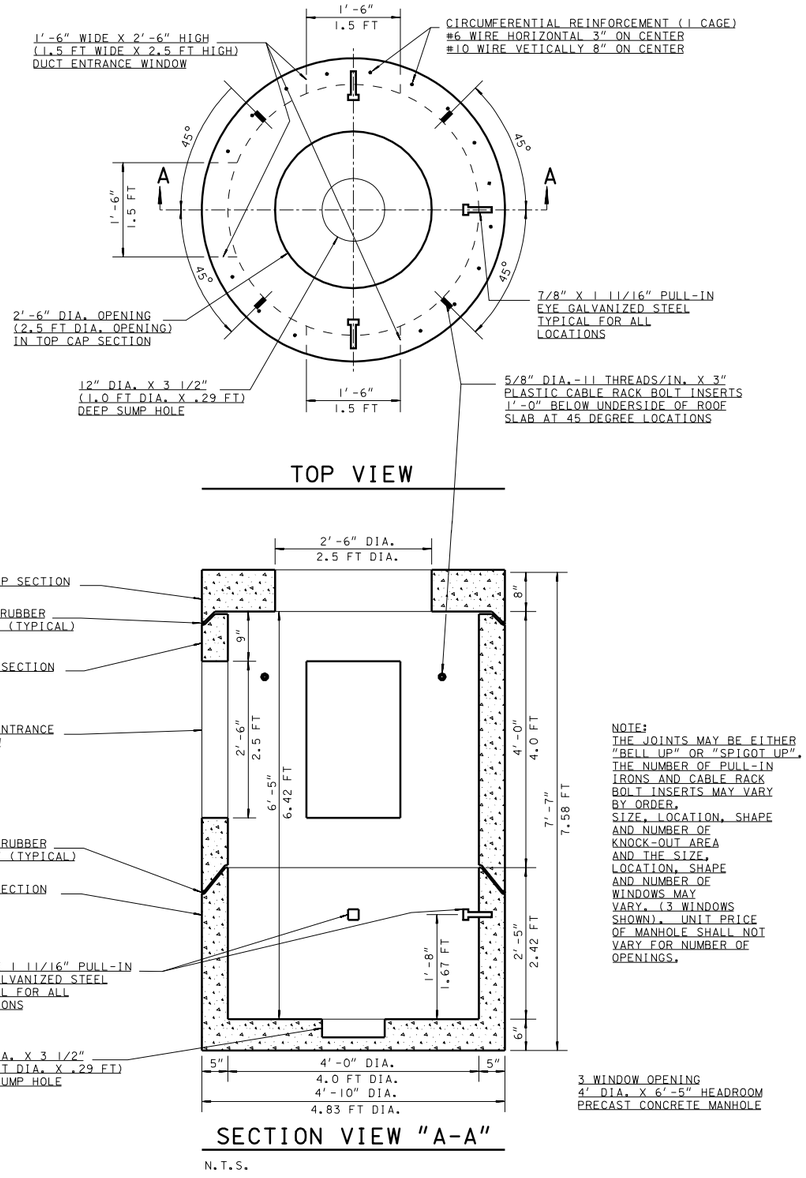
THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

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

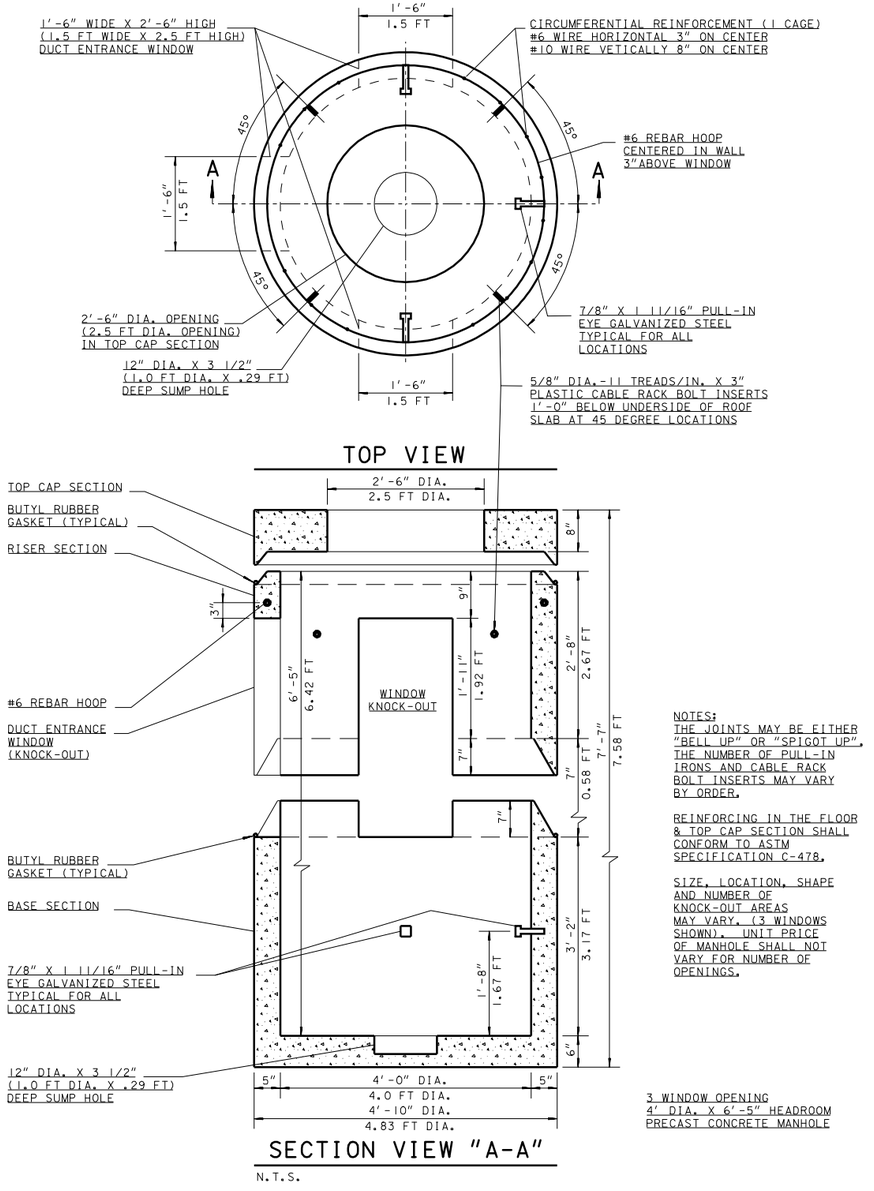
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

CONCRETE ADJUSTING RING

STATE PROJECT NUMBER 2265-08-70	HWY: S. 27TH ST.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 198	E



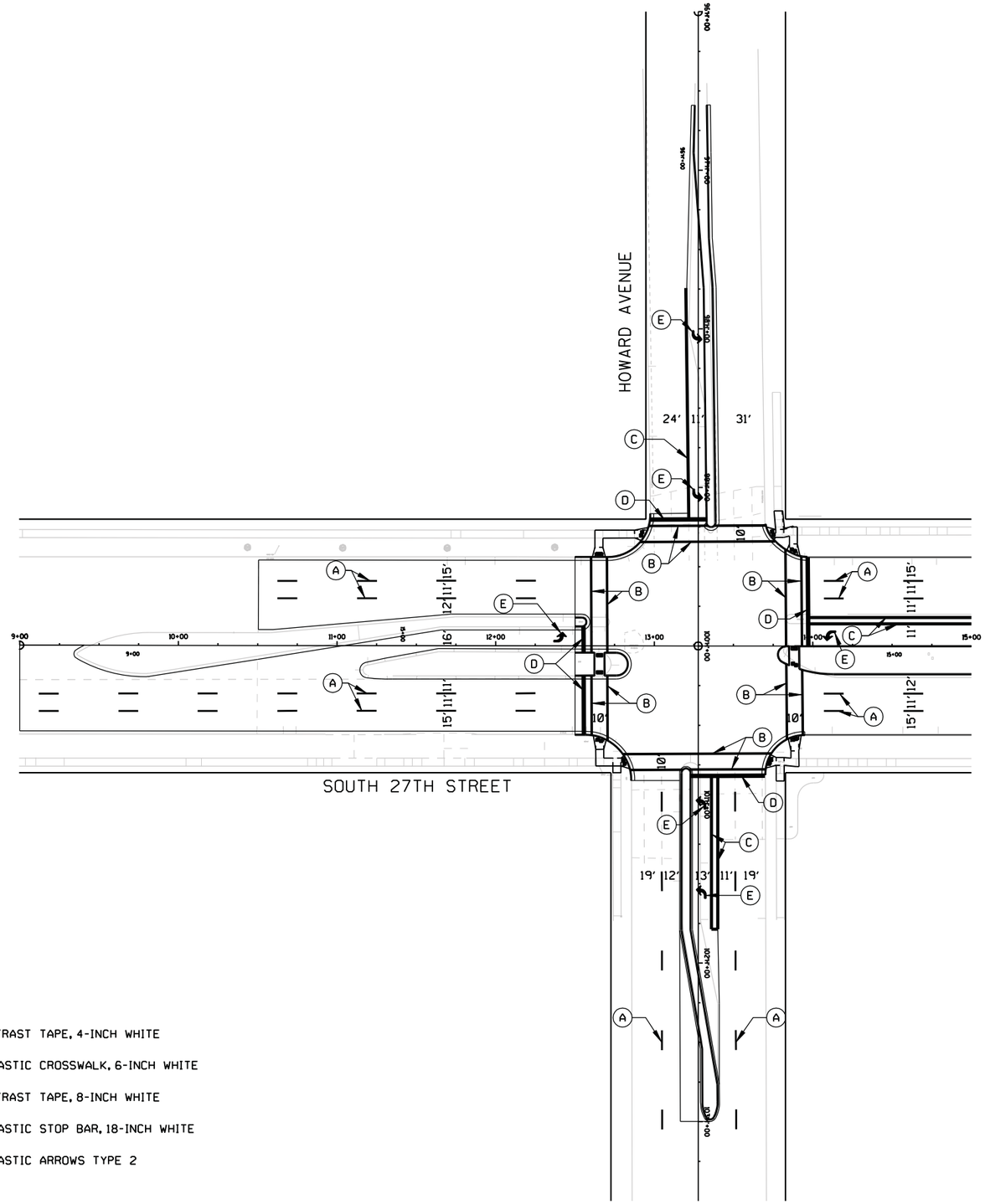
4' DIAMETER MANHOLE TYPE TES DETAIL



4' DIAMETER "DOGHOUSE" TYPE TES DETAIL

2

N



(A) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH WHITE

(B) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK, 6-INCH WHITE

(C) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 8-INCH WHITE

(D) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR, 18-INCH WHITE

(E) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2

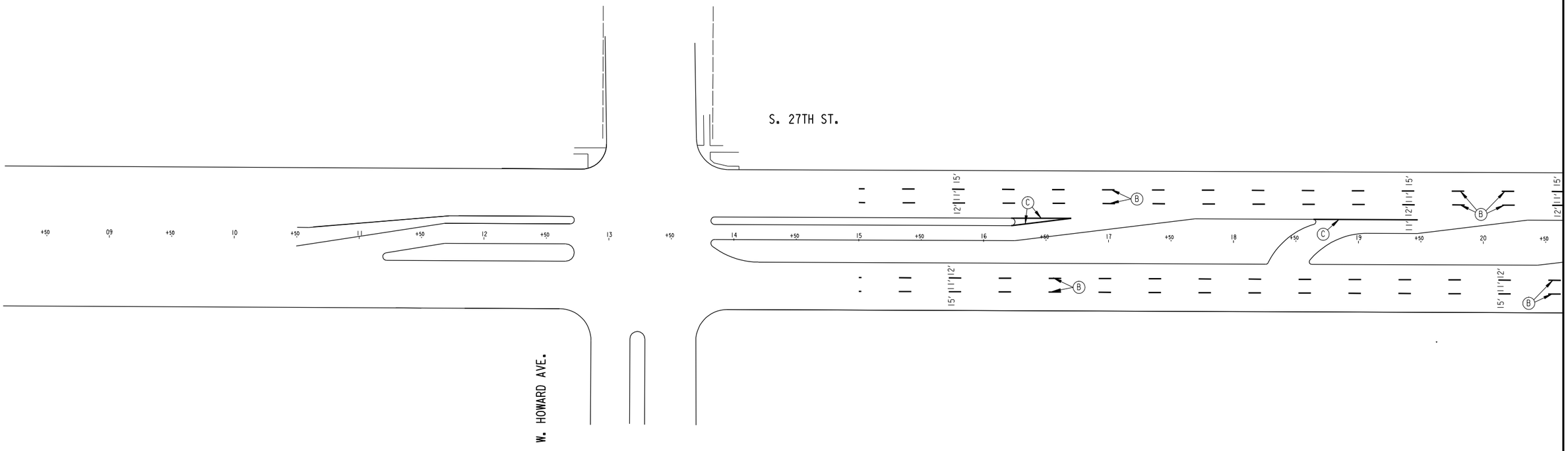
WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER
08/26/2013

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET 0' 40'	SHEET NO: 200	E

FILE NAME=

PAVEMENT MARKING

N



(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
(H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
(J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

SHEET 1 OF 9

STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 201	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

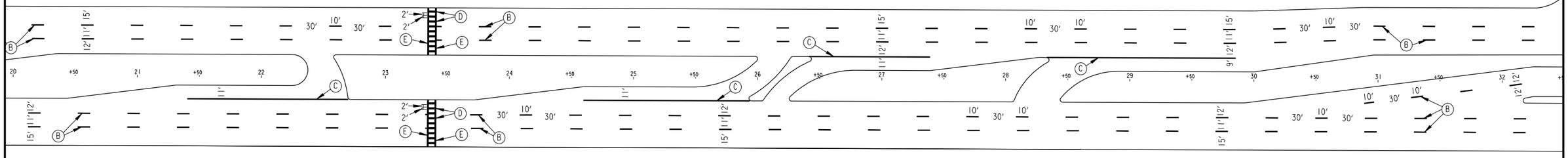
2

PAVEMENT MARKING

N

S. 27TH ST.

S. 27TH ST.



(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
(H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
(J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

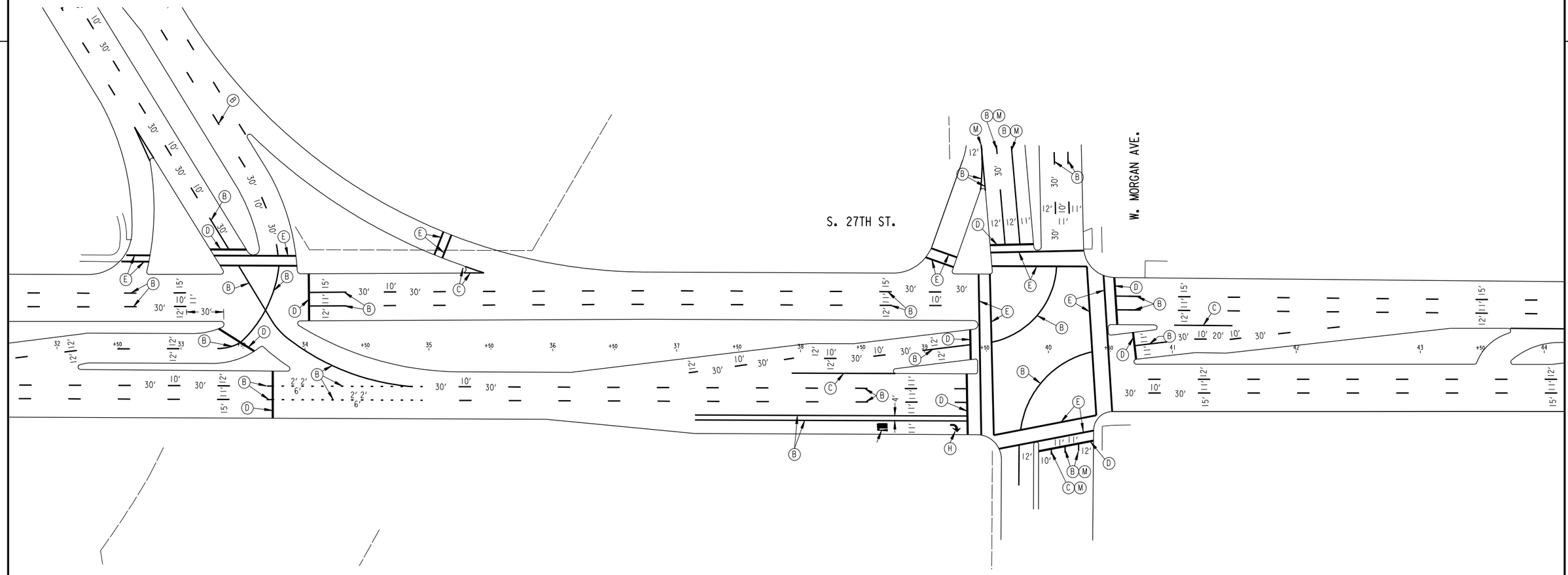
SHEET 2 OF 9

STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 202	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

PAVEMENT MARKING



(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
(H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
(J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

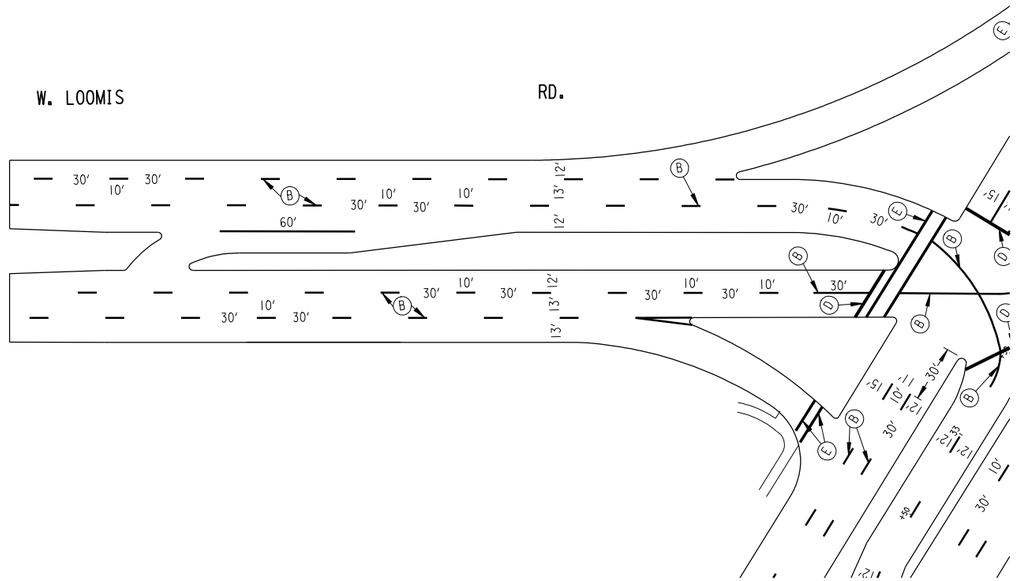
STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 203	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

PAVEMENT MARKING

2



(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
(H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
(J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

SHEET 4 OF 9

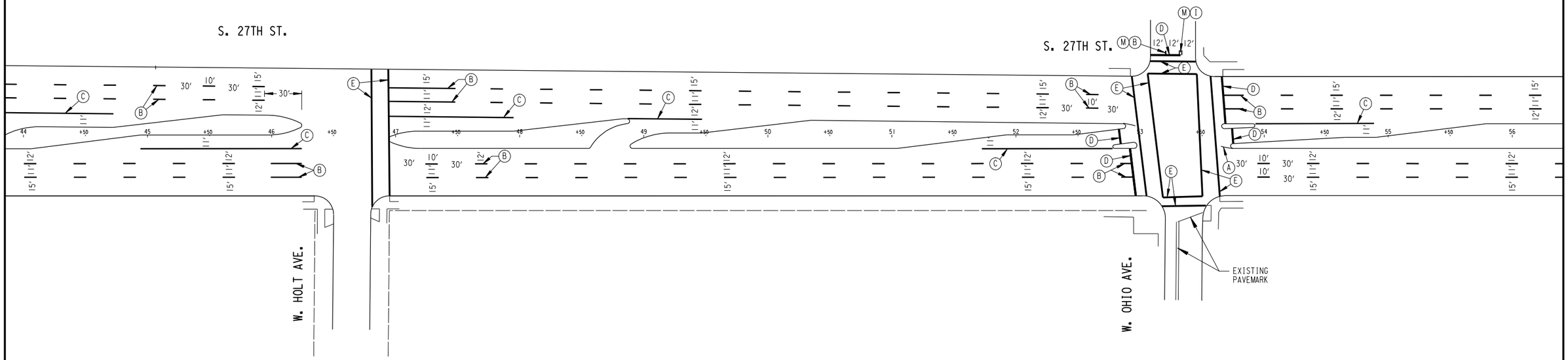
STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 204	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

PAVEMENT MARKING

N



(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
(H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
(J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

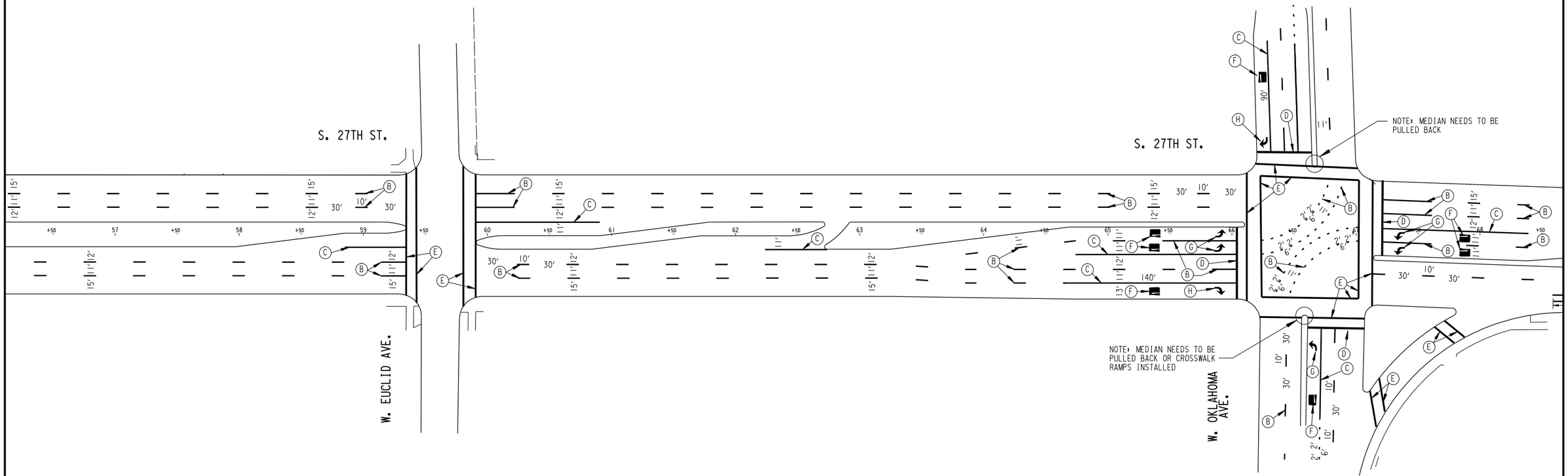
SHEET 5 OF 9

STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 205	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

PAVEMENT MARKING



- (A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
- (B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
- (C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
- (D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
- (E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
- (F) PAVEMENT MARKING WORDS EPOXY
- (G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
- (H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
- (I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
- (J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
- (K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
- (L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
- (M) MATCH EXISTING

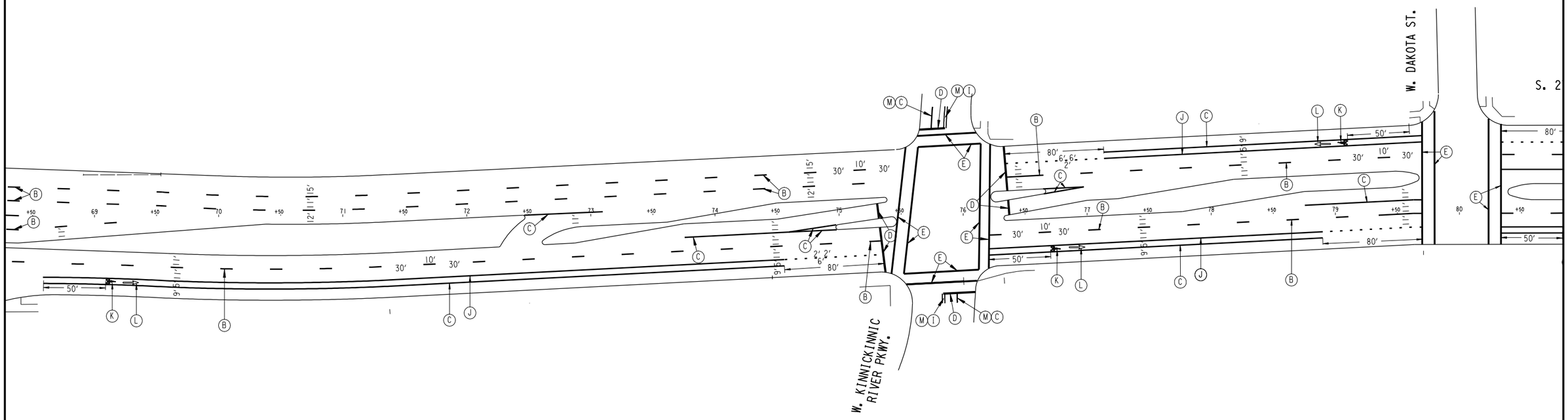
SHEET 6 OF 9

STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 206	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

PAVEMENT MARKING



(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
(H) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (RIGHT TURN)
(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
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(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

SHEET 7 OF 9

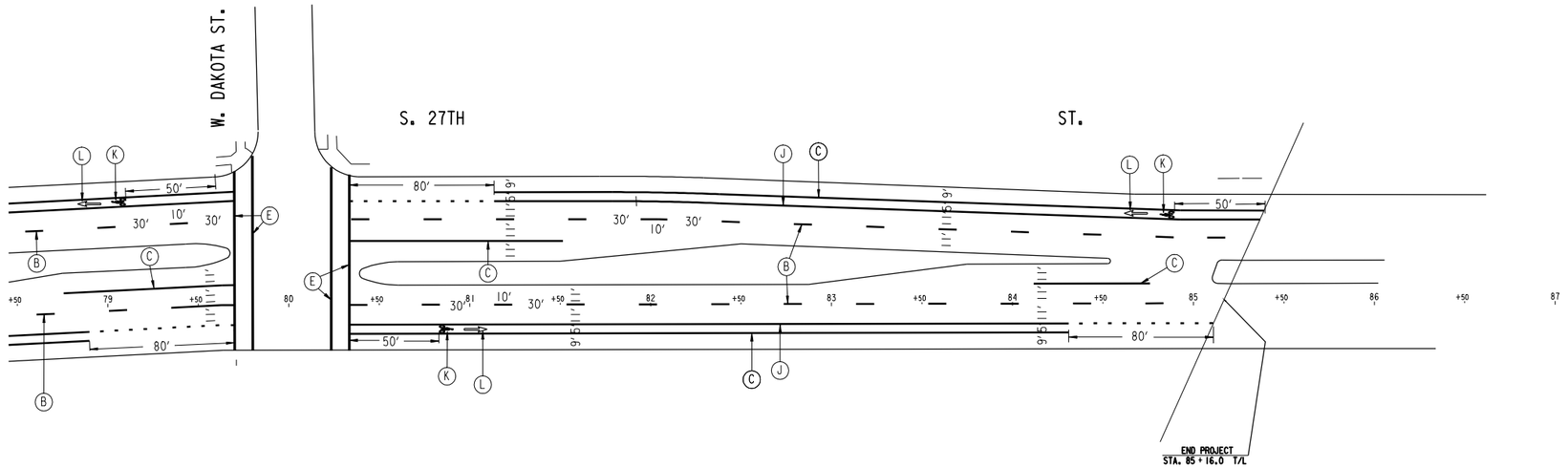
STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 207	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

PAVEMENT MARKING

N



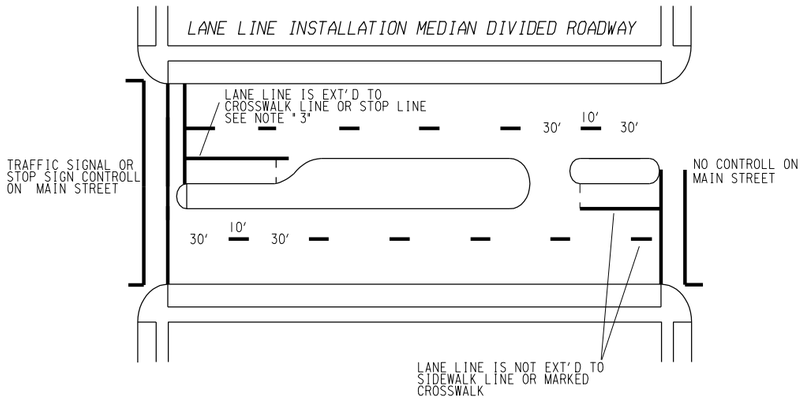
NOTE : CITY OF MILWAUKEE WILL CONTINUE BIKE LANES
FROM END OF PROJECT TO WEST LINCOLN AVE.

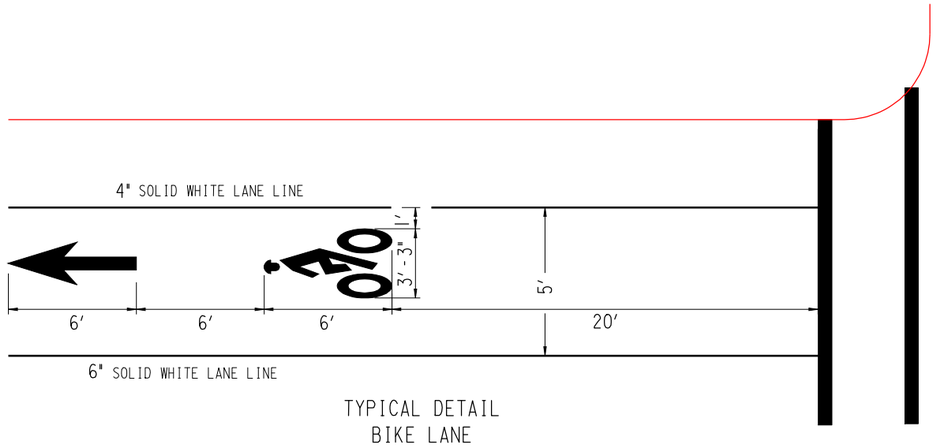
(A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW
(B) PAVEMENT MARKING EPOXY, 4-INCH WHITE
(C) PAVEMENT MARKING EPOXY, 8-INCH WHITE
(D) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
(E) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
(F) PAVEMENT MARKING WORDS EPOXY
(G) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (LEFT TURN)
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(I) PAVEMENT MARKING EPOXY 4-INCH DOUBLE YELLOW
(J) PAVEMENT MARKING EPOXY, 6-INCH WHITE
(K) PAVEMENT MARKING SYMBOLS, BIKE LANE EPOXY
(L) PAVEMENT MARKING ARROWS, BIKE LANE EPOXY
(M) MATCH EXISTING

STATE PROJECT NUMBER: 2265-08-70 - -	HWY: S.T.H. 241	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET	SHEET NO: 208	E

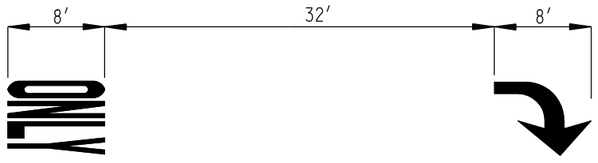
FILE NAME: W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

REVISED: 5-6-13

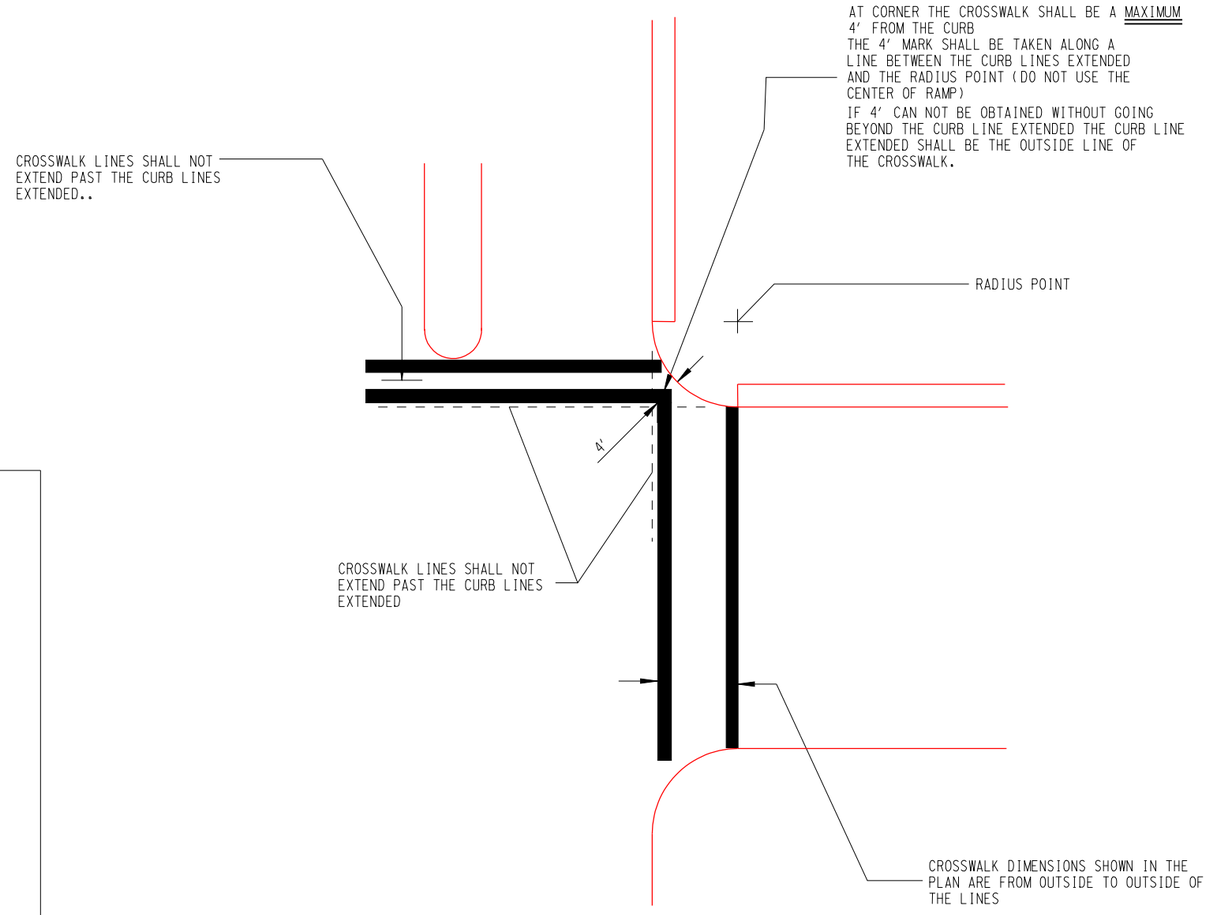




TYPICAL DETAIL
BIKE LANE



TYPICAL DETAIL
ARROW AND ONLY



4' TYPICAL
CROSSWALK INSTALLATION
(PLASTIC, EPOXY, PAINT)

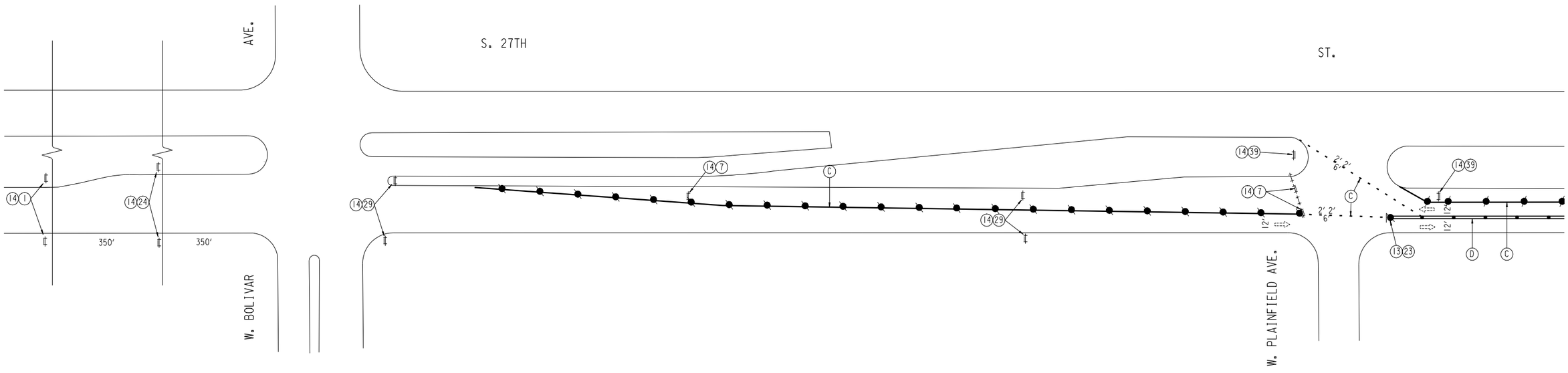
PAVEMENT MARKING NOTES

1. DASHED YELLOW CENTER LINES AND WHITE LANE LINES ARE 10 FEET LONG WITH A 30 FOOT GAP.
2. ALL DASHED CENTER LINES AND LANE LINES ARE 4 INCHES WIDE. ALL DOUBLE YELLOW CENTER LINES HAVE A 4 INCH SPACE BETWEEN TWO 4 INCH LINES.
3. AT CONTROLLED INTERSECTION IF LANE LINE IS LESS THAN 10 FEET, THE PRECEEDING LINE IS EXTENDED TO THE STOP LINE OR CROSSWALK LINE. THIS BALANCE LINE SHOULD NOT EXCEED 49 FEET. THIS POLICY APPLIES TO LANE LINES ONLY AT TRAFFIC SIGNALIZED OR STOP SIGN CONTROLLED INTERSECTIONS AND CENTER LINES AT ALL LOCATIONS.
4. ALL DIMENSIONS ARE FROM THE FACE OF THE CURB TO THE CENTER OF THE MARKING UNLESS OTHERWISE NOTED.
5. TEMPORARY PAVEMENT MARKINGS MUST BE PLACED ON THE PAVEMENT IF PERMANENT MARKINGS ARE NOT INSTALLED AFTER THE COMPLETION OF PAVING.

STATE PROJECT NUMBER - -	HWY:	COUNTY: MILWAUKEE	PAVEMENT MARKINGS	SCALE FEET	SHEET NO: 209	E

FILE NAME= W:\SPR\27TH_HOWARD_OKLA\PAVEMARK.DGN

STAGE I



LEGEND

(1) W020-1 ROAD WORK AHEAD 48" X48"
(2) R11-2 ROAD CLOSED 48" X30"
(3) R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48"
(4) R6-1R ONE WAY 24" X48"
(5) W01-7 24" X48"
(6) W01-6L 24" X48"
(7) W01-6R 24" X48"
(8) R5-1 DO NOT ENTER 36" X36"
(9) R3-2 36" X36"
(12) R6-1L ONE WAY 30" X48"
(20) R1-1 STOP 30" X30"
(21) W01-4L 48" X48"
(22) R3-1 36" X36"
(23) R4-7A KEEP RIGHT 36" X 48"
(24) W020-5R RIGHT LANE CLOSED AHEAD 48" X48"
(25) W04-2R 30" X30"
(27) W20-3 ROAD CLOSED AHEAD 48" X48"
(28) W016-7PR 24" X12"
(29) W04-2L 48" X48"
(30) W020-5L LEFT LANE CLOSED AHEAD 48" X48"
(32) R3-6L 30" X36"
(33) W020-5 CENTER LANE CLOSED AHEAD 48" X48"
(34) W09-3A 48" X48"
(35) R3-7R RIGHT LANE MUST TURN RIGHT 36" X36"
(36) W013-1 20 M.P.H. 24" X12"
(37) R3-8B ONLY ONLY ONLY 30" X48"
(38) W01-3L 48" X48"
(39) W01-3R 48" X48"
(40) R3-7L LEFT LANE MUST TURN LEFT 36" X36"
(41) W016-7PL 24" X12"
(42) W012-1 24" X24"
(43) W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48"

(13) DRUMS W/LIGHTS 30' SPACING
(14) TYPE III BARRICADES
(14)+(X) TYPE III BARRICADES W/ SIGN
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

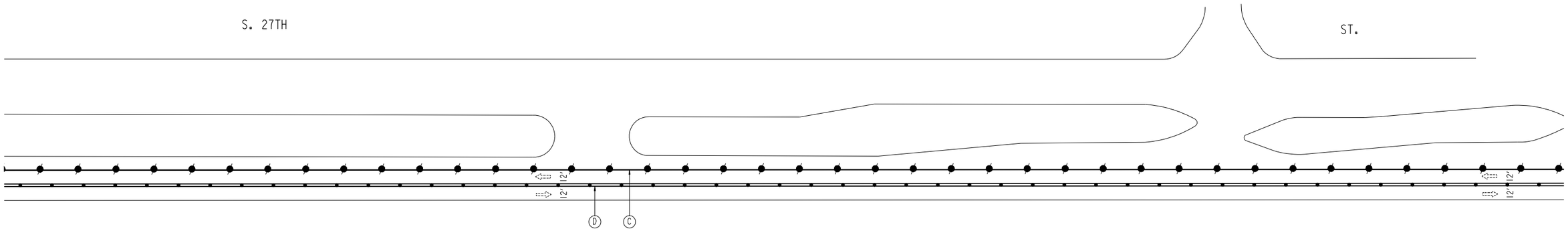
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

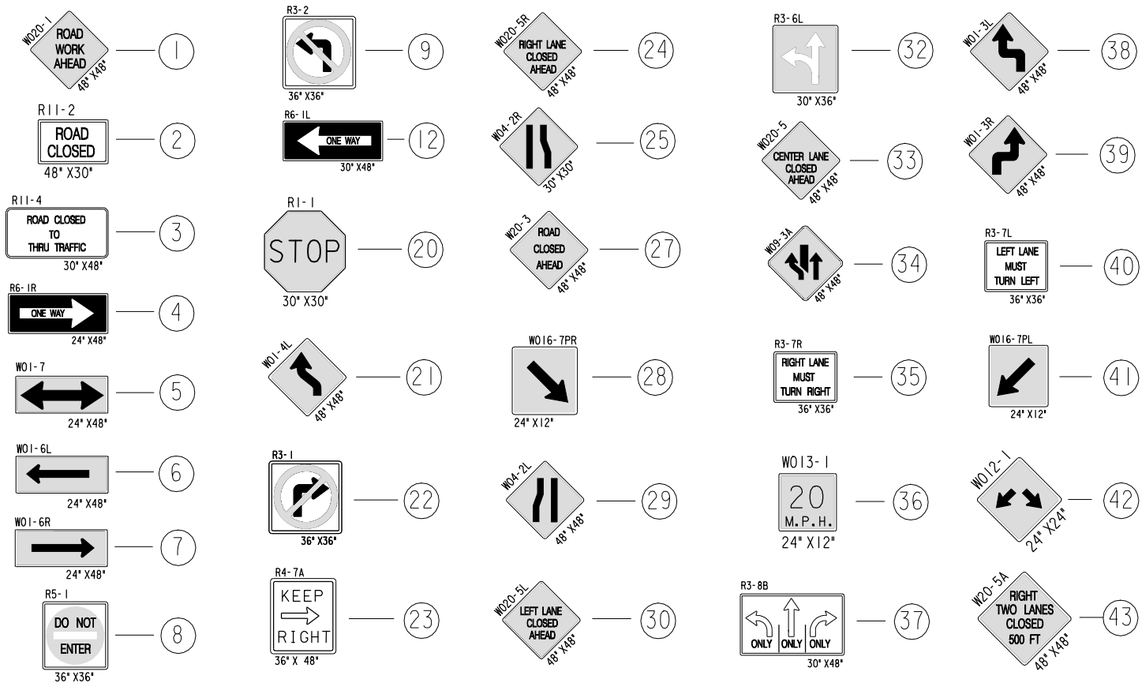
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 210	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE I



LEGEND

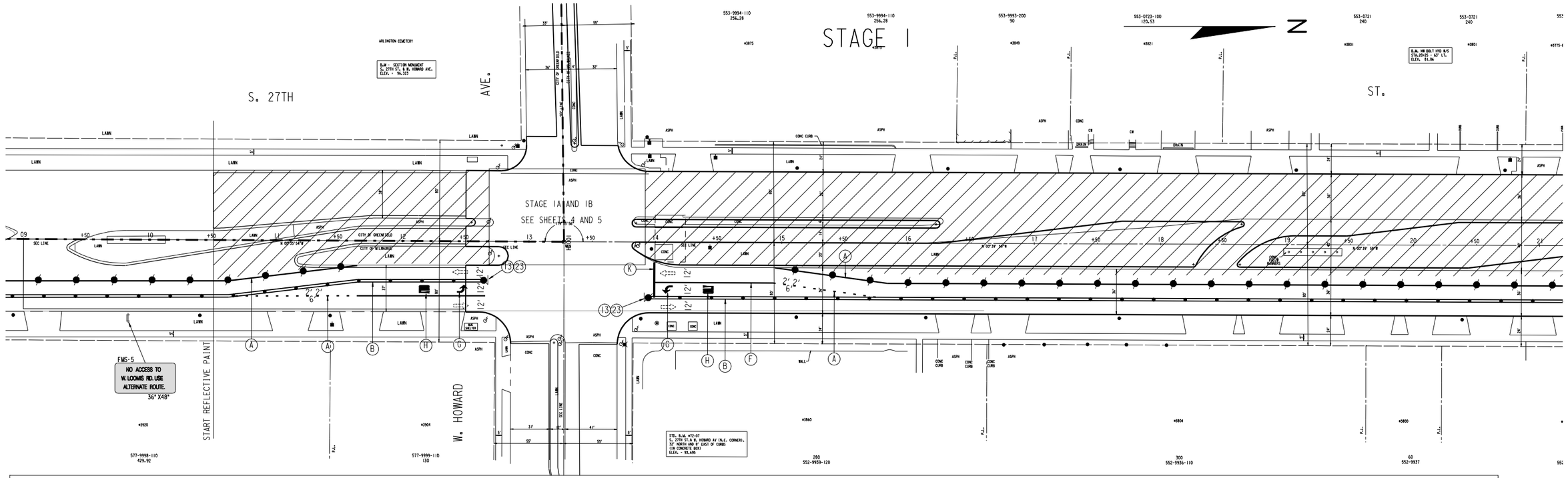


- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

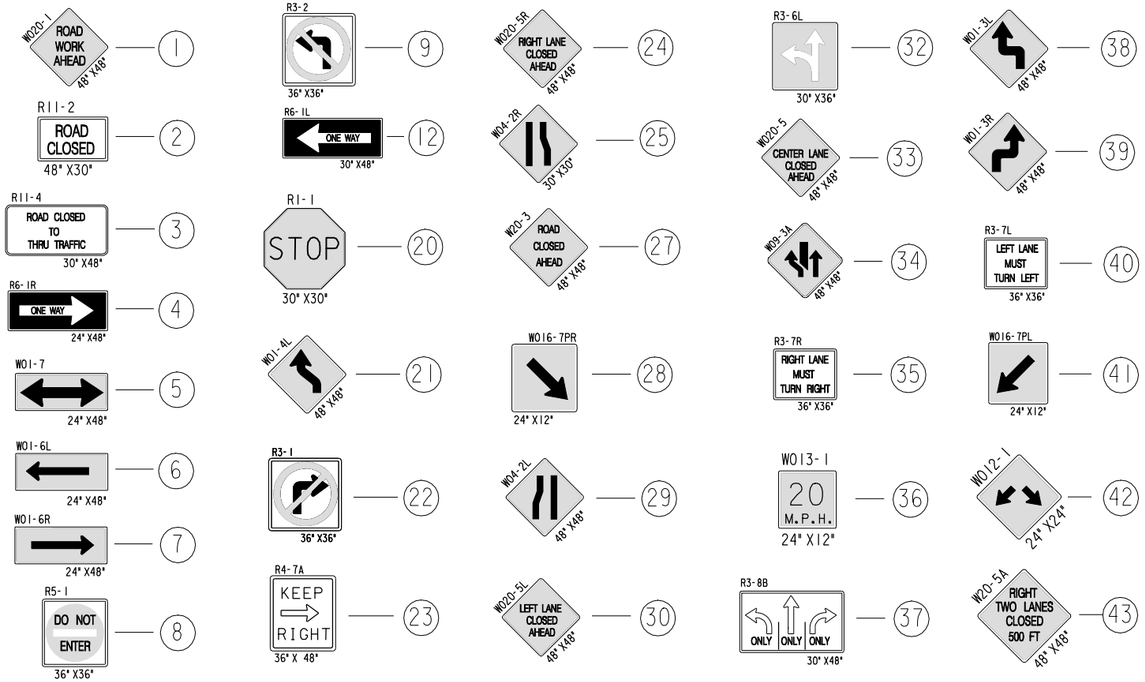
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 211	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

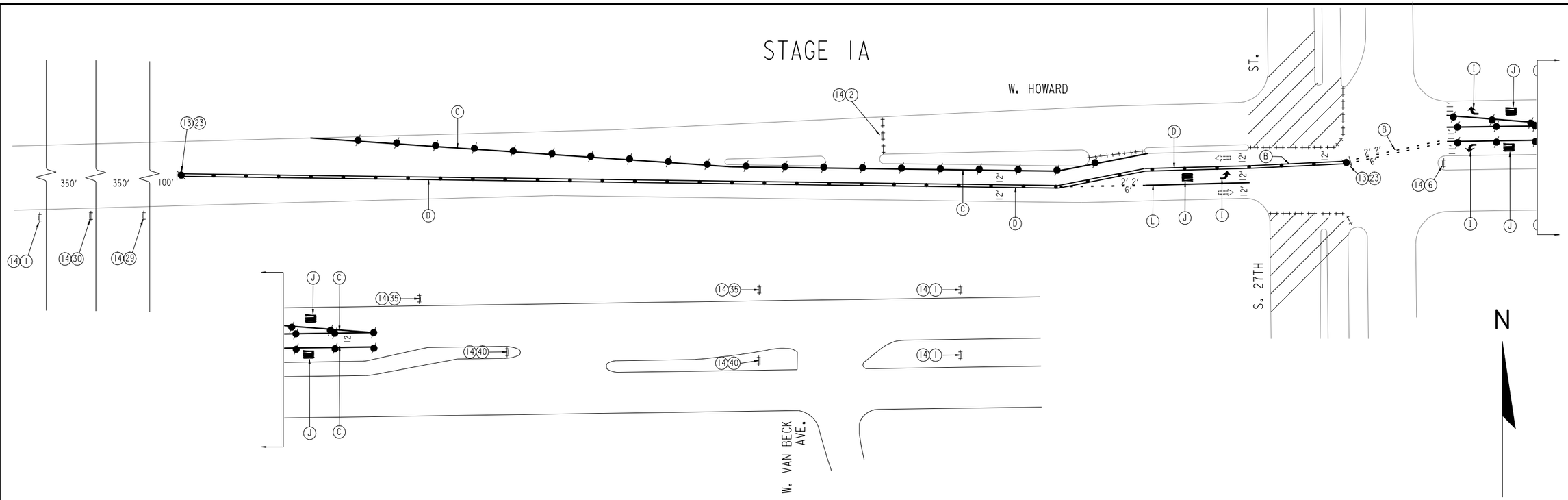
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 3 OF 53

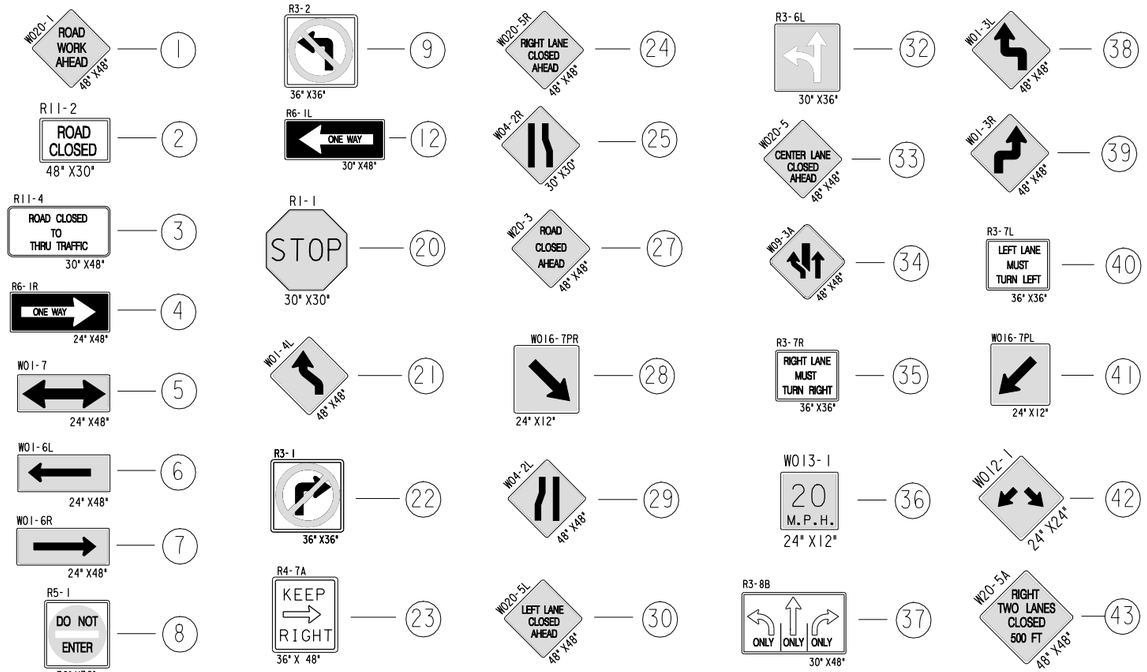
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 212	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IA



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

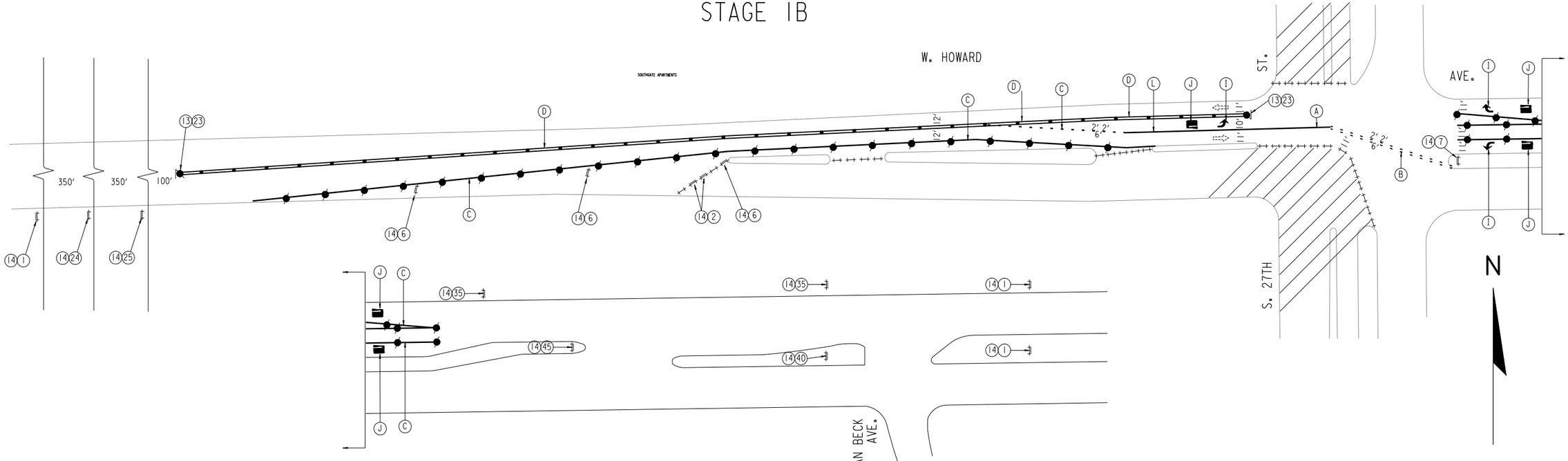
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 4 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 213	E

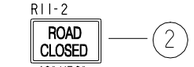
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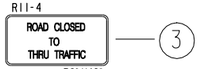
STAGE IB

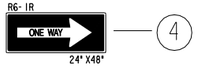


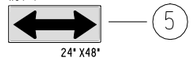
LEGEND

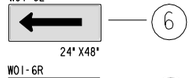


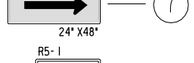


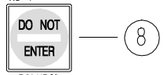


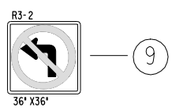


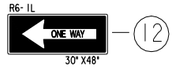


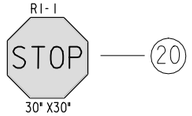




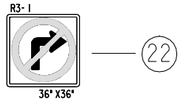


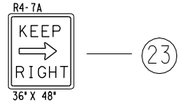


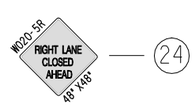




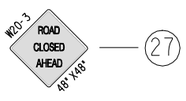


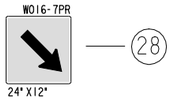


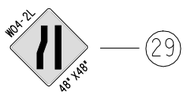


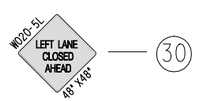


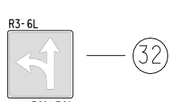


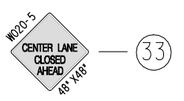


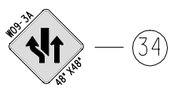


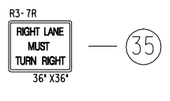


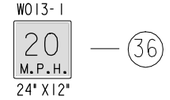


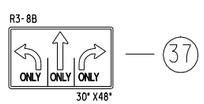


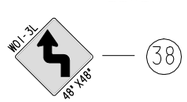


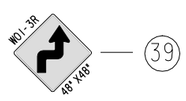


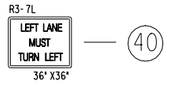


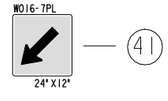


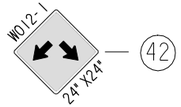


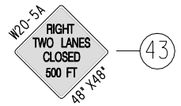












DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

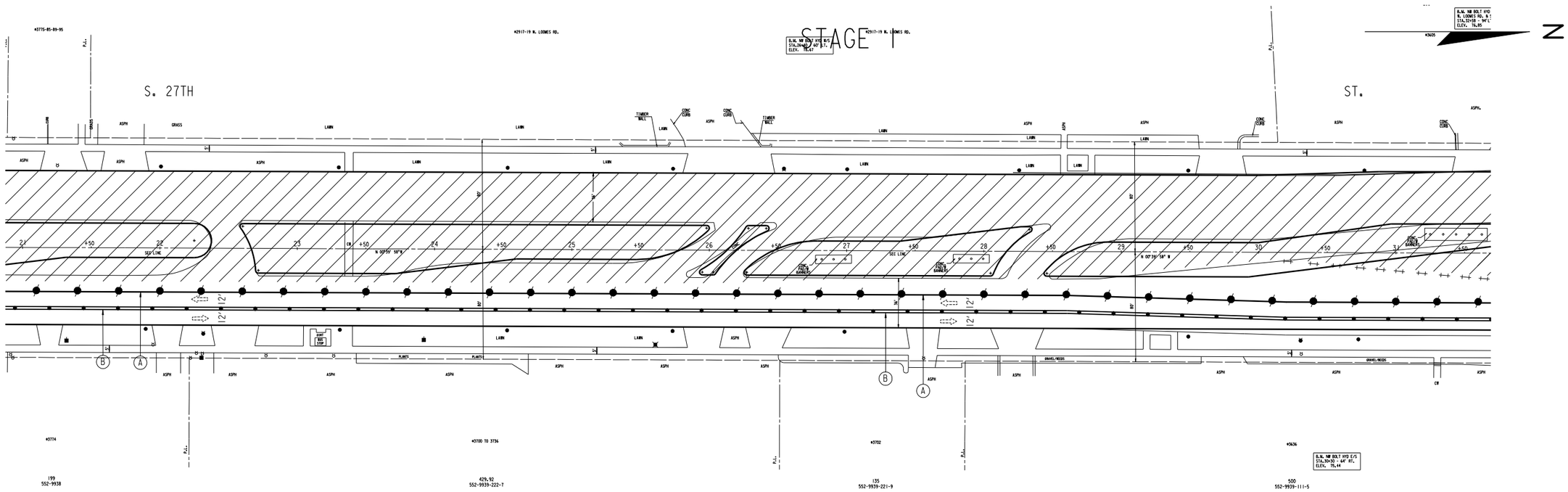
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

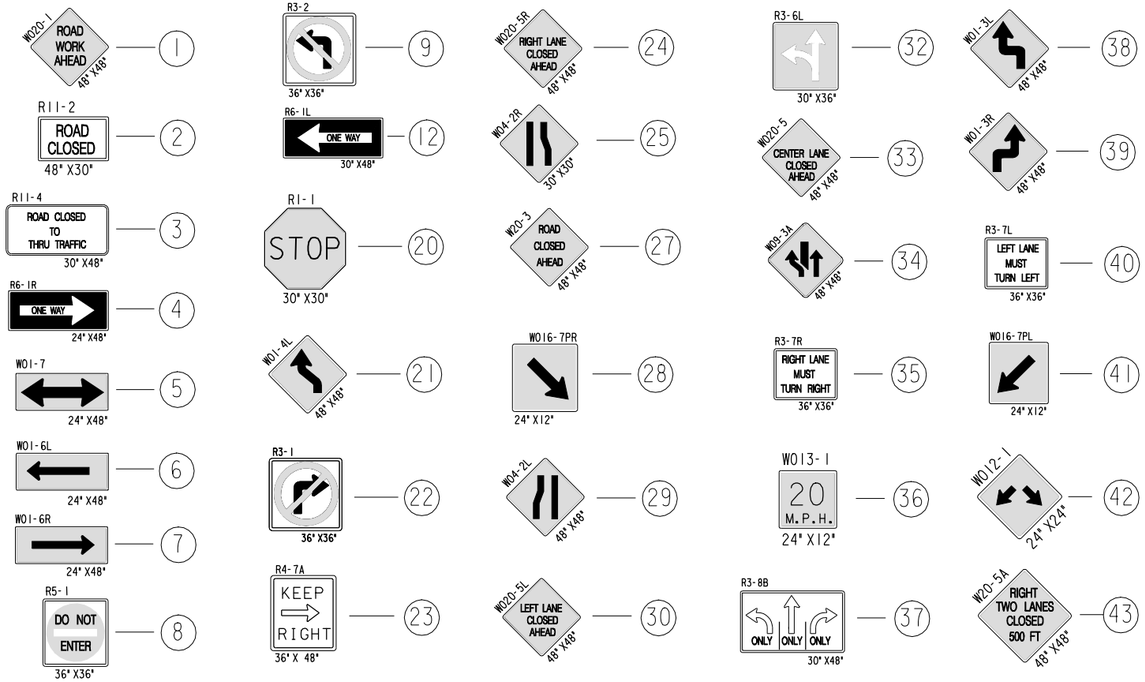
SHEET 5 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 214	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

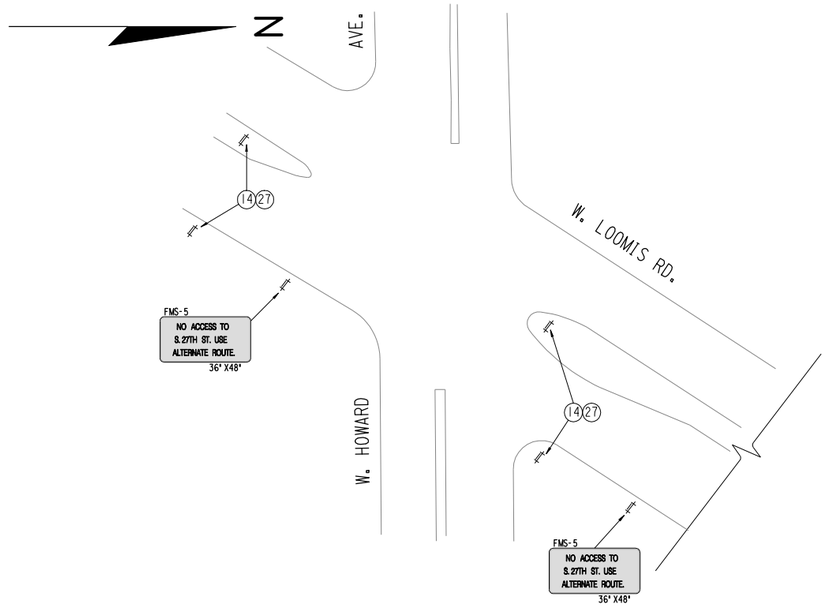
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

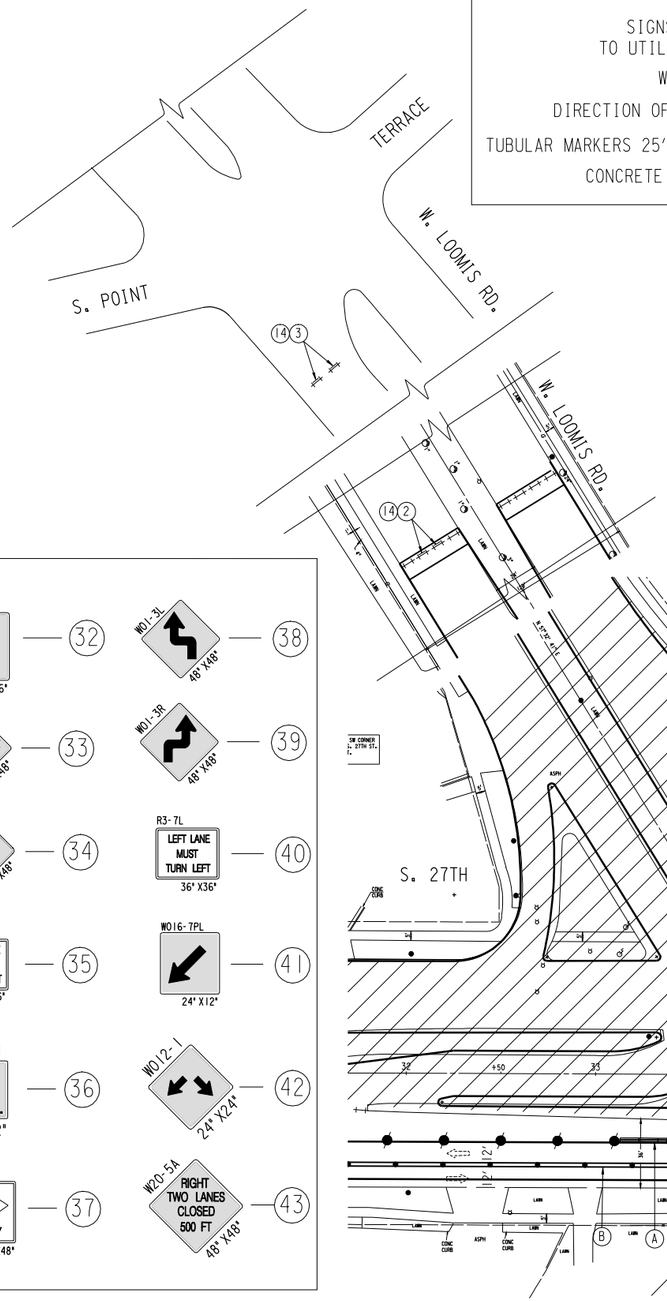
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 215 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE I



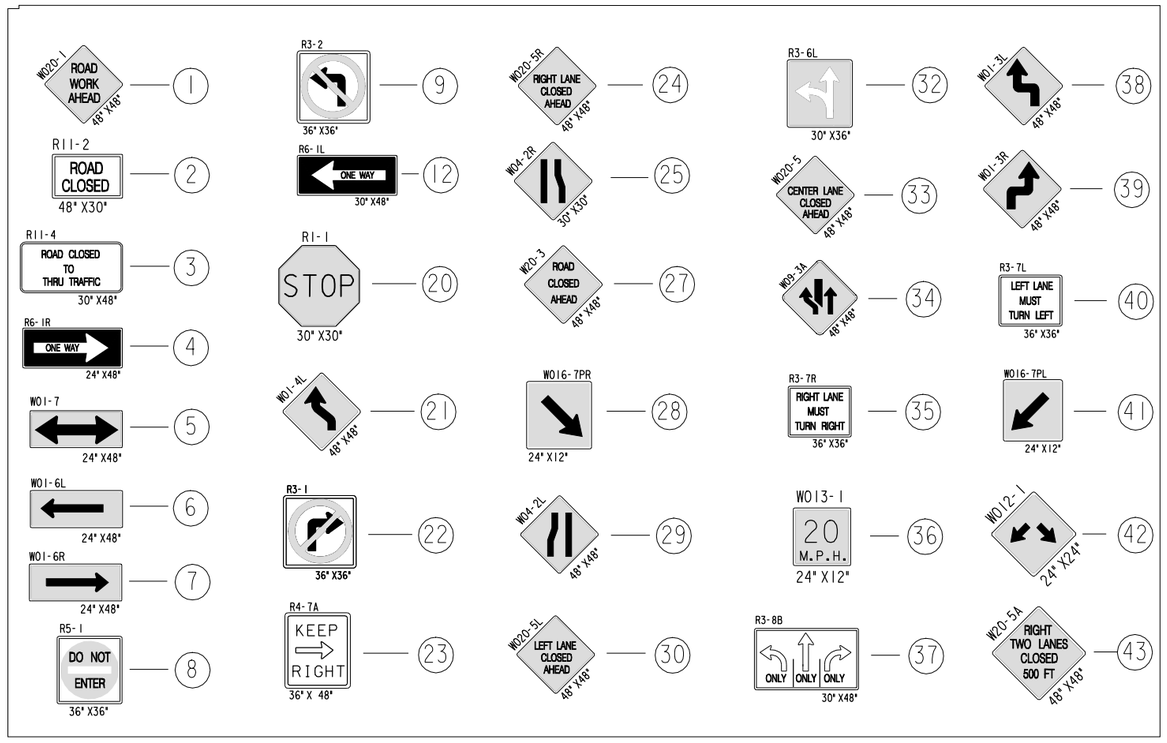


DRUMS W/LIGHTS 30' SPACING — (13)
TYPE III BARRICADES — (14)
TYPE III BARRICADES W/ SIGN — (14) + (X)
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

LEGEND

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

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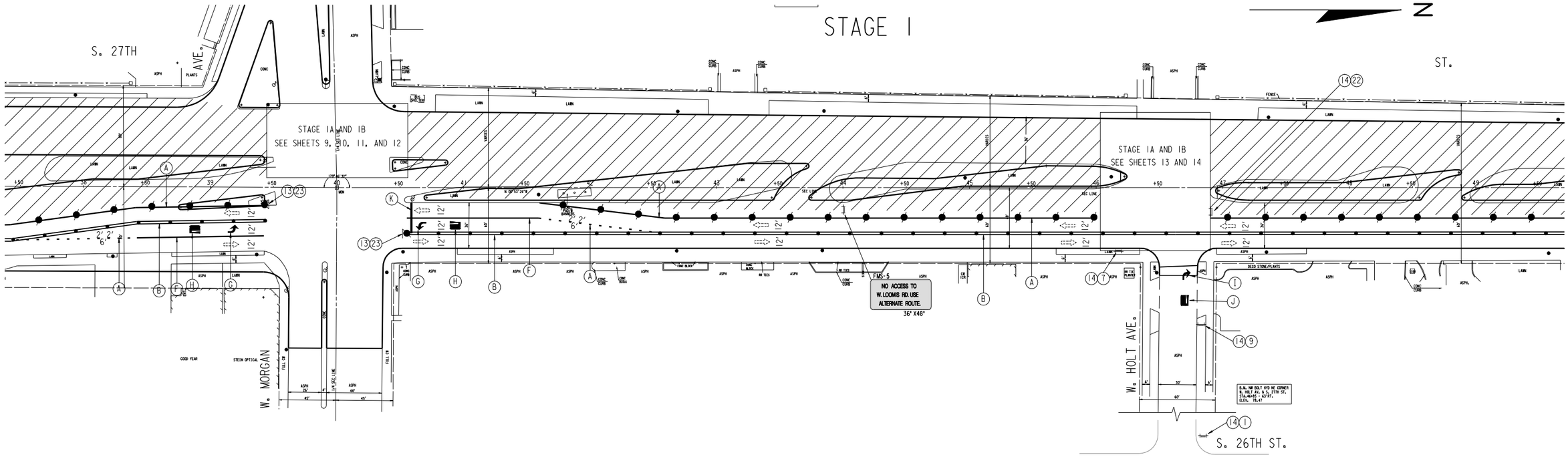


SHEET 7 OF 53

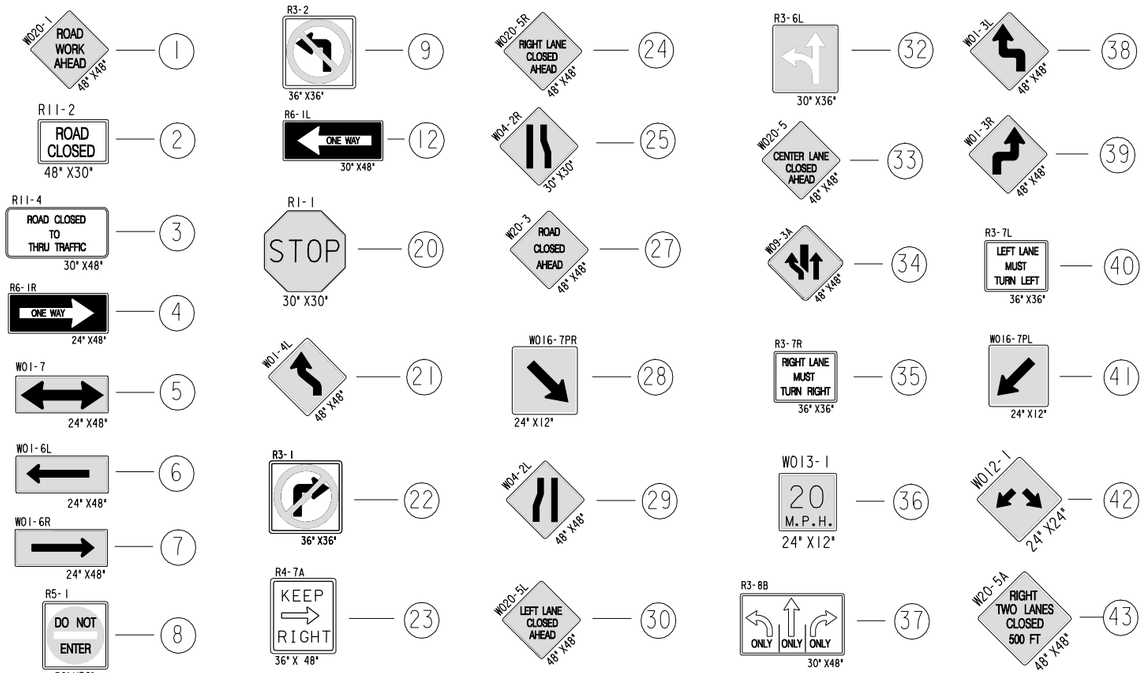
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 216 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE I



LEGEND



DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

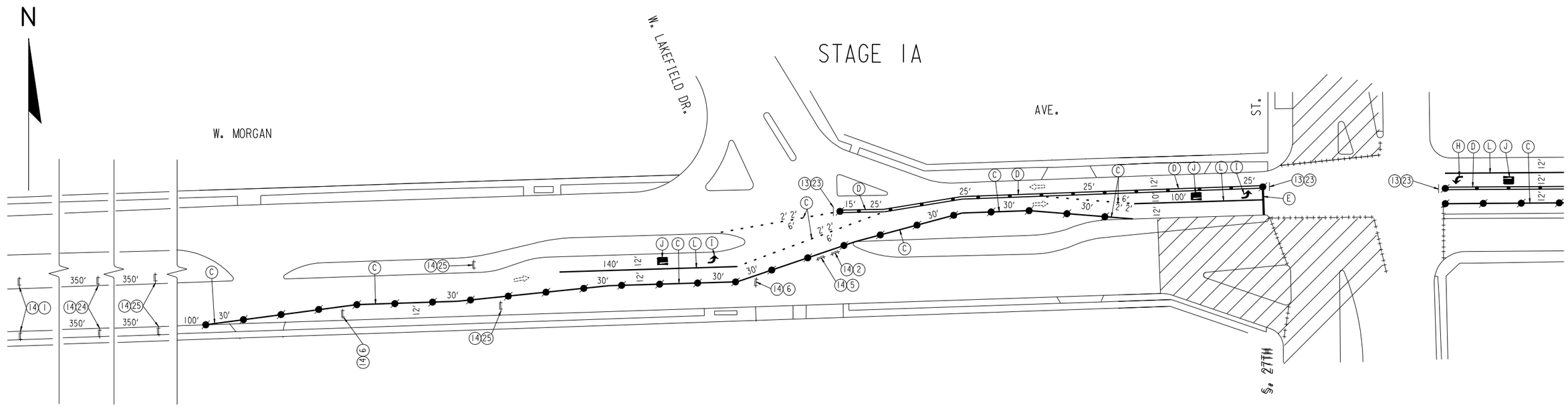
CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

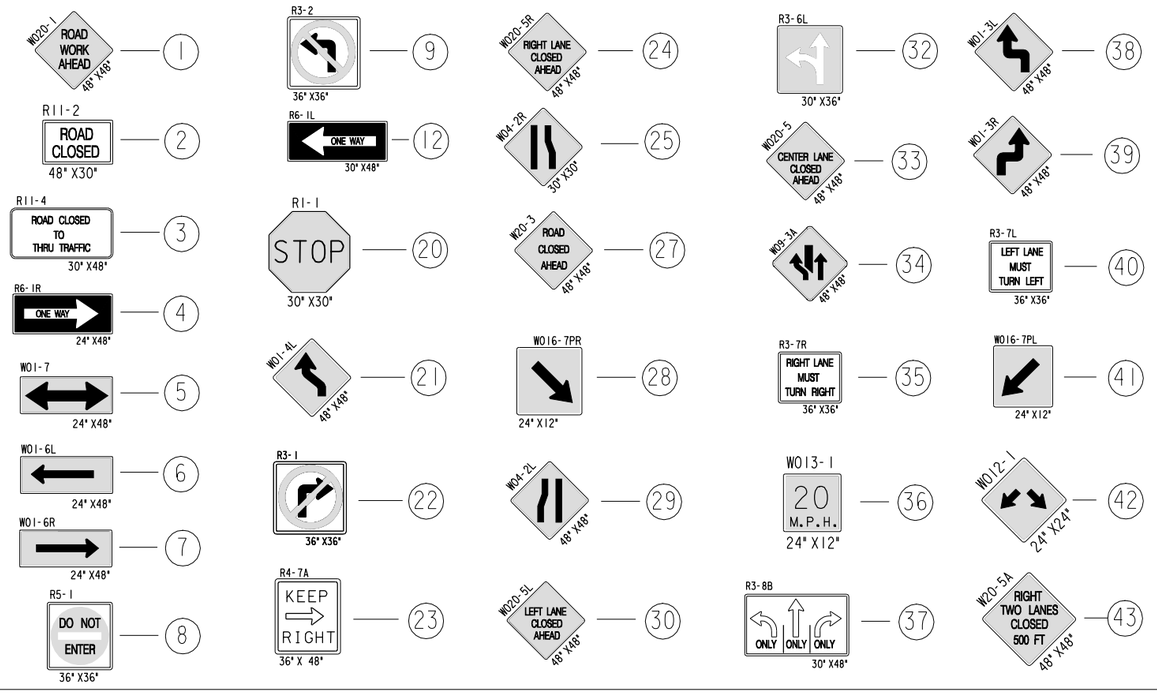
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 217	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

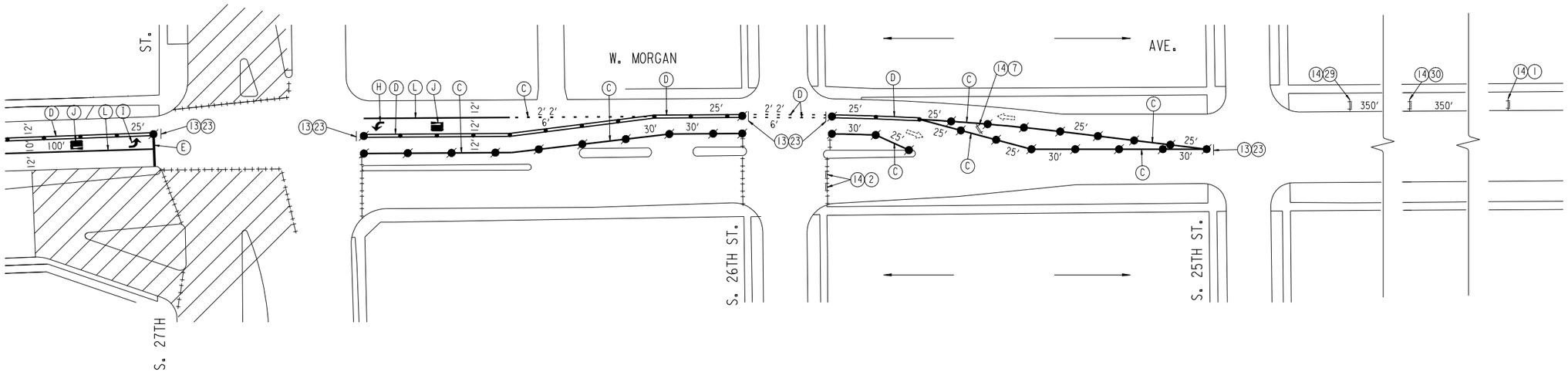
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

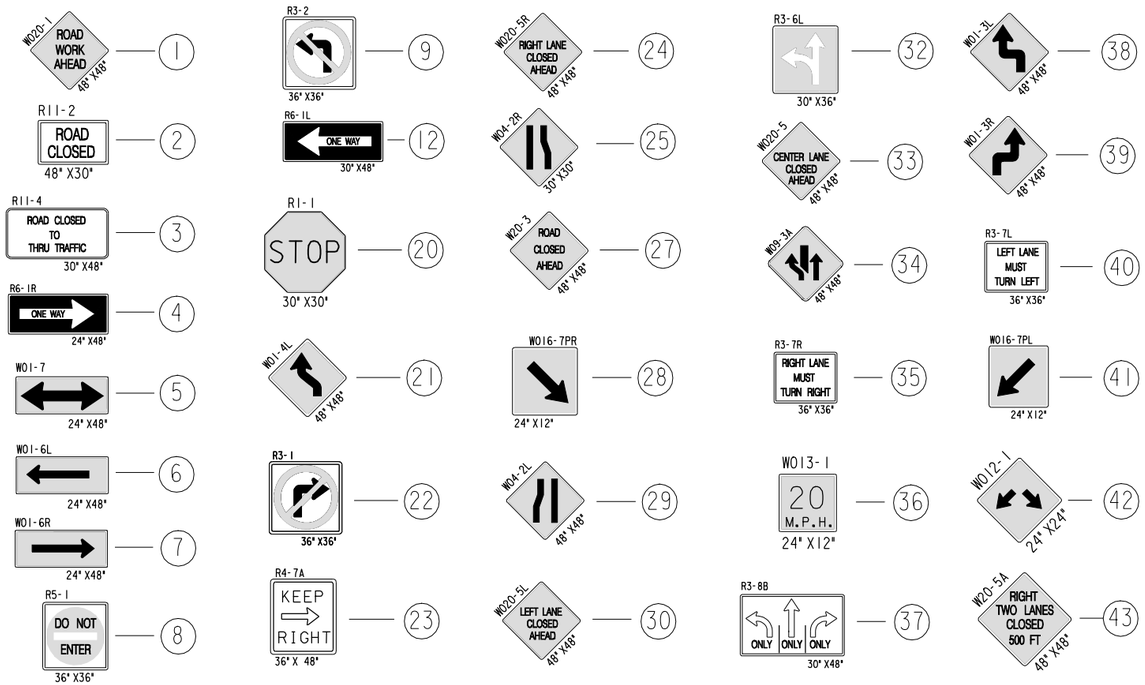
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 218	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IA



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

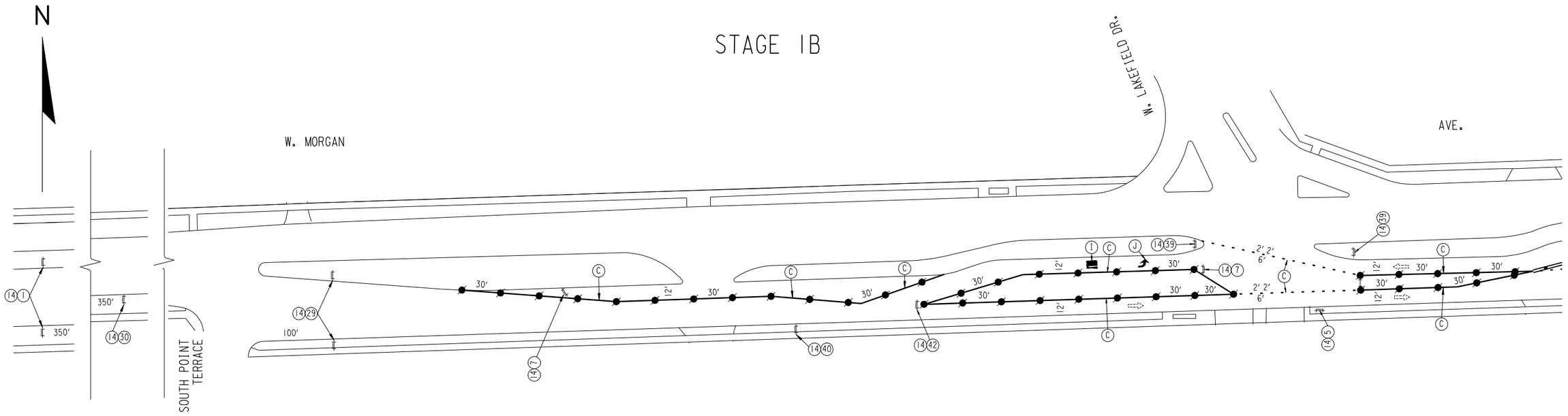
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 10 OF 53

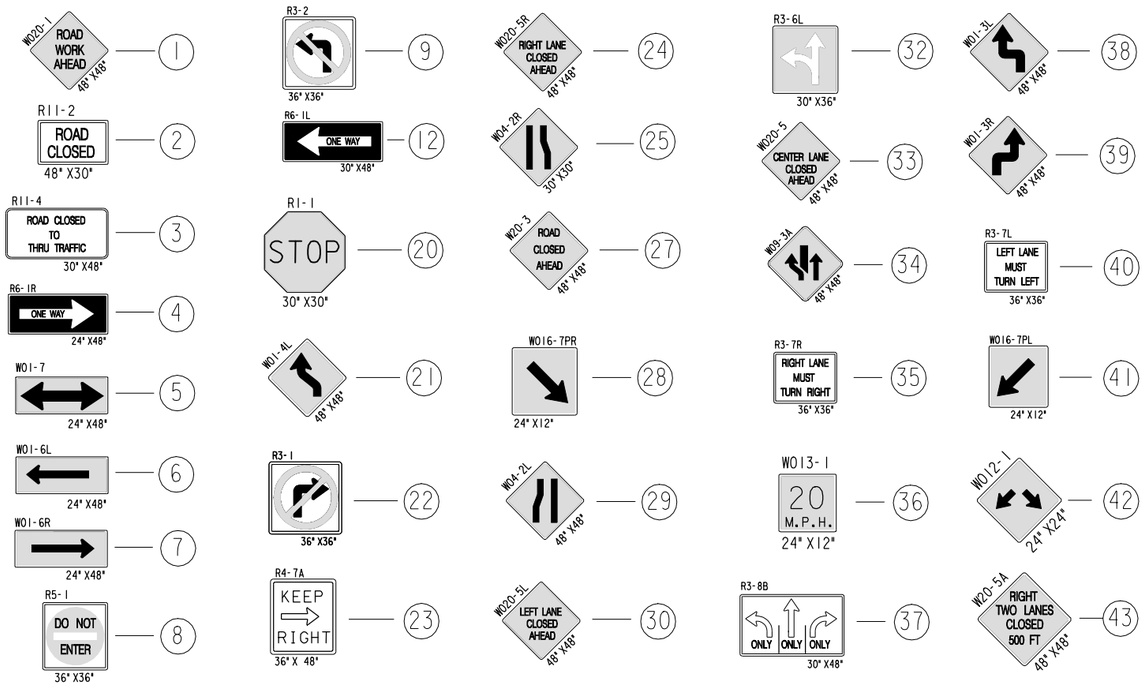
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 219	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 1B



LEGEND



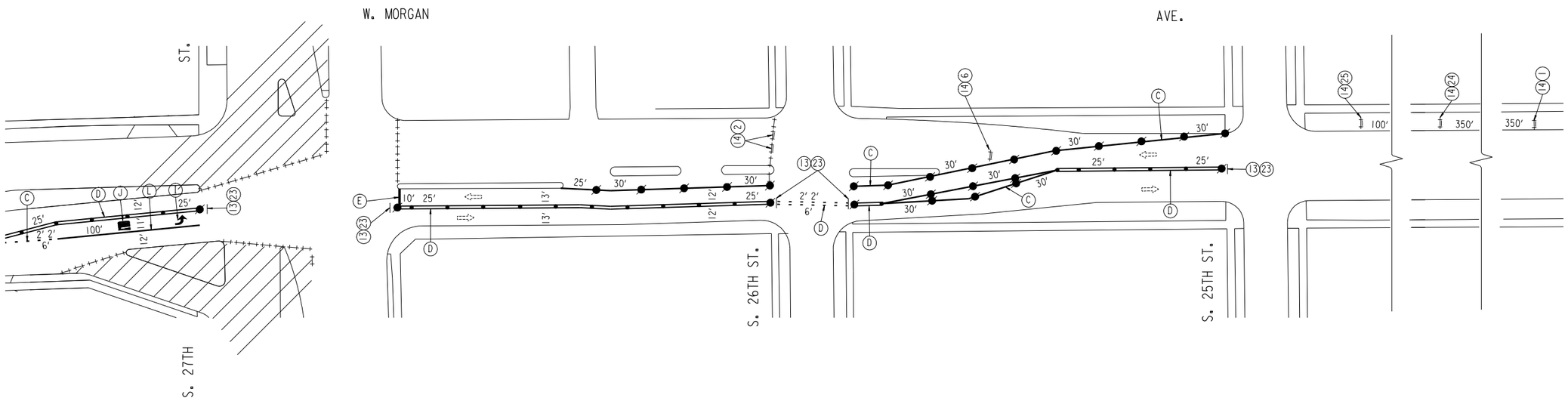
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

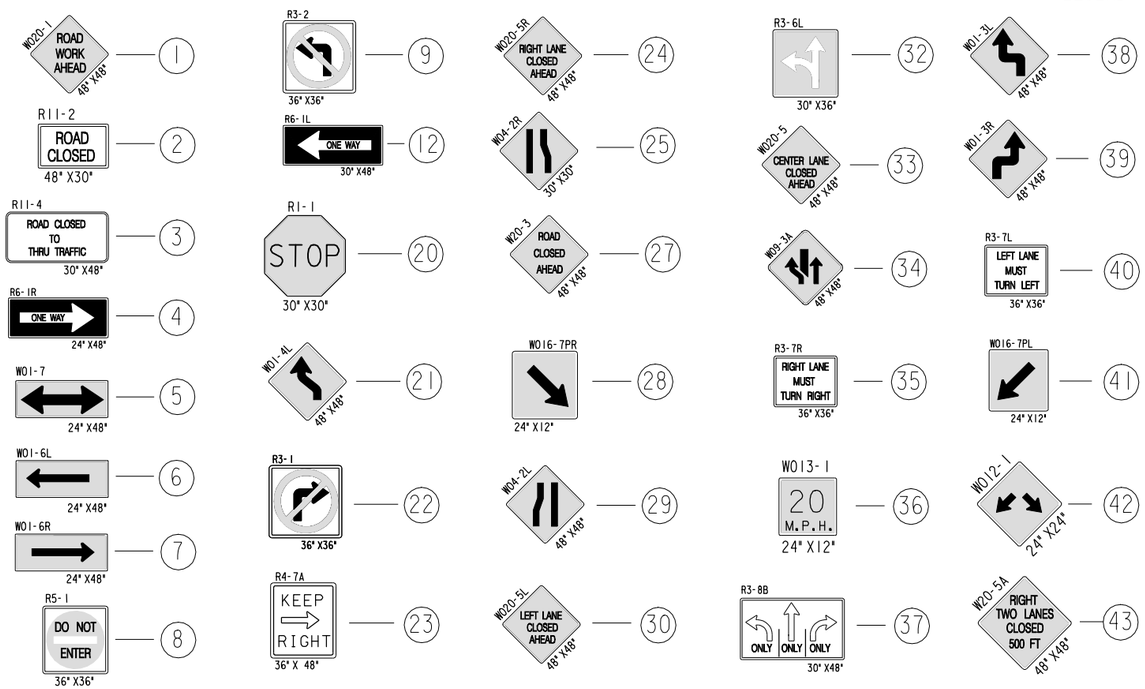
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 220 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IB



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

- A TPM, REFLECTIVE PAINT, 4" WHITE
- B TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- C TPM, REMOVABLE TAPE, 4" WHITE
- D TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- E TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- F TPM, REFLECTIVE PAINT, 8" WHITE
- G TPM, ARROWS, REFLECTIVE PAINT
- H TPM, WORDS, REFLECTIVE PAINT
- I TPM, ARROWS, REMOVABLE TAPE
- J TPM, WORDS, REMOVABLE TAPE
- K TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- L TPM, REMOVABLE TAPE, 8" WHITE

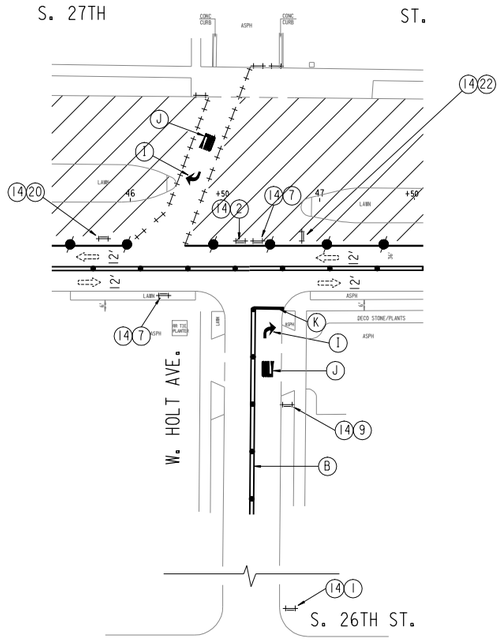
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 12 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 221 E

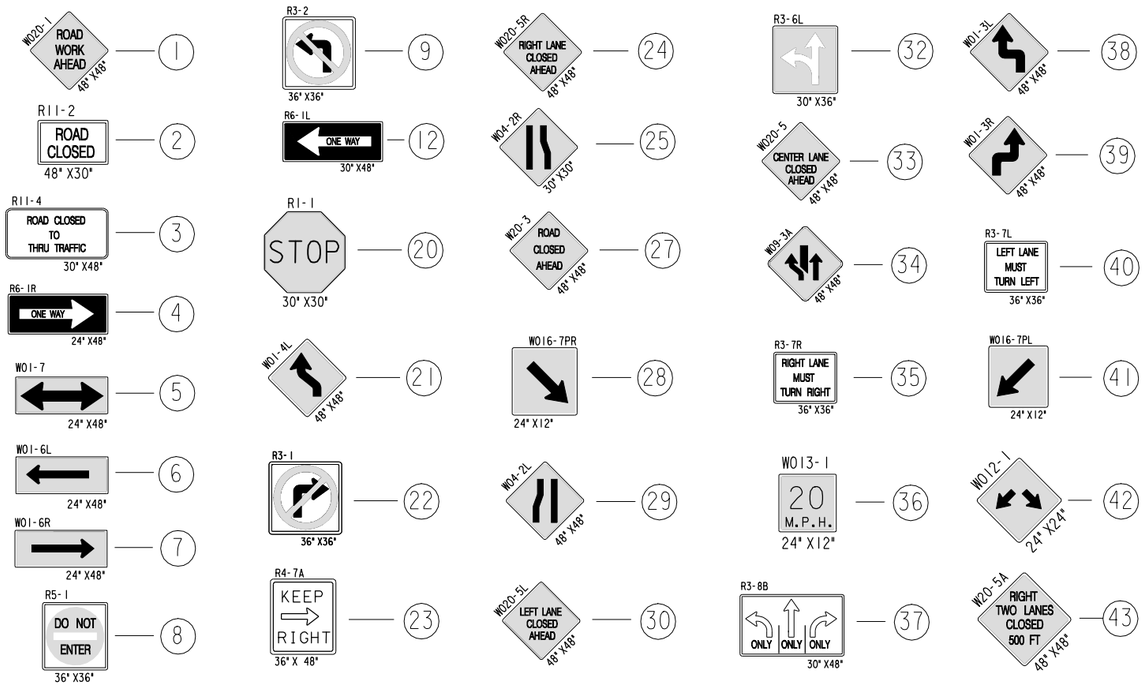
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IA



N

LEGEND



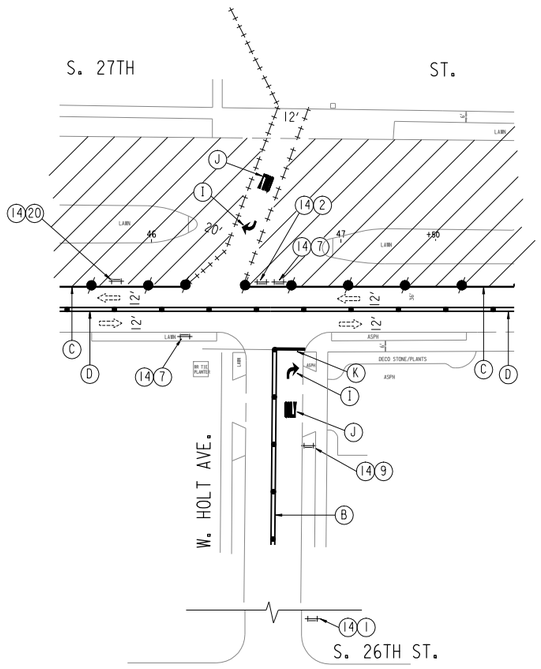
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
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- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 222 E

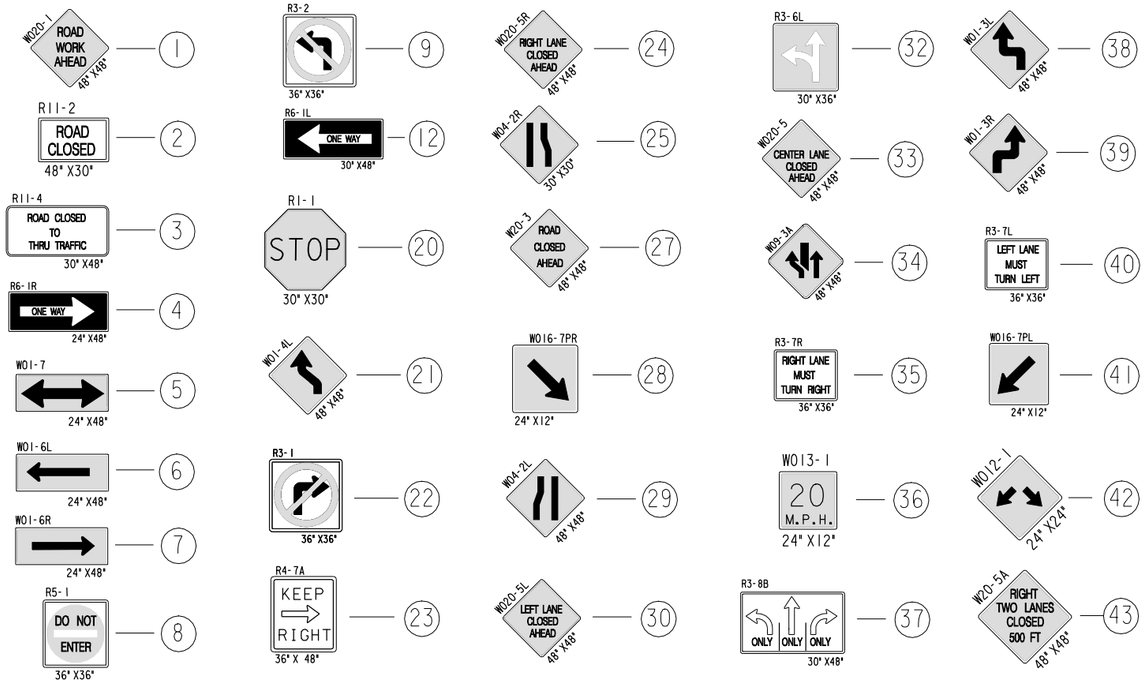
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 1B



N

LEGEND



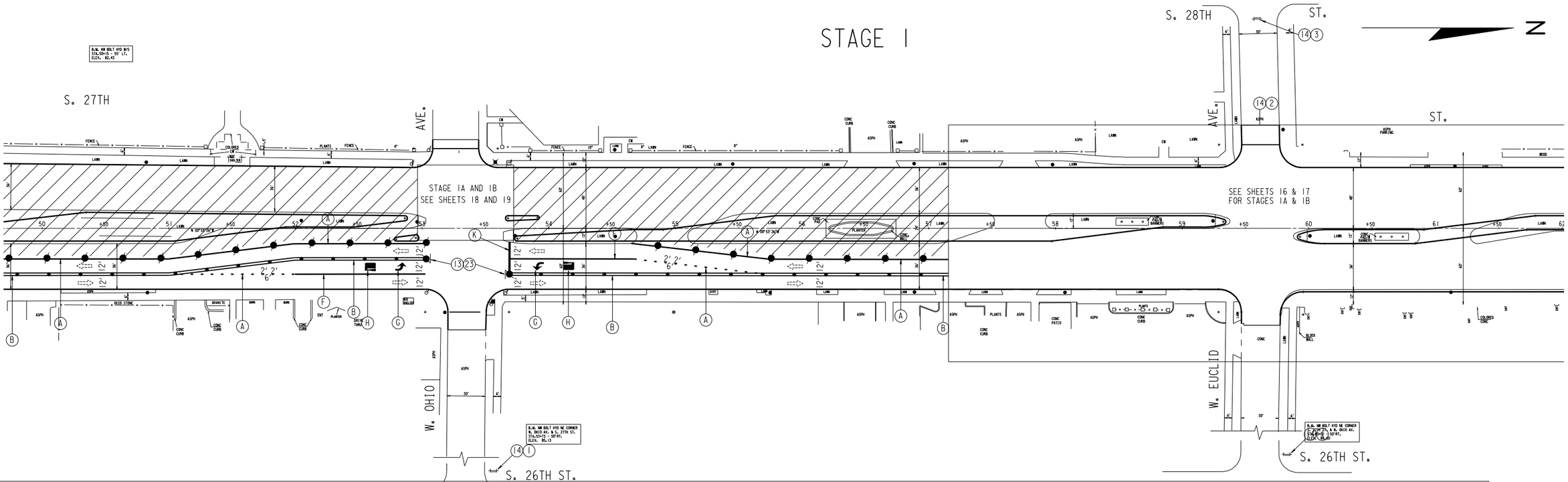
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
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(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
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(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
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NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

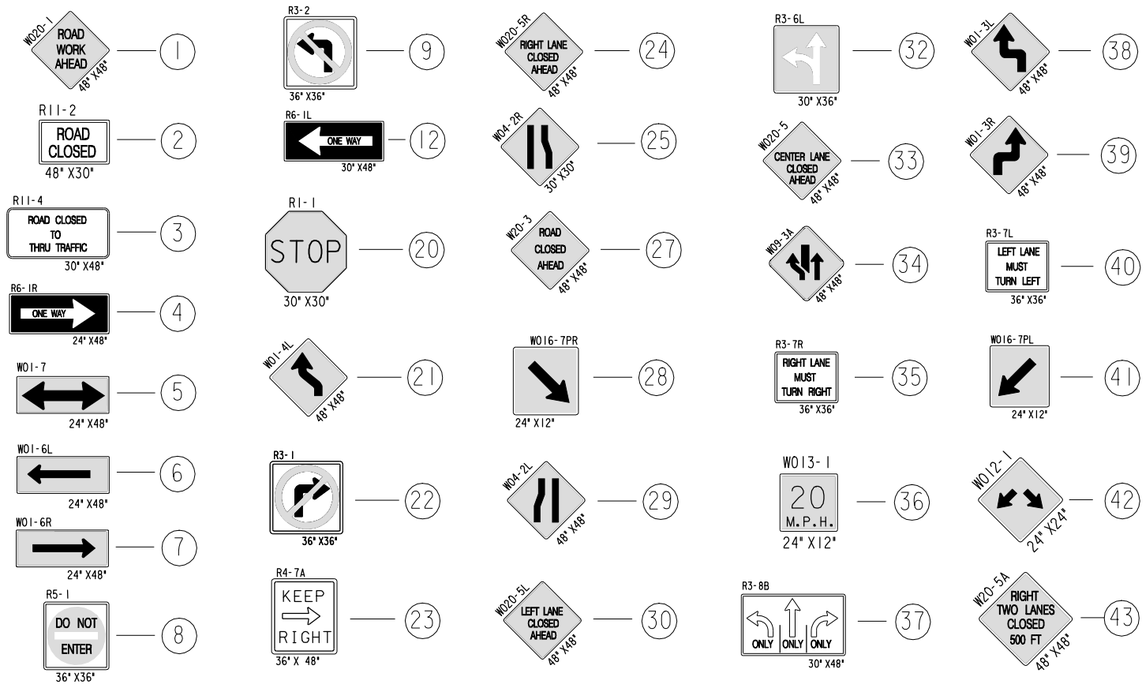
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 223 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE I



LEGEND



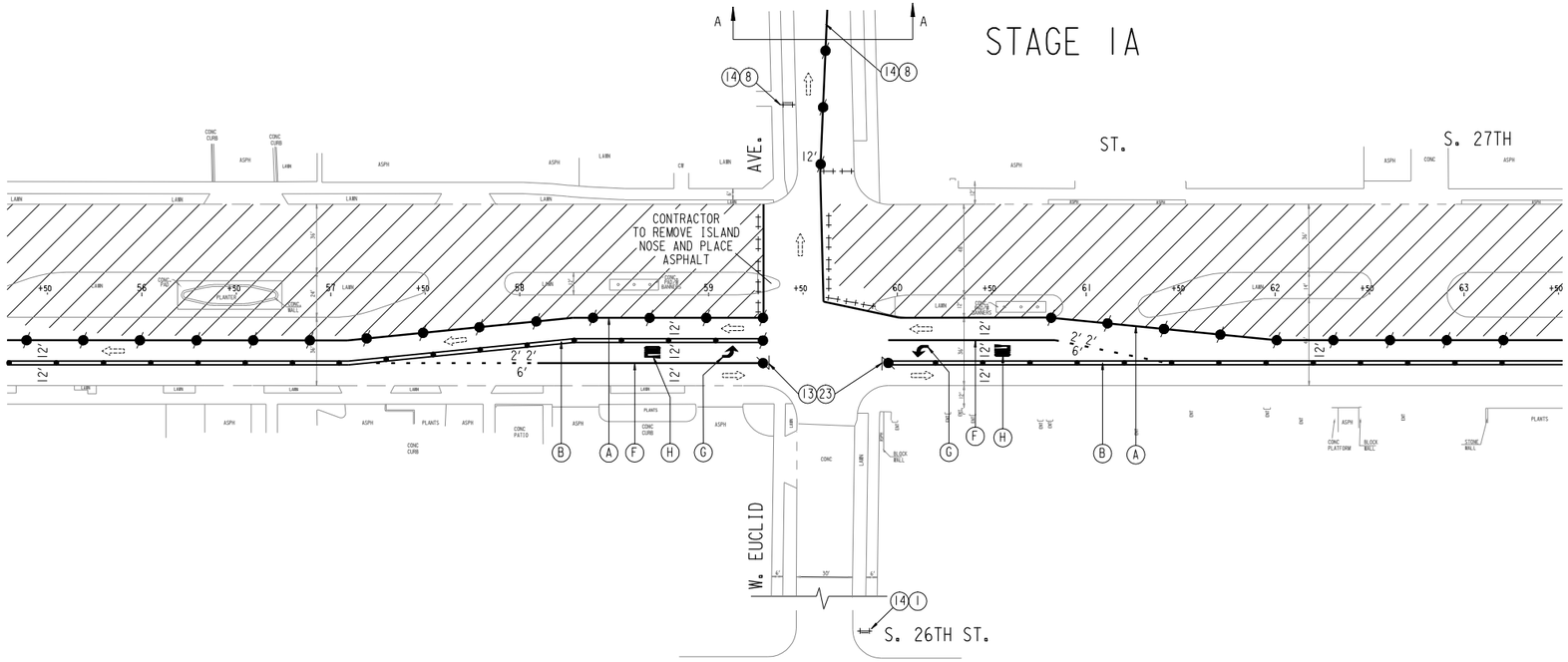
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
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- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

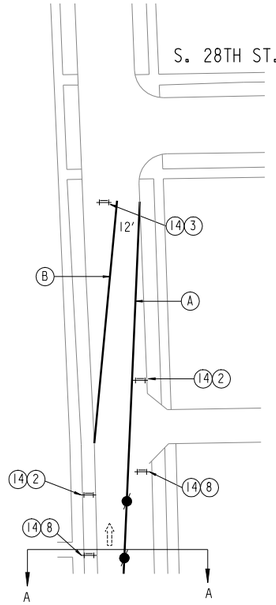
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 224	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

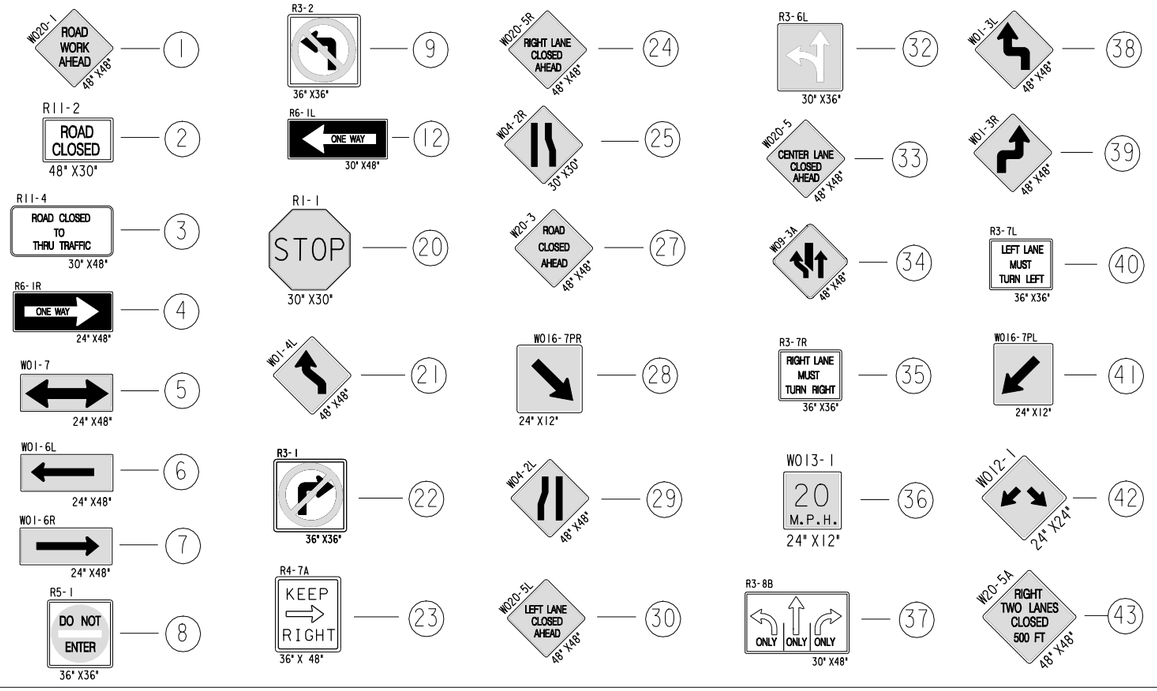
STAGE IA





N

LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

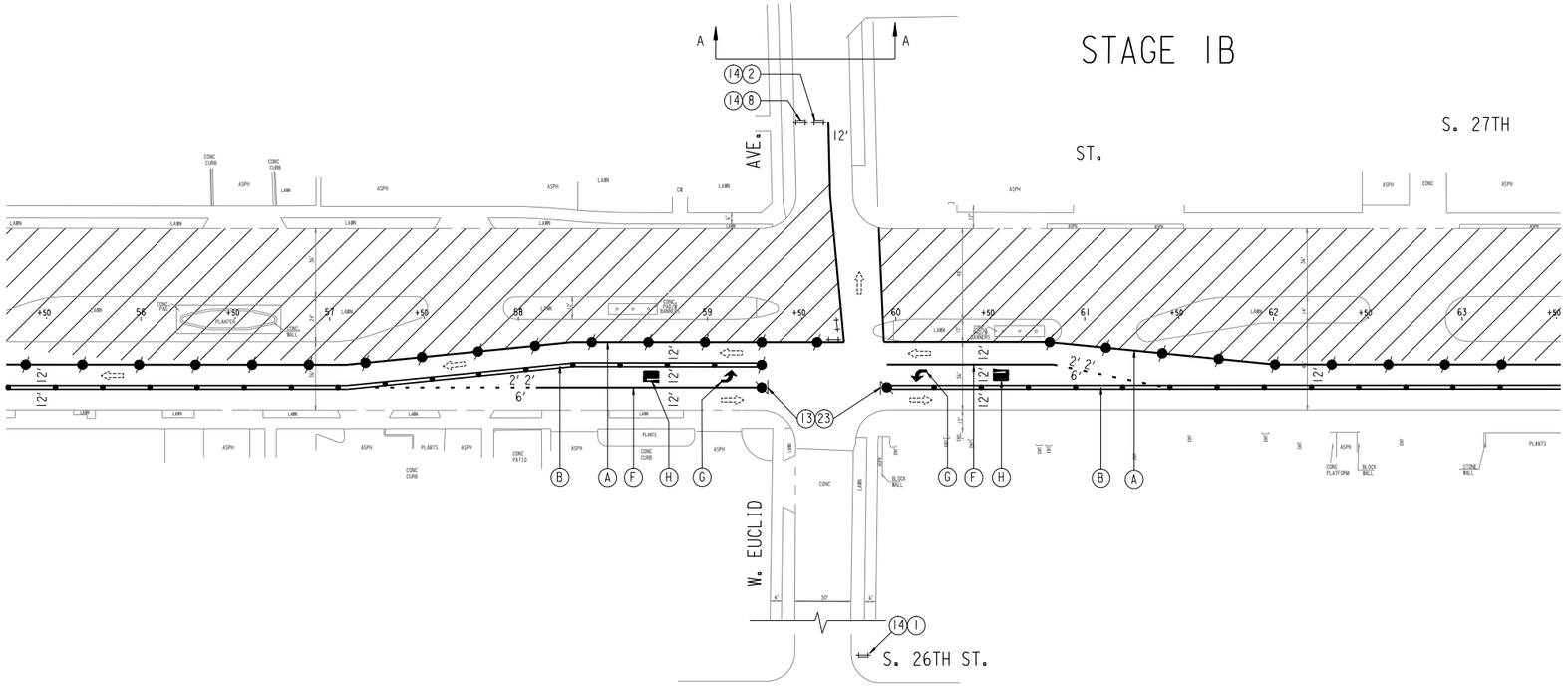
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

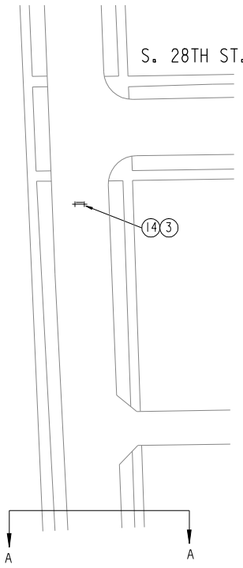
SHEET 16 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 225	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

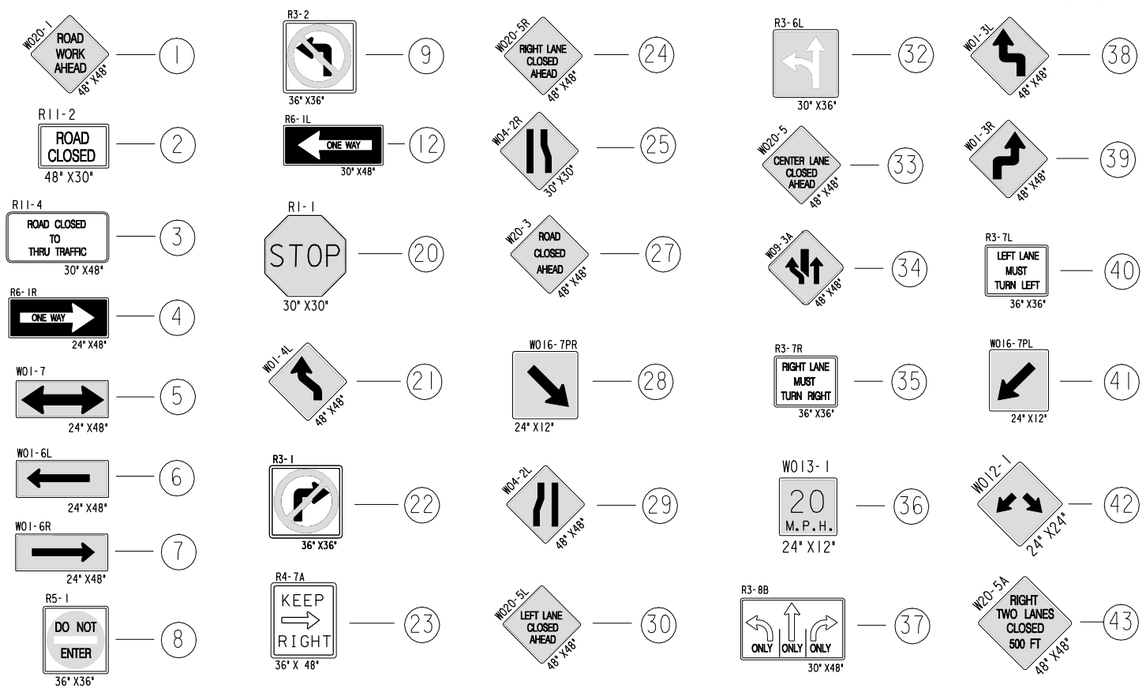
STAGE 1B





N

LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

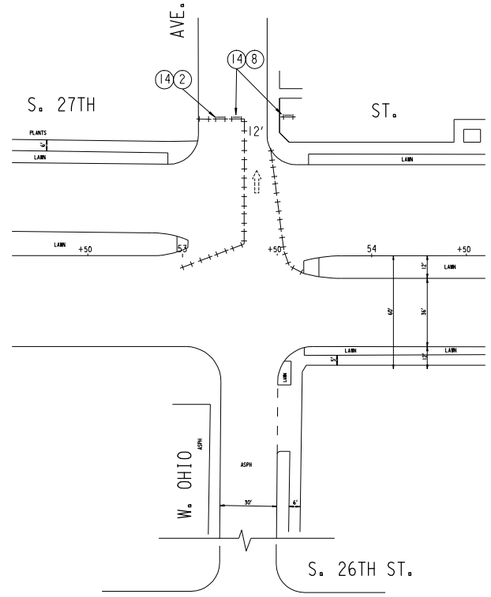
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
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(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 226	E

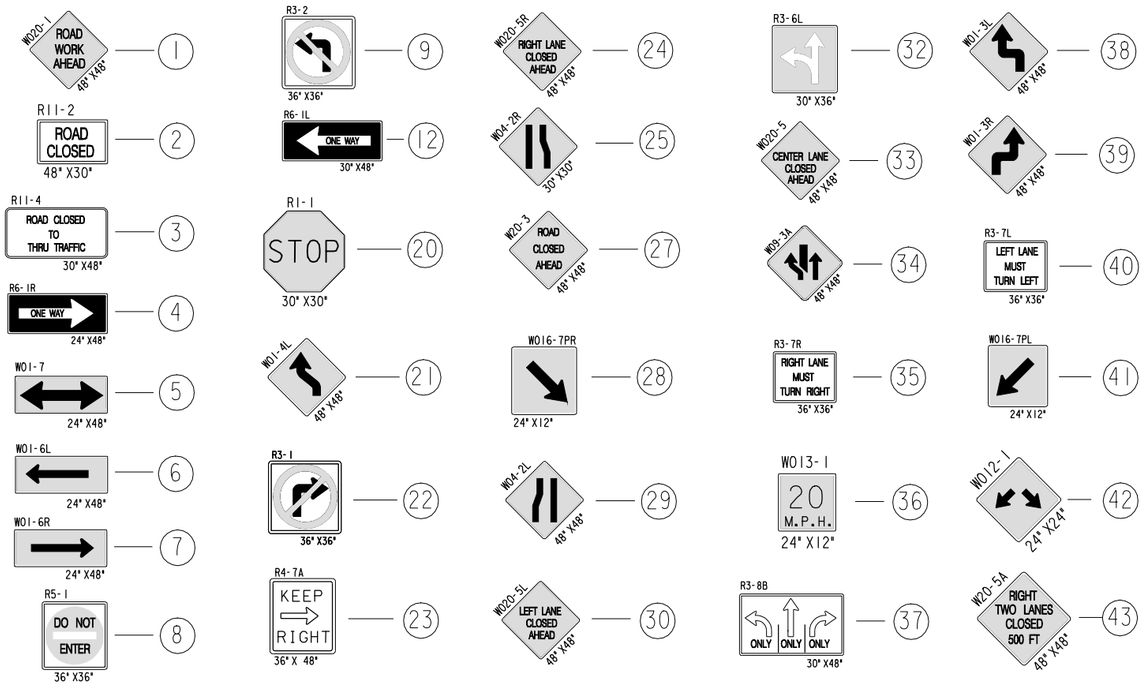
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 1A



N

LEGEND



DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

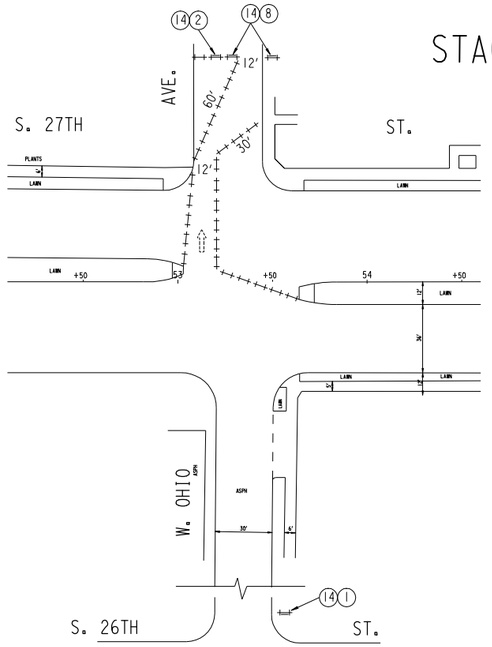
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
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- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 227 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IB



N

LEGEND

W020-1 ROAD WORK AHEAD 48" X48" — (1)
R11-2 ROAD CLOSED 48" X30" — (2)
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — (3)
R6-1R ONE WAY 24" X48" — (4)
W01-7 24" X48" — (5)
W01-6L 24" X48" — (6)
W01-6R 24" X48" — (7)
R5-1 DO NOT ENTER 36" X36" — (8)
R3-2 36" X36" — (9)
R6-1L ONE WAY 30" X48" — (12)
R1-1 STOP 30" X30" — (20)
W01-4L 48" X48" — (21)
R3-1 36" X36" — (22)
R4-7A KEEP RIGHT 36" X 48" — (23)
W020-5R RIGHT LANE CLOSED AHEAD 48" X48" — (24)
W04-2R 30" X30" — (25)
W020-3 ROAD CLOSED AHEAD 48" X48" — (27)
W016-7PR 24" X12" — (28)
W04-2L 48" X48" — (29)
W020-5L LEFT LANE CLOSED AHEAD 48" X48" — (30)
R3-6L 30" X36" — (32)
W020-5 CENTER LANE CLOSED AHEAD 48" X48" — (33)
W09-3A 48" X48" — (34)
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — (35)
W013-1 20 M.P.H. 24" X12" — (36)
R3-8B ONLY ONLY ONLY 30" X48" — (37)
W01-3L 48" X48" — (38)
W01-3R 48" X48" — (39)
R3-7L LEFT LANE MUST TURN LEFT 36" X36" — (40)
W016-7PL 24" X12" — (41)
W012-1 24" X24" — (42)
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — (43)

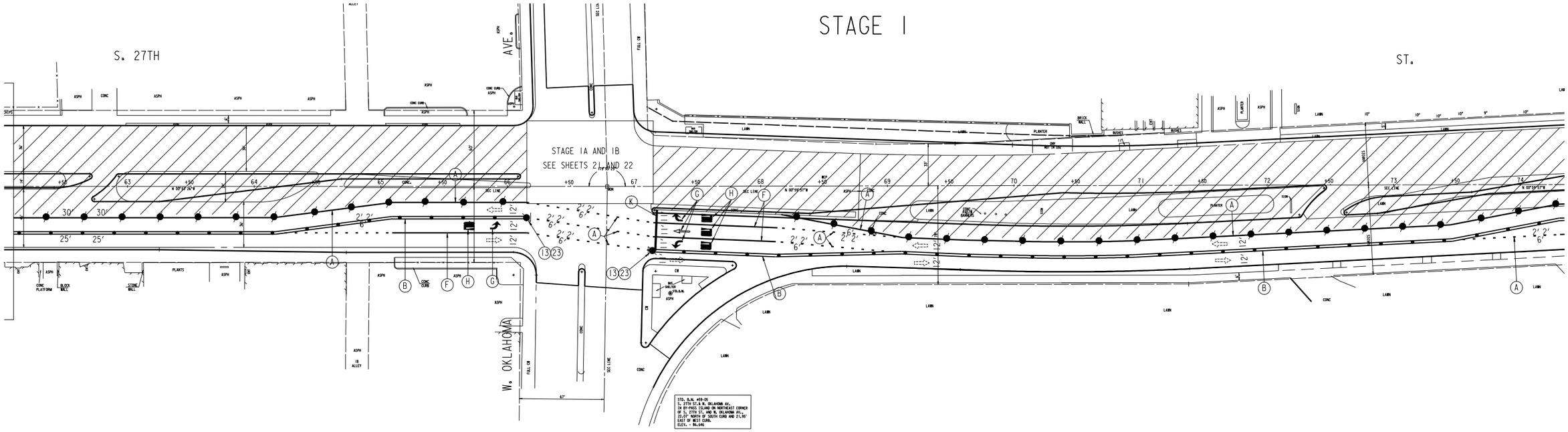
DRUMS W/LIGHTS 30' SPACING — (13)
TYPE III BARRICADES — (14)
TYPE III BARRICADES W/ SIGN — (14) + (X)
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
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(F) TPM, REFLECTIVE PAINT, 8" WHITE
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(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

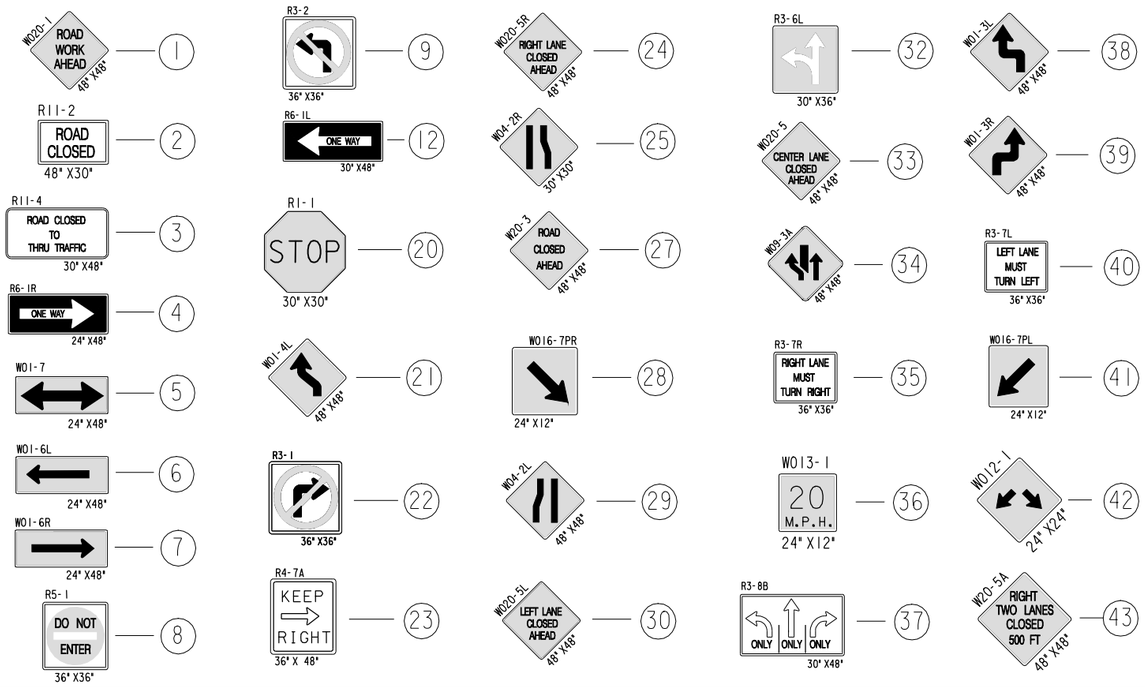
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 228	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN



LEGEND



DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

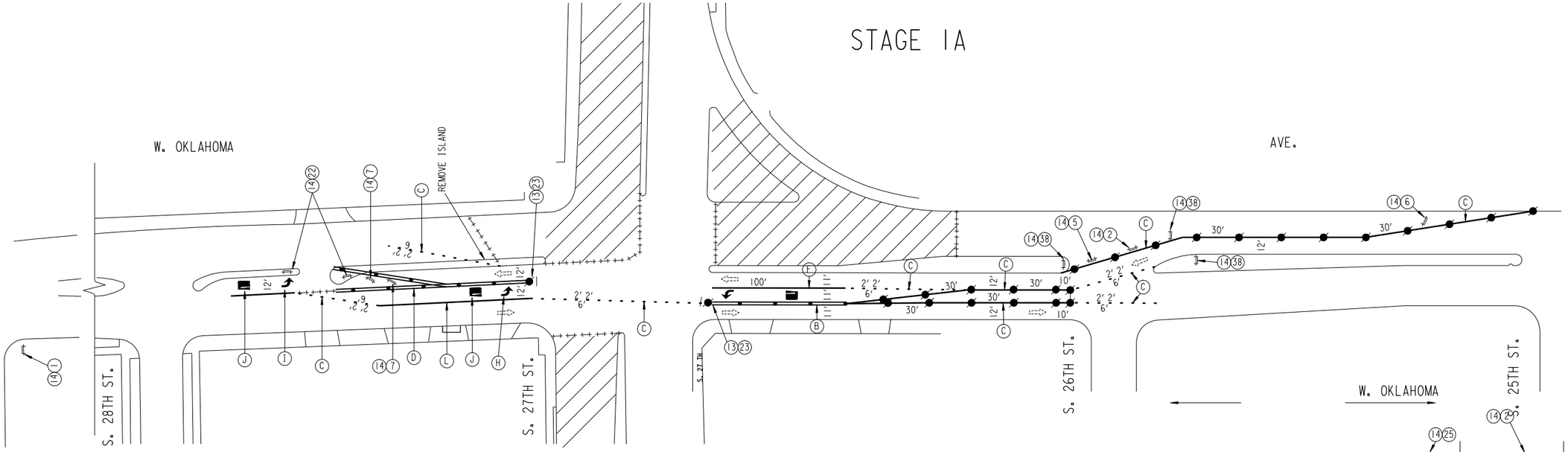
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 20 OF 53

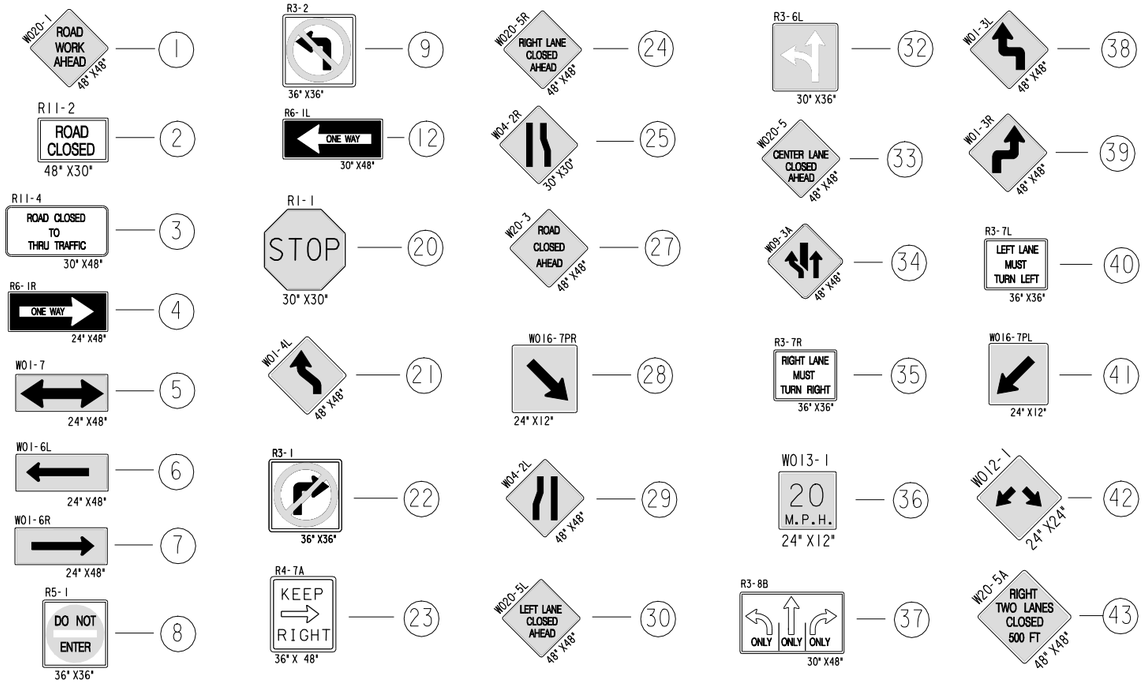
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 229	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 1A



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

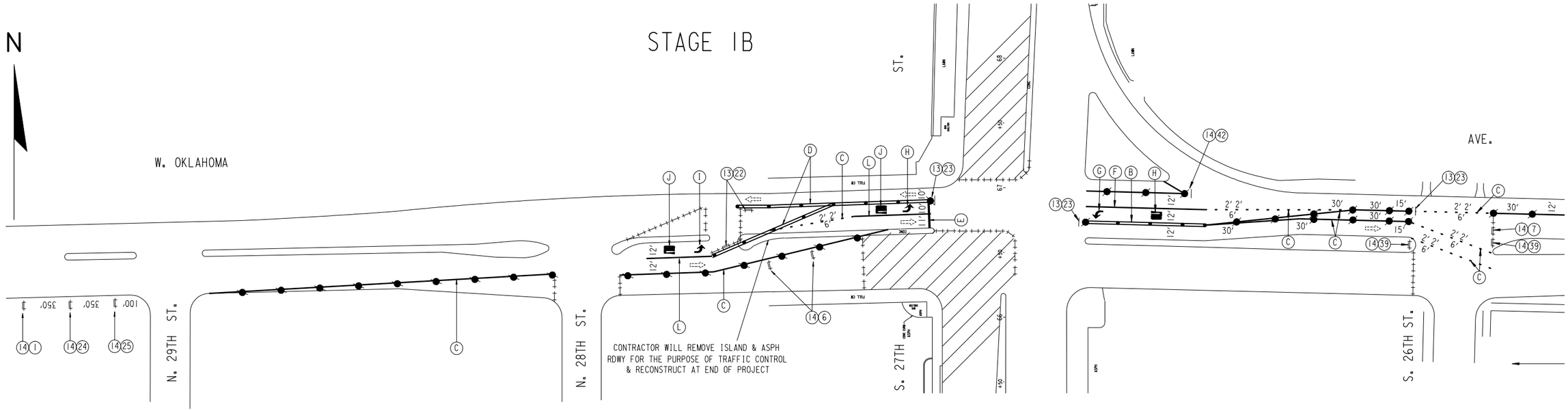
- DRUMS W/LIGHTS 30' SPACING — 13
- TYPE III BARRICADES — 14
- TYPE III BARRICADES W/ SIGN — 14 + X
- SIGNS BANDED TO UTILITY POLE
- WORK AREA
- DIRECTION OF TRAFFIC
- TUBULAR MARKERS 25' SPACING
- CONCRETE BARRIERS

SHEET 21 OF 53

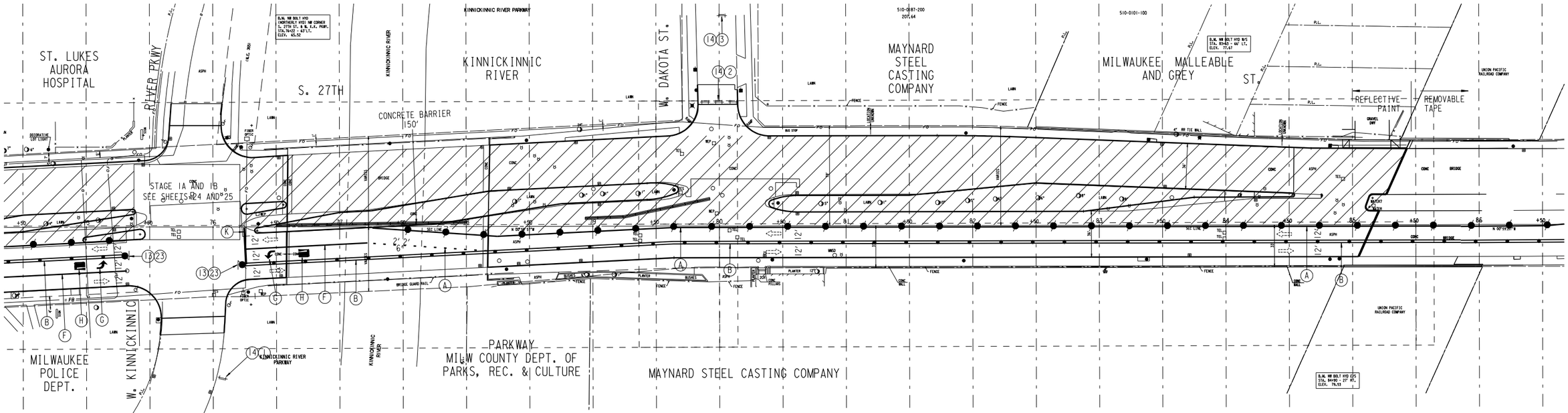
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 230	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

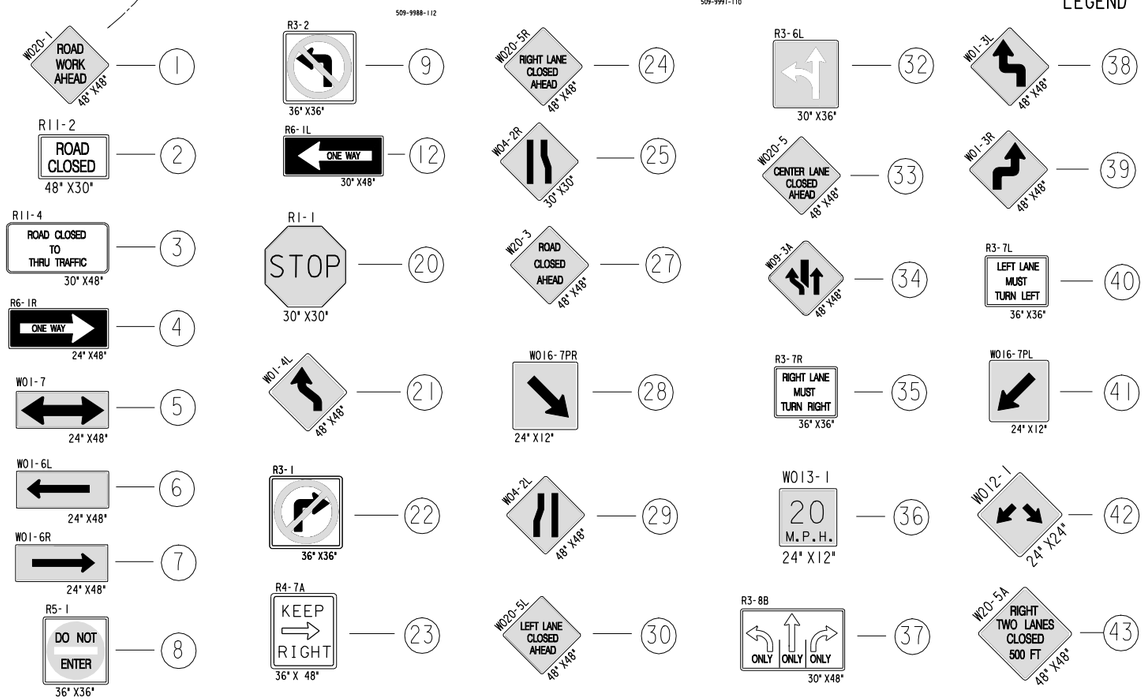
STAGE IB


N
W. OKLAHOMA
AVE.
ST.
N. 29TH ST.
N. 28TH ST.
S. 27TH
S. 26TH ST.
S. 25TH ST.
CONTRACTOR WILL REMOVE ISLAND & ASPH RDWY FOR THE PURPOSE OF TRAFFIC CONTROL & RECONSTRUCT AT END OF PROJECT
100'
350'
350'
350'
30'
30'
30'
30'
30'
30'
30'
30'
15'
15'
12'
12'
2'
2'
6'
6'
2'
2'
6'
6'
2'
2'
6'
6'
68'
67'
66'
+30'
+30'
+30'
+30'
+50'
+50'
+50'
+50'
11'
10'
10'
12'
12'
12

STAGE I



LEGEND



DRUMS W/LIGHTS 30' SPACING — (13)
TYPE III BARRICADES — (14)
TYPE III BARRICADES W/ SIGN — (14) + (X)
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

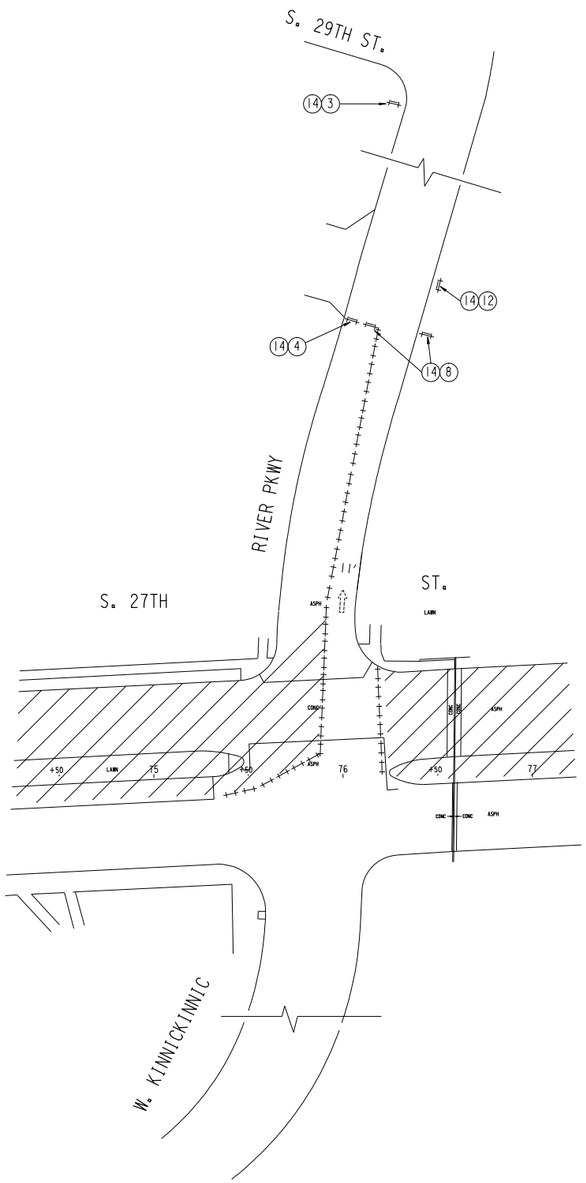
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 23 OF 53

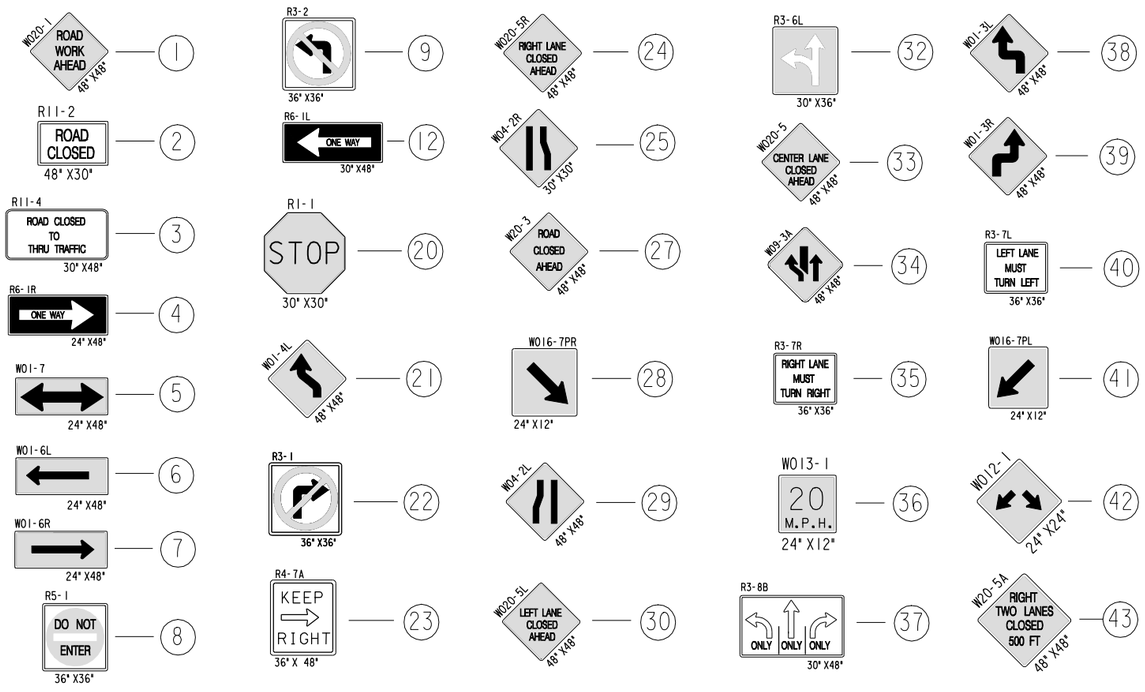
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 232	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IA



LEGEND



(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

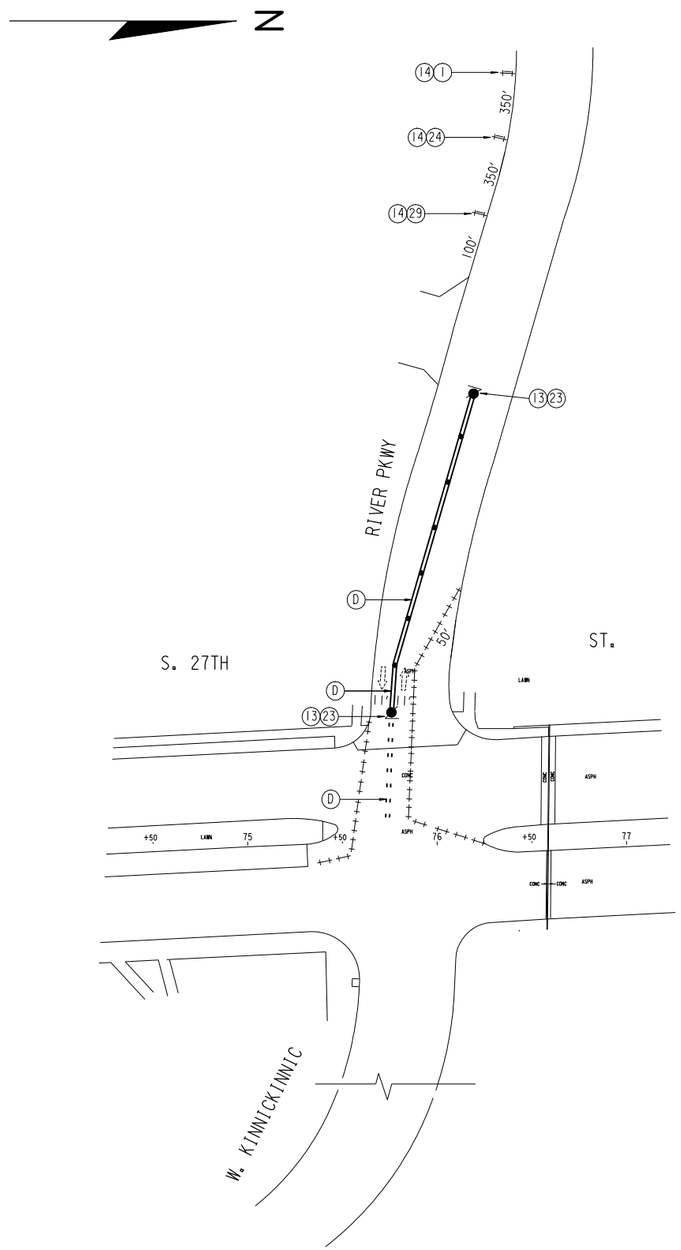
DRUMS W/LIGHTS 30' SPACING — (13)
TYPE III BARRICADES — (14)
TYPE III BARRICADES W/ SIGN — (14) + (X)
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

SHEET 24 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 233	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE IB



LEGEND

W20-1 ROAD WORK AHEAD 48" X48" — 1
R11-2 ROAD CLOSED 48" X30" — 2
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — 3
R6-1R ONE WAY 24" X48" — 4
W01-7 24" X48" — 5
W01-6L 24" X48" — 6
W01-6R 24" X48" — 7
R5-1 DO NOT ENTER 36" X36" — 8
R3-2 36" X36" — 9
R6-1L ONE WAY 30" X48" — 12
R1-1 STOP 30" X30" — 20
W01-4L 48" X48" — 21
R3-1 36" X36" — 22
R4-7A KEEP RIGHT 36" X 48" — 23
W20-5R RIGHT LANE CLOSED AHEAD 48" X48" — 24
W04-2R 30" X30" — 25
W20-3 ROAD CLOSED AHEAD 48" X48" — 27
W016-7PR 24" X12" — 28
W04-2L 48" X48" — 29
W20-5L LEFT LANE CLOSED AHEAD 48" X48" — 30
R3-6L 30" X36" — 32
W20-5 CENTER LANE CLOSED AHEAD 48" X48" — 33
W09-3A 48" X48" — 34
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — 35
W013-1 20 M.P.H. 24" X12" — 36
R3-8B ONLY ONLY ONLY 30" X48" — 37
W01-3L 48" X48" — 38
W01-3R 48" X48" — 39
R3-7L LEFT LANE MUST TURN LEFT 36" X36" — 40
W016-7PL 24" X12" — 41
W012-1 24" X24" — 42
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — 43

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

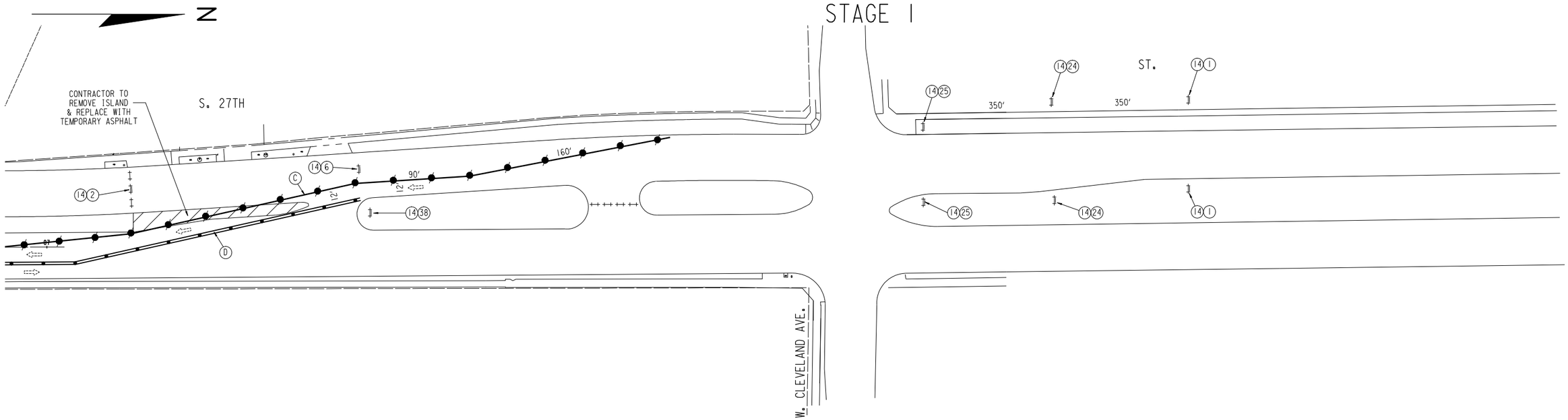
DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

SHEET 25 OF 53

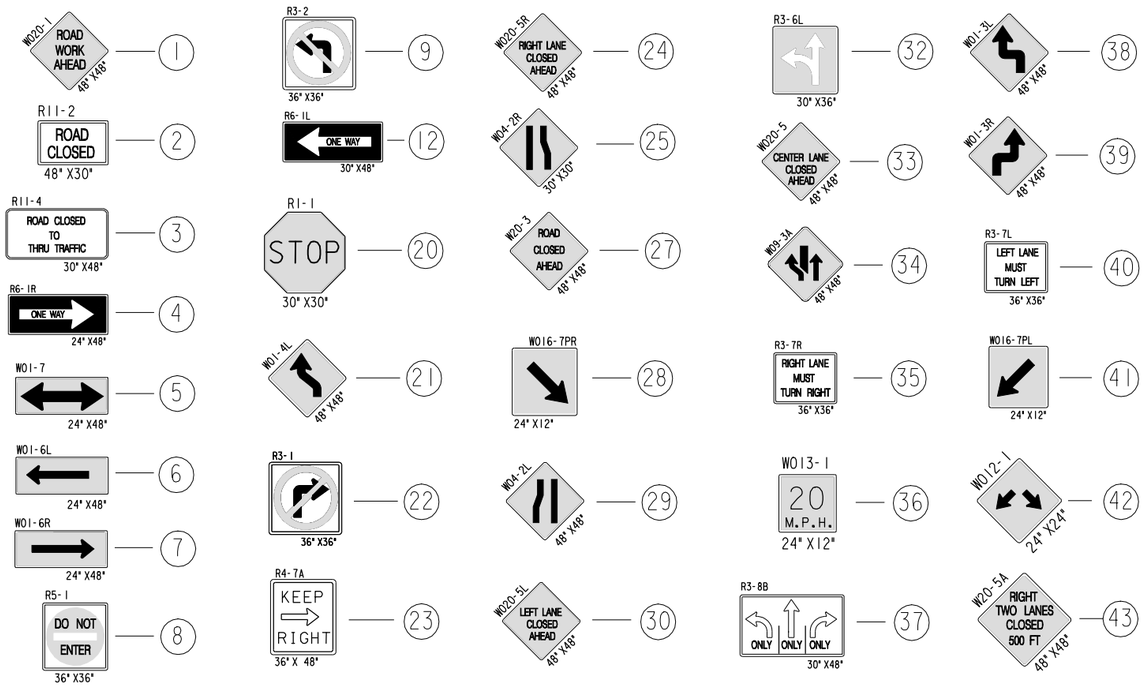
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 234 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE I



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

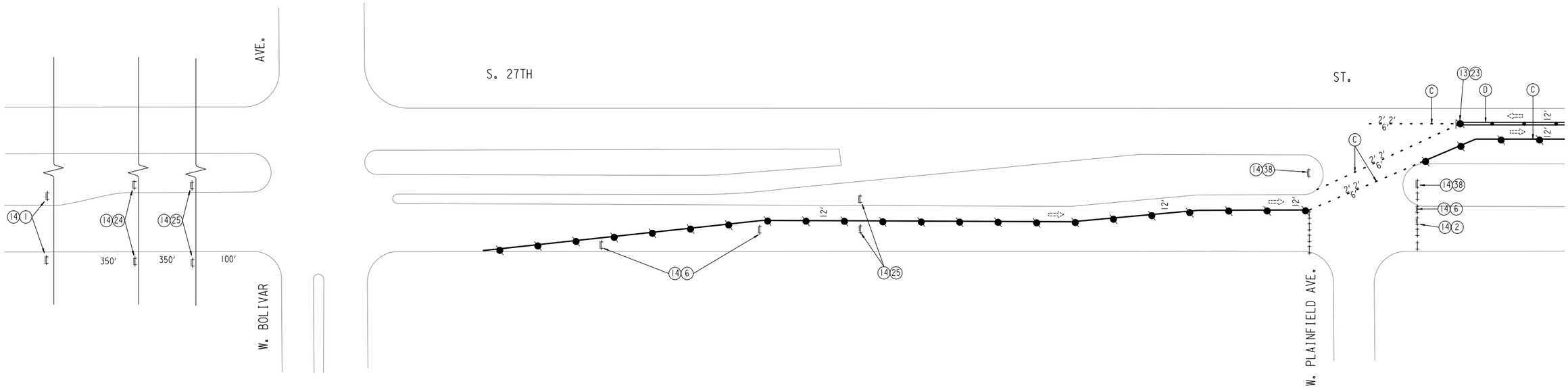
TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

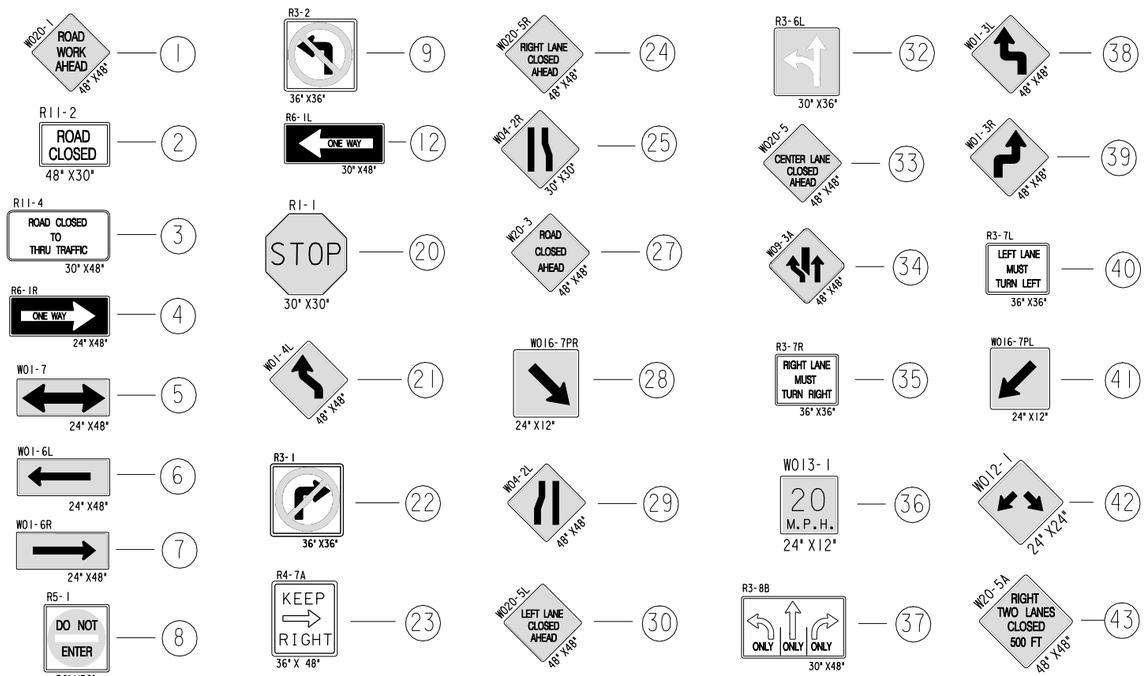
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STAGE 2



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
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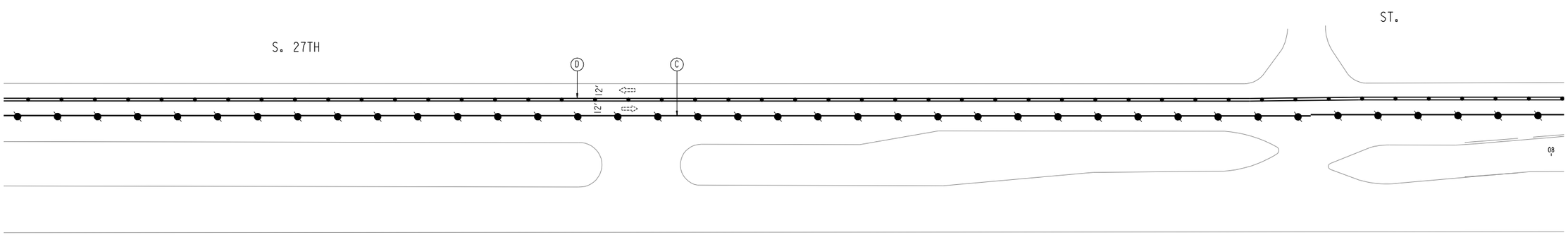
SHEET 27 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 236	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2



LEGEND

W20-1 ROAD WORK AHEAD 48" X48" — 1
R11-2 ROAD CLOSED 48" X30" — 2
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — 3
R6-1R ONE WAY 24" X48" — 4
W01-7 24" X48" — 5
W01-6L 24" X48" — 6
W01-6R 24" X48" — 7
R5-1 DO NOT ENTER 36" X36" — 8
R3-2 36" X36" — 9
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W01-4L 48" X48" — 21
R3-1 36" X36" — 22
R4-7A KEEP RIGHT 36" X 48" — 23
W20-5R RIGHT LANE CLOSED AHEAD 48" X48" — 24
W04-2R 30" X30" — 25
W20-3 ROAD CLOSED AHEAD 48" X48" — 27
W016-7PR 24" X12" — 28
W04-2L 48" X48" — 29
W20-5L LEFT LANE CLOSED AHEAD 48" X48" — 30
R3-6L 30" X36" — 32
W20-5 CENTER LANE CLOSED AHEAD 48" X48" — 33
W03-3A 48" X48" — 34
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — 35
W013-1 20 M.P.H. 24" X12" — 36
R3-8B ONLY ONLY ONLY 30" X48" — 37
W01-3L 48" X48" — 38
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R3-7L LEFT LANE MUST TURN LEFT 36" X36" — 40
W016-7PL 24" X12" — 41
W012-1 24" X24" — 42
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — 43

DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
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(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
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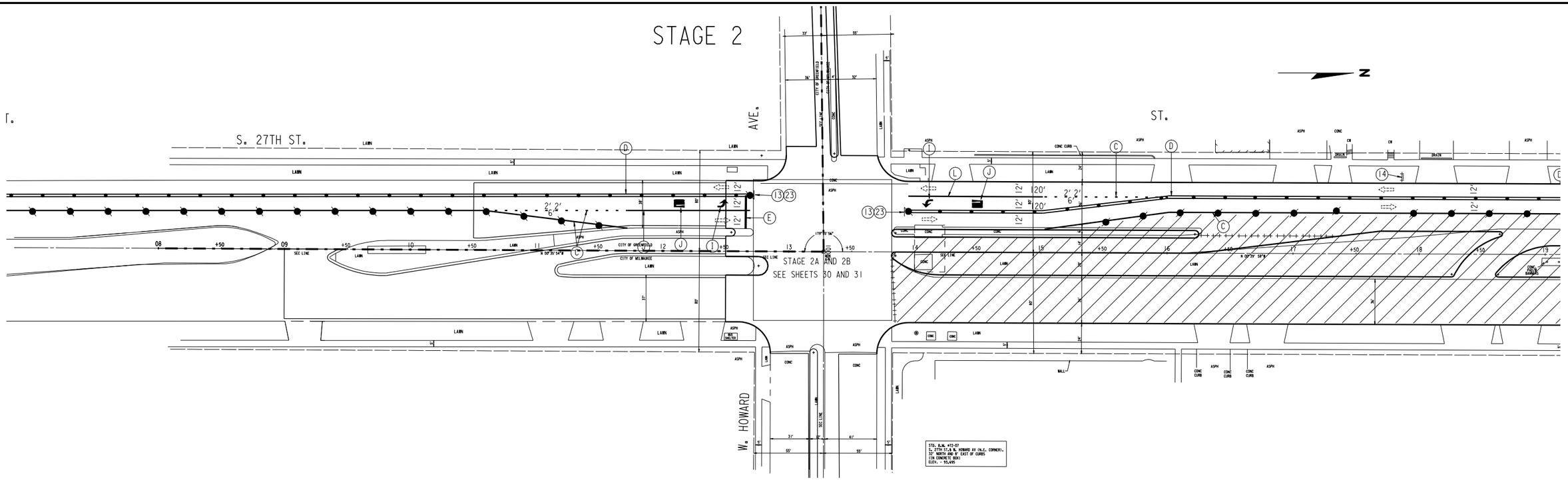
SHEET 28 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 237	E

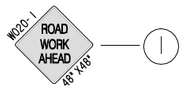
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REVISED:

STAGE 2



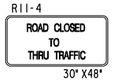
LEGEND



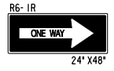
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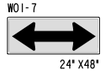
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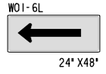
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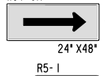
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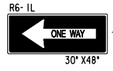
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8



9



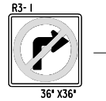
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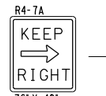
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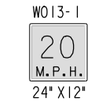
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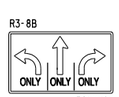
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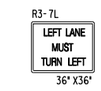
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38



39



40



41



42



43

DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

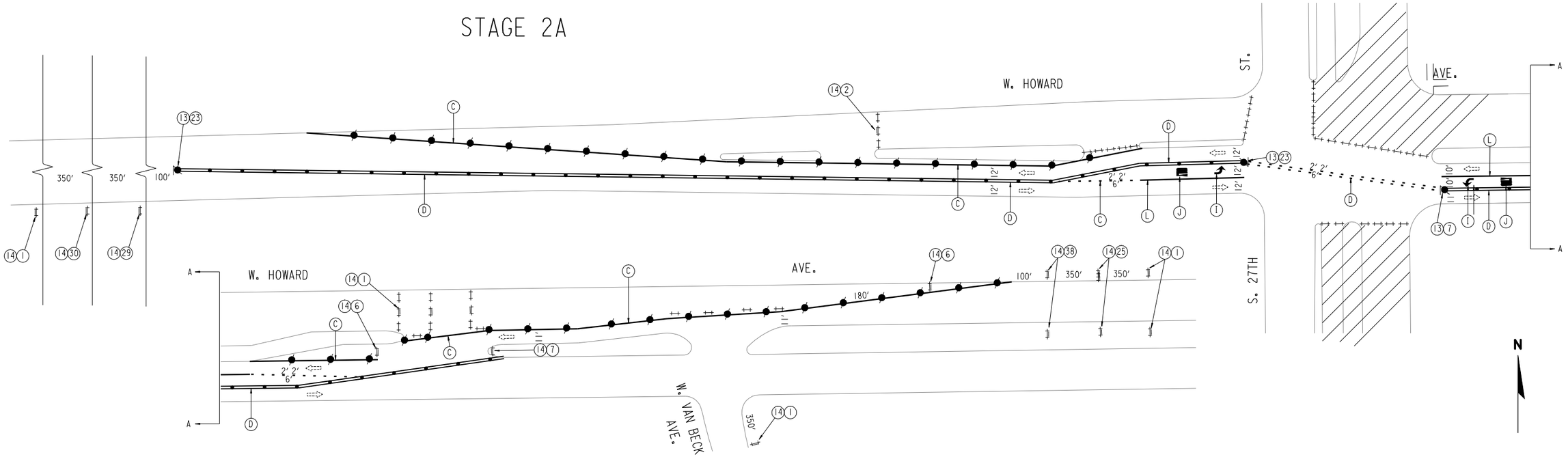
SHEET 29 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 238	E

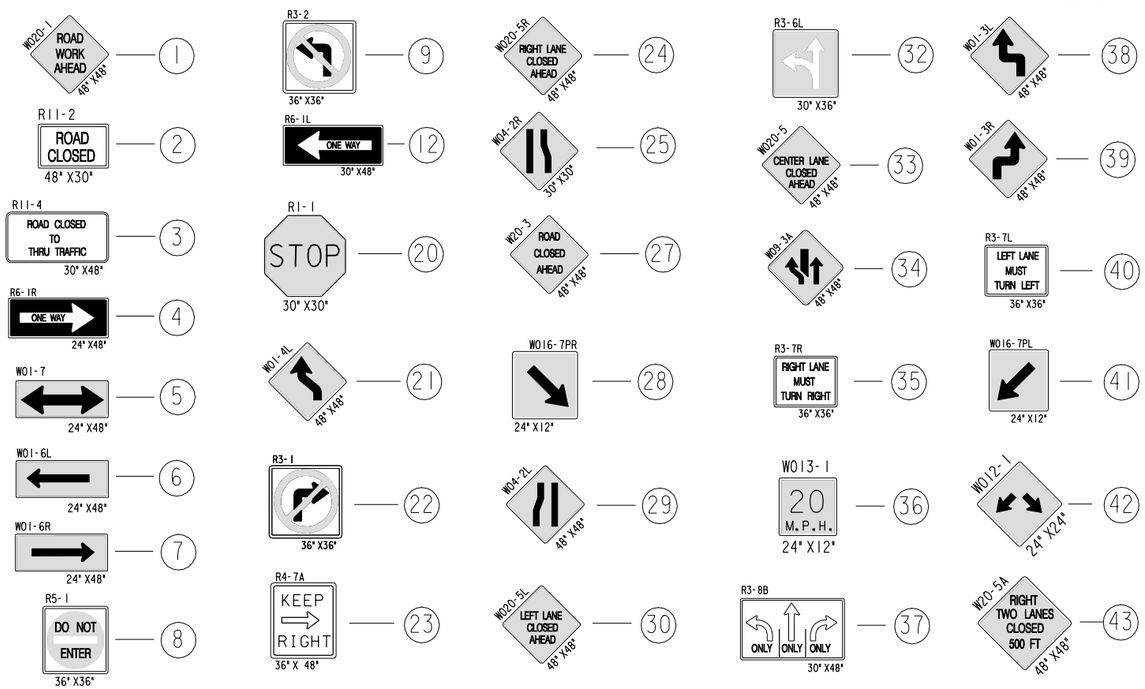
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2A



LEGEND



DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

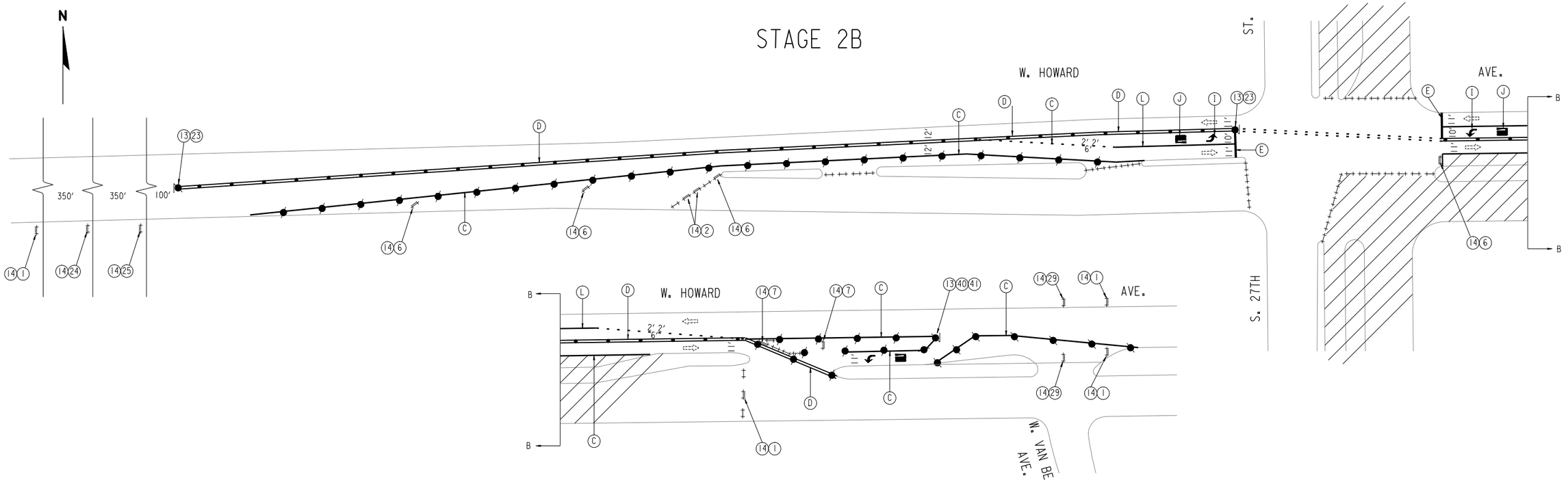
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 239	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

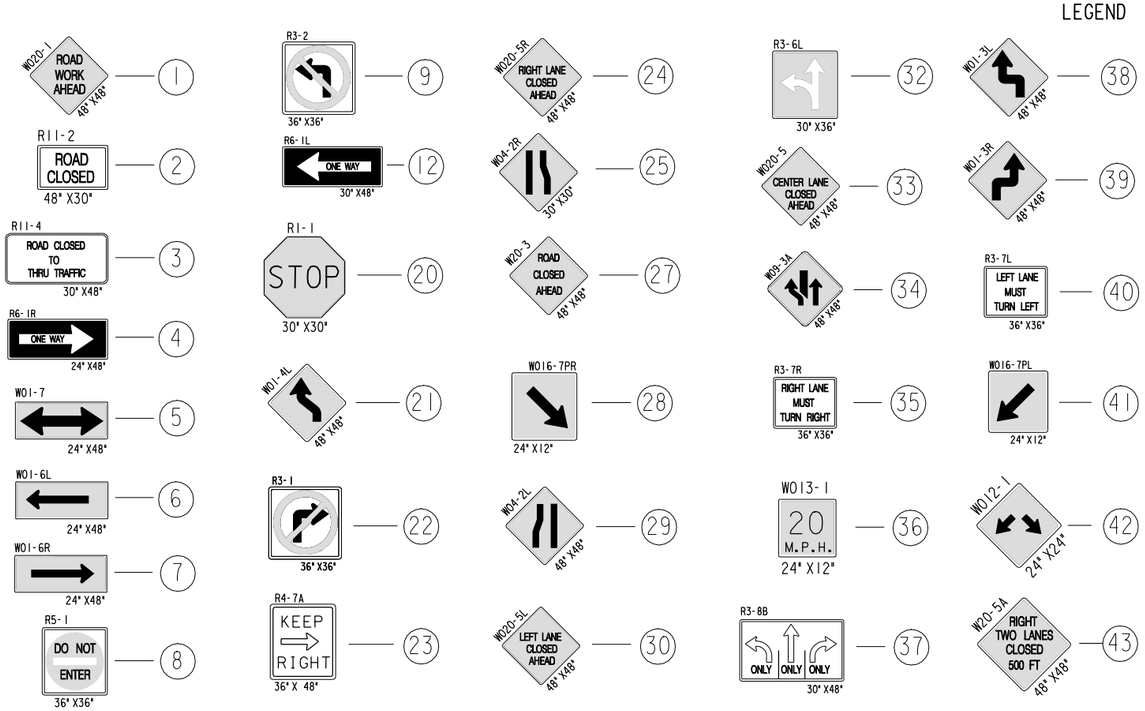
REVISED:

2

STAGE 2B



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

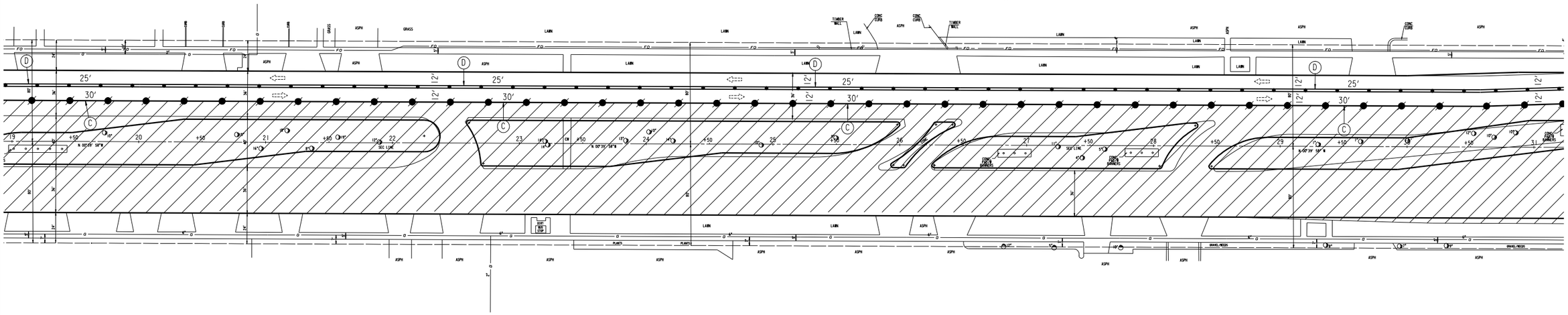
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 240	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2



LEGEND

W020-1 ROAD WORK AHEAD 48" X48" — (1)

R11-2 ROAD CLOSED 48" X30" — (2)

R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — (3)

R6-1R ONE WAY 24" X48" — (4)

W01-7 24" X48" — (5)

W01-6L 24" X48" — (6)

W01-6R 24" X48" — (7)

R5-1 DO NOT ENTER 36" X36" — (8)

R3-2 36" X36" — (9)

R6-1L ONE WAY 30" X48" — (12)

R1-1 STOP 30" X30" — (20)

W01-4L 48" X48" — (21)

R3-1 36" X36" — (22)

R4-7A KEEP RIGHT 36" X 48" — (23)

W020-5R RIGHT LANE CLOSED AHEAD 48" X48" — (24)

W04-2R 30" X30" — (25)

W20-3 ROAD CLOSED AHEAD 48" X48" — (27)

W016-7PR 24" X12" — (28)

W04-2L 48" X48" — (29)

W020-5L LEFT LANE CLOSED AHEAD 48" X48" — (30)

R3-6L 30" X36" — (32)

W020-5 CENTER LANE CLOSED AHEAD 48" X48" — (33)

W09-3A 48" X48" — (34)

R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — (35)

W013-1 20 M.P.H. 24" X12" — (36)

R3-8B ONLY ONLY ONLY 30" X48" — (37)

W01-3L 48" X48" — (38)

W01-3R 48" X48" — (39)

R3-7L LEFT LANE MUST TURN LEFT 36" X36" — (40)

W016-7PL 24" X12" — (41)

W012-1 24" X24" — (42)

W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — (43)

DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

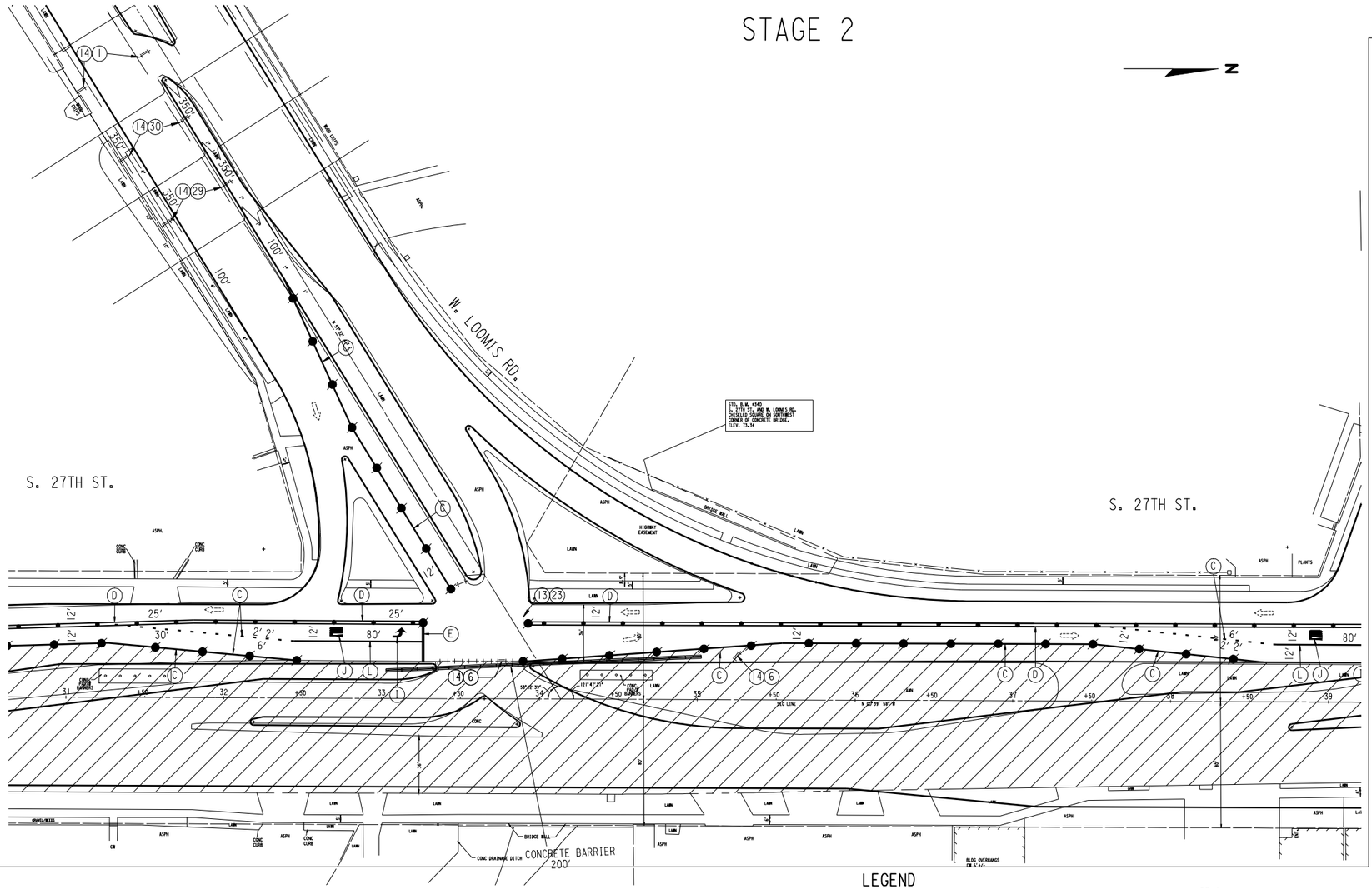
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 241	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

DRUMS W/LIGHTS 30' SPACING — (13)
TYPE III BARRICADES — (14)
TYPE III BARRICADES W/ SIGN — (14) + (X)
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

LEGEND

(1) W020-1 ROAD WORK AHEAD 48" X48"
(2) R11-2 ROAD CLOSED 48" X30"
(3) R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48"
(4) R6-1R ONE WAY 24" X48"
(5) W01-7 24" X48"
(6) W01-6L 24" X48"
(7) W01-6R 24" X48"
(8) R5-1 DO NOT ENTER 36" X36"
(9) R3-2 36" X36"
(12) R6-1L ONE WAY 30" X48"
(20) R1-1 STOP 30" X30"
(21) W01-4L 48" X48"
(22) R3-1 36" X36"
(23) R4-7A KEEP RIGHT 36" X48"
(24) W020-5R RIGHT LANE CLOSED AHEAD 48" X48"
(25) W04-2R 30" X30"
(27) W20-3 ROAD CLOSED AHEAD 48" X48"
(28) W016-7PR 24" X12"
(29) W04-2L 48" X48"
(30) W020-5L LEFT LANE CLOSED AHEAD 48" X48"
(32) R3-6L 30" X36"
(33) W020-5 CENTER LANE CLOSED AHEAD 48" X48"
(34) W09-3A 48" X48"
(35) R3-7R RIGHT LANE MUST TURN RIGHT 36" X36"
(36) W013-1 20 M.P.H. 24" X12"
(37) R3-8B ONLY ONLY ONLY 30" X48"
(38) W01-3L 48" X48"
(39) W01-3R 48" X48"
(40) R3-7L LEFT LANE MUST TURN LEFT 36" X36"
(41) W016-7PL 24" X12"
(42) W012-1 24" X24"

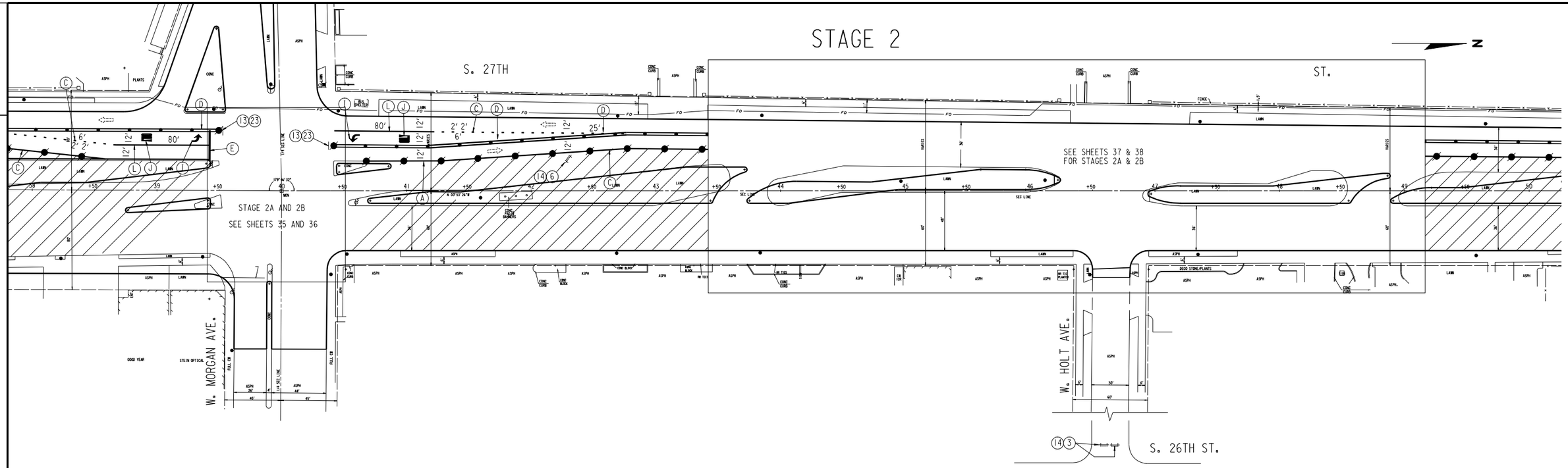
SHEET 33 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 242	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2



LEGEND

W020-1 ROAD WORK AHEAD 48" X48" — (1)

R11-2 ROAD CLOSED 48" X30" — (2)

R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — (3)

R6-1R ONE WAY 24" X48" — (4)

W01-7 24" X48" — (5)

W01-6L 24" X48" — (6)

W01-6R 24" X48" — (7)

R5-1 DO NOT ENTER 36" X36" — (8)

R3-2 36" X36" — (9)

R6-1L ONE WAY 30" X48" — (12)

R1-1 STOP 30" X30" — (20)

W01-4L 48" X48" — (21)

R3-1 36" X36" — (22)

R4-7A KEEP RIGHT 36" X 48" — (23)

W020-5R RIGHT LANE CLOSED AHEAD 48" X48" — (24)

W04-2R 30" X30" — (25)

W020-3 ROAD CLOSED AHEAD 48" X48" — (27)

W016-7PR 24" X12" — (28)

W04-2L 48" X48" — (29)

W020-5L LEFT LANE CLOSED AHEAD 48" X48" — (30)

R3-6L 30" X36" — (32)

W020-5 CENTER LANE CLOSED AHEAD 48" X48" — (33)

W09-3A 48" X48" — (34)

R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — (35)

W013-1 20 M.P.H. 24" X12" — (36)

R3-8B ONLY ONLY ONLY 30" X48" — (37)

W01-3L 48" X48" — (38)

W01-3R 48" X48" — (39)

R3-7L LEFT LANE MUST TURN LEFT 36" X36" — (40)

W016-7PL 24" X12" — (41)

W012-1 24" X24" — (42)

W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — (43)

DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

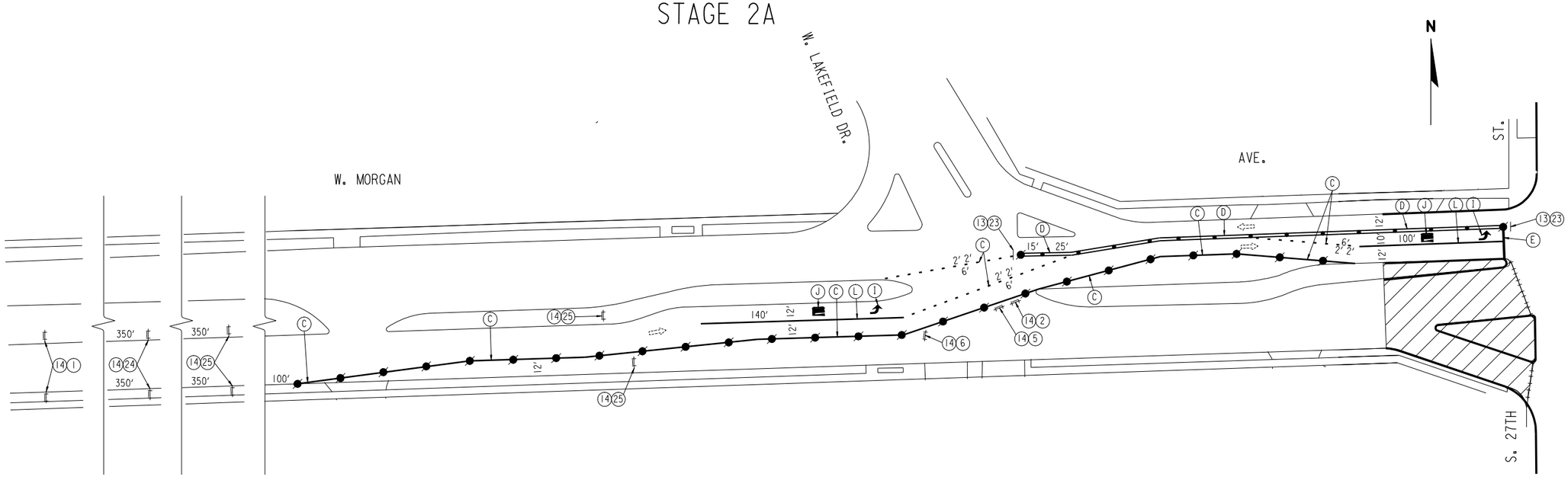
SHEET 34 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 243	E

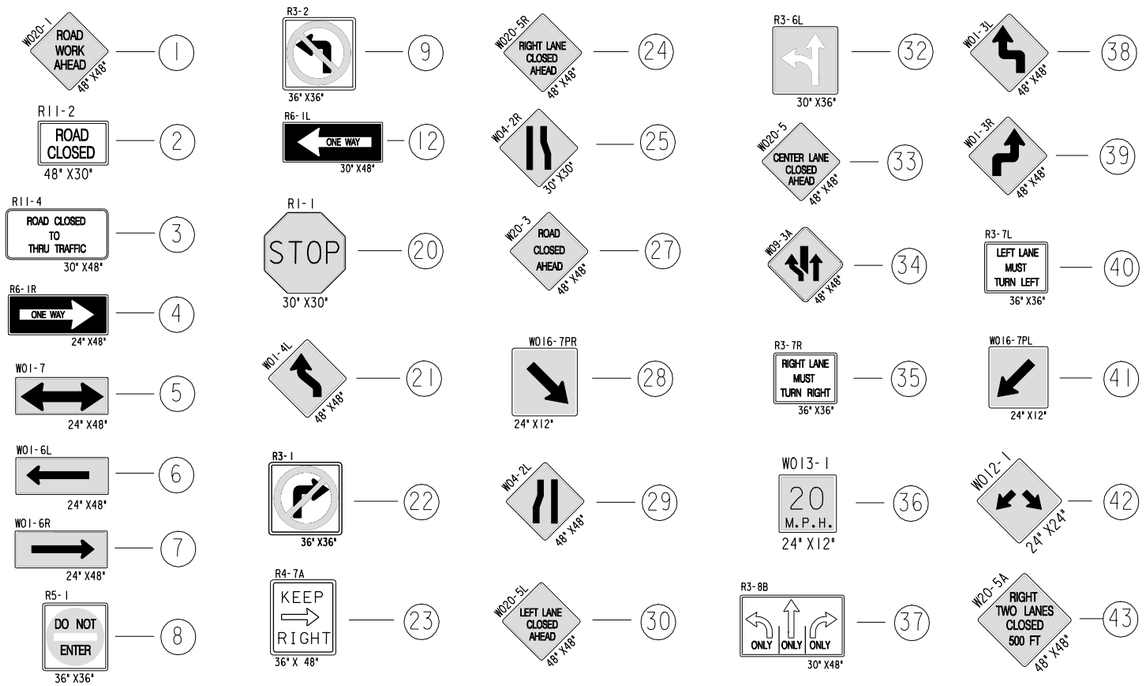
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2A



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

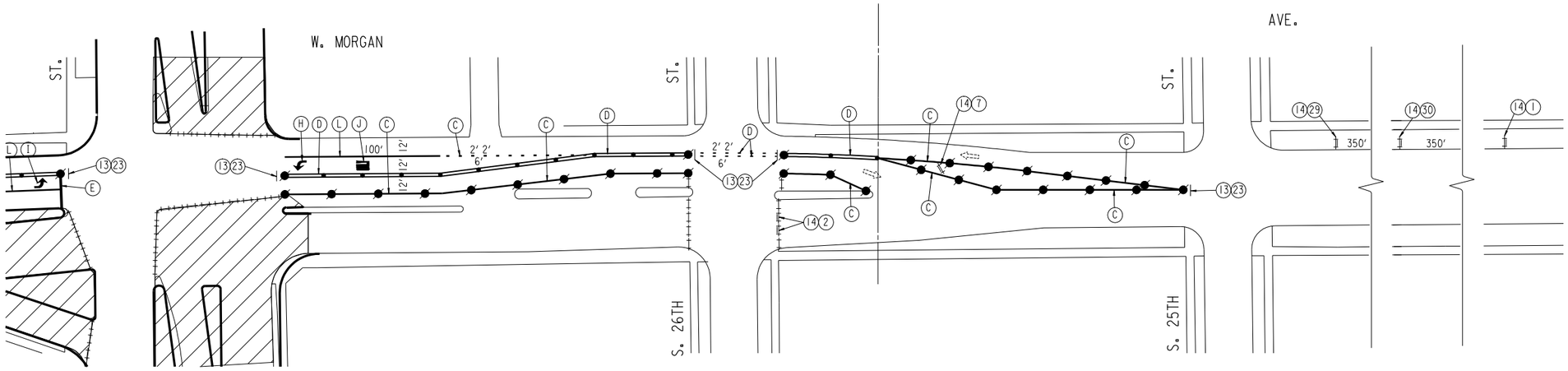
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 244	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2A



N

LEGEND

W020-1 ROAD WORK AHEAD 48" X48" — 1
R11-2 ROAD CLOSED 48" X30" — 2
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — 3
R6-1R ONE WAY 24" X48" — 4
W01-7 24" X48" — 5
W01-6L 24" X48" — 6
W01-6R 24" X48" — 7
R5-1 DO NOT ENTER 36" X36" — 8
R3-2 36" X36" — 9
R6-1L ONE WAY 30" X48" — 12
R1-1 STOP 30" X30" — 20
W01-4L 48" X48" — 21
R3-1 36" X36" — 22
R4-7A KEEP RIGHT 36" X 48" — 23
W020-5R RIGHT LANE CLOSED AHEAD 48" X48" — 24
W04-2R 30" X30" — 25
W20-3 ROAD CLOSED AHEAD 48" X48" — 27
W016-7PR 24" X12" — 28
W04-2L 48" X48" — 29
W020-5L LEFT LANE CLOSED AHEAD 48" X48" — 30
R3-6L 30" X36" — 32
W020-5 CENTER LANE CLOSED AHEAD 48" X48" — 33
W09-3A 48" X48" — 34
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — 35
W013-1 20 M.P.H. 24" X12" — 36
R3-8B ONLY ONLY ONLY 30" X48" — 37
W01-3L 48" X48" — 38
W01-3R 48" X48" — 39
R3-7L LEFT LANE MUST TURN LEFT 36" X36" — 40
W016-7PL 24" X12" — 41
W012-1 24" X24" — 42
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — 43

DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

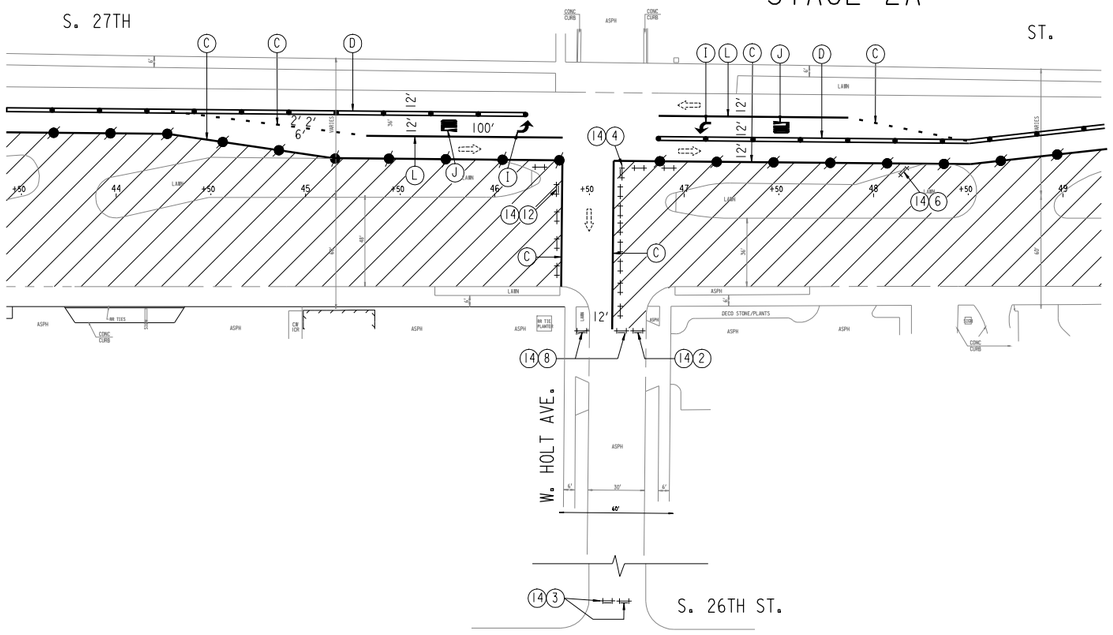
SHEET 36 OF 53

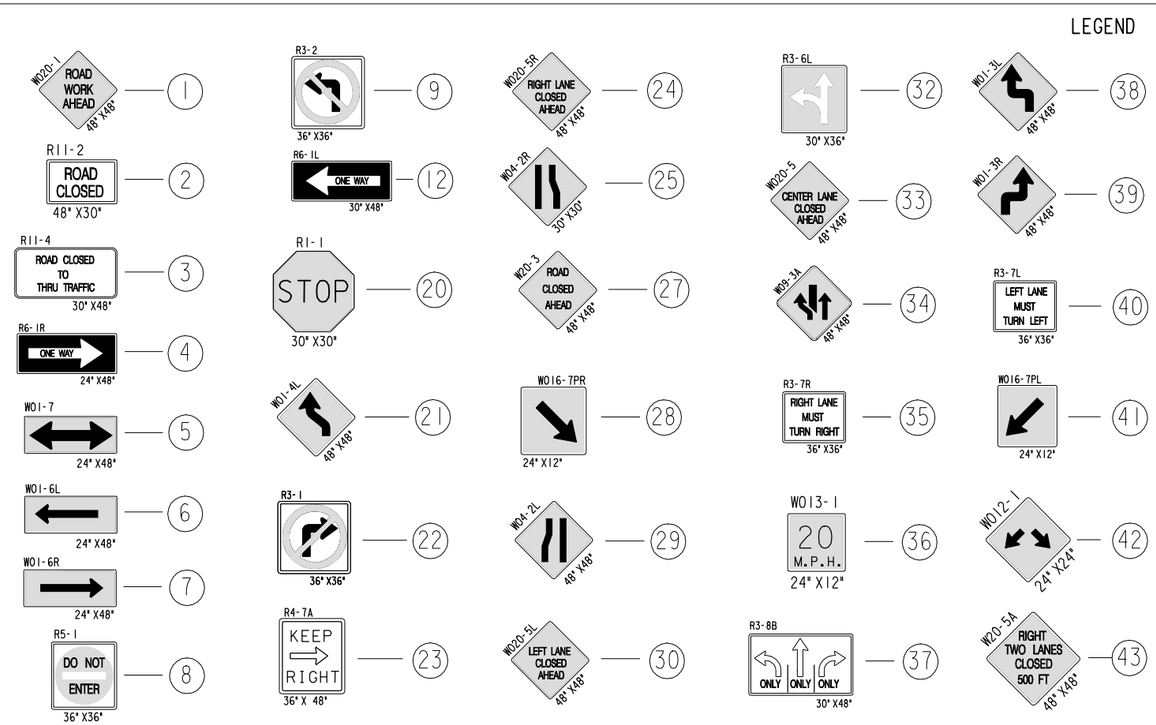
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 245	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2A



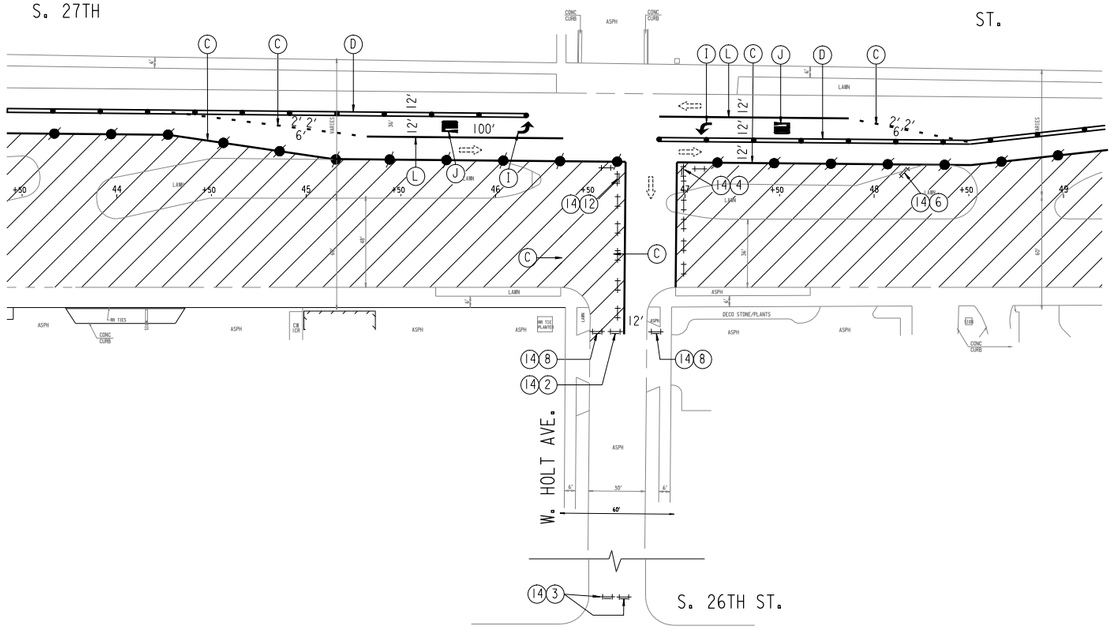


SHEET 37 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 246	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 2B



N

LEGEND

W20-1 ROAD WORK AHEAD 48" X48" — (1)
R11-2 ROAD CLOSED 48" X30" — (2)
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — (3)
R6-1R ONE WAY 24" X48" — (4)
W01-7 24" X48" — (5)
W01-6L 24" X48" — (6)
W01-6R 24" X48" — (7)
R5-1 DO NOT ENTER 36" X36" — (8)
R3-2 36" X36" — (9)
R6-1L ONE WAY 30" X48" — (12)
R1-1 STOP 30" X30" — (20)
W01-4L 48" X48" — (21)
R3-1 36" X36" — (22)
R4-7A KEEP RIGHT 36" X 48" — (23)
W20-5R RIGHT LANE CLOSED AHEAD 48" X48" — (24)
W04-2R 30" X30" — (25)
W20-3 ROAD CLOSED AHEAD 48" X48" — (27)
W016-7PR 24" X12" — (28)
W04-2L 48" X48" — (29)
W20-5L LEFT LANE CLOSED AHEAD 48" X48" — (30)
R3-6L 30" X36" — (32)
W20-5 CENTER LANE CLOSED AHEAD 48" X48" — (33)
W09-3A 48" X48" — (34)
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — (35)
W013-1 20 M.P.H. 24" X12" — (36)
R3-8B ONLY ONLY ONLY 30" X48" — (37)
W01-3L 48" X48" — (38)
W01-3R 48" X48" — (39)
R3-7L LEFT LANE MUST TURN LEFT 36" X36" — (40)
W016-7PL 24" X12" — (41)
W012-1 24" X24" — (42)
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — (43)

DRUMS W/LIGHTS 30' SPACING — (13)
TYPE III BARRICADES — (14)
TYPE III BARRICADES W/ SIGN — (14) + (X)
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

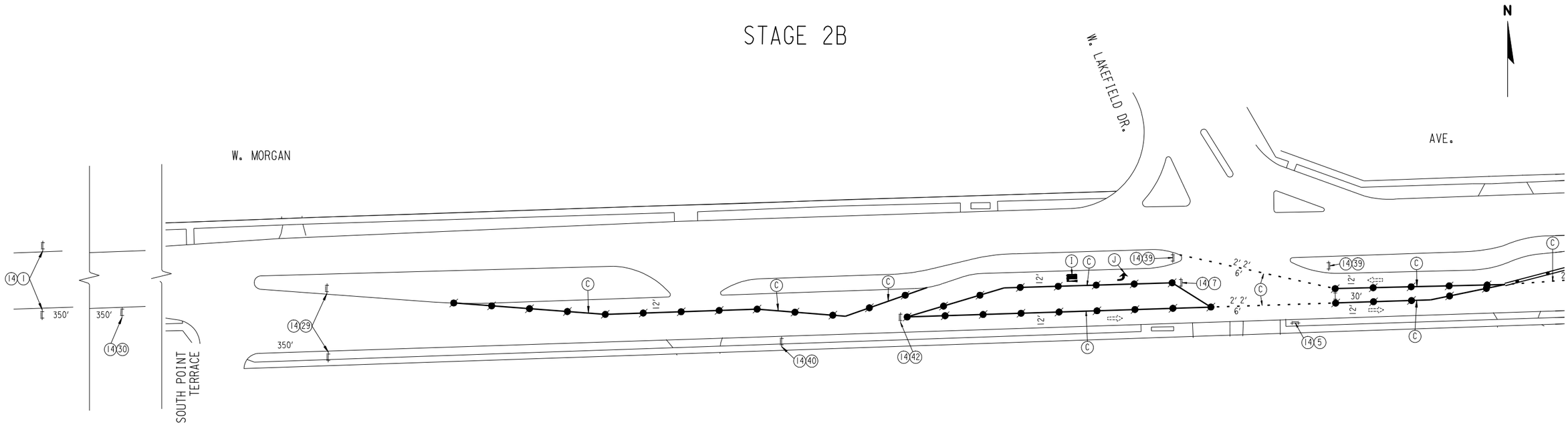
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

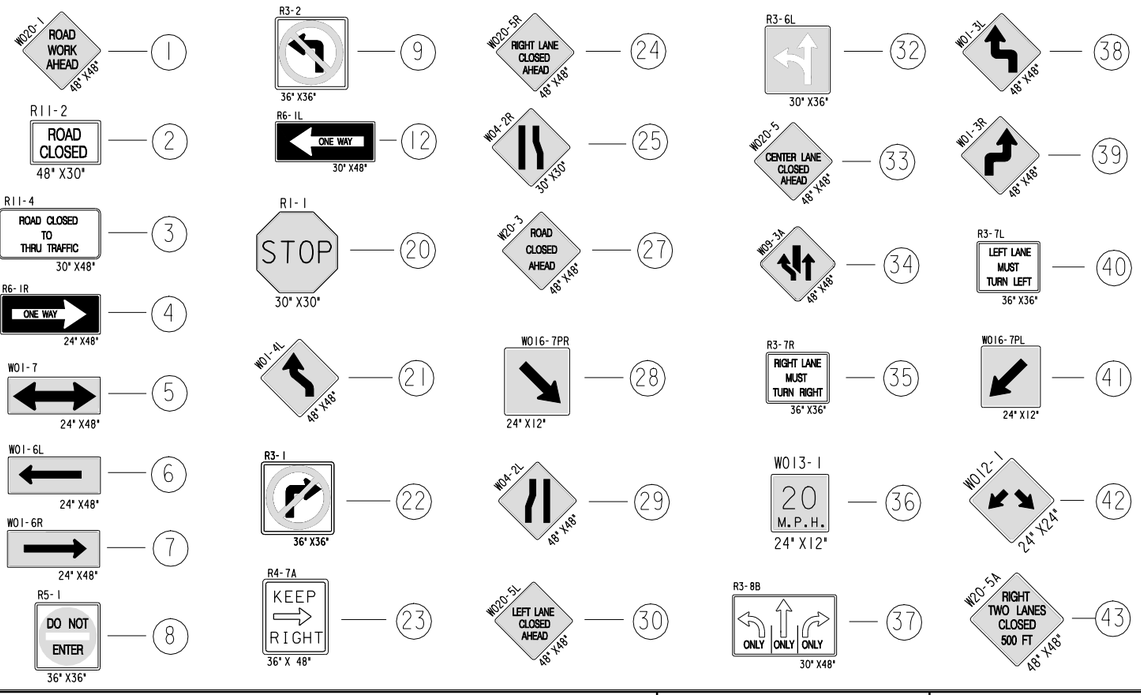
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 247 E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 2B



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

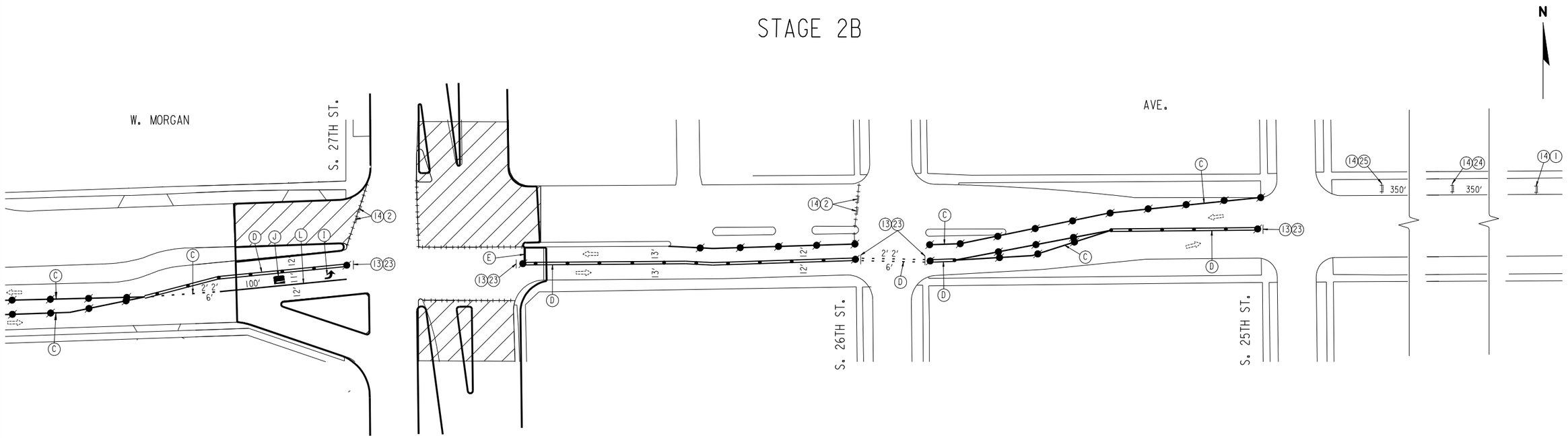
SHEET 39 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 248	E

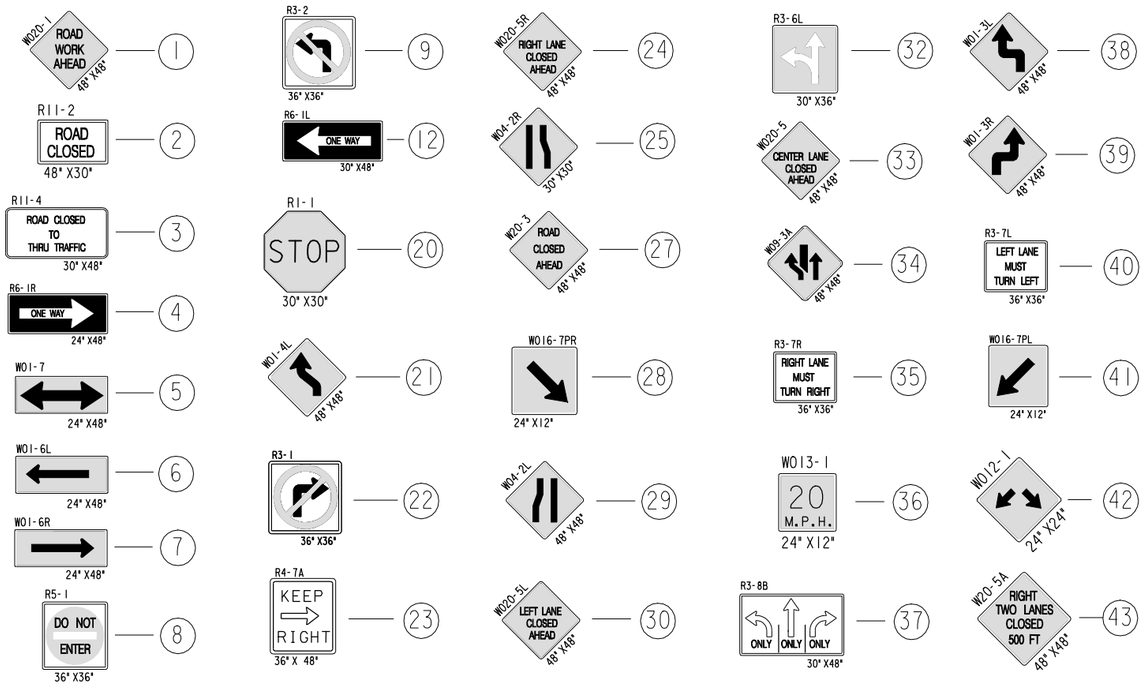
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2B



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

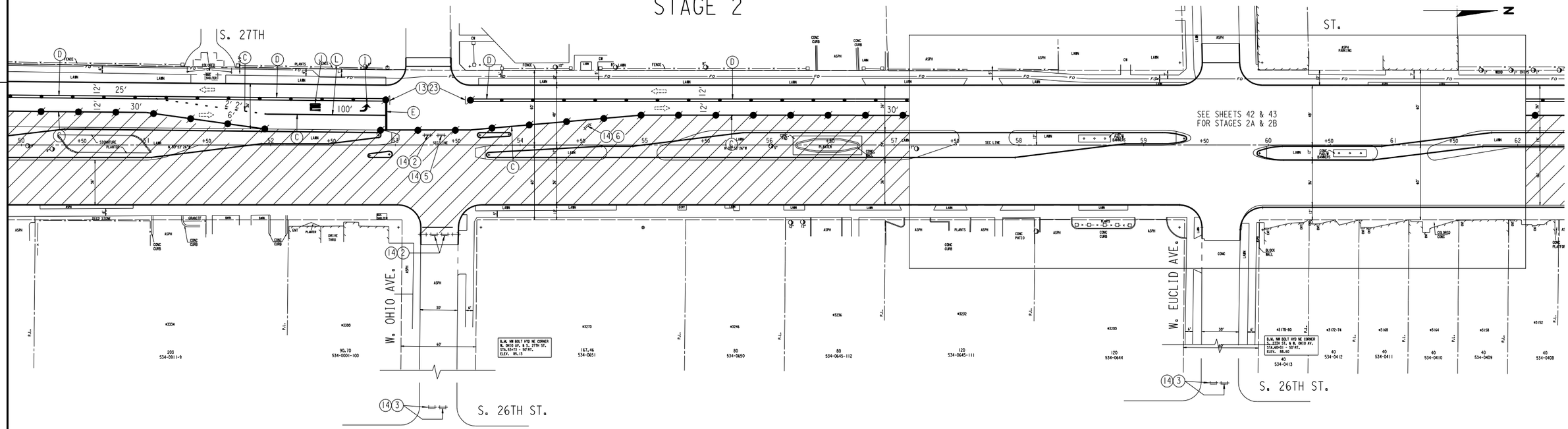
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 249	E

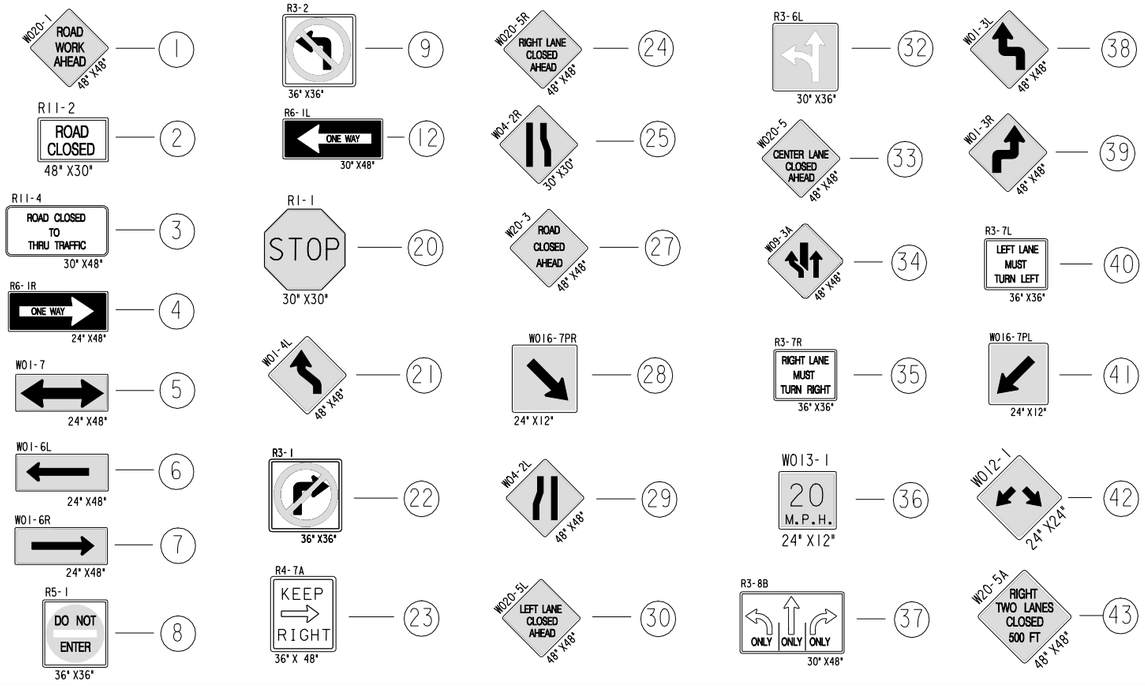
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2



LEGEND



DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

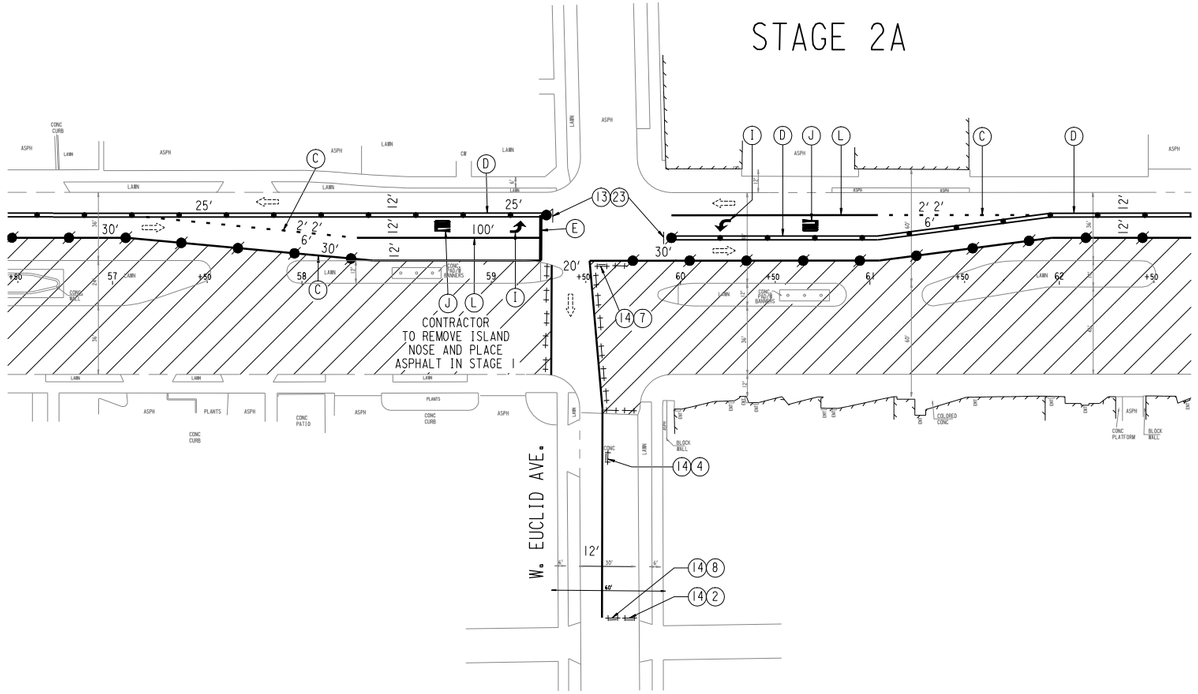
SHEET 41 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 250	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

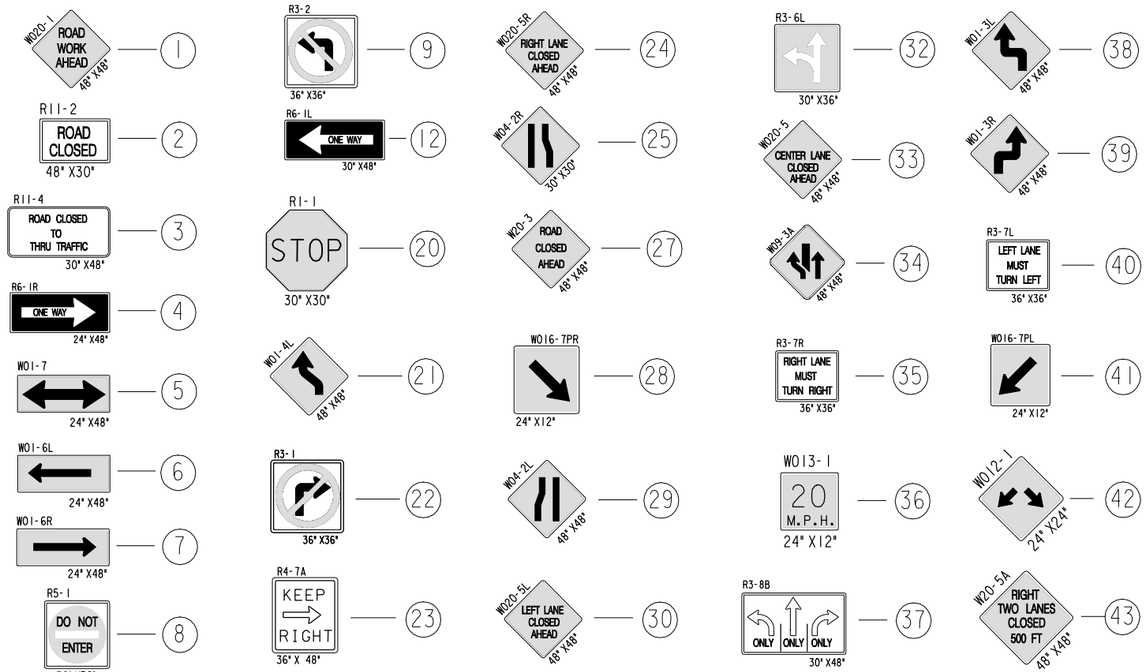
REVISED:

STAGE 2A



N

LEGEND



DRUMS W/LIGHTS 30' SPACING — (13)

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

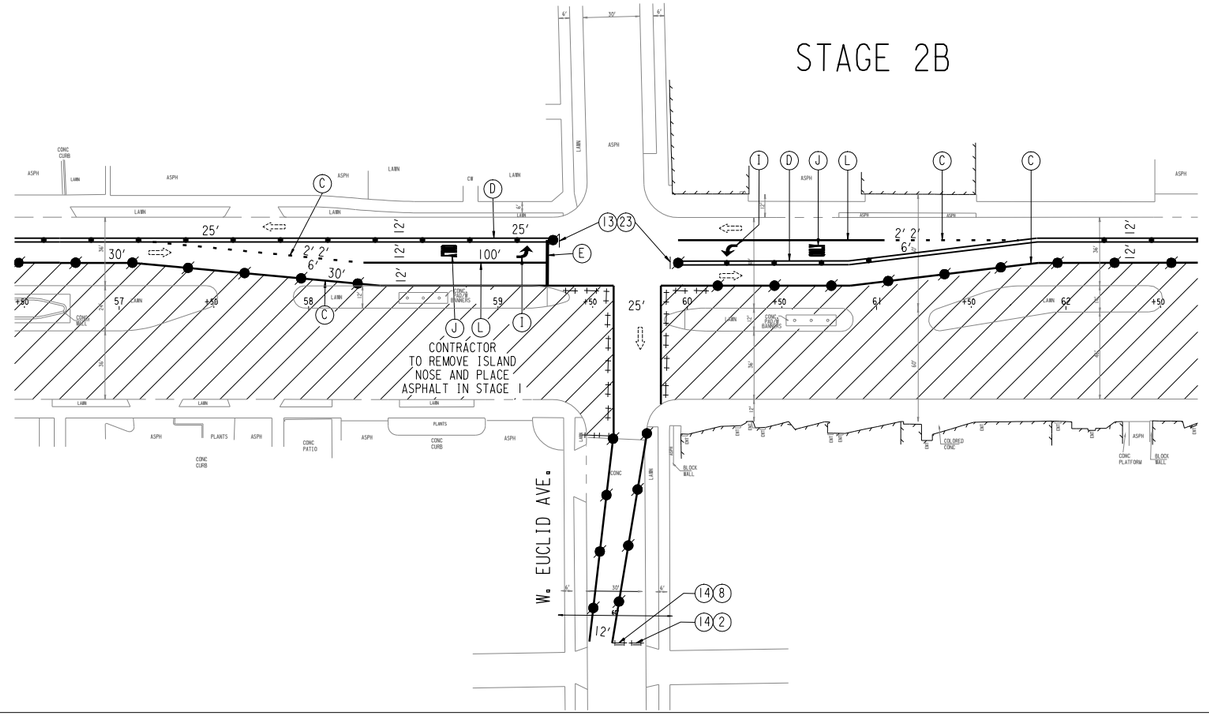
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 42 OF 53

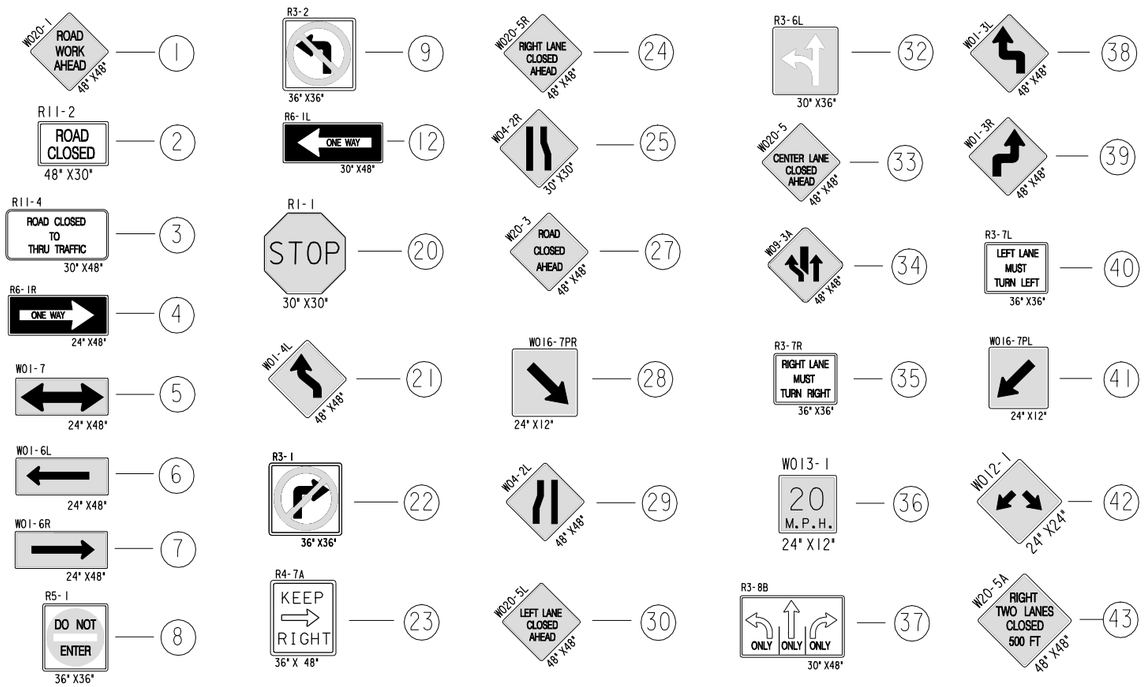
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 251	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 2B



LEGEND



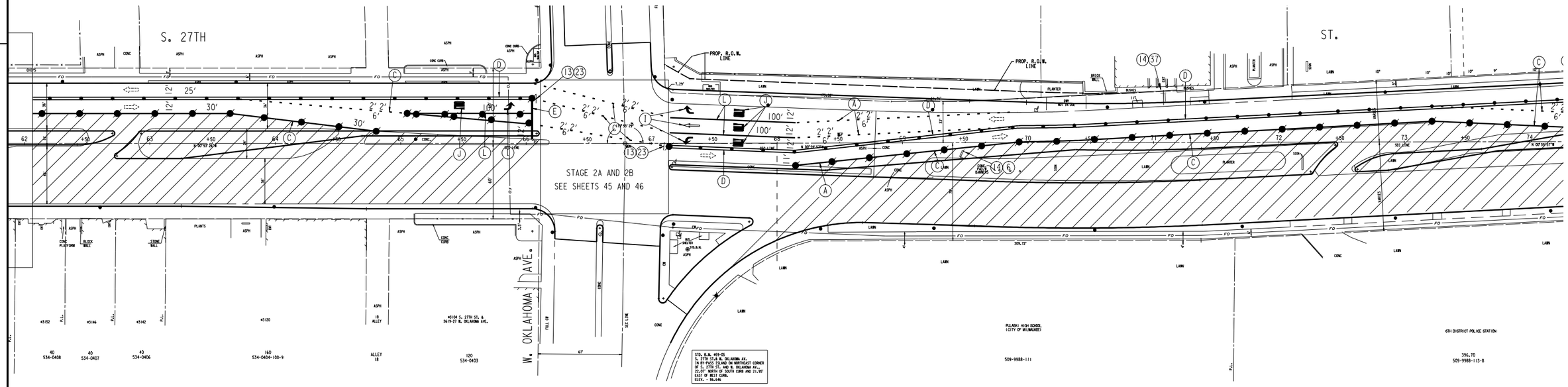
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

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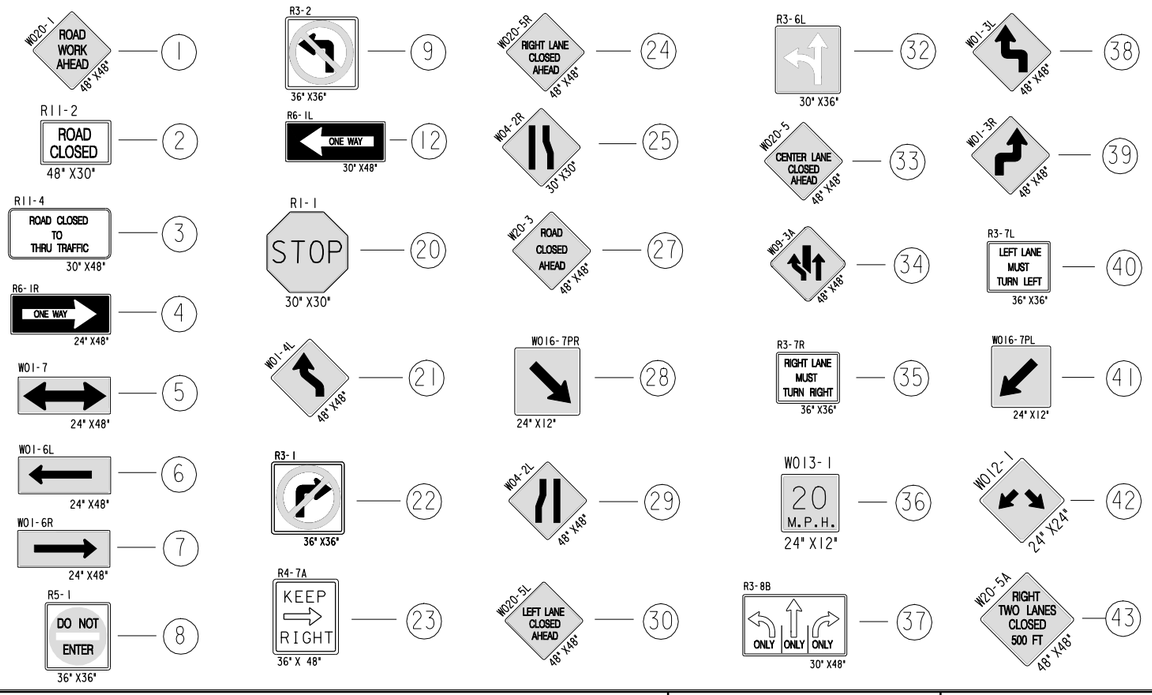
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 252	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 2



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

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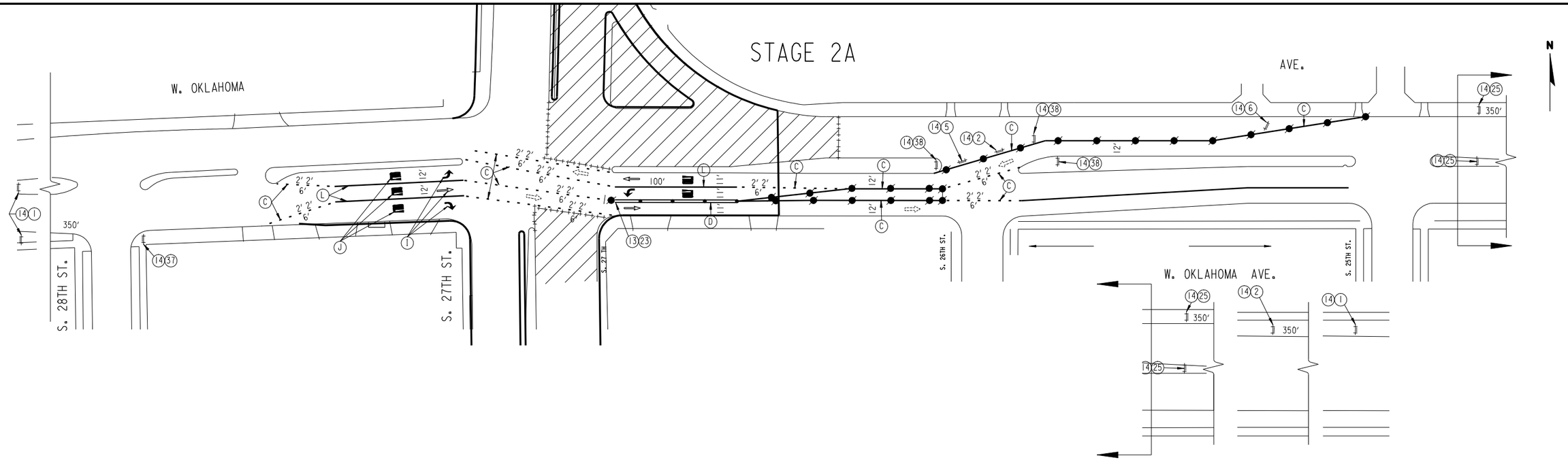
SHEET 44 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 253	E

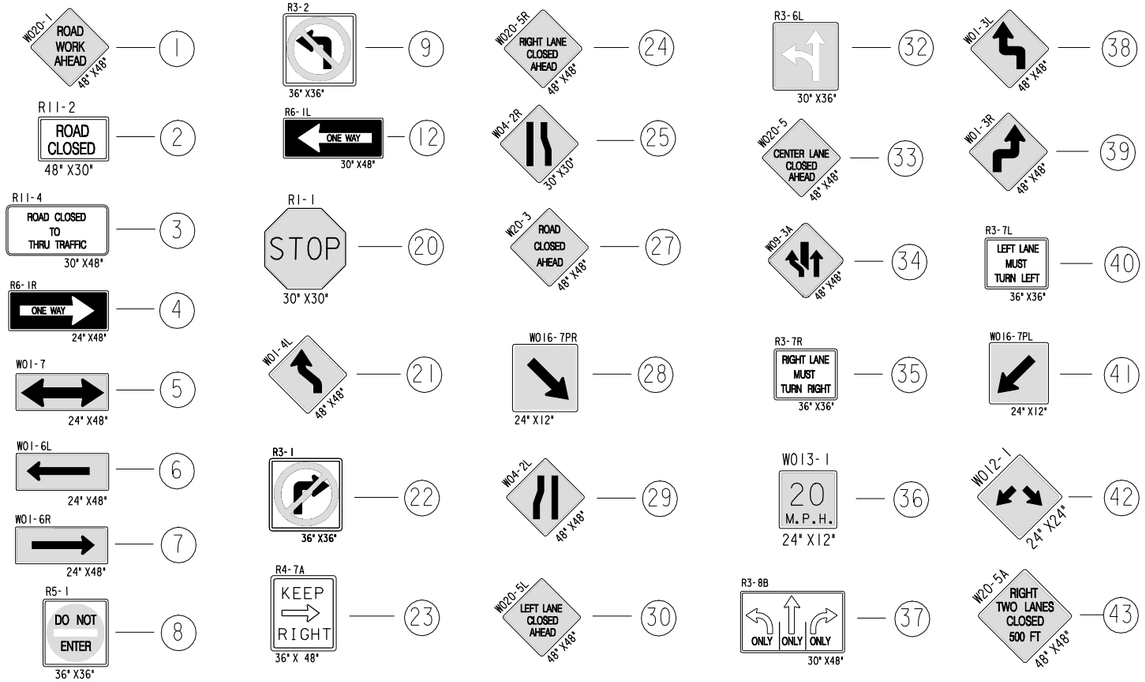
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2A



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

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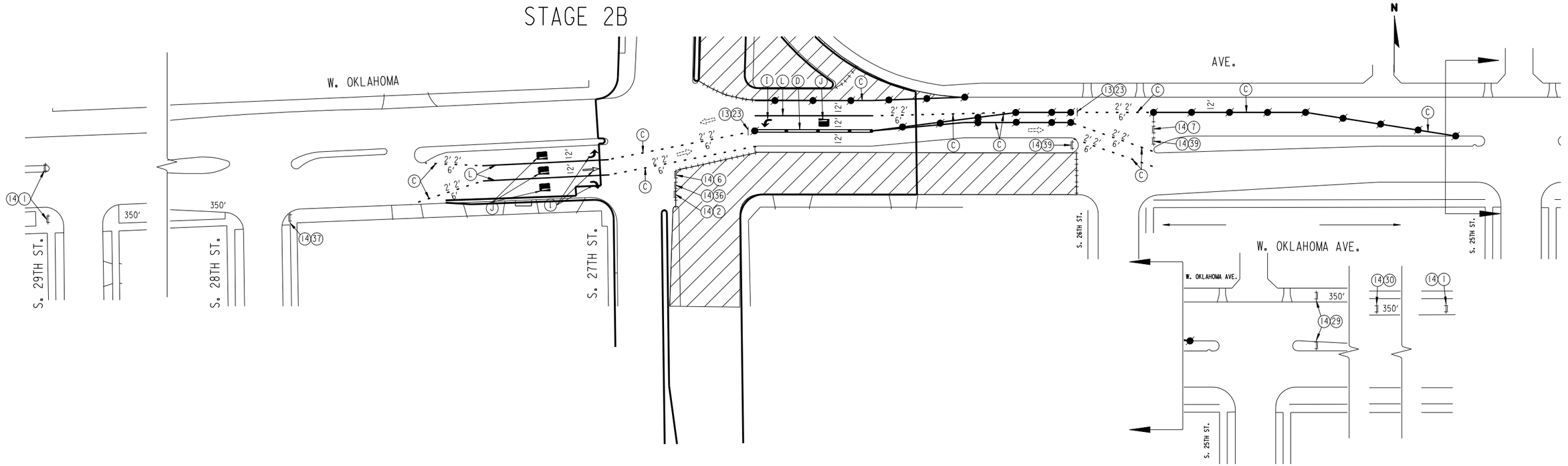
SHEET 45 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 254	E

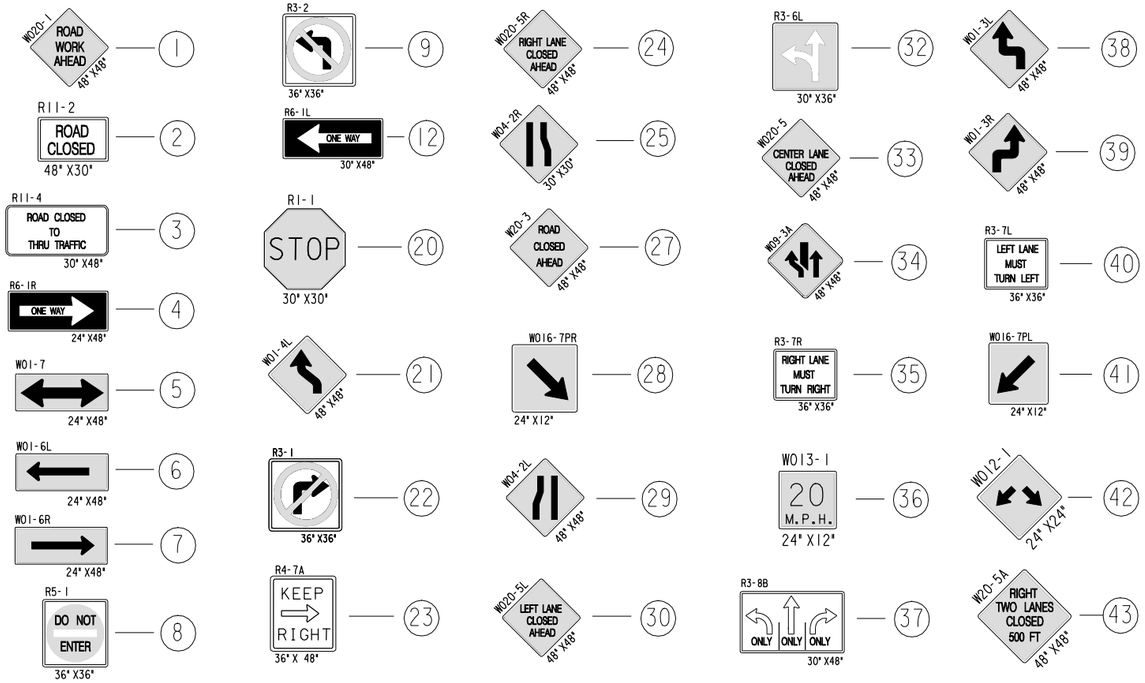
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2B



LEGEND



DRUMS W/LIGHTS 30' SPACING — 13

TYPE III BARRICADES — 14

TYPE III BARRICADES W/ SIGN — 14 + X

SIGNS BANDED TO UTILITY POLE

WORK AREA

DIRECTION OF TRAFFIC

TUBULAR MARKERS 25' SPACING

CONCRETE BARRIERS

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
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- (L) TPM, REMOVABLE TAPE, 8" WHITE

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SHEET 46 OF 53

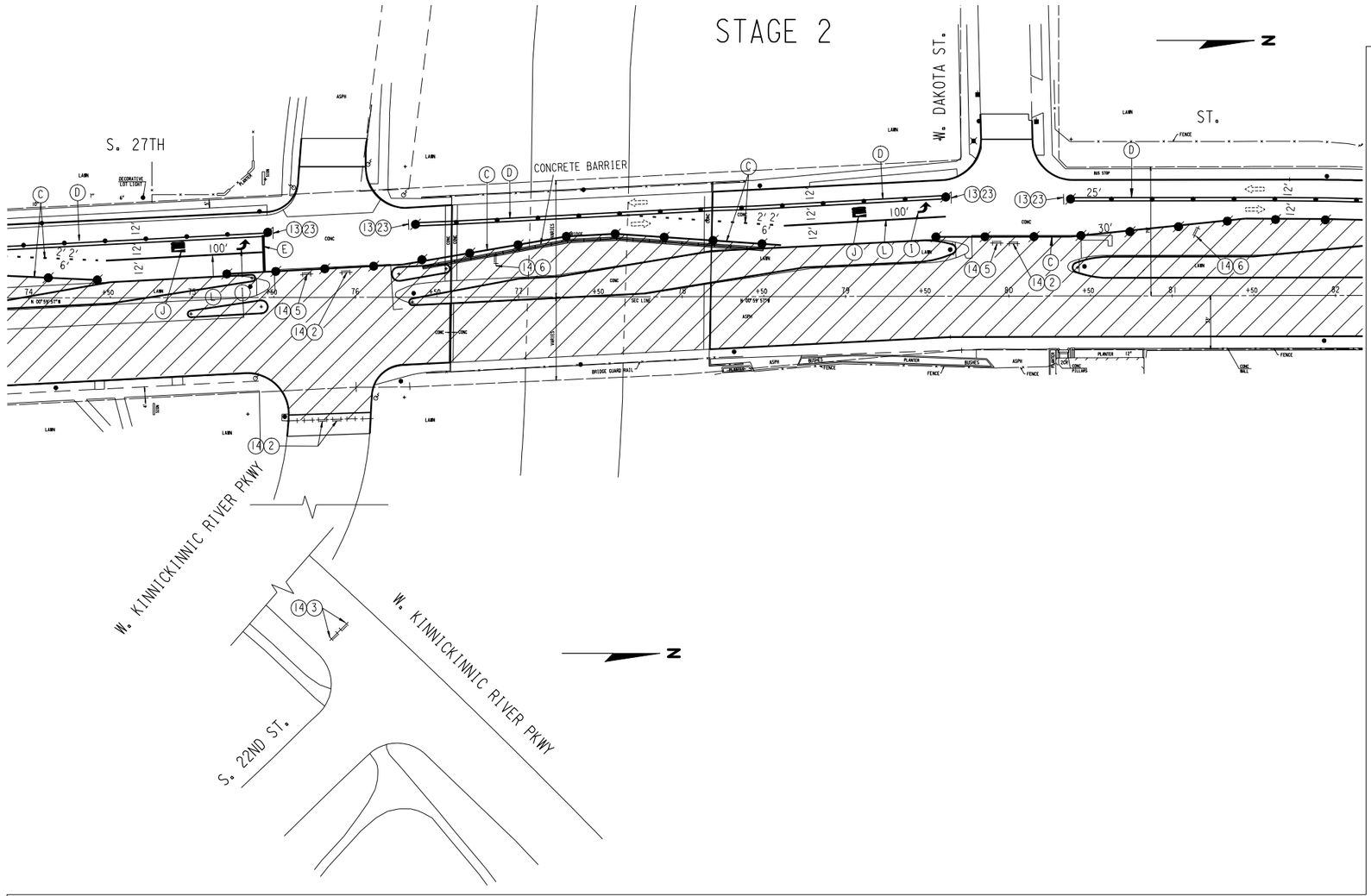
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 255	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

2

STAGE 2



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
- (F) TPM, REFLECTIVE PAINT, 8" WHITE
- (G) TPM, ARROWS, REFLECTIVE PAINT
- (H) TPM, WORDS, REFLECTIVE PAINT
- (I) TPM, ARROWS, REMOVABLE TAPE
- (J) TPM, WORDS, REMOVABLE TAPE
- (K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
- (L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

- DRUMS W/LIGHTS 30' SPACING — (13)
- TYPE III BARRICADES — (14)
- TYPE III BARRICADES W/ SIGN — (14) + (X)
- SIGNS BANDED TO UTILITY POLE
- WORK AREA
- DIRECTION OF TRAFFIC
- TUBULAR MARKERS 25' SPACING
- CONCRETE BARRIERS

LEGEND

(1) W20-1 ROAD WORK AHEAD 48" X48"
(2) R11-2 ROAD CLOSED 48" X30"
(3) R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48"
(4) R6-1R ONE WAY 24" X48"
(5) W01-7 24" X48"
(6) W01-6L 24" X48"
(7) W01-6R 24" X48"
(8) R5-1 DO NOT ENTER 36" X36"
(9) R3-2 36" X36"
(12) R6-1L ONE WAY 30" X48"
(20) R1-1 STOP 30" X30"
(21) W01-4L 48" X48"
(22) R3-1 36" X36"
(23) R4-7A KEEP RIGHT 36" X48"
(24) W20-5R RIGHT LANE CLOSED AHEAD 48" X48"
(25) W04-2R 30" X30"
(27) W20-3 ROAD CLOSED AHEAD 48" X48"
(28) W016-7PR 24" X12"
(29) W04-2L 48" X48"
(30) W20-5L LEFT LANE CLOSED AHEAD 48" X48"
(32) R3-6L 30" X36"
(33) W20-5 CENTER LANE CLOSED AHEAD 48" X48"
(34) W09-3A 48" X48"
(35) R3-7R RIGHT LANE MUST TURN RIGHT 36" X36"
(36) W013-1 20 M.P.H. 24" X12"
(37) R3-8B ONLY ONLY ONLY 30" X48"
(38) W01-3L 48" X48"
(39) W01-3R 48" X48"
(40) R3-7L LEFT LANE MUST TURN LEFT 36" X36"
(41) W016-7PL 24" X12"
(42) W012-1 24" X24"

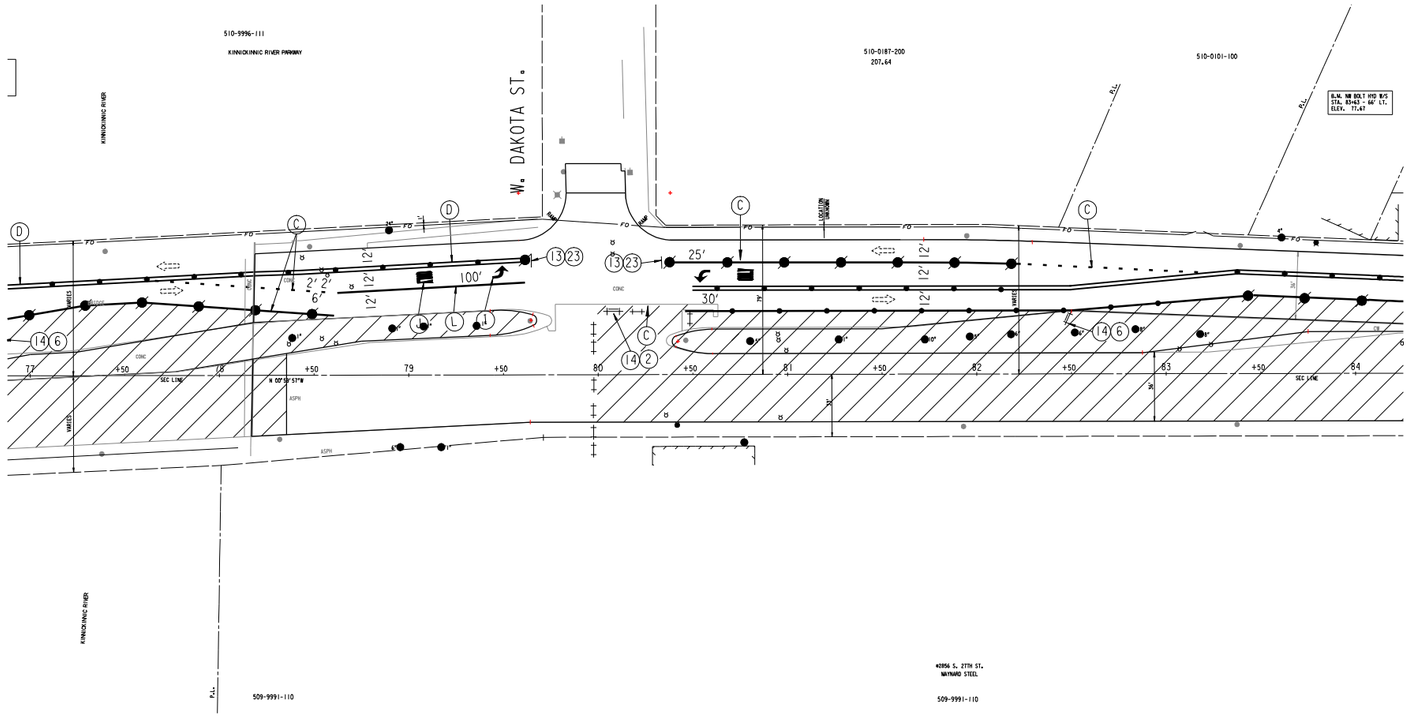
SHEET 47 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 256	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2A



LEGEND

DRUMS W/LIGHTS 30' SPACING	(13)
TYPE III BARRICADES	(14)
TYPE III BARRICADES W/ SIGN	(14) + (X)
SIGNS BANDED TO UTILITY POLE	
WORK AREA	
DIRECTION OF TRAFFIC	
TUBULAR MARKERS 25' SPACING	
CONCRETE BARRIERS	

(1) W20-1 — ROAD WORK AHEAD — 48" X48"

(2) R11-2 — ROAD CLOSED — 48" X30"

(3) R11-4 — ROAD CLOSED TO THRU TRAFFIC — 30" X48"

(4) R6-1R — ONE WAY — 24" X48"

(5) W01-7 — 24" X48"

(6) W01-6L — 24" X48"

(7) W01-6R — 24" X48"

(8) R5-1 — DO NOT ENTER — 36" X36"

(9) R3-2 — 36" X36"

(12) R6-1L — ONE WAY — 30" X48"

(20) R1-1 — STOP — 30" X30"

(21) W01-4L — 48" X48"

(22) R3-1 — 36" X36"

(23) R4-7A — KEEP RIGHT — 36" X 48"

(24) W20-5R — RIGHT LANE CLOSED AHEAD — 48" X48"

(25) W04-2R — 30" X30"

(27) W20-3 — ROAD CLOSED AHEAD — 48" X48"

(28) W016-7PR — 24" X12"

(29) W04-2L — 48" X48"

(30) W20-5L — LEFT LANE CLOSED AHEAD — 48" X48"

(32) R3-6L — 30" X36"

(33) W20-5 — CENTER LANE CLOSED AHEAD — 48" X48"

(34) W09-3A — 48" X48"

(35) R3-7R — RIGHT LANE MUST TURN RIGHT — 36" X36"

(36) W013-1 — 20 M.P.H. — 24" X12"

(37) R3-8B — ONLY ONLY ONLY — 30" X48"

(38) W01-3L — 48" X48"

(39) W01-3R — 48" X48"

(40) R3-7L — LEFT LANE MUST TURN LEFT — 36" X36"

(41) W016-7PL — 24" X12"

(42) W012-1 — 24" X24"

(43) W20-5A — RIGHT TWO LANES CLOSED 500 FT — 48" X48"

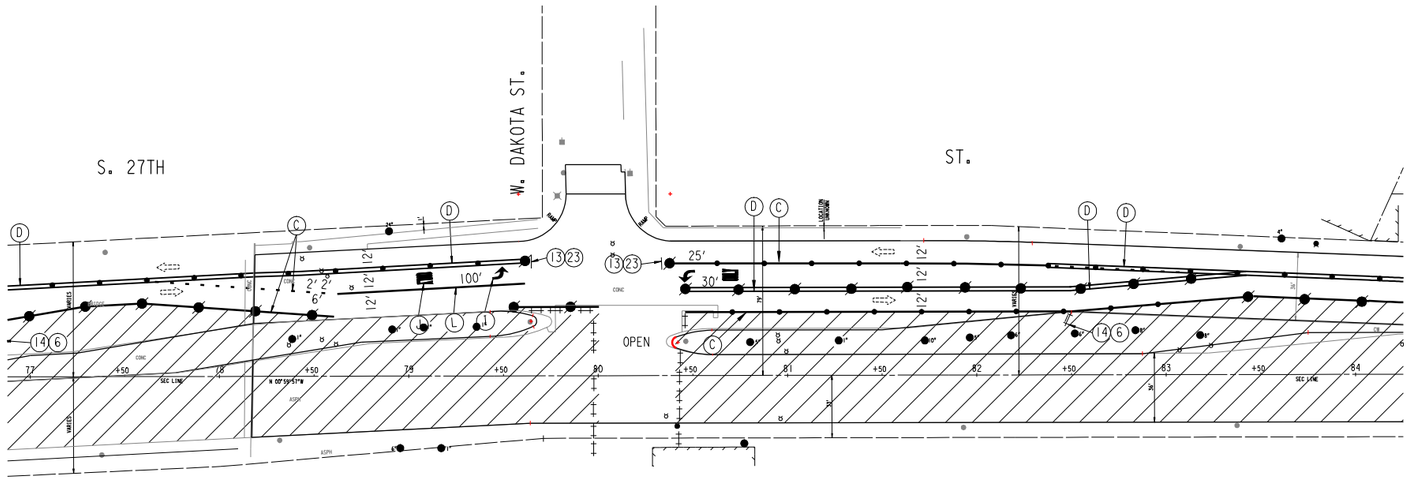
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
(J) TPM, WORDS, REMOVABLE TAPE
(K) TPM, STOP LINE, REFLECTIVE PAINT, 24" WHITE
(L) TPM, REMOVABLE TAPE, 8" WHITE

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 257	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 2B



LEGEND

W20-1 ROAD WORK AHEAD 48" X48" — 1
R11-2 ROAD CLOSED 48" X30" — 2
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — 3
R6-1R ONE WAY 24" X48" — 4
W01-7 24" X48" — 5
W01-6L 24" X48" — 6
W01-6R 24" X48" — 7
R5-1 DO NOT ENTER 36" X36" — 8
R3-2 36" X36" — 9
R6-1L ONE WAY 30" X48" — 12
R1-1 STOP 30" X30" — 20
W01-4L 48" X48" — 21
R3-1 36" X36" — 22
R4-7A KEEP RIGHT 36" X 48" — 23
W20-5R RIGHT LANE CLOSED AHEAD 48" X48" — 24
W04-2R 30" X30" — 25
W20-3 ROAD CLOSED AHEAD 48" X48" — 27
W16-7PR 24" X12" — 28
W04-2L 48" X48" — 29
W20-5L LEFT LANE CLOSED AHEAD 48" X48" — 30
R3-6L 30" X36" — 32
W20-5 CENTER LANE CLOSED AHEAD 48" X48" — 33
W09-3A 48" X48" — 34
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — 35
W13-1 20 M.P.H. 24" X12" — 36
R3-8B ONLY ONLY ONLY 30" X48" — 37
W01-3L 48" X48" — 38
W01-3R 48" X48" — 39
R3-7L LEFT LANE MUST TURN LEFT 36" X36" — 40
W16-7PL 24" X12" — 41
W012-1 24" X24" — 42
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — 43

DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

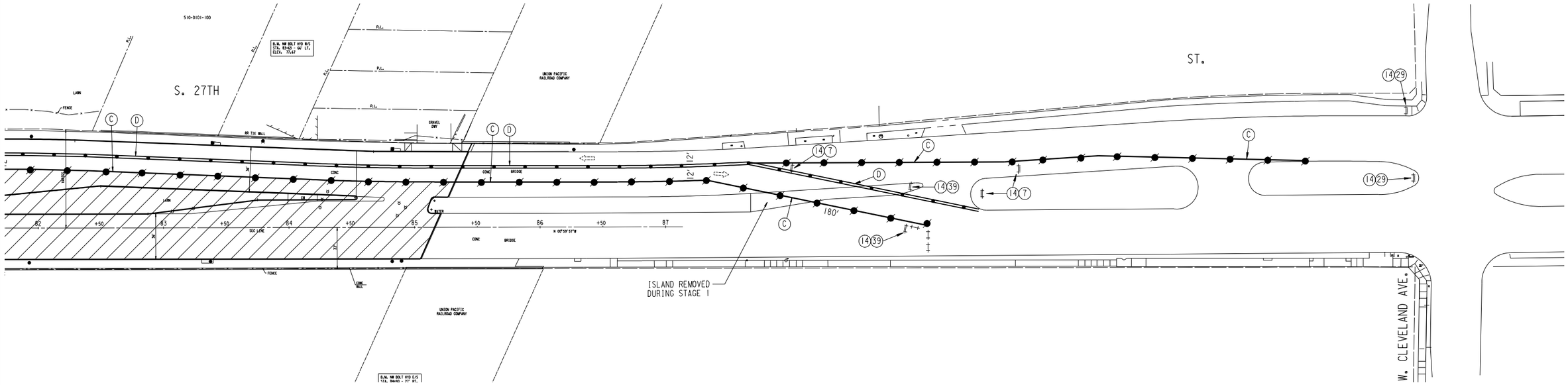
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(C) TPM, REMOVABLE TAPE, 4" WHITE
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(E) TPM, STOP LINE, REMOVABLE TAPE 24" WHITE
(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
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STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 258	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

STAGE 2



LEGEND

W20-1 ROAD WORK AHEAD 48" X48" — 1
R11-2 ROAD CLOSED 48" X30" — 2
R11-4 ROAD CLOSED TO THRU TRAFFIC 30" X48" — 3
R6-1R ONE WAY 24" X48" — 4
W01-7 24" X48" — 5
W01-6L 24" X48" — 6
W01-6R 24" X48" — 7
R5-1 DO NOT ENTER 36" X36" — 8
R3-2 36" X36" — 9
R6-1L ONE WAY 30" X48" — 12
R1-1 STOP 30" X30" — 20
W01-4L 48" X48" — 21
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W20-5R RIGHT LANE CLOSED AHEAD 48" X48" — 24
W04-2R 30" X30" — 25
W20-3 ROAD CLOSED AHEAD 48" X48" — 27
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W20-5 CENTER LANE CLOSED AHEAD 48" X48" — 33
W09-3A 48" X48" — 34
R3-7R RIGHT LANE MUST TURN RIGHT 36" X36" — 35
W13-1 20 M.P.H. 24" X12" — 36
R3-8B ONLY ONLY ONLY 30" X48" — 37
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W01-3R 48" X48" — 39
R3-7L LEFT LANE MUST TURN LEFT 36" X36" — 40
W16-7PL 24" X12" — 41
W12-1 24" X24" — 42
W20-5A RIGHT TWO LANES CLOSED 500 FT 48" X48" — 43

DRUMS W/LIGHTS 30' SPACING — 13
TYPE III BARRICADES — 14
TYPE III BARRICADES W/ SIGN — 14 + X
SIGNS BANDED TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING
CONCRETE BARRIERS

(A) TPM, REFLECTIVE PAINT, 4" WHITE
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(F) TPM, REFLECTIVE PAINT, 8" WHITE
(G) TPM, ARROWS, REFLECTIVE PAINT
(H) TPM, WORDS, REFLECTIVE PAINT
(I) TPM, ARROWS, REMOVABLE TAPE
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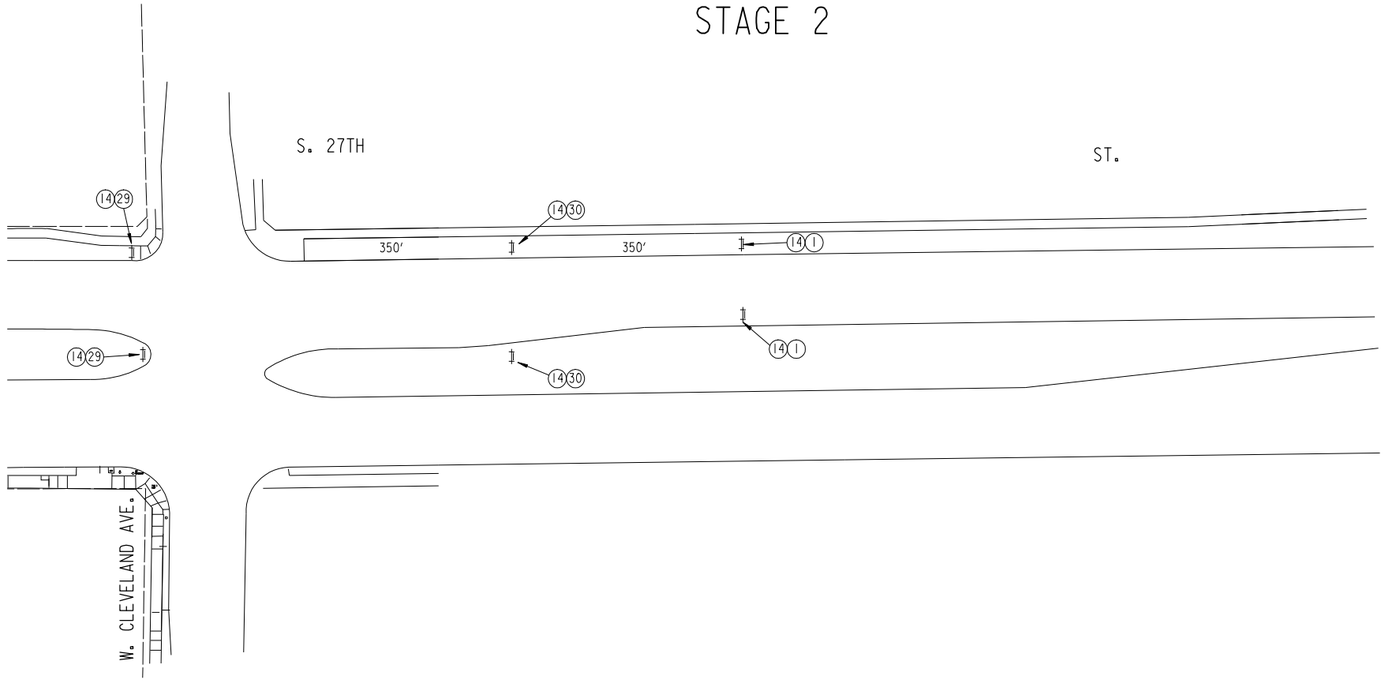
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STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 259	E

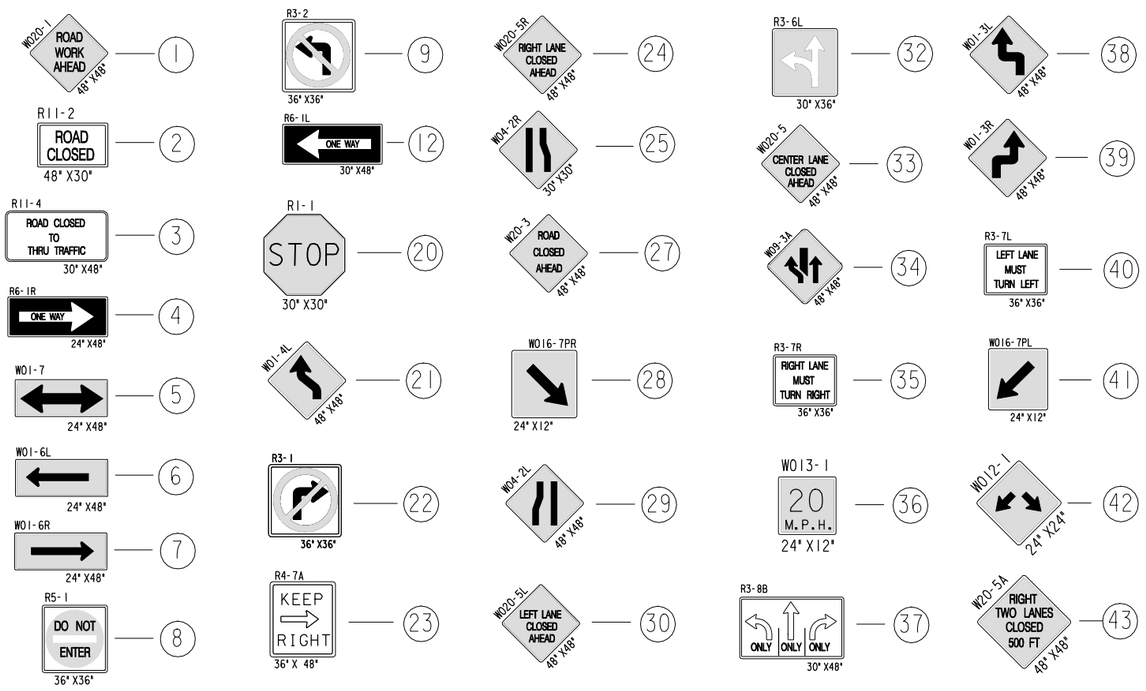
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE 2



LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
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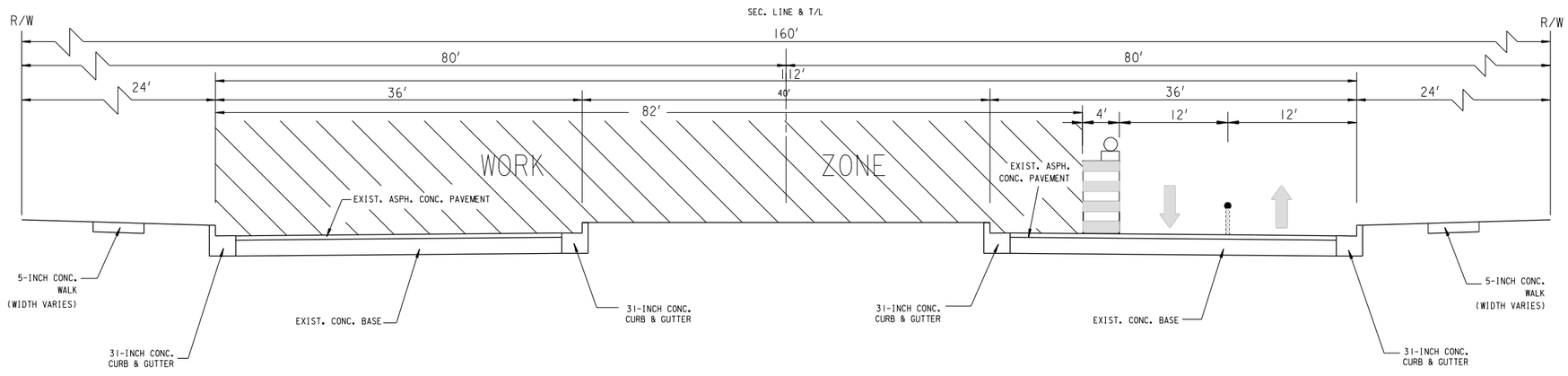
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 260	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

STAGE I TYPICAL

N



TYPICAL EXISTING SECTION

SOUTH 27TH STREET

W.HOWARD AVE. TO W. MORGAN AVE.

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 261	E

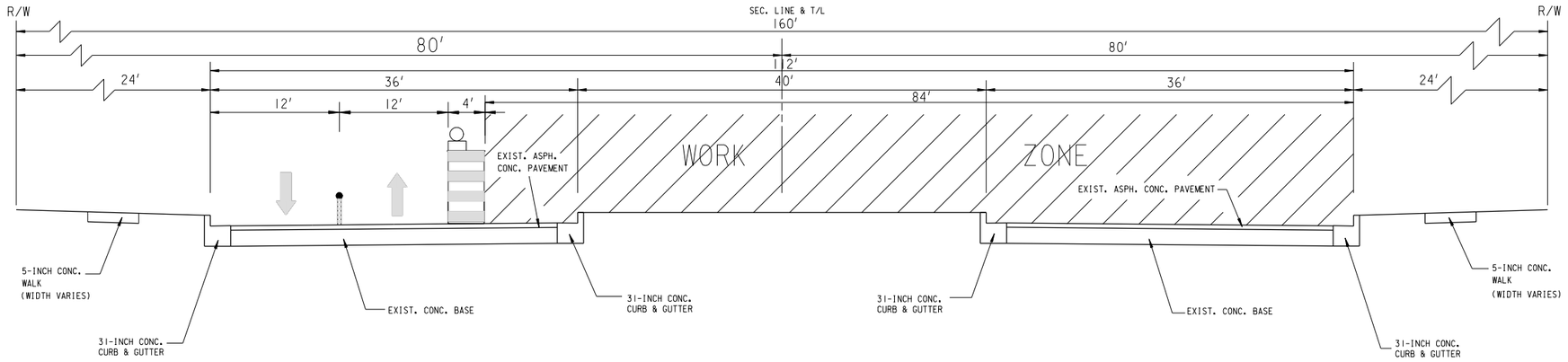
FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGEI.DGN

REVISED:

2

STAGE 2 TYPICAL

N



TYPICAL EXISTING SECTION

SOUTH 27TH STREET

W.HOWARD AVE. TO W. MORGAN AVE.

SHEET 53 OF 53

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 262	E

FILE NAME: W:\SPR\27TH HOWARD OKLA\TRAFFIC STAGE1.DGN

REVISED:

(Y) NORTH: 361,643.41
(X) EAST: 2,546,381.20

BEGIN PROJECT 2265-08-70
STA. 09 + 00.00
(Y) NORTH: 361,441.323
(X) EAST: 2,548,876.642

CITY OF GREENFIELD

T/L W. HOWARD AVE.

96' H'

N88° 27' 58"E

179° 55' 56"

BEGIN CONSTRUCTION
WEST HOWARD AVENUE
STA. 96'H' + 58.87
(Y) NORTH: 361,705.15
(X) EAST: 2,547,905.55

CITY OF MILWAUKEE

T/L S. 27TH ST.

CITY OF GREENFIELD

10 15 20 25 30 35 40 45 50

SECTION LINE = T/L S.27TH ST. N00° 35' 54"W

SECTION LINE = T/L S.27TH ST. N00° 39' 58"W

SECTION LINE = T/L S.27TH ST. N00° 53' 26"W

CITY OF MILWAUKEE

100' H'

SECTION LINE

N89° 11' 53"E

1104' H'

STA. 13 + 27.74 - S. 27TH ST. =
STA. 100'H' + 00.00 - W. HOWARD AVENUE

EQUATION

STA. 13 + 27.74
TOWNSHIP 6 NORTH, RANGE 21/22 EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ ALUMINUM CAP

STATE PLANE COORDINATES OF SECTION CORNER
(Y) NORTH: 361,714.28
(X) EAST: 2,549,027.78

END CONSTRUCTION
WEST HOWARD AVENUE
STA. 102'H' + 99.80
(Y) NORTH: 361,718.48
(X) EAST: 2,549,327.78

(Y) NORTH: 361,750.06
(X) EAST: 2,551,584.15

BEGIN CONSTRUCTION
WEST LOOMIS ROAD
STA. 1'L' + 25.00
(Y) NORTH: 363,498.86
(X) EAST: 2,548,529.42

T/L W. LOOMIS RD.

1'L'

N57° 32' 41"E

5'L'

58° 12' 39"

121° 47' 21"

STA. 34 + 13.63 - S. 27TH ST. =
STA. 6'L' + 87.24 - W. LOOMIS RD.

EQUATION

END CONSTRUCTION
STA. 6'L' + 87.24
(Y) NORTH: 363,801.14
(X) EAST: 2,549,003.50

(Y) NORTH: 364,297.17
(X) EAST: 2,546,357.70

N

MATCHLINE STA. 50+00

179° 46' 32"

W. MORGAN AVE.

1/4 SECTION LINE

STA. 40 + 00.00
TOWNSHIP 6 NORTH, RANGE 21/22 EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ ALUMINUM CAP

STATE PLANE COORDINATES OF QUARTER SECTION CORNER
(Y) NORTH: 364,386.13
(X) EAST: 2,548,996.72

(Y) NORTH: 364,404.68
(X) EAST: 2,551,566.52

(Y) NORTH: 366,959.24
(X) EAST: 2,546,322.90

STA. 66 + 78.85
TOWNSHIP 6 NORTH, RANGE 21/22 EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ ALUMINUM CAP

STATE PLANE COORDINATES OF SECTION CORNER
(Y) NORTH: 367,064.36
(X) EAST: 2,548,955.09

N

MATCHLINE STA. 50+00

179° 53' 29"

T/L S.27TH ST.

50 55 60 65 70 75 80 85 90

SECTION LINE = T/L S.27TH ST. N00° 53' 26"W

SECTION LINE = T/L S.27TH ST. N00° 59' 57"W

W. OKLAHOMA AVE.

SECTION LINE

END PROJECT 2265-08-70
STA. 85 + 16.00
(Y) NORTH: 368,902.35
(X) EAST: 2,548,923.04

(Y) NORTH: 367,066.39
(X) EAST: 2,551,558.60

STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SCALE FEET 0 300'	SHEET NO: 263	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\27ALIGN.DGN

DATE 02DEC13 E S T I M A T E O F Q U A N T I T I E S

LINE 2265-08-70

NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0120	CLEARING	ID	85.000	85.000
0020	201.0220	GRUBBING	ID	85.000	85.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 77+37.79	LS	1.000	1.000
0040	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 02. 34+50.57	LS	1.000	1.000
0050	204.0100	REMOVING PAVEMENT	SY	80,238.000	80,238.000
0060	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	SF	2,575.000	2,575.000
0070	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	720.000	720.000
0080	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	2,575.000	2,575.000
0090	204.0150	REMOVING CURB & GUTTER	LF	663.000	663.000
0100	204.0155	REMOVING CONCRETE SIDEWALK	SY	11,620.000	11,620.000
0110	204.0175	REMOVING CONCRETE SLOPE PAVING	SY	401.000	401.000
0120	204.0195	REMOVING CONCRETE BASES	EACH	27.000	27.000
0130	204.0215	REMOVING CATCH BASINS	EACH	39.000	39.000
0140	204.0220	REMOVING INLETS	EACH	5.000	5.000
0150	204.0250	ABANDONING MANHOLES	EACH	17.000	17.000
0160	204.0255	ABANDONING CATCH BASINS	EACH	36.000	36.000
0170	205.0100	EXCAVATION COMMON **P**	CY	45,292.000	45,292.000
0180	205.0501.S	EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	TON	420.000	420.000
0190	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-40-0438	LS	1.000	1.000
0200	206.2000	EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. B-40-0058	LS	1.000	1.000
0210	210.0100	BACKFILL STRUCTURE	CY	2,049.000	2,049.000
0220	213.0100	FINISHING ROADWAY (PROJECT) 01. 2265-08-70	EACH	1.000	1.000
0230	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	33,346.000	33,346.000
0240	310.0115	BASE AGGREGATE OPEN GRADED	CY	160.000	160.000
0250	312.0115	SELECT CRUSHED MATERIAL	CY	45.000	45.000
0260	320.0125	CONCRETE BASE 6-INCH	SY	440.000	440.000
0270	390.0303	BASE PATCHING CONCRETE	SY	400.000	400.000
0280	415.0070	CONCRETE PAVEMENT 7-INCH	SY	150.000	150.000
0290	415.0085	CONCRETE PAVEMENT 8 1/2-INCH	SY	74,058.000	74,058.000
0300	415.0210	CONCRETE PAVEMENT GAPS	EACH	18.000	18.000
0310	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	310.000	310.000
0320	416.0280	CONCRETE DRIVEWAY HES 8-INCH	SY	3,410.000	3,410.000
0330	416.0610	DRILLED TIE BARS	EACH	1,054.000	1,054.000
0340	440.4410.S	INCENTIVE IRI RIDE	DOL	17,280.000	17,280.000
0350	455.0105	ASPHALTIC MATERIAL PG58-28	TON	35.000	35.000
0360	455.0605	TACK COAT	GAL	85.000	85.000
0370	460.1103	HMA PAVEMENT TYPE E-3	TON	568.000	568.000
0380	465.0105	ASPHALTIC SURFACE	TON	170.000	170.000
0390	465.0110	ASPHALTIC SURFACE PATCHING	TON	150.000	150.000
0400	502.0100	CONCRETE MASONRY BRIDGES	CY	683.000	683.000
0410	502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC (WIDTH) 01. 3/8-INCH	LF	158.000	158.000
0420	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-40-0438	LS	1.000	1.000
0430	502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,925.000	1,925.000
0440	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	758.000	758.000
0450	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	138,607.000	138,607.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
0460	505.0610	BAR STEEL REINFORCEMENT HS COATED CULVERTS	LB	4,520.000	4,520.000
0470	506.0105	STRUCTURAL STEEL CARBON	LB	711.000	711.000
0480	506.1510	SHEET ZINC	LB	690.000	690.000
0490	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	33.000	33.000
0500	506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH	2,301.000	2,301.000
0510	506.3025	WELDED STUD SHEAR CONNECTORS 7/8X8-INCH	EACH	2,304.000	2,304.000
0520	506.7050.S	REMOVING BEARINGS (STRUCTURE) 01. B-40-0438	EACH	33.000	33.000
0530	509.1500	CONCRETE SURFACE REPAIR	SF	198.000	198.000
0540	509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	1,950.000	1,950.000
0550	509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	16.000	16.000
0560	516.0100	DAMPPROOFING	SY	121.000	121.000
0570	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	57.000	57.000
0580	516.0610.S	SHEET MEMBRANE WATERPROOFING FOR TOP SLAB (STRUCTURE) 01. B-40-0058	SY	1,000.000	1,000.000
0590	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 01. B-40-0438	LS	1.000	1.000
0600	517.1010.S	CONCRETE STAINING (STRUCTURE) 01. B-40-0438	SF	2,308.000	2,308.000
0610	517.1010.S	CONCRETE STAINING (STRUCTURE) 02. B-40-0058	SF	1,005.000	1,005.000
0620	517.1015.S	CONCRETE STAINING MULTI-COLOR (STRUCTURE) 01. B-40-0058	SF	598.000	598.000
0630	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-40-0058	SF	598.000	598.000
0640	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-40-0438	LS	1.000	1.000
0650	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-40-0438	LS	1.000	1.000
0660	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1.000	1.000
0670	601.0150	CONCRETE CURB INTEGRAL TYPE D	LF	264.000	264.000
0680	601.0319	CONCRETE CURB & GUTTER 19-INCH	LF	455.000	455.000
0690	601.0322	CONCRETE CURB & GUTTER 22-INCH	LF	50.000	50.000
0700	601.0331	CONCRETE CURB & GUTTER 31-INCH	LF	2,149.000	2,149.000
0710	601.0600	CONCRETE CURB PEDESTRIAN	LF	18.000	18.000
0720	602.0410	CONCRETE SIDEWALK 5-INCH	SF	58,854.000	58,854.000
0730	602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	526.000	526.000
0740	602.1000	CONCRETE LOADING ZONE	SF	4,000.000	4,000.000
0750	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	260.000	260.000
0760	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	260.000	260.000
0770	604.0400	SLOPE PAVING CONCRETE	SY	401.000	401.000
0780	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	2,452.000	2,452.000
0790	611.0420	RECONSTRUCTING MANHOLES	EACH	11.000	11.000
0800	611.1004	CATCH BASINS 4-FT DIAMETER	EACH	29.000	29.000
0810	611.2004	MANHOLES 4-FT DIAMETER	EACH	2.000	2.000
0820	611.3003	INLETS 3-FT DIAMETER	EACH	16.000	16.000
0830	611.8110	ADJUSTING MANHOLE COVERS	EACH	126.000	126.000
0840	611.8115	ADJUSTING INLET COVERS	EACH	36.000	36.000
0850	611.9705	SALVAGED MANHOLE COVERS	EACH	136.000	136.000

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LINE 2265-08-70

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
0860	611.9710	SALVAGED INLET COVERS	EACH	93.000	93.000
0870	612.0106	PIPE UNDERDRAIN 6-INCH	LF	619.000	619.000
0880	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	160.000	160.000
0890	616.0206	FENCE CHAIN LINK 6-FT	LF	20.000	20.000
0900	616.0404	FENCE CHAIN LINK SALVAGED 4-FT	LF	20.000	20.000
0910	619.1000	MOBILIZATION	EACH	1.000	1.000
0920	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	153.000	153.000
0930	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	3.000	3.000
0940	623.0200	DUST CONTROL SURFACE TREATMENT	SY	70,627.000	70,627.000
0950	625.0100	TOPSOIL	SY	13,235.000	13,235.000
0960	627.0200	MULCHING	SY	151.000	151.000
0970	628.1504	SILT FENCE	LF	338.000	338.000
0980	628.1520	SILT FENCE MAINTENANCE	LF	338.000	338.000
0990	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
1000	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
1010	628.6005	TURBIDITY BARRIERS	SY	286.000	286.000
1020	628.7010	INLET PROTECTION TYPE B	EACH	1.000	1.000
1030	628.7015	INLET PROTECTION TYPE C	EACH	5.000	5.000
1040	628.7570	ROCK BAGS	EACH	10.000	10.000
1050	629.0210	FERTILIZER TYPE B	CWT	8.330	8.330
1060	631.0300	SOD WATER	MGAL	12.000	12.000
1070	631.1000	SOD LAWN	SY	13,235.000	13,235.000
1080	632.0101	TREES (SPECIES, ROOT, SIZE) 01. JAPANESE TREE LILAC B&B 3" CAL	EACH	2.000	2.000
1090	632.0101	TREES (SPECIES, ROOT, SIZE) 02. ADIRONDACK CRABAPPLE B&B 3" CAL	EACH	2.000	2.000
1100	632.0101	TREES (SPECIES, ROOT, SIZE) 03. SHADEMASTER HONEYLOCUST B&B 3" CAL	EACH	4.000	4.000
1110	632.0101	TREES (SPECIES, ROOT, SIZE) 04. CALLERY PEAR B&B 3" CAL	EACH	3.000	3.000
1120	632.0101	TREES (SPECIES, ROOT, SIZE) 05. CRIMSON SPIRE ENGLISH OAK B&B 3" CAL	EACH	8.000	8.000
1130	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 01. ANNABELLE HYDRANGEAS CG #5	EACH	7.000	7.000
1140	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 02. COOL SPLASH HONEYSUCKLE CG #5	EACH	6.000	6.000
1150	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 03. GROW LOW SUMAC CG #3	EACH	9.000	9.000
1160	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 04. RED KNOCKOUT ROSES CG #5	EACH	7.000	7.000
1170	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 05. YELLOW KNOCKOUT ROSES CG #5	EACH	10.000	10.000
1180	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 06. RUGOSA ROSES CG #3	EACH	32.000	32.000
1190	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 07. ARCTIC BLUE WILLOW CG #5	EACH	8.000	8.000
1200	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 08. DIABLO NINEBARK CG #5	EACH	20.000	20.000
1210	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 09. TIGERS EYE SUMAC CG #5	EACH	14.000	14.000
1220	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 10. RED TWIG DOGWOOD CG #5	EACH	5.000	5.000
1230	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 11. SAMBUCUS CG #5	EACH	7.000	7.000
1240	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	30.000	30.000
1250	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	9.000	9.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
1260	637.2210	SIGNS TYPE II REFLECTIVE H	SF	176.500	176.500
1270	638.2602	REMOVING SIGNS TYPE II	EACH	8.000	8.000
1280	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
1290	643.0100	TRAFFIC CONTROL (PROJECT) 01. 2265-08-70	EACH	1.000	1.000
1300	643.0300	TRAFFIC CONTROL DRUMS	DAY	131,452.000	131,452.000
1310	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	99,535.000	99,535.000
1320	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	942.000	942.000
1330	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	942.000	942.000
1340	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	199,070.000	199,070.000
1350	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	131,452.000	131,452.000
1360	643.0900	TRAFFIC CONTROL SIGNS	DAY	40,762.000	40,762.000
1370	645.0112	GEOTEXTILE FABRIC TYPE DF SCHEDULE B	SY	129.000	129.000
1380	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	7,794.000	7,794.000
1390	646.0116	PAVEMENT MARKING EPOXY 6-INCH	LF	1,904.000	1,904.000
1400	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	3,282.000	3,282.000
1410	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	578.000	578.000
1420	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	550.000	550.000
1430	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	7.000	7.000
1440	647.0206	PAVEMENT MARKING ARROWS BIKE LANE EPOXY	EACH	5.000	5.000
1450	647.0306	PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY	EACH	5.000	5.000
1460	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	7.000	7.000
1470	647.0576	PAVEMENT MARKING STOP LINE EPOXY 24-INCH	LF	984.000	984.000
1480	647.0776	PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	LF	3,738.000	3,738.000
1490	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	21,292.000	21,292.000
1500	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	60,315.000	60,315.000
1510	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	5,203.000	5,203.000
1520	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	392.000	392.000
1530	649.1800	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE	EACH	67.000	67.000
1540	649.2000	TEMPORARY PAVEMENT MARKING WORDS REMOVABLE TAPE	EACH	67.000	67.000
1550	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	303.000	303.000
1560	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	14,550.000	14,550.000
1570	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-40-0438	LS	1.000	1.000
1580	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-40-0058	LS	1.000	1.000
1590	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	14,550.000	14,550.000
1600	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2265-08-70	LS	1.000	1.000
1610	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2265-08-70	LS	1.000	1.000
1620	652.0215	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	LF	75.000	75.000
1630	652.0220	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/2-INCH	LF	150.000	150.000
1640	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,492.000	1,492.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
1650	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	1,104.000	1,104.000
1660	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	24,925.000	24,925.000
1670	652.0605	CONDUIT SPECIAL 2-INCH	LF	744.000	744.000
1680	652.0610	CONDUIT SPECIAL 2 1/2-INCH	LF	100.000	100.000
1690	652.0615	CONDUIT SPECIAL 3-INCH	LF	148.000	148.000
1700	652.0800	CONDUIT LOOP DETECTOR	LF	992.000	992.000
1710	652.0900	LOOP DETECTOR SLOTS	LF	390.000	390.000
1720	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	5.000	5.000
1730	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	13.000	13.000
1740	653.0905	REMOVING PULL BOXES	EACH	24.000	24.000
1750	654.0101	CONCRETE BASES TYPE 1	EACH	11.000	11.000
1760	654.0110	CONCRETE BASES TYPE 10	EACH	4.000	4.000
1770	654.0113	CONCRETE BASES TYPE 13	EACH	4.000	4.000
1780	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	1.000	1.000
1790	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	745.000	745.000
1800	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	3,604.000	3,604.000
1810	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	2,018.000	2,018.000
1820	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	2,035.000	2,035.000
1830	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	2,199.000	2,199.000
1840	655.0800	LOOP DETECTOR WIRE	LF	1,331.000	1,331.000
1850	655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	LF	921.000	921.000
1860	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. STH 241 & HOWARD AVE	LS	1.000	1.000
1870	657.0100	PEDESTAL BASES	EACH	11.000	11.000
1880	657.0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	EACH	1.000	1.000
1890	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	4.000	4.000
1900	657.0430	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	EACH	6.000	6.000
1910	657.1345	INSTALL POLES TYPE 9	EACH	1.000	1.000
1920	657.1355	INSTALL POLES TYPE 12	EACH	4.000	4.000
1930	657.1520	INSTALL MONOTUBE ARMS 20-FT	EACH	1.000	1.000
1940	657.1545	INSTALL MONOTUBE ARMS 45-FT	EACH	2.000	2.000
1950	657.1555	INSTALL MONOTUBE ARMS 55-FT	EACH	2.000	2.000
1960	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	14.000	14.000
1970	658.0115	TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	EACH	8.000	8.000
1980	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	14.000	14.000
1990	658.0220	BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	EACH	8.000	8.000
2000	658.0416	PEDESTRIAN SIGNAL FACE 16-INCH	EACH	8.000	8.000
2010	658.0500	PEDESTRIAN PUSH BUTTONS	EACH	10.000	10.000
2020	658.0600	LED MODULES 12-INCH RED BALL	EACH	14.000	14.000
2030	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	14.000	14.000
2040	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	14.000	14.000
2050	658.0615	LED MODULES 12-INCH RED ARROW	EACH	8.000	8.000
2060	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	16.000	16.000
2070	658.0625	LED MODULES 12-INCH GREEN ARROW	EACH	8.000	8.000
2080	658.0635	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	EACH	8.000	8.000
2090	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 01. STH 241 & HOWARD AVE	LS	1.000	1.000
2100	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 01. STH 241 & HOWARD AVE	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
2110	661.0300	GENERATORS	DAY	2.000	2.000
2120	670.0100	FIELD SYSTEM INTEGRATOR	LS	1.000	1.000
2130	670.0200	ITS DOCUMENTATION	LS	1.000	1.000
2140	678.0200	FIBER OPTIC SPLICE ENCLOSURE	EACH	1.000	1.000
2150	678.0300	FIBER OPTIC SPLICE	EACH	4.000	4.000
2160	678.0500	COMMUNICATION SYSTEM TESTING	LS	1.000	1.000
2170	690.0150	SAWING ASPHALT	LF	3,360.000	3,360.000
2180	690.0250	SAWING CONCRETE	LF	2,795.000	2,795.000
2190	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	5,313.000	5,313.000
2200	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	5,500.000	5,500.000
2210	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	4,000.000	4,000.000
2220	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	3,000.000	3,000.000
2230	SPV.0025	SPECIAL 01. DEEP CONCRETE SURFACE REPAIR	CF	20.000	20.000
2240	SPV.0035	SPECIAL 01. PLANTING SOIL	CY	20.000	20.000
2250	SPV.0035	SPECIAL 02. ENGINEERED SOIL	CY	397.000	397.000
2260	SPV.0035	SPECIAL 03. BEDDING LAYER	CY	80.000	80.000
2270	SPV.0060	SPECIAL 01. MOVING POLE AND BANNER	EACH	5.000	5.000
2280	SPV.0060	SPECIAL 02. REMOVING POLE FOOTING	EACH	5.000	5.000
2290	SPV.0060	SPECIAL 03. INLET COVER TYPE 57	EACH	48.000	48.000
2300	SPV.0060	SPECIAL 04. INLET COVER TYPE 55	EACH	18.000	18.000
2310	SPV.0060	SPECIAL 05. INLET COVER TYPE 58A	EACH	13.000	13.000
2320	SPV.0060	SPECIAL 06. INLET COVER TYPE MS 58	EACH	1.000	1.000
2330	SPV.0060	SPECIAL 07. MANHOLE COVER TYPE 57	EACH	1.000	1.000
2340	SPV.0060	SPECIAL 08. CATCH BASIN TYPE 45A	EACH	67.000	67.000
2350	SPV.0060	SPECIAL 09. INLET SCREEN TYPE M	EACH	148.000	148.000
2360	SPV.0060	SPECIAL 10. INLET SCREEN TYPE R	EACH	144.000	144.000
2370	SPV.0060	SPECIAL 11. INTERNAL SANITARY MANHOLE SEALS	EACH	55.000	55.000
2380	SPV.0060	SPECIAL 12. ADJUSTING WATER BOX	EACH	127.000	127.000
2390	SPV.0060	SPECIAL 13. ADJUSTING WATER MANHOLE FRAME AND LID	EACH	2.000	2.000
2400	SPV.0060	SPECIAL 14. WATER MAIN PROTECTION	EACH	27.000	27.000
2410	SPV.0060	SPECIAL 15. CONCRETE BASE TYPE 10 SPECIAL	EACH	11.000	11.000
2420	SPV.0060	SPECIAL 16. INSTALL TRAFFIC SIGNAL BASE	EACH	29.000	29.000
2430	SPV.0060	SPECIAL 17. CONCRETE FOOTING FOR BANNER POLE	EACH	5.000	5.000
2440	SPV.0060	SPECIAL 18. POLES TYPE 10	EACH	3.000	3.000
2450	SPV.0060	SPECIAL 19. POLES TYPE 12 SPECIAL	EACH	4.000	4.000
2460	SPV.0060	SPECIAL 20. POLES TYPE 13 SPECIAL	EACH	7.000	7.000
2470	SPV.0060	SPECIAL 21. MONOTUBE ARMS 30-FT	EACH	3.000	3.000
2480	SPV.0060	SPECIAL 22. MONOTUBE ARMS 35-FT	EACH	7.000	7.000
2490	SPV.0060	SPECIAL 23. MONOTUBE ARMS 40-FT	EACH	4.000	4.000
2500	SPV.0060	SPECIAL 24. GIANT BLUE HOSTAS CG #1	EACH	12.000	12.000
2510	SPV.0060	SPECIAL 25. CATMINT BLUE WONDER CG #1	EACH	228.000	228.000
2520	SPV.0060	SPECIAL 26. DWARF DAYLILLIES CG #1	EACH	66.000	66.000
2530	SPV.0060	SPECIAL 27. BECKY SHASTA DAISY CG #1	EACH	156.000	156.000
2540	SPV.0060	SPECIAL 28. ORNAMENTAL GRASS CG #5	EACH	24.000	24.000
2550	SPV.0060	SPECIAL 29. DAFFODIL BULB 3" X 3"	EACH	500.000	500.000
2560	SPV.0060	SPECIAL 30. POLYMER CONCRETE VAULT 13"X24"X18"	EACH	74.000	74.000
2570	SPV.0060	SPECIAL 31. POLYMER CONCRETE VAULT 17"X30"X24"	EACH	2.000	2.000

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DATE 02DEC13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
2580	SPV.0060	SPECIAL 32. POLYMER CONCRETE VAULT 17"X30"X18"	EACH	63.000	63.000
2590	SPV.0060	SPECIAL 33. JUNCTION BOX 12"X18"X8"	EACH	2.000	2.000
2600	SPV.0060	SPECIAL 34. CONCRETE COLLAR SPECIAL	EACH	7.000	7.000
2610	SPV.0060	SPECIAL 35. END DIAPHRAGM ADJUSTMENT	EACH	31.000	31.000
2620	SPV.0060	SPECIAL 36. REINSTALLING POLE AND BANNER	EACH	5.000	5.000
2630	SPV.0060	SPECIAL 37. SUB-BASIN BOWL	EACH	3.000	3.000
2640	SPV.0060	SPECIAL 38. CATCH BASIN ELBOW	EACH	1.000	1.000
2650	SPV.0060	SPECIAL 39. INFORMATIONAL SIGNS	EACH	14.000	14.000
2660	SPV.0060	SPECIAL 40. 6-INCH CLEANOUTS	EACH	16.000	16.000
2670	SPV.0060	SPECIAL 41. BLACK EYED SUSAN CG #1	EACH	84.000	84.000
2680	SPV.0060	SPECIAL 42. DAYLILLIES CG #1	EACH	408.000	408.000
2690	SPV.0060	SPECIAL 43. PURPLE CONEFLOWER CG #1	EACH	60.000	60.000
2700	SPV.0060	SPECIAL 44. RUSSIAN SAGE CG #1	EACH	36.000	36.000
2710	SPV.0060	SPECIAL 46. KARL FOERSTER GRASS CG #1	EACH	38.000	38.000
2720	SPV.0060	SPECIAL 47. SWITCH GRASS CG #1	EACH	58.000	58.000
2730	SPV.0060	SPECIAL 48. ADJUSTING TES MANHOLE COVERS	EACH	19.000	19.000
2740	SPV.0060	SPECIAL 49. INSTALLING CONDUIT INTO EXISTING MANHOLE	EACH	6.000	6.000
2750	SPV.0060	SPECIAL 50. 4' DIAMETER MANHOLE TYPE TES	EACH	10.000	10.000
2760	SPV.0060	SPECIAL 51. 4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES	EACH	2.000	2.000
2770	SPV.0060	SPECIAL 52. SAWING CONCRETE ENCASED DUCT PACKAGE	EACH	14.000	14.000
2780	SPV.0060	SPECIAL 54. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	EACH	6.000	6.000
2790	SPV.0060	SPECIAL 55. REMOVING STREET LIGHTING HAND HOLE	EACH	1.000	1.000
2800	SPV.0060	SPECIAL 56. CAPPING OF ABANDONED STORM INLETS AT CULVERT	EACH	2.000	2.000
2810	SPV.0060	SPECIAL 80. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET	EACH	1.000	1.000
2820	SPV.0060	SPECIAL 81. TRAFFIC SIGNAL INTERCONNECT VAULT	EACH	1.000	1.000
2830	SPV.0060	SPECIAL 82. REMOVING TRAFFIC SIGNAL INTERCONNECT VAULT	EACH	1.000	1.000
2840	SPV.0060	SPECIAL 83. CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEM. FOR MONOTUBE ARMS (TYPE 9)	EACH	1.000	1.000
2850	SPV.0060	SPECIAL 84. CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEM. FOR MONOTUBE ARMS (TYPE 12)	EACH	4.000	4.000
2860	SPV.0090	SPECIAL 01. CONCRETE CURB AND GUTTER INTEGRAL 19-INCH	LF	27,550.000	27,550.000
2870	SPV.0090	SPECIAL 02. CONSTRUCTION STAKING CONCETE SIDEWALK	LF	8,660.000	8,660.000
2880	SPV.0090	SPECIAL 04. GALVANIZED PIPE 16 GAUGE 9 1/2-INCH	LF	4.000	4.000
2890	SPV.0090	SPECIAL 05. GALVANIZED PIPE 16 GAUGE 11 1/2-INCH	LF	5.000	5.000
2900	SPV.0090	SPECIAL 06. 1-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	12.000	12.000
2910	SPV.0090	SPECIAL 07. 2-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	529.000	529.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
2920	SPV.0090	SPECIAL 08. 3-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	33.000	33.000
2930	SPV.0090	SPECIAL 09. 4-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	2,582.000	2,582.000
2940	SPV.0090	SPECIAL 10. 6-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	3,582.000	3,582.000
2950	SPV.0090	SPECIAL 11. 7-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	229.000	229.000
2960	SPV.0090	SPECIAL 12. 8-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	LF	11.000	11.000
2970	SPV.0090	SPECIAL 40. FIBER OPTIC TRACER WIRE	LF	166.000	166.000
2980	SPV.0090	SPECIAL 41. FIBER OPTIC WARNING TAPE	LF	166.000	166.000
2990	SPV.0090	SPECIAL 90. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH	LF	193.000	193.000
3000	SPV.0090	SPECIAL 94. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	734.000	734.000
3010	SPV.0105	SPECIAL 01. MIS MANHOLE RISER EXTENSION	LS	1.000	1.000
3020	SPV.0105	SPECIAL 02. ELECTRICAL WORK	LS	1.000	1.000
3030	SPV.0105	SPECIAL 03. UNDERDECK UTILITY STRUCTURE B-40-0438	LS	1.000	1.000
3040	SPV.0105	SPECIAL 04. DECK DRAINAGE SYSTEM STRUCTURE B-40-0438	LS	1.000	1.000
3050	SPV.0105	SPECIAL 05. RAILING STEEL TYPE C2 GALVANIZED B-40-0058	LS	1.000	1.000
3060	SPV.0105	SPECIAL 06. RAILING TUBULAR TYPE 'M' (MODIFIED) B-40-0438	LS	1.000	1.000
3070	SPV.0105	SPECIAL 40. TRANSPORTING TRAF SIG & INTERSECTION LIGHTING MATERIALS STH 241 & HOWARD AVE	LS	1.000	1.000
3080	SPV.0105	SPECIAL 41. REMOVE TRAFFIC SIGNALS STH 241 & HOWARD AVE	LS	1.000	1.000
3090	SPV.0105	SPECIAL 42. REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE STH 241 & HOWARD AVE	LS	1.000	1.000
3100	SPV.0105	SPECIAL 43. EVP DETECTOR HEAD INSTALLATION STH 241 & HOWARD AVE	LS	1.000	1.000
3110	SPV.0105	SPECIAL 44. TRANSPORT & INST STATE FURN VIDEO DETECTION SYSTEM STH 241 & HOWARD AVE	LS	1.000	1.000
3120	SPV.0105	SPECIAL 45. INSTALL STATE SUPPLIED TRAFFIC SIGNAL CABINET STH 241 AND HOWARD AVE.	LS	1.000	1.000
3130	SPV.0105	SPECIAL 46. TEMP NON-INTRUSIVE VEHICLE DETECTION SYS FOR INTERSECT STH 241 & HOWARD AVE	LS	1.000	1.000
3140	SPV.0165	SPECIAL 02. CONCRETE SURFACE REPAIR - DECK	SF	1,350.000	1,350.000
3150	SPV.0170	SPECIAL 01. TEST ROLLING	STA	175.000	175.000
3160	SPV.0180	SPECIAL 01. JOINT SEALING	SY	72,380.000	72,380.000
3170	SPV.0180	SPECIAL 02. COLORED CONCRETE PAVEMENT 8 1/2 INCH	SY	1,720.000	1,720.000
3180	SPV.0180	SPECIAL 04. CONCRETE RESURFACE AND REPAIR MORTAR	SY	1,000.000	1,000.000
3190	SPV.0180	SPECIAL 05. CONCRETE MOWING STRIP 4-INCH	SY	29.000	29.000

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DATE 02DEC13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2265-08-70 QUANTITY
3200	SPV.0180	SPECIAL 06. REMOVING CONCRETE MOWING STRIP	SY	55.000	55.000
3210	SPV.0195	SPECIAL 01. MANAGEMENT OF SOLID WASTE	TON	700.000	700.000
3220	SPV.0195	SPECIAL 02. COBBLESTONES	TON	10.000	10.000

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STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
1	POLES, TYPE 9
4	POLES, TYPE 12
1	20' MONOTUBE ARM
2	45' MONOTUBE ARM
2	55' MONOTUBE ARM
6	VIDEO CAMERA
4	EVP DETECTOR HEADS
2	RADIO INTERCONNECT ANTENNA 5.8GHZ

FOR INFORMATION ONLY

VIDEO DETECTOR CABLE

LOC.	TO	LOC.	CABLE TRAFFIC SIGNAL 4-14 AWG L.F.
CB1		SB 8 (VID1)	357
CB1		SB11 (VID2)	253
CB1		SB 16 (VID3)	124
CB1		SB3 (VID4)	187
CB1		SB3 (VID5)	187
		TOTALS	1108

STATE FURNISHED FOR INFORMATION ONLY

SIG. BASE NO.	POLE TYPE 9 EACH	POLE TYPE 12 EACH	MONO 20' ARM EACH	MONO 45' ARM EACH	MONO 55' ARM EACH	VIDEO CAMERA EACH	EVP DETECTOR HEADS EACH	RADIO INTERCONNECT ANTENNA 5.8 GHZ
SB3		1		1		1	1	
SB7	1		1					
SB8		1		1		1	1	2
SB11		1			1	2	1	
SB16		1			1	2	1	
TOTAL	1	4	1	2	2	6	4	2

* QUANTITY SHOWN ELSEWHERE
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

SHEET 1 OF 8

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TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0105.40 TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.41 REMOVE TRAFFIC SIGNALS L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	SPV.0105.42 REMOVE LOOP WIRE & LEAD-IN CABLE L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION

LOCATION	SPV.0105.43 EVP DETECTOR HEAD INSTALLATION L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.44 TRANSPORTING AND INSTALLING STATE FURNISHED VIDEO DETECTION SYSTEM L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.45 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.46 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS SYSTEM L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

*** QUANTITY SHOWN ELSEWHERE**
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

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TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069 SIGNAL MOUNTING HARDWARE L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

GENERATORS

LOCATION	661.0300 GENERATORS DAY
STH 241 & HOWARD AVE	2
TOTAL	2

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

METER BREAKER PEDESTAL

LOCATION*	656.0200 METER BREAKER PEDESTAL L.S.
STH 241 & HOWARD AVE	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEMBLIES

SIG. BASE NO.	SPV.0060.83 CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEMBLIES FOR MONOTUBE ARMS (TYPE 9 POLE) EACH	SPV.0060.84 CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEMBLIES FOR MONOTUBE ARMS (TYPE 12 POLE) EACH
SB3		1
SB7	1	
SB8		1
SB11		1
SB16		1
TOTAL	1	4

* QUANTITY SHOWN ELSEWHERE
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

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POLES

SIG. BASE NO.	657.0100 PED. BASE EACH	657.0405 3.5-FOOT STAND. EACH	657.0425 15-FOOT STAND. EACH	657.0430 10-FOOT STAND. EACH	657.1345 INSTALL POLE TYPE 9 EACH	657.1355 INSTALL POLE TYPE 12 EACH	657.1520 INSTALL MONO 20' ARM EACH	657.1545 INSTALL MONO 45' ARM EACH	657.1555 INSTALL MONO 55' ARM EACH	658.0500 PUSH BUTTON EACH
SB1	1			1						1
SB2	1		1							
SB3						1		1		
SB4	1			1						1
SB5	1			1						1
SB6	1		1							
SB7					1		1			
SB8						1		1		1
SB9	1			1						1
SB10	1		1							1
SB11						1			1	1
SB12	1			1						1
SB13	1		1							
SB14	1	1								1
SB15	1			1						1
SB16						1			1	
TOTAL	11	1	4	6	1	4	1	2	2	10

PULL BOXES

PULL BOX NO.	LOCATION**	653.0135 PULL BOXES 24"x36" EACH	653.0140 PULL BOXES 24"x42" EACH
PB1	12+73.9, 77.0' LT		1
PB2	13+35.7, 79.5' LT		1
PB3	13+72.8, 78.2' LT		1
PB4	14+06.2, 60.1' LT		1
PB5	16+45.3, 61.7' LT	1	
PB6	13+82.0, 52' RT		1
PB7	13+82.9, 65.4' RT		1
PB8	13+73.3, 99.0' RT		1
PB9	13+73.8, 296.1' RT	1	
PB10	13+20.0, 92.1' RT		1
PB11	12+82.5, 87.3' RT		1
PB12	12+82.2, 159.2' RT	1	
PB13	12+52.7, 62.0' RT		
PB14	9+33.9, 63.6' RT	1	1
PB15	12+51.9, 7.2' RT		1
PB16	12+50.6, 76.2' LT		1
PB17	12+04.9, 60.3' LT	1	
TOTAL*		5	12

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

CONCRETE BASES

SIGNAL BASE NO.	LOCATION*	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE BASES TYPE 9, SPECIAL EACH
CB1	12+66.0, 75.3' LT				1
SB1	12+86.5, 75.0' LT	1			
SB2	12+94.9, 80.1' LT	1			
SB3	13+71.9, 87.9' LT			1	
SB4	13+81.3, 67.0' LT	1			
SB5	13+91.9, 67.2' LT	1			
SB6	13+97.1, 60.4' LT	1			
SB7	13+93.8, 6.3' RT		1		
SB8	13+94.0, 66.7' RT			1	
SB9	13+84.3, 77.0' RT	1			
SB10	13+73.7, 77.9' RT	1			
SB11	12+70.1, 68.9' RT			1	
SB12	12+61.4, 69.2' RT	1			
SB13	12+55.9, 58.8' RT	1			
SB14	12+57.6, 6.8' RT	1			
SB15	12+69.3, 66.3' LT	1			
SB16	12+73.5, 60.2' LT			1	
TOTAL		11	1	4	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

* QUANTITY SHOWN ELSEWHERE
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

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		FACES											
SIG. HEAD NO.	SIG. BASE NO.	658.0110 3-12" VERT. EACH	658.0115 4-12" VERT. EACH	658.0215 BCKPLT 3-SEC. EACH	658.0220 BCKPLT 4-SEC. EACH	658.0416 PEDESTRIAN SIGNAL FACE 16" EACH	658.0600 RED BALL EACH	658.0605 YELLOW BALL EACH	658.0610 GREEN BALL EACH	658.0615 RED ARROW EACH	658.0620 YELLOW ARROW EACH	658.0625 GREEN ARROW EACH	658.0635 LED MODULES PED COUNTDOWN TIMER 16" EACH
1	SB13	1		1			1	1	1				
2	SB8	1		1			1	1	1				
3	SB8	1		1			1	1	1				
4	SB8	1		1			1	1	1				
5	SB6		1		1					1	2	1	
6	SB7		1		1					1	2	1	
7	SB6	1		1			1	1	1				
8	SB16	1		1			1	1	1				
9	SB16	1		1			1	1	1				
10	SB16	1		1			1	1	1				
11	SB13		1		1					1	2	1	
12	SB16		1		1					1	2	1	
13	SB10	1		1			1	1	1				
14	SB3	1		1			1	1	1				
15	SB3	1		1			1	1	1				
16	SB2		1		1					1	2	1	
17	SB3		1		1					1	2	1	
18	SB2	1		1			1	1	1				
19	SB11	1		1			1	1	1				
20	SB11	1		1			1	1	1				
21	SB10		1		1					1	2	1	
22	SB11		1		1					1	2	1	
23	SB12					1							1
24	SB15					1							1
25	SB1					1							1
26	SB4					1							1
27	SB5					1							1
28	SB8					1							1
29	SB9					1							1
30	SB11					1							1
TOTAL		14	8	14	8	8	14	14	14	8	16	8	8

*** QUANTITY SHOWN ELSEWHERE**
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

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CONDUIT

LOC.	TO	LOC.	652.0225 CONDUIT NONMET. 2-INCH L.F.	652.0235 CONDUIT NONMET. 3-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1		PB1		24		
PB1		SB1	13			
PB1		SB2	22			
PB1		PB2		124		
PB2		PB3				
PB2		PB3		74		
PB3		SB3		10		
PB3		SB4	15			
PB3		PB4	78			
PB4		SB5	16			
PB4		SB6	10			
PB4		PB5			240	
PB4		PB6		140		
PB6		SB7		12		
PB6		PB7		122		
PB7		SB8		12		
PB7		SB9	12			
PB7		PB8	72			
PB8		SB10	21			
PB8		PB9	195			
PB8		PB10				108
PB10		PB11				40
PB11		PB12		72		
PB11		PB13	82			
PB13		SB11		20		
PB13		SB12	13			
PB13		SB13	5			
PB13		PB14			319	
PB13		PB15		110		
PB15		SB14	6			
PB15		PB16		168		
PB16		SB15	22			
PB16		SB16		29		
PB16		PB17			49	
PB16		CB1		48		
		TOTAL*	582	965	608	148

TRAFFIC SIGNAL EVP DETECTOR CABLE

LOC.	TO	LOC.	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.
CB1		SB 16 (HEAD A)	124
CB1		SB8 (HEAD B)	357
CB1		SB 11 (HEAD C)	253
CB1		SB3 (HEAD D)	187
		TOTALS	921

FOR INFORMATION ONLY

VIDEO DETECTOR CABLE

LOC.	TO	LOC.	CABLE TRAFFIC SIGNAL 4-14 AWG L.F.
CB1		SB 8 (VID1)	357
CB1		SB11 (VID2)	253
CB1		SB 16 (VID3)	124
CB1		SB3 (VID4)	187
CB1		SB3 (VID5)	187
		TOTALS	1108

*** QUANTITY SHOWN ELSEWHERE**
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

SHEET 6 OF 8

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TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION**	SIZE (FT)x(FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
21	PB5	16+45.7, 36.8' LT	6' X 30'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	92	394	236
61	PB14	9+37.3, 36.7' RT	6' X 30'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	106	481	251
81	PB9	13+55.1, 288.2' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	96	499	180
S1	PB17	12+00.0, 49.3' LT	6' X 6'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	42	73	103
S2	PB17	12+00.1, 36.2' LT	6' X 6'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	58	73	116
S3	PB17	12+00.3, 24.6' LT	6' X 6'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	73	150
S4	PB12	12+98.5, 150.5' RT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	52	273	136
S5	PB12	13+10.6, 150.3' RT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	273	159
						TOTAL*	602	2139	1331

** LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
** * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
SB11	1
SB12	1
SB13	1
SB14	1
SB15	1
SB16	1
TOTAL	16

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVE PULL BOX EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
PB18	1
PB19	1
PB20	1
PB21	1
PB22	1
TOTAL*	21

* QUANTITY SHOWN ELSEWHERE
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

3

SIGNAL CABLE AND WIRE

LOC.	TO	LOC.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1		SB1	35		
CB1		SB2		44	
CB1		SB3		162	
CB1		SB4	167		
CB1		SB5	221		
CB1		SB6		213	
CB1		SB7		316	
CB1		SB8		392	
CB1		SB9	393		
CB1		SB10		403	
CB1		SB11		223	
CB1		SB12	217		
CB1		SB13		206	
CB1		SB14	138		
CB1		SB15	52		
CB1		SB16		59	
CB1		SB1			35
SB1		SB2			45
SB2		SB3			176
SB3		SB4			38
SB4		SB5			98
SB5		SB6			40
SB6		SB7			121
SB7		SB8			115
SB8		SB9			37
SB9		SB10			98
SB10		SB11			236
SB11		SB12			47
SB12		SB13			31
SB13		SB14			95
SB14		SB15			145
SB15		SB16			65
SB16		CB1			59
PB1		CB1			21
PB2		SB3			74
PB3		SB3			22
PB4		SB6			22
PB6		SB7			25
PB7		SB8			23
PB8		SB10			35
PB10		SB10			105
PB11		SB13			72
PB13		SB13			17
PB15		SB14			18
PB16		SB14			120
		TOTAL	3241	2018	2035

3

SIGNAL CABLE AND WIRE

LOC.	TO	LOC.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0700 LEAD IN CABLE L.F.
SB1		HEAD 25	15		
SB1		BUTTON			6
SB2		HEAD 16		22	
SB2		HEAD 18	22		
SB3		HEAD 14	56		
SB3		HEAD 15	43		
SB3		HEAD 17		70	
SB4		HEAD 26	15		
SB4		BUTTON			6
SB5		HEAD 27	15		
SB5		BUTTON			6
SB6		HEAD 5		22	
SB6		HEAD 7	22		
SB7		HEAD 6		45	
SB7		BUTTON			6
SB8		HEAD 2	70		
SB8		HEAD 3	58		
SB8		HEAD 4	46		
SB8		HEAD 28	15		
SB8		BUTTON			6
SB9		HEAD 29	15		
SB9		BUTTON			6
SB10		HEAD 13	22		
SB10		HEAD 21		22	
SB11		HEAD 19	66		
SB11		HEAD 20	54		
SB11		HEAD 22		80	
SB11		HEAD 30	15		
SB11		BUTTON			6
SB12		HEAD 23	15		
SB12		BUTTON			6
SB13		HEAD 1	22		
SB13		HEAD 11		22	
SB14		BUTTON			6
SB15		HEAD 24	15		
SB15		BUTTON			6
SB16		HEAD 8	36		
SB16		HEAD 9	48		
SB16		HEAD 10	60		
SB16		HEAD 12		80	
		TOTALS*	745	363	60

*** QUANTITY SHOWN ELSEWHERE**
ALL ITEMS ON THIS PAGE ARE CATEGORY 0300

SHEET 8 OF 8

3

STATE FURNISHED SUMMARY (FOR INFORMATION ONLY)

		PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT L.F.	ETHERNET SWITCH EACH
CB1 (S1086)		350	1
	TOTAL	350	1

I/C CONDUIT

LOC.	TO	LOC.	652.0215 CONDUIT NONMET. 1.25-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.
CV11	TO	ICPB82		91
ICPB82	TO	CB1 (S1086)	75	
		TOTAL*	75	91

I/C PULL BOXES

NO.	LOCATION**		653.0140 PULL BOXES 24"x42" EACH	SPV.0060.81 TRAFFIC SIGNAL INTERCONNECT VAULT EACH
CV11	11+93.5, 14.5' RT			1
ICPB82	11+92.2, 76.1' RT		1	
		TOTAL*	1	1

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

FIBER OPTIC SPLICE

LOCATION		678.0200 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
CV11		1	4
	TOTAL	1	4

FIELD SYSTEM INTEGRATOR

LOCATION		670.0100 FIELD SYSTEM INTEGRATOR L.S.
S1086		1
	TOTAL	1

REMOVING TRAFFIC SIGNAL INTERCONNECT VAULT

VAULT NUMBER		SPV.0060.82 REMOVING TRAFFIC SIGNAL INTERCONNECT VAULT EACH
CV11		1
	TOTAL	1

ALL ITEMS ON THIS PAGE ARE CATEGORY 1500

* QUANTITY SHOWN ELSEWHERE

PROJECT NO: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME:J:\projects\d2_226508241\signal\Quantities\030201_mq.pptx PLOT DATE : 10-JUN-2013 PLOT BY : mscmwb PLOT NAME : _____ PLOT SCALE : 1:1

3

COMMUNICATION SYSTEM TESTING

LOCATION	678.0500 COMMUNICATION SYSTEM TESTING L.S.
CB1 (1086)	1
TOTAL	1

ITS DOCUMENTATION

LOCATION	670.0200 ITS DOCUMENTATION L.S.
S1086	1
TOTAL	1

3

FIBER OPTIC WARNING TAPE

LOC.	TO	LOC.	SPV.0090.41 FIBER OPTIC WARNING TAPE L.F.
CV11	TO	ICPB82	91
ICPB82	TO	CB1 (S1086)	75
		TOTAL	166

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVE PULL BOX EACH
ICPB82	1
ICPB83	1
TOTAL*	2

FIBER OPTIC COMMUNICATIONS EQUIPMENT

LOCATION	SPV.0060.80 INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET EACH	ST-ST SINGLE MODE FIBER JUMPER 4-FEET** EACH	CAT-SE CABLE 4-FEET** EACH
CB1 (S1086)	1	2	1
TOTAL^	1	2	1

^ PAY ITEMS INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS AS LISTED

** FOR INFORMATION ONLY

FIBER OPTIC TRACER WIRE

LOC.	TO	LOC.	SPV.0090.40 FIBER OPTIC TRACER WIRE L.F.
CV11	TO	ICPB82	91
ICPB82	TO	CB1 (S1086)	75
		TOTAL	166

ALL ITEMS ON THIS PAGE ARE CATEGORY 1500

* QUANTITY SHOWN ELSEWHERE

3

REMOVING PAVEMENT

ROADWAY	STATION	TO	STATION	OFFSET	204.0100 REMOVING PAVEMENT SY	DEPTH	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF
S. 27th STREET	9+00		12+50	RT	-	1"	825
	10+50		12+50	LT	-	1"	1,750
	12+50		13+93	RT/LT	2,201	-	-
	13+93		15+00	RT	673	-	-
	13+93		15+00	LT	454	-	-
W. HOWARD AVENUE							
	96H+59		99H+16	RT/LT	256	-	-
	100H+81		102H+76	RT/LT	454	-	-
TOTAL					4,038		2,575

REMOVING CURB & GUTTER

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0150 REMOVING CURB & GUTTER LF
W. HOWARD AVENUE					
	96H+59	RT/LT	99H+16	RT/LT	264
	100H+81	RT/LT	102H+76	RT/LT	119
TOTAL					383

REMOVING CONCRETE SIDEWALK

ROADWAY	STATION	TO	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
S. 27th STREET					
	12+62.50		12+97.50	LT	26
	12+62.50		12+85.26	RT	23
	13+70.28		13+94.76	LT	24
	13+70.62		13+91.29	RT	26
TOTAL					99

REMOVING INLETS

ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
S. 27TH STREET			
	12+62	20' RT	1
	12+63	11' LT	1
	12+66	63' LT	1
	12+77	56' LT	1
	12+99	81' LT	1
TOTAL			5

MILLING ITEMS

ROADWAY	STATION	TO	STATION		204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
S. 27th STREET					
	10+50		12+50	LT	825
	9+00		12+50	RT	1,750
TOTAL					2,575

UNLESS OTHERWISE NOTED
ALL ITEMS SHOWN ARE WITHIN CATEGORY 0200

BASE AGGREGATE ITEMS

ROADWAY	STATION	TO STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
S. 27TH STREET			
	12+50	13+93	829
	13+93	15+00	405
W. HOWARD AVENUE			
	96H+59	99H+16	100
	100H+81	102H+76	112
TOTAL			1,446

BASE PATCHING

LOCATION	390.0303 BASE PATCHING CONCRETE SY
PROJECT	400
TOTALS	400

ASPHALTIC ITEMS

ROADWAY	STATION	TO STATION	OFFSET	455.0105 ASPHALTIC MATERIAL PG 58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON
S. 27TH STREET						
	9+00	12+50	RT	24	44	385
	10+50	12+60	LT	11	21	183
TOTALS				35	65	568

UNLESS OTHERWISE NOTED
ALL ITEMS SHOWN ARE WITHIN CATEGORY 0200

CONCRETE PAVEMENT

ROADWAY	STATION	TO STATION	SPV.0180.02 COLORED CONCRETE PAVEMENT 8 1/2-INCH SY	415.0085 CONCRETE PAVEMENT 8 1/2-INCH SY
S. 27TH STREET				
	12+50	13+93	380	1,762
	13+93	15+00	--	1,119
W. HOWARD AVENUE				
	96H+59	99H+16	--	240
	100H+81	102H+76	--	337
TOTALS			380	3,458

DRILLED TIE BAR

ROADWAY	LOCATION	416.0610 DRILLED TIE BARS EACH
S. 27TH STREET		
	12+60	38
	15+00	39
W. HOWARD AVENUE		
	96H+59 TO 99H+16	104
	99H+16	9
	99H+24	12
	100H+81	12
	100H+81 TO 102H+76	78
	100H+85	12
TOTAL		304

CURB RAMPS

ROADWAY	STATION	OFFSET	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
S. 27TH STREET			
	12+65	6' RT	8
	12+65	17' RT	8
	12+65	58' RT	8
	12+65	60' LT	8
	12+81	73' RT	8
	12+92	71' LT	8
	13+73	73' RT	8
	13+75	71' LT	8
	13+88	60' LT	8
	13+88	2' RT	8
	13+88	12' RT	8
	13+89	59' RT	8
TOTAL			96

CONCRETE MEDIAN SLOPED NOSE

ROADWAY	STATION	OFFSET	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
S. 27TH STREET			
	12+58	15' LT	49
	12+84	12' RT	22
	13+20	78' RT	26
	13+36	75' RT	22
	13+80	5' RT	34
TOTAL			153

CONCRETE SIDEWALK

ROADWAY	STATION	TO STATION	OFFSET	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0410 CONCRETE SIDEWALK 5-INCH SF
S. 27TH STREET					
	12+61	12+96	LT	--	233
	12+62	12+84	RT	--	199
	13+71	13+92	LT	18	215
	13+71	13+93	RT	--	234
TOTALS				18	881

CONCRETE CURB & GUTTER

LOCATION	STATION	TO STATION	OFFSET	601.0150 CONCRETE CURB INTEGRAL TYPE D LF	601.0319 CONCRETE CURB & GUTTER 19-INCH LF	601.0331 CONCRETE CURB & GUTTER 31-INCH LF
S. 27TH STREET						
	12+50	13+00	RT/LT	--	--	228
	13+68	15+00	RT/LT	--	--	308
W. HOWARD AVENUE						
	96H+59	99H+22	LT	264	--	273
	100H+81	102H+76	RT/LT	--	455	--
TOTALS				264	455	809

UNLESS OTHERWISE NOTED
ALL ITEMS SHOWN ARE WITHIN CATEGORY 0200

INLETS

ROADWAY	STATION	OFFSET	STRUCTURE NUMBER	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.8115 ADJUSTING INLET COVERS EACH	611.9710 SALVAGED INLET COVERS EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	SPV.0060.03 INLET COVER TYPE 57 EACH	SPV.0060.08 CATCH BASIN TYPE 45A EACH	SPV.0060.09 INLET SCREEN TYPE M EACH	SPV.0060.10 INLET SCREEN TYPE R EACH
27TH STREET												
	12+54	11' LT	AA	1	--	1	--	1	--	--	--	--
	12+61	20' RT	100	1	--	--	--	--	1	--	1	--
	12+62	55' RT	101	--	--	--	--	--	1	--	1	--
	12+63	11' LT	A	--	--	--	--	1	--	--		
	12+66	63' LT	B	--	--	--	1	--	--	--	--	--
	12+77	56' LT	C	1	--	1	--	1	--	--	--	--
	12+99	81' LT	D	1	--	1	--	1	--	--	--	--
	13+22	174' RT	101B	--	1	1	--	--	--	--	--	1
	13+31	198' LT	101A	--	--	--	--	--	1	1	1	--
	13+38	75' LT	102	--	1	1	--	--	--	--	1	--
	13+69	85' LT	103	--	--	--	--	1	--	--	--	--
	13+69	85' LT	2	--	1	1	--	--	--	1	1	--
TOTALS				4	3	6	1	5	3	2	5	1

STORM SEWER ITEMS

ROADWAY	STATION	TO STATION	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH L.F.
27TH STREET			
	12+54	12+63	32
	13+50	13+69	22
TOTAL			54

MANHOLE ITEMS

ROADWAY	STATION	OFFSET	611.0420 RECONSTRUCTING MANHOLES EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.9705 SALVAGED MANHOLE COVERS EACH	SPV.0060.11 INTERNAL SANITARY MANHOLE SEAL EACH	PROPOSED RIM ELEV.
27TH STREET							
	10+70	55' RT		1	1		
	13+50	69' LT		1	1		95.25
	13+53	65' RT		1	1		94.80
CAT. 0070 →	13+60	82' LT		1	1	1	95.12
	13+71	50' LT		1	1		94.74
CAT. 0070 →	14+63	62' RT		1	1	1	92.85
	14+68	55' RT	1		1		92.16
CAT. 0070 →		TOTALS	0	2	2	2	
CAT. 0200 →		TOTALS	1	4	5	0	
		TOTALS	1	6	7	2	

EROSION CONTROL ITEMS

LOCATION	628.7570 ROCK BAGS EACH
PROJECT	10
TOTALS	10

UNLESS OTHERWISE NOTED
ALL ITEMS SHOWN ARE WITHIN CATEGORY 0200

PAVEMENT MARKING ITEMS

ROADWAY	STATION	STATION	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 6.25 FT LINE, 18.75FT SKIP 4-INCH WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE LF	SPV.0060.54 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 WHITE EACH	SPV.0090.90 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR 18-INCH WHITE LF	SPV.0090.94 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH WHITE LF
S 27TH STREET							
	10+62	12+62	134	--	--	--	--
	9+12	12+58	231	--	--	--	--
	12+37	12+45	--	--	1	--	--
	12+55	12+55	--	--	--	54	--
	12+60	12+60	--	--	--	--	98
	12+70	12+70	--	--	--	--	101
	13+83	13+83	--	--	--	--	108
	13+93	13+93	--	--	--	--	97
	13+97	13+97	--	--	--	56	--
	13+97	15+00	--	206	--	--	--
	14+06	14+14	--	--	1	--	--
	14+07	15+00	93	--	--	--	--
W. HOWARD AVENUE							
	97H+74	99H+20	--	146	--	--	--
	98H+01	98H+09	--	--	1	--	--
	99H+01	99H+09	--	--	1	--	--
	99H+20	99H+20	--	--	--	36	--
	99H+24	99H+24	--	--	--	--	70
	99H+34	99H+34	--	--	--	--	85
	100H+68	100H+68	--	--	--	--	94
	100H+78	100H+78	--	--	--	--	81
	100H+82	100H+82	--	--	--	47	--
	100H+82	101H+79	--	198	--	--	--
	100H+92	103H+30	120	--	--	--	--
	100H+95	101H+03	--	--	1	--	--
	101H+51	101H+59	--	--	1	--	--
SUBTOTALS			578	550	6	193	734
TOTALS			578	550	6	193	734

UNLESS OTHERWISE NOTED
ALL ITEMS SHOWN ARE WITHIN CATEGORY 0200

RESTORATION ITEMS

ROADWAY	STATION	TO	STATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
S. 27TH STREET							
	12+50		12+62	19	0.01	.5	19
	12+69		12+83	23	0.01	.6	23
	13+92		15+00	200	0.13	4.5	200
W. HOWARD AVENUE							
	96H+59		99H+25	161	0.10	3.7	161
	100H+78		102H+98	132	0.08	3.0	132
TOTALS				535	0.33	12	535

DUST CONTROL SURFACE TREATMENT

LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT MGAL
PROJECT	27
TOTAL	27

SAW CUTTING ITEMS

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	690.0250 SAWING CONCRETE LF
S. 27TH STREET					
	12+60	LT/RT	12+60	LT/RT	95
	15+00	LT/RT	15+00	LT/RT	113
W. HOWARD AVENUE					
	96H+59	RT	99H+16	RT	282
	99H+24	LT	99H+24	LT	294
	100H+81	LT	102H+76	LT	294
	100H+85	RT	100H+85	RT	263
TOTAL					1,341

UNLESS OTHERWISE NOTED
ALL ITEMS SHOWN ARE WITHIN CATEGORY 0200

ROAD WORK

CATEGORY 0010

ITEM NO. UNIT PAY LOCATION		CLEARING 201.0120 ID	GRUBBING 201.0220 ID	REMOVING ASPHALT BUTT JOINT 204.0115 SY	REMOVING CURB & GUTTER 204.0150 LF	REMOVING CONCRETE WALK 204.0155 SY	EXCAVATION COMMON 205.0100 CY	BASE AGGREGATE 1 1/4 INCH 305.0120 TON	CONCRETE BASE 6-INCH 320.0125 SY	CONCRETE PAVEMENT 7-INCH 415.0070 SY	CONCRETE PAVEMENT GAPS 415.0210 SY	CONCRETE PAVEMENT APPROACH SLAB 415.0410 SY	CONCRETE DRIVEWAY HES 8-INCH 416.0280 SY
STA. 15+00 to STA. 20+00	LT	0	0	0	0	380		930	20	0	2	0	270
STA. 20+00 to STA. 26+00	LT	0	0	0	0	280		920	10	0	1	0	210
STA. 26+00 to STA. 32+00	LT	0	0	0	0	350		1,090	10	0	1	0	220
STA. 32+00 to STA. 38+00	LT	0	0	0	0	210		1,350	0	0	0	0	0
STA. 38+00 to STA. 44+00	LT	0	0	230	110	480	See	1,500	0	0	0	0	70
STA. 44+00 to STA. 50+00	LT	0	0	0	0	360	Section 9	1100	10	0	0	0	90
STA. 50+00 to STA. 56+00	LT	0	0	30	10	170	for	1,000	0	0	0	0	0
STA. 56+00 to STA. 62+00	LT	0	0	40	30	470	Earthwork	990	30	0	0	0	120
STA. 62+00 to STA. 68+00	LT	30	30	0	0	690	Quantities	1,030	50	50	2	0	130
STA. 68+00 to STA. 74+00	LT	20	20	0	0	520		820	20	0	0	0	50
STA. 74+00 to STA. 79+50	LT	0	0	70	0	150		840	0	0	0	180	0
STA. 79+50 to STA. 85+16	LT	0	0	50	30	420		1130	0	0	0	0	30
STA. 1'L'+25 to STA. 6'L'+87.	LT	0	0	35	25	300		685	0	0	0	0	60
	SUBTOTAL	50	50	455	205	4,780		13,385	150	50	6	180	1,250
STA. 15+00 to STA. 20+00	RT	10	10	0	0	420		760	30	0	2	0	210
STA. 20+00 to STA. 26+00	RT	0	0	0	0	450		1040	20	0	1	0	210
STA. 26+00 to STA. 32+00	RT	0	0	0	0	300		1030	10	0	0	0	110
STA. 32+00 to STA. 38+00	RT	0	0	0	0	981		1160	30	0	2	0	300
STA. 38+00 to STA. 44+00	RT	0	0	110	0	920	See	1250	40	90	1	0	300
STA. 44+00 to STA. 50+00	RT	0	0	20	10	530	Section 9	1000	40	0	1	0	270
STA. 50+00 to STA. 56+00	RT	0	0	40	40	550	for	1010	50	0	2	0	230
STA. 56+00 to STA. 62+00	RT	0	0	0	0	600	Earthwork	1020	30	0	1	0	160
STA. 62+00 to STA. 68+00	RT	15	15	0	0	890	Quantities	1170	10	10	2	0	100
STA. 68+00 to STA. 74+00	RT	10	10	0	0	270		1100	0	0	0	0	50
STA. 74+00 to STA. 79+50	RT	0	0	60	0	290		650	20	0	0	130	30
STA. 79+50 to STA. 85+16	RT	0	0	0	0	390		740	10	0	0	0	30
STA. 1'L'+25 to STA. 6'L'+87.	RT	0	0	35	25	150		685	0	0	0	0	160
	SUBTOTAL	35	35	265	75	6,741		12,615	290	100	12	130	2,160
	GRAND TOTAL	**85**	**85**	**720**	**280**	**11,521**		**26,000**	**440**	**150**	**18**	**310**	**3,410**

3

ROAD WORK

CATEGORY 0010

LOCATION		DRILLED TIE BARS 416.0610 EACH	TACK COAT 455.0605 GAL	ASPHALT SURFACE 465.0105 TON	CONCRETE CURB 22-INCH 601.0322 LF	CONCRETE CURB 31-INCH 601.0331 LF	CONCRETE SIDEWALK 5-INCH 602.0410 SF	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA 602.0515 SF	CONCRETE LOADING ZONE 602.1000 SF	DUST CONTROL SURFACE TREATMENT 623.0200 SY	TOPSOIL 625.0100 SY	SOD LAWN 631.1000 SY
STA. 15+00 to STA. 20+00	LT	0	0	0	0	0	800	0	750	2580	290	290
STA. 20+00 to STA. 26+00	LT	0	0	0	0	60	520	10	0	2420	290	290
STA. 26+00 to STA. 32+00	LT	0	0	0	0	0	1080	0	150	3020	550	550
STA. 32+00 to STA. 38+00	LT	0	0	0	0	0	1940	50	0	3630	1310	1310
STA. 38+00 to STA. 44+00	LT	130	10	40	0	470	2240	50	250	4070	650	650
STA. 44+00 to STA. 50+00	LT	0	0	0	0	0	2480	20	0	3030	710	710
STA. 50+00 to STA. 56+00	LT	0	0	0	10	0	910	20	100	2770	500	500
STA. 56+00 to STA. 62+00	LT	0	0	10	0	30	3230	20	0	2720	590	590
STA. 62+00 to STA. 68+00	LT	120	0	20	0	50	3880	20	660	2860	360	360
STA. 68+00 to STA. 74+00	LT	0	0	0	0	0	2610	0	0	2370	180	180
STA. 74+00 to STA. 79+50	LT	130	0	10	0	180	1350	20	260	1850	400	400
STA. 79+50 to STA. 85+16	LT	0	0	10	0	30	3380	20	0	3010	630	630
STA. 1'L'+25 to STA. 6'L'+87.	LT	0	0	10	0	10	1260	0	0	1825	400	400
	SUBTOTAL	380	10	100	10	830	25,680	230	2,170	36,155	6,860	6,860
STA. 15+00 to STA. 20+00	RT	0	0	0	0	0	500	0	0	2050	390	390
STA. 20+00 to STA. 26+00	RT	0	0	0	0	30	1440	10	30	2840	380	380
STA. 26+00 to STA. 32+00	RT	0	0	0	0	0	690	0	150	2860	940	940
STA. 32+00 to STA. 38+00	RT	0	0	10	0	0	1603	20	0	3210	750	750
STA. 38+00 to STA. 44+00	RT	130	10	30	0	230	2970	20	750	3400	270	270
STA. 44+00 to STA. 50+00	RT	0	0	10	0	10	2220	20	0	2790	480	480
STA. 50+00 to STA. 56+00	RT	0	0	10	40	0	2790	20	50	2760	460	460
STA. 56+00 to STA. 62+00	RT	10	0	0	0	0	3490	20	0	2790	460	460
STA. 62+00 to STA. 68+00	RT	120	0	0	0	50	4660	50	410	3380	250	250
STA. 68+00 to STA. 74+00	RT	0	0	0	0	0	1520	0	150	2910	980	980
STA. 74+00 to STA. 79+50	RT	110	0	10	0	180	2570	20	290	1490	70	70
STA. 79+50 to STA. 85+16	RT	0	0	0	0	0	3310	20	0	2140	10	10
STA. 1'L'+25 to STA. 6'L'+87.	RT	0	0	0	0	10	630	0	0	1825	400	400
	SUBTOTAL	370	10	70	40	510	28,393	200	1,830	34,445	5,840	5,840
	GRAND TOTAL	**750**	**20**	**170**	**50**	**1,340**	**54,073**	**430**	**4,000**	**70,600**	**12,700**	**12,700**

ROAD WORK

CATEGORY 0010

LOCATION		CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF	SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF	CONCRETE CURB & GUTTER INTEGRAL 19-INCH SPV.0090.01 LF	CONSTRUCTION STAKING CONCRETE SIDEWALK SPV.0090.02 LF
STA. 15+00 to STA. 20+00	LT	500	500	110	10	1020	220
STA. 20+00 to STA. 26+00	LT	600	600	90	0	1180	90
STA. 26+00 to STA. 32+00	LT	600	600	90	0	1160	120
STA. 32+00 to STA. 38+00	LT	600	600	0	0	1810	130
STA. 38+00 to STA. 44+00	LT	600	600	160	90	1210	220
STA. 44+00 to STA. 50+00	LT	600	600	30	0	1290	380
STA. 50+00 to STA. 56+00	LT	600	600	30	30	1050	40
STA. 56+00 to STA. 62+00	LT	600	600	140	100	1090	390
STA. 62+00 to STA. 68+00	LT	600	600	400	180	970	620
STA. 68+00 to STA. 74+00	LT	600	600	30	0	600	520
STA. 74+00 to STA. 79+50	LT	390	390	40	0	730	130
STA. 79+50 to STA. 85+16	LT	580	580	30	30	1550	520
STA. 1'L'+25 to STA. 6'L'+87.	LT	410	410	90	35	930	340
	SUBTOTAL	7,280	7,280	1,240	475	14,590	3,720
STA. 15+00 to STA. 20+00	RT	500	500	230	0	1010	150
STA. 20+00 to STA. 26+00	RT	600	600	200	0	1140	340
STA. 26+00 to STA. 32+00	RT	600	600	50	0	1140	150
STA. 32+00 to STA. 38+00	RT	600	600	290	0	1290	320
STA. 38+00 to STA. 44+00	RT	600	600	370	150	910	500
STA. 44+00 to STA. 50+00	RT	600	600	240	30	980	540
STA. 50+00 to STA. 56+00	RT	600	600	320	30	1130	540
STA. 56+00 to STA. 62+00	RT	600	600	120	110	1210	540
STA. 62+00 to STA. 68+00	RT	600	600	70	130	640	670
STA. 68+00 to STA. 74+00	RT	600	600	0	0	1710	200
STA. 74+00 to STA. 79+50	RT	390	390	100	0	320	270
STA. 79+50 to STA. 85+16	RT	570	570	40	30	550	540
STA. 1'L'+25 to STA. 6'L'+87.	RT	410	410	90	35	930	180
	SUBTOTAL	7,270	7,270	2,120	515	12,960	4,940
	GRAND TOTAL	**14,550**	**14,550**	**3,360**	**990**	**27,550**	**8,660**

ROAD WORK

CATEGORY 0010

LOCATION	ITEM NO. / UNIT PAY	FINISHING ROADWAY (PROJECT) 2265-08-70 213.0100 EACH	EXCAVATION, HAULING and DISPOSAL of PETROLEUM CONTAMINATED SOIL 205.0501.S TON	QMP RIDE INCENTIVE IRI RIDE 440.4410.S DOL	ASPHALT SURFACE PATCHING 465.0110 TON	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	MOBILIZATION 619.1000 EACH	LANDMARK REFERENCE MONUMENT 621.0100 EACH	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	MOBILIZATION EROSION CONTROL 628.1905 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		1	420	17,280	150	260	260	1	3	338	338	1

ROAD WORK

CATEGORY 0010

LOCATION	ITEM NO. / UNIT PAY	MOBILIZATION EMERGENCY EROSION CONTROL 628.1910 EACH	FERTILIZER TYPE B 629.0210 CWT	LANDSCAPE PLANTING SURVEILLANCE and CARE CYCLES 632.9101 EACH	FIELD OFFICE TYPE C 642.5201 EACH	TRAFFIC CONTROL 643.0100 EACH	CONST. STKG. ELECTRICAL INSTALLATIONS 650.8500 LS	CONST. STKG. SUPPLEMENTAL CONTROL 650.9910 LS	INCENTIVE STRENGTH CONCRETE PAVEMENT 715.0415 DOL	MOVING POLE & BANNER SPV.0060.01 EACH	REMOVING POLE FOOTING SPV.0060.02 EACH	CONCRETE FOOTING FOR BANNER POLE SPV.0060.17 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		1	8	30	1	1	1	1	5,313	5	5	5

ROAD WORK

CATEGORY 0010

LOCATION	ITEM NO. / UNIT PAY	REINSTALLING POLE & BANNER SPV.0060.36 EACH	MIS MANHOLE RISER EXTENSION SPV.0105.01 LS	TEST ROLLING SPV.0170.01 STA	CONCRETE MOWING STRIP 4-INCH SPV.0180.05 SY	REMOVING CONCRETE MOWING STRIP SPV.0180.06 SY
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		5	1	175	29	55

ROAD WORK
(REMOVING CATCH BASINS)

CATEGORY 0010
ITEM NO. 204.0215 (39)
UNIT PAY EACH

NO	LOCATION	NO	LOCATION
104	16+40, 5' RT	154	46+99, 47' RT
105	16+56, 55' LT	156	48+99, 51' LT
107	19+56, 55' LT	158	50+10, 47' RT
110	23+08, 55' LT	164	55+98, 47' LT
114	26+41, 55' LT	170	59+95, 47' RT
117	28+71, 55' LT	174	63+27, TL
119	31+75, 59' LT	175	64+53, 48' LT
127	34+04, 60' RT	178	66+02, 48' LT
128	34+79, 23' LT	179	66+22, 65' RT
129	34+83, 80' LT	183	72+12, 33' LT
130	35+10, 62' LT	187	75+21, 13' LT
131	35+22, 98' LT	190	75+45, 50' LT
136	39+07, 87' LT	195	78+41, 30' RT
141	39+90.8, 91' LT	197	78+91, 27' RT
143	40+28, 85' LT	199E	83+50, 64' LT
146	40+54.5, 60' LT	199F	83+52, 29' LT
148	43+23, 58' LT	199H	84+24, 21' LT
151	46+50, 64' RT	199K	3L+31, 47' RT
152	46+58, 54' LT	199L	3L+31 , 47' LT
153	46+80, 63' RT		

ROAD WORK
(ABANDONING CATCH BASINS)

CATEGORY 0010
ITEM NO. 204.0255 (36)
UNIT PAY EACH

NO	LOCATION	NO	LOCATION
109	22+14, TL	149	43+33, 48' RT
112	25+66, 50' LT	150	45+04, 08' LT
113	25+81, 5' LT	155	47+14, TL
116	28+16, 6' RT	157	49+24, TL
118	30+09, 59' RT	162	53+77, 06' RT
120	32+57, 77' LT	165	56+57, 48' RT
123	5L+66, 40' RT	167	58+62, 48' LT
124	33+31, 14' RT	168	59+47, 64' RT
126	5L+93, 03' LT	169	59+79, 65' RT
133	37+02, 69' LT	173	61+36, 06' RT
134	37+73, 62' RT	176	64+63, 47' RT
135	38+81, 69' LT	177	66+01, 46' RT
138	39+42, 17' LT	182	67+76, 87' RT
139	39+44, 51' RT	188	75+22, 01' RT
140	39+63, 79' RT	194	78+34, 28' LT
142	39+93, 71' RT	196	78+87, 66' LT
144	40+36. 69' RT	198	79+05, 18' LT
145	40+53, 48' RT	199A	80+35, 24' RT

ROAD WORK
(SALVAGED INLET COVERS)

CATEGORY 0010
ITEM NO. 611.9710 (87)
UNIT PAY EACH

NO	LOCATION	NO	LOCATION	NO	LOCATION
103	13+70, 85' LT	138	39+42, 17' LT	175	64+53, 48' LT
106	17+26, 56' RT	139	39+44, 51' RT	176	64+63, 47' RT
107	19+56, 55' LT	140	39+63, 79' RT	177	66+01, 46' RT
108	20+46, 55' RT	142	39+93, 71' RT	178	66+02, 48' LT
109	22+14, TL	144	40+37, 69' RT	179	66+22, 65' RT
110	23+08, 55' LT	145	40+53, 48' RT	180	67+05, 80' RT
111	23+66, 55' RT	146	40+55, 60' LT	182	67+76, 87' RT
112	25+66, 50' LT	148	43+23, 58' LT	183	72+12, 33' LT
113	25+81, 5' LT	149	43+33, 48' RT	184	72+15, 02' RT
114	26+41, 55' LT	150	45+04, 08' LT	185	72+16, 26' RT
115	26+92, 57' RT	151	46+50, 64' RT	186	72+16, 61' RT
116	28+16, 06' RT	152	46+58, 54' LT	187	75+21, 13' LT
117	28+71, 55' LT	153	46+80, 63' RT	188	75+22, 01' RT
118	30+09, 59' RT	154	46+99, 47' RT	189	75+32, 45' RT
119	31+75, 59' LT	155	47+14, TL	190	75+45, 50' LT
120	32+57, 77' LT	156	48+99, 51' LT	191	75+66, 78' LT
123	5L+66, 40' RT	157	49+24, TL	192	76+54, 40' RT
124	33+31, 14' RT	158	50+10, 47' RT	194	78+34, 28' LT
126	5L+93, 2.5' LT	159A	53+50, 69' RT	195	78+41, 30' RT
127	34+04, 60' RT	160	53+69, 47' LT	196	78+87, 66' LT
128	34+79, 23' LT	161	53+70, 46' RT	197	78+91, 27' RT
129	34+83, 80' LT	162	53+77, 06' RT	198	79+05, 18' LT
130	35+10, 62' LT	165	56+57, 48' RT	199A	80+35, 24' RT
131	35+22, 98' LT	167	58+62, 48' LT	199C	80+62, 11' LT
133	37+02, 69' LT	168	59+47, 64' RT	199D	80+61, 24' LT
134	37+73, 62' RT	169	59+79, 65' RT	199G	83+71, 25' RT
135	38+81, 69' LT	170	59+95, 47' RT	199H	84+24, 21' LT
136	39+6.7, 87' LT	171	59+98, 47' LT	199K	3L+31, 47' RT
137	39+42, 61' LT	173	61+36, 06' RT	199L	3L+31 , 47' LT

ROAD WORK
**(ADJUSTING INLET COVERS)

CATEGORY 0010
ITEM NO. 611.8115 (33)
UNIT PAY EACH

NO	LOCATION	PROPOSED ELEVATION
106	17+26, 56' RT	**86.23**
108	20+46, 55' RT	**81.30**
115	26+92, 57' RT	**76.44**
121	5L+57, 55' RT	**75.30**
122	33+10,12' LT	**74.20**
125	5L+82, 04' RT	**74.80**
132	37+00, TL	**71.35**
137	39+42, 61' LT	**70.31**
147	42+34, TL	**72.97**
159	52+00, 05' LT	**82.20**
159A	53+50, 69' RT	**82.38**
160	53+69, 47' LT	**82.41**
161	53+70, 46' RT	**82.48**
163	55+22, 06' RT	**84.56**
166	58+37, 05' LT	**86.15**
171	59+98, 47' LT	**85.70**
172	60+07, 06' RT	**87.06**
180	67+06, 80' RT	**86.78**
181	67+65, 62' RT	**85.06**
184	72+14.5, 02' RT	**72.01**
185	72+15.8, 26' RT	**72.61**
186	72+16, 61' RT	**72.33**
189	75+32, 45' RT	**65.09**
191	75+66, 78' LT	**63.90**
192	76+54, 40' RT	**62.30**
193	76+52, 55' LT	**62.12**
199	79+05, 32' LT	**59.84**
199B	80+40, 70' LT	**61.70**
199C	80+62, 11' LT	**63.13**
199D	80+61, 24' LT	**62.73**
199G	83+71, 25' RT	**74.67**
199J	1L+85, 01' RT	**84.82**
199M	3L+35, 05' RT	**79.56**

ROAD WORK
**(CONSTRUCTION STAKING STORM SEWER SYSTEM)

CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 33**
UNIT PAY EACH

ROAD WORK
**(INLET SCREEN TYPE M)

CATEGORY 0010
ITEM NO. SPV.0060.09 (34)
UNIT PAY EACH

NO	LOCATION
106	17+26, 56' RT
108	20+46, 55' RT
111	23+66, 55' RT
115	26+92, 567' RT
121	5L+57, 55' RT
122	33+10,12' LT
125	5L+82, 04' RT
132	37+00, TL
137	39+42, 61' LT
147	42+34, TL
159	52+00, 5' LT
159A	53+50, 69' RT
160	53+69, 47' LT
161	53+70, 46' RT
163	55+22, 6' RT
166	58+37, 5' LT
171	59+99, 47' LT
172	60+07, 6' RT
180	67+06, 80' RT
181	67+65, 62' RT
184	72+15, 02' RT
185	72+16, 26' RT
186	72+16, 61' RT
189	75+32, 45' RT
191	75+66, 78' LT
192	76+54, 40' RT
193	76+52, 55' LT
199	79+05, 32' LT
199B	80+40, 70' LT
199C	80+62, 11' LT
199D	80+61, 24' LT
199G	83+71, 25' RT
199J	1L+85, 1' RT

ROAD WORK
**(INLET SCREEN TYPE R)

CATEGORY 0010
ITEM NO. SPV.0060.10 (34)
UNIT PAY EACH

NO	LOCATION
106	17+26, 56' RT
108	20+46, 55' RT
111	23+66, 55' RT
115	26+92, 567' RT
121	5L+57, 55' RT
122	33+10,12' LT
125	5L+82, 04' RT
132	37+00, TL
137	39+42, 61' LT
147	42+34, TL
159	52+00, 5' LT
159A	53+50, 69' RT
160	53+69, 47' LT
161	53+70, 46' RT
163	55+22, 6' RT
166	58+37, 5' LT
171	59+99, 47' LT
172	60+07, 6' RT
180	67+06, 80' RT
181	67+65, 62' RT
184	72+15, 02' RT
185	72+16, 26' RT
186	72+16, 61' RT
189	75+32, 45' RT
191	75+66, 78' LT
192	76+54, 40' RT
193	76+52, 55' LT
199	79+05, 32' LT
199B	80+40, 70' LT
199C	80+62, 11' LT
199D	80+61, 24' LT
199G	83+71, 25' RT
199J	1L+85, 1' RT

ROAD WORK
**(INLET COVER TYPE 57)

CATEGORY 0010
ITEM NO. SPV.0060.03 (3)
UNIT PAY EACH

NO	LOCATION
193	76+52, 55' LT
199	79+05, 32' LT
199B	80+39.5, 70' LT

ROAD WORK
**(INLET COVER TYPE 55)

CATEGORY 0010
ITEM NO. SPV.0060.04 (11)
UNIT PAY EACH

NO	LOCATION
121	5L+57, 55' RT
122	33+10,12' LT
125	5L+82.4, 04' RT
132	37+00, TL
159	52+00, 5' LT
163	55+22, 06' RT
166	58+37, 05' LT
172	60+07, 06' RT
199D	80+61, 24' LT
199J	1L+85, 01' RT
199M	3L+35, 05' RT

ROAD WORK
(INLET COVER TYPE MS 58)

CATEGORY 0010
ITEM NO. SPV.0060.06 (1)
UNIT PAY EACH

NO	LOCATION
181	67+65, 62' RT

**QUANTITIES SHOWN ELSEWHERE

ROADWAY ITEMS
(TRAFFIC SIGNALS and STREET LIGHTING)

CATEGORY 0010

LOCATION	ITEM NO. / UNIT PAY	REMOVING CONCRETE BASES 204.0195 EACH	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/2-INCH 652.0220 LF	**CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH 652.0225 LF	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH 652.0230 LF	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH 652.0235 LF	CONDUIT SPECIAL 2-INCH 652.0605 LF	CONDUIT SPECIAL 2 1/2-INCH 652.0610 LF	CONDUIT LOOP DETECTOR 652.0800 LF	LOOP DETECTOR SLOTS 652.0900 LF	REMOVING PULL BOXES 653.0905 EACH	CONCRETE BASES TYPE 10 654.0110 EACH	CONCRETE BASE TYPE 10 SPECIAL SPV.0060.15 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		11	150	820	440	23,960	45	100	390	390	1	3	11

3

ROAD WORK
(TRAFFIC SIGNALS and STREET LIGHTING)

CATEGORY 0010

LOCATION	ITEM NO. / UNIT PAY	INSTALL TRAFFIC SIGNAL BASE SPV.0060.16 EACH	POLES TYPE 10 SPV.0060.18 EACH	POLES TYPE 12 SPECIAL SPV.0060.19 EACH	POLES TYPE 13 SPECIAL SPV.0060.20 EACH	MONOTUBE ARM 30-FT SPV.0060.21 EACH	MONOTUBE ARM 35-FT SPV.0060.22 EACH	MONOTUBE ARM 40-FT SPV.0060.23 EACH	POLYMER CONCRETE VAULT 13 'x 24" x 18" SPV.0060.30 EACH	POLYMER CONCRETE VAULT 17" x 30" x 24" SPV.0060.31 EACH	POLYMER CONCRETE VAULT 17" x 30" x 18" SPV.0060.32 EACH	REMOVING STREET LIGHTING HAND HOLE SPV.0060.55 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		29	3	4	7	3	7	4	74	2	63	1

**QUANTITIES SHOWN ELSEWHERE

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**638.2602** REM SIGNS TYPE II (EA)	**634.0816** TUBULAR STEEL POSTS 2"X 2"x16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	J1-1(2)	--	24	x	36	6.000	--	1	--	--
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M6-4	241	24	x	24	--	--	--	--	--
2	J2-1(2)	--	24	x	45	7.500	--	1	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-4	(ARROW)	21	x	21	--	--	--	--	--
3	J ASSEM.	--	--	x	--	--	1	--	--	COVERED ALT ROUTE MARKER ON LIGHT POLE
4	J ASSEM.	--	--	x	--	--	1	--	--	COVERED ALT ROUTE MARKER ON LIGHT POLE
5	J2-1(2)	--	24	x	45	7.500	--	1	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-4	(ARROW)	21	x	21	--	--	--	--	--
6	J1-1(2)	--	24	x	36	6.000	1	--	--	MOUNT ON LIGHT POLE
	M3-1	NORTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
7	J2-2(2)	--	48	x	57	19.000	--	3	--	--
	M3-1	NORTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M5-2L	(ARROW)	21	x	21	--	--	--	--	--
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M5-1R	(ARROW)	21	x	21	--	--	--	--	--

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**638.2602** REM SIGNS TYPE II (EA)	**634.0816** TUBULAR STEEL POSTS 2"X 2"x16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
8	J3-2 (2)	--	48	x	57	19.000	1	--	--	MOUNT ON LIGHT POLE
	M3-1	NORTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-2	(ARROW)	21	x	21	--	--	--	--	--
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-1	(ARROW)	21	x	21	--	--	--	--	--
9	J4-1(2)	--	24	x	36	6.000	--	1	--	--
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
10	J4-1(2)	--	24	x	36	6.000	--	--	--	MOUNT ON LIGHT POLE
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	36	24	x	24	--	--	--	--	--
11	J1-1(2)	--	24	x	36	6.000	1	--	--	MOUNT ON LIGHT POLE
	M2-1	JCT	24	x	12	--	--	--	--	--
	M1-6	36	24	x	24	--	--	--	--	--
12	J2-1(2)	--	24	x	57	9.500	1	--	--	MOUNT ON LIGHT POLE
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	36	24	x	24	--	--	--	--	--
	M5-2L	(ARROW)	21	x	21	--	--	--	--	--

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**638.2602** REM SIGNS TYPE II (EA)	**634.0816** TUBULAR STEEL POSTS 2"X 2"x16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
13	J3-1(2)	--	24	x	57	9.500	--	2	--	IN MEDIAN
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	36	24	x	24	--	--	--	--	--
	M6-1	(ARROW)	21	x	21	--	--	--	--	--
14	J2-3(2)	--	48	x	57	19.000	1	--	--	MOUNT ON LIGHT POLE
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-1	(ARROW)	21	x	21	--	--	--	--	--
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	36	24	x	24	--	--	--	--	--
	M5-2R	(ARROW)	21	x	21	--	--	--	--	--
15	J2-1(2)	--	24	x	45	7.500	--	1	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-1	(ARROW)	21	x	21	--	--	--	--	--
16	J1-1(2)	--	24	x	36	6.000	1	--	--	MOUNT ON LIGHT POLE
	M2-1	JCT	24	x	12	--	--	--	--	--
	M1-6	36	24	x	24	--	--	--	--	--
17	J4-1(2)	--	24	x	36	6.000	1	--	--	MOUNT ON LIGHT POLE
	M3-1	NORTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**638.2602** REM SIGNS TYPE II (EA)	**634.0816** TUBULAR STEEL POSTS 2"X 2"x16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
18	J2-1(2)	--	24	x	45	7.500	--	1	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-4	(ARROW)	21	x	21	--	--	--	--	--
19	J4-1(2)	--	24	x	36	6.000	--	1	--	--
	M3-3	SOUTH	24	x	12	--	--	--	--	--
	M1-6	241	24	x	24	--	--	--	--	--
20	J2-1(2)	--	24	x	45	7.500	--	1	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-4	(ARROW)	21	x	21	--	--	--	--	--
21	J2-1(2)	--	24	x	45	7.500	--	1	--	--
	M1-6	241	24	x	24	--	--	--	--	--
	M6-4	(ARROW)	21	x	21	--	--	--	--	--
22	J4-1(2)	--	24	x	45	7.500	--	--	--	MOUNT ON LIGHT POLE
	M3-1	NORTH	24	x	24	--	--	--	--	--
	M1-6	241	21	x	21	--	--	--	--	--
		--	--	x	--	--	--	--	--	--
TOTALS						176.500	9	14	--	--

CATEGORY 0010
**ITEM NO. 611.1004 CATCH BASINS 4-FT DIAMETER (5)
**ITEM NO. 611.3003 INLETS 3-FT DIAMETER (3)
**ITEM NO. SPV.0060.03 INLET COVER TYPE 57 (9)
**ITEM NO. SPV.0060.04 INLET COVER TYPE 55 (3)
**ITEM NO. SPV.0060.05 INLET COVER TYPE 58A (2)
**ITEM NO. SPV.0060.08 CATCH BASIN TYPE 45A (8)
**ITEM NO. SPV.0060.09 INLET SCREEN TYPE M (16)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (16)
UNIT PAY EACH

ROAD WORK

CATEGORY 0010
**ITEM NO. 608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-Inch (430)
UNIT PAY LF

**ITEM NO SPV.0060.34 CONCRETE COLLAR SPECIAL (0)
UNIT PAY EACH

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 16**
UNIT PAY EACH

NO	LOCATION	TYPE		ELEVATION	DEPTH (ft)	INLET SCREEN	SPAN		LENGTH (ft)	INVERT ELEVATION		SLOPE	REMARKS
		STRUCTURE	INLET COVER			TYPE M TYPE R	FROM	TO		INLET	OUTLET	FT/FT	
3	16+21, 18' LT	Catch Basin 4-FT Dia	Type 57	88.24	4.82	Both	3	MH 205	45	84.50	83.60	0.020	
4	16+21, 12' LT	Catch Basin Type 45A	Type 57	88.36	5.53	Both	4	3	8	85.25	85.05	0.025	
5	16+40, 5' RT	Catch Basin Type 45A	Type 55	88.57	4.95	Both	5	MH 205	55	85.45	84.35	0.020	
6	16+56, 55' LT	Inlet 3-FT Diameter	Type 57	87.03	4.25	Both	6	MH 205	7	83.40	83.25	0.021	
7	18+00, TL	Catch Basin Type 45A	Type 55	84.80	5.53	Both	7	MH 206	55	81.10	80.00	0.020	
8	18+24.9, 18' RT	Catch Basin Type 45A	Type 57	84.60	6.43	Both	8	9	54	80.00	78.90	0.020	
9	18+62.9, 18' LT	Catch Basin 4-FT Dia	Type 57	83.40	6.63	Both	9	MH 206	45	78.60	78.00	0.013	
10	19+26, 48' LT	Catch Basin 4-FT Dia	Type 58A	82.03	5.33	Both	—	—	—	76.70	76.70	—	Build on Storm Sewer
11	19+56, 55' LT	Inlet 3-FT Diameter	See remarks	81.67	4.25	Both	11	10	7	78.05	77.90	0.021	Use salvaged inlet cover Type 57
12	20+42.5, 18' RT	Catch Basin Type 45A	Type 57	81.83	4.91	Both	12	Inlet 108	35	78.75	78.05	0.020	
13	22+00, 6' LT	Catch Basin Type 45A	Type 55	80.10	4.93	Both	13	Inlet 14	21	77.00	76.45	0.026	
14	22+23.9, 18' LT	Catch Basin 4-FT Dia	Type 57	79.35	5.98	Both	14	16	29	75.20	74.60	0.021	
15	22+23.9, 7' RT	Catch Basin Type 45A	Type 57	80.13	5.96	Both	15	14	26	76.00	75.45	0.021	
16	22+25, 48' LT	Catch Basin 4-FT Dia	Type 58A	79.27	5.82	Both	—	—	—	73.45	73.45	—	Build on Storm Sewer
17	23+08, 55' LT	Inlet 3-FT Diameter	See remarks	78.45	4.25	Both	17	MH 209	11	74.85	74.60	0.023	Use salvaged inlet cover Type 57
19	25+46, 7' RT	Catch Basin Type 45A	Type 57	77.71	5.79	Both	19	20	32	73.75	73.10	0.020	

**QUANTITIES SHOWN ELSEWHERE

3

CATEGORY 0010
**ITEM NO. 611.1004 CATCH BASINS 4-FT DIAMETER (7)
**ITEM NO. 611.3003 INLETS 3-FT DIAMETER (3)
**ITEM NO. SPV.0060.03 INLET COVER TYPE 57 (10)
**ITEM NO. SPV.0060.04 INLET COVER TYPE 55 (1)
**ITEM NO. SPV.0060.05 INLET COVER TYPE 58A (5)
**ITEM NO. SPV.0060.08 CATCH BASIN TYPE 45A (12)
**ITEM NO. SPV.0060.09 INLETSCREEN TYPE M (22)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (22)
UNIT PAY EACH

ROAD WORK

CATEGORY 0010
**ITEM NO. 608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-Inch (522)
UNIT PAY LF

**ITEM NO SPV.0060.34 CONCRETE COLLAR SPECIAL (4)
UNIT PAY EACH

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 22**
UNIT PAY EACH

3

NO	LOCATION	TYPE STRUCTURE	TYPE INLET COVER	ELEVATION	DEPTH (ft)	INLET SCREEN TYPE M TYPE R	SPAN FROM	SPAN TO	LENGTH (ft)	INVERT ELEVATION INLET	INVERT ELEVATION OUTLET	SLOPE FT/FT	REMARKS
20	25+75, 5' LT	Catch Basin 4-FT Dia	Type 55	77.50	6.33	Both	20	21	26	73.00	72.45	0.021	
21	25+97, 16' LT	Catch Basin 4-FT Dia	Type 57	76.87	6.50	Both	21	A21	29	72.20	70.05	0.074	Pipe connection A21 at 25+97, 48' LT
22	26+41, 55' LT	Inlet 3-FT Diameter	See remarks	76.14	4.25	Both	22	MH 210	7	72.55	72.40	0.021	Use salvaged inlet cover Type 57
22A	28+00, TL	Catch Basin Type 45A	Type 57	76.50	4.93	Both	22A	Inlet 23	15	73.40	73.10	0.020	
23	28+00, 14.6' LT	Catch Basin Type 45A	Type 57	75.45	4.98	Both	23	A23	33	72.30	69.80	0.076	Pipe connection A23 at 28+00, 48' LT
24	28+03.8, 18' RT	Catch Basin Type 45A	Type 57	76.09	4.92	Both	24	23	35	73.00	72.30	0.020	
25	28+71, 55' LT	Inlet 3-FT Diameter	See remarks	74.61	4.25	Both	25	26	7	71.00	70.85	0.021	Use salvaged inlet cover Type 57
26	28+72, 48' LT	Catch Basin 4-FT Dia	Type 58A	74.92	7.52	Both	—	—	—	67.40	67.40	—	Build on Storm Sewer
27	30+25, 56' RT	Catch Basin Type 45A	See remarks	73.94	4.92	Both	27	MH 212	10	70.85	70.65	0.020	Use salvaged inlet cover Type 57
28	31+00, 4.5' RT	Catch Basin Type 45A	Type 57	74.00	4.93	Both	28	29	41	70.90	70.05	0.021	
29	31+00, 48' RT	Catch Basin 4-FT Dia	Type 58A	73.71	6.81	Both	—	—	—	66.90	66.90	—	Build on Storm Sewer
30	31+75, 59.2' LT	Inlet 3-FT Diameter	See remarks	73.04	4.25	Both	30	A30	9	69.35	68.25	0.122	Pipe connection A30 at 31+75, 48' LT Use salvaged inlet cover Type 57
31	31+75, 21' LT	Catch Basin Type 45A	Type 57	73.47	4.95	Both	31	A31	21	70.35	67.20	0.150	Pipe connection A31 at 31+75, 48' LT
32	32+75, 59.6' LT	Catch Basin Type 45A	See remarks	73.87	4.25	Both	32	MH 214	58	70.30	69.10	0.021	Use salvaged inlet cover Type 57
33	33+25, 12' RT	Catch Basin Type 45A	See remarks	73.60	4.93	Both	33	35	43	70.50	69.60	0.021	Use salvaged inlet cover Type 57
34	33+50, 56' RT	Catch Basin Type 45A	Type 57	72.20	4.93	Both	34	35	10	69.10	68.90	0.020	
35	33+50, 46' RT	Catch Basin 4-FT Dia	Type 58A	72.65	7.27	Both	—	—	—	65.38	65.38	—	Build on Storm Sewer
38	35+59, 77' LT	Catch Basin Type 45A	Type 57	71.10	7.08	Both	38	MH 216	144	67.25	65.85	0.010	
39	36+50, 61.5' RT	Catch Basin Type 45A	Type 57	70.58	4.91	Both	39	40	9	67.50	67.30	0.022	
40	36+50, 70' RT	Catch Basin 4-FT Dia	Type 58A	71.76	6.14	Both	—	—	—	65.62	65.62	—	Build on Storm Sewer
41	37+75, 25' LT	Catch Basin Type 45A	Type 57	70.58	4.91	Both	41	42	25	67.50	67.00	0.020	
42	37+75, 50' LT	Catch Basin 4-FT Dia	Type 58A	70.44		Both	—	—	—	65.20	65.20	—	Build on Storm Sewer

**QUANTITIES SHOWN ELSEWHERE

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

CATEGORY 0010
**ITEM NO. 611.1004 CATCH BASINS 4-FT DIAMETER (2)
**ITEM NO. 611.2004 MANHOLE 4-FT DIAMETER (1)
**ITEM NO. 611.3003 INLETS 3-FT DIAMETER (7)
**ITEM NO. SPV.0060.03 INLET COVER TYPE 57 (7)
**ITEM NO. SPV.0060.04 INLET COVER TYPE 55 (1)
**ITEM NO. SPV.0060.05 INLET COVER TYPE 58A (2)
**ITEM NO. SPV.0060.08 CATCH BASIN TYPE 45A (11)
**ITEM NO. SPV.0060.09 INLET SCREEN TYPE M (20)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (20)
UNIT PAY EACH

ROAD WORK

CATEGORY 0010
**ITEM NO. 608.0312 STORM SEWER PIPE
REINFORCED CONCRETE CLASS III 12-Inch (501)
UNIT PAY LF

**ITEM NO SPV.0060.34 CONCRETE COLLAR SPECIAL (2)
UNIT PAY EACH

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 21**
UNIT PAY EACH

NO	LOCATION	TYPE		ELEVATION	DEPTH (ft)	INLET SCREEN	SPAN		LENGTH (ft)	INVERT ELEVATION		SLOPE	REMARKS
		STRUCTURE	INLET COVER			TYPE M TYPE R	FROM	TO		INLET	OUTLET	FT/FT	
43	38+00, 67' RT	Inlet 3-FT Diameter	Type 57	70.17	4.25	Both	43	MH 218	11	66.50	66.25	0.023	
44	38+42, 6' LT	Catch Basin Type 45A	Type 57	70.45	6.83	Both	44	MH 219	58	65.45	64.85	0.010	
45	38+73.5, 63' LT	Catch Basin Type 45A	Type 57	69.40	4.93	Both	45	MH 219	17	66.30	65.95	0.021	
46	39+6.7, 87' LT	Inlet 3-FT Diameter	See remarks	69.94	4.25	Both	46	MH 219	42	66.30	65.85	0.011	Use salvaged inlet cover Type 57
47	39+41, 67' RT	Inlet 3-FT Diameter	See remarks	70.20	4.25	Both	47	48A	17	66.95	66.75	0.012	Use salvaged inlet cover Type 57
48	39+52, 85' LT	Catch Basin Type 45A	Type 57	70.30	7.13	Both	48	MH 222	32	65.00	64.35	0.020	
48A	39+57, 71' RT	Manhole 4-FT Dia	Type 58A	70.00	6.50	—	—	—	—	—	—	—	Build on storm sewer
49	39+62, 85' RT	Inlet 3-FT Diameter	See remarks	70.32	5.10	Both	49	48A	17	65.75	65.40	0.021	Use salvaged inlet cover Type 57
50	39+90.8, 91' LT	Catch Basin Type 45A	Type 55	71.20	8.63	Both	50	MH 222	18	64.40	64.00	0.022	
51	39+92, 74.5' RT	Catch Basin Type 45A	See remarks	70.73	7.16	Both	51	MH 224	14	65.40	65.25	0.011	Use salvaged inlet cover Type 57
52	40+28.3, 85' LT	Inlet 3-FT Diameter	See remarks	70.30	4.25	Both	52	MH 222	42	66.90	66.70	0.005	Use salvaged inlet cover Type 57
53	40+36.5, 64' RT	Catch Basin Type 45A	See remarks	70.57	6.90	Both	53	MH 224	40	65.50	64.70	0.020	Use salvaged inlet cover Type 57
54	40+55, 60' LT	Inlet 3-FT Diameter	See remarks	70.30	4.25	Both	54	A54	38	67.20	65.00	0.058	Pipe connection A54 at 40+55, 22' LT Use salvaged inlet cover Type 57
55	40+72, 10' RT	Catch Basin Type 45A	Type 57	70.77	4.95	Both	55	56	35	67.65	66.95	0.020	
56	40+75, 48' RT	Catch Basin 4-FT Dia	See remarks	70.19	7.02	Both	—	—	—	63.17	63.17	—	Build on storm sewer Use salvaged inlet cover Type 57
57	43+23, 57.5' LT	Inlet 3-FT Diameter	See remarks	73.02	4.25	Both	57	MH 227	32	69.40	68.75	0.020	Use salvaged inlet cover Type 57
58	43+71, 10' RT	Catch Basin Type 45A	Type 57	73.52	4.95	Both	58	59	35	70.40	69.70	0.020	Use salvaged inlet cover Type 57
59	43+71, 48' RT	Catch Basin 4-FT Dia	Type 58A	72.98	5.03	Both	—	—	—	67.95	67.95	—	New Manhole / Build on Storm Sewer
60	44+13.6, 7.6' LT	Catch Basin Type 45A	Type 57	74.18	8.51	Both	60	A60	15	67.50	66.85	0.043	Pipe connection A60 at 44+12, 23' LT
61	46+51, 62' RT	Catch Basin Type 45A	See remarks	76.40	5.83	Both	61	MH 231	8	72.05	71.85	0.025	Use salvaged inlet cover Type 57
62	46+58, 53' LT	Catch Basin Type 45A	See remarks	76.63	4.91	Both	62	MH 229	30	73.55	72.95	0.020	Use salvaged inlet cover Type 57

**QUANTITIES SHOWN ELSEWHERE

CATEGORY 0010
**ITEM NO. 611.1004 CATCH BASINS 4-FT DIAMETER (5)
**ITEM NO. 611.2004 MANHOLE 4-FT DIAMETER (1)
**ITEM NO. 611.3003 INLETS 3-FT DIAMETER (3)
**ITEM NO. SPV.0060.03 INLET COVER TYPE 57 (7)
**ITEM NO. SPV.0060.04 INLET COVER TYPE 55 (1)
**ITEM NO. SPV.0060.05 INLET COVER TYPE 58A (3)
**ITEM NO. SPV.0060.08 CATCH BASIN TYPE 45A (13)
**ITEM NO. SPV.0060.09 INLET SCREEN TPE M (21)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (21)

ROAD WORK

CATEGORY 0010
**ITEM NO. 608.0312 STORM SEWER PIPE
REINFORCED CONCRETE CLASS III 12-Inch (404)
UNIT PAY LF

**ITEM NO SPV.0060.34 CONCRETE COLLAR SPECIAL (1)
UNIT PAY EACH

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 21**
UNIT PAY EACH

NO	LOCATION	TYPE STRUCTURE	TYPE INLET COVER	ELEVATION	DEPTH (ft)	INLET SCREEN TYPE M TYPE R	SPAN FROM	SPAN TO	LENGTH (ft)	INVERT ELEVATION INLET	INVERT ELEVATION OUTLET	SLOPE FT/FT	REMARKS
63	46+79, 61' RT	Inlet 3-FT Diameter	See remarks	76.68	4.25	Both	63	MH 231	20	73.00	72.80	0.010	Use salvaged inlet cover Type 57
64	46+98.7, 47' RT	Inlet 3-FT Diameter	See remarks	76.80	4.20	Both	64	MH 232	8	73.10	72.90	0.025	Use salvaged inlet cover Type 57
65	47+21.8, 4.6' LT	Catch Basin Type 45A	Type 57	77.46	4.84	Both	65	66	8	74.45	74.25	0.025	
66	47+21.8, 10' RT	Catch Basin 4-FT Dia	Type 57	77.55	5.88	Both	66	MH 232	37	73.50	72.75	0.020	
67	47+25, 3' RT	Catch Basin 4-FT Dia	Type 55	77.90	5.73	Both	67	66	9	74.00	73.80	0.022	
68	48+92, 10' RT	Catch Basin Type 45A	Type 57	78.94	4.75	Both	68	71	39	74.00	73.65	0.009	
69	48+99, 51' LT	Catch Basin Type 45A	See remarks	78.75	7.58	Both	69	A69	27	73.00	69.65	0.124	Pipe connection A69 at 48+99, 22' LT Use salvaged inlet cover Type 57
70	49+25, 4' RT	Catch Basin Type 45A	See remarks	79.50	4.93	Both	70	71	30	76.40	75.80	0.020	Use salvaged inlet cover Type 55
71	49+25, 34' RT	Catch Basin 4-FT Dia	Type 58A	79.25	5.60	Both	—	—	—	73.65	73.65	—	New Manhole
72	50+10.3, 47' RT	Inlet 3-FT Diameter	See remarks	79.70	5.35	Both	72	MH 233	12	74.85	74.60	0.021	Use salvaged inlet cover Type 57
73	53+76, 6' RT	Catch Basin Type 45A	Type 57	83.16	4.94	Both	73	74	6	80.05	79.90	0.025	
74	53+76, 10' RT	Catch Basin Type 45A	Type 57	83.16	5.40	Both	74	MH 240	34	79.25	78.75	0.015	
75	55+98, 47' LT	Catch Basin Type 45A	Type 57	83.81	4.94	Both	75	MH 242	9	80.70	80.50	0.022	
75A	56+75, 10' RT	Catch Basin Type 45A	Type 57	84.63	4.93	Both	75A	76	36	79.70	79.25	0.013	
76	56+75, 48' RT	Manhole 4-FT Dia	See remarks	84.15	6.98	Both	76	MH 243	22	79.00	78.55	0.020	Use salvaged inlet cover Type 57
77	58+75, 48' LT	Catch Basin Type 45A	See remarks	84.75	4.93	Both	77	MH 247	42	81.65	80.80	0.020	Use salvaged inlet cover Type 57
78	59+46.8, 67.5' RT	Catch Basin Type 45A	See remarks	85.94	6.32	Both	78	79	12	81.45	81.30	0.013	Use salvaged inlet cover Type 57
79	59+60, 62' RT	Catch Basin 4-FT Dia	Type 58A	86.26	4.96	Both	—	—	—	81.30	81.30	—	New Manhole
80	59+77.5, 69.5' RT	Catch Basin Type 45A	See remarks	86.50	4.93	Both	80	79	17	82.70	82.30	0.024	Use salvaged inlet cover Type 57
81	59+96.5, 50' RT	Catch Basin Type 45A	See remarks	86.25	4.95	Both	81	83	23	81.75	81.60	0.007	Use salvaged inlet cover Type 57
82	60+12.4, 1' RT	Catch Basin Type 45A	Type 57	87.60	4.93	Both	82	84	13	84.50	84.20	0.023	
83	60+13, 31' RT	Catch Basin 4-FT Dia	Type 58A	87.04	5.89	Both	—	—	—	81.15	81.15	—	New Manhole

**QUANTITIES SHOWN ELSEWHERE

CATEGORY 0010
**ITEM NO. 611.1004 CATCH BASINS 4-FT DIAMETER (6)
**ITEM NO. 611.3003 INLET 3-FT DIAMETER (0)
**ITEM NO. SPV.0060.03 INLET COVER TYPE 57 (6)
**ITEM NO. SPV.0060.04 INLET COVER TYPE 55 (1)
**ITEM NO. SPV.0060.05 INLET COVER TYPE 58A (1)
**ITEM NO. SPV.0060.08 CATCH BASIN TYPE 45A (16)
**ITEM NO. SPV.0060.09 INLET SCREEN TYPE M (22)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (22)
UNIT PAY EACH

ROAD WORK

CATEGORY 0010
**ITEM NO. 608.0312 STORM SEWER PIPE
REINFORCED CONCRETE CLASS III 12-Inch (485)
UNIT PAY LF

**ITEM NO SPV.0060.34 CONCRETE COLLAR SPECIAL (0)
UNIT PAY EACH

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 21**
UNIT PAY EACH

NO	LOCATION	TYPE		ELEVATION	DEPTH (ft)	INLET SCREEN	SPAN		LENGTH (ft)	INVERT ELEVATION		SLOPE	REMARKS
		STRUCTURE	INLET COVER			TYPE M TYPE R	FROM	TO		INLET	OUTLET	FT/FT	
84	60+13.5, 12' RT	Catch Basin 4-FT Dia	Type 57	86.89	4.77	Both	84	83	18	83.95	83.55	0.022	
85	63+27.6, TL	Catch Basin Type 45A	Type 55	90.08	6.31	Both	85	MH 252	32	85.60	84.95	0.020	
86	64+53.8, 48' LT	Catch Basin Type 45A	See remarks	88.77	4.95	Both	86	MH 254	13	85.65	83.35	0.177	Use salvaged inlet cover Type 57
87	65+92, 52' RT	Catch Basin Type 45A	See remarks	87.36	4.84	Both	87	MH 256	22	83.35	82.90	0.020	Use salvaged inlet cover Type 57
88	66+02, 48' LT	Catch Basin Type 45A	See remarks	87.06	4.94	Both	88	MH 257	14	83.95	83.65	0.021	Use salvaged inlet cover Type 57
88A	66+07, 05' LT	Catch Basin Type 45A	Type 57	87.70	4.75	Both	88A	MH 256	34	84.62	83.92	0.021	
89	66+22.9, 71.5' RT	Catch Basin Type 45A	See remarks	86.95	5.78	Both	89	90	34	83.75	83.50	0.007	Use salvaged inlet cover Type 57
90	66+53, 71' RT	Catch Basin 4-FT Dia	Type 58A	87.75	5.15	Both	—	—	—	82.60	82.60	—	New Manhole
91	67+76.5, 59.6 RT	Catch Basin Type 45A	See remarks	84.25	5.03	Both	91	Inlet 181	13	81.05	80.75	0.023	Use salvaged inlet cover Type 57
92	67+88.2, 83.1' RT	Catch Basin Type 45A	Type 57	83.80	6.88	Both	92	Inlet 181	30	78.75	78.15	0.020	
93	72+12.5, 35.9' LT	Catch Basin Type 45A	Type 57	71.70	4.95	Both	93	MH 264	12	68.00	67.75	0.021	
94	75+21.3, 13.20' LT	Catch Basin 4-FT Dia	See remarks	65.46	4.60	Both	94	MH 267	40	61.50	61.20	0.007	Use salvaged inlet cover Type 57
95	75+25, 8' LT	Catch Basin Type 45A	See remarks	65.38	4.91	Both	95	94	8	62.30	62.10	0.025	Use salvaged inlet cover Type 57
96	75+44, 52.4' LT	Catch Basin Type 45A	See remarks	64.30	4.95	Both	96	MH 267	34	60.80	60.70	0.003	Use salvaged inlet cover Type 57
97	78+41, 30' RT	Catch Basin Type 45A	See remarks	60.13	4.91	Both	97	MH 272	7	57.05	56.90	0.021	Use salvaged inlet cover Type 57
98	78+90.5, 27' RT	Catch Basin 4-FT Dia	See remarks	60.13	5.11	Both	—	—	—	55.02	55.02	—	Build on storm sewer
99	79+00, 68' LT	Catch Basin Type 45A	See remarks	59.50	4.93	Both	99	MH 273	37	56.40	55.75	0.018	Use salvaged inlet cover Type 57
99A	79+00, 19' LT	Catch Basin Type 45A	See remarks	60.47	4.95	Both	99A	MH 273	12	56.20	55.90	0.025	Use salvaged inlet cover Type 57
99B	80+50, 25' RT	Catch Basin Type 45A	See remarks	62.13	6.81	Both	99B	MH 276	19	57.15	56.95	0.011	Use salvaged inlet cover Type 57
99C	83+50, 65.8' LT	Catch Basin 4-FT Dia	Type 57	73.48	4.31	Both	99C	99D	33	71.00	70.50	0.015	
99D	83+52, 28.5' LT	Catch Basin 4-FT Dia	Type 57	73.95	3.95	Both	—	—	—	70.00	70.00	—	Build on storm sewer
99E	84+24, 22' LT	Catch Basin Type 45A	See remarks	76.85	4.93	Both	99E	99D	73	72.50	71.25	0.017	Use salvaged inlet cover Type 57

**QUANTITIES SHOWN ELSEWHERE

3

CATEGORY 0010
**ITEM NO. 611.1004 CATCH BASINS 4-FT DIAMETER (0)
**ITEM NO. 611.3003 INLETS 3-FT DIAMETER (0)
**ITEM NO. SPV.0060.03 INLET COVER TYPE 57 (3)
**ITEM NO. SPV.0060.04 INLET COVER TYPE 55 (0)
**ITEM NO. SPV.0060.05 INLET COVER TYPE 58A (0)
**ITEM NO. SPV.0060.08 CATCH BASIN TYPE 45A (5)
**ITEM NO. SPV.0060.09 INLET SCREEN TYPE M (5)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (5)
UNIT PAY EACH

ROAD WORK

CATEGORY 0010
**ITEM NO. 608.0312 STORM SEWER PIPE
REINFORCED CONCRETE CLASS III 12-Inch (56)
UNIT PAY LF

**ITEM NO SPV.0060.34 CONCRETE COLLAR SPECIAL (0)
UNIT PAY EACH

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 8**
UNIT PAY EACH

3

NO	LOCATION	TYPE		ELEVATION	DEPTH (ft)	INLET SCREEN	SPAN		LENGTH (ft)	INVERT ELEVATION		SLOPE	REMARKS
		STRUCTURE	INLET COVER			TYPE M TYPE R	FROM	TO		INLET	OUTLET	FT/FT	
99F	3L+30.5, 47' RT	Catch Basin Type 45A	See remarks	78.85	4.93	Both	99F	MH 279	6	75.75	75.60	0.025	Use salvaged inlet cover Type 57
99G	3L+30.5 , 47' LT	Catch Basin Type 45A	See remarks	78.90	4.93	Both	99G	MH 278	10	75.80	75.60	0.020	Use salvaged inlet cover Type 57
99H	5L+89, TL	Catch Basin Type 45A	Type 57	74.63	4.91	Both	99H	99J	9	71.55	71.35	0.022	Possible TEES conflict
99J	5L+86.9, 10' RT	Catch Basin Type 45A	Type 57	74.50	4.93	Both	99J	99K	15	71.45	71.15	0.020	
99K	5L+89, 35' RT	Catch Basin Type 45A	Type 57	74.31	4.94	Both	99K	MH 214	16	71.20	70.85	0.022	

CATEGORY 0010
ITEM NO. SPV.0060.37 SUB-BASIN BOWL (3)
ITEM NO. SPV.0060.38 CATCH BASIN ELBOW (1)
**ITEM NO. SPV.0060.09 INLET SCREEN TYPE M (3)
**ITEM NO. SPV.0060.10 INLET SCREEN TYPE R (3)
UNIT PAY EACH

ROAD WORK

CATEGORY 0010
ITEM NO. SPV.0090.04 GALVANIZED PIPE
16 GUAGE 9½-INCH (4)
ITEM NO. SPV.0090.05 GALVANIZED PIPE
16 GAUGE 11½-INCH (5)
UNIT PAY LF

NO	LOCATION	TYPE		ELEVATION	DEPTH (ft)	INLET SCREEN	SPAN		LENGTH (ft)	INVERT ELEVATION		SLOPE	REMARKS
		CATCH BASIN	INLET COVER			TYPE M TYPE R	FROM	TO		INLET	OUTLET		
36	34+79, 23' LT	SUB-BASIN BOWL	See remarks	73.10	—	Both	36	See remarks	2	73.10	70.02	—	Connect to top of box culvert Use salvaged inlet cover Type 57
37	34+83, 80' LT	SUB-BASIN BOWL	See remarks	73.10	—	Both	37	See remarks	3	73.10	70.02	—	Connect to top of box culvert Use salvaged inlet cover Type 55
37A	35+10, 62' LT	SUB-BASIN BOWL & CATCH BASIN ELBOW	See remarks	72.43	—	Both	37A	See remarks	4	72.45	68.50	—	Connect to side of box culvert Use salvaged inlet cover Type 57

**QUANTITIES SHOWN ELSEWHERE

3

ROAD WORK
**(ADJUSTING MANHOLE COVERS)

CATEGORY 0010
ITEM NO. 611.8110 (66)
UNIT PAY EACH

NO	LOCATION	PROPOSED ELEVATION	NO	LOCATION	PROPOSED ELEVATION
205	16+56, 48' LT	**87.27**	241	55+23, 51' RT	**84.08**
206	18+28, 48' LT	**83.80**	242	56+07, 51' LT	**84.61**
207	20+40, 48' LT	**80.73**	243	56+52, 50' RT	**84.41**
208	21+31, 48' LT	**79.78**	244	57+92, 51' LT	
209	23+17, 48' LT	**78.63**	245	57+97, 50' RT	**85.42**
210	26+45, 48' LT	**76.33**	246	58+32, 34' RT	**85.57**
211	30+05, 48' LT	**74.14**	247	58+33, 33' LT	**85.41**
212	30+18, 48' RT	**74.23**	249	59+58, 35', LT	**85.76**
213	5L+61, 43' RT	**75.11**	250	61+36, 34' RT	**88.14**
214	33+33, 48' LT	**74.39**	251	62+94, 31' LT	**89.51**
215	35+19, 68' RT	**71.86**	252	63+27, 34' RT	**90.13**
216	37+03, 50' LT	**70.90**	253	63+27, 33' LT	**89.91**
217	37+72, 70' RT	**70.86**	254	64+54, 33' LT	**89.22**
218	37+89, 69' RT	**70.46**	256	66+05, 35' RT	**87.82**
219	38+82, 48' LT	**70.00**	257	66+03, 33' LT	**87.62**
221	39+83, 22' LT	**71.22**	258	66+57, 32' RT	**87.80**
222	39+82, 74' LT	**70.75**	259	66+57, 33' LT	**87.53**
224	39+99, 63' RT	**70.70**	261	67+65, 22' LT	**84.66**
225	40+8, 23' LT	**71.21**	263	72+11, 49' RT	**72.95**
226	40+34, 46' RT	**70.60**	264	72+14, 22' LT	**72.01**
227	43+21, 24' LT	**73.50**	265	73+34, 22' LT	**69.48**
228	43+29, 47' RT	**72.57**	266	75+32, 34' RT	**65.35**
229	46+58, 23' LT	**77.12**	267	75+61, 21' LT	**64.77**
230	46+60, 47' RT	**76.74**	268	75+50, 20' LT	**64.47**
231	46+60, 65' RT	**76.79**	269	76+51, 34' RT	**62.54**
232	46+96, 39' RT	**77.08**	270	76+51, 23' LT	**62.95**
233	50+13, 35' RT	**80.10**	271	78+26, 27' RT	**60.47**
234	50+21, 21' LT	**80.47**	272	78+48, 28' RT	**60.26**
235	52+04, 35' RT	**82.02**	273	79+01, 29' LT	**60.44**
236	52+66, 21' LT	**82.50**	274	79+92, 75' LT	**60.83**
237	52+85, 47' LT	**82.05**	275	79+94, 29' LT	**61.70**
239	53+30, 48' LT	**82.70**	278	3L+21, 44' LT	**79.28**
240	53+76, 47' RT	**82.51**	279	3L+36, 44' RT	**78.78**

ROAD WORK
**(SALVAGED MANHOLE COVERS)

CATEGORY 0010
ITEM NO. 611.9705 (75)
UNIT PAY EACH

NO	LOCATION	NO	LOCATION
205	16+56, 48' LT	244	57+92, 51' LT
206	18+28, 48' LT	245	57+97, 50' RT
207	20+40, 48' LT	246	58+32, 34' RT
208	21+31, 48' LT	247	58+33, 33' LT
209	23+17, 48' LT	248	59+59, 31' RT
210	26+45, 48' LT	249	59+58, 35', LT
211	30+05, 48' LT	250	61+36, 34' RT
212	30+18, 48' RT	251	62+94, 31' LT
213	5L+61, 43' RT	252	63+27, 34' RT
214	33+33, 48' LT	253	63+27, 33' LT
215	35+19, 68' RT	254	64+54, 33' LT
216	37+03, 50' LT	255	64+81, 34' RT
217	37+72, 70' RT	256	66+05, 35' RT
218	37+89, 69' RT	257	66+03, 33' LT
219	38+82, 48' LT	258	66+57, 32' RT
220	39+50, 71' RT	259	66+57, 33' LT
221	39+83, 22' LT	260	67+24, 21' LT
222	39+82, 74' LT	261	67+65, 22' LT
223	39+94, 44' RT	262	70+02, 21' LT
224	39+96, 63' RT	263	72+11, 49' RT
225	40+8, 23' LT	264	72+14, 22' LT
226	40+34, 46' RT	265	73+34, 22' LT
227	43+21, 24' LT	266	75+32, 34' RT
229	46+58, 23' LT	267	75+61, 21' LT
230	46+60, 47' RT	268	75+50, 20' LT
231	46+60, 65' RT	269	76+51, 34' RT
232	46+96, 39' RT	270	76+51, 23' LT
233	50+13, 35' RT	271	78+26, 27' RT
234	50+21, 21' LT	272	78+48, 28' RT
235	52+04, 35' RT	273	79+01, 29' LT
236	52+66, 21' LT	274	79+92, 75' LT
237	52+85, 47' LT	275	79+94, 29' LT
238	53+30, 52' RT	276	80+31, 27' RT
239	53+30, 48' LT	277	80+41, 29' LT
240	53+76, 47' RT	278	3L+21, 44' LT
241	55+23, 51' RT	279	3L+36, 44' RT
242	56+07, 51' LT	10102	21+65, 18' LT
243	56+52, 50' RT		

ROAD WORK
**(ABANDONING MANHOLES)

CATEGORY 0010
ITEM NO. 204.0250 (1)
UNIT PAY EACH

NO	LOCATION
220	39+50, 71' RT

ROAD WORK
(MANHOLE COVER TYPE 57)

CATEGORY 0010
ITEM NO. SPV.0060.07 (1)
UNIT PAY EACH

NO	LOCATION
228	43+29, 47' RT

ROAD WORK
(RECONSTRUCTING MANHOLES)

CATEGORY 0010
ITEM NO. 611.0420 (10)
UNIT PAY EACH

NO	LOCATION	ELEVATION EXISITNG	ELEVATION PROPOSED	WORK REQUIRED STRUCUTRE	REMARKS
111	23+56, 55' RT		**78.90**	Repair three courses	Use salvaged cover
223	39+94, 44' RT	70.36	**70.67**	Repair three courses	Use salvaged cover
238	53+30, 52' RT	82.91	**82.74**	Repair four courses	Use salvaged cover
248	59+59, 31' RT	86.60	**86.58**	Repair four courses	Use salvaged cover
255	64+81, 34' RT	89.00	**89.32**	Repair four courses	Use salvaged cover
260	67+24, 21' LT	86.32	**86.14**	Repair four courses	Use salvaged cover
262	70+02, 21' LT	76.61	**77.09**	Repair three courses	Use salvaged cover
276	80+31, 27' RT	61.96	**62.15**	Reconstruct	Use salvaged cover
277	80+41, 29' LT	61.99	**62.69**	Reconstruct	Use salvaged cover
10102	21+65, 18' LT	81.15	**62.69**	Reconstruct and reposition cover away from curbline	Use salvaged cover

ROAD WORK
**(CONSTRUCTION STAKING STORM SEWER SYSTEM)

CATEGORY 0010
ITEM NO. 650.4000 **TOTAL OF 76**
UNIT PAY EACH

**QUANTITIES SHOWN ELSEWHERE

ROAD WORK
(PAVEMENT MARKING)

CATEGORY 0010

ITEM NO.	PAVEMENT MARKING EPOXY 4-INCH 646.0106	PAVEMENT MARKING EPOXY 6-INCH 646.0116	PAVEMENT MARKING EPOXY 8-INCH 646.0126	PAVEMENT MARKING ARROWS EPOXY TYPE 2 647.0166	PAVEMENT MARKING ARROWS BIKE LANE EPOXY 647.0206	PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY 647.0306	PAVEMENT MARKING WORDS EPOXY 647.0356	PAVEMENT MARKING STOPLINE EPOXY 24-INCH 647.0576	PAVEMENT MARKING CROSSWALK EPOXY 12-INCH 647.0776
UNIT PAY	LF	LF	LF	LF	EACH	EACH	EACH	LF	LF
LOCATION									
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87	7,794	1,904	3,282	7	5	5	7	984	3,738

ROAD WORK
(TEMPORARY TRAFFIC CONTROL)

CATEGORY 0010

ITEM	SIZE	DESCRIPTION	STAGE 1	STAGE 2	TOTAL
R3-1	36"x36"	"NO RIGHT TURN"	5		5
R3-2	36"x36"	"NO LEFT TURN"	3		3
R3-7L	36"x36"	"LEFT LANE MUST TURN LEFT"	1	1	2
R3-8B	30"x48"			3	3
R4-7A	36"x48"	"KEEP RIGHT"	34	30	64
R5-1	36"x36"	"DO NO ENTER"	7	4	11
R6-1L	30"x48"	"ONE WAY" (LEFT)	1	1	2
R6-1R	24"x48"	"ONE WAY" (RIGHT)	1	1	2
R11-2	48"x30"	"ROAD CLOSED"	23	23	46
R11-4	30"x48"	"ROAD CLOSED TO THRU TRAFFIC"	4	5	9
WO1-3L	48"x48"		3	5	8
WO1-3R	48"x48"		6	6	12
WO1-6L	24"x48"		9	16	25
WO1-6R	24"x48"		11	6	17
WO1-7	24"x48"		9	20	29
WO4-2L	48"x48"	PAVEMANT WIDTH TRANSITION (LEFT)	7	14	21
WO4-2R	30"x30"	PAVEMANT WIDTH TRANSITION (RIGHT)	8	6	14
WO9-3A	48"x48"		3		3
WO12-1	48"x48"		2	1	3
WO13-1	24"x12"	"SPEED ADVISORY"		2	2
WO20-1	48"x48"	"ROAD WORK AHEAD"	20	20	40
WO20-3	48"x48"	"ROAD CLOSED AHEAD"	4		4
WO20-5	48"x48"	"CENTER LANE CLOSED AHEAD"	1		1
WO20-5A	48"x48"	'RIGHT TWO LANES CLOSED 500 FT"	1		1
WO20-5L	48"x48"	'LEFT LANE CLOSED AHEAD"	3	8	11
WO20-5R	48"x48"	'RIGHT LANE CLOSED AHEAD"	7	6	13
FMS-5	36"x48"		5		5
		643.0900 TOTAL	178 20470 (DAYS)	178 20292 (DAYS)	356 40762 (DAYS)

TRAFFIC CONTROL, SIGNS
FIXED MESSAGE

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

3

ROAD WORK
(TEMPORARY TRAFFIC CONTROL)

CATEGORY 0010

ITEMS	STAGE 1		STAGE 2		TOTAL	
	(EACH)	(DAYS)	(EACH)	(DAYS)		
# TRAFFIC CONTROL DRUMS (643.0300)	580	66700	568	64752	131452	DAYS
## TRAFFIC CONTROL BARRICADES, TYPE III (643.0420)	583	67045	285	32490	99535	DAYS
TRAFFIC CONTROL WARNING LIGHTS, TYPE "A" (FLASHING) (643.0705)	1166	134090	570	64980	199070	DAYS
TRAFFIC CONTROL WARNING LIGHTS, TYPE "C" (STEADY) (643.0715)	580	66700	568	64752	131452	DAYS
### TEMPORARY PAVEMENT MARKING						
TRAFFIC CONTROL, FLEXIBLE TUBULAR POSTS (643.0500)	512	EACH	430	EACH	942	EACH
TRAFFIC CONTROL, FLEXIBLE TUBULAR BASES (643.0600)	512	EACH	430	EACH	942	EACH
WHITE, REFLECTIVE PAINT 4-INCH (649.0200)	7324	LF	0	LF	7324	LF
YELLOW, REFLECTIVE PAINT 4-INCH (649.0200)	13968	LF	0	LF	13968	LF
WHITE, REMOVABLE TAPE 4-INCH (649.0400)	9659	LF	16964	LF	26623	LF
YELLOW, REMOVABLE TAPE 4-INCH (649.0400)	11768	LF	21924	LF	33692	LF
WHITE, REMOVABLE TAPE 8-INCH (649.0801)	2633	LF	2570	LF	5203	LF
WHITE, STOP LINE REMOVABLE TAPE 24-INCH (649.1400)	181	LF	211	LF	392	LF
ARROWS, REMOVABLE TAPE (649.1800)	34	EACH	33	EACH	67	EACH
WORDS, REMOVABLE TAPE (649.2000)	34	EACH	33	EACH	67	EACH

\# ALL DRUMS HAVE STEADY BURNING YELLOW LIGHTS (LIGHTS ARE TO BE PAID FOR SEPERATLY UNDER THEIR APPROPRIATE BID ITEM)

\## ALL TYPE III BARRICADES HAVE TWO (2) FLASHING YELLOW LIGHTS (LIGHTS ARE TO BE PAID FOR SEPERATLY UNDER THEIR APPROPRIATE BID ITEM)

WHEN PLACING TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, THE TAPE SHALL BE SLICED OR CUT ACROSS IT'S WIDTH EVERY TWENTY FIVE FEET

ALL TEMPORARY PAVEMENT MARKINGS MUST BE REMOVED PRIOR TO FINAL ACCEPTANCE OF PROJECT

3

ROAD WORK
(EARTH WORK SUMMARY)

CATEGORY 0010

FROM/To STATION	LOCATION	EXCAVATION COMMON (1) (ITEM # 205.0100)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6)	MASS ORDINATE +/- (7)	WASTE	BORROW (8)
		CUT (2)	EBS EXCAVATION (3)				1.20 FACTOR			
		CY	CY	CY	CY	CY	CY	CY	CY	CY
15+00 to 85+50	S. 27th St.	39392	5900	25400	13992	1591	1909	12083	37483	0

1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION IS UNDISTRIBUTED AND IS TO BE BACKFILLED WITH BASE AGGREGATE DENSE 1¼-INCH AS DIRECTED BY THE ENGINEER**
4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
6) EXPANDED FILL. FACTOR = 1.20
7) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL.
8) TO BE BID AS PART OF BASE AGGREGATED DENSE 1-1/4"

SEE SECTION 9 OF PLANS FOR CUT & FILL QUANTITIES

**QUANTITIES SHOWN ELSEWHERE

ROADWORK

**(CITY UNDERGROUND CONDUIT)

CATEGORY 0010

LOCATION	ABANDON MANHOLES 204.0250 EACH	ADJUSTING TES MANHOLE COVERS SPV.0060.48 EACH	INSTALLING CONDUIT INTO EXISTING MANHOLE SPV.0060.49 EACH	4' DIAMETER MANHOLE TPYE TES SPV.0060.50 EACH	4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES SPV.0060.51 EACH
MANHOLE 606 - STA 33 + 60.0, 24.5 RT		1		1	
MANHOLE 607 - STA 34 + 92.6, 7.0 LT	1				
MANHOLE 608 - STA 38 + 39.3, 7.9 LT	1				
MANHOLE 609 - STA 39 + 19.5, 22.3 RT		1		1	
MANHOLE 610 - STA 39+ 37.9, 70.8 LT		1 NEW COVER	1		
MANHOLE 611 - STA 20 + 69.0, 30.2 LT		1			1
MANHOLE 612 - STA 40+ 44.5, 71.8 LT		1 NEW COVER			
MANHOLE 613 - STA 43 + 78.9, 66.8 LT	1				
MANHOLE 614 - STA 46 + 44.0, 16.5 RT		1		1	
MANHOLE 615 - STA 46 + 73.0, 8.3 LT	1				
MANHOLE 616 - STA 46 + 73.3, 62.7 LT	1				
MANHOLE 617 - STA 50 + 23.9, 8.1 LT	1				
MANHOLE 618 - STA 53 + 60.0, 16.5 RT		1		1	
MANHOLE 619 - STA 53 + 75.0, 7.4 LT	1				
MANHOLE 620 - STA 56 + 87.5, 8.6 LT					
MANHOLE 621 - STA 59 + 38.5, 16.5 RT		1		1	
MANHOLE 622 - STA 60 + 00.5, 7.5 LT	1				
MANHOLE 623 - STA 62 + 44.7, 7.1 LT	1				
MANHOLE 624 - STA 64 + 85.2, 6.9 LT	1				
MANHOLE 625 - STA 66 + 12.6, 6.9 LT	1				
MANHOLE 626 - STA 66 + 12.2, 22.5 RT					1
MANHOLE 627 - STA 66 + 50.4, 18.5 RT		1 NEW COVER	1		
MANHOLE 628 - STA 67 + 03.3, 53.5 RT		1 NEW COVER			
MANHOLE 629 - STA 70 + 26.9, 55.1 RT		1 NEW COVER		1	
MANHOLE 630 - STA 71 + 38.9, 50.1 RT		1 NEW COVER		1	
MANHOLE 631 - STA 73 + 49.7, 53.9 RT		1 NEW COVER	1		
MANHOLE 632 - STA 76 + 00.6, 53.8 RT		1 NEW COVER	1		
MANHOLE 634 - STA 79 + 70.6, 57.0 LT	1				
MANHOLE 635 - STA 79 + 71.2, 25.3 LT	1				
MANHOLE 636 - STA 75 + 85.0, 26.0 LT		1		1	
MANHOLE 637 - STA 75 + 85.0, 26.0 LT		1 NEW COVER	1		
TOTAL	13	16	5	8	2

ROAD WORK

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)

CATEGORY 0010

ITEM NO. 650.4000 **TOTAL OF 26**

UNIT PAY EACH

3

**QUANTITIES SHOWN ELSEWHERE

ROAD WORK

**(CITY UNDERGROUND CONDUIT)

CATEGORY 0010

LOCATION	SAWING CONCRETE ENCASED DUCT PACKAGE SPV.0060.52 EACH	1-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.06 LF	2-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.07 LF	3-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.08 LF	4-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.09 LF	6-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.10 LF	7-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.11 LF	8-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.12 LF
MH 606 to STA 33 + 97.0, 80.0 LT					134			
MH 606 to STA 35 + 91.0, 24.5 RT							229	
STA 35 + 91.0, 24.5 RT to PROPOSED VAULT	13							
STA 35 + 91.0, 24.5 RT to MH 609					327			
MH 609 to MH 610					92			
MH 609 to MH 611						113		
MH 611 to STA 46 + 31.5, 16.5 RT						593		
STA 46 + 31.5, 16.5 RT to STA 46 + 26.5, 62.0 LT			82					
STA 46 + 31.5, 16.5 RT to MH 614								11
MH 614 to STA 46 + 44.0, 63.0 RT			45					
MH 614 to MH 618						712		
MH 618 to STA 53 + 60.0, 51.9 RT				33				
STA 53 + 60.0, 51.9 RT to PROPOSED VAULT		12						
MH 618 to MH 621						575		
MH 621 to STA 59 + 32.0, 50.2 LT			66					
MH 621 TO STA 59 + 41.9, 61.0 RT			42					
MH 621to MH 626						670		
MH 626 to MH 634						34		
MH 634 to STA 66 + 50, 77.5 RT					58			
MH632 to MH 633						78		
MH 633 to STA 75 + 52.8, 38.0 LT						80		
STA 78 + 22.8, 38.0 LT to MH 636						153		
MH 636 to STA 79 + 71.4, 96.0 LT	1		52					
MH 636 to MH 637						509		
TOTAL	14	12	287	33	611	3,517	229	11

**QUANTITIES SHOWN ELSEWHERE

ROAD WORK
(STREETSCAPING)

CATEGORY 0020

LOCATION	ITEM NO. / UNIT PAY	**MULCHING 627.0200 SY	JAPANESE TREE LILAC B&B 3" CAL 632.0101.01 EACH	ADIRONDACK CRABAPPLE B&B 3" CAL 632.0101.02 EACH	SHADEMASTER HONEYLOCUST' B&B 3" CAL 632.0101.03 EACH	CALLERY PEAR B&B 3" CAL 632.0101.04 EACH	CRIMSON SPIRE ENGLISH OAK B&B 3" CAL 632.0101.05 EACH	ANNABELLE HYDRANGEAS CG #5 632.0201.01 EACH	"COOL SPLASH" HONEYSUCKLE CG #5 632.0201.02 EACH	GROW LOW SUMAC CG #3 632.0201.03 EACH	RED KNOCKOUT ROSES CG #5 632.0201.04 EACH	YELLOW KNOCKOUT ROSES CG #5 632.0201.05 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		30	2	2	4	3	8	7	6	9	7	10

ROAD WORK
(STREETSCAPING)

CATEGORY 0020

LOCATION	ITEM NO. / UNIT PAY	PLANTING SOIL SPV.0035.01 CY	GIANT BLUE HOSTAS CG #1 SPV.0060.24 EACH	**BLUE WONDER CATMINT CG #1 SPV.0060.25 EACH	DWARF DAYLILLIES CG #1 SPV.0060.26 EACH	**BECKY SHASTA DAISY CG #1 SPV.0060.27 EACH	ORNAMENTAL GRASS CG #5 SPV.0060.28 EACH	DAFFODIL BULB 3" x 3" SPV.0060.29 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		20	12	36	66	36	24	500

COMMUNITY SENSITIVE DESIGN

CATEGORY 0020

LOCATION		ITEM NO. / UNIT PAY **COLORED CONCRETE PAVEMENT 8 1/2-INCH SPV.0180.02 SY
W Howard Av Intersection		
Crosswalk @ Sta. 23+37	LT	40
W Morgan Av Intersection	LT	220
	SUBTOTAL	260
W Howard Av Intersection		
Crosswalk @ Sta. 23+37	RT	40
W Morgan Av Intersection	RT	210
	SUBTOTAL	250
	GRAND TOTAL	510

**QUANTITIES SHOWN ELSEWHERE

3

PAVEMENT - PARKING

CATEGORY 0030

LOCATION		ITEM NO. 204.0100 REMOVING PAVEMENT UNIT PAY SY	ITEM NO. 415.0085 CONCRETE PAVEMENT 8 1/2-INCH UNIT PAY SY
STA. 15+00 to STA. 20+00	LT	2600	2580
STA. 20+00 to STA. 26+00	LT	2,690	2420
STA. 26+00 to STA. 32+00	LT	3,050	3020
STA. 32+00 to STA. 38+00	LT	4,140	3630
STA. 38+00 to STA. 44+00	LT	4640	4070
STA. 44+00 to STA. 50+00	LT	2,960	3030
STA. 50+00 to STA. 56+00	LT	2,910	2770
STA. 56+00 to STA. 62+00	LT	2,910	2720
STA. 62+00 to STA. 68+00	LT	3,100	2860
STA. 68+00 to STA. 74+00	LT	2,060	2370
STA. 74+00 to STA. 79+50	LT	2240	1850
STA. 79+50 to STA. 85+16	LT	3180	3010
STA. 1'L'+25 to STA. 6'L'+87.	LT	1960	1825
	SUBTOTAL	38,440	36,155
STA. 15+00 to STA. 20+00	RT	2180	2050
STA. 20+00 to STA. 26+00	RT	3050	2840
STA. 26+00 to STA. 32+00	RT	3140	2860
STA. 32+00 to STA. 38+00	RT	3350	3210
STA. 38+00 to STA. 44+00	RT	3550	3400
STA. 44+00 to STA. 50+00	RT	2980	2790
STA. 50+00 to STA. 56+00	RT	3000	2760
STA. 56+00 to STA. 62+00	RT	3050	2790
STA. 62+00 to STA. 68+00	RT	3890	3380
STA. 68+00 to STA. 74+00	RT	3480	2910
STA. 74+00 to STA. 79+50	RT	1890	1490
STA. 79+50 to STA. 85+16	RT	2240	2140
STA. 1'L'+25 to STA. 6'L'+87.	RT	1960	1825
	SUBTOTAL	37,760	34,445
	GRAND TOTAL	**76,200**	**70,600**

CSS OKLAHOMA & KINNICKINNIC AVE

CATEGORY 0040

LOCATION		ITEM NO. 652.0225 **CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH UNIT PAY LF	ITEM NO. SPV.0180.02 **COLORED CONCRETE PAVEMENT 8 1/2-INCH UNIT PAY SY
W Oklahoma Av Intersection	LT	0	210
W Kinnickinnic River Pkwy Intersection	LT	0	190
W Oklahoma AV to Kinnickinnic River Pkwy		45	0
	SUBTOTAL	45	400
W Oklahoma Av Intersection	RT	0	250
W Kinnickinnic River Pkwy Intersection	RT	0	180
W Oklahoma AV to Kinnickinnic River Pkwy		45	0
	SUBTOTAL	45	430
	GRAND TOTAL	90	830

STRUCTURE B-40-0438 (BRIDGE)

CATEGORY 0050

LOCATION	ITEM NO. SPV.0195.01 MANAGEMENT of SOILD WASTE UNIT PAY TON
STA 76+58 to STA 78+19	700

STRUCTURE B-40-0058 (CULVERT)

CATEGORY 0060

LOCATION	ITEM NO. 616.0206 FENCE CHAIN LINK 6-FT UNIT PAY LF
STA 33+75 to STA 35+50	10

**QUANTITIES SHOWN ELSEWHERE

NON PARTICIPATING - CITY OF MILWAUKEE

CATEGORY 0070

ITEM NO. UNIT PAY LOCATION		**CONCRETE SIDEWALK 5-INCH 602.0410 SF
STA. 15+00 to STA. 20+00	LT	120
STA. 20+00 to STA. 26+00	LT	330
STA. 26+00 to STA. 32+00	LT	120
STA. 32+00 to STA. 38+00	LT	20
STA. 38+00 to STA. 44+00	LT	120
STA. 44+00 to STA. 50+00	LT	40
STA. 50+00 to STA. 56+00	LT	580
STA. 56+00 to STA. 62+00	LT	0
STA. 62+00 to STA. 68+00	LT	0
STA. 68+00 to STA. 74+00	LT	540
STA. 74+00 to STA. 79+50	LT	50
STA. 79+50 to STA. 85+16	LT	0
STA. 1'L'+25 to STA. 6'L'+87.24	LT	90
	SUBTOTAL	2,010
STA. 15+00 to STA. 20+00	RT	0
STA. 20+00 to STA. 26+00	RT	420
STA. 26+00 to STA. 32+00	RT	450
STA. 32+00 to STA. 38+00	RT	450
STA. 38+00 to STA. 44+00	RT	100
STA. 44+00 to STA. 50+00	RT	0
STA. 50+00 to STA. 56+00	RT	0
STA. 56+00 to STA. 62+00	RT	0
STA. 62+00 to STA. 68+00	RT	0
STA. 68+00 to STA. 74+00	RT	0
STA. 74+00 to STA. 79+50	RT	410
STA. 79+50 to STA. 85+16	RT	0
STA. 1'L'+25 to STA. 6'L'+87.24	RT	60
	SUBTOTAL	1,890
	GRAND TOTAL	**3,900**

NON PARTICIPATING - CITY OF MILWAUKEE

**(ADJUSTING MANHOLE COVERS)

CATEGORY 0070
ITEM NO. 611.8110 (54)
UNIT PAY EACH

NO	LOCATION	PROPOSED ELEVATION	NO	LOCATION	PROPOSED ELEVATION
300	13+60, 82' LT	**95.12**	327	53+37, 21' LT	**83.04**
301	14+63, 62' RT	**92.85**	328	53+37, 59' LT	**82.76**
302	16+34, 63' RT	**88.54**	329	54+91, 23' LT	**83.88**
303	17+21, 63' RT	**86.90**	330	54+91, 43' LT	**83.40**
304	17+20, 63' LT	**86.58**	331	56+33, 45' RT	**84.26**
305	17+54, 62' LT	**85.85**	332	57+92, 45' RT	**84.92**
306	18+34, 61' RT	**84.21**	333	57+93, 41' LT	**85.04**
307	20+90, 63' LT	**80.80**	334	58+27, 43' LT	**85.20**
308	21+38, 62' LT	**79.67**	335	58+63, 40' RT	**85.57**
309	21+64, 60' RT	**81.00**	336	59+64, 43' RT	**86.44**
310	24+17, 62' LT	**78.40**	337	59+64, 42' LT	**85.69**
311	26+88, 62' LT	**76.59**	338	63+01, 41' RT	**89.76**
312	27+20, 65' RT	**76.98**	339	63+32, 43' LT	**89.41**
313	29+53, 62' LT	**74.86**	340	63+64, 41' RT	**90.11**
314	32+19, 63' LT	**73.98**	341	63+65, 43' LT	**89.42**
315	32+20, 64' RT	**73.45**	342	66+44, 41' RT	**87.80**
316	5L+30, 50.8 RT	**75.33**	343	66+69, 42' LT	**87.23**
317	35+15, 61'RT	**71.56**	344	66+68, 41' RT	**87.62**
318	37+10, 61' RT	**70.82**	345	67+31, 19' LT	**85.90**
319	39+73, 43' LT	**70.88**	346	70+11, 18' LT	**76.90**
320	39+95, 44.5' LT	**70.89**	347	71+29, 19' LT	**73.85**
321	40+03, 58.5' RT	**70.73**	348	73+40, 19' LT	**69.42**
322	43+39, 57.5' RT	**73.42**	349	73+46, 37' LT	**68.85**
323	46+67, 56' RT	**76.86**	350	73+65, 50' LT	**69.02**
324	49+34, 57' RT	**79.76**	351	75+38, 58' LT	**65.16**
325	52+10, 55' RT	**82.30**	352	80+02, 24' LT	**61.94**
326	53+36, 47' RT	**82.76**	353	83+57, 21'LT	**74.90**

NON PARTICIPATING - CITY OF MILWAUKEE

**(SALVAGED MANHOLE COVERS)

CATEGORY 0070
ITEM NO. 611.9705 (54)
UNIT PAY EACH

NO	LOCATION	NO	LOCATION
300	13+60, 82' LT	327	53+37, 21' LT
301	14+63, 62' RT	328	53+37, 59' LT
302	16+34, 63' RT	329	54+91, 23' LT
303	17+21, 63' RT	330	54+91, 43' LT
304	17+20, 63' LT	331	56+33, 45' RT
305	17+54, 62' LT	332	57+92, 45' RT
306	18+34, 61' RT	333	57+93, 41' LT
307	20+90, 63' LT	334	58+27, 43' LT
308	21+38, 62' LT	335	58+63, 40' RT
309	21+64, 60' RT	336	59+64, 43' RT
310	24+17, 62' LT	337	59+64, 42' LT
311	26+88, 62' LT	338	63+01, 41' RT
312	27+20, 65' RT	339	63+32, 43' LT
313	29+53, 62' LT	340	63+64, 41' RT
314	32+19, 63' LT	341	63+65, 43' LT
315	32+20, 64' RT	342	66+44, 41' RT
316	5L+30, 50.8 RT	343	66+69, 42' LT
317	35+15, 61'RT	344	66+68, 41' RT
318	37+10, 61' RT	345	67+31, 19' LT
319	39+73, 43' LT	346	70+11, 18' LT
320	39+95, 44.5' LT	347	71+29, 19' LT
321	40+03, 58.5' RT	348	73+40, 19' LT
322	43+39, 57.5' RT	349	73+46, 37' LT
323	46+67, 56' RT	350	73+65, 50' LT
324	49+34, 57' RT	351	75+38, 58' LT
325	52+10, 55' RT	352	80+02, 24' LT
326	53+36, 47' RT	353	83+57, 21'LT

NON PARTICIPATING - CITY OF MILWAUKEE

**(CONSTRUCTION STAKING STORM SEWER SYSTEM)

CATEGORY 0070
ITEM NO. 650.4000 **TOTAL OF 52**
UNIT PAY EACH

**QUANTITIES SHOWN ELSEWHERE

NON PARTICIPATING - CITY OF MILWAUKEE
(INTERNAL SANITARY MANHOLE SEALS)

CATEGORY 0070
ITEM NO. SPV.0060.11 (53)
UNIT PAY EACH

NO	LOCATION	REMARKS	NO	LOCATION	REMARKS
300	13+60, 82' LT	Replace if needed	327	53+37, 21' LT	Replace if needed
301	14+63, 62' RT	Replace if needed	328	53+37, 59' LT	Replace if needed
302	16+34, 63' RT	Replace if needed	329	54+91, 23' LT	Replace if needed
303	17+21, 63' RT	Replace if needed	330	54+91, 43' LT	Replace if needed
304	17+20, 63' LT	Replace if needed	331	56+33, 45' RT	Replace if needed
305	17+54, 62' LT	Replace if needed	332	57+92, 45' RT	Replace if needed
306	18+34, 61' RT	Replace if needed	333	57+93, 41' LT	Replace if needed
307	20+90, 63' LT	Replace if needed	334	58+27, 43' LT	Replace if needed
308	21+38, 62' LT	Replace if needed	335	58+63, 40' RT	Replace if needed
309	21+64, 60' RT	Replace if needed	336	59+64, 43' RT	Replace if needed
310	24+17, 62' LT	Replace if needed	337	59+64, 42' LT	Replace if needed
311	26+88, 62' LT	Replace if needed	338	63+01, 41' RT	Replace if needed
312	27+20, 65' RT	Replace if needed	339	63+32, 43' LT	Replace if needed
313	29+53, 62' LT	Replace if needed	340	63+64, 41' RT	Replace if needed
314	32+19, 63' LT	Replace if needed	341	63+65, 43' LT	Replace if needed
315	32+20, 64' RT	Replace if needed	342	66+44, 41' RT	**Do not replace seal**
316	5L+30, 50.8 RT	Replace if needed	343	66+69, 42' LT	Replace if needed
317	35+15, 61'RT	Replace if needed	344	66+68, 41' RT	Replace if needed
318	37+10, 61' RT	Replace if needed	345	67+31, 19' LT	Replace if needed
319	39+73, 43' LT	Replace if needed	346	70+11, 18' LT	Replace if needed
320	39+95, 44.5' LT	Replace if needed	347	71+29, 19' LT	Replace if needed
321	40+03, 58.5' RT	Replace if needed	348	73+40, 19' LT	Replace if needed
322	43+39, 57.5' RT	Replace if needed	349	73+46, 37' LT	Replace if needed
323	46+67, 56' RT	Replace if needed	350	73+65, 50' LT	Replace if needed
324	49+34, 57' RT	Replace if needed	351	75+38, 58' LT	Replace if needed
325	52+10, 55' RT	Replace if needed	352	80+02, 24' LT	Replace if needed
326	53+36, 47' RT	Replace if needed	353	83+57, 21'LT	Replace if needed

NON PARTICIPATING - CITY OF MILWAUKEE
(WATER SUPPLY)

CATEGORY 0070

LOCATION	ITEM NO. / UNIT PAY	ADJUST WATER BOX SPV.0060.12 EACH	ADJUST WATER MANHOLE FRAME & LID SPV.0060.13 EACH	WATER MAIN PROTECTION SPV.0060.14 EACH
STA 15+00 to STA 85+16 STA 1'L'+25 to STA 6'L'+87		127	2	27

NON PARTICIPATING - CITY OF MILWAUKEE
**(CONSTRUCTION STAKING STORM SEWER SYSTEM)

CATEGORY 0070
ITEM NO. 650.4000 **TOTAL OF 2**
UNIT PAY EACH

NON PARTICIPATING - CITY OF MILWAUKEE

CATEGORY 0070

LOCATION	ITEM NO. / UNIT PAY	JOINT SEALING SPV.0060.02 SY
STA. 15+00 to STA. 85+16		72,380

**QUANTITIES SHOWN ELSEWHERE

NON-PARTICIPATING - CITY OF MILWAUKEE
**(CITY UNDERGROUND CONDUIT)

CATEGORY 0070

LOCATION	ABANDON MANHOLES 204.0250 EACH	ADJUSTING TES MANHOLE COVERS SPV.0060.48 EACH	INSTALLING CONDUIT INTO EXISTING MANHOLE SPV.0060.49 EACH	4' DIAMETER MANHOLE TPYE TES SPV.0060.50 EACH	4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES SPV.0060.51 EACH
MANHOLE 600 - STA 13 + 19.2, 11.0 RT		1 NEW COVER	1		
MANHOLE 601 - STA 19 + 60.1, 8.8 LT	1				
MANHOLE 602 - STA 19 + 90.0, 24.5 RT		1		1	
MANHOLE 603 - STA 25 + 61.2, 8.9 LT	1				
MANHOLE 604 - STA 25 + 65.0, 24.5 RT		1		1	
MANHOLE 605 - STA 30 + 25.2, 7.2 LT	1				
TOTAL	3	3	1	2	

ROAD WORK
**(CONSTRUCTION STAKING STORM SEWER SYSTEM)
CATEGORY 0070
ITEM NO. 650.4000 **TOTAL OF 5**

3

NON-PARTICIPATING - CITY OF MILWAUKEE
**(CITY UNDERGROUND CONDUIT)

CATEGORY 0070

LOCATION	SAWING CONCRETE ENCASED DUCT PACKAGE SPV.0060.52 EACH	1-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.06 LF	2-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.07 LF	3-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.08 LF	4-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.09 LF	6-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.10 LF	7-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.11 LF	8-DUCT CONDUIT CEMENT ENCASED 4" RIGID NON-METALLIC CONDUIT DB-60 SPV0090.12 LF
MH 600 to MH 602					668			
MH 602 to STA 19 + 90.0, 66.0 RT			39					
MH 602 to MH 604					676			
MH 604 to STA 26 + 65.0, 59.0 LT			82					
MH 604 to STA 32 + 93.5, 24.5 RT					627			
STA 32 + 93.5, 24.5 RT to STA 32 + 81.0, 69.0 RT			52					
STA 32 + 93.5, 24.5 RT to MH 606						65		
STA 53 + 60.0, 51.9 RT to PROPOSED POLICE BOX			19					
MH 636 to POLICE CALL BOX			50					
TOTAL	0	0	242	0	1,971	65	0	0

**QUANTITIES SHOWN ELSEWHERE

3

ROADWORK
(BIOSWALES)

CATEGORY 0090

ITEM NO. / UNIT PAY / LOCATION	BASE AGGREGATE OPEN GRADE 310.0115 CY	PIPE UNDERDRAIN 6-INCH 612.0106 LF	PIPE UNDERDRAIN UNPERFORATED 6-INCH 612.0206 EACH	**MULCHING 627.0200 SY	RUGOSA ROSES CG #3 632.0201.06 EACH	ARTIC BLUE WILLOW CG #5 632.0201.07 EACH	DIABLO NINEBARK CG #5 632.0201.08 EACH	TIGERS EYE SUMAC CG #5 632.0201.09 EACH	RED TWIG DOGWOOD CG #5 632.0201.10 EACH	SAMBUCUS CG #5 632.0201.11 EACH	GEOTEXILE FABRIC TYPE DF SCHEDULE B 645.0112 SY	ENGINEERED SOIL SPV.0035.02 CY	BEDDING LAYER SPV.0035.03 CY
STA 16+90 to STA 17+80, Bioswale 1	34	122	28	52	0	0	11	0	0	0	27	86	17
STA 19+90 to STA 20+20, Bioswale 2	16	60	29	24	0	0	0	0	0	7	8	40	8
STA 23+43 to STA 23+88, Bioswale 3	12	39	9	18	0	0	0	0	5	0	9	30	6
STA 25+00 to STA 25+40, Bioswale 4	10	32	13	15	10	0	0	0	0	0	8	24	5
STA 26+10 to STA 26+95, Bioswale 5	23	77	9	35	10	0	9	0	0	0	17	57	11
STA 29+75 to STA 30+40, Bioswale 6	28	160	63	43	0	3	0	7	0	0	23	71	14
STA 42+10 to STA 42+50, Bioswale 7	12	34	0	19	3	5	0	0	0	0	8	31	6
STA 44+10 to STA 44+50, Bioswale 8	13	44	9	19	0	0	0	7	0	0	10	28	7
STA 48+98 to STA 49+55, Bioswale 9	12	51	0	18	9	0	0	0	0	0	12	30	6
TOTALS	160	619	160	121	32	8	20	14	5	7	129	397	80

3

ROADWORK
(BIOSWALES)

CATEGORY 0090

ITEM NO. / UNIT PAY / LOCATION	**BLUE WONDER CATMINT CG #1 SPV.0060.25 EACH	**BECKY SHASTA DAISY CG #1 SPV.0060.27 EACH	INFORMATIONAL SIGN SPV.0060.39 EACH	6-INCH CLEANOUT SPV.0060.40 EACH	BLACK EYED SUSAN CG #1 SPV.0060.41 EACH	DAYLILLIES CG #1 SPV.0060.42 EACH	PURPLE CONEFLOWER CG #1 SPV.0060.43 EACH	RUSSIAN SAGE CG #1 SPV.0060.44 EACH	KARL FOERSTER GRASS CG #1 SPV.0060.46 EACH	SWITCH GRASS CG #1 SPV.0060.47 EACH	COBBLESTONE SPV.0195.02 TON
STA 16+90 to STA 17+80, Bioswale 1	48	48		3	0	144	0	0	0	0	2
STA 19+90 to STA 20+20, Bioswale 2	0	0		3	36	0	36	24	24	0	1
STA 23+43 to STA 23+88, Bioswale 3	48	0		1	0	0	0	0	0	14	0
STA 25+00 to STA 25+40, Bioswale 4	0	0		1	24	48	0	0	0	9	2
STA 26+10 to STA 26+95, Bioswale 5	0	24	Various Locations	2	0	96	0	0	14	0	1
STA 29+75 to STA 30+40, Bioswale 6	48	24		5	24	0	0	0	0	15	1
STA 42+10 to STA 42+50, Bioswale 7	0	0		0	0	48	24	0	0	0	1
STA 44+10 to STA 44+50, Bioswale 8	48	24		1	0	0	0	0	0	9	1
STA 48+98 to STA 49+55, Bioswale 9	0	0		0	0	72	0	12	0	11	1
	192	120	14	16	84	408	60	36	38	58	10

**QUANTITIES SHOWN ELSEWHERE

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2265-08-20		
FEDERAL PROJECT NUMBER	4.01	03

PLAT OF RIGHT-OF-WAY REQUIRED FOR

SOUTH 27TH STREET

W. HOWARD AVENUE TO THE UNION PACIFIC RAILROAD

STH 241 MILWAUKEE COUNTY

CONSTRUCTION PROJECT NUMBER
2265-08-70

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
BUILDING	B	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.	**CURVE DATA**	
EASEMENT	EASE.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
NOT TO SCALE	N.T.S	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN
PROPERTY LINE	PL		
RECORDED AS	(000')		

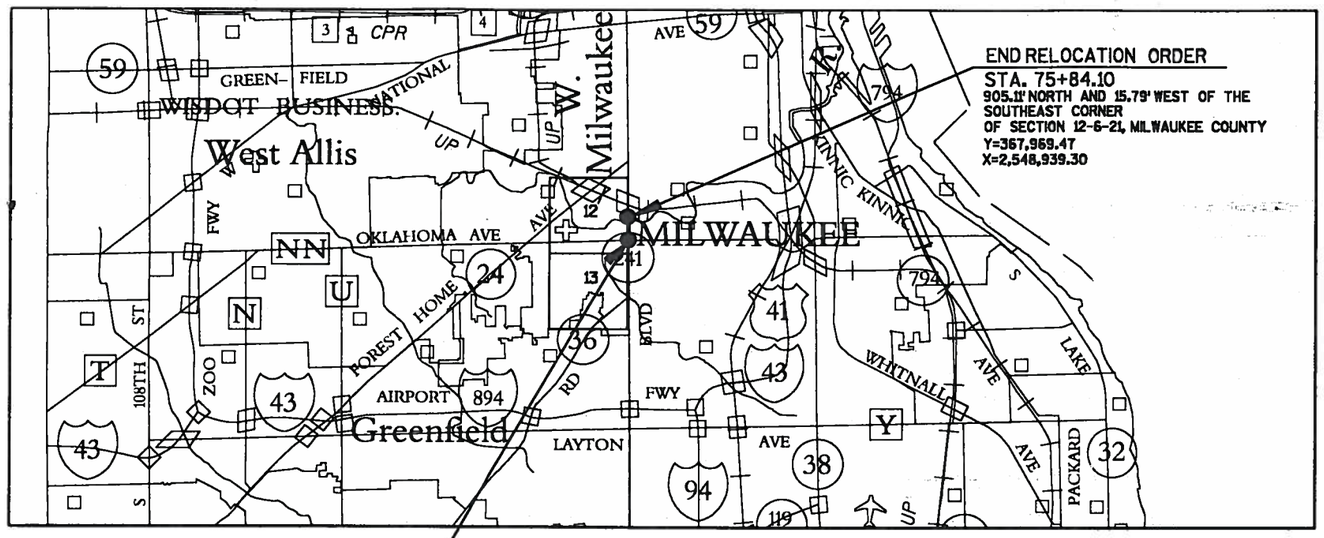
CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⅝" OR UNLESS NOTED	PROPOSED R/W LINE	
R/W MONUMENT	●(SET)	EXISTING H.E. LINE	
R/W STANDARD	▲(SET)	PROPERTY LINE	
SIGN	(SIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT	●	SLOPE INTERCEPTS	
SECTION CORNER SYMBOL		CORPORATE LIMITS	
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	41820	SECTION LINE	
UTILITY PARCEL NUMBER	04	QUARTER LINE	
PARCEL NUMBER	12	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES	—OH—	
ELECTRIC	—E—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON COMPENSABLE	COMPENSABLE
POWER POLE	●	●
TELEPHONE POLE	#	#
TELEPHONE PEDESTAL	⌘	⌘
ELECTRIC TOWER	⊠	

R21E | R22E



R21E | R22E

NOTES:
COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD (27) AND SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION TECHNICAL REPORT 7 (3RD EDITION) ADJUSTMENT. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON DETAIL SHEET. (GRID FACTOR = 0.9999240)

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER

GN

LAYOUT
SCALE 0 1.0 2.0

TOTAL NET LENGTH OF CENTERLINE = 0.171 MI.

ACCEPTED FOR
CITY OF MILWAUKEE

2/28/13 (Date)
(Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

SPANN & ASSOCIATES

WISCONSIN CHARLES A. FORMOE S-1876 MILWAUKEE, WI LAND SURVEYOR

FEB. 28, 2013 (Date)
(Signature)

REVISION DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT

DATE: N/A N/A (Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

*INDICATES COMPUTED AREA, NO TAX ROLL AREA FOUND

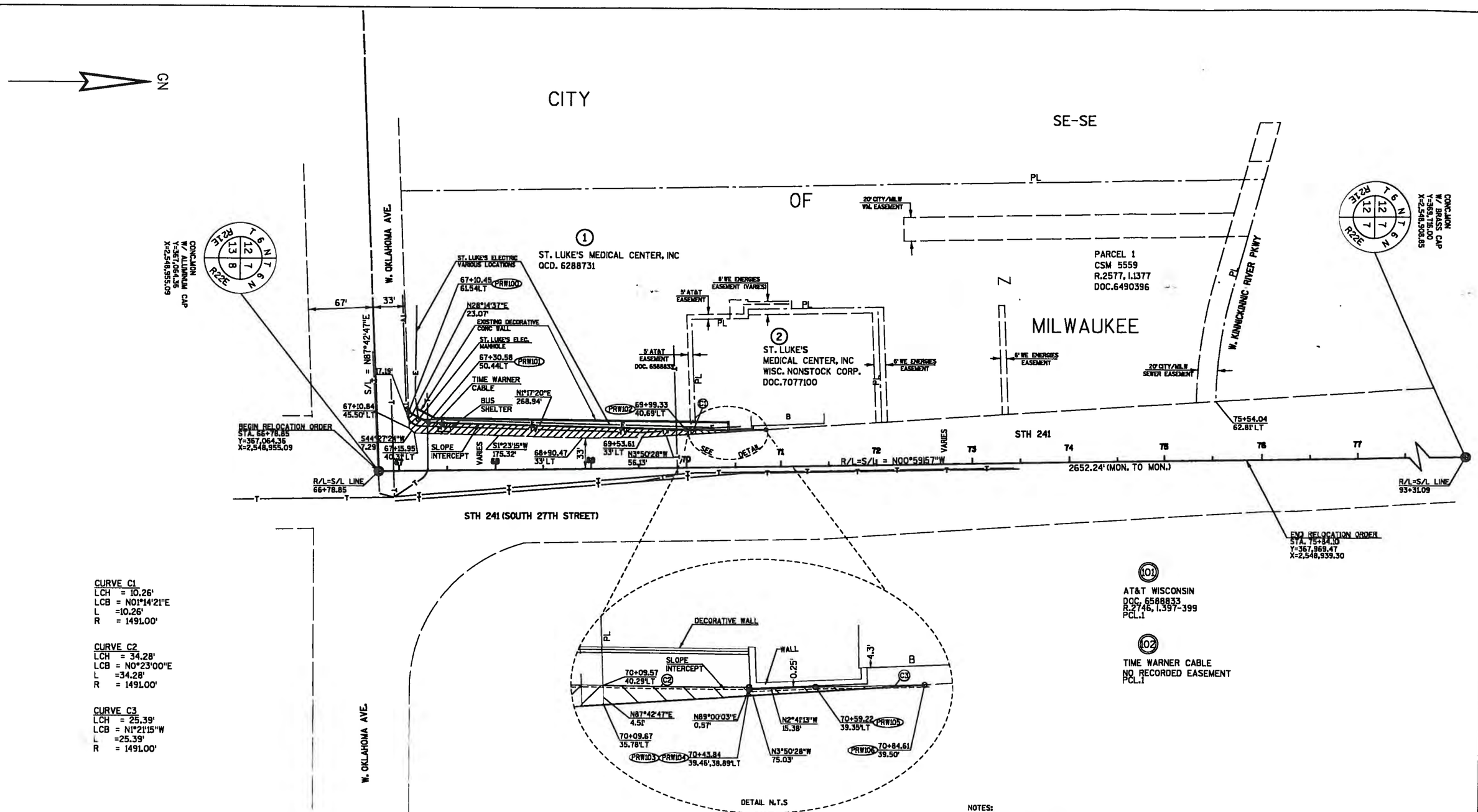
AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL AREA (ACRES)	R/W REQUIRED (S.F.)			TOTALREMAINING (ACRES)	TLE (S.F.)
					NEW	EXISTING	TOTAL		
1	4.03	ST.LUKE'S MEDICAL CENTER,INC	FEE	*4.474	3287	—	3287	4.399	—
2	4.03	ST.LUKE'S MEDICAL CENTER INC., WISCONSIN NONSTOCK CORP.	FEE	0.56	141	—	141	0.557	—
UTILITY NUMBER									
101	4.03	AT&T WISCONSIN	R.O.R						
102	4.03	TIME WARNER CABLE	R.O.R						

4

4

REVISION DATE	DATE: FEB. 28, 2013		HWY: STH 241	STATE R/W PROJECT NUMBER 2265-08-20	PLAT SHEET 4.02	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2265-08-70	PS&E SHEET 318	E



CURVE C1
LCH = 10.26'
LCB = N01°14'21"E
L = 10.26'
R = 1491.00'

CURVE C2
LCH = 34.28'
LCB = N0°23'00"E
L = 34.28'
R = 1491.00'

CURVE C3
LCH = 25.39'
LCB = N1°21'15"W
L = 25.39'
R = 1491.00'

101 AT&T WISCONSIN DOC. 6588833 R.2746, I.397-399 PCL.1

102 TIME WARNER CABLE NO RECORDED EASEMENT PCL.1

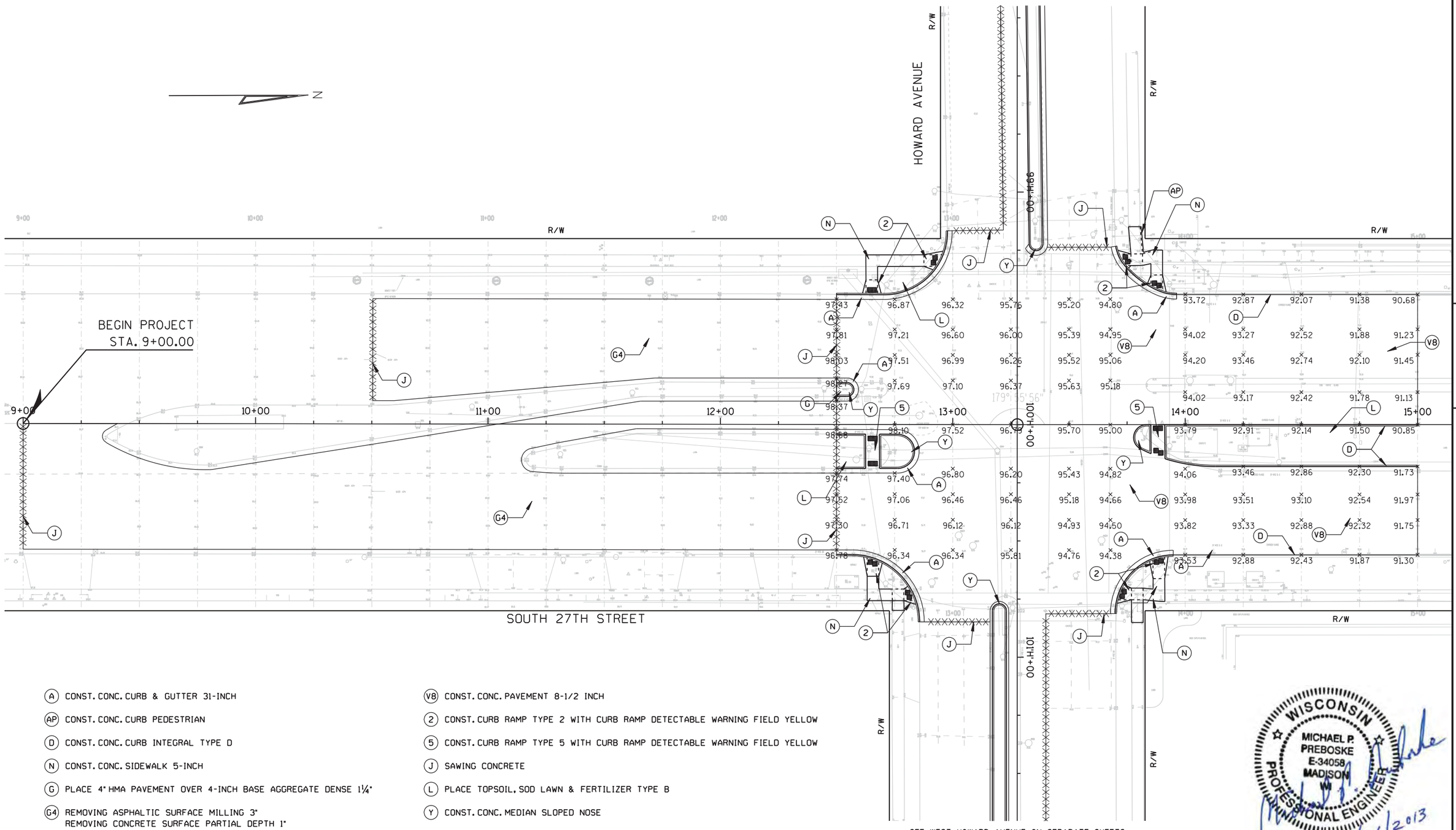
NOTES:
COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION TECHNICAL REPORT NO. 7 (3RD EDITION) ADJUSTMENT. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS SHEET.

HIGHWAY/STREET	BASIS OF EXISTING RIGHT-OF-WAY	DATE	WIDTH
STH 241 (S.27TH ST) : W. OKLAHOMA AVE. TO KINNICKINNIC RIVER PARKWAY	PROJECT T02-2(18)/2265-1-21	1970	VARIES
STH 241 (S.27TH ST)	OCD 3580048	1957	VARIES

REVISION DATE PRELIMINARY	DATE: FEB. 28, 2013	SCALE, FEET 0 100	HWY: STH 241	STATE R/W PROJECT NUMBER 2265-08-20	PLAT SHEET 4.03	
	GRID FACTOR .99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2265-08-70	PS&E SHEET 319	E

FILE NAME : C:\ProgramData\Bentley\PowerDraft V8i\WorkSpace\Projects\DOT*S-08-20-S.27TH OKLAHOMA\DGN FILES\PLAN SHEETS
PLOT DATE: 1/14/2013 PLOT BY : K_JENKINS PLOT NAME: PLOT SCALE :
STH 2412266-08-20 4.03

SEE WEST HOWARD AVENUE ON SEPARATE SHEETS



SEE WEST HOWARD AVENUE ON SEPARATE SHEETS

- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (AP) CONST. CONC. CURB PEDESTRIAN
- (D) CONST. CONC. CURB INTEGRAL TYPE D
- (N) CONST. CONC. SIDEWALK 5-INCH
- (G) PLACE 4" HMA PAVEMENT OVER 4-INCH BASE AGGREGATE DENSE 1¼"
- (G4) REMOVING ASPHALTIC SURFACE MILLING 3"
  REMOVING CONCRETE SURFACE PARTIAL DEPTH 1"
  PLACE 4" HMA PAVEMENT
- (V8) CONST. CONC. PAVEMENT 8-1/2 INCH
- (2) CONST. CURB RAMP TYPE 2 WITH CURB RAMP DETECTABLE WARNING FIELD YELLOW
- (5) CONST. CURB RAMP TYPE 5 WITH CURB RAMP DETECTABLE WARNING FIELD YELLOW
- (J) SAWING CONCRETE
- (L) PLACE TOPSOIL, SOD LAWN & FERTILIZER TYPE B
- (Y) CONST. CONC. MEDIAN SLOPED NOSE

WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER
08/26/2013

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 320 E

FILE NAME=

SEE SOUTH 27TH STREET ON SEPARATE SHEETS

N

R/W

R/W

R/W

15+00

14+00

13+00

12+00

96'H'+00

97'H'+00

98'H'+00

99'H'+00

100'H'+00

101'H'+00

102'H'

179° 15' 56"

10:1 TAPER

BEGIN CONSTRUCTION
STA. 96'H'+58.87

HOWARD AVENUE

R/W

R/W

R/W

R/W

SOUTH 27TH STREET

MATCHLINE STA. 102'H'+00

(V8) CONST. CONC. PAVEMENT 8-1/2 INCH

(V) CONST. CONC. PAVEMENT 8-1/2 INCH WITH CONC. CURB INTEGRAL TYPE D

(J) SAWING CONCRETE

(A) CONST. CONC. CURB & GUTTER 31-INCH

(C) CONST. CONC. CURB & GUTTER 19-INCH

(L) PLACE TOPSOIL, SOD LAWN & FERTILIZER TYPE B

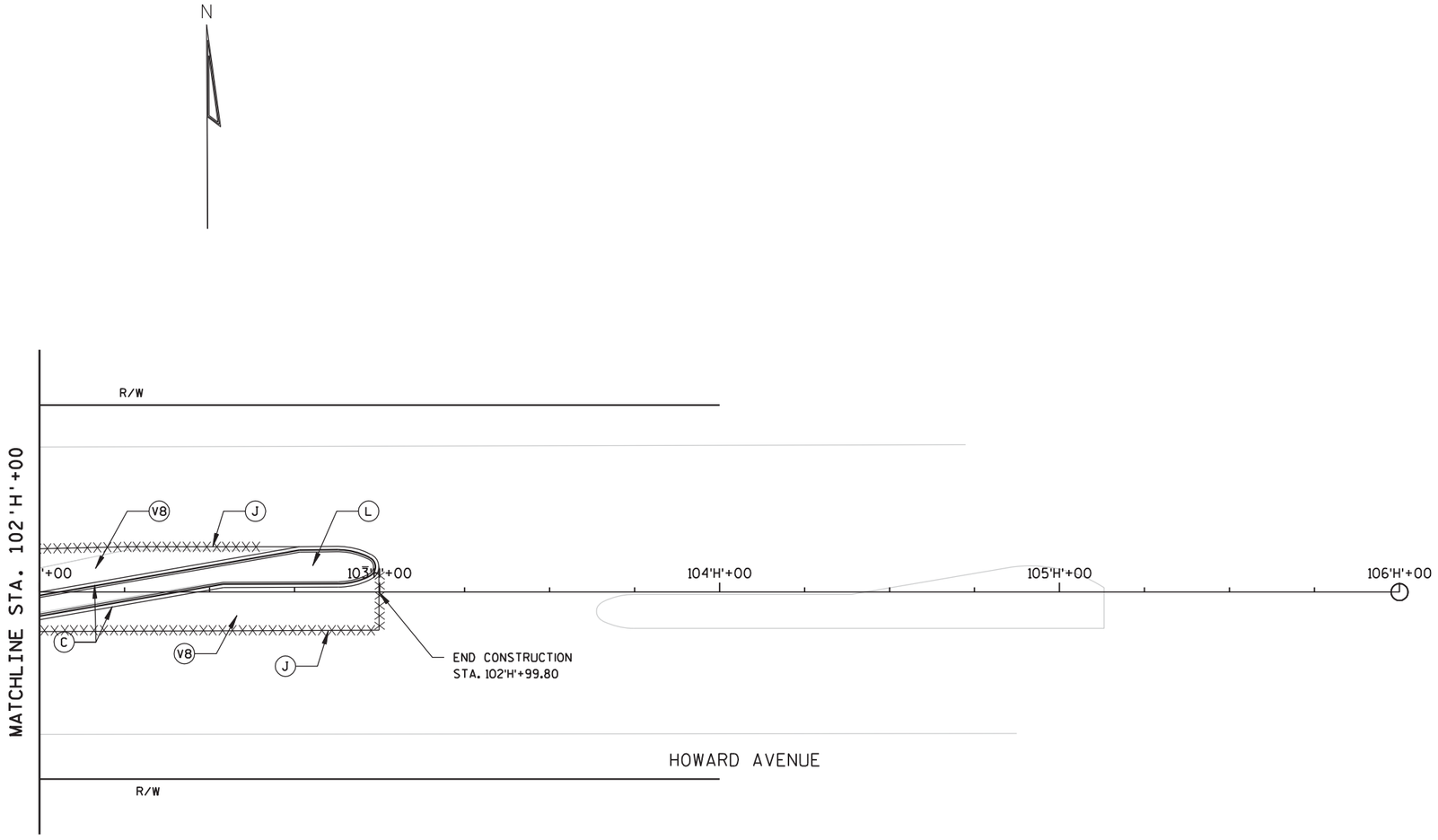
WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER

08/26/2013

SEE SOUTH 27TH STREET ON SEPARATE SHEETS

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY :MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 321	E

FILE NAME=



(V8) CONST. CONC. PAVEMENT 8-1/2 INCH

(J) SAWING CONCRETE

(C) CONST. CONC. CURB 19-INCH

(L) PLACE TOPSOIL, SOD LAWN & FERTILIZER TYPE B

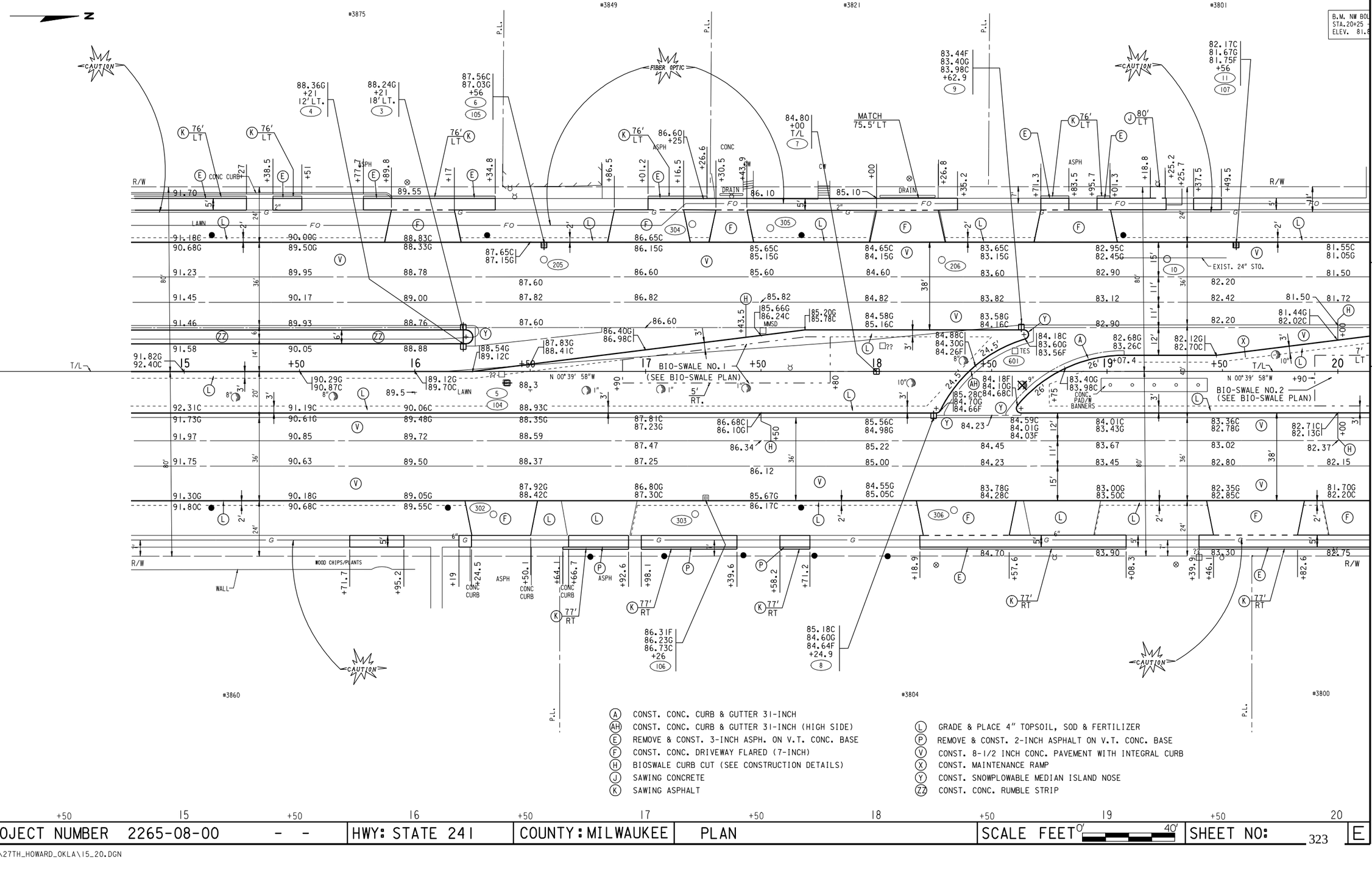
WISCONSIN
MICHAEL P. PREBOSKE
E-34058
MADISON
WI
PROFESSIONAL ENGINEER

08/26/2013

STATE PROJECT NUMBER: 2265-08-70	HWY: STH 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 322	E

FILE NAME=

SOUTH 27TH STREET

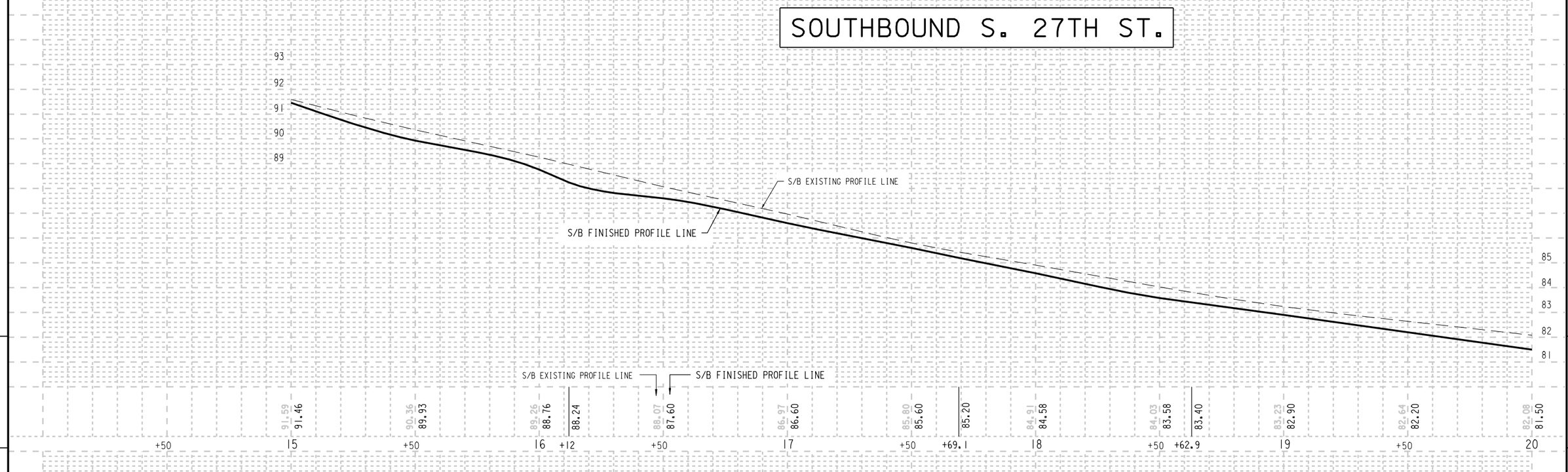


(A) CONST. CONC. CURB & GUTTER 31-INCH
(AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(H) BIOSWALE CURB CUT (SEE CONSTRUCTION DETAILS)
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
(ZZ) CONST. CONC. RUMBLE STRIP

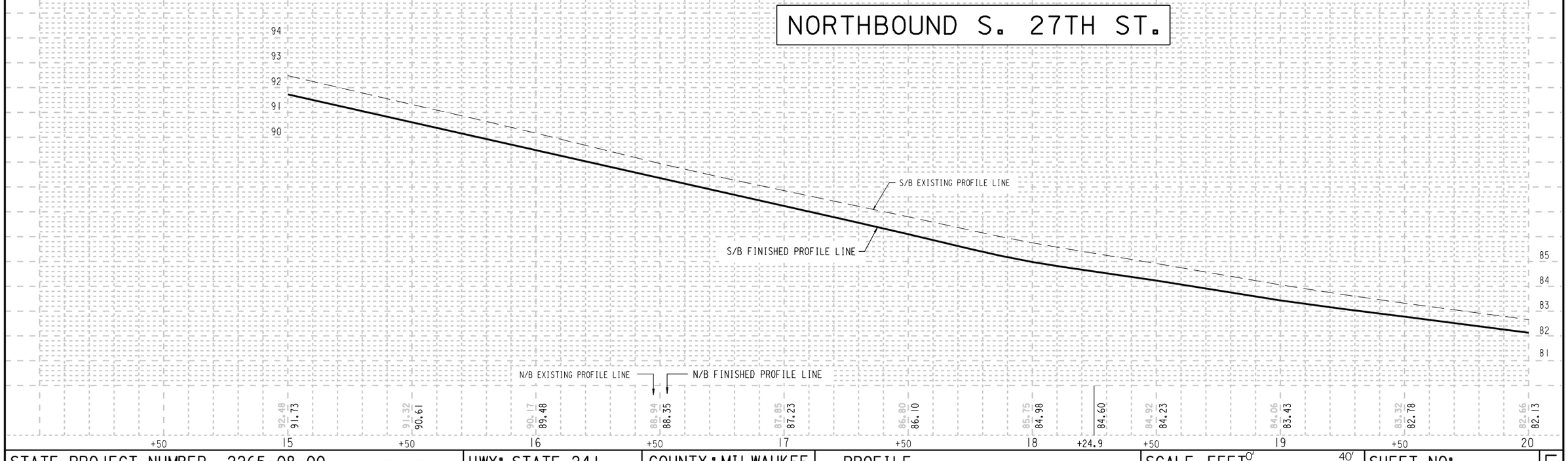
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 323 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\15_20.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 324	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\15_20.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.20+25 - 63' LT.
ELEV. 81.86

#3801 #3775-85-89-95 #2917-19 W. LOOMIS RD.

CAUTION FIBER OPTIC N

P.L. P.L.

K 76' LT K 76' LT K 76' LT

CURB CURB CURB CURB GRASS ASPH GRASS LAWN LAWN LAWN TIMBER WALL CONC CURB ASPH

+23.8 +36.2 +36.9 +64.8 +66 +66.3 +78 +86 +98 +06 +16 +42 +60 +88 80.05 +94.5 +33 +41 +86 +01.5 +24.3 +34.3

R/W

FO FO FO FO FO FO FO

80.10F/L +00 06' LT (13)

79.39F 79.35G 79.93C +23.9 (14)

78.95C 78.45G 78.51F +08 (17) (110)

77.50F/L +75 5.0' LT (20)

76.87G 77.45C +96.9 (21)

78.10 77.40

81.55C 81.05G (207) 80.85C 80.35G (208) 80.35C 79.85G 79.85C 79.35G 79.56C 79.06G EXIST. 27" STO. (16) 79.28C 78.78G 79.00C 78.50G (209) 78.72C 78.22G (310) 78.44C 77.94G 78.06C 77.56G 77.68C 77.18G 77.30C 76.80G EXIST. 36" STO. (112) 76.92C 76.42G (A21)

81.50 80.80 80.30 79.80 79.51 79.23 78.95 78.77 78.71 78.67 78.39 78.01 77.63 77.25 76.87

81.72 81.50 81.02 80.52 80.02 79.73 79.45 79.17 78.99 78.93 78.89 78.61 78.23 77.85 77.47 77.09

81.44G 82.02C 81.00F 80.98G 81.56C 80.78G 81.36C 80.28G 80.86C 79.78G 80.36C 79.49G 80.07C 79.17F 79.15G 79.73C 78.93G 79.51C 78.65G 79.23C 78.37G 78.95C 77.99G 78.57C 77.61G 78.19C 77.23G 77.81C

BIO-SWALE NO.4 (SEE BIO-SWALE PLAN)

BIO-SWALE NO.2 (SEE BIO-SWALE PLAN)

WMSD 10102 SEC LINE TES 603 113

20 +50 21 +50 22 109 +50 23 +50 24 +50 25 +50 26

82.71C 82.13G 81.71 81.28 80.85 80.45 80.05 80.44C 79.86G 79.88F 80.21C 79.63G 79.58 79.52 79.47 79.30 79.25 79.81C 79.23G 79.64C 79.06G 79.08F 78.85 78.53 78.19 77.85 77.51

82.37 81.93 81.50 81.07 80.67 80.27 79.87 79.65 79.36 78.85 78.75 78.41 78.07 77.73

82.15 81.71 81.28 80.85 80.45 80.05 79.65 79.36 78.85 78.53 78.19 77.85 77.51

81.70G 82.20C 80.83G 81.33C 80.40G 80.90C 80.00G 80.50C 79.60G 80.10C 79.20G 79.70C 78.90G 79.40C TEL 78.40G 78.90C 78.08G 78.58C 77.74G 78.24C 77.40G 77.90C 77.06G 77.56C

82.75 R/W 82.25 81.75 80.60 80.45 80.15 79.35 79.00 77.95

PLANTS PLANTS

82.33C +42.5 18' RT (12) 81.38F 81.30G 81.80C +46 (108) 80.71C 80.13G 80.15F +23.9 (15) 79.24C 78.74G +76 (18) (111) 78.29C 77.71G 77.73F +46 (19)

BIO-SWALE NO.3 (SEE BIO-SWALE PLAN)

CAUTION CAUTION

#3800 #3774 #3700 TO 3736

(7B) CONST. CURB RAMP TYPE 7B WITH DETECTABLE WARNING FIELD

(AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)

(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE

(F) CONST. CONC. DRIVEWAY FLARED (7-INCH)

(H) BIOSWALE CURB CUT (SEE CONSTRUCTION DETAILS)

(K) SAWING ASPHALT

(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER

(N) CONST. 5-INCH CONC. SIDEWALK

(P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE

(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB

(VG) CONST. 8-1/2 -INCH COLORED CONC. PAVEMENT

(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE

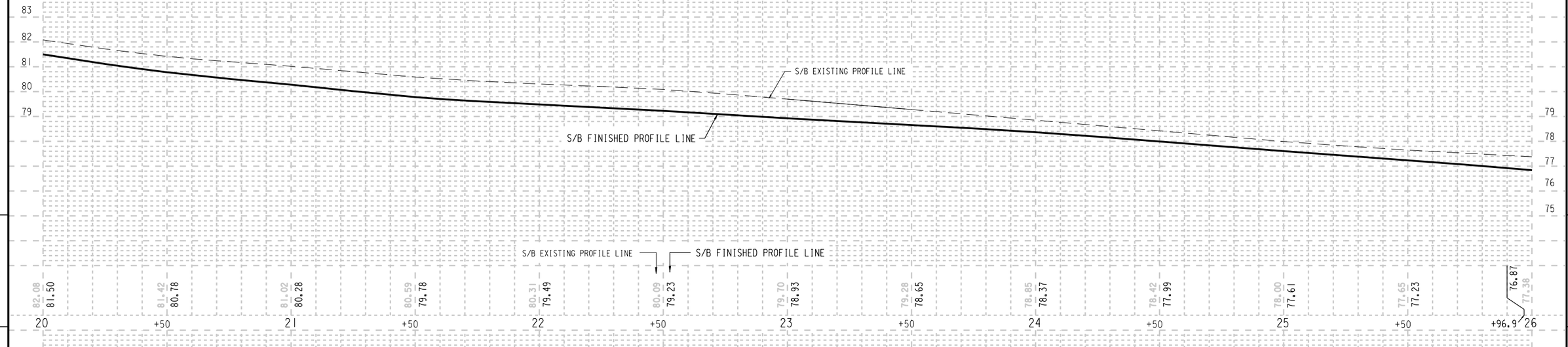
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

20 +50 21 +50 22 +50 23 +50 24 +50 25 +50 26

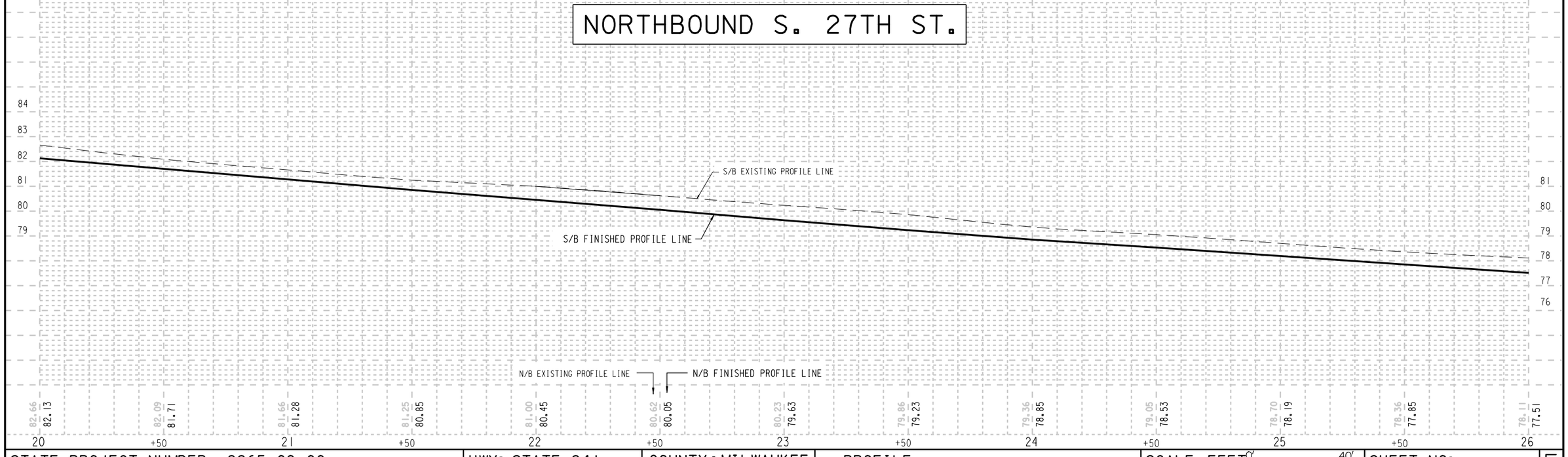
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 325 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\20_26.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 326	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\20_26.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.26+40 - 60' LT.
ELEV. 78.67

#2917-19 W. LOOMIS RD.

B.M. NW BOLT HYD SW CORNER
W. LOOMIS RD. & S. 27TH ST.
STA.32+58 - 94'LT.
ELEV. 76.85

#3605

P.L.

N

FIBER OPTIC

BIO-SWALE NO.5 (SEE BIO-SWALE PLAN)

BIO-SWALE NO.6 (SEE BIO-SWALE PLAN)

#3702

#3636

B.M. NW BOLT HYD E/S
STA.30+30 - 64' RT.
ELEV. 75.44

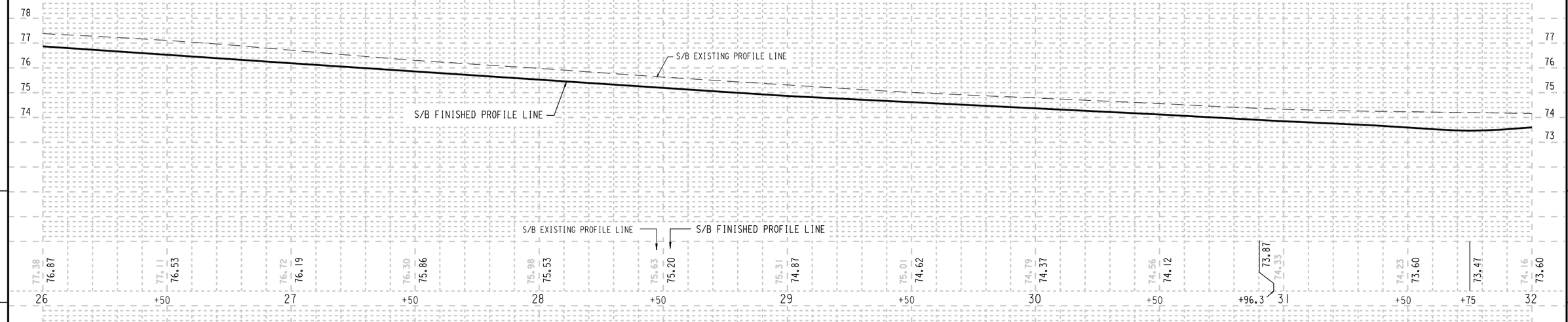
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)
- (E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
- (F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
- (H) BIOSWALE CURB CUT (SEE CONSTRUCTION DETAILS)
- (K) SAWING ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5-INCH CONC. SIDEWALK
- (V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
- (X) CONST. MAINTENANCE RAMP
- (Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

26 +50 27 +50 28 +50 29 +50 30 +50 31 +50 32

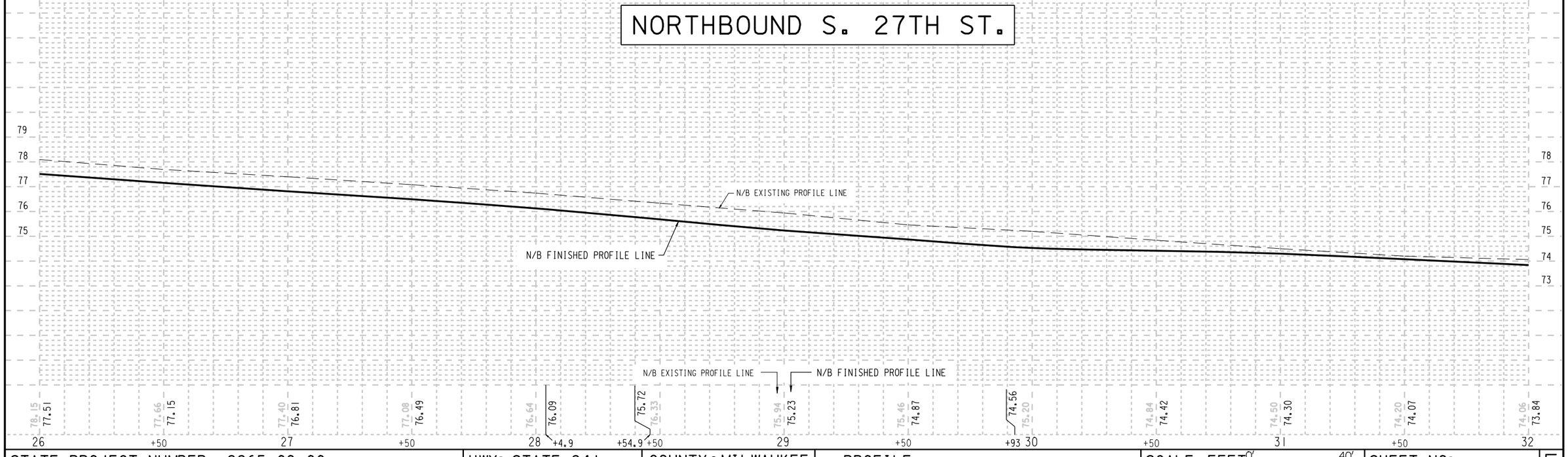
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 327 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\26_32.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 328	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\26_32.DGN

SEE WEST LOOMIS ROAD PLAN SHEET
(STA. 1'L'+25.00 TO STA. 6'L'+87.24)

STD. B.M. #340
S. 27TH ST. AND W. LOOMIS RD.
CHISELED SQUARE ON SOUTHWEST
CORNER OF CONCRETE BRIDGE.
ELEV. 73.34

SOUTH 27TH STREET

W. LOOMIS RD.

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

#3555 S. 27TH ST.

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

C.W. CTR. 46.0' R= +04.6-90.6'LT.

C.W. CTR. 08.0' R= +41.9-83.2'LT.

106.4' LT

34+71.3 132.2'LT

35+14.7 106.2'LT

35+22.2 103.3'LT

35+42.4 103.4'LT

HIGHWAY EASEMENT

BRIDGE WALL

FIBER OPTIC

CONC PAD W/ BANNERS

3-SPAN CONCRETE BOX CULVERT

EXIST. 21" STO.

EXIST. 12" STO.

CONC DRAINAGE DITCH

BRIDGE WALL

MATCH

BLDG OVERHANGS CW 6'+/-

STRUCTURE
B-40-0058

KINNICKINNIC RIVER (SOUTHEAST BRANCH)

#2536 W. WARNIMONT AVE.

#3540

#3514

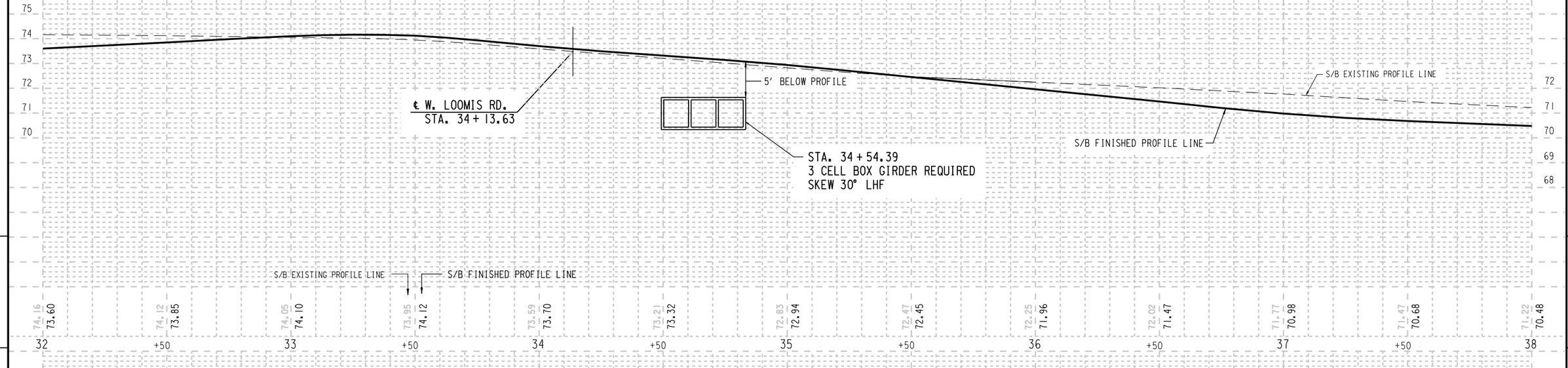
SOUTH 27TH STREET T/L = 34 + 13.63
WEST LOOMIS ROAD T/L = 6'L' + 87.24

(2) CONST. CURB RAMP TYPE 2 WITH DETECTABLE WARNING FIELD
(3) CONST. CURB RAMP TYPE 3 WITH DETECTABLE WARNING FIELD
(5) CONST. CURB RAMP TYPE 5 WITH DETECTABLE WARNING FIELD
(6) CONST. CURB RAMP TYPE 6 WITH DETECTABLE WARNING FIELD
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(T) SAWING CONCRETE AT OR NEAR BUILDING, OR WALL
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE

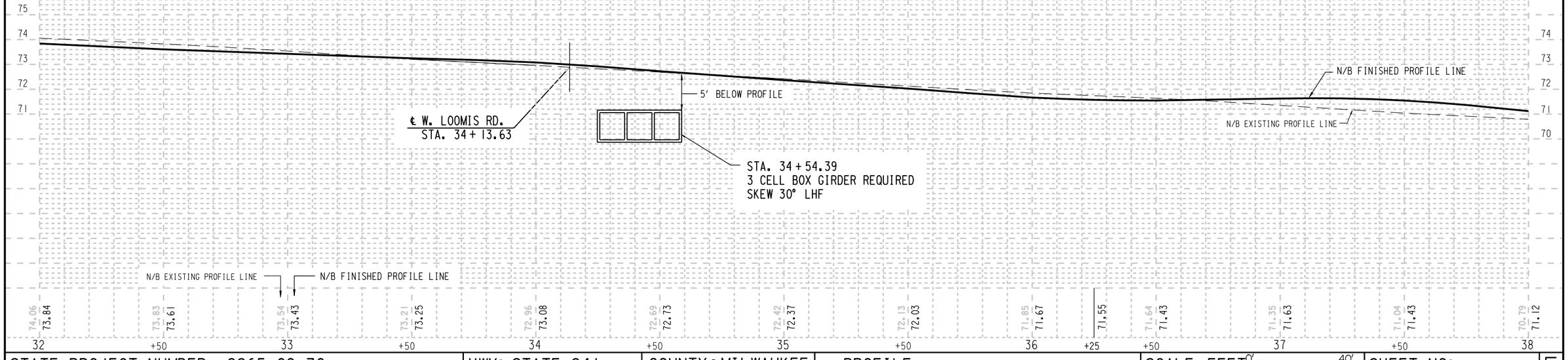
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 329 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\32_38.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 330	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\32_38.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD NW CORNER S. 27TH ST. & W. MORGAN AV. STA.40+30 - 156'LT. ELEV. 72.86

B.M. NW BOLT HYD W/S STA.43+65 - 61' LT. ELEV. 76.46

PLACE LANDMARK REFERENCE MONUMENT STA. 40 + 00.00- T/L

#3473

SEE CONST. DETAILS FOR ADDITIONAL INFORMATION ON WALKS, MEDIANS, PAVEMENT AND CURB RAMPS

SEE CONST. DETAILS FOR ADDITIONAL INFORMATION ON INTERSECTION

SEE CONST. DETAILS FOR ADDITIONAL INFORMATION ON WALKS, MEDIANS, PAVEMENT AND CURB RAMPS

BIO-SWALE NO.8 (SEE BIO-SWALE PLAN)

BIO-SWALE NO.7 (SEE BIO-SWALE PLAN)

W. MORGAN AVE.

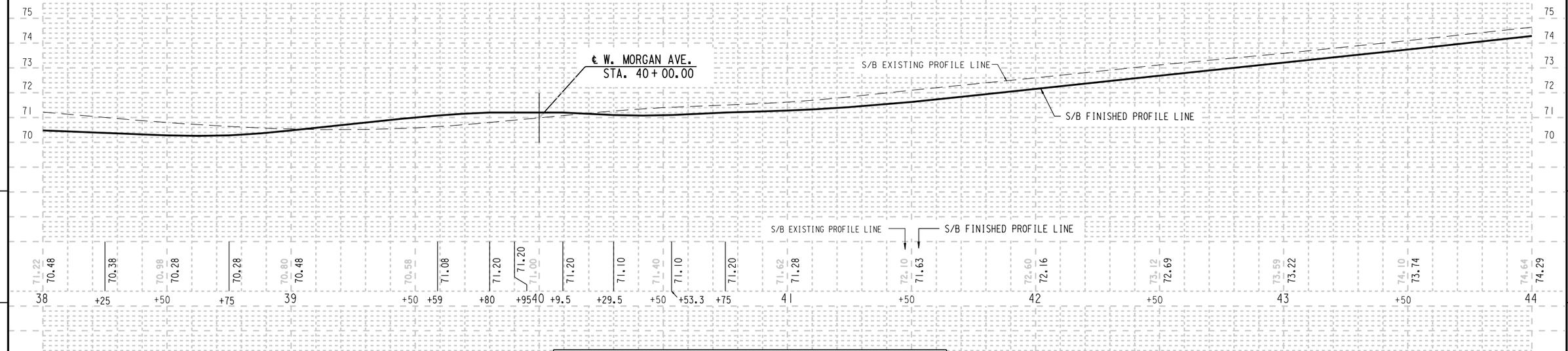
#3470 #3456 #3450 #3440

- (I) CONST. CURB RAMP TYPE I WITH DETECTABLE WARNING FIELD
- (2) CONST. CURB RAMP TYPE 2 WITH DETECTABLE WARNING FIELD
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)
- (D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
- (D7) CONST. 7 CONC. ON 6-INCH BASE AGGREGATE DENSE
- (E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
- (F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
- (G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3-INCH MIN. ASPH. OVERLAY
- (H) BIOSWALE CURB CUT (SEE CONSTRUCTION DETAILS)
- (J) SAWING CONCRETE
- (K) SAWING ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5-INCH CONC. SIDEWALK
- (N2) CONST. 2' X 2' 5-INCH CONC. SIDEWALK CUTOFF
- (P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE
- (R) SAWING CONCRETE AT BASE OF CONC. STEP
- (T) SAWING CONCRETE AT OR NEAR BUILDING, OR WALL
- (V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
- (VG) CONST. 8-1/2 -INCH COLORED CONC. PAVEMENT
- (X) CONST. MAINTENANCE RAMP
- (Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

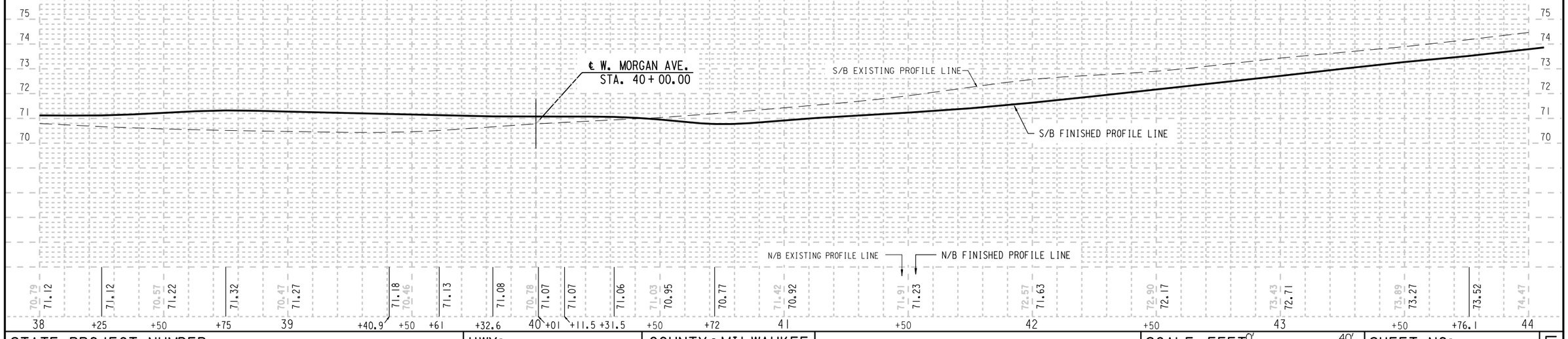
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 331 E

FILE NAME: W:\SPR\27TH HOWARD OKLA 38 44.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER	HWY:	COUNTY: MILWAUKEE		SCALE FEET 0' 40'	SHEET NO: 332	E

FILE NAME=

SOUTH 27TH STREET

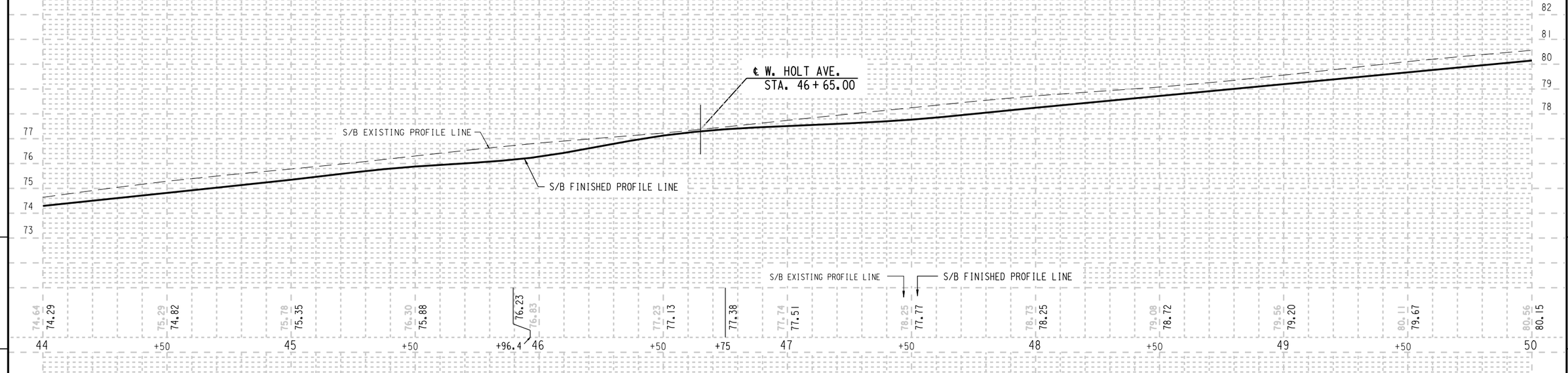
(2) CONST. CURB RAMP TYPE 2 WITH DETECTABLE WARNING FIELD
(3) CONST. CURB RAMP TYPE 3 WITH DETECTABLE WARNING FIELD
(A) CONST. CONC. CURB & GUTTER 31-INCH
(D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(H) BIOSWALE CURB CUT (SEE CONSTRUCTION DETAILS)
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(N2) CONST. 2' X 2' 5-INCH CONC. SIDEWALK CUTOFF
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE

B.M. NW BOLT HYD NE CORNER W. HOLT AV. & S. 27TH ST. STA.46+85 - 63' RT. ELEV. 78.47

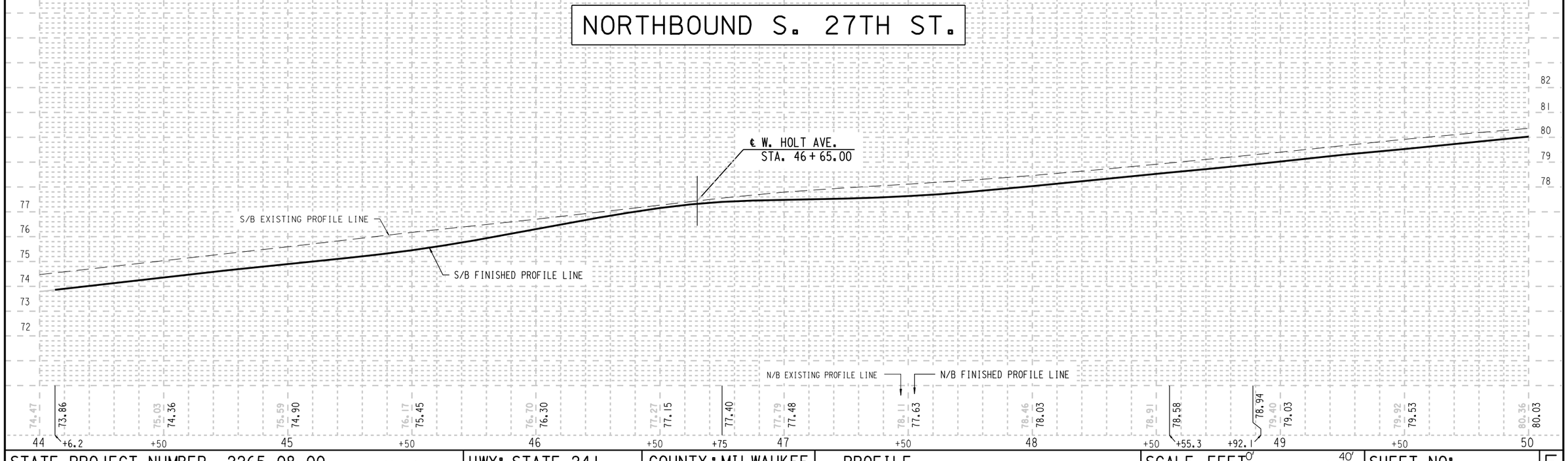
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0 40'	SHEET NO: 333 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\44_50.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 334 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\44_50.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S
STA.50+15 - 55' LT.
ELEV. 82.43

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

WALGREENS #3233

FIBER OPTIC

FIBER OPTIC

P.L.

N

W. OHIO AVE.

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

B.M. NW BOLT HYD NE CORNER
W. OHIO AV. & S. 27TH ST.
STA.53+73 - 50'RT.
ELEV. 85.13

#3334 #3300 #3270 #3246

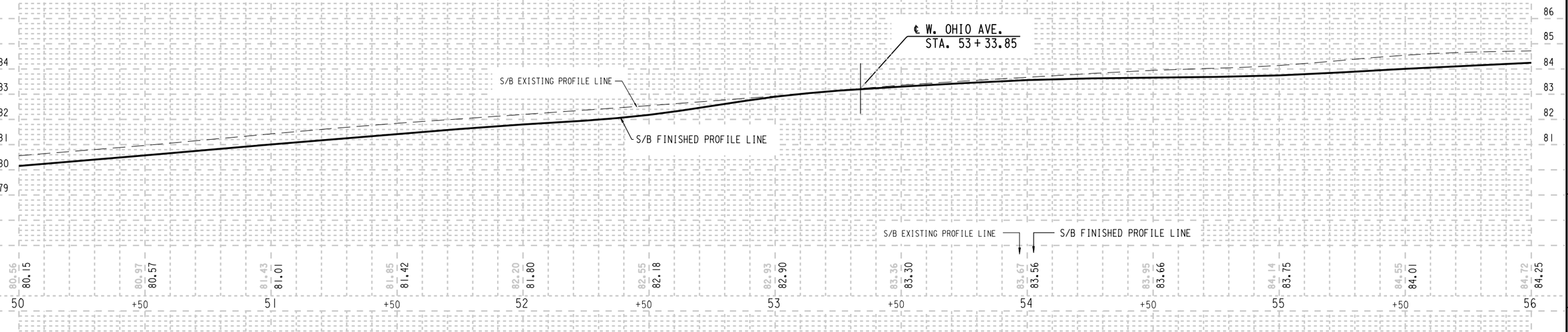
(2) CONST. CURB RAMP TYPE 2 WITH DETECTABLE WARNING FIELD
(3) CONST. CURB RAMP TYPE 3 WITH DETECTABLE WARNING FIELD
(9) CONST. CURB RAMP TYPE 9 WITH DETECTABLE WARNING FIELD
(B) CONST. CONC. CURB & GUTTER 22-INCH
(BC) CONST. CONC. CURB & GUTTER 22-INCH (COVERED FLANGE)
(D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(VA) CONST. 7-INCH CONC. ALLEY PAVEMENT
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

50 +50 51 +50 52 +50 53 +50 54 +50 55 +50 56

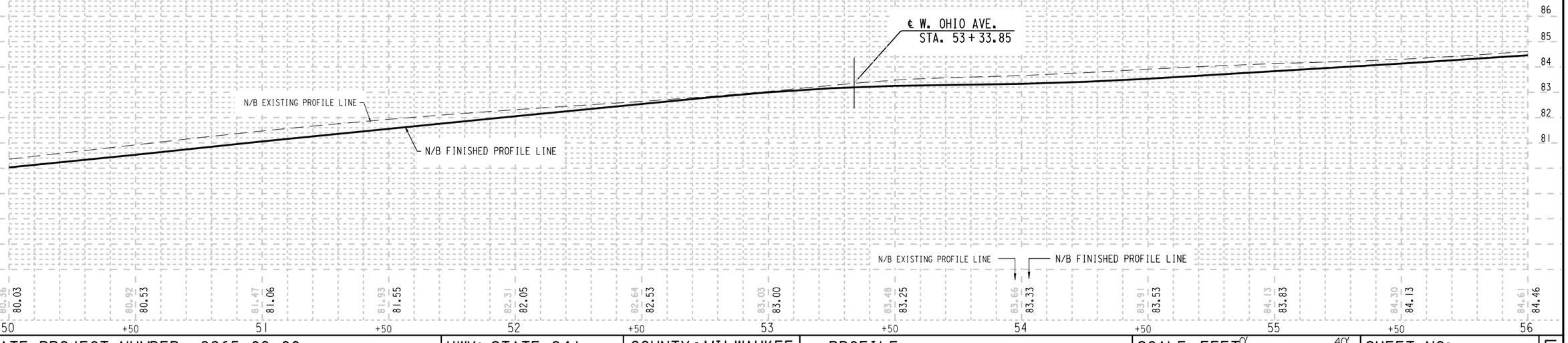
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 335	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\50_56.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 336	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\50_56.DGN

SOUTH 27TH STREET

N

#2733 W. EUCLID AVE.

#3179-81

#3165

#3236

#3232

#3178-80

#3172-74

#3168

#3164

#3158

REMOVE & DISPOSE CONC. PAD

FIBER OPTIC

CAUTION

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

PROPOSED PLANTING BED

PLANTER

CONC. WALL

CONC. PAD/W BANNERS

SAW CURB @ L/L AND REMOVE

BLOCK WALL 71' RT

CONC PATIO

COLORED CONC

EXIST. 12" STO.

EXIST. 12" STO.

W. EUCLID AVE.

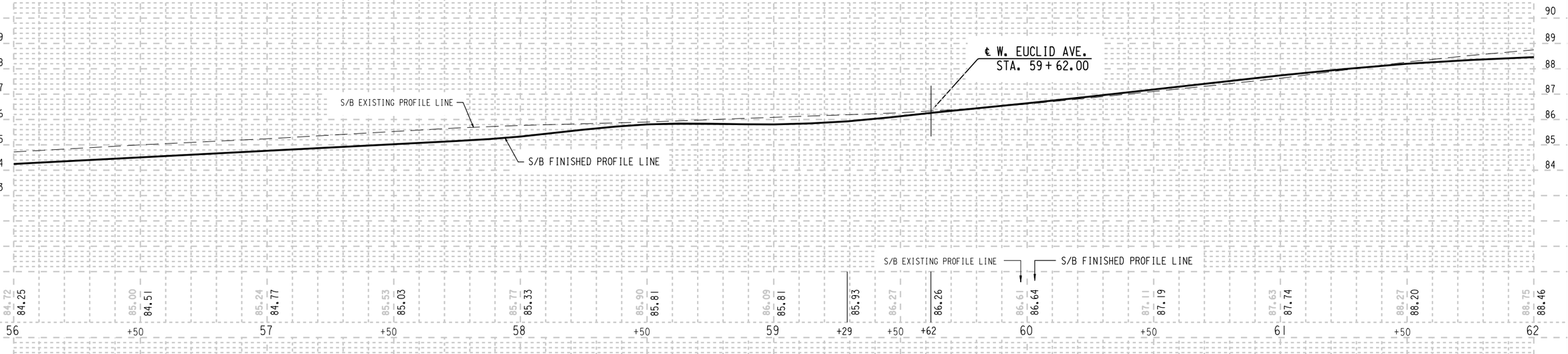
B.M. NW BOLT HYD NE CORNER S. 27TH ST. & W. OHIO AV. STA.60+01 - 50' RT. ELEV. 88.60

(9) CONST. CURB RAMP TYPE 9 WITH DETECTABLE WARNING FIELD
(A) CONST. CONC. CURB & GUTTER 31-INCH
(C) CONST. CONC. CURB & GUTTER 19-INCH
(D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(F) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3-INCH MIN. ASPH. OVERLAY
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE
(R) SAWING CONCRETE AT BASE OF CONC. STEP
(T) SAWING CONCRETE AT OR NEAR BUILDING, OR WALL
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

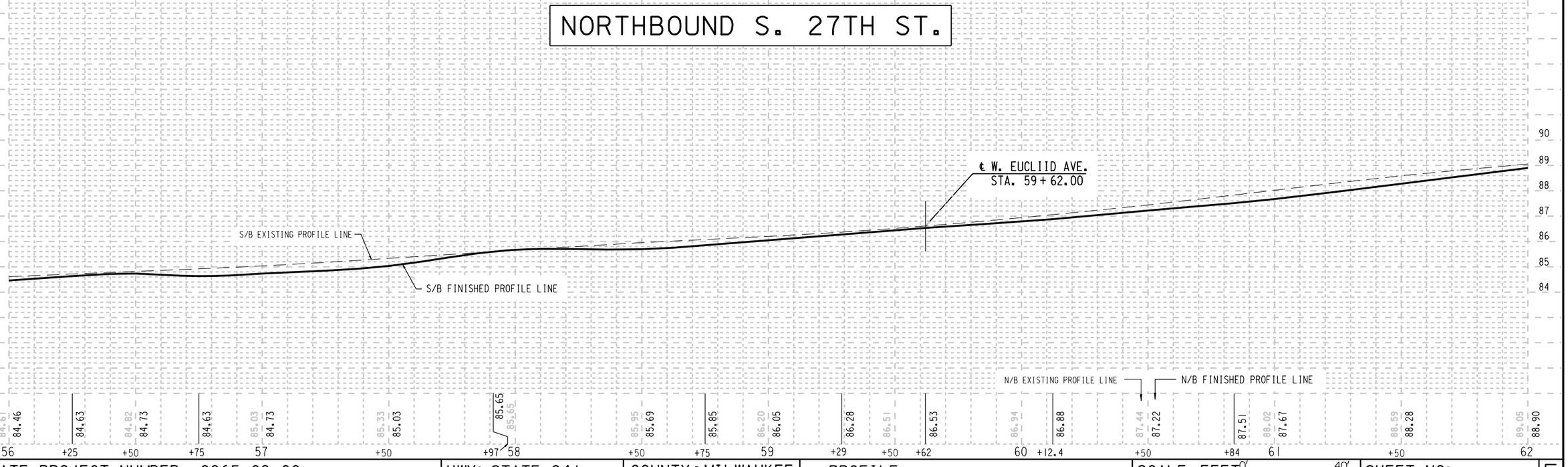
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0 40'	SHEET NO: 337 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\56_62.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 338	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\56_62.DGN

SOUTH 27TH STREET

B.M. NW BOLT HYD W/S STA.63+13 - 51' LT. ELEV. 91.07

SAW CURB @ L/L AND REMOVE

SAW CURB @ L/L AND REMOVE

SAW CURB

PROPOSED PLANTING BED

PLACE LANDMARK REFERENCE MONUMENT STA. 66+78.07-T/L

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON INTERSECTION

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

W. OKLAHOMA AVE.

#3151 #3119 #3105 #3152 #3146 #3142 #3120 #3104 S. 27TH ST. & 2619-27 W. OKLAHOMA AVE.

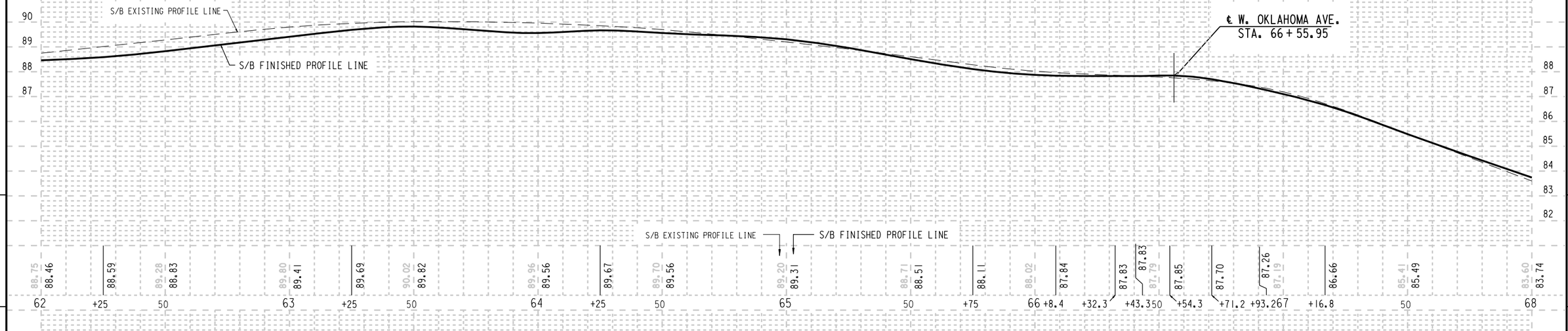
(I) CONST. CURB RAMP TYPE I WITH DETECTABLE WARNING FIELD
(IA) CONST. CURB RAMP TYPE IA WITH DETECTABLE WARNING FIELD
(2) CONST. CURB RAMP TYPE 2 WITH DETECTABLE WARNING FIELD
(3) CONST. CURB RAMP TYPE 3 WITH DETECTABLE WARNING FIELD
(A) CONST. CONC. CURB & GUTTER 31-INCH
(AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)
(D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
(D7) CONST. 7 CONC. ON 6-INCH BASE AGGREGATE DENSE
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(N2) CONST. 2' X 2' 5-INCH CONC. SIDEWALK CUTOFF
(P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(V8) CONST. 8-1/2 -INCH CONC. PAVEMENT
(VA) CONST. 7-INCH CONC. ALLEY PAVEMENT
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

STD. B.M. #59-05
S. 27TH ST.& W. OKLAHOMA AV.
IN BY-PASS ISLAND ON NORTHEAST CORNER OF S. 27TH ST. AND W. OKLAHOMA AV., 22.07' NORTH OF SOUTH CURB AND 21.95' EAST OF WEST CURB.
ELEV. - 86.646

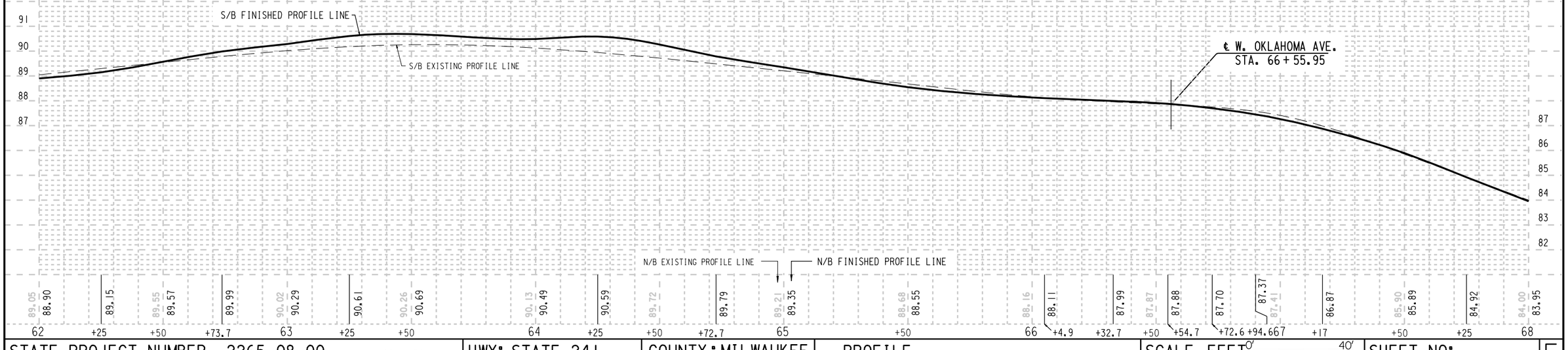
STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0 40	SHEET NO: 339 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\62_68.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-00 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 340 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\62_68.DGN

SOUTH 27TH STREET

N

B.M. NW BOLT HYD W/S
STA. 71+34 - 45' LT.
ELEV. 69.32

SAW CURB @ L/L AND REMOVE

SAW CURB @ L/L AND REMOVE

PROP. R.O.W. LINE

10' SEWER EASEMENT

CAUTION

CAUTION

P.L.

P.L.

P.L.

P.I.L.

SEC LINE

T/L

N 00°59'57"W

N 00°59'

- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (C) CONST. CONC. CURB & GUTTER 19-INCH
- (D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
- (G2) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 2-INCH MIN. ASPH. OVERLAY
- (K) SAWING ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5-INCH CONC. SIDEWALK
- (V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
- (X) CONST. MAINTENANCE RAMP
- (Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

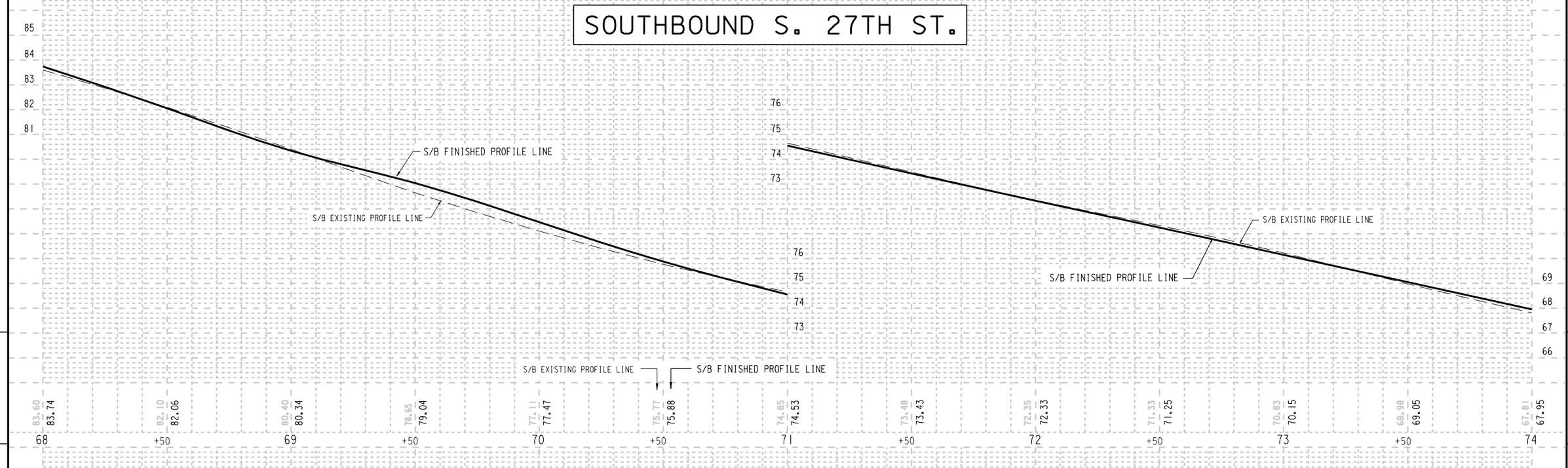
PULASKI HIGH SCHOOL (CITY OF MILWAUKEE)

6TH DISTRICT POLICE STATION

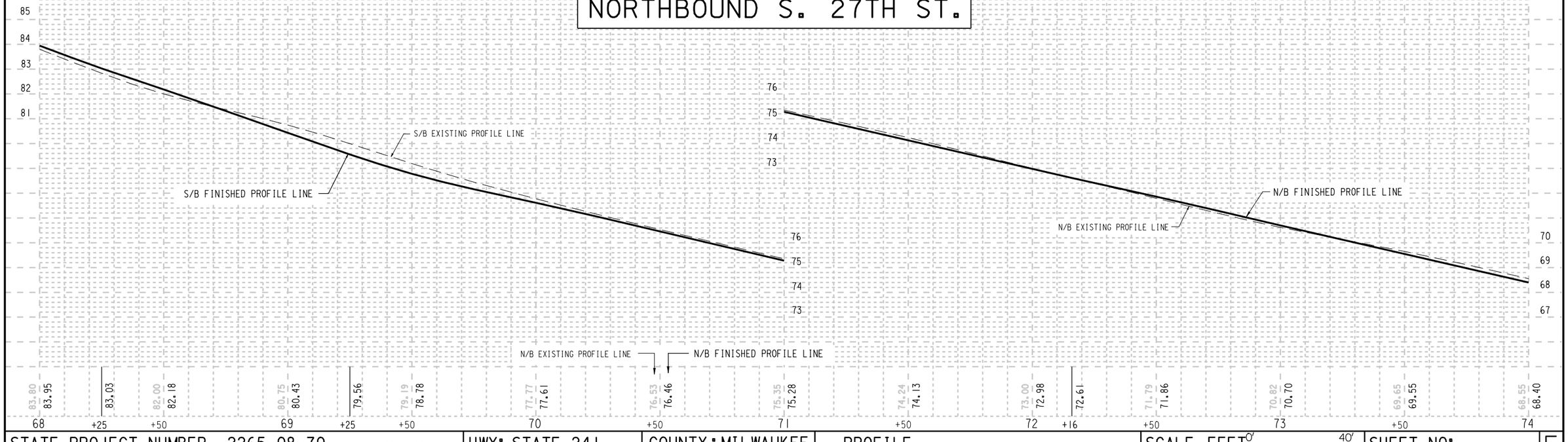
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE FEET 0' 40'	SHEET NO: 341	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\68_74.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 342	E

FILE NAME: W:\SPR\27TH HOWARD OKLA 68 74.DGN

SOUTH 27TH STREET

KINNICKINNIC RIVER PARKWAY

N

B.M. NW BOLT HYD
(NORTHERLY HYD) NW CORNER
S. 27TH ST. & W. K.K. PKWY.
STA.76+22 - 63' LT.
ELEV. 65.52

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON INTERSECTION

STRUCTURE B-40-0438

KINNICKINNIC RIVER

W. KINNICKINNIC RIVER PKWY.

SEE STANDARD DETAIL DRAWING 13B 2-6

DETAIL CONC. DRIVEWAY DEPRESSED - MODIFIED
78+37.3 RT. TO 78+75.4 RT.

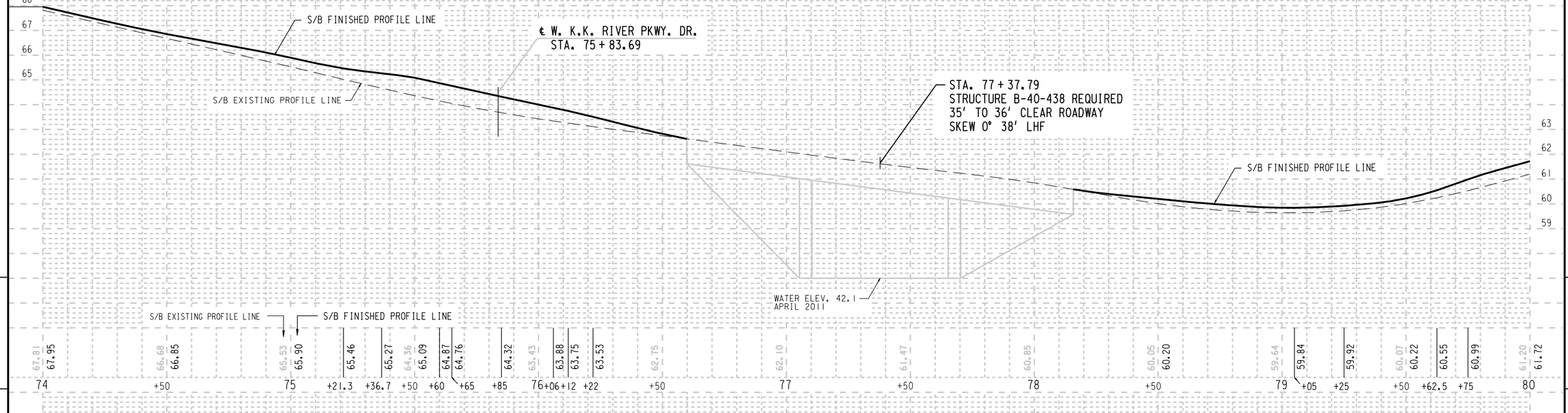
KINNICKINNIC RIVER PARKWAY

- (I) CONST. CURB RAMP TYPE I WITH DETECTABLE WARNING FIELD
- (IA) CONST. CURB RAMP TYPE IA WITH DETECTABLE WARNING FIELD
- (7A) CONST. CURB RAMP TYPE 7A WITH DETECTABLE WARNING FIELD
- (9) CONST. CURB RAMP TYPE 9 WITH DETECTABLE WARNING FIELD
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
- (E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
- (G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3-INCH MIN. ASPH. OVERLAY
- (K) SAWING ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5-INCH CONC. SIDEWALK
- (P) REMOVE & CONST. 2-INCH ASPHALT ON V.T. CONC. BASE
- (T) SAWING CONCRETE AT OR NEAR BUILDING, OR WALL
- (V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
- (V8) CONST. 8-1/2 -INCH CONC. PAVEMENT
- (X) CONST. MAINTENANCE RAMP
- (XX) 12" REINFORCED CONCRETE PAVEMENT APPROACH SLAB
- (Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

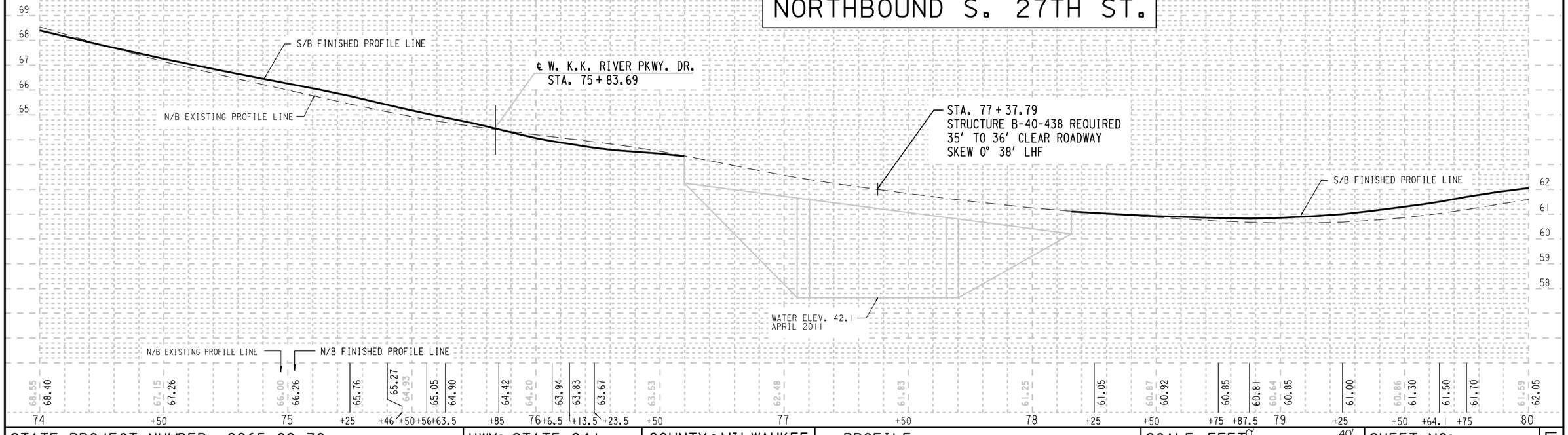
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 343 E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\74_79+50.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0′ 40′	SHEET NO: 344	E

FILE NAME: W:\SPR\27TH_HOWARD_OKLA\74_79+50.DGN

SOUTH 27TH STREET

W. DAKOTA ST.

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

FIBER OPTIC

B.M. NW BOLT HYD W/S STA. 83+63 - 66' LT. ELEV. 77.67

B.M. NW BOLT HYD E/S STA. 84+90 - 27' RT. ELEV. 79.53

∠PT. +80.2 32.0' RT.

SEE CONST. DETAIL FOR ADDITIONAL INFORMATION ON CURB RAMPS

#2856 S. 27TH ST. MAYNARD STEEL

UNION PACIFIC RAILROAD COMPANY

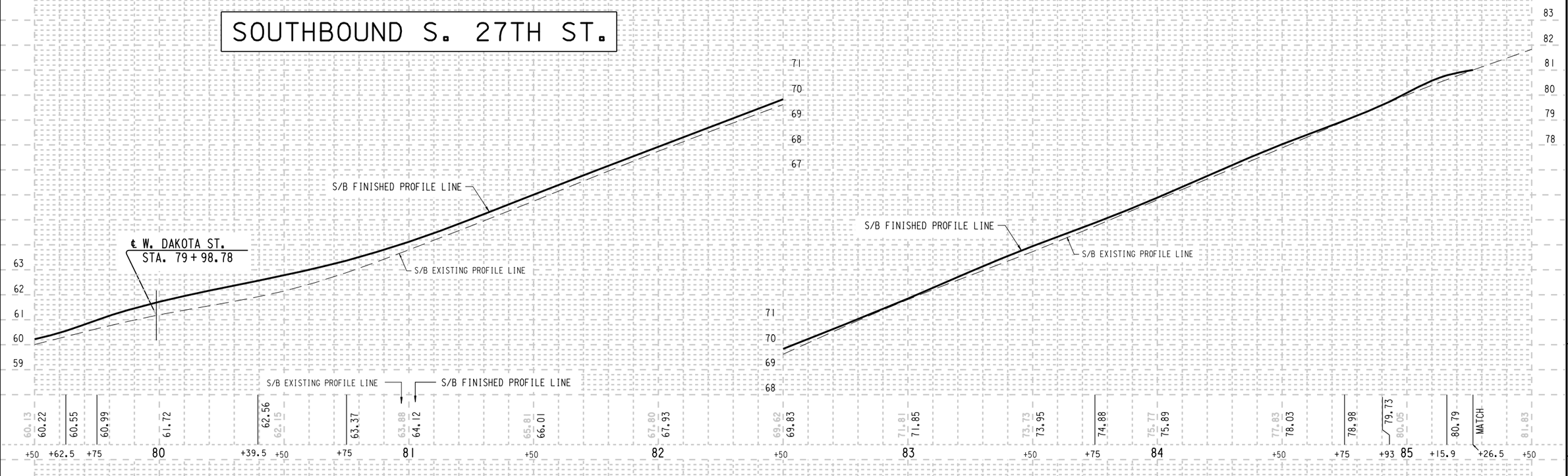
END PROJECT STA. 85 + 16.0 T/L

(1) CONST. CURB RAMP TYPE 1 WITH DETECTABLE WARNING FIELD
(3) CONST. CURB RAMP TYPE 3 WITH DETECTABLE WARNING FIELD
(7A) CONST. CURB RAMP TYPE 7A WITH DETECTABLE WARNING FIELD
(A) CONST. CONC. CURB & GUTTER 31-INCH
(D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
(63) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3-INCH MIN. ASPH. OVERLAY
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5-INCH CONC. SIDEWALK
(T) SAWING CONCRETE AT OR NEAR BUILDING, OR WALL
(V) CONST. 8-1/2 INCH CONC. PAVEMENT WITH INTEGRAL CURB
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

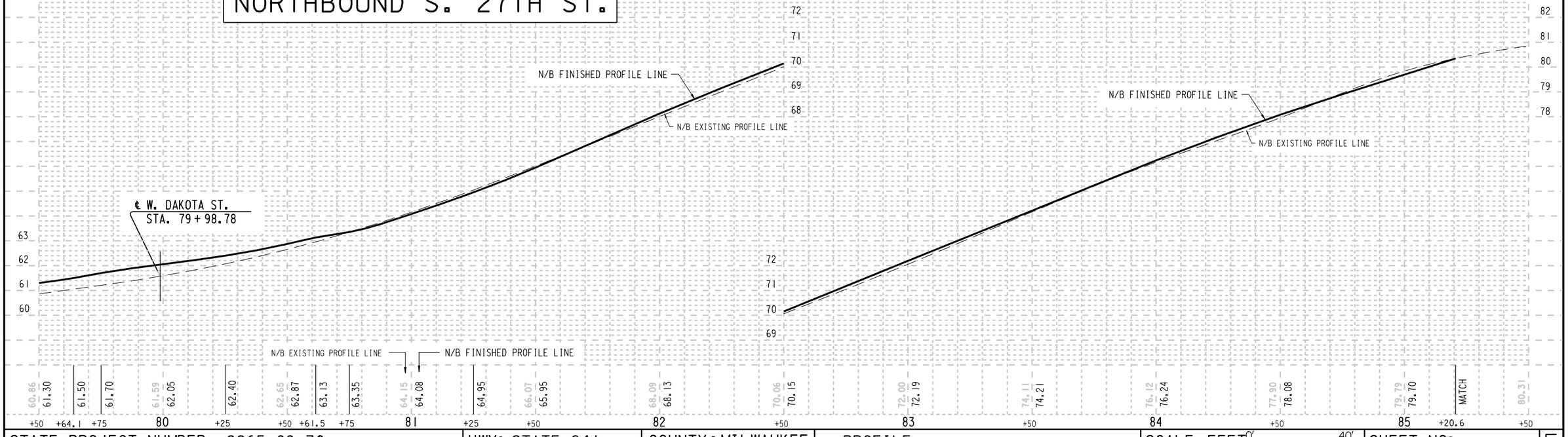
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FILE NAME: W:\SPR\27TH_HOWARD_OKLA\79+50_85+50.DGN

SOUTHBOUND S. 27TH ST.



NORTHBOUND S. 27TH ST.



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 346 E

FILE NAME: W:\SPR\27TH HOWARD OKLA 79+50 85+50.DGN

BEGIN CONSTRUCTION
WEST LOOMIS ROAD T/L = 1'L' + 25.00

END CONSTRUCTION
WEST LOOMIS ROAD T/L = 6'L' + 87.24
SOUTH 27TH STREET T/L = 34 + 13.63

STD. B.M. #340
S. 27TH ST. AND W. LOOMIS RD.
CHISELED SQUARE ON SOUTHWEST
CORNER OF CONCRETE BRIDGE.
ELEV. 73.34

WEST LOOMIS ROAD

KINNICKINNIC RIVER (SOUTH BRANCH)

SOUTH 27TH STREET

B.M. NW BOLT W/HD SW CORNER W. LOOMIS RD. & S. 27TH ST. STA. 32+58 94' LT. ELEV. 76.85

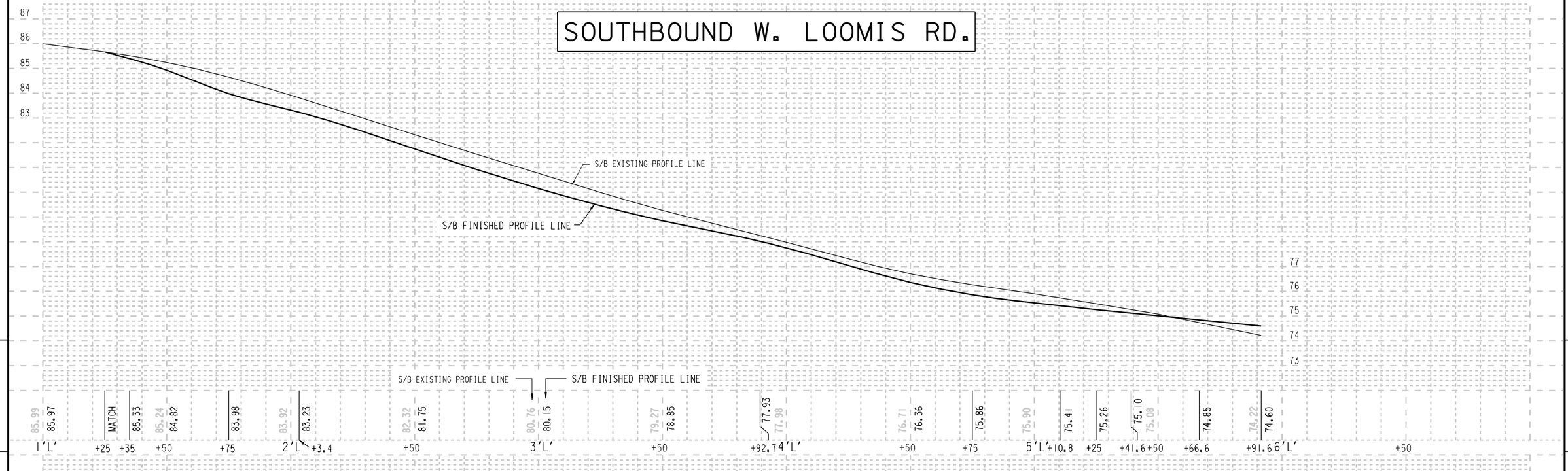
SEE SOUTH 27TH STREET PLAN SHEET (STA. 32+00 TO STA. 38+00)

(2) CONST. CURB RAMP TYPE 2 WITH DETECTABLE WARNING FIELD
(6) CONST. CURB RAMP TYPE 6 WITH DETECTABLE WARNING FIELD
(A) CONST. CONC. CURB & GUTTER 31-INCH
(AH) CONST. CONC. CURB & GUTTER 31-INCH (HIGH SIDE)
(D23) CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) FIG.23B
(E) REMOVE & CONST. 3-INCH ASPH. ON V.T. CONC. BASE
(G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3-INCH MIN. ASPH. OVERLAY
(J) SAWING CONCRETE
(K) SAWING ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
(X) CONST. MAINTENANCE RAMP
(Y) CONST. SNOWPLOWABLE MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

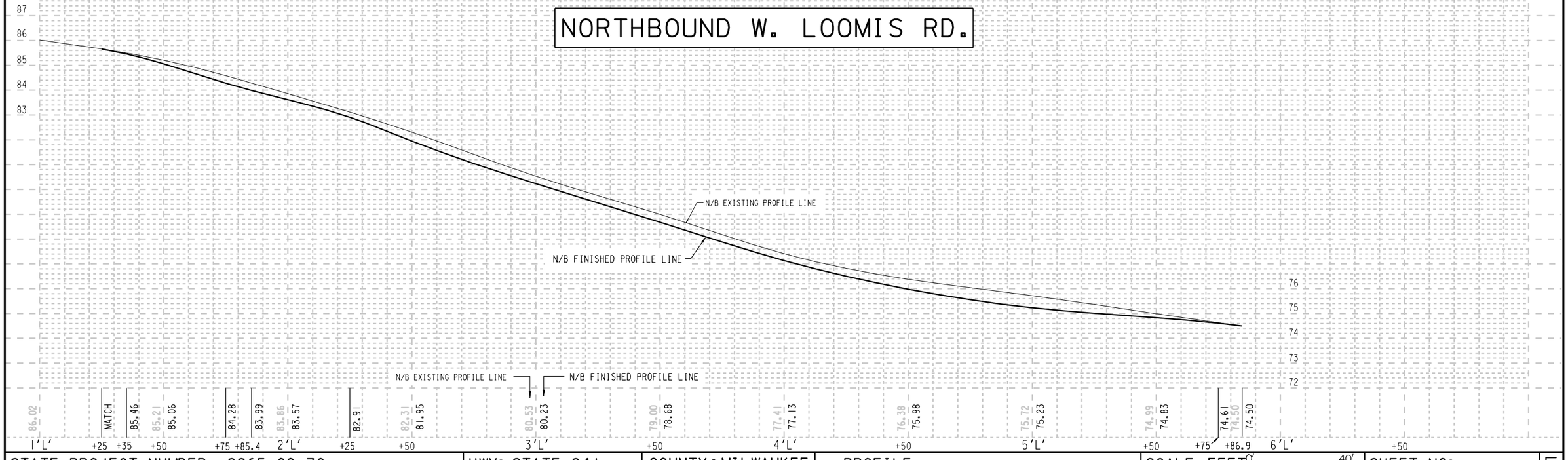
STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0 40	SHEET NO: 347 E

FILE NAME: W:\SPR\27TH HOWARD OKLA 09 15.DGN

SOUTHBOUND W. LOOMIS RD.



NORTHBOUND W. LOOMIS RD.



STATE PROJECT NUMBER 2265-08-70 - -	HWY: STATE 241	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 348	E

FILE NAME: W:\SPR\27TH HOWARD OKLA 09 15.DGN

Standard Detail Drawing List

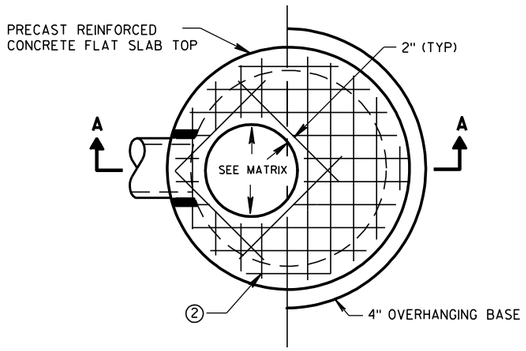
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-05	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-03	CONCRETE BASE TYPE 10
09C12-03A	CONCRETE BASE TYPE 13
09C12-03B	CONCRETE BASE TYPE 13
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-12B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-12G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-04A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-04C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F08-03	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
12A03-10	NAME PLATE (STRUCTURES)
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE
13C14-04C	BASE PATCHING CONCRETE
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A02-01	TREE PLANTING DETAIL
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15B03-12A	FENCE CHAIN LINK
15B03-12B	FENCE CHAIN LINK
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-12A	PAVEMENT MARKING SYMBOLS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C29-03A	BICYCLE LANE MARKING
15C29-03B	BICYCLE LANE MARKING
15C29-03E	PAVEMENT MARKING FOR BIKE LANES
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D06-02	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

6

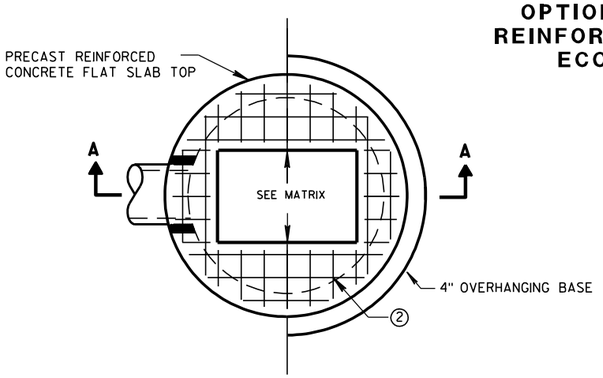
Standard Detail Drawing List

15D20-01	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

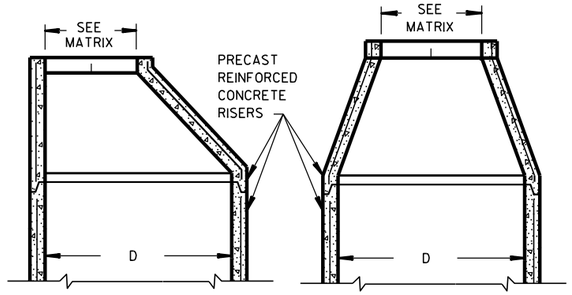
6



PLAN VIEW CIRCULAR OPENING

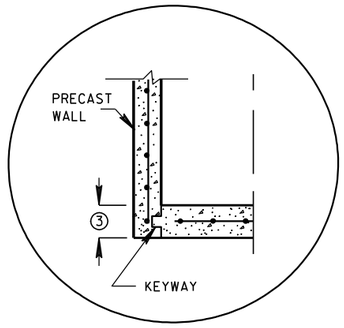


PLAN VIEW RECTANGULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

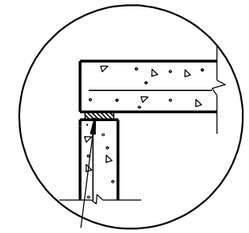
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

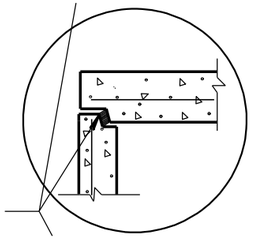
SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

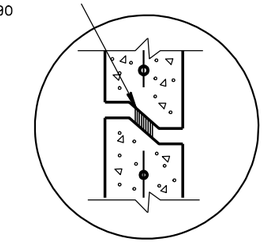


TOP WITH PLAIN END JOINT

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

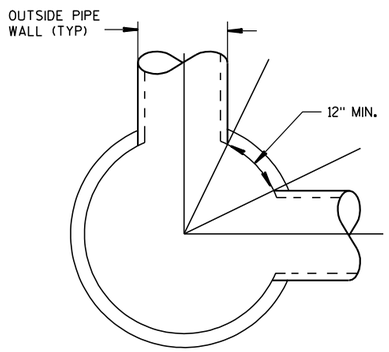


TOP WITH TONGUE AND GROOVE JOINT

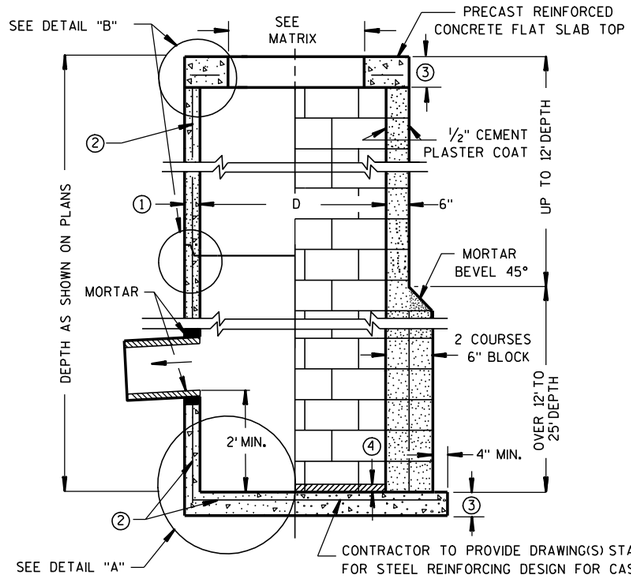


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

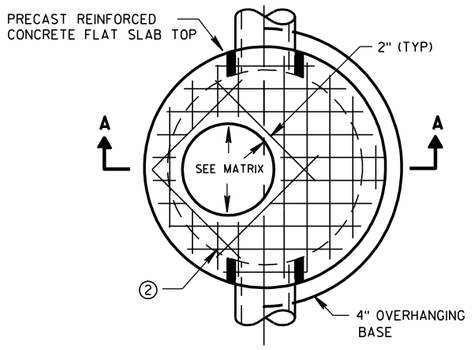
APPROVED

6/5/2012
DATE

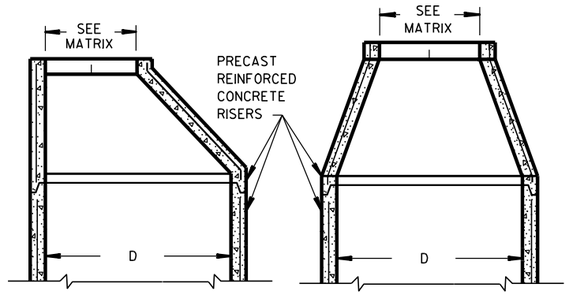
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6
S.D.D. 8 A 8-1

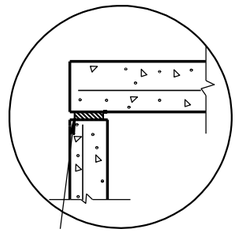


PLAN VIEW CIRCULAR OPENING



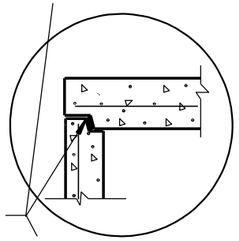
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

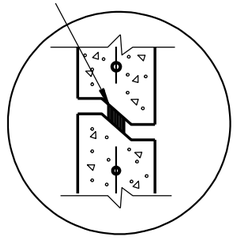


TOP WITH PLAIN END JOINT

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

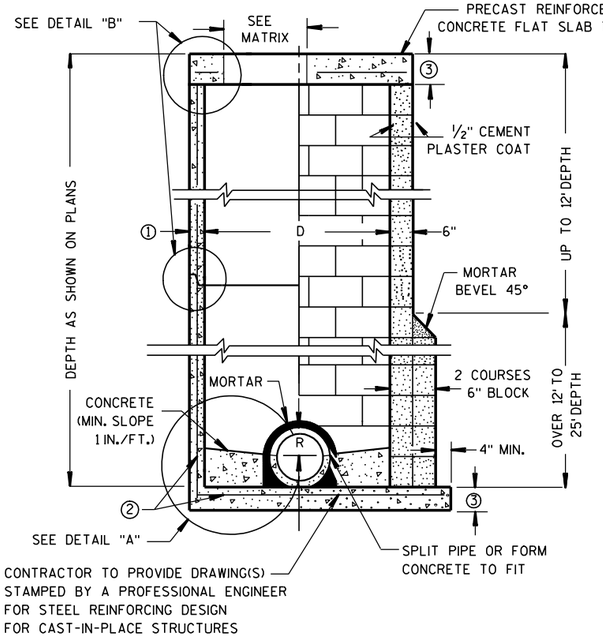


TOP WITH TONGUE AND GROOVE JOINT



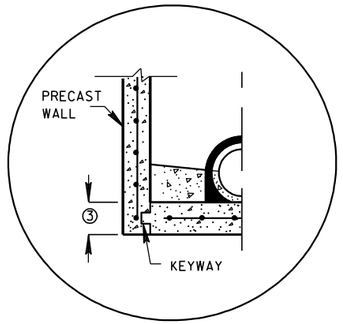
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

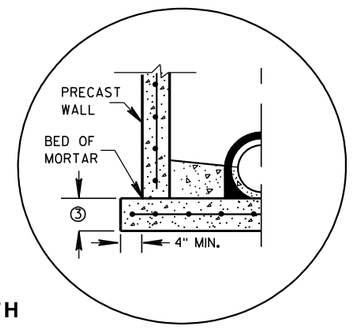


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

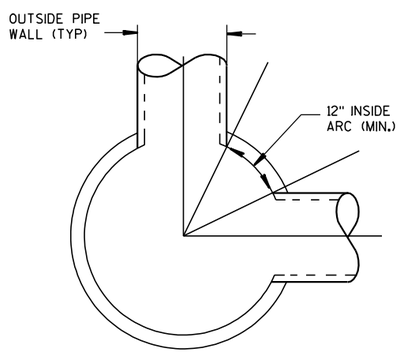


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

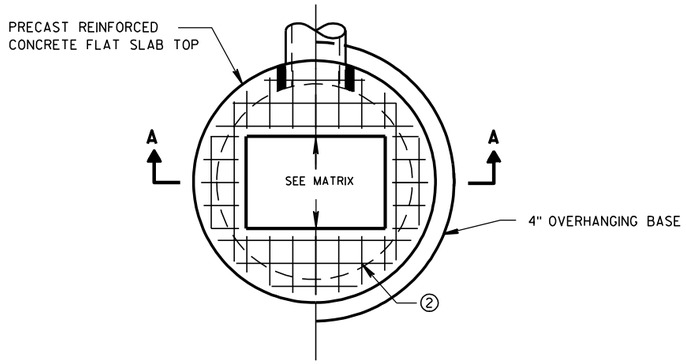
APPROVED

6/5/2012
DATE

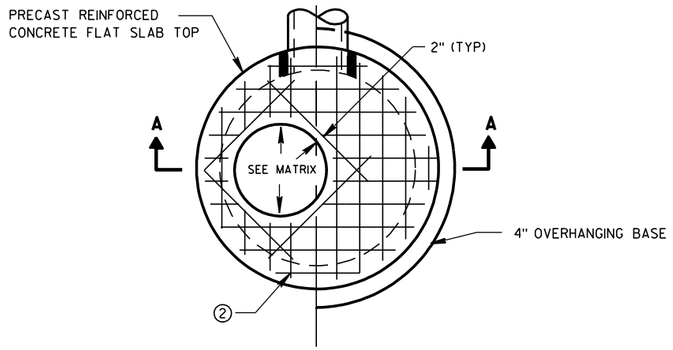
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

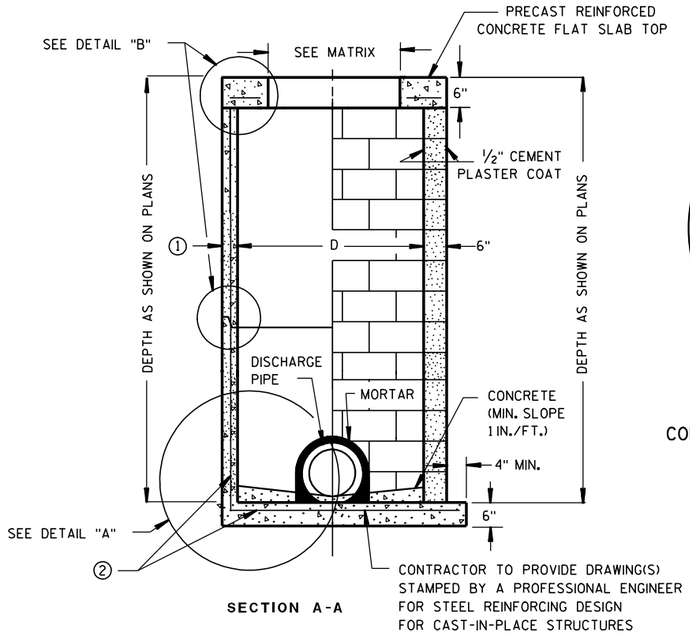
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S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

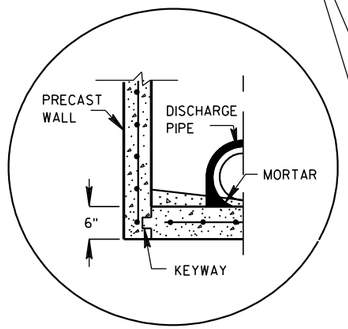


SECTION A-A

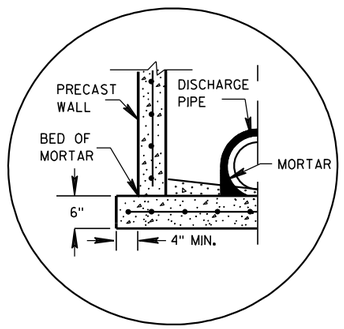
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

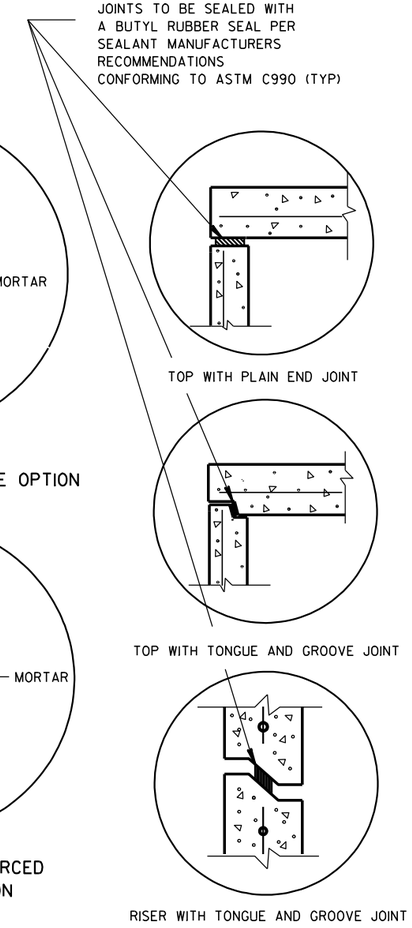


PRECAST REINFORCED
CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE PRECAST REINFORCED
CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

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

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

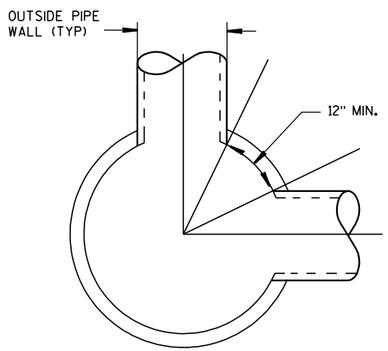
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

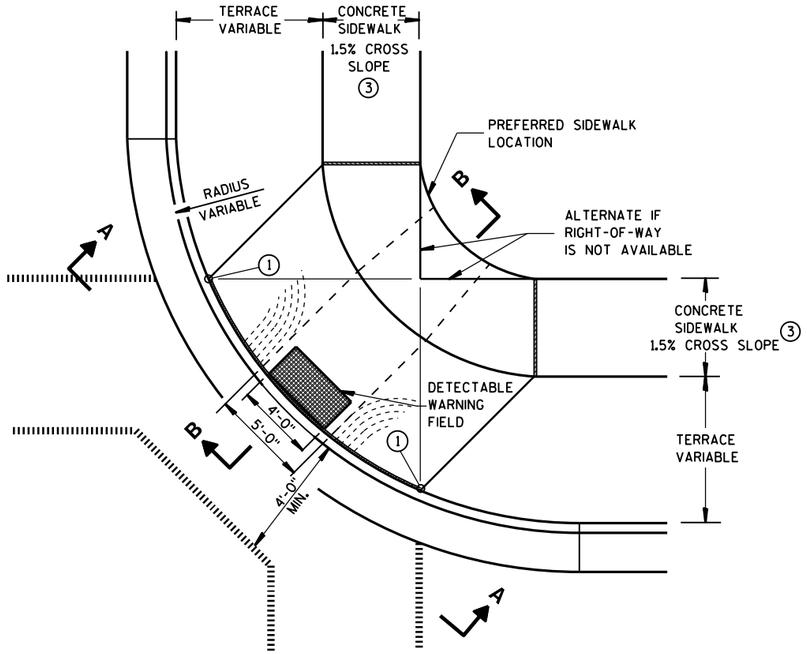
INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

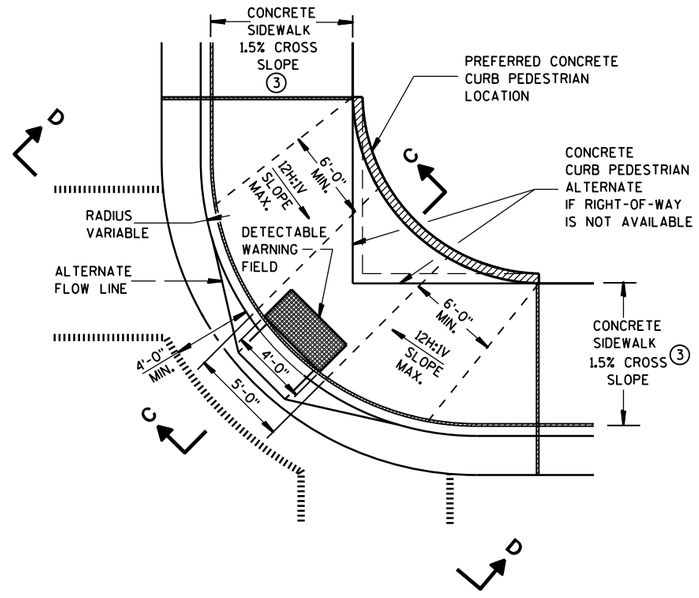
6
S.D.D. 8 C 6-1



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

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

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

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

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

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

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

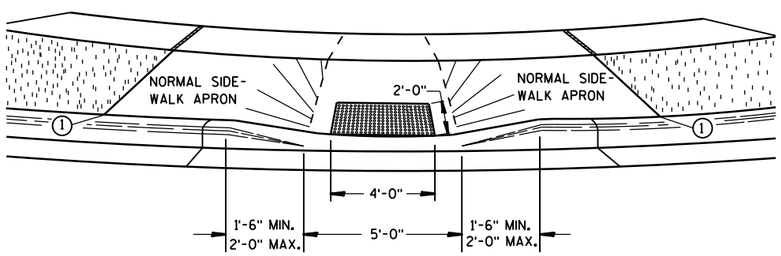
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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

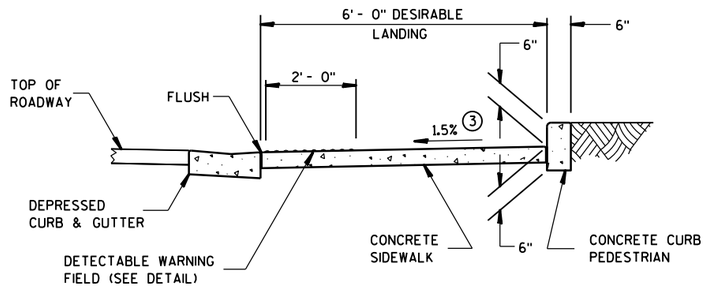
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

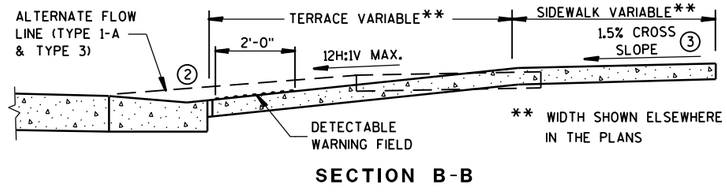
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



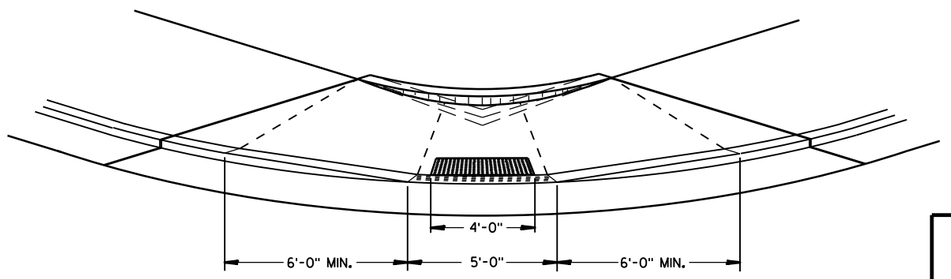
VIEW A-A



SECTION C-C



SECTION B-B



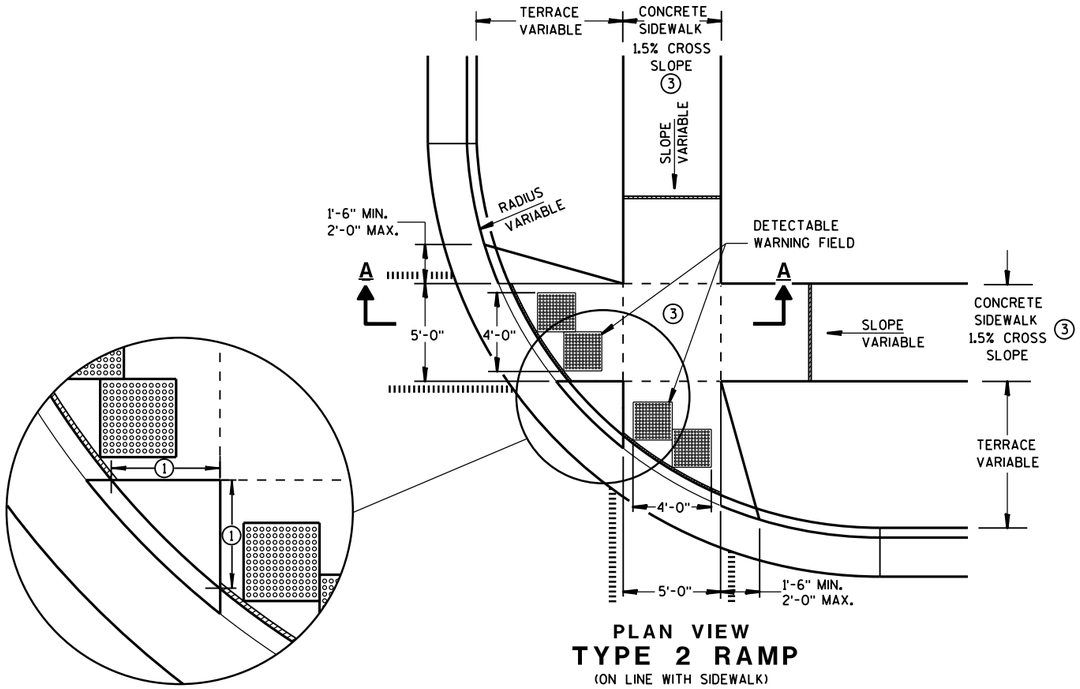
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

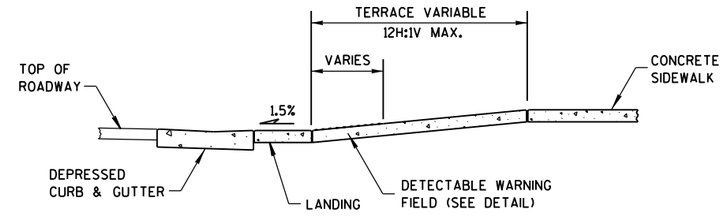
S.D.D. 8 D 5-15a



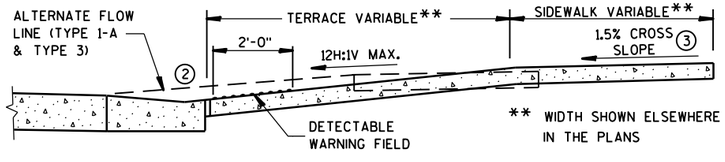
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

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

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

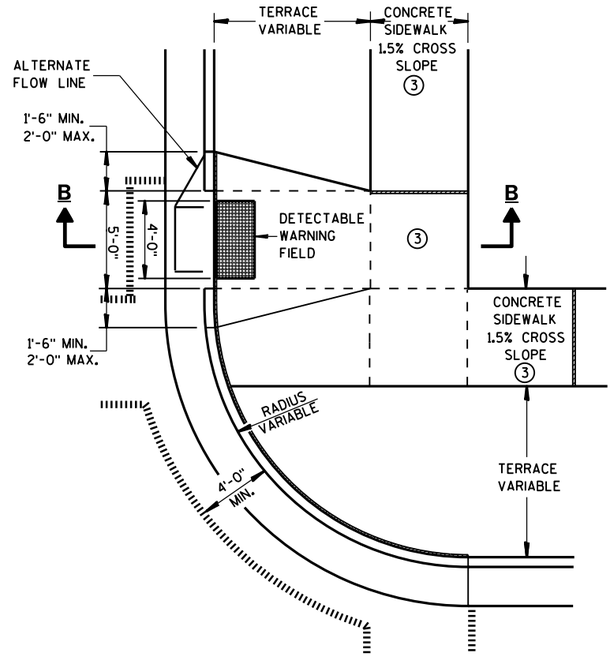
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

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

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

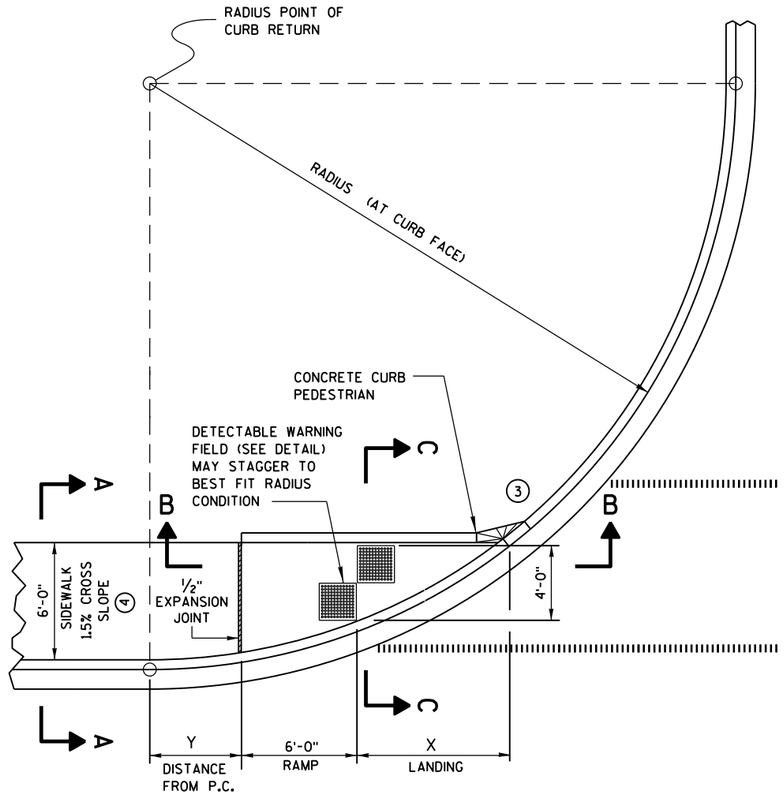
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

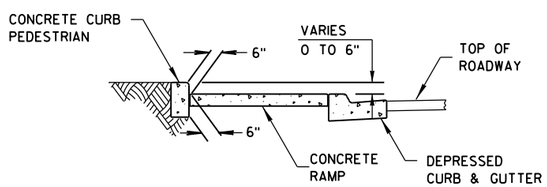
S.D.D. 8 D 5-15b

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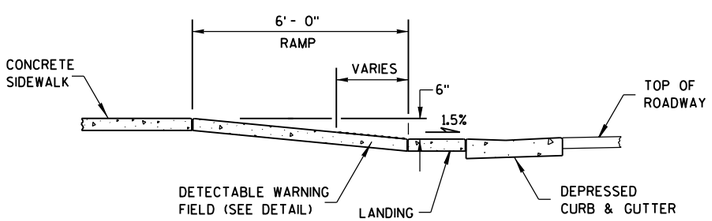
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



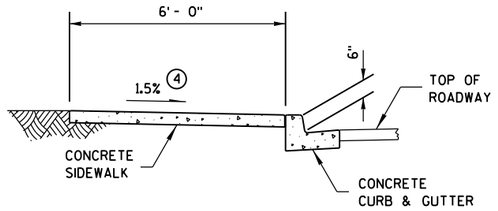
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

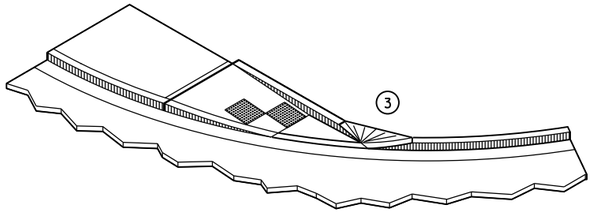
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

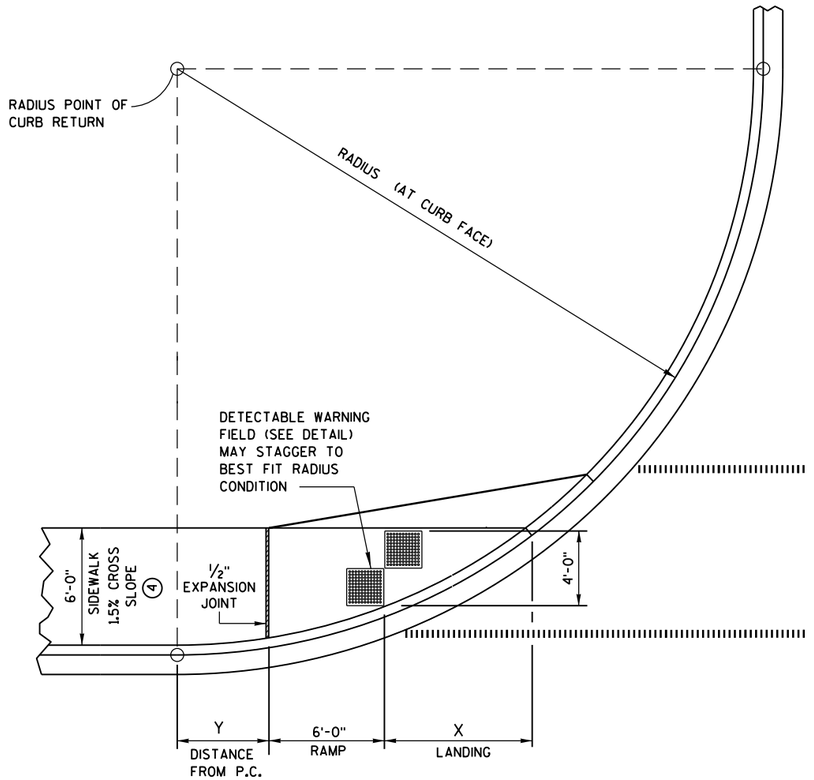
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

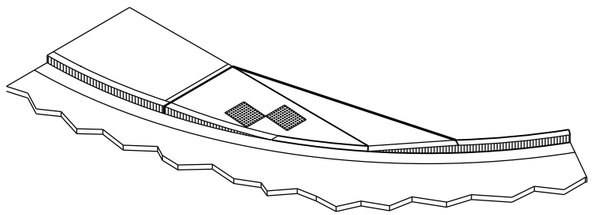
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

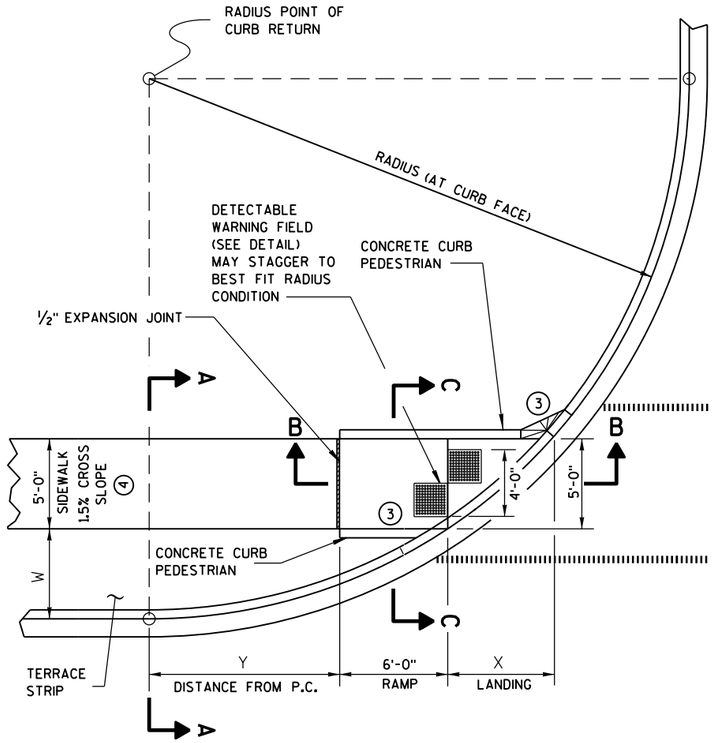
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

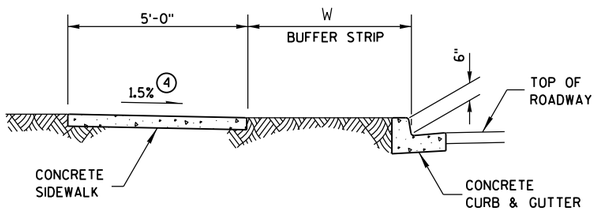
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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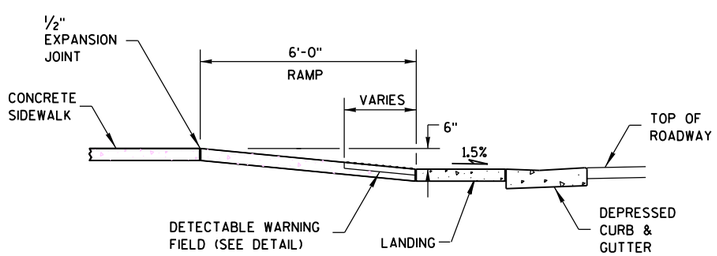
S.D.D. 8 D 5-15c



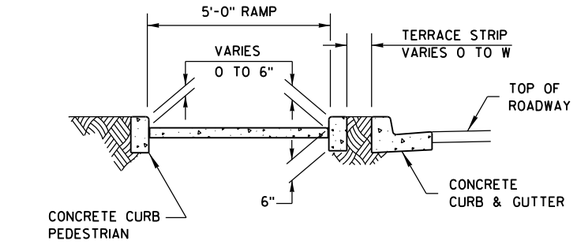
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

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

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

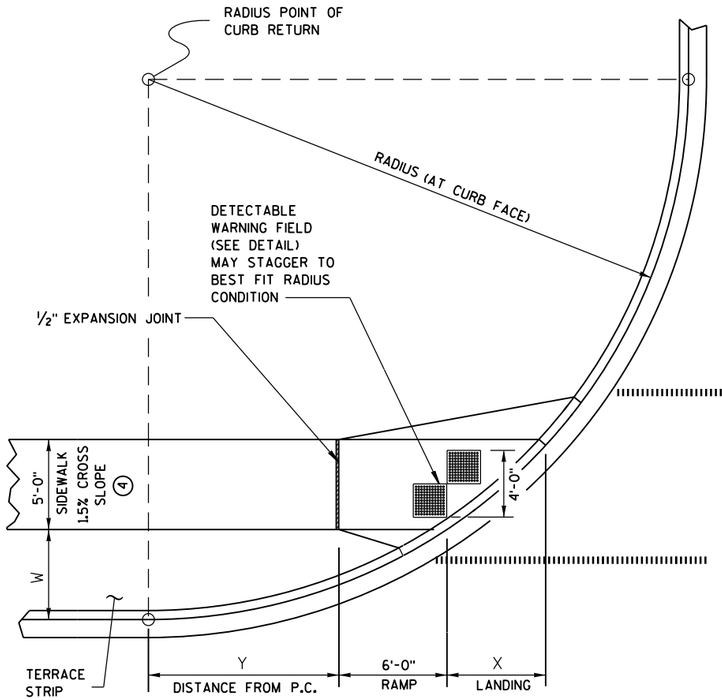
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

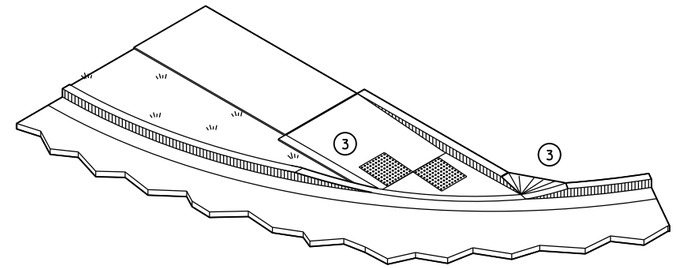
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

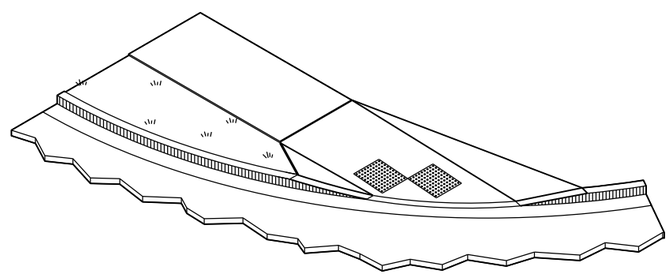
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



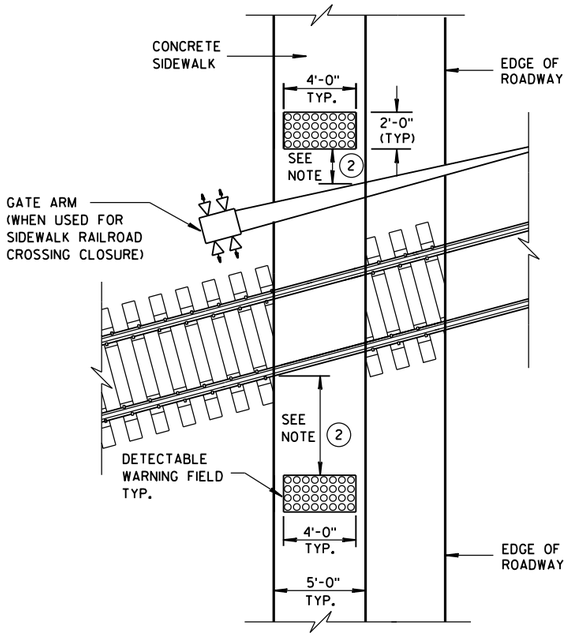
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

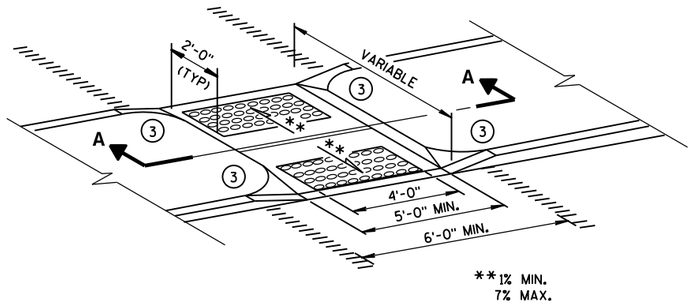
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

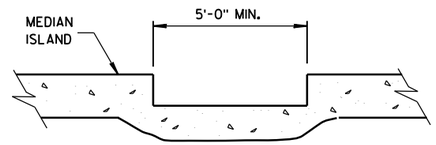
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

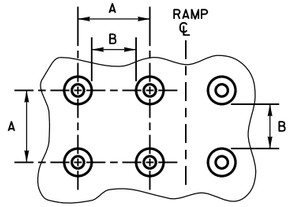
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



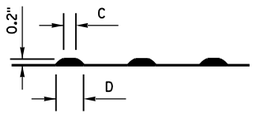
SECTION A-A



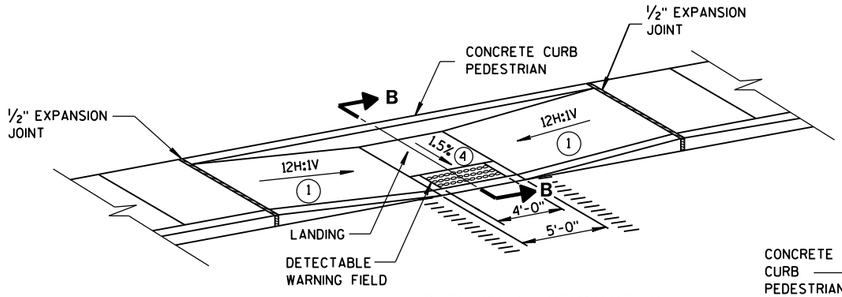
PLAN VIEW

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

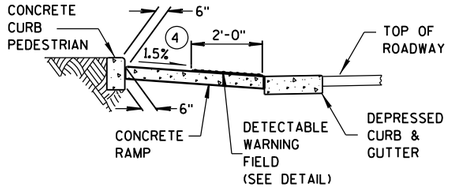
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

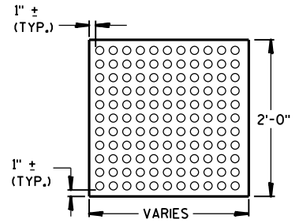


MID-BLOCK CROSSING
TYPE 7A



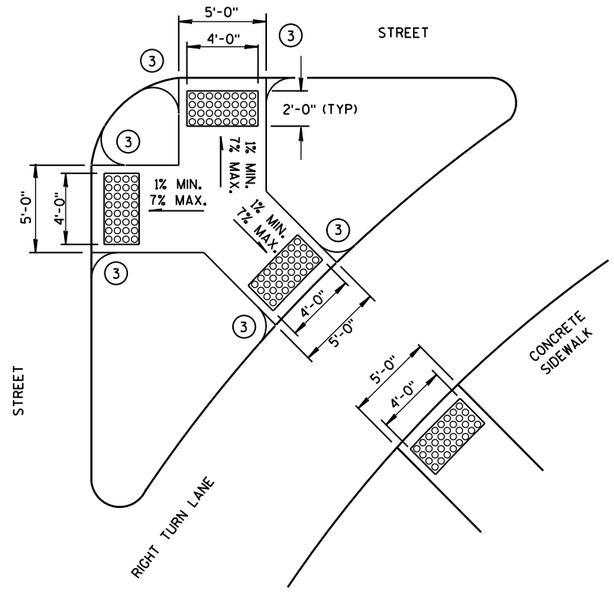
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

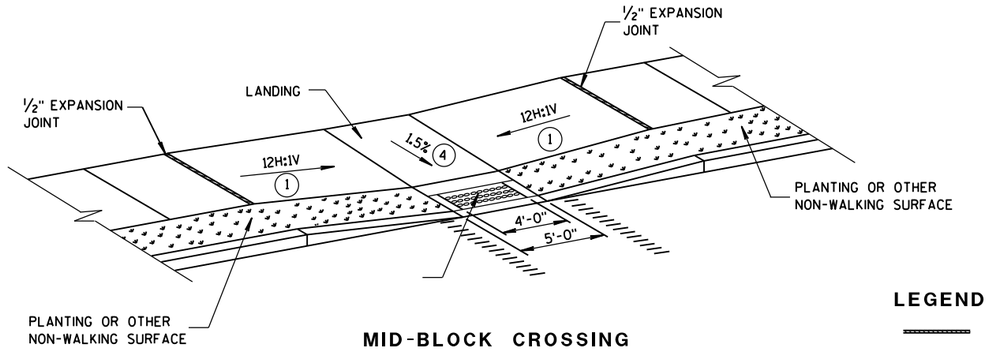


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

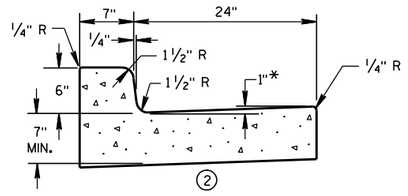
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

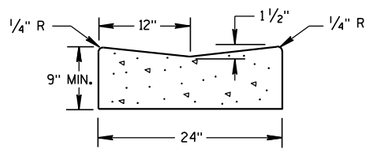
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

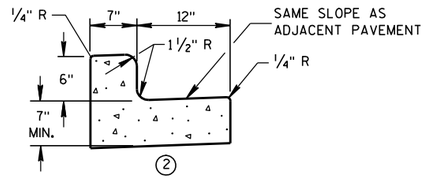
S.D.D. 8 D 5-15e



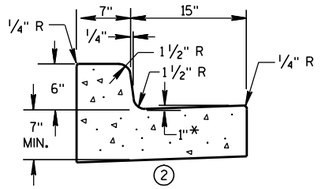
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

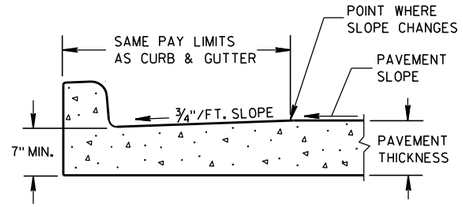


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

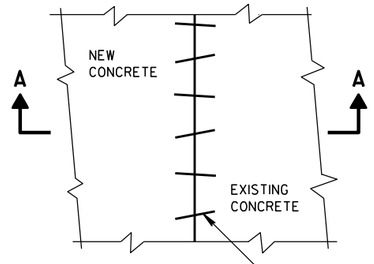
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

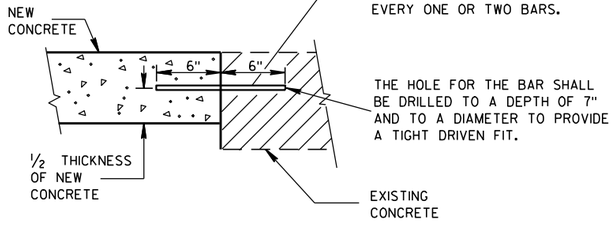
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

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

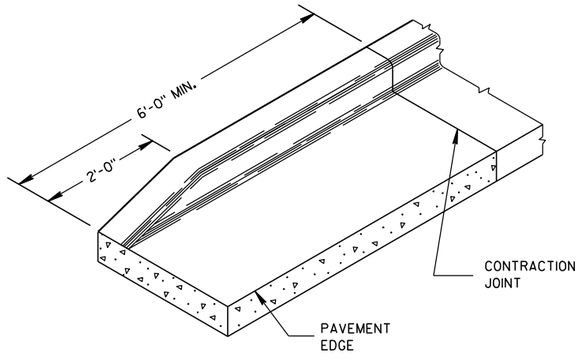
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



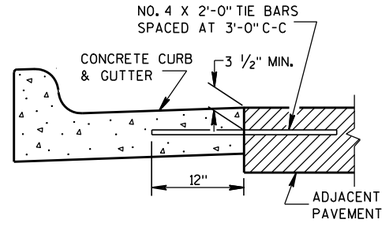
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

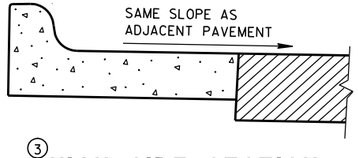
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

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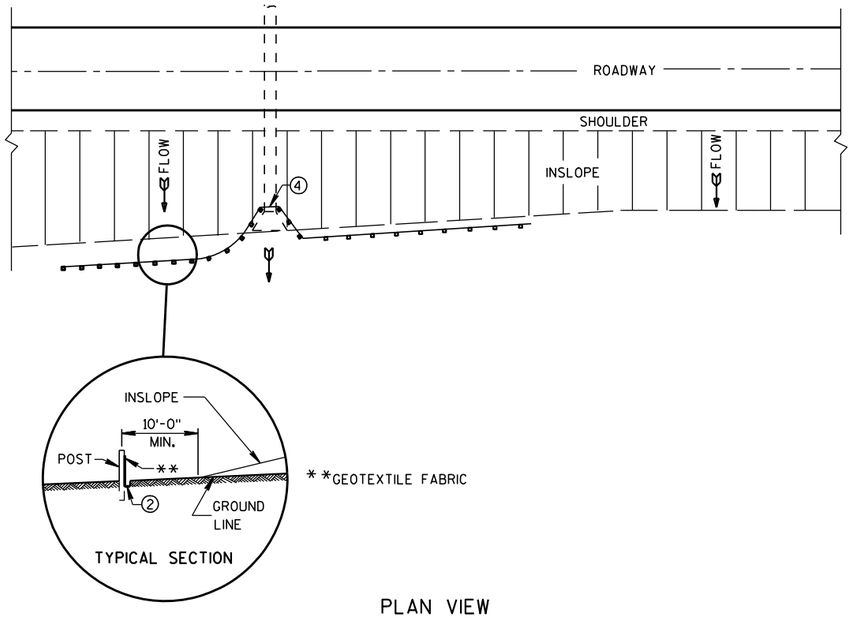
FHWA

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S.D.D. 8 D 16-10

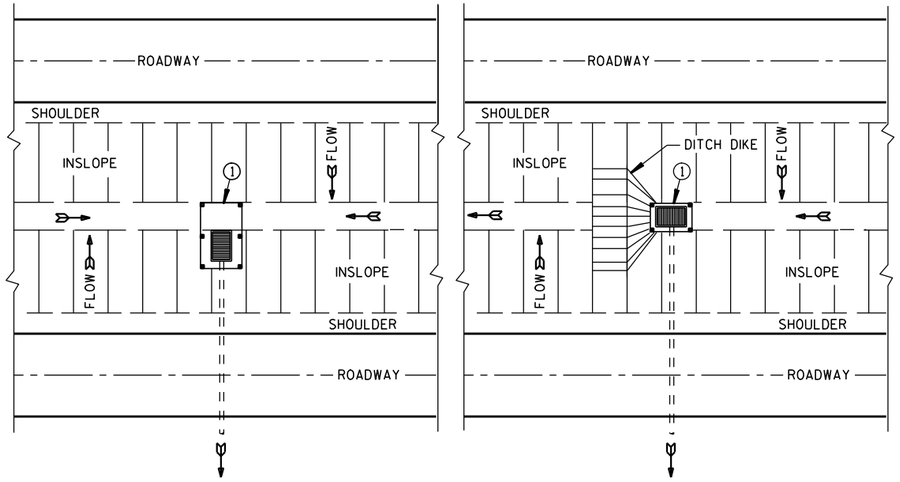
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S.D.D. 8 D 16-10



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

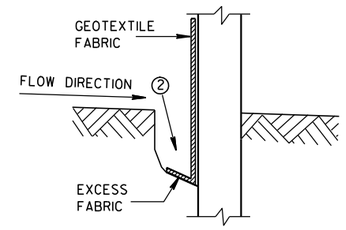
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

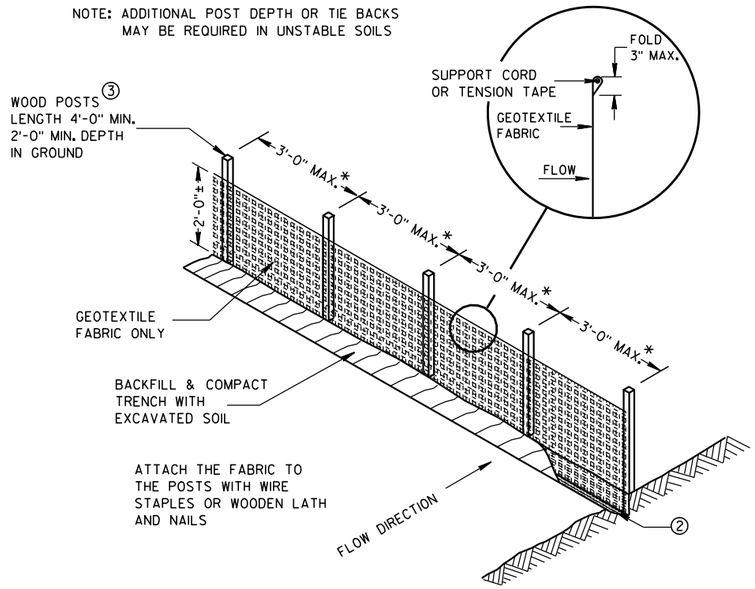
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

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

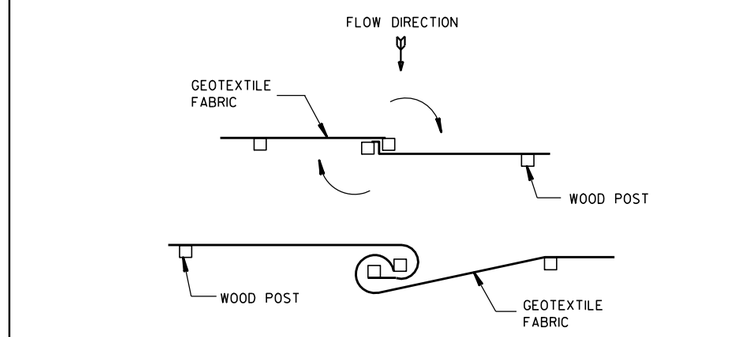


TRENCH DETAIL

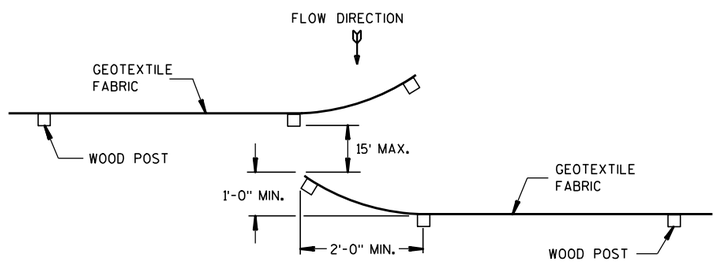


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

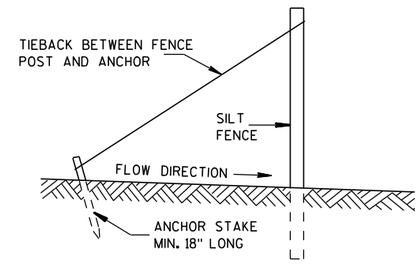


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

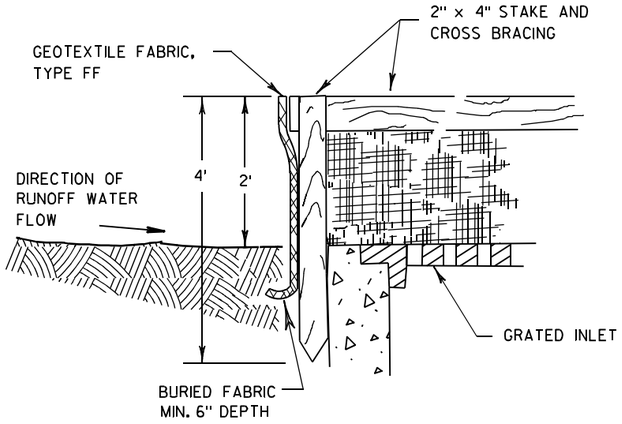
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

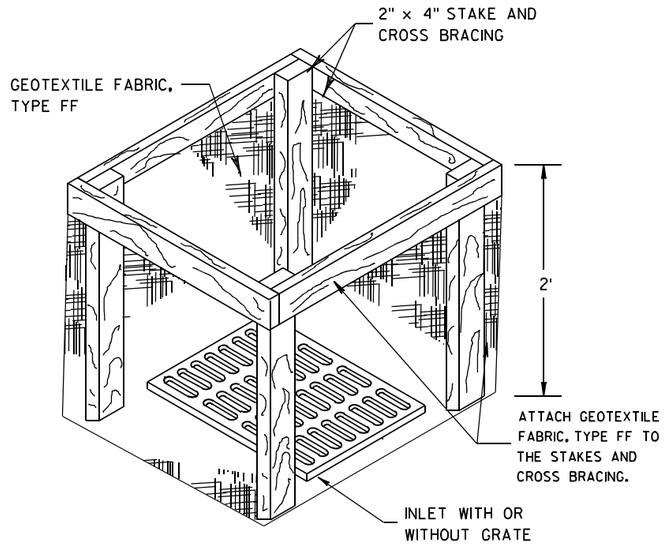
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S.D.D. 8 E 9-6

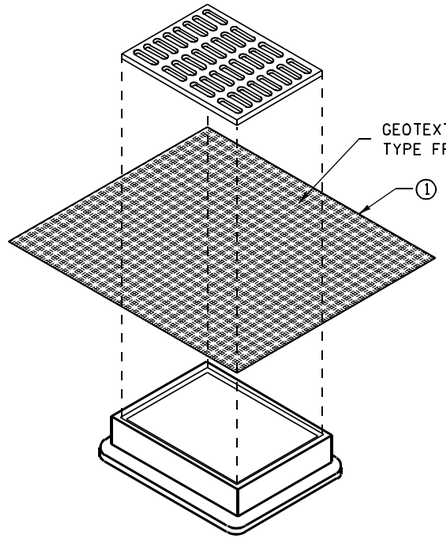
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S.D.D. 8 E 9-6



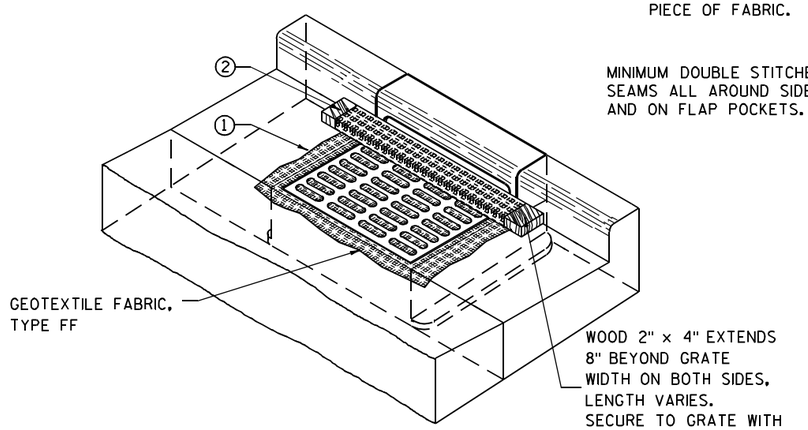


INLET PROTECTION, TYPE A

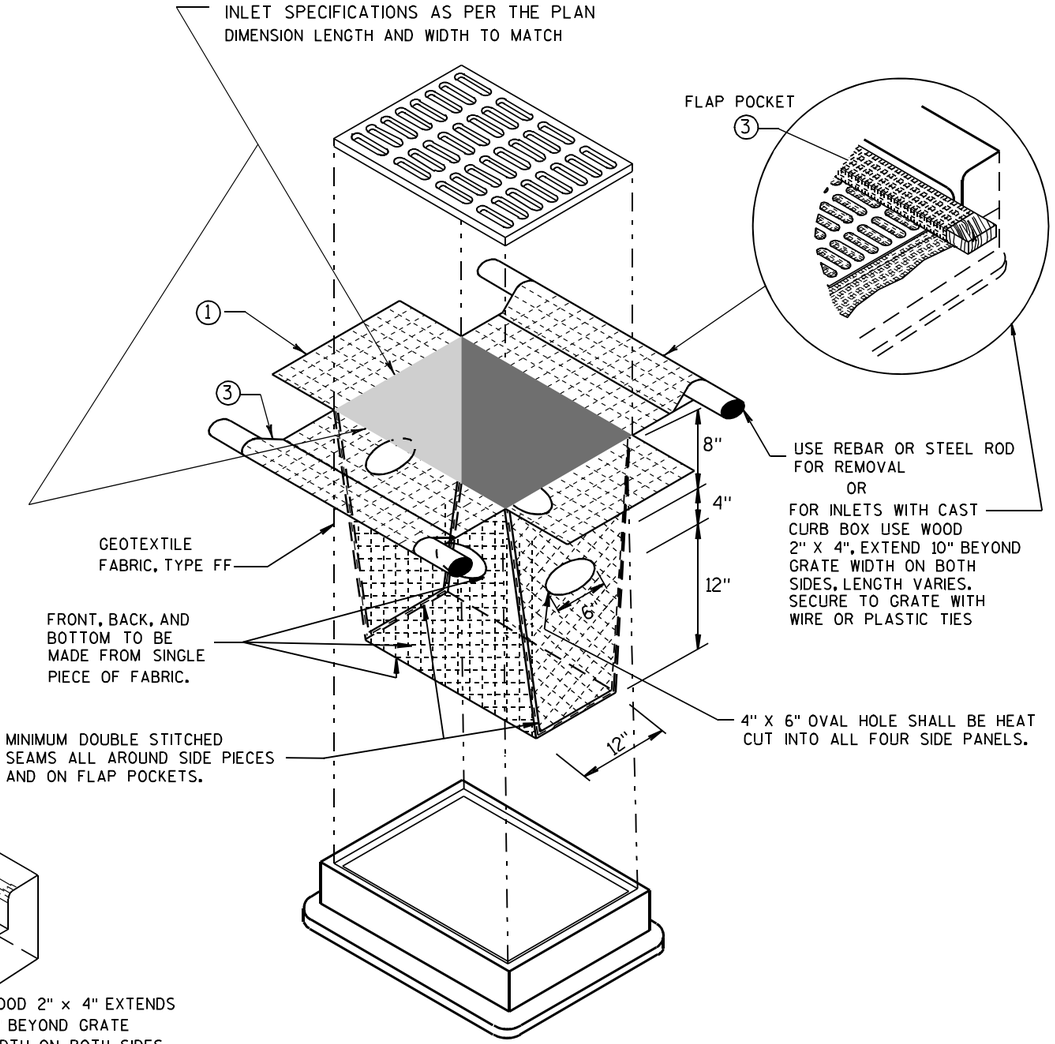


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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.

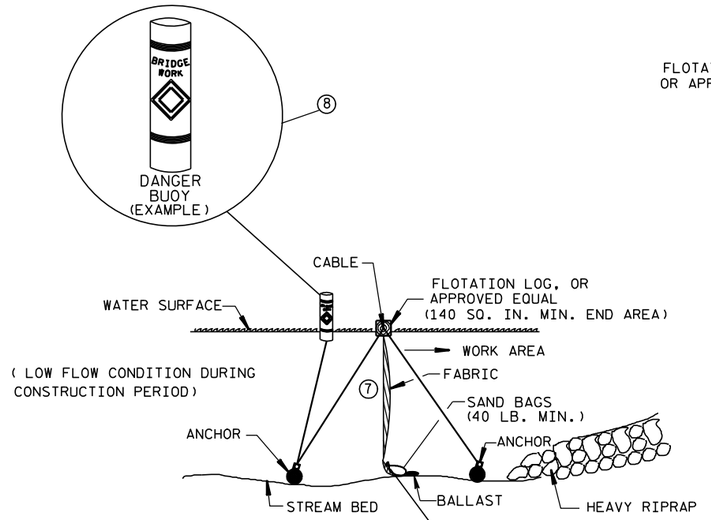
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

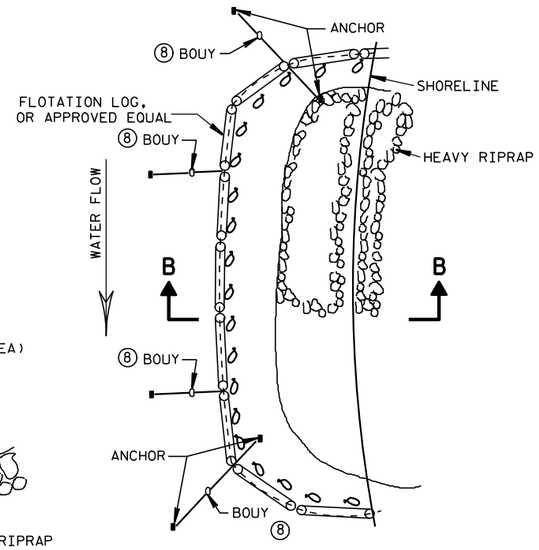
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

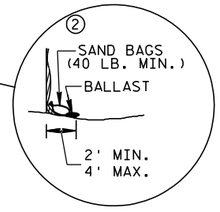
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 10-2

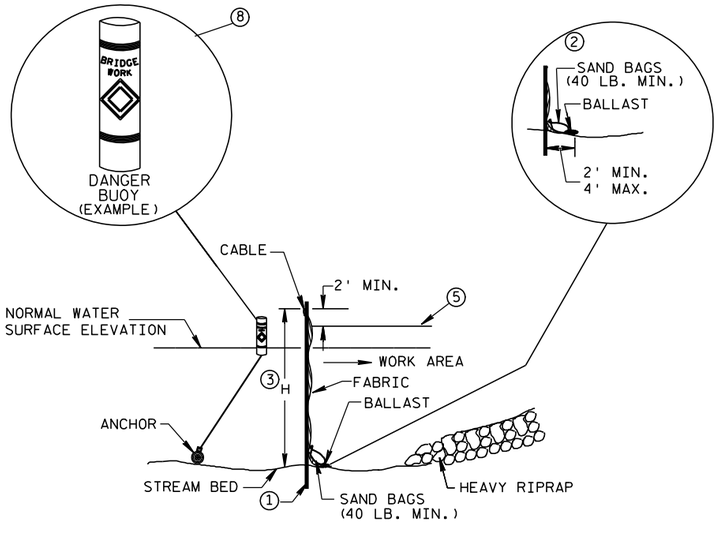


SECTION B-B

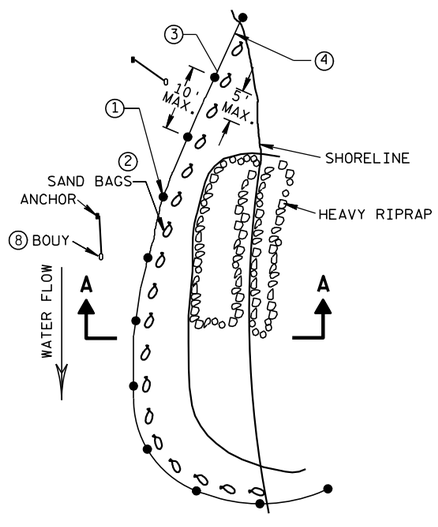




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

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.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

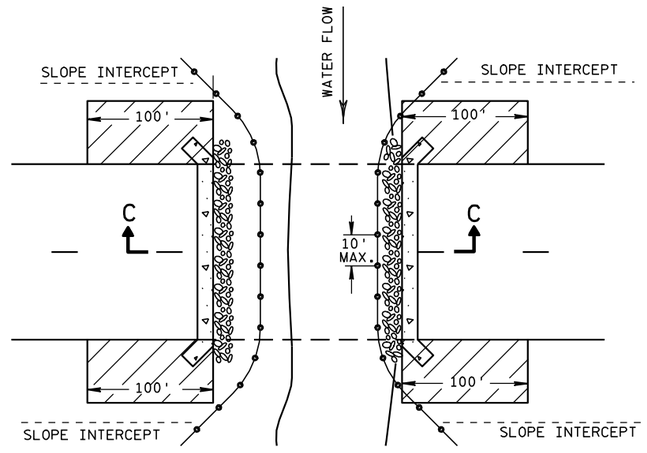
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

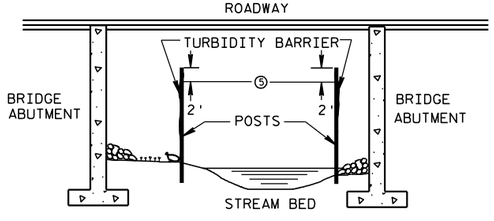
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

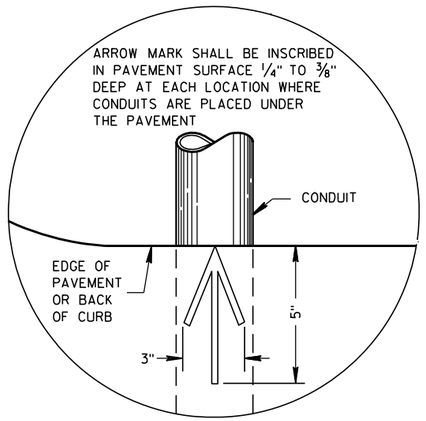
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6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
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S.D.D. 8 E 11-2

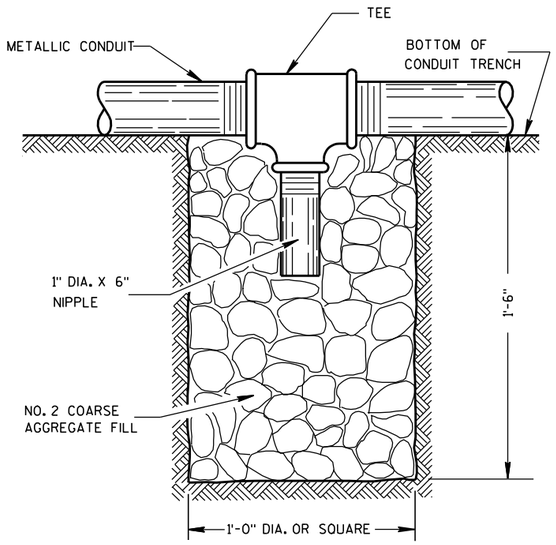
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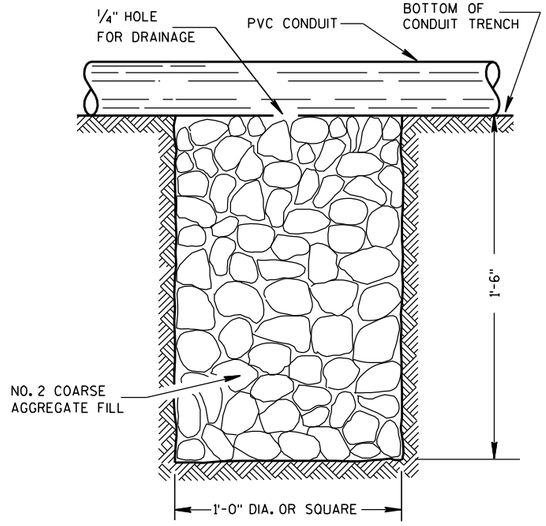
PLAN VIEW

ARROW MARK



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

DRAIN SUMP FOR METALLIC CONDUIT



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

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

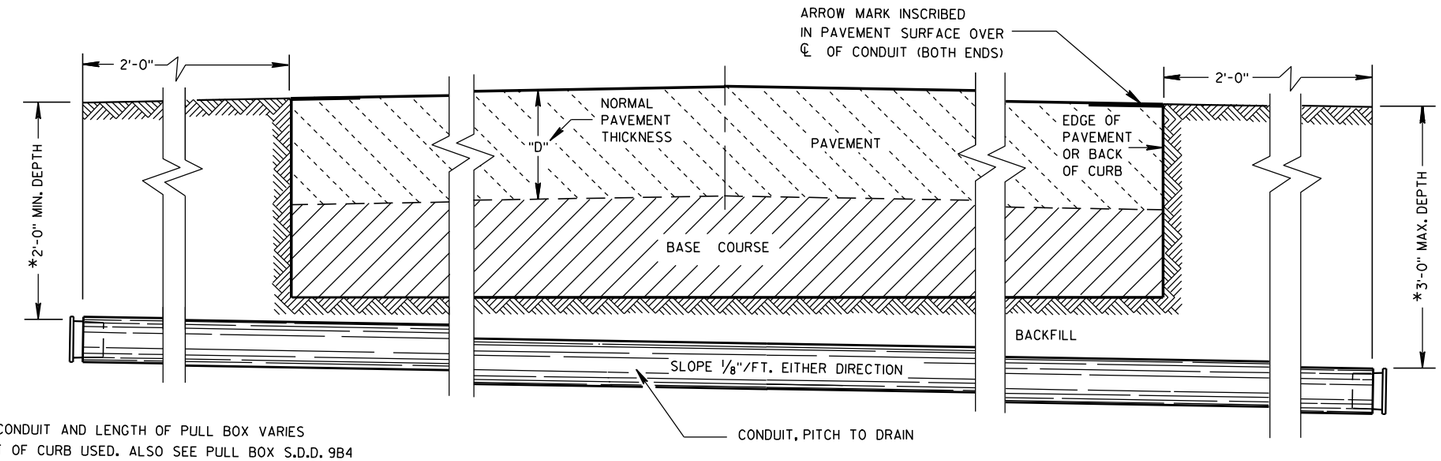
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

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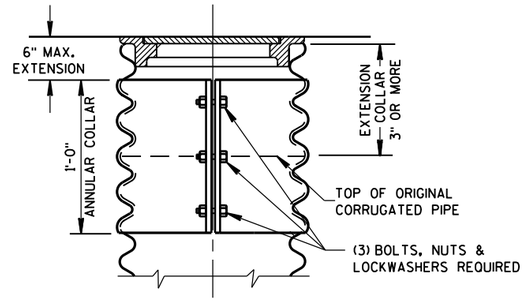
S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

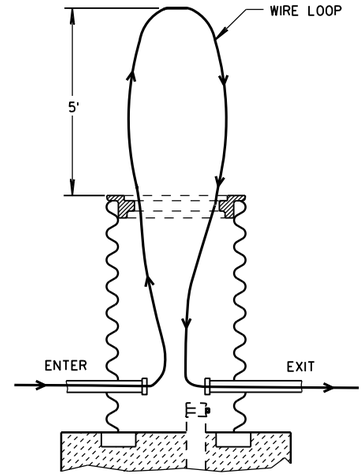
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

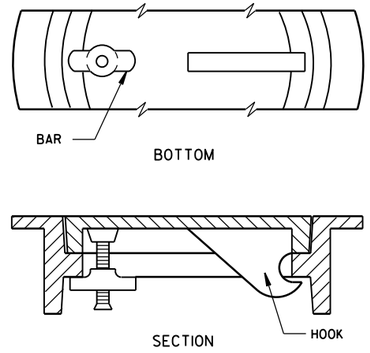
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

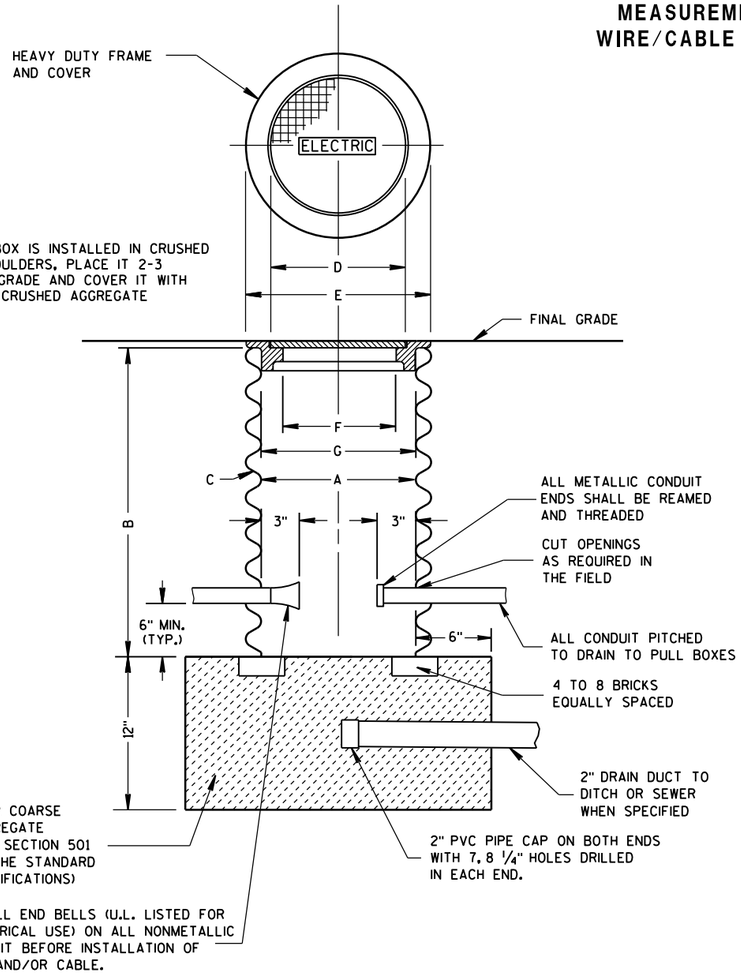


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



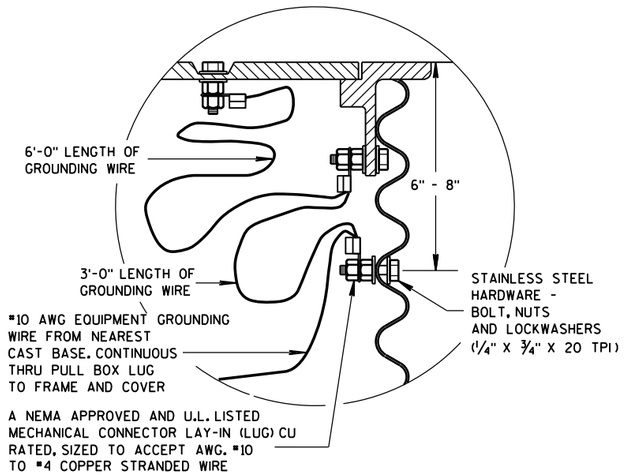
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

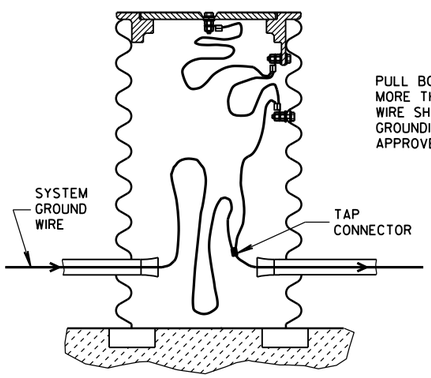


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

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

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

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

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

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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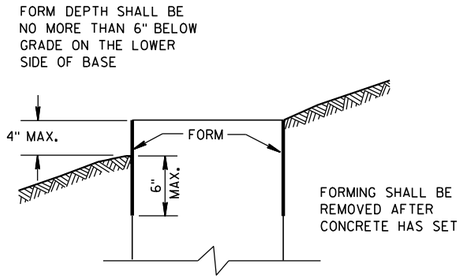
2-7-2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

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S.D.D. 9 B 4-10



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

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

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

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

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

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

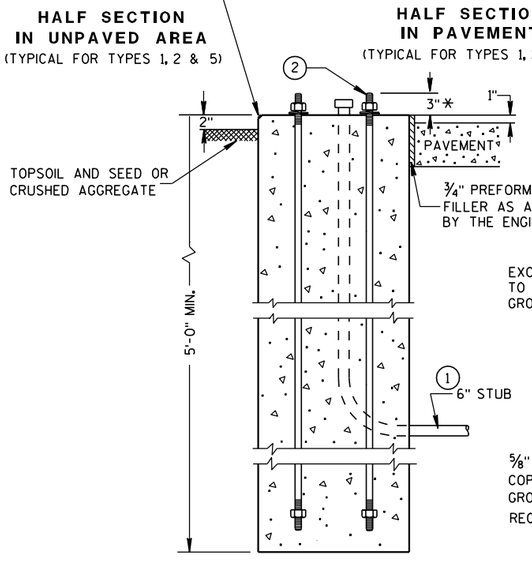
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

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

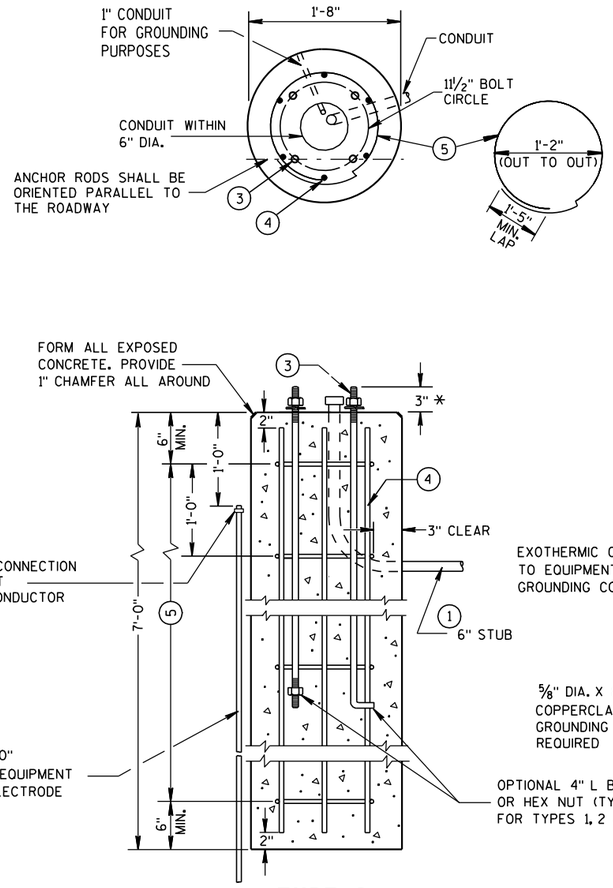
(6) (4) I" DIA. X 3'-6" ANCHOR RODS.

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

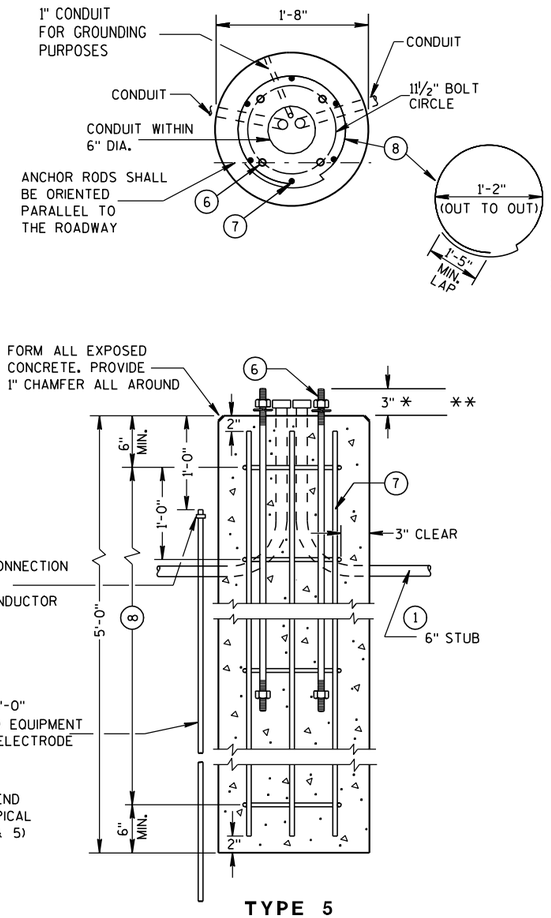
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



TYPE 1



TYPE 2



TYPE 5

CONCRETE BASES

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

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

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
365
HWYS
FHWA

6

S.D.D. 9 C 2-6

6

S.D.D. 9 C 2-6

GENERAL NOTES

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

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

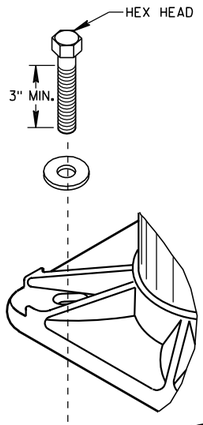
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

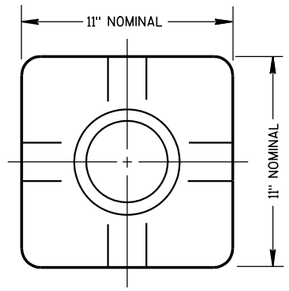
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

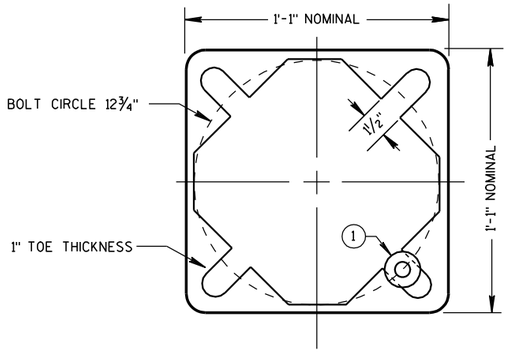
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

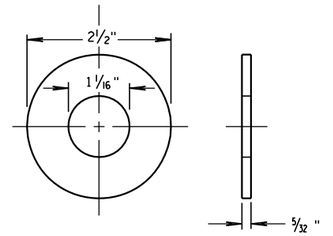




TOP VIEW
(PEDESTAL BASE)

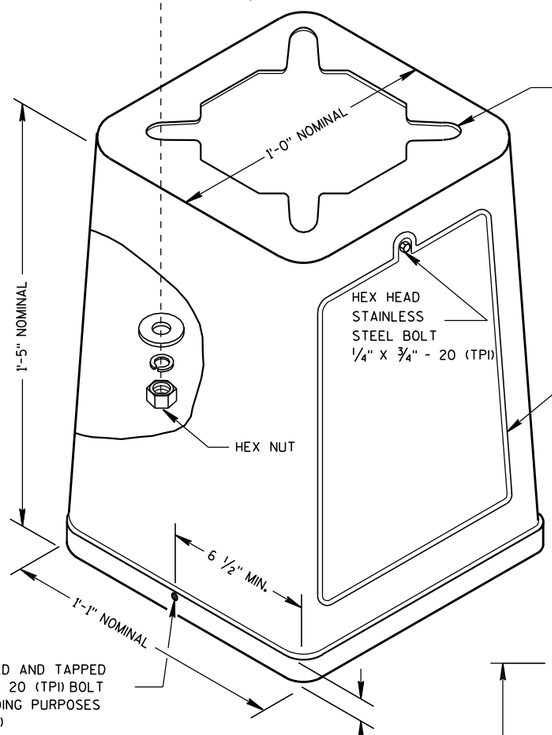


BOTTOM VIEW
(PEDESTAL BASE)

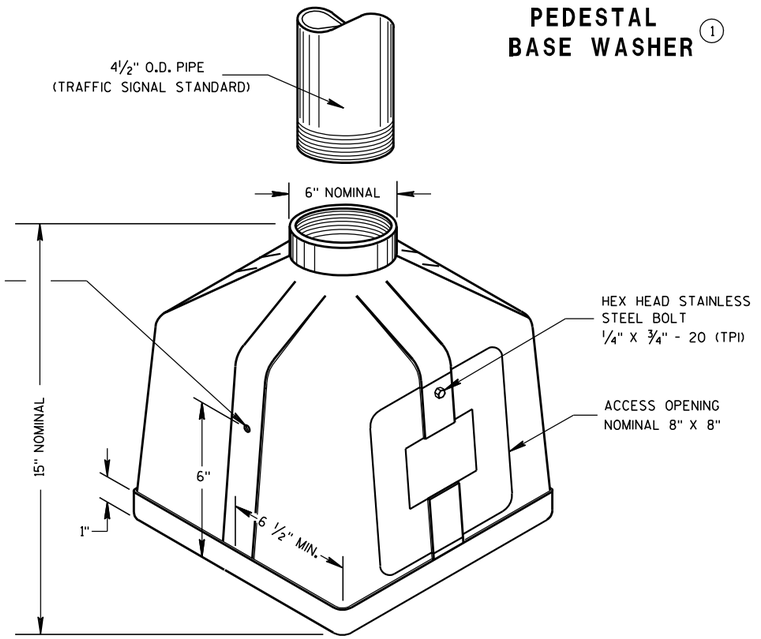


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

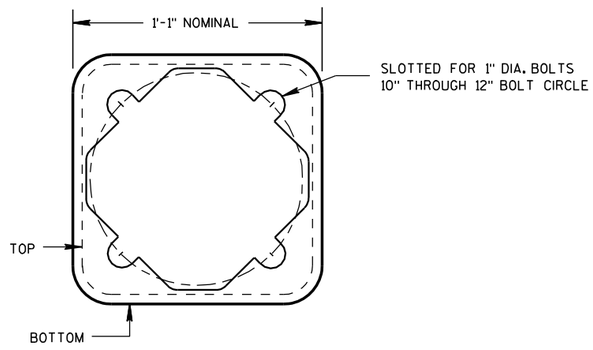


ISOMETRIC VIEW

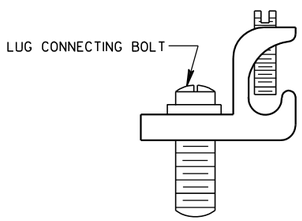


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

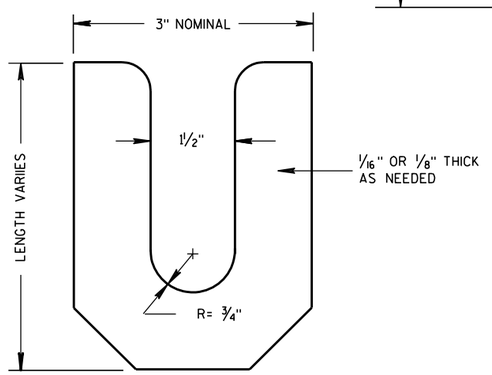


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

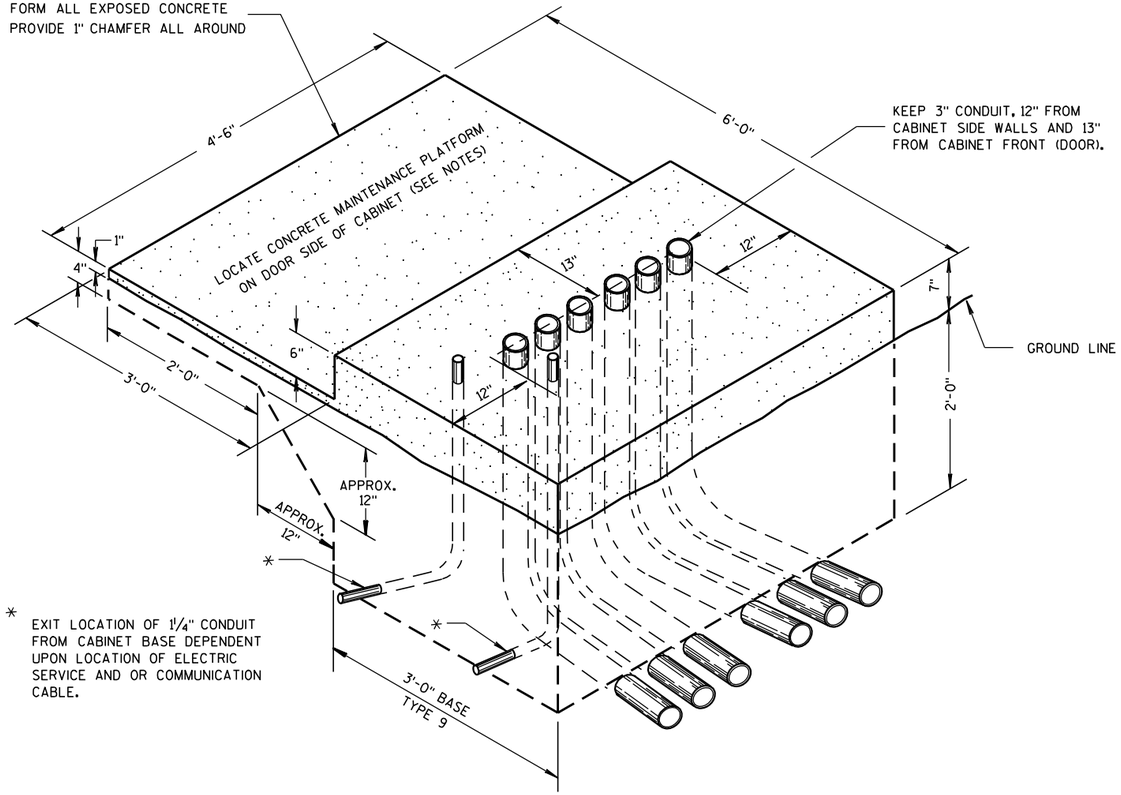
APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI
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S.D.D. 9 C 3-3

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S.D.D. 9 C 3-3

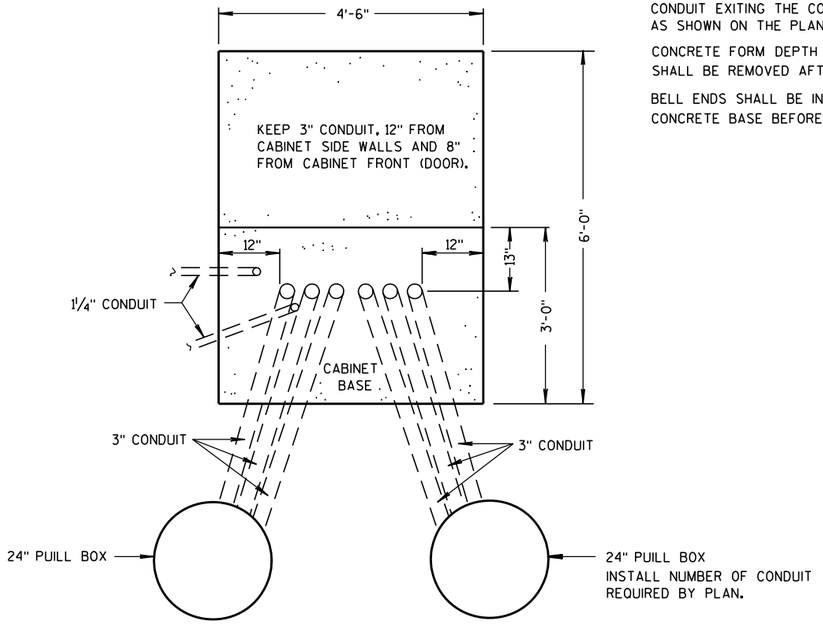


* EXIT LOCATION OF 1¼" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE AND OR COMMUNICATION CABLE.

ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

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

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

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

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

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/27/07 — DATE

/S/ Balu Ananthapadmanabhan — STATE ELECTRICAL ENGI

367

HWYS

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S.D.D. 9 C 6-5

S.D.D. 9 C 6-5

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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

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

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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

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

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

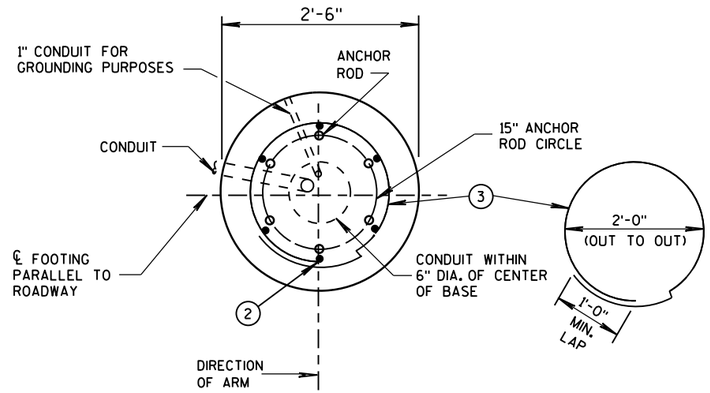
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

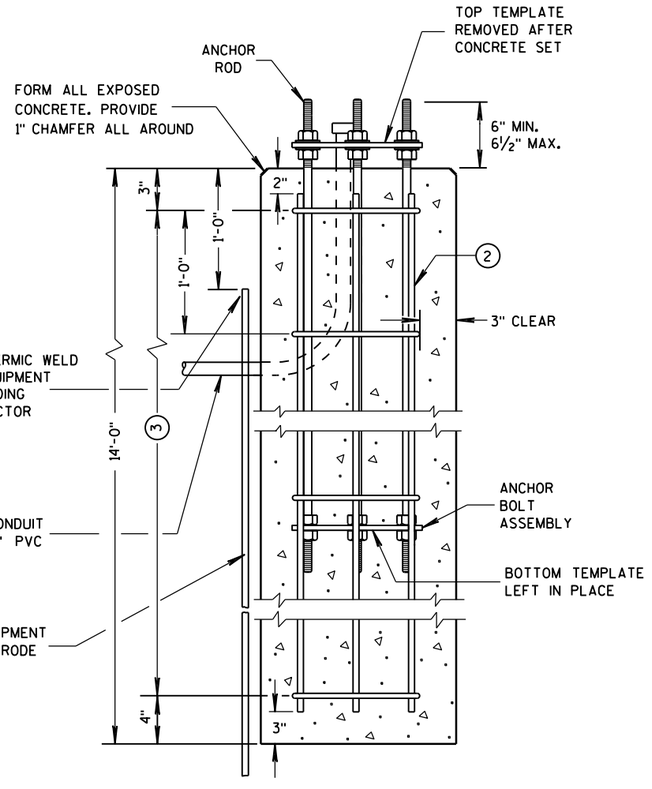
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

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

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

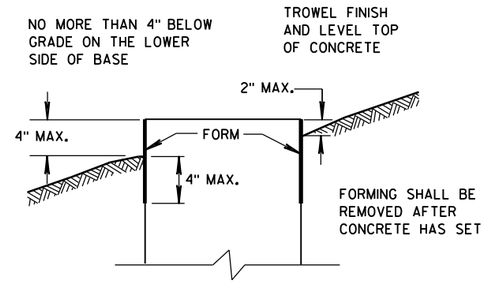
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



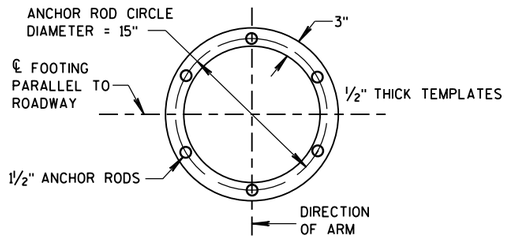


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

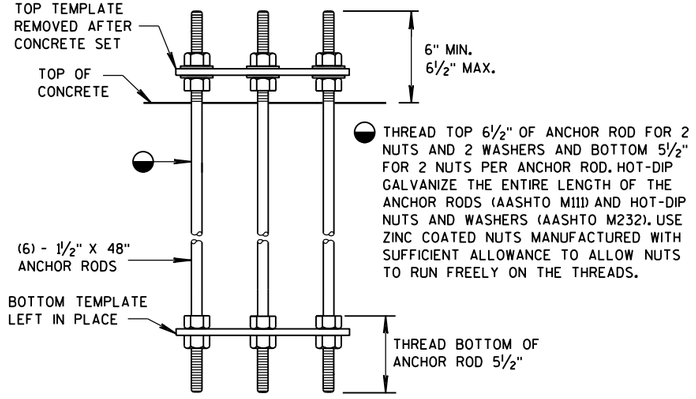
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

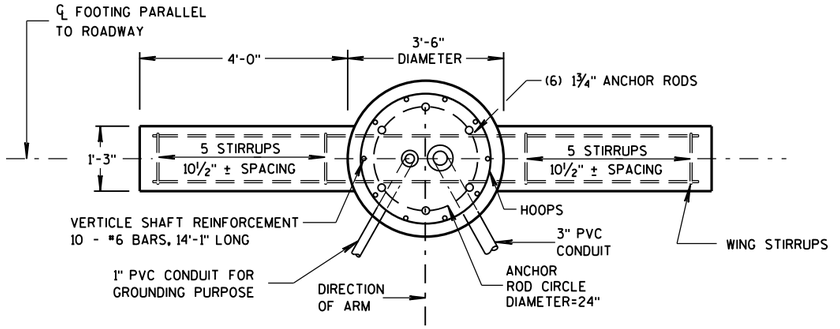
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

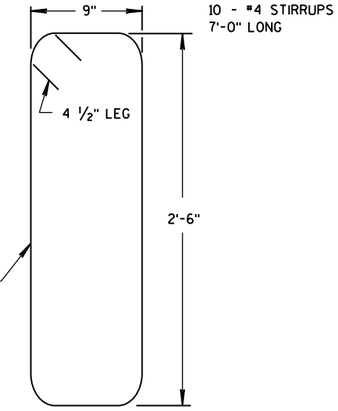
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
1-16-2013 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

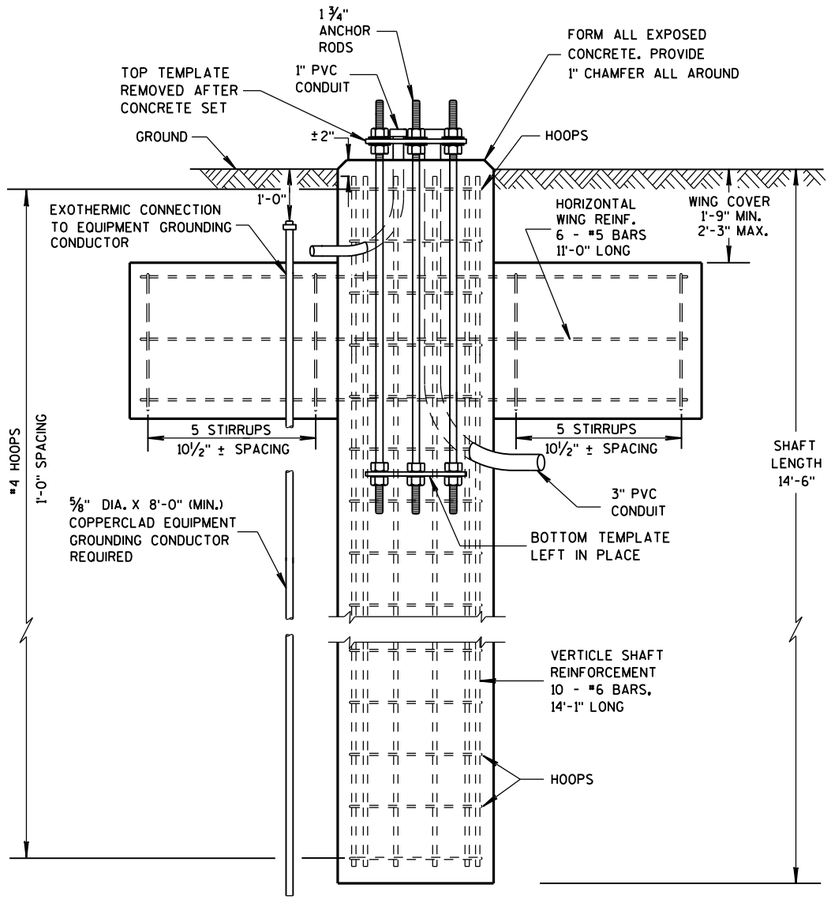
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S.D.D. 9 C 11-3



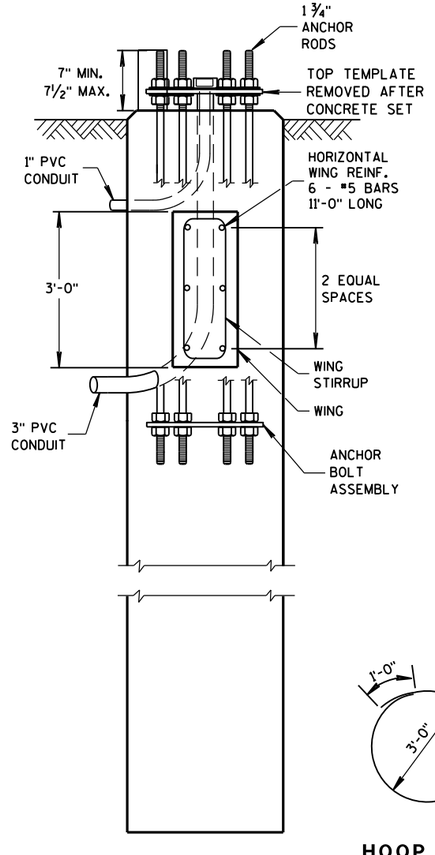
PLAN VIEW



WING STIRRUP

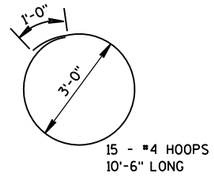


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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

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

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

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

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

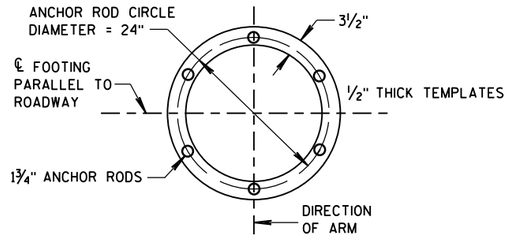
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

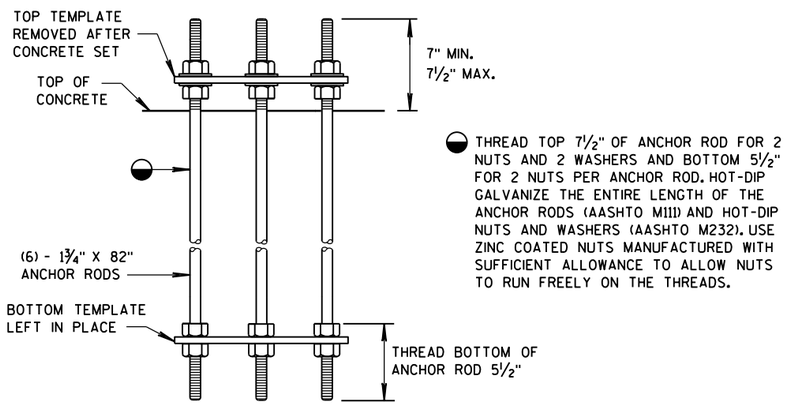
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 9 C 12-3a

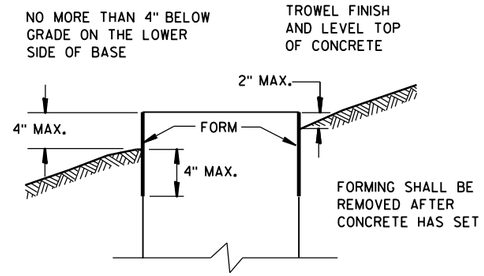


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY

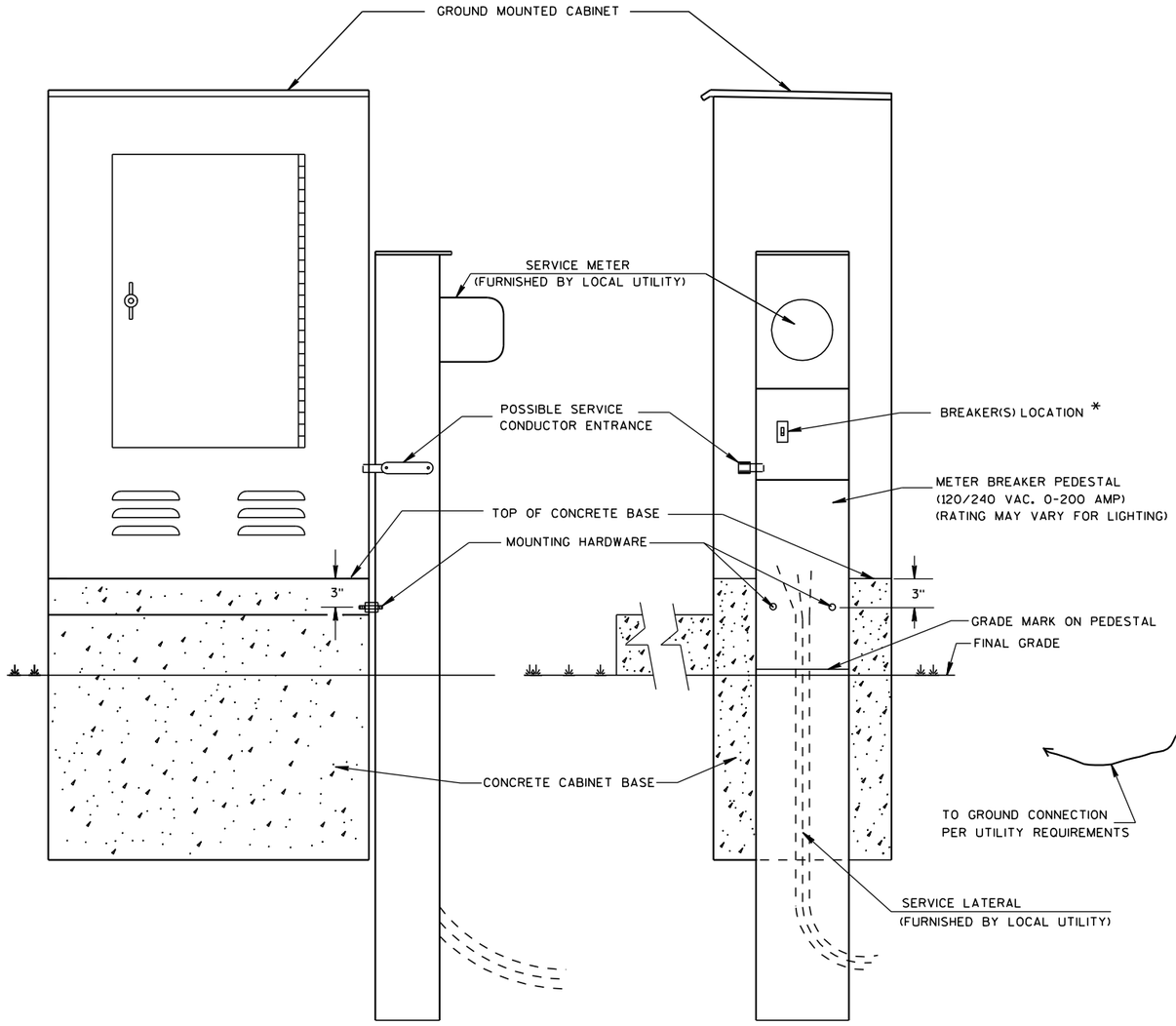


FORMING DETAIL

CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
1-16-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

6

S.D.D. 9 C 12-3b



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

6

S.D.D. 9 D 1-4

6

S.D.D. 9 D 1-4

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/27/09 — DATE

/S/ Joanna L. Bush — STATE ELECTRICAL ENGI

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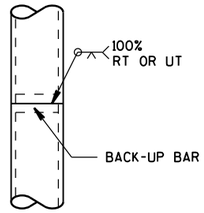
HWYS

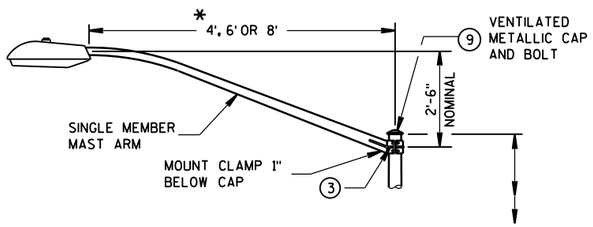
FHWA

FOR MANUFACTURERS USE ONLY

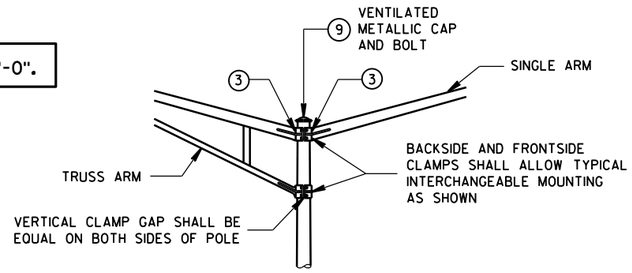
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

*RISE FOR 4' ARM SHALL BE 2'-0".





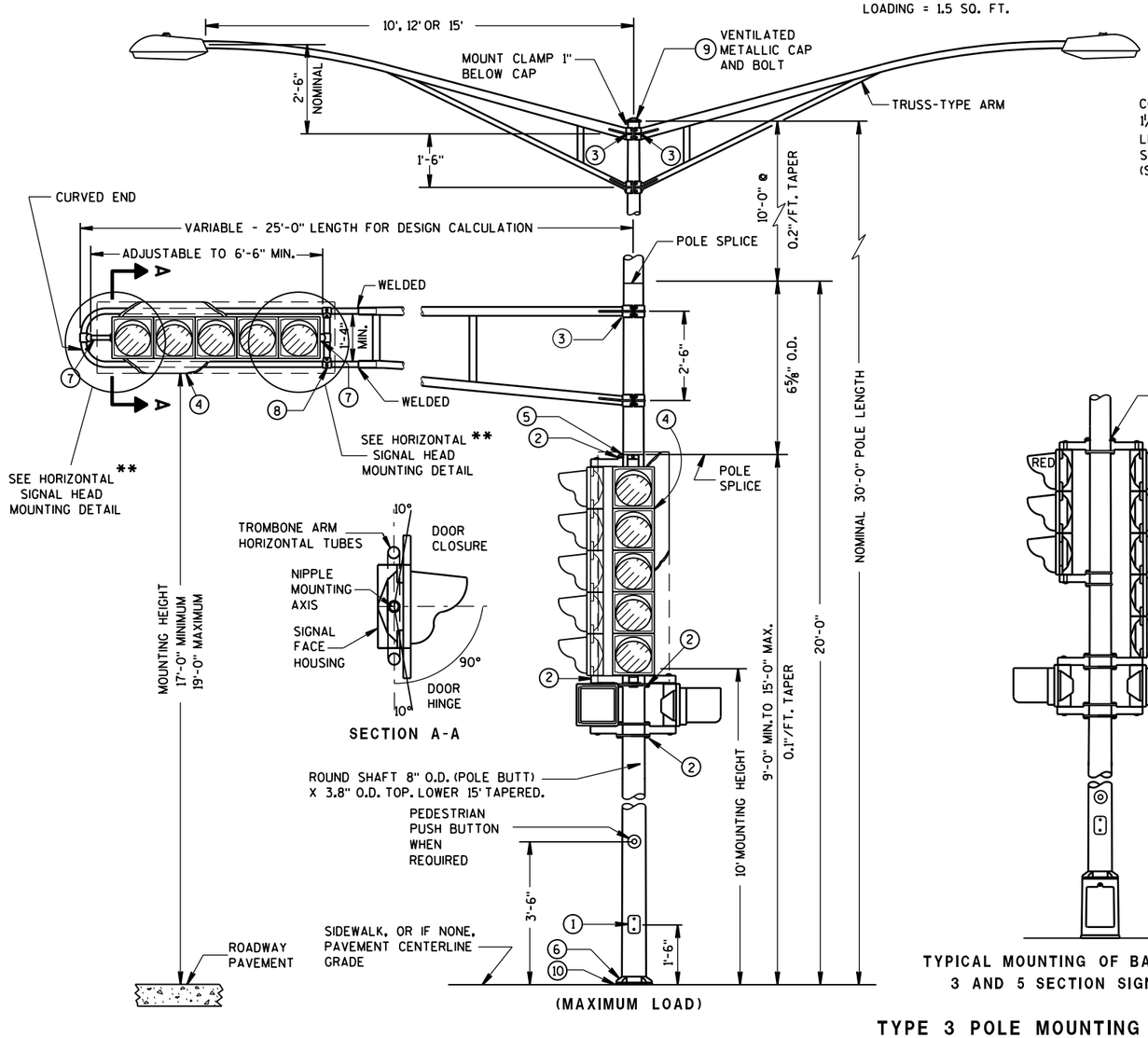
POLE SPLICE DETAIL

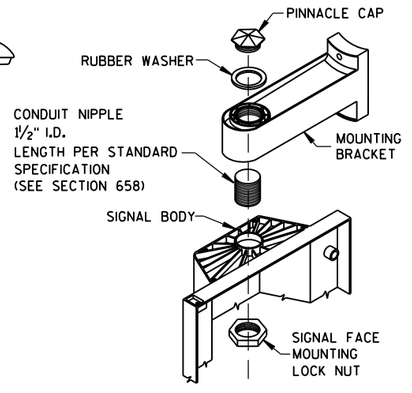


INTERCHANGEABLE MOUNTING DETAIL

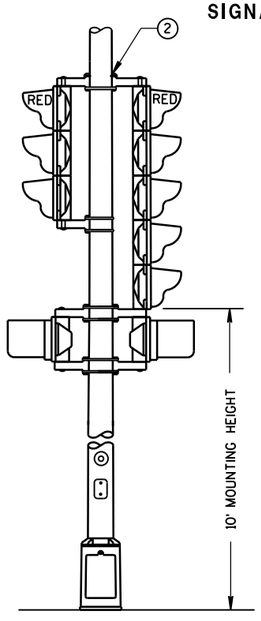
LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

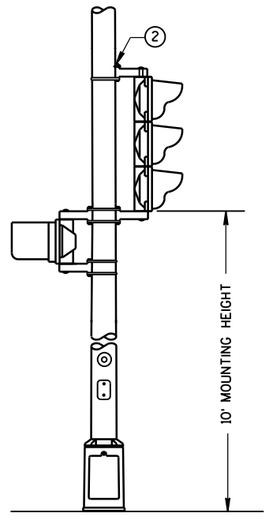




SIGNAL FACE MOUNTING DETAIL
(BANDED)



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



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

TYPE 3 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

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

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

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

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

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

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

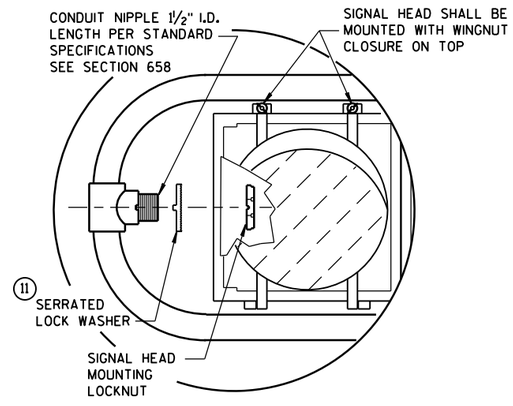
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

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

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

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



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

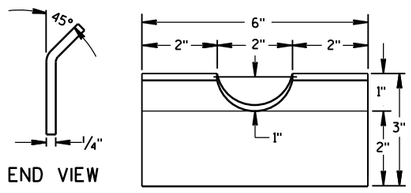
** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 9 E 1-12b

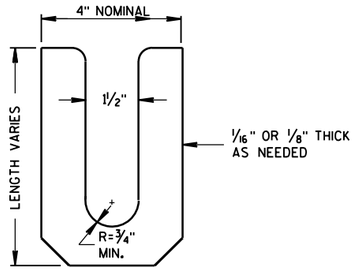


END VIEW

FRONT VIEW

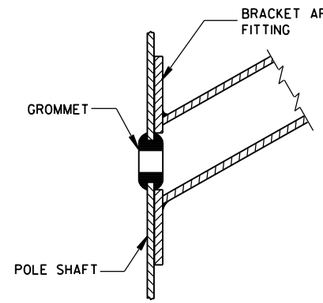
RECTANGULAR CLAMP SHIM

(4 TO A SET)

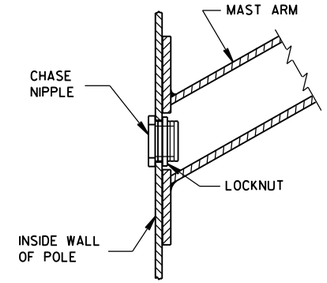


LEVELING SHIM (15)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

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

(13) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

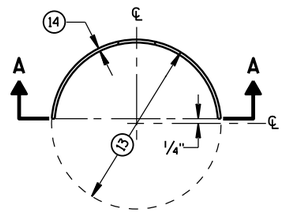
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

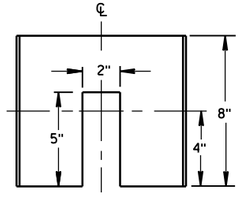
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

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

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



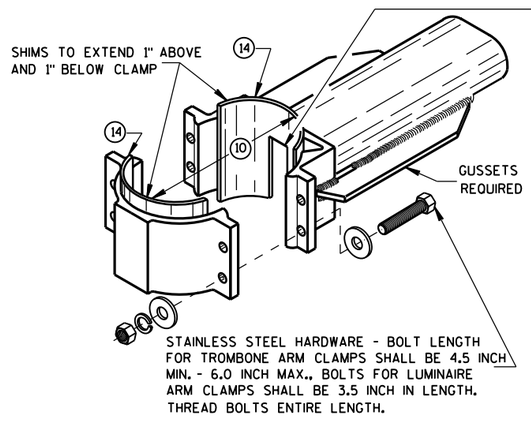
PLAN VIEW



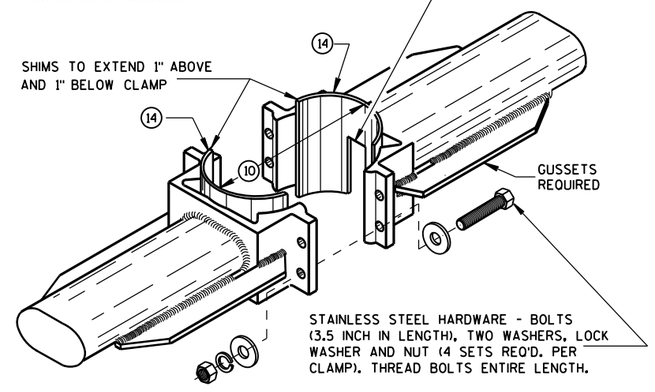
SECTION A-A

CIRCULAR CLAMP SHIM

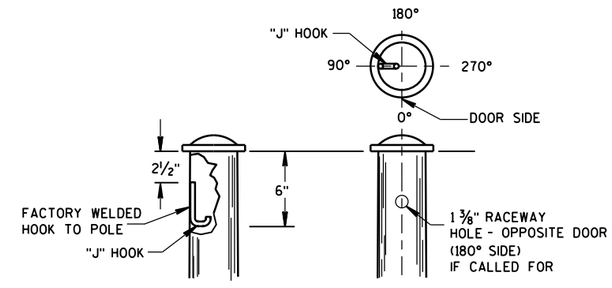
(2 TO A SET)



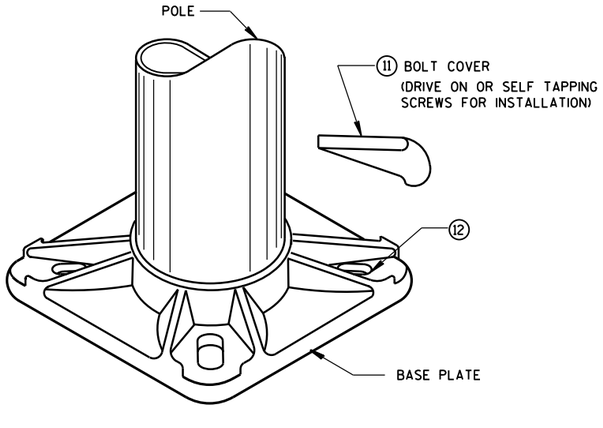
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



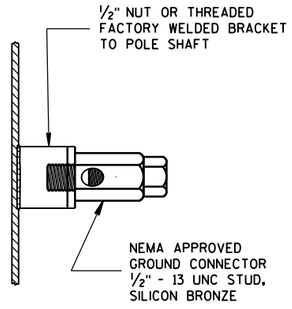
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

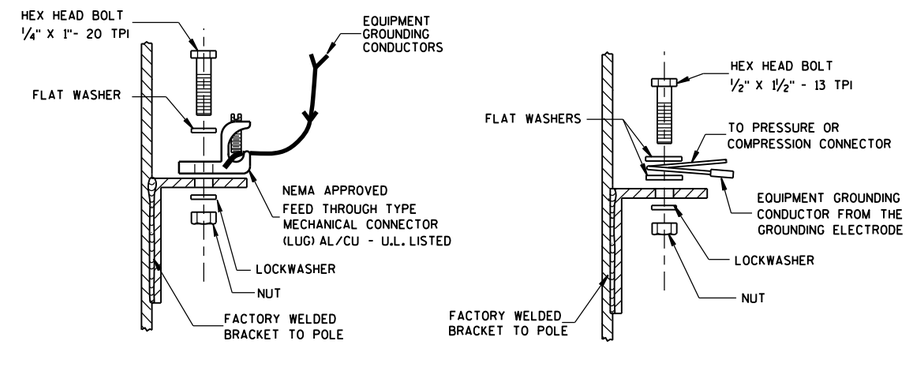


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

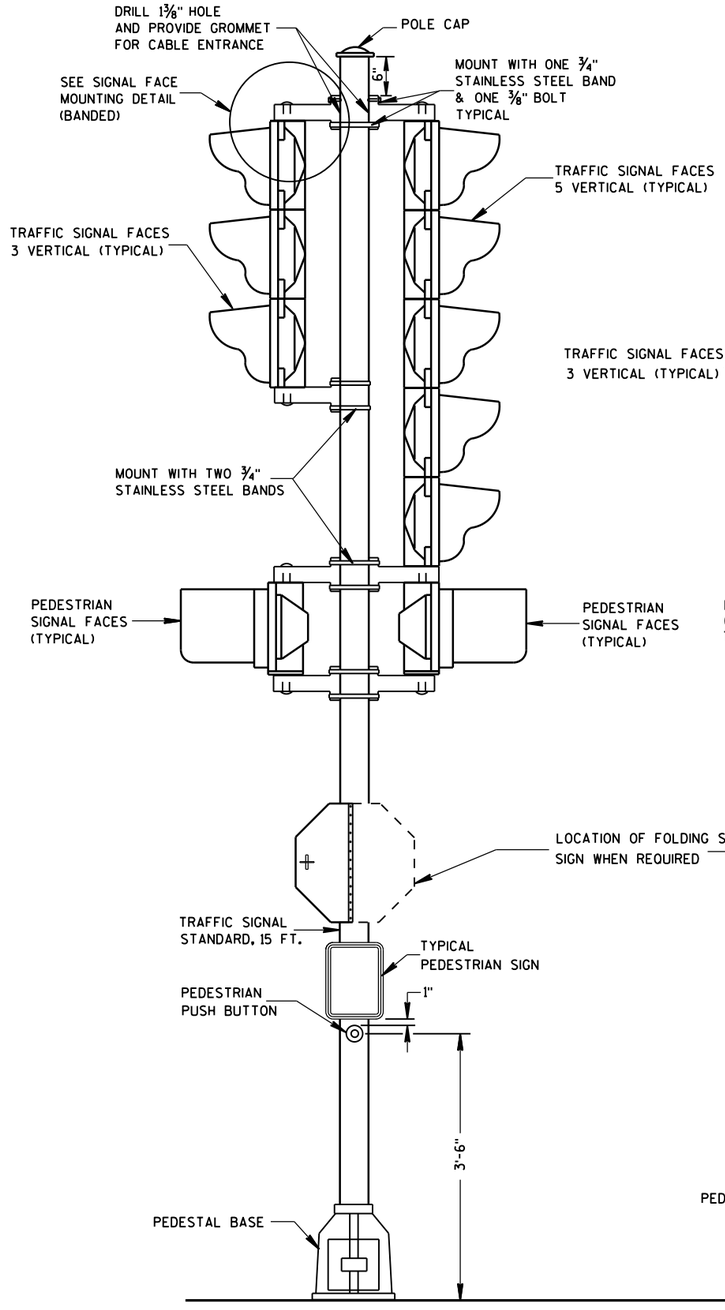
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/7/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL

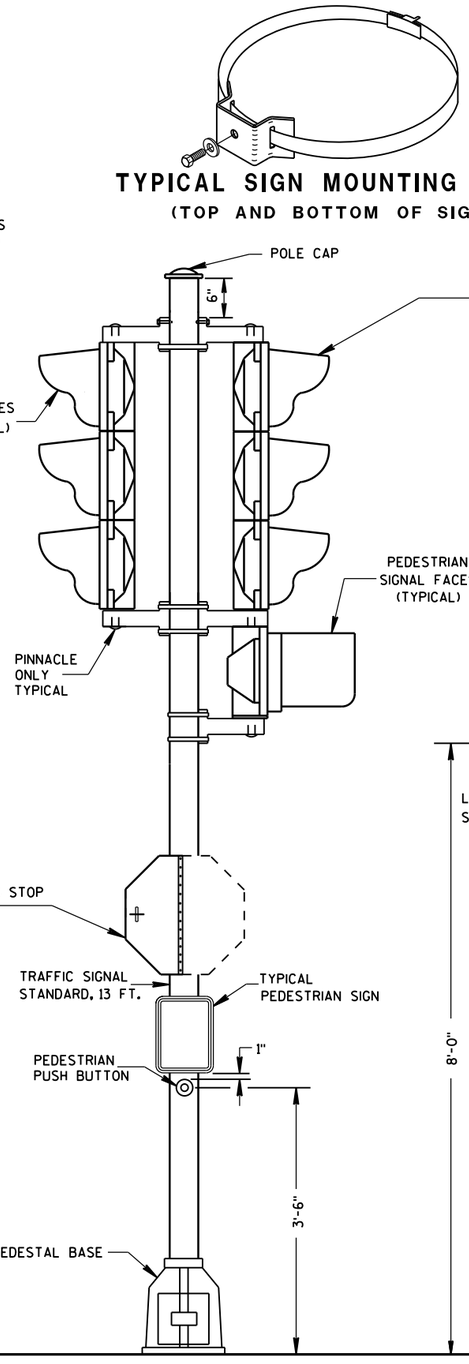
FHWA

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S.D.D. 9 E 1-12g

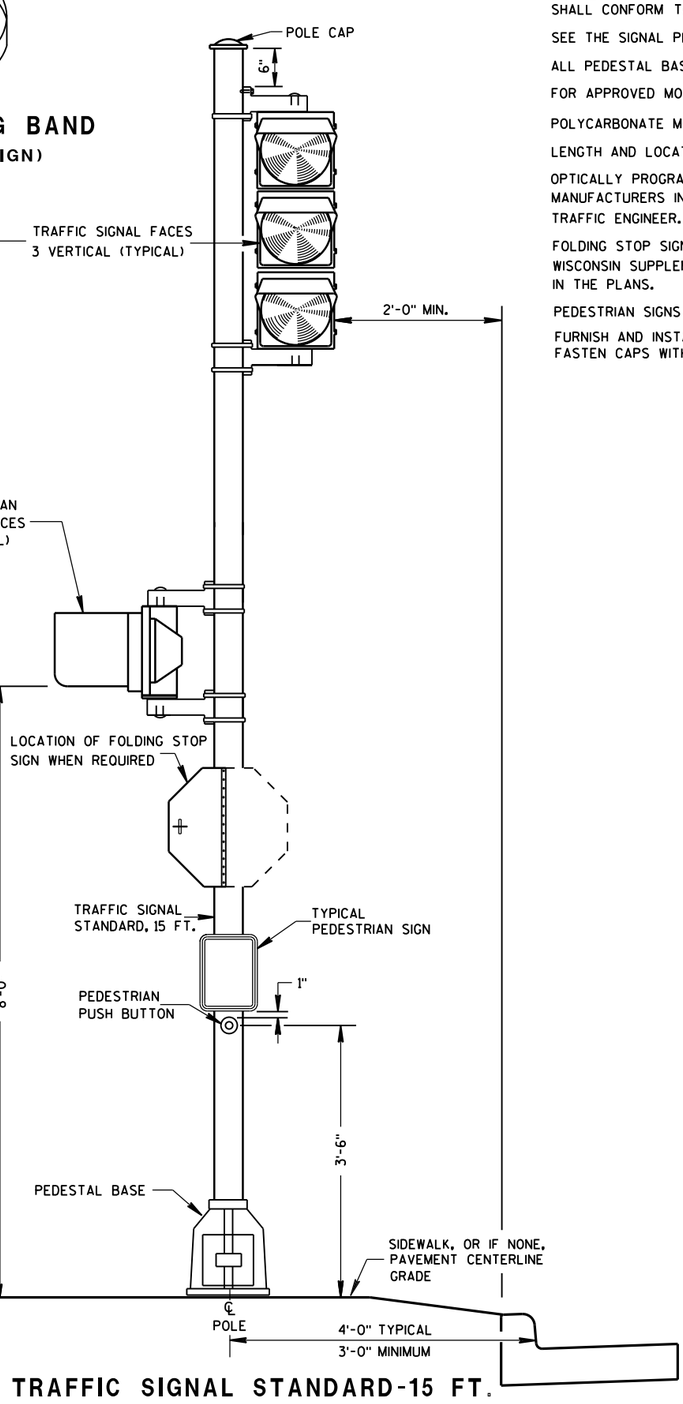


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

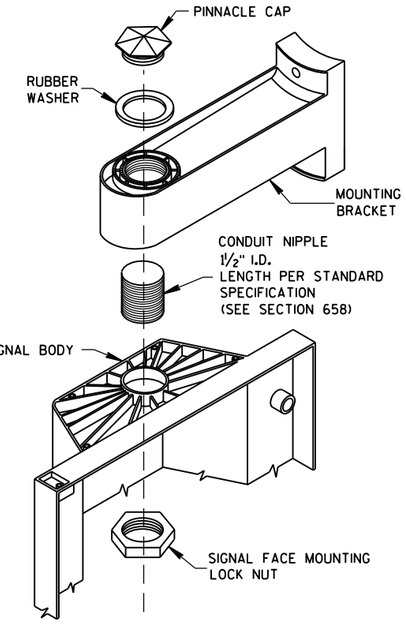
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

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

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



SIGNAL FACE MOUNTING DETAIL
(BANDED)

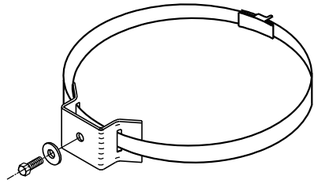
TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

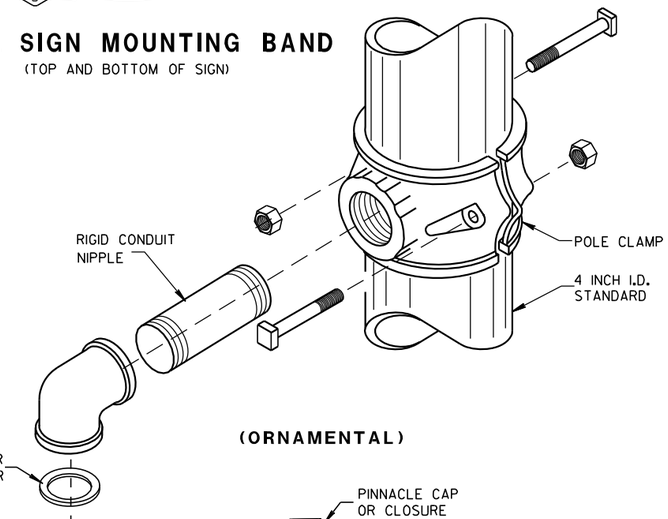
APPROVED
2/28/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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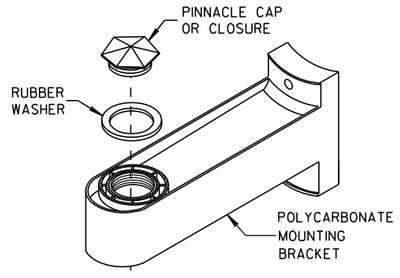
S.D.D. 9 E 6-5



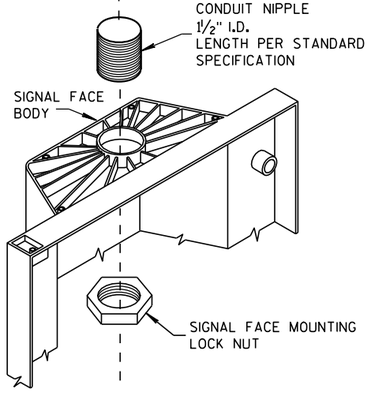
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



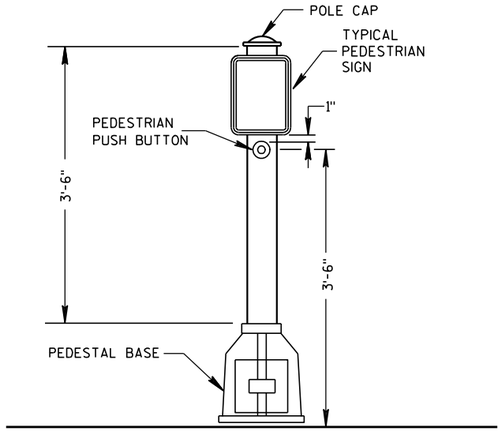
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

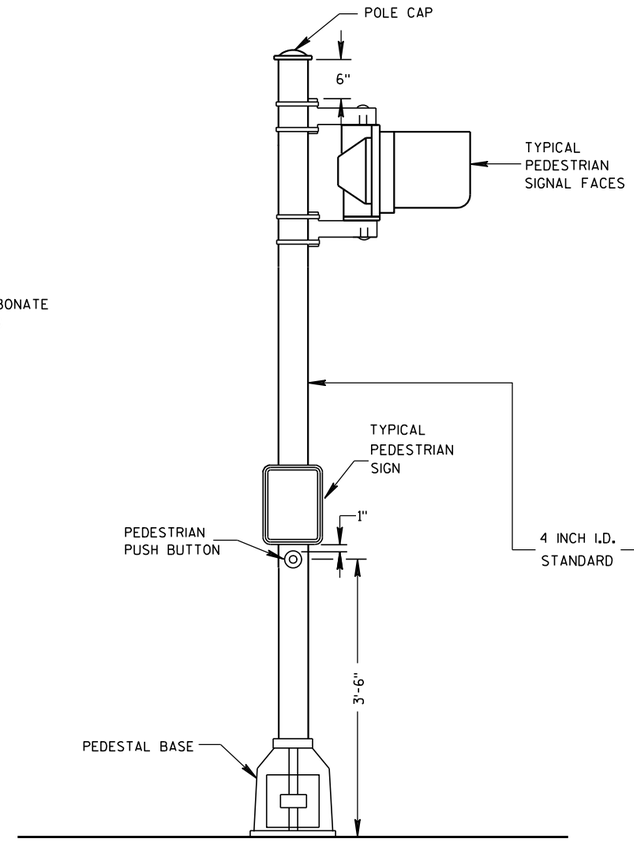
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

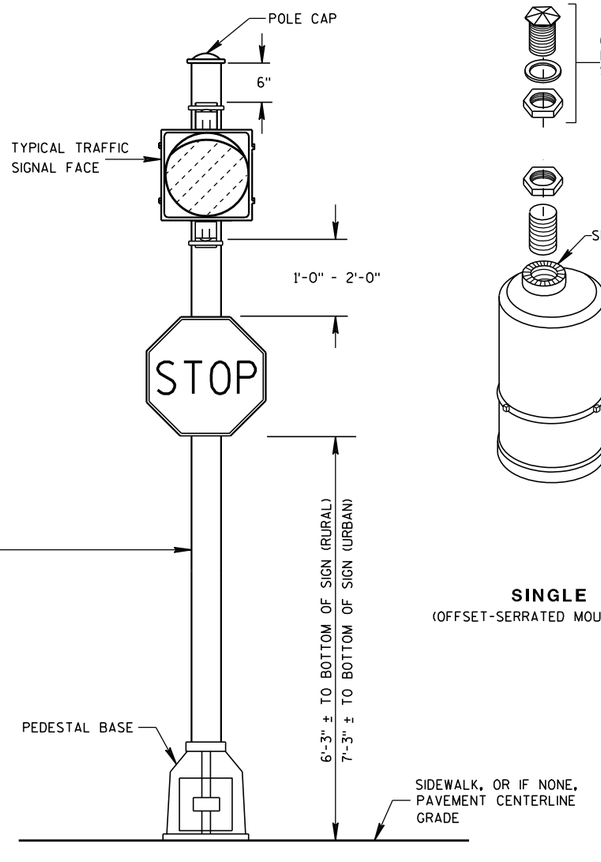
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

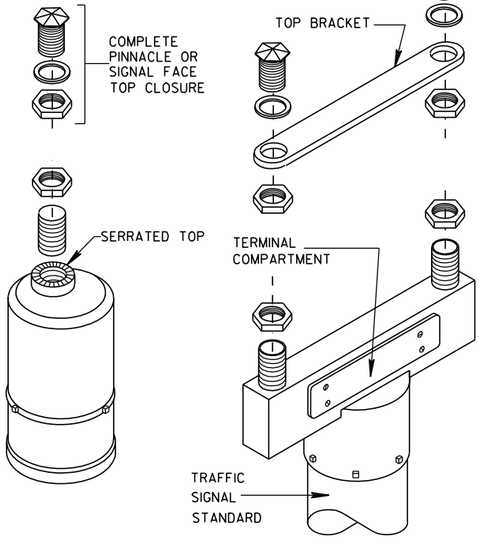
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI 375

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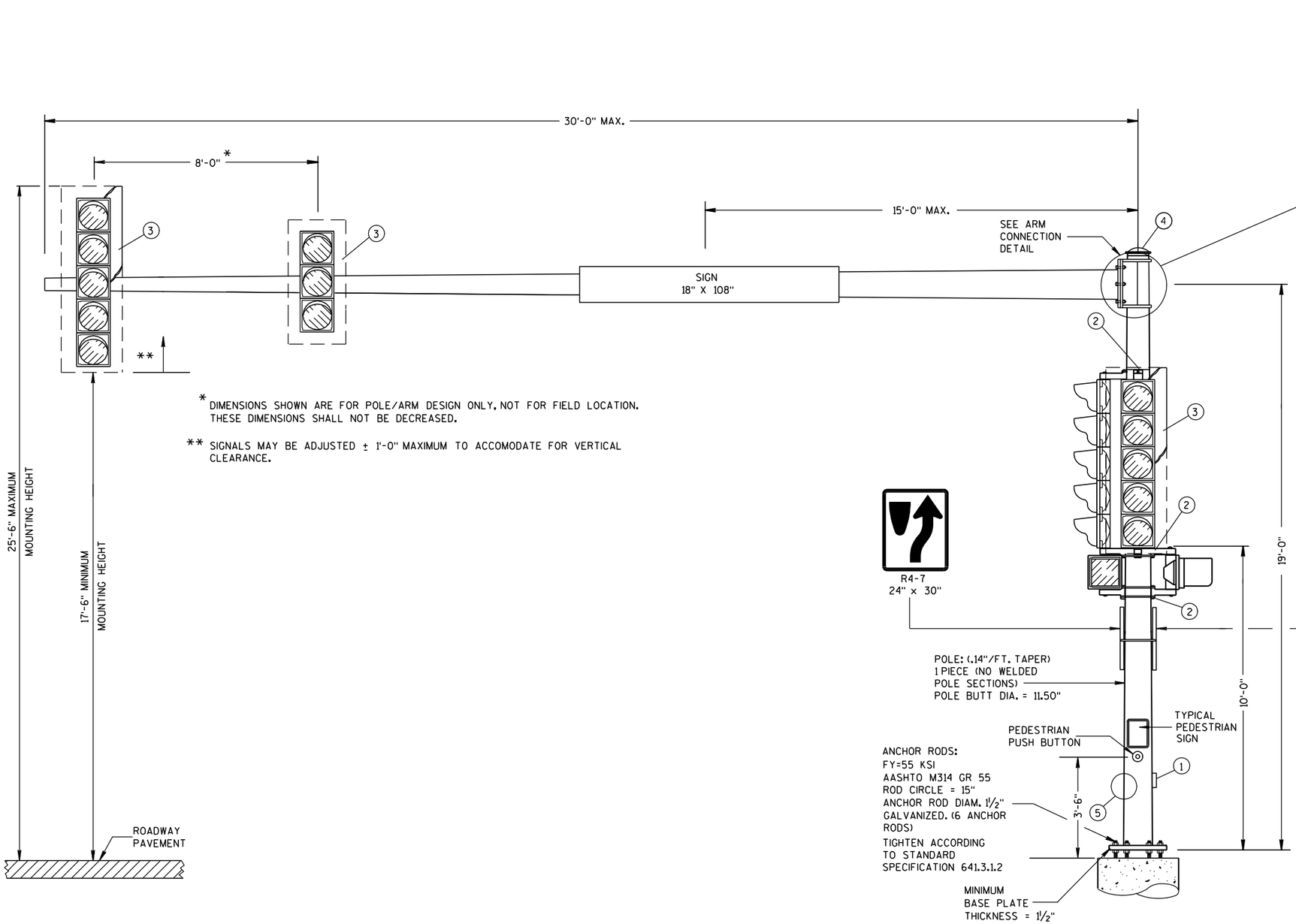
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S.D.D. 9 E 7-5

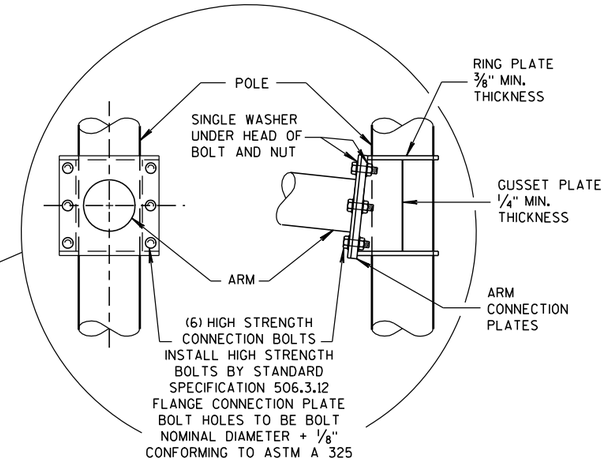
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S.D.D. 9 E 7-5



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

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



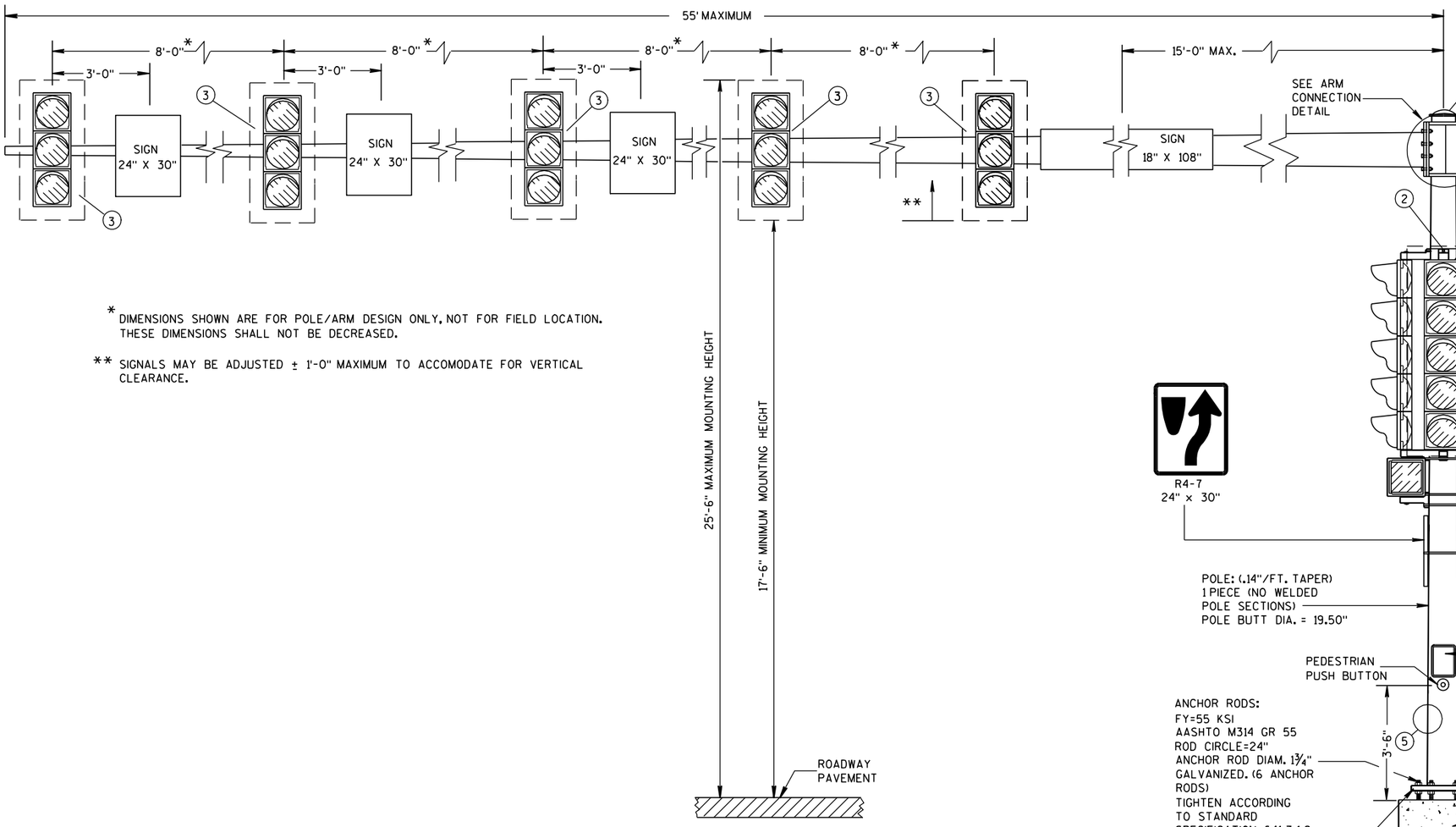
6 BOLT ARM CONNECTION DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

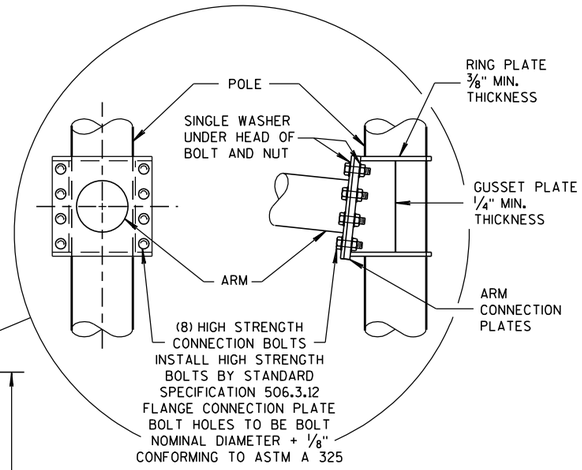
TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/2/2011 DATE	/S/ Thomas J. Corrigan STATE ELECTRICAL ENGI 376 HWYS
FHWA	

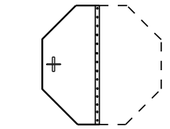


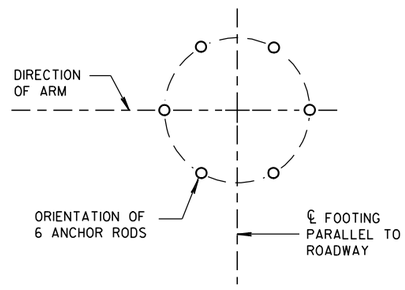
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

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



8 BOLT ARM CONNECTION DETAIL





ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/2/2011 — DATE
/S/ Thomas J. Gorring — STATE ELECTRICAL ENGI
377 — HWYS
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S.D.D. 9 E 8-4c

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE LATEST AASHTO AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

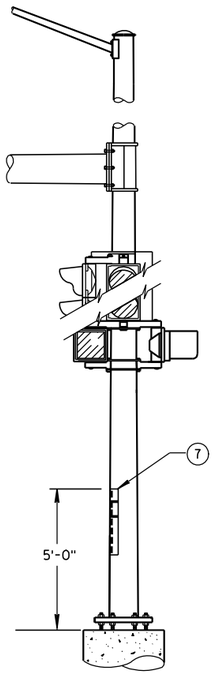
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

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

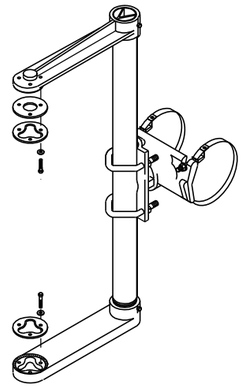
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

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

MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

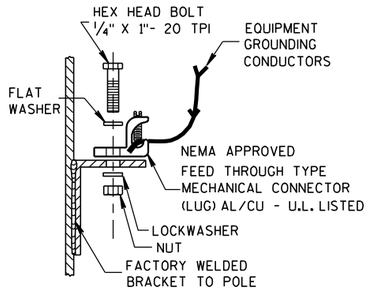


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



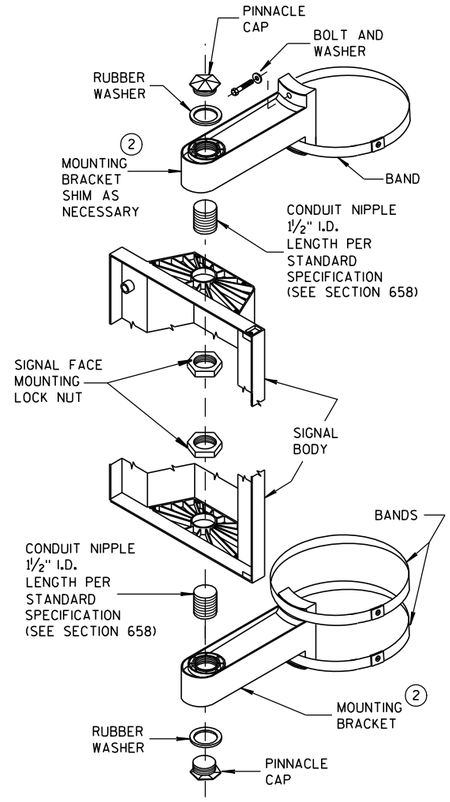
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

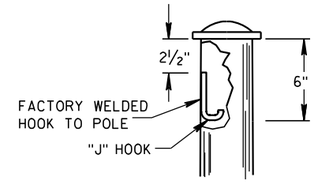


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI 378 HWYS

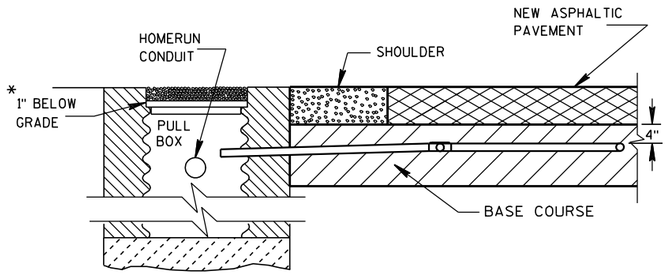
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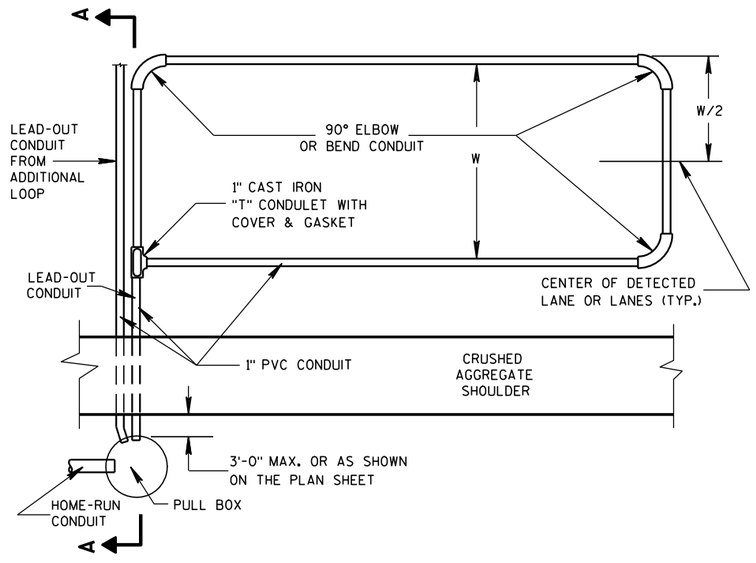
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SECTION A-A
NO CURB & GUTTER

DETECTOR LOOP INSTALLATION DETAIL

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



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES

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

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

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

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

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

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

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

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

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

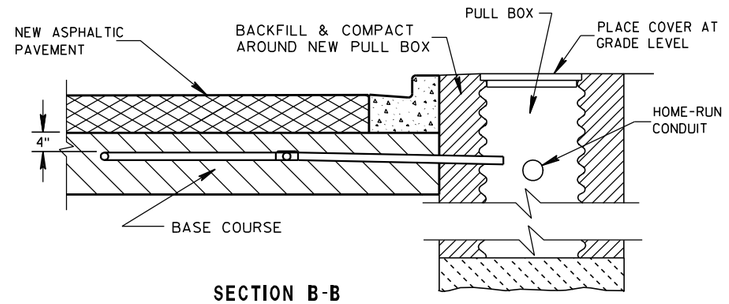
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE ASPHALTIC PAVEMENT IS PLACED.

WHEN MULTIPLE LAYERS OF ASPHALTIC PAVEMENT ARE TO BE PLACED, LOOPS MAY BE INSTALLED BY SAWING A TWO INCH WIDE SLOT IN THE FIRST LAYER, DIG OUT THE ASPHALTIC MATERIAL AND BASE COURSE. PLACE THE LOOP, FILL THE SLOT WITH BASE COURSE MATERIAL AND NEW ASPHALTIC MATERIAL AND TAMP THE ASPHALTIC MATERIAL IN PLACE.

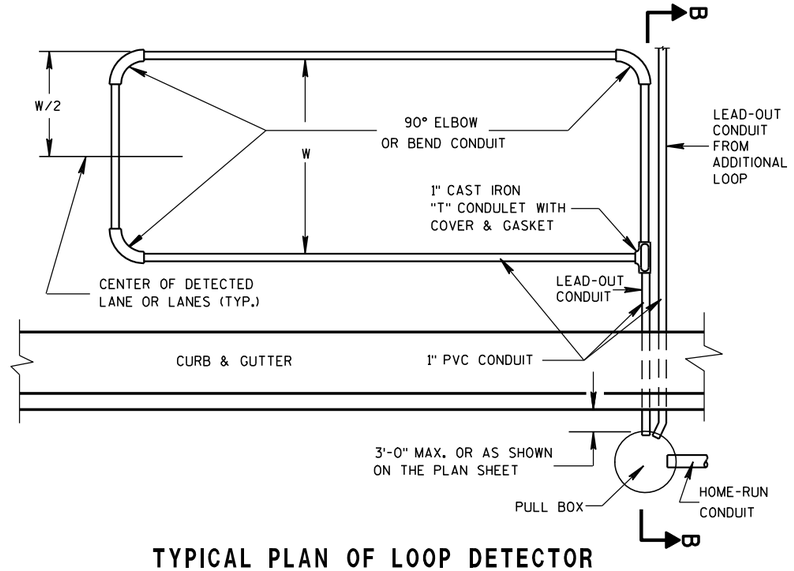
SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT/PAVEMENT OPENING SHALL BE SEALED WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

DRIVE A 1½" MAX. PK NAIL INTO THE NEW ASPHALTIC PAVEMENT AND DIRECTLY ABOVE THE CONDULET AFTER THE FINAL LAYER OF NEW ASPHALTIC PAVEMENT IS COMPLETELY INSTALLED, IF REQUIRED BY THE DISTRICT TRAFFIC SECTION.



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/7/06 — DATE

/S/ Balu Ananthar[illegible]an — STATE ELECTRICAL ENGI

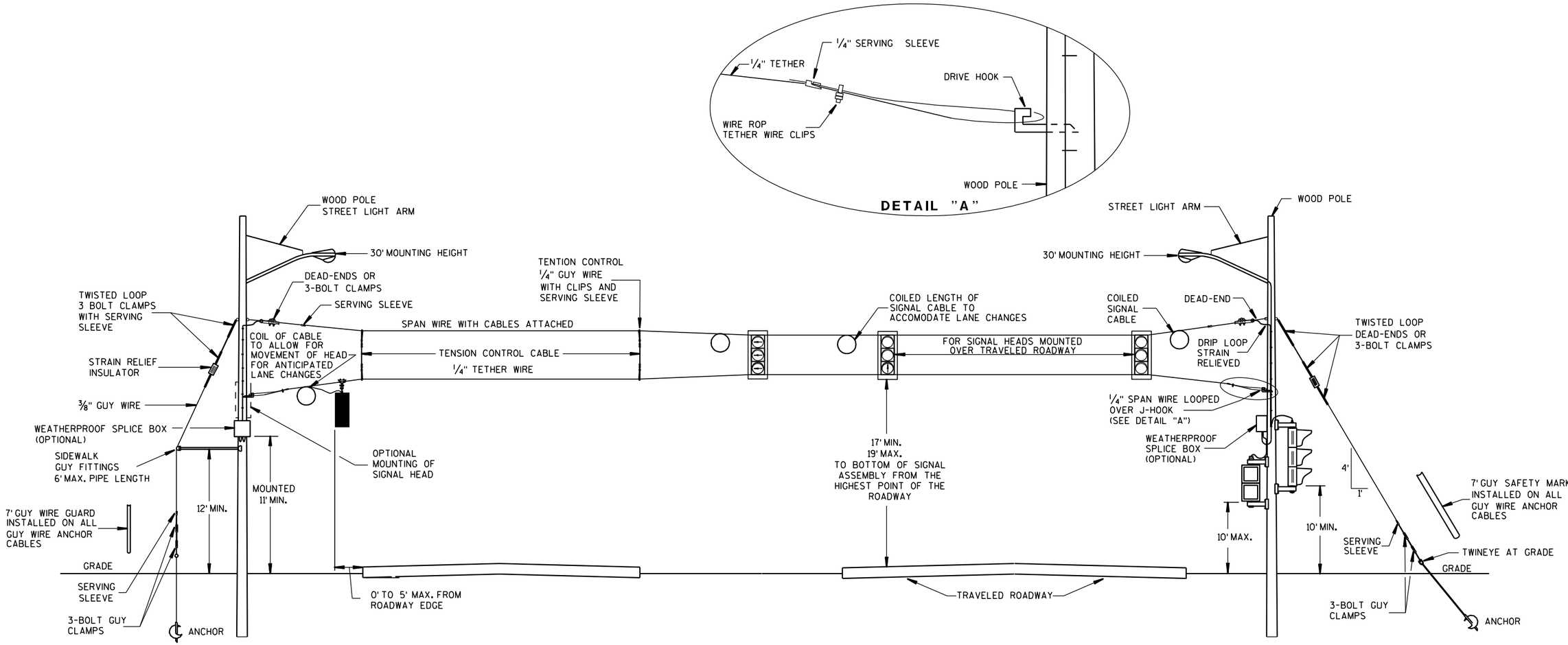
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GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

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

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE — /S/ Balu Ananthanarayanan STATE ELECTRICAL ENGI 380 HWYS

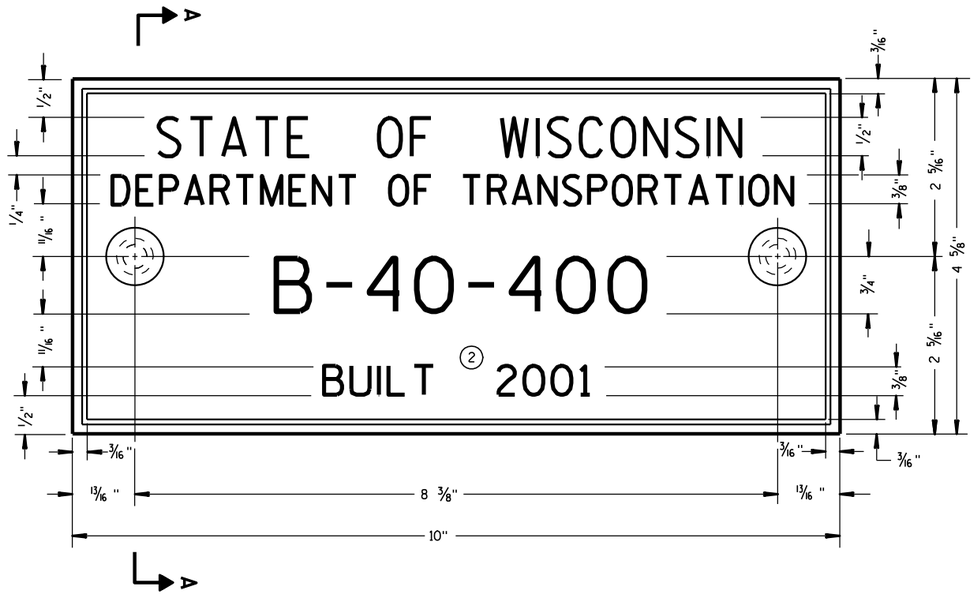
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S.D.D. 9 G 1-3b



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

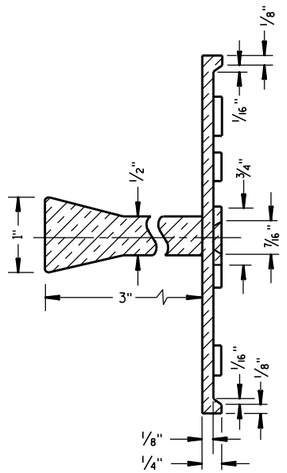
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

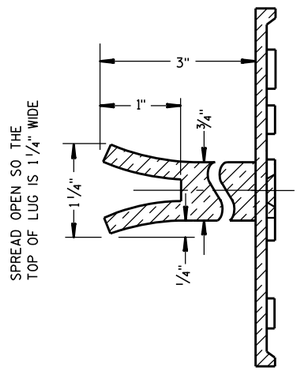
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

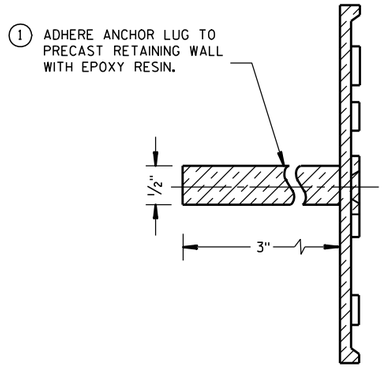
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

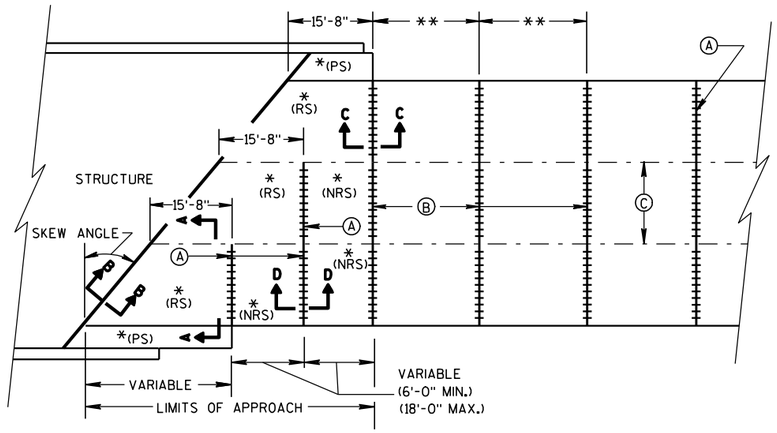
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

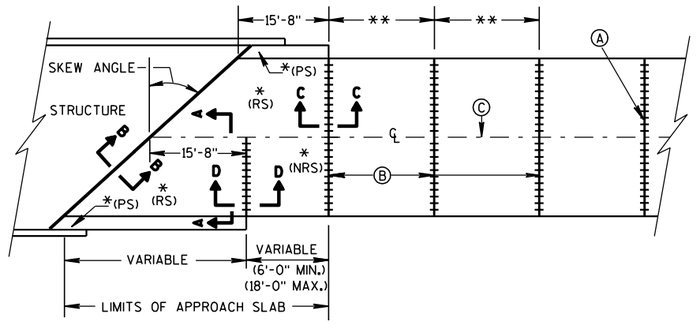
FHWA

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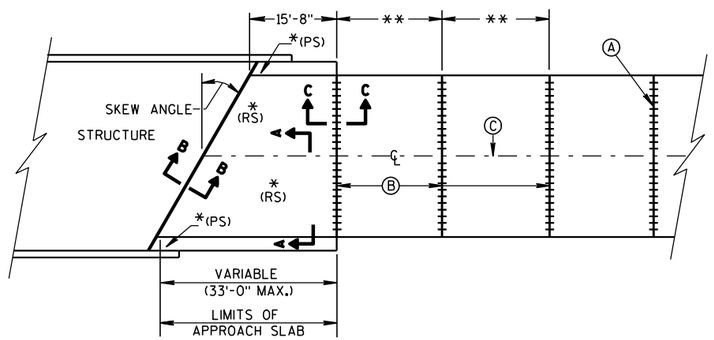
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



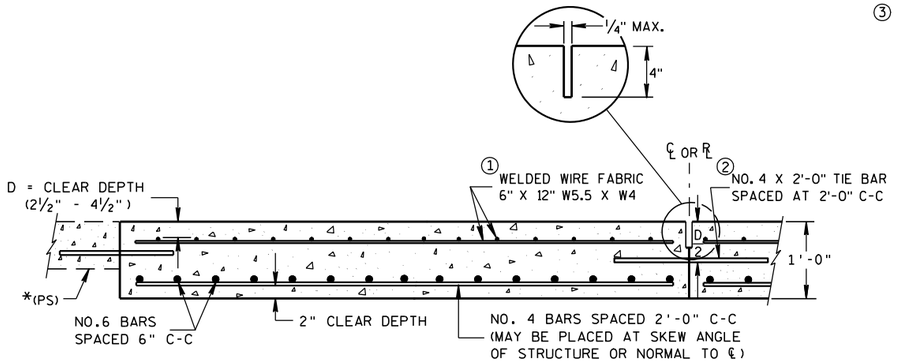
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

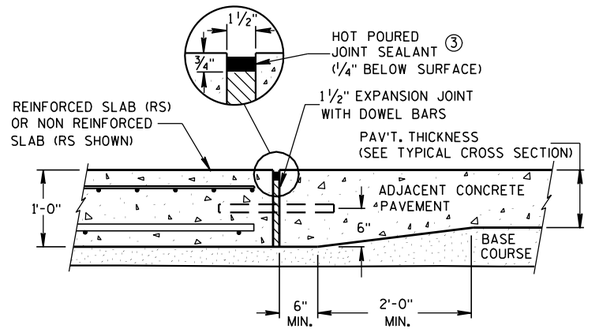
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

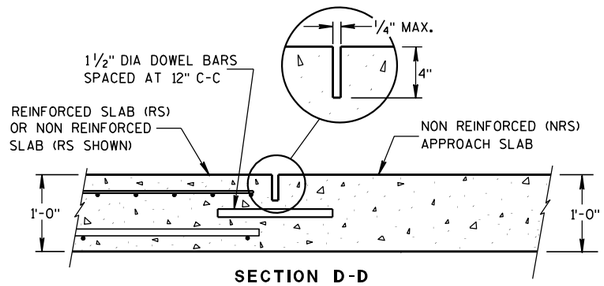
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



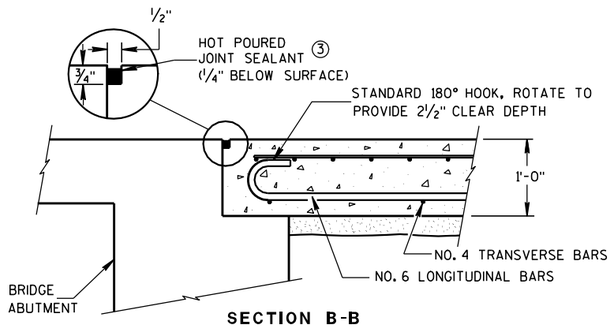
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

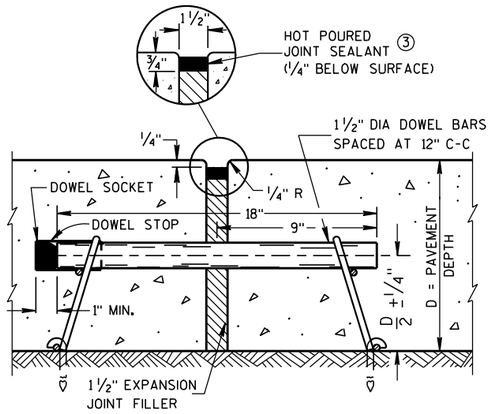
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT

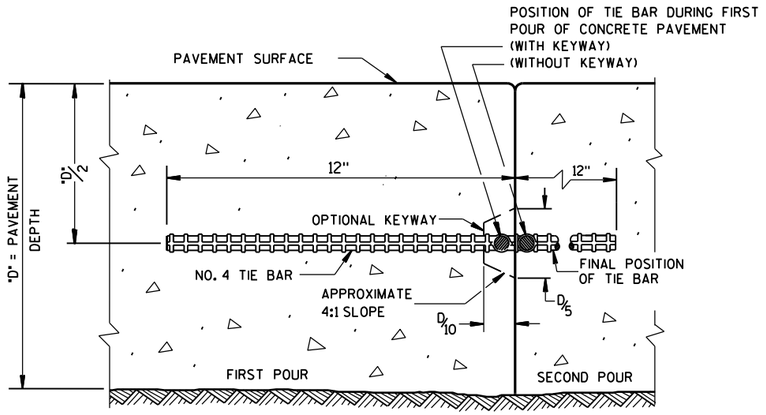


EXPANSION JOINT

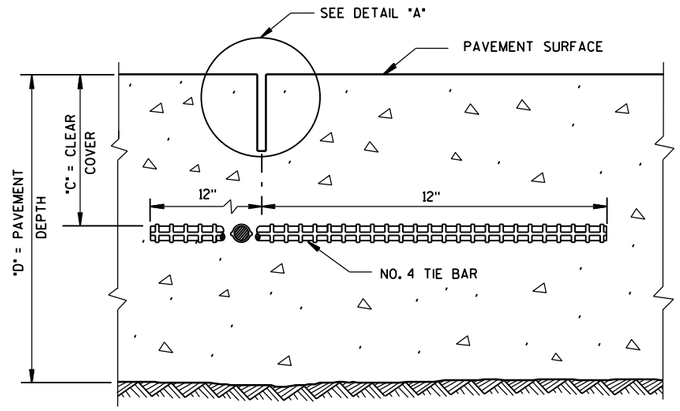
CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE ... NEER
FHWA



CONSTRUCTION JOINT



SAWED JOINT

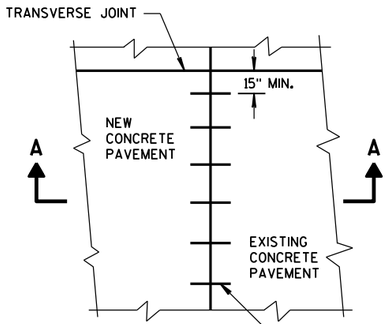
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

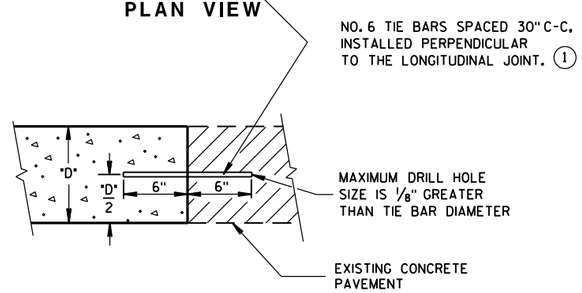
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

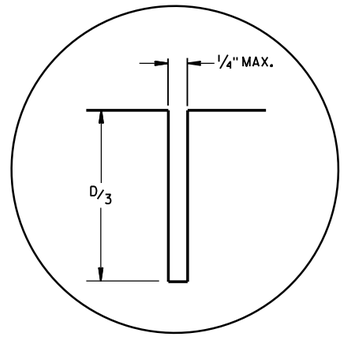


PLAN VIEW



SECTION A-A

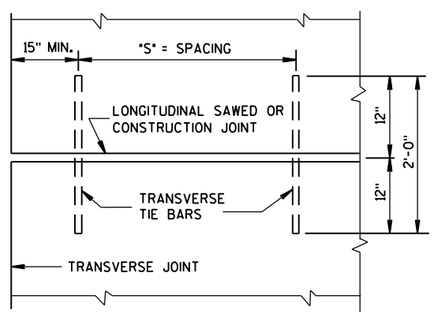
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

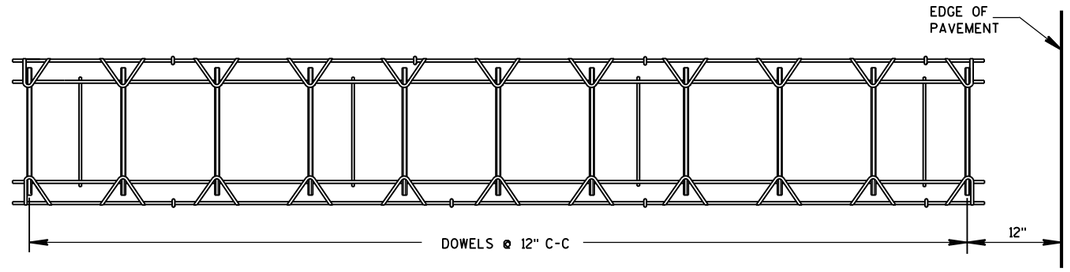
FHWA

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S.D.D. 13 C 1-16

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S.D.D. 13 C 1-16

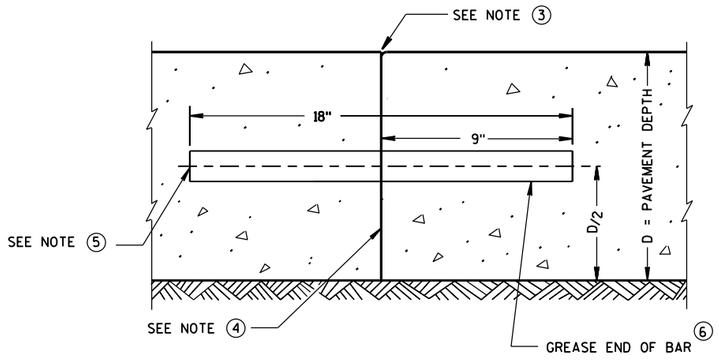


PLAN VIEW

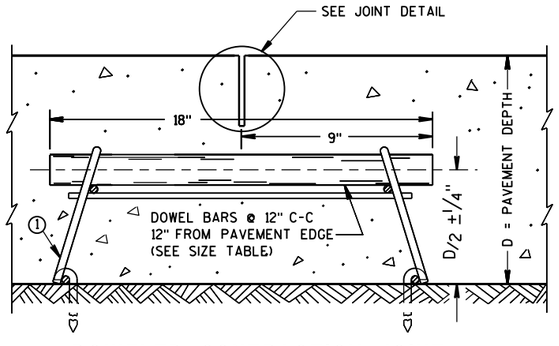


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



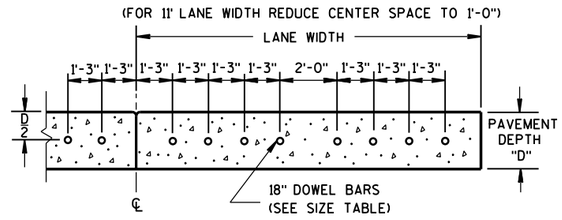
TRANSVERSE CONSTRUCTION JOINT



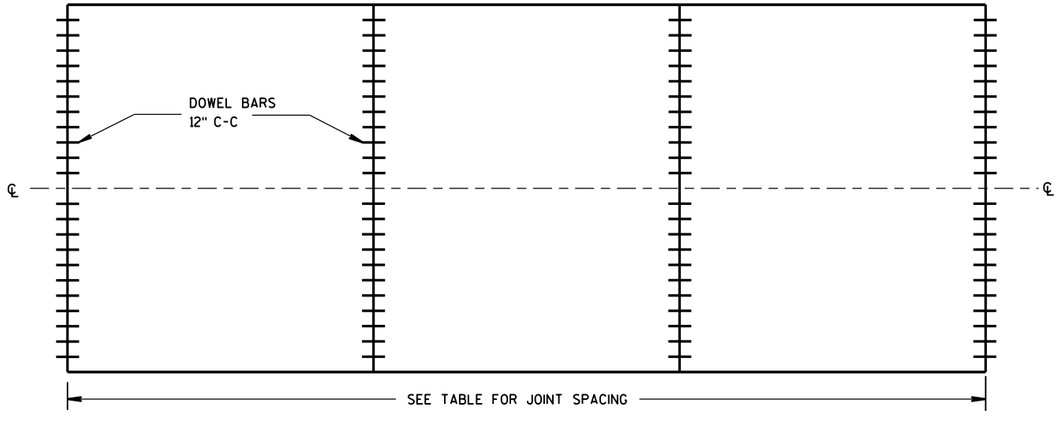
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

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

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

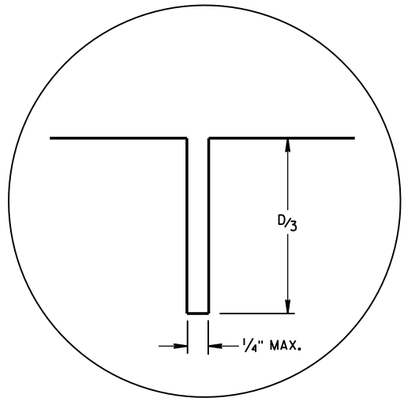
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

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S.D.D. 13 C 13-8

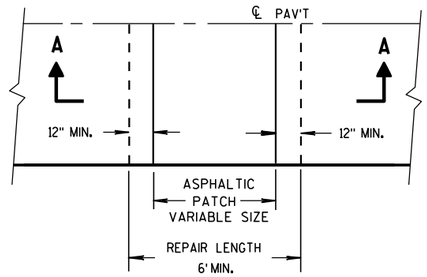
GENERAL NOTES

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

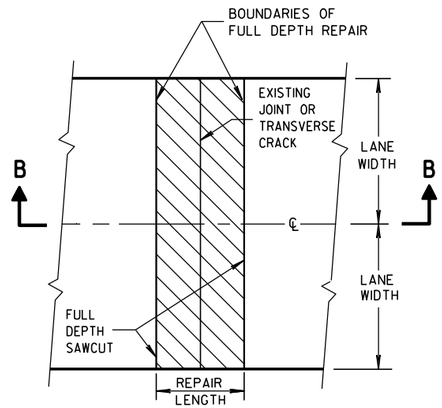
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

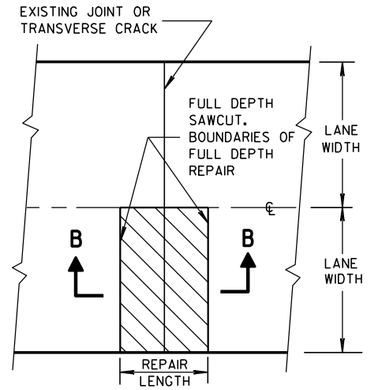
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



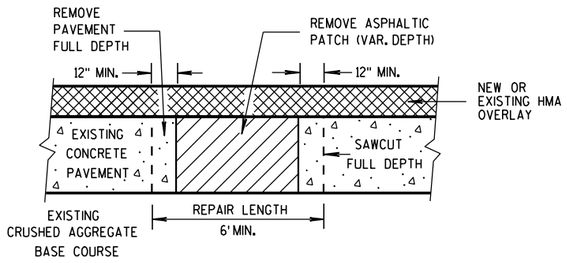
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

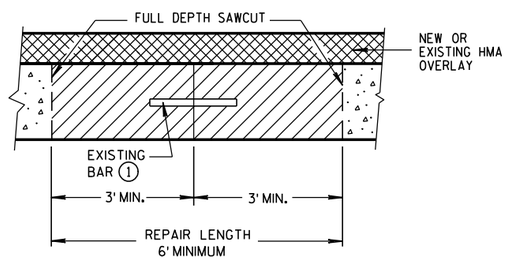
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

BASE PATCHING CONCRETE

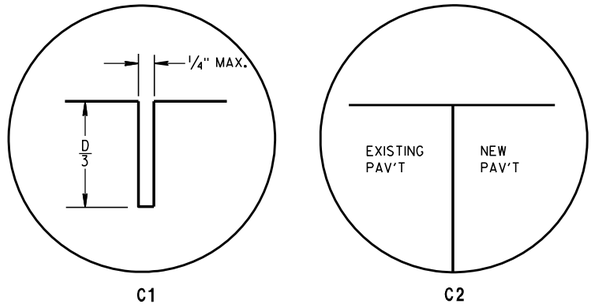
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

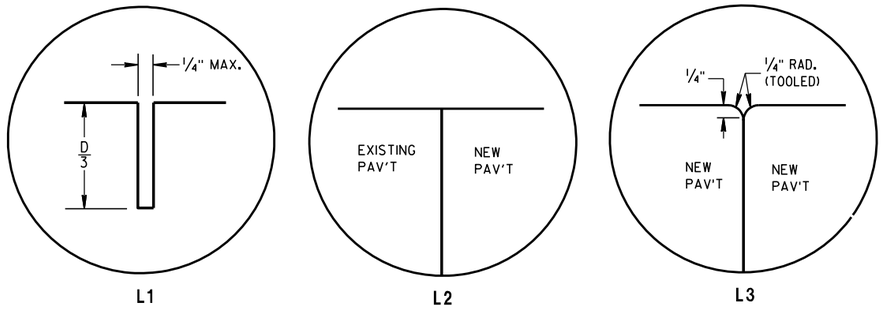
S.D.D. 13 C 14-4a

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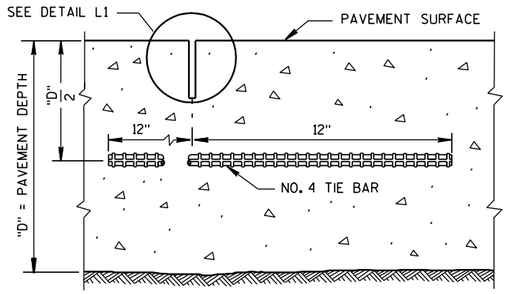
S.D.D. 13 C 14-4a



TRANSVERSE JOINTS

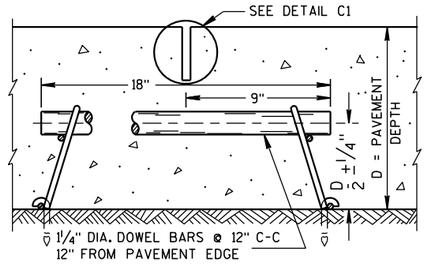


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

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

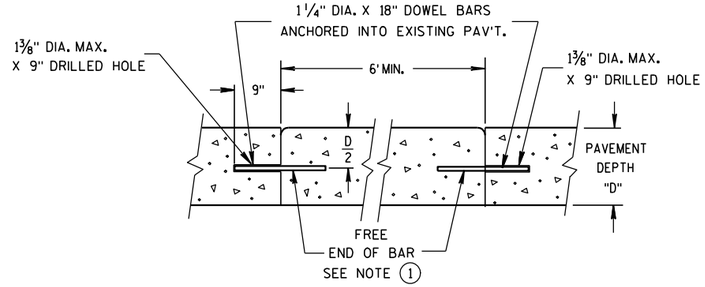
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

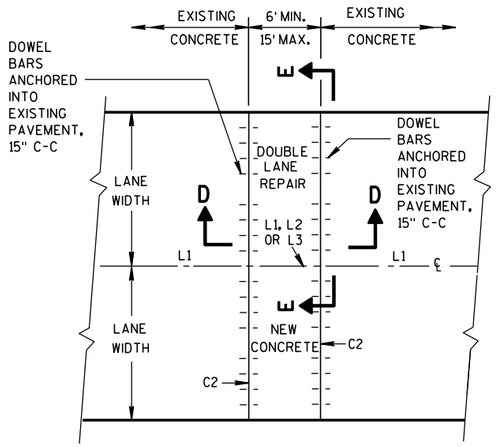
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

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

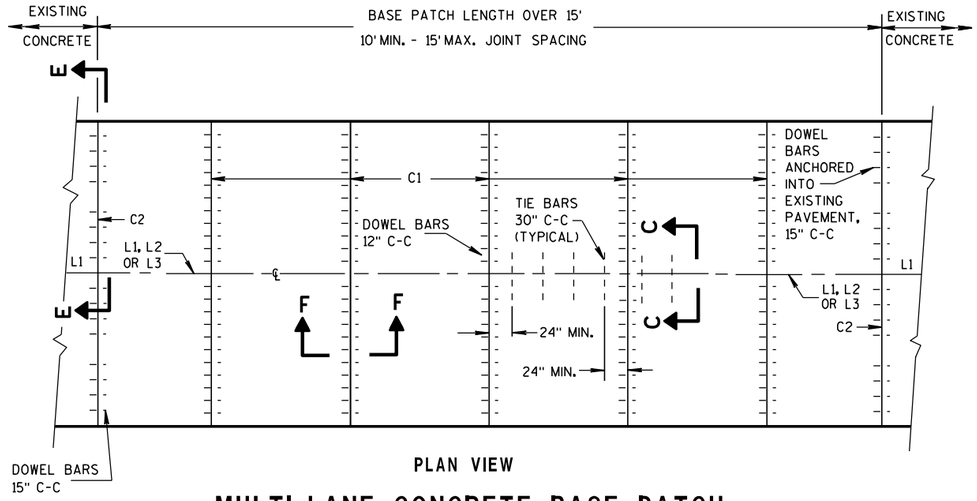


SECTION D-D



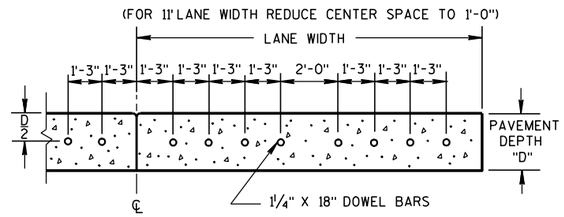
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

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



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

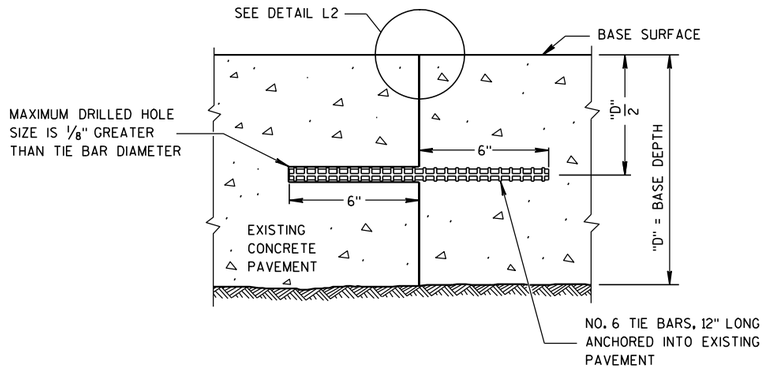
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 13 C 14-4b

6

S.D.D. 13 C 14-4b



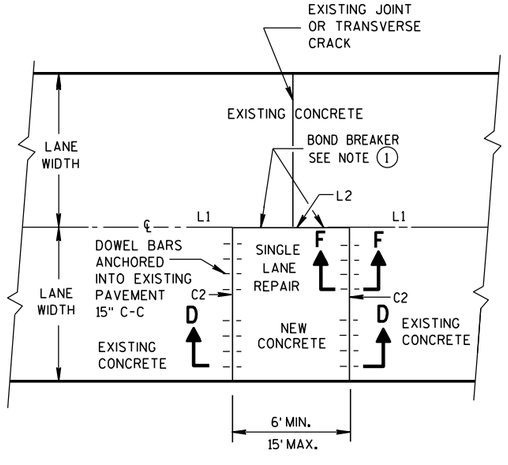
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

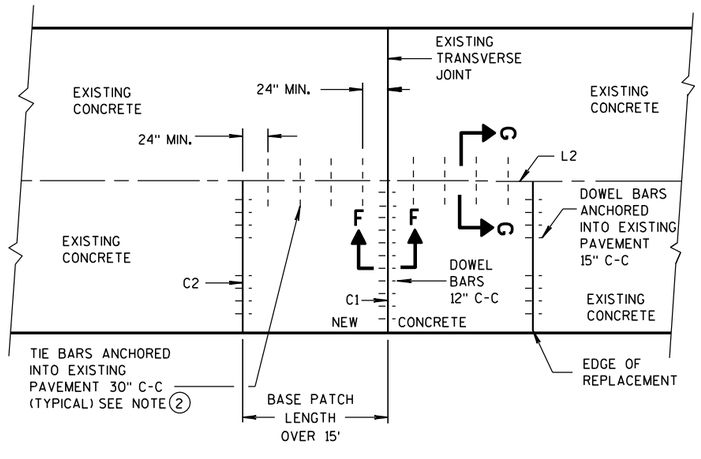
1. USE AN ENGINEER-APPROVED BOND BREAKER FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

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



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

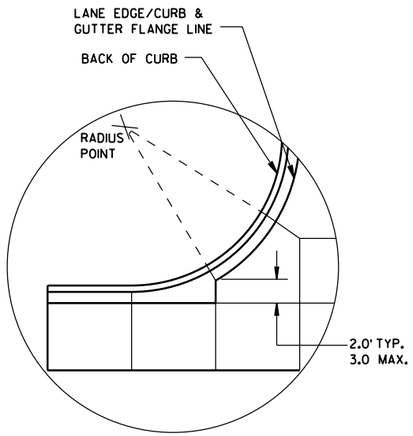
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

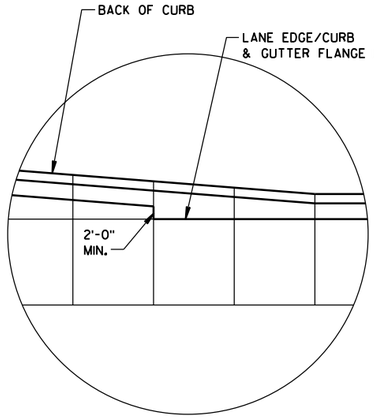
APPROVED
12-11-2009 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE NEER
FHWA

6

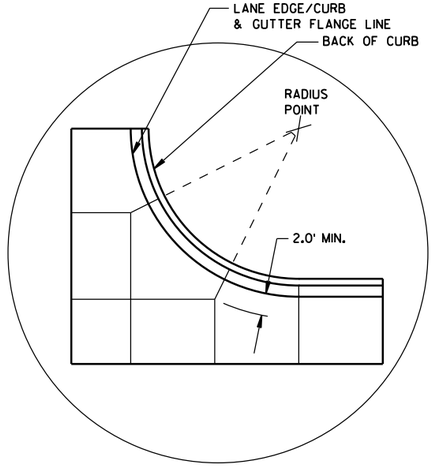
S.D.D. 13 C 14-4c



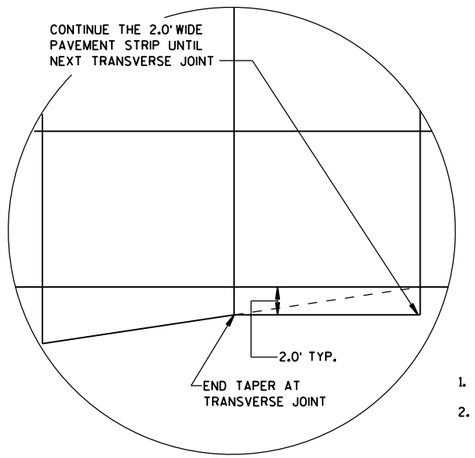
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

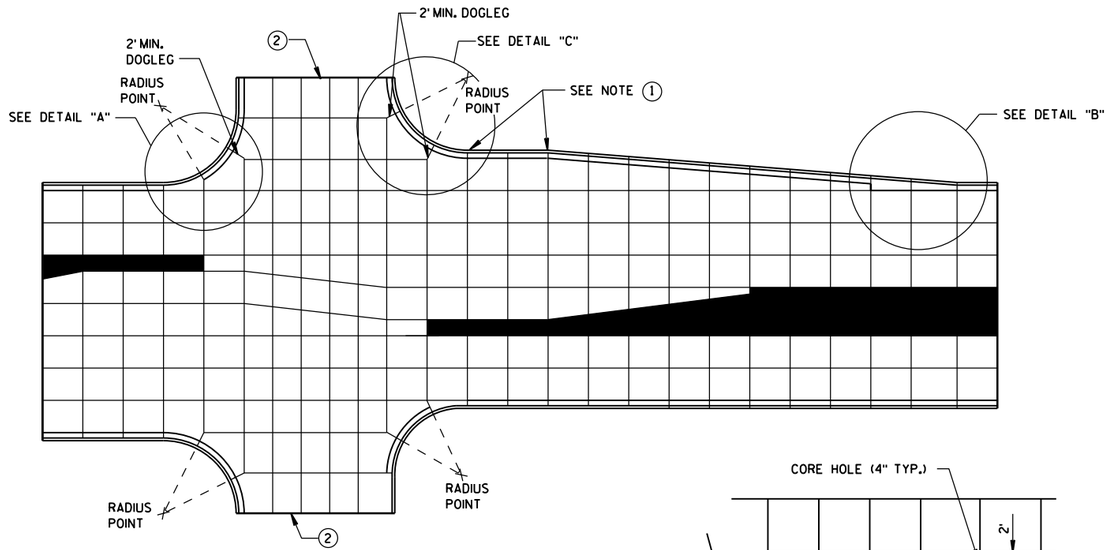
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

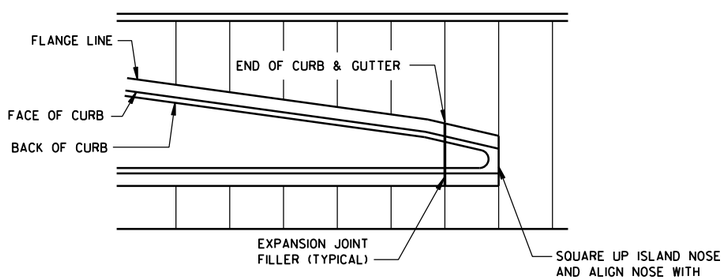


STANDARD INTERSECTION

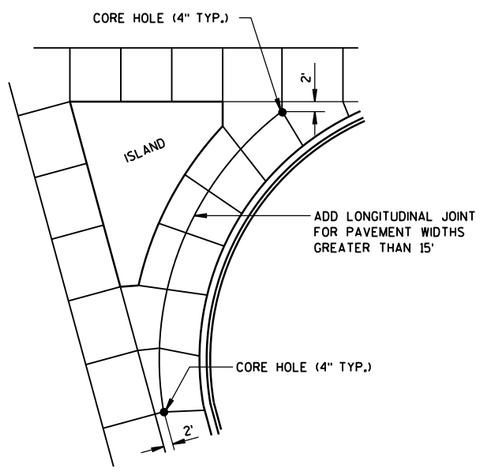
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

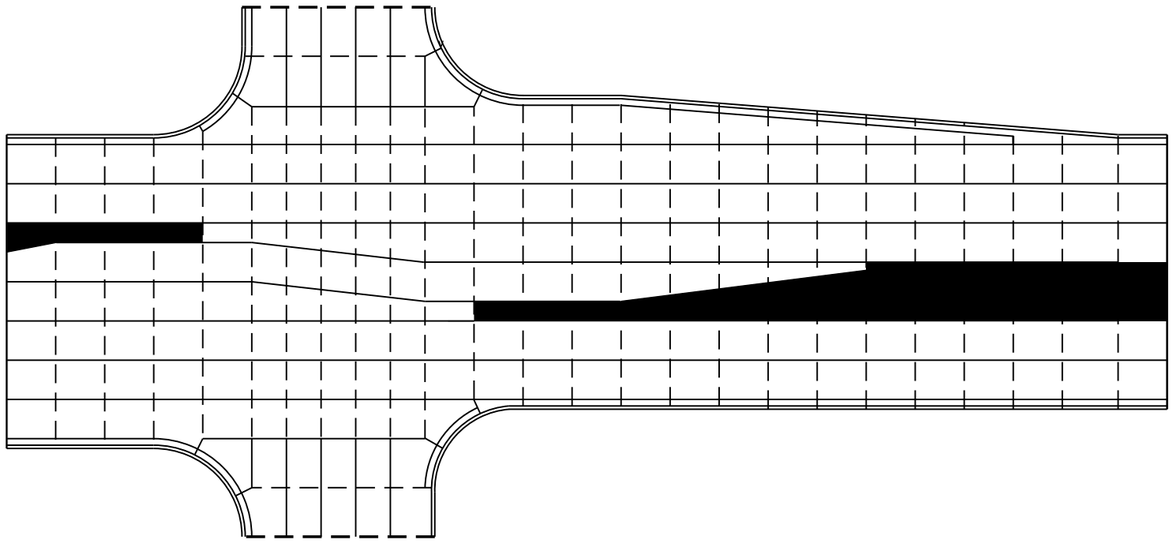
6
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

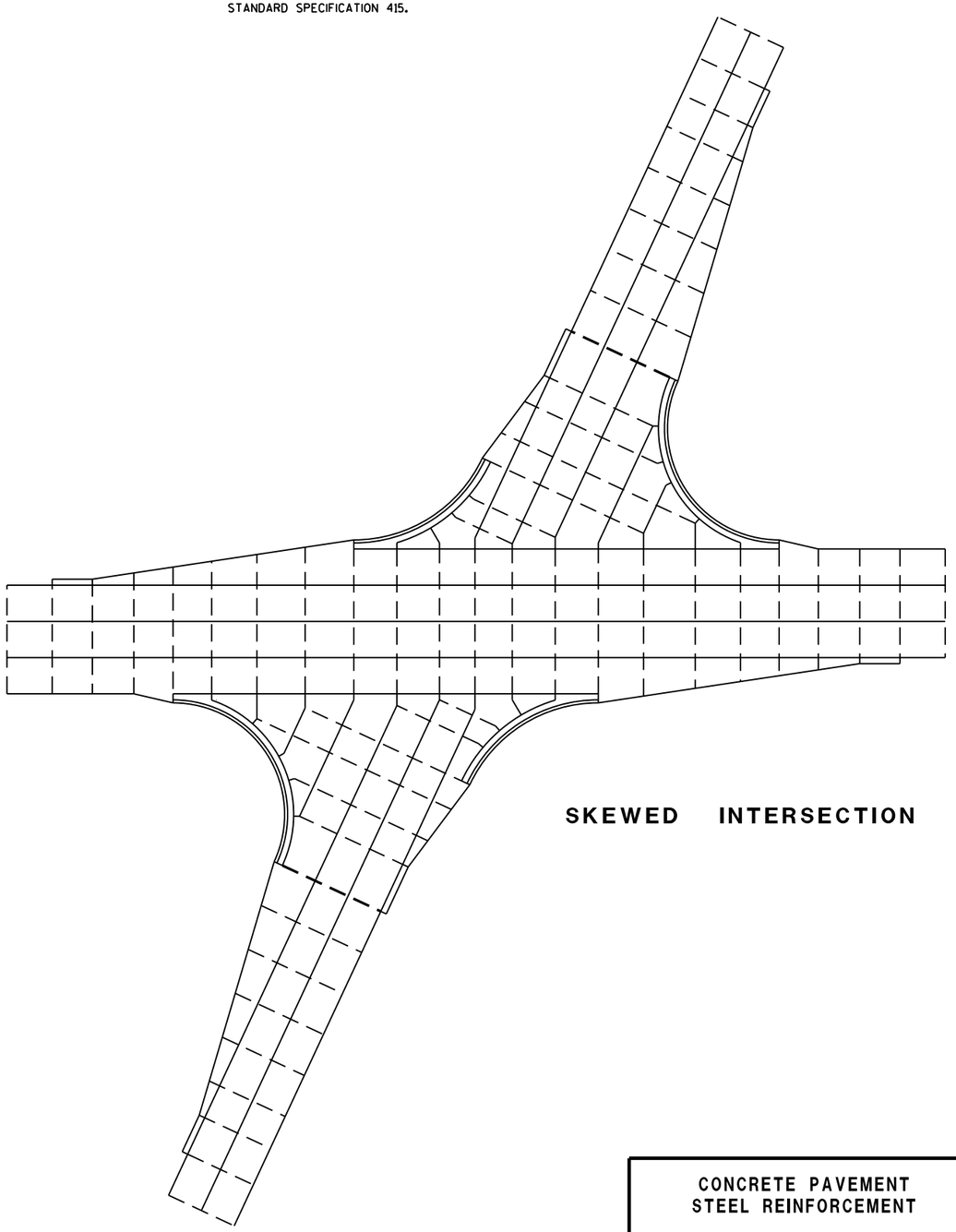
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

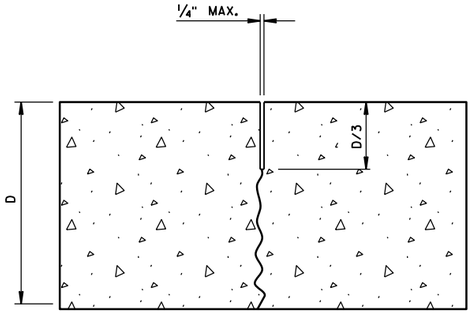
S.D.D. 13 C 18-2b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

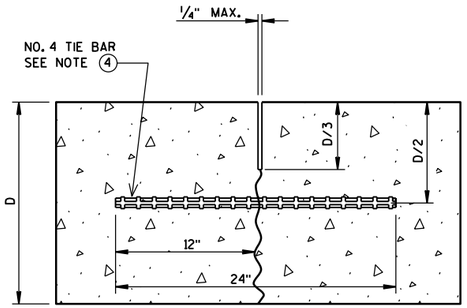
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 18-2b



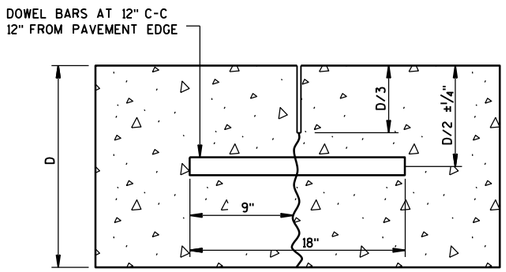
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

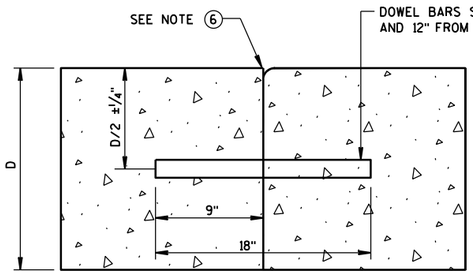
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



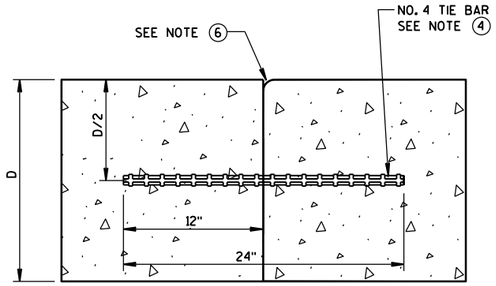
DOWELED-TRANSVERSE

CONTRACTION JOINTS

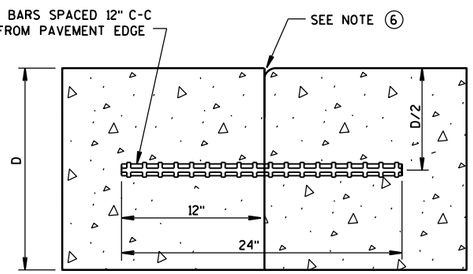
SEE NOTE (2)



DOWELED TRANSVERSE

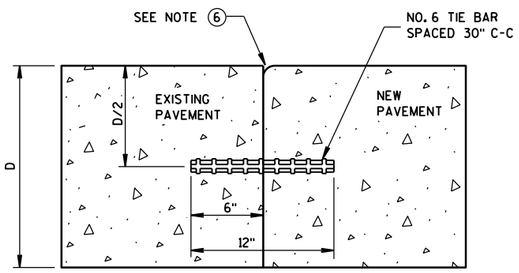


TIED LONGITUDINAL



TIED TRANSVERSE

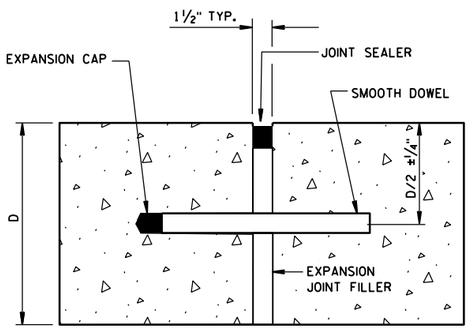
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

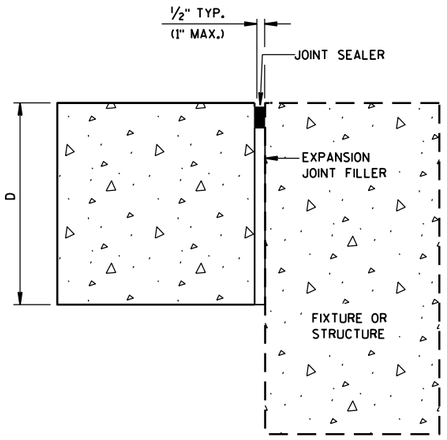
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

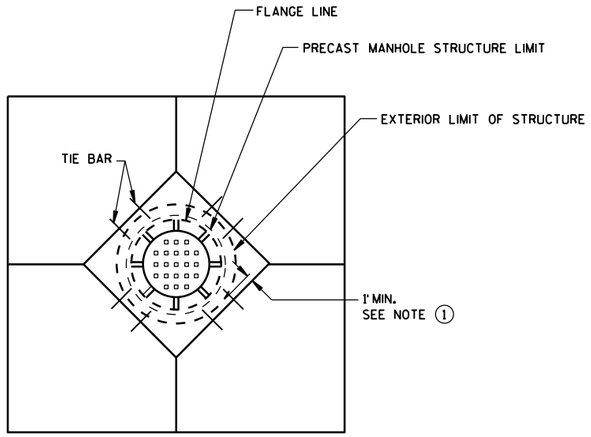
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

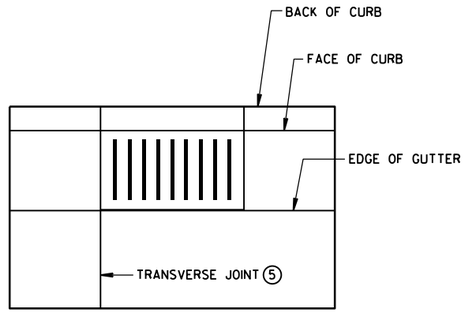
S.D.D. 13 C 18-2c

6

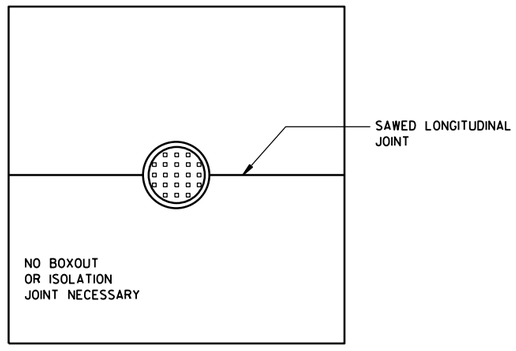
S.D.D. 13 C 18-2c



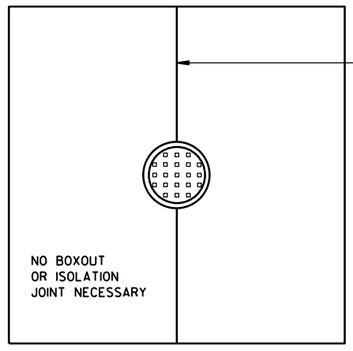
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



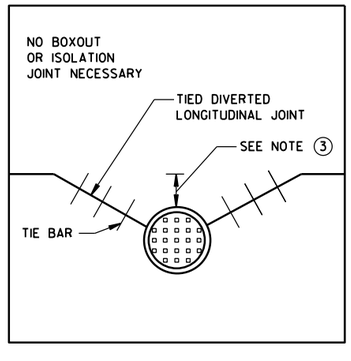
INLET WITH TRANSVERSE JOINT



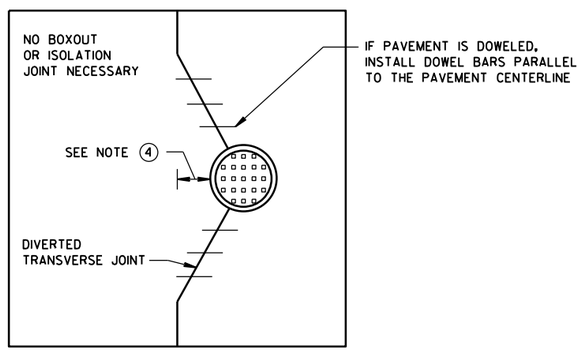
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

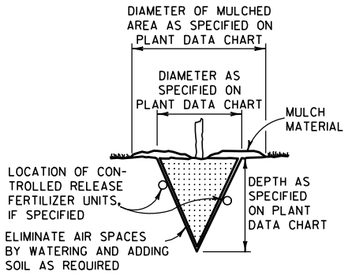
/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

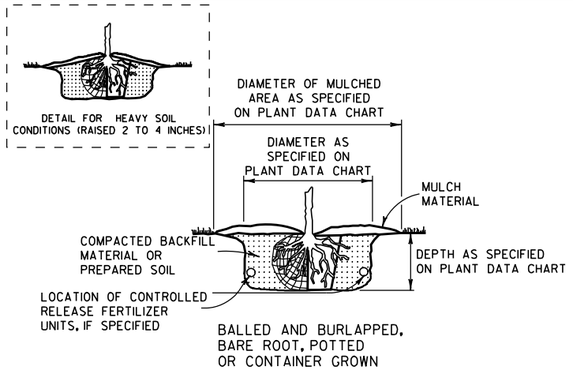
FHWA

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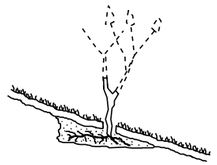
S.D.D. 13 C 18-2d



MACHINE MOVED

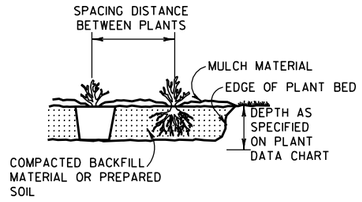


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



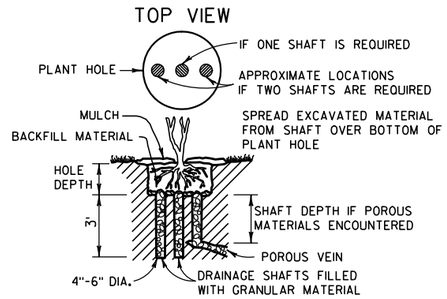
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



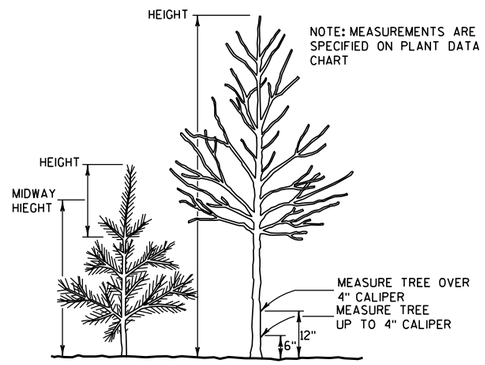
PREPARED BED (BARE ROOT AND POTTED)

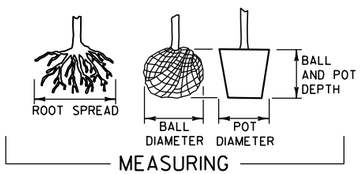
PLANTING



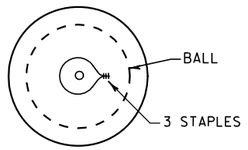
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

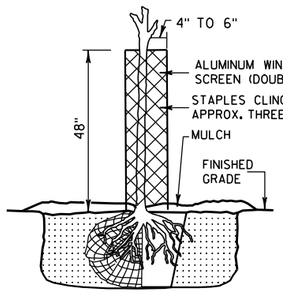




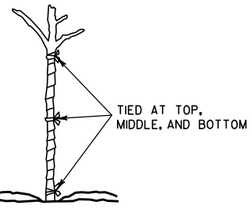
MEASURING



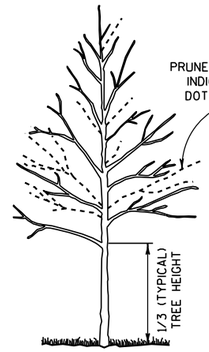
TOP VIEW



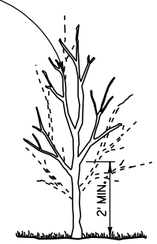
RODENT PROTECTION



WRAPPING



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



SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)



MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

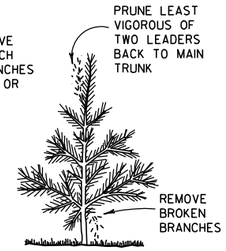
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES



SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

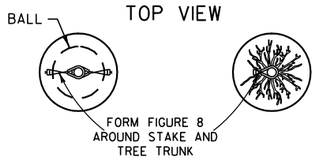


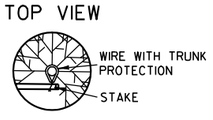
SUMAC

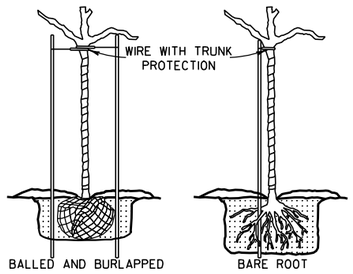


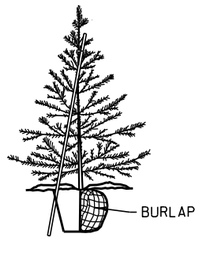
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



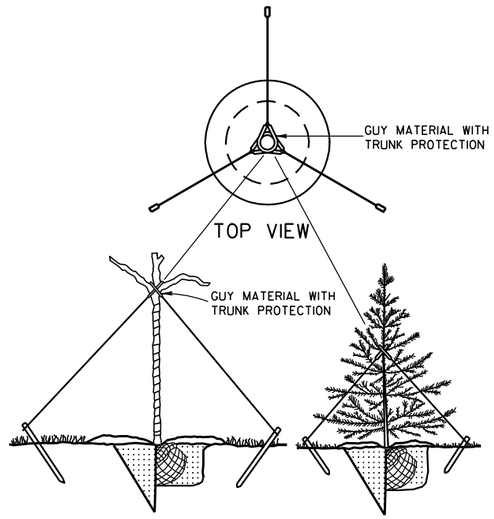




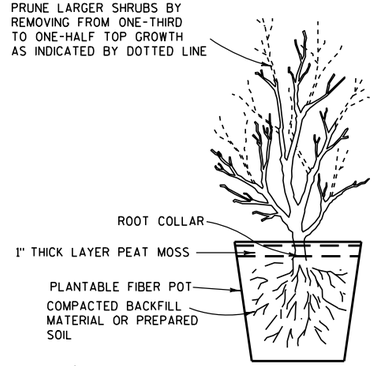


NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE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

BRACING



GUYING



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

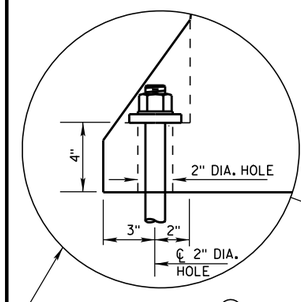
TREE PLANTING DETAIL

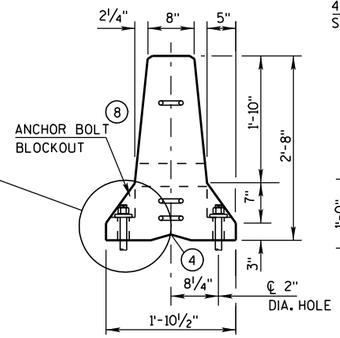
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

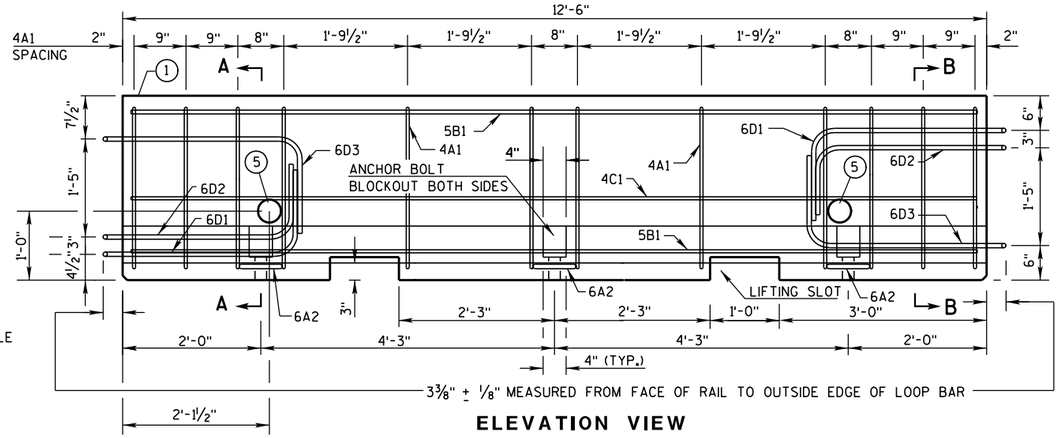
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S.D.D. 14 A 2-1

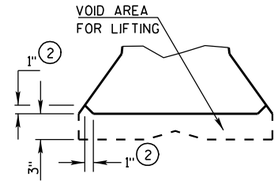




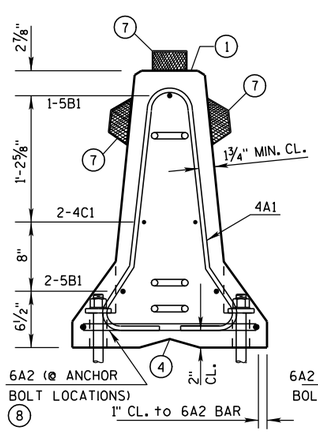
END VIEW



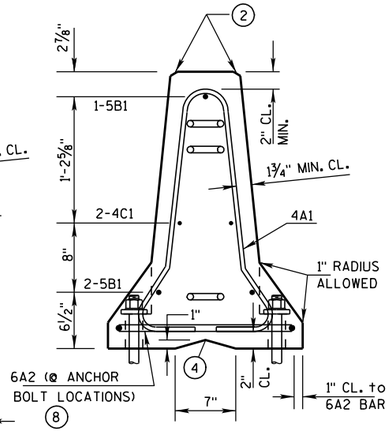
ELEVATION VIEW



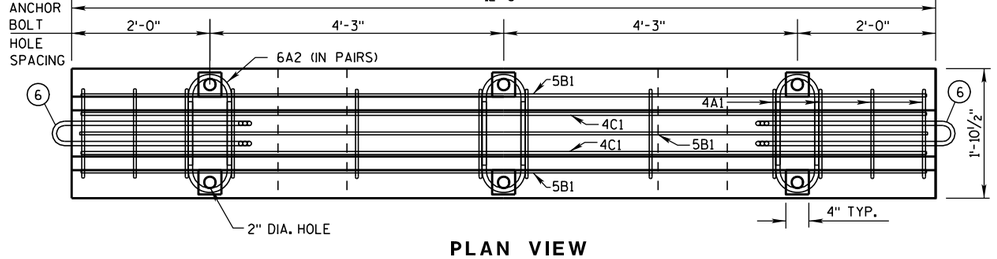
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

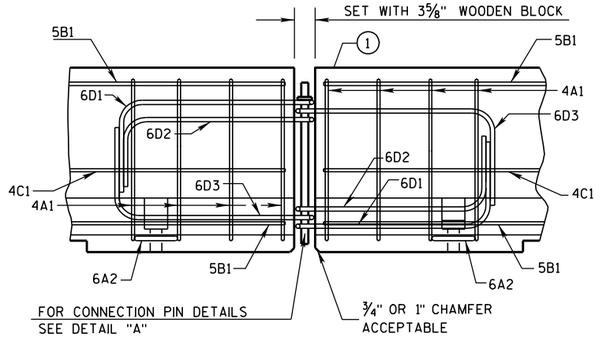


SECTION B-B
(STIRRUP PLACEMENT)

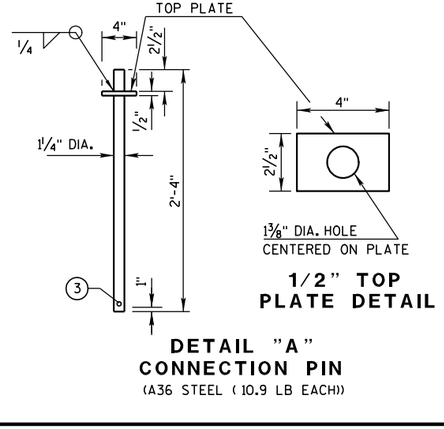


PLAN VIEW

DETAILS OF BARRIER SECTION

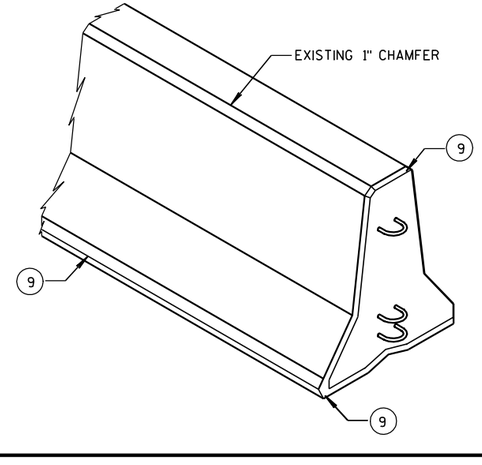


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WICBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

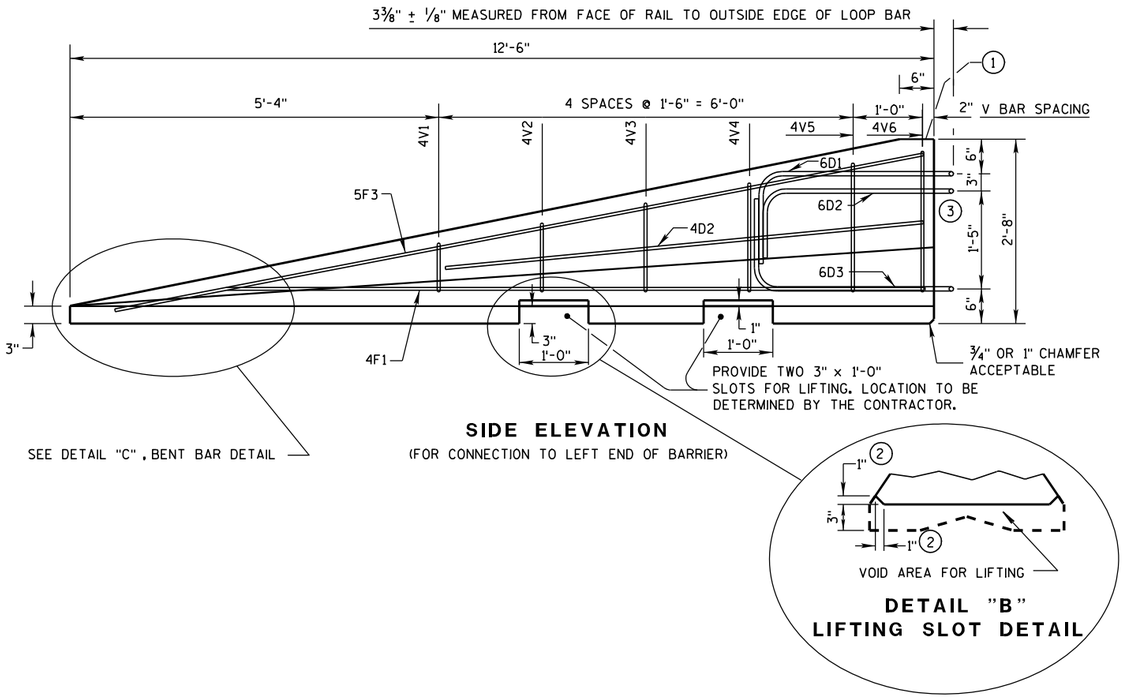
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

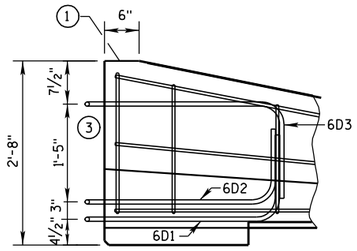
6

S.D.D. 14 B 7-13a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)

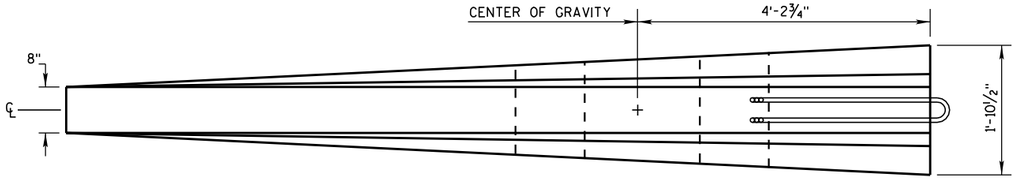
DETAIL "B"
LIFTING SLOT DETAIL



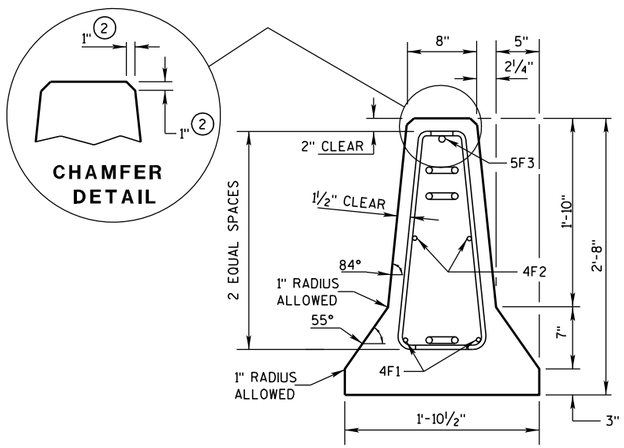
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

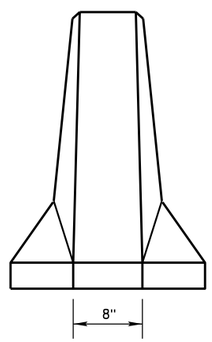
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



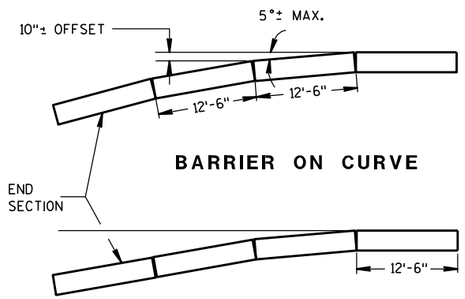
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

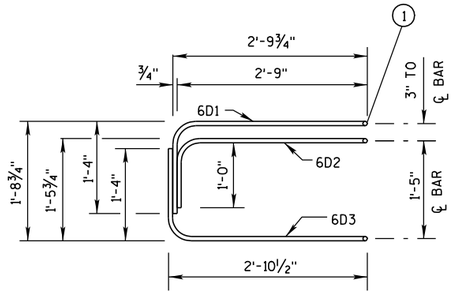
6

S.D.D. 14 B 7-13b

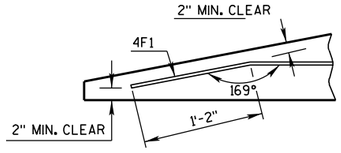
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

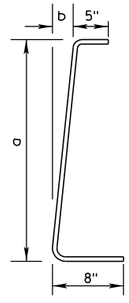
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

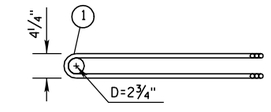
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

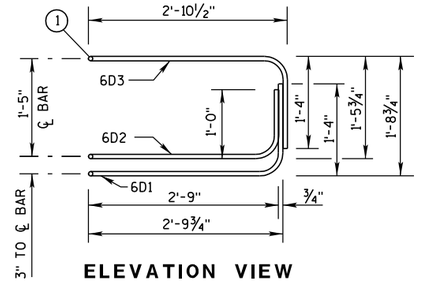
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

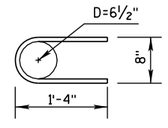
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



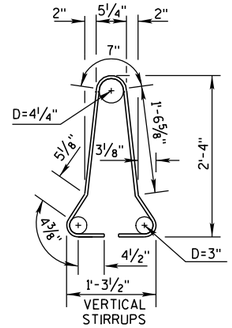
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



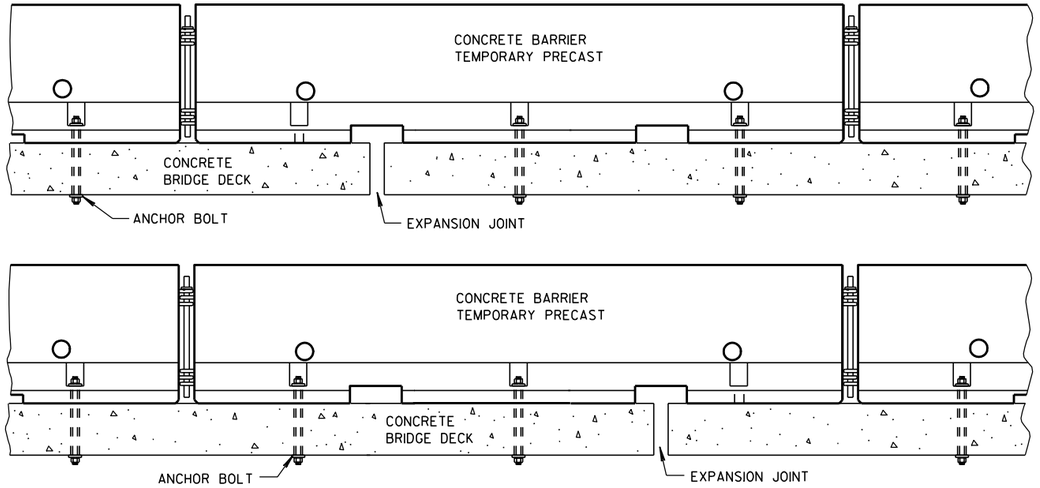
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

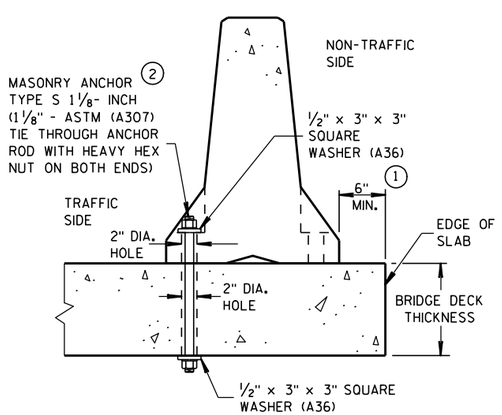
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



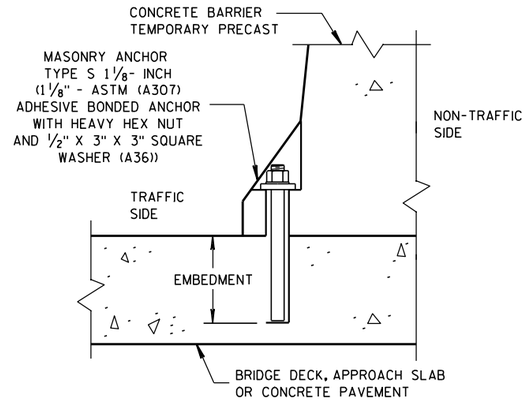
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR (2) INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

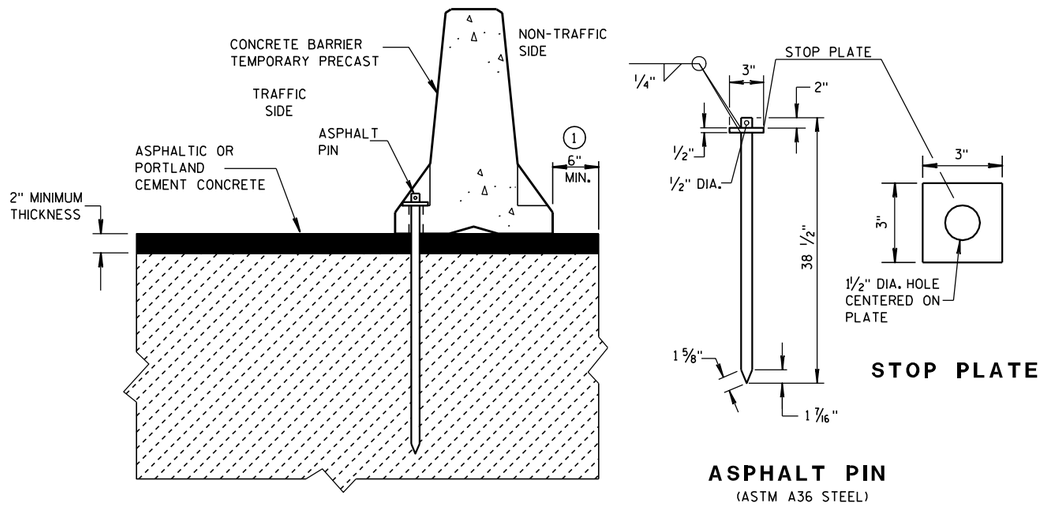
(1) CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

(2) ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



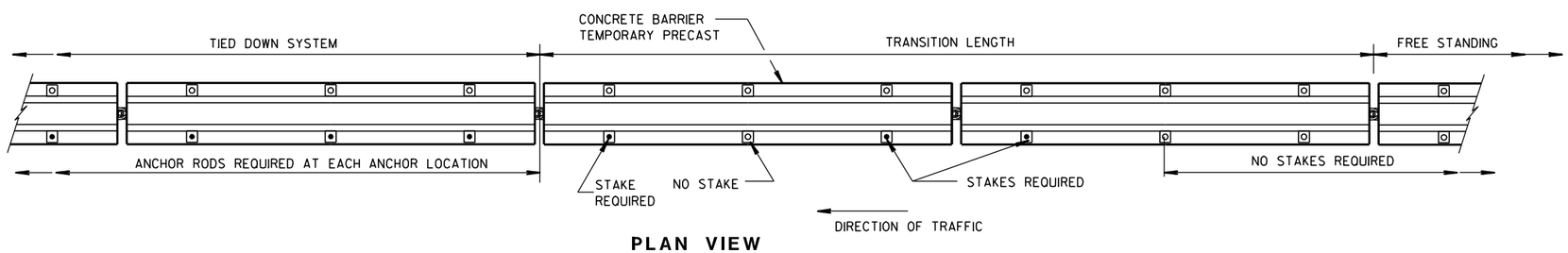
STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



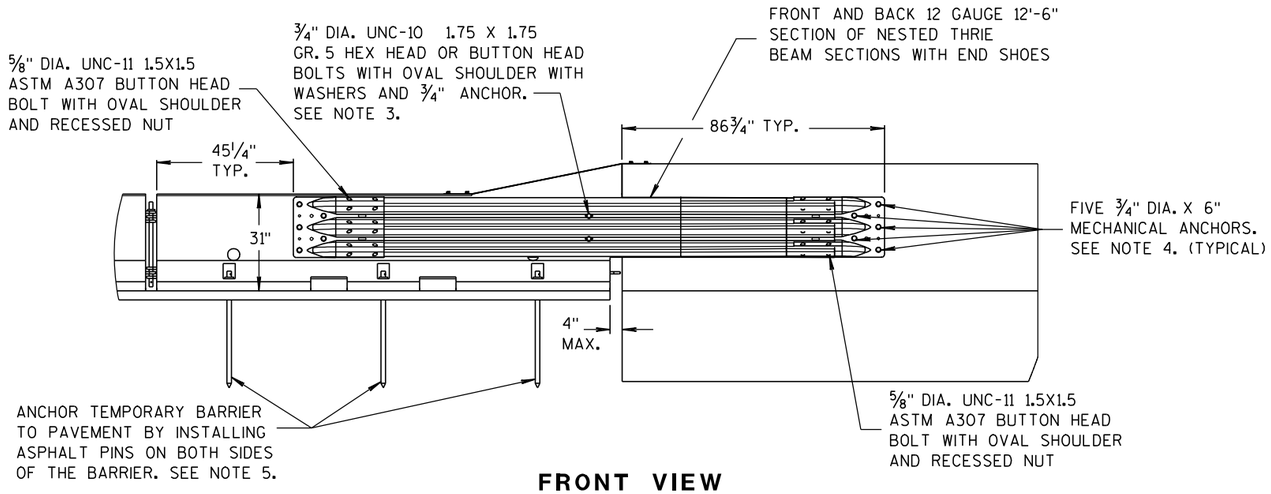
PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

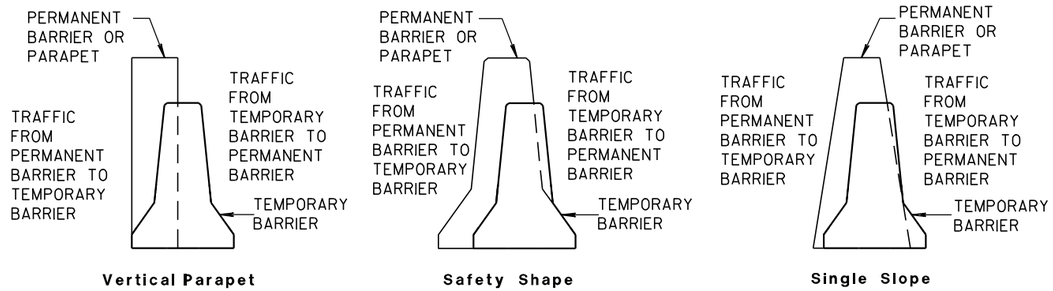
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...



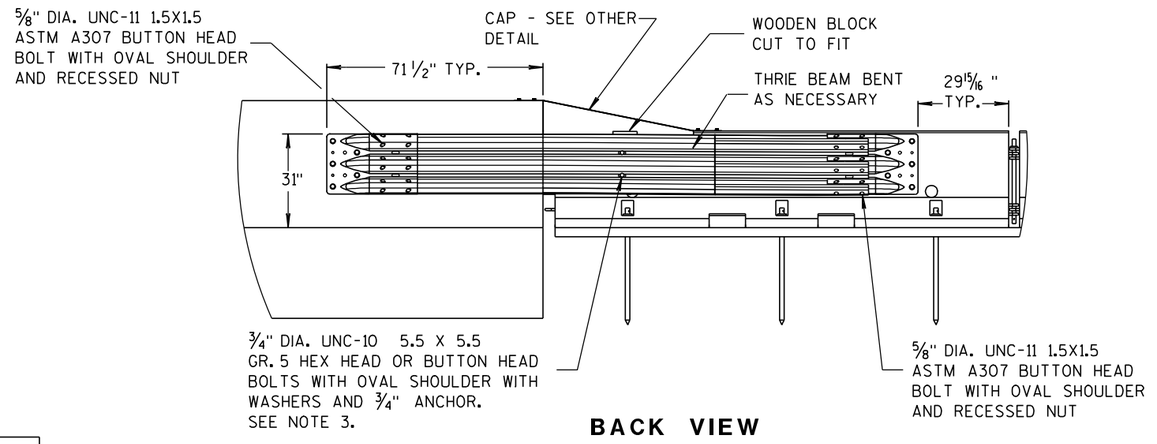
FRONT VIEW

NOTES

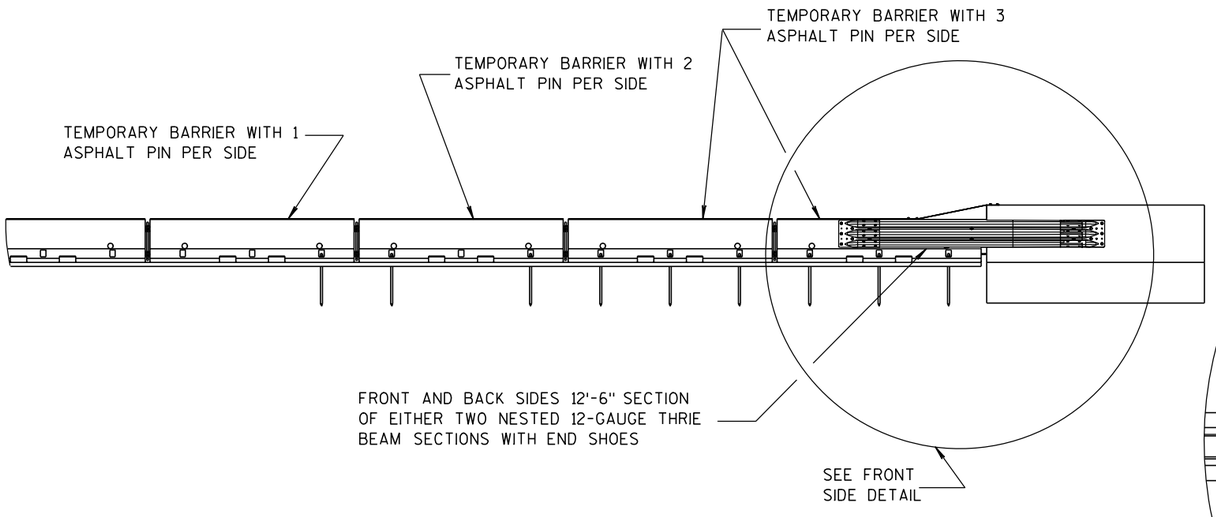
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



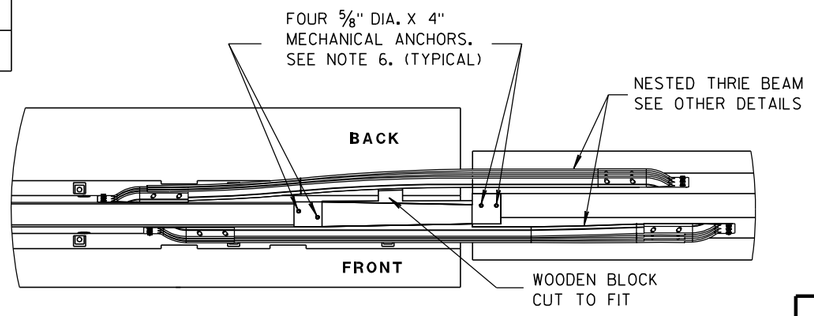
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



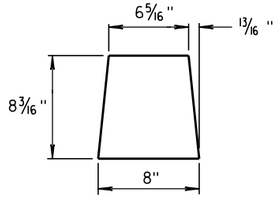
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

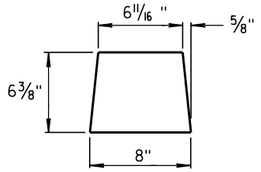
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

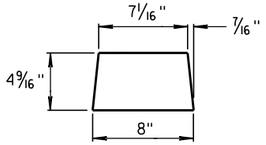
6
S.D.D. 14 B 7-13e



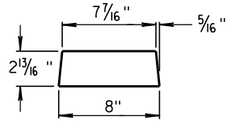
GUSSET 1



GUSSET 2

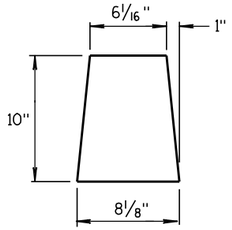


GUSSET 3

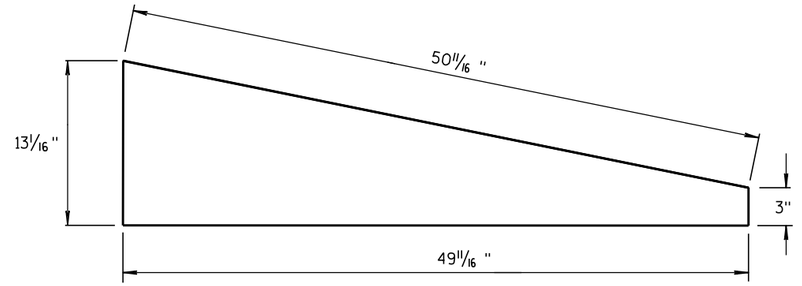


GUSSET 4

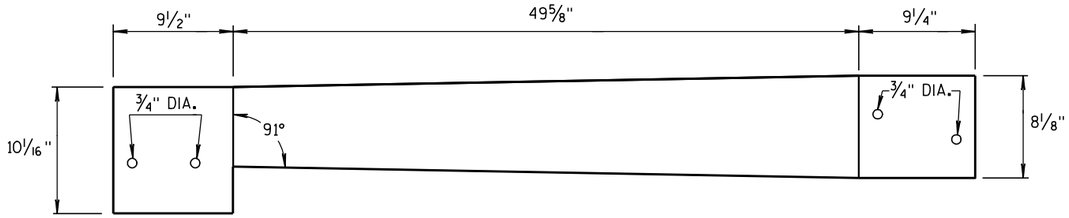
GUSSETS

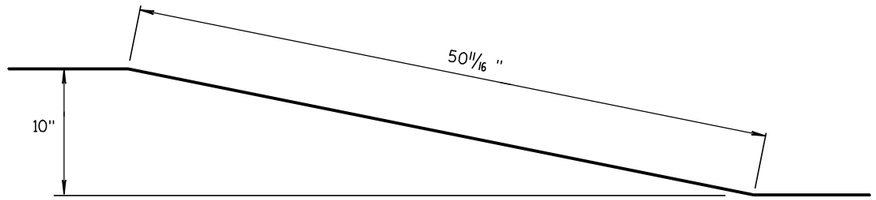


END PLATE

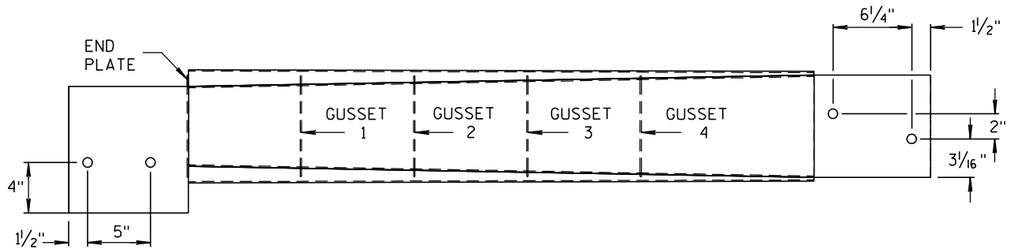


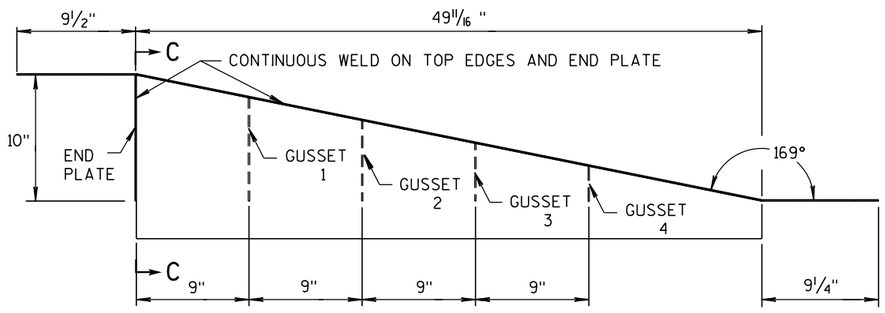
SIDE PLATE

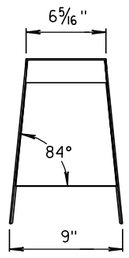




TOP PLATE







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

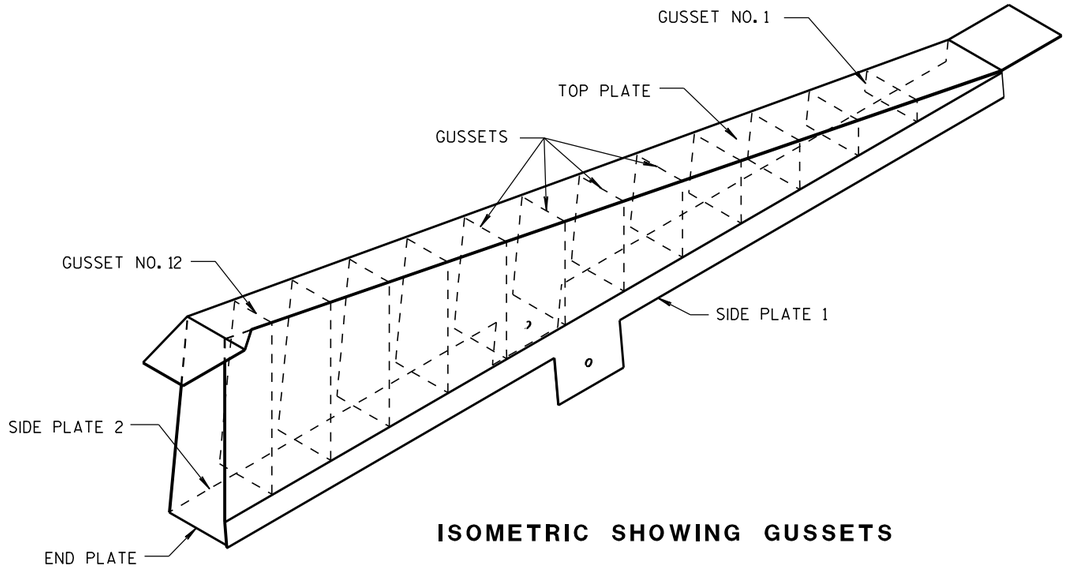
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

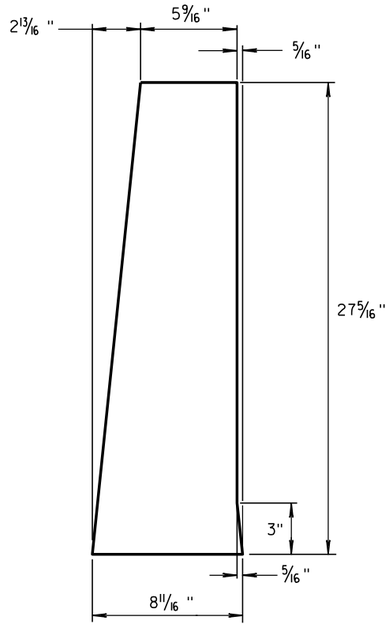
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

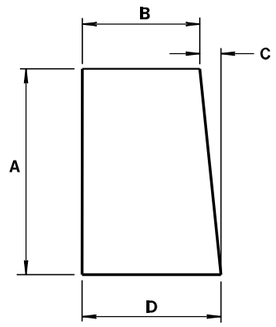


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

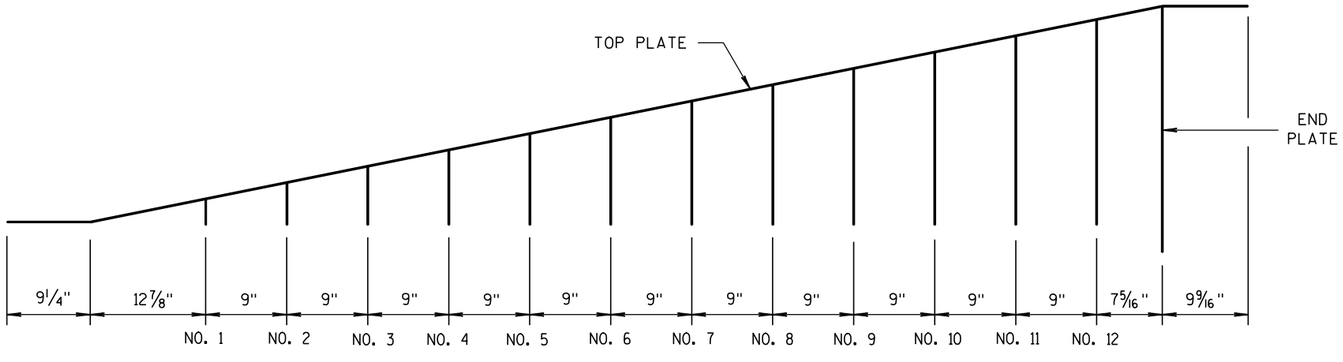
ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS

GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

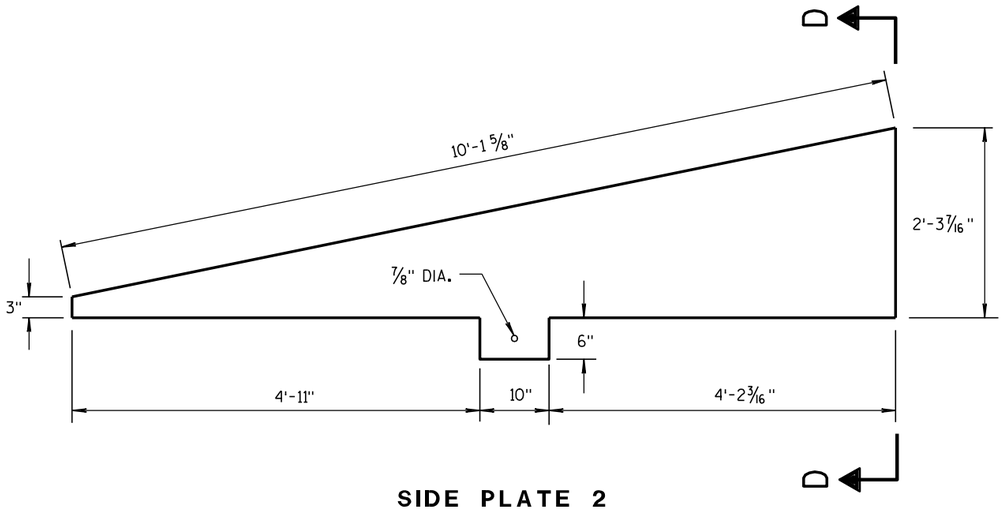
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

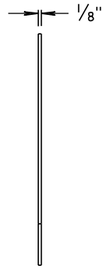
S.D.D. 14 B 7-13g

6

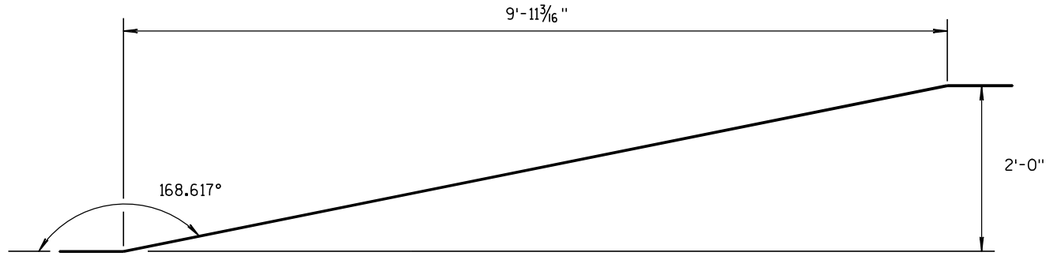
S.D.D. 14 B 7-13g



SIDE PLATE 2

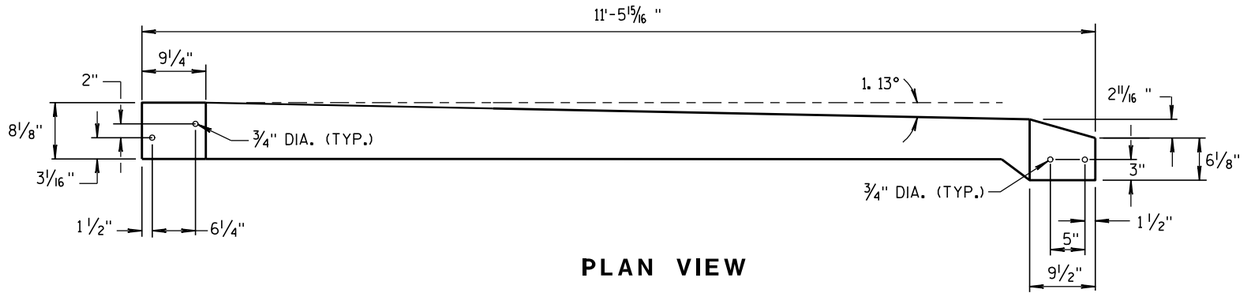


END VIEW



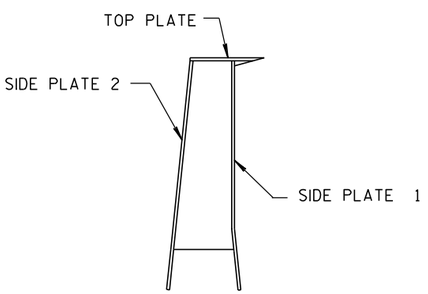
SIDE VIEW

TOP PLATE

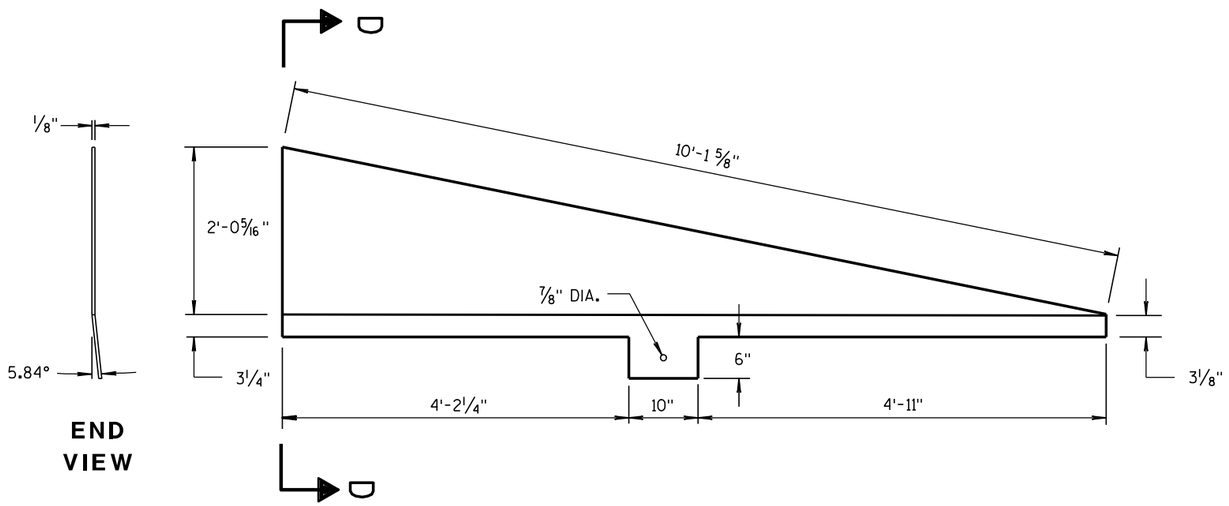


PLAN VIEW

TOP PLATE



SECTION D-D



END VIEW

SIDE PLATE 1

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. ---- — ROADWAY STANDARDS ENGINEER

400 — ENT

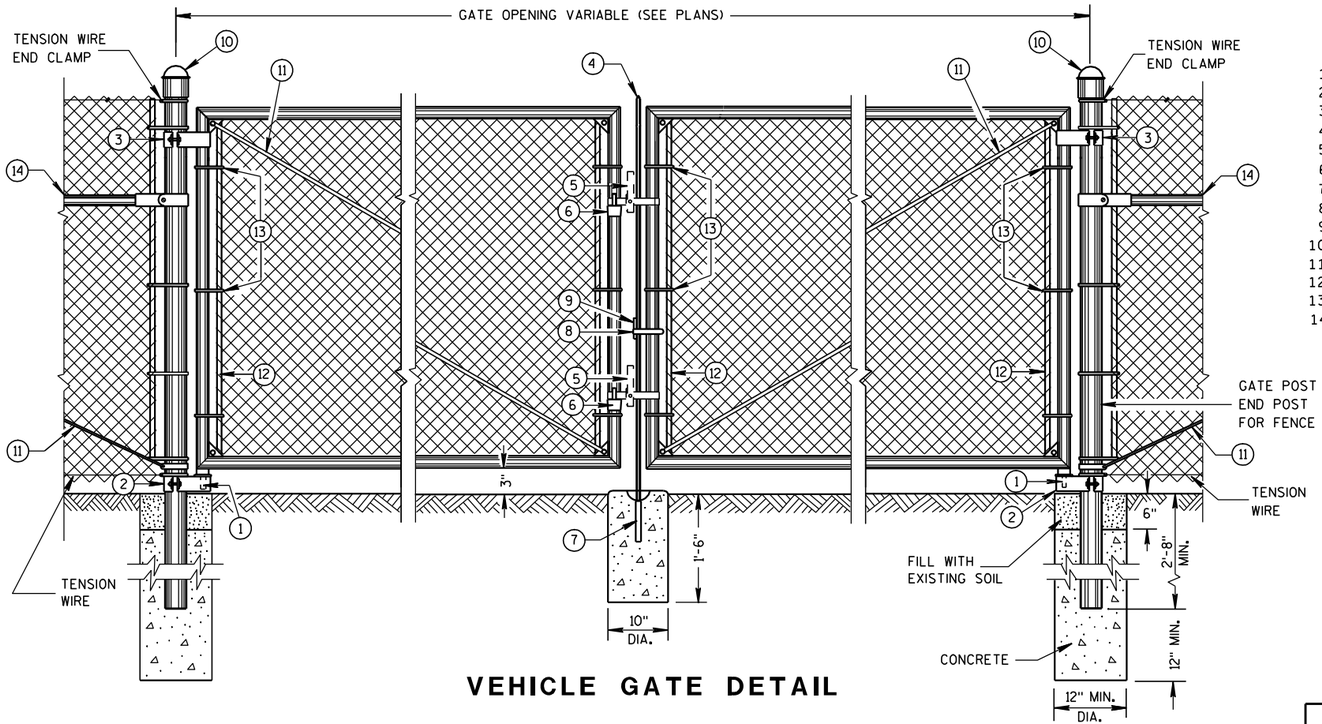
FHWA

6

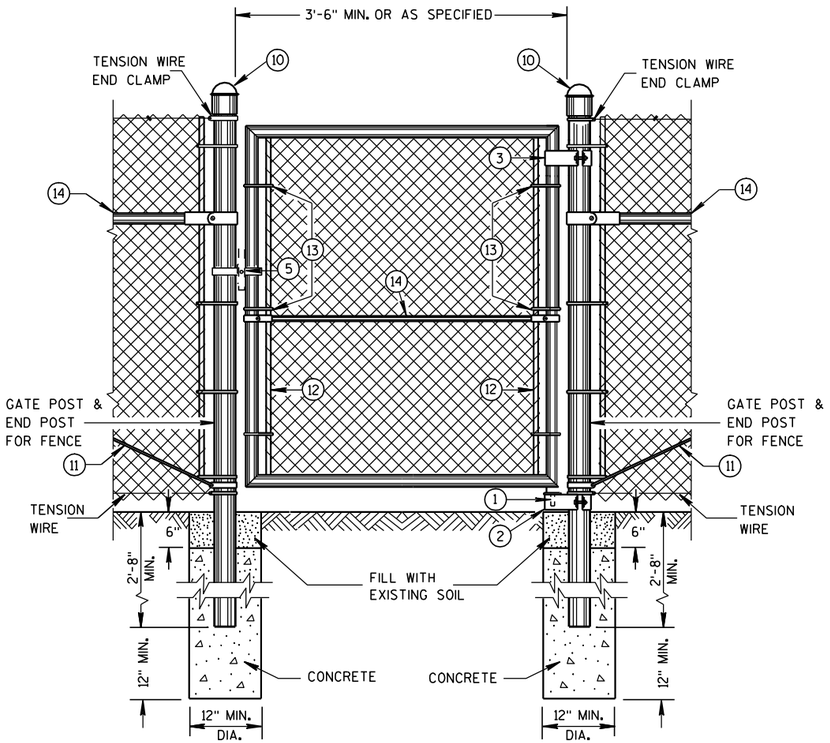
S.D.D. 14 B 7-13h

6

S.D.D. 14 B 7-13h



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

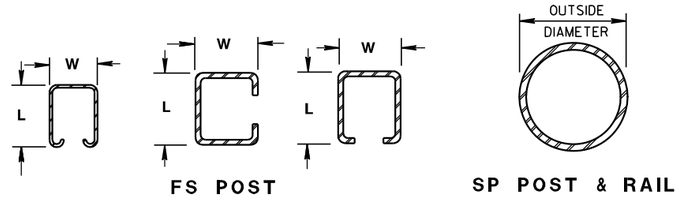
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

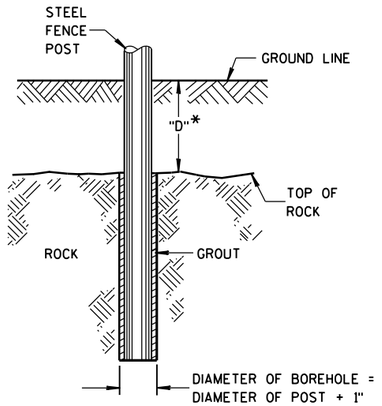
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

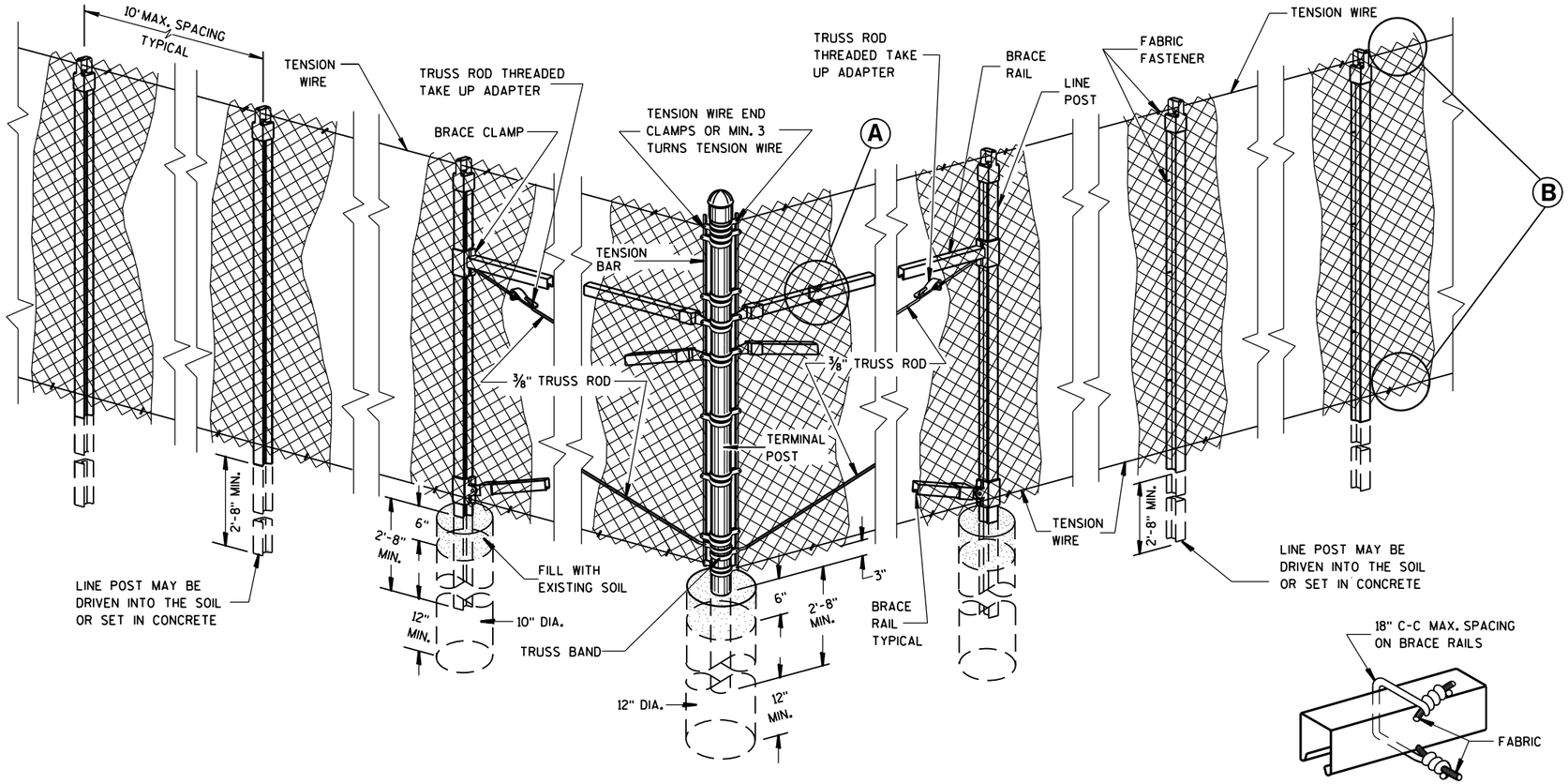
6

S.D.D. 15 B 3-12a

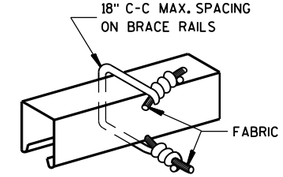


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



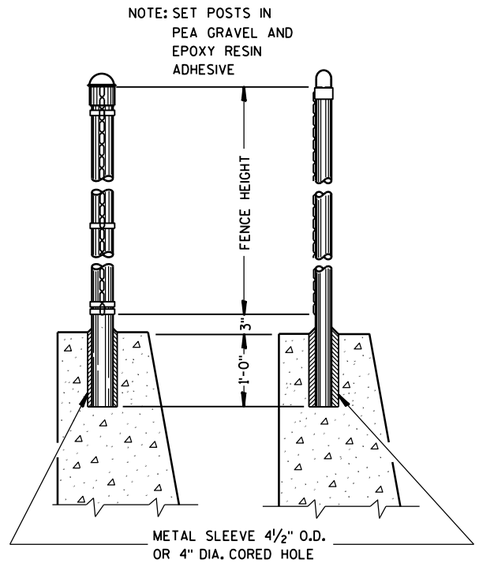
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



BRACE RAIL

FABRIC FASTENER

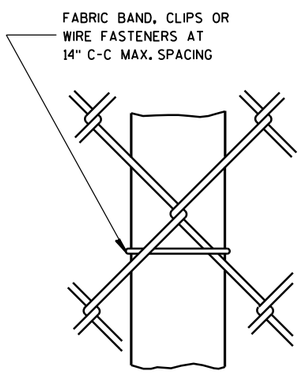
Ⓐ



END POST & CORNER POST

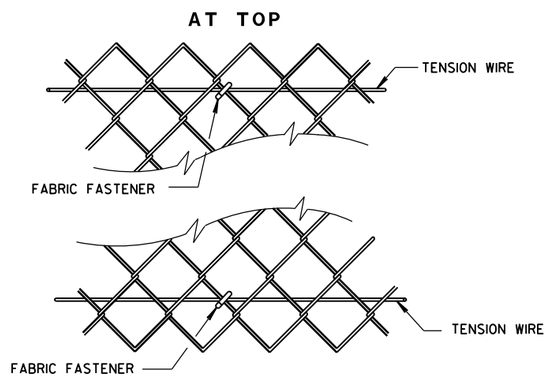
LINE POST

DETAILS OF FENCE ON WALL



LINE POST

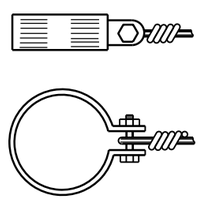
FABRIC FASTENER



AT BOTTOM

SELVAGES

Ⓑ



TENSION WIRE END CLAMP

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

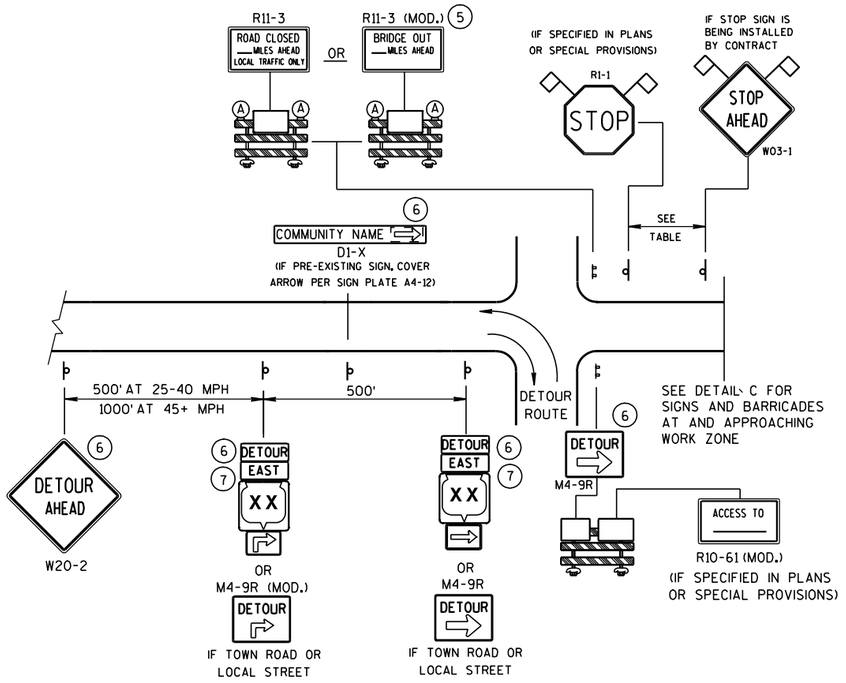
APPROVED
3/19/2010
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-12b

6

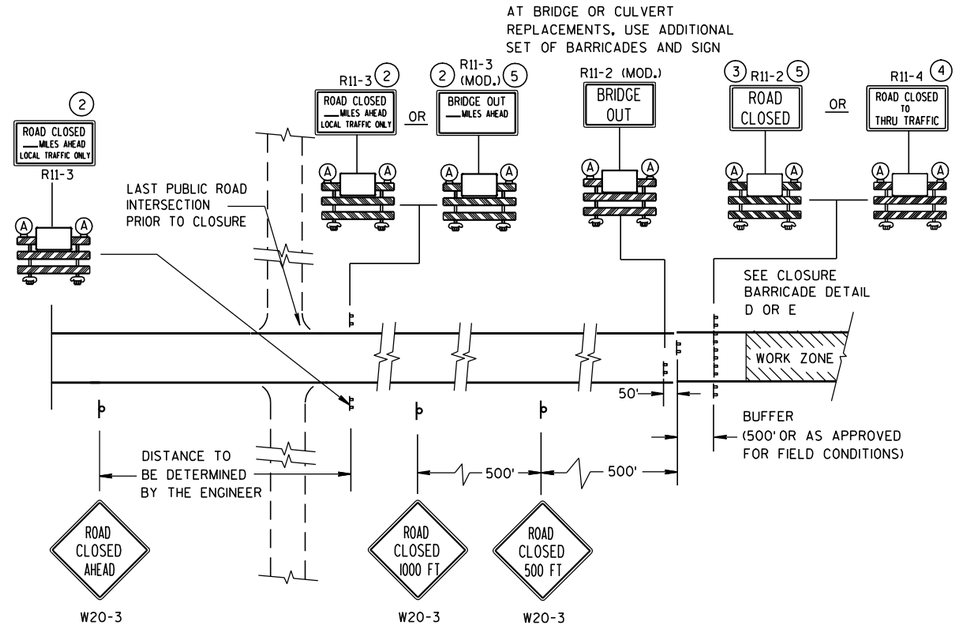
S.D.D. 15 B 3-12b



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

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

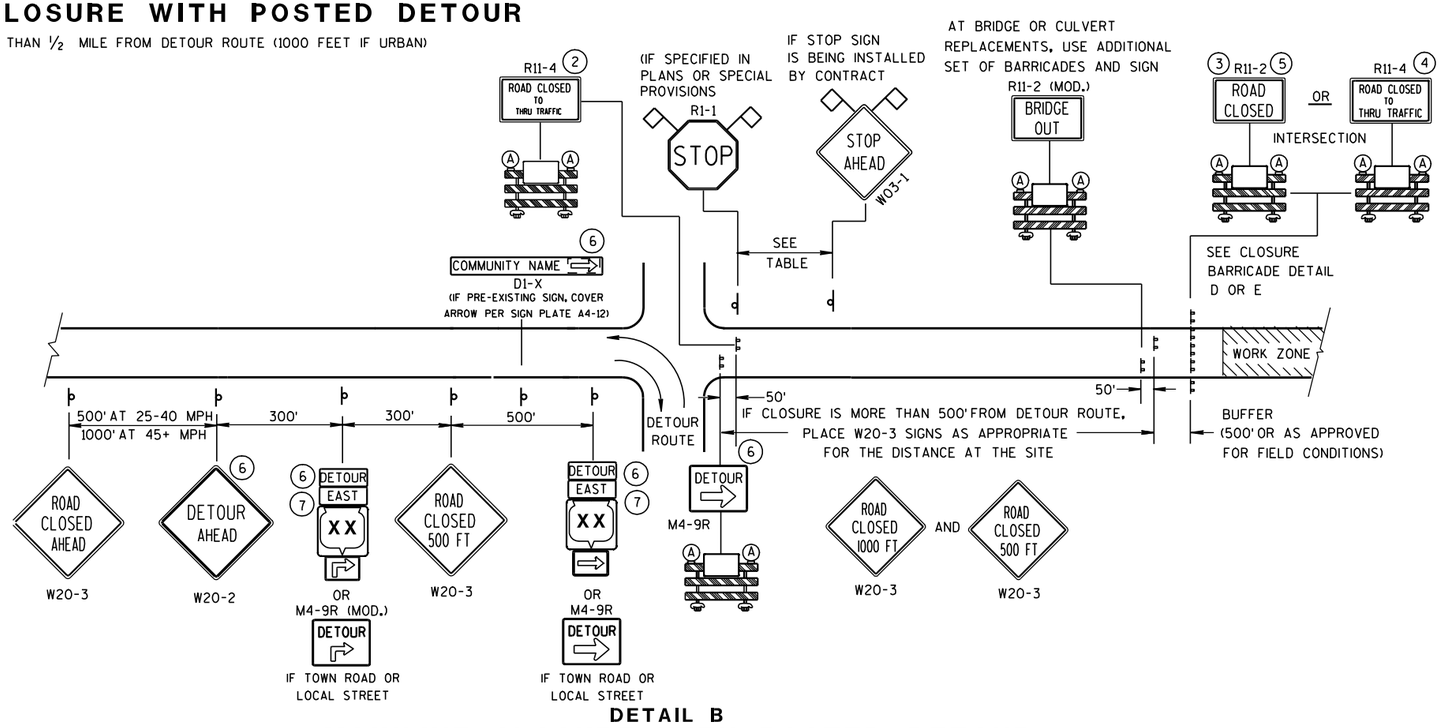


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

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

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

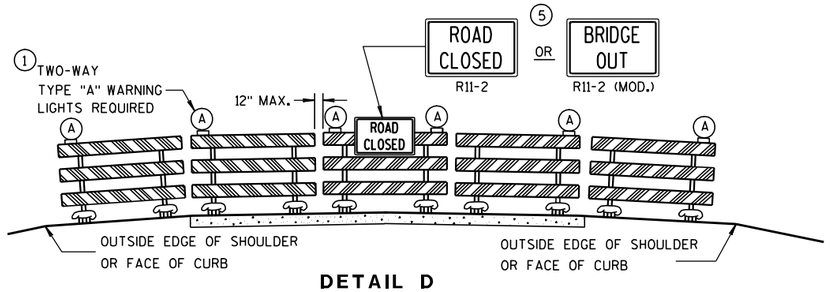
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

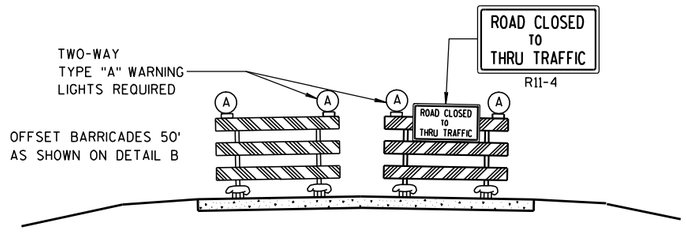
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

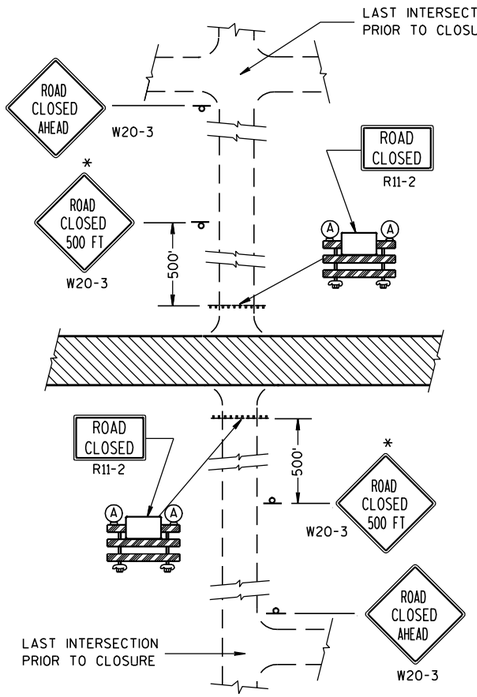
9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

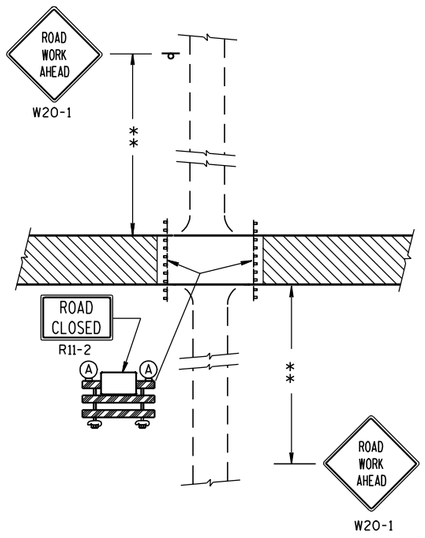
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S.D.D. 15 C 2-4b



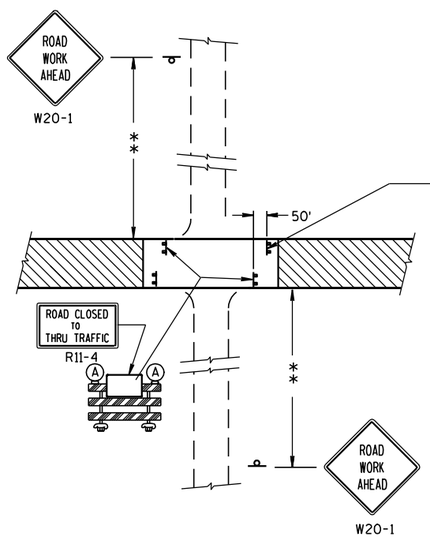
DETAIL 1

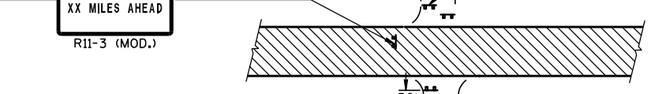
(NO ACCESS TO PROJECT)



DETAIL 2

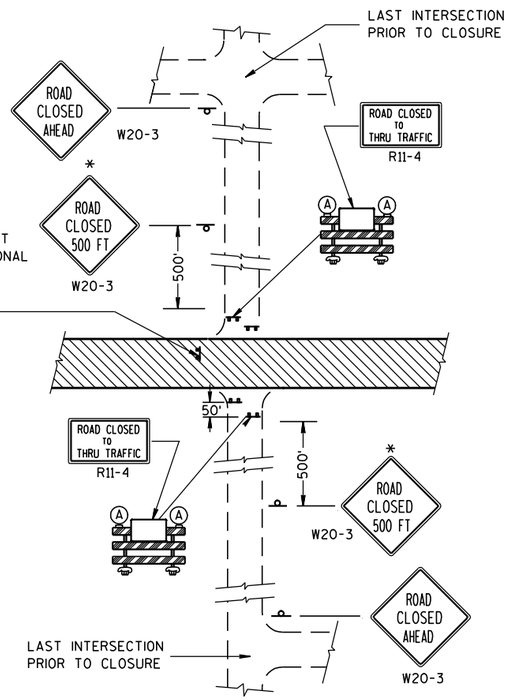
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

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

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-03 DATE

/S/ Thomas N. N[illegible] CHIEF SIGNS AND MAR[illegible] INEER

FHWA

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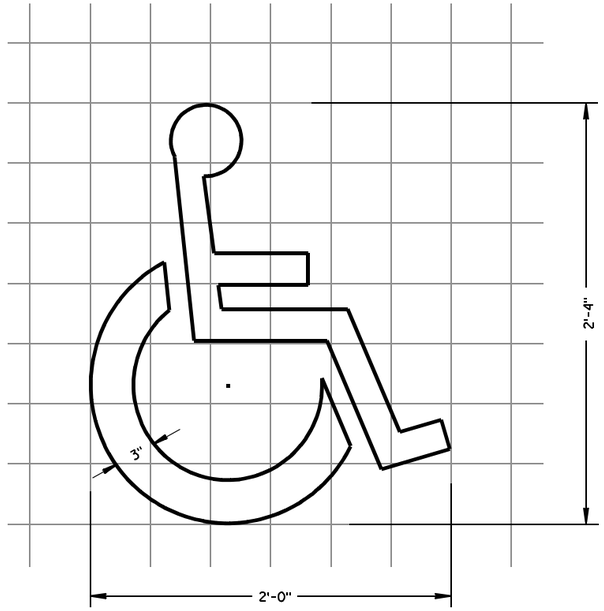
S.D.D. 15 C 3-1

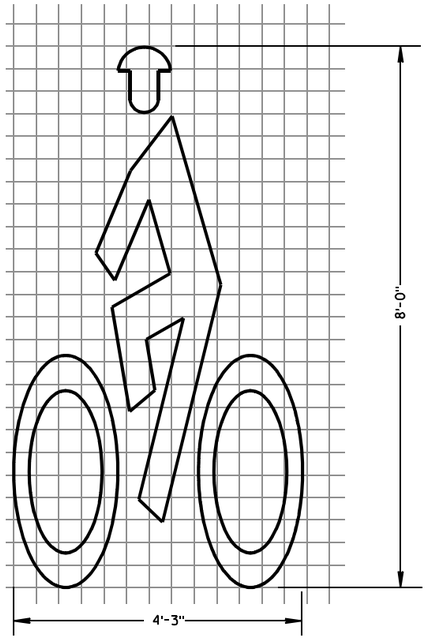
GENERAL NOTES

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

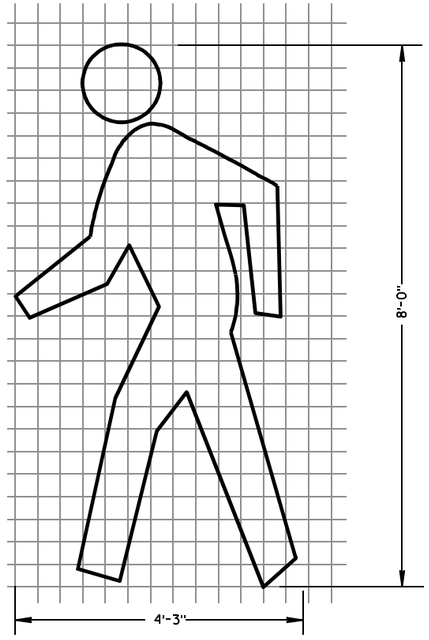
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

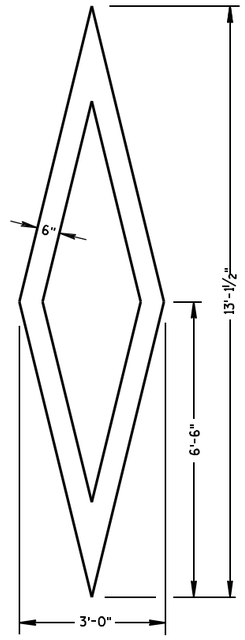




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

6

6

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

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

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 DATE

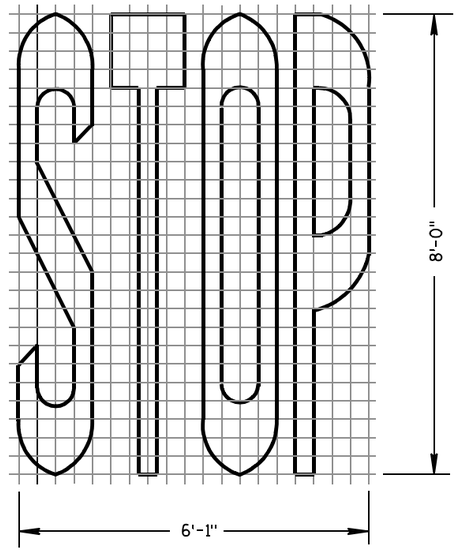
/S/ Thomas N Nathan STATE TRAFFIC ENGINEER

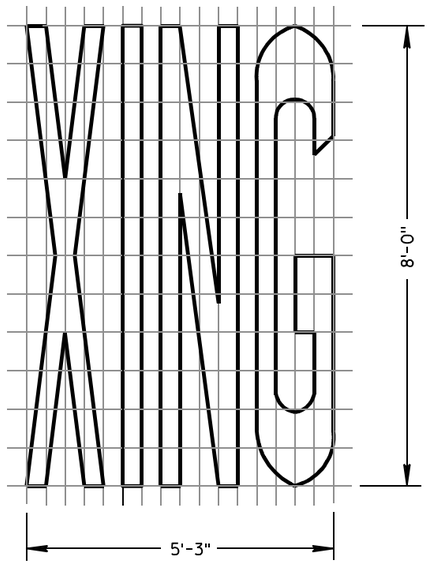
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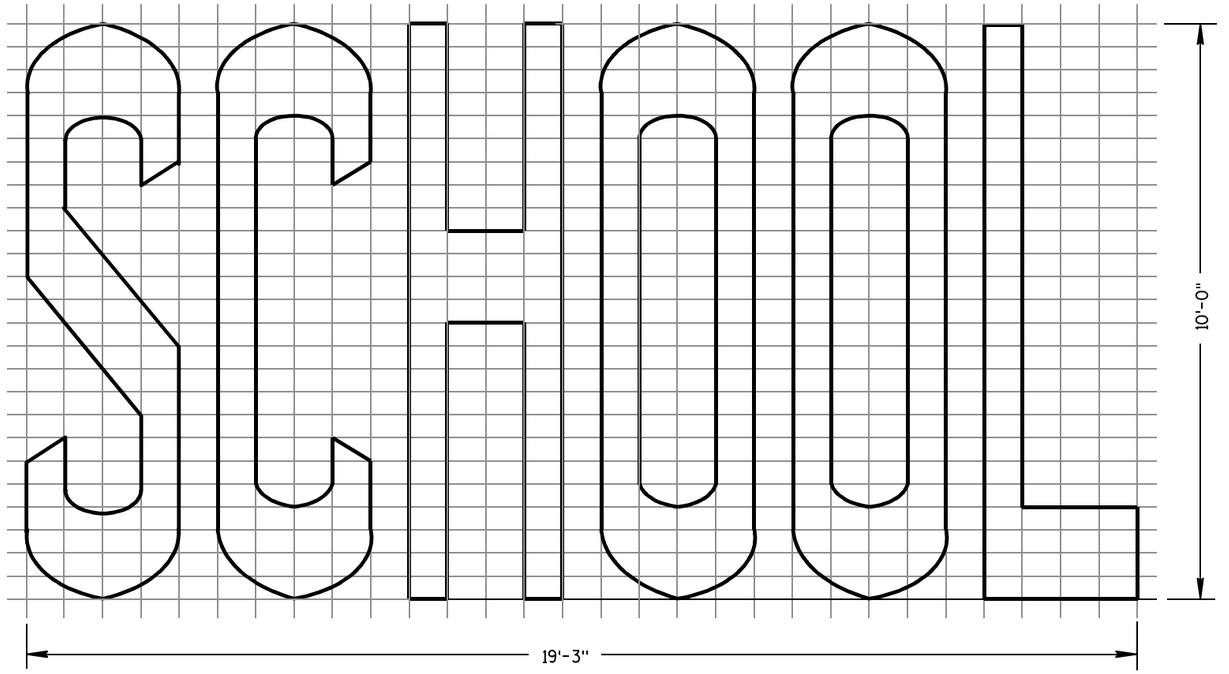
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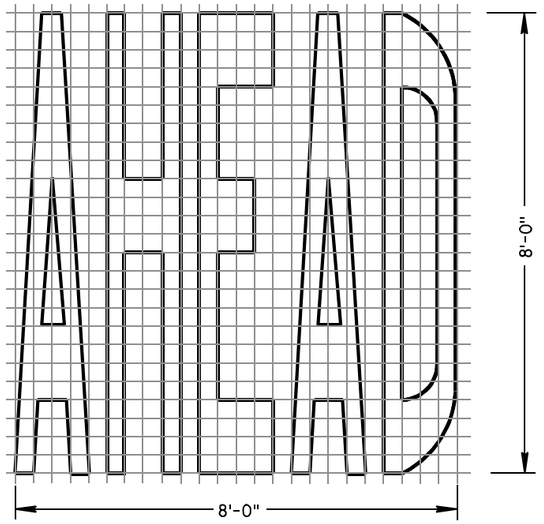
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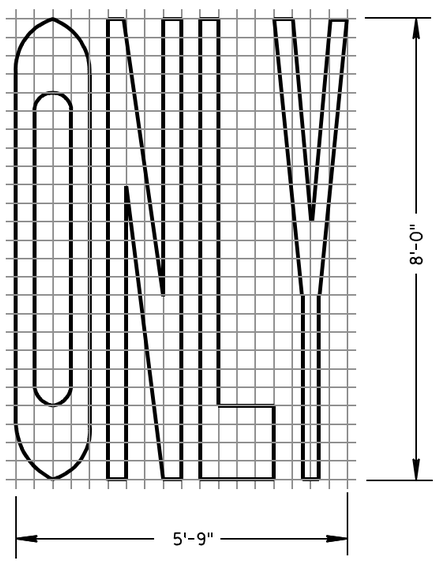


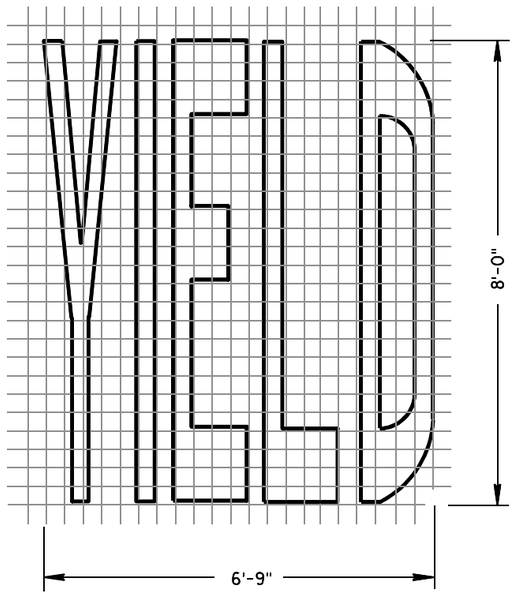


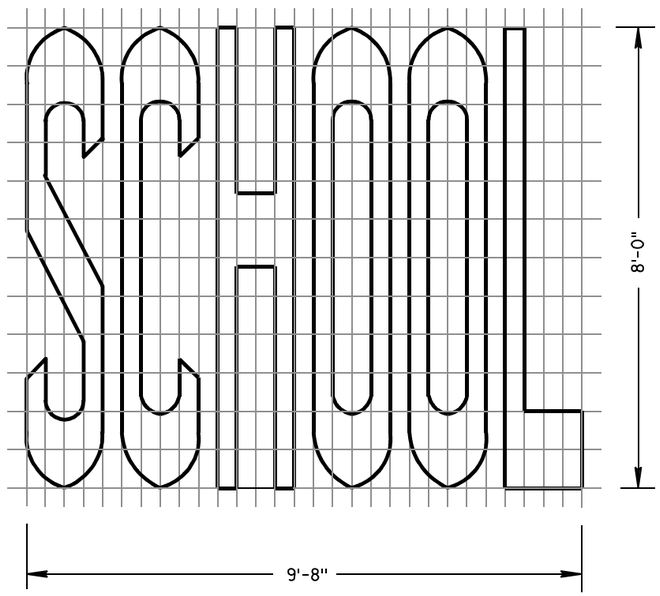


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

407

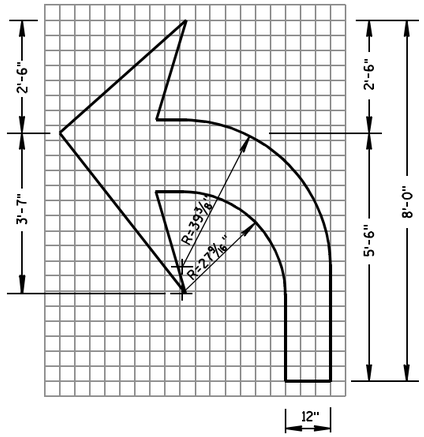
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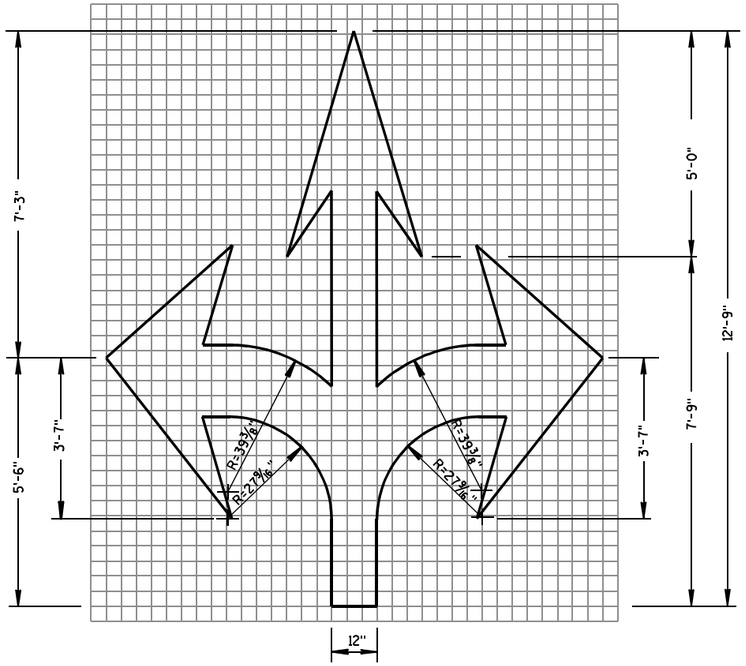
S.D.D. 15 C 7-12b

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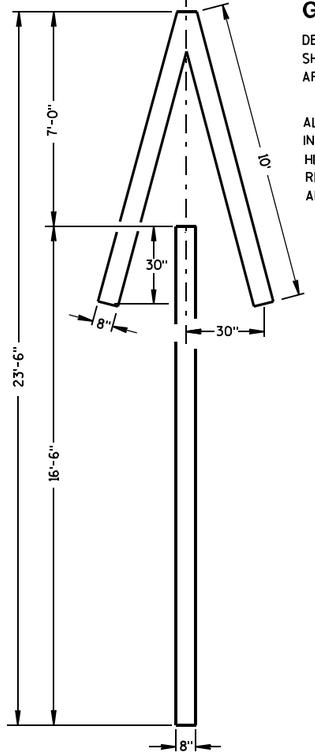
S.D.D. 15 C 7-12b



TYPE 2



TYPE 6

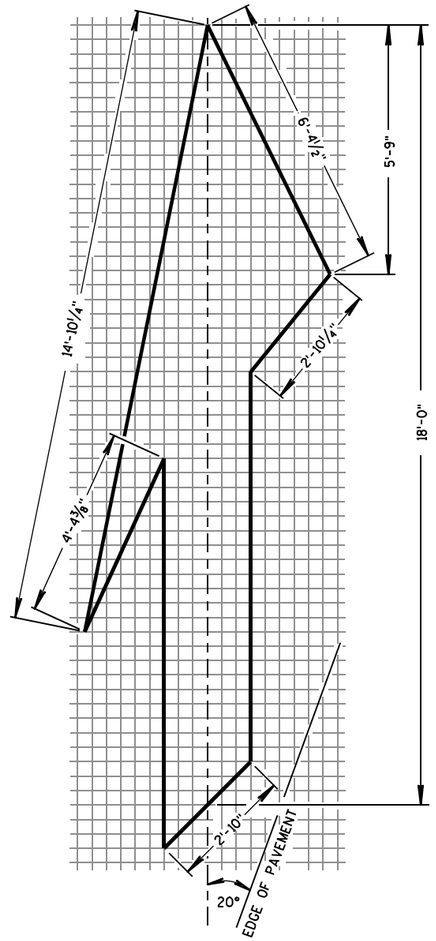


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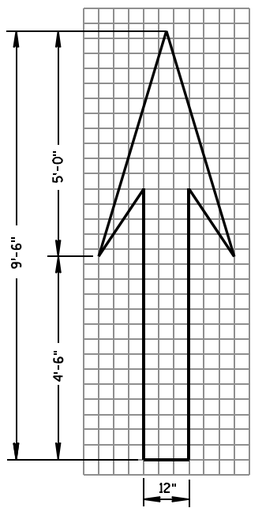
GENERAL NOTES

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

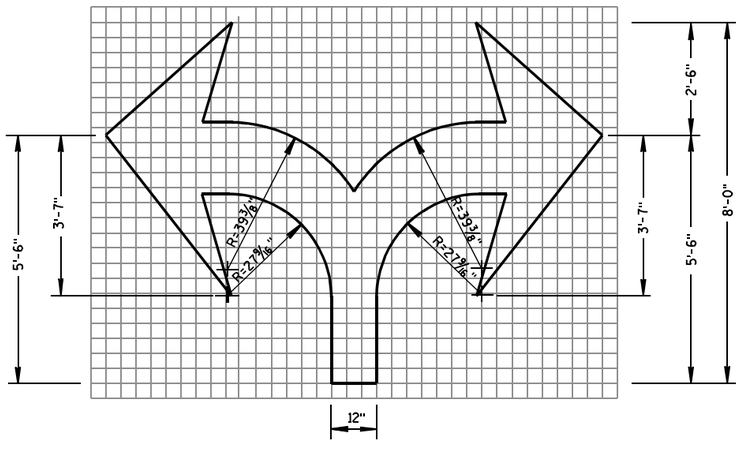
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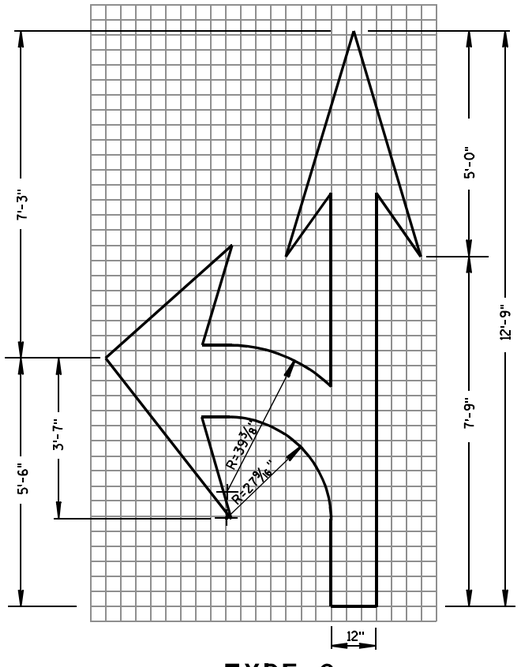
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

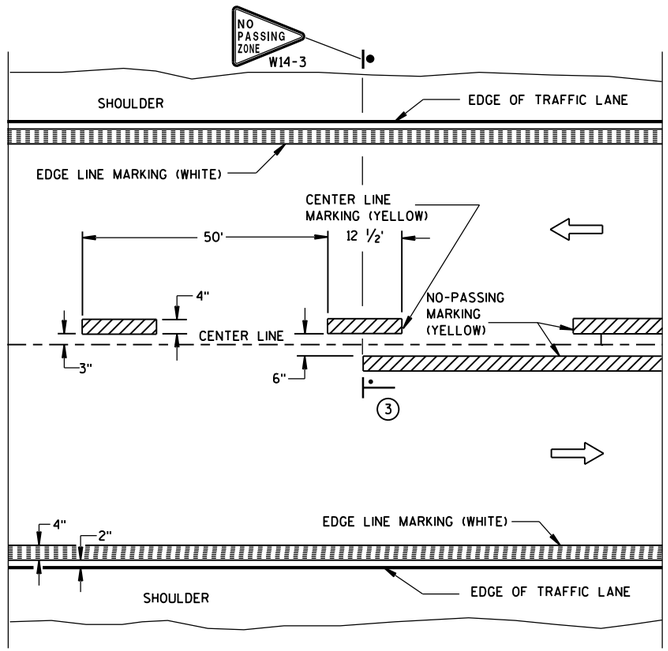
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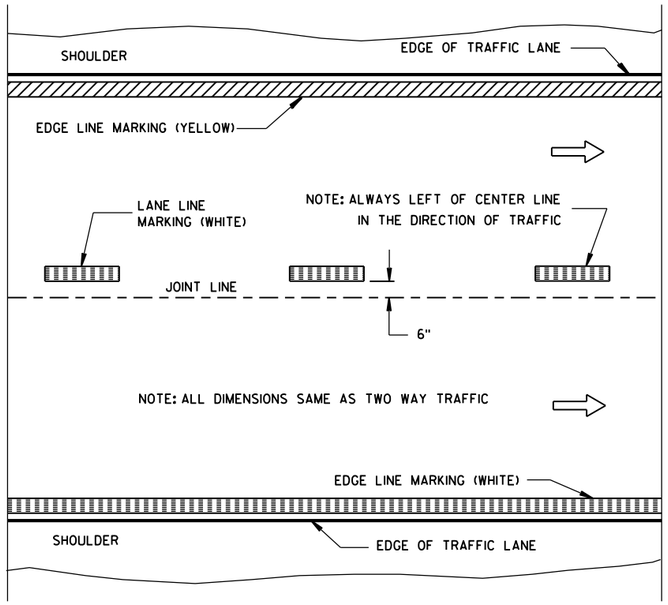
S.D.D. 15 C 7-12c

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

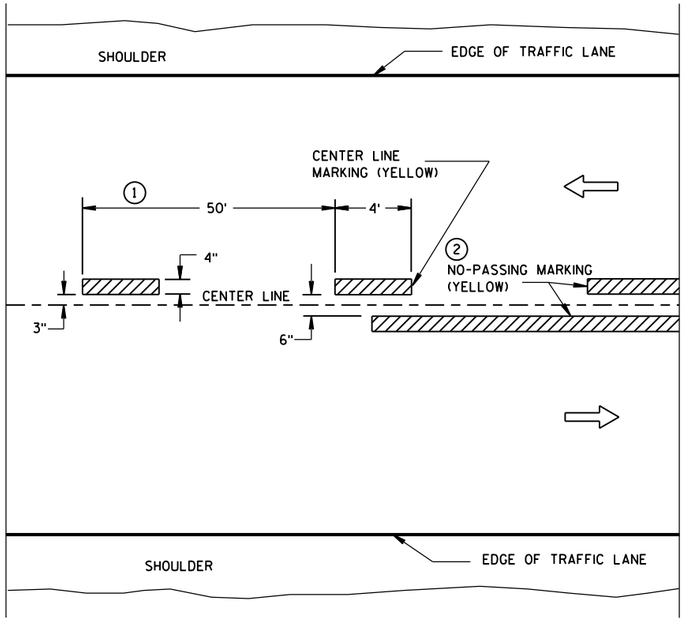


TWO WAY TRAFFIC

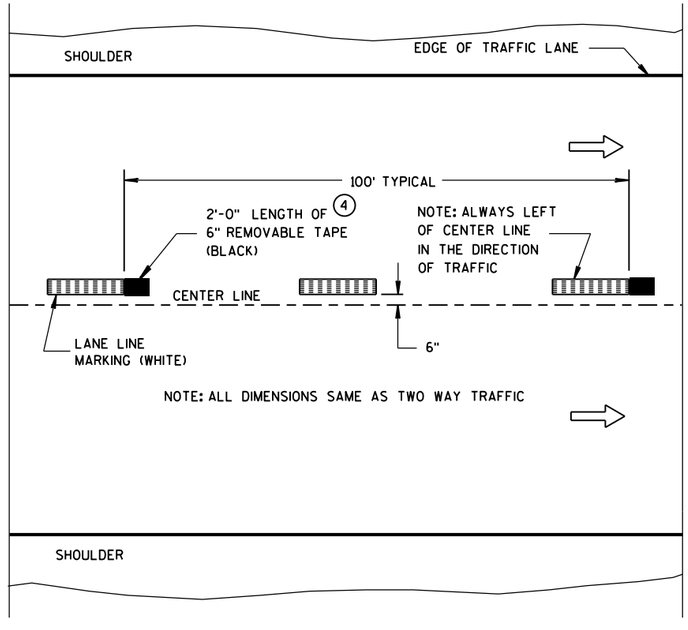


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

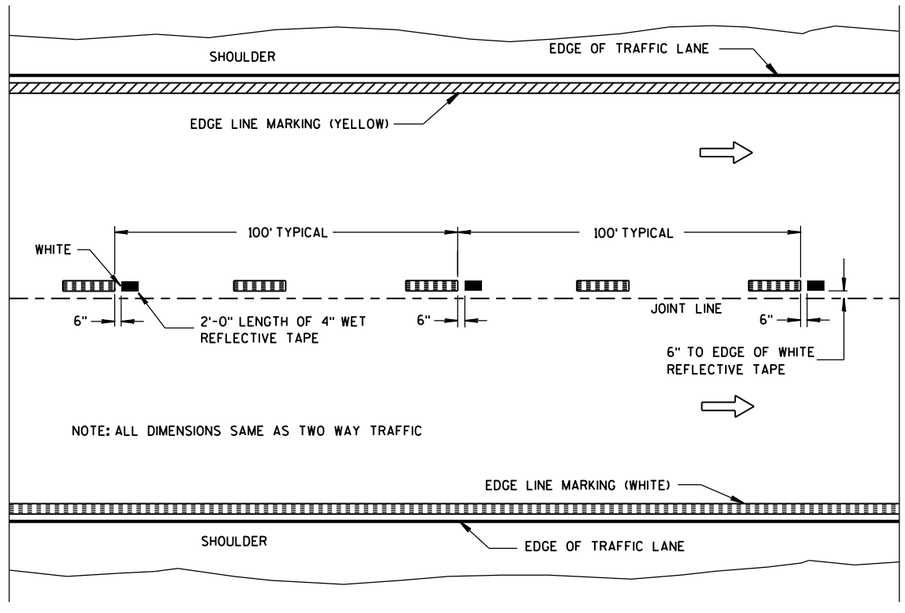
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC E

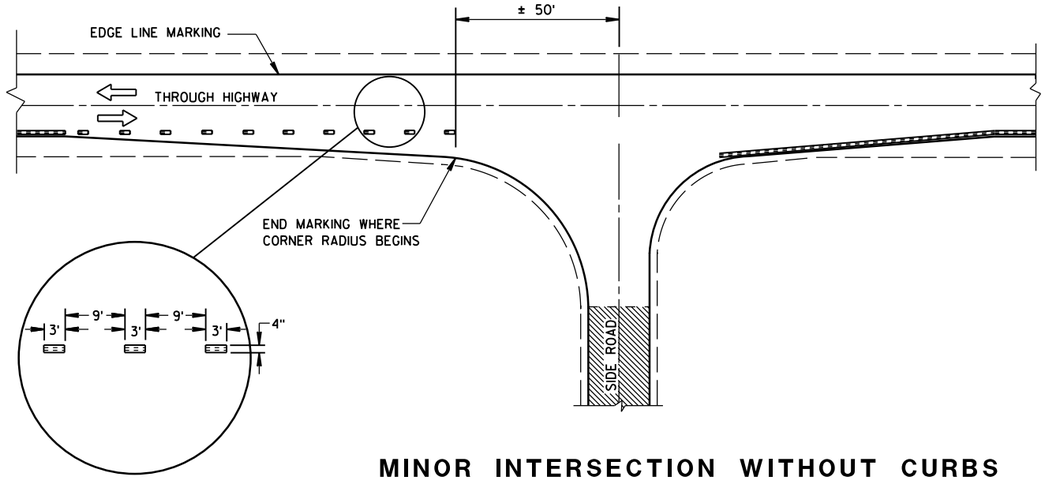
FHWA

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

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

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

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

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

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

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

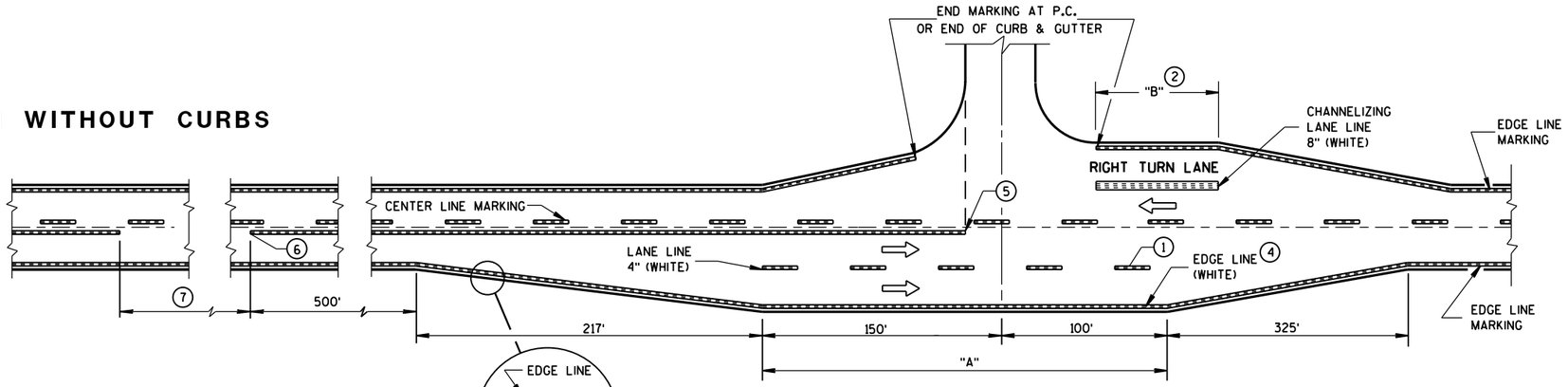
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

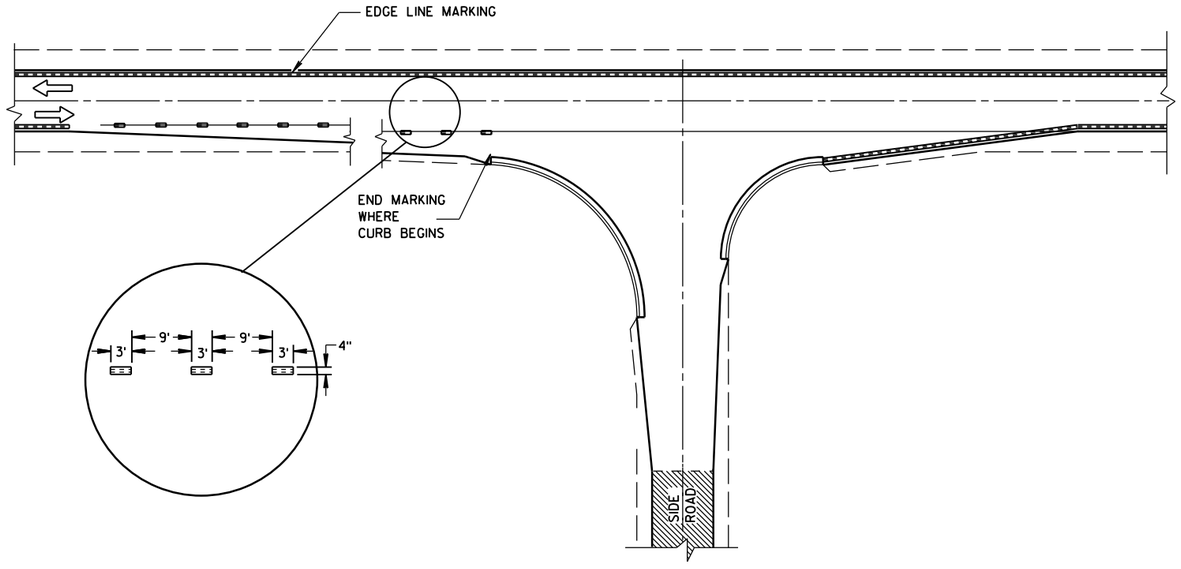
(7)

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



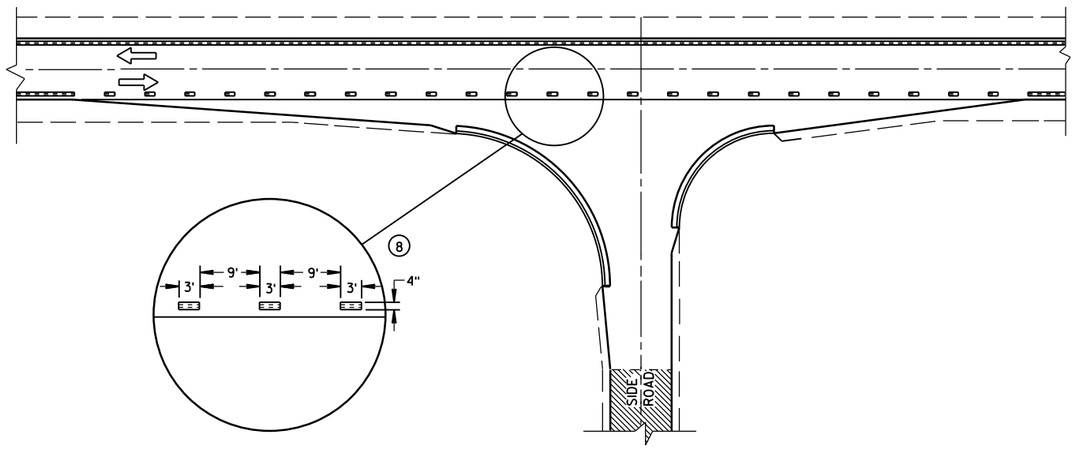
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

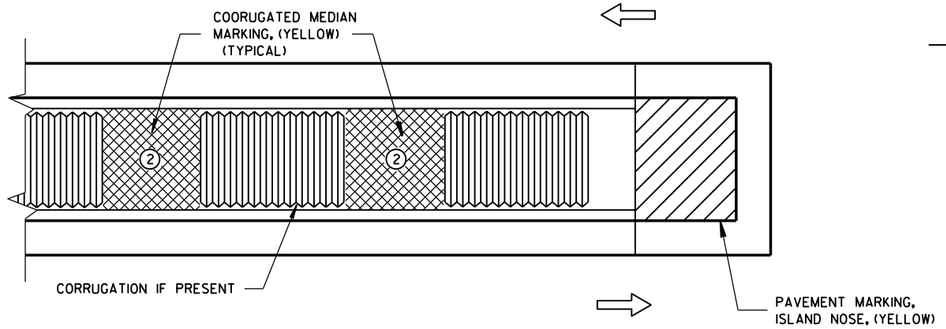
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 410

6

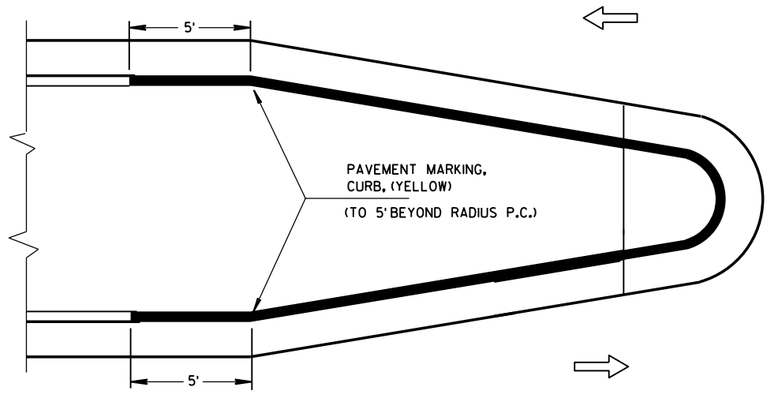
S.D.D. 15 C 8-16b

6

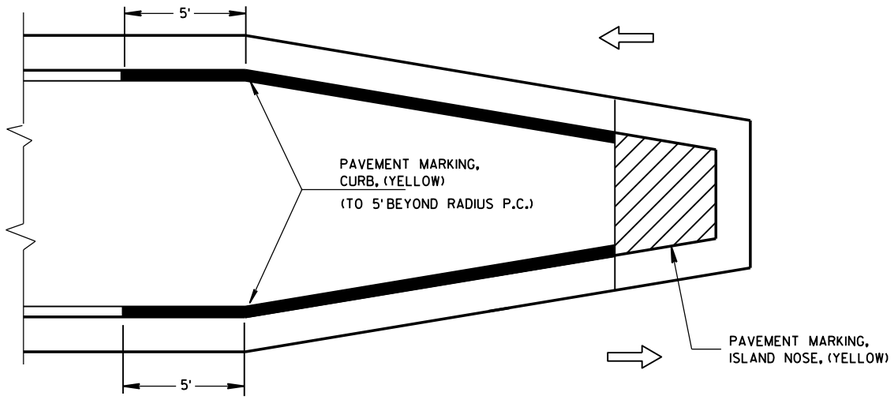
S.D.D. 15 C 8-16b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

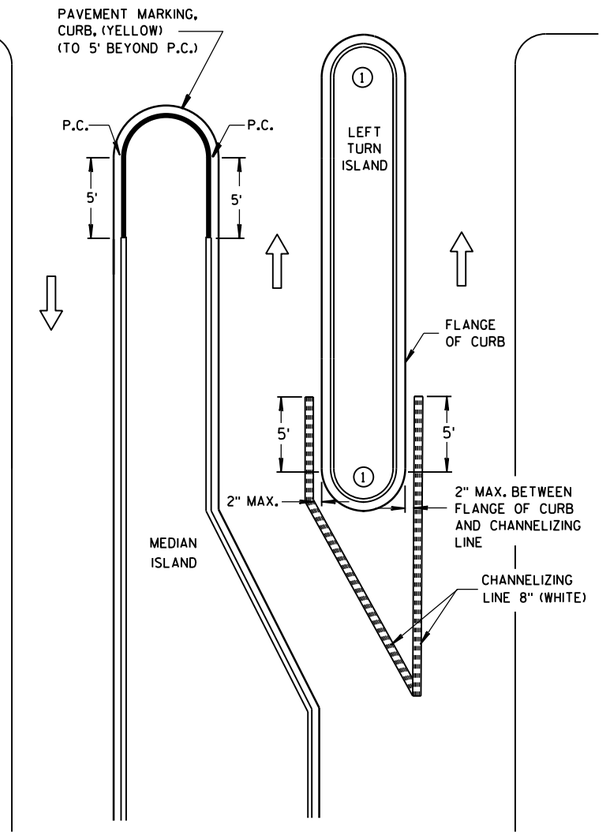


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

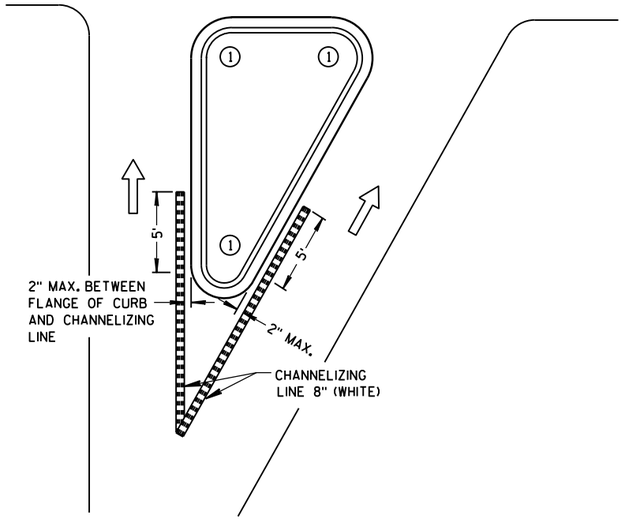


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

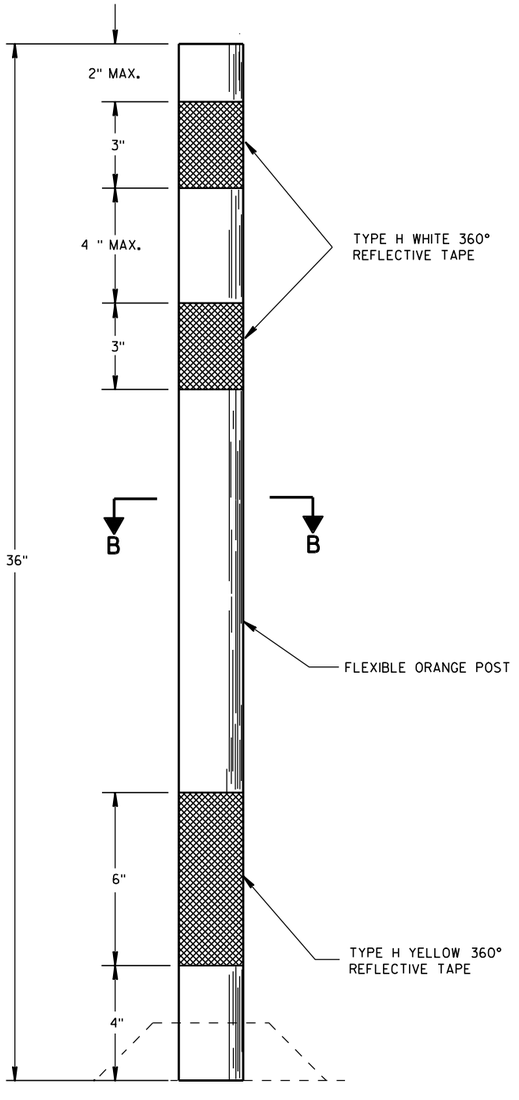
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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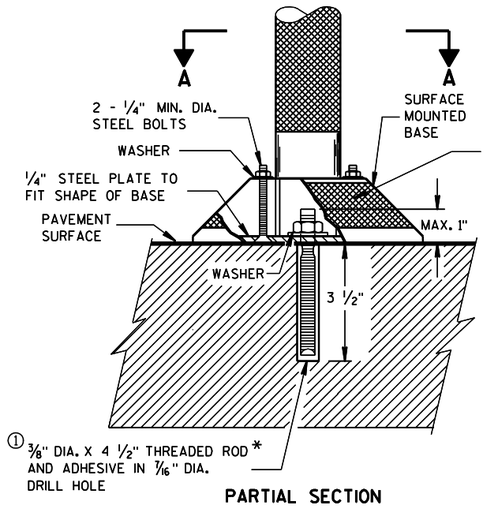
S.D.D. 15 C 8-16f

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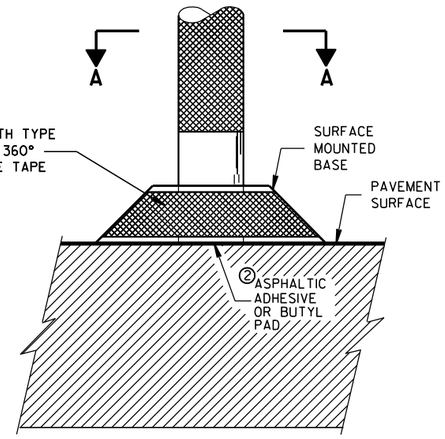
S.D.D. 15 C 8-16f



FLEXIBLE TUBULAR MARKER POST



PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT

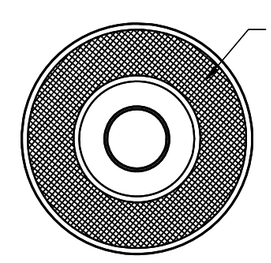
GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

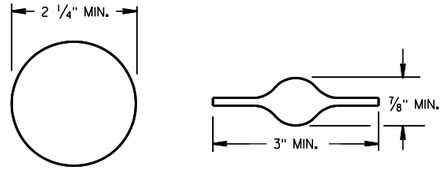
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



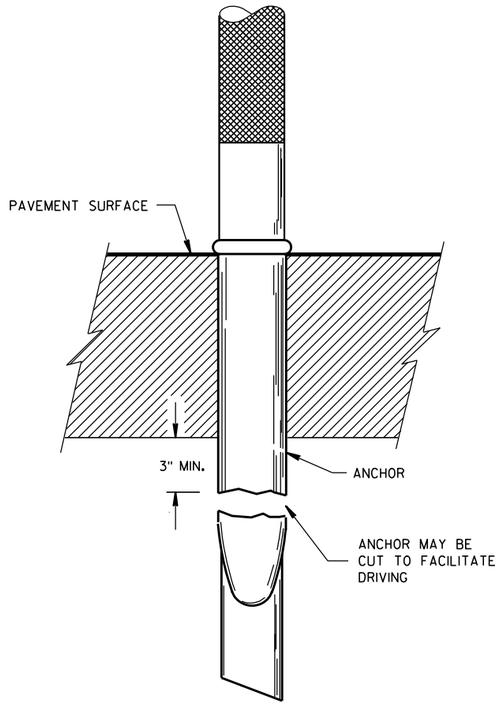
SECTION A-A

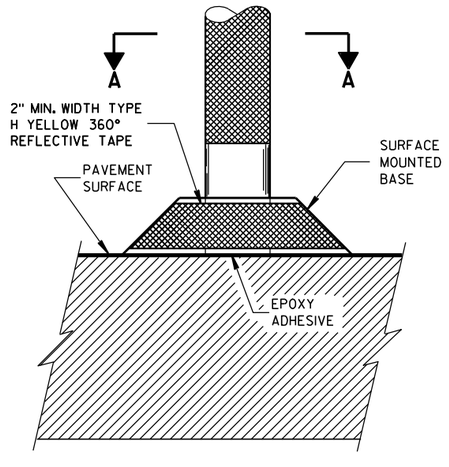
SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES





POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/17/94 DATE

/S/ Chester J. [illegible] DIRECTOR, OFFICE O

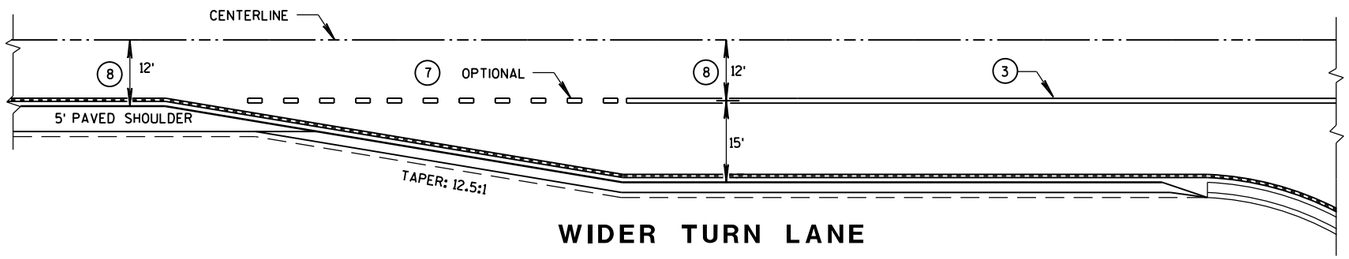
FHWA

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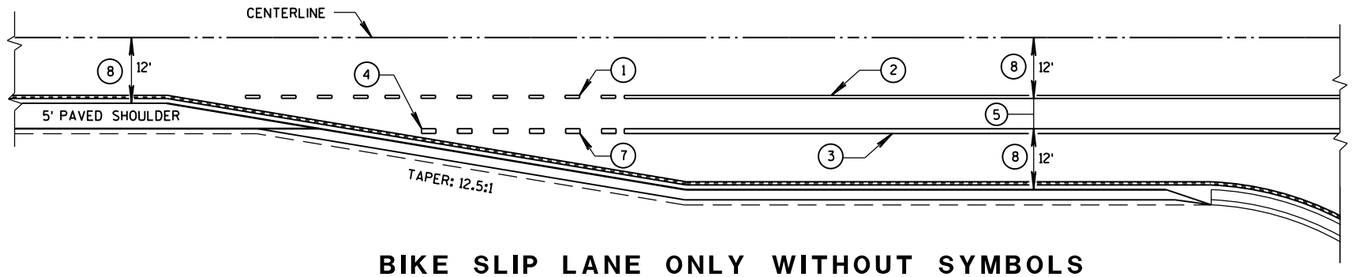
S.D.D. 15 C 11-5

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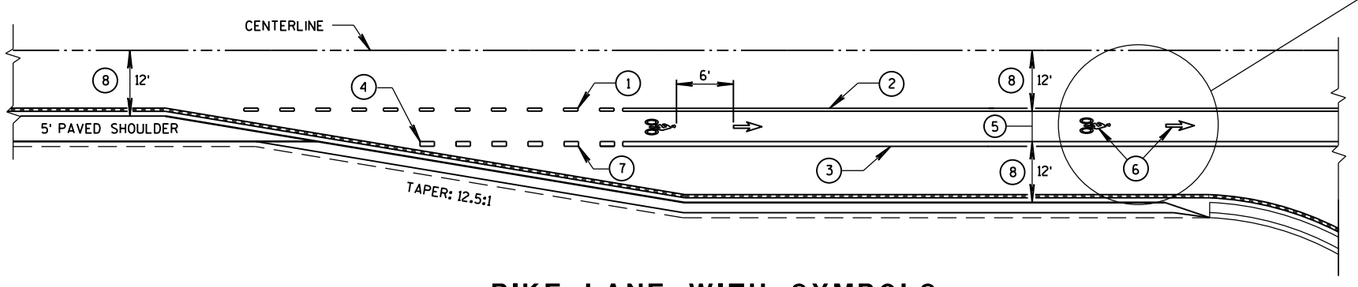
S.D.D. 15 C 11-5



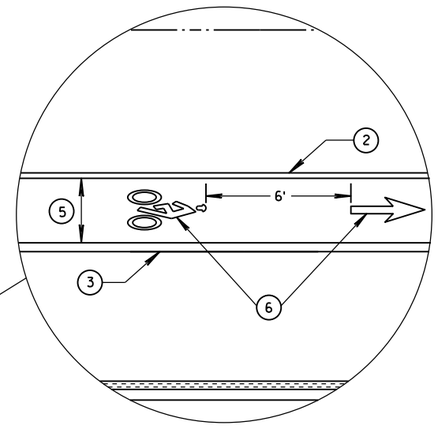
WIDER TURN LANE



BIKE SLIP LANE ONLY WITHOUT SYMBOLS



BIKE LANE WITH SYMBOLS



GENERAL NOTES

1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE.
   BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.

6

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

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

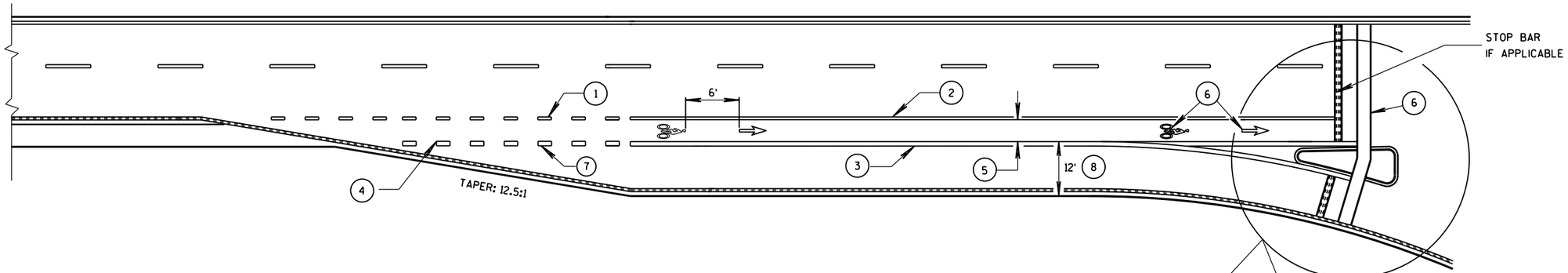
FHWA

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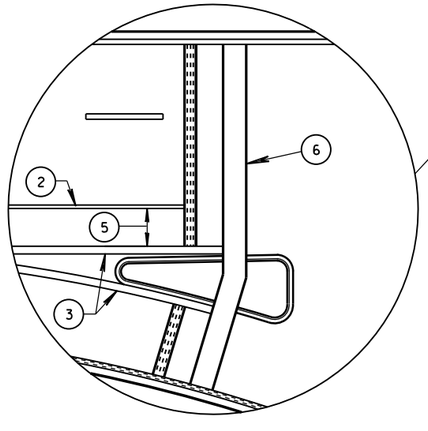
S.D.D. 15 C 29-3a

GENERAL NOTES

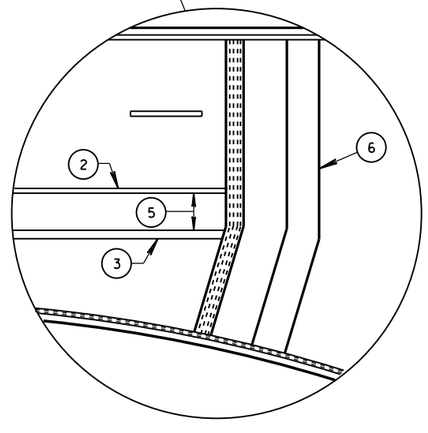
1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. 5' TYPICAL.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.



BIKE LANE - 4-LANE DIVIDED WITH RIGHT TURN LANE



4 LANE DIVIDED WITH ISLAND



4 LANE DIVIDED WITHOUT ISLAND

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

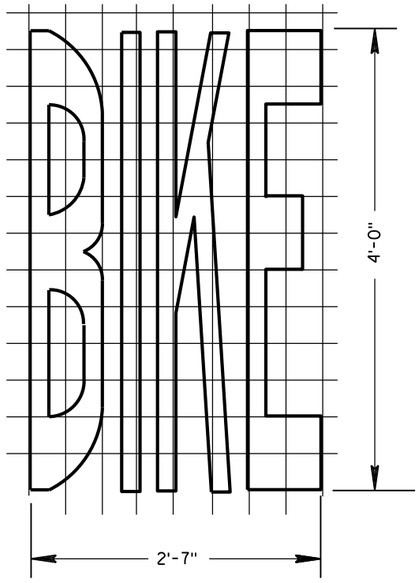
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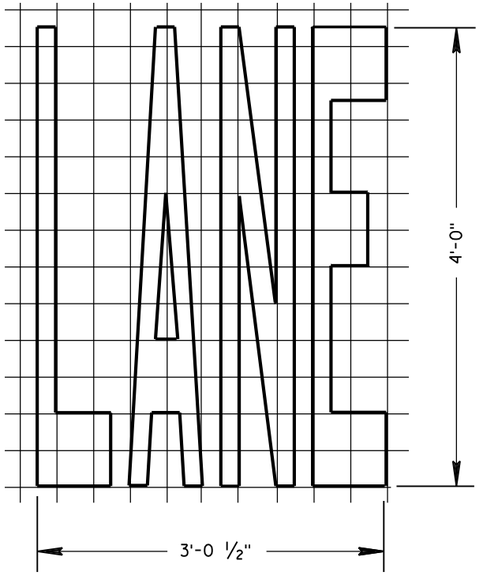
S.D.D. 15 C 29-3b

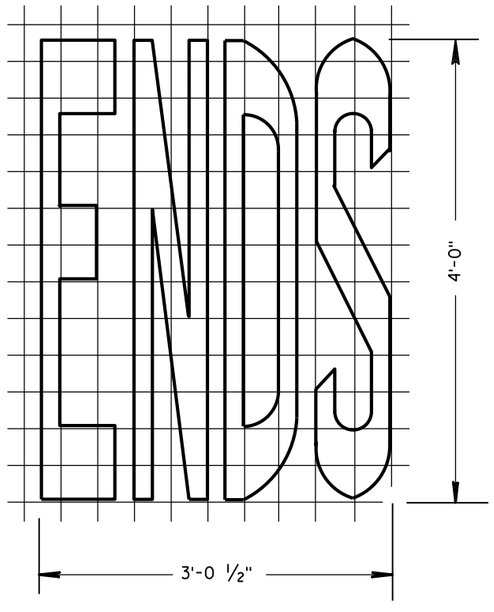
GENERAL NOTES

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

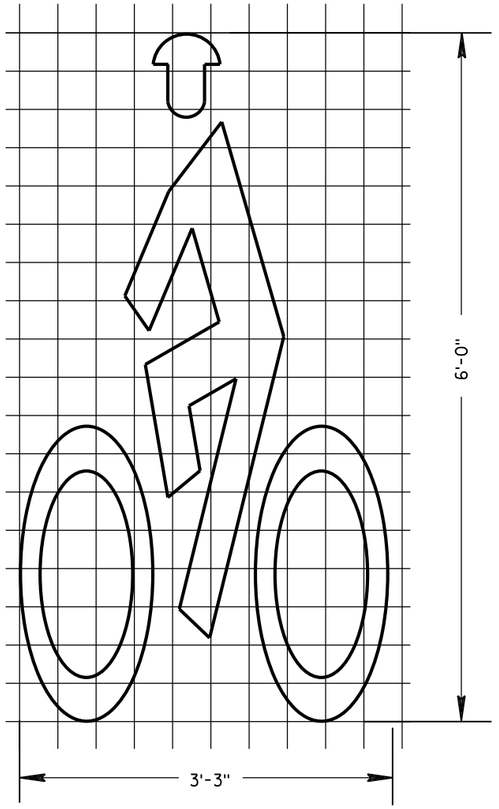
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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



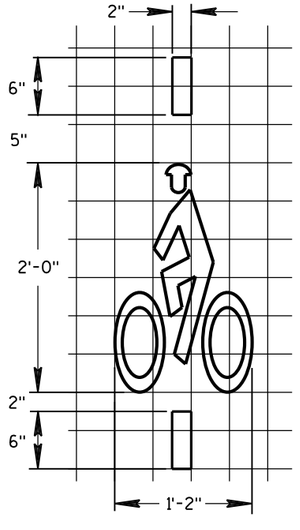




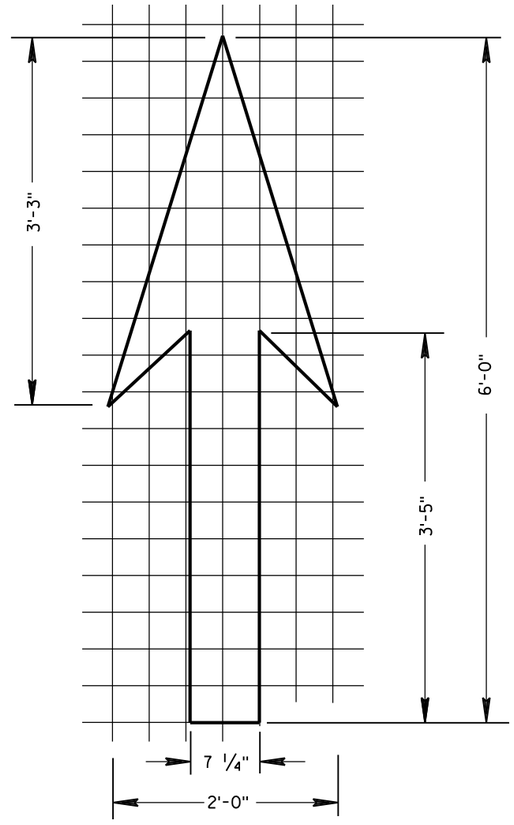
BIKE LANE WORDS



BIKE LANE SYMBOL



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE ARROW

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC EN

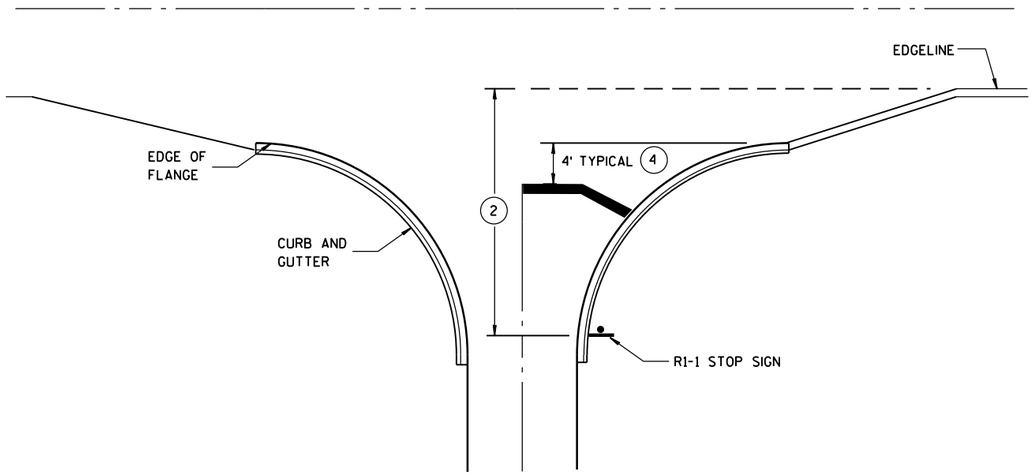
FHWA

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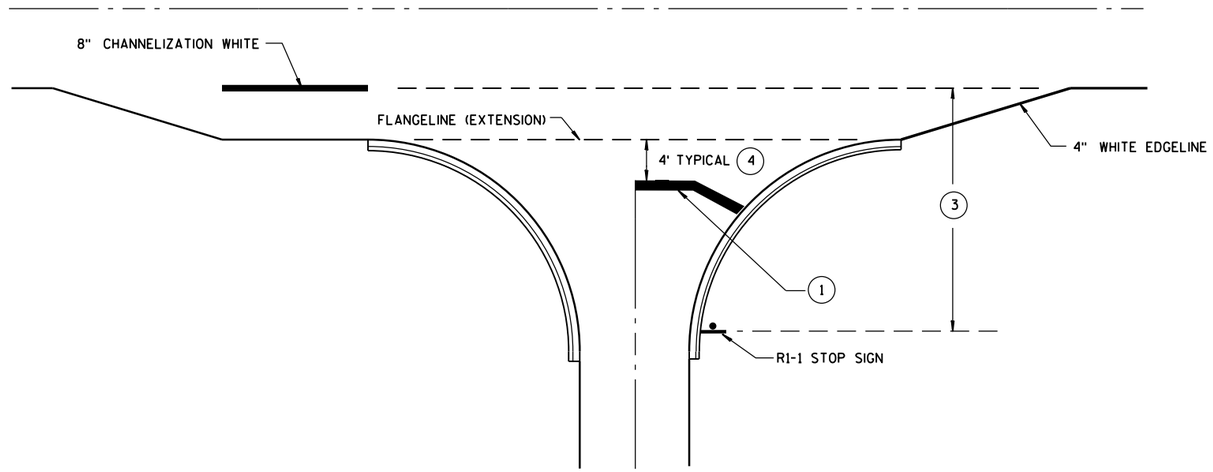
S.D.D. 15 C 29-3e

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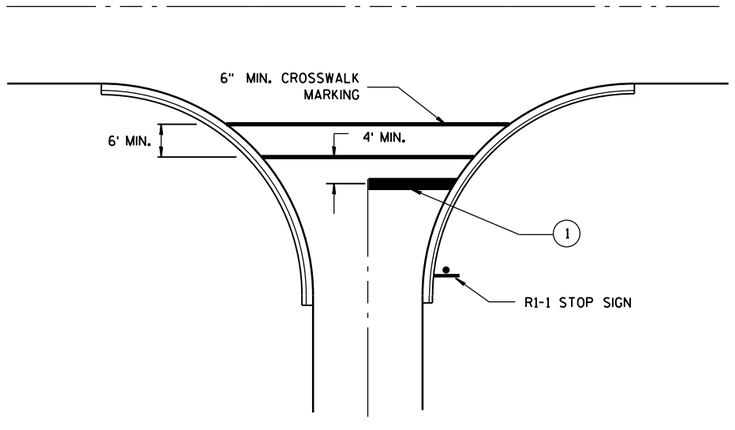
S.D.D. 15 C 29-3e



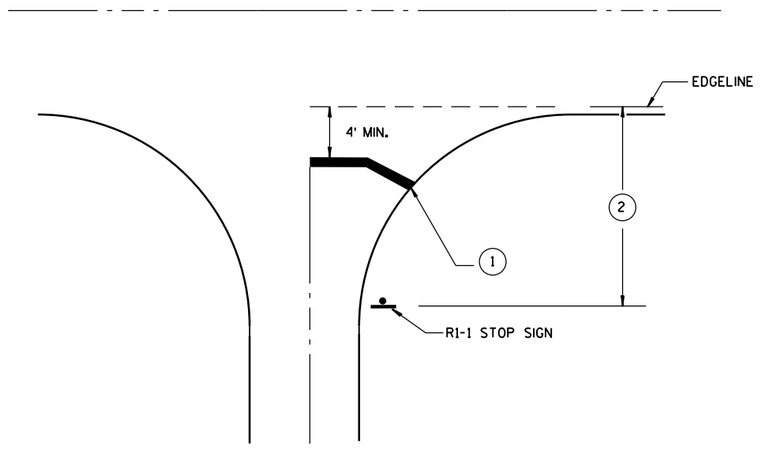
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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.

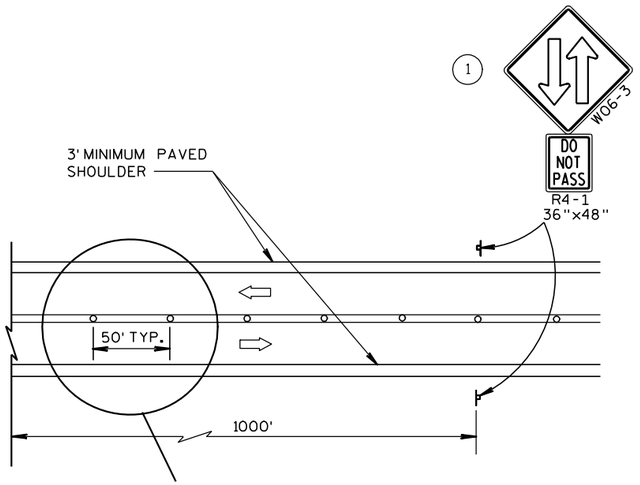
STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

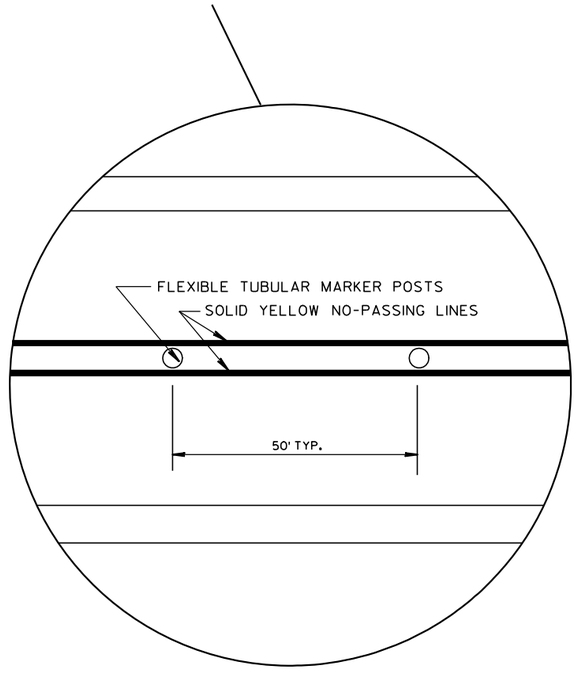
APPROVED
4/30/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 33-1



TWO LANE, TWO WAY OPERATION



GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

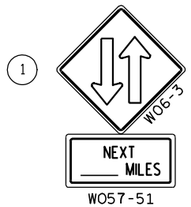
A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC @ 50' SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



R2-1
48"x60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD **BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY** 2 OR 3 MILES.



W057-51
48"x24"



R4-1
36"x48"

THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200' BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500' BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000' BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

LEGEND

- POST WITH ATTACHED SIGN
- FLEXIBLE TUBULAR MARKER AND BASE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

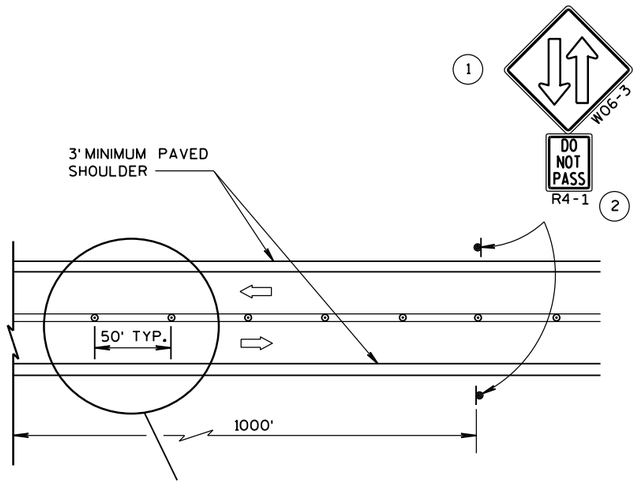
APPROVED
12-4-95
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF 417

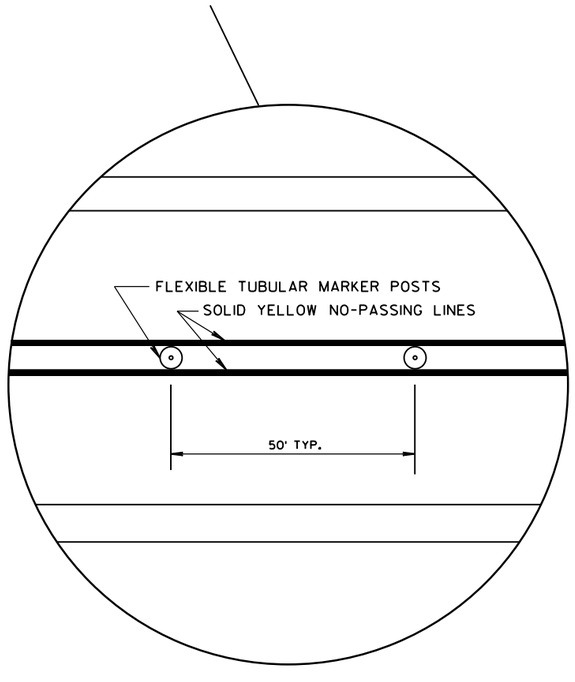
FHWA

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S.D.D. 15 D 6-2



TWO LANE, TWO WAY OPERATION



GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

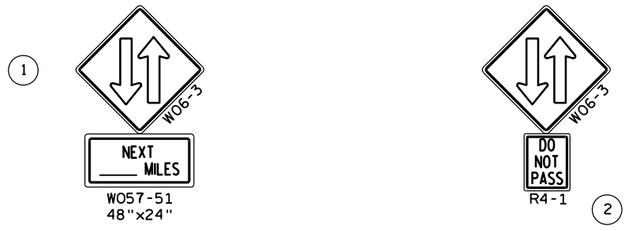
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

(2) CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC

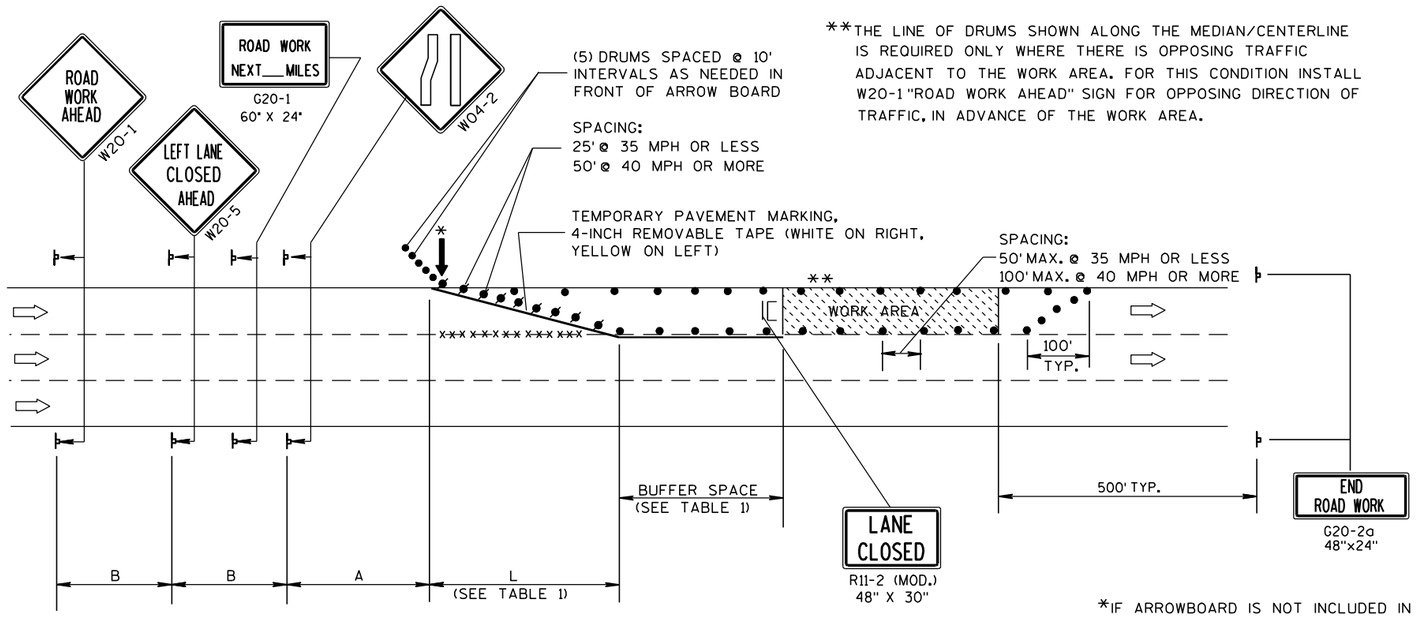
TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 D 6-3



**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"

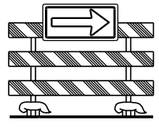


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

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 7 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

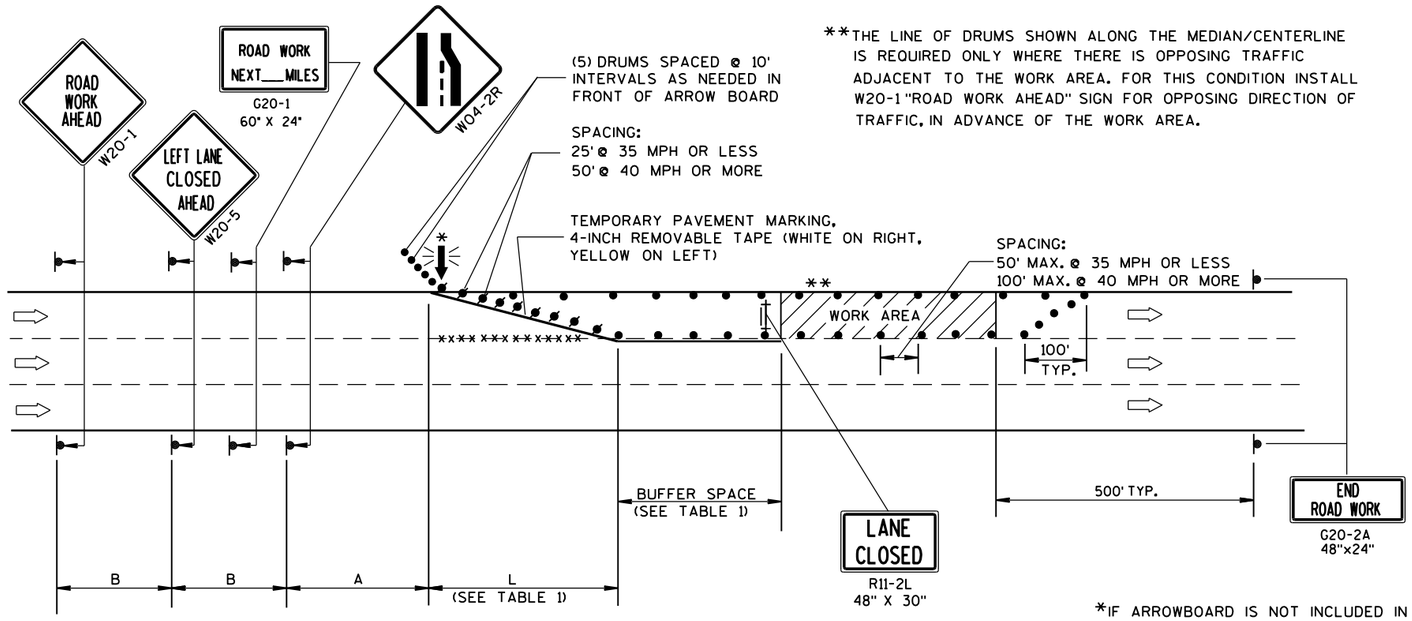
5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6

S.D.D. 15 D 20-1



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

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

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

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

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

W01-6
48"x24"

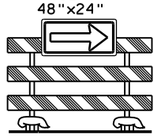


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

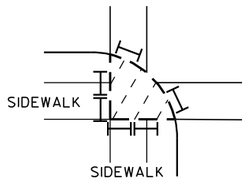
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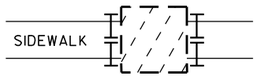
S.D.D. 15 D 20-2

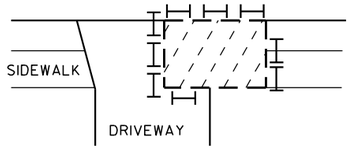
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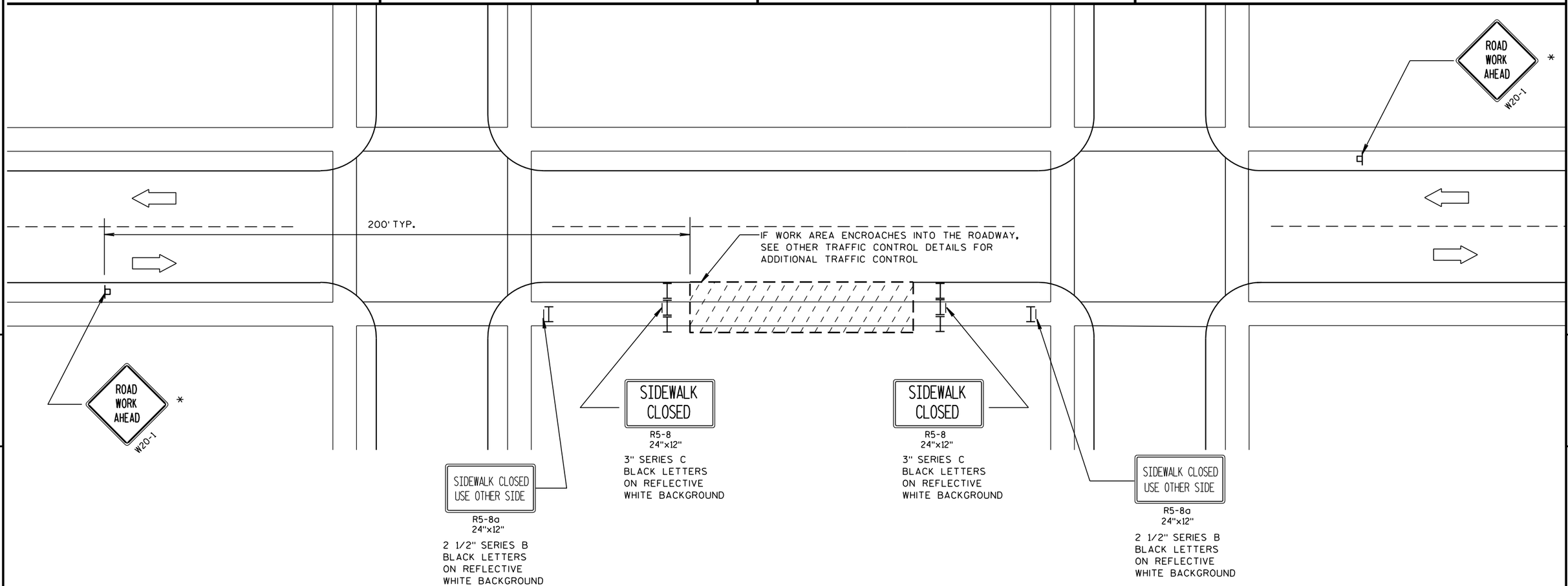
S.D.D. 15 D 20-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

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

GENERAL NOTES :

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

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

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

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

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

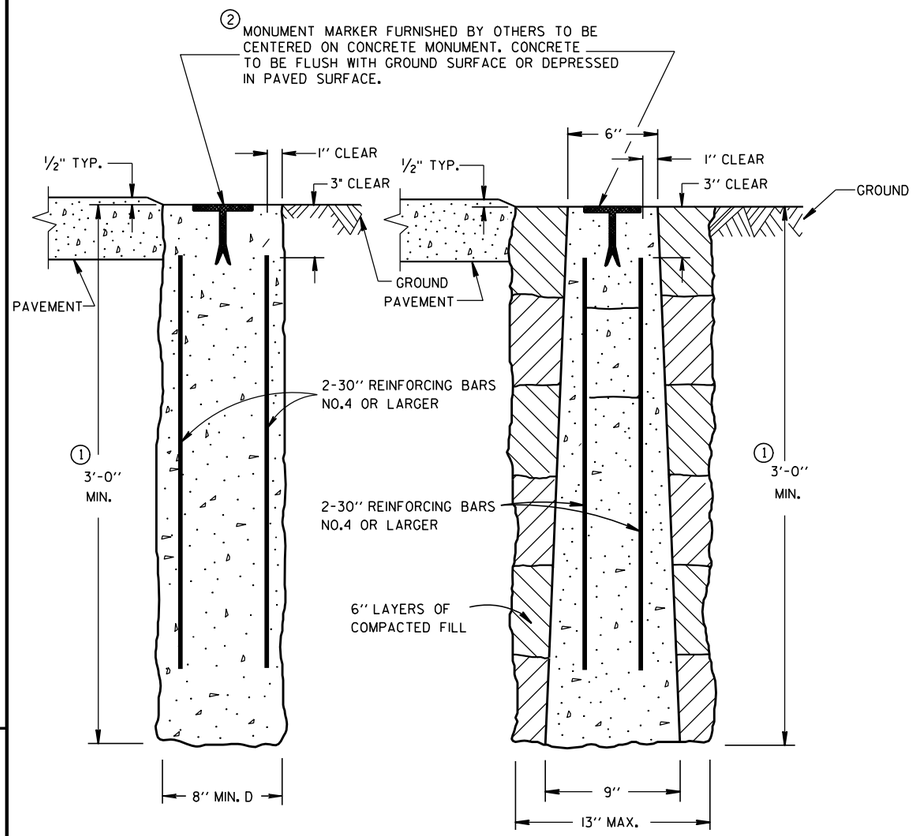
TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible]NEER
FHWA

6

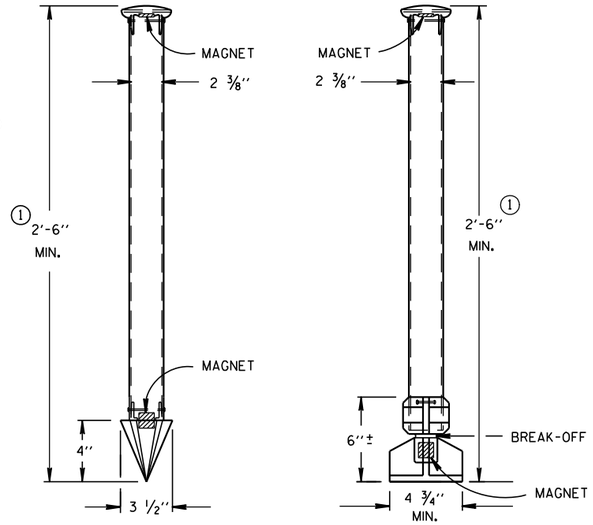
S.D.D. 15 D 30-1



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

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

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

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

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

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

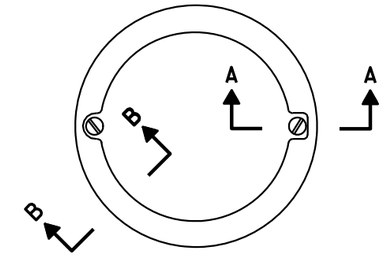
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

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

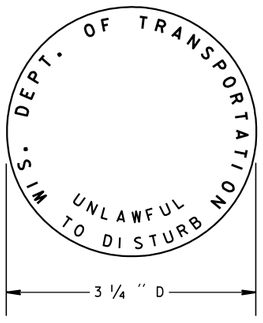
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

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

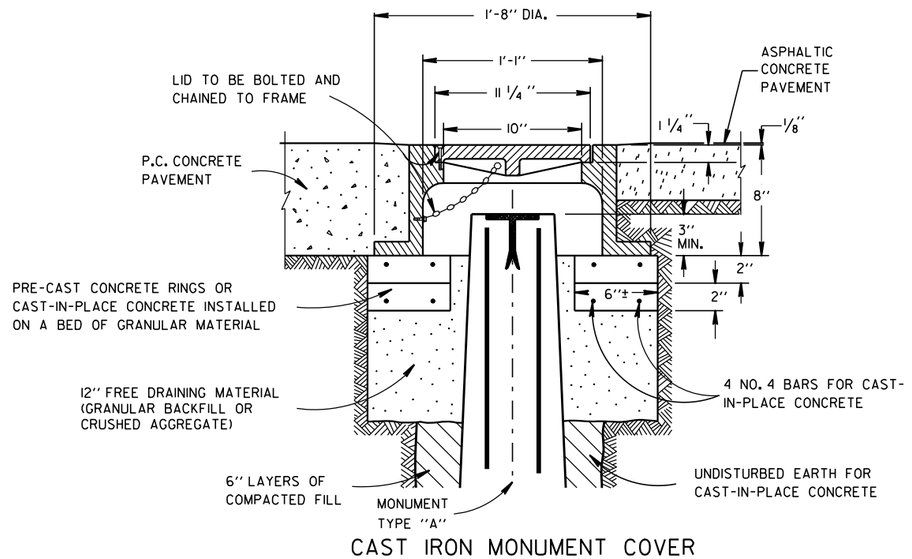
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

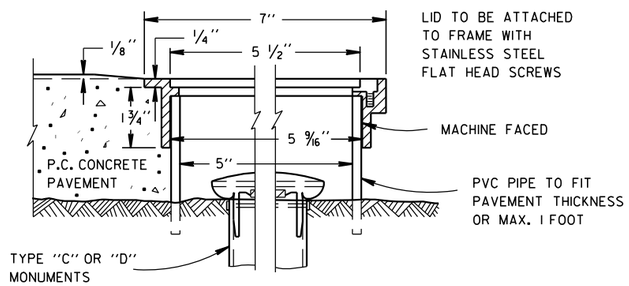


② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/22/1999 DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 16 A 1-6

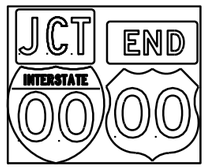
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S.D.D. 16 A 1-6

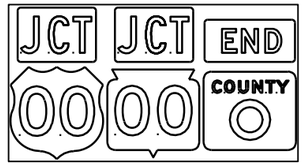
TYPICAL ASSEMBLIES



J1-1



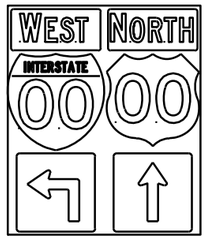
J1-2



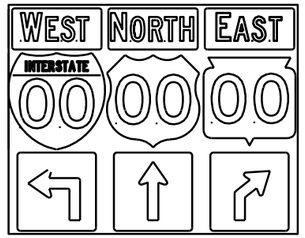
J1-3



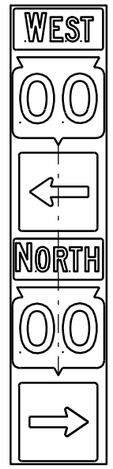
J2-1



J2-2

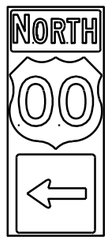


J2-3

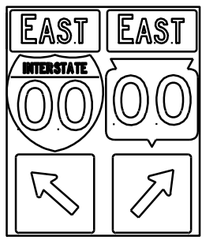


JV

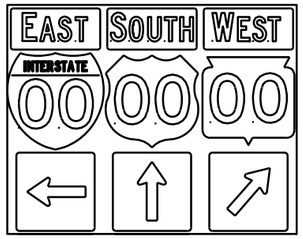
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



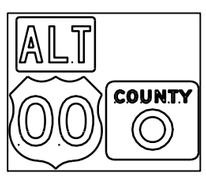
J3-2



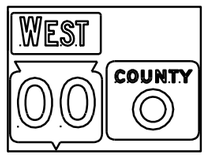
J3-3



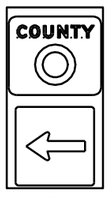
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

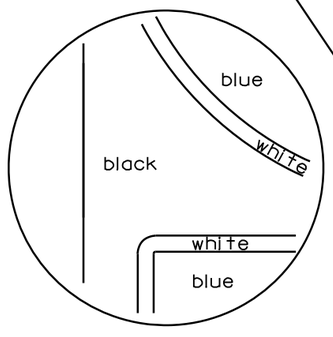


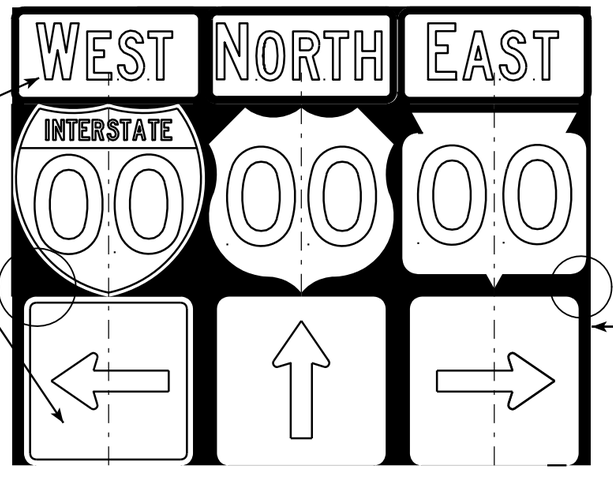
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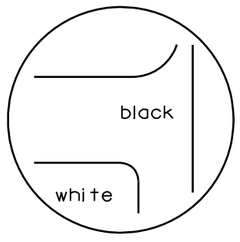


J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/13 PLATE NO. A2-1S.7

7

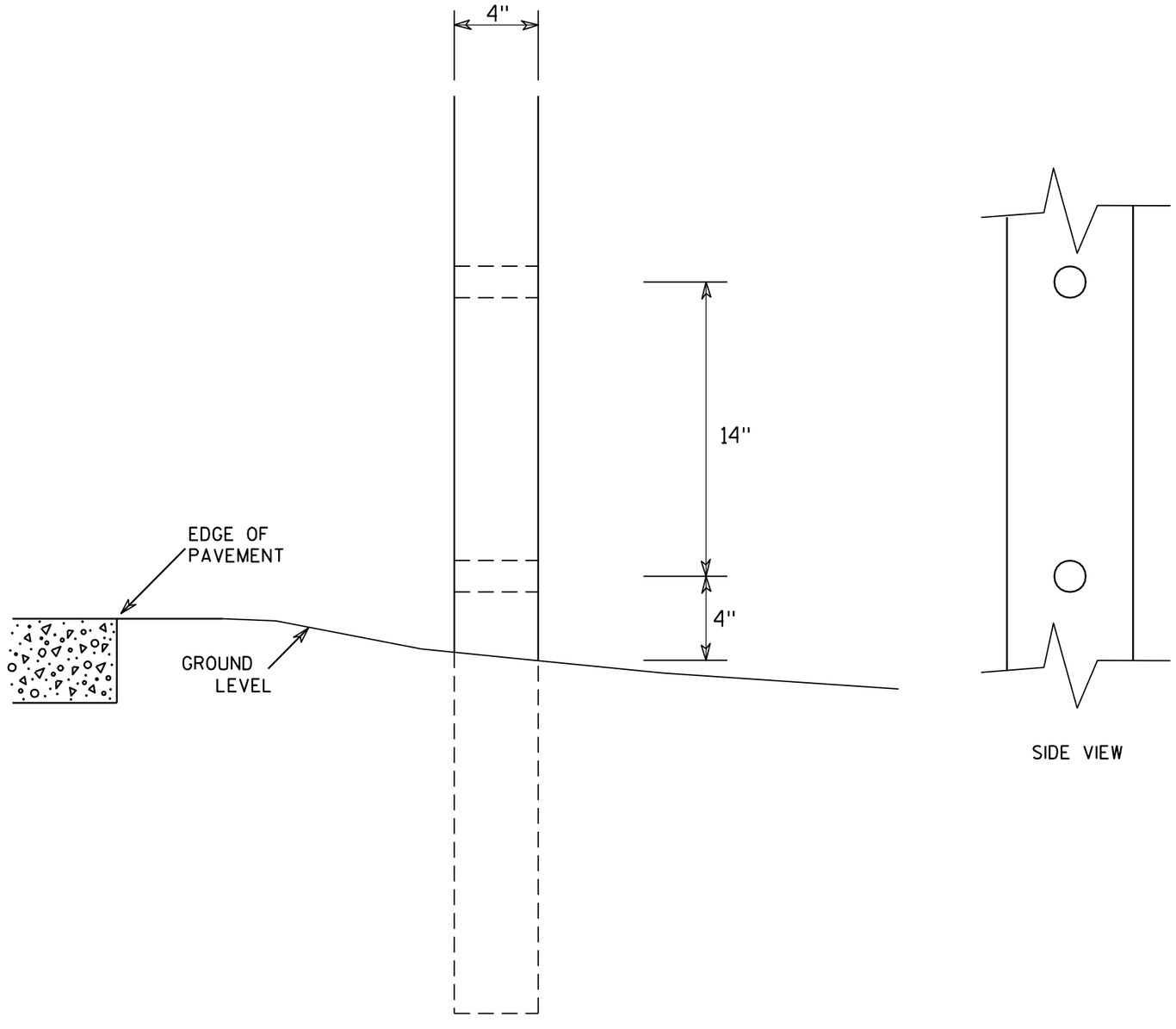
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PROJECT NO:

SHEET NO: 423 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 25-MAR-2013 11:33 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

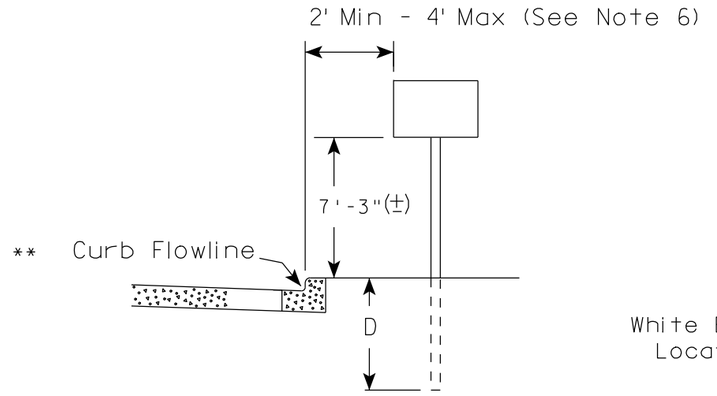
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

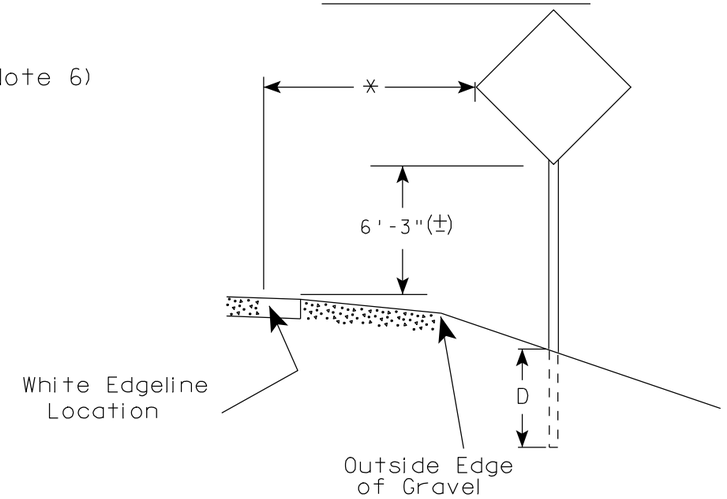
DATE 3/27/97 PLATE NO. A4-11.2

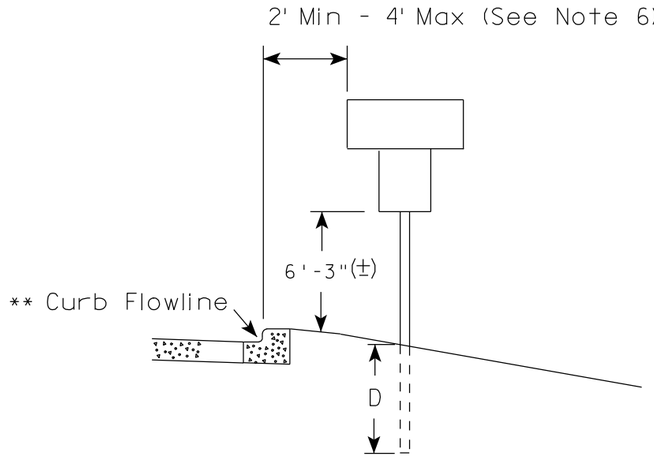
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 424	E

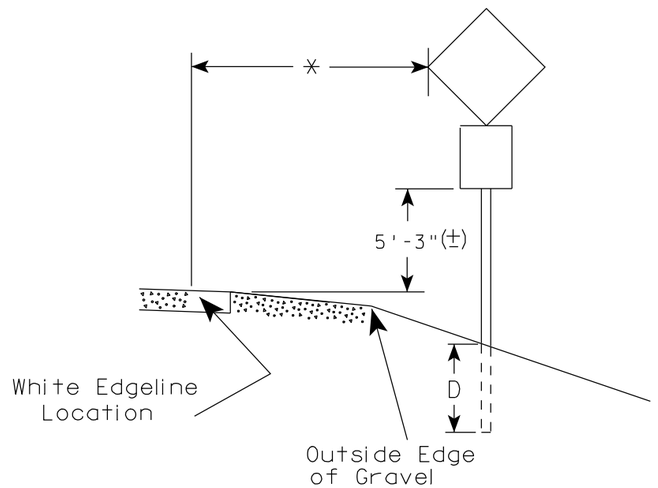
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

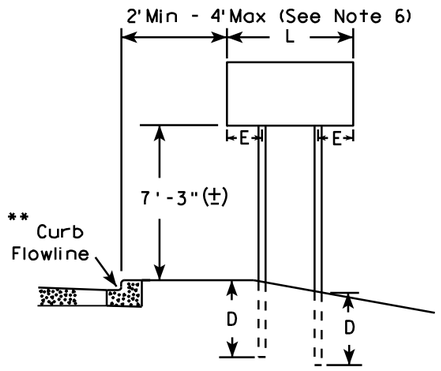
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

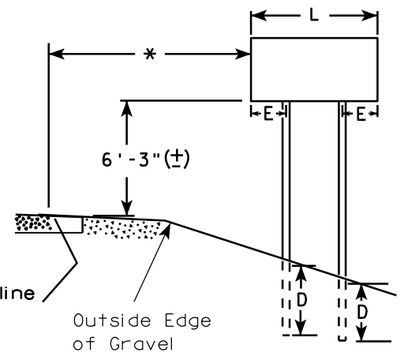
DATE 5/24/2013 PLATE NO. A4-3.17

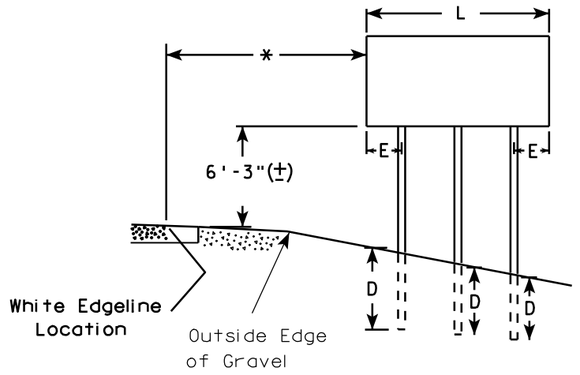
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 425	E

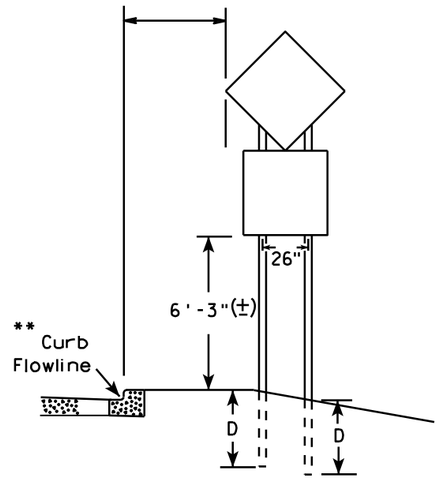
URBAN AREA



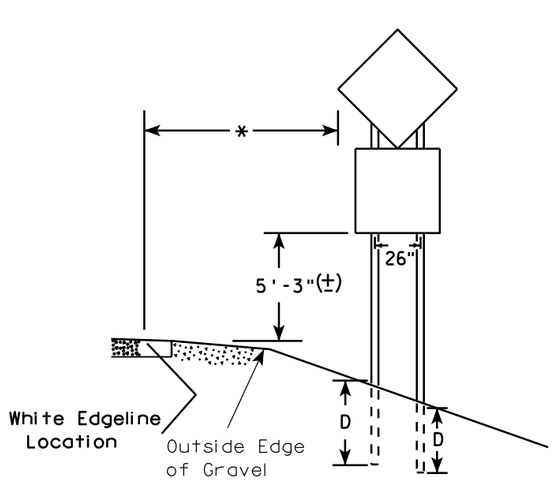
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
*** Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. For multiple post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

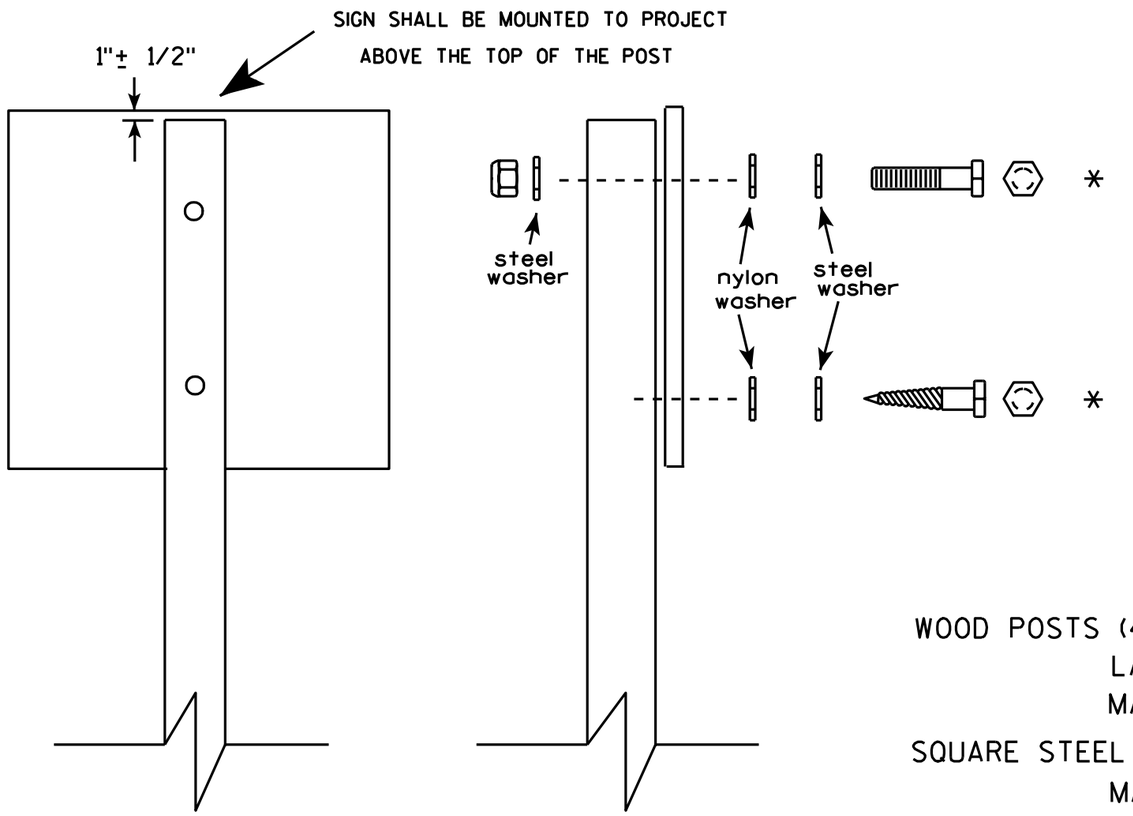
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 426	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A44.DGN PLOT DATE : 21-SEP-2011 13:36 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 109.249131:1.000000
WISDOT/CADDS SHEET 42



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

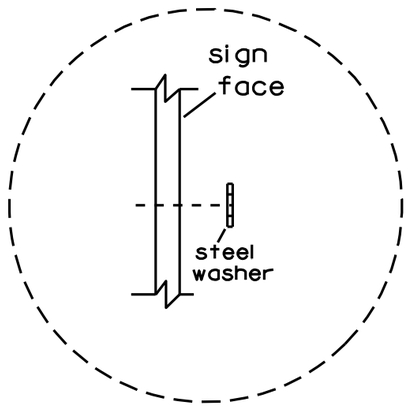
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

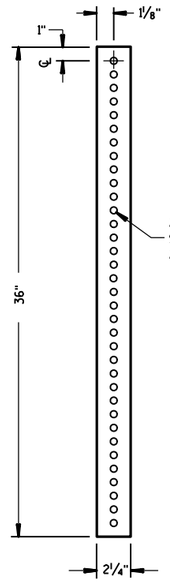
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PROJECT NO:

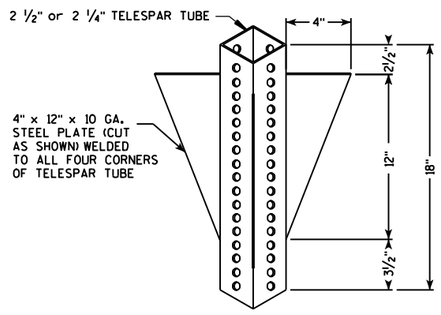
SHEET NO: 427 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

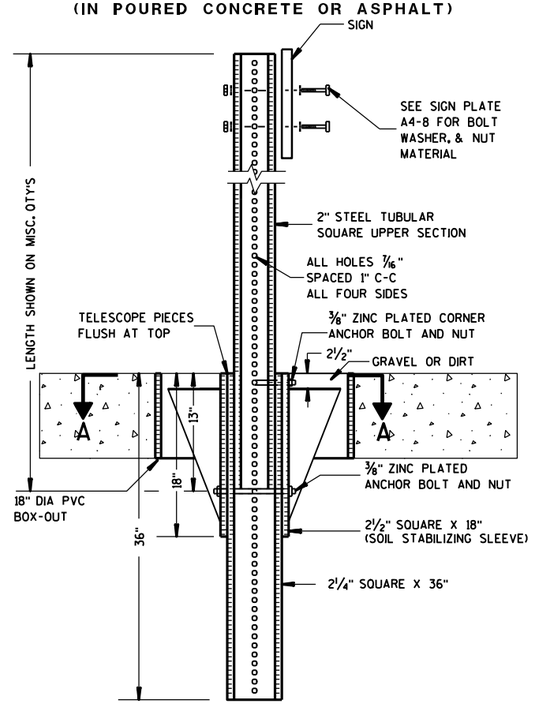
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



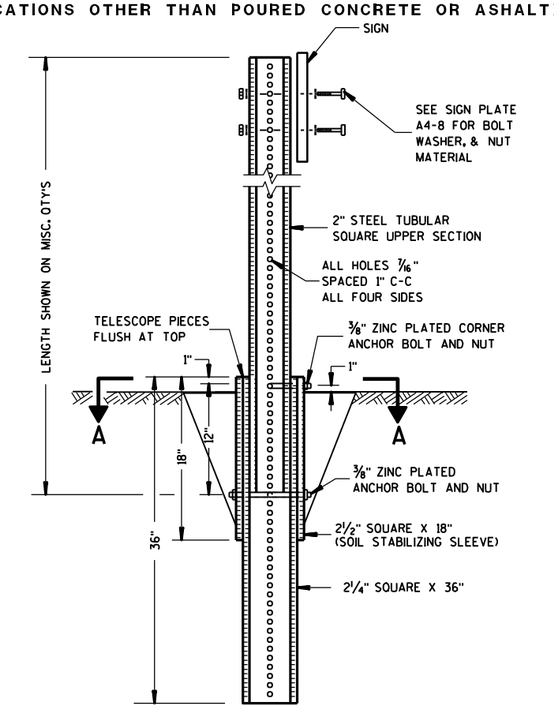
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

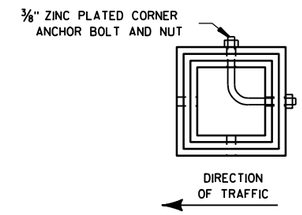


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

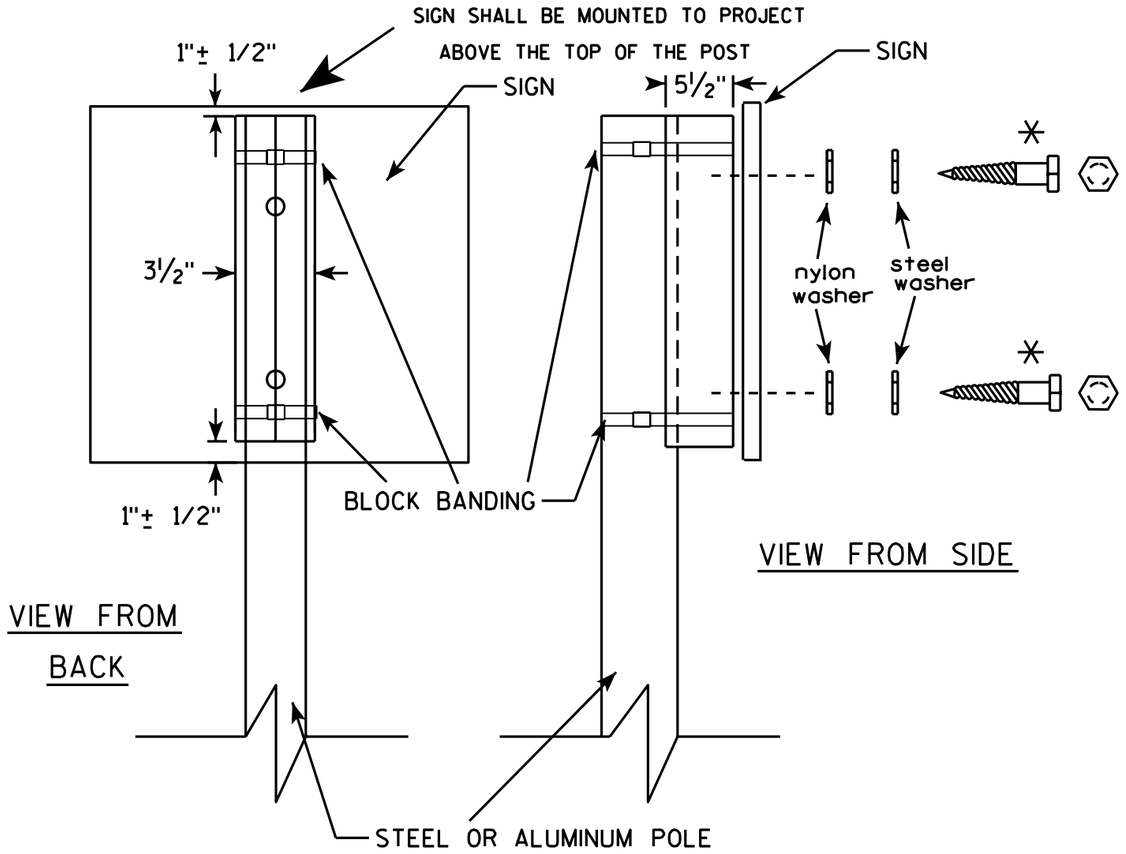
TUBULAR STEEL SIGN POST A4-9

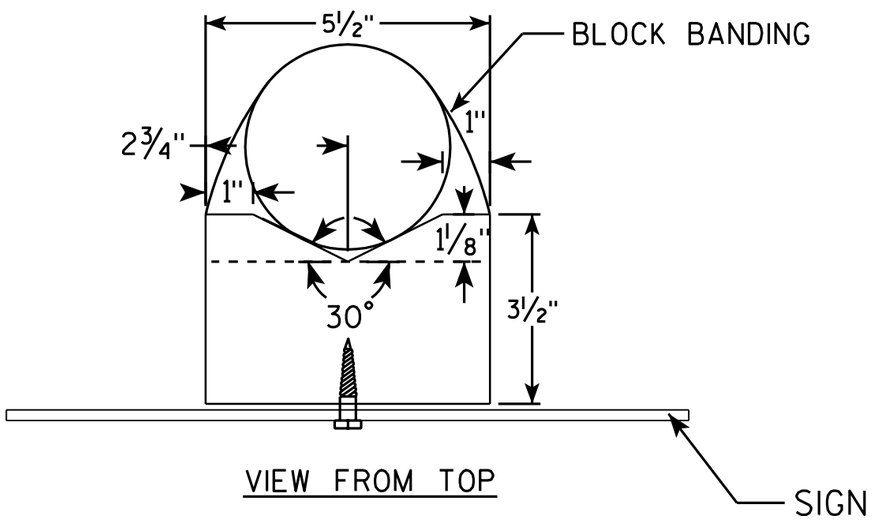
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 428	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

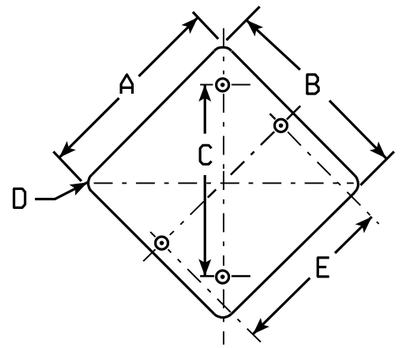
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

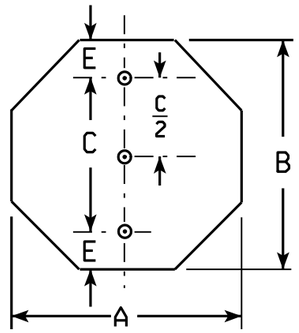
APPROVED Matthew R Rauch
for State Traffic Engineer

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

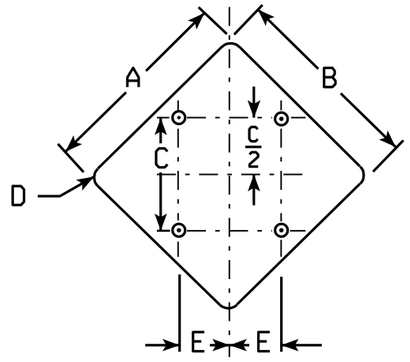
PROJECT NO:				SHEET NO: 429	E



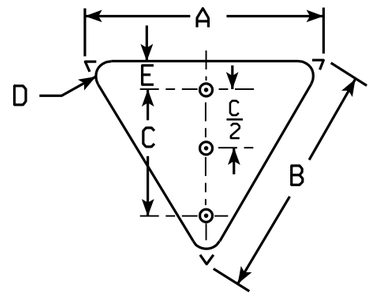
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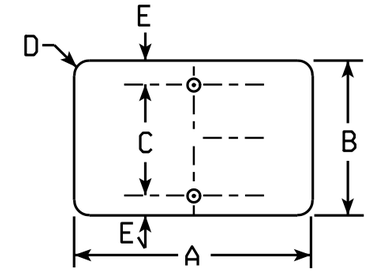
2



3



4



5

TYPE 1							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
18	18	18	1 1/2	14	2.25	.080	2
24	24	24	1 1/2	20	4.0	.080	2
30	30	30	1 7/8	22	6.25	.080	2
36	36	36	2 1/4	26	9.0	.100	2

TYPE 2						
A	B	C	E	Area Sq. Ft.	THICK NESS	Mounting Holes
24	24	20	2	3.31	.080	2
30	30	24	3	5.18	.100	2
36	36	28	4	7.46	.125	2
48	48	36	6	13.25	.125	3

TYPE 3							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
48	48	26	3	13	16.0	.125	4

TYPE 4							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
36	36	24	2	2	3.9	.100	2
48	48	32	3	3	7.0	.125	2

TYPE 5							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
8	8	6	1 1/2	1	0.44	.080	2
12	12	9	1 1/2	1 1/2	1.00	.080	2
18	18	14	1 1/2	2	2.25	.080	2
21	15	11	1 1/2	2	2.19	.080	2
21	21	17	1 1/2	2	3.06	.080	2
24	12	8	1 1/2	2	2.0	.080	2
24	18	14	1 1/2	2	3.0	.080	2
24	24	20	1 1/2	2	4.0	.080	2
30	12	8	1 1/2	2	2.5	.080	2
30	15	11	1 1/2	2	3.13	.080	2
30	18	14	1 1/2	2	3.75	.080	2
30	21	17	1 1/2	2	4.37	.080	2
30	24	20	1 1/2	2	5.0	.080	2

TYPE 5 CONT'D.							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
30	30	22	1 7/8	4	6.25	.080	2
36	12	8	1 1/2	2	3.0	.100	2
36	18	14	1 1/2	2	4.5	.100	2
36	24	20	1 1/2	2	6.0	.100	2
36	36	26	2 1/4	5	9.0	.100	2
40	18	14	1 1/2	2	5.00	.100	2
42	30	22	1 7/8	4	8.75	.125	2
48	48	32	3	8	16.0	.125	4

NOTES

1. All sign blanks shall have 7/16" Diameter mounting hole.

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 1 OF 3

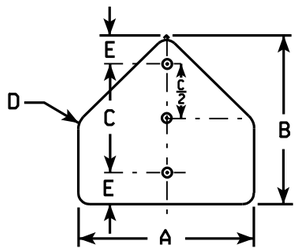
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

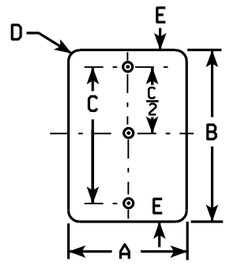
DATE 8/16/13

PLATE NO. A5-3A.21

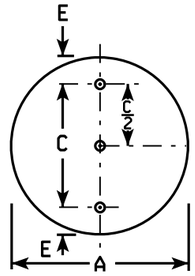
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 430 | E



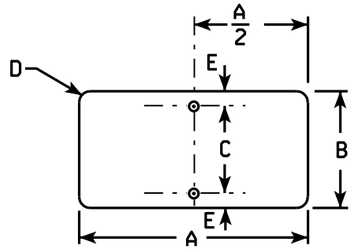
6



7



8



9

TYPE 6							
A	B	C	D	E	Area Sq. Ft	THICK NESS	Mounting Holes
30	30	24	1 3/8	3	4.68	.080	2
36	36	26	1 5/8	5	6.75	.100	2
48	48	32	1 7/8	8	12.0	.125	3

TYPE 7							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
12	18	15	1 1/2	1 1/2	1.5	.080	2
12	24	20	1 1/2	2	2.0	.080	2
12	36	24	1 1/2	6	3.0	.100	2
12	48	32	1 1/2	8	4.0	.125	3
15	21	18	1 1/2	1 1/2	2.19	.080	2
18	24	20	1 1/2	2	3.0	.080	2
18	36	24	1 1/2	6	4.5	.100	2
18	54	36	2 1/2	9	6.75	.080	3
21	60	40	1 1/2	10	8.75	.080	3
21	72	52	1 1/2	10	10.5	.080	3
24	30	22	1 1/2	4	5.0	.080	2
24	36	24	1 1/2	6	6.0	.100	2
24	39	27	1 1/2	6	6.5	.080	3
24	45	32	1 7/8	6	7.5	.080	3
24	48	32	1 7/8	8	8.0	.125	3
24	57	37	1 7/8	10	9.5	.080	3
36	48	32	1 7/8	8	12.0	.125	3
30	36	24	1 7/8	6	7.5	.100	2
36	54	36	2 1/4	9	12.75	.100	3
36	57	37	1 7/8	10	14.25	.100	3
48	39	27	1 7/8	10	13.0	.125	3
48	45	32	1 7/8	10	14.0	.125	3
48	57	37	3	6	19.0	.125	3

TYPE 8						
A	B	C	E	Area Sq. Ft.	THICK NESS	Mounting Holes
30	—	24	3	4.91	.080	2
36	—	26	5	7.07	.100	2
48	—	32	8	12.5	.125	3

TYPE 9							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
48	24	20	1 7/8	2	8.0	.125	2

NOTES

1. All sign blanks shall have 7/16" Diameter mounting holes.

7

7

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 2 OF 3

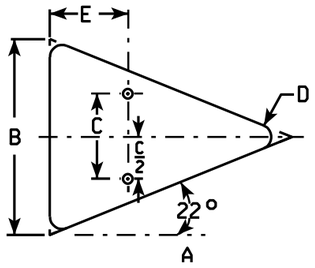
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

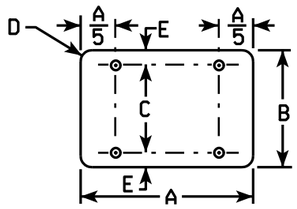
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-3A.21

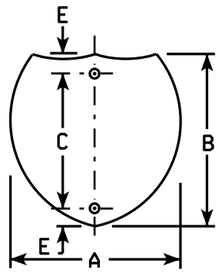
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 431	E



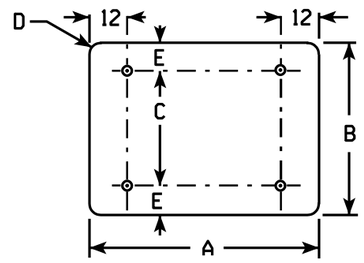
10



11



12



13

TYPE 10 (NOTE 1)							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
48	36	14	2 1/4	16	6.0	.125	2

TYPE 11							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
48	48	32	3	8	16.0	.125	4

TYPE 12 (NOTE 2)						
A	B	C	E	Area Sq. Ft.	THICK NESS	Mounting Holes
24	24	18	3	3.13	.080	2
30	24	18	3	3.91	.080	2
36	36	28	4	7.03	.100	2
45	36	28	4	8.79	.125	2

TYPE 13							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
48	60	40	3	10	20.0	.125	4
48	24	20	1 7/8	2	8.0	.125	4
48	30	22	1 7/8	4	10.0	.125	4
54	18	14	1 1/2	2	6.75	.125	4
60	24	20	1 7/8	2	10.0	.125	4
60	30	22	1 7/8	4	12.5	.125	4

NOTES

1. Dimension A on type #10 is measured to the theoretical intersections of the edges.
2. Shape of type #12 shall conform to FHWA standard for interstate route markers.

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 3 OF 3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

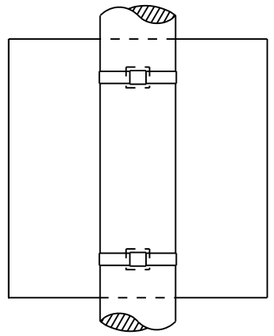
DATE 8/16/13 PLATE NO. A5-3A.21

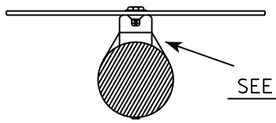
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 432 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A53.DGN PLOT DATE : 16-AUG-2013 13:53 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 1.984759:1.000000
WISDOT/CADDS SHEET 42

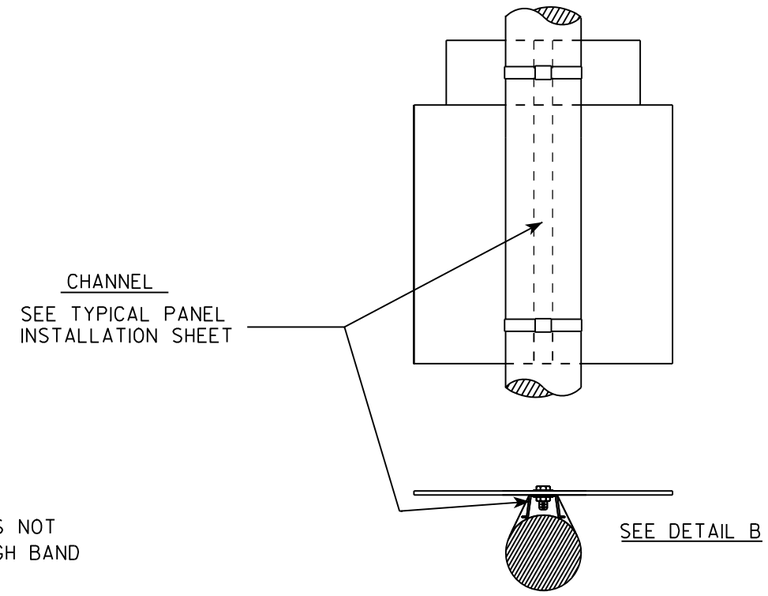
BANDING

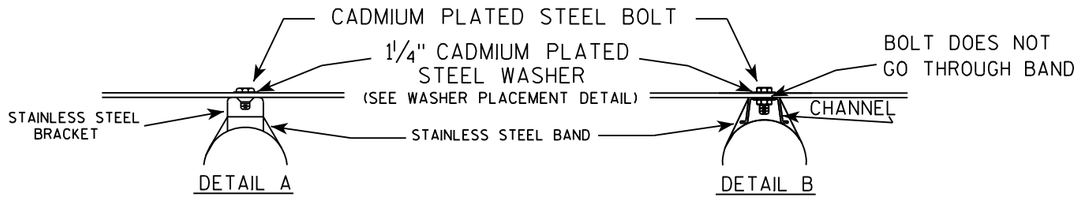
SINGLE SIGN



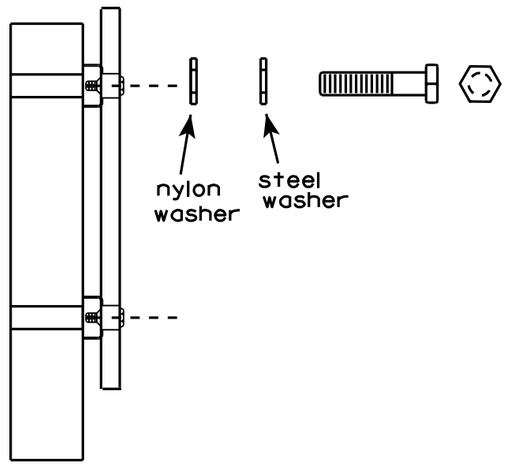


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

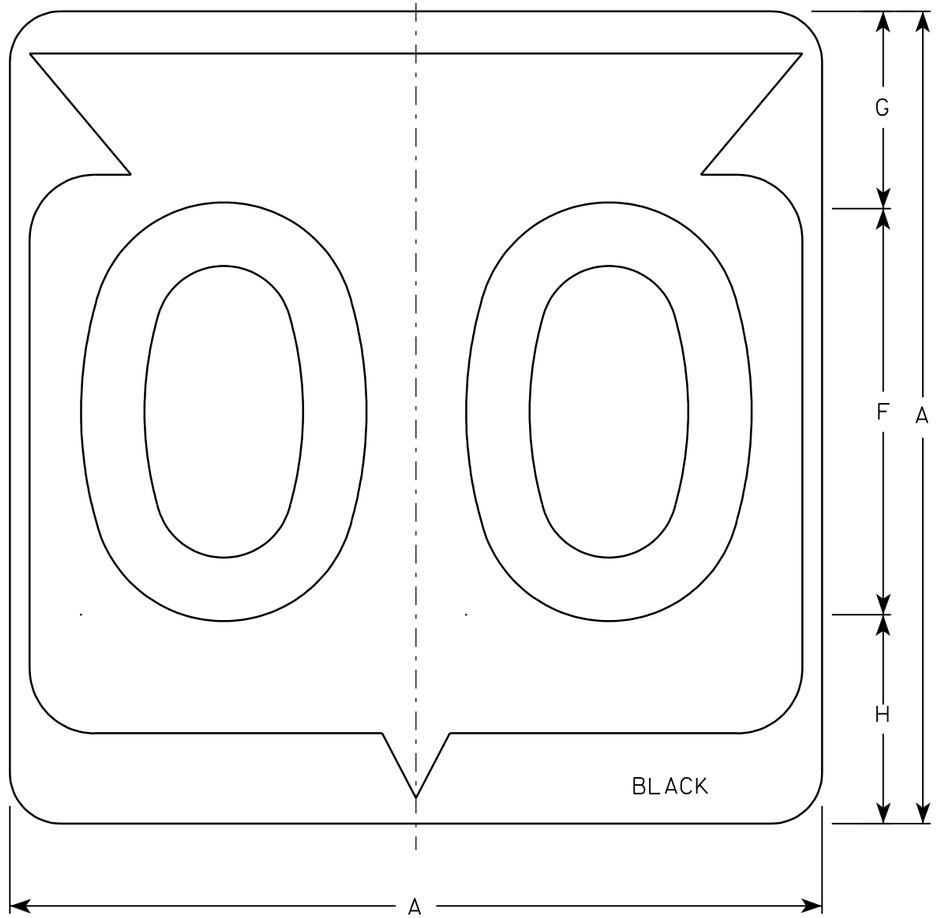
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

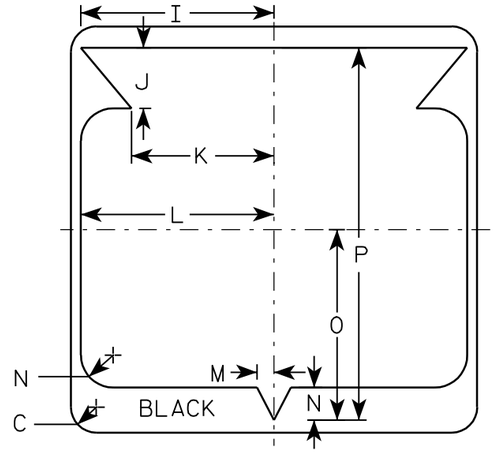
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 433	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

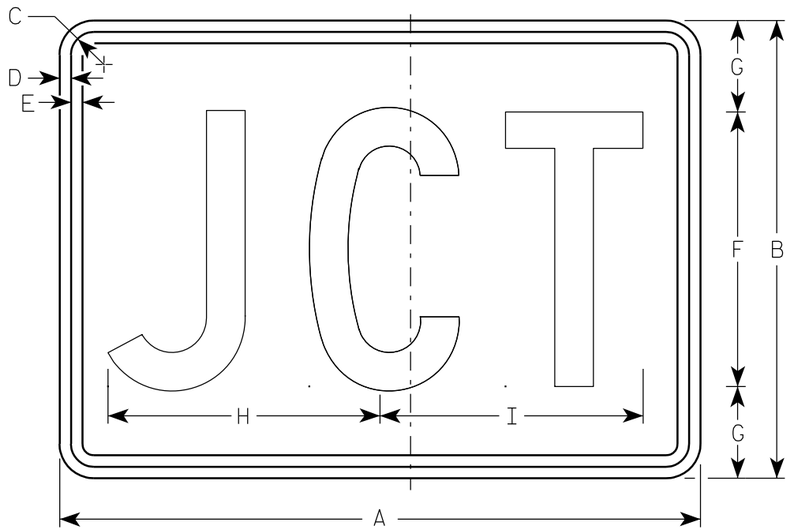
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

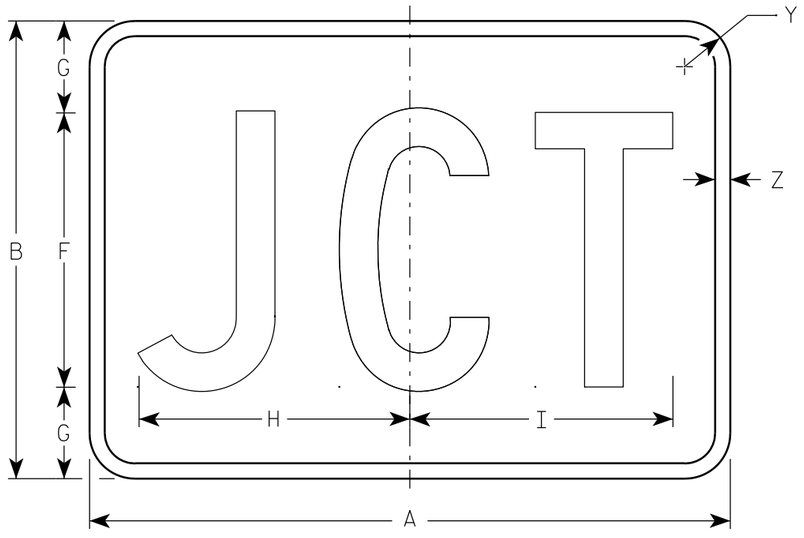
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 434	E



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

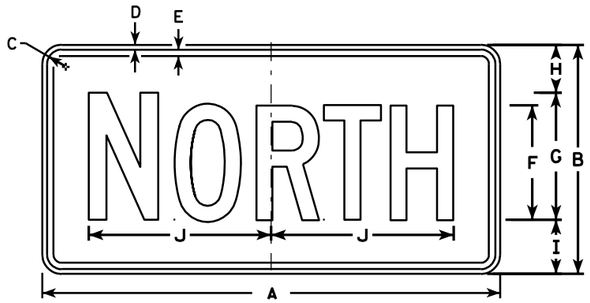
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

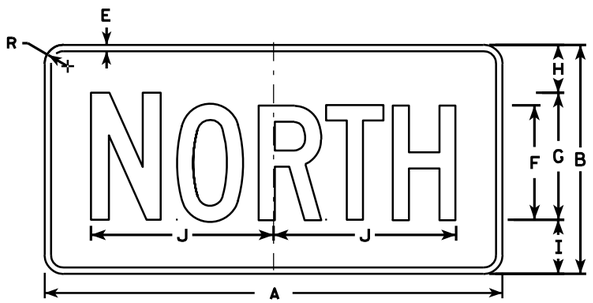
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 435	E



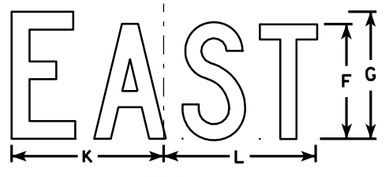
M3-1
MK3-1
MO3-1



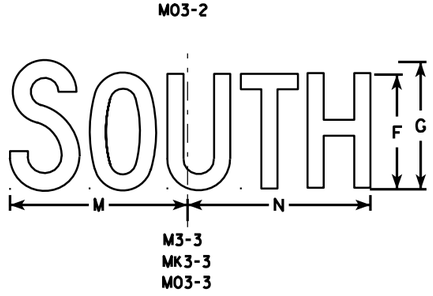
MB3-1
MG3-1
MM3-1
MN3-1



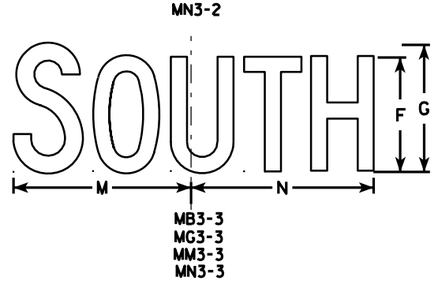
M3-2
MK3-2
MO3-2



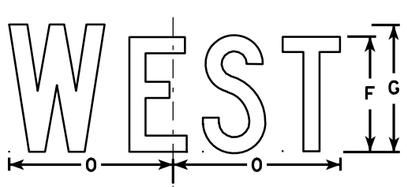
MB3-2
MG3-2
MM3-2
MN3-2



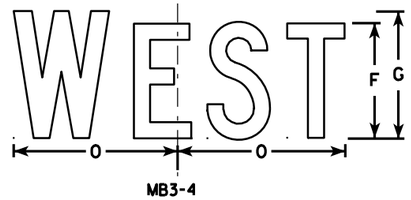
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

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

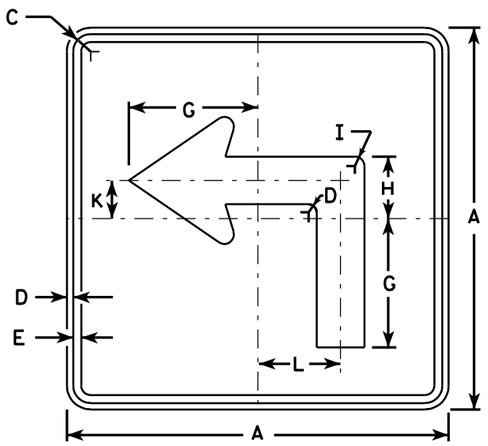
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

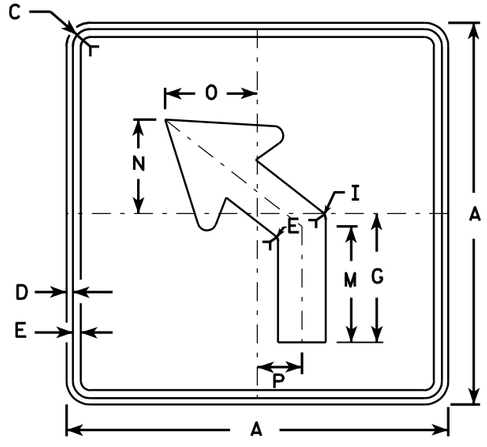
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

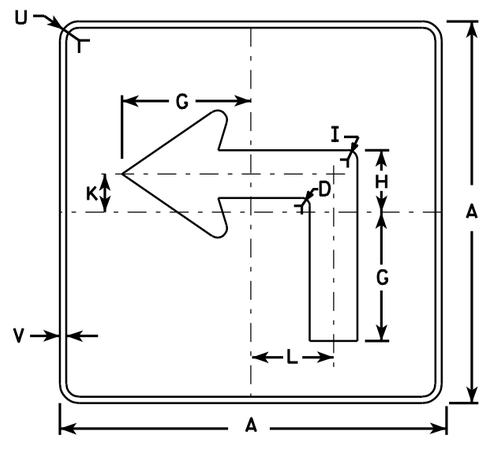
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 436	E



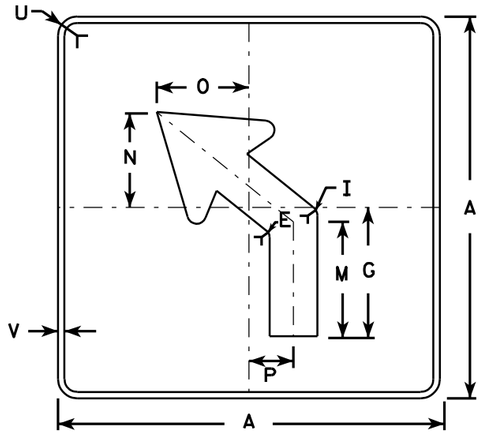
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



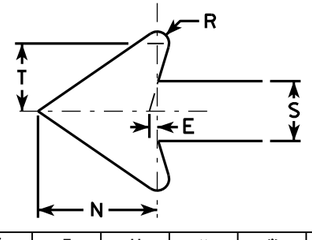
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

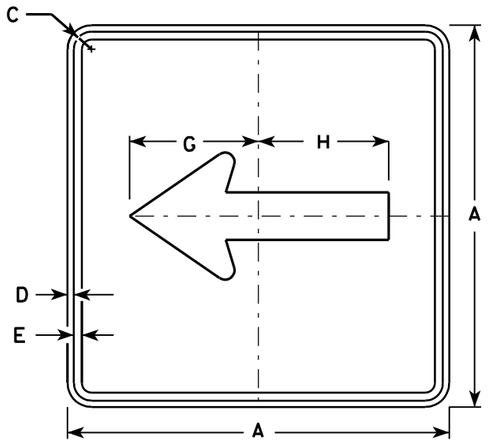
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

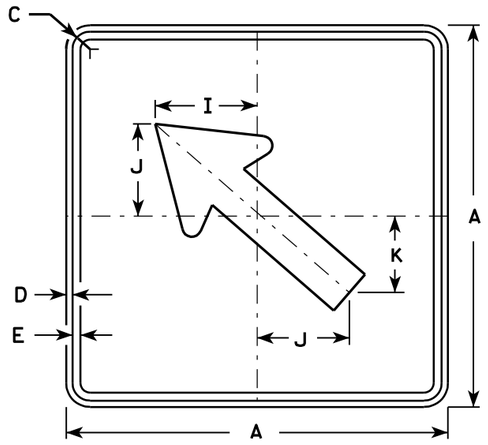
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 437	E

7

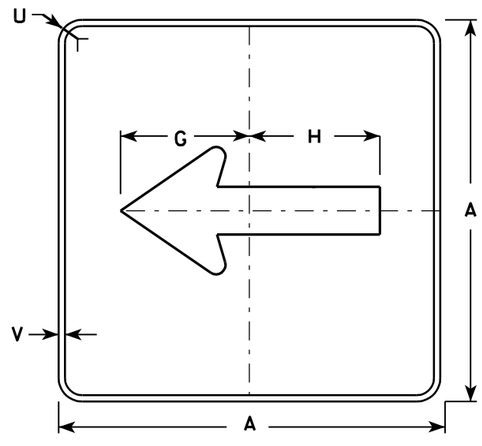
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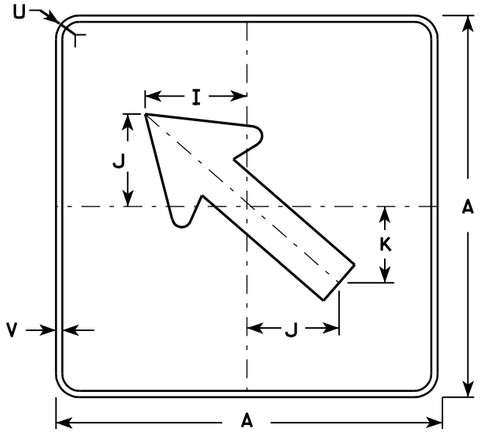
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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   Message - See note 4
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4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

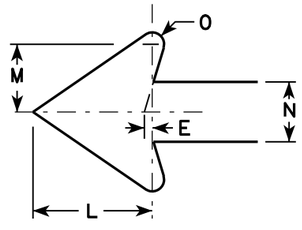
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H Reflective



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

STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

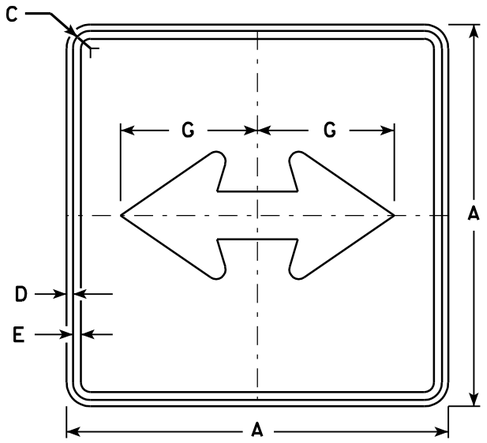
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

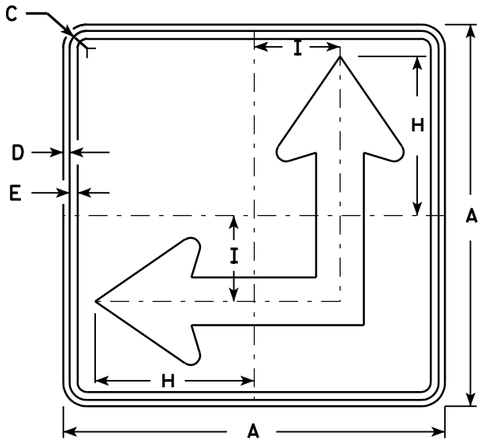
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 438 | E

7

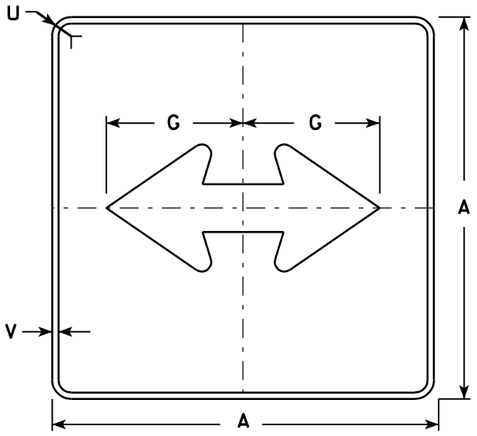
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WISDOT/CADDS SHEET 42



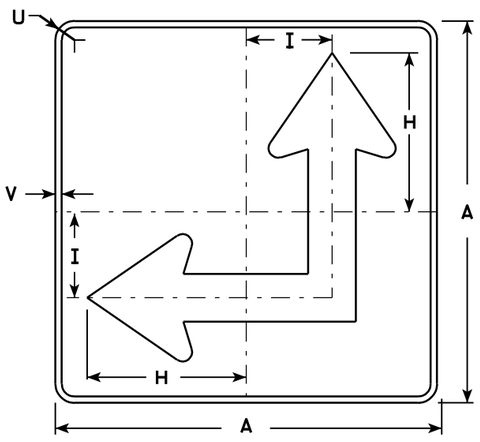
M6-4
MK6-4
MM6-4
MO6-4
MP6-4
MR6-4



M6-6
MK6-6
MM6-6
MO6-6
MP6-6
MR6-6



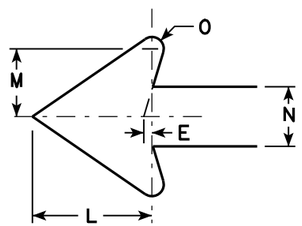
MB6-4
MG6-4
MN6-4



MB6-6
MG6-6
MN6-6

NOTES

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   MB6-4 and MB6-6 Background - Blue
   Message - White - Type H Reflective
   MG6-4 and MG6-6 Background - Green
   Message - White - Type H Reflective
   MK6-4 and MK6-6 Background - Green
   Message - White - Type H Reflective
   MM6-4 and MM6-6 Background - White - Type H Reflective
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White - Type H Reflective
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White - Type H Reflective
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow - Type H Reflective
5. M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

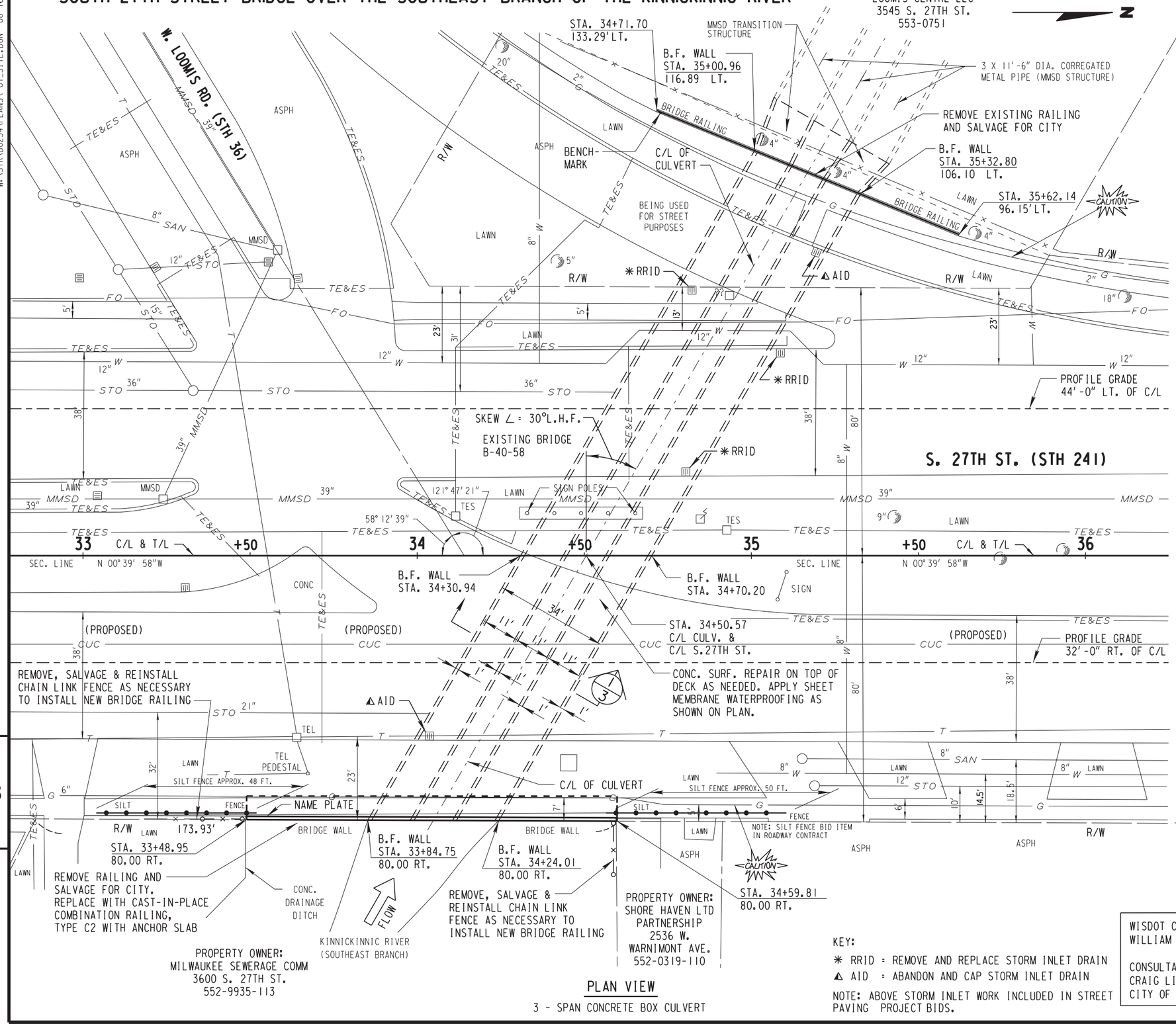
DATE 7/29/13 PLATE NO. M6-4.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 439 | E

W:\STR\B0234\PLANS\01_SITE.DGN 08-16-2013

SOUTH 27TH STREET BRIDGE OVER THE SOUTHEAST BRANCH OF THE KINNICKINNIC RIVER

STATE PROJECT NUMBER
2265 - 08 - 70



PLAN VIEW
3 - SPAN CONCRETE BOX CULVERT

PROPERTY OWNER:
LOOMIS CENTRE LLC
2701 W. MORGAN AVE.
553-0741

STANDARD B.M. NO.340
LOCATION: S. 27TH ST. AND W. LOOMIS RD.
DESCRIPTION: BRONZE CAP TOP OF W. SIDE WING WALL OF CULVERT (APPROX 1 FT N. OF SOUTHERLY END & IMMEDIATELY ADJ. TO SDWK.)
EL.: 73.34

LIST OF DRAWINGS

1. TITLE SHEET / GENERAL PLAN
2. SUPERSTRUCTURE CROSS SECTION AND ELEVATION
3. ESTIMATE OF QUANTITIES AND TRANSVERSE SECTION
4. EXTERIOR OF CULVERT CONCRETE SURFACE REPAIR PLAN
5. INTERIOR OF CULVERT CONCRETE SURFACE REPAIR PLAN (SOUTH CELL)
6. INTERIOR OF CULVERT CONCRETE SURFACE REPAIR PLAN (CENTER & NORTH CELLS)
7. ANCHOR SLAB LAYOUT AND DETAILS
8. ANCHOR SLAB BILL OF BARS
9. BRIDGE RAILING ELEVATIONS AND RAILING PLAN
10. BRIDGE RAILING DETAILS
11. STEEL RAILING DETAILS

KEY:
* RRID = REMOVE AND REPLACE STORM INLET DRAIN
△ AID = ABANDON AND CAP STORM INLET DRAIN

NOTE: ABOVE STORM INLET WORK INCLUDED IN STREET PAVING PROJECT BIDS.

WISDOT CONTACT:
WILLIAM DREHER 608-266-8489

CONSULTANT CONTACT:
CRAIG LIBERTO 414-286-3294
CITY OF MILWAUKEE D.P.W.

WISCONSIN
CRAIG S. LIBERTO
E-23746
MILWAUKEE
WIS.
PROFESSIONAL ENGINEER
Craig S. Liberto 8/28/13

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher 9/3/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-58

S. 27TH ST. OVER KINNICKINNIC RIVER

COUNTY	MILWAUKEE	~~TOWN~~/CITY/ ~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	AASHTO 2003		
DESIGNED BY J.P.H.	DESIGN CK'D. R.V.K.	DRAWN BY K.P.S.	PLANS CK'D. R.V.K.

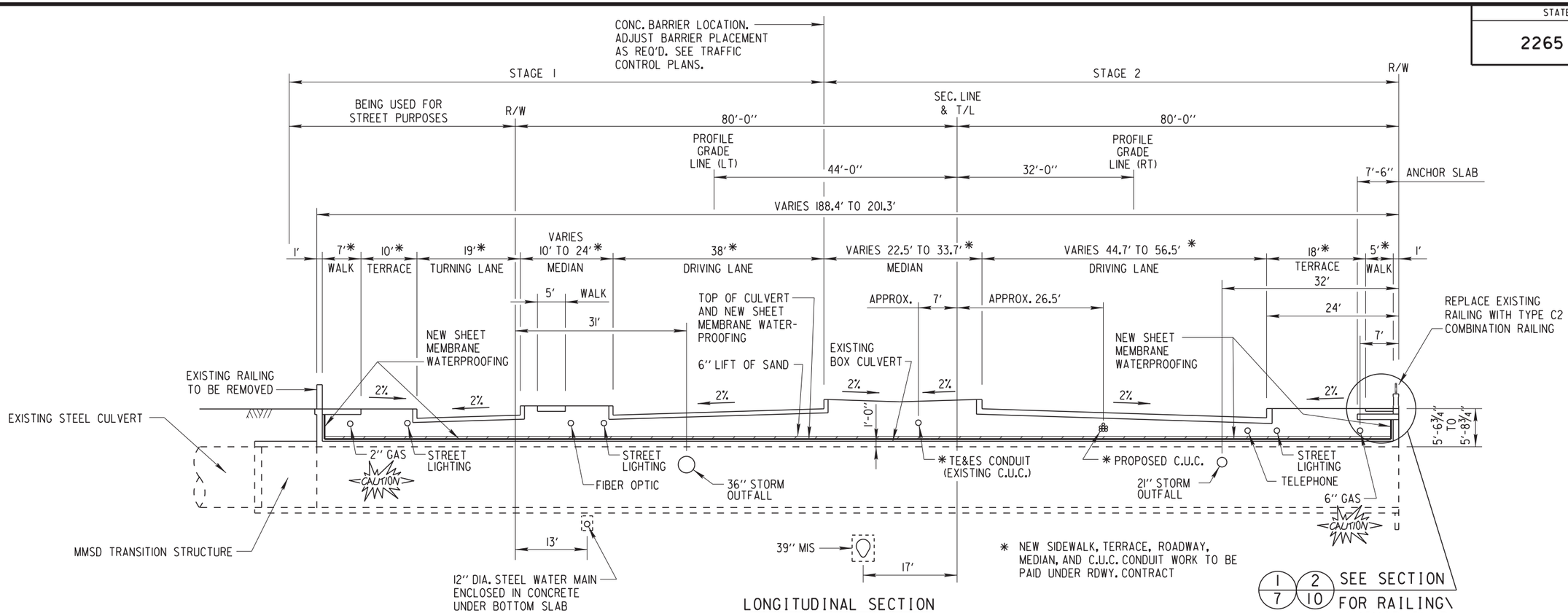
TITLE SHEET / GENERAL PLAN

SHEET 440 OF 11

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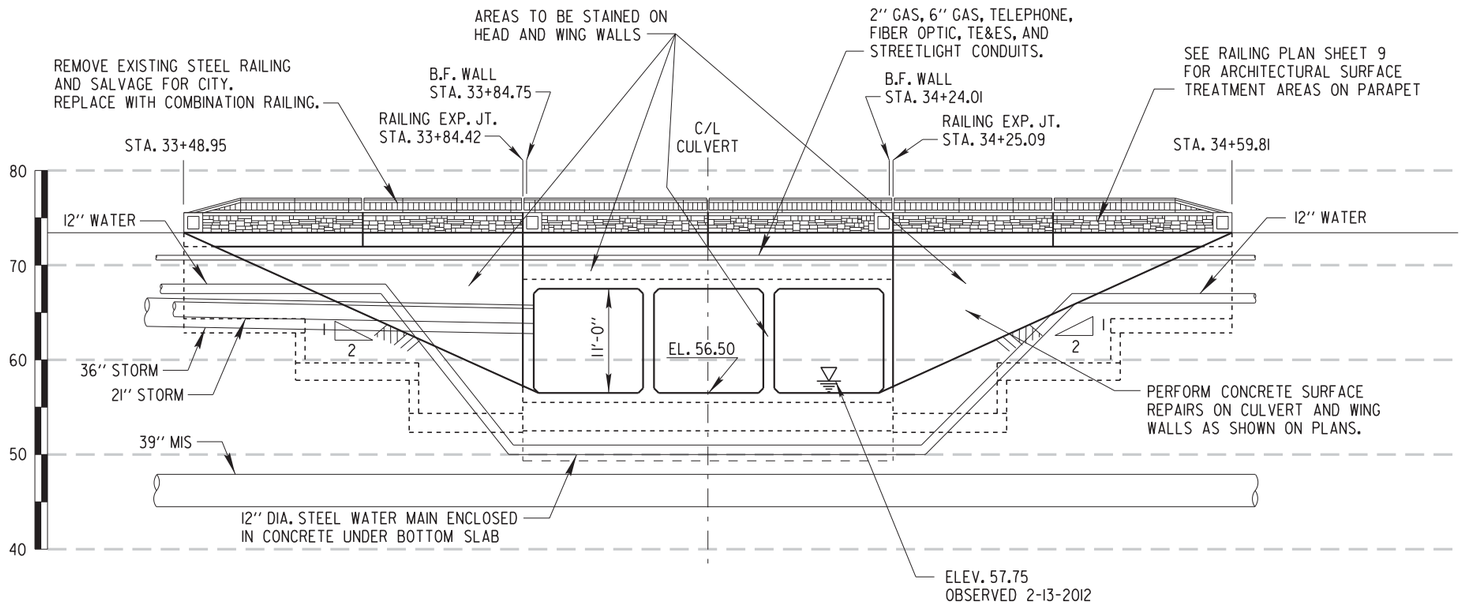
STATE PROJECT NUMBER

2265 - 08 - 70



LONGITUDINAL SECTION

LOOKING NORTH



EAST ELEVATION

LOOKING WEST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

SUPERSTRUCTURE CROSS SECTION AND ELEVATION

SHEET 8 OF 11

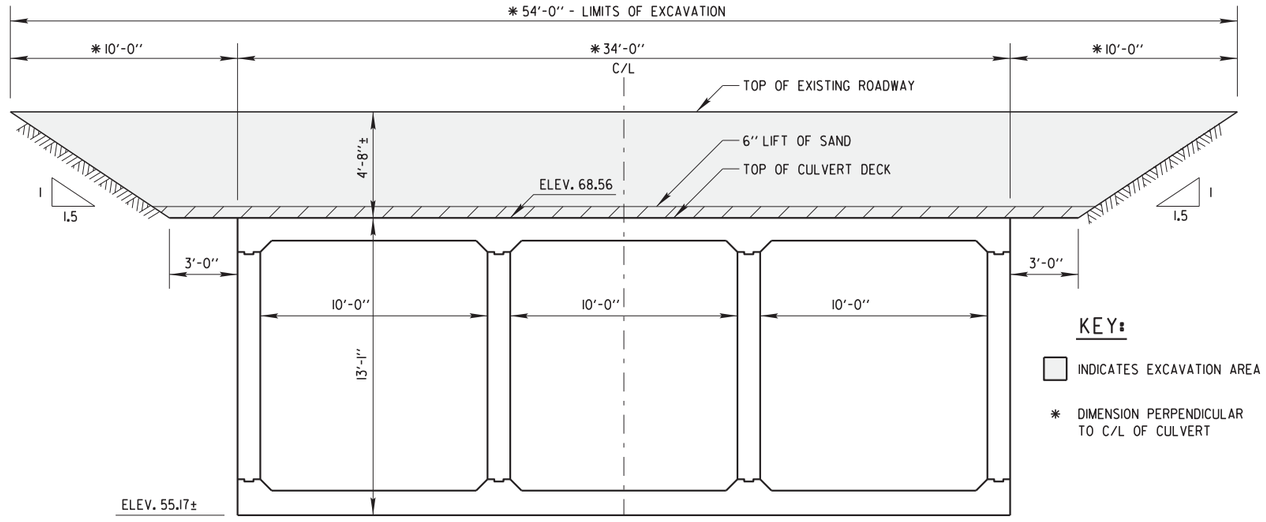
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STATE PROJECT NUMBER

2265 - 08 - 70



* TRANSVERSE SECTION (1/1)

LOOKING NORTH WEST

ESTIMATE OF QUANTITIES

CATEGORY 0060

ITEM NO.	BID ITEM	UNIT	CULVERT	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STA. 34+50.57)	LS	1	1
204.0175	REMOVING CONCRETE SLOPE PAVING	SY	4	4
206.2000	EXCAVATION FOR STRUCTURES CULVERTS (B-40-58)	LS	1	1
210.0100	BACKFILL STRUCTURE	CY	1,919	1,919
502.0100	CONCRETE MASONRY BRIDGES	CY	47	47
505.0610	BAR STEEL REINFORCEMENT HS COATED CULVERTS	LB	4,520	4,520
◑ 509.1500	CONCRETE SURFACE REPAIR	SF	170	170
◑ 509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	1,896	1,896
◑ 509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	8	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7	7
516.0610.S	SHEET MEMBRANE WATERPROOFING FOR TOP SLAB (B-40-58)	SY	1,000	1,000
517.1010.S	CONCRETE STAINING (B-40-58)	SF	1,005	1,005
517.1015.S	CONCRETE STAINING MULTI-COLOR (B-40-58)	SF	598	598
517.1050.S	ARCHITECTURAL SURFACE TREATMENT (B-40-58)	SF	598	598
604.0400	SLOPE PAVING CONCRETE	SY	4	4
616.0404	FENCE CHAIN LINK SALVAGED 4-FT	LF	20	20
690.0250	SAWING CONCRETE	LF	111	111
◨ SPV.0025	DEEP CONCRETE SURFACE REPAIR	CF	20	20
SPV.0060	CAPPING OF ABANDONED STORM INLETS AT CULVERT	EACH	2	2
◨ SPV.0105	RAILING STEEL TYPE C2 GALVANIZED (B-40-58)	LS	1	1
SPV.0165	CONCRETE SURFACE REPAIR - DECK	SF	1,350	1,350
SPV.0180	CONCRETE RESURFACER & REPAIR MORTAR	SY	1,000	1,000

◑ AS DETERMINED BY ENGINEER IN THE FIELD.
SEE CONCRETE SURFACE REPAIR PLAN SHEETS FOR LOCATIONS AND EXTENT OF WORK.

◨ AS DETERMINED BY ENGINEER AT TOP OF DECK.

NOTE: SILT FENCE AND SILT FENCE MAINTENANCE QUANTITIES INCLUDED IN ROADWAY CONTRACT

TRAFFIC VOLUME

ADT (CURRENT) = 41,400
ADT (2032) = 45,400
R.D.S. = 40 MPH

DESIGN DATA

DEAD LOAD

CONC. = 150 LB/CF
OVERBURDEN = 5'-0"

LIVE LOAD

DESIGN RATING : HS20
INVENTORY RATING : HS20
OPERATING RATING : HS30
MAX. STD. PERMIT VEHICLE LOAD = 250 KIPS

ALLOWABLE DESIGN STRESSES

CONC. MASONRY f'c = 4,000 PSI
BAR STEEL REINFORCEMENT fy = 60,000 PSI

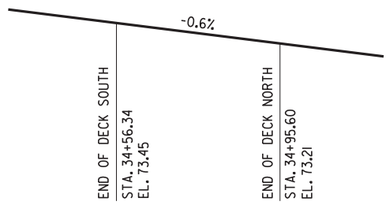
HYDRAULIC DATA

INSTANTANEOUS PEAK DISCHARGE, 100 YEAR: 3,900 CFS
VELOCITY THRU BRIDGE, 100 YEAR: 10.5 FPS
TOTAL WATERWAY AREA THRU BRIDGE: 330 SF
DRAINAGE AREA: APPROX. 8.39 SQ.MI.
2-YEAR FLOOD STAGE: NOT AVAILABLE
100-YEAR FLOOD STAGE: 76.33 (2008)
REGULATORY FLOOD STAGE (PER 2008 FIS): 72.10

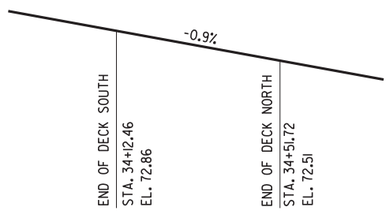
PROJECT IMPROVEMENTS

THE BRIDGE REHABILITATION PROJECT, AS PROPOSED, CONSISTS OF: REMOVING AND REPLACING FILL OVER THE STRUCTURE, SURFACE REPAIRS TO THE CULVERT DECK, UNDERSIDE OF DECK, WALLS, & WING WALLS; REMOVAL AND REPLACEMENT OF SLOPE PAVING, REPLACING THE EAST RAILING; REMOVING THE WEST RAILING; PLACING SHEET MEMBRANE WATERPROOFING ON ENTIRE DECK AND UP WALLS ABOVE DECK.

THE STREET PROJECT, AS PROPOSED, CONSISTS OF: REPLACEMENT OF THE SDWK./CURB/ROADWAY/MEDIAN, EROSION CONTROL, STORM INLET WORK, RE-GRADING, SILT FENCE, SILT FENCE MAINTENANCE, AND PLACING TOP SOIL AND SEED.



PROFILE GRADE LINE 44 FEET LEFT OF TRANSIT LINE OF SOUTH 27TH STREET



PROFILE GRADE LINE 32 FEET RIGHT OF TRANSIT LINE OF SOUTH 27TH STREET

GENERAL NOTES

ALL DETAILS, MATERIALS & FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION EDITION 2014, EXCEPT AS OTHERWISE NOTED.

ALL STATIONS & ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM. CITY OF MILWAUKEE DATUM = 580.60 NGVD.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT. ALL REINFORCING BARS ARE ENGLISH & THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE SIZE OF THE BAR.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

CHAMFER EXPOSED CONCRETE EDGES 1" UNLESS OTHERWISE NOTED.

SEE ROADWAY PLANS FOR EXISTING AND PROPOSED UTILITY LOCATIONS.

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.

SPACES EXCAVATED AND NOT OCCUPIED BY NEW CONSTRUCTION SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

JOINT FILLER SHALL CONFORM TO AASHTO DESIGNATION M 153 TYPE I, II, III, OR AASHTO DESIGNATION M213.

CONCRETE STAINING LIMITS ARE SHOWN ON SHEET 2 AND INCLUDE HEADWALL, WING WALLS, AND CELL WALL ELEVATIONS.

CONCRETE STAINING COLOR:
FEDERAL STANDARD COLOR NO. 30372

CONCRETE STAINING MULTI-COLOR LIMITS ARE LOCATED ON THE COMBINATION RAILING, ALL FACES.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

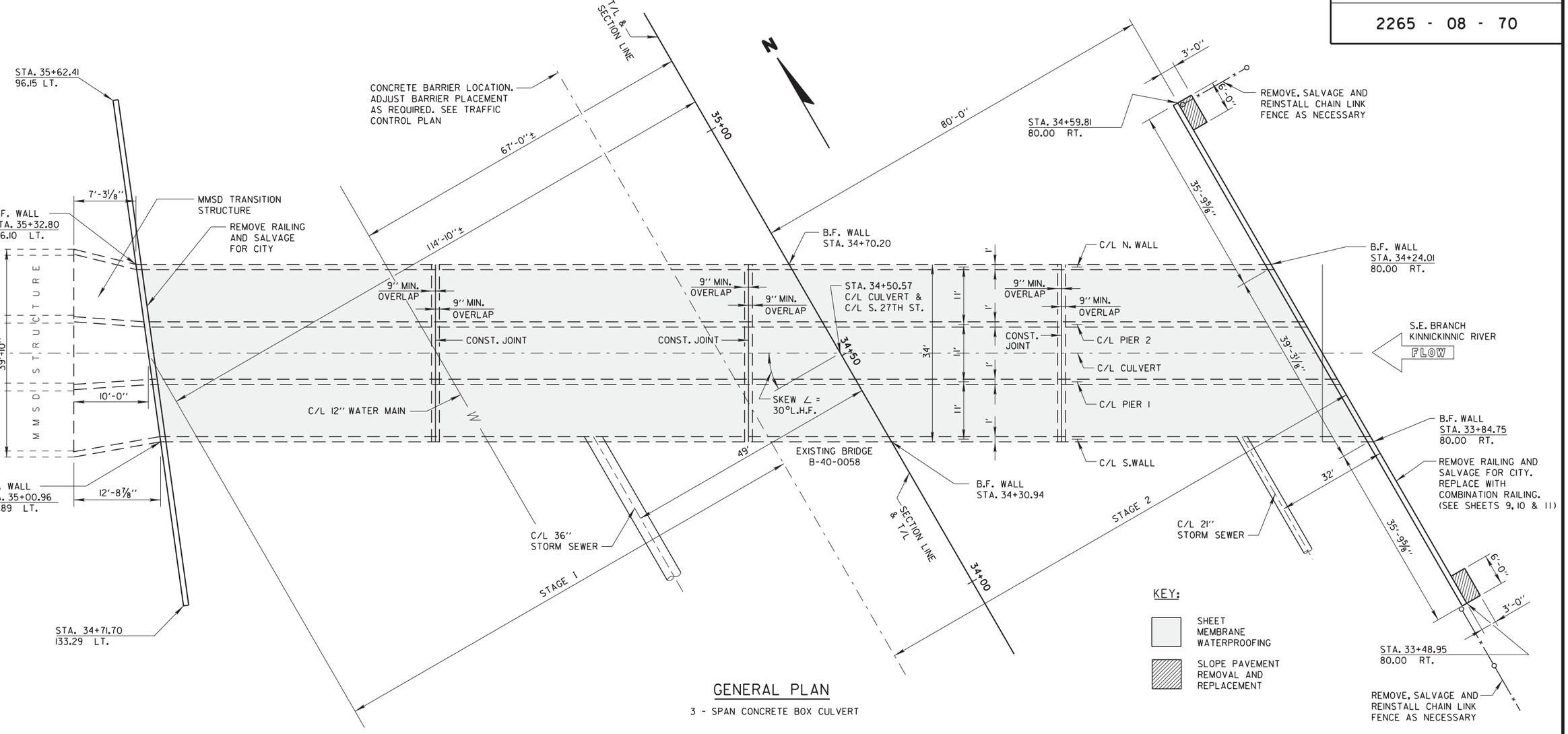
DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

ESTIMATE OF QUANTITIES & TRANSVERSE SECTION

SHEET 7 OF 11

W:\STR\B0234\PLAN\ 04_REPAIR.DGN 08-20-2013

STATE PROJECT NUMBER
2265 - 08 - 70

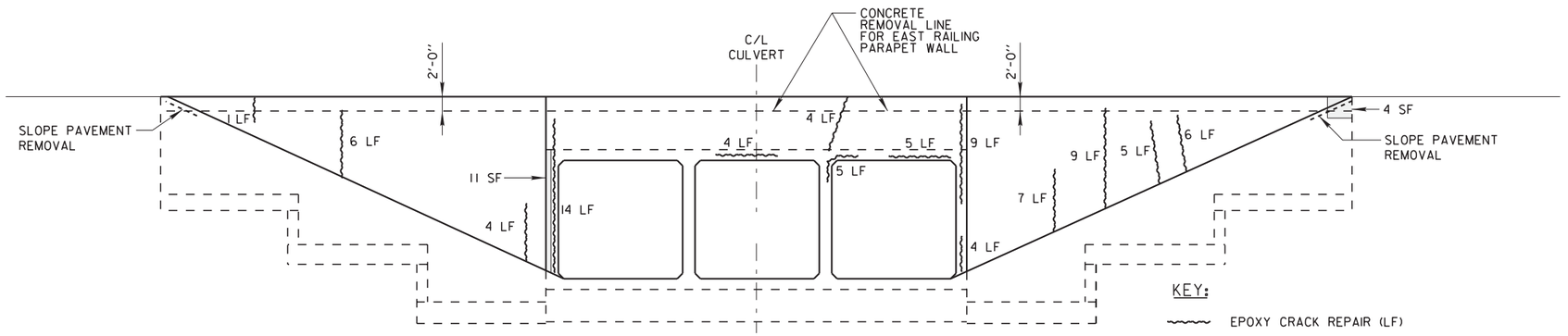


KEY:

- SHEET MEMBRANE WATERPROOFING
- SLOPE PAVEMENT REMOVAL AND REPLACEMENT

GENERAL PLAN

3 - SPAN CONCRETE BOX CULVERT



EAST ELEVATION

LOOKING WEST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

EXTERIOR OF CULVERT CONCRETE SURFACE REPAIR PLAN

SHEET 8 OF 11

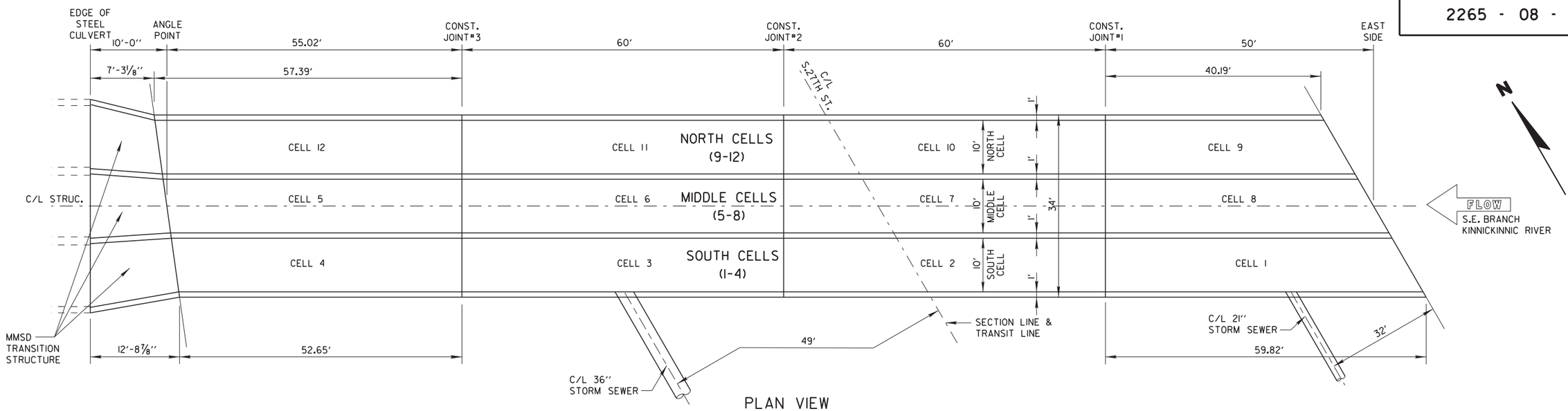
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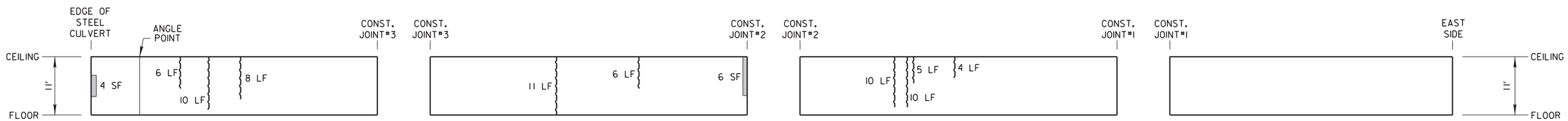
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STATE PROJECT NUMBER

2265 - 08 - 70



PLAN VIEW

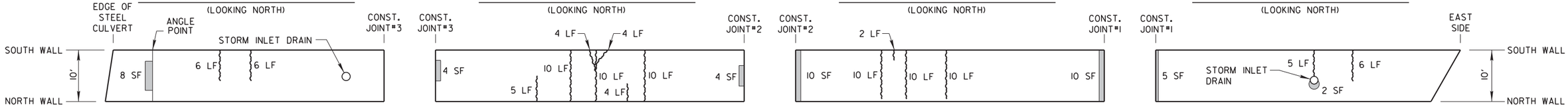


ELEVATION NORTH WALL - CELL 4 (LOOKING NORTH)

ELEVATION NORTH WALL - CELL 3 (LOOKING NORTH)

ELEVATION NORTH WALL - CELL 2 (LOOKING NORTH)

ELEVATION NORTH WALL - CELL 1 (LOOKING NORTH)

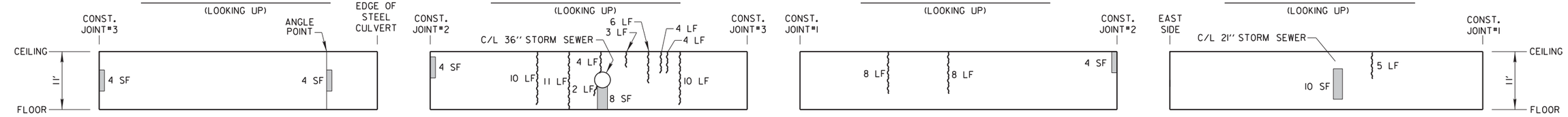


PLAN VIEW CEILING - CELL 4 (LOOKING UP)

PLAN VIEW CEILING - CELL 3 (LOOKING UP)

PLAN VIEW CEILING - CELL 2 (LOOKING UP)

PLAN VIEW CEILING - CELL 1 (LOOKING UP)



ELEVATION SOUTH WALL - CELL 4 (LOOKING SOUTH)

ELEVATION SOUTH WALL - CELL 3 (LOOKING SOUTH)

ELEVATION SOUTH WALL - CELL 2 (LOOKING SOUTH)

ELEVATION SOUTH WALL - CELL 1 (LOOKING SOUTH)

SOUTH CELL REPAIRS

(CELLS 1-4)

KEY:

~~~~ EPOXY CRACK REPAIR (LF)

CONCRETE SURFACE REPAIR (SF)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

INTERIOR OF CULVERT CONCRETE SURFACE REPAIR PLAN (SOUTH CELL)

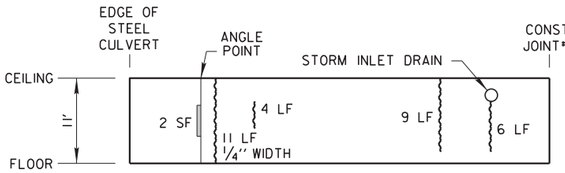
SHEET 444 OF 11

8

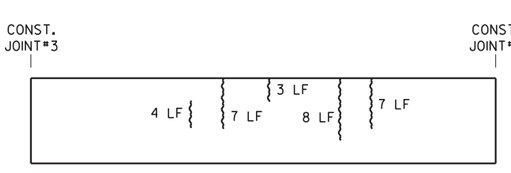
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W:\STR\B0234\PLAN\ 06_INSIDE.DGN 06-18-2013

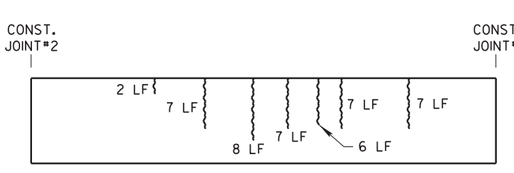
STATE PROJECT NUMBER
2265 - 08 - 70



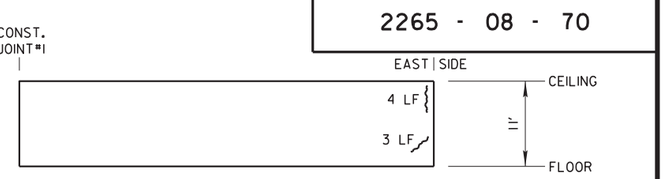
ELEVATION NORTH WALL - CELL 12
(LOOKING NORTH)



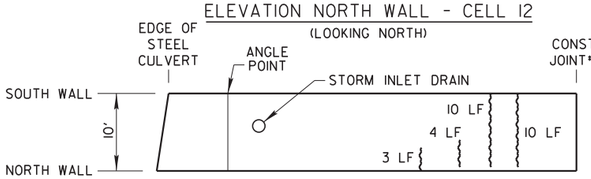
ELEVATION NORTH WALL - CELL 11
(LOOKING NORTH)



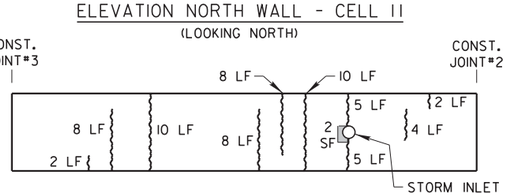
ELEVATION NORTH WALL - CELL 10
(LOOKING NORTH)



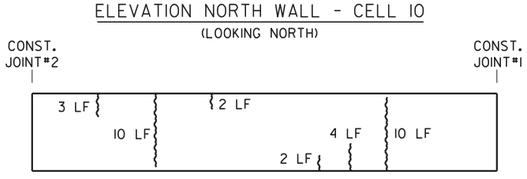
ELEVATION NORTH WALL - CELL 9
(LOOKING NORTH)



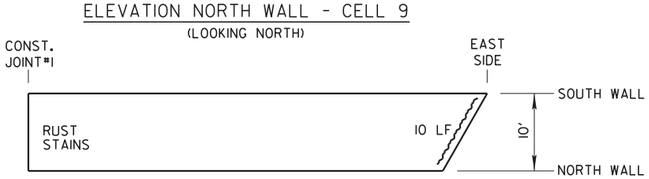
PLAN VIEW CEILING - CELL 12
(LOOKING UP)



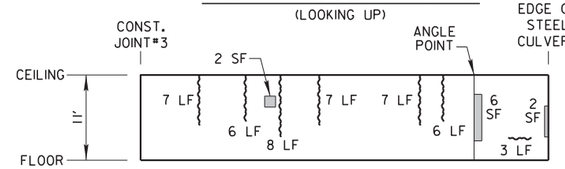
PLAN VIEW CEILING - CELL 11
(LOOKING UP)



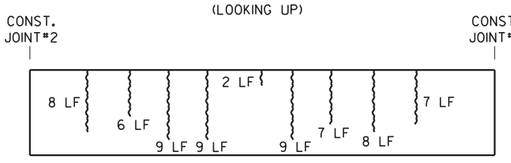
PLAN VIEW CEILING - CELL 10
(LOOKING UP)



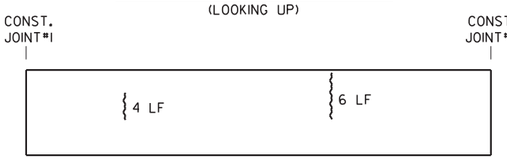
PLAN VIEW CEILING - CELL 9
(LOOKING UP)



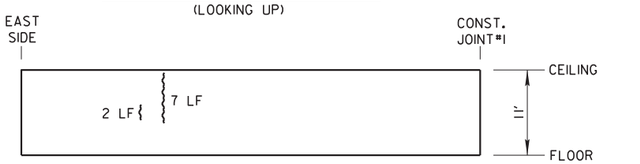
ELEVATION SOUTH WALL - CELL 12
(LOOKING SOUTH)



ELEVATION SOUTH WALL - CELL 11
(LOOKING SOUTH)



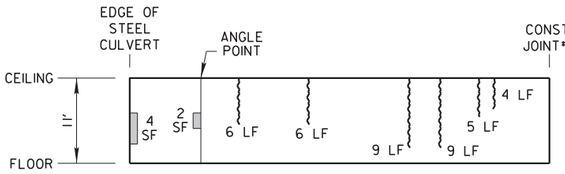
ELEVATION SOUTH WALL - CELL 10
(LOOKING SOUTH)



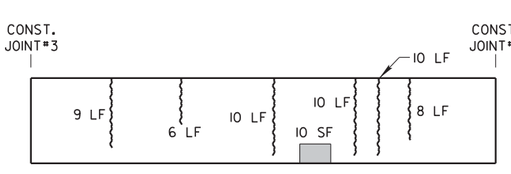
ELEVATION SOUTH WALL - CELL 9
(LOOKING SOUTH)

NORTH CELL REPAIRS
(CELLS 9-12)

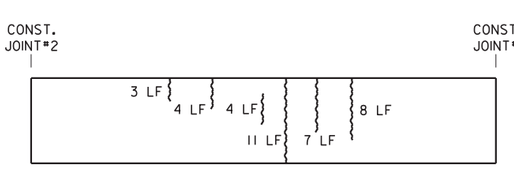
NOTE:
FOR NORTH CELL ONLY, CRACKS ON NORTH WALL ARE TO BE REPAIRED 76 LF TOTAL



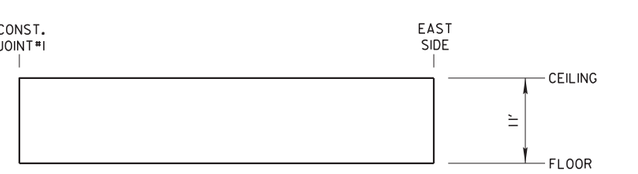
ELEVATION NORTH WALL - CELL 5
(LOOKING NORTH)



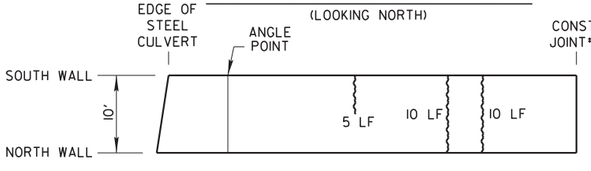
ELEVATION NORTH WALL - CELL 6
(LOOKING NORTH)



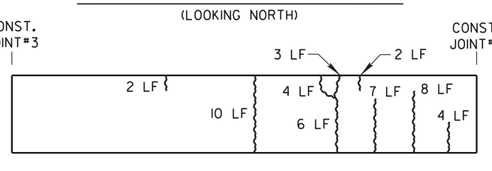
ELEVATION NORTH WALL - CELL 7
(LOOKING NORTH)



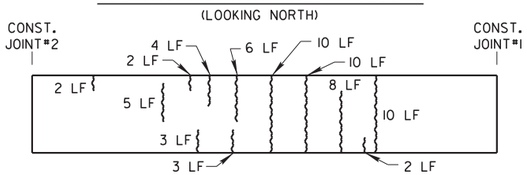
ELEVATION NORTH WALL - CELL 8
(LOOKING NORTH)



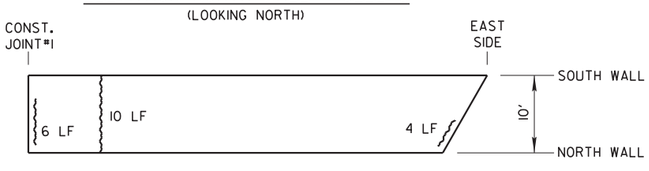
PLAN VIEW CEILING - CELL 5
(LOOKING UP)



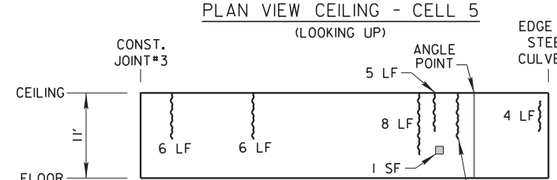
PLAN VIEW CEILING - CELL 6
(LOOKING UP)



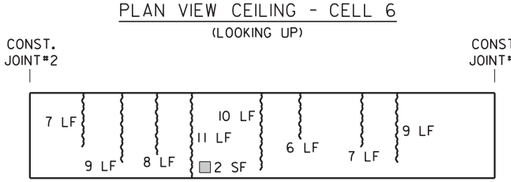
PLAN VIEW CEILING - CELL 7
(LOOKING UP)



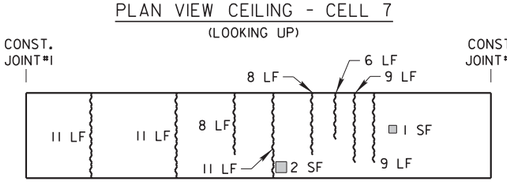
PLAN VIEW CEILING - CELL 8
(LOOKING UP)



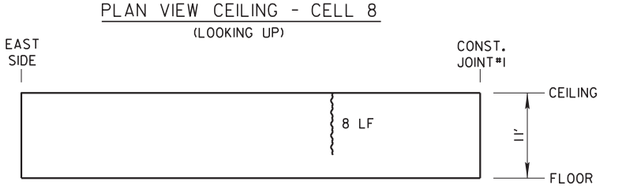
ELEVATION SOUTH WALL - CELL 5
(LOOKING SOUTH)



ELEVATION SOUTH WALL - CELL 6
(LOOKING SOUTH)



ELEVATION SOUTH WALL - CELL 7
(LOOKING SOUTH)



ELEVATION SOUTH WALL CELL 8
(LOOKING SOUTH)

CENTER CELL REPAIRS
(CELLS 5-8)

KEYS:

EPOXY CRACK REPAIR (LF)

CONCRETE SURFACE REPAIR (SF)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY	K.P.S.	PLANS CK'D.	J.P.H. R.V.K.

INTERIOR OF CULVERT CONCRETE SURFACE REPAIR PLAN (CENTER & NORTH CELLS)

SHEET 445 OF 11

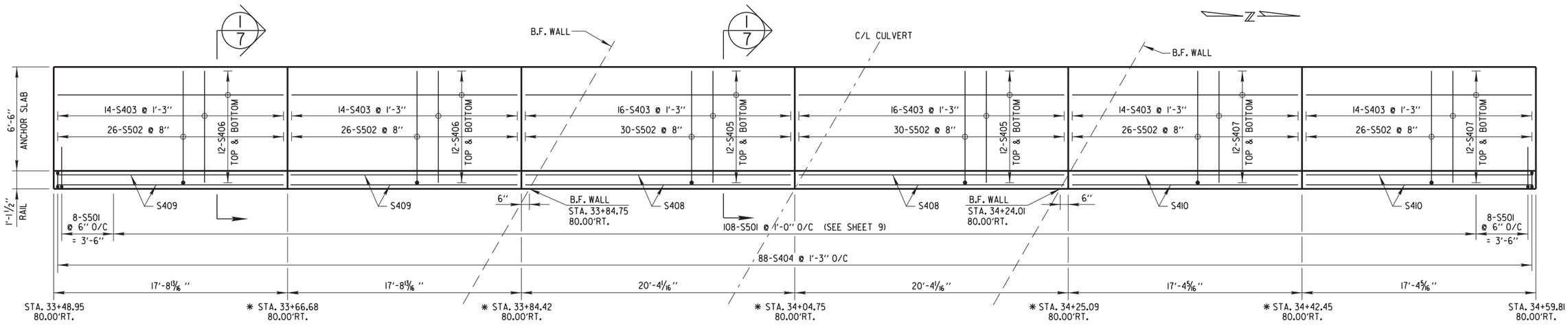
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STATE PROJECT NUMBER

2265 - 08 - 70

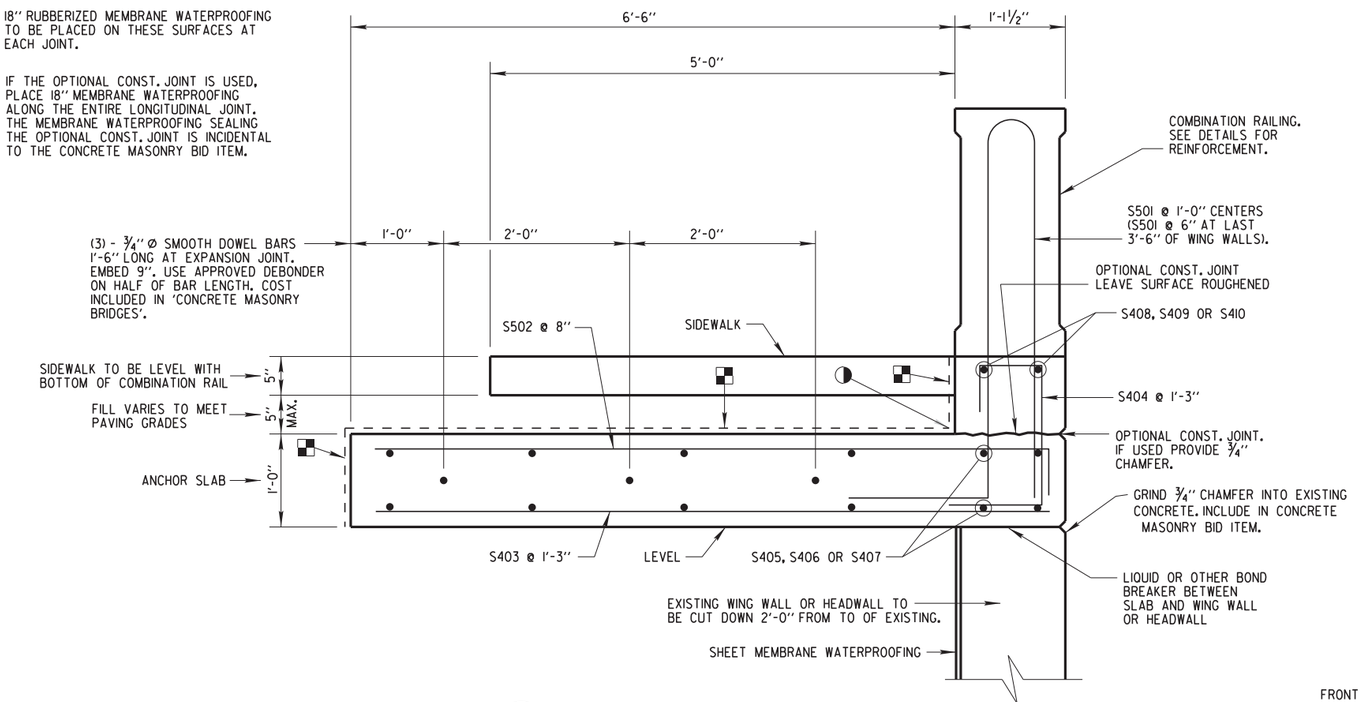


* RAILING AND ANCHOR SLAB EXPANSION JOINT

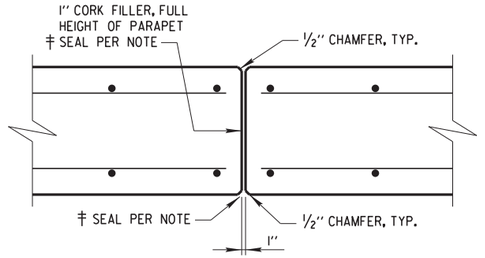
ANCHOR SLAB LAYOUT PLAN AT EAST

■ 18" RUBBERIZED MEMBRANE WATERPROOFING TO BE PLACED ON THESE SURFACES AT EACH JOINT.

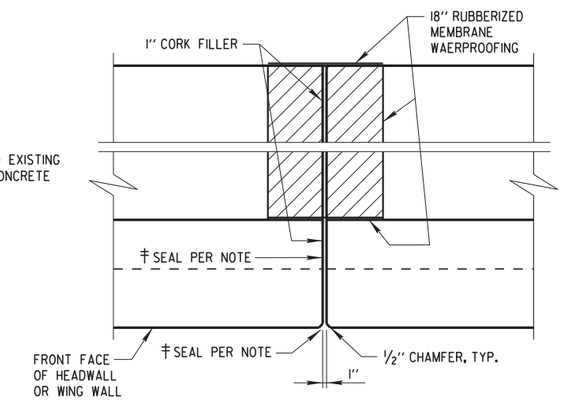
◐ IF THE OPTIONAL CONST. JOINT IS USED, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE CONCRETE MASONRY BID ITEM.



1/7 SECTION ANCHOR SLAB



CONCRETE PARAPET EXPANSION JOINT DETAIL



ANCHOR SLAB EXPANSION JOINT DETAIL

KEY:

F.F. - FRONT FACE
B.F. - BACK FACE

NOTE:

REMOVE EXISTING WING WALL 2'-0" BELOW EXISTING TOP

‡ SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY K.P.S. | PLANS CK'D. J.D.T. R.V.K.

ANCHOR SLAB LAYOUT AND DETAILS

SHEET 7 OF 11

8

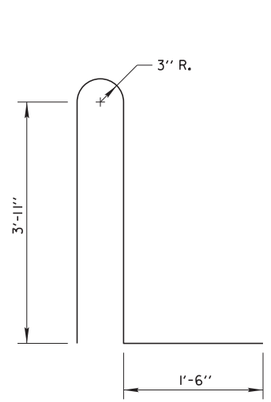
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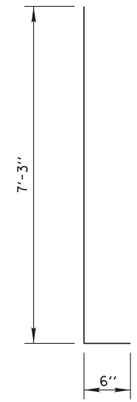
STATE PROJECT NUMBER
2265 - 08 - 70

BILL OF BARS - ANCHOR SLAB

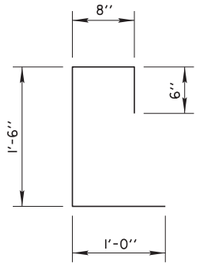
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	124	11'-4''	X		RAILING DOWEL
S502	X	164	7'-8''	X		SLAB - TOP TRANSVERSE
S403	X	88	7'-3''			SLAB - BOTTOM TRANSVERSE
S404	X	88	3'-5''	X		CAP - DOWEL
S405	X	24	20'-0''			SLAB - HEADWALL LONGITUDINAL (TOP AND BOTTOM)
S406	X	24	17'-4''			SLAB - S.E. WINGWALL LONGITUDINAL (TOP AND BOTTOM)
S407	X	24	17'-0''			SLAB - N.E. WING WALL LONGITUDINAL (TOP AND BOTTOM)
S408	X	4	20'-0''			CAP - HEADWALL LONGITUDINAL
S409	X	4	17'-4''			CAP - S.E. WINGWALL LONGITUDINAL
S410	X	4	17'-0''			CAP - N.E. WING WALL LONGITUDINAL



S501



S502



S404

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY	K.P.S.	PLANS CK'D.	H.J.R. R.V.K.

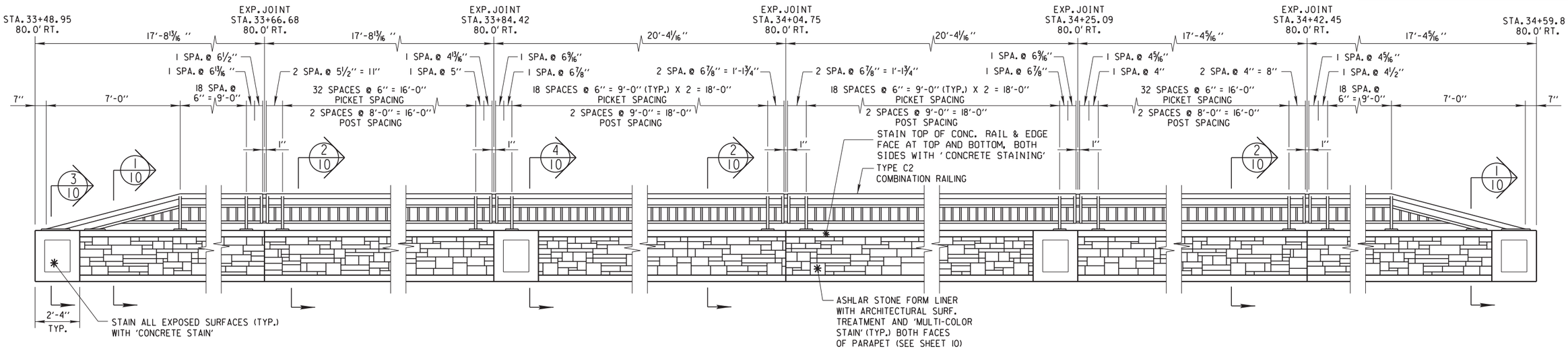
ANCHOR SLAB
BILL OF BARS

SHEET 447 OF 11

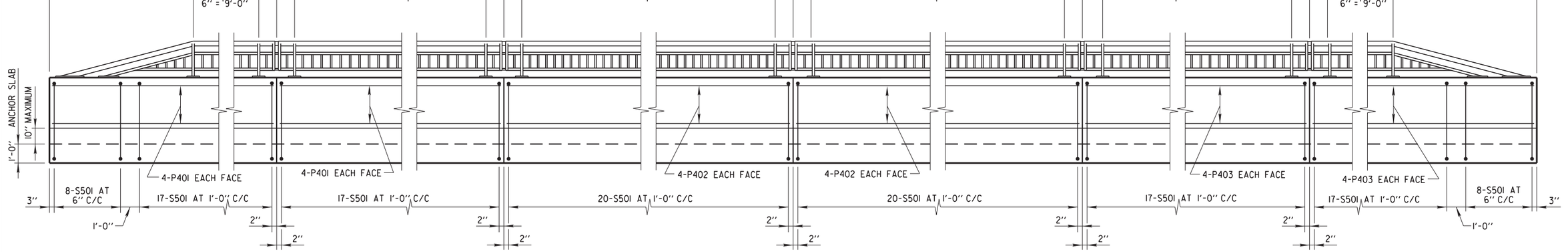
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STATE PROJECT NUMBER

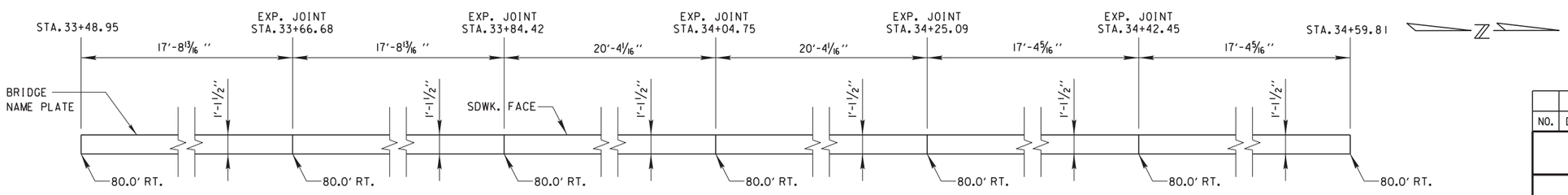
2265 - 08 - 70



EAST FACE OF EAST BRIDGE RAILING - LOOKING WEST



EAST FACE OF EAST BRIDGE RAILING - LOOKING WEST
(ANCHOR SLAB SHOWN)



PLAN VIEW OF EAST BRIDGE RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY K.P.S. | PLANS CK'D. J.D.T. R.V.K.

BRIDGE RAILING ELEVATIONS & RAILING PLAN

SHEET 9 OF 11

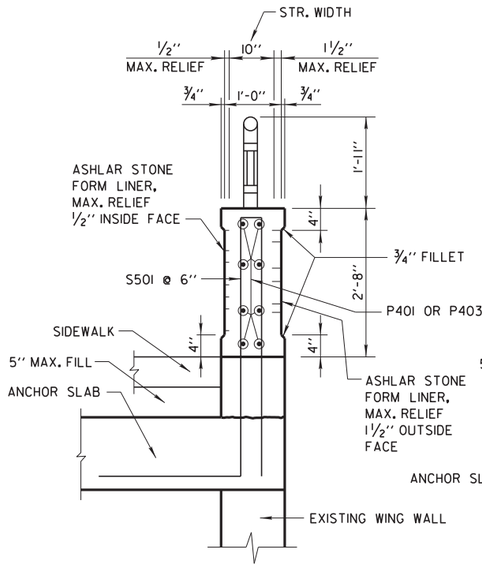
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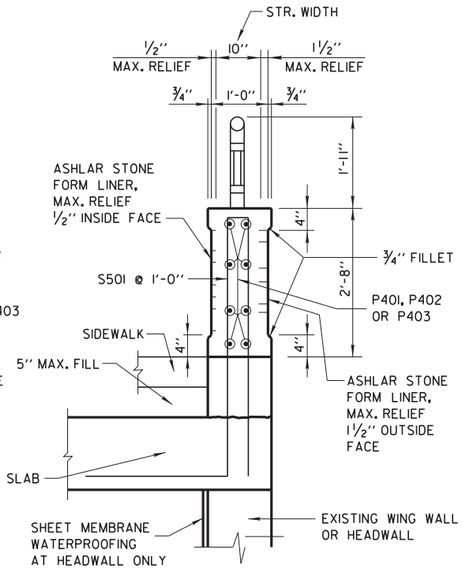
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STATE PROJECT NUMBER

2265 - 08 - 70

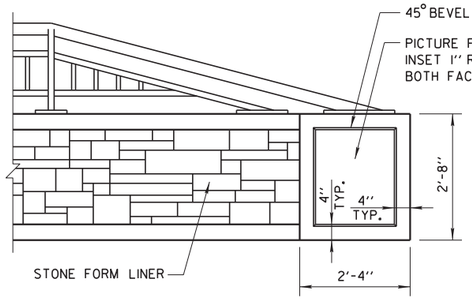


SECTION 1/9

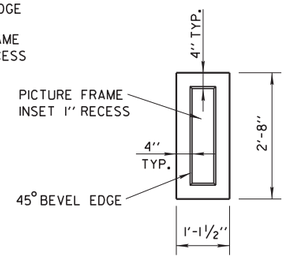


SECTION 2/9

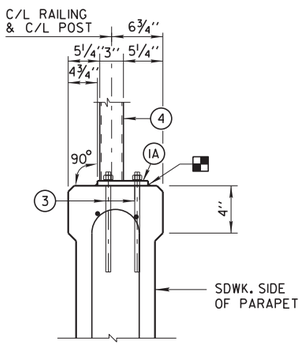
STR. = STRUCTURE



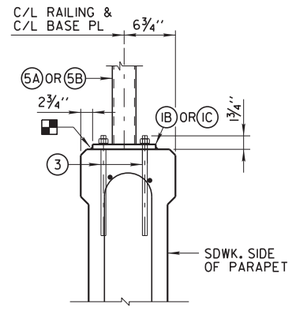
RAILING PICTURE FRAME INSET ELEVATION



END RAILING PICTURE FRAME INSET ELEVATION

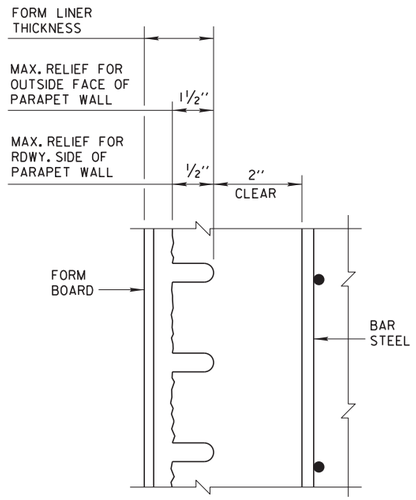


SECTION THRU PARAPET ON BRIDGE

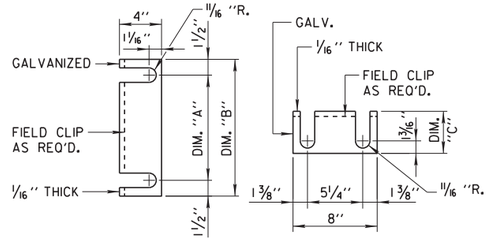


ANCHORAGE FOR END RAIL

NOTE:
SEE LEGEND & RAILING NOTES ON SHEET 11



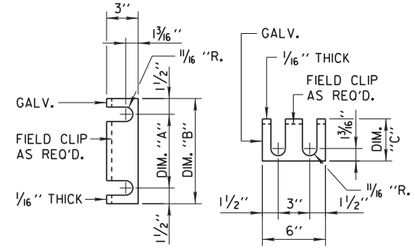
SECTION THRU FORM LINER



END RAIL SHIM DETAIL

	DIM. "A"	DIM. "B"	DIM. "C"
8" x 1'-1" BASE PLATE (1B)	10"	1'-1"	6 1/2"
8" x 1'-6" BASE PLATE (1C)	1'-3"	1'-6"	9"

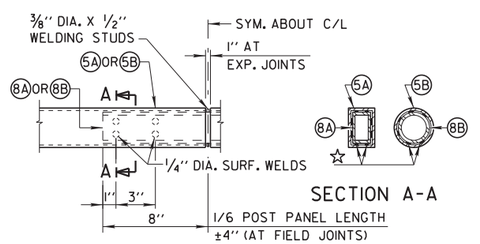
(2 SETS PER POST)



RAIL POST SHIM DETAIL

	DIM. "A"	DIM. "B"	DIM. "C"
6" x 8" BASE PLATE (1A)	5"	8"	4"

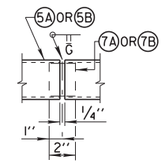
(2 SETS PER POST)



SECTION A-A

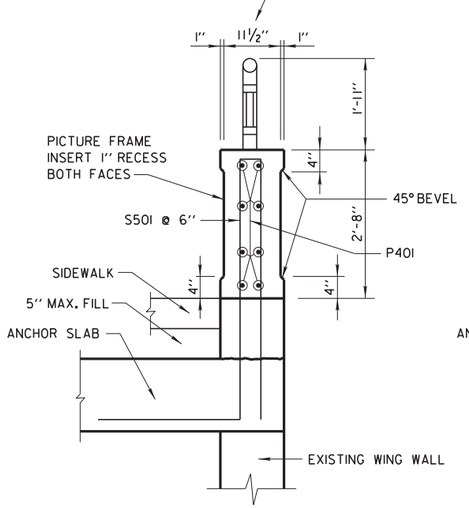
FIELD ERECTION JOINT DETAIL

☆ MIN. 5/8" FLAT SURF. DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALT.

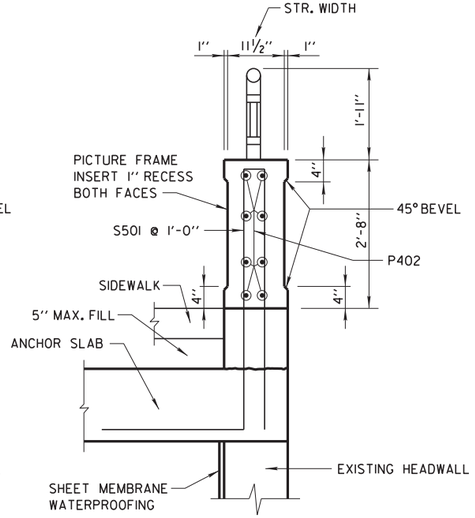


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



SECTION 3/9

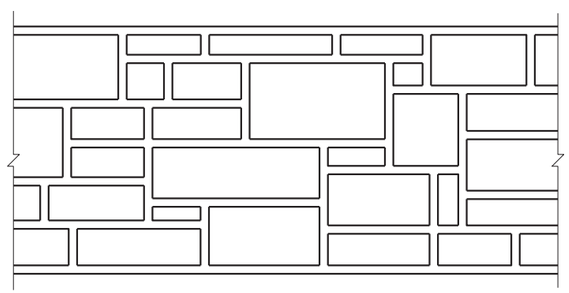


SECTION 4/9

STR. = STRUCTURE

BILL OF BARS - VERTICAL PARAPET WALL

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	16	17'-4"			PARAPET WALL - S.E. WING WALL - HORIZONTAL
P402	X	16	20'-0"			PARAPET WALL - HEADWALL - HORIZONTAL
P403	X	16	17'-0"			PARAPET WALL - N.E. WING WALL - HORIZONTAL



ASHLAR STONE FORM LINER

STONE SIZE = 8-INCH TO 16-INCH,
MAX. RELIEF = 1/2-INCH FOR INSIDE FACE AND 1 1/2" OUTSIDE FACE OF PARAPET WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

BRIDGE RAILING DETAILS

SHEET 10 OF 11

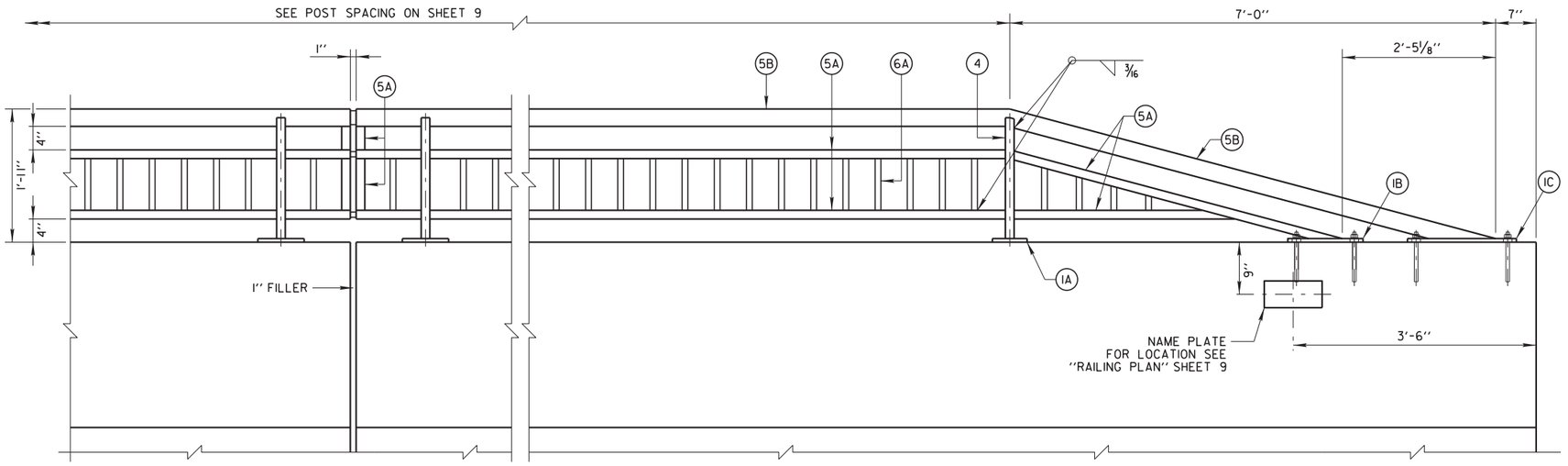
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STATE PROJECT NUMBER
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WEST ELEVATION OF PARAPET

(LOOKING EAST)

LEGEND

(IA) PLATE 5/8" x 6" x 8" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(IB) PLATE 5/8" x 8" x 1'-1" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(IC) PLATE 5/8" x 8" x 1'-6" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(2) 1/4" x 2 1/2" x 7 1/4" ANCHOR PLATE WITH 11/16 " DIA. HOLES FOR THREADED RODS NO. 3.

(3) 4 STAINLESS STEEL CONCRETE MASONRY ANCHORS (MIN. TENSILE STRENGTH = 70 KSI) TYPE 'S' (EPOXY), 5/8" DIA. MINIMUM PULLOUT CAPACITY OF 13 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.

(4) STRUCTURAL TUBING 3" x 1 1/2" x 3/16". PLACE VERTICAL. WELD TO NO. 1 & NO. 5.

(5A) STRUCTURAL TUBING 3" x 1 1/2" x 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(5B) 2 1/2" DIA. STANDARD PIPE RAIL (2.875" O.D.). WELD TO NO. 1 & NO. 4. INSIDE OF PIPE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

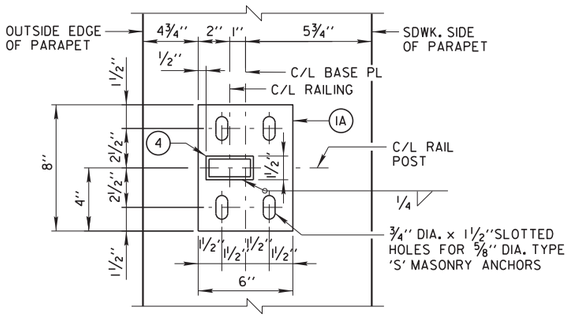
(6A) BAR 1" x 1" PICKETS. WELD TO NO. 5 (SPACE AT 6" MAX. C/L TO C/L SPACING). PLACE VERTICAL.

(7A) RECTANGULAR SLEEVE FABRICATED FROM 3/16"PLATES. PROVIDE "SLIDING FIT".

(7B) CIRCULAR SLEEVE FABRICATED FROM 2" DIA. STANDARD PIPE.

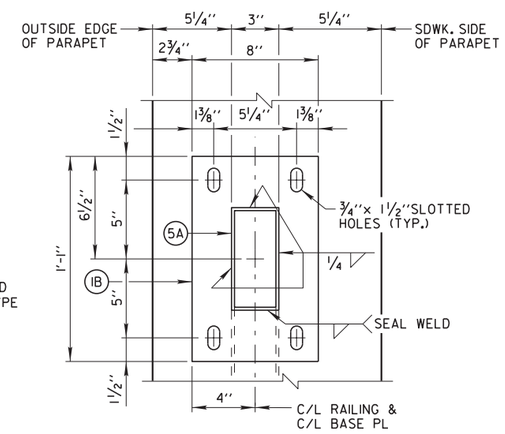
(8A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" AT FIELD ERECTION JOINTS) (1'-4" AT STRIP SEAL EXPANSION JOINTS.)

(8B) CIRCULAR SLEEVE FABRICATED FROM 2" DIA. STANDARD PIPE. (1'-4" AT FIELD ERECTION JOINTS) (1'-4" AT STRIP SEAL EXPANSION JOINTS.)



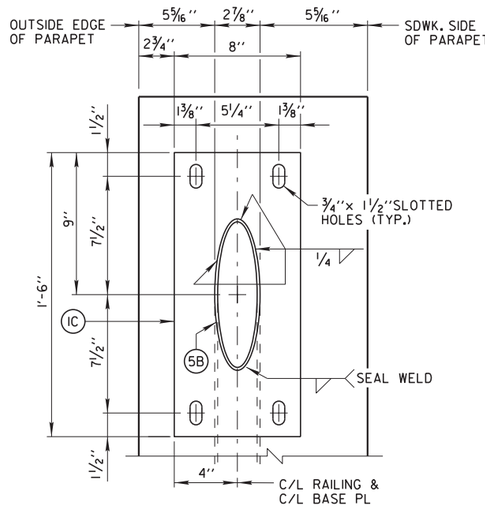
TYPICAL RAIL POST BASE PLATE

FOR 3" X 1 1/2" X 3/16" POSTS (4)



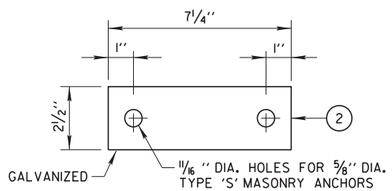
END RAIL BASE PLATE

FOR 3"x1 1/2"x3/16" POSTS (5A)



END RAIL BASE PLATE

FOR 2 1/2" DIA. STD. PIPE RAIL (5B)



END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES (IB) (IC)

2 REQUIRED PER END RAIL BASE PLATE

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C2 GALVANIZED B-40-058", WHICH INCLUDES WORK SHOWN ON SHEETS 10 & 11.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1, 2, 6, 7 AND 8 SHALL CONFORM TO ASTM A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B (NO. 4 & NO. 5).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED OR STAINLESS STEEL.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING COLORED NON-BITUMINOUS JOINT SEALER, MATCHING COLOR OF RAILING.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED FEDERAL STANDARD COLOR NO. 14062.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

MATERIAL THICKNESS OF THICKER PART JOINED	MINIMUM SIZE OF FILLET WELD *
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	5/16"
OVER 1 1/2" TO 2 1/4"	3/8"
OVER 2 1/4" TO 6"	1/2"

* EXCEPT THAT WELD SIZE SHALL NOT EXCEED THICKNESS OF THINNER PART JOINED.

NOTES

RAILING SHALL BE HOT DIP GALVANIZED AND PAINTED WITH WISDOT APPROVED TWO COAT PAINT SYSTEM.

PAINT POSTS, RAILS, SHIMS, AND EXPOSED PORTIONS OF ANCHOR BOLTS. FINISH COAT COLOR SHALL BE FEDERAL STANDARD COLOR NO. 14062.

INCLUDE PAINTING COST IN BID ITEM "RAILING STEEL TYPE C2 GALVANIZED B-40-058".

5/8" DIA. CONCRETE MASONRY ANCHORS TYPE 'S' : MINIMUM PULLOUT STRENGTH 13 KIPS, EMBED 7" MIN. FOR RAIL POSTS AND 5" MIN. FOR END RAILS STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-58

DRAWN BY	PLANS CK'D.	J.P.H.
K.P.S.		R.V.K.

STEEL RAILING DETAILS

SHEET 11 OF 11
450

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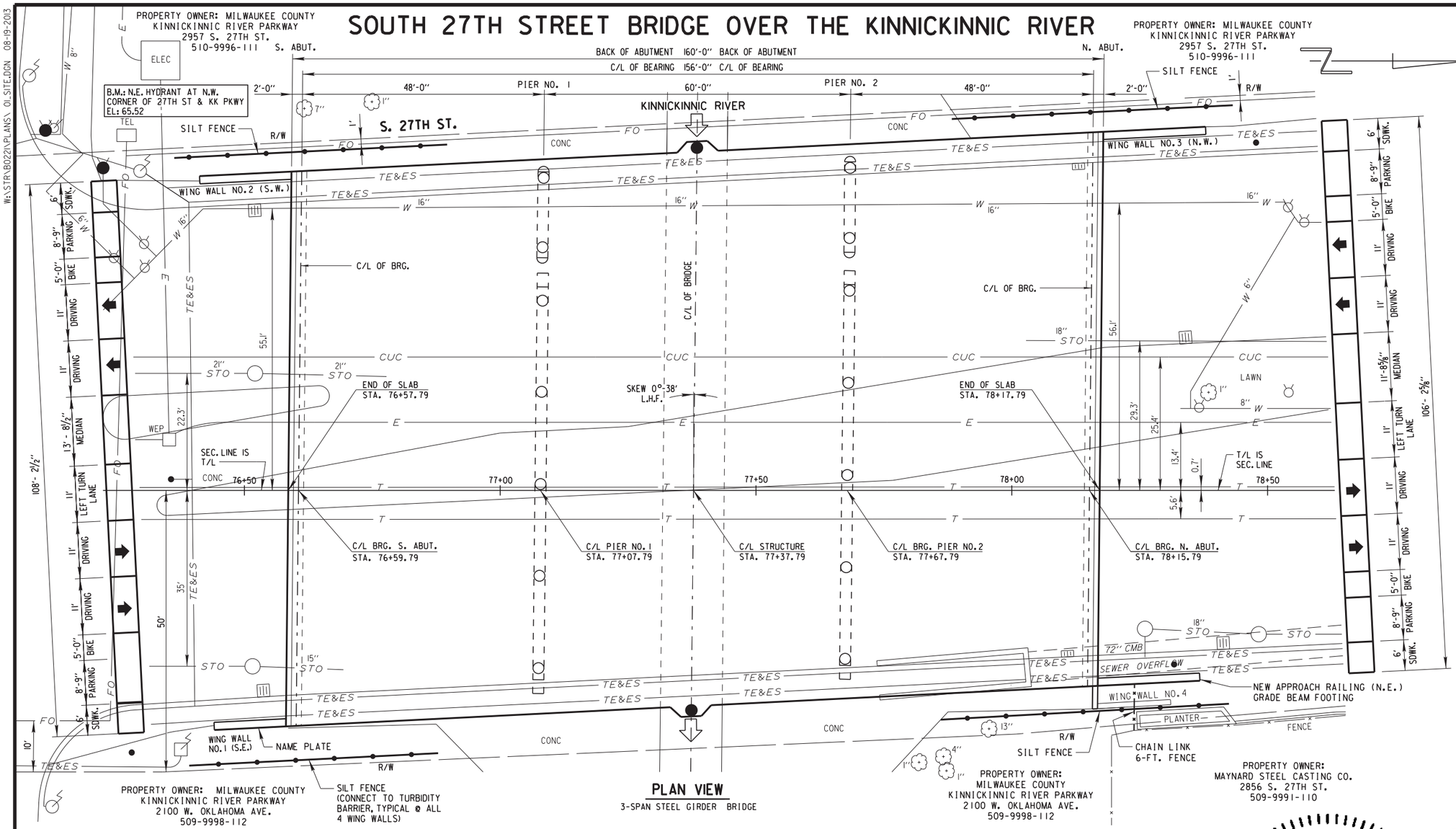
SOUTH 27TH STREET BRIDGE OVER THE KINNICKINNIC RIVER

STATE PROJECT NUMBER

2265 - 08 - 70

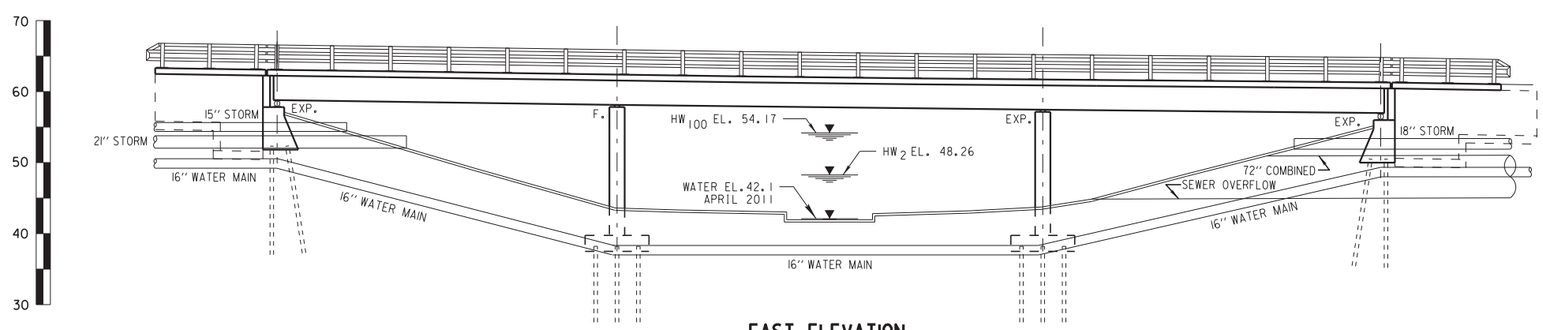
PROPERTY OWNER: MILWAUKEE COUNTY
KINNICKINNIC RIVER PARKWAY
2957 S. 27TH ST.
510-9996-111

PROPERTY OWNER: MILWAUKEE COUNTY
KINNICKINNIC RIVER PARKWAY
2957 S. 27TH ST.
510-9996-111



PLAN VIEW

3-SPAN STEEL GIRDER BRIDGE



EAST ELEVATION

LOOKING WEST

LIST OF DRAWINGS

1. TITLE SHEET / GENERAL PLAN
2. SUPERSTRUCTURE CROSS SECTION AND ESTIMATE OF QUANTITIES
3. SOUTH ABUTMENT ELEVATION VIEWS
4. SOUTH ABUTMENT PLAN AND BILL OF BARS
5. SOUTH ABUTMENT SECTIONS
6. NORTH ABUTMENT ELEVATION VIEWS
7. NORTH ABUTMENT PLAN AND BILL OF BARS
8. NORTH ABUTMENT SECTIONS
9. NORTH AND SOUTH ABUTMENT CONCRETE SURFACE REPAIRS / MEDIAN REINFORCEMENT
10. PIERS 1 AND 2 CONCRETE SURFACE REPAIR
11. MODIFIED GIRDER END DIAPHRAGMS
12. ELASTOMERIC BEARINGS REPLACEMENT DETAILS
13. WING WALL NO. 1 (S.E.) PLAN, SECTIONS, AND ELEVATION
14. WING WALL NO. 2 (S.W.) PLAN, SECTIONS, AND ELEVATION
15. WING WALL NO. 3 (N.W.) PLAN, SECTIONS, AND ELEVATION
16. APPROACH RAILING FOOTING (N.E.) PLAN, SECTION, AND ELEVATION
17. DECK PLAN SOUTH SPAN STAGE 1
18. DECK PLAN SOUTH SPAN STAGE 2
19. DECK PLAN MIDDLE SPAN STAGE 1
20. DECK PLAN MIDDLE SPAN STAGE 2
21. DECK PLAN NORTH SPAN STAGE 1
22. DECK PLAN NORTH SPAN STAGE 2
23. STAGE 1 CONSTRUCTION SUPERSTRUCTURE CROSS SECTIONS
24. STAGE 2 CONSTRUCTION SUPERSTRUCTURE CROSS SECTIONS
25. DECK BILL OF BARS AND SHEAR CONNECTOR LAYOUT
26. LIGHTPOLE SIDEWALK REINFORCEMENT DETAILS
27. DECK GRADES
28. RAILING PLAN; JUNCTION BOXES AND SCUPPER LOCATIONS
29. BRIDGE RAILING ELEVATIONS
30. TUBULAR STEEL RAILING TYPE M (MODIFIED)
31. PEDESTRIAN RAILING CABLE DETAILS
32. SLOPE PAVING REPAIR: PLAN, ELEVATION, SECTIONS, AND DETAILS
33. EXISTING AND NEW SCUPPERS DETAILS
34. STRIP SEAL EXPANSION JOINT SECTIONS
35. STRIP SEAL EXPANSION JOINT DETAILS
36. CITY UNDERGROUND CONDUIT (C.U.C.) PLAN, SECTION, AND DETAILS
37. STAGED CONSTRUCTION TRAFFIC CONTROL

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 9/3/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
CRAIG S. LIBERTO
E-23746
MILWAUKEE
WIS.
PROFESSIONAL ENGINEER
Craig S. Liberto 8/28/13

CITY OF MILWAUKEE CONTACT
CRAIG LIBERTO: (414-286-3294)

WISDOT BRIDGE OFFICE CONTACT
WILLIAM DREHER: (608-266-8489)

STRUCTURE B-40-438

S. 27TH ST. OVER KINNICKINNIC RIVER

COUNTY	MILWAUKEE	~~TOWN~~/CITY/ ~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	AASHTO STD. SPEC. 2003		
DESIGNED BY J.P.H.	DESIGN CK'D. R.V.K.	DRAWN BY K.P.S.	PLANS CK'D. R.V.K.

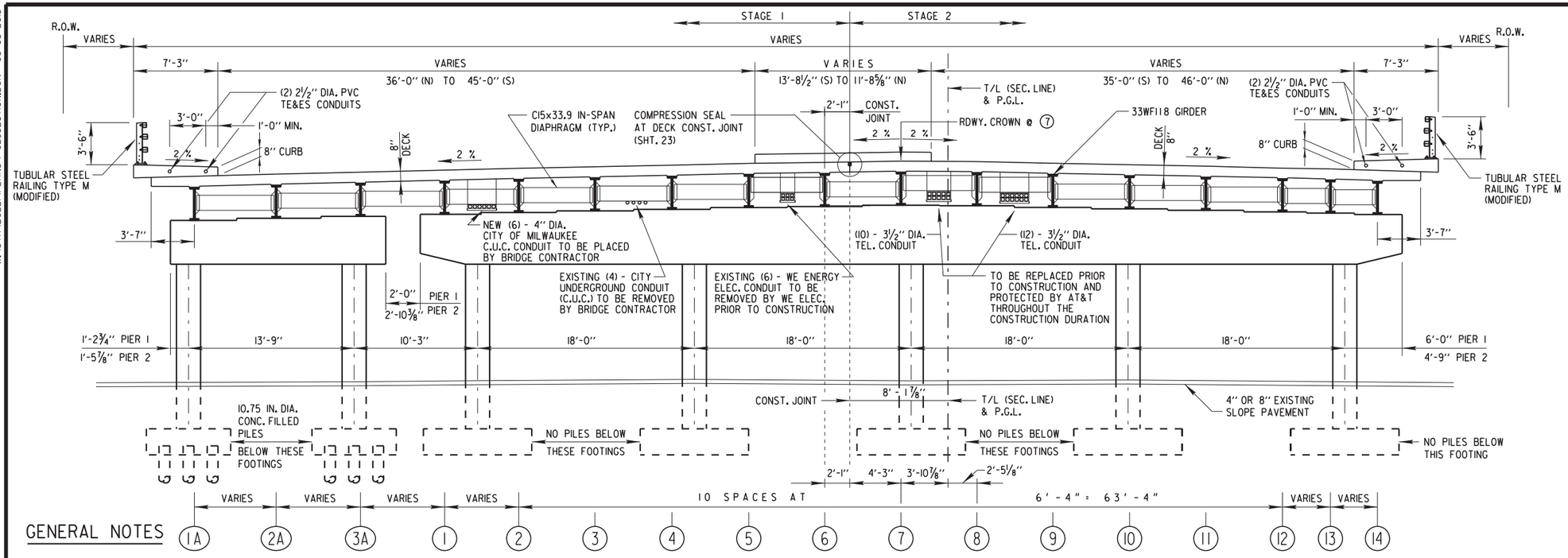
TITLE SHEET / GENERAL PLAN

SHEET 451 OF 37

W:\STR\B022\PLANS\ 02_SECTION.DGN 08-05-2013

STATE PROJECT NUMBER

2265 - 08 - 70



SECTION THRU BRIDGE LOOKING NORTH

GENERAL NOTES

DETAILS, MATERIALS AND FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION EDITION OF 2014 EXCEPT AS OTHERWISE NOTED.

STATIONS AND ALL ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.

DRAWINGS SHALL NOT BE SCALED.

CHAMFER EXPOSED CONCRETE EDGES 1" UNLESS OTHERWISE NOTED

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

REINFORCING BARS ARE ENGLISH AND THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE NOTED.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURE.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, PRECAST CONCRETE BEARING BLOCKS, EPOXY ANCHORS, ¼" GROUT, ANCHOR BOLTS, STEEL PLATES, AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED" EACH.

SPACES EXCAVATED AND NOT OCCUPIED BY NEW CONSTRUCTION SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

BACKFILL THE FRONT FACE OF WALLS BEFORE THE BACK FACE.

JOINT FILLER SHALL CONFORM TO AASHTO DESIGNATION M 153 TYPE I, II, OR III, OR AASHTO DESIGNATION M213.

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.

CONCRETE INSERTS FOR AT&T TO BE FURNISHED BY UTILITY COMPANY AND PLACED BY CONTRACTOR. COSTS OF PLACING AT&T INSERTS SHALL BE INCLUDED IN BID PRICE FOR CONCRETE MASONRY BRIDGES. ALL HARDWARE FOR C.U.C. CONDUITS, INCLUDING CONCRETE INSERTS, AND ALL REQUIRED LABOR, TO BE SUPPLIED BY THE CONTRACTOR AND INCLUDED IN BID PRICE FOR UNDERDECK UTILITY STRUCTURE C.U.C.

SEE ROADWAY PLANS FOR EXISTING AND PROPOSED UTILITY LOCATIONS.

PAINT FOR STEEL GIRDERS AND RAILING TO MATCH FEDERAL STANDARD NO. 595C, COLOR NO. 14062.

CONCRETE STAIN COLOR TO MATCH FEDERAL STANDARD NO. 595C, COLOR NO. 30318.

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	S. ABUT.	S. PIER NO. 1	N. PIER NO. 2	N. ABUT.	SUPER.	RAILING	WING WALLS	SLOPE PAVING	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 77+37.79	LS									1
204.0175	REMOVING CONCRETE SLOPE PAVING	SY								397	397
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-40-438)	LS									1
210.0100	BACKFILL STRUCTURE	CY	57			60			13		130
312.0115	SELECT CRUSHED MATERIAL	CY								45	45
502.0100	CONCRETE MASONRY BRIDGES	CY	22			23	582		9		636
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC (3/8-INCH)	LF					158				158
502.3100	EXPANSION DEVICE (B-40-438)	LS					1				1
502.3200	PROTECTIVE SURFACE TREATMENT	SY					1,925				1,925
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	306			318			134		758
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	5,114			5,350	126,567		1,576		138,607
506.0105	STRUCTURAL STEEL CARBON	LB					711				711
506.1510	SHEET ZINC	LB	340			350					690
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	17			16					33
506.3015	WELDED STUD SHEAR CONNECTORS 7/8 X 6-INCH	EACH					2,301				2,301
506.3025	WELDED STUD SHEAR CONNECTORS 7/8 X 8-INCH	EACH					2,304				2,304
506.7050.S	REMOVING BEARINGS (B-40-438)	EACH	17			16					33
509.1500	CONCRETE SURFACE REPAIR	SF		19	7	2					28
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	14	18	14	8					54
509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	2	2	2	2					8
516.0100	DAMPPROOFING	SY	57			64					121
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	20			20			10		50
517.0900.S	PREPARATION AND COATING OF TOP FLANGES (B-40-438)	LS					1				1
517.1010.S	CONCRETE STAINING (B-40-438)	SF					2,108		200		2,308
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (B-40-438)	LS					1				1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (B-40-438)	LS					1				1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH					1				1
604.0400	SLOPE PAVING CONCRETE	SY								397	397
616.0206	FENCE CHAIN LINK 6-FT	LF							10		10
628.6005	TURBIDITY BARRIERS	LF		143	143						286
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	20			20	624				664
690.0250	SAWING CONCRETE	LF	109			113			69	62	353
SPV.0060	JUNCTION BOXES 18X12X8-INCH	EACH					2				2
SPV.0060	ADJUSTING DIAPHRAGMS	EACH					31				31
SPV.0105	RAILING TUBULAR TYPE M MODIFIED (B-40-438)	LS						1			1
SPV.0105	ELECTRICAL WORK	LS					1				1
SPV.0105	DECK DRAINAGE SYSTEM (B-40-438)	LS					1				1
SPV.0105	UNDERDECK UTILITY (B-40-438) CITY OF MILWAUKEE C.U.C.	LS					1				1

DESIGN DATA

DEAD LOAD

CONCRETE = 150 LBS./C.F.
F.W.S. = 20 LBS./S.F.
RAILING = 37 LBS./L.F.

LIVE LOAD

DECK DESIGN RATING: HS-20
SUPERSTRUCTURE INVENTORY RATING HS-22
SUPERSTRUCTURE OPERATING RATING HS-36
MAX. STD. PERMIT VEHICLE LOAD = 250 KIPS

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY (DECK SLAB) f'_c = 4000 PSI
CONCRETE MASONRY (ALL OTHERS) f'_c = 3500 PSI
BAR STEEL REINFORCEMENT f_y = 60,000 PSI
ROLLED STEEL BEAMS/SHAPES F_y = 33,000 PSI

HYDRAULIC DATA

HW_{100} 100-YEAR FLOOD STAGE = 54.17 FT.
HW_2 2-YEAR FLOOD STAGE = 48.26 FT.

ELEVATIONS

CITY OF MILWAUKEE VERT. DATUM = 580.60 (NGVD 1929)
B.M.: N.E. HYDRANT AT N.W. CORNER OF S. 27TH ST. AND KINNICKINNIC RIVER PARKWAY EL. = 65.52

TRAFFIC VOLUME

ADT (2012) = 30,700
ADT (2032) = 35,300
R.D.S. = 40 MPH

UTILITIES

NOTE: AT&T TELEPHONE UTILITIES WILL BE KEPT IN SERVICE FOR STRUCTURE B-40-438 THROUGHOUT THE REHABILITATION PROJECT DURATION. PRIOR TO START OF CONSTRUCTION AT&T WILL PROVIDE SUPPORT AND PROTECTION TO THEIR FACILITIES. WE-ENERGIES ELECTRIC CONDUITS WILL BE PERMANENTLY RELOCATED PRIOR TO CONSTRUCTION. CITY OF MILWAUKEE C.U.C. FACILITIES SHALL BE RELOCATED BY BRIDGE CONTRACTOR DURING CONSTRUCTION. SEE PROJECT SPECIFICATIONS.

BRIDGE REMOVAL AND CONSTRUCTION NOTES

EXISTING BRIDGE PLANS ARE ON FILE IN CITY OF MILWAUKEE INFRASTRUCTURE SERVICES DIVISION'S STRUCTURAL DESIGN UNIT, ROOM 907, FRANK P. ZEIDLER MUNICIPAL BUILDING, 841 N. BROADWAY, MILWAUKEE, WI 53202 PHONE (414)-286-3294.

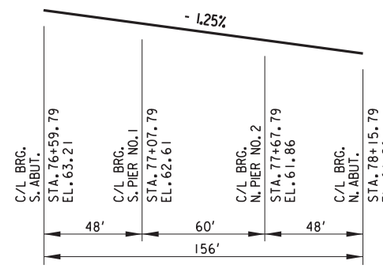
EXISTING BRIDGE WILL BE REMOVED IN TWO STAGES TO KEEP S. 27TH STREET OPEN FOR 2-WAY TRAFFIC DURING CONSTRUCTION. EXISTING SOUTHBOUND ROADWAY IS TO BE REMOVED FIRST WHILE 2-WAY TRAFFIC IS TO BE CARRIED BY THE EXISTING NORTHBOUND ROADWAY. AFTER PROPOSED SOUTHBOUND ROADWAY IS COMPLETED TRAFFIC WILL BE DIVERTED TO THE NEWLY FINISHED SOUTHBOUND ROADWAY AND THE PROPOSED NORTHBOUND ROADWAY WILL BE CONSTRUCTED.

AVOID PERMANENT OR LONG-TERM DEBRIS DEPOSITION IN WATERWAY. LIMIT MATERIAL DEPOSITION WITHIN WATERWAY. BRIDGE DECK REMOVAL IN SECTIONS IS PREFERRED TO KNOCKING IT DOWN INTO WATERWAY. MAINTAIN UNIMPEDED NATURAL STREAM FLOW THROUGH STRUCTURE TO MAINTAIN STREAM ENVIRONMENT INTEGRITY.

REMOVE EXISTING BRIDGE DECK B-40-438 OVER KINNICKINNIC RIVER IN LARGE SECTIONS & CONFORMING TO CONTRACTOR'S APPROVED STRUCTURE REMOVAL & CLEAN-UP PLAN. DURING SUPERSTRUCTURE REMOVAL, PREVENT LARGE PIECES AND MINIMIZE SMALL PIECES FROM ENTERING WATERWAY.

PROPOSED IMPROVEMENTS

THE PROJECT AS PROPOSED CONSISTS OF: REMOVAL OF EXISTING BRIDGE DECK AND RAILINGS; CONCRETE SURFACE REPAIR OF THE ABUTMENTS AND PIERS; BEARING REPLACEMENT; PREPPING AND PAINTING THE STEEL GIRDERS; INSTALLATION OF GIRDER SHEAR STUD CONNECTORS; PLACEMENT OF NEW CONCRETE BRIDGE DECK; INSTALLATION OF NEW BRIDGE TYPE M (MODIFIED) RAILING; SLOPE PAVING REPAIR.



PROFILE GRADE LINE (P.G.L.) ALONG T/L OF SOUTH 27TH STREET BRIDGE OVER THE KINNICKINNIC RIVER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

SUPERSTRUCTURE CROSS SECTION AND ESTIMATE OF QUANTITIES

SHEET 8 OF 37
452

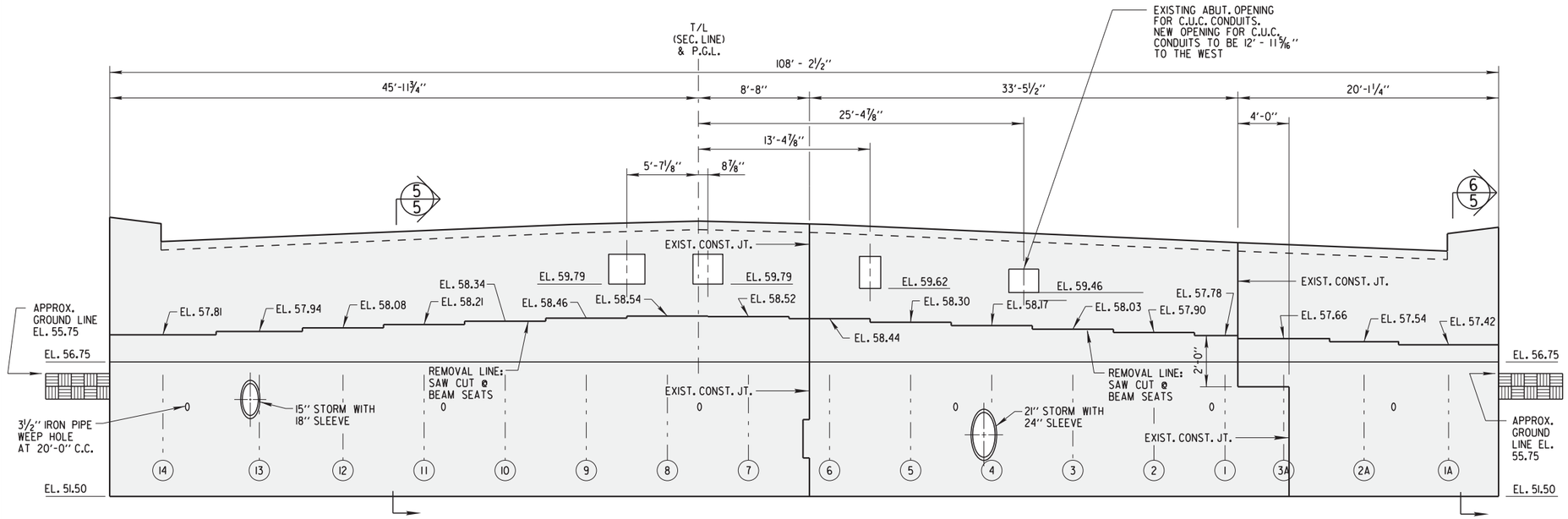
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STATE PROJECT NUMBER

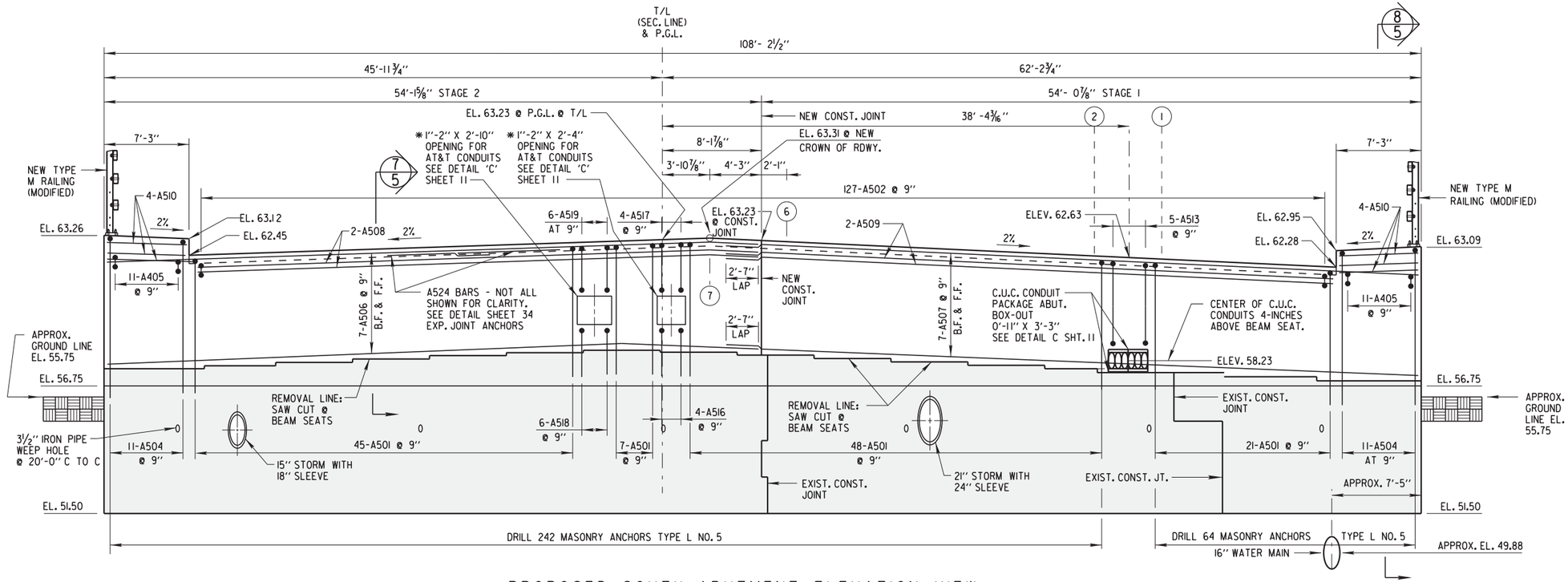
2265 - 08 - 70



EXISTING SOUTH ABUTMENT ELEVATION VIEW

(LOOKING SOUTH)

* * (N.T.S.)



PROPOSED SOUTH ABUTMENT ELEVATION VIEW

(LOOKING SOUTH)

* * (N.T.S.)

NOTE:
CUT A506 & A507 BARS AS NECESSARY AT OPENINGS FOR CUC, AND AT&T BLOCK OUTS.

NOTE:
ABUTMENT PILES NOT SHOWN FOR CLARITY

* * DUE TO WIDTH OF BRIDGE VERTICAL SCALE HAS BEEN ADJUSTED TO FIT VIEWS ON SHEET.

* PROPOSED UTILITY BOX-OUTS ARE AT SAME ELEVATION AND OFFSET AS EXISTING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

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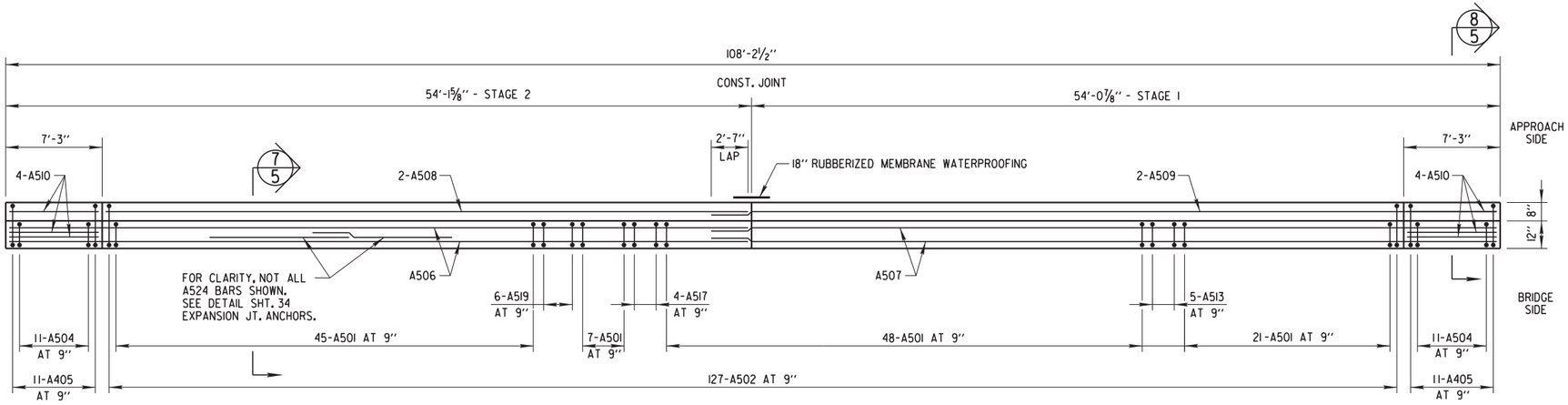
SOUTH ABUTMENT ELEVATION VIEWS

SHEET 453 OF 37

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STATE PROJECT NUMBER

2265 - 08 - 70

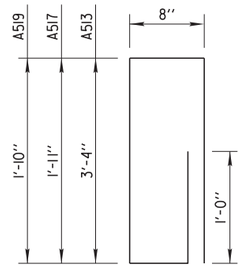


PROPOSED SOUTH ABUTMENT PLAN VIEW

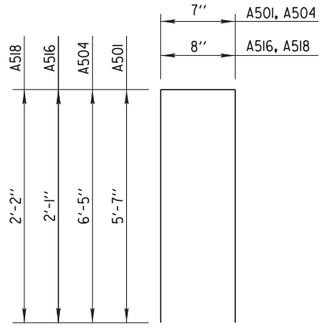
(N.T.S.)

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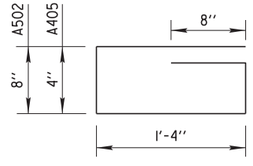
BILL OF BARS - SOUTH ABUTMENT						
BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	121	11'-7''	X		BACKWALL DOWEL RDWY.
A502	X	127	4'-1''	X		RDWY. CORBEL
A504	X	22	13'-3''	X		BACKWALL DOWEL SDWK.
A405	X	22	3'-8''	X		SDWK. CORBEL
A506	X	14	53'-7''			BACKWALL TRAN. STAGE 2
A507	X	14	56'-11''			BACKWALL TRAN. STAGE 1
A508	X	2	46'-4''			TRAN. RDWY. CORBEL STAGE 2
A509	X	2	49'-8''			TRAN. RDWY. CORBEL STAGE 1
A510	X	8	6'-11''			TRAN. SDWK. CORBEL - E. AND W. SIDE
A513	X	5	8'-6''	X		BLOCK OUT - CUC
A516	X	4	4'-8''	X		BLOCK OUT - AT&T
A517	X	4	5'-9''	X		BLOCK OUT - AT&T
A518	X	6	4'-9''	X		BLOCK OUT - AT&T
A519	X	6	5'-2''	X		BLOCK OUT - AT&T
A520	X	24	5'-6''			BLOCK OUT - CUC, AT&T
A621	X	4	6'-4''			BLOCK OUT - AT&T
A622	X	4	7'-3''			BLOCK OUT - CUC
A623	X	4	6'-10''			BLOCK OUT - AT&T
A524	X	42	8'-0''			BARS FOR STRIP SEAL ANCHORS



A513, A517, A519



A501, A504, A516, A518



A502, A405

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

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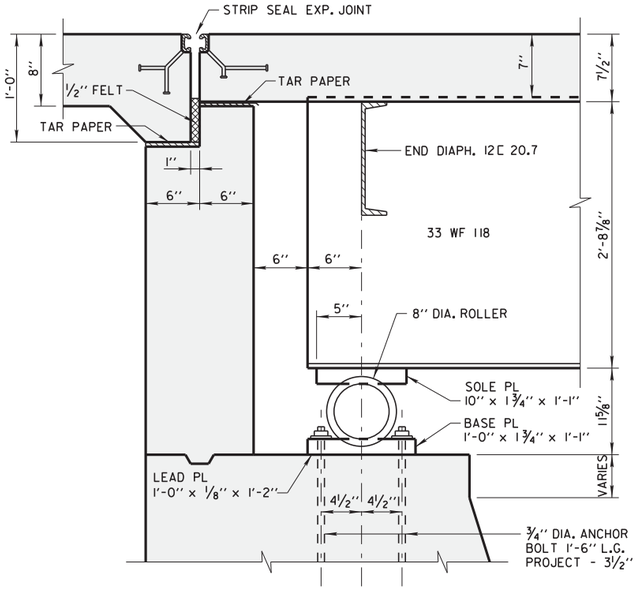
SOUTH ABUTMENT PLAN AND BILL OF BARS

SHEET 454 OF 37

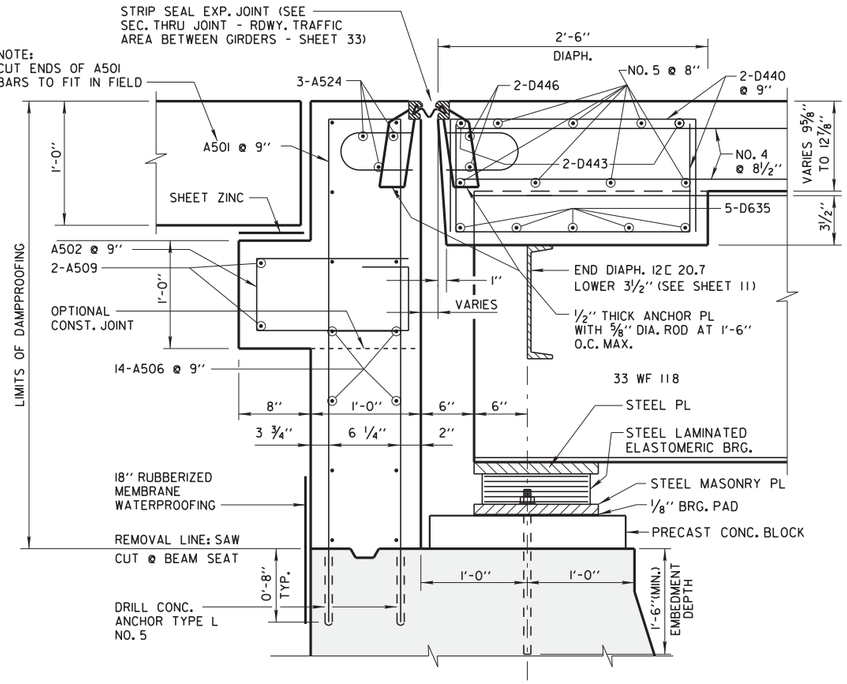
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STATE PROJECT NUMBER

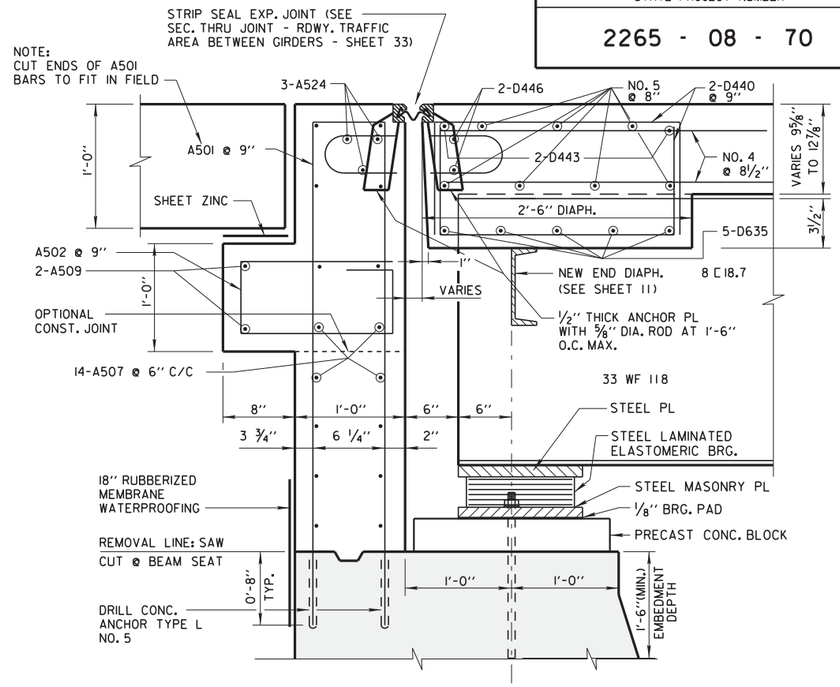
2265 - 08 - 70



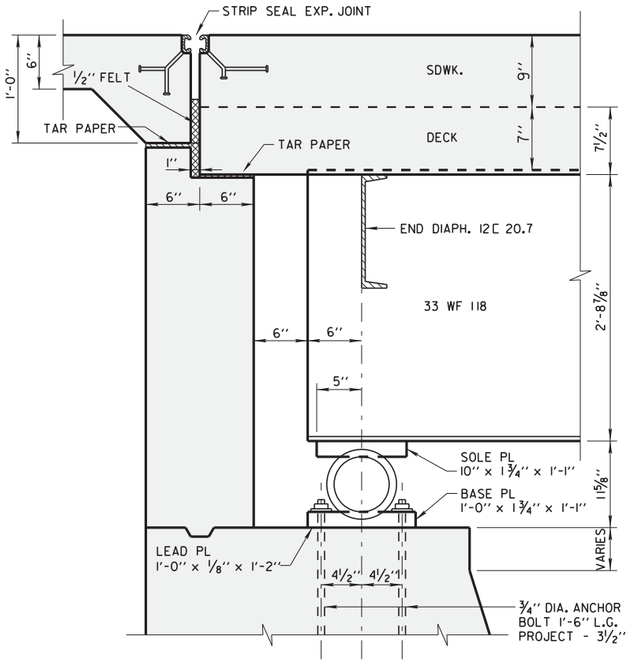
SECTION EXISTING ABUTMENT AT ROADWAY (5 / 3 — 5 / 6 — 5 / 18)



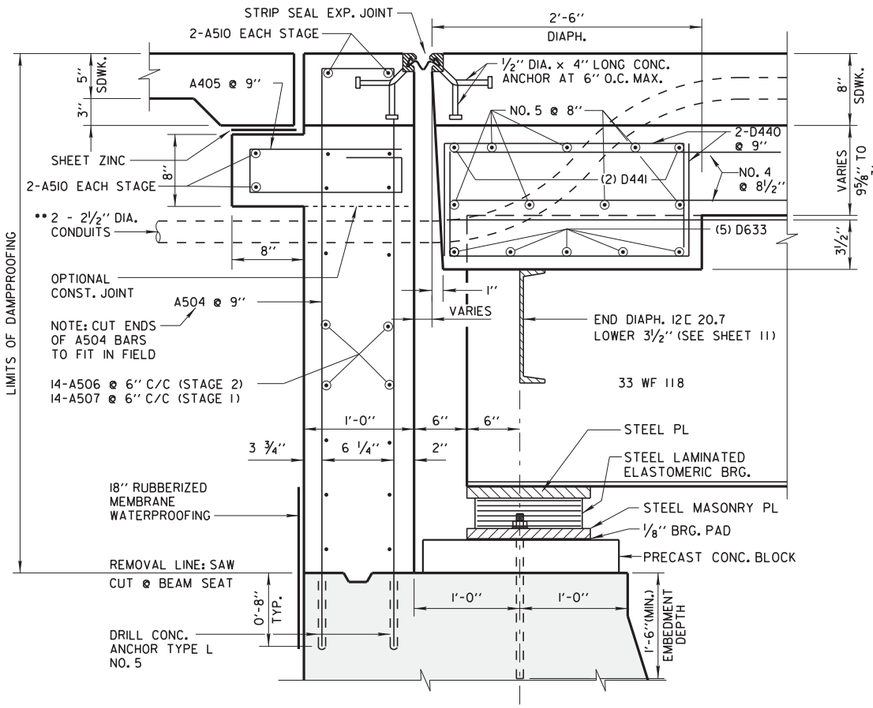
* SECTION PROPOSED ABUTMENT AT ROADWAY (7 / 3 — 7 / 4 — 7 / 18)



* SECTION PROPOSED ABUTMENT AT ROADWAY
BETWEEN GIRDERS 5 & 6, 7 & 8, AND 8 & 9



SECTION EXISTING ABUTMENT AT SIDEWALK (6 / 3 — 6 / 6 — 6 / 17)



* SECTION PROPOSED ABUTMENT AT SIDEWALK (8 / 3 — 8 / 4 — 8 / 17)

KEY:

* SOME DECK AND SDWK. BARS IN SEC. VIEW HAVE BEEN OMITTED FOR CLARITY.

EXISTING CONC.

NEW CONC.

** SEE SHEET 27 FOR NOTES REGARDING 2 1/2" P.V.C. CONDUITS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

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SOUTH ABUTMENT SECTIONS

SHEET 455 OF 37

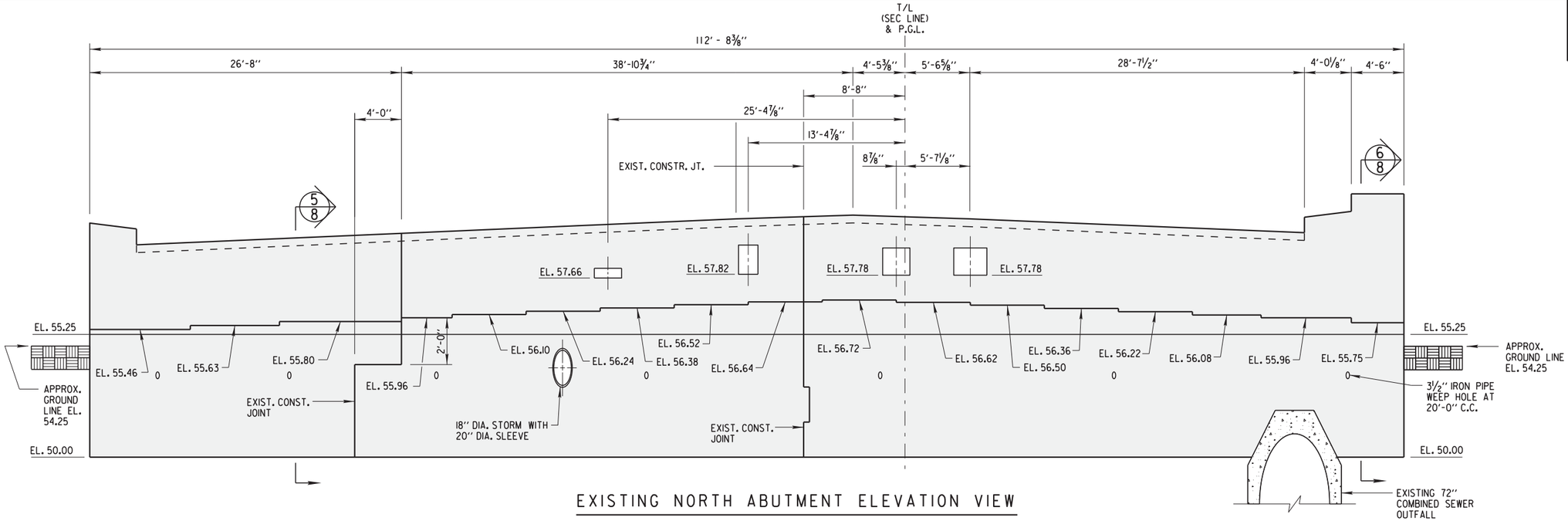
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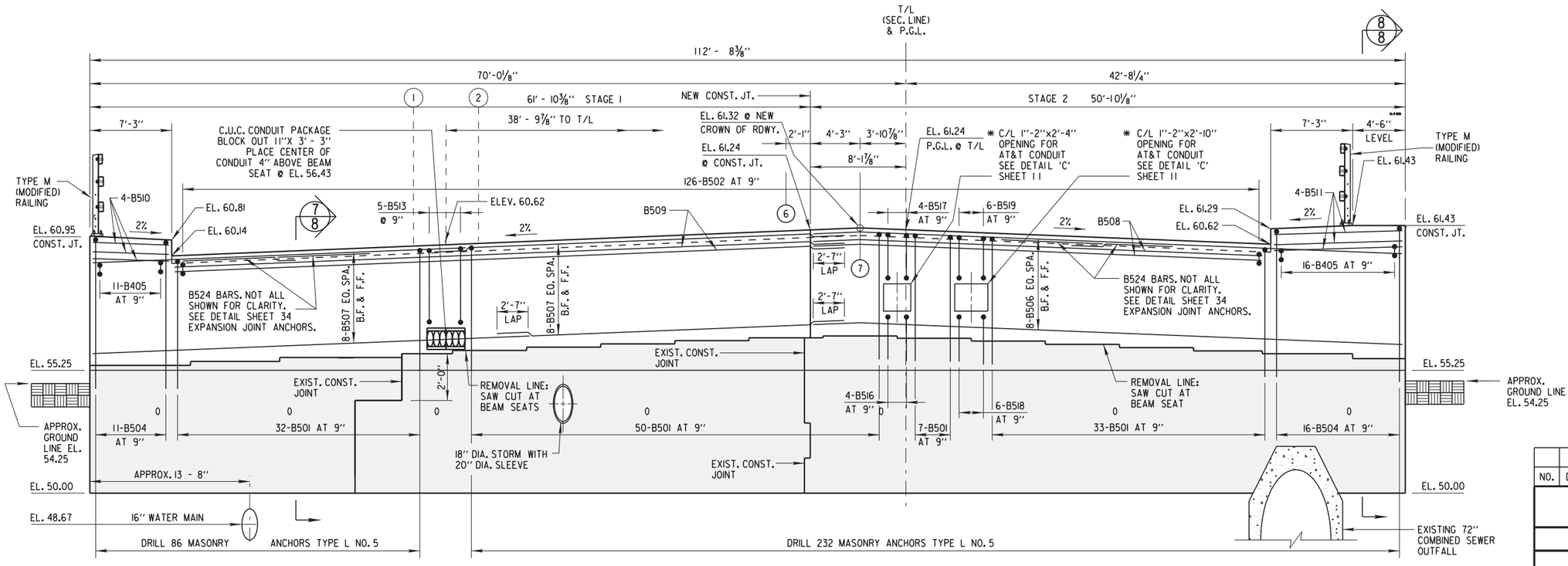
STATE PROJECT NUMBER

2265 - 08 - 70



EXISTING NORTH ABUTMENT ELEVATION VIEW

(LOOKING NORTH)
** (N.T.S.)



PROPOSED NORTH ABUTMENT ELEVATION VIEW

(LOOKING NORTH)
** (N.T.S.)

** DUE TO WIDTH OF BRIDGE VERTICAL SCALE HAS BEEN ADJUSTED TO FIT VIEWS ON SHEET.

* PROPOSED UTILITY BOX-OUTS ARE AT SAME ELEVATION AND OFFSET AS EXISTING.

NOTE:
CUT B506 & B507 BARS AS NECESSARY AT OPENINGS FOR CUC AND AT&T BLOCK OUTS

NOTE:
ABUTMENT PILES NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

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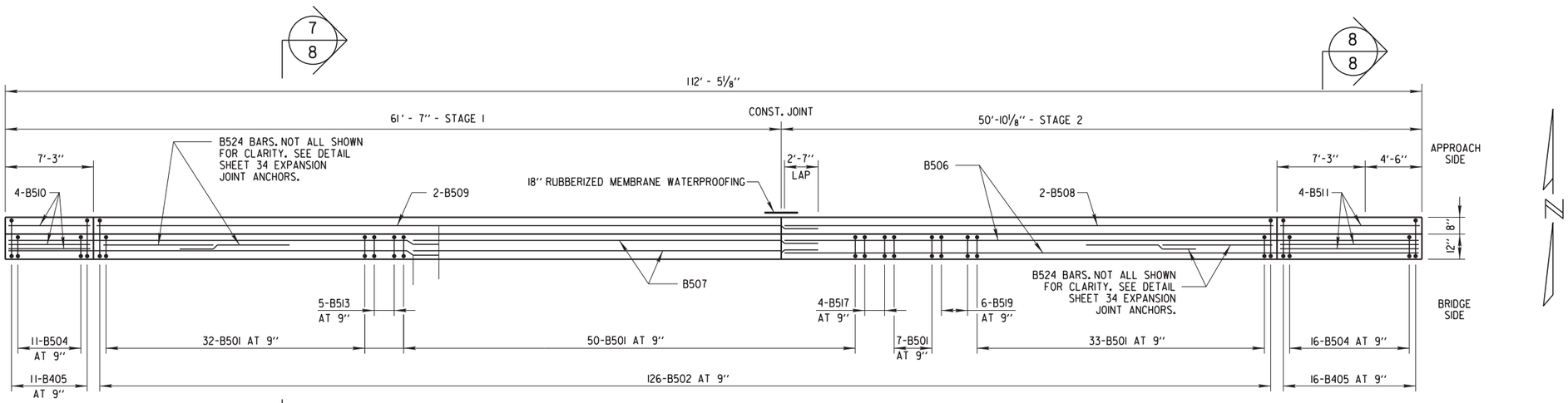
NORTH ABUTMENT ELEVATION VIEWS

SHEET 456 OF 37

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STATE PROJECT NUMBER

2265 - 08 - 70

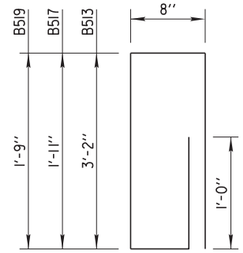


PROPOSED NORTH ABUTMENT PLAN VIEW

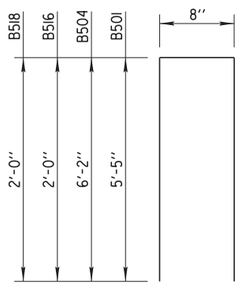
(N.T.S.)

BILL OF BARS - NORTH ABUTMENT

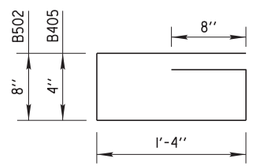
BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	122	11'-3"	X		BACKWALL DOWEL RDWY.
B502	X	126	4'-2"	X		RDWY. CORBEL
B504	X	27	12'-9"	X		BACKWALL DOWEL SDWK.
B405	X	27	3'-8"	X		SDWK. CORBEL
B506	X	16	50'-8"			BACKWALL TRAN. STAGE 2
B507	X	32	33'-7"			BACKWALL TRAN. STAGE 1
B508	X	2	38'-11"			TRAN. RDWY. CORBEL STAGE 2
B509	X	2	56'-9"			TRAN. RDWY. CORBEL STAGE 1
B510	X	4	6'-11"			TRAN. SDWK. CORBEL - W. SIDE
B511	X	4	11'-5"			TRAN. SDWK. CORBEL - E. AND W. SIDE
B513	X	5	8'-2"	X		BLOCK OUT - CUC
B516	X	4	4'-5"	X		BLOCK OUT - AT&T
B517	X	4	5'-10"	X		BLOCK OUT - AT&T
B518	X	6	4'-5"	X		BLOCK OUT - AT&T
B519	X	6	5'-6"	X		BLOCK OUT - AT&T
B520	X	24	5'-6"			BLOCK OUT - CUC, AT&T
B621	X	4	6'-4"			BLOCK OUT - AT&T
B622	X	4	7'-3"			BLOCK OUT - CUC
B623	X	4	6'-10"			BLOCK OUT - AT&T
B524	X	42	8'-0"			BARS FOR STRIP SEAL ANCHORS



B513, B517, B519



B501, B504, B516, B518



B502, B405

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

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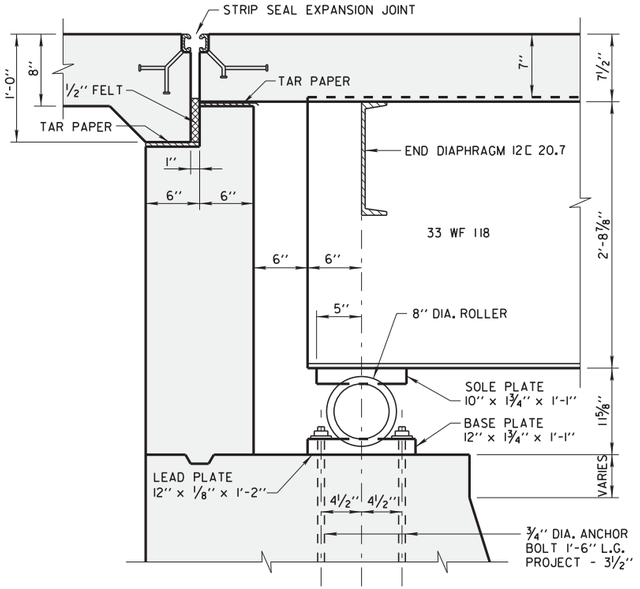
NORTH ABUTMENT PLAN AND BILL OF BARS

SHEET 457 OF 37

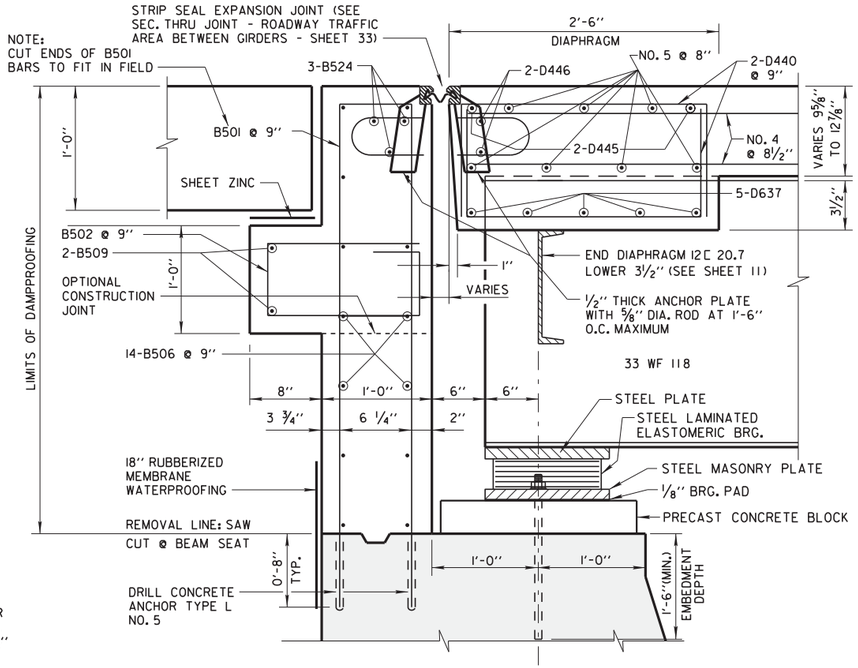
W:\STR\B022\PLANS\08_NORTH_ABUT_SECT.DGN 08-21-2013

STATE PROJECT NUMBER

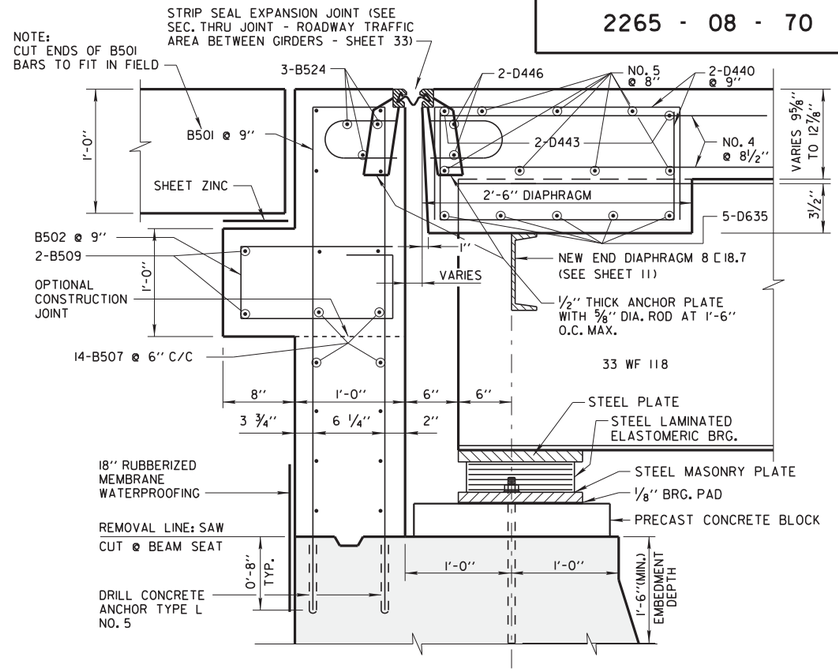
2265 - 08 - 70



SECTION EXISTING ABUTMENT AT ROADWAY (5/6) (5/7) (5/21)

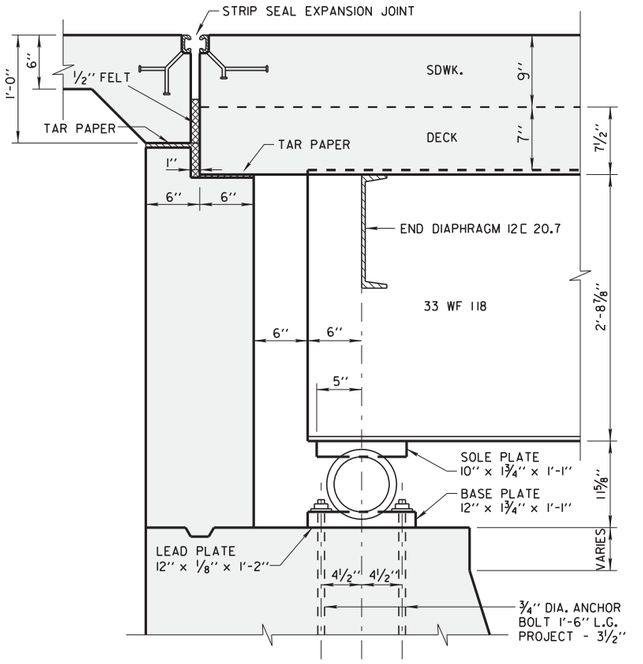


*SECTION PROPOSED ABUTMENT AT ROADWAY (7/6) (7/7) (7/21)

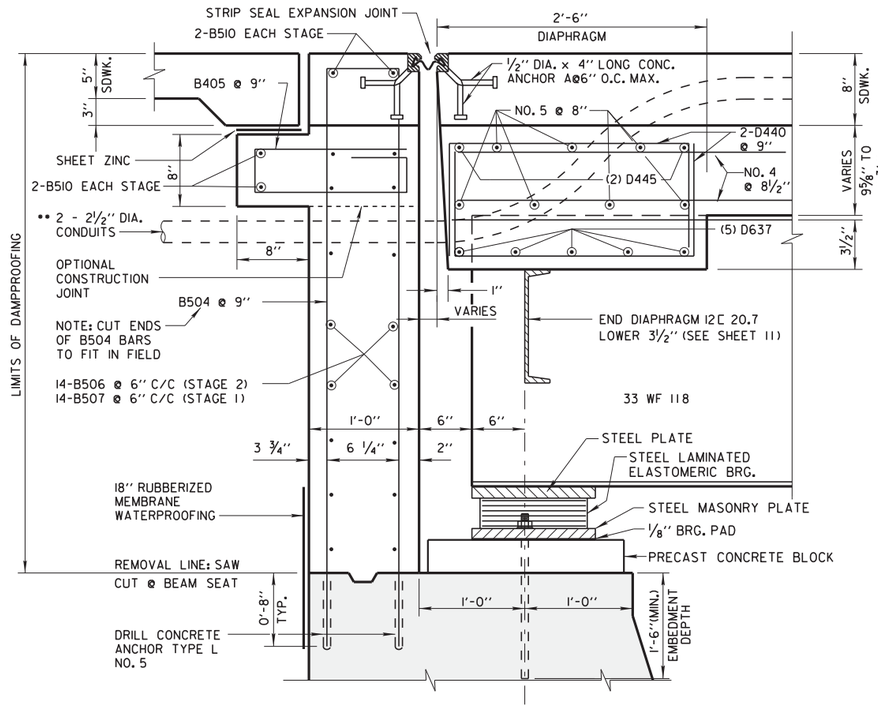


*SECTION PROPOSED ABUTMENT AT ROADWAY

BETWEEN GIRDERS 5 & 6, 7 & 8, AND 8 & 9



SECTION EXISTING ABUTMENT AT SIDEWALK (6/6) (6/7) (6/22)



*SECTION PROPOSED ABUTMENT AT SIDEWALK (8/6) (8/7) (8/22)

KEY:

* SOME DECK AND SDWK. BARS IN SEC. VIEW HAVE BEEN OMITTED FOR CLARITY.

EXISTING CONCRETE

NEW CONCRETE

** SEE SHEET 27 FOR NOTES REGARDING 2 1/2" P.V.C. CONDUITS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

NORTH ABUTMENT SECTIONS

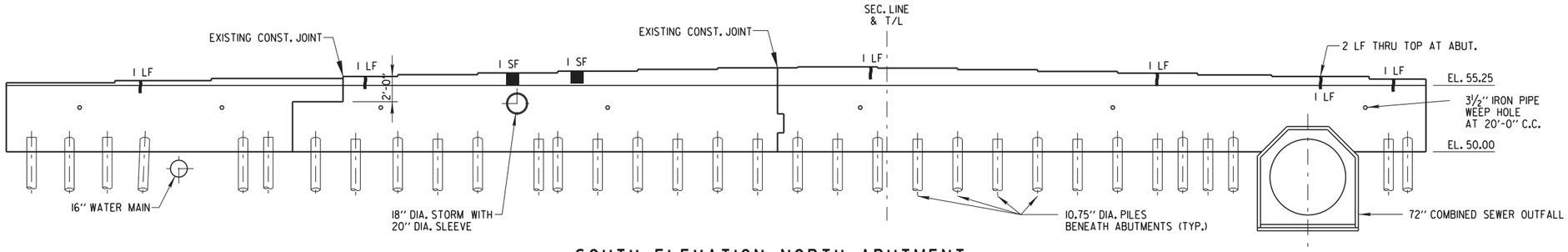
SHEET 458 OF 37

8

8

W:\STR\B022\PLANS\ 09_ABUT_REPAIR.DGN 08-12-2013

STATE PROJECT NUMBER
2265 - 08 - 70



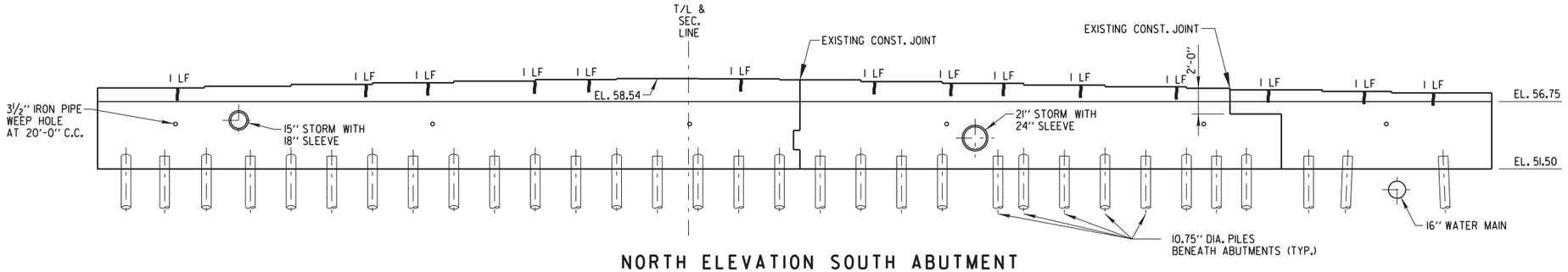
KEY:

CRACK REPAIR =

CONC. SURF. REPAIR =

SOUTH ELEVATION NORTH ABUTMENT

(LOOKING NORTH) N.T.S



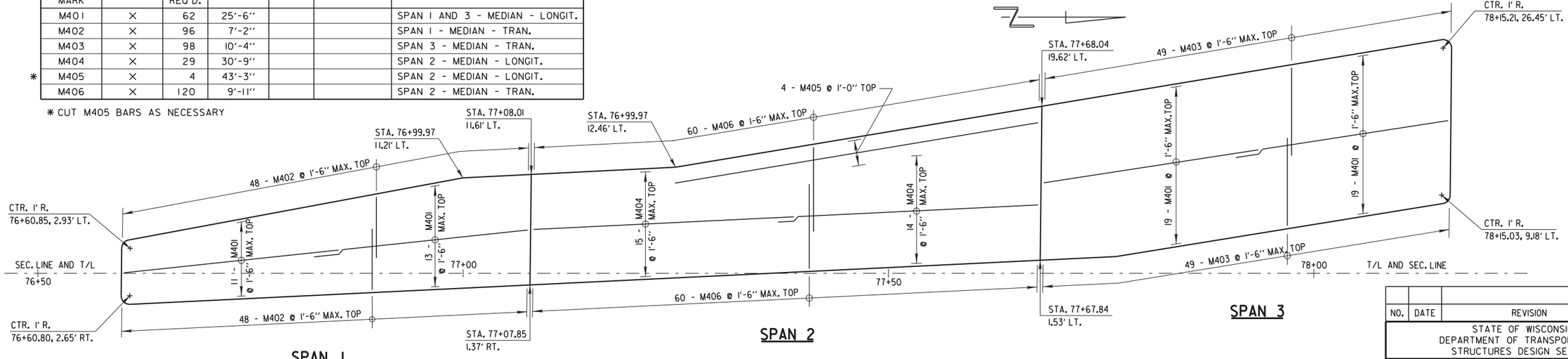
NORTH ELEVATION SOUTH ABUTMENT

(LOOKING SOUTH) N.T.S.

BILL OF BARS - MEDIAN

	BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	M401	X	62	25'-6"			SPAN 1 AND 3 - MEDIAN - LONGIT.
	M402	X	96	7'-2"			SPAN 1 - MEDIAN - TRAN.
	M403	X	98	10'-4"			SPAN 3 - MEDIAN - TRAN.
	M404	X	29	30'-9"			SPAN 2 - MEDIAN - LONGIT.
*	M405	X	4	43'-3"			SPAN 2 - MEDIAN - LONGIT.
	M406	X	120	9'-11"			SPAN 2 - MEDIAN - TRAN.

* CUT M405 BARS AS NECESSARY



SPAN 1

SPAN 2

SPAN 3

MEDIAN REINFORCEMENT PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

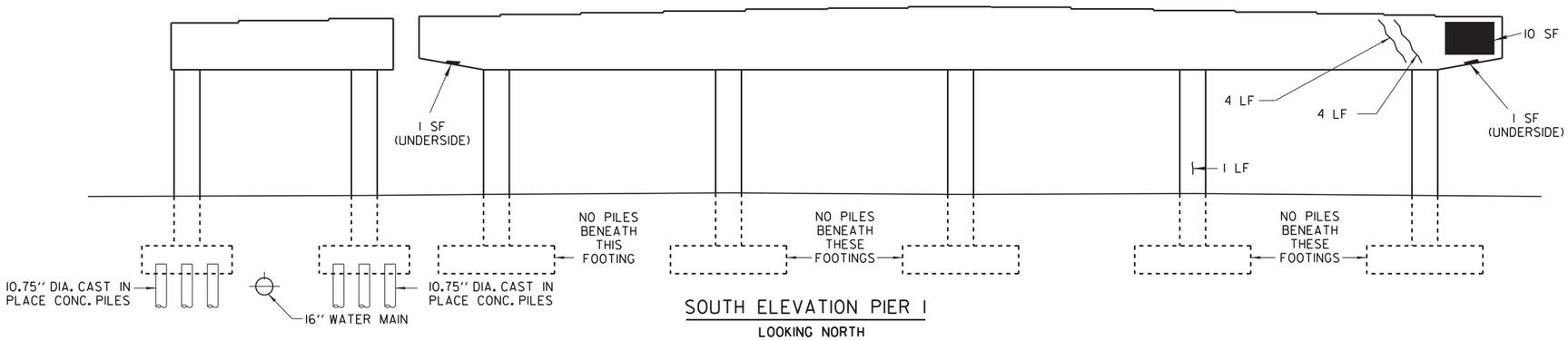
NORTH AND SOUTH ABUTMENT CONCRETE SURFACE REPAIRS / MEDIAN REINFORCEMENT

SHEET 459 OF 37

W:\STR\B022\PLANS\ 10_PIER_REPAIR.DGN 05-02-2013

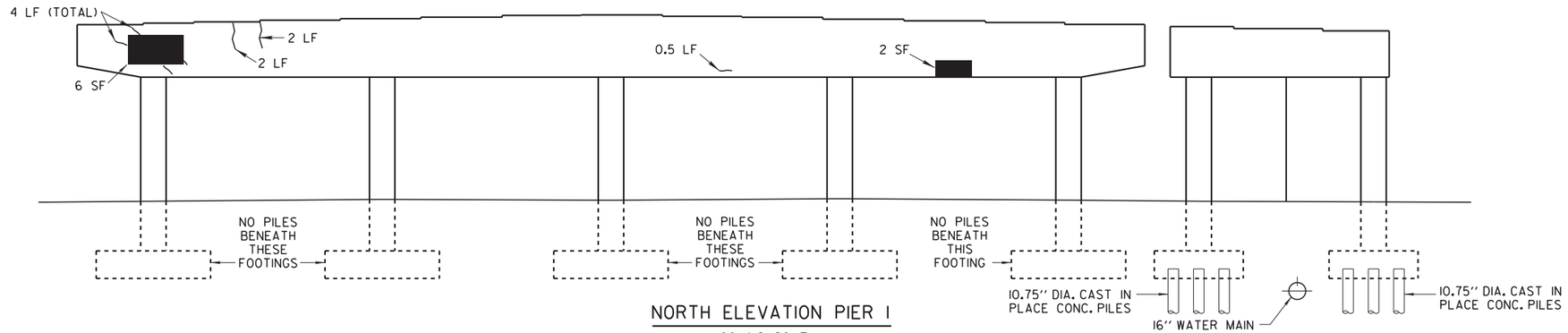
STATE PROJECT NUMBER

2265 - 08 - 70



SOUTH ELEVATION PIER 1

LOOKING NORTH



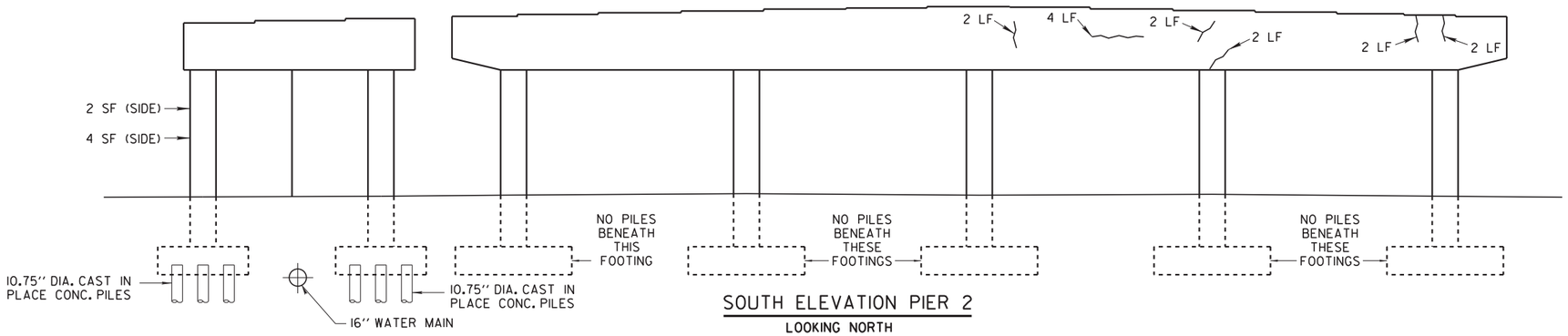
NORTH ELEVATION PIER 1

LOOKING SOUTH

KEY:

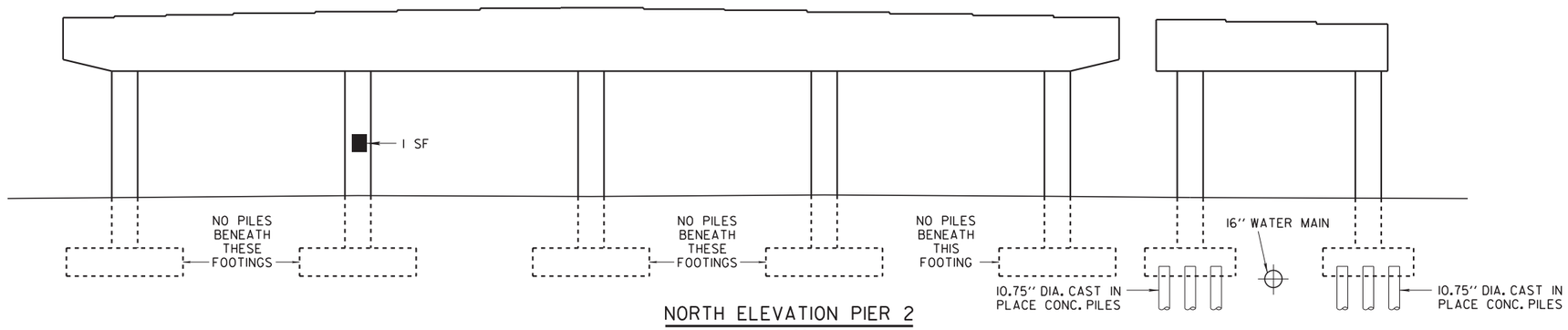
CRACK REPAIR = ~

CONCRETE SURFACE REPAIR = ■



SOUTH ELEVATION PIER 2

LOOKING NORTH



NORTH ELEVATION PIER 2

LOOKING SOUTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

PIERS 1 & 2 CONCRETE SURFACE REPAIRS

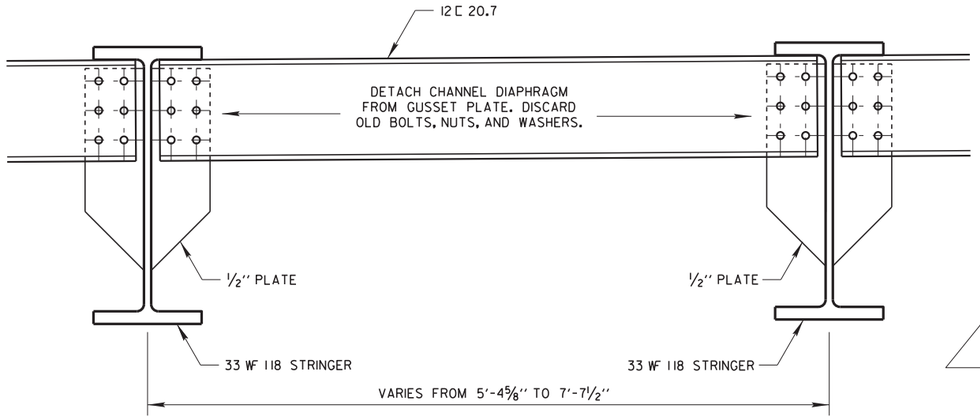
SHEET 10 OF 37

460

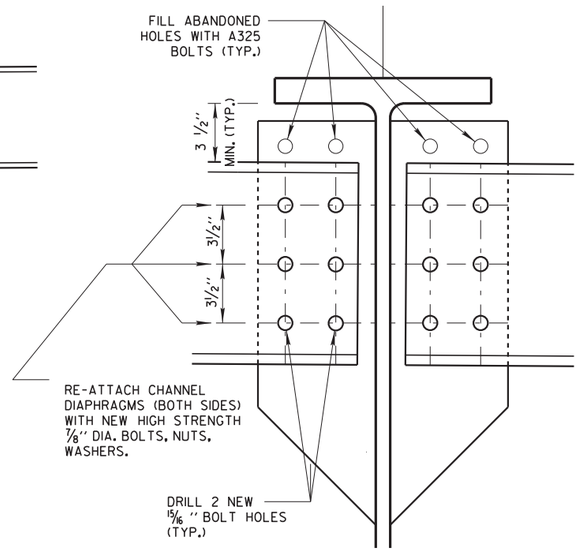
W:\STR\B022\PLANS\ 11_DIAPHRAGM.DGN 06-19-2013

STATE PROJECT NUMBER

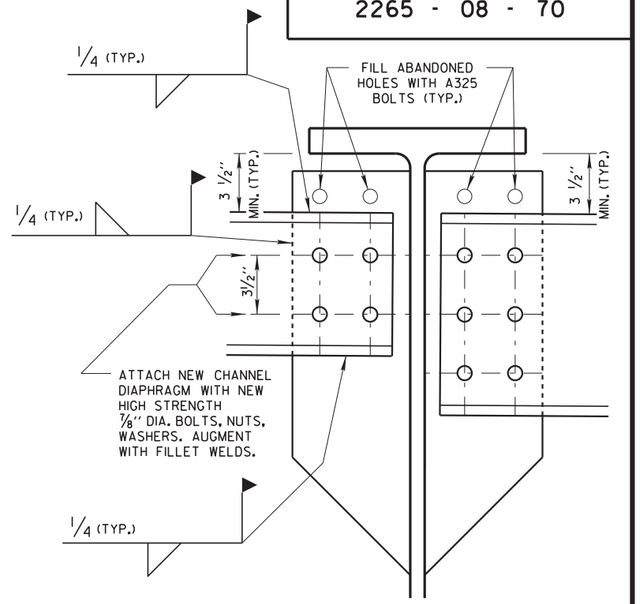
2265 - 08 - 70



EXISTING GIRDER END DIAPHRAGM

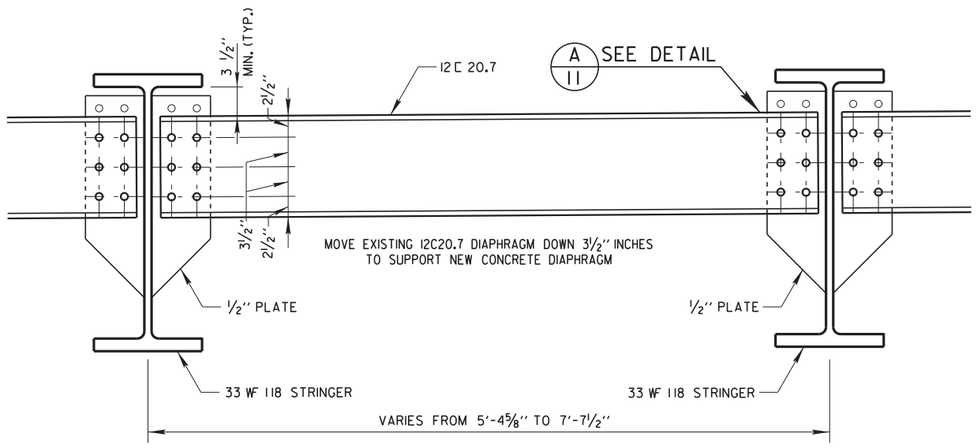


A/11 MODIFIED GIRDER END DIAPHRAGM DETAIL



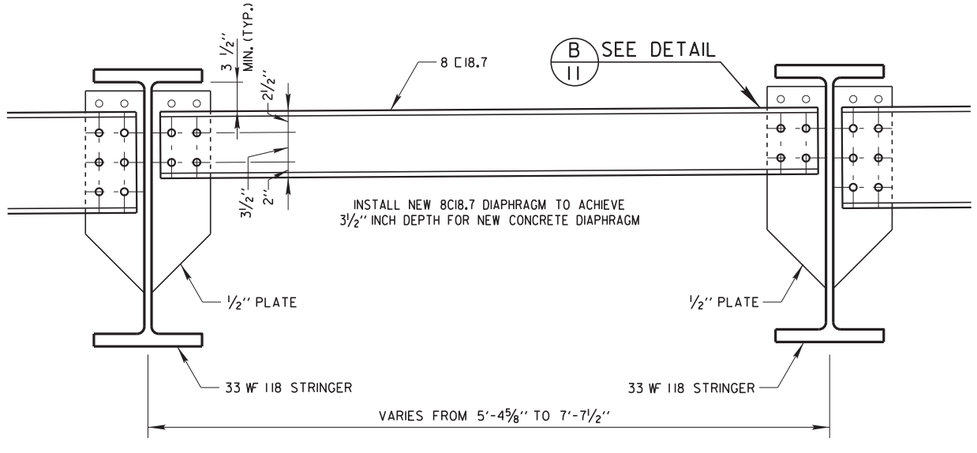
B/11 MODIFIED GIRDER END DIAPHRAGM DETAIL

BETWEEN GIRDERS 5 & 6, 7 & 8, AND 8 & 9



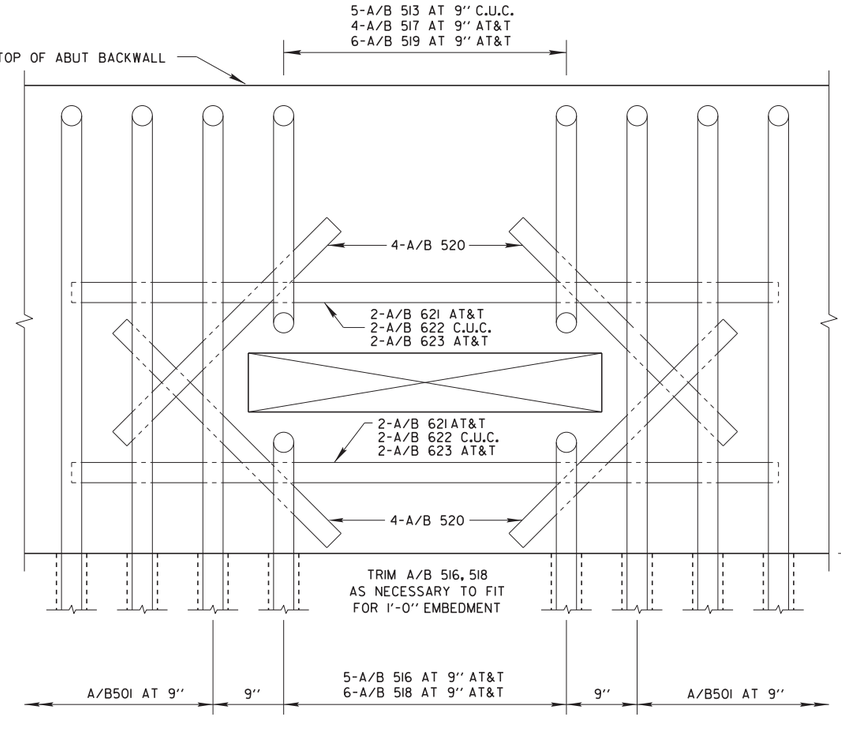
MODIFIED GIRDER END DIAPHRAGM

BETWEEN GIRDERS (TYP. EXCEPT AS NOTED BELOW)



MODIFIED GIRDER END DIAPHRAGM

BETWEEN GIRDERS 5 & 6, 7 & 8, AND 8 & 9



C/3 C/6 DETAIL FOR BLOCK OUT OPENINGS IN ABUTMENT WALL

BLOCK OUT OPENINGS

AT&T - 2'-4" W x 1'-2" H
AT&T - 2'-10" W x 1'-2" H
C.U.C. - 3'-3" W x 0'-11" H

BID ITEM : SPV.0060 END DIAPHRAGM ADJUSTMENT

SEE SPECIAL PROVISIONS

COVERS INSTALLATION OF NEW 8C18.7 STEEL CHANNEL DIAPHRAGMS AND LOWERING EXISTING 12C20.7 STEEL CHANNEL DIAPHRAGMS.

BID ITEM : 506.0105 STRUCTURAL CARBON STEEL

COVERS THE MATERIALS FOR THE NEW 8C18.7 STEEL CHANNEL DIAPHRAGMS.

REMOVAL LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY R.V.K. | PLANS CK'D. J.P.H. R.V.K.

MODIFIED GIRDER END DIAPHRAGMS

SHEET 461 OF 37

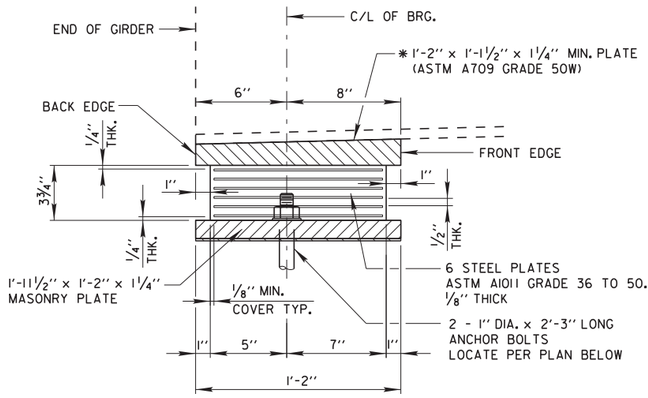
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8

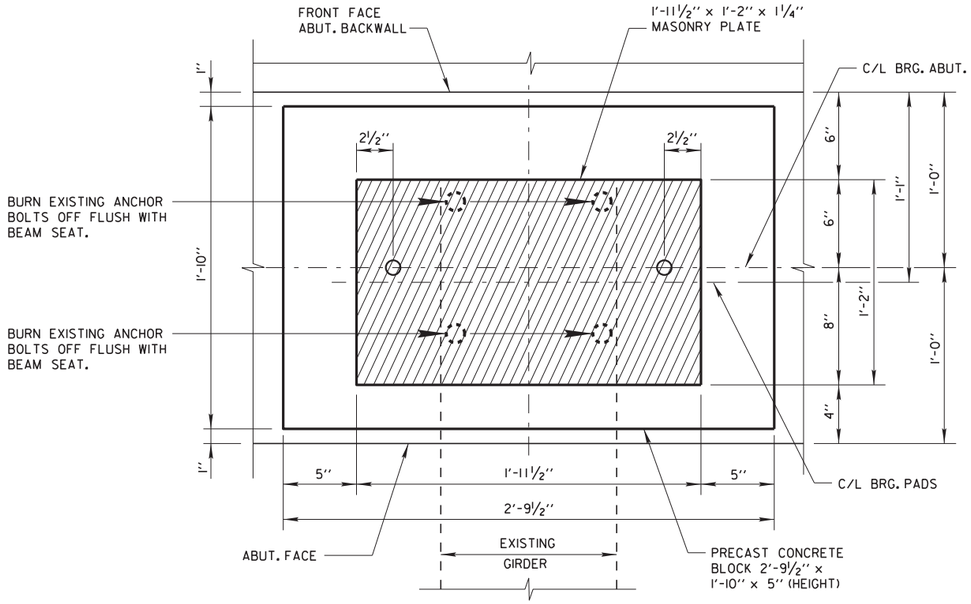
W:\STR\B022\PLANS\ 12_BEARINGDET.DGN 08-18-2013

STATE PROJECT NUMBER

2265 - 08 - 70



SECTION THRU ELASTOMERIC BEARING



CLEARANCE DIAGRAM AT ABUTMENTS

BEARING NOTES

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, PRECAST CONCRETE BEARING BLOCKS, EPOXY ANCHORS, ¼" GROUT, ANCHOR BOLTS, STEEL PLATES, AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED B-40-438", EACH.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS FOR BEARINGS SHALL BE THREADED 3", PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 2'-3" FOR 1" DIA. BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + PRECAST CONCRETE BLOCK THICKNESS + 2¼", ABOVE TOP OF CONCRETE.

PROVIDE ⅛" THICK BEARING PAD SAME SIZE AS MASONRY PLATE FOR BEARINGS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS C.

NEW ELASTOMERIC BEARINGS TO BE PLACED AT ALL GIRDERS ON SOUTH AND NORTH ABUTMENT.

BURN EXISTING ANCHOR BOLTS OFF FLUSH WITH BEAM SEAT.

FRONT ELEVATION

ANCHOR BOLT NOTES

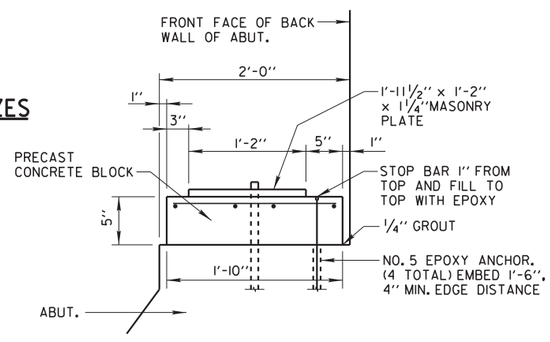
USE MASONRY PLATE WITH (2) - 1" DIA. x 2'-3" LONG ANCHOR BOLTS.

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	ǂ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1½"	△ 5/16"
OVER 1½" TO 2¼"	△ ⅜"
OVER 2¼" TO 6"	△ ½"

ǂ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

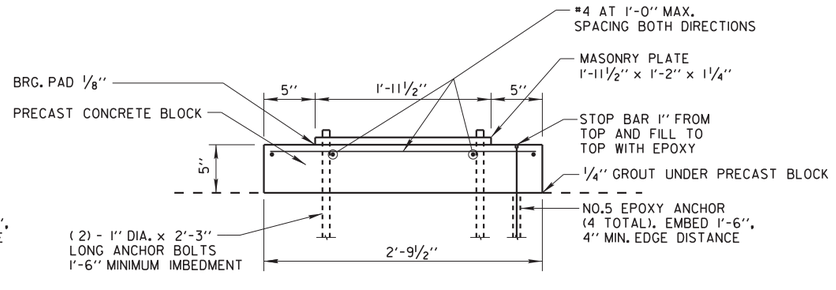
△ MIN. PASS SIZE IS 5/16"



PRECAST CONCRETE BLOCK DETAIL

(SIDE VIEW)

ANCHOR BOLT PLAN AT EXIST. GIRDERS



PRECAST CONCRETE BLOCK DETAIL

(ELEVATION VIEW)

TAPERED TOP PLATE THICKNESS

LOCATION	THICKNESS AT BACK EDGE	THICKNESS AT FRONT EDGE
S. ABUT.	1 ¼"	1 ⅜"
N. ABUT.	1 ¼"	1 ⅜"

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. R.V.K. | PLANS CK'D. J.P.H. R.V.K.

ELASTOMERIC BEARINGS REPLACEMENT DETAILS

SHEET 462 OF 37

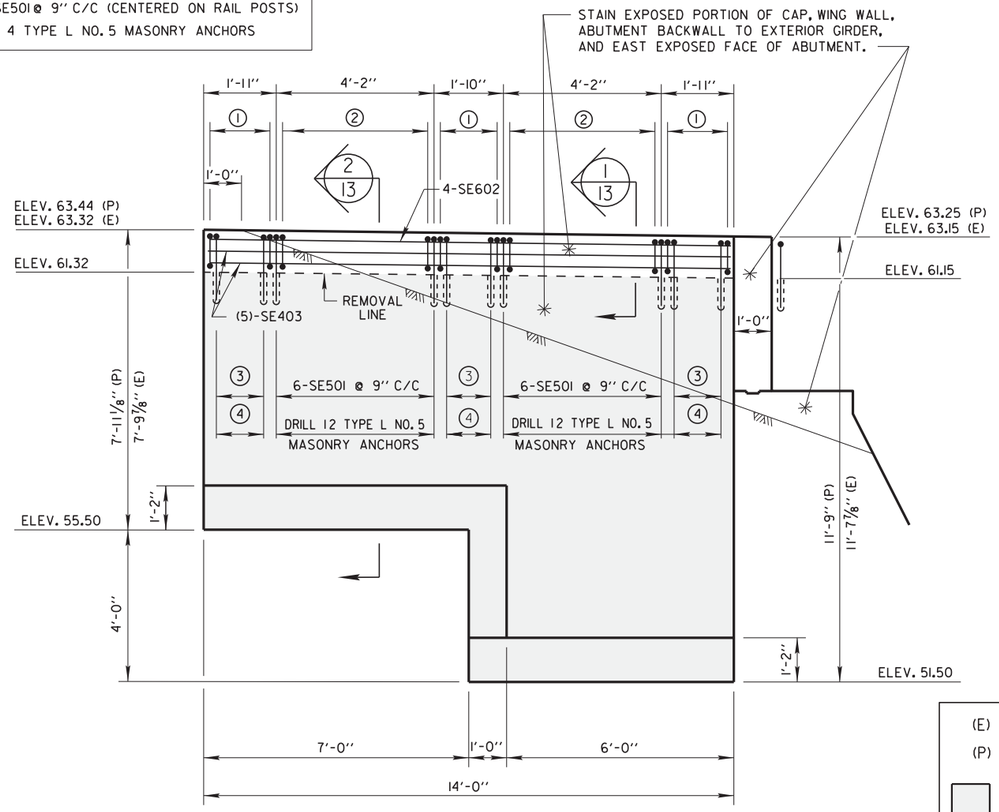
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STATE PROJECT NUMBER

2265 - 08 - 70

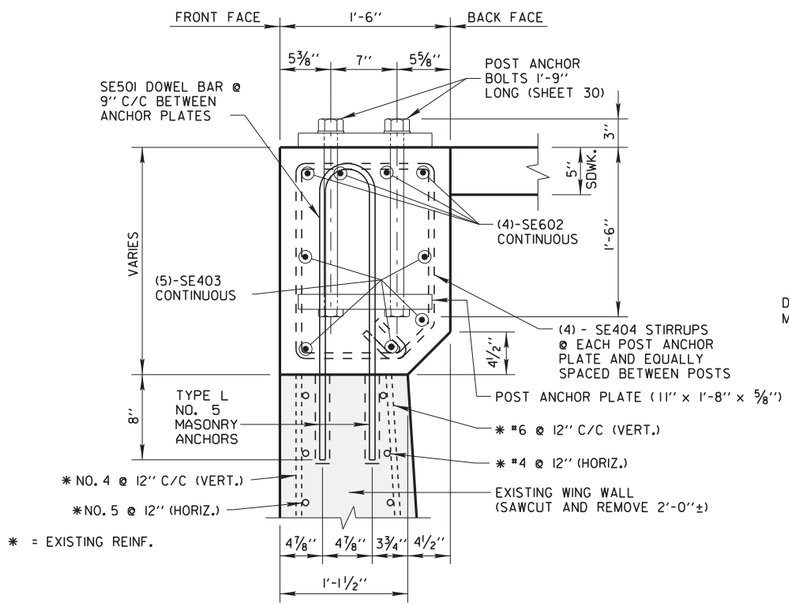
(1)—4 - SE404 @ 2'' EACH SIDE OF POST
(2)—7 - SE404 EQUALLY SPACED
(3)—2 - SE501 @ 9'' C/C (CENTERED ON RAIL POSTS)
(4)—DRILL 4 TYPE L NO. 5 MASONRY ANCHORS



PROPOSED ELEVATION WING WALL NO. 1 (S.E.)

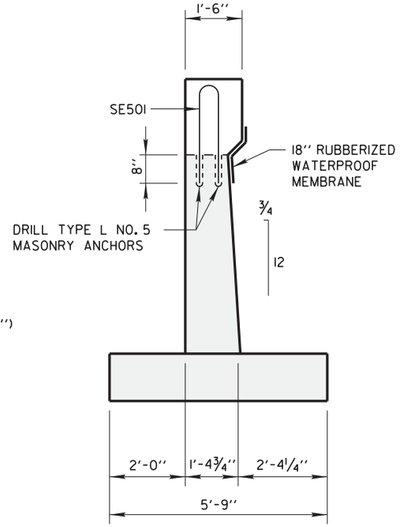
(LOOKING WEST)

(E) EXISTING ELEV.
(P) PROPOSED ELEV.
EXISTING CONCRETE
NEW CONCRETE



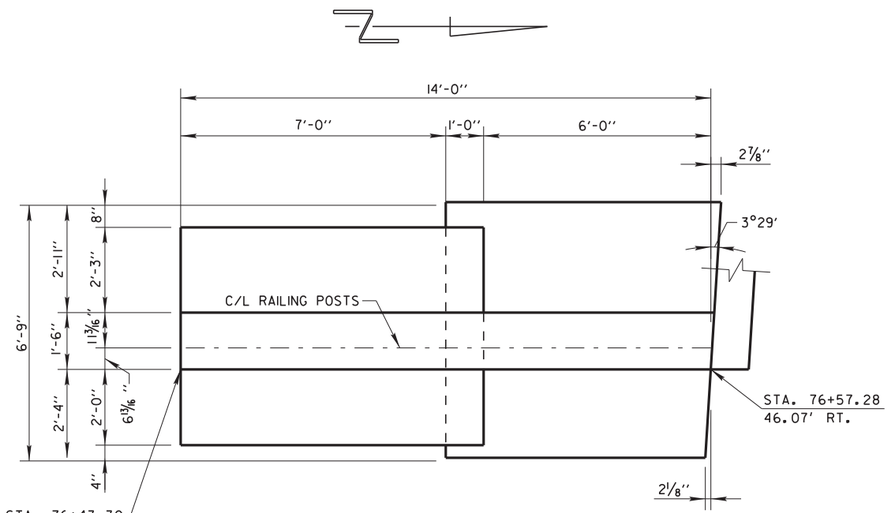
SECTION 1/13

NOTE: RUBBERIZED MEMBRANE NOT SHOWN FOR CLARITY

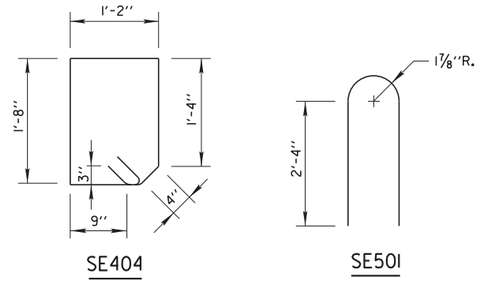


SECTION 2/13

NOTE:
REMOVE TOP OF WALL TO SOUND CONCRETE.
ESTIMATED QUANTITIES (SHT. 2) ASSUME 2'-0'' REMOVAL DEPTH.



PLAN VIEW PROPOSED WING WALL NO. 1 (S.E.)



BILL OF BARS - WING WALL NO. 1 (S.E.)

BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
SE501	X	18	5'-4''	X		DOWEL
SE602	X	4	13'-8''			TOP HORIZONTAL CAP
SE403	X	5	13'-8''			FRONT AND BACK FACE CAP
SE404	X	26	5'-4''	X		STIRRUP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. R.V.K. | PLANS CK'D. J.P.H. R.V.K.

WING WALL NO. 1 (S.E.) PLAN, SECTIONS, AND ELEVATION

SHEET 463 OF 37

8

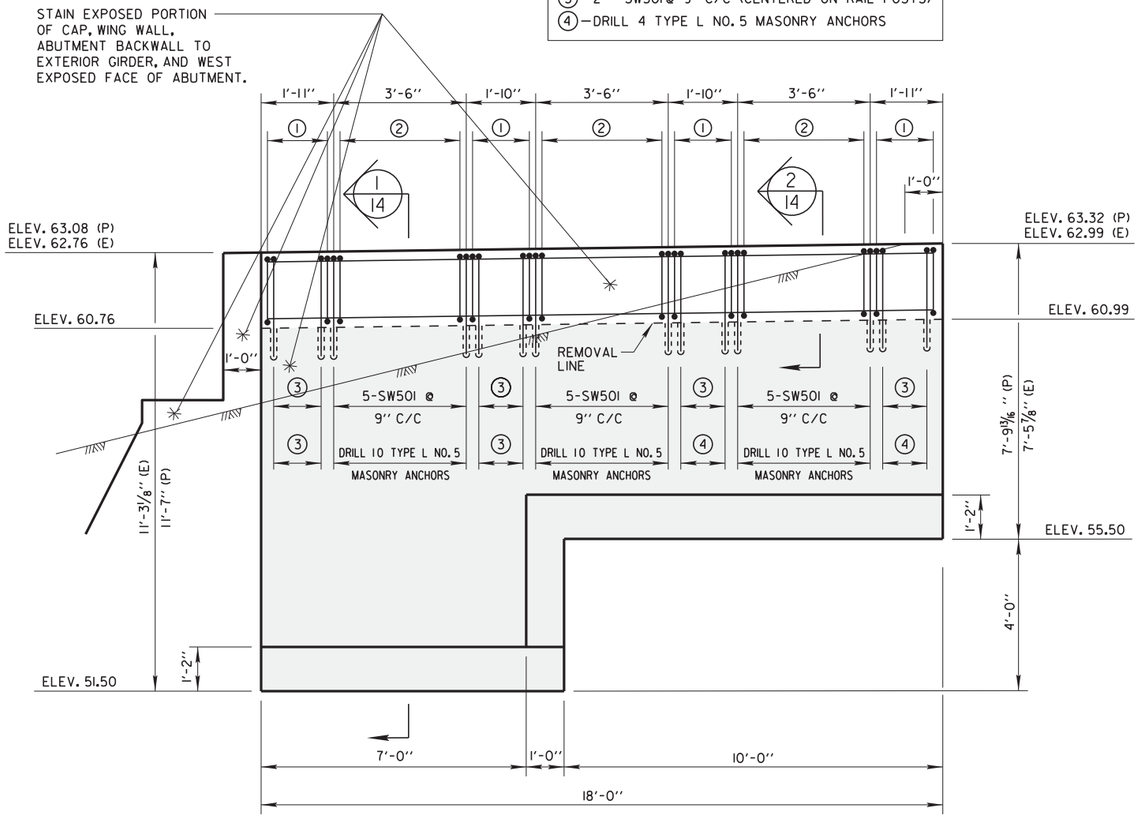
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W:\STR\B022\PLANS\ 14_WINGWALL2.DGN 08-22-2013

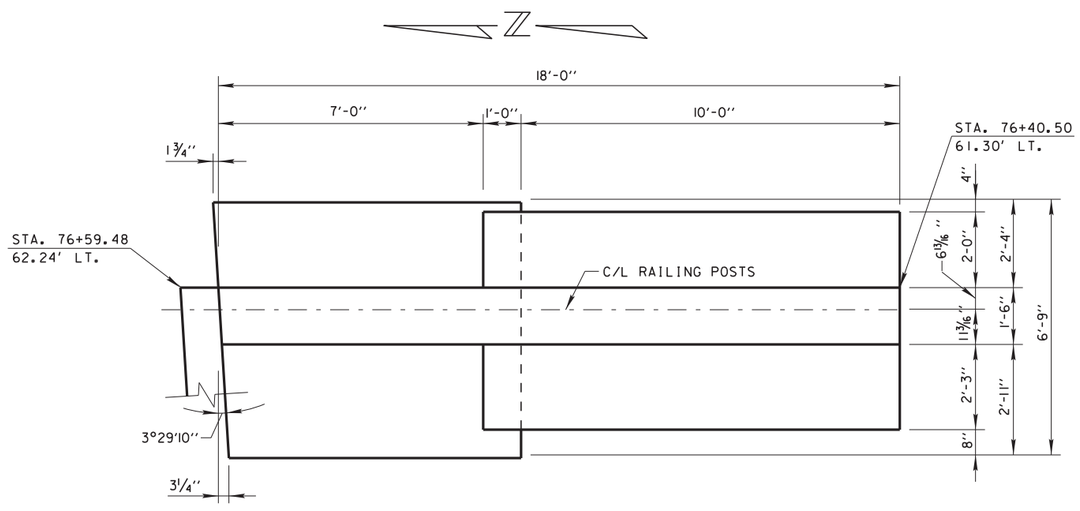
STATE PROJECT NUMBER

2265 - 08 - 70

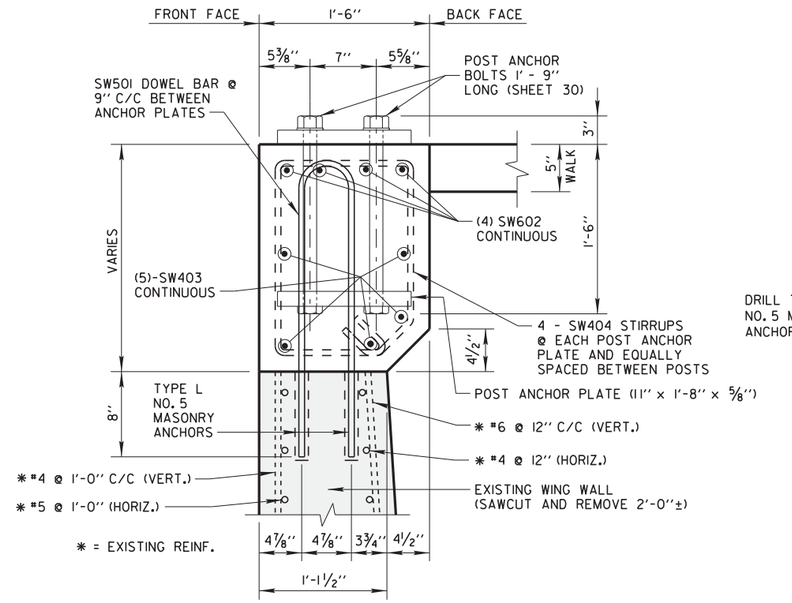
① — 4 - SW404 @ 2'' EACH SIDE OF POST
② — 7 - SW404 EQUALLY SPACED
③ — 2 - SW501 @ 9'' C/C (CENTERED ON RAIL POSTS)
④ — DRILL 4 TYPE L NO. 5 MASONRY ANCHORS



PROPOSED ELEVATION WING WALL NO. 2 (S.W.)

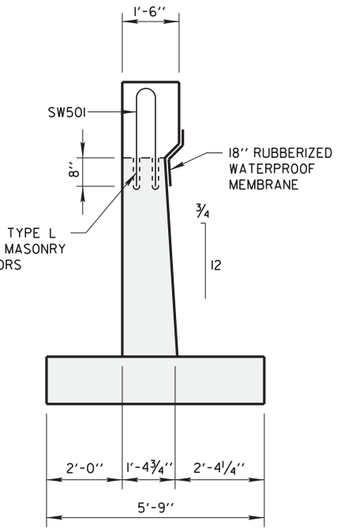


PLAN VIEW PROPOSED WING WALL NO. 2 (S.W.)



SECTION 2/14

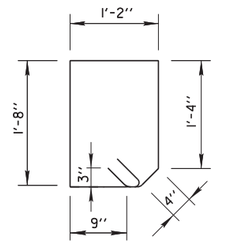
NOTE: RUBBERIZED MEMBRANE NOT SHOWN FOR CLARITY



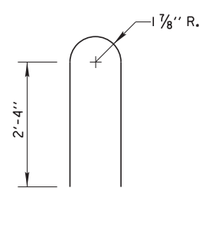
SECTION 1/14

NOTE:
REMOVE TOP OF WALL TO SOUND CONCRETE. ESTIMATED QUANTITIES (SHT. 2) ASSUME 2'-0'' REMOVAL DEPTH.

(E) EXISTING ELEV.
(P) PROPOSED ELEV.
EXISTING CONCRETE
NEW CONCRETE



SW404



SW501

BILL OF BARS - WING WALL NO. 2 (S.W.)

BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
SW501	×	23	5'-4''	×		DOWEL
SW602	×	4	17'-8''			TOP HORIZONTAL CAP
SW403	×	5	17'-8''			FRONT AND BACK FACE CAP
SW404	×	37	5'-4''	×		STIRRUP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. R.V.K. | PLANS CK'D. J.P.H. R.V.K.

WING WALL NO. 2 (S.W.) PLAN, SECTIONS AND ELEVATION

SHEET 14 OF 37
464

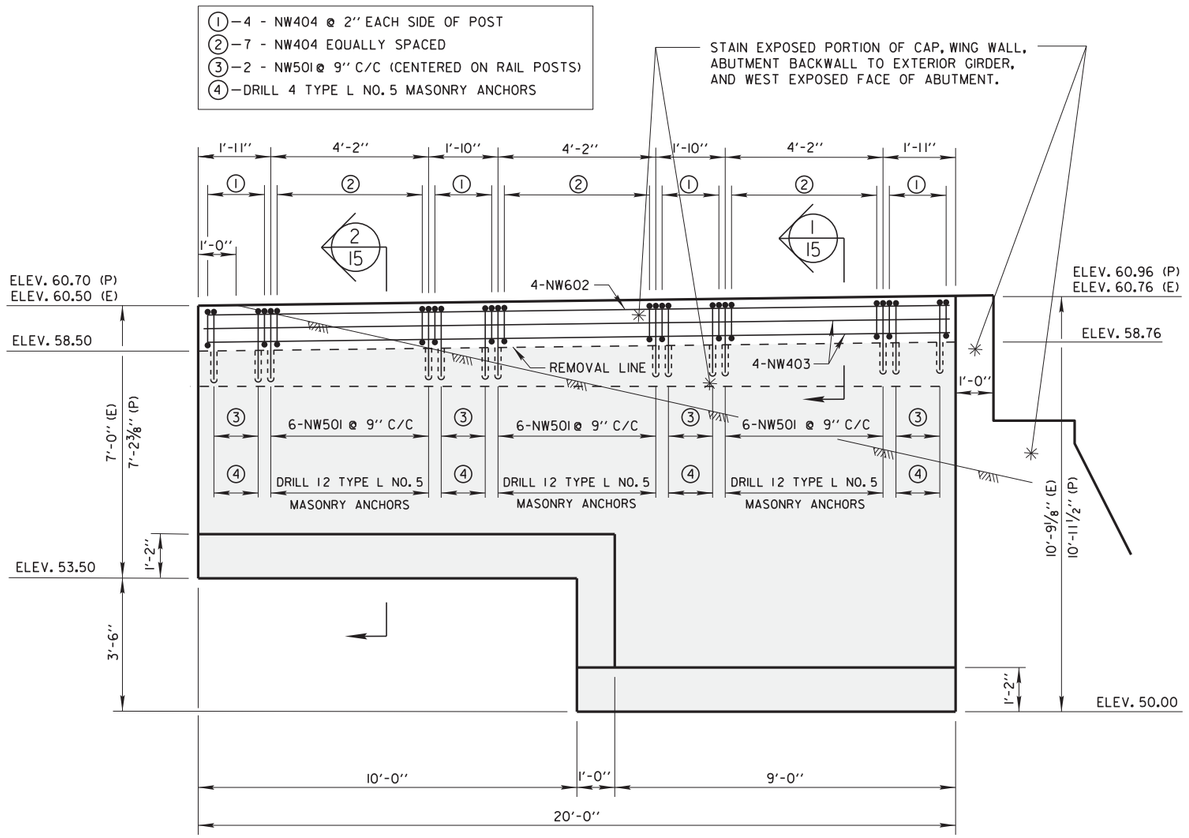
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W:\STR\B022\PLANS\ 15_WINGWALL3.DGN 08-22-2013

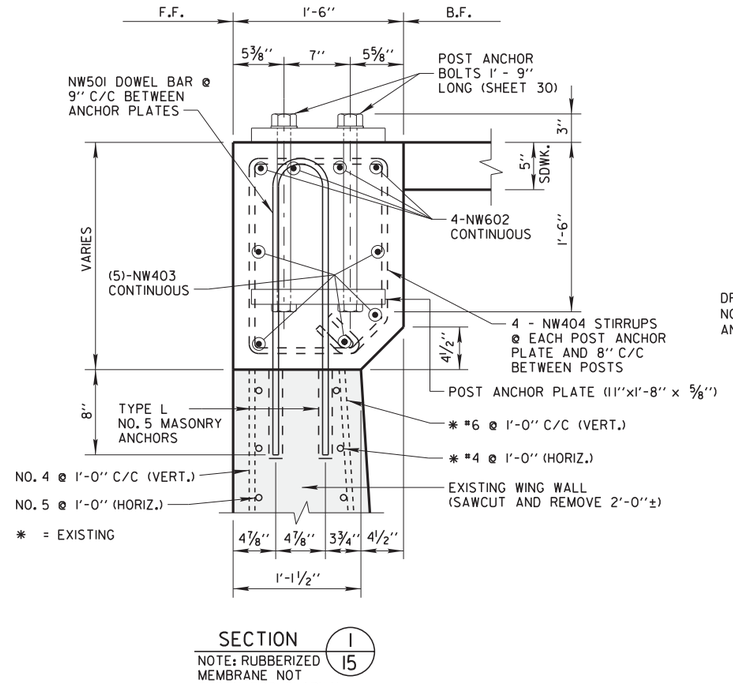
STATE PROJECT NUMBER

2265 - 08 - 70



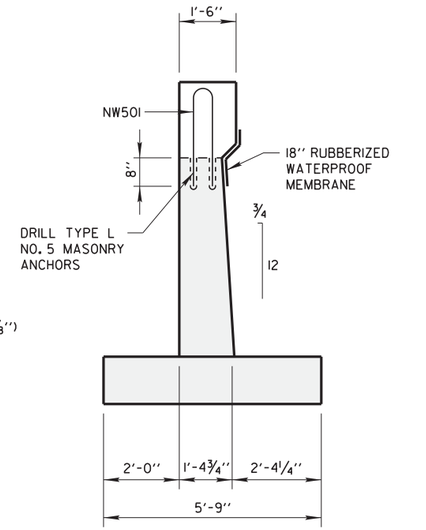
PROPOSED ELEVATION WING WALL NO. 3 (N.W.)

(LOOKING EAST AT OUTSIDE FACE)



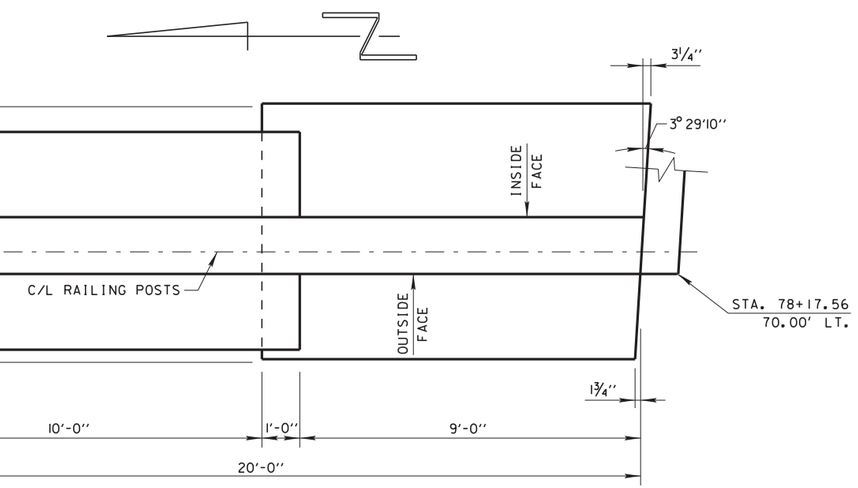
SECTION 1/15

NOTE: RUBBERIZED MEMBRANE NOT SHOWN FOR CLARITY



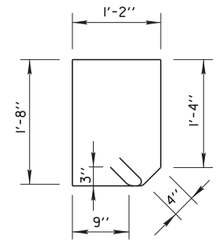
SECTION 2/15

NOTE:
REMOVE TOP OF WALL TO SOUND CONCRETE.
ESTIMATED QUANTITIES (SHT. 2) ASSUME 2'-0'' REMOVAL DEPTH.

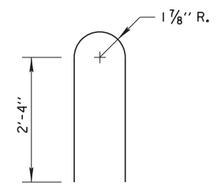


PLAN VIEW PROPOSED WING WALL NO. 3 (N.W.)

(E) EXISTING ELEV.
(P) PROPOSED ELEV.
EXISTING CONCRETE
NEW CONCRETE



NW404



NW501

BILL OF BARS - WING WALL NO. 3 (N.W.)

BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
NW501	×	26	5'-4''	×		DOWEL
NW602	×	4	19'-8''			TOP HORIZ. CAP
NW403	×	5	19'-8''			F.F AND B.F. CAP
NW404	×	37	5'-4''	×		STIRRUP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. R.V.K. | PLANS CK'D. J.P.H. R.V.K.

WING WALL NO. 3 (N.W.) PLAN, SECTIONS AND ELEVATION

SHEET 15 OF 37

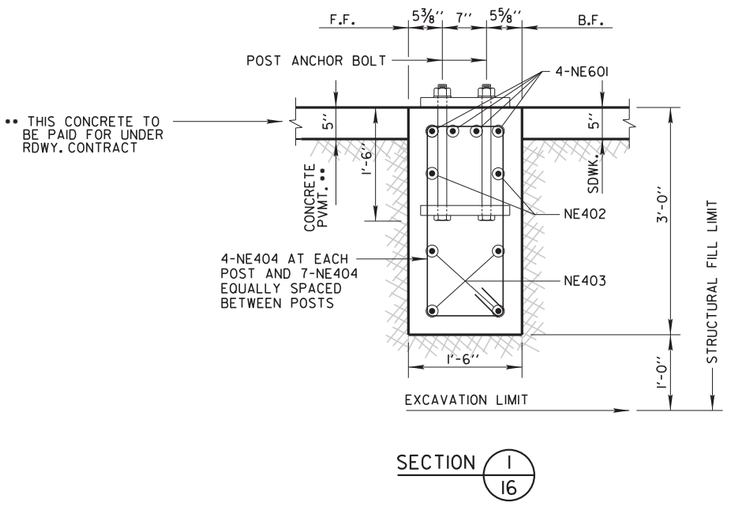
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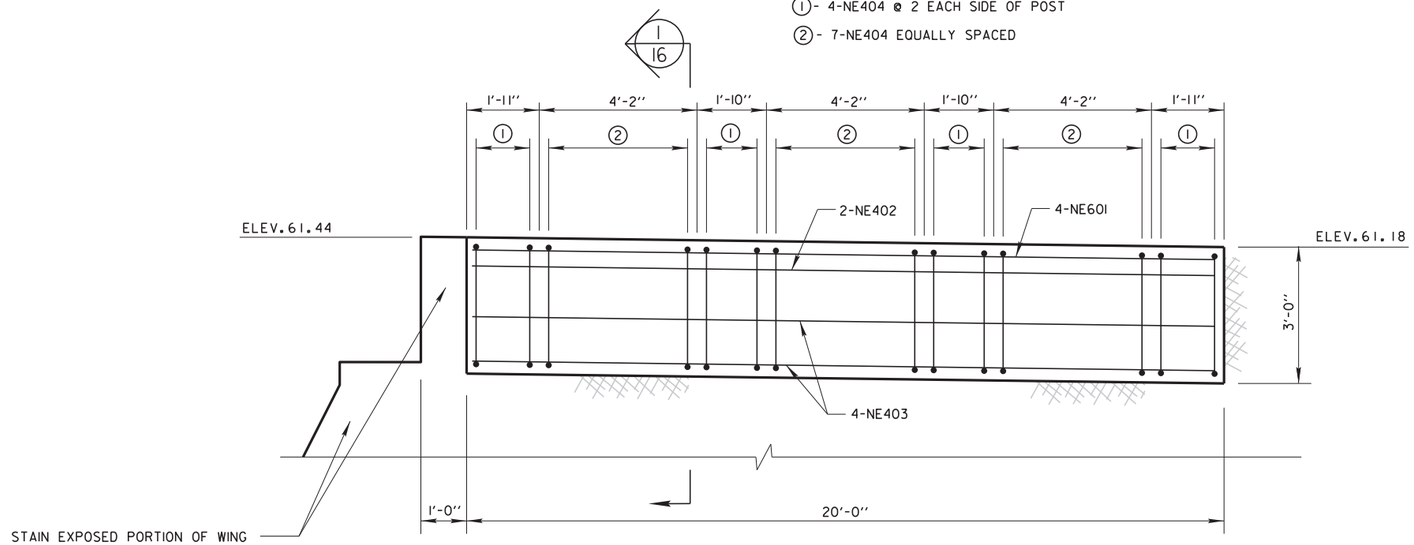
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STATE PROJECT NUMBER

2265 - 08 - 70

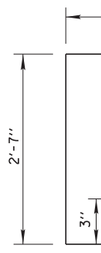


SECTION 1/16

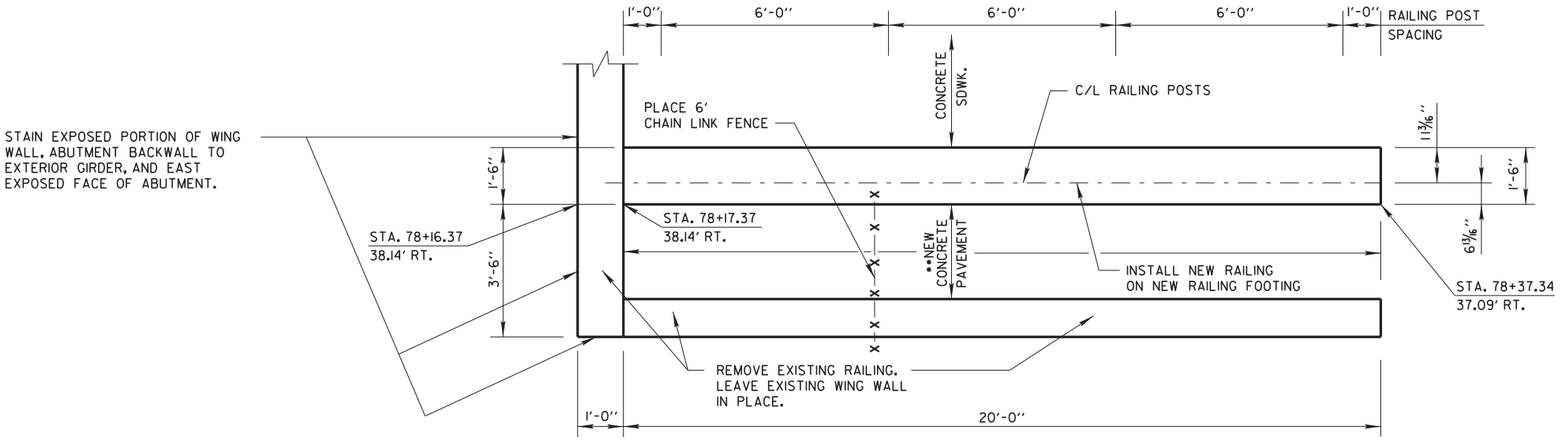


ELEVATION PROPOSED N.E. RAILING FOOTING

(LOOKING WEST)



NE404



PLAN VIEW PROPOSED N.E. RAILING FOOTING

BILL OF BARS - PROPOSED N.E. PARAPET WALL

BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
NE601	X	4	19'-8"			TOP HORIZ. - B.F. & F.F.
NE402	X	2	19'-8"			MIDDLE HORIZ. - B.F. & F.F.
NE403	X	4	19'-8"			BOTTOM HORIZ. - B.F. & F.F.
NE404	X	37	8'-0"	X		STIRRUP IN RAILING FOOTING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

APPROACH RAILING FOOTING (N.E.) PLAN, SECTION & ELEVATION

SHEET 16 OF 37

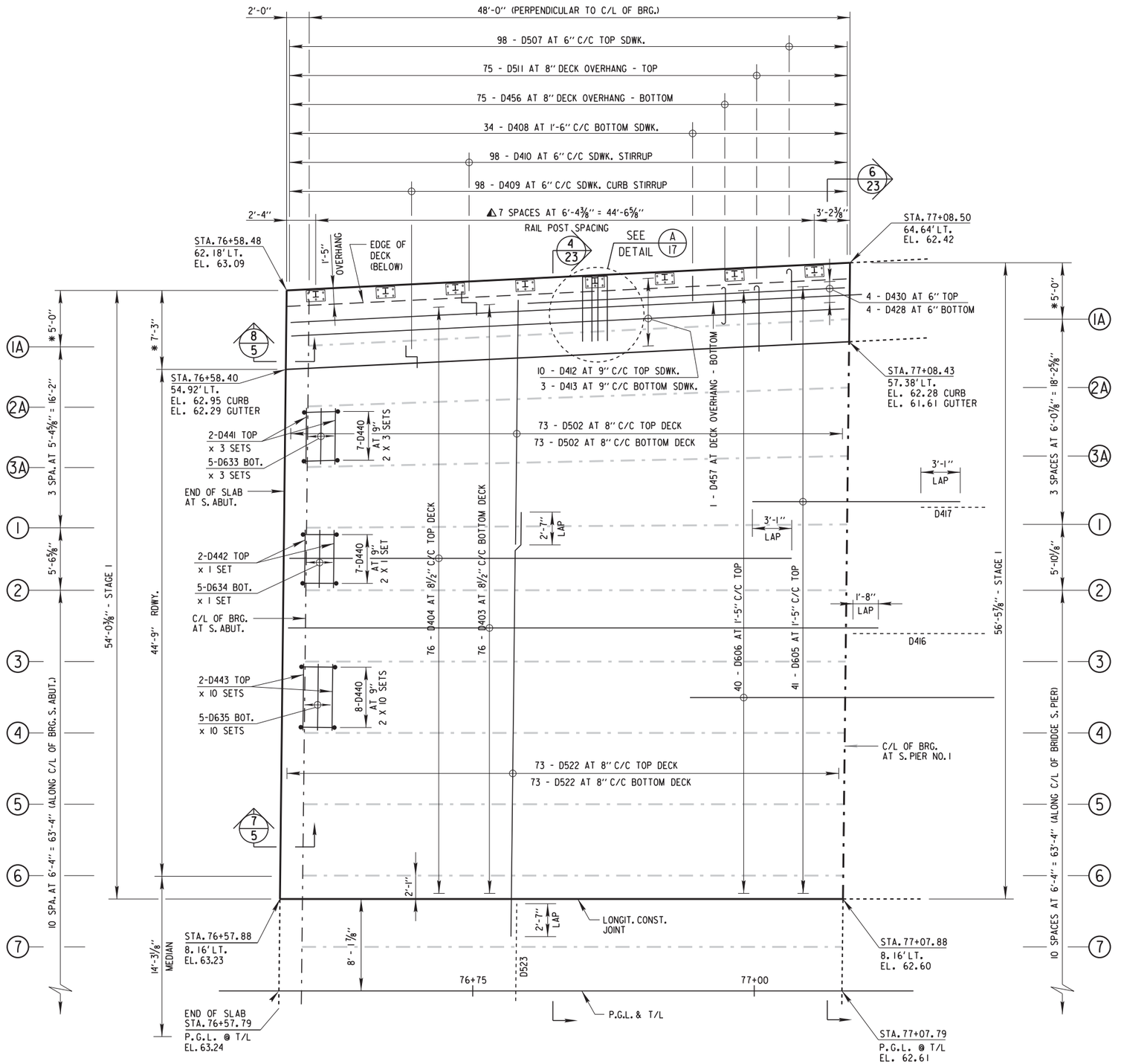
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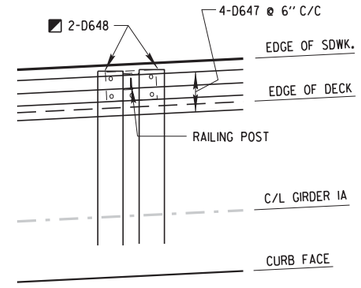
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W:\STR\B022\PLANS\ I7_SOUTHDECK.DGN 08-21-2013

STATE PROJECT NUMBER

2265 - 08 - 70





DETAIL A/17
TYPICAL AT ALL RAILING POSTS ⚠

NOTES

PLACE D605 BARS ALTERNATELY WITH D606 BARS TO ACHIEVE NO. 6 BARS TOP SPACED AT 8½" C/C. STAGGER D502 TOP WITH D502 BOTTOM. SIMILARLY, STAGGER D522 TOP WITH D522 BOTTOM.

REFER TO SHEET 28 FOR DEFLECTION JOINT DETAILS.

* INDICATES DIMENSION PERPENDICULAR TO EDGE OF DECK

⚠ SEE SHEET 30 FOR TYPE M RAILING POST ANCHORAGE DETAILS

◩ TIE TO TOP SDWK. BARS

DECK PLAN

SOUTH SPAN - STAGE I

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

DECK PLAN SOUTH SPAN STAGE I

SHEET 17 OF 37

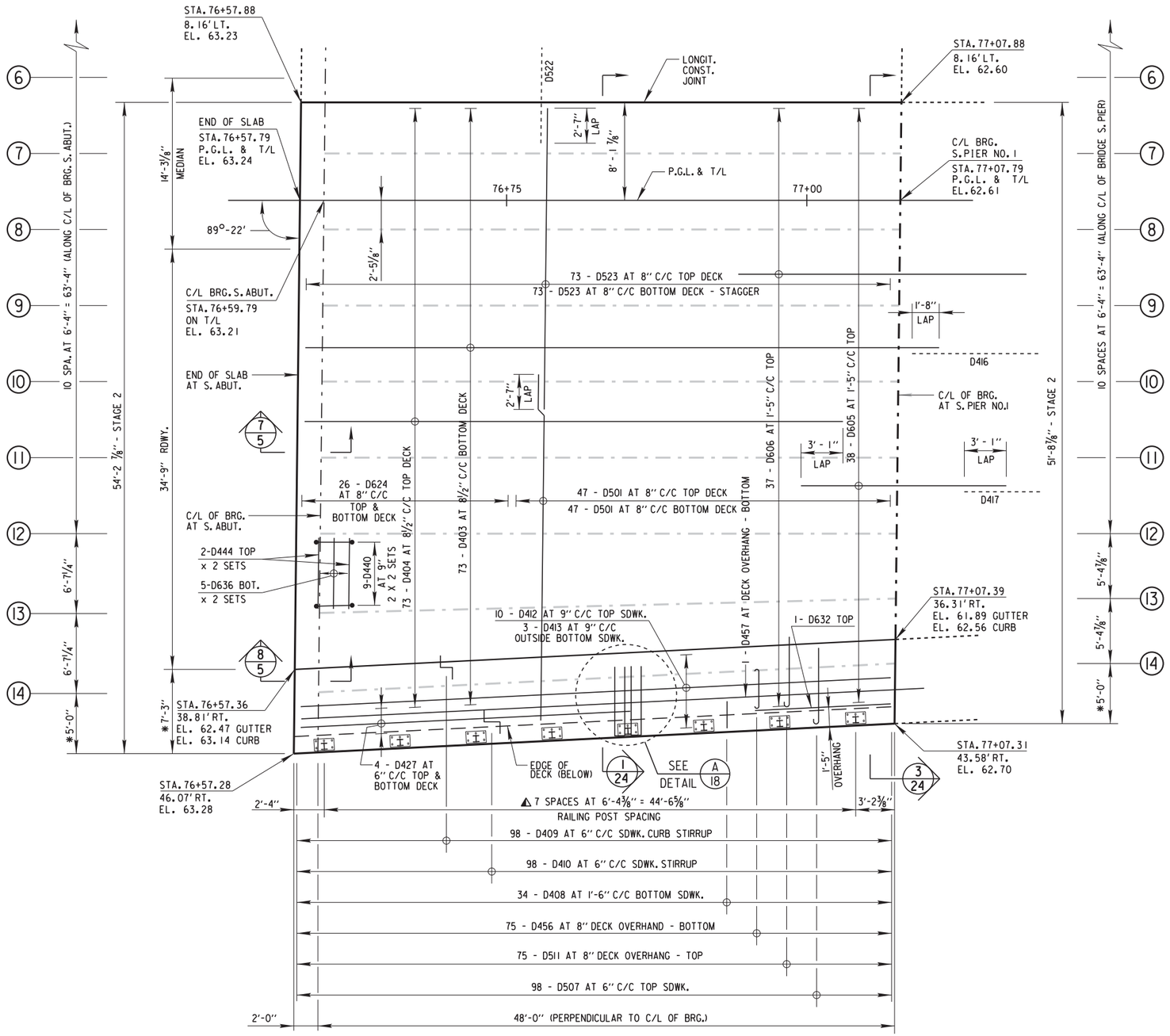
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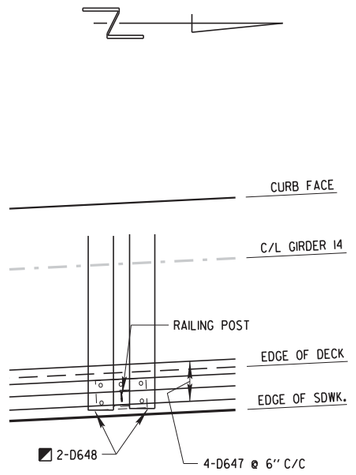
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W:\STR\B022\N\PLANS\ 18_SOUTHDECK2.DGN 08-21-2013

STATE PROJECT NUMBER

2265 - 08 - 70





DETAIL A/18

⚠ TYPICAL AT ALL RAILING POSTS

NOTES

PLACE D605 BARS ALTERNATELY WITH D606 BARS TO ACHIEVE #6 BARS TOP SPACED AT 8½" C/C. STAGGER D501 TOP WITH D501 BOTTOM. SIMILARLY, STAGGER D523 TOP WITH D523 BOTTOM.

REFER TO SHEET 28 FOR DEFLECTION JOINT DETAILS.

* INDICATES DIMENSION PERPENDICULAR TO EDGE OF DECK

⚠ SEE SHEET 30 FOR TYPE M RAILING POST ANCHORAGE DETAILS

◩ TIE TO TOP SDWK. BARS

DECK PLAN

SOUTH SPAN - STAGE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

DECK PLAN SOUTH SPAN STAGE 2

SHEET 18 OF 37

468

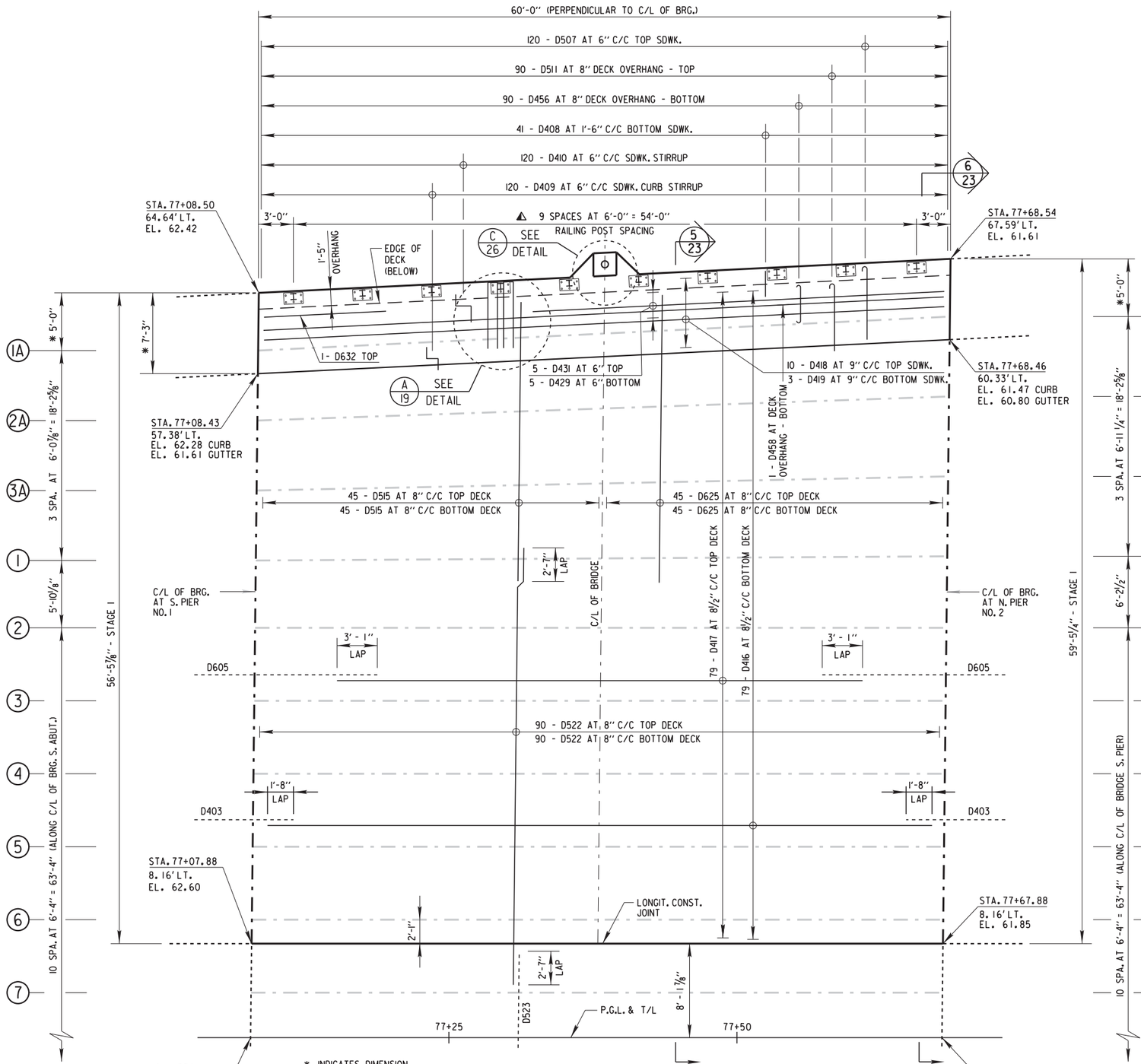
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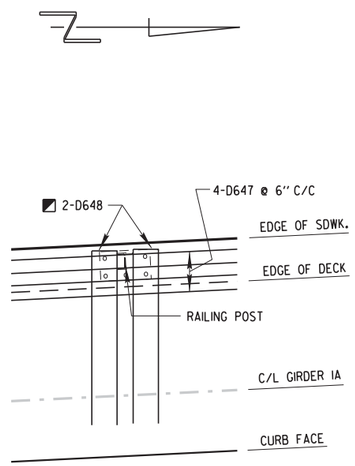
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W:\STR\B022\N\PLANS\ 19.MIDDLEDECK.DGN 08-21-2013

STATE PROJECT NUMBER

2265 - 08 - 70





DETAIL A/19

▲ TYPICAL AT ALL RAILING POSTS

NOTES

PLACE D605 BARS ALTERNATELY WITH D606
BARS TO ACHIEVE #6 BARS SPACED AT 8½" C/C.
STAGGER D515 TOP WITH D515 BOTTOM.
STAGGER D522 TOP WITH D522 BOTTOM.
STAGGER D625 TOP WITH D625 BOTTOM.

REFER TO SHEET 28 FOR DEFLECTION JOINT DETAILS.

* INDICATES DIMENSION PERPENDICULAR TO EDGE OF DECK

▲ SEE SHEET 30 FOR TYPE M RAILING POST ANCHORAGE DETAILS

◪ TIE TO TOP WALK BARS

DECK PLAN

MIDDLE SPAN - STAGE I

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.D.H. R.V.K.

DECK PLAN
MIDDLE SPAN
STAGE I

SHEET 469 OF 37

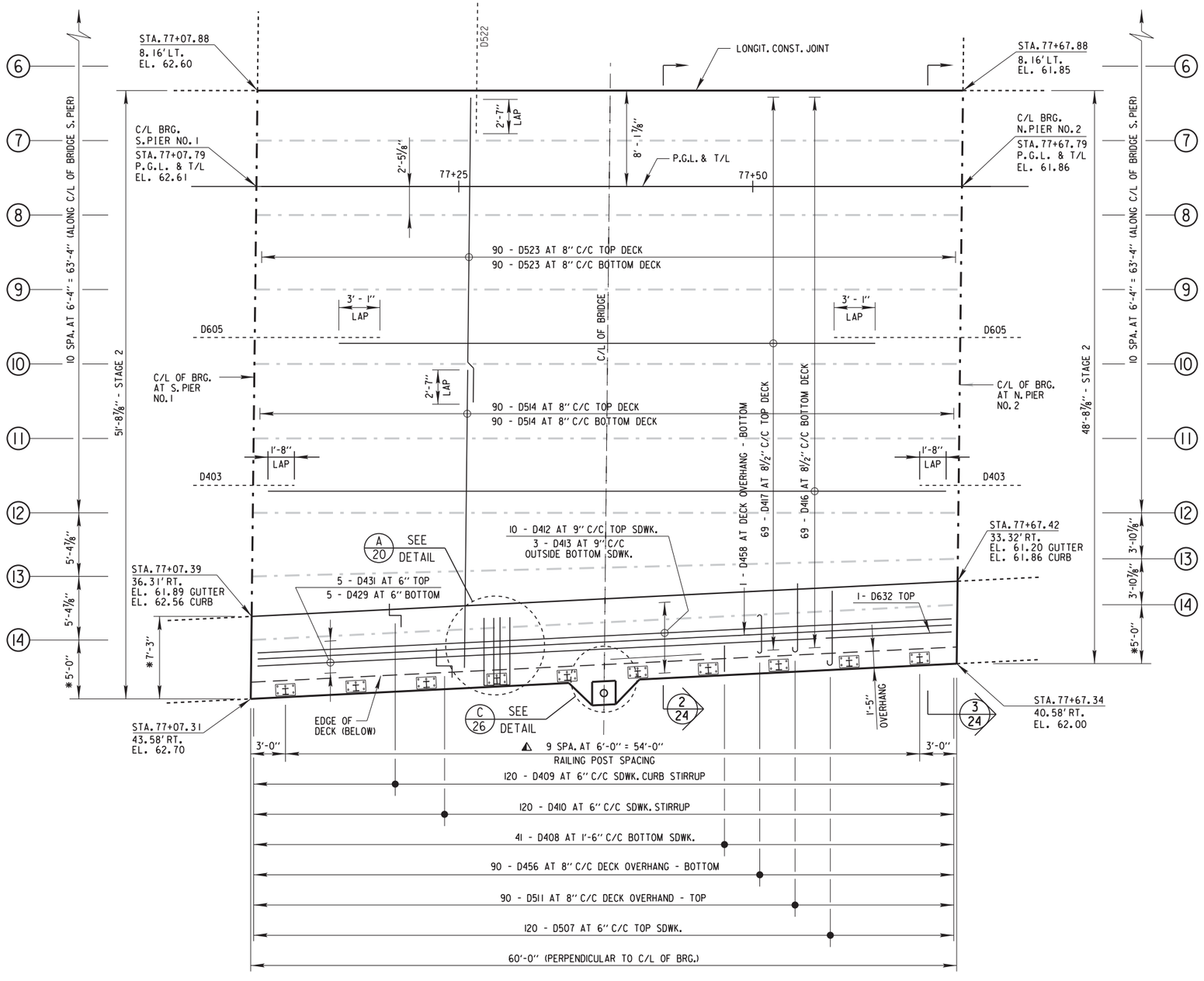
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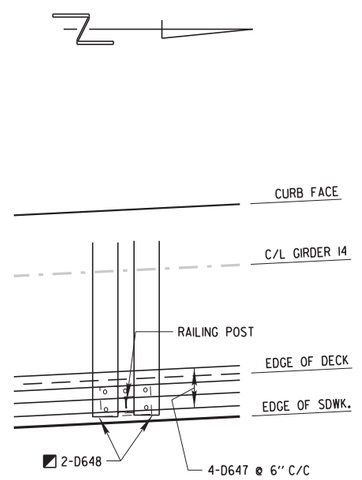
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STATE PROJECT NUMBER

2265 - 08 - 70





DETAIL A 20

△ TYPICAL AT ALL RAILING POSTS

NOTES

PLACE D605 BARS ALTERNATELY WITH D606 BARS TO ACHIEVE *6 BARS TOP SPACED AT 8½" C/C. STAGGER D514 TOP WITH D514 BOTTOM. SIMILARLY, STAGGER D523 TOP WITH D523 BOTTOM.

REFER TO SHEET 28 FOR DEFLECTION JOINT DETAILS.

* INDICATES DIMENSION PERPENDICULAR TO EDGE OF DECK

△ SEE SHEET 30 FOR TYPE M RAILING POST ANCHORAGE DETAILS

◪ TIE TO TOP SDWK. BARS

DECK PLAN

MIDDLE SPAN - STAGE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

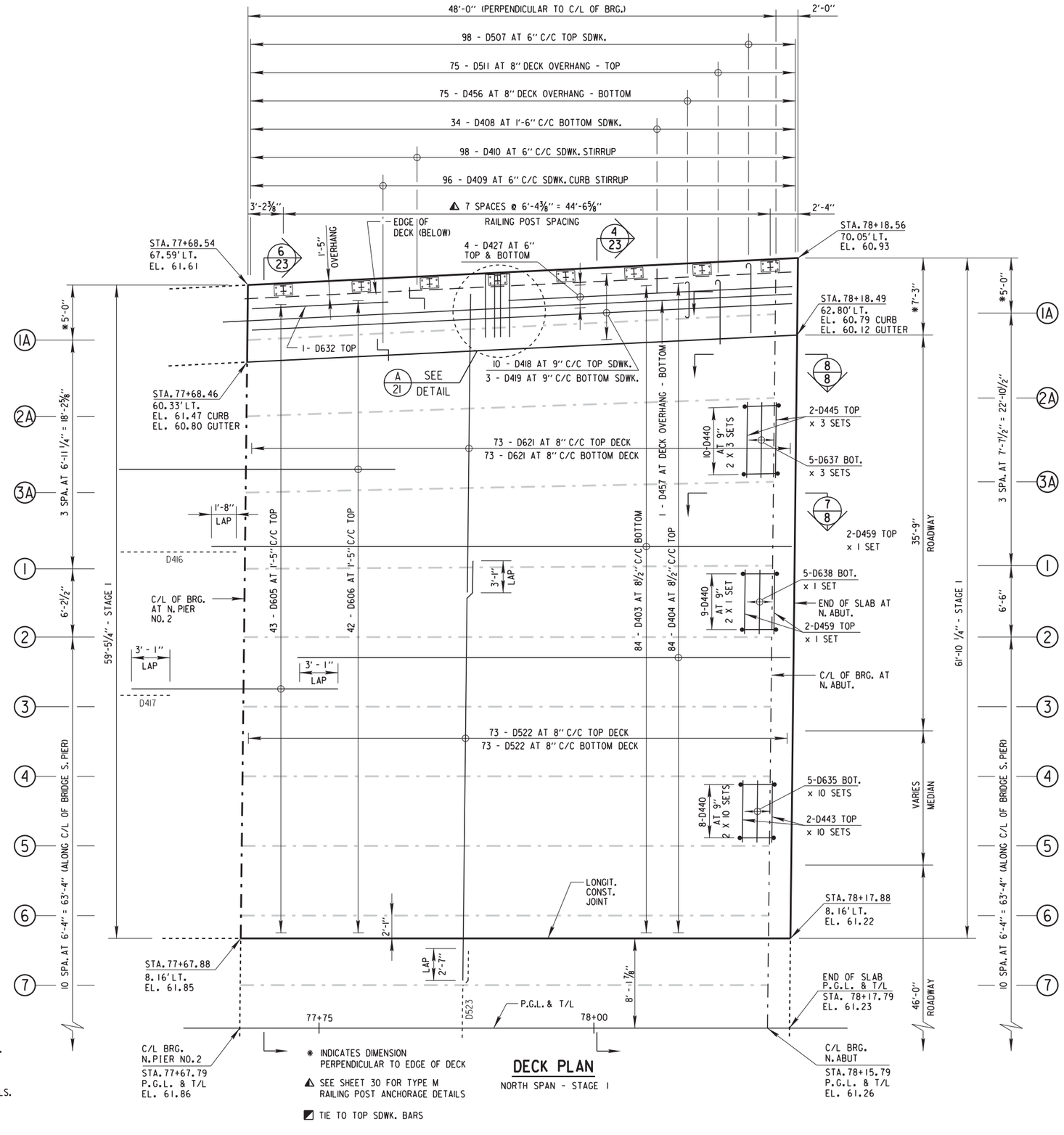
DECK PLAN
MIDDLE SPAN
STAGE 2

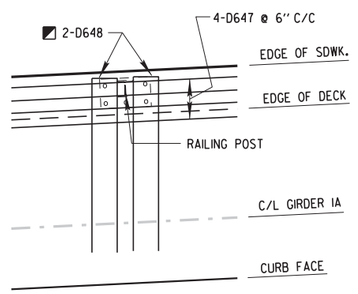
SHEET 470 OF 37

W:\STR\D022I\PLANS\ 2L.NORTHDECK1.DGN 08-21-2013

STATE PROJECT NUMBER

2265 - 08 - 70





DETAIL A 21

⚠ TYPICAL AT ALL RAILING POSTS

NOTES

PLACE D605 BARS ALTERNATELY WITH D606 BARS TO ACHIEVE #6 BARS TOP SPACED AT 8½" C/C. STAGGER D522 TOP WITH D522 BOTTOM. SIMILARLY, STAGGER D621 TOP WITH D621 BOTTOM.

REFER TO SHEET 28 FOR DEFLECTION JOINT DETAILS.

* INDICATES DIMENSION PERPENDICULAR TO EDGE OF DECK

⚠ SEE SHEET 30 FOR TYPE M RAILING POST ANCHORAGE DETAILS

◪ TIE TO TOP SDWK. BARS

DECK PLAN

NORTH SPAN - STAGE I

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

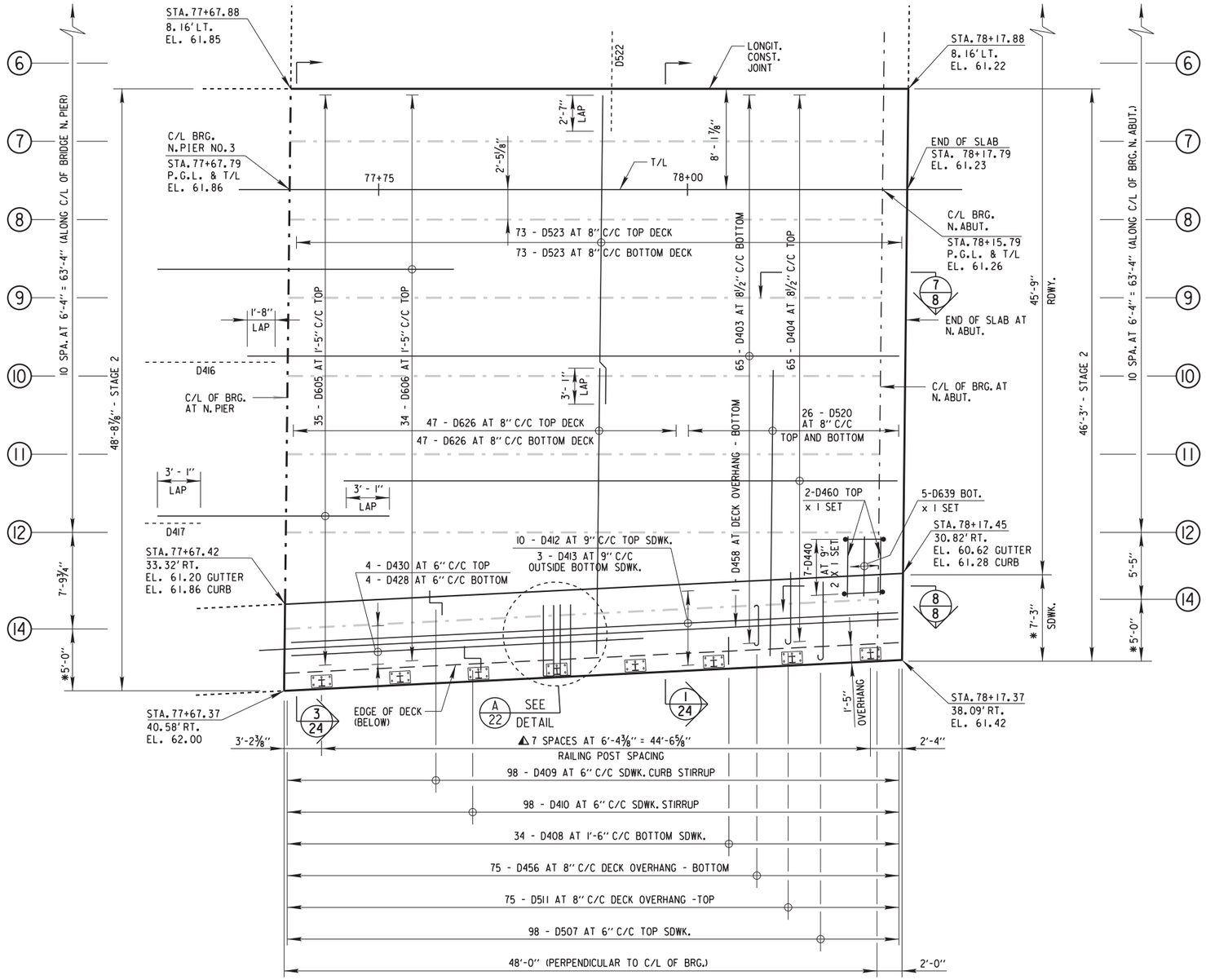
DECK PLAN NORTH SPAN STAGE I

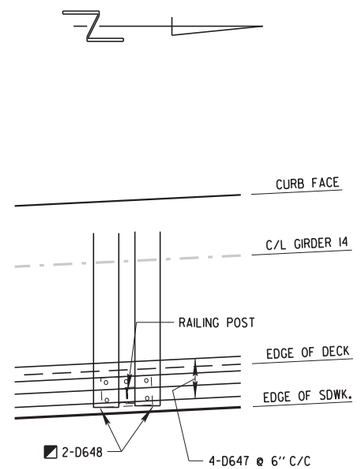
SHEET 471 OF 37

W:\STR\B022\PLANS\ 22_NORTHDECK2.DGN 08-22-2013

STATE PROJECT NUMBER

2265 - 08 - 70





DETAIL A/22

⚠ TYPICAL AT ALL RAILING POSTS

NOTES

PLACE D605 BARS ALTERNATELY WITH D606 BARS TO ACHIEVE #6 BARS TOP SPACED AT 8½" C/C. STAGGER D523 TOP WITH D523 BOTTOM. SIMILARLY, STAGGER D626 TOP WITH D626 BOTTOM.

REFER TO SHEET 28 FOR DEFLECTION JOINT DETAILS.

* INDICATES DIMENSION PERPENDICULAR TO EDGE OF DECK

⚠ SEE SHEET 30 FOR TYPE M RAILING POST ANCHORAGE DETAILS

◩ TIE TO TOP SDWK. BARS

DECK PLAN

NORTH SPAN - STAGE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

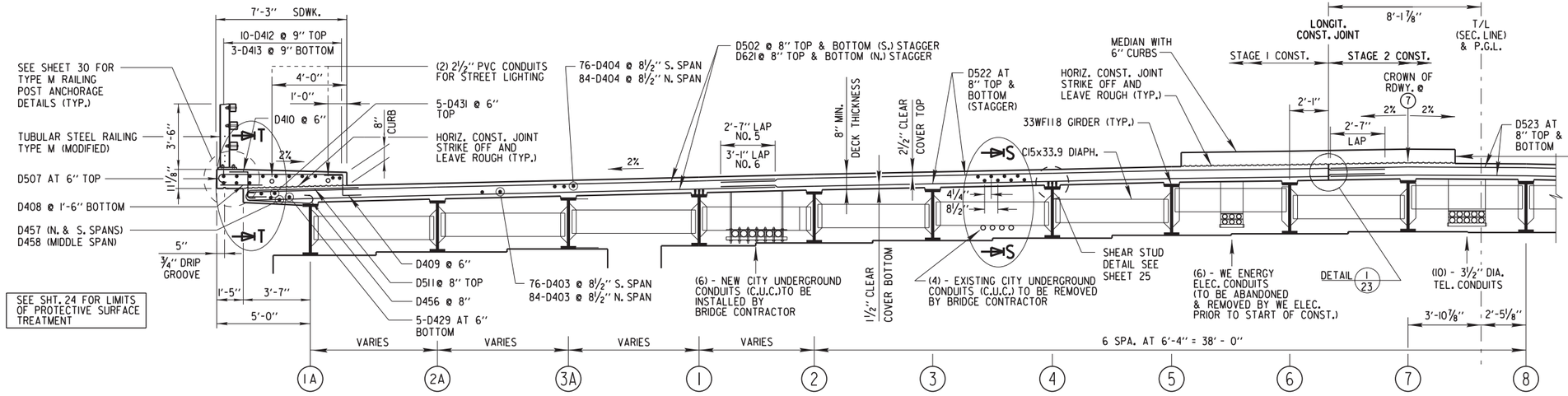
DECK PLAN NORTH SPAN STAGE 2

SHEET 22 OF 37

W:\STR\B022\PLANS\ 23_SECTION.DGN 08-20-2013

STATE PROJECT NUMBER

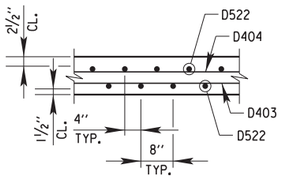
2265 - 08 - 70



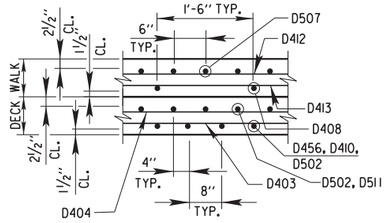
CROSS SECTION OF STAGE 1 END SPANS 4/17 4/21

LOOKING NORTH NEAR MIDSPAN

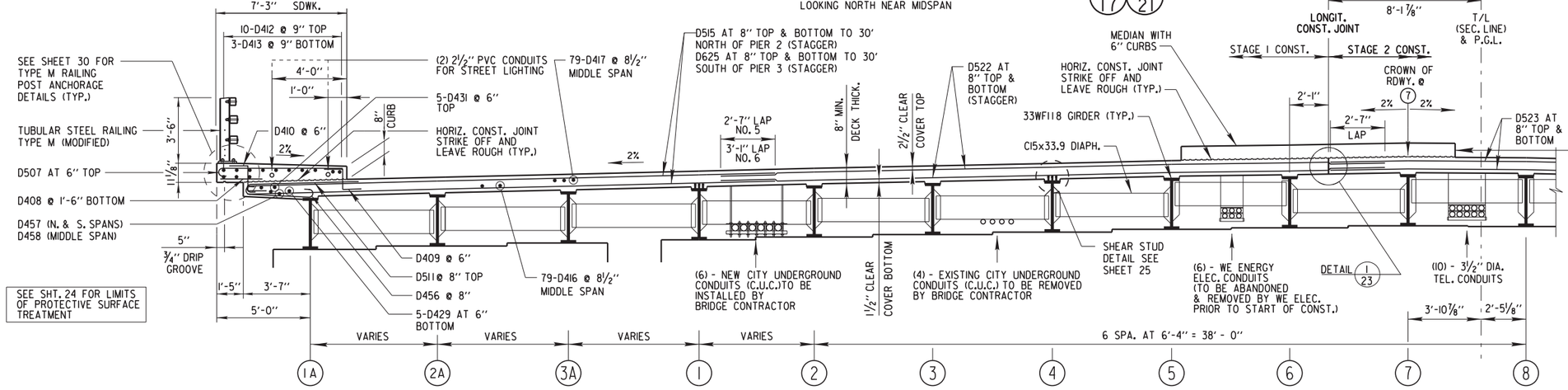
NOTE:
SEE SHEET 9 FOR MEDIAN REINFORCEMENT, STATIONING, AND OFFSETS.



SECTION S-S



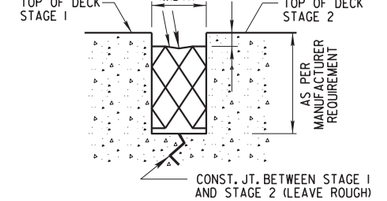
SECTION T-T



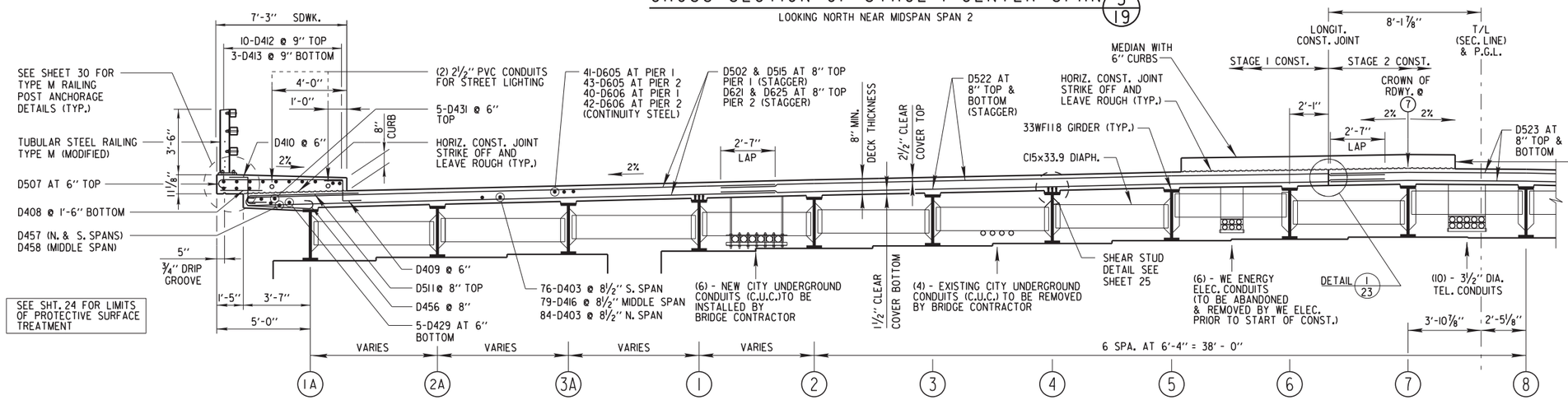
CROSS SECTION OF STAGE 1 CENTER SPAN 5/19

LOOKING NORTH NEAR MIDSPAN SPAN 2

NOTE:
SEE SHEET 9 FOR MEDIAN REINFORCEMENT, STATIONING, AND OFFSETS.



DETAIL I 23 I 24
PREFORMED COMPRESSION SEAL
BETWEEN STAGE 1 AND STAGE 2 DECK CONSTRUCTION



CROSS SECTION OF STAGE 1 ALL SPANS 6/17 6/19 6/21

LOOKING NORTH NEAR PIERS

NOTE:
SEE SHEET 9 FOR MEDIAN REINFORCEMENT, STATIONING, AND OFFSETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY	K.P.S.	PLANS CK'D.	J.P.H. R.V.K.

STAGE 1 CONSTRUCTION SUPERSTRUCTURE CROSS SECTIONS

SHEET 473 OF 37

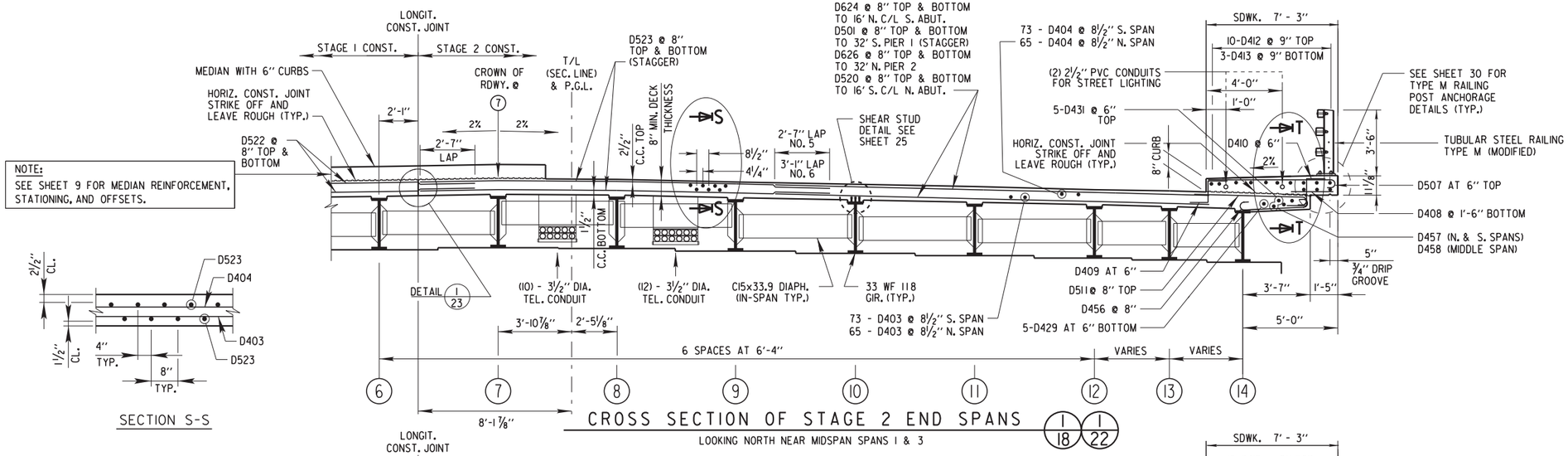
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W:\STR\B022N\PLANS\ 24_SECTION.DGN 08-22-2013

STATE PROJECT NUMBER

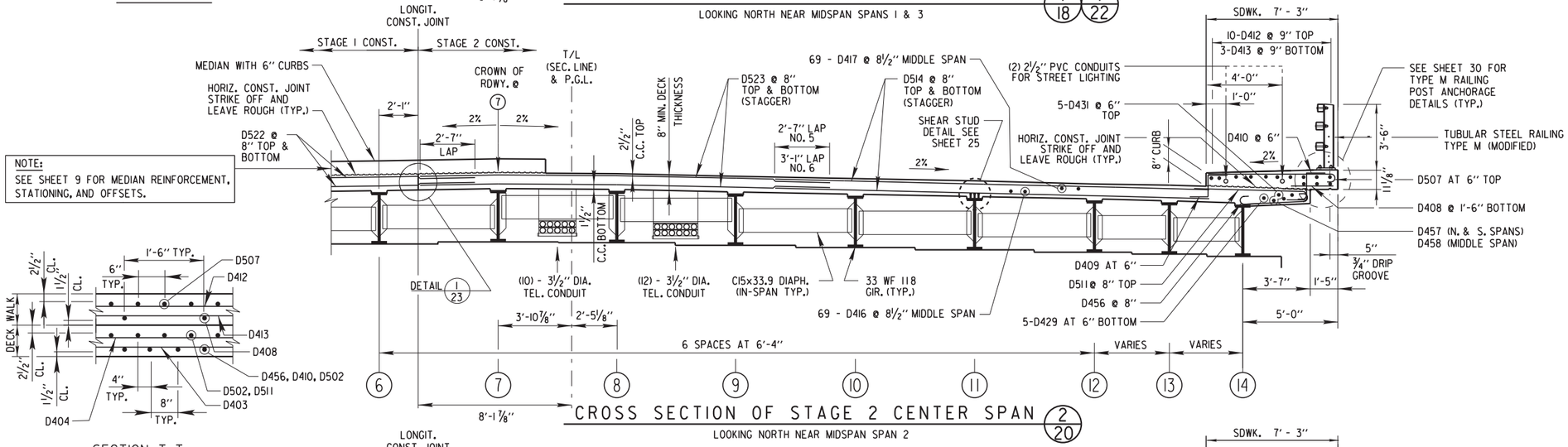
2265 - 08 - 70



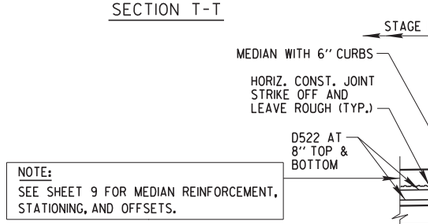
SECTION S-S

CROSS SECTION OF STAGE 2 END SPANS (1/18, 1/22)

LOOKING NORTH NEAR MIDSPAN SPANS 1 & 3

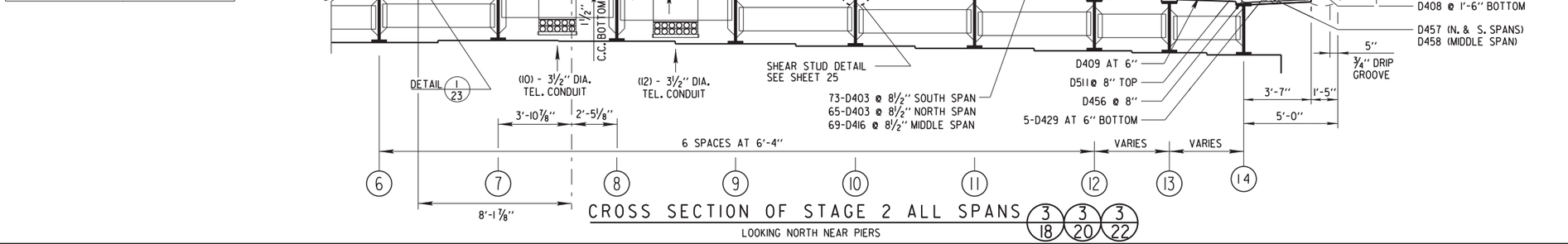


SECTION T-T



CROSS SECTION OF STAGE 2 CENTER SPAN (2/20)

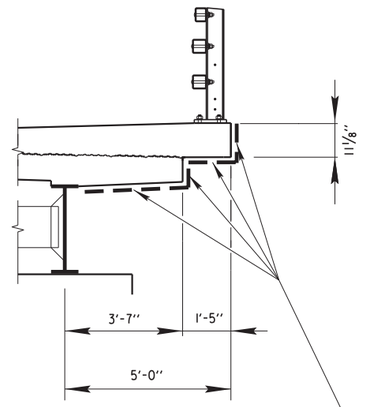
LOOKING NORTH NEAR MIDSPAN SPAN 2



CROSS SECTION OF STAGE 2 ALL SPANS (3/18, 3/20, 3/22)

LOOKING NORTH NEAR PIERS

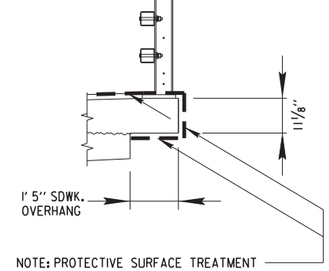
CONCRETE STAIN COLOR TO BE FEDERAL NO. 30318



NOTE: LIMITS OF CONCRETE STAINING TO EXTEND ALONG VERTICAL EDGE/SIDE OF SDWK., UNDERSIDE OF SDWK., VERTICAL EDGE/SIDE OF THE DECK SLAB, AND UNDERSIDE OF DECK AND TO TERMINATE AT EXTERIOR GIRDER.

DETAIL CONCRETE STAIN SUPERSTRUCTURE

TYP. FOR SHEETS 23 AND 24



NOTE: PROTECTIVE SURFACE TREATMENT FOR DECK, VERTICAL FACE CURB, SURFACE OF SDWK., TO EXTEND ALONG EDGE/SIDE OF SDWK., AND ALSO UNDERSIDE OF SDWK. OVERHANG

DETAIL PROTECTIVE SURFACE TREATMENT

TYP. FOR SHEETS 23 AND 24

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

STAGE 2 CONSTRUCTION SUPERSTRUCTURE CROSS SECTIONS

SHEET 474 OF 37

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W:\STR\B022\PLANS\ 25_DECKBAR.DGN 08-22-2013

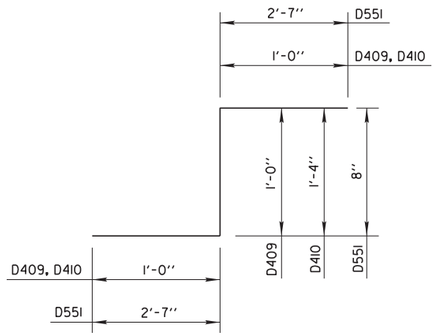
STATE PROJECT NUMBER

2265 - 08 - 70

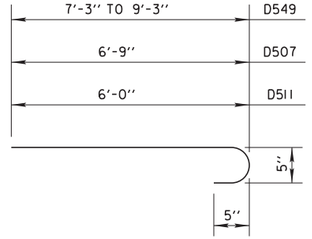
BILL OF BARS - DECK

BAR MARK	COATED	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
D501	×	94	25'-4"		* * *	TRAN. - S. SPAN - STAGE 2 - TOP & BOTTOM
D502	×	146	23'-11"		* * *	TRAN. - S. SPAN - STAGE 1 - TOP & BOTTOM
D403	×	298	51'-0"			LONGIT. - S. & N. SPANS - STAGES 1 & 2 - BOTTOM
D404	×	298	43'-1"			LONGIT. - S. & N. SPANS - STAGES 1 & 2 - TOP
D605	×	157	18'-0"			LONGIT. - S. & N. SPANS - STAGES 1 & 2 - CONTINUITY STEEL - TOP
D606	×	153	24'-0"			LONGIT. - S. & N. SPANS - STAGES 1 & 2 - CONTINUITY STEEL - TOP
D507	×	632	7'-4"	×		SDWK. - TRAN. - TOP
D408	×	218	2'-3"			SDWK. - TRAN. - BOTTOM
D409	×	632	2'-10"	×		SIDE CURB STIRRUP
D410	×	632	3'-2"	×		SDWK. - STIRRUP
D511	×	480	6'-7"	×		DECK TRAN. AT OVERHANG - TOP
D412	×	40	48'-5"			SDWK. LONGIT. - S. & N. SPANS - TOP
D413	×	12	48'-5"			SDWK. LONGIT. - S. & N. SPANS - BOTTOM AT OUTSIDE
D514	×	180	23'-0"		* * *	TRAN. - MIDDLE SPAN - STAGE 2 - TOP & BOTTOM
D515	×	90	25'-10"		* * *	TRAN. - MIDDLE SPAN - STAGE 1 - TOP & BOTTOM
D416	×	148	59'-6"			LONGIT. - MIDDLE SPAN - STAGES 1 & 2 - BOTTOM
D417	×	148	49'-0"			LONGIT. - MIDDLE SPAN - STAGES 1 & 2 - TOP
D418	×	20	59'-6"			SDWK. LONGIT. - MIDDLE SPAN - TOP
D419	×	6	59'-6"			SDWK. LONGIT. - MIDDLE SPAN - BOTTOM AT OUTSIDE
D520	×	52	19'-6"		* * *	TRAN. - N. SPAN - STAGE 2 - TOP & BOTTOM
D621	×	146	27'-9"		* * *	TRAN. - N. SPAN - STAGE 1 - TOP & BOTTOM
D522	×	472	35'-6"			TRAN. - ALL SPANS - E. SIDE - STAGE 1 - TOP & BOTTOM
D523	×	472	28'-1"			TRAN. - STAGE 2 - W. SIDE - ALL SPANS - TOP & BOTTOM
D624	×	52	26'-6"		* * *	TRAN. - STAGE 2 - S. SPAN - TOP & BOTTOM
D625	×	90	27'-4"		* * *	TRAN. - STAGE 1 - MIDDLE SPAN - TOP & BOTTOM
D626	×	94	20'-9"		* * *	TRAN. - STAGE 2 - N. SPAN - TOP & BOTTOM
D427	×	16	23'-10"		* * *	LONGIT. - STAGE 2 (S. SPAN S.E.) - STAGE 1 (N. SPAN N.W.) - TOP & BOTTOM
D428	×	8	25'-5"		* * *	LONGIT. - STAGE 2 (N. SPAN N.E.) - STAGE 1 (S. SPAN S.W.) - BOTTOM
D429	×	10	30'-0"		* * *	LONGIT. - MIDDLE SPAN - STAGE 2 (E. SIDE) - STAGE 1 (W. SIDE) - BOTTOM
D430	×	8	17'-2"		* * *	LONGIT. - STAGE 2 (N. SPAN N.E.) - STAGE 1 (S. SPAN S.W.) - TOP
D431	×	10	24'-2"		* * *	LONGIT. - MIDDLE SPAN - STAGE 2 (E. SIDE) - STAGE 1 (W. SIDE) - TOP
D632	×	4	7'-11"			LONGIT. - N. AND S. SPANS - STAGES 1 & 2 - OUTSIDE TOP - CONTINUITY STEEL
D633	×	15	5'-0"			S. SPAN DIAPH. BETWEEN GIRDERS 1A & 1 - STAGE 1 - HORIZ. BOTTOM
D634	×	5	5'-2"			S. SPAN DIAPH. BETWEEN GIRDERS 1 & 2 - STAGE 1 - HORIZ. BOTTOM
D635	×	100	6'-0"			N. & S. SPAN DIAPH. BETWEEN GIRDERS 2 & 12 - STAGES 1 & 2 - HORIZ. BOTTOM
D636	×	10	6'-3"			S. SPAN DIAPH. BETWEEN GIRDERS 12 & 14 - STAGE 1 - HORIZ. BOTTOM
D637	×	15	7'-3"			N. SPAN DIAPH. BETWEEN GIRDERS 1A & 1 - STAGE 2 - HORIZ. BOTTOM
D638	×	5	6'-2"			N. SPAN DIAPH. BETWEEN GIRDERS 1 & 2 - STAGE 2 - HORIZ. BOTTOM
D639	×	5	5'-1"			N. SPAN DIAPH. BETWEEN GIRDERS 12 & 14 - STAGE 2 - HORIZ. BOTTOM
D440	×	504	3'-9"	×		N. & S. SPAN DIAPH. - VERT. STIRRUPS - STAGES 1 & 2
D441	×	6	5'-0"			S. SPAN DIAPH. BETWEEN GIRDERS 1A & 1 - STAGE 1 - HORIZ. TOP
D442	×	2	5'-2"			S. SPAN DIAPH. BETWEEN GIRDERS 1 & 2 - STAGE 1 - HORIZ. TOP
D443	×	40	6'-0"			N. & S. SPAN DIAPH. BETWEEN GIRDERS 2 & 12 - STAGES 1 & 2 - HORIZ. TOP
D444	×	4	6'-3"			S. SPAN DIAPH. BETWEEN GIRDERS 12 & 14 - STAGE 1 - HORIZ. TOP
D445	×	6	7'-3"			N. SPAN DIAPH. BETWEEN GIRDERS 1A & 1 - STAGE 2 - HORIZ. TOP
D446	×	56	8'-0"			N. & S. SPAN BARS FOR STRIP SEAL EXP. JOINTS
D647	×	200	6'-0"			SDWK. TYPE M POST ANCHORAGE TIES - LONGIT.
D648	×	100	12'-0"	×		SDWK. TYPE M POST ANCHORAGE TIES - TRAN.
D549	×	32	8'-3"	×	* * *	LIGHT STD. - SDWK. TRAN. - TOP AND BOTTOM
D550	×	16	10'-0"	×		LIGHT STD. - SDWK. DIAGONAL - TOP AND BOTTOM
D551	×	16	5'-7"	×		LIGHT STD. - DECK - CURB Z BARS
D552	×	16	5'-0"			LIGHT STD. - DIAGONAL AT ELECTRICAL JUNCTION BOX
D553	×	8	6'-7"	×		LIGHT STD. - VERT. TRAN.
D554	×	8	3'-1"	×		LIGHT STD. - VERT. LONGIT.
D455	×	16	4'-5"	×		LIGHT STD. - HORIZ. STIRRUP
D456	×	480	4'-0"	×		DECK TRAN. AT OVERHANG - BOTTOM
D457	×	4	51'-0"			DECK LONGIT. AT OVERHANG - N. AND S. SPANS - BOTTOM
D458	×	2	59'-6"			DECK LONGIT. AT OVERHANG - MIDDLE SPAN - BOTTOM
D459	×	2	6'-2"			N. SPAN DIAPH. BETWEEN GIRDERS 1 & 2 - STAGE 2 - HORIZ. TOP
D460	×	2	5'-1"			N. SPAN DIAPH. BETWEEN GIRDERS 12 & 14 - STAGE 2 - HORIZ. TOP

* * * LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

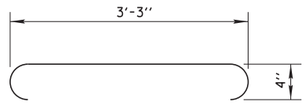


D409, D410, D551



D507, D511, D549

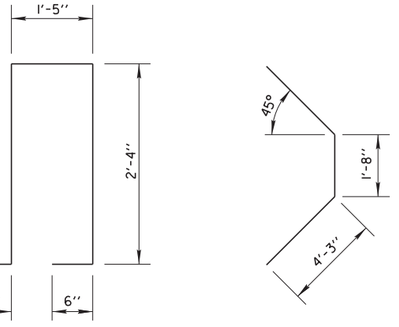
D540, D648, D554, D455



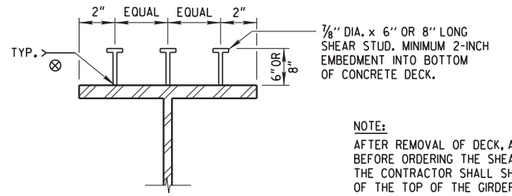
D456

BAR SERIES TABLE		
MARK	NO. REQUIRED	LENGTH
D501	2 SERIES OF 47	24'-6" TO 26'-1"
D502	2 SERIES OF 73	22'-9" TO 25'-1"
D514	2 SERIES OF 90	21'-6" TO 24'-6"
D515	2 SERIES OF 45	25'-1" TO 26'-7"
D520	2 SERIES OF 26	19'-1" TO 19'-11"
D621	2 SERIES OF 73	25'-1" TO 30'-5"
D624	2 SERIES OF 26	26'-1" TO 26'-10"
D625	2 SERIES OF 45	26'-7" TO 28'-0"
D626	2 SERIES OF 47	19'-11" TO 21'-6"
D427	2 SERIES OF 4	8'-9" TO 38'-11"
D428	2 SERIES OF 4	10'-5" TO 40'-5"
D429	2 SERIES OF 5	10'-5" TO 49'-6"
D430	2 SERIES OF 4	2'-0" TO 32'-4"
D431	2 SERIES OF 5	4'-0" TO 44'-4"
D549	8 SERIES OF 4	7'-3" TO 9'-3"

BUNDLE AND TAG EACH SERIES SEPARATELY

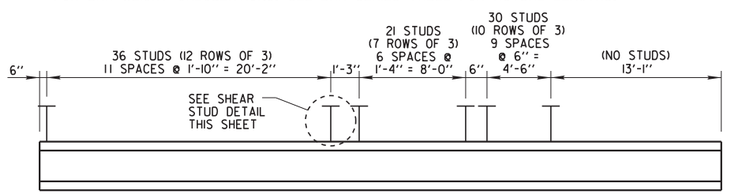


D553 D550



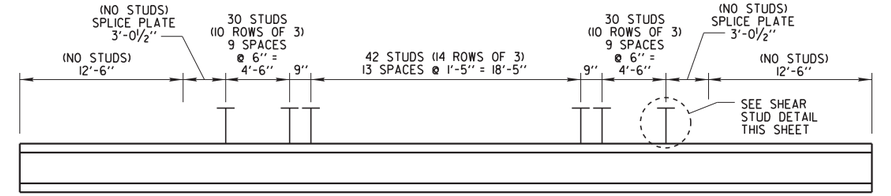
SHEAR STUD DETAIL

NOTE:
AFTER REMOVAL OF DECK, AND BEFORE ORDERING THE SHEAR STUDS, THE CONTRACTOR SHALL SHOOT GRADES OF THE TOP OF THE GIRDERS TO DETERMINE HAUNCH HEIGHTS. ORDER APPROPRIATE SIZE STUDS AS NEEDED TO ACHIEVE MINIMUM 2" EMBEDMENT INTO BOTTOM OF NEW DECK SLAB.



SHEAR STUD SPACING-ALL STRINGERS

END SPANS (NORTH SPAN AND SOUTH SPAN)



SHEAR STUD SPACING-ALL STRINGERS

CENTER SPAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. J.P.H. R.V.K.

DECK BILL OF BARS AND SHEAR CONNECTOR LAYOUT

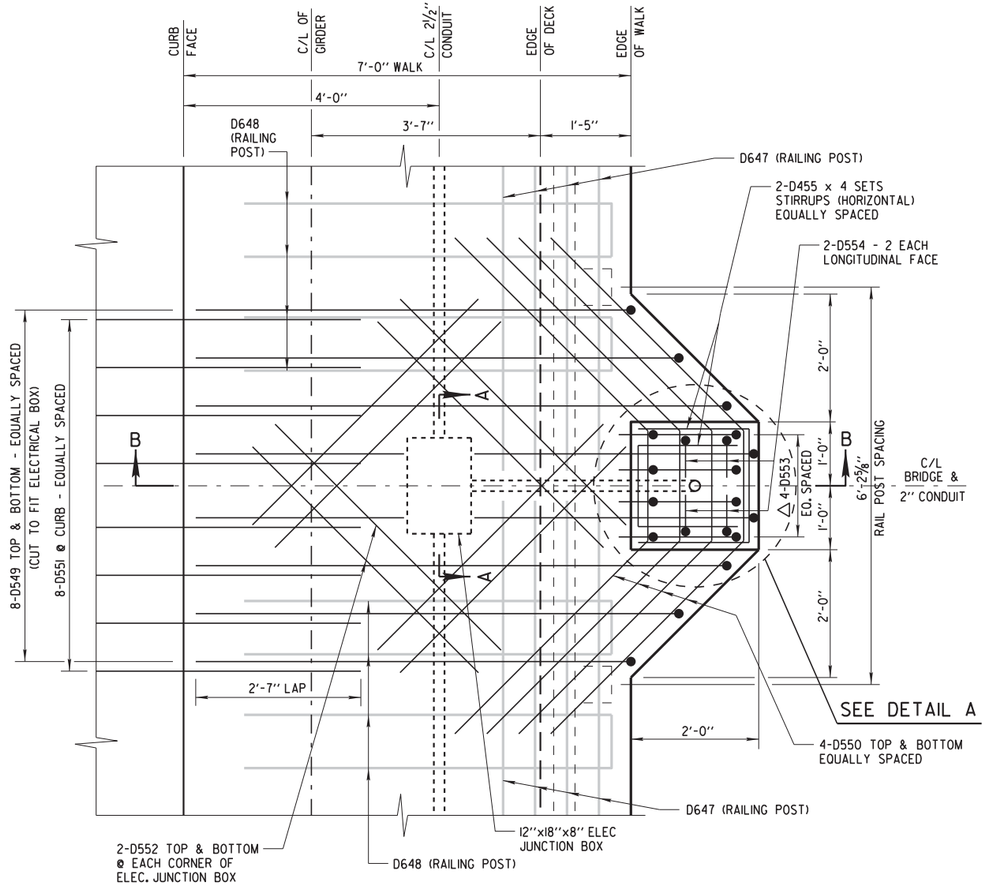
SHEET 475 OF 37

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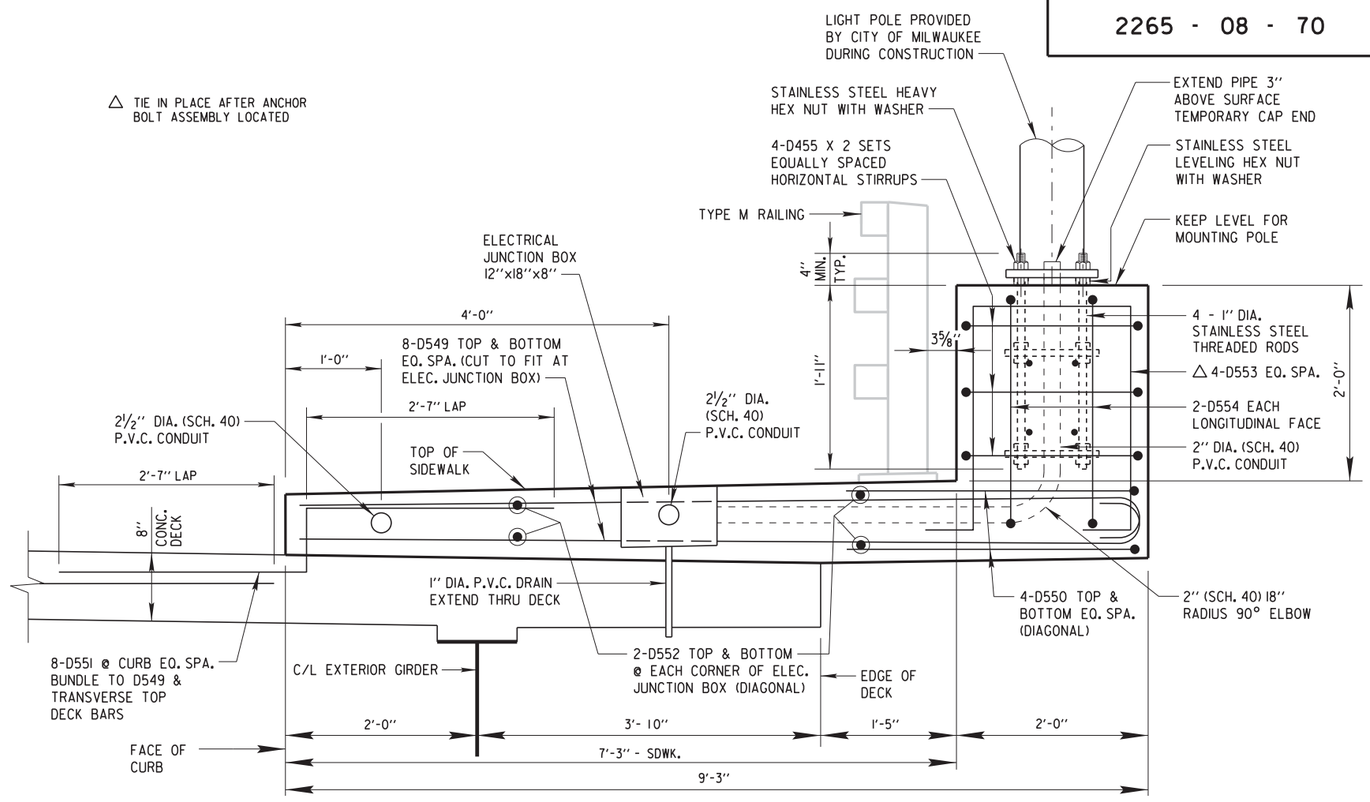
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STATE PROJECT NUMBER
2265 - 08 - 70



△ TIE IN PLACE AFTER ANCHOR BOLT ASSEMBLY LOCATED



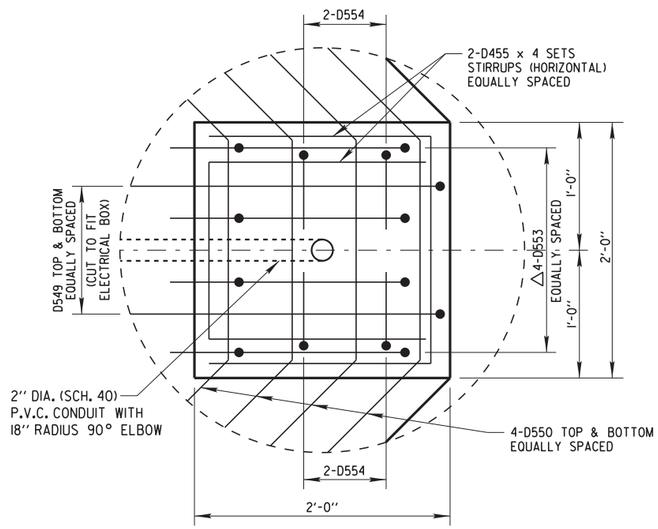
SECTION B-B

THRU SIDEWALK AND RAILING AT LIGHTPOLE

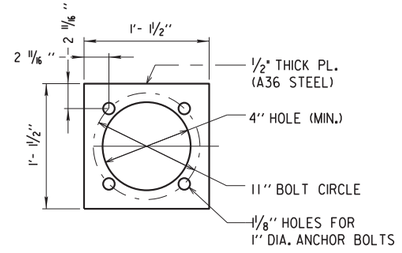
C 17 | C 18 | C 19 | C 20 | C 21 | C 22

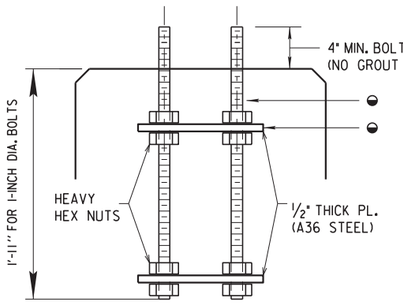
PLAN OF SIDEWALK AT STREETLIGHT

(WALK & DECK BARS NOT SHOWN FOR CLARITY)



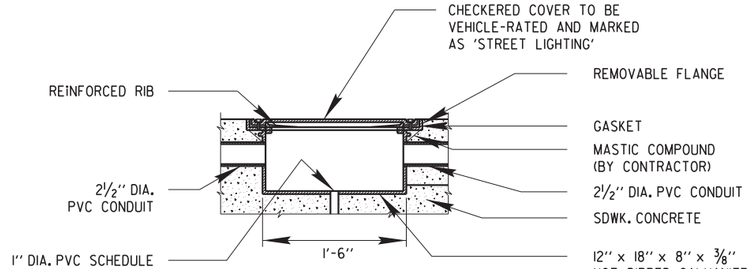
DETAIL A





ANCHORAGE DETAIL

(2 REQ'D.)



SECTION A-A

◒ ANCHOR BOLT
ASTM 449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" (MIN.) OF BOLT INCLUDING NUTS AND WASHERS. PROVIDE ENLARGED THREAD ON NUT FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.

FURNISHING AND INSTALLATION OF ANCHOR BOLTS FOR LIGHT POLES AND 2" DIA. SCH 40 CONDUIT IS INCLUDED IN BID ITEM SPV.0105 ELECTRICAL WORK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY	K.P.S.	PLANS CK'D.	J.P.H. R.V.K.

LIGHTPOLE SIDEWALK REINFORCEMENT DETAILS

SHEET 476 OF 37

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STATE PROJECT NUMBER

2265 - 08 - 70

SOUTH SPAN	GIRDER NO.	S. ABUT.	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	PIER NO. 1	GIRDER NO.
TYP. INTERIOR & EXTERIOR TOTAL DEAD LOAD DEFLECTION INCHES		0.00	0.08	0.16	0.23	0.30	0.23	0.16	0.08	0.00	0.00	0.00	
DECK GRADE	WEST EDGE	62.15	62.08	62.02	61.95	61.89	61.83	61.76	61.70	61.63	61.57	61.50	WEST EDGE
DECK GRADE	(1A)	62.22	62.16	62.09	62.03	61.96	61.90	61.83	61.77	61.70	61.64	61.57	(1A)
DECK GRADE	(2A)	62.33	62.27	62.20	62.14	62.08	62.01	61.95	61.89	61.82	61.76	61.70	(2A)
DECK GRADE	(3A)	62.44	62.37	62.31	62.25	62.19	62.13	62.06	62.00	61.94	61.88	61.82	(3A)
DECK GRADE	(1)	62.54	62.48	62.42	62.36	62.30	62.24	62.18	62.12	62.06	62.00	61.94	(1)
DECK GRADE	(2)	62.65	62.59	62.53	62.47	62.41	62.35	62.29	62.23	62.17	62.11	62.05	(2)
DECK GRADE	(3)	62.78	62.72	62.66	62.60	62.54	62.48	62.42	62.36	62.30	62.24	62.18	(3)
DECK GRADE	(4)	62.91	62.85	62.79	62.73	62.67	62.61	62.55	62.49	62.43	62.37	62.31	(4)
DECK GRADE	(5)	63.03	62.97	62.91	62.85	62.79	62.73	62.67	62.61	62.55	62.49	62.43	(5)
DECK GRADE	(6)	63.16	63.10	63.04	62.98	62.92	62.86	62.80	62.74	62.68	62.62	62.56	(6)
DECK GRADE	CONST. JOINT	63.20	63.14	63.08	63.02	62.96	62.90	62.84	62.78	62.72	62.66	62.60	CONST. JOINT
CROWN RDWY. → (7)	DECK GRADE	63.29	63.23	63.17	63.11	63.05	62.99	62.93	62.87	62.81	62.75	62.69	(7) ← CROWN RDWY.
DECK GRADE	P.G.L. & T/L	63.21	63.15	63.09	63.03	62.97	62.91	62.85	62.79	62.73	62.67	62.61	P.G.L. & T/L
DECK GRADE	(8)	63.16	63.10	63.04	62.98	62.92	62.86	62.80	62.74	62.68	62.62	62.56	(8)
DECK GRADE	(9)	63.03	62.97	62.91	62.85	62.79	62.73	62.67	62.61	62.55	62.49	62.43	(9)
DECK GRADE	(10)	62.91	62.85	62.79	62.73	62.67	62.61	62.55	62.49	62.43	62.37	62.31	(10)
DECK GRADE	(11)	62.78	62.72	62.66	62.60	62.54	62.48	62.42	62.36	62.30	62.24	62.18	(11)
DECK GRADE	(12)	62.65	62.59	62.53	62.47	62.41	62.35	62.29	62.23	62.17	62.11	62.05	(12)
DECK GRADE	(13)	62.52	62.47	62.41	62.35	62.29	62.23	62.18	62.12	62.06	62.00	61.95	(13)
DECK GRADE	(14)	62.39	62.34	62.28	62.23	62.17	62.11	62.06	62.00	61.95	61.89	61.84	(14)
DECK GRADE	EAST EDGE	62.32	62.26	62.21	62.15	62.10	62.04	61.99	61.93	61.88	61.82	61.77	EAST EDGE

GRADES COMPUTED FOR POINTS LOCATED AT RIGHT ANGLE TO P.G.L.

MIDDLE SPAN	GIRDER NO.	PIER 1	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	PIER NO. 2	GIRDER NO.
TYP. INTERIOR & EXTERIOR TOTAL DEAD LOAD DEFLECTION INCHES		0.00	0.00	0.09	0.19	0.27	0.36	0.27	0.19	0.09	0.00	0.00	
DECK GRADE	WEST EDGE	61.50	61.42	61.34	61.26	61.18	61.10	61.02	60.94	60.85	60.77	60.69	WEST EDGE
DECK GRADE	(1A)	61.57	61.49	61.41	61.33	61.25	61.17	61.09	61.01	60.93	60.85	60.76	(1A)
DECK GRADE	(2A)	61.70	61.62	61.54	61.46	61.38	61.30	61.22	61.14	61.06	60.98	60.90	(2A)
DECK GRADE	(3A)	61.82	61.74	61.66	61.58	61.51	61.43	61.35	61.27	61.20	61.12	61.04	(3A)
DECK GRADE	(1)	61.94	61.86	61.79	61.71	61.64	61.56	61.48	61.41	61.33	61.26	61.18	(1)
DECK GRADE	(2)	62.05	61.98	61.90	61.83	61.75	61.68	61.60	61.53	61.45	61.38	61.30	(2)
DECK GRADE	(3)	62.18	62.11	62.03	61.96	61.88	61.81	61.73	61.66	61.58	61.51	61.43	(3)
DECK GRADE	(4)	62.31	62.23	62.16	62.08	62.01	61.93	61.86	61.78	61.71	61.63	61.56	(4)
DECK GRADE	(5)	62.43	62.36	62.28	62.21	62.13	62.06	61.98	61.91	61.83	61.76	61.68	(5)
DECK GRADE	(6)	62.56	62.49	62.41	62.34	62.26	62.19	62.11	62.04	61.96	61.89	61.81	(6)
DECK GRADE	CONST. JOINT	62.60	62.53	62.45	62.38	62.30	62.23	62.15	62.08	62.00	61.93	61.85	CONST. JOINT
CROWN RDWY. → (7)	DECK GRADE	62.69	62.61	62.54	62.46	62.39	62.31	62.24	62.16	62.09	62.01	61.94	(7) ← CROWN RDWY.
DECK GRADE	P.G.L. & T/L	62.61	61.54	62.46	62.39	62.31	62.24	62.16	62.09	62.01	61.94	61.86	P.G.L. & T/L
DECK GRADE	(8)	62.56	62.49	62.41	62.34	62.26	62.19	62.11	62.04	61.96	61.89	61.81	(8)
DECK GRADE	(9)	62.43	62.36	62.28	62.21	62.13	62.06	61.98	61.91	61.83	61.76	61.68	(9)
DECK GRADE	(10)	62.31	62.23	62.16	62.08	62.01	61.93	61.86	61.78	61.71	61.63	61.56	(10)
DECK GRADE	(11)	62.18	62.11	62.03	61.96	61.88	61.81	61.73	61.66	61.58	61.51	61.43	(11)
DECK GRADE	(12)	62.05	61.98	61.90	61.83	61.75	61.68	61.60	61.53	61.45	61.38	61.30	(12)
DECK GRADE	(13)	61.95	61.87	61.80	61.73	61.66	61.59	61.51	61.44	61.37	61.30	61.23	(13)
DECK GRADE	(14)	61.84	61.77	61.70	61.63	61.56	61.49	61.42	61.36	61.29	61.22	61.15	(14)
DECK GRADE	EAST EDGE	61.77	61.70	61.63	61.56	61.49	61.42	61.35	61.28	61.21	61.15	61.08	EAST EDGE

GRADES COMPUTED FOR POINTS LOCATED AT RIGHT ANGLE TO P.G.L.

NORTH SPAN	GIRDER NO.	PIER 2	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	N. ABUT.	GIRDER NO.
TYP. INTERIOR & EXTERIOR TOTAL DEAD LOAD DEFLECTION INCHES		0.00	0.00	0.00	0.08	0.16	0.23	0.30	0.23	0.16	0.08	0.00	
DECK GRADE	WEST EDGE	60.69	60.63	60.56	60.50	60.43	60.37	60.30	60.24	60.18	60.11	60.05	WEST EDGE
DECK GRADE	(1A)	60.76	60.70	60.63	60.57	60.51	60.44	60.38	60.31	60.25	60.18	60.12	(1A)
DECK GRADE	(2A)	60.90	60.84	60.78	60.71	60.65	60.59	60.52	60.46	60.40	60.33	60.27	(2A)
DECK GRADE	(3A)	61.04	60.98	60.92	60.86	60.79	60.73	60.67	60.61	60.55	60.48	60.42	(3A)
DECK GRADE	(1)	61.18	61.12	61.06	61.00	60.94	60.88	60.82	60.76	60.70	60.64	60.57	(1)
DECK GRADE	(2)	61.30	61.24	61.18	61.12	61.06	61.00	60.94	60.88	60.82	60.76	60.70	(2)
DECK GRADE	(3)	61.43	61.37	61.31	61.25	61.19	61.13	61.07	61.01	60.95	60.89	60.83	(3)
DECK GRADE	(4)	61.56	61.50	61.44	61.38	61.32	61.26	61.20	61.14	61.08	61.02	60.96	(4)
DECK GRADE	(5)	61.68	61.62	61.56	61.50	61.44	61.38	61.32	61.26	61.20	61.14	61.08	(5)
DECK GRADE	(6)	61.81	61.75	61.69	61.63	61.57	61.51	61.45	61.39	61.33	61.27	61.21	(6)
DECK GRADE	CONST. JOINT	61.85	61.79	61.73	60.67	61.61	61.55	61.49	61.43	61.37	61.31	61.25	CONST. JOINT
CROWN RDWY. → (7)	DECK GRADE	61.94	61.88	61.82	61.76	61.70	61.64	61.58	61.52	61.46	61.40	61.34	(7) ← CROWN RDWY.
DECK GRADE	P.G.L. & T/L	61.86	61.80	61.74	61.68	61.62	61.56	61.50	61.44	61.38	61.32	61.26	P.G.L. & T/L
DECK GRADE	(8)	61.81	61.75	61.69	61.63	61.57	61.51	61.45	61.39	61.33	61.27	61.21	(8)
DECK GRADE	(9)	61.68	61.62	61.56	61.50	61.44	61.38	61.32	61.26	61.20	61.14	61.08	(9)
DECK GRADE	(10)	61.56	61.50	61.44	61.38	61.32	61.26	61.20	61.14	61.08	61.02	60.96	(10)
DECK GRADE	(11)	61.43	61.37	61.31	61.25	61.19	61.13	61.07	61.01	60.95	60.89	60.83	(11)
DECK GRADE	(12)	61.30	61.24	61.18	61.12	61.06	61.00	60.94	60.88	60.82	60.76	60.70	(12)
DECK GRADE	(13)	-	-	-	-	-	-	-	-	-	-	-	
DECK GRADE	(14)	61.15	61.09	61.04	60.98	60.93	60.87	60.82	60.76	60.71	60.65	60.60	(14)
DECK GRADE	EAST EDGE	61.08	61.02	60.97	60.91	60.86	60.80	60.75	60.69	60.64	60.58	60.52	EAST EDGE

NOTE:

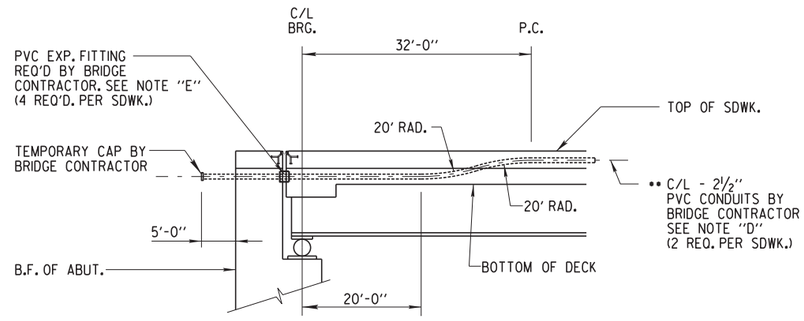
THE EXPANSION COUPLINGS ARE TO BE MADE FROM PVC (CLARION E945K OR EQUIVALENT). COUPLINGS SHALL NOT BE MADE OF METALLIC MATERIALS.

NOTE "D":

AFTER INSTALLING 2½" CONDUITS AND PRIOR TO POURING BRIDGE DECK AND SIDEWALK CONCRETE, THE BRIDGE CONTRACTOR SHALL CONTACT MR. DENNIS MILLER OF THE CITY OF MILWAUKEE STREET LIGHTING FIELD OPERATIONS AT (414)286-5942 (OFFICE) OR (414)708-4251 (CELL) THREE (3) WORKING DAYS IN ADVANCE TO PROPERLY INSPECT THE INSTALLATION. IF MR. MILLER IS NOT AVAILABLE CALL DISPATCHER AT (414)286-5944.

NOTE "E":

EA. EXPANSION COUPLING SHALL PROVIDE A "T" FITTING, OR SIMILAR DEVICE, TO PROVIDE FOR DRAINAGE IN ADDITION TO EXPANSION/CONTRACTION. CALL MR. THOMAS MANZKE, CITY OF MILWAUKEE STREET LIGHT DESIGN ENGINEER, AT (414)286-3265 FOR QUESTIONS REGARDING THIS TYPE OF DEVICE.



SECTION 1/28 (TYP. @ ALL 4 CORNERS)

SEE SHEETS 5, 8, & 28 FOR ADDITIONAL INFORMATION REGARDING 2½"P.V.C. CONDUITS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

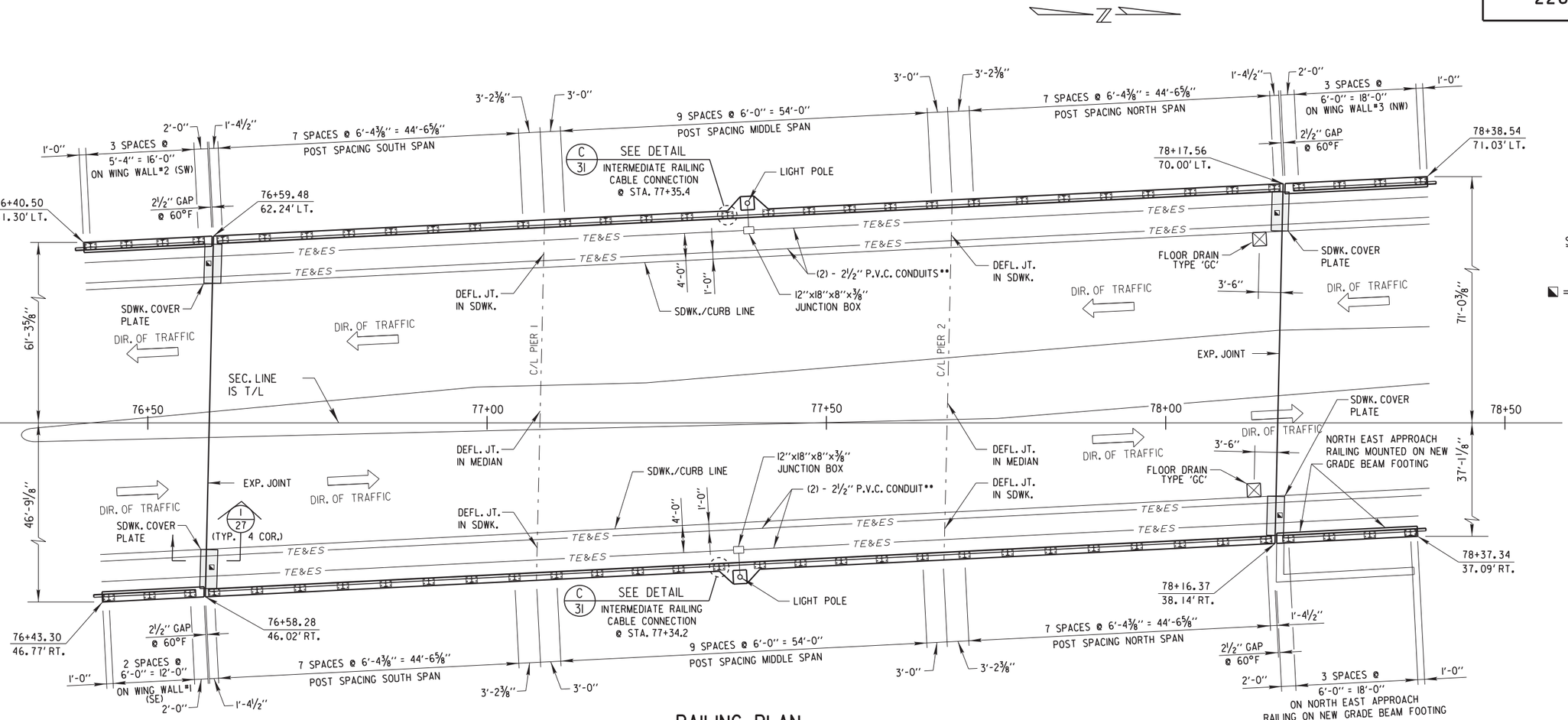
DRAWN BY J.P.H. | PLANS CK'D. J.P.H. R.V.K.

DECK GRADES

SHEET 477 OF 37

W:\STR\B022\N\PLANS\ 28_RAILING.DGN 06-11-2013

STATE PROJECT NUMBER
2265 - 08 - 70



SIDEWALK COVER PLATE DETAIL

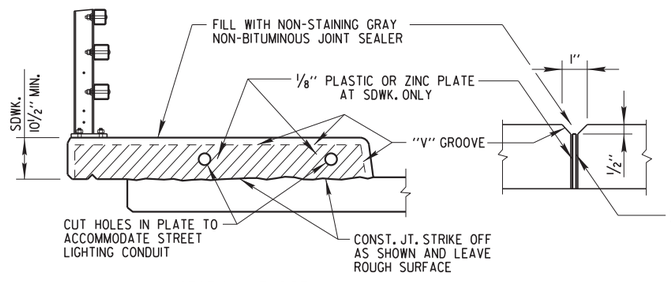
▩ = AREA OF MOVEMENT OF THE COVER PLATE. ORIENT TO ALIGN WITH DIRECTION OF TRAFFIC.

NOTE: SEE SHEET NO. 35 FOR DETAILS REGARDING ORIENTATION OF COVER PLATE MOVEMENT.

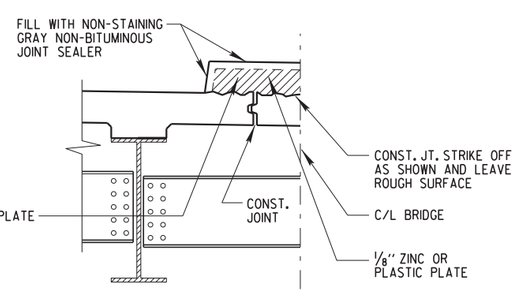
RAILING PLAN

(NOTE: BROKEN TRANSVERSE DRAFTING LINE AND AN ADJUSTED VERTICAL SCALE HAS BEEN USED TO ALLOW THE MEDIAN TO FIT THE ILLUSTRATION)

** SEE SHEETS 5, 8, & 27 FOR ADDITIONAL INFORMATION REGARDING THE 2 ½" P.V.C. CONDUITS



SECTION AT SIDEWALK ABOVE PIERS 1 & 2



SECTION AT MEDIAN ABOVE PIERS 1 & 2

DEFLECTION JOINT DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY	K.P.S. R.V.K.	PLANS CK'D.	J.P.H. R.V.K.

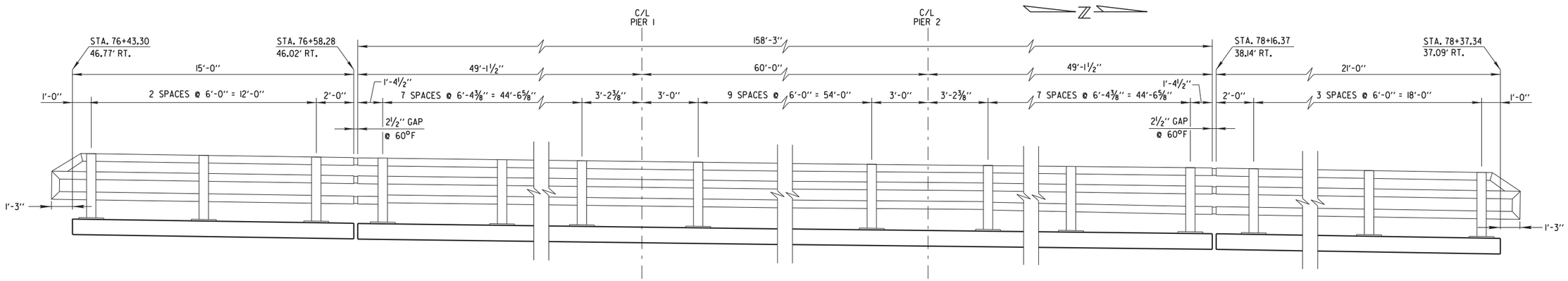
RAILING PLAN; JUNCTION BOXES AND SCUPPER LOCATIONS

SHEET 478 OF 37

W:\STR\B022\PLANS\ 29_RAILING.DGN 06-06-2013

STATE PROJECT NUMBER

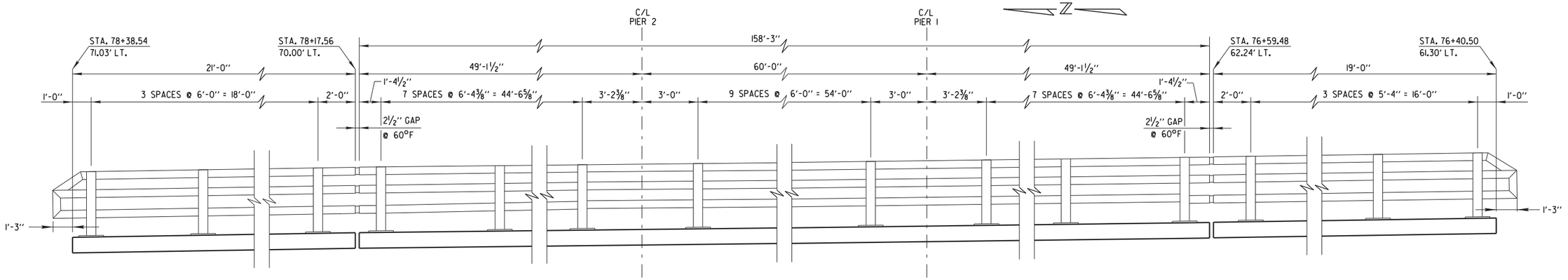
2265 - 08 - 70



EAST FACE OF
WING WALL NO. 1 (S.E.) RAILING
LOOKING WEST

EAST FACE OF EAST BRIDGE RAILING
LOOKING WEST

EAST FACE OF
NORTHEAST APPROACH RAILING AND FOOTING
LOOKING WEST



WEST FACE OF
WING WALL NO. 3 (N.W.) RAILING
LOOKING EAST

WEST FACE OF WEST BRIDGE RAILING
LOOKING EAST

WEST FACE OF
WING WALL NO. 2 (S.W.) RAILING
LOOKING EAST

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY R.V.K. | PLANS CK'D. J.P.H. R.V.K.

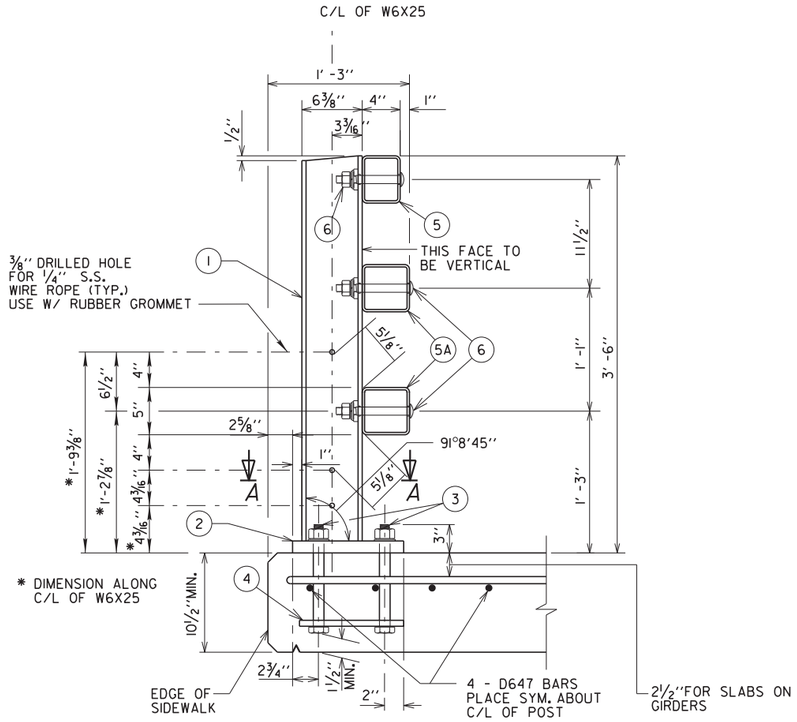
BRIDGE RAILING ELEVATIONS

SHEET 29 OF 37
479

W:\STR\B022\N\PLANS\ 30_RAILDET_(TYPE_M).DGN 08-22-2013

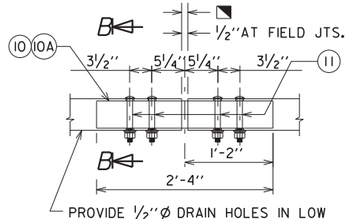
STATE PROJECT NUMBER

2265 - 08 - 70

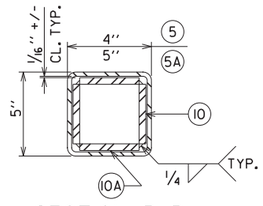


SECTION THRU RAILING ON DECK
STAINLESS STEEL WIRE ROPE SPACES DETAIL

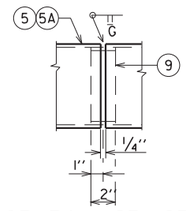
(N.T.S.)



FIELD ERECTION JOINT DETAIL

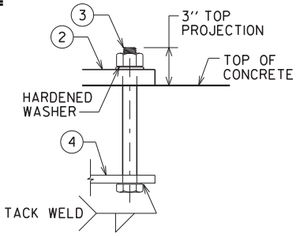


SECTION B-B

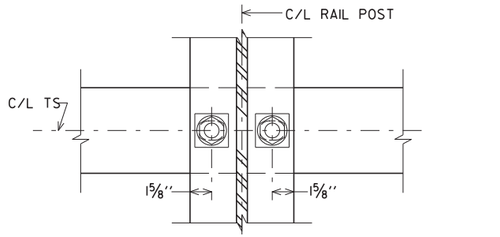


SHOP RAIL SPLICE DETAIL

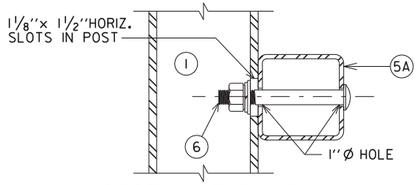
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



ANCHOR BOLTS



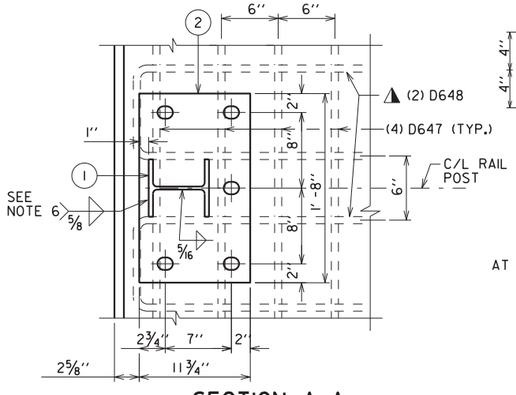
SECTION THRU POST WEB



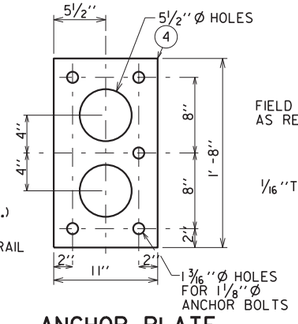
SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

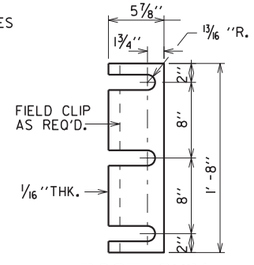


SECTION A-A

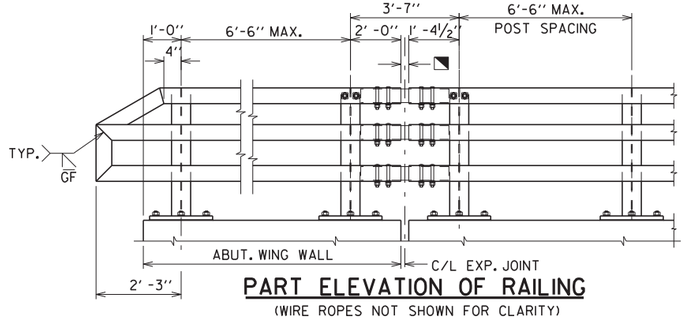


ANCHOR PLATE

AT RAIL TO DECK CONNECTION



POST SHIM DETAIL



PART ELEVATION OF RAILING

(WIRE ROPES NOT SHOWN FOR CLARITY)

LEGEND

(1) W6 x 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 5/16" X 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. USE 10 3/4" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

(4) 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(8) 1" DIA. HOLES IN TUBE NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBE.

(9) SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".

(10) 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(11) 7/8" Ø A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

(12) 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

(15) 1" Ø HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE 'M' (MODIFIED) B-40-438" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. GALVANIZED OR STAINLESS STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.
13. STEEL RAILING POSTS & TUBING COLOR TO MATCH FEDERAL STANDARD NO. 595C COLOR, NO. 14062
14. GALVANIZED OR STAINLESS STEEL POST SHIMS SHALL BE USED UNDER POSTS WHERE REQUIRED FOR ALIGNMENT.

▲ TIE TO TOP MAT OF STEEL.

* FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

◥ RDWY. OPENING OR 2 1/2" MIN. FOR STRIP SEAL EXP. JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY	K.P.S.	PLANS CK'D.	J.P.H. R.V.K.

TUBULAR STEEL RAILING TYPE M (MODIFIED)

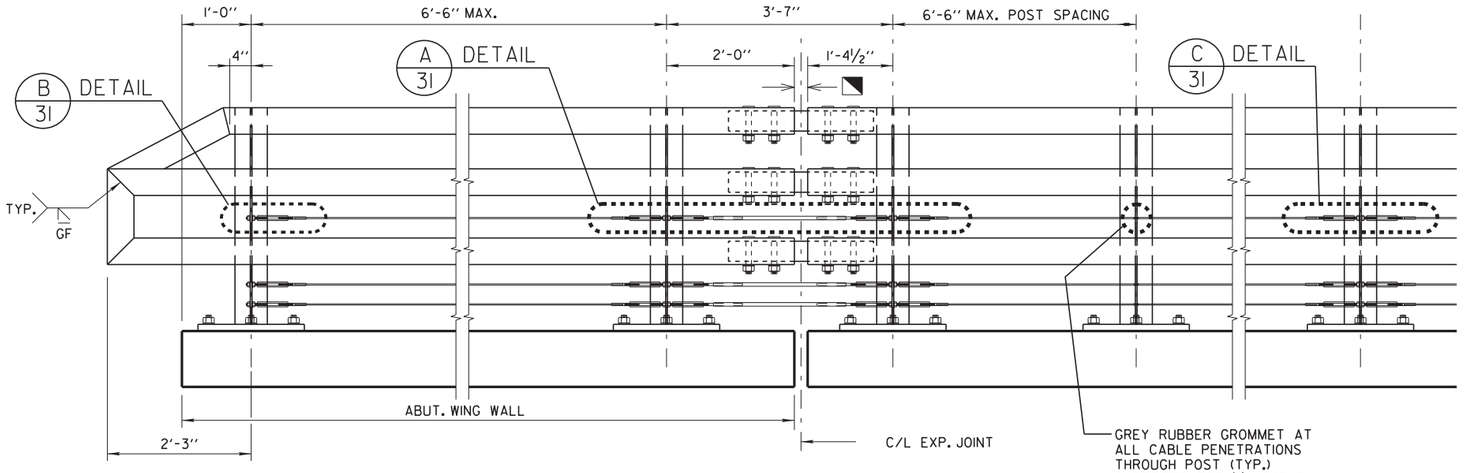
SHEET 480 OF 37

8

8

W:\STR\B0221\PLANS\ 31_RAILING.DGN 06-24-2013

STATE PROJECT NUMBER
2265 - 08 - 70



PARTIAL RAILING ELEVATION

HARDWARE:

CABLE

- ¼"ØS.S. 1x19 CLASS
- BREAKING STRENGTH OF 8,200 LBS.

THREADED ROD

- S.S. A276 TYPE 300 OR 400 SERIES
- MIN. TENSILE STRENGTH = 90 KSI

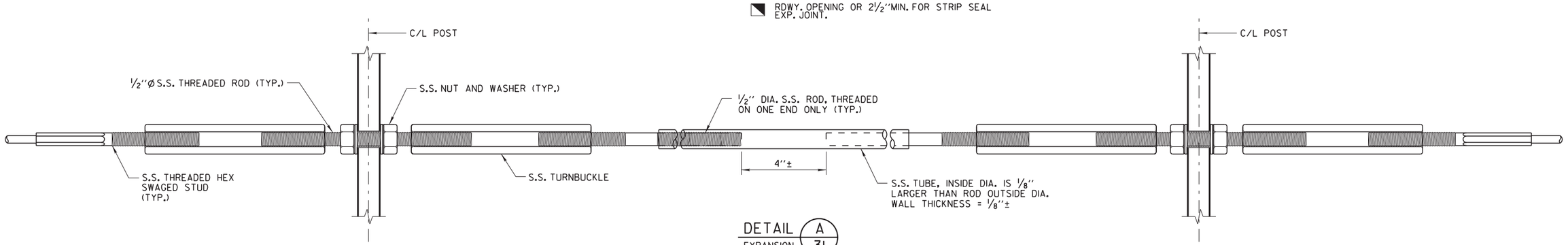
THREADED HEX SWAGED STUD

THREAD SIZE: ½- 20
LENGTH OF THREAD : 3" MIN
TOTAL LENGTH : AS MANUFACTURER REQ'D. FOR ¼- 1x19 SS CABLE
PART NO. H58-50FCC
THE CABLE CONNECTION
5224 HIGHWAY 50E
CARSON CITY, NV 89701
800-851-2961
OR EQUIVALENT

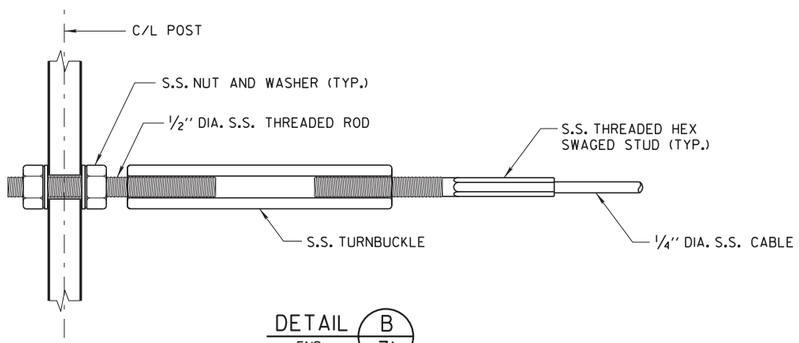
NOTES:

1. CABLES SHALL BE TIGHTENED AFTER RAILING HAS BEEN INSTALLED.
2. INTERMEDIATE CABLE TERMINATORS SHALL BE LOCATED AT ±75'. SEE SHEET 28 FOR LOCATIONS.

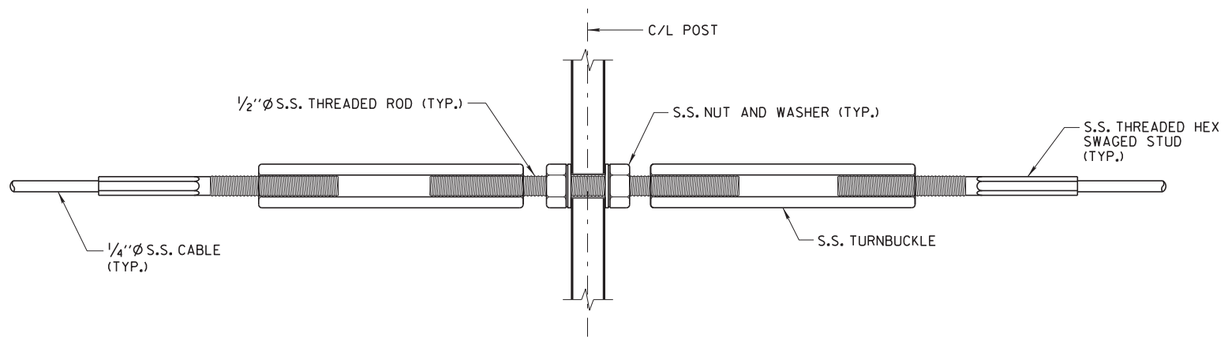
RDWY. OPENING OR 2½"MIN. FOR STRIP SEAL EXP. JOINT.



DETAIL A 31 — EXPANSION JOINT



DETAIL B 31 — END



DETAIL C 31 — INTERMEDIATE

(FOR LOCATION SEE NOTE 28)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY	K.P.S.	PLANS CK'D.	J.P.H. R.V.K.

PEDESTRIAN RAILING CABLE DETAILS

SHEET 481 OF 37

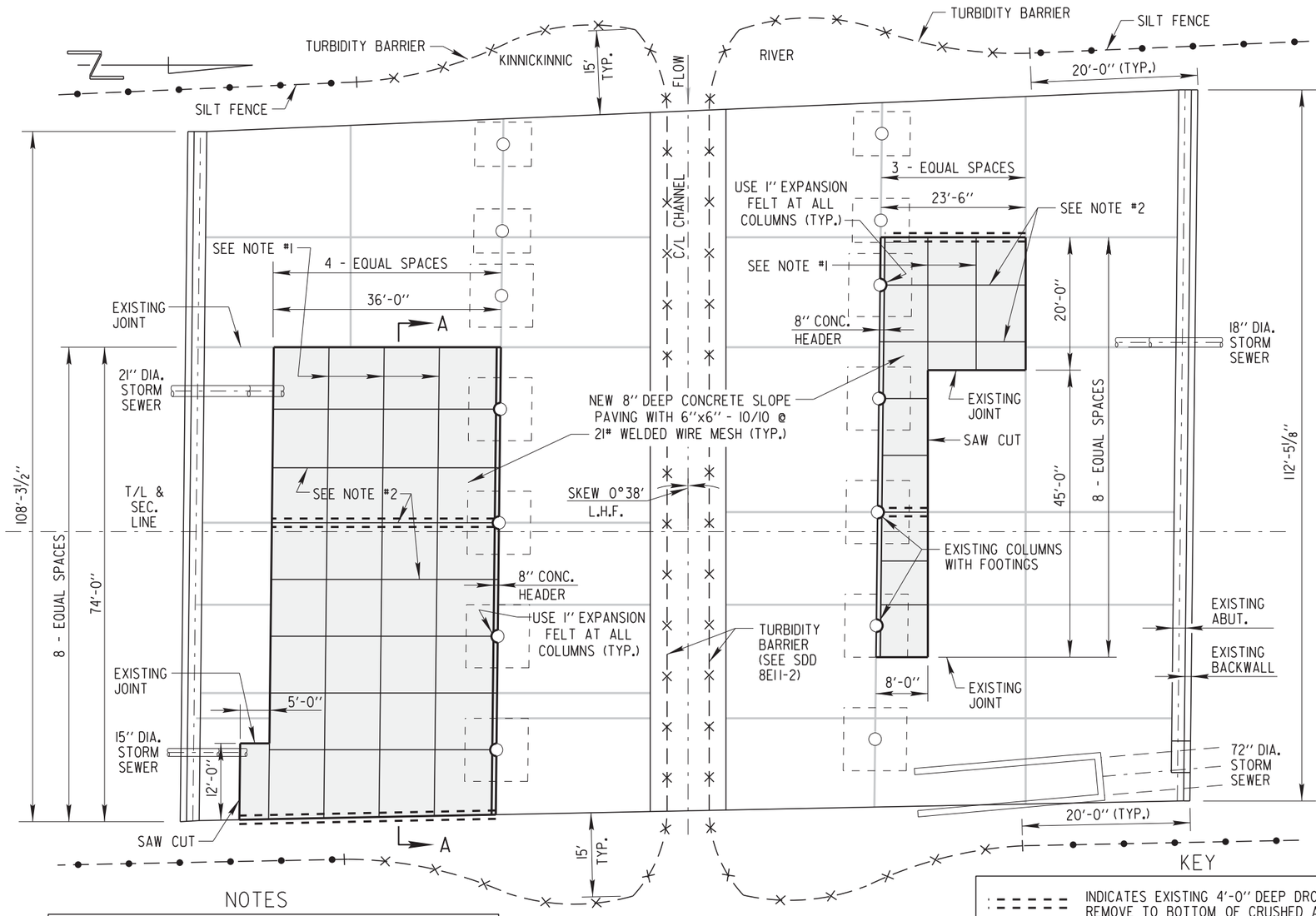
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STATE PROJECT NUMBER

2265 - 08 - 70



NOTES

NOTE NO. 1 - FORM PLANES OF WEAKNESS OR FALSE JOINTS IN THE CONCRETE BY SCORING THE FINISHED SURFACE AT LEAST ½" DEEP WITH A JOINT TOOL.

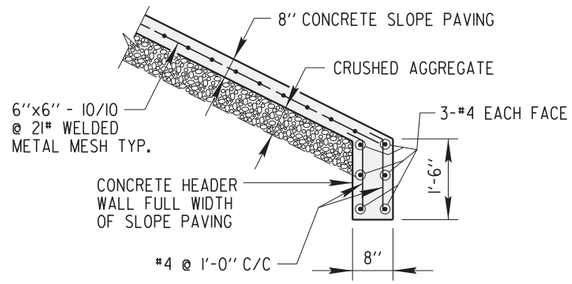
NOTE NO. 2 - CONSTRUCT JOINT PARALLEL TO T/L - SEC. LINE

SLOPE PAVING REPAIR PLAN VIEW

KEY

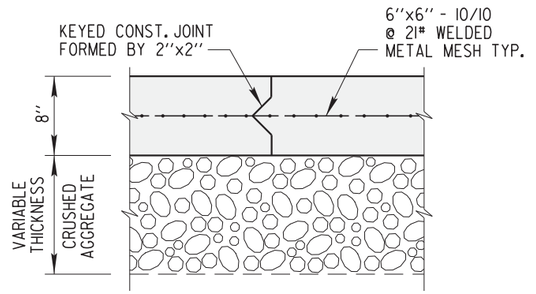
INDICATES EXISTING 4'-0" DEEP DROP WALL. REMOVE TO BOTTOM OF CRUSHED AGGREGATE.

REMOVE AND REPLACE EXISTING SLOPE PAVING WITH 8" DEPTH NEW CONCRETE SLOPE PAVING ON CRUSHED AGGREGATE BASE.

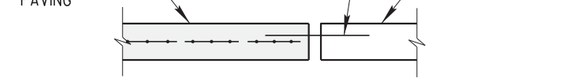


TYPICAL SECTION

8" CONCRETE HEADER



CONSTRUCTION JOINT DETAIL

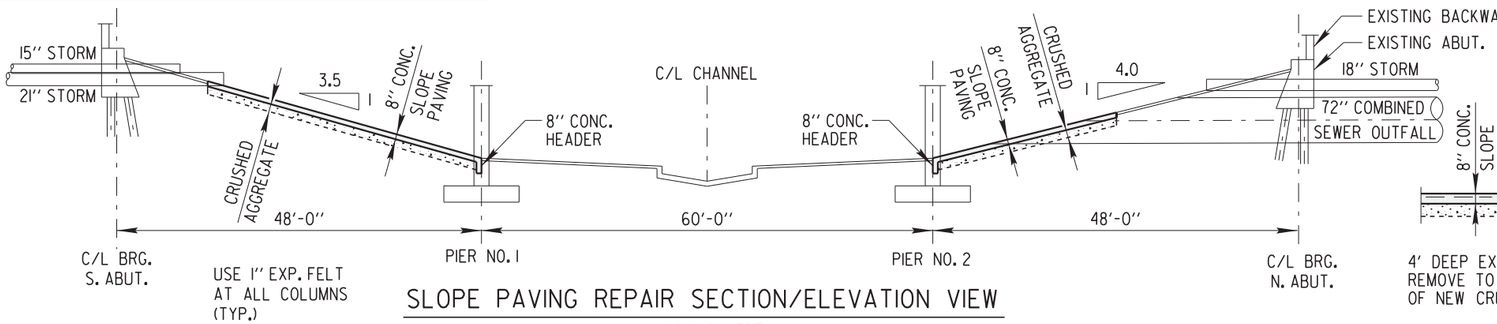


TYPICAL INTERIOR CONSTRUCTION JOINT

GENERAL NOTES:

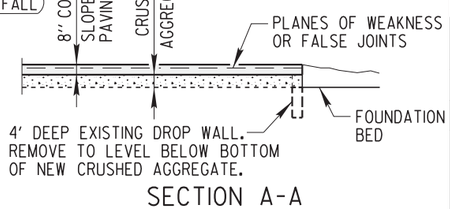
DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

EXISTING SLOPE PAVING HAS VARIABLE DEPTH (4"-8"), SEE KEY FOR LOCATIONS OF EXISTING DROP WALLS. MATCH EXISTING GRADES AND MAINTAIN EXISTING CROSS SLOPES. BID ITEM 312.0115 SELECT CRUSHED MATERIAL INCLUDED TO ALLOW LEVELING OF EXISTING CRUSHED AGGREGATE.



SLOPE PAVING REPAIR SECTION/ELEVATION VIEW

(LOOKING WEST)



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY	K.P.S.	PLANS CK'D.	J.P.H. R.V.K.

SLOPE PAVING REPAIR: PLAN, ELEVATION, SECTIONS, AND DETAILS

SHEET 32 OF 37

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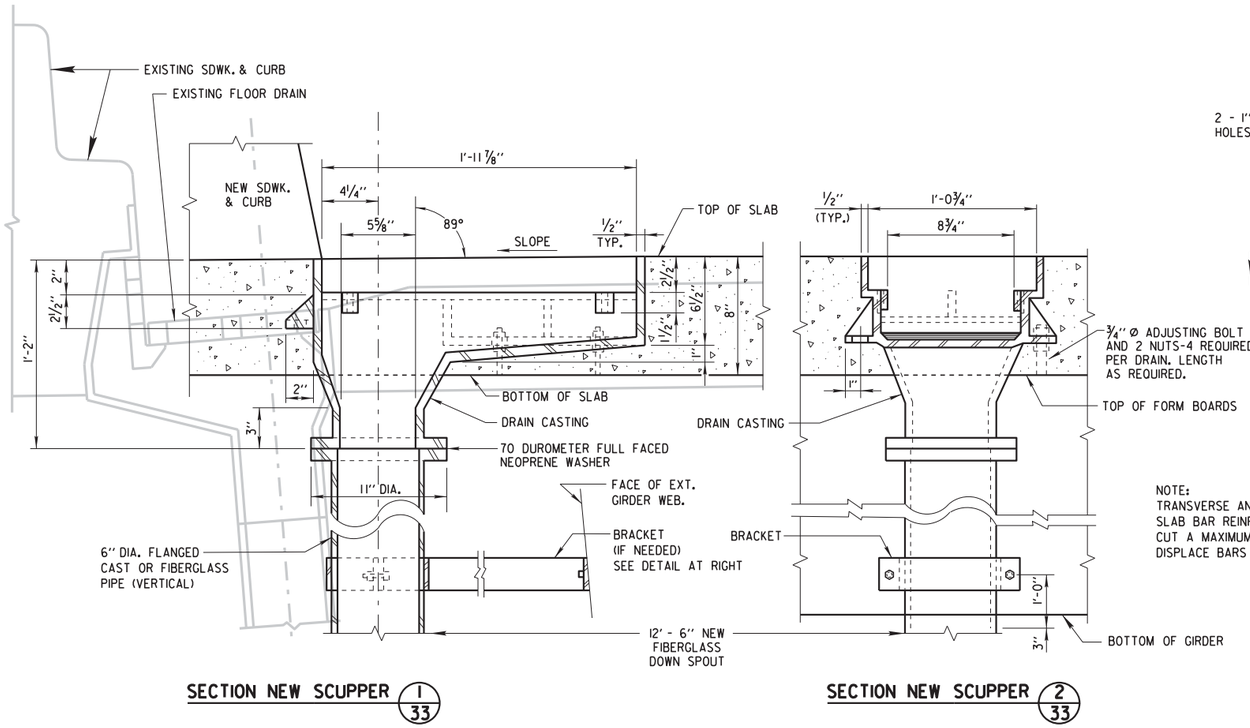
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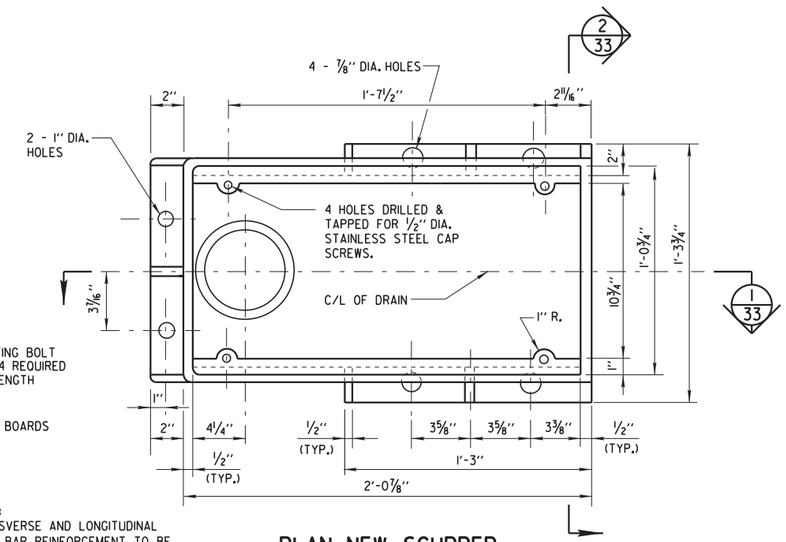
STATE PROJECT NUMBER

2265 - 08 - 70



SECTION NEW SCUPPER (1/33)

SECTION NEW SCUPPER (2/33)



NOTE:
TRANSVERSE AND LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAXIMUM 1" CLEAR FROM DRAIN DISPLACE BARS WHERE POSSIBLE.

PLAN NEW SCUPPER

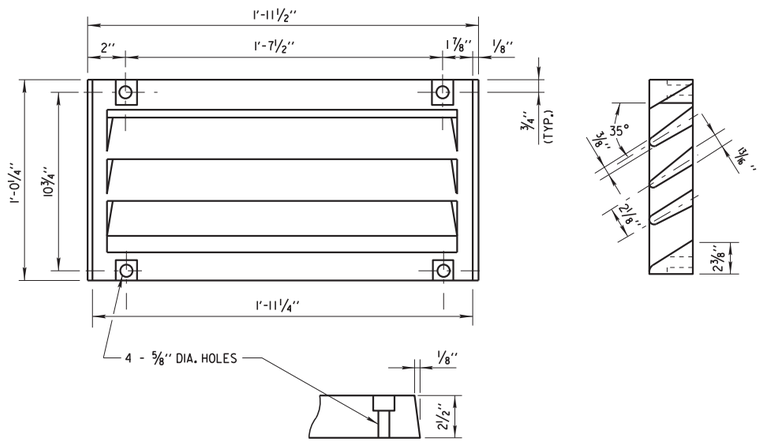
GENERAL NOTES

ALL MATERIAL FOR TYPE "GC" CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON, CONFORMING TO A.S.T.M. A48, CLASS 30. (APPROX. WEIGHT = 225 LB)

MATERIAL FOR BRACKETS SHALL CONFORM TO A.S.T.M. A36.

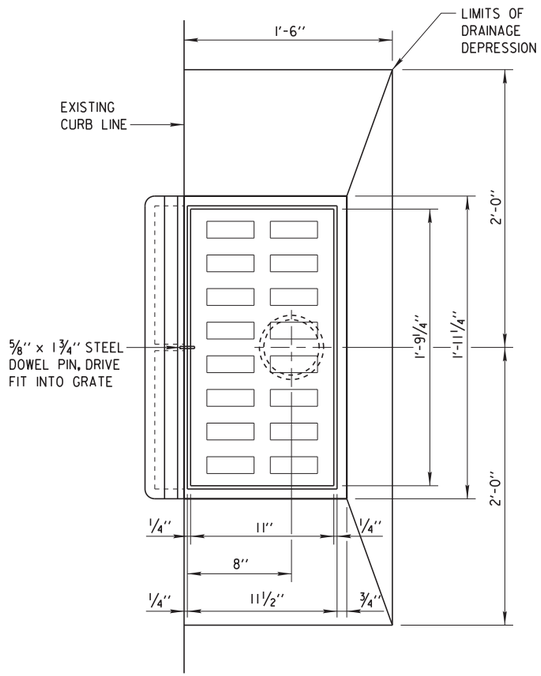
CONTRACTOR MAY PROPOSE ALTERNATE TYPE OF BRACKET. PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO APPROVAL OF ENGINEER.

FLANGED 6" DIA. DOWNSPOUTS SHALL BE EITHER CAST MATERIAL OR FIBERGLASS, CONFORMING A.S.T.M. D2996, GRADE 1, CLASS A.

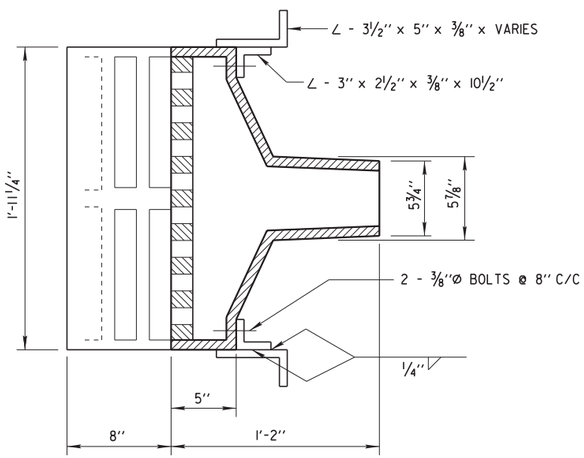


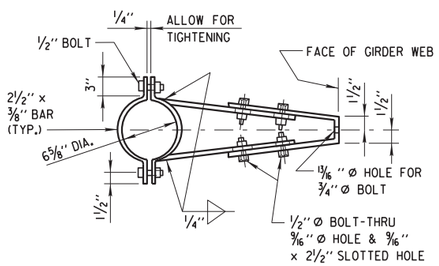
NEW GRATE CASTING DETAIL

ATTACH GRATE TO FRAME FOR SHIPMENT



EXISTING SCUPPER PLAN & SECTION





BRACKET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. R.V.K. J.P.H.

EXISTING AND NEW SCUPPERS DETAILS

SHEET 33 OF 37

483

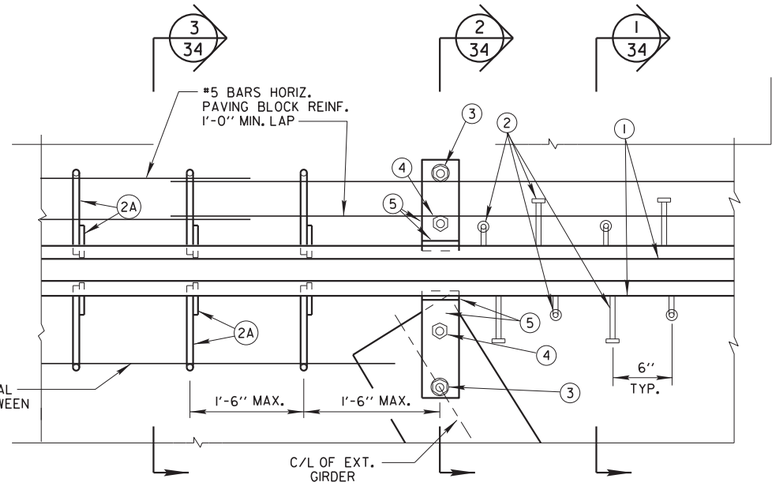
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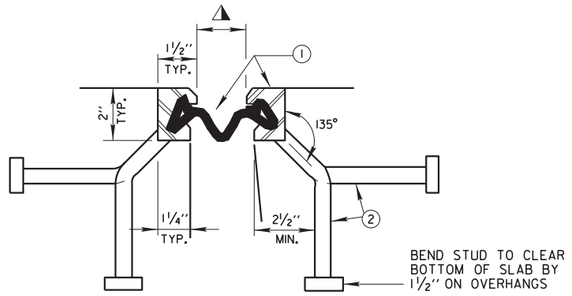
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STATE PROJECT NUMBER

2265 - 08 - 70



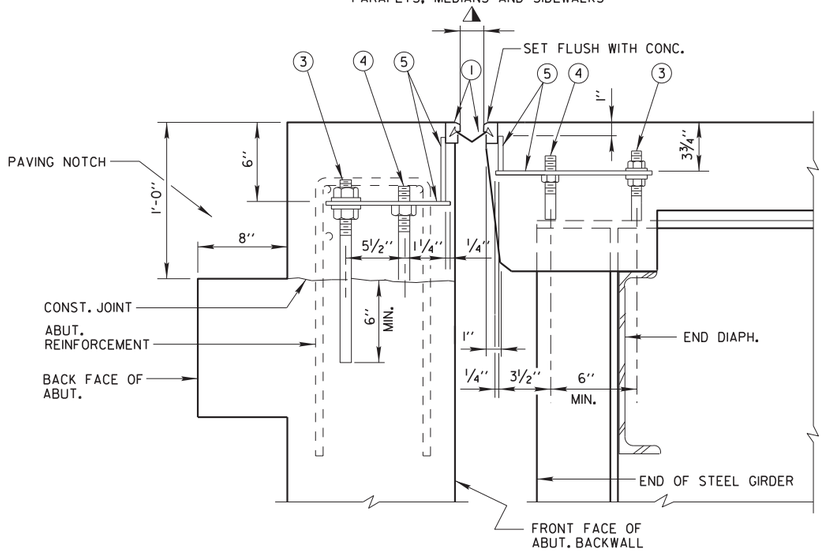
PARTIAL PLAN STRIP SEAL EXPANSION JT.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB AND AT PARAPETS, MEDIANS AND SIDEWALKS

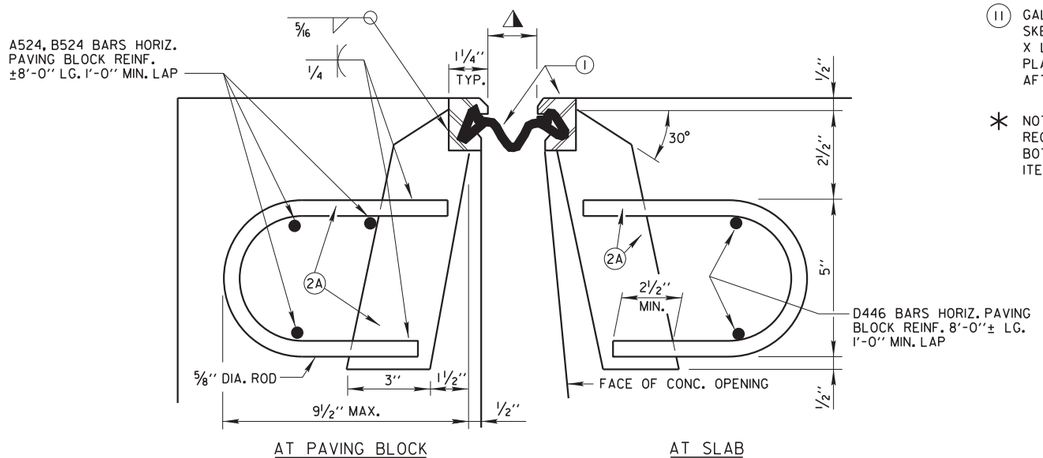
1 / 34



SECTION THRU JOINT AT STEEL GIRDER

NORMAL TO C/L SUBSTRUCTURE

2 / 34



AT PAVING BLOCK AT SLAB

SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN GIRDERS

3 / 34

LEGEND

▲ (1) NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS. SET JOINT OPENING TO 1¾".

(2) STUDS ⅝" DIA. x 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 5 BAR AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND WASHERS. FOR STEEL GIRDERS WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" x ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY COATING MATERIAL. PROVIDE 1½" HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" x 10" x (2'-0" LONG FOR SKEWS 10° TO 45° AND 3'-0" FOR SKEWS > 45° USE NO. 7 BEND AS SHOWN.

(7) ¾" DIA. x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE RECESS 1/16" BELOW PLATE SURFACE TO 45° AND 3'-0" LONG FOR SKEWS > 45° WITH HOLES FOR NO. 7 AS SHOWN.

(8) ¾" DIA. x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾" DIA. x 2¼" GALVANIZED THREADED COUPLING.

(10) 1" x 5" SLOTTED CSK. HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.

(11) GALVANIZED SIDEWALK PLATE ⅜" x (2'-0" WIDE FOR SKEWS TO 45° AND 3'-0" WIDE FOR SKEWS > 45°) X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK PLATE WITH HOLES FOR NO. 7 GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

✳ NOTE: TWO (2) STRIP SEAL EXPANSION JOINTS REQUIRED FOR THIS PROJECT. ONE AT EACH ABUTMENT. BOTH TO BE PAID FOR UNDER LUMP SUM FOR BID ITEM 502.3100

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. R.V.K. J.P.H.

STRIP SEAL EXPANSION JOINT SECTIONS

SHEET 484 OF 37

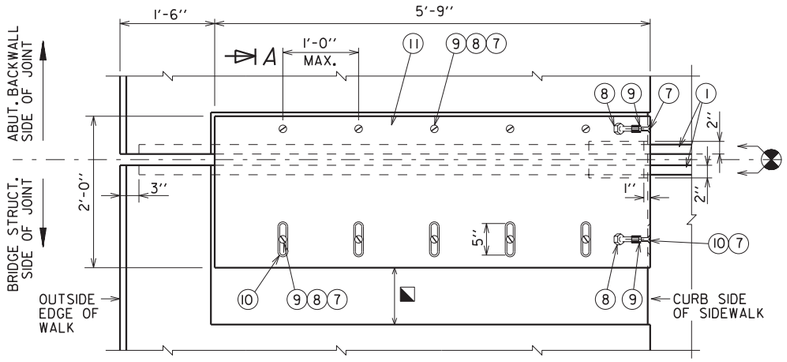
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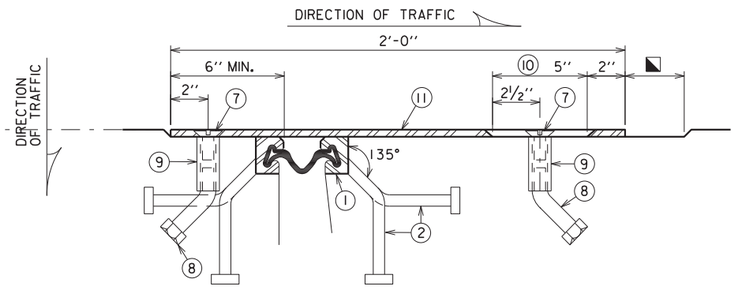
STATE PROJECT NUMBER

2265 - 08 - 70

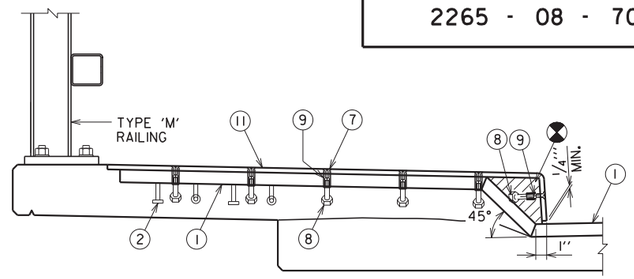


PLAN AT SIDEWALK

AT N.W. CORNER OF NORTH ABUTMENT - SOUTHBOUND TRAFFIC
AND S.E. CORNER OF SOUTH ABUTMENT - NORTHBOUND TRAFFIC



SECTION A-A



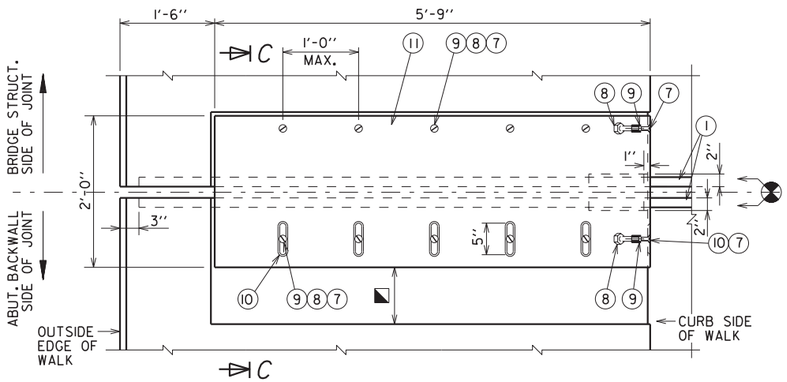
SECTION AT SIDEWALK

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

SEE SHEET 34 LEGEND AND GENERAL NOTES.

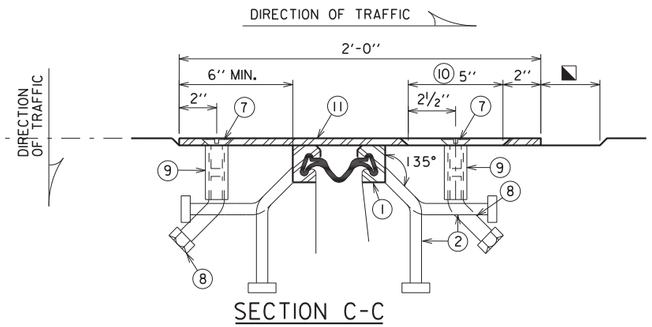
⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◥ JOINT OPENING DIM. ALONG SKEW PLUS ½"



PLAN AT SIDEWALK

AT S.W. CORNER OF SOUTH ABUTMENT - SOUTHBOUND TRAFFIC
AND N.E. CORNER OF NORTH ABUTMENT - NORTHBOUND TRAFFIC



SECTION C-C

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

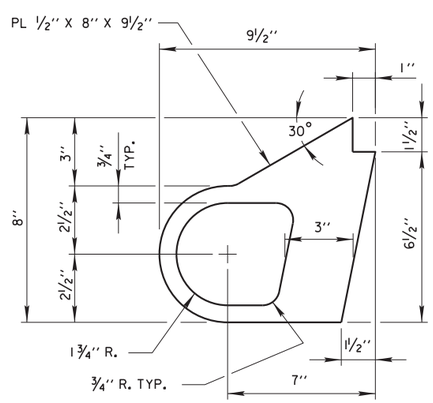
AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

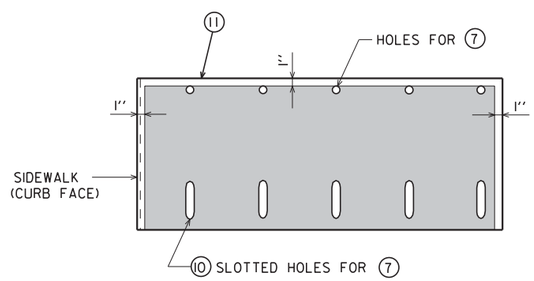
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-438".



ALTERNATE STRIP SEAL ANCHOR



PLAN OF SIDEWALK COVER PLATE
WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY C.L. R.V.K. | PLANS CK'D. R.V.K. J.P.H.

STRIP SEAL EXPANSION JOINT DETAILS

SHEET 35 OF 37

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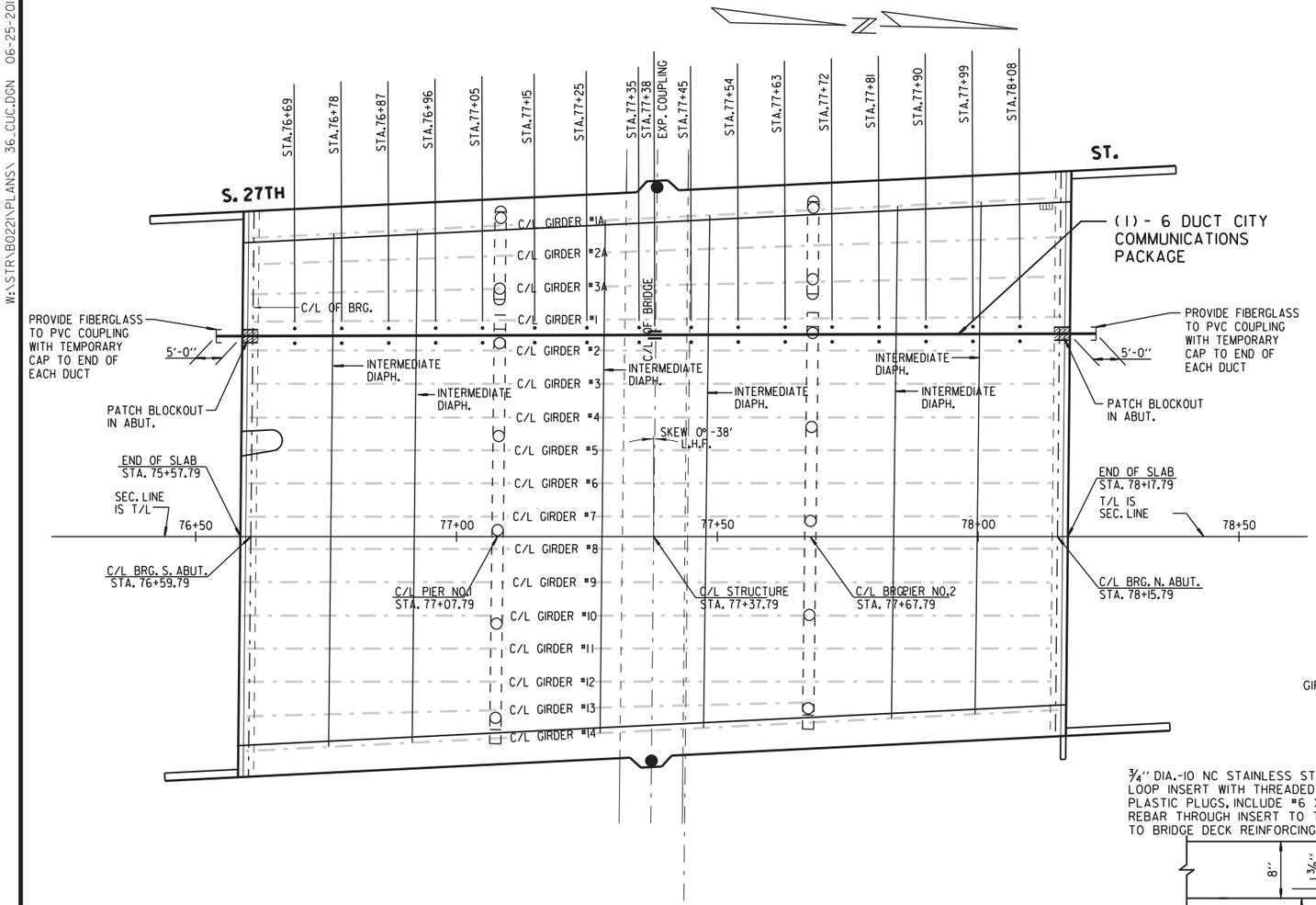
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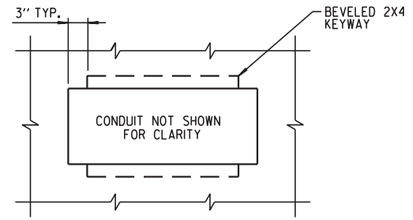
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STATE PROJECT NUMBER

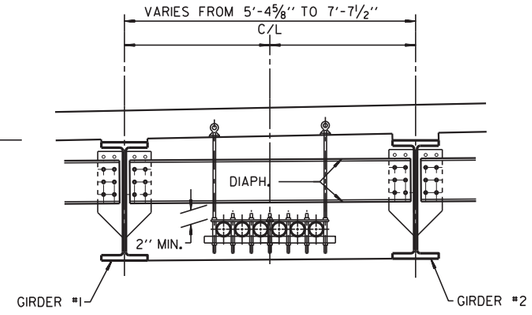
2265 - 08 - 70





BLOCKOUT PATCH DETAIL

(3'-3" X 0'-11" BLOCKOUT)



DIAPHRAGM DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG T/L FOR W. GOOD HOPE RD.

ALL COMPONENTS SHALL HAVE A MINIMUM 75-YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHES 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO ENSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURER'S RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL HAVE STAINLESS STEEL COATING.

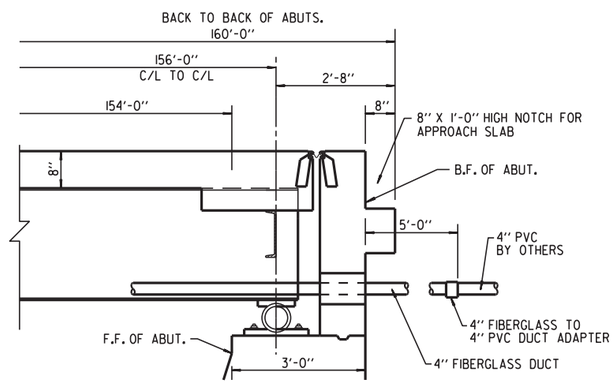
FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS 1 & 2. SEE B-40-438 BRIDGE PLANS.

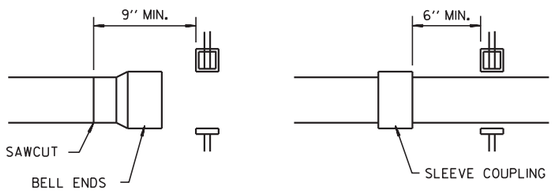
ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE COUPLING AND TEMPORARY CAP ON THE END OF EACH DUCT.

INSTALL EXPANSION JOINT PER LOCATION ON THE PLAN. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

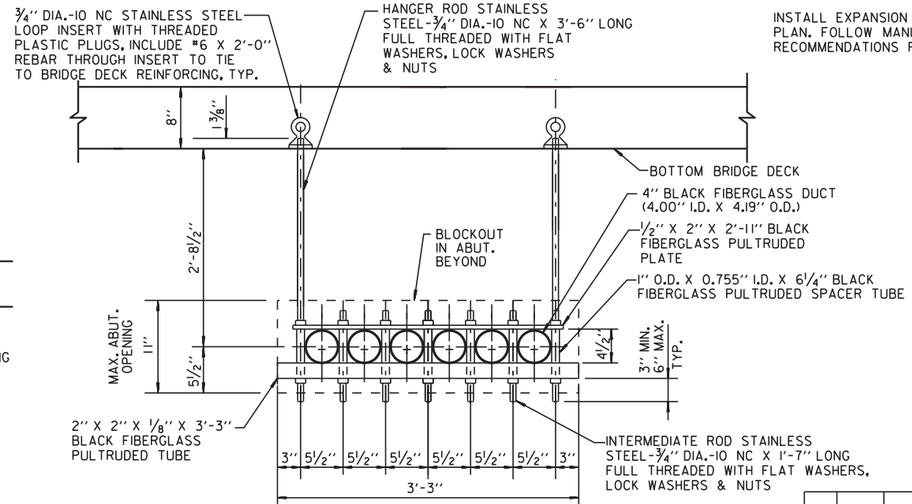


TYPICAL SECTION AT ABUTMENTS



CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.



6 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAGM CROSSING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY S.J.S. | PLANS CK'D. R.V.K. K.L.R.

CITY UNDERGROUND CONDUIT (C.U.C.) PLAN, SECTION, AND DETAILS

SHEET 36 OF 37

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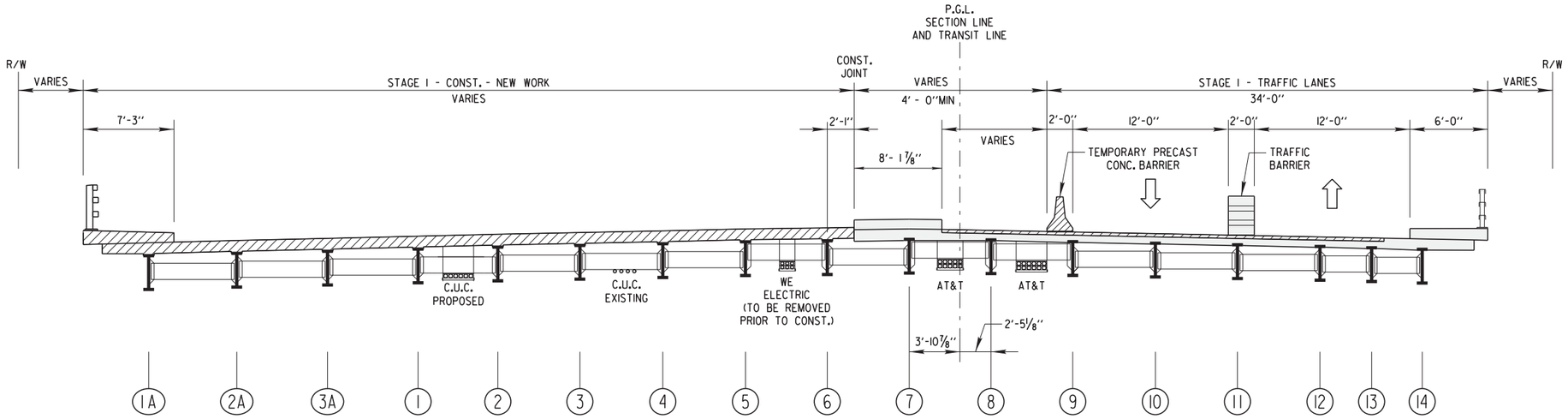
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W:\STR\B022\PLANS\ 37_TRAFFIC_STAGING.DGN 08-18-2013

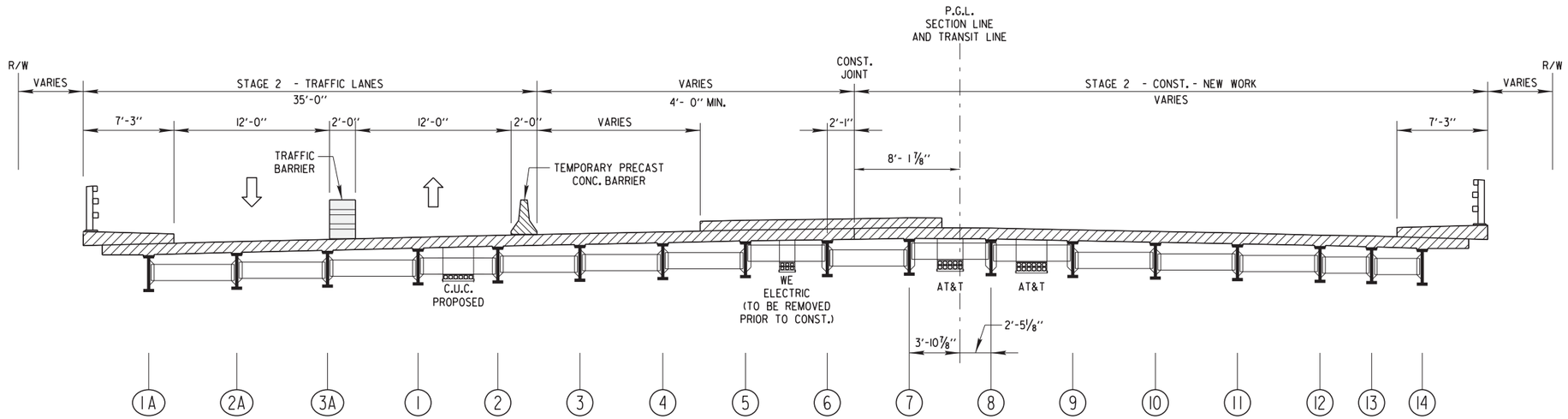
STATE PROJECT NUMBER

2265 - 08 - 70



STAGE 1 - SECTION

(LOOKING NORTH)



STAGE 2 - SECTION

(LOOKING NORTH)

TRAFFIC CONTROL CONSTRUCTION STAGES 1 & 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-438

DRAWN BY K.P.S. | PLANS CK'D. R.V.K.

STAGED CONSTRUCTION
TRAFFIC CONTROL

SHEET 37 OF 37

487

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STATION	CUT C.Y.	FILL (-) C.Y.	LARGEST CUT IN FEET	LARGEST FILL (-) IN FEET
15+00	0	0	2.03	1.11
15+50	86	10	2.41	1.11
16+00	115	10	2.67	1.11
16+50	108	10	2.41	1.11
17+00	97	10	2.44	1.11
17+50	79	10	2.34	1.11
18+00	78	10	2.24	1.11
18+50	80	10	2.49	1.11
19+00	104	10	2.50	1.11
19+50	97	10	2.36	1.11
20+00	97	10	2.39	1.11
20+50	101	10	2.50	1.11
21+00	91	10	2.53	1.11
21+50	105	10	2.50	1.11
22+00	124	10	2.61	1.11
22+50	139	10	2.49	1.11
23+00	123	10	2.42	1.11
23+50	104	10	2.41	1.11
24+00	95	10	2.37	1.11
24+50	97	11	2.39	1.28
25+00	97	11	2.34	1.28
25+50	94	11	2.35	1.28
26+00	118	11	2.46	1.28
26+50	145	11	2.14	1.28
27+00	103	11	2.37	1.28
27+50	103	11	2.36	1.28
28+00	103	11	2.52	1.28
28+50	139	11	2.31	1.28
29+00	129	15	2.56	1.28
29+50	110	19	2.53	1.28
30+00	102	20	2.69	1.28
30+50	102	21	2.43	1.28

STATION	CUT C.Y.	FILL (-) C.Y.	LARGEST CUT IN FEET	LARGEST FILL (-) IN FEET
31+00	98	21	2.34	1.28
31+50	105	22	2.37	1.28
32+00	123	22	2.25	1.28
32+50	236	34	2.35	1.28
33+00	373	48	2.52	1.28
33+50	254	31	2.04	1.28
34+00	197	27	2.02	1.28
34+50	187	23	2.14	1.28
35+00	194	18	2.35	1.28
35+50	223	16	2.10	1.28
36+00	153	12	2.28	1.30
36+50	168	12	2.46	1.30
37+00	160	16	2.11	1.30
37+50	148	25	2.20	1.30
38+00	149	21	2.09	1.30
38+50	137	33	1.94	1.30
39+00	118	59	2.11	1.30
39+50	155	80	1.98	1.30
40+00	191	55	2.32	1.30
40+50	303	18	2.15	1.30
41+00	105	8	2.51	1.30
41+50	111	12	2.50	1.30
42+00	115	12	2.70	1.30
42+50	109	12	2.58	1.30
43+00	98	12	2.67	1.30
43+50	86	12	2.14	1.30
44+00	104	9	2.41	1.30
44+50	96	12	2.52	1.30
45+00	118	12	2.74	1.30
45+50	108	12	2.61	1.30
46+00	99	12	2.35	1.30
46+50	105	13	2.02	1.30
47+00	103	1	2.16	0.20
47+50	82	14	2.32	1.30
48+00	89	14	2.34	1.30
48+50	88	12	2.17	1.30
49+00	99	12	2.23	1.30
49+50	90	12	2.20	1.30

STATION	CUT C.Y.	FILL (-) C.Y.	LARGEST CUT IN FEET	LARGEST FILL (-) IN FEET
50+00	82	12	2.16	1.30
50+50	70	12	2.22	1.30
51+00	69	12	2.63	1.30
51+50	66	13	2.25	1.30
52+00	66	13	2.19	1.30
52+50	71	12	2.14	1.30
53+00	83	12	1.88	1.30
53+50	97	1	1.80	0.10
54+00	85	12	2.16	1.30
54+50	79	12	2.30	1.30
55+00	73	12	2.03	1.30
55+50	63	12	2.34	1.30
56+00	64	12	2.34	1.30
56+50	63	14	2.27	1.30
57+00	63	14	2.26	1.30
57+50	65	12	2.25	1.30
58+00	68	13	2.15	1.30
58+50	77	13	2.20	1.30
59+00	93	13	2.19	1.30
59+50	93	12	2.12	1.30
60+00	98	12	2.04	1.30
60+50	61	12	1.92	1.30
61+00	43	12	2.05	1.30
61+50	49	14	2.14	1.30
62+00	53	19	2.02	1.30
62+50	51	17	1.75	1.30
63+00	54	13	2.28	1.30
63+50	43	18	2.11	1.30
64+00	38	23	2.50	1.30
64+50	61	18	1.82	1.30
65+00	62	12	1.80	1.30
65+50	68	15	2.11	1.30

STATION	CUT C.Y.	FILL (-) C.Y.	LARGEST CUT IN FEET	LARGEST FILL (-) IN FEET
66+00	82	15	2.25	1.30
66+50	109	1	1.79	0.83
67+00	86	7	1.78	0.90
67+50	150	12	2.26	1.30
68+00	155	12	2.28	1.30
68+50	118	13	2.68	1.30
69+00	107	12	2.30	1.30
69+50	95	12	1.98	1.30
70+00	76	12	1.74	1.30
70+50	73	13	1.73	1.30
71+00	83	12	1.84	1.30
71+50	89	12	1.82	1.30
72+00	83	12	1.80	1.30
72+50	90	12	1.95	1.30
73+00	94	12	1.87	1.30
73+50	99	12	1.80	1.30
74+00	95	12	1.95	1.30
74+50	118	12	2.39	1.30
75+00	121	13	1.83	1.30
75+50	96	12	1.82	1.30
76+00	107	4	1.83	0.51
76+50	54	0	1.87	0.00
77+00	0	0	0.00	0.00
77+50	16	0	1.67	0.00
78+00	25	0	1.50	0.00
78+50	50	6	1.67	1.30
79+00	52	10	1.50	1.30
79+50	32	10	1.57	1.30
80+00	44	17	1.41	1.30
80+50	76	11	1.27	1.30
81+00	68	9	1.61	1.30
81+50	88	6	1.70	1.30
82+00	83	7	2.01	1.30
82+50	60	6	1.57	1.30
83+00	53	6	1.63	1.30
83+50	51	6	1.73	1.30
84+00	66	6	1.59	1.30
84+50	59	1	1.45	0.00
85+00	51	1	2.01	0.00
85+50	25	0	1.69	0.00
TOTAL	13992	1909		

EARTHWORK SUMMARY

EXCAVATION COMMON (205.0100)	39,392 C.Y.
(INCLUDES 25,400 C.Y. PAV'T. REMOVAL)	
FILL (INCLUDING 20% SHRINKAGE)	1909 C.Y.
WASTE	37,483 C.Y.

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PROJECT NO: 2265-08-70 | HWY: STH 241 | COUNTY: MILWAUKEE | COMPUTER EARTHWORK DATA | SHEET: 488 | E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov