WKE

JUN 2013

PROJECT ID: 1060-33-73

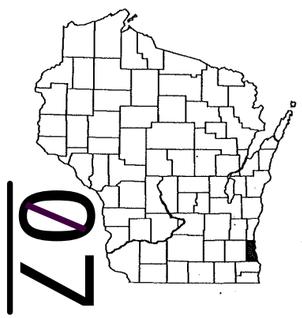
WITH: N/A

COUNTY: MILWAUKEE

ORDER OF SHEETS

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

TOTAL SHEETS = 630



DESIGN DESIGNATION SWAN BLVD

A.A.D.T. 2014	=	13,490
A.A.D.T. 2035	=	14,970
D.H.V. 2035	=	1119 NB/573 SB
D.D.	=	66.1% NB/33.9% SB
T.	=	0.5% NB/1.0% SB
DESIGN SPEED	=	45 MPH
ESALS	=	3,241,200

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

- ELECTRIC — E
- FIBER OPTIC — FO
- GAS — G
- OVERHEAD POWER — OH
- SANITARY SEWER — SAN
- STORM SEWER — SS
- TELEPHONE — T
- WATER — W
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE
- TRANSMISSION TOWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ZOO IC - SWAN BLVD

LOCAL STREET

WATERTOWN PLANK ROAD TO USH 45

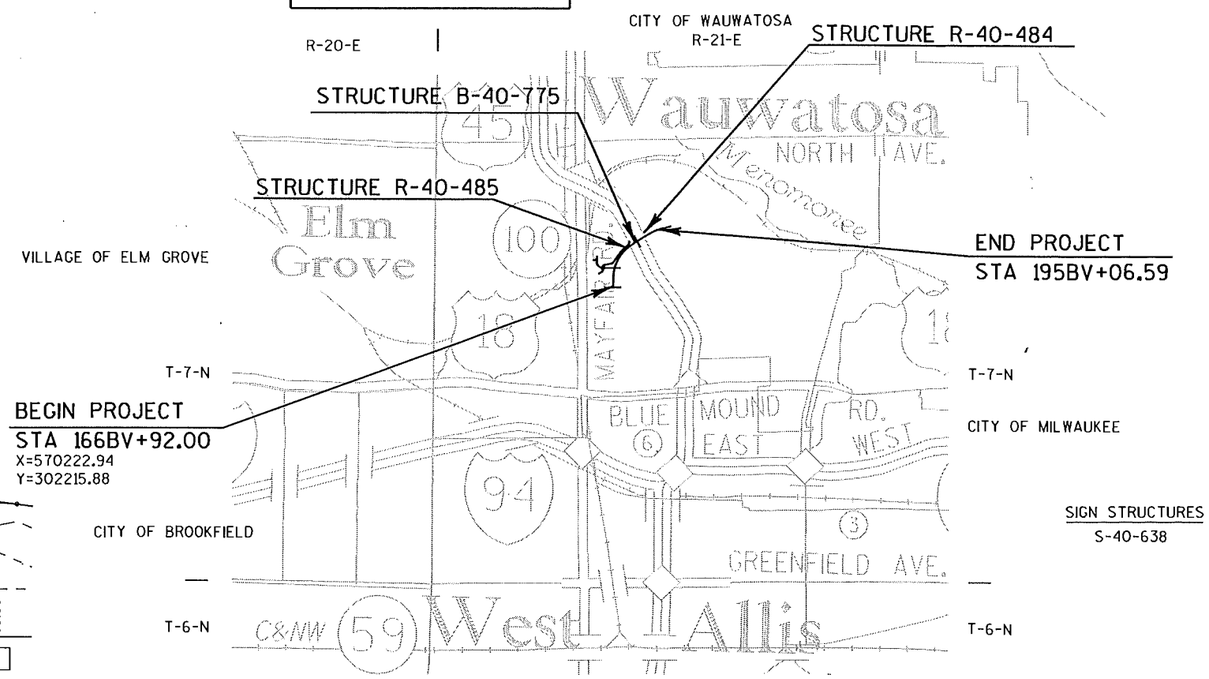
SWAN BLVD

MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-33-73		

STATE PROJECT NUMBER

1060-33-73



SIGN STRUCTURES
S-40-638

LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.489 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

FORWARD 45

ORIGINAL PLANS PREPARED BY
MILWAUKEE, WISCONSIN

WISCONSIN
THOMAS SPIELES
E-41178
MILWAUKEE, WI
PROFESSIONAL ENGINEER

3-28-13 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	FORWARD 45
Designer	FORWARD 45
Project Manager	JEFF BOHEN
Regional Examiner	
Regional Supervisor	ROBERTO GUTIERREZ
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 3-28-13 (Signature)

E

UTILITY CONTACTS

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MIDWEST FIBER NETWORKS
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FAX: (262) 547-1103
kbauer@sewrpc.org

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

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

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	GENERAL NOTES AND UTILITY CONTACTS	SHEET:	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\020101_gn.ppt PLOT DATE : 1/30/2013 5:01:15 AM PLOT BY : MSCDYB PLOT NAME : 020101_gn1 PLOT SCALE : 1:1

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATION AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE.

CURB HEIGHTS AT THE END OF THE CURB AND GUTTER SHALL BE TAPERD FROM 0 TO 6 INCHES IN 6 FEET.

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

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE PLACED WITH 6-INCH TYPICAL DEPTH.

CONCRETE PAVEMENT TINING SHALL BE LONGITUDINAL.

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

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER.

SAWCUT ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.

UNLESS OTHERWISE SHOWN OR NOTED, TEMPORARY PAVEMENTS SHALL BE 5 INCHES OF ASPHALTIC SURFACE TEMPORARY OVER 10 INCHES OF BASE AGGREGATE DENSE, 1 ¼ INCH.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL “IN USE” SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

PLACE TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, MULCH AND FERTILIZE OR SOD AND FERTILIZE ALL AREAS WITHIN 5 CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

THE CONTRACTOR SHALL PROVIDE A CONCRETE JOINT DETAIL 14 DAYS PRIOR TO PAVING FOR APPROVAL BY THE ENGINEER. 15-FOOT MAXIMUM SPACING FOR LONGITUDINAL JOINTS.

CONSTRUCT HMA PAVEMENT WITH THE FOLLOWING LAYERS AND GRADATIONS:

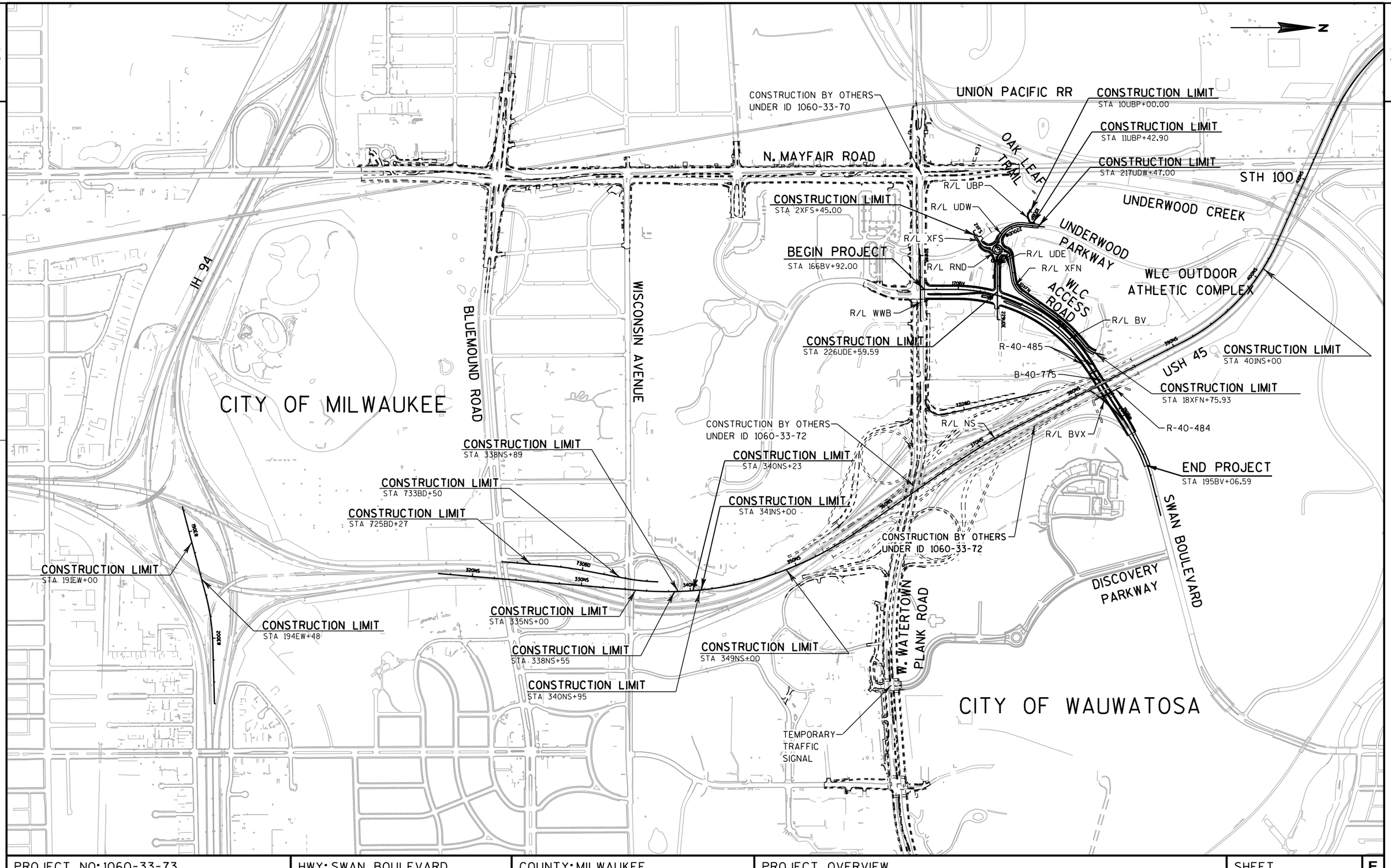
PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
ASPHALTIC SURFACE	3"	3"	25.0 MM	
	5"	2" UPPER LAYER	25.0MM	
		3" LOWER LAYER	25.0MM	
ASPHALTIC SURFACE TEMPORARY	5"		25.0 MM	
E-10	7 1/2"	3 1/2" UPPER LAYER	25.0 MM	PG-64-28
		4" LOWER LAYER	25.0 MM	PG-64-28

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEWS
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
PAVING GRADES
FTMS PLANS
CONTOUR MAP
CROSS SECTION MATCHLINES
EROSION CONTROL
STORM SEWER
STORM WATER MANAGEMENT
UTILITY PLAN
STREETSCAPING / PLANTING
SIGNING REMOVAL PLAN
PERMANENT SIGNING
LIGHTING
TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL
STAGE CONSTRUCTION
DETOUR
FENCING
ALIGNMENT LAYOUT

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EASTBOUND
FE	FIELD ENTRANCE
FL	FLOW LINE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PGL	PROFILE GRADE LINE
PLE	PERMANENT LIMITED EASEMENT
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET	E

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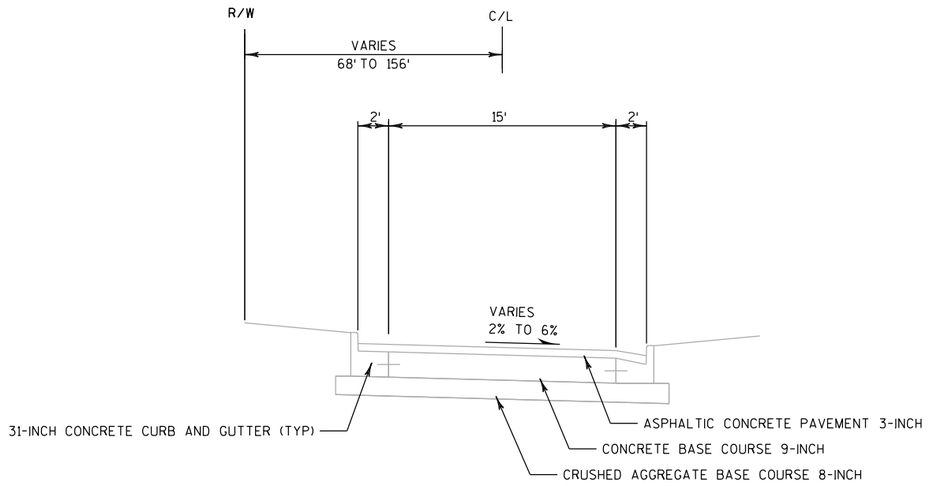
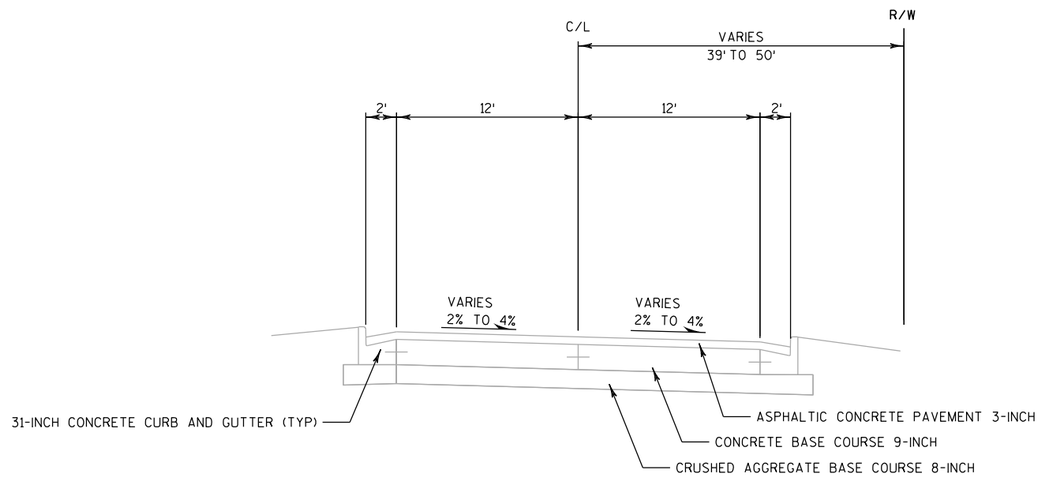


TYPICAL EXISTING SECTION

SWAN BOULEVARD

SOUTHBOUND EXIT RAMP TO STA 192BV+20



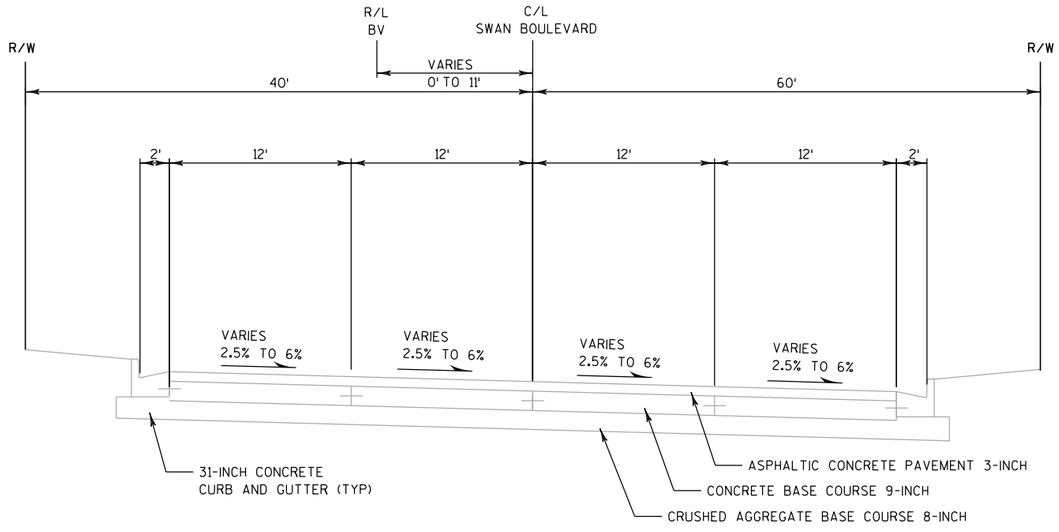
TYPICAL EXISTING SECTION

SWAN BOULEVARD

NORTHBOUND ENTRANCE RAMP TO STA 192BV+20

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



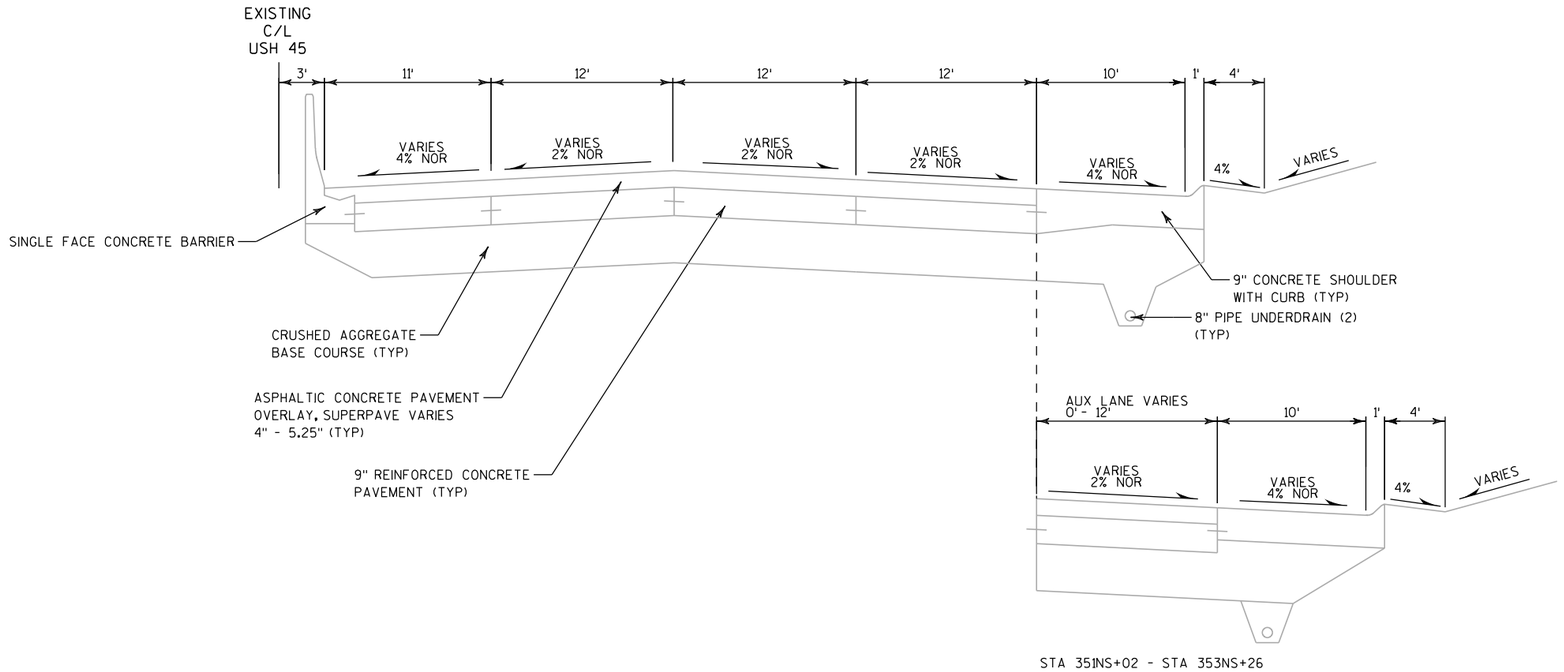
TYPICAL EXISTING SECTION

SWAN BOULEVARD

STA 192BV+20 TO STA 195BV+07

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2

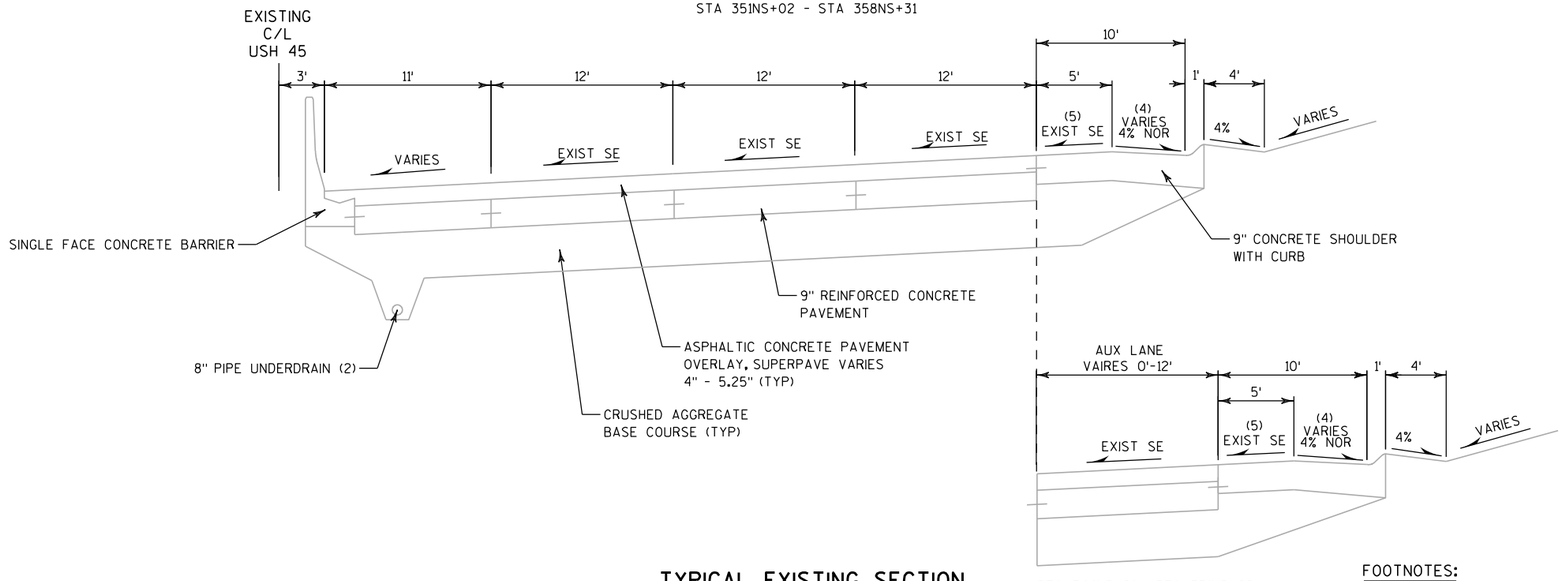


STA 351NS+02 - STA 353NS+26

TYPICAL EXISTING SECTION

NB USH 45 MAINLINE

STA 351NS+02 - STA 358NS+31



STA 344NS+01 - STA 351NS+02

TYPICAL EXISTING SECTION

NB USH 45 MAINLINE SUPERELEVATED

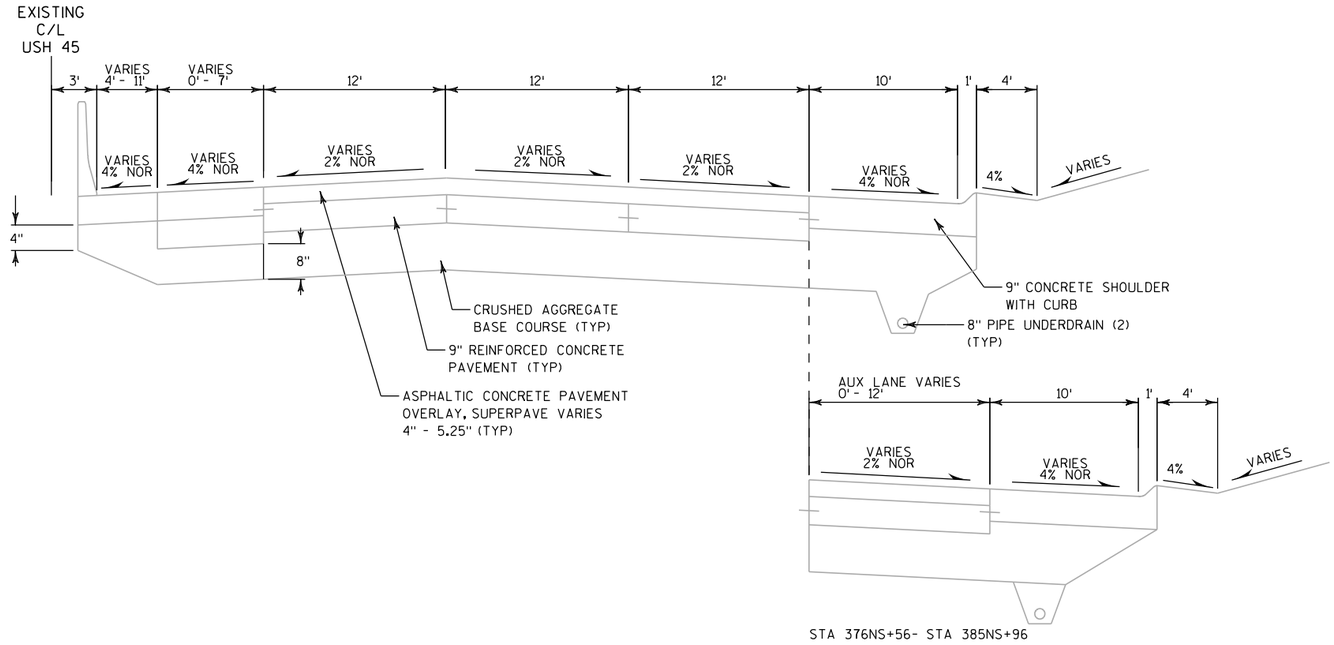
STA 340NS+23 - STA 351NS+02

FOOTNOTES:

(1) 6" MOUNTABLE CONCRETE CURB.
(2) PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.
(4) CROSS SLOPE EQUAL TO THE GREATER OF 4% OR
SUPER ELEVATION RATE OF ADJACENT LANE.
(5) CROSS SLOPE EQUAL TO SUPER ELEVATION RATE OF ADJACENT LANE.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

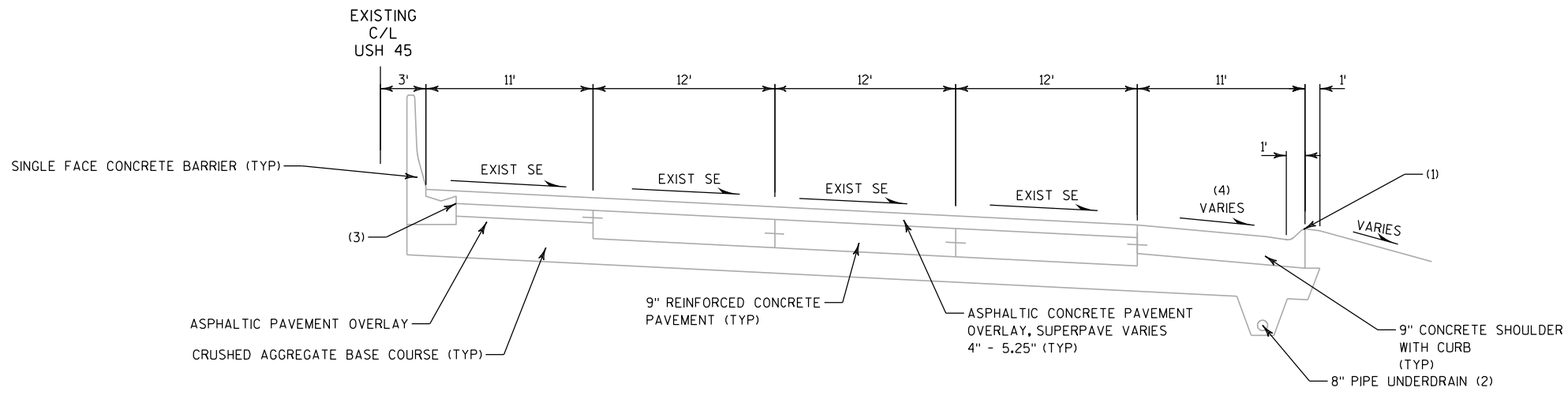
2



TYPICAL EXISTING SECTION

NB USH 45 MAINLINE

STA 368NS+78 - STA 388NS+26



TYPICAL EXISTING SECTION

NB USH 45 MAINLINE SUPERELEVATED

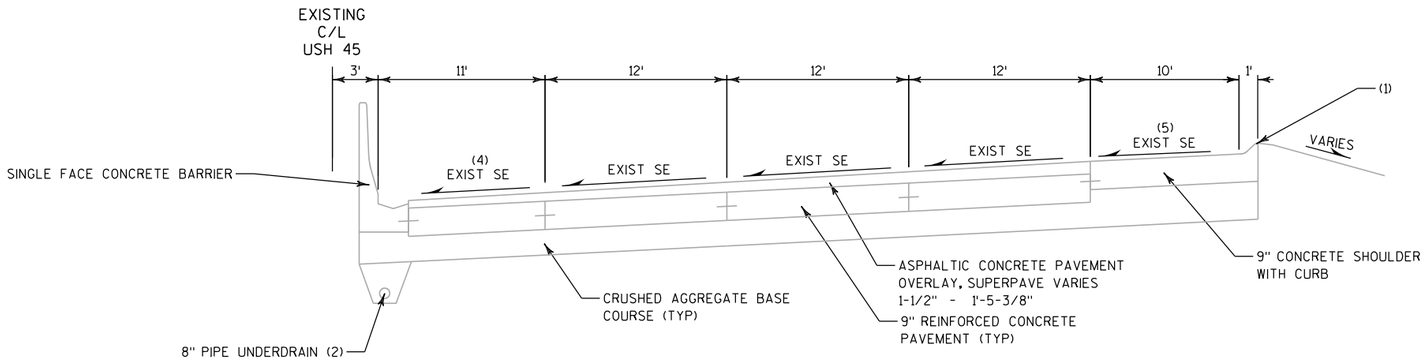
STA 358NS+31 - STA 368NS+78

FOOTNOTES:

(1) 6" MOUNTABLE CONCRETE CURB.
(2) PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.
(3) CONCRETE SHOULDER IS 1.25" ABOVE CONCRETE PAVEMENT
4) CROSS SLOPE EQUAL TO THE GREATER OF 4% OR
SUPER ELEVATION RATE OF ADJACENT LANE..
(5) CROSS SLOPE EQUAL TO SUPER ELEVATION RATE OF ADJACENT LANE.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



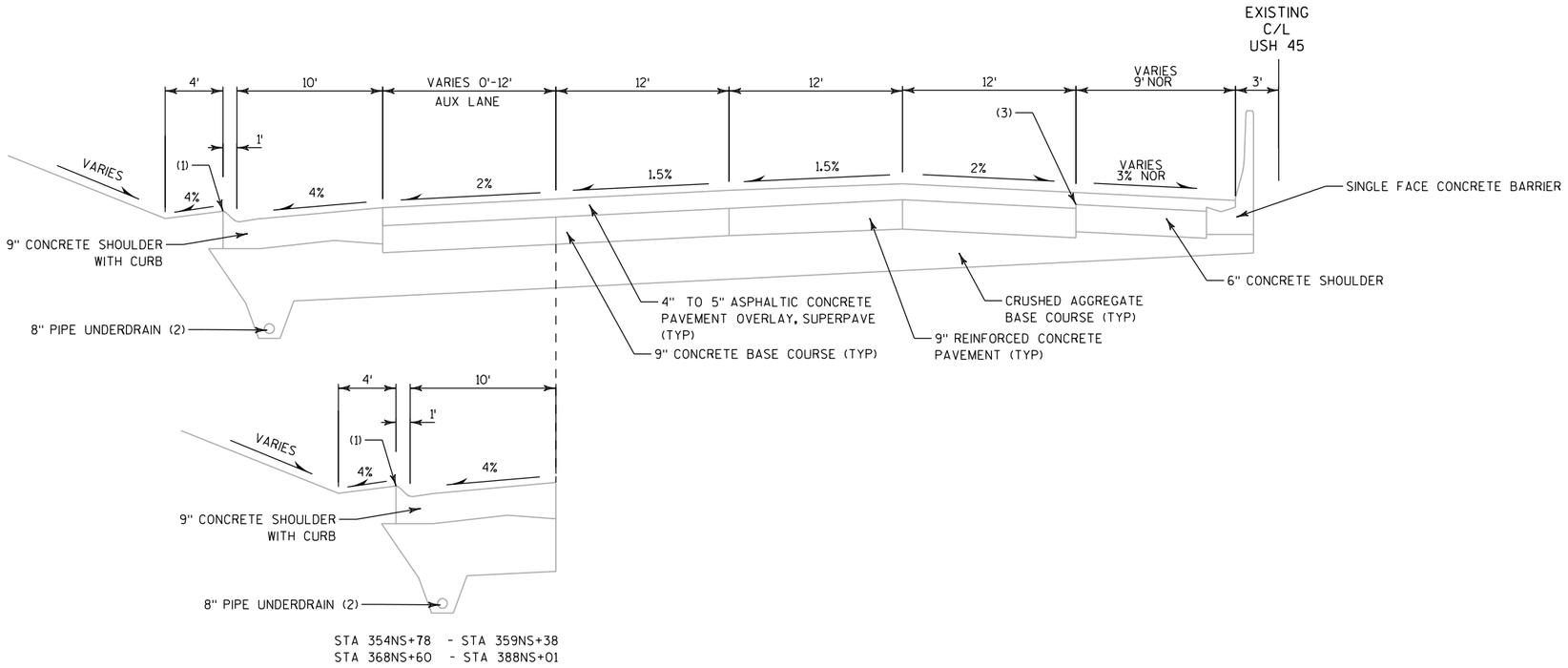
TYPICAL EXISTING SECTION
NB USH 45 MAINLINE SUPERELEVATED
STA 388NS+26 - STA 400NS+22

FOOTNOTES:

(1) 6" MOUNTABLE CONCRETE CURB.
(2) PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.
(4) CROSS SLOPE EQUAL TO THE GREATER OF 4% OR
SUPER ELEVATION RATE OF ADJACENT LANE.
(5) CROSS SLOPE EQUAL TO SUPER ELEVATION RATE OF ADJACENT LANE.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\020301_ts.dgn PLOT DATE : 30-JAN-2013 04:11 PLOT BY : MSCDYB PLOT NAME : 020301_ts4 PLOT SCALE : 10:1
WISDOT/CADDS SHEET 42

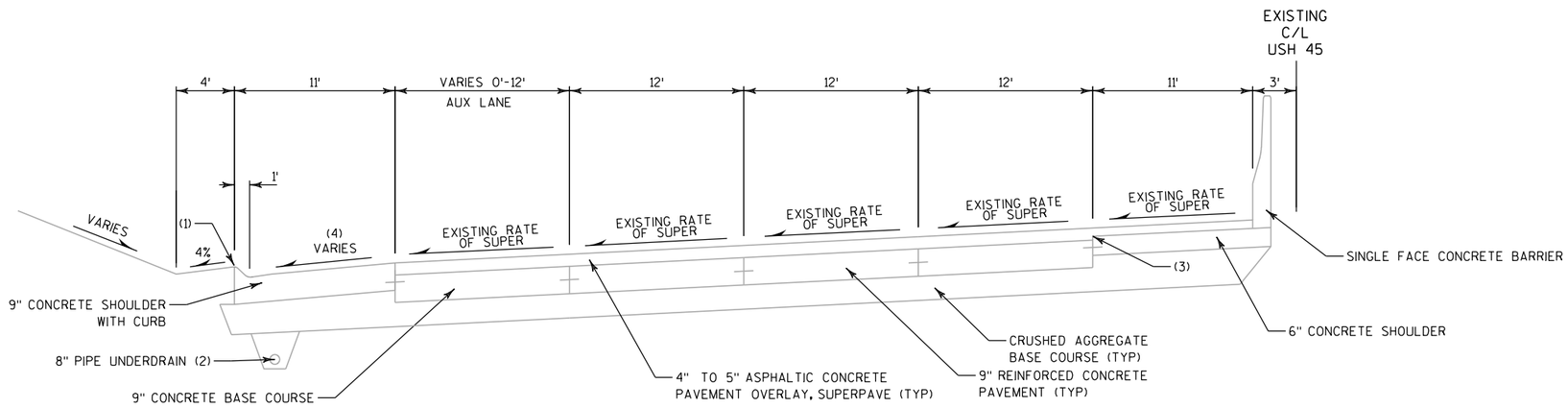


STA 354NS+78 - STA 359NS+38
STA 368NS+60 - STA 388NS+01

TYPICAL EXISTING SECTION

SB USH 45 MAINLINE

STA 350NS+33 - STA 359NS+38
STA 368NS+60 - STA 388NS+01



TYPICAL EXISTING SECTION

SB USH 45 MAINLINE SUPERELEVATED

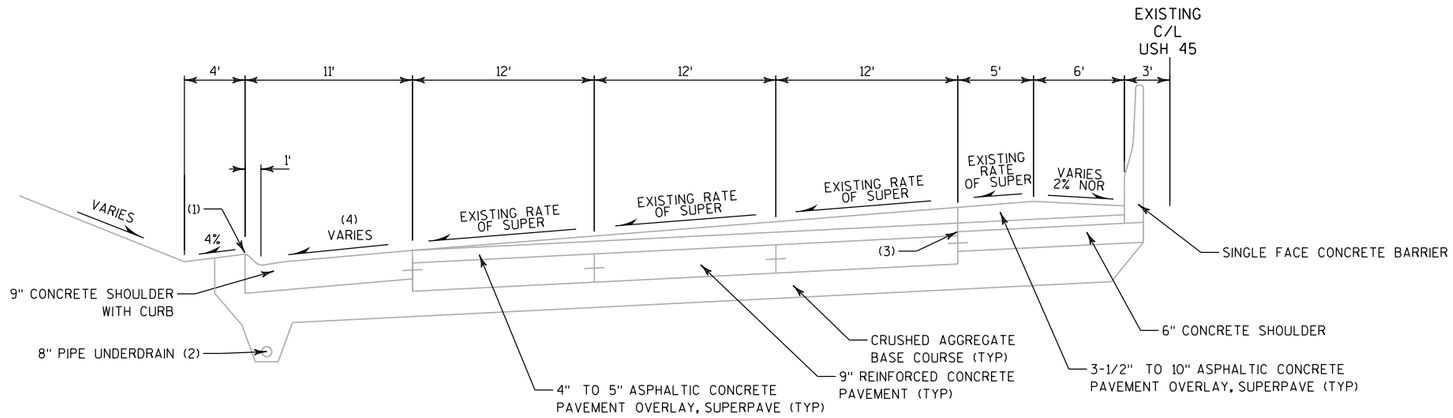
STA 346NS+94 - STA 350NS+33

FOOTNOTES:

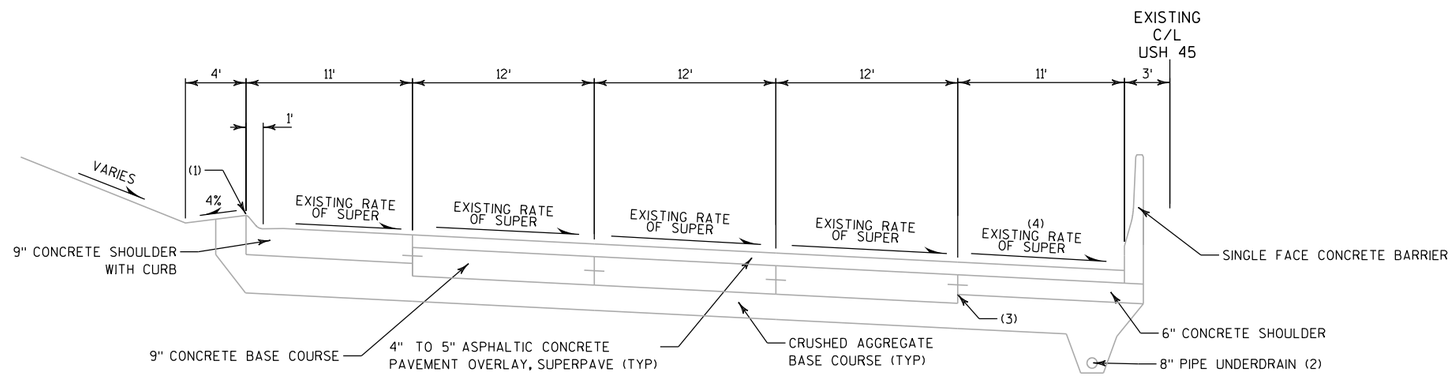
(1) 6" MOUNTABLE CONCRETE CURB.
(2) PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.
(3) CONCRETE SHOULDER IS 1.25" ABOVE CONCRETE PAVEMENT.
(4) CROSS SLOPE EQUAL TO THE GREATER OF 4% OR
SUPER ELEVATION RATE OF ADJACENT LANE.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



TYPICAL EXISTING SECTION
SB USH 45 MAINLINE SUPER ELEVATED
STA 388NS+01 - STA 401NS+00

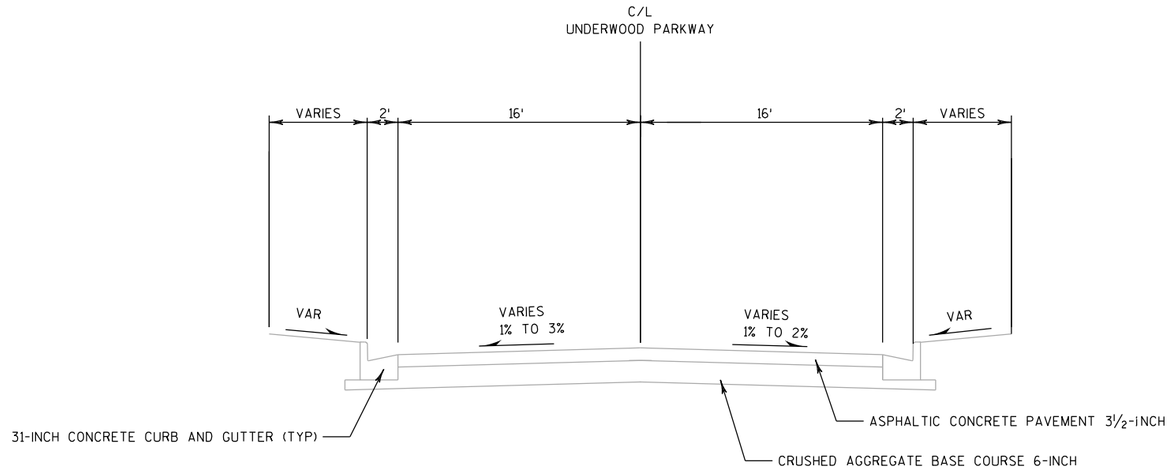


TYPICAL EXISTING SECTION
SB USH 45 MAINLINE SUPER ELEVATED
STA 359NS+38 - STA 368NS+60

FOOTNOTES:
(1) 6" MOUNTABLE CONCRETE CURB.
(2) PIPE UNDERDRAIN LOCATION IS APPROXIMATE. NO OFFSET SHOWN IN AS BUILT PLANS.
(3) CONCRETE SHOULDER IS 1.25" ABOVE CONCRETE PAVEMENT.
(4) CROSS SLOPE EQUAL TO THE GREATER OF 4% OR
SUPER ELEVATION RATE OF ADJACENT LANE.

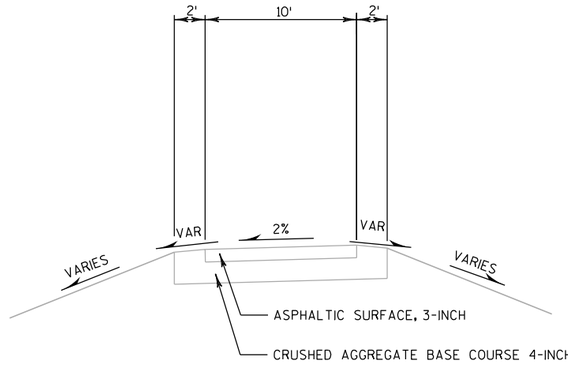
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



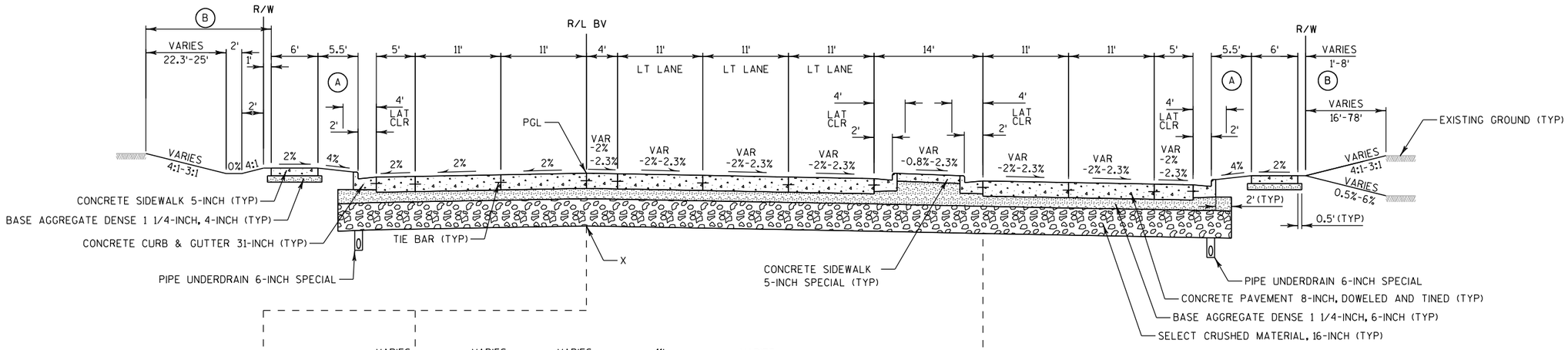
TYPICAL EXISTING SECTION
UNDERWOOD PARKWAY

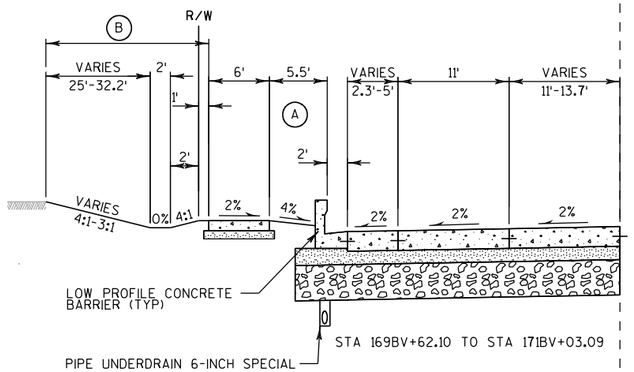
STA 217UDW+47 TO STA 219UDW+00

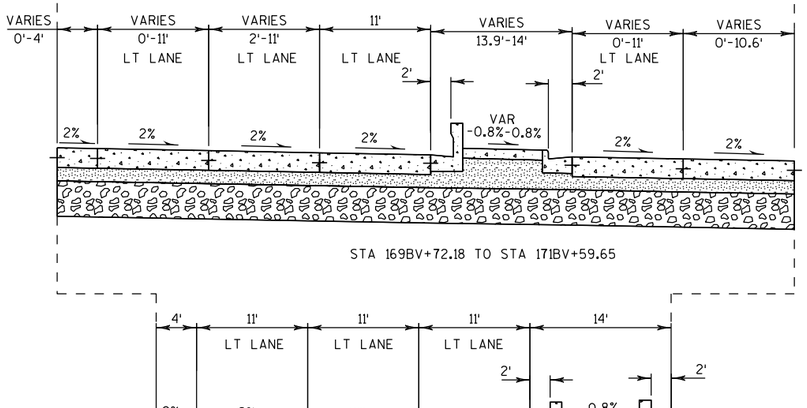


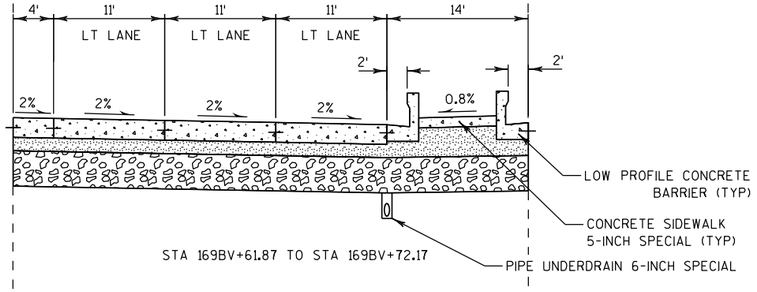
TYPICAL EXISTING SECTION
OAK LEAF TRAIL

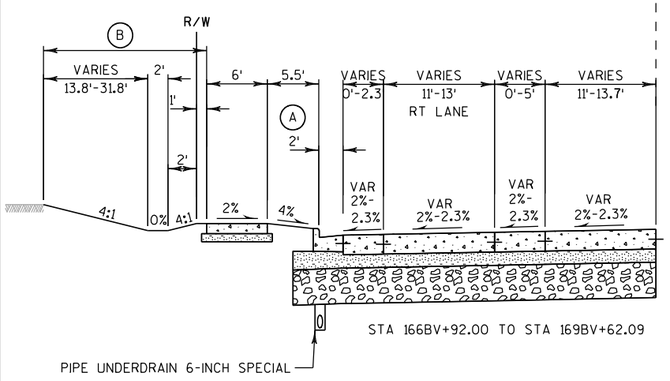
STA 10UBP+00.00











TYPICAL FINISHED SECTION

SWAN BOULEVARD

STA 166BV+92.00 TO STA 171BV+59.65

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

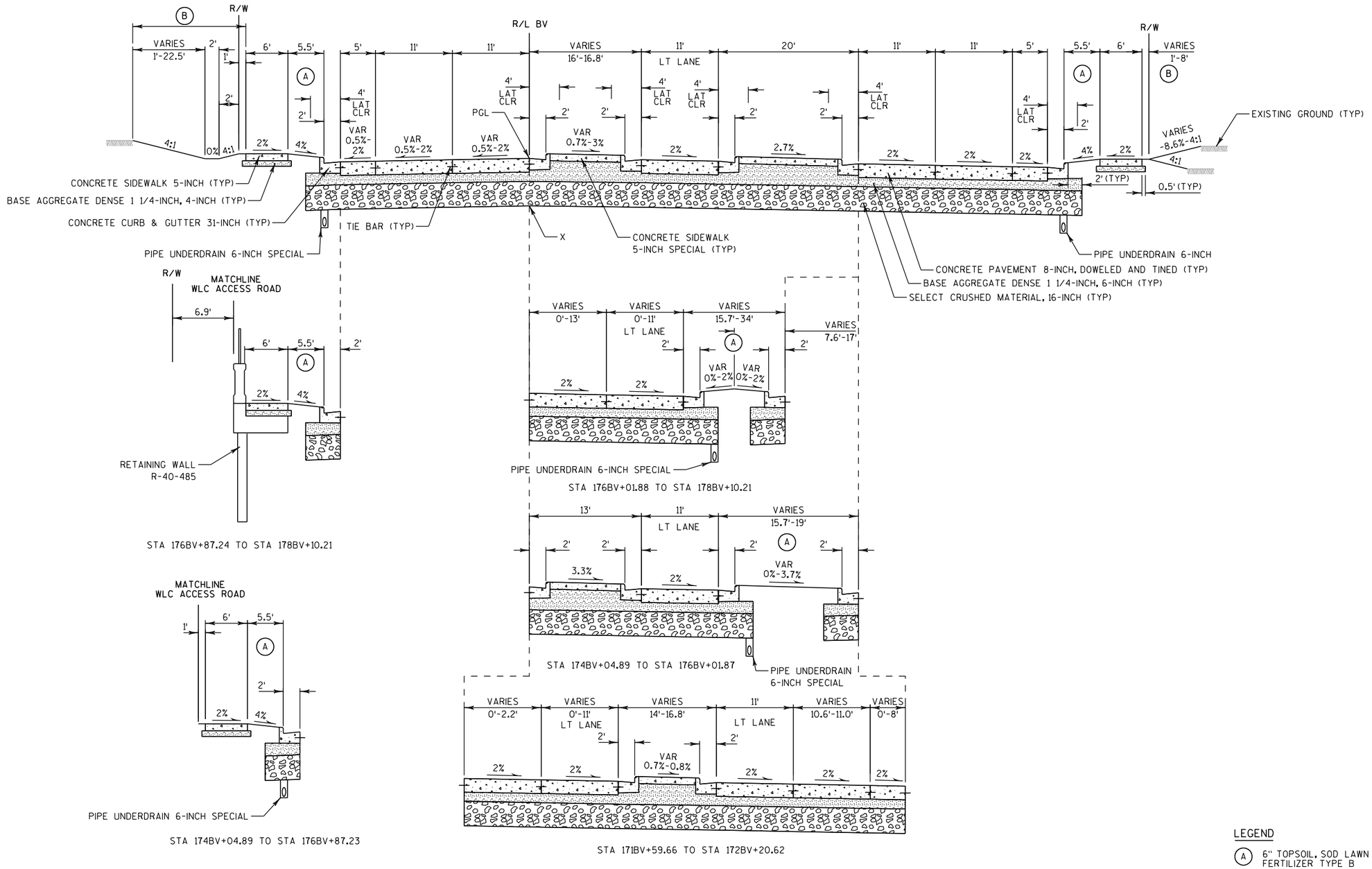
LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION

SWAN BOULEVARD

STA 171BV+59.66 TO STA 178BV+10.21

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

LEGEND

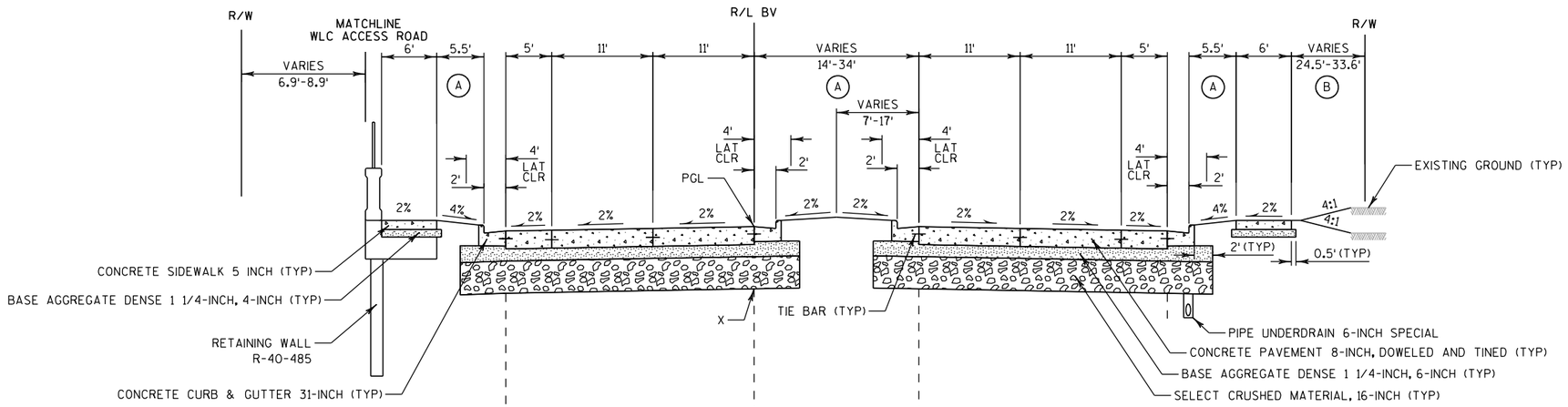
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

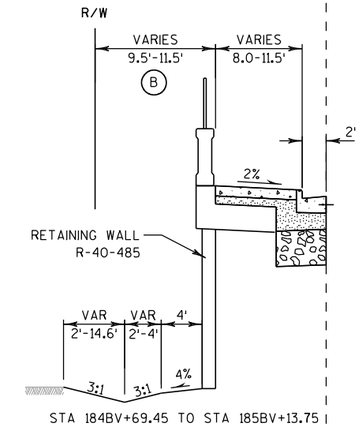
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

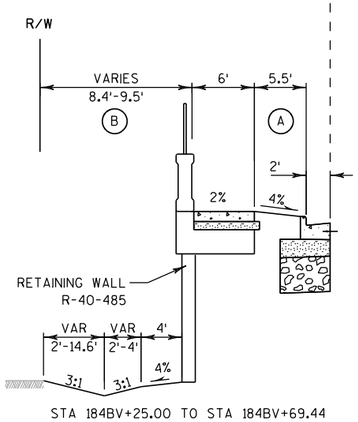
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2

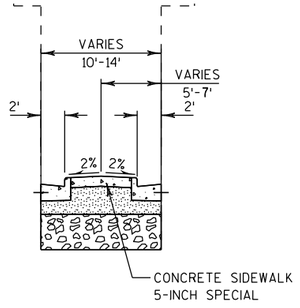




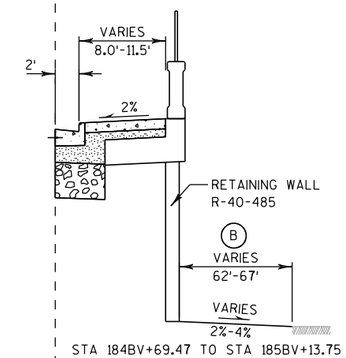
STA 184BV+69.45 TO STA 185BV+13.75



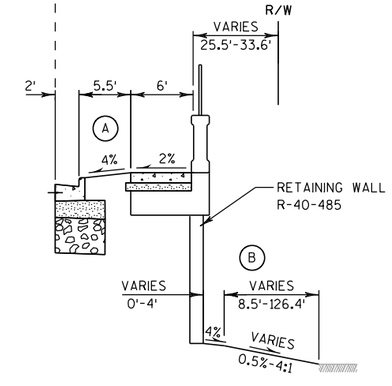
STA 184BV+25.00 TO STA 184BV+69.44



STA 183BV+50.12 TO STA 185BV+13.75



STA 184BV+69.47 TO STA 185BV+13.75



STA 179BV+06.83 TO STA 184BV+69.46

TYPICAL FINISHED SECTION
SWAN BOULEVARD

STA 178BV+10.22 TO STA 185BV+13.75

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

LEGEND

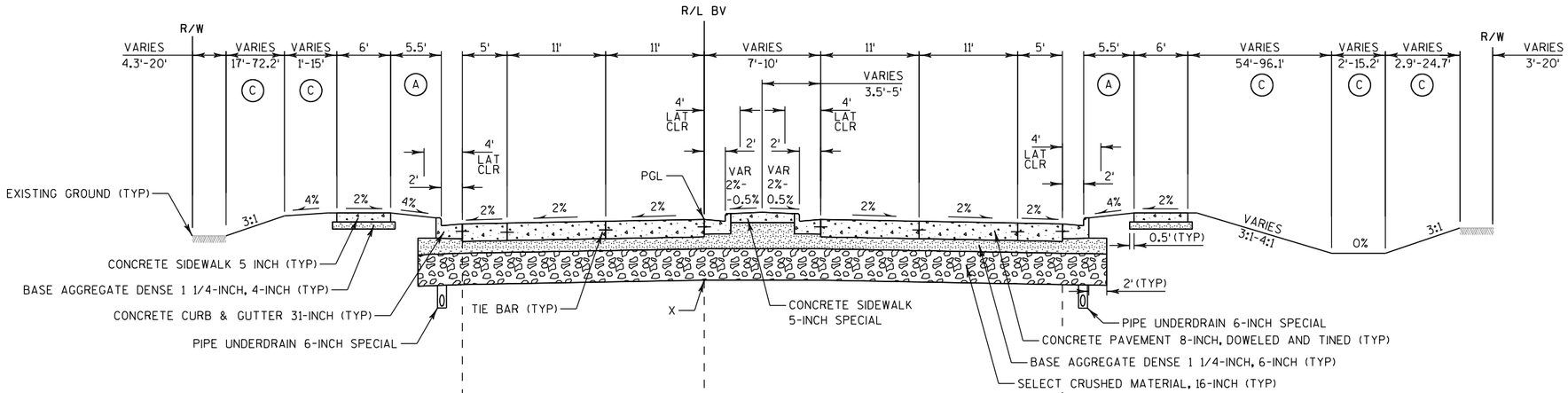
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

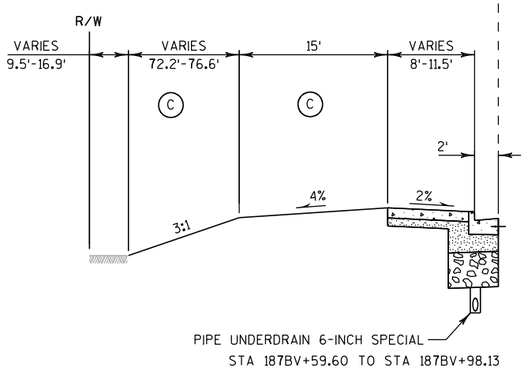
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

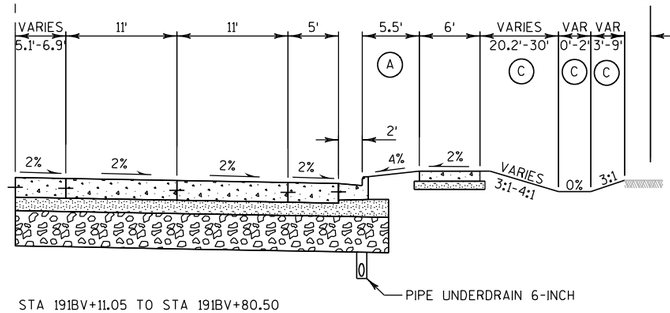
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2

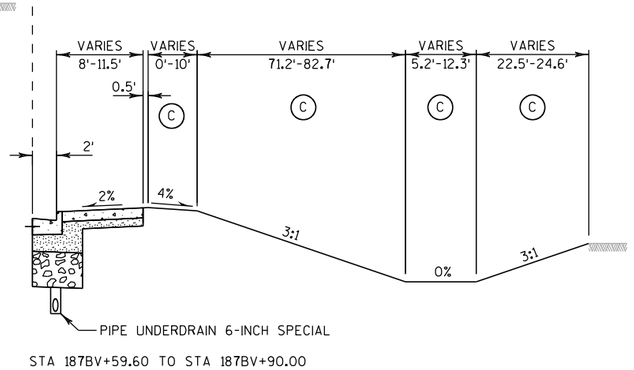




STA 187BV+59.60 TO STA 187BV+98.13



STA 191BV+11.05 TO STA 191BV+80.50



STA 187BV+59.60 TO STA 187BV+90.00

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

TYPICAL FINISHED SECTION
SWAN BOULEVARD

STA 187BV+59.60 TO STA 191BV+80.50

LEGEND

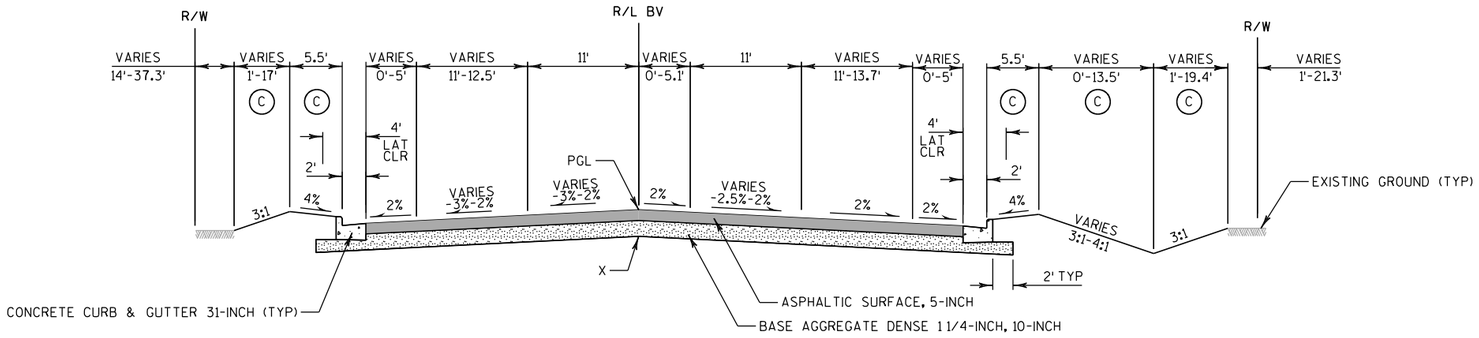
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

TYPICAL FINISHED SECTION

SWAN BOULEVARD

STA 191BV+80.51 TO STA 195BV+06.59

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\020401_ts.dgn PLOT DATE : 30-JAN-2013 04:12 PLOT BY : MSCDYB PLOT NAME : 020401_ts4 PLOT SCALE : 15:1
WISDOT/CADDS SHEET 42

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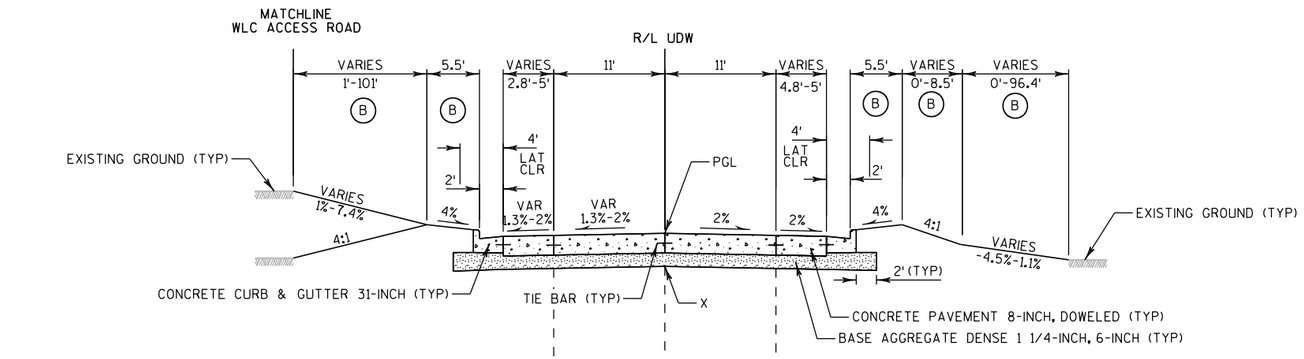
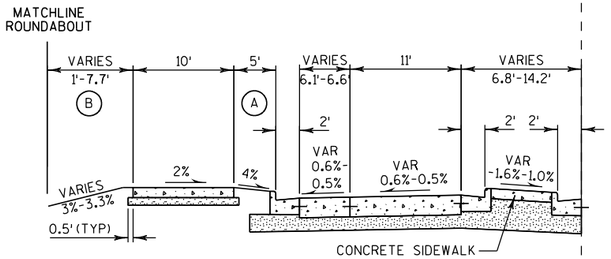
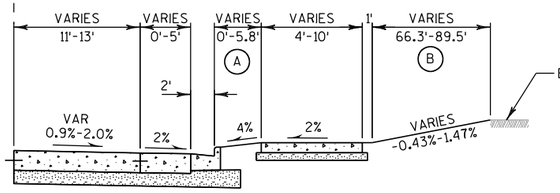
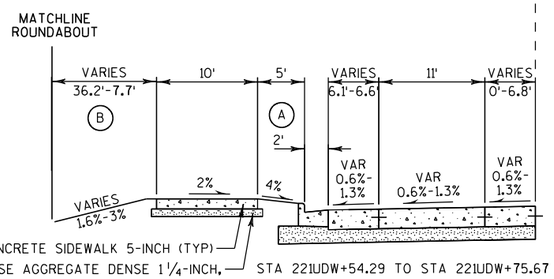




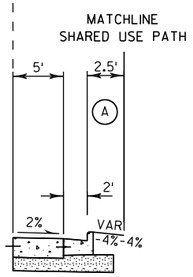
STA 221UDW+75.68 TO STA 222UDW+02.82



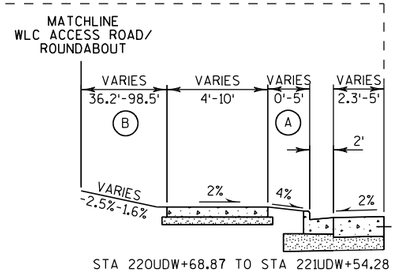
STA 221UDW+00.66 TO STA 222UDW+02.82



STA 221UDW+54.29 TO STA 221UDW+75.67



STA 218UDW+05.00 TO STA 218UDW+30.00



STA 220UDW+68.87 TO STA 221UDW+54.28

TYPICAL FINISHED SECTION
UNDERWOOD PARKWAY

STA 217UDW+47.00 TO STA 222UDW+02.82

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

LEGEND

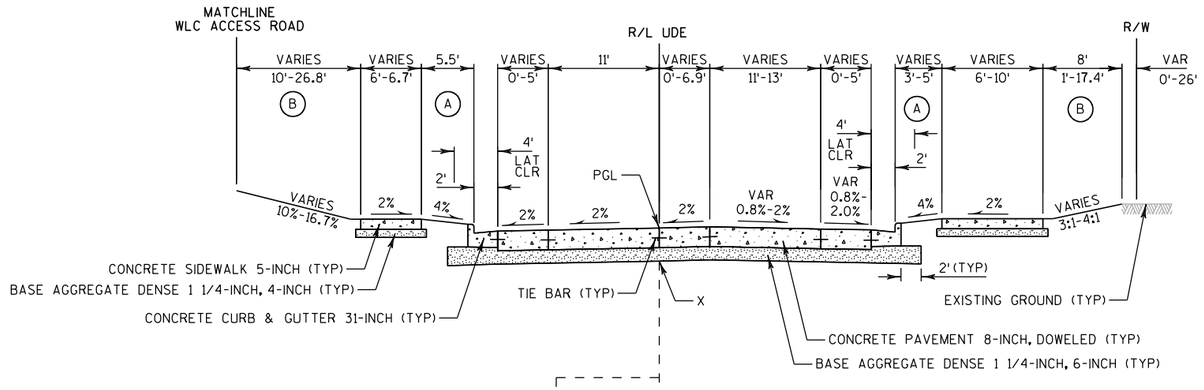
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

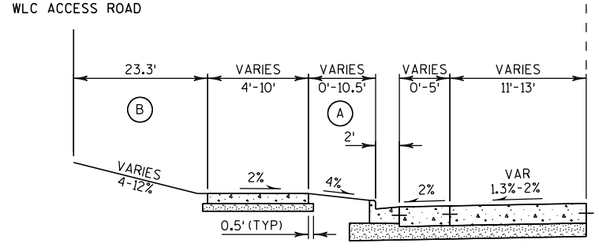
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

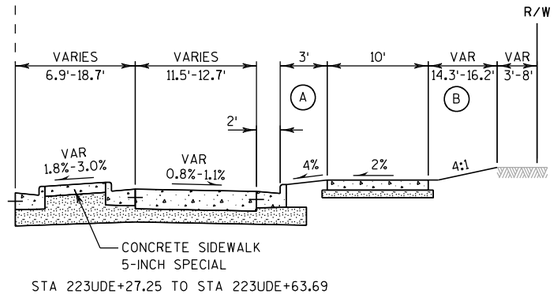
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2





STA 223UDE+27.25 TO STA 224UDE+47.30



STA 223UDE+27.25 TO STA 223UDE+63.69

TYPICAL FINISHED SECTION
UNDERWOOD PARKWAY

STA 223UDE+27.25 TO STA 226UDE+59.59

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

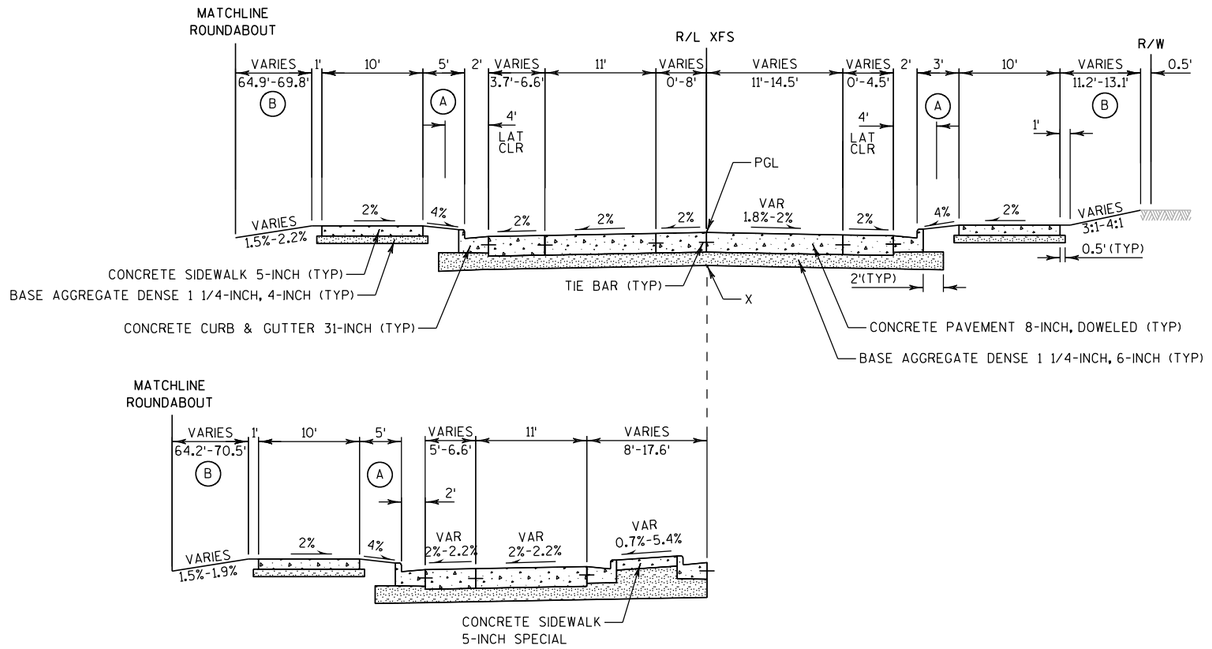
LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

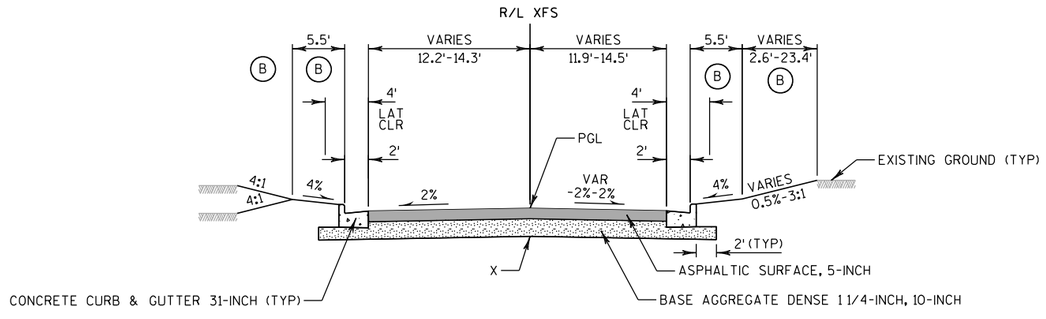
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



STA 3XFS+80.17 TO STA 4XFS+44.56



STA 2XFS+45.00 TO STA 3XFS+25.00

TYPICAL FINISHED SECTION
WLC ACCESS ROAD

STA 2XFS+45.00 TO STA 4XFS+44.56

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

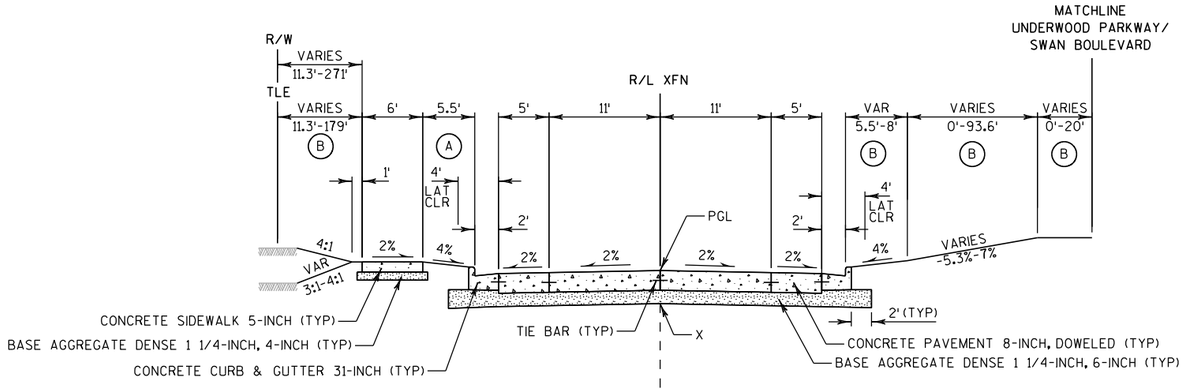
LEGEND

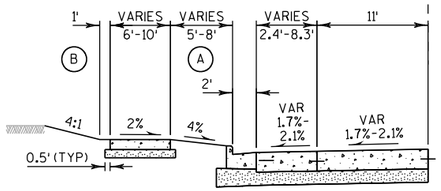
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

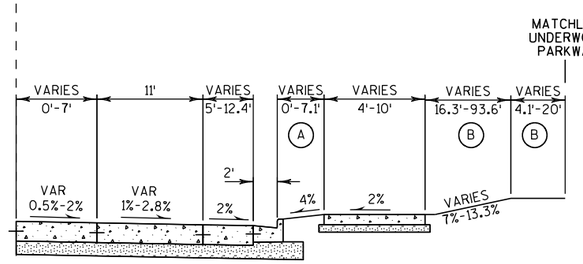
(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

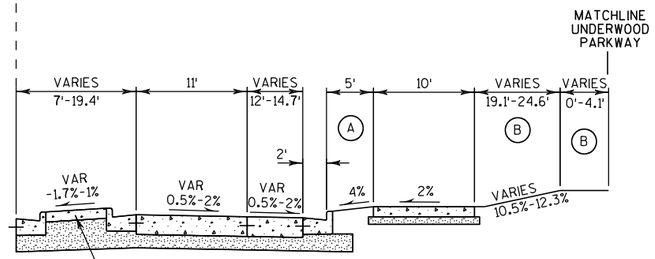




STA 5XFN+58.77 TO STA 6XFN+98.02



STA 6XFN+14.75 TO STA 7XFN+47.97



STA 5XFN+58.77 TO STA 6XFN+14.74

TYPICAL FINISHED SECTION
WLC ACCESS ROAD

STA 5XFN+58.77 TO STA 18XFN+75.93

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

LEGEND

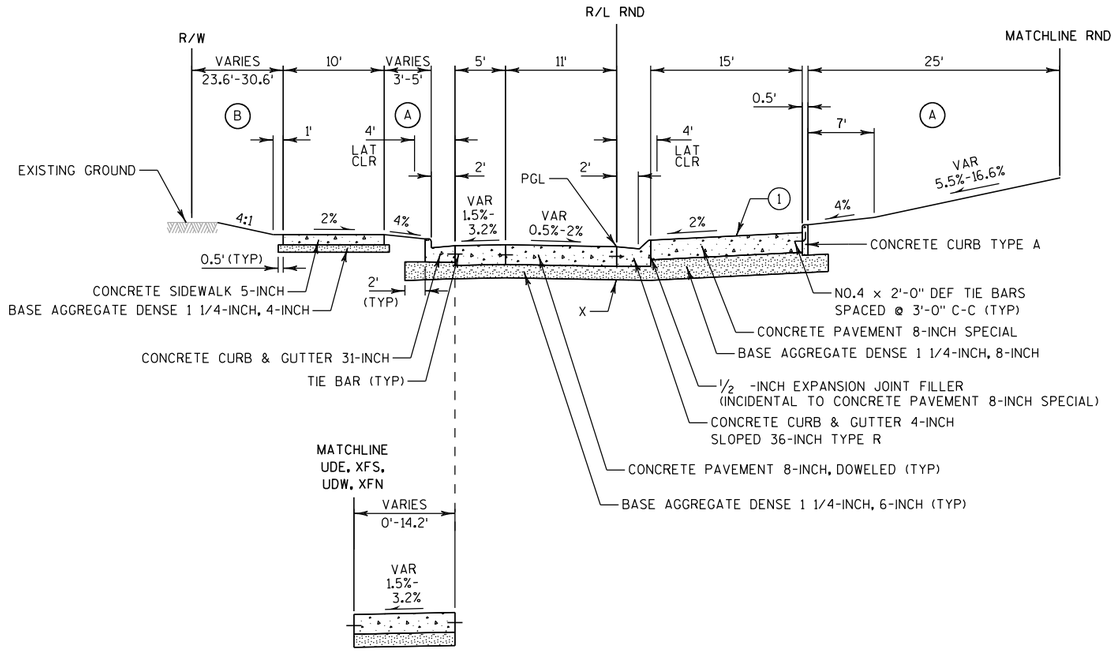
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



STA 10RND+00.00 TO STA 10RND+19.94
STA 10RND+59.82 TO STA 10RND+92.79
STA 11RND+30.92 TO STA 11RND+61.06
STA 11RND+97.12 TO STA 12RND+36.14
STA 12RND+63.32 TO STA 12RND+76.46

TYPICAL FINISHED SECTION

ROUNDABOUT

STA 10RND+00.00 TO STA 12RND+76.46

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION
(1) = MEDIUM BROOM FINISH. DO NOT USE PATTERN AND SPECIAL JOINTING AS SHOWIN IN CONSTRUCTION DETAIL

LEGEND

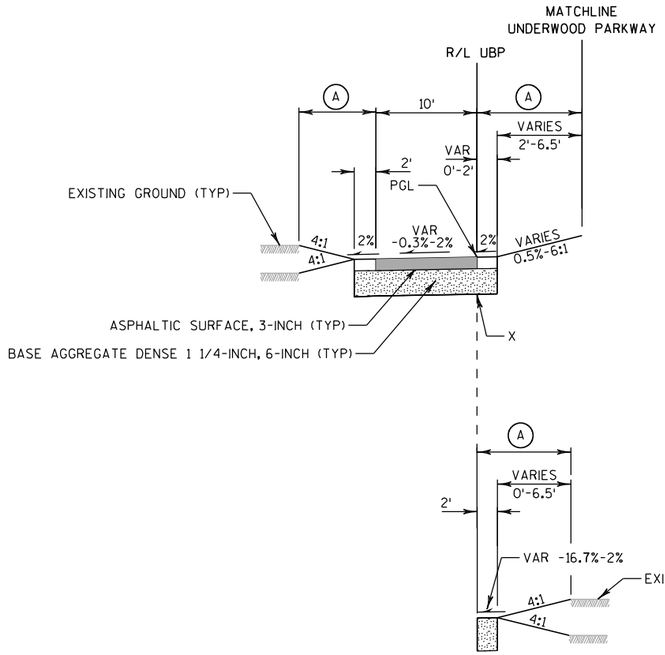
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



STA 10UBP+00.00 TO STA 11UBP+15.00

TYPICAL FINISHED SECTION

SHARED USE PATH

STA 10UBP+00.00 TO STA 11UBP+42.90

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

LEGEND

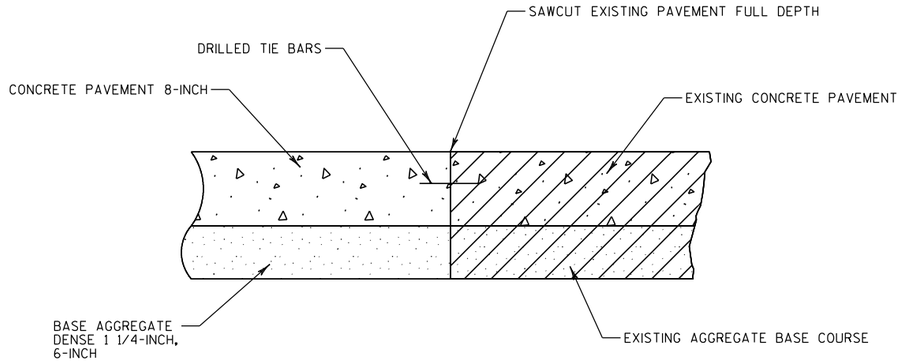
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS I TYPE B, & FERTILIZER TYPE B

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, EROSION MAT CLASS II TYPE B, & FERTILIZER TYPE B

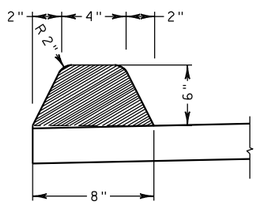
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\020401_ts.dgn PLOT DATE : 30-JAN-2013 04:12 PLOT BY : MSCDYB PLOT NAME : 020401_ts10 PLOT SCALE : 15:1
WISDOT/CADDS SHEET 42



MATCH AT EXISTING CONCRETE PAVEMENT

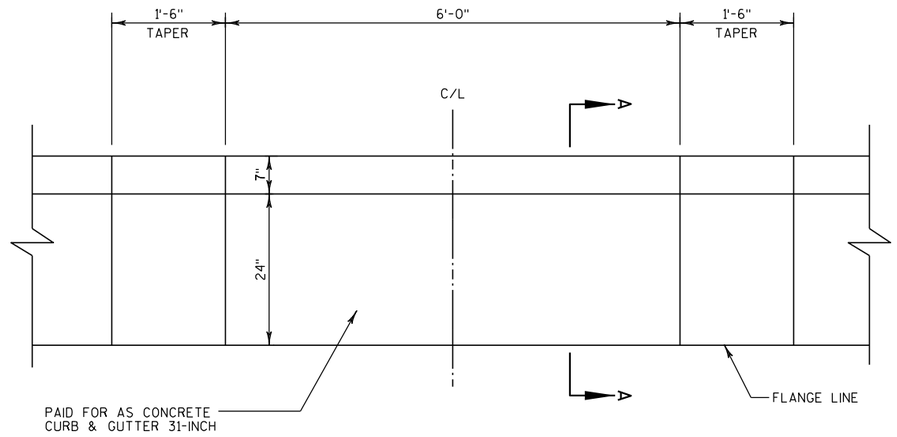
W. WATERTOWN PLANK ROAD



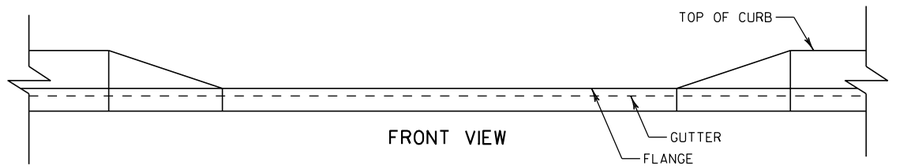
ASPHALTIC CURB DETAIL

SEE PLAN DETAILS FOR LOCATIONS

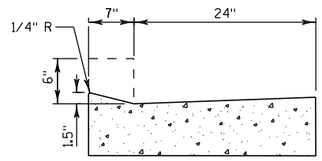
2



PLAN VIEW



FRONT VIEW



END VIEW

SECTION A-A

MAINTENANCE OPENING

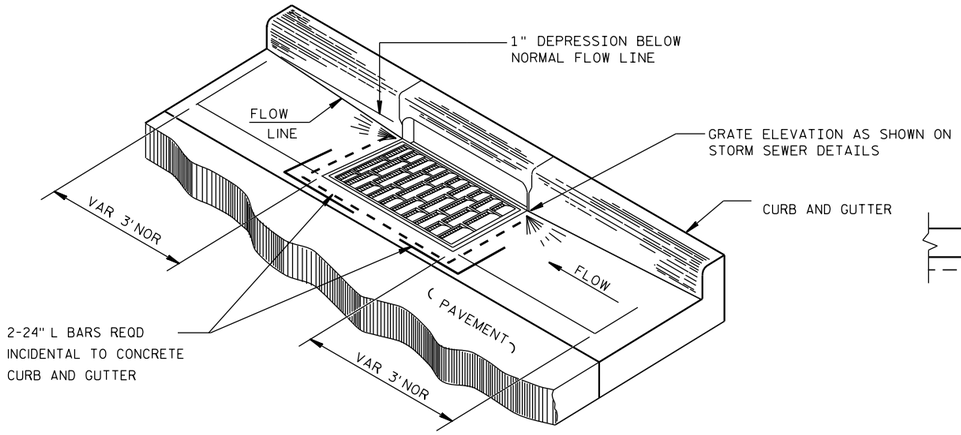
177BV+51.94
177BV+56.22

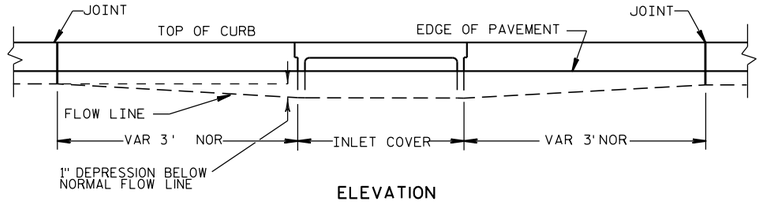
NOTE

PAID FOR AS CURB AND GUTTER. MEASURED ALONG FLOW LINE.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

2



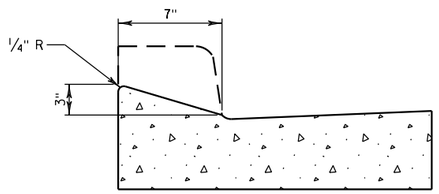


ELEVATION

DETAIL OF CURB AND GUTTER AT INLETS

SEE STORM SEWER PLANS FOR LOCATIONS

STRUCTURES: B121, B127, B131, B217, B219, B240, B257, B259, B263, B268, B269

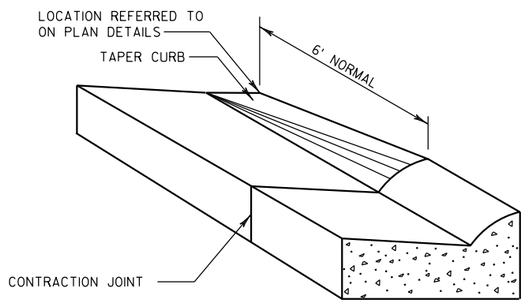


DRIVEWAY ENTRANCE CURB

LOCATIONS AS NOTED ON THE PLAN DETAILS

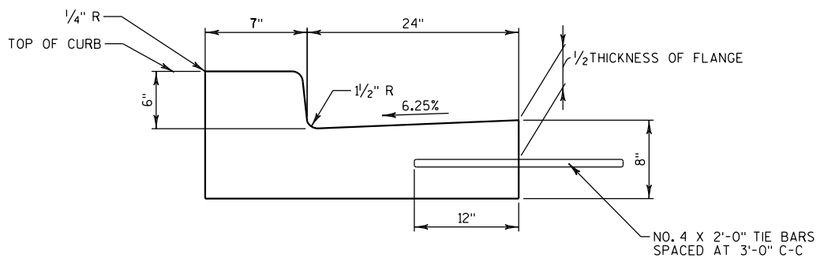
NOTE

PAID FOR AS CONCRETE CURB AND GUTTER 31-INCH. MEASURED ALONG FLOW LINE.



CURB & GUTTER TERMINI

SEE PLAN DETAILS FOR LOCATIONS

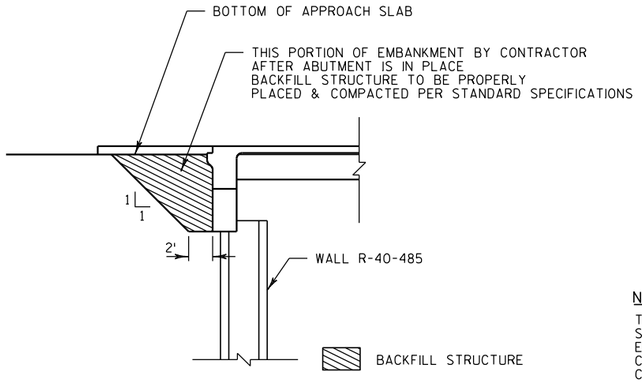


CONCRETE CURB AND GUTTER 31-INCH

NOTES

1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER ADJACENT TO NEW CONCRETE PAVEMENT.
2) OMIT TIE BARS WHERE INTEGRAL CURB AND GUTTER IS REQUIRED.
3) SEE STANDARD DETAIL DRAWING FOR DETAILS NOT SHOWN HERE.

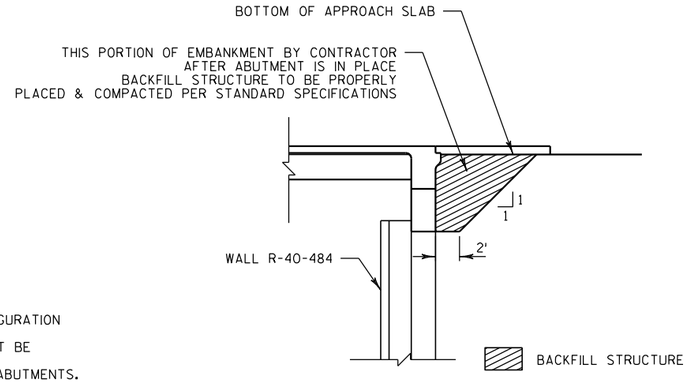
2



WEST ABUTMENT

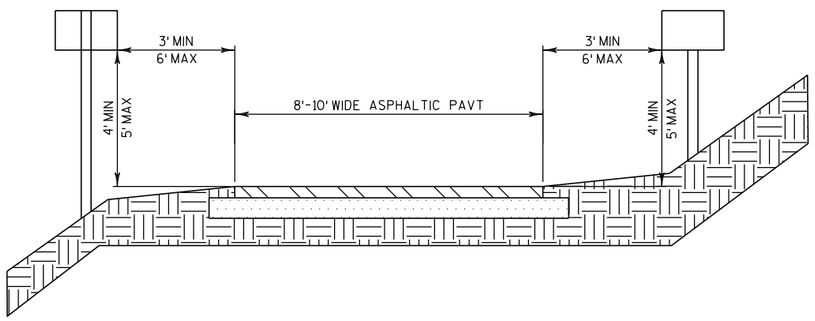
NOTE

THE EMBANKMENT CONFIGURATION SHOWN IS THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.



EAST ABUTMENT

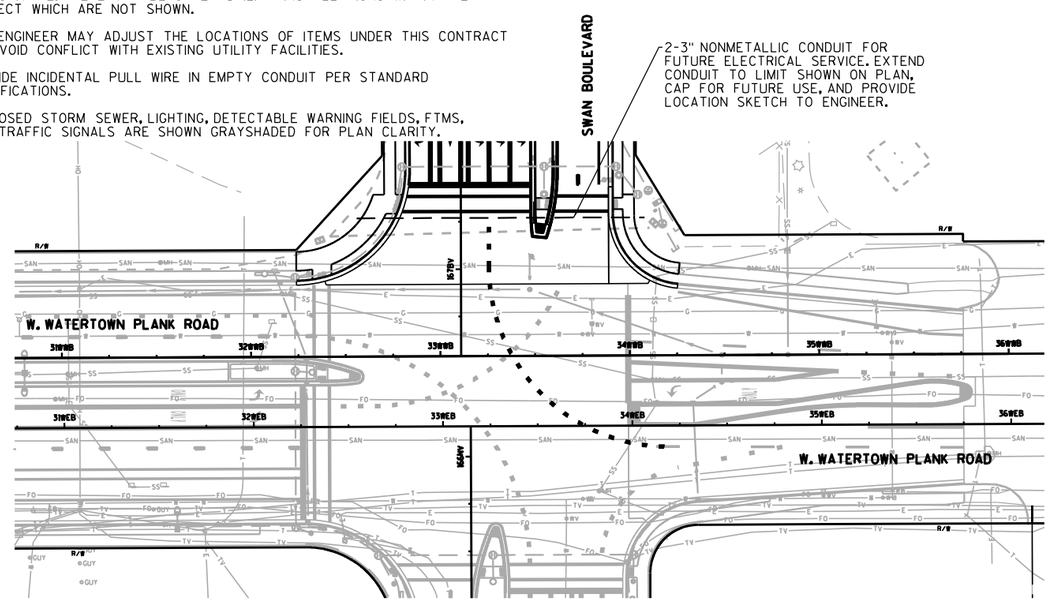
EMBANKMENT CONSTRUCTION & BACKFILL STRUCTURE DETAIL



SIGN PLACEMENT ON SHARED - USE PATHS

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
3. PROVIDE INCIDENTAL PULL WIRE IN EMPTY CONDUIT PER STANDARD SPECIFICATIONS.
4. PROPOSED STORM SEWER, LIGHTING, DETECTABLE WARNING FIELDS, FTMS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.



UNDERGROUND CONDUIT FOR FUTURE ELECTRICAL SERVICE

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

2

NOTES

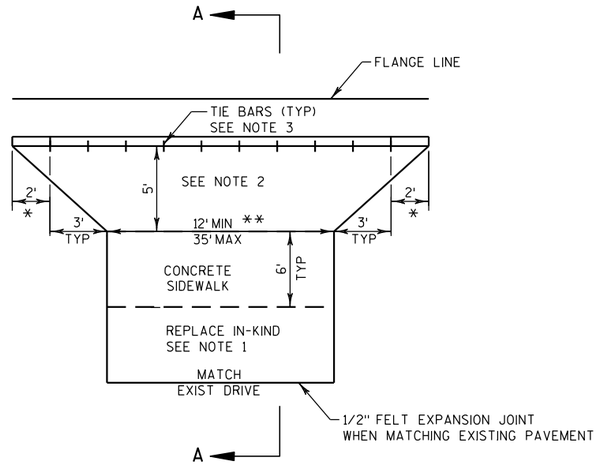
1. DRIVEWAY SURFACE BEYOND APRON TO BE REPLACED IN-KIND WITH MINIMUM SECTION OF:

   ASPHALTIC SURFACE (5-INCH) DRIVEWAYS AND FIELD ENTRANCES
   OVER BASE AGGREGATE DENSE 1 1/4-INCH (6-INCH)
   OR
   CONCRETE DRIVEWAY 9-INCH OVER
   BASE AGGREGATE DENSE 1 1/4-INCH (6-INCH)
   OR
   BASE AGGREGATE DENSE 1 1/4-INCH (10-INCH)

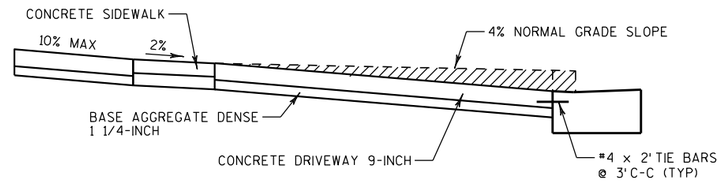
2. ALL URBAN DRIVEWAYS TO BACK OF SIDEWALK TO BE PAID FOR AS CONCRETE DRIVEWAY 9-INCH

3. TIE BARS ARE INCIDENTAL TO THE BID ITEM "CONCRETE DRIVEWAY 9-INCH".

* TAPER CURB HEAD (1.5" TO 6")
** SEE PAVING DETAILS FOR WIDTH REQUIRED



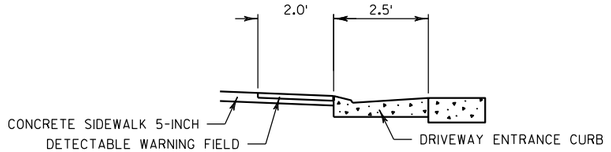
PLAN VIEW



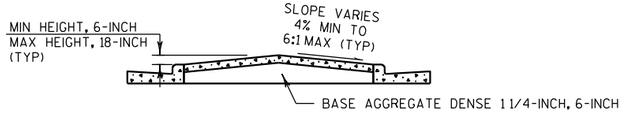
SECTION A-A

URBAN DRIVEWAY

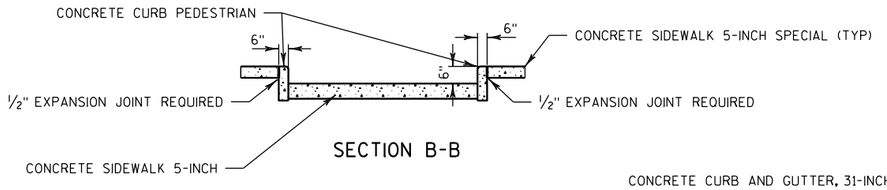
STA 225UDE+15



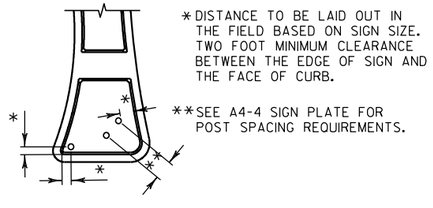
SECTION A-A



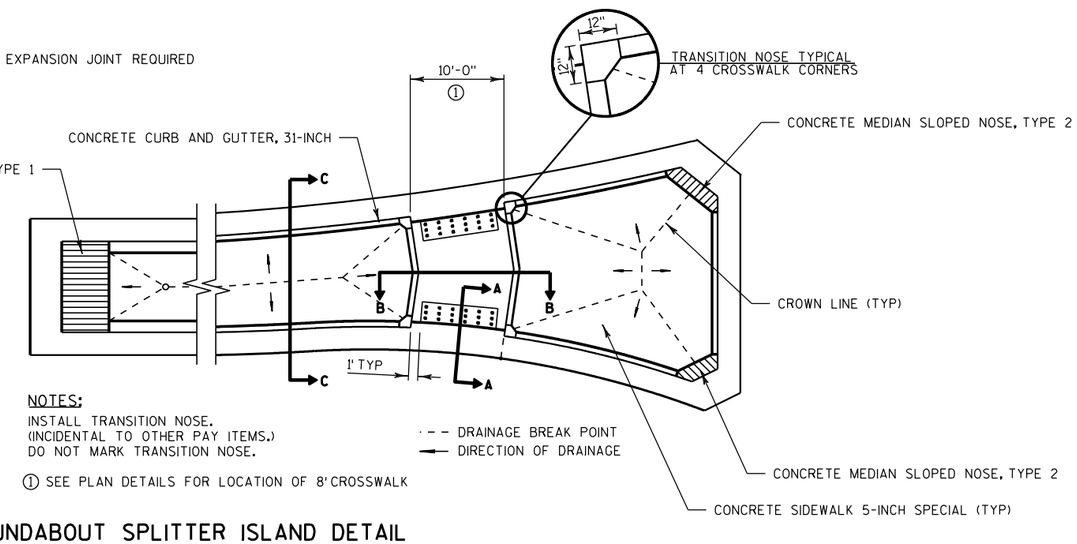
SECTION C-C



SECTION B-B



ISLAND SIGN LOCATION DETAIL (TYP)



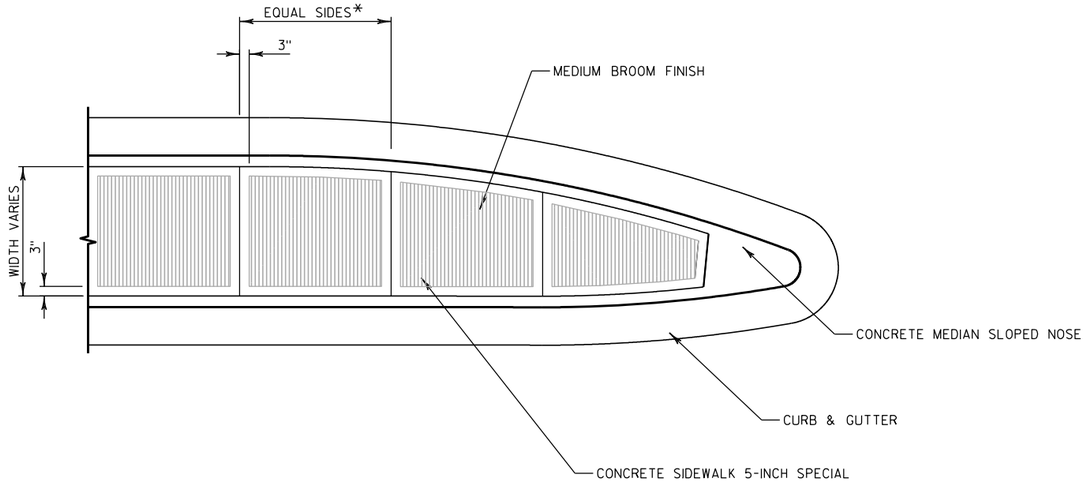
NOTES:
INSTALL TRANSITION NOSE.
(INCIDENTAL TO OTHER PAY ITEMS.)
DO NOT MARK TRANSITION NOSE.

① SEE PLAN DETAILS FOR LOCATION OF 8' CROSSWALK

- - - DRAINAGE BREAK POINT
⟵ DIRECTION OF DRAINAGE

ROUNDABOUT SPLITTER ISLAND DETAIL

UNDERWOOD PARKWAY
WLC ACCESS ROAD

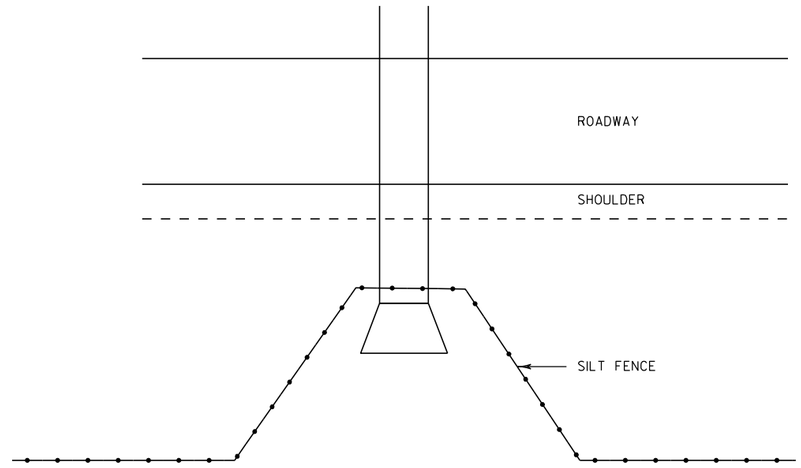


CONCRETE SIDEWALK 5-INCH SPECIAL - MEDIAN

NOT TO SCALE

NOTES

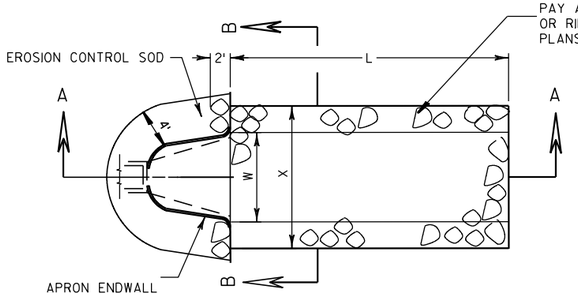
*SEE PLAN DETAILS AND STREETSCPAING PLANS FOR LOCATIONS
DETERMINE JOINT SPACING IN THE FIELD



TYPICAL SILT FENCE DETAIL AT PIPE INLET

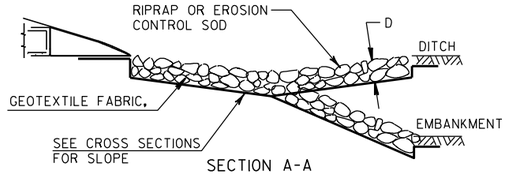
NOTE

SEE SILT FENCE SDD FOR ADDITIONAL INFORMATION

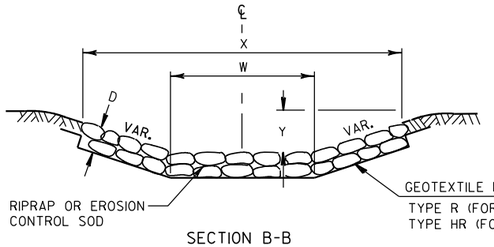


PLAN VIEW

PAY AREA FOR EROSION CONTROL SOD, OR RIP RAP. SEE EROSION CONTROL PLANS FOR TYPE OF PROTECTION.



SECTION A-A



SECTION B-B

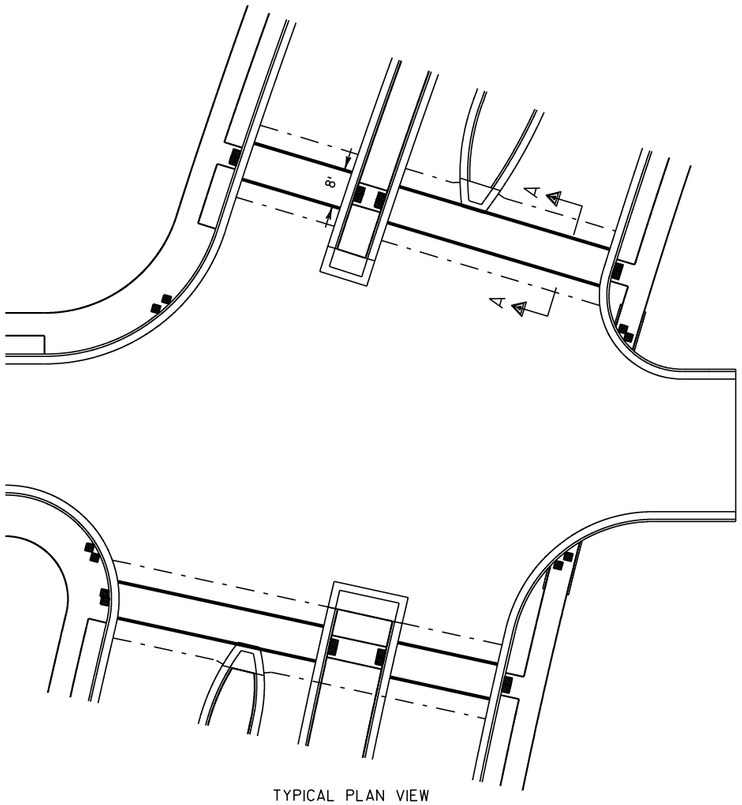
L = 3 x W (NOR.) OR 10' MIN. OR
AS INDICATED IN THE PLANS OR AS
DIRECTED BY THE ENGINEER.

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+2' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

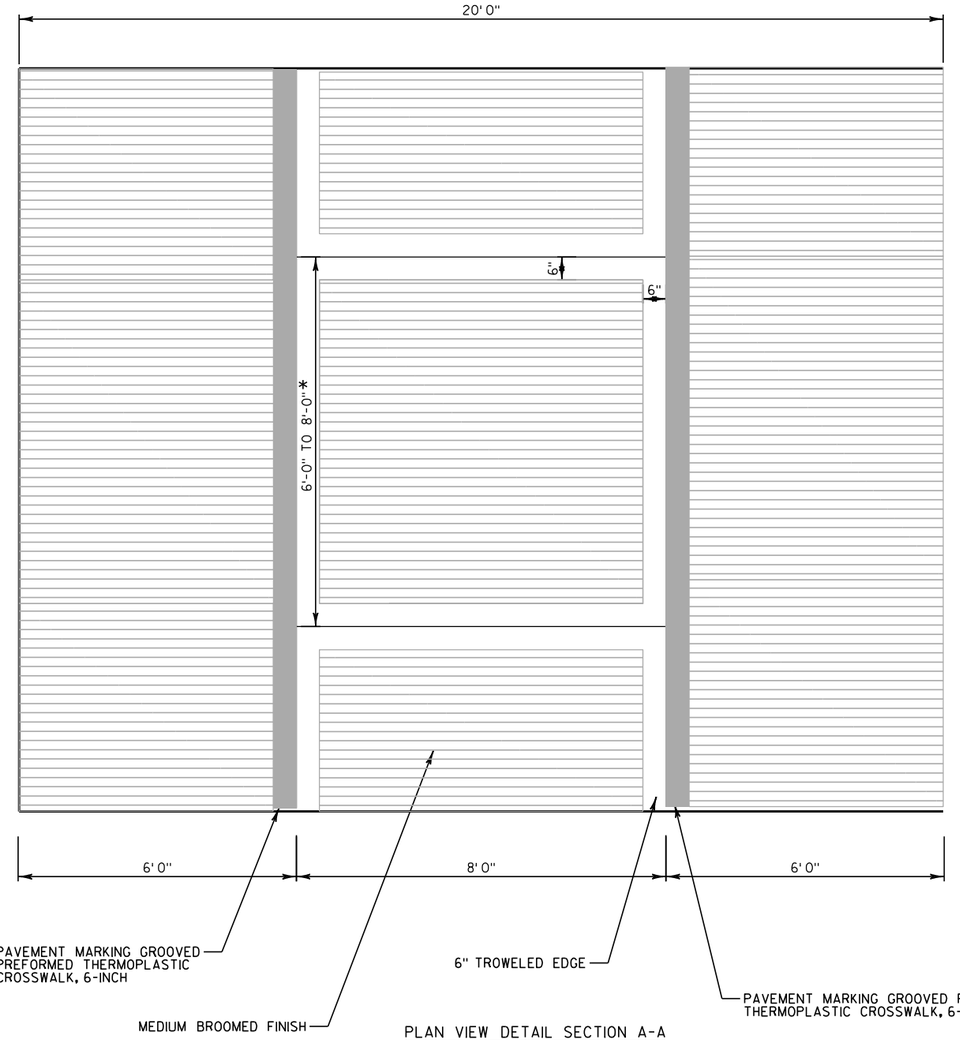
Y = 0' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

SOD, RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

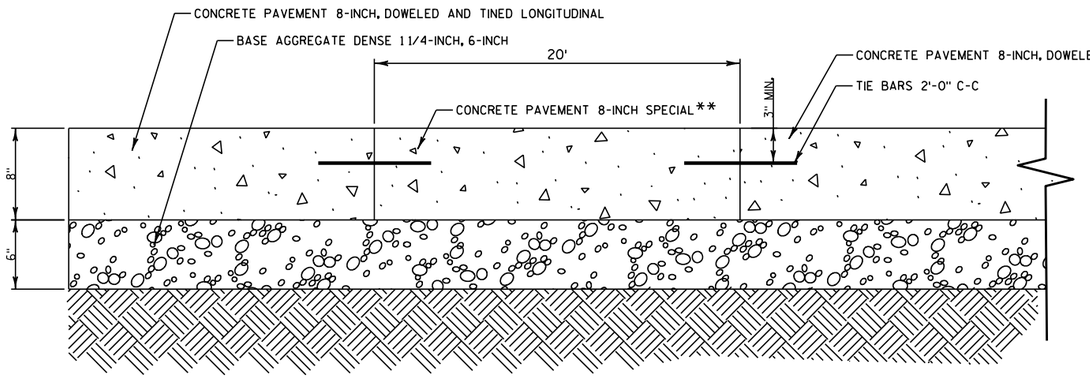


TYPICAL PLAN VIEW

N



PLAN VIEW DETAIL SECTION A-A



SECTION A-A

NOTES

* DETERMINE JOINT SPACING IN THE FIELD

** DO NOT TINE CONCRETE PAVEMENT 8-INCH SPECIAL

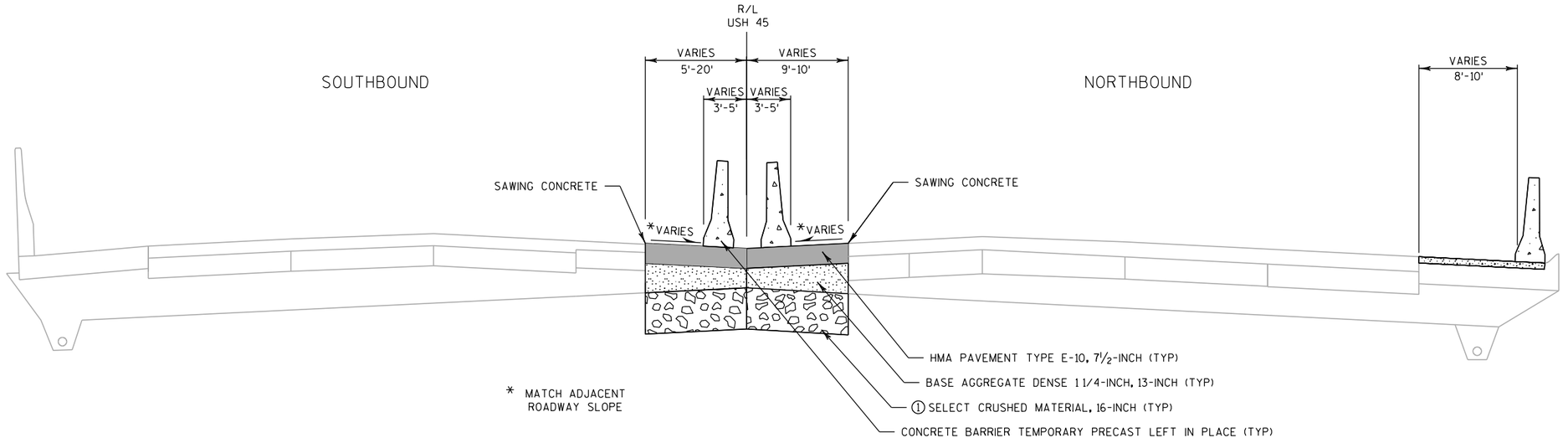
CONCRETE PAVEMENT 8-INCH SPECIAL

NOT TO SCALE

LOCATED AT INTERSECTIONS BELOW:
SWAN BOULEVARD AND WATERTOWN PLANK ROAD
SWAN BOULEVARD AND UNDERWOOD PARKWAY
UNDERWOOD PARKWAY AND ROUNDABOUT
WLC ACCESS ROAD AND ROUNDABOUT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

2



* MATCH ADJACENT ROADWAY SLOPE

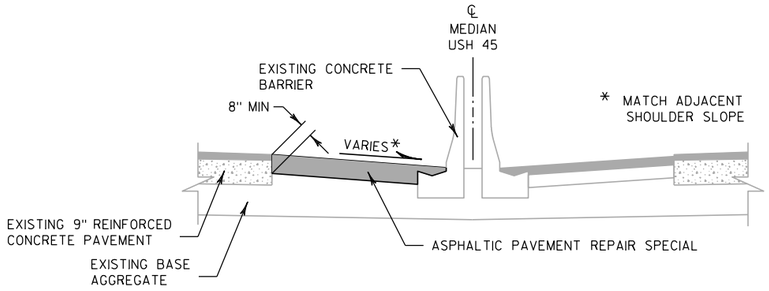
USH 45 MEDIAN RECONSTRUCT

STA 380NS+92.18 TO STA 383NS+42.18

NOTES

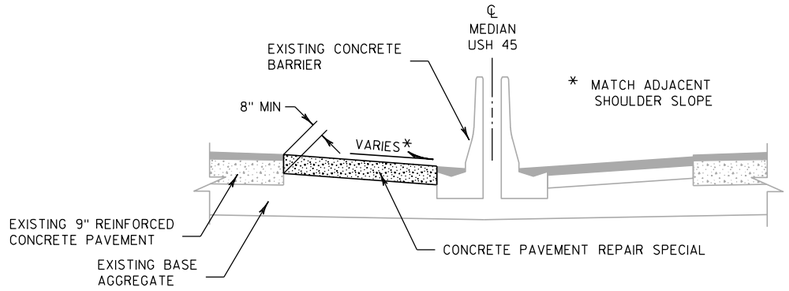
① ENGINEER DIRECTION PRIOR TO PLACEMENT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E



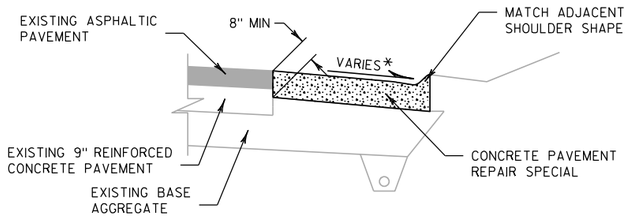
TYPICAL PROPOSED SECTION - ASPHALT OPTION

(DRAINAGE STRUCTURES NOT SHOWN)



TYPICAL PROPOSED SECTION - CONCRETE OPTION

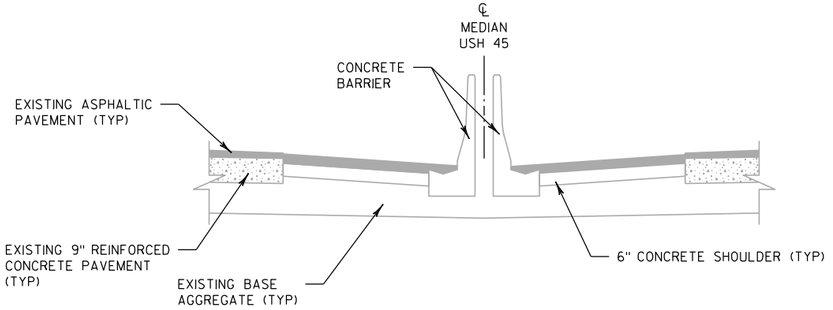
(DRAINAGE STRUCTURES NOT SHOWN)



TYPICAL PROPOSED SECTION - OUTSIDE SHOULDER

(DRAINAGE STRUCTURES NOT SHOWN)

* MATCH ADJACENT
SHOULDER SLOPE

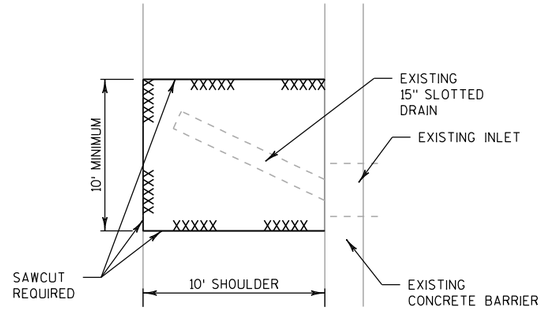


TYPICAL EXISTING SECTION

(DRAINAGE STRUCTURES NOT SHOWN)

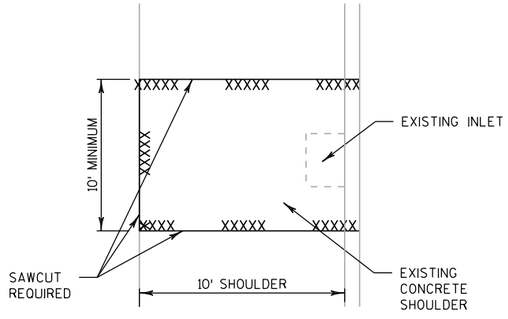
NOTES

1. SAWCUT LIMITS TO BE DETERMINED BY THE ENGINEER.
2. IF VOIDS EXIST UNDER AREAS TO BE REPAIRED, AND AT THE DIRECTION OF THE ENGINEER, BACKFILL WITH BASE AGGREGATE DENSE AND/OR BACKFILL CONTROLLED LOW STRENGTH. INCIDENTAL TO CONCRETE PAVEMENT REPAIR SPECIAL.



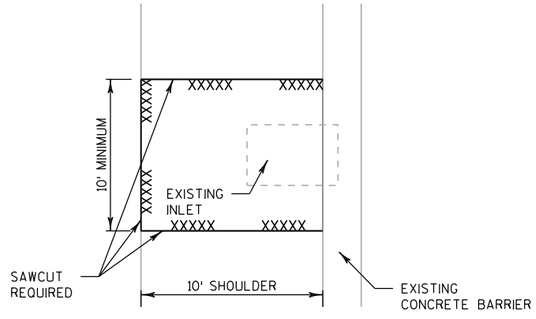
PLAN VIEW

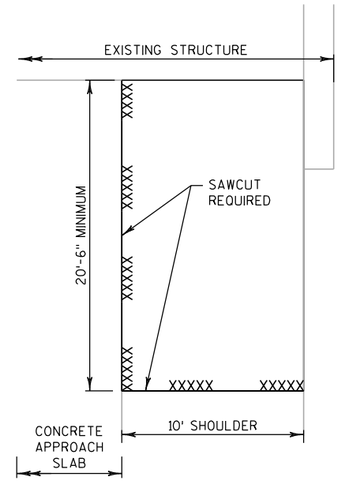
REPAIR AT SLOTTED DRAIN



PLAN VIEW

REPAIR AT INLET



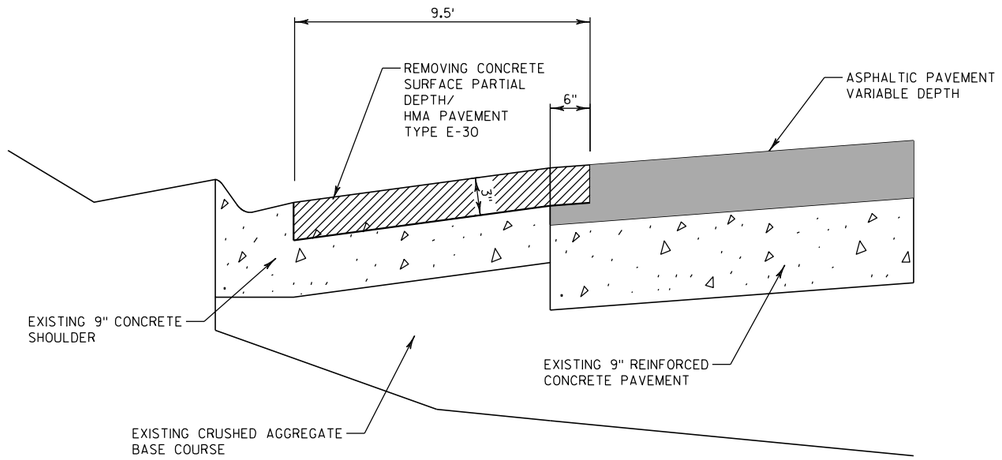


PLAN VIEW

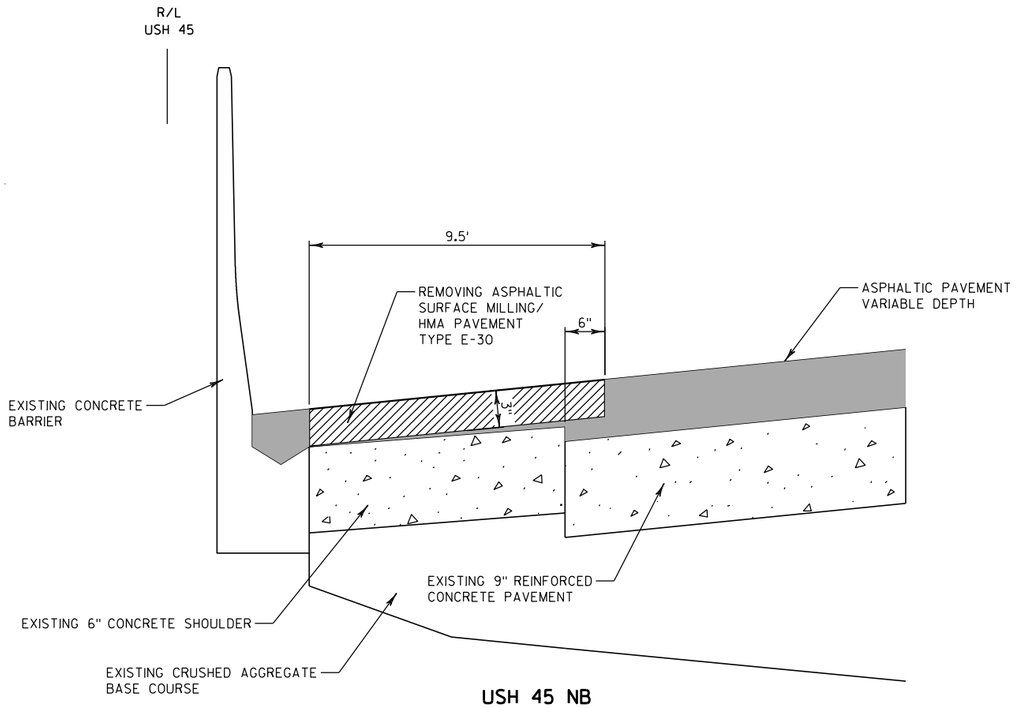
REPAIR AT BRIDGE APPROACH SLAB

SHOULDER REPAIR

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E



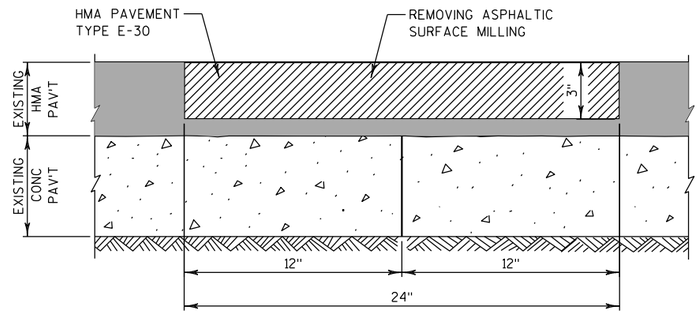
USH 45
OUTSIDE SHOULDER



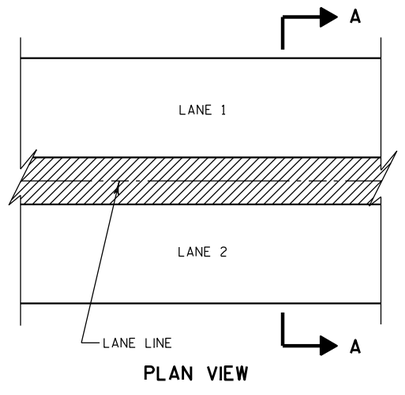
USH 45 NB
MEDIAN SHOULDER

SHOULDER RESURFACING

SEE TRAFFIC CONTROL PLANS FOR LOCATIONS



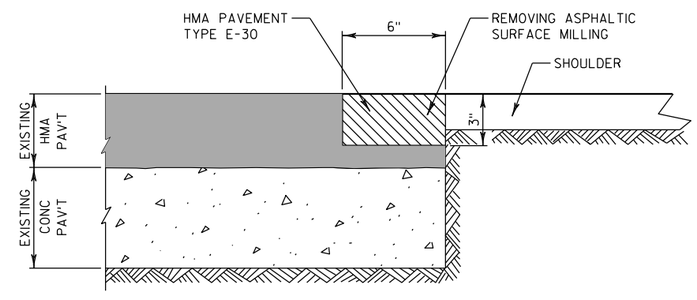
SECTION A-A



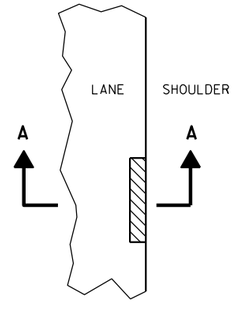
PLAN VIEW

LANE LINE JOINT REPAIR

SEE TRAFFIC CONTROL PLANS FOR LOCATIONS



SECTION A-A



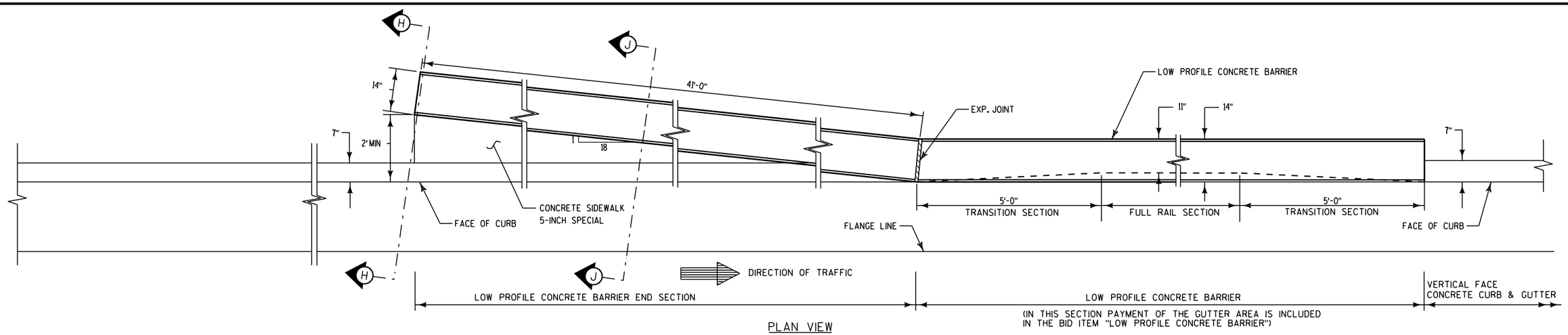
PLAN VIEW

EDGE LINE JOINT REPAIR

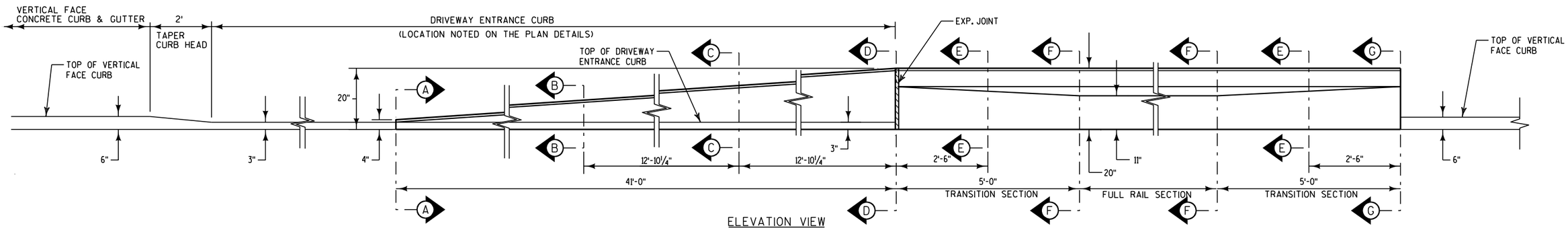
SEE TRAFFIC CONTROL PLANS FOR LOCATIONS

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

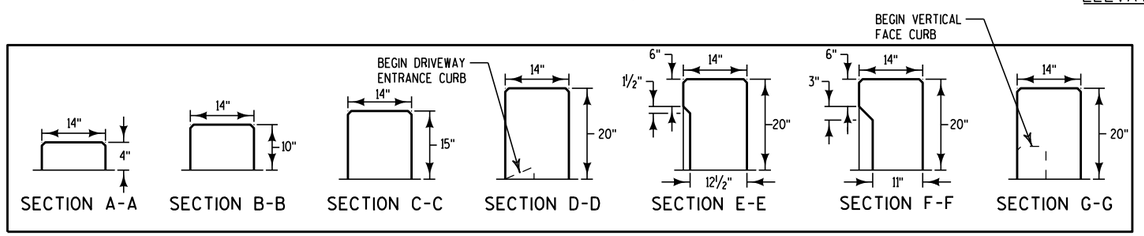
2



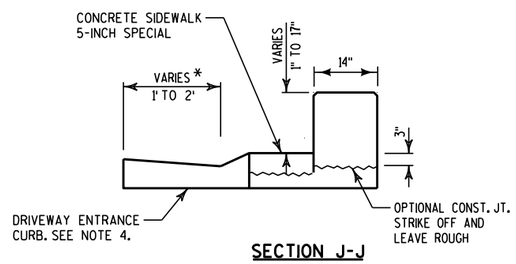
PLAN VIEW



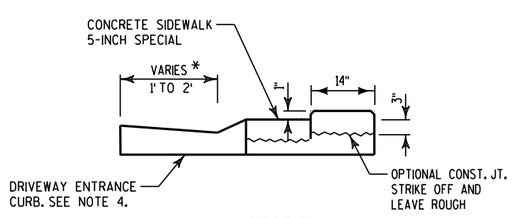
ELEVATION VIEW



SECTIONS

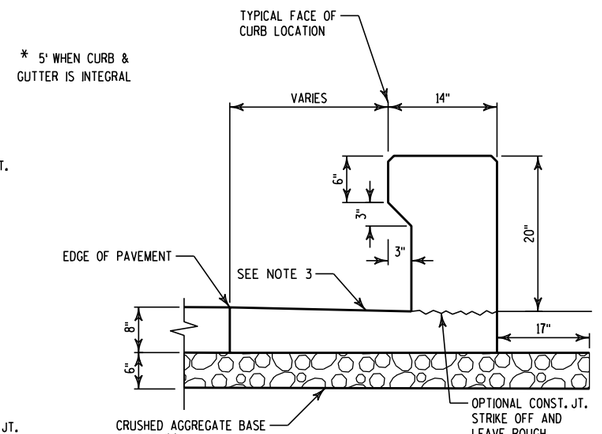


SECTION J-J



SECTION H-H

* 5' WHEN CURB & GUTTER IS INTEGRAL



TYPICAL LOW PROFILE CONCRETE BARRIER SECTION
(FULL RAIL SECTION)

NOTES

1) SEE SPECIAL PROVISIONS FOR STAIN COLORS.

2) STAIN VERTICAL SURFACES ON FRONT AND BACK OF LOW PROFILE CONCRETE BARRIER AND LOW PROFILE CONCRETE BARRIER END SECTION. DO NOT STAIN HORIZONTAL SURFACES.

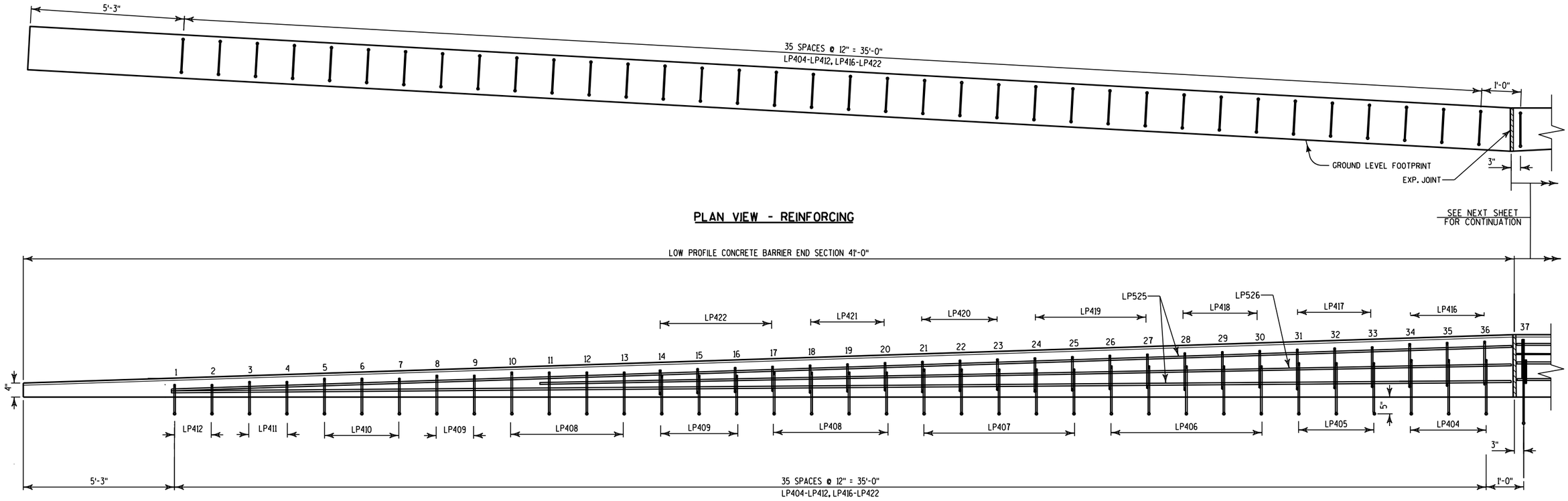
3) PAYMENT OF THE GUTTER AREA IS INCLUDED IN THE BID ITEM "LOW PROFILE CONCRETE BARRIER".

4) DRIVEWAY ENTRANCE CURB PAID FOR AS CURB AND GUTTER MEASURED ALONG FLOW LINE. SEE PLAN DETAILS FOR LIMITS.

LOW PROFILE CONCRETE BARRIER
(SEE PLAN DETAILS FOR LOCATIONS)

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

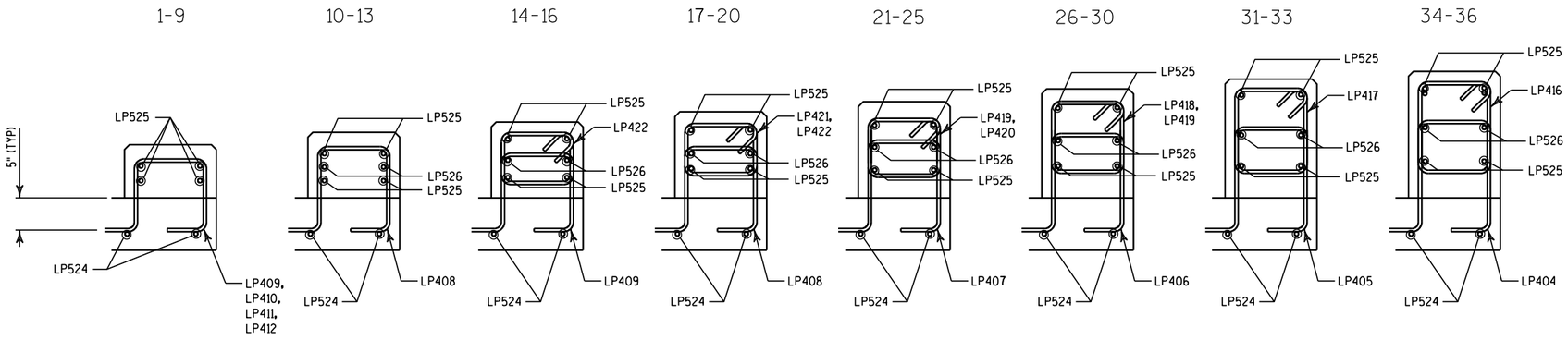
2



PLAN VIEW - REINFORCING

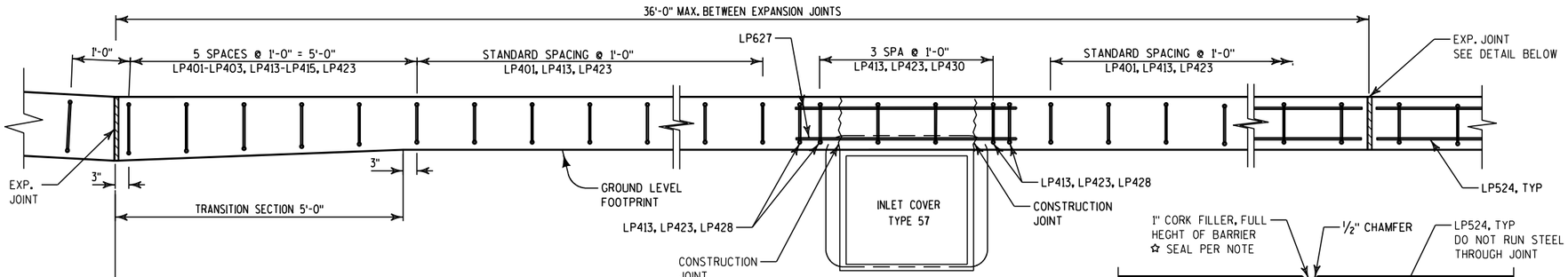
PROFILE VIEW - REINFORCING

LOW PROFILE CONCRETE BARRIER END SECTION

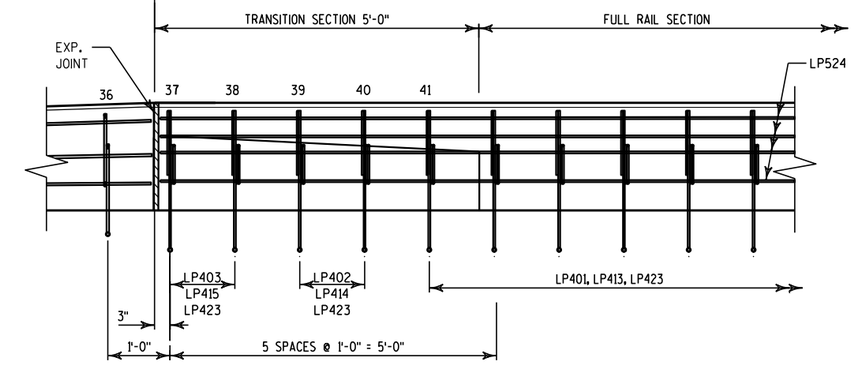


REBAR PLACEMENT - TAPERED END CROSS SECTIONS

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

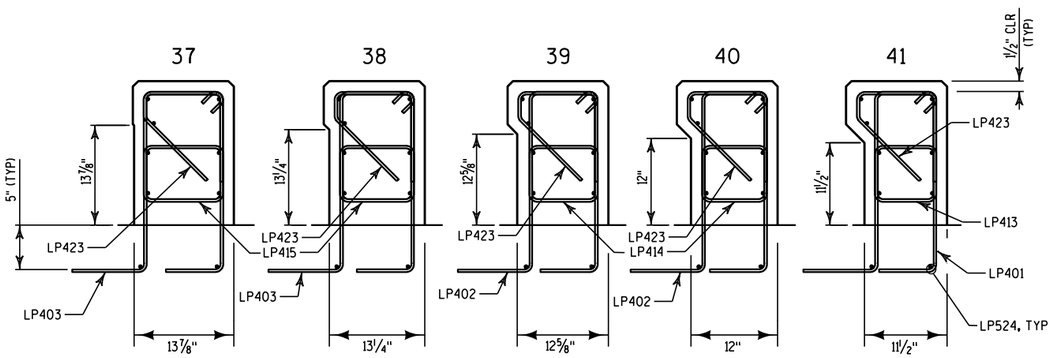


PLAN VIEW - REINFORCING

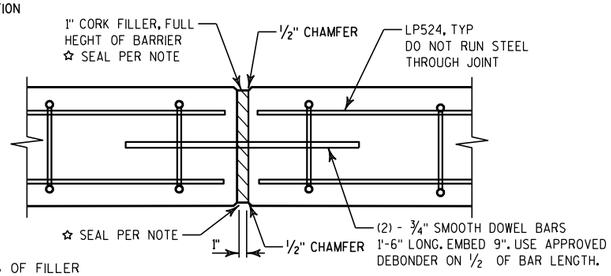


PROFILE VIEW - REINFORCING

LOW PROFILE CONCRETE BARRIER



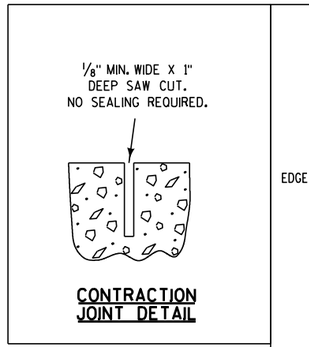
REBAR PLACEMENT - TRANSITION CROSS SECTIONS



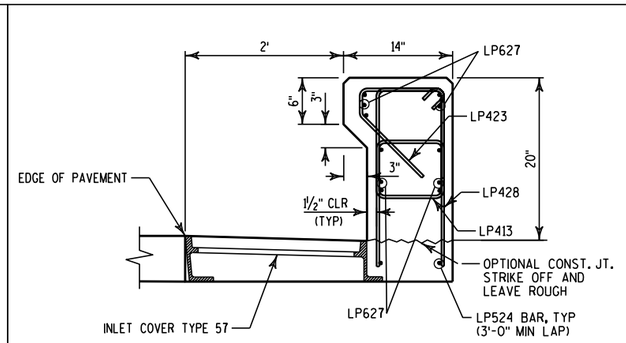
☆ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

EXPANSION JOINT DETAIL

(JOINT TO EXTEND FULL DEPTH OF BARRIER)

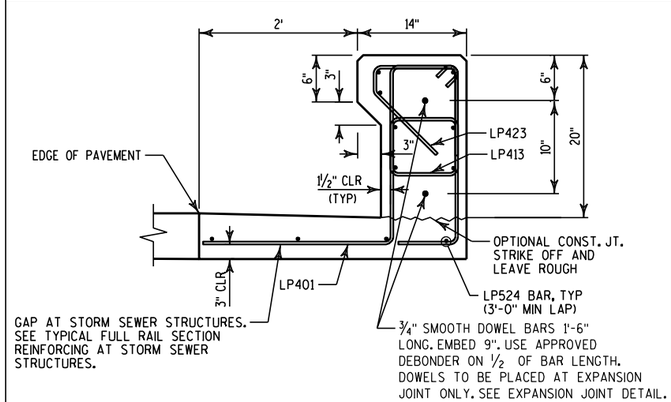


CONTRACTION JOINT DETAIL



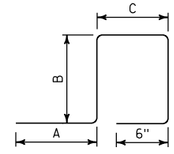
TYPICAL LOW PROFILE CONCRETE BARRIER SECTION

(FULL RAIL SECTION REINFORCING AT STORM SEWER STRUCTURES)



TYPICAL LOW PROFILE CONCRETE BARRIER SECTION

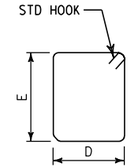
(FULL RAIL SECTION REINFORCING)



LP401-LP412

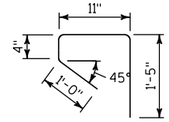
BAR MARK	DIMENSIONS		
	A*	B	C
LP401	2'-3"	1'-5"	8"
LP402	2'-2"	1'-5"	9"
LP403	2'-1"	1'-5"	10"
LP404	2'-0"	1'-5"	11"
LP405	2'-0"	1'-4"	11"
LP406	2'-0"	1'-3"	11"
LP407	2'-0"	1'-2"	11"
LP408	2'-0"	1'-1"	11"
LP409	2'-0"	1'-0"	11"
LP410	2'-0"	11"	11"
LP411	2'-0"	10"	11"
LP412	2'-0"	9"	11"

* DIMENSIONS GIVEN FOR 2' GUTTER PAN. SUBTRACT 1' FROM DIMENSION FOR 1' GUTTER PAN SECTION.



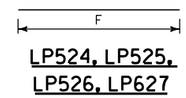
LP413-LP422

BAR MARK	DIMENSIONS	
	D	E
LP413	8"	1'-2"
LP414	9"	1'-2"
LP415	10"	1'-2"
LP416	11"	1'-2"
LP417	11"	1'-1"
LP418	11"	1'-0"
LP419	11"	11"
LP420	11"	10"
LP421	11"	9"
LP422	11"	8"

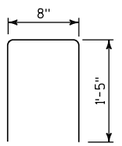


LP423

BAR MARK	DIMENSION
	F
LP524	35'-8" MAX
LP525	35'-8"
LP526	26'-0"
LP627	8'-0"



LP524, LP525, LP526, LP627



LP428

NOTES

1. USE 1½" CLEAR CONCRETE COVER FOR REBAR IN BARRIER, AND 3" CLEAR FOR CONCRETE CAST AGAINST EARTH.
2. THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT-TO-OUT OF BAR.
3. ALL BAR STEEL REINFORCEMENT SHALL BE ASTM A615 GRADE 60, EPOXY COATED. EPOXY SHALL BE APPLIED TO REINFORCEMENT AFTER THE BARS ARE BENT TO FINAL CONDITION.
4. DO NOT WELD EPOXY COATED REINFORCEMENT BARS.
5. USE ¾" CHAMFER ON TOP CORNERS.
6. CONTRACTION JOINTS SHALL BE SAWED, AS INDICATED. SPACING SHALL MATCH PAVEMENT JOINTS.
7. ALL REINFORCEMENT TO BE INCIDENTAL TO "LOW PROFILE CONCRETE BARRIER" AND "LOW PROFILE CONCRETE BARRIER END SECTION".

NOTES

FOR FTMS REMOVALS REFER TO FTMS PLANS

FOR LIGHTING REMOVALS REFER TO LIGHTING PLANS

FOR TRAFFIC SIGNAL REMOVALS REFER TO TRAFFIC SIGNAL PLANS

FOR SIGN REMOVALS REFER TO SIGN PLANS

FOR STRUCTURE REMOVALS REFER TO STRUCTURE PLANS

2

LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	BUILDING REMOVAL (PAID FOR AS: REMOVING FORMER GREENHOUSE BUILDINGS AND REMOVING FORMER SALT DOME BUILDINGS)
	REMOVING CURB AND GUTTER
	REMOVING ASPHALTIC SURFACE
	REMOVING FENCE
	REMOVING WROUGHT IRON FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
X X X	SAWING ASPHALT
X X X	SAWING CONCRETE PAVEMENT
	REMOVING CONCRETE BARRIER
	REMOVING INLETS
	REMOVING MANHOLES
—RM—	REMOVING STORM SEWER
	BULKHEAD PIPE MASONRY
X X	ABANDONING UTILITIES
	REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLAN - LEGEND	SHEET E

2

N

CONSTRUCTION BY OTHERS UNDER 1060-33-70

BV+52.60
82.98' LT

BV+74.66
80.22' LT

BV+00.13
79.64' LT

BV+88.71
77.94' LT

BV+91.23
68.17' LT

BV+17.33
66.91' LT

BV+37.52
66.28' LT

BV+85.42
66.01' LT

BV+15.54
66.66' LT

MATCHLINE 225UD+10

225UDE

168BV

170BV

172BV

174BV

176BV

178BV

MATCHLINE 178BV+00

32WWB

34WWB

36WWB

W. INNOVATION DRIVE

W. WATERTOWN PLANK ROAD

CONSTRUCTION BY OTHERS UNDER 1060-33-70

BV+07.42
112.89' RT

BV+12.68
106.86' RT

BV+16.59
169.72' RT

BV+43.05
121.31' RT

BV+46.37
131.97' RT

BV+14.57
112.00' RT

REMOVING FORMER SALT DOME BUILDINGS

REMOVING FENCE

228UDE

BOLLARDS (4)

BOLLARDS (6)

BOLLARD

CANOPY

POST

SIGN

SCHOOL

GUY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021101_rm.dgn PLOT DATE : 30-JAN-2013 16:28 PLOT BY : MSCD1S PLOT NAME : 021101_rm PLOT SCALE : 100:1

2

2

REMOVING FORMER GREENHOUSE BUILDINGS

XFN+26.60
134.82' LT

XFN+43.47
146.89' LT

XFN+86.41
31.22' LT

XFN+73.42
14.59' RT

REMOVING STORM SEWER PIPE
(18-INCH)

18XFN

16XFN

14XFN

BV+21.98
52.26' LT

BV+96.48
52.03' LT

REMOVING STORM
SEWER PIPE
(12-INCH)

182BV

180BV

184BV

186BV

188BV

REMOVING WROUGHT
IRON GATE

BV+67.08
93.11' RT

REMOVING STORM
SEWER PIPE
(15-INCH)

BV+14.73
95.05' RT

BV+56.36
125.07' RT

BV+91.25
183.99' RT

BV+52.47
156.67' RT

BV+32.06
170.91' RT

BV+78.02
185.84' RT

BV+92.52
178.71' RT

BV+12.22
118.39' RT

BV+45.65
103.93' RT

BV+12.27
205.39' RT

BV+60.53
300.85' RT

BV+57.71
307.88' RT

BV+83.41
319.55' RT

BV+48.76
323.68' RT

BV+36.83
335.50' RT

BV+77.76
331.78' RT

MATCHLINE 178BV+00

386NS

384NS

380NS

USH 45 SB

USH 45 NB

SWAN BOULEVARD

SWAN BOULEVARD

BULKHEAD
PIPE MASONRY

REMOVING STORM
SEWER PIPE
(12-INCH)

BV+25.24
19.77' RT

BV+54.86
14.95' RT

190BV

290BV

288BV

BV+50.40
60.66' RT

BV+29.00
39.87' RT

BV+58.71
35.37' RT

BV+48.89
87.39' RT

REMOVING STORM
SEWER PIPE
(12-INCH)

BV+76.30
168.40' RT

BV+98.44
188.36' RT

MATCHLINE 190BV+00

MATCHLINE 378NS+00

REMOVING STORM
SEWER PIPE
(12-INCH)

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021102_rm.dgn PLOT DATE : 28-MAR-2013 16:26 PLOT BY : MSCTYS PLOT NAME : 021102_rm PLOT SCALE : 100:1

2

2

N

BV+06.59
26.01' RT

196BV

SWAN BOULEVARD

198BV

194BV

192BV

BV+06.59
27.32' RT

MATCHLINE 190BV+00

BV

RM

REMOVING STORM SEWER PIPE
(12-INCH)

OH

W

SS

PIPL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021103_rm.dgn PLOT DATE : 30-JAN-2013 04:21 PLOT BY : MSCDYB PLOT NAME : 021103_rm PLOT SCALE : 100:1

2

2

STH 100

W. WATERTOWN PLANK ROAD

UNDERWOOD PARKWAY

PARKING

ATHLETIC FIELD

CONSTRUCT BY OTHERS
UNDER 1060-33-70

CONSTRUCTION BY OTHERS
UNDER 1060-33-70

REMOVING GATE

BULKHEAD PIPE MASONRY

REMOVING STORM SEWER PIPE
(12-INCH)

REMOVING FORMER SALT DOME BUILDINGS

UDW+85.63
34.19' RT

UDW+34.89
19.26' RT

UDW+25.35
47.97' RT

UDW+93.48
4.65' RT

XFS+50.86
139.13' LT

XFS+05.55
43.88' LT

XFS+97.33
138.61' LT

XFS+72.37
37.75' LT

XFS+44.92
14.77' LT

XFS+44.92
15.98' RT

XFS+86.46
44.36' RT

XFS+20.46
40.35' RT

XFS+63.48
40.56' RT

XFS+88.38
40.18' RT

XFS+12.72
48.73' RT

XFS+50.93
54.67' RT

UDE+02.16
42.94' RT

UDE+53.16
40.09' RT

XFN+54.54
38.76' LT

XFN+80.36
35.45' LT

MATCHLINE 225UD+10

MATCHLINE 178BV+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021104_rm.dgn PLOT DATE : 30-JAN-2013 04:21 PLOT BY : MSCDYB PLOT NAME : 021104_rm PLOT SCALE : 100:1

2

2

W. WATERTOWN PLANK ROAD

766WD

768WD

770WD

772WD

774WD

776WD

364NS

366NS

368NS

370NS

372NS

374NS

376NS

MATCHLINE 378NS+00

USH 45 SB

USH 45 NB

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021105_rm.dgn PLOT DATE : 30-JAN-2013 04:21 PLOT BY : MSCDYB PLOT NAME : 021105_rm PLOT SCALE : 100:1

2

N

IH 94 WB

USH 45 SB

USH 45 NB

IH 94 EB

200EW

198EW

196EW

194EW

192EW

190EW

188EW

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021106_rm.dgn PLOT DATE : 30-JAN-2013 04:21 PLOT BY : MSCDYB PLOT NAME : 021106_rm PLOT SCALE : 100:1

2

2

N

724BD
726BD
728BD
730BD
732BD
734BD

320NS
322NS
324NS
326NS
328NS
330NS
332NS
334NS

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

USH 45 SB

USH 45 NB

REMOVING STORM SEWER PIPE
(24-INCH)

RM

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021107_rm.dgn PLOT DATE : 30-JAN-2013 04:22 PLOT BY : MSCDYB PLOT NAME : 021107_rm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

WISCONSIN AVENUE
SB EXIT RAMP

736BD

336NS

338NS

340NS

342NS

344NS

346NS

348NS

350NS

CAUTION

EXISTING SIGN TO REMAIN

USH 45 SB

USH 45 NB

BASKETBALL COURT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021108_rm.dgn PLOT DATE : 30-JAN-2013 16:28 PLOT BY : MSCD1S PLOT NAME : 021108_rm PLOT SCALE : 100:1

2

LEGEND

(CP04) CONCRETE PAVEMENT 8-INCH, DOWELED
(CP05) CONCRETE PAVEMENT 8-INCH, DOWELED AND TINED LONGITUDINAL
(CP21) CONCRETE PAVEMENT 8-INCH SPECIAL (SEE CONSTRUCTION DETAILS)

(AP23) HMA PAVEMENT TYPE E-10, 7 1/2-INCH

(PV01) CONCRETE PAVEMENT APPROACH SLAB
(PV05) ASPHALTIC CURB
(PV10) ASPHALTIC SURFACE, 3-INCH
(PV11) ASPHALTIC SURFACE, 5-INCH
(PV12) ASPHALTIC SURFACE TEMPORARY, 5-INCH

(CG03) CURB RAMP TYPE 2
(CG06) CURB RAMP TYPE 4B
(CG07) CURB RAMP TYPE 5
(CG08) CURB RAMP TYPE 6
(CG09) CURB RAMP TYPE 7A
(CG10) CURB RAMP TYPE 7B
(CG16) CONCRETE CURB AND GUTTER 31-INCH
(CG22) CONCRETE CURB PEDESTRIAN
(CG35) CONCRETE CURB TYPE A
(CG36) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R

(CM01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
(CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
(CM04) MAINTENANCE OPENING
(CM07) CONCRETE SIDEWALK 5-INCH
(CM09) CONCRETE SIDEWALK 5-INCH SPECIAL
(CM10) CONCRETE PAVEMENT REPAIR SPECIAL

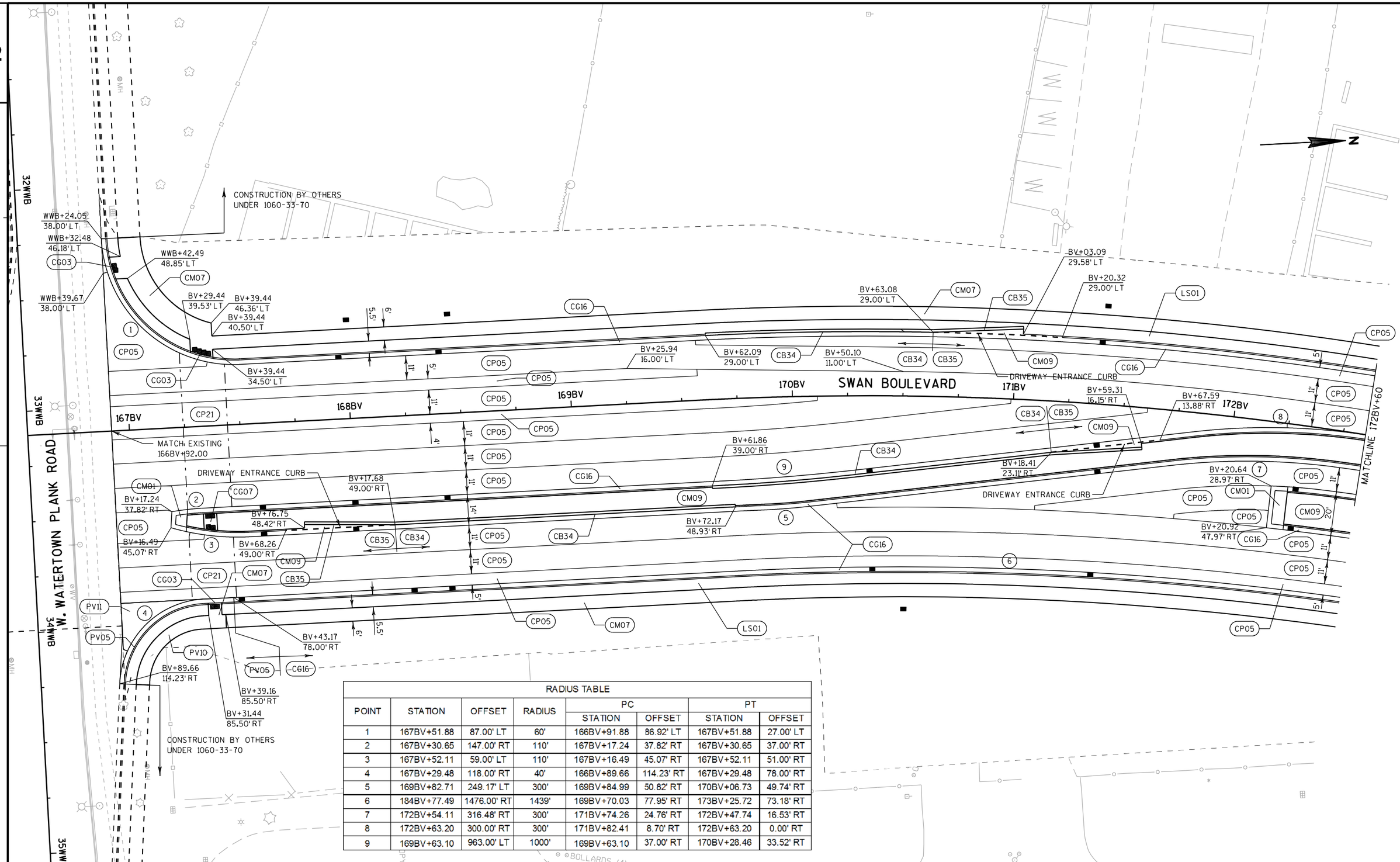
(DR03) CONCRETE DRIVEWAY 9-INCH

(CB32) CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE
(CB33) CONCRETE BARRIER TRANSITION TO THRIE BEAM 32-INCH
(CB34) LOW PROFILE CONCRETE BARRIER
(CB35) LOW PROFILE CONCRETE BARRIER END SECTION

(LS01) SOD LAWN

● PROPOSED MANHOLE
■ PROPOSED INLET
⊠ TRAFFIC SIGNAL PULL BOX

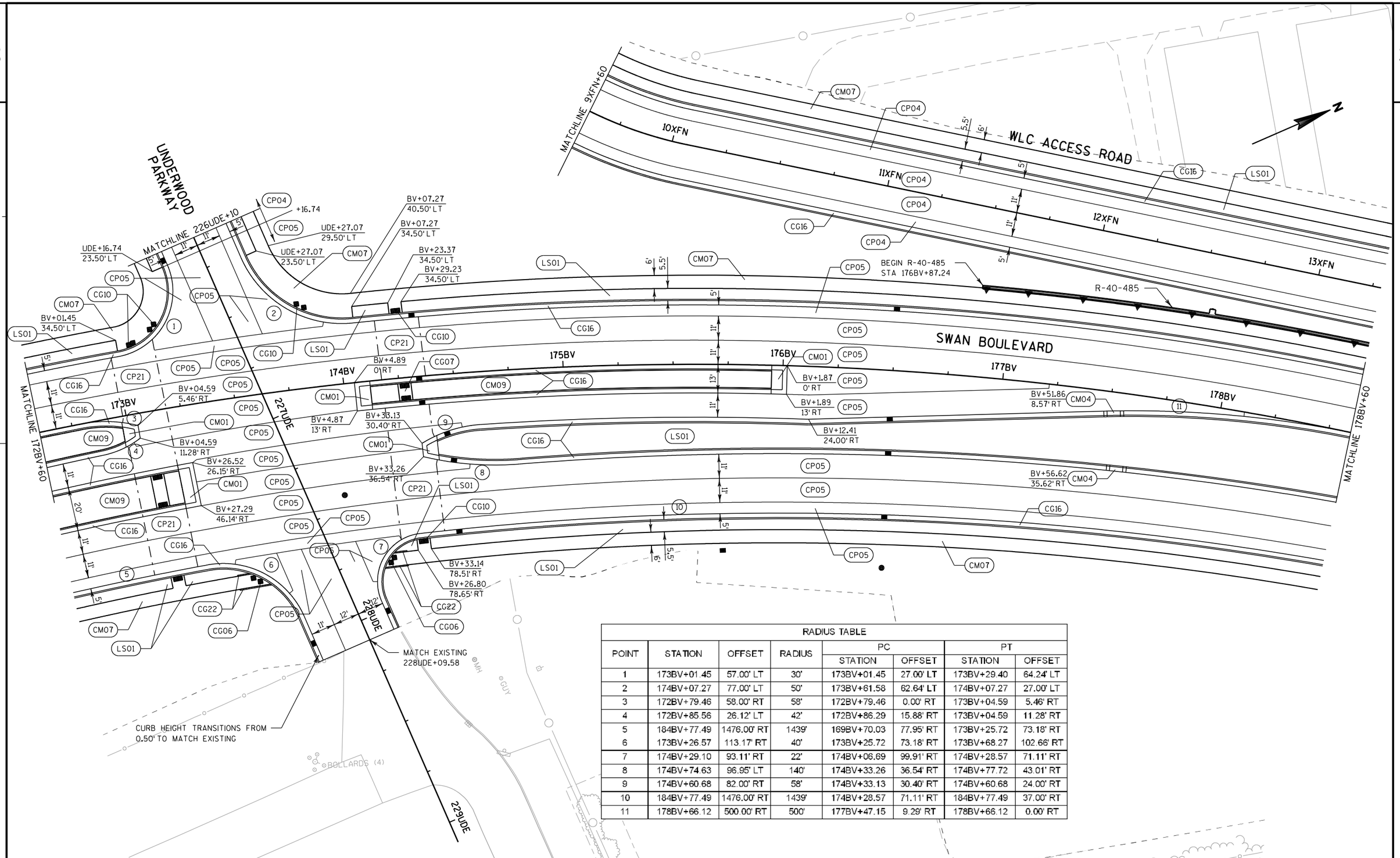
2



RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	167BV+51.88	87.00' LT	60'	166BV+91.88	86.92' LT	167BV+51.88	27.00' LT
2	167BV+30.65	147.00' RT	110'	167BV+17.24	37.82' RT	167BV+30.65	37.00' RT
3	167BV+52.11	59.00' LT	110'	167BV+16.49	45.07' RT	167BV+52.11	51.00' RT
4	167BV+29.48	118.00' RT	40'	166BV+89.66	114.23' RT	167BV+29.48	78.00' RT
5	169BV+82.71	249.17' LT	300'	169BV+84.99	50.82' RT	170BV+06.73	49.74' RT
6	184BV+77.49	1476.00' RT	1439'	169BV+70.03	77.95' RT	173BV+25.72	73.18' RT
7	172BV+54.11	316.48' RT	300'	171BV+74.26	24.76' RT	172BV+47.74	16.53' RT
8	172BV+63.20	300.00' RT	300'	171BV+82.41	8.70' RT	172BV+63.20	0.00' RT
9	169BV+63.10	963.00' LT	1000'	169BV+63.10	37.00' RT	170BV+28.46	33.52' RT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

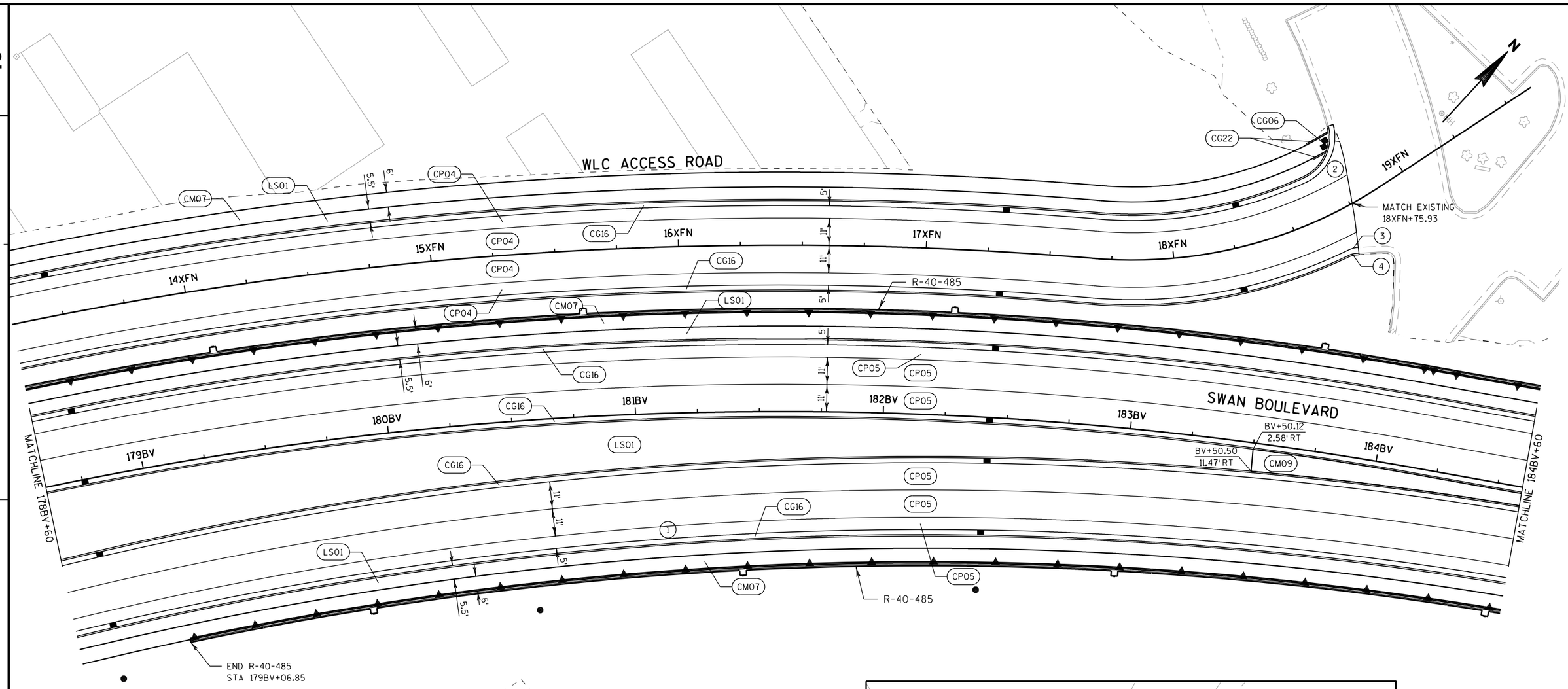


RADIUS TABLE

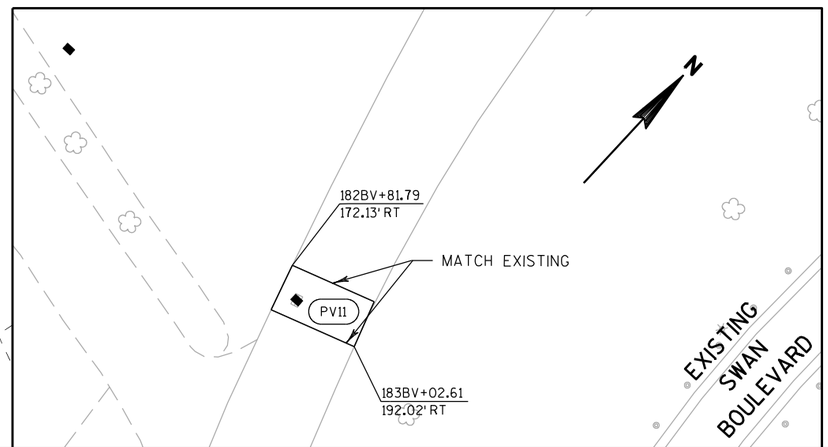
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	173BV+01.45	57.00' LT	30'	173BV+01.45	27.00' LT	173BV+29.40	64.24' LT
2	174BV+07.27	77.00' LT	50'	173BV+61.58	62.64' LT	174BV+07.27	27.00' LT
3	172BV+79.46	58.00' RT	58'	172BV+79.46	0.00' RT	173BV+04.59	5.46' RT
4	172BV+85.56	26.12' LT	42'	172BV+86.29	15.88' RT	173BV+04.59	11.28' RT
5	184BV+77.49	1476.00' RT	1439'	169BV+70.03	77.95' RT	173BV+25.72	73.18' RT
6	173BV+26.57	113.17' RT	40'	173BV+25.72	73.18' RT	173BV+68.27	102.66' RT
7	174BV+29.10	93.11' RT	22'	174BV+06.69	99.91' RT	174BV+28.57	71.11' RT
8	174BV+74.63	96.95' LT	140'	174BV+33.26	36.54' RT	174BV+77.72	43.01' RT
9	174BV+60.68	82.00' RT	58'	174BV+33.13	30.40' RT	174BV+60.68	24.00' RT
10	184BV+77.49	1476.00' RT	1439'	174BV+28.57	71.11' RT	184BV+77.49	37.00' RT
11	178BV+66.12	500.00' RT	500'	177BV+47.15	9.29' RT	178BV+66.12	0.00' RT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

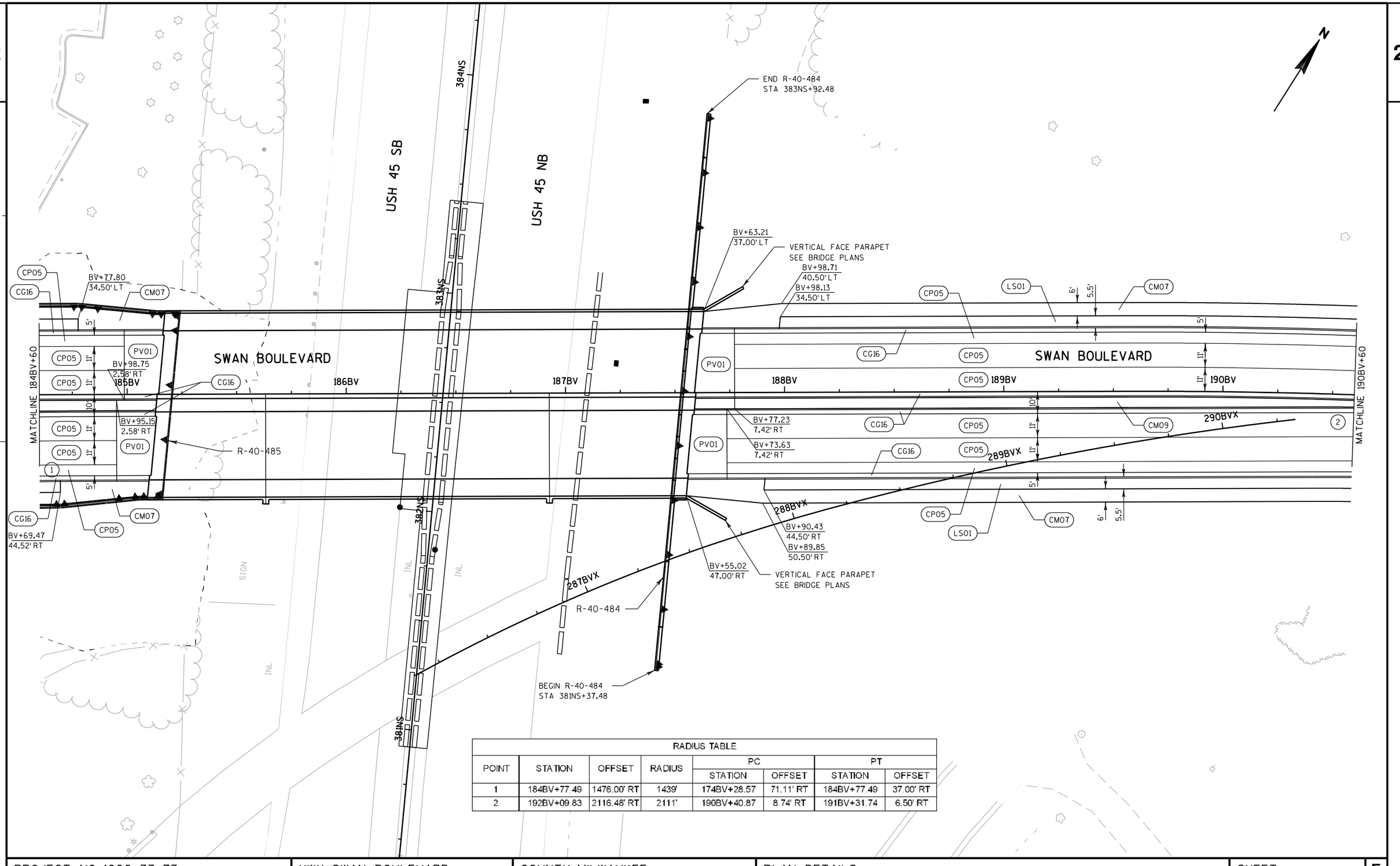


RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	184BV+77.49	1476.00' RT	1439'	174BV+28.57	71.11' RT	184BV+77.49	37.00' RT
2	18XFN+62.57	36.00' LT	20'	18XFN+62.57	16.00' LT	18XFN+86.41	31.22' LT
3	18XFN+66.36	26.00' RT	10'	18XFN+66.36	16.00' RT	18XFN+69.99	16.86' RT
4	18XFN+65.55	26.00' RT	8'	18XFN+65.55	18.00' RT	18XFN+68.27	18.60' RT



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

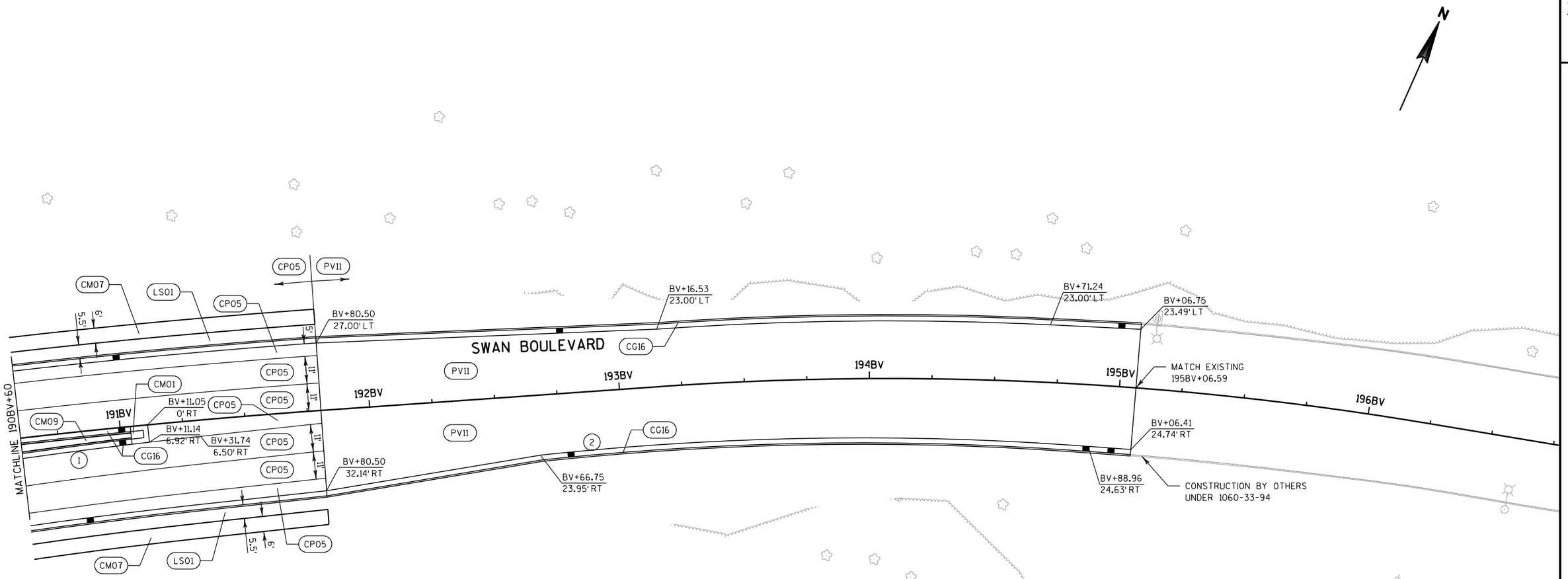
2



RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	184BV+77.49	1476.00' RT	1439'	174BV+28.57	71.11' RT	184BV+77.49	37.00' RT
2	192BV+09.83	2116.48' RT	2111'	190BV+40.87	8.74' RT	191BV+31.74	6.50' RT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

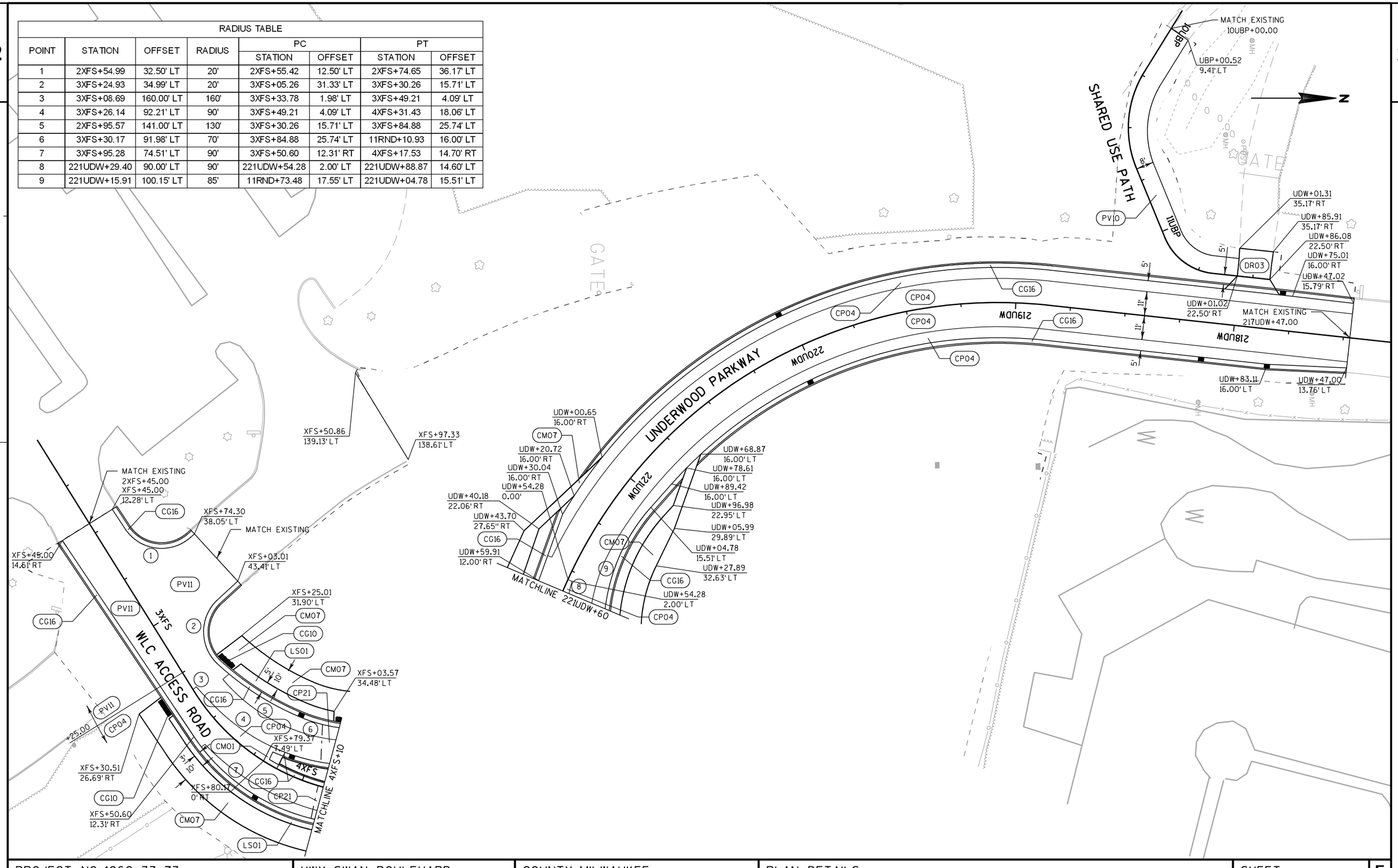
2



RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	192BV+09.83	2116.48' RT	2111'	190BV+40.87	8.74' RT	191BV+31.74	6.50' RT
2	193BV+11.07	1223.13' RT	1200'	192BV+66.75	23.95' RT	194BV+88.96	24.63' RT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

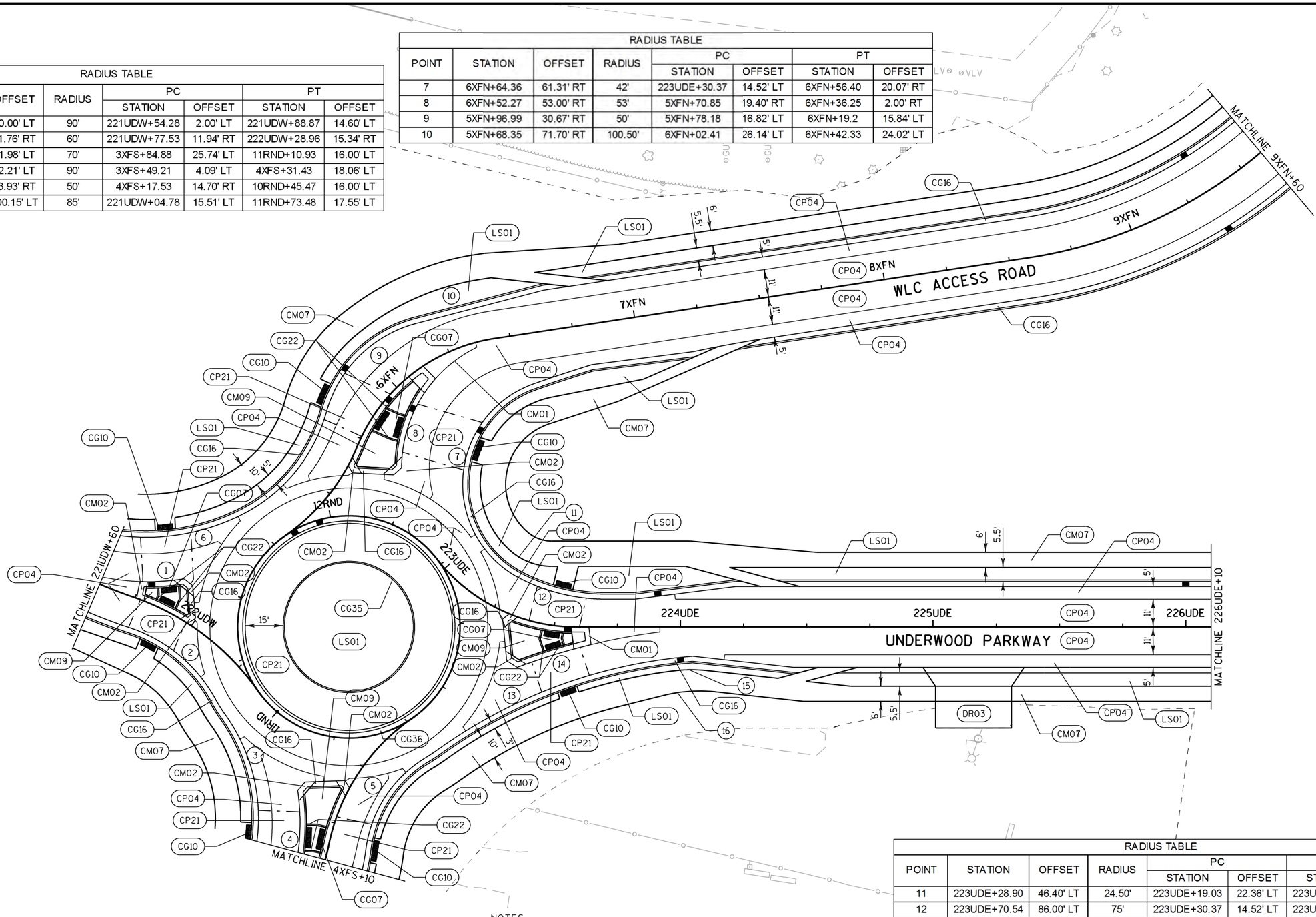
RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	2XFS+54.99	32.50' LT	20'	2XFS+55.42	12.50' LT	2XFS+74.65	36.17' LT
2	3XFS+24.93	34.99' LT	20'	3XFS+05.26	31.33' LT	3XFS+30.26	15.71' LT
3	3XFS+08.69	160.00' LT	160'	3XFS+33.78	1.98' LT	3XFS+49.21	4.09' LT
4	3XFS+26.14	92.21' LT	90'	3XFS+49.21	4.09' LT	4XFS+31.43	18.06' LT
5	2XFS+95.57	141.00' LT	130'	3XFS+30.26	15.71' LT	3XFS+84.88	25.74' LT
6	3XFS+30.17	91.98' LT	70'	3XFS+84.88	25.74' LT	11RND+10.93	16.00' LT
7	3XFS+95.28	74.51' LT	90'	3XFS+50.60	12.31' RT	4XFS+17.53	14.70' RT
8	221UDW+29.40	90.00' LT	90'	221UDW+54.28	2.00' LT	221UDW+88.87	14.60' LT
9	221UDW+15.91	100.15' LT	85'	11RND+73.48	17.55' LT	221UDW+04.78	15.51' LT



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	221UDW+29.40	90.00' LT	90'	221UDW+54.28	2.00' LT	221UDW+88.87	14.60' LT
2	221UDW+86.87	71.76' RT	60'	221UDW+77.53	11.94' RT	222UDW+28.96	15.34' RT
3	3XFS+30.17	91.98' LT	70'	3XFS+84.88	25.74' LT	11RND+10.93	16.00' LT
4	3XFS+26.14	92.21' LT	90'	3XFS+49.21	4.09' LT	4XFS+31.43	18.06' LT
5	4XFS+39.14	63.93' RT	50'	4XFS+17.53	14.70' RT	10RND+45.47	16.00' LT
6	221UDW+15.91	100.15' LT	85'	221UDW+04.78	15.51' LT	11RND+73.48	17.55' LT

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
7	6XFN+64.36	61.31' RT	42'	223UDE+30.37	14.52' LT	6XFN+56.40	20.07' RT
8	6XFN+52.27	53.00' RT	53'	5XFN+70.85	19.40' RT	6XFN+36.25	2.00' RT
9	5XFN+96.99	30.67' RT	50'	5XFN+78.18	16.82' LT	6XFN+19.2	15.84' LT
10	5XFN+68.35	71.70' RT	100.50'	6XFN+02.41	26.14' LT	6XFN+42.33	24.02' LT



NOTES

CONCRETE PAVEMENT 8-INCH SPECIAL AT TRUCK APRON SHALL BE MEDIUM BROOMED FINISH. DO NOT USE PATTERN AND SPECIAL JOINTING SHOWN IN CONSTRUCTION DETAIL

STATION/OFFSET INFORMATION SHOWN ON NEXT SHEET

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
11	223UDE+28.90	46.40' LT	24.50'	223UDE+19.03	22.36' LT	223UDE+44.07	22.98' LT
12	223UDE+70.54	86.00' LT	75'	223UDE+30.37	14.52' LT	223UDE+70.54	11.00' LT
13	224UDE+20.61	211.00' RT	200'	10RND+41.66	16.00' LT	224UDE+04.81	11.63' RT
14	224UDE+23.41	250.00' RT	250'	223UDE+40.11	19.15' RT	223UDE+91.85	2.00' RT
15	224UDE+04.44	76.97' RT	60'	223UDE+97.25	17.40' RT	224UDE+10.96	17.33' RT
16	224UDE+07.72	85.38' RT	60'	223UDE+93.18	27.17' RT	224UDE+14.24	25.73' RT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

N

VLV⊙ ⊘VLV

⊙GUY ⊙GUY

MATCHLINE 9XFN+60

XFN±44.97 34.00' LT
XFN+63.49 23.50' LT
XFN±98.03 29.50' LT
XFN+42.48 34.02' LT
XFN+46.17 24.00' LT
XFN+42.33 24.02' LT
XFN+66.02 16.00' LT
XFN+13.32 0' RT
XFN+91.48 16.00' LT
XFN+76.02 16.00' LT
XFN+80.54 16.02' RT
XFN+31.02 16.41' RT
XFN+85.76 25.48' LT
XFN+14.76 6.87' RT
XFN+47.97 16.01' RT
XFN+78.44 24.02' LT
XFN+21.03 16.92' RT
XFN+99.77 24.79' RT
XFN+63.30 0' LT
XFN+88.69 31.90' RT
XFN+62.89 26.34' RT
XFN+60.24 36.65' RT
XFN+27.44 39.04' RT
XFN+70.85 19.40' RT
XFN+07.70 45.42' RT
UDW+71.83 31.82' LT
UDW+78.15 35.25' LT
XFN+61.63 2.82' RT
XFN+67.69 17.72' RT
UDE+47.62 23.42' LT
UDE+01.99 24.00' LT
UDE+03.86 34.00' LT
UDE+59.57 24.00' LT
UDE+19.31 23.50' LT
UDE+53.86 29.50' LT
UDE+47.30 16.00' LT
UDE+81.85 11.00' LT
UDE+63.69 0' RT
UDW+88.87 14.60' RT
UDW+92.60 13.84' LT
UDE+31.52 0' RT
UDE+29.89 2.92' RT
UDE+64.58 7.02' RT
UDE+21.85 16.00' LT
UDE+31.85 16.00' LT
UDE+44.81 16.00' RT
UDE+54.81 16.00' RT
UDW+83.64 18.78' RT
UDW+93.75 3.37' RT
UDE+36.36 17.84' RT
UDW+85.03 28.77' RT
UDW+93.52 18.85' RT
UDW+98.19 0' RT
XFS+34.90 16.76' LT
XFS+41.74 3.04' RT
UDE+40.11 19.15' RT
UDE+75.77 31.52' RT
UDE+04.81 11.63' RT
UDE+49.55 21.55' RT
UDE+70.26 16.00' RT
UDE+31.00 23.58' RT
UDE+59.73 25.75' RT
UDE+38.58 20.35' RT
UDE+01.00 23.58' RT
UDE+31.00 40.00' RT
UDE+54.06 28.62' RT
UDE+48.67 29.50' RT
UDE+01.00 40.00' RT
UDE+34.94 68.77' RT
XFS+31.43 18.06' LT
XFS+40.12 0' RT
XFS+17.44 35.96' LT
XFS+24.27 19.30' RT
XFS+12.99 19.99' RT

12RND
223UDE
MATCHLINE 221UDW+60
222UDW
15'
15'
10'
11RND
MATCHLINE 4XFS+10

5'
11'
8XFN
WLC ACCESS ROAD
9XFN
7XFN
6XFN
5'
10'
6'
5.5'
5'
11'
11'
5'
224UDE
225UDE
226UDE
UNDERWOOD PARKWAY
MATCHLINE 226UDE+10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

SWAN BOULEVARD

185BV

186BV

187BV

188BV

287BVX

288BVX

AP23

CB32

SIGN

INL

W

379NS

380NS

381NS

382NS

383NS

384NS

385NS+00

MATCHLINE 385NS+00

USH 45 SB

USH 45 NB

NS+92.18
5.00'LT

NS+92.18
3.00'LT
FACE OF BARRIER

CONNECT TO EXISTING BARRIER
SEE STANDARD DETAIL DRAWING

NS+92.18
3.00'RT
FACE OF BARRIER

NS+92.18
7.90'RT

CONNECT TO EXISTING BARRIER
SEE STANDARD DETAIL DRAWING

NS+40.92
63.00'RT
FACE OF BARRIER

NS+04.63
4.67'LT
FACE OF BARRIER

NS+00.00
14.70'LT

NS+79.65
3.00'LT
FACE OF BARRIER

NS+00.00
5.00'LT

NS+79.61
3.00'RT
FACE OF BARRIER

NS+04.61
4.70'RT
FACE OF BARRIER

NS+25.00
20.39'LT

NS+25.00
14.64'LT

NS+00.00
20.39'LT

NS+92.19
4.66'LT
FACE OF BARRIER

NS+00.00
5.00'LT

NS+17.10
3.00'LT
FACE OF BARRIER

NS+42.18
5.00'LT

NS+42.18
3.00'LT
FACE OF BARRIER

CONNECT TO EXISTING BARRIER
SEE STANDARD DETAIL DRAWING

NS+42.18
10.18'RT

NS+42.18
3.00'RT
FACE OF BARRIER

NS+17.07
3.00'RT
FACE OF BARRIER

NS+92.19
4.67'RT
FACE OF BARRIER

NS+15.93
65.33'RT
FACE OF BARRIER

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021209_pd.dgn PLOT DATE : 31-JAN-2013 04:13 PLOT BY : MSCDYB PLOT NAME : 021209_pd PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

N

W. WATERTOWN PLANK ROAD
32WWB

33WWB

34WWB

35WWB

SWAN BOULEVARD

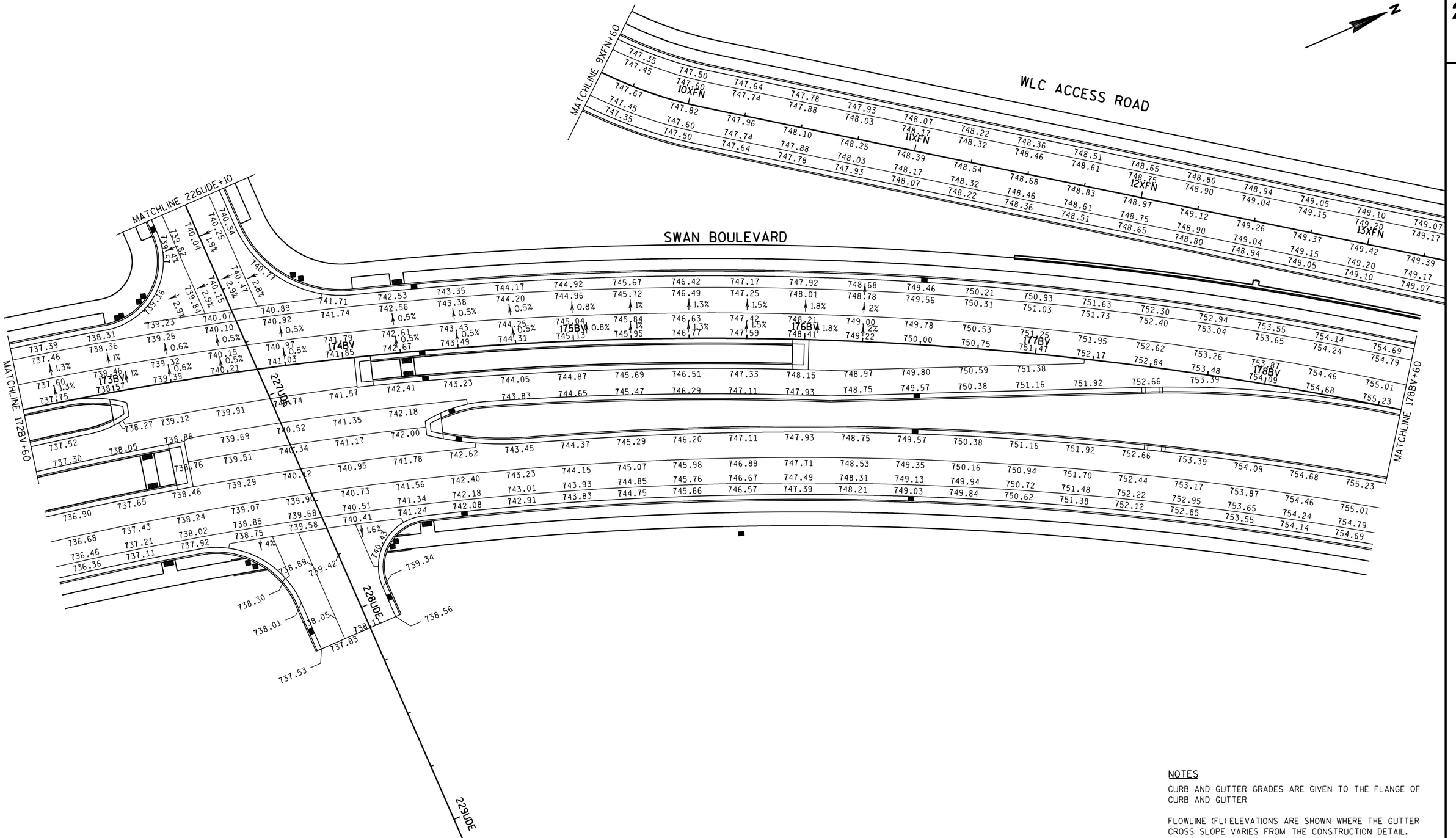
MATCHLINE 172BV+60

NOTES
CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE THE GUTTER CROSS SLOPE VARIES FROM THE CONSTRUCTION DETAIL.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2

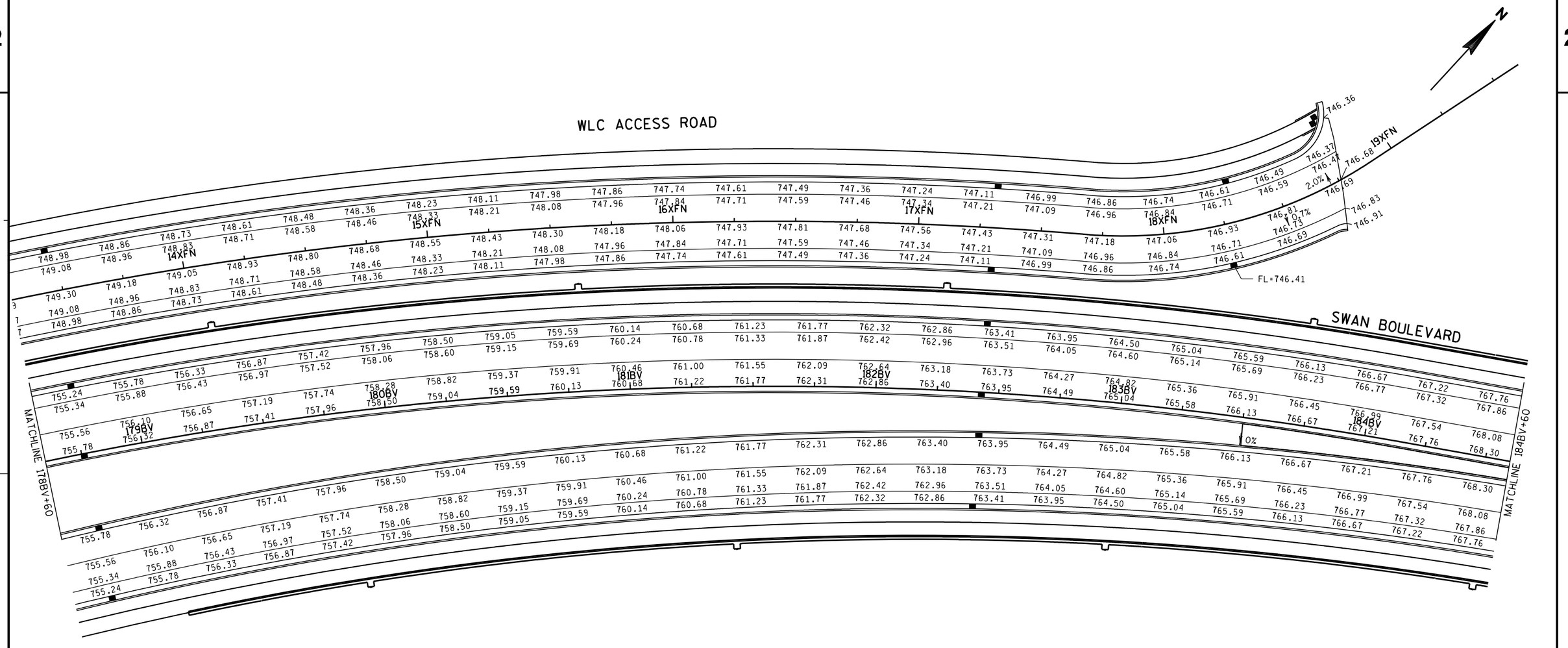


NOTES

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER

FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE THE GUTTER CROSS SLOPE VARIES FROM THE CONSTRUCTION DETAIL.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E



NOTES
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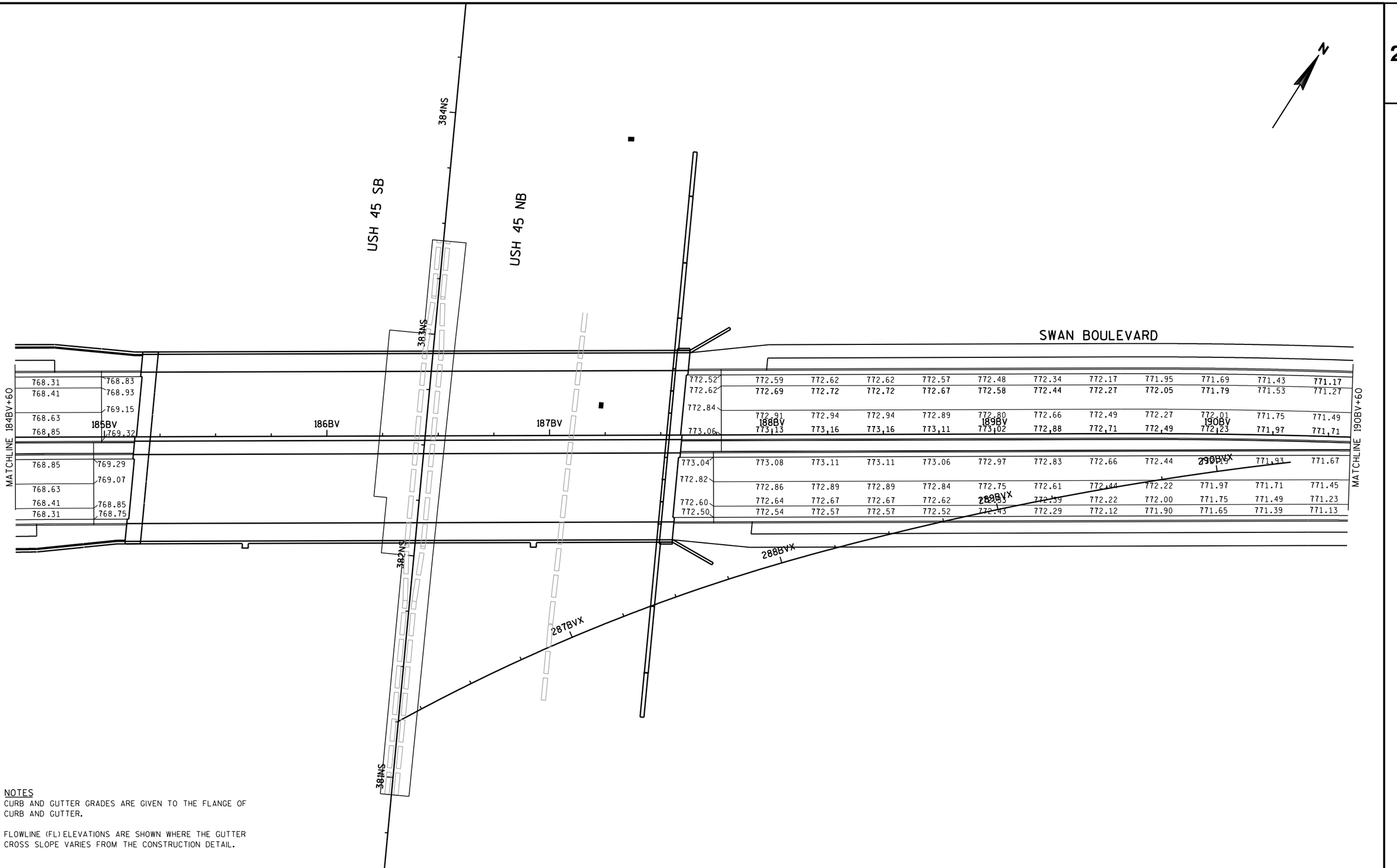
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2



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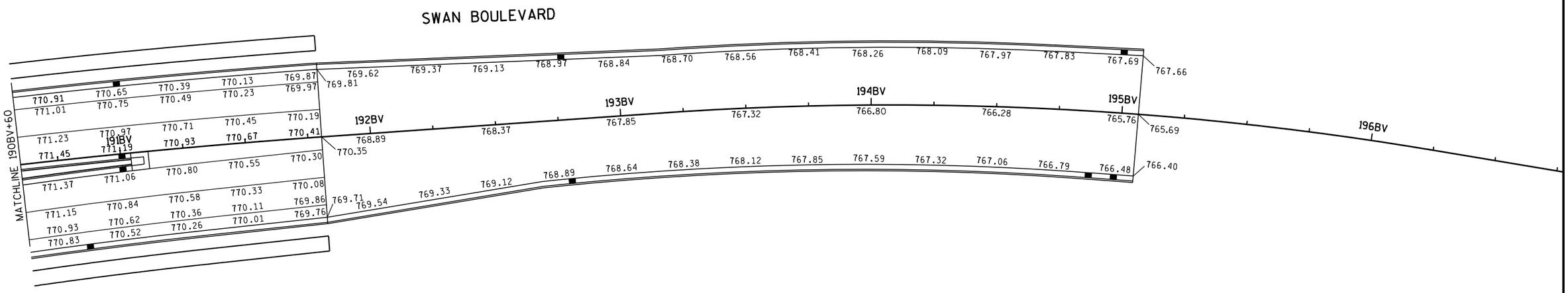
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2



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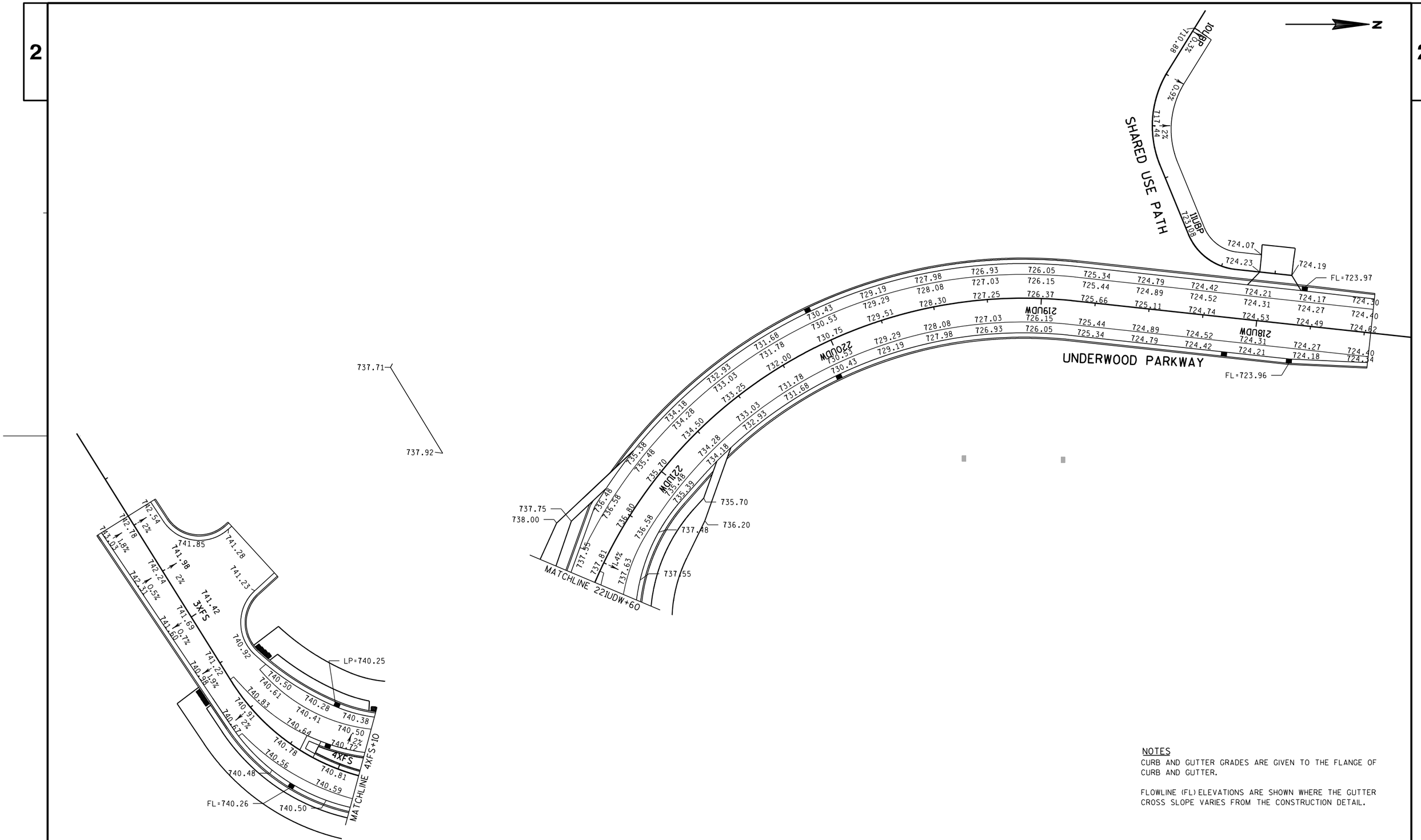
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E



NOTES

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PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2

N

WLC ACCESS ROAD

MATCHLINE 9XFN+60

UNDERWOOD PARKWAY

MATCHLINE 226UDE+10

MATCHLINE 22UDW+60

MATCHLINE 4XFS+10

NOTES

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

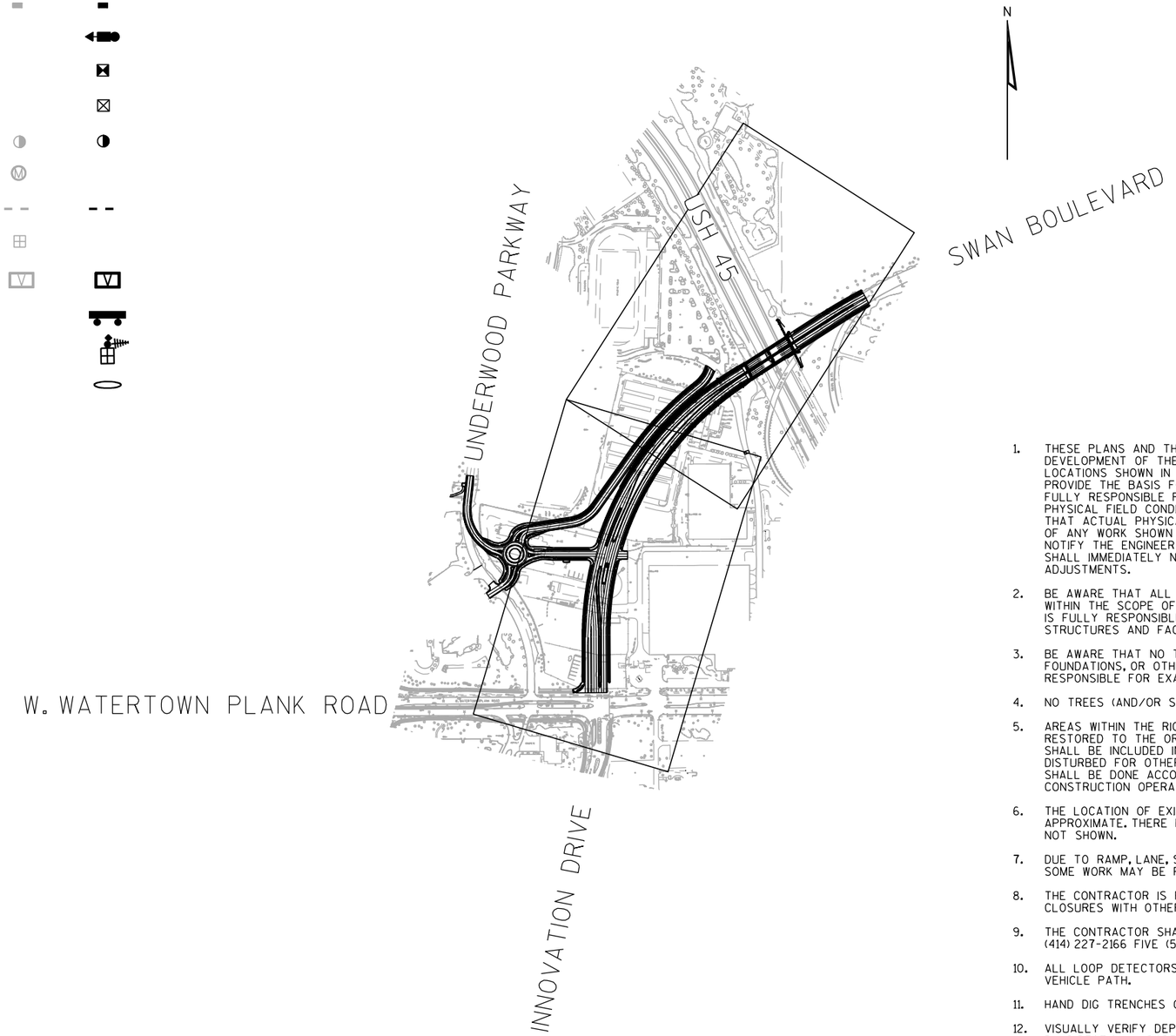
FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE THE GUTTER CROSS SLOPE VARIES FROM THE CONSTRUCTION DETAIL.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2

LEGEND

	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
JUNCTION BOX	▬	▬
CCTV CAMERA AND POLE		◀▬●
POLE MOUNTED CABINET		⊠
METER BREAKER PEDESTAL		⊠
24"X36" STEEL PULL BOX	◑	◑
MANHOLE	Ⓜ	
FTMS (ITS) CONDUIT	= =	= =
BREAKER DISCONNECT BOX	⊞	
COMMUNICATIONS VAULT, TYPE 1	CV	CV
HIGHWAY ADVISORY RADIO ASSEMBLY		▬
TEMPORARY VEHICLE DETECTOR ASSEMBLY		⊞
DETECTION ZONE		⬭

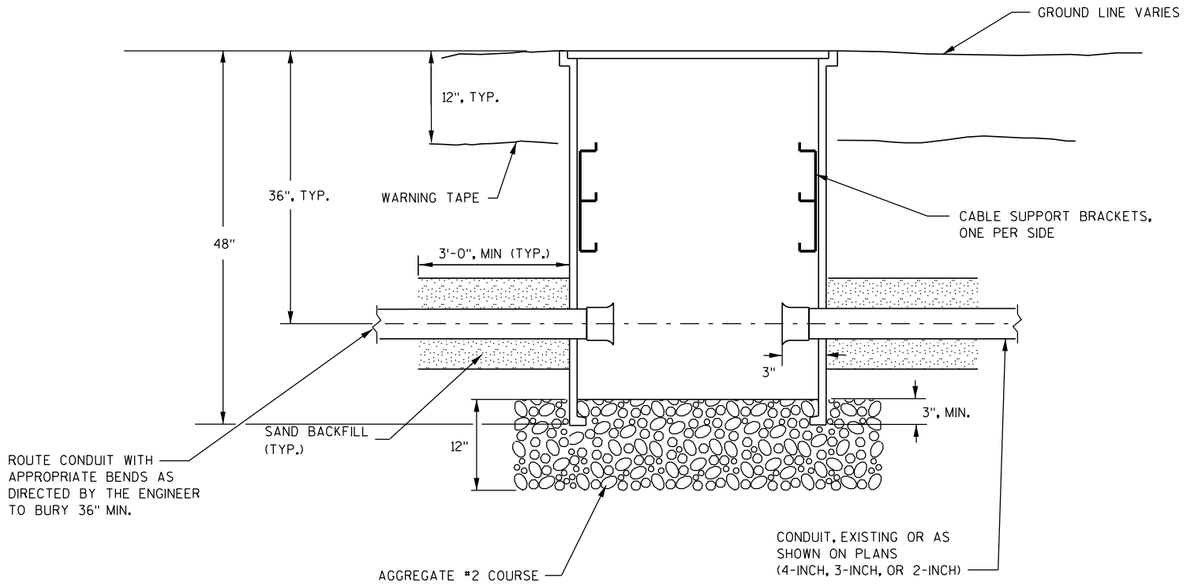


FTMS GENERAL NOTES

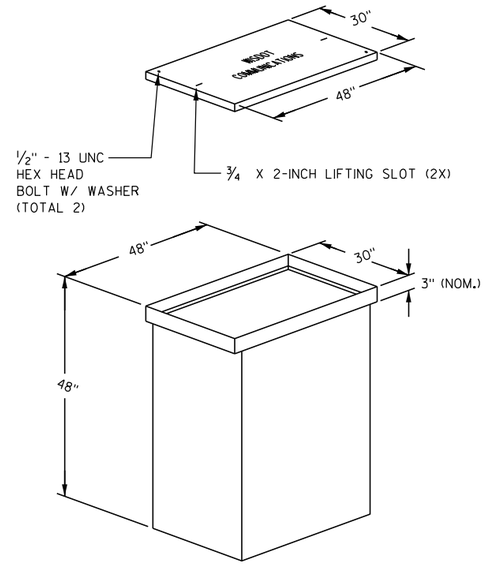
1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

FTMS STANDARD ABBREVIATIONS

CCTV	CLOSED CIRCUIT TELEVISION SITE
CB	CONTROLLER CABINET
PB	PULL BOX
CV	COMMUNICATIONS VAULT
MH	MANHOLE
MB	METER BREAKER PEDESTAL



SECTION A-A



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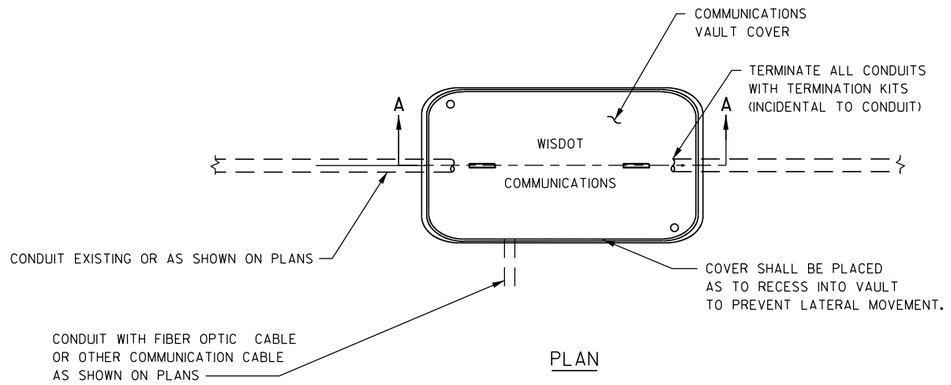


PLAN

COMMUNICATIONS VAULT

NOTES

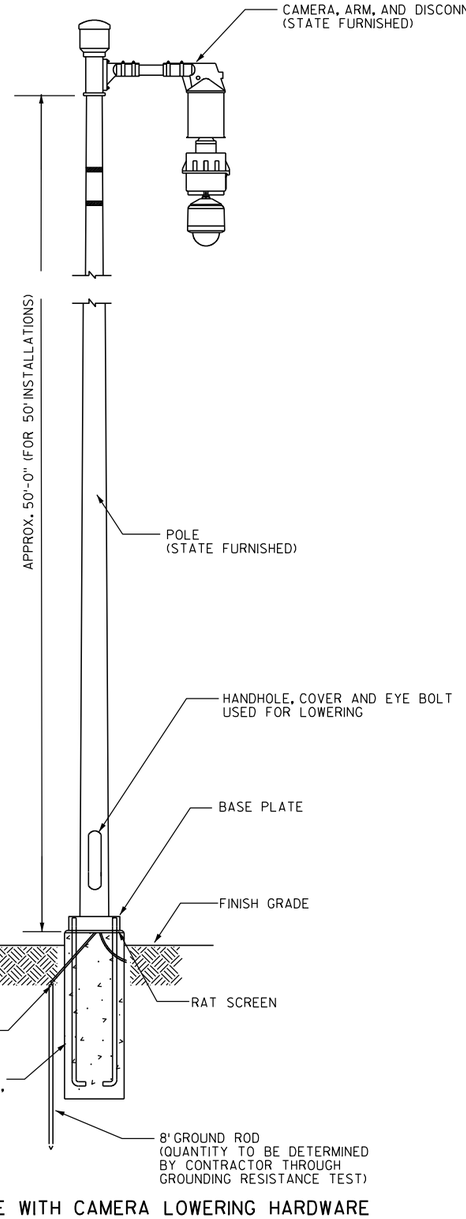
1) BOX SHALL HAVE AN OPEN BASE.

2) COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

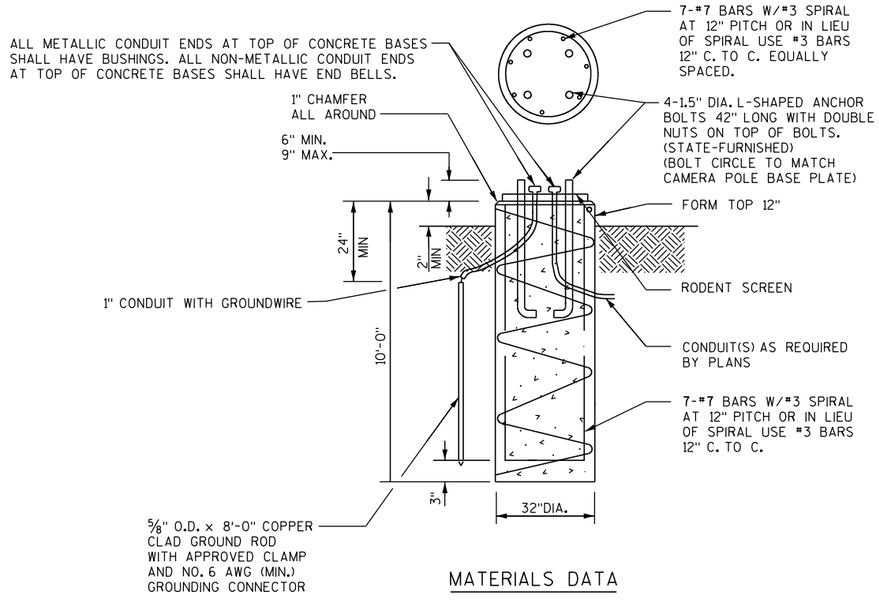
3) ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

4) VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

5) FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.



CAMERA POLE WITH CAMERA LOWERING HARDWARE

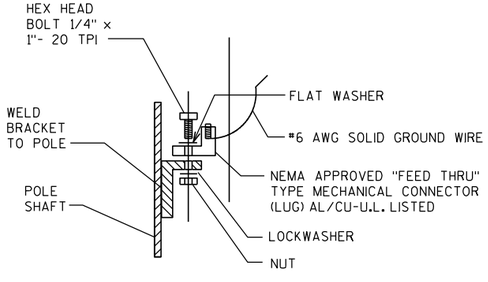


MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

CONCRETE BASE, 50' CAMERA POLE

NOT TO SCALE



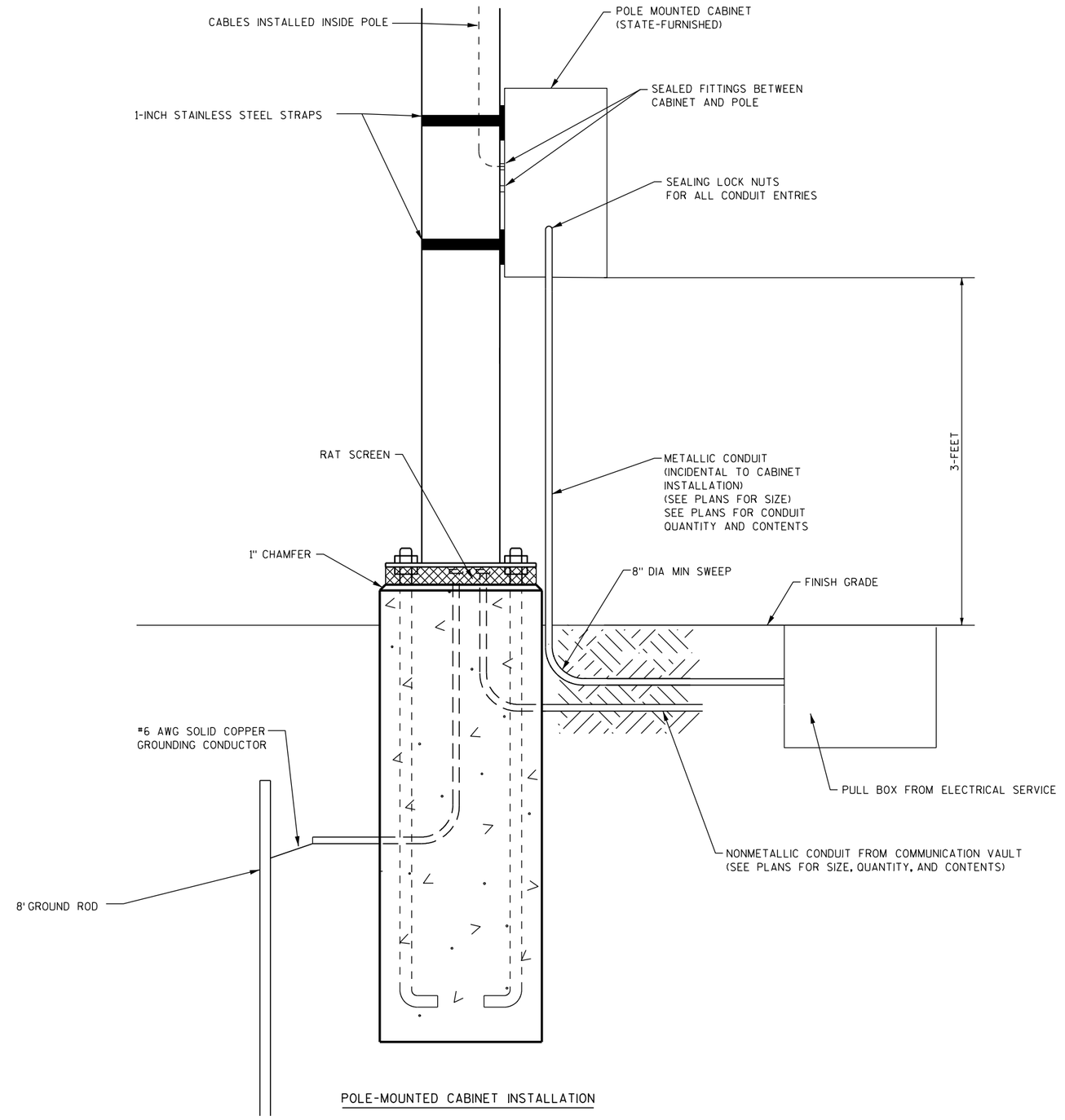
FIELD INSTALLED GROUNDING LUG

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

CAMERA POLES & FOUNDATIONS

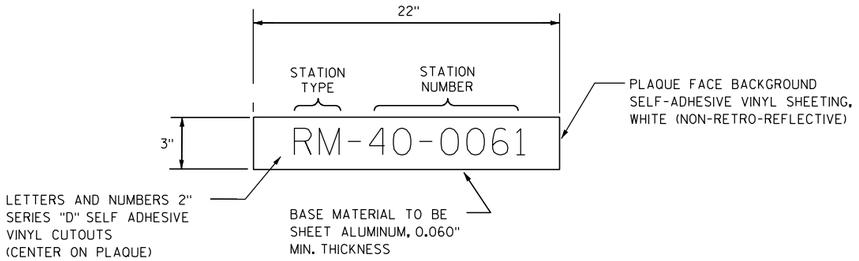
2



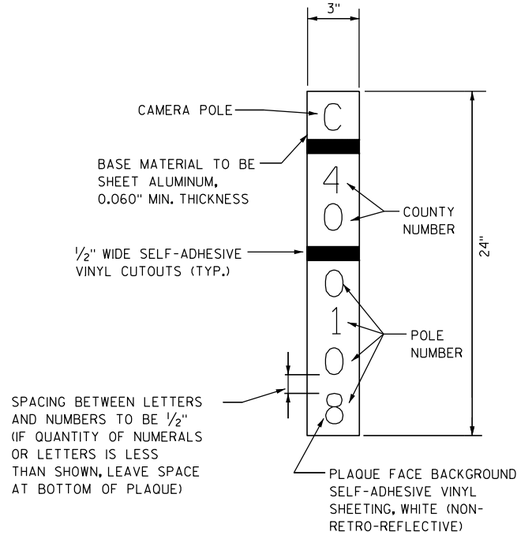
POLE-MOUNTED CABINET INSTALLATION

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

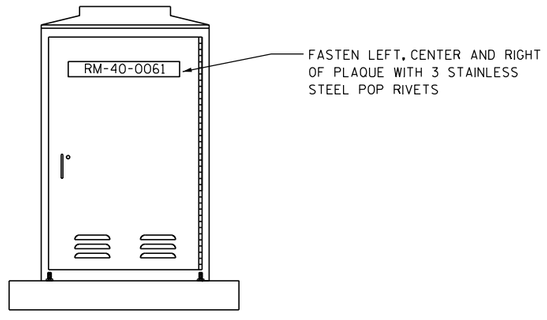
2



ITS FIELD CABINET IDENTIFICATION PLAQUE DETAIL



POLE IDENTIFICATION PLAQUE DETAIL



ITS FIELD CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)

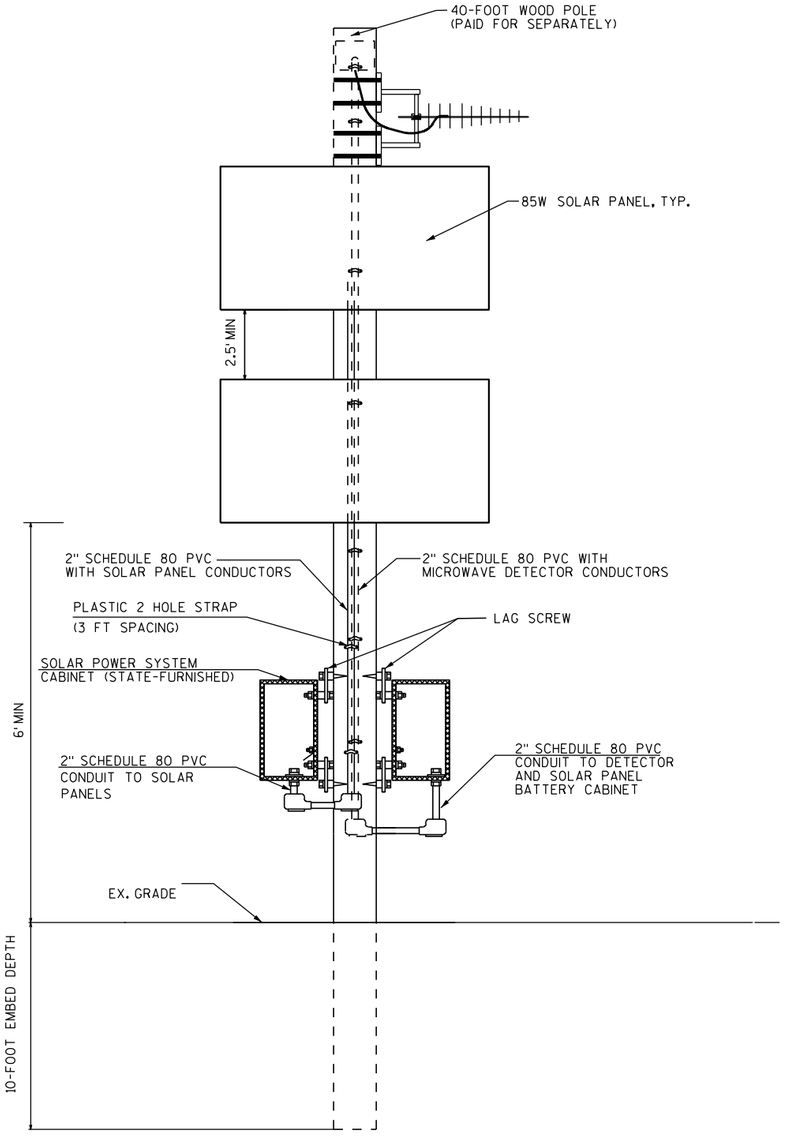
LEGEND STATION TYPE

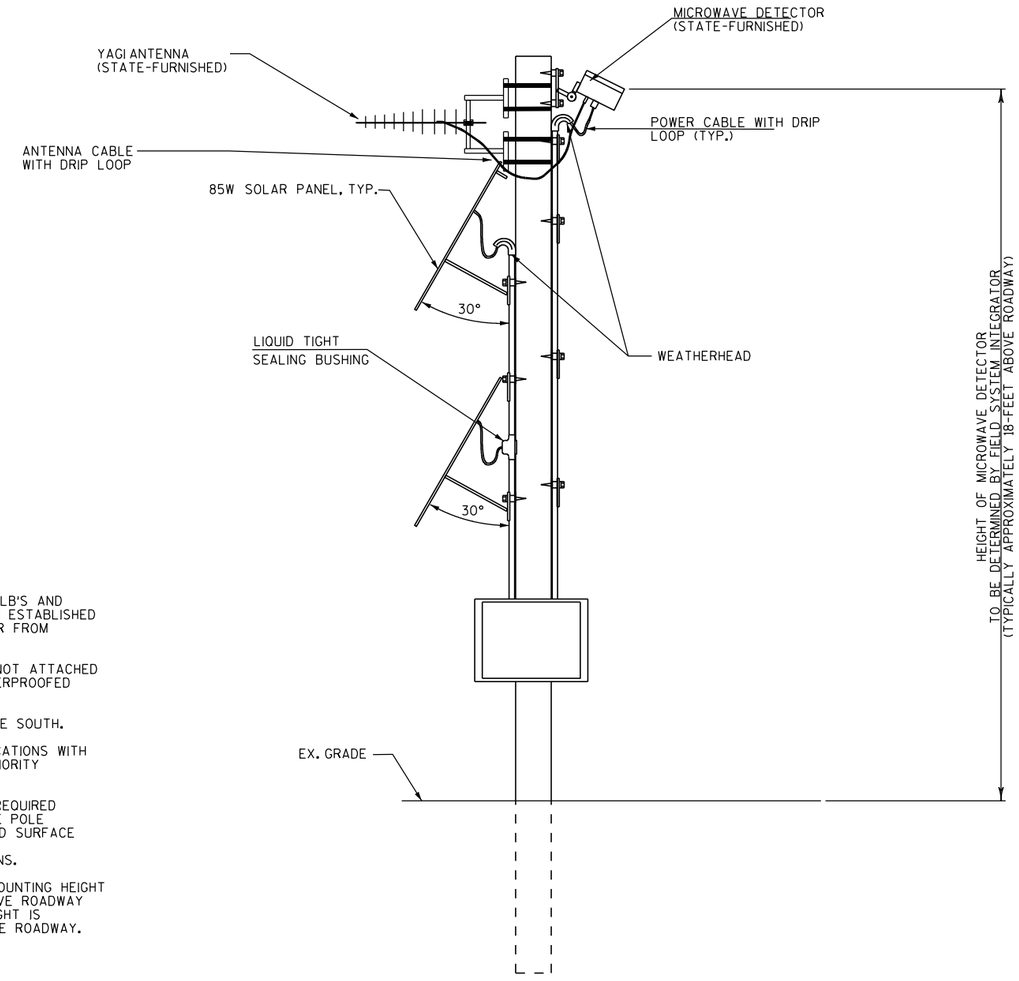
RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

NOTES

1) TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2) FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3) FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4) COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

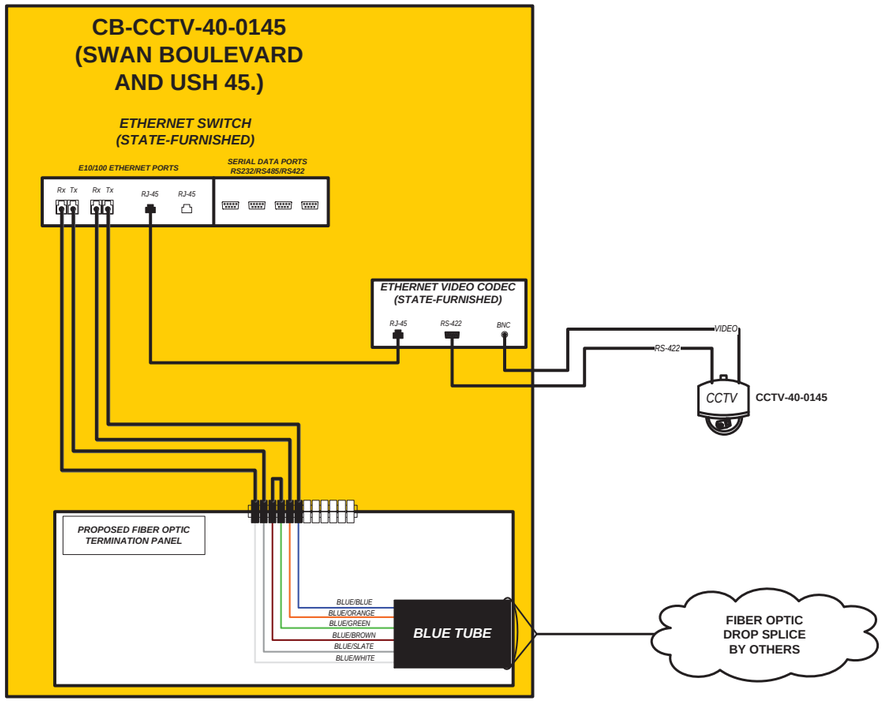


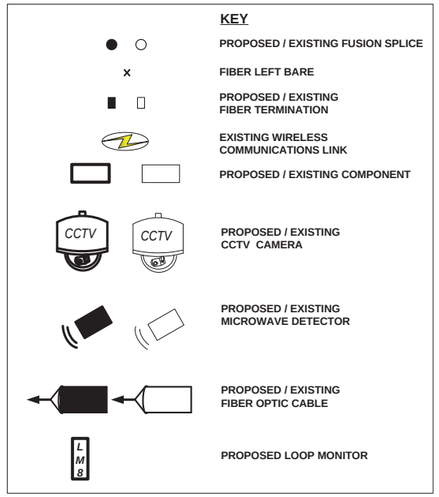


NOTES:

1. ALL WIRES ENTERING CONDUIT, LB'S AND SERVICE CAPS SHALL HAVE AN ESTABLISHED DRIP LOOP TO PREVENT WATER FROM ENTERING CONDUIT.
2. ANY LB OPENINGS THAT ARE NOT ATTACHED TO CONDUIT SHALL BE WEATHERPROOFED USING A SILICONE SEAL.
3. SOLAR PANELS MUST FACE DUE SOUTH.
4. COORDINATE SOLAR PANEL LOCATIONS WITH VEHICLE DETECTORS, GIVING PRIORITY TO VEHICLE DETECTORS.
5. CONTRACTOR SHALL PROVIDE REQUIRED SETTING DEPTH AND ADEQUATE POLE HEIGHT ABOVE MONITORED ROAD SURFACE TO MEET VEHICLE DETECTOR MANUFACTURER'S SPECIFICATIONS.
6. CONTRACTOR TO DETERMINE MOUNTING HEIGHT OF MICROWAVE DETECTOR ABOVE ROADWAY BEING DETECTED. NOMINAL HEIGHT IS APPROXIMATELY 18-FEET ABOVE ROADWAY.

TEMPORARY VEHICLE DETECTOR ASSEMBLY





2

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS PLANS - COMMUNICATIONS DETAILS	SHEET 68	E

2

780WG
781WG
782WG
783WG
784WG
185BV
186BV
187BV
287BVX
288BVX
18BFP
19BFP
20BFP
21BFP
18BBV
380NS
381NS
382NS
383NS
384NS
385NS
EXMB01
EXCB01
EXMH01
EXPB03
EXPB01
EXPB04
EXPB02
SWAN BOULEVARD
USH 45 SB
USH 45 NB
SIGN
INL
MATCHLINE 385NS+82

LEGEND

(1) REMOVE PULL BOX
(4) REMOVE CABLE
(5) REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE
(7) REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL
(9) BURY TYPE 1 MANHOLE

NOTES

1. THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS
2. FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS
3. REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVALS WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

2

2

INL

SIGN

EXPB05

4

4

FIBER OPTIC

USH 45 SB

MATCHLINE 385NS+82

386NS

387NS

388NS

389NS

390NS

391NS

MATCHLINE 391NS+82

INL

INL

USH 45 NB

INL

HWY

HWY

15"

12" CMP
IE 743.32

PLAYGROUND

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

2

2

INL

INL

INL

MH

FO

HWY

MH

E

4

EXPB06

4

EXHAR02

SIGN

INL

USH 45 SB

MATCHLINE 391NS+82

392NS

393NS

394NS

395NS

396NS

397NS

398

INL

HWY

INL

USH 45 NB

INL

HWY

MH

FO

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021412_fm.dgn PLOT DATE : 30-JAN-2013 04:25 PLOT BY : MSCDYB PLOT NAME : 021412_fm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

SWAN BOULEVARD

INNOVATION DRIVE

W. WATERTOWN PLANK ROAD

UNDERWOOD PARKWAY

WLC ACCESS ROAD

ATHLETIC FIELD

SCHOOL

30WWB

32WWB

34WWB

36WWB

R/W

CONSTRUCTION BY OTHERS
UNDER I.D. 1060-33-70

(3) 2-INCH HDPE DUCTS
EXTEND EXISTING
CONDUITS TO CV167BV

CV167BV

SLOPE INTERCEPT

(3) 2-INCH HDPE DUCTS
(1) WITH (2) 6-COUNT FOC

168BV

170BV

172BV

174BV

176BV

178BV

CV167BV-1

(3) 2-INCH HDPE DUCTS

(3) 2-INCH HDPE DUCTS AND (1) 72-COUNT FOC
INSTALLED BY OTHERS UNDER PROJECT I.D 1060-33-72

CONSTRUCTION BY OTHERS
UNDER I.D. 1060-33-72

22SDE

CV174BV

CV174BV-1

CV177BV

10XFN

12XFN

14XFN

(1) 2-INCH HDPE DUCT
(1) WITH (1) 6-COUNT FOC

(2) 2-INCH CONDUITS IN RETAINING WALL PARAPET
(1) WITH (1) 6-COUNT FOC

MATCHLINE 179BV+50

BOLLARDS (4)

BOLLARDS (6)

BOLLARD

CANOPY

SIGN

POST

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021420_fm.dgn PLOT DATE : 30-JAN-2013 04:25 PLOT BY : MSCDYB PLOT NAME : 021420_fm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

NOTE:
1. CONTRACTOR SHALL COORDINATE WITH WISCONSIN LUTHERAN COLLEGE IT DEPARTMENT FOR FIBER OPTIC CABLE INSTALLATION.
2. CONTRACTOR SHALL VERIFY THE EXISTING UNDERGROUND UTILITIES IN FIELD PRIOR TO BORING AND INSTALLATION.

WISCONSIN LUTHERAN COLLEGE STADIUM

STADIUM NETWORK CLOSET

EXCV02
VERIFY VAULT LOCATION IN FIELD

EXCV01
(1) INSTALL CONDUITS INTO EXISTING COMMUNICATION VAULT

INSTALL (1) 6-COUNT FOC IN EXISTING CONDUITS TO STADIUM NETWORK CLOSET.

PBWLC

(1) 2-INCH HDPE DUCT - DIRECTIONAL BORE
(1) WITH (1) 6-COUNT FOC

(1) 2-INCH HDPE DUCT
(1) WITH (1) 6-COUNT FOC

(1) 2-INCH HDPE DUCT
(1) WITH (1) 6-COUNT FOC

CONSTRUCTION BY OTHERS
UNDER I.D. 1060-33-72

USH 45 SB
USH 45 NB

390NS
388NS
386NS
384NS
382NS
380NS

PLAYGROUND

N

MATCHLINE 179BV+50

16XFN
18XFN
WLC ACCESS ROAD
180BV
182BV
184BV
186BV
188BV
190BV
192BV
CV184BV
CV188BV
PB188BV
MB188BV
B-40-775

SWAN BOULEVARD

(2) 2-INCH CONDUITS IN RETAINING WALL PARAPET
(1) WITH (1) 6-COUNT FOC

(2) 2-INCH CONDUITS IN BRIDGE PARAPET
(1) WITH (1) 6-COUNT FOC

TMD01
TEMPORARY VEHICLE DETECTOR ASSEMBLY
COMMUNICATION LINK TO EXISTING HUB:
EXHUB-40-0005

CCTV-40-0145
(1) 50-FOOT CCTV CAMERA POLE BASE
(1) 50-FOOT CCTV CAMERA POLE (S-F)
(1) CCTV CAMERA ASSEMBLY (S-F)
(1) POLE MOUNTED CONTROL CABINET (S-F)
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(1) ETHERNET SWITCH (S-F)
(1) ETHERNET VIDEO CODEC (S-F)
(6) FIBER OPTIC TERMINATIONS

CB-CCTV-40-0145

(1) 2-INCH NONMETALIC CONDUITS
(1) WITH (3) NO. 6 AWG LIGHTING WIRES
AND (1) NO. 10 AWG LIGHTING WIRES

(1) 2-INCH NONMETALIC CONDUITS
(1) WITH (3) NO. 6 AWG LIGHTING WIRES
AND (1) NO. 10 AWG LIGHTING WIRES

(3) 2-INCH NONMETALIC CONDUITS
(1) WITH (1) 6-COUNT FOC

SLOPE INTERCEPT

EXHAR01
SALVAGE AND REINSTALL HAR FLASHER ASSEMBLY

R/W

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

PARKING

ATHLETIC FIELD

W. WATERTOWN PLANK ROAD

30WWB

32WWB

34WWB

CONSTRUCTION BY OTHERS
UNDER 1060-33-70

CONSTRUCTION
BY OTHERS
UNDER
1060-33-70

SWAN BOULEVARD

168BV

170BV

172BV

174BV

176BV

MATCHLINE 172BV+00

MATCHLINE 176BV+00

UNDERWOOD PARKWAY

224UDE

226UDE

228UDE

218UDW

220UDW

222UDW

4XFS

12RMD

6XFN

8XFN

10XFN

WLC ACCESS ROAD

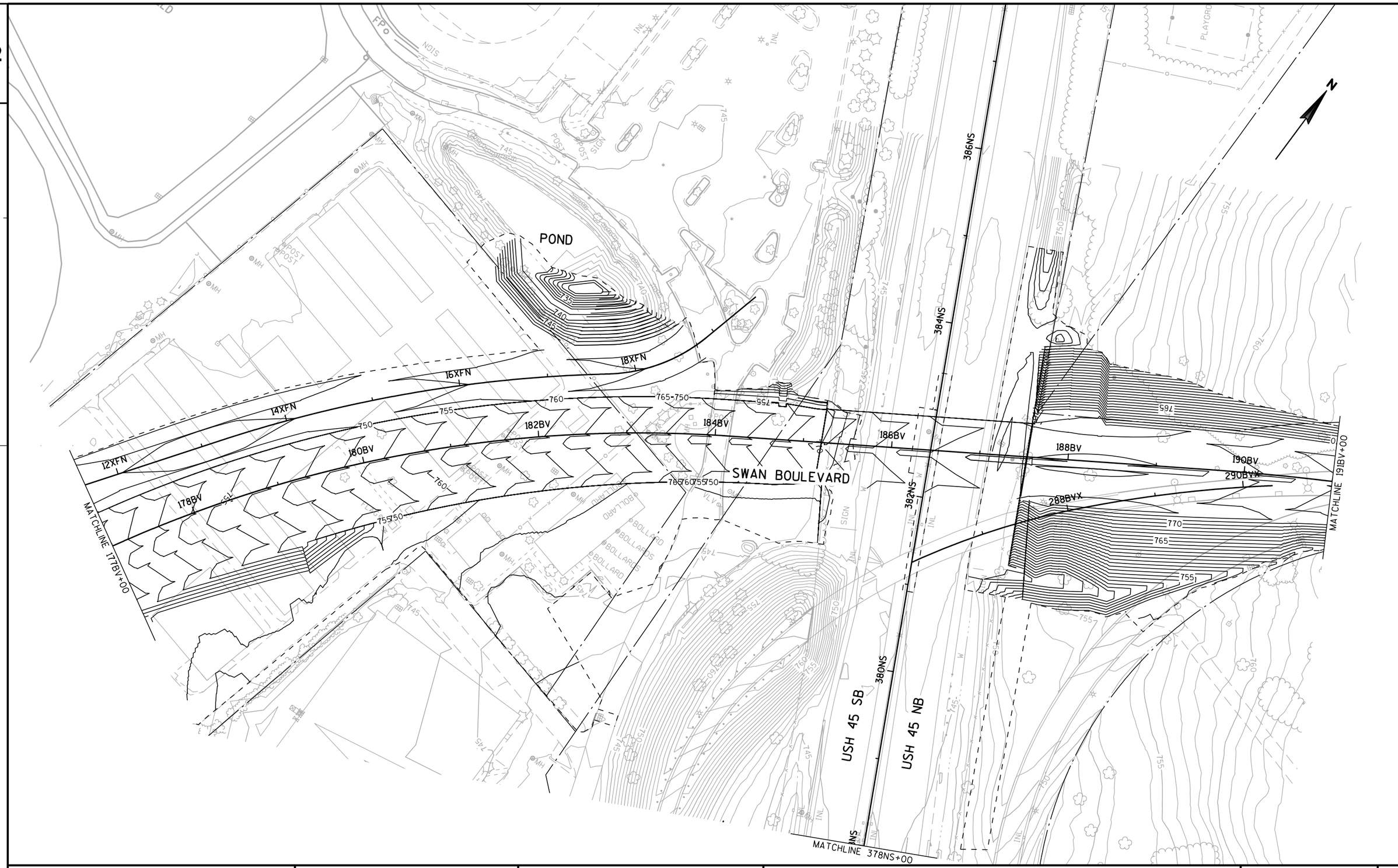
POST CANOPY

BOLLARDS (4)

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021601_cm.dgn PLOT DATE : 30-JAN-2013 04:26 PLOT BY : MSCDYB PLOT NAME : 021601_cm PLOT SCALE : 100:1

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021602_cm.dgn PLOT DATE : 27-MAR-2013 16:02 PLOT BY : MSCTYS PLOT NAME : 021602_cm PLOT SCALE : 100:1

2

2

N

196BV

198BV

194BV

SWAN BOULEVARD

192BV

MATCHLINE 191BV+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021603_cm.dgn PLOT DATE : 30-JAN-2013 04:26 PLOT BY : MSCDYB PLOT NAME : 021603_cm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

W. WATERTOWN PLANK ROAD

766WD

768WD

770WD

772WD

774WD

776WD

364NS

366NS

368NS

370NS

372NS

374NS

376NS

378NS+00

MATCHLINE 378NS+00

USH 45 SB

USH 45 NB

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021604_cm.dgn PLOT DATE : 30-JAN-2013 04:26 PLOT BY : MSCDYB PLOT NAME : 021604_cm PLOT SCALE : 100:1

2

N

IH 94 WB

USH 45 SB

SITE EXCAVATION

USH 45 NB

IH 94 EB

200EW

198EW

196EW

194EW

192EW

190EW

188EW

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021605_cm.dgn PLOT DATE : 30-JAN-2013 04:26 PLOT BY : MSCDYB PLOT NAME : 021605_cm PLOT SCALE : 100:1

2

724BD
726BD
728BD
730BD
732BD
734BD

320NS
322NS
324NS
326NS
328NS
330NS
332NS
334NS

SEE EXISTING UTILITY PLANS
FOR FTMS CONDUIT LOCATION
CROSSING USH 45

SITE EXCAVATION

W. BLUEMOUND ROAD

W. WISCONSIN AVENUE

USH 45 SB

USH 45 NB

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

NOTE
SEE EXISTING UTILITY PLAN FOR LOCATION OF GAS LINE.

WISCONSIN AVENUE SB EXIT RAMP

USH 45 SB

USH 45 NB

736BD

336NS

338NS

340NS

342NS

344NS

346NS

348NS

350NS

SITE EXCAVATION

EXISTING SIGN TO REMAIN

SITE EXCAVATION

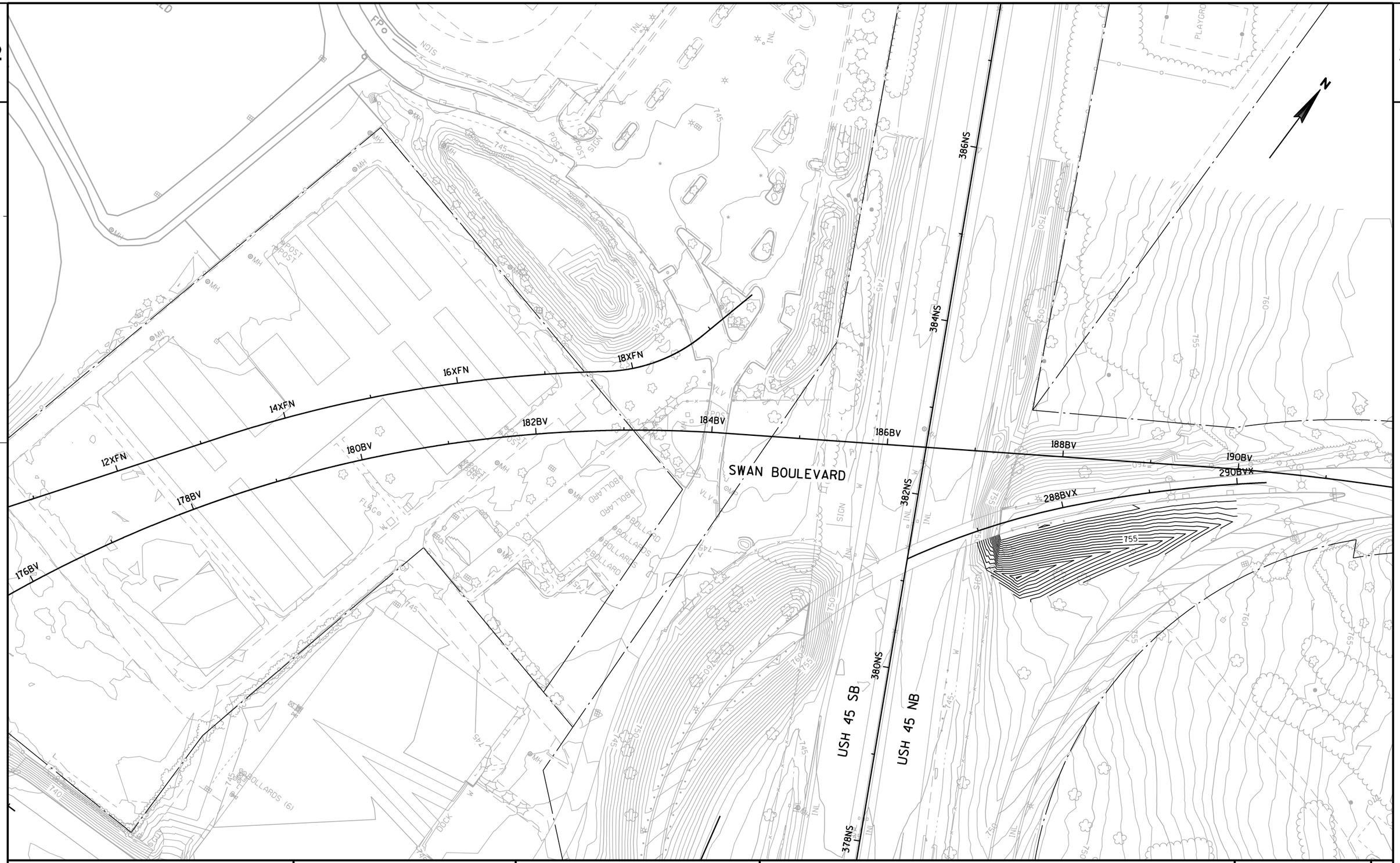
CAUTION

R/W

BASKETBALL COURT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021607_cm.dgn PLOT DATE : 30-JAN-2013 16:29 PLOT BY : MSCD1S PLOT NAME : 021607_cm PLOT SCALE : 100:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CONTOUR MAP - TEMPORARY	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021608_cm.dgn PLOT DATE : 30-JAN-2013 04:26 PLOT BY : MSCDYB PLOT NAME : 021608_cm PLOT SCALE : 100:1

2

2

N

SHARED USE PATH

R/L UBP

UNDERWOOD PARKWAY

218UDW

220UDW

M/L

R/L XFS

R/L UDW

M/L

R/L UDE

UNDERWOOD PARKWAY

M/L

R/L XFN

SWAN BOULEVARD

168BV

170BV

172BV

R/L BV

WLC ACCESS ROAD

174BV

176BV

MATCHLINE 177BV+00

30WWB

32WWB

34WWB

BOLLARDS (4)

POST CANOPY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTION MATCHLINES	SHEET E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021701_xm.dgn PLOT DATE : 30-JAN-2013 04:27 PLOT BY : MSCDYB PLOT NAME : 021701_xm PLOT SCALE : 100:1

2

2

N

USH 45 SB

USH 45 NB

SWAN BOULEVARD

386NS

384NS

382NS

380NS

378NS

M/L

R/L BV

R/L NS

12XFN

14XFN

16XFN

18XFN

180BV

182BV

184BV

186BV

188BV

190BV

290BVX

288BVX

178BV

MATCHLINE 176BV+00

30.50'

52.68'

30.24'

25.99'

25.98'

25.97'

25.96'

25.94'

25.93'

25.95'

25.97'

26.16'

27.77'

31.10'

41.15'

41.10'

124.40'

109.48'

117.47'

122.72'

126.88'

133.19'

BOLLARD

BOLLARDS

BOLLARDS (6)

FLAG

DOCK

PLAYGROUND

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTION MATCHLINES	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\021702_xm.dgn PLOT DATE : 27-MAR-2013 16:04 PLOT BY : MSCTYS PLOT NAME : 021702_xm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT CLASS I, TYPE B
  FERTILIZER TYPE B
  WITH SEEDING NATIVE SEED BUTTERFLY MIX
- EROSION MAT CLASS II, TYPE B
  FERTILIZER TYPE B
  WITH SEEDING NATIVE SEED BUTTERFLY MIX
- SOD LAWN
- EROSION MAT CLASS I, TYPE B
  FERTILIZER TYPE A
  WITH SEEDING NATIVE SEED BUTTERFLY MIX
- SOIL STABILIZER TYPE B
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- WATERPROOF MEMBRANE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- MEDIUM RIP RAP

NOTES

INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.

INLET PROTECTION TYPE B, C, OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

2

N

2

CONSTRUCTION BY OTHERS UNDER 1060-33-70

SWAN BOULEVARD

MATCHLINE 225UD+00

UNDERWOOD PARKWAY

WLC ACCESS ROAD

MATCHLINE 178BV+00

CONSTRUCTION BY OTHERS UNDER 1060-33-70

W. WATERTOWN PLANK ROAD

170BV

172BV

176BV

BOLLARDS (4)

BOLLARDS (6)

CANOPY

SIGN

SCHOOL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022001_ec.dgn PLOT DATE : 30-JAN-2013 04:28 PLOT BY : MSCDYB PLOT NAME : 022001_ec PLOT SCALE : 100:1

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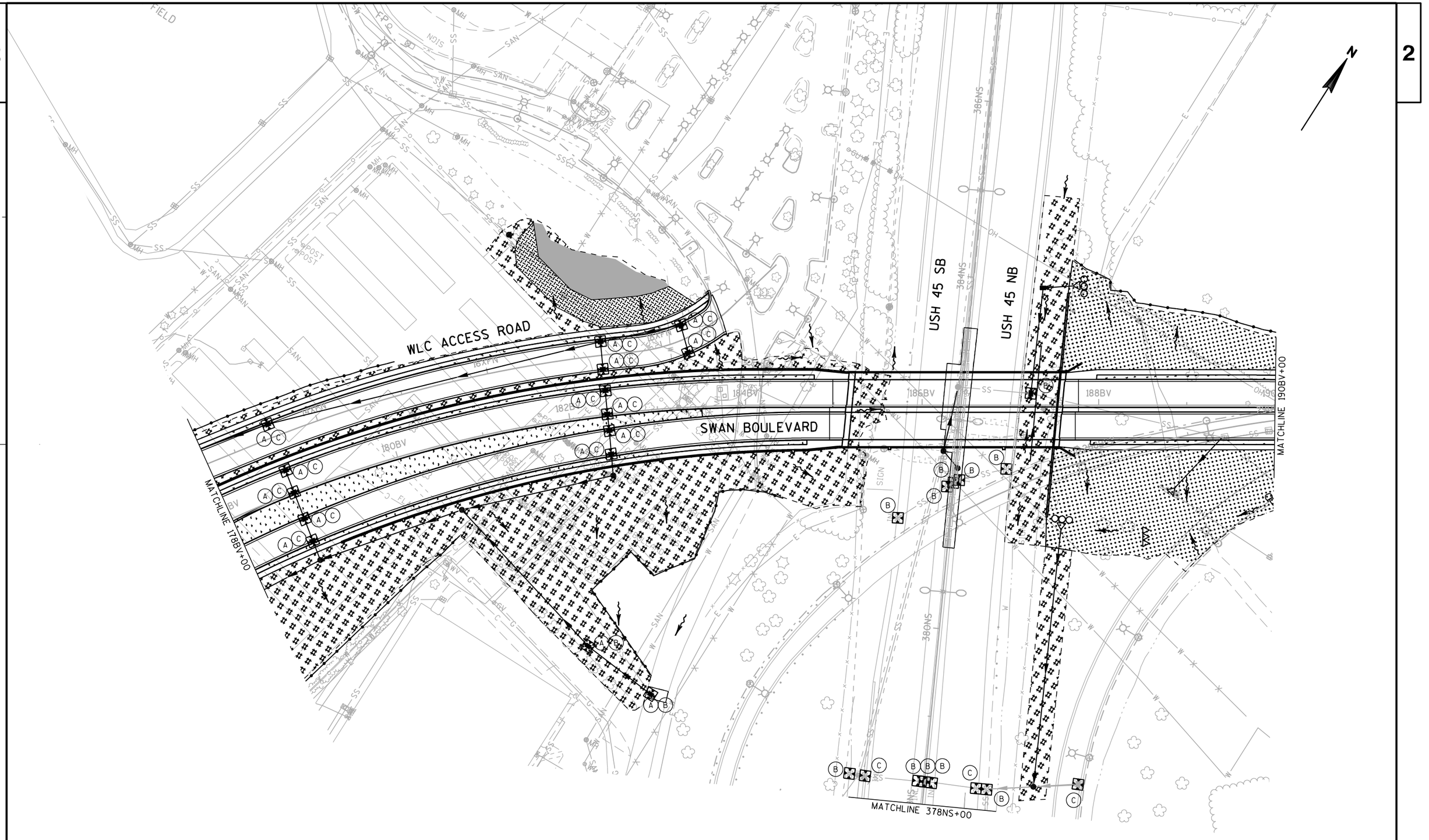


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

2

2

N

WETLAND BOUNDARY

SWAN BOULEVARD

196BV

198BV

194BV

192BV

MATCHLINE 190BV+00

OH

W

SS

P/PL

WETLAND BOUNDARY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022003_ec.dgn PLOT DATE : 30-JAN-2013 04:28 PLOT BY : MSCDYB PLOT NAME : 022003_ec PLOT SCALE : 100:1

2

WETLAND BOUNDARY

SHARED USE PATH

UNDERWOOD PARKWAY

UNDERWOOD PARKWAY

PARKWAY

PARKING

PARKING

ATHLETIC FIELD

WLC ACCESS ROAD

MATCHLINE 225UD+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022004_ec.dgn PLOT DATE : 30-JAN-2013 04:28 PLOT BY : MSCDYB PLOT NAME : 022004_ec PLOT SCALE : 100:1

2

2

W. WATERTOWN PLANK ROAD

772WD

774WD

776WD

USH 45 SB

USH 45 NB

372NS

374NS

376NS

366NS

368NS

364NS

WETLAND BOUNDARY

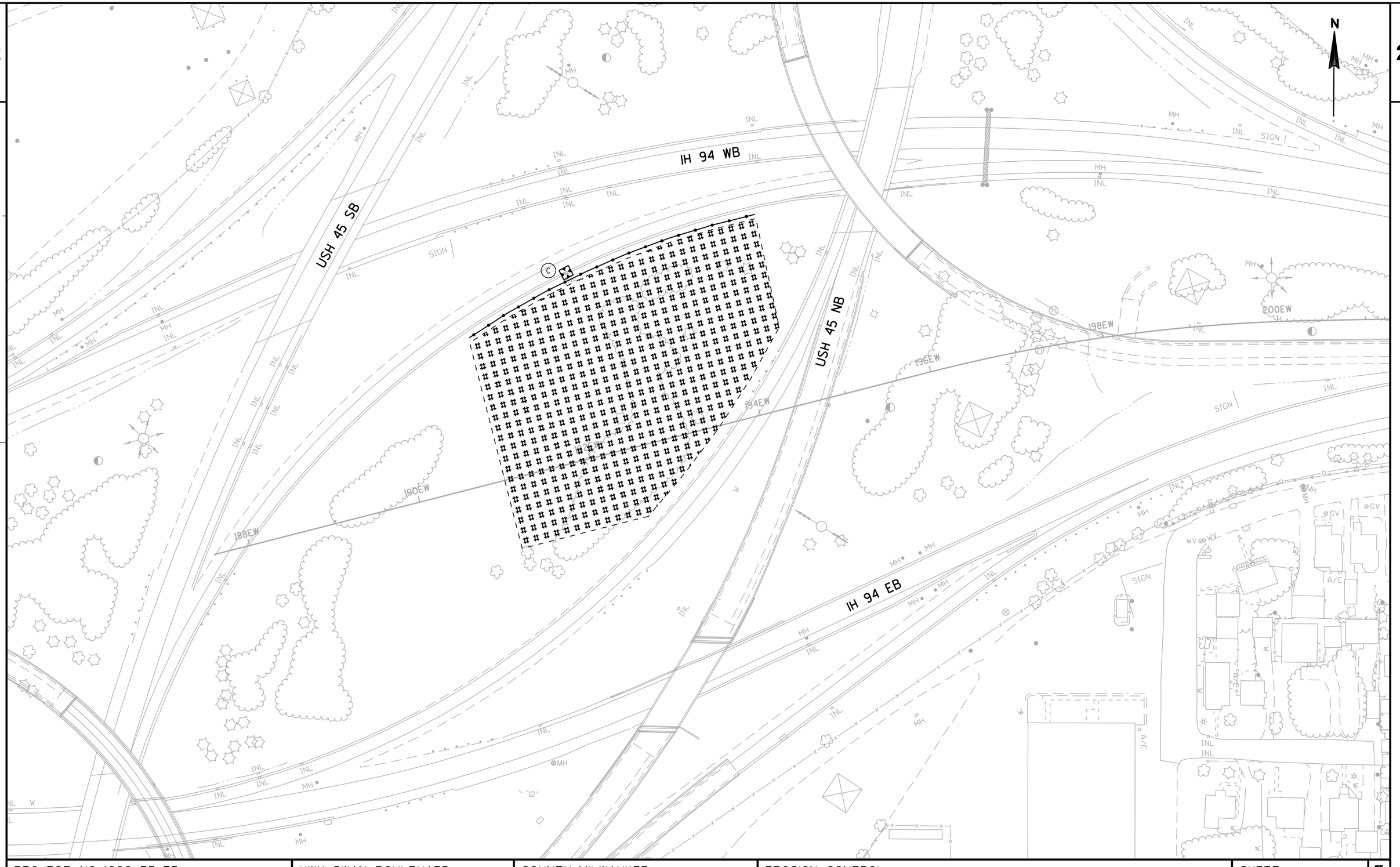
MATCHLINE 378NS+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022005_ec.dgn PLOT DATE : 30-JAN-2013 16:29 PLOT BY : MSCD1S PLOT NAME : 022005_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022006_ec.dgn PLOT DATE : 30-JAN-2013 04:28 PLOT BY : MSCDYB PLOT NAME : 022006_ec PLOT SCALE : 100:1

2

2

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

USH 45 SB

USH 45 NB

MATCHLINE 335NS+00

320NS 322NS 324NS 326NS 328NS 330NS 334NS

724BD 726BD 728BD 730BD 732BD 734BD

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022007_ec.dgn PLOT DATE : 30-JAN-2013 04:28 PLOT BY : MSCDYB PLOT NAME : 022007_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

WISCONSIN AVENUE
SB EXIT RAMP

MATCHLINE 335NS+00

348NS

350NS

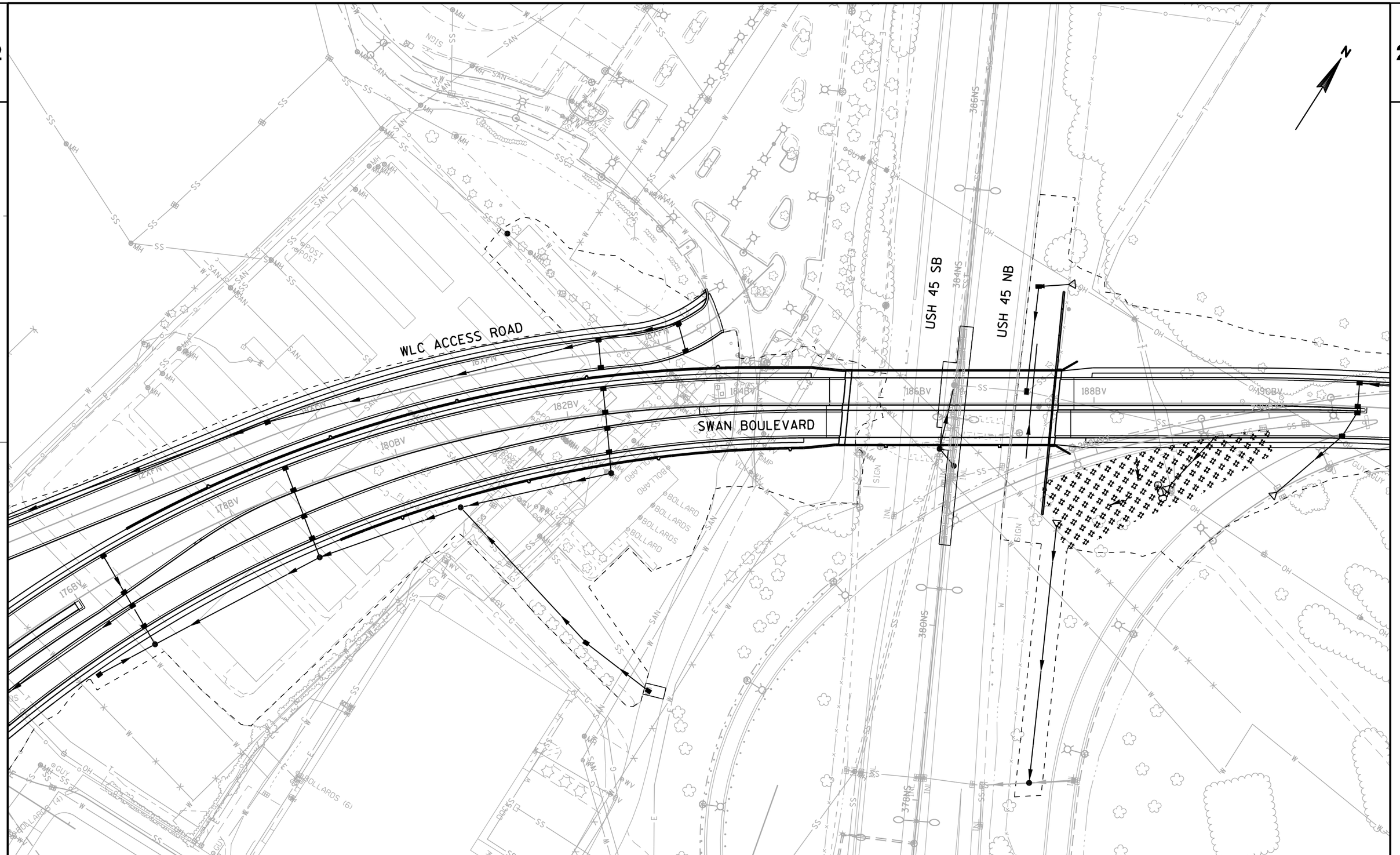
USH 45 SB

USH 45 NB

BASKETBALL COURT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022008_ec.dgn PLOT DATE : 21-FEB-2013 08:48 PLOT BY : MSCTYS PLOT NAME : 022008_ec PLOT SCALE : 100:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EROSION CONTROL - TEMPORARY	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022009_ec.dgn PLOT DATE : 27-MAR-2013 16:09 PLOT BY : MSCTYS PLOT NAME : 022009_ec PLOT SCALE : 100:1

GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE.
LOCATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET OR AT CENTER OF MANHOLE.

ADJUSTMENT RINGS MAY BE USED TO A MAXIMUM THICKNESS OF 6-INCHES.

PLAN LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE AND IS USED TO COMPUTE PIPE SLOPE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

VERIFY THE EXISTING STORM SEWER SYSTEM CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

SEE REMOVAL PLANS FOR REMOVAL OF EXISTING STORM SEWER SYSTEM.

ALL DRAINAGE STRUCTURES, EXISTING OR PROPOSED, SUBJECT TO TRAFFIC LOADING SHALL HAVE NON-ROCKING COVERS AS DIRECTED BY THE ENGINEER IN THE FIELD. COST INCIDENTAL TO NEW COVER ON PROPOSED STRUCTURE OR "RECONSTRUCTING/ADJUSTING MANHOLES OR INLETS" ON EXISTING STRUCTURE UNLESS SPECIFICALLY CALLED OUT FOR WELDING STORM SEWER COVERS.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES.

SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.

JOINT TIES FOR CONCRETE PIPE SHALL BE USED TO CONNECT ALL CONCRETE APRON ENDWALLS AND THE LAST THREE PIPE SEGMENTS PRECEDING THE APRON ENDWALL. THE COST OF JOINT TIES SHALL BE INCIDENTAL TO THE STORM SEWER PIPE.

STORM SEWER LEGEND

EXISTING
(BE***) EXISTING STRUCTURE

(B***) PROPOSED DRAINAGE STRUCTURE
● PROPOSED MANHOLE
■ PROPOSED INLET
△ PROPOSED ENDWALL

EXISTING
PE*** EXISTING PIPE

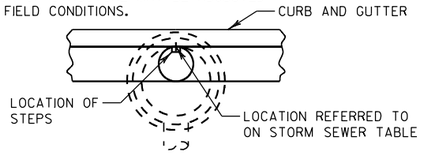
P*** PROPOSED PIPE

2

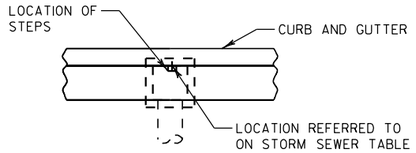
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET	E

NOTE

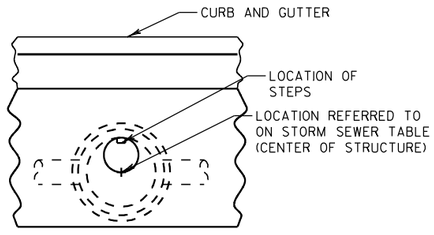
1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.



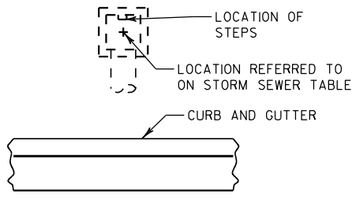
ROUND STRUCTURE IN CURB AND GUTTER



SQUARE STRUCTURE IN CURB AND GUTTER

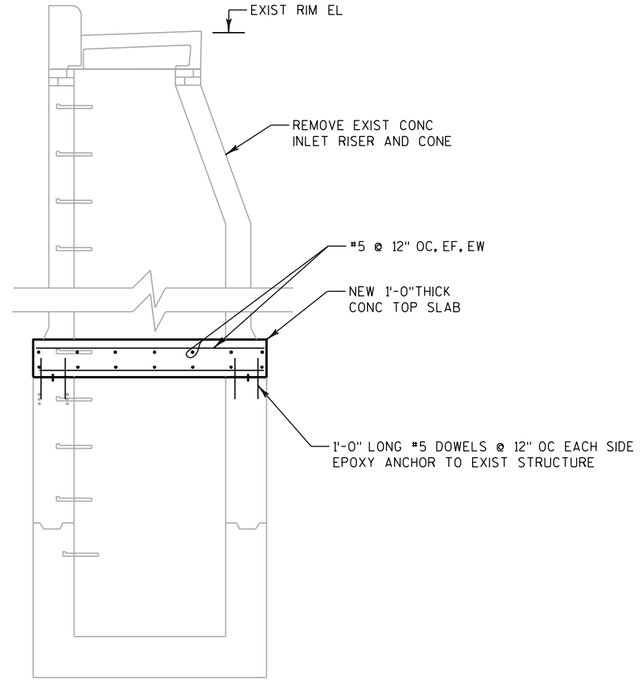


ROUND STRUCTURE NOT IN CURB AND GUTTER



SQUARE STRUCTURE NOT IN CURB AND GUTTER

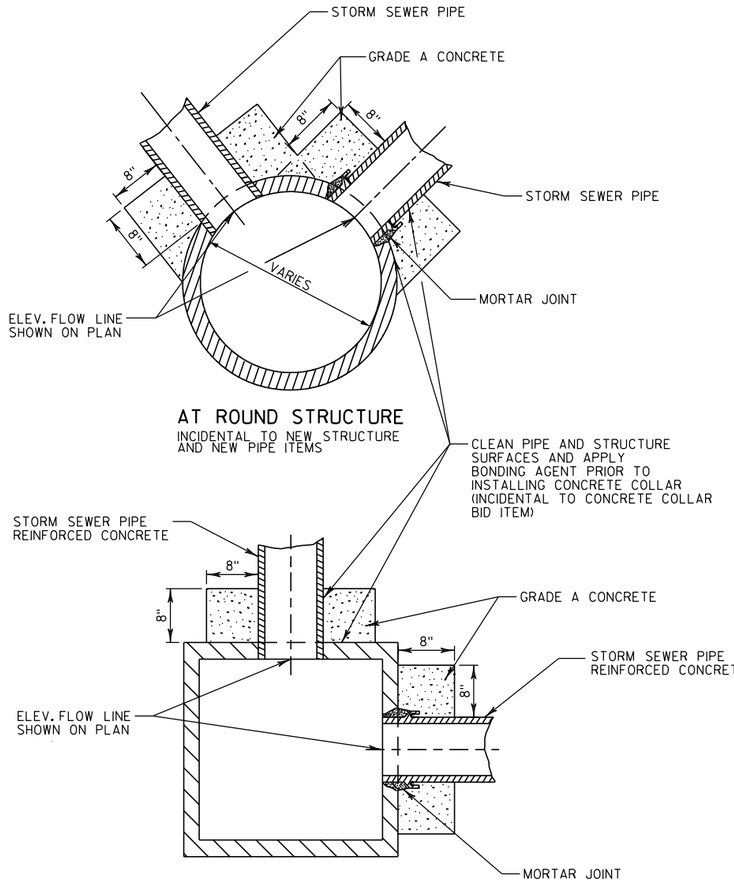
STRUCTURE LOCATION DETAIL (SQUARE OR ROUND)



SECTION

REMOVE AND CAP EXISTING DRAINAGE STRUCTURE

BE455 - STA 382NS+74.44



AT ROUND STRUCTURE

INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

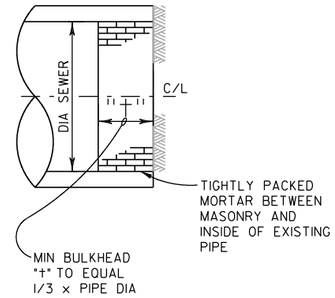
CLEAN PIPE AND STRUCTURE SURFACES AND APPLY BONDING AGENT PRIOR TO INSTALLING CONCRETE COLLAR (INCIDENTAL TO CONCRETE COLLAR BID ITEM)

AT SQUARE STRUCTURE

INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

NOTE:
CONCRETE COLLAR TO BE PAID AS A BID ITEM WHEN CONNECTING AN EXISTING PIPE TO A NEW STRUCTURE.

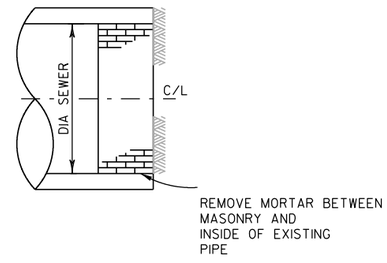
CONCRETE COLLAR DETAIL



BULKHEAD PIPE MASONRY

ITEM TO BE PAID FOR UNDER ITEM "SEALING PIPES"

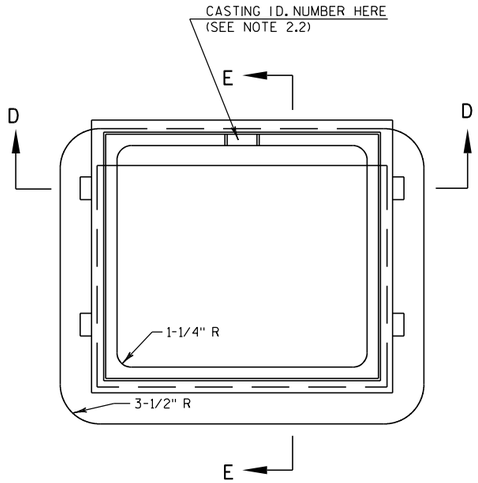
STA 218UDW+13, 18'LT
STA 381NS+99, 84'RT
STA 382NS+70, 5'LT
STA 383NS+31, 84'RT
STA 189BV+39, 68'RT

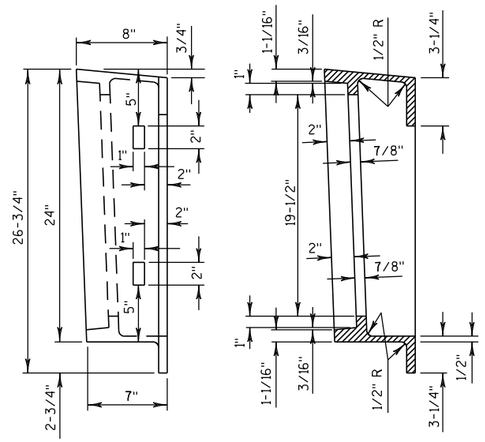


REMOVING BULKHEAD

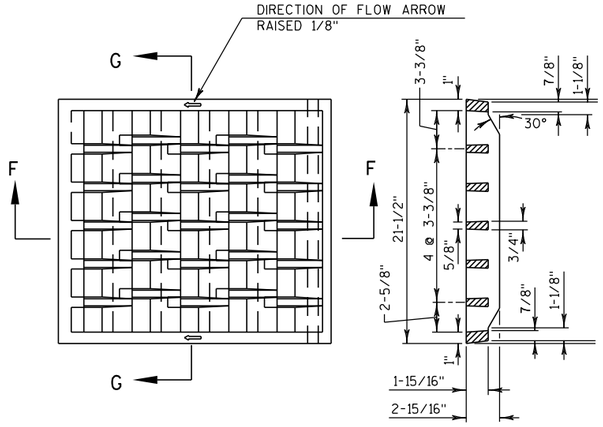
PE690 STA 167BE+07, 36'RT
PE604 STA 220UDW+16, 72'LT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET	E



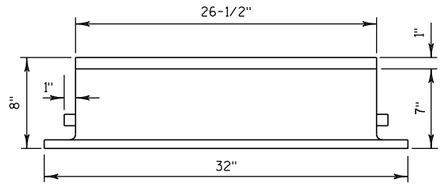


SECTION E-E

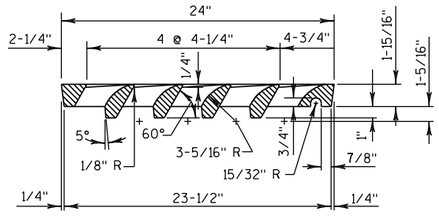


GRATE

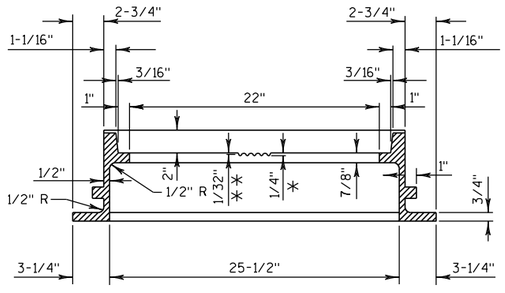
SECTION G-G



FRAME



SECTION F-F



SECTION D-D

* DEPRESSION FOR LETTERS

* * CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

GENERAL NOTES

1. ALL EDGES ARE TO BE GROUND.

2. 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.

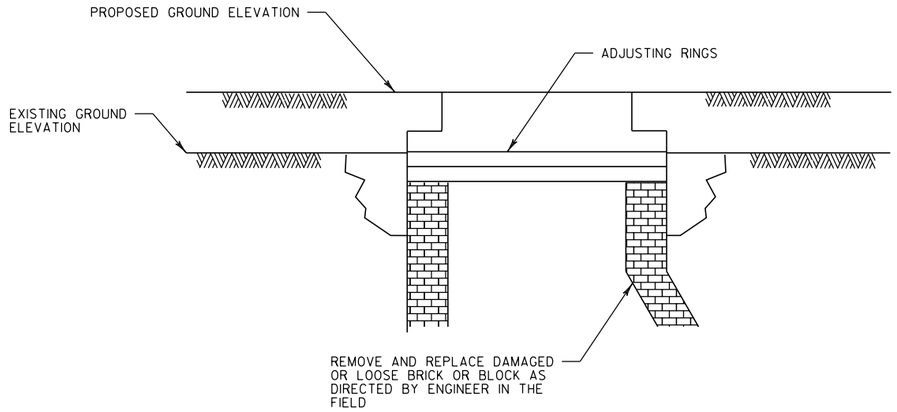
   2. ON THE SEAT OF THE FRAME IN 1 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (M.S.51).

   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 (M.S.57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

CASTING - TYPE 57

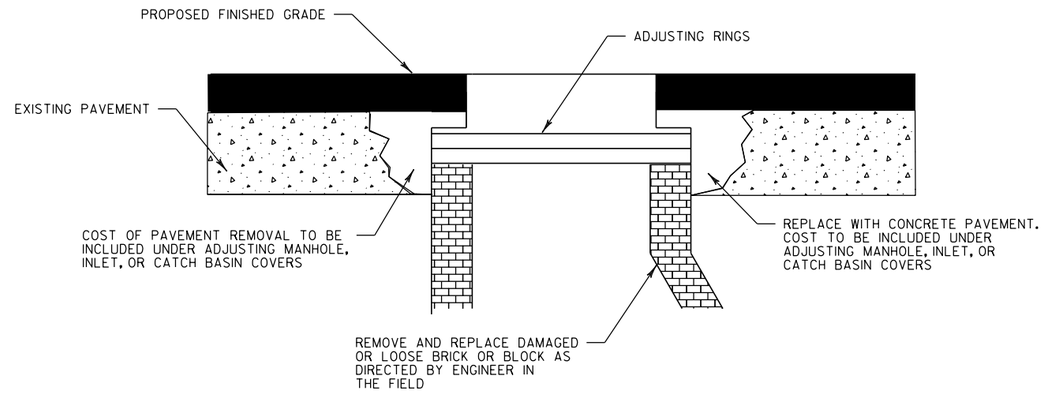
LID-145 LBS., FRAME-204 LBS.

2



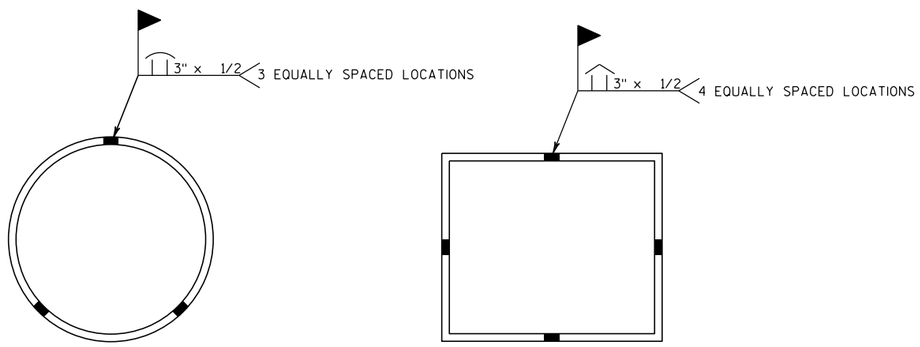
NON-PAVED LOCATION

ADJUST CHIMNEY WITH PROPER SIZE CONCRETE ADJUSTING RINGS (SIZE OF OPENING OF CONCRETE ADJUSTING RING TO BE DETERMINED BY SIZE OF OPENING IN FRAME) AND REINSTALL EXISTING FRAME AND LID TO FINISHED GRADE. BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM ADJUSTING INLET COVERS.



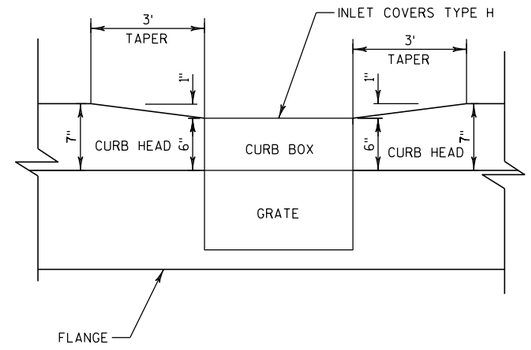
PAVED LOCATION

ADJUSTING MANHOLE OR INLET COVERS



WELDING STORM SEWER COVERS

WELD EACH STORM SEWER COVER WITH A 1/2 WIDE WELD 3" LONG

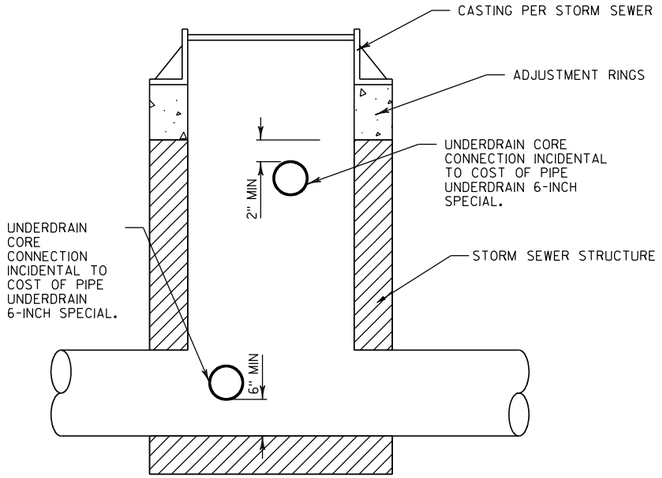


PLAN VIEW

CURB HEAD TRANSITION FOR INLET COVERS TYPE H

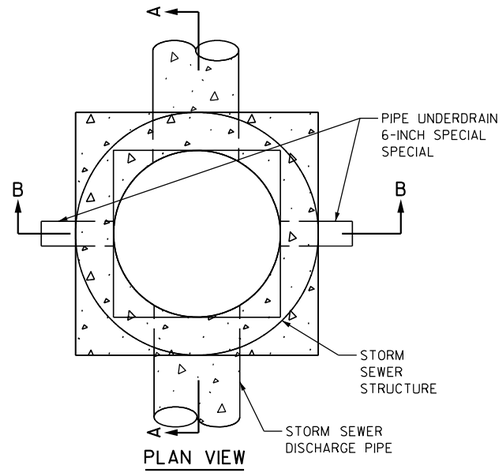
NOTE: TAPER BACK CURBHEAD EDGE; MAINTAIN FRONT CURB FACE.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET	E

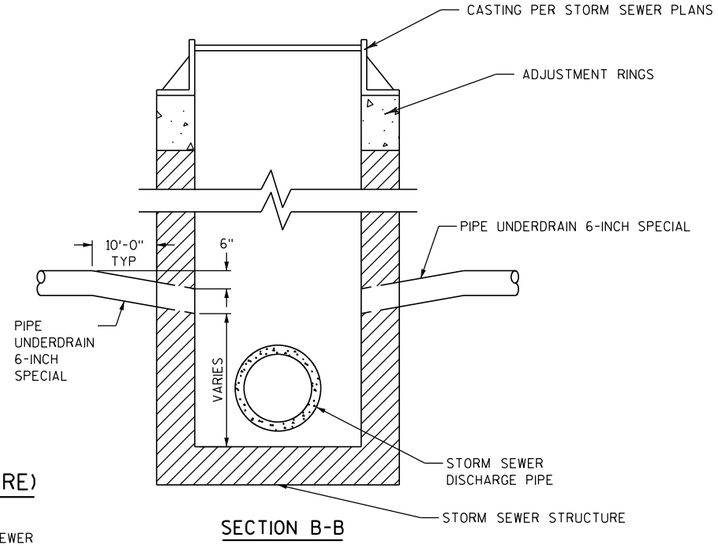


SECTION A-A

MINIMUM AND MAXIMUM CORED PIPE UNDERDRAIN 6-INCH SPECIAL UNDERDRAIN CORE LOCATIONS WITH CROSSPIPE.



PLAN VIEW



SECTION B-B

TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL

PIPE UNDERDRAIN 6-INCH SPECIAL OUTFALL AT INLET/MANHOLE (ROUND OR SQUARE)

NOTES

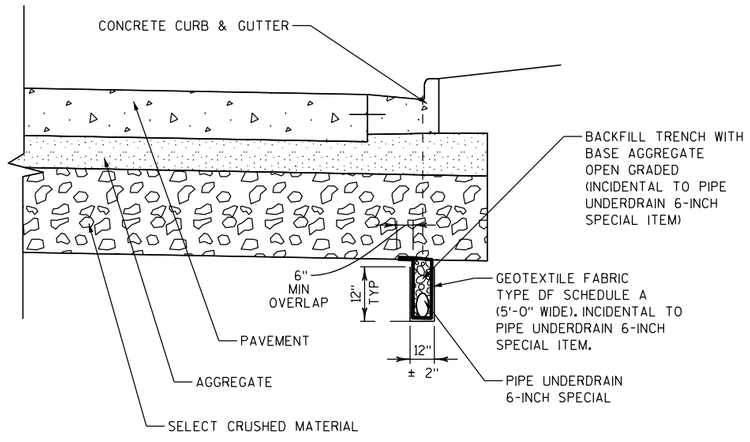
1. BOTTOM OF CORE PLACED A MINIMUM OF 6" ABOVE THE INVERT OF THE REINFORCED CONCRETE STORM SEWER PIPE.
2. TOP OF CORE HOLES WILL BE A MINIMUM OF 2" BELOW THE TOP OF THE INLET STRUCTURES BOTTOM OF RINGS.
3. PIPE UNDERDRAIN 6-INCH SPECIAL SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS OR SEWER ACCESS STRUCTURES.
4. CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE CORE HOLE.
5. CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALL OF A STRUCTURE.

NOTES

1. CONNECTIONS TO INLETS OR MANHOLES SHALL EXTEND PIPE UNDERDRAIN 6-INCH SPECIAL TO THE INSIDE WALL OF STORM SEWER STRUCTURE.
2. PROVIDE UNDERDRAIN PIPE CORED HOLES AT OR BETWEEN ELEVATIONS SHOWN IN SECTION A-A.
3. SEE STORM SEWER PLANS FOR PIPE UNDERDRAIN LOCATIONS.
4. PROVIDE POSITIVE DRAINAGE (0.5% MINIMUM GRADE) THROUGH PIPE UNDERDRAIN 6-INCH SPECIAL AND CORE INTO STORM SEWER STRUCTURE.
5. WHEN INLET DEPTH IS SHALLOW, PIPE UNDERDRAIN 6-INCH SPECIAL MAY BE PLACED AT A DEPTH TO PROVIDE POSITIVE DRAINAGE TO BE COORDINATED WITH ENGINEER IN FIELD.
6. ATTACHMENT OF PIPE UNDERDRAIN 6-INCH SPECIAL TO REAR OF INLET IS SATISFACTORY IF REINFORCED CONCRETE STORM SEWER PIPE SIZE RESTRICTS SPACE FOR UNDERDRAIN CORE.
7. COORDINATE LOCATION AND TIMING OF ANY CONNECTIONS BEING MADE TO PIPE UNDERDRAIN 6-INCH SPECIAL FOR RETAINING WALL PIPE UNDERDRAIN STRUCTURES WITH WALL CONTRACTOR.
8. CONNECT PIPE UNDERDRAIN 6-INCH SPECIAL AT STORM SEWER STRUCTURES SUCH THAT ANY SINGLE RUN DOES NOT EXCEED 800 FEET IN LENGTH.

NOTE

1. TYPICAL ELEVATION OF PIPE UNDERDRAIN 6-INCH SPECIAL SHALL BE PLACED BELOW THE SELECT CRUSHED MATERIAL.

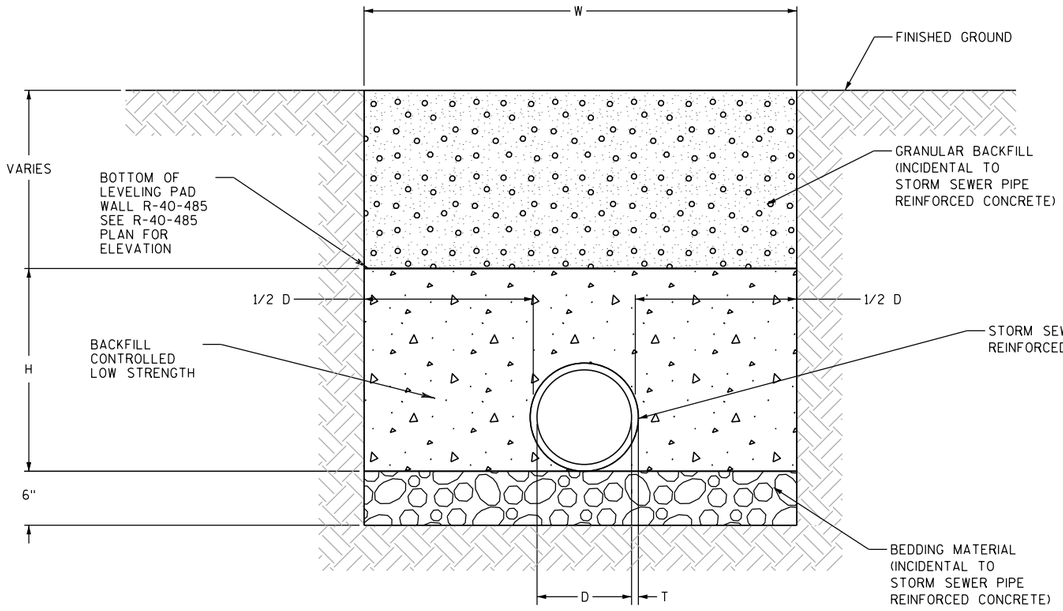


PIPE UNDERDRAIN 6-INCH SPECIAL TRENCH DETAIL - CURB AND GUTTER SECTION

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET	E

BACKFILL CONTROLLED LOW STRENGTH AREA (FOR INFORMATION ONLY)						
D	T	H	W	PA	TA	SA
PIPE SIZE		HEIGHT BCLS	(2x1/2D)+(2xT)+D TRENCH WIDTH	PIPE AREA IN BCLS	H x W TRENCH AREA IN BCLS	TA-PA BCLS AREA
INCHES						
DIAMETER	THICKNESS					
IN	IN		LF	SF	SF	SF
24	3.00	4.10	4.50	4.91	18.45	13.54

BCLS VOLUME (CUBIC YARDS) = $\frac{\text{BCLS AREA (SA) X PIPE PLAN LENGTH}}{27}$



BACKFILL CONTROLLED LOW STRENGTH (BCLS) DETAIL - TRENCH

P245

2

N

W. WATERTOWN PLANK ROAD

CONSTRUCTION BY OTHERS UNDER 1060-33-70

32WB

34WB

16BV

170BV

172BV

174BV

176BV

178BV

180BV

16XFN

SWAN BOULEVARD

UNDERWOOD PARKWAY

228BVE

EXISTING PE690

STORM SEWER REMOVED UNDER 1060-33-70

CONSTRUCTION BY OTHERS UNDER 1060-33-70

REMOVING BULKHEAD
CONNECT 24" X 38" HORIZONTAL ELLIPTICAL PIPE SOUTH TO EXISTING 24" X 38" HORIZONTAL ELLIPTICAL PIPE
1-CONCRETE COLLAR REQUIRED

FOR PIPE UNDERDRAIN 6-INCH SPECIAL LOCATIONS, SEE MISCELLANEOUS QUANTITY TABLE

B115 P115 B116 P116 B114A P114 B114 P114A B117 P117 B119 P118 B119C P119 B119B P119A B119A P119B P119C B118 B124 P124 B126 P126 B125 B123 P123 P125 B127 P127 B131 P131 P133 P122 B122 P121 B120 P120 P132 P132A B133 B121 B132A B132 B247 P246B R-40-485 B246B P246A B246A

755 750 745 740 735 730 725 720 715 710

B132A 727.00
B133 726.84
B132 727.39
722.44 SSPRC CL III 15" @ 1.00%
722.17
722.17
SSPRC CL III 15" @ 1.00%
722.07

B126 726.65
B127 726.22
B131 726.09
722.61
SSPRC CL III 15" @ 0.50%
722.54
721.79
SSPRC CL III 24" @ 0.50%
722.00
722.54
721.50

B127 726.22
B125 726.48
B124 726.85
721.79
721.79
SSPRC CL III 24" @ 0.50%
721.99
SSPRC CL III 24" @ 0.50%
722.07

B121 725.73
B122 726.21
B131 726.09
B120 725.88
SSPRC CL III 15" @ 0.50%
722.53
722.46
722.21
SSPRC CL III 18" @ 0.50%
722.05
722.05
SSPRC CL III 18" @ 0.50%
722.00
721.50

B119A 730.14
B119B 728.69
B119C 729.33
725.18
SSPRC CL III 15" @ 1.00%
724.98
724.98
SSPRC CL III 15" @ 1.00%
724.56
723.81

B115 733.00
B117 732.82
B116 732.60
B119 732.78
B118 731.90
727.90
SSPRC CL III 15" @ 1.00%
727.76
727.01
SSPRC CL III 24" @ 0.50%
726.81
726.81
SSPRC CL III 24" @ 0.50%
726.76
726.76
727.71
SSPRC CL III 15" @ 0.50%
727.51

FINISHED PROFILE AT STORM SEWER TRUNKLINE
EXISTING PROFILE AT STORM SEWER TRUNKLINE
B247 747.28
B246B 744.20
B246A 743.00
737.76
SSPRC CL III 30" @ 0.50%
737.57
SSPRC CL III 24" @ 0.50%
738.50
8" SAN
736.55
736.55
738.07

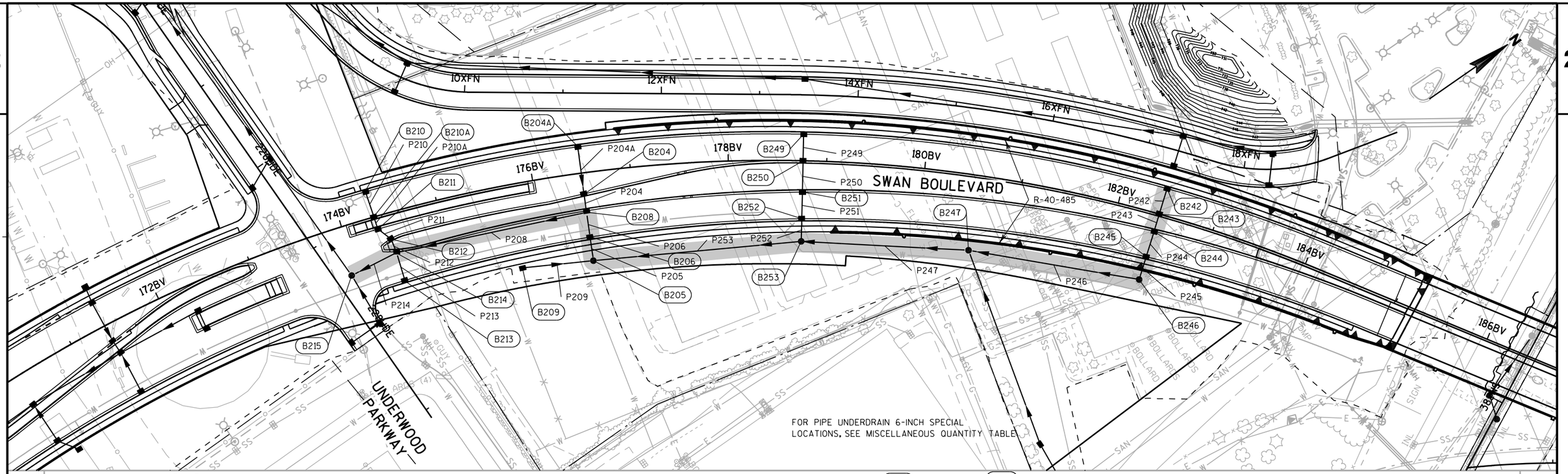
B131 726.09
B133 726.84
B123 726.29
722.07
EXISTING SSPRCHE CL HE-III 24" X 38"
722.00
SSPRC CL III 24" @ 1.15%
721.68
721.68
SSPRCHE CL HE-III 24" X 38" @ 0.50%
721.50
721.50
721.50
SSPRCHE CL HE-III 24" X 38" @ 0.50%
721.32
721.32
SSPRCHE CL HE-III 24" X 38" @ 0.50%
721.08

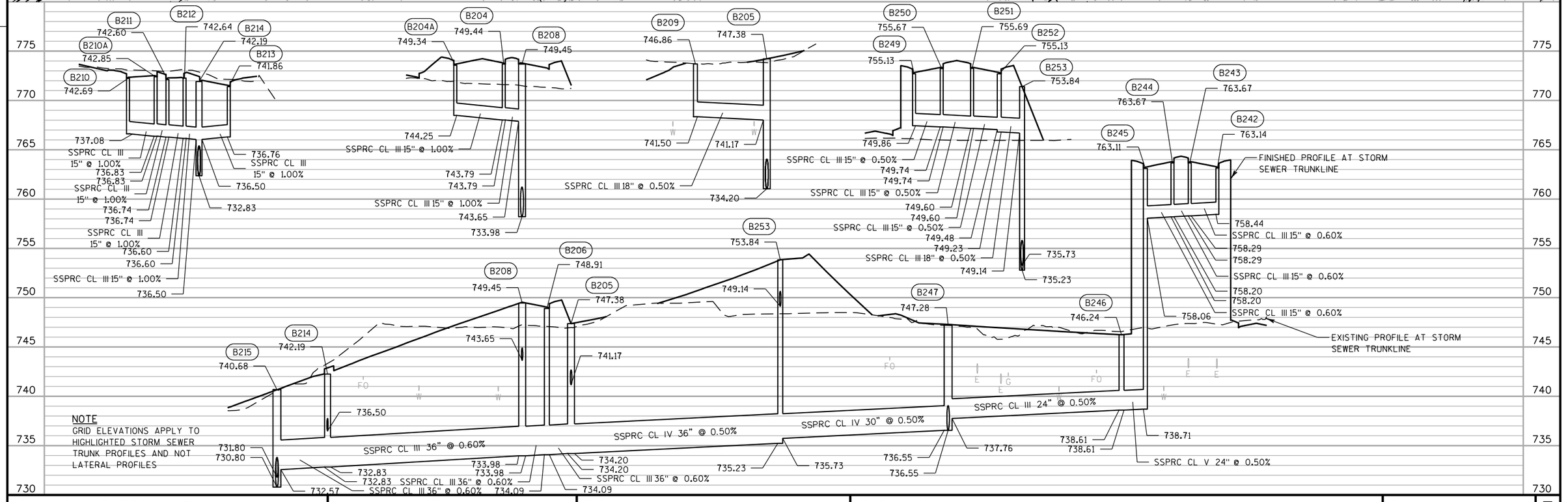
B114A 735.90
B114 735.51
B119 732.78
B119C 729.33
724.56
727.51
723.81
723.81
730.23
SSPRC CL III 15" @ 1.00%
730.07
729.32
SSPRC CL III 24" @ 3.00%
726.76
726.76
726.76
SSPRC CL III 24" @ 3.00%

NOTE
GRID ELEVATIONS APPLY TO HIGHLIGHTED STORM SEWER TRUNK PROFILES AND NOT LATERAL PROFILES

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

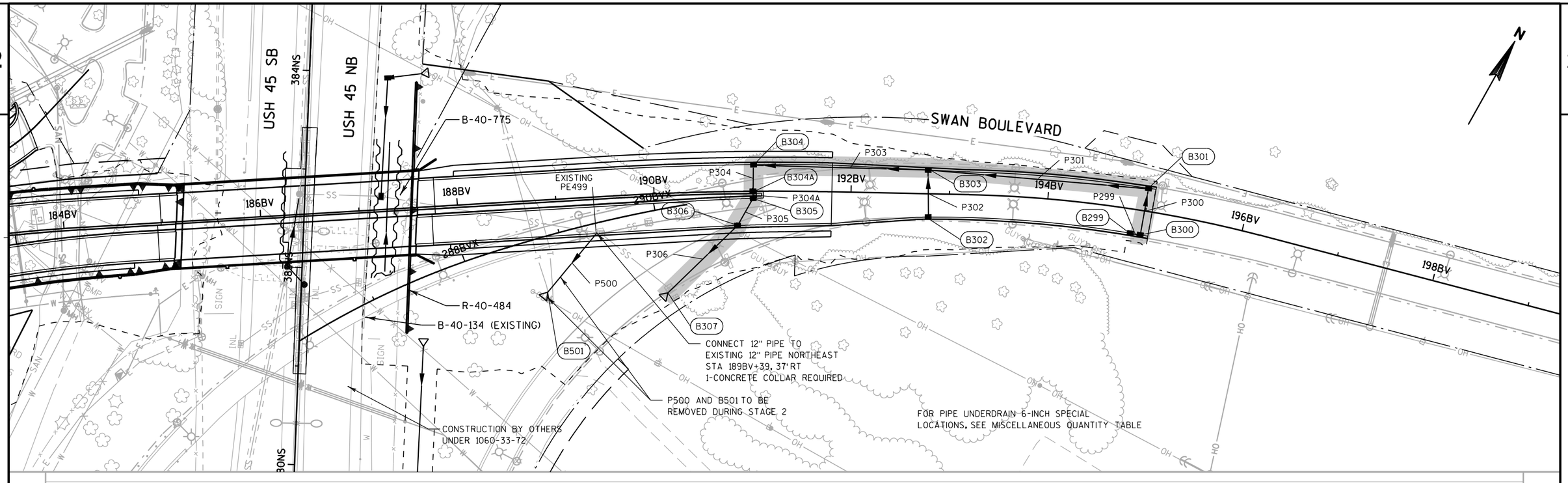
2

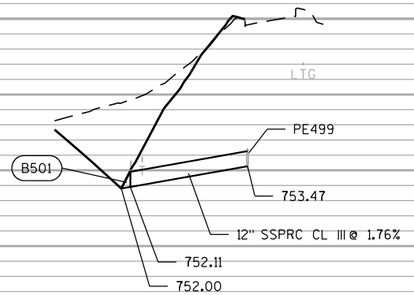


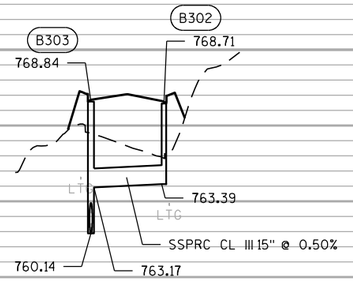


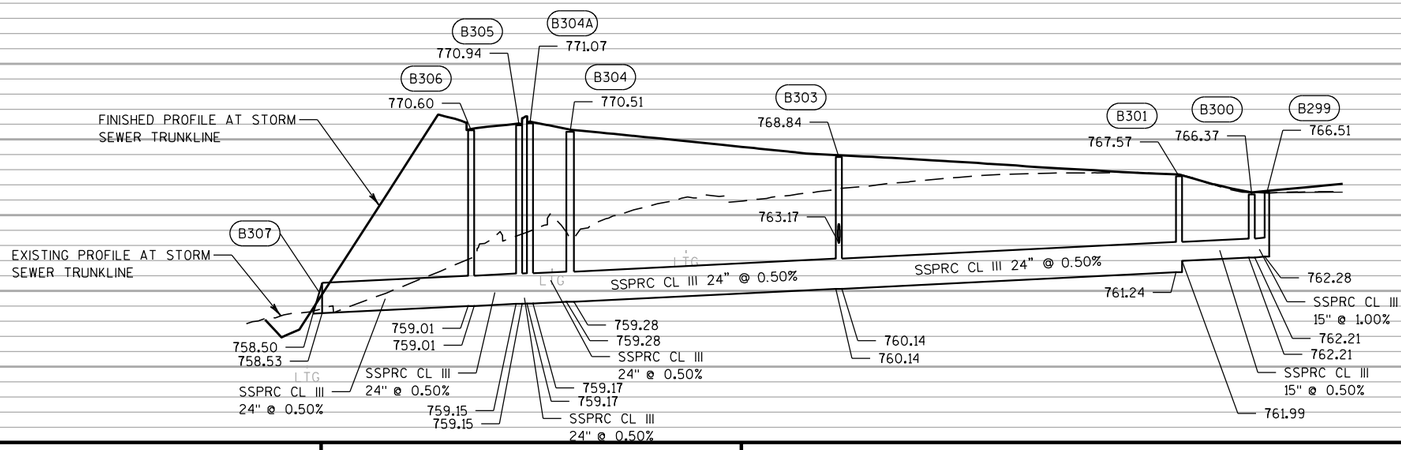
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

2



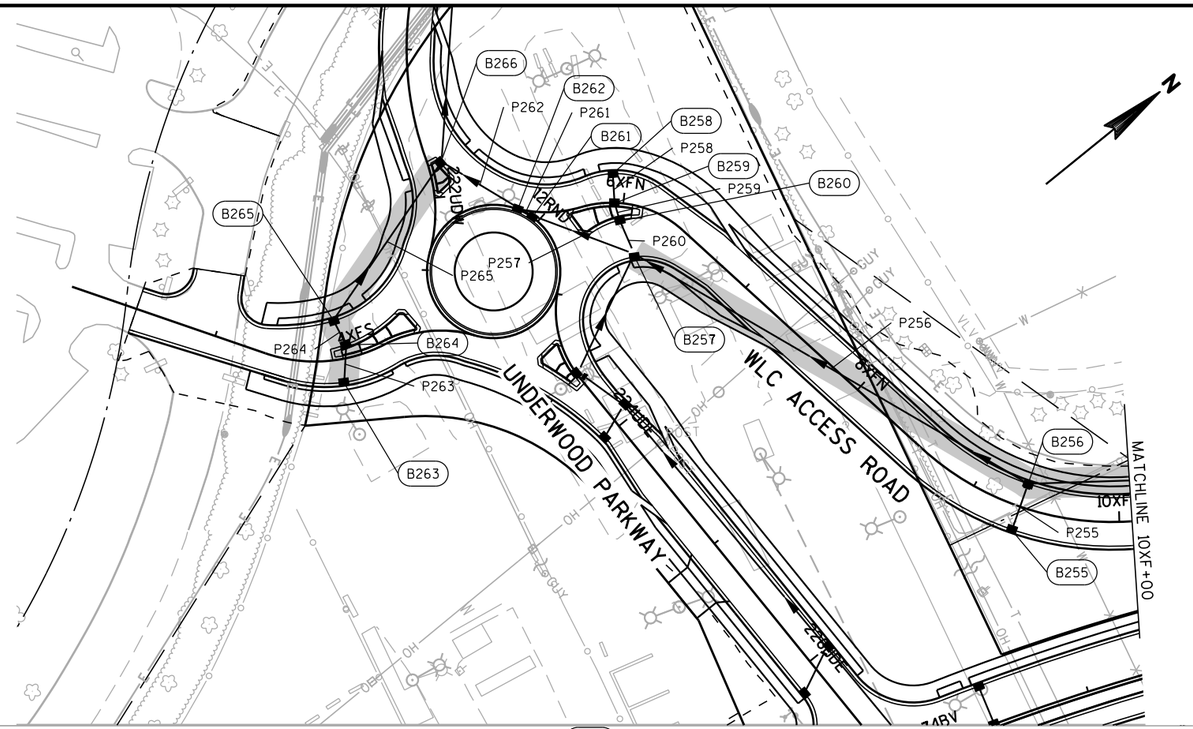


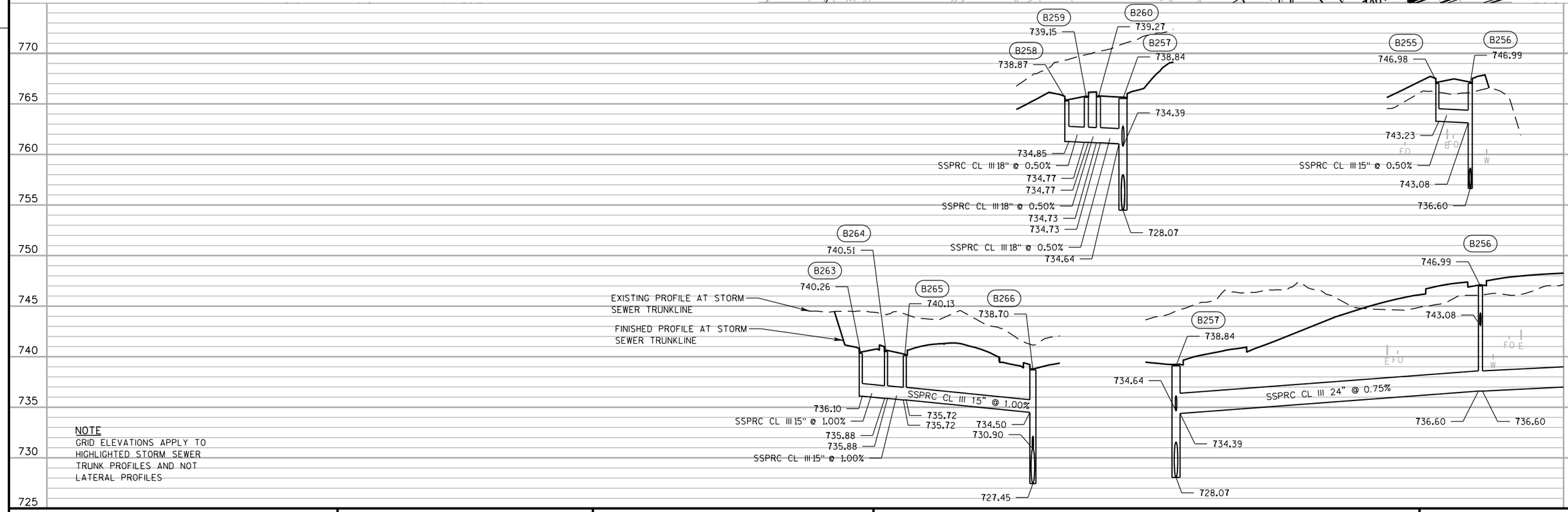




NOTE
GRID ELEVATIONS APPLY TO HIGHLIGHTED STORM SEWER TRUNK PROFILES AND NOT LATERAL PROFILES

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

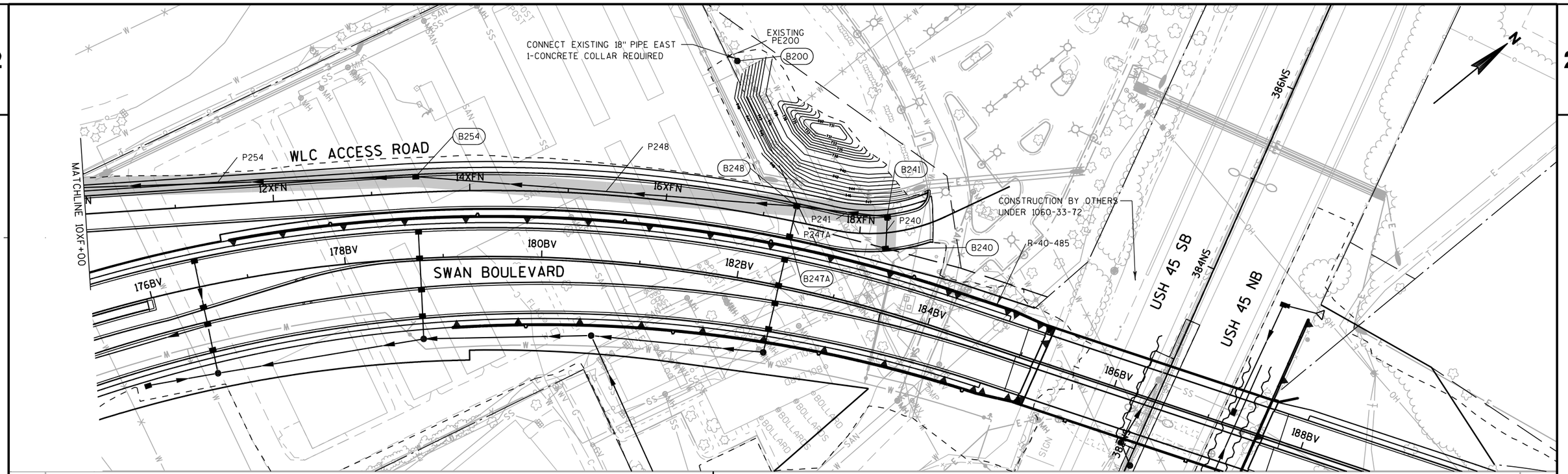


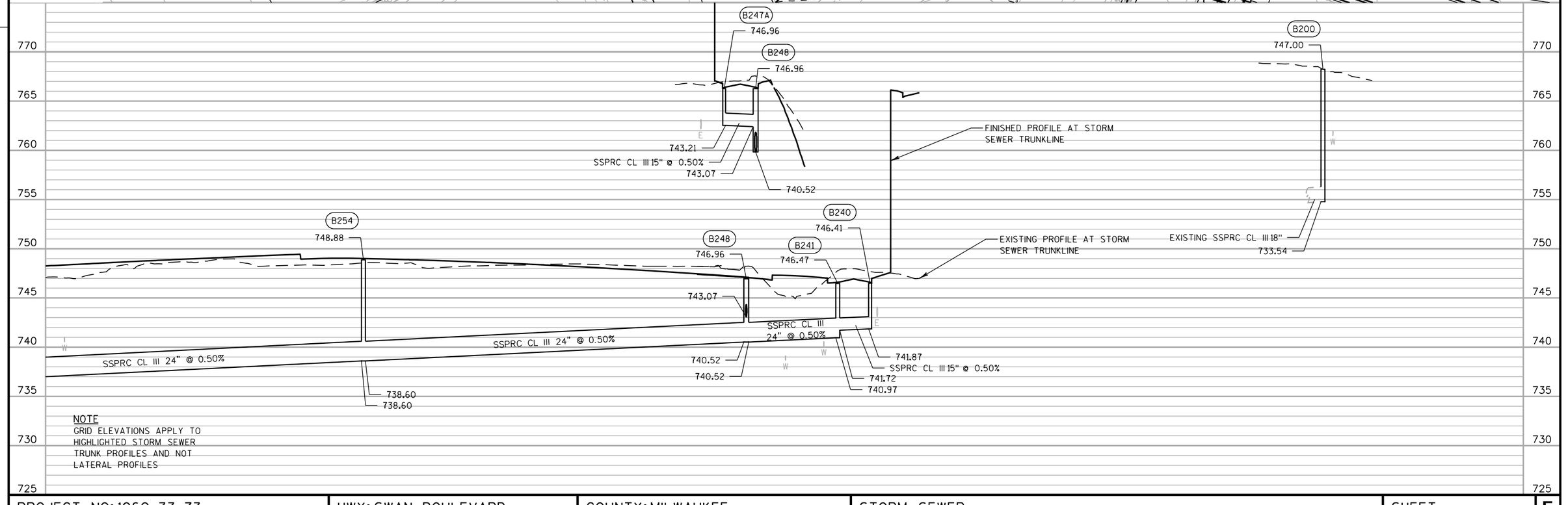


NOTE
GRID ELEVATIONS APPLY TO HIGHLIGHTED STORM SEWER TRUNK PROFILES AND NOT LATERAL PROFILES

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET E

2





NOTE
GRID ELEVATIONS APPLY TO HIGHLIGHTED STORM SEWER TRUNK PROFILES AND NOT LATERAL PROFILES

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

2

N

P268 B268 B269 P269 B271 EXISTING PE270

CONNEXT EXISTING 12" PIPE WEST
1-CONCRETE COLLAR REQUIRED

EXISTING BE270B ADJUSTING INLET COVERS

EXISTING STORM SEWER STRUCTURES BE270A AND BE270B AND PIPE PE270A TO REMAIN DURING MATERIAL REMOVAL. ANY DAMAGED PIPE OR STRUCTURE SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

EXISTING BE270A ADJUSTING INLET COVERS

PE270A P271 P267 B272 B267 B261 P261 B262 P266 P262 B266 B257 P220 B220 P219 B219 P217 B217 P215 P218 B218 P216 B216 B215 P203 B203 P202 B202

WLC ACCESS ROAD

UNDERWOOD PARKWAY

SWAN BOULEVARD

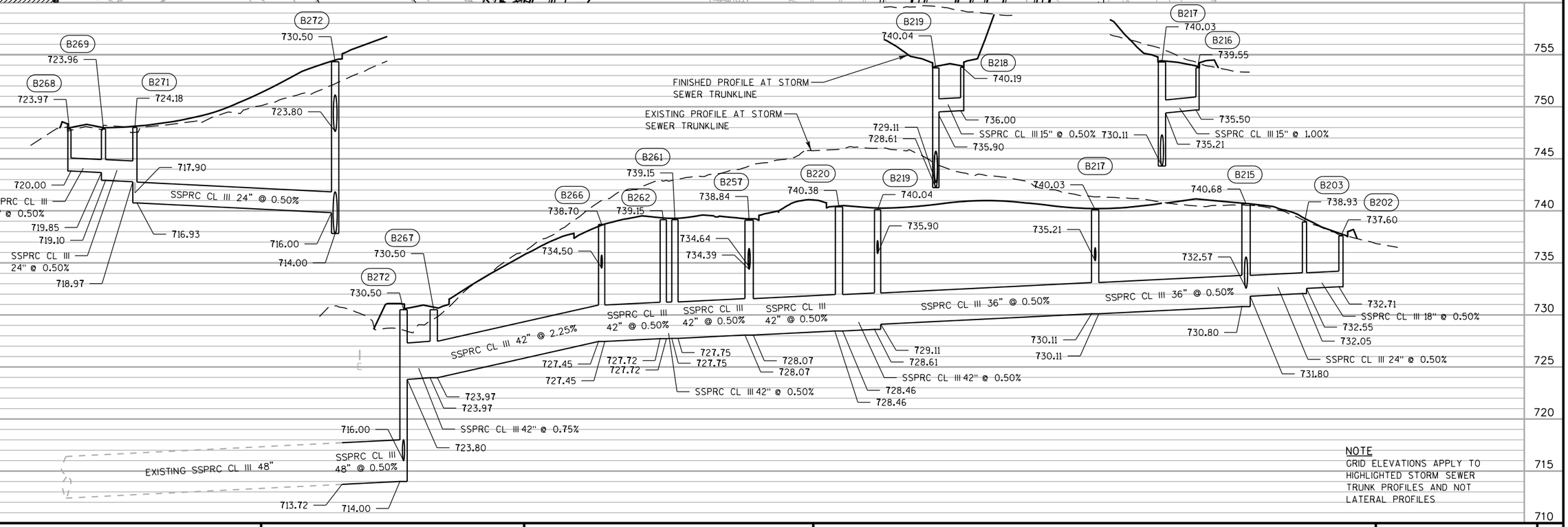
BOLLARDS (6)

BOLLARD

REMOVING BULKHEAD
CONNECT 48" PIPE TO EXISTING 48" PIPE SOUTHWEST
1-CONCRETE COLLAR REQUIRED

EXISTING PE604

10UBP 10FFN 8XFN 12RMD 22RUD 22SUDE 22NUDE 22PUDE 22QUDE 22RUDE 17GBV 17HBV 17IBV 17JBV 17KBV 17LBV 17MBV 17NBV 17OBV 17PBV 17QBV 17RBV 17SBV 17TBV 17UBV 17VBV 17WBV 17XBV 17YBV 17ZBV



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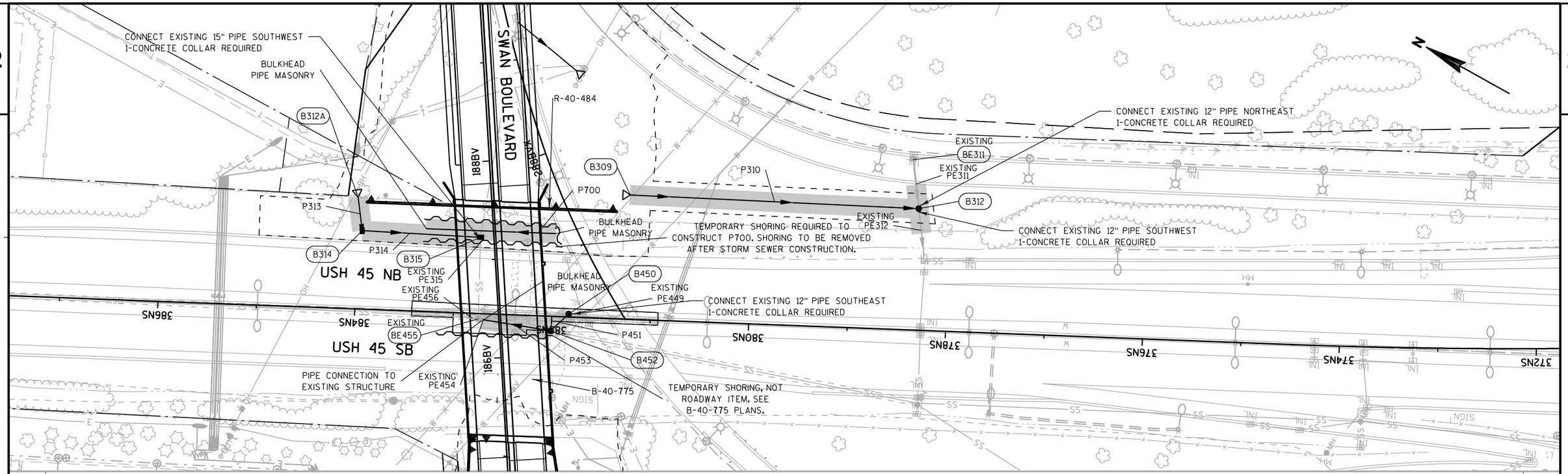
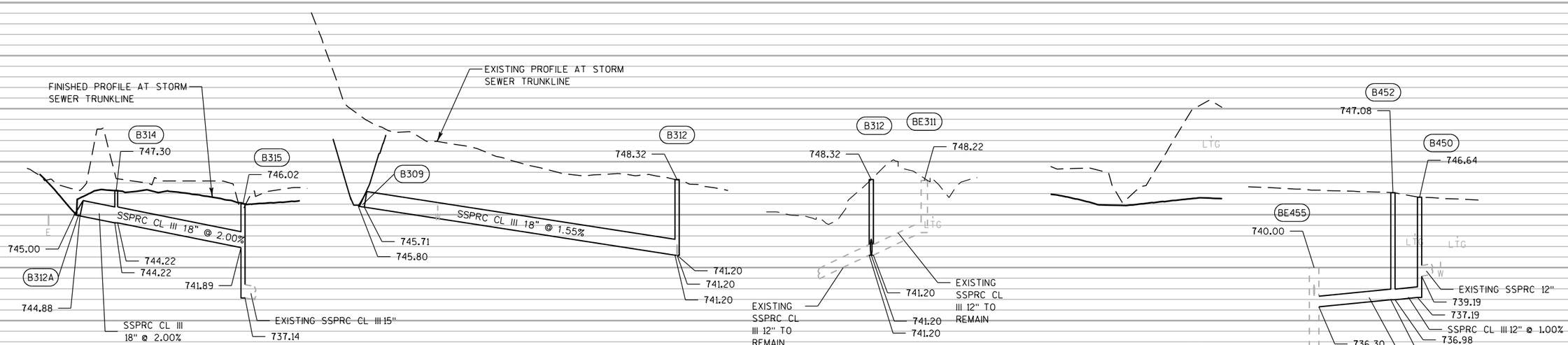
GRID ELEVATIONS APPLY TO HIGHLIGHTED STORM SEWER TRUNK PROFILES AND NOT LATERAL PROFILES

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E



765 760 755 750 745 740 735 730 725 720



NOTE
GRID ELEVATIONS APPLY TO HIGHLIGHTED STORM SEWER TRUNK PROFILES AND NOT LATERAL PROFILES

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\022507_ss.dgn PLOT DATE : 27-MAR-2013 16:13 PLOT BY : MSCTYS PLOT NAME : 022507_ss PLOT SCALE : 100:1

2

2

BULKHEAD EXISTING SEWER (SOUTH INVERT)

ABANDON 300' 8" SAN SEWER

ABANDON MH

ABANDON 39' 8" SAN SEWER

ABANDON MH

ABANDON 48' 8" SAN SEWER

BULKHEAD EXISTING SEWER (WEST INVERT)

ABANDON 206' 8" SAN SEWER

ABANDON MH

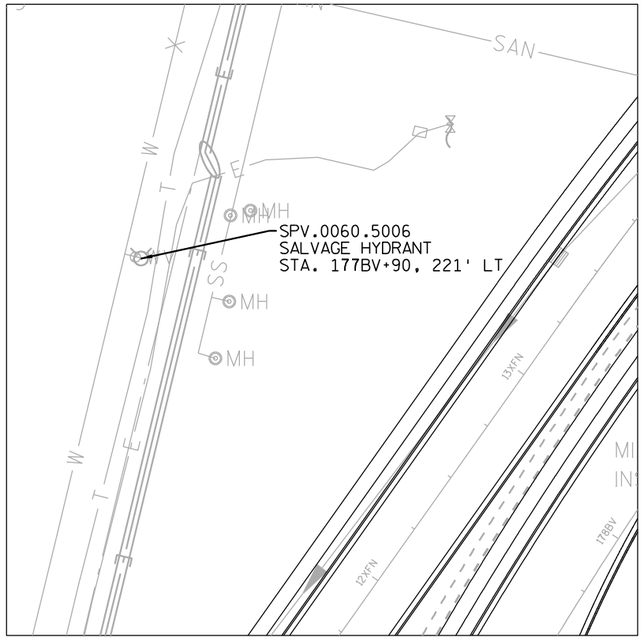
ABANDON 82' 6" SAN SEWER

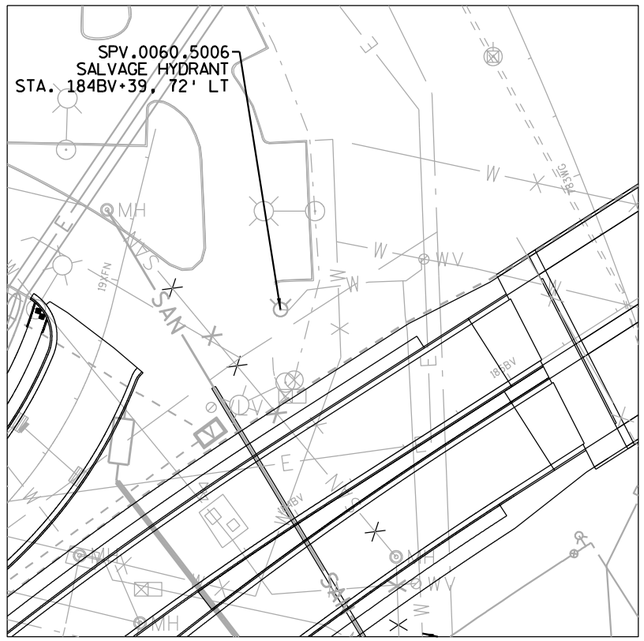
ABANDON 72' 6" SAN SEWER

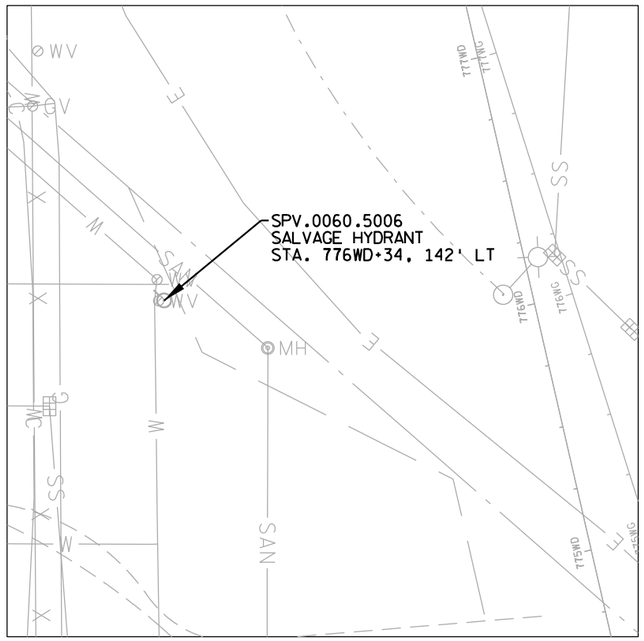
ABANDON 124' 6" SAN SEWER

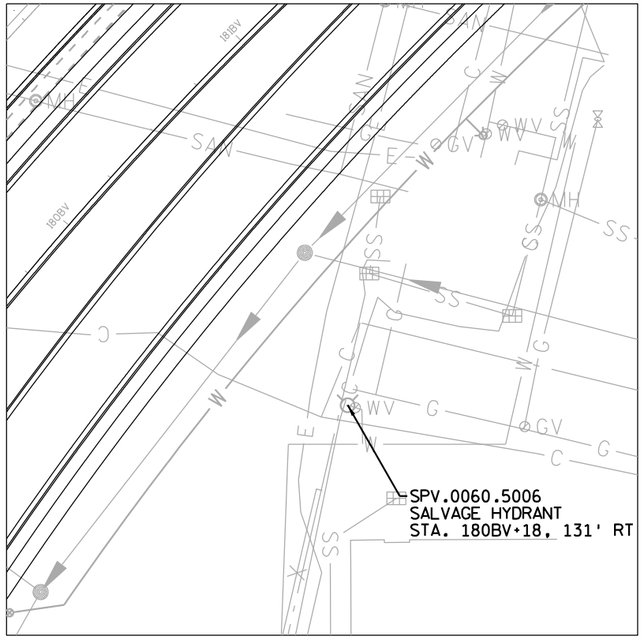
SWAN BLVD

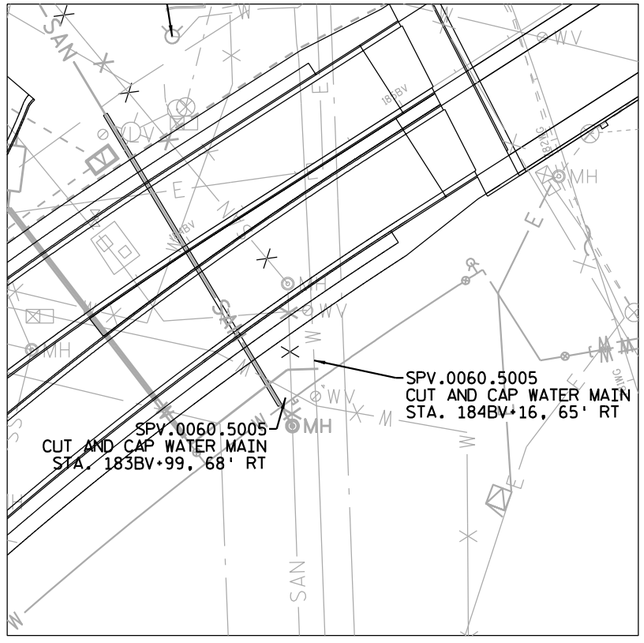
PROJECT NO: 1060-33-73	HWY: SWAN BLVD	COUNTY: MILWAUKEE	MILWAUKEE COUNTY SANITARY SEWER	SHEET	E

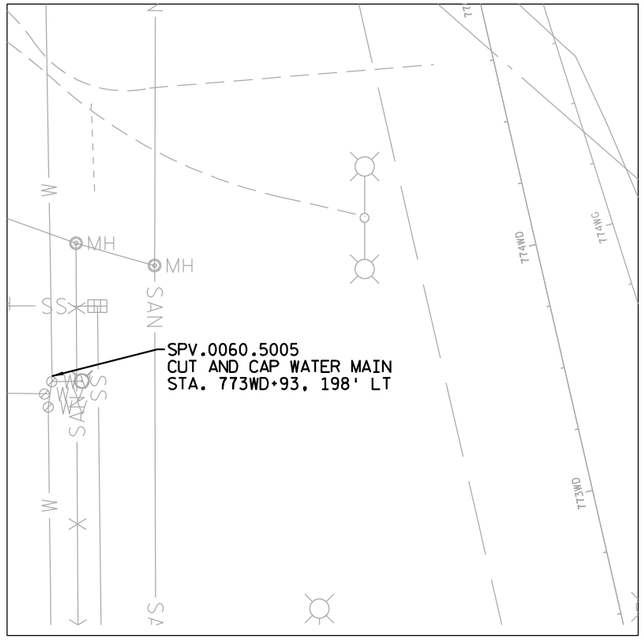












2

PROJECT NO: 1060-33-73	HWY: SWAN BLVD	COUNTY: MILWAUKEE	MILWAUKEE COUNTY WATER MAIN	SHEET	E

WISCONSIN
MICHAEL N. PAULOS
E-33220
FRANKLIN, WI
PROFESSIONAL ENGINEER

3-14-13

WATERTOWN PLANK ROAD

34WWB

167BV 168BV 169BV 170BV 171BV 172BV

FUTURE SWAN BOULEVARD

134'

FUTURE DOT STORM SEWER (TYP.)

REFERENCE LINE

PROP. HYD. #1
A.T. 16"x6"
STA. 167+79.80, 69.36'RT.
V. 6"
HYD. 8'-6" BURY DEPTH
STA. 167+79.80, 82.98'RT.

EXIST. 16" WATER MAIN

P.C.
STA. 169+69.24, 69.31'RT.

PROP. HYD. #2
A.T. 16"x6"
STA. 170+62.70, 68.47'RT.
V. 6"
HYD. 7'-6" BURY DEPTH
STA. 170+62.73, 81.73'RT.

CONNECT TO EXIST. 16" WATER MAIN
STA. 167+31.64, 68.83'RT.
TEMP. 16" PLUG W/2" A.V.
DO NOT REMOVE PLUG & A.V.
UNTIL PRESSURE TEST IS COMPLETE
AND A SAFE WATER SAMPLE IS
OBTAINED.
CONTRACTOR SHALL VERIFY EXACT
ELEVATION AND LOCATION OF
EXISTING 16" WATER MAIN
INSTALL SS 16"
SL 16"
REMOVE/SALVAGE 16" PLUG , 2"A.V.

FUTURE DOT ROAD (TYP.)

CURVE DATA

DEL. = 32°50'53"
TAN. = 426.39'
LEN. = 829.29'
RAD. = 1446.50'
CHD. = 817.98'
C.B. = N.16°15'07"E.

PROPOSED 16" WATER MAIN EXTENSION

STA. 172+00.00
MATCH LINE - SEE SHEET 2

GENERAL NOTES

1. SEE DETAIL SHEET FOR LIST OF GENERAL NOTES THAT PERTAIN TO THE ENTIRE PROJECT.
2. WATER MAIN STATIONING IS BASED ON ROADWAY STATIONING FOR FUTURE SWAN BLVD. CONVERT WATER MAIN PLAN ELEVATIONS TO NAVD88(2007) ELEVATIONS BY ADDING 580.28

0 20 40

457.10 L.F. - 16" CL. 55 D.I. WATER MAIN W/POLYWRAP

EXISTING GRADE OVER C/L OF PROPOSED WATER MAIN

48.16 189.02' 89.02' 84.00' 46.90'

PROP. GRADE AT HYD. EL. 146.6+/-

PROP. GRADE AT HYD. EL. 149.9+/-

FUTURE GRADE OVER C/L OF PROPOSED WATER MAIN

PROPOSED 16" WATER MAIN EXTENSION

FUTURE 15" STORM SEWER I.E. 142.0+/-

FUTURE ELECT.

FUTURE 18" STORM SEWER I.E. 142.0+/-

FUTURE ELECT.

FUTURE 15" STORM SEWER I.E. 144.6+/-

FUTURE 15" STORM SEWER I.E. 147.4+/-

10 L.F. - INSULATION REQUIRED (INCIDENTAL)

EXIST. 16" WATER MAIN

S.=0.0455'/'

S.=0.0097'/'

S.=0.0097'/'

S.=0.0296'/'

S.=0.0352'/'

STA. 167+31.64, 68.83'RT.
CONNECT TO EXIST. 16" W.M.
GRD. BRK.
16" I.E. 139.80+/-

STA. 167+79.80, 69.36'RT.
A.T. 16"x6"
HYD. SHOE
GRD. BRK.

STA. 169+69.24, 69.31'RT.
P.C.
16" I.E. 139.45
GRD. BRK.

STA. 170+62.70, 68.47'RT.
A.T. 16"x6"
HYD. SHOE

STA. 171+50.69, 67.44'RT.
GRD. BRK.
16" I.E. 144.57

STA. 172+00.00, 66.76'RT.
MATCH LINE - SEE SHEET 2
16" I.E. 146.22

IN ACCORDANCE WITH WISCONSIN STATUTE 182.0175, DAMAGE TO TRANSMISSION FACILITIES, EXCAVATOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWING, AND FURTHER, EXCAVATOR SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF THIS STATUTE RELATIVE TO EXCAVATOR'S WORK.

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street,
Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax

CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

PROPOSED 16" WATER MAIN EXTENSION

FUTURE SWAN BOULEVARD — FROM: WATERTOWN PLANK RD.
TO: 500 FT. N. OF WATERTOWN PLANK RD.

SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 2'
DRAWN BY: AS
CHECKED BY: MNP
DATE: 03/19/13

SHEET 1 OF 7 SHEETS
FILE NO. -

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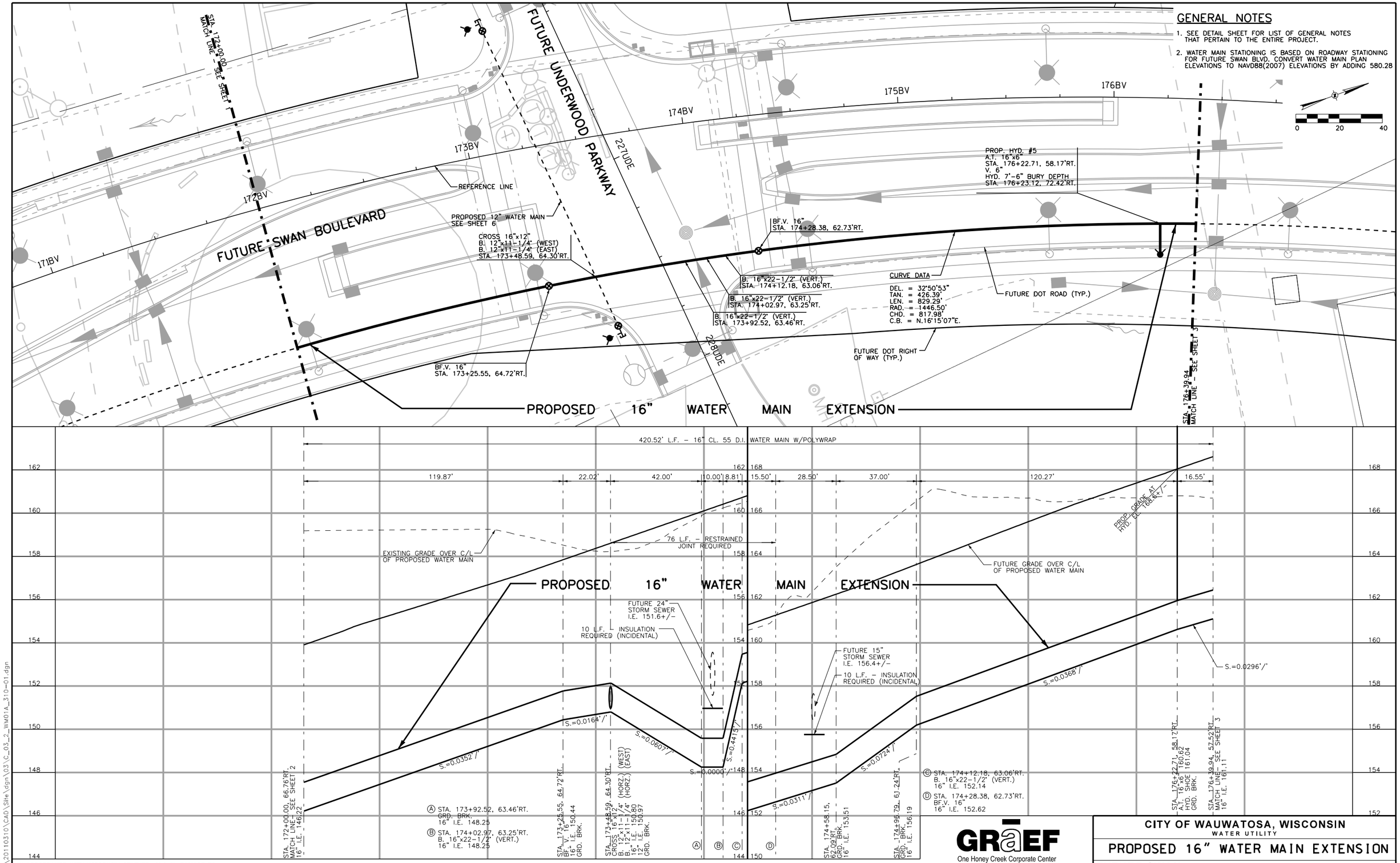
GENERAL NOTES

1. SEE DETAIL SHEET FOR LIST OF GENERAL NOTES THAT PERTAIN TO THE ENTIRE PROJECT.
2. WATER MAIN STATIONING IS BASED ON ROADWAY STATIONING FOR FUTURE SWAN BLVD. CONVERT WATER MAIN PLAN ELEVATIONS TO NAVD88(2007) ELEVATIONS BY ADDING 580.28



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CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

PROPOSED 16" WATER MAIN EXTENSION

FUTURE SWAN BOULEVARD — FROM: 500 FT. N. OF WATERTOWN PLANK RD.
TO: 1000 FT. N. OF WATERTOWN PLANK RD.

SCALE: HORIZ. 1" = 20' VERT. 1" = 2' — DRAWN BY: AS CHECKED BY: MAP — DATE: 03/28/2013

SHEET 2 OF 7 SHEETS — FILE NO. —

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GENERAL NOTES

1. SEE DETAIL SHEET FOR LIST OF GENERAL NOTES THAT PERTAIN TO THE ENTIRE PROJECT.
2. WATER MAIN STATIONING IS BASED ON ROADWAY STATIONING FOR FUTURE SWAN BLVD. CONVERT WATER MAIN PLAN ELEVATIONS TO NAVD88(2007) ELEVATIONS BY ADDING 580.28

FUTURE SWAN BOULEVARD

REFERENCE LINE

176BV 177BV 178BV 179BV 180BV 181BV

STA. 176+39.94 MATCH LINE – SEE SHEET 2

STA. 181+46.37 MATCH LINE – SEE SHEET 4

PROP. HYD. #6
A.T. 16"x6"
STA. 178+56.53, 72.87'RT.
V. 6"
HYD. 8'–0" BURY DEPTH
STA. 178+64.25, 65.25'RT.

P.T.
STA. 178+35.62, 52.09'RT.
B. 16"x45°
TOTAL DEFLECTION 48°29'55"

CURVE DATA
DEL. = 32°50'53"
TAN. = 426.35'
LEN. = 829.29'
RAD. = 1446.50'
CHD. = 817.98'
C.B. = N.16°15'07"E.

BF.V. 16"
B. 16"x22–1/2" (VERT.)
STA. 178+60.01, 76.25'RT.

P.C.
B. 16"x45° (HORZ.)
B. 16"x22–1/2" (VERT.)
TOTAL DEFLECTION 47°01'46"
STA. 178+76.06, 91.95'RT.

FUTURE DOT RIGHT OF WAY (TYP.)

PROPOSED 16" WATER MAIN EXTENSION

FUTURE DOT RETAINING WALL (TYP.)

B. 16"x22–1/2" (VERT.)
STA. 180+81.63, 86.13'RT.

CURVE DATA
DEL. = 23°00'29"
TAN. = 295.93'
LEN. = 583.88'
RAD. = 1454.00'
CHD. = 279.96'
C.B. = N.46°09'29"E.

B. 16"x22–1/2" (VERT.)
STA. 180+43.34, 87.35'RT.

B. 16"x22–1/2" (VERT.)
STA. 180+56.63, 86.93'RT.

B. 16"x22–1/2" (VERT.)
STA. 180+67.26, 86.59'RT.

PROP. HYD. #7
A.T. 16"x6"
STA. 181+42.38, 84.08'RT.
V. 6"
HYD. 7'–6" BURY DEPTH
STA. 181+42.72, 93.57'RT.

0 20 40

497.70 L.F. – 16" CL. 55 D.I. WATER MAIN W/POLYWRAP

188.34' 28.84' 4.73' 21.79' 77.00' 80.00' 12.50' 10.00' 13.52' 57.23' 3.75'

FUTURE GRADE OVER C/L OF PROPOSED WATER MAIN

PROP. GRADE AT HYD. EL. 175.3+/–

EXIST. GRADE AT HYD. EL. 166.7+/–

76 L.F. – RESTRAINED JOINT REQUIRED

67 L.F. – RESTRAINED JOINT REQUIRED

ELECT.

FUTURE ELECT.

PROPOSED 16" WATER MAIN EXTENSION

EXISTING GRADE OVER C/L OF PROPOSED WATER MAIN

S.=0.0296'/'

S.=0.0112'/'

S.=0.0000'/'

S.=0.1696'/'

S.=0.0396'/'

S.=0.0148'/'

S.=0.0148'/'

FUTURE 30" STORM SEWER I.E. 156.3+/–

S.=0.0050'/'

S.=0.0060'/'

S.=0.4864'/'

S.=0.4016'/'

S.=0.0000'/'

10 L.F. – INSULATION REQUIRED (INCIDENTAL)

STA. 176+39.94, 57.72'RT.
MATCH LINE – SEE SHEET 2
16" I.E. 161.11

FUTURE 36" STORM SEWER I.E. 153.8+/–

STA. 178+35.62, 52.09'RT.
P.T.
B. 16"x45° (HORZ.)166.68
GRD. BRK.

STA. 178+56.53, 72.87'RT.
A.T. 16"x6"
HYD. SHOE 167.42
GRD. BRK.

STA. 178+60.01, 76.25'RT.
BF.V. 16" 167.00
B. 16"x11–1/4" (VERT.)

STA. 178+76.06, 91.95'RT.
P.C.
B. 16"x45° (HORZ.)
B. 16"x11–1/4" (VERT.)
16" I.E. 163.30

Ⓐ STA. 179+58.17, 89.84'RT.
GRD. BRK.
16" I.E. 160.25

FUTURE 36" STORM SEWER I.E. 154.9+/–

Ⓑ STA. 180+43.34, 87.35'RT.
B. 16"x22–1/2" (VERT.)
16" I.E. 159.06

Ⓒ STA. 180+56.63, 86.93'RT.
B. 16"x22–1/2" (VERT.)
16" I.E. 152.98

Ⓓ STA. 180+67.26, 86.59'RT.
B. 16"x22–1/2" (VERT.)
16" I.E. 152.98

STA. 180+81.63, 86.13'RT.
B. 16"x22–1/2" (VERT.)
16" I.E. 158.41

STA. 181+42.38, 84.08'RT.
A.T. 16"x6"
HYD. SHOE 159.12
GRD. BRK.

STA. 181+46.37, 84.10'RT.
MATCH LINE – SEE SHEET 4
16" I.E. 158.68

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Milwaukee, WI 53214-1470
414 / 259 1500
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CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

PROPOSED 16" WATER MAIN EXTENSION

FUTURE SWAN BOULEVARD — FROM: 1000 FT. N. OF WATERTOWN PLANK RD.
TO: 1500 FT. N. OF WATERTOWN PLANK RD.

SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 2'

DRAWN BY: AS
CHECKED BY: MAP

DATE: 03/28/13

SHEET 3 OF 7 SHEETS

FILE NO. –

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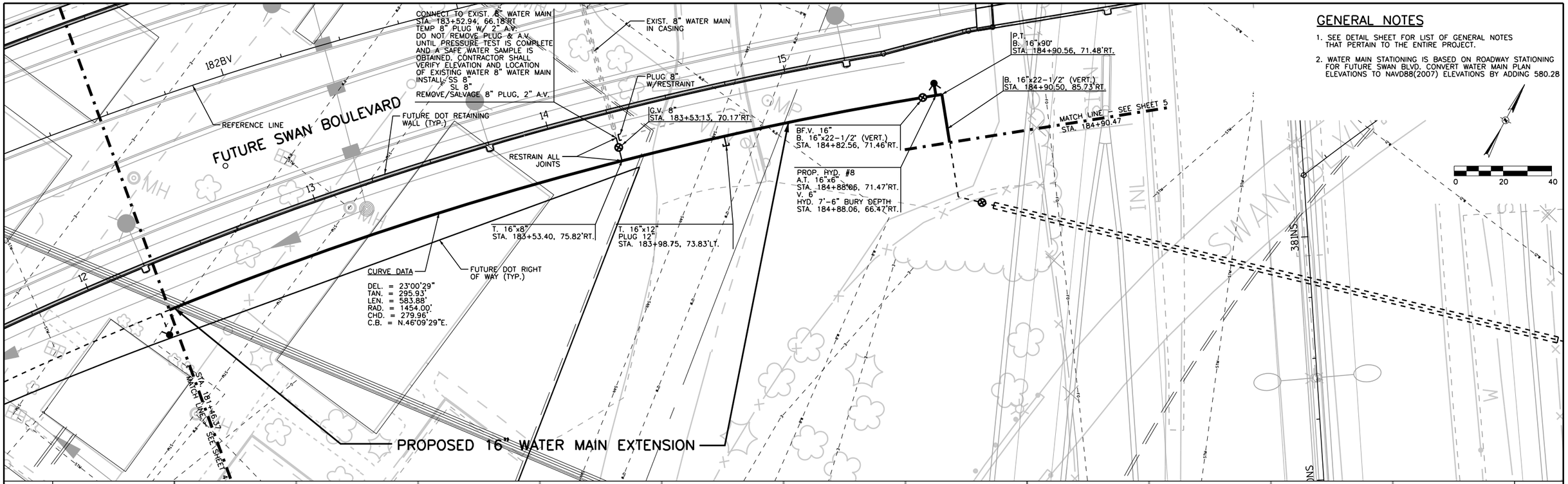
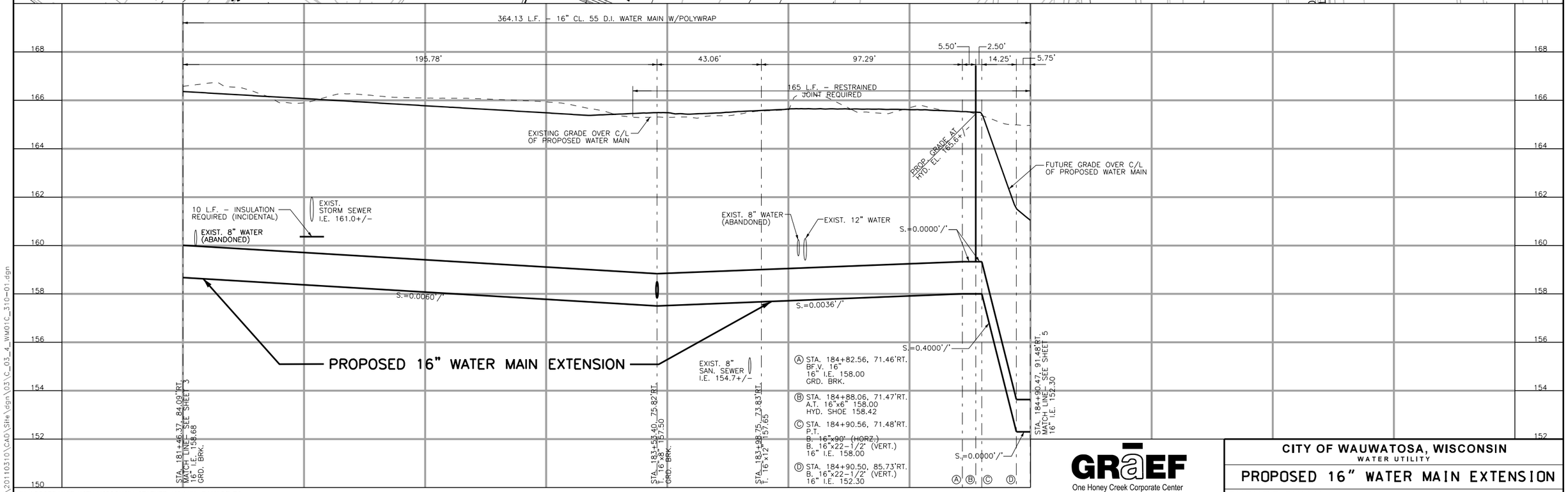
GENERAL NOTES

1. SEE DETAIL SHEET FOR LIST OF GENERAL NOTES THAT PERTAIN TO THE ENTIRE PROJECT.
2. WATER MAIN STATIONING IS BASED ON ROADWAY STATIONING FOR FUTURE SWAN BLVD. CONVERT WATER MAIN PLAN ELEVATIONS TO NAVD88(2007) ELEVATIONS BY ADDING 580.28





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CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

PROPOSED 16" WATER MAIN EXTENSION

FUTURE SWAN BOULEVARD — FROM: 1500 FT. N. OF WATERTOWN PLANK RD. TO: 2000 FT. N. OF WATERTOWN PLANK RD.

SCALE: HORIZ.: 1" = 20' VERT.: 1" = 2' — DRAWN BY: AS CHECKED BY: MAP — DATE: 03/28/13

SHEET 4 OF 7 SHEETS — FILE NO. –

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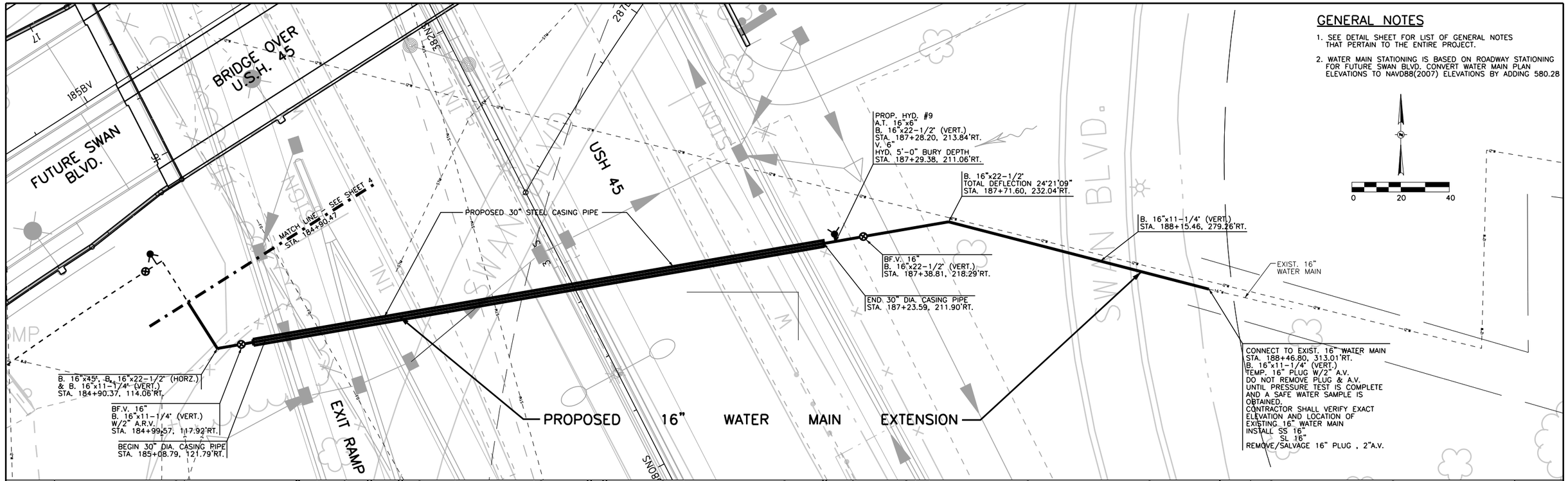
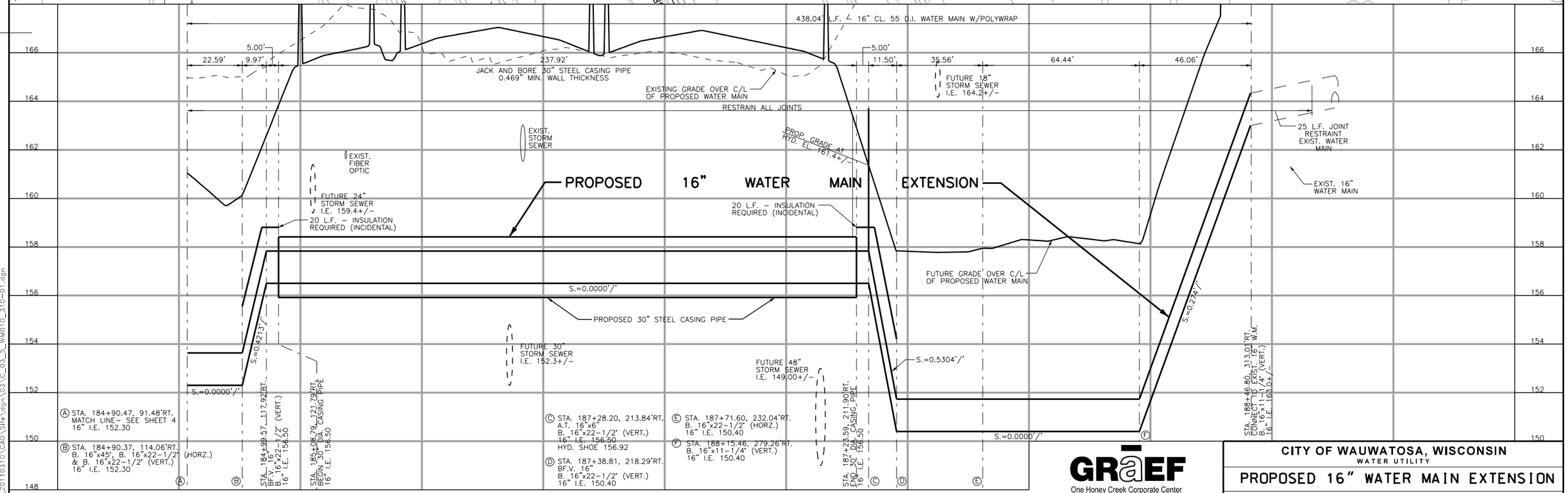
GENERAL NOTES

1. SEE DETAIL SHEET FOR LIST OF GENERAL NOTES THAT PERTAIN TO THE ENTIRE PROJECT.
2. WATER MAIN STATIONING IS BASED ON ROADWAY STATIONING FOR FUTURE SWAN BLVD. CONVERT WATER MAIN PLAN ELEVATIONS TO NAVD88(2007) ELEVATIONS BY ADDING 580.28





IN ACCORDANCE WITH WISCONSIN STATUTE 182.0175, DAMAGE TO TRANSMISSION FACILITIES, EXCAVATOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWING, AND FURTHER, EXCAVATOR SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF THIS STATUTE RELATIVE TO EXCAVATOR'S WORK.

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CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

PROPOSED 16" WATER MAIN EXTENSION

FUTURE SWAN BOULEVARD
FROM: 2000 FT. N. OF WATERTOWN PLANK RD.
TO: 2270 FT. N. OF WATERTOWN PLANK RD.

SCALE: HORIZ.: 1" = 20' VERT.: 1" = 2'
DRAWN BY: AS CHECKED BY: MAP
DATE: 03/28/13

SHEET 5 OF 7 SHEETS
FILE NO. –

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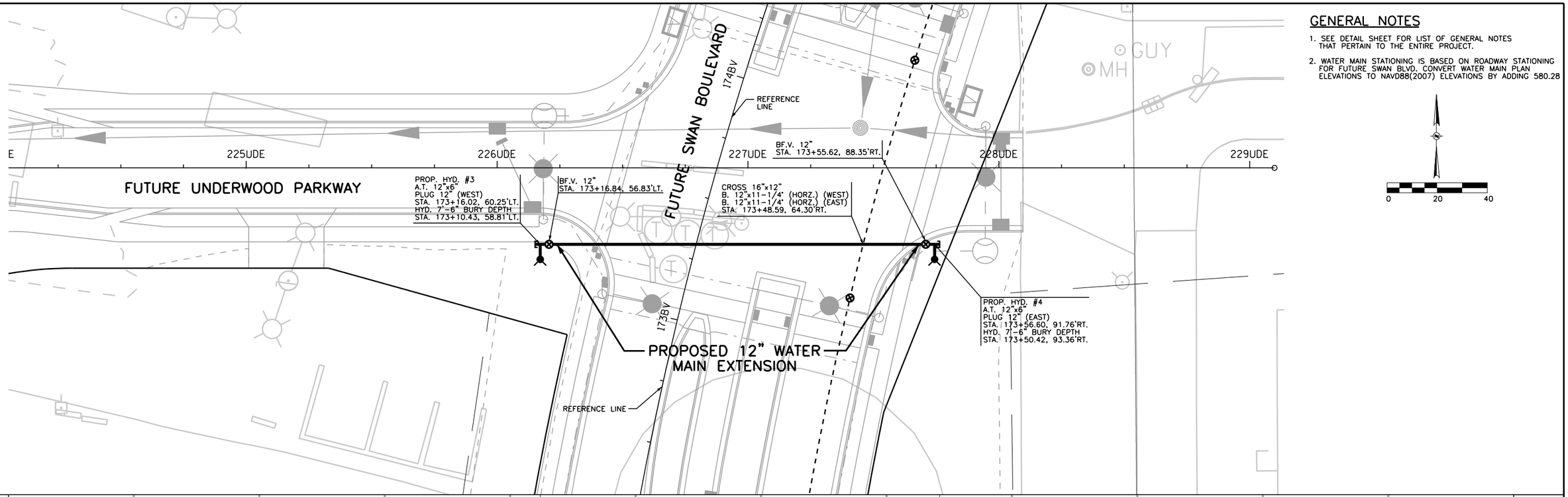
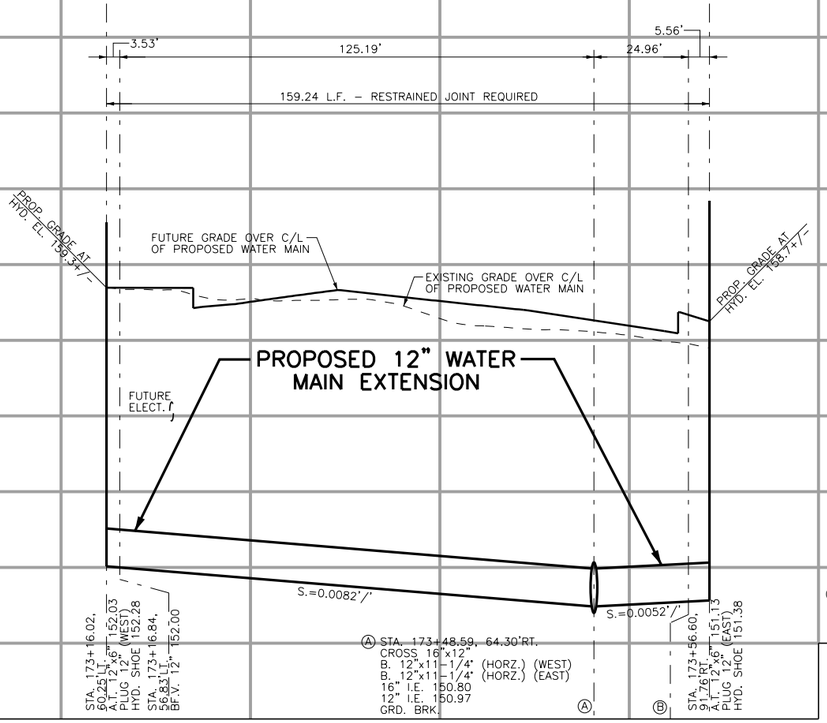
GENERAL NOTES

1. SEE DETAIL SHEET FOR LIST OF GENERAL NOTES THAT PERTAIN TO THE ENTIRE PROJECT.
2. WATER MAIN STATIONING IS BASED ON ROADWAY STATIONING FOR FUTURE SWAN BLVD. CONVERT WATER MAIN PLAN ELEVATIONS TO NAVD88(2007) ELEVATIONS BY ADDING 580.28





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CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

PROPOSED 16" WATER MAIN EXTENSION

FUTURE SWAN BOULEVARD — FROM: 500 FT. N. OF WATERTOWN PLANK RD.
TO: 1000 FT. N. OF WATERTOWN PLANK RD.

SCALE: HORIZ.1" = 20' VERT.1" = 2' | DRAWN BY: AS CHECKED BY: MNP | DATE: 03/28/13

SHEET 6 OF 7 SHEETS | FILE NO. –

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GENERAL NOTES

1. CONTRACTOR SHALL EXPOSE EXISTING WATER MAIN AT ALL LOCATIONS PRIOR TO START OF CONSTRUCTION TO VERIFY EXACT LOCATION AND INVERT OF EXISTING WATER MAIN. ANY DISCREPANCIES SHALL BE REPORTED TO ENGINEER TO ALLOW DESIGN MODIFICATIONS AS REQUIRED. WATER MAIN RELAY SHALL BE A MINIMUM 2 FEET AWAY FROM EXISTING MAIN AS LOCATED IN THE FIELD. ELEVATIONS OF EXISTING WATER MAIN BETWEEN CONNECTION POINTS ARE APPROXIMATE BASED ON BEST AVAILABLE RECORDS. PROPOSED WATER MAIN SHALL BE INSTALLED UNDER EXISTING WATER MAIN AND SERVICES TO ALLOW FOR EXISTING WATER MAIN TO REMAIN LIVE THROUGHOUT THE PROJECT. ANY DIFFERENCES BETWEEN EITHER LOCATION OR DEPTH OF EXISTING WATER MAIN SHALL BE MODIFIED IN THE FIELD, AND ANY CHANGES IN ELEVATION AND LOCATION SHALL BE INCIDENTAL TO WATER MAIN PRICE.

2. EXISTING STORM SEWER AND SANITARY MAIN LINE CROSSINGS HAVE BEEN SHOWN IN THE PROFILE ALONG THE MAIN BASED ON BEST AVAILABLE RECORDS. ELECTRIC, TELEPHONE, GAS, STREET LIGHTING, WATER AND SANITARY SERVICES ARE SHOWN IN PLAN VIEW, BUT NOT PROFILE VIEW, BASED ON BEST AVAILABLE RECORDS. CONTRACTOR SHALL LOCATE SERVICES IN THE FIELD AND LOCATION AND CROSSING OF THESE SERVICES ARE INCIDENTAL TO WATER MAIN PRICE.

3. LOCATION OF PROPOSED WATER LATERALS ON PLANS ARE APPROXIMATE. FINAL LOCATION OF LATERALS SHALL BE DETERMINED IN THE FIELD AND SHALL BE INCIDENTAL TO CONTRACT PRICE. EXISTING SANITARY SERVICES ARE IN THE SAME TRENCH AS AS WATER SERVICES IN MOST LOCATIONS. ANY DAMAGE TO EXISTING SANITARY SERVICES DURING CONSTRUCTION SHALL BE REPAIRED AND IS INCIDENTAL TO WATER MAIN.

4. THE CONTRACTOR IS TO EXERCISE GREAT CARE WHEN WORKING IN THE VICINITY OF THE EXISTING WATER MAIN. ALL COST OF REPAIRING THE PROPOSED AND/OR EXISTING WATER MAIN SHALL BE INCLUDED IN THE PRICE BID OF WATER MAIN ITEMS.

5. CONTRACTOR SHALL BULKHEAD ALL HYDRANT DRAINS THAT CONNECT TO EXISTING SEWERS.

6. RIGHT-OF-WAY, PROPERTY LINE, WATER SERVICE, SANITARY LATERAL, STREET LIGHTING, BURIED ELECTRICAL, WATER MAINS, & STORM SEWER INFORMATION WAS PROVIDED BY THE CITY AND IS APPROXIMATE ONLY.

7. ALL WATER MAIN ELEVATIONS ON PLANS ARE INVERT ELEVATIONS. ALL STATIONING OF WATER MAIN IS OFF THE DOT STATIONING.

8. ALL WATER MAIN, SERVICES, BORING PITS, AND HYDRANT LEADS SHALL HAVE CRUSHED CONCRETE BACKFILL.

9. ALL OFFSET FITTINGS SHALL BE RESTRAINED BY MEGA-LUGS OR APPROVED EQUAL.

10. CONTRACTOR SHALL SUPPORT ALL EXISTING UTILITIES & STRUCTURES.

11. ABANDONING THE EXISTING WATER MAIN, HYD., VALVES, SERVICES, SERVICES BOXES, (MAINLINE & AUXILIARY VALVES FOR HYDRANTS) SHALL BE INCLUDED IN NEW PIPE COSTS. BACKFILL AND ALL RESTORATION INVOLVED WITH ABANDONMENT SHALL BE INCLUDED.

12. CONTRACTOR SHALL NOTIFY ALL AFFECTED CUSTOMERS OF UNSCHEDULED WATER SHUT-OFFS. CITY TO APPROVE WORDING OF NOTICES.

13. CONTRACTOR TO PROVIDE 2 WORKING DAYS ADVANCE NOTICE OF SCHEDULED WATER SERVICE SHUT-OFFS TO WATER UTILITY.

14. CONTRACTOR SHALL PROVIDE PLATES OR OTHER APPROVED MATERIAL TO PROVIDE CONTINUOUS ACCESS TO DRIVEWAYS.

15. CONTRACTOR TO PROVIDE PLYWOOD, CRUSHED STONE, PLATES, OR OTHER APPROVED METHODS TO PROVIDE FOR CONTINUOUS ACCESS FOR SIDEWALKS, HANDICAP RAMPS AND CROSS WALKS AT LOCATIONS DESIGNATED BY CONSTRUCTION ENGINEER.

16. ALL WATER MAIN, VALVES, HYDRANTS, AND FITTINGS SHALL HAVE POLYWRAP.

17. INSULATION SHALL BE INCIDENTAL TO PROP. WATER MAIN COSTS.

18. CONTRACTOR TO PROVIDE VERTICAL SEPARATION IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER BETWEEN ALL WATER MAIN INSTALLED OR LOCATED UNDER THE PROPOSED STORM SEWER. IN ADDITION, ALL MAINS CONSTRUCTED WITHIN 2-FEET OF STORM SEWER SHOULD BE INSTALLED WITH 2" POLYSTRENE BOARD INSULATION ABOVE AND ALONGSIDE THE WATER MAIN.

19. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3" SAND BEDDING AND COVER AROUND STREET LIGHT, TRAFFIC SIGNAL OR INTERCONNECT CABLE, DUCT OR CONDUIT WHEREVER IT IS EXPOSED

BID ITEM DESCRIPTION

DUCTILE IRON CLASS 55- 16-INCH

LINEAR FEET OF 16-INCH DIAMETER, D.I.P. WATER MAIN CLASS 55 WITH POLYWRAP, SAND BEDDING AND COVER, CRUSHED CONCRETE BACKFILL FLUSHING TESTING AND SAMPLING, INCLUDING ABANDONING EXISTING WATER MAIN W/ R.J. CAP.

DUCTILE IRON CLASS 55- 12-INCH

LINEAR FEET OF 12-INCH DIAMETER, D.I.P. WATER MAIN CLASS 55 WITH POLYWRAP, SAND BEDDING AND COVER, CRUSHED CONCRETE BACKFILL FLUSHING TESTING AND SAMPLING, INCLUDING ABANDONING EXISTING WATER MAIN W/ R.J. CAP.

RESILIENT WEDGE GATE VALVES- 8-INCH

EACH 8-INCH MJ RELILIENT WEDGE GATE VALVE WITH ADAPTOR, POLYWRAP ROADWAY BOX, AND COVER.

RESILIENT WEDGE GATE VALVES- 6-INCH

EACH 6-INCH MJ RELILIENT WEDGE GATE VALVE WITH ADAPTOR, POLYWRAP ROADWAY BOX, AND COVER.

BUTTERFLY VALVE- 16-INCH

EACH 16-INCH MJ BUTTERFLY VALVE WITH ADAPTOR, POLYWRAP ROADWAY BOX, AND COVER.

BUTTERFLY VALVE- 12-INCH

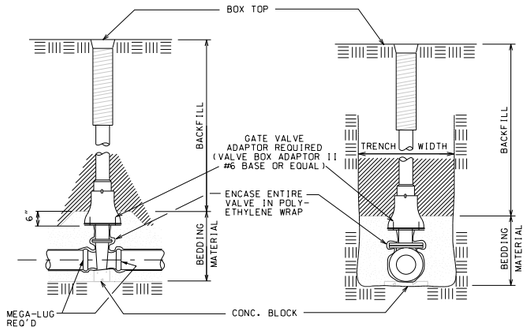
EACH 12-INCH MJ BUTTERFLY VALVE WITH ADAPTOR, POLYWRAP ROADWAY BOX, AND COVER.

HYDRANT ASSEMBLY

EACH HYDRANT FURNISHED AND INSTALLED WITH MEGALUGS AND RESTRAINED JOINTS, RESTRAINED 6-INCH DIAMETER, D.I.P. R.J. WATER MAIN CLASS 55, INCLUDING CRUSHED CONCRETE BACKFILL.

DUCTILE IRON CLASS 55, 16-INCH W/ STEEL 30-INCH CASING PIPE JACK AND BORED IN PLACE

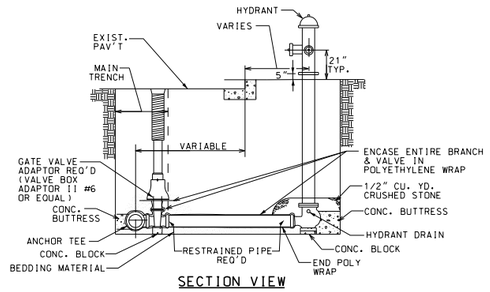
LINEAR FEET OF 16-INCH DIAMETER, D.I.P. WATER MAIN CLASS 55 WITH 30-INCH DIAMETER STEEL CASING PIPE, MINIMUM 0.469-INCH WALL THICKNESS, JACK AND BORED IN PLACE, INCLUDING CASING PIPE SPACERS & END SEALS, AND PIT EXCAVATION.



SIDE VIEW FRONT VIEW

STANDARD GATE VALVE BOX SETTING DETAIL

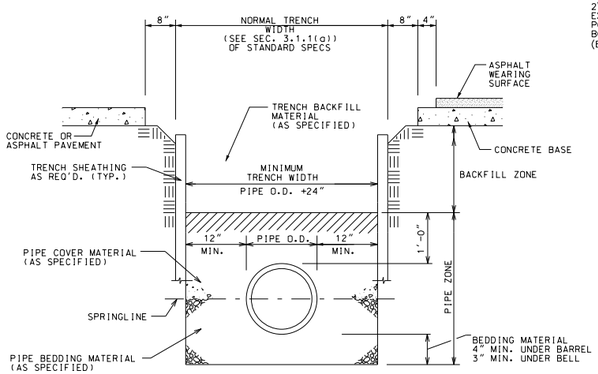
N.T.S.



SECTION VIEW

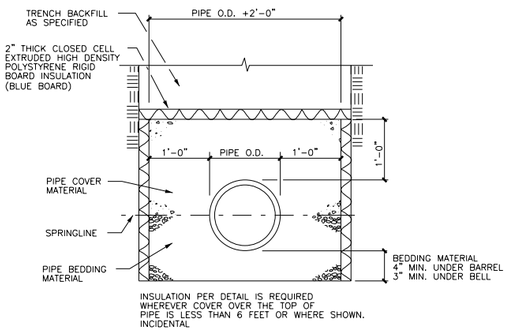
STANDARD HYDRANT SETTING

N.T.S.



WATER MAIN TRENCH DETAIL

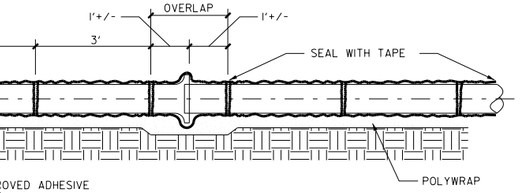
N.T.S.



INSULATION PER DETAIL IS REQUIRED WHEREVER COVER OVER THE TOP OF PIPE IS LESS THAN 6 FEET OR WHERE SHOWN. INCIDENTAL

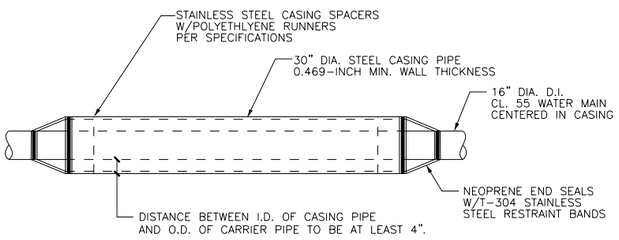
INSULATION DETAIL

N.T.S.



POLYETHYLENE WRAP

N.T.S.



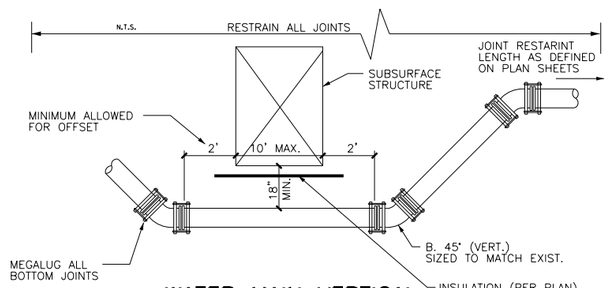
NOTES: 1.) PIPE CROSSING SHALL BE INSTALLED SUCH THAT NO TRAFFIC SHALL BE INTERRUPTED.

2.) ALL JACKING OR TUNNELING METHODS SHALL MEET THE REQUIREMENTS OF THE JURISDICTIONAL AUTHORITY.

3.) STEEL CASING PIPE SHALL HAVE A MINIMUM WALL THICKNESS OF 0.469 INCHES AND BE ASTM A-53 GRADE B, 35,000 PSI MINIMUM YIELD STEEL

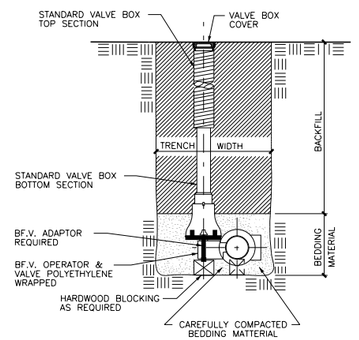
JACK AND BORE DETAIL

N.T.S.



WATER MAIN VERTICAL OFFSET

N.T.S.



FRONT VIEW

STANDARD BUTTERFLY VALVE BOX SETTING DETAIL

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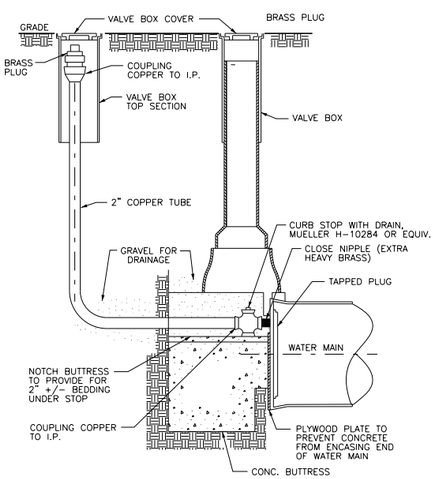


PLUG WITH AIR VENT INCLUDING CONCRETE BUTTRESS

N.T.S.

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street,
Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax

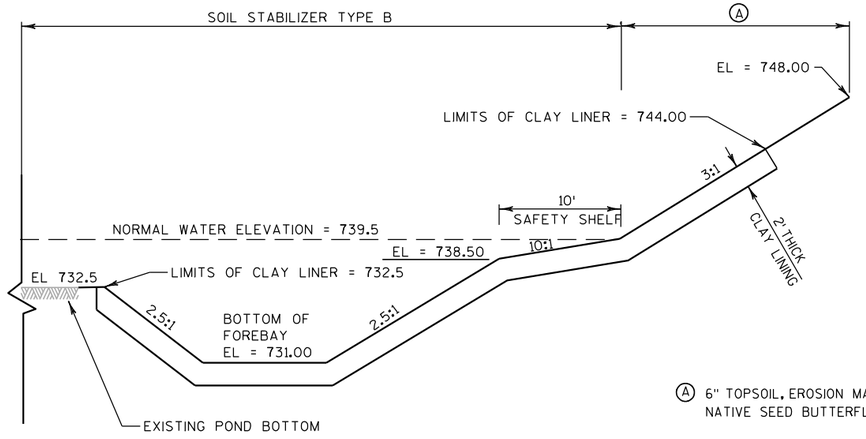
CITY OF WAUWATOSA, WISCONSIN
WATER UTILITY

DETAILS AND GENERAL NOTES

SCALE: HORIZ. 1 IN. = N.T.S. VERT. 1 IN. = N.T.S.
DRAWN BY: AS CHECKED BY: MNP
D 116 DATE:
SHEET 7 OF 7 SHEETS
FILE NO. –

3/28/2013 1:54:59 PM
L:\Jobs2011\20110310\CAD\Site\dgn\03\C_03_1_DETAIL01_310_.dgn

2



Ⓐ 6" TOPSOIL, EROSION MAT CLASS I TYPE B, NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE A

WISCONSIN LUTHERAN COLLEGE POND SECTION A-A

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORMWATER MANAGEMENT - CONSTRUCTION DETAILS	SHEET	E

2

2

N

POND ALIGNMENT DATA				
PI	NORTHING (Y)	EASTING (X)	DISTANCE (FEET)	BEARING
14+00.00	303744.57	570564.42	39.26	S 40°44'03.32" E
14+39.26	303714.83	570590.04	51.16	S 77°18'17.86" E
14+90.42	303703.58	570639.95	27.25	N 84°21'24.78" E
15+17.67	303706.26	570667.06	25.57	N 53°28'33.94" E
15+43.24	303721.48	570687.61	25.86	N 52°16'25.80" E
15+69.10	303737.31	570708.07	16.58	N 45°45'03.77" E
15+85.68	303748.88	570719.94	50.08	N 37°11'24.72" E
16+35.77	303788.77	570750.22		

POND POINT DATA			
POINT NUMBER	NORTHING (Y)	EASTING (X)	ELEVATION
P1	303727.06	570608.29	738.0
P2	303721.93	570609.67	738.0
P3	303741.90	570616.94	738.0
P4	303749.48	570639.94	733.0
P5	303748.54	570643.07	733.0
P6	303743.47	570644.26	733.0
P7	303738.51	570646.26	731.0
P8	303733.33	570648.60	731.0
P9	303755.69	570664.71	731.0
P10	303756.49	570666.87	731.0
P11	303756.11	570676.74	731.0
P12	303750.74	570678.46	731.0
P13	303760.16	570692.43	733.0
P14	303768.75	570725.67	739.0

WISCONSIN LUTHERAN COLLEGE POND

EXISTING OUTLET STRUCTURE TO REMAIN

PI 14+00.00

PI 14+39.26

PI 14+90.42

PE200

B200

10' SAFETY SHELF
SLOPE=10:1
ELEVATION FROM
739.50 TO 738.50

FOREBAY

WLC ACCESS ROAD

SWAN BOULEVARD

R-40-485

19XFN

18XFN

17XFN

16XFN

184BV

183BV

182BV

NOTES

MAINTAIN POND INFLOW & OUTFLOW AT ALL TIMES.

WISCONSIN LUTHERAN COLLEGE POND ALIGNMENT AT NORMAL WATER ELEVATION = 739.50.

ALL PROPOSED WISCONSIN LUTHERAN COLLEGE POND GRADING RADII FROM ELEVATION 731 THROUGH 738 (INCLUSIVE) ARE 3-FEET.

CONFORM GRADING BELOW NORMAL WATER ELEVATION AS SHOWN ON PLAN TO ENSURE EQUAL VOLUME COMPENSATION IN FOREBAY.

CONTRACTOR MAY USE STRUCTURE B200 OR PIPE PE200 FOR DEWATERING FOR DETENTION BASIN CONSTRUCTION IN ACCORDANCE WITH ALL LOCAL, STATE, FEDERAL PERMISSIONS, SPECIFICATIONS, REQUIREMENTS, AND APPROVALS.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STORMWATER MANAGEMENT - PONDS	SHEET	E

2

N

MATCHLINE 225UD+00

SWAN BOULEVARD

168BV

170BV

172BV

174BV

176BV

178BV

MATCHLINE 178BV+00

UNDERWOOD PARKWAY

225UDE

228UDE

W. WATERTOWN PLANK ROAD

36WMB

22WMB

BOLLARDS (4)

BOLLARDS (6)

CANOPY

BOLLARD

SIGN

SCHOOL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023001_up.dgn PLOT DATE : 30-JAN-2013 04:31 PLOT BY : MSCDYB PLOT NAME : 023001_up PLOT SCALE : 100:1

2

2

WLC ACCESS ROAD

SWAN BOULEVARD

USH 45 SB

USH 45 NB

18XFN

16XFN

14XFN

182BV

180BV

184BV

186BV

188BV

190BV

386NS

384NS

382NS

380NS

378NS

MATCHLINE 178BV+00

MATCHLINE 190BV+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023002_up.dgn PLOT DATE : 28-MAR-2013 16:44 PLOT BY : MSCTYS PLOT NAME : 023002_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

SWAN BOULEVARD

192BV

194BV

196BV

198BV

MATCHLINE 190BV+00

BV

SS

OH

GUY

W

PIPL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023003_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023003_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

W. WATERTOWN PLANK ROAD

SHARED USE PATH

UNDERWOOD PARKWAY

WLC ACCESS ROAD

ATHLETIC FIELD

PARKING

MATCHLINE 225UD+00

MATCHLINE 178BV+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023004_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023004_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

768WD

770WD

772WD

774WD

776WD

USH 45 SB

USH 45 NB

366NS

368NS

370NS

372NS

374NS

376NS

378NS

380

MATCHLINE 380NS+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023005_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023005_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

MATCHLINE 380NS+00

USH 45 SB

USH 45 NB

382NS 384NS 386NS 388NS 390NS 392NS 394NS

182BV 184BV 186BV 188BV 288BV 290BV 180BV 18XFN

ATHLETIC FIELD

PLAYGROUND

PLAYGROUND

POOL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023006_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023006_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

IH 94 WB

IH 94 EB

USH 45 SB

USH 45 NB

198EW

196EW

194EW

192EW

190EW

188EW

200EW

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023007_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023007_up PLOT SCALE : 100:1

2

2

N

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

USH 45 SB

USH 45 NB

726BD

728BD

730BD

732BD

734BD

320NS

322NS

324NS

326NS

328NS

330NS

332NS

334NS

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023008_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023008_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

WISCONSIN AVENUE
SB EXIT RAMP

USH 45 SB

USH 45 NB

736BD

336NS

338NS

340NS

342NS

344NS

346NS

348NS

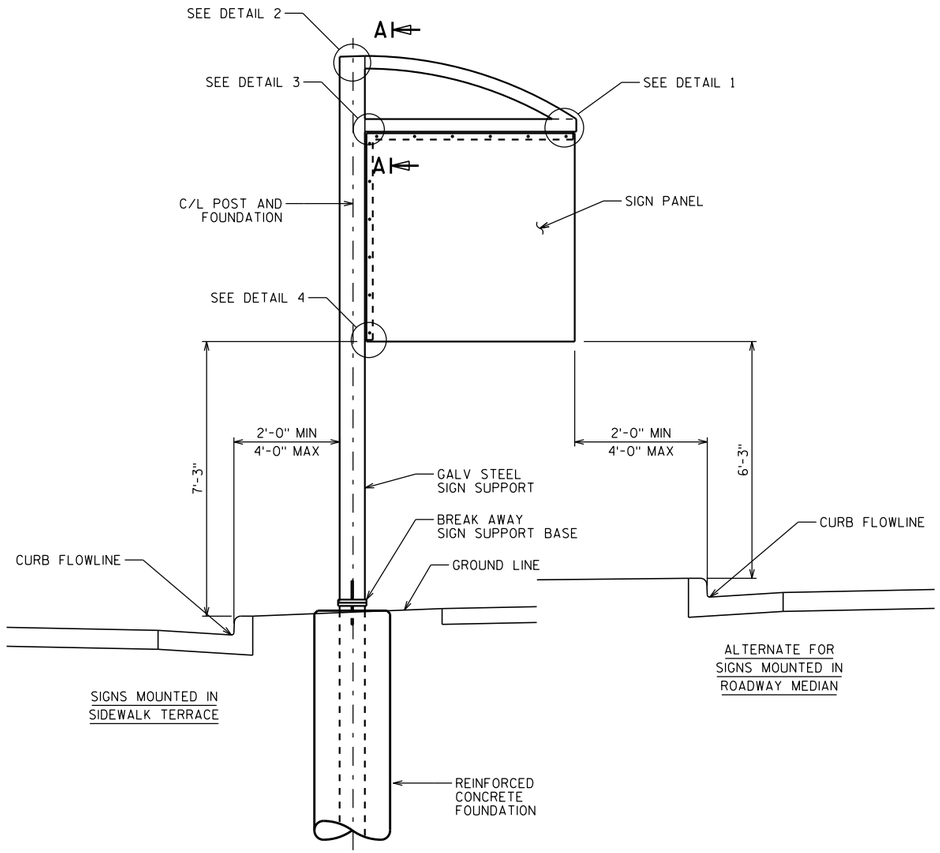
350NS

BASKETBALL COURT

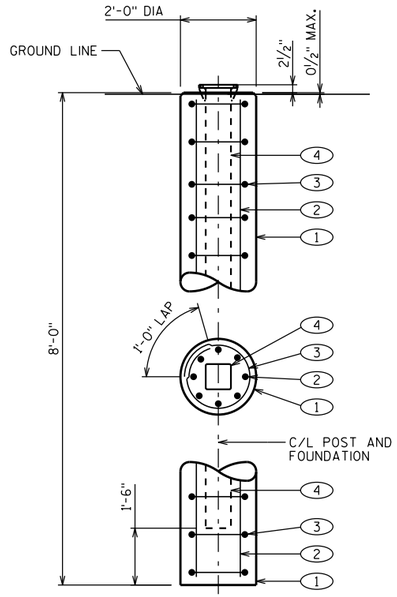
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	EXISTING UTILITY PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023009_up.dgn PLOT DATE : 30-JAN-2013 04:32 PLOT BY : MSCDYB PLOT NAME : 023009_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42



SPECIAL SIGN SUPPORT AND FOUNDATION



FOUNDATION DETAIL

LEGEND

1. REINFORCED CONCRETE FOUNDATION.
2. (8) - #7 X 6'-6" VERTICAL.
3. (8) - #4 @ 11" CIRCULAR TIES. LAP EACH TIE 1'-0".
4. STUB POST HSS 8 X 8 X 0.250" WITH 4" DIA HOLES @ 1'-8" ON TWO SIDES. EMBED IN NO. 1.
5. POST HSS 8 X 8 X 0.250".
6. HORIZONTAL ARM HSS 6 X 4 X 0.250".
7. CURVED ARM HSS 6 X 4 X 0.250".
8. CONNECTION PLATE ⅜" X 2½". WELD TO POST NO. 5 AND HORIZONTAL ARM NO. 6. ATTACH TO SIGN PANEL NO. 10 WITH RIVETS NO. 11.
9. END PLATE 3/16" THICK. WELD TO POST NO. 5 OR HORIZONTAL ARM NO 6.
10. SIGN PANEL. SEE SIGNING DETAILS FOR WIDTH AND HEIGHT. PROVIDE HOLES FOR RIVETS NO. 11.
11. RIVETS ½" DIA. AT 1'-0" SPACING.

BREAKAWAY SIGN SUPPORT BASE

12. PLATE 1" X 9" X 1'-0¾". WELD TO STUB POST NO. 4. SEE DETAIL FOR ORIENTATION OF SLOTS RELATIVE TO TRAFFIC.
13. PLATE 1" X 9" X 0'-2⅜". WELD TO POST NO. 5. SEE DETAIL FOR ORIENTATION OF SLOTS RELATIVE TO TRAFFIC.
14. STIFFENER PLATE ½" X 2" X 0'-4". WELD TO STUB POST NO. 4 AND PLATE NO. 12 OR POST NO. 5 AND PLATE NO. 13 AS SHOWN IN BREAK AWAY SIGN SUPPORT BASE DETAIL.
15. H.S. BOLT ¾" DIA. WITH HEX NUT AND 3 WASHERS FOR EACH BOLT. SEE BOLTING PROCEDURE.
16. BRASS SHIMS. FURNISH (2) - 0.012" +/- THICK AND (2) - 0.032" +/- THICK PER SIGN SUPPORT. SHIM AS REQUIRED TO MAKE POST NO. 5 VERTICAL.

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.

THE BID ITEM FOR THE SIGN PANELS SHALL BE "SIGNS REFLECTIVE TYPE II." SEE THE PERMANENT SIGNING PLANS FOR THE SIGN SUPPORT LOCATIONS AND THE SIGNING DETAILS FOR THE SIGN PANEL REQUIREMENTS.

THE BID ITEM FOR THE GALVANIZED STEEL SIGN SUPPORTS, INCLUDING BREAKAWAY SIGN SUPPORT BASE AND POST EMBEDDED IN THE CONCRETE FOUNDATION, SHALL BE "CROSSROAD NAME SIGNS SPECIAL SIGN SUPPORTS" OR "SIGN STRUCTURE WAYFINDING." SEE THE MISCELLANEOUS QUANTITY SHEETS FOR THE QUANTITIES OF EACH TYPE.

THE BID ITEM FOR THE REINFORCED CONCRETE FOUNDATIONS SHALL BE "CONCRETE FOUNDATION, CROSSROAD NAME SIGNS SPECIAL SIGN" OR "CONCRETE FOUNDATION, WAYFINDING." SEE THE MISCELLANEOUS QUANTITY SHEETS FOR THE QUANTITIES OF EACH TYPE.

FOR DETAILS 1, 2, 3 AND 4, AND THE BREAK AWAY SIGN SUPPORT BASE, SEE SHEET 2 OF 2.

THE TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH.

CONCRETE REINFORCEMENT SHALL BE EPOXY COATED AASHTO M 31 GRADE 60.

RECTANGULAR AND SQUARE HSS SHALL BE ASTM A 500 GRADE B. PLATES AND BARS SHALL BE ASTM A 709 GRADE 36. RIVETS SHALL BE ASTM A 502 GRADE 1. BRASS SHIMS SHALL BE ASTM B 36.

WELDING SHALL CONFORM TO AWS D 1.1, STRUCTURAL WELDING CODE - STEEL. WHERE WELD SIZES ARE NOT SHOWN ON THESE PLANS USE THE MINIMUM SIZE PREQUALIFIED WELDS ALLOWED BY AWS FOR THE THICKNESSES BEING CONNECTED.

SIGN SUPPORT STEEL AND CONNECTING HARDWARE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH SECTION 506 OF THE STANDARD SPECIFICATIONS. LOCATE VENT HOLES FOR GALVANIZING ON THE BOTTOM FACE OF THE HSS ARMS.

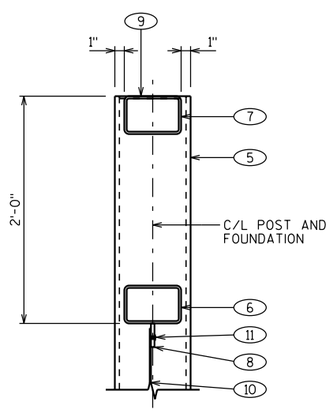
BOLTING PROCEDURE FOR BASE

1. ASSSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETWEEN PLATES.

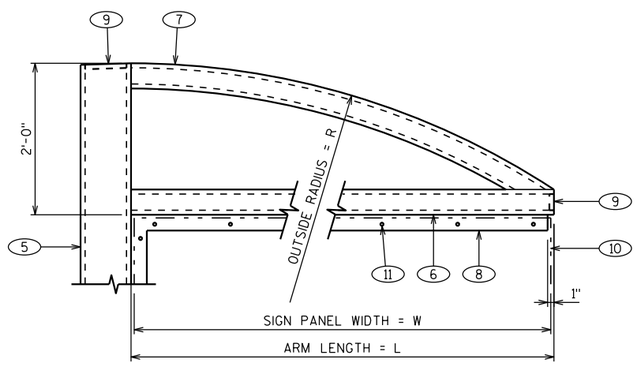
2. SHIM AS REQ'D TO PLUMB POST.

3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO 75 FOOT-POUNDS. DO NOT OVER TIGHTEN.

4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOSSENING.



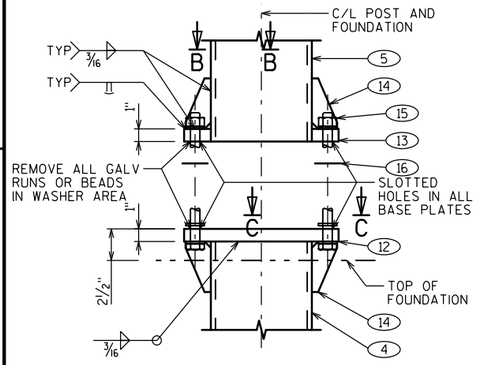
SECTION A-A



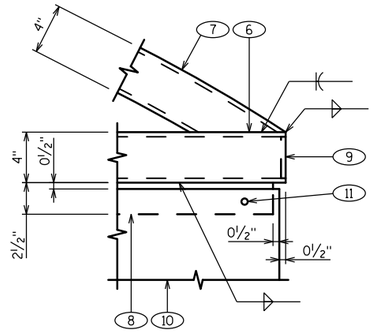
SUPPORT ARM GEOMETRY

W	L	R
5'-6"	5'-7"	10'-2¼"
6'-6"	6'-7"	13'-10"

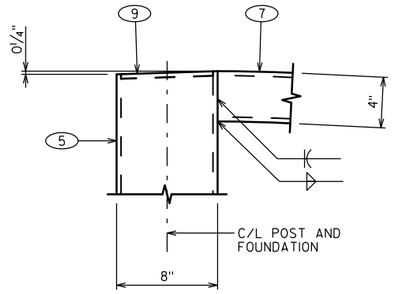
SPECIAL SIGN SUPPORTS AND FOUNDATIONS (SHEET 1 OF 2)



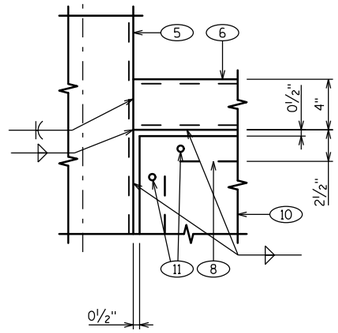
BREAK AWAY SIGN SUPPORT BASE



DETAIL 1



DETAIL 2



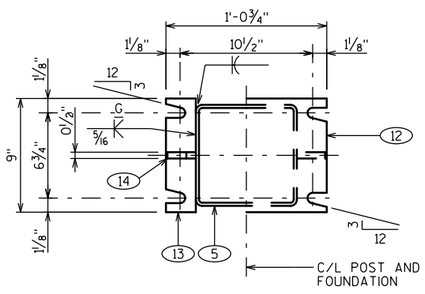
DETAIL 3

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.

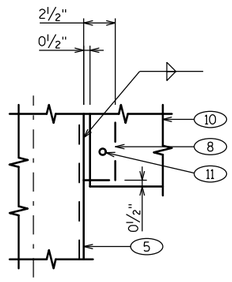
FOR THE GENERAL NOTES AND LEGEND, SEE SHEET 1 OF 2.

2

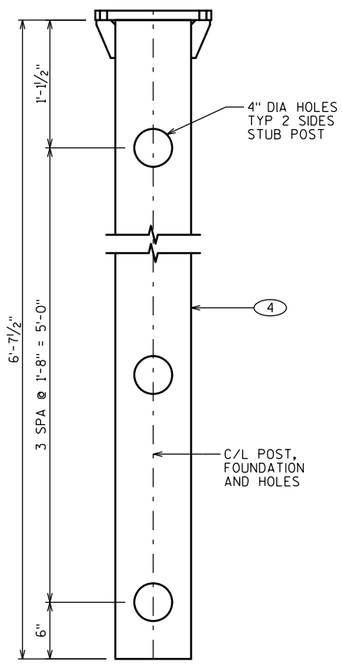


SECTION B-B

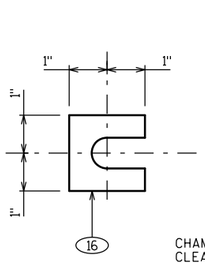
SECTION C-C



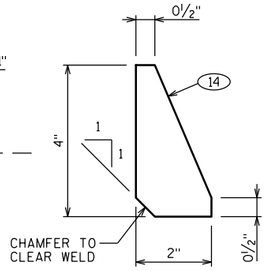
DETAIL 4



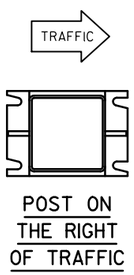
STUB POST - NO. 4



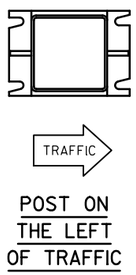
SHIM PLATE



STIFFENER PLATE



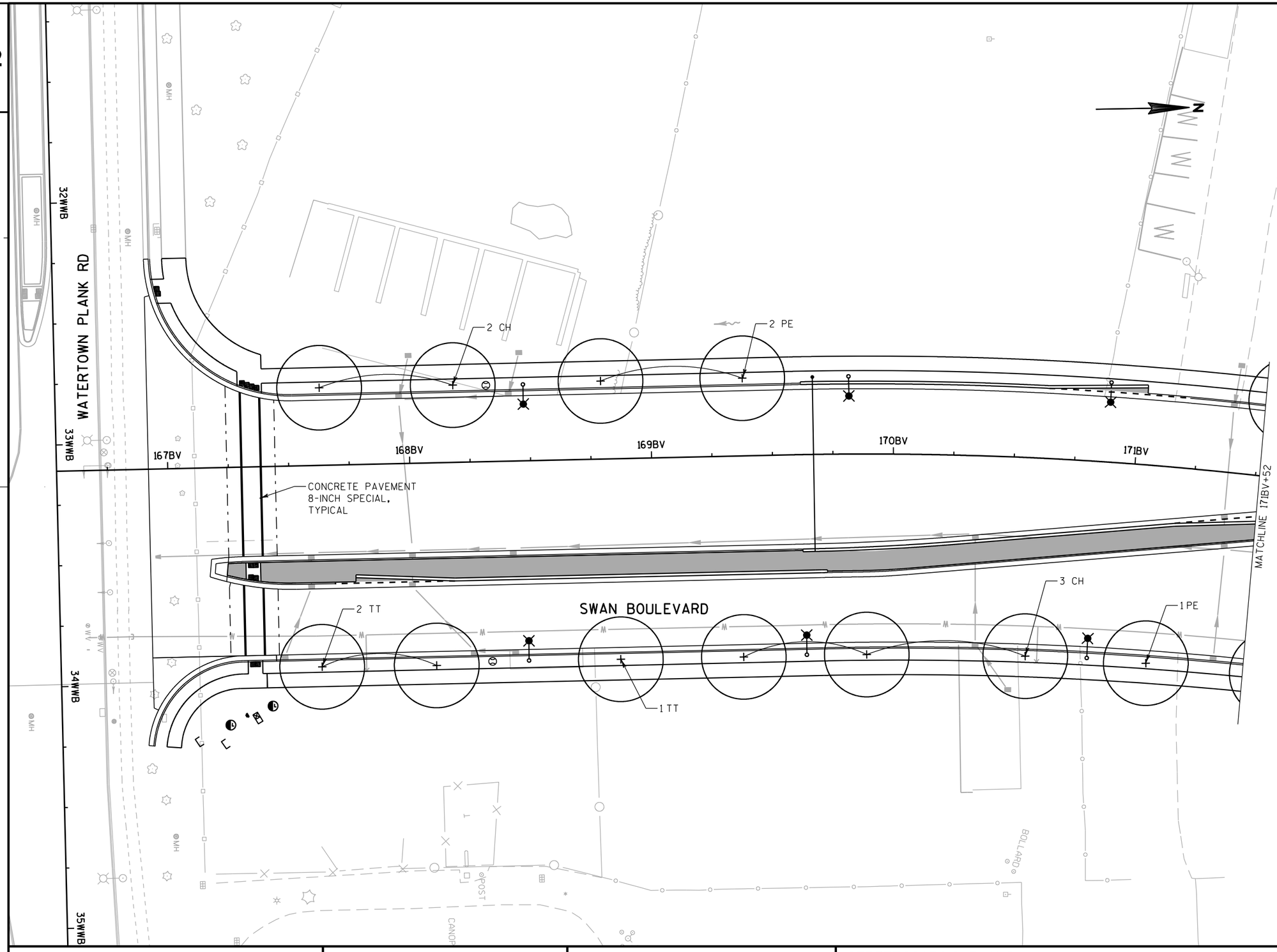
POST ON THE RIGHT OF TRAFFIC



POST ON THE LEFT OF TRAFFIC

POST SLOT ORIENTATION

SPECIAL SIGN SUPPORTS AND FOUNDATIONS (SHEET 2 OF 2)



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

- EXISTING TREE
- CONCRETE SIDEWALK 5 - INCH SPECIAL
- LIGHT POLE, ARM MOUNT LUMINAIRE
- RETAINING WALL

NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB.
2. MULCH IS INCIDENTAL TO TREE PLANTING, SEE PLANT DATA CHART.
3. CONTRACTOR SHALL MARK PLANT LOCATIONS. PLANTINGS SHALL NOT PROCEED WITHOUT APPROVAL OF THE ENGINEER.

SHEET 1 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

2

MATCHLINE 9XFN+13
SEE SHEET 8

MATCHLINE 225UDE+90
SEE SHEET 8

226UDE UNDERWOOD PARKWAY

10XFN

WLC ACCESS ROAD

MATCHLINE 10XFN+75

1 LP

2 CH

1 PE

3 TT

172BV

173BV

174BV

175BV

176BV

227UDE

3 CC

MATCHLINE 171BV+52

MATCHLINE 176BV+14

CONCRETE PAVEMENT
8-INCH SPECIAL,
TYPICAL

SWAN BOULEVARD

3 PE

3 TT

228UDE

MH

GUY

BOLLARDS (4)

229UDE

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
5 - INCH SPECIAL

LIGHT POLE, ARM MOUNT
LUMINAIRE

RETAINING WALL

NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB.
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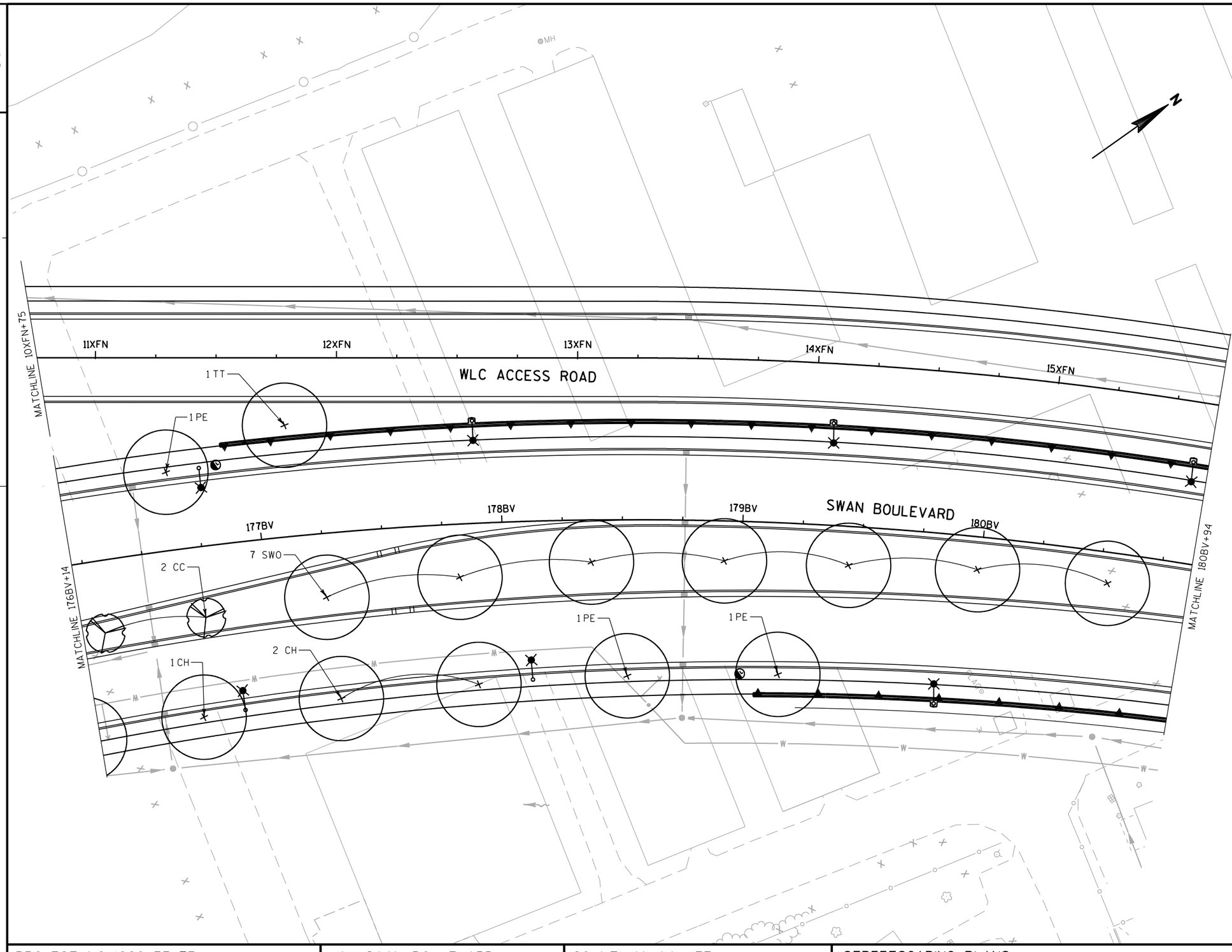
SHEET 2 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

- EXISTING TREE
- CONCRETE SIDEWALK 5 - INCH SPECIAL
- LIGHT POLE, ARM MOUNT LUMINAIRE
- RETAINING WALL

NOTE:
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SHEET 3 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

2

WLC ACCESS ROAD

16XFN 17XFN 18XFN 19XFN

SWAN BOULEVARD

181BV 182BV 183BV 184BV 185BV

MATCHLINE 180BV+94

MATCHLINE 185BV+74

5 CC

BOLLARD BOLLARDS BOLLARDS BOLLARD

MH MH MP MP

SIGN

INL

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
5 - INCH SPECIAL

LIGHT POLE, ARM MOUNT
LUMINAIRE

RETAINING WALL

NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB.
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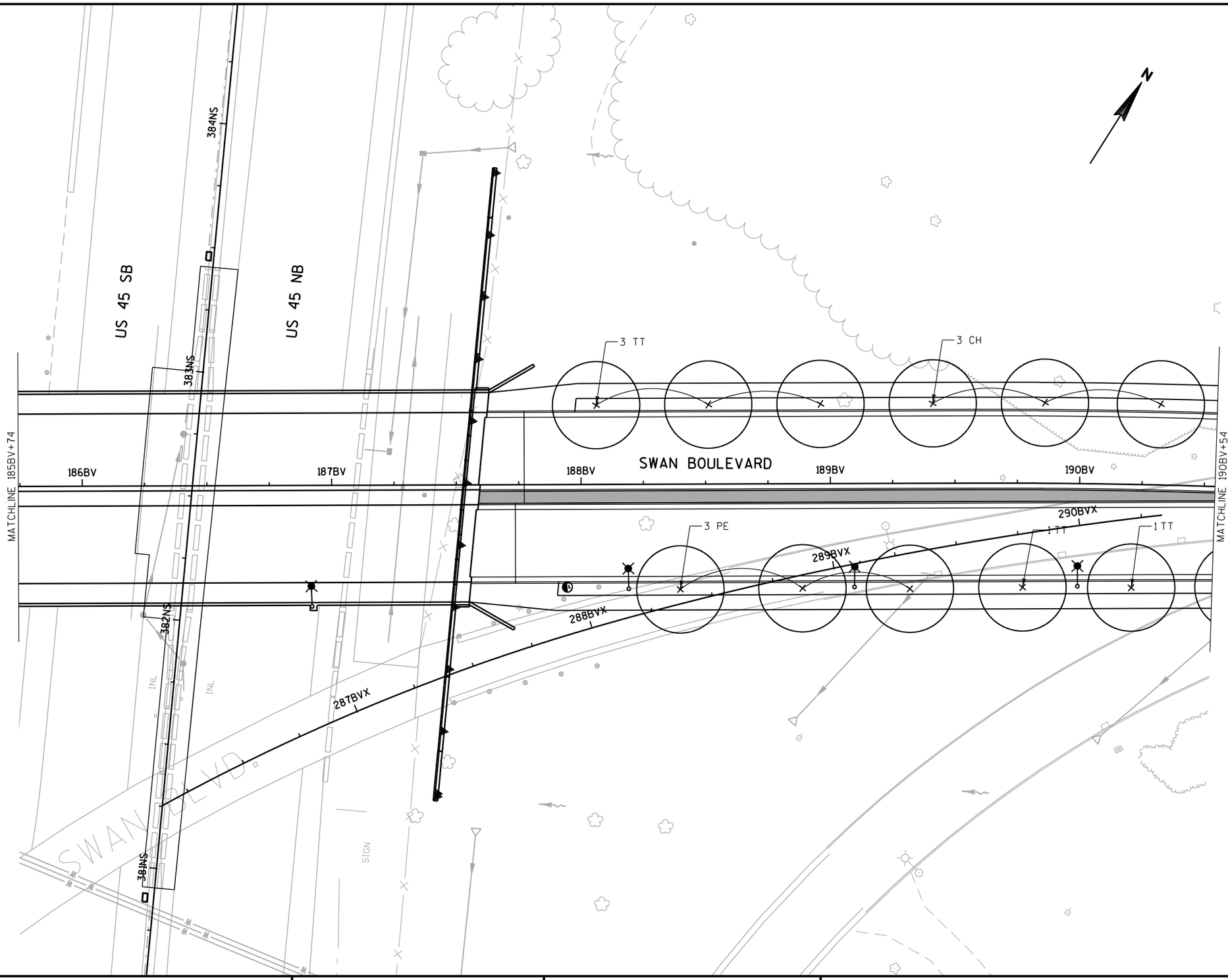
SHEET 4 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

- EXISTING TREE
- CONCRETE SIDEWALK 5 - INCH SPECIAL
- LIGHT POLE, ARM MOUNT LUMINAIRE
- RETAINING WALL

NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB.
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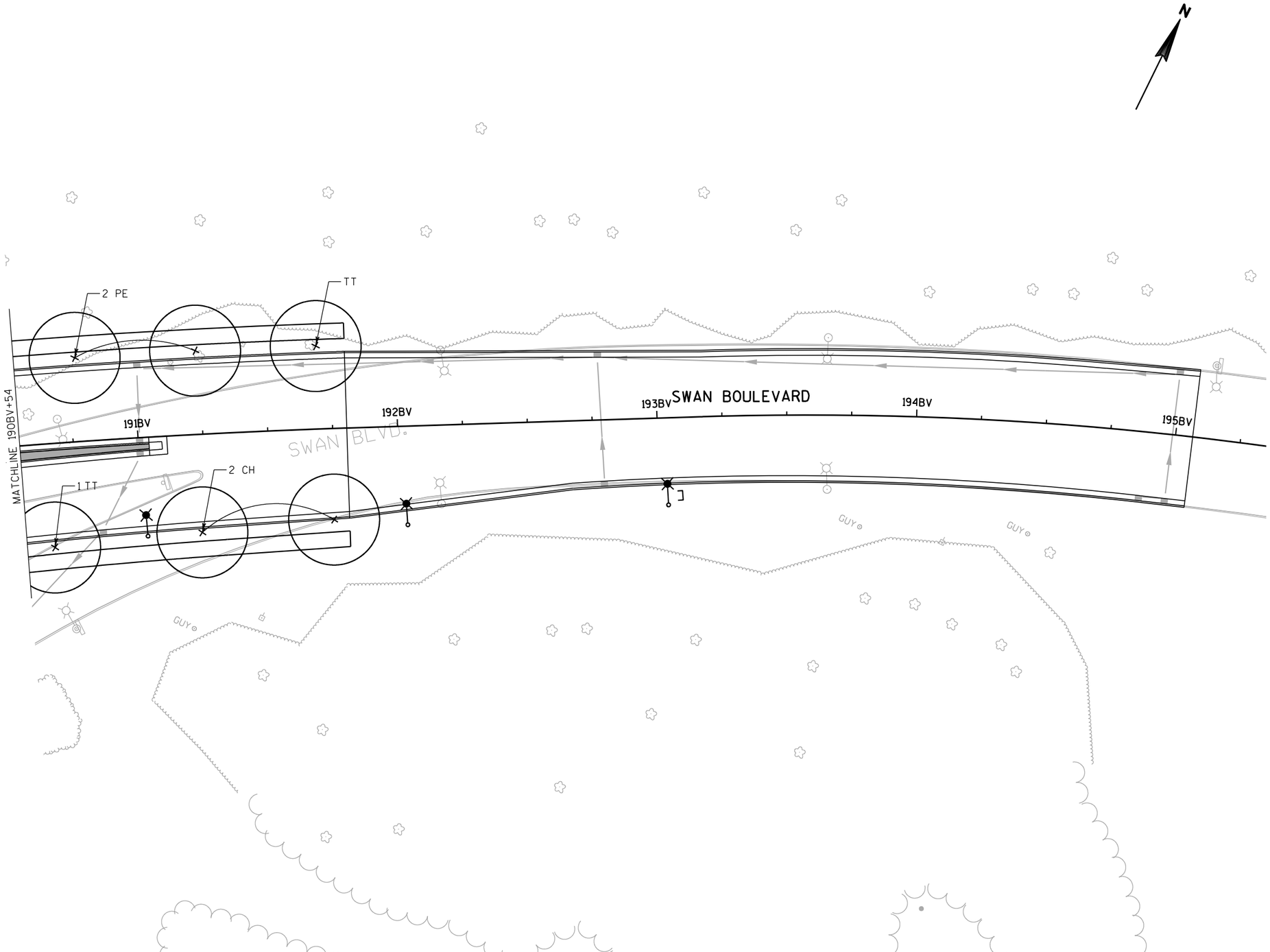
SHEET 5 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

- EXISTING TREE
- CONCRETE SIDEWALK 5 - INCH SPECIAL
- LIGHT POLE, ARM MOUNT LUMINAIRE
- RETAINING WALL

NOTE:
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SHEET 6 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

2

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

- EXISTING TREE
- CONCRETE SIDEWALK 5 - INCH SPECIAL
- LIGHT POLE, ARM MOUNT LUMINAIRE
- RETAINING WALL

NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB.
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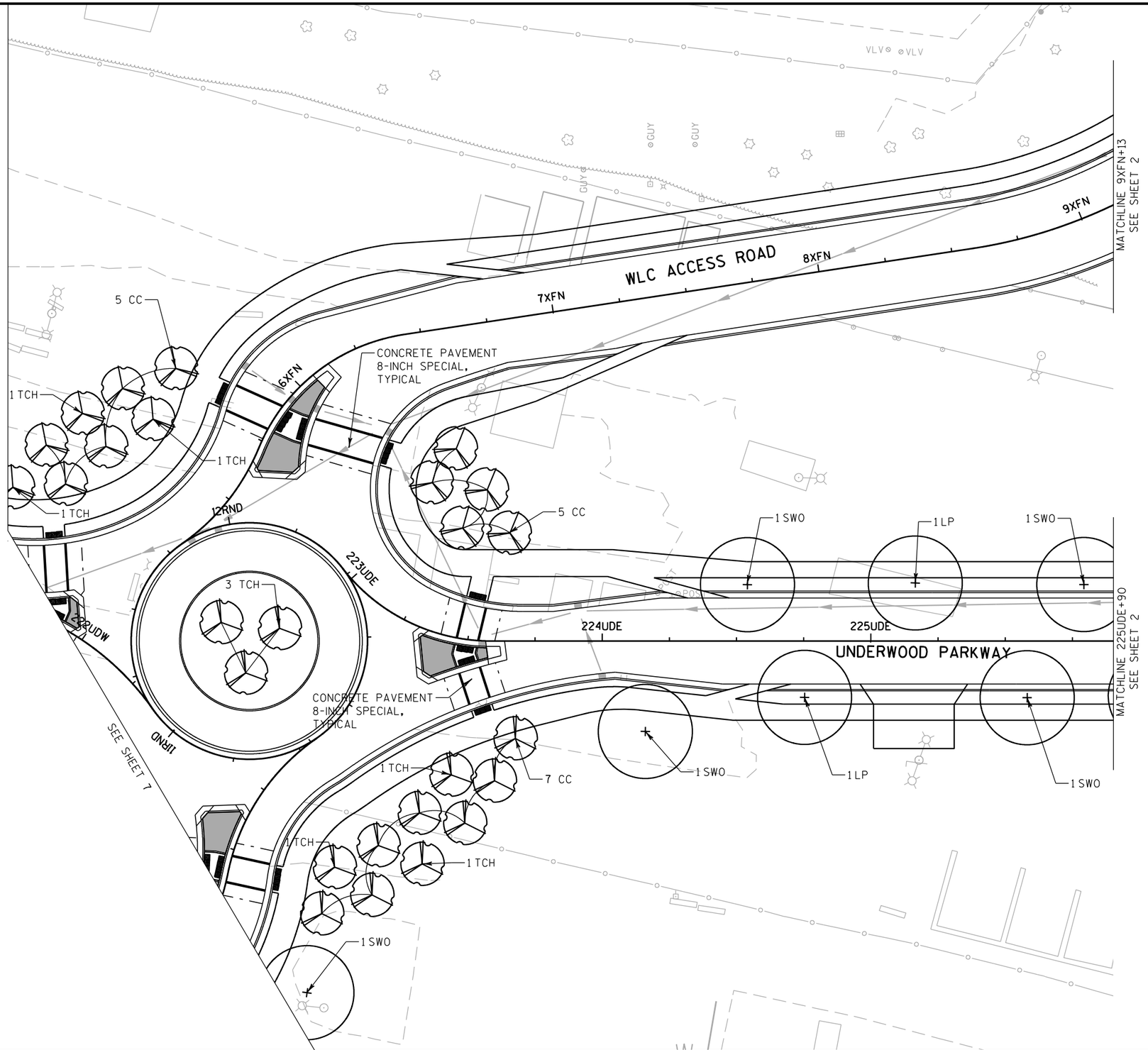
SHEET 7 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E



N

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	CH	HACKBERRY, COMMON
	SWO	OAK, SWAMP WHITE
	LP	TREE, LONDON PLANE
	TT	TREE, TULIP
DECIDUOUS TREES (ORNAMENTAL)		
	CC	CRABAPPLE, CAMELOT
	TCH	HAWTHORN, THORNLESS COCKSPUR
	HM	MAPLE, HEDGE

LEGEND

- EXISTING TREE
- CONCRETE SIDEWALK 5 - INCH SPECIAL
- LIGHT POLE, ARM MOUNT LUMINAIRE
- RETAINING WALL

NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB.
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SHEET 8 OF 8

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

SYM.	COMMON NAME	SCIENTIFIC NAME	AVE. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE	MINIMUM BALL OR POT SIZE		MINIMUM HOLE SIZE		BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROT'CT REQ'D	MULCH RING DIAM.
						DIAM.	DEPTH	DIAM.	DEPTH				
	DECIDUOUS TREES (SHADE)												
PE	Elm, Prospector	Ulmus carpinifolia 'Prospector'	50'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
CH	Hackberry, Common	Celtis occidentalis	50'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
SWO	Oak, Swamp White	Quercus bicolor	45'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
LP	Tree, London Plane	Plantanus occidentails	50'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
TT	Tree, Tulip	Liriodendron tulipifera	60'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
	DECIDUOUS TREES (ORNAMENTAL)												
CC	Crabapple,Camelot	Malus 'Camzam'	10'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
TCH	Hawthorn, Thornless Cockspur	Crataegus crus galli var. inermis	20'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
HM	Maple, Hedge	Acer campestre	25'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLANT DATA CHART	SHEET NO: 138	E

2

2

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- W ES (XX) INDICATES YEAR INSTALLED
- ESTR EXISTING SIGN TO REMAIN
- (XXXX) DENOTES SIGN NUMBER

186BV

184BV

382NS

380NS

378NS

376NS

374NS

372NS

370NS

368NS

776WD

774WD

772WD

SWAN BLVD

USH 45

USH 45

USH 45

SWAN BLVD

NB ON RAMP

SB OFF RAMP

130

131

NO PARKING THIS SIDE

R7-1D(2S)

REMOVE

101

EMERGENCY VEHICLE ENTRANCE ONLY

REMOVE

102

30 M.P.H.

REMOVE

103

SPEED LIMIT 40

REMOVE

104

12'-0"

LOW CLEARANCE AHEAD

REMOVE

RIGHT LANE

BUSES MOTORCYCLES AND 2 OR MORE OCCUPANT CAR POOLS ONLY

TRUCKS

ESTR

100

REMOVE

105

Swan Blvd

REMOVE AT LAST STAGE WHEN ROAD CLOSED

BOLLARD

BOLLARDS

BOLLARDS (6)

SIGN

INL

W

VLV

DOCK

UC

HW

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET 139 E

FILE NAME : J:\projects\D2_10603373\SIGN\023201_es.dgn PLOT DATE : 25-JAN-2013 10:55 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

106 REMOVE

107 REMOVE

108 REMOVE

109 DIVIDED HIGHWAY ENDS REMOVE

110 REMOVE

111 REMOVE

112 DO NOT ENTER REMOVE

113 DO NOT ENTER REMOVE

114 REMOVE

115 RIGHT LANE ENDS REMOVE

116 REMOVE

188BV

190BV

290BVX

288BVX

192BV

194BV

196BV

198BV

SWAN BLVD

SWAN BLVD.

SWAN BLVD.

SWAN BLVD

GPED GPED

INL

INL

EMERGENCY VEHICLE ENTRANCE ONLY

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

W ES(XX) INDICATES YEAR INSTALLED

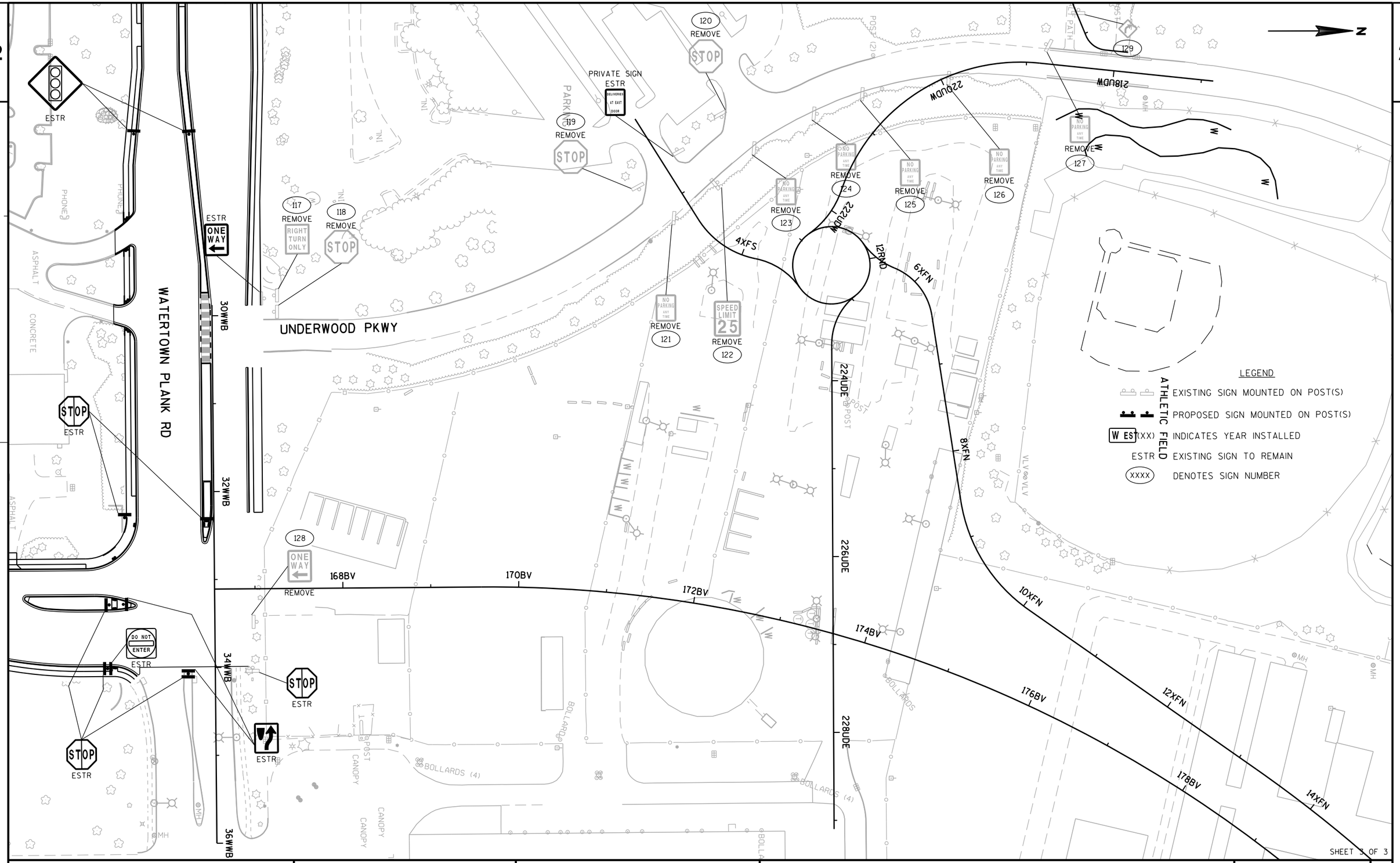
ESTR EXISTING SIGN TO REMAIN

(XXXX) DENOTES SIGN NUMBER

SHEET 2 OF 3

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET 140	E

FILE NAME : J:\projects\D2_10603373\SIGN\023202_es.dgn PLOT DATE : 25-JAN-2013 10:55 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 100:1



SHEET 3 OF 3

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET 141 E

FILE NAME : J:\projects\D2_10603373\SIGN\023203_es.dgn PLOT DATE : 25-JAN-2013 10:55 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 100:1

2

2

N

SWAN BOULEVARD

MATCHLINE 167BV+00
SEE SHEET 8

MATCHLINE 173BV+00

167BV
168BV
169BV
170BV
171BV
172BV

1001 R4-7(2M)
1002 R5-1(2M) DO NOT ENTER
1003 R6-3(2M) DIVIDED HIGHWAY
1004 R5-1A(2M) WRONG WAY
1005 R3-7R(3) RIGHT LANE MUST TURN RIGHT
1006 R3-5R(2M) ONLY
1007 R3-5A(2M) ONLY
1013 R3-7R(3) RIGHT LANE MUST TURN RIGHT
1014 ON LIGHT POLE D9-2(2M) MB6-1(2M)
1015 R3-20L(2M) BEGIN LEFT TURN LANE
1016 J3-1(2M) TO 45
1033 R4-7(2M)

R6-2L(2M) ONE WAY
1017

R1-1F(3) STOP
1018
1019

Watertown Plank Rd
M1-94H(2M)
ON SIGNAL MAST ARM
2001

OVERHEAD SIGN SUPPORT
S-40-638

R2-1(2M) SPEED LIMIT 40
1020

D1-4
Underwood Parkway
Wil-O-Way Hanson Golf Course
1200 N Mayfair Rd
WI Luth College Athletic Fields
1101

R5-2(2M)
1123

R3-20L(2M) BEGIN LEFT TURN LANE
1021

J3-1(2M) TO 45
1012

R3-5L(2M) ONLY
1008

R3-5L(2M) ONLY
1009

R4-5(4) TRUCKS USE RIGHT LANE
1010

R3-5L(2M) ONLY
1011

R3-20LL(2M) BEGIN LEFT TURN LANE
1022

LEGEND

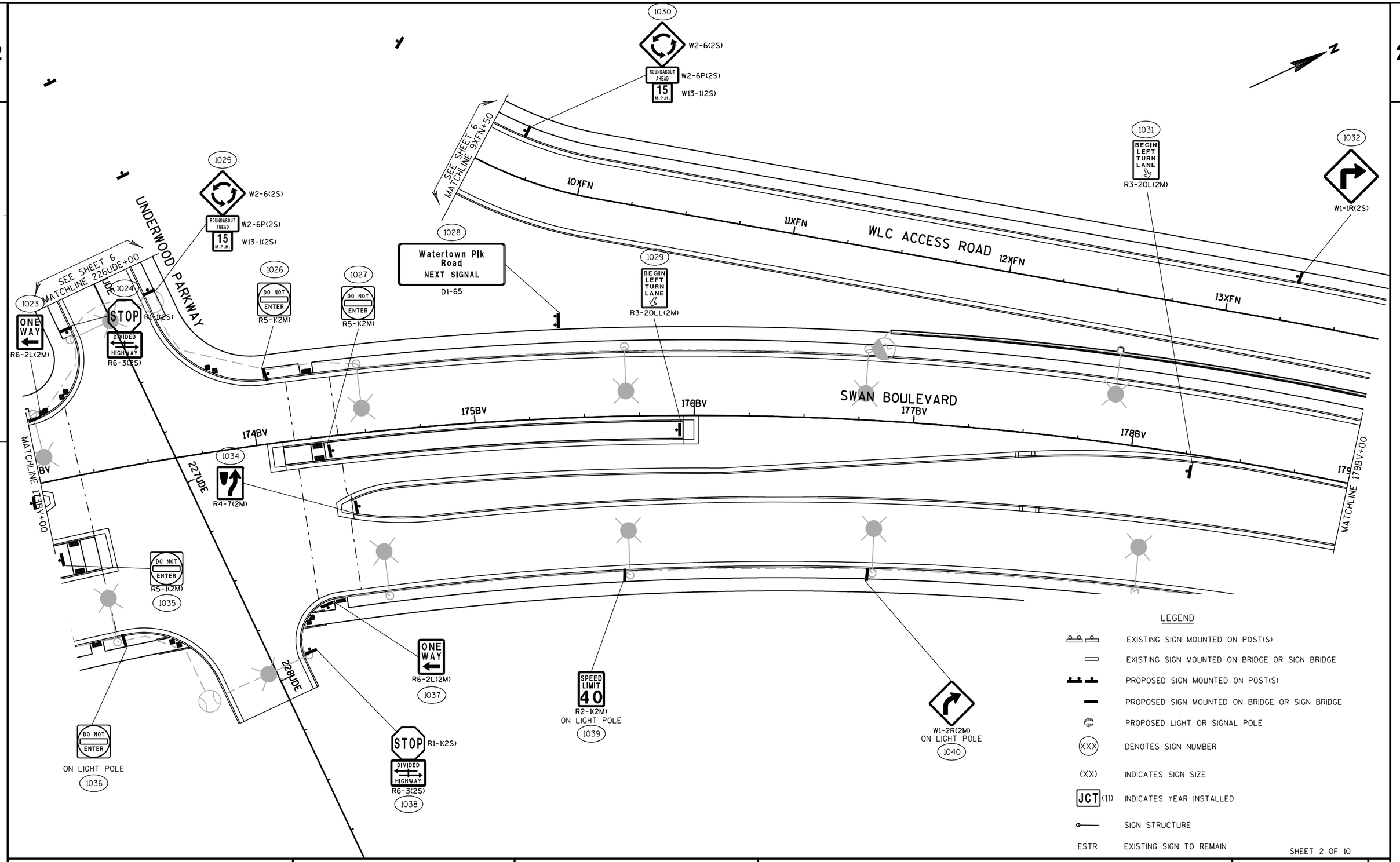
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED LIGHT OR SIGNAL POLE ON LIGHT POLE
- XXX DENOTES SIGN NUMBER
- (XX) INDICATES SIGN SIZE
- JCT (11) INDICATES YEAR INSTALLED
- SIGN STRUCTURE
- ESTR EXISTING SIGN TO REMAIN

SHEET 1 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET E

FILE NAME : J:\projects\D2_10603373\SIGN\023221_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023221_ps PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : J:\projects\D2_10603373\SIGN\023222_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023222_ps PLOT SCALE : 40:1

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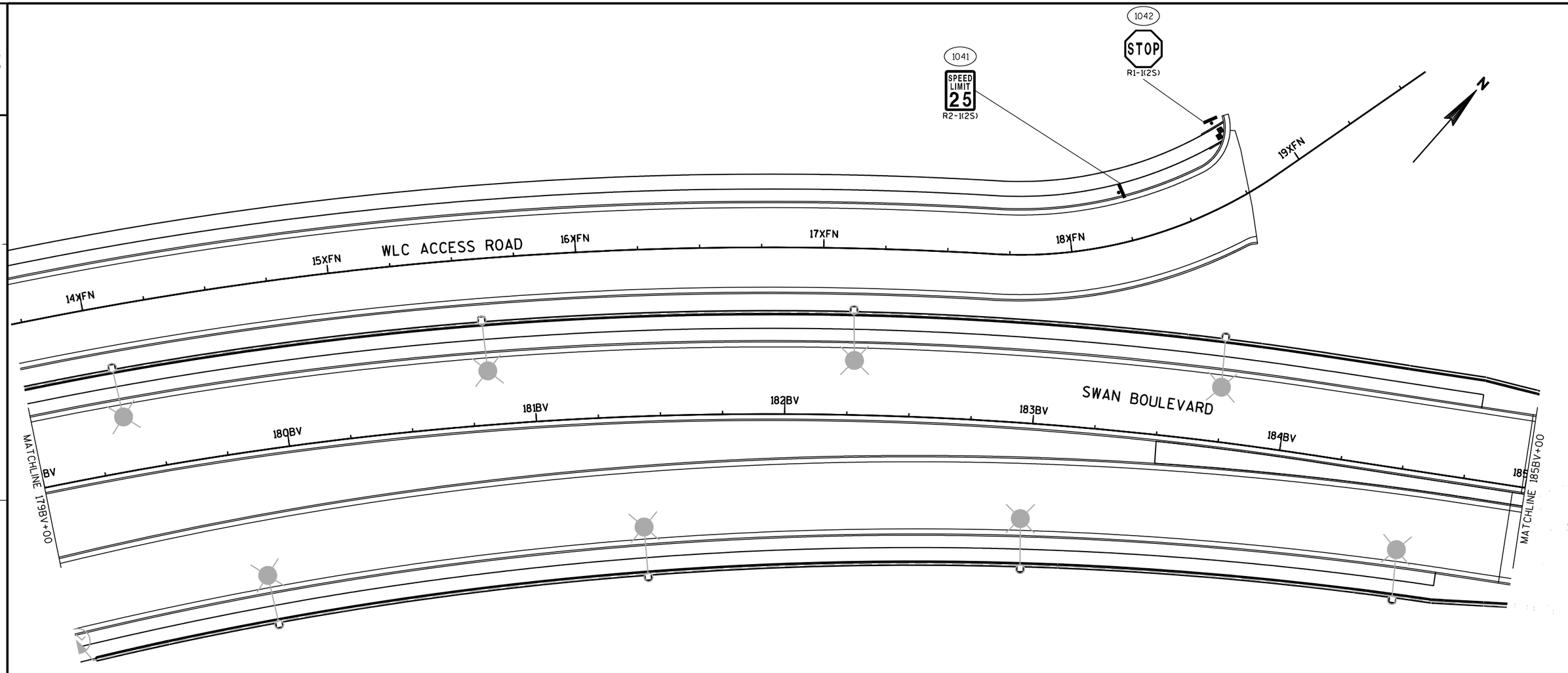
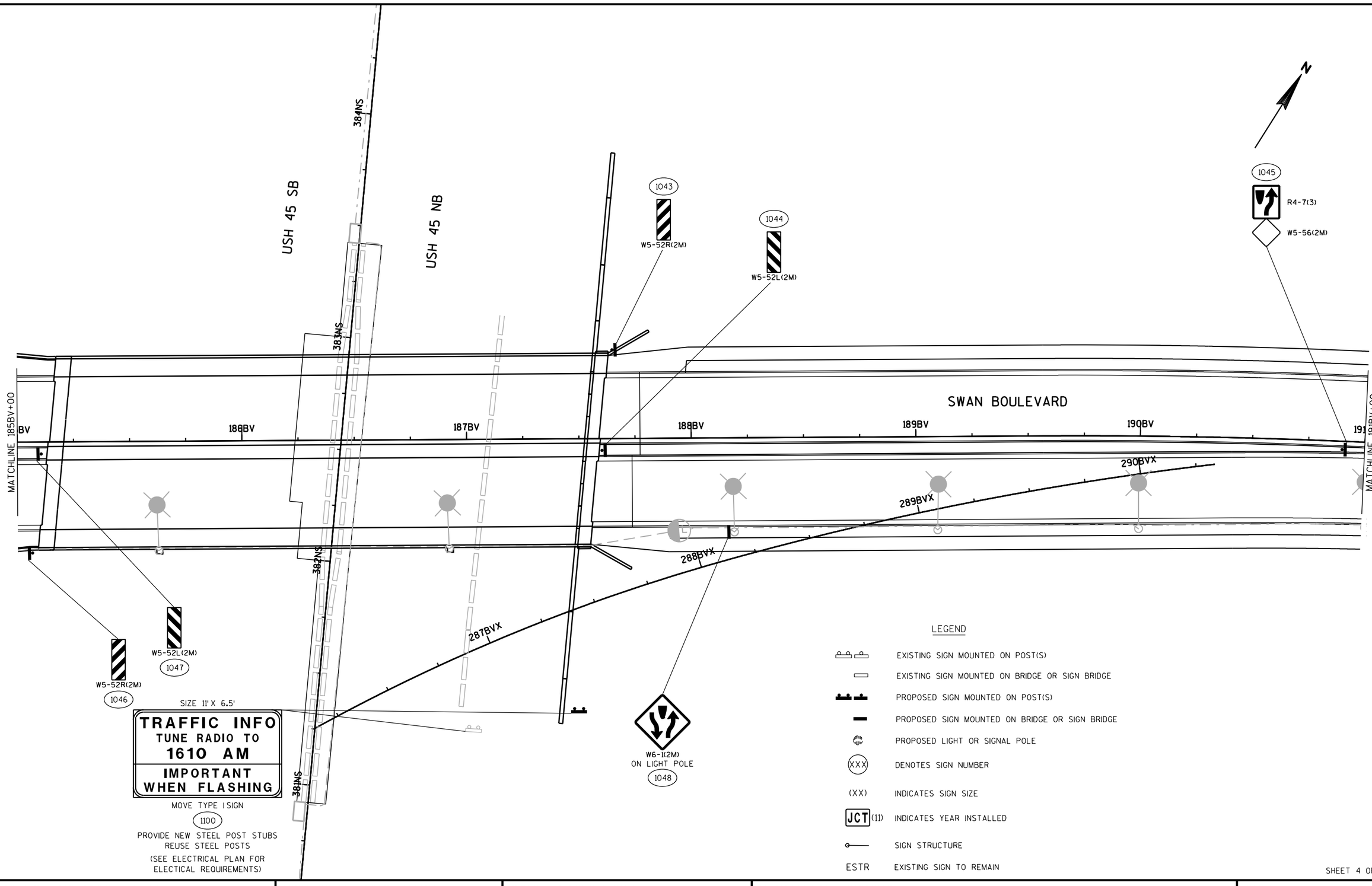


LEGEND

	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
	PROPOSED LIGHT OR SIGNAL POLE
XXX	DENOTES SIGN NUMBER
(XX)	INDICATES SIGN SIZE
JCT (11)	INDICATES YEAR INSTALLED
	SIGN STRUCTURE
ESTR	EXISTING SIGN TO REMAIN

2



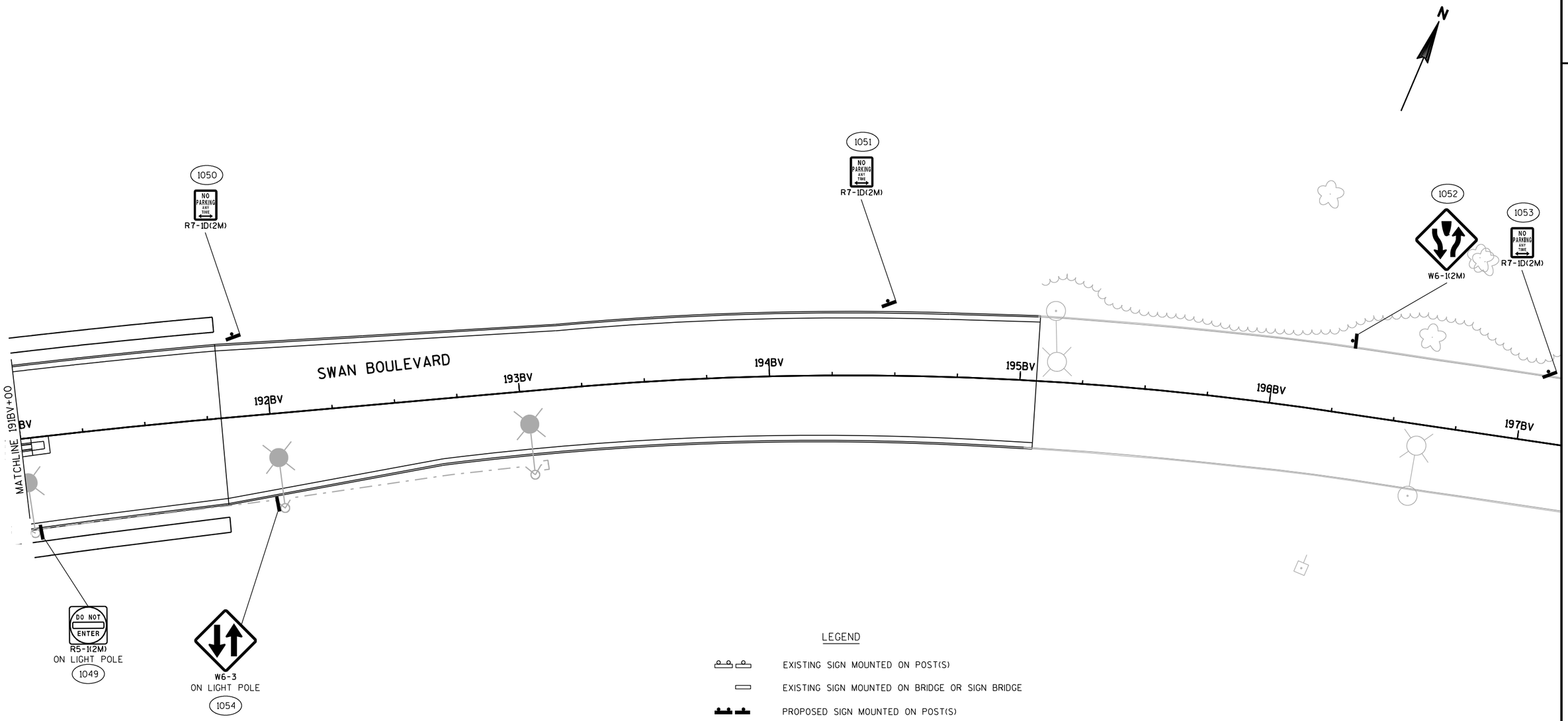
SHEET 4 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : J:\projects\D2_10603373\SIGN\023224_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023224_ps1 PLOT SCALE : 40:1

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
	PROPOSED LIGHT OR SIGNAL POLE
XXX	DENOTES SIGN NUMBER
(XX)	INDICATES SIGN SIZE
JCT (11)	INDICATES YEAR INSTALLED
	SIGN STRUCTURE
ESTR	EXISTING SIGN TO REMAIN

SHEET 5 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (XX) INDICATES SIZE
- JCT (11) INDICATES YEAR INSTALLED
- SIGN STRUCTURE
- ESTR EXISTING SIGN TO REMAIN

1055 Underwood Parkway D1-1

1056 R1-2(2S) YIELD; R1-54(2S) TO TRAFFIC FROM LEFT

1057 W11-2(2S); W16-7L(2S)

1058 R1-2(2S) YIELD; R6-2R(2S) ONE WAY

1059 R4-7(2S)

1060 WI Luth College Athletic Fields D1-1

1061 W11-2(2S); W16-7L(2S)

1062 W3-2(2S)

1063 1200 N Mayfair Rd; Underwood Parkway EAST WEST; Wil-O-Way Hanson Golf Course D1-3

1064 R4-7(2S)

1065 1066 W11-2(2S); W16-7L(2S)

1067 DO NOT ENTER R5-1(2S)

1068 R1-2(2S) YIELD; R1-54(2S) TO TRAFFIC FROM LEFT

1069 R1-2(2S) YIELD; R6-2R(2S) ONE WAY

1070 W11-2(2S); W16-7L(2S)

1071 R4-7(2S)

1072 W3-2

1073 Underwood Parkway; 1200 N Mayfair Rd; WI Luth College Athletic Fields D1-3

1074 R1-2(2S) YIELD; R6-2R(2S) ONE WAY

1075 R1-2(2S) YIELD; R1-54(2S) TO TRAFFIC FROM LEFT

1076 1200 N Mayfair Rd D1-1

1077 1078 W11-2(2S); W16-7L(2S)

1079 1080 1081 1082 R6-4B(2S) ONE WAY; R6-1R(2S); 4' MOUNTING HEIGHT

1083 R1-2(2S) YIELD; R6-2R(2S) ONE WAY

1084 R1-2(2S) YIELD; R1-54(2S) TO TRAFFIC FROM LEFT

1085 W11-2(2S); W16-7L(2S)

1086 Underwood Parkway D1-1

1087 DO NOT ENTER R5-1(2S)

1088 DO NOT ENTER R5-1(2S)

1089 DO NOT ENTER R5-1(2S)

WLC ACCESS ROAD

UNDERWOOD PARKWAY

6XFN 7XFN 8XFN 9XFN

12RND

223UDE 224UDE 225UDE 226

SEE SHEET 2 MATCHLINE 9XFN+50

SEE SHEET 7 MATCHLINE 221UDW+50

MATCHLINE 226UDE+00 SEE SHEET 2

MATCHLINE 4XFS+00 SEE SHEET 7

N

SHEET 6 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET E

FILE NAME : J:\projects\D2_10603373\SIGN\023226_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023226_ps PLOT SCALE : 40:1

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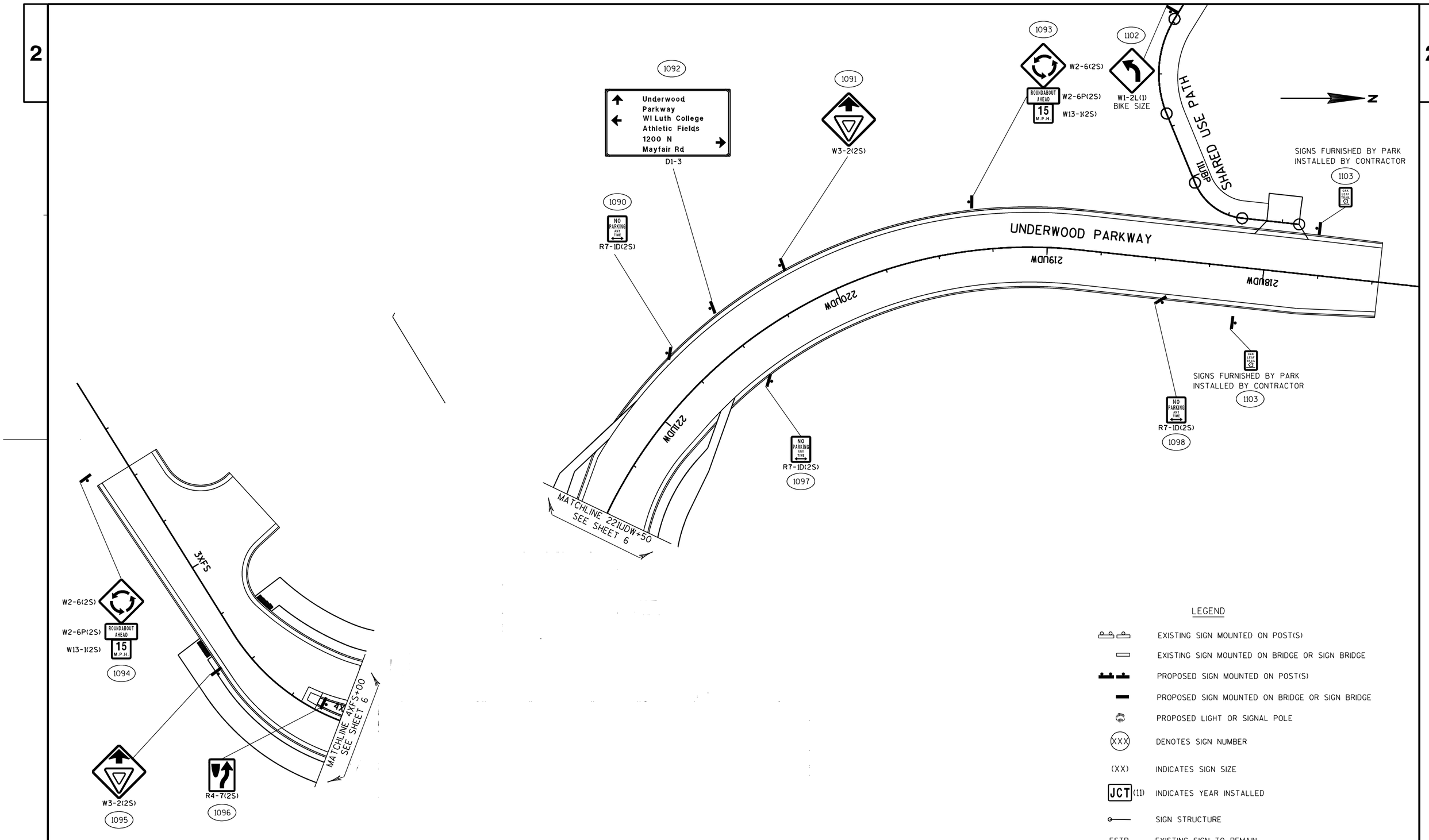


LEGEND

	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
	PROPOSED LIGHT OR SIGNAL POLE
XXX	DENOTES SIGN NUMBER
(XX)	INDICATES SIGN SIZE
JCT (11)	INDICATES YEAR INSTALLED
	SIGN STRUCTURE
ESTR	EXISTING SIGN TO REMAIN

SHEET 7 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

SEE SHEET 1
MATCHLINE 167BV+00

167

30WWB 31WWB 32WWB 33WWB 34WWB 35WWB

N

ONE WAY
R6-2L(2M)
1099

Innovation Dr
Swan Blvd
M1-94H(2M)
ON SIGNAL MAST ARM
2002

W. WATERTOWN PLANK ROAD

2003
Watertown Plank Rd
M1-94H(2M)
ON SIGNAL MAST ARM

DO NOT ENTER
ESTR

STOP
R1-1F(3)
ESTR

INNOVATION DRIVE

Swan Blvd
Innovation Dr
M1-94H(2M)
ON SIGNAL MAST ARM
2004

STOP
R1-1F(3)
ESTR

GUY
GUY
GUY
WV
WV
HALT
CONCRETE
CONC
ASPHALT
ASPHALT
A/C

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (XX) INDICATES SIGN SIZE
- JCT (11) INDICATES YEAR INSTALLED
- SIGN STRUCTURE
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : J:\projects\D2_10603373\SIGN\023228_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023228_ps PLOT SCALE : 40:1

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (XX) INDICATES SIGN SIZE
- JCT (11) INDICATES YEAR INSTALLED
- SIGN STRUCTURE
- ESTR EXISTING SIGN TO REMAIN

NOTE: ANY OTHER SIGNS NOT SHOWN ARE EXISTING SIGNS TO REMAIN.

N

2

1104
STOP
R1-1F(3)

1105
MOVE
R4-7

64WWB 65WWB 66WWB 67WWB 68WWB 69WWB

64WEB 65WEB 66WEB 67WEB 68WEB 69WEB

W. WATERTOWN PLANK RD

MH GV WV

12XI 13XI 14XI 15XI 16XI 17XI

W3-3(2M)
1106 1107
16x16 ORANGE FLAGS INCIDENTAL

STOP
R1-1F(3)
1108

STOP
R1-1F(3)
ON WOOD POLE
1109

DO NOT ENTER
R5-1(2S)
1110
1111

W11-2
MOVE
1112

SHEET 9 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : J:\projects\D2_10603373\SIGN\023229_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023229_ps PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

NOTE: ANY OTHER SIGNS NOT SHOWN ARE EXISTING SIGNS TO REMAIN.

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (XX) INDICATES SIGN SIZE
- JCT (11) INDICATES YEAR INSTALLED
- SIGN STRUCTURE
- ESTR EXISTING SIGN TO REMAIN

DISCOVERY PARKWAY

1113 STOP R1-1F(3)

1121 R4-7(2M)

1114 MOVE W11-2

1116 ON WOOD POLE STOP R1-1F(3)

1120 MOVE W11-2

1117 STOP R1-1F(3)

1115 MOVE W11-2

R4-7 MOVE 1119

19X1

18X1

70WWB 71WWB 72WWB 73WWB 74WWB 75WWB

70WEB 71WEB 72WEB 73WEB 74WEB 75WEB

W. WATERTOWN PLANK RD

MH

16x16 ORANGE FLAGS INCIDENTAL

1118 1122 W3-3(2M)

SHEET 10 OF 10

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

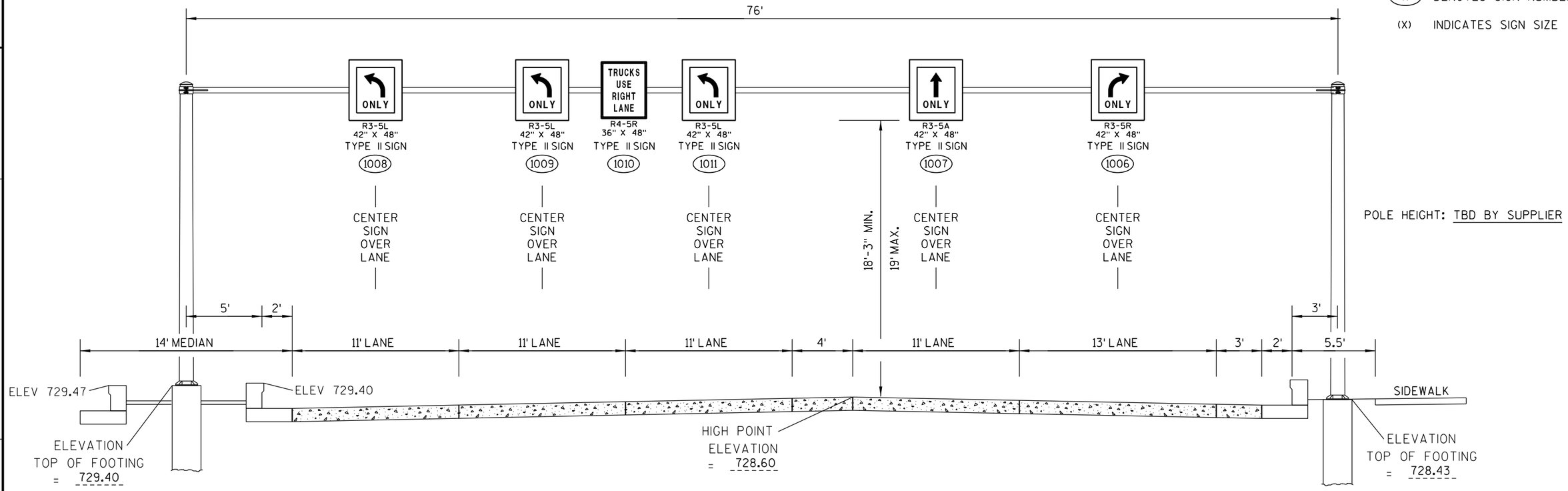
FILE NAME : J:\projects\D2_10603373\SIGN\023230_ps.dgn PLOT DATE : 30-JAN-2013 13:13 PLOT BY : MSCKVW PLOT NAME : 023230_ps PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

(X) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-40-638
SWAN BOULEVARD SB
STATION 169+67

NOTE. CONTRACTOR SHALL:

1. SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2. PROVIDE DESIGN CALCULATIONS.
3. SHOW SIGNS ON SHOP DRAWINGS.
4. I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT.
5. 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWING.

IBEAMS - W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS.

FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE

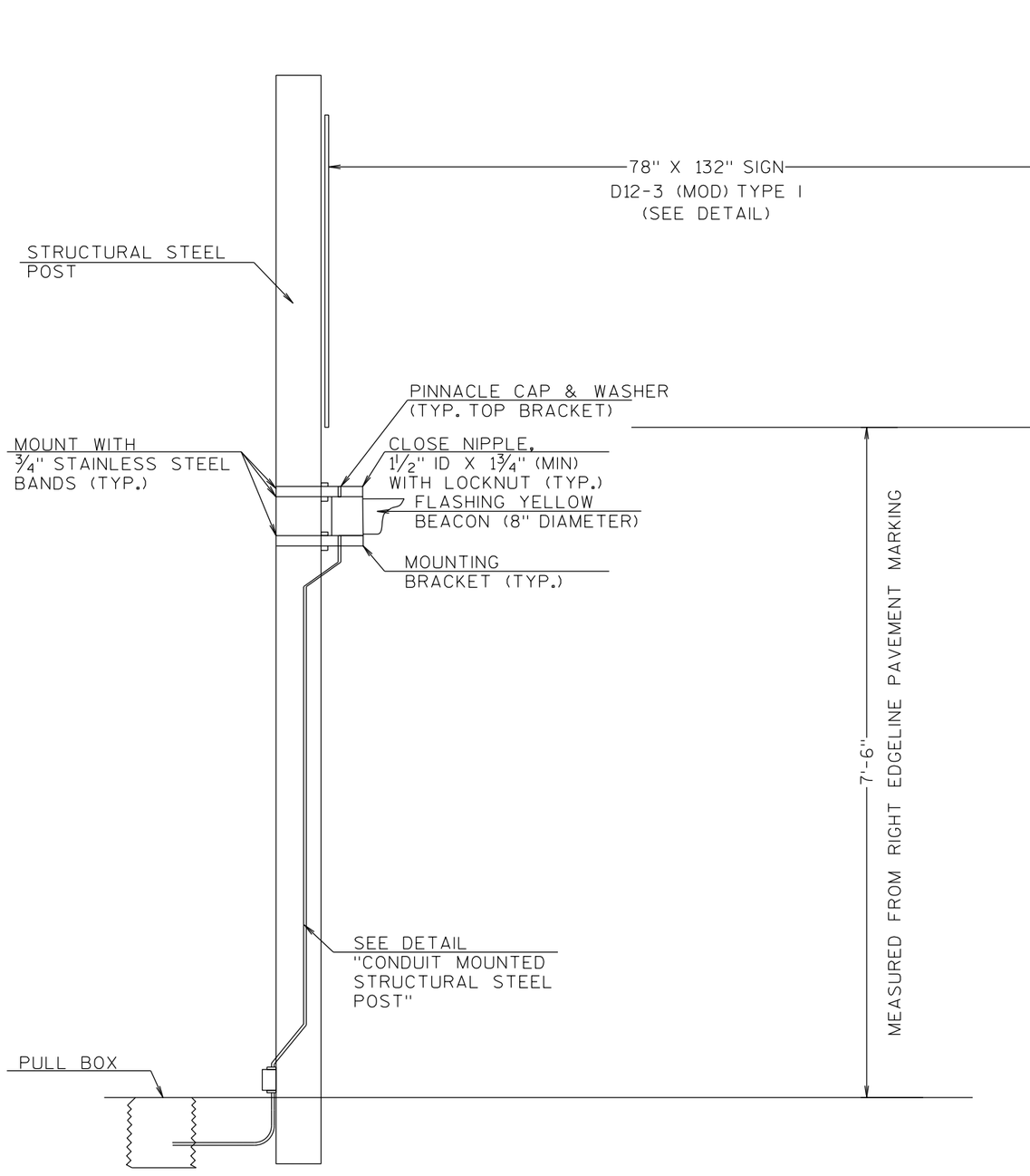
MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS.

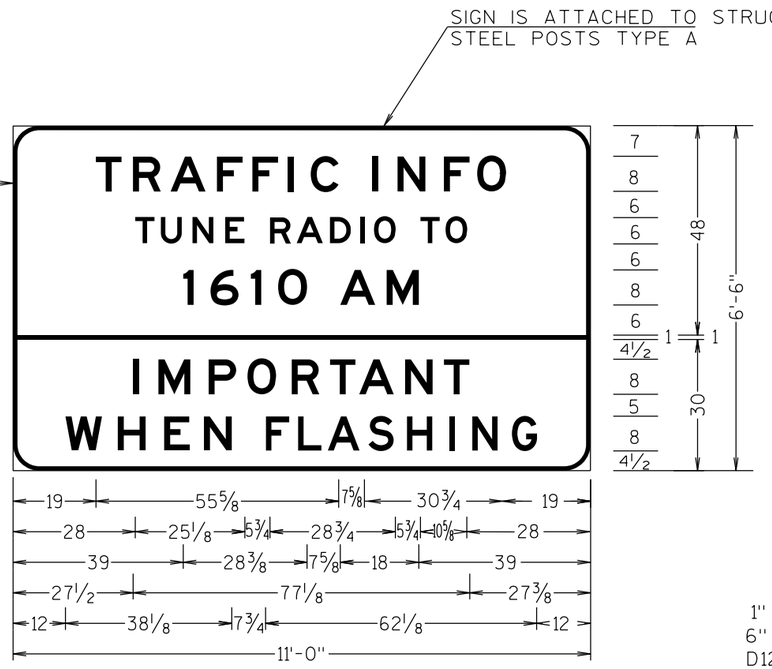
GENERAL NOTES

1. DRAWINGS NOT TO SCALE.
2. DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".
3. THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.
4. WIND VELOCITY PER WISDOT STD SPECIFICATIONS.
5. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

SHEET 1 OF 1

PROJECT NO: 1060-33-73	HWY: SWAN BLVD	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT S-40-638 FULL SPAN	SHEET 152	E





EXISTING SIGN TO BE MOVED

PROVIDE NEW STEEL POSTS

1" BORDER
6" RADIUS
D12-3 (MOD)

TYPE 1

COLOR:

BLUE BACKGROUND - TOP
WHITE MESSAGE - TOP
YELLOW BACKGROUND - BOTTOM
BLACK MESSAGE - BOTTOM

NOTES:

1. ALL SIGNS ARE TYPE 1 (EXCEPT AS NOTED) - TYPE H REFLECTIVE-REFERENCE "WIS DOT STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION" LATEST EDITION.
2. 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.
3. ALL CAP LETTERS ARE SERIES E MODIFIED. ALL UPPER AND LOWER CASE LETTERS ARE SERIES E MODIFIED.
4. SIGN NUMBERS SHOWN BY: ◯
5. DO NOT SCALE.

TYPICAL DETAIL

HARS FLASHER ASSEMBLY
(NOT TO SCALE)

PROJECT NO: 1060-33-73	HWY: SWAN BLVD	COUNTY: MILWAUKEE	HAR FLASHER DETAIL	SHEET 153	E

2

2

N

STH 100

UNION PACIFIC RR

UNDERWOOD PARKWAY

USH 45

SWAN BOULEVARD

OAK LEAF TRAIL

N. MAYFAIR ROAD

INNOVATION DRIVE

W. WATERTOWN PLANK ROAD

CITY OF WAUWATOSA

EXISTING
DOT

HL-40-UC	
A,C	BLACK
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,C,B,D	30A
480VAC GROUNDED NEUTRAL	2 WIRE

EXISTING
CITY OF WAUWATOSA

89
CIRCUITS NE (#1) NW (#2) SW (#3) SE (#4)
240/480V 1 PHASE GROUNDED NEUTRAL

CONSTRUCTION BY OTHERS
UNDER PROJECT ID 1060-33-72

CONSTRUCTION BY OTHERS
UNDER ID 1060-33-72

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PROJECT OVERVIEW - LIGHTING REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023501_lp.dgn PLOT DATE : 12-MAR-2013 13:45 PLOT BY : MSCITM PLOT NAME : 023501_lp PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

2

N

UNION PACIFIC RR

STH 100

EXISTING
DOT

HL-40-UC	
A,C	BLACK
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,C,B,D	30A
480VAC	2 WIRE GROUNDED NEUTRAL

UNDERWOOD PARKWAY

USH 45

SWAN BOULEVARD

B-40-775

R-40-484

R-40-485

R/L NS

WLC ACCESS ROAD

R/L BV

NEW
CITY OF WAUWATOSA

SB	
A,C,E,G	BLACK
B,D,F,H	RED
N	WHITE
GND	GREEN OR BARE
A,B,C,D,E,F,G,H	40A
240/480V	1 PHASE ISOLATED NEUTRAL

EXISTING
CITY OF WAUWATOSA

89	
CIRCUITS	
NE (#1)	
NW (#2)	
SW (#3)	
SE (#4)	
240/480V	1 PHASE GROUNDED NEUTRAL

CITY OF WAUWATOSA

OAK LEAF TRAIL

SHARED USE PATH

CONSTRUCTION BY OTHERS
UNDER PROJECT ID 1060-33-72

CONSTRUCTION BY OTHERS
UNDER PROJECT ID 1060-33-70

W. WATERTOWN PLANK ROAD

R/L WWB

N. MAYFAIR ROAD

INNOVATION DRIVE

CONSTRUCTION BY OTHERS
UNDER PROJECT ID 1060-33-72

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PROJECT OVERVIEW - FINAL LIGHTING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023502_lp.dgn PLOT DATE : 12-MAR-2013 13:46 PLOT BY : MSCITM PLOT NAME : 023502_lp PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

GENERAL NOTES

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

LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED.

THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION 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 ALL CONDUITS.

PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED 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.

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.) UNLESS OTHERWISE NOTED ON PLANS.

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

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWING FOR ALL THE WORK BEING DONE.

INSTALLATION OF LATERAL UNDERGROUND CONDUIT UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCHES BELOW PROPOSED GRADE. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DAMAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAYBE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

HAND DIGGING MAYBE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED & WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BASE BID ITEM. COORDINATE ALL WORK NEAR GAS LINE WITH WE ENERGIES.

EXISTING CONDUIT AND CID NO LONGER BEING USED IS ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ABANDONED WIRING AT THE CONTRACT'S EXPENSE. ABANDONED PULL BOX REMOVAL IS INCIDENTAL TO THE ROAD CONSTRUCTION.

ALL UNDERGROUND WIRING AND CONDUIT FOR POLES BEING REMOVED IS ABANDONED IN PLACE UNLESS NOTED OTHERWISE. CONTRACTOR MAY SALVAGE ABANDONED WIRING AT HIS OWN EXPENSE.

STAGING NOTES

MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, PROPOSED LIGHTING OR BOTH.

DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE REMOVAL/SALVAGE BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION.

TEMPORARY LIGHTING TO ILLUMINATE AN AREA BEFORE EXISTING LIGHTING UNITS IN THE AREA ARE SCHEDULED FOR REMOVAL. THE SCHEDULING OF REMOVAL IS AT THE DISCRETION OF THE CONTRACTOR WITH THE PROVISION THAT LIGHTING OF THE ROADWAY IS PROVIDED AT ALL TIMES.

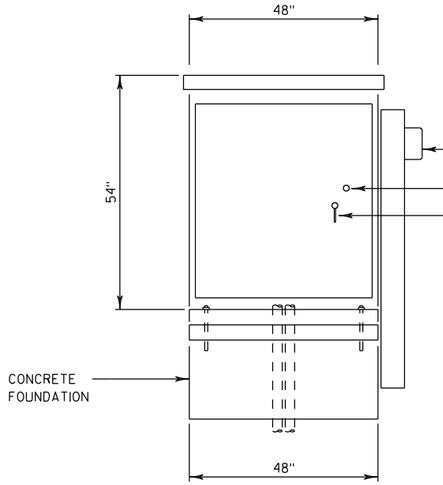
2

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - GENERAL NOTES	SHEET	E

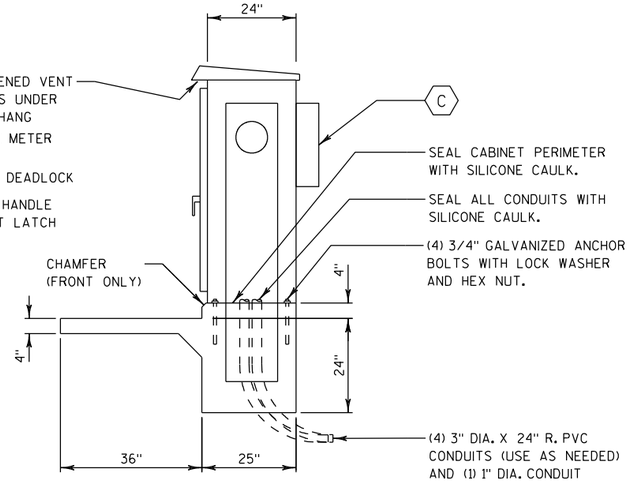
2

GENERAL NOTES

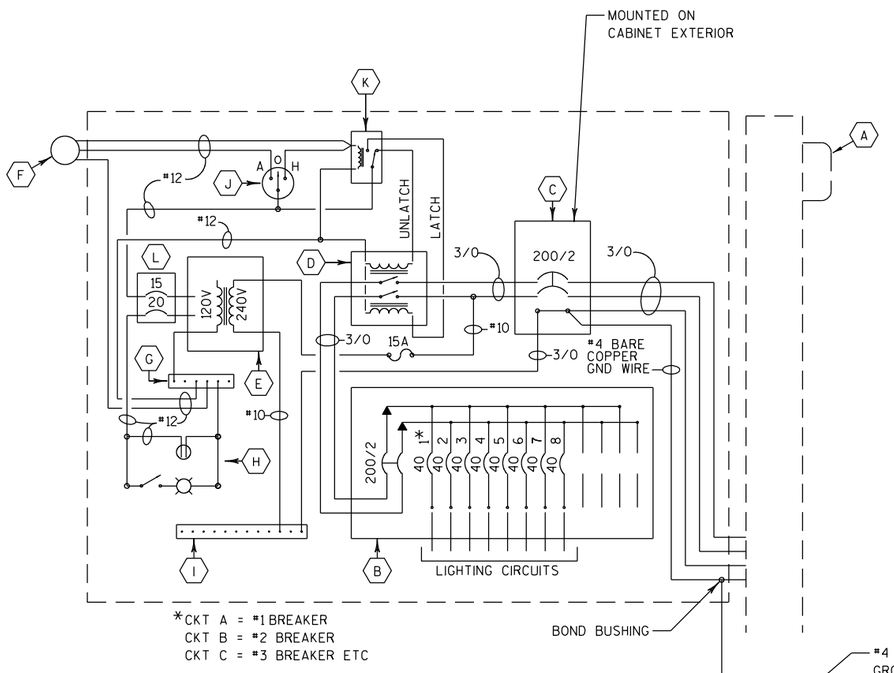
1. PROVIDE PVC, RUBBER OR OTHER NON-CONDUCTIVE SHROUD OVER EXPOSED LUGS ON CONTACTOR.



FRONT VIEW
NTS



SIDE VIEW
NTS



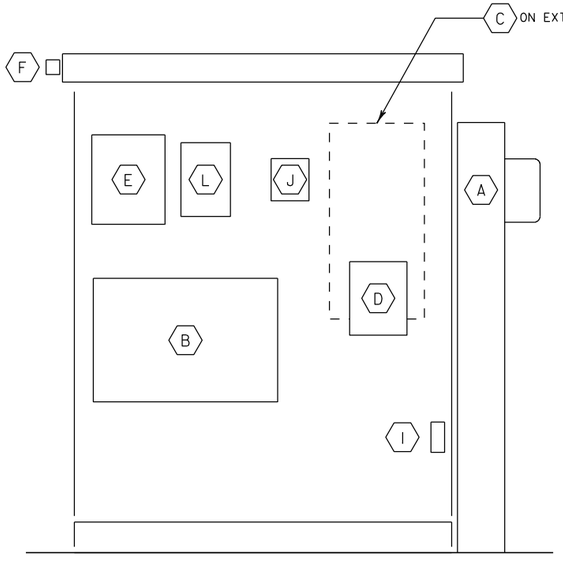
*CKT A = #1 BREAKER
CKT B = #2 BREAKER
CKT C = #3 BREAKER ETC

DISTRIBUTION CABINET SCHEMATIC
NTS

PROVIDE QUANTITY OF BREAKERS BASED ON NUMBER OF LIGHTING CIRCUITS SHOWN IN LIGHTING PLAN.

EQUIPMENT:

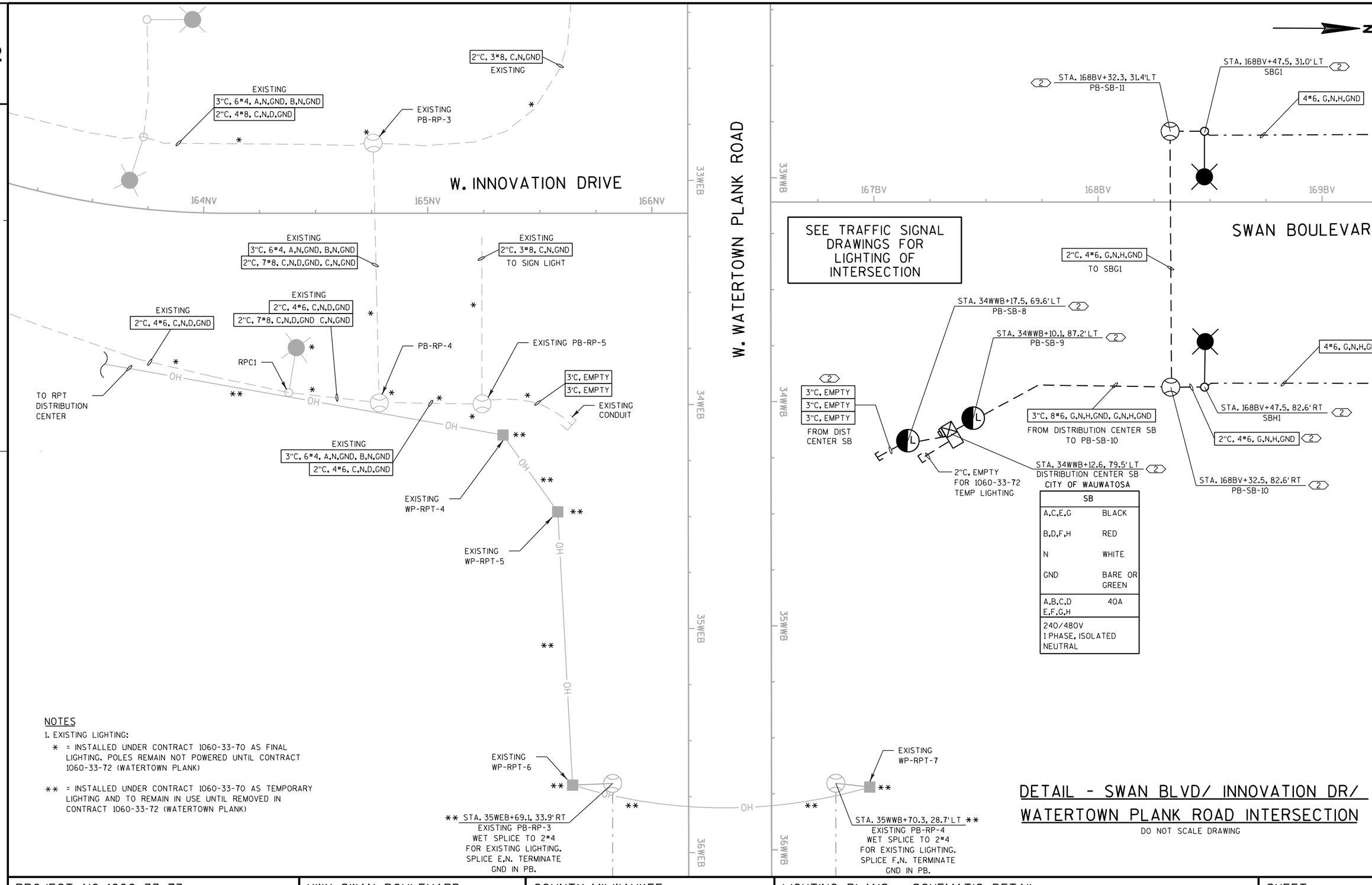
- (A) UTILITY APPROVED 200A, 240/480, 1PH, 3W METER PEDESTAL
- (B) SQUARE-D I-LINE DISTRIBUTION PANEL
- (C) 200A MAIN DISCONNECT 2P, 600V, SN, NEMA 4X STAINLESS STEEL MOUNTED ON EXTERIOR. UNIT TO BE LOCKABLE IN ON & OFF POSITIONS
- (D) 200A MECHANICALLY HELD CONTACTOR
- (E) 240V/120V 3KVA CONTROL TRANSFORMER
- (F) BUTTON TYPE PHOTO CELL, 120V (FACE NORTH)
- (G) NEUTRAL BAR FOR 120V CIRCUITS.
- (H) 20A CIRCUIT WITH GFI RECEPTACLE, LIGHT AND SWITCH.
- (I) NEUTRAL BAR FOR 240V CIRCUITS (LOCATE ON CABINET SIDEWALL)
- (J) HAND-OFF-AUTO SWITCH
- (K) 8-PIN DPDT RELAY & SOCKET. 120V COIL, 10A CONTACTS
- (L) BREAKER BOX FOR 120V CIRCUITS



BASIC EQUIPMENT LAYOUT
NTS

DETAIL - SB DISTRIBUTION CENTER - WAUWATOSA
NTS

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - DETAILS	SHEET	E



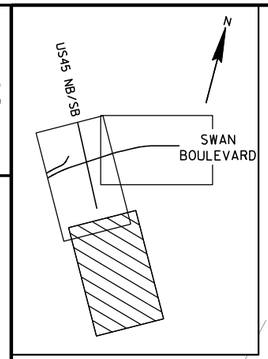
NOTES

1. EXISTING LIGHTING:
   - * = INSTALLED UNDER CONTRACT 1060-33-70 AS FINAL LIGHTING. POLES REMAIN NOT POWERED UNTIL CONTRACT 1060-33-72 (WATERTOWN PLANK)
   - ** = INSTALLED UNDER CONTRACT 1060-33-70 AS TEMPORARY LIGHTING AND TO REMAIN IN USE UNTIL REMOVED IN CONTRACT 1060-33-72 (WATERTOWN PLANK)

DETAIL - SWAN BLVD/ INNOVATION DR/ WATERTOWN PLANK ROAD INTERSECTION

DO NOT SCALE DRAWING

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC DETAIL	SHEET	E



N

768WD
770WD
772WD

DISCONNECT AND ABANDON WIRING TO REMOVED POLES, TYP

1 MC-1
1 MC-2
1 MC-3
1 MC-4

W. WATERTOWN PLANK ROAD

USH 45 SB
USH 45 NB

48 50 52 54 56 58 60
360NS 362NS 364NS 366NS 368NS 370NS 372NS

MATCHLINE 373NS+50

EXISTING DOT LIGHTING, NOT PART OF THIS CONTRACT, POLE TO REMAIN

SWAN BOULEVARD

2 8944
2 8945
2 8946
2 8947

EXISTING DOT LIGHTING, NOT PART OF THIS CONTRACT, POLE TO REMAIN

EXISTING DOT PULL BOX NOT PART OF THIS CONTRACT AND TO REMAIN

REMOVAL LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE REMOVAL STAGE NUMBER
- XYYZ — EXISTING DOT LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  X - CIRCUIT NUMBER
  YY - DISTRIBUTION CENTER,
  Z - POLE ID NUMBER
- XXYY — EXISTING MUNICIPAL LIGHTING POLE, WITH ARM MOUNTED LUMINAIRE
  XX - DISTRIBUTION CENTER,
  YY - POLE ID NUMBER
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- EXISTING MANHOLE
- EXISTING PULLBOX
- EXISTING PULLBOX

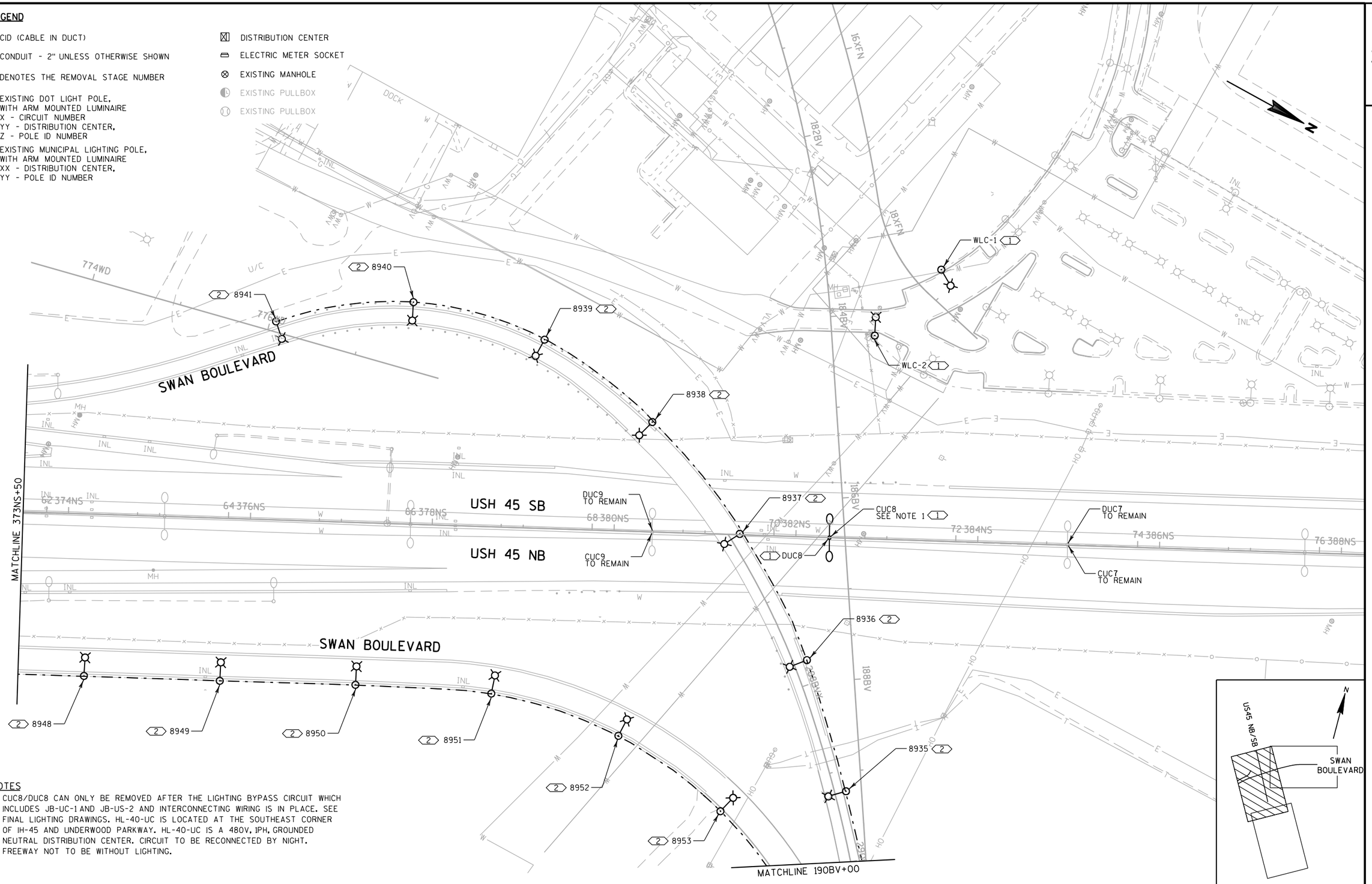
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - REMOVALS	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023516_lp.dgn PLOT DATE : 30-JAN-2013 11:40 PLOT BY : MSCITM PLOT NAME : 023516_lp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

REMOVAL LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE REMOVAL STAGE NUMBER
- XYYZ — EXISTING DOT LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  X - CIRCUIT NUMBER
  YY - DISTRIBUTION CENTER,
  Z - POLE ID NUMBER
- XXYY — EXISTING MUNICIPAL LIGHTING POLE, WITH ARM MOUNTED LUMINAIRE
  XX - DISTRIBUTION CENTER,
  YY - POLE ID NUMBER
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- EXISTING MANHOLE
- EXISTING PULLBOX
- EXISTING PULLBOX



NOTES

1. CUC8/DUC8 CAN ONLY BE REMOVED AFTER THE LIGHTING BYPASS CIRCUIT WHICH INCLUDES JB-UC-1 AND JB-US-2 AND INTERCONNECTING WIRING IS IN PLACE. SEE FINAL LIGHTING DRAWINGS. HL-40-UC IS LOCATED AT THE SOUTHEAST CORNER OF IH-45 AND UNDERWOOD PARKWAY. HL-40-UC IS A 480V, 1PH, GROUNDED NEUTRAL DISTRIBUTION CENTER. CIRCUIT TO BE RECONNECTED BY NIGHT. FREEWAY NOT TO BE WITHOUT LIGHTING.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - REMOVALS	SHEET	E

2

N

SWAN BOULEVARD

8932
TO REMAIN
DISCONNECT
CIRCUIT NW (#2)
AT THIS POLE

8931

8930

EXISTING CIRCUIT NW (#2)

8927
TO REMAIN

EXISTING CIRCUIT NE (#1)

ABANDON

2 8933

2 8934

192BV

194BV

196BV

198BV

GUY

OH

8956 2

8955 2

8954 2

ABANDON

8957
TO REMAIN
DISCONNECT
CIRCUIT SW (#3)
AT THIS POLE

EXISTING CIRCUIT SW (#3)

8958
TO REMAIN

EXISTING CIRCUIT SE (#4)

DISTRIBUTION CENTER #89

EXISTING

89
CIRCUITS NE (#1) NW (#2) SW (#3) SE (#4)
480/240V 1 PHASE GROUNDED NEUTRAL

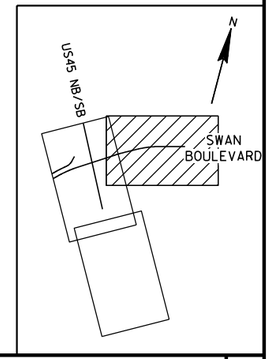
MATCHLINE 190BV+00

W

PIPL

REMOVAL LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE REMOVAL STAGE NUMBER
- XYYZ — EXISTING DOT LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  X - CIRCUIT NUMBER
  YY - DISTRIBUTION CENTER,
  Z - POLE ID NUMBER
- XXYY — EXISTING MUNICIPAL LIGHTING POLE, WITH ARM MOUNTED LUMINAIRE
  XX - DISTRIBUTION CENTER,
  YY - POLE ID NUMBER
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- EXISTING MANHOLE
- EXISTING PULLBOX
- EXISTING PULLBOX



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - REMOVALS	SHEET	E

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- (#) DENOTES THE CONSTRUCTION STAGE NUMBER FOR INSTALLATION
- W XXYZ CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE W - STATION/OFFSET XX - DISTRIBUTION CENTER, Y - CIRCUIT, Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 42"
- PULL BOX 24" x 36"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER
- SM STRUCTURE MOUNTED SEE STRUCTURAL DRAWINGS
- JUNCTION BOX

EXISTING DISTRIBUTION CENTER RPT **

RPT	
A1	BLACK
A2	RED
N	WHITE
GND	GREEN
A1/A2	40A/2P
120/240V 1 PHASE, ISOLATED NEUTRAL	

SEE LIGHTING PLANS - DETAILS - SWAN BLVD/ INNOVATION DR/ WATERTOWN PLANK ROAD INTERSECTION

EXISTING PARKING LOT LIGHTING TO BE MODIFIED/REMOVED BY OTHERS.

SEE SIGNAL DRAWINGS FOR LIGHTING INFORMATION AT INTERSECTION

W. INNOVATION DRIVE

SWAN BOULEVARD

UNDERWOOD PARKWAY

WLC ACCESS ROAD

W. WATERTOWN PLANK ROAD

MATCHLINE 175BV+00

NEW CITY OF WAUWATOSA

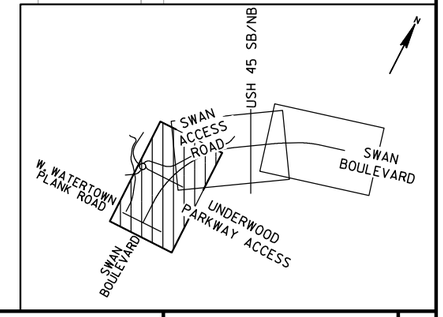
SB	
A,C,E,G	BLACK
B,D,F,H	RED
N	WHITE
GND	BARE OR GREEN
A,B,C,D E,F,G,H	40A
240/480V 1 PHASE, ISOLATED NEUTRAL	

NOTES

1. EXISTING LIGHTING:

* = INSTALLED UNDER CONTRACT 1060-33-70 AS FINAL LIGHTING. POLES REMAIN NOT POWERED UNTIL CONTRACT 1060-33-72 (WATERTOWN PLANK)

** = INSTALLED UNDER CONTRACT 1060-33-70 AS TEMPORARY LIGHTING AND TO REMAIN IN USE UNTIL REMOVED IN CONTRACT 1060-33-72 (WATERTOWN PLANK)



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023551_lp.dgn PLOT DATE : 12-MAR-2013 13:47 PLOT BY : MSCITM PLOT NAME : 023551_lp PLOT SCALE : 100:1

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE CONSTRUCTION STAGE NUMBER FOR INSTALLATION
- W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE. W - STATION/OFFSET. XX - DISTRIBUTION CENTER, Y - CIRCUIT, Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 42"
- PULL BOX 24" x 36"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER
- SM — STRUCTURE MOUNTED SEE STRUCTURAL DRAWINGS
- JUNCTION BOX

EXISTING DISTRIBUTION CENTER RPT **

RPT	
A1	BLACK
A2	RED
N	WHITE
GND	GREEN
A1/A2	40A/2P
120/240V 1 PHASE, ISOLATED NEUTRAL	

SEE LIGHTING PLANS - DETAILS - SWAN BLVD/ INNOVATION DR/ WATERTOWN PLANK ROAD INTERSECTION

EXISTING PARKING LOT LIGHTING TO BE MODIFIED/REMOVED BY OTHERS.

SEE SIGNAL DRAWINGS FOR LIGHTING INFORMATION AT INTERSECTION

W. INNOVATION DRIVE

SWAN BOULEVARD

UNDERWOOD PARKWAY

WLC ACCESS ROAD

W. WATERTOWN PLANK ROAD

MATCHLINE 175BV+00

NEW CITY OF WAUWATOSA

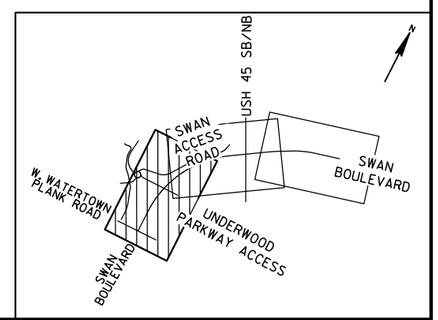
SB	
A,C,E,G	BLACK
B,D,F,H	RED
N	WHITE
GND	BARE OR GREEN
A,B,C,D E,F,G,H	40A
240/480V 1 PHASE, ISOLATED NEUTRAL	

NOTES

1. EXISTING LIGHTING:

* = INSTALLED UNDER CONTRACT 1060-33-70 AS FINAL LIGHTING. POLES REMAIN NOT POWERED UNTIL CONTRACT 1060-33-72 (WATERTOWN PLANK)

** = INSTALLED UNDER CONTRACT 1060-33-70 AS TEMPORARY LIGHTING AND TO REMAIN IN USE UNTIL REMOVED IN CONTRACT 1060-33-72 (WATERTOWN PLANK)



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- (#) DENOTES THE CONSTRUCTION STAGE NUMBER FOR INSTALLATION
- W / XXYZ CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 42"
- PULL BOX 24" x 36"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER
- SM STRUCTURE MOUNTED SEE STRUCTURAL DRAWINGS
- JUNCTION BOX

WLC ACCESS ROAD

SWAN BOULEVARD

USH 45 SB

USH 45 NB

THLETIC FIELD

DUC7 TO REMAIN

CUC7 TO REMAIN

CUC9 TO REMAIN

DUC9 TO REMAIN

STA. 18XFN+88.5, 56.6' LT (1) WLC-1

STA. 183BV+72.8, SM (2) SBH12

STA. 18XFN+94.4, 67.0' RT (1) WLC-2

STA. 19XFN+00.3, 77.0' RT (1) PB-WLC-1

STA. 383NS+46.6, 2.0' LT (1) JB-UC-1

STA. 182BV+26.9, SM (2) SBG12

STA. 180BV+81.2, SM (2) SBH11

STA. 179BV+35.3, SM (2) SBG11

STA. 177BV+89.4, SM (2) SBH10

STA. 176BV+84.8, 32.7' LT (2) PB-SB-14

STA. 176BV+77.8, 32.4' LT (2) SBG9

STA. 175BV+68.8, 31.7' LT (2) SBH8

STA. 176BV+85.2, 69.5' RT SBH9 (2)

STA. 175BV+69.2, 72.4' RT SBG8 (2)

STA. 178BV+10.9, 65.6' RT SBG10 (2)

STA. 179BV+00.6, 63.1' RT PB-SB-15 (2)

STA. 179BV+85.6, SM (2) SBG13

STA. 181BV+42.9, SM (2) SBH13

STA. 182BV+99.1, SM (2) SBG14

STA. 184BV+53.8, SM (2) SBH14

STA. 185BV+63.2, SM (2) SBG15

STA. 380NS+87.9, 3.4' LT (1) JB-UC-2

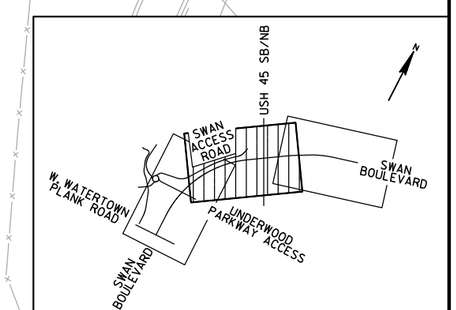
STA. 188BV+19.0, 41.9' RT SBG16 (2)

STA. 187BV+94.2, 41.9' RT PB-SB-16 (2)

STA. 186BV+92.6, SM SBH15 (2)

MATCHLINE 175BV+00

MATCHLINE 189BV+00



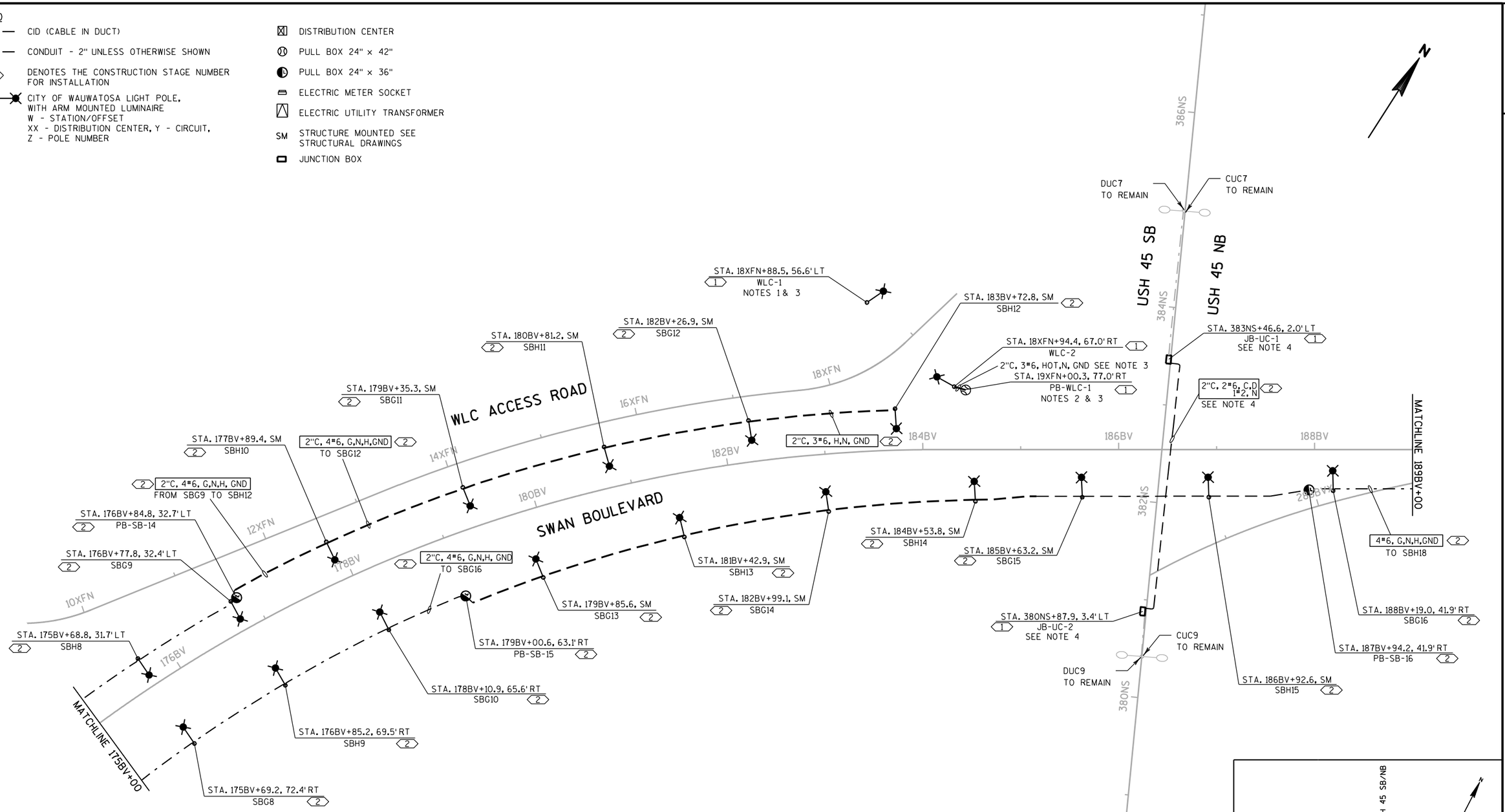
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E

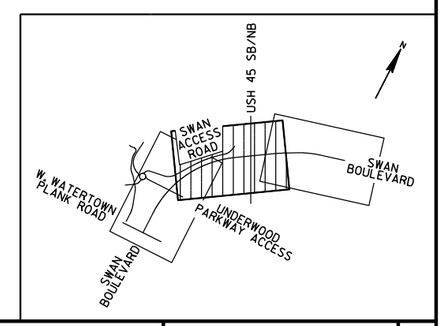
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023553_lp.dgn PLOT DATE : 12-MAR-2013 13:47 PLOT BY : MSCITM PLOT NAME : 023553_lp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- (#) DENOTES THE CONSTRUCTION STAGE NUMBER FOR INSTALLATION
- W / XXYZ CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 42"
- PULL BOX 24" x 36"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER
- SM STRUCTURE MOUNTED SEE STRUCTURAL DRAWINGS
- JUNCTION BOX





NOTE

1. INTERCEPT EXISTING CIRCUIT AND EXTEND TO RELOCATED POLE
2. LOCATE EXISTING CIRCUIT AND PLACE PULL BOX TO INTERCEPT. EXTEND 2"C, 2#6, 1#6GND FROM PULL BOX TO POLE. WET SPLICE.
3. COORDINTE POWER DISCONNECT WITH WISCONSIN LUTHERAN COLLEGE.
4. JB-UC-1 AND JB-UC-2 TO BE MOUNTED ON INSIDE OF EXISTING BARRIER. INTERCEPT EXISTING CID (2#6, C,D, #2 N) AT BOTH ENDS. COORDINATE CONDUIT BURIAL LOCATION AND DEPTH WITH PIER CONSTRUCTION. CONDUIT TO BE RIGID METALLIC.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

2

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE CONSTRUCTION STAGE NUMBER FOR INSTALLATION
- W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 42"
- PULL BOX 24" x 36"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER
- SM — STRUCTURE MOUNTED SEE STRUCTURAL DRAWINGS
- JUNCTION BOX

N

SWAN BOULEVARD

8932 8931 8930 8927 8657 8958

192BV 194BV 196BV 198BV 190BV 200BV

MATCHLINE 189BV+00

STA. 193BV+03.4, 33.5' RT
SBH18 (2)

STA. 192BV+02.8, 37.9' RT
SBG18 (2)

STA. 191BV+01.6, 38.0' RT
SBH17 (2)

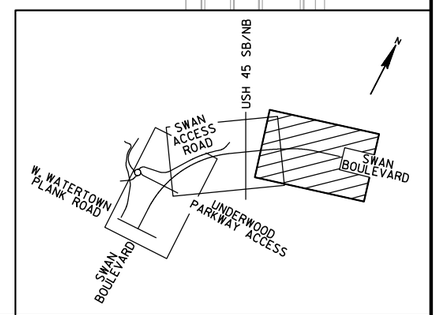
STA. 189BV+99.6, 41.2' RT
SBG17 (2)

STA. 189BV+09.5, 41.5' RT
SBH16 (2)

EXISTING
CITY OF WAUWATOSA

89
CIRCUITS NE (#1) NW (#2) SW (#3) SE (#4)
240/480V 1 PHASE GROUNDED NEUTRAL

DISCOVERY PARKWAY



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023555_lp.dgn PLOT DATE : 12-MAR-2013 13:48 PLOT BY : MSCITM PLOT NAME : 023555_lp PLOT SCALE : 100:1

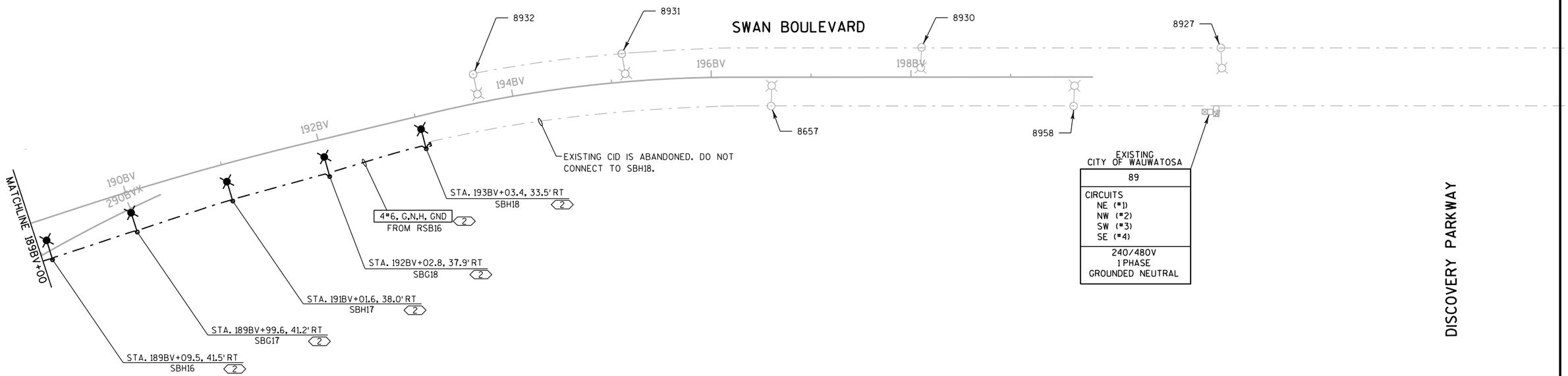
WISDOT/CADDS SHEET 42

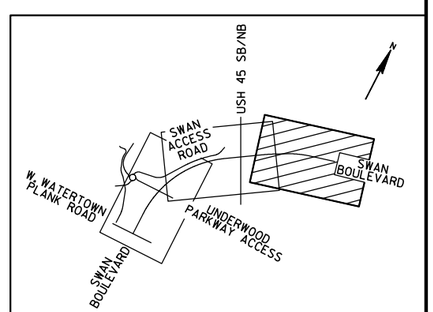
2

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE CONSTRUCTION STAGE NUMBER FOR INSTALLATION
- W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 42"
- PULL BOX 24" x 36"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER
- SM — STRUCTURE MOUNTED SEE STRUCTURAL DRAWINGS
- JUNCTION BOX

N





PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

2

N

SWAN BOULEVARD

USH 45

DISCOVERY PARKWAY

W. WATERTOWN PLANK ROAD

INNOVATION DRIVE

N. 92ND STREET

S1115

S1115

USH 45

W. WATERTOWN PLANK ROAD

LEGEND

WISDOT OWNED PERMANENT TRAFFIC SIGNAL

SXXXX

CITY OF WAUWATOSA OWNED TRAFFIC SIGNAL

(A) INSTALL TEMPORARY TRAFFIC SIGNAL

(B) REMOVE TEMPORARY TRAFFIC SIGNAL UPON 1060-33-73 PROJECT COMPLETION

(C) TEMPORARY TRAFFIC SIGNAL NOT REQUIRED

(D) TEMPORARY TRAFFIC SIGNAL INSTALLED AND MAINTAINED UNDER 1060-33-70

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023901_sp_tmp_po.dgn PLOT DATE : 30-JAN-2013 04:37 PLOT BY : MSCDYB PLOT NAME : PLOT SCALE : 375:1

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

POSTED SPEED LIMIT = 25 MPH

DISCOVERY PARKWAY

R/W

WP1 WP2 WP3 WP4 WP5 WP6 WP7

MAINTAIN 12 FOOT MINIMUM CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES

MAINTAIN 12 FOOT MINIMUM CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES

W. WATERTOWN PLANK ROAD

POSTED SPEED LIMIT=35 MPH

W. WATERTOWN PLANK ROAD

POSTED SPEED LIMIT=35 MPH

CONSTRUCTION NOTES;

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
6. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
7. CURB RAMPS TO BE CONSTRUCTED WITH DISCOVERY PARKWAY. ADJUST PEDESTRIAN PUSH BUTTON AND PEDESTRIAN SIGNAL HEAD LOCATIONS BASED ON FIELD CONDITIONS AT THE TIME OF CONSTRUCTION TO MEET MUTCD REQUIREMENTS.

SUMMARY OF MATERIALS	
CLASS IV WOOD POLES	4
WOOD POSTS	3
TRAFFIC SIGNAL HEADS	11
PEDESTRIAN SIGNAL HEADS	4
PEDESTRIAN PUSH BUTTONS	4
250W HPS LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	2
EVP DETECTOR HEADS	3
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
DISCOVERY PARKWAY
CITY OF WAUWATOSA
MILWAUKEE COUNTY

CITY CONTACT: BILL WEHRLEY
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2 & 3	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023921_sp_tmp.dgn PLOT DATE : 15-APR-2013 11:45 PLOT BY : mscjym PLOT NAME : 023921_sp_tmp PLOT SCALE : 40.000812:1

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

W. WATERTOWN PLANK ROAD

DISCOVERY PARKWAY

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT=35 MPH

MAINTAIN 12 FOOT MINIMUM CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES

MAINTAIN 12 FOOT MINIMUM CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES

WP1 WP2 WP3 WP4 WP5 WP6 WP7

TRAFFIC CONTROL PLACED UNDER I.D. 1060-33-72.
COORDINATE TEMPORARY TRAFFIC SIGNAL HEAD
MOVES WITH THE CONTRACTOR FOR I.D. 1060-33-72.

TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
DISCOVERY PARKWAY
CITY OF WAUWATOSA
MILWAUKEE COUNTY

CITY CONTACT: BILL WEHRLEY
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - 1060-33-72 STAGE 1A	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\023921a_sp_tmp.dgn PLOT DATE : 15-APR-2013 11:45 PLOT BY : mscjym PLOT NAME : 023921a_sp_tmp PLOT SCALE : 40.000812:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1		HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø1 CLEAR TO	Ø1 CLEAR TO	Ø2 R/W	Ø2 CLEAR TO **	Ø2 CLEAR TO	Ø2 CLEAR TO	Ø3 R/W	Ø3 CLEAR TO **	Ø3 CLEAR TO	Ø3 CLEAR TO	Ø4 R/W	Ø4 CLEAR TO **	Ø4 CLEAR TO	Ø4 CLEAR TO	FLASH
	Ø1	4,5	G	Y	R		R	R	R		NOT USED				R	R	R		R
	Ø2	6,7,8	R	R	R		G	Y	R						R	R	R		R
	Ø3																		
	Ø4	9,10,11	R	R	R		R	R	R						G	Y	R		R
	Ø5																		
	Ø6	1,2,3	R	R	R		R	R	R						R	R	R		R
	Ø7																		
	Ø8																		
	OLA																		
	Ø2P	14,15	D	D	D		*	D	D						D	D	D		
	Ø4P	12,13	D	D	D		D	D	D						*	D	D		
	Ø6P																		
	Ø8P																		

RING 2		HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø5 CLEAR TO	Ø5 CLEAR TO	Ø6 R/W	Ø6 CLEAR TO **	Ø6 CLEAR TO	Ø6 CLEAR TO	Ø7 R/W	Ø7 CLEAR TO **	Ø7 CLEAR TO	Ø7 CLEAR TO	Ø8 R/W	Ø8 CLEAR TO **	Ø8 CLEAR TO	Ø8 CLEAR TO
	Ø1	4,5					R	R	R		NOT USED							
	Ø2	6,7,8					R	R	R									
	Ø3																	
	Ø4	9,10,11					R	R	R									
	Ø5																	
	Ø6	1,2,3					G	Y	R									
	Ø7																	
	Ø8																	
	OLA																	
	Ø2P	14,15					D	D	D									
	Ø4P	12,13					D	D	D									
	Ø6P																	
	Ø8P																	

BARRIER

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

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
41		X			4	4		X			VIDEO
42		X			4	4					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

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

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

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

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C
MOVEMENT	← →	↰ →	↓
PHASE	2+6	6+1	4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

GENERAL NOTES:

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

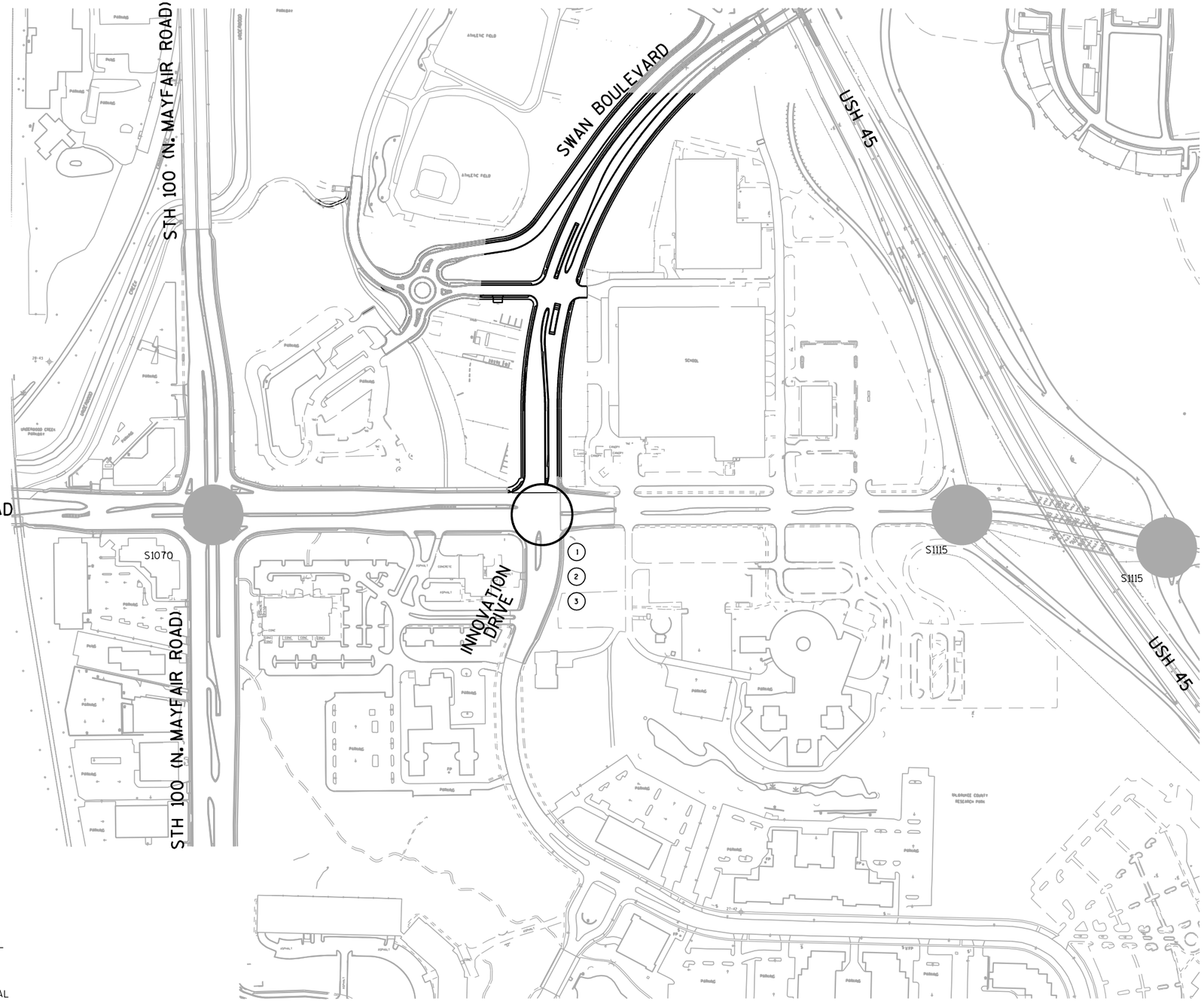
W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY
CITY OF WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

DATE 04/13

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES	SHEET E



LEGEND

WISDOT OWNED PERMANENT TRAFFIC SIGNAL

SXXXX

CITY OF WAUWATOSA OWNED TRAFFIC SIGNAL

(1) INSTALL PARTIAL PERMANENT TRAFFIC SIGNAL

(2) PARTIAL PERMANENT TRAFFIC SIGNAL INSTALLED WITH 1060-33-70 PROJECT

(3) REMAINING PERMANENT TRAFFIC SIGNAL INSTALLED WITH FUTURE 1060-33-72 PROJECT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

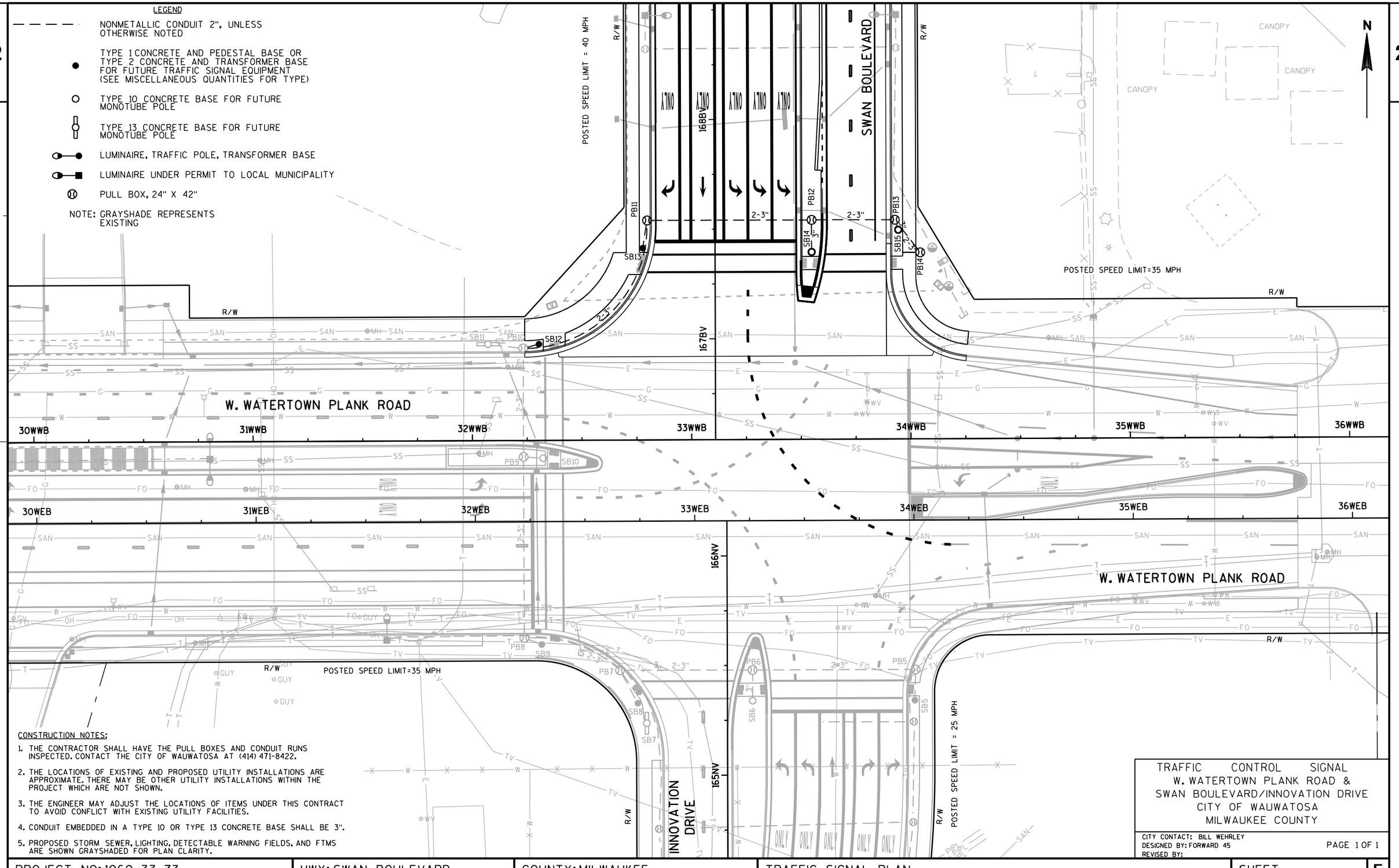
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024001_sp_po.dgn PLOT DATE : 30-JAN-2013 04:40 PLOT BY : MSCDYB PLOT NAME : PLOT SCALE : 375:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- TYPE 1 CONCRETE AND PEDESTAL BASE OR TYPE 2 CONCRETE AND TRANSFORMER BASE FOR FUTURE TRAFFIC SIGNAL EQUIPMENT (SEE MISCELLANEOUS QUANTITIES FOR TYPE)
- TYPE 10 CONCRETE BASE FOR FUTURE MONOTUBE POLE
- TYPE 13 CONCRETE BASE FOR FUTURE MONOTUBE POLE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 42"

NOTE: GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED. CONTACT THE CITY OF WAUWATOSA AT (414) 471-8422.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
5. PROPOSED STORM SEWER, LIGHTING, DETECTABLE WARNING FIELDS, AND FTMS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
SWAN BOULEVARD/INNOVATION DRIVE
CITY OF WAUWATOSA
MILWAUKEE COUNTY

CITY CONTACT: BILL WEHRLEY
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

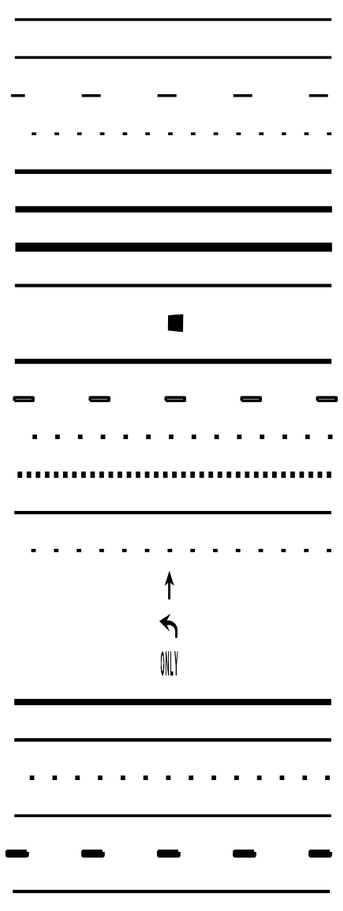
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024015_sp.dgn PLOT DATE : 30-JAN-2013 04:41 PLOT BY : MSCDYB PLOT NAME : 024015_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

LEGEND



(1) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

(2) PAVEMENT MARKING EPOXY 4-INCH (WHITE)

(3) PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE)
(12.5 FT LINE 37.5 FT SKIP)

(4) PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN WHITE)
(3 FT LINE 9 FT SKIP)

(6) PAVEMENT MARKING EPOXY 8-INCH (WHITE)

(7) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)

(13) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)

(20) PAVEMENT MARKING CURB EPOXY (YELLOW)

(21) PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)

(29) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)

(30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE)
(12.5 FT LINE 37.5 FT SKIP)

(39) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (DOT PATTERN WHITE)
(3 FT LINE 9 FT SKIP)

(53) PAVEMENT MARKING EPOXY 18-INCH (DOT PATTERN WHITE)
(2 FT LINE 2 FT SKIP)

(55) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)

(57) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DOT PATTERN WHITE)
(3 FT LINE 9 FT SKIP)

(62) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 1 (WHITE)

(63) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 (WHITE)

(67) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS (WHITE)

(68) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)

(70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)

(73) PAVEMENT MARKING EPOXY 8-INCH (DOT PATTERN WHITE)
(2 FT LINE 6 FT SKIP)

(120) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (YELLOW)

(138) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (DASHED WHITE)
(12.5 FT LINE 37.5 FT SKIP)

(139) PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 4-INCH (YELLOW)

2

CONSTRUCTION BY OTHERS
UNDER 1060-33-70

33WB

34WB

35WB

167BV

168BV

+01

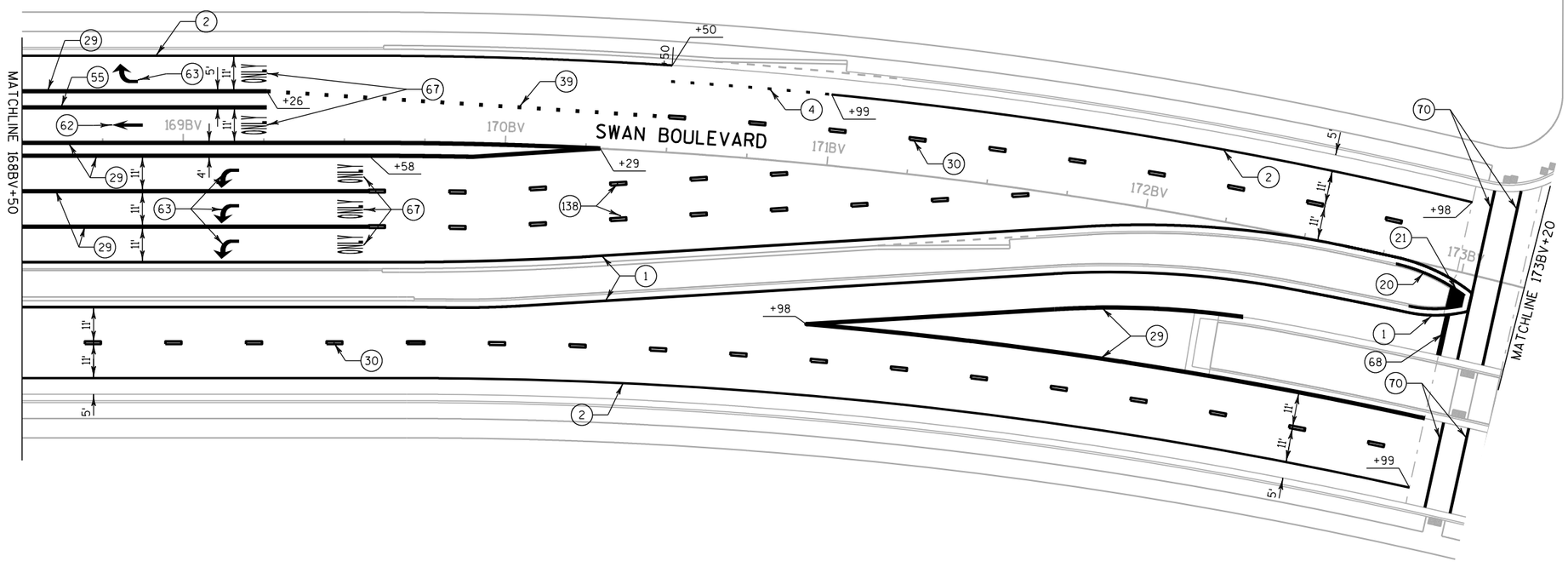
R 95'

MATCHLINE 168BV+50

CONSTRUCTION BY OTHERS
UNDER 1060-33-70

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

N

MATCHLINE 9XFN+50

10XFN

16'

16'

11XFN

WLC ACCESS ROAD

12XFN

139 (DOUBLE)

13XFN

UNDERWOOD PARKWAY

MATCHLINE 226UDE+00

16'

16'

139 (DOUBLE)

68

+42

70

6'

2

5'

70

6'

175BV

176BV

SWAN BOULEVARD

177BV

+35

30

11'

11'

178BV

29

MATCHLINE 179BV+00

MATCHLINE 173BV+20

227UDE

174BV

68

8'

20

1

6'

11'

11'

5'

30

70

2

70

6'

+81

68

228UDE

(DOUBLE) 139

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024503_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024503_pm PLOT SCALE : 40:1

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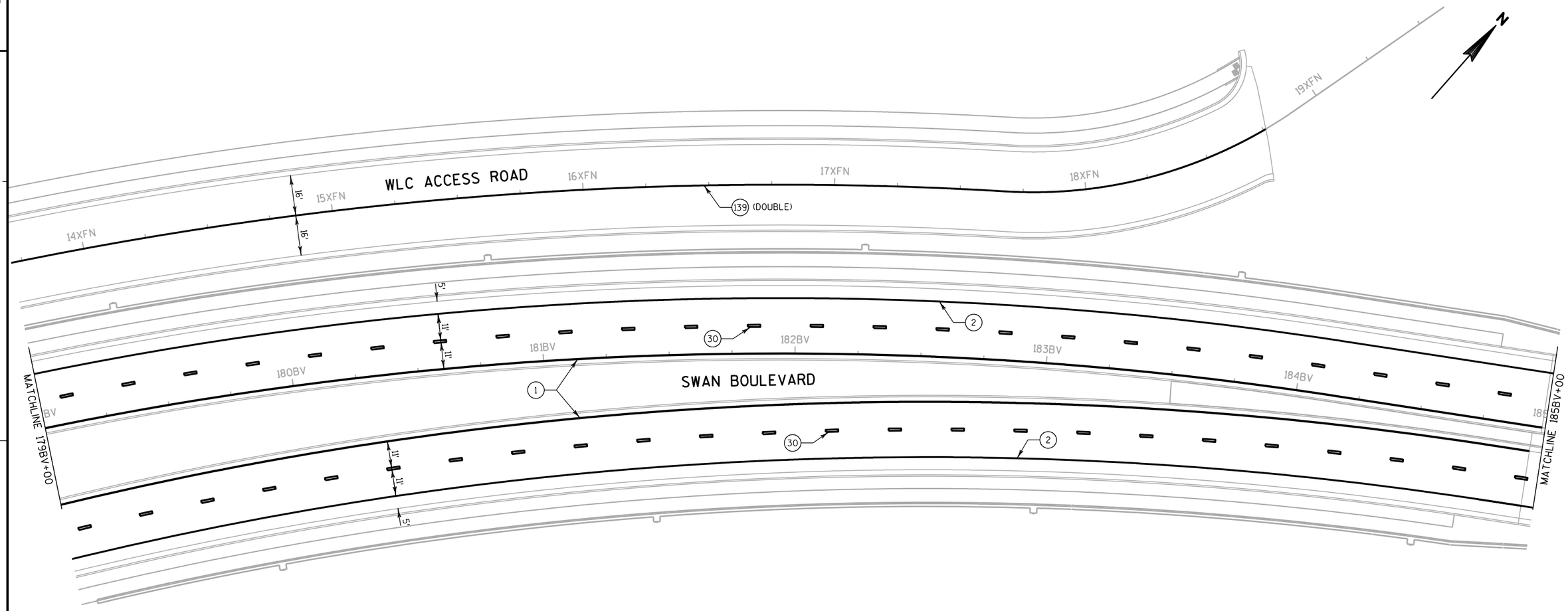
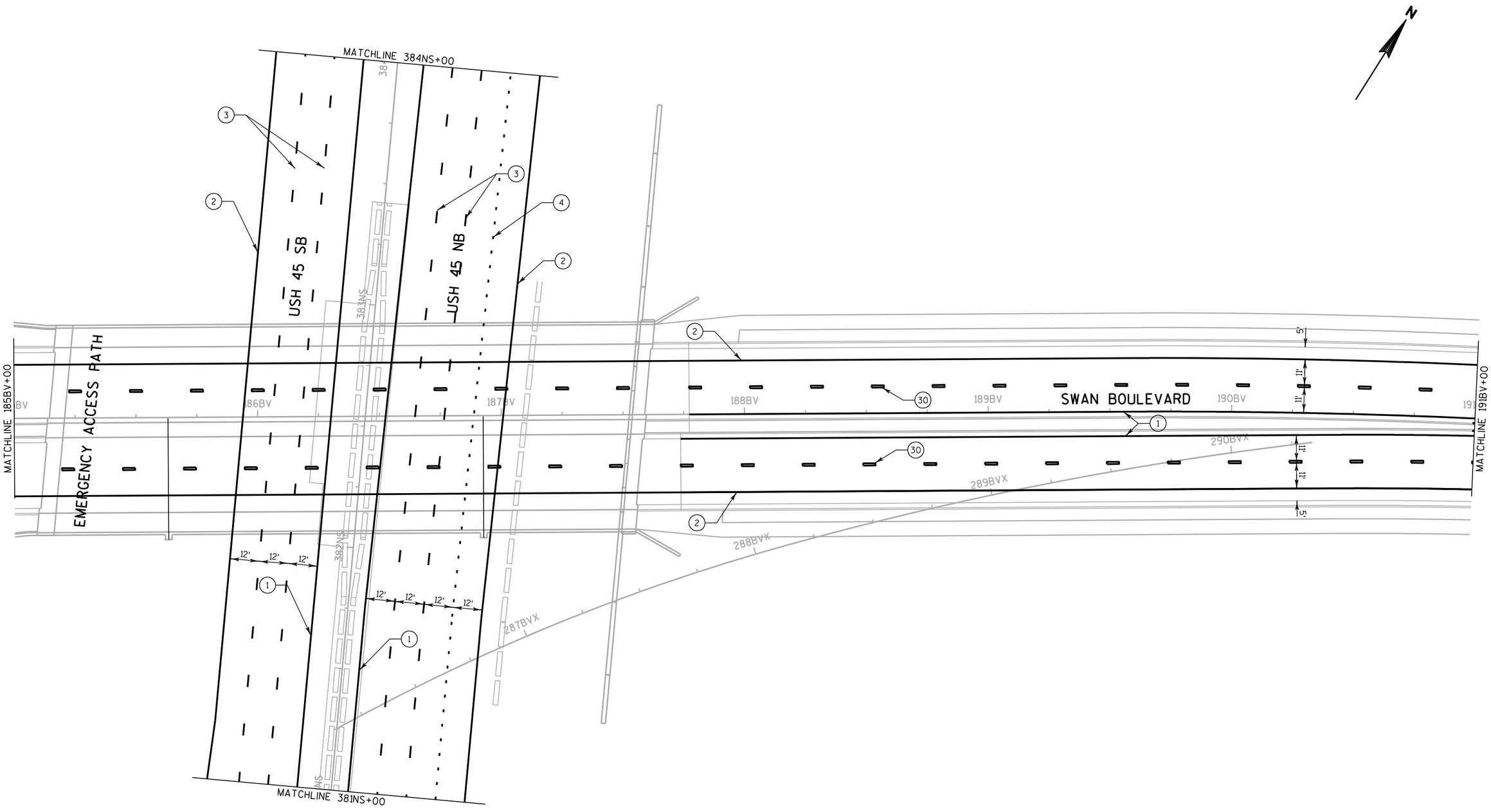


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024504_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024504_pm PLOT SCALE : 40:1

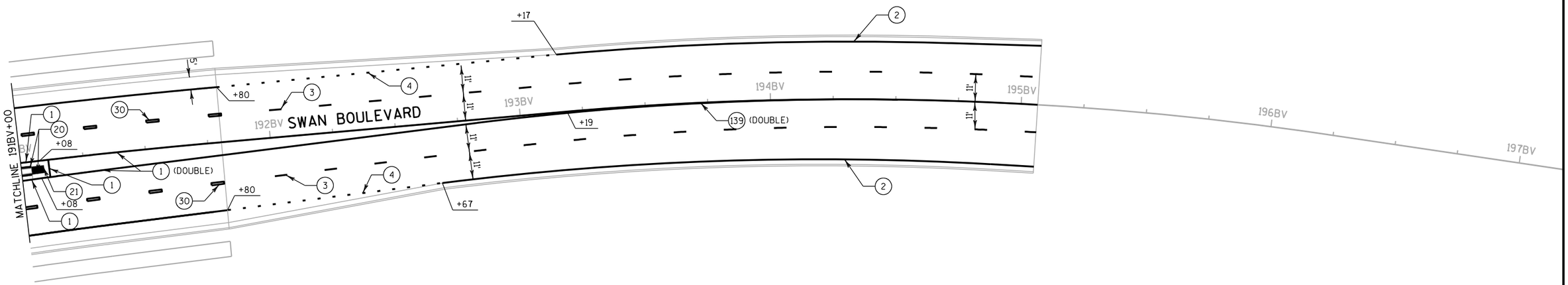
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

N

SHARED USE PATH

11UBP

UNDERWOOD PARKWAY

219UDW

218UDW

139 (DOUBLE)

16'

16'

220UDW

221UDW

+29

139 (DOUBLE)

MATCHLINE 221UDW+50

WLC ACCESS ROAD

139 (DOUBLE)

3XFS

10'

70

139 (DOUBLE)

+83

+84

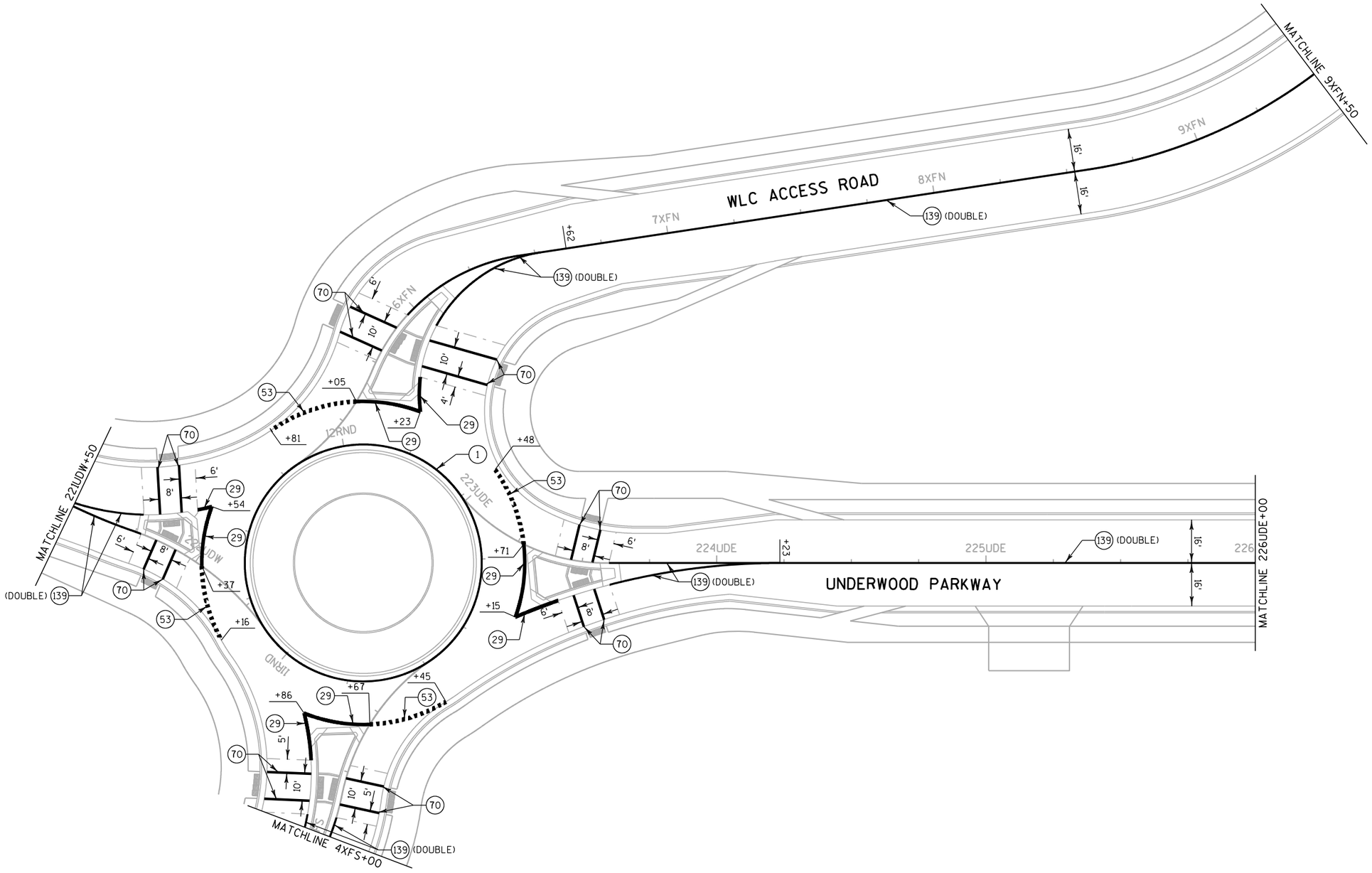
4XFS

MATCHLINE 4XFS+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

N



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024508_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024508_pm PLOT SCALE : 40:1

2

2

INL

SIGN

INL

INL

SIGN

INL

MH

INL

2

+32

INL

15'

INL

13

INL

6

USH 45 SB

INL

INL

INL

MATCHLINE 375NS+00

373NS

374NS

369NS

370NS

371NS

372NS

USH 45 NB

INL

+82

15'

6

MH

INL

INL

INL

2

INL

INL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024509_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024509_pm PLOT SCALE : 40:1

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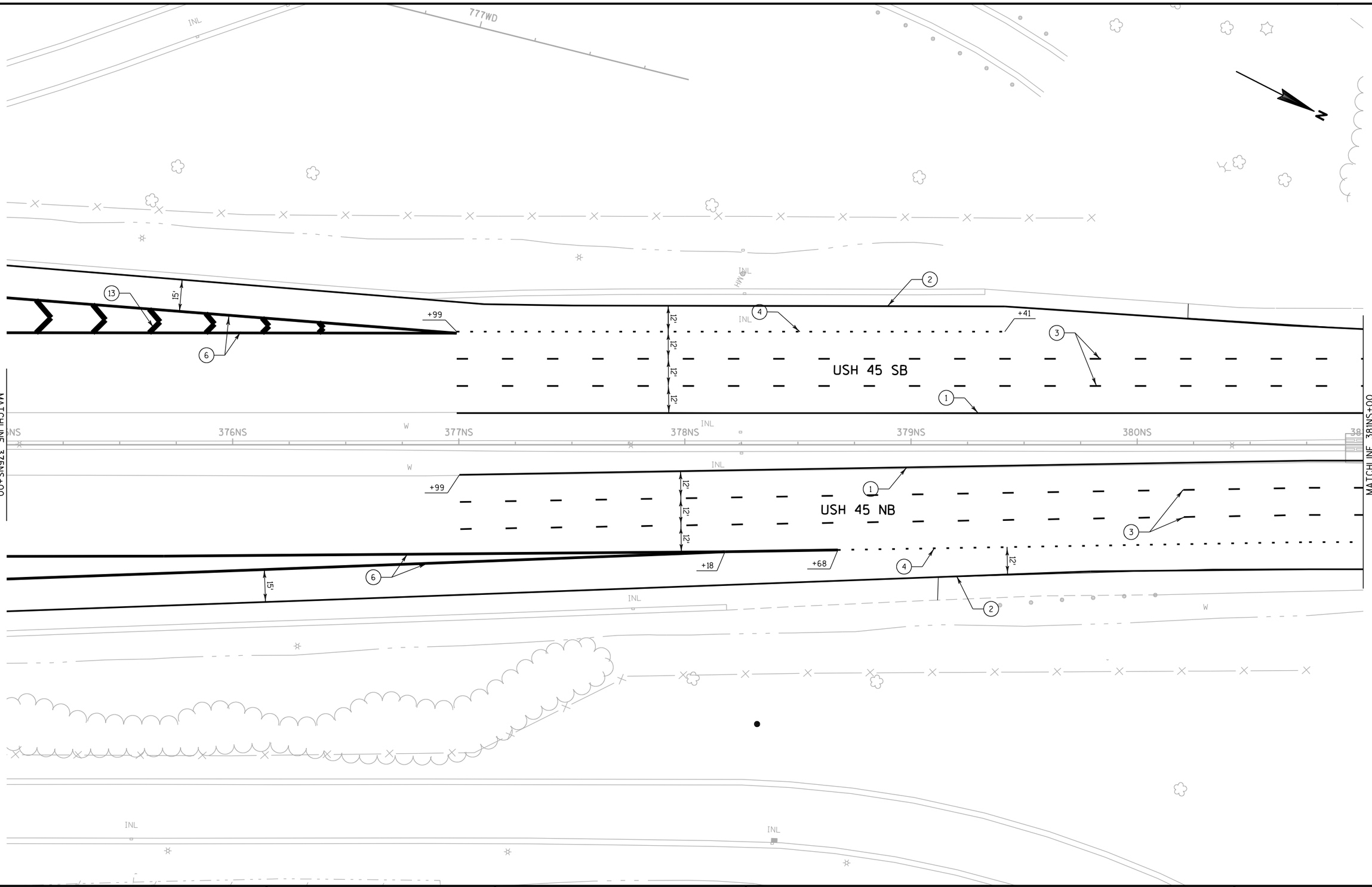


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024510_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024510_pm PLOT SCALE : 40:1

2

2

N

SIGN

INL

INL

INL

INL

INL

INL

MH

INL

GRT

MATCHLINE 384NS+00

384NS

385NS

386NS

387NS

388NS

389NS

390NS

USH 45 SB

12'

12'

12'

+50

USH 45 NB

12'

12'

12'

+00

+58

+07

1

2

3

4

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024511_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024511_pm PLOT SCALE : 40:1

2

2

N

DISCOVERY PARKWAY

W. WATERTOWN PLANK ROAD

7

7

7

MH

MH

MH

MH

MH

MH

SIGN

WV

W

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\024512_pm.dgn PLOT DATE : 31-JAN-2013 16:46 PLOT BY : MSCD1S PLOT NAME : 024512_pm PLOT SCALE : 40:1

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) CONFLICTING TYPE II TRAFFIC SIGNS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER. COVERING OR REMOVAL OF SIGNS SHALL BE INCLUDED IN "TRAFFIC CONTROL SURVEILLANCE MAINTENANCE" ITEM.

3) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. FLAGGING IS NOT PERMITTED ON FREEWAY LANES.

4) ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

6) FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

7) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

8) DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF THE BARRIER.

9) WORK AREAS SHOWN MAY NOT ILLUSTRATE ALL REMOVALS. SEE REMOVAL SHEETS FOR ADDITIONAL INFORMATION.

10) ALL TRAFFIC CONTROL SIGNS LOCATED IN MEDIANS SHALL BE MOUNTED ON CONCRETE BARRIER UNLESS OTHERWISE NOTED, SEE TRAFFIC CONTROL DETAILS.

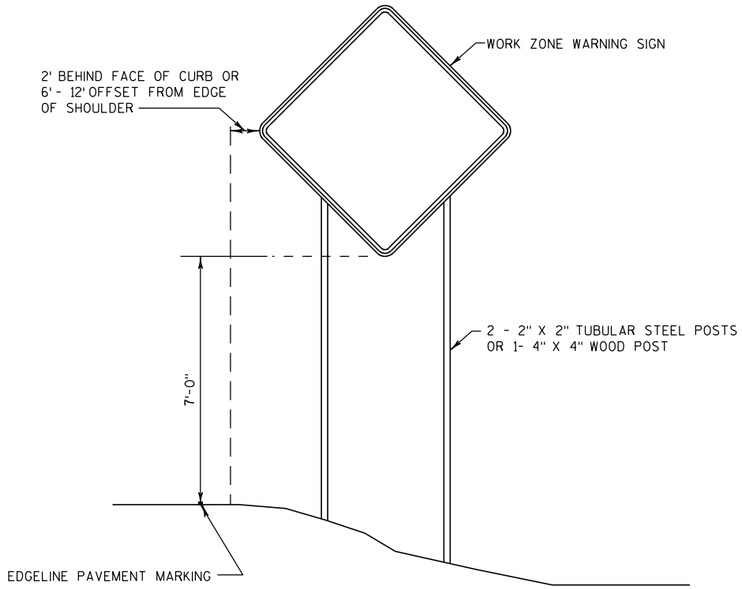
11) WHEN A SEGMENT OF THE PROJECT IS NOT SHOWN ON THE STAGING PLANS, USE THE SAME TRAFFIC CONTROL AS THE PREVIOUS STAGE FOR THAT SEGMENT.

LEGEND

- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A
- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A AND ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FIXED MESSAGE SIGN GROUND MOUNT
- FIXED MESSAGE SIGN SURFACE MOUNT
- TRAFFIC CONTROL ARROW BOARD
- CC — CRASH CUSHION TEMPORARY
- CC — CRASH CUSHION TEMPORARY PLACED IN PRIOR STAGE
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER PLACED IN PRIOR STAGE
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CONCRETE BARRIER TEMPORARY PRECAST PLACED IN PRIOR STAGE
- TRAFFIC FLOW ARROW
- WORK ZONE THIS STAGE
- TEMPORARY PAVEMENT
- WORK BY OTHERS

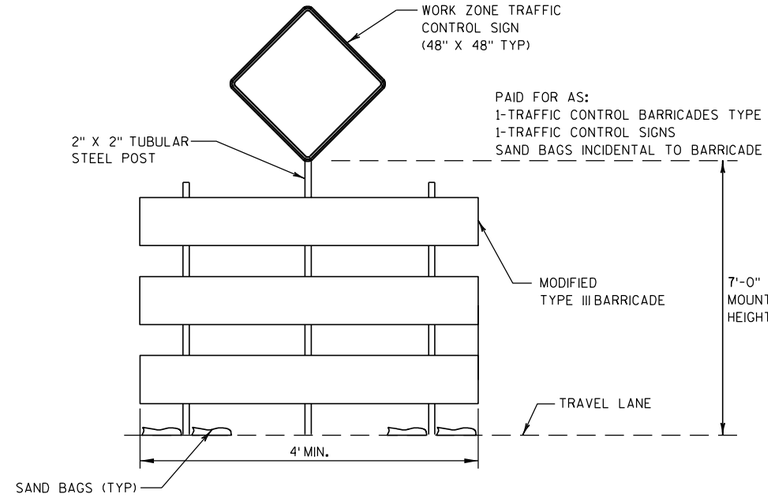
TEMPORARY PAVEMENT MARKING LEGEND

- (1) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (2) PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- (3) PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (4) PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (45) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (46) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (49) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
- (50) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (51) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5FT LINE 37.5 FT SKIP)
- (P) PERMANENT PAVEMENT MARKING, SEE PAVEMENT MARKING PLAN
- (R) REMOVE PAVEMENT MARKING
- ▶ TEMPORARY RAISED PAVEMENT MARKERS (ONE-WAY REFLECTOR)



TYPICAL TEMPORARY TRAFFIC CONTROL SIGN
MOUNTING ON FIXED SUPPORT

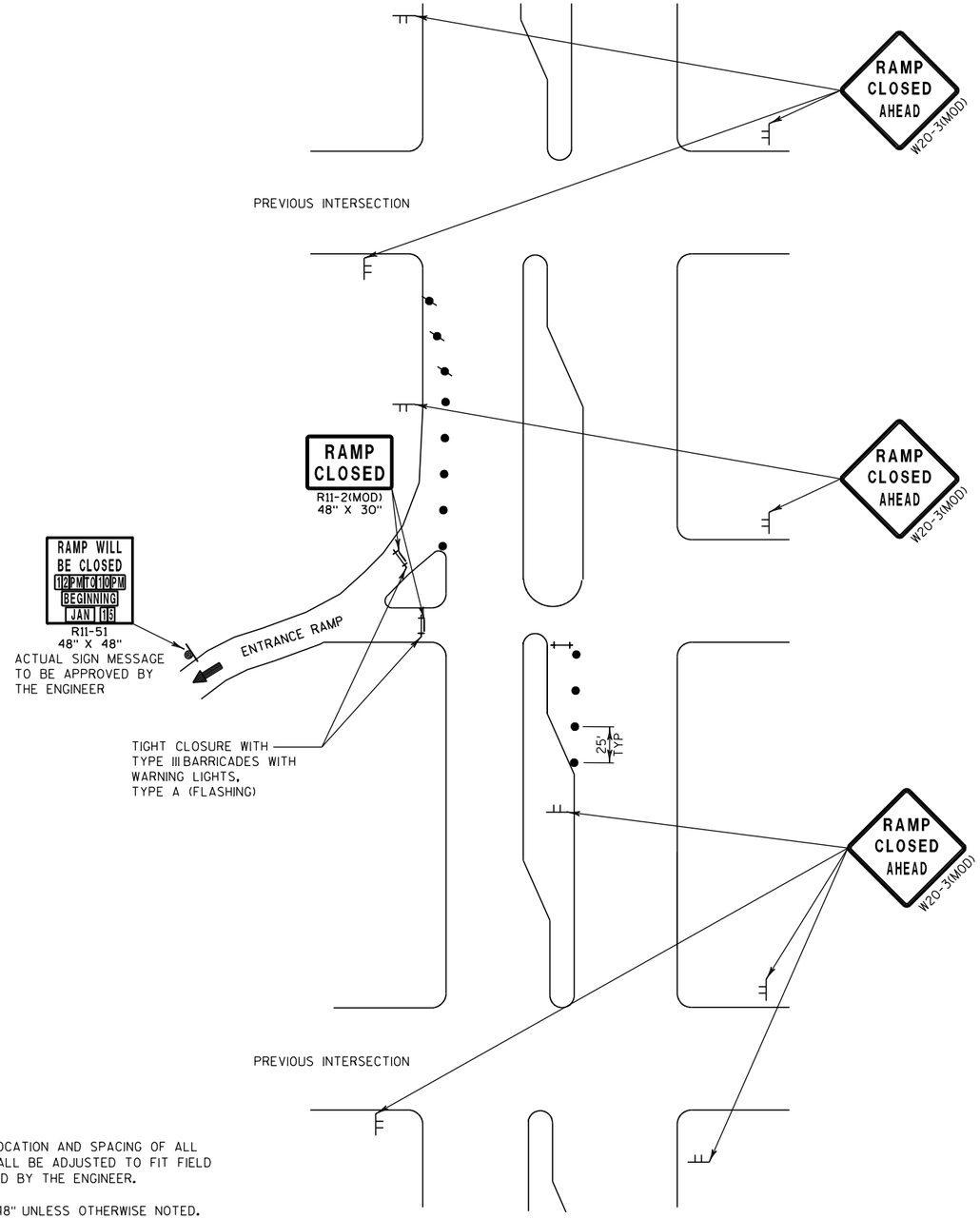
LONG TERM
7 DAYS OR MORE



TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON TEMPORARY SUPPORT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

2



NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

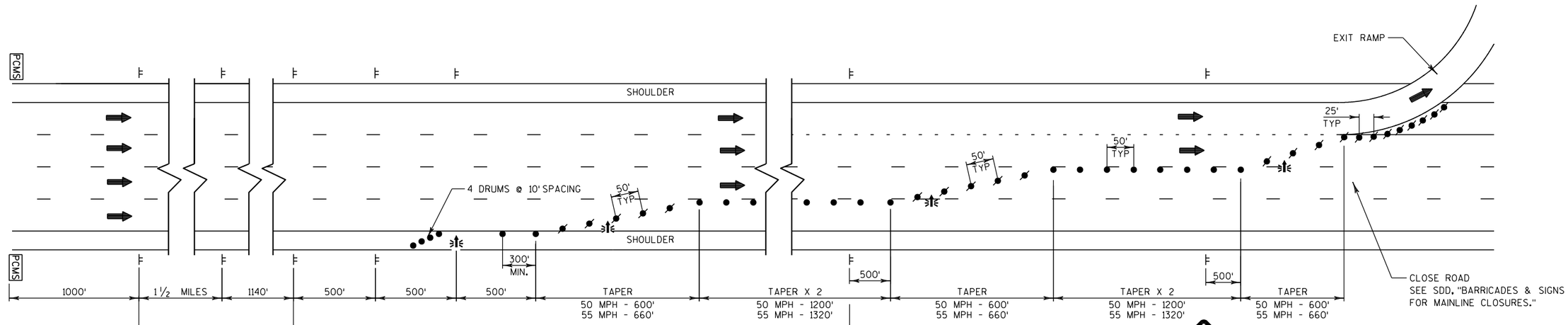
LEGEND

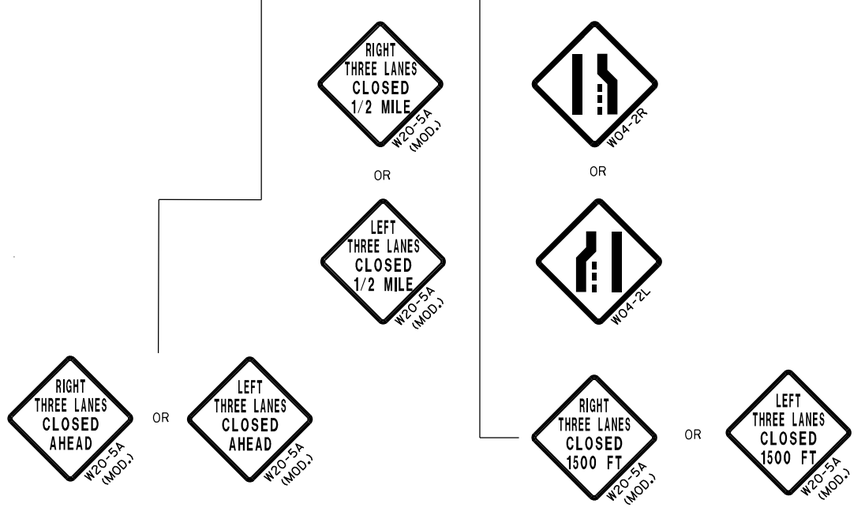
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL III BARRICADE
- TRAFFIC CONTROL III BARRICADE WITH LIGHT TYPE A AND ATTACHED SIGN
- DIRECTION OF TRAFFIC

ENTRANCE RAMP CLOSURE

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

2





LEGEND

- ● TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- DIRECTION OF TRAFFIC
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

FULL FREEWAY CLOSURE DETAIL

3 LANE CLOSURE - SPEEDS 45 MPH OR GREATER

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR).

THREE LANE CLOSURE SHOWN. ADJUST DETAIL ACCORDINGLY FOR ROADWAY WITH FEWER LANES.

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

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROW BOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

ALL WARNING SIGNS FOR LONG TERM OPERATIONS SHALL BE NON-FLUORESCENT DIAMOND GRADE SHEETING. TYPE A LIGHTS AND FLAGS ARE NOT REQUIRED.

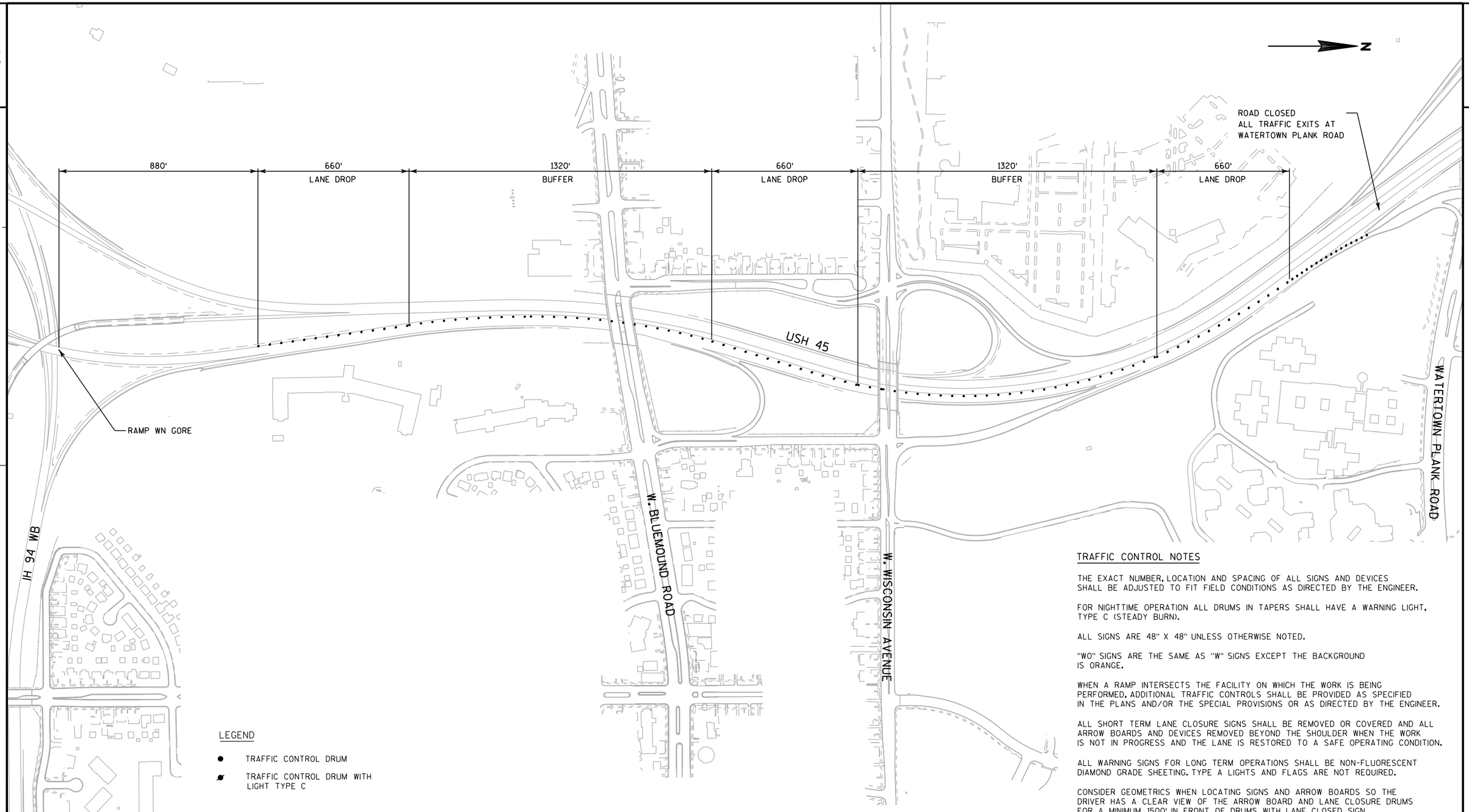
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS WITH LANE CLOSED SIGN.

SEE DETOUR PLANS FOR ADDITIONAL SIGNING REQUIREMENTS.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

2



LEGEND

- ● TRAFFIC CONTROL DRUM
- ◪ TRAFFIC CONTROL DRUM WITH LIGHT TYPE C

FULL FREEWAY CLOSURE DETAIL (USH 45 NB)

TRAFFIC CONTROL NOTES

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

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROW BOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

ALL WARNING SIGNS FOR LONG TERM OPERATIONS SHALL BE NON-FLUORESCENT DIAMOND GRADE SHEETING. TYPE A LIGHTS AND FLAGS ARE NOT REQUIRED.

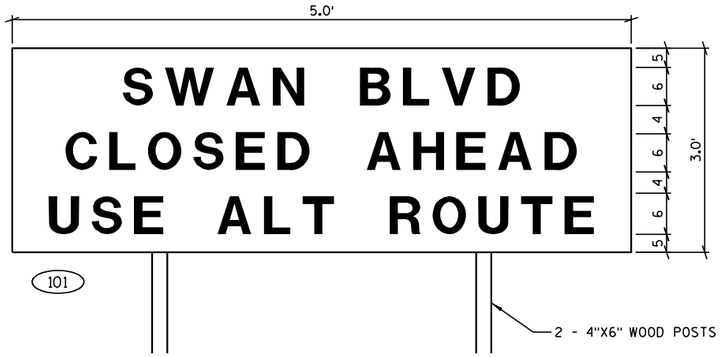
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS WITH LANE CLOSED SIGN.

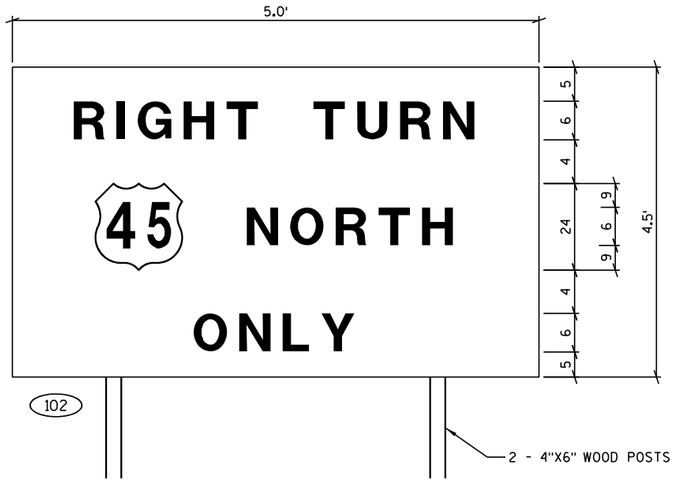
SEE SPECIAL PROVISIONS FOR FREEWAY WORK RESTRICTIONS.

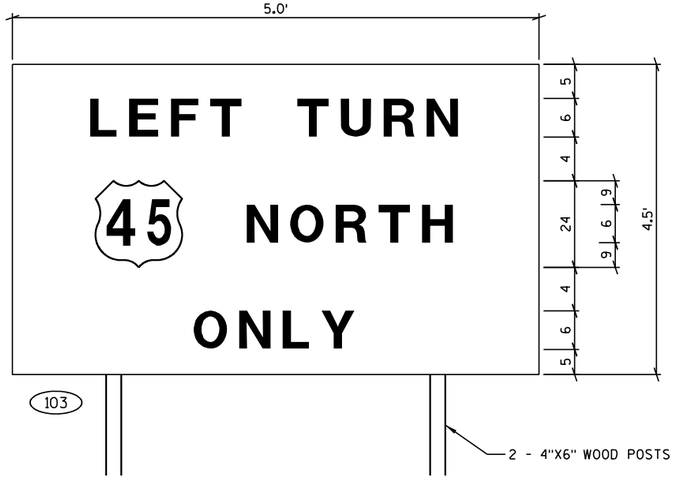
SEE FULL FREEWAY CLOSURE DETAIL FOR ADDITIONAL SIGNING AND TRAFFIC CONTROL DEVICE REQUIREMENTS.

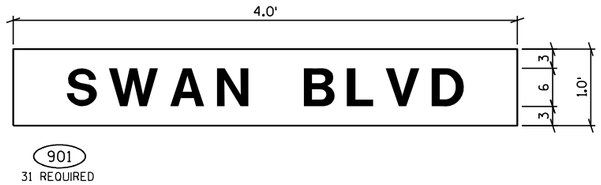
SEE DETOUR - USH 45 NORTHBOUND AND SOUTHBOUND FOR ADDITIONAL SIGNING REQUIREMENTS.

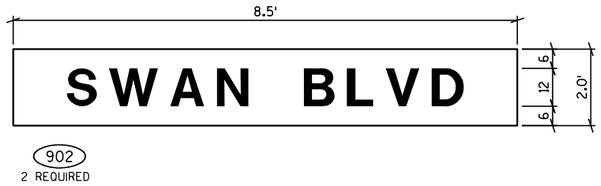
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E











NOTES

1. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

2. ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS. SIGNS WHERE NO POSTS ARE SHOWN ARE TO BE MOUNTED ON EXISTING SIGNS. FOR SIGNS MOUNTED ON POSTS, USE POSTS FROM FHWA LIST OF ACCEPTED BREAKAWAY SIGN SUPPORTS.

3. POSTS SHALL MEET THE BREAKAWAY REQUIREMENTS OF SECTION 643.2.9.1 OF THE STANDARD SPECIFICATIONS AND SIGN PLATE A4-11.

4. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".

5. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.

6. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
12" CAPS SHALL BE SERIES "D", 6" CAPS SHALL BE SERIES "C".

7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

9. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

10. "BEGIN XXX XX" SIGNS SHALL BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

11. "BEGIN XXX XX" SIGNS SHALL BE SEPARATE PANELS, AND ARE CONSIDERED INCIDENTAL TO THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

(XXX) = SIGN NUMBER FIXED MESSAGE

2

STAGE 1

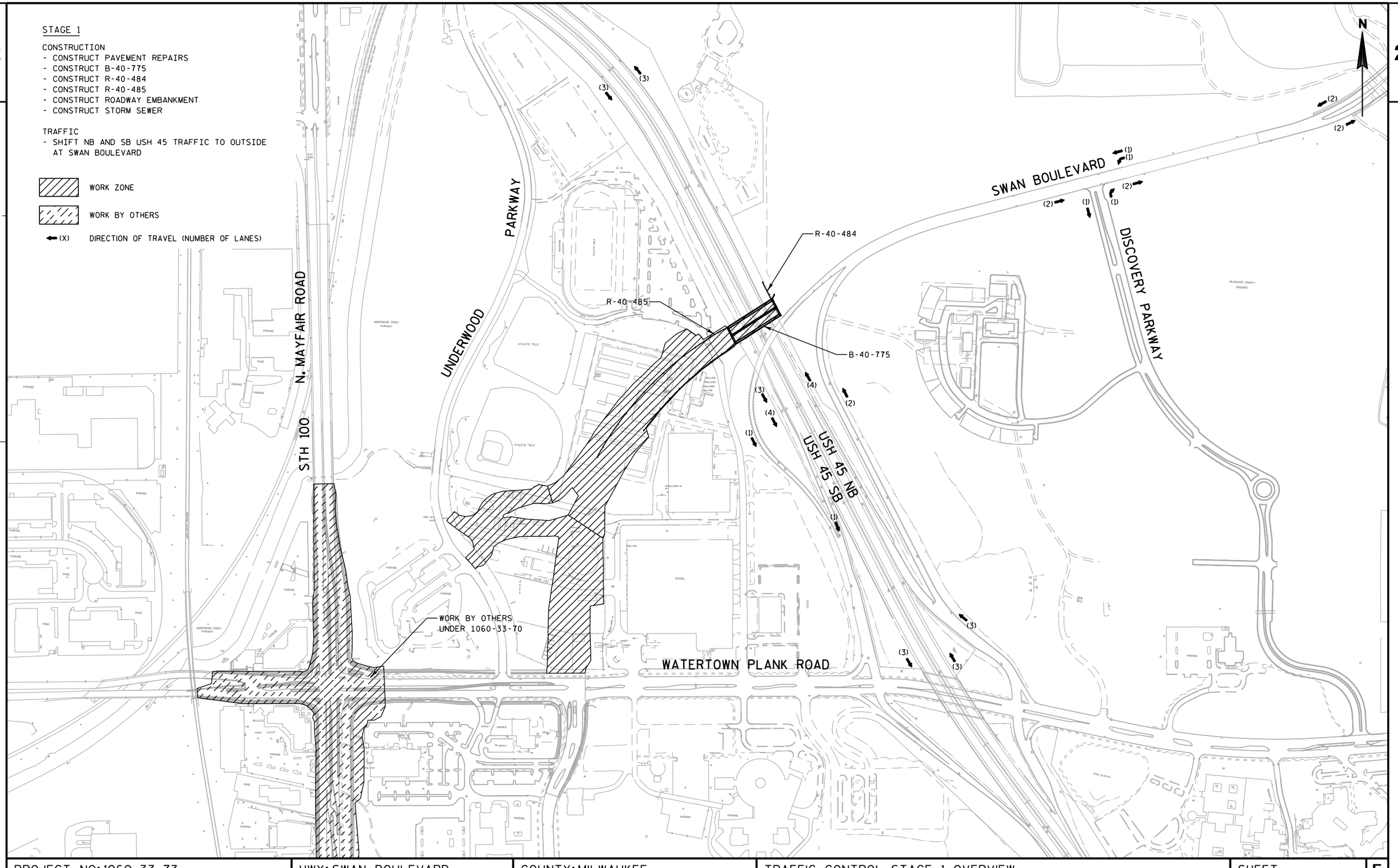
CONSTRUCTION
- CONSTRUCT PAVEMENT REPAIRS
- CONSTRUCT B-40-775
- CONSTRUCT R-40-484
- CONSTRUCT R-40-485
- CONSTRUCT ROADWAY EMBANKMENT
- CONSTRUCT STORM SEWER

TRAFFIC
- SHIFT NB AND SB USH 45 TRAFFIC TO OUTSIDE AT SWAN BOULEVARD

WORK ZONE

WORK BY OTHERS

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026100_s1.dgn PLOT DATE : 30-JAN-2013 04:43 PLOT BY : MSCDYB PLOT NAME : 026100_s1 PLOT SCALE : 400:1

2

N

2

TRAFFIC CONTROL DEVICES
BY OTHERS UNDER
I.D. 1060-33-70

RIGHT TURN ONLY
R3-53R
24" X 30"

R3-2
24" X 24"

SWAN BOULEVARD

MATCHLINE 225UDE+00

UNDERWOOD PARKWAY

225UDE

168BV

170BV

172BV

174BV

176BV

178BV

MATCHLINE 178BV+00

232UDE

32WWB

34WWB

36WWB

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

TRAFFIC CONTROL DEVICES
BY OTHERS UNDER
I.D. 1060-33-70

WATERTOWN PLANK ROAD

POST

CANOPY

BOLLARDS (4)

BOLLARDS (4)

BOLLARDS (6)

SIGN

SCHOOL

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026101_s1.dgn PLOT DATE : 30-JAN-2013 04:44 PLOT BY : MSCDYB PLOT NAME : 026101_s1 PLOT SCALE : 100:1

2

2

N

ROAD CLOSED
R11-2
48" X 30"

B-40-775

R-40-484

FENCE TEMPORARY

TEMPORARY SHORING REQUIRED SEE STRUCTURE PLANS

WLC ACCESS ROAD

18KFN
16XFN
14KFN
182BV
180BV
184BV
186BV
188BV
190
290
288BVX

+73
6.0' LT

+24
6.0' LT

MATCHLINE 178BV+00 BV

MATCHLINE 190BV+00

R-40-485

FENCE TEMPORARY

USH 45 SB
USH 45 NB
384NS
382NS
380NS
378NS

SWAN BOULEVARD

SWAN BOULEVARD WB MAY BE CLOSED TO FACILITATE STORM SEWER CONSTRUCTION, REFER TO THE SPECIAL PROVISIONS FOR DETAILS. REFER TO DETOUR-SWAN BOULEVARD FOR SIGNING DETAILS.

ROAD CLOSED
R11-2
48" X 30"

PLACE SIGN AT WATERTOWN PLANK ROAD

ROAD CLOSED AHEAD
W20-3

ROAD WORK 250 FT
W20-1

FPO
NDIS
POST
SIGN
DOCK
INL
SIGN

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026102_s1.dgn PLOT DATE : 30-JAN-2013 04:44 PLOT BY : MSCDYB PLOT NAME : 026102_s1 PLOT SCALE : 100:1

2

2

N

500'

ROAD WORK 250 FT W20-1

ROAD WORK 500 FT W20-1

ROAD WORK AHEAD W20-1

192BV

194BV

196BV

198BV

SWAN BOULEVARD

MATCHLINE 190BV+00

MATCHLINE

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

DISCOVERY PARKWAY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026103_s1.dgn PLOT DATE : 30-JAN-2013 04:44 PLOT BY : MSCDYB PLOT NAME : 026103_s1 PLOT SCALE : 100:1

2

N

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

ROAD WORK 250 FT
W20-1

ROAD CLOSED 250 FT
W20-3

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

ROAD WORK 500 FT
W20-1

ROAD CLOSED 500 FT
W20-3

ROAD WORK AHEAD
W20-1

ROAD CLOSED AHEAD
W20-3

500'

UNDERWOOD PARKWAY MAY BE CLOSED
TO FACILITATE STORM SEWER CONSTRUCTION,
REFER TO THE SPECIAL PROVISIONS FOR DETAILS.
ADJUST UNDERWOOD PARKWAY SIGNING AS SHOWN
FOR ROADWAY CLOSURE.

WORK BY OTHERS
UNDER I.D. 1060-33-70

UNDERWOOD PARKWAY

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

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

ROAD WORK AHEAD
W20-1

ROAD CLOSED AHEAD
W20-3

WATERTOWN PLANK ROAD

30WWB

18BUBP

22BUDW

18BUDW

22DUDW

12FWD

6XFN

4XFS

22AUDE

MATCHLINE 225UDE+00

8XFN

10XFN

WLC ACCESS ROAD

12XFN

MATCHLINE 178BV+00

* SIGN TO BE IN PLACE DURING
CLOSURE OF UNDERWOOD PARKWAY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026105_s1.dgn PLOT DATE : 30-JAN-2013 04:44 PLOT BY : MSCDYB PLOT NAME : 026105_s1 PLOT SCALE : 100:1

2

336NS

338NS

340NS

342NS

344NS

346NS

348NS

USH 45 NB

USH 45 SB

NS+23

NS+65

NS+94

NS+93

NS+36

NS+38

3

4

2

1

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

EDGE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

LANE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

LANE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

MATCHLINE 350NS+00

ROAD WORK AHEAD
W20-1

ROAD WORK 1000 FT
W20-1

ROAD WORK 500 FT
W20-1

500'

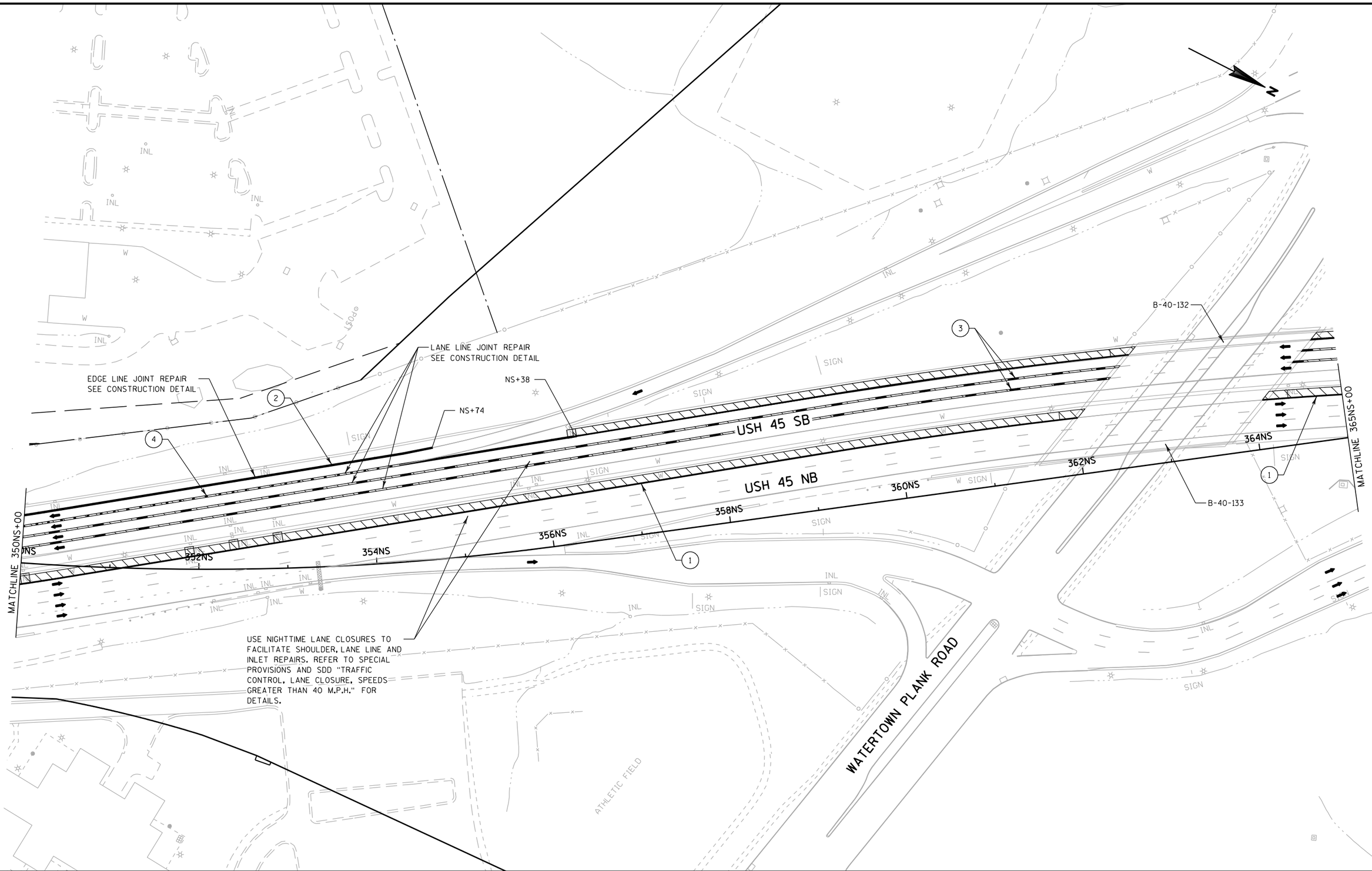
500'

USE NIGHTTIME LANE CLOSURES TO FACILITATE SHOULDER, LANE LINE AND INLET REPAIRS. REFER TO SPECIAL PROVISIONS AND SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR DETAILS.

BASKETBALL COURT

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

2

WATERTOWN PLANK ROAD

168WD
170WD
172WD
174WD
176WD

N

USH 45 SB

USH 45 NB

SWAN BOULEVARD

MATCHLINE 365NS+00

MATCHLINE 380NS+00

366NS
368NS
370NS
372NS
374NS
376NS
378NS

LANE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

EDGE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

310'
LANE SHIFT AND
LANE WIDTH CHANGE

NS+04
NS+90
14' LT
NS+00
11.0' RT
NS+56
14' RT
NS+16
13' RT
NS+89
48.4' RT
NS+25
5.5' RT
NS+07
58.4' RT

12'
14'

1 2 3 45 46 49 50

ROAD WORK AHEAD W20-1

ROAD WORK 500 FT W20-1

W1-4CL

45 M.P.H. W013-1 36" X 36"

USE NIGHTTIME LANE CLOSURES TO FACILITATE SHOULDER, LANE LINE AND INLET REPAIRS. REFER TO SPECIAL PROVISIONS AND SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR DETAILS.

NOTES

1. SHOULDER, LANE LINE AND INLET REPAIRS BETWEEN STA 377NS+16 AND STA 388NS+50 SHALL BE COMPLETED PRIOR TO STAGE 1 TRAFFIC SHIFTS SHOWN ON THIS SHEET.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026108_s1.dgn PLOT DATE : 30-JAN-2013 04:45 PLOT BY : MSCDYB PLOT NAME : 026108_s1 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

NOTES

1. SHOULDER, LANE LINE AND INLET REPAIRS BETWEEN STA 377NS+16 AND STA 388NS+50 SHALL BE COMPLETED PRIOR TO STAGE 1 TRAFFIC SHIFTS SHOWN ON THIS SHEET.

182BV
184FN
184BV
R-40-485
B-40-775
R-40-484
188BV
188BVX
190BV
190BVX
SWAN BOULEVARD

310' LANE SHIFT
NS+24 56.0' LT
NS+00 25.0' LT
NS+00 25.0' LT
NS+49 12.4' LT
NS+50 23.0' LT
350' LANE SHIFT AND LANE WIDTH CHANGE
NS+50 25.0' LT
NS+00, 62.2' RT
NS+58 50.4' RT
NS+00 18.4' RT
200' LANE SHIFT AND WIDTH CHANGE
NS+00 14.0' RT
NS+01 62.7' RT
NS+76 59.0' RT
NS+75 13.0' RT
NS+26 62.3' RT

W24-1BR
45 M.P.H.
W013-1
36" X 36"

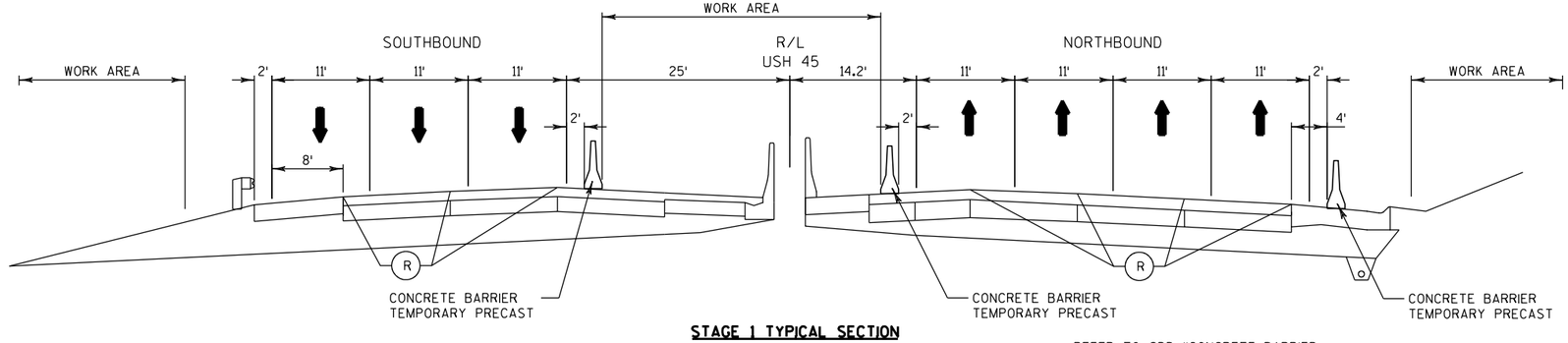
LANE LINE JOINT REPAIR SEE CONSTRUCTION DETAIL

USH 45 SB
USH 45 NB

MATCHLINE 380NS+00
MATCHLINE 395NS+00
382NS
384NS
386NS
388NS
390NS
392NS
394NS

USE NIGHTTIME LANE CLOSURES TO FACILITATE SHOULDER, LANE LINE AND INLET REPAIRS. REFER TO SPECIAL PROVISIONS AND SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR DETAILS.

ATHLETIC FI
PLAYGROUND



STAGE 1 TYPICAL SECTION
USH 45
STATION 382NS+50

REFER TO SDD "CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" " FOR ANCHORING REQUIREMENTS

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

2

UNDERWOOD CREEK PARKWAY

ATHLETIC FIELD

USH 45 SB

USH 45 NB

404NS

402NS

400NS

398NS

396NS

406NS

408NS

NS+00

NS+22

395NS+00

MATCHLINE

LANE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

LANE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL

USE NIGHTTIME LANE CLOSURES TO FACILITATE SHOULDER, LANE LINE AND INLET REPAIRS. REFER TO SPECIAL PROVISIONS AND SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR DETAILS.

END ROAD WORK
C20-2A
48" X 24"

ROAD WORK 500 FT
W20-1

ROAD WORK 1000 FT
W20-1

ROAD WORK AHEAD
W20-1

500'

1000'

CANADIAN PACIFIC RR

N

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 1 CONSTRUCTION	SHEET	E

2

STAGE 2

CONSTRUCTION
- REMOVE B-40-134
- CONSTRUCT B-40-775
- CONSTRUCT R-40-484 AND R-40-485
- CONSTRUCT STORM SEWER
- CONSTRUCT ROADWAY PAVEMENTS
- CONSTRUCT SHARED USE PATH

TRAFFIC
- RESTORE USH 45 TO ORIGINAL CONFIGURATION UPON COMPLETION OF MEDIAN WORK
- CLOSE SWAN BOULEVARD BETWEEN DISCOVERY PARKWAY AND WATERTOWN PLANK ROAD

WORK ZONE

WORK BY OTHERS

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

N

SWAN BOULEVARD

DISCOVERY PARKWAY

UNDERWOOD PARKWAY

N. MAYFAIR ROAD

STH 100

USH 45 NB
USH 45 SB

WATERTOWN PLANK ROAD

R-40-484

R-40-485

B-40-775

B-40-134

(1) (2) (3) (4)

2

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026200_s2.dgn PLOT DATE : 30-JAN-2013 04:45 PLOT BY : MSCDYB PLOT NAME : 026200_s2 PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

N

TRAFFIC CONTROL DEVICES
BY OTHERS UNDER
I.D. 1060-33-70

ONLY
R3-50R
30" X 36"

R3-2
24" X 24"

MATCHLINE 225UDE+00

32WWB

34WWB

36WWB

168BV

170BV

172BV

174BV

176BV

SWAN BOULEVARD

UNDERWOOD PARKWAY

300922

226UDE

ROAD CLOSED
R11-2
48" X 30"

BOLLARDS (4)

CANOPY

BOLLARDS (4)

MATCHLINE 178BV+00

TRAFFIC CONTROL DEVICES
BY OTHERS UNDER
I.D. 1060-33-70

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
USE OTHER SIDE
R9-10
24" X 12"
TYPE II BARRICADE
PLACE AT PEDESTRIAN
CROSSING TO THE EAST

WATERTOWN PLANK ROAD

SCHOOL

BOLLARDS (6)

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

2

2

ROAD CLOSED
R11-2
48" X 30"

B-40-775

R-40-484

R-40-485

B-40-134

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED AHEAD
W20-3

WLC ACCESS ROAD

USH 45 SB

USH 45 NB

MATCHLINE 190BV+00

MATCHLINE 178BV+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026202_s2.dgn PLOT DATE : 30-JAN-2013 04:46 PLOT BY : MSCDYB PLOT NAME : 026202_s2 PLOT SCALE : 100:1

2

2

N

ROAD CLOSED
R11-2
48" X 30"

W01-6
48" X 24"

R3-2
24" X 24"

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

196BV

198BV

194BV

192BV

SWAN BOULEVARD

MATCHLINE

MATCHLINE 190BV+00

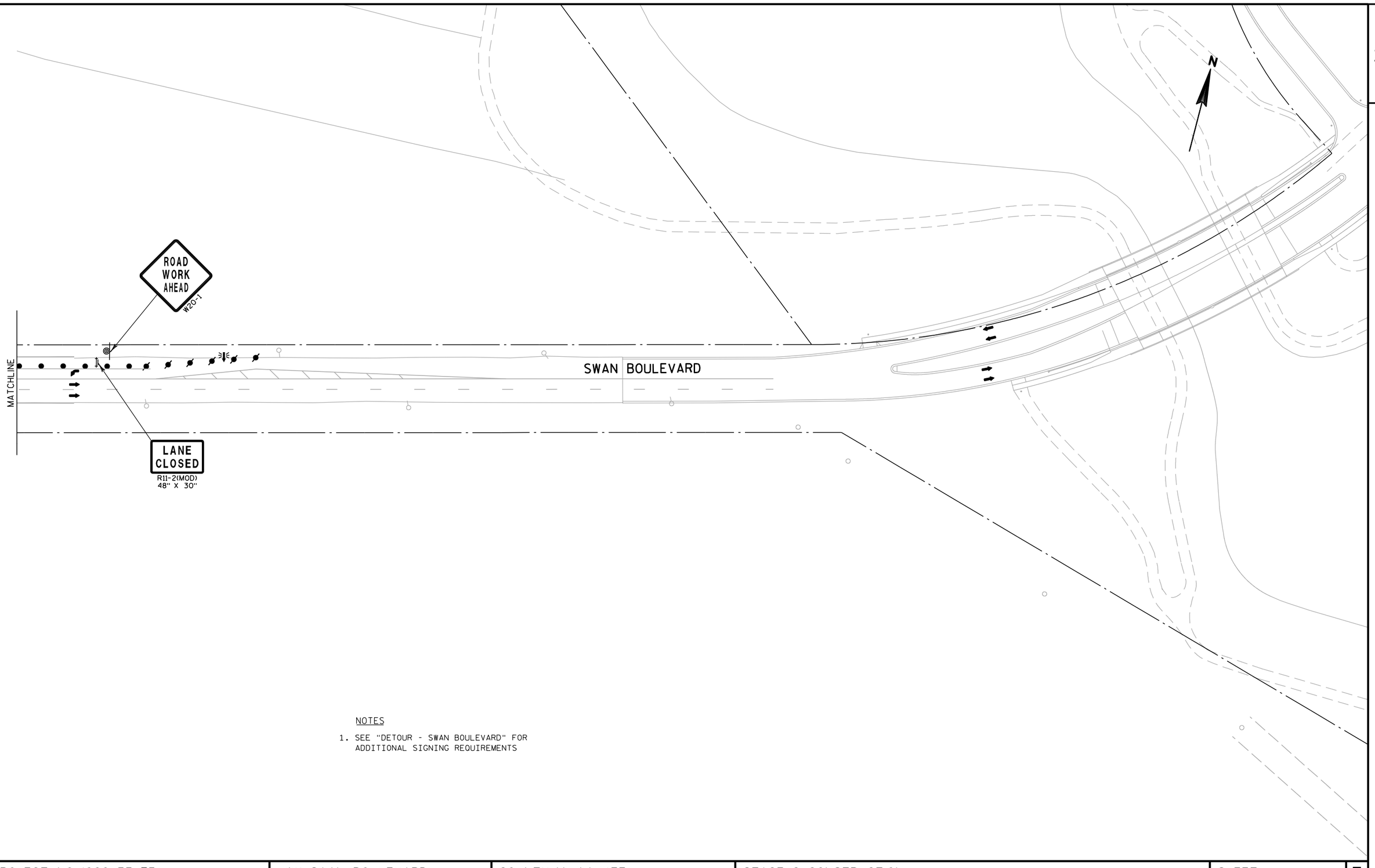
DISCOVERY PARKWAY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026203_s2.dgn PLOT DATE : 30-JAN-2013 04:46 PLOT BY : MSCDYB PLOT NAME : 026203_s2 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



NOTES

1. SEE "DETOUR - SWAN BOULEVARD" FOR ADDITIONAL SIGNING REQUIREMENTS

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

2

N

ROAD WORK 250 FT W20-1

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

ROAD WORK 500 FT W20-1

500'

ROAD WORK AHEAD W20-1

ROAD CLOSED R11-2 48" X 30"

MAINTAIN ACCESS AT ALL TIMES

TRAFFIC CONTROL DEVICES BY OTHERS UNDER I.D. 1060-33-70

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

ROAD WORK AHEAD W20-1

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" TYPE II BARRICADE

UNDERWOOD PARKWAY

WATERTOWN PLANK ROAD

WLC ACCESS ROAD

MATCHLINE 225UDE+00

MATCHLINE 178BV+00

PARKING

ATHLETIC FIELD

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

2

2

SIGN LOCATED APPROXIMATELY
150' SOUTH OF WISCONSIN AVENUE

EXIT 40
Watertown Plk Rd
Swan Blvd
1/2 MILE

COVERING SIGNS TYPE I
LEFT IN PLACE

ROAD
WORK
AHEAD
W20-1

MATCHLINE

346NS
348NS
350NS
352NS
354NS
356NS
358NS
360NS

USH 45 SB
USH 45 NB

S-40-196

COVERING SIGNS TYPE II
LEFT IN PLACE

EXIT 40
Watertown Plk Rd
Swan Blvd
EXIT ONLY

COVERING SIGNS TYPE I
LEFT IN PLACE

Swan Blvd
Watertown Plank Rd
← WEST EAST →

WATERTOWN PLANK ROAD

RIGHT TURN
45 NORTH
ONLY

FIXED MESSAGE SIGN (102)

SWAN BLVD
CLOSED AHEAD
USE ALT ROUTE

FIXED MESSAGE SIGN (101)

BASKETBALL COURT

ATHLETIC FIELD

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026206_s2.dgn PLOT DATE : 30-JAN-2013 04:46 PLOT BY : MSCDYB PLOT NAME : 026206_s2 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

WATERTOWN PLANK ROAD

168WD

170WD

172WD

174WD

N

LEFT TURN
45 NORTH
ONLY

FIXED MESSAGE SIGN (103)

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

TRAFFIC CONTROL
BARRICADE PERMANENT
TYPE III

USH 45 SB

USH 45 NB

362NS

364NS

366NS

368NS

370NS

372NS

374NS

MATCHLINE

MATCHLINE 376NS+00

ROAD
WORK
1000 FT
W20-1

ROAD
WORK
AHEAD
W20-1

ROAD
WORK
500 FT
W20-1

ROAD
CLOSED
R11-2
48" X 30"

12"

12"

3

2

Swan Blvd

TRAFFIC CONTROL
COVERING SIGNS TYPE II

TRAFFIC CONTROL
BARRICADES PERMANENT
TYPE III

SIGN

INL

W

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026207_s2.dgn PLOT DATE : 30-JAN-2013 04:46 PLOT BY : MSCDYB PLOT NAME : 026207_s2 PLOT SCALE : 100:1

2

N

500' 1000'

ROAD WORK 500 FT W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK AHEAD W20-1

SEE STAGE 1
FOR SIGN LOCATIONS
ALONG USH 45 SB

776WD

182BV

183BV

184BV

185BV

186BV

187BV

188BV

189BV

190BV

R-40-485

B-40-775

R-40-484

P

USH 45 SB

USH 45 NB

MATCHLINE 376NS+00

376NS 378NS 380NS 382NS 384NS 386NS 388NS 390NS

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
SEE PLAN DETAILS

END ROAD WORK
G20-2A
48" X 24"
SEE STAGE 1
FOR SIGN LOCATION

PLAYGROUND

NOTES

1. USH 45 SHALL BE RESTORED TO ITS ORIGINAL LANE CONFIGURATION UPON COMPLETION OF WORK WITHIN THE USH 45 MEDIAN. SEE PLAN DETAILS AND PAVEMENT MARKING PLANS.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026208_s2.dgn PLOT DATE : 30-JAN-2013 04:46 PLOT BY : MSCDYB PLOT NAME : 026208_s2 PLOT SCALE : 100:1

STAGE 3

CONSTRUCTION
- CONSTRUCT NEW CONNECTION TO UNDERWOOD PARKWAY
- CONSTRUCT PRIVATE ENTRANCE

TRAFFIC
- OPEN SWAN BOULEVARD
- OPEN UNDERWOOD PARKWAY ACCESS
- OPEN WLC ACCESS ROAD
- CLOSE UNDERWOOD PARKWAY

WORK ZONE

WORK BY OTHERS

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

N

SWAN BOULEVARD

N. MAYFAIR ROAD

STH 100

UNDERWOOD PARKWAY

DISCOVERY PARKWAY

USH 45 NB
USH 45 SB

R-40-484

R-40-485

B-40-775

PRIVATE ENTRANCE

WATERTOWN PLANK ROAD

WORK BY OTHERS
UNDER 1060-33-72

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026300_s3.dgn PLOT DATE : 30-JAN-2013 04:47 PLOT BY : MSCDYB PLOT NAME : 026300_s3 PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

N

2

COVERING SIGNS TYPE II LEFT IN PLACE

ONLY

MATCHLINE 225UDE+00

TRAFFIC CONTROL DRUM LEFT IN PLACE (TYP)

S-40-638

32WWB

168BV

170BV

SWAN BOULEVARD

172BV

25' TYP

UNDERWOOD PARKWAY

300322

174BV

176BV

34WWB

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

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

BOLLARD

BOLLARDS (4)

CANOPY

CANOPY

CANOPY

INL

TRAFFIC CONTROL BARRICADES PERMANENT TYPE III

BOLLARD

36WWB

MATCHLINE 178BV+00

WATERTOWN PLANK ROAD

WORK BY OTHERS UNDER I.D. 1060-33-72

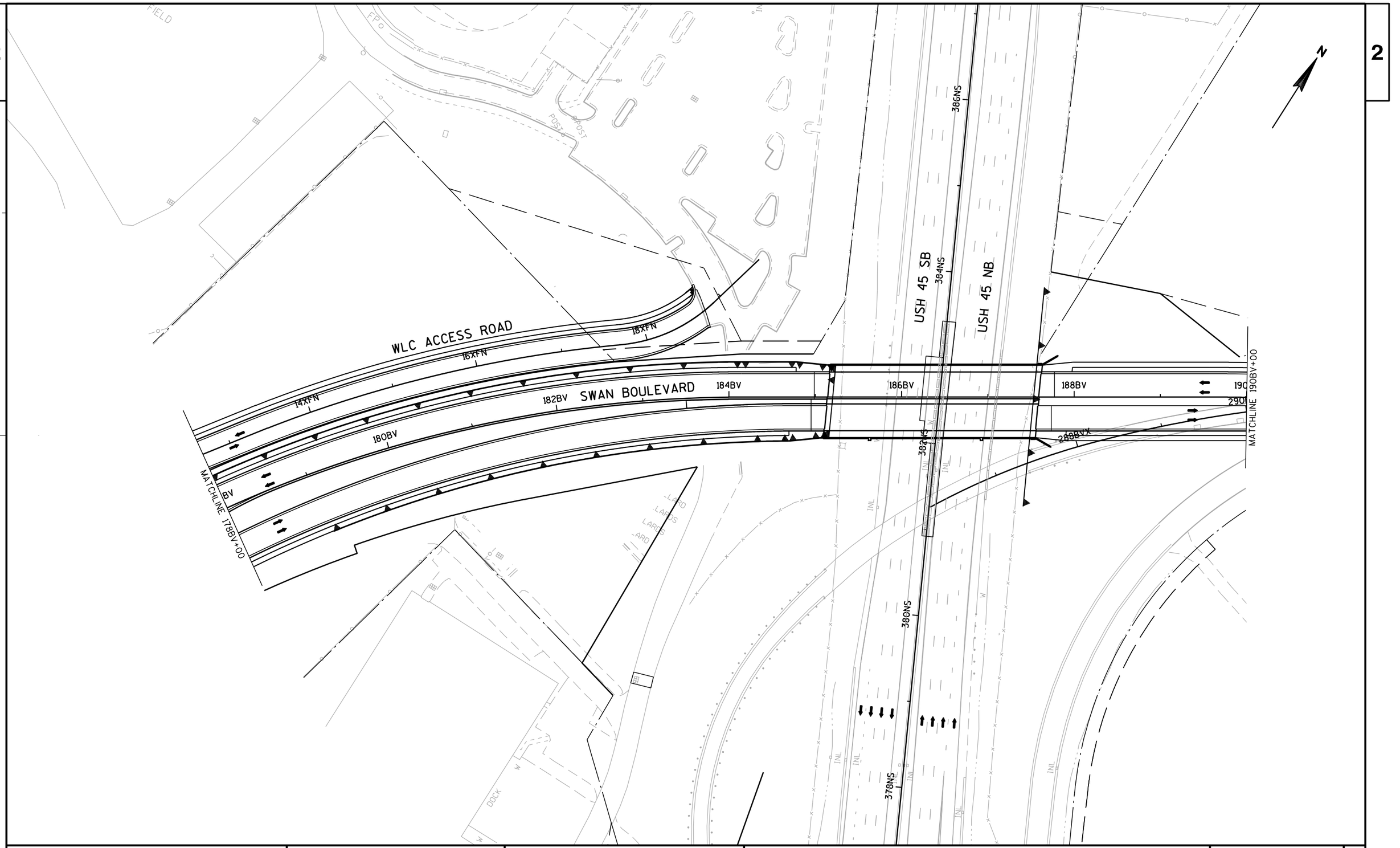
SCHOOL

BOLLARDS (6)

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026301_s3.dgn PLOT DATE : 30-JAN-2013 04:48 PLOT BY : MSCDYB PLOT NAME : 026301_s3 PLOT SCALE : 100:1

2



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026302_s3.dgn PLOT DATE : 30-JAN-2013 04:48 PLOT BY : MSCDYB PLOT NAME : 026302_s3 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

ROAD WORK 250 FT W20-1

ROAD WORK 500 FT W20-1

196BV

198BV

194BV

192BV

SWAN BOULEVARD

MATCHLINE

MATCHLINE

BV

MATCHLINE 190BV+00

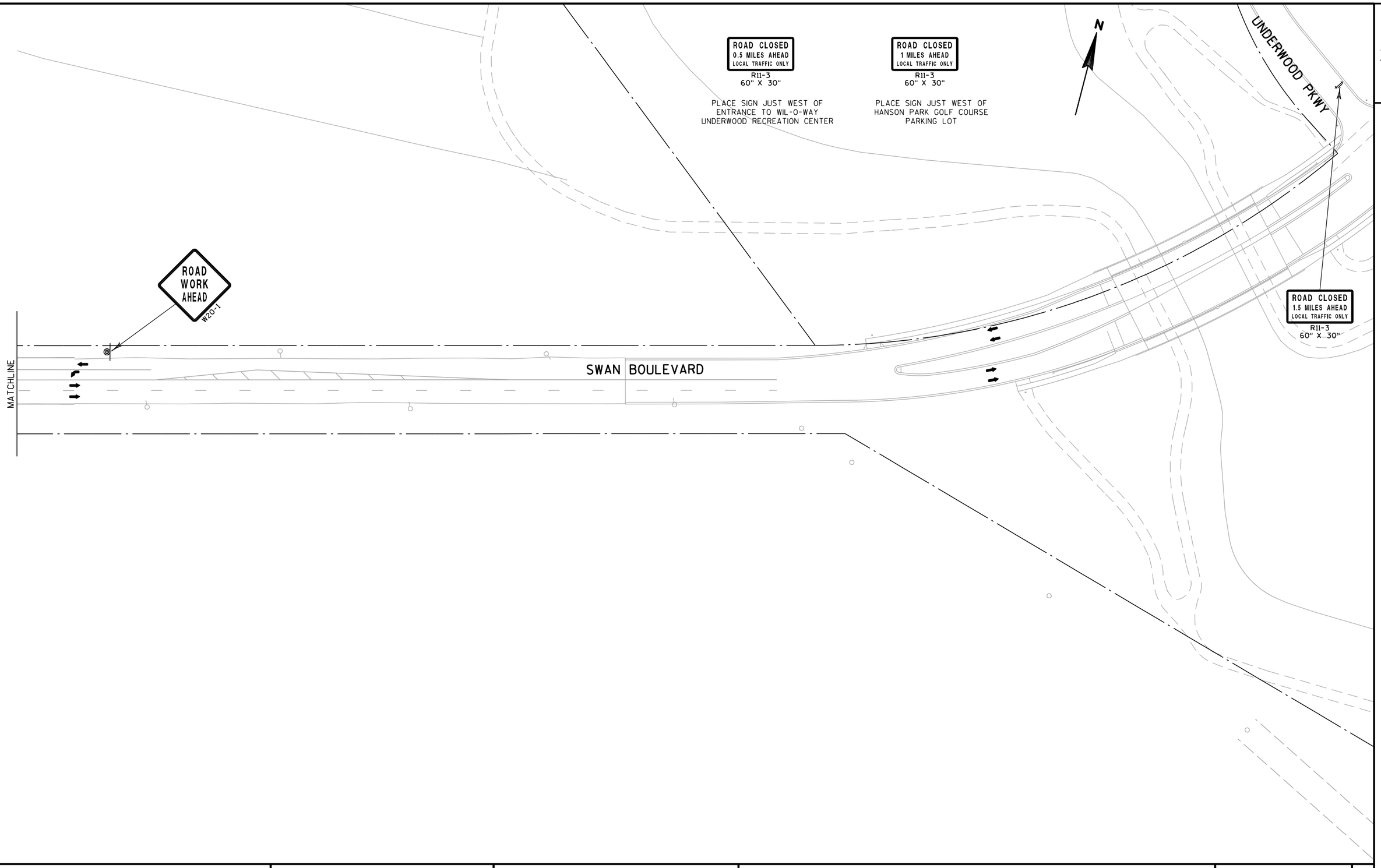
END ROAD WORK G20-2A 48" X 24"

DISCOVERY PARKWAY

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026303_s3.dgn PLOT DATE : 30-JAN-2013 04:48 PLOT BY : MSCDYB PLOT NAME : 026303_s3 PLOT SCALE : 100:1

2



2

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\026304_s3.dgn PLOT DATE : 30-JAN-2013 04:48 PLOT BY : MSCDYB PLOT NAME : 026304_s3 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

MAINTAIN PEDESTRIAN AND BICYCLE ACCESS TO THE OAK LEAF TRAIL OFF UNDERWOOD PARKWAY THROUGHOUT CONSTRUCTION OPERATIONS

ROAD CLOSED
R11-2
48" X 30"

UNDERWOOD PARKWAY

ROAD CLOSED 250 FT
W20-3

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

ROAD CLOSED 500 FT
W20-3

ROAD CLOSED AHEAD
W20-3

500'

ROAD CLOSED
R11-2
48" X 30"

MAINTAIN ACCESS AT ALL TIMES

ROAD CLOSED
R11-2
48" X 30"

TRAFFIC CONTROL BARRICADES PERMANENT TYPE III

WATERTOWN PLANK ROAD

MATCHLINE 225UDE+00

MATCHLINE 178BV+00

WLC ACCESS ROAD

ATHLETIC FIELD

PARKING

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

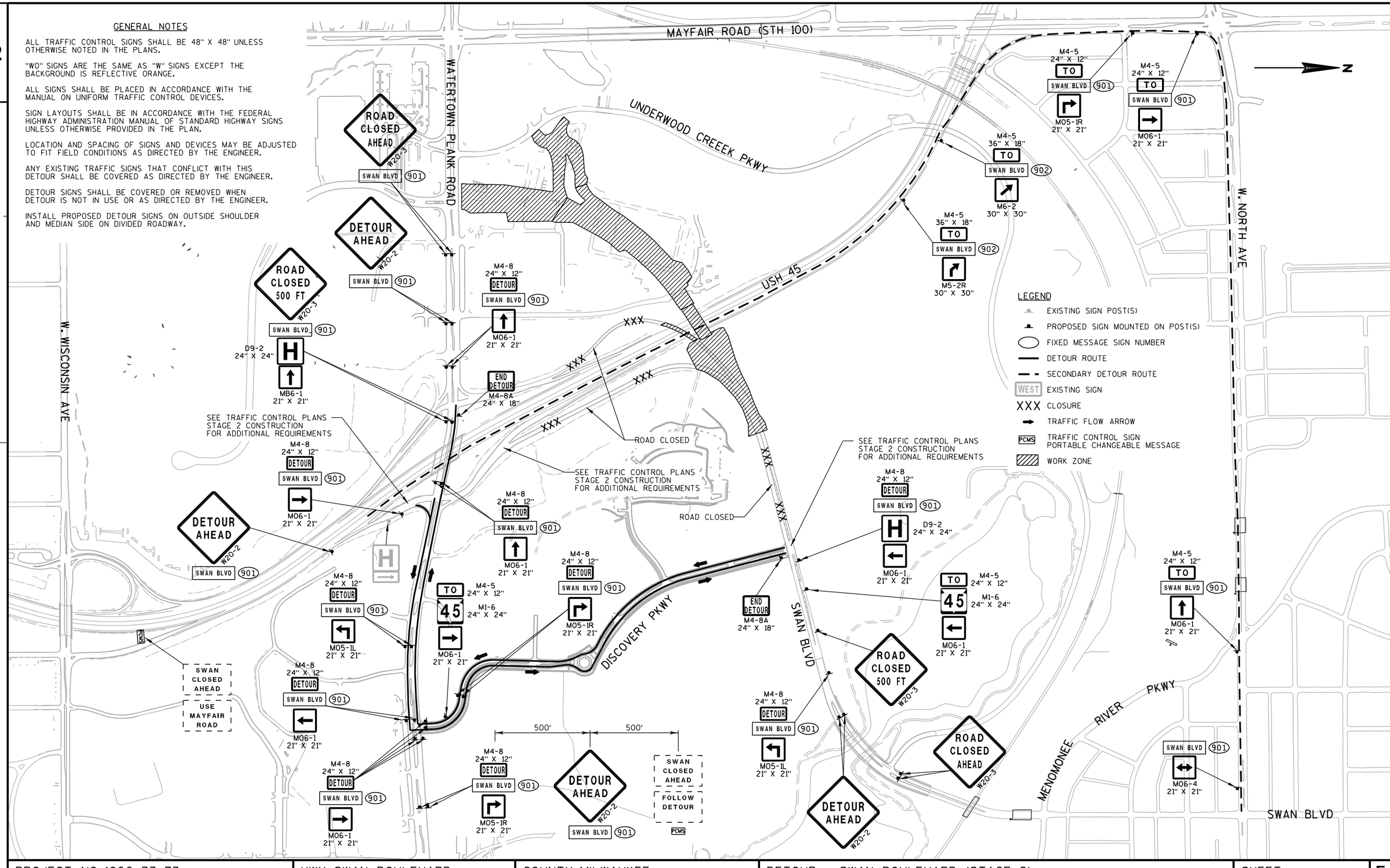
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

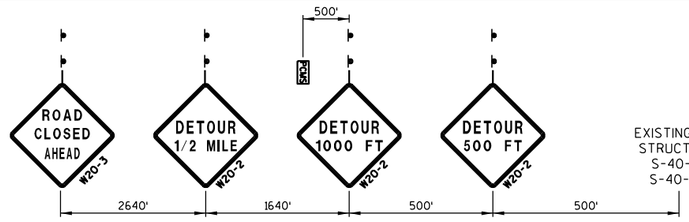
ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	DETOUR - SWAN BOULEVARD (STAGE 2)	SHEET E



EXISTING SIGN STRUCTURES
S-40-196
S-40-354

PCMS MESSAGE

ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- NORTH EXISTING SIGN
- COVER SIGN
- XXX CLOSURE
- TRAFFIC FLOW ARROW
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE
- WORK ZONE

IH 94
WATERTOWN PLANK RD.
W. BLUEMOUND RD
W. WISCONSIN AVE
W. BURLEIGH RD
N. MAYFAIR RD (STH 100)
W. NORTH AVE
USH 45
SWAN BLVD
IH 894/USH 45
IH 94
S. 92ND ST

M4-8 24" X 12" DETOUR
NORTH 45
SOUTH 45

COVER WITH (E)

CLOSE ENTRANCE RAMP
SEE "ENTRANCE RAMP CLOSURE" DETAIL

S-40-354

SEE "ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE" DETAIL ABOVE AND "FULL FREEWAY CLOSURE DETAIL"

END DETOUR
M04-8A
30" X 24"

ROAD CLOSED

SEE "ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE" DETAIL ABOVE, "FULL FREEWAY CLOSURE DETAIL" AND "FULL FREEWAY CLOSURE DETAIL (USH 45 NB)"

S-40-196

(1) DETOUR M4-8 24" X 12"; NORTH M03-1 24" X 12"; 45 M1-6 24" X 24"

(2) DETOUR M4-8 24" X 12"; SOUTH M03-3 24" X 12"; 45 M1-6 24" X 24"

(A) M06-1 21" X 21"
(B) M05-1R 21" X 21"
(C) M06-1 21" X 21"
(D) M05-1L 21" X 21"
(E) M06-1 21" X 21"
(F) M05-2R 21" X 21"
(G) M06-2 21" X 21"

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

DETOURS SHOWN FOR NIGHTTIME USE ONLY.

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	DETOUR - USH 45 NORTHBOUND AND SOUTHBOUND (STAGES 1 AND 2)	SHEET	E

2

2

WLC ACCESS ROAD

SWAN BOULEVARD

USH 45 SB

USH 45 NB

R-40-485

NS+89.28
116.02' LT

B-40-775

R-40-485

NS+28.27
106.76' LT

NS+55.43
101.89' LT

NS+20.00
100.36' LT

NS+79.69
100.39' LT

R-40-484

NS+93.91
115.12' RT

NS+11.03
113.73' RT

NS+29.85
99.15' RT

NS+75.00
99.65' RT

LEGEND

—×—×— FENCE TEMPORARY LEFT IN PLACE

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	FENCING	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\027101_fn.dgn PLOT DATE : 31-JAN-2013 16:34 PLOT BY : MSCD1S PLOT NAME : 027101_fn PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

9UBP+90.42 SHARED USE PATH =
174BV+09.82 SWAN BOULEVARD, 834.98'LT
X = 569495.28
Y = 303180.43

11UBP+57.84 SHARED USE PATH=
174BV+59.84 SWAN BOULEVARD, 731.77'LT
X = 569617.72
Y = 303220.35

216UDW+86.42 UNDERWOOD PARKWAY =
175BV+27.64 SWAN BOULEVARD, 735.55'LT
X = 569650.81
Y = 303317.01

R/L UDW

CURVE UBP2
CURVE UBP1
S58°14'37"E
10UBP
N67°43'23"E
S58°10'23"W
PC UBP1
PI UBP1
PT UBP1
PT UBP2
PI UBP2
PC UBP2
PC UDW1
R/L UBP

PI XFN1
PC XFN1
PRC XFN2
PI XFN2
PI UDW1
PI UDW2
PRC UDW2
CURVE XFN1
CURVE XFN2
PC XFN2
PT XFN2
CURVE UDW1
CURVE UDW2
CURVE RND1
4XFS
10RND
PC UDE1
CURVE UDE1
PT UDE1
PT UDW2
PC XFS2
CURVE XFS2
PI XFS2
PC XFS1
CURVE XFS1
PI XFS1
PRC XFS2
2XFS
N58°02'06"E
R/L XFS

2XFS+00.00 WLC ACCESS ROAD =
221UDW+73.78 UNDERWOOD PARKWAY, 248.34'RT
X = 569690.71
Y = 302658.94

220UDW
N81°24'00"E
PC XFN3
CURVE XFN3
10XFN
PT XFN3
PI XFN3
N35°16'59"E
R/L XFN
PI BV1
PC XFN4
15XFN
PI XFN4
CURVE XFN4
180BV

19XFN+61.87 WLC ACCESS ROAD =
184BV+34.90 SWAN BOULEVARD, 159.43'LT
X = 570822.13
Y = 303852.65

PT XFN5
PRC XFN5
CURVE XFN5
N35°56'54"E
PI XFN5
PT BV1
185BV

382NS+54.14 USH 45 =
186BV+44.18 SWAN BOULEVARD
X = 571084.33
Y = 303831.08

226UDE+87.64 UNDERWOOD PARKWAY =
173BV+62.66 SWAN BOULEVARD
X = 570277.15
Y = 302881.46

225UDE
S90°00'00"E
175BV
R/L UDE
CURVE BV1
R/L BV

229UDE+09.86 UNDERWOOD PARKWAY =
174BV+33.73 SWAN BOULEVARD, 212.31'RT
X = 570499.38
Y = 302881.46

T 7 N
20 20
20 20
R 21 E
X=571773.24
Y=304820.60

385NS
N0°20'27"W
PC BV2
PI BV2
190BV
290BVX
CURVE BV2
PT BV2
N61°58'43"E
PC BV3
CURVE BV3
195BV
PI BV3
PT BV3
N75°29'25"E

199BV+82.65 SWAN BOULEVARD =
X = 572293.97
Y = 304377.30

END PROJECT 1060-33-73
195BV+06.59
X = 571834.56
Y = 304253.01

290BVX+33.35 SB EXISTING SWAN BOULEVARD =
190BV+33.35 SWAN BOULEVARD, 12.00'RT
X = 571418.94
Y = 304029.58

PI BVX2
CURVE BVX2
N57°24'05"E
PI BVX
CURVE BVX1
PCC BVX1/BVX2
PT BVX2
PC BVX

286BVX+13.16 SB EXISTING SWAN BOULEVARD =
186BV+31.68 SWAN BOULEVARD, 128.26'RT
X = 571142.90
Y = 303716.30

380NS
R/L NS
1/4 LINE 2660.86'
N0°12'38"W

775WD
N12°58'27"W
770WD
375NS
PT NS3
PI NS3
370NS
CURVE NS3
PC NS3

T 7 N
20 20
29 29
R 21 E
X=571783.02
Y=302159.76
PT WD1
PC NS3
CURVE WD1
PI WD1

29WWB+87.95 WATERTOWN PLANK ROAD
X = 569900.09
Y = 302176.46

BEGIN PROJECT 1060-33-73
166BV+92.00
X = 570222.94
Y = 302215.88

10UBP+00.00 SHARED USE PATH =
166BV+85.06 SWAN BOULEVARD, 282.80'LT
X = 569940.17
Y = 302208.09

33WWB+10.92 WATERTOWN PLANK ROAD WB =
166BV+54.00 SWAN BOULEVARD
X = 570223.06
Y = 302177.88

36WWB+00.00 WATERTOWN PLANK ROAD =
166BV+54.41 SWAN BOULEVARD, 289.08'RT
X = 570512.14
Y = 302179.16

30WWB
R/L WWB
25'
SECTION LINE
2667.48'
N89°44'51"E
2332'
N90°E
35WWB
NO°10'20"W
170BV
PC BV1

T 7 N
19 20
30 29
R 21 E
X=569115.57
Y=302148.00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

2

2

X=571822.63
Y=294185.74

T 7 N
R 21 E
32 32
32 32

286NS+60.56 USH 45
Y = 294819.40
X = 572161.64

290NS

187EW+58.35 IH 94
X = 572206.13
Y = 295426.49

R/L NS

295NS

N15°05'01"E

293NS+24.61 USH 45 =
188EW+91.11 IH 94
X = 572334.45
Y = 295460.57

190EW

300NS

PC
NS1

305NS

CURVE NS1

N75°07'34"E

R/L EW

195EW

PC
EW1

CURVE EW1

PI
EW1

200EW

PT
EW1

N88°24'57"E

205EW+99.87 IH 94
X = 574013.76
Y = 295720.66

N

X=569138.09
Y=299491.06

T 7 N
R 21 E
30 29
30 29

X=574472.02
Y=294195.84

T 7 N
R 21 E
32 33
32 33

X=574448.90
Y=299508.94

T 7 N
R 21 E
29 28
29 28

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\027202_ad.dgn PLOT DATE : 30-JAN-2013 16:30 PLOT BY : MSCD1S PLOT NAME : 027202_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

X=569138.09
Y=299491.06

T 7 N
R 21 E
30 29
30 29

N

X=571800.79
Y=299505.73

T 7 N
R 21 E
29 29
29 29

2

SECTION LINE 2643.54' N89°40'20"E

310NS

CURVE NS1

PI
NS1

315NS

PT
NS1

320NS

325NS

N4°48'07"E

330NS

R/L NS

722BD+56.79 RAMP BD
X = 572713.72
Y = 298346.91

725BD

N4°48'07"E

PC
BD1

R/L BD

PI
BD1

CURVE BD1

730BD

PT
BD1

N10°45'10"E

PC
BD2

735BD CURVE BD2

PI
BD2

PT
BD2

335NS

1/4 LINE 2648.11' N89°55'50"E

X=574448.90
Y=299508.94

T 7 N
R 21 E
29 28
29 28

X=574448.90
Y=299508.94

T 7 N
R 21 E
29 28
29 28

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\027203_ad.dgn PLOT DATE : 30-JAN-2013 16:30 PLOT BY : MSCD1S PLOT NAME : 027203_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

2

N

1/4 LINE 2666.98' S0°18'45"E

1/4 LINE 2662.74' N89°41'03.6"E

1/4 LINE 2654.09' S0°23'1"E

1/4 LINE 2660.86' N0°12'38"W

SECTION LINE 2667.48' N89°44'51"E

T 7 N R 21 E — 30 29 / 29 29 — X=569138.06 Y=299491.06

T 7 N R 21 E — 19 20 / 30 29 — X=569115.57 Y=302148.00

T 7 N R 21 E — 20 20 / 20 20 — X=571773.24 Y=304820.60

T 7 N R 21 E — 29 29 / 29 29 — X=571800.79 Y=299505.73

T 7 N R 21 E — 20 20 / 29 29 — X=571783.02 Y=302159.76

T 7 N R 21 E — 32 19 / 32 19 — X=571815.34 Y=296838.79

365NS

360NS

N34°51'19"W

355NS

PT NS2

350NS

345NS

CURVE NS2

340NS

335NS

PC NS2

735BD

R/L NS

PI NS2

1/4 LINE 2648.11' N89°55'50"E

SECTION LINE 2633.82' N89°42'13"E

T 7 N R 21 E — 29 28 / 29 28 — X=574448.90 Y=299508.94

T 7 N R 21 E — 20 21 / 29 28 — X = 574416.80 Y = 302173.39

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\027204_ad.dgn PLOT DATE : 30-JAN-2013 16:30 PLOT BY : MSCD1S PLOT NAME : 027204_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

N

X=569081.94
Y=304800.15

T 7 N
R 21 E
19 20
19 20

SECTION LINE 2691.38' N89°33'53"E

410NS

416NS+13.92 USH 45
X = 568656.74
Y = 305945.63

N66°03'08"W

405NS

PT
NS4

400NS

R/L NS

CURVE NS4

PI
NS4

395NS

390NS

PC
NS4

385NS

N27°02'02"W

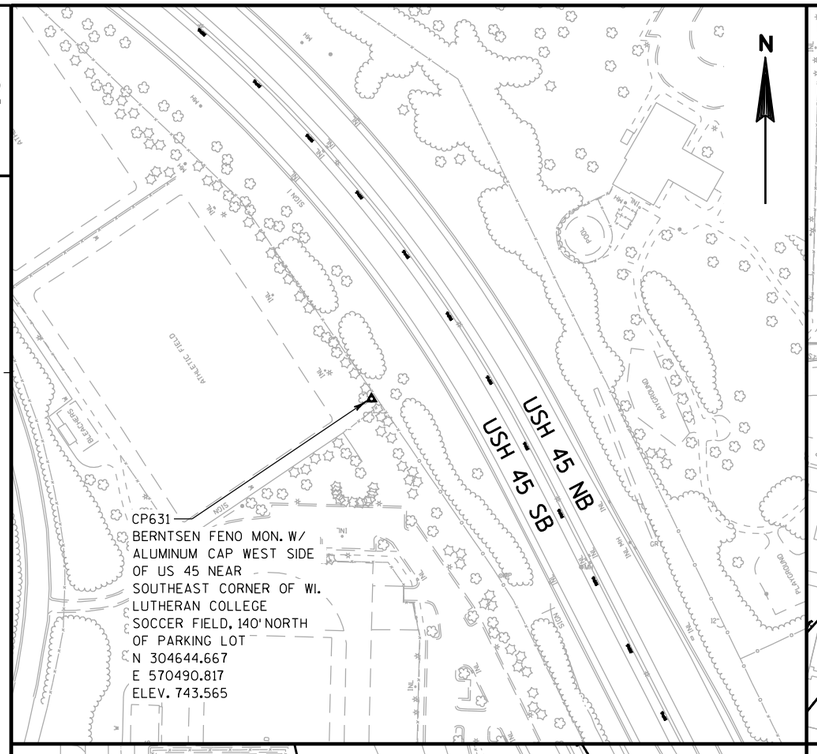
X=571773.24
Y=304820.60

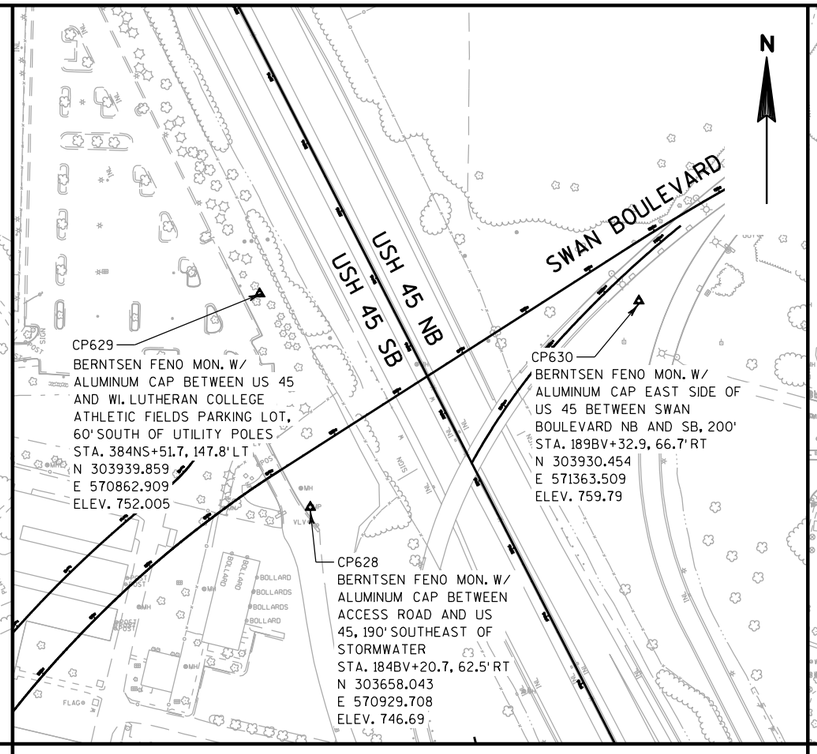
T 7 N
R 21 E
20 20
20 20

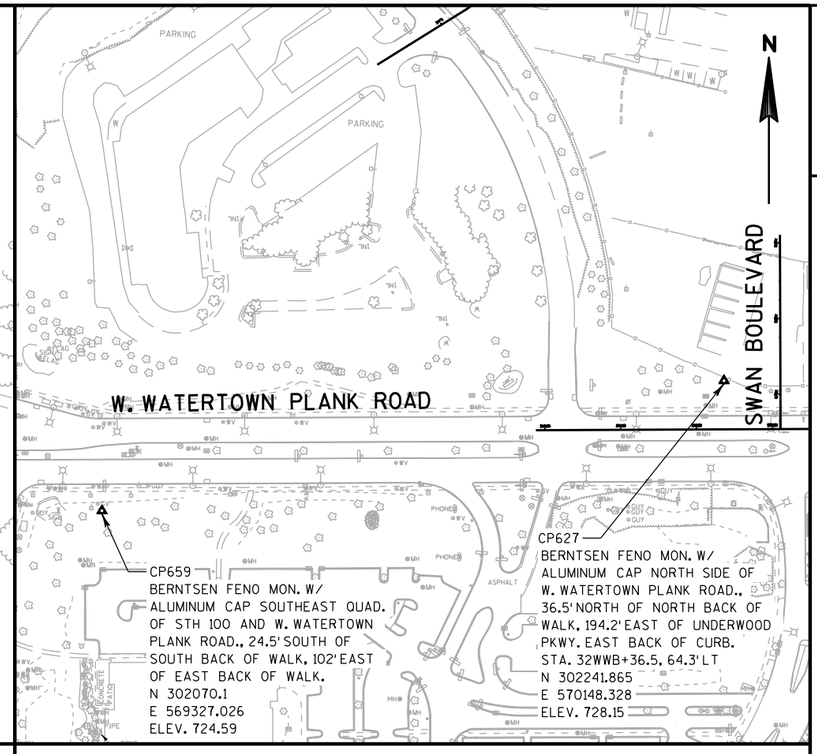
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

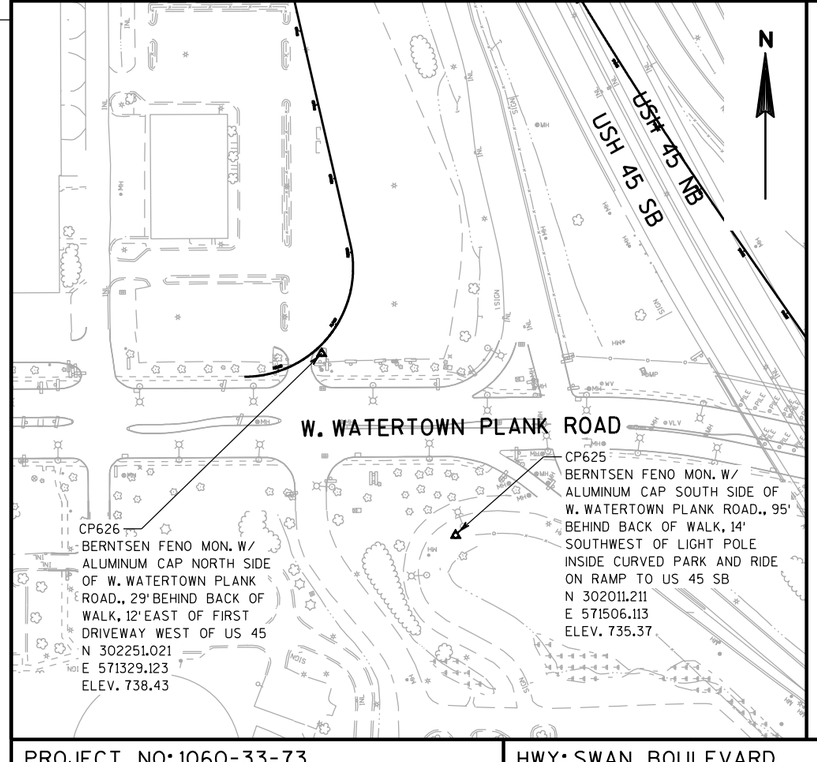
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\027205_ad.dgn PLOT DATE : 30-JAN-2013 16:30 PLOT BY : MSCD1S PLOT NAME : 027205_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42









PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET	E

2

CURVE DATA											
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
BD1	728BD+50.73	572763.44	298938.76	5°57'02"	1°31'11"	195.95	391.54	5.09	3770.00	726BD+54.78	730BD+46.32
BD2	735BD+46.31	572893.28	299622.48	9°10'48"	2°56'18"	156.55	312.43	6.27	1950.00	733BD+89.76	737BD+02.20
BV1	177BV+54.31	570219.75	303278.19	57°34'25"	3°57'05"	796.71	1457.03	204.46	1450.00	169BV+57.61	184BV+14.63
BV2	190BV+68.72	571441.99	304059.81	4°34'38"	2°02'47"	111.90	223.68	2.24	2800.00	189BV+56.82	191BV+80.50
BV3	194BV+70.53	571796.81	304248.64	13°30'42"	4°24'27"	154.00	306.57	9.09	1300.00	193BV+16.53	196BV+23.10
BVX1	287BVX+12.65	571190.86	303803.46	13°21'05"	6°44'26"	99.49	198.07	5.80	850.00	286BVX+13.16	288BVX+11.24
BVX2	289BVX+22.52	571332.35	303959.67	8°54'43"	4°00'44"	111.28	222.11	4.33	1428.00	288BVX+11.24	290BVX+33.35
EW1	198EW+20.19	573232.40	295699.05	13°17'23"	3°00'56"	221.34	440.70	12.85	1900.00	195EW+98.85	200EW+39.55
NS1	309NS+62.35	572760.64	297041.88	10°16'54"	0°42'39"	725.12	1446.35	32.55	8060.00	302NS+37.22	316NS+83.58
NS2	346NS+23.95	573067.49	300694.51	39°39'27"	1°54'35"	1081.77	2076.46	189.08	3000.00	335NS+42.18	356NS+18.64
NS3	370NS+41.48	571636.09	302749.78	7°49'18"	0°57'03"	411.88	822.49	14.06	6025.00	366NS+29.60	374NS+52.09
NS4	397NS+58.57	570400.54	305171.14	39°01'06"	2°59'59"	676.71	1300.71	116.34	1910.00	390NS+81.86	403NS+82.57
RND1	CC=	569858.21	302881.46	180°00'00"	130°13'04"	N/A	138.23	N/A	44.00	10RND+00.00	12RND+76.46
UBP1	10UBP+47.86	569544.13	303150.20	54°01'28"	119°21'58"	24.47	45.26	5.88	48.00	10UBP+23.39	10UBP+68.65
UBP2	11UBP+18.82	569613.20	303178.48	61°33'36"	216°12'38"	15.78	28.47	4.34	26.50	11UBP+03.03	11UBP+31.50
UDE1	223UDE+29.23	569913.96	302881.46	52°07'05"	81°51'04"	34.23	63.67	7.92	70.00	222UDE+95.00	223UDE+58.67
UDW1	220UDW+56.37	569611.03	302949.21	77°06'49"	26°38'57"	171.37	289.37	59.94	215.00	218UDW+85.00	221UDW+74.37
UDW2	222UDW+06.74	569803.60	302882.68	35°52'27"	57°17'45"	32.37	62.61	5.11	100.00	221UDW+74.37	222UDW+36.98
WD1	767WD+33.95	571407.42	302221.1	102°43'17"	39°47'19"	180.13	258.17	86.62	144.00	765WD+53.82	768WD+11.99
XFN1	5XFN+49.44	569852.53	302931.14	32°40'03"	70°44'08"	23.74	46.18	3.41	81.00	5XFN+25.70	5XFN+71.88
XFN2	6XFN+11.44	569876.71	302989.63	58°56'21"	81°51'04"	39.56	72.01	10.40	70.00	5XFN+71.88	6XFN+43.89
XFN3	9XFN+36.67	570205.31	303039.32	46°07'01"	30°48'15"	79.18	149.71	16.15	186.00	8XFN+57.50	10XFN+07.21
XFN4	15XFN+47.52	570563.14	303545.02	16°48'05"	3°46'36"	224.04	444.87	16.45	1517.08	13XFN+23.48	17XFN+68.35
XFN5	18XFN+31.26	570789.52	303721.35	38°08'10"	31°28'52"	62.91	121.14	10.57	182.00	17XFN+68.35	18XFN+89.49
XFS1	3XFS+78.05	569841.76	302753.20	46°33'57"	57°17'45"	43.03	81.27	8.87	100.00	3XFS+35.02	4XFS+16.29
XFS2	4XFS+48.51	569856.72	302826.95	43°52'40"	71°37'11"	32.22	61.26	6.25	80.00	4XFS+16.29	4XFS+77.55

DATE 15APR13 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	1060-33-73 QUANTITY
0010	108.4400	CPM PROGRESS SCHEDULE	EACH	1.000	1.000
0020	201.0105	CLEARING **P**	STA	29.000	29.000
0030	201.0120	CLEARING	ID	363.000	363.000
0040	201.0205	GRUBBING **P**	STA	29.000	29.000
0050	201.0220	GRUBBING	ID	363.000	363.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 0001. 186+44	LS	1.000	1.000
0070	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0001. B-40-134	LS	1.000	1.000
0080	204.0100	REMOVING PAVEMENT **P**	SY	4,778.000	4,778.000
0090	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH **P**	SF	39,675.000	39,675.000
0100	204.0110	REMOVING ASPHALTIC SURFACE **P**	SY	5,241.000	5,241.000
0110	204.0120	REMOVING ASPHALTIC SURFACE MILLING **P**	SY	8,446.000	8,446.000
0120	204.0150	REMOVING CURB & GUTTER **P**	LF	1,435.000	1,435.000
0130	204.0157	REMOVING CONCRETE BARRIER **P**	LF	546.000	546.000
0140	204.0165	REMOVING GUARDRAIL **P**	LF	118.000	118.000
0150	204.0170	REMOVING FENCE	LF	2,904.000	2,904.000
0160	204.0195	REMOVING CONCRETE BASES	EACH	14.000	14.000
0170	204.0210	REMOVING MANHOLES	EACH	4.000	4.000
0180	204.0220	REMOVING INLETS	EACH	13.000	13.000
0190	204.0245	REMOVING STORM SEWER (SIZE) 0001. 12-INCH **P**	LF	836.000	836.000
0200	204.0245	REMOVING STORM SEWER (SIZE) 0002. 15-INCH **P**	LF	355.000	355.000
0210	204.0245	REMOVING STORM SEWER (SIZE) 0003. 18-INCH **P**	LF	374.000	374.000
0220	204.0245	REMOVING STORM SEWER (SIZE) 0004. 24-INCH **P**	LF	68.000	68.000
0230	204.0280	SEALING PIPES	EACH	5.000	5.000
0240	205.0100	EXCAVATION COMMON	CY	67,985.000	67,985.000
0250	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0002. B-40-775	LS	1.000	1.000
0260	206.6000.S	TEMPORARY SHORING	SF	9,872.000	9,872.000
0270	209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	12.000	12.000
0280	210.0100	BACKFILL STRUCTURE **P**	CY	580.000	580.000
0290	213.0100	FINISHING ROADWAY (PROJECT) 0001. 1060-33-73	EACH	1.000	1.000
0300	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	16,018.000	16,018.000
0310	312.0110	SELECT CRUSHED MATERIAL	TON	17,828.000	17,828.000
0320	415.0080	CONCRETE PAVEMENT 8-INCH **P**	SY	24,738.000	24,738.000
0330	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	204.000	204.000
0340	416.0190	CONCRETE DRIVEWAY 9-INCH **P**	SY	114.000	114.000
0350	416.0610	DRILLED TIE BARS	EACH	60.000	60.000
0360	440.4410.S	INCENTIVE IRI RIDE	DOL	6,473.000	6,473.000
0370	455.0220	ASPHALTIC MATERIAL PG64-28	GAL	13.000	13.000
0380	455.0605	TACK COAT	GAL	13.000	13.000
0390	460.1110	HMA PAVEMENT TYPE E-10	TON	222.000	222.000
0400	460.1130	HMA PAVEMENT TYPE E-30	TON	1,393.000	1,393.000
0410	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	1,426.000	1,426.000
0420	465.0105	ASPHALTIC SURFACE	TON	612.000	612.000
0430	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	50.000	50.000
0440	465.0310	ASPHALTIC CURB	LF	70.000	70.000
0450	502.0100	CONCRETE MASONRY BRIDGES **P**	CY	473.000	473.000
0460	502.3200	PROTECTIVE SURFACE TREATMENT **P**	SY	2,550.000	2,550.000

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DATE 15APR13 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	1060-33-73 QUANTITY
0470	503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	2,670.000	2,670.000
0480	504.0500	CONCRETE MASONRY RETAINING WALLS **P**	CY	645.000	645.000
0490	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	111,250.000	111,250.000
0500	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	259,740.000	259,740.000
0510	505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	104,815.000	104,815.000
0520	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED **P**	EACH	44.000	44.000
0530	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 0001. B-40-775 **P**	EACH	40.000	40.000
0540	513.2000	RAILING PIPE (STRUCTURE) 0001. R-40-484	LS	1.000	1.000
0550	516.0500	RUBBERIZED MEMBRANE WATERPROOFING **P**	SY	99.000	99.000
0560	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0001. R-40-484	SF	1,538.000	1,538.000
0570	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0002. R-40-485	SF	20,335.000	20,335.000
0580	520.8000	CONCRETE COLLARS FOR PIPE	EACH	9.000	9.000
0590	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	1.000	1.000
0600	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	2.000	2.000
0610	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	1.000	1.000
0620	550.0500	PILE POINTS	EACH	33.000	33.000
0630	550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	2,475.000	2,475.000
0640	601.0105	CONCRETE CURB TYPE A **P**	LF	163.000	163.000
0650	601.0331	CONCRETE CURB & GUTTER 31-INCH **P**	LF	13,981.000	13,981.000
0660	601.0580	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R **P**	LF	264.000	264.000
0670	601.0600	CONCRETE CURB PEDESTRIAN **P**	LF	373.000	373.000
0680	602.0410	CONCRETE SIDEWALK 5-INCH **P**	SF	46,770.000	46,770.000
0690	602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	408.000	408.000
0700	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	1,650.000	1,650.000
0710	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	2,325.000	2,325.000
0720	604.0400	SLOPE PAVING CONCRETE **P**	SY	52.000	52.000
0730	606.0200	RIPRAP MEDIUM	CY	8.000	8.000
0740	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	177.000	177.000
0750	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	1,026.000	1,026.000
0760	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	686.000	686.000
0770	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	2,866.000	2,866.000
0780	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	210.000	210.000
0790	608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	652.000	652.000
0800	608.0342	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH	LF	455.000	455.000
0810	608.0348	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH	LF	59.000	59.000

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DATE 15APR13 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	1060-33-73 QUANTITY
0820	608.0430	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH	LF	170.000	170.000
0830	608.0436	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH	LF	212.000	212.000
0840	608.0460	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 60-INCH	LF	132.000	132.000
0850	608.0524	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH	LF	24.000	24.000
0860	610.0124	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	LF	135.000	135.000
0870	611.0535	MANHOLE COVERS TYPE J-SPECIAL	EACH	9.000	9.000
0880	611.0624	INLET COVERS TYPE H	EACH	69.000	69.000
0890	611.0642	INLET COVERS TYPE MS	EACH	9.000	9.000
0900	611.0652	INLET COVERS TYPE T	EACH	2.000	2.000
0910	611.0663	INLET COVERS TYPE X	EACH	3.000	3.000
0920	611.2004	MANHOLES 4-FT DIAMETER	EACH	4.000	4.000
0930	611.2005	MANHOLES 5-FT DIAMETER	EACH	11.000	11.000
0940	611.2006	MANHOLES 6-FT DIAMETER	EACH	8.000	8.000
0950	611.2007	MANHOLES 7-FT DIAMETER	EACH	6.000	6.000
0960	611.2008	MANHOLES 8-FT DIAMETER	EACH	3.000	3.000
0970	611.3004	INLETS 4-FT DIAMETER	EACH	55.000	55.000
0980	611.3901	INLETS MEDIAN 1 GRATE	EACH	1.000	1.000
0990	611.3902	INLETS MEDIAN 2 GRATE	EACH	4.000	4.000
1000	611.8115	ADJUSTING INLET COVERS	EACH	2.000	2.000
1010	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	32.000	32.000
1020	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	1,789.000	1,789.000
1030	614.0905	CRASH CUSHIONS TEMPORARY	EACH	5.000	5.000
1040	616.0600.S	FENCE TEMPORARY	LF	550.000	550.000
1050	619.1000	MOBILIZATION	EACH	1.000	1.000
1060	620.0300	CONCRETE MEDIAN SLOPED NOSE **P**	SF	1,042.000	1,042.000
1070	623.0200	DUST CONTROL SURFACE TREATMENT	SY	42,298.000	42,298.000
1080	624.0100	WATER	MGAL	304.000	304.000
1090	625.0105	TOPSOIL	CY	8,919.000	8,919.000
1100	625.0500	SALVAGED TOPSOIL **P**	SY	29,586.000	29,586.000
1110	627.0200	MULCHING	SY	2,000.000	2,000.000
1120	628.1504	SILT FENCE	LF	6,808.000	6,808.000
1130	628.1520	SILT FENCE MAINTENANCE	LF	6,808.000	6,808.000
1140	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
1150	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	3.000	3.000
1160	628.2004	EROSION MAT CLASS I TYPE B	SY	87,477.000	87,477.000
1170	628.2023	EROSION MAT CLASS II TYPE B	SY	9,248.000	9,248.000
1180	628.6510	SOIL STABILIZER TYPE B	ACRE	5.100	5.100
1190	628.7005	INLET PROTECTION TYPE A	EACH	83.000	83.000
1200	628.7010	INLET PROTECTION TYPE B	EACH	34.000	34.000
1210	628.7015	INLET PROTECTION TYPE C	EACH	69.000	69.000
1220	628.7020	INLET PROTECTION TYPE D	EACH	17.000	17.000
1230	628.7504	TEMPORARY DITCH CHECKS	LF	113.000	113.000
1240	628.7555	CULVERT PIPE CHECKS	EACH	2.000	2.000
1250	628.7560	TRACKING PADS	EACH	8.000	8.000
1260	629.0205	FERTILIZER TYPE A	CWT	3.000	3.000
1270	629.0210	FERTILIZER TYPE B	CWT	69.000	69.000
1280	630.0200	SEEDING TEMPORARY	LB	2,775.000	2,775.000
1290	630.0400	SEEDING NURSE CROP	LB	739.000	739.000
1300	631.0300	SOD WATER	MGAL	163.000	163.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-73 QUANTITY
1310	631.1000	SOD LAWN	SY	7,136.000	7,136.000
1320	632.0101	TREES (SPECIES, ROOT, SIZE) 0001. ELM PROSPECTOR B&B 2 1/2 -INCH CAL	EACH	15.000	15.000
1330	632.0101	TREES (SPECIES, ROOT, SIZE) 0003. HACKBERRY COMMON B&B 2 1/2 -INCH CAL	EACH	15.000	15.000
1340	632.0101	TREES (SPECIES, ROOT, SIZE) 0005. OAK SWAMP WHITE B&B 2 1/2 -INCH CAL	EACH	16.000	16.000
1350	632.0101	TREES (SPECIES, ROOT, SIZE) 0007. LONDON PLANE B&B 2 1/2 -INCH CAL	EACH	9.000	9.000
1360	632.0101	TREES (SPECIES, ROOT, SIZE) 0009. TULIP B&B 2 1/2 -INCH CAL	EACH	17.000	17.000
1370	632.0101	TREES (SPECIES, ROOT, SIZE) 0011. CRABAPPLE CAMELOT B&B 2 -INCH CAL	EACH	33.000	33.000
1380	632.0101	TREES (SPECIES, ROOT, SIZE) 0013. HAWTHORN THORNLESS COCKSPUR B&B 2 -INCH CAL	EACH	17.000	17.000
1390	632.0101	TREES (SPECIES, ROOT, SIZE) 0015. MAPLE HEDGE	EACH	3.000	3.000
1400	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	24.000	24.000
1410	633.5200	MARKERS CULVERT END	EACH	1.000	1.000
1420	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	21.000	21.000
1430	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	3.000	3.000
1440	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	71.000	71.000
1450	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	600.000	600.000
1460	635.0300	SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS	EACH	2.000	2.000
1470	636.0100	SIGN SUPPORTS CONCRETE MASONRY **P**	CY	1.600	1.600
1480	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	98.000	98.000
1490	637.0202	SIGNS REFLECTIVE TYPE II	SF	1,100.390	1,100.390
1500	637.0402	SIGNS REFLECTIVE FOLDING TYPE II	SF	59.680	59.680
1510	638.2101	MOVING SIGNS TYPE I	EACH	1.000	1.000
1520	638.2102	MOVING SIGNS TYPE II	EACH	6.000	6.000
1530	638.2602	REMOVING SIGNS TYPE II	EACH	39.000	39.000
1540	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	30.000	30.000
1550	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	2.000	2.000
1560	638.3620	ERECTING STATE OWNED SIGNS TYPE II	EACH	2.000	2.000
1570	638.4100	MOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	2.000	2.000
1580	641.8100	OVERHEAD SIGN SUPPORT (STRUCTURE) 0001. S-40-638	LS	1.000	1.000
1590	643.0100	TRAFFIC CONTROL (PROJECT) 0001. 1060-33-73	EACH	1.000	1.000
1600	643.0300	TRAFFIC CONTROL DRUMS	DAY	6,260.000	6,260.000
1610	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	89.000	89.000
1620	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	3,586.000	3,586.000
1630	643.0453	TRAFFIC CONTROL BARRICADES PERMANENT TYPE III	EACH	7.000	7.000
1640	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	7,172.000	7,172.000
1650	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,582.000	1,582.000
1660	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	82.000	82.000
1670	643.0900	TRAFFIC CONTROL SIGNS	DAY	6,557.000	6,557.000
1680	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	20.000	20.000
1690	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	40.000	40.000
1700	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	277.000	277.000
1710	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	113.000	113.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-73 QUANTITY
1720	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 0001. 1060-33-73	EACH	1.000	1.000
1730	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	4,184.000	4,184.000
1740	645.0120	GEOTEXTILE FABRIC TYPE HR **P**	SY	12.000	12.000
1750	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	30,145.000	30,145.000
1760	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	1,894.000	1,894.000
1770	646.0156	PAVEMENT MARKING EPOXY 18-INCH	LF	62.000	62.000
1780	646.0600	REMOVING PAVEMENT MARKINGS	LF	3,576.000	3,576.000
1790	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	1,309.000	1,309.000
1800	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	2,467.000	2,467.000
1810	647.0456	PAVEMENT MARKING CURB EPOXY	LF	152.000	152.000
1820	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	104.000	104.000
1830	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	4.000	4.000
1840	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	243.000	243.000
1850	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	9,187.000	9,187.000
1860	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	425.000	425.000
1870	649.2100	TEMPORARY RAISED PAVEMENT MARKERS	EACH	73.000	73.000
1880	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	338.000	338.000
1890	652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	60.000	60.000
1900	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	4,762.000	4,762.000
1910	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	838.000	838.000
1920	652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	35.000	35.000
1930	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	2.000	2.000
1940	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	8.000	8.000
1950	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	8.000	8.000
1960	653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	3.000	3.000
1970	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	15.000	15.000
1980	653.0905	REMOVING PULL BOXES	EACH	3.000	3.000
1990	654.0101	CONCRETE BASES TYPE 1	EACH	2.000	2.000
2000	654.0105	CONCRETE BASES TYPE 5	EACH	27.000	27.000
2010	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	1.000	1.000
2020	655.0146	CABLE IN DUCT 4-6 AWG	LF	2,348.000	2,348.000
2030	655.0505	ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF	2,670.000	2,670.000
2040	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	4,788.000	4,788.000
2050	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	160.000	160.000
2060	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	11,442.000	11,442.000
2070	655.0635	ELECTRICAL WIRE LIGHTING 2 AWG	LF	282.000	282.000
2080	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0001. CB-CCTV-40-0145	LS	1.000	1.000
2090	656.0400	ELECTRICAL SERVICE MAIN LUGS ONLY METER PEDESTAL (LOCATION) 0001. SB	LS	1.000	1.000
2100	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0001. CB-CCTV-40-0145	LS	1.000	1.000
2110	657.0100	PEDESTAL BASES	EACH	2.000	2.000
2120	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	25.000	25.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-73 QUANTITY
2130	657.0322	POLES TYPE 5-ALUMINUM	EACH	36.000	36.000
2140	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	1.000	1.000
2150	657.0430	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	EACH	1.000	1.000
2160	657.0615	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	EACH	36.000	36.000
2170	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	38.000	38.000
2180	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 0001. W. WATERTOWN PLANK RD & DISCOVERY PARKWAY	LS	1.000	1.000
2190	670.0100	FIELD SYSTEM INTEGRATOR 0001. FTMS	LS	1.000	1.000
2200	670.0200	ITS DOCUMENTATION 0001. FTMS	LS	1.000	1.000
2210	671.0112	CONDUIT HDPE 1-DUCT 2-INCH	LF	1,070.000	1,070.000
2220	671.0132	CONDUIT HDPE 3-DUCT 2-INCH	LF	1,355.000	1,355.000
2230	671.0212	CONDUIT HDPE DIRECTIONAL BORE 1-DUCT 2-IN	LF	90.000	90.000
2240	672.0250	BASE CAMERA POLE 50-FT	EACH	1.000	1.000
2250	673.0105	COMMUNICATION VAULT TYPE 1	EACH	7.000	7.000
2260	673.0225.S	INSTALL POLE MOUNTED CABINET	EACH	1.000	1.000
2270	674.0300	REMOVE CABLE	LF	1,613.000	1,613.000
2280	675.0400.S	INSTALL ETHERNET SWITCH	EACH	1.000	1.000
2290	677.0100	INSTALL CAMERA POLE	EACH	1.000	1.000
2300	677.0200	INSTALL CAMERA ASSEMBLY	EACH	1.000	1.000
2310	677.0300.S	INSTALL VIDEO ENCODER	EACH	1.000	1.000
2320	678.0006	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	LF	5,170.000	5,170.000
2330	678.0400	FIBER OPTIC TERMINATION	EACH	6.000	6.000
2340	678.0500	COMMUNICATION SYSTEM TESTING 0001. FTMS	LS	1.000	1.000
2350	690.0150	SAWING ASPHALT	LF	2,998.000	2,998.000
2360	690.0250	SAWING CONCRETE	LF	768.000	768.000
2370	SPV.0035	SPECIAL 0030. EXCAVATION HAULING AND REUSE OF SOLID WASTE SOIL	CY	45,960.000	45,960.000
2380	SPV.0035	SPECIAL 0031. CLAY CAP	CY	7,446.000	7,446.000
2390	SPV.0035	SPECIAL 4000. HPC MASONRY STRUCTURES **P**	CY	882.000	882.000
2400	SPV.0035	SPECIAL 8001. DETENTION BASIN CLAY LINING **P**	CY	673.000	673.000
2410	SPV.0055	SPECIAL 0010. LANE RENTAL ASSESSMENT	DOL	1.000	1.000
2420	SPV.0060	SPECIAL 0010. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROW TYPE 1	EACH	2.000	2.000
2430	SPV.0060	SPECIAL 0011. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROW TYPE 2	EACH	8.000	8.000
2440	SPV.0060	SPECIAL 0012. PAVEMENT MARKING GROOVED PREFORMED THERMAPLASTIC WORDS	EACH	10.000	10.000
2450	SPV.0060	SPECIAL 0014. MOBILIZATION EMERGENCY PAVEMENT REPAIR	EACH	1.000	1.000
2460	SPV.0060	SPECIAL 0015. TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP	EACH	25.000	25.000
2470	SPV.0060	SPECIAL 0016. TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE	EACH	85.000	85.000
2480	SPV.0060	SPECIAL 0017. TRAFFIC CONTROL COVERING SIGNS TYPE I LEFT IN PLACE	EACH	2.000	2.000
2490	SPV.0060	SPECIAL 0018. TRAFFIC CONTROL COVERING SIGNS TYPE II LEFT IN PLACE	EACH	2.000	2.000
2500	SPV.0060	SPECIAL 0020. EXPOSING EXISTING UTILITY	EACH	30.000	30.000
2510	SPV.0060	SPECIAL 0021. REMOVING GATE	EACH	1.000	1.000
2520	SPV.0060	SPECIAL 0022. STRAW BALES	EACH	300.000	300.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-73 QUANTITY
2530	SPV.0060	SPECIAL 0023. TRAFFIC CONTROL DRUMS LEFT IN PLACE	EACH	20.000	20.000
2540	SPV.0060	SPECIAL 0024. REMOVING WROUGHT IRON GATE	EACH	1.000	1.000
2550	SPV.0060	SPECIAL 0025. BURY EXISTING TYPE 1 MANHOLE	EACH	1.000	1.000
2560	SPV.0060	SPECIAL 1010. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	EACH	8.000	8.000
2570	SPV.0060	SPECIAL 1020. SALVAGING LIGHT POLES LUMINAIRES AND ARMS	EACH	2.000	2.000
2580	SPV.0060	SPECIAL 1023. SALVAGING LUMINAIRES-WAUWATOSA	EACH	22.000	22.000
2590	SPV.0060	SPECIAL 1024. SALVAGING LIGHT POLES ARMS AND LUMINAIRES - MILWUAKEE COUNTY	EACH	4.000	4.000
2600	SPV.0060	SPECIAL 1030. REMOVING LIGHTING UNIT	EACH	1.000	1.000
2610	SPV.0060	SPECIAL 1031. REMOVING ALUMINUM LIGHT POLES AND ARMS	EACH	8.000	8.000
2620	SPV.0060	SPECIAL 1032. REMOVING CONCRETE LIGHT POLES AND ARMS	EACH	14.000	14.000
2630	SPV.0060	SPECIAL 1060. LUMINAIRE LED	EACH	36.000	36.000
2640	SPV.0060	SPECIAL 1120. DISTRIBUTION CENTER LIGHTING - WAUWATOSA	EACH	1.000	1.000
2650	SPV.0060	SPECIAL 2004. GROUND ROD	EACH	1.000	1.000
2660	SPV.0060	SPECIAL 2005. SALVAGE TRAVELER ADVISORY RADIO FLASHER ASSEMBLY	EACH	1.000	1.000
2670	SPV.0060	SPECIAL 2006. REMOVING CONTROLLER CABINET	EACH	1.000	1.000
2680	SPV.0060	SPECIAL 2007. REMOVING CONTROLLER CABINET BASE	EACH	1.000	1.000
2690	SPV.0060	SPECIAL 2013. REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL	EACH	1.000	1.000
2700	SPV.0060	SPECIAL 2015. INSTALL SALVAGED TRAVELER ADVISORY RADIO FLASHER ASSEMBLY	EACH	1.000	1.000
2710	SPV.0060	SPECIAL 2016. INSTALL SOLAR POWER SYSTEM ASSEMBLY	EACH	1.000	1.000
2720	SPV.0060	SPECIAL 2018. INSTALL TEMPORARY VEHICLE DETECTOR ASSEMBLY	EACH	1.000	1.000
2730	SPV.0060	SPECIAL 2019. REFOCUSING TEMPORARY VEHICLE DETECTOR ASSEMBLY	EACH	3.000	3.000
2740	SPV.0060	SPECIAL 3001. POLES TYPE 10	EACH	2.000	2.000
2750	SPV.0060	SPECIAL 3002. CONCRETE BASES TYPE 10 CONTRACTOR SUPPLIED ANCHOR BOLTS & ROD TEMPLATE	EACH	2.000	2.000
2760	SPV.0060	SPECIAL 4100. ANCHOR ASSEMBLIES LIGHT POLES STRUCTURES	EACH	11.000	11.000
2770	SPV.0060	SPECIAL 4110. PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	4.000	4.000
2780	SPV.0060	SPECIAL 4120. PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	4.000	4.000
2790	SPV.0060	SPECIAL 5000. RESILIENT WEDGE GATE VALVE 6 INCH	EACH	9.000	9.000
2800	SPV.0060	SPECIAL 5001. RESILIENT WEDGE GATE VALVE 8 INCH	EACH	1.000	1.000
2810	SPV.0060	SPECIAL 5002. HYDRANT ASSEMBLY	EACH	9.000	9.000
2820	SPV.0060	SPECIAL 5003. BUTTERFLY VALVE 16 INCH	EACH	6.000	6.000
2830	SPV.0060	SPECIAL 5004. BUTTERFLY VALVE 12 INCH	EACH	2.000	2.000
2840	SPV.0060	SPECIAL 5005. CUT AND CAP WATER MAIN	EACH	3.000	3.000
2850	SPV.0060	SPECIAL 5006. SALVAGE HYDRANT	EACH	4.000	4.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-73 QUANTITY
2860	SPV.0060	SPECIAL 5007. ABANDON EXISTING SANITARY MANHOLE	EACH	3.000	3.000
2870	SPV.0060	SPECIAL 7010. CROSSROAD NAME SIGNS SPECIAL SIGN SUPPORTS	EACH	5.000	5.000
2880	SPV.0060	SPECIAL 7011. CONC FOUNDATION ADVANCED CROSSROAD NAME SIGNS SPECIAL SIGN SUPPORT	EACH	5.000	5.000
2890	SPV.0060	SPECIAL 8004. INLET COVERS TYPE 57	EACH	4.000	4.000
2900	SPV.0060	SPECIAL 8015. PIPE CONNECTION TO EXISTING STRUCTURE	EACH	1.000	1.000
2910	SPV.0060	SPECIAL 8017. SEDIMENTATION BASIN	EACH	2.000	2.000
2920	SPV.0060	SPECIAL 8018. REMOVING BULKHEAD	EACH	2.000	2.000
2930	SPV.0060	SPECIAL 8050. WELDING STORM SEWER COVERS	EACH	16.000	16.000
2940	SPV.0060	SPECIAL 8061. REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE	EACH	1.000	1.000
2950	SPV.0075	SPECIAL 0010. TRUCK MOUNTED ATTENUATOR	HRS	150.000	150.000
2960	SPV.0075	SPECIAL 4200. DRILLED FOUNDATION SHAFT OBSTRUCTIONS	HRS	10.000	10.000
2970	SPV.0085	SPECIAL 0010. SEEDING NATIVE SEED BUTTERFLY MIX	LB	370.000	370.000
2980	SPV.0090	SPECIAL 0010. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH	LF	102.000	102.000
2990	SPV.0090	SPECIAL 0011.PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	1,056.000	1,056.000
3000	SPV.0090	SPECIAL 0013. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 4-INCH	LF	4,985.000	4,985.000
3010	SPV.0090	SPECIAL 0014. LOW PROFILE CONCRETE BARRIER	LF	411.000	411.000
3020	SPV.0090	SPECIAL 0015. LOW PROFILE CONCRETE BARRIER END SECTION	LF	123.000	123.000
3030	SPV.0090	SPECIAL 0016. FENCE TEMPORARY LEFT IN PLACE	LF	397.000	397.000
3040	SPV.0090	SPECIAL 0017. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	LF	675.000	675.000
3050	SPV.0090	SPECIAL 0020. REMOVING WROUGHT IRON FENCE	LF	155.000	155.000
3060	SPV.0090	SPECIAL 4300. FENCE DECORATIVE BRIDGE	LF	499.000	499.000
3070	SPV.0090	SPECIAL 4310. FENCE DECORATIVE WALL	LF	1,426.000	1,426.000
3080	SPV.0090	SPECIAL 4320. DRILLED FOUNDATION SHAFT 34.75-INCH **P**	LF	1,080.000	1,080.000
3090	SPV.0090	SPECIAL 5000. DUCTILE IRON (D) CLASS 55 WATER MAIN 16 INCH	LF	1,940.000	1,940.000
3100	SPV.0090	SPECIAL 5001. DUCTILE IRON (D) CLASS 55 WATER MAIN 12 INCH	LF	159.000	159.000
3110	SPV.0090	SPECIAL 5002. DUCTILE IRON (D) CLASS 55 WATER MAIN 16 INCH W/30 IN STEEL CASTING PIPE	LF	238.000	238.000
3120	SPV.0090	SPECIAL 5003. ABANDON EXISTING 6 INCH SANITARY SEWER	LF	288.000	288.000
3130	SPV.0090	SPECIAL 5004 ABANDON EXISTING 8 INCH SANITARY SEWER	LF	593.000	593.000
3140	SPV.0090	SPECIAL 8001. PIPE UNDERDRAIN 6-INCH SPECIAL	LF	3,796.000	3,796.000
3150	SPV.0105	SPECIAL 0001. SURVEY PROJECT 1060-33-73	LS	1.000	1.000
3160	SPV.0105	SPECIAL 0002. PAVEMENT CLEANUP	LS	1.000	1.000

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DATE 15APR13 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	1060-33-73 QUANTITY
3170	SPV.0105	SPECIAL 0003. REMOVING FORMER GREENHOUSE BUILDINGS	LS	1.000	1.000
3180	SPV.0105	SPECIAL 0004. REMOVING FORMER SALT DOME BUILDINGS	LS	1.000	1.000
3190	SPV.0105	SPECIAL 0005. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000
3200	SPV.0105	SPECIAL 1006. MAINTENANCE OF LIGHTING SYSTEMS- SWAN BLVD	LS	1.000	1.000
3210	SPV.0105	SPECIAL 3001. TEMP EVP SYS W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY	LS	1.000	1.000
3220	SPV.0105	SPECIAL 4400. TRIAL DRILLED FOUNDATION SHAFT	LS	1.000	1.000
3230	SPV.0105	SPECIAL 8002. DEWATERING FOR DETENTION BASIN CONSTRUCTION	LS	1.000	1.000
3240	SPV.0165	SPECIAL 0010. CONCRETE SIDEWALK 5-INCH SPECIAL	SF	11,171.000	11,171.000
3250	SPV.0165	SPECIAL 4600. LONGITUDINAL GROOVING BRIDGE DECK	SF	13,770.000	13,770.000
3260	SPV.0165	SPECIAL 4610. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT **P**	SF	23,395.000	23,395.000
3270	SPV.0165	SPECIAL 4620. WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT **P**	SF	4,891.000	4,891.000
3280	SPV.0165	SPECIAL 4630. TEMP WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT **P**	SF	423.000	423.000
3290	SPV.0165	SPECIAL 4640. PRESTRESSED PRECAST CONCRETE WALL PANEL **P**	SF	4,508.000	4,508.000
3300	SPV.0180	SPECIAL 0010. CONCRETE PAVEMENT 8-INCH SPECIAL	SY	1,242.000	1,242.000
3310	SPV.0180	SPECIAL 0011. CONCRETE PAVEMENT REPAIR SPECIAL	SY	375.000	375.000
3320	SPV.0180	SPECIAL 0012. WATERPROOF MEMBRANE	SY	1,850.000	1,850.000
3330	SPV.0195	SPECIAL 0010. MANAGEMENT OF SOLID WASTE	TON	6,963.000	6,963.000

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CLEARING AND GRUBBING ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0120 CLEARING ID	201.0220 GRUBBING ID
1000	1	SWAN BOULEVARD								
			179BV+75			11' RT	--	--	12	12
			180BV+26			28' LT	--	--	8	8
			180BV+27			27' RT	--	--	10	10
			180BV+73			108' RT	--	--	3	3
			180BV+80			94' RT	--	--	3	3
			181BV+08			160' RT	--	--	6	6
			181BV+24			210' RT	--	--	4	4
			181BV+27			82' RT	--	--	5	5
			181BV+31			87' RT	--	--	5	5
			181BV+38			229' RT	--	--	4	4
			181BV+42			104' RT	--	--	5	5
			181BV+46			109' RT	--	--	5	5
			181BV+53			248' RT	--	--	3	3
			181BV+69			266' RT	--	--	4	4
			181BV+75			146' RT	--	--	6	6
			181BV+79			115' RT	--	--	7	7
			181BV+81			42' RT	--	--	7	7
			181BV+81			282' RT	--	--	4	4
			181BV+88			73' RT	--	--	7	7
			181BV+95			173'RT	--	--	5	5
			182BV+00			302' RT	--	--	3	3
			182BV+02			152' RT	--	--	8	8
			182BV+13			55' RT	--	--	4	4
			182BV+18			165' RT	--	--	5	5
			182BV+91			3' LT	--	--	6	6
			183BV+07			28' LT	--	--	5	5
			183BV+28			5' LT	--	--	6	6
			183BV+31			48' LT	--	--	8	8
			183BV+40			4' RT	--	--	4	4
			183BV+41			20' LT	--	--	6	6
			183BV+48			27' RT	--	--	5	5
			183BV+54			32' LT	--	--	4	4
			183BV+62			65' RT	--	--	4	4
			183BV+65			48' RT	--	--	4	4
			184BV+48			47' LT	--	--	4	4
			184BV+69			22' LT	--	--	5	5
			184BV+69			59' LT	--	--	5	5
			184BV+85			51' LT	--	--	4	4
	1	USH 45								
			335NS+16			100' LT	--	--	4	4
			335NS+16			88' LT	--	--	4	4
			335NS+26			31' LT	--	--	6	6
			336NS+00		337NS+00	LT	1	1	--	--
			335NS+55			158' LT	--	--	8	8
			335NS+79			134' LT	--	--	6	6
			336NS+07			65' LT	--	--	5	5

CLEARING AND GRUBBING ITEMS (CONTINUED)

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0120 CLEARING ID	201.0220 GRUBBING ID
			336NS+32			91' LT	--	--	6	6
			343NS+00			37' LT	--	--	6	6
			345NS+28			23' LT	--	--	4	4
			347NS+00		349NS+00	LT	2	2	--	--
			370NS+00		371NS+00	LT	1	1	--	--
			372NS+00		375NS+00	LT	3	3	--	--
			381NS+00		383NS+00	LT	2	2	--	--
									--	--
	1	WLC ACCESS ROAD								
			7XFN+00		9XFN+00	RT/LT	2	2		--
			9XFN+11			7' LT	--	--	3	3
			9XFN+39			24' LT	--	--	3	3
			16XFN+64			133' LT	--	--	4	4
			16XFN+83			123' LT	--	--	3	3
			16XFN+85			117' LT	--	--	3	3
			16XFN+86			111' LT	--	--	3	3
			16XFN+89			98' LT	--	--	3	3
			17XFN+09			66' LT	--	--	4	4
			17XFN+22			56' LT	--	--	4	4
			17XFN+28			41' LT	--	--	3	3
			17XFN+91			6' LT	--	--	6	6
			18XFN+43			24' LT	--	--	5	5
			18XFN+51			1' RT	--	--	10	10
			3XFS+00		3XFN+80	RT/LT	1	1	--	--
	1	IH 94								
			191EW+00		195EW+00	RT/LT	4	4	--	--
		SUBTOTAL					16	16	306	306
	2	SWAN BOULEVARD								
			188BV+00		194BV+00	LT	6	6	--	--
			187BV+33			133' RT	--	--	7	7
			187BV+46			112' RT	--	--	6	6
			187BV+50			16' RT	--	--	7	7
			187BV+52			2' LT	--	--	7	7
			187BV+77			130' LT	--	--	6	6
			188BV+06			135' RT	--	--	5	5
			188BV+08			169' RT	--	--	4	4
			188BV+26			16' RT	--	--	4	4
			188BV+34			138' RT	--	--	4	4
			190BV+00		191BV+00	RT	1	1	--	--
			192BV+00		194BV+00	RT	2	2	--	--
		SUBTOTAL					9	9	50	50
	3	UNDERWOOD PARKWAY								
			217UDW+89			23' LT	--	--	7	7
			219UDW+00		223UDW+00	RT/LT	4	4	--	--
		SUBTOTAL					4	4	7	7
		TOTALS					29	29	363	363

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REMOVING PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0100 REMOVING PAVEMENT SY	COMMENT
1000	1	USH 45						
			380NS+92		383NS+42	RT	182	
			382NS+00		383NS+00	LT	190	
			370NS+31		372NS+03	LT	171	
		SUBTOTAL					544	
	2	SWAN BOULEVARD						
			187BV+47		195BV+07	RT/LT	4,212	
		SUBTOTAL					4,212	
	3	UNDERWOOD PARKWAY						
			217UDW+82		218UDW+05	RT	22	DRIVEWAY
		SUBTOTAL					22	
		TOTAL					4,778	

REMOVING FENCE

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0170 REMOVING FENCE LF
1000	1	SWAN BOULEVARD					
			167BV+11	47' LT	167BV+27	85' LT	41
			168BV+75	113' RT	169BV+00	83' LT	199
			170BV+92	173' RT	170BV+92	71' LT	246
			172BV+14	10' LT	172BV+16	68' LT	60
			173BV+60	128' RT	173BV+85	121' RT	25
			174BV+29	357' LT	174BV+86	164' RT	525
			184BV+86	43' LT	185BV+56	48' LT	70
	1	USH 45					
			370NS+45	424' LT	371NS+96	371' LT	124
			379NS+80	100' LT	382NS+89	115' LT	275
			380NS+00	100' RT	384NS+94	115' RT	394
	1	WLC ACCESS ROAD					
			3XFS+63	44' RT	4XFS+30	113' LT	182
			9XFN+04	40' RT	10XFN+06	41' LT	127
			4XFS+30	113' LT	4XFS+78	57' RT	182
	1	UNDERWOOD PARKWAY					
			218UDW+80	66' LT	221UDW+69	49' RT	282
			221UDW+69	49' RT	223UDE+48	73' RT	172
		SUBTOTAL					2,904
		TOTAL					2,904

REMOVING CURB & GUTTER

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM LOCATION	TO STATION	TO LOCATION	204.0150 REMOVING CURB & GUTTER LF
1000	1	SWAN BOULEVARD					
			183BV+73	65' RT	183BV+86	46' LT	120
			184BV+13	95' RT	184BV+20	49' LT	148
	1	WLC ACCESS ROAD					
			18XFN+68	17' RT	18XFN+82	30' LT	52
	1	USH 45					
			367NS+81	540' RT	367NS+99	547' LT	37
		SUBTOTAL					357
	3	UNDERWOOD PARKWAY					
			217UDW+47	17' RT	221UDW+23	127' RT	461
			217UDW+49	16' LT	221UDW+38	87' RT	433
	3	WLC ACCESS ROAD					
			2XFS+45	15' LT	2XFS+74	37' LT	48
			2XFS+45	16' RT	2XFS+85	45' RT	48
			3XFS+05	41' LT	3XFS+21	43' RT	88
		SUBTOTAL					1,078
		TOTAL					1,435

REMOVING GUARDRAIL

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0165 REMOVING GUARDRAIL LF
1000	2	SWAN BOULEVARD					
			187BV+49	87' RT	188BV+06	73' RT	59
			187BV+51	61' RT	188BV+07	41' RT	59
		SUBTOTAL					118
		TOTAL					118

REMOVING MANHOLES

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0210 REMOVING MANHOLES EACH
1000	1	SWAN BOULEVARD			
			181BV+43	128' RT	1
			182BV+16	40' RT	1
			183BV+24	1' LT	1
	1	WLC ACCESS ROAD			
			16XFN+71	125' LT	1
		TOTAL			4

REMOVING INLETS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
1000	1	SWAN BOULEVARD			
			180BV+68	101' RT	1
			180BV+95	83' RT	1
			180BV+99	153' RT	1
			182BV+16	40' RT	1
			182BV+57	321' RT	1
		USH 45			
			382NS+75	77' RT	1
		SUBTOTAL			6
	2	SWAN BOULEVARD			
			189BV+44	37' RT	1
			189BV+93	29' RT	1
			190BV+13	98' RT	1
			190BV+18	106' RT	1
			190BV+42	23' RT	1
		SUBTOTAL			5
	3	UNDERWOOD PARKWAY			
			218UDW+13	16' RT	1
			218UDW+13	18' LT	1
		SUBTOTAL			2
		TOTAL			13

SAWING

CATEGORY	STAGE	ROADWAY	FROM STATION	TO STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1000	1	SWAN BOULEVARD					
			167BV+07	173BV+43	RT	661	--
			167BV+53	168BV+75	LT	122	--
			169BV+00	170BV+91	LT	198	--
			171BV+17	171BV+38	LT	26	--
			171BV+85	172BV+16	LT	32	--
			173BV+43	174BV+14	LT	--	77
			180BV+12	181BV+12	RT	159	--
			182BV+37	184BV+15	RT	479	--
			183BV+96	184BV+22	LT	32	--
	1	USH 45					
			368NS+00	375NS+11	LT	826	--
			380NS+92	383NS+42	LT	--	278
			380NS+92	383NS+42	RT	--	262
	1	WLC ACCESS ROAD					
			3XFS+63	3XFS+88	RT	35	--
			4XFS+13	4XFS+51	RT	18	--
			10XFN+55	10XFN+81	LT	26	--
			16XFN+27	16XFN+44	LT	22	--
			18XFN+73	18XFN+86	RT/LT	54	--
	1	UNDERWOOD CREEK PARKWAY					
			224UDE+02	224UDE+53	RT	51	--
		SUBTOTAL				2,741	617
	2	SWAN BOULEVARD					
			187BV+49	187BV+50	RT	--	27
			188BV+76	188BV+98	RT	--	30
			189BV+25	189BV+29	RT	--	20
			189BV+55	189BV+59	RT	--	21
			195BV+07	195BV+07	RT/LT	--	53
		SUBTOTAL				--	151
	3	UNDERWOOD PARKWAY					
			217UDW+47	217UDW+47	RT/LT	35	--
			219UDW+86	219UDW+93	RT	33	--
			220UDW+25	220UDW+35	RT	34	--
	3	WLC ACCESS ROAD					
			2XFS+45	2XFS+45	RT/LT	32	--
			2XFS+51	2XFS+97	LT	46	--
			2XFS+72	3XFS+06	LT	34	--
			2XFS+86	3XFS+20	RT	34	--
	3	UNDERWOOD PARKWAY SHARED USE PATH					
			10UBP+00	10UBP+00	LT	9	--
		SUBTOTAL				257	--
		TOTAL				2,998	768

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\030201_mq_pav.ppt PLOT DATE : 1/31/2013 11:27:25 AM PLOT BY : MSCCEJ PLOT NAME : 030201_mq_pav3 PLOT SCALE : 1:1

REMOVING BUILDING STRUCTURES

CATEGORY	STAGE	LOCATION	SPV.0105.0003 REMOVING FORMER GREENHOUSE BUILDINGS LS	SPV.0105.0004 REMOVING FORMER SALT DOME BUILDINGS LS
1000	1	PROJECT	1	1
		TOTAL	1	1

REMOVING GATE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	SPV.0060.0021 REMOVING GATE EACH
1000	3	UNDERWOOD PARKWAY			
			220UDW+71	RT	1
		SUBTOTAL			1
		TOTAL			1

REMOVING CONCRETE BARRIER

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0157 REMOVING CONCRETE BARRIER LF
1000	1	USH 45					
			380NS+92		383NS+42	LT	250
			380NS+92		383NS+42	RT	250
			381NS+41		381NS+87	RT	46
		TOTAL					546

REMOVING ASPHALTIC SURFACE

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0110 REMOVING ASHALTIC SURFACE SY	COMMENT
1000	1	USH 45	367NS+05		375NS+11	LT	5,241	PARKING LOT
		TOTALS					5,241	

REMOVING STORM SEWER

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF	204.0245.0003 REMOVING STORM SEWER 18-INCH LF	204.0245.0004 REMOVING STORM SEWER 24-INCH LF
1000	1	SWAN BOULEVARD								
			180BV+68		180BV+95	RT	31	--	--	--
			180BV+68		180BV+99	RT	59	--	--	--
			180BV+99		181BV+43	RT	47	--	--	--
			181BV+43		182BV+57	RT	--	215	--	--
			181BV+43		182BV+36	RT	--	106	--	--
			182BV+16		182BV+36	RT	--	34	--	--
			182BV+36		183BV+24	RT	--	--	110	--
			187BV+23		187BV+52	LT	36	--	--	--
			187BV+23		189BV+44	LT/RT	226	--	--	--
1		WLC ACCESS ROAD								
			16XFN+51		16XFN+71	LT	--	--	24	--
			16XFN+71		18XFN+00	LT/RT	--	--	240	--
1		USH 45								
			378NS+31		378NS+32	RT	4	--	--	--
			381NS+81		382NS+74	LT/RT	94	--	--	--
		SUBTOTALS					497	355	374	--
1		BLUEMOUND ROAD								
			732BD+71		732BD+73	RT	--	--	--	68
		SUBTOTALS					--	--	--	68
2		SWAN BOULEVARD								
			188BV+92		189BV+40	RT	106	--	--	--
			189BV+44		190BV+13	RT	91	--	--	--
			190BV+13		190BV+18	RT	10	--	--	--
			189BV+44		189BV+93	RT	50	--	--	--
			189BV+93		190BV+41	RT	48	--	--	--
		SUBTOTALS					305	--	--	--
		UNDERWOOD PARKWAY								
3			218UDW+13		218UDW+13	LT/RT	34	--	--	--
		SUBTOTALS					34	--	--	--
		TOTALS					836	355	374	68

Division	From/To Station	Location	Excavation Common (1) Cut (2) (15)	Item 205.0100 EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (6) Factor 0.8	Expanded EBS Backfill (7) Factor 1.3	Unexpanded Fill	Expanded Fill (9) Factor 1.2	Mass Ordinate +/- (10)	Waste	Borrow Item 208.0100
1	166BV+92 TO 185BV+10	SWAN BLVD	-	-	1,928	-	-	-	30,312	36,375	-36,375	-36,375	0
	10RND+00 TO 12RND+76	ROUNDABOUT	-	-	22	-	-	-	1	1	-1	-1	0
	3XFN+25 TO 18XFS+76	WLC ACCESS ROAD	-	-	210	-	-	-	1,631	1,958	-1,958	-1,958	0
	220UDW+50 TO 226UDE+60	UNDERWOOD PARKWAY	-	-	126	-	-	-	266	320	-320	-320	0
	381NS+05 TO 385NS+00	USH 45 SB DITCH	2	-	-	2	-	-	53	64	-62	-62	0
	382NS+12 TO 385NS+00	USH 45 NB DITCH	1,137	-	-	1,137	-	-	273	327	809	809	0
	10+00 to 17+77	POND	707	-	-	707	-	-	327	393	314	314	0
	341NS+00 TO 349NS+00	SITE EXCAVATION WISCONSIN OFF RAMP	10,380	-	-	10,380	-	-	-	-	10,380	10,380	0
	338NS+89 TO 340NS+95	SITE EXCAVATION USH 45 AND WISCONSIN	1,622	-	-	1,622	-	-	-	-	1,622	1,622	0
	335NS+00 TO 338NS+55	SITE EXCAVATION WISCONSIN LOOP RAMP	20,991	-	-	20,991	-	-	-	-	20,991	20,991	0
	725BD+27 TO 733BD+50	SITE EXCAVATION WISCONSIN TO BLUEMOUND	13,547	-	-	13,547	-	-	-	-	13,547	13,547	0
	191EW+00 TO 194EW+48	SITE EXCAVATION EW CORE	15,378	-	-	15,378	-	-	-	-	15,378	15,378	
Division 1 Subtotal Stage 1			63,765	-	2,286	63,765	-	-	32,864	39,436	24,328	24,328	-
2	187+62 TO 195+07	SWAN BLVD	2,255	-	259	1,996	-	-	22,748	27,298	-25,301	-25,301	0
	381+05 TO 385+00	USH 45 NB DITCH	1,232	-	-	1,232	-	-	44	52	1,179	1,179	0
	10+00 TO 11+43	SHARED USE PATH	55	-	-	55	-	-	2	3	52	52	0
Division 2 Subtotal Stage 2			3,542	-	259	3,283	-	-	22,794	27,353	-24,070	-24,070	0
3	2+45 TO 3+25	WLC ACCESS ROAD	342	-	18	324	-	-	0	0	323	323	0
	217+47 TO 220+50	UNDERWOOD PARKWAY	337	-	56	281	-	-	362	434	-154	-154	0
Division 3 Subtotal Stage 3			679	-	75	604	-	-	362	435	170	170	0
Grand Total			67,985	-	2,620	67,652	-	-	56,020	67,224	428	428	0
		Total Common Exc	67,985										

EARTHWORK SUMMARY NOTES:

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 to be backfilled with Borrow or Cut.
4) Salvaged/Unusable Pavement Material - Not shown in Earthwork Detail Sheets
5) Available Material = Cut - Salvaged/Unusable Pavement Material
6) Reduced EBS in Fill - Excavated EBS material is useable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
7) Expanded EBS Backfill - This is to be filled with Borrow or Cut material. EBS Backfill Factor = 1.3.
8) The estimated area outside the 1:1 fill slopes where excavated EBS or excess topsoil material is placed.
9) Expanded Fill. Factor = 1.20
   Expanded Fill = (Unexpanded Fill - Reduced EBS) * Fill Factor
   If Reduced EBS > than volume available outside of the 1:1 slope
   Subtract only available volume. Remaining volume or reduced EBS is considered waste.
10) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division. (Incl. Salv/Unusable Pavement Quantities shown in this table)
    The Mass Ordinate number will vary between the summary and individual detail sheets due to the Salvaged/Unusable Pavement Material being shown in the summary sheet only.
11) The structural backfill needed to construct the retaining walls has been estimated. The structural backfill quantity has been subtracted from the fill volume in all end area calculations.
    The width of the structural backfill off of the back of the wall has been estimated as 0.8 times the height of the retaining walls.
12) The waste quantity at the end of Stage 1 is assumed to be used as borrow during Stage 2.
13) Structural backfill material to be obtained from excavation common from Stage 1.
14) Structure Excavation, due to retaining wall and bridge construction, (estimated 4,734 cy) is not included in this table and should be considered additional waste.
15) Division 1 Common Excavation for Swan Blvd, Roundabout, WLC Access Road, and Underwood Parkway quantified as Management of Solid Waste, Item SPV.0195.0010, and Excavation Hauling and Reuse of Solid Waste Soil, Item SPV.0035.0030

BASE AGGREGATE ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
1000							
	1	SWAN BOULEVARD					
			166BV+92		173BV+27	3,214	6,086
			173BV+27		174BV+07	592	1,272
			174BV+07		183BV+50	3,173	6,396
			183BV+50		185BV+14	1,210	1,044
	1	WLC ACCESS ROAD					
			3XFS+00		4XFS+45	326	--
			5XFN+59		18XFN+76	2,466	--
	1	ROUNDABOUT					
			10RND+00		12RND+76	509	--
	1	UNDERWOOD PARKWAY					
			220UDW+68		222UDW+03	261	--
			223UDE+27		226UDE+27	625	--
	1	USH 45					
			380NS+92		383NS+42	389	419
		SUBTOTALS				12,765	15,217
	2	SWAN BOULEVARD					
			187BV+60		191BV+11	1,194	2,196
			191BV+11		191BV+80	209	414
			191BV+80		195BV+07	1,108	--
		UNDERWOOD PARKWAY SHARED USE PATH					
			10UBP+00		11UBP+43	52	--
		SUBTOTALS				2,563	2,611
	3	UNDERWOOD PARKWAY					
			217UDW+47		220UDW+68	533	--
		WLC ACCESS ROAD					
			2XFS+45		3XFS+00	157	--
		SUBTOTALS				690	--
		UNDISTRIBUTED					
		TOTALS				16,018	17,828

FOR INFORMATION ONLY

AGGREGATE UNIT WEIGHTS USED	
Base Aggregate Dense	2.0 TONS/CY
Select Crushed Material	1.75 TONS/CY

CONCRETE PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	SPV. 0180.0010 CONCRETE PAVEMENT 8-INCH SPECIAL SY
1000	1	SWAN BOULEVARD					
			166BV+92		184BV+99	14,022	574
	1	UNDERWOOD PARKWAY					
			220UDW+68		222UDW+03	380	65
			223UDE+27		223UDE+64	920	55
	1	WLC ACCESS ROAD					
			3XFS+25		4XFS+45	415	70
			5XFN+59		18XFN+76	4,636	98
	1	R0UNDABOUT					
			10RND+00		12RND+76	749	380
	1	USH 45					
			379NS+13		386NS+07	--	--
			380NS+24		388NS+50	--	--
		SUBTOTALS				21,122	1,242
	2	SWAN BOULEVARD					
			187BV+74		191BV+81	2,476	--
		SUBTOTALS				2,476	--
	3	UNDERWOOD PARKWAY					
			217UDW+47		220UDW+68	1,140	--
		SUBTOTALS				1,140	--
		TOTALS				24,738	1,242

3

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STAGE	ROADWAY	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
1000	1	SWAN BOULEVARD		
			B-40-775 (NORTH)	51
			B-40-775 (SOUTH)	51
		SUBTOTAL		102
	2	SWAN BOULEVARD		
			B-40-775 (NORTH)	51
			B-40-775 (SOUTH)	51
		SUBTOTAL		102
		TOTAL		204

DRIVEWAY ITEMS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	416.0190 CONCRETE DRIVEWAY 9-INCH SY
1000	1	UNDERWOOD PARKWAY			
			225UDE+16	RT	84
		SUBTOTALS			84
	3	UNDERWOOD PARKWAY			
			217UDW+93	RT	30
		SUBTOTALS			30
		TOTALS			114

DRILLED TIE BARS

CATEGORY	STAGE	ROADWAY	LOCATION TO LOCATION	OFFSET	416.0610 DRILLED TIE BARS EACH
1000	1	SWAN BOULEVARD			
			166BV+92	LT/RT	60
		TOTAL			60

3

ASPHALTIC ITEMS

*FOR INFORMATION ONLY

MATERIAL UNIT WEIGHTS USED		
HMA Pavement	110	LB/(SY*IN)

CATEGORY	STAGE	ROADWAY	STATION	TO STATION	OFFSET	455.0220 ASPHALTIC MATERIAL PG 64-28 TON	455.0605 TACK COAT GAL	460.1110 HMA PAVEMENT TYPE E-10 TON	465.0105 ASPHALTIC SURFACE TON 3-INCH*	465.0105 ASPHALTIC SURFACE TON 5-INCH*	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0310 ASPHALTIC CURB LF
1000	1	SWAN BOULEVARD										
			166BV+92	167BV+43	RT	--	--	--	6	8	--	70
			189BV+25	189BV+59	RT	--	--	--	--	19		
	1	USH 45										
			380NS+92	383NS+42	RT/LT	13	13	222	--	--	--	--
	1	UNDERWOOD PARKWAY										
			219UDW+80	220UDW+31	RT	--	--	--	--	--	50	--
		SUBTOTAL				13	13	222	6	27	50	70
	2	SWAN BOULEVARD										
			191BV+81	195BV+07	RT/LT	--	--	--	--	486	--	--
	2	UNDERWOOD PARKWAY SHARED USE PATH										
			10UBP+00	11UBP+43	LT	--	--	--	21	--	--	--
		SUBTOTAL				--	--	--	21	486	--	--
	3	WLC ACCESS ROAD										
			2XFS+45	3XFS+25	RT/LT	--	--	--	--	72	--	--
		SUBTOTAL				--	--	--	--	72	--	--
		TOTALS				13	13	222	612		50	70

QMP RIDE; INCENTIVE IRI RIDE

CATEGORY	LOCATION	440.4410.S QMP RIDE; INCENTIVE IRI RIDE DOL
1000	PROJECT	6,473
	TOTAL	6,473

INCENTIVE DENSITY HMA PAVEMENT

CATEGORY	STAGE	LOCATION	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL
1000	ALL	PROJECT	1,426
		TOTAL	1,426

CONCRETE CURB & GUTTER

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	601.0105 CONCRETE CURB TYPE A LF	601.0331 CONCRETE CURB & GUTTER 31-INCH LF	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF	601.0600 CONCRETE CURB PEDESTRIAN LF
1000	1	SWAN BOULEVARD								
			166BV+94		169BV+62	LT	--	301	--	--
			167BV+24		167BV+68	MEDIAN	--	45	--	--
			167BV+24		169BV+62	MEDIAN	--	238	--	--
			167BV+43		173BV+73	RT	--	635	--	--
			167BV+69		168BV+18	MEDIAN	--	49	--	--
			169BV+72		172BV+98	MEDIAN	--	321	--	--
			170BV+63		171BV+20	LT	--	58	--	--
			171BV+18		171BV+68	MEDIAN	--	49	--	--
			171BV+20		173BV+28	LT	--	235	--	--
			171BV+68		172BV+98	MEDIAN	--	131	--	--
			172BV+28		173BV+20	MEDIAN	--	178	--	--
			173BV+11		173BV+23	LT	--	--	--	18
			173BV+39		173BV+55	RT	--	--	--	20
			173BV+63		185BV+17	LT	--	1,190	--	--
			173BV+74		174BV+07	LT	--	--	--	46
			174BV+08		185BV+10	RT	--	1,094	--	--
			174BV+10		174BV+22	RT	--	--	--	16
			174BV+12		175BV+95	MEDIAN	--	364	--	--
			174BV+40		185BV+14	MEDIAN	--	1,069	--	--
			174BV+40		185BV+13	MEDIAN	--	1,055	--	--
	1	UNDERWOOD PARKWAY								
			220UDW+68		221UDW+83	LT	--	121	--	--
			220UDW+68		222UDW+03	RT	--	138	--	--
			221UDW+78		221UDW+97	LT	--	39	--	--
			221UDW+82		221UDW+91	LT	--	--	--	14
			223UDE+27		226UDE+27	LT	--	293	--	--
			223UDE+33		223UDE+58	RT	--	58	--	--
			223UDE+43		226UDE+17	RT	--	285	--	--
			223UDE+45		223UDE+54	RT	--	--	--	14
	1	WLC ACCESS ROAD								
			3XFS+00		4XFS+44	RT	--	152	--	--
			3XFS+05		4XFS+28	LT	--	126	--	--
			3XFS+87		4XFS+39	LT	--	--	--	106
			4XFS+13		4XFS+22	LT	--	--	--	14
			5XFN+59		18XFN+84	LT	--	1,329	--	--
			5XFN+64		6XFN+07	RT	--	--	--	83
			5XFN+82		5XFN+96	RT	--	--	--	26
			5XFN+84		18XFN+69	RT	--	1,280	--	--
			18XFN+70		18XFN+83	LT	--	--	--	16

(CONTINUED ON NEXT SHEET)

CONCRETE CURB & GUTTER (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	601.0105 CONCRETE CURB TYPE A LF	601.0331 CONCRETE CURB & GUTTER 31-INCH LF	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF	601.0600 CONCRETE CURB PEDESTRIAN LF
1000	1	ROUNDABOUT								
			10RND+00		12RND+76		163	--	264	--
			10RND+20		10RND+59	LT	--	57	--	--
			10RND+94		11RND+30	LT	--	59	--	--
			11RND+62		11RND+96	LT	--	57	--	--
			12RND+37		12RND+62	LT	--	43	--	--
		SUBTOTAL					163	11,051	264	373
	2	SWAN BOULEVARD								
			187BV+56		195BV+07	RT	--	744	--	--
			187BV+59		191BV+04	MEDIAN	--	345	--	--
			187BV+59		191BV+04	MEDIAN	--	345	--	--
			187BV+62		195BV+07	LT	--	750	--	--
		SUBTOTAL					--	2,184	--	--
	3	UNDERWOOD PARKWAY								
			217UDW+47		220UDW+68	LT	--	310	--	--
			217UDW+47		220UDW+68	RT	--	337	--	--
	3	WLC ACCESS ROAD								
			2XFS+45		2XFS+73	LT	--	43	--	--
			2XFS+45		3XFS+00	RT	--	55	--	--
		SUBTOTAL					--	746	--	--
		TOTALS					163	13,981	264	373

REMOVING WROUGHT IRON GATE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	SPV.0060.0024 REMOVING WROUGHT IRON GATE EACH
1000	1	SWAN BOULEVARD			
			183BV+94	LT	1
		SUBTOTAL			1
		TOTAL			1

REMOVING WROUGHT IRON FENCE

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	SPV.0090.0020 REMOVING WROUGHT IRON FENCE LF
1000	1	SWAN BOULEVARD					
			183BV+20	9' LT	184BV+85	43' LT	155
		SUBTOTAL					155
		TOTAL					155

CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF	SPV.0165.0010 CONCRETE SIDEWALK 5-INCH SPECIAL SF
1000	1	SWAN BOULEVARD						
			167BV+24		172BV+98	MEDIAN	--	4,842
			167BV+39		173BV+54	RT	3,557	--
			166BV+95		173BV+23	LT	4,581	--
			167BV+77		168BV+07	RT	--	26
			170BV+73		171BV+03	LT	--	33
			171BV+29		171BV+60	RT	--	25
			172BV+28		173BV+19	MEDIAN	--	1,319
			173BV+64		174BV+29	LT	743	--
			174BV+29		185BV+24	LT	6,823	--
			174BV+10		185BV+16	RT	6,482	--
			174BV+12		175BV+95	MEDIAN	--	1,428
			183BV+50		185BV+14	MEDIAN	--	989
	1	UNDERWOOD PARKWAY						
			220UDW+69		221UDW+81	LT	828	--
			221UDW+01		222UDW+02	RT	660	--
			221UDW+78		221UDW+97	MEDIAN	--	110
			223UDE+27		226UDE+27	LT	2,264	--
			223UDE+33		223UDE+58	MEDIAN	--	215
			223UDE+44		226UDE+17	RT	1,989	--
	1	WLC ACCESS ROAD						
			3XFS+36		4XFS+27	LT	843	--
			3XFS+39		4XFS+44	RT	1,297	--
			3XFS+87		4XFS+39	MEDIAN	--	345
			5XFN+59		18XFN+82	LT	8,609	--
			5XFN+65		6XFN+07	MEDIAN	--	340
			5XFN+92		7XFN+48	RT	878	--
	1	ROUNDABOUT						
			10RND+20		10RND+59	LT	561	--
			10RND+94		11RND+30	LT	519	--
			11RND+64		11RND+94	LT	495	--
			12RND+37		12RND+62	LT	324	--
		SUBTOTALS					41,454	9,672
	2	SWAN BOULEVARD						
			187BV+55		191BV+81	RT	2,664	--
			187BV+59		1919BV+04	MEDIAN	--	1,499
			187BV+59		191BV+81	LT	2,653	--
		SUBTOTALS					5,317	1,499
		TOTALS					46,770	11,171

CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
1000	1	SWAN BOULEVARD			
			166BV+97	LT	8
			167BV+34	LT	16
			167BV+34	RT	24
			173BV+08	LT	8
			173BV+10	RT	24
			173BV+18	LT	8
			173BV+48	RT	8
			173BV+85	LT	8
			174BV+14	RT	8
			174BV+26	LT	8
			174BV+28	RT	24
	1	UNDERWOOD PARKWAY			
			221UDW+82	LT	36
			221UDW+88	RT	12
			223UDE+52	LT	12
			223UDE+53	RT	36
	1	WLC ACCESS ROAD			
			3XFS+31	LT	16
			3XFS+34	RT	16
			4XFS+15	LT	48
			4XFS+18	RT	16
			5XFN+83	LT	16
			6XFN+01	RT	48
			18XFN+78	LT	8
		TOTAL			408

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 1 SF	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 2 SF
1000	1	SWAN BOULEVARD				
			167BV+21	RT	61	--
			172BV+24	RT	152	--
			173BV+00	RT	62	--
			173BV+24	RT	140	--
			174BV+09	RT	91	--
			174BV+37	RT	62	--
			175BV+99	RT	91	--
	1	UNDERWOOD PARKWAY				
			221UDW+77	LT	--	22
			221UDW+90	LT	--	21
			221UDW+98	LT	--	16
			223UDE+32	RT	--	16
			223UDE+39	RT	--	19
			223UDE+60	RT	56	--
	1	WLC ACCESS ROAD				
			3XFS+83	LT	56	--
			4XFS+33	LT	--	21
			4XFS+40	LT	--	16
			5XFN+64	RT	--	16
			5XFN+71	RT	--	21
			6XFN+10	RT	56	--
		SUBTOTAL			825	168
	2	SWAN BOULEVARD				
			191BV+08	RT	49	--
		SUBTOTAL			49	--
		TOTAL				1,042

CONCRETE BARRIER ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	SPV.0090.0014 LOW PROFILE CONCRETE BARRIER LF	SPV.0090.0015 LOW PROFILE CONCRETE BARRIER END SECTION LF
1000	1	SWAN BOULEVARD						
			167BV+77		169BV+71	RT	154	41
			169BV+62		171BV+03	LT	103	41
			169BV+63		171BV+60	RT	154	41
		TOTALS					411	123

FINISHING ROADWAY

CATEGORY	STAGE	LOCATION	213.0100.0001 EACH
1000	ALL	PROJECT 1060-33-73	1
		TOTALS	1

PAVEMENT REPAIR

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION		204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	460.1130 HMA PAVEMENT TYPE E-30 TON	SPV.0060.8050 WELDING STORM SEWER COVERS EACH	SPV.0180.0011 CONCRETE PAVEMENT REPAIR SPECIAL SY	COMMENTS
1000	1	USH 45 NB										
			340NS+23		346NS+38	RT	--	289	48	--	--	LANE LINES
			341NS+65		362NS+12	LT/RT	--	2,078	343	--	--	MEDIAN SHOULDER
				342NS+49		RT	--	--	--	1	11	INLET
				350NS+05		RT	--	--	--	1	11	INLET
				351NS+89		LT	--	--	--	1	11	INLET
				352NS+39		LT	--	--	--	1	11	INLET
				352NS+89		LT	--	--	--	1	11	INLET
				361NS+93		LT	--	--	--	--	23	APPROACH SLAB
			364NS+10		376NS+56	LT/RT	--	1,245	205	--	--	MEDIAN SHOULDER
				364NS+29		LT	--	--	--	--	23	APPROACH SLAB
				373NS+26		RT	--	--	--	1	11	INLET
				373NS+76		RT	--	--	--	1	11	INLET
				374NS+26		RT	--	--	--	1	11	INLET
			377NS+16		387NS+00	RT	--	656	108	--	--	LANE LINES
			379NS+07		386NS+00	RT	7,140	--	--	--	--	OUTSIDE SHOULDER
			386NS+00		400NS+22	RT	--	1,401	231	--	--	MEDIAN SHOULDER
				389NS+34		RT	--	--	--	1	11	INLET
				395NS+76		RT	--	--	--	1	11	INLET
			396NS+00		400NS+22	RT	--	191	32	--	--	LANE LINES
		USH 45 SB										
			346NS+94		362NS+57	LT/RT	--	866	143	--	--	LANE LINES
			348NS+93		354NS+74	LT	--	32	5	--	--	EDGE LINE
				356NS+37		LT	--	--	--	1	11	INLET
			356NS+38		362NS+77	LT	5,656	--	--	--	--	OUTSIDE SHOULDER
				362NS+61		LT	--	--	--	--	23	APPROACH SLAB
			364NS+49		401NS+00	LT	--	1,616	267	--	--	LANE LINES
			364NS+73		373NS+79	LT	8,774	--	--	--	--	OUTSIDE SHOULDER
				364NS+90		LT	--	--	--	--	23	APPROACH SLAB
				373NS+49		LT	--	--	--	1	13	INLET
				373NS+70		LT	--	--	--	1	15	INLET
			373NS+79		377NS+04	LT	--	72	12	--	--	EDGE LINE
			380NS+24		401NS+00	LT	18,105	--	--	--	--	OUTSIDE SHOULDER
				381NS+20		LT	--	--	--	1	11	INLET
				389NS+25		LT	--	--	--	1	11	INLET
				395NS+75		LT	--	--	--	1	11	INLET
SUBTOTALS							39,675	8,446	1,393	16	275	
UNDISTRIBUTED							--	--	--	--	100	
TOTALS							39,675	8,446	1,393	16	375	

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO STATION	OFFSET	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.6510 SOIL STABILIZER TYPE B ACRE	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	SPV.0180.0012 WATERPROOF MEMBRANE SY
1000	1	SWAN BOULEVARD														
			167BV+05	173BV+72	RT	--	--	--	--	--	2,853	--	--	--	--	--
			167BV+09	173BV+17	LT	--	--	--	--	--	2,284	--	--	--	--	--
			169BV+00	171BV+00	LT	--	--	--	--	--	--	--	--	36	--	--
			171BV+42	173BV+72	RT	--	211	211	--	--	--	--	--	--	--	--
			173BV+14	185BV+65	LT	--	--	--	--	--	5,433	--	--	--	--	--
			174BV+09	185BV+60	RT	--	--	--	--	--	10,005	--	--	--	--	--
			177BV+10	180BV+46	RT	--	322	322	--	--	--	--	--	--	--	--
			181BV+96	184BV+43	RT	--	423	423	--	--	--	--	--	--	--	--
	1	UNDERWOOD PARKWAY														
			221UDW+30	222UDW+36	RT	--	140	140	--	--	--	--	--	--	--	--
			220UDW+68	222UDW+00	RT	--	--	--	--	--	1,799	--	--	--	--	--
			222UDE+31	226UDE+04	RT	--	--	--	--	--	369	--	--	--	--	--
	1	WLC ACCESS ROAD														
			3XFS+32	4XFS+55	RT	--	--	--	--	--	227	--	--	--	--	--
			5XFN+26	18XFN+76	LT	--	728	728	--	--	2,959	--	0.1	--	--	--
	1	USH 45														
			325NS+25	333NS+31	RT/LT	--	--	--			5,998	--	--	--	--	--
			335NS+05	338NS+55	RT/LT	--	--	--	--	--	7,513	--	--	18	--	--
			338NS+90	340NS+95	RT/LT	--	--	--	--	--	1,576	--	--	--	--	--
			341NS+00	349NS+00	RT/LT	--	398	398	--	--	5,397	--	--	18	--	--
			378NS+14	385NS+00	RT	--	--	--	--	--	2,609	--	--	--	--	--
	1	IH 94														
			191EW+00	194EW+50	RT/LT	--	356	356	--	--	9,103	--	--	--	--	--
	1	WD														
			766WD+54	774WD+83	RT/LT	--	1,620	1,620	--	--	6,996	--	--	--	--	1,480
	1	SWAN BOULEVARD DITCH TEMPORARY														
			287BVX+26	289BVX+98	RT	--	--	--	--	--	1,884	--	--	--	--	--
		SUBTOTALS					4,198	4,198	--	--	67,004	--	0.1	72	--	1,480
	2	SWAN BOULEVARD														
			187BV+57	195BV+07	LT	--	784	784	--	--	--	2,660	--	--	1	--
			187BV+38	195BV+07	RT	--	--	--	--	--	--	4,738	--	--	1	--
			188BV+50	188BV+50	RT	--	--	--	--	--	--	--	--	18	--	--
		SUBTOTALS					784	784	--	--	--	7,398	--	18	2	--
	3	UNDERWOOD PARKWAY														
			10UBP+00	11UBP+43	LT	--	105	105	--	--	--	--	--	--	--	--
			217UDW+47	220UDW+68	LT	--	185	185	--	--	1,823	--	--	--	--	--
			218UDW+58	220UDW+68	RT	--	--	--	--	--	919	--	--	--	--	--
			218UDW+58	219UDW+87	RT	--	175	175	--	--	--	--	--	--	--	--
	3	WLC ACCESS ROAD														
			2XFS+45	2XFS+71	LT	--	--	--	--	--	30	--	--	--	--	--
			2XFS+45	3XFS+39	RT	--	--	--	--	--	205	--	--	--	--	--
		SUBTOTALS					465	465	--	--	2,977	--	--	--	--	--
		UNDISTRIBUTED				2,000	1,362	1,362	3	3	17,495	1,850	5	23	--	370
		TOTALS				2,000	6,808	6,808	3	3	87,477	9,248	5.1	113	2	1,850

RESTORATION ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	625.0105 TOPSOIL CY	625.0500 SALVAGED TOPSOIL SY	629.0205 FERTILIZER TYPE A CWT	629.0210 FERTILIZER TYPE B CWT	SPV.0085.0010 SEEDING NATIVE SEED BUTTERFLY MIX LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
1000	1	SWAN BOULEVARD													
			166BV+94		173BV+01	LT	54	--	--	0.2	--	--	--	7	324
			167BV+05		173BV+72	RT	476	--	--	1.8	10	77	21	--	--
			167BV+09		173BV+17	LT	381	--	--	1.4	8	62	16	--	--
			166BV+92		173BV+46	RT	58	--	--	0.2	--	--	--	8	346
			173BV+14		185BV+65	LT	905	--	--	3.4	20	147	39	--	--
			174BV+07		174BV+24	LT	2	--	--	0.0	--	--	--	--	9
			174BV+09		185BV+60	RT	1,667	--	--	6.3	36	270	72	--	--
			174BV+16		184BV+69	RT	91	--	--	0.3	--	--	--	12	548
			174BV+29		184BV+78	LT	98	--	--	0.4	--	--	--	13	585
			174BV+40		183BV+50	RT	296	--	--	1.1	--	--	--	40	1,773
	1	UNDERWOOD PARKWAY													
			221UDW+30		222UDW+50	RT	15	--	--	0.1	--	--	--	2	89
			220UDW+86		222UDW+00	LT	12	--	--	0.0	--	--	--	2	75
			220UDW+68		222UDW+00	RT	300	--	--	1.1	6	49	13	--	--
			222UDE+95		226UDE+27	LT	41	--	--	0.2	--	--	--	6	245
			222UDE+95		224UDE+45	RT	8	--	--	0.0	--	--	--	1	48
			224UDE+50		226UDE+17	RT	12	--	--	0.0	--	--	--	2	69
			222UDE+31		226UDE+04	RT	62	--	--	0.2	1	10	3	--	--
	1	WLC ACCESS ROAD													
			3XFS+39		4XFS+14	RT	4	--	--	0.0	--	--	--	1	24
			3XFS+32		4XFS+55	RT	38	--	--	0.1	1	6	2	--	--
			5XFN+07		18XFN+76	LT	611	--	3.0	0.4	11	80	21	16	705
	1	USH 45													
			325NS+25		333NS+31	RT/LT	--	5,998	--	3.8	22	162	43	--	--
			335NS+05		338NS+55	RT/LT	--	7,513	--	4.7	27	203	54	--	--
			338NS+90		340NS+95	RT/LT	--	1,576	--	1.0	6	43	11	--	--
			341NS+00		349NS+00	RT/LT	--	5,397	--	3.4	19	146	39	--	--
			378NS+14		385NS+00	RT	435	--	--	1.6	9	70	19	--	--
	1	IH 94													
			191EW+00		194EW+50	RT/LT	--	9,103	--	5.7	33	246	66	--	--
	1	WD													
			766WD+54		774WD+83	RT/LT	1,166	--	--	4.4	25	189	50	--	--
	1	SWAN BOULEVARD DITCH TEMPORARY													
			287BVX+26		289BVX+98	RT	314	--	--	1.2	7	51	14	--	--
		SUBTOTALS					7,046	29,586	3.0	43	241	1,811	483	110	4,841

(CONTINUED ON NEXT SHEET)

RESTORATION ITEMS (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	625.0105 TOPSOIL CY	625.0500 SALVAGED TOPSOIL SY	629.0205 FERTILIZER TYPE A CWT	629.0210 FERTILIZER TYPE B CWT	SPV.0085.0010 SEEDING NATIVE SEED BUTTERFLY MIX LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
	2	SWAN BOULEVARD													
			187BV+38		195BV+07	RT	790	--	--	3.0	17	128	34	--	--
			187BV+57		195BV+07	LT	443	--	--	1.7	10	72	19	--	--
			187BV+90		191BV+81	RT	35	--	--	0.1	17	128	34	5	211
			187BV+98		191BV+81	LT	35	--	--	0.1	--	--	--	5	211
	2	ROUNDABOUT													
			10RND+00		12RND+76	RT	38	--	--	4.8	--	--	--	5	227
		SUBTOTALS					1,341	--	--	10	44	328	87	15	649
	3	UNDERWOOD PARKWAY													
			10UBP+00		11UBP+43	LT	11	--	--	0.0	--	--	--	2	68
			10UBP+00		11UBP+43	RT	25	--	--	0.1	--	--	--	3	151
			217UDW+47		220UDW+68	LT	304	--	--	1.1	7	49	13	--	--
			218UDW+58		220UDW+68	RT	153	--	--	0.6	3	25	7	--	--
	3	WLC ACCESS ROAD													
			2XFS+45		2XFS+71	LT	5	--	--	0.0	--	1	--	--	--
			2XFS+45		3XFS+39	RT	34	--	--	0.1	1	6	1	--	--
		SUBTOTALS					532	--	--	2	11	81	21	5	219
		UNDISTRIBUTED					--	--	--	14	74	555	148	33	1,427
		TOTALS					8,919	29,586	3.0	69	370	2,775	739	163	7,136

RIPRAP ITEMS

CATEGORY	STAGE	LOCATION	STATION	OFFSET	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
1000	2	SWAN BOULEVARD				
			188BV+81	99' RT	3	4
			190BV+00	114' RT	5	8
		TOTALS			8	12

STRAW BALES

CATEGORY	STAGE	LOCATION	SPV.0060.0022 STRAW BALES EACH
1000	ALL	SWAN BOULEVARD	300
		TOTAL	300

INLET PROTECTION

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	628.7005 TYPE A EACH	628.7010 TYPE B EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
1000	1	SWAN BOULEVARD							
			167BV+46			1	--	1	--
			167BV+58			2	--	2	--
			167BV+95		168BV+00	4	1	--	3
			168BV+25			1	--	--	1
			168BV+42		168BV+46	5	1	3	1
			169BV+24			--	--	--	1
			170BV+35		170BV+51	3	1	2	--
			171BV+39			5	2	4	--
			172BV+06		172BV+56	2	2	2	--
			174BV+33		174BV+47	6	--	6	--
			175BV+74		175BV+75	2	1	1	--
			176BV+50			4	--	4	--
			178BV+76			4	--	4	--
			181BV+79			1	1	--	--
			182BV+43			4	--	4	--
			182BV+58			1	1	--	--
	1	UNDERWOOD PARKWAY							
			221UDW+75			1	--	1	--
			223UDE+58			1	--	1	--
			223UDE+91		224UDE+00	2	--	--	2
			226UDE+00		226UDE+14	2	--	2	--
			228UDE+01			2	--	2	--
			228UDE+63			--	--	--	1
	1	SWAN ACCESS ROAD							
			3XFS+85		3XFS+90	3	--	1	2
			5XFN+91		6XFN+22	4	--	2	2
			9XFN+33			2	--	2	--
			13XFN+46			1	--	1	--
			17XFN+31			2	--	2	--
			18XFN+60			2	--	2	--
	1	ROUNDABOUT							
			11RND+84		11RD+95	2	--	--	2
	1	USH 45							
			335NS+46			--	1	--	--
			338NS+00		339NS+00	--	3	2	--
			339NS+21			--	1	--	--
			340NS+80		341NS+70	--	2	2	--
			349NS+85			--	1	--	--
			371NS+83		372NS+20	--	2	--	--
			374NS+75			--	1	--	--
			378NS+22		378NS+27	--	5	2	--
			378NS+39			--	--	1	--
			381NS+21		381NS+87	--	5	--	--
			382NS+75			--	1	--	--

INLET PROTECTION (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	628.7005 TYPE A EACH	628.7010 TYPE B EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
	1	IH 94							
			192EW+26			--	--	1	--
		SUBTOTALS				69	32	57	15
1000	2	SWAN BOULEVARD							
			190BV+84			1	--	1	--
			191BV+01			3	--	3	--
			192BV+77		192BV+79	2	--	2	--
			194BV+88		195BV+00	3	--	3	--
		SUBTOTALS				9	--	9	--
	3	UNDERWOOD PARKWAY							
			217UDW+79			2	--	--	2
			218UDW+13			1	--	1	--
			218UDW+82		219UDW+50	--	2	--	--
			220UDW+04			2	--	2	--
		SUBTOTALS				5	2	3	2
		TOTALS				83	34	69	17

TRACKING PADS

CATEGORY	STAGE	LOCATION	628.7560 TRACKING PADS EACH
1000	1	SWAN BOULEVARD	2
	1	USH 45	4
	1	EW CORE	1
	1	W. WATERTOWN PLANK RD.	1
		TOTAL	8

CITY OF WAUWATOSA - WATER

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	SPV.0090.5000 DUCTILE IRON (DI) CLASS 55 WATER MAIN, 16-INCH LF	SPV.0090.5001 DUCTILE IRON (DI) CLASS 55 WATER MAIN, 12-INCH LF	SPV.0060.5000 RESILIENT WEDGE GATE VALVE, 6-INCH EACH	SPV.0060.5001 RESILIENT WEDGE GATE VALVE, 8-INCH EACH	SPV.0060.5002 HYDRANT ASSEMBLY EACH	SPV.0060.5003 BUTTERFLY VALVE 16-INCH EACH	SPV.0060.5004 BUTTERFLY VALVE 12-INCH EACH	SPV.0090.5002 DUCTILE IRON (DI) CLASS 55 WATER MAIN, 16-INCH W/30-INCH STEEL CASING PIPE LF
7037	1	SWAN BOULEVARD													
			167BV+31	69' RT		188BV+46	313' RT	1,940	--	--	--	--	--	--	--
			173BV+16	60' LT		173BV+56	95'RT	--	159	--	--	--	--	--	--
			167BV+80	69' RT		--	--	--	--	1	--	1	--	--	--
			170BV+62	68' RT		--	--	--	--	1	--	1	--	--	--
			173BV+25	65' RT		--	--	--	--	--	--	--	1	--	--
			174BV+28	63' RT		--	--	--	--	--	--	--	1	--	--
			176BV+22	58' RT		--	--	--	--	1	--	1	--	--	--
			178BV+56	73' RT		--	--	--	--	1	--	1	--	--	--
			178BV+60	76' RT		--	--	--	--	--	--	--	1	--	--
			181BV+42	84' RT		--	--	--	--	1	--	1	--	--	--
			183BV+53	70' RT		--	--	--	--	--	1	--	--	--	--
			184BV+82	71' RT		--	--	--	--	--	--	--	1	--	--
			184BV+88	71' RT		--	--	--	--	1	--	1	--	--	--
			184BV+08	122' RT		--	--	--	--	--	--	--	1	--	--
			187BV+28	214' RT		--	--	--	--	1	--	1	--	--	--
			187BV+32	216' RT		--	--	--	--	--	--	--	1	--	--
			173BV+16	60' LT		--	--	--	--	1	--	1	--	--	--
			173BV+16	57' RT		--	--	--	--	--	--	--	--	1	--
			173BV+55	88' RT		--	--	--	--	--	--	--	--	1	--
			173BV+56	91' RT		--	--	--	--	1	--	1	--	--	--
			185BV+09	121' RT		187BV+23	211' RT	--	--	--	--	--	--	--	238
		TOTALS						1,940	159	9	1	9	6	2	238

MILWAUKEE COUNTY - WATER

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	SPV.0060.5005 CUT AND CAP WATER MAIN EACH	SPV.0060.5006 SALVAGE HYDRANT EACH
7110	1	SWAN BOULEVARD				
			177BV+90	221' LT	--	1
			180BV+18	131' RT	--	1
			184BV+39	72' LT	--	1
			184BV+16	65' RT	1	--
			183BV+99	68' RT	1	--
		WD				
			773WD+93	198' LT	1	--
			776WD+34	142' LT	--	1
		TOTALS			3	4

MILWAUKEE COUNTY - SANITARY

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	SPV.0090.5003 ABANDON EXISTING 6-INCH SANITARY SEWER LF	SPV.0090.5004 ABANDON EXISTING 8-INCH SANITARY SEWER LF	SPV.0060.5007 ABANDON EXISTING SANITARY MANHOLE EACH
7100	1	SWAN BOULEVARD								
			181BV+12	380' LT		181BV+98	103' RT	288	593	--
			178BV+90	240' LT		--	--	--	--	1
			180BV+28	42' LT		--	--	--	--	1
			181BV+51	28' RT		--	--	--	--	1
		TOTALS						288	593	3

STORM SEWER STRUCTURES

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2003 MANHOLES 3-FT DIAMETER EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0642 INLET COVERS TYPE MS EACH	611.0624 INLET COVERS TYPE H[2] EACH	611.0652 INLET COVERS TYPE T[3] EACH	611.0663 INLET COVERS TYPE X[4] EACH	SPV.0060.8004 INLET COVERS TYPE 57[5] EACH	COMMENTS
Swan Boulevard	B114	1	172BV+32.17	45.8	RT	735.51	5.28	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B114A	1	172BV+32.09	30.1	RT	735.90	6.58	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B115	1	171BV+39.73	-44.5	LT	733.00	5.10	---	---	---	---	---	---	---	---	1	---	2	---	---	---	---	---
Swan Boulevard	B116	1	171BV+38.29	-29.0	LT	732.60	5.59	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B117	1	171BV+39.22	19.4	RT	732.82	6.01	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	---
Swan Boulevard	B118	1	171BV+40.50	78.1	RT	731.90	4.19	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B119	1	171BV+39.94	29.5	RT	732.78	6.02	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B119A	1	170BV+51.33	96.2	RT	730.14	4.96	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---
Swan Boulevard	B119B	1	170BV+36.34	79.4	RT	728.69	3.71	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B119C	1	170BV+35.16	35.1	RT	729.33	5.52	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---
Swan Boulevard	B120	1	168BV+42.12	80.0	RT	725.88	3.35	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B121	1	168BV+25.00	80.0	RT	725.73	3.52	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	DEPRESSED 1"
Swan Boulevard	B122	1	168BV+00.00	49.0	RT	726.21	4.16	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	---
Swan Boulevard	B123	1	168BV+42.06	39.0	RT	726.29	4.61	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B124	1	168BV+46.12	-44.8	LT	726.85	4.78	---	---	---	---	---	---	---	---	1	---	2	---	---	---	---	---
Swan Boulevard	B125	1	168BV+41.33	-29.0	LT	726.48	4.49	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B126	1	168BV+00.36	-44.6	LT	726.65	4.04	---	---	---	---	---	---	---	---	1	---	2	---	---	---	---	---
Swan Boulevard	B127	1	167BV+96.00	-29.0	LT	726.22	4.43	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	DEPRESSED 1"
Swan Boulevard	B131	1	168BV+00.40	39.0	RT	726.09	4.59	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	DEPRESSED 1"
Swan Boulevard	B132	1	167BV+46.82	80.0	RT	727.39	4.95	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B132A	1	167BV+58.31	49.0	RT	727.00	4.83	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B133	1	167BV+58.56	39.0	RT	726.84	5.52	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---
WLC Access Road North	B200	1	16XFN+50.50	-150.4	LT	747.00	13.46	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---
Underwood Parkway East	B202	1	228UDE+00.93	25.0	RT	737.60	4.89	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Underwood Parkway East	B203	1	228UDE+00.79	-14.0	LT	738.93	6.88	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B204	1	176BV+50.03	23.2	RT	749.44	5.65	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B204A	1	176BV+50.00	-29.0	LT	749.34	5.09	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B205	1	176BV+50.34	89.8	RT	747.38	13.18	---	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---
Swan Boulevard	B206	1	176BV+50.21	67.7	RT	748.91	14.82	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B208	1	176BV+50.00	36.7	RT	749.45	15.47	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---

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[4]TOP SLAB OPENINGS FOR INLET COVERS TYPE X SHALL BE 1'-10" X 2'-6"
[5]TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" X 2'-0"

STORM SEWER STRUCTURES CONTINUED

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2003 MANHOLES 3-FT DIAMETER EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0642 INLET COVERS TYPE MS EACH	611.0624 INLET COVERS TYPE H[2] EACH	611.0652 INLET COVERS TYPE T[3] EACH	611.0663 INLET COVERS TYPE X[4] EACH	SPV.0060.8004 INLET COVERS TYPE 57[5] EACH	COMMENTS
Swan Boulevard	B209	1	175BV+73.35	85.5	RT	746.86	5.36	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	---
Swan Boulevard	B210	1	174BV+33.33	-29.0	LT	742.69	5.61	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B210A	1	174BV+34.43	2.0	RT	742.85	6.02	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B211	1	174BV+34.76	11.0	RT	742.60	5.86	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B212	1	174BV+45.49	27.9	RT	742.64	6.04	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B213	1	174BV+47.31	72.7	RT	741.86	5.10	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B214	1	174BV+47.45	38.2	RT	742.19	9.36	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---
Underwood Parkway East	B215	1	227UDE+44.83	-16.0	LT	740.68	9.88	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
Underwood Parkway East	B216	1	226UDE+14.31	18.0	RT	739.55	4.05	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Underwood Parkway East	B217	1	226UDE+00.00	-18.0	LT	740.03	9.92	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	DEPRESSED 1"
Underwood Parkway East	B218	1	224UDE+00.21	14.1	RT	740.19	4.19	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Underwood Parkway East	B219	1	223UDE+90.82	-14.1	LT	740.04	11.43	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	DEPRESSED 1"
Underwood Parkway East	B220	1	223UDE+55.47	2.0	RT	740.38	11.92	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---
WLC Access Road North	B240	1	18XFN+25.00	18.0	RT	746.41	4.54	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	DEPRESSED 1"
WLC Access Road North	B241	1	18XFN+29.72	-18.0	LT	746.47	5.50	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B242	1	182BV+43.66	-29.0	LT	763.14	4.70	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B243	1	182BV+43.05	2.0	RT	763.67	5.38	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B244	1	182BV+42.76	16.5	RT	763.67	5.47	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B245	1	182BV+42.11	47.5	RT	763.11	24.40	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B246	1	182BV+41.30	69.6	RT	746.24	7.63	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---
Swan Boulevard	B246A	1	182BV+57.22	320.8	RT	743.00	4.50	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---
Swan Boulevard	B246B	1	181BV+78.72	257.0	RT	744.20	6.63	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---
Swan Boulevard	B247	1	180BV+56.08	76.7	RT	747.28	10.73	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
WLC Access Road North	B247A	1	17XFN+30.65	18.0	RT	746.96	3.75	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
WLC Access Road North	B248	1	17XFN+31.33	-18.0	LT	746.96	6.44	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B249	1	178BV+76.01	-29.0	LT	755.13	5.27	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B250	1	178BV+76.01	2.0	RT	755.67	5.93	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B251	1	178BV+76.01	29.9	RT	755.69	6.09	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B252	1	178BV+76.05	60.9	RT	755.13	5.90	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B253	1	178BV+75.87	82.0	RT	753.84	18.61	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---

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[5]TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" X 2'-0"

STORM SEWER STRUCTURES CONTINUED

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2003 MANHOLES 3-FT DIAMETER EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0642 INLET COVERS TYPE MS EACH	611.0624 INLET COVERS TYPE H[2] EACH	611.0652 INLET COVERS TYPE T[3] EACH	611.0663 INLET COVERS TYPE X[4] EACH	SPV.0060.8004 INLET COVERS TYPE 57[5] EACH	COMMENTS
WLC Access Road North	B254	1	13XFN+45.59	-18.0	LT	748.88	10.28	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
WLC Access Road North	B255	1	9XFN+33.28	18.0	RT	746.98	3.75	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
WLC Access Road North	B256	1	9XFN+33.47	-18.0	LT	746.99	10.39	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
WLC Access Road North	B257	1	6XFN+23.70	34.2	RT	738.84	10.77	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	DEPRESSED 1"
WLC Access Road North	B258	1	5XFN+92.65	-21.2	LT	738.87	4.02	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
WLC Access Road North	B259	1	5XFN+94.23	2.0	RT	739.15	4.38	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	DEPRESSED 1"
WLC Access Road North	B260	1	5XFN+97.84	9.4	RT	739.27	4.54	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Underwood Parkway Roundabout	B261	1	11RND+95.47	2.0	RT	739.15	11.40	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---
Underwood Parkway Roundabout	B262	1	11RND+84.56	2.0	RT	739.15	11.43	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---
WLC Access Road South	B263	1	3XFS+85.00	17.3	RT	740.26	4.16	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	DEPRESSED 1"
WLC Access Road South	B264	1	3XFS+91.26	-6.9	LT	740.51	4.63	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
WLC Access Road South	B265	1	3XFS+84.68	-27.7	LT	740.13	4.41	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
---	---	---	---	---	---	---	---		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway West	B266	1	221UDW+79.61	-6.4	LT	738.70	11.25	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---
Underwood Parkway West	B267	1	220UDW+03.86	-18.0	LT	730.50	6.53	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---
Underwood Parkway West	B268	3	217UDW+79.53	18.0	RT	723.97	3.97	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	DEPRESSED 1"
Underwood Parkway West	B269	3	217UDW+83.11	-18.0	LT	723.96	4.86	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	DEPRESSED 1"
Underwood Parkway West	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway West	B271	3	218UDW+13.30	-18.0	LT	724.18	7.25	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Underwood Parkway West	B272	1	220UDW+03.86	18.0	RT	730.50	16.50	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B299	2	194BV+88.19	26.6	RT	766.51	4.23	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B300	2	194BV+98.44	26.7	RT	766.37	4.16	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B301	2	194BV+99.16	-25.3	LT	767.57	6.33	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B302	2	192BV+79.07	25.6	RT	768.71	5.32	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B303	2	192BV+77.81	-26.1	LT	768.84	8.70	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B304	2	191BV+01.12	-29.0	LT	770.51	11.23	---	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---
Swan Boulevard	B304A	2	191BV+00.62	2.0	RT	771.07	11.90	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
Swan Boulevard	B305	2	191BV+00.35	5.2	RT	770.94	11.79	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---

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[5]TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" X 2'-0"

STORM SEWER STRUCTURES CONTINUED

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2003 MANHOLES 3-FT DIAMETER EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0642 INLET COVERS TYPE MS EACH	611.0624 INLET COVERS TYPE H[2] EACH	611.0652 INLET COVERS TYPE T[3] EACH	611.0663 INLET COVERS TYPE X[4] EACH	SPV.0060.8004 INLET COVERS TYPE 57[5] EACH	COMMENTS
Swan Boulevard	B306	2	190BV+84.37	36.6	RT	770.60	11.59	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---
USH 45	BE311	2	378NS+39.53	175.8	RT	748.22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	B312	1	378NS+31.89	123.4	RT	748.32	7.12	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---
USH 45							---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	B314	1	383NS+95.55	79.6	RT	747.30	3.08	---	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---
USH 45	B315	1	382NS+75.21	77.4	RT	746.02	8.88	---	---	---	---	---	---	---	---	1	---	2	---	---	---	---	---
USH 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	B450	1	381NS+82.86	3.0	RT	746.64	9.45	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---
USH 45	B452	1	382NS+00.67	-14.8	LT	747.08	10.10	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---
USH 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	BE455	1	382NS+74.44	-5.4	LT	740.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway West	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
							TOTAL	4	11	8	6	3	55	1	4	9	9	69	2	3	4		

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STORM SEWER PIPES

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	608.0436 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	608.0460 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 60-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	COMMENTS
Swan Boulevard	P114	1	B114	B114A	730.23	730.07	1.00	16	---	20	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P114A	1	B114A	B119	729.32	726.76	3.00	85	---	---	---	90	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P115	1	B115	B116	727.90	727.76	1.00	14	---	18	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P116	1	B116	B117	727.01	726.81	.50	40	---	---	---	44	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P117	1	B117	B119	726.81	726.76	.50	10	---	---	---	15	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P118	1	B118	B119	727.71	727.51	.50	41	---	45	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P119	1	B119	B119C	726.76	723.81	3.00	98	---	---	---	103	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P119A	1	B119A	B119B	725.18	724.98	1.00	20	---	23	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P119B	1	B119B	B119C	724.98	724.56	1.00	42	---	46	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P119C	1	B119C	B123	723.81	721.68	1.15	186	---	---	---	191	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P120	1	B120	B121	722.53	722.46	.50	14	---	17	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P121	1	B121	B122	722.21	722.05	.50	33	---	---	37	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P122	1	B122	B131	722.05	722.00	.50	10	---	---	15	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P123	1	B123	B131	721.68	721.50	.50	36	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---
Swan Boulevard	P124	1	B124	B125	722.07	721.99	.50	15	---	---	---	18	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P125	1	B125	B127	721.99	721.79	.50	41	---	---	---	45	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P126	1	B126	B127	722.61	722.54	.50	15	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P127	1	B127	B131	721.79	721.50	.50	57	---	---	---	63	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P131	1	B131	B133	721.50	721.32	.50	36	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---
Swan Boulevard	P132	1	B132	B132A	722.44	722.17	1.00	27	---	30	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P132A	1	B132A	B133	722.17	722.07	1.00	10	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P133	1	B133	PE690	721.32	721.08	.50	48	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
WLC Access Road North	PE200	1	B200	---	733.54	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
Underwood Parkway East	P202	1	B202	B203	732.71	732.55	.50	31	---	---	35	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway East	P203	1	B203	B215	732.05	731.80	.50	50	---	---	---	56	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P204	1	B204	B208	743.79	743.65	1.00	14	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P204A	1	B204A	B204	744.25	743.79	1.00	46	---	49	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P205	1	B205	B206	734.20	734.09	.60	19	---	---	---	---	---	25	---	---	---	---	---	---	---	---	---
Swan Boulevard	P206	1	B206	B208	734.09	733.98	.60	19	---	---	---	---	---	25	---	---	---	---	---	---	---	---	---
Swan Boulevard	P208	1	B208	B214	733.98	732.83	.60	191	---	---	---	---	---	197	---	---	---	---	---	---	---	---	---

[A]SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.
[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	608.0436 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	608.0460 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 60-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	COMMENTS
Swan Boulevard	P209	1	B209	B205	741.50	741.17	.50	67	---	---	72	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P210	1	B210	B210A	737.08	736.83	1.00	25	---	28	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P210A	1	B210A	B211	736.83	736.74	1.00	9	---	12	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P211	1	B211	B212	736.74	736.60	1.00	14	---	17	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P212	1	B212	B214	736.60	736.50	1.00	10	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P213	1	B213	B214	736.76	736.50	1.00	26	---	30	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P214	1	B214	B215	732.83	732.57	.60	44	---	---	---	---	---	51	---	---	---	---	---	---	---	---	---
Underwood Parkway East	P215	1	B215	B217	730.80	730.11	.50	137	---	---	---	---	---	145	---	---	---	---	---	---	---	---	---
Underwood Parkway East	P216	1	B216	B217	735.50	735.21	1.00	29	---	34	---	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway East	P217	1	B217	B219	730.11	729.11	.50	202	---	---	---	---	---	209	---	---	---	---	---	---	---	---	---
Underwood Parkway East	P218	1	B218	B219	736.00	735.90	.50	21	---	25	---	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway East	P219	1	B219	B220	728.61	728.46	.50	31	---	---	---	---	---	---	37	---	---	---	---	---	---	---	---
Underwood Parkway East	P220	1	B220	B257	728.46	728.07	.50	79	---	---	---	---	---	---	86	---	---	---	---	---	---	---	---
WLC Access Road North	P240	1	B240	B241	741.87	741.72	.50	29	---	33	---	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P241	1	B241	B248	740.97	740.52	.50	88	---	---	---	93	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P242	1	B242	B243	758.44	758.29	.60	25	---	28	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P243	1	B243	B244	758.29	758.20	.60	14	---	17	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P244	1	B244	B245	758.20	758.06	.60	24	---	28	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P245	1	B245	B246	738.71	738.61	.50	20	---	---	---	---	---	---	---	---	---	---	---	---	24	---	BACKFILL SLURRY
Swan Boulevard	P246	1	B246	B247	738.61	737.76	.50	169	---	---	---	176	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P246A	1	B246A	B246B	738.50	738.07	.50	86	---	---	---	90	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P246B	1	B246B	B247	737.57	736.55	.50	204	---	---	---	---	210	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P247	1	B247	B253	736.55	735.73	.50	164	---	---	---	---	---	---	---	---	170	---	---	---	---	---	---
WLC Access Road North	P247A	1	B247A	B248	743.21	743.07	.50	28	---	32	---	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P248	1	B248	B254	740.52	738.60	.50	384	---	---	---	389	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P249	1	B249	B250	749.86	749.74	.50	25	---	28	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P250	1	B250	B251	749.74	749.60	.50	28	---	31	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P251	1	B251	B252	749.60	749.48	.50	24	---	28	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P252	1	B252	B253	749.23	749.14	.50	19	---	---	23	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	P253	1	B253	B205	735.23	734.20	.50	206	---	---	---	---	---	---	---	---	---	212	---	---	---	---	---

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	608.0436 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	608.0460 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 60-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	COMMENTS
WLC Access Road North	P254	1	B254	B256	738.60	736.60	.50	400	---	---	---	404	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P255	1	B255	B256	743.23	743.08	.50	29	---	33	---	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P256	1	B256	B257	736.60	734.39	.75	295	---	---	---	301	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P257	1	B257	B261	728.07	727.75	.50	64	---	---	---	---	---	---	71	---	---	---	---	---	---	---	---
WLC Access Road North	P258	1	B258	B259	734.85	734.77	.50	15	---	---	19	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P259	1	B259	B260	734.77	734.73	.50	8	---	---	12	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road North	P260	1	B260	B257	734.73	734.64	.50	18	---	---	24	---	---	---	---	---	---	---	---	---	---	---	---
Underw ood Parkw ay Roundabout	P261	1	B261	B262	727.75	727.72	.50	5	---	---	---	---	---	---	11	---	---	---	---	---	---	---	---
Underw ood Parkw ay Roundabout	P262	1	B262	B266	727.72	727.45	.50	53	---	---	---	---	---	---	59	---	---	---	---	---	---	---	---
WLC Access Road South	P263	1	B263	B264	736.10	735.88	1.00	22	---	25	---	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road South	P264	1	B264	B265	735.88	735.72	1.00	16	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---
WLC Access Road South	P265	1	B265	B266	735.72	734.50	1.00	122	---	127	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Underw ood Parkw ay West	P266	1	B266	B267	727.45	723.97	2.25	155	---	---	---	---	---	---	161	---	---	---	---	---	---	---	---
Underw ood Parkw ay West	P267	1	B267	B272	723.97	723.80	.75	22	---	---	---	---	---	---	29	---	---	---	---	---	---	---	---
Underw ood Parkw ay West	P268	3	B268	B269	720.00	719.85	.50	29	---	33	---	---	---	---	---	---	---	---	---	---	---	---	---
Underw ood Parkw ay West	P269	3	B269	B271	719.10	718.97	.50	26	---	---	---	30	---	---	---	---	---	---	---	---	---	---	---
Underw ood Parkw ay West	PE270	3	---	B271	---	717.90	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
Underw ood Parkw ay West	P271	3	B271	B272	716.93	716.00	.50	187	---	---	---	192	---	---	---	---	---	---	---	---	---	---	---
Underw ood Parkw ay West	P272	1	B272	PE604	714.00	713.72	.50	56	---	---	---	---	---	---	---	59	---	---	---	---	---	---	---
Sw an Boulevard	P299	2	B299	B300	762.28	762.21	1.00	7	---	10	---	---	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P300	2	B300	B301	762.21	761.99	.50	44	---	48	---	---	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P301	2	B301	B303	761.24	760.14	.50	221	---	---	---	225	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P302	2	B302	B303	763.39	763.17	.50	45	---	48	---	---	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P303	2	B303	B304	760.14	759.28	.50	173	---	---	---	177	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P304	2	B304	B304A	759.28	759.17	.50	22	---	---	---	27	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P304A	2	B304A	B305	759.17	759.15	.50	3	---	---	---	7	---	---	---	---	---	---	---	---	---	---	---
Sw an Boulevard	P305	2	B305	B306	759.15	759.01	.50	28	---	---	---	32	---	---	---	---	---	---	---	---	---	---	---

[A]SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	608.0436 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	608.0460 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 60-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	COMMENTS
Swan Boulevard	P306	2	B306	B307	759.01	758.53	.50	96	---	---	---	98	---	---	---	---	---	---	---	---	---	---	---
USH 45	--		--	--	--	--	--	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	P310	1	B309	B312	745.71	741.20	1.55	291	---	---	293	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	PE311	1	BE311	B312	---	741.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
USH 45	PE312	1	B312	---	741.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
USH 45	P313	1	B312A	B314	744.88	744.22	2.00	33	---	---	34	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	P314	1	B314	B315	744.22	741.89	2.00	116	---	---	120	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	PE315	1	B315	---	737.14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
USH 45	PE449	1	---	B450	---	739.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
USH 45	P451	1	B450	B452	737.19	736.98	1.00	21	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	P453	1	B452	BE455	736.98	736.30	1.00	68	74	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	PE454	1	---	BE455	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
USH 45	PE456	1	BE455	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
Swan Boulevard	PE499	1	---	---	---	753.47	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
Swan Boulevard	P500	1	PE499	B501	753.47	752.11	1.76	77	77	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Underwood Parkway West	PE604	1	P272	---	713.72	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Swan Boulevard	PE690	1	P133	---	721.08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
USH 45	P700	1	--	--	727.57	726.91	.50	132	---	---	---	---	---	---	---	---	---	---	---	---	132	---	---
								TOTAL	177	1,026	686	2,866	210	652	455	59	170	212	132	24	135	

[A]SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

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SEALING PIPES

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0280 SEALING PIPES EACH
1000	1	USH 45			
			381NS+99	84'RT	1
			382NS+70	5'LT	1
			383NS+31	84'RT	1
			189BV+39	68' RT	1
		SUBTOTAL			4
	3	UNDERWOOD PARKWAY			
			218UDW+13	18' LT	1
		SUBTOTAL			1
		TOTAL			5

TEMPORARY SHORING

CATEGORY	STAGE	ROADWAY	PIPE ID	STATION	OFFSET	206.6000.S TEMPORARY SHORING SF
1000	1	USH 45				
			P700	382NS+64	74' RT	6220
		TOTAL				6,220

CONCRETE COLLARS FOR PIPE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
1000	1	SWAN BOULEVARD			
			167BV+07	36' RT	1
			189BV+40	36' RT	1
	1	WLC ACCESS ROAD			
			16XFN+52	149' LT	1
	1	UNDERWOOD PARKWAY			
			220UDW+16	72' RT	1
		SUBTOTAL			4
	2	USH 45			
			378NS+31	120' RT	1
			378NS+32	126' RT	1
			381NS+80	3' RT	1
			382NS+77	77' RT	1
		SUBTOTAL			4
	3	UNDERWOOD PARKWAY			
			218UDW+13	18' LT	1
		SUBTOTAL			1
		TOTAL			9

3

ADJUSTING INLETS

CATEGORY	STAGE	ROADWAY	STR NO.	STATION	OFFSET	611.8115 ADJUSTING INLET COVERS EACH
1000	3	UNDERWOOD PARKWAY				
			BE270A	218UDW+82	74' LT	1
			BE270B	219UDW+50	71' LT	1
		TOTAL				2

APRON ENDWALLS

CATEGORY	STAGE	ROADWAY	PIPE ID	ENDWALL ID	ENDWALL ELEVATION	ENDWALL STATION	ENDWALL OFFSET	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	633.5200 MARKERS CULVERT END EACH
1000	1	SWAN BOULEVARD									
			P500	B501	752.00	188BV+86	94' RT	1	--	--	--
	1	USH 45									
			P310	B309	745.80	381NS+32	126' RT	--	1	--	--
			P313	B312A	745.00	384NS+03	118' RT	--	1	--	--
		SUBTOTALS						1	2	--	--
	2	SWAN BOULEVARD									
			P306	B307	758.50	190BV+04	106' RT	--	---	1	1
		TOTALS						1	2	1	1

NOTES

1) ENDWALL ELEVATION / STATION / OFFSET ARE TO END CENTER OF ENDWALL
2) PIPE LENGTHS AND SLOPES ARE MEASURED TO THE END OF PIPE

DETENTION BASIN CLAY LINING

CATEGORY	STAGE	ROADWAY	LOCATION	SPV.0035.8001 DETENTION BASIN CLAY LINING CY
1000	1	WLC ACCESS ROAD		
			WISCONSIN LUTHERAN COLLEGE POND	673
		TOTAL		673

REMOVING BULKHEAD

CATEGORY	STAGE	ROADWAY	PIPE ID	STATION	OFFSET	SPV.0060.8018 REMOVING BULKHEAD EACH
1000	1	SWAN BOULEVARD				
			PE690	167BV+07	36' RT	1
	1	UNDERWOOD PARKWAY				
			PE604	220UDW+16	72' RT	1
		TOTAL				2

BACKFILL CONTROLLED LOW STRENGTH

CATEGORY	STAGE	DESCRIPTION	209.0200.S BACKFILL CONTROLLED LOW STRENGTH CY
1000	1	24-INCH SS-RCP V - P245	12
		TOTAL	12

REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE

CATEGORY	STAGE	ROADWAY	STR. NO.	STATION	OFFSET	EXISTING RIM ELEVATION	TO	PROPOSED RIM ELEVATION	SPV.0060.8061 REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE EACH
1000	1	USH 45							
			BE455	382NS+74	5' LT	747.31		740.00	1
		TOTAL							1

PIPE CONNECTION TO EXISTING STRUCTURE

ROADWAY	STRUCTURE NUMBER	STATION	OFFSET	SPV.0060.8015 PIPE CONNECTION TO EXISTING STRUCTURE EACH
USH 45				
	BE455	382NS+70	5'LT	1
TOTAL				1

DEWATERING

CATEGORY	ROADWAY	SPV.0105.8002 DEWATERING FOR DETENTION BASIN CONSTRUCTION LS
1000	UNDISTRIBUTED	1
	TOTAL	1

SEDIMENTATION BASIN

CATEGORY	ROADWAY	SPV.0060.8017 SEDIMENTATION BASIN EACH
1000	UNDISTRIBUTED	2
	TOTAL	2

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	STATION	646.0106* PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP YELLOW LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 2 FT LINE, 6 FT SKIP WHITE LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 2 FT LINE, 6 FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3 FT LINE, 9 FT SKIP 12.5 FT LINE, 37.5 FT SKIP WHITE LF	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF
1000	SWAN BOULEVARD SB													
		167BV+17	173BV+13	509	--	--	--	37	--	13	131	182	31	86	1,425	--
		173BV+21	173BV+82	--	--	--	--	--	--	--	--	--	--	--	--	--
		174BV+23	185BV+00	1,080	--	--	--	--	--	--	266	--	--	--	442	--
		185BV+00	195BV+06	877	403	34	77	--	--	--	163	--	--	--	--	--
	SWAN BOULEVARD NB													
		167BV+17	173BV+13	539	1,185	--	--	--	--	--	135	--	--	--	331	75
		173BV+50	174BV+11	--	--	--	--	--	--	--	--	--	--	--	--	--
		174BV+26	185BV+00	1,020	2,113	--	--	--	--	--	257	--	--	--	--	67
		185BV+00	195BV+06	919	406	26	76	--	--	--	162	--	--	--	--	10
	UNDERWOOD PARKWAY													
		217UDW+47	221UDW+29	--	--	--	--	--	--	--	--	--	--	--	--	--
		221UDW+26	222UDW+29	--	--	--	--	--	--	--	--	--	--	--	28	--
		222UDE+97	224UDE+24	--	--	--	--	--	--	--	--	--	--	--	44	--
		224UDE+24	226UDE+41	--	--	--	--	--	--	--	--	--	--	--	--	--
		227UDE+79	228UDE+10	--	--	--	--	--	--	--	--	--	--	--	--	--

*ADDITIONAL QUANTITIES FOUND ELSE\

(CONTINUED ON NEXT SHEET)

(CONTINUED)

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	STATION	646.0106* PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP WHITE LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP YELLOW LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 2 FT LINE, 6 FT SKIP WHITE LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 2 FT LINE, 6 FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 3 FT LINE, 9 FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3 FT LINE, 9 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF
	WLC ACCESS ROAD															
		2XFS+45	3XFS+43	--	--	--	--	--	--	--	--	--	--	--	--	--
		3XFS+43	4XFS+73	--	--	--	--	--	--	--	--	--	--	43	--	--
		5XFN+26	6XFN+62	--	--	--	--	--	--	--	--	--	--	37	--	--
		6XFN+62	18XFN+76	--	--	--	--	--	--	--	--	--	--	--	--	--
	ROUNDABOUT															
		10RND+00	12RND+76	--	276	--	--	--	--	--	--	--	--	--	--	--
	US 45 NB															
		372NS+82	378NS+68	--	--	--	--	--	1,118	--	--	--	--	--	--	--
		372NS+82	386NS+07	1,328	--	--	--	--	--	--	--	--	--	--	--	--
		376NS+99	387NS+00	--	1,000	--	500	--	--	--	--	--	--	--	--	--
		378NS+68	386NS+58	--	--	198	--	--	--	--	--	--	--	--	--	--
	US 45 SB															
		373NS+32	388NS+50	1,520	--	--	--	--	--	--	--	--	--	--	--	--
		373NS+32	376NS+99	--	--	--	--	--	739	--	--	--	--	--	--	--
		376NS+99	388NS+50	--	1,150	--	575	--	--	--	--	--	--	--	--	--
		376NS+99	379NS+41	--	--	61	--	--	--	--	--	--	--	--	--	--
	W. WATERTOWN PLANK RD**			--	--	--	--	--	--	--	--	--	--	--	--	--
	SUBTOTALS			7,792	6,534	318	1,228	37	1,857	13	1,114	182	31	86	2,350	152
	TOTALS					15,871		1,894			1,309			2,467		152

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	STATION	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH WHITE LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW EACH	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE LF	SPV.0060.0010 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 1 WHITE EACH	SPV.0060.0011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 WHITE EACH	SPV.0060.0012 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS WHITE EACH	SPV.0090.0010 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE, 18-INCH WHITE LF	SPV.0090.0011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK, 6-INCH WHITE LF	SPV.0090.0013 PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 4-INCH YELLOW LF	646.0156 PAVEMENT MARKING EPOXY 18-INCH 2 FT LINE, 2 FT SKIP WHITE LF
1000	SWAN BOULEVARD SB												
		167BV+17	173BV+13	--	--	--	2	8	10	64	243	--	--
		173BV+21	173BV+82	--	--	--	--	--	--	23	112	--	--
		174BV+23	185BV+00	--	--	--	--	--	--	--	54	--	--
		185BV+00	195BV+06	--	--	--	--	--	--	--	--	326	--
	SWAN BOULEVARD NB												
		167BV+17	173BV+13	--	2	--	--	--	--	--	111	--	--
		173BV+50	174BV+11	--	--	--	--	--	--	15	104	--	--
		174BV+26	185BV+00	--	1	--	--	--	--	--	116	--	--
		185BV+00	195BV+06	--	1	--	--	--	--	--	--	326	--
	UNDERWOOD PARKWAY												
		217UDW+47	221UDW+29	--	--	--	--	--	--	--	--	765	--
		221UDW+26	222UDW+29	--	--	--	--	--	--	--	59	94	14
		222UDE+97	224UDE+24	--	--	--	--	--	--	--	50	127	16
		224UDE+24	226UDE+41	--	--	--	--	--	--	--	--	436	--
		227UDE+79	228UDE+10	--	--	--	--	--	--	--	--	57	--

(CONTINUED ON NEXT SHEET)

(CONTINUED)

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	STATION	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH WHITE LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW EACH	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE LF	SPV.0060.0010 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 1 WHITE EACH	SPV.0060.0011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 WHITE EACH	SPV.0060.0012 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS WHITE EACH	SPV.0090.0010 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE, 18-INCH WHITE LF	SPV.0090.0011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK, 6-INCH WHITE LF	SPV.0090.0013 PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 4-INCH YELLOW LF	646.0156 PAVEMENT MARKING EPOXY 18-INCH 2 FT LINE, 2 FT SKIP WHITE LF
	WLC ACCESS ROAD												
		2XFS+45	3XFS+43	--	--	--	--	--	--	--	57	166	--
		3XFS+43	4XFS+73	--	--	--	--	--	--	--	63	134	15
		5XFN+26	6XFN+62	--	--	--	--	--	--	--	88	105	17
		6XFN+62	18XFN+76	--	--	--	--	--	--	--	--	2,447	--
	ROUNDABOUT												
		10RND+00	12RND+76	--	--	--	--	--	--	--	--	--	--
	US 45 NB												
		372NS+82	378NS+68	--	--	--	--	--	--	--	--	--	--
		372NS+82	386NS+07	--	--	--	--	--	--	--	--	--	--
		376NS+99	387NS+00	--	--	--	--	--	--	--	--	--	--
		378NS+68	386NS+58	--	--	--	--	--	--	--	--	--	--
	US 45 SB												
		373NS+32	388NS+50	--	--	--	--	--	--	--	--	--	--
		373NS+32	376NS+99	--	--	243	--	--	--	--	--	--	--
		376NS+99	388NS+50	--	--	--	--	--	--	--	--	--	--
		376NS+99	379NS+41	--	--	--	--	--	--	--	--	--	--
	W. WATERTOWN PLANK RD**			104	--	--	--	--	--	--	--	--	--
	SUBTOTALS			104	4	243	2	8	10	102	1,056	4,985	62
	TOTALS			104	4	243	2	8	10	102	1,056	4,985	62

TRAFFIC CONTROL

CATEGORY	STAGE	LOCATION	STAGE DURATION	643.0100 TRAFFIC CONTROL 1060-33-73	643.0300* TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420* TRAFFIC CONTROL BARRICADES TYPE III		643.0453 TRAFFIC CONTROL BARRICADES PERMANENT TYPE III	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800* TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910* TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II			SPV.0060.0023 TRAFFIC CONTROL DRUMS LEFT IN PLACE
																				NUMBER OF SIGNS	NUMBER OF CYCLES		NUMBER OF SIGNS	NUMBER OF CYCLES		
			DAYS	EACH	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH			EACH			EACH	EACH
1000	1		82																								
		SWAN BOULEVARD		--		--		--	11	902	--	22	1,804		--		--	8	656	--	--	--	--	--	--	--	--
		UNDERWOOD PARKWAY		--		--		--	3	246	--	6	492		--		--	7	574	--	--	--	--	--	--	--	--
		USH 45 NB		--	14	1,148		--		--	--		--		--		--	13	1,066	--	--	--	--	--	--	--	--
		USH 45 SB		--	14	1,148		--		--	--		--	8	656		--	11	902	--	--	--	--	--	--	--	--
		ATHLETIC FIELD ENTRANCE		--		--		--	7	574	--	14	1,148		--		--	4	328	--	--	--	--	--	--	--	--
		STAGE 1 SUBTOTALS		--		2,296		--		1,722	--		3,444		656		--		3,526			--			--		--
1000	2		37																								
		SWAN BOULEVARD		--	34	1,258		--	16	592	--	32	1,184	6	222	1	37	8	296	--	--	--	--	--	--	--	--
		WATERTOWN PLANK ROAD		--		--	2	74		--	--		--		--		--	2	74	--	--	--	--	--	--	--	--
		UNDERWOOD PARKWAY		--		--		--	3	111	--	6	222		--		--	7	259	--	--	--	--	--	--	--	--
		DISCOVERY PARKWAY		--	11	407		--	1	37	--	2	74		--		--	2	74	--	--	--	--	--	--	--	--
		USH 45 NB		--		--		--		--	--		--		--		--	8	296	--	--	--	--	--	--	--	--
		USH 45 SB		--		--		--		--	--		--		--		--	7	259	--	--	--	--	--	--	--	--
		ATHLETIC FIELD ENTRANCE		--		--		--	7	259	--	14	518		--		--	4	148	--	--	--	--	--	--	--	--
		STAGE 2 SUBTOTALS		--		1,665		74		999	--		1,998		222		37		1,406			--			--		--
1000	3		19																								
		SWAN BOULEVARD		--		--		--		--	3		--		--		--	4	76	--	--	--	--	--	--	--	20
		UNDERWOOD PARKWAY		--		--		--	7	133	3	14	266		--		--	9	171	--	--	--	--	--	--	--	--
		USH 45 NB		--		--		--		--	--		--		--		--	8	152	--	--	--	--	--	--	--	--
		USH 45 SB		--		--		--		--	--		--		--		--	7	133	--	--	--	--	--	--	--	--
		STAGE 3 SUBTOTALS		--		--		--		133	6		266		--		--		532			--			--		20
		UNDISTRIBUTED		1		792		15		571	1		1,142		176		7		1,093	5	2	10	10	2	20		--
		TOTALS		1		4,753		89		3,425	7		6,850		1,054		44		6,557			10			20		20

* ADDITIONAL QUANTITIES FOUND ELSEWHERE
** FOR INFORMATION ONLY

3

TRAFFIC CONTROL (DETOUR)

CATEGORY	STAGE	LOCATION	DURATION DAYS	643.0300* TRAFFIC CONTROL DRUMS EACH**	643.0300* TRAFFIC CONTROL DRUMS DAYS	643.0420* TRAFFIC CONTROL BARRICADES TYPE III EACH**	643.0420* TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH**	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH**	643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0800* TRAFFIC CONTROL ARROW BOARDS EACH**	643.0800* TRAFFIC CONTROL ARROW BOARDS DAYS	643.0910* TRAFFIC CONTROL COVERING SIGNS TYPE I NUMBER OF SIGNS	643.0910* TRAFFIC CONTROL COVERING SIGNS TYPE I NUMBER OF CYCLES	643.0910* TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II NUMBER OF SIGNS	643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II NUMBER OF CYCLES	643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH**	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS	643.2000 TRAFFIC CONTROL DETOUR 1060-33-73 EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH**	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS
1000	1																								
		USH 45 NB	2	107	214	5	10	10	20	55	110	4	8	--	--	--	--	--	--	3	6	--	76	152
		WISCONSIN AVENUE ENTRANCE RAMP		15	30	5	10	10	20		--		--	--	--	--	--	--	--	--	--	--	9	18
		WATERTOWN PLANK RD ENTRANCE RAMP		32	64	10	20	20	40		--		--	--	--	--	--	--	--	--	--	--	7	14
		USH 45 SB	2	117	234	6	12	12	24	55	110	4	8	--	--	--	--	--	--	2	4	--	75	150
		NORTH AVENUE ENTRANCE RAMP		38	76	7	14	14	28		--		--	--	--	--	--	--	--	--	--	--	11	22
		STAGE 1 SUBTOTALS			618		66		132		220		16			0			0		10	0		356
1000	2																								
		USH 45 NB	2	117	234	6	12	12	24	55	110	4	8	--	--	--	--	--	--	3	6	--	76	152
		WISCONSIN AVENUE ENTRANCE RAMP		15	30	5	10	10	20		--		--	--	--	--	--	--	--	--	--	--	9	18
		WATERTOWN PLANK RD ENTRANCE RAMP		32	64	10	20	20	40		--		--	--	--	--	--	--	--	--	--	--	7	14
		USH 45 SB	2	117	234	6	12	12	24	55	110	4	8	--	--	--	--	--	--	2	4	--	75	150
		NORTH AVENUE ENTRANCE RAMP		38	76	7	14	14	28		--		--	--	--	--	--	--	--	--	--	--	11	22
		SWAN BOULEVARD	37		--		--		--		--		--	--	--	--	--	--	--	2	74	--	75	2,775
		STAGE 2 SUBTOTALS			638		68		136		220		16			0			0		84	0		3,131
		UNDISTRIBUTED			251		27		54		88		6	5	2	10	10	2	20		19	1		697
		TOTALS			1,507		161		322		528		38			10			20		113	1		4,184

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

** FOR INFORMATION ONLY

TRAFFIC CONTROL PAVEMENT MARKING

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	646.0600 REMOVING PAVEMENT MARKINGS LF	646.0106* PAVEMENT MARKING EPOXY 4-INCH DASHED WHITE LF	DOT PATTERN WHITE LF	WHITE LF	YELLOW LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE LF	YELLOW LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH DOT PATTERN WHITE LF	WHITE LF	649.2100 TEMPORARY RAISED PAVEMENT MARKERS WHITE EACH	YELLOW EACH
1000	1	USH 45 NB	340NS+23		377NS+16	--	--	325	--	3,325	--	--	--	--	--	--
			377NS+16		387NS+00	1,420	--	--	--	--	2670	985	75	220	--	--
			387NS+00		400NS+22	--	--	215	--	1,435	--	--	--	--	--	--
											--	--	--	--	--	--
		USH 45 SB	346NS+94		377NS+90	--	2,650	1,455	150	--	--	--	--	--	--	--
			377NS+97		388NS+50	1,360	--	--	--	--	2945	1060	--	60	42	21
			388NS+50		401NS+00	--	1,250	625	--	--	--	--	--	--	--	--
		STAGE 1 SUBTOTALS				2,780	3,900	2,620	150	4,760	5,615	2,045	75	280	42	21
	2	NB ENTRANCE RAMP				200	310	155	--	--	--	--	--	--	--	--
		STAGE 2 SUBTOTALS				200	310	155	--	--	--	--	--	--	--	--
		UNDISTRIBUTED				596		2379				1527		70		10
		TOTALS				3,576		14,274				9,187		425		73

DASHED WHITE = 12.5-FT DASH, 37.5-FT SKIP
DOT PATTERN WHITE = 3-FT LINE, 9-FT SKIP
* ADDITIONAL QUANTITIES FOUND ELSEWHERE

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	STAGE	LOCATION	SIGN NO.	NUMBER REQUIRED	SIGN SIZE W X H FT X FT	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	SIGN MESSAGE
1000	2	WATERTOWN PLANK ROAD	101	1	5.0 X 3.0	15.00	SWAN BLVD CLOSED AHEAD USE ALT ROUTE
	2	WATERTOWN PLANK ROAD	102	1	5.0 X 4.5	22.50	RIGHT TURN 45 NORTH ONLY
	2	WATERTOWN PLANK ROAD	103	1	5.0 X 4.5	22.50	LEFT TURN 45 NORTH ONLY
	2	VARIOUS	901	32	4.0 X 1.0	128.00	SWAN BLVD
	2	USH 45 NB	902	2	8.5 X 2.0	34.00	SWAN BLVD
		SUBTOTAL				222.00	
		UNDISTRIBUTED				55.00	
		TOTALS				277.00	

TEMPORARY CONCRETE BARRIER ITEMS

CATEGORY	STAGE	LOCATION	STATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	SPV.0090.0017 CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE LF
1000	1	SWAN BLVD	287BVX+24 - 288BVX+73, LT	150.0	150.0	1	--
		USH 45 NB	379NS+25 - 385NS+00, RT	575.0	575.0	1	--
			380NS+26 - 384NS+01, RT	375.0	375.0	1	--
		USH 45 SB	381NS+00 - 385NS+49, LT	450.0	450.0	1	--
		STAGE 1 SUBTOTALS		1,550.0	1,550.0	4	0
1000	2	USH 45 NB	380NS+92 - 383NS+42, RT	--	250.0	--	250.0
			381NS+41 - 383NS+16, RT	--	175.0	--	175.0
		USH 45 SB	380NS+92 - 383NS+42, LT	--	250.0	--	250.0
		STAGE 2 SUBTOTALS		0	675	0	675.0
		UNDISTRIBUTED		100.0	100.0	1	--
		TOTALS		1,650.0	2,325.0	5	675.0

ATTENUATOR

CATEGORY	ROADWAY	SPV.0075.0010 TRUCK MOUNTED ATTENUATOR HOUR
1000	VARIOUS	
	UNDISTRIBUTED	150
	TOTALS	150

TRAFFIC CONTROL ITEMS

CATEGORY	ROADWAY	SPV.0060.0015 TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP EACH	SPV.0060.0016 TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE EACH
1000		25	85
	TOTALS	25	85

3

3

TRAFFIC CONTROL COVERING SIGNS LEFT IN PLACE

CATEGORY	STAGE	LOCATION	SPV.0060.0017 TRAFFIC CONTROL COVERING SIGNS TYPE I LEFT IN PLACE EACH	SPV.0060.0018 TRAFFIC CONTROL COVERING SIGNS TYPE II LEFT IN PLACE EACH
1000	2	USH 45 NB AT WISCONSIN AVE	1	0
	2	USH 45 NB EXIT RAMP TO WATERTOWN PLANK RD	1	1
	3	SWAN BOULEVARD SB AT WATERTOWN PLANK RD	0	1
		TOTALS	2	2

FENCE TEMPORARY

CATEGORY	ROADWAY	STATION	616.0600.S LF
1000	SWAN BLVD	184BV+90	200
		187BV+90	250
	UNDISTRIBUTED		100
	TOTALS		550

CONDUIT ITEMS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF
1000	1	SWAN BOULEVARD	167BV+27	55' LT		167BV+27	97' RT	304
		TOTAL						304

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

3

FENCING ITEMS

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	SPV.0090.0016 FENCE TEMPORARY LEFT IN PLACE LF
1000	2	SWAN BOULEVARD					
			380NS+75	100' RT	381NS+37	108' RT	67
			383NS+92	108' RT	384NS+94	115' RT	102
			379NS+80	100' LT	381NS+95	123' LT	228
		SUBTOTALS					397
		TOTALS					397

CLAY CAP

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	SPV.0035.0031 CLAY CAP CY
1000	1	WD	768WD+00		775WD+00	7,446
		TOTAL				7,446

3

MOBILIZATION

CATEGORY	STAGE	LOCATION	619.1000 MOBILIZATION EACH
1000	ALL	PROJECT	1
		TOTAL	1

DUST CONTROL SURFACE TREATMENT

CATEGORY	STAGE	LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT 623.0200 SY
1000	ALL	PROJECT	42,298
		TOTAL	42,298

WATER

CATEGORY	STAGE	LOCATION	624.0100 WATER MGAL
1000	ALL	PROJECT - BASE AGGREGATE	32
		PROJECT - EXCAVATION	272
		TOTAL	304

CPM PROGRESS SCHEDULE

CATEGORY	STAGE	LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH
1000	ALL	PROJECT	1
		TOTAL	1

MOBILIZATION EMERGENCY PAVEMENT REPAIR

CATEGORY	STAGE	LOCATION	SPV.0060.0014 MOBILIZATION EMERGENCY PAVEMENT REPAIR EACH
1000		UNDISTRIBUTED	1
		TOTAL	1

EXPOSING EXISTING UTILITY

CATEGORY	LOCATION	SPV.0060.0020 EXPOSING EXISTING UTILITY EACH
1000	UNDISTRIBUTED	30
	TOTAL	30

SURVEY PROJECT

CATEGORY	STAGE	LOCATION	SPV.0105.0001 SURVEY PROJECT 1060-33-73 LS
1000	ALL	PROJECT	1
		TOTAL	1

PAVEMENT CLEANUP

CATEGORY	STAGE	LOCATION	SPV.0105.0002 PAVEMENT CLEANUP LS
1000	ALL	PROJECT	1
		TOTAL	1

PIPE UNDERDRAIN

CATEGORY	STAGE	LOCATION	BEGIN STATION	CONNECT TO STRUCTURE	OFFSET	SPV.0090.8001 PIPE UNDERDRAIN 6-INCH SPECIAL LF
1000	1	SWAN BOULEVARD				
			166BV+96	B126	LT	132
			166BV+95	B132	RT	70
			167BV+46	B120	RT	72
			167BV+77	B131	RT	13
			167BV+88	B131	RT	52
			168BV+15	B121	RT	26
			168BV+59	B126	LT	62
			169BV+72	B123	RT	127
			170BV+67	B121	RT	218
			171BV+44	B119B	RT	100
			171BV+47	B124	LT	309
			174BV+47	B116	LT	311
			174BV+51	B118	RT	294
			176BV+54	B212	RT	204
			176BV+56	B210	LT	220
			176BV+57	B213	RT	199
			176BV+87	B204A	LT	40
			178BV+10	B204	RT	159
			179BV+07	B206	RT	244
		SUBTOTAL				2,852
	2	SWAN BOULEVARD				
			187BV+60	B304	LT	339
			191BV+81	B304	LT	79
			187BV+60	B306	RT	322
			191BV+81	B306	RT	94
		SUBTOTAL				834
			UNDISTRIBUTED			110
		TOTAL				3,796

CONCRETE PAVEMENT JOINT LAYOUT

CATEGORY	STAGE	LOCATION	SPV.0105.0005 CONCRETE PAVEMENT JOINT LAYOUT LS
1000	ALL	PROJECT	1
		TOTAL	1

EXCAVATION, HAULING, AND REUSE OF SOLID WASTE

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	SPV.0035.0030 EXCAVATION HAULING AND REUSE OF SOLID WASTE SOIL CY
1000	1	SWAN BOULEVARD	166BV+92		185BV+10	34,833
	1	WLC ACCESS ROAD	3XFS+25		18XFN+76	7,335
	1	UNDERWOOD PARKWAY	220UDW+50		226UDW+60	3,792
		TOTAL				45,960

MANAGEMENT OF SOLID WASTE

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	SPV.0195.0010 MANAGEMENT OF SOLID WASTE TON
1000	1	SWAN BOULEVARD				
			171BV+50		173BV+00	2,108
			173BV+30		173BV+60	102
			178BV+00		178BV+40	102
			179BV+05		179BV+45	102
	1	ROUNDABOUT	10RND+00		12RND+76	3,868
	1	WLC ACCESS ROAD	6XFN+85		7XFN+15	478
	1	UNDERWOOD PARKWAY	219UDW+10		219UDW+50	204
		TOTAL				6,963

FTMS PULLBOXES & COMMUNICATION VAULTS

CATEGORY	ROADWAY	EQUIPMENT ID	STATION	OFFSET	653.0135* PULL BOXES STEEL 24 X 36 - INCH EACH	673.0105 COMMUNICATION VAULT TYPE 1 EACH	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
1300	SWAN BOULEVARD						
		CV167BV	167BV+15	75'LT	--	1	--
		CV167BV-1	167BV+24	102'RT	--	1	--
		CV174BV	174BV+13	33'LT	--	1	--
		CV174BV-1	174BV+19	89'RT	--	1	--
		CV177BV	176BV+83	42'LT	--	1	--
		CV184BV	183BV+89	47'LT	--	1	--
		CV188BV	187BV+88	52'LT	--	1	--
		PB188BV	188BV+33	45'LT	1	--	--
		TOTALS			1	7	--
7137	WLC ACCESS RD	PBWLC	17XFN+07	243'LT	1	--	--
		EXCV01	19XFN+49	283'LT	--	--	1
		TOTALS			1	--	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CONDUIT AND TRACER WIRE

CATEGORY	ROADWAY	EQUIPMENT ID	LINEAR DISTANCE	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	671.0112 CONDUIT HDPE 1 DUCT 2-INCH LF	671.0132 CONDUIT HDPE 3 DUCT 2-INCH LF	671.0212 CONDUIT HDPE DIRECTIONAL BORE 1 DUCT 2-INCH LF	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG LF
1300	SWAN BOULEVARD							
		CV167BV - CV167BV-1	180	--	--	185	--	185
		CV167BV - CV174BV	725	--	--	730	--	730
		CV174BV - CV174BV-1	130	--	--	135	--	135
		CV174BV-1 - CV177BV	280	--	--	285	--	285
		CV177BV - PARAPET	15	--	--	20	--	20
		CV188BV - CB-CCTV-40-0145	30	135	--	--	--	35
		CB-CCTV-40-0145 - PB188BV	25	30	--	--	--	30
		PB188BV - MB188BV	85	90	--	--	--	90
		CV177BV - CV184BV	730	--	735	--	--	735
		TOTALS		255	735	1355	--	2245
7137	WLC ACCESS RD	CV184BV - PBWLC	330	--	335	--	--	335
		PBWLC - EXCV01	85	--	--	--	90	90
		TOTALS		--	335	--	90	425

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

FTMS CABLE AND WIRE

CATEGORY	ROADWAY	EQUIPMENT ID	LINEAR DISTANCE	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF
1300	SWAN BOULEVARD				
		CB-CCTV-40-0145 - PB188BV	25	50	150
		PB188BV - MB188BV	85	110	330
		TOTALS		160	480

FTMS CABLE

CATEGORY	ROADWAY	EQUIPMENT ID	LINEAR DISTANCE	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF
1300	SWAN BOULEVARD			
		CV167BV - CV174BV	725	1500
		CV174BV-1 - CV177BV	280	610
		CV177BV - CV188BV	1125	1150
		CV188BV - CB-CCTV-40-0145	30	55
		CV177BV - CV184BV	730	755
		TOTALS		4070
7137	WLC ACCESS RD	CV184BV - PBWLC	330	355
		PBWLC - EXCV01	85	110
		EXCV01 - EXCV02	185	210
		EXCV02 - WLC NETWORK CLOSET	400	425
		TOTALS		1100

3

FTMS ELECTRICAL SERVICE

CATEGORY	ROADWAY	EQUIPMENT ID	STATION	OFFSET	656.0200.0001 ELECTRICAL SERVICE METER BREAKER PEDESTAL (CB-CCTV-40-0145) LS	656.0500.0001 ELECTRICAL SERVICE DISCONNECT BOX (CB-CCTV-40-0145) LS
1300	SWAN BOULEVARD					
		MB188BV	188BV+20	128'LT	1	1
		TOTALS			1	1

FTMS COMMUNICATIONS (CABINETS)

CATEGORY	ROADWAY	EQUIPMENT ID	STATION	OFFSET	675.0400.S INSTALL ETHERNET SWITCH EACH	677.0300.S INSTALL VIDEO ENCODER EACH	678.0400 FIBER OPTIC TERMINATION EACH
1300	SWAN BOULEVARD						
		CB-CCTV-40-0145	188BV+13	57 'LT	1	1	6
		TOTALS			1	1	6

3

FTMS BASES, POLES AND EQUIPMENT

CATEGORY	ROADWAY	EQUIPMENT ID	LOCATION	OFFSET	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	672.0250 BASE CAMERA POLE 50-FT EACH	673.0225.S INSTALL POLE MOUNTED CABINET EACH	677.0100 INSTALL CAMERA POLE EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	SPV.0060.2004 GROUND ROD EACH	SPV.0060.2005 SALVAGE TRAVELER ADVISORY RADIO FLASHER ASSEMBLY EACH	SPV.0060.2015 INSTALL SALVAGED TRAVELER ADVISORY RADIO FLASHER ASSEMBLY EACH	SPV.0060.2016 INSTALL SOLAR POWER SYSTEM ASSEMBLY EACH
1300	SWAN BOULEVARD												
		CB-CCTV-40-0145	188BV+13	57 'LT	1	1	1	1	1	1	--	--	--
		EXHAR01	381NS+43	116 'RT	--	--	--	--	--	--	1	1	--
		EXHAR02	395NS+64	74 'LT	--	--	--	--	--	--	--	--	1
		TOTALS			1	1	1	1	1	1	1	1	1

TEMPORARY ITEMS

CATEGORY	ROADWAY	EQUIPMENT ID	SPV.0060.2018 INSTALLING TEMPORARY VEHICLE DETECTOR ASSEMBLY EACH	SPV.0060.2019 REFOCUSING TEMPORARY VEHICLE DETECTOR ASSEMBLY EACH
1300	USH 45	TMD01	1	1
		UNDISTRIBUTED	--	2
	TOTALS		1	3

FTMS MISC. ITEMS

CATEGORY	ROADWAY	FIELD SYSTEM INTEGRATOR (FTMS) 670.0100.0001 LS	ITS DOCUMENTATION (FTMS) 670.0200.0001 LS	COMMUNICATION SYSTEM TESTING (FTMS) 678.0500.0001 LS
1300				
	SWAN BOULEVARD	1	1	1
	TOTALS	1	1	1

3

ITS REMOVALS

CATEGORY	ROADWAY	EQUIPMENT ID	674.0300 REMOVE CABLE LF
1300	SWAN BOULEVARD		
		EXPB01 - EXPB02	159
		EXPB02 - EXMH01	21
		EXMH01 - EXCB01	5
		EXCB01 - EXPB03	5
		EXPB03 - EXMH01	62
		EXCB01 - EXPB04	171
		EXPB04 - EXPB05	404
		EXPB05 - EXPB06	726
		EXPB06 - EXHAR02	60
		TOTALS	1,613

ITS REMOVALS

CATEGORY	ROADWAY	EQUIPMENT ID	DESCRIPTION	STATION	OFFSET	653.0905* REMOVING PULL BOXES EACH	SPV.0060.2006 REMOVING CONTROLLER CABINET EACH	SPV.0060.2007 REMOVING CONTROLLER CABINET BASE EACH	SPV.0060.2013 REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH	SPV.0060.0025 BURY EXISTING TYPE 1 MANHOLE EACH
1300	SWAN BOULEVARD									
		EXPB01	PULL BOX	382NS+27	74'RT	1	--	--	--	--
		EXPB02	PULL BOX	381NS+97	82'LT	1	--	--	--	--
		EXCB01	CONTROL CABINET	381NS+88	106'LT	--	1	1	--	--
		EXMB01	METER BREAKER	381NS+84	109'LT	--	--	--	1	--
		EXPB03	PULL BOX	381NS+87	101'LT	1	--	--	--	--
		EXMH01	MANHOLE	381NS+26	99'LT	--	--	--	--	1
					TOTALS	3	1	1	1	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

STREETSCAPING ITEMS

CATEGORY	PROJECT NUMBER	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH
6000	1060-33-73	24
	TOTALS	24

BID ITEMS	SYM.	COMMON NAME	PLANTING LAYOUT SHEET NUMBERS 1 EACH	2 EACH	3 EACH	4 EACH	5 EACH	6 EACH	7 EACH	8 EACH	TOTALS EACH
		DECIDUOUS TREES (SHADE)									
632.0101.0001	PE	Elm, Prospector	3	4	3		3	2			15
632.0101.0003	CH	Hackberry, Common	5	2	3		3	2			15
632.0101.0005	SWO	Oak, Swamp White			7				4	5	16
632.0101.0007	LP	Tree, London Plane		1					6	2	9
632.0101.009	TT	Tree, Tulip	3	6	1		5	2			17
		DECIDUOUS TREES (ORNAMENTAL)									
632.0101.011	CC	Crabapple,Camelot		3	2	5			6	17	33
632.0101.013	TCH	Hawthorn, Thornless Cockspur							8	9	17
632.0101.0015	HM	Maple, Hedge							3		3

TYPE I & II PERMANENT SIGNING **REMOVALS** **CATEGORY CODE 1000**

SIGN NO.		SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	REMARKS / NEW SIGN LOCATION
100	W4-1	--	1	1	--
101	--	EMERGENCY VEHICLE ENTRANCE ONLY	1	--	ON LIGHT POLE
102	W1-2R, W13-1	--	2	1	--
103	R2-1	40 MPH	1	--	ON LIGHT POLE
104	W12-2, W10-5, W16-9P	--	3	--	ON LIGHT POLE
105	R5-2, D1-60(MOD)	--	2	2	REMOVE AT LAST STAGE WHEN ROAD CLOSED
106	W5-52	--	1	1	--
107	R7-2R	--	1	--	ON LIGHT POLE
108	R7-2R	--	1	--	ON LIGHT POLE
109	W6-1, W6-2A(MOD)	--	2	--	ON LIGHT POLE
110	W5-52	--	1	1	--
111	R3-2	--	1	1	--
112	R5-1	--	1	1	--
113	R5-1	--	1	--	--
114	R4-7, W5-52	--	2	1	--
115	W4-2R, W9-1R	--	2	--	ON LIGHT POLE
116	R7-2R	--	1	--	ON LIGHT POLE
117	R3-53R	--	1	1	--
118	R1-1	--	1	1	--
119	R1-1	--	1	1	--
120	R1-1	--	1	1	--
121	R7-2	--	1	1	--
122	R2-1	25 MPH	1	1	--
123	R7-2	--	1	1	--
124	R7-2	--	1	1	--
125	R7-2	--	1	1	--
126	R7-2	--	1	1	--
127	R7-2	--	1	1	--
128	R6-2L	--	1	1	--
129	W1-2R	--	1	1	--
130	R7-1D	--	1	1	--
131	R7-1D	--	1	1	--
TOTALS			39	24 *	--

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 1000

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0816 POSTS TUBULAR STEEL 2"x2"X16' [EA]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	MOUNT ON SAME POST AS SIGN #	638.2101 MOVING SIGNS TYPE I [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [LB]	635.0300 SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS [EA]	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT [LB]	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS [EA]	638.3620 ERECTING STATE OWNED SIGNS TYPE II [EA]	638.4100 MOVING STRUCTURAL STEEL SIGN SUPPORTS [EA]	REMARKS NEW SIGN LOCATION
1001	R4-7(2M)	--	24 x 30	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
1002	R5-1(2M)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
1003	R6-3(2M)	--	30 x 24	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
1004	R5-1A(2M)	--	42 x 30	8.75	--	1	--	--	1005	--	--	--	--	--	--	--	--	--	--	--
1005	R3-7R(3)	--	30 x 30	6.25	--	--	--	--	1004	--	--	--	--	--	--	--	--	--	--	--
1006	R3-5R(2M)	--	42 x 48	14.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
1007	R3-5A(2M)	--	42 x 48	14.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
1008	R3-5L(2M)	--	42 x 48	14.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
1009	R3-5L(2M)	--	42 x 48	14.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
1010	R4-5(4)	--	36 x 48	12.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
1011	R3-5L(2M)	--	42 x 48	14.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
1012	J3-1(2M)	--	24 x 57	9.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON STRUCTURE S-40-638
	M4-5	--	24 x 12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	M1-4	USH 45	24 x 24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1013	R3-7R(2M)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1014	D9-2(2M)	--	24 x 24	4.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MB6-1(2M)		21 x 21	3.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1015	R3-20L(2M)	--	24 x 36	6.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1016	J3-1(2M)	--	24 x 57	9.50	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
	M4-5	--	24 x 12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	M1-4	USH 45	24 x 24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1017	R6-2L(2M)	--	30 x 36	7.50	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1018	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
1019	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
1020	R2-1(2M)	40 MPH	30 x 36	7.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1021	R3-20L(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1022	R3-20LL(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1023	R6-2L(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1024	R1-1(2S)	--	30 x 30	5.18	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-3(2S)		30 x 24	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1025	W2-6(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W2-6P(2S)	--	30 x 15	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W13-1(2S)	15 MPH	18 x 18	2.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1026	R5-1(2M)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1027	R5-1(2M)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1028	D1-65	WATERTOWN PLANK RD NEXT SIGNAL	66 x 36	16.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	SEE SEPERATE QTY TABLE FOR POSTS
1029	R3-20LL(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1030	W2-6(2S)	--	30 x 30	6.25	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
	W2-6P(2S)	--	30 x 15	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W13-1(2S)	15 MPH	18 x 18	2.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1031	R3-20L(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1032	W1-1R(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1033	R4-7(2M)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1034	R4-7(2M)	--	24 x 30	5.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1035	R5-1(2M)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1036	R5-1(2M)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1037	R6-2L(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1038	R1-1(2S)	--	30 x 30	5.18	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-3(2S)		30 x 24	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1039	R2-1(2M)	40 MPH	30 x 36	7.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1040	W1-2R(2M)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1041	R2-1(2S)	25 MPH	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1042	R1-1(2S)	--	30 x 30	5.18	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1043	W5-52R(2M)	--	12 x 36	3.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1044	W5-52L(2M)	--	12 x 36	3.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1045	R4-7(3)	--	36 x 48	12.00	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
	W5-56(2M)	--	18 x 18	2.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1046	W5-52R(2M)	--	12 x 36	3.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CONTINUED ON NEXT SHEET

PROJECT NO:1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES- PERMANENT SIGNING	SHEET: 282	E

FILE NAME: J:\projects\D2_10603373\SIGN\Quantities\ PLOT DATE : 1/25/2013 8:47:53 AM PLOT BY : MSCKVW PLOT NAME : 030202_mq PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 1000

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0816 POSTS TUBULAR STEEL 2"x2"X16' [EA]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	MOUNT ON SAME POST AS SIGN #	638.2101 MOVING SIGNS TYPE I [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [LB]	635.0300 SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS [EA]	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT [LB]	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS [EA]	638.3620 ERECTING STATE OWNED SIGNS TYPE II [EA]	638.4100 MOVING STRUCTURAL STEEL SIGN SUPPORTS [EA]	REMARKS NEW SIGN LOCATION
1047	W5-52L(2M)	--	12 x 36	3.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1048	W6-1(2M)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1049	R5-1(2M)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE, SHEET 5
1050	R7-1D(2M)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1051	R7-1D(2M)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1052	W6-1(2M)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1053	R7-1D(2M)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1054	W6-3(2M)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON LIGHT POLE
1055	D1-1	UNDERWOOD PARKWAY W/ARROW	66 x 30	13.75	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1056	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R1-54(2S)	--	24 x 15	2.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1057	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1058	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-2R(2S)	--	24 x 30	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1059	R4-7(2S)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1060	D1-1	WISC LUTHERAN COLLEGE W/ARROW	84 x 30	17.50	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1061	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1062	W3-2(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1063	D1-4	1200 N MAYFAIR, UNDERWOOD PRKWY, UNDERWOOD PRKWY, WIL-O-WAY	78 x 84	45.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	SEE SEPERATE QTY TABLE FOR POSTS
1064	R4-7(2S)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1065	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	1088	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1066	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1067	R5-1(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1068	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R1-54(2S)	--	24 x 15	2.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1069	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-2R(2S)	--	24 x 30	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1070	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1071	R4-7(2S)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1072	W3-2(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1073	D1-3	UNDERWOOD PARKWAY, 1200N MAYFAIR RD, WISC LUTHERAN COLLEGE	78 x 66	35.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	SEE SEPERATE QTY TABLE FOR POSTS
1074	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-2R(2S)	--	24 x 30	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1075	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R1-54(2S)	--	24 x 15	2.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1076	D1-1	1200 N MAYFAIR RD	66 x 30	13.75	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1077	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	1089	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1078	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1079	R6-4B(2S)	--	60 x 24	10.00	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-1R(2S)	--	36 x 12	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1080	R6-4B(2S)	--	60 x 24	10.00	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-1R(2S)	--	36 x 12	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1081	R6-4B(2S)	--	60 x 24	10.00	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-1R(2S)	--	36 x 12	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1082	R6-4B(2S)	--	60 x 24	10.00	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-1R(2S)	--	36 x 12	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1083	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R6-2R(2S)	--	24 x 30	5.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1084	R1-2(2S)	--	36 x 31	3.88	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R1-54(2S)	--	24 x 15	2.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1085	W11-2(2S)	--	30 x 30	6.25	--	1	--	--	1087	--	--	--	--	--	--	--	--	--	--	--
	W16-7L(2S)	--	24 x 12	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1086	D1-1	UNDERWOOD PARKWAY	66 x 30	13.75	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CONTINUED ON NEXT SHEET

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 1000

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0816 POSTS TUBULAR STEEL 2"x2"X16' [EA]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	MOUNT ON SAME POST AS SIGN #	638.2101 MOVING SIGNS TYPE I [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [LB]	635.0300 SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS [EA]	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT [LB]	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS [EA]	638.3620 ERECTING STATE OWNED SIGNS TYPE II [EA]	638.4100 MOVING STRUCTURAL STEEL SIGN SUPPORTS [EA]	REMARKS NEW SIGN LOCATION
1087	R5-1(2S)	--	30 x 30	6.25	--	--	--	--	1085	--	--	--	--	--	--	--	--	--	--	--
1088	R5-1(2S)	--	30 x 30	6.25	--	--	--	--	1065	--	--	--	--	--	--	--	--	--	--	--
1089	R5-1(2S)	--	30 x 30	6.25	--	--	--	--	1077	--	--	--	--	--	--	--	--	--	--	--
1090	R7-1D(2S)	--	18 x 24	3.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1091	W3-2(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1092	D1-3	UNDERWOOD PARKWAY, WISC LUTHERAN COLLEGE, 1200N MAYFAIR RD	78 x 66	35.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	SEE SEPERATE QTY TABLE FOR POSTS
1093	W2-6(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W2-6P(2S)	--	30 x 15	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W13-1(2S)	15 MPH	24 x 24	4.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1094	W2-6(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W2-6P(2S)	--	30 x 15	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	W13-1(2S)	15 MPH	24 x 24	4.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1095	W3-2(2S)	--	36 x 36	9.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1096	R4-7(2S)	--	24 x 30	5.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1097	R7-1D(2S)	--	18 x 24	3.00	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1098	R7-1D(2S)	--	18 x 24	3.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1099	R6-2L(2M)		30 x 36	7.50	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1100	--	TRAFFIC INFO, TUNE RADIO TO 1610 AM, IMPORTANT WHEN FLASHING	-- x --	--	--	--	--	--	--	1	--	--	600	2	2	98	2	--	2	SEE ELECTRICAL PLAN FOR ELECTICAL REQUIREMENTS
1101	D1-4	UNDERWOOD PRKWY, WIL-O-WAY,1200 N MAYFAIR, WI LUTH COLLEGE ATHLETIC FIELDS	78 x 84	45.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	SEE SEPERATE QTY TABLE FOR POSTS
1102	W1-2L(1)	--	24 x 24	4.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	ON SHARED USE PATH
1103	OAK LEAF TRAIL	--	-- x --	--	--	--	2	--	--	--	--	--	--	--	--	--	--	2	--	SIGNS FURNISHED BY MILW CO PARK, INSTALLED BY CONTACTOR
1104	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON TEMPORARY SIGNAL WOOD POST
1105	R4-7	--	-- x --	--	--	--	1	--	1108	--	1	1	--	--	--	--	--	--	--	--
1106	W3-3(2M)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1107	W3-3(2M)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1108	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	1105	--	--	--	--	--	--	--	--	--	--	--
1109	R1-1F(3)	--	36 x 36	--	7.46	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1110	R5-1(2S)	--	30 x 30	6.25	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1111	R5-1(2S)	--	30 x 30	6.25	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1112	W11-2	--	-- x --	--	--	--	1	--	--	--	1	1	--	--	--	--	--	--	--	--
1113	R1-1F(3)	--	36 x 36	--	7.46	--	1	--	1121	--	--	--	--	--	--	--	--	--	--	--
1114	W11-2	--	-- x --	--	--	--	1	--	--	--	1	1	--	--	--	--	--	--	--	--
1115	W11-2	--	-- x --	--	--	--	1	--	1117	--	1	1	--	--	--	--	--	--	--	--
1116	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ON TEMPORARY SIGNAL WOOD POST
1117	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	1115	--	--	--	--	--	--	--	--	--	--	--
1118	W3-3(2M)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1119	R4-7	--	-- x --	--	--	--	--	--	1120	--	1	1	--	--	--	--	--	--	--	--
1120	W11-2	--	-- x --	--	--	--	1	--	--	--	1	1	--	--	--	--	--	--	--	--
1121	R4-7(2M)	--	24 x 30	5.00	--	--	--	--	1113	--	--	--	--	--	--	--	--	--	--	--
1122	W3-3(2M)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1123	R5-2(2M)	--	24 x 24	4.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTALS				1020.89 *	59.68	71	21	3	--	1	6	6 *	600	2	1.6	98	2	2	2	--

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 3 OF 3

PROJECT NO:1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES- PERMANENT SIGNING	SHEET: 284	E

FILE NAME: J:\projects\D2_10603373\SIGN\Quantities\

PLOT DATE : 1/25/2013 8:47:53 AM PLOT BY : MSCKVW PLOT NAME : 030202_mq PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING

NON-PARTICIPATING CATEGORY CODE 8010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	**637.0202** SIGNS REFLC TYPE II [SF]	REMARKS NEW SIGN LOCATION
2001	M1-94H	WATERTOWN PLANK RD	114 x 18	14.25	MOUNT ON SIGNAL MAST ARM
2002	M1-94H	INNOVATION DR/SWAN BLVD	102 x 36	25.50	MOUNT ON SIGNAL MAST ARM
2003	M1-94H	WATERTOWN PLANK RD	114 x 18	14.25	MOUNT ON SIGNAL MAST ARM
2004	M1-94H	SWAN BLVD/INNOVATION DR	102 x 36	25.50	MOUNT ON SIGNAL MAST ARM
	TOTALS			79.50 *	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TYPE I & II PERMANENT SIGNING

NON-PARTICIPATING CATEGORY CODE 8010

SIGN NO.		SIGN MESSAGE	**SPV.0060.7010** CROSSROAD NAME SIGNS SPECIAL SIGN SUPPORTS [EACH]	**SPV.0060.7011** CONCRETE FOUNDATION ADVANCE CROSSROAD NAME SIGNS SPECIAL SIGN SUPPORT [EACH]	REMARKS
1101	D1-3	UNDERWOOD PRKWY, 1200 N, WI LUTH	1	1	SEE SEPARATE QTY TABLE FOR SIGNS
1028	D1-65	WATERTOWN PLANK RD, NEXT SIGNAL	1	1	SEE SEPARATE QTY TABLE FOR SIGNS
1063	D1-3	1200 N, UNDERWOOD PRKWY, UNDERWOOD PRKWY	1	1	SEE SEPARATE QTY TABLE FOR SIGNS
1073	D1-3	UNDERWOOD PRKWY, 1200 N, WI LUTH	1	1	SEE SEPARATE QTY TABLE FOR SIGNS
1092	D1-3	UNDERWOOD PRKWY, WI LUTH, 1200 N	1	1	SEE SEPARATE QTY TABLE FOR SIGNS
	TOTALS		5	5	

3

3

OVERHEAD SIGN SUPPORTS - MISC QUANTITIES	CATEGORY 1000	1060-33-73 SWAN BLVD
LOCATION	OVERHEAD SIGN SUPPORT STRUCTURE S-40-638 L.S. 641.8100.0001	
SWAN BLVD	1	
TOTAL	1	

SHEET 1 OF 1

PROJECT NO: 1060-33-73	HWY: SWAN BLVD	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT QUANTITIES	SHEET 286	E

LIGHTING - REMOVAL

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 204.0195 REMOVING CONCRETE BASES EACH	SPV.0060.1010 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH	SPV.0060.1020 SALVAGING LIGHT POLES, LUMINAIRES AND ARMS EACH	SPV.0060.1023 SALVAGING LUMINAIRES - WAUWATOSA EACH	SPV.0060.1024 SALVAGING LIGHT POLES. ARMS & LUMINAIRES - MILWAUKEE COUNTY EACH	SPV.0060.1030 REMOVING LIGHTING UNIT EACH	SPV.0060.1031 REMOVING ALUMINUM LIGHT POLES AND ARMS EACH	SPV.0060.1032 REMOVING CONCRETE LIGHT POLES AND ARMS EACH	SPV.0105.1006 MAINTENCE OF LIGHTING SYSTEMS - SWAN BLVD. LS
1100	1	--	SYSTEM MAINTENANCE	--	--	--	--	--	--	--	--	1
		CUC8/DUC8	STA. 382NS+37, 0' RT	1	2	--	--	--	1	--	--	--
		MC-1	STA 367NS+75, 423' LT	1	1	--	--	1	--	--	--	--
		MC-2	STA 369NS+18, 338' LT	1	1	--	--	1	--	--	--	--
		MC-3	STA 371NS+20, 344' LT	1	1	--	--	1	--	--	--	--
		MC-4	STA 372NS+61, 295' LT	1	1	--	--	1	--	--	--	--
		WLC-1	STA 18XFN+76.8, 25.6' lt	1	1	1	--	--	--	--	--	--
		WLC-2	STA 18XFN+80.4, 74.4' lt	1	1	1	--	--	--	--	--	--
1100	1		SUBTOTAL	7	8	2	0	4	1	0	0	1
1100	2	8956	STA. 193BV+65.4, 28.42 RT	1	--	--	1	--	--	1	--	--
		8955	STA. 192BV+16.17, 30.41 RT	--	--	--	1	--	--	--	1	--
		8933	STA. 192BV+17.31, 28.02 LT	--	--	--	1	--	--	--	1	--
		8934	STA. 190BV+68.96, 9.35 LT	--	--	--	1	--	--	--	1	--
		8954	STA. 190BV+70.51, 72.46 RT	--	--	--	1	--	--	--	1	--
		8953	STA. 189BV+35.25, 156.44 RT	--	--	--	1	--	--	--	1	--
		8952	STA. 380NS+11.9, 225.21 RT	1	--	--	1	--	--	1	--	--
		8951	STA. 378NS+69.93, 186.58 RT	--	--	--	1	--	--	--	1	--
		8950	STA. 377NS+21.24, 178.50 RT	--	--	--	1	--	--	--	1	--
		8949	STA. 375NS+71.76, 180.85 RT	1	--	--	1	--	--	1	--	--
		8948	STA. 374NS+21.58, 179.47 RT	--	--	--	1	--	--	--	1	--
		8947	STA. 372NS+67.17, 176.39 RT	1	--	--	1	--	--	1	--	--
		8946	STA. 371NS+13.26, 169.57 RT	1	--	--	1	--	--	1	--	--
		8945	STA. 369NS+60.25, 159.06 RT	1	--	--	1	--	--	1	--	--
		8944	STA. 368NS+07.08, 145.49 RT	1	--	--	1	--	--	1	--	--
		8935	STA. 189BV+22.20, 17.68 RT	--	--	--	1	--	--	--	1	--
		8936	STA. 187BV+75.60, 50.89 RT	--	--	--	1	--	--	--	1	--
		8937	STA. 381NS+38.17, 0.91 LT	--	--	--	1	--	--	1	--	--
		8938	STA. 380NS+38.10, 120.85 LT	--	--	--	1	--	--	--	1	--
		8939	STA. 379NS+16.92, 207.40 LT	--	--	--	1	--	--	--	1	--
		8940	STA. 377NS+71.28, 244.36 LT	--	--	--	1	--	--	--	1	--
		8941	STA. 376NS+21.37, 218.04 LT	--	--	--	1	--	--	--	1	--
1100	2		SUBTOTAL	7	0	0	22	0	0	8	14	0
1100			TOTAL	14	8	2	22	4	1	8	14	1

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING AND MISCELLANEOUS - FINAL

CATEGORY	STAGE	DESCRIPTION	LOCATION	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH	653.0222 JUNCTION BOXES 18x12x6 INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 - ALUMINUM EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	** 659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.1060 LUMINAIRE LED EACH	REMARKS
1100	1	JB-UC-1	STA. 383NS+46.6, 2.0' LT	--	--	1	--	--	--	--	--	--	--	
		JB-UC-2	STA. 380NS+87.9, 3.4' LT	--	--	1	--	--	--	--	--	--	--	
		WLC-1	STA. 18XFN+88.5, 56.6' LT	--	--	--	1	126	--	--	--	--	--	SALVAGED POLE
		WLC-2	STA. 18XFN+94.4, 67' RT	--	--	--	1	126	--	--	--	--	--	SALVAGED POLE
		PB-WLC-1	STA. 19XFN+0.3, 3.77' RT	1	--	--	--	--	--	--	--	--	--	
1100	1		SUBTOTAL	1	0	2	2	252	0	0	0	0	0	
1100	2	PB-SB-8	STA. 34WWB+17.5, 69.6' LT	1	--	--	--	--	--	--	--	--	--	
		PB-SB-9	STA. 34WWB+10.1, 87.2' LT	1	--	--	--	--	--	--	--	--	--	
		PB-SB-10	STA. 168BV+32.5, 82.6' RT	--	1	--	--	--	--	--	--	--	--	
		PB-SB-11	STA. 168BV+32.3, 31.4' LT	--	1	--	--	--	--	--	--	--	--	
		SBG1	STA. 168BV+47.5, 31.0' LT	--	--	--	1	126	1	1	1	1	1	
		SBH2	STA. 169BV+81.6, 32.1' LT	--	--	--	1	126	1	1	1	1	1	
		SBG3	STA. 170BV+88.0, 32.9' LT	--	--	--	1	126	1	1	1	1	1	
		SBH4	STA. 172BV+02.7, 31.6' LT	--	--	--	1	126	1	1	1	1	1	
		SBG5	STA. 173BV+03.0, 31.6' LT	--	--	--	1	126	1	1	1	1	1	
		SBH6	STA. 173BV+25.5, 61.4' LT	--	--	--	1	126	1	1	1	1	1	
		PB-SB-13	STA. 173BV+63.8, 71.9' LT	--	1	--	--	--	--	--	--	--	--	
		SBG7	STA. 174BV+48.9, 31.5' LT	--	--	--	1	126	1	1	1	1	1	
		SBH8	STA. 175BV+68.8, 31.7' LT	--	--	--	1	126	1	1	1	1	1	
		SBG9	STA. 176BV+77.8, 32.4' LT	--	--	--	1	126	1	1	1	1	1	
		PB-SB-14	STA. 176BV+84.8, 32.7' LT	1	--	--	--	--	--	--	--	--	--	
		SBH10	STA. 177BV+84.4, SM	--	--	--	--	126	--	1	1	1	1	
		SBG11	STA. 179BV+35.3, SM	--	--	--	--	126	--	1	1	1	1	
		SBH11	STA. 180BV+81.2, SM	--	--	--	--	126	--	1	1	1	1	
		SBG12	STA. 182BV+26.9, SM	--	--	--	--	126	--	1	1	1	1	
		SBH12	STA. 183BV+72.8, SM	--	--	--	--	126	--	1	1	1	1	
		SBH1	STA. 168BV+47.5, 82.6' RT	--	--	--	1	126	1	1	1	1	1	
		SBG2	STA. 169BV+62.7, 82.8' RT	--	--	--	1	126	1	1	1	1	1	
		SBH3	STA. 170BV+85.3, 81.4' RT	--	--	--	1	126	1	1	1	1	1	
		SBG4	STA. 172BV+07.1, 79.8' RT	--	--	--	1	126	1	1	1	1	1	
		SBH5	STA. 173BV+20.5, 77.9' RT	--	--	--	1	126	1	1	1	1	1	
		PB-SB-12	STA. 173BV+59.7, 111.9' RT	--	1	--	--	--	--	--	--	--	--	
		SBG6	STA. 174BV+11.2, 97.8' RT	--	--	--	1	126	1	1	1	1	1	
		SBH7	STA. 174BV+53.5, 75.2' RT	--	--	--	1	126	1	1	1	1	1	
		SBG8	STA. 175BV+69.2, 72.4' RT	--	--	--	1	126	1	1	1	1	1	
		SBH9	STA. 176BV+85.2, 69.5' RT	--	--	--	1	126	1	1	1	1	1	
		SBG10	STA. 178BV+10.9, 65.6' RT	--	--	--	1	126	1	1	1	1	1	
		PB-SB-15	STA. 179BV+0.6, 63.1' RT	1	--	--	--	--	--	--	--	--	--	
		SBG13	STA. 179BV+85.6, SM	--	--	--	--	126	--	1	1	1	1	
		SBH13	STA. 181BV+42.9, SM	--	--	--	--	126	--	1	1	1	1	
		SBG14	STA. 182BV+99.1, SM	--	--	--	--	126	--	1	1	1	1	

LIGHTING AND MISCELLANEOUS - FINAL

CATEGORY	STAGE	DESCRIPTION	LOCATION	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH	653.0222 JUNCTION BOXES 18x12x6 INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 - ALUMINUM EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	** 659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.1060 LUMINAIRE LED EACH	REMARKS
1100	2	SBH14	STA. 184BV+53.8, SM	--	--	--	--	126	--	1	1	1	1	
		SBG15	STA. 185BV+63.2, SM	--	--	--	--	126	--	1	1	1	1	
		SBH15	STA. 186BV+92.6, SM	--	--	--	--	126	--	1	1	1	1	
		PB-SB-16	STA. 187BV+94.2, 41.9' RT	1	--	--	--	--	--	--	--	--	--	
		SBG16	STA. 188BV+19.0, 41.9' RT	--	--	--	1	126	1	1	1	1	1	
		SBH16	STA. 189BV+09.5, 41.5' RT	--	--	--	1	126	1	1	1	1	1	
		SBG17	STA. 189BV+99.6, 41.2' RT	--	--	--	1	126	1	1	1	1	1	
		SBH17	STA. 191BV+01.6, 38.0' RT	--	--	--	1	126	1	1	1	1	1	
		SBG18	STA. 192BV+02.8, 37.9' RT	--	--	--	1	126	1	1	1	1	1	
		SBH18	STA. 193BV+03.4, 33.5' RT	--	--	--	1	126	1	1	1	1	1	
1100	2		SUBTOTAL	5	4	0	25	4536	25	36	36	36	36	
1100			TOTAL	6	4	2	27	4788	25	36	36	36	36	

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING - WIRE AND CONDUIT - FINAL

CAT.	STAGE	FROM	TO	652.0125 CONDUIT RIGID METALLIC SCHEDULE 40 2 -INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	655.0146 CABLE IN DUCT 4-6 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG LF	REMARKS
1100	1	JB-UC-1	JB-UC-2	275	__	--	--	564	282	MOUNTED INSIDE BARRIER
		PB-WLC-1	WLC-2	--	25	--	--	96	--	
1100	1		SUBTOTAL	275	25	0	0	660	282	
1100	2	DIST CENTER SB	PB-SB-8	--	--	17	--	--	--	EMPTY, SEE NOTE 2
		DIST CENTER SB	PB-SB-8	--	--	17	--	--	--	EMPTY, SEE NOTE 2
		DIST CENTER SB	PB-SB-8	--	--	17	--	--	--	EMPTY, SEE NOTE 2
		DIST CENTER SB	CAPPED	--	20	--	--	--	--	FOR 1060-33-72 TEMP LTG
		DIST CENTER SB	PB-SB-9	--	--	17	--	192	--	
		PB-SB-9	PB-SB-10	--	96	--	--	824	--	
		PB-SB-10	PB-SB-11	--	109	--	--	464	--	
		PB-SB-11	SBG1	--	17	--	--	96	--	
		SBG1	SBH2	--	--	--	148	--	--	
		SBH2	SBG3	--	--	--	122	--	--	
		SBG3	SBH4	--	--	--	130	--	--	
		SBH4	SBG5	--	--	--	116	--	--	
		SBG5	SBH6	--	--	--	55	--	--	
		SBH6	PB-SB-13	--	47	--	--	216	--	
		PB-SB-13	SBG7	--	112	--	--	476	--	
		SBG7	SBH8	--	--	--	136	--	--	
		SBH8	SBG9	--	--	--	127	--	--	
		SBG9	PB-SB-14	--	13	--	--	80	--	
		PB-SB-14	SBH10	--	10	--	--	68	--	
		PB-SB-14	SBH10	--	SM	--	--	468	--	
		SBH10	SBG11	--	SM	--	--	608	--	
		SBG11	SBH11	--	SM	--	--	648	--	
		SBH11	SBG12	--	SM	--	--	648	--	
		SBG12	SBH12	--	SM	--	--	486	--	
		PB-SB-10	SBH1	--	20	--	--	108	--	
		SBH1	SBG2	--	--	--	128	--	--	
		SBG2	SBH3	--	--	--	129	--	--	
		SBH3	SBG4	--	--	--	129	--	--	
		SBG4	SBH5	--	--	--	121	--	--	
		SBH5	PB-SB-12	--	63	--	--	280	--	
		PB-SB-12	SBG6	--	50	--	--	228	--	
		SBG6	SBH7	--	--	--	72	--	--	
		SBH7	SBG8	--	--	--	124	--	--	
		SBG8	SBH9	--	--	--	129	--	--	
		SBH9	SBG10	--	--	--	133	--	--	

LIGHTING - WIRE AND CONDUIT - FINAL

CAT.	STAGE	FROM	TO	652.0125 CONDUIT RIGID METALLIC SCHEDULE 40 2 -INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	655.0146 CABLE IN DUCT 4-6 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG LF	REMARKS
1100	2	SBG10	PB-SB-15	--	92	--	--	396	--	
		PB-SB-15	SBG13	--	10	--	--	68	--	
		PB-SB-15	SBG13	--	SM	--	--	352	--	
		SBG13	SBH13	--	SM	--	--	644	--	
		SBH13	SBG14	--	SM	--	--	644	--	
		SBG14	SBH14	--	SM	--	--	648	--	
		SBH14	SBG15	--	SM	--	--	488	--	ON BRIDGE
		SBG15	SBH15	--	SM	--	--	548	--	ON BRIDGE
		SBH15	PB-SB-16	--	SM	--	--	288	--	
		SBH15	PB-SB-16	--	40	--	--	188	--	
		PB-SB-16	SBG16	--	30	--	--	148	--	
		SBG16	SBH16	--	--	--	104	--	--	
		SBH16	SBG17	--	--	--	103	--	--	
		SBG17	SBH17	--	--	--	114	--	--	
		SBH17	SBG18	--	--	--	114	--	--	
		SBG18	SBH18	--	--	--	114	--	--	
		SBH18	STUB	--	15	--	--	--	--	
1100	2		SUBTOTAL	0	744	68	2348	10302	0	
1100	2		TOTAL	275	769	68	2348	10962	282	

NOTES

1. SM = CONDUIT STRUCTURE MOUNTED AND PROVIDED AS PART OF A STRUCTURE BID ITEM. SEE STRUCTURAL DRAWINGS.
2. MULTIPLE ENTRIES IN TABLE IF MULTIPLE CONDUITS BETWEEN THE "FROM" AND "TO" ITEMS.

3

LIGHTING -DISTRIBUTION CENTERS

CATEGORY	STAGE	DESCRIPTION	LOCATION	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	656.0400 ELECTRICAL SERVICE MAIN LUGS ONLY METER PEDESTAL - SB LS	** 659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.1120 DISTRIBUTION CENTER LIGHTING - WAUWATOSA EACH	REMARKS
1100	2	SB	34WWB+12.6, 79.5' LT	1	1	1	1	NOTE 1, 200A, 240/480V. 1 PHASE
1100	2		TOTAL	1	1	1	1	

** = ADDITIONAL ITEMS SHOWN ELSEWHERE

NOTES

1. CIRCUITS TO RESEARCH PARK AND WATERTOWN PLANK ROAD CONNECTED UNDER FUTURE CONTRACT 1060-33-72

WATERTOWN PLANK ROAD & SWAN BOULEVARD/INNOVATION DRIVE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF
PB10	PB11		182
PB11	PB12		150
PB12	PB13		76
PB13	PB14		38
PB10	SB12	7	
PB11	SB13	13	
PB12	SB14		15
PB13	SB15		5
	*** TOTALS	20	466

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S EACH
PB10	1
*** TOTAL	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB11	167BV+54.1	31.0' LT	1
PB12	167BV+54.1	44.0' RT	1
PB13	167BV+54.1	82.0' RT	1
PB14	167BV+39.2	93.5' RT	1
		*** TOTAL	4

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	SPV.0060.3002 CONCRETE BASES TYPE 10, CONTRACTOR SUPPLIED ANCHOR BOLTS & ANCHOR ROD TEMPLATE EACH
SB12	166BV+97.5	80.5' LT	1	
SB13	167BV+41.3	33.0' LT	1	
SB14	167BV+39.6	44.0' RT		1
SB15	167BV+49.7	83.5' RT		1
		*** TOTALS	2	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES AND POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	SPV.0060.3001 POLES TYPE 10 EACH
SB12	1	1		
SB13	1		1	
SB14				1
SB15				1
*** TOTALS	2	1	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WATERTOWN PLANK ROAD & DISCOVERY PARKWAY

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY

LOCATION	661.0200.0001 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS
W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY	1
TOTAL	1

TEMPORARY EVP SYSTEM
W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY

LOCATION	SPV.0105.3001 TEMPORARY EVP SYSTEM LS
W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY	1
TOTAL	1

PAGE 1 OF 1

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1060-33-23	4.01	
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

LOCAL ROADS

(GLENVIEW AVENUE/WATERTOWN PLANK ROAD/SWAN BOULEVARD)

LOCAL ROADS — MILWAUKEE CO.

CONSTRUCTION PROJECT NUMBERS
1060-33-71 1060-33-72 1060-33-73

CONVENTIONAL ABBREVIATIONS

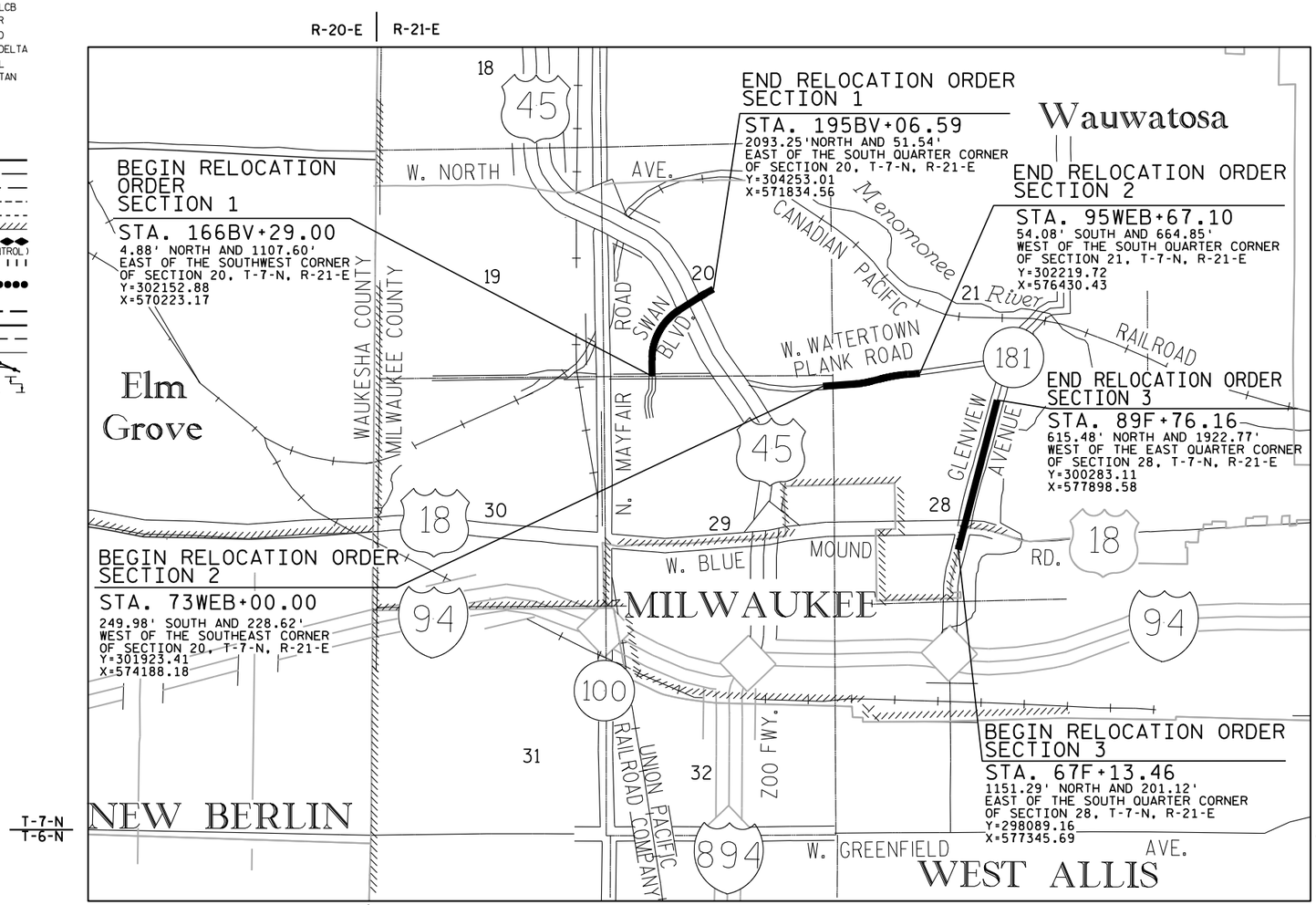
ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
BUILDING	B	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.	**CURVE DATA**	
EASEMENT	EASE.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
IMAGE	I	RADIUS	R
LAND CONTRACT	LC	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	(100')		
REEL	R		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS RESTRICTED (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		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		



NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4 " REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS.

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

THE HIGH ACCURACY REFERENCE NETWORK (HARN) POINTS USED ON PROJECT WERE:
1) MILWAUKEE GPS
2) WAUWATOSA W. GPS

N

LAYOUT
SCALE 0 0.5 MI. 1 MI.

TOTAL NET LENGTH OF REFERENCE LINES = 1.460 MI.

ORIGINAL PLAT PREPARED BY:
KURT E. KRUGER S-1946 CASCADE, WI
WISCONSIN LAND SURVEYOR
August 26,2011

REVISION DATE
FEB. 16, 2012
MAY 4, 2012
AUG. 17, 2012

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT
DATE: August 26,2011 (Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

* DENOTES AREA COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAININ ACRES	TLE ACRES	PLE ACRES	PARCEL NUMBER
1060-33-23	1(3)	4.07	MILWAUKEE COUNTY	FEE, TLE	8.156	6.192		6.192	1.964	1.964		1(3)
1060-33-23	2(3)	4.06	MILWAUKEE COUNTY	FEE,TLE	37.695	8.288		8.288	29.407	5.502		2(3)
1060-33-23	3(2)	4.07	WISCONSIN LUTHERAN COLLEGE INC.	FEE, TLE	26.857	0.728		0.728	26.129	1.012		3(2)
1060-33-23	4(3)	4.07	MILWAUKEE COUNTY	FEE, TLE	52.607	0.048		0.048	52.559	0.096		4(3)
1060-33-23	5(2)	4.07	WISCONSIN DEPARTMENT OF NATURAL RESOURCES	FEE, TLE	67.292	0.283		0.283	67.009	0.155		5(2)
1060-33-23	6(4)	4.07	UWM INNOVATION PARK LLC	TLE	85.643				85.643	0.055		6(4)
1060-33-23	7(4)	4.11	JENNINGS & 84 BLUEMOUND, LLC	FEE,TLE	1.806*	0.011		0.011	1.795	0.030		7(4)
1060-33-23	8(3)	4.11	WISCONSIN LUTHERAN HIGH SCHOOL CONFERENCE	FEE,TLE	11.494	0.005		0.005	11.489	0.048		8(3)
1060-33-23	9(3)	4.11	82 BLUE, LLP	FEE,TLE	2.988	0.012		0.012	2.976	0.064		9(3)
1060-33-23	10(3)	4.11	SNC PROPERTIES, LLC	FEE,TLE	0.449	0.003		0.003	0.446	0.045		10(3)
1060-33-23	11(4)	4.11	MILWAUKEE COUNTY	PLE,TLE	VAST				VAST	0.011	0.054	11(4)
1060-33-23	12(3)	4.11	CALVARY ASSEMBLY OF GOD	FEE,TLE	1.269	0.054		0.054	1.215	0.055		12(3)
1060-33-23	13(3)	4.12	JEFFREY M. & MARY M. SCHICKER	TLE	0.193				0.193	0.008		13(3)
1060-33-23	14(3)	4.12	ANDREW & SUSAN H. SECRIST	TLE	0.193				0.193	0.014		14(3)
1060-33-23	15(3)	4.12	RICHARD J. & CAROL C. MEYER	TLE	0.226				0.226	0.024		15(3)
1060-33-23	16(3)	4.12	ROBERT C. & PATRICIA K. SCHULZ	TLE	0.188				0.188	0.010		16(3)
1060-33-23	17(3)	4.12	DANIEL L. & MARY L. WOEHRER	TLE	0.193				0.193	0.007		17(3)
1060-33-23	18(3)	4.12	CLIFFORD R. & SARA J. KASDORF	TLE	0.193				0.193	0.004		18(3)
1060-33-23	19(3)	4.12	MICHAEL & JACQUELINE PHILLIPS	TLE	0.368				0.368	0.005		19(3)
1060-33-23	20(4)	4.08,4.09,4.10	MILWAUKEE COUNTY	FEE,PLE,TLE	224.870	0.050		0.050	224.820	2.996	0.241	20(4)
1060-33-23	21(4)	4.08,4.09,4.10	MILWAUKEE COUNTY	FEE, PLE, TLE	VAST	1.455		1.455	VAST	2.391	0.114	21(4)
1060-33-23	22(3)	4.12	JERE A. & LINDA M. TRUDEAU	TLE	0.204				0.204	0.007		22(3)
1060-33-23	500(3)	4.06 - 4.11	WE ENERGIES - ELECTRIC	ROR								500(3)
1060-33-23	501(3)	4.06,4.07, 4.09	WE ENERGIES - GAS	ROR								501(3)
1060-33-23	502(3)	4.06,4.08 - 4.10	WE ENERGIES - STEAM	ROR								502(3)
1060-33-23	504(3)	4.07 - 4.11	AT&T WISCONSIN	ROR								504(3)
1060-33-23	506(3)	4.06,4.08 - 4.12	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT	MEMORANDUM OF UNDERSTANDING								506(3)
1060-33-23	507(3)	4.06,4.08,4.10	TIME WARNER CABLE	ROR								507(3)
1060-33-23	531(3)	4.11	CITY OF WAUWATOSA	ROR								531(3)
1060-33-23	532(3)	4.11	CITY OF WAUWATOSA WATER UTILITY	ROR								532(3)
1060-33-23	543(3)	4.08 - 4.09	MILWAUKEE COUNTY - ELEC/COM	ROR								543(3)
1060-33-23	UA631(3)	4.11,4.12	CITY OF WAUWATOSA	UTILITY AGREEMENT								UA631(3)
1060-33-23	UA632(3)	4.06,4.11,4.12	CITY OF WAUWATOSA WATER UTILITY	UTILITY AGREEMENT								UA632(3)
1060-33-23	UA641(3)	4.11	CITY OF MILWAUKEE - SEWER	UTILITY AGREEMENT								UA641(3)
1060-33-23	UA642(3)	4.11	CITY OF MILWAUKEE - WATER	UTILITY AGREEMENT								UA642(3)
1060-33-23	UA643(3)	4.11	CITY OF MILWAUKEE - CABLE	UTILITY AGREEMENT								UA643(3)
1060-33-23	UA644(3)	4.11	CITY OF MILWAUKEE - CONDUIT	UTILITY AGREEMENT								UA644(3)

4

4

REVISION DATE
FEB. 16, 2012
MAY 4, 2012
AUG. 17, 2012

DATE AUG. 26, 2011

HWY: LOCAL ROADS

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-23

CONSTRUCTION PROJECT NUMBER 1060-33-71
1060-33-73

PLAT SHEET 4.02

PS&E SHEET

E

R-21-E

SECTION 20

END RELOCATION ORDER
SECTION 1
STA. 195BV+06.59

198BV

SWAN BOULEVARD

SECTION 21

N

NE-SE

UNION PACIFIC

UNDERWOOD CREEK

NW-SW

SHEET 4.07

④ ⑤

NE-SW

NW-SE

NE-SE

NW-SW

NE-SW

190BV

③ ⑥

① 180BV

Milwaukee County Grounds

BEGIN RELOCATION ORDER
SECTION 1
STA. 166BV+29.00

4

4

MATCHLINE

USH 45

CITY

SW-SW

SE-SW

SW-SE

SE-SE

SHEET 4.08

END RELOCATION ORDER
SECTION 2
STA. 95WEB+67.10

SE-SW

SW-SW

STH 100

UNDERWOOD PARKWAY

② 170BV

T-7-N

T-7-N

20WEB

30WEB

166BV

40WEB

W. WATERTOWN PLANK ROAD

50WEB

60WEB

70WEB

80WEB

90WEB

10TPN

N. 87TH ST

SHEET 4.06

OF

21

20

SHEET 4.10

10TH

N. 92ND ST

SHEET 4.09

NW-NW

NE-NW

RAILROAD

N. MAYFAIR ROAD

160NV

W. INNOVATION DR.

NE-NE

NW-NW

NE-NW

NW-NE

NE-NE

Milwaukee County Research Park

BEGIN RELOCATION ORDER
SECTION 2
STA. 73WEB+00.00

Medical Center

WAUWATOSA

W. POTTER ROAD

W. RESEARCH DRIVE

SE-NE

SW-NW

SE-NW

SW-NE

SE-NE

SW-NW

SE-NW

COMPANY

W. WISCONSIN AVENUE

SECTION 29

CITY OF MILWAUKEE

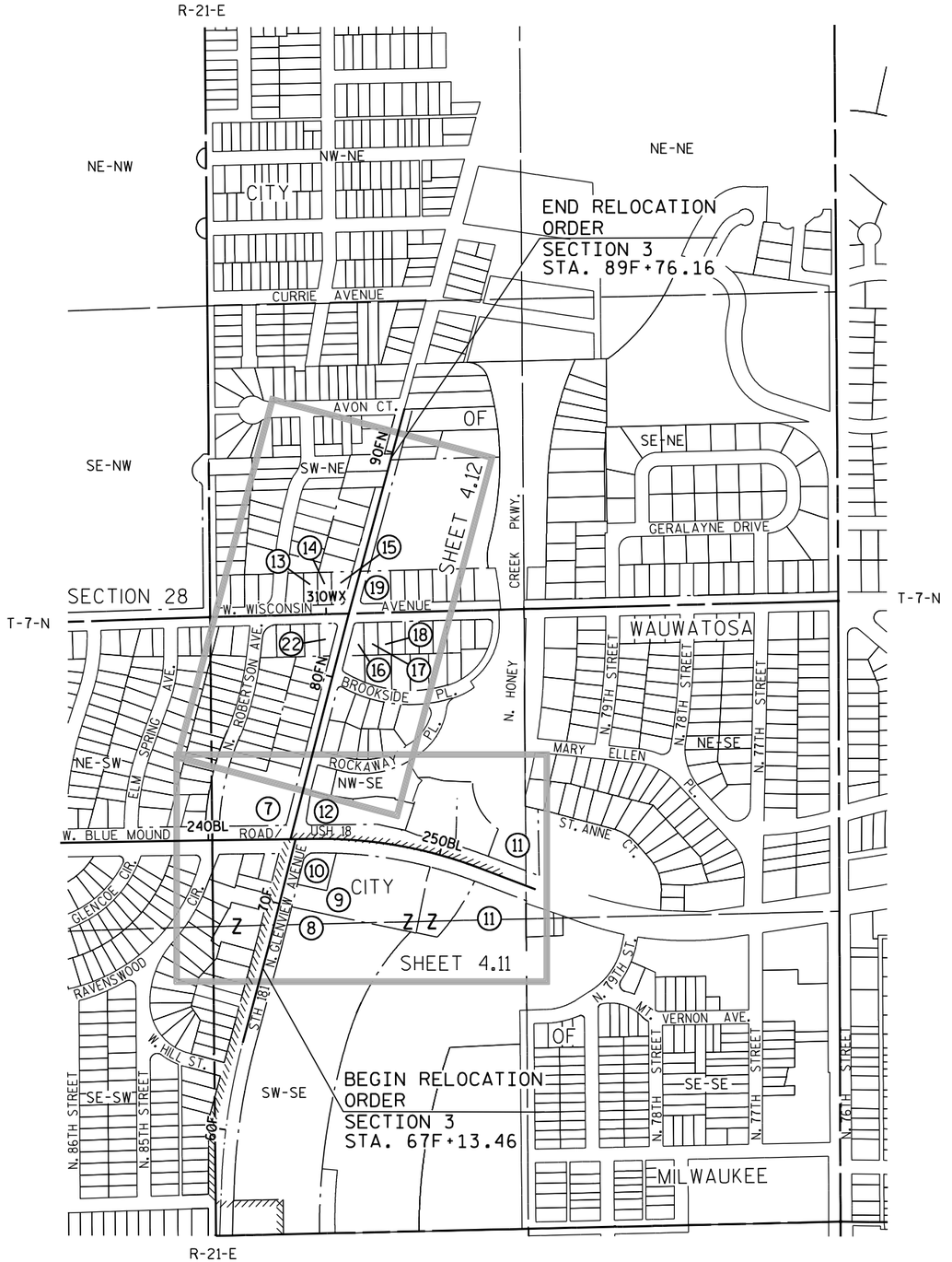
SECTION 28

R-21-E

SHEET 4.03 OMITTED

REVISION DATE	DATE		HWY:LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.04	
FEB. 16, 2012 MAY 4, 2012 AUG. 17, 2012	AUG 26, 2011	NOT TO SCALE	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-73 1060-33-72	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-23 (Local Rds)\cds\040404_RL.dgn PLOT DATE : 17-AUG-2012 10:35 PLOT BY : MSCGRS PLOT NAME : PLOT SCALE : 600:1



REVISION DATE	DATE MAY 4, 2012	NOT TO SCALE	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.05	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-71	PS&E SHEET	E

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

SWAN BOULEVARD REFERENCE LINE IS THE INSIDE EDGE OF SOUTHBOUND LANE.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

(500) WE ENERGIES - ELECTRIC
PARCEL 2 - DOC. NO. 8763938
PARCEL 2 - DOC. NO. 3845014
PARCEL 2 - (NO RECORD OF EASEMENT)

(501) WE ENERGIES - GAS
PARCEL 2 - DOC. NO. 3814196

(502) WE ENERGIES - STEAM
PARCEL 2 - DOC. NO. 7298264

(506) MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

(507) TIME WARNER CABLE
PARCEL 2 - (NO RECORD OF EASEMENT)

UA632 WAUWATOSA WATER UTILITY

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 45	1100-1-23 U03-1(75)	1969	VARIES
USH 45	CSM 7371	2004	VARIES
WATERTOWN PLANK RD	CT-03-1(73)	1967	VARIES
WATERTOWN PLANK RD	O.C. DOC. 3745778	1959	55' SOUTH

SIGN	OWNER	DOCUMENT NO.
2-1	WISCONSIN LUTHERAN COLLEGE, INC.	9145403

CURVE 1
PI STA. 177BV+54.31
Y : 303278.19
X : 570219.75
DELTA = 57°34'25"
D = 3°57'05"
T = 796.71'
L = 1457.03
R = 1450.00

CURVE 2
PI STA. 370NS+41.48
Y : 302749.78
X : 571636.09
DELTA = 7°49'18"
D = 0°57'03"
T = 411.88'
L = 822.49
R = 6025.00

CURVE 3
PI STA. 221UD+24.51
Y : 302881.46
X : 569603.70
DELTA = 96°10'23"
D = 26°38'57"
T = 239.51'
L = 360.88
R = 215.00

REVISION DATE MAY 4, 2012	DATE FEB. 16, 2012	SCALE, FEET 0 100 200	HWY:	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.06
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-73	PS&E SHEET E

RL SWAN BOULEVARD
PI STA. 177+54.31
Y : 303278.19
X : 570219.75
DELTA = 57°34'25"
D = 3°57'05"
T = 796.71'
L = 1457.03
R = 1450.00

RL SWAN BOULEVARD
PI STA.194+70.53
Y : 304248.64
X : 571796.81
DELTA = 13°30'42"
D = 4°24'27"
T = 154.00'
L = 306.57
R = 1300.00

RL SWAN BOULEVARD
PI STA. 190+68.72
Y : 304059.81
X : 571441.99
DELTA = 4°34'38"
D = 2°02'47"
T = 111.90'
L = 223.68
R = 2800.00

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 45	1100-1-23 U03-1(75)	1969	VARIES
USH 45	CSM 7371	2004	VARIES
SWAN BLVD	CSM 8330	2010	60' SOUTH
SWAN BLVD	CSM 7634	2005	VARIES
SWAN BLVD	CT-03-1(75)	1967	80'

(500) WE ENERGIES - ELECTRIC
PARCEL 1 - DOC. NO. 8763938
PARCEL 3 - DOC. NO. 8763938
PARCEL 3 - DOC. NO. 3845014
PARCEL 4 - DOC. NO. 3845014
PARCEL 4 - (NO RECORD OF EASEMENT)
PARCEL 5 - DOC. NO. 3845014
PARCEL 6 - DOC. NO. 9332979

(501) WE ENERGIES - GAS
PARCEL 1 - DOC. NO. 3814196
PARCEL 1 - (NO RECORD OF EASEMENT)

(504) AT&T WISCONSIN
PARCEL 1 - (NO RECORD OF EASEMENT)
PARCEL 4 - DOC. NO. 3575475
PARCEL 5 - DOC. NO. 3575475

C4
L = 420.14'
R = 1345.00'
LC = 418.43'
LCB = S29°06'18"W

C5
L = 113.00
R = 803.94
LC = 112.90
LCB = S48°41'15"W

C6
L = 204.62
R = 1355.00
LC = 204.43
LCB = S42°22'48"W

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS

SWAN BOULEVARD REFERENCE LINE IS THE INSIDE EDGE OF SOUTHBOUND LANE.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE	DATE AUG. 26, 2011	SCALE, FEET 0 100 200	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.07	
FEB. 16, 2012 MAY 4, 2012 AUG. 17, 2012			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-73	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-23 (Local Rds)\cds\040407_RP.dgn PLOT DATE : 17-AUG-2012 13:14 PLOT BY : MSCGRS PLOT NAME : PLOT SCALE : 200:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
WATERTOWN PLANK RD.	O.C. DOC. 5557424	1982	120'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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

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W. WATERTOWN PLANK ROAD REFERENCE LINE IS THE INSIDE EDGE OF EASTBOUND LANE.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

4

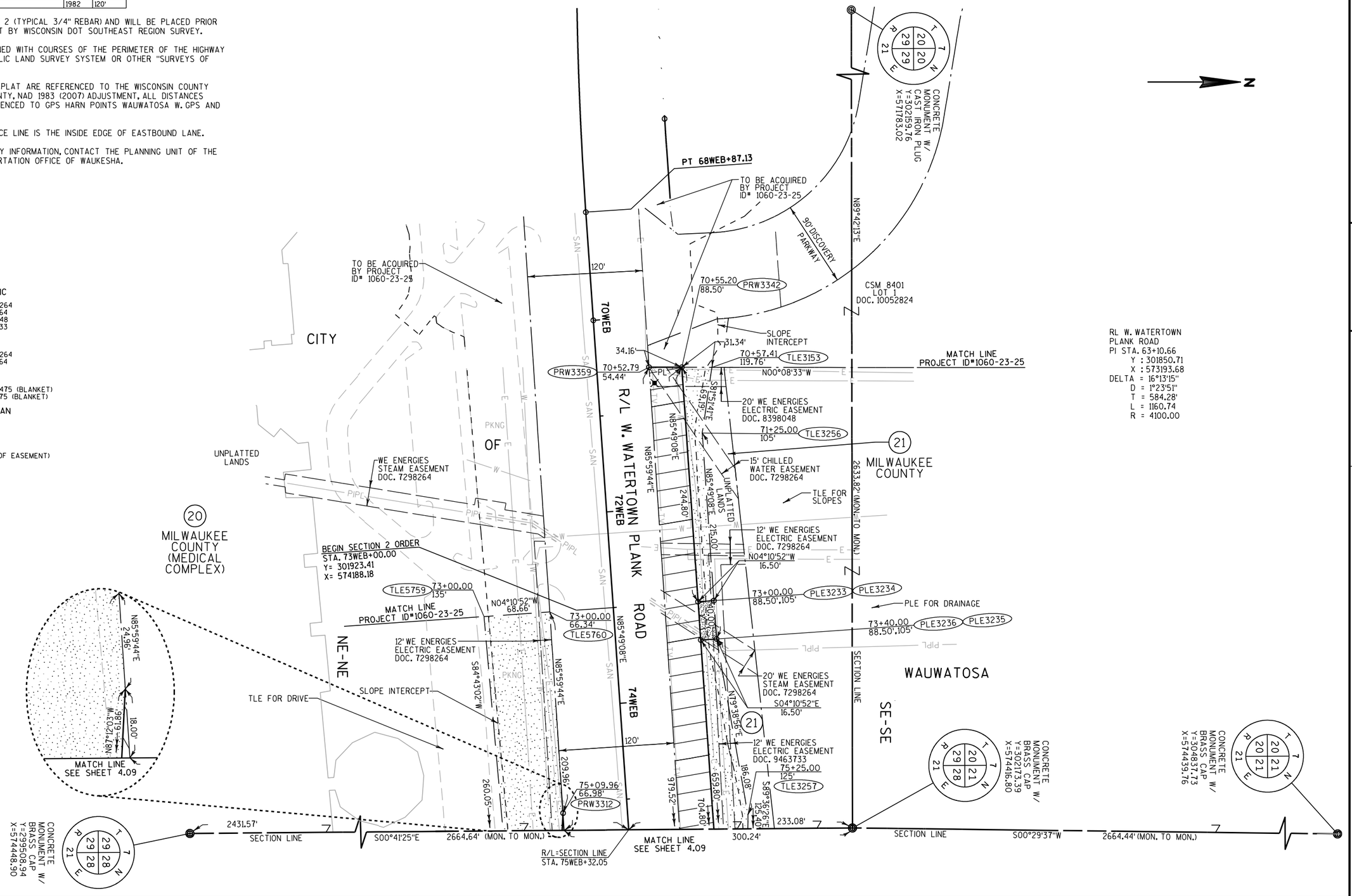
(500) WE ENERGIES - ELECTRIC
PARCEL 20 - DOC. NO. 7298264
PARCEL 21 - DOC. NO. 7298264
PARCEL 21 - DOC. NO. 8398048
PARCEL 21 - DOC. NO. 9463733

(502) WE ENERGIES - STEAM
PARCEL 20 - DOC. NO. 7298264
PARCEL 21 - DOC. NO. 7298264

(504) AT&T WISCONSIN
PARCEL 20 - DOC. NO. 3575475 (BLANKET)
PARCEL 21 - DOC. NO. 3575475 (BLANKET)

(506) MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

(507) TIME WARNER CABLE
PARCEL 20 - (NO RECORD OF EASEMENT)



REVISION DATE	DATE	SCALE, FEET	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.08	
AUG. 17, 2012	MAY 4, 2012	0 50 100	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-23 (Local Rds)\cds\040408_RP.dgn PLOT DATE : 16-AUG-2012 12:22 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
WATERTOWN PLANK RD.	O.C. DOC. 5557424	1982	120'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

W. WATERTOWN PLANK ROAD REFERENCE LINE IS THE INSIDE EDGE OF EASTBOUND LANE.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

CONCRETE MONUMENT W/ BRASS CAP Y=299508.94 X=574448.90

CONCRETE MONUMENT W/ BRASS CAP Y=302173.39 X=574416.80

CONCRETE MONUMENT W/ BRASS CAP Y=304837.73 X=574439.76

SECTION LINE S84°43'02"W 260.05'

SECTION LINE S00°41'25"E 979.52'

SEE SHEET 4.08 MATCH LINE (2664.64' MON. TO MON.)

SECTION LINE S00°29'37"W 2664.44' (MON. TO MON.)

R/L=SECTION LINE STA. 75WEB+32.05

20 MILWAUKEE COUNTY (MEDICAL COMPLEX)

21

76WEB R/L W. WATERTOWN PLANK ROAD 80WEB

82WEB

TLE3402 TLE3185 75+60.00 130',108' S04°10'52"E 22.00'

N87°12'03"W 704.80'

300.24' 75+71.36 74.50' PRW3311

S89°36'26"E 125.40'

S84°15'24"W 655.80'

12' WE ENERGIES ELECTRIC EASEMENT DOC. 7298264

120'

S85°49'08"W 110.04'

N85°59'44"E 407.04'

12' WE ENERGIES ELECTRIC EASEMENT DOC. 9463733

76+50.00 115' TLE3258

PLE FOR DRAINAGE

CITY

TLE3389 TLE3186 76+70.00 135',105' S85°49'08"W 15.00'

30.00' N04°10'52"W 55.18'

S88°14'03"W 48.80'

TLE FOR SLOPES & DRIVES

TLE3390 76+85.00 135'

TLE3391 77+22.08 106.46'

S88°45'24"W 59.18'

N85°59'44"E 203.64'

N69°07'11"E 52.20'

N81°25'13"E 40.58'

N77°55'26"E 130.38'

77+00.00 130' TLE3259

78+00.00 94' PRW3299

UNPLATTED LANDS

PC 5THS+67.45

PT 6THS+90.44

TLE3192 6+43.44 48.97' N27°44'48"E 28.18'

TLE3193 6+18.04 63.39'

TLE3194 5+45.34 61.73'

N02°10'55"W 70.06'

N08°39'35"W 136.65'

TLE3191 7+81.86 56.50'

N10°15'09"E 45.29'

8+25.03 43.95' TLE3189

10' WE ENERGIES GAS EASEMENT DOC. 9539895

PLE3187 11+01.44 63.56'

TLE3188 10+37.81 63.49'

220.38'

63.63' N02°33'57"E

N04°46'11"W

S13°48'01"E 36.53'

77+75.00 74.50' PRW3310

S85°32'35"W 159.00'

S88°55'50"W 160.12'

S02°45'18"W 160.88'

N85°49'08"E 170.45'

N88°32'43"E 105.12'

PC 13TH+45.40

20' WE ENERGIES STEAM EASEMENT DOC. 7298264

78+30.00 140' TLE3260

N22°21'36"E 25.91'

13+89.54 74.68' TLE3261

N00°45'39"E 128.65'

15+34.46 25.30' TLE3262

N04°10'52"W 21.00'

78+55.00 94',115' PLE3245 PLE3246

N58°16'17"E 51.14'

INGRESS EGRESS DOC. 7298264

14TH

15+33.92 25.83' TLE3263

N32°20'29"W

PT 15TH+16.91

S36°15'17"E 69.70'

14+70.00 35' TLE3264

TLE FOR SLOPES & DRIVES

PLE FOR TRAFFIC SIGNAL FACILITIES AND DRAINAGE

79+97.32 90.45' PRW3301

N87°51'11"E 2680.36' (MON. TO MON.)

12' WE ENERGIES ELECTRIC EASEMENT DOC. 9138127

PLE FOR DRAINAGE

81+10.00 88.12',100' PLE3330 PLE3329

12' WE ENERGIES ELECTRIC EASEMENT DOC. 9532345

81+20.00 120' TLE3266

SECTION LINE

SLOPE INTERCEPT

82+25.00 110' TLE3343

PLE FOR DRAINAGE

12' WE ENERGIES ELECTRIC EASEMENT DOC. 8586952

N70°27'46"E 175.57'

64.3'

S75°24'30"W 395.20'

N09°27'18"W 18.37'

82+50.00 86.63',105' PLE3241 PLE3242

N80°15'46"E 18.97'

82+70.00 86.42',105' PLE3244 PLE3243

S10°01'09"E 18.58'

N04°10'52"W 16.50'

77+15.00 88.50',105' PLE3237 PLE3238

N85°49'08"E 20.00'

77+35.00 88.50',105' PLE3410 PLE3239

S04°10'52"E 16.50'

77+60.00 88.50' PRW3240

16' PRIVATE ACCESS EASEMENT DOC. 7854184

NORTH LIMITS STA. 15TH+50.00 Y=302280.94 X=574731.19

20' WE ENERGIES STEAM EASEMENT DOC. 7298264

OF

UNPLATTED LANDS

SW-SW

79+60.00 110' PLE3247

S18°07'25"E 27.40'

S36°39'35"E

79+70.00 115' TLE3265

S37°20'34"E 19.11'

79+70.45 93.99' PRW3300

WAUWATOSA

20' WE ENERGIES STEAM EASEMENT DOC. 7298264

PC 8THS+18.45

PT 9THS+44.48

6THS 8THS 10THS 12THS

N. 92ND ST.

TLE3197 7+28.76 49.35'

S00°11'03"W 188.52'

TLE3195 5+44.87 38.27'

15' CHILLED WATER EASEMENT DOC. 7298264

12' WE ENERGIES ELECTRIC EASEMENT DOC. 7298264

S89°43'40"W 100.00'

SOUTH LIMITS STA. 5THS+45.05 Y=301290.18 X=574755.33

S53°45'46"W 15.48'

TLE3198 7+36.58 62.71'

TLE3208 8+00.55 70.53'

S01°05'33"W 64.45'

S02°45'13"W 65.00'

8+17.98 61.31'

TLE3213

S33°45'09"E 19.72'

PLE FOR DRAINAGE & SIGNAL FACILITIES

PLE3143 11+23.38 73.11'

N24°24'47"E 41.79'

PLE3199 79+40.00 68.31'

80+31.94 68.59'

ERW3358 80+32.31 51.41'

15' CHILLED WATER EASEMENT DOC. 7298264

N85°59'44"E

PLANK ROAD

STA. 78WEB+99.52= STA. 12TH+22.64

STA. 78WEB+58.30= STA. 12THS+20.33

412.04'

N83°34'22"E 146.14'

N80°36'35"E 110.83'

PC 80WEB+63.05

SLOPE INTERCEPT

20' WE ENERGIES STEAM EASEMENT DOC. 7298264

20 MILWAUKEE COUNTY (MEDICAL COMPLEX)

12' WE ENERGIES ELECTRIC EASEMENT DOC. 9463733

N88°23'47"E 99.55'

C5 C6 C8 C9

STA. 83WEB+00.00 MATCH LINE SEE SHEET 4.10

NW-NW

UNPLATTED LANDS

WAUWATOSA

8+87.91 68.45' TLE3217

TLE3228 9+62.50 73.34'

S59°03'49"W 18.03'

TLE3218 8+97.84 84.05'

S02°45'13"W 45.00'

S35°54'22"E 19.21'

TLE3219 9+47.47 85.30'

79+35.00 68.29' PRW3309

N24°24'47"E 5.00'

RL W. WATERTOWN PLANK ROAD
PI STA. 82+50.75
Y : 301992.73
X : 575136.40
DELTA = 10°33'38"
D = 2°49'16"
T = 187.70'
L = 374.34
R = 2031.00

RL N. 92ND STREET
PI STA.6+29.00
Y : 301374.13
X : 574755.33
DELTA = 5°52'20"
D = 4°46'29"
T = 61.55'
L = 122.99
R = 1200.00

RL N. 92ND STREET
PI STA.8+81.58
Y : 301625.49
X : 574729.48
DELTA = 8°29'44"
D = 6°44'26"
T = 63.13'
L = 126.03
R = 850.00

RL N. 92ND STREET
PI STA. 14+33.94
Y : 302178.18
X : 574796.26
DELTA = 35°05'42.00"
D = 20°27'46.00"
T = 88.54'
L = 171.51
R = 280.00

C5	C8
L = 238.91	L = 244.66
R = 1292.92	R = 1946.50
LC = 238.57	LC = 244.50
LCB = S80°42'07"W	LCB = N84°47'08"E
C6	**C9**
L = 445.99	L = 19.15
R = 1946.50	R = 1946.50
LC = 445.01	LC = 19.15
LCB = N81°49'20"E	LCB = S80°54'10"W
C7	
L = 110.67	
R = 1946.50	
LC = 110.66	
LCB = S86°45'27"W	

500	WE ENERGIES - ELECTRIC PARCEL 20 - DOC. NO. 7298264 PARCEL 20 - DOC. NO. 9463733 PARCEL 20 - (NO RECORD OF EASEMENT) PARCEL 21 - DOC. NO. 9532345 PARCEL 21 - DOC. NO. 8586952 PARCEL 21 - DOC. NO. 9463733 PARCEL 21 - DOC. NO. 9138127
501	WE ENERGIES - GAS PARCEL 20 - DOC. NO. 9539895 PARCEL 20 - (NO RECORD OF EASEMENT)
502	WE ENERGIES - STEAM PARCEL 20 - DOC. NO. 7298264 PARCEL 21 - DOC. NO. 7298264
504	AT&T WISCONSIN PARCEL 20 - DOC. NO. 3575475 (BLANKET) PARCEL 21 - DOC. NO. 3575475 (BLANKET)
506	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
507	TIME WARNER CABLE PARCEL 21 - (NO RECORD OF EASEMENT)

REVISION DATE AUG. 17, 2012	DATE MAY 4, 2012	SCALE, FEET 0 50 100	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.09
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-23 (Local Rds)\cds\040409_RP.dgn PLOT DATE : 17-AUG-2012 12:44 PLOT BY : msckek PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
WATERTOWN PLANK RD.	O.C. DOC. 5557424	1982	120'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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W. WATERTOWN PLANK ROAD REFERENCE LINE IS THE INSIDE EDGE OF EASTBOUND LANE.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

(500) WE ENERGIES - ELECTRIC
PARCEL 20 - DOC. NO. 9463733
PARCEL 21 - DOC. NO. 8339388
PARCEL 21 - DOC. NO. 8244806
PARCEL 21 - (NO RECORD OF EASEMENT)

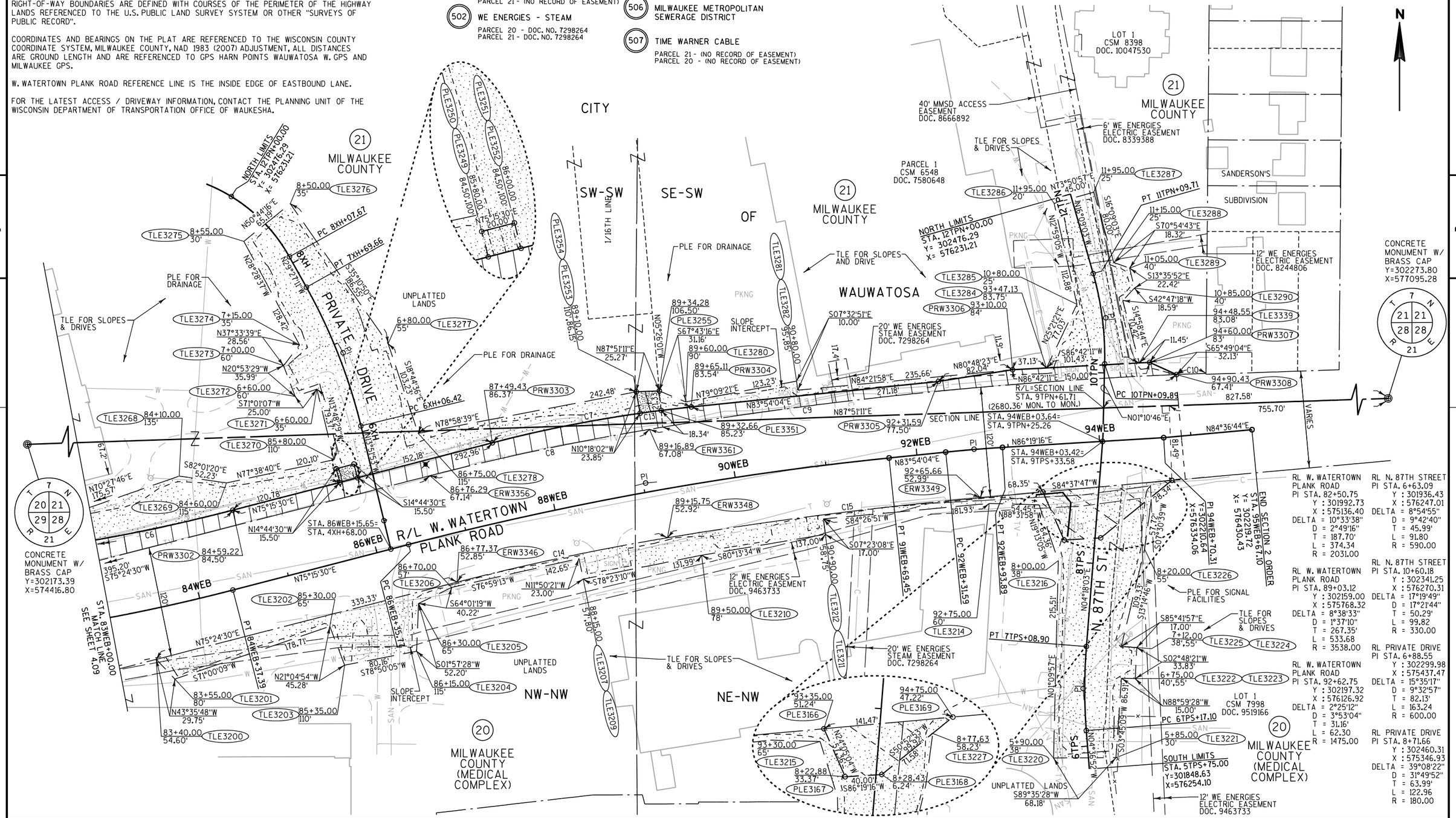
(502) WE ENERGIES - STEAM
PARCEL 20 - DOC. NO. 7298264
PARCEL 21 - DOC. NO. 7298264

(504) AT&T WISCONSIN
PARCEL 20 - DOC. NO. 3575475 (BLANKET)
PARCEL 21 - DOC. NO. 3575475 (BLANKET)

(506) MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

(507) TIME WARNER CABLE
PARCEL 21 - (NO RECORD OF EASEMENT)
PARCEL 20 - (NO RECORD OF EASEMENT)

C6	C7	C8	C9	C10	C13	C14	C15
L = 445.99	L = 221.06	L = 245.20	L = 579.13	L = 32.22	L = 23.23	L = 234.85	L = 344.86
R = 1946.50	R = 1465.50	R = 2844.26	R = 4734.26	R = 4734.26	R = 1465.50	R = 2724.26	R = 4614.26
LC = 445.01	LC = 220.85	LC = 245.12	LC = 578.76	LC = 32.22	LC = 23.23	LC = 234.78	LC = 344.78
LCB = N81°49'20"E	LCB = N79°34'47"E	LCB = S77°52'41"W	LCB = S83°51'07"W	LCB = S87°33'05"W	LCB = S82°08'46"W	LCB = N77°52'41"E	LCB = N82°29'19"E



REVISION DATE	DATE	SCALE, FEET	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.10	
AUG. 17, 2012	MAY 4, 2012	0 50 100	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-23 (Local Rds)\cds\040410_RP.dgn PLOT DATE : 17-AUG-2012 13:20 PLOT BY : MSCGRS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 18	MILWAUKEE COUNTY CODE 41.02	-	120'
STH 181	DAVID V. JENNING'S PARK SUBDVN.	1923	33'(W.)
USH 18	DAVID V. JENNING'S PARK SUBDVN.	1923	60'(N.)
STH 181	BROOKSIDE SUBDIVISION	1924	33'(E.)
USH 18	ASSESSOR'S PLAT NO. 38	1935	60'(S.)
STH 181	ASSESSOR'S PLAT NO. 38	1935	33'(W.)
STH 181	PROJECT #U 5729(2)	1952	110'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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STH 181 REFERENCE LINE IS THE CENTER OF RIGHT OF WAY.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

CONCRETE MONUMENT W/ BRASS CAP Y=299598.00 X=577119.35

T 7 N, R 21 E, 28 28 28 28

CITY

DAVID V. JENNINGS PARK BLOCK 3

PKNG

18' MUNICIPAL UTILITY EASEMENT DOC. 1386854

10' WE ENERGIES ELECTRIC & AT&T WI EASEMENT DOC. 3945027 (NO. 1)

6' AT&T WI TELEPHONE EASEMENT DOC. 9409955

N. GLENVIEW AVENUE

JENNINGS & 84 BLUEMOUND, LLC (7)

CAVALRY ASSEMBLY OF GOD (12)

BROOKSIDE BLOCK 2

6' WE ENERGIES ELECTRIC EASEMENT DOC. 3966155

W. BLUE MOUND ROAD

WAUWATOSA

SNC PROPERTIES, LLC (10)

82 BLUE, LLP (9)

UNPLATTED LANDS

BLANKET EASEMENT MILW. ELEC. RAIL DOC. 1058368

ACCESS EASEMENT DOC. 7276572

15' WE ENERGIES POLE EASEMENT DOC. 3998582

TLE FOR SLOPES AND DRIVES

SLOPE INTERCEPTS

6' WE ENERGIES & AT&T WI POLE EASEMENT DOC. 3977776

6' WE ENERGIES & AT&T WI ELECTRIC & TELEPHONE EASEMENT DOC. 3738559

WISCONSIN LUTHERAN HIGH SCHOOL CONFERENCE (8)

ENCROACHMENT (LIGHT POLE)

TLE FOR DRIVE

20' MMSD SEWER EASEMENT PER ASSESSOR'S PLAT NO. 36

ASSESSORS PLAT NO. 36

PLE FOR DRAINAGE

LOT 6

LOT 12

MILWAUKEE COUNTY (11)

HONEY CREEK PARKWAY

MILWAUKEE

RL W. BLUE MOUND RD.
PI STA. 248+25.11
Y : 298648.89
X : 577936.95
DELTA = 21°32'17"
D = 2°59'59"
T = 363.30'
L = 718.02
R = 1910.08
LCB = S79°59'15"E
LC = 713.80'

WEST LIMITS
STA. 240BL+05.29
Y=299638.05
X=577117.19

EAST LIMITS
STA. 252BL+46.72
Y=298496.26
X=578339.15

BEGIN RELOCATION ORDER
STA. 67F+13.46
Y=298089.16
X=577345.69

CONCRETE MONUMENT W/ BRASS CAP Y=296937.87 X=577144.57

T 7 N, R 21 E, 28 33 33 28

PI 68+16.08
Y=298188.26
X=577372.33

CITY OF WAUWATOSA
CITY OF MILWAUKEE

500	WE ENERGIES - ELECTRIC	
	PARCEL 7 - DOC. NO. 1386854	
	PARCEL 7 - (NO RECORD OF EASEMENT)	
	PARCEL 8 - DOC. NO. 3738559	
	PARCEL 8 - DOC. NO. 3977776	
	PARCEL 8 - DOC. NO. 3712526	
	PARCEL 10 - DOC. NO. 3998582	
	PARCEL 10 - DOC. NO. 1058368 (BLANKET)	
	PARCEL 12 - DOC. NO. 3966155	
504	AT&T WISCONSIN	
	PARCEL 7 - DOC. NO. 1386854	
	PARCEL 8 - DOC. NO. 3738559	
	PARCEL 8 - DOC. NO. 3977776	
	PARCEL 8 - (NO RECORD OF EASEMENT)	
	PARCEL 12 - DOC. NO. 9409955	
	PARCEL 12 - (NO RECORD OF EASEMENT)	
506	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT	
	PARCEL 11 - DOC. ASSESSOR'S PLAT NO. 36	
531	CITY OF WAUWATOSA	
	PARCEL 7 - DOC. NO. 1386854 (STORM)	
	PARCEL 7 - DOC. NO. 1386854 (SAN)	
	PARCEL 7 - (NO RECORD OF EASEMENT)	
532	CITY OF WAUWATOSA WATER UTILITY	
	PARCEL 7 - DOC. NO. 1386854	
	PARCEL 7 - (NO RECORD OF EASEMENT)	
UA631	CITY OF WAUWATOSA	
UA632	CITY OF WAUWATOSA WATER UTILITY	
UA641	CITY OF MILWAUKEE - SEWER	
UA642	CITY OF MILWAUKEE - WATER	
UA643	CITY OF MILWAUKEE - CABLE	
UA644	CITY OF MILWAUKEE - CONDUIT	

C2	L = 69.56	R = 1591.50	LC = 69.55	LCB = S12°54'42"W
C3	L = 318.63	R = 1850.08	LC = 318.23	LCB = S83°06'39"E
C4	L = 318.86	R = 1845.08	LC = 318.47	LCB = N83°07'40"W
C5	L = 34.81	R = 20.00	LC = 30.58	LCB = N40°53'17"W
C6	L = 50.67	R = 36.50	LC = 46.70	LCB = S38°51'57"E
C8	L = 19.57	R = 15.00	LC = 18.21	LCB = S51°52'04"W
C9	L = 419.36	R = 1910.08	LC = 418.52	LCB = S83°28'00"E
C10	L = 62.79	R = 1591.50	LC = 62.79	LCB = S10°31'45"W
C11	L = 87.56	R = 1850.08	LC = 87.55	LCB = S89°24'02"E
C12	L = 108.25	R = 1845.08	LC = 108.24	LCB = N89°45'34"W
C13	L = 37.64	R = 35.00	LC = 35.85	LCB = N45°17'48"E
C14	L = 31.70	R = 30.00	LC = 30.25	LCB = N44°46'03"E
C15	L = 39.03	R = 28.50	LC = 36.05	LCB = S39°23'56"E

REVISION DATE AUG. 17, 2012	DATE MAY 4, 2012	SCALE, FEET 0 50 100	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.11
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-71	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-23 (Local Rds)\cds\040411_RP.dgn PLOT DATE : 17-AUG-2012 13:25 PLOT BY : MSCGRS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
W. WISCONSIN AVE.	DAVID V. JENNING'S PARK SUBDVN.	1923	80'
STH 181	DAVID V. JENNING'S PARK SUBDVN.	1923	66'
BROOKSIDE PLACE	DAVID V. JENNING'S PARK SUBDVN.	1923	30' (N.)
BROOKSIDE PLACE	BROOKSIDE SUBDIVISION	1924	30' (S.)
ROCKAWAY PLACE	BROOKSIDE SUBDIVISION	1924	60'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

STH 181 REFERENCE LINE IS THE CENTER OF RIGHT OF WAY.

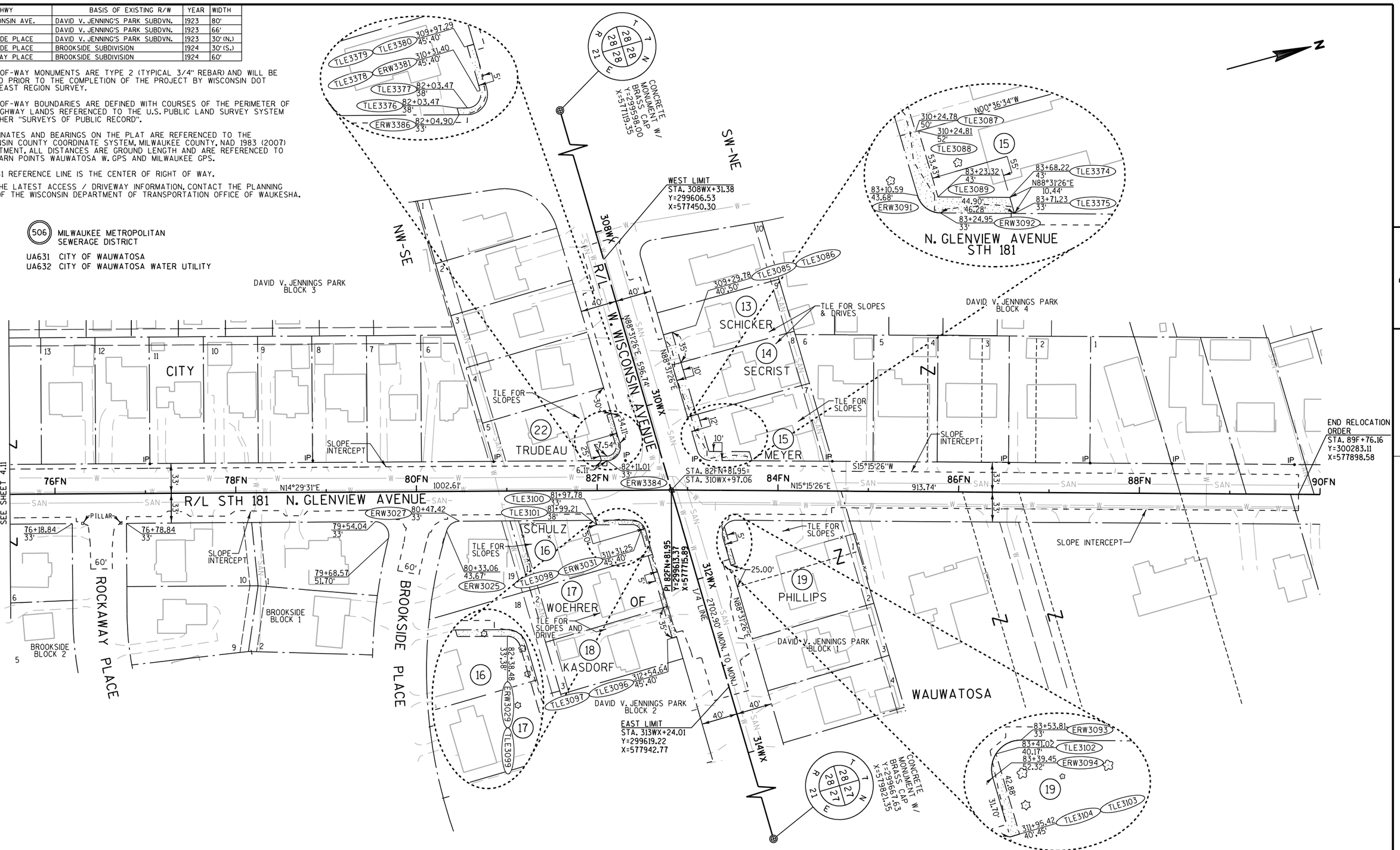
FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

506 MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

UA631 CITY OF WAUWATOSA

UA632 CITY OF WAUWATOSA WATER UTILITY

4



REVISION DATE	DATE MAY 4, 2012	SCALE, FEET 0 50 100	HWY: LOCAL ROADS	STATE R/W PROJECT NUMBER 1060-33-23	PLAT SHEET 4.12	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-71	PS&E SHEET	E

NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.

N

MILWAUKEE COUNTY

CONSTRUCTION BY OTHERS UNDER 1060-33-70

BEGIN PROJECT 1060-33-73
STA 166BV+92.00

SWAN BOULEVARD

R/L BV

R/L UDE

R/L XFN

UNDERWOOD PARKWAY

WLC ACCESS ROAD

W. WATERTOWN PLANK ROAD

CONSTRUCTION BY OTHERS UNDER 1060-33-70

CP 627

CP 628

168BV

170BV

172BV

174BV

176BV

178BV

180BV

OH SIGN SUPPORT
S-40-638
STA. 169BV+67

SLOPE INTERCEPT

MANAGEMENT OF SOLID WASTE, SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

MATCHLINE 176BV+00

R/L WWB

32WWB

34WWB

36WWB

8XFN

10XFN

12XFN

220BDE

230BDE

TLE

R/W

CAUTION

BOLLARDS (4)

POST CANOPY

VPI STA 166BV+92.00
VPI EL 727.43

VPC STA 167BV+50.00
VPC EL 727.14

LP STA 167BV+96.29
LP EL 727.03

VPT STA 171BV+00.00
VPT EL 732.01

VPI STA 177BV+25.00
VPI EL 752.51

VPC STA 176BV+02.50
VPC EL 748.49

VCL = 350'
K = 93

VCL = 245
K = 222

0.50%

3.28%

EXISTING PROFILE AT $\mathbb{R}$ BV

FINISHED PROFILE AT $\mathbb{R}$ BV

VPI STA 169BV+25.00
VPI EL 726.27

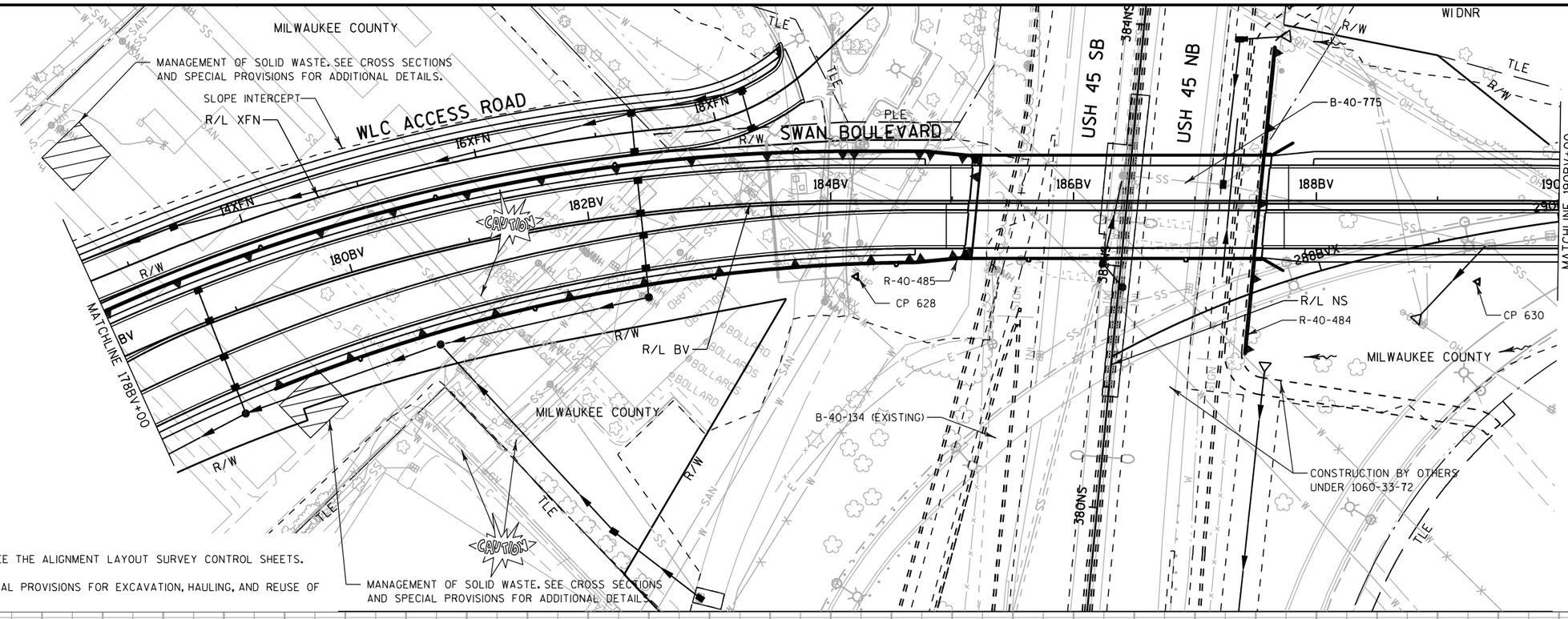
BEGIN PROJECT 1060-33-73
STA 166BV+92.00

EXISTING PROFILE ELEVATIONS

FINISHED PROFILE ELEVATIONS

168BV	170BV	172BV	174BV	176BV	178BV	180BV
726.73 / 727.60 / 726.97	727.39 / 730.21	727.27 / 730.99	727.14 / 731.22	727.05 / 731.88	727.03 / 732.38	727.07 / 732.92
727.18 / 733.64	727.36 / 733.87	727.61 / 734.26	727.92 / 734.77	728.30 / 735.33	728.75 / 735.82	729.27 / 736.27
729.85 / 736.48	730.50 / 736.95	731.22 / 737.12	732.01 / 737.49	732.83 / 737.69	733.65 / 739.43	734.47 / 739.57
735.29 / 739.57	736.11 / 739.57	736.93 / 739.39	737.75 / 739.02	738.57 / 739.28	739.39 / 739.49	740.21 / 740.30
741.03 / 741.65	741.85 / 742.99	742.67 / 744.31	743.49 / 746.03	744.31 / 747.34	745.13 / 747.22	745.95 / 747.18
746.77 / 747.00	747.59 / 747.05	748.41 / 746.89	749.22 / 747.45	750.00 / 748.44	750.75 / 749.02	751.47 / 748.63
752.17 / 748.65	752.84 / 748.49	753.48 / 748.37	754.09 / 748.28	754.68 / 748.31	755.23 / 748.41	755.78 / 748.58
756.32 / 748.67	756.87 / 748.56	757.41 / 748.56	757.96 / 748.45	758.50		

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: SWAN BOULEVARD	SHEET	E

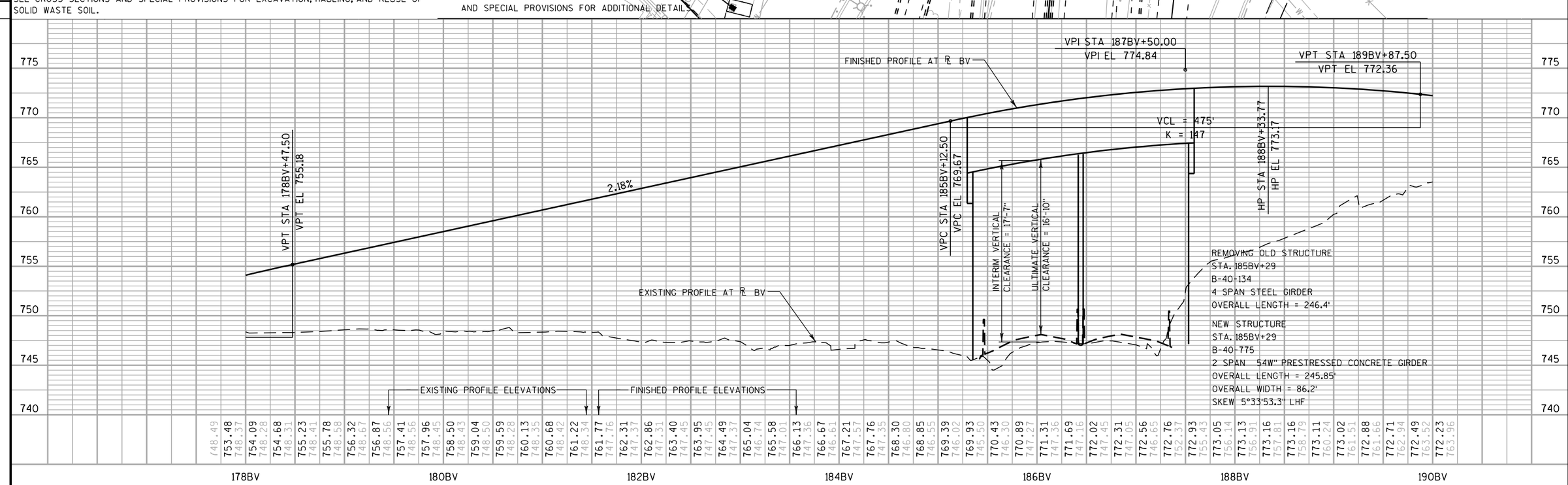


NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.

MANAGEMENT OF SOLID WASTE. SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

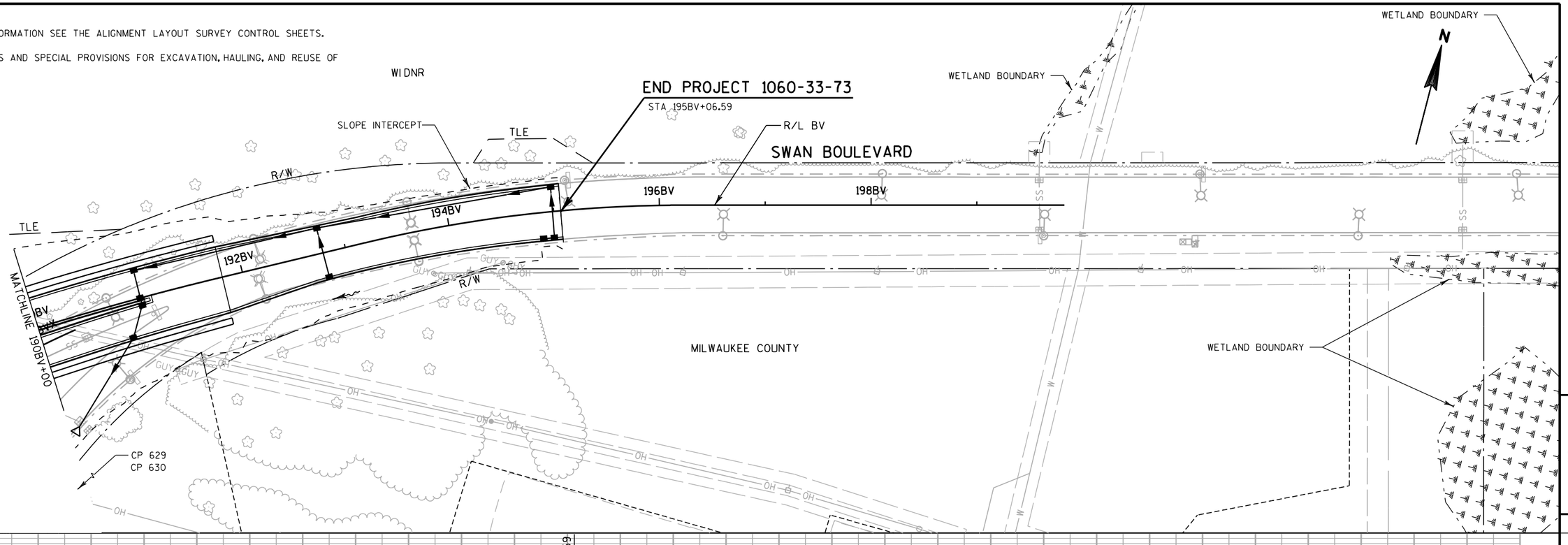


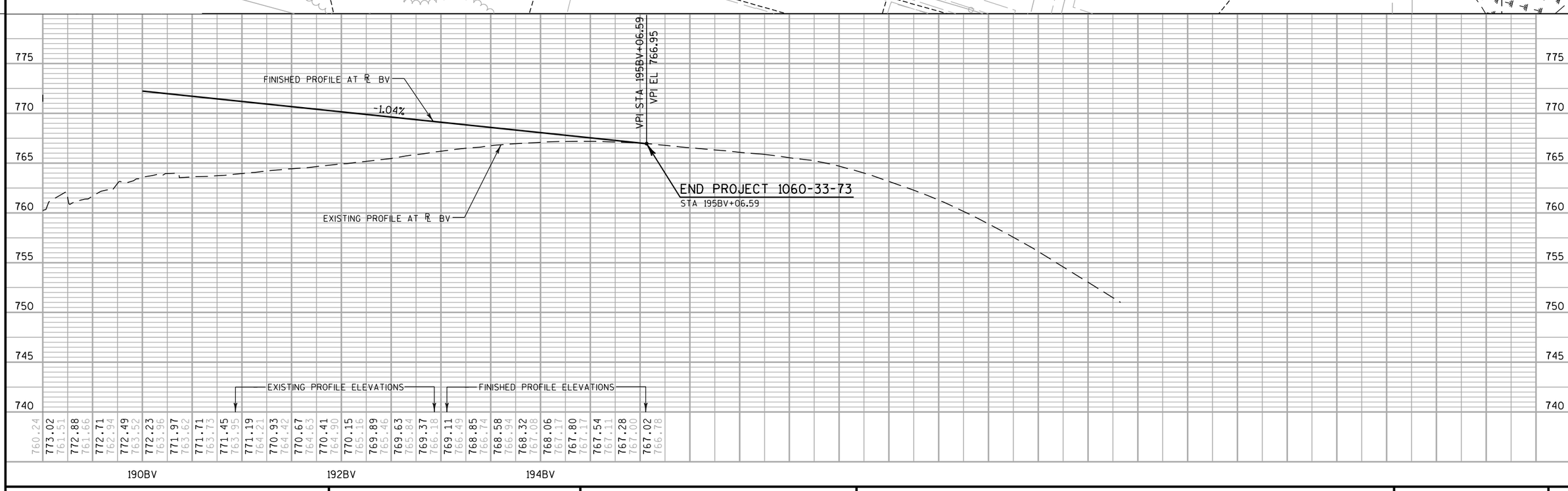
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: SWAN BOULEVARD	SHEET	E

NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.



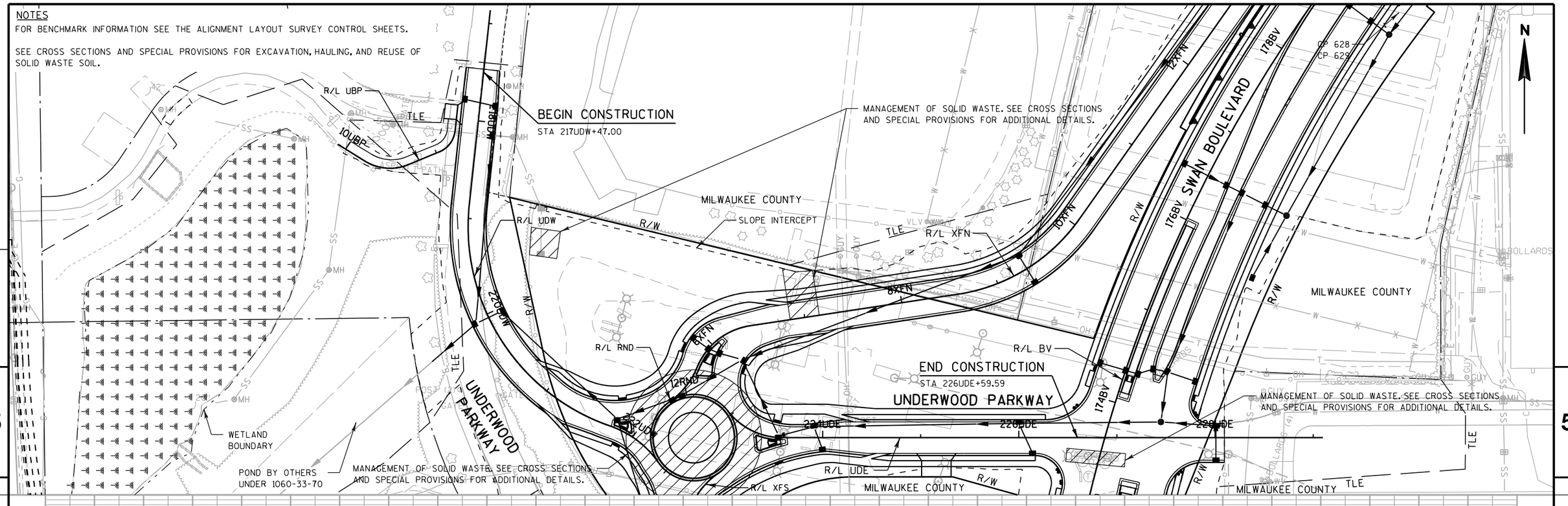


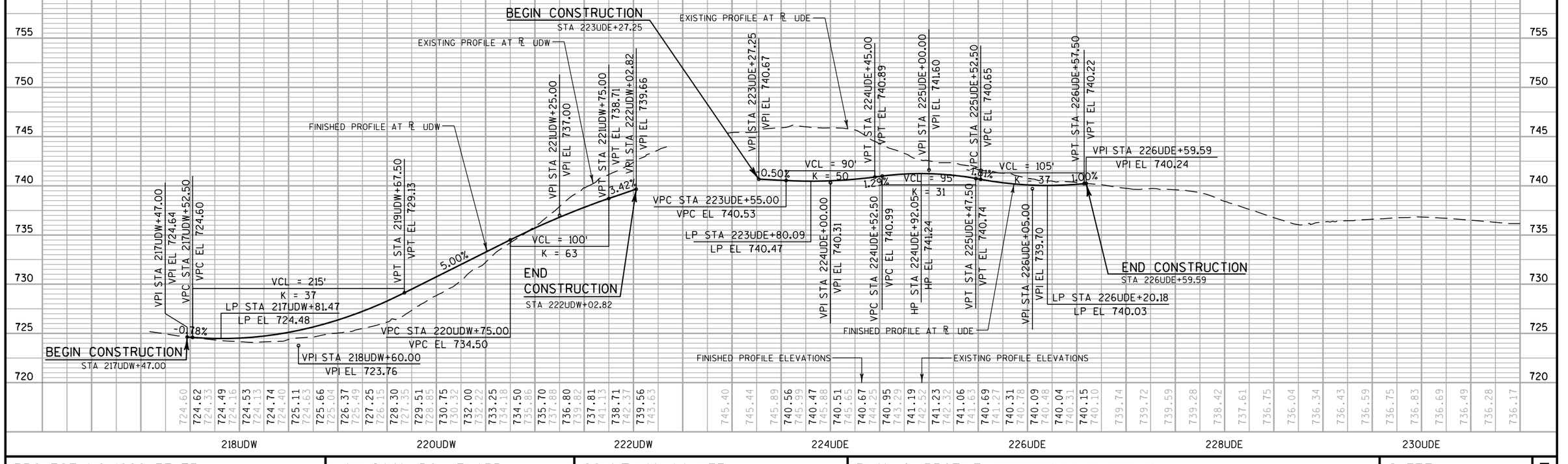
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: SWAN BOULEVARD	SHEET	E

NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.





PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: UNDERWOOD PARKWAY	SHEET	E

MANAGEMENT OF SOLID WASTE. SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

MILWAUKEE COUNTY

SLOPE INTERCEPT

TLE

MATCHLINE 10XFN+00

WLC ACCESS ROAD

8XFN

R/L XFN

R/L UDW

WETLAND BOUNDARY

UNDERWOOD PARKWAY

12RND

MANAGEMENT OF SOLID WASTE. SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

R/L BV

UNDERWOOD PARKWAY

22UDE

17BV

R/W

SWAN BOULEVARD

MANAGEMENT OF SOLID WASTE. SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

TLE

MILWAUKEE COUNTY

NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.

PARKING

R/L XFS

R/L RND

R/L UDE

MILWAUKEE COUNTY

CP 626
CP 625

28BV

BEGIN CONSTRUCTION
STA 2XFS+45

POND BY OTHERS
UNDER 1060-33-70

EXISTING PROFILE AT ℄ XFS

VPI STA 2XFS+45.00
VPI EL 742.89

VPC STA 3XFS+02.50
VPC EL 741.64

-2.18%

VCL = 135'
K = 37

1.50%

VPT STA 4XFS+37.50
VPT EL 741.18

VPI STA 4XFS+44.56
VPI EL 741.29

FINISHED PROFILE AT ℄ XFS

VPI STA 3XFS+70.00
VPI EL 740.17

LP STA 3XFS+82.44
LP EL 740.77

END CONSTRUCTION
STA 4XFS+44.56

FINISHED PROFILE AT ℄ XFN

VPI STA 5XFN+58.77
VPC STA 5XFN+70.00
VPI EL 739.45
VPC EL 739.39
LP STA 5XFN+89.23
LP EL 739.35

VCL = 160'
K = 38

VPT STA 7XFN+30.00
VPT EL 741.93

VPI STA 6XFN+50.00
VPI EL 738.99

-0.50%

BEGIN CONSTRUCTION
STA 5XFN+58.77

3.67%

VPI STA 8XFN+70.00
VPI EL 747.06

VPT STA 9XFN+32.50
VPT EL 747.43

VCL = 125'
K = 40

VPC STA 8XFN+07.50
VPC EL 744.77

EXISTING PROFILE AT ℄ XFN

0.58%

HP STA 13XFN+03.71
HP EL 749.42

VPI STA 13XFN+00.00
VPI EL 749.55

VPC STA 12XFN+50.00
VPC EL 749.26

VCL = 100'
K = 93

VPT STA 13XFN+50.00
VPT EL 749.30

-0.50%

	EXISTING PROFILE ELEVATIONS	FINISHED PROFILE ELEVATIONS	EXISTING PROFILE ELEVATIONS	FINISHED PROFILE ELEVATIONS
	742.75	742.78	743.07	743.14
	742.78	742.21	739.37	743.44
	742.24	742.30	739.36	744.03
	741.69	743.38	739.51	744.83
	741.22	744.27	739.83	745.72
	740.91	744.33	740.30	746.45
	740.78	744.31	740.94	746.95
	740.81	744.27	741.75	747.40
	741.02	744.53	742.66	746.25
	744.48		743.58	744.97
			744.50	744.57
			745.38	744.49
			746.11	745.00
			746.68	745.47
			747.11	745.92
			747.38	746.32
			747.53	746.90
			747.67	747.47
			747.82	747.41
			747.96	747.09
			748.10	747.23
			748.25	747.94
			748.39	748.23
			748.54	748.56
			748.68	748.49
			748.83	748.79
			748.97	748.65
			749.12	748.23
			749.26	748.30
			749.37	748.33
			749.42	748.42
			749.39	748.64
			749.30	748.53
			749.18	748.21
			749.05	748.15
			748.93	748.28
			748.80	748.33
			748.68	748.35
			748.55	

760 755 750 745 740 735 730 725

2XFS 4XFS 6XFN 8XFN 10XFN 12XFN 14XFN

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: WLC ACCESS ROAD	SHEET	E

NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.

MILWAUKEE COUNTY

MANAGEMENT OF SOLID WASTE. SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

SLOPE INTERCEPT

R/L XFN

WLC ACCESS ROAD

MATCHLINE 10XFN+00

10XFN 12XFN 14XFN 16XFN 18XFN

POND

END CONSTRUCTION
STA 18XFN+76.93

CP 631

CP 629

CP 628

CONSTRUCTION BY OTHERS
UNDER 1060-33-72

R/L NS

386NS 388NS

USH 45 SB

USH 45 NB

B-40-775

R-40-485

TLE

PLE

R/W

SWAN BOULEVARD

176BV 178BV 180BV 182BV 184BV 186BV

R/L BV

MILWAUKEE COUNTY

MANAGEMENT OF SOLID WASTE. SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

NOTE

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

5

5

760 755 750 745 740 735 730 725

VPC STA 12XFN+50.00
VPC EL 749.26

VPI STA 13XFN+00.00
VPI EL 749.55

HP STA 13XFN+03.71
HP EL 749.42

VPT STA 13XFN+50.00
VPT EL 749.30

VPI STA 18XFN+75.93
VPI EL 746.68

0.58%

VCL = 100'
K = 93

-0.50%

FINISHED PROFILE AT ℄ XFN

EXISTING PROFILE AT ℄ XFN

END CONSTRUCTION
STA 18XFN+75.93

EXISTING PROFILE ELEVATIONS

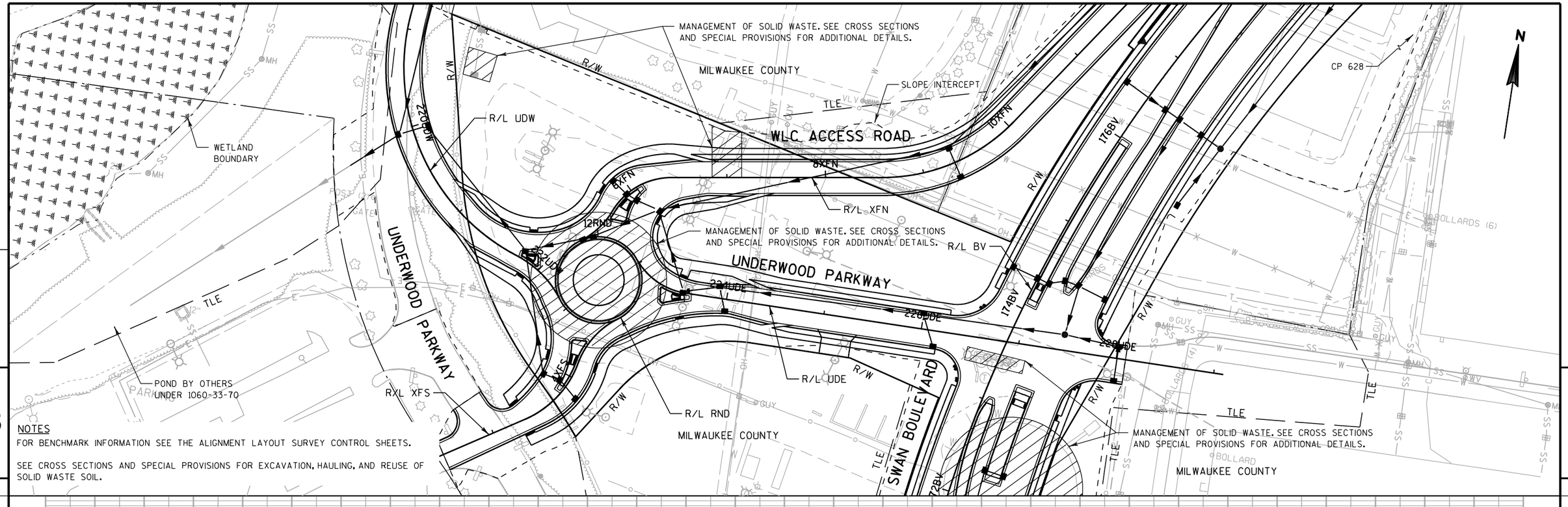
FINISHED PROFILE ELEVATIONS

10XFN	12XFN	14XFN	16XFN	18XFN
747.47	747.82 747.41	747.96 747.09	748.10 747.23	748.25 747.94
748.39 748.23	748.54 748.56	748.68 748.49	748.83 748.79	748.97 748.63
749.12 748.23	749.26 748.30	749.37 748.33	749.42 748.42	749.39 748.64
749.30 748.53	749.18 748.21	749.05 748.15	748.93 748.28	748.80 748.33
748.68 748.35	748.55 748.39	748.43 748.44	748.30 748.41	748.18 748.33
748.06 748.25	747.93 748.20	747.81 748.19	747.68 748.12	747.56 747.82
747.43 747.96	747.31 747.56	747.18 747.69	747.06 748.00	746.93 747.72
746.81 746.69	746.69 746.44	747.86	747.99	

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: WLC ACCESS ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\050406_pp.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 050406_pp PLOT SCALE : 100:1

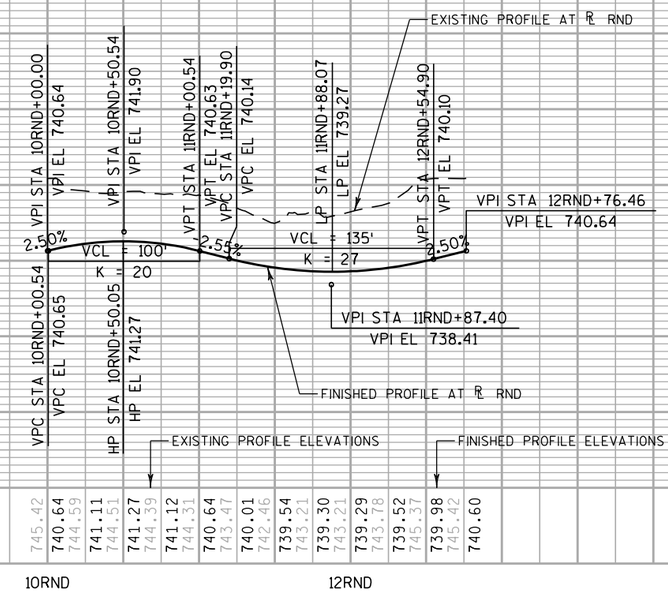
WISDOT/CADDS SHEET 40



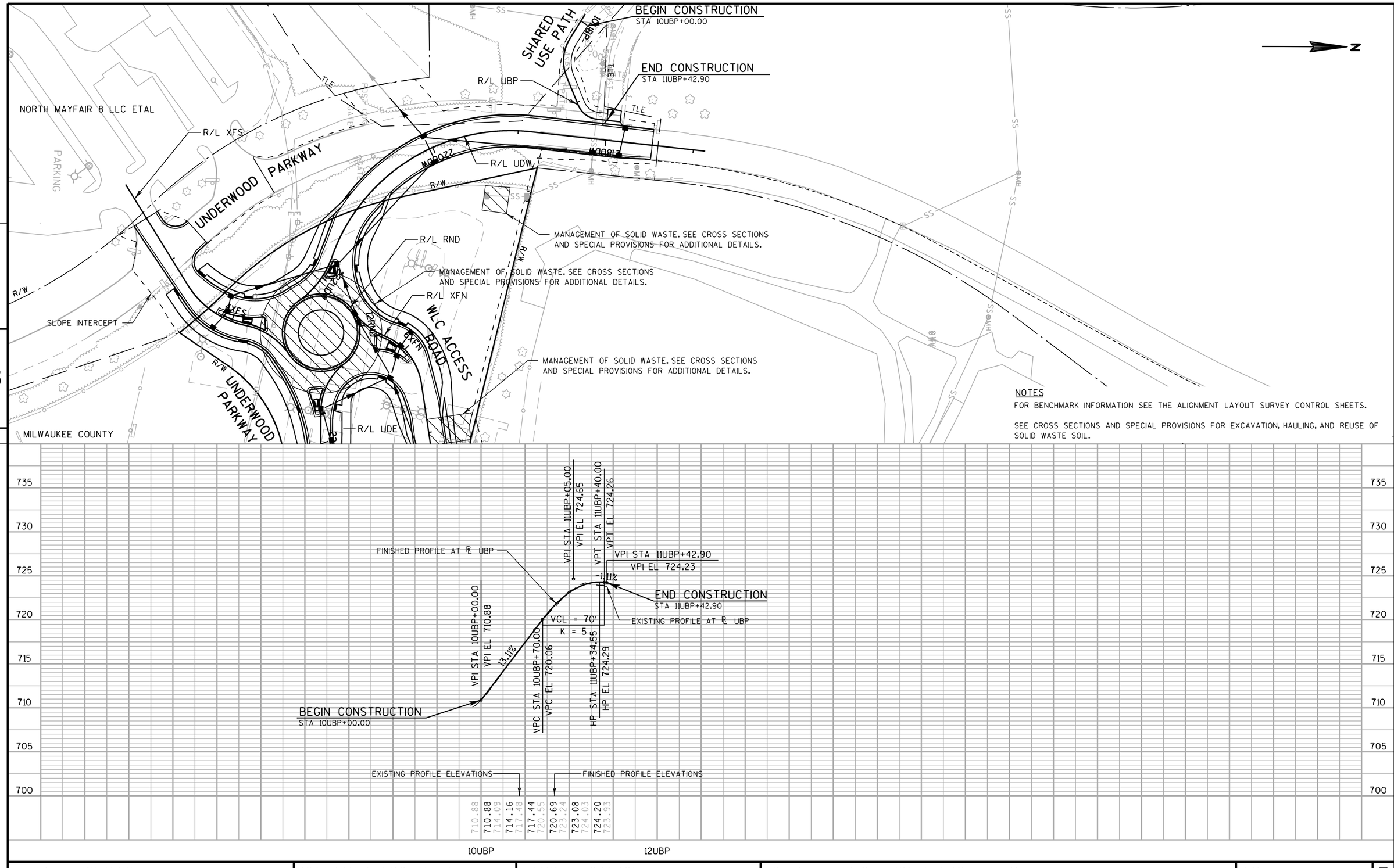
NOTES

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

SEE CROSS SECTIONS AND SPECIAL PROVISIONS FOR EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL.



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: ROUNDABOUT	SHEET	E



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	PLAN & PROFILE: SHARED USE PATH	SHEET	E

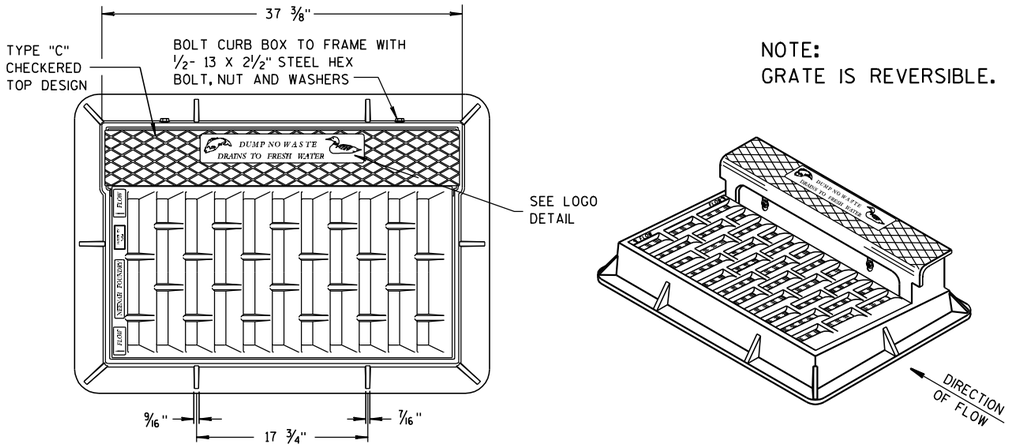
Standard Detail Drawing List

08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
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
09C11-02	CONCRETE BASE TYPE 10
09C13-01	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D03-02	POST MOUNTED CONTROLLER SERVICE INSTALLATION
09E01-11D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-11G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-04	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-04B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
10A01-02	ELECTRICAL HANDHOLE WIRING
10A02-02	IDENTIFICATION PLAQUES LIGHT POLES
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
11B02-02	CONCRETE MEDIAN NOSE
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-07	URBAN DOWELED CONCRETE PAVEMENT
13C18-01A	CONCRETE PAVEMENT JOINTING
13C18-01B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-01C	CONCRETE PAVEMENT JOINT TIES
13C18-01D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-01E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
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"
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES

6

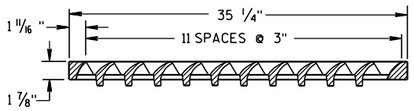
Standard Detail Drawing List

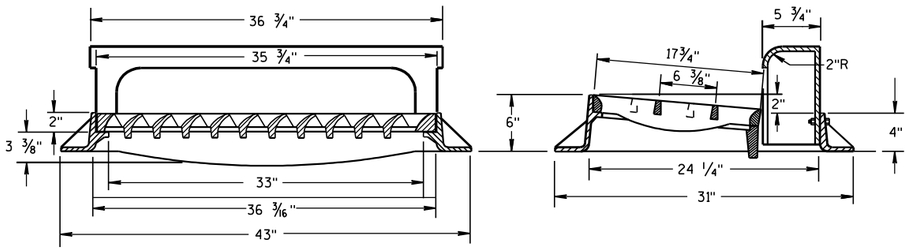
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C08-15E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-15F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C15-03	36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D14-01	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-02	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE



NOTE:
GRATE IS REVERSIBLE.

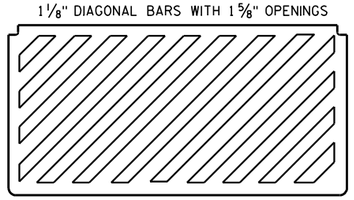
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"





TYPE "H"

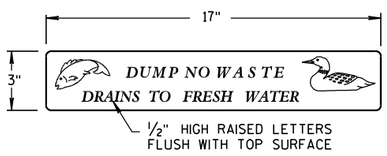
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 159 LBS.)
GRATE..... 159 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL

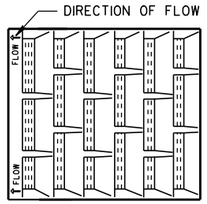
GENERAL NOTES

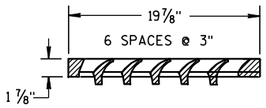
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

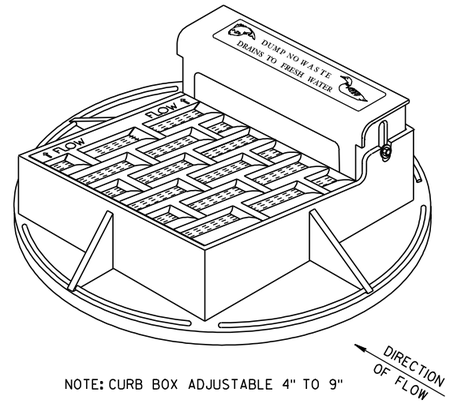
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

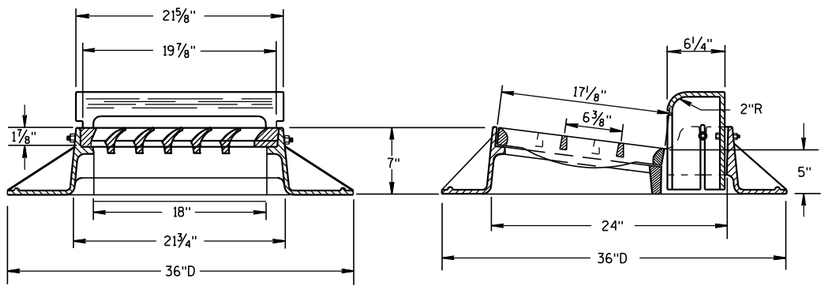
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





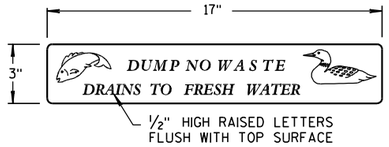


NOTE: CURB BOX ADJUSTABLE 4" TO 9"



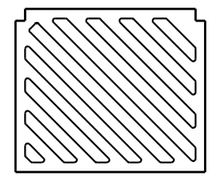
TYPE "A"

(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 185 LBS.
GRATE..... 71 LBS.
CURB BOX..... 84 LBS.



LOGO DETAIL

NOTE:
GRATE IS REVERSIBLE.



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8"
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
317
FHWA

6

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

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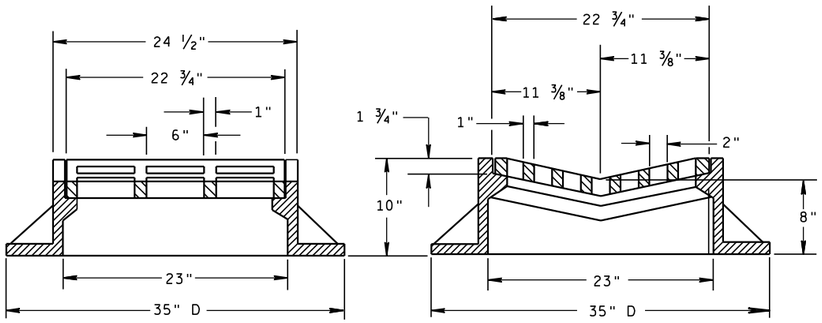
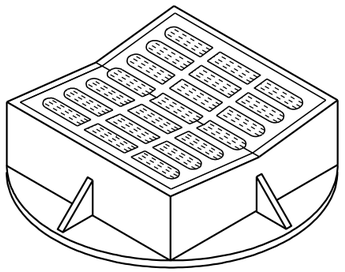
S.D.D. 8 A 5-18a

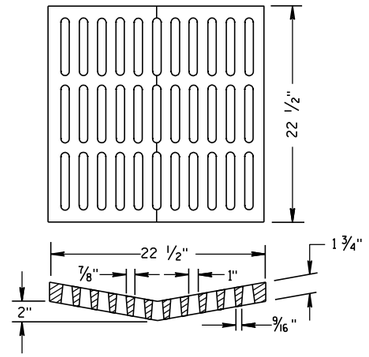




TYPE "B"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 294 LBS.
GRATE..... 111 LBS.

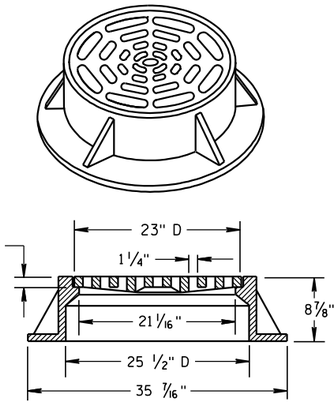


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.

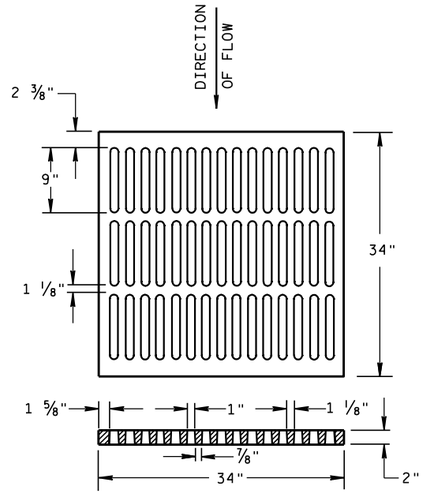
GENERAL NOTES

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

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

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

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

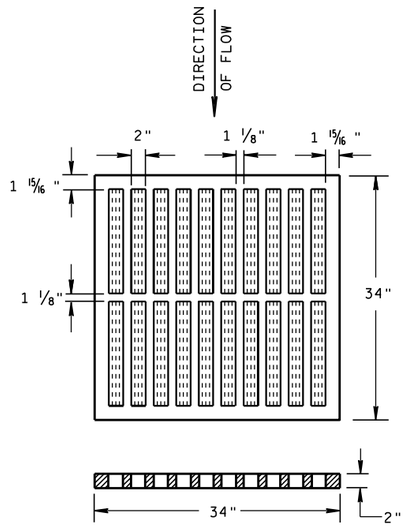


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

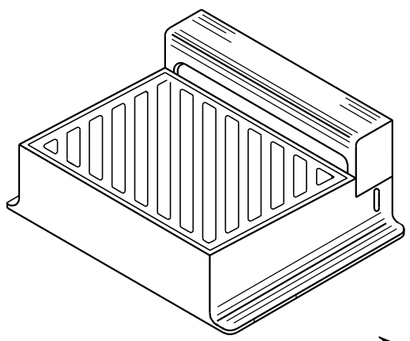


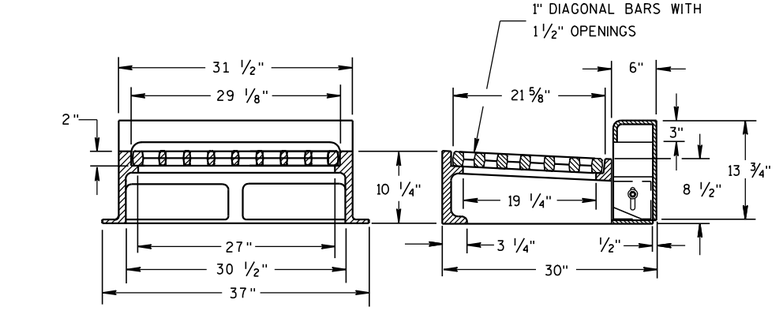
TYPE "MS"

(APPROXIMATE GRATE WEIGHT 268 LBS.)

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

TYPE "WM"

(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 DATE

/S/ Jerry H. Zaas
ROADWAY STANDARDS ENGINEER

318

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FHWA

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

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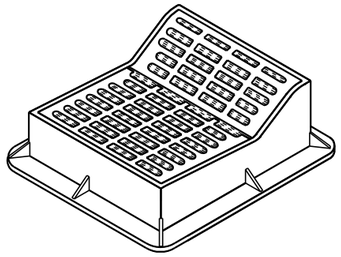
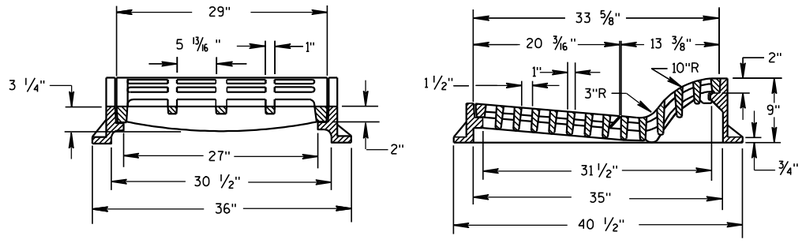
S.D.D. 8 A 5-18b



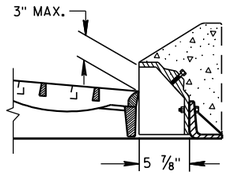


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

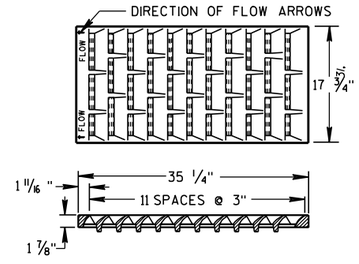
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

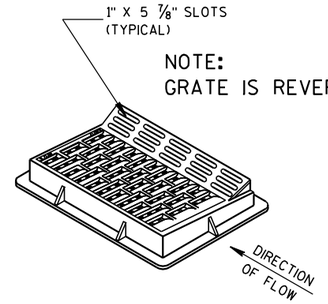
GENERAL NOTES

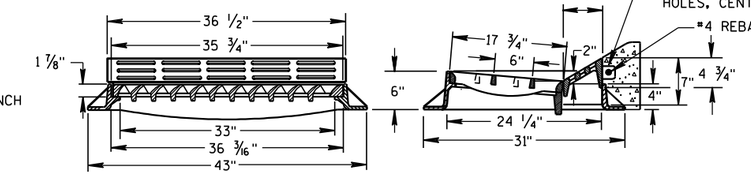
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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





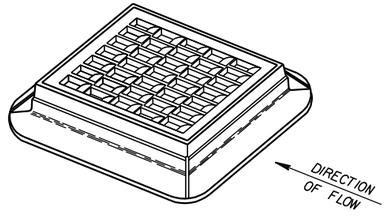


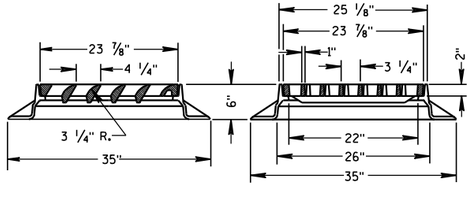
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)
FRAME..... 181 LBS.
GRATE..... 159 LBS.
CURB BOX..... 74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

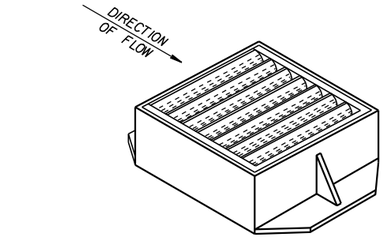


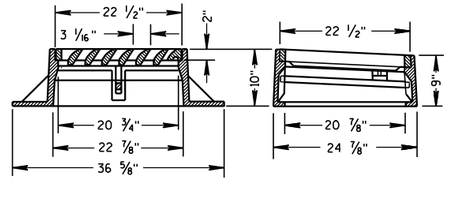


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE..... 169 LBS.

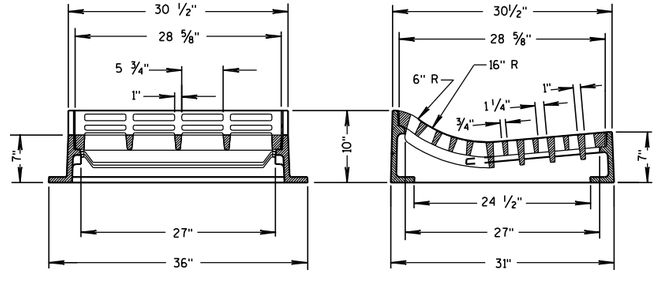




TYPE "V"

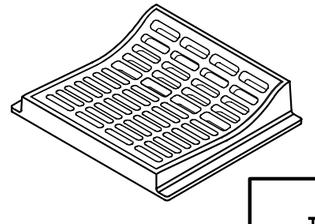
(APPROXIMATE WEIGHT 410 LBS.)

FRAME..... 269 LBS.
GRATE..... 136 LBS.
SAFETY BAR..... 5 LBS.



TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)
FRAME.....270 LBS.
GRATE.....260 LBS.
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

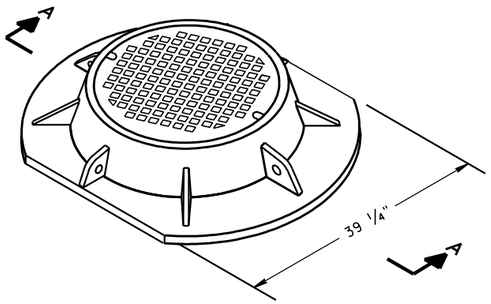
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

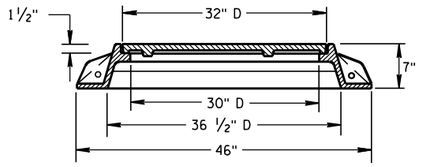
6

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

6

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



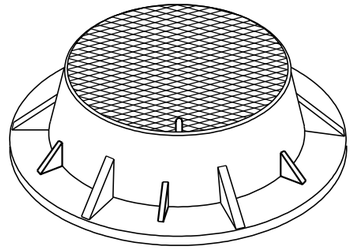


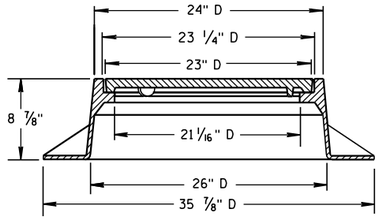
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

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

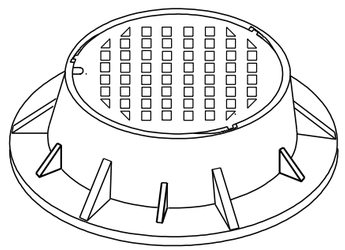


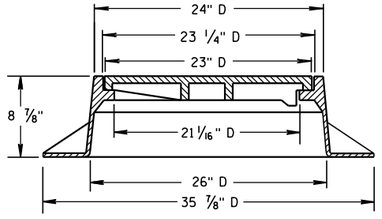


TYPE "J"

(APPROXIMATE WEIGHT 267 LBS.)

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





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 267 LBS.)

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

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

GENERAL NOTES

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

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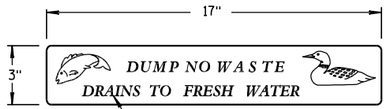
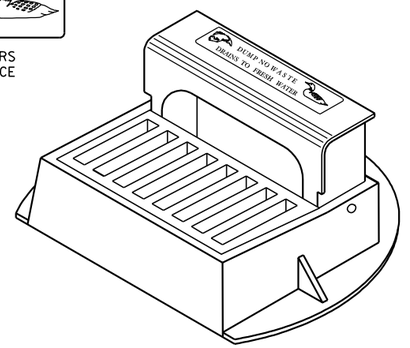
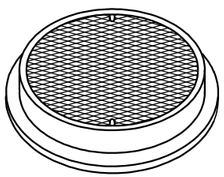
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

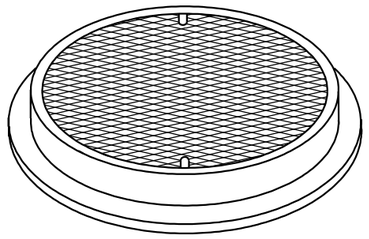
THE ACTUAL WEIGHT OF COVERS MAY VARY WITH 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

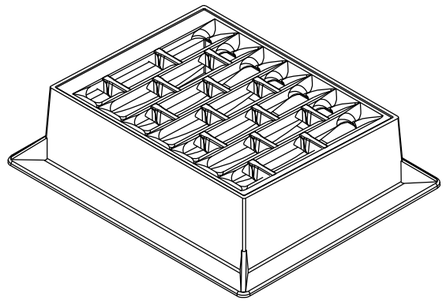


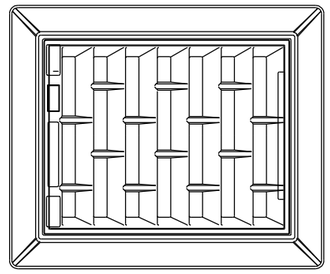
LOGO DETAIL

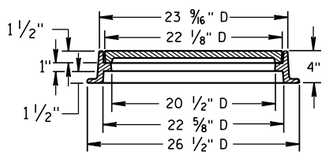








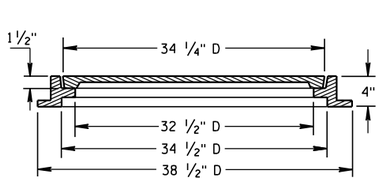




TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

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



TYPE "M"

(APPROXIMATE WEIGHT 377 LBS.)

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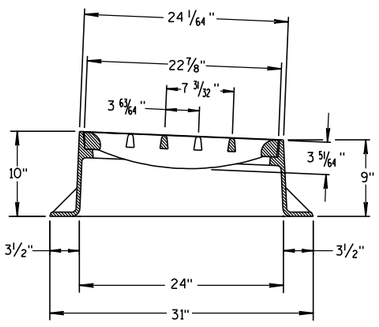
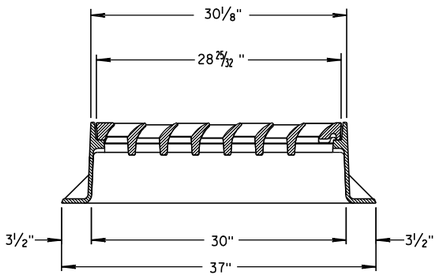
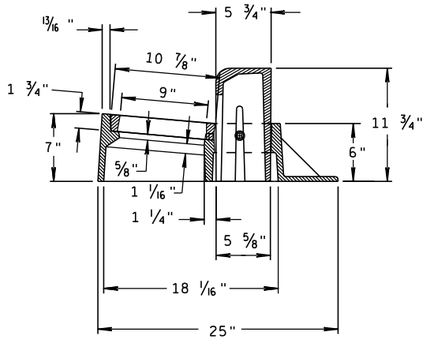
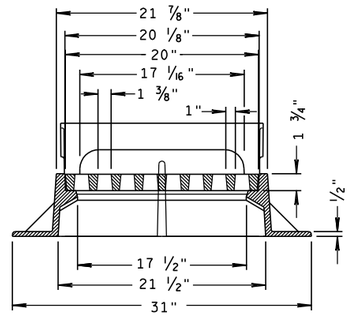
LID..... 252 LBS.





INLET COVER TYPE "BW"





INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 344 LBS.)

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

320

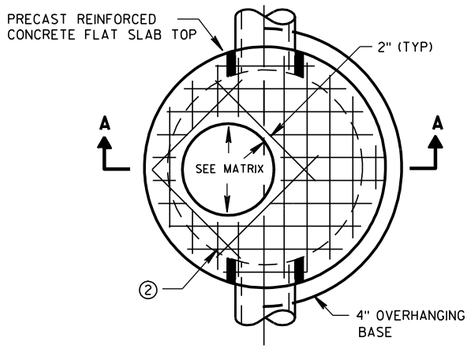
NT

6

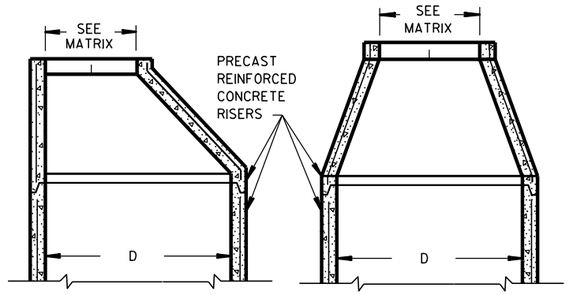
S.D.D. 8 A 5-18d

6

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

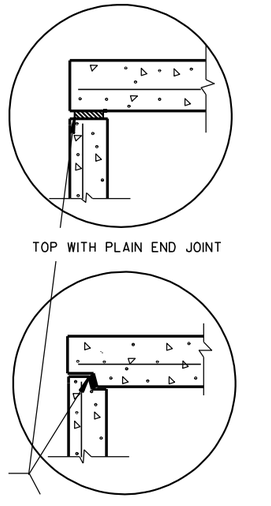


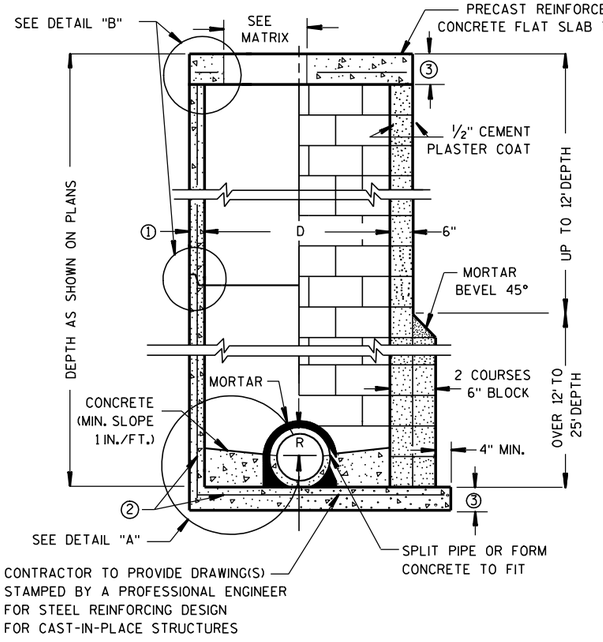
PLAN VIEW CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

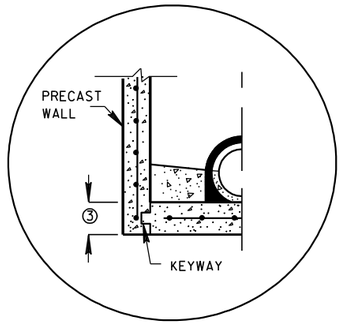
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



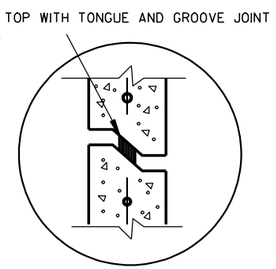


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

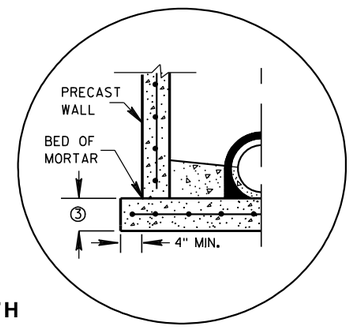
CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②



PRECAST REINFORCED
CONCRETE WITH INTEGRAL BASE OPTION

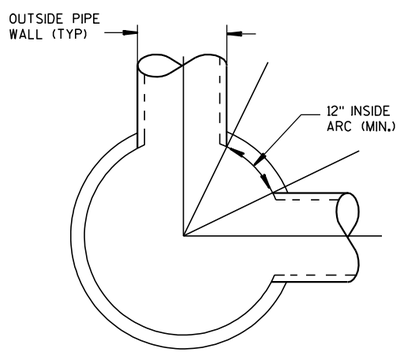


DETAIL "B"



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

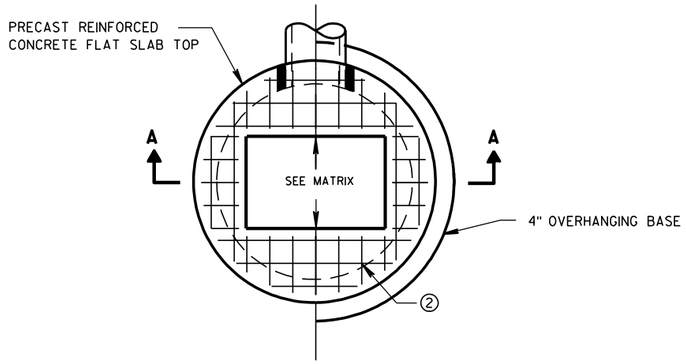
6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

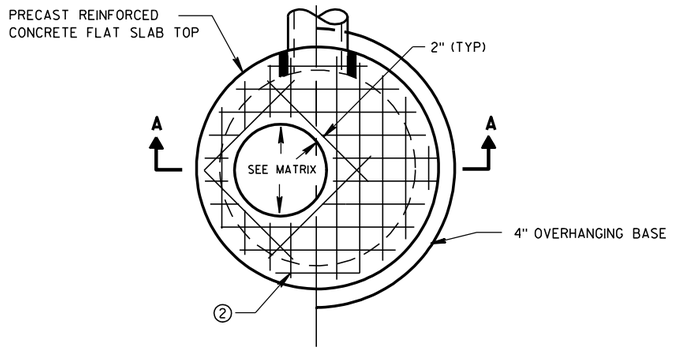
FHWA

321

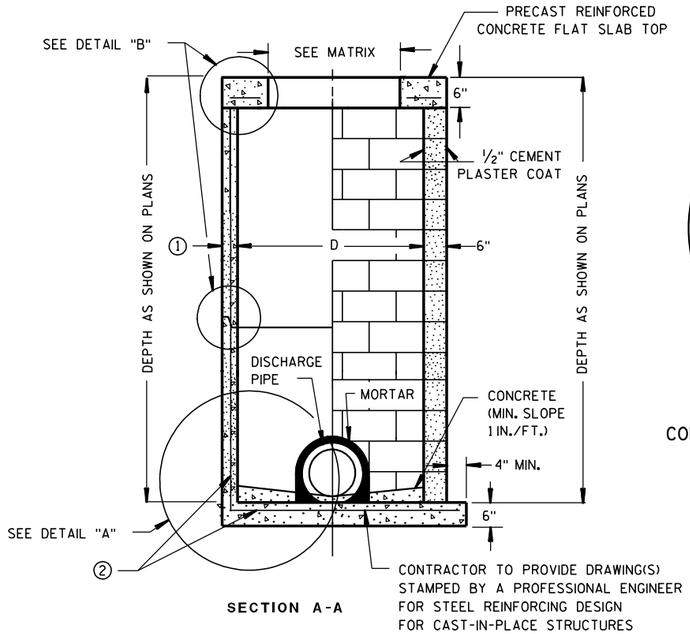
6
S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

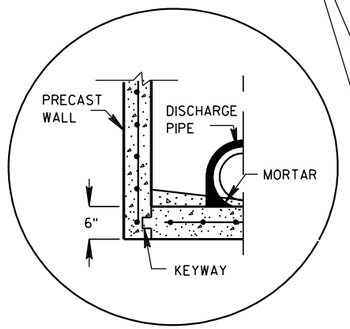


SECTION A-A

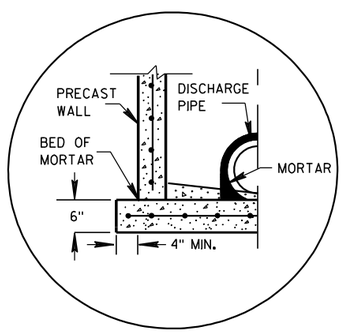
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

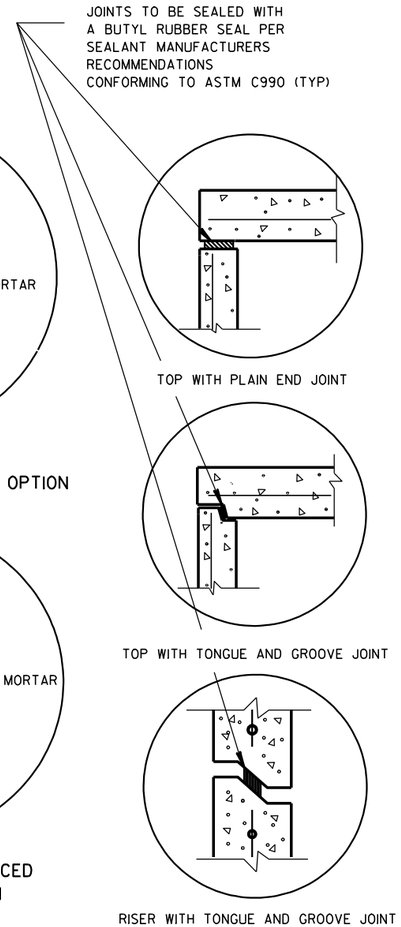


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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.

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.

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.

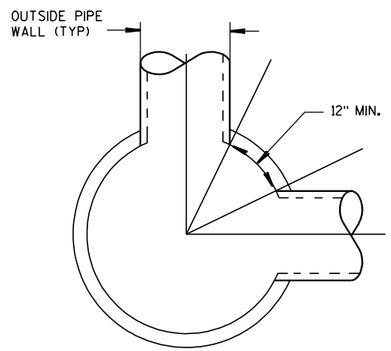
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

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

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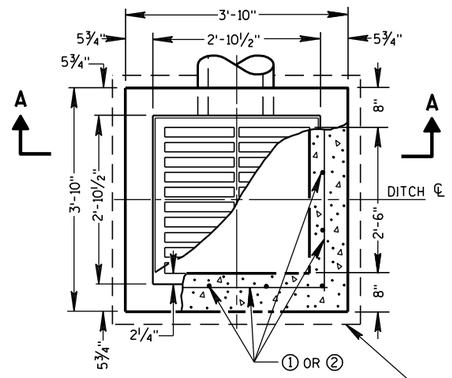
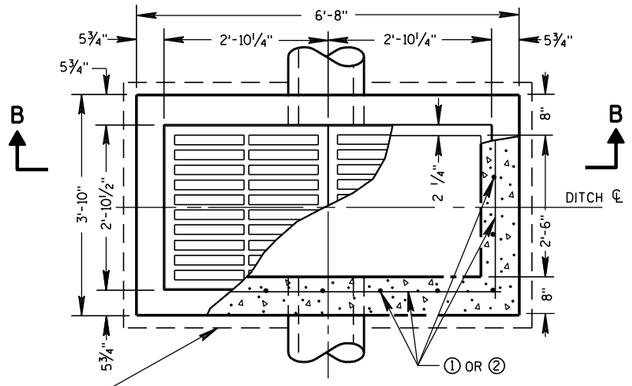
S.D.D. 8 C 6-1

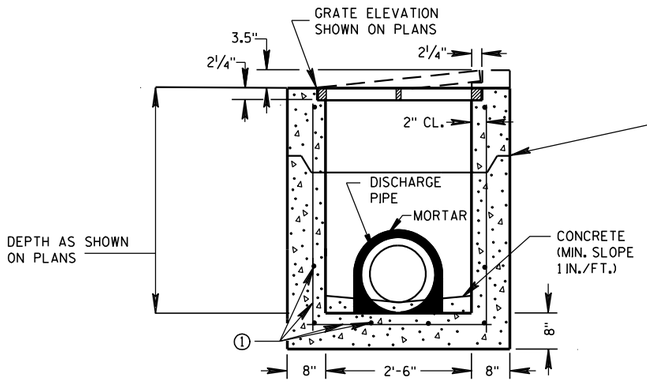


PLAN VIEW

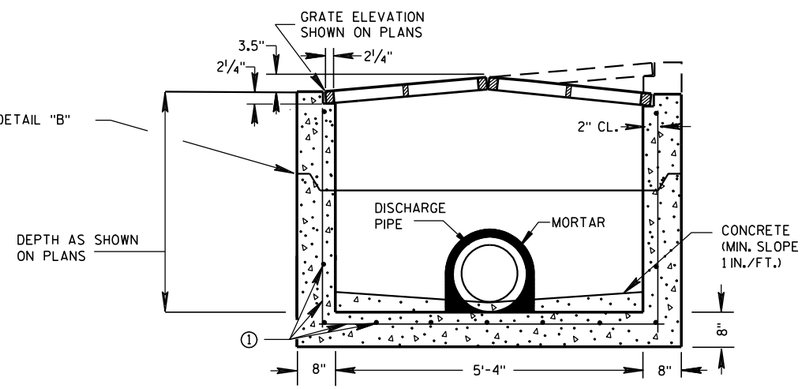


PLAN VIEW

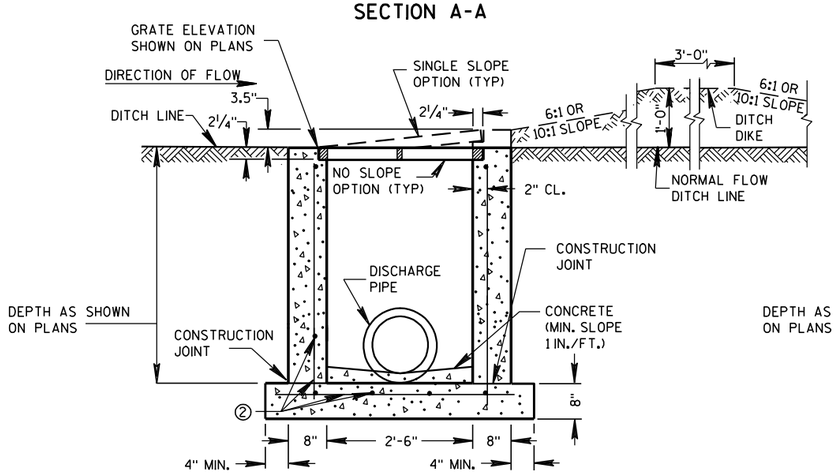
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



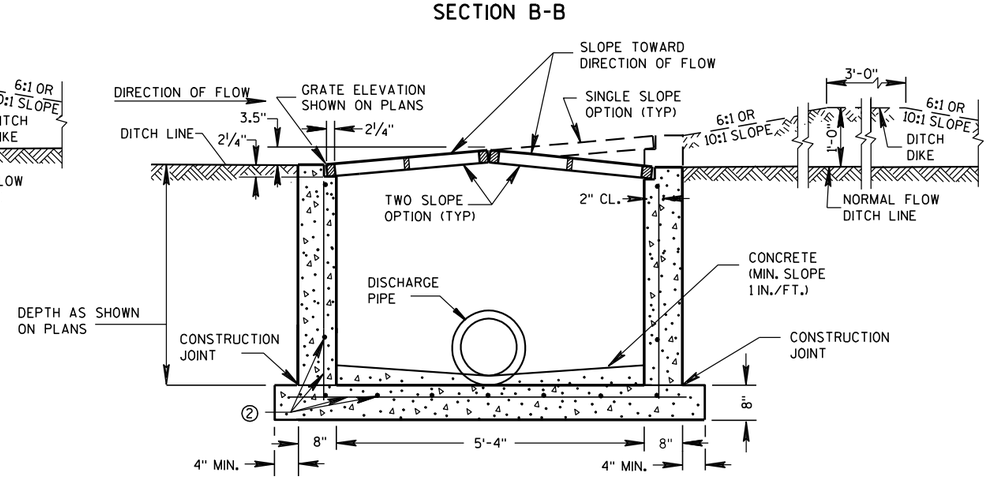
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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 INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

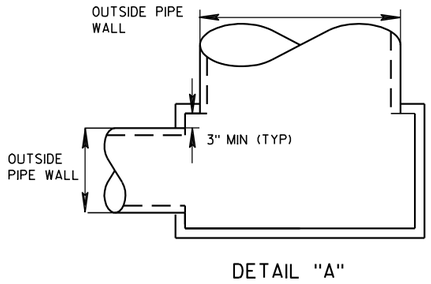
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

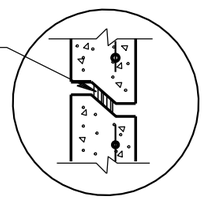
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 8 C 8-1

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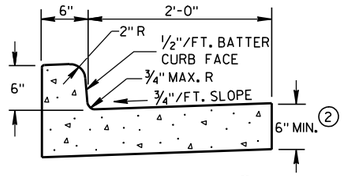
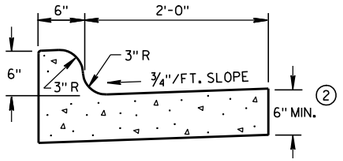
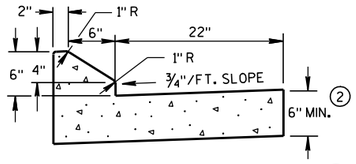


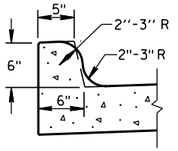
TYPES A & D (1)



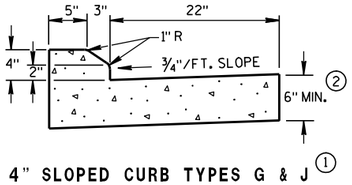
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

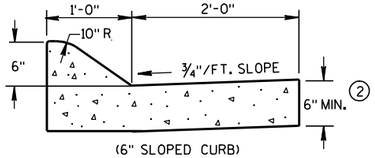


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

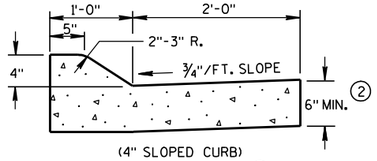


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

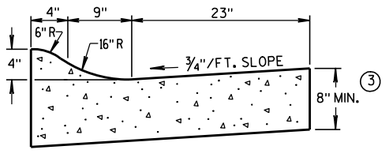


(6" SLOPED CURB)



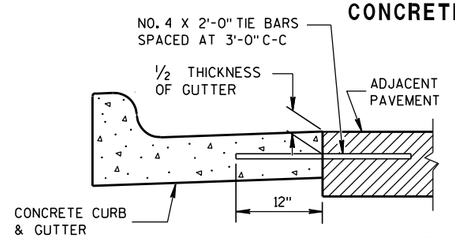
(4" SLOPED CURB)

TYPES A & D (1)



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

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)

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

GENERAL NOTES

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

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

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

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

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

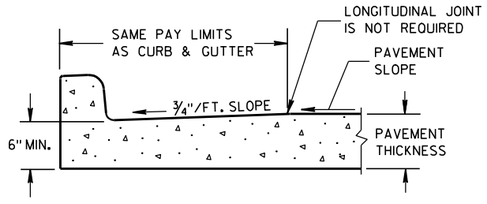
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

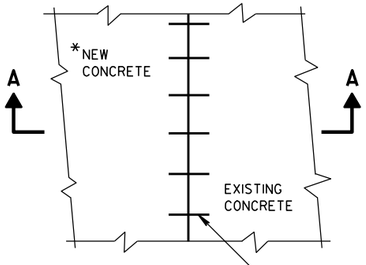
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

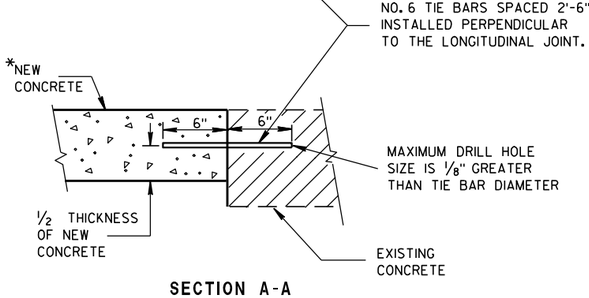


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



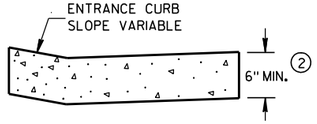
PLAN VIEW

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

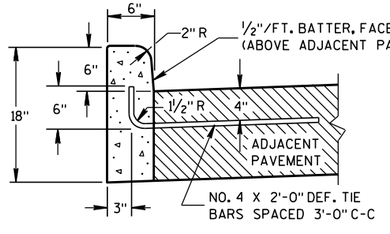


SECTION A-A

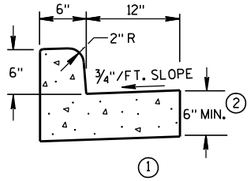
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

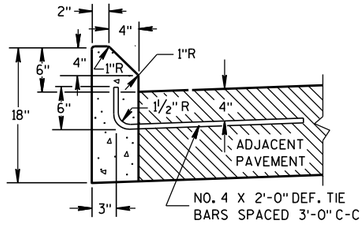


(1) TYPES A & D

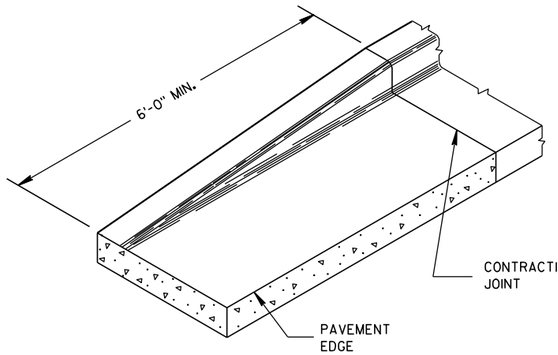


(1) TYPES A & D

CONCRETE CURB & GUTTER 18"



(1) TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
9/4/08 DATE	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA	324 ENT

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S.D.D. 8 D 1-17

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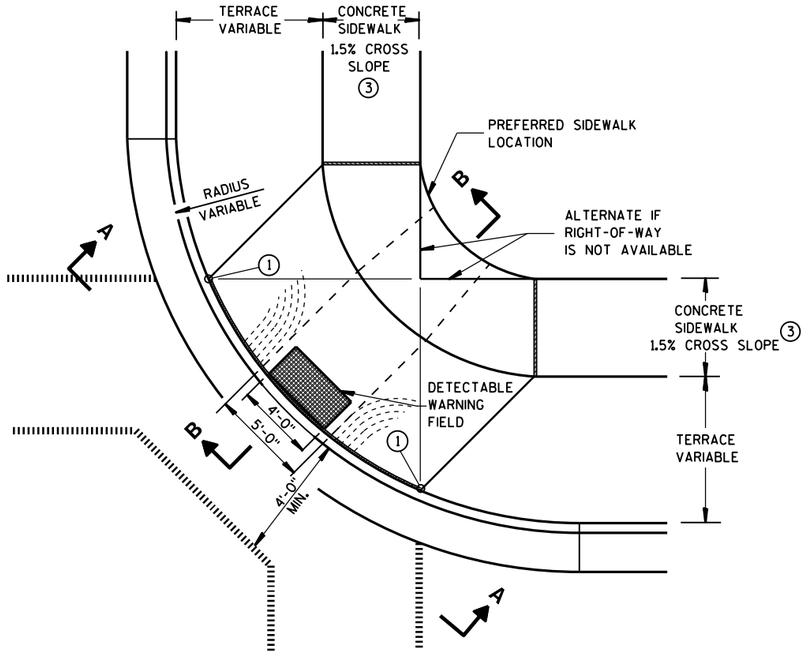
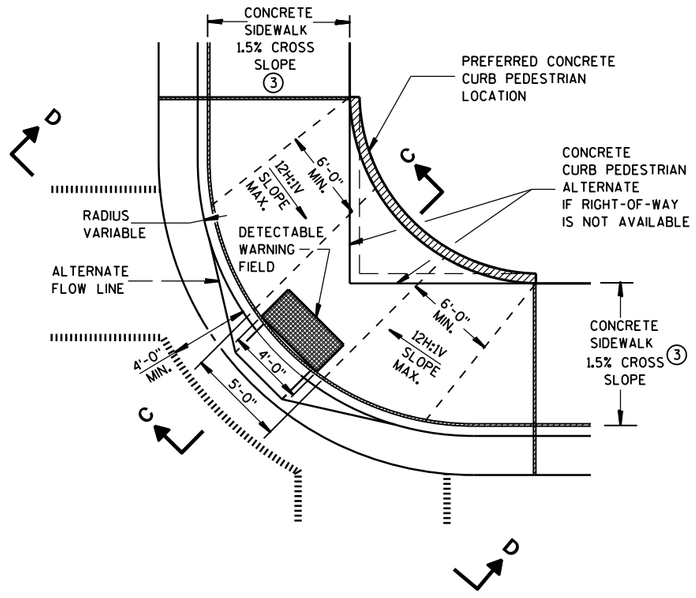
S.D.D. 8 D 1-17



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

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

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

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

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

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

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

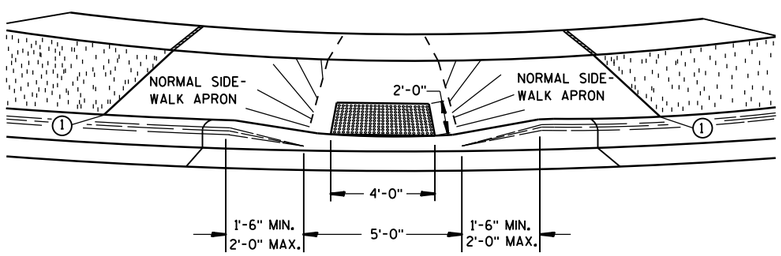
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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

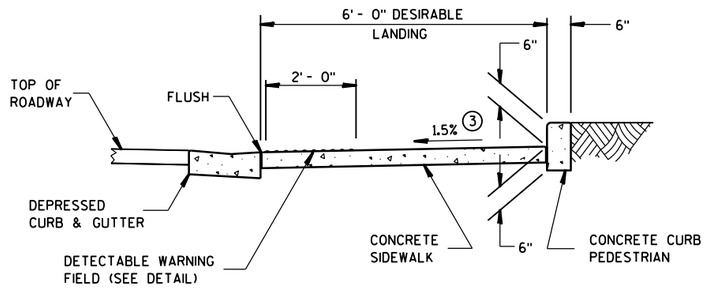
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

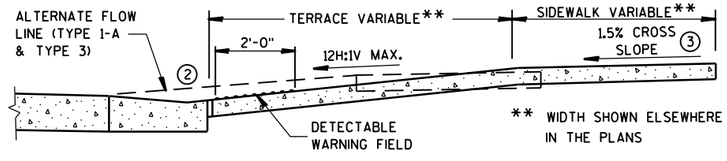
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



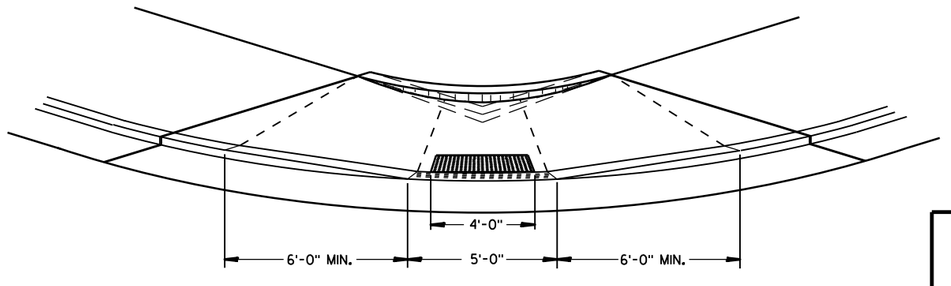
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

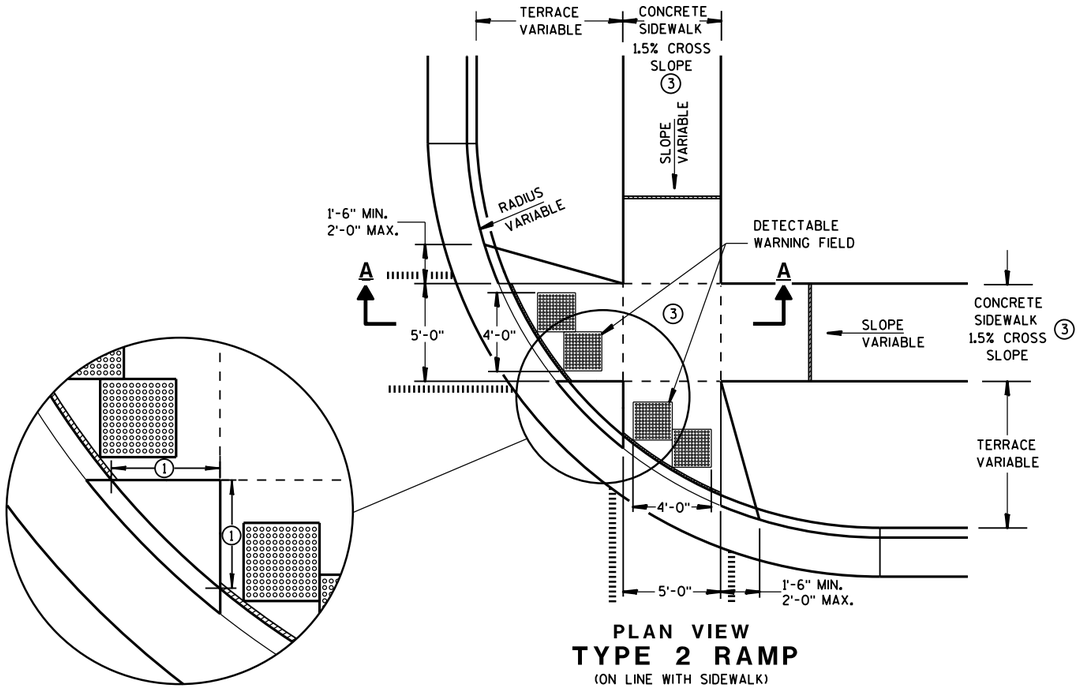
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

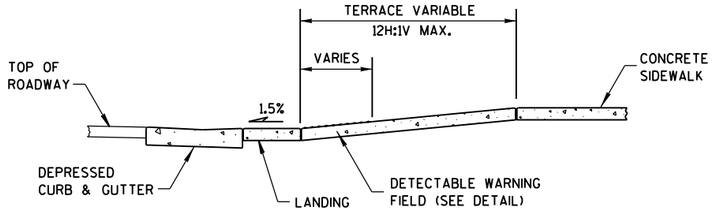
S.D.D. 8 D 5-15a



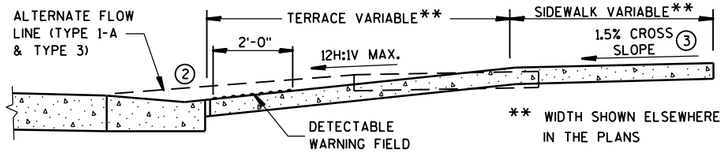
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

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

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

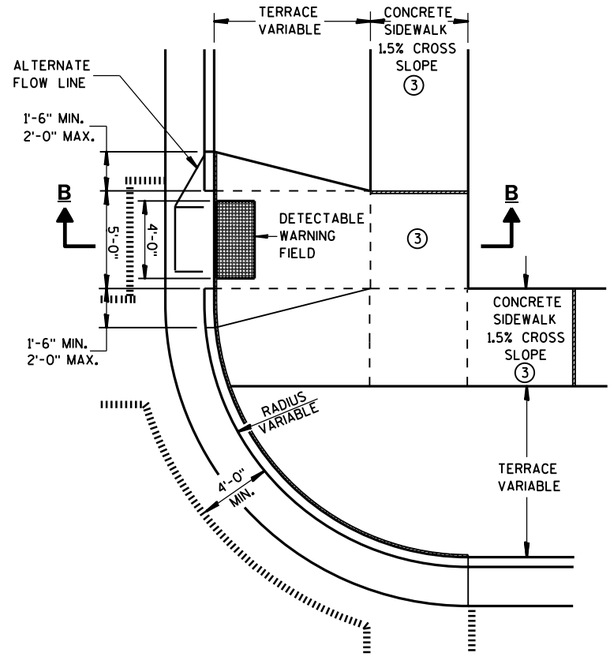
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

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

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

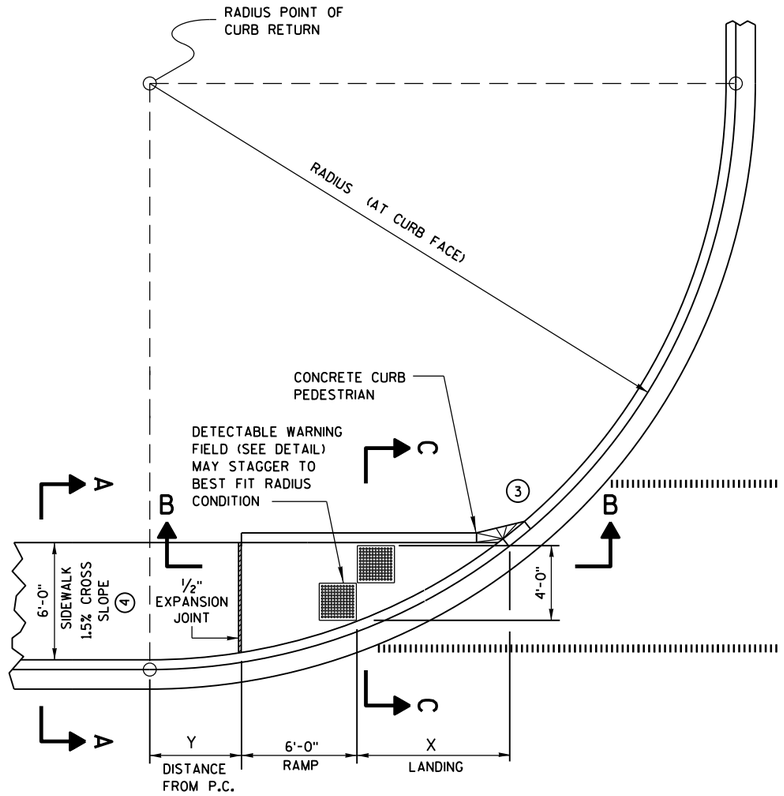
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

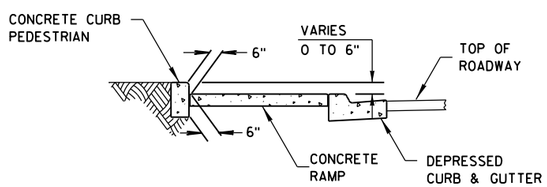
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

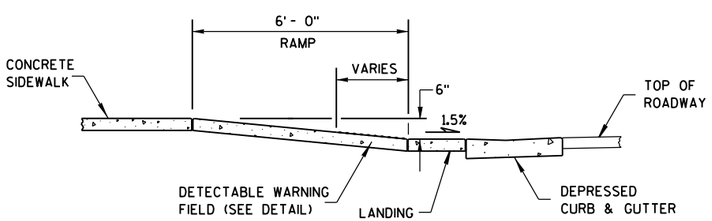
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



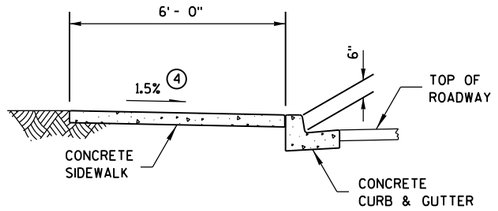
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

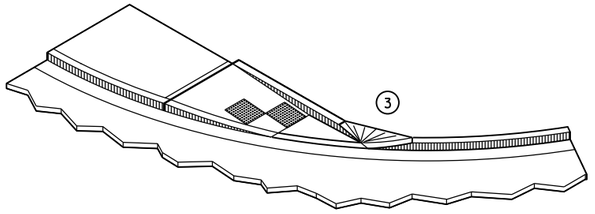
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

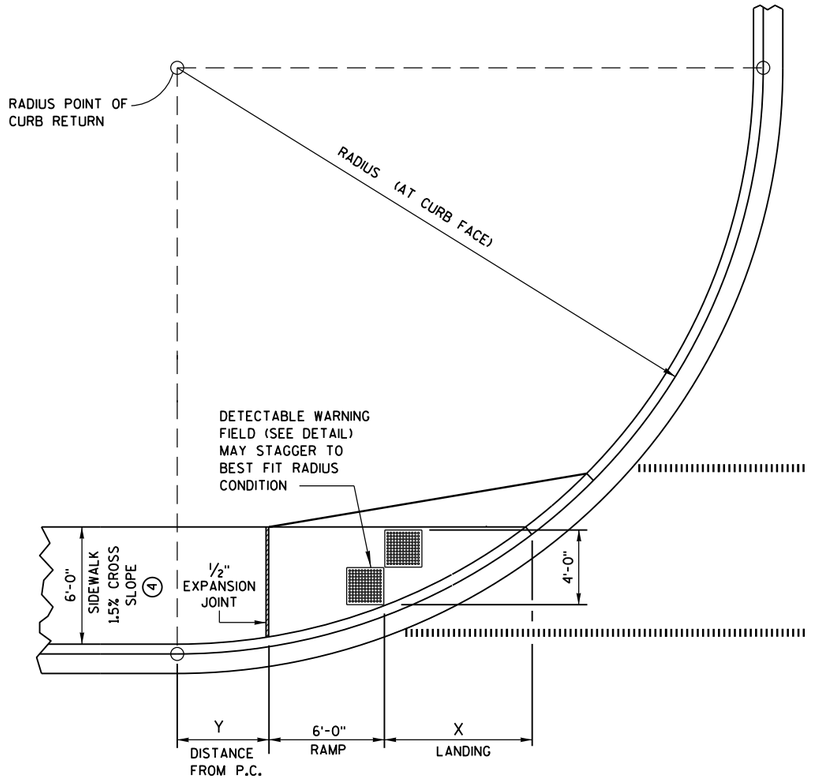
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

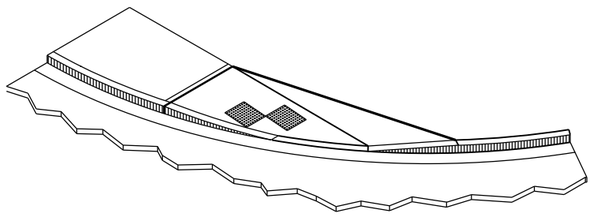
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

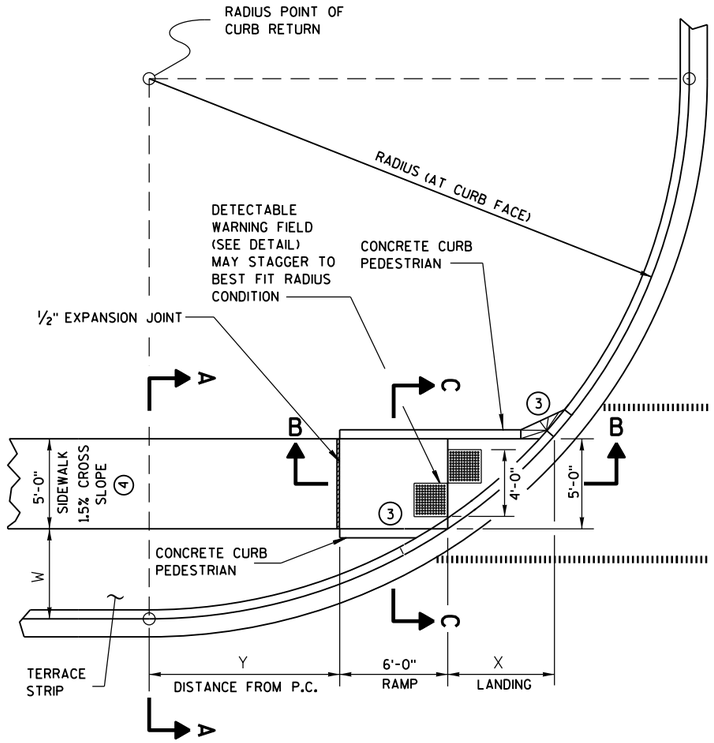
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

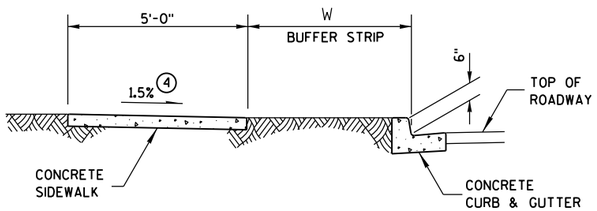
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

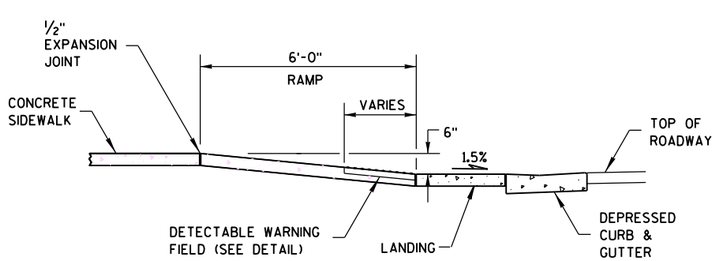
S.D.D. 8 D 5-15c



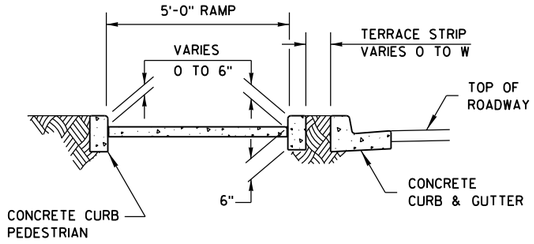
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

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

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

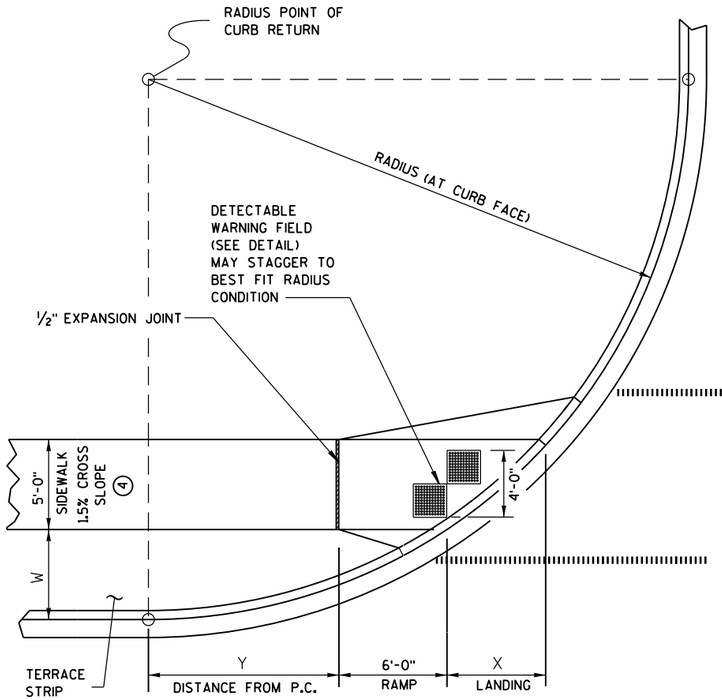
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

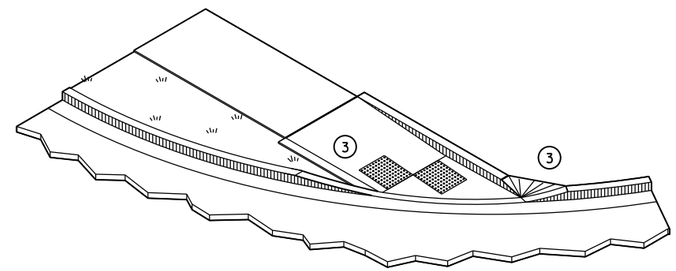
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

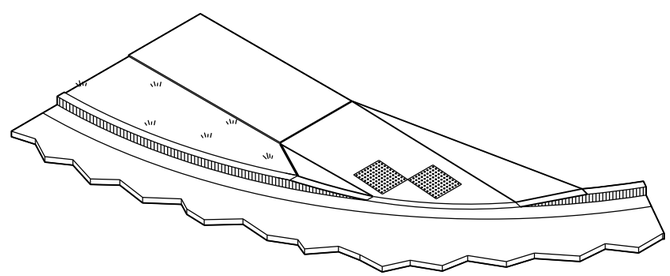
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



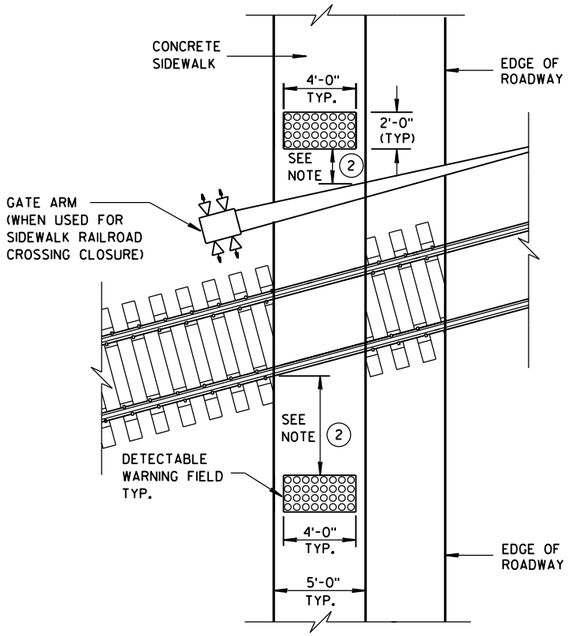
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

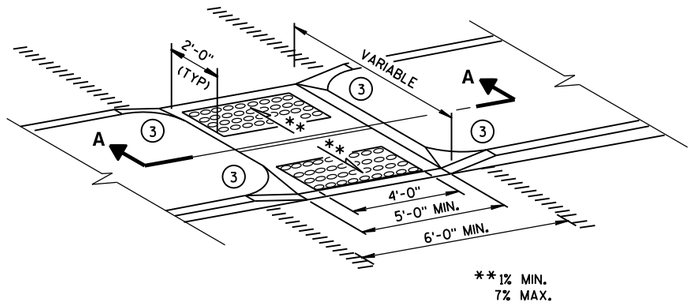
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

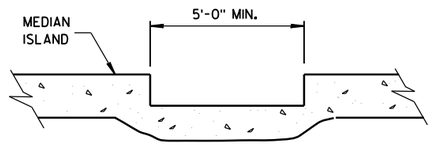
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

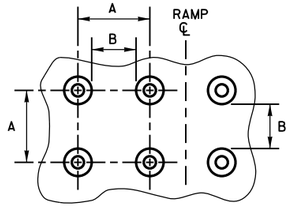
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



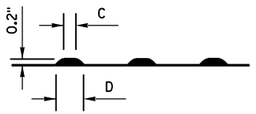
SECTION A-A



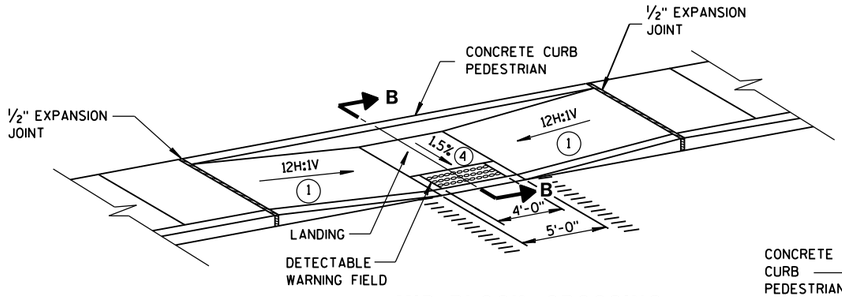
PLAN VIEW

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

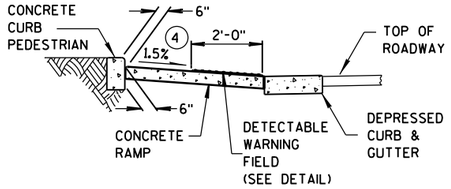
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

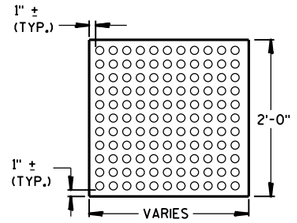


MID-BLOCK CROSSING
TYPE 7A



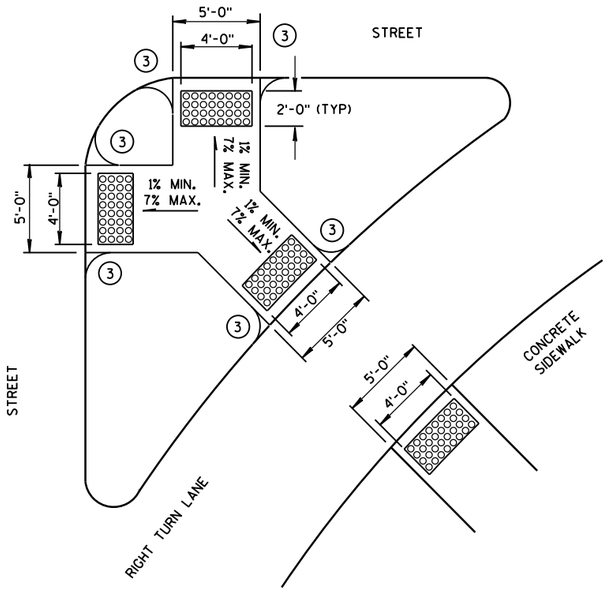
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

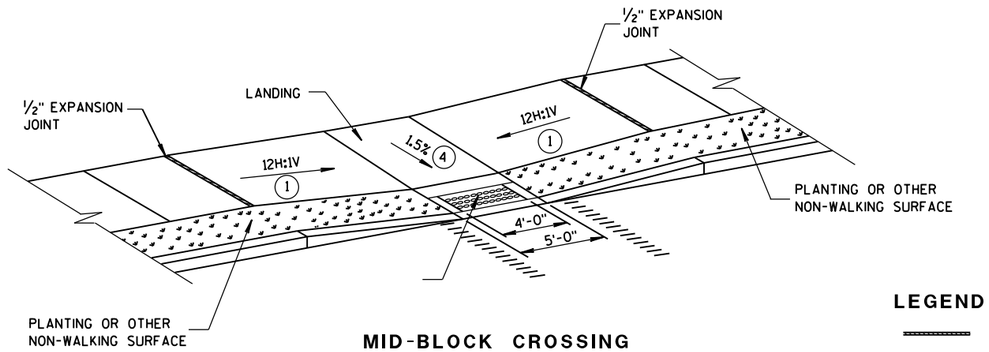


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

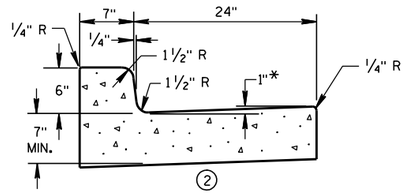
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

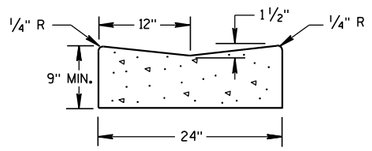
S.D.D. 8 D 5-15e

6

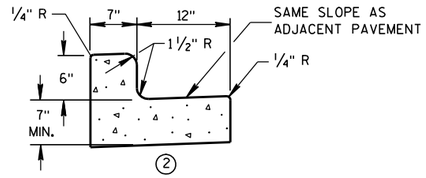
S.D.D. 8 D 5-15e



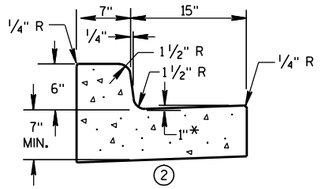
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

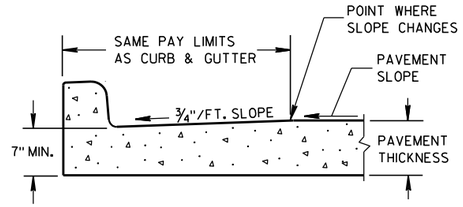


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

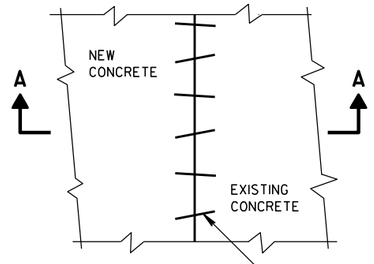
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

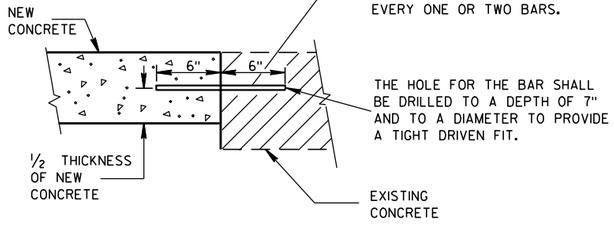
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

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

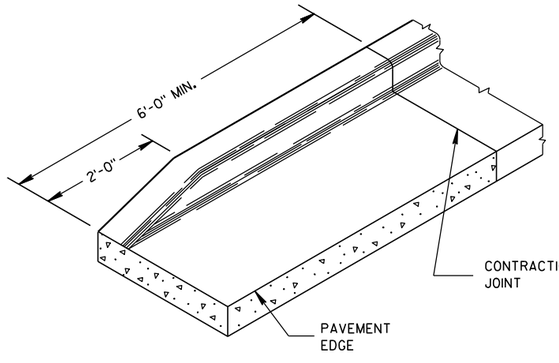
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



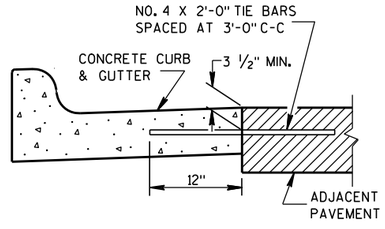
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

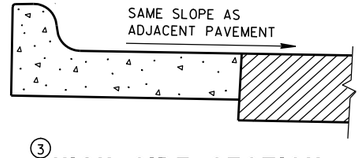
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

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ENT

FHWA

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S.D.D. 8 D 16-10

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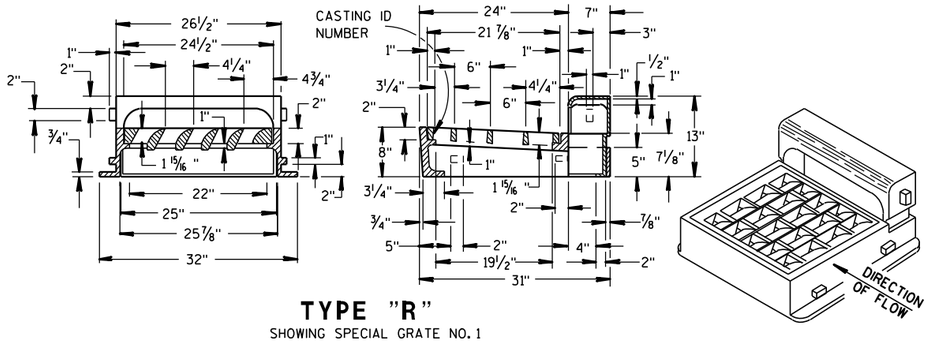
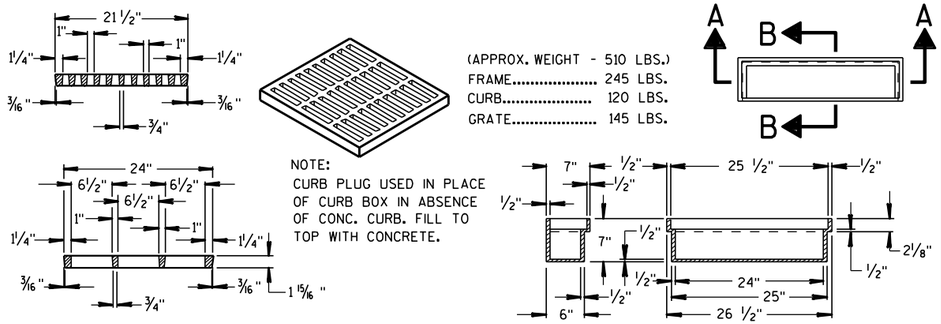
S.D.D. 8 D 16-10

INLET COVERS



TYPE "R"

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



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

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

SECTION B-B SECTION A-A

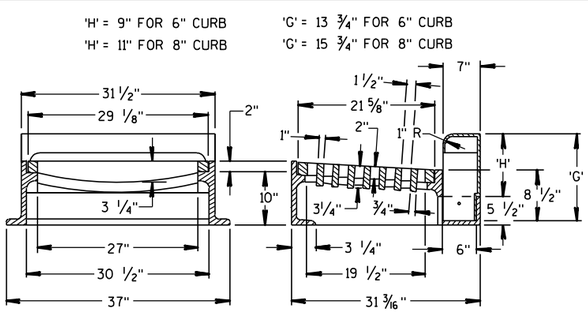
GRATE FOR TYPE "R" INLET COVER

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

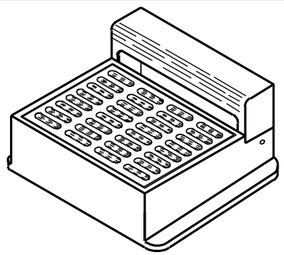
SPECIAL CURB PLUG "P"

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

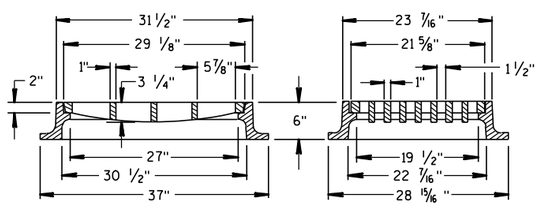
'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



TYPE "W"



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



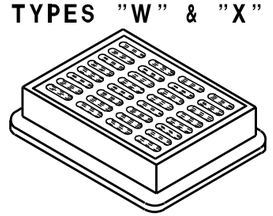
TYPE "X"

(APPROX. WEIGHT - 470 LBS.)

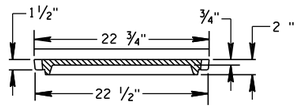
ALTERNATE GRATE

(FOR EXPRESSWAY RAMPS)

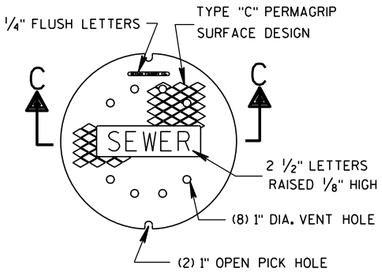
TYPES "W" & "X"

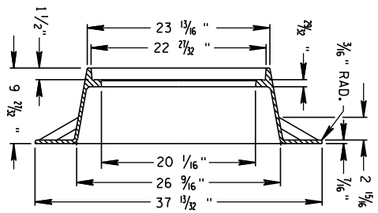


MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

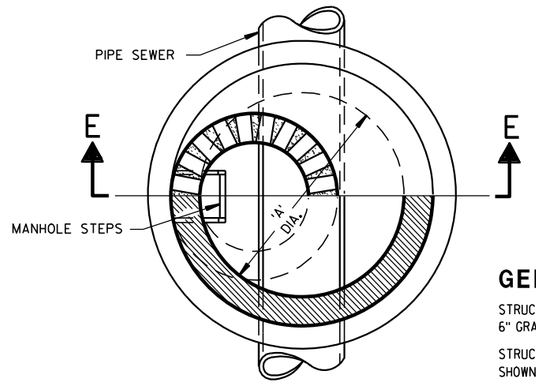
TABLE OF DIMENSIONS

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

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

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

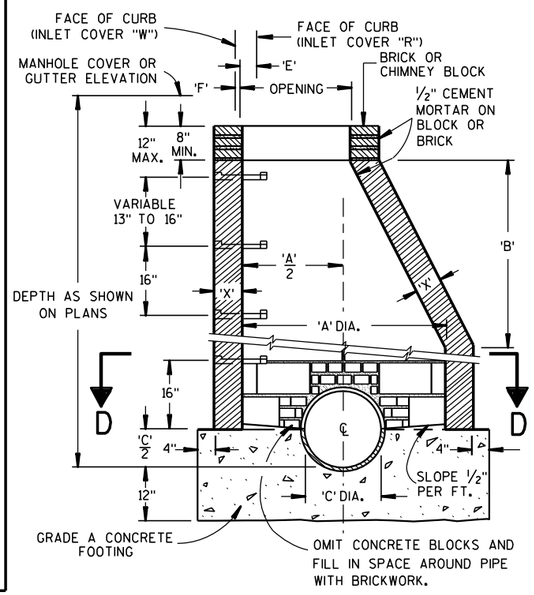
MANHOLE



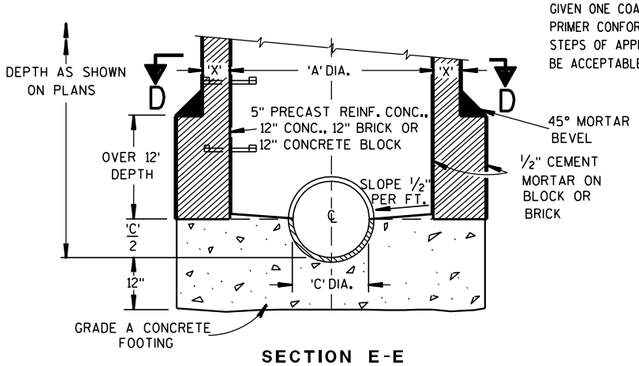
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

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



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

GENERAL NOTES

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

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

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

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

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

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

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

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

MANHOLE STEPS

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

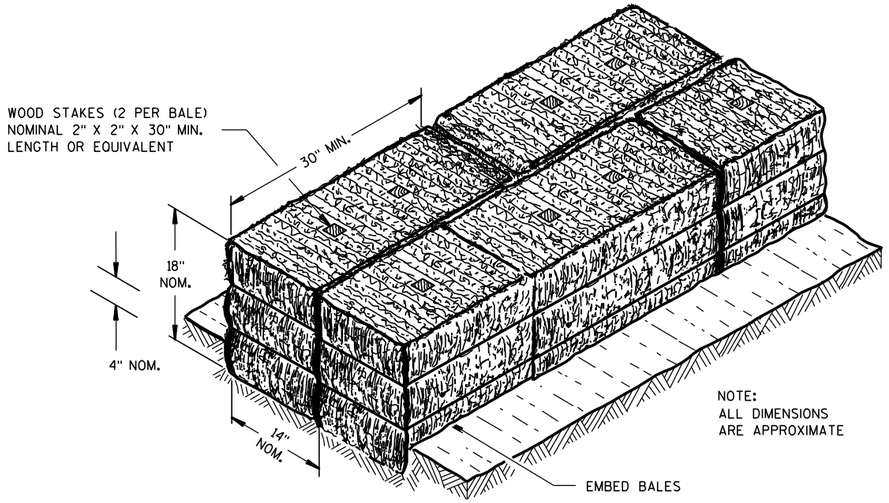
SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC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

MANHOLES, MANHOLE & INLET COVERS

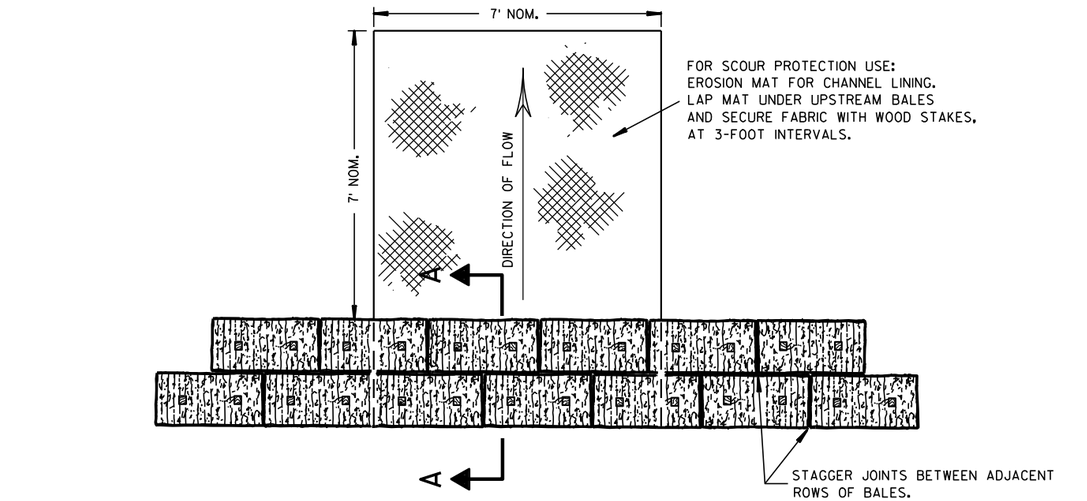
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2011 — DATE
/S/ Jerry H. Zogg — ROADSIDE STANDARDS ENGINEER
331
FHWA

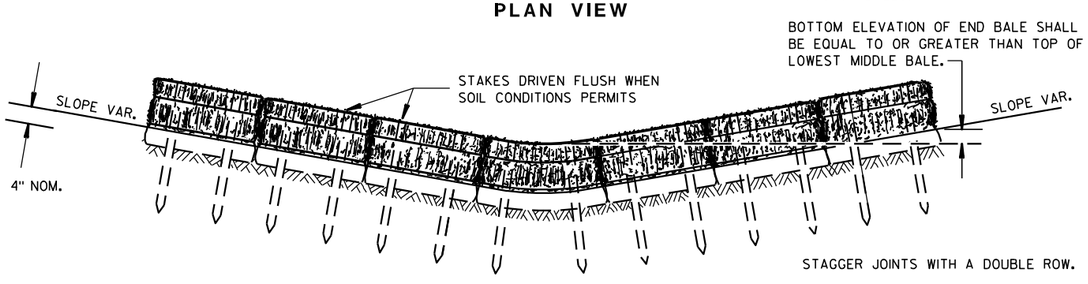
6
S.D.D. 8 D 17-6



SECTION A-A



PLAN VIEW



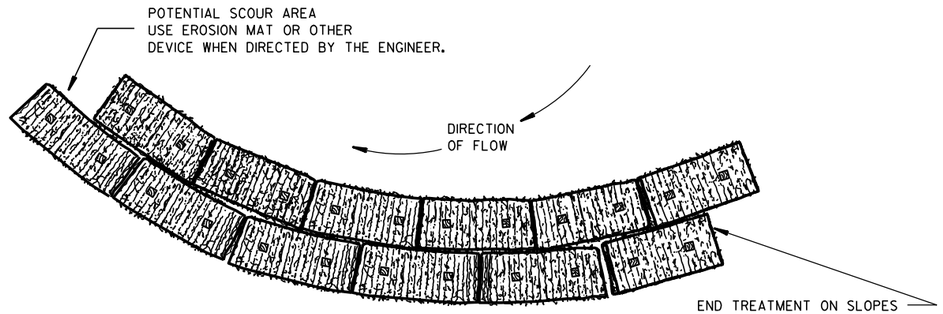
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

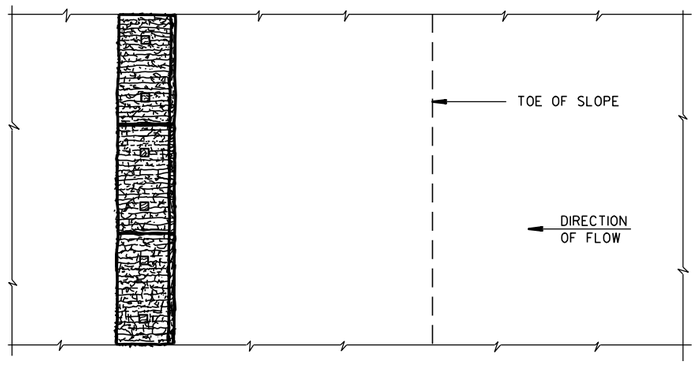
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

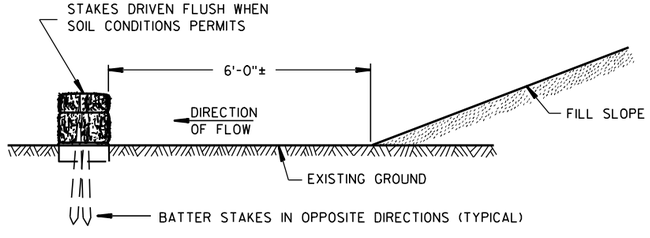


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

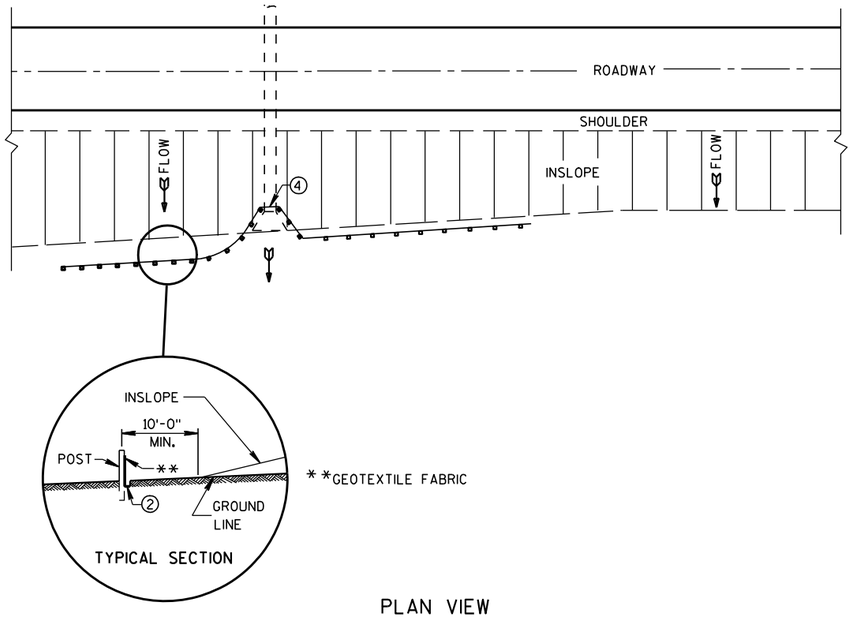
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

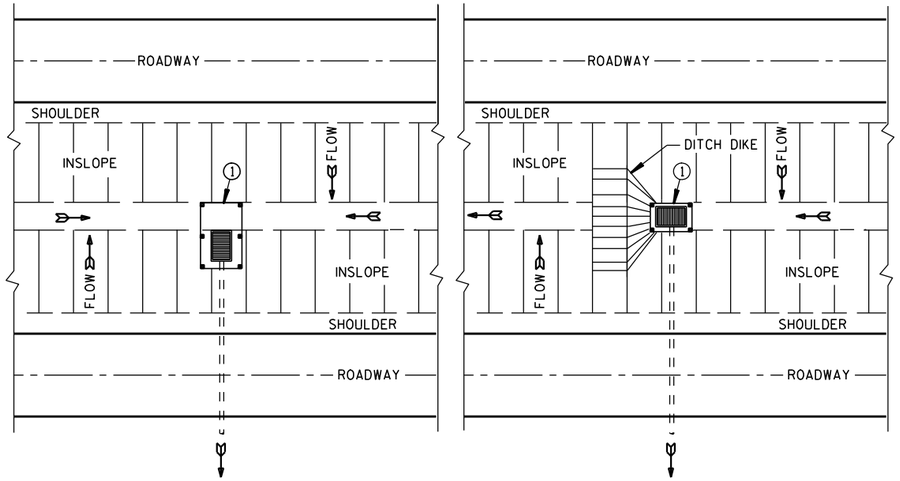
6

S.D.D. 8 E 8-3



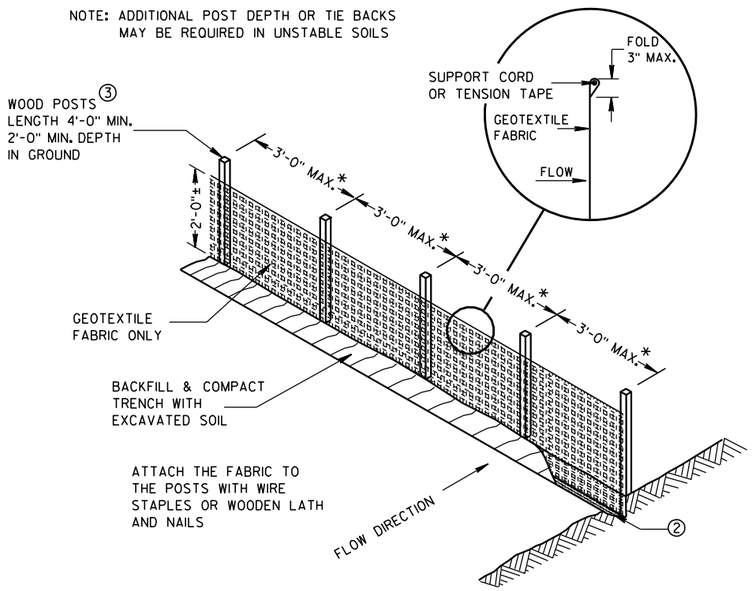
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



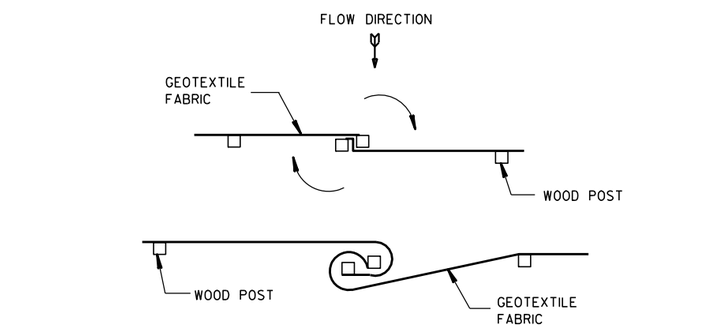
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

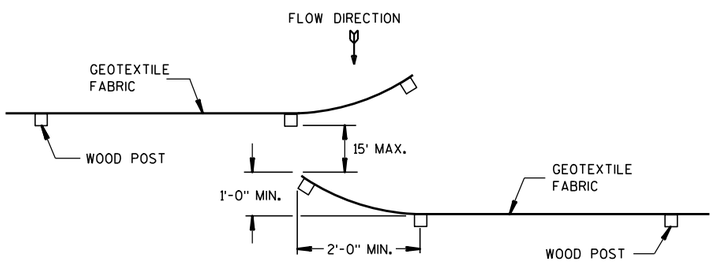


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



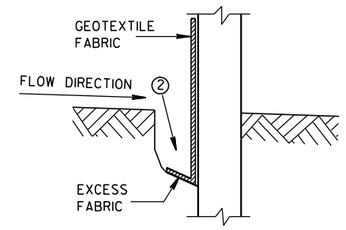
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

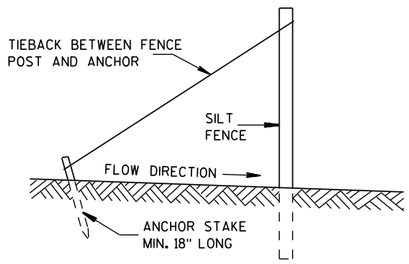
GENERAL NOTES

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



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

6

S.D.D. 8 E 9-6

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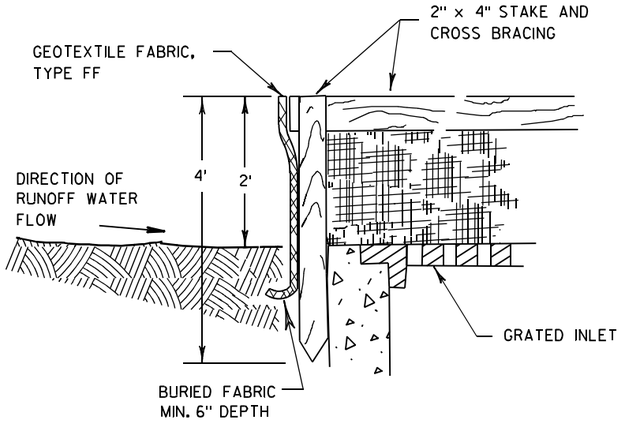
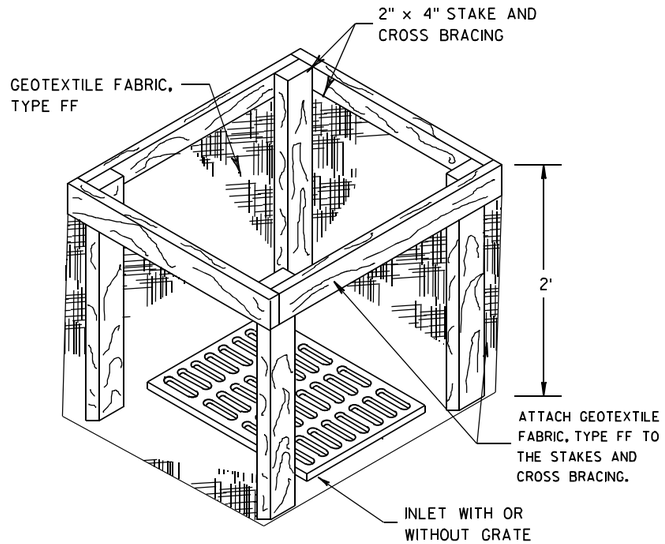
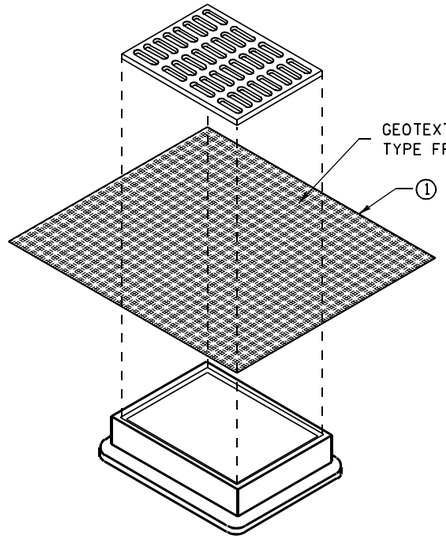
S.D.D. 8 E 9-6



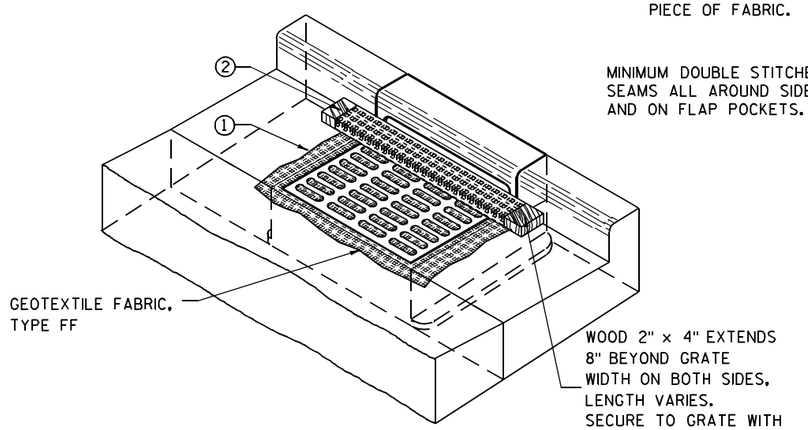


INLET PROTECTION, TYPE A

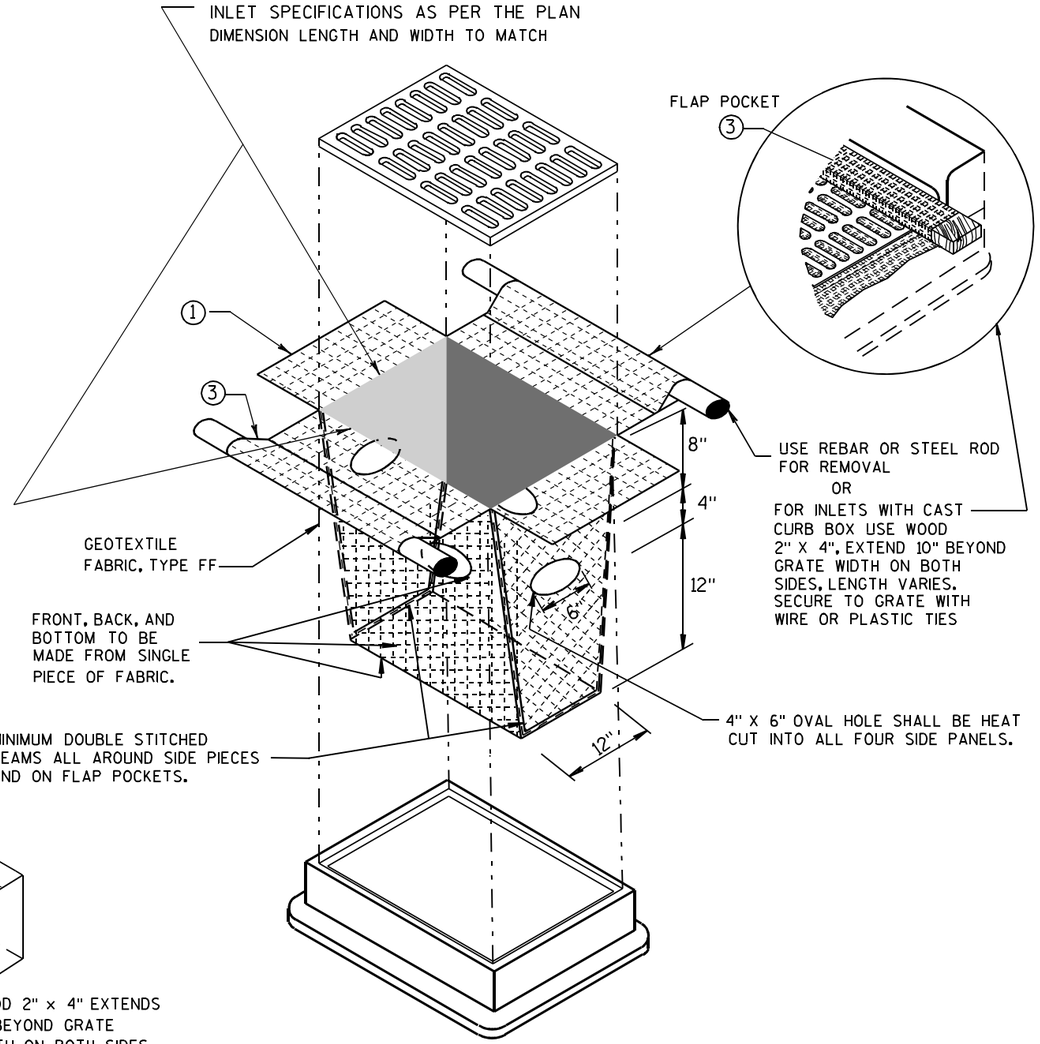


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

6

S.D.D. 8 E 10-2

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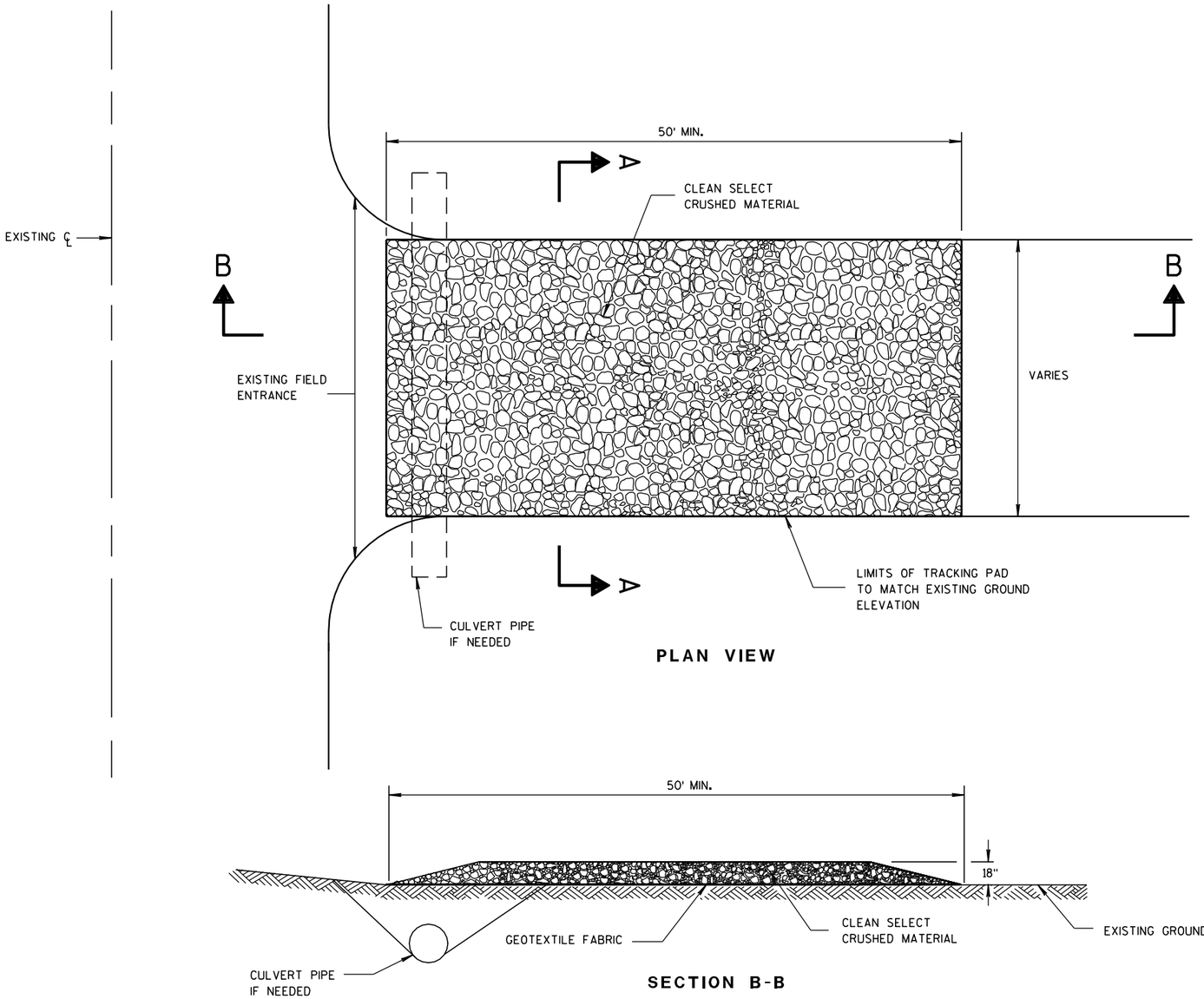
S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

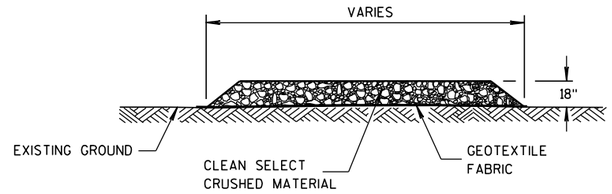
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER

335

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FHWA

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

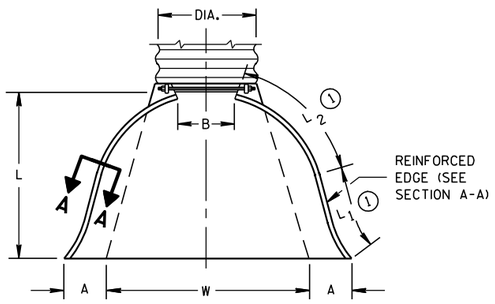
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

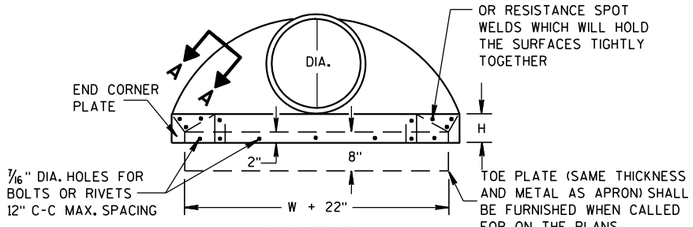
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

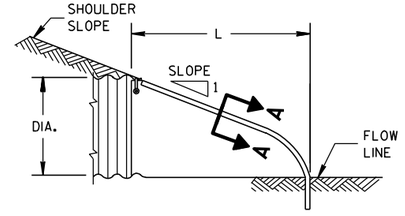
*MINIMUM
**MAXIMUM



PLAN VIEW

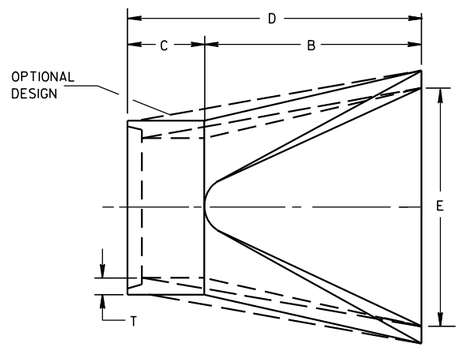


END VIEW

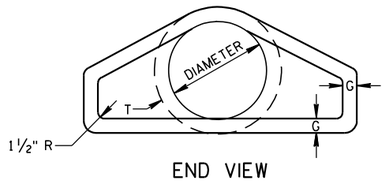


SIDE ELEVATION

METAL ENDWALLS



PLAN



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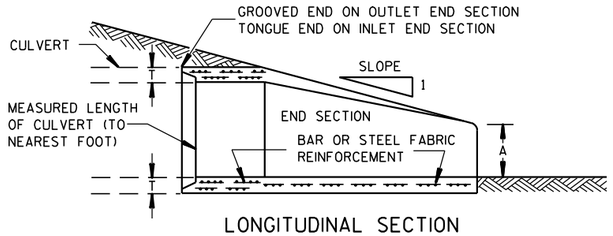
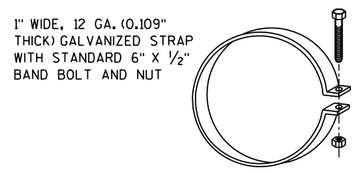


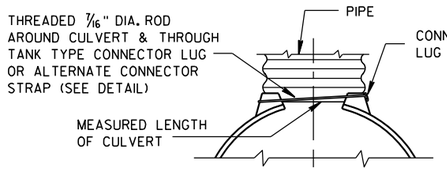
LONGITUDINAL SECTION

CONCRETE ENDWALLS

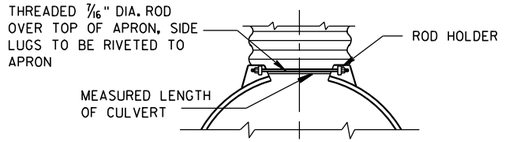


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

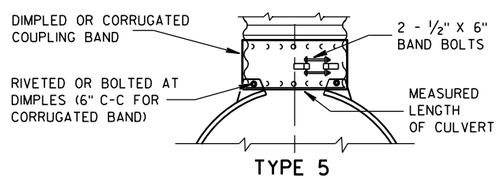


TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE

TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

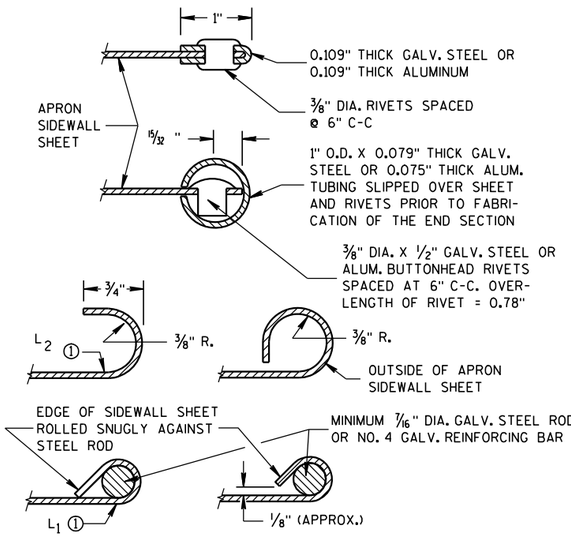
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

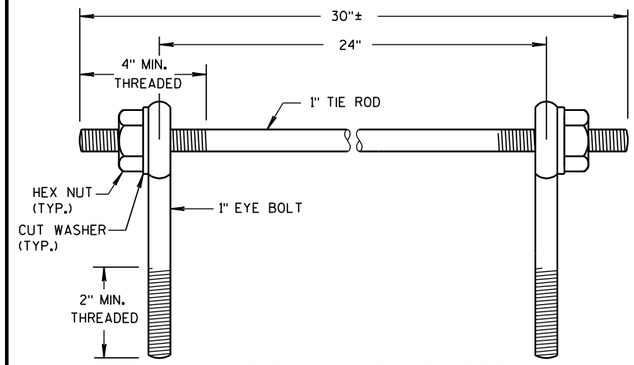
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

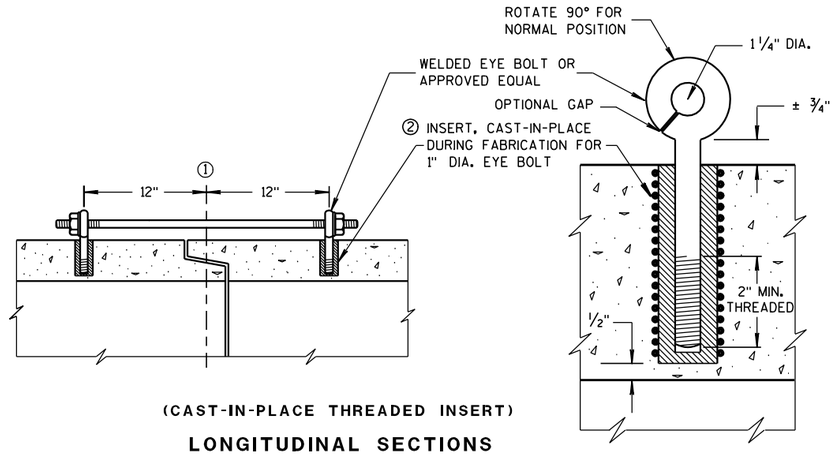
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

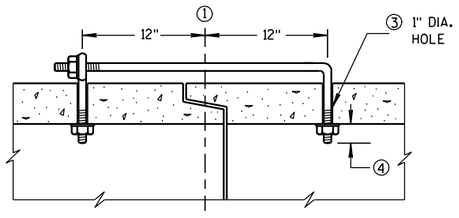
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

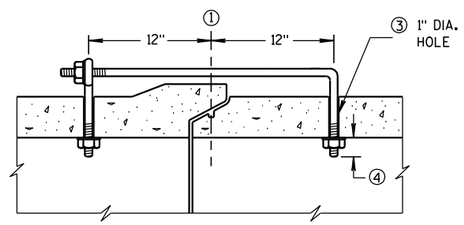
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

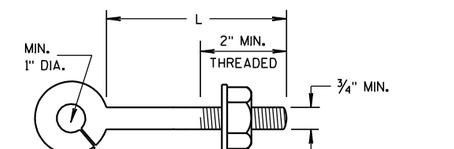


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

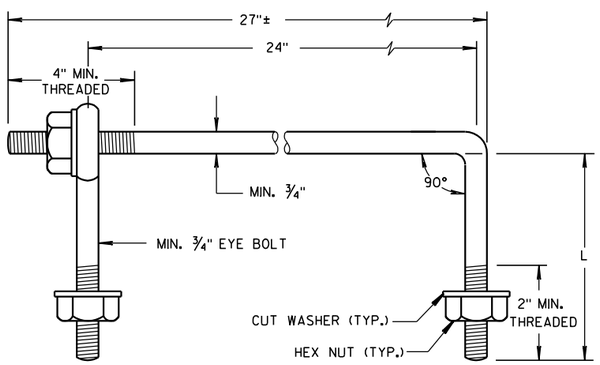
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

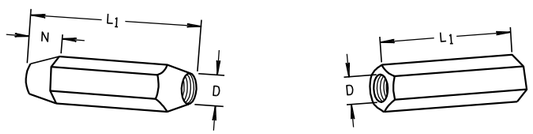
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

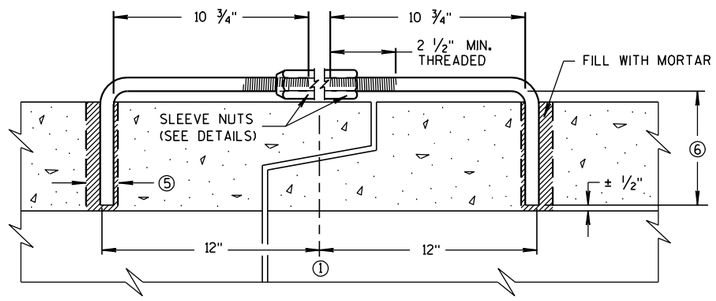
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

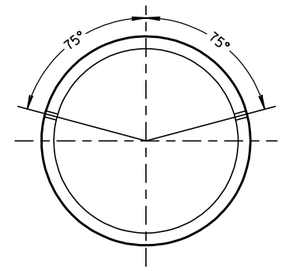
SLEEVE NUTS



LONGITUDINAL SECTION

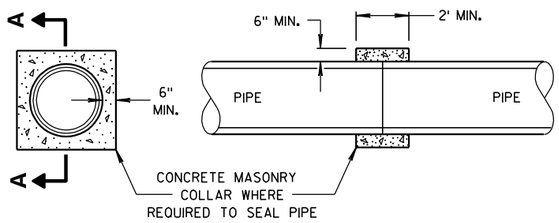
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
337
FHWA

6

S.D.D. 8 F 4-7

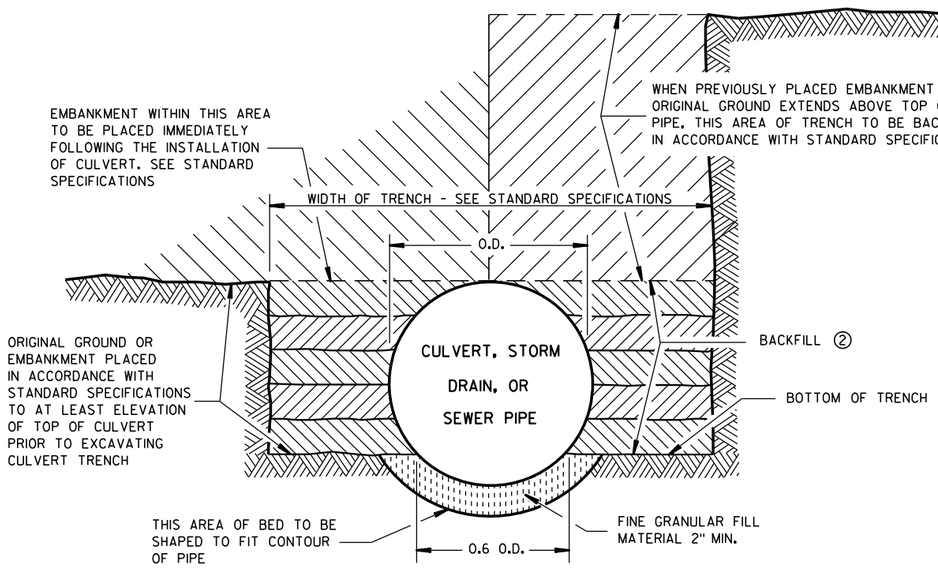
GENERAL NOTES

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

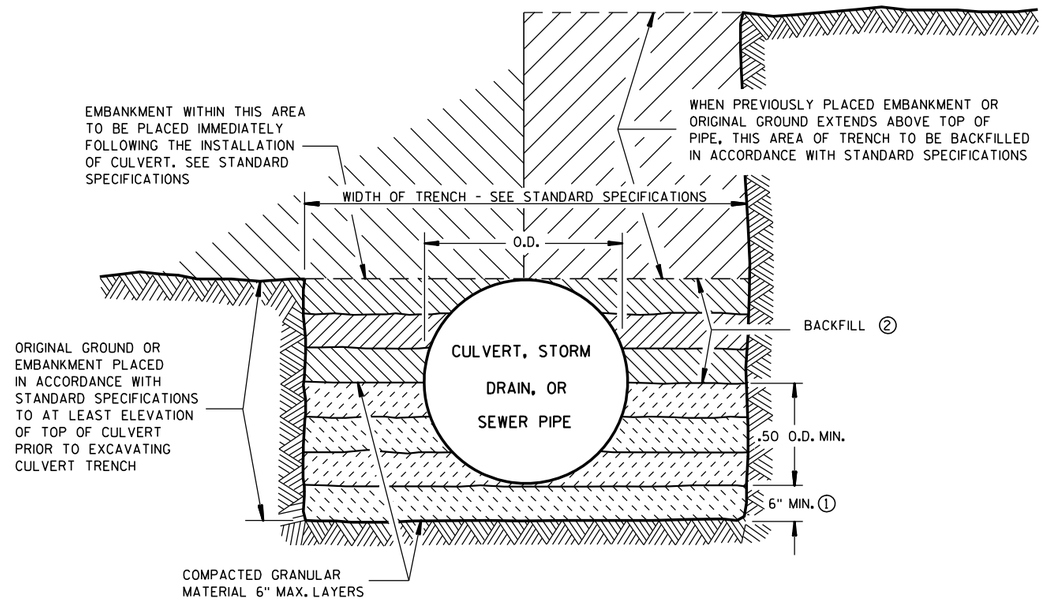
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



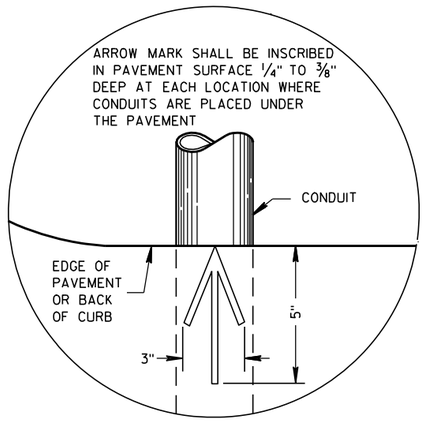
GRANULAR FOUNDATION

CLASS "B" BEDDING

CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	HWYS

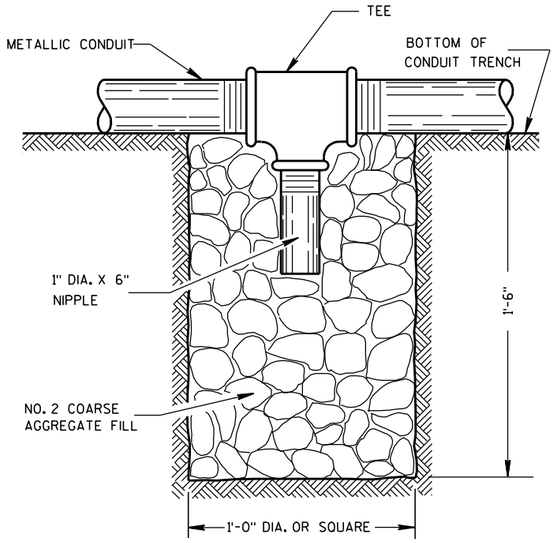
6

S.D.D. 8 F 5-1



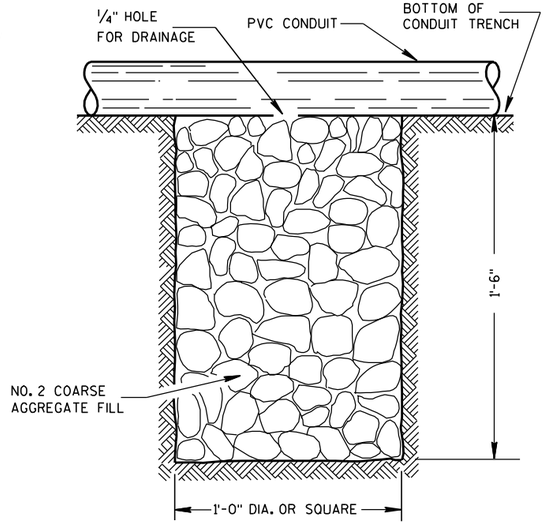
PLAN VIEW

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.

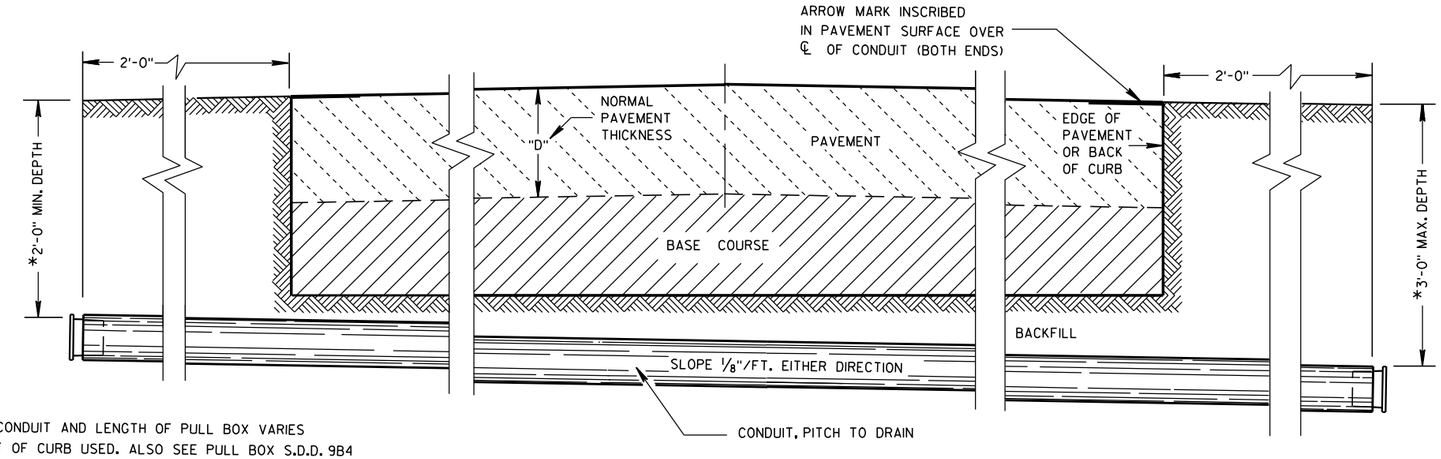
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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 Aganthanarayanan — STATE ELECTRICAL ENGI

339

HWYS

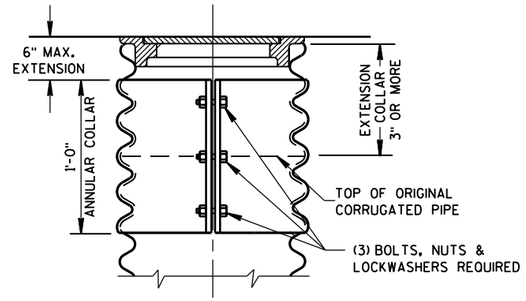
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

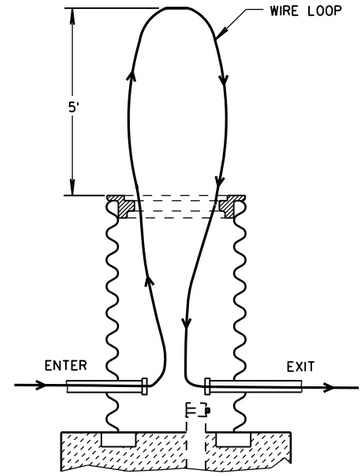
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

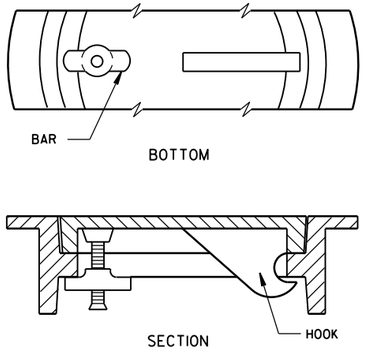
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

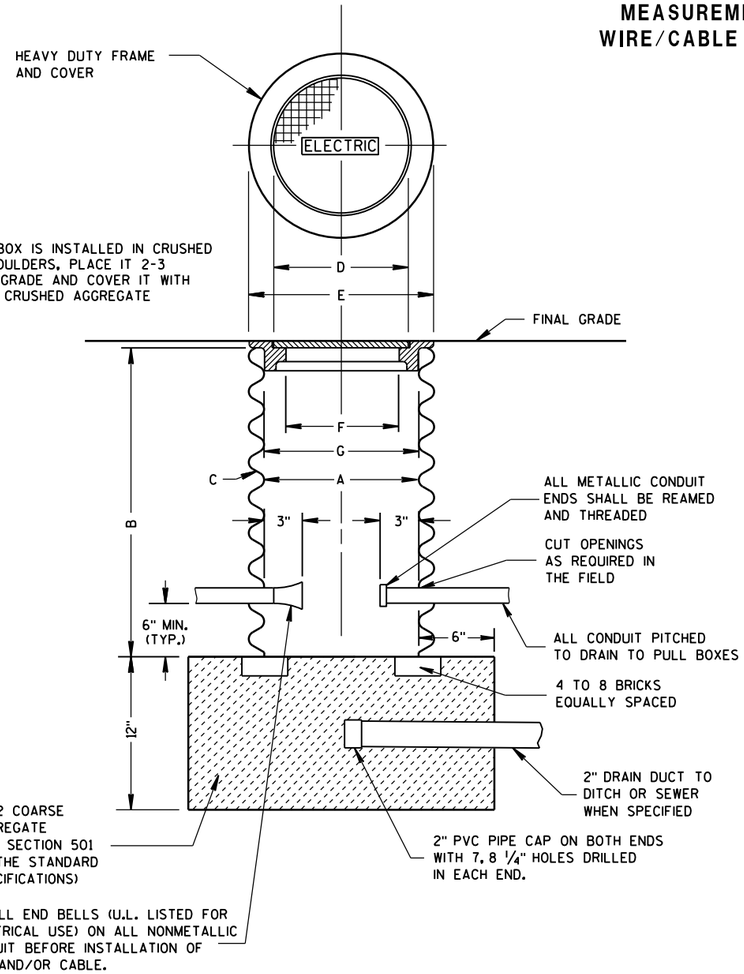


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



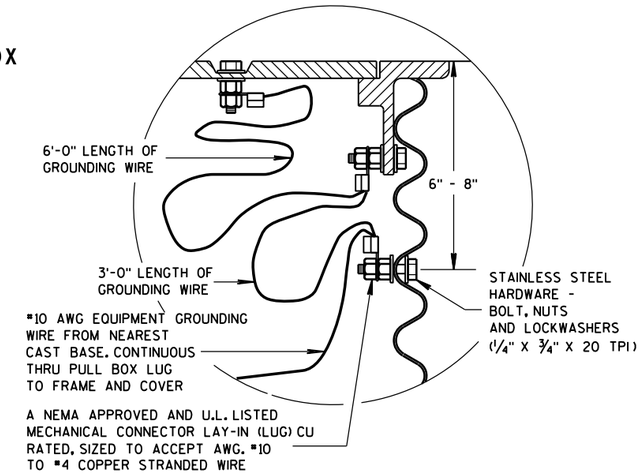
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

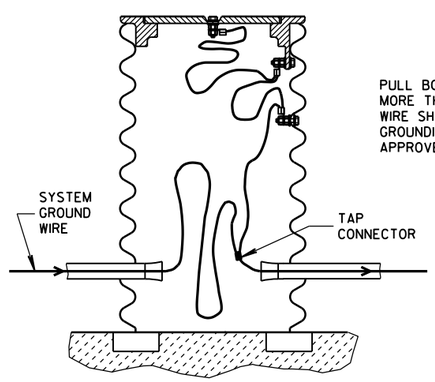


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

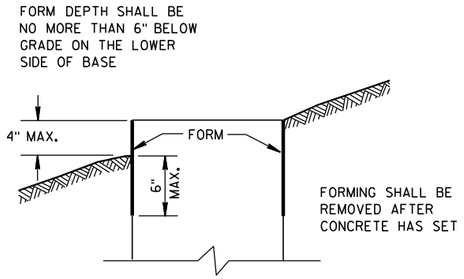
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

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

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

PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
2-7-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	340



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

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

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

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

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

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

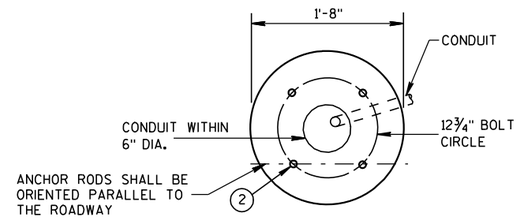
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

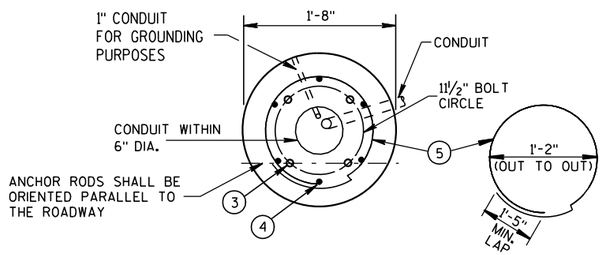
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

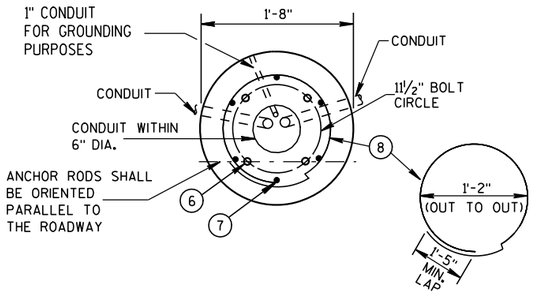
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

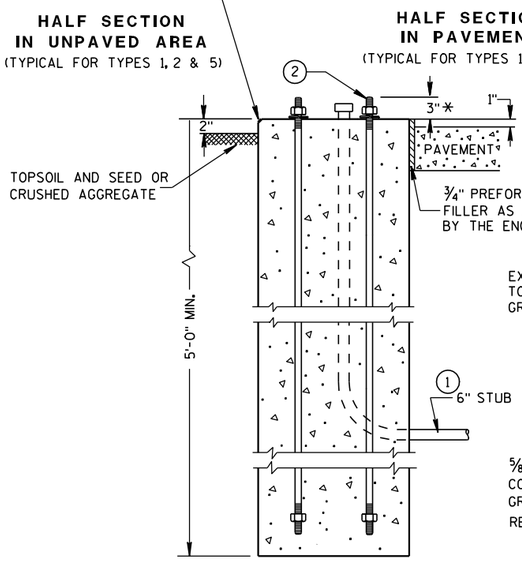






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

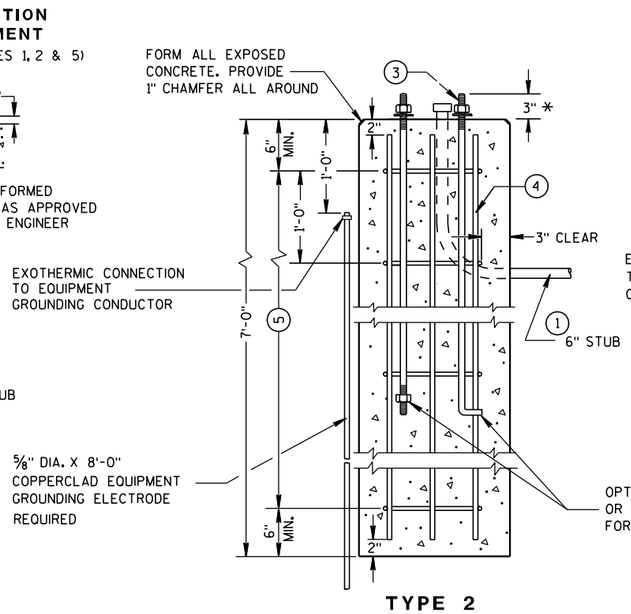
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



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

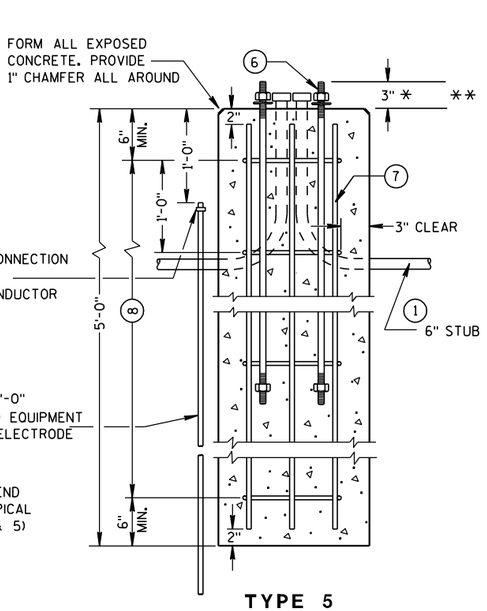
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

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

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

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
341
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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.

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.

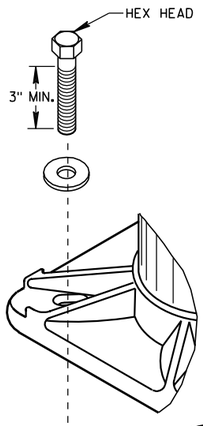
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

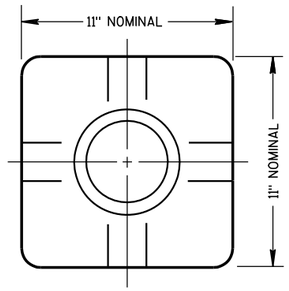
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

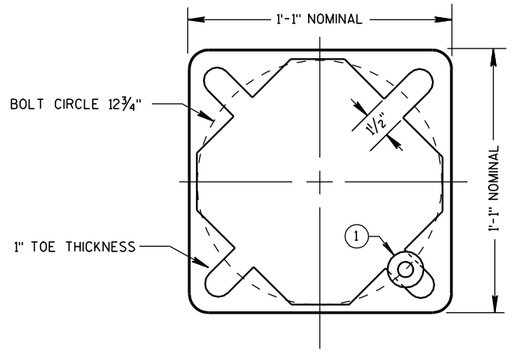
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

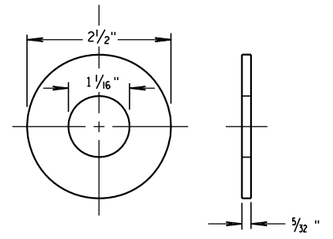




TOP VIEW
(PEDESTAL BASE)

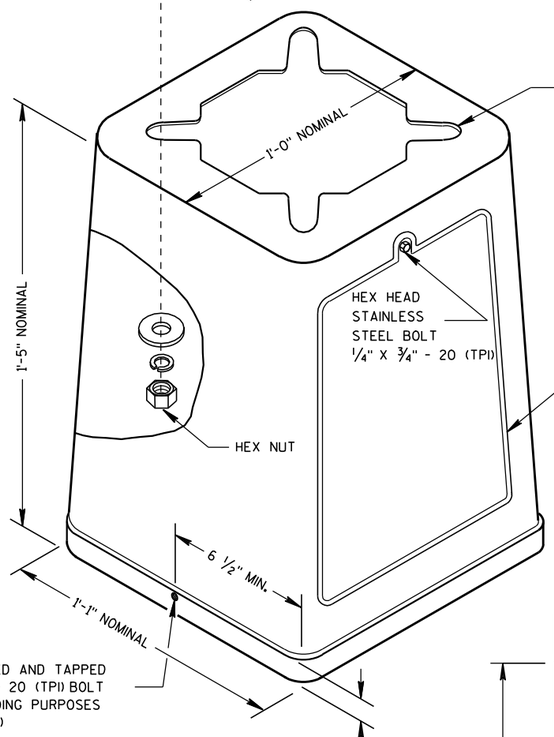


BOTTOM VIEW
(PEDESTAL BASE)

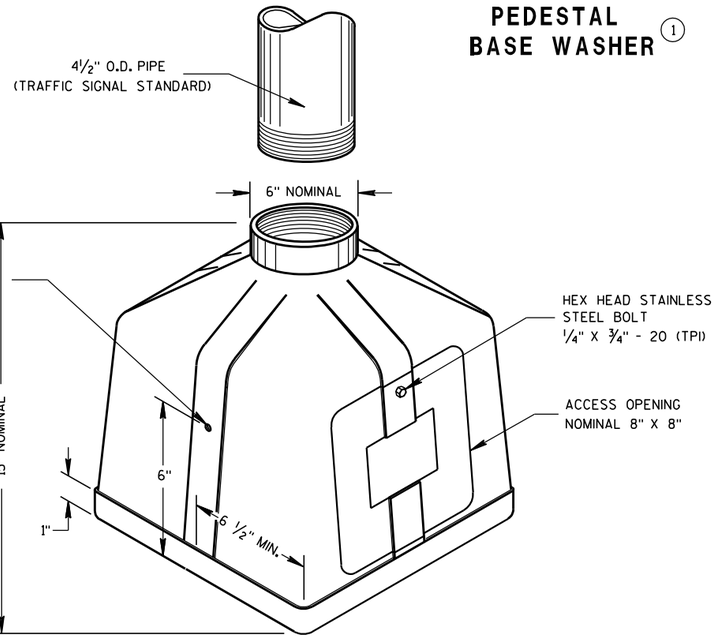


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

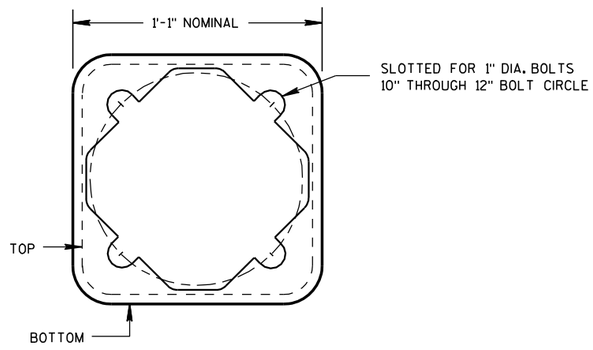


ISOMETRIC VIEW

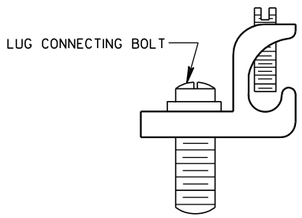


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

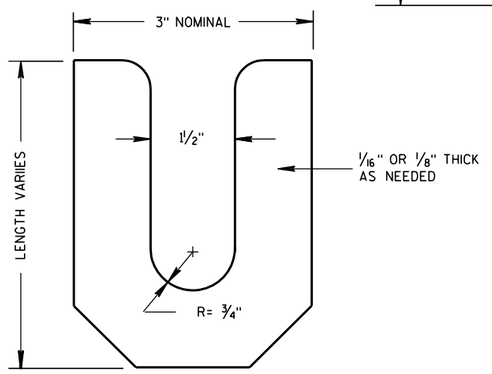


TYPICAL MECHANICAL CONNECTOR LUG

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
342
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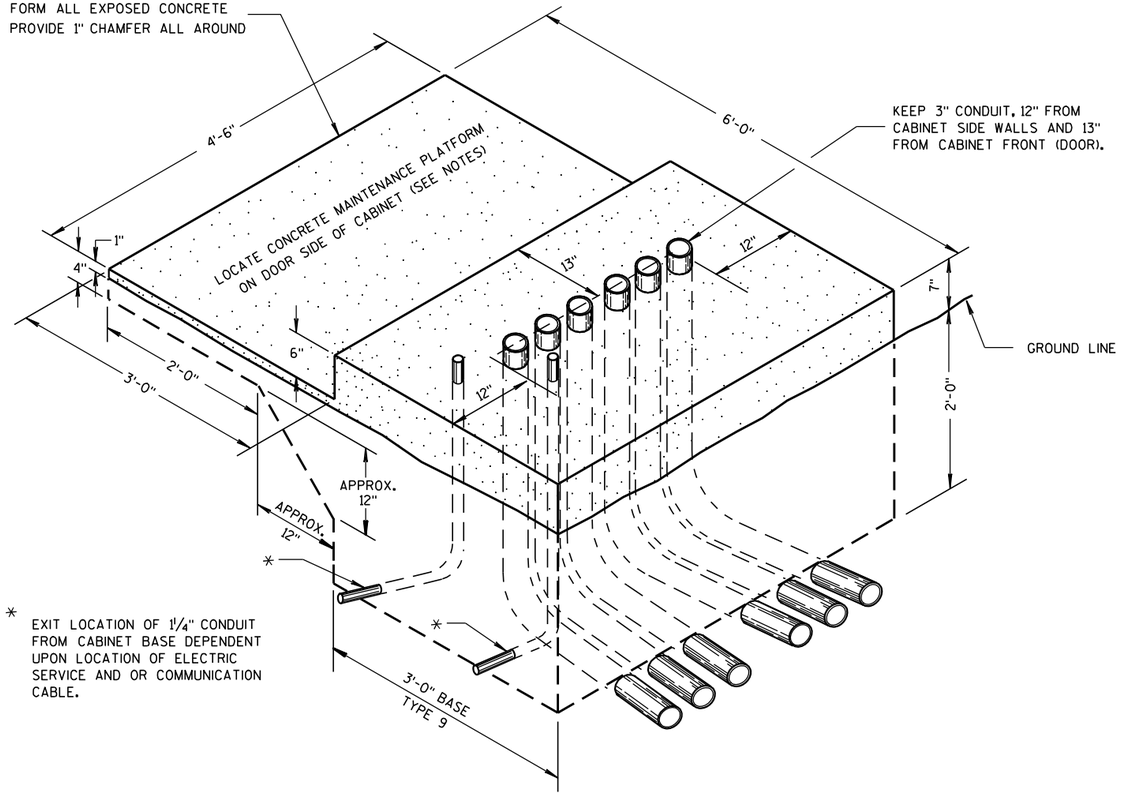
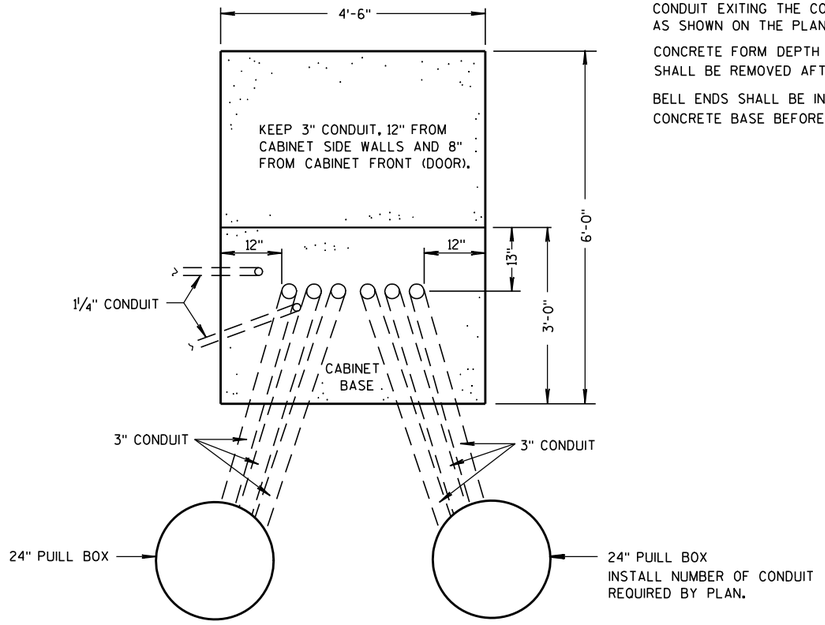


* EXIT LOCATION OF 1¼" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE AND OR COMMUNICATION CABLE.

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 — HWYS

FHWA

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).

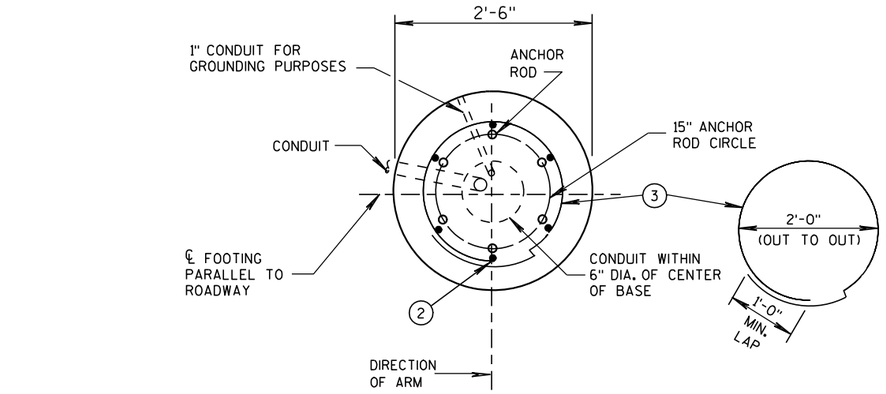
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

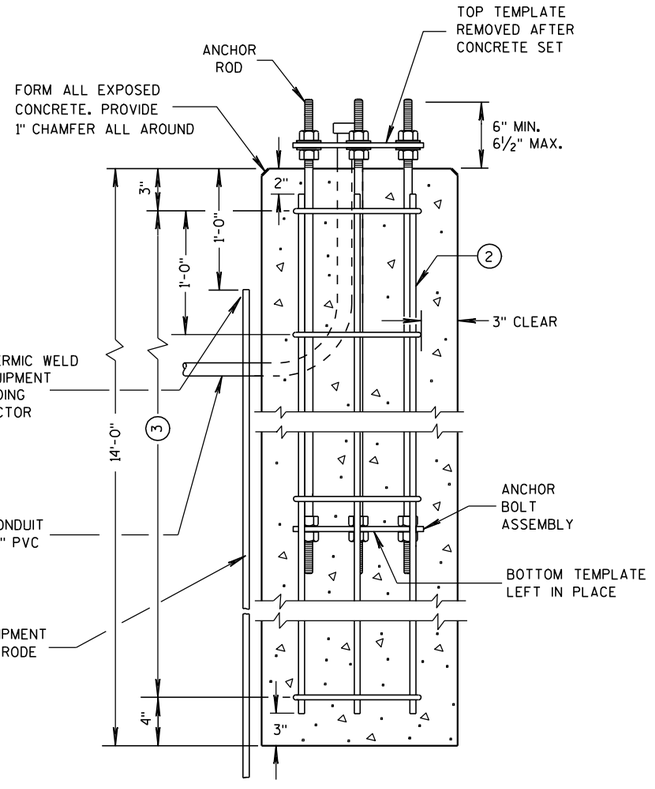
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN 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.

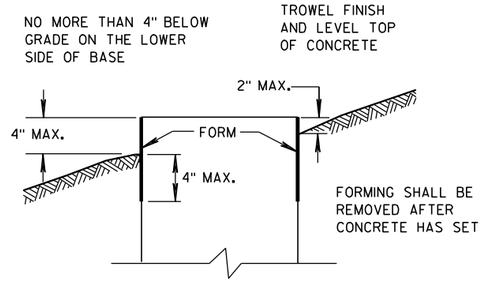
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



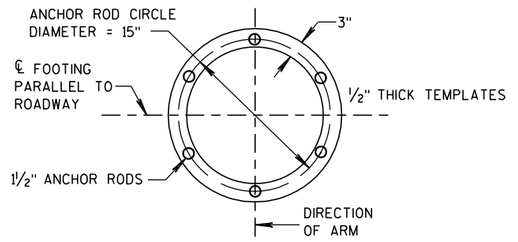


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

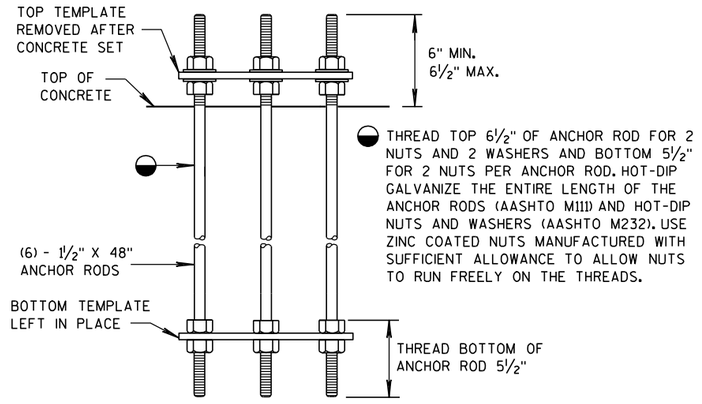
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



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

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3-2-11 DATE

/S/ Thomas J. Cornine
STATE ELECTRICAL ENGI

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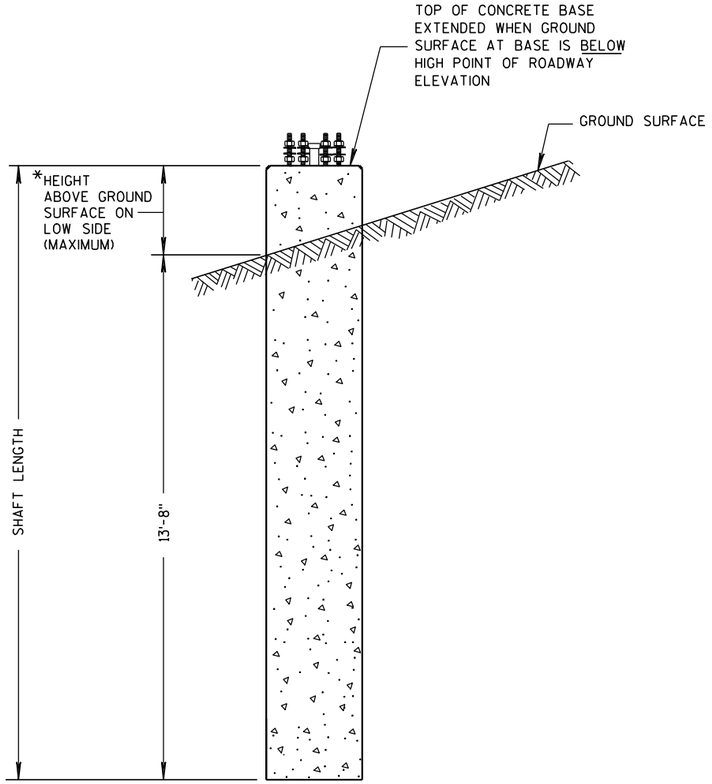
REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

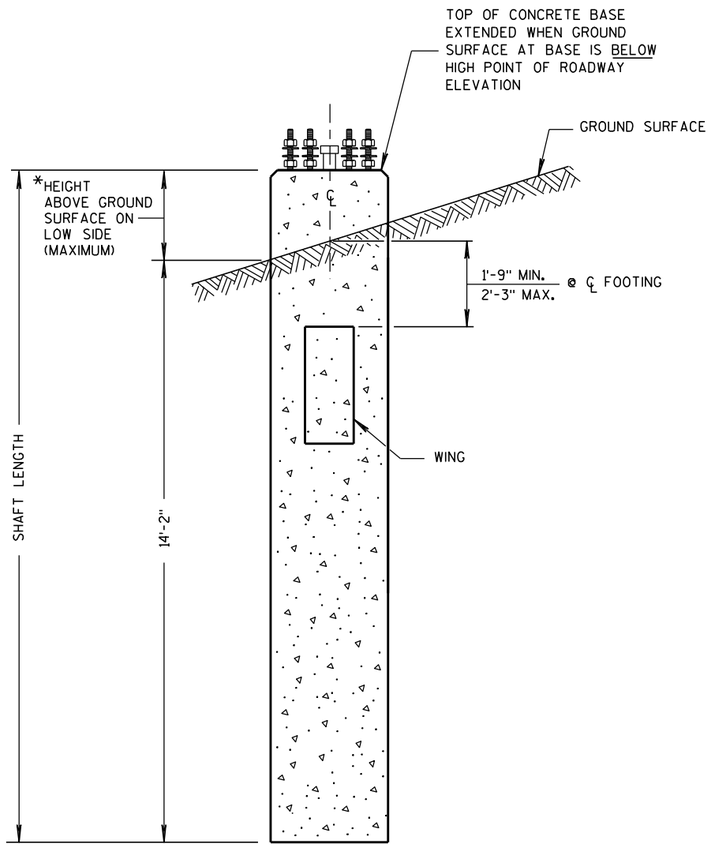
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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3-3-10 DATE — /S/ Joanna L. Rush STATE ELECTRICAL ENGI — HWYS

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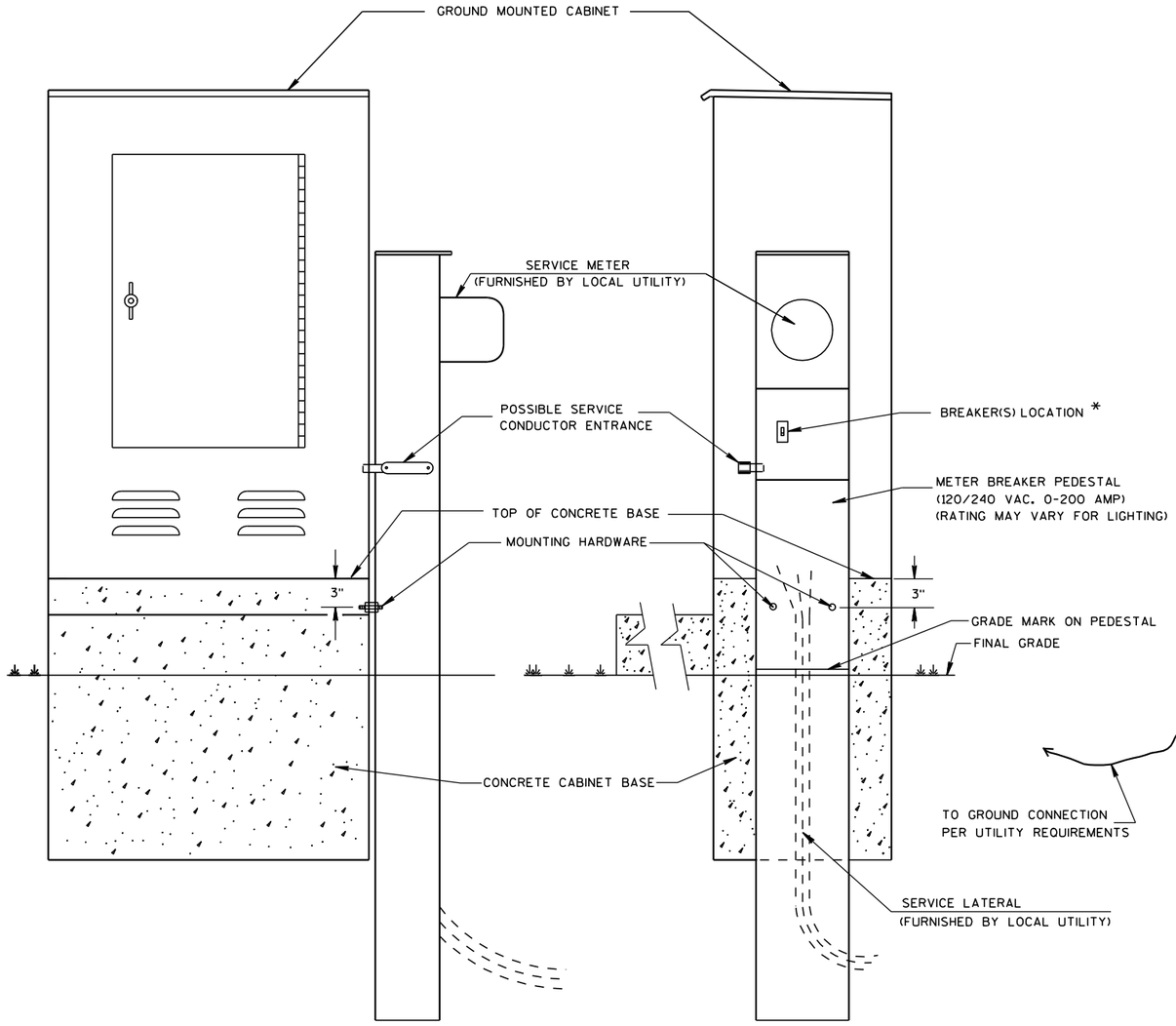
S.D.D. 9 C 13-1



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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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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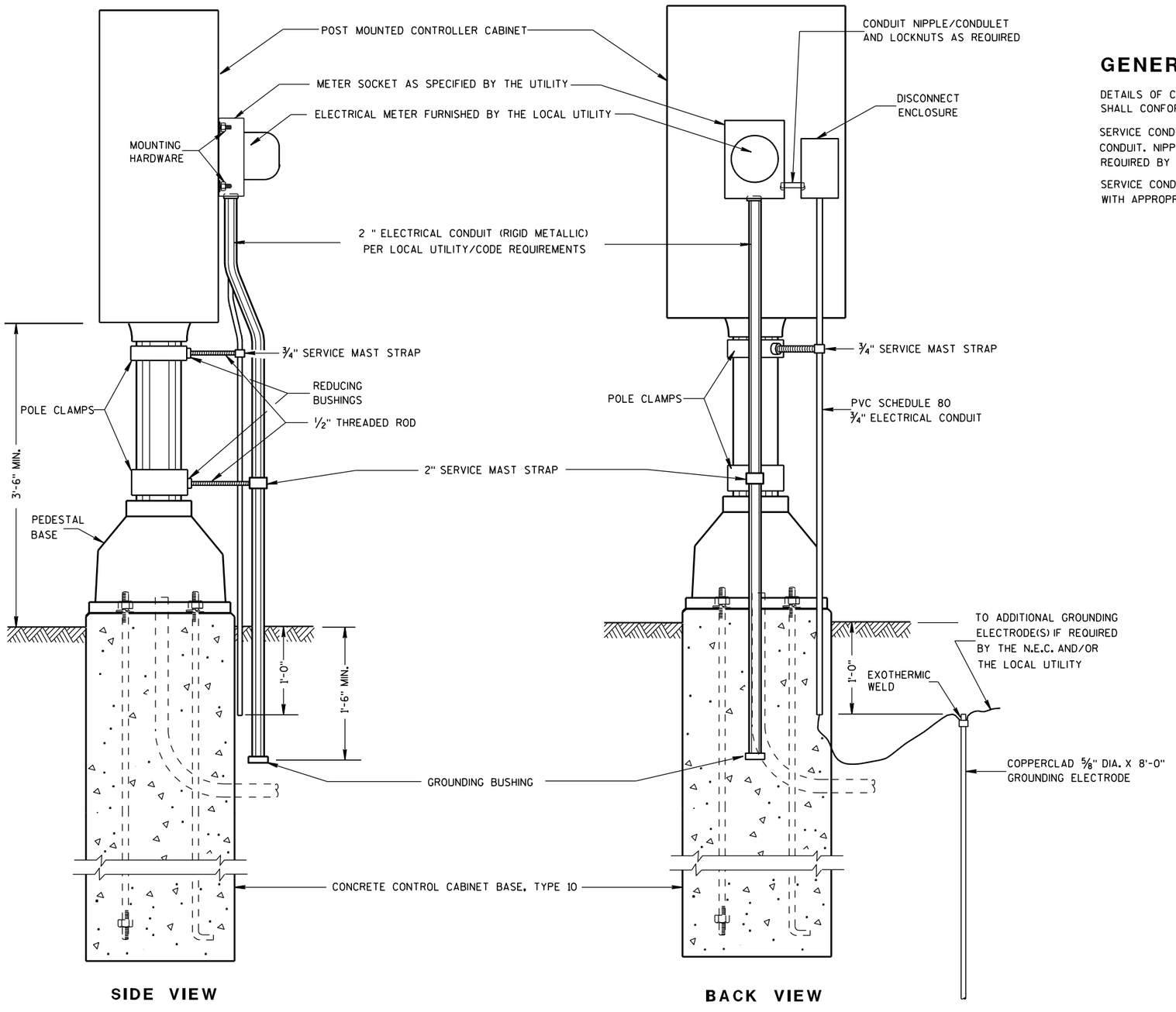

POST MOUNTED CONTROLLER SERVICE INSTALLATION

GENERAL NOTES

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

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID STEEL OR SCHEDULE 80 PVC ELECTRICAL CONDUIT. NIPPLES AND/OR CONDULETS, WITH LOCK NUTS AND GROUNDING BUSHINGS AS REQUIRED BY THE N.E.C. OR THE LOCAL UTILITY.

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

POST MOUNTED CONTROLLER SERVICE INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2003 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI
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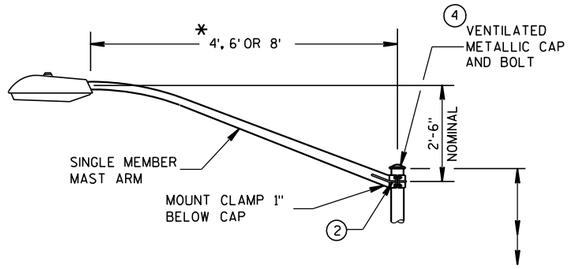
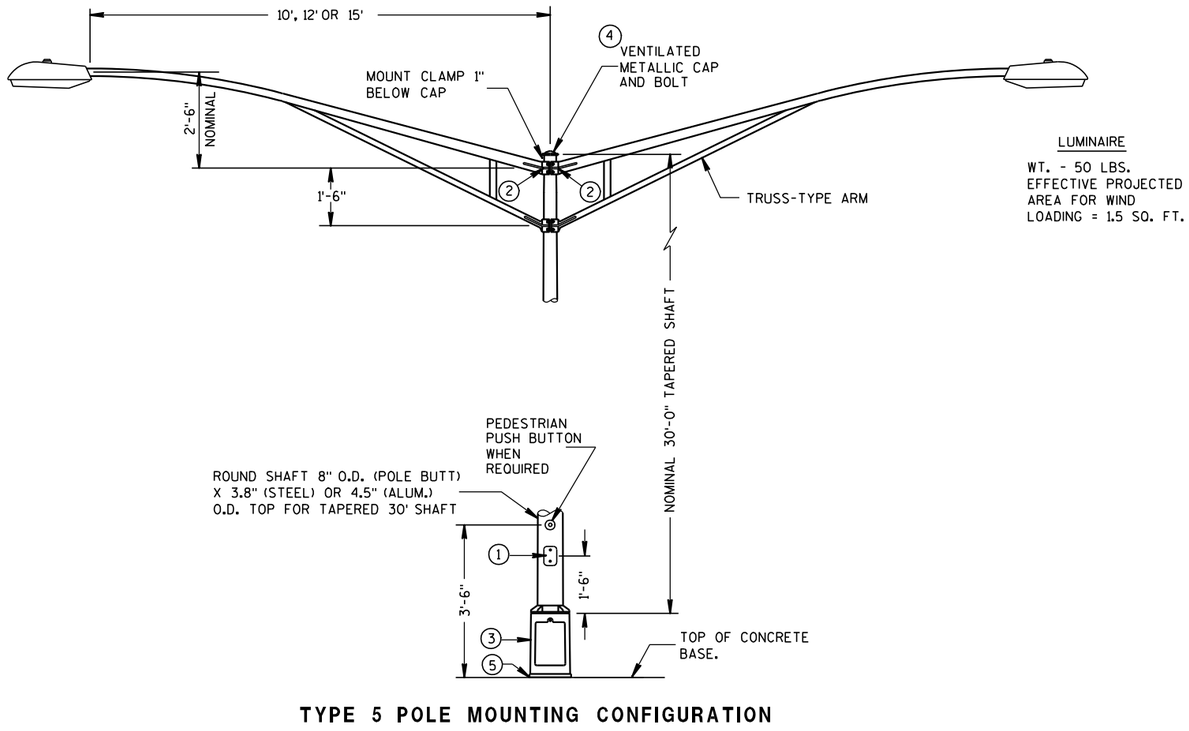
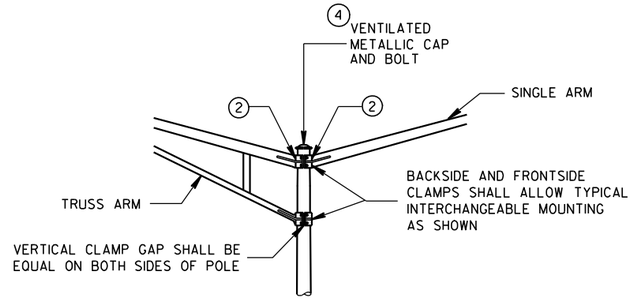
*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

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

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

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 ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS 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. GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.
3. CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
4. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
5. SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

POLE MONTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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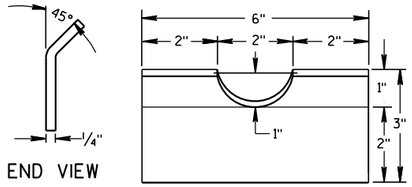
S.D.D. 9 E 1-11d

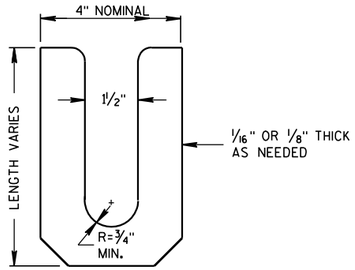


END VIEW

FRONT VIEW

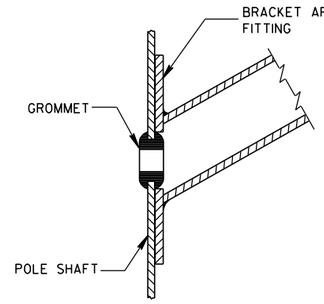
RECTANGULAR CLAMP SHIM

(4 TO A SET)

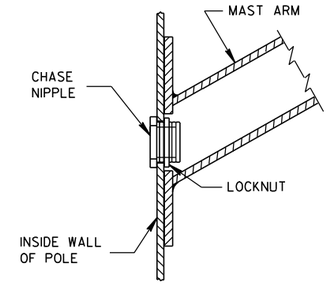


LEVELING SHIM (15)

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".

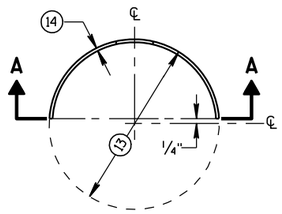
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

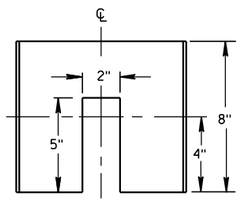
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(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.



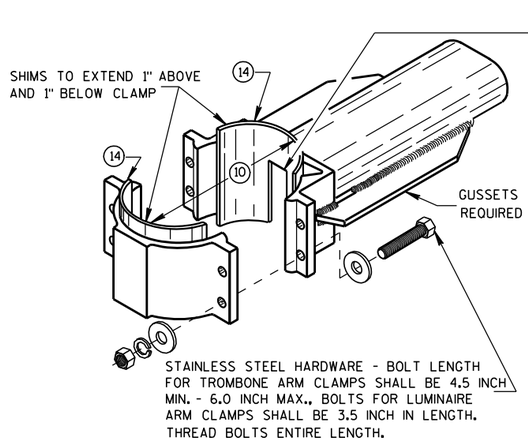
PLAN VIEW



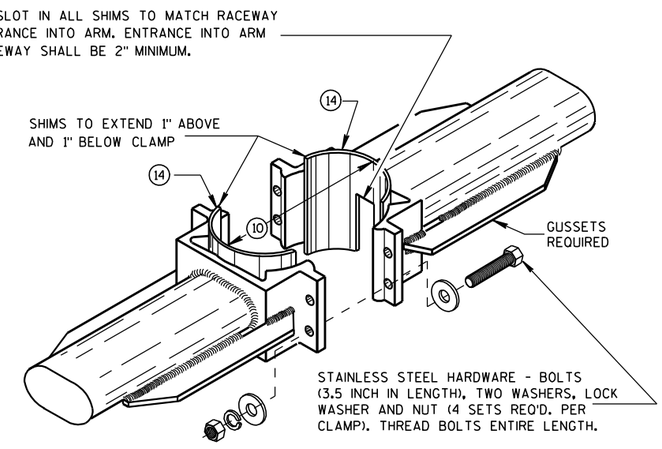
SECTION A-A

CIRCULAR CLAMP SHIM

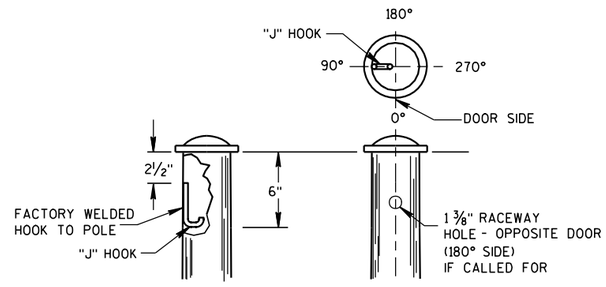
(2 TO A SET)



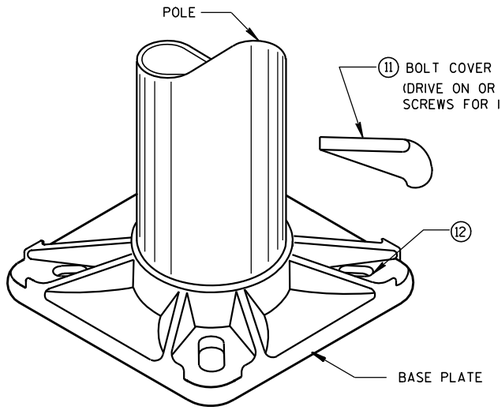
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



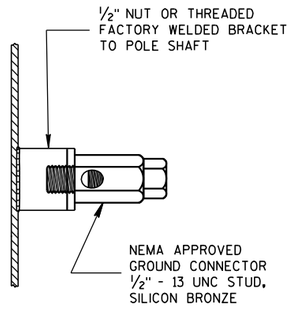
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

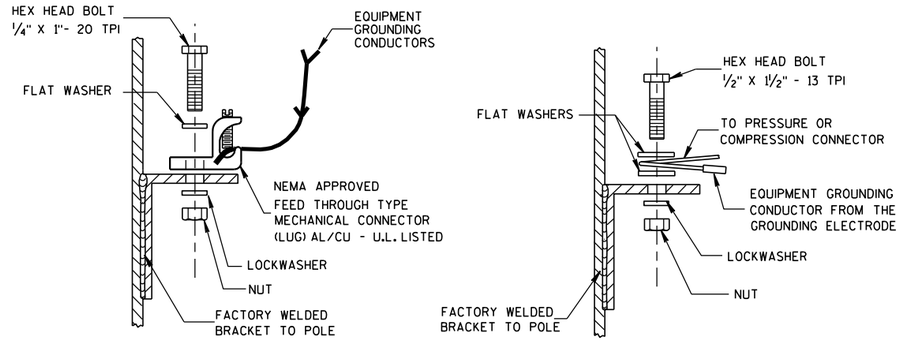


TYPICAL "J" HOOK LOCATION



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

3/2/11 — DATE

/S/ Thomas J. Goerlinger — STATE ELECTRICAL ENGINEER

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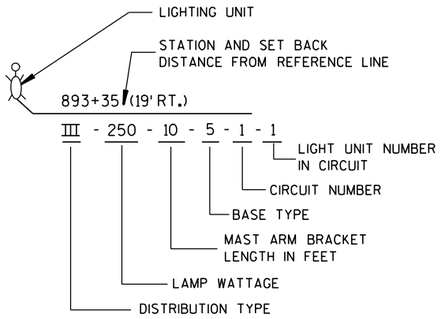
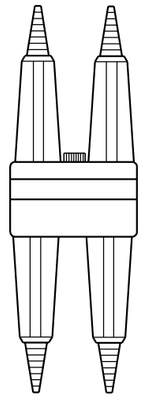
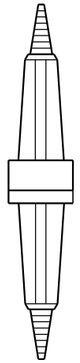


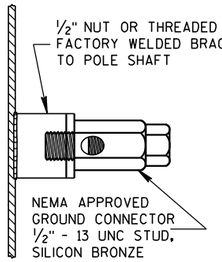
LIGHTING UNIT CODE
(TYPICAL)

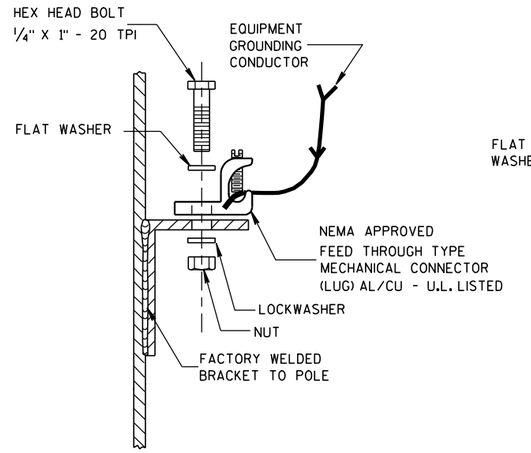


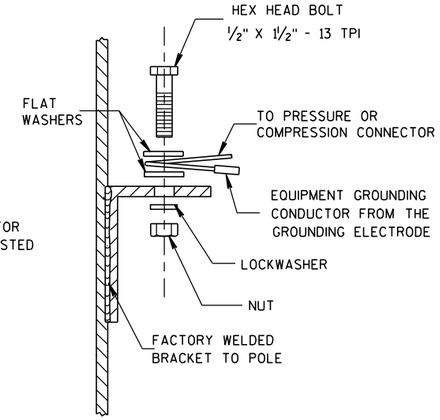
DETAIL "A"
BREAKAWAY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



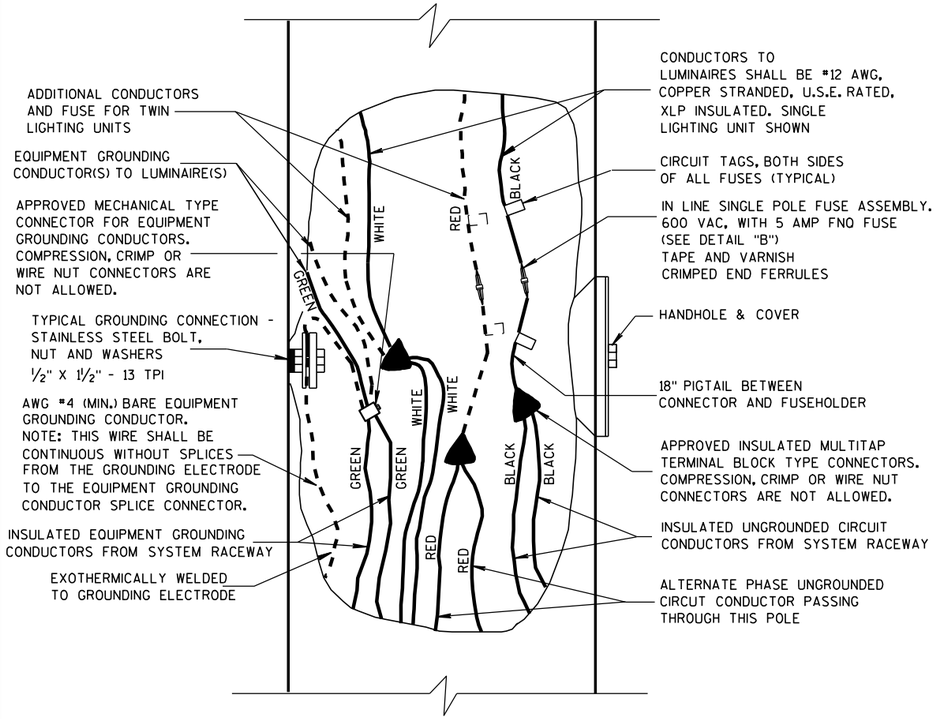
DETAIL "B"
BREAKAWAY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



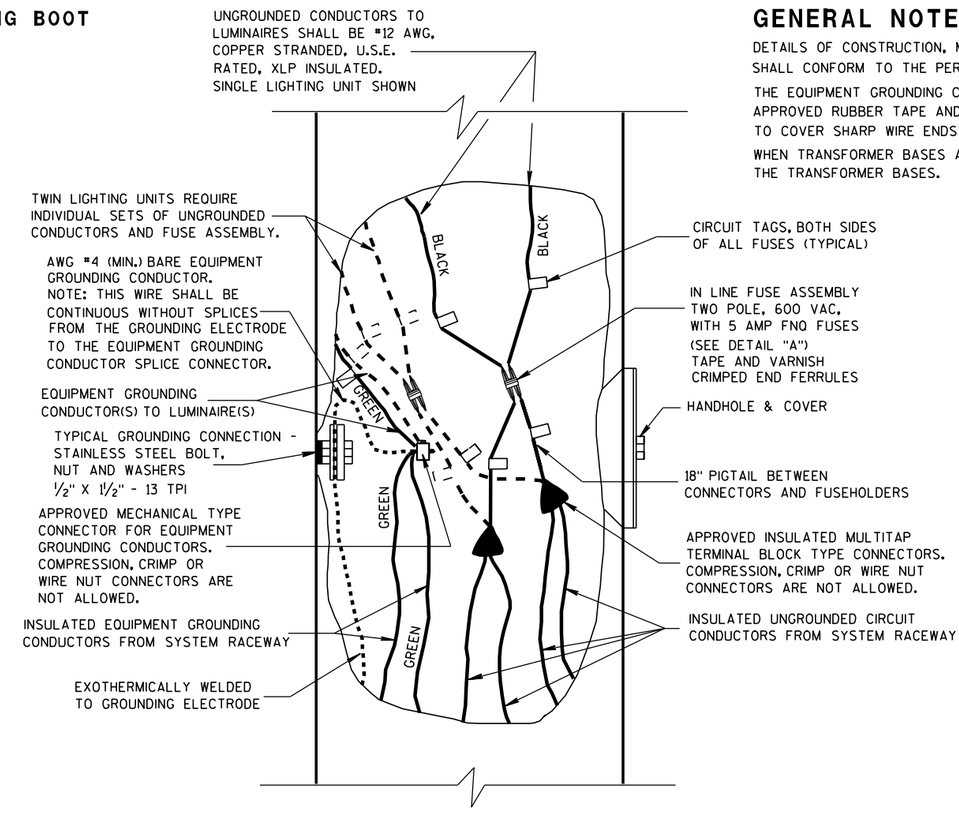




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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



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

GENERAL NOTES

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

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

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

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 — DATE

/S/ Thomas J. Gosnell — STATE ELECTRICAL ENGI

350 — HWYS

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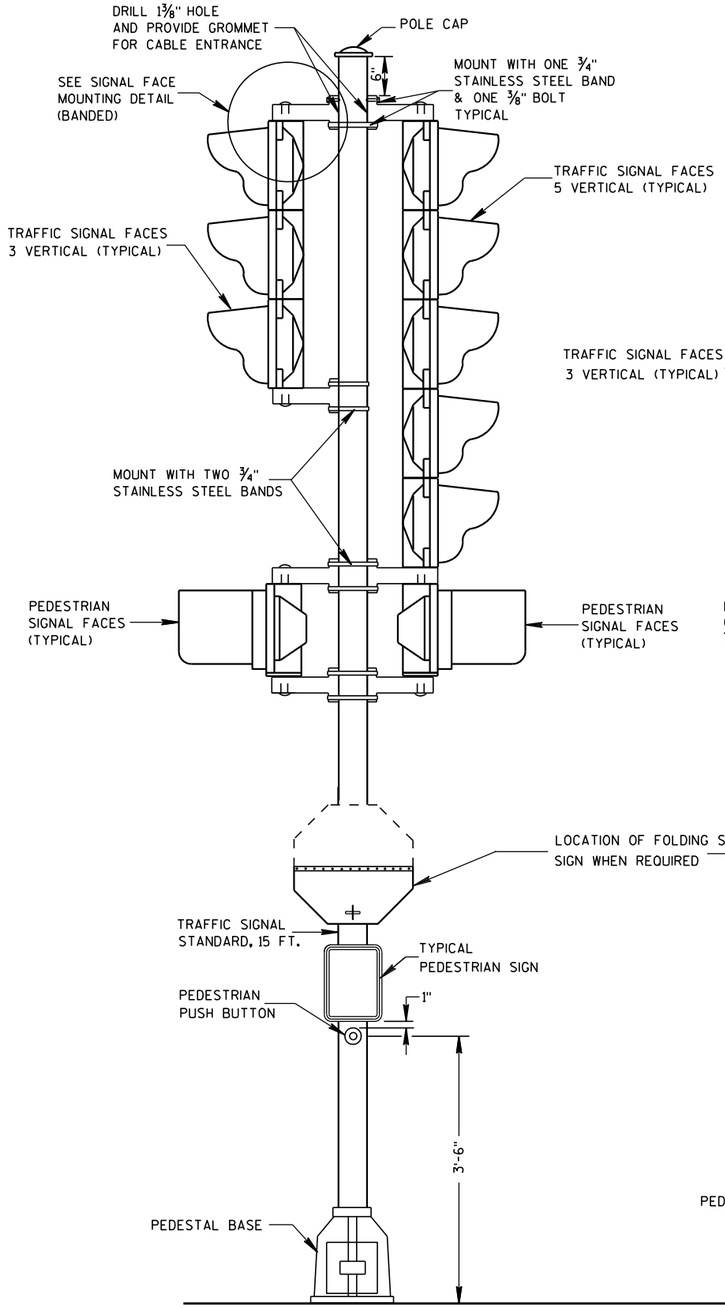
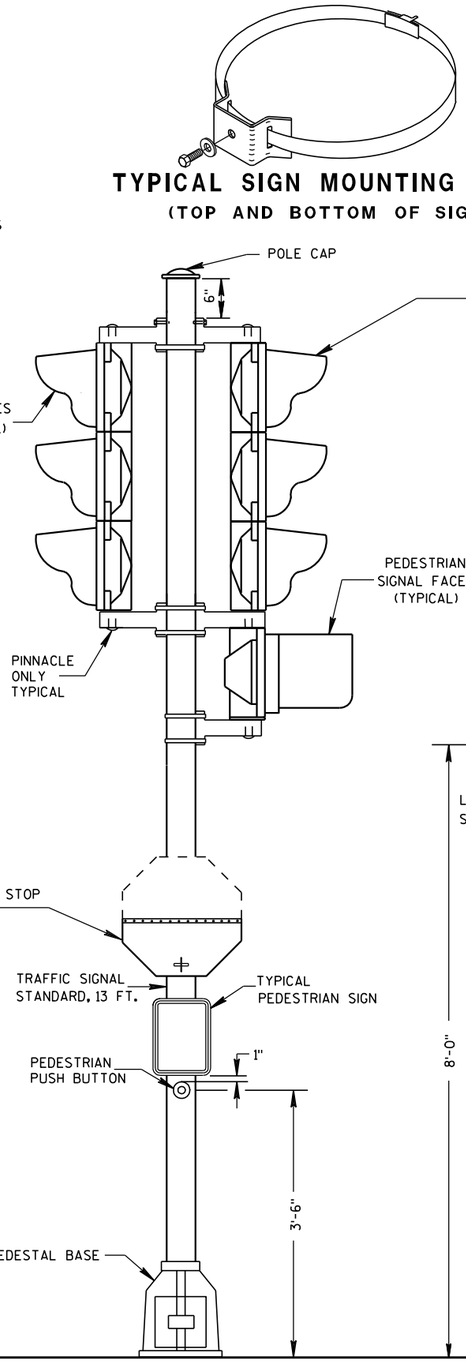
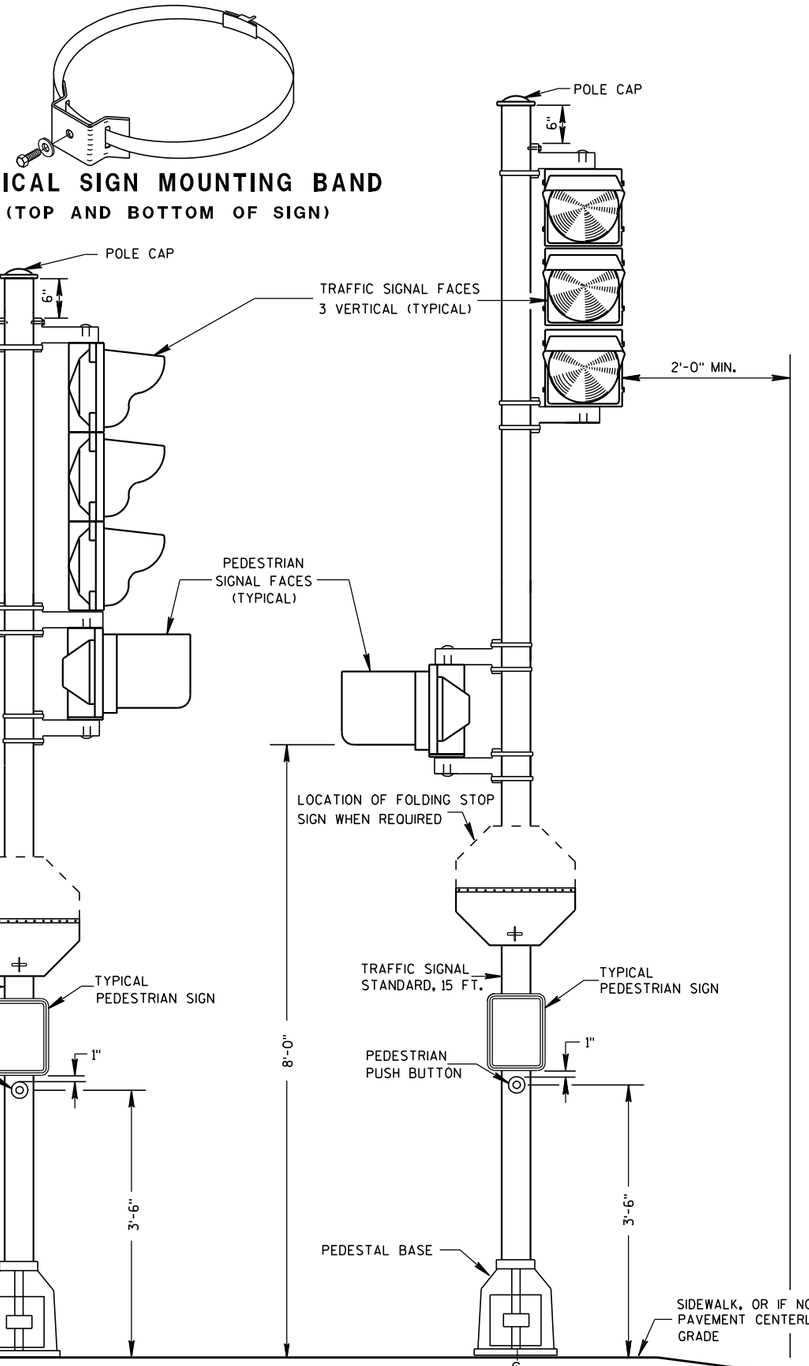


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

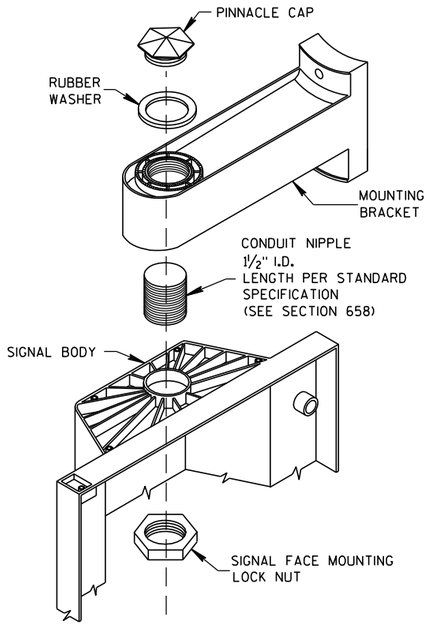
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT 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) 1/4" 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
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5/11/10 DATE
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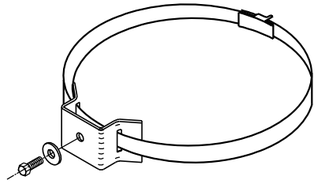
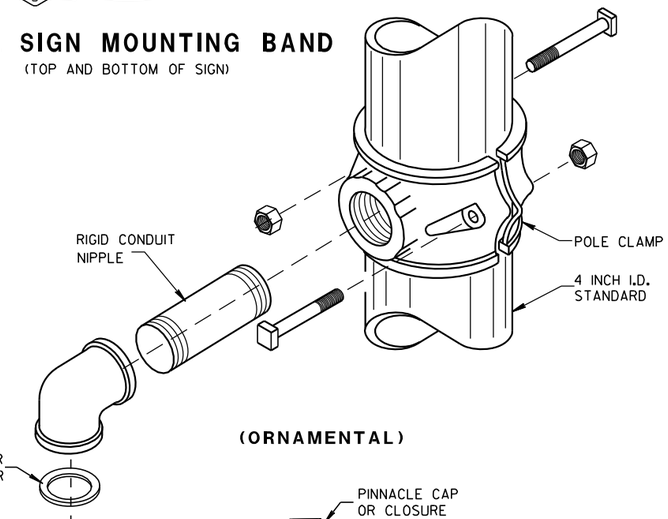
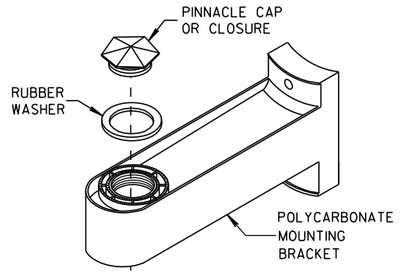


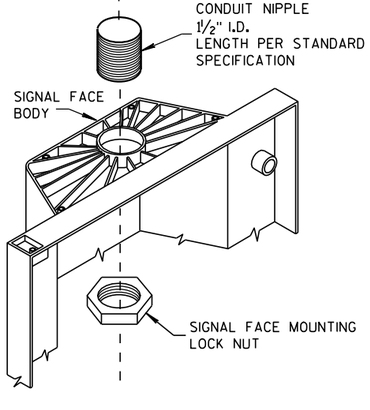
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



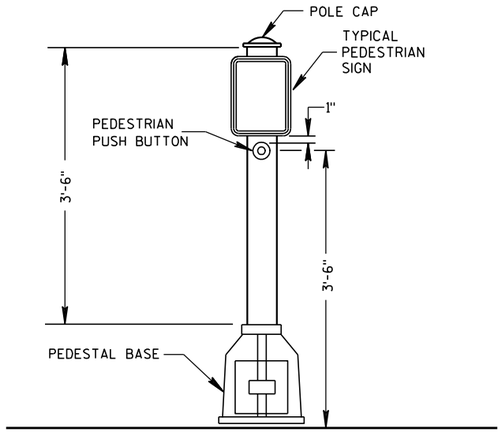
(ORNAMENTAL)



(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.

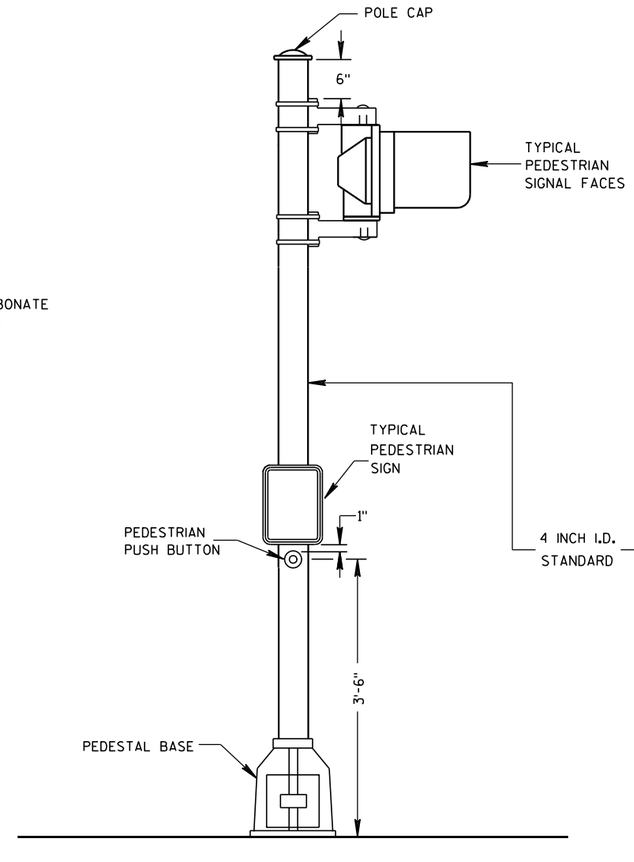
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

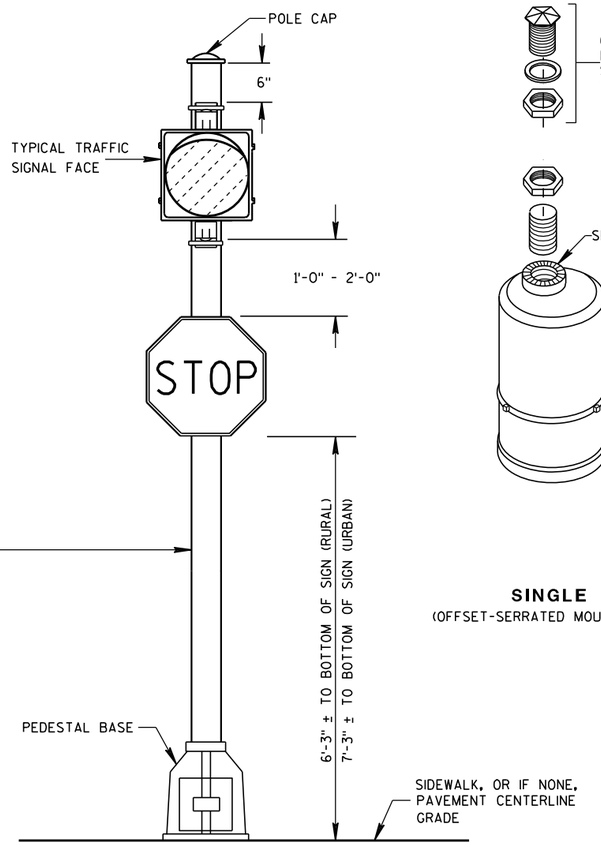
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

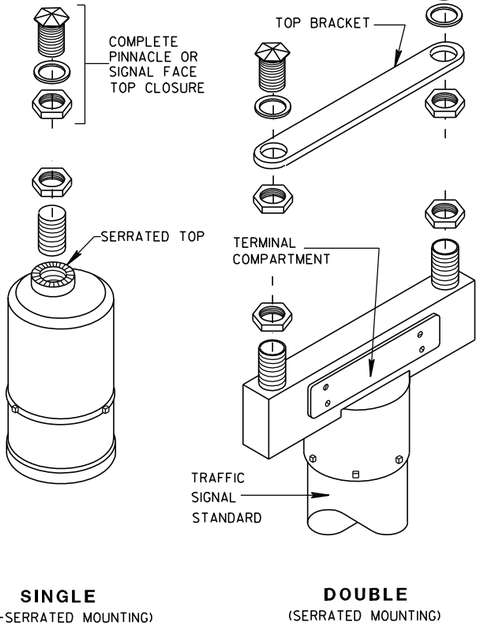
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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

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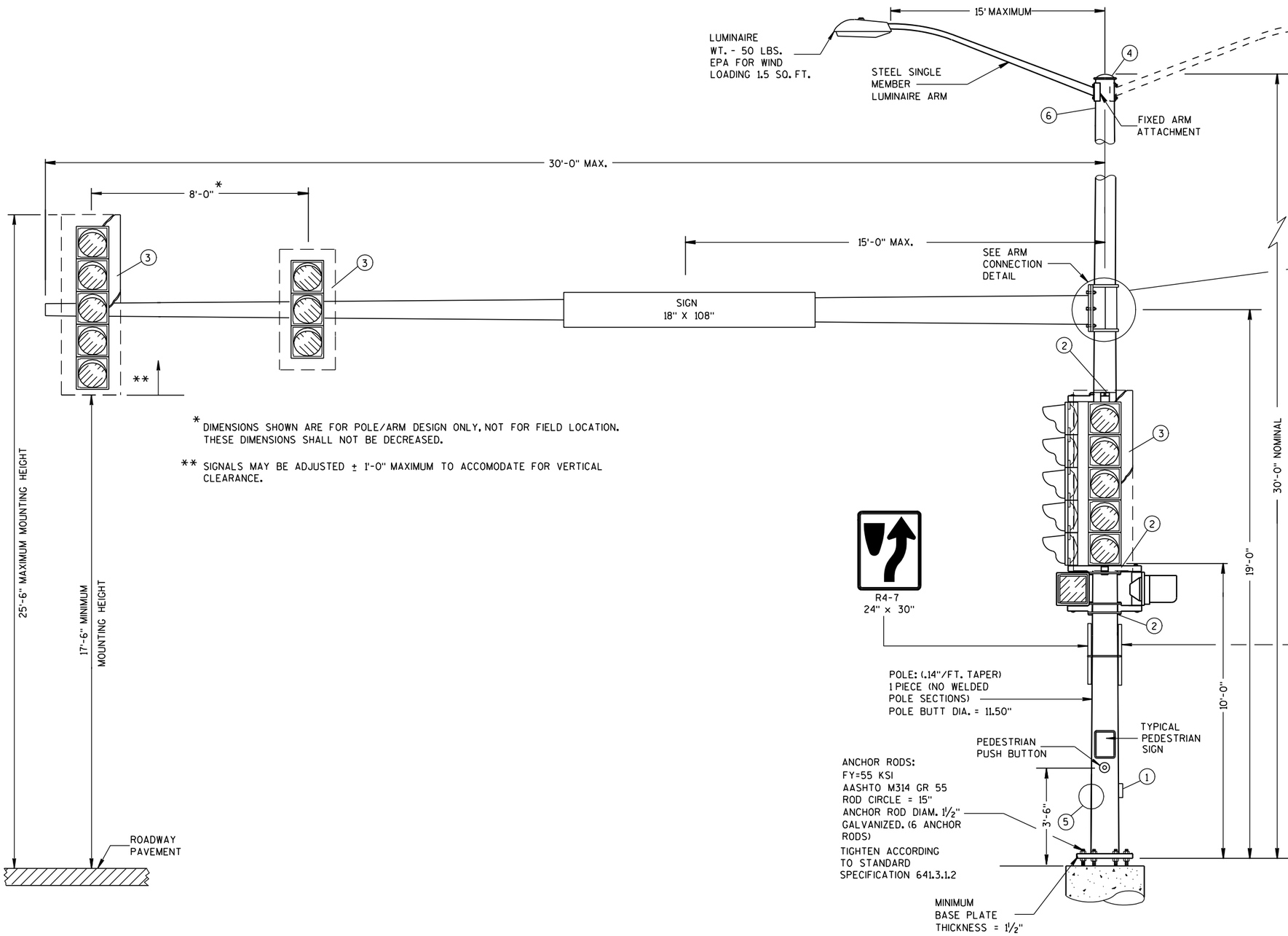
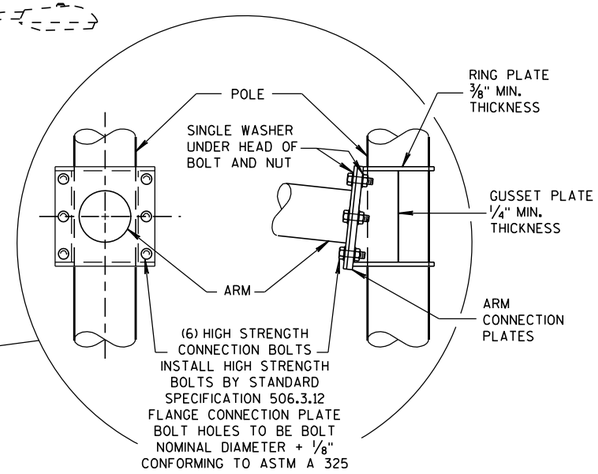
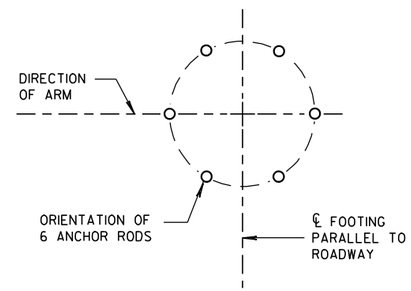


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/2/2011 DATE	/S/ Thomas J. Corrigan STATE ELECTRICAL ENGI
FHWA	353 HWYS

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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.

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.

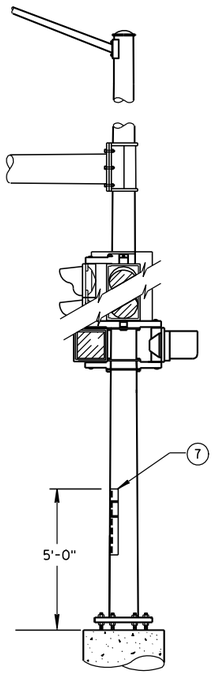
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

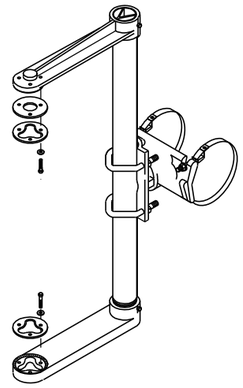
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

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.

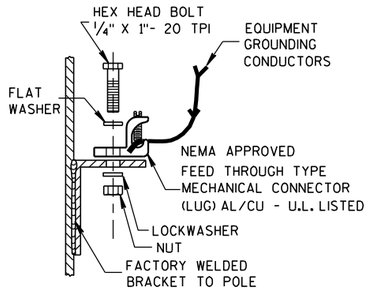


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



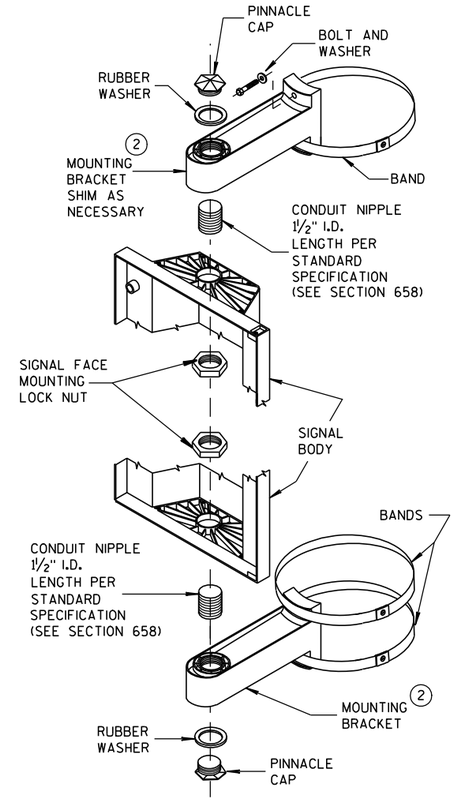
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

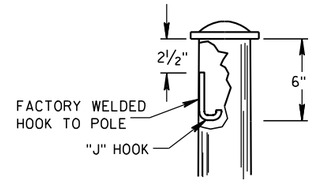


TYPICAL GROUNDING CONNECTIONS (5)

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
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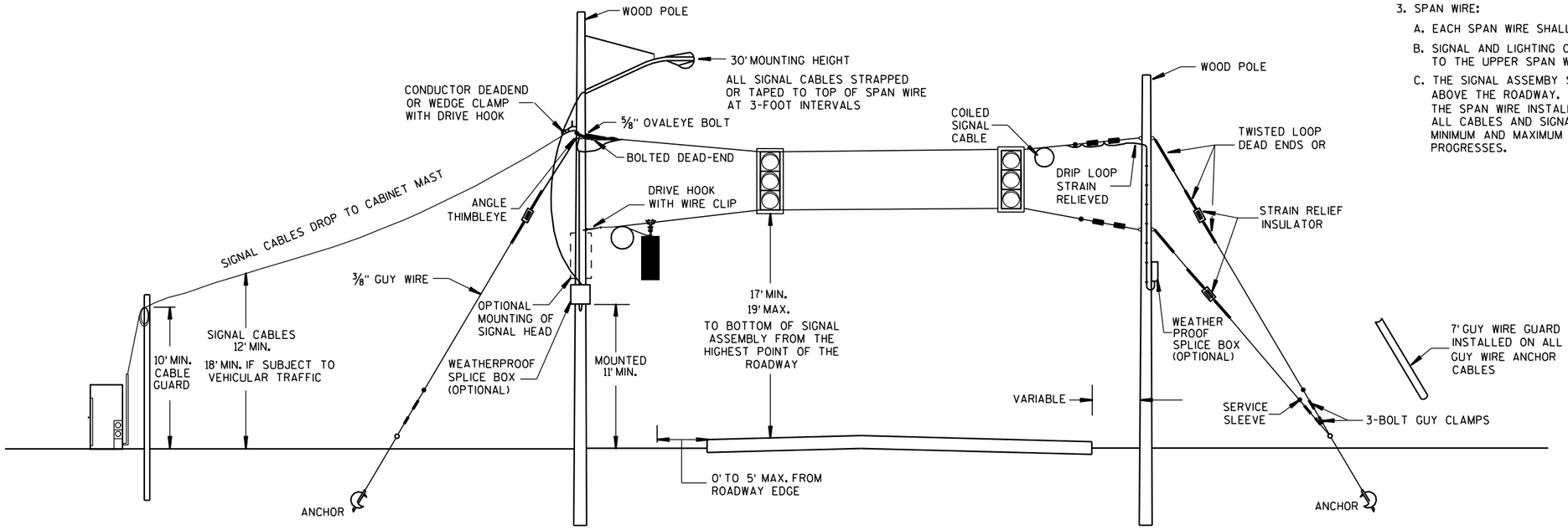
GENERAL NOTES

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.

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

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthar [illegible] n
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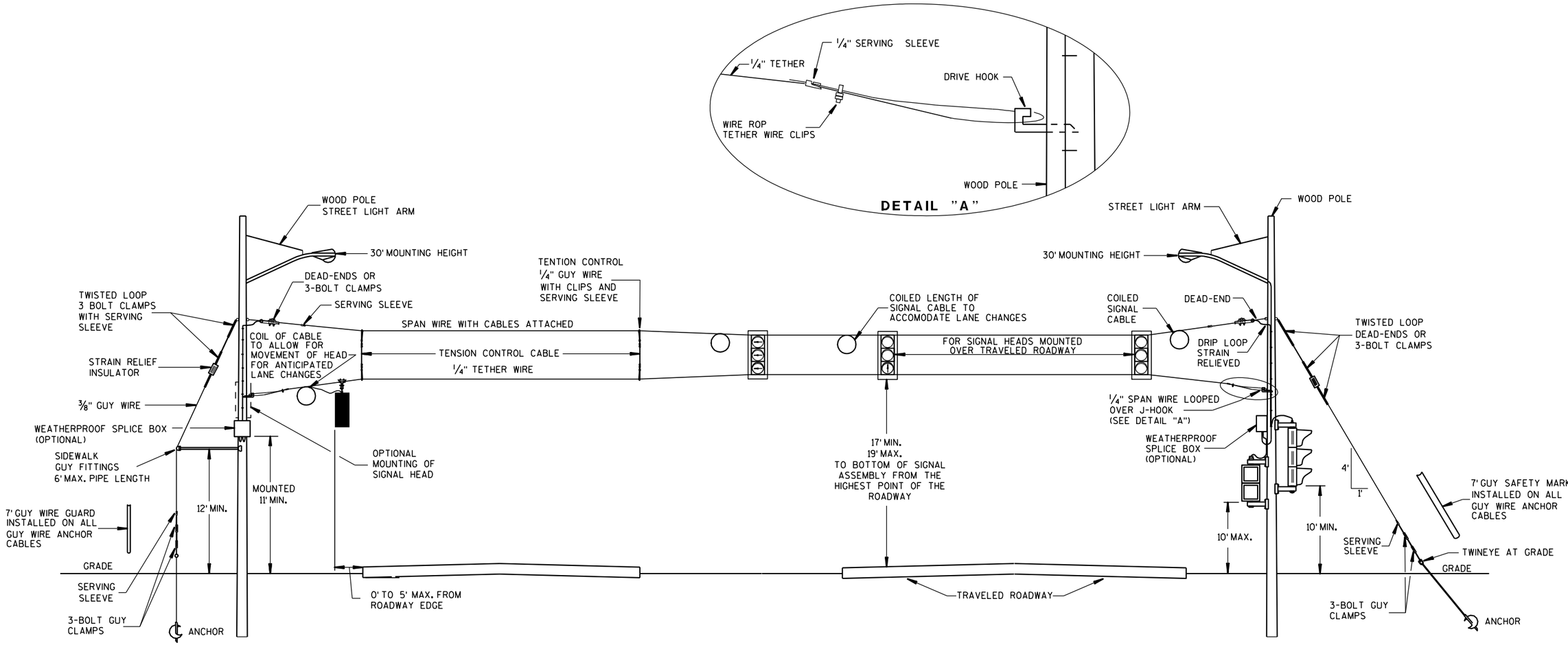

GENERAL NOTES

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 356 HWYS

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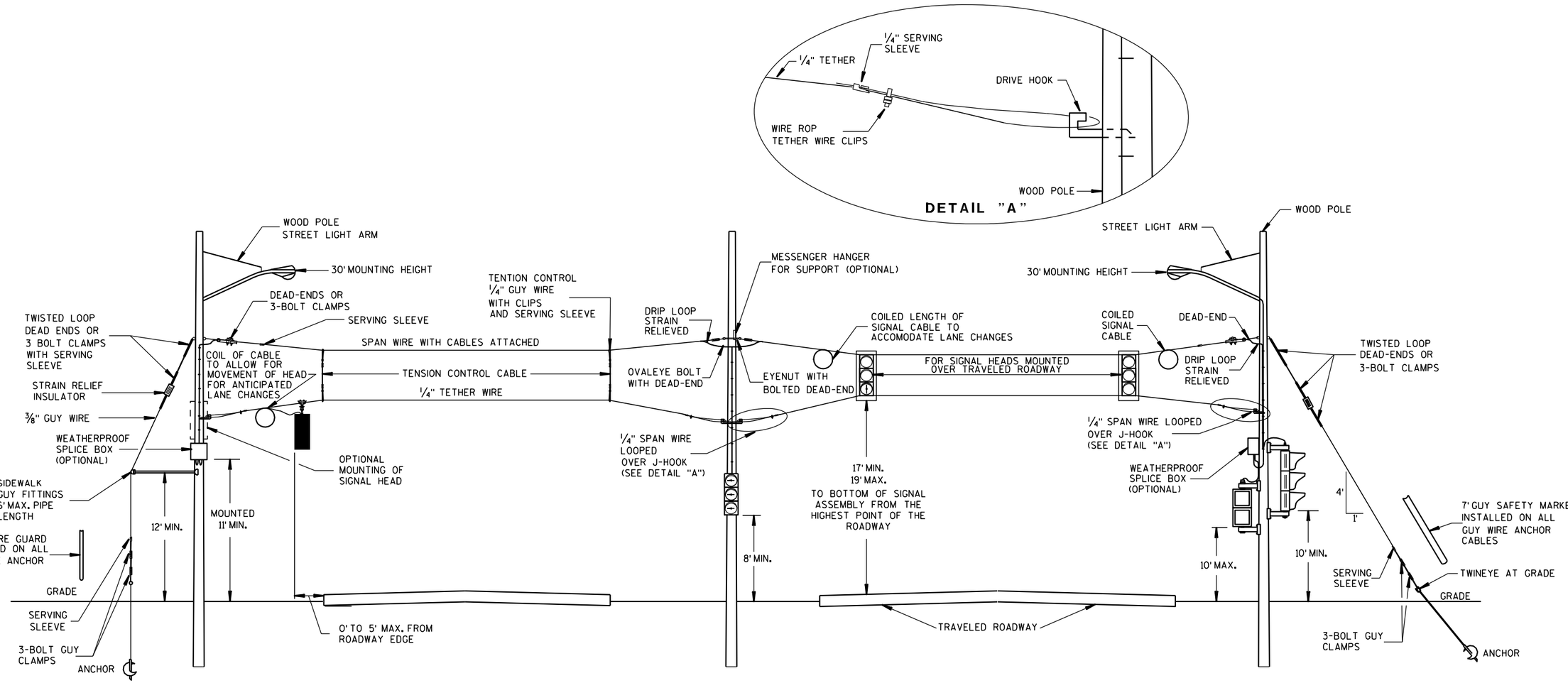

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

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.

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

357 HWYS

FHWA

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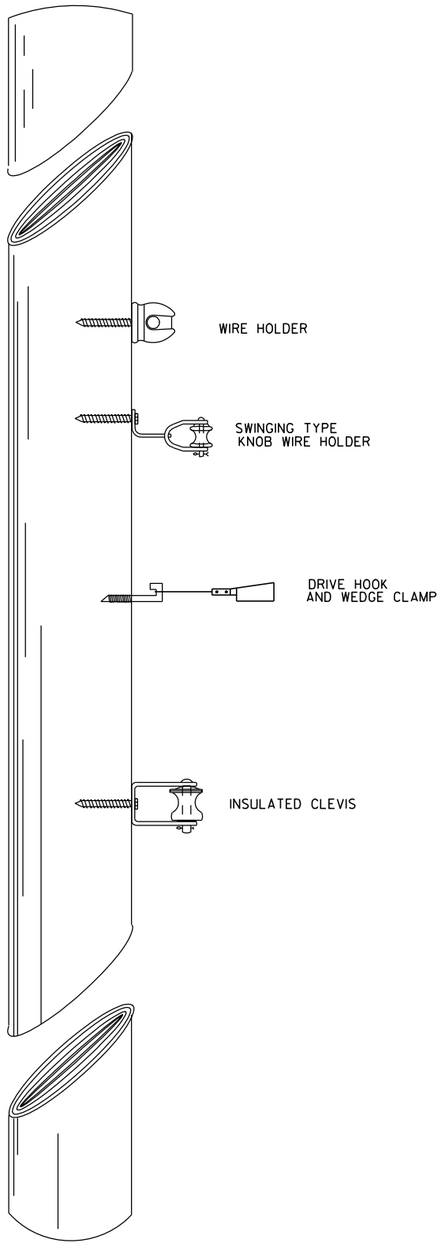
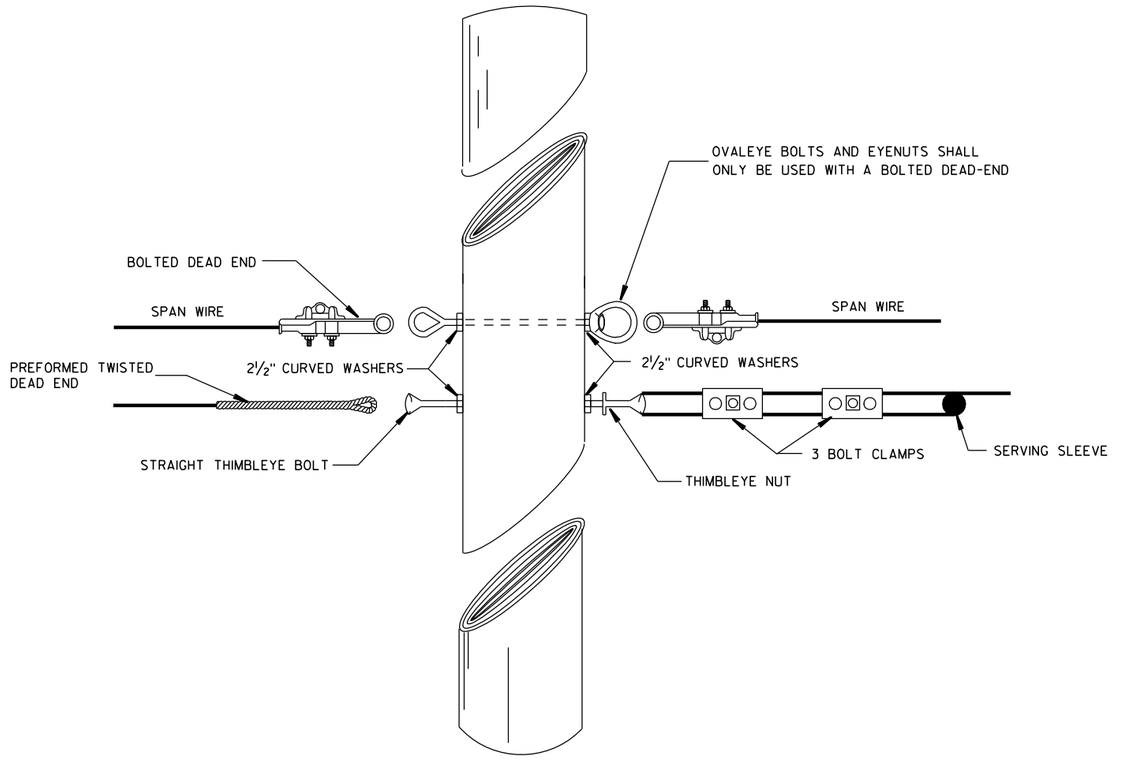
S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

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SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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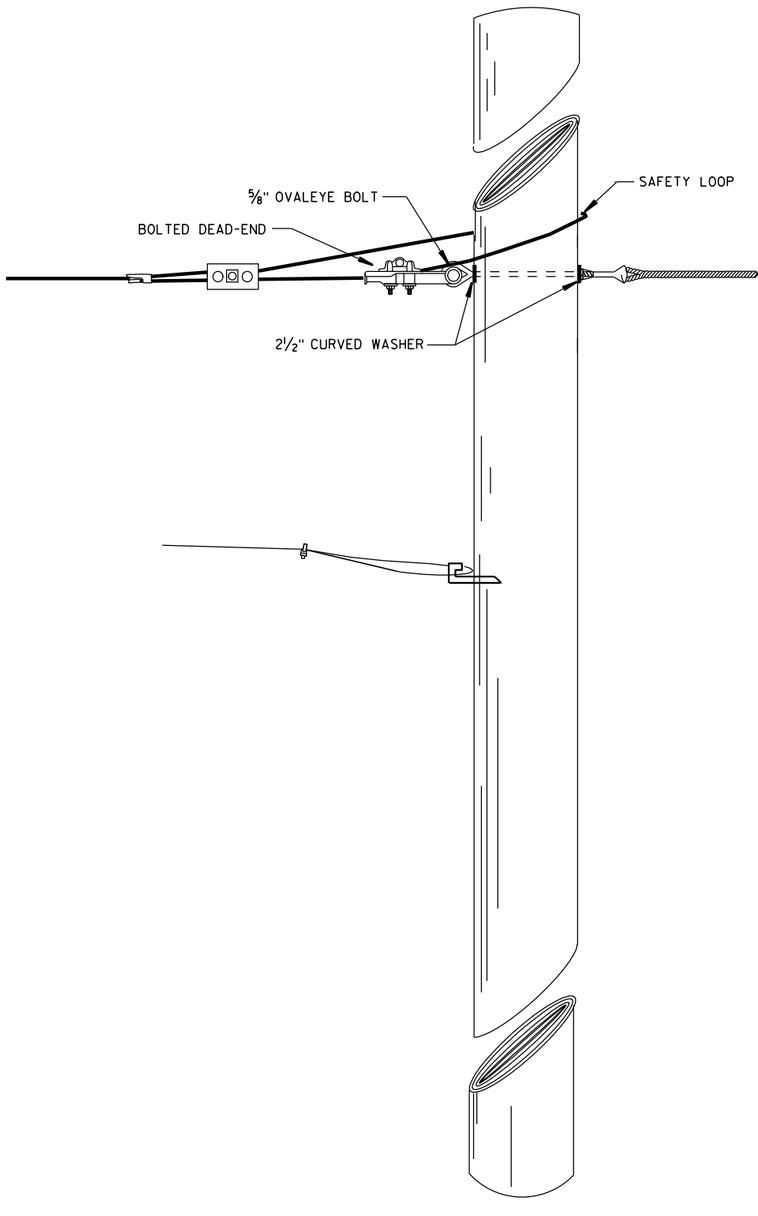
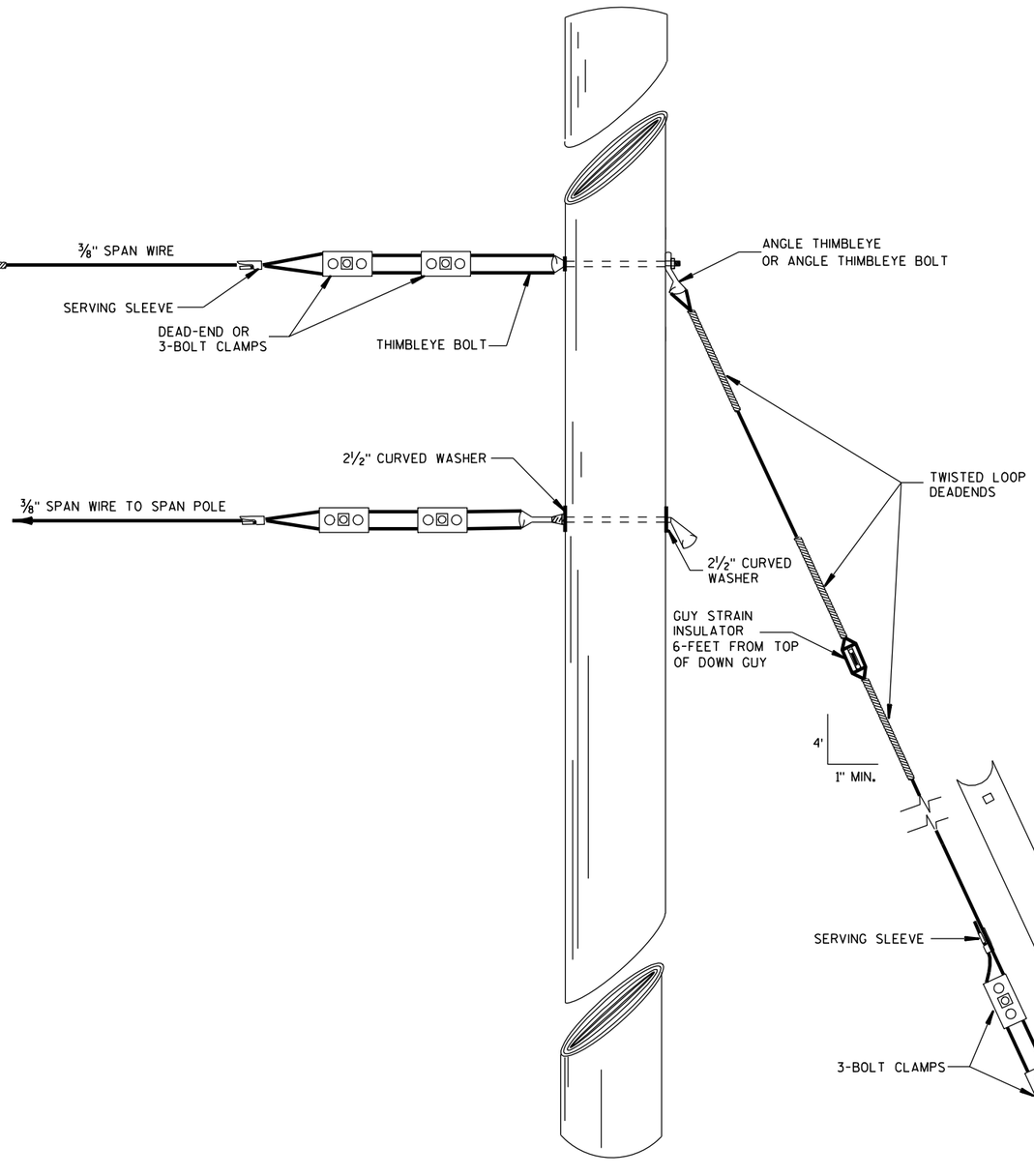
GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7-14-08 DATE
/S/ Balu Aganthanarayanan
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FHWA

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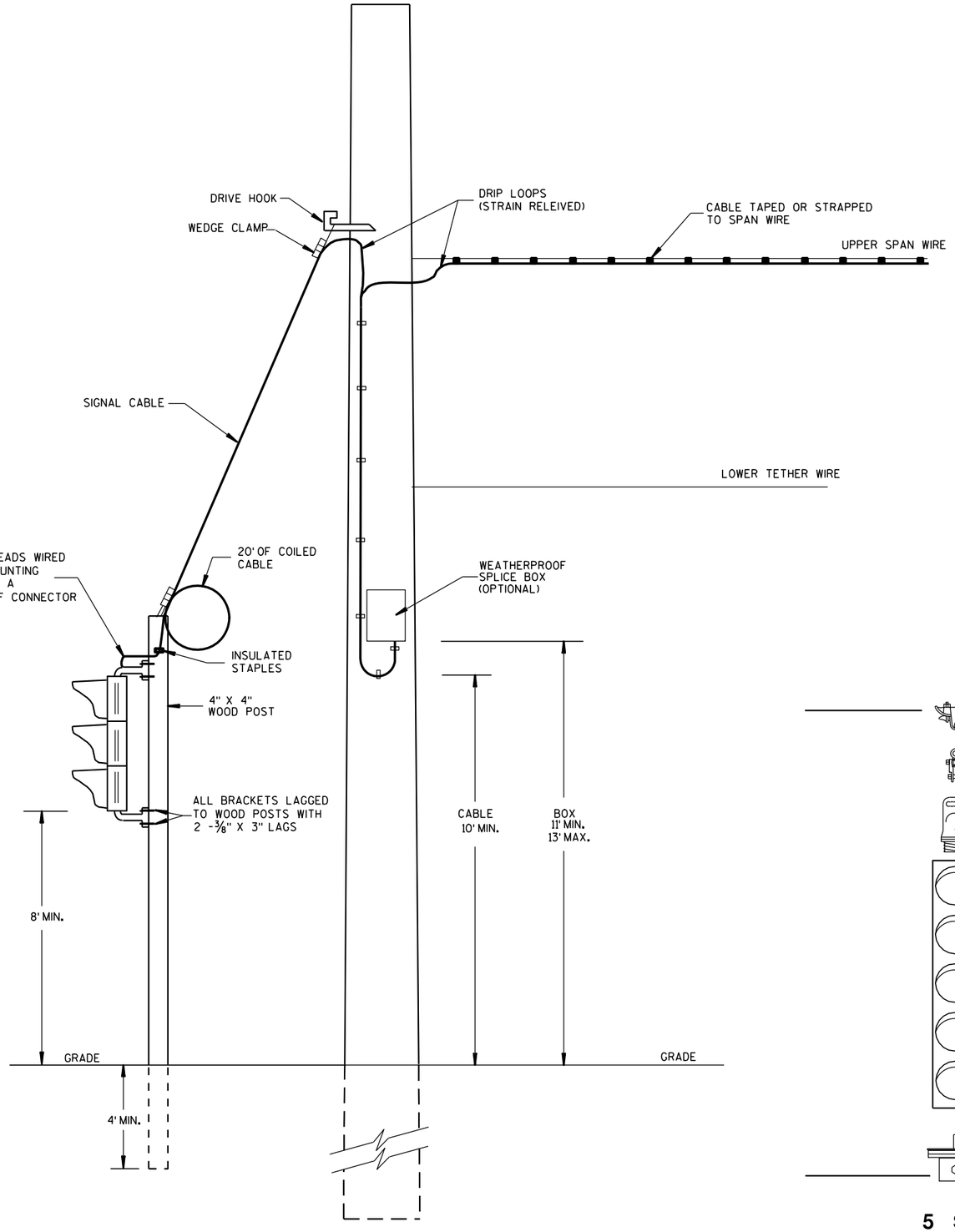
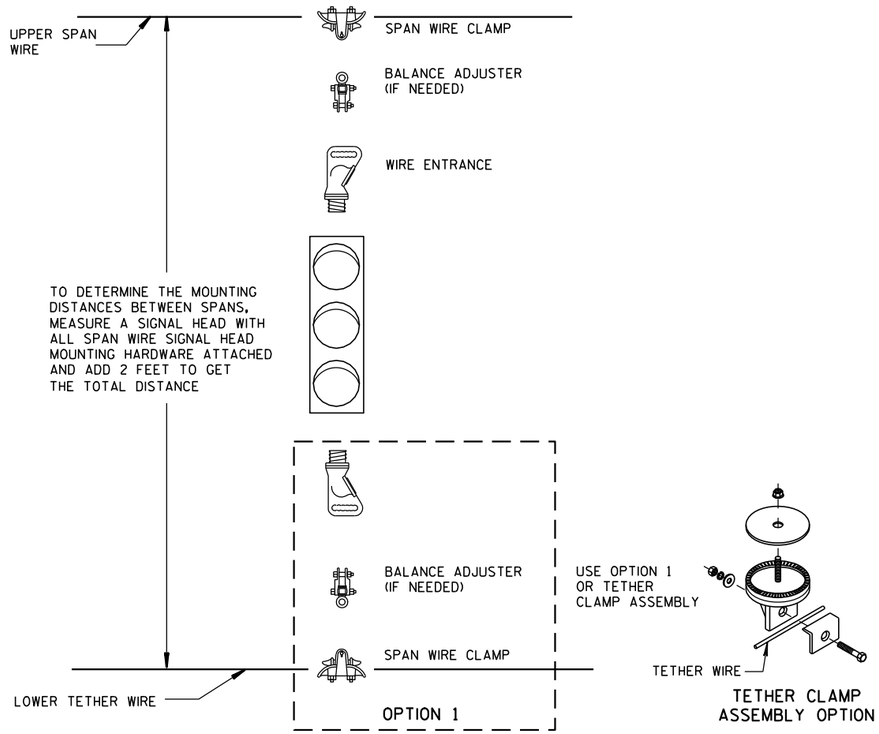
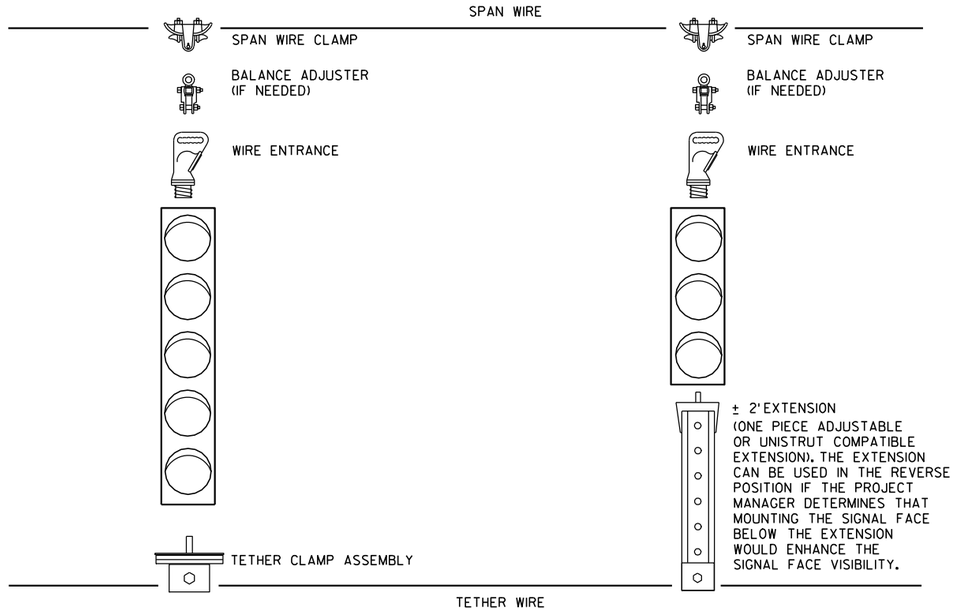


TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7-14-08 DATE
/S/ Balu Aganthangarayanan
STATE ELECTRICAL ENGI 360 HWYS
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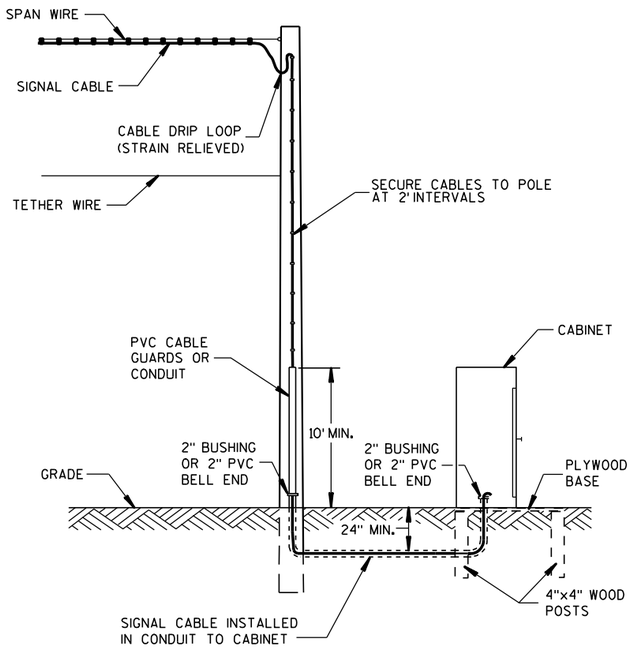
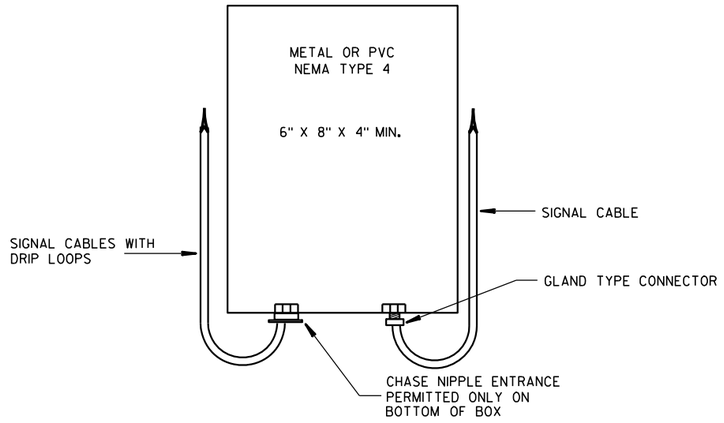
S.D.D. 9 G 1-3f





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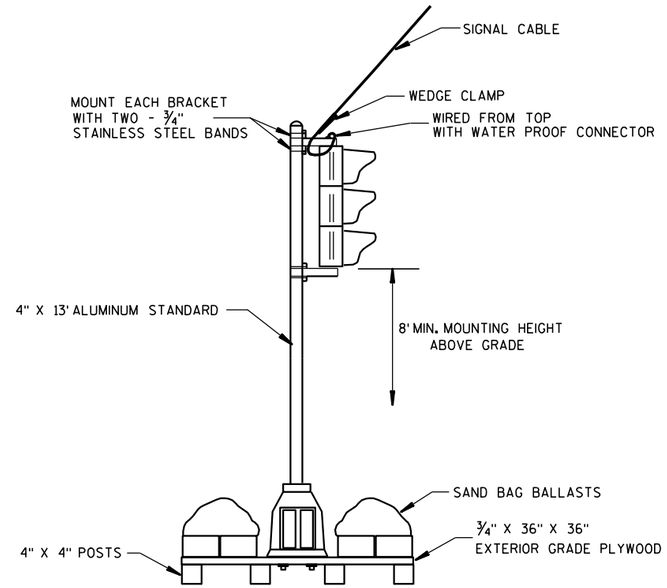
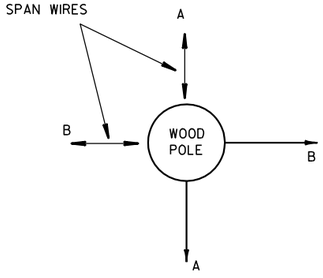
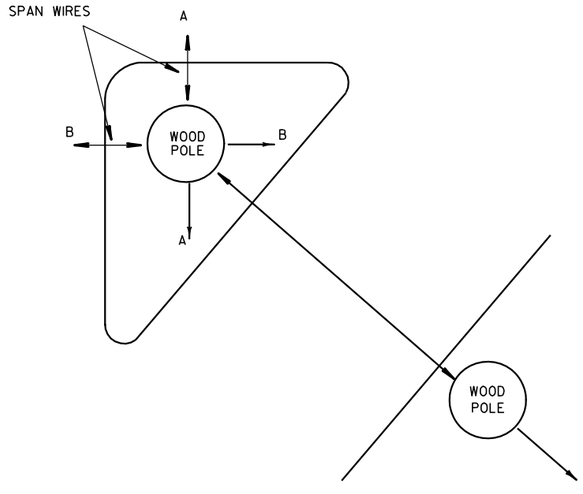


TYPICAL SKID TYPE TEMPORARY

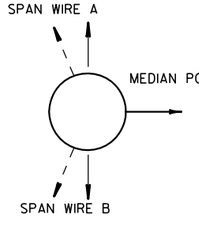


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF THE
SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08
DATE

/S/ Balu Aganthangayanan
STATE ELECTRICAL ENGI

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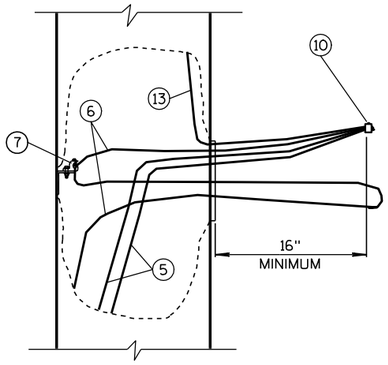
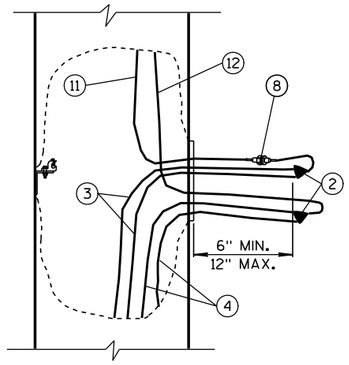
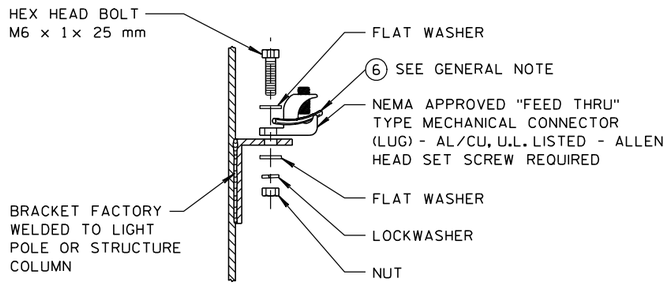


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



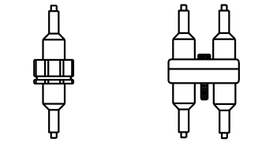
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



FUSE ASSEMBLIES

GENERAL NOTES

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

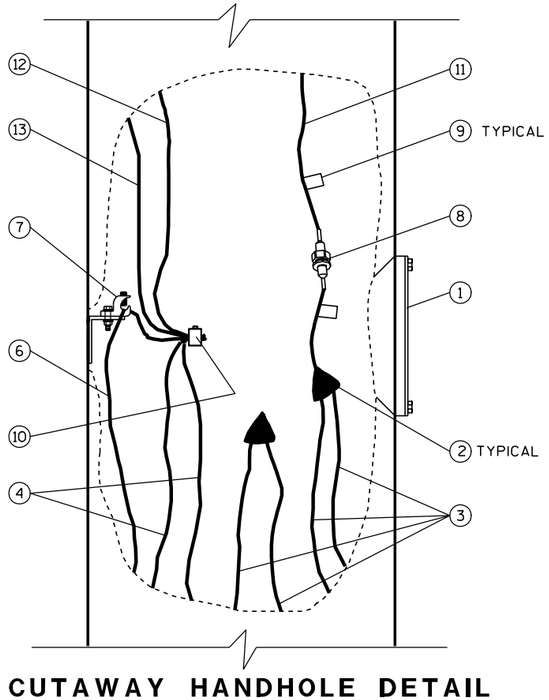
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

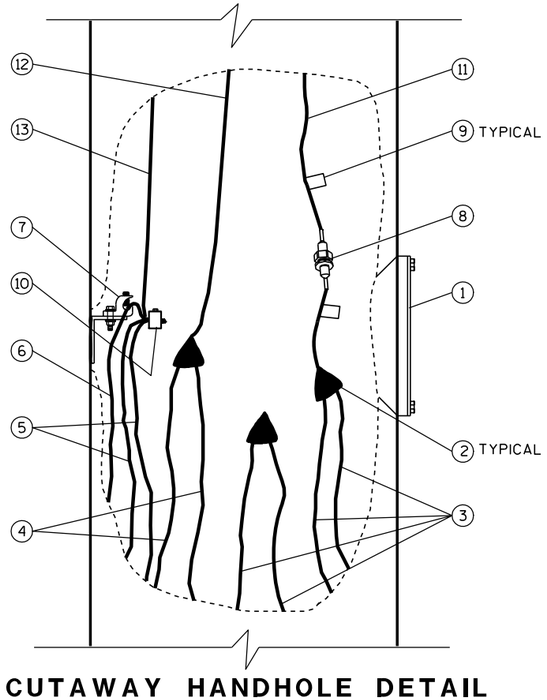
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



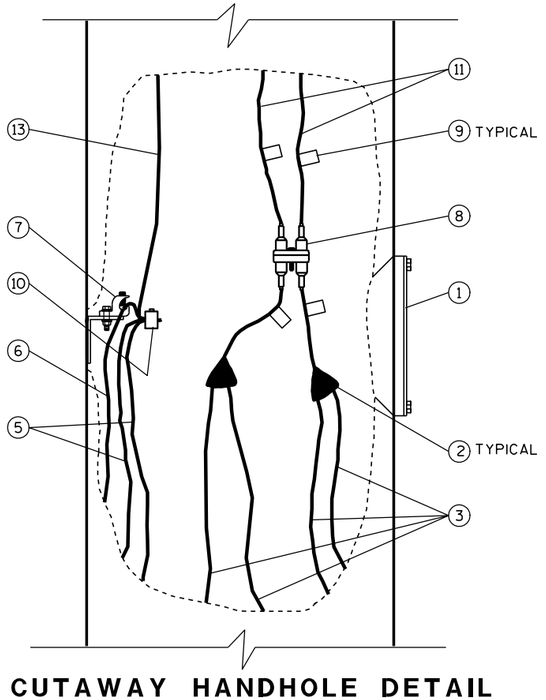
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-φ SHOWN; 3-φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-φ SHOWN; 3-φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

(1) HANDHOLE AND COVER
(2) INSULATED SPLICE
(3) UNGROUNDED LINE WIRE
(4) GROUNDED LINE WIRE
(5) SYSTEM GROUNDING LINE WIRE
(6) GROUNDING ELECTRODE CONDUCTOR
(7) HANDHOLE GROUNDING LUG
(8) FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
(9) CIRCUIT TAG (SEE GENERAL NOTE)
(10) REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
(11) UNGROUNDED POLE WIRE
(12) GROUNDED POLE WIRE
(13) EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
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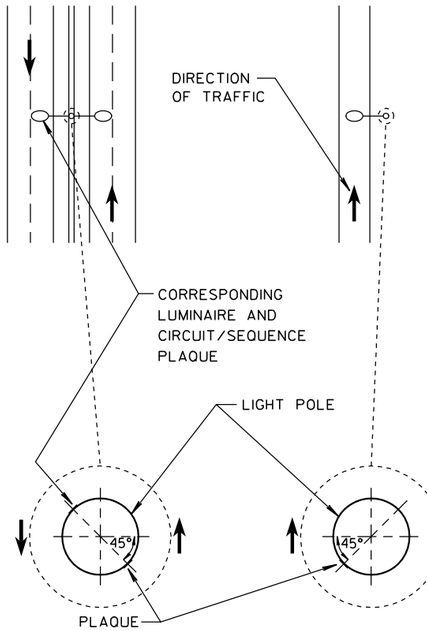


MEDIAN POLE **SINGLE ARM POLE**

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

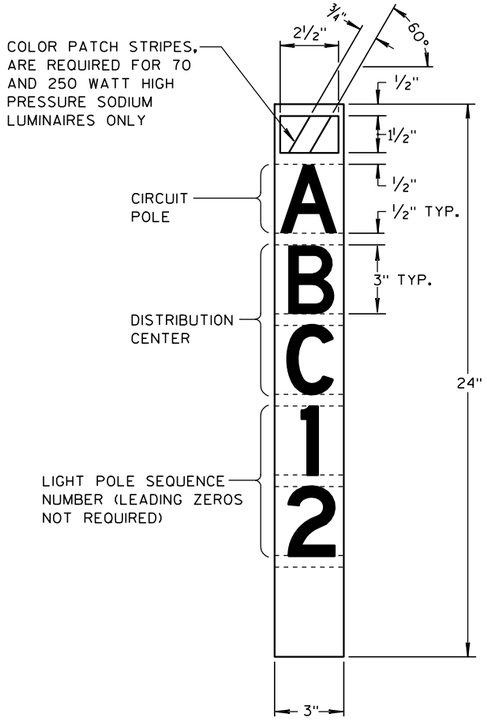
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS LUMINAIRES

1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE WITH WHITE STRIPE
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN
70 WATT - BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
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GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

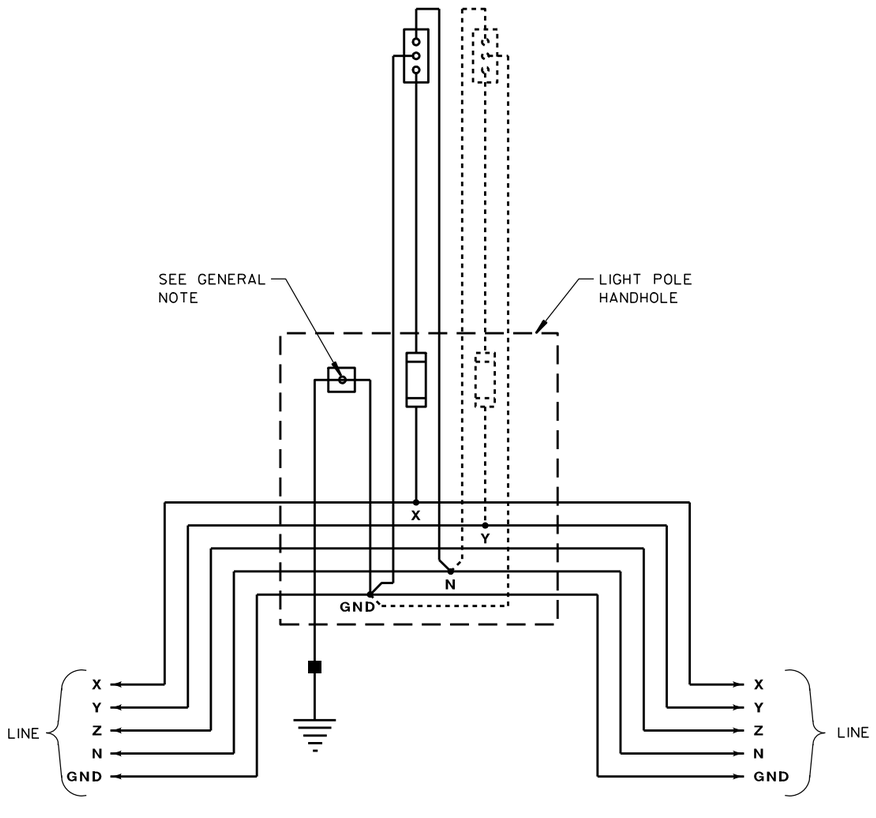
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

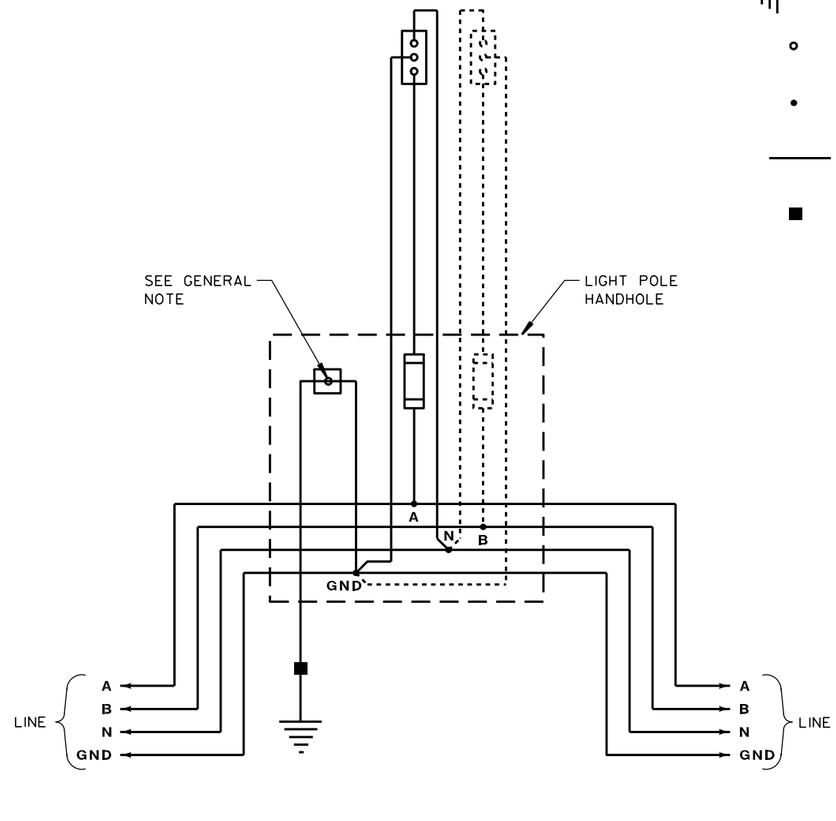
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
FHWA — HWYS

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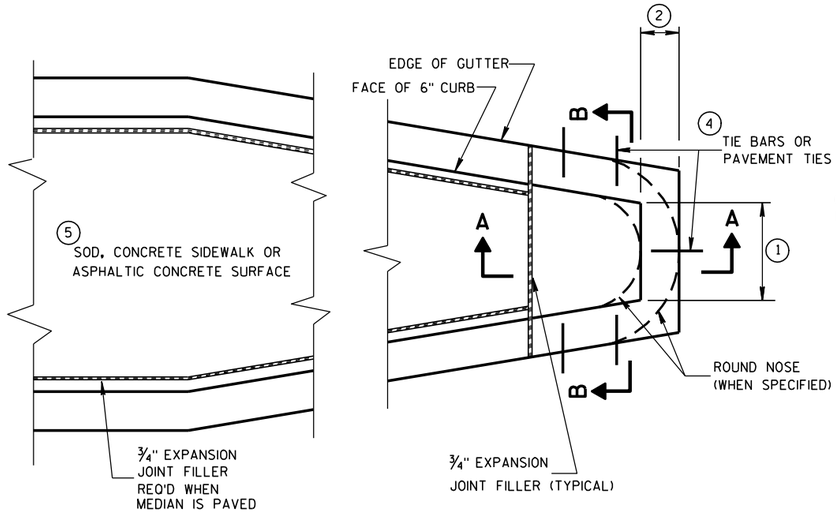
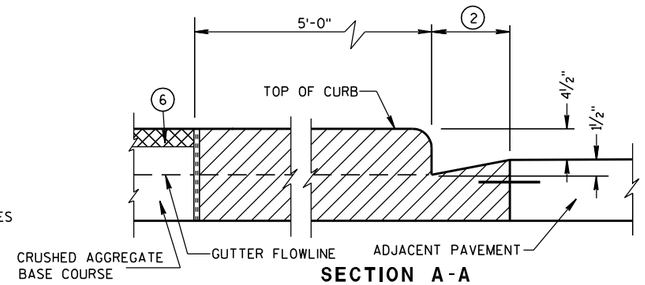
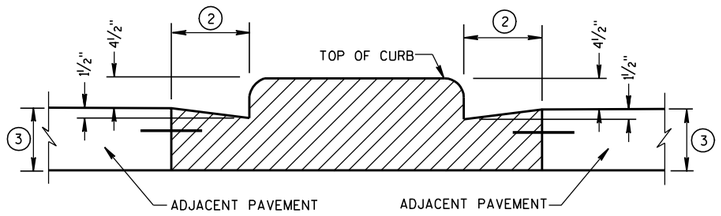




SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

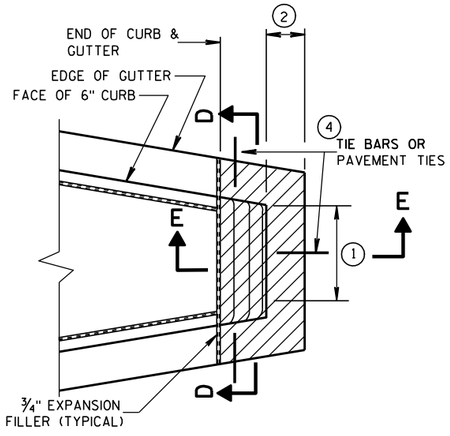
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

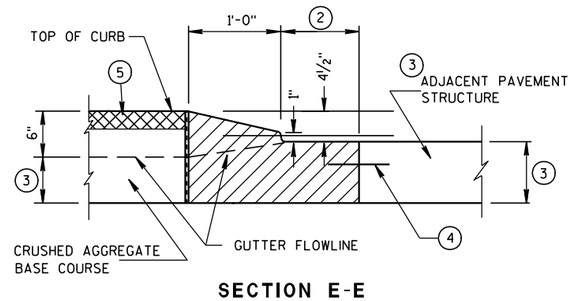
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

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

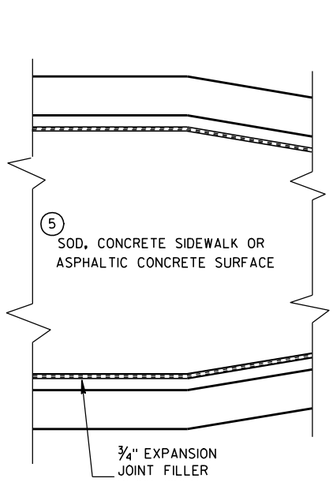
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

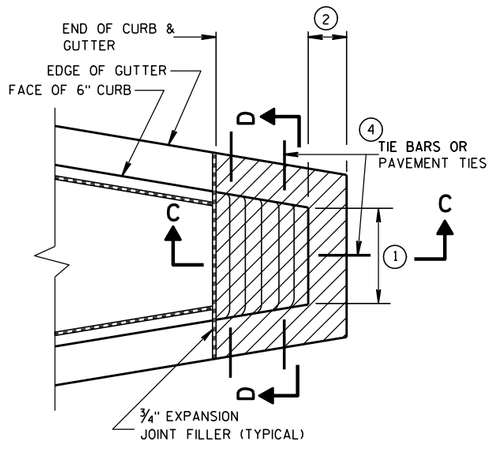




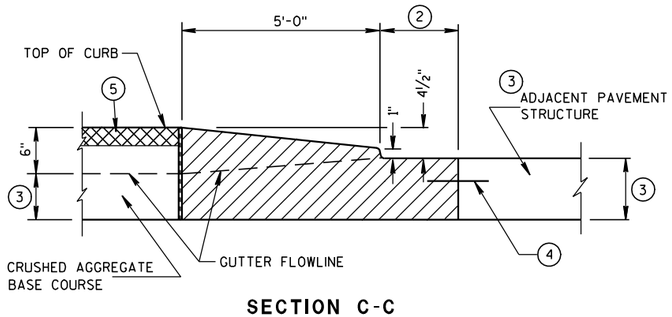
SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

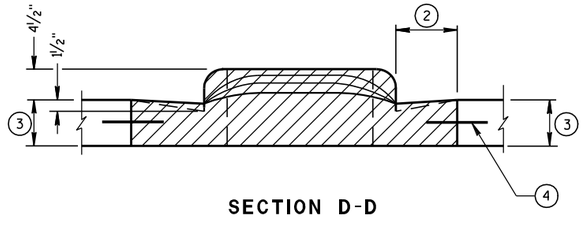




CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION C-C



SECTION D-D

CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA	365 NT

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S.D.D. 11 B 2-2

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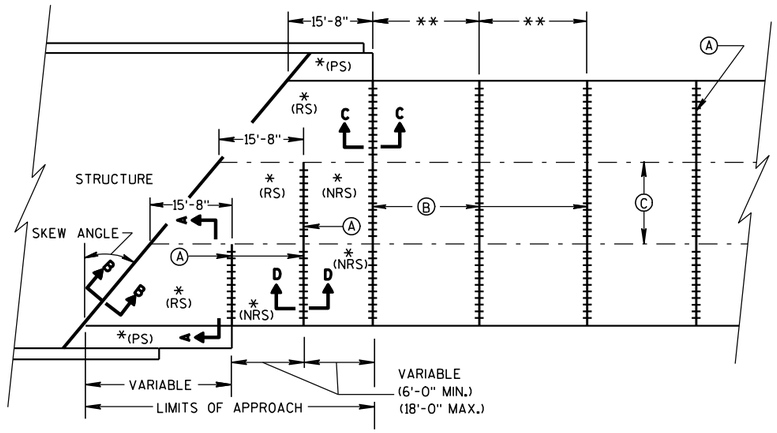
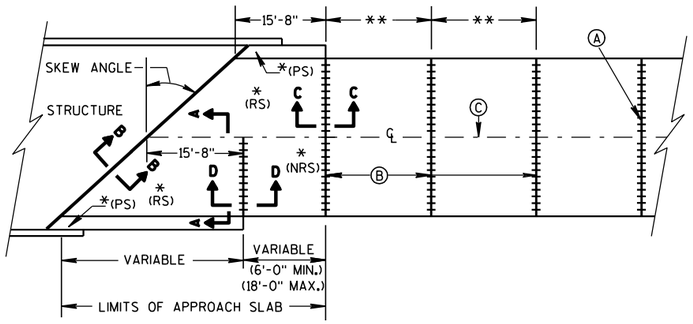
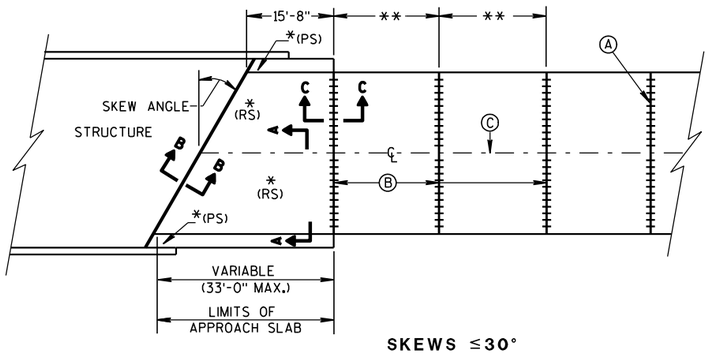
S.D.D. 11 B 2-2



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



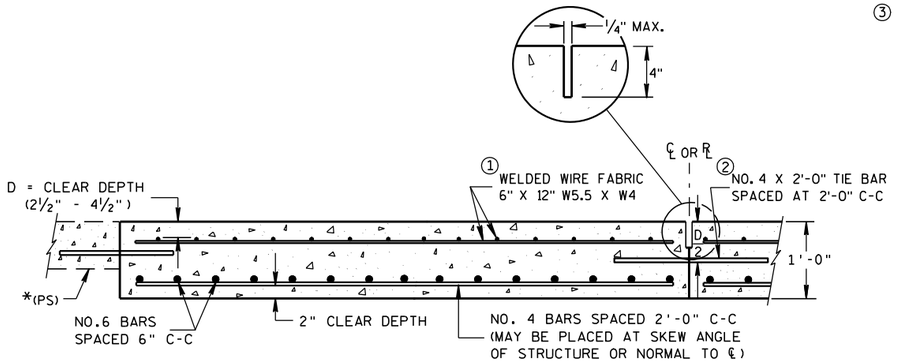
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

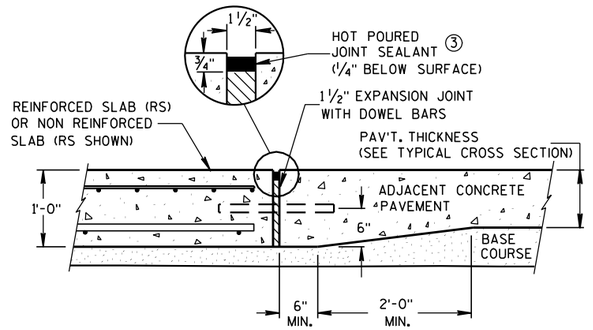
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

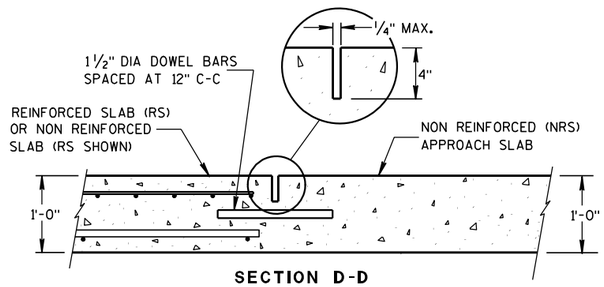
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



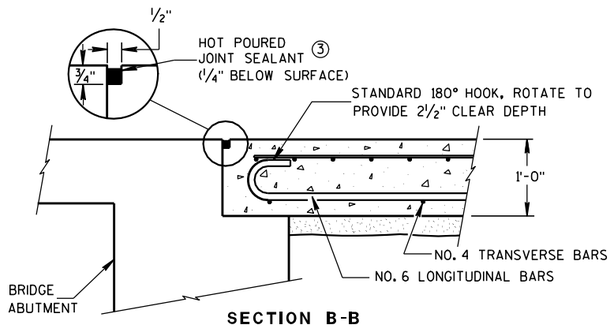
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

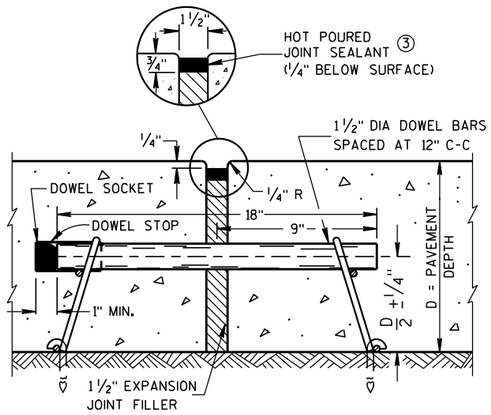
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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 366 NEER
FHWA

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S.D.D. 13 B 2-6
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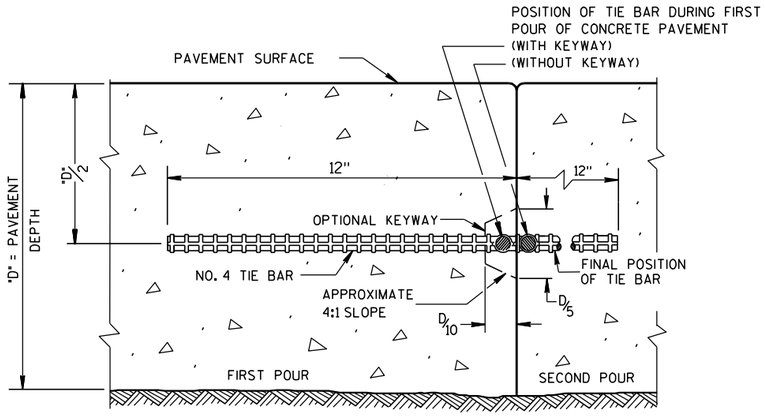
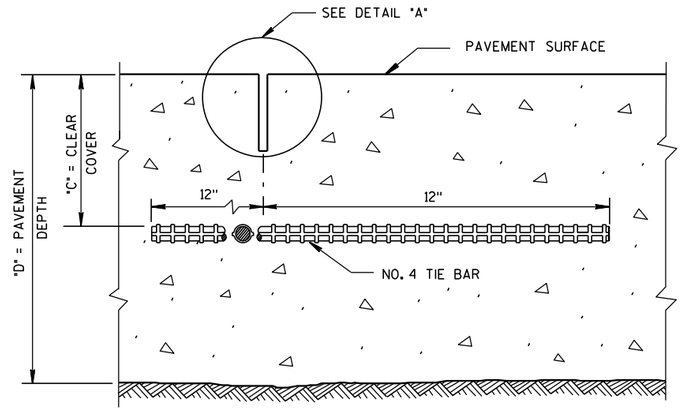


CONSTRUCTION JOINT



SAWED JOINT

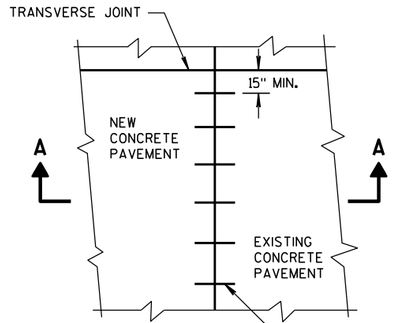
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

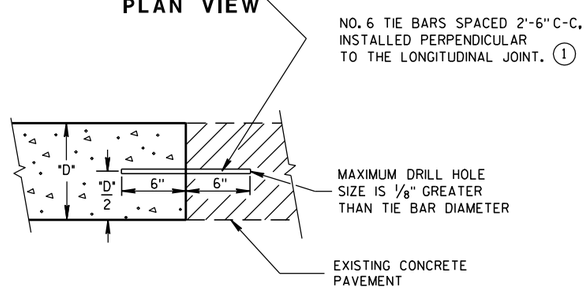
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

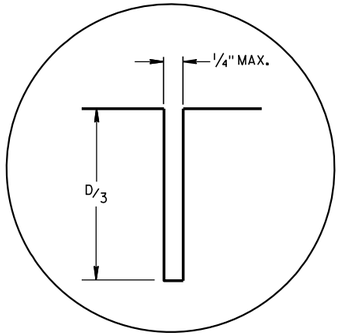
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

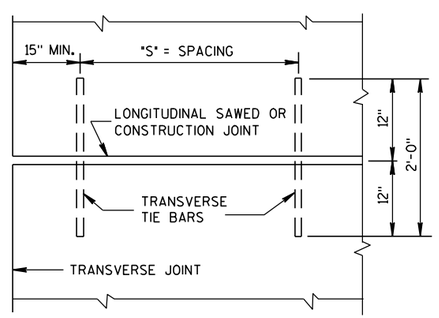


SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

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

10-5-2010
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DI 367 INEER

FHWA

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S.D.D. 13 C 1-15

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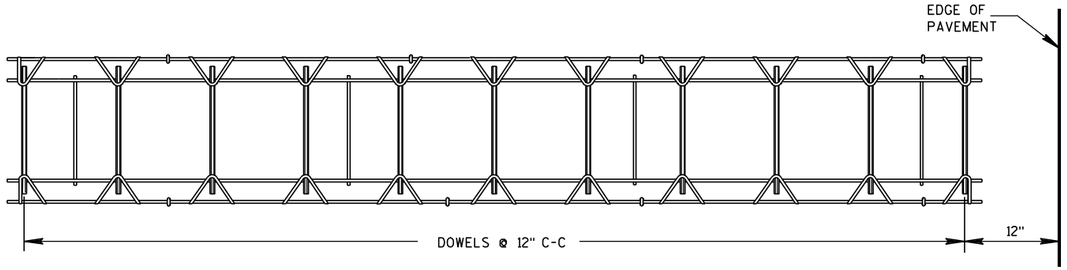
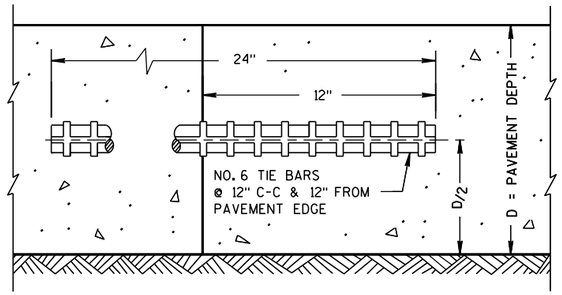
S.D.D. 13 C 1-15



PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



TRANSVERSE CONSTRUCTION JOINT

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT 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, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.

② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

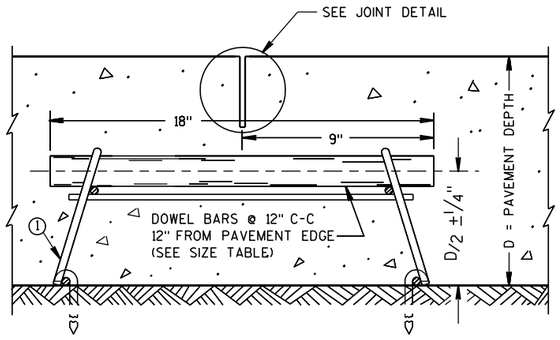
④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

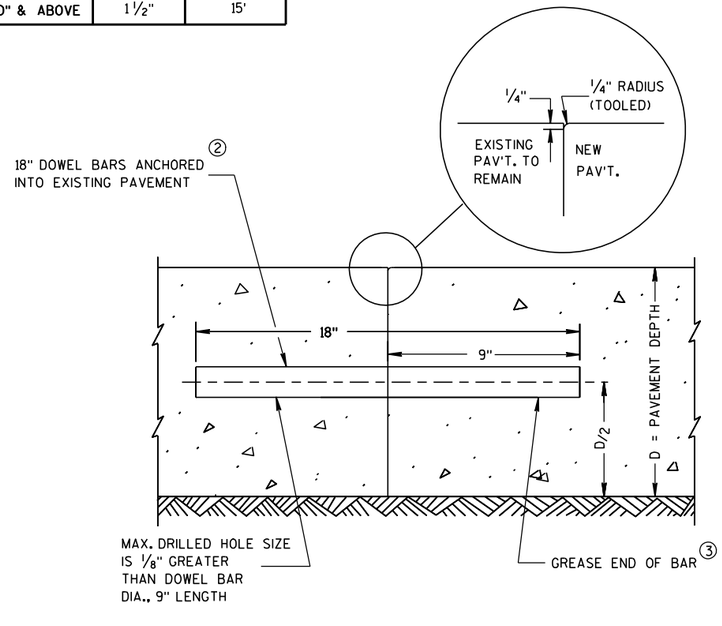
⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6",6 1/2"	NONE	12'
7",7 1/2"	1"	14'
8",8 1/2"	1 1/4"	15'
9",9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

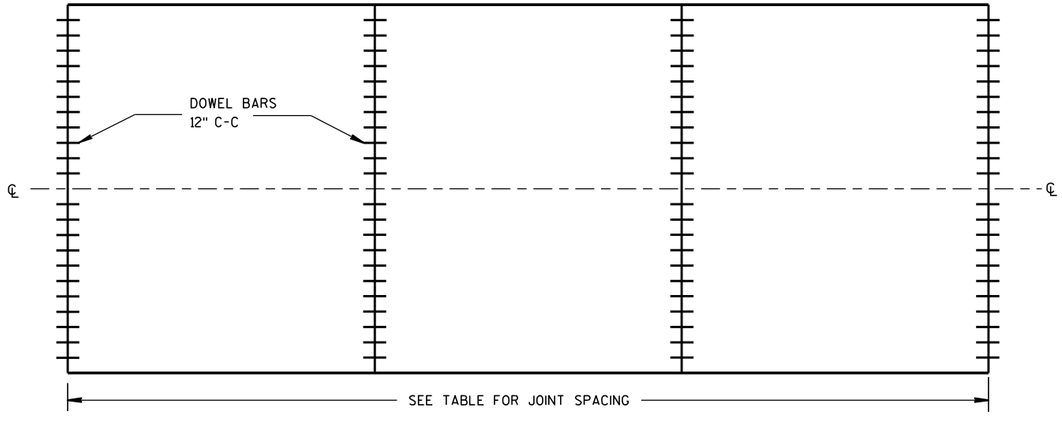


DOWELED CONTRACTION JOINT

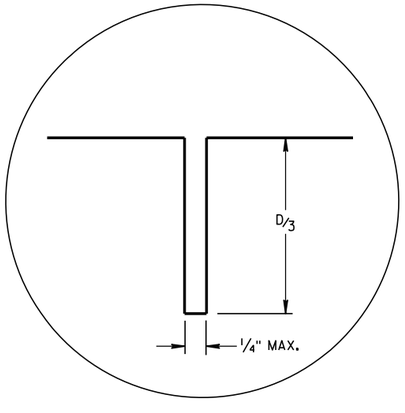


TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DESIGN ENGINEER
FHWA

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S.D.D. 13 C 13-7

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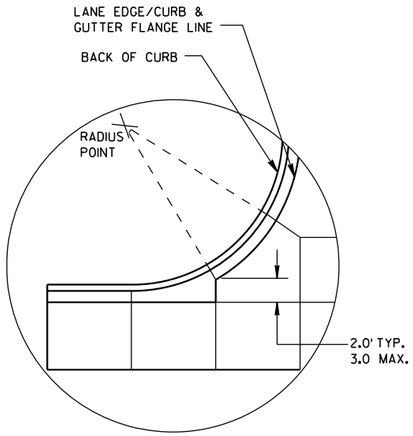
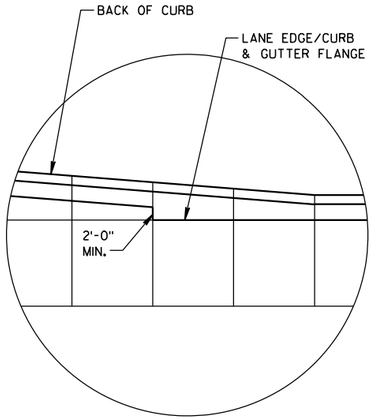
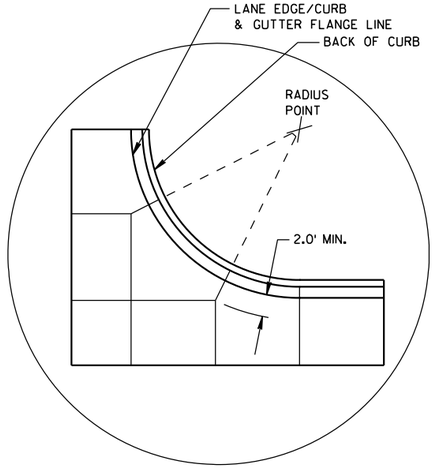
S.D.D. 13 C 13-7



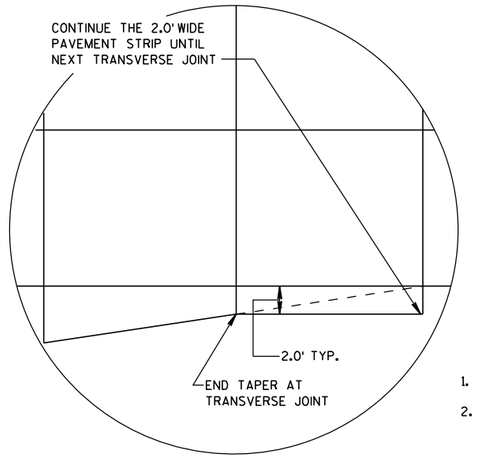
DETAIL "A"



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.

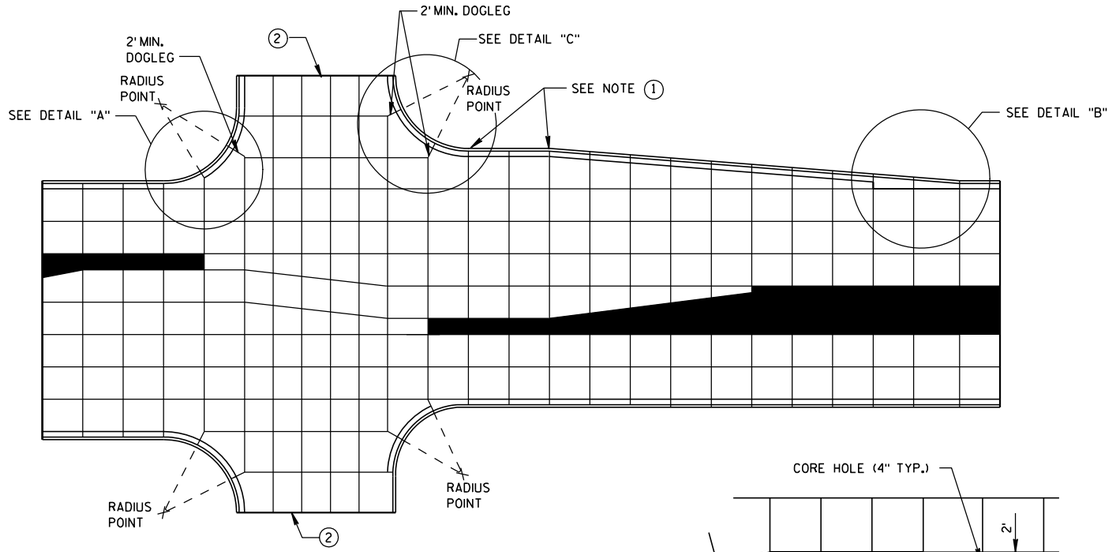
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

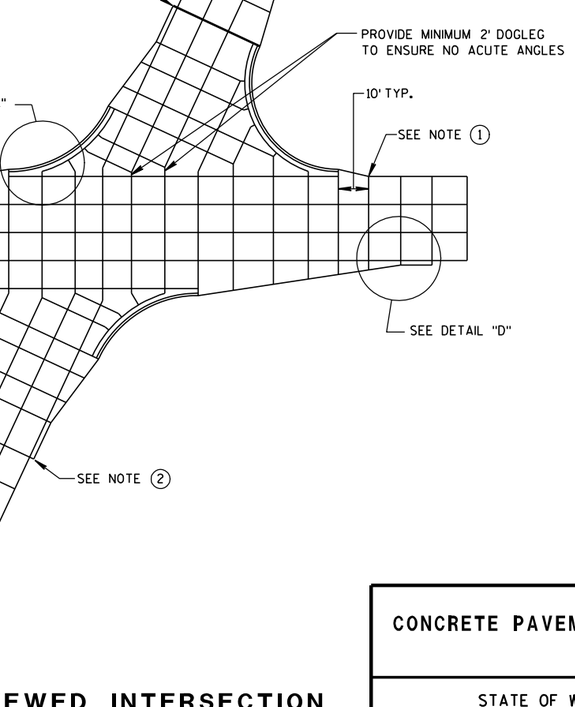
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



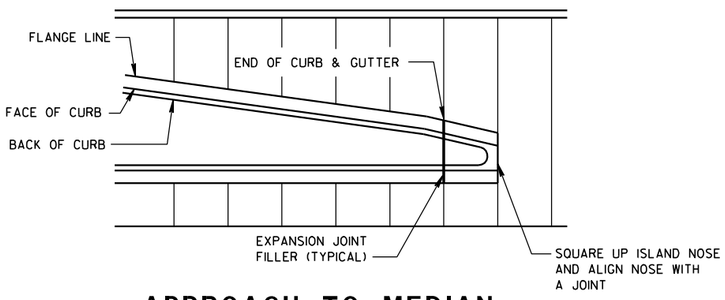
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

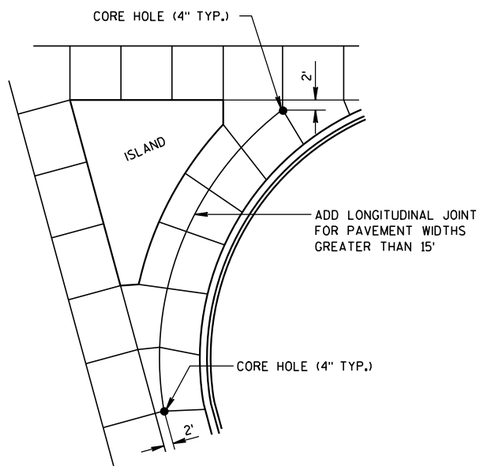
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

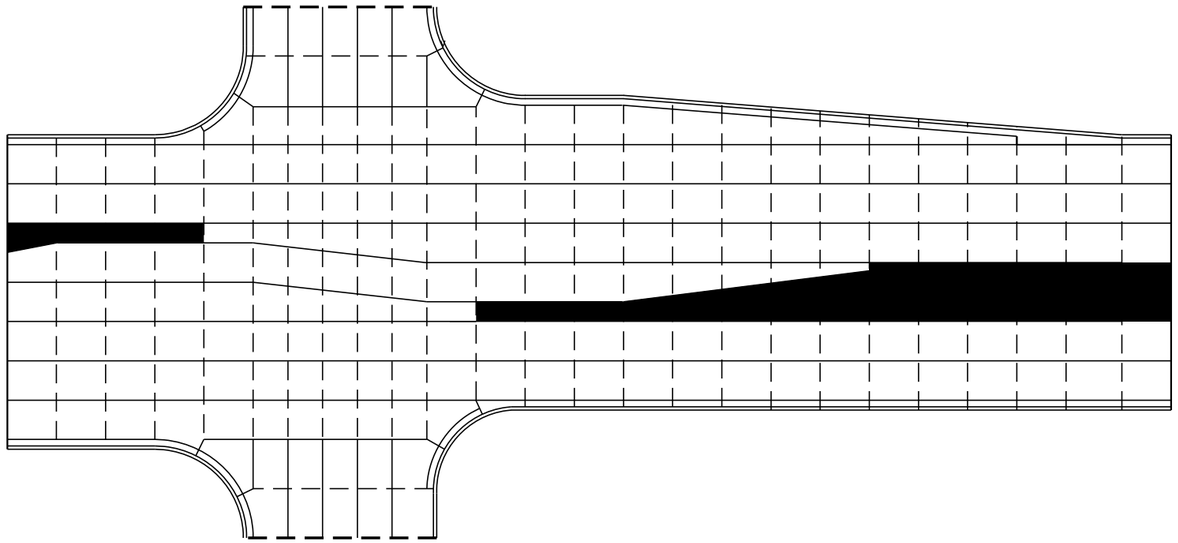
6
S.D.D. 13 C 18-1a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

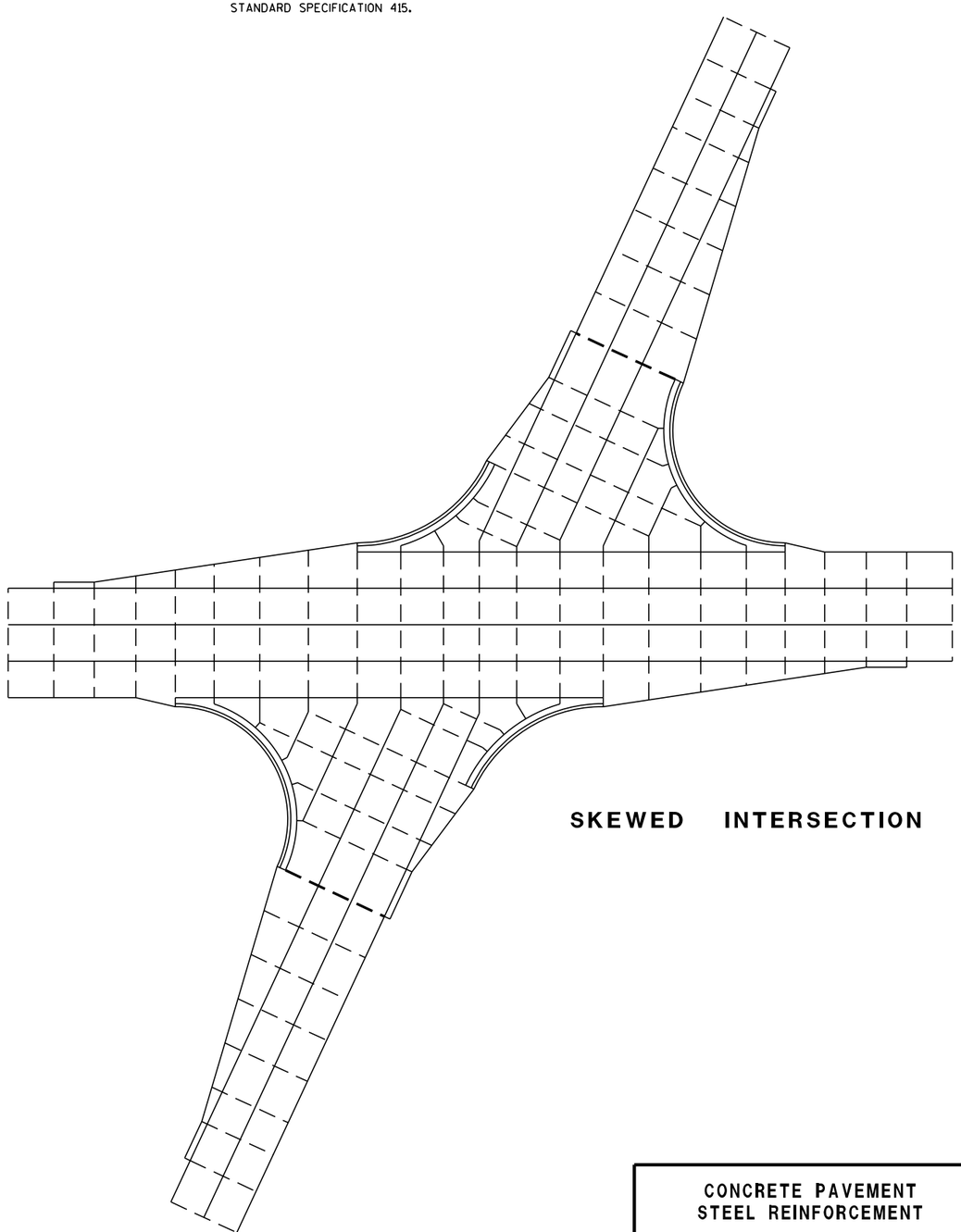
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

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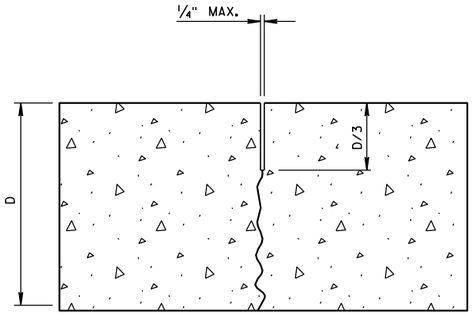
S.D.D. 13 C 18-1b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

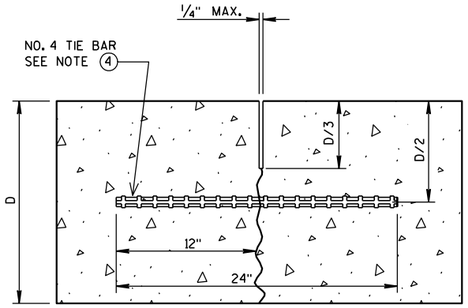
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 18-1b



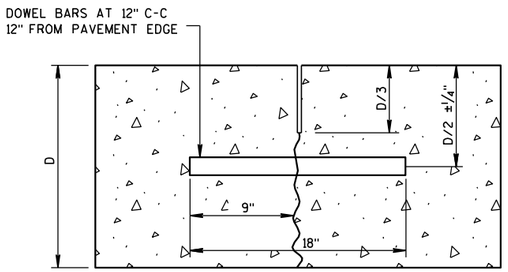
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

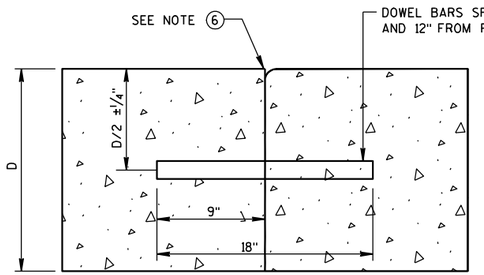
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE 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.



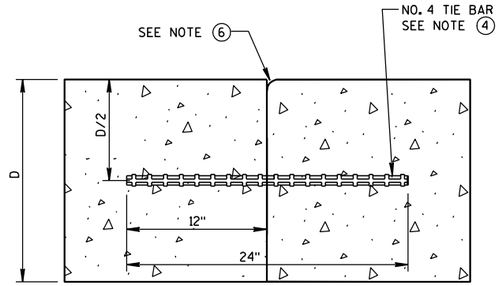
DOWELED-TRANSVERSE

CONTRACTION JOINTS

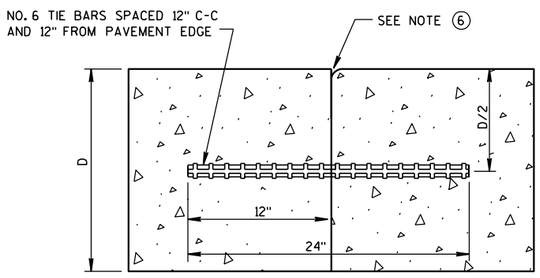
SEE NOTE (2)



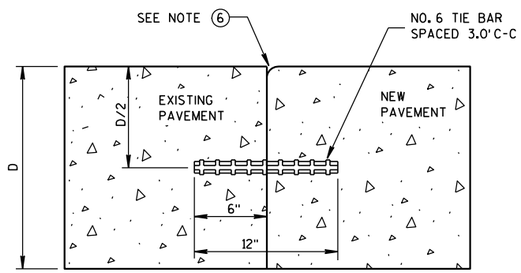
DOWELED TRANSVERSE



TIED LONGITUDINAL



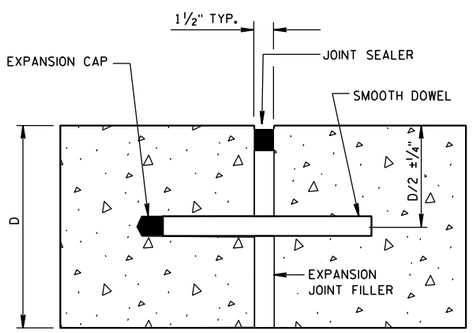
TIED TRANSVERSE
SEE NOTE (3)



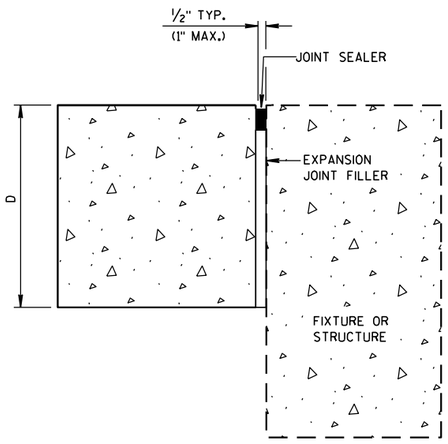
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE
SEE NOTE (1)



UNTIED-LONGITUDINAL

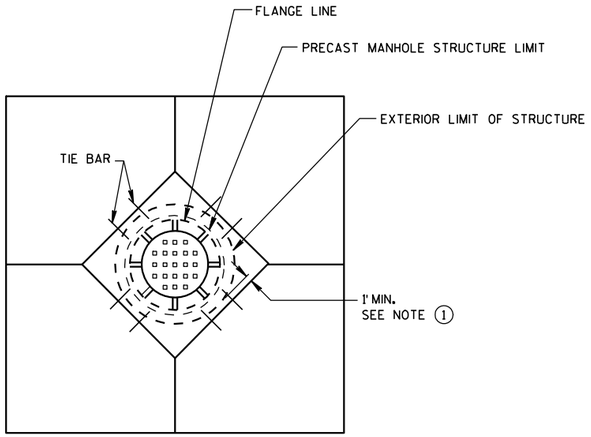
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

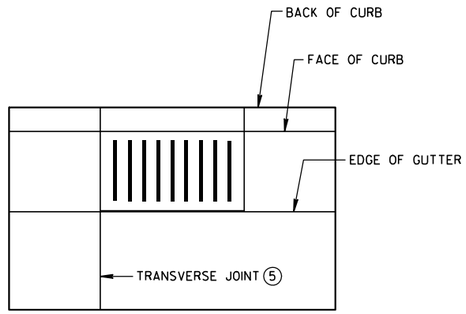
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

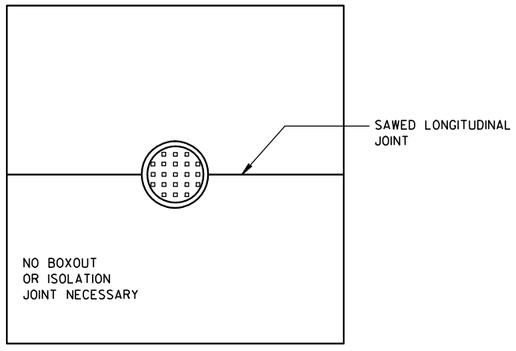
S.D.D. 13 C 18-1c



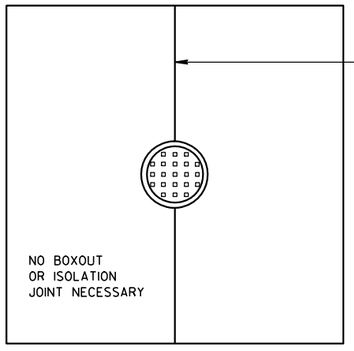
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



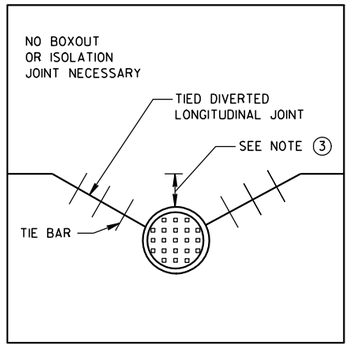
INLET WITH TRANSVERSE JOINT



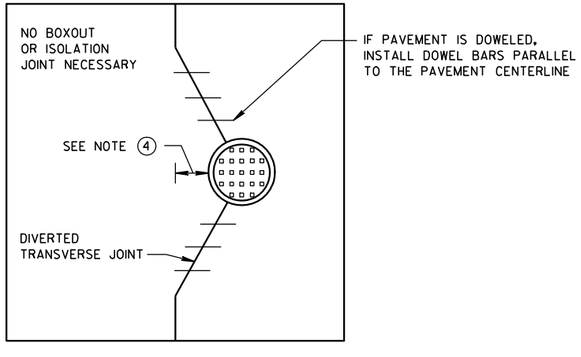
MANHOLE WITH LONGITUDINAL JOINT



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 GREATER THAN 2 FEET, DO NOT DIVERT JOINT AND SAW LONGITUDINAL JOINT AS NORMAL. IF DISTANCE IS 2 FEET OR LESS, DIVERT LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE.
4. IF DISTANCE FROM THE EDGE OF MANHOLE TO THE NEAREST TRANSVERSE JOINT IS GREATER THAN 4 FEET, REDIRECT JOINT TO INTERSECT MANHOLE. IF DISTANCE IS 4 FEET OR LESS, PLACE REBAR REINFORCEMENT AROUND 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
10-5-2010 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D372 ENGINEER
FHWA

6
S.D.D. 13 C 18-1d

LEGEND

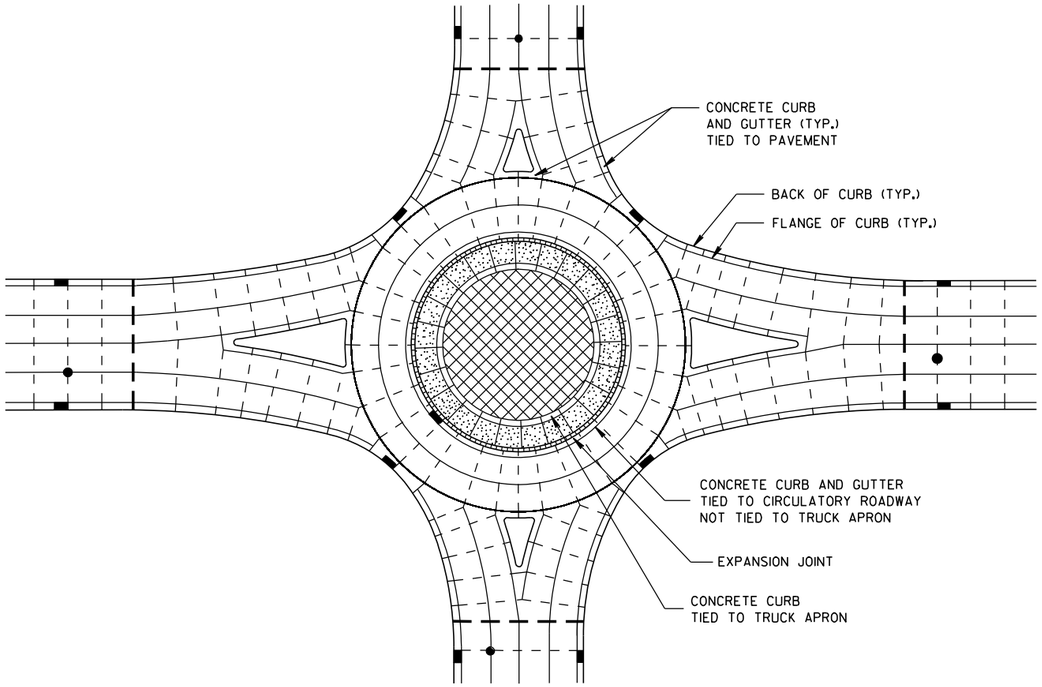
- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

GENERAL NOTES

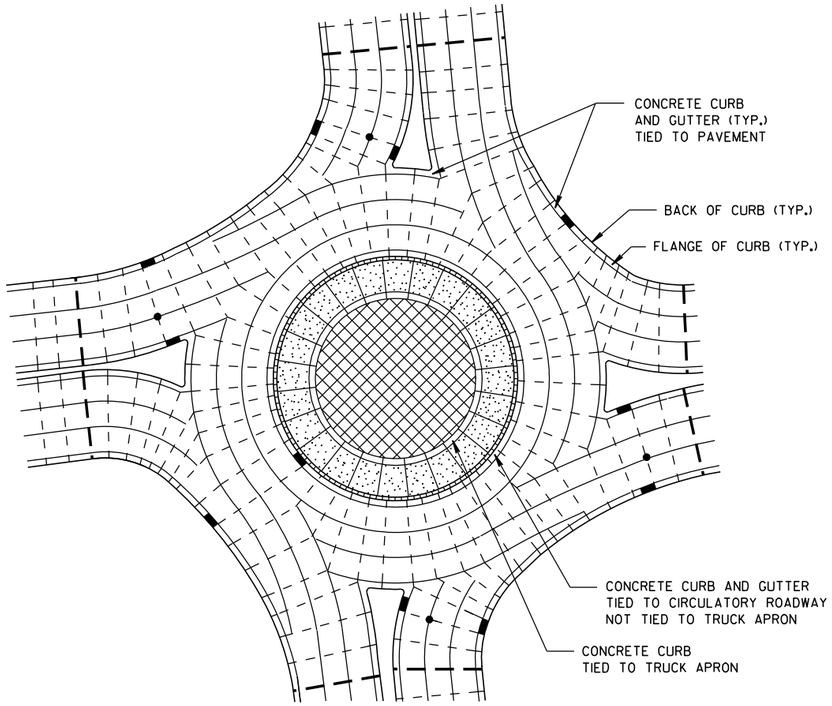
MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18-1a.

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

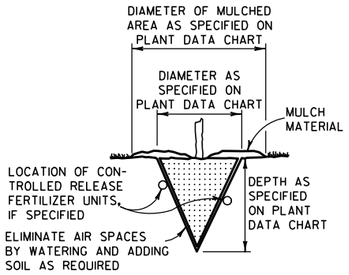
10-5-2010 DATE

/S/ Deb Bischoff PAVEMENT POLICY & DI 373 INEER

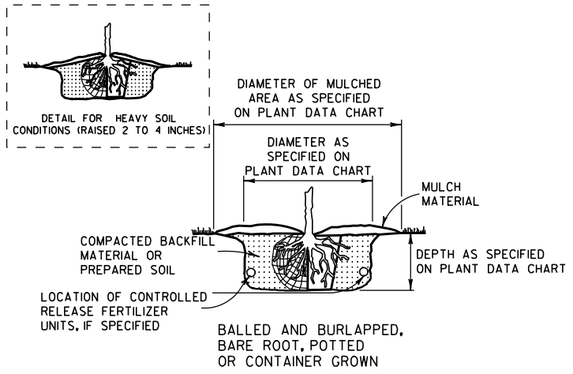
FHWA

6

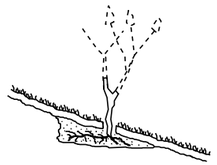
S.D.D. 13 C 18-1e



MACHINE MOVED

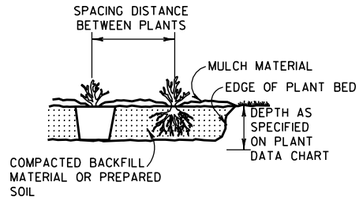


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



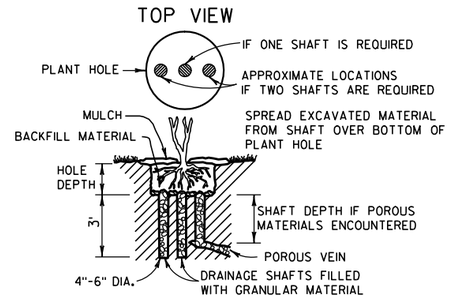
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



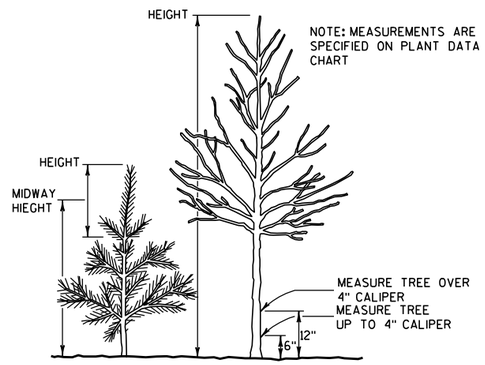
PREPARED BED (BARE ROOT AND POTTED)

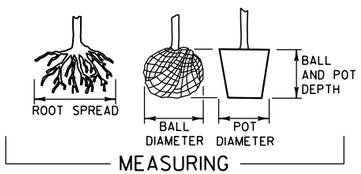
PLANTING



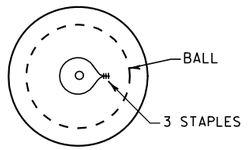
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

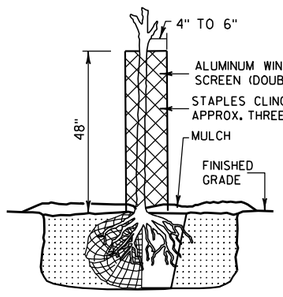




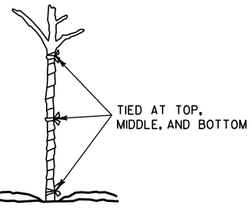
MEASURING



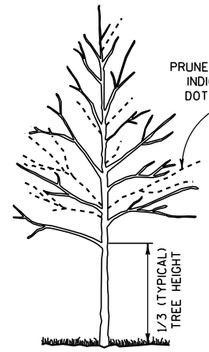
TOP VIEW



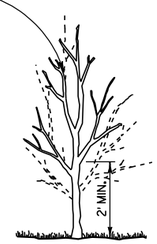
RODENT PROTECTION



WRAPPING



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



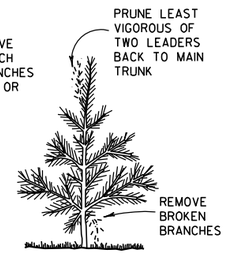
SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

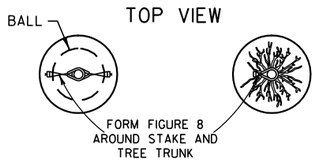
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

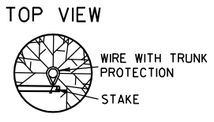
SUMAC

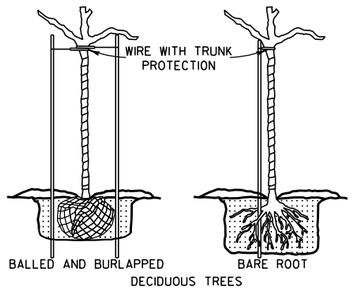


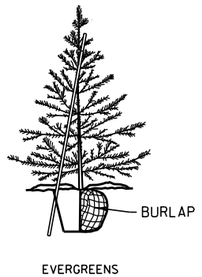
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



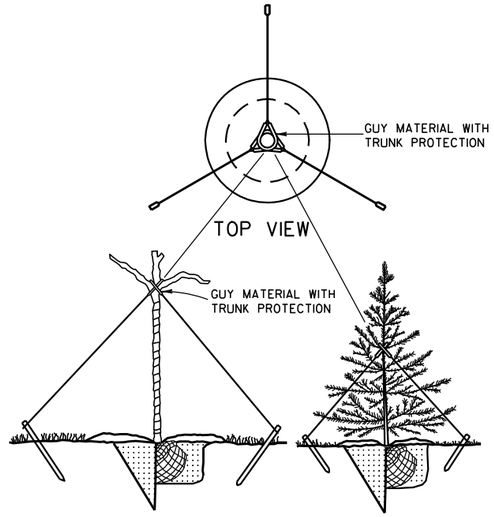






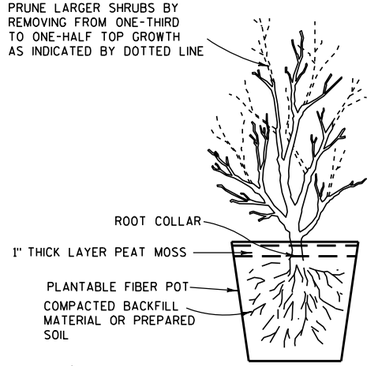
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE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

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

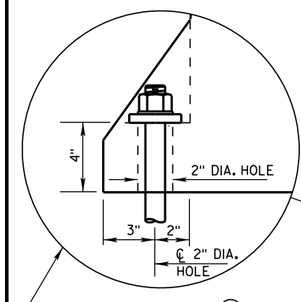
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

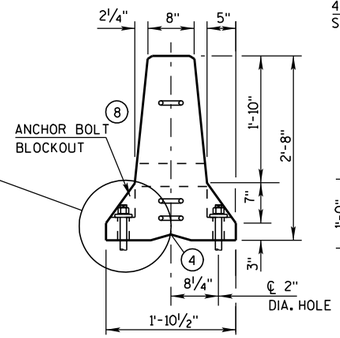
APPROVED
4/11/94
DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

6

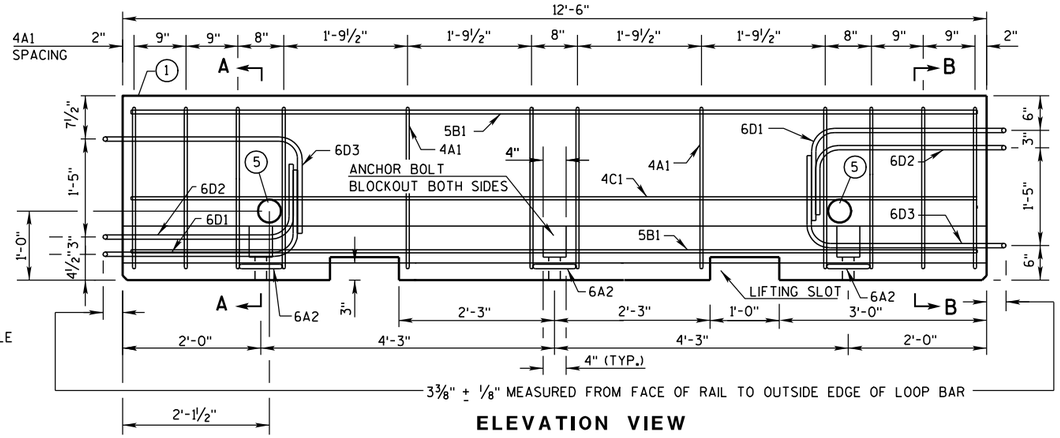
S.D.D. 14 A 2-1



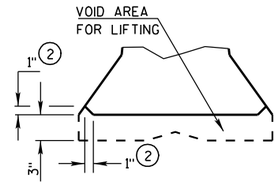
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



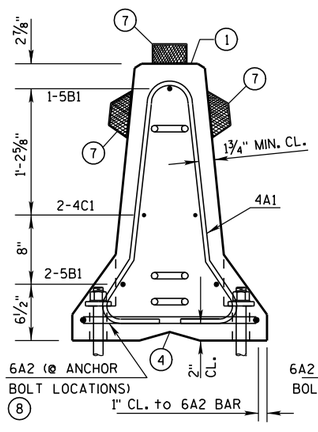
END VIEW



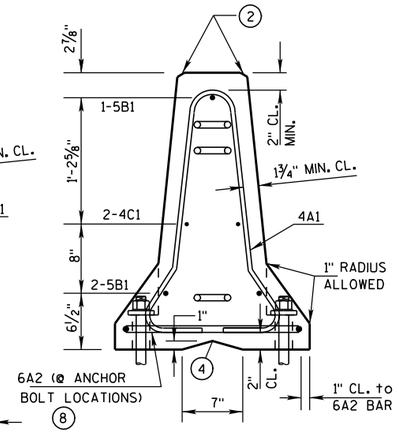
ELEVATION VIEW



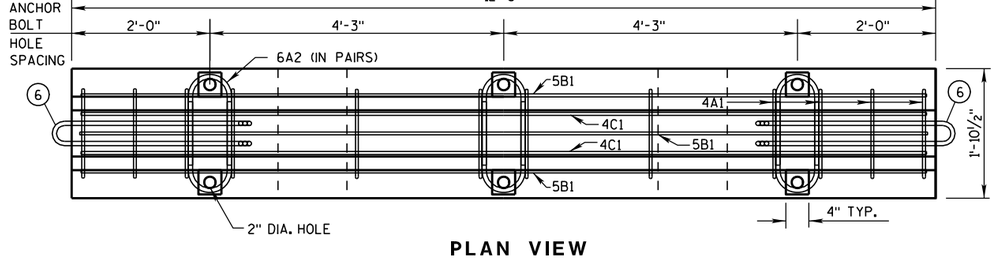
DETAIL "B" LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

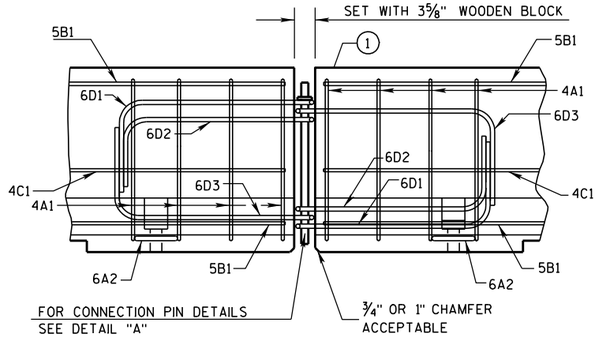


SECTION B-B
(STIRRUP PLACEMENT)

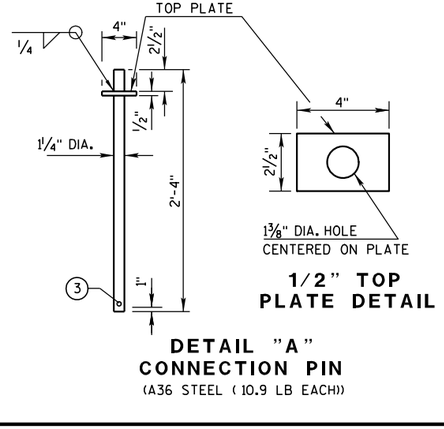


PLAN VIEW

DETAILS OF BARRIER SECTION

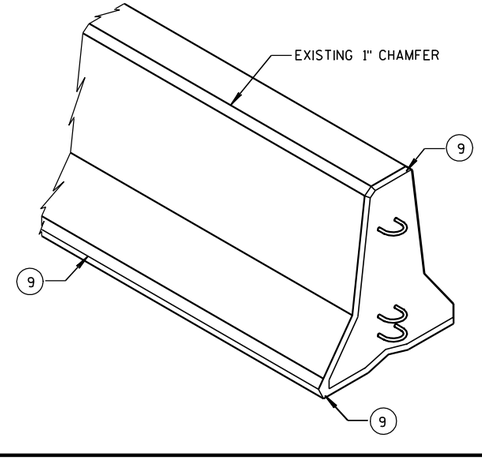


DETAILS OF BARRIER CONNECTION



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.

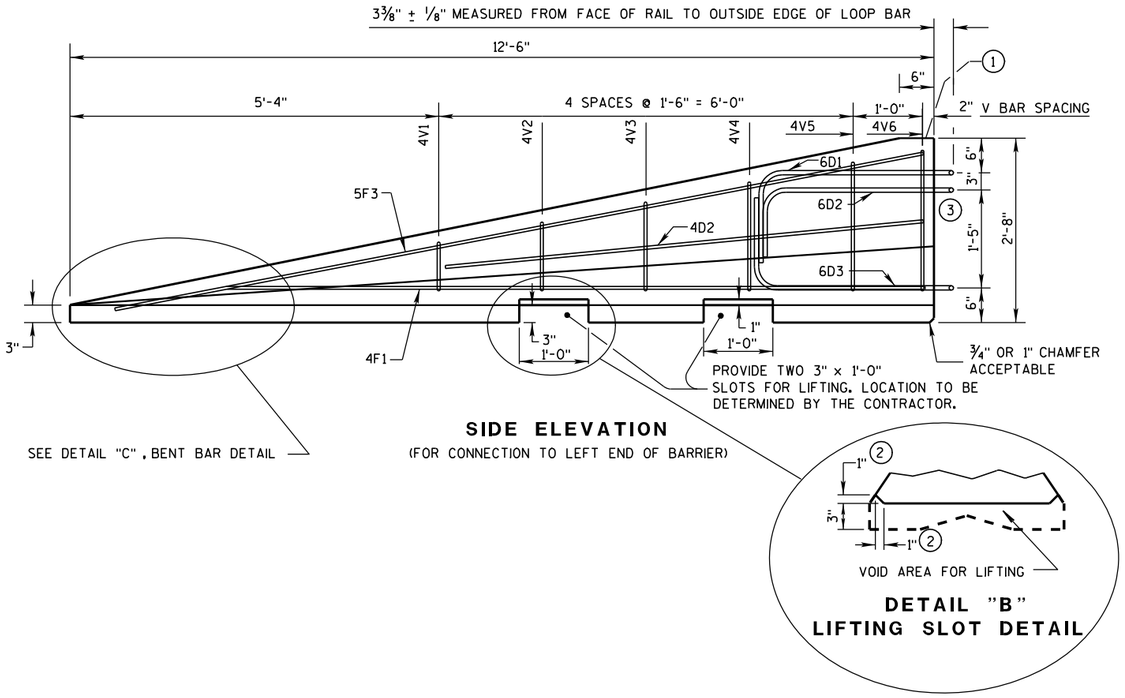
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

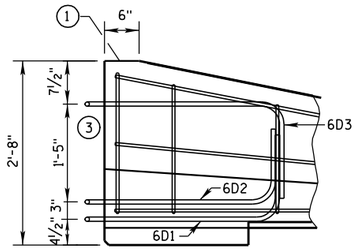
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 7-13a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)

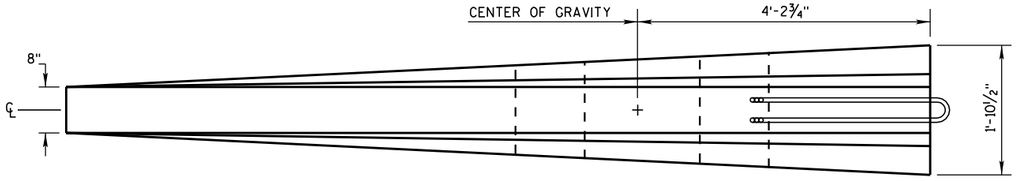
DETAIL "B"
LIFTING SLOT DETAIL



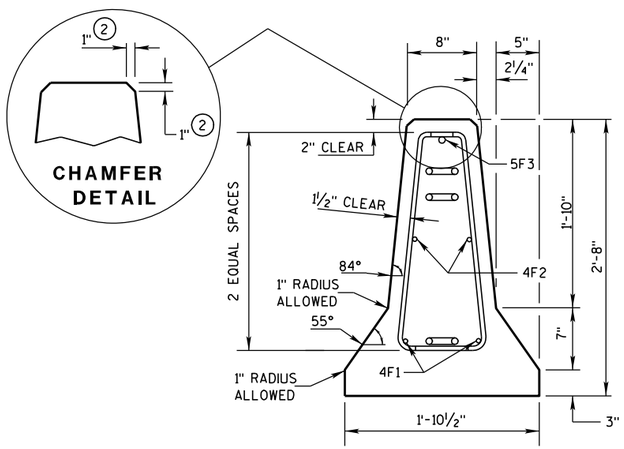
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

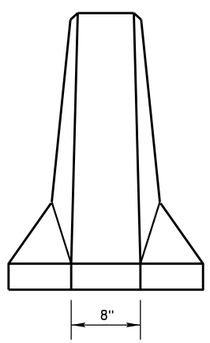
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



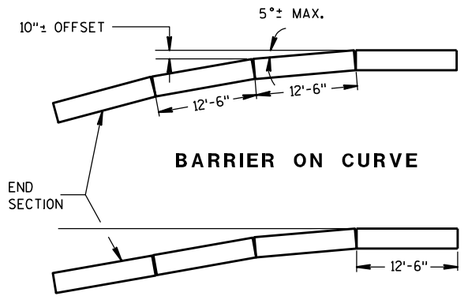
PLAN VIEW



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

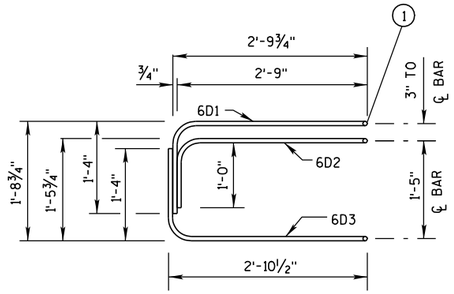
6

S.D.D. 14 B 7-13b

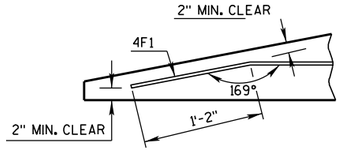
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

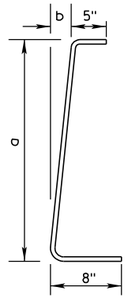
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

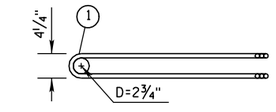
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

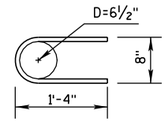
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

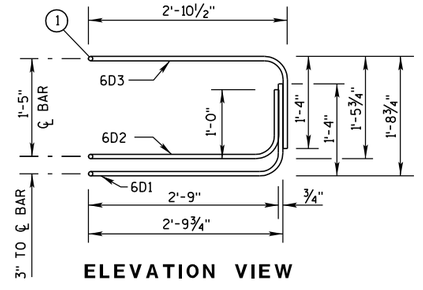
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



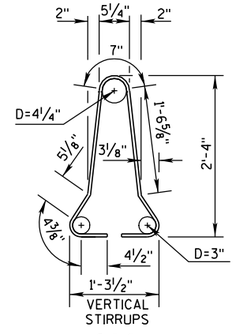
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



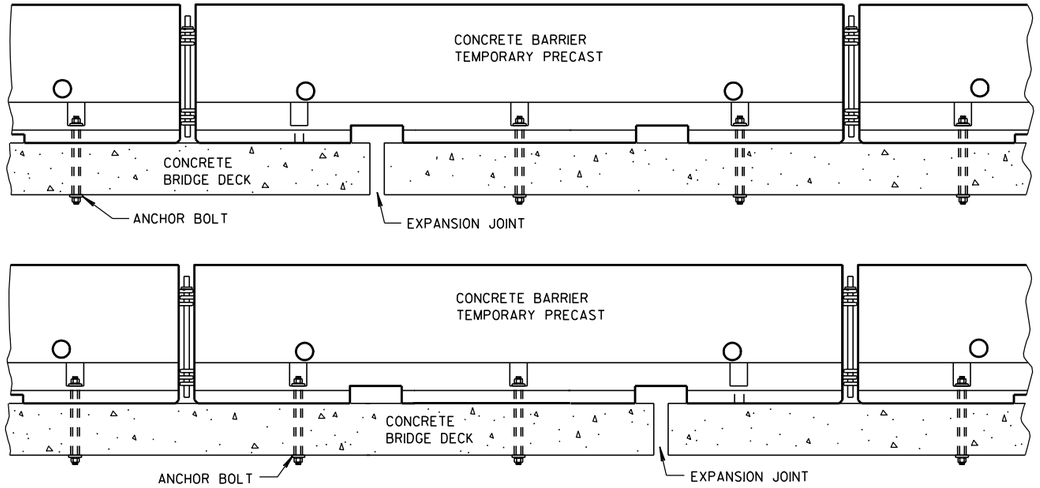
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

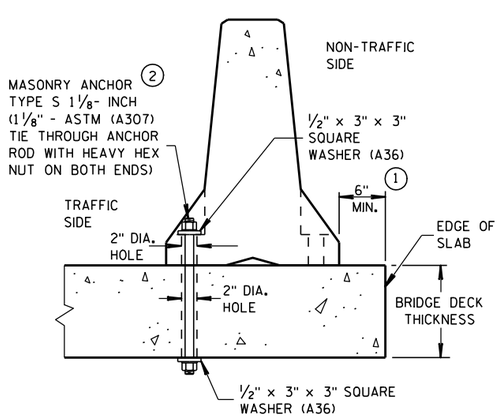
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



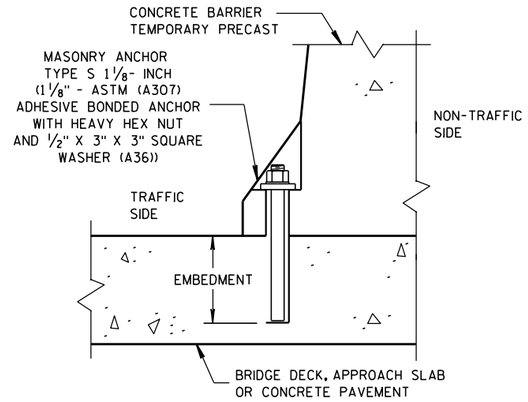
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

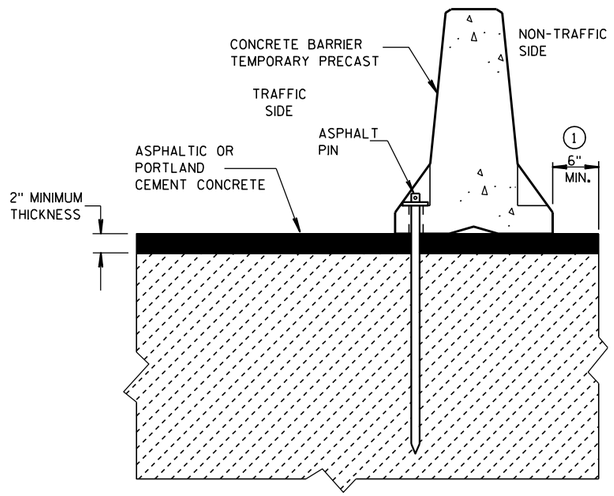
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE 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.

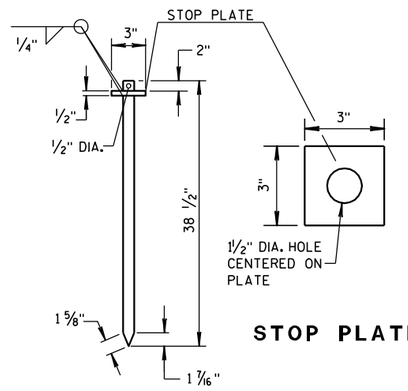
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE 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.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

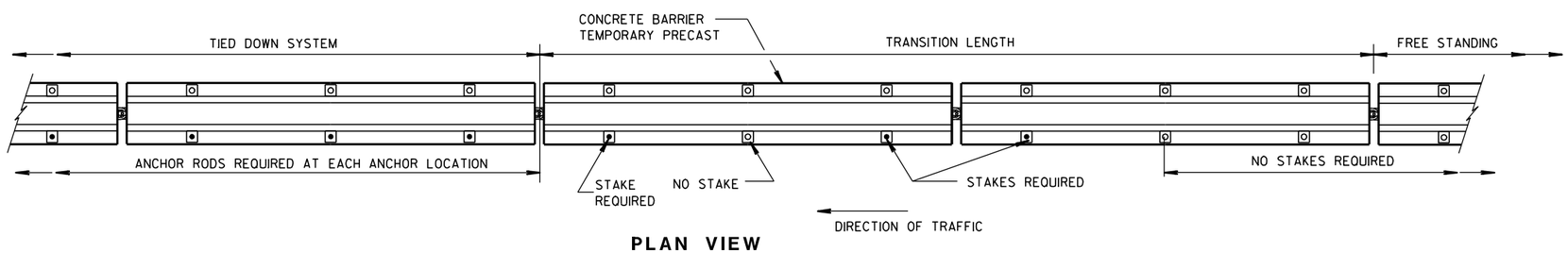
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPHALT PIN

(ASTM A36 STEEL)

STOP PLATE



PLAN VIEW

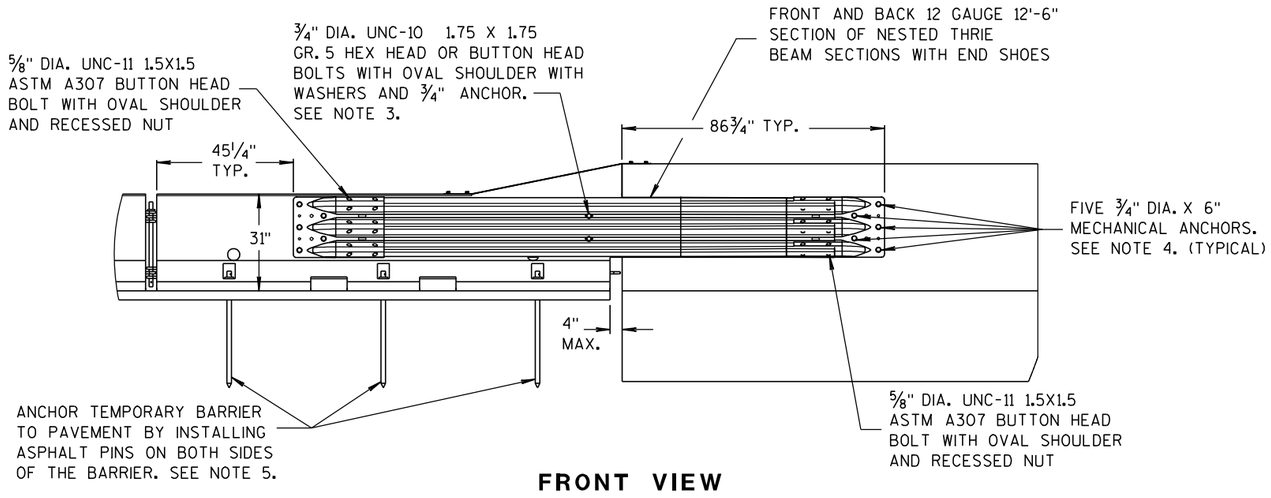
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

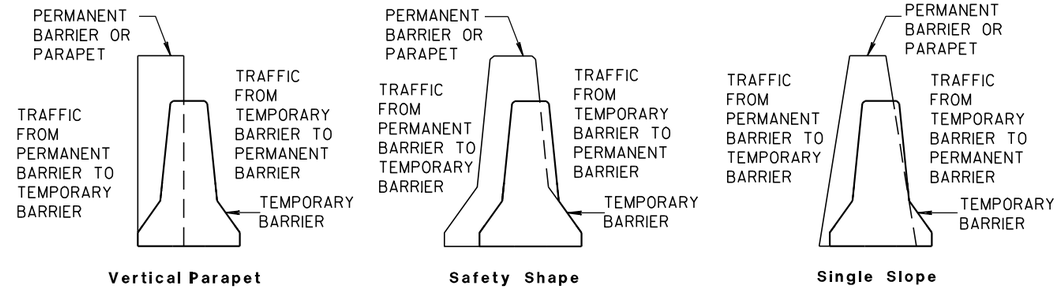
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 7-13d



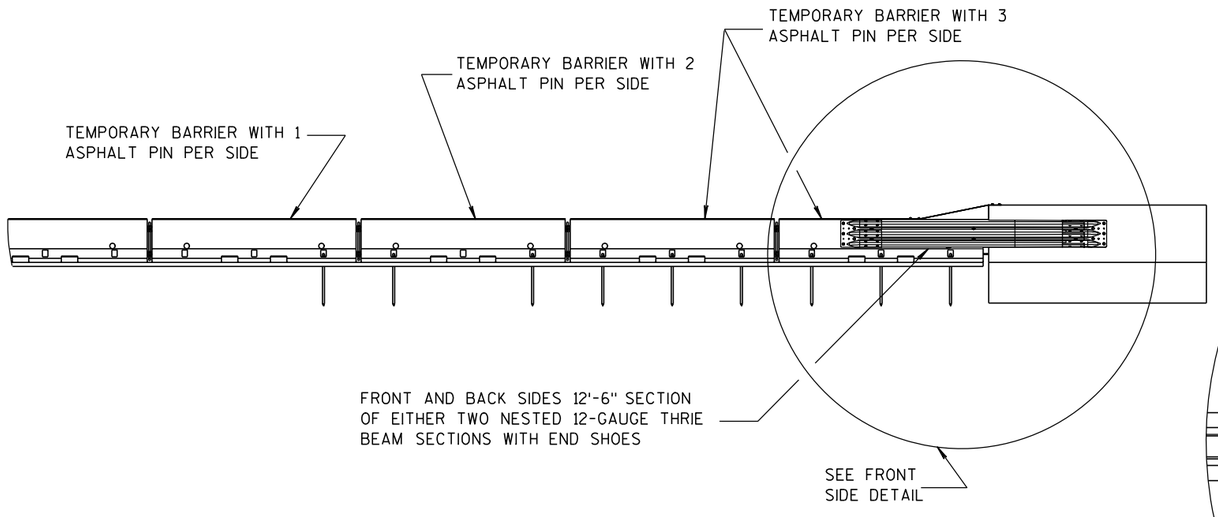
FRONT VIEW



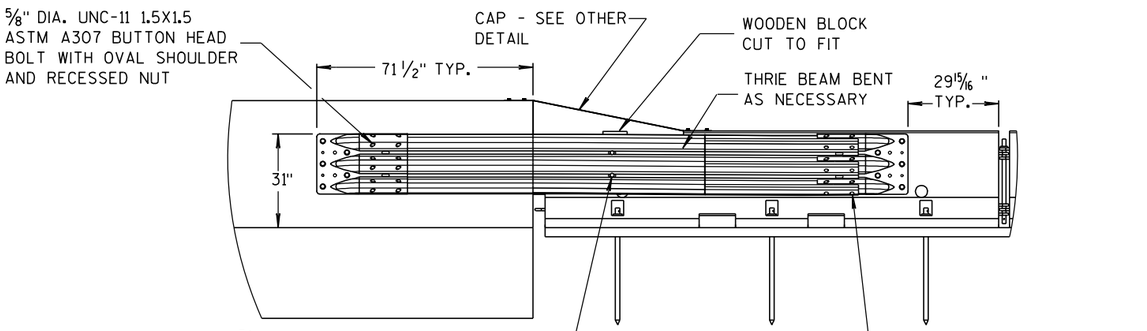
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

NOTES

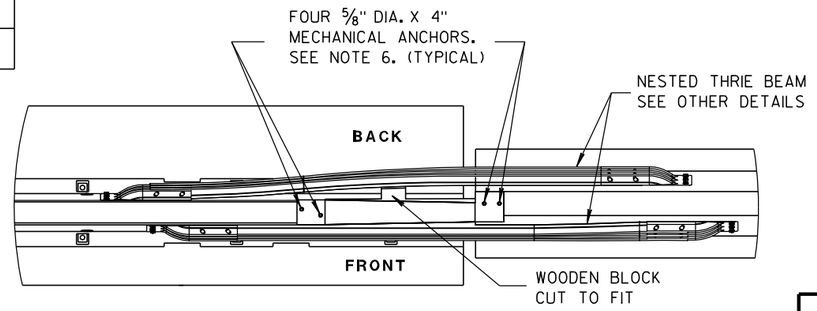
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 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.



FRONT VIEW



BACK VIEW



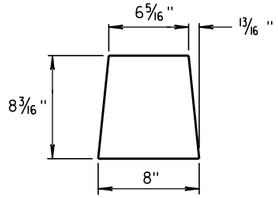
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

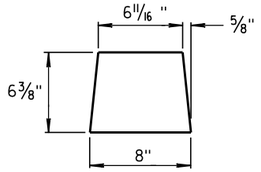
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13e



GUSSET 1



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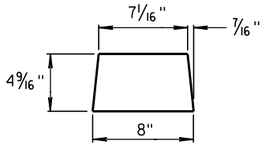

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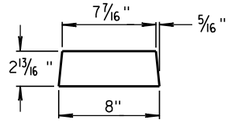
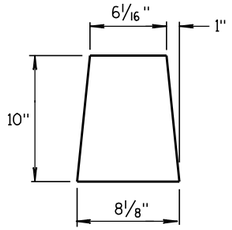
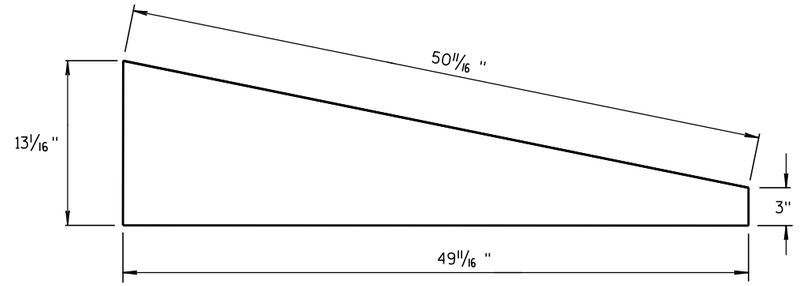


GUSSET 4

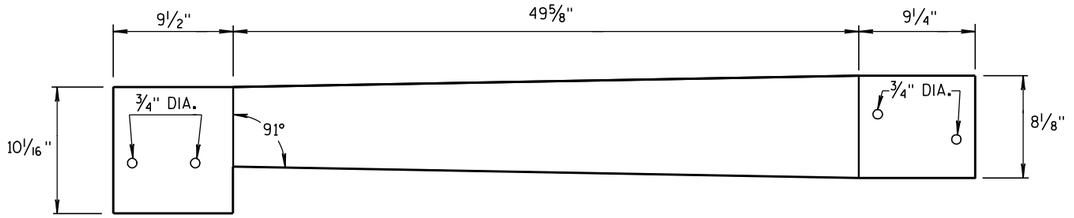
GUSSETS

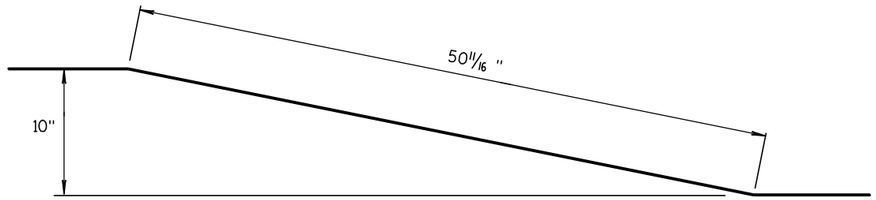


END PLATE



SIDE PLATE





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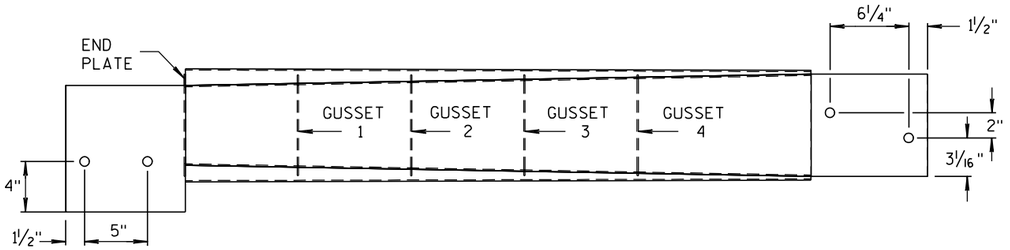

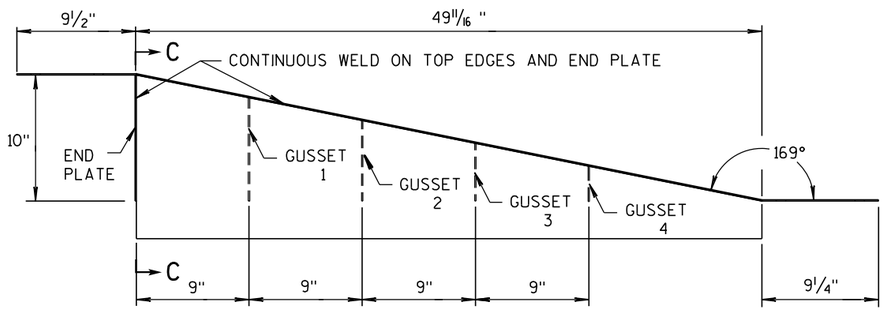

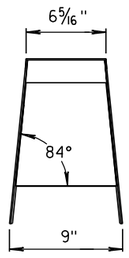

SECTION C-C

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

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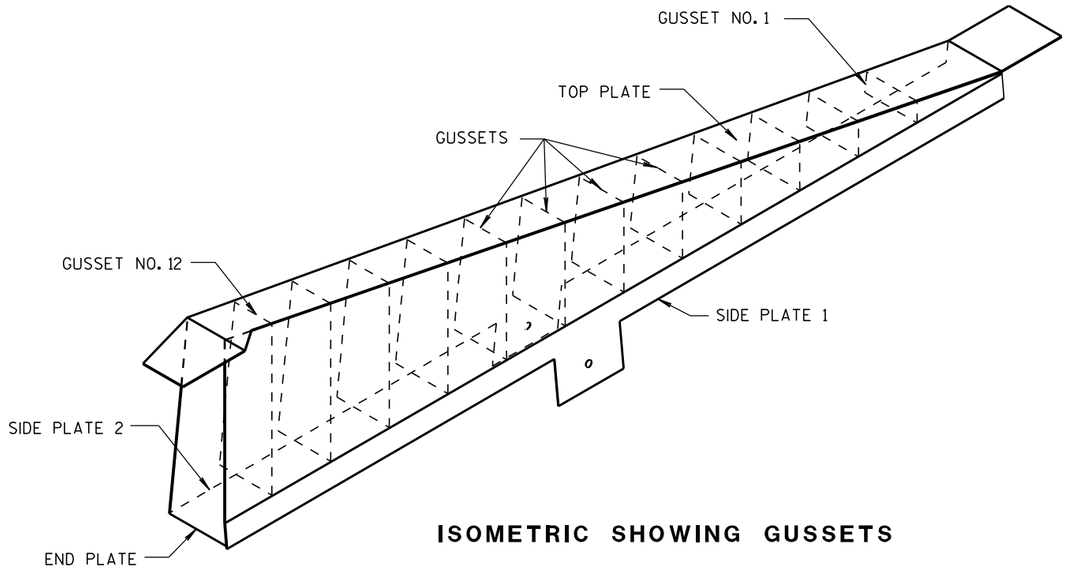
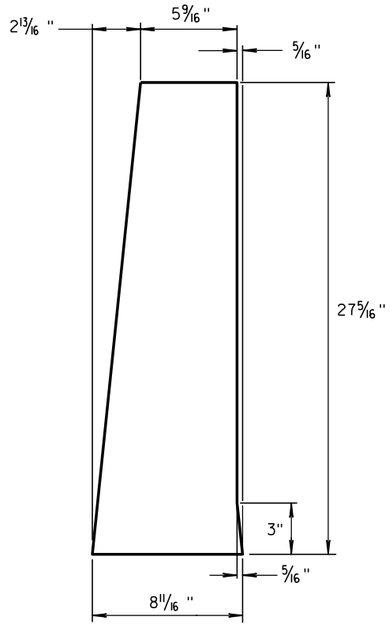
S.D.D. 14 B 7-13f

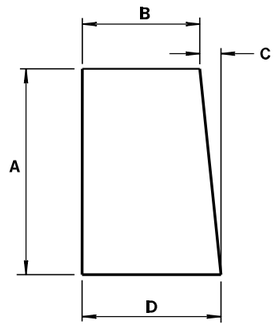


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



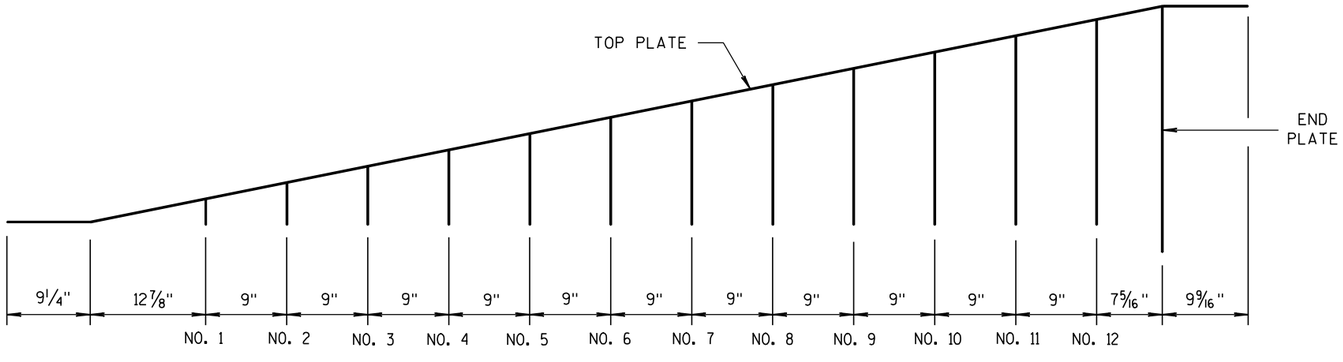
GUSSETS 1 - 12

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...

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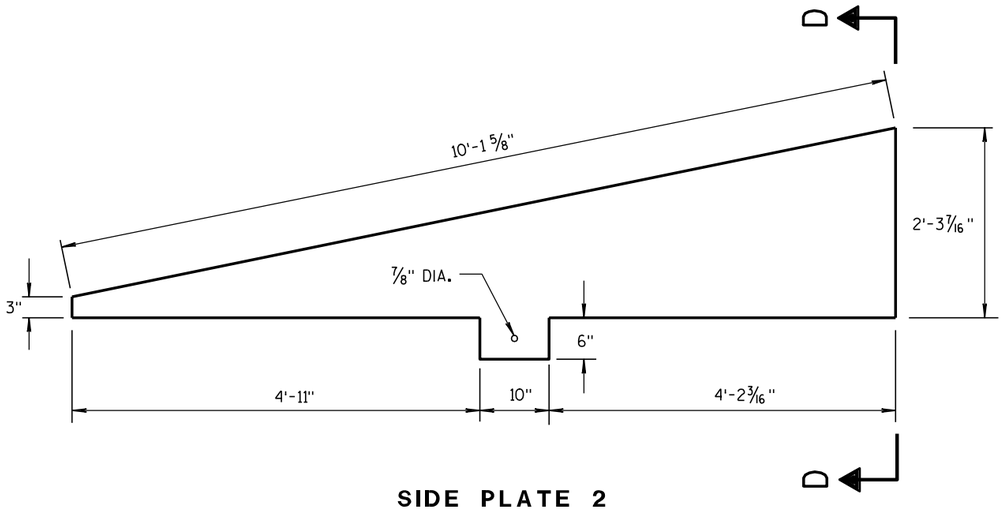
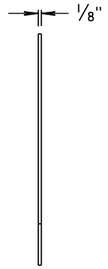
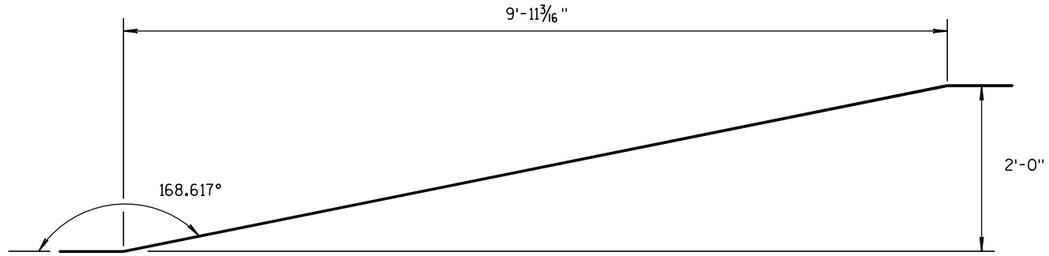
S.D.D. 14 B 7-13g



SIDE PLATE 2

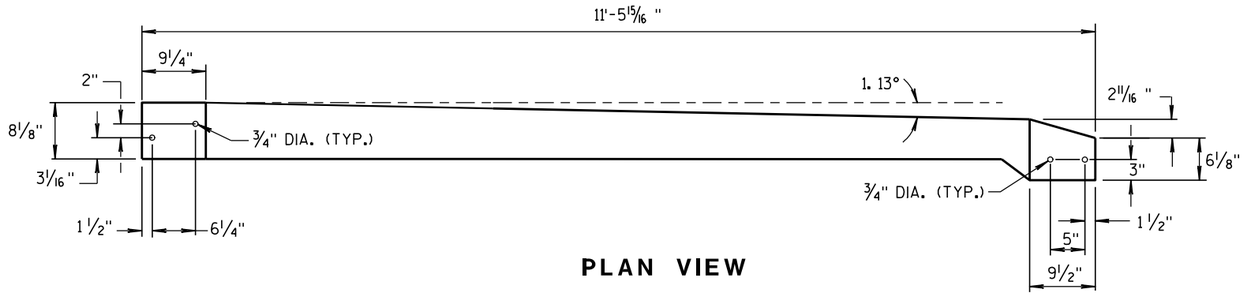


END VIEW



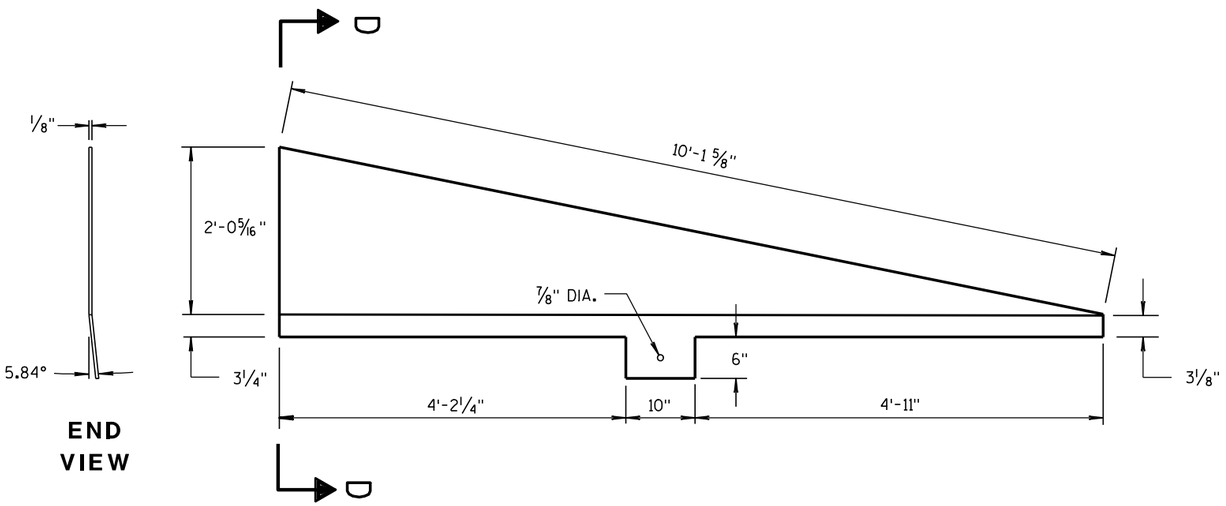
SIDE VIEW

TOP PLATE



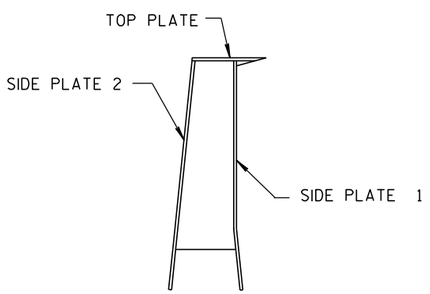
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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
FHWA	382 ENT

6

S.D.D. 14 B 7-13h

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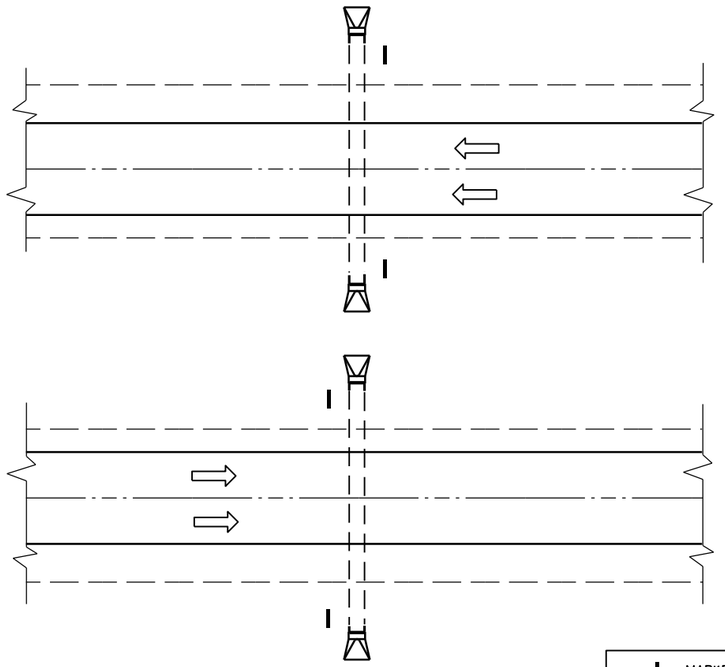
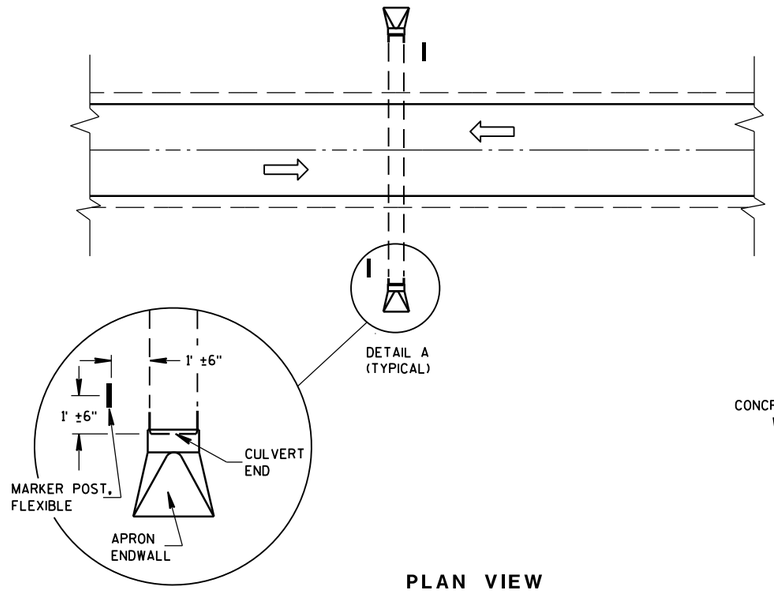
S.D.D. 14 B 7-13h



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

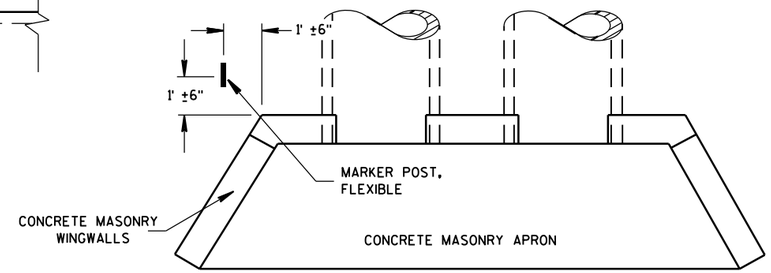
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

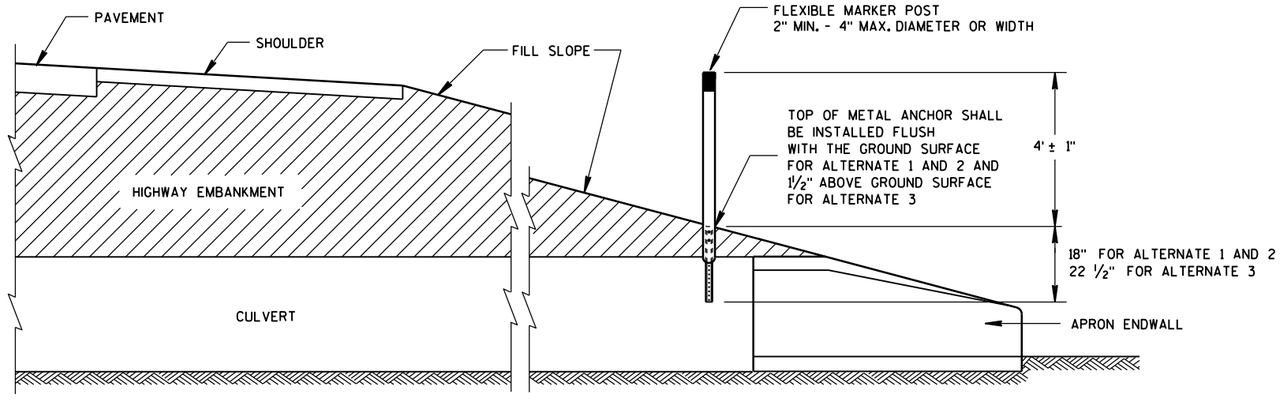
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 A 3-2a

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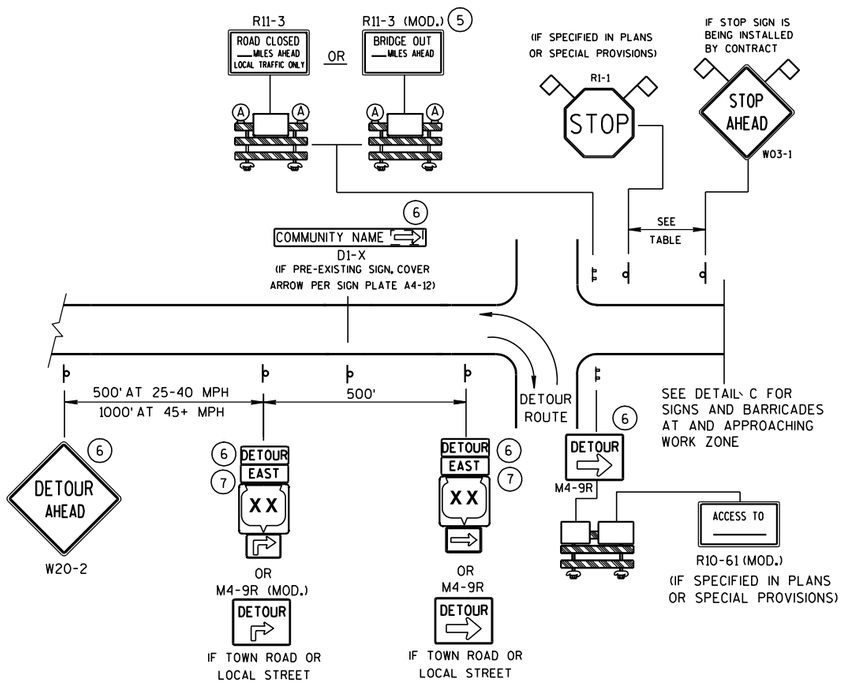
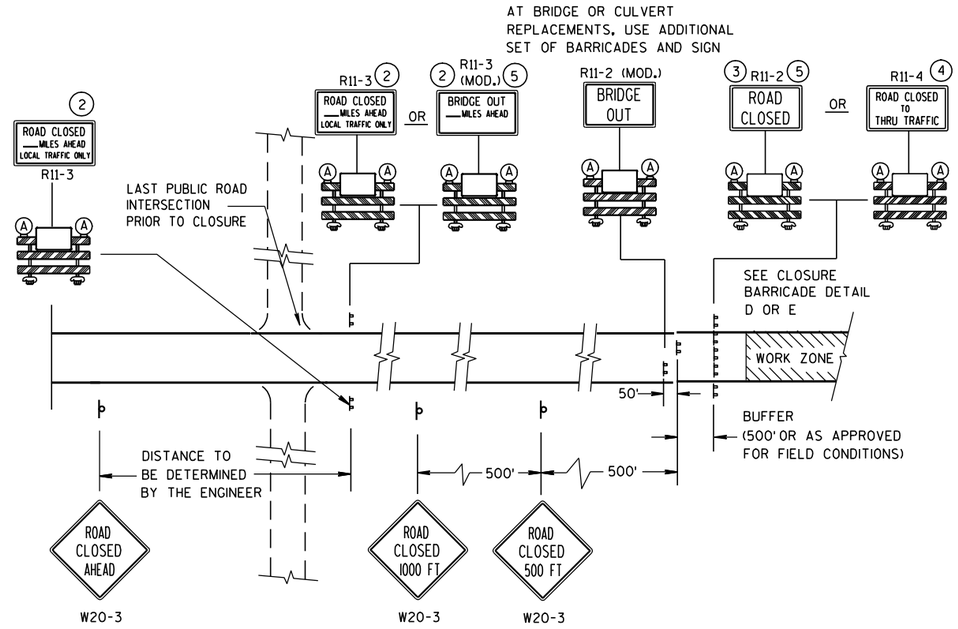
S.D.D. 15 A 3-2a



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

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

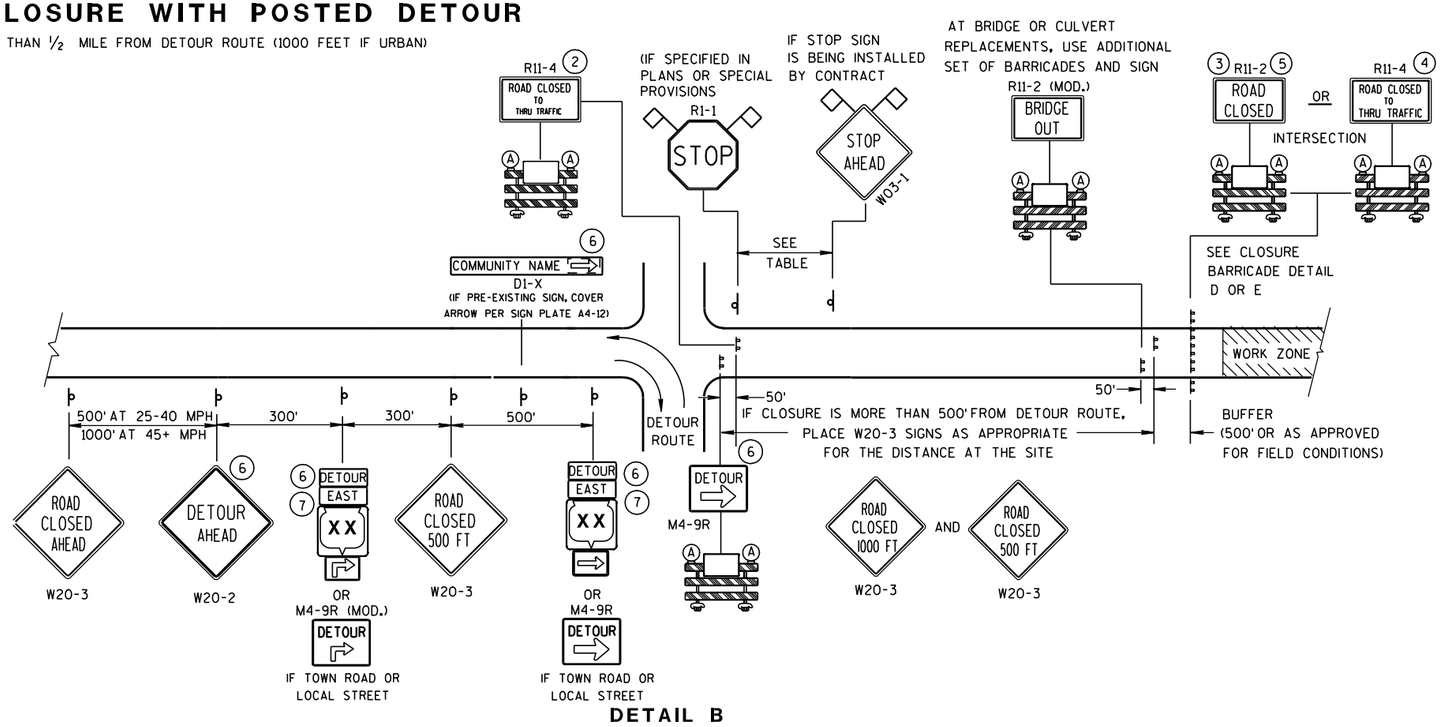


DETAIL C

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

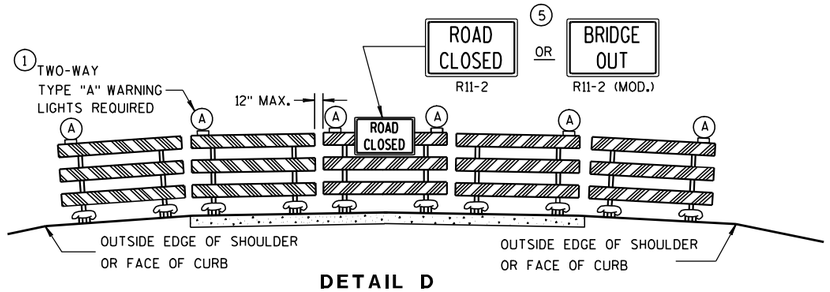
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

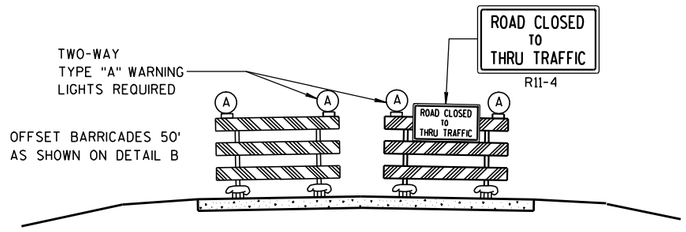
S.D.D. 15 C 2-4a



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 MAR[illegible]INEER

FHWA

6

S.D.D. 15 C 2-4b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

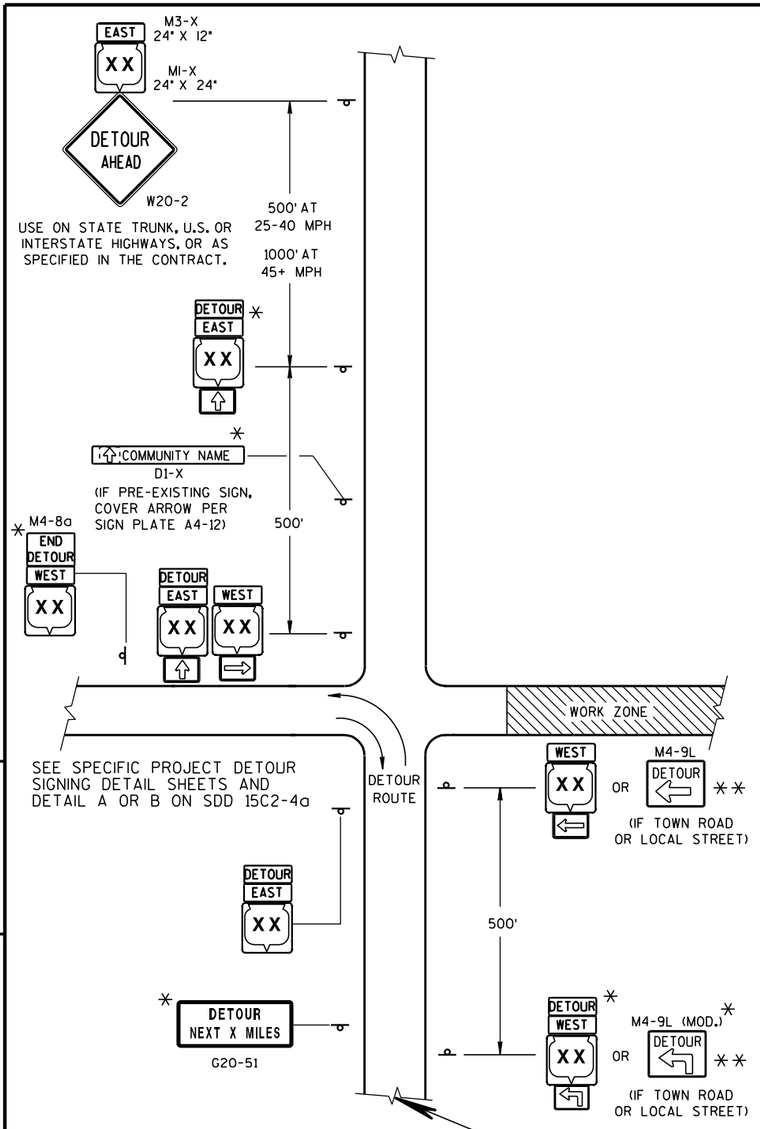
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

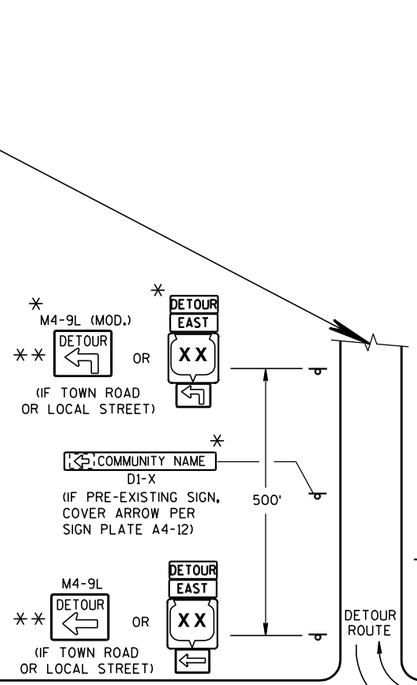
SIGN SIZES SHALL BE AS FOLLOWS:

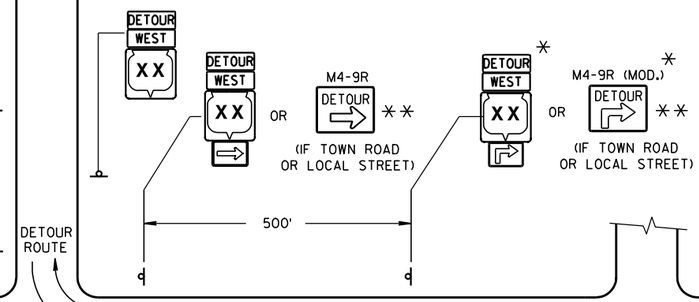
M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
M4-9 SHALL BE 30" X 24".
M4-8a SHALL BE 24" X 18".
G20-51 SHALL BE 60" X 24".
W20-2 SHALL BE 48" X 48".
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

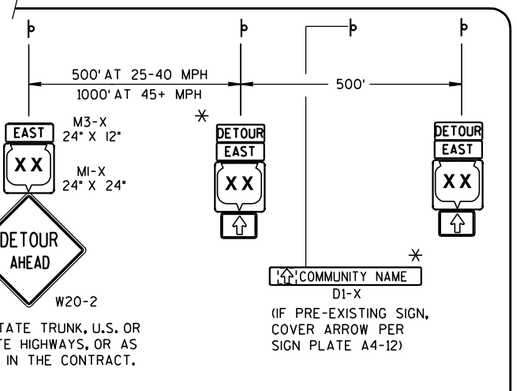
* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

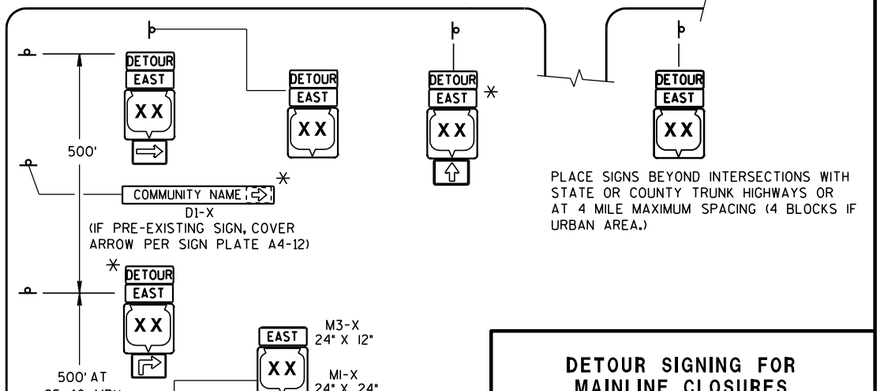
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.











MATCH POINT

LEGEND

- POST MOUNTED SIGN
- WORK ZONE
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- M05-1 OR M06-1 OR M06-1

DETAIL F

DETOUR SIGNING

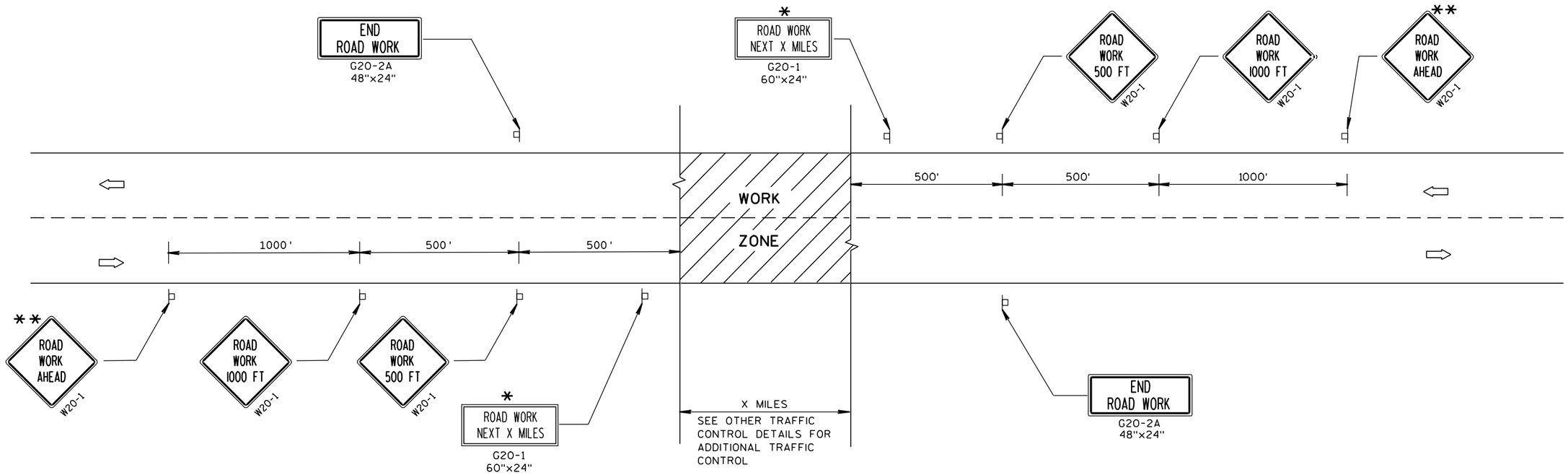
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

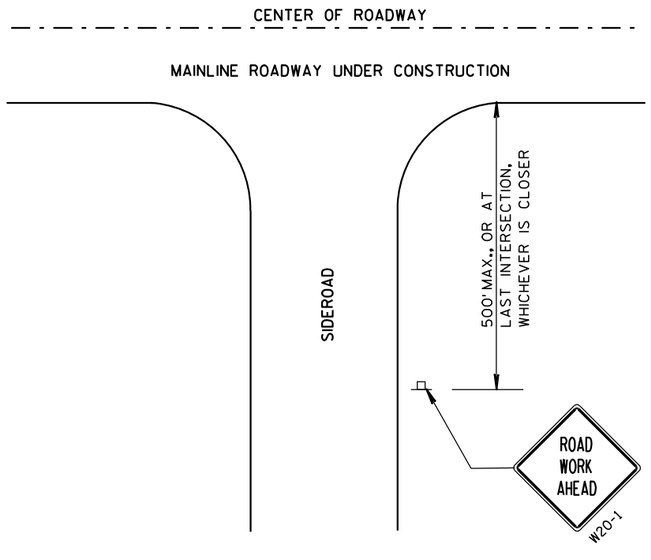
APPROVED
9-16-03 DATE
/S/ Thomas N. [illegible] CHIEF SIGNS AND MAR[illegible]INEER
FHWA

6 S.D.D. 15 C 2-4c

6 S.D.D. 15 C 2-4c



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING.

LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

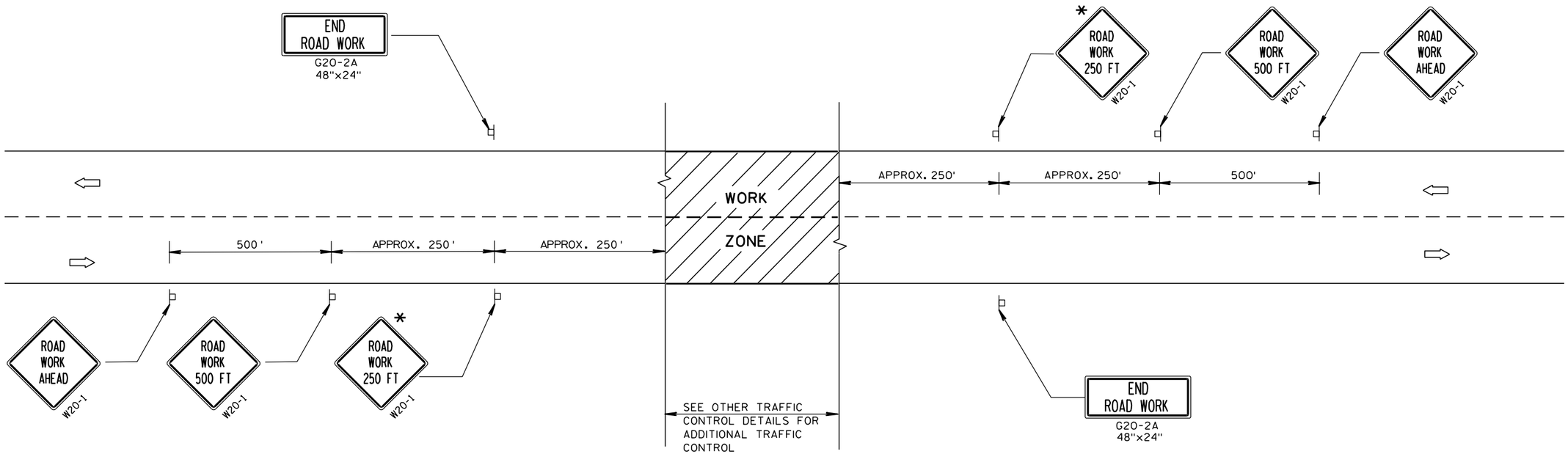
5/23/00 DATE

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

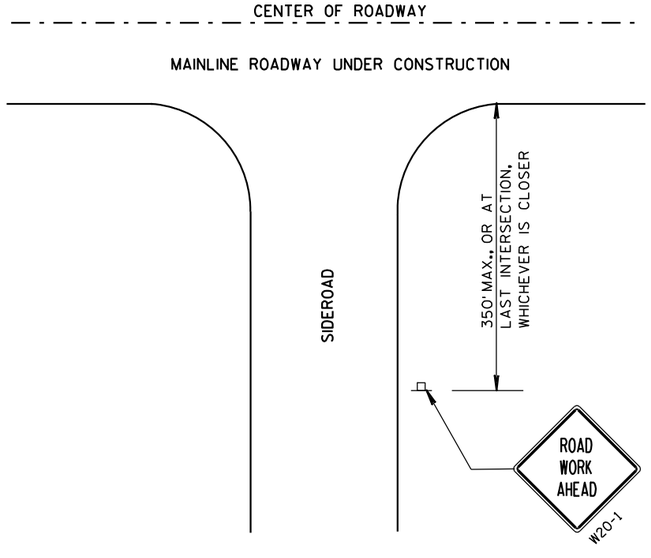
FHWA

6

S.D.D. 15 C 4-1



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

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

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

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

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

LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 5-1

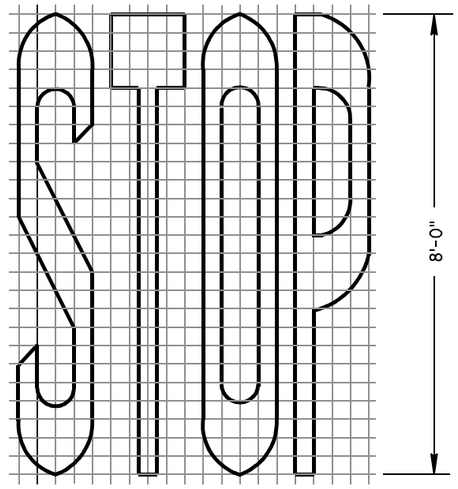
6

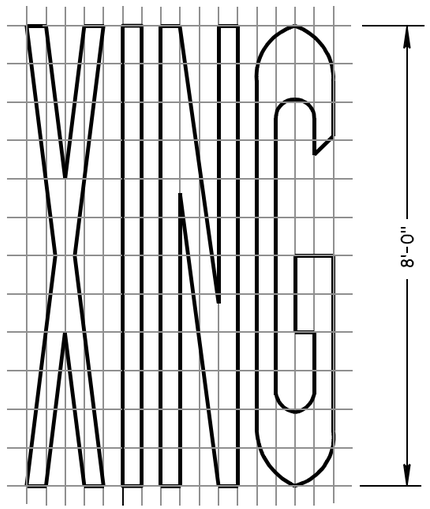
S.D.D. 15 C 5-1

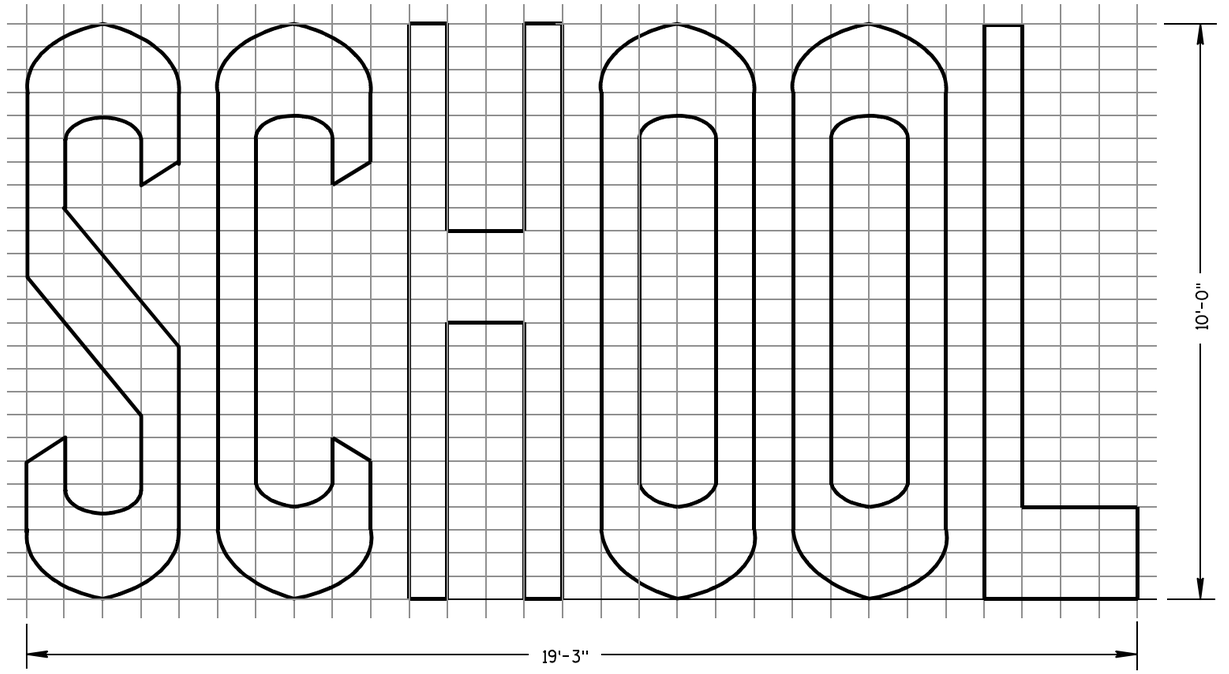
GENERAL NOTES

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.

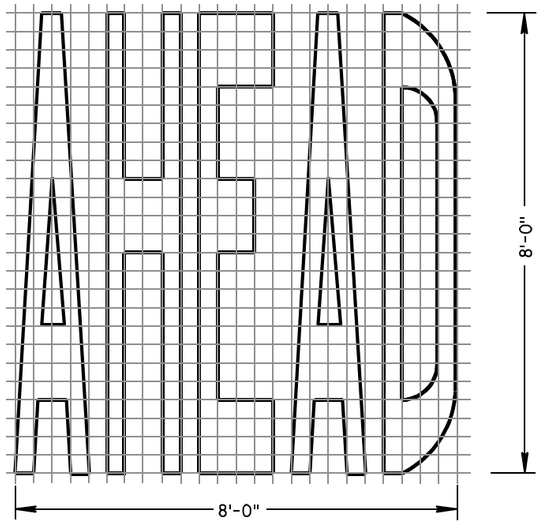
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

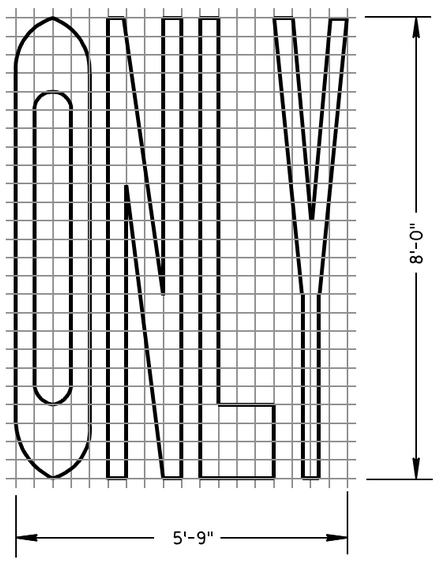


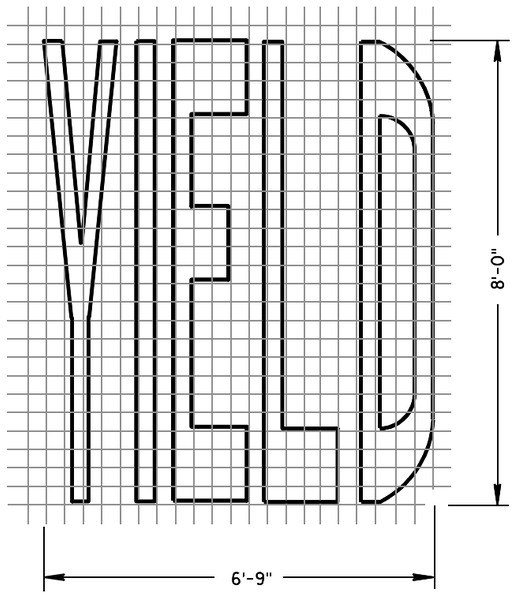


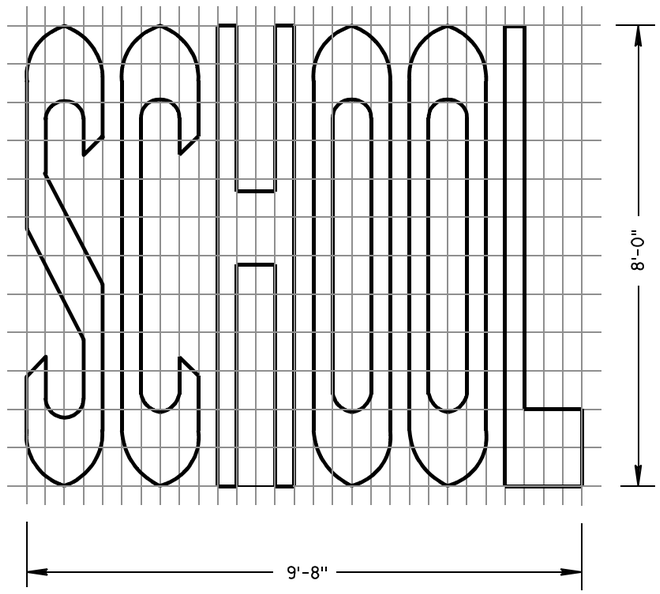


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

FHWA

6

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

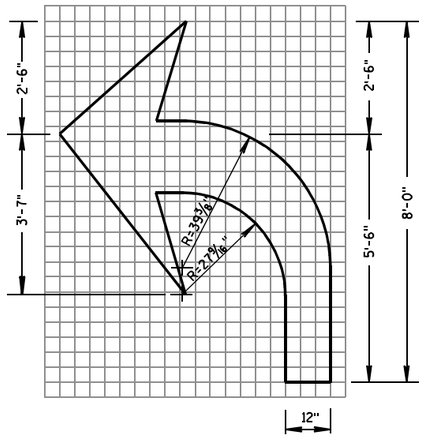
6

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

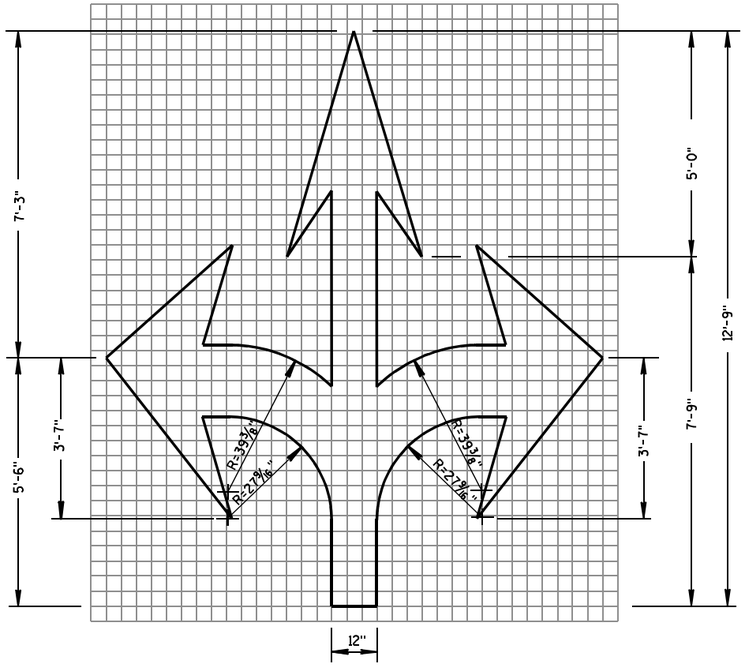
GENERAL NOTES

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

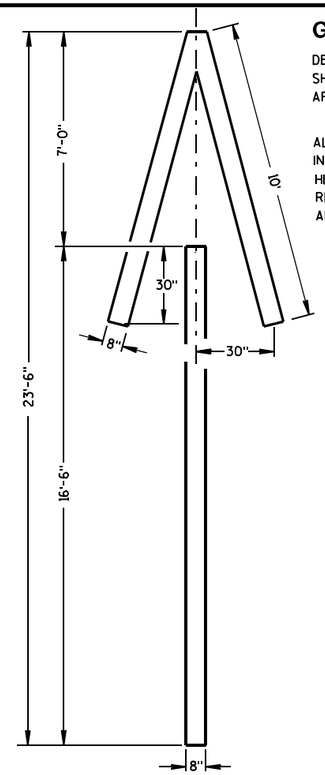
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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



TYPE 2



TYPE 6



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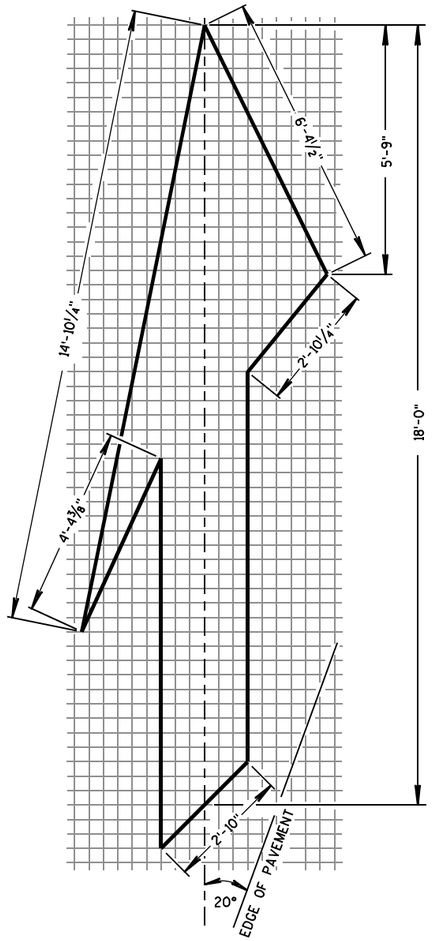
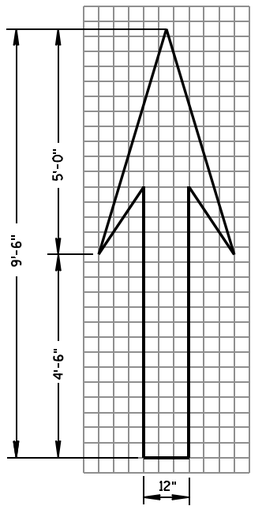
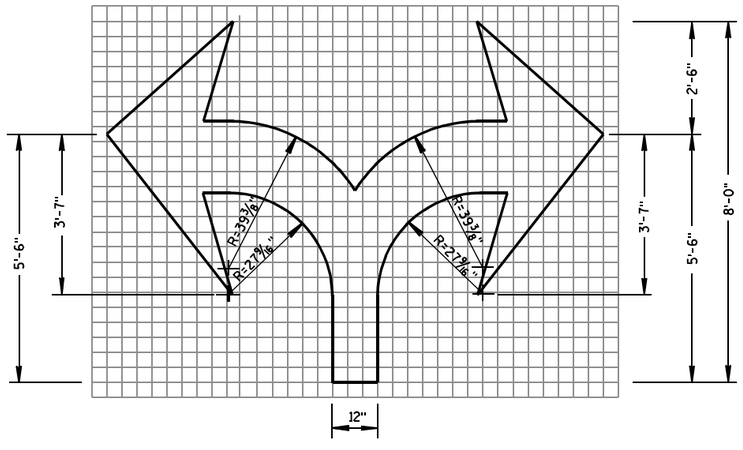


TYPE 5 LANE DROP ARROW



TYPE 1



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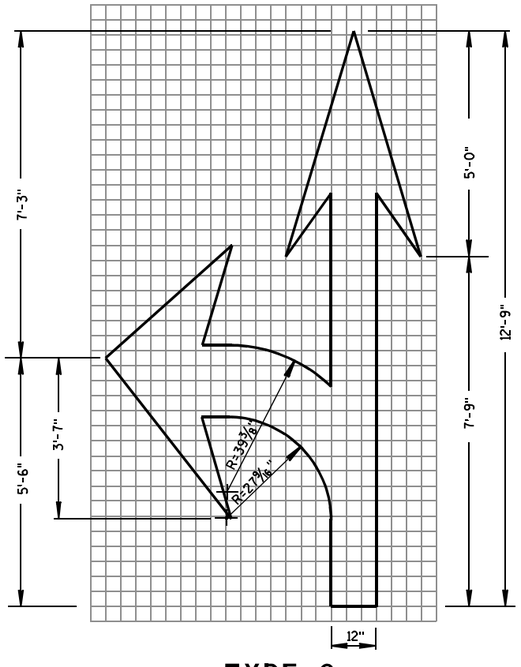


TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

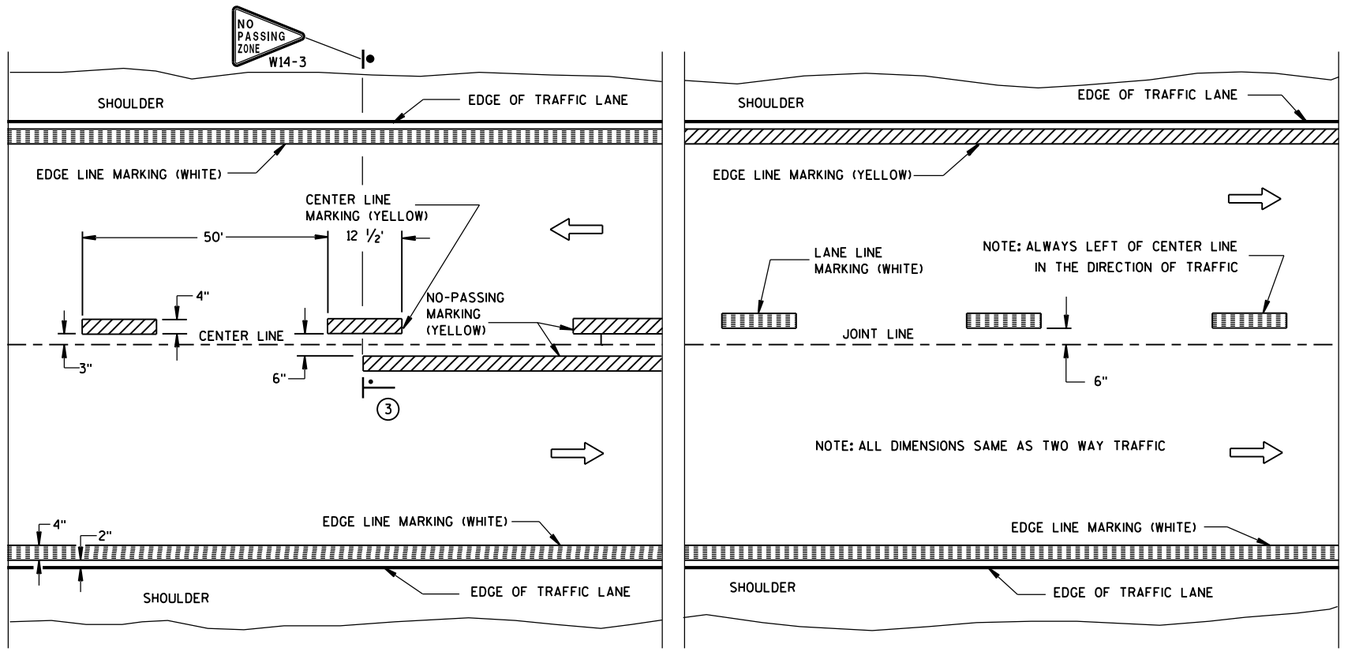
FHWA

6

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

6

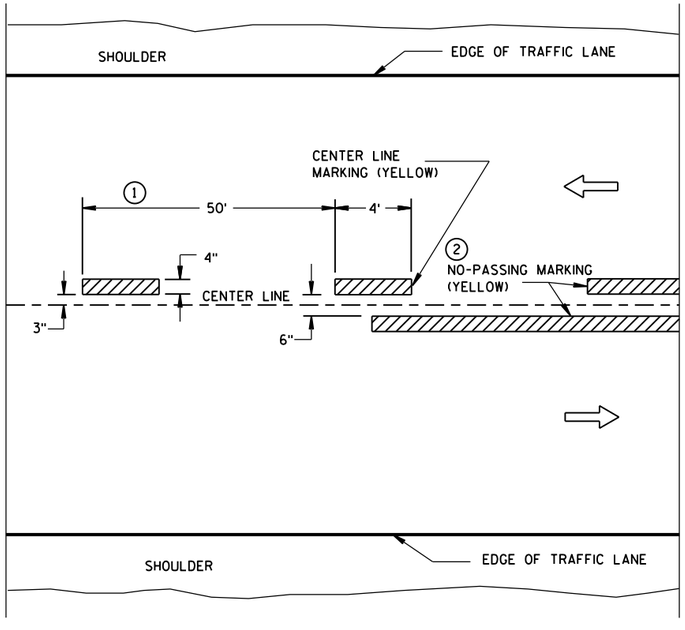
S.D.D. 15 C 7-12c



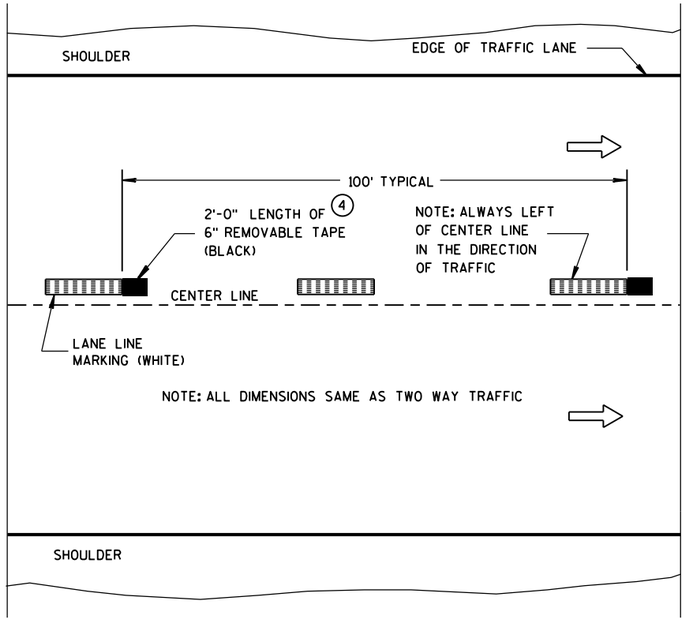
TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

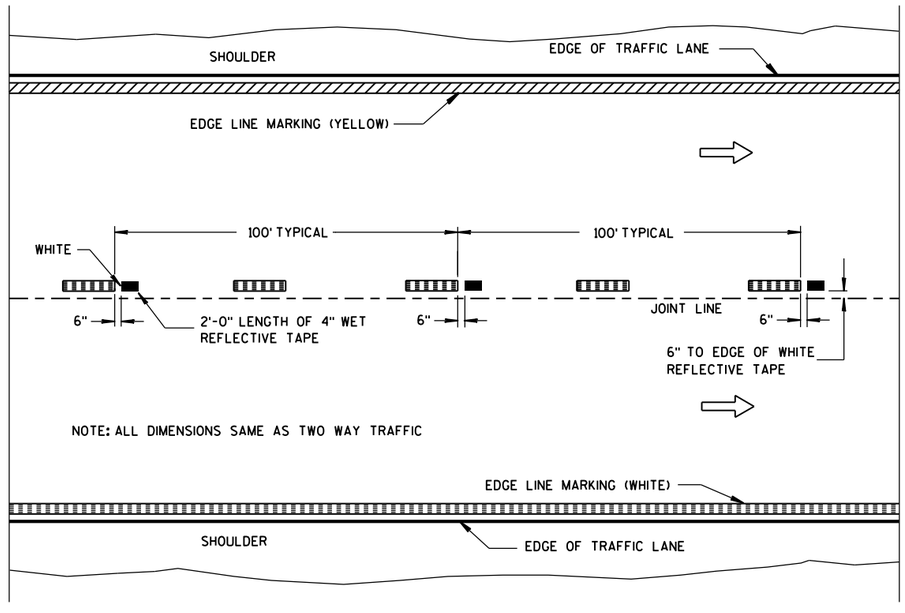
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

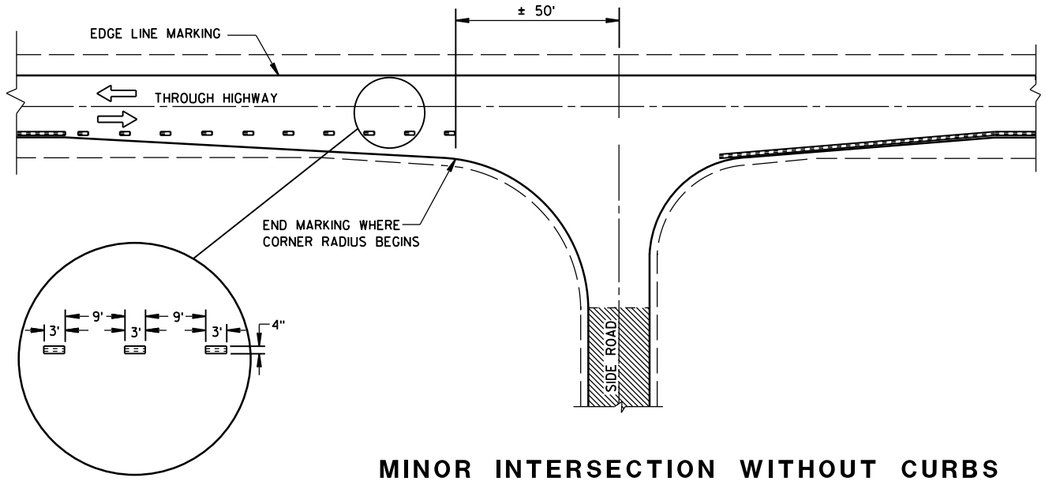
APPROVED
10-1-2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
391
SIGN
FHWA

6

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

6

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



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.

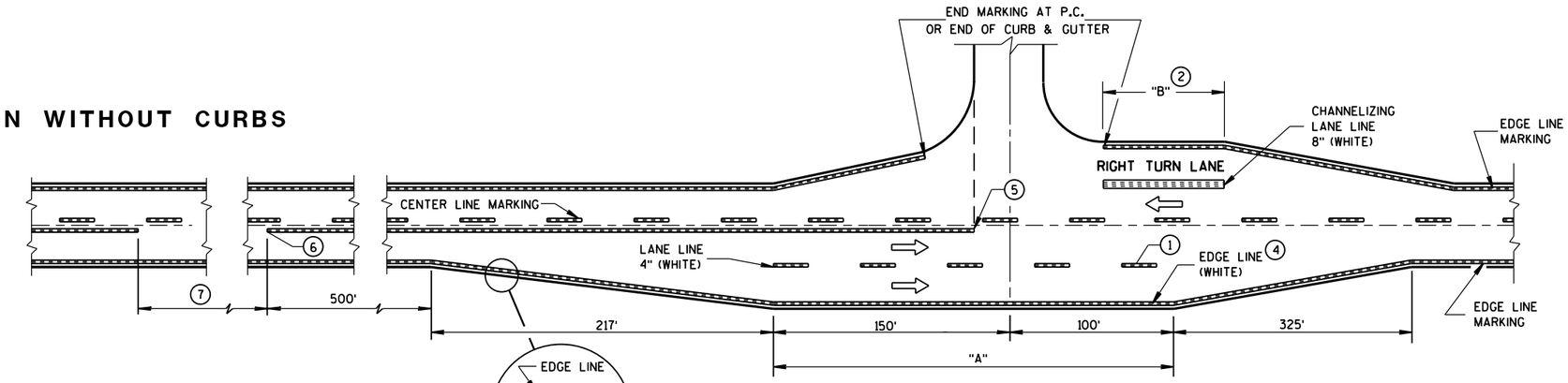
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

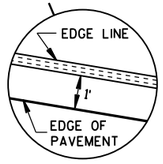
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

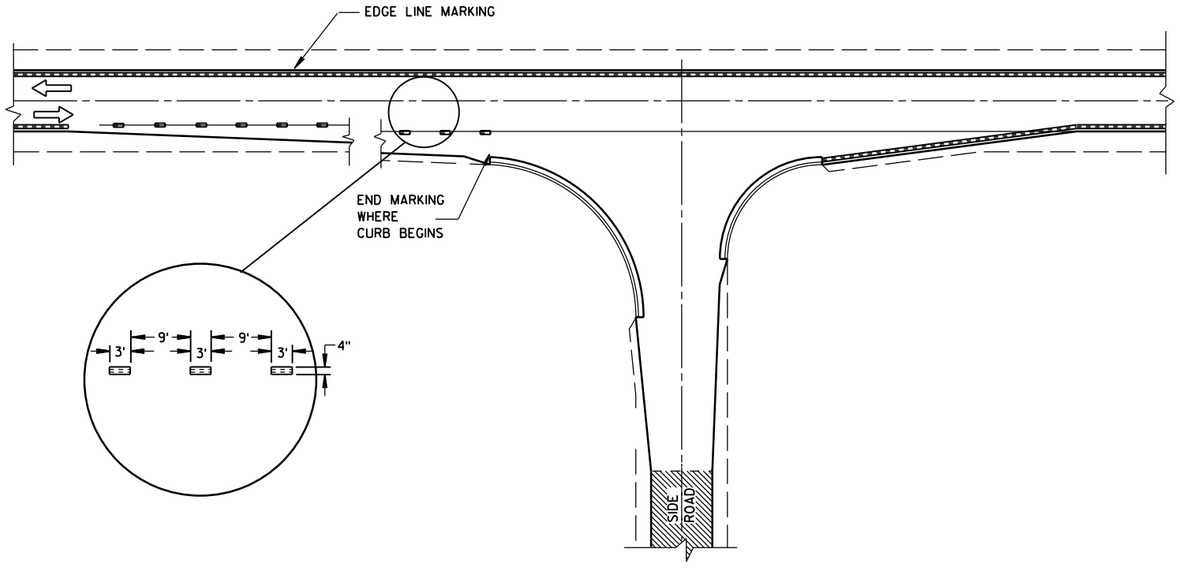
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





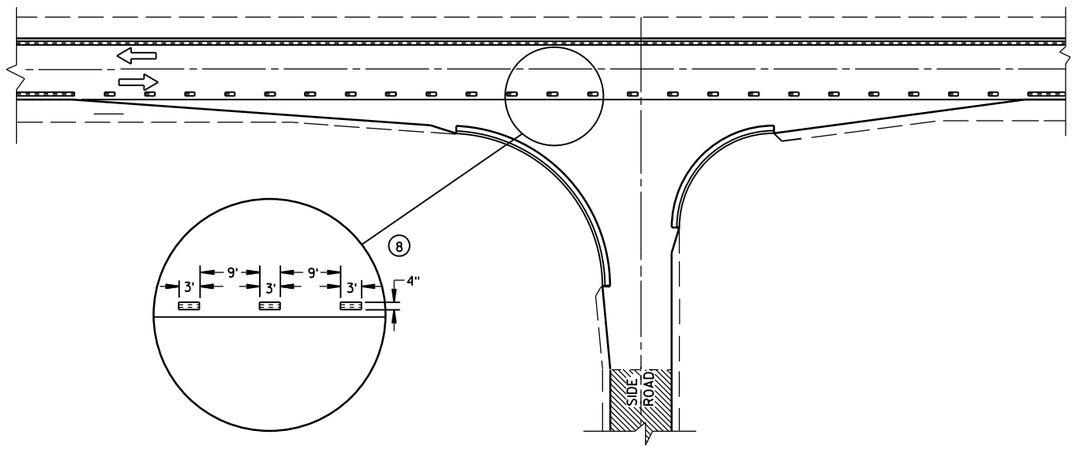
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

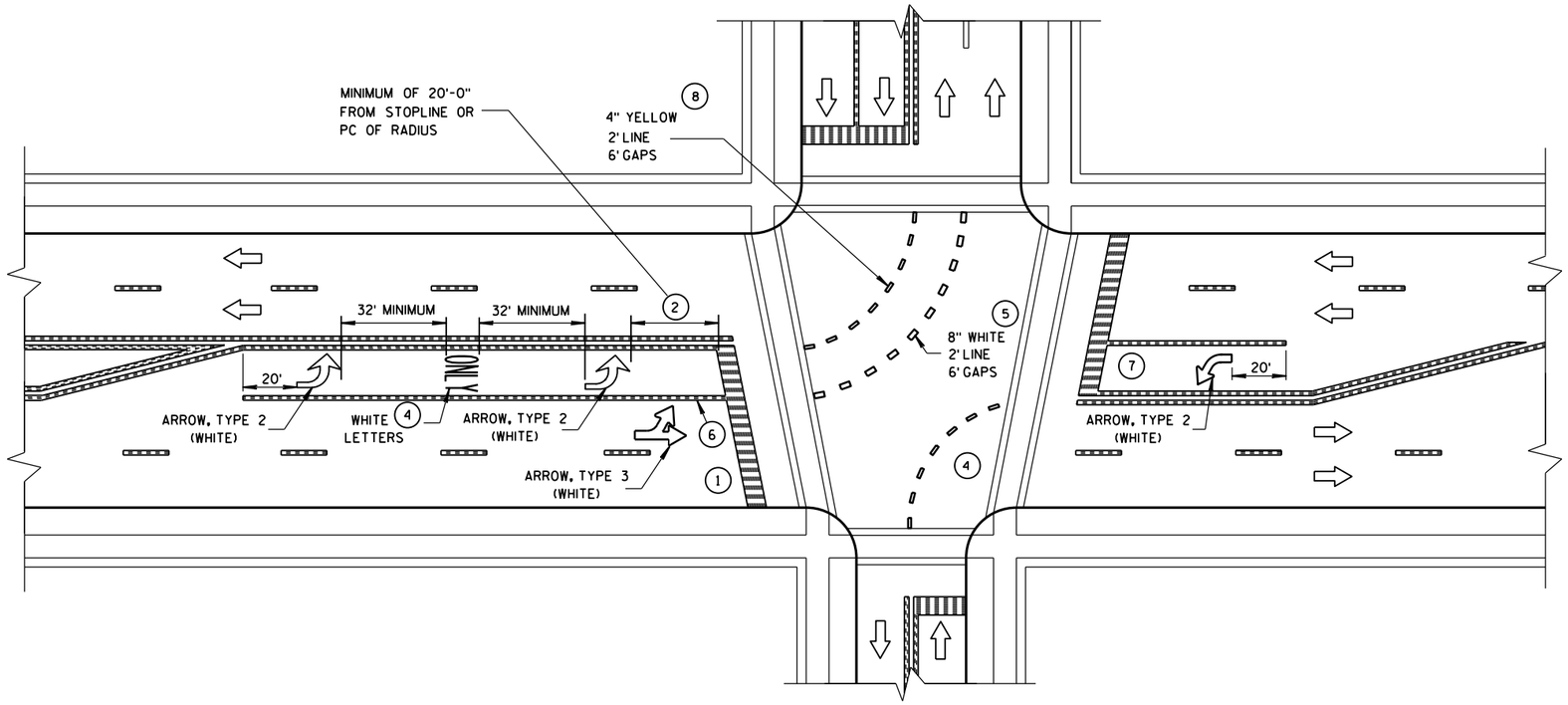
(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

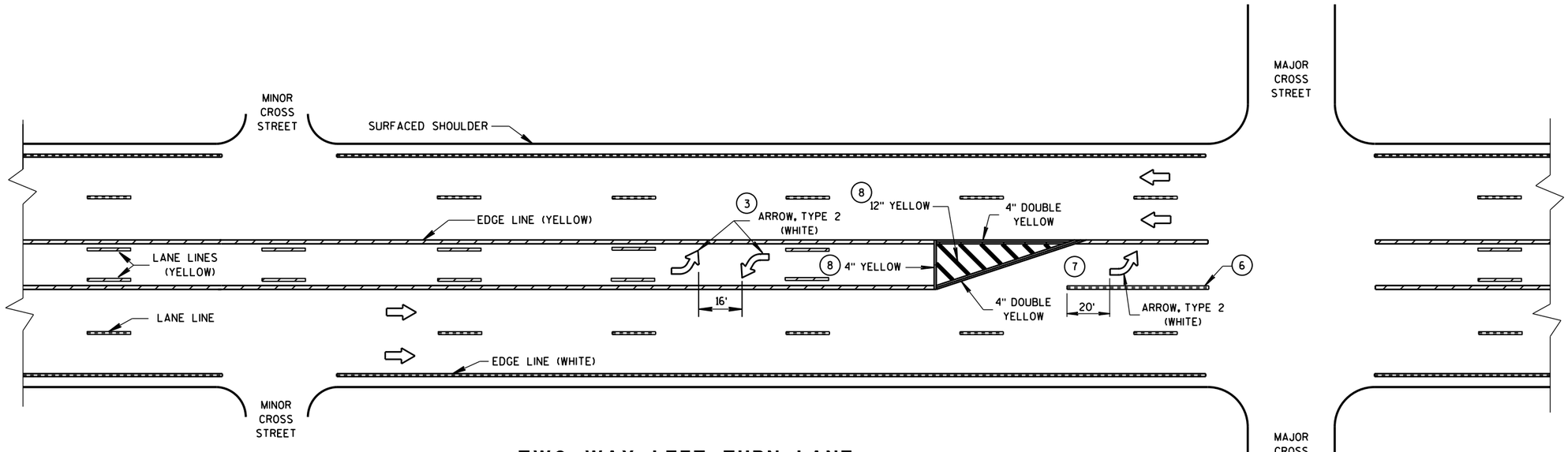
S.D.D. 15 C 8-15b



GENERAL NOTES

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

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

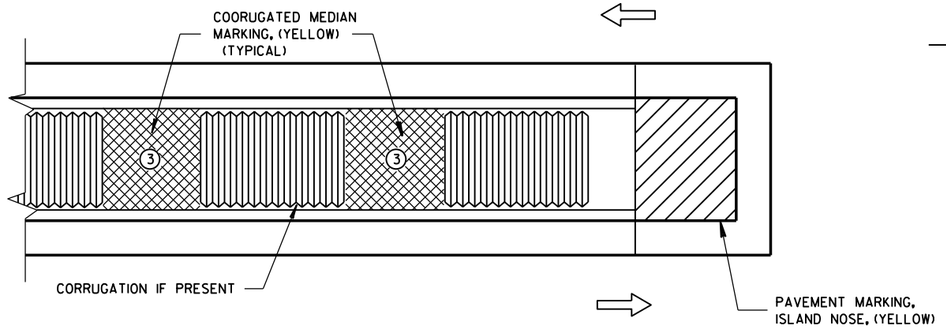
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

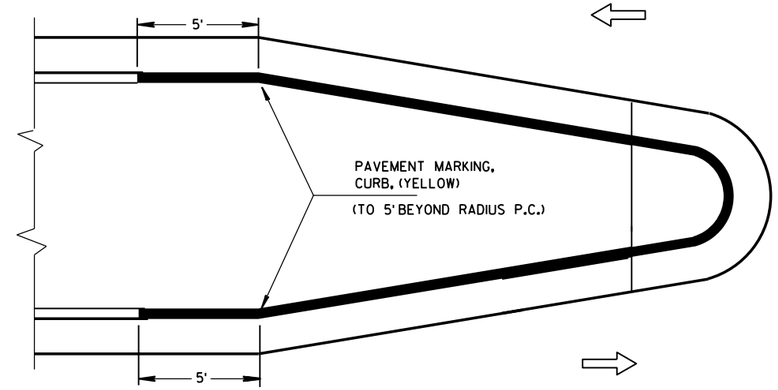
S.D.D. 15 C 8-15e

6

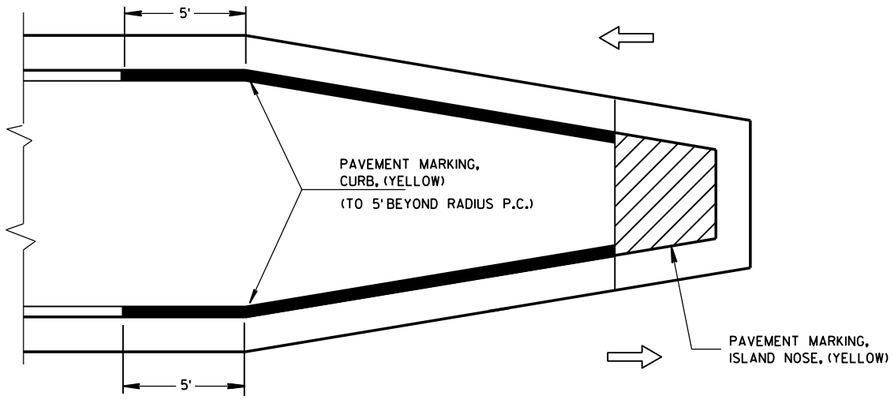
S.D.D. 15 C 8-15e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

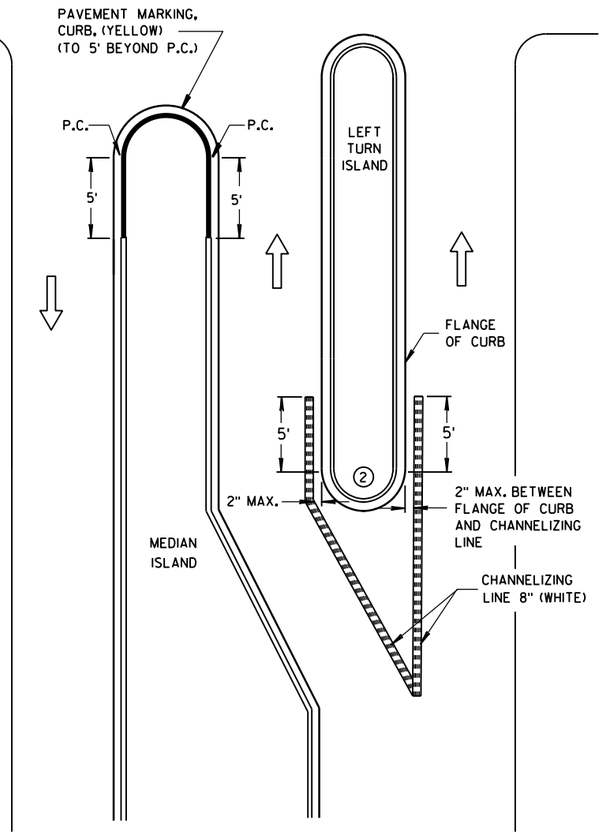


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

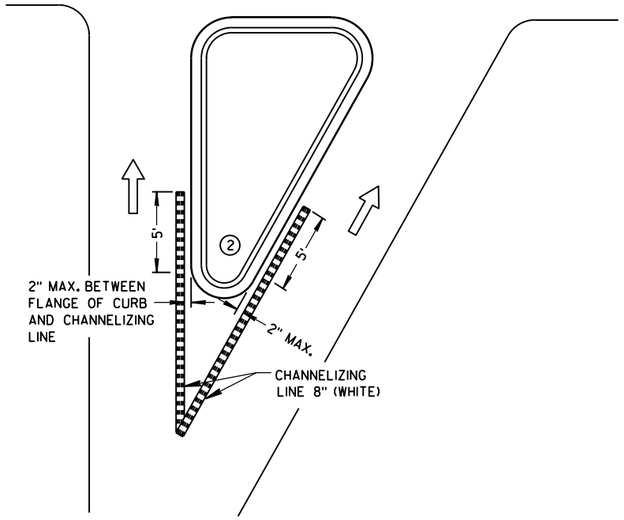
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



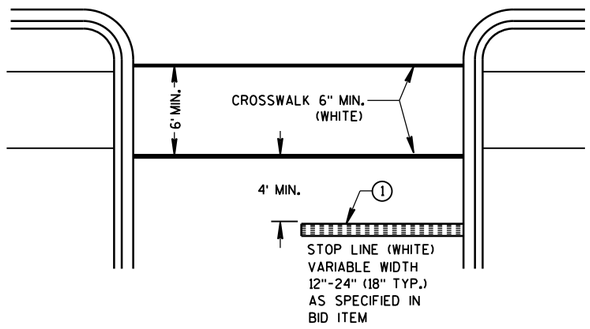
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. 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



STOP LINE AND CROSSWALK

LEGEND

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

PAVEMENT MARKING
(ISLANDS, STOP LINE &
CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) 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 BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

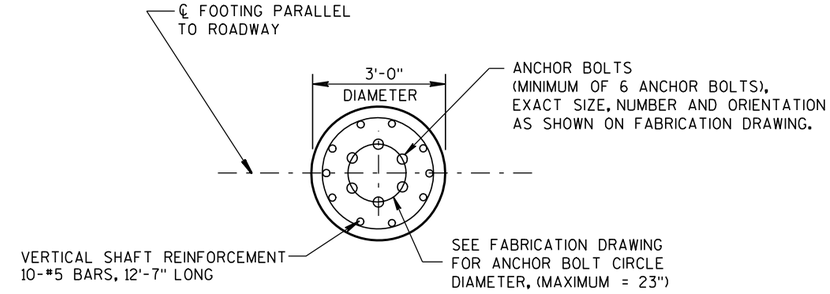
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

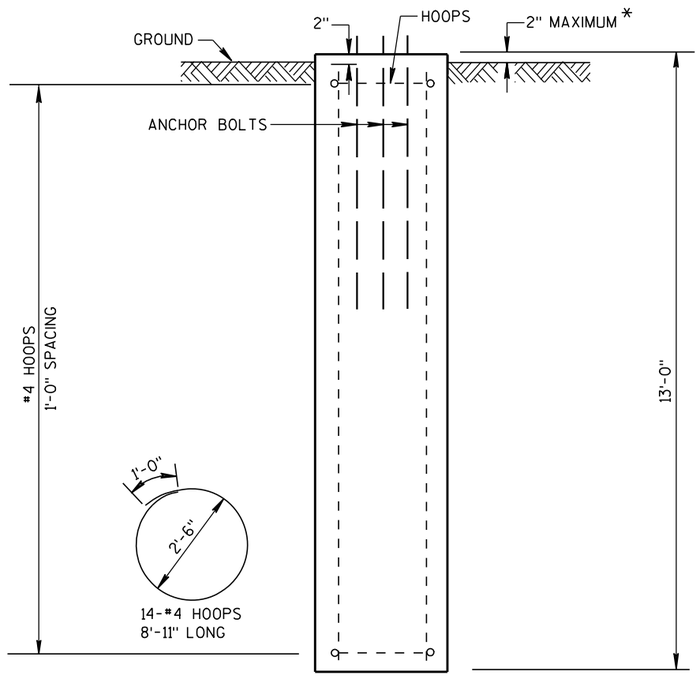
ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW



ELEVATION VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/17/09 — DATE

/S/ Thomas N. Nothdurm — STATE TRAFFIC ENGINEER

FHWA

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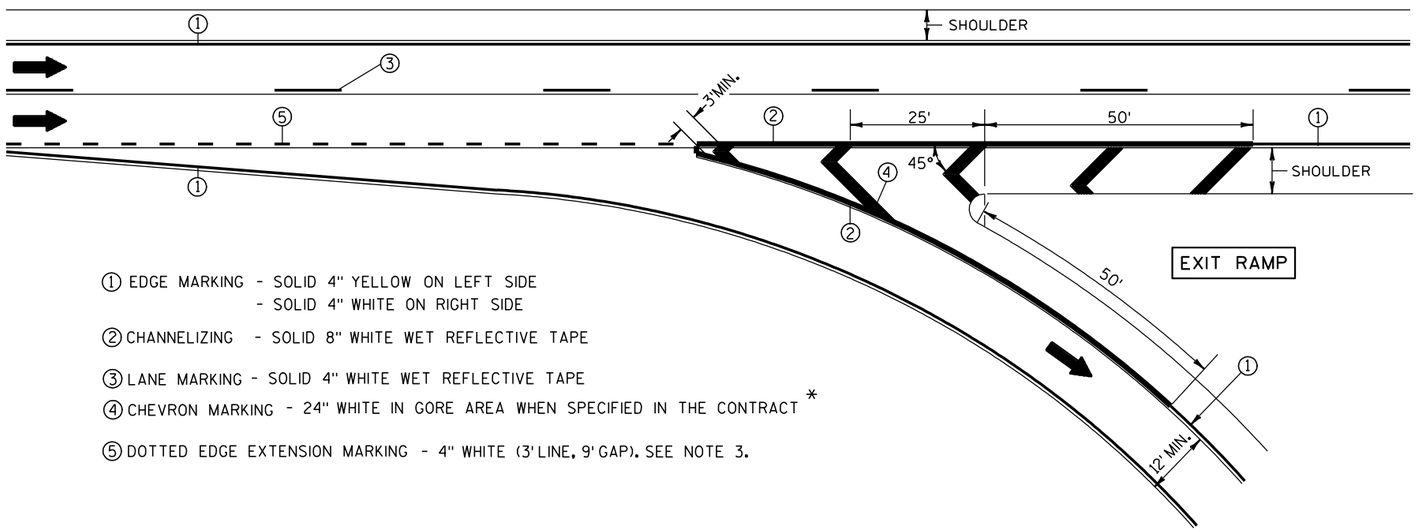
S.D.D. 15 C 15-3



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

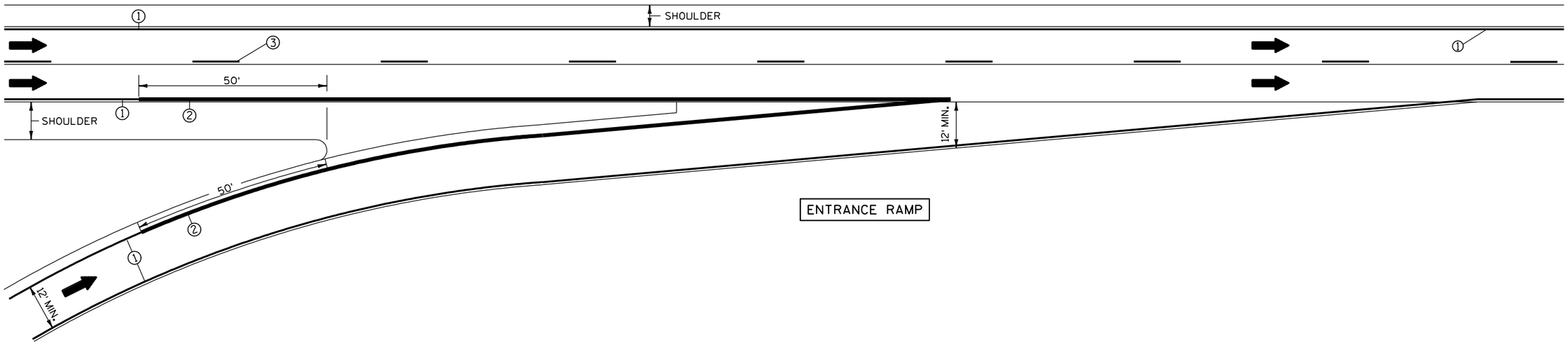
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

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

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



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S.D.D. 15 C 31-1a

PAVEMENT MARKING (RAMPS AND GORES)

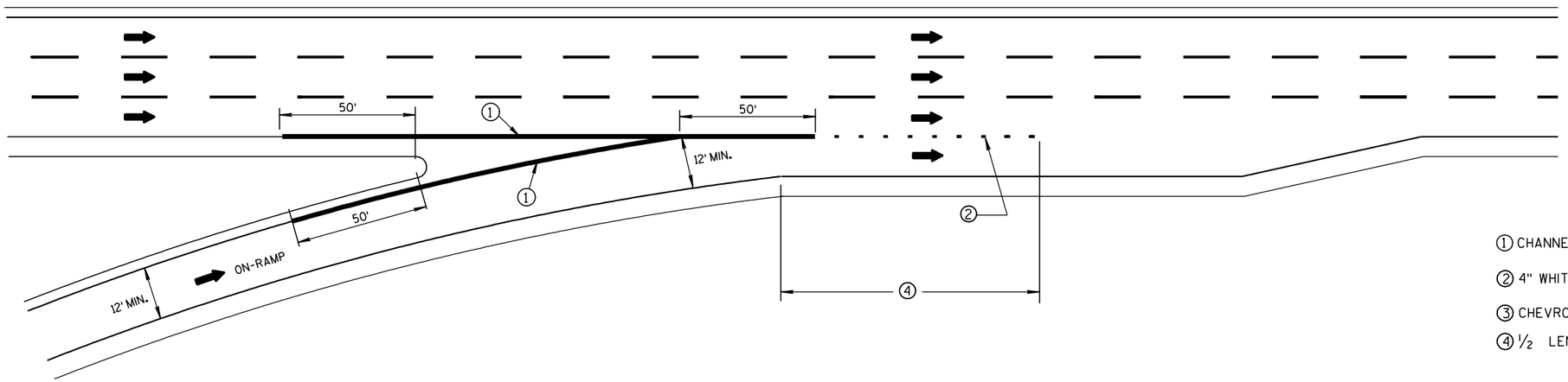
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1a

NOTES:

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



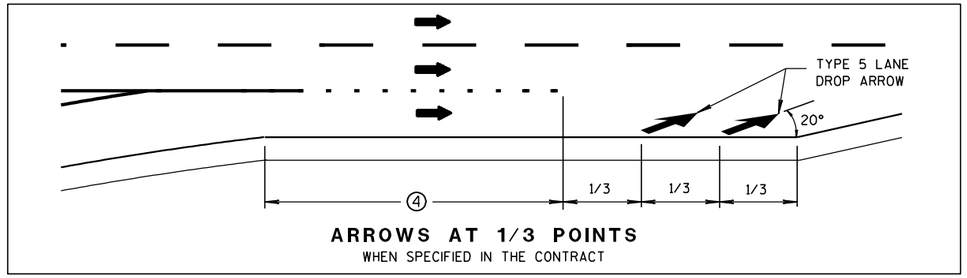
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

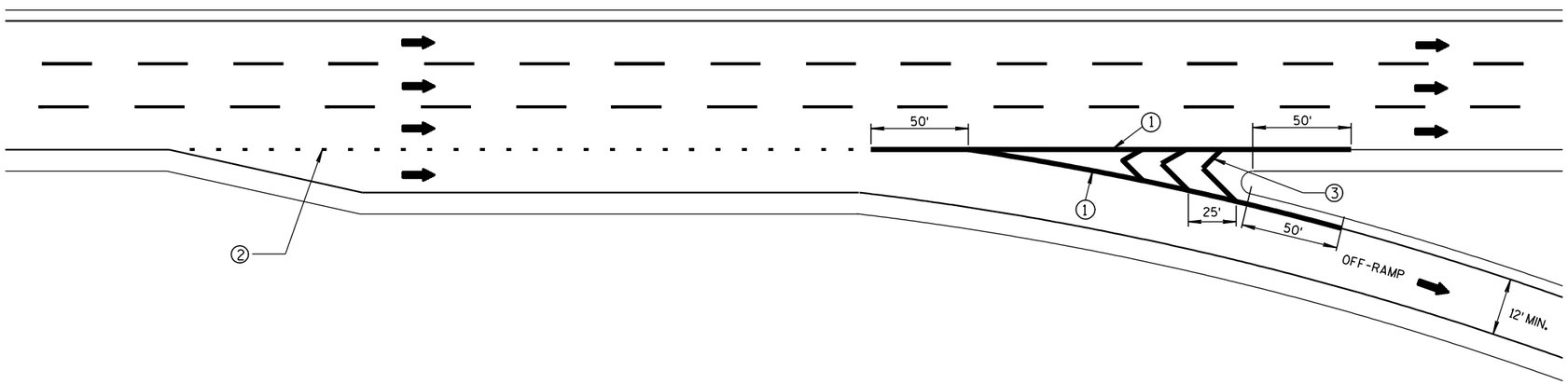
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ 1/2 LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothem
STATE TRAFFIC ENGINE 397 SIGN
FHWA

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

(1) CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

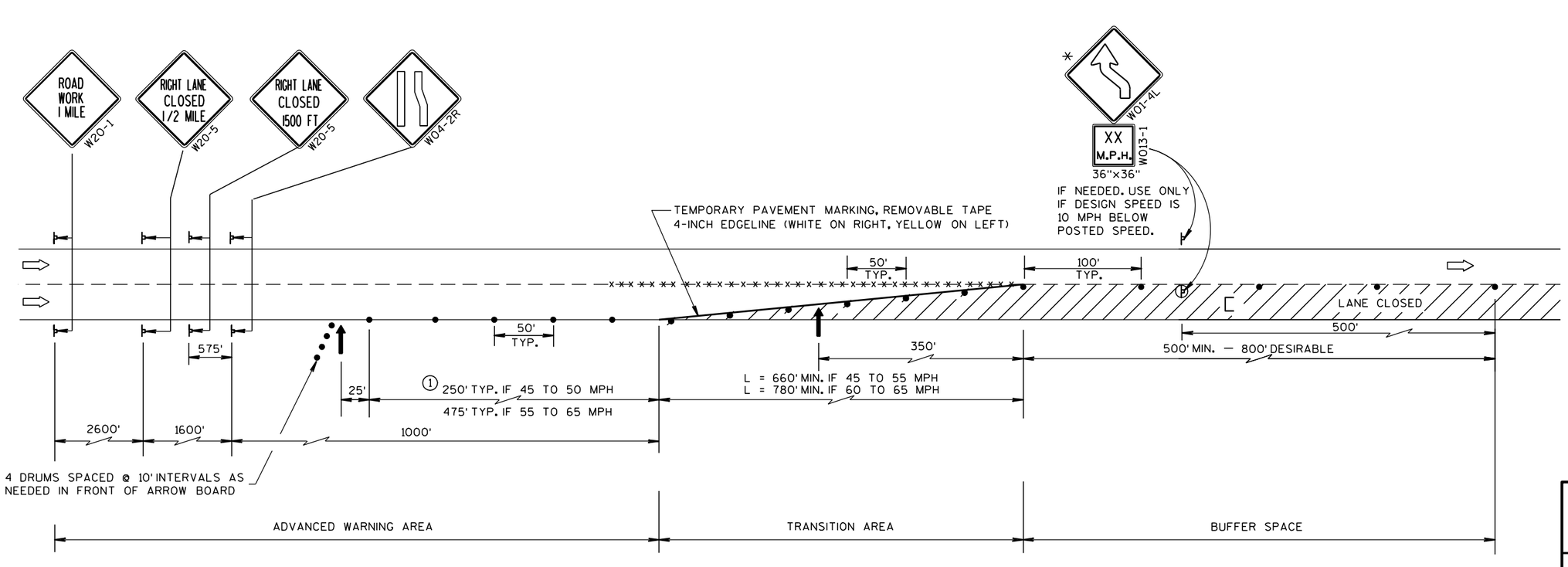
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

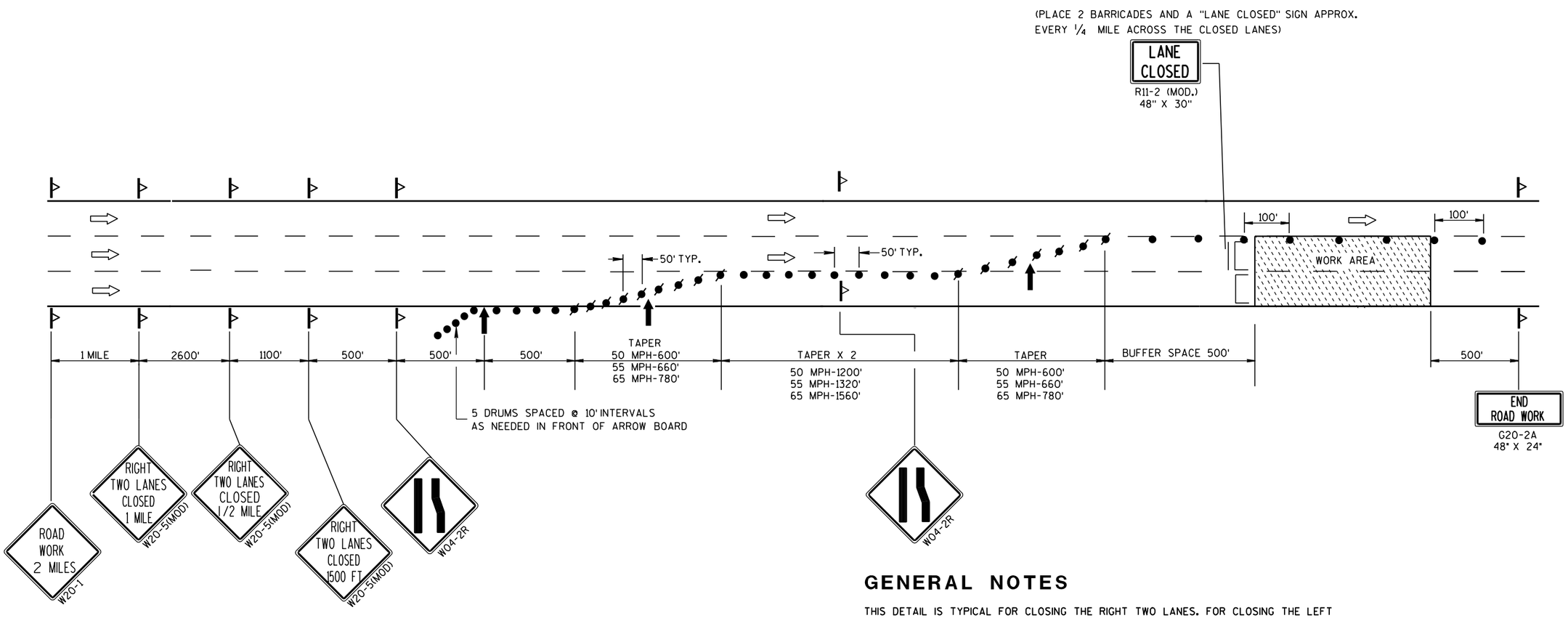
* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-7-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF 398
FHWA



LEGEND

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY BURN)
- SIGN ON POST OR PORTABLE SUPPORT
- FLASHING ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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.

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

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

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2000
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MAR 399 INEER

FHWA

SYMBOLS

- TRAFFIC CONTROL DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW
- ARROW BOARD IN CAUTION MODE

GENERAL NOTES

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

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

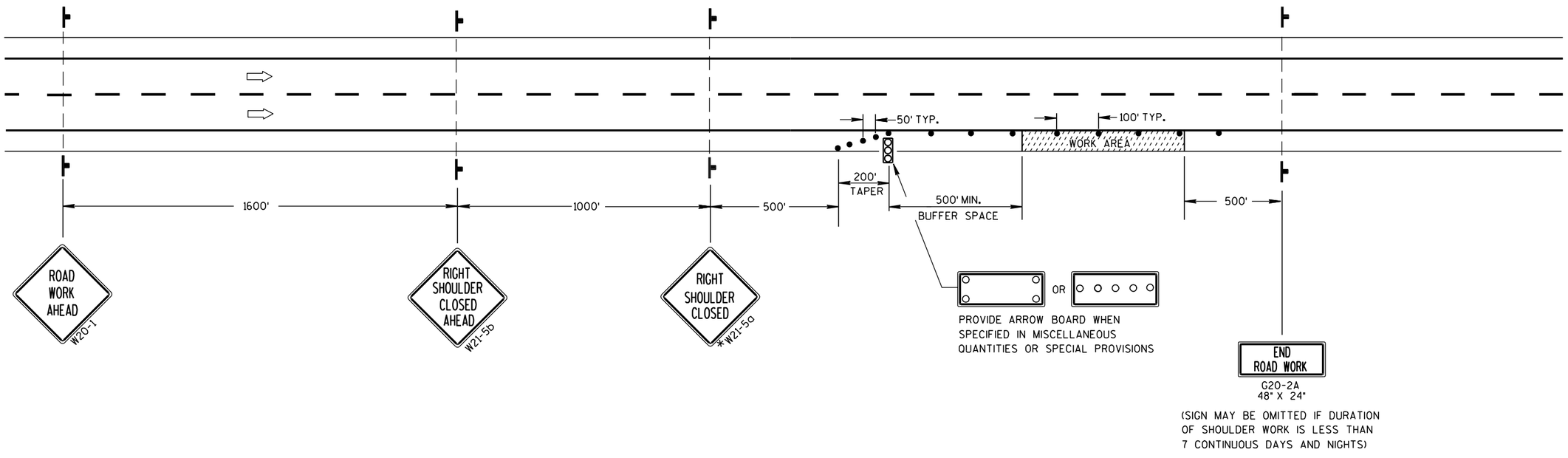
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00
DATE

/S/ Chester J Spong
CHIEF SIGNS AND MARKING ENGINEER

FHWA

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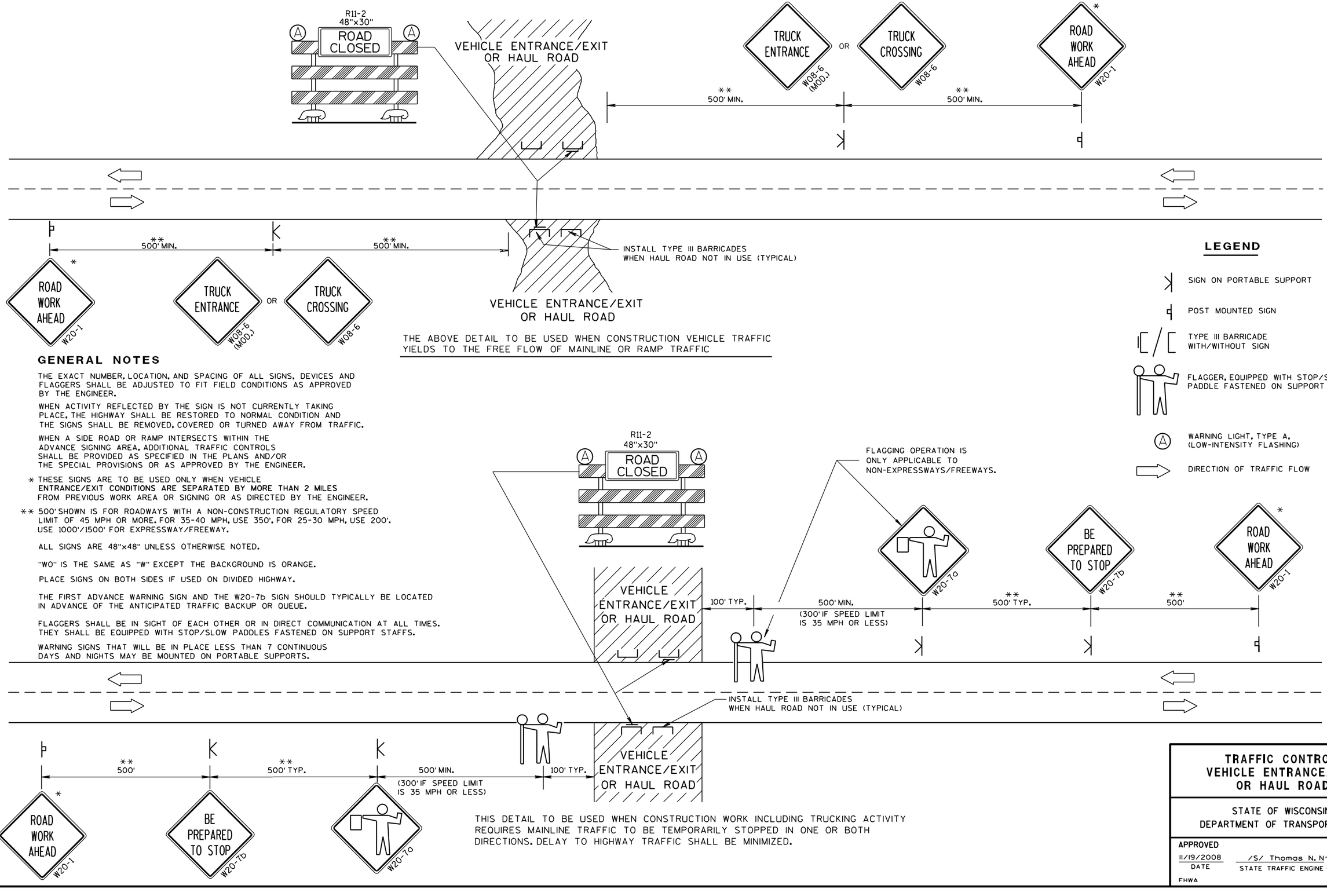
S.D.D. 15 D 27-1



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON PORTABLE SUPPORT
- POST MOUNTED SIGN
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) WARNING LIGHT, TYPE A, (LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE **ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES** FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500' SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350'. FOR 25-30 MPH, USE 200'. USE 1000'/1500' FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

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

THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/19/2008 DATE
/S/ Thomas N. N[illegible]
STATE TRAFFIC ENGINE[illegible] 401 SIGN
FHWA

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S.D.D. 15 D 29-2

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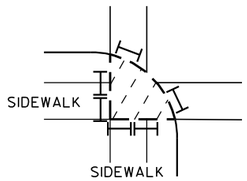
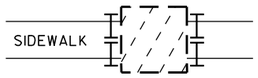
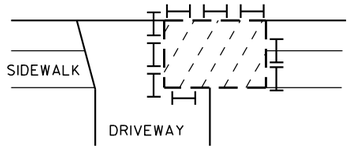
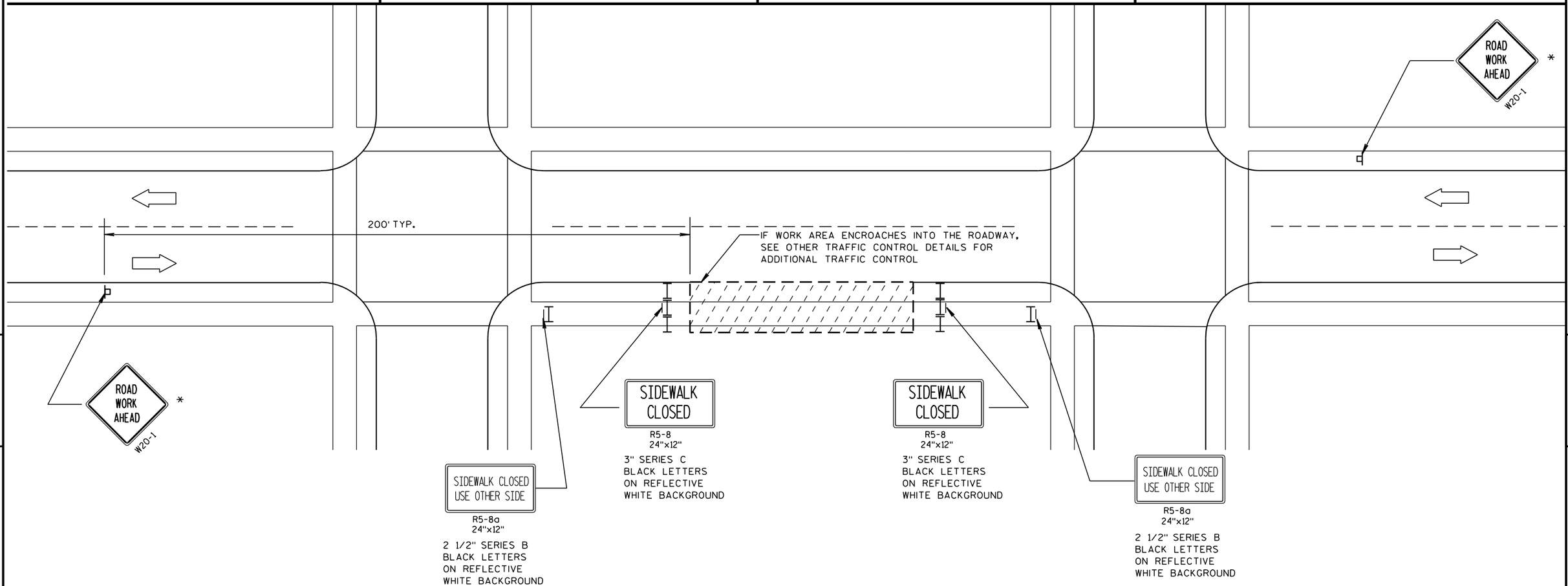
S.D.D. 15 D 29-2

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

6

S.D.D. 15 D 30-1

GENERAL NOTES:

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

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

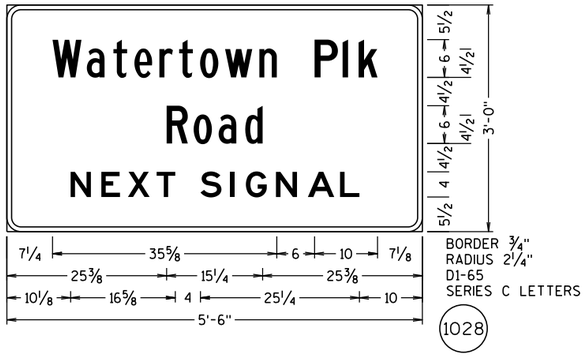
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

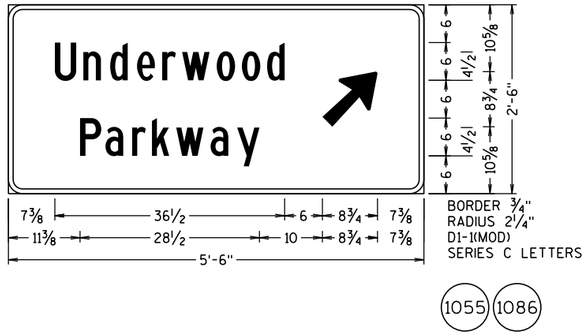
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

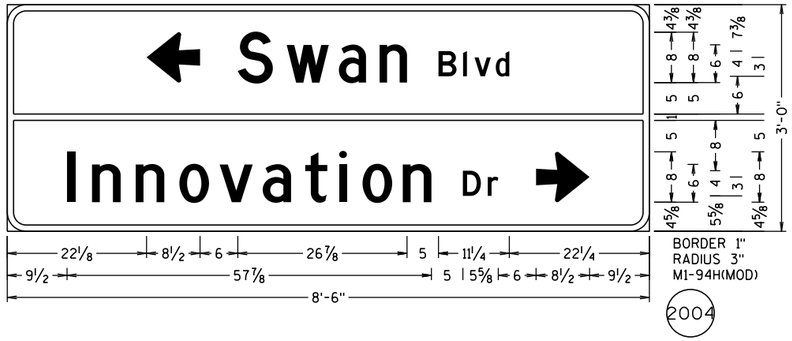
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

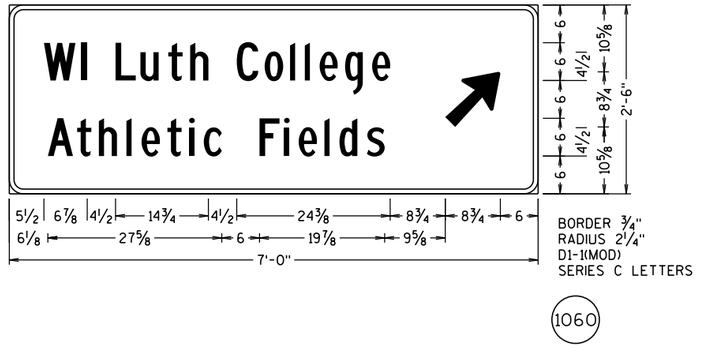
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

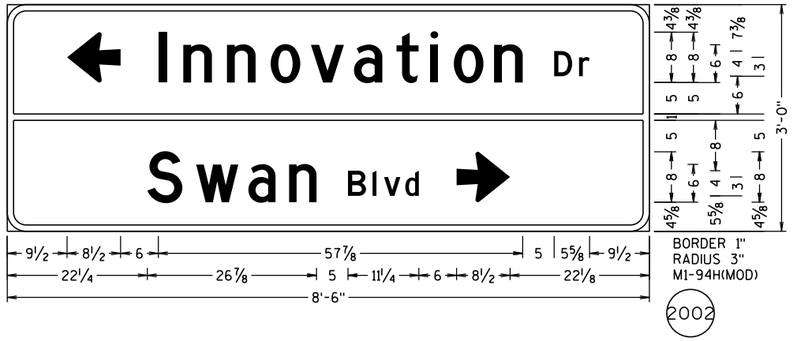
11. DO NOT SCALE.

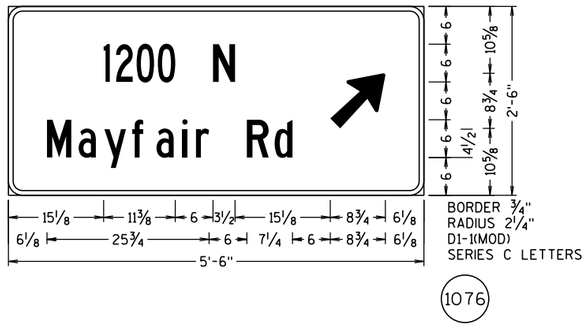






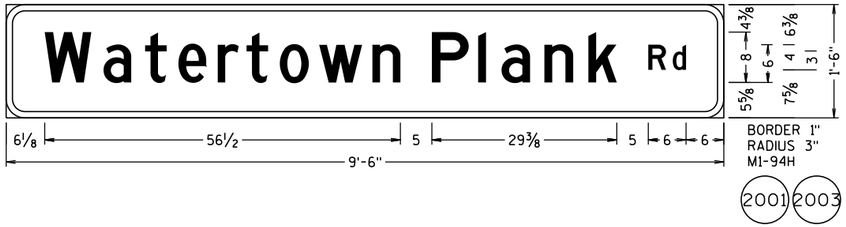


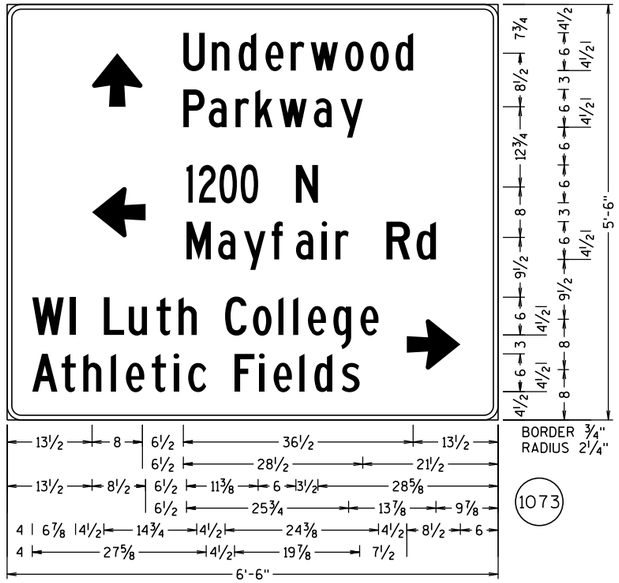


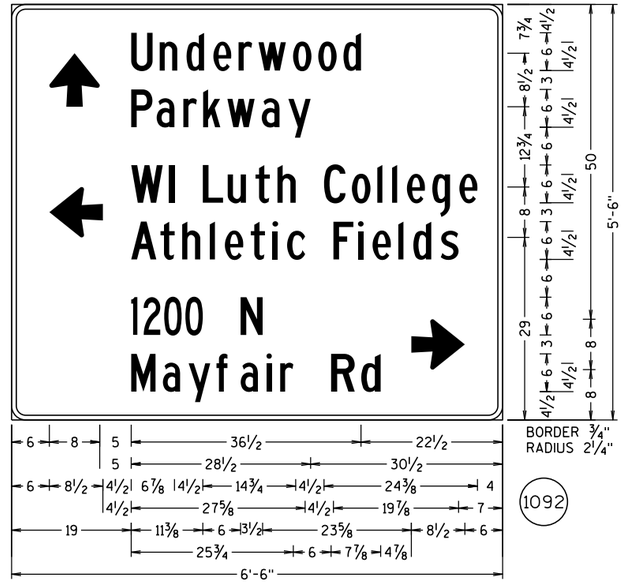


SHEET 1 OF 2

PROJECT NO: 1060-33-73	HWY: SWAN BLVD	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE II SIGNS	SCALE: 0 1/2" 1"	SHEET 403	E







GENERAL NOTES:

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

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

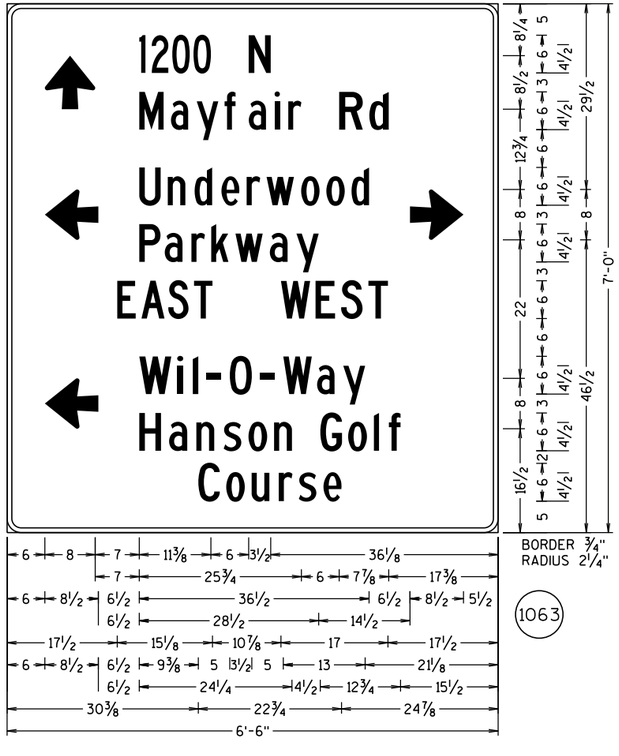
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

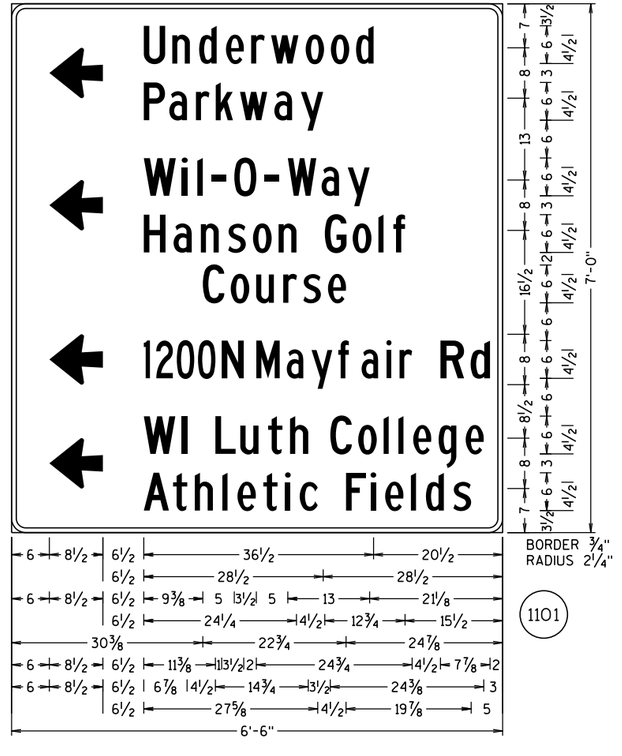
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

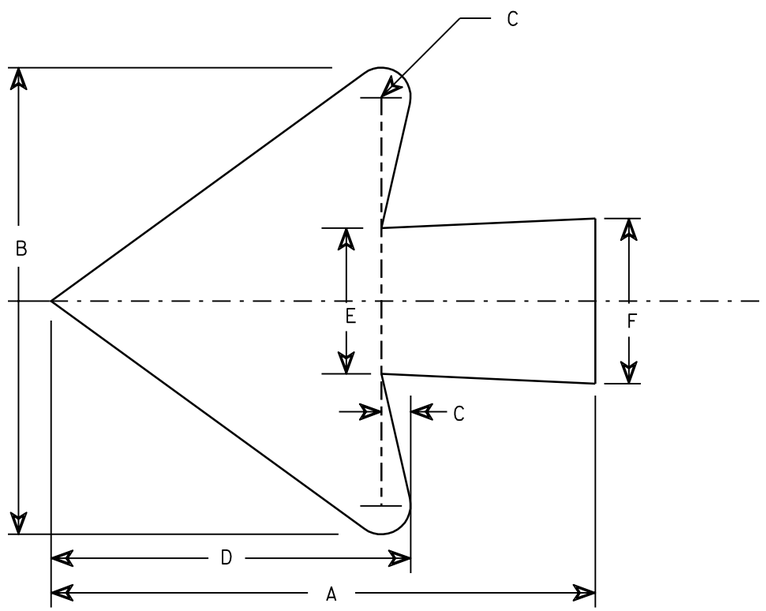
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

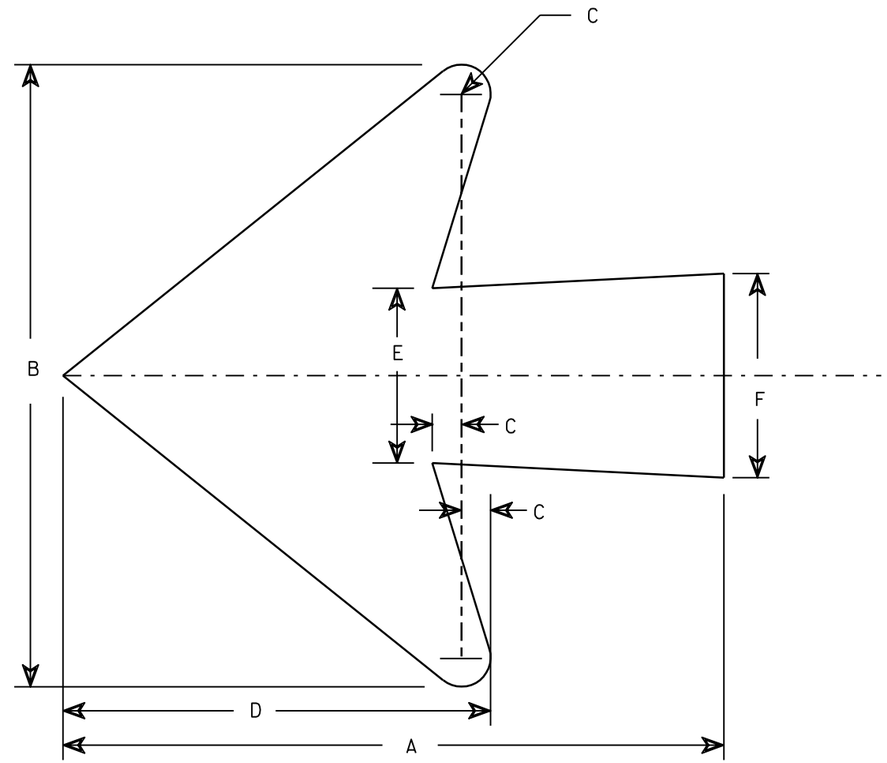






Lower Case Copy Size	A Right or Left	A * 2 Town	A * 3 Town	B	C	D	E	F
3¾ Series C	7	11	18	6	⅜	4⅝	1⅞	2⅛

* Indicates Ahead and Tilt for 2 & 3 Town applications.



Lower Case Copy Size	A Right or Left	A * 2 Town	A * 3 Town	B	C	D	E	F
4½ Series D&E	8½	11	18	8	⅜	5½	2¼	2⅝
6 Series D&E	12	18	24	10¾	½	7⅜	3¼	3½
8 Series E	15½	24	30	14¼	¾	9¾	4¼	4½

* Indicates Ahead and Tilt for 2 & 3 Town applications.

STANDARD ARROWS
FOR D1 GUIDE SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg
for State Traffic Engineer

DATE 8/10/92 PLATE NO. A1-2.3

7

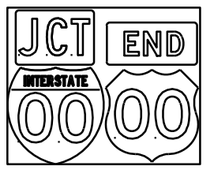
7

PROJECT NO:

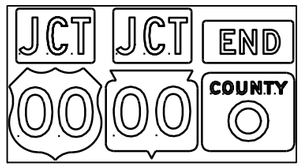
SHEET NO: 405 E

TYPICAL ASSEMBLIES

J1-1

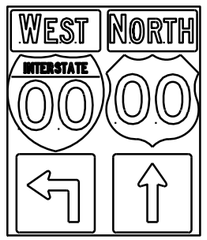


J1-2

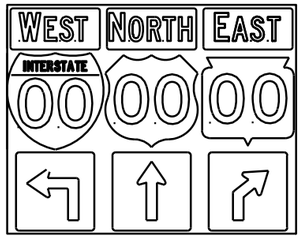


J1-3

J2-1

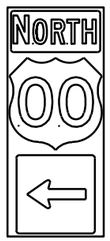


J2-2

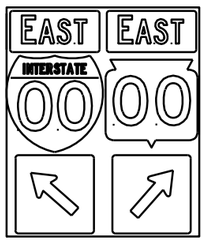


J2-3

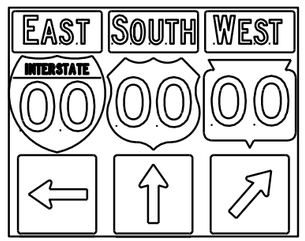
JV



J3-1

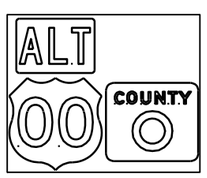


J3-2

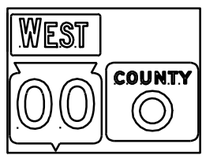


J3-3

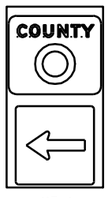
J4-1



J4-2



J4-2



J13-1

J12-1

J32-1

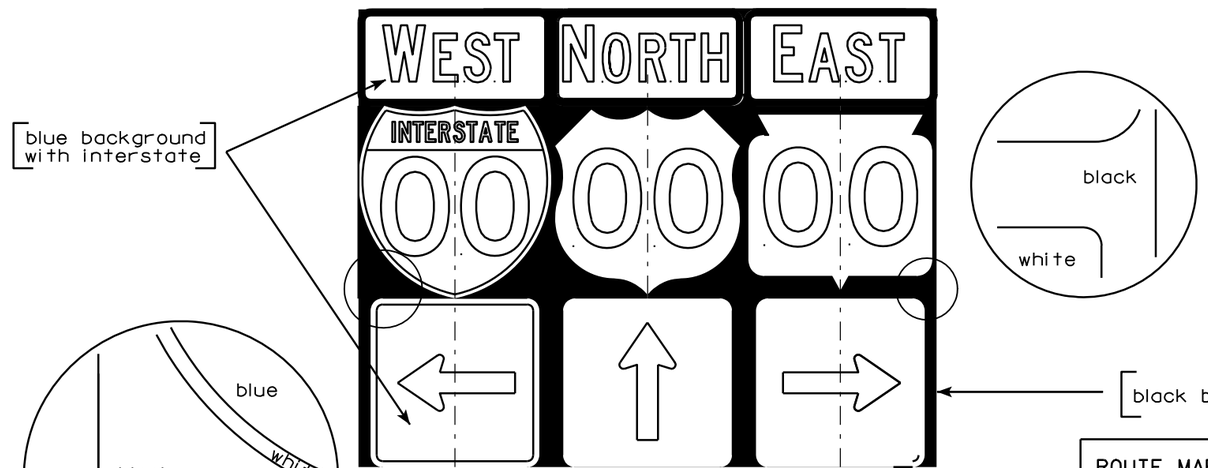
J33-1

J23-1

J22-1

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 since base material is plywood.
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.



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/21/09 PLATE NO. A2-1S.6

PROJECT NO:

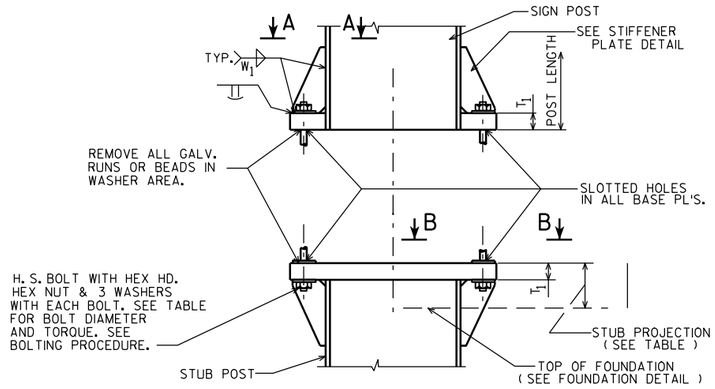
SHEET NO: 406 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A21S.DGN PLOT DATE : 21-OCT-2009 09:27 PLOT BY : ditjph PLOT NAME :

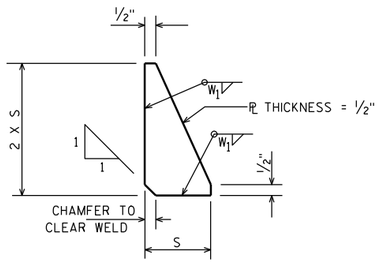
WISDOT/CADDS SHEET 42

7

7

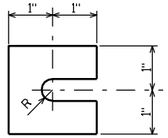


SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

SHIM DETAIL

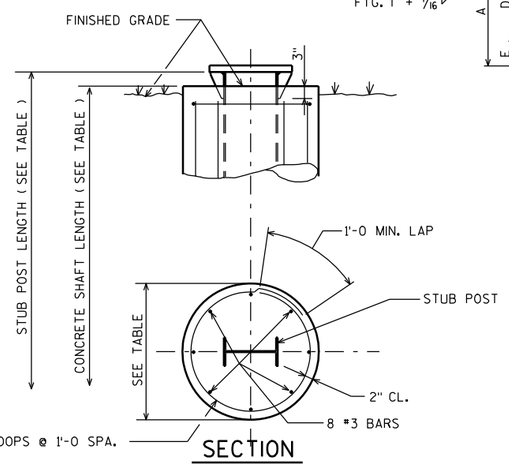
POST DETAIL

	QUANTITIES FOR 1 FOOTING	
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

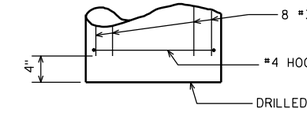
⑦

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

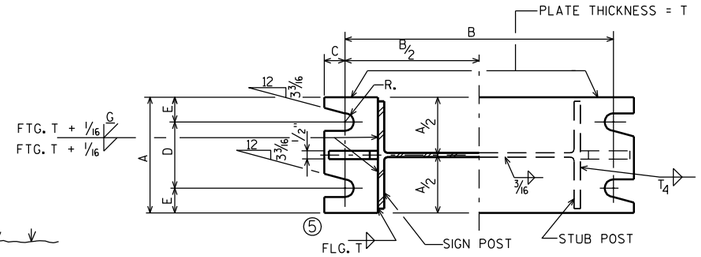
⑦



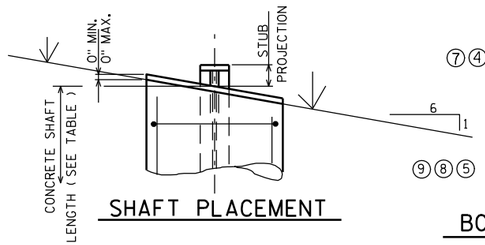
SECTION



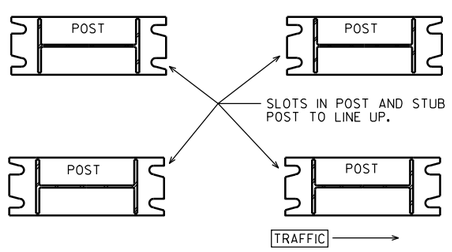
FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT



POST SLOT ORIENTATION ⑦

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND△	140 △25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

	TYPE	DIMENSION / POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② K
④	A	W10"X12.0 #/FT.	3/4" ϕ @ 75#-FT.	5 1/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32 "	2 1/8"	3'-6	3"	2'-0 ϕ	5'-0	76.0# ④
④	B	W12"X16.0 #/FT.	7/8" ϕ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32 "	3"	5'-6	3"	2'-0 ϕ	7'-0	146.5# ④
	C	W12"X19.0 #/FT.	7/8" ϕ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32 "	3"	6'-0	3"	2'-0 ϕ	7'-6	182.1#
	D	W12"X22.0 #/FT.	7/8" ϕ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	15/32 "	3"	6'-6	3"	2'-0 ϕ	8'-0	210.5#
③	E	W12"X26.0 #/FT.	1" ϕ @ 90#-FT.	7"	1'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32 "	3"	7'-0	3"	2'-0 ϕ	8'-6	293.0# ③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer
DATE 4/26/11 PLATE NO. A3-1.13

NO.	DATE	REVISION
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE ℄ WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

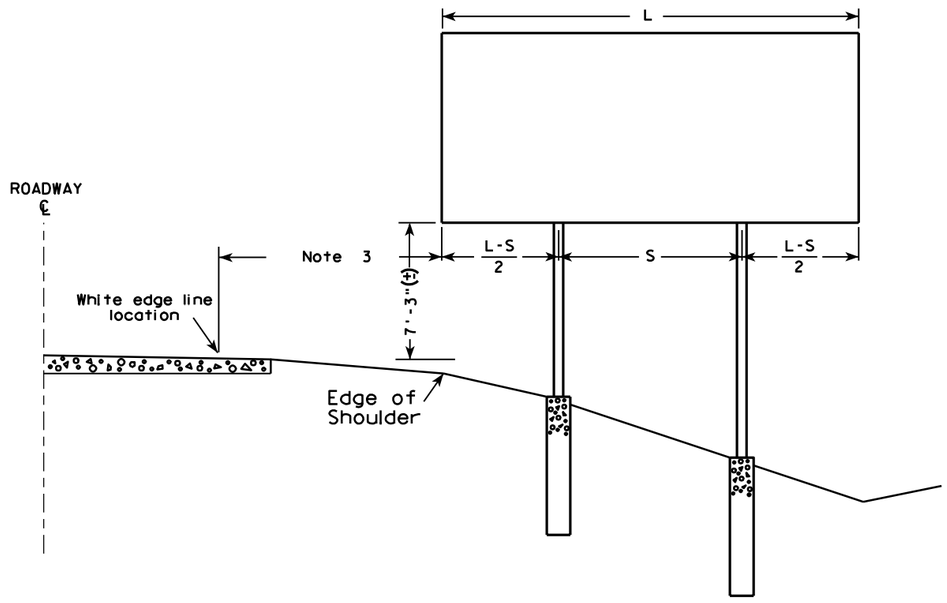
TYPE A, B, C, D, & E

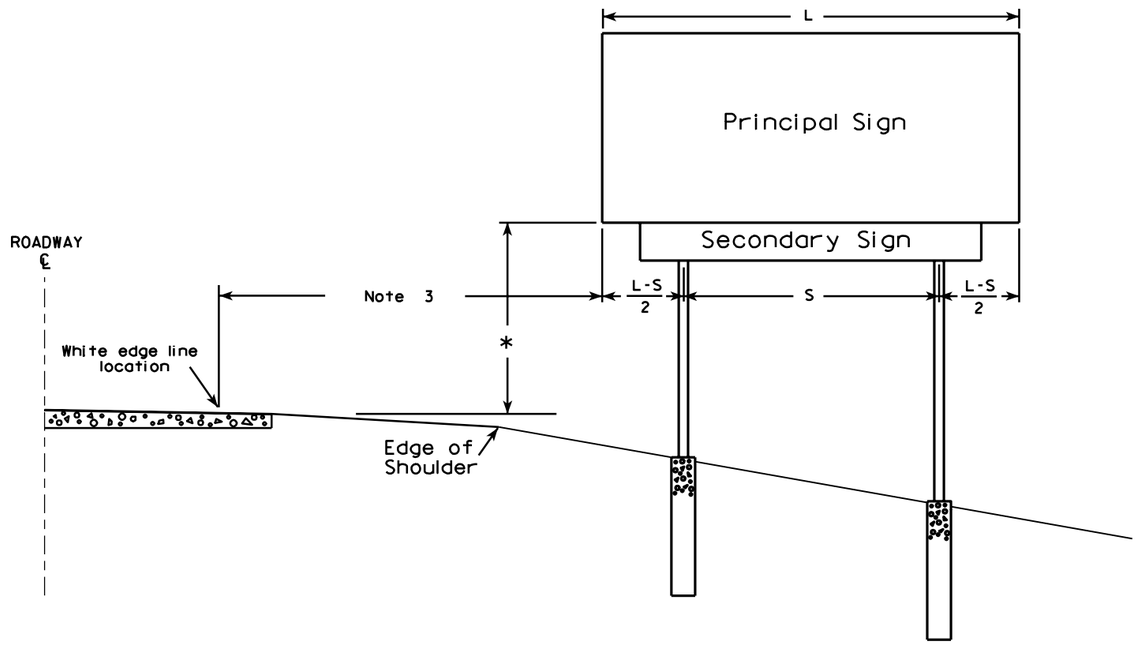
CONST. SPEC. 2011 | DRAWN BY JPH | PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 407 | E





GENERAL NOTES

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

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

7

7

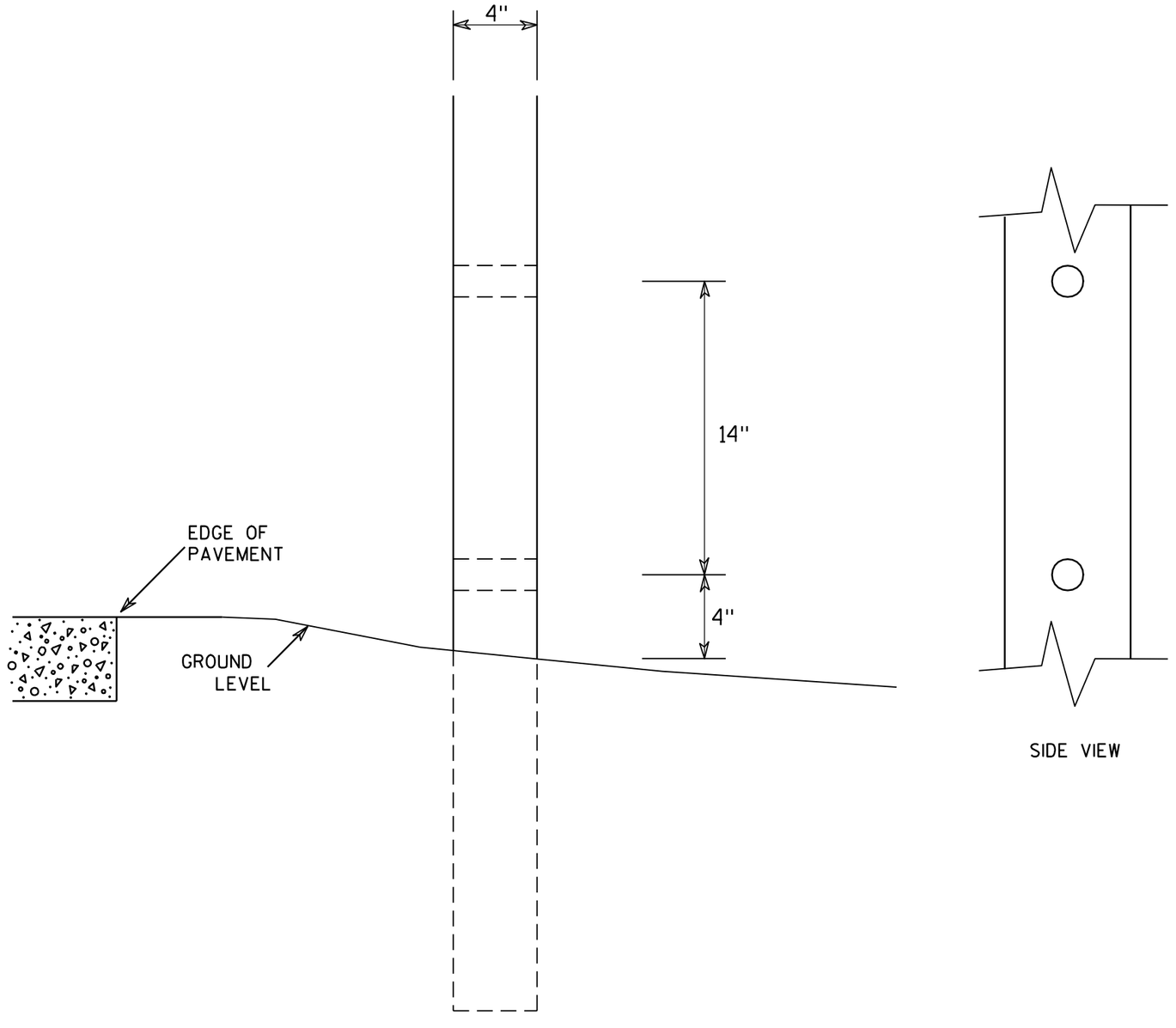
TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:				SHEET NO: 408	E



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

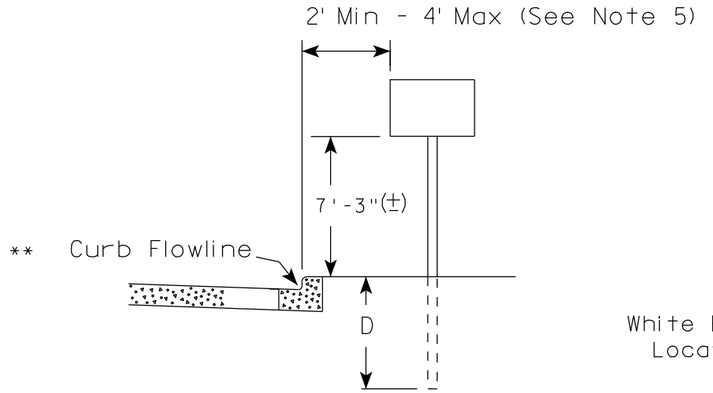
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

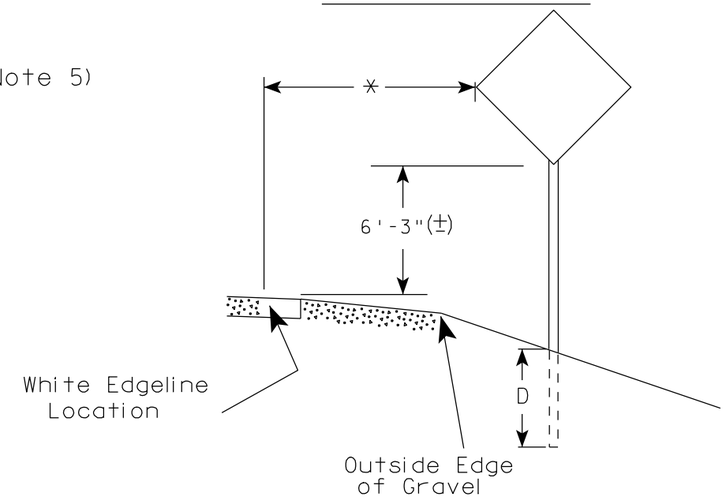
DATE 3/27/97 PLATE NO. A4-11.2

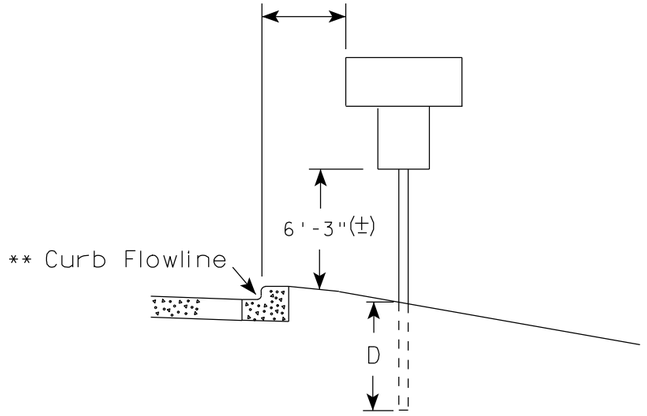
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 409	E

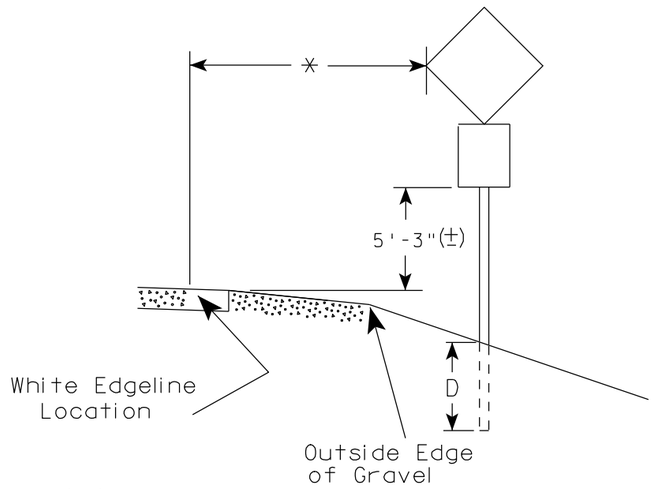
URBAN AREA



RURAL AREA (See Note 2)







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

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

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), 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" (±).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

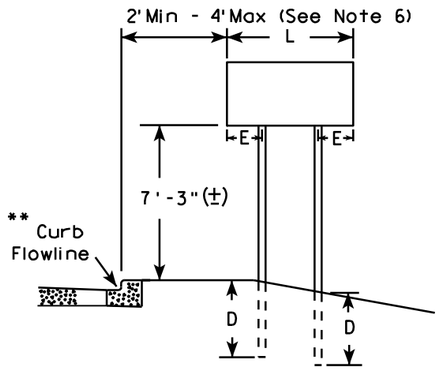
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

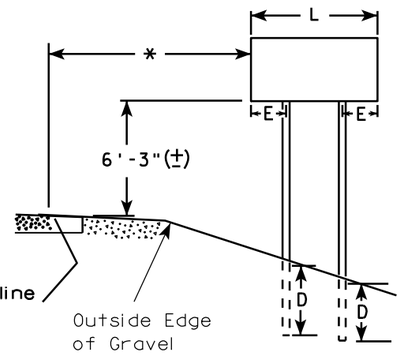
DATE 9/21/2011 PLATE NO. A4-3.16

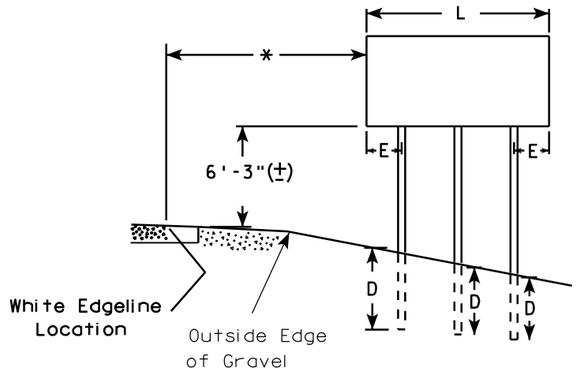
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 410	E

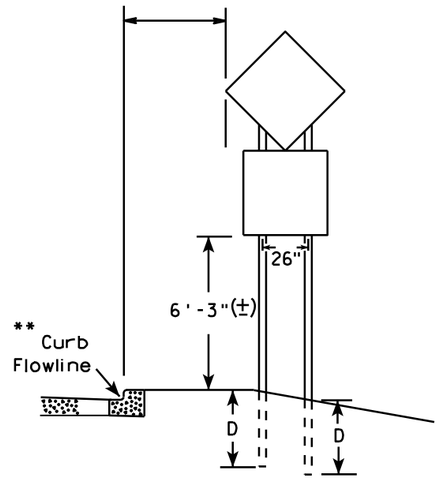
URBAN AREA



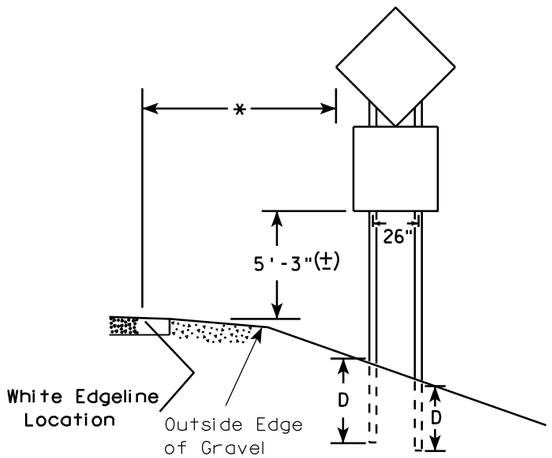
RURAL AREA (See Note 3)







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

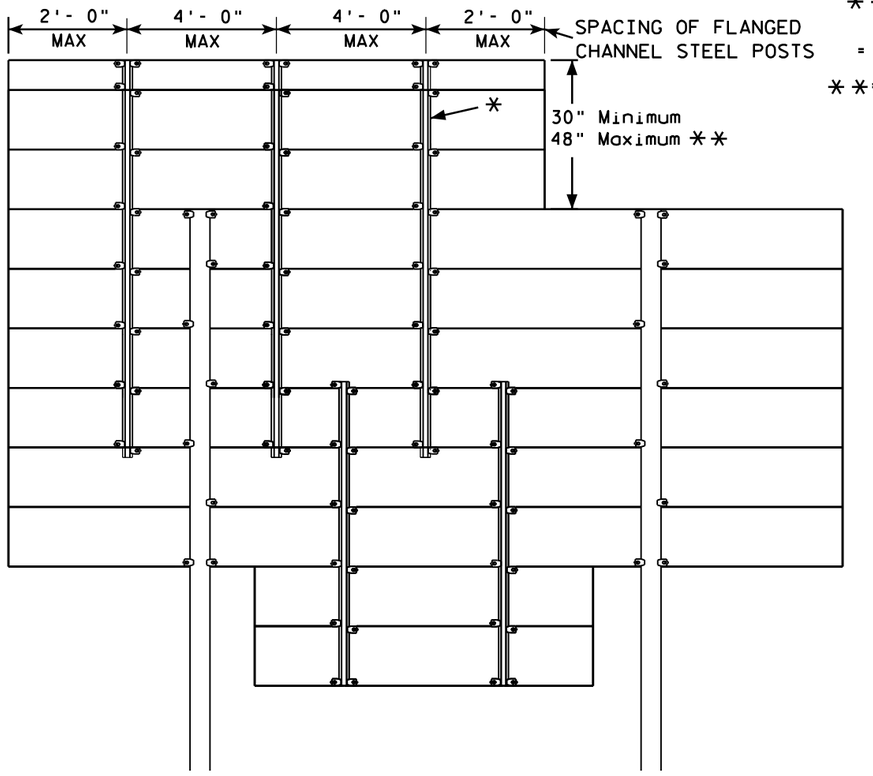
DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 411	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

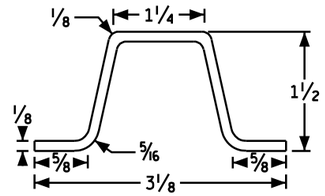
GROUND MOUNTED SIGN



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

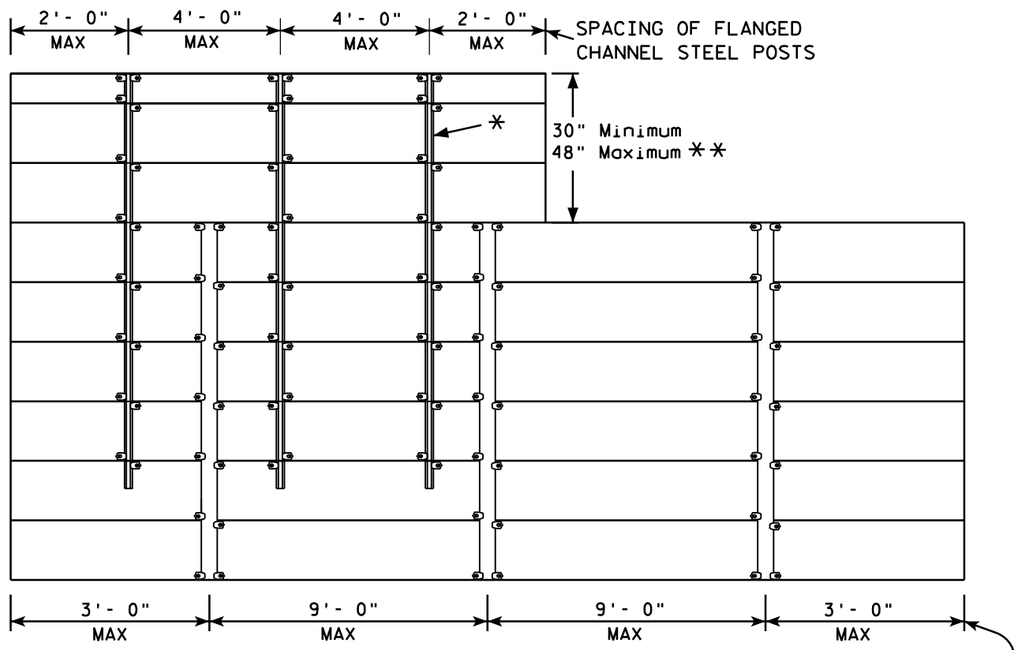
**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)

7

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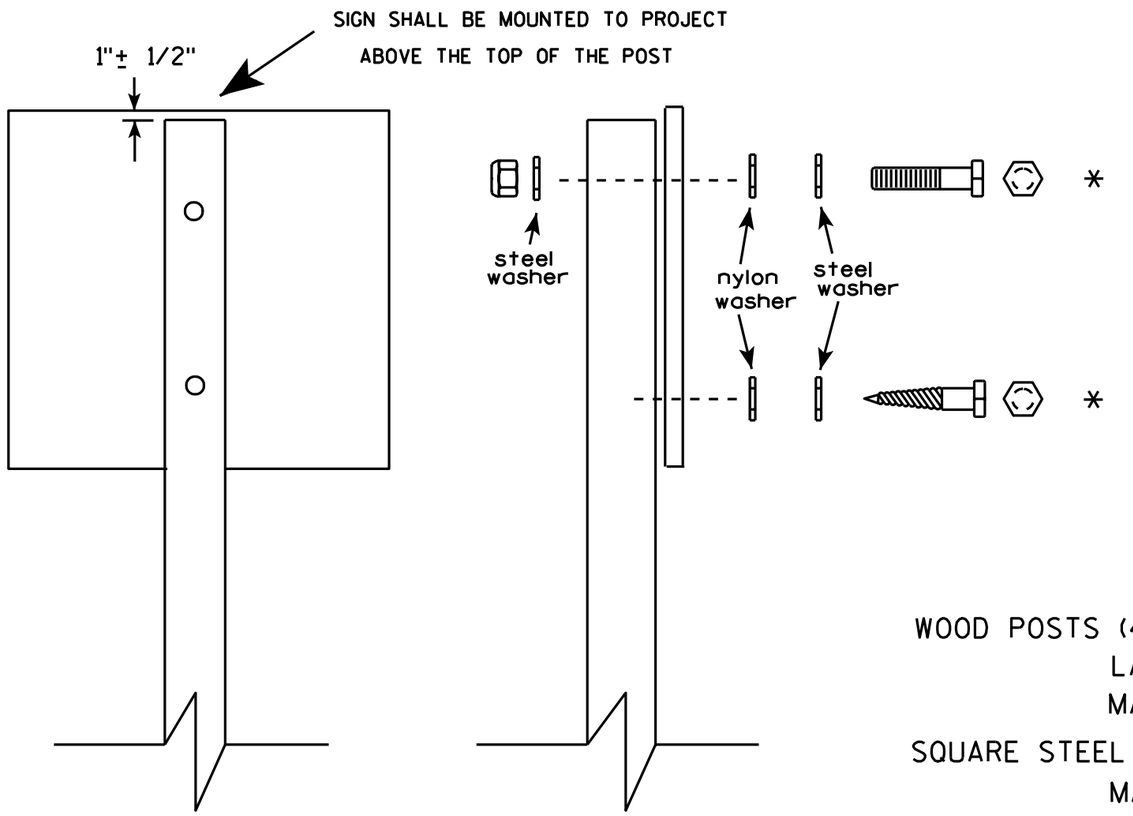
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. A4-6.11

PROJECT NO:				SHEET NO: 412	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

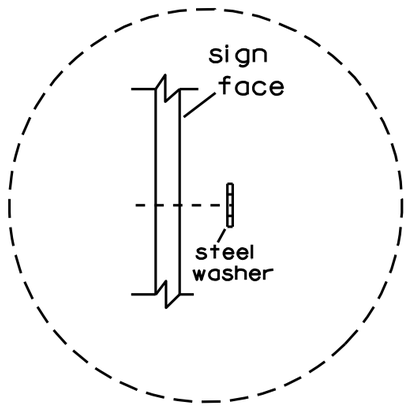
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

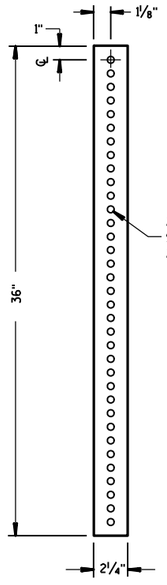
7

PROJECT NO:

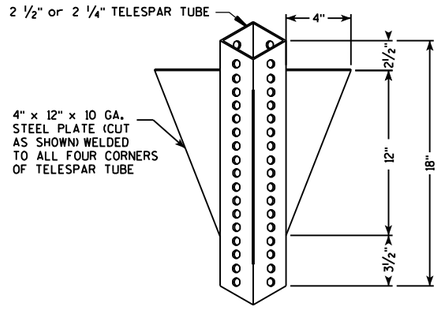
SHEET NO: 413 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

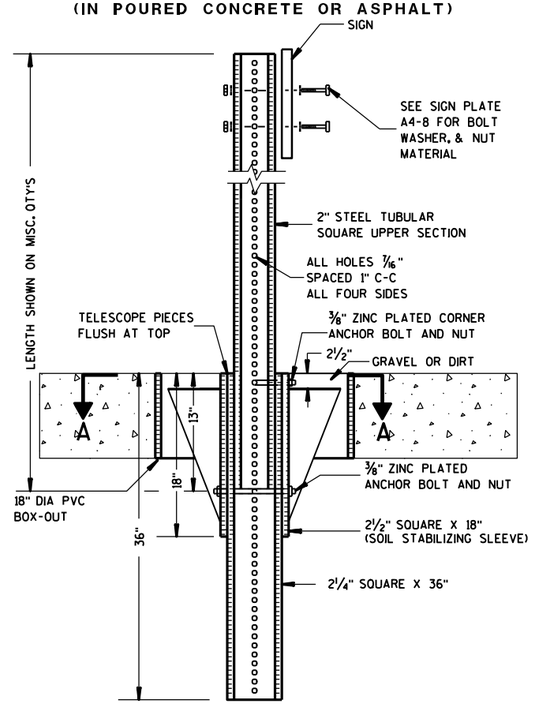
2 1/4 " SQUARE 12 GAUGE PERFORATED GALVANIZED FINISH



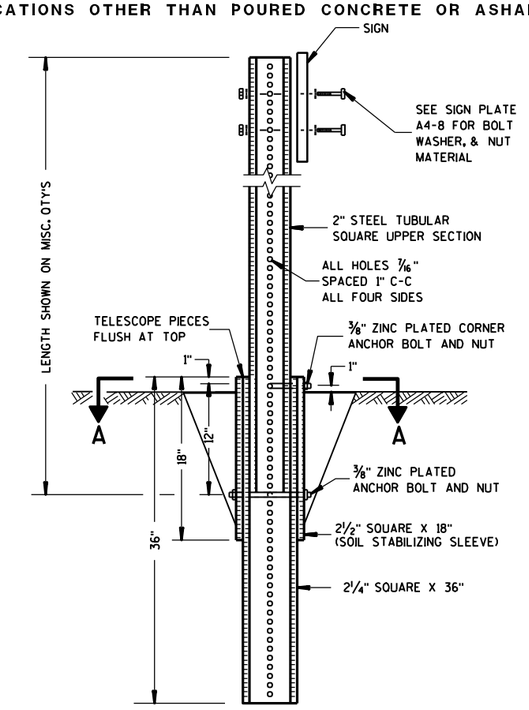
2 1/2 " SQUARE 12 GAUGE OMNI-DIRECTIONAL PERFORATED SOIL STABILIZING SLEEVE GALVANIZED FINISH

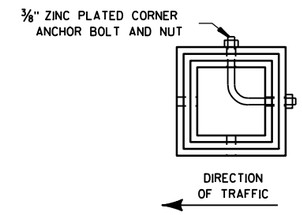


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

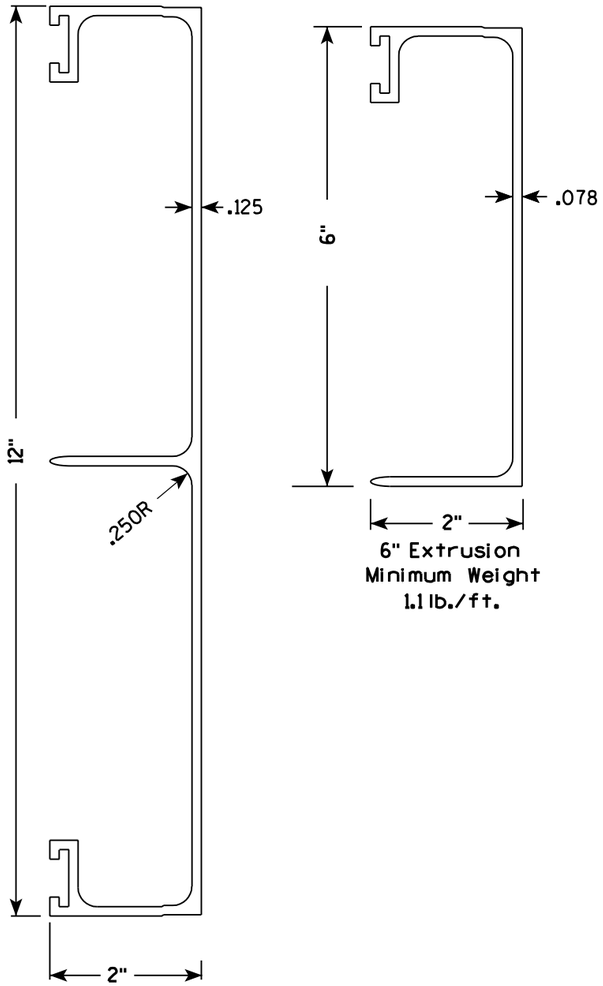
WISCONSIN DEPT OF TRANSPORTATION

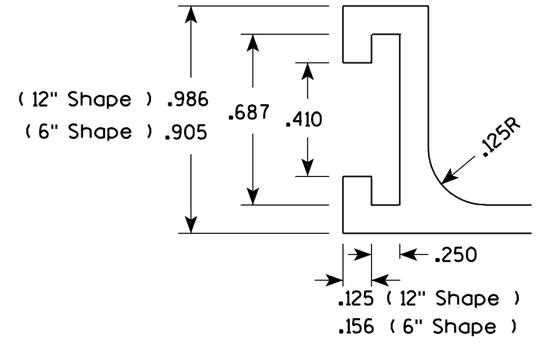
APPROVED Matthew R Rauch
for State Traffic Engineer

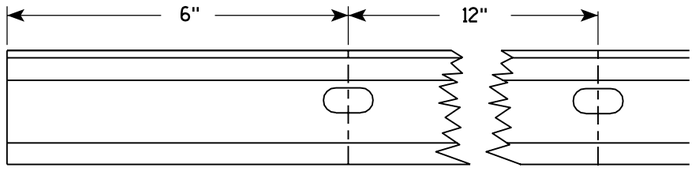
DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 414	E

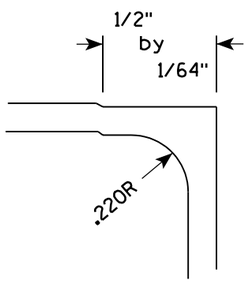
Extruded Shape







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

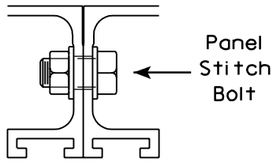


Hardware

STITCH BOLT, WASHER & NUT

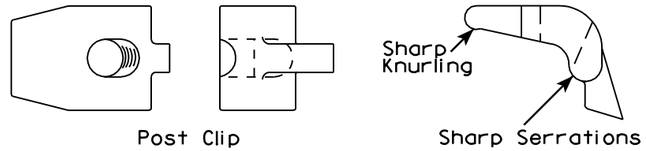
The hardware includes:

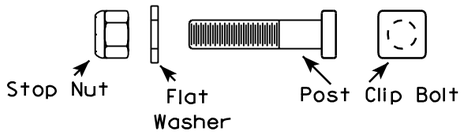
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

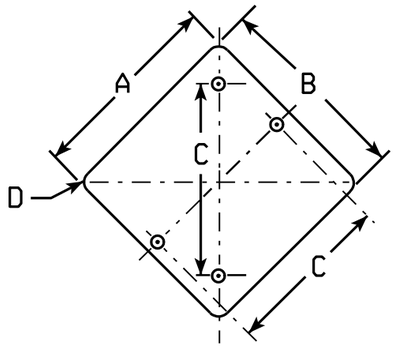
1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be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

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9



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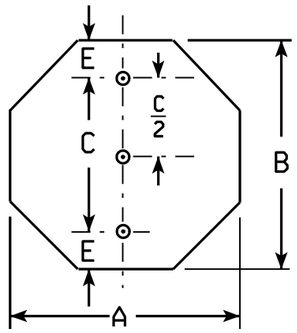
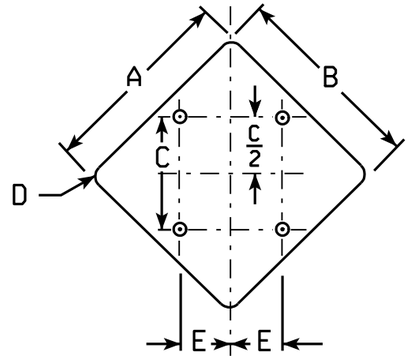
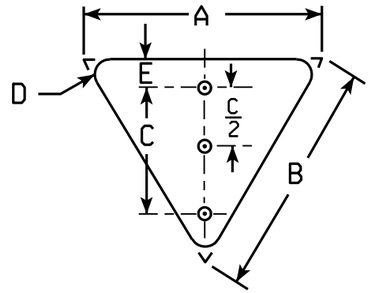


2



3



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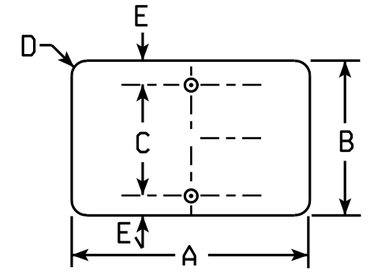


5

TYPE 1						
A	B	C	D	Area Sq. Ft.	THICK NESS	Mounting Holes
24	24	24	1 1/2	4.0	.080	2
30	30	30	1 7/8	6.25	.080	2
36	36	36	2 1/4	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

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

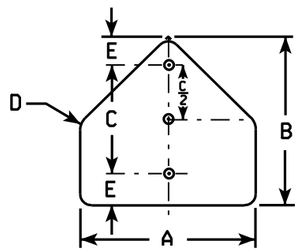
DATE 3/5/2012

PLATE NO. A5-3A.19

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 416 | E

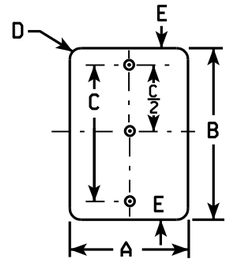
FILE NAME : c:\CAEFiles\Projects\tr_stdplate\A53.DGN PLOT DATE : 05-MAR-2012 14:49 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.986348:1.000000

WISDOT/CADDS SHEET 42



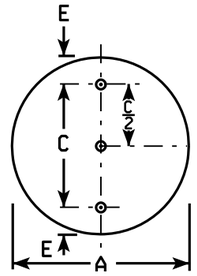
6

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



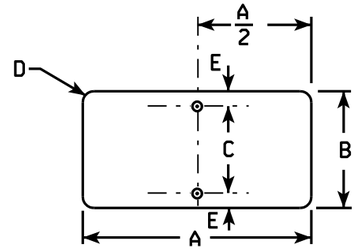
7

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
36	54	36	1 7/8	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
48	60	40	3	7	20.0	.125	3



8

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



9

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.

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

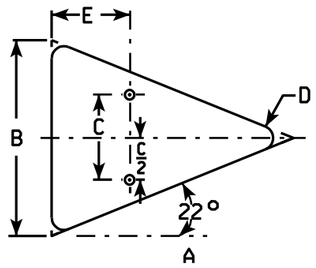
SHEET 2 OF 3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/2012 PLATE NO. A5-3A.19

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 417	E



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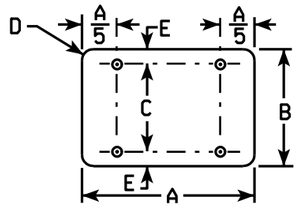

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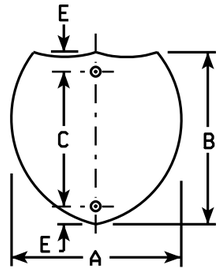

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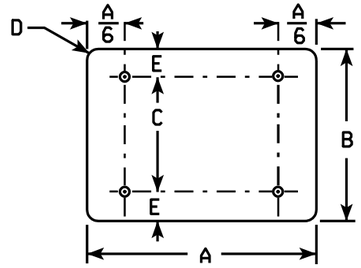


13

TYPE 10 (NOTE 1)							
A	B	C	D	E	Area Sq. Ft.	THICK NESS	Mounting Holes
48	36	14	2¼	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	48	32	3	8	16.0	.125	4
48	60	40	3	10	20.0	.125	4
48	24	20	1⅞	2	8.0	.125	4
48	30	22	1⅞	4	10.0	.125	4
60	24	20	1⅞	2	10.0	.125	4
60	30	22	1⅞	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

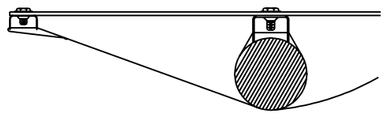
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

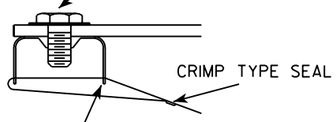
DATE 3/5/2012 PLATE NO. A5-3A.19

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 418	E

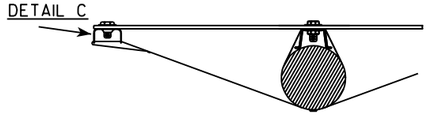
BRACE BANDING

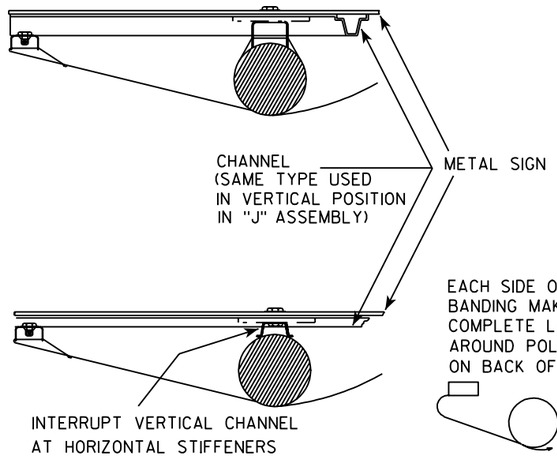


DETAIL C
CADMIUM PLATED STEEL BOLT
THROUGH BLACK BORDER



DETAIL C

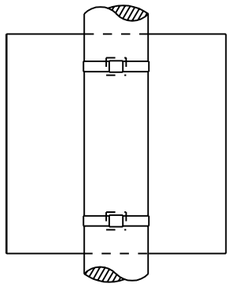


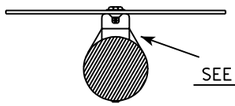


EACH SIDE OF BRACE
BANDING MAKES ONE
COMPLETE LOOP
AROUND POLE-SEAL
ON BACK OF POLE

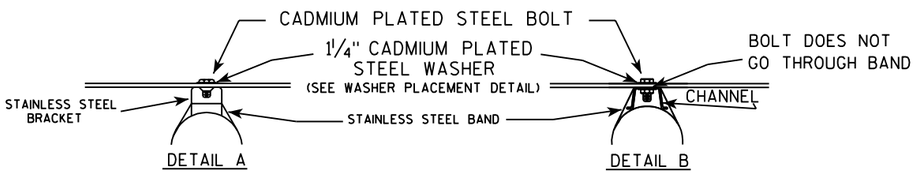
BRACKET BANDING

SINGLE SIGN





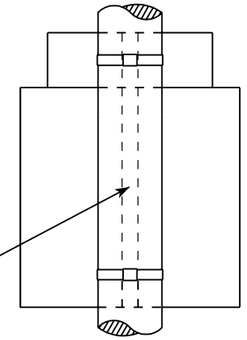
SEE DETAIL A



DETAIL A

DETAIL B

"J" ASSEMBLY

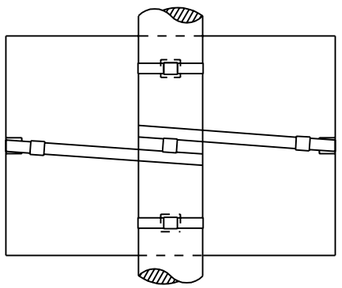


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

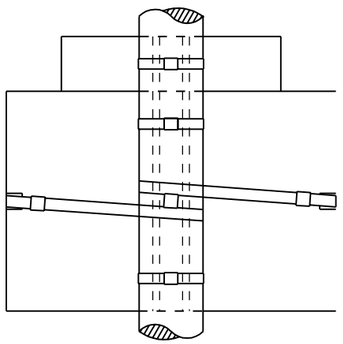
GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' 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.

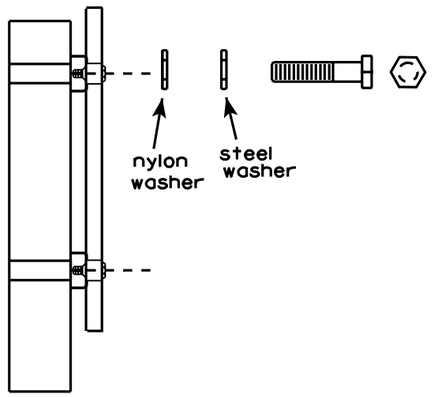


BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF SIGN.



WASHER PLACEMENT



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

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

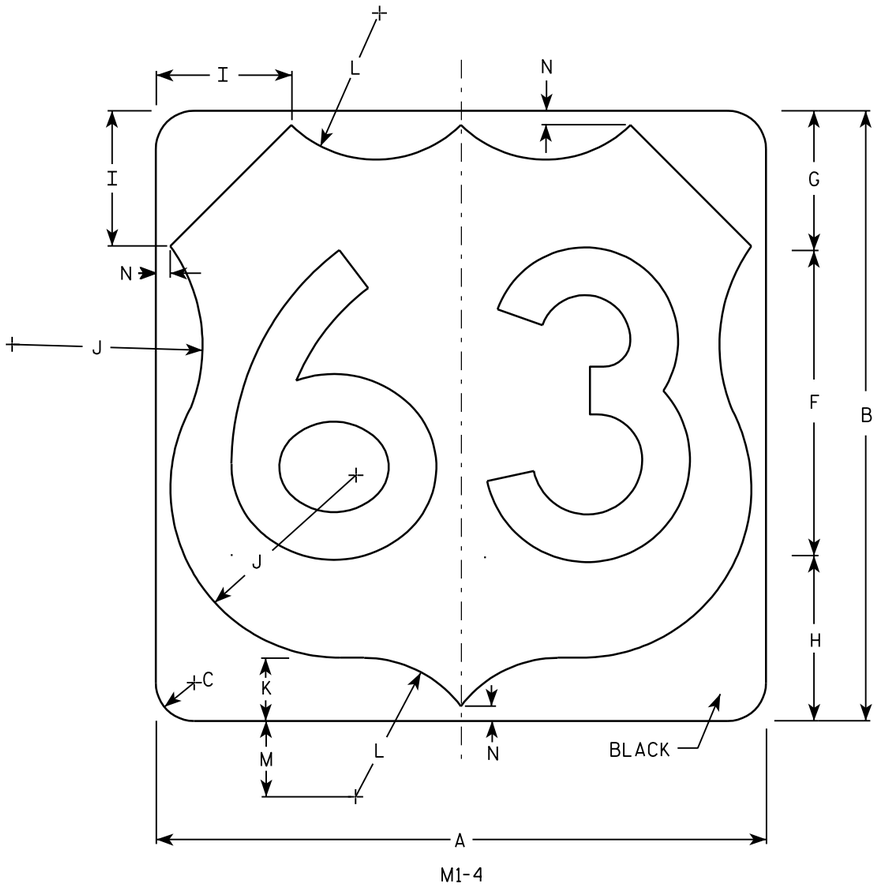
APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

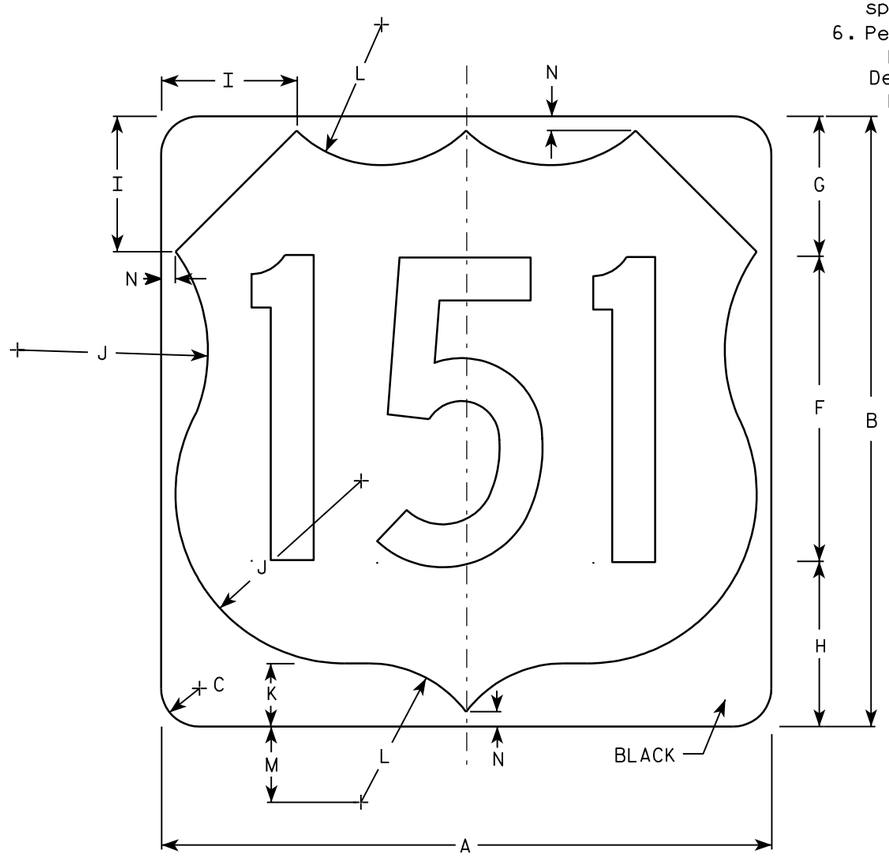
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 419	E

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 numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

7

7

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	Areq sq. ft.	Area m2
1																												
2	24	24	1 ½			12	5 ½	6 ½	5	7 ½	2 ½	5 ½	3	½													4.0	.36
3	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0	.81
4	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0	.81
5	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0	.81

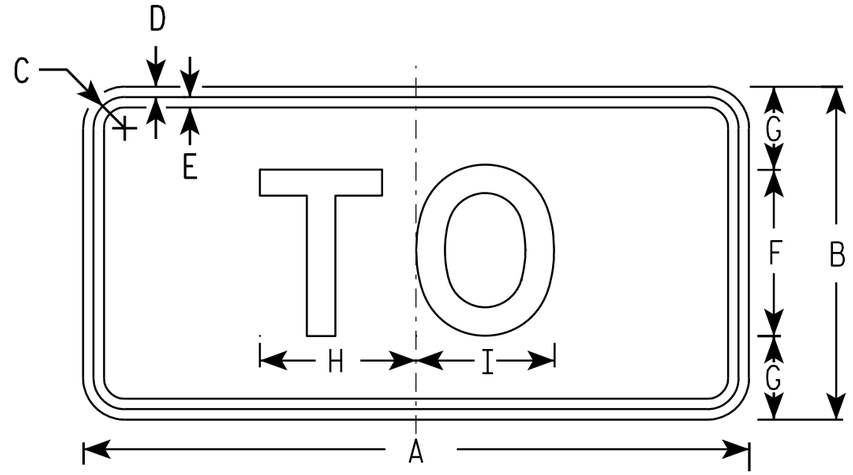
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

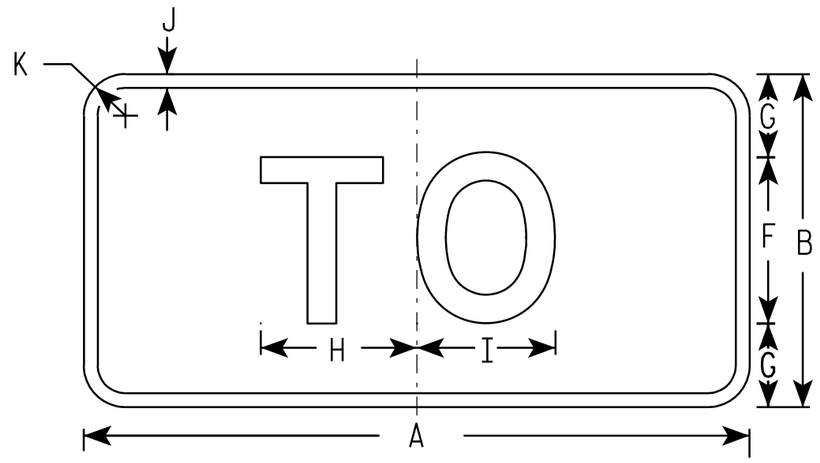
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 420 | E



M4-5
MK4-5
MM4-5



MB4-5
MG4-5
MN4-5

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 - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black
   MB4-5 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG4-5 Background - Green
   Message - White - Type H Reflective
   MK4-5 Background - Green
   Message - White - Type H Reflective
   MM4-5 Background - White - Type H Reflective
   Message - Green
   MN4-5 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	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

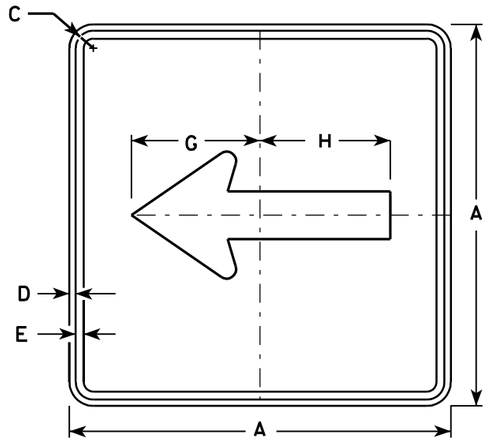
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

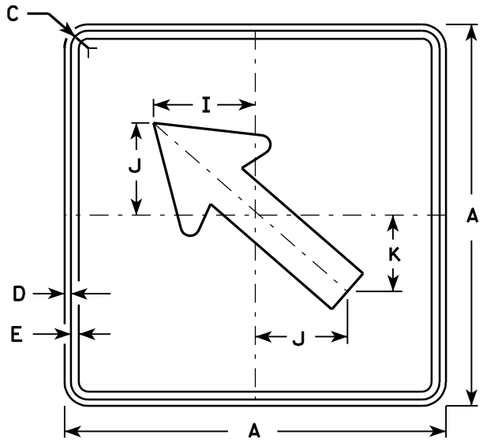
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-5.6

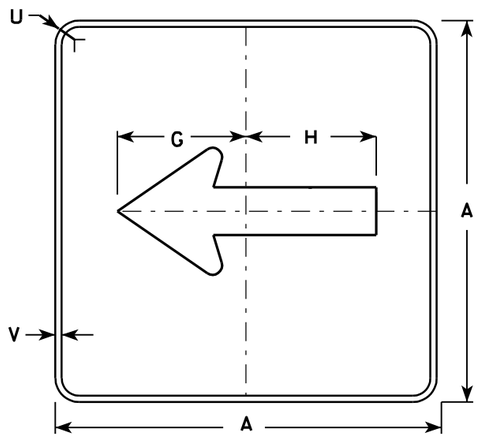
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 421 | E



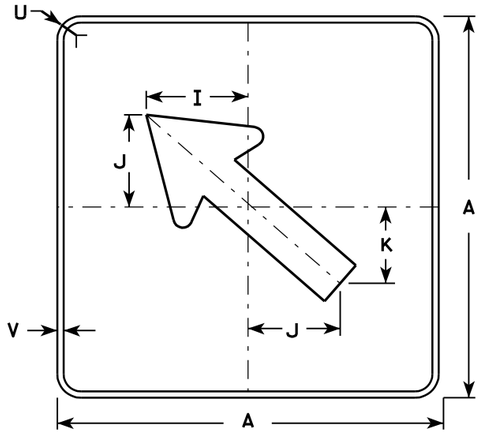
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



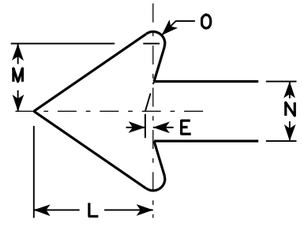
MB6-1
MG6-1
MN6-1



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.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - 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 - Reflective
   Message - Black
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow - Type H Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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		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	0.28
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	0.56
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	0.56
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	0.56

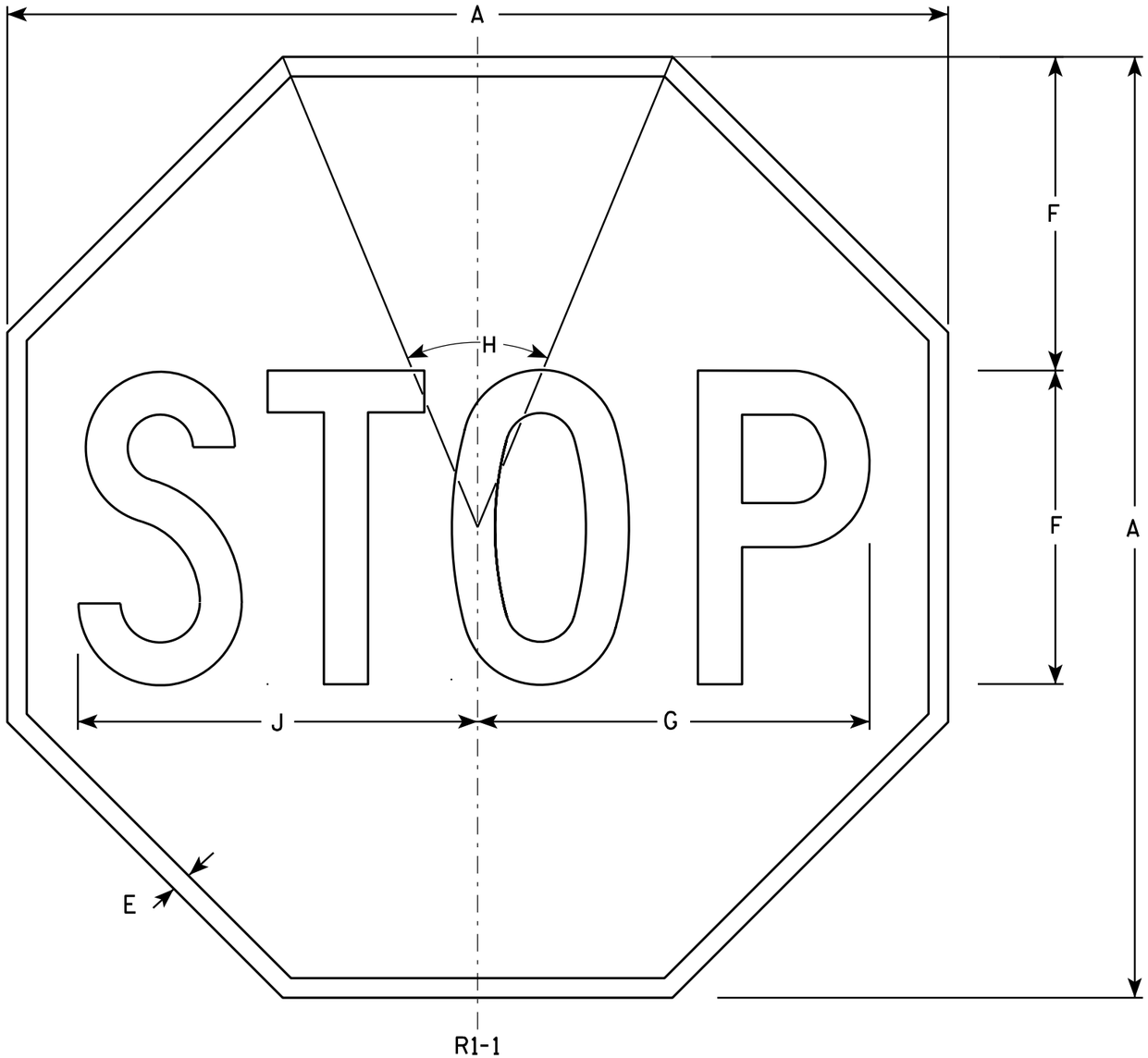
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 422	E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

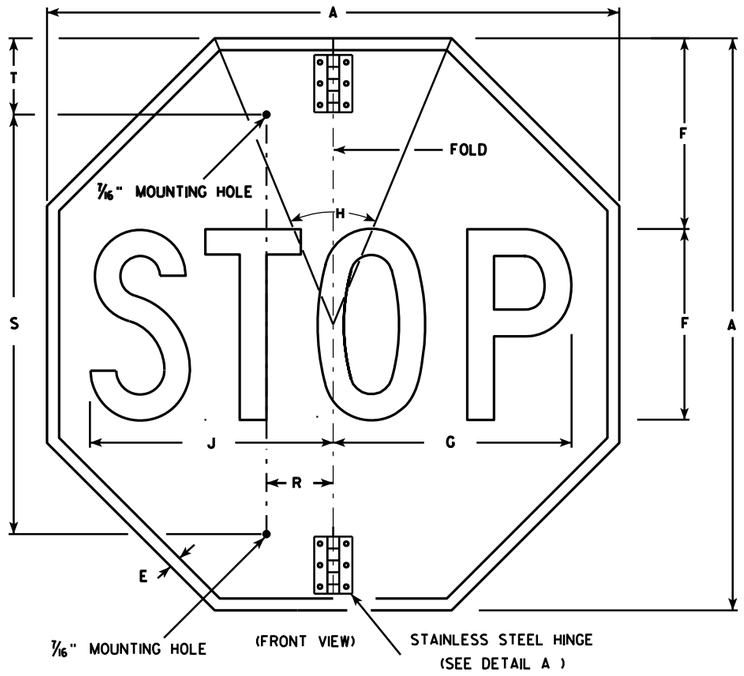
STANDARD SIGN
R1-1

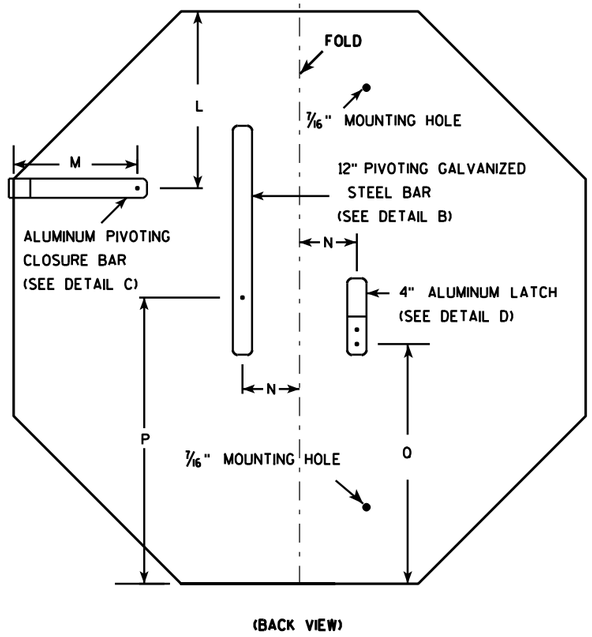
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

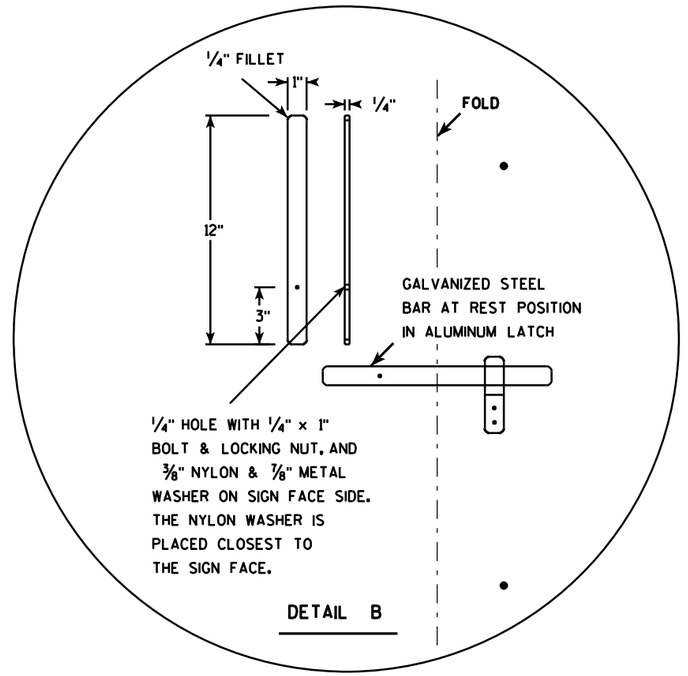
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 423	E

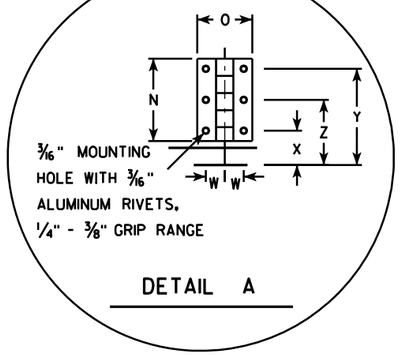


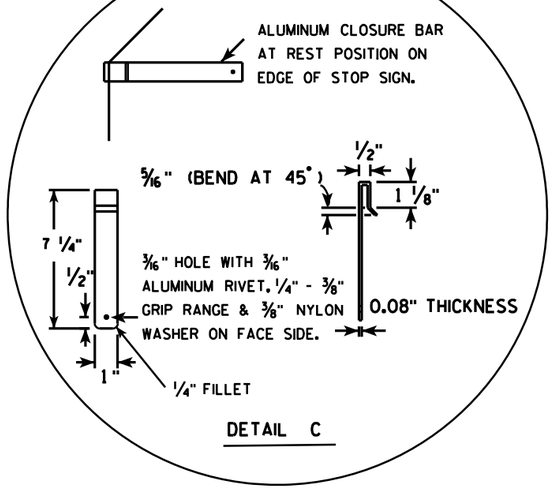


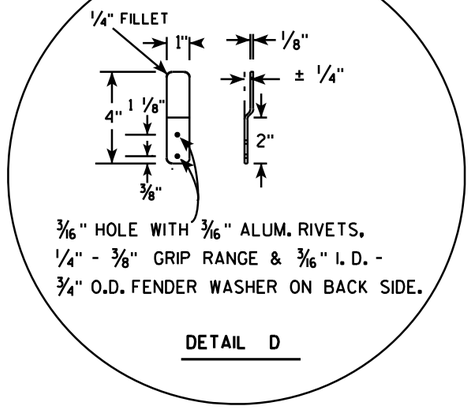
NOTES

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









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

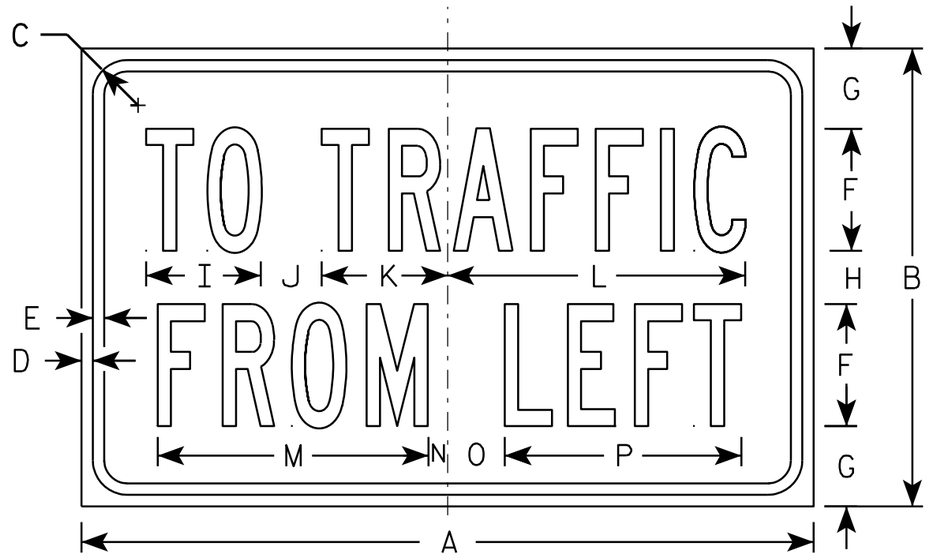
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 424	E



R1-54

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

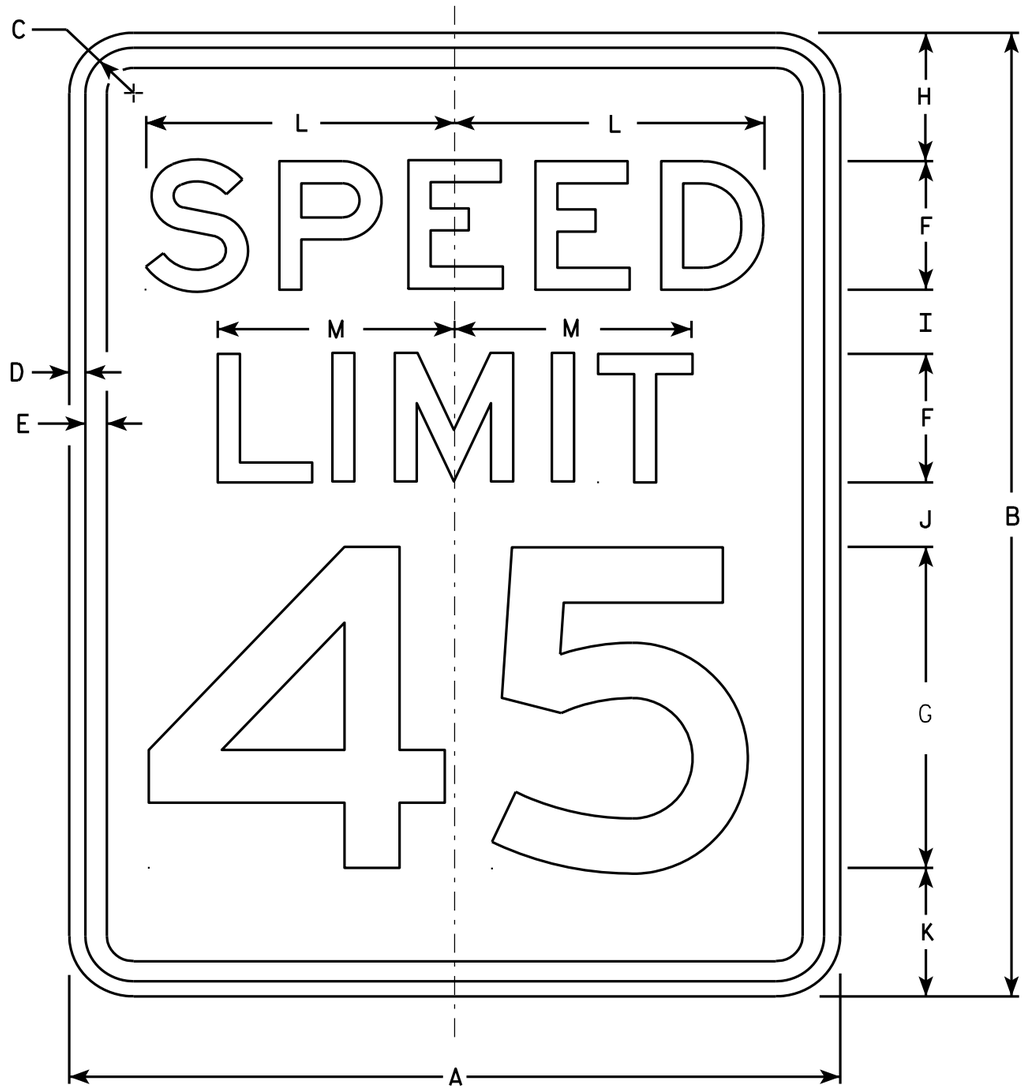
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 425	E



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

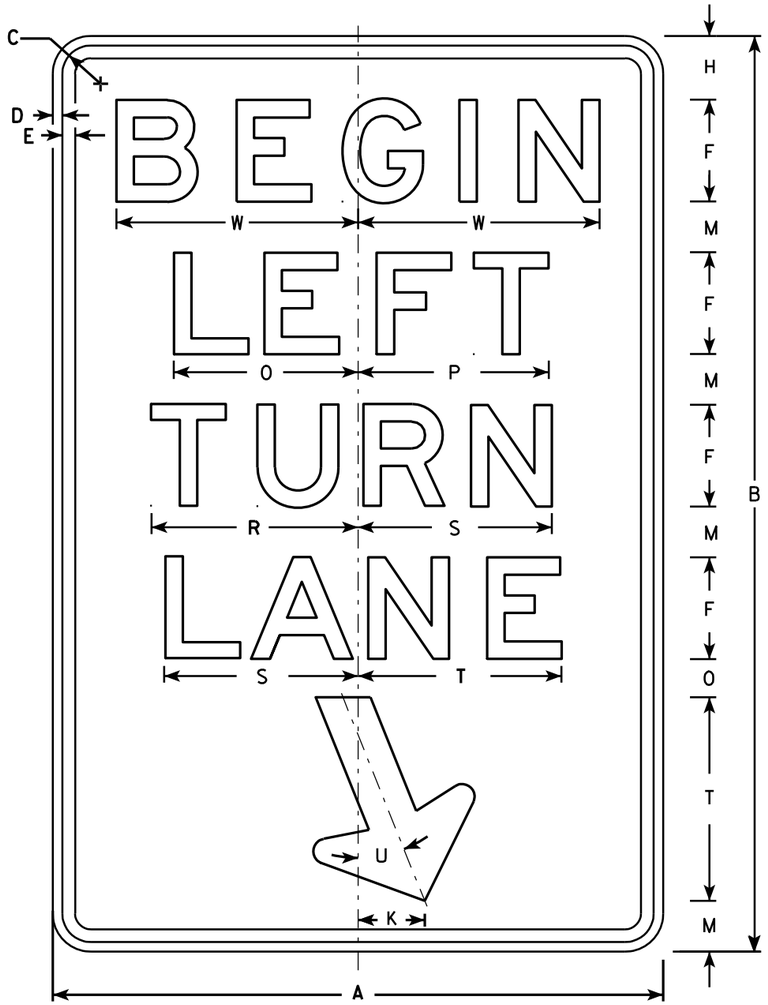
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

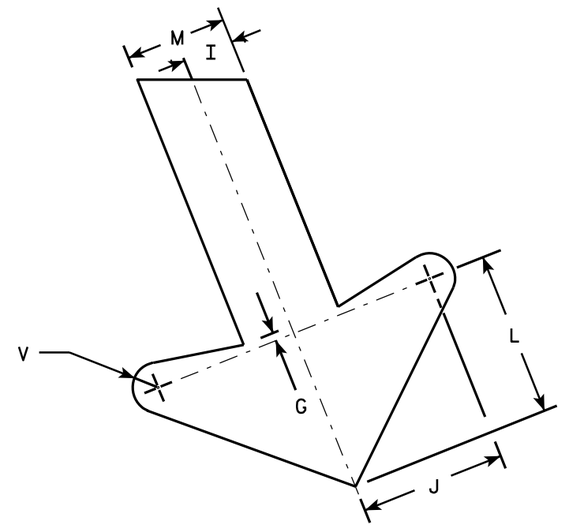
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 426 | E



R3-20L

NOTES

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



ARROW DETAIL

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

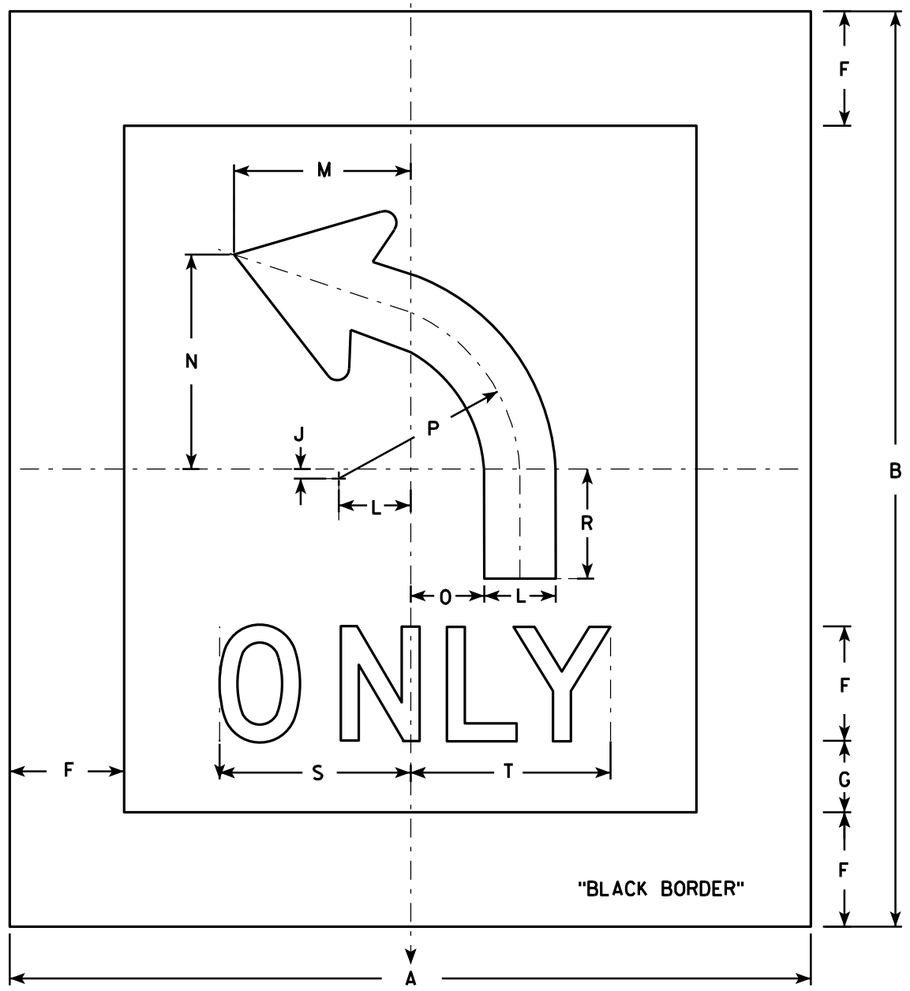
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

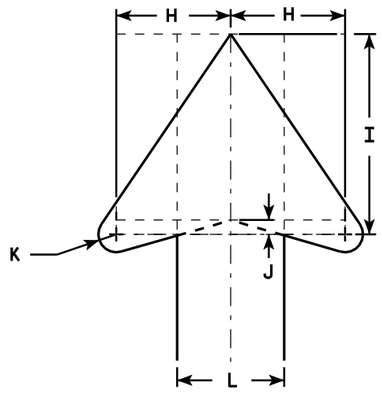
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 427 | E



R3-5L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

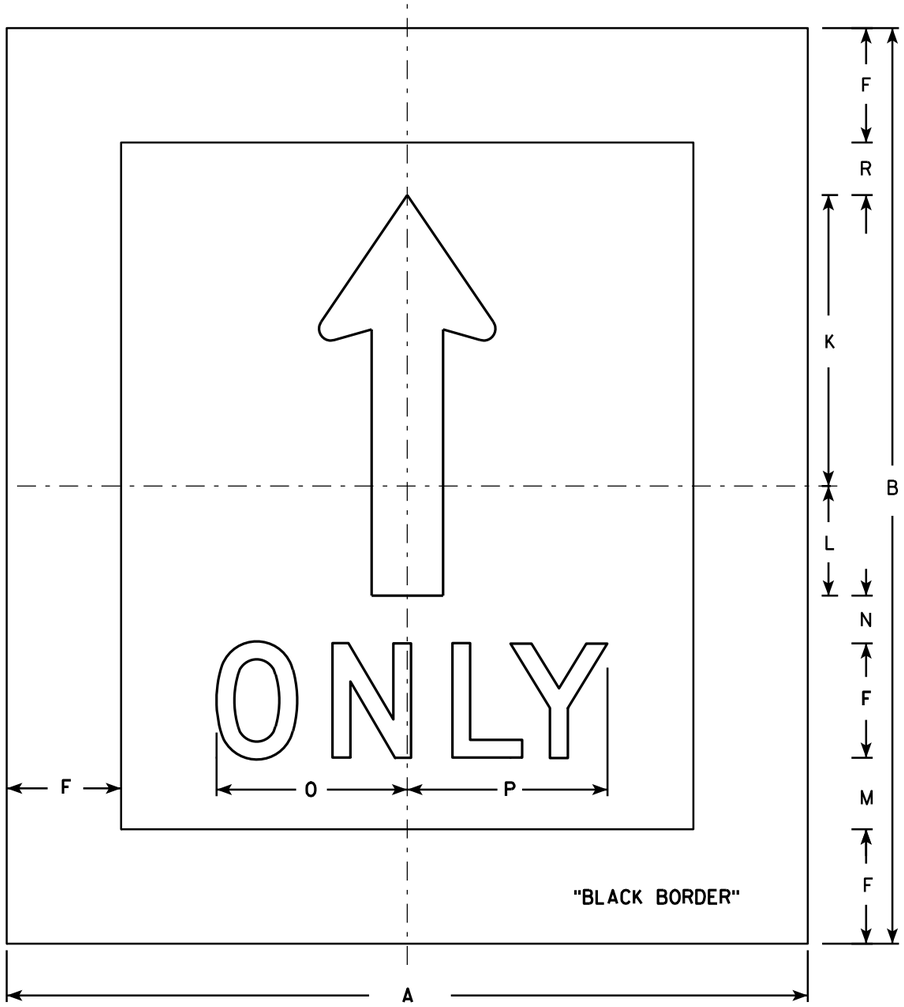
STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

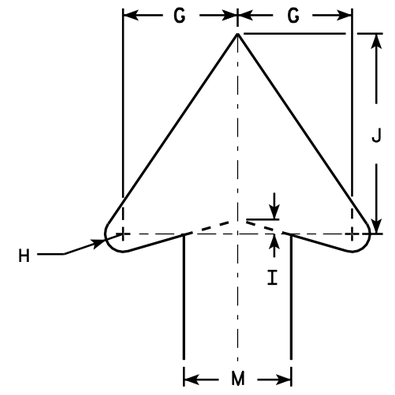
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 428 | E



R3-5A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	4	5/8	1/2	7	15 1/4	5 3/4	3 3/4	2 1/2	10	10 1/2		2 3/4									1.26
2M	42	48				6	4	5/8	1/2	7	15 1/4	5 3/4	3 3/4	2 1/2	10	10 1/2		2 3/4									1.26
3																											
4																											
5																											

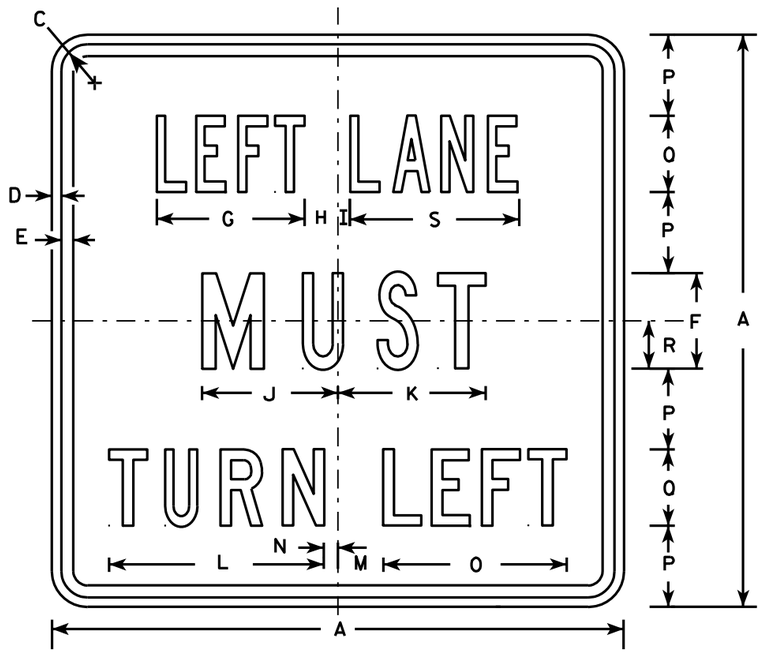
STANDARD SIGN
R3-5A

WISCONSIN DEPT OF TRANSPORTATION

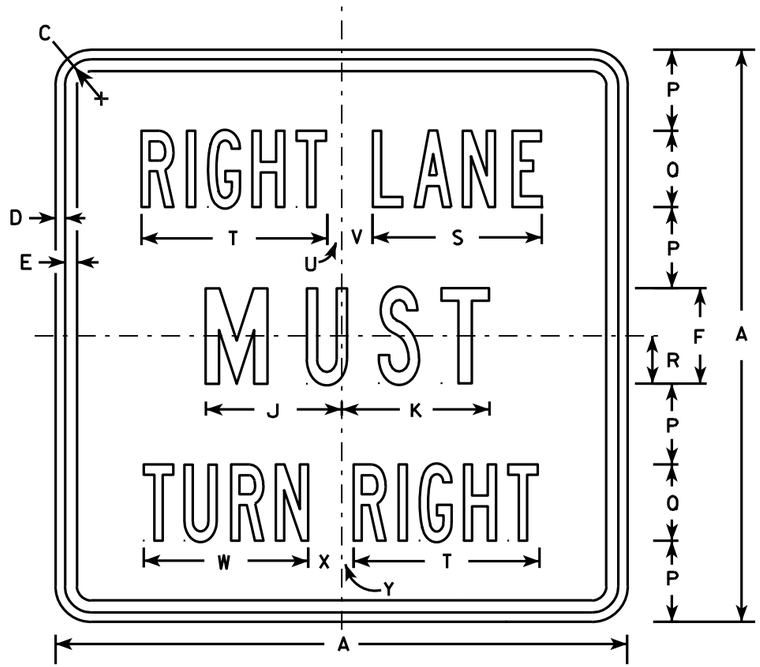
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5A.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 429	E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

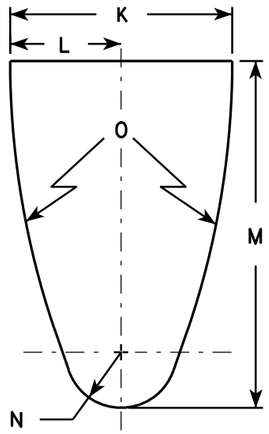
APPROVED Matthew R Rauch
for State Traffic Engineer

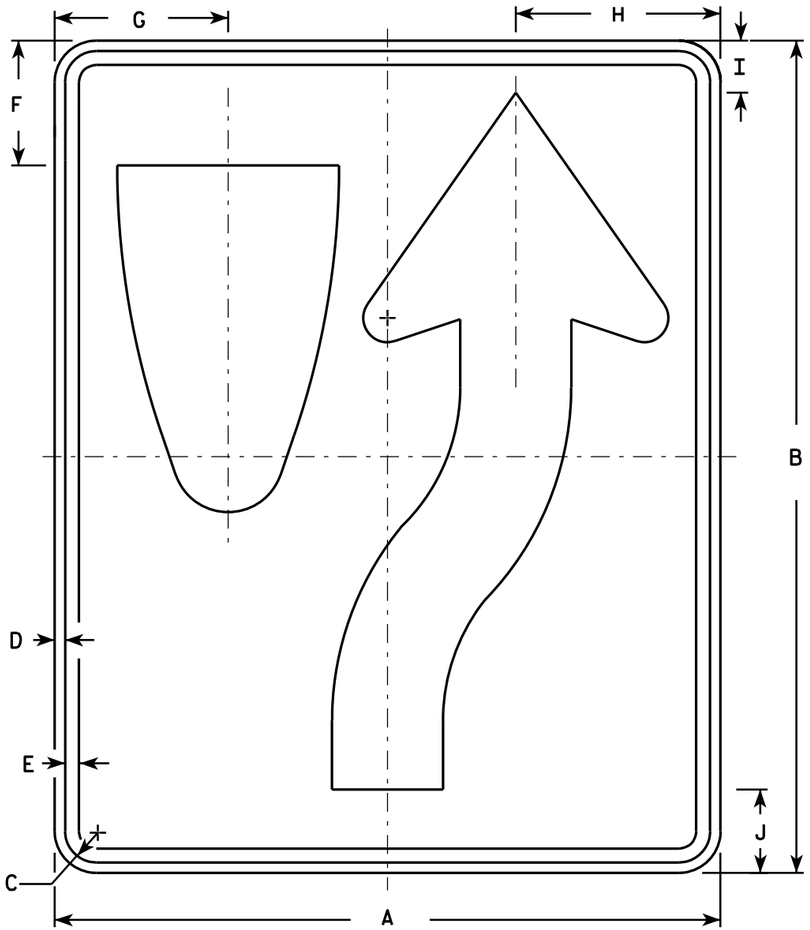
DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 430 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R37.DGN PLOT DATE : 18-MAR-2011 09:43 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

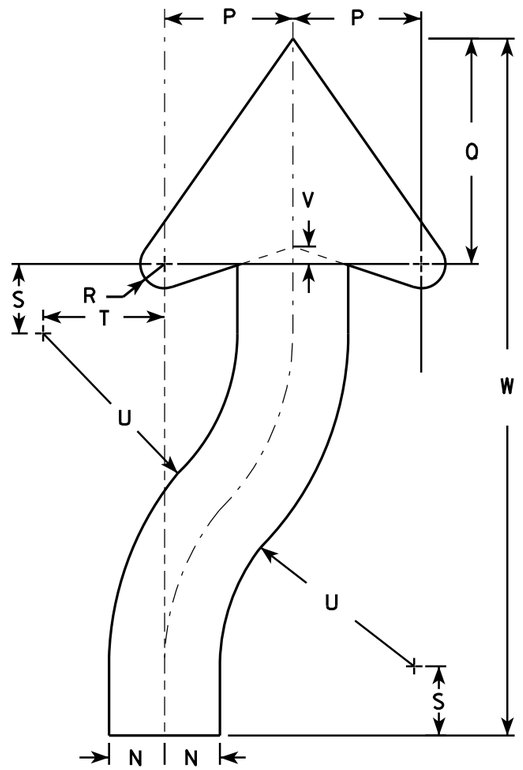




R4-7

NOTES

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



ARROW DETAIL

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

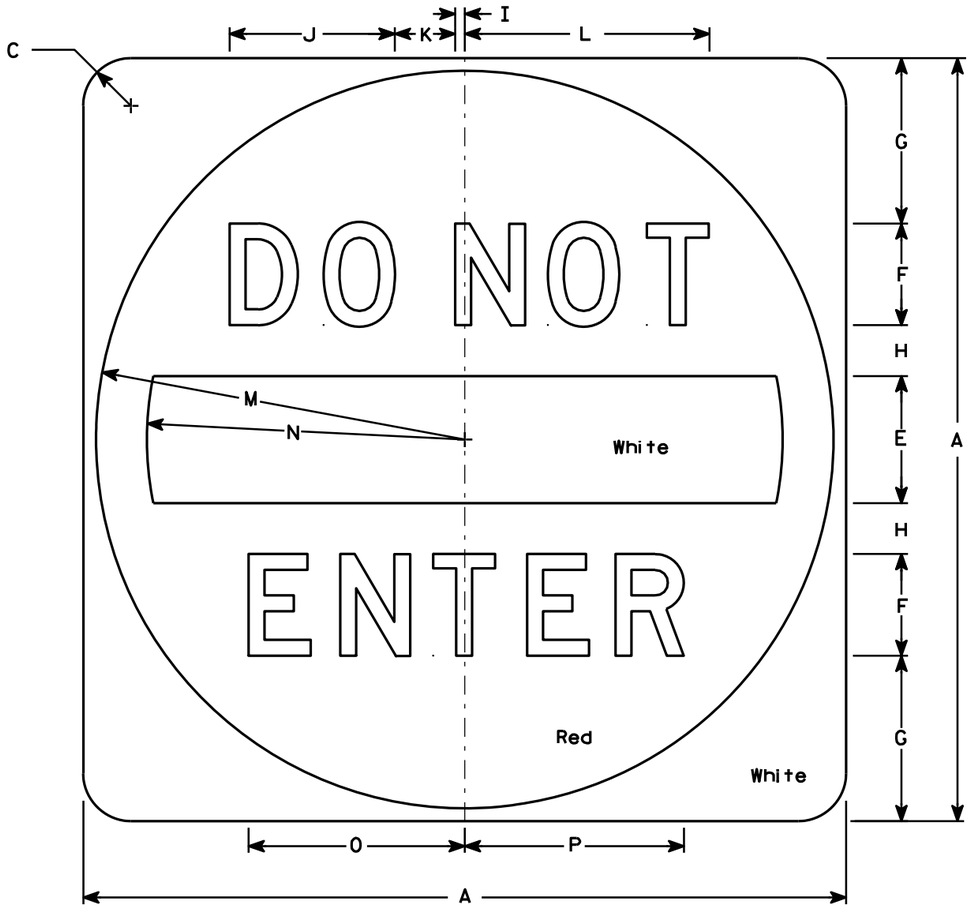
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 431	E



R5-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

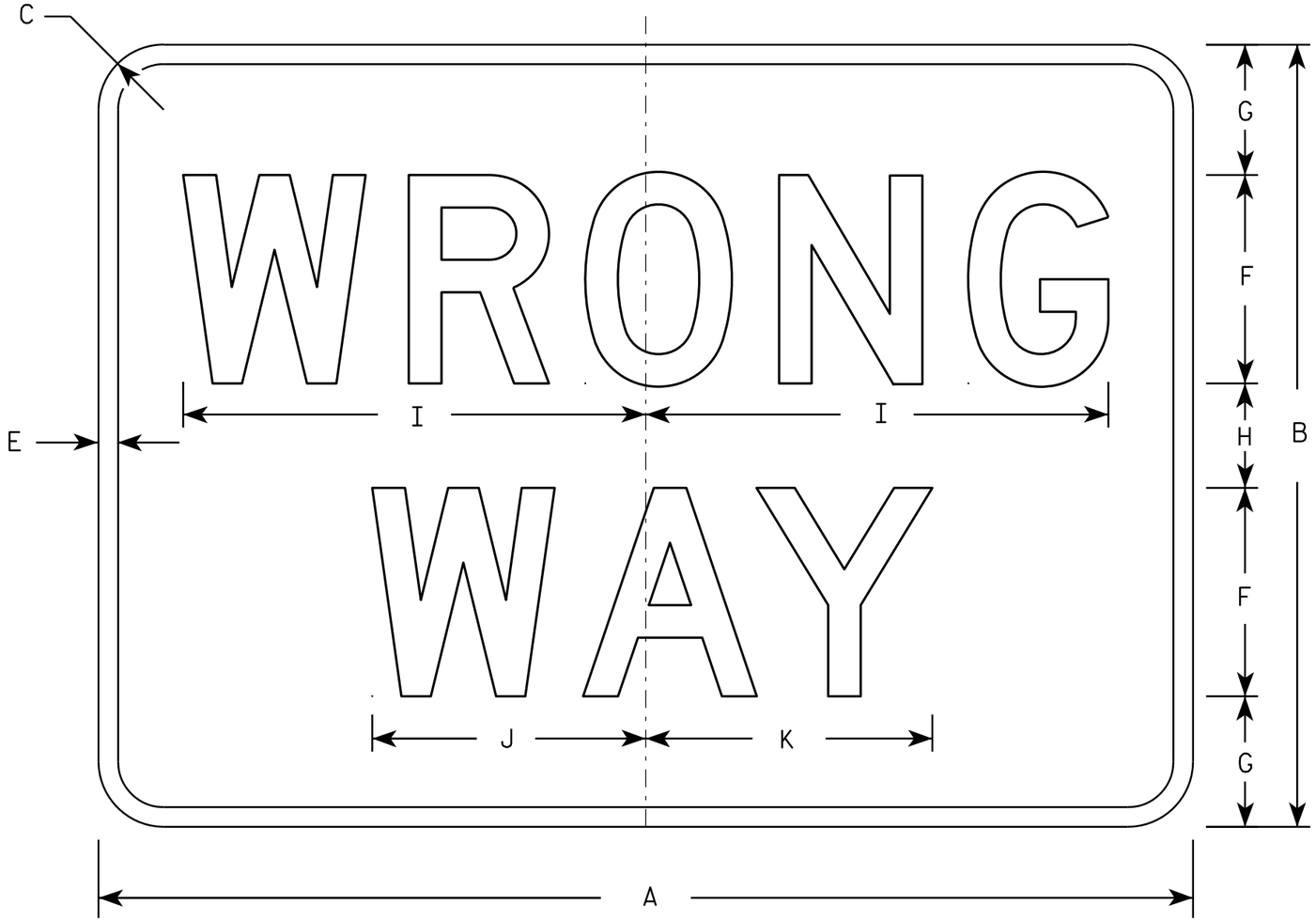
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 432 | E



R5-1A

NOTES

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

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

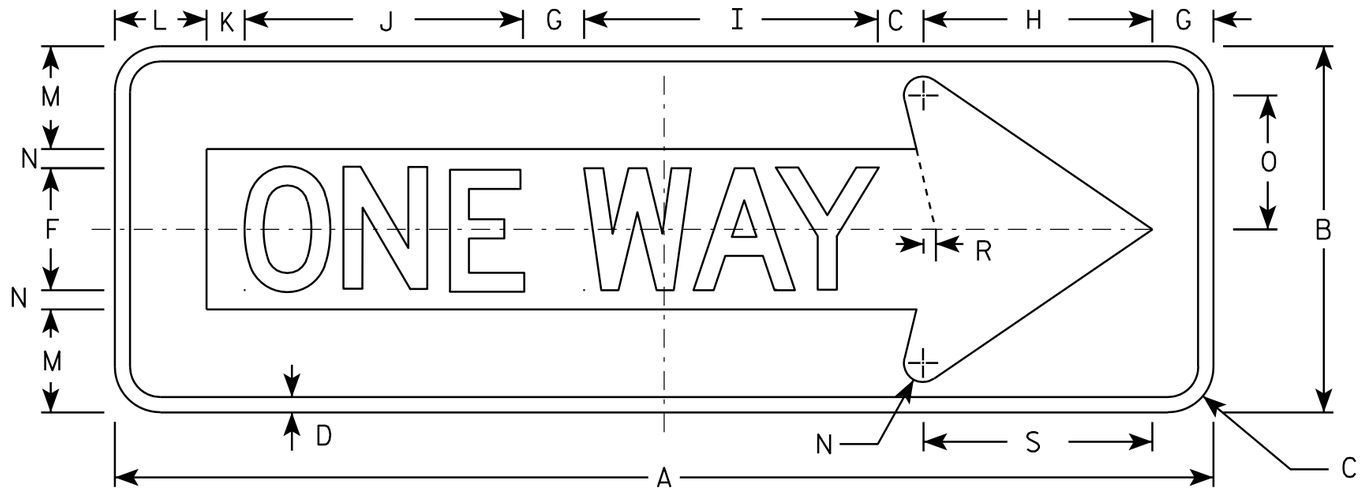
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

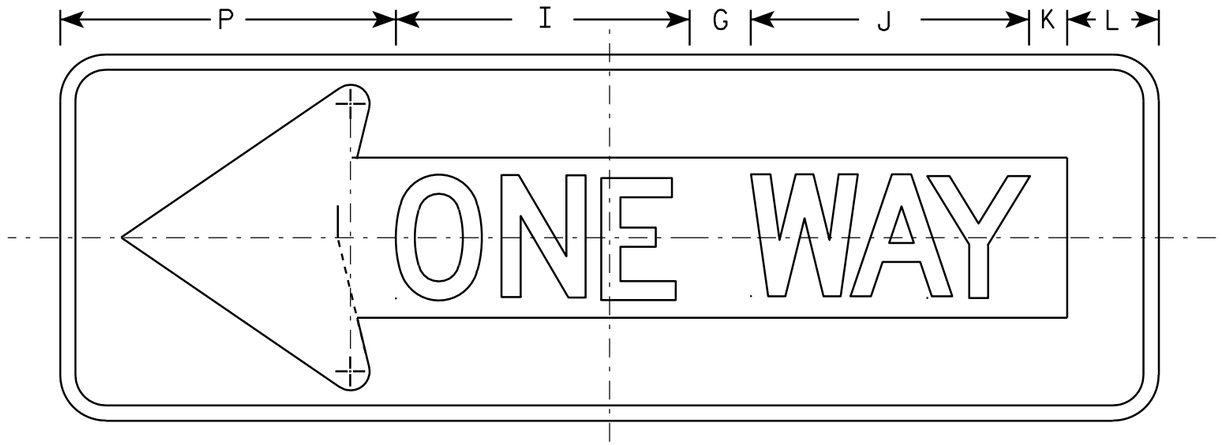
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 433 | E



R6-1R

NOTES

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



R6-1L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

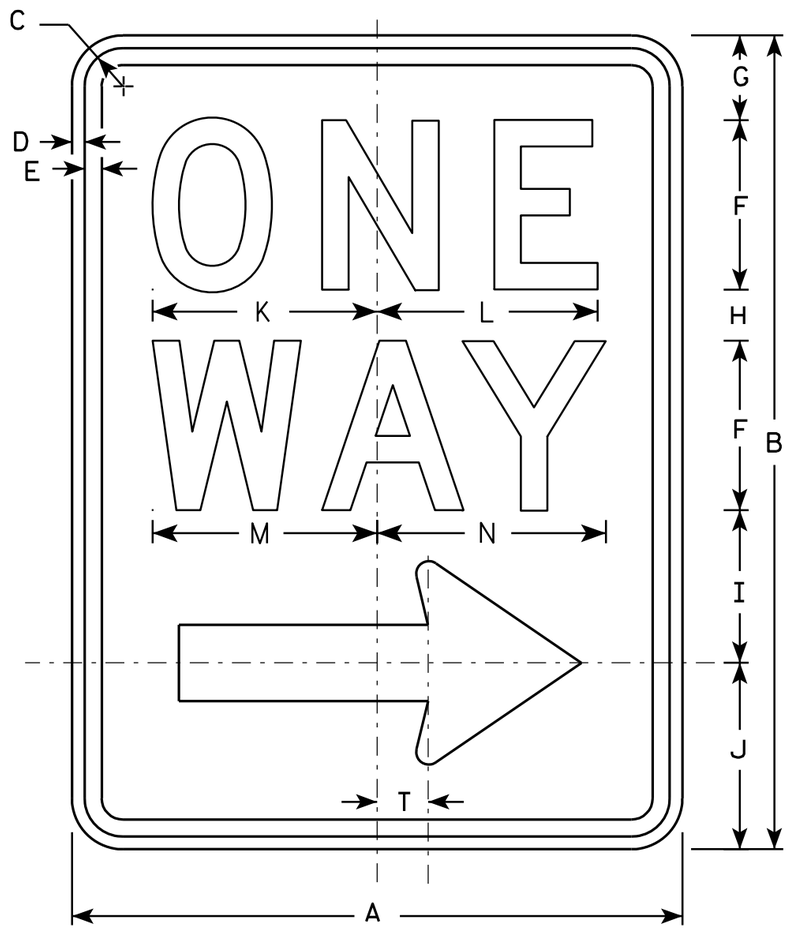
SHEET NO: 434 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R61.DGN PLOT DATE : 17-DEC-2010 14:11 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

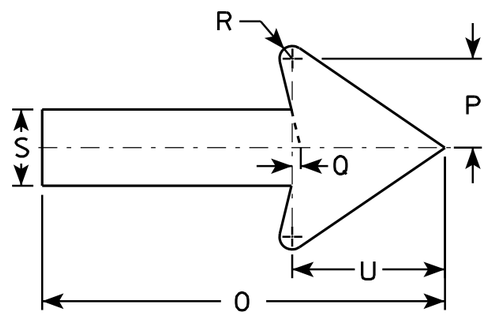
7



R6-2R

NOTES

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



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

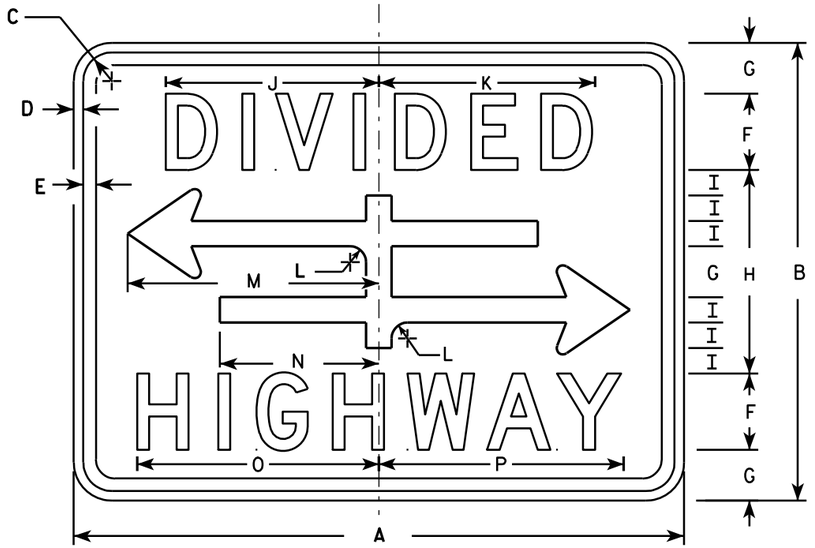
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

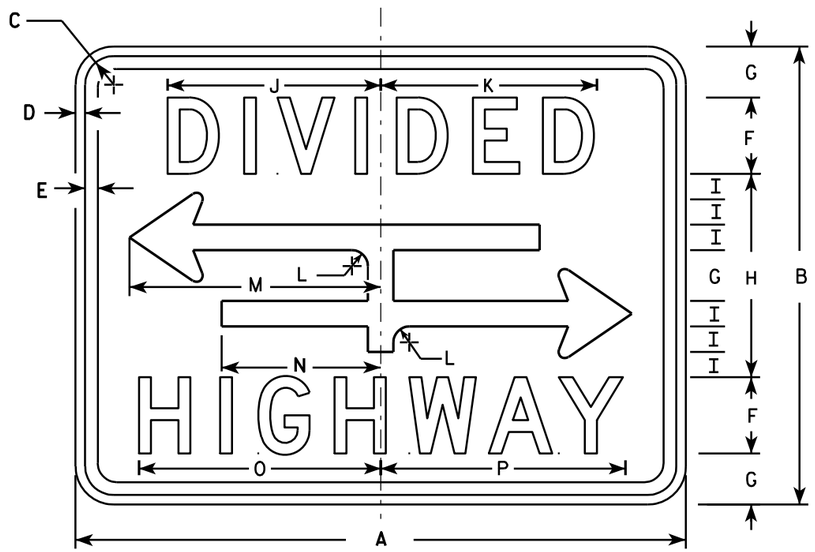
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 435	E



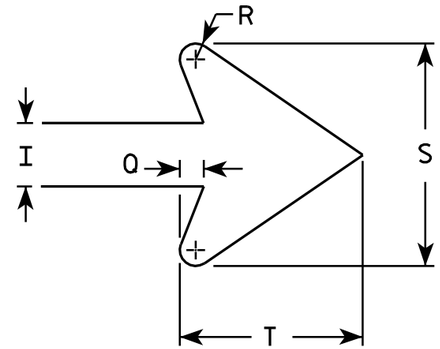
R6-3

NOTES

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



R6-3A



ARROW DETAIL

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

STANDARD SIGN
R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

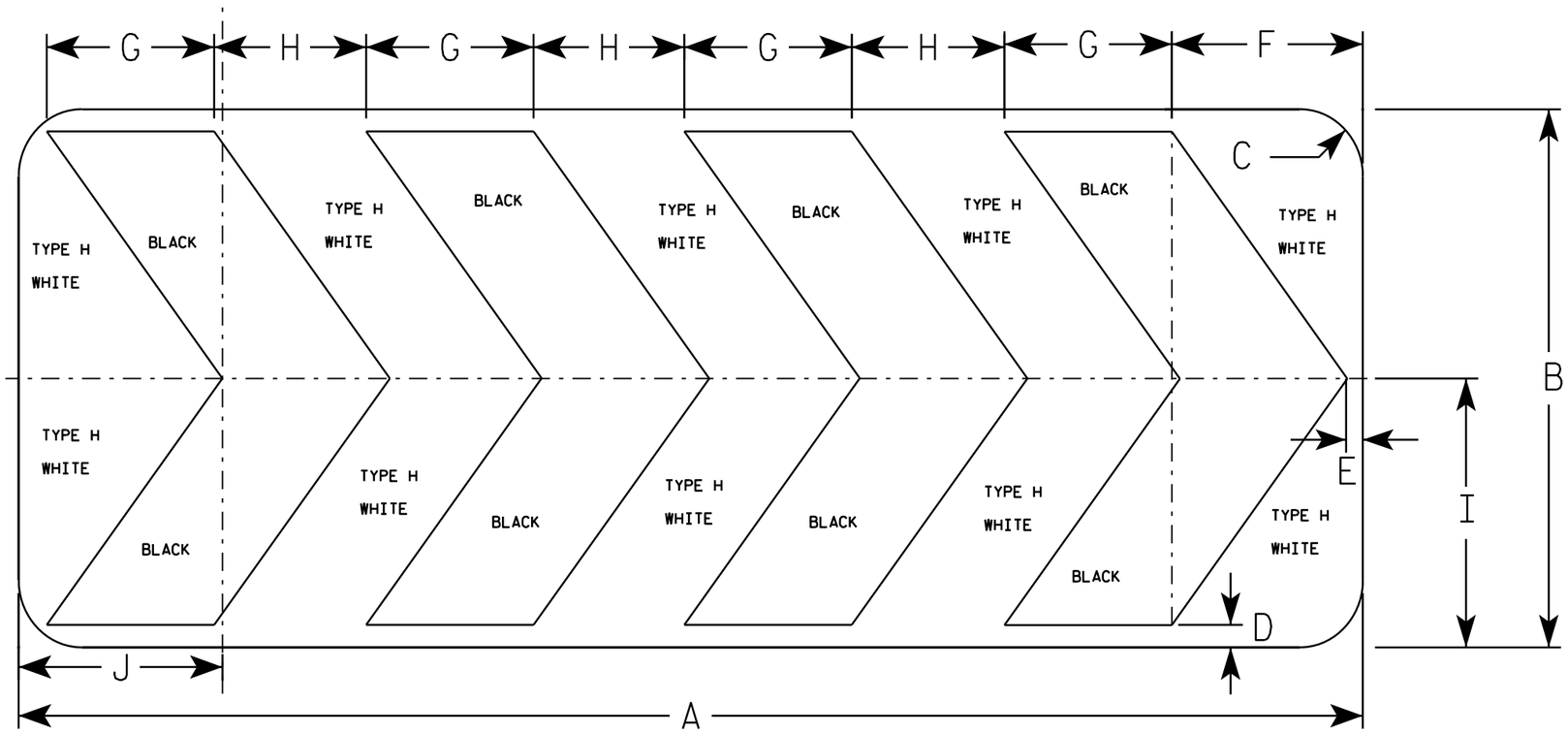
DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 436 E

NOTES

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



R6-4B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	24	2 1/4	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	2 1/4	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/03/11 PLATE NO. R6-4B.2

PROJECT NO:

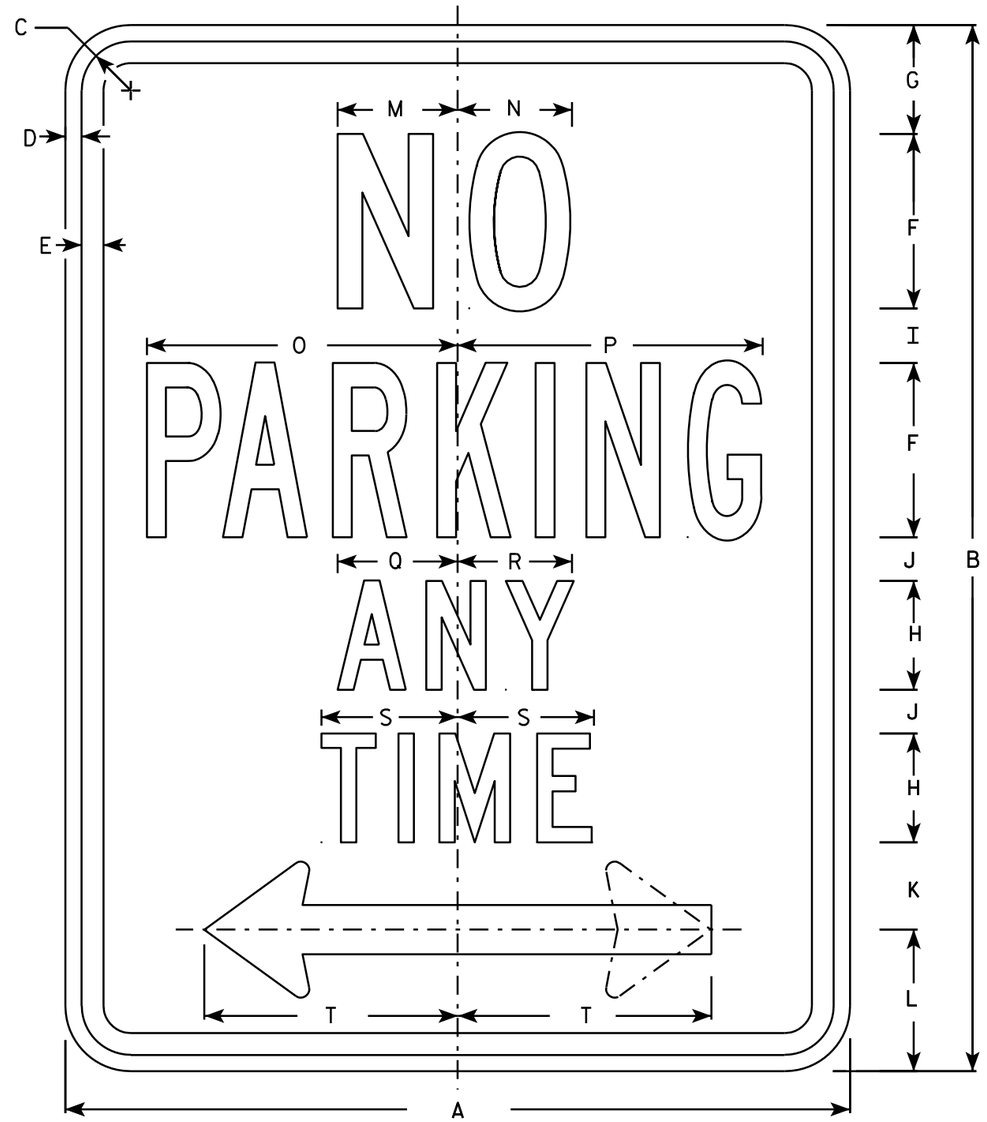
SHEET NO: 437 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R64B.DGN PLOT DATE : 03-JAN-2011 14:30 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

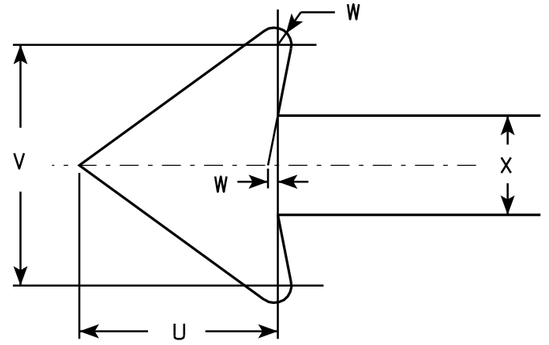
7



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

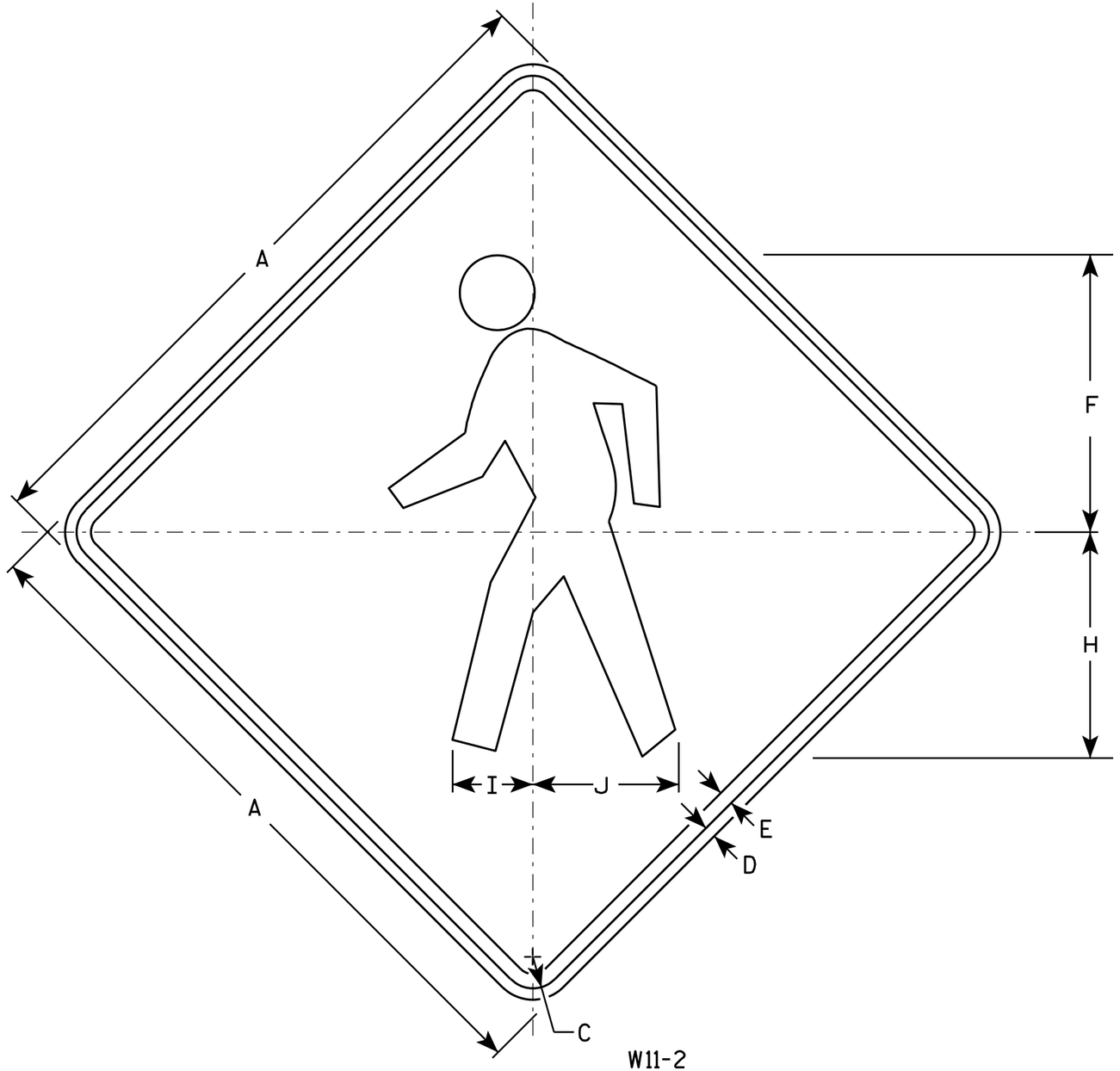
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 438	E



W11-2

NOTES

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

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

STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

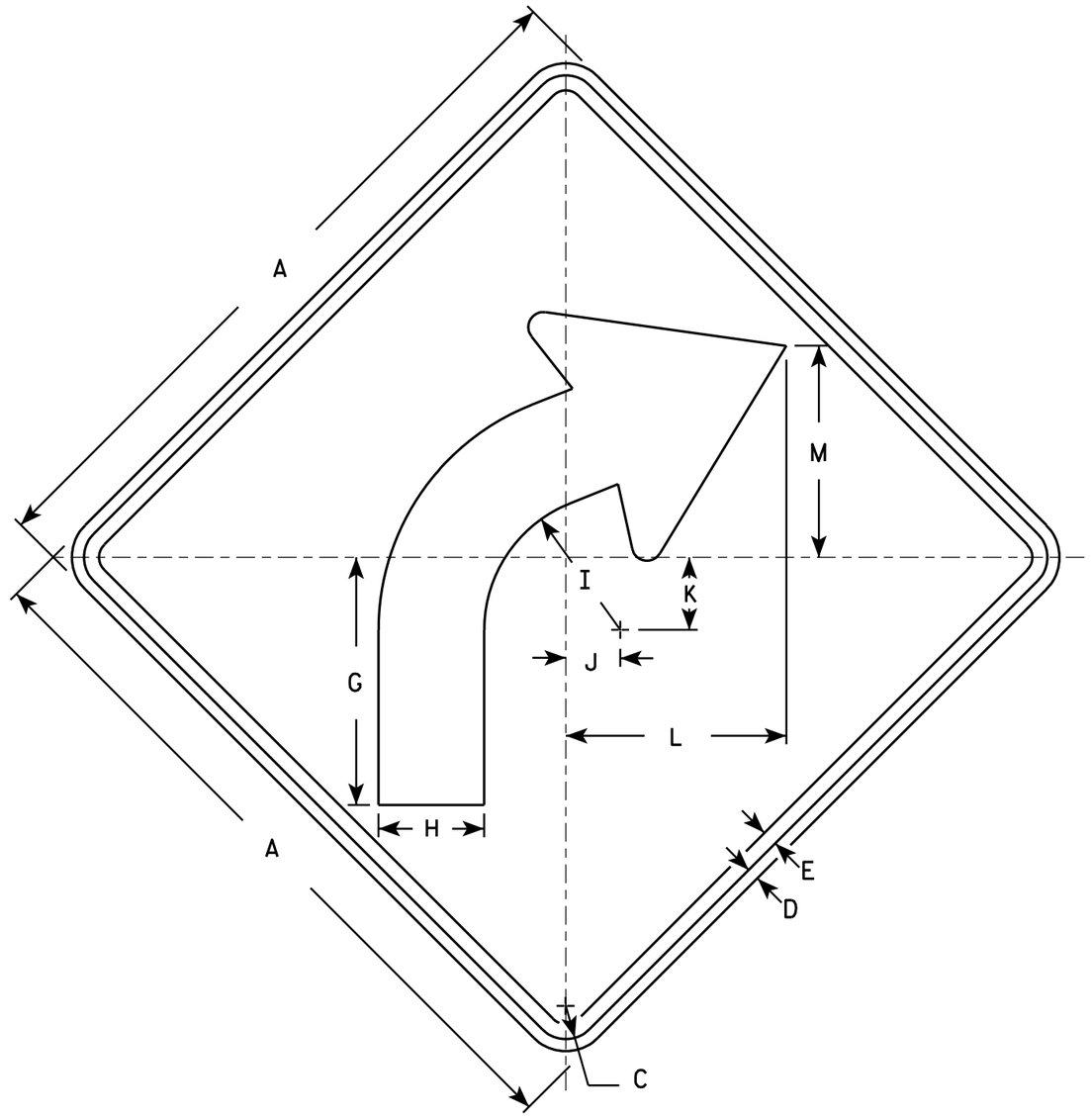
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

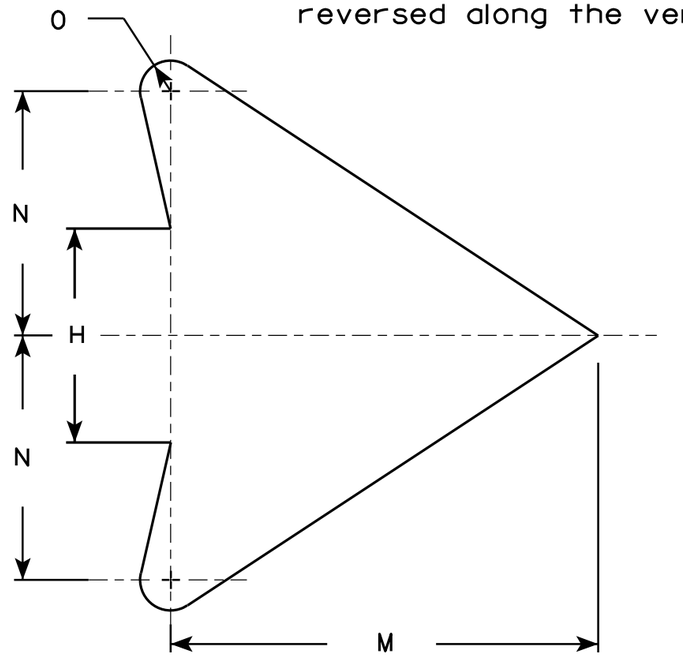
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 439	E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

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

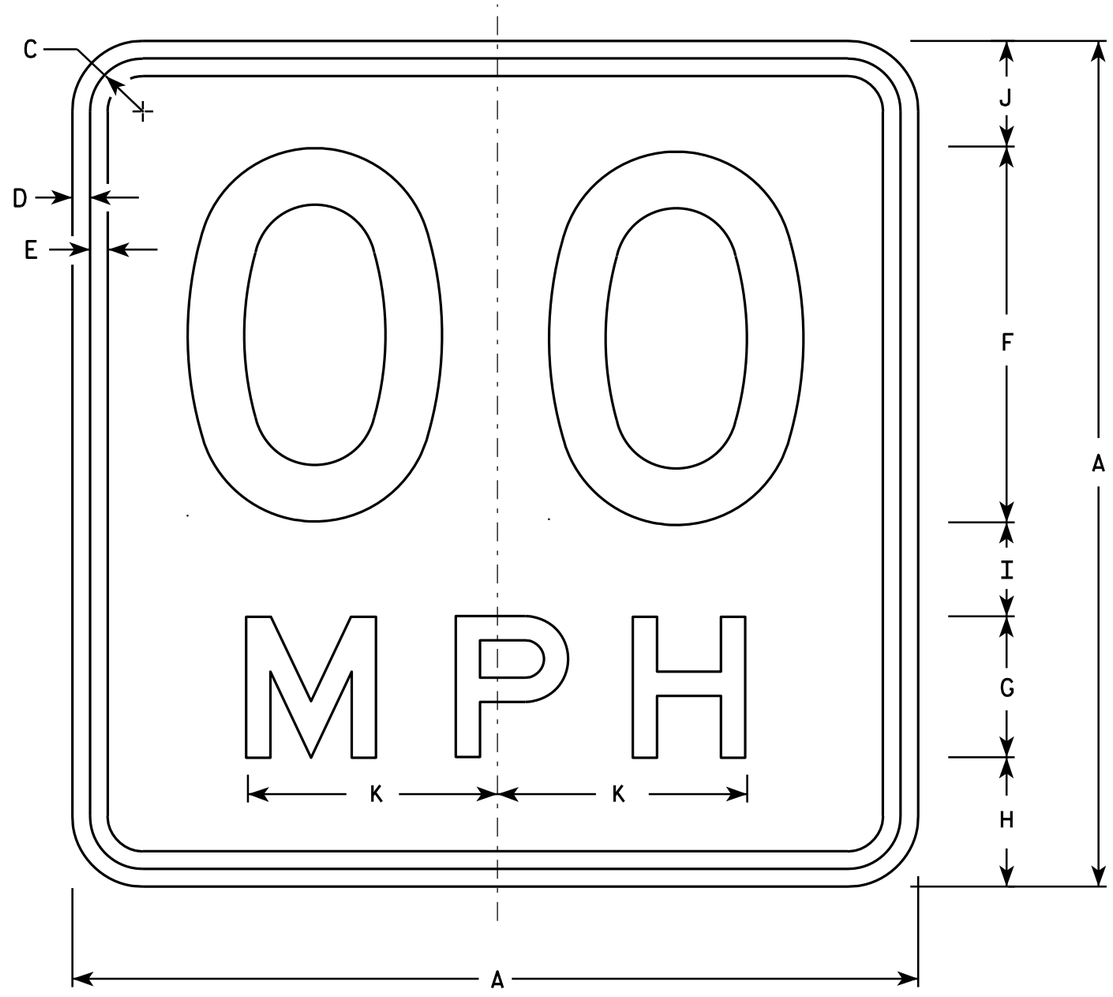
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 440	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

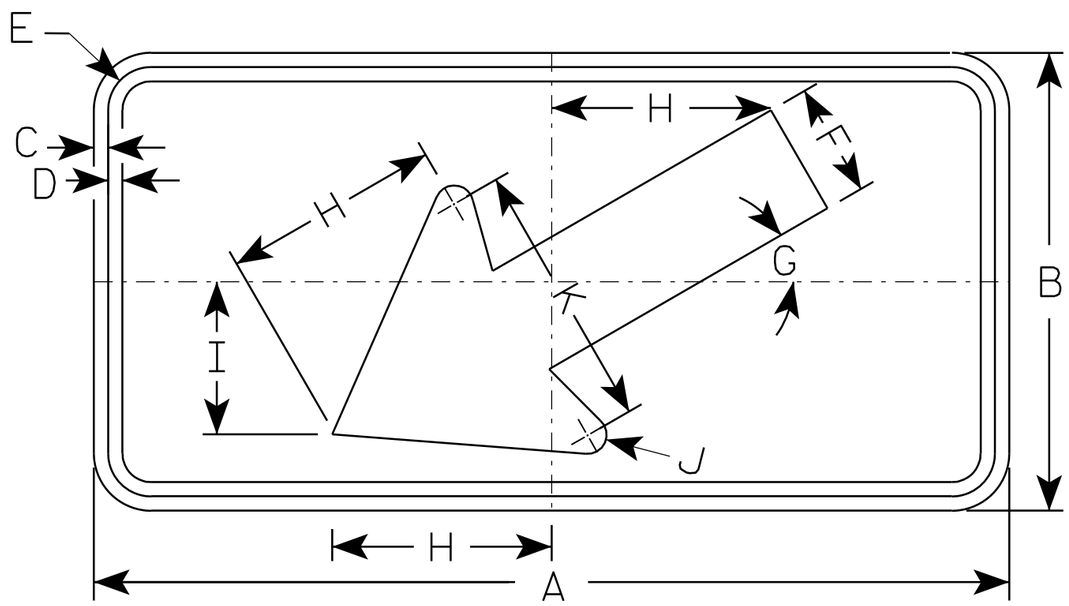
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 441 | E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

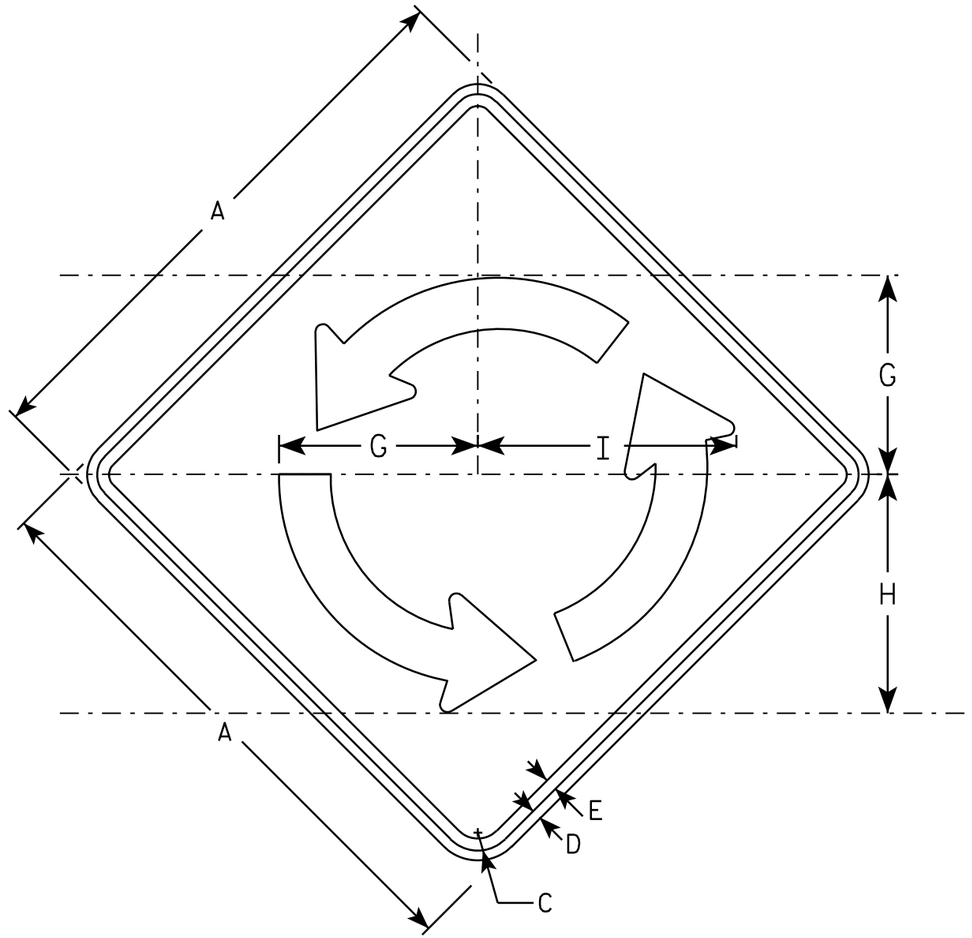
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 442	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W167.DGN PLOT DATE : 02-NOV-2010 09:34 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 3.972696:1.000000

WISDOT/CADDS SHEET 42

7

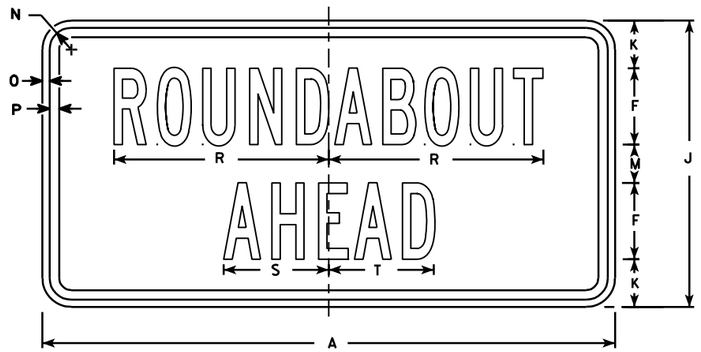
7



W2-6

NOTES

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



W2-6P

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	W2-6 Area sq. ft.	W2-6P Area sq. ft.
1																										
2S	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
2M	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
3	36		1 5/8	5/8	3/4	5	12 1/2	15	16 1/4	18	2 5/8		2 3/4	1 1/8	3/8	1/2		14	7	6 3/4					9.00	4.50
4	48		2 1/4	3/4	1	6	16 5/8	20	16 1/4	24	4 3/8		3 5/8	1 3/8	1/2	5/8		17	8 1/4	8 1/4					16.0	8.0
5																										

STANDARD SIGN
W2-6

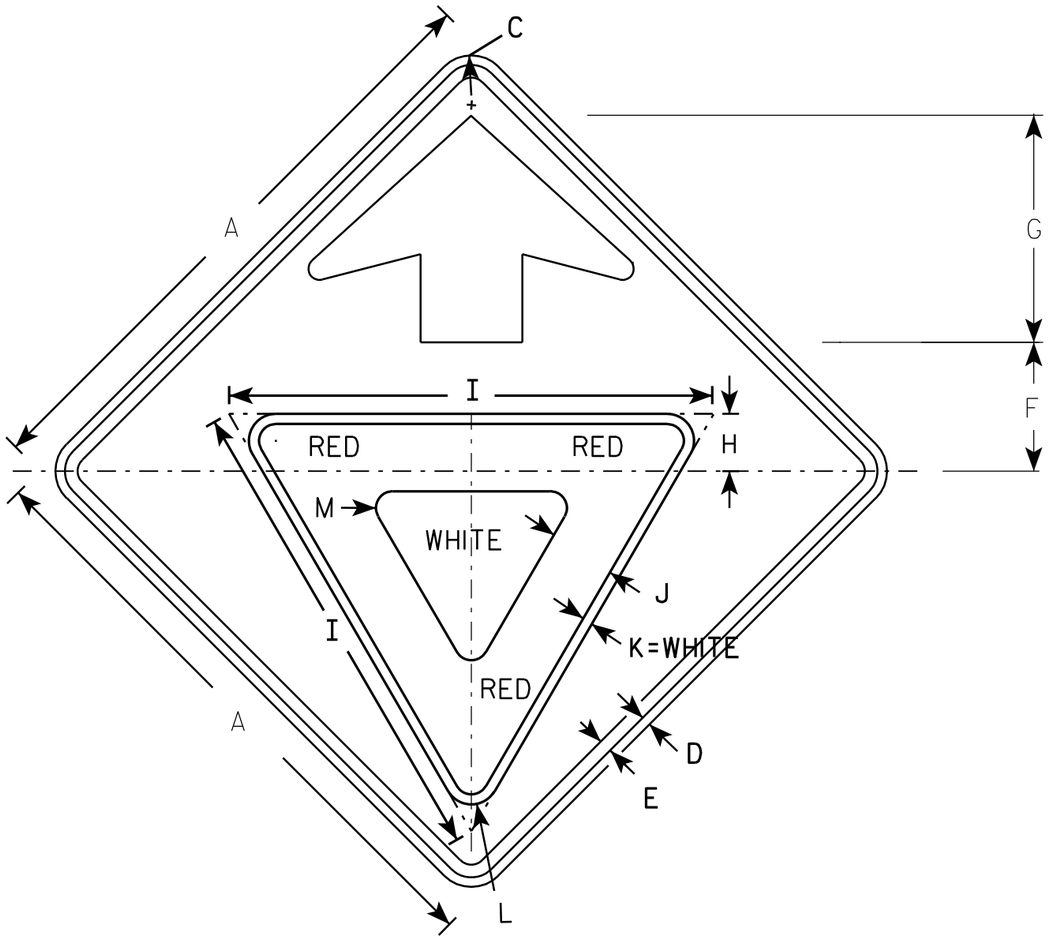
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/29/12 PLATE NO. W2-6.5

PROJECT NO:

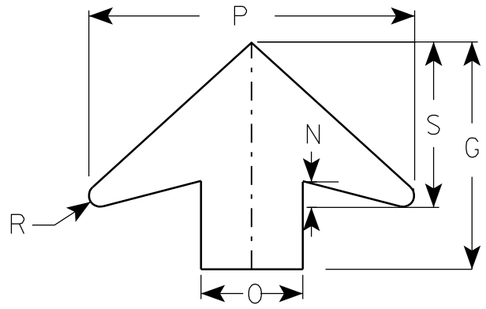
SHEET NO: 443 E



W3-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	3	25	3 3/8	1/2	1 3/8	7/8	1 1/4	5	16		1/2	8								6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W3-2

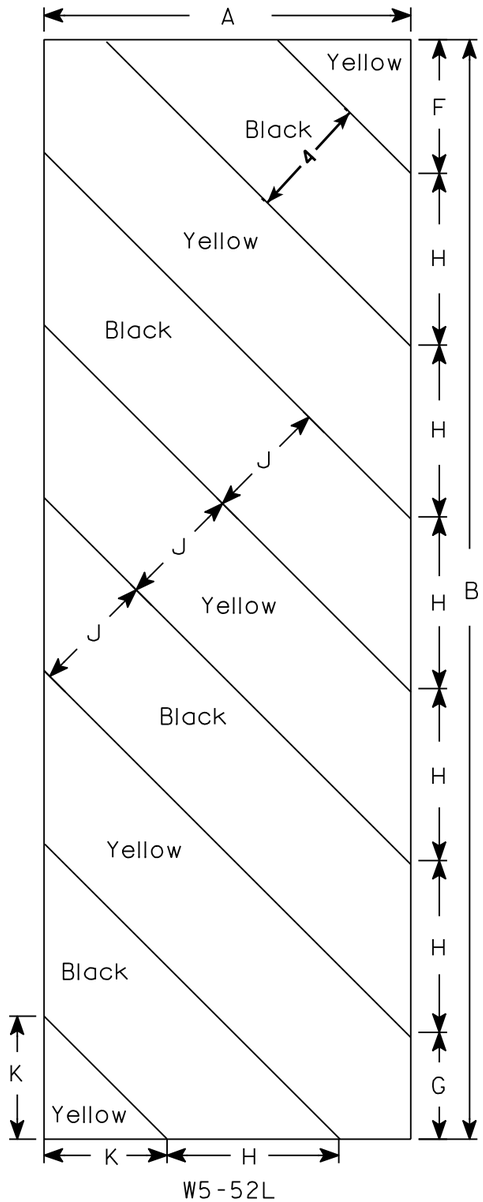
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

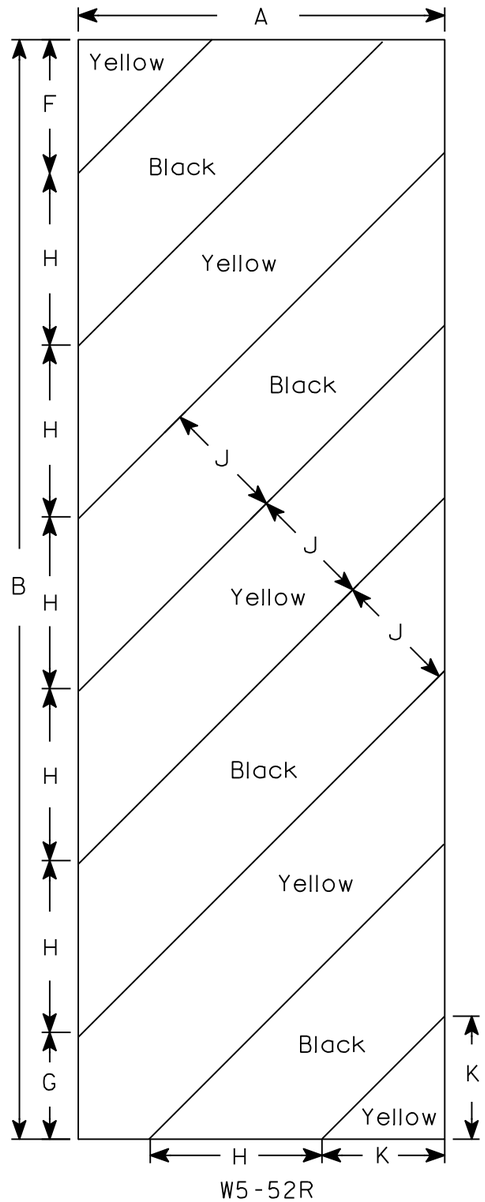
DATE 6/7/10 PLATE NO. W3-2..9

PROJECT NO:

SHEET NO: 444 E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

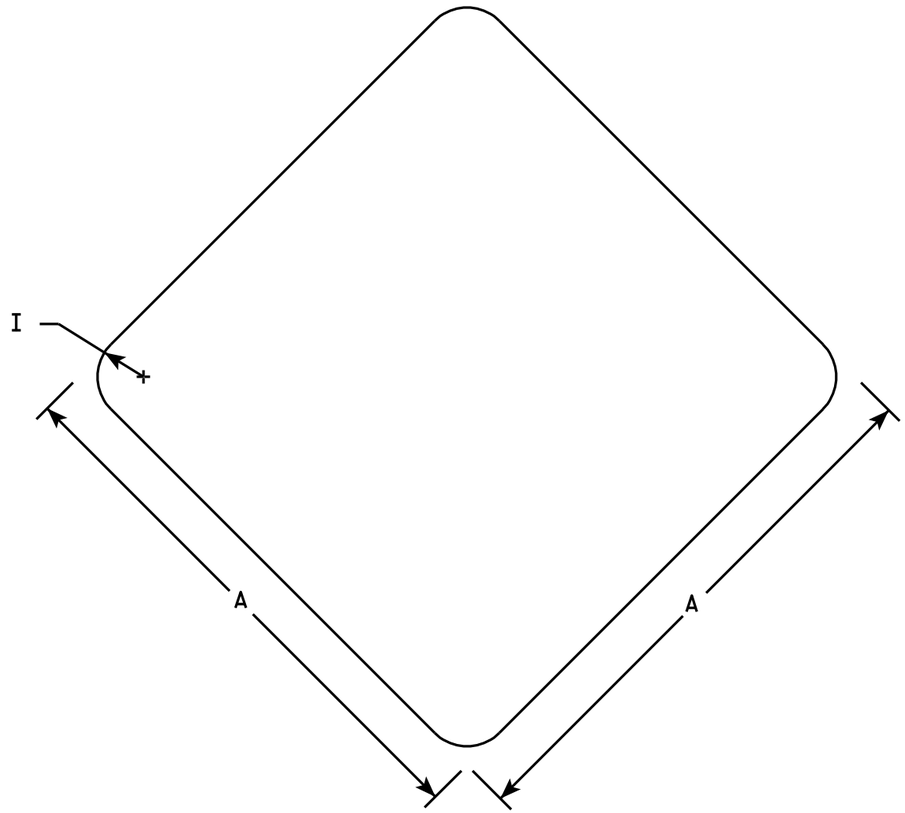
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 445	E



W5-56

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

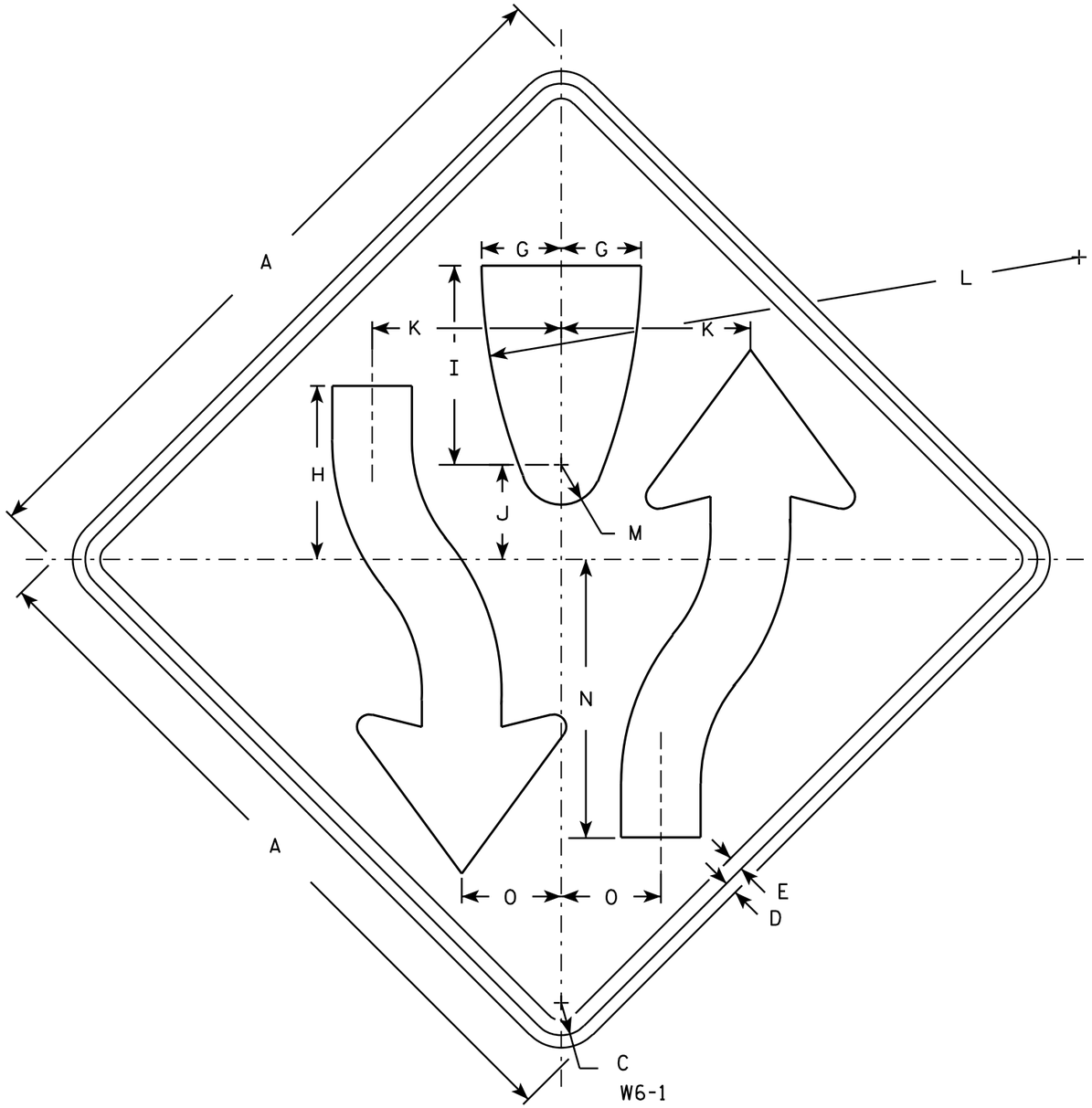
STANDARD SIGN
W5-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

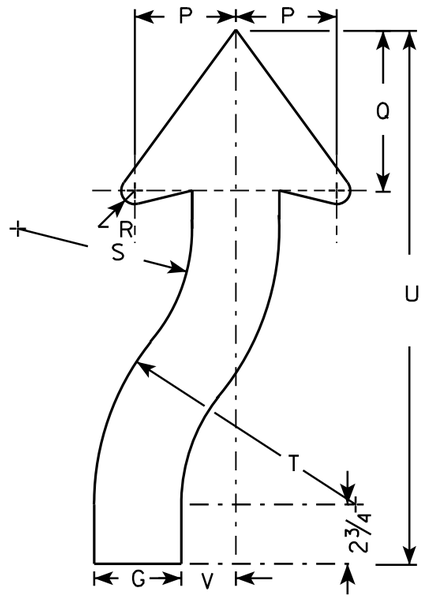
DATE 11/2/10 PLATE NO. W5-56.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 446	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W6-2 same as W6-1 but is rotated 180° when mounted.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

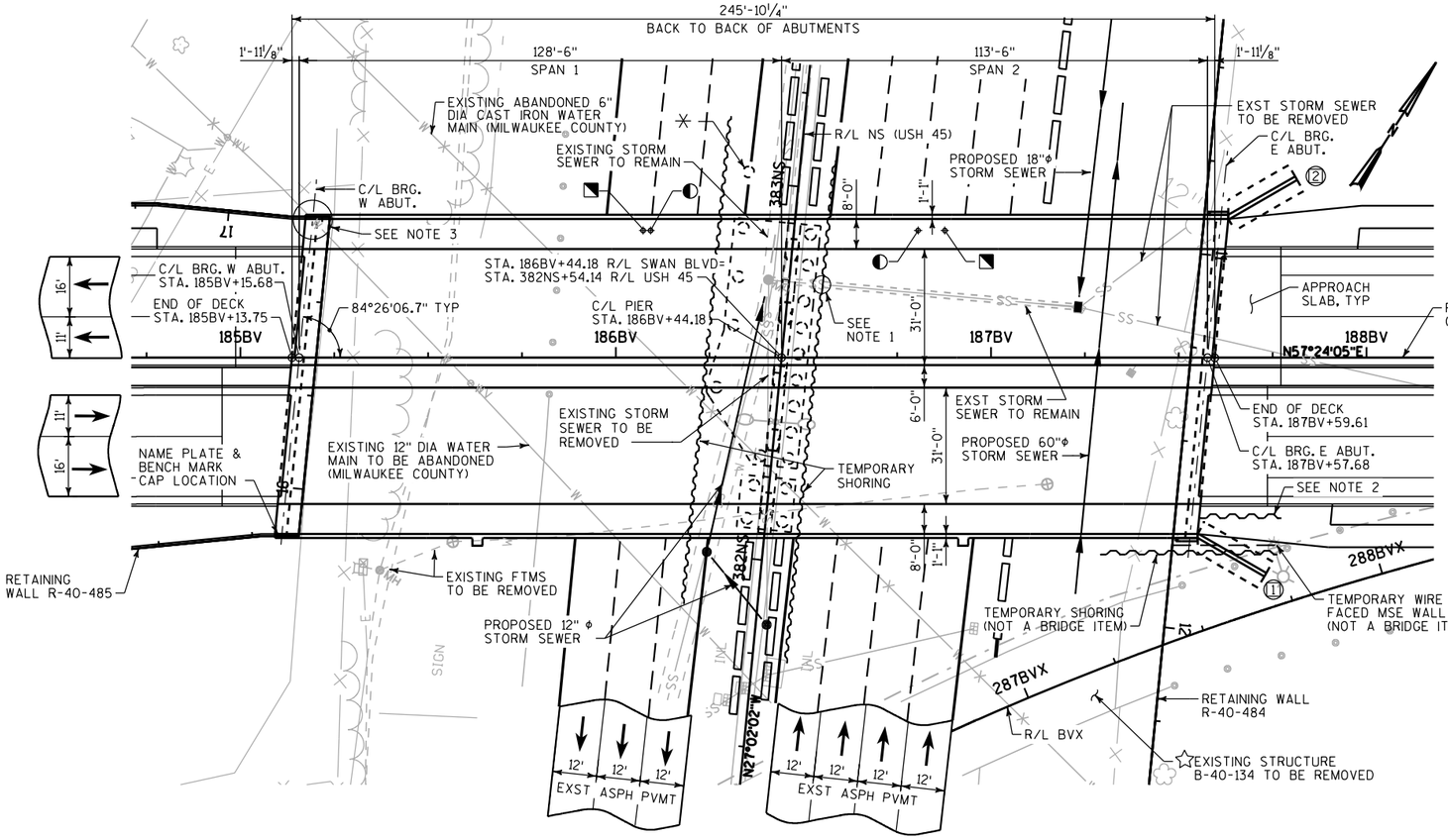
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/22/11 PLATE NO. W6-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 447	E

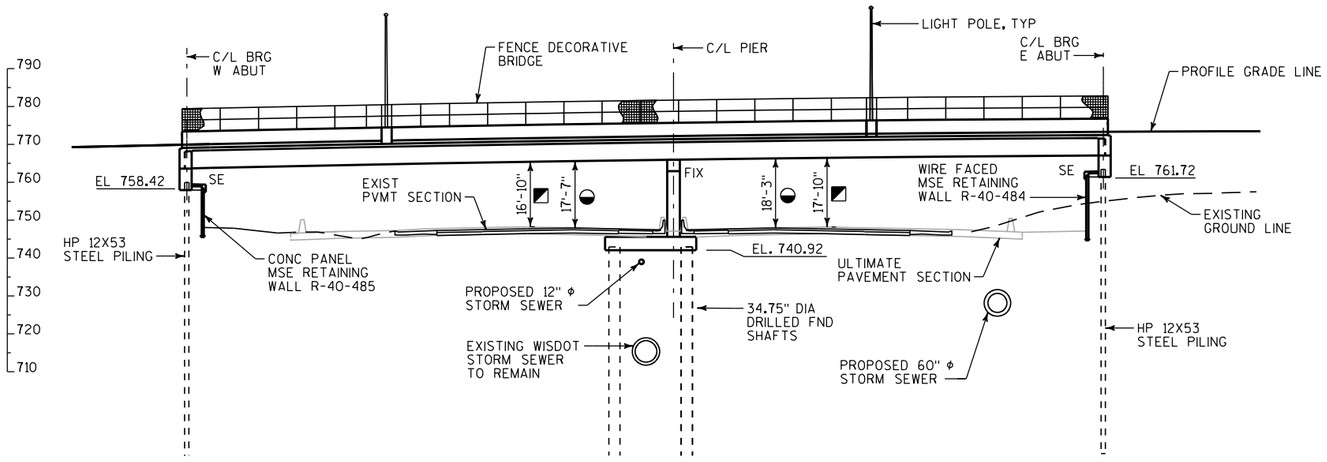
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W61.DGN PLOT DATE : 22-MAR-2011 13:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.952219:1.000000
WISDOT/CADDS SHEET 42



PLAN

2-SPAN 54W" PRESTRESSED GIRDER



ELEVATION

LOOKING NORTH

NOTES

1. SPECIAL SHORING REQ'D IN THIS AREA TO AVOID EXISTING STORM SEWER PIPE. EXCAVATE IN THIS AREA TO ACCURATELY LOCATE PIPE. SHORING IS INCLUDED IN THE BID ITEM "TEMPORARY SHORING".
2. TEMPORARY SHORING REQ'D DURING PHASE 2 CONSTRUCTION OF WALL R-40-484 IN ORDER TO COMPLETE THE CONSTRUCTION OF WING 1.
3. EXST WATER LINE (MILWAUKEE COUNTY) TO BE ABANDONED. REMOVAL MAY BE REQUIRED IN THIS AREA FOR ABUT PILE INSTALLATION. IF REQUIRED, WATER LINE REMOVAL WILL BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-40-775".

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS
3. GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. EAST ABUTMENT
8. EAST ABUTMENT DETAILS (1 OF 2)
9. EAST ABUTMENT DETAILS (2 OF 2)
10. EAST ABUTMENT WINGS (1 OF 2)
11. EAST ABUTMENT WINGS (2 OF 2)
12. PIER (1 OF 4)
13. PIER (2 OF 4)
14. PIER (3 OF 4)
15. PIER (4 OF 4)
16. 54W" PRESTRESSED GIRDER
17. 54W" PRESTRESSED GIRDER DETAILS
18. SUPERSTRUCTURE FRAMING PLAN
19. SUPERSTRUCTURE REINFORCEMENT
20. SUPERSTRUCTURE CROSS SECTION
21. SUPERSTRUCTURE DETAILS
22. STEEL DIAPHRAGM
23. VERTICAL FACE PARAPET (1 OF 3)
24. VERTICAL FACE PARAPET (2 OF 3)
25. VERTICAL FACE PARAPET (3 OF 3)
26. LIGHT SUPPORT DETAILS
27. LIGHT SUPPORT REINFORCEMENT
28. FENCE DECORATIVE BRIDGE (1 OF 3)
29. FENCE DECORATIVE BRIDGE (2 OF 3)
30. FENCE DECORATIVE BRIDGE (3 OF 3)
31. AESTHETIC DETAILS

LEGEND

- TRAFFIC DIRECTION
- WG ANGLE OF INTERSECTION IS TO TANGENT
- ☆ EXISTING STRUCTURE B-40-134 IS A 4-SPAN CONTINUOUS STEEL ROLLED BEAM BRIDGE. PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW STREET, WAUKESHA, WI, OR THROUGH THE WISDOT STRUCTURES WEBSITE.
- (X) WING NUMBER
- POINT OF MINIMUM VERTICAL CLEARANCE INTERIM CONDITION
- POINT OF MINIMUM VERTICAL CLEARANCE ULTIMATE CONDITION
- ✳ TRIAL DRILLED FOUNDATION SHAFT APPROXIMATE LOCATION, STA 383NS+02.6, 13.5' LEFT. FINAL LOCATION TO BE DETERMINED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER.

STATE PROJECT NUMBER

1060-33-73

DESIGN DATA

DESIGN SPECIFICATION: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.01
OPERATING RATING FACTOR: RF = 1.79
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- 54W-INCH PRESTRESSED GIRDERS ..... f'c = 9,000 psi
- DRILLED FOUNDATION SHAFTS ..... f'c = 4,000 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12x53 STEEL PILING REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD:
- WEST ABUTMENT ..... 220 TONS PER PILE
- EAST ABUTMENT ..... 220 TONS PER PILE

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.
ESTIMATED PILE LENGTHS:
- WEST ABUTMENT ..... 75 FEET
- EAST ABUTMENT ..... 75 FEET

PIER TO BE SUPPORTED ON 34.75" DIA DRILLED FOUNDATION SHAFTS PROVIDING A FACTORED AXIAL RESISTANCE OF 470 TONS.

TRAFFIC DATA

SWAN BOULEVARD
EXST ADT = 8,100 (2010)
FUTURE ADT = 14,970 (2035)
RDS = 45 MPH

USH 45
EXST ADT = 147,000 (2010)
FUTURE ADT = 205,000 (2035)
RDS = 60 MPH

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 03/15/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-775

SWAN BOULEVARD OVER USH 45

COUNTY: MILWAUKEE
~~TOWN~~/CITY/~~VILLAGE~~: WAUWATOSA

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MS	CNK	MS	KES

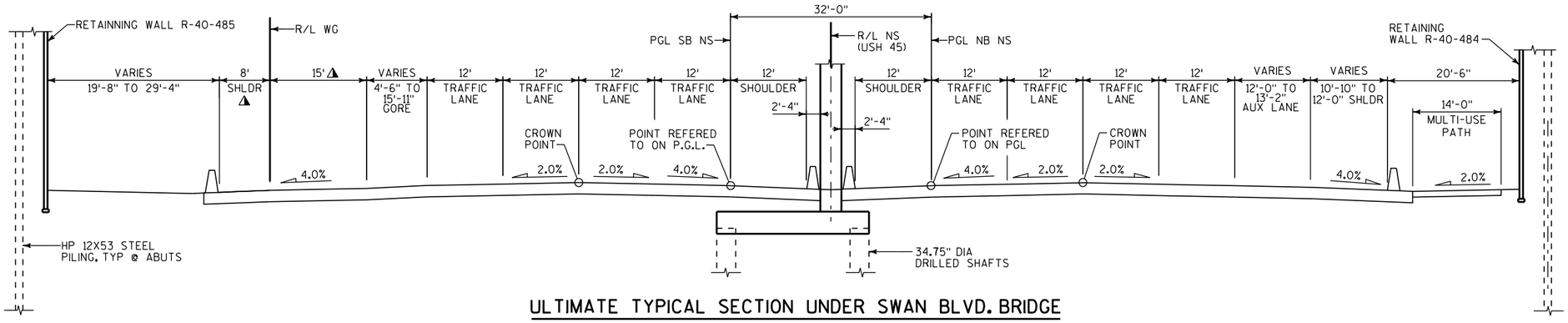
GENERAL PLAN & ELEVATION

SHEET 1 OF 31

8

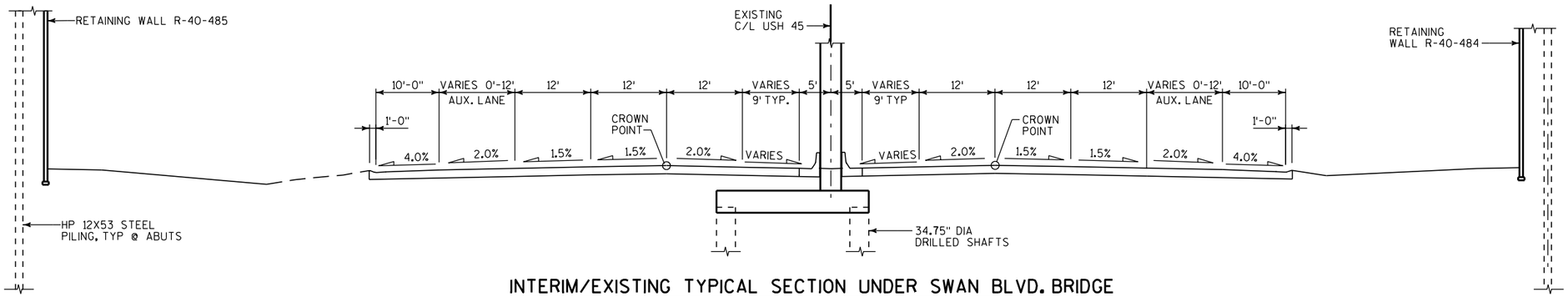
8

STATE PROJECT NUMBER
1060-33-73



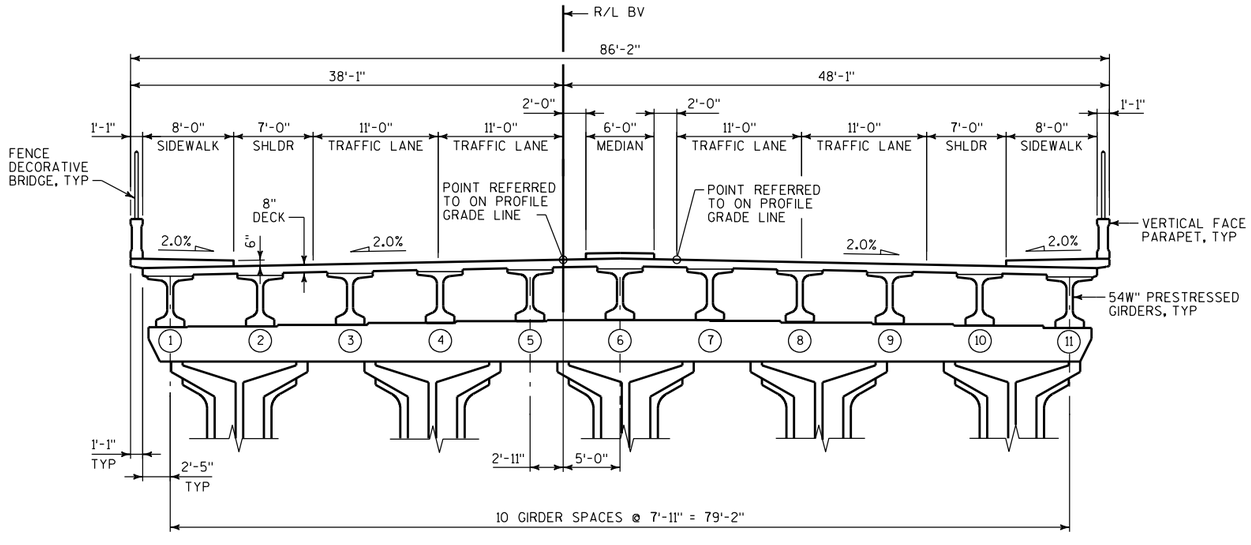
ULTIMATE TYPICAL SECTION UNDER SWAN BLVD. BRIDGE

◭ DIMENSIONS NORMAL TO R/L WG (LOOKING NORTH)



INTERIM/EXISTING TYPICAL SECTION UNDER SWAN BLVD. BRIDGE

DIMENSIONS NORMAL TO PIER FACES AND LANES
NORMAL TO WG LANES
(LOOKING NORTH)



TYPICAL SECTION THRU SWAN BOULEVARD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY GLM | PLANS CK'D. KES

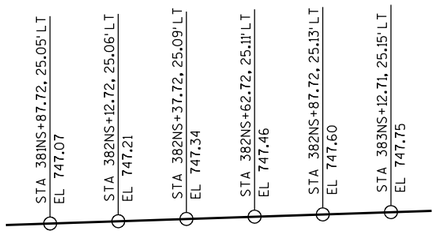
TYPICAL SECTIONS

SHEET 2 OF 31

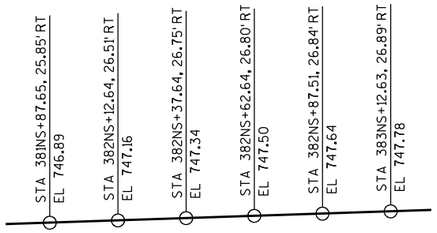
TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	WEST ABUTMENT	PIER	EAST ABUTMENT	SUPER	TOTAL
203.0200	REMOVING OLD STRUCTURE STATION 186+44	LS	-------	-------	-------	-------	1
203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-134	LS	-------	-------	-------	-------	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-775	LS	-------	-------	-------	-------	1
206.6000.S	TEMPORARY SHORING	SF	-------	2,150	-------	-------	2,150
210.0100	BACKFILL STRUCTURE	CY	315	-------	265	-------	580
502.0100	CONCRETE MASONRY BRIDGES	CY	57	290	126	-------	473
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-------	-------	-------	2,550	2,550
503.1550	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-------	-------	-------	2,670	2,670
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	-------	109,920	1,330	-------	111,250
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,860	48,450	7,040	199,390	259,740
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	11	22	11	-------	44
506.4000	STEEL DIAPHRAGMS B-40-775	EACH	-------	-------	-------	40	40
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	15	-------	16	-------	31
550.0500	PILE POINTS	EACH	18	-------	15	-------	33
550.1120	PILING STEEL 12-INCH X 53 LB	LF	1,350	-------	1,125	-------	2,475
604.0400	SLOPE PAVING CONCRETE	SY	26	-------	26	-------	52
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	-------	-------	-------	18	18
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	-------	60	-------	-------	60
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-------	-------	-------	720	720
652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	-------	-------	-------	15	15
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	-------	-------	-------	2	2
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	-------	-------	-------	882	882
SPV.0060.4100	ANCHOR ASSEMBLIES LIGHT POLES STRUCTURES	EACH	-------	-------	-------	2	2
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	2	-------	2	-------	4
SPV.0060.4120	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	2	-------	2	-------	4
SPV.0075.4200	DRILLED FOUNDATION SHAFT OBSTRUCTIONS	HRS	-------	10	-------	-------	10
SPV.0090.4300	FENCE DECORATIVE BRIDGE	LF	-------	-------	-------	499	499
SPV.0090.4320	DRILLED FOUNDATION SHAFT 34.75-INCH	LF	-------	1,080	-------	-------	1,080
SPV.0105.4400	TRIAL DRILLED FOUNDATION SHAFT	LS	-------	-------	-------	-------	1
SPV.0165.4600	LONGITUDINAL GROOVING BRIDGE DECK	SF	-------	-------	-------	13,770	13,770
	NON-BID ITEMS						
	EXPANDED POLYSTYRENE	SIZE					1"
	PREFORMED JOINT FILLER	SIZE					3/4" & 2"
	NON-BITUMINOUS JOINT FILLER	SIZE					3/4", 1" & 2"
	NAME PLATE	EACH					1

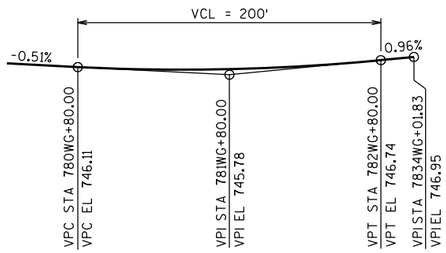
ALL ITEMS ARE CATEGORY 2000



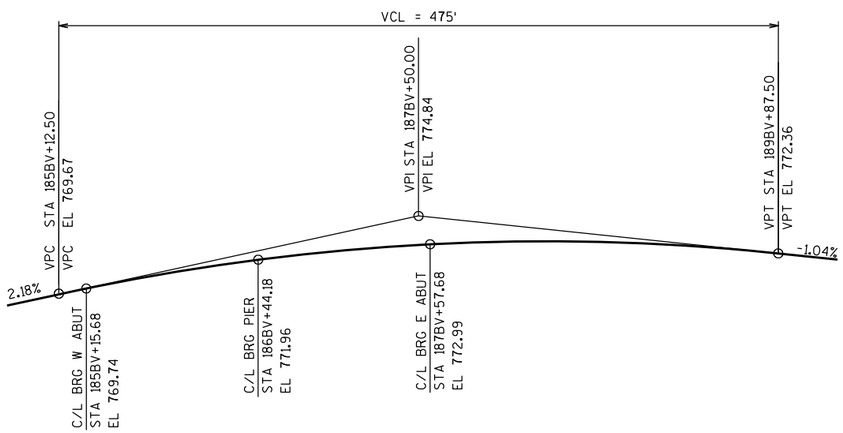
EXISTING USH 45 SB CROWN



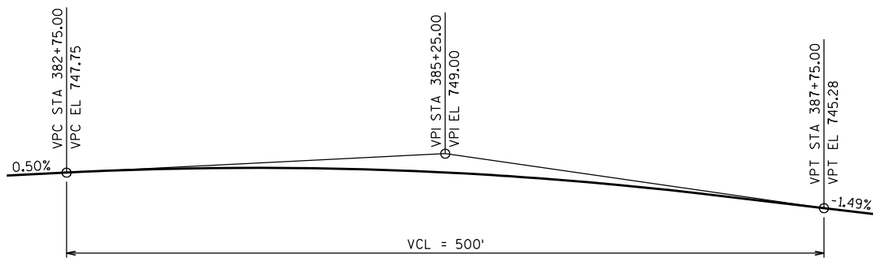
EXISTING USH 45 NB CROWN



FUTURE PROFILE GRADE LINE - RAMP WG



PROFILE GRADE LINE - BV (SWAN BOULEVARD)



FUTURE PROFILE GRADE LINE - NS (USH 45) NB & SB

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE OR MSE BACKFILL SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2 1/2", WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER. PER AWS D1.1

THE EXISTING BRIDGE B-40-134 IS A FOUR SPAN STEEL ROLLED BEAM STRUCTURE. THE ENTIRE STRUCTURE WILL BE REMOVED.

THE PARAPET CONCRETE QUANTITY FOR VERTICAL FACE PARAPET SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY SUPERSTRUCTURES"

THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING STRUCTURE B-40-134 AND CONSTRUCTION OF THE BRIDGE B-40-775 ABUTMENTS WITH RETAINING WALLS R-40-484 AND R-40-485.

A TRIAL DRILLED SHAFT INCLUDED IN THE BID ITEMS FOR THIS STRUCTURE MUST BE SUCCESSFULLY CONSTRUCTED PRIOR TO BEGINNING CONSTRUCTION OF ANY PRODUCTION DRILLED SHAFTS FOR PIER FOOTING. SEE SPECIAL PROVISIONS.

THE GEOTECHNICAL DATA PROVIDED FOR THIS STRUCTURE IN THE "GEOTECHINCAL EXPLORATION AND FOUNDATION EVALUATION REPORT STRUCTURE B-40-775" (DATED 1-13-2013) GOVERNS OVER ANY DISCREPANCY WITH THE SUBSURFACE EXPLORATION AND GEOTECHNICAL DATA SHOWN IN THE PLANS.

HORIZONTAL CURVE DATA

CURVE NO. WG3

P.I. = 783WG+12.73
X: 570990.26
Y: 303848.22
Δ = 9°29'34.79" LEFT
D = 3°49'10.99"
T = 124.55'
L = 248.53'
R = 1500.00'
P.C. = 781WG+88.19
P.T. = 784WG+36.71

STATE PROJECT NUMBER
1060-33-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

GENERAL NOTES & QUANTITIES

SHEET 3 OF 31

8

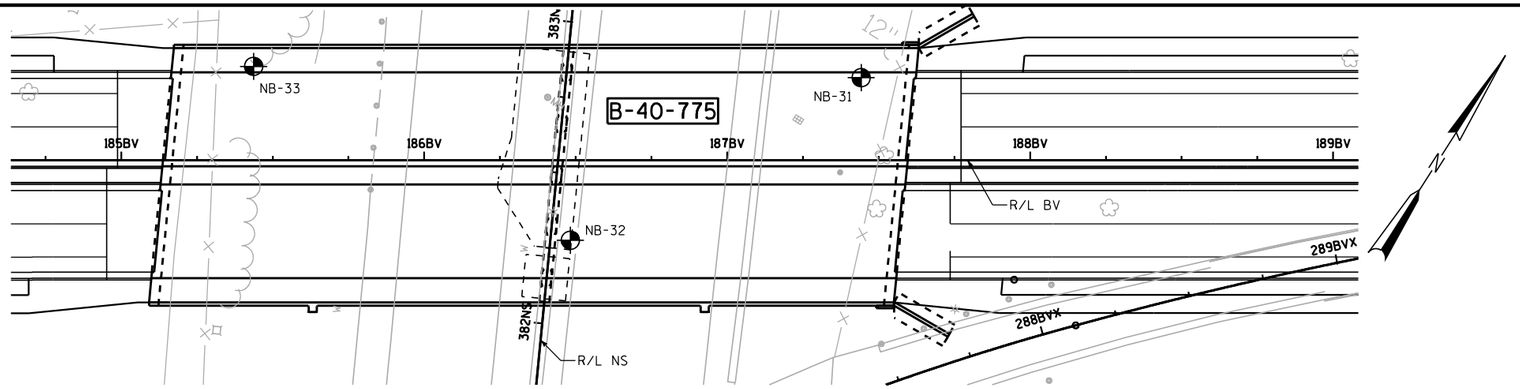
NOTES

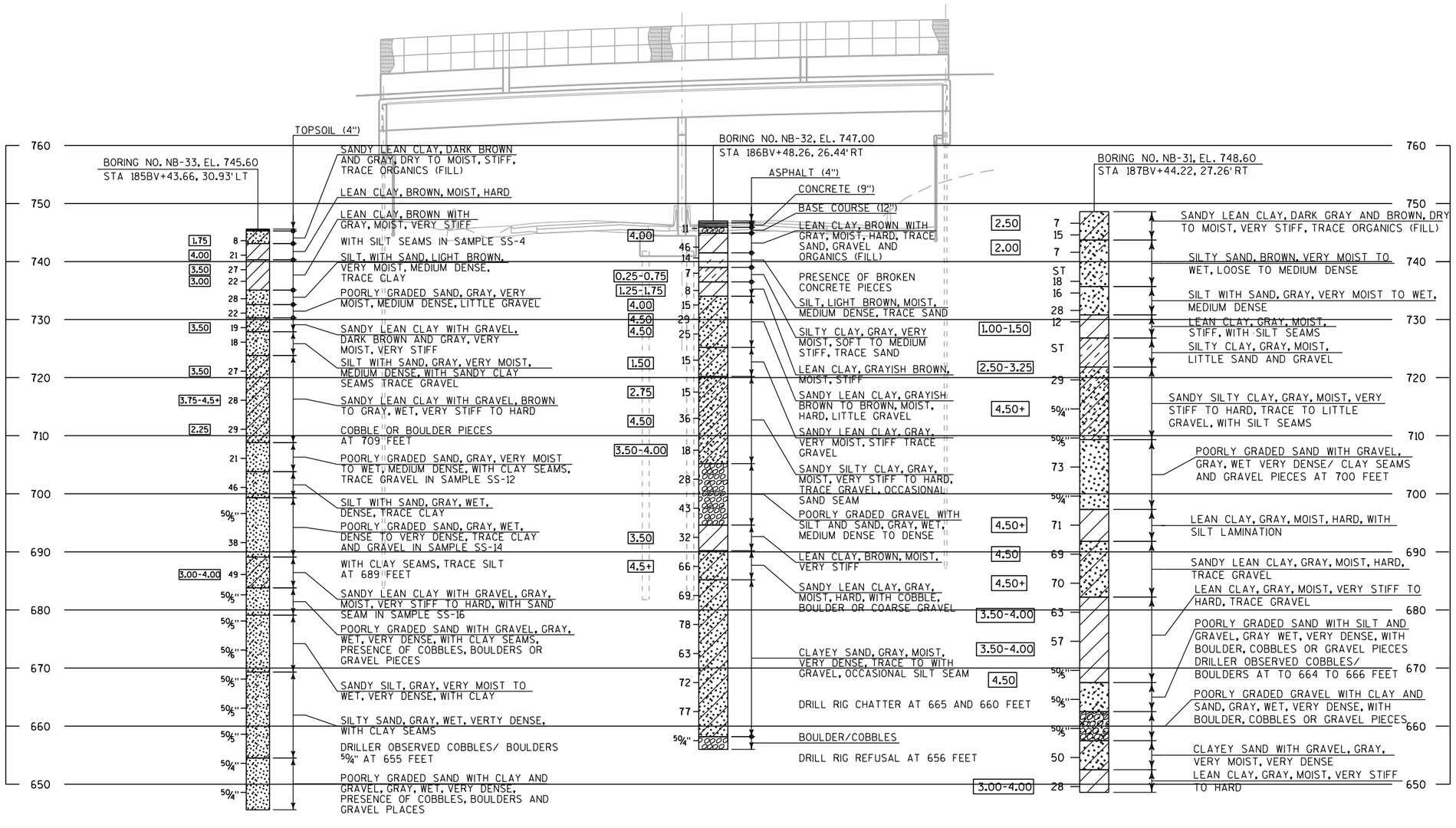
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 23, 2011 - BORING NB-31
SEPTEMBER 22, 2011 - BORING NB-32
AUGUST 22, 2011 - BORING NB-33





STATE PROJECT NUMBER

1060-33-73

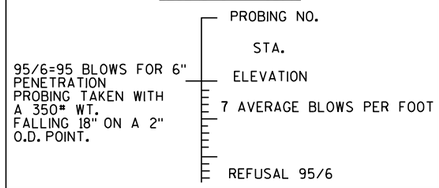
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

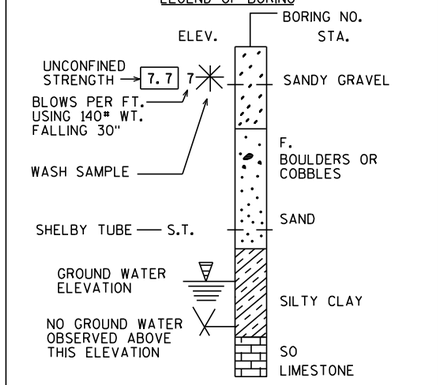
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

SUBSURFACE EXPLORATION

SHEET 4 OF 31

8

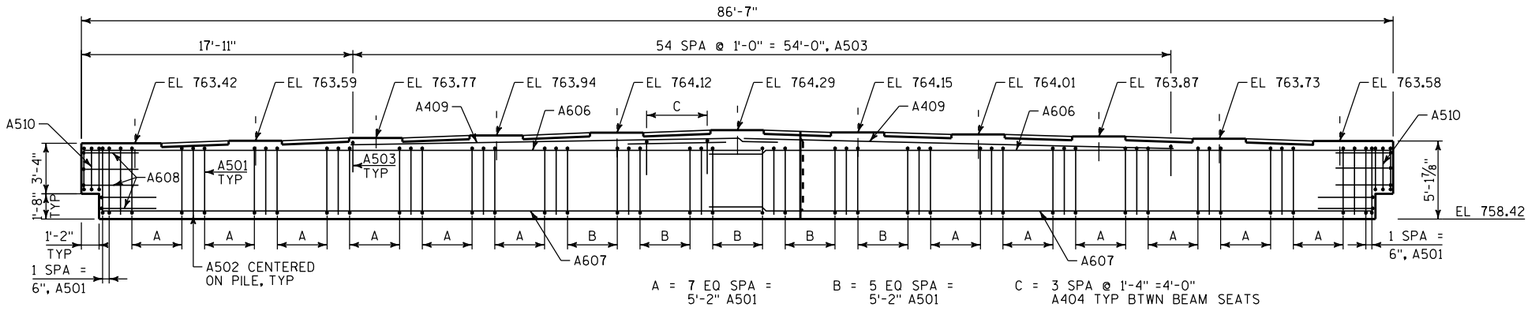
8

STATE PROJECT NUMBER
1060-33-73

NOTES

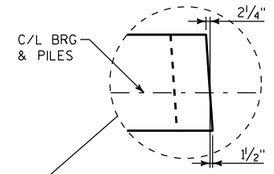
DIMENSIONS ARE GIVEN ALONG C/L BRG & PILES

SEE SHEET 6 FOR TYPICAL BEAM SEAT DETAIL



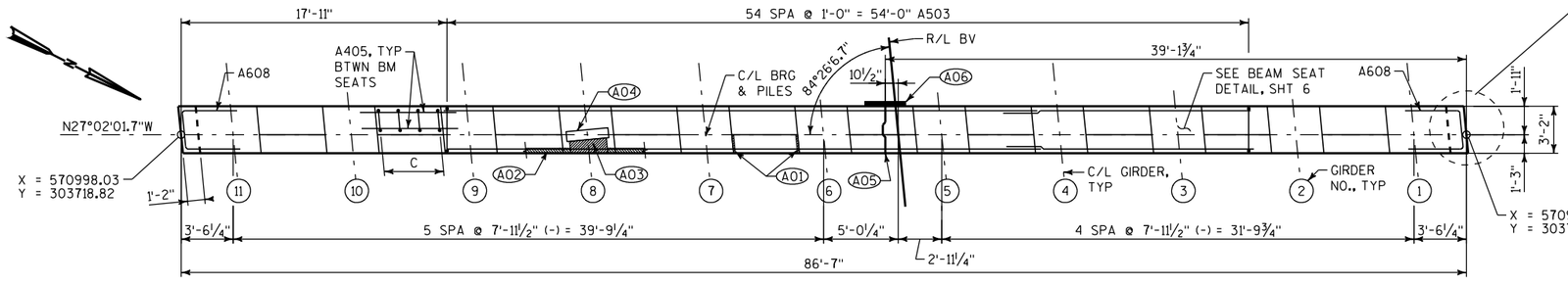
ELEVATION

(LOOKING WEST)

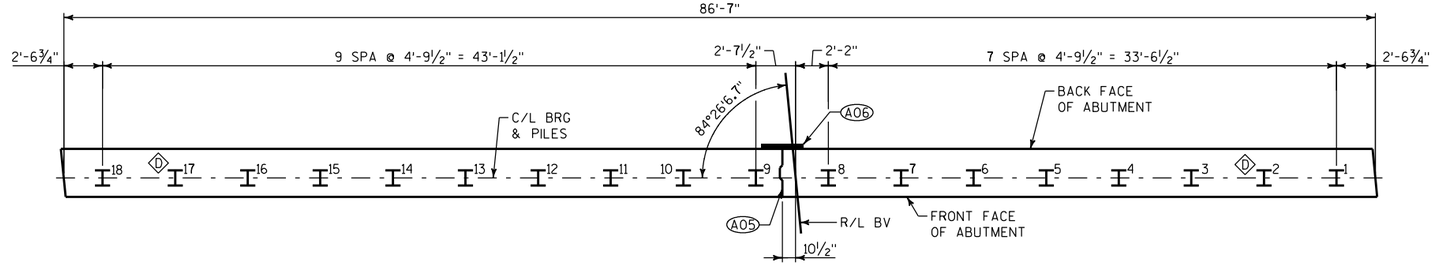


ABUTMENT END DETAIL

(SOUTH END SIMILAR BUT OPPOSITE)



PLAN



PILE PLAN

LEGEND

I HP 12X53 STEEL PILING WITH PILE POINTS AND A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED PILE LENGTH = 75 FEET.

◇D DYNAMIC PILE LOAD TESTING.

(A01) 3/4" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.

(A02) 4" X 3/4" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.

(A03) 3/4" FILLER UNDER GIRDERS, TYP.

(A04) 1/2" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.

(A05) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".

(A06) 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

MIN LAP TABLE

SIZE	LAP
#4	2'-4"
#6	3'-6"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. KES

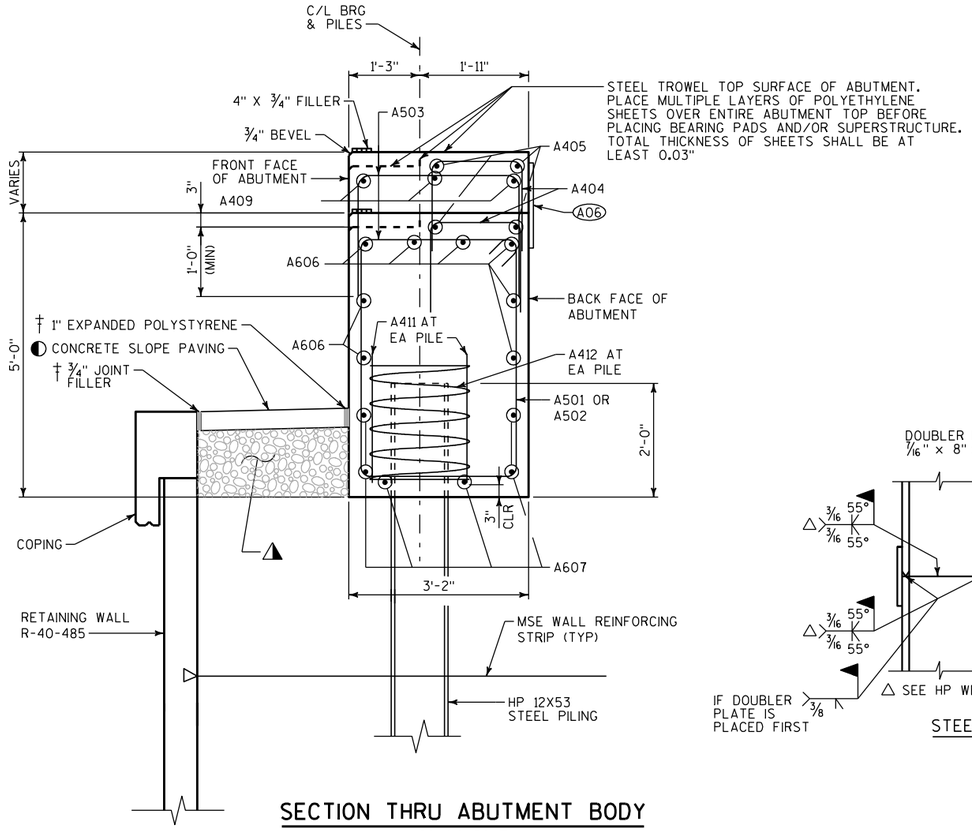
WEST ABUTMENT

SHEET 5 OF 31

8

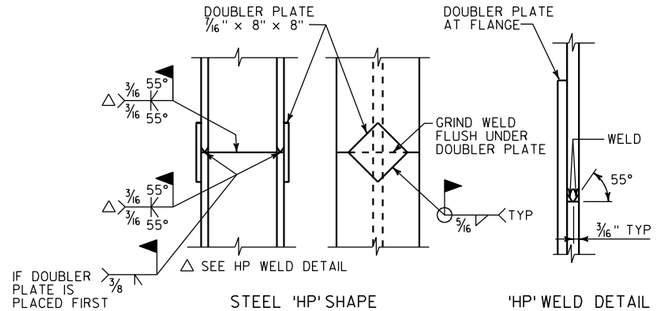
8

STATE PROJECT NUMBER
1060-33-73



SECTION THRU ABUTMENT BODY

(LOOKING SOUTH)



STEEL 'HP' SHAPE

'HP' WELD DETAIL

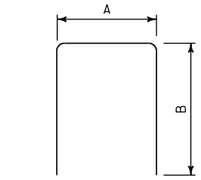
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

BILL OF BARS

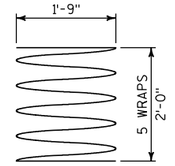
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A501	X	100	14'-7"	X	BODY - STIRRUPS
A502	X	18	11'-0"	X	BODY - VERT. - AT PILES
A503	X	55	6'-10"	X	BODY - VERT. - GIRDERS 2-9
A404	X	40	5'-9"	X	BODY - VERT. - BTWN BEAM SEATS
A405	X	20	7'-3"		BODY - HORIZ. - BTWN BEAM SEATS
A606	X	16	45'-0"		BODY - HORIZ.
A607	X	12	43'-10"		BODY - HORIZ.
A608	X	10	9'-5"	X	BODY - HORIZ. - ENDS
A409	X	6	28'-6"		BODY - HORIZ. - GIRDERS 2-9
A510	X	6	11'-4"	X	BODY - STIRRUP @ ENDS
A411	X	26	2'-3"		PILES - 2 PER PILE - VERTICAL
A412	X	13	28'-0"	X	PILES - 1 PER PILE - 5 WRAP SPIRAL

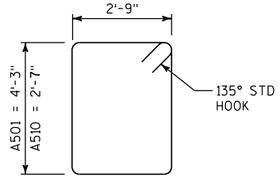


A502, A503, A404

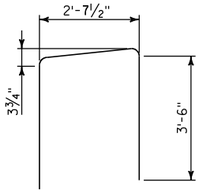
BAR MARK	DIM 'A'	DIM 'B'
A502	2'-9"	4'-3"
A503	2'-9"	2'-2"
A404	1'-7"	2'-2"



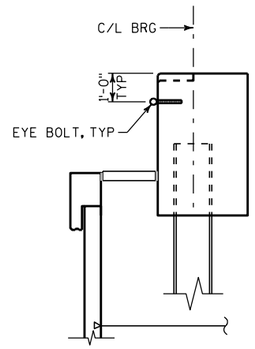
A412



A501, A510



A608



SECTION THRU ABUT

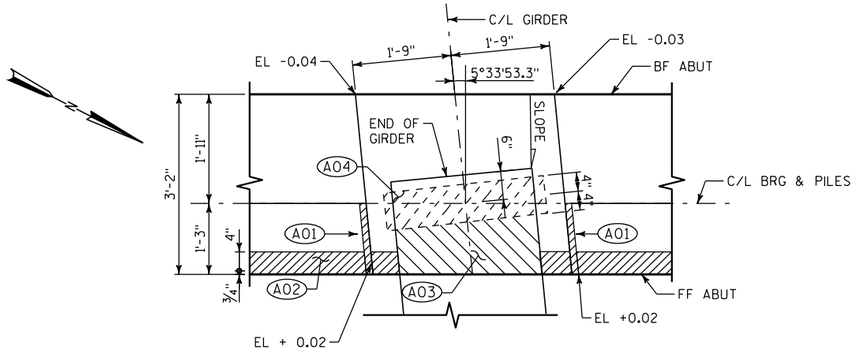
(SHOWING FALL PROTECTION - LOOKING SOUTH)

LEGEND

† SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.

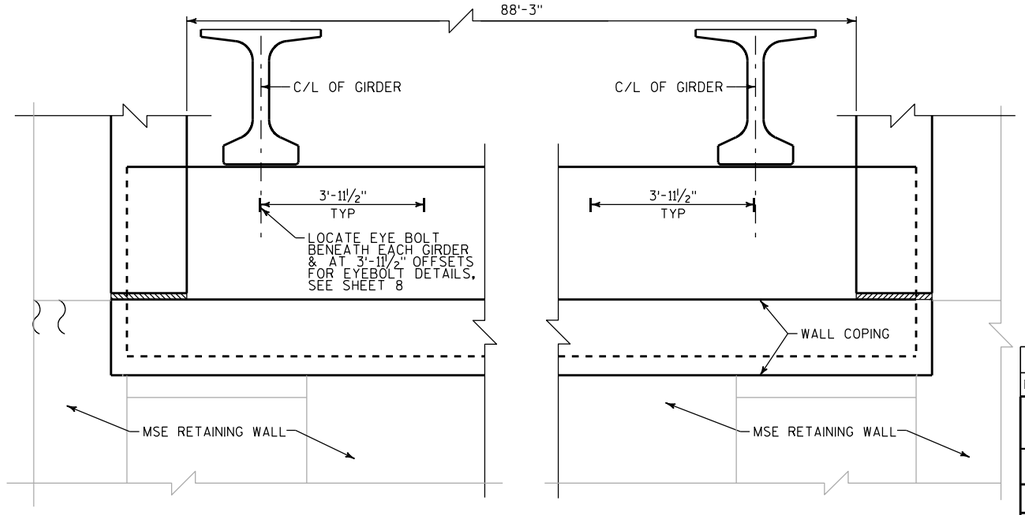
◐ SLOPE CONCRETE PAD DOWN ¾" FROM FRONT FACE OF ABUTMENT TO BACK OF CONCRETE COPING

◭ SIZE 2 COARSE AGGREGATE OR MSE BACKFILL. COST IS INCLUDED IN THE BID ITEM "SLOPE PAVING CONCRETE".



TYPICAL BEAM SEAT DETAIL

(ELEVATION CORRECTIONS GIVEN IN FEET)



ABUTMENT ELEVATION

(SHOWING FALL PROTECTION - LOOKING WEST)

NOTES

(A01) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.

(A02) 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.

(A03) ¾" FILLER UNDER GIRDERS, TYP.

(A04) ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.

(A06) 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D.

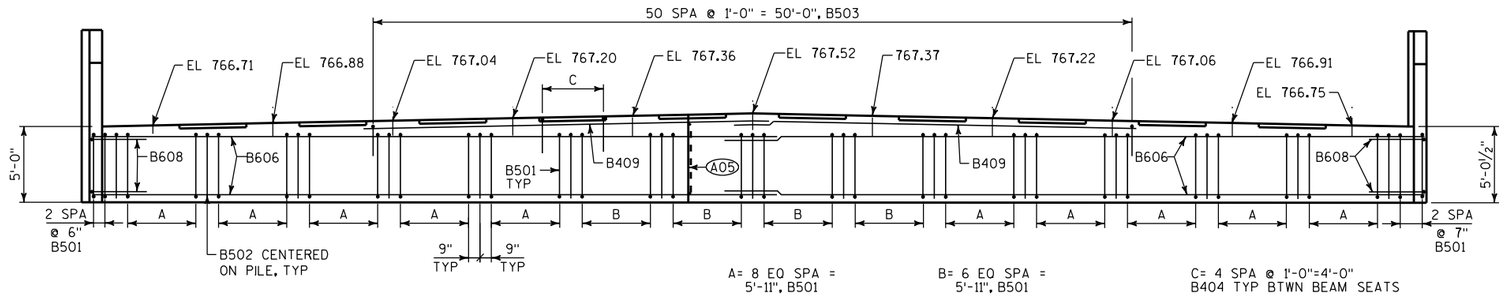
WEST ABUTMENT DETAILS

SHEET 6 OF 31

8

8

STATE PROJECT NUMBER
1060-33-73

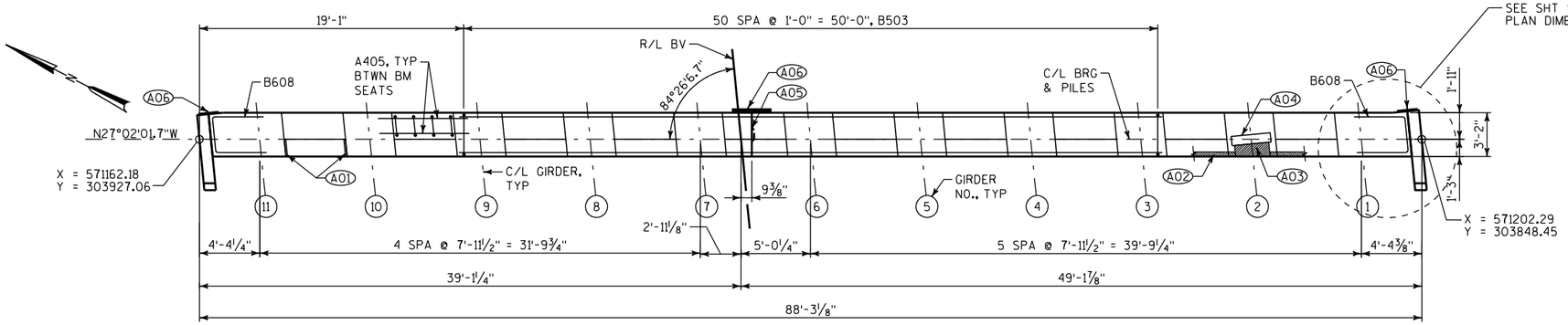


ELEVATION
(LOOKING EAST)

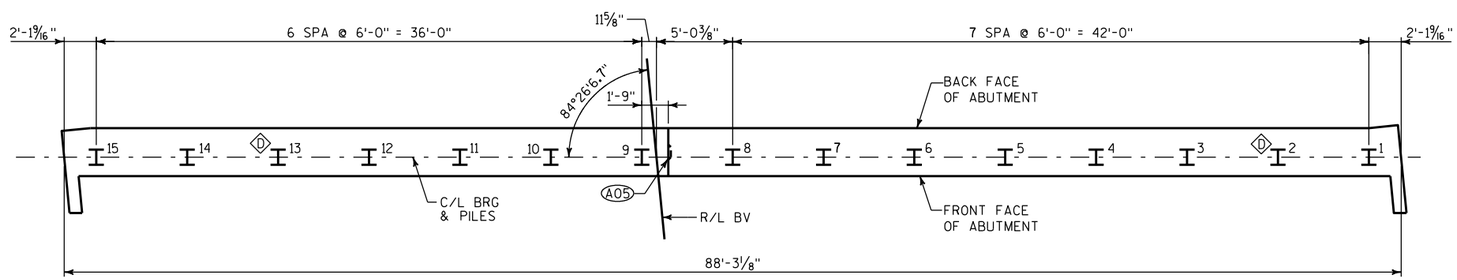
NOTES

DIMENSIONS ARE GIVEN ALONG C/L BRG & PILES

SEE SHEET 8 FOR TYPICAL BEAM SEAT DETAIL



PLAN



PILE PLAN

SEE SHT 9 FOR CLOSURE WALL PLAN DIMENSIONS & DETAILS

LEGEND

I HP 12X53 STEEL PILING WITH PILE POINTS AND A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED PILE LENGTH = 75 FEET.

◇D DYNAMIC PILE LOAD TESTING.

A01 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.

A02 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.

A03 ¾" FILLER UNDER GIRDERS, TYP.

A04 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.

A05 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".

A06 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

MIN LAP TABLE

SIZE	LAP
#4	2'-4"
#6	3'-6"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

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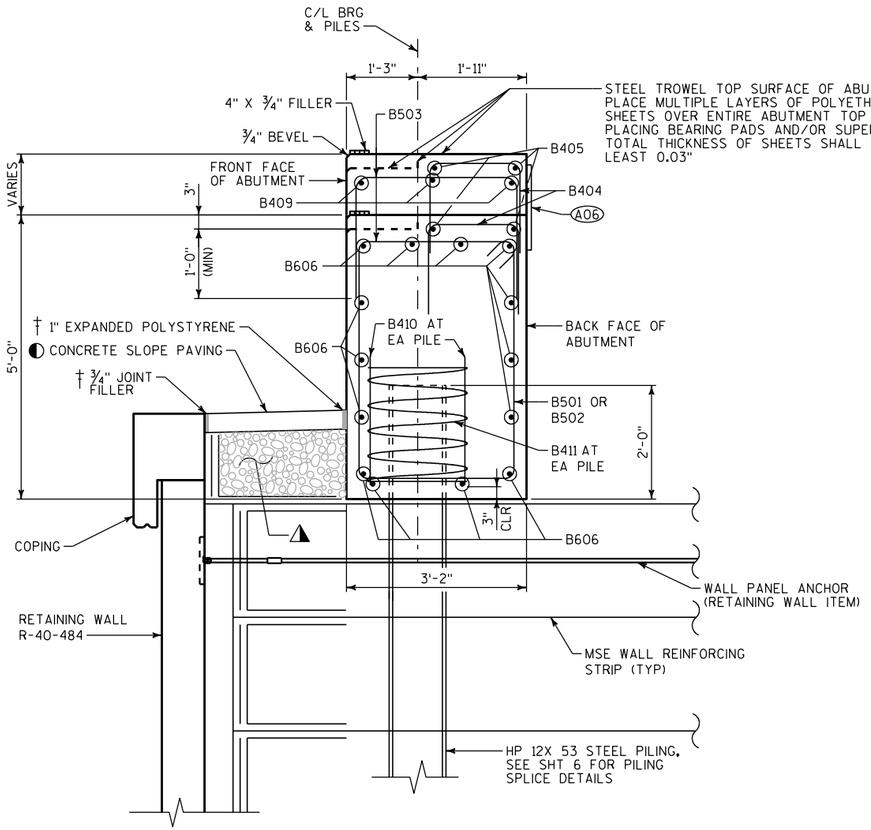
EAST ABUTMENT

SHEET 7 OF 31

8

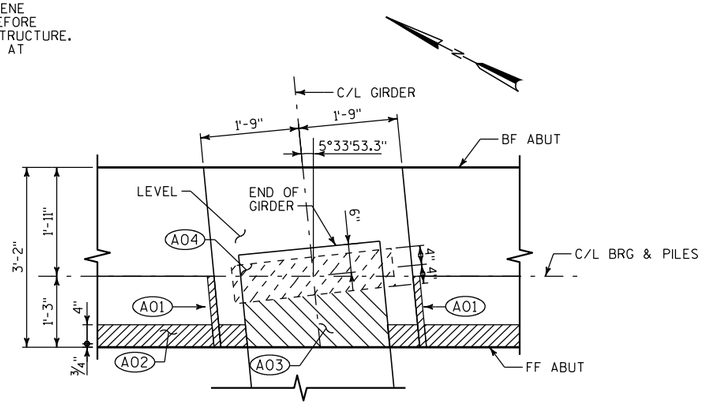
8

STATE PROJECT NUMBER
1060-33-73



SECTION THRU ABUTMENT BODY

(LOOKING NORTH)

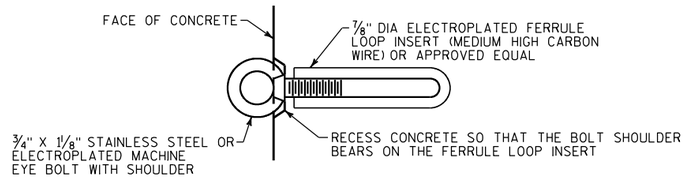


TYPICAL BEAM SEAT DETAIL

(ELEVATION CORRECTIONS GIVEN IN FEET)

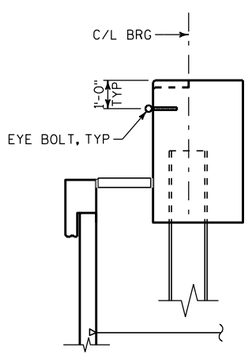
NOTES

- (A01) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- (A02) 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- (A03) ¾" FILLER UNDER GIRDERS, TYP.
- (A04) ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- (A06) 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS



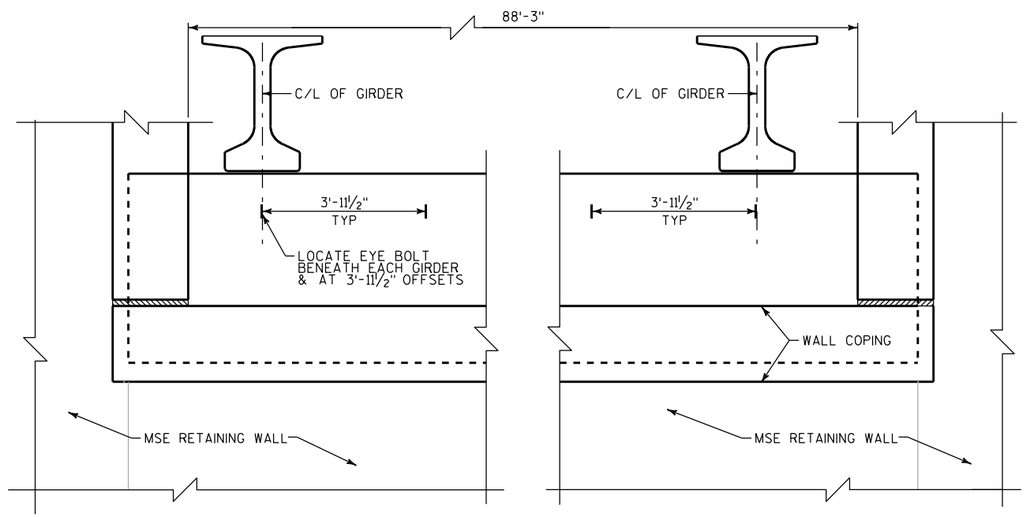
EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.



SECTION THRU ABUT

(SHOWING FALL PROTECTION - LOOKING NORTH)



ABUTMENT ELEVATION

(SHOWING FALL PROTECTION - LOOKING EAST)

LEGEND

- † SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
- ◐ SLOPE CONCRETE PAD DOWN ¾" FROM FRONT FACE OF ABUTMENT TO BACK OF CONCRETE COPING
- ◭ SIZE 2 COARSE AGGREGATE OR MSE BACKFILL. COST IS INCLUDED IN THE BID ITEM "SLOPE PAVING CONCRETE".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY	MS	PLANS CK'D.	KES

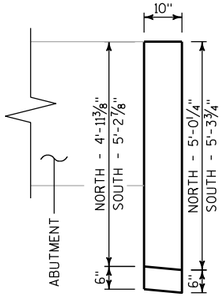
EAST ABUTMENT DETAILS (1 OF 2)

SHEET 8 OF 31

8

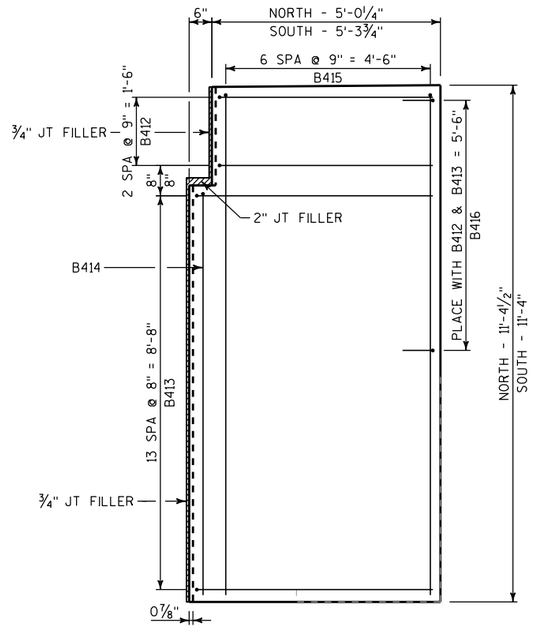
8

STATE PROJECT NUMBER
1060-33-73



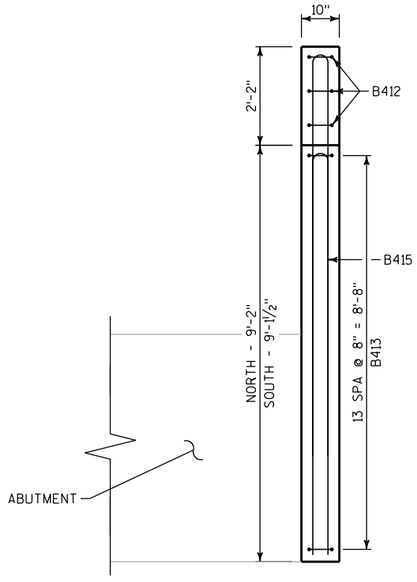
CLOSURE WALL PLAN

SOUTH CLOSURE WALL SHOWN.
NORTH CLOSURE WALL OPPOSITE HAND.



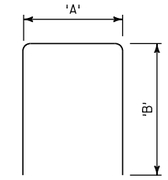
CLOSURE WALL ELEVATION

ONLY CLOSURE WALL REINFORCEMENT SHOWN
(LOOKING NORTH)



CLOSURE WALL END ELEVATION

SOUTH CLOSURE WALL SHOWN.
NORTH CLOSURE WALL OPPOSITE HAND.
ONLY CLOSURE WALL REINFORCEMENT SHOWN
(LOOKING EAST)

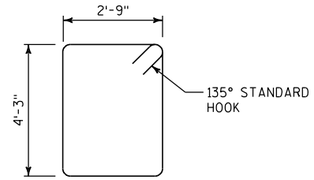


BAR MARK	DIM 'A'	DIM 'B'
B502	2'-9"	4'-3"
B503	2'-9"	2'-2"
B404	1'-7"	2'-2"
B414	5"	8'-9"
B415	5"	10'-11"
B416	5"	1'-0"

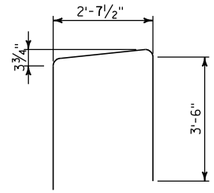
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

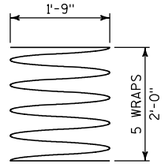
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	100	14'-7"	X	BODY - STIRRUPS
B502	X	15	11'-0"	X	BODY - VERT. - AT PILES
B503	X	51	6'-10"	X	BODY - VERT. - GIRDERS 3-9
B404	X	40	5'-9"	X	BODY - VERT. - BTWN BEAM SEATS
B405	X	20	7'-3"		BODY - HORIZ. - BTWN BEAM SEATS
B606	X	28	45'-9"		BODY - HORIZ.
B608	X	10	9'-5"	X	BODY - HORIZ. - ENDS
B409	X	6	26'-6"		BODY - HORIZ. - GIRDERS 3-9
B410	X	24	2'-3"		PILES - 2 PER PILE - VERTICAL
B411	X	12	28'-0"	X	PILES - 1 PER PILE - 5 WRAP SPIRAL
B412	X	6	9'-7"	X	CLOSURE WALL- HORZ - TOP
B413	X	28	10'-7"	X	CLOSURE WALL- HORZ - BOT
B414	X	2	17'-9"	X	CLOSURE WALL- VERT - FRONT
B415	X	14	22'-1"	X	CLOSURE WALL- VERT - BACK
B416	X	18	2'-3"	X	CLOSURE WALL- HORZ - BACK



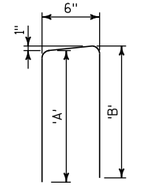
B501



B608



B411



BAR MARK	DIM 'A'	DIM 'B'
B412	4'-7"	4'-8"
B413	5'-1"	5'-2"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY ASW | PLANS CK'D. KES

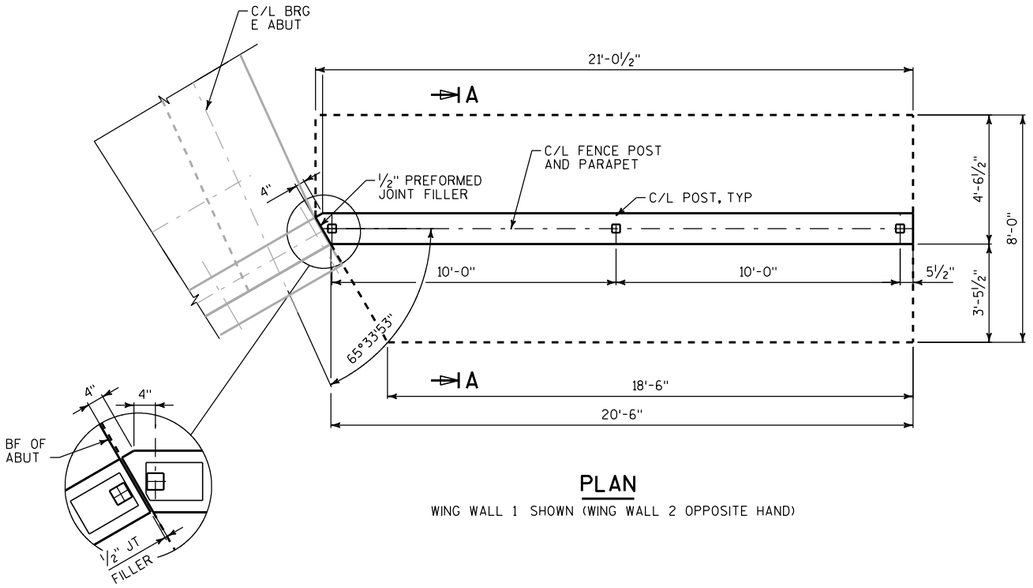
EAST ABUTMENT DETAILS (2 OF 2)

SHEET 9 OF 31

8

8

STATE PROJECT NUMBER
1060-33-73

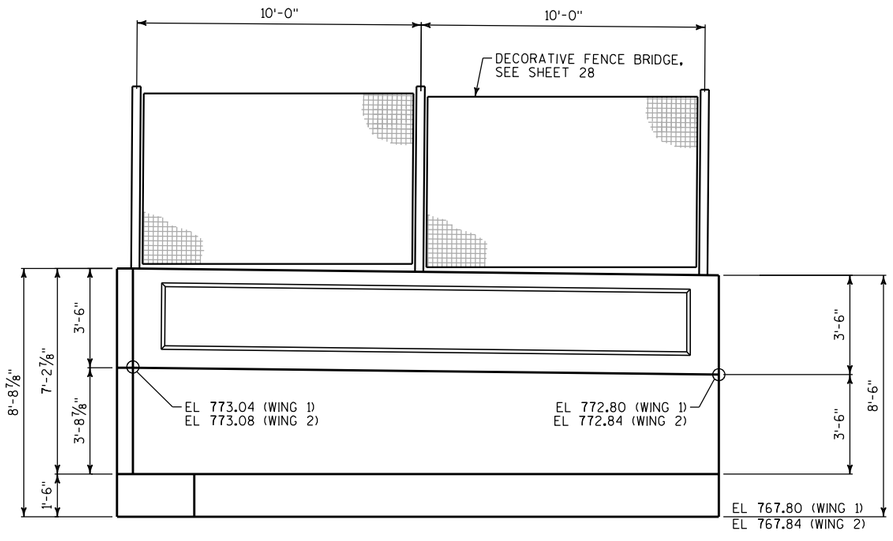


PLAN

WING WALL 1 SHOWN (WING WALL 2 OPPOSITE HAND)

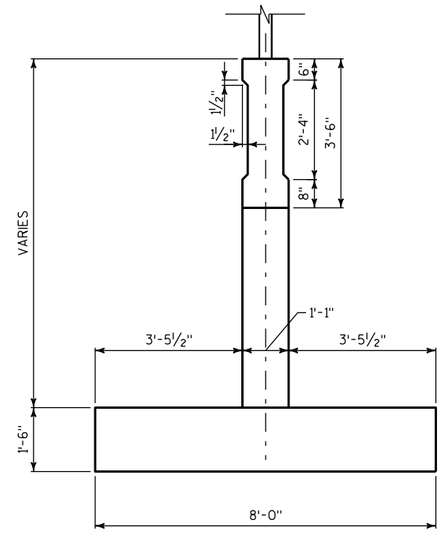
NOTES

CONSTRUCTION OF WING 1 CANNOT BE STARTED UNTIL STAGE 2 OF THE ROADWAY TRAFFIC CONTROL STAGING PLAN. IN THIS STAGE, EXISTING STRUCTURE B-40-134 IS BEING REMOVED WHICH WILL ALLOW THE COMPLETION OF WALL R-40-484 AND WING 1.



ELEVATION

WING WALL 1 SHOWN (WING WALL 2 OPPOSITE HAND)



SECTION A-A

WING WALLS 1 & 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. KES

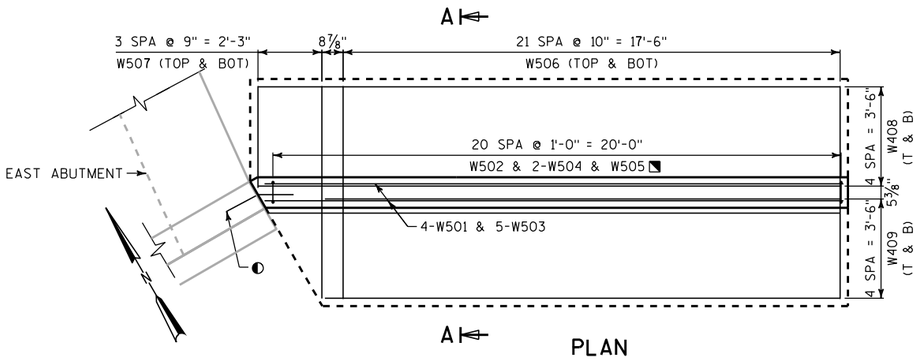
EAST ABUTMENT WINGS (1 OF 2)

SHEET 10 OF 31

8

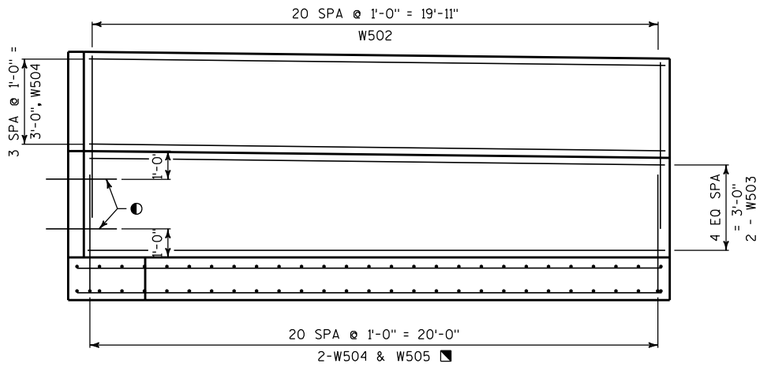
8

STATE PROJECT NUMBER
1060-33-73



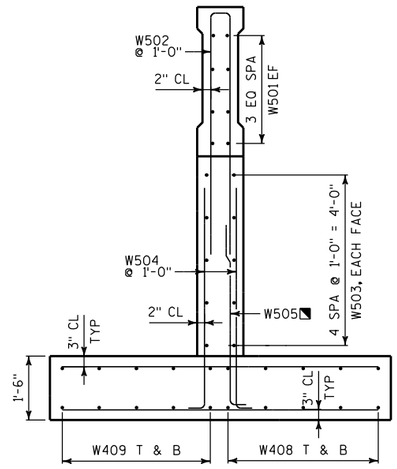
PLAN

WING WALL 1 SHOWN
(WING WALL 2 OPPOSITE HAND)

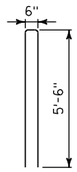


ELEVATION

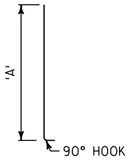
WING WALL 1 SHOWN
(WING WALL 2 OPPOSITE HAND)



SECTION A-A



W502



BAR MARK	DIM 'A'
W504	4'-0"
W505	3'-3"

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D WING 1	NO REQ'D WING 2	LENGTH	BENT	SERIES	LOCATION
W501	X	8	8	20'-3"	-		PARAPET LONGITUDINAL
W502	X	21	21	11'-3"	X		PARAPET TRANSVERSE
W503	X	10	10	20'-3"	-		STUB LONGITUDINAL
W504	X	42	42	4'-5"	X		STUB TRANSVERSE
W505	X	21	21	3'-8"	X		STUB/FOOTING TRANSVERSE
W506	-	44	44	7'-6"	-		FOOTING TRANSVERSE
W507	-	8	8	5'-6"	-	◭	FOOTING TRANSVERSE (SERIES)
W408	-	10	10	20'-6"	-		FOOTING LONGITUDINAL
W409	-	10	10	19'-0"	-	◭	FOOTING LONGITUDINAL (SERIES)

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
W507	4 SERIES OF 4	3'-6" TO 7'-6"
W409	4 SERIES OF 5	18'-0" TO 20'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY

◐ 1" ϕ PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO ABUTMENT. USE DEBONDER ON EXTENSION INTO WING WALL. BEND AS REQUIRED. INCLUDE IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

◥ W505 IS TO BE PLACED ON SIDE OF WING WALL FACING SWAN BLVD ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. KES

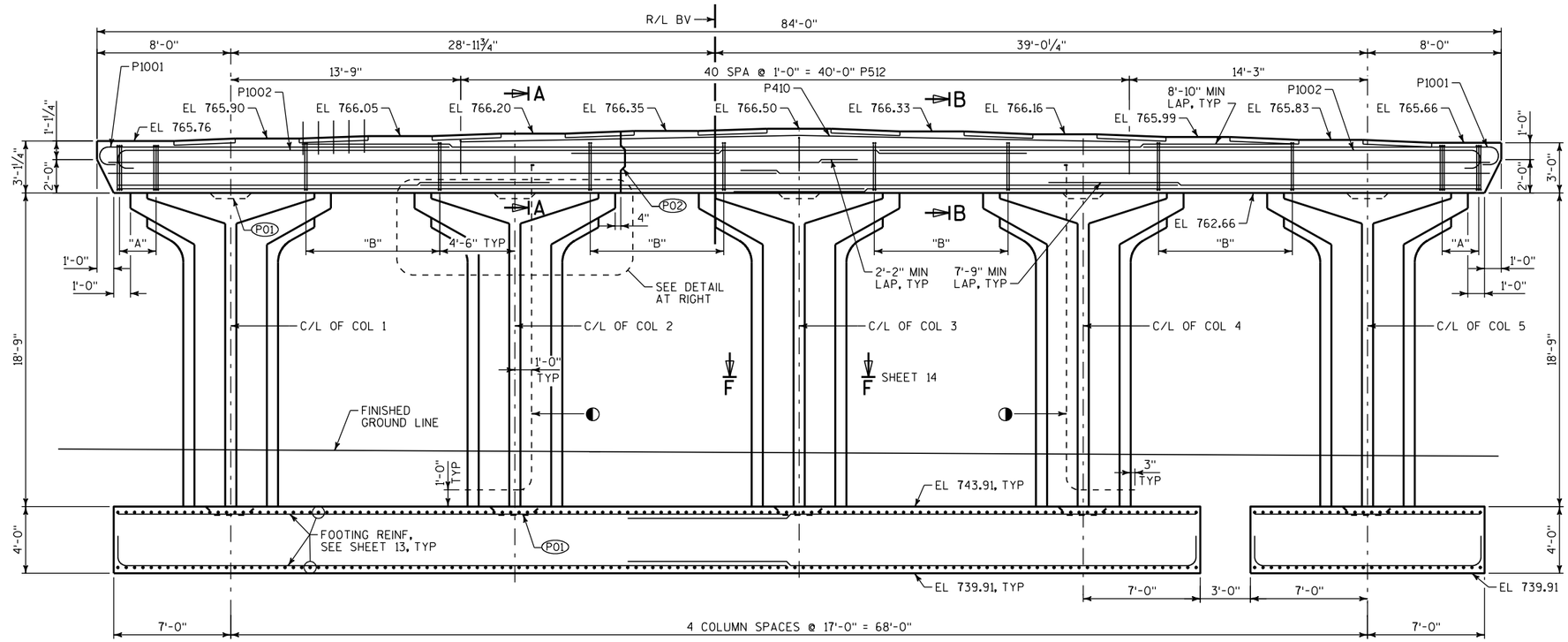
EAST ABUTMENT WINGS (2 OF 2)

SHEET 11 OF 31

8

8

STATE PROJECT NUMBER
1060-33-73

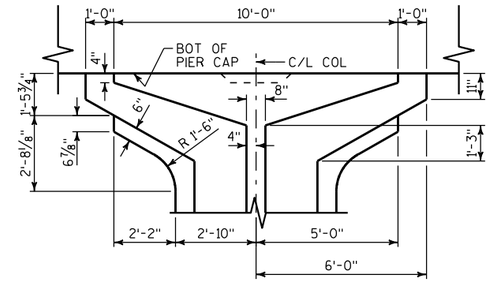


"A" = 5 SPA @ 5¼" = 2'-2¼"
3-P611 BARS (BUNDLED)

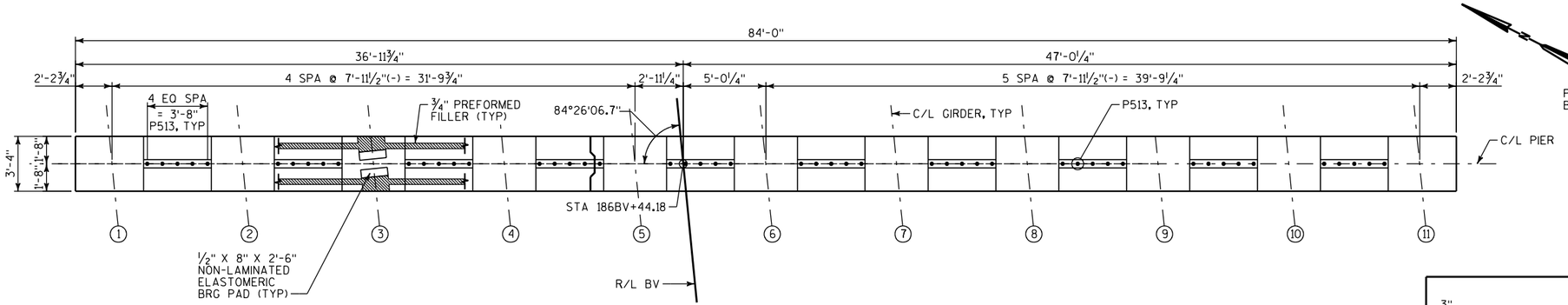
"B" = 16 SPA @ 6" = 8'-0"
2-P611 BARS (BUNDLED)

ELEVATION

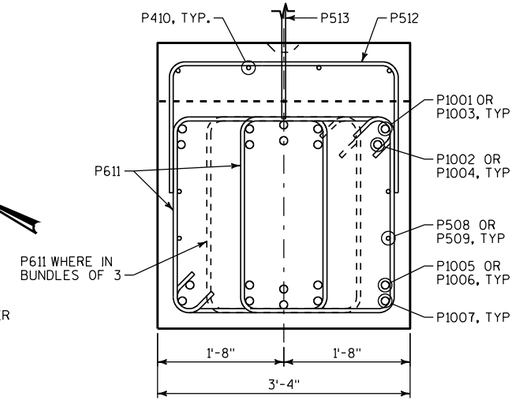
(LOOKING EAST)
(DRILLED SHAFTS NOT SHOWN FOR CLARITY)



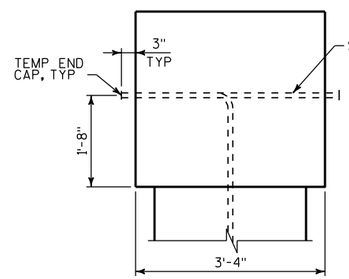
DETAIL AT TOP OF COLUMN



PIER CAP PLAN



SECTION B-B



SECTION A-A

TYP COLUMNS 2 & 4
(REINF NOT SHOWN FOR CLARITY)

◐ 1" DIA NONMETALLIC CONDUIT FOR FUTURE UNDERDECK LIGHTING. TEMPORARILY CAP ENDS WHERE CONDUIT EXITS CONCRETE.

NOTES

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACE BEVELED 4"x1'-3"x2'-6" TYP AT TOP AND BOTTOM OF COLUMNS

(P02) KEYED CONSTRUCTION JOINT FORMED BY SURFACE BEVELED 3"x1'-0"x1'-6" IN PIER CAP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY	CNK	PLANS CK'D.	ASW

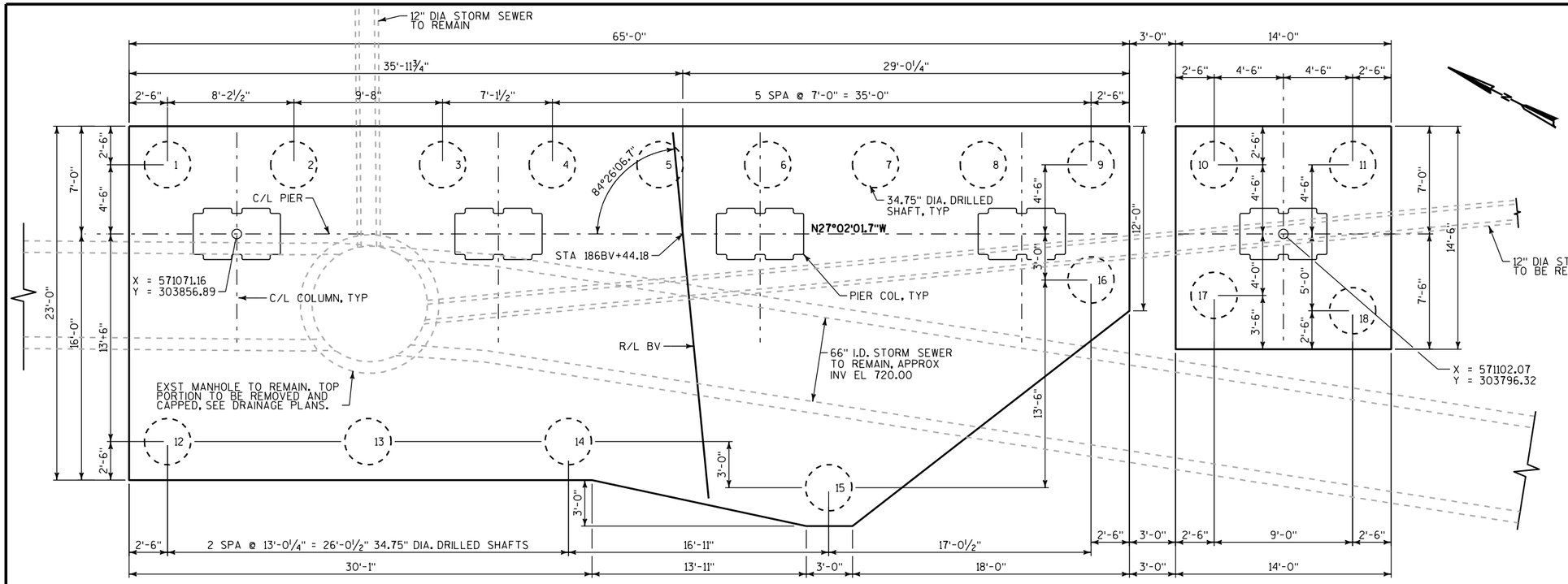
PIER
(1 OF 4)

SHEET 12 OF 31

8

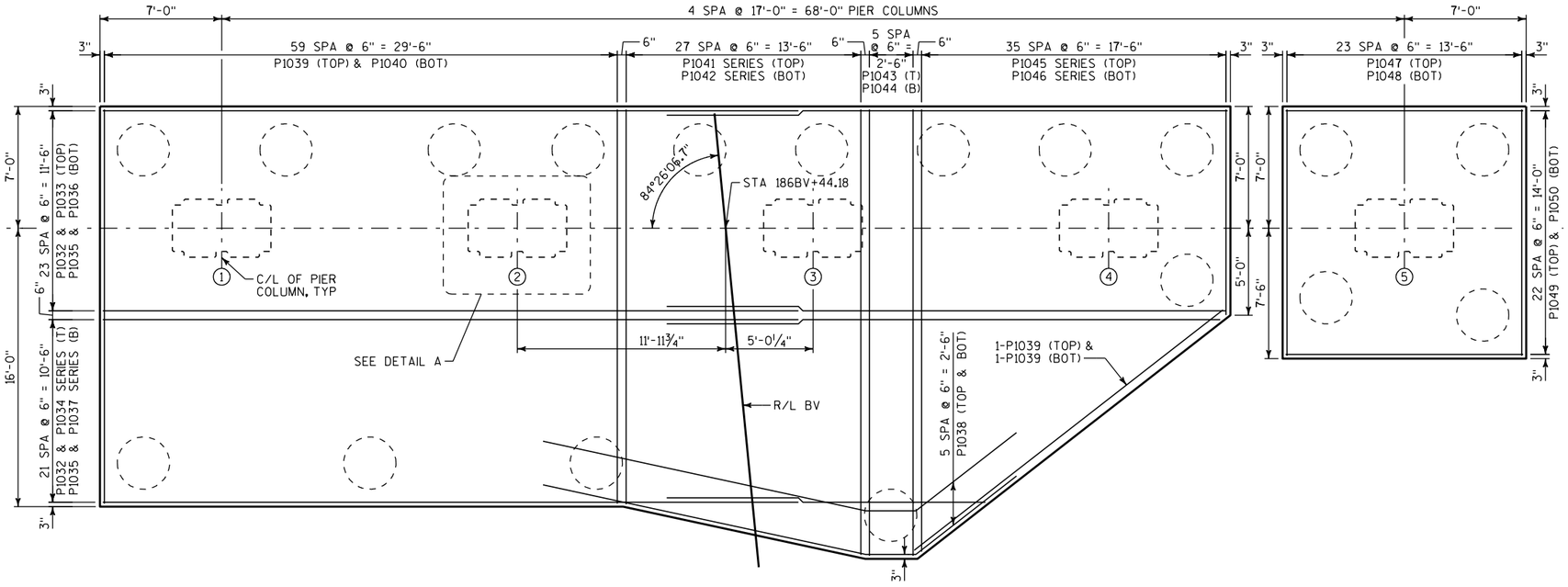
8

STATE PROJECT NUMBER
1060-33-73



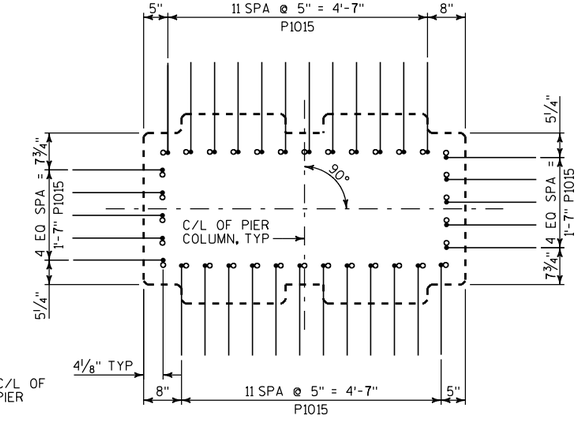
FOOTING PLAN

(SHOWING SURVEYED EXISTING STORM SEWER LOCATION)



FOOTING PLAN

(SHOWING REINFORCEMENT)



DETAIL A

(SHOWING COLUMN-FOOTING DOWELS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY CNK | PLANS CK'D. ASW

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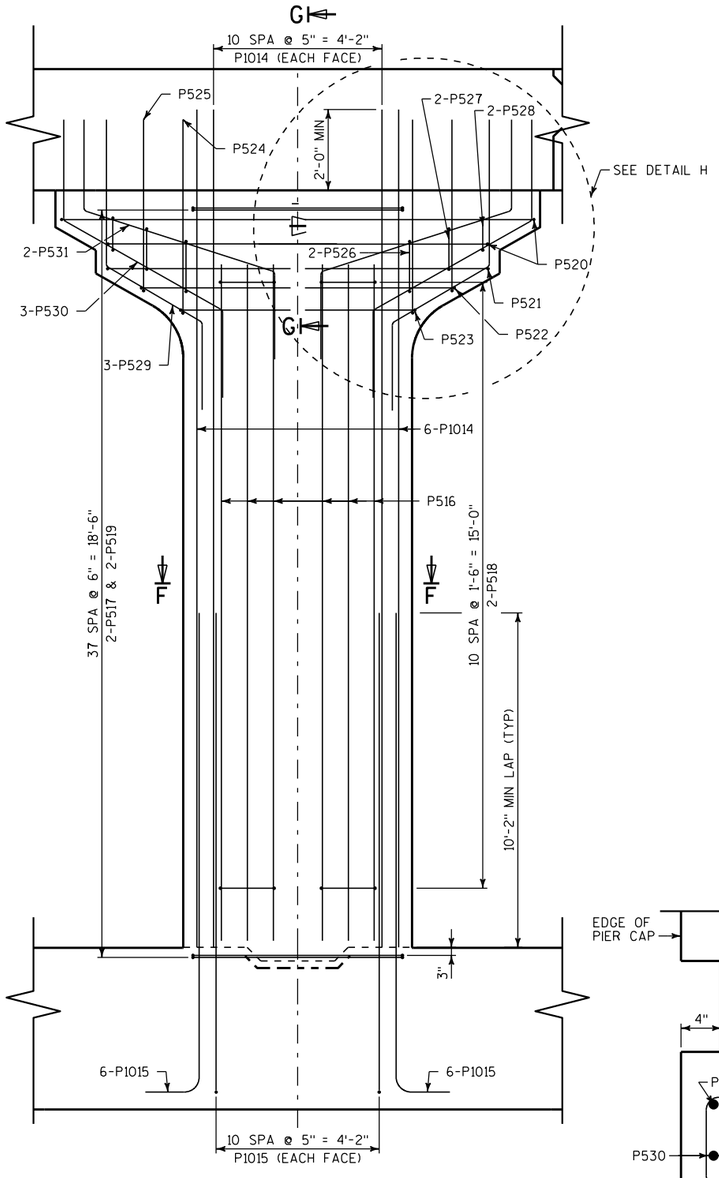
FILE NAME : W:\Cadd\Final\10603373_BV\Structs\B-40-775\cds\B775_080402_pi.dgn PLOT DATE : 15-MAR-2013 09:46 PLOT BY : MSCKES PLOT NAME : B775_080402_pi PLOT SCALE : 8:1

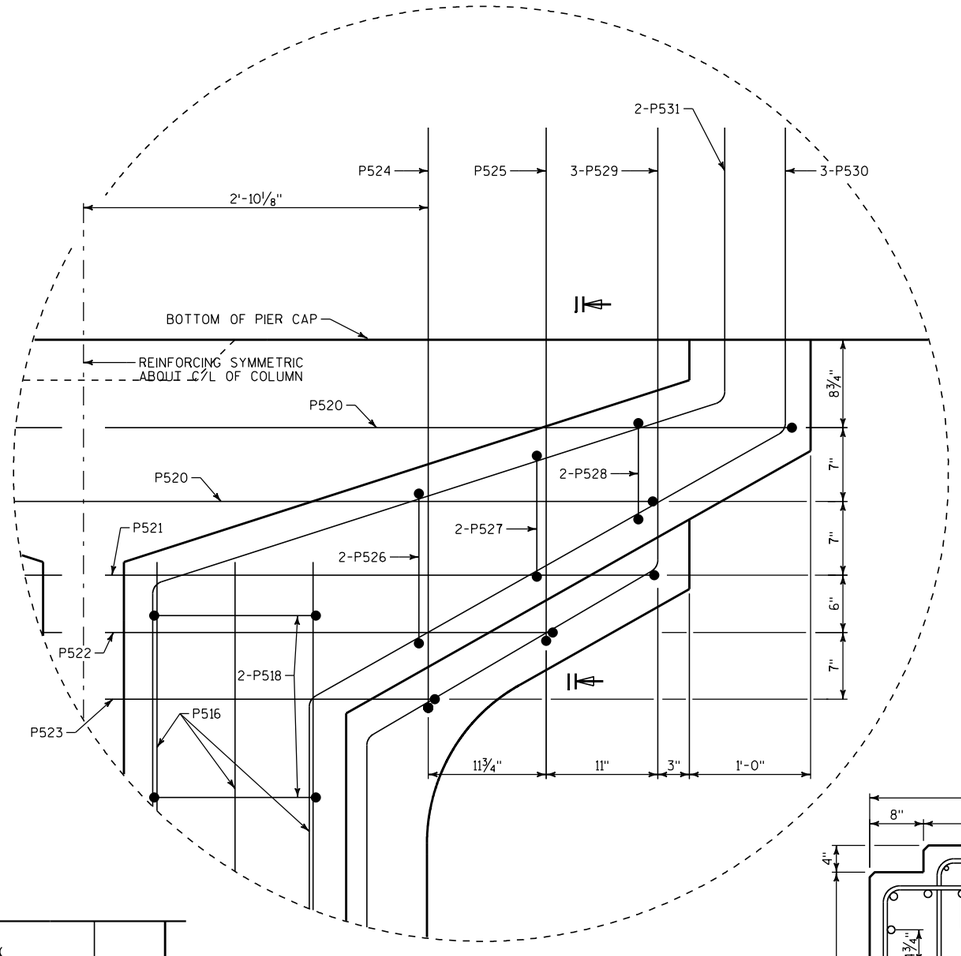
STATE PROJECT NUMBER

1060-33-73



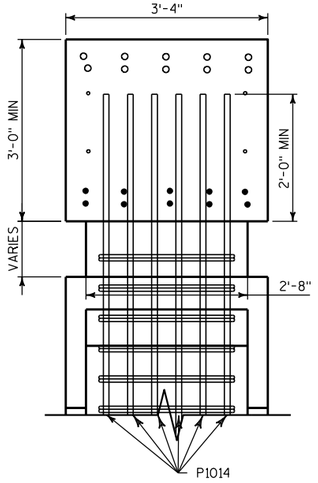
COLUMN ELEVATION

(LOOKING EAST)



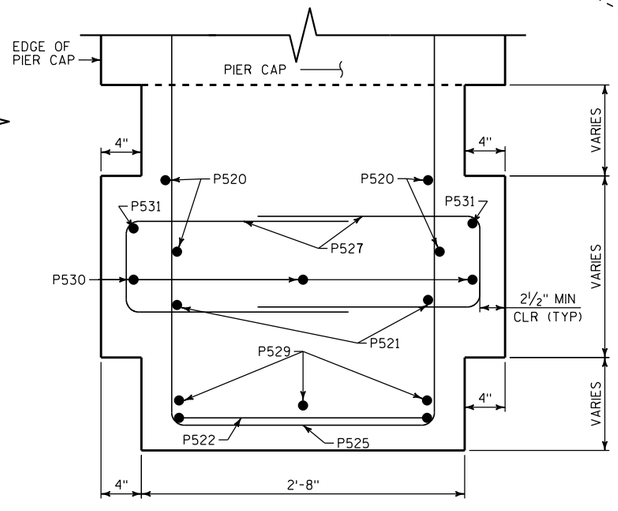
DETAIL H

SECONDARY REINFORCEMENT SHOWN ONLY
(LOOKING EAST)

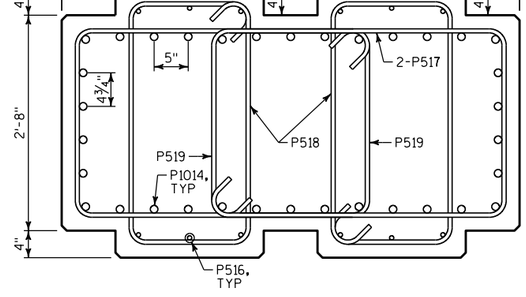


SECTION G-G

(LOOKING NORTH)



SECTION I-I



SECTION F-F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

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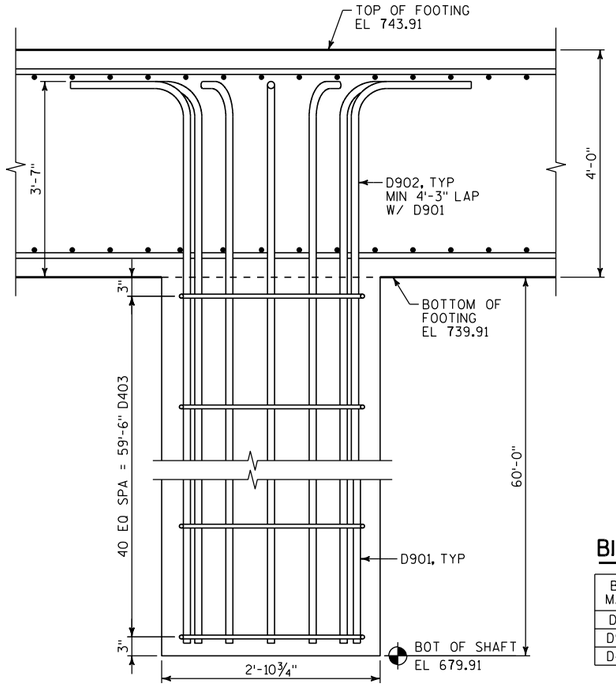


TYPICAL DRILLED SHAFT ELEVATION

(SHOWING REINFORCEMENT)

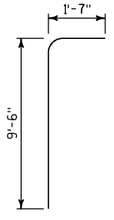
DRILLED SHAFT DATA TABLE

SHAFT NO.	R/L SWAN BLVD	R/L OFFSET	SHAFT C/L X	SHAFT C/L Y
1	186BV+51.90	32.84' LT	571073.14	303862.91
2	186BV+51.10	24.67' LT	571076.87	303855.60
3	186BV+50.16	15.05' LT	571081.27	303846.99
4	186BV+49.47	7.96' LT	571084.51	303840.64
5	186BV+48.79	0.99' LT	571087.69	303834.41
6	186BV+48.12	5.98' RT	571090.87	303828.17
7	186BV+47.44	12.94' RT	571094.05	303821.94
8	186BV+46.76	19.91' RT	571097.23	303815.70
9	186BV+46.08	26.88' RT	571100.41	303809.47
10	186BV+46.85	34.80' RT	571104.03	303802.38
11	186BV+47.72	43.75' RT	571108.12	303794.36
12	186BV+33.98	34.59' LT	571057.11	303854.73
13	186BV+32.71	21.56' LT	571063.06	303843.08
14	186BV+31.46	8.67' LT	571068.95	303831.53
15	186BV+26.83	7.88' RT	571073.96	303815.10
16	186BV+38.61	26.15' RT	571093.73	303806.06
17	186BV+36.85	33.97' RT	571096.46	303798.51
18	186BV+34.98	42.83' RT	571099.66	303790.04

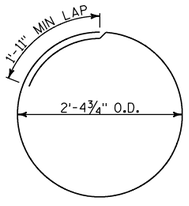
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

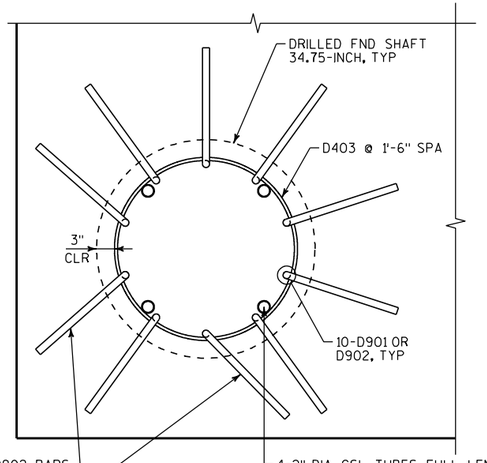
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
D901		180	60'-0"		DRILLED SHAFT VERTICAL
D902		180	10'-10"	X	DRILLED SHAFT VERTICAL TOP
D403		738	9'-6"	X	DRILLED SHAFT TIE



D902



D403



DRILLED FOUNDATION SHAFT REINFORCEMENT

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

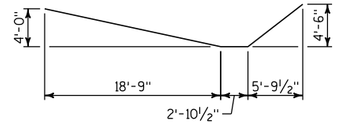
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	SERIES	LOCATION
P1001	X	10	22'-6"	X		PIER CAP TOP
P1002	X	10	37'-5"	X		PIER CAP TOP
P1003	X	5	59'-2"			PIER CAP TOP
P1004	X	5	27'-3"			PIER CAP TOP
P1005	X	10	25'-10"			PIER CAP BOTTOM
P1006	X	5	45'-4"			PIER CAP BOTTOM
P1007	X	10	44'-8"			PIER CAP BOTTOM
P508	X	4	44'-10"			PIER CAP SIDES
P509	X	4	40'-0"			PIER CAP SIDES
P410	X	4	40'-0"			PIER CAP TOP
P611	X	172	10'-2"	X		PIER CAP STIRRUP
P512	X	41	6'-2"	X		PIER CAP VERTICAL
P513	X	50	2'-0"			PIER CAP DOWELS
P1014	X	170	20'-9"			COLUMN VERTICAL
P1015	X	170	15'-4"	X		COLUMN VERTICAL
P516	X	60	16'-8"			COLUMN VERTICAL
P517	X	380	12'-5"	X		COLUMN STIRRUP
P518	X	110	9'-1"	X		COLUMN STIRRUP
P519	X	380	3'-1"	X		COLUMN TIE
P520	X	20	13'-4"	X		COLUMN HORIZ TIE
P521	X	10	11'-6"	X		COLUMN HORIZ TIE
P522	X	10	10'-6"	X		COLUMN HORIZ TIE
P523	X	10	8'-0"	X		COLUMN HORIZ TIE
P524	X	10	12'-10"	X		COLUMN VERTICAL TIE
P525	X	10	11'-8"	X		COLUMN VERTICAL TIE
P526	X	20	5'-3"	X		COLUMN HORIZ TIE
P527	X	20	5'-0"	X		COLUMN HORIZ TIE
P528	X	20	4'-10"	X		COLUMN HORIZ TIE
P529	X	30	8'-6"	X		COLUMN FLARE
P530	X	30	9'-1"	X		COLUMN FLARE
P531	X	20	9'-4"	X		COLUMN FLARE
P1032		46	40'-0"			FOOTING TRANSVERSE TOP
P1033		24	32'-2"			FOOTING TRANSVERSE TOP
P1034		22	25'-1"		⚠	FOOTING TRANSVERSE TOP
P1035		46	41'-6"	X		FOOTING TRANSVERSE BOTTOM
P1036		24	33'-8"	X		FOOTING TRANSVERSE BOTTOM
P1037		22	26'-7"	X	⚠	FOOTING TRANSVERSE BOTTOM
P1038		12	29'-2"	X		FOOTING TRANSVERSE TOP & BOTTOM
P1039		62	22'-6"			FOOTING TOP & BOTTOM
P1040		60	25'-6"	X		FOOTING LONG BOTTOM
P1041		28	24'-1"		⚠	FOOTING LONG TOP
P1042		28	27'-1"	X	⚠	FOOTING LONG BOTTOM
P1043		6	25'-8"			FOOTING LONG TOP
P1044		6	28'-8"	X		FOOTING LONG BOTTOM
P1045		36	18'-7"		⚠	FOOTING LONG TOP
P1046		36	21'-7"	X	⚠	FOOTING LONG BOTTOM
P1047		24	14'-0"			FOOTING LONG TOP
P1048		24	17'-0"	X		FOOTING LONG BOTTOM
P1049		23	13'-6"			FOOTING TRANSVERSE TOP
P1050		23	16'-6"	X		FOOTING TRANSVERSE BOTTOM

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

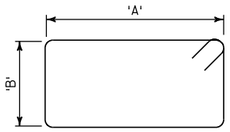
BAR SERIES TABLE

BAR MARK	NO. OF SERIES	LENGTH
P1034	1 SERIES OF 22	18'-4" TO 31'-10"
P1037	1 SERIES OF 22	19'-10" TO 33'-4"
P1041	1 SERIES OF 28	22'-6" TO 25'-7"
P1042	1 SERIES OF 28	25'-6" TO 28'-7"
P1045	1 SERIES OF 36	11'-9" TO 25'-5"
P1046	1 SERIES OF 36	14'-9" TO 28'-5"

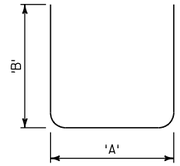
BUNDLE AND TAG EACH SERIES SEPARATELY



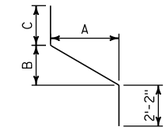
P1038



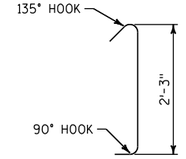
BAR MARK	DIM. 'A'	DIM. 'B'
P611	2'-1"	2'-7"
P517	3'-8"	2'-3"
P518	2'-10"	1'-5"



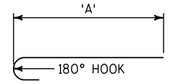
BAR MARK	DIM. 'A'	DIM. 'B'
P512	2'-11"	1'-9"
P520	2'-3"	5'-8"
P521	2'-3"	4'-9"
P522	2'-3"	4'-3"
P523	2'-3"	3'-0"
P524	2'-3"	5'-5"
P525	2'-3"	4'-10"
P526	1'-4"	2'-1"
P527	1'-1"	2'-1"
P528	0'-11"	2'-1"



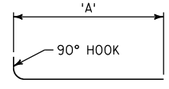
BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C
P529	2'-5"	1'-5"	3'-8"
P530	3'-11"	2'-3"	2'-6"
P531	4'-9"	1'-7"	2'-3"



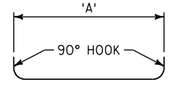
P519



BAR MARK	DIM. 'A'
P1001	21'-1"
P1002	36'-0"



BAR MARK	DIM. 'A'
P1015	13'-10"
P1035	40'-0"
P1036	32'-2"
P1037	18'-4" TO 31'-10"



BAR MARK	DIM. 'A'
P1040	22'-6"
P1042	22'-6" TO 25'-7"
P1044	25'-8"
P1046	11'-10" TO 25'-5"
P1048	14'-1"
P1050	13'-7"

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STATE OF WISCONSIN
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STRUCTURE B-40-775

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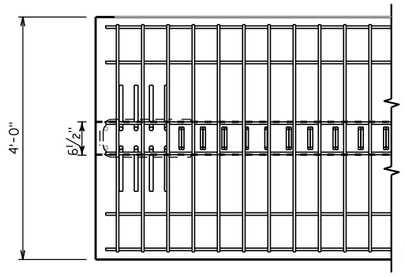
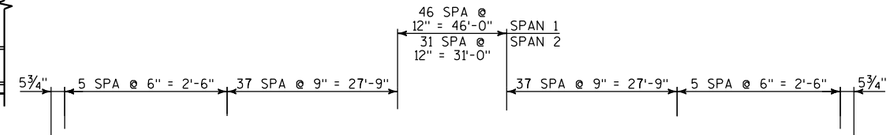
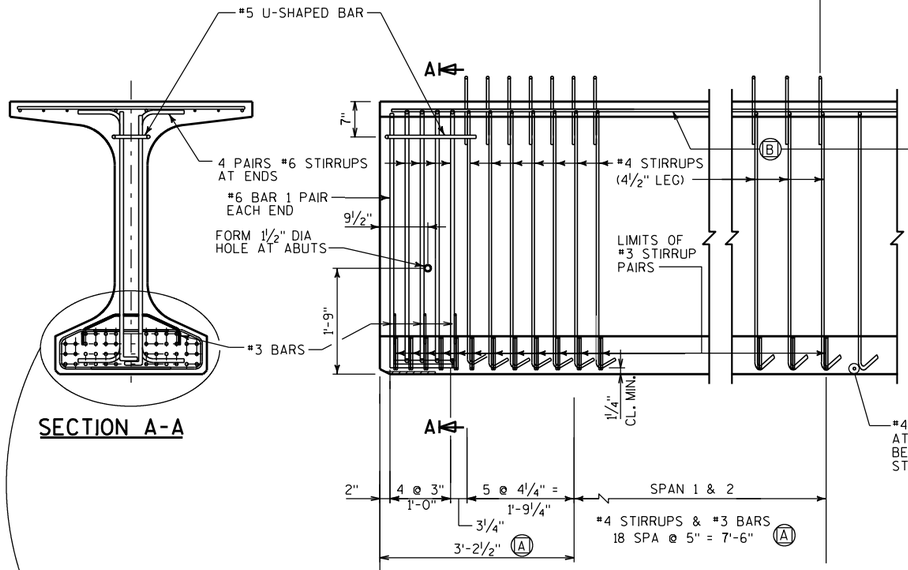


TOP FLANGE



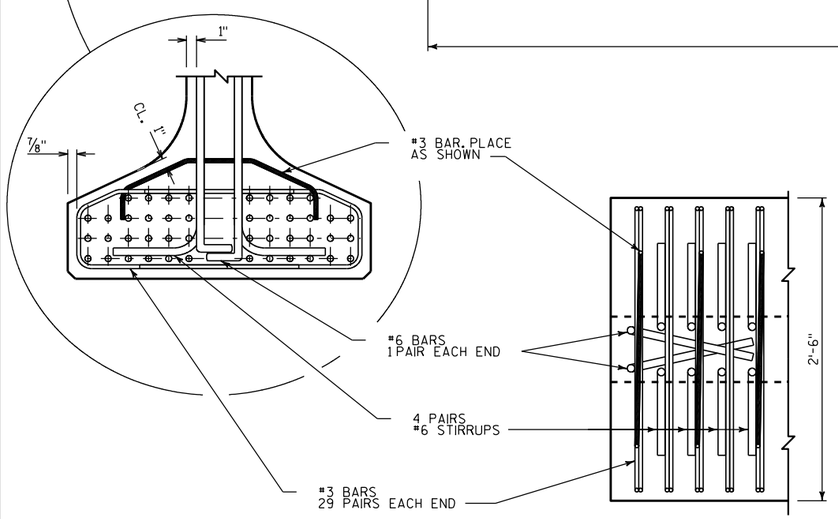


SECTION A-A

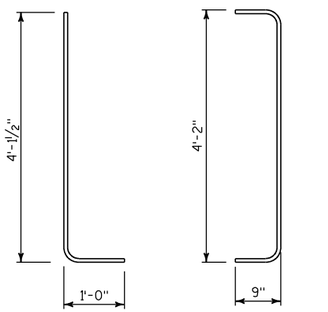
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6-#4 BARS, FULL LENGTH, MIN. LAP = 1'-8"

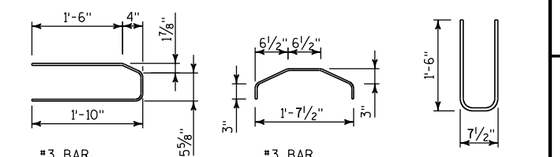


BOTTOM FLANGE



#6 BAR
2 @ EACH END

#6 BAR
8 @ EACH END



#3 BAR
29 PAIRS EACH END
(EPOXY COATED)

#3 BAR
3 @ EACH END
(EPOXY COAT)

#5 BAR
1 @ EACH END

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH-FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6" Φ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

1. USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

FOR GIRDER LENGTHS AND "P" VALUES, SEE SHEET 17.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

54W" PRESTRESSED GIRDER

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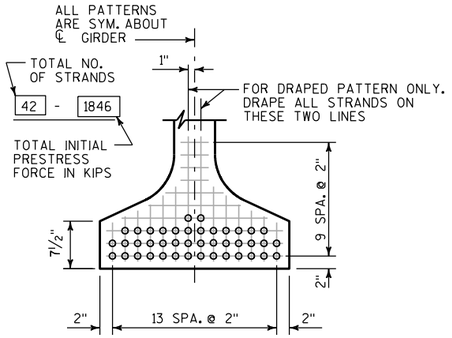
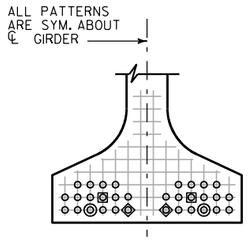


STRAND PATTERN - SPAN 1

0.6" DIA. STRANDS



DEBONDED STRANDS - SPAN 1

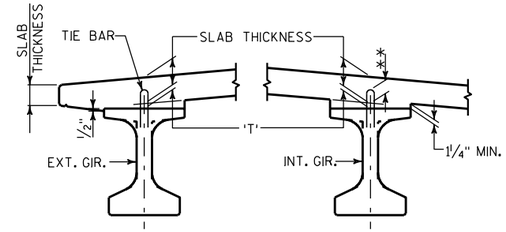
GIRDERS 1 & 11

GIRDER END PATTERN SHOWN
DEBOND STRANDS AT BOTH ENDS

○ DEBOND LENGTH = 5'-0" (2 STRANDS)

□ DEBOND LENGTH = 7'-6" (2 STRANDS)

◇ DEBOND LENGTH = 10'-0" (2 STRANDS)



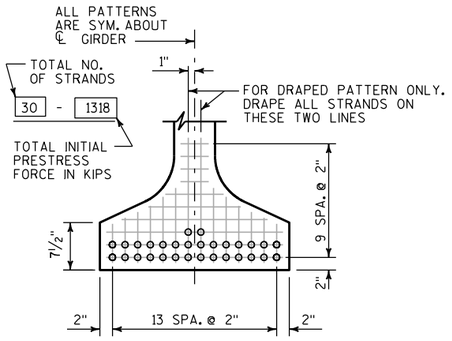
SLAB HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

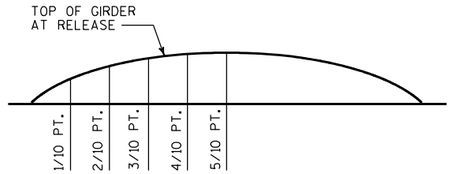
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'



STRAND PATTERN - SPAN 2

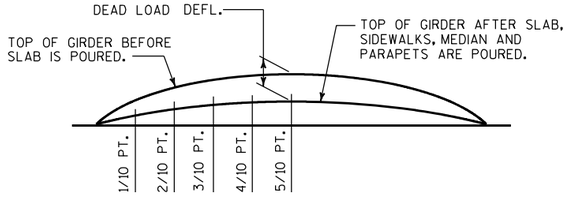
0.6" DIA. STRANDS



THEORETICAL CAMBER AT STRAND RELEASE

THEORETICAL CAMBER *					
SPAN	1/10	2/10	3/10	4/10	5/10
1	1¼"	2⅛"	2⅞"	3¼"	3⅜"
2	¾"	1¼"	1⅝"	1⅞"	2"

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF RELEASE. THESE VALUES ARE PRESENTED FOR INFORMATION ONLY. THE CAMBER VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'.

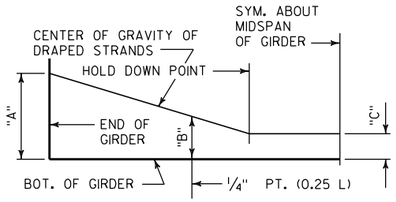


DEAD LOAD DEFLECTION DIAGRAM

GIRDER DATA

SPAN	GIRDER NUMBERS	GIRDER LENGTH "L"	DEAD LOAD DEFL (IN.)					CONC STRGTH f'c (psi)	f'ci (psi) *	"P"	DIA OF STRAND (IN.)	DRAPED PATTERN					NO. OF DEBONDED STRANDS
			1/10	2/10	3/10	4/10	5/10					TOTAL NO OF STRANDS	(IN.) "A"	"B" (MIN)	"B" (MAX)	"C"	
1	1 & 11	128'-10½"	⅞	1¾	2⅜	2¾	2⅞	9000	6800	7"	0.6	40	49	16	19	5	6
1	2 - 10	128'-10½"	⅞	1¾	2⅜	2¾	2⅞	9000	6800	7"	0.6	40	49	16	19	5	0
2	1 - 11	113'-10½"	½	1	1⅜	1⅝	1¾	9000	6800	7"	0.6	30	50	15½	18½	4	0

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.



DRAPED STRAND PROFILE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

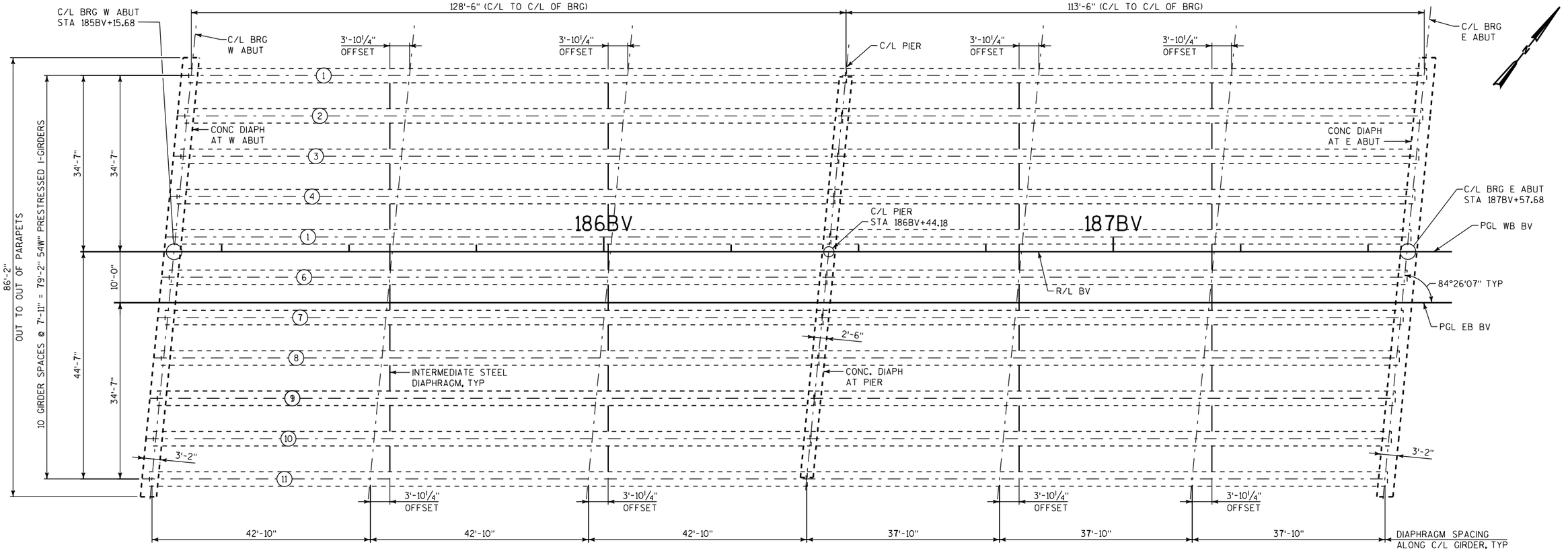
54W" PRESTRESSED GIRDER DETAILS

SHEET 17 OF 31

8

8

STATE PROJECT NUMBER
1060-33-73



FRAMING PLAN

TOP OF DECK ELEVATIONS

LOCATION	W ABUT BRG	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	E ABUT BRG
TOE OF BARRIER	769.90	770.16	770.42	770.67	770.90	771.13	771.34	771.54	771.73	771.91	772.07	772.21	772.34	772.46	772.58	772.68	772.77	772.86	772.94	773.01	773.07
EDGE OF DECK	769.08	769.34	769.60	769.85	770.08	770.31	770.52	770.72	770.91	771.09	771.25	771.39	771.52	771.64	771.76	771.86	771.95	772.04	772.12	772.19	772.25
GIRDER 1	769.12	769.39	769.65	769.89	770.13	770.35	770.56	770.76	770.95	771.13	771.30	771.44	771.57	771.69	771.80	771.91	772.00	772.09	772.17	772.24	772.30
TOE OF N CURB	769.22	769.49	769.75	769.99	770.23	770.45	770.66	770.87	771.06	771.24	771.40	771.54	771.67	771.80	771.91	772.01	772.11	772.20	772.27	772.34	772.40
GIRDER 2	769.26	769.53	769.79	770.04	770.27	770.49	770.71	770.91	771.10	771.28	771.45	771.59	771.72	771.84	771.95	772.06	772.15	772.24	772.32	772.39	772.45
GIRDER 3	769.40	769.67	769.93	770.18	770.42	770.64	770.85	771.06	771.25	771.43	771.60	771.74	771.87	771.99	772.10	772.21	772.31	772.39	772.47	772.54	772.60
GIRDER 4	769.54	769.82	770.07	770.32	770.56	770.79	771.00	771.20	771.39	771.58	771.75	771.89	772.02	772.14	772.26	772.36	772.46	772.55	772.63	772.70	772.76
GIRDER 5	769.69	769.96	770.22	770.47	770.70	770.93	771.15	771.35	771.54	771.72	771.89	772.04	772.17	772.29	772.41	772.51	772.61	772.70	772.78	772.85	772.91
PGL WB BV	769.74	770.01	770.27	770.52	770.76	770.98	771.20	771.40	771.60	771.78	771.95	772.09	772.22	772.35	772.46	772.57	772.67	772.75	772.83	772.91	772.97
TOE OF MEDIAN CURB	769.77	770.05	770.31	770.56	770.79	771.02	771.24	771.44	771.63	771.82	771.99	772.13	772.26	772.38	772.50	772.61	772.70	772.79	772.87	772.95	773.01
CROWN	769.83	770.10	770.36	770.61	770.85	771.08	771.29	771.50	771.69	771.87	772.04	772.18	772.32	772.44	772.56	772.66	772.76	772.85	772.93	773.00	773.07
GIRDER 6	769.83	770.10	770.36	770.61	770.85	771.08	771.29	771.50	771.69	771.87	772.04	772.18	772.32	772.44	772.56	772.66	772.76	772.85	772.93	773.00	773.07
TOE OF MEDIAN CURB	769.76	770.03	770.29	770.54	770.78	771.01	771.23	771.43	771.62	771.81	771.98	772.12	772.25	772.38	772.49	772.60	772.70	772.79	772.87	772.94	773.00
PGL EB BV	769.72	769.99	770.25	770.50	770.74	770.97	771.18	771.39	771.58	771.76	771.94	772.08	772.21	772.34	772.45	772.56	772.66	772.75	772.83	772.90	772.96
GIRDER 7	769.64	769.93	770.19	770.44	770.68	770.90	771.12	771.33	771.52	771.70	771.87	772.02	772.15	772.27	772.39	772.50	772.60	772.69	772.77	772.84	772.90
GIRDER 8	769.47	769.75	770.01	770.26	770.50	770.73	770.95	771.16	771.35	771.53	771.71	771.85	771.98	772.11	772.22	772.33	772.43	772.52	772.60	772.68	772.74
GIRDER 9	769.29	769.58	769.84	770.09	770.33	770.56	770.78	770.98	771.18	771.36	771.54	771.68	771.82	771.94	772.06	772.17	772.27	772.36	772.44	772.51	772.58
GIRDER 10	769.12	769.40	769.67	769.92	770.16	770.39	770.61	770.81	771.01	771.20	771.37	771.51	771.65	771.78	771.89	772.00	772.10	772.19	772.28	772.35	772.42
TOE OF S CURB	769.06	769.35	769.61	769.87	770.11	770.34	770.56	770.76	770.96	771.15	771.32	771.46	771.60	771.73	771.84	771.95	772.05	772.15	772.23	772.30	772.37
GIRDER 11	768.94	769.23	769.49	769.74	769.99	770.22	770.44	770.64	770.84	771.03	771.20	771.35	771.48	771.61	771.73	771.84	771.94	772.03	772.11	772.19	772.25
EDGE OF DECK	768.89	769.17	769.44	769.69	769.93	770.16	770.38	770.59	770.79	770.97	771.15	771.29	771.43	771.56	771.68	771.79	771.89	771.98	772.06	772.14	772.20
TOE OF BARRIER	769.71	769.99	770.26	770.51	770.75	770.98	771.20	771.41	771.61	771.79	771.97	772.11	772.25	772.38	772.50	772.61	772.71	772.80	772.88	772.96	773.02

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

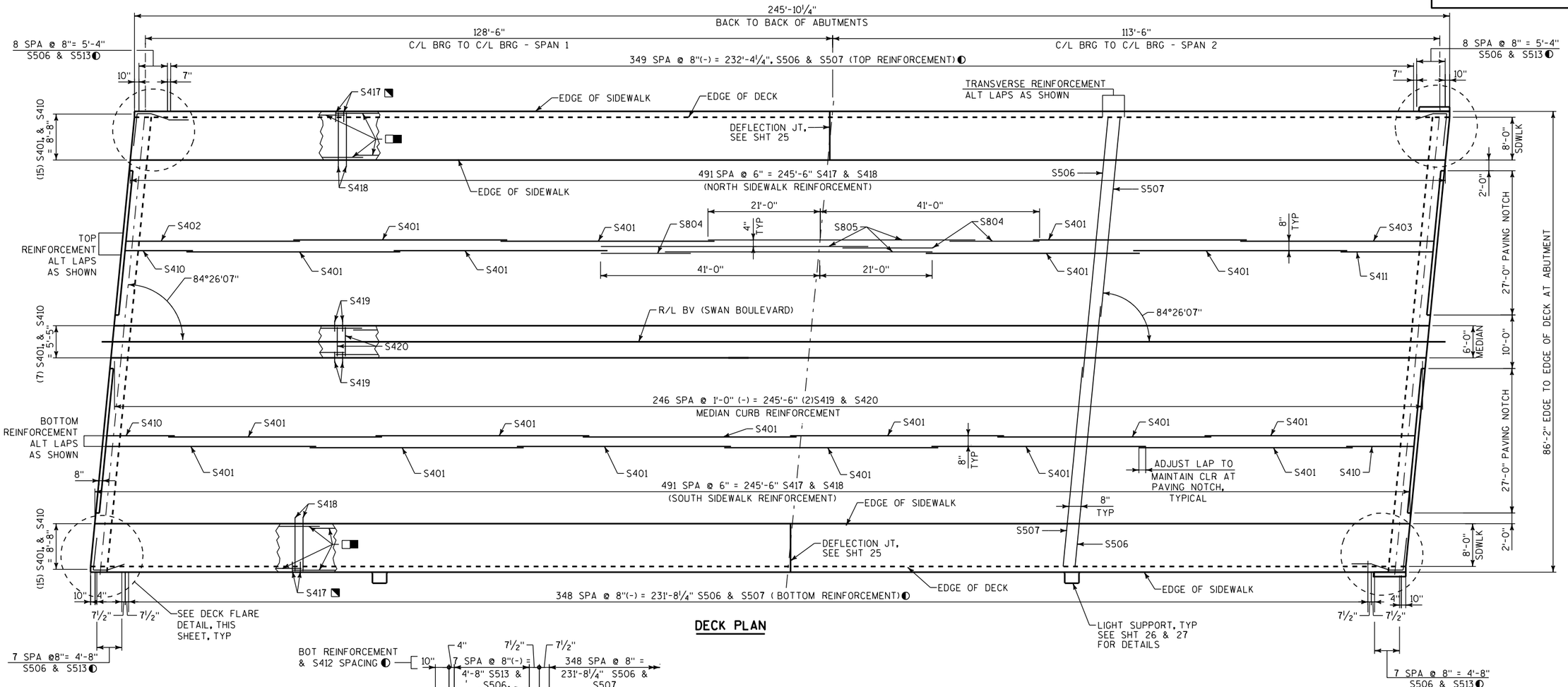
DRAWN BY MS | PLANS CK'D. CNK

SUPERSTRUCTURE
FRAMING PLAN

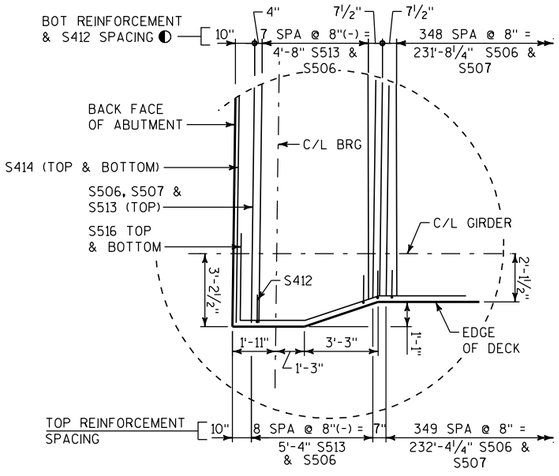
SHEET 18 OF 31

STATE PROJECT NUMBER

1060-33-73



DECK PLAN



DECK FLARE DETAIL

(TYP 4 LOCATIONS)
(LONG REINF NOT SHOWN FOR CLARITY)

LEGEND:

- DISCONTINUE S417 BARS AT LIGHT SUPPORT LOCATIONS ON SOUTH PARAPET. SEE LIGHT SUPPORT REINFORCEMENT SHEET FOR DETAILS.
- S401 AND S410 LAP PLACEMENT IN SIDEWALKS AND MEDIAN SHALL BE SIMILAR TO BOTTOM REINFORCEMENT SHOWN. FOR TRANSVERSE LOCATION, SEE SUPERSTRUCTURE CROSS SECTIONS.
- PLACE S412 B/W S506, S507, OR S513 TOP REINF AT EDGES OF DECK, TYP EACH SIDE.

TABLE OF BAR LAPS:

BAR SIZE	DIRECT.	MIN LAP
4	LONG	1'-3"
5	TRANS	2'-0"
8	LONG	4'-10"

SMALLER BAR CONTROLS LAP LENGTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

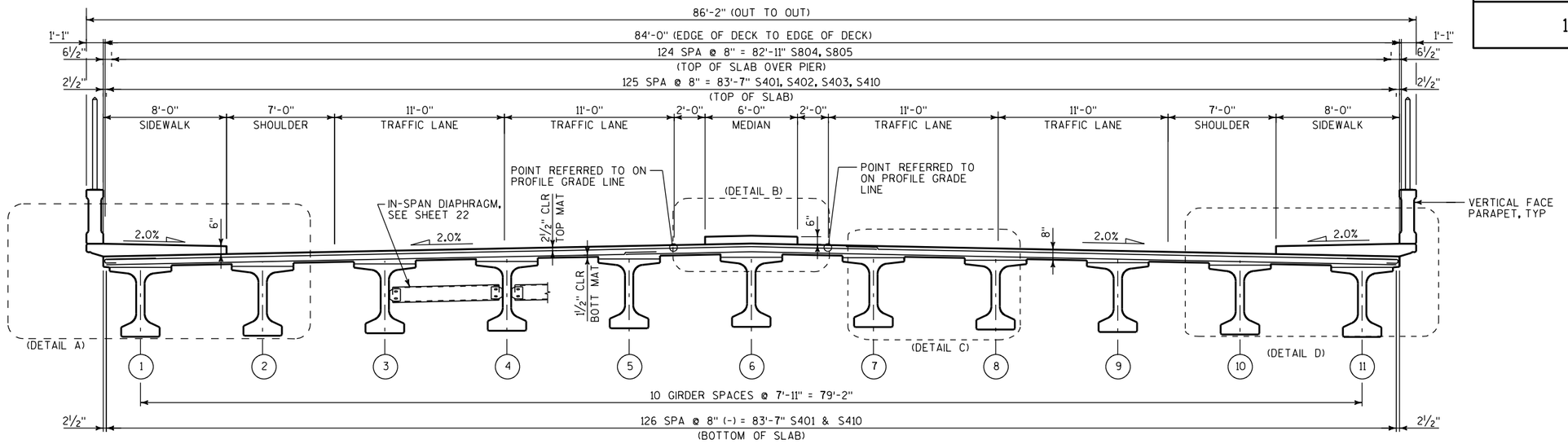
STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

SUPERSTRUCTURE REINFORCEMENT

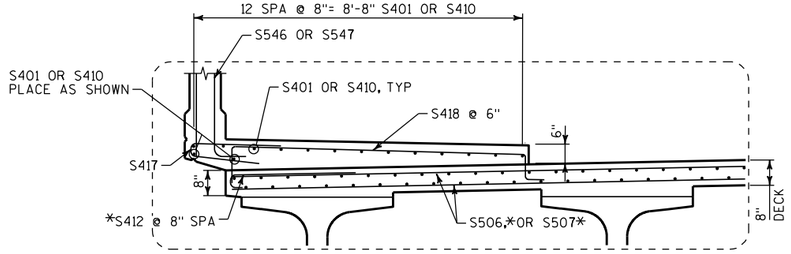
SHEET 19 OF 31

STATE PROJECT NUMBER
1060-33-73



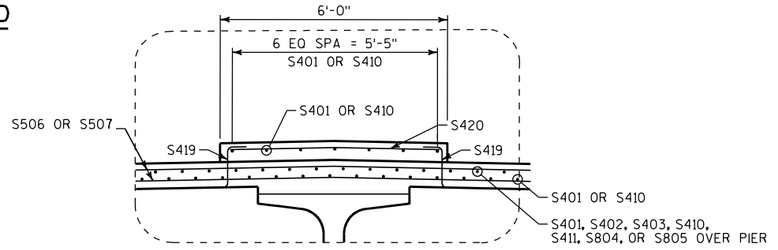
TYPICAL SECTION THRU SWAN BOULEVARD

(LOOKING EAST)



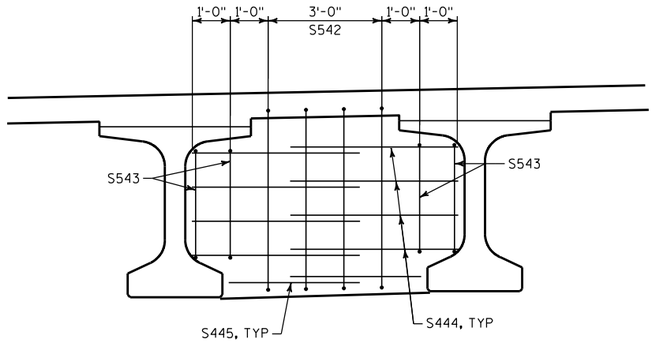
SIDEWALK DETAIL (ON BOTH SIDES)

(DETAIL A)



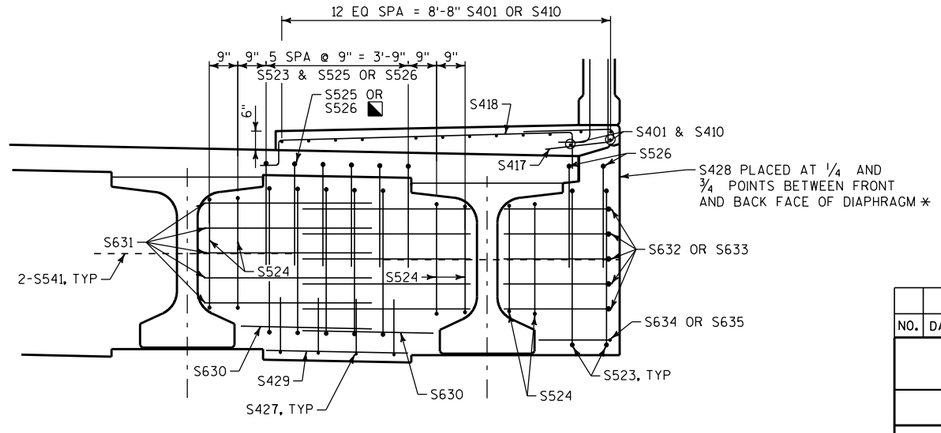
MEDIAN CURB DETAIL

(DETAIL B)



PIER DIAPHRAGM DETAIL

(DETAIL C)



ABUTMENT DIAPHRAGM DETAIL

(DETAIL D)
(BACK FACE HORIZONTAL BARS S639 AND S640 NOT SHOWN FOR CLARITY - SEE SHT 21 FOR SECTION)

◥ S525 SHALL BE PLACED AT DIAPHRAGM LOCATIONS WITH A PAVING NOTCH WHEREAS S526 SHALL BE PLACED AT LOCATIONS WITHOUT A PAVING NOTCH. SEE SHT 21.

* BARS NOT SHOWN IN DETAIL D FOR CLARITY. BAR LAYOUT AT SOUTH EDGE OF SLAB IS SIMILAR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

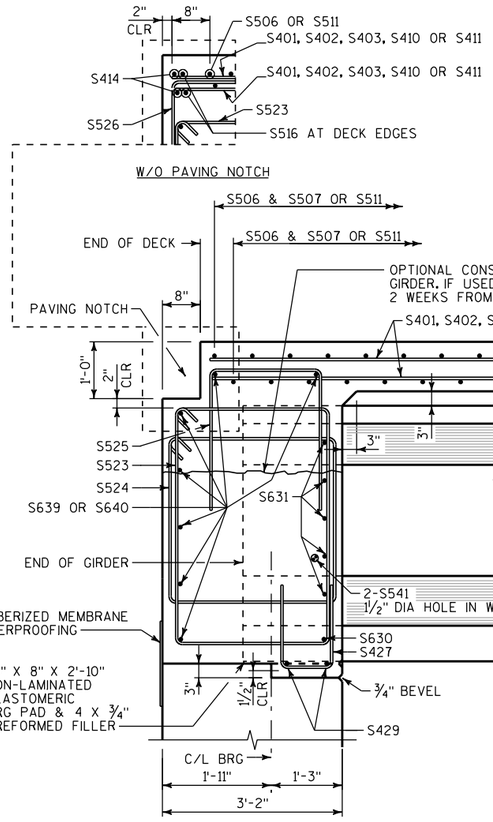
SUPERSTRUCTURE CROSS SECTION

SHEET 20 OF 31

8

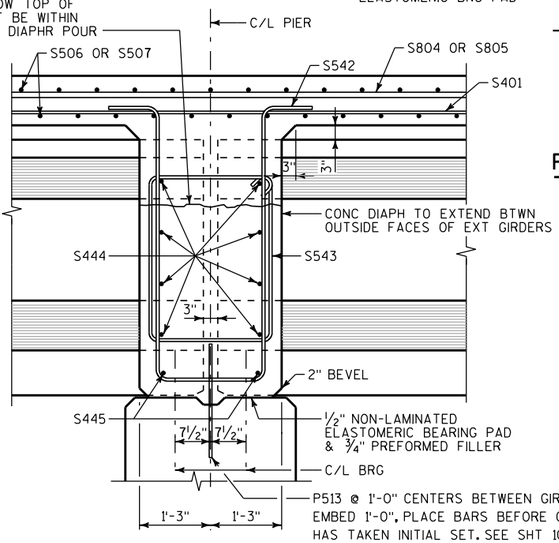
8

STATE PROJECT NUMBER
1060-33-73



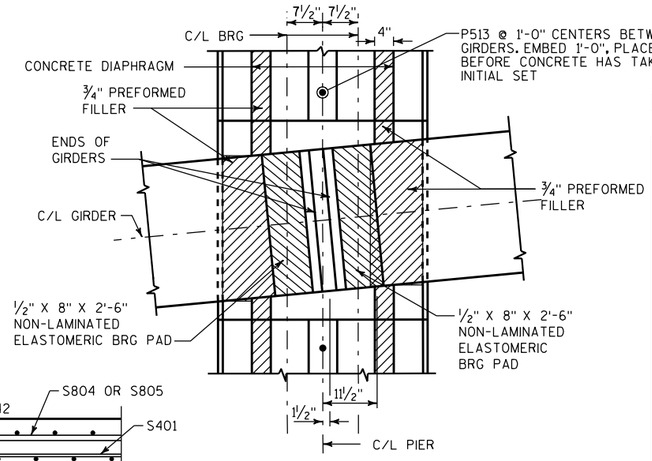
PART LONGITUDINAL SECTION AT ABUTMENT

CONC DIAPH TO EXTEND OUT TO OUT OF BRIDGE DECK
(SEE SHEETS 7 AND 9 FOR ABUTMENT BEAM SEAT DETAILS)



PART LONGITUDINAL SECTION AT PIER

CONC DIAPH TO EXTEND BETWEEN INSIDE WEB FACES OF EXTERIOR GIRDERS

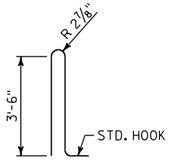


PIER BEARING PAD DETAIL

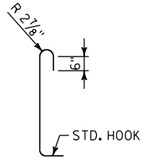
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	1425	40'-0"	-	SLAB, CURB & SIDEWALK LONG TOP & BOTTOM
S402	X	63	33'-3"	-	SLAB, CURB, & SIDEWALK LONG TOP
S403	X	63	36'-9"	-	SLAB, CURB, & SIDEWALK LONG TOP
S804	X	251	16'-10"	-	SLAB LONG TOP
S805	X	251	50'-0"	-	SLAB LONG TOP
S506	X	737	50'-0"	-	SLAB TRANSVERSE TOP & BOTTOM
S507	X	701	38'-0"	-	SLAB TRANSVERSE TOP & BOTTOM
S410	X	227	13'-6"	-	SLAB, CURB, & SIDEWALK LONG TOP & BOTTOM
S411	X	63	18'-0"	-	SLAB, CURB, & SIDEWALK LONG TOP
S412	X	737	4'-1"	X	SLAB TRANSVERSE TOP AT OVERHANG
S513	X	36	39'-0"	-	SLAB TRANSVERSE TOP & BOTTOM AT DECK FLARE
S414	X	8	10'-8"	-	SLAB TRANSVERSE TOP & BOTTOM AT ABUTMENTS
S516	X	8	13'-11"	X	SLAB TOP & BOTTOM AT DECK FLARE
S417	X	970	5'-10"	X	NORTH & SOUTH SIDEWALK TRANSVERSE
S418	X	970	10'-10"	X	NORTH & SOUTH SIDEWALK TRANSVERSE
S419	X	494	2'-10"	X	MEDIAN CURB TRANSVERSE
S420	X	247	5'-8"	-	MEDIAN CURB TRANSVERSE
S523	X	128	14'-7"	X	ABUTMENT DIAPHRAGM VERT
S524	X	88	11'-11"	X	ABUTMENT DIAPHRAGM VERT BETWEEN GIRDER FLANGES
S525	X	96	8'-11"	X	ABUTMENT DIAPHRAGM VERT AT PAVING NOTCH
S526	X	32	9'-7"	X	ABUTMENT DIAPHRAGM VERT
S427	X	80	3'-5"	X	ABUTMENT DIAPHRAGM VERT BETWEEN BEAM SEATS
S428	X	8	4'-2"	-	ABUTMENT DIAPHRAGM VERT EXTERIOR FACES
S429	X	40	3'-7"	-	ABUTMENT DIAPHRAGM HORIZ FRONT FACE
S630	X	40	3'-6"	-	ABUTMENT DIAPHRAGM HORIZ FRONT FACE
S631	X	200	4'-6"	-	ABUTMENT DIAPHRAGM HORIZ FRONT FACE
S632	X	10	9'-0"	X	ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S633	X	10	9'-0"	X	ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S634	X	2	7'-10"	X	ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S635	X	2	7'-10"	X	ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S639	X	28	30'-0"	-	ABUTMENT DIAPHRAGM HORIZ BACK FACE
S640	X	14	37'-0"	-	ABUTMENT DIAPHRAGM HORIZ BACK FACE
S541	X	44	6'-0"	-	ABUTMENT DIAPHRAGM THRU GIRDER WEBS
S542	X	40	12'-7"	X	PIER DIAPHRAGM VERT
S543	X	40	10'-8"	X	PIER DIAPHRAGM VERT
S444	X	160	4'-5"	-	PIER DIAPHRAGM HORIZ
S445	X	40	3'-6"	-	PIER DIAPHRAGM HORIZ
S546	X	475	8'-0"	X	VERTICAL FACE PARAPET
S547	X	24	11'-1"	X	VERTICAL FACE PARAPET AT ABUTMENTS
S548	X	4	5'-0"	X	VERTICAL FACE PARAPET AT JB



S546



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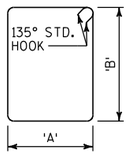
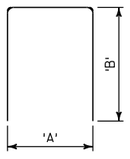
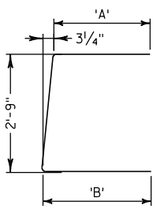


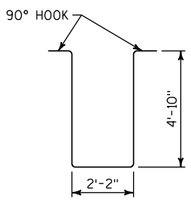
BAR MARK	DIM. 'A'	DIM. 'B'
S523	2'-10"	4'-2"
S524	2'-10"	2'-10"
S543	2'-2"	2'-11"



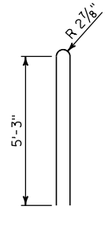
BAR MARK	DIM. 'A'	DIM. 'B'
S525	2'-2"	3'-6"
S526	2'-10"	3'-6"
S427	11"	1'-4"



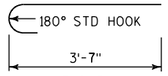
BAR MARK	DIM. 'A'	DIM. 'B'
S632	2'-9"	3'-10"
S633	3'-10"	2'-9"
S634	1'-7"	3'-10"
S635	3'-10"	1'-7"



S542



S547



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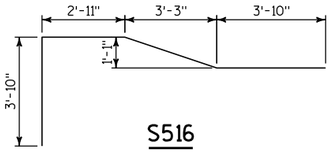

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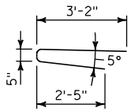

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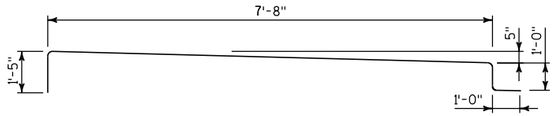

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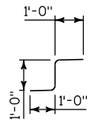

S419

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

SUPERSTRUCTURE DETAILS

SHEET 21 OF 31

8

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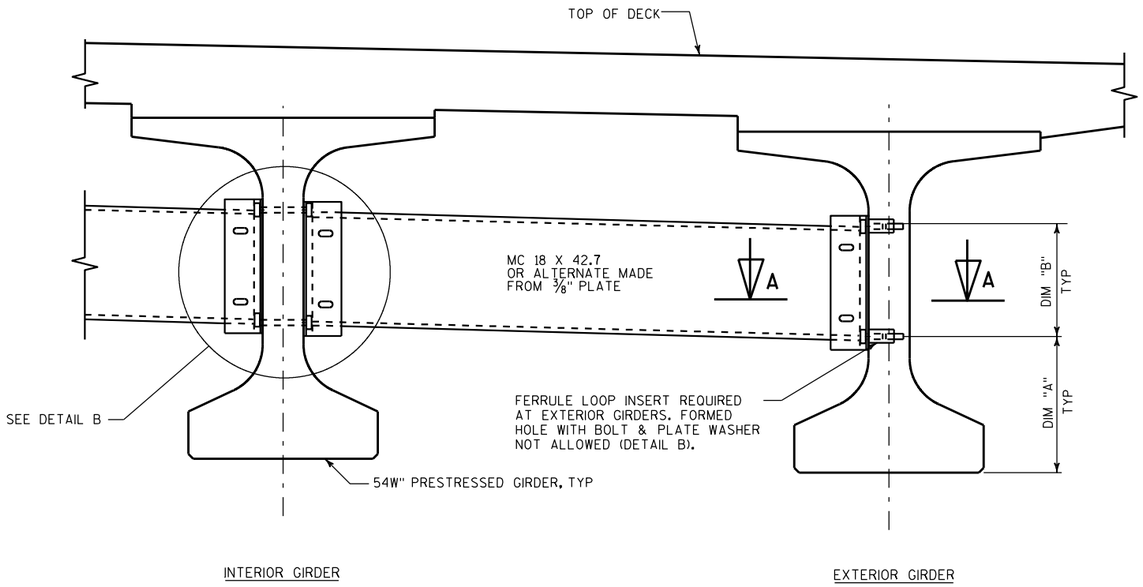


PART TRANSVERSE SECTION AT DIAPHRAGM

DIMENSION TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM "X"
54W"	1'-9 1/8"	1'-5 7/8"	1'-9 1/2"	4 1/4"

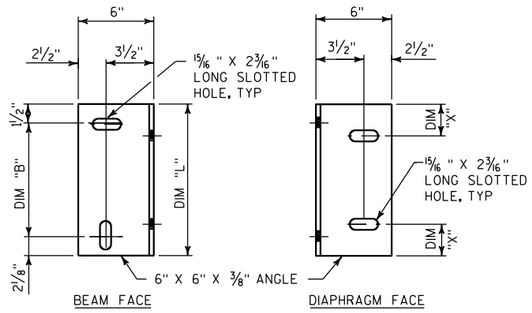
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-775, EACH.

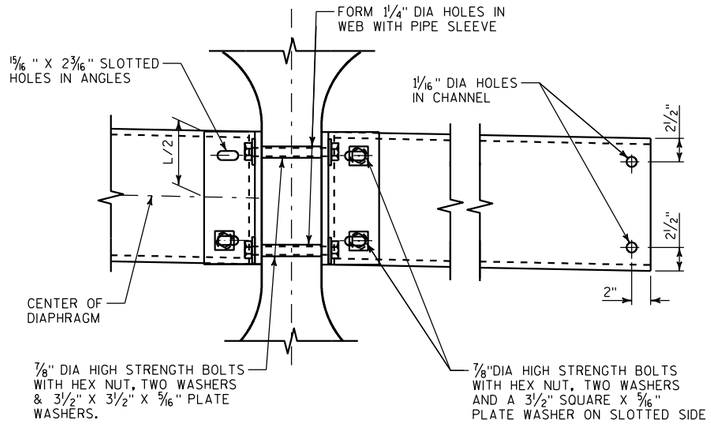
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

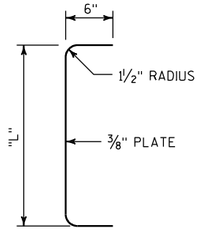
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



DIAPHRAGM SUPPORT

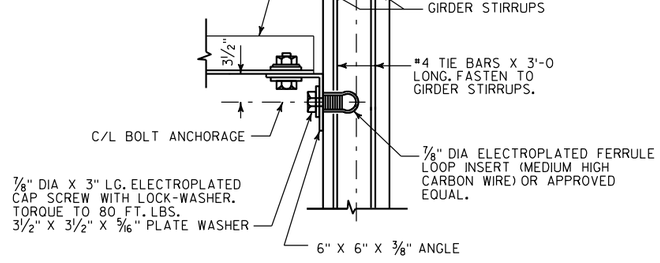


DETAIL B



SECTION THRU ALTERNATE DIAPHRAGM

* DIM "X" = 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

STEEL DIAPHRAGM

SHEET 22 OF 31

8

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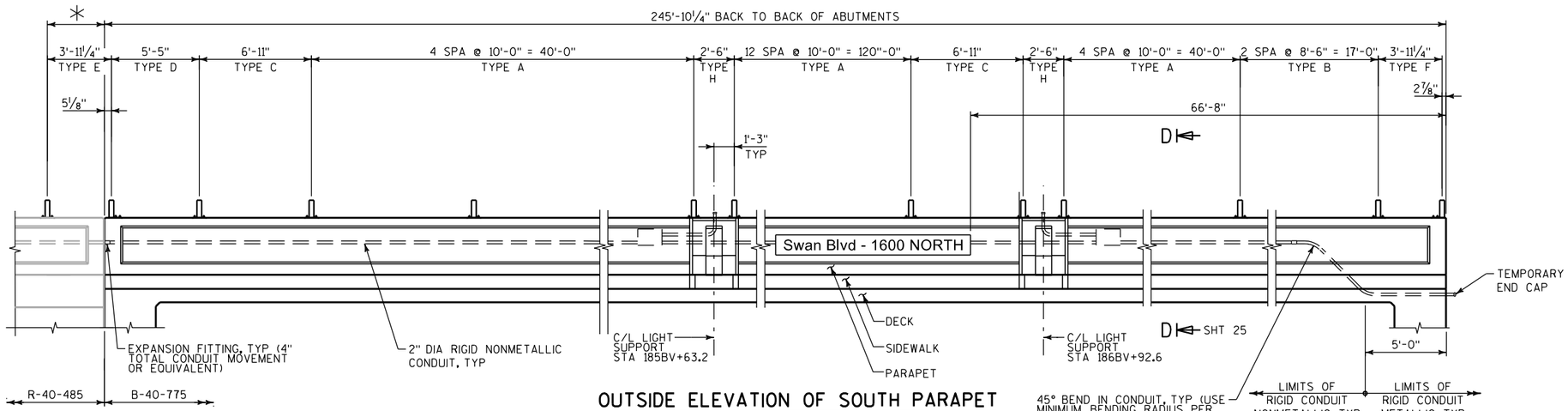
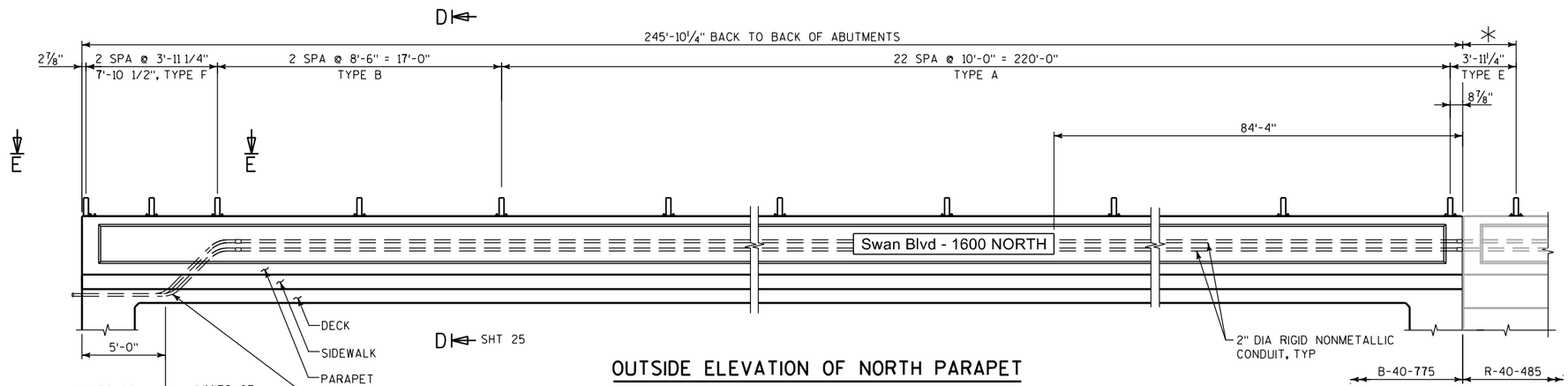
STATE PROJECT NUMBER
1060-33-73



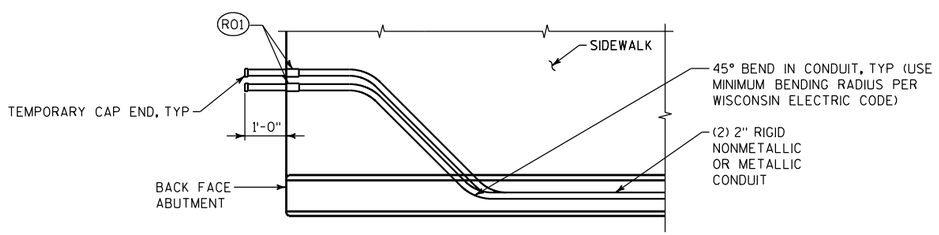
OUTSIDE ELEVATION OF SOUTH PARAPET

(LOOKING NORTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



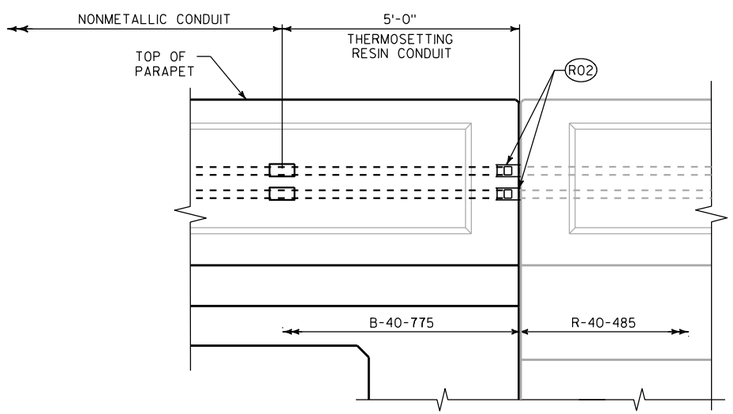
OUTSIDE ELEVATION OF NORTH PARAPET

(LOOKING SOUTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



SECTION E-E

(NE CORNER SHOWN, SE CORNER SIMILAR)



ELEVATION AT WEST ABUTMENT

(LOOKING SOUTH - NW CORNER SHOWN, SW CORNER SIMILAR)

LEGEND

(R01) METALLIC CONDUIT EXPANSION FITTING (O-Z/GEDNEY TYPE AX-200 & BONDING JUMPER) WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".

(R02) REINFORCED THERMOSETTING RESIN CONDUIT (RTRC) EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCLUDED IN THE BID ITEM "CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH".

✳ THIS PORTION OF FENCE IS INCLUDED IN THE BID ITEM "FENCE DECORATIVE BRIDGE" FOR STRUCTURE B-40-775 AND INCLUDES BASE PLATES AND ANCHORS THAT ARE ATTACHED TO R-40-485.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY	MS	PLANS CK'D.	CNK

VERTICAL FACE PARAPET (1 OF 3)

SHEET 23 OF 31

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STATE PROJECT NUMBER
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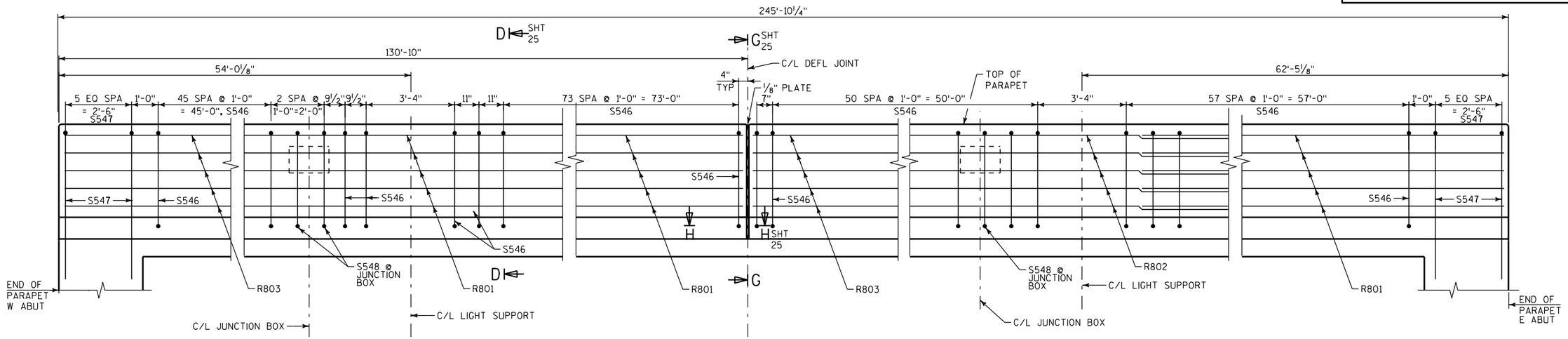
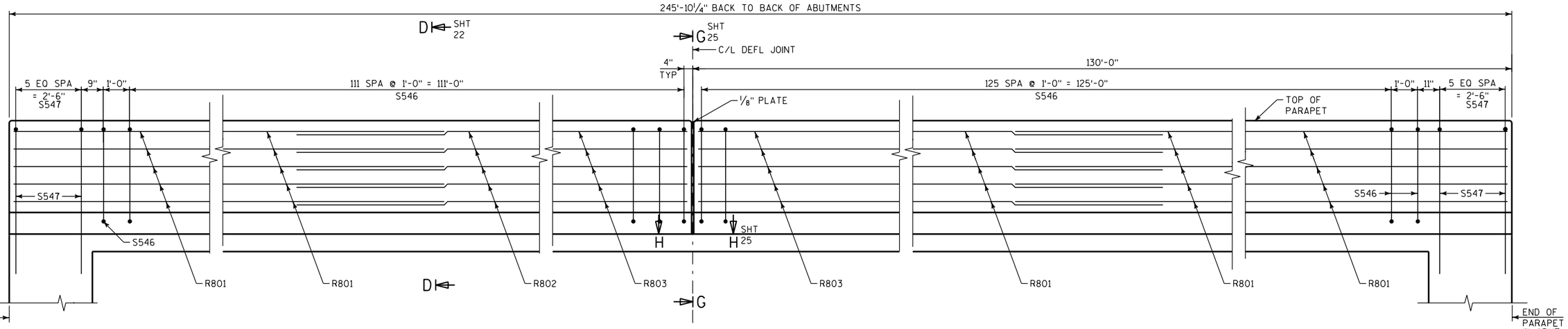


ELEVATION - SOUTH PARAPET

(LOOKING NORTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



ELEVATION - NORTH PARAPET

(LOOKING SOUTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
R801	X	54	60'-0"		PARAPET LONG
R802	X	18	44'-6"		PARAPET LONG
R803	X	36	22'-8"		PARAPET LONG
					PARAPET LONG

NOTES:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

LAP LONGITUDINAL BARS A MINIMUM OF 5'-9".

NOTES

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END. THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

VERTICAL FACE PARAPET (2 OF 3)

SHEET 24 OF 31

8

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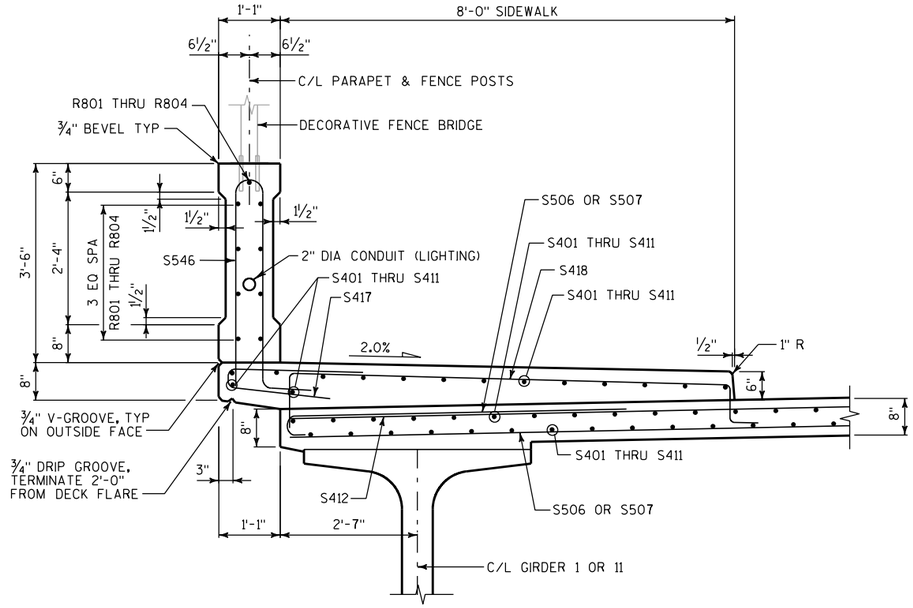
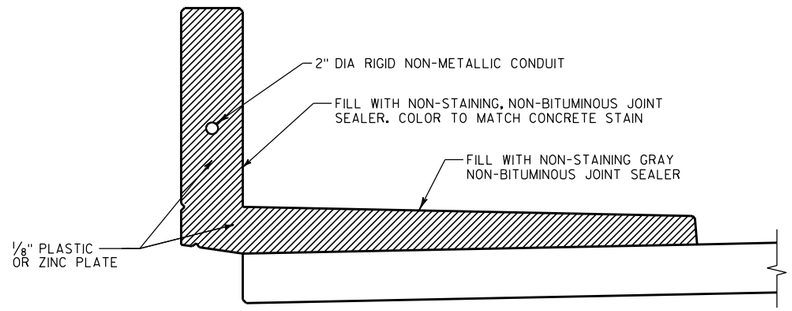
STATE PROJECT NUMBER

1060-33-73



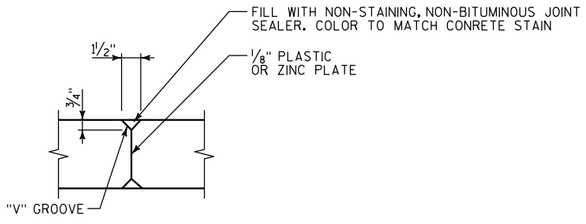
SECTION D-D

(SOUTH PARAPET SHOWN)
1-2" DIA CONDUIT (LIGHTING) SOUTH PARAPET
2-2" DIA CONDUITS (FTMS) NORTH PARAPET



SECTION G-G

THRU DEFLECTION JOINT (SEE SHEET 24 FOR LOCATIONS)
(SOUTH PARAPET SHOWN - NORTH PARAPET SIMILAR)



SECTION H-H

THRU DEFLECTION JOINT
(SEE SHEET 24 FOR LOCATIONS)

8

8

NO.	DATE	REVISION	BY

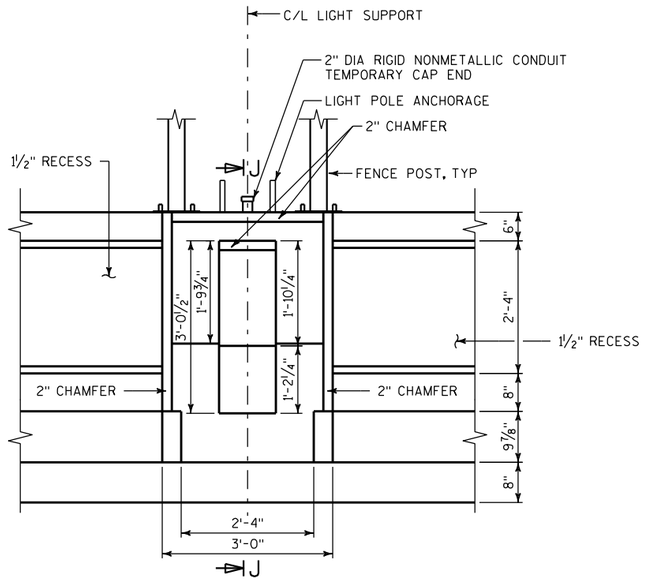
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

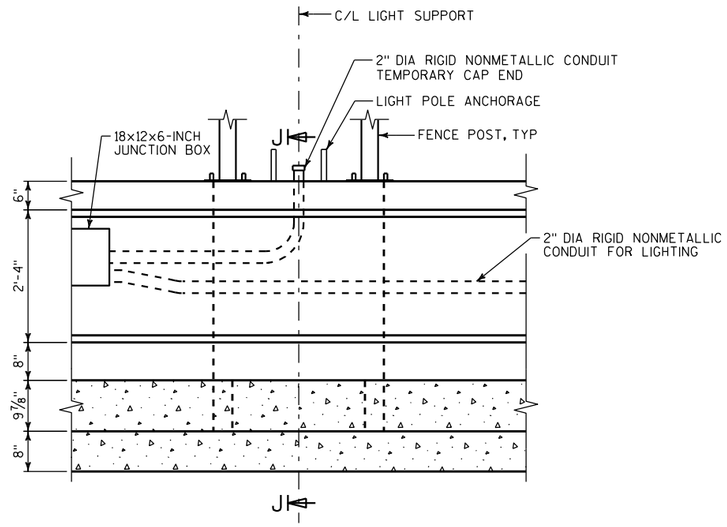
DRAWN BY MS | PLANS CK'D. CNK

VERTICAL FACE PARAPET (3 OF 3)

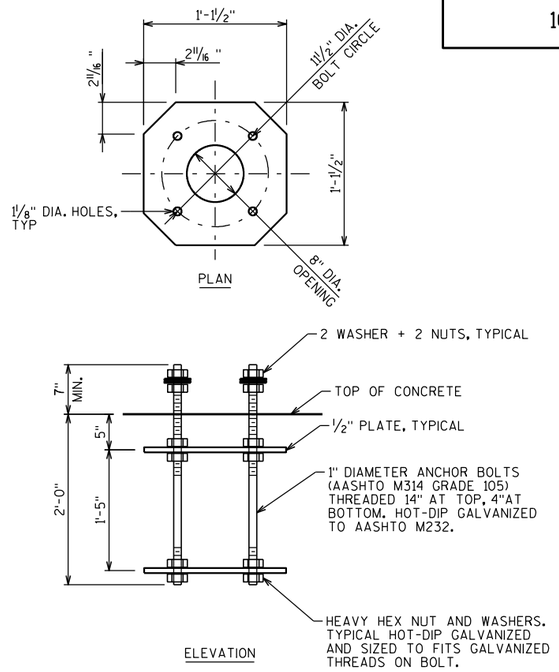
SHEET 25 OF 31



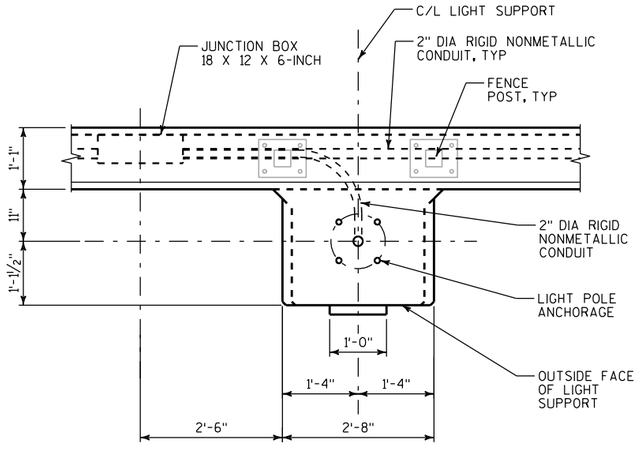
OUTSIDE ELEVATION AT LIGHT SUPPORT



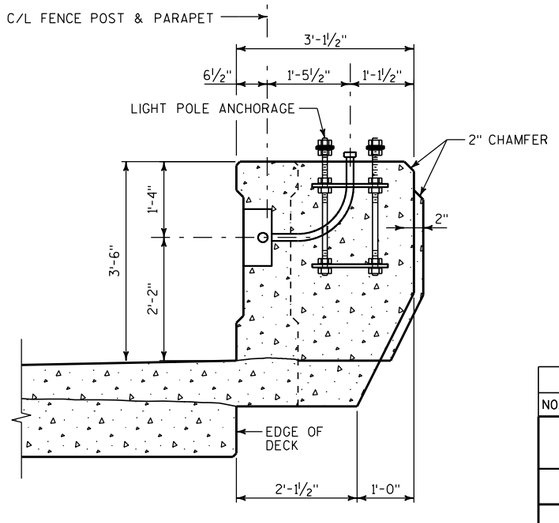
INSIDE ELEVATION AT LIGHT SUPPORT



ANCHOR ASSEMBLY LIGHT POLE STRUCTURES



PLAN AT LIGHT SUPPORT



SECTION J-J

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

LIGHT SUPPORT DETAILS

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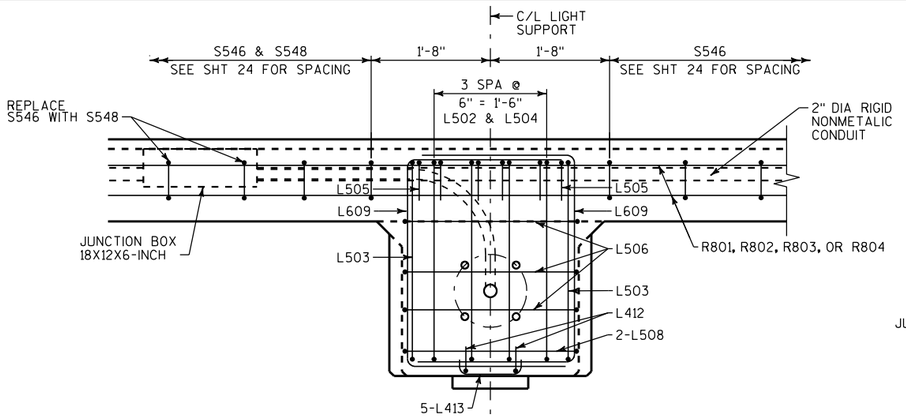
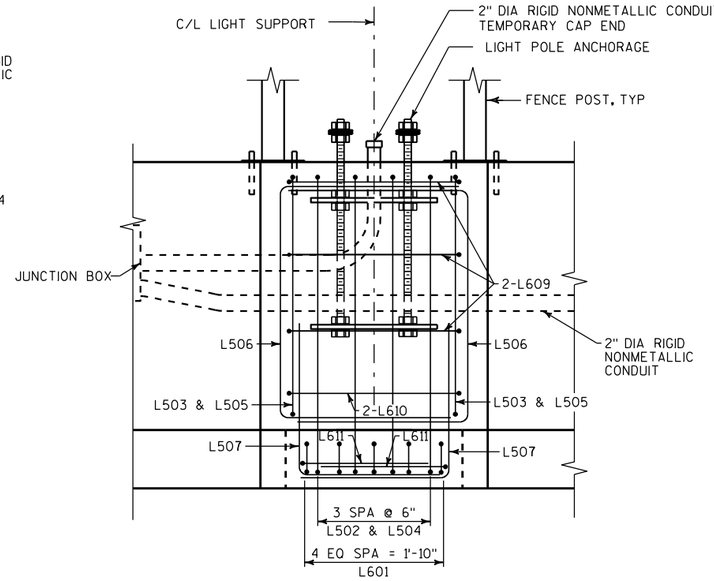
STATE PROJECT NUMBER
1060-33-73



REINFORCEMENT IN LIGHT SUPPORT

SECTIONAL PLAN



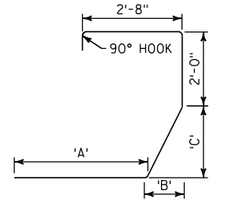
REINFORCEMENT IN LIGHT SUPPORT

OUTSIDE ELEVATION

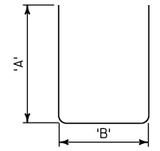
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

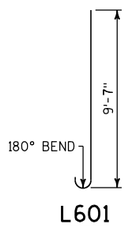
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L601	X	10	10'-3"	X	SIDEWALK HOOK
L502	X	8	10'-7"	X	VERTICAL - INSIDE
L503	X	4	7'-11"	X	VERTICAL - OUTSIDE
L504	X	8	4'-8"	X	VERTICAL - OUTSIDE
L505	X	4	3'-10"	X	VETICAL - BRIDGE-SIDE
L506	X	12	7'-5"	X	VERTICAL - BODY
L507	X	8	5'-8"	X	VERTICAL - LOWER BODY
L508	X	4	6'-6"	X	VERTICAL - OUTSIDE
L609	X	12	6'-10"	X	HORIZONTAL - TOP
L610	X	4	6'-5"	X	HORIZONTAL - BODY
L611	X	4	4'-7"	X	HORIZONTAL - BOTTOM
L412	X	4	3'-0"	X	OUTSIDE FACE
L413	X	10	1'-1"	X	OUTSIDE FACE



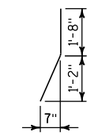
BAR MARK	DIM 'A'	DIM 'B'	DIM 'C'
L502	3'-6"	1'-0"	2'-0"
L503	2'-0"	0'-6"	1'-0"



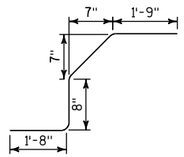
BAR MARK	DIM 'A'	DIM 'B'
L504	0'-6"	3'-11"
L505	0'-6"	3'-1"
L506	2'-3"	3'-2"
L507	2'-0"	1'-11"
L508	2'-3"	2'-3"
L609	2'-3"	2'-7"
L610	2'-3"	2'-3"
L413	0'-4"	0'-7"



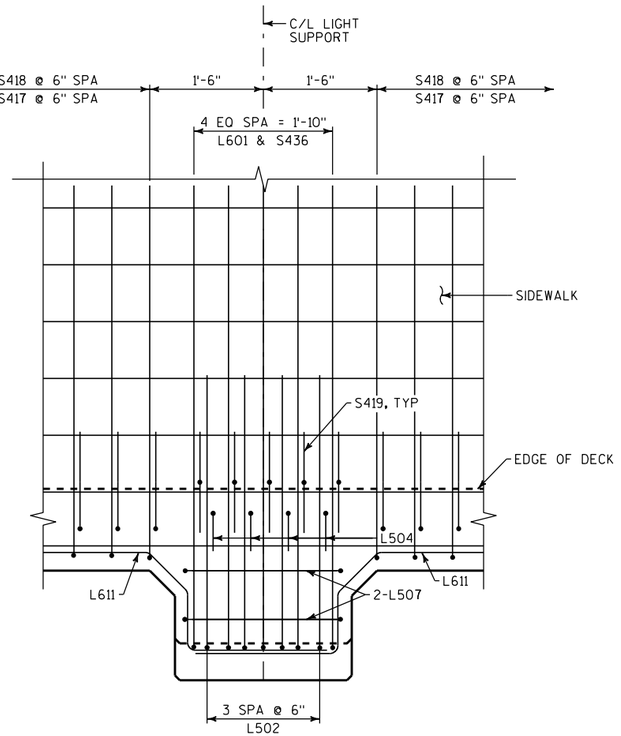
L601



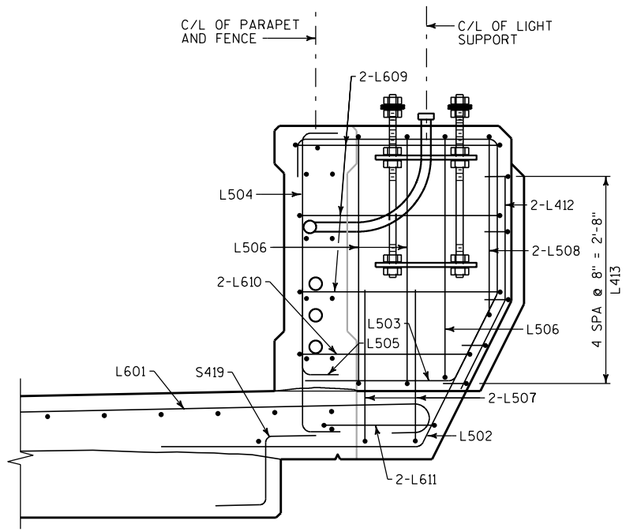
L412



L611



REINFORCEMENT IN SIDEWALK AT LIGHT SUPPORT



REINFORCEMENT IN SIDEWALK AND LIGHT SUPPORT

CROSS SECTION AT LIGHT SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

LIGHT SUPPORT REINFORCEMENT

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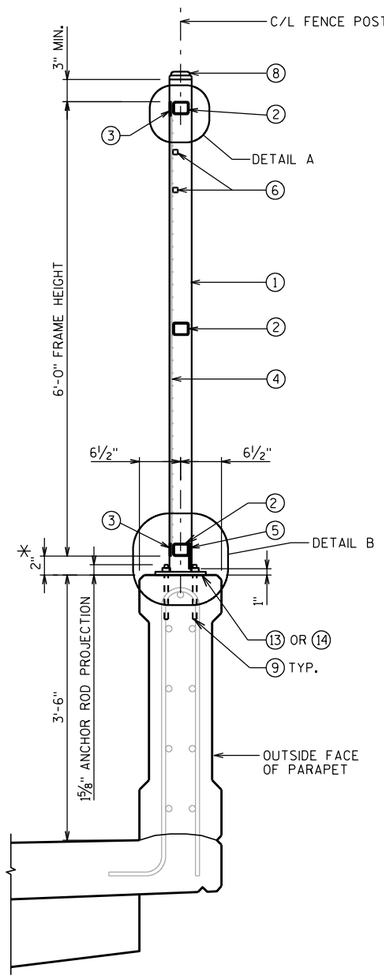
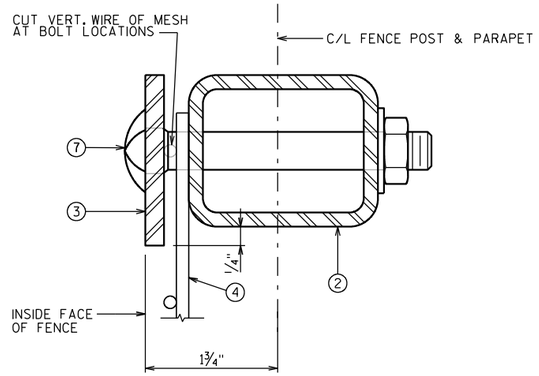
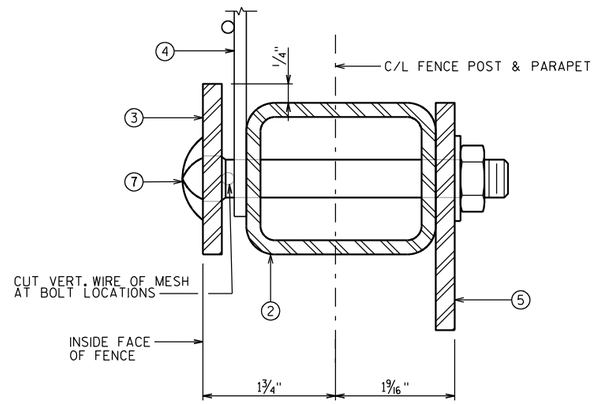
STATE PROJECT NUMBER
1060-33-73



SECTION THRU PARAPET



DETAIL A



DETAIL B

LEGEND

1. HSS 3½ X 3½ X ⅜ POST WITH ⅛" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.
2. HSS 2½ X 2½ X ⅜. WELD TO NO. 6.
3. PL 2¾" X ¼" WELDED FRAME. WELD TO NO. 4. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET. WELD TO NO. 3.
5. PL ¼" X WIDTH VARIES. PROVIDE SHORT SLOTTED VERT. HOLES FOR NO. 7.
6. ¾" x ¾" BAR. WELD TO NO. 2 & 6.
7. ½" DIA. CARRIAGE BOLT, WASHER & NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 & NO. 2 WHERE CONNECTED TO DECORATIVE INSET PLATE FOR SQUARE PORTION OF THE BOLT HEAD.
8. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
9. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 7" MINIMUM EMBEDMENT WITH A MINIMUM PULLOUT OF 20 KIPS.
10. PL ⅝" X 4½" X 6" CONNECTION WITH 2" DIA. HOLE FOR NO. 7. USE NO. 11 TO COVER 2" DIA. ADJUSTMENT HOLES.
11. PL ⅜" X 2" X 4½".
12. PL WASHER ¼" X 3½" X 3½".
13. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
14. PL ½" X 8" X 1'-0" BASE PLATE. WELD TO NO. 1.
15. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

* THE DIMENSION BETWEEN THE BOTTOM OF THE WELDED FRAME AND THE TOP OF THE PARAPET VARIES DUE TO THE VERTICAL PROFILE OF THE STRUCTURE. SET THIS DIMENSION TO 2" ADJACENT TO THE POST WHERE NO. 5 HAS THE SMALLEST VERTICAL DIMENSION.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE BRIDGE" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

FOR ELEVATIONS OF FENCE PANELS, SEE THIS SHT & SHT 29.

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.

STRUCTURAL TUBING SHALL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

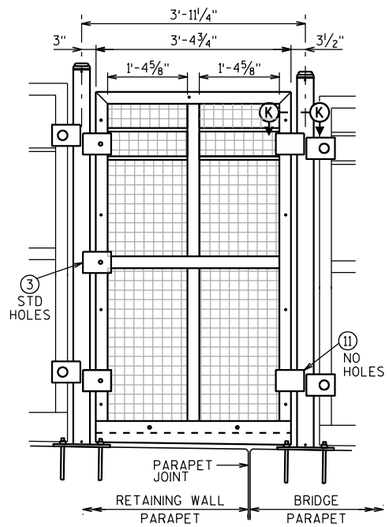
THE STEEL MESH SHALL BE TACK WELDED TO THE 2¾" X ¼" WELDED FRAME. THE MESH SHALL BE STRETCHED TO REMOVE SLACK.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

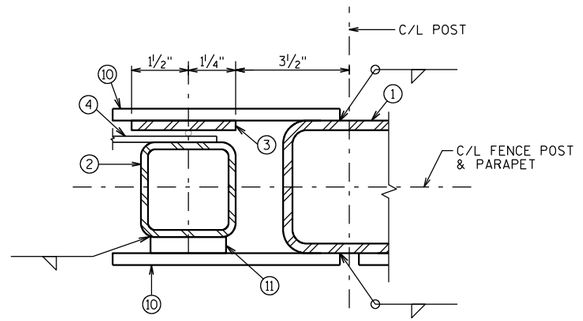
AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.4.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS ⅜".

COAT THE RAILING WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.



OUTSIDE ELEVATION OF PANEL TYPE "E"
(EXPANSION PANEL)



SECTION K-K

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY TEK | PLANS CK'D. KES

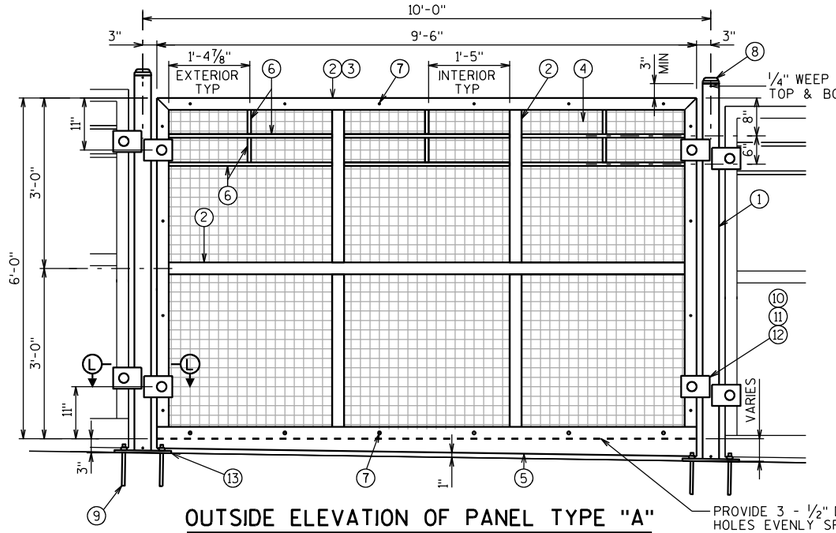
FENCE DECORATIVE BRIDGE (1 OF 3)

SHEET 28 OF 31

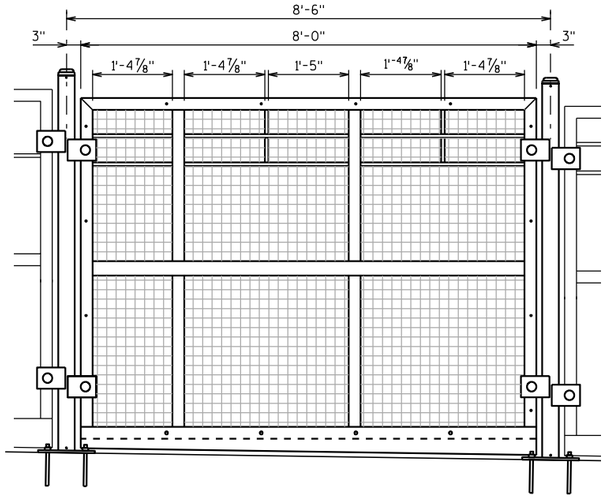
8

8

STATE PROJECT NUMBER
1060-33-73



OUTSIDE ELEVATION OF PANEL TYPE "A"



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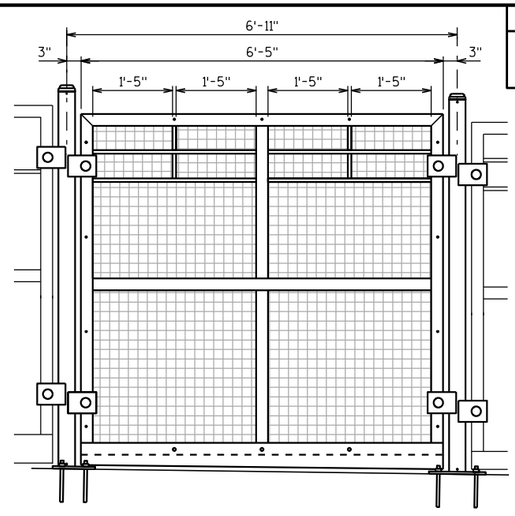
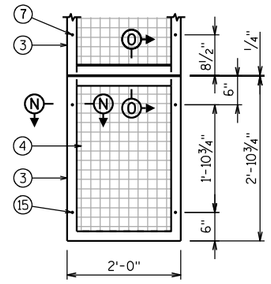
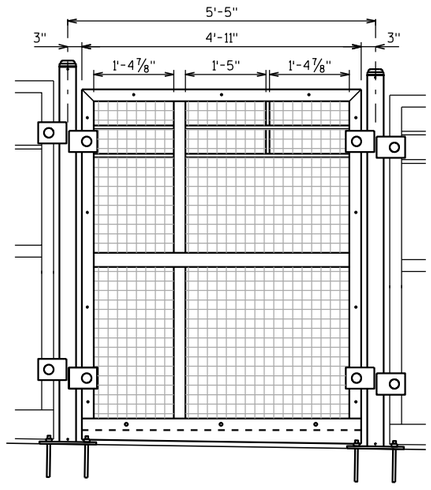


OUTSIDE ELEVATION OF PANEL TYPE "C"

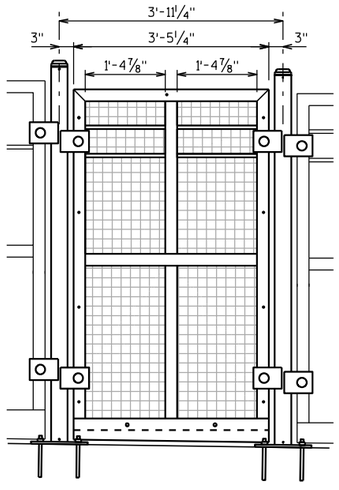


MAINTENANCE DOOR DETAIL

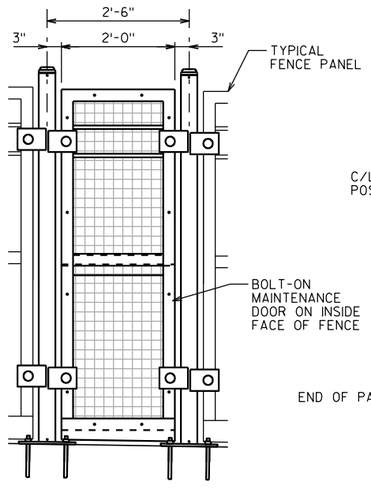
INSIDE ELEVATION



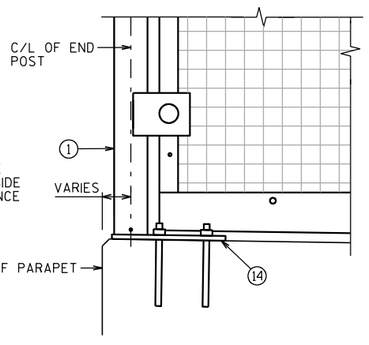
OUTSIDE ELEVATION OF PANEL TYPE "D"



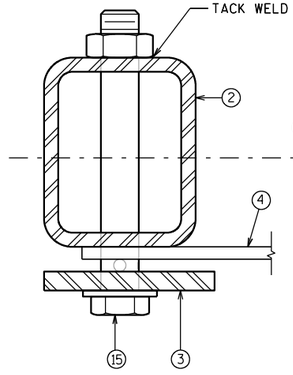
OUTSIDE ELEVATION OF PANEL TYPE "F"



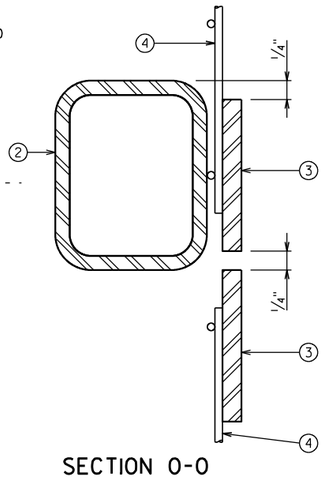
OUTSIDE ELEVATION OF PANEL TYPE "H"



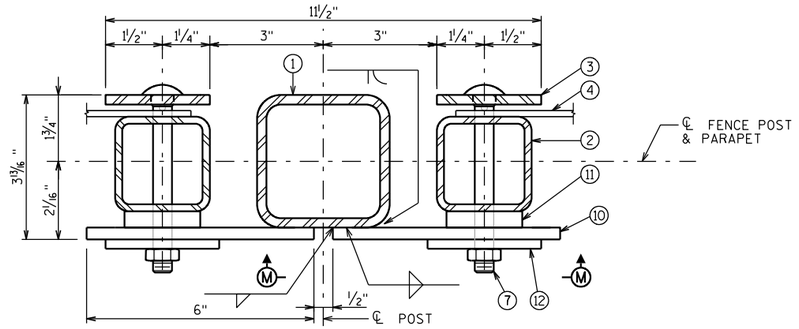
END POST DETAIL



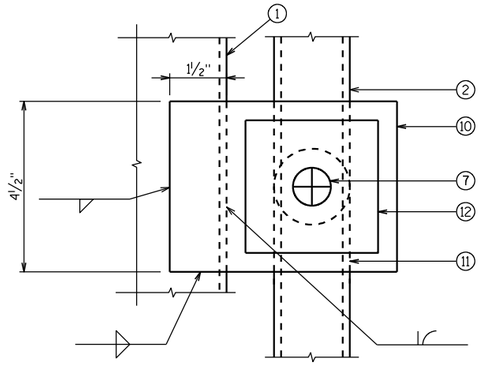
SECTION N-N



SECTION O-O



SECTION L-L



ELEVATION M-M

NOTES

FOR NOTES AND LEGEND, SEE SHEET 28.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE BRIDGE PANEL' ON SHEET 30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY	TEK	PLANS CK'D.	KES

FENCE DECORATIVE BRIDGE (2 OF 3)

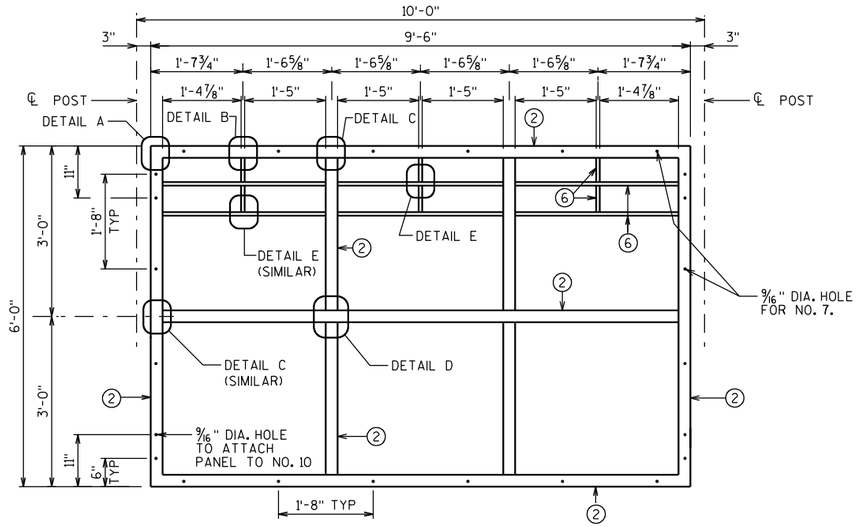
SHEET 29 OF 31

8

8

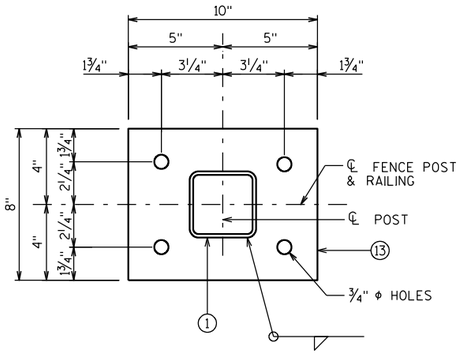
STATE PROJECT NUMBER

1060-33-73

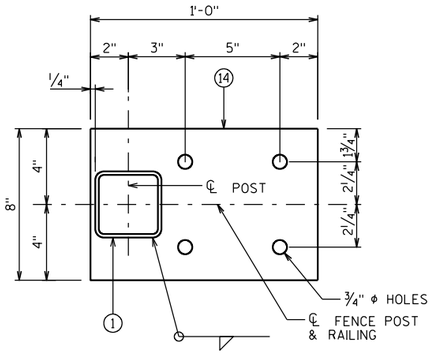


DECORATIVE FENCE BRIDGE PANEL

TYPICAL 10' PANEL SHOWN



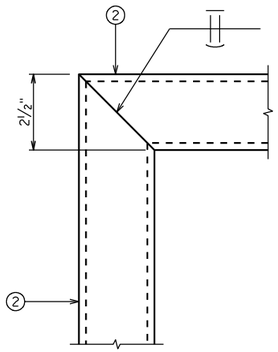
BASE PLATE



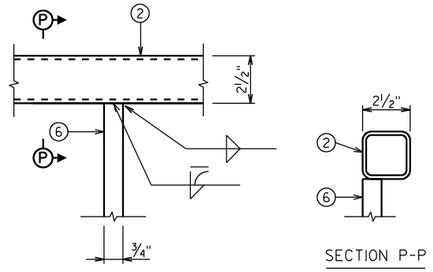
END BASE PLATE

(INSTALL AT END SECTIONS)

BASE PLATE DETAILS



DETAIL A

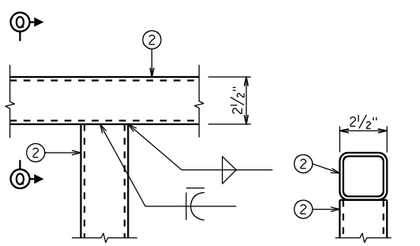


DETAIL B

SECTION P-P

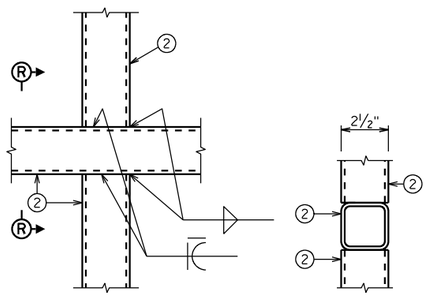
¼" PLATE (NO. 5)

PANEL TYPE	DIM 'J'	NO. 'K'	SPA 'L'	DIM 'M'	DIM 'N'
A	9'-6"	5	1'-8"	8'-4"	7"
B	8'-0"	4	1'-8"	6'-8"	8"
C	6'-5"	3	1'-8"	5'-0"	8½"
D	4'-11"	2	1'-8"	3'-4"	9½"
E	3'-4¾"	2	1'-1½"	2'-3"	6⅞"
F	3'-5¼"	2	1'-1½"	2'-3"	7⅛"
H	2'-0"	1	10"	10"	7"



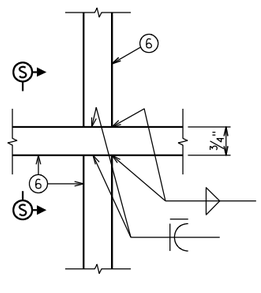
DETAIL C

SECTION Q-Q



DETAIL D

SECTION R-R



DETAIL E

SECTION S-S

NOTES

FOR NOTES AND LEGEND, SEE SHEET 28.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY TEK | PLANS CK'D. KES

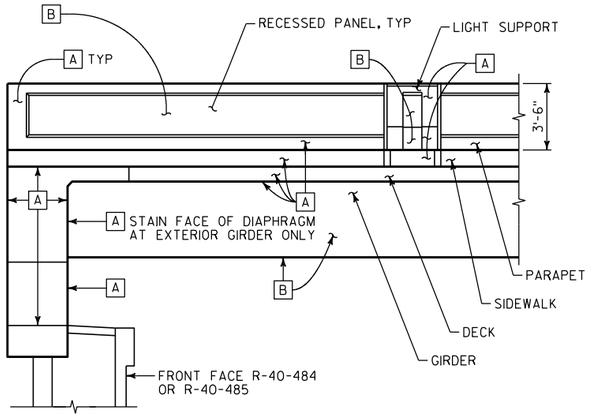
FENCE DECORATIVE BRIDGE (3 OF 3)

SHEET 30 OF 31

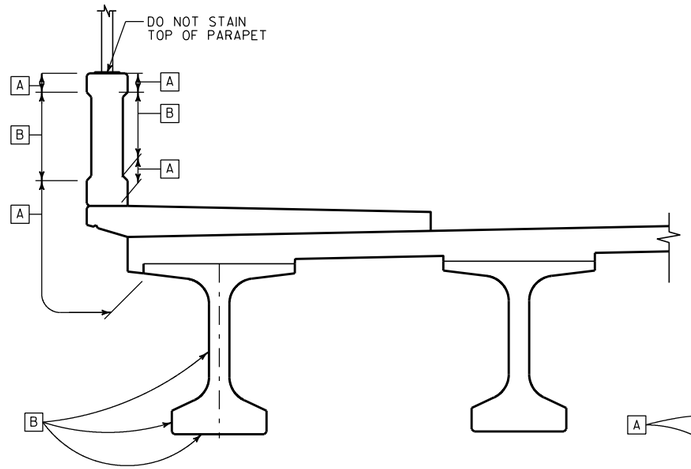
8

8

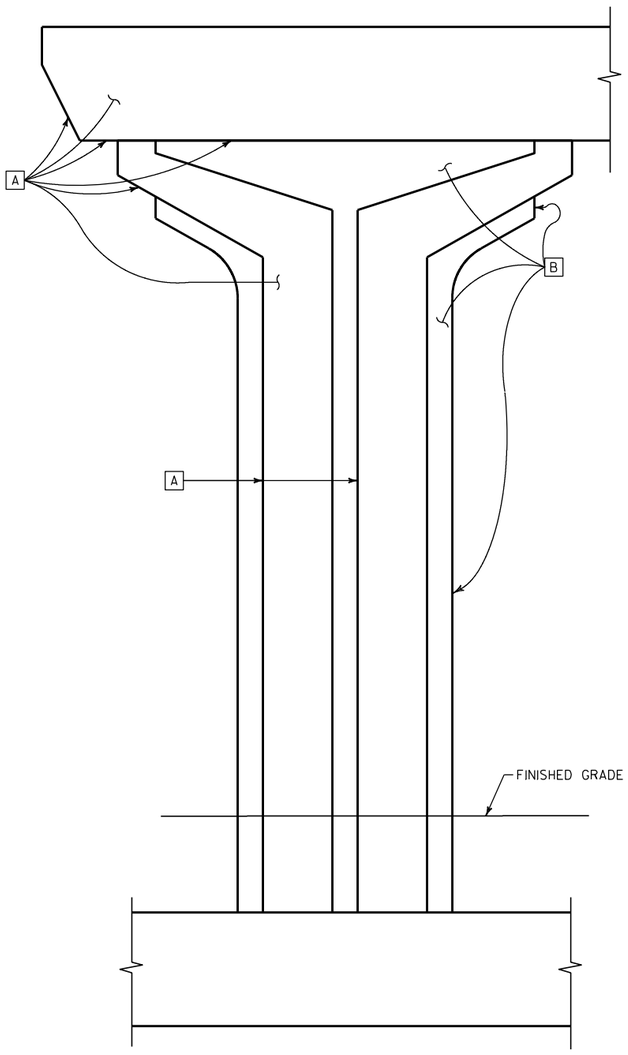
STATE PROJECT NUMBER
1060-33-73



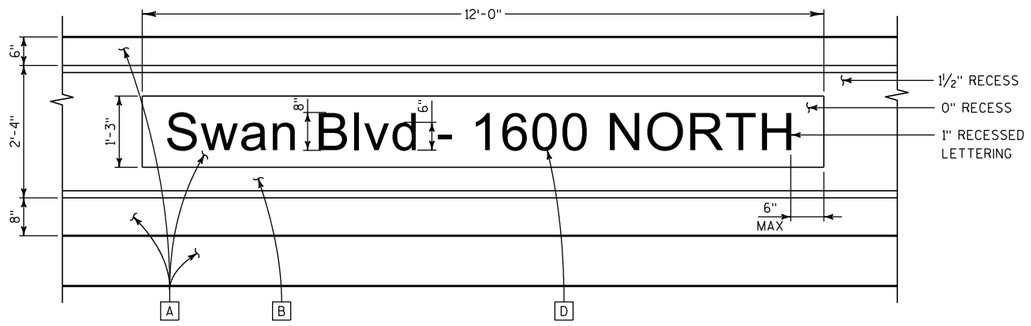
OUTSIDE ELEVATION OF PARAPET



ELEVATION OF DECK



ELEVATION OF PIER



INDENTED TEXT

EXTERIOR FACE OF PARAPET ONLY

NOTES:
LETTERING SHALL BE HELVETICA, 8" UPPER CASE AND 6" LOWER CASE.

SEE SHT 23 FOR LOCATIONS.

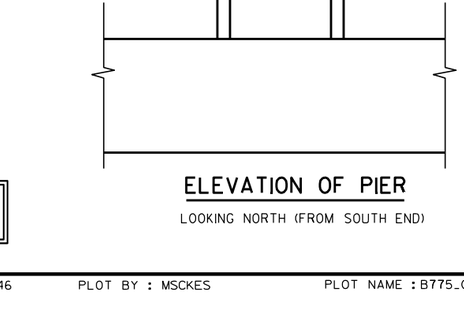
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		SIDEWALKS	FASCIA & EXPOSED UNDERSIDE
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO TOP OF CONCRETE SLOPE PAVING
		PIERS	SIDES OF GIRDER PEDESTALS, SIDES AND BOTTOM OF CAP BEAM AND COLUMNS TO FINISHED GRADE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON BOTH SIDES
		GIRDERS	EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS
		PIERS	REVEALS ON COLUMNS
C	ACCENT COLOR #2	PARAPETS	LETTERING AT ROADWAY NAME

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR : 33564
ACCENT COLOR #1: 33448
ACCENT COLOR #2: 37038

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



ELEVATION OF PIER

LOOKING NORTH (FROM SOUTH END)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-775

DRAWN BY MS | PLANS CK'D. CNK

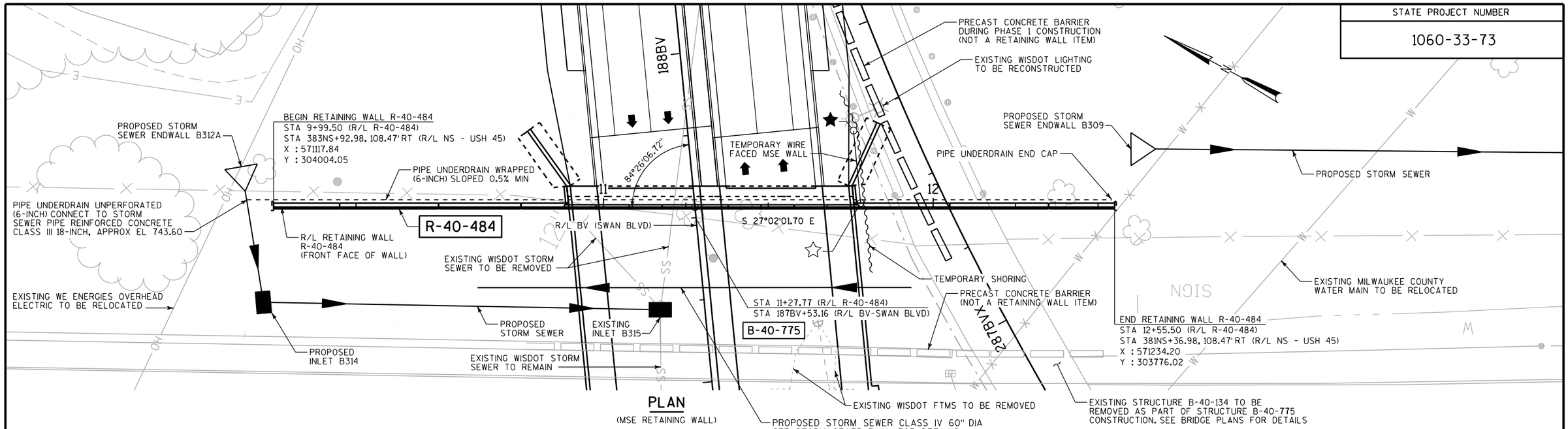
AESTHETIC DETAILS

SHEET 31 OF 31

8

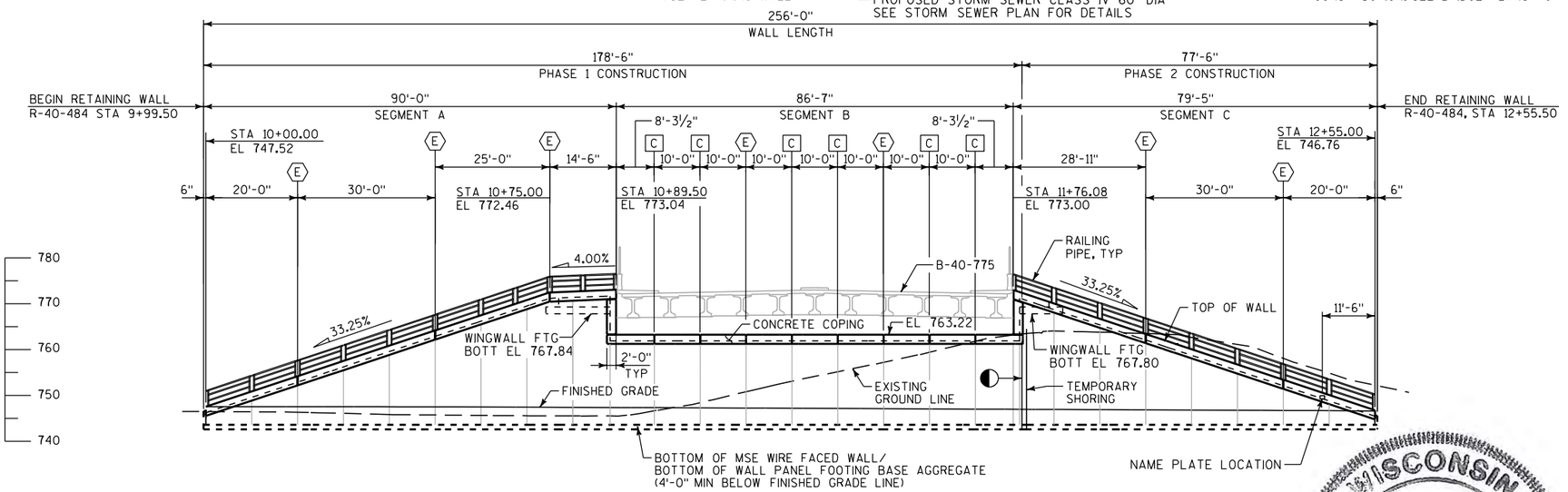
8

STATE PROJECT NUMBER
1060-33-73



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING EAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

DESIGN DATA:

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 5,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI

DESIGN THE RETAINING WALL IN FRONT OF THE BRIDGE B-40-775 EAST ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

DESIGN THE RETAINING WALL ADJACENT TO EAST ABUTMENT OF BRIDGE B-40-775 FOR A 4H:1V BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 100 PSF.

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- BEGIN TEMPORARY WIRE FACED MSE WALL, STA 11+75.86, 23'-3" LT
- END TEMPORAY WIRE FACED MSE WALL, STA 11+78.00, 1'-3" LT
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH, SEE SHEET 8.

FOUNDATION DATA:

MINIMUM SOIL BEARING CAPACITY
PRECAST WALL PANEL FOOTING: 3,000 PSF

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, NOTES & PROFILE GRADE LINE
3. TYPICAL WALL SECTIONS
4. SEGMENT A COPING PLAN & ELEVATION
5. SEGMENT B COPING PLAN & ELEVATION
6. SEGMENT C COPING PLAN & ELEVATION
7. WALL DETAILS
8. WALL ELEVATIONS, BAR BENDS & TEMP WALL DETAILS
9. RAILING PIPE DETAILS
10. AESTHETIC WALL TREATMENT ELEVATION & DETAIL
11. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 04/03/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-484

EAST ABUTMENT AT SWAN BOULEVARD & USH 45

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WAUWATOSA

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MS	EKM	MS	EKM

GENERAL PLAN & ELEVATION

SHEET 1 OF 11

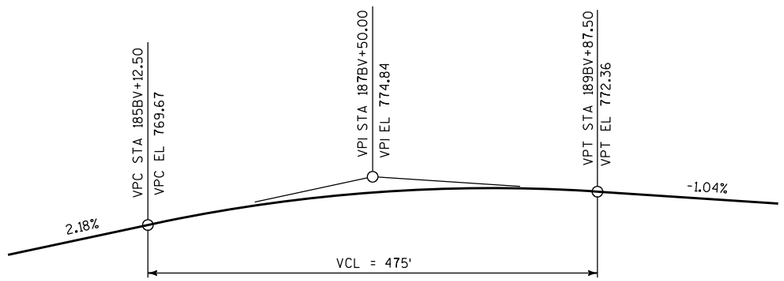
WISCONSIN
EDWARD K. McCRIGHT
E37422
MILWAUKEE, WI
3/15/13
PROFESSIONAL ENGINEER

STATE PROJECT NUMBER
1060-33-73

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	TOTAL
206.6000.S	TEMPORARY SHORING	SF	---	1,502	---	1,502
513.2000	RAILING PIPE R-40-484	LS	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	1	5	1	7
517.1050.S.0001	ARCHITECTURAL SURFACE TREATMENT R-40-484	SF	436	788	314	1,538
616.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	8	---	---	8
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	87	80	257
SPV.0165.4620	WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	1,742	1,788	1,361	4,891
SPV.0165.4630	TEMPORARY WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	---	423	---	423
SPV.0165.4640	PRESTRESSED PRECAST CONCRETE WALL PANEL	SF	1,607	1,658	1,243	4,508
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				¾", 2"
	NON-BITUMINOUS JOINT FILLER	SIZE				¾", 1", 2"
	CORK FILLER	SIZE				1"
	NAME PLATE	EACH				1
	EXPANDED POLYSTYRENE	SIZE				1"

ALL ITEMS ARE CATEGORY 3000



PROFILE GRADE LINE
(SWAN BOULEVARD)

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED SHEAR STRENGTH (PSF)	DRAINED	
			FRICTION ANGLE (DEGREES)	COHESION (PSF)
CLAY FILL	124-130	1,000-2,000	30	0
STIFF TO VERY STIFF LEAN CLAY	125-130	1,000-3,000	30-31	0-100
LOOSE TO M. DENSE SILTY SANDS	125-130	-	30-34	0
DENSE TO V. DENSE SANDS	130-134	-	32-40	0
HARD CLAY (TILL)	130-135	3,000-4,000	32-34	100-200
REINFORCED FILL	120	0	30	0
NEW CLAY FILL ⚹	125	0-1,500	30	0

⚹ DESIGN WALL FOR THESE VALUES

WALL EXTERNAL STABILITY EVALUATION

	DIMENSIONS		
	WALL HEIGHT (FEET)	29.7	17.1
	EXPOSED WALL HEIGHT (FEET)	25.7	13.1
⚹	MINIMUM LENGTH OF REINFORCEMENT (FEET)	25.5	12.0
	WALL STATION (R/L RETAINING WALL)	10+89.50	12+15.00
	BORING USED	NB-31	NR-28
	CAPACITY TO DEMAND RATIO (CDR)		
	SLIDING	1.69	1.50
	ECCENTRICITY	1.85	1.35
	BEARING	1.04	1.10
	GLOBAL STABILITY	1.01	1.41

⚹ FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE (NAVD) NORTH AMERICAN VERTICAL DATUM OF 1988.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL (PHASE 2), UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

EXISTING STRUCTURES ARE NOT SHOWN IN THESE PLANS. THE REMOVAL OF THESE STRUCTURES IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-775 BRIDGE QUANTITIES.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / QMP PILOT".

THESE PLANS ARE FOR A WALL WIRE FACED MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL WITH A FULL HEIGHT PRESTRESSED PRECAST CONCRETE WALL FACING.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 9 INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 9 INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-484 WITH THE EAST ABUTMENT OF BRIDGE B-40-775 AND INSTALLATION OF STORM SEWER PIPE P700.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / QMP PILOT".

ALL BAR STEEL REINFORCEMENT IS TO BE EPOXY COATED.

OPTIONAL TRANSVERSE CONSTRUCTION JOINTS ARE PERMITTED IN THE FOOTING WITH A MINIMUM SPACING OF TWO PANEL LENGTHS. FOOTING JOINTS SHALL BE OFFSET A MINIMUM OF 1'-0" FROM PRECAST WALL PANEL JOINTS. RUN BAR STEEL THRU FOOTING JOINTS.

THE QUANTITY OF CONCRETE MASONRY FOR THE CAST-IN-PLACE COPING AND FOOTING IS INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL".

GENERAL NOTES (CONTINUED)

THE PLAN QUANTITY FOR THE ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / QMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO BOTTOM OF WALL AS SHOWN IN THE PLANS. THE BOTTOM OF THE WALL IS ASSUMED TO BE 4'-0" BELOW FINISHED GRADE. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

DO NOT ALLOW CONCRETE OR FILL TO DROP INTO OR ACCUMULATE IN THE WALL PANEL CAVITY.

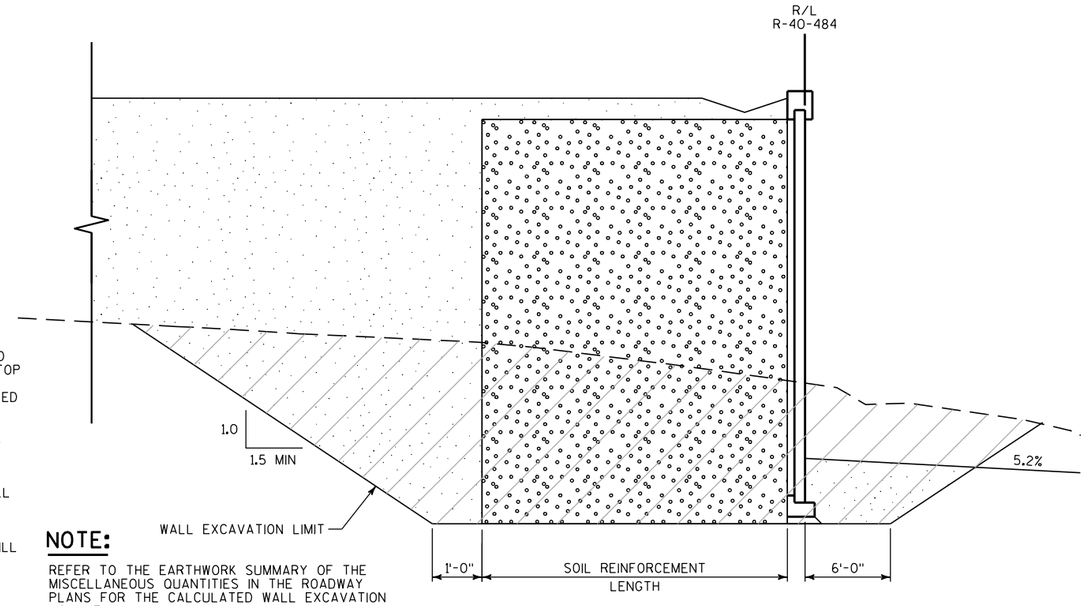
PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30? WITHOUT CERTIFIED TEST VALUES.

ALL MATERIALS AND WORK NECESSARY TO CONNECT THE UNPERFORATED PIPE UNDERDRAIN TO THE STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH, SHALL BE INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN UNPERFORATED (6-INCH)".

INSTALLATION OF THE PIPE UNDERDRAIN TEMPORARY CAP DURING PHASE 1, AND REMOVAL OF THE TEMPORARY CAP AND CONNECTION OF THE PIPE UNDERDRAIN WRAPPED IN PHASE 2 SHALL BE INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN WRAPPED (6-INCH).

PLACE A TRENCH DRAIN 16 INCHES IN WIDTH BY 256 FEET LONG A MINIMUM OF 2 FEET BELOW THE BASE OF THE REINFORCED ZONE TO LOWER THE WATER LEVEL DURING CONSTRUCTION. DRAIN SHOULD PARALLEL WALL FACE AND BE LOCATED AT THE BACK OF THE REINFORCED ZONE NEAR THE INTERFACE WITH THE RETAINED SOIL. THE TRENCH SHOULD BE LINED WITH A NON-WOVEN GEOTEXTILE AND BACKFILLED WITH COMPACTED BASE AGGREGATE OPEN GRADED. THE BASE OF THE TRENCH DRAIN SHOULD BE SLOPED AT 0.5% TOWARDS A SUMP SO THAT THE WATER CAN BE REMOVED BY PUMPING. PLACE SUMP AT OUTSIDE PERIMETER OF WALL TO COLLECT WATER AND ALLOW FOR PUMPING DURING WALL CONSTRUCTION. PUMP WATER INTO MAINTAINED DRAINAGE DITCH OR ADJACENT STORM SEWER. ABANDON SUMP AFTER COMPLETION OF FILL PLACEMENT. ALL MATERIALS AND LABOR REQUIRED TO INSTALL TRENCH DRAIN ARE INCIDENTAL TO BID ITEM " MSE WIRE FACE MECHANICALLY STABILIZED EARTH LRFD / QMP PILOT".



NOTE:
REFER TO THE EARTHWORK SUMMARY OF THE MISCELLANEOUS QUANTITIES IN THE ROADWAY PLANS FOR THE CALCULATED WALL EXCAVATION VOLUME.

WALL EXCAVATION LIMITS DIAGRAM
(LOOKING NORTH)

LEGEND

WALL EXCAVATION - INCLUDED IN THE BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / QMP PILOT"

EMBANKMENT - NOT A RETAINING WALL ITEM

MSE BACKFILL - INCLUDED IN THE BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / QMP PILOT"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-484

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QUANTITIES, NOTES & PROFILE GRADE LINE

SHEET 2 OF 11

8

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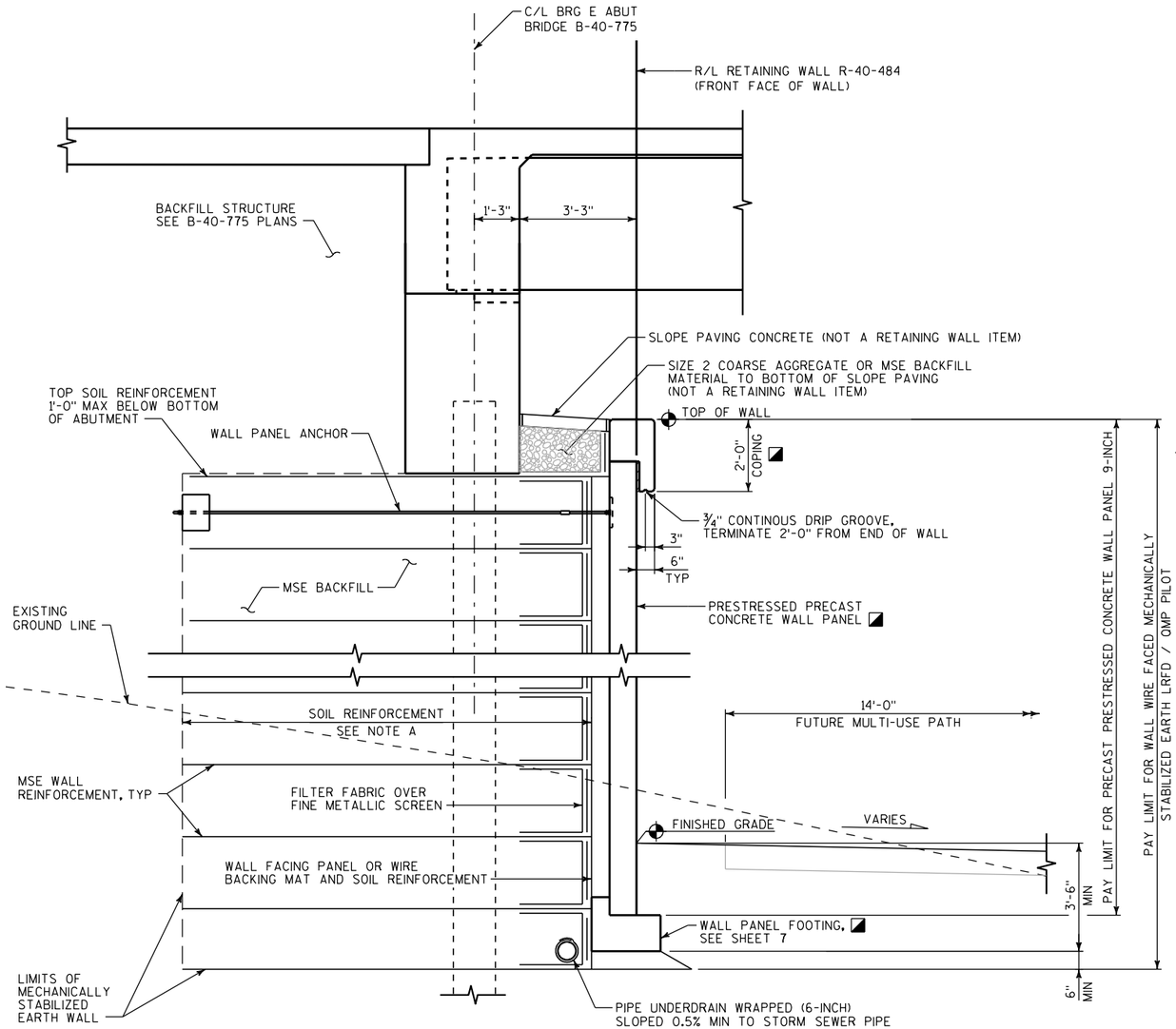
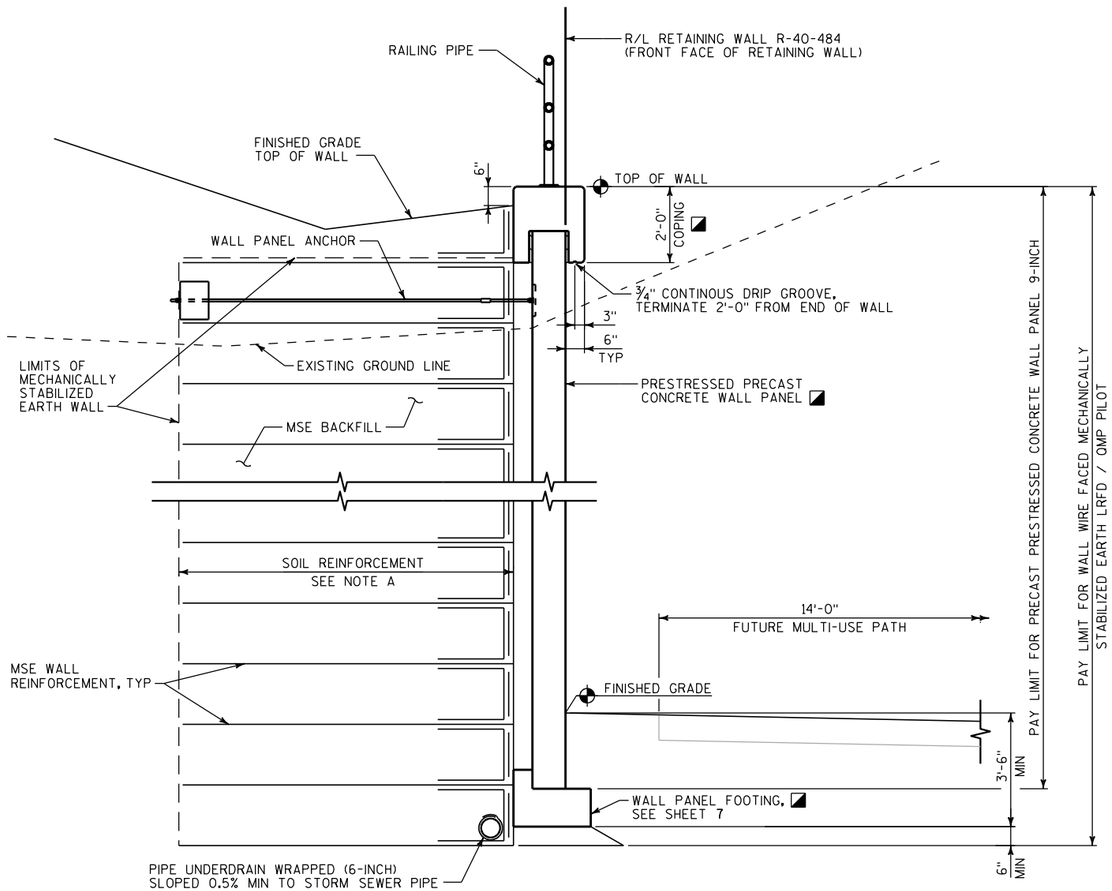
FILE NAME : W:\Cadd\Final\10603373_BV\Structs\R-40-484\cds\R40484_080202_qu.dgn PLOT DATE : 08-MAR-2013 11:44 PLOT BY : MSCEKM PLOT NAME : R40484_080202_qu PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-73



TYPICAL SECTION AT B-40-775 EAST ABUTMENT

(LOOKING SOUTH - SEGMENT B STA 10+89.50 TO STA 11+76.08)



TYPICAL SECTION AT SEGMENTS A & C

(LOOKING SOUTH - SEGMENT A STA 10+00.00 TO STA 10+89.50)
(LOOKING SOUTH - SEGMENT C STA 11+76.08 TO STA 12+55.50)

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 2
FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND
THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO
SPECIFICATIONS.

LEGEND

◪ TO BE CONSTRUCTED
DURING PHASE 2

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STRUCTURE R-40-484

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TYPICAL WALL SECTIONS

SHEET 3 OF 11

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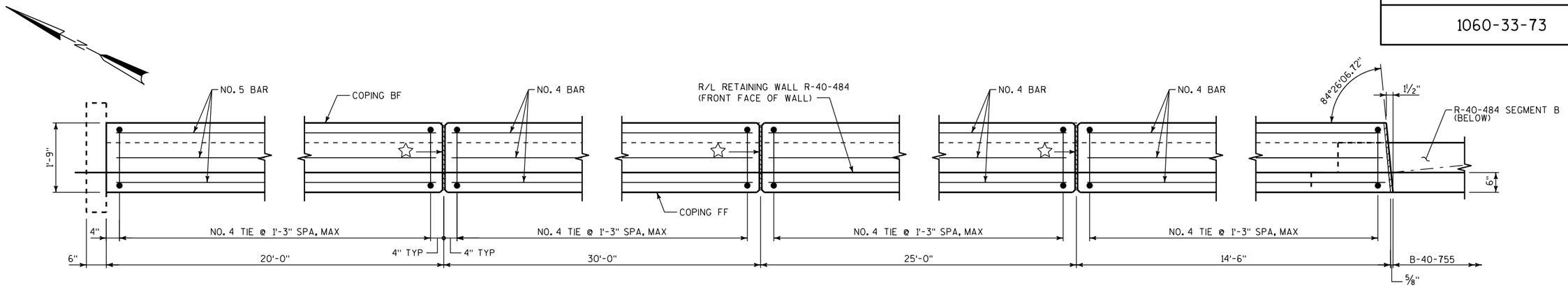
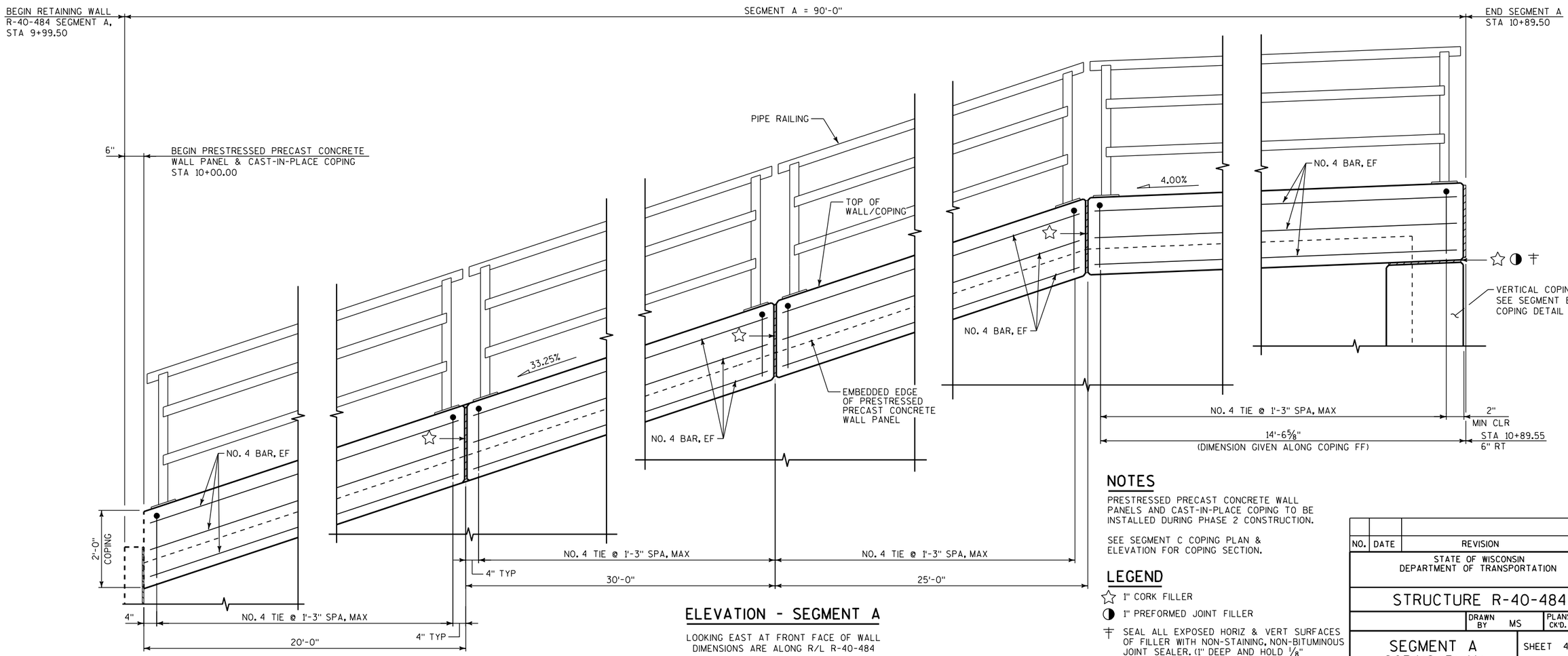
1060-33-73



PLAN - SEGMENT A

DIMENSIONS ARE ALONG R/L R-40-484



ELEVATION - SEGMENT A

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-484

NOTES

PRESTRESSED PRECAST CONCRETE WALL PANELS AND CAST-IN-PLACE COPING TO BE INSTALLED DURING PHASE 2 CONSTRUCTION.

SEE SEGMENT C COPING PLAN & ELEVATION FOR COPING SECTION.

LEGEND

☆ 1" CORK FILLER

◑ 1" PREFORMED JOINT FILLER

⫩ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-484

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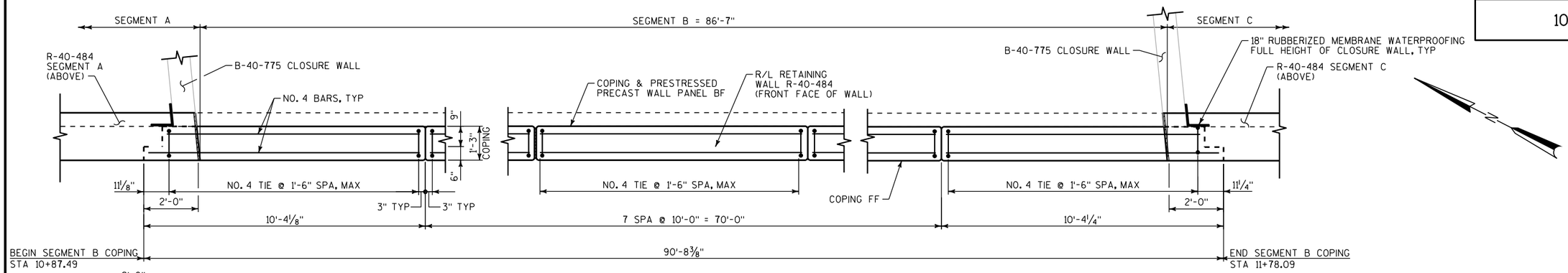
SEGMENT A
COPING PLAN
& ELEVATION

SHEET 4 OF 11

8

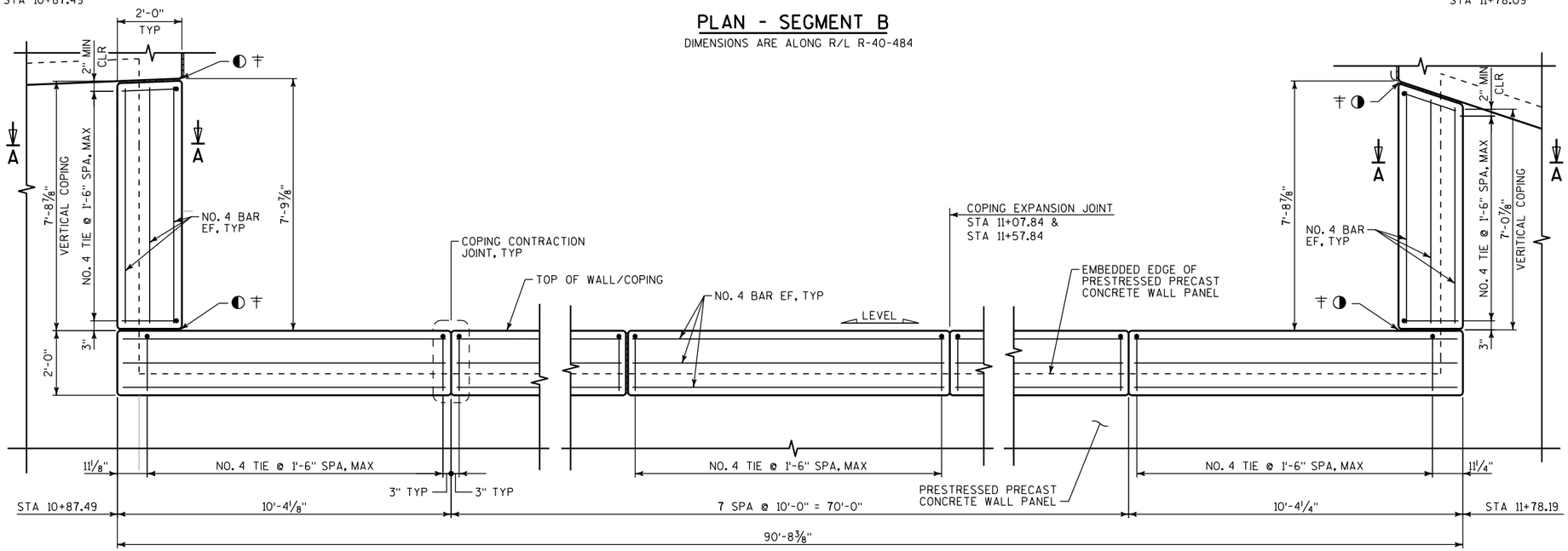
8

STATE PROJECT NUMBER
1060-33-73



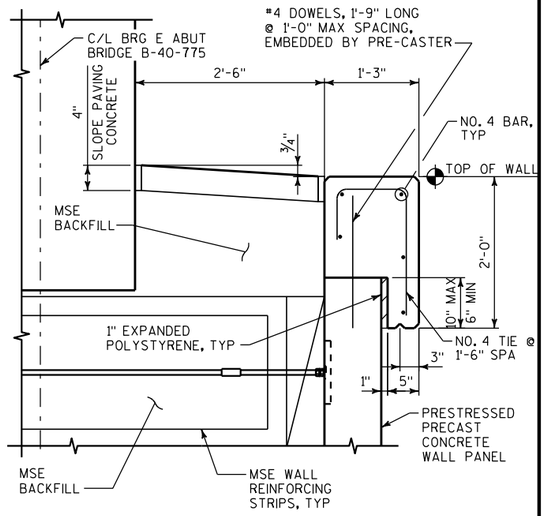
PLAN - SEGMENT B

DIMENSIONS ARE ALONG R/L R-40-484

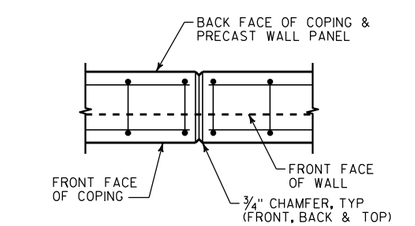


ELEVATION - SEGMENT B

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-484

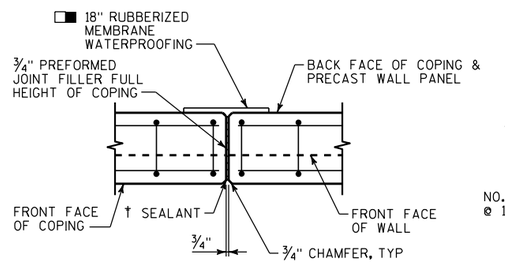


COPING SECTION AT SEGMENT B



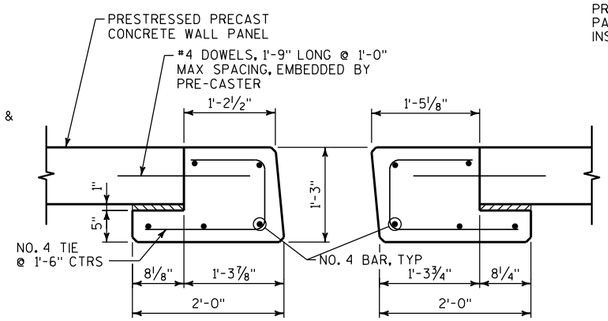
COPING CONTRACTION JOINT AT SEGMENT B

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATIONS OF JOINT, SEE GENERAL PLAN & ELEVATION SHEET.



COPING EXPANSION JOINT AT SEGMENT B

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER.



SECTION A-A

(VERTICAL COPING)

NOTE

PRESTRESSED PRECAST CONCRETE WALL PANELS AND CAST-IN-PLACE COPING TO BE INSTALLED DURING PHASE 2 CONSTRUCTION.

LEGEND

- ☆ 1" CORK FILLER
- ◑ 1" PREFORMED JOINT FILLER
- ▭ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS
- ⊤ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

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STRUCTURE R-40-484

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SEGMENT B COPING PLAN & ELEVATION

SHEET 5 OF 11

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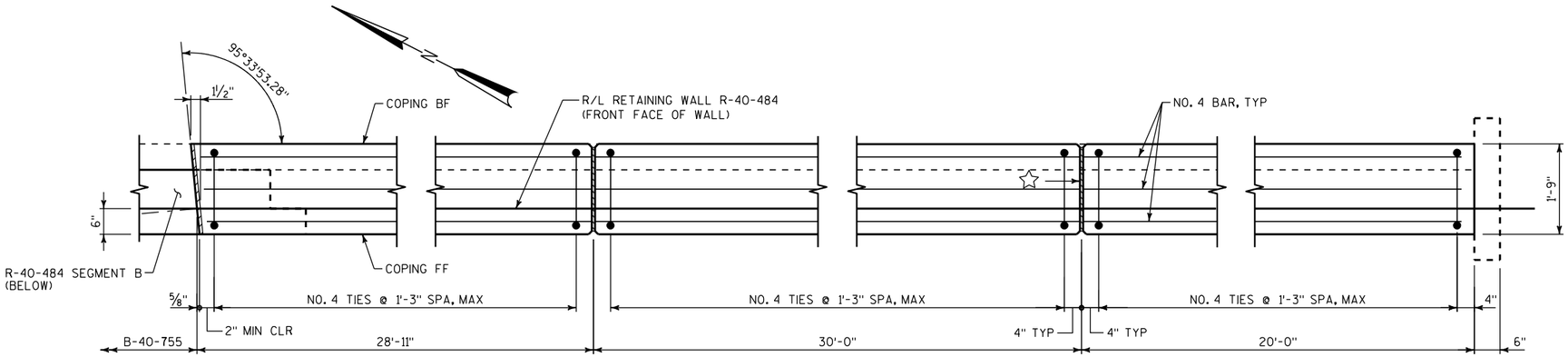
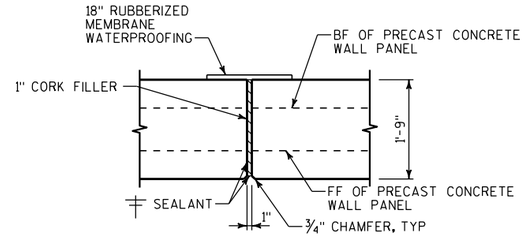
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-73

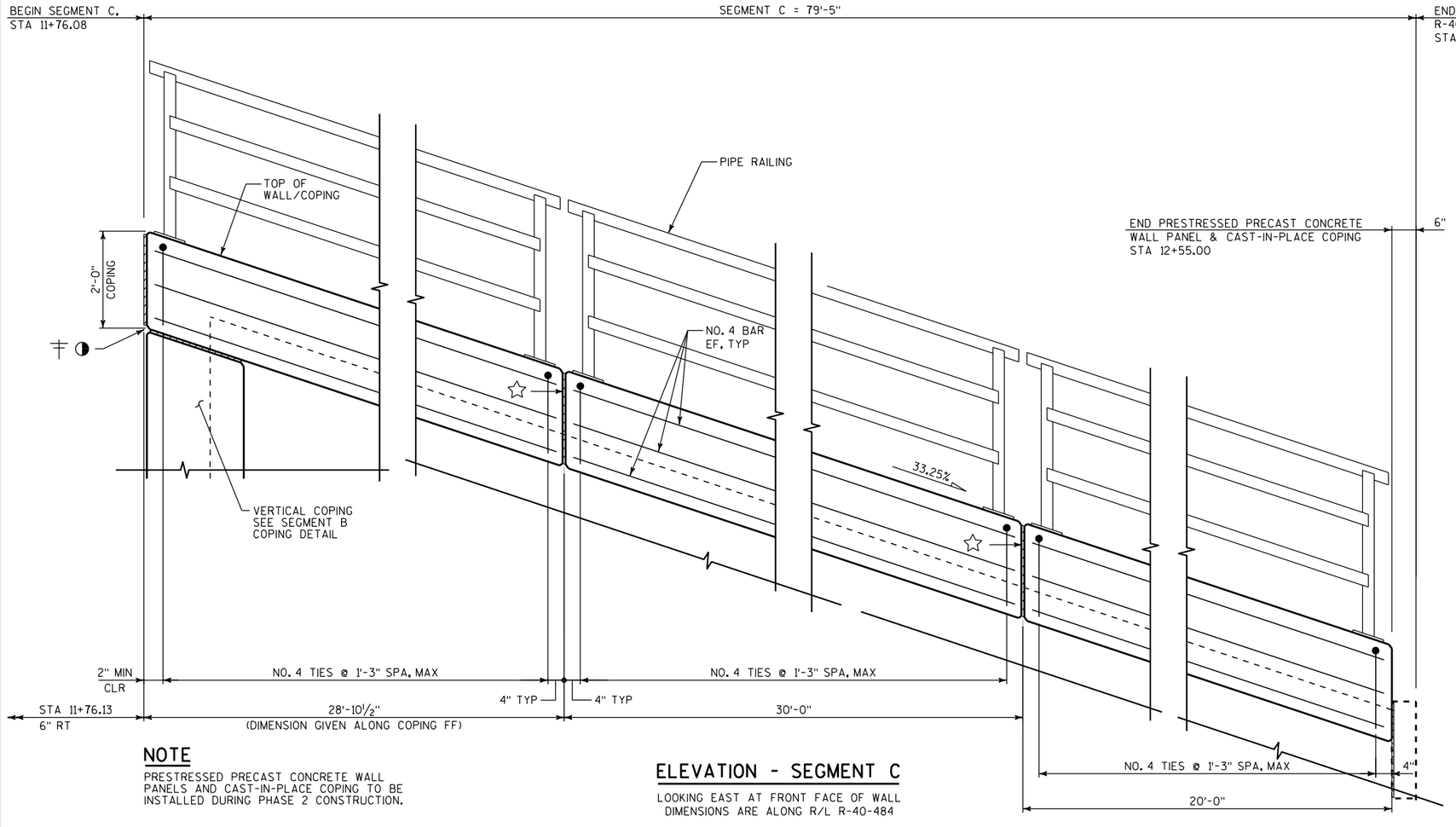


PLAN - SEGMENT C

DIMENSIONS ARE ALONG R/L R-40-484



COPING EXPANSION JOINT - SEGMENTS A & C

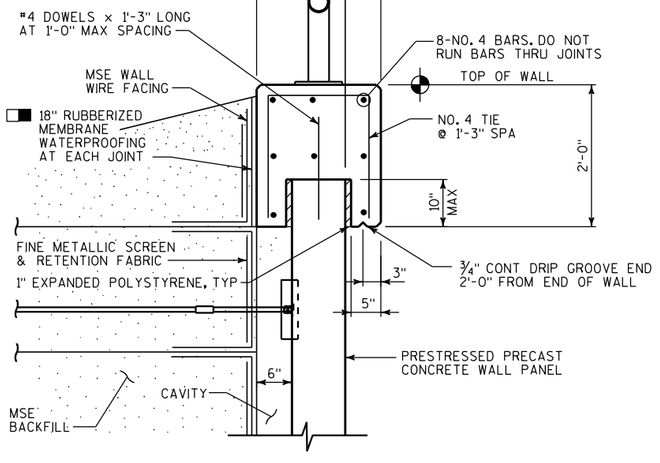


NOTE

PRESTRESSED PRECAST CONCRETE WALL PANELS AND CAST-IN-PLACE COPING TO BE INSTALLED DURING PHASE 2 CONSTRUCTION.

ELEVATION - SEGMENT C

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-484



COPING SECTION AT SEGMENTS A & C

LEGEND

- ☆ 1" CORK FILLER
- ◑ 1" PREFORMED JOINT FILLER
- ■ MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING
- ⊣ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

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STRUCTURE R-40-484

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SEGMENT C
COPING PLAN
& ELEVATION

SHEET 6 OF 11

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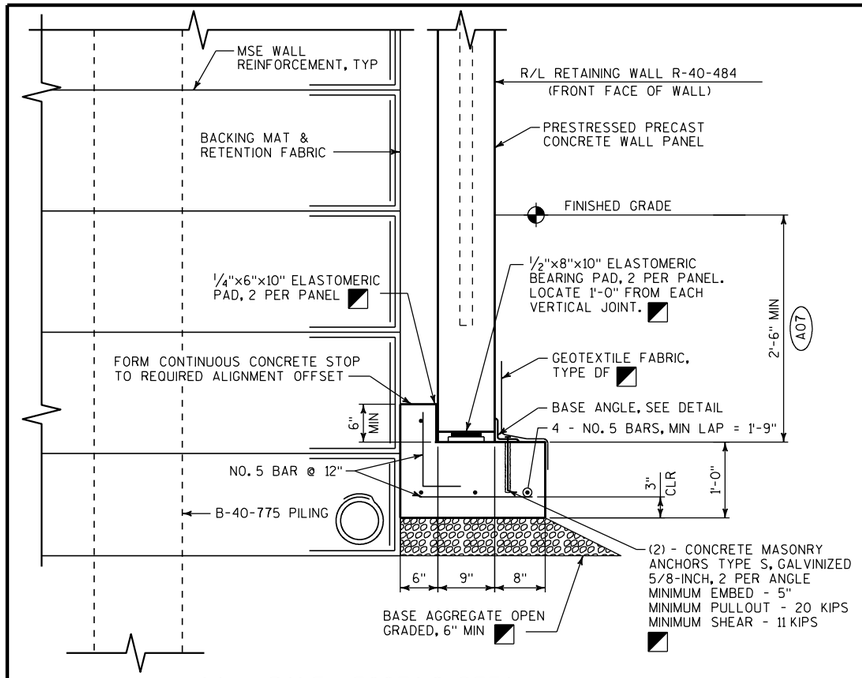
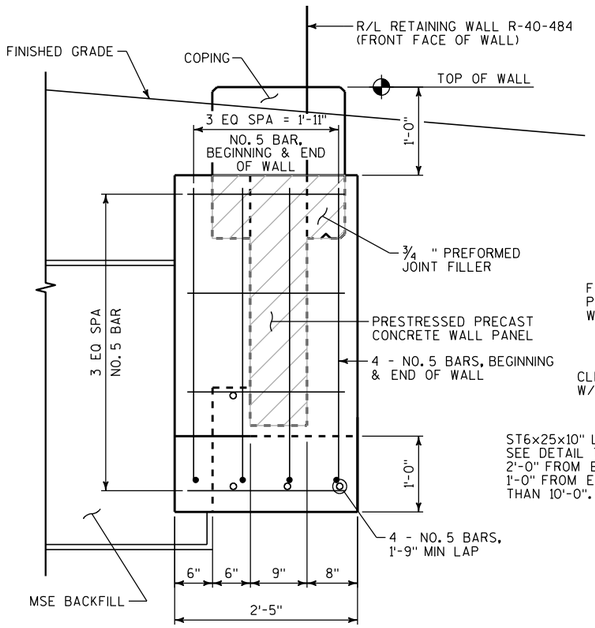
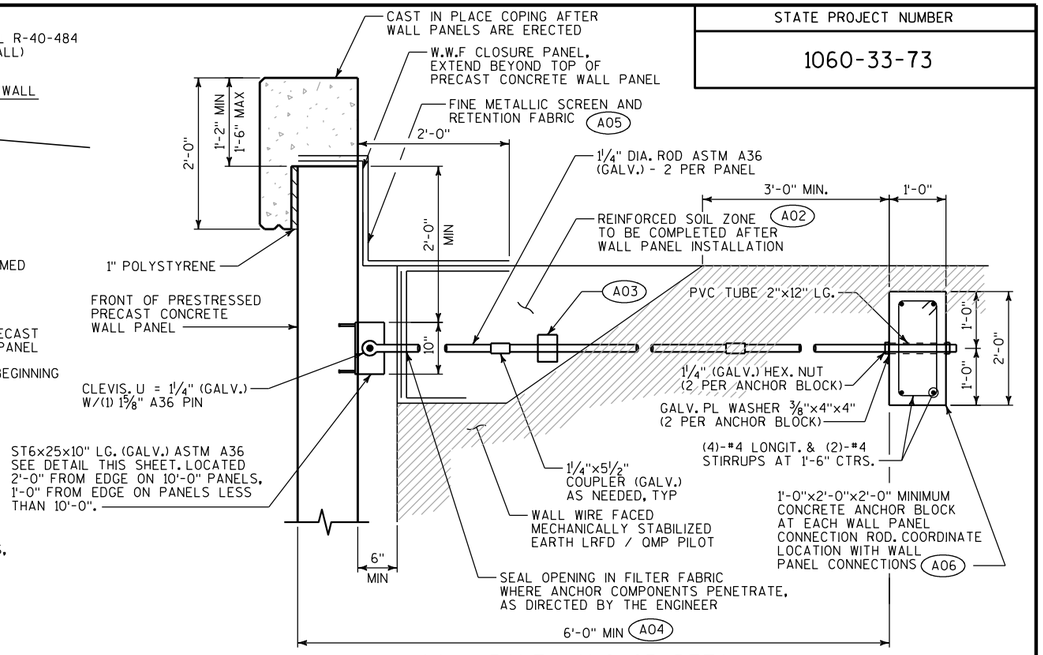


WALL PANEL FOOTING DETAIL



END OF WALL DETAIL



WALL PANEL ANCHOR DETAIL

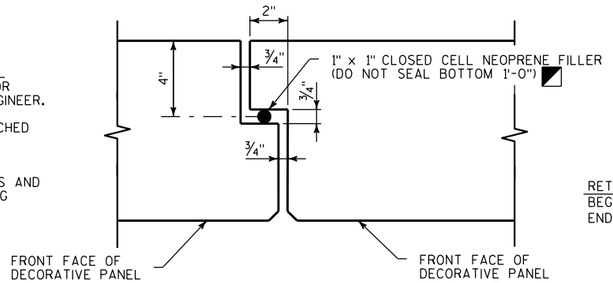
NOTES

AN ALTERNATE WALL PANEL ANCHOR AND PANEL CONSTRUCTION SYSTEM MAY BE SUBMITTED FOR REVIEW AND POSSIBLE ACCEPTANCE BY THE ENGINEER.

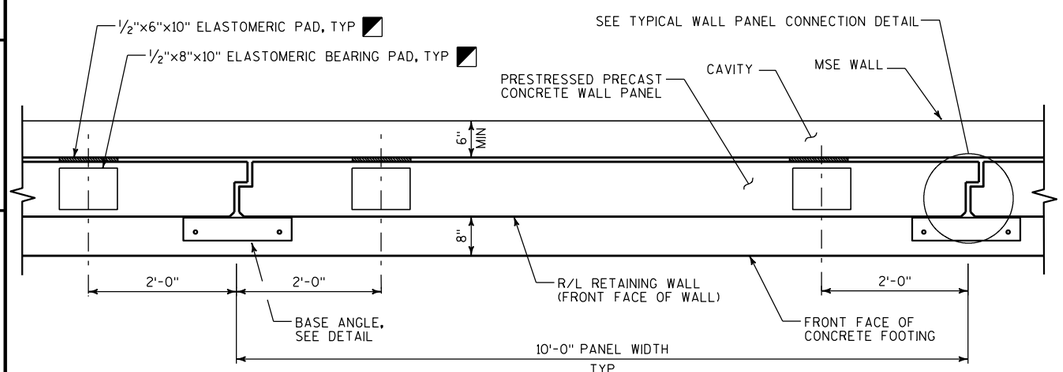
TILT UP PANEL ANCHOR SYSTEM MAY BE TRENCHED IN IF THE GEOMETRY OF THE ANCHOR SYSTEM LOCATION ALLOWS.

PRESTRESSED PRECAST CONCRETE WALL PANELS AND CAST-IN-PLACE COPING TO BE INSTALLED DURING PHASE 2 CONSTRUCTION.

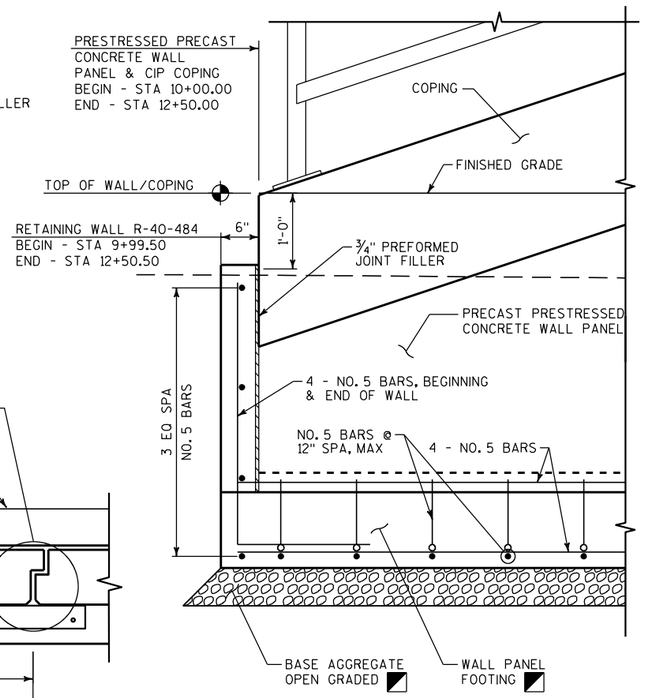
SEE SHEET 8 FOR LEGEND.



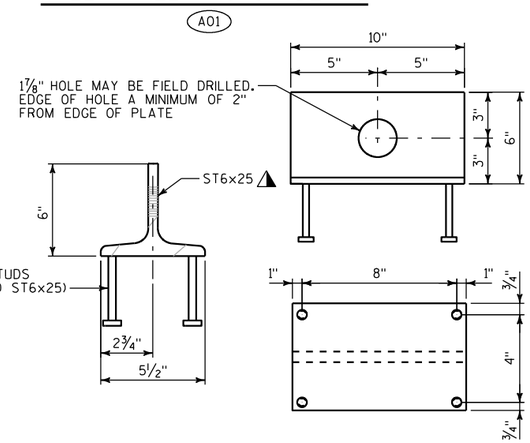
TYPICAL WALL PANEL CONNECTION DETAIL



TYPICAL WALL PANEL CONNECTION

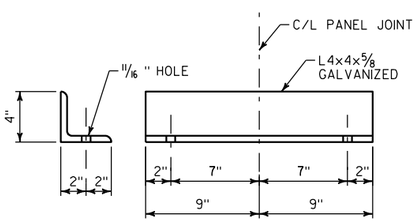


END OF WALL ELEVATION



PANEL CONNECTION DETAILS

(2 PER PANEL)



BASE ANGLE DETAIL

(1 AT EACH PANEL JOINT)
INCLUDED IN BID ITEM
"PRESTRESSED PRECAST CONCRETE WALL PANEL"

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STATE OF WISCONSIN
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STRUCTURE R-40-484

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WALL DETAILS

SHEET 7 OF 11

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STATE PROJECT NUMBER
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LEGEND

(A01) WALL PANEL ANCHOR SYSTEM INCLUDES ANCHOR BLOCK, ANCHOR BLOCK COUPLER, 1¼" DIA. ANCHOR ROD, CLEVIS, AND OTHER PANEL CONNECTION COMPONENTS. DESIGN, DETAILING, AND FURNISHING OF THESE ITEMS IS INCLUDED IN THE BID ITEM "PRECAST PRESTRESSED CONCRETE WALL PANEL 9-INCH." INSTALLATION OF THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / OMP PILOT."

(A02) DESIGN LENGTH TO PROVIDE REQUIRED HORIZONTAL CAPACITY OF ANCHOR ASSEMBLY. MINIMUM OF 3'-0" OF COMPACTED FILL IN FRONT OF ANCHOR BLOCK PRIOR TO WALL PANEL ERECTION. ROD MIN. 2'-0" BELOW FINISH GRADE.

(A03) OPTIONAL MULTIDIRECTIONAL CONNECTOR MAY BE USED TO FACILITATE ALIGNMENT AT THE CONNECTION. CONNECTOR TO BE CORROSION RESISTANT AND DEVELOP 100% OF THE ULTIMATE STRENGTH OF 1¼" DIA. BAR)

(A04) LENGTH MAY BE INCREASED TO AVOID OBSTRUCTIONS.

(A05) ALTERNATE METHODS OF SEALING OFF THE 6" VOID IN FRONT OF THE MSE WALL MAY BE SUBMITTED TO WISDOT FOR CONSIDERATION.

(A06) AN ALTERNATIVE DEADMAN AND PANEL CONNECTION SYSTEM MAY BE SUBMITTED FOR REVIEW AND POSSIBLE ACCEPTANCE BY THE ENGINEER.

(A07) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO BOTTOM OF WALL PANEL FOOTING IS SHOWN. THE FOOTING MAY BE CONSTRUCTED ON A SLOPE PARALLEL TO THE PROPOSED GRADE, OR MAY BE STEPPED. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION OF THE WALL PANEL FOOTING WITH FABRICATION OF THE PRECAST PANELS.

◪ INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"

SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

S12x50 (GALV.) CUT IN ½ TO FORM "T" SECTION. BF = 5.477" TW = 0.687".

TO BE CONSTRUCTED DURING PHASE 2.

SEGMENT A WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
10+00.00	747.52	746.46	747.55
10+10.00	750.85	746.39	747.55
10+20.00	754.17	746.29	747.54
10+30.00	757.50	746.05	747.52
10+40.00	760.82	745.81	747.50
10+50.00	764.15	745.70	747.48
10+60.00	767.47	745.62	747.46
10+70.00	770.80	745.55	747.43
10+75.00	772.46	745.53	747.42
10+80.00	772.66	745.50	747.40
10+89.50	773.04	745.48	747.36

SEGMENT B WALL ELEVATIONS ◪

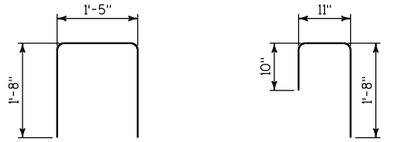
STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
10+87.49	763.22	745.51	747.37
10+97.83	763.22	746.60	747.33
11+07.83	763.22	748.40	747.29
11+17.83	763.22	750.77	747.24
11+27.83	763.22	753.09	747.19
11+37.83	763.22	755.12	747.15
11+47.83	763.22	757.19	747.10
11+57.83	763.22	759.35	747.05
11+67.83	763.22	761.78	747.01
11+78.19	763.22	763.42	746.96

◪ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

SEGMENT C WALL ELEVATIONS ◪

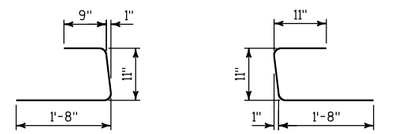
STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
11+76.08	773.00	763.16	746.97
11+85.00	770.03	764.03	746.93
11+95.00	766.71	763.76	746.88
12+05.00	763.38	763.49	746.84
12+15.00	760.06	762.62	746.79
12+25.00	756.73	761.10	746.74
12+35.00	753.41	758.07	746.70
12+45.00	750.08	754.82	746.65
12+55.00	746.76	752.19	746.60

◪ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

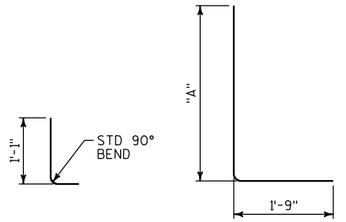


SEGMENT A & C
(NO. 4 TIE)

SEGMENT B
(NO. 4 VERT TIE)



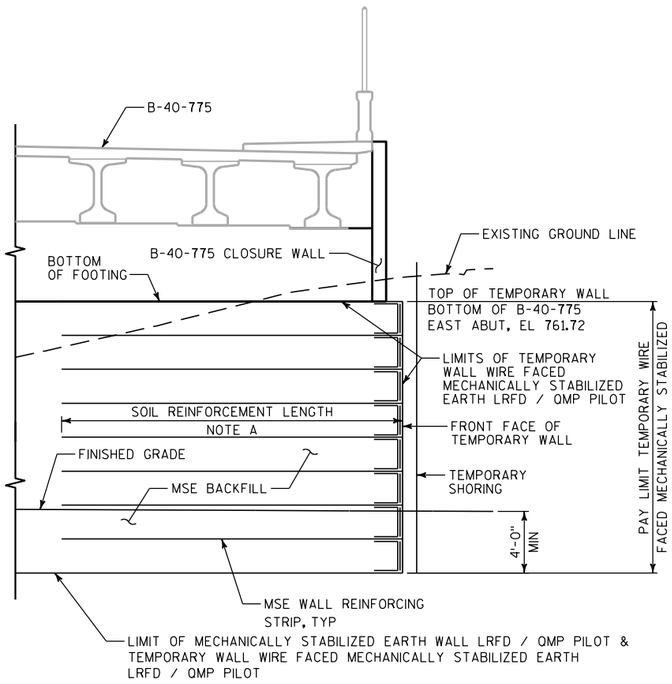
SEGMENT B
(NO. 4 HORIZ TIE)



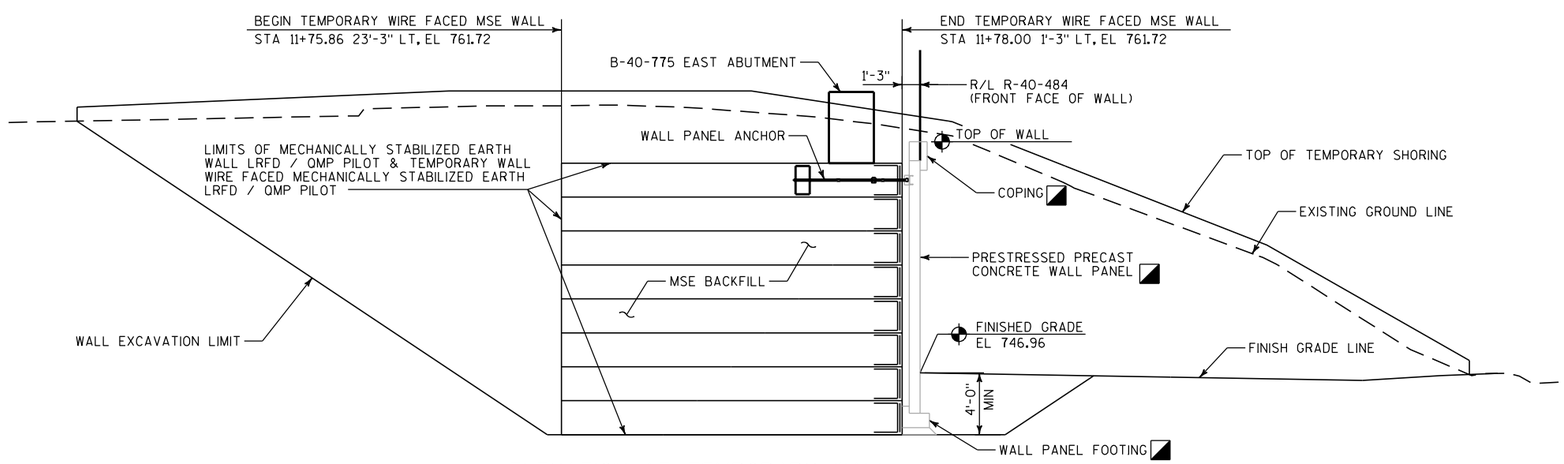
WALL LOCATION	DIM "A"
BEGIN	3'-1"
END	2'-3"

DIMENSIONS GIVEN ASSUME THAT FOOTING IS PLACED LEVEL. FINAL DIMENSION TO BE DETERMINED BY CONTRACTOR.

FOOTING BARS
(NO. 5 BARS)



SECTION AT TEMPORARY WALL
(LOOKING EAST)



ELEVATION AT TEMPORARY WALL
(LOOKING SOUTHEAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-484

DRAWN BY MS | PLANS CK'D. EKM

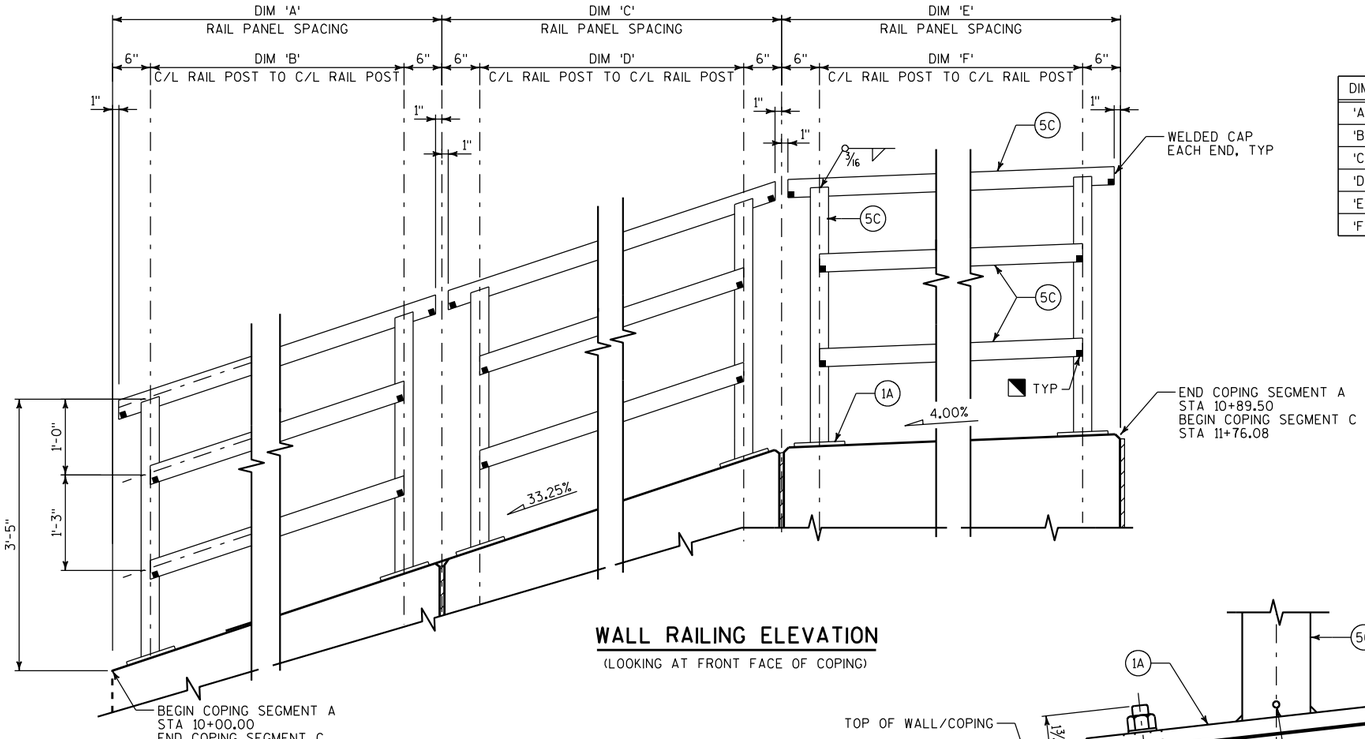
WALL ELEVATIONS, BAR BENDS & TEMP WALL DETAILS

SHEET 8 OF 11

8

8

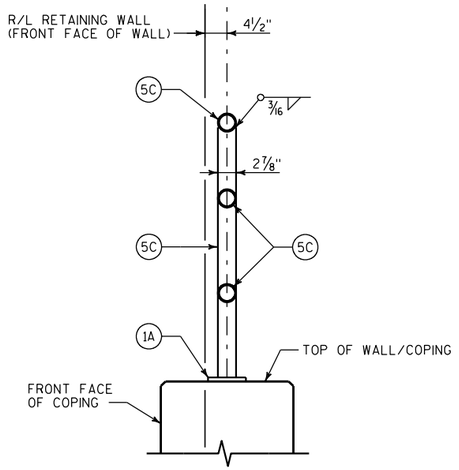
STATE PROJECT NUMBER
1060-33-73



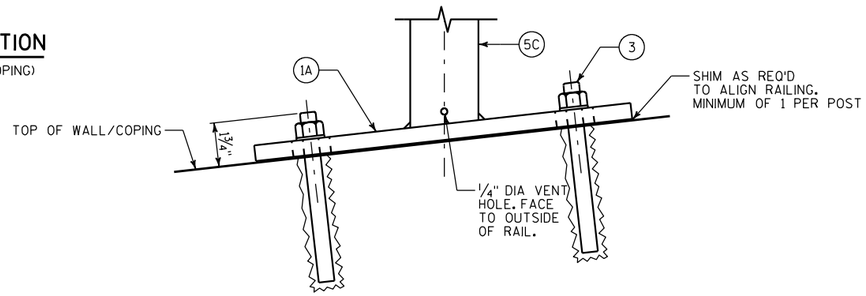
WALL RAILING ELEVATION

(LOOKING AT FRONT FACE OF COPING)

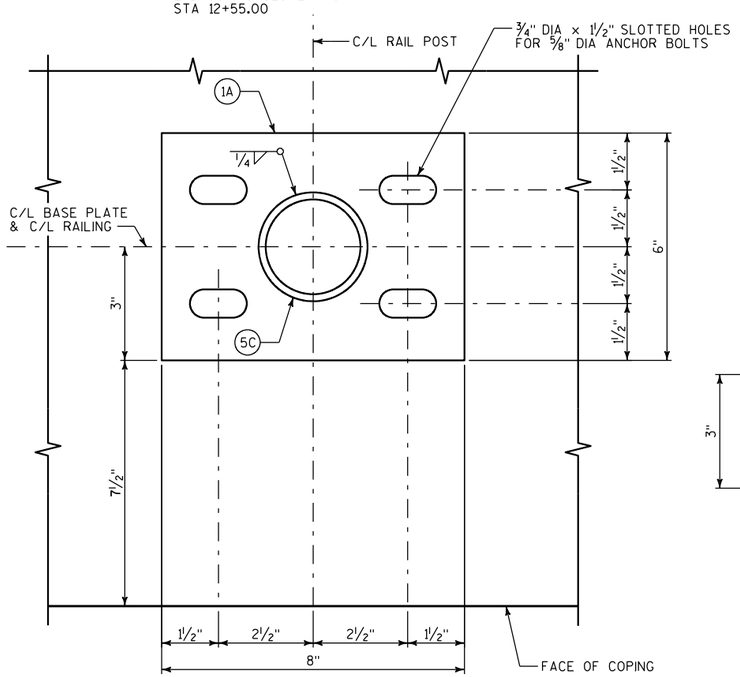
DIM	SEGMENT A	SEGMENT C
'A'	6 SPACES @ 10'-0"	7 SPACES @ 10'-0"
'B'	9'-0" EACH PANEL	9'-0" EACH PANEL
'C'	2 SPACES @ 7'-6"	1 SPACE @ 8'-10"
'D'	6'-6" EACH PANEL	7'-10"
'E'	2 SPACES @ 7'-3"	------
'F'	6'-3" EACH PANEL	------



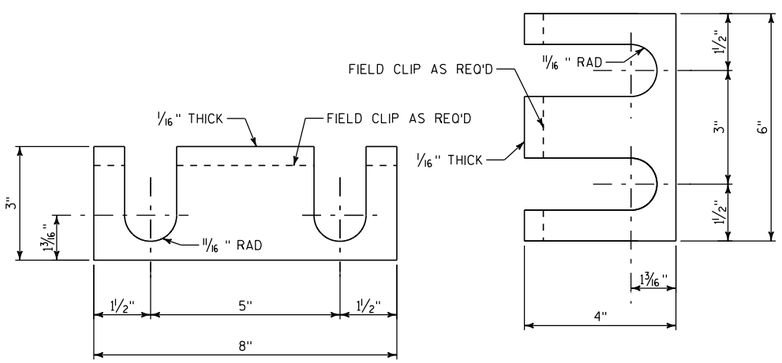
WALL RAILING SECTION



ANCHOR BOLTS FOR RAIL POST



RAIL POST BASE PLATE



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-484", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

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. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

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.

FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN PANEL LENGTHS OF 2 POSTS.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

(1A) PLATE 5/8" x 6" x 8" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA, MINIMUM PULLOUT CAPACITY OF 20 KIPS. EMBED A MINIMUM OF 5".

(5C) 2 1/2" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO 5C.

1/2" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-484

DRAWN BY: MS | PLANS CK'D: EKM

RAILING PIPE DETAILS

SHEET 9 OF 11

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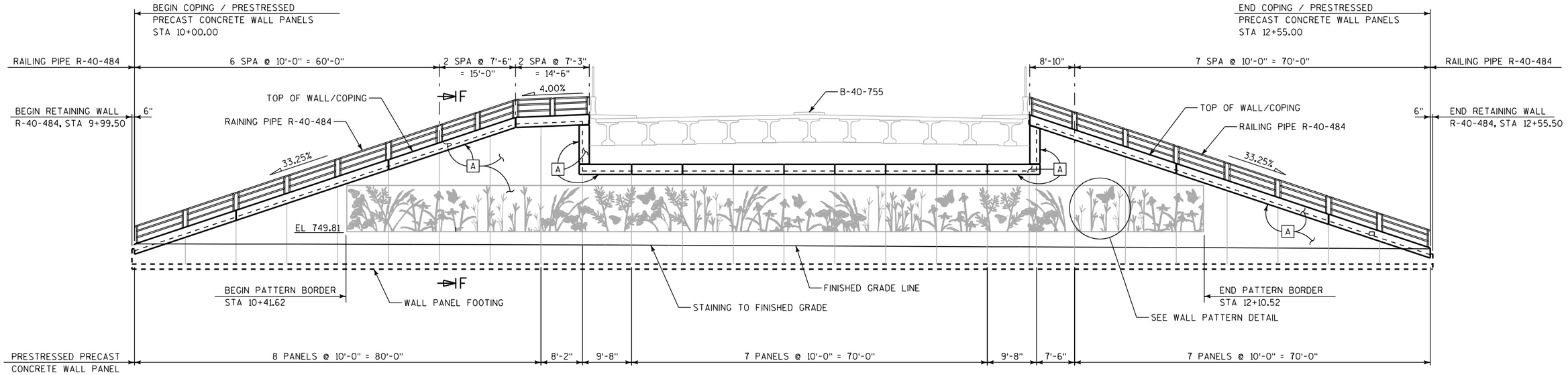
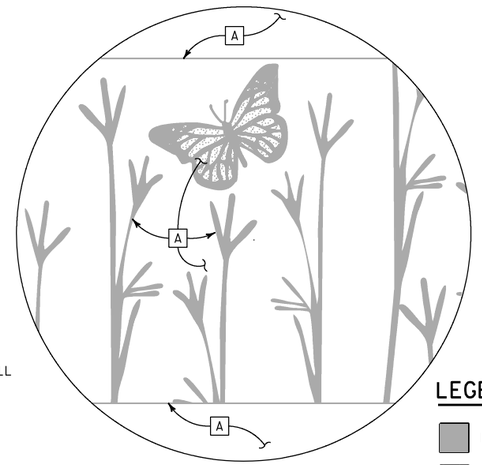


ELEVATION

(LOOKING EAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)



WALL PATTERN DETAIL

NOTES:

ELECTRONIC FILES OF THE DECORATIVE PATTERNS ARE AVAILABLE FROM:
WISCONSIN DEPARTMENT OF TRANSPORTATION
JEFF BOHEN P.E., 141 NW BARSTOW STREET, WAUKESHA, WISCONSIN 53187, (262) 548-6459

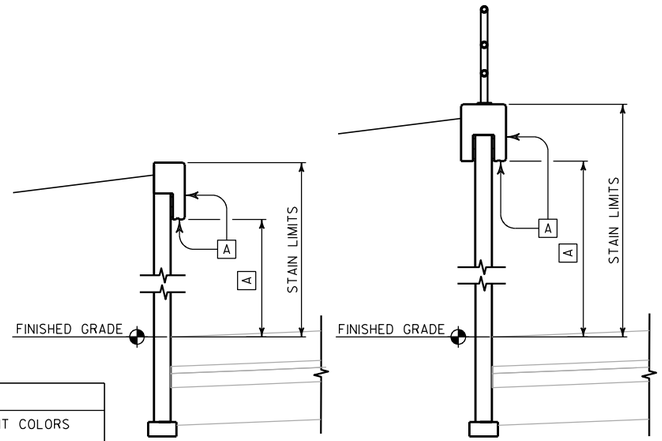
SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-484".

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE

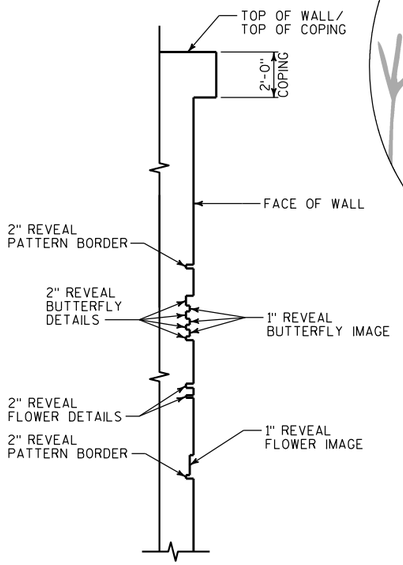
STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED.
BASE COLOR - 33564



MSE WALL STAINING DIAGRAMS

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



SECTION F-F

RELIEF PATTERN DETAIL

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS + 0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-484

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT ELEVATION & DETAIL

SHEET 10 OF 11

NOTE:

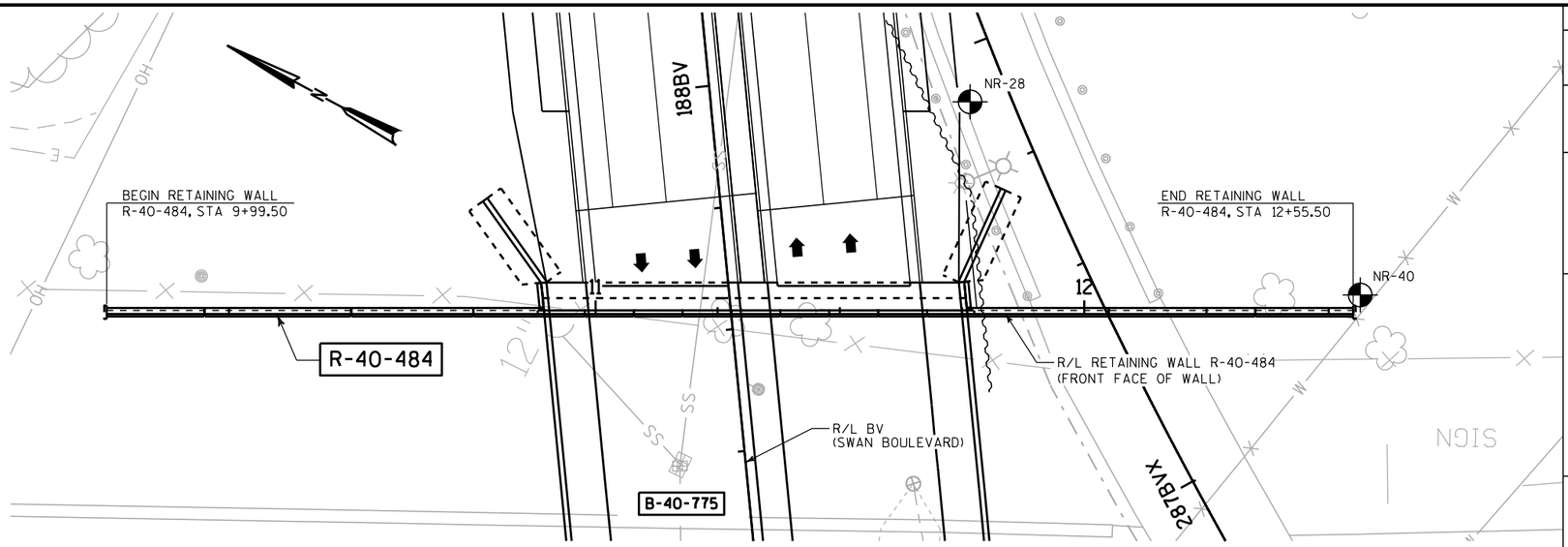
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-484.

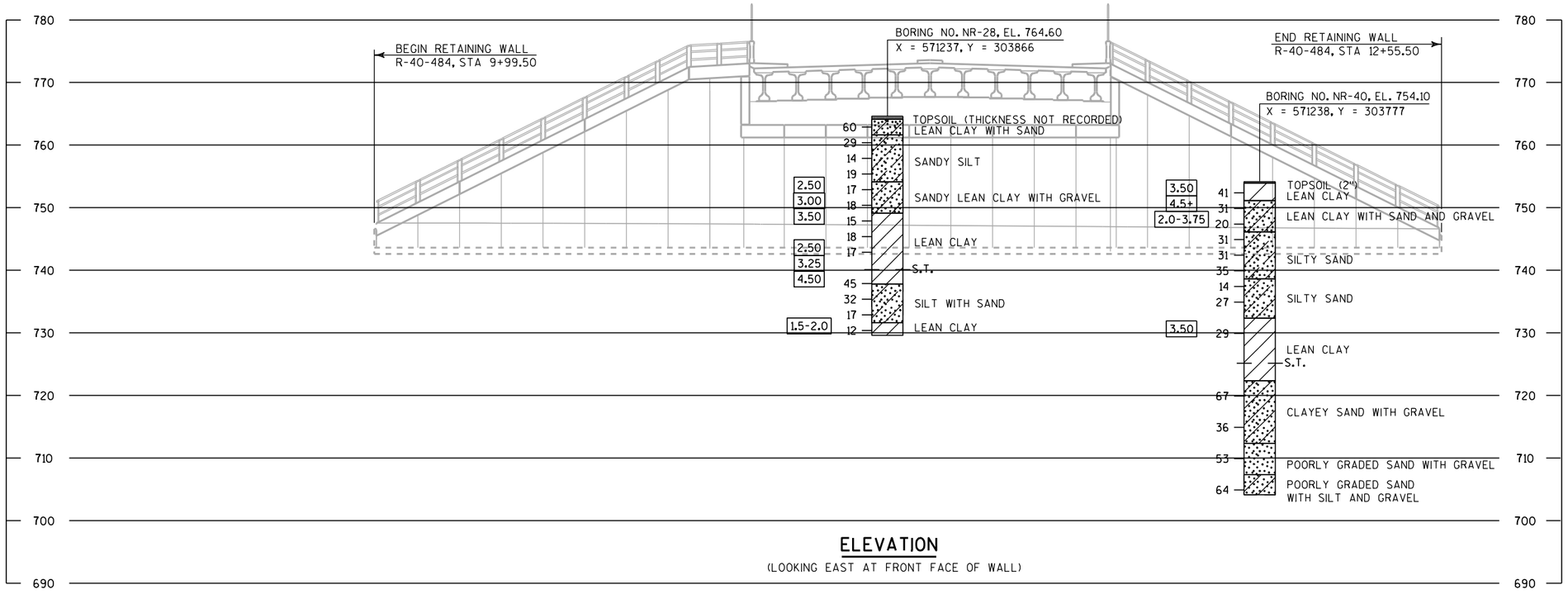
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
NOVEMBER 22, 2011 - BORING NR-28
DECEMBER 23, 2011 - BORING NR-40



PLAN



ELEVATION

(LOOKING EAST AT FRONT FACE OF WALL)

STATE PROJECT NUMBER

1060-33-73

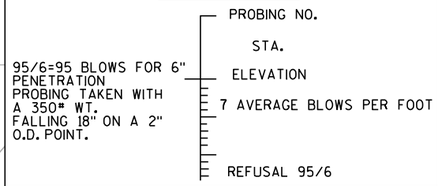
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

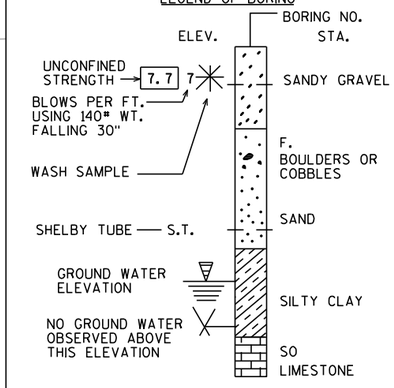
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-484

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION

SHEET 11 OF 11

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STATE PROJECT NUMBER
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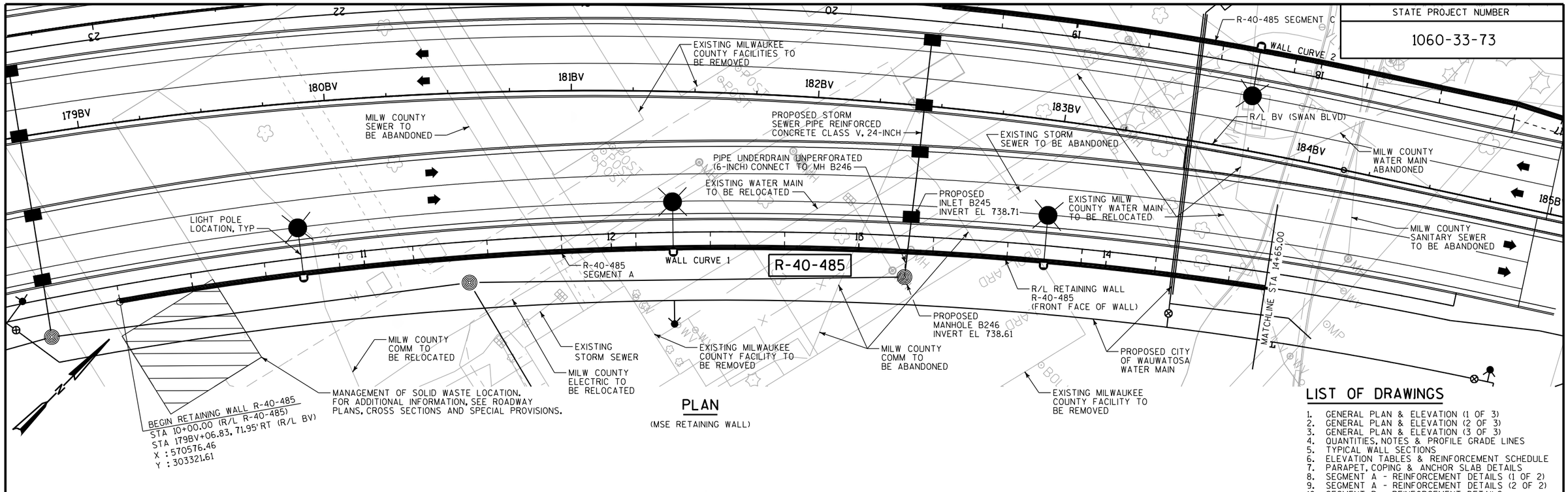
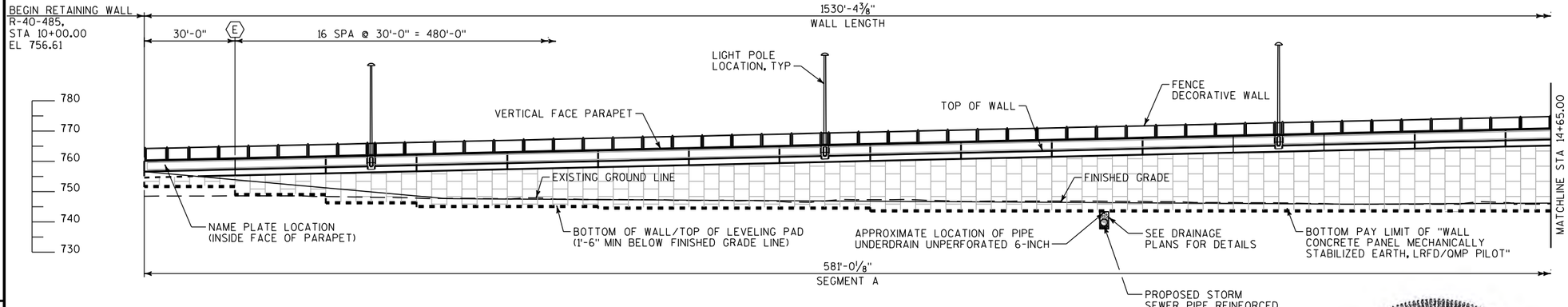


PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 3)
2. GENERAL PLAN & ELEVATION (2 OF 3)
3. GENERAL PLAN & ELEVATION (3 OF 3)
4. QUANTITIES, NOTES & PROFILE GRADE LINES
5. TYPICAL WALL SECTIONS
6. ELEVATION TABLES & REINFORCEMENT SCHEDULE
7. PARAPET, COPING & ANCHOR SLAB DETAILS
8. SEGMENT A - REINFORCEMENT DETAILS (1 OF 2)
9. SEGMENT A - REINFORCEMENT DETAILS (2 OF 2)
10. SEGMENT B - REINFORCEMENT DETAILS
11. SEGMENT C - REINFORCEMENT DETAILS (1 OF 2)
12. SEGMENT C - REINFORCEMENT DETAILS (2 OF 2)
13. LIGHT SUPPORT DETAILS
14. FENCE DECORATIVE WALL (1 OF 3)
15. FENCE DECORATIVE WALL (2 OF 3)
16. FENCE DECORATIVE WALL (3 OF 3)
17. AESTHETIC WALL TREATMENT DETAILS
18. SUBSURFACE EXPLORATION (1 OF 3)
19. SUBSURFACE EXPLORATION (2 OF 2)
20. SUBSURFACE EXPLORATION (3 OF 3)

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY RETAINING WALL f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS f'c = 4,000 PSI
BAR STEEL REINFORCEMENT Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE RETAINING WALL ADJACENT TO WEST ABUTMENT OF BRIDGE B-40-775 FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT

WISCONSIN
EDWARD K. McCRIGHT
E37422
MILWAUKEE, WI
3/15/13
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 03/15/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-485

WEST RETAINING WALL ALONG SWAN BOULEVARD

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WAUWATOSA

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MS	EKM	MS	EKM

GENERAL PLAN & ELEVATION (1 OF 3)

SHEET 1 OF 20

STATE PROJECT NUMBER
1060-33-73

EXIST WE ENERGIES UNDERGROUND ELECTRIC LINE TO REMAIN

RETAINING WALL CORNER R-40-485
STA 15+87.40 (R/L R-40-485)
STA 185BV+15.56, 47.58'RT (R/L BV SWAN BLVD)
X : 571001.61
Y : 303721.71

WALL CORNER
PT STA 15+41.17
X : 570964.71
Y : 303693.92

R-40-485 SEGMENT A

WALL CURVE 1

N 51°48'44.23" E

N 27°02'01.70" W

WALL KINK
PI STA 15+77.33
X : 570993.14
Y : 303716.28

LIGHT POLE LOCATION, TYP

EXISTING SANITARY SEWER (TO REMAIN)

EXISTING MILW COUNTY WATER MAIN TO BE RELOCATED

PROPOSED CITY OF WAUWATOSA WATER MAIN

MATCHLINE STA 14+65.00

EXISTING MILW COUNTY WATER MAIN TO BE ABANDONED

MILW COUNTY COMM TO BE ABANDONED

EXISTING STORM SEWER

R/L BV (SWAN BLVD)

PROPOSED STORM SEWER

PROPOSED INLET B242

R/L R-40-485 (FRONT FACE OF WALL)

MATCHLINE STA 20+00.00

B-40-775

MILW. COUNTY WATER MAIN TO BE RELOCATED

WISDOT FTMS TO BE RELOCATED

R/L USH 45

R/L RETAINING WALL R-40-484

RETAINING WALL CORNER R-40-485
STA 16+72.97 (R/L R-40-485)
STA 185BV+23.86, 37.58'LT (R/L SWAN BLVD)
X : 570962.72
Y : 303797.93

WALL KINK
PI STA 16+83.03
X : 570954.24
Y : 303792.50

WALL CORNER
PI STA 17+19.19
X : 570922.03
Y : 303776.06

S 62°57'07.64" W

S 57°24'05.02" W

PC STA 17+82.36
X : 570868.82
Y : 303742.03

R-40-485

WALL CURVE 2

EXISTING WATER MAIN

EXISTING WATER MAIN TO BE RELOCATED

EXISTING MILW COUNTY SANITARY SEWER TO REMAIN IN SERVICE

EXISTING ELECTRIC TO BE RELOCATED

PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO INLET B247

PROPOSED INLET B247 INV 743.22

R/L XF (SWAN ACCESS ROAD)

PLAN
(MSE RETAINING WALL)

1530'-4⅜"
WALL LENGTH

16 SPA @ 30'-0" = 480'-0" | 31'-2" | 21'-2" | 18'-8" | 18'-6¾" | 21'-2" | 31'-2" | 25 SPA @ 30'-0" = 750'-0"

RETAINING WALL KINK
STA 15+77.33
EL 769.50

RETAINING WALL CORNER
STA 15+41.17
EL 768.71

STA 15+81.01
EL 769.56

RETAINING WALL CORNER
STA 15+87.40

RETAINING WALL CORNER
STA 16+72.97

STA 16+79.47
EL 769.75

RETAINING WALL KINK
STA 16+83.03
EL 769.67

RETAINING WALL CORNER
STA 17+19.19
EL 768.96

VERTICAL FACE PARAPET

TOP OF WALL

20'-0" | 30'-0" TYP | 20'-0"

B-40-775

10'-0" TYP

EL 759.92

EXISTING GROUND LINE

CONCRETE COPING

VERTICAL FACE PARAPET

TOP OF WALL

FENCE DECORATIVE WALL, TYP

LIGHT POLE LOCATION, TYP

FINISHED GRADE

780 | 770 | 760 | 750 | 740 | 730

MATCHLINE STA 14+65.00

MATCHLINE STA 20+00.00

BOTTOM OF WALL/TOP OF LEVELING PAD (3'-0" MIN BELOW FINISHED GRADE LINE, SEGMENT B)

BOTTOM OF WALL/TOP OF LEVELING PAD (1'-6" MIN BELOW FINISHED GRADE LINE, SEGMENT A 1'-6" & 2'-0" MIN BELOW FINISHED GRADE LINE, SEGMENT C)

BOTTOM PAY LIMIT OF "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH, LRFD/OMP PILOT"

APPROXIMATE LOCATION OF PIPE UNDERDRAIN UNPERFORATED 6-INCH

581'-0⅛" SEGMENT A | 98'-5½" SEGMENT B | 850'-10¾" SEGMENT C

ELEVATION
(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- (S) VERTICAL SLIP JOINT
- ☆ S 57°24'05.02" W
- ★ N 57°24'05.02" E
- ① 3'-8⅛"
- ② 6'-4⅝"
- ③ 7'-9½"
- ④ 7'-9⅜"
- ⑤ 6'-6"
- ⑥ 3'-6¾"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY MS | PLANS CK'D. EKM

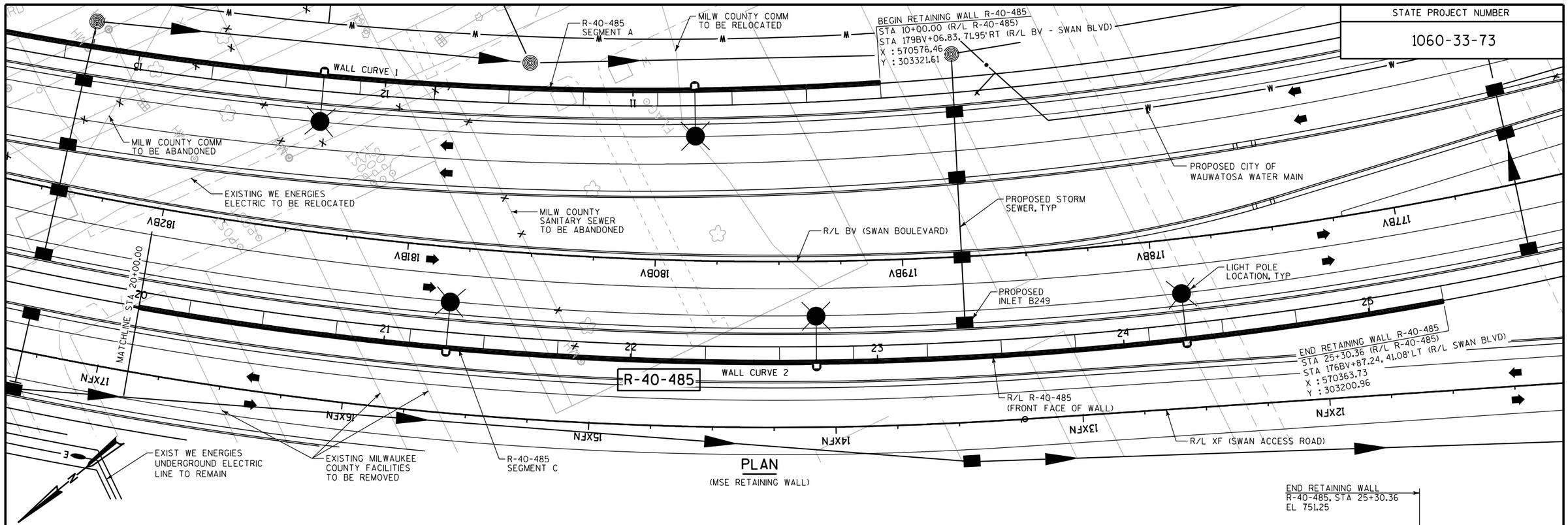
GENERAL PLAN & ELEVATION (2 OF 3)

SHEET 2 OF 20

FILE NAME : W:\Cadd\Final\10603373_BV\Structs\R-40-485\cds\R485_080102_gp.dgn
PLOT DATE : 08-MAR-2013 12:09
PLOT BY : MSCEKM
PLOT NAME : R485_080102_gp
PLOT SCALE : 40:1

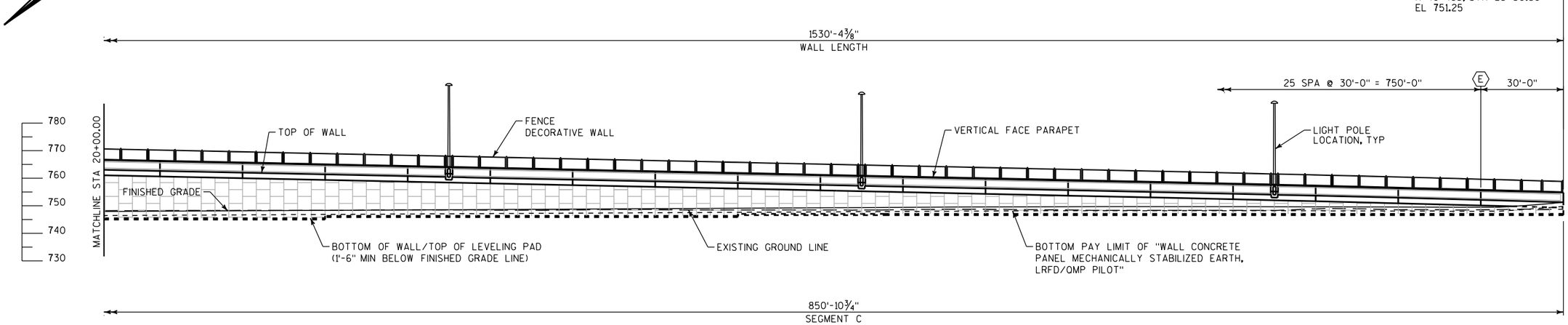
STATE PROJECT NUMBER

1060-33-73



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY MS | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (3 OF 3)

SHEET 3 OF 20

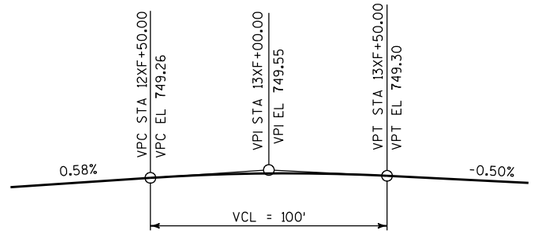
FILE NAME : W:\Cadd\Final\10603373_BV\Structs\R-40-485\cds\R485_080103_gp.dgn PLOT DATE : 08-MAR-2013 12:09 PLOT BY : MSCEKM PLOT NAME : R485_080103_gp PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-73

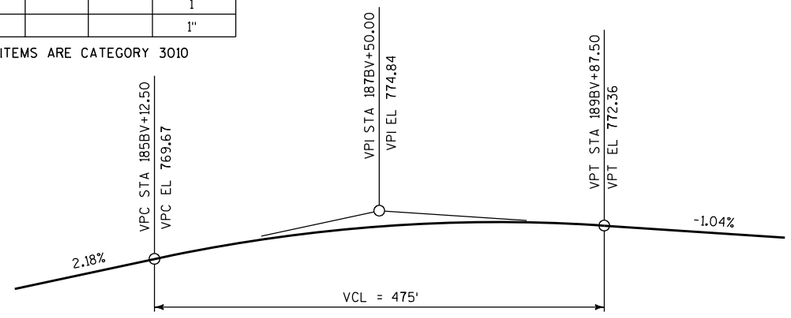
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	TOTAL
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	262	---	383	645
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	42,675	---	62,140	104,815
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24	2	35	61
517.1050.S.0002	ARCHITECTURAL SURFACE TREATMENT R-40-485	SF	8,831	1,372	10,132	20,335
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	12	---	12	24
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	582	99	851	1,532
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	11	---	34	45
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	595	---	2,403	2,998
652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	5	---	15	20
653.0220	JUNCTION BOXES 18 x 6 x 6-INCH	EACH	2	---	1	3
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	4	---	7	11
SPV.0060.4100	ANCHOR ASSEMBLIES LIGHT POLES STRUCTURES	EACH	4	---	5	9
SPV.0090.4310	FENCE DECORATIVE WALL	LF	578	---	848	1,426
SPV.0165.4610	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	9,993	1,569	11,833	23,395
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				¾", 2"
	NON-BITUMINOUS JOINT FILLER	SIZE				¾", 1", 2"
	CORK FILLER	SIZE				1"
	NAME PLATE	EACH				1
	EXPANDED POLYSTYRENE	SIZE				1"

ALL ITEMS ARE CATEGORY 3010



PROFILE GRADE LINE
(SWAN ACCESS ROAD XF)



PROFILE GRADE LINE
(SWAN BOULEVARD)

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
RETAINED MSE WALL FILL ⚹	125	0	1,500	30	0
REINFORCED FILL	120	30	0	30	0
STIFF TO VERY STIFF CLAY FILL	124-130	0	1,000-2,000	30-31	0-100
LEAN CLAY	125-130	0	1,500-3,000	30-32	0-100
SAND/SILTY SAND	125-130	30-33	0	30-33	0
HARD CLAY	130-135	0	3,000-4,500	32-34	100-200
DENSE SAND	130	34-38	0	34-38	0

⚹ DESIGN WALL FOR THESE VALUES

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS			
WALL HEIGHT (FEET)	12.8	16.1	19.3
EXPOSED WALL HEIGHT (FEET)	11.3	13.1	17.3
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹	10.4	18.1	13.5
WALL STATION (R/L BV-SWAN BOULEVARD)	11+01	16+00	19+20
DESIGN GROUND WATER LEVEL (FEET)	797	797	797
BORING USED	NR-27	NR-33	NR-21
CAPACITY TO DEMAND RATION (CDR)			
SLIDING	1.33	1.73	1.36
ECCENTRICITY	1.20	1.94	1.21
BEARING	1.08	1.20	1.36
GLOBAL STABILITY	----	1.05	1.28

DESIGN GROUNDWATER ELEVATIONS ARE AN APPROXIMATION AT THE TIME OF THE SUBSURFACE EXPLORATION. GROUNDWATER LEVELS FLUCTUATE WITH TIME DUE TO MANY FACTORS. WATER TABLE ELEVATION DURING CONSTRUCTION MAY BE HIGHER OR LOWER THAN THE DESIGN LEVEL. CONTRACTOR MUST CHECK GEOTECHNICAL REPORT FOR ADDITIONAL GROUNDWATER INFORMATION.

⚹ FINAL DESIGN FOR INTERNAL STABILITY, EXTERNAL SLIDING, AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

HORIZONTAL CURVE DATA

WALL CURVE 1	WALL CURVE 2
PI = STA 12+73.88	PI = STA 21+64.41
X : 570734.80	X : 570546.96
Y : 303545.08	Y : 303536.20
DELTA = 21°45'36.95" RT	DELTA = 28°44'32.55" LT
D = 4°01'15.57"	D = 3°50'33.22"
R = 1424.92'	R = 1491.08'
T = 273.88	T = 382.05
L = 541.17'	L = 748.00
E = 26.08	E = 48.17
PC = STA 10+00.00	PC = STA 17+82.36
X : 570576.46	X : 570868.82
Y : 303321.61	Y : 303742.03
PT = STA 15+41.17	PT = STA 25+30.36
X : 570964.71	X : 570363.73
Y : 303693.92	Y : 303200.96

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET, ELEVATIONS ARE REFERENCED TO THE (NGVD) NORTH AMERICAN VERTICAL DATUM OF 1988.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

EXISTING STRUCTURES ARE NOT SHOWN IN THESE PLANS. THE REMOVAL OF THESE STRUCTURES IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-775 BRIDGE QUANTITIES.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE COST OF EXCAVATING TO THE WALL EXCAVATION LIMITS IS TO BE INCLUDED IN THE ROADWAY BID ITEMS "EXCAVATION, HAULING, AND REUSE OF SOLID WASTE SOIL" AND "MANAGEMENT OF SOLID WASTE". FOR ADDITIONAL INFORMATION, SEE ROADWAY PLANS, CROSS SECTIONS AND SPECIAL PROVISIONS.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7 INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7 INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-485 WITH THE WEST ABUTMENT OF BRIDGE B-40-775.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE TO BE EPOXY COATED.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR THE SEGMENTS A & C CAST-IN-PLACE ANCHOR SLAB/COPING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS" AND "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE 2'-0" BELOW FINISHED GRADE FOR SEGMENTS A & C AND 3'-0" BELOW FINISHED GRADE FOR SEGMENT B. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

LEGEND

EXCAVATION REQUIRED FOR CONSTRUCTION OF MSE WALL - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRDF/QMP PILOT"

EMBANKMENT (NOT A RETAINING WALL ITEM)

MSE BACKFILL - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT"

NOTE:

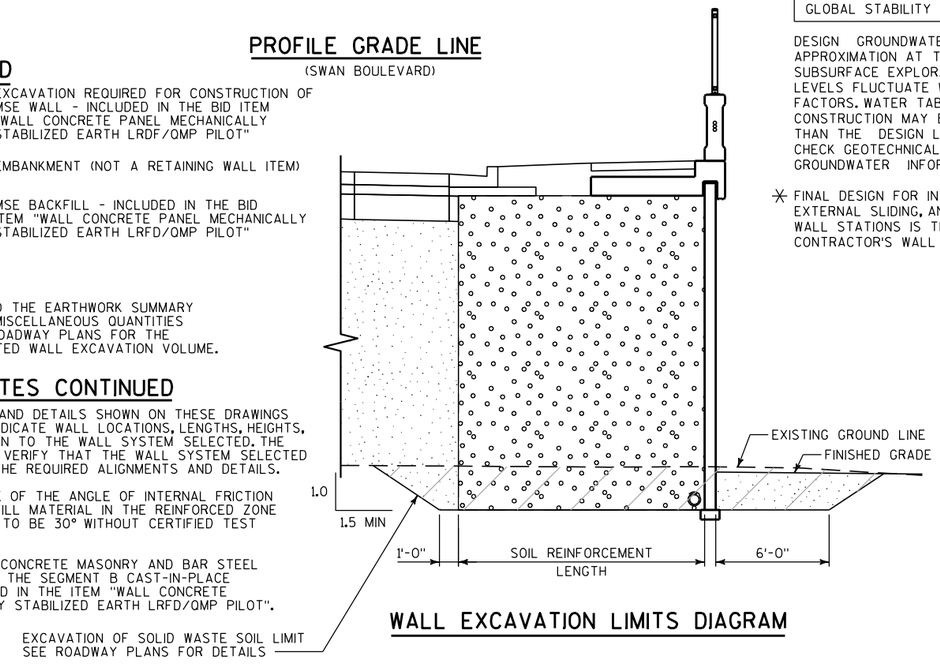
REFER TO THE EARTHWORK SUMMARY OF THE MISCELLANEOUS QUANTITIES IN THE ROADWAY PLANS FOR THE CALCULATED WALL EXCAVATION VOLUME.

GENERAL NOTES CONTINUED

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR THE SEGMENT B CAST-IN-PLACE COPING ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".



WALL EXCAVATION LIMITS DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY MS | PLANS CK'D. EKM

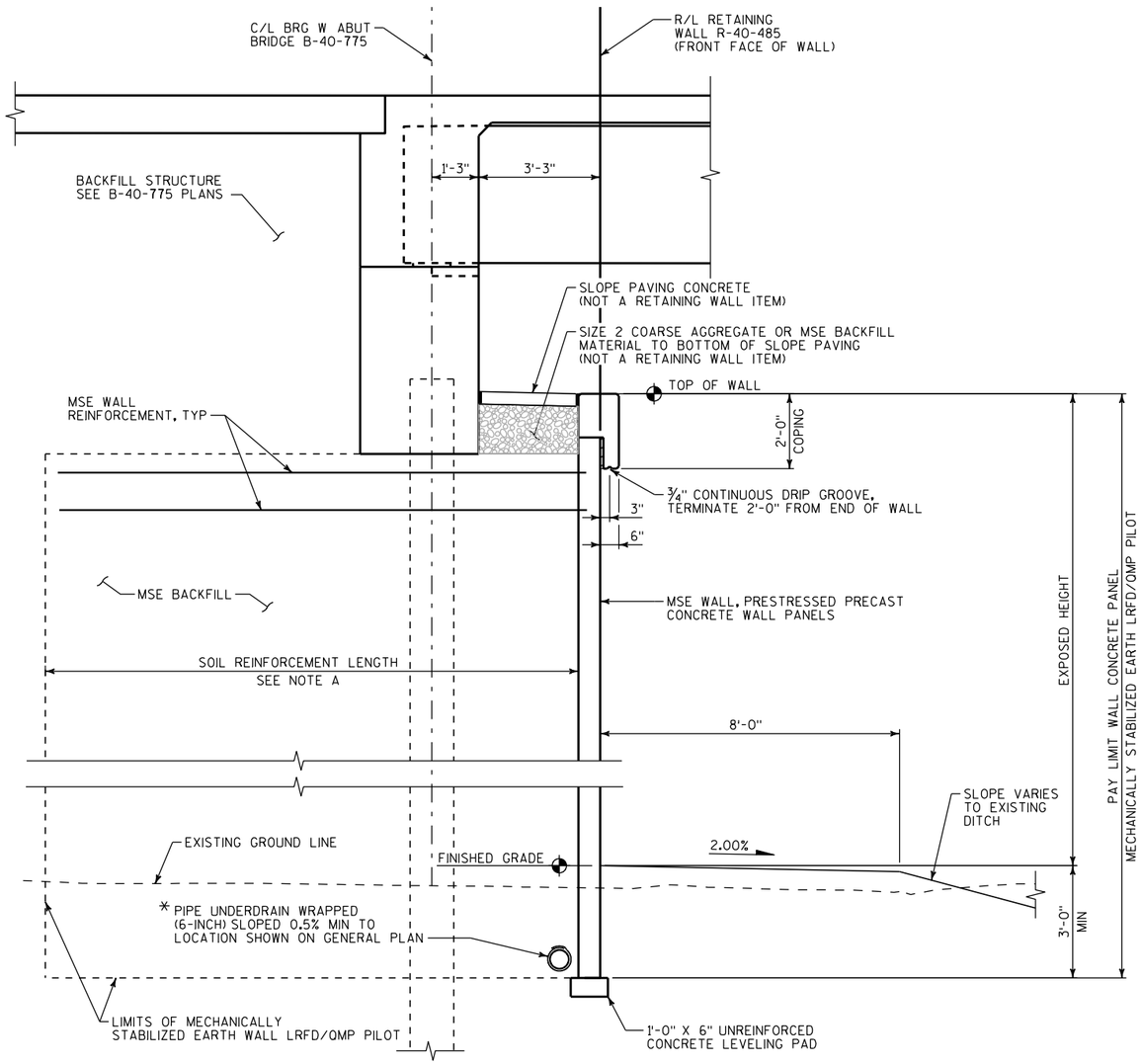
QUANTITIES, NOTES & PROFILE GRADE LINES

SHEET 4 OF 20

8

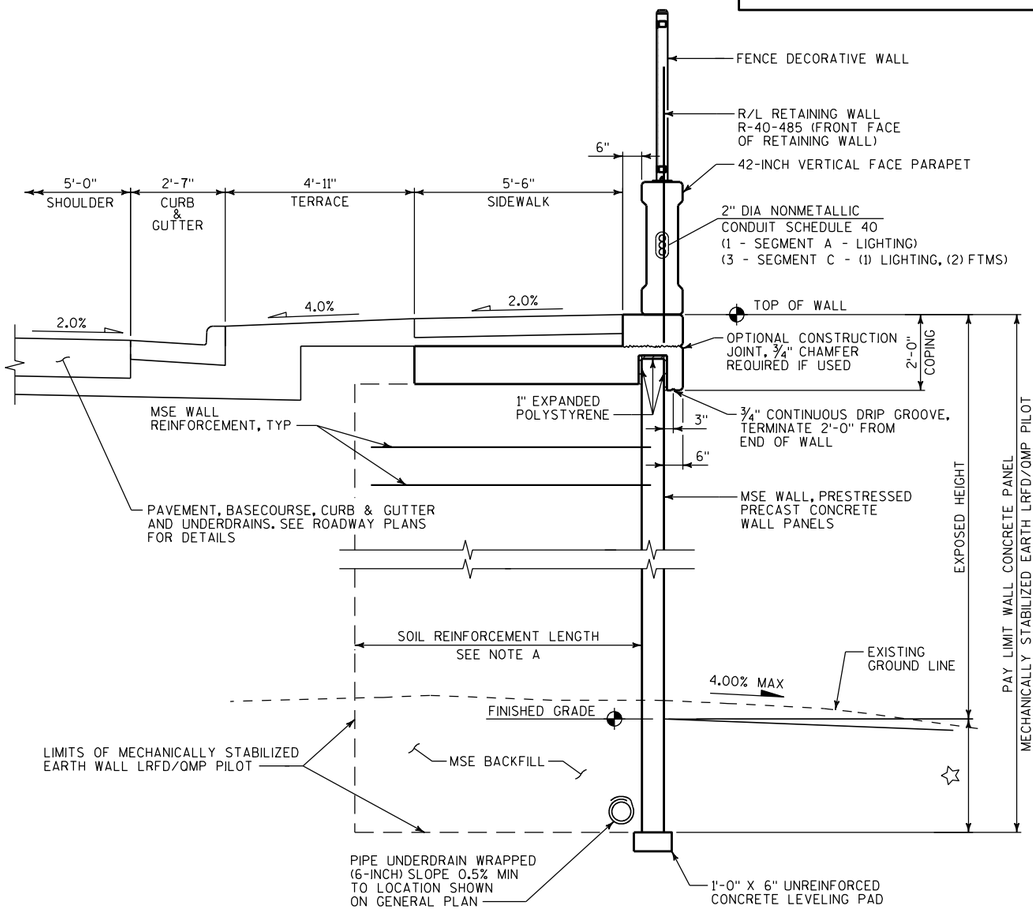
8

STATE PROJECT NUMBER
1060-33-73



TYPICAL SECTION AT B-40-775 WEST ABUTMENT

(LOOKING NORTH - SEGMENT B STA 15+81.01 TO STA 16+79.47)



TYPICAL SECTION AT SEGMENTS A & C

(LOOKING EAST - SEGMENT A STA 10+00.00 TO STA 15+81.01)
(LOOKING WEST - SEGMENT C STA 16+79.47 TO STA 25+30.36)

☆ SEGMENT A - 1'-6" MIN. EMBEDMENT
SEGMENT C - 2'-0" MIN. EMBEDMENT (STA 16+79.47 TO STA 19+90.36)
SEGMENT C - 1'-6" MIN. EMBEDMENT (STA 19+90.36 TO STA 25+30.36)

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 4 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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TYPICAL WALL SECTIONS

SHEET 5 OF 20

FILE NAME : W:\Cadd\Final\10603373_BV\Structs\R-40-485\cds\R485_080305_ts.dgn
PLOT DATE : 08-MAR-2013 12:09
PLOT BY : MSCEKM
PLOT NAME : R485_080305_ts
PLOT SCALE : 4.000008:1

SEGMENT A WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+00.00	756.61	756.62	748.44
10+10.00	756.84	755.72	748.46
10+20.00	757.07	754.82	748.49
10+30.00	757.30	753.92	748.51
10+40.00	757.53	753.02	748.53
10+50.00	757.76	752.13	748.55
10+60.00	757.99	751.23	748.35
10+70.00	758.22	750.33	748.22
10+80.00	758.45	749.43	748.05
10+90.00	758.67	748.53	747.81
11+00.00	758.90	747.63	747.63
11+10.00	759.13	747.57	747.71
11+20.00	759.36	747.51	747.60
11+30.00	759.59	747.45	747.91
11+40.00	759.82	747.39	747.53
11+50.00	760.04	747.34	747.41
11+60.00	760.27	747.28	747.33
11+70.00	760.50	747.22	747.25
11+80.00	760.73	747.16	747.10
11+90.00	760.96	747.10	747.16
12+00.00	761.18	747.04	746.98
12+10.00	761.41	746.98	746.69
12+20.00	761.64	746.92	746.49
12+30.00	761.87	746.86	747.36
12+40.00	762.10	746.80	747.29
12+50.00	762.32	746.75	747.39
12+60.00	762.55	746.69	747.06
12+70.00	762.78	746.63	746.74
12+80.00	763.01	746.57	746.85
12+90.00	763.23	746.51	746.83
13+00.00	763.46	746.45	746.85
13+10.00	763.69	746.39	746.79
13+20.00	763.91	746.33	746.74
13+30.00	764.14	746.27	746.74
13+40.00	764.37	746.21	746.63
13+50.00	764.59	746.16	746.39
13+60.00	764.82	746.10	746.36
13+70.00	765.05	746.04	746.32
13+80.00	765.27	745.98	746.18
13+90.00	765.50	745.92	745.98
14+00.00	765.73	745.86	745.86
14+10.00	765.95	745.91	745.83
14+20.00	766.18	745.95	745.84
14+30.00	766.41	746.00	745.82
14+40.00	766.63	746.04	746.51
14+50.00	766.86	746.09	746.35
14+60.00	767.09	746.13	745.83
14+70.00	767.31	746.18	746.01
14+80.00	767.54	746.22	746.03
14+90.00	767.76	746.27	746.99
15+00.00	767.98	746.32	746.81
15+10.00	768.20	746.36	746.49
15+20.00	768.41	746.41	746.19
15+30.00	768.63	746.45	746.28
15+40.00	768.85	746.50	746.26
15+41.17	768.71	746.50	746.24
15+42.34	768.78	746.51	746.22
15+52.34	768.98	746.55	746.08
15+62.34	769.18	746.60	746.11
15+81.01	769.56	746.68	745.81

SEGMENT C WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
16+79.47	769.75	747.37	746.77
16+88.03	769.57	747.49	746.96
16+98.03	769.38	747.62	746.88
17+08.03	769.18	747.75	747.27
17+19.19	768.96	747.90	747.82
17+20.36	769.03	747.92	747.87
17+30.36	768.81	748.03	747.96
17+40.36	768.59	748.02	748.01
17+50.36	768.38	747.92	747.96
17+60.36	768.16	747.90	747.95
17+70.36	767.94	747.87	747.79
17+80.36	767.72	747.89	747.24
17+82.36	767.68	747.90	747.23
17+90.36	767.51	747.89	747.14
18+00.36	767.30	747.84	747.08
18+10.36	767.09	747.80	747.70
18+20.36	766.87	747.76	747.93
18+30.36	766.66	747.71	747.88
18+40.36	766.45	747.66	747.56
18+50.36	766.24	747.61	747.53
18+60.36	766.03	747.57	747.54
18+70.36	765.81	747.54	747.40
18+80.36	765.60	747.51	747.35
18+90.36	765.39	747.49	747.63
19+00.36	765.18	747.48	747.74
19+10.36	764.97	747.50	747.80
19+20.36	764.76	747.53	748.12
19+30.36	764.54	747.56	747.90
19+40.36	764.33	747.61	747.49
19+50.36	764.12	747.66	747.43
19+60.36	763.91	747.71	747.49
19+70.36	763.70	747.76	747.62
19+80.36	763.48	747.82	747.80
19+90.36	763.27	747.87	748.11
20+00.36	763.06	747.92	748.11
20+10.36	762.85	747.98	748.14
20+20.36	762.64	748.03	748.18
20+30.36	762.42	748.08	748.21
20+40.36	762.21	748.13	748.23
20+50.36	762.00	748.18	748.26
20+60.36	761.79	748.22	748.29
20+70.36	761.58	748.27	748.32
20+80.36	761.36	748.33	748.35
20+90.36	761.15	748.38	748.39
21+00.36	760.94	748.43	748.42
21+10.36	760.73	748.48	748.45
21+20.36	760.52	748.53	748.42
21+30.36	760.31	748.58	748.40
21+40.36	760.09	748.63	748.37
21+50.36	759.88	748.68	748.35
21+60.36	759.67	748.73	748.35
21+70.36	759.46	748.78	748.46
21+80.36	759.25	748.84	748.66
21+90.36	759.03	748.89	748.65
22+00.36	758.82	748.94	748.58
22+10.36	758.61	748.99	748.47
22+20.36	758.40	749.04	748.47
22+30.36	758.19	749.09	748.46
22+40.36	757.97	749.14	748.42
22+50.36	757.76	749.19	748.39

SEGMENT C CONT... WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
22+60.36	757.55	749.24	748.37
22+70.36	757.34	749.29	748.40
22+80.36	757.13	749.34	748.45
22+90.36	756.92	749.39	748.52
23+00.36	756.70	749.44	748.61
23+10.36	756.49	749.49	748.70
23+20.36	756.28	749.54	748.71
23+30.36	756.07	749.59	748.64
23+40.36	755.86	749.64	748.54
23+50.36	755.64	749.67	748.44
23+60.36	755.43	749.70	748.34
23+70.36	755.22	749.71	748.33
23+80.36	755.00	749.72	748.32
23+90.36	754.78	749.72	748.30
24+00.36	754.56	749.71	748.29
24+10.36	754.33	749.69	748.27
24+20.36	754.10	749.68	748.25
24+30.36	753.86	749.64	748.45
24+40.36	753.62	749.61	748.82
24+50.36	753.37	749.58	748.93
24+60.36	753.12	749.55	748.81
24+70.36	752.87	749.52	748.56
24+80.36	752.61	749.50	748.57
24+90.36	752.35	749.47	748.44
25+00.36	752.08	749.46	748.52
25+10.36	751.81	749.67	748.61
25+20.36	751.53	750.40	748.57
25+30.36	751.25	751.26	748.72

SEGMENT B WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
15+81.01	759.92	746.68	745.81
15+87.40	759.92	746.71	745.76
15+95.19	759.92	746.76	745.86
16+05.19	759.92	746.83	745.98
16+15.19	759.92	746.89	746.04
16+25.19	759.92	746.96	746.08
16+35.19	759.92	747.02	746.09
16+45.19	759.92	747.09	746.12
16+55.19	759.92	747.15	746.17
16+65.19	759.92	747.22	746.37
16+72.97	759.92	747.29	746.54

◥ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

NOTES

FOR DETAILS OF SEGMENT A STA 10+00.00 TO STA 15+81.01 AND SEGMENT C STA 16+79.47 TO STA 25+30.36, SEE SECTION A-A, SHEET 7.

BILL OF BARS NOTES:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

⚠ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

SEE SHEET 13 FOR LIGHT SUPPORT DETAILS.

BILL OF BARS - SEGMENT A

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	884	6'-6"	X		COPING - VERTICAL TIE
A402	X	884	4'-2"	X		COPING - VERTICAL TIE
A503	X	884	7'-7"	X		ANCHOR SLAB - HORIZONTAL - TOP
A404	X	483	5'-7"			ANCHOR SLAB - HORIZONTAL - BOTTOM
A405	X	272	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
A406	X	16	30'-8"			ANCHOR SLAB & COPING - LONGITUDINAL
A407	X	10	20'-7"		⚠	ANCHOR SLAB - LONGITUDINAL - SERIES
A408	X	16	14'-9"			ANCHOR SLAB & COPING - LONGITUDINAL
A409	X	10	5'-9"	X	⚠	ANCHOR SLAB - LONGITUDINAL - SERIES
A410	X	6	20'-9"			COPING - LONGITUDINAL
A411	X	6	5'-2"	X		COPING - LONGITUDINAL
A412	X	2	5'-8"			ANCHOR SLAB - HORIZONTAL - TOP & BOTTOM
A513	X	20	6'-5"	X		ANCHOR SLAB - LIGHT BLISTER STIRRUP
A614	X	8	5'-1"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
A615	X	8	4'-9"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
L501	X	24	11'-8"	X		LIGHT SUPPORT - STIRRUP
L502	X	24	6'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L603	X	24	6'-8"	X		LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	5'-6"	X		LIGHT SUPPORT - HORIZONTAL TIE
L505	X	20	4'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L406	X	16	1'-10"	X		LIGHT SUPPORT - HORIZONTAL TIE
L407	X	8	2'-10"	X		LIGHT SUPPORT - VERTICAL
R501	X	860	6'-6"	X		PARAPET - VERTICAL TIE
R802	X	136	29'-7"			PARAPET - LONGITUDINAL
R803	X	8	30'-8"			PARAPET - LONGITUDINAL
R804	X	8	20'-9"			PARAPET - LONGITUDINAL
R805	X	8	14'-9"			PARAPET - LONGITUDINAL
R806	X	8	7'-1"	X		PARAPET - LONGITUDINAL

BILL OF BARS - SEGMENT C

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
C501	X	1292	6'-6"	X		COPING - VERTICAL TIE
C402	X	1292	4'-2"	X		COPING - VERTICAL TIE
C503	X	1292	7'-7"	X		ANCHOR SLAB - HORIZONTAL - TOP
C404	X	699	5'-7"			ANCHOR SLAB - HORIZONTAL - BOTTOM
C405	X	416	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
C406	X	10	30'-7"		⚠	ANCHOR SLAB - LONGITUDINAL - SERIES
C407	X	10	20'-7"		⚠	ANCHOR SLAB - LONGITUDINAL - SERIES
C408	X	16	14'-9"			ANCHOR SLAB & COPING - LONGITUDINAL
C409	X	10	5'-0"	X	⚠	ANCHOR SLAB - LONGITUDINAL - SERIES
C410	X	6	30'-9"			COPING - LONGITUDINAL
C411	X	6	20'-9"			COPING - LONGITUDINAL
C412	X	6	4'-11"	X		COPING - LONGITUDINAL
C513	X	25	6'-5"	X		ANCHOR SLAB - LIGHT BLISTER STIRRUP
C614	X	10	5'-1"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
C615	X	10	4'-9"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
L501	X	30	11'-8"	X		LIGHT SUPPORT - STIRRUP
L502	X	30	6'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L603	X	30	6'-8"	X		LIGHT SUPPORT - HORIZONTAL TIE
L604	X	10	5'-6"	X		LIGHT SUPPORT - HORIZONTAL TIE
L505	X	25	4'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L406	X	20	1'-10"	X		LIGHT SUPPORT - HORIZONTAL TIE
L407	X	10	2'-10"	X		LIGHT SUPPORT - VERTICAL
R501	X	1262	6'-6"	X		PARAPET - VERTICAL TIE
R802	X	208	29'-7"			PARAPET - LONGITUDINAL
R803	X	8	30'-8"			PARAPET - LONGITUDINAL
R804	X	8	20'-9"			PARAPET - LONGITUDINAL
R805	X	8	14'-9"			PARAPET - LONGITUDINAL
R806	X	8	7'-1"	X		PARAPET - LONGITUDINAL

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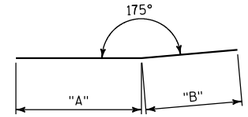
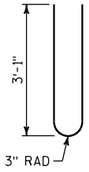
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
A407	2 SERIES OF 5	20'-8" TO 20'-5"
A409	2 SERIES OF 5	5'-3" TO 6'-4"
C406	2 SERIES OF 5	30'-5" TO 30'-8"
C407	2 SERIES OF 5	20'-5" TO 20'-8"
C409	2 SERIES OF 5	5'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY

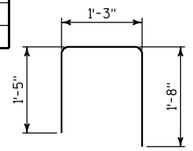


A409, A411
C409, C412, R806

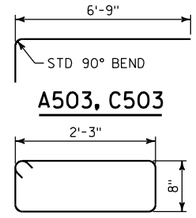


R501

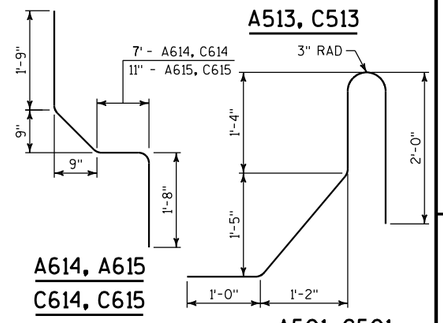
BAR MARK	DIM "A"	DIM "B"
A409	3'-6" TO 4'-4"	1'-9" TO 2'-0"
A411	3'-5"	1'-9"
C409	3'-3" TO 3'-0"	1'-9" TO 2'-0"
C412	3'-3"	1'-8"
R806	3'-5"	3'-8"



A402, C402



A503, C503
A513, C513



A614, A615
C614, C615
A501, C501

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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ELEVATION TABLES & REINFORCEMENT SCHEDULE

SHEET 6 OF 20

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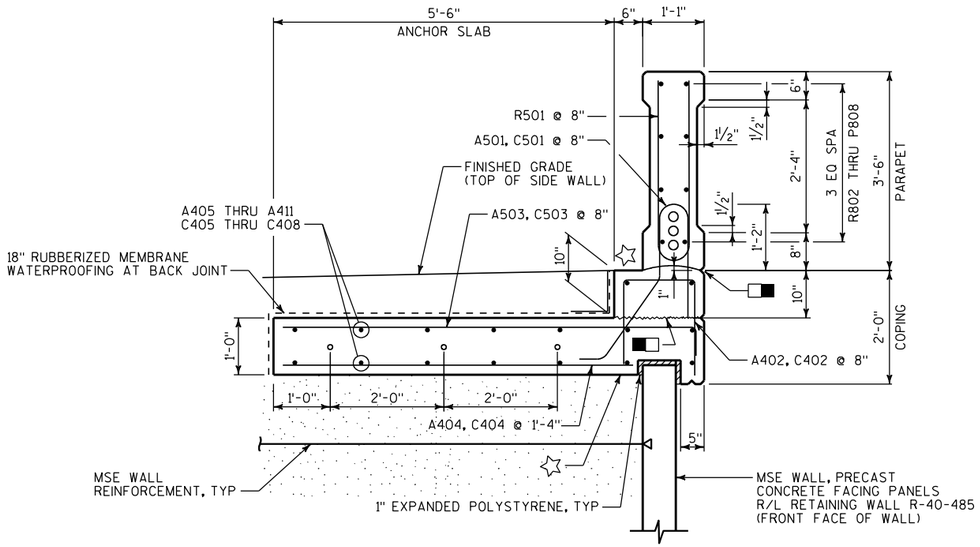
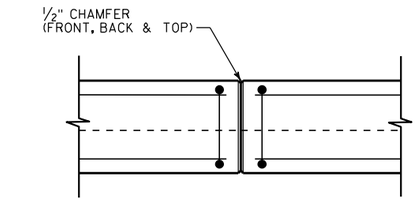
1060-33-73

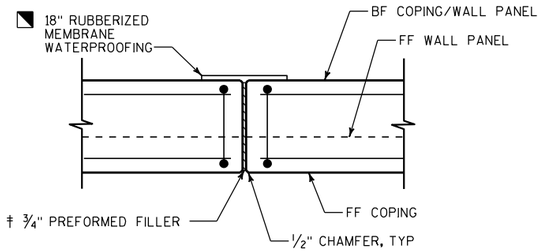


SECTION A-A COPING DETAIL SEGMENTS A & C



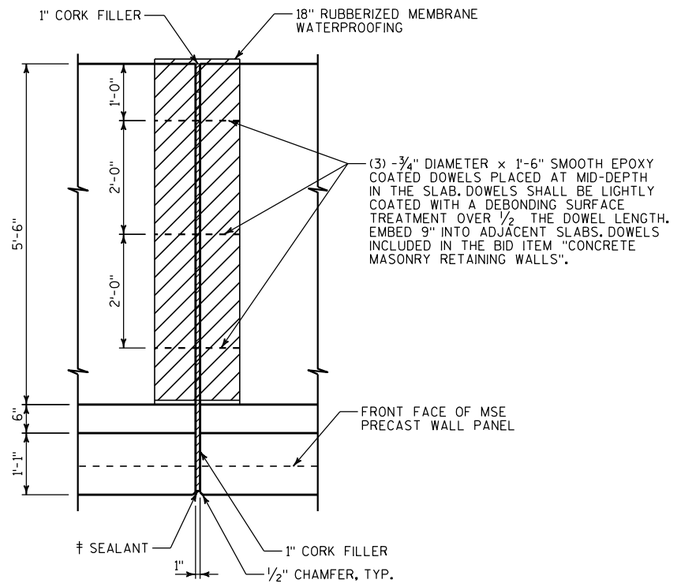
COPING CONTRACTION JOINT SEGMENT B

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINT, SEE GENERAL PLAN AND ELEVATION SHEETS.



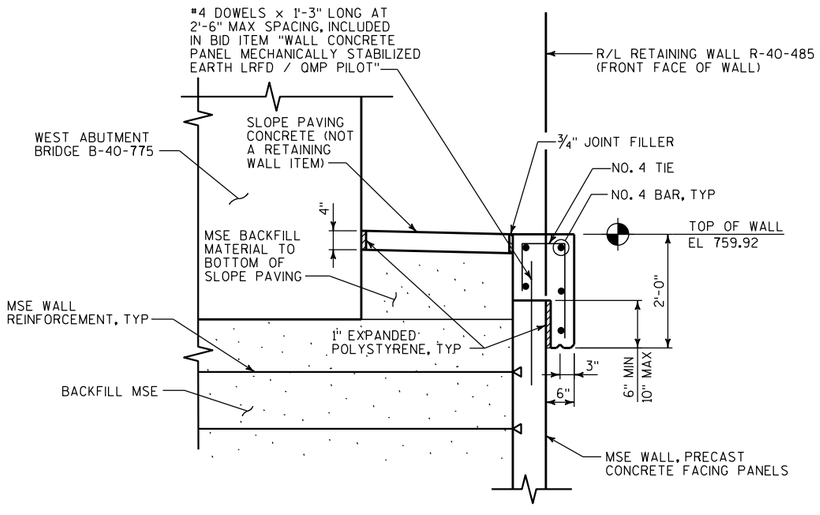
COPING EXPANSION JOINT SEGMENT B

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.

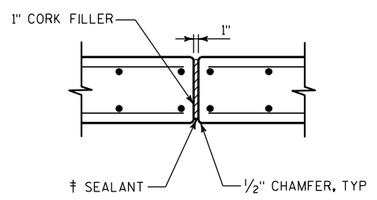


ANCHOR SLAB EXPANSION JOINT SEGMENTS A & C

LOCATE EXPANSION JOINTS OVER WALL JOINTS.
DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.

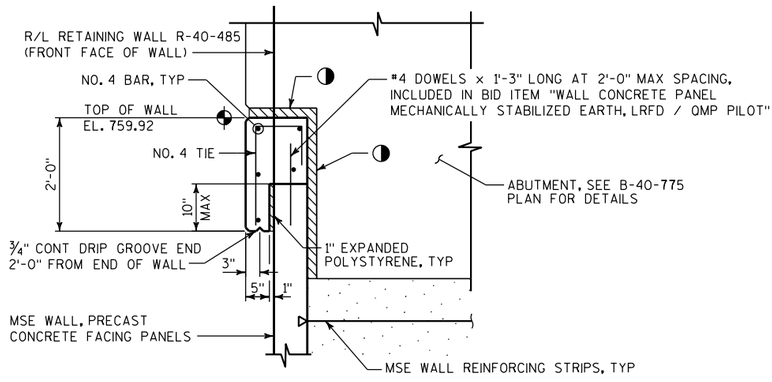


COPING DETAIL AT SEGMENT B



PARAPET EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT.



COPING DETAIL THRU ABUTMENT

(SEGMENT B)

LEGEND

- ☆ LEVEL
- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ‡ NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- 2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- OPTIONAL CONSTRUCTION JOINT, ¾" CHAMFER AND RUBBERIZED MEMBRANE WATERPROOFING REQUIRED ALONG JOINT IF USED. ADDITIONAL RUBBERIZED MEMBRANE WATERPROOFING SHALL BE INCIDENTAL TO BID ITEM "CONCRETE MASONRY RETAINING WALLS".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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PARAPET, ANCHOR SLAB & COPING DETAILS

SHEET 7 OF 20

8

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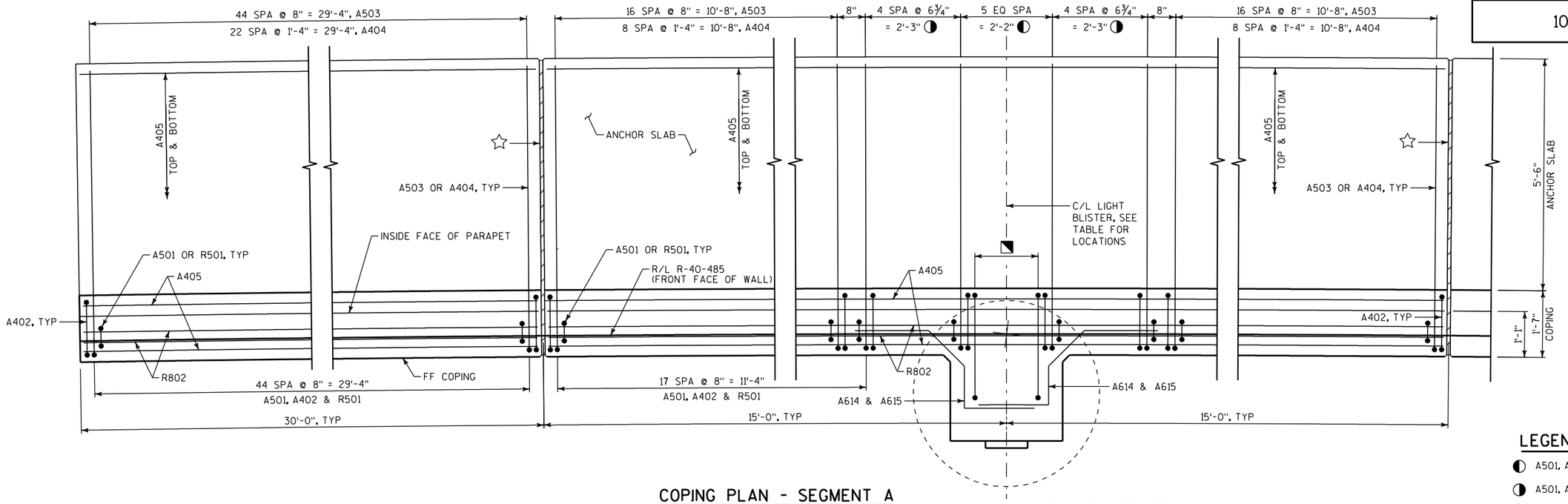


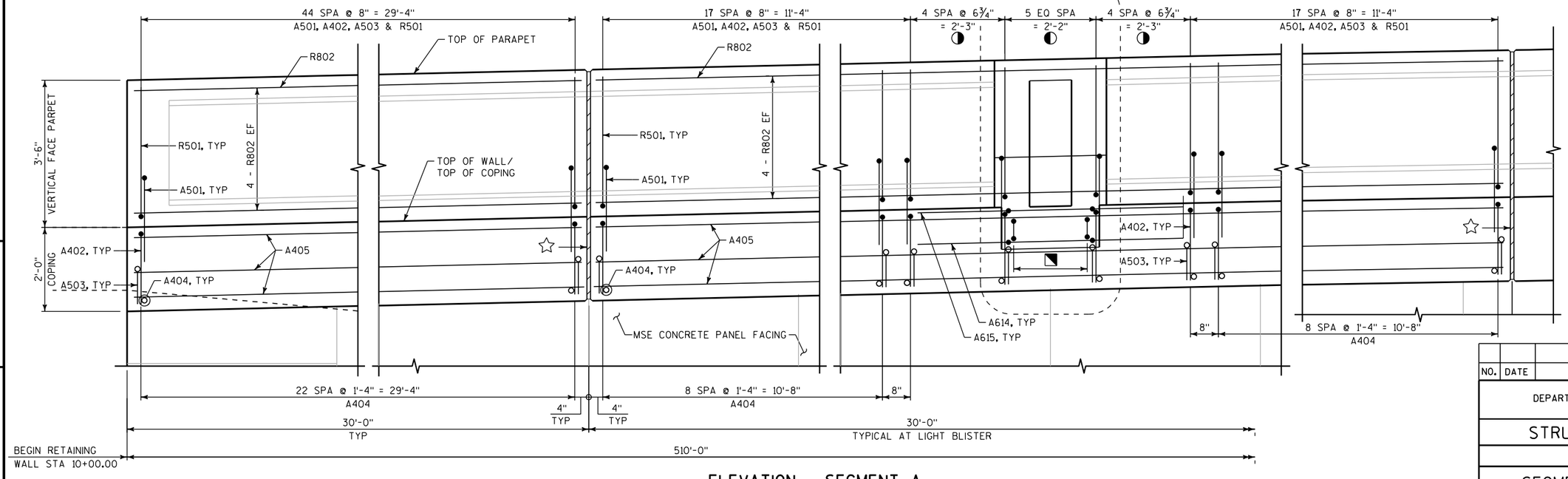
COPING PLAN - SEGMENT A

LIGHT BLISTER REINFORCEMENT NOT SHOWN FOR CLARITY
DIMENSIONS ARE ALONG R/L R-40-485

SEE LIGHT BLISTER DETAIL FOR ADDITIONAL REINFORCEMENT

LEGEND

- ◐ A501, A402, A503 & A404
- ◑ A501, A402, A503, A404 & R501
- ☆ 1" CORK FILLER
- ◥ A513, SEE LIGHT SUPPORT DETAILS FOR SPACING



ELEVATION - SEGMENT A

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-485

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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SEGMENT A REINFORCEMENT DETAILS (1 OF 2)

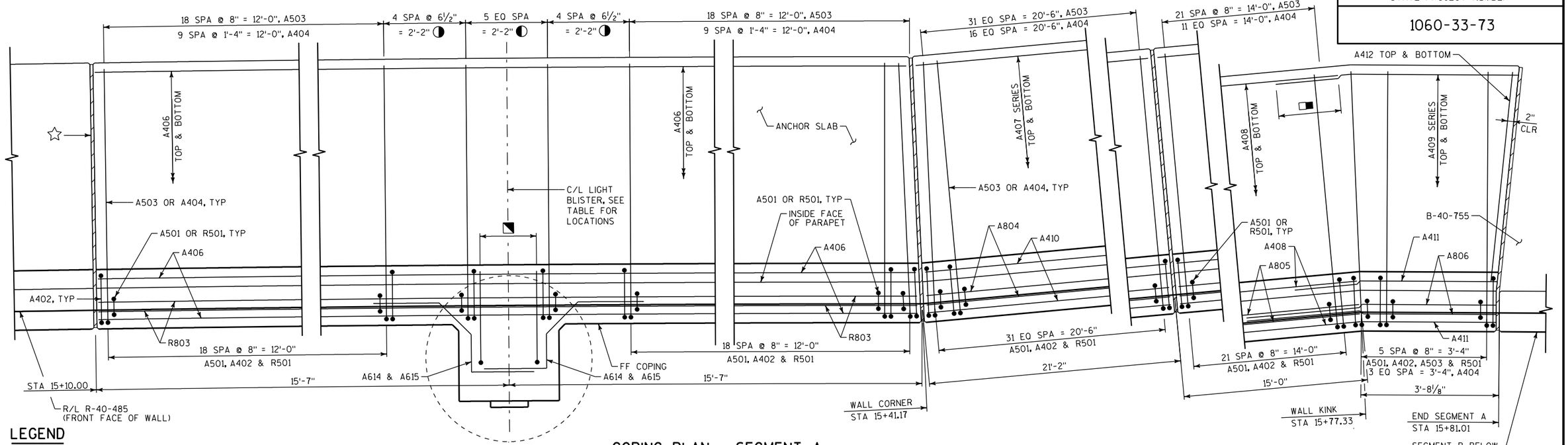
SHEET 8 OF 20

8

8

STATE PROJECT NUMBER

1060-33-73

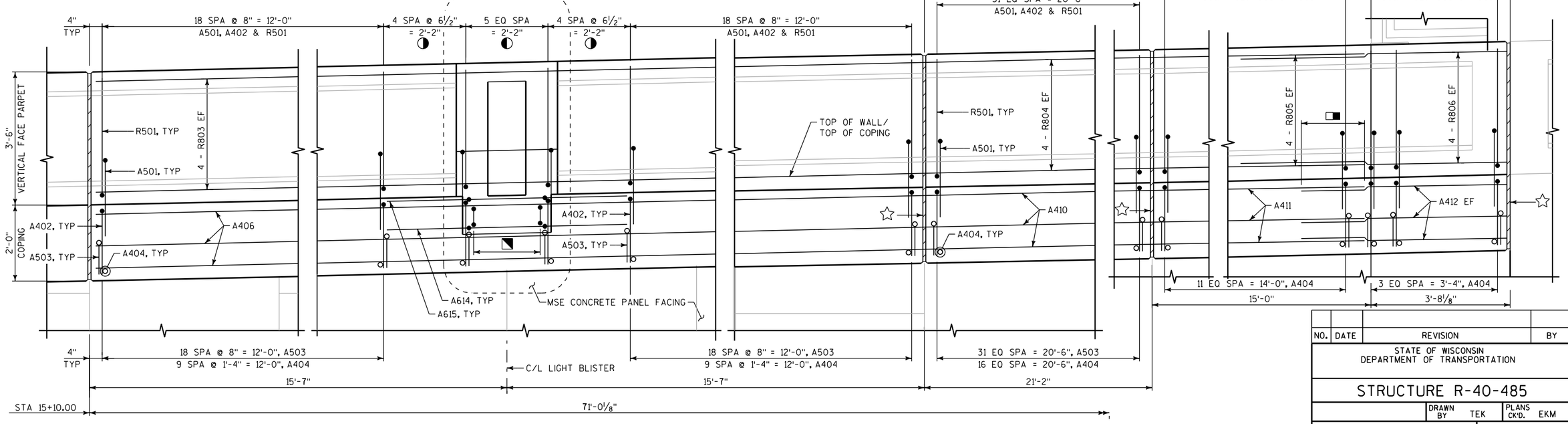


COPING PLAN - SEGMENT A

LIGHT BLISTER REINFORCEMENT NOT SHOWN FOR CLARITY
DIMENSIONS ARE ALONG R/L R-40-485

LEGEND

- ◐ A501, A402, A503 & A404
- ◑ A501, A402, A503, A404 & R501
- ☆ 1" CORK FILLER
- ◥ A513, SEE LIGHT SUPPORT DETAILS FOR SPACING
- SEE LIGHT BLISTER DETAIL FOR ADDITIONAL REINFORCEMENT
- ▭ 1'-8" MIN LAP, NO 5 BARS
  3'-8" MIN LAP, NO 8 BARS



ELEVATION - SEGMENT A

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-485

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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SEGMENT A REINFORCEMENT DETAILS (2 OF 2)

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STATE PROJECT NUMBER

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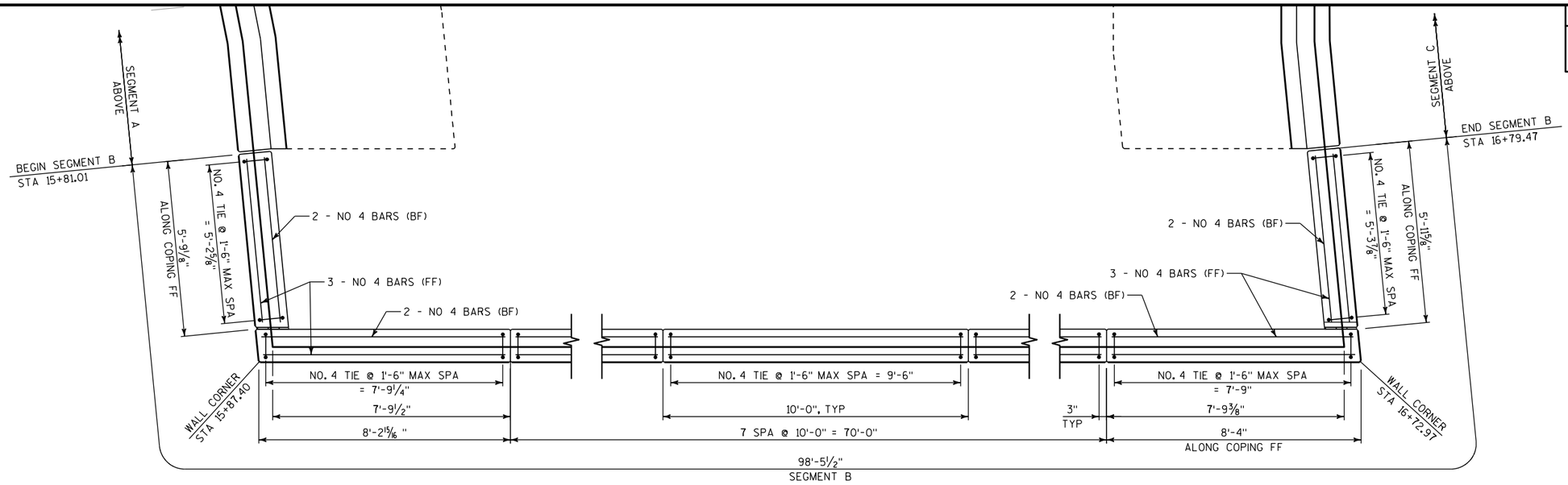
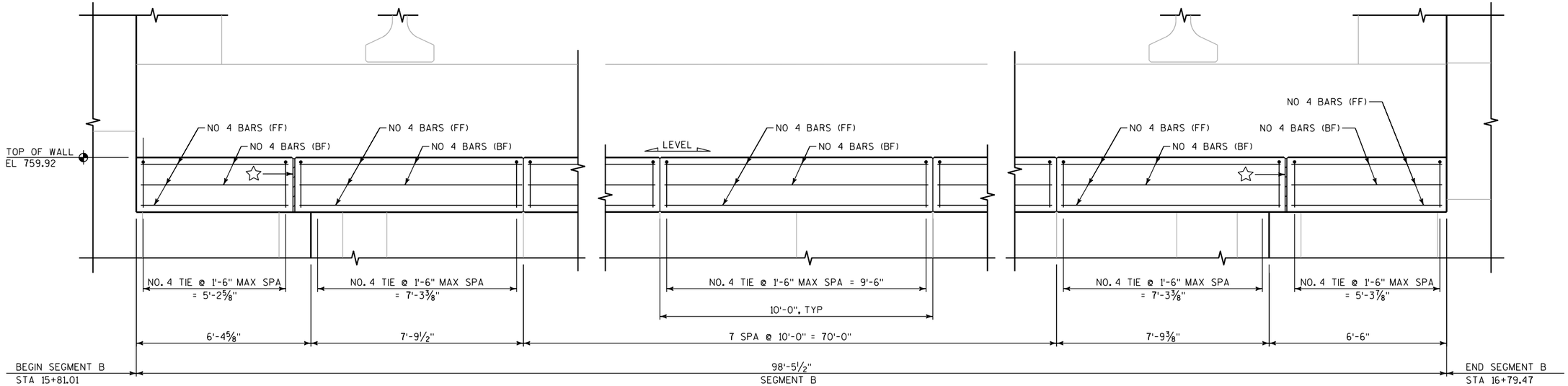


PLAN - SEGMENT B

DIMENSIONS ARE ALONG R/L R-40-485
(SEE "COPING DETAIL AT SEGMENT B" ON SHEET 7 FOR BAR SPACING)



ELEVATION - SEGMENT B

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-485

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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SEGMENT B REINFORCEMENT DETAILS

SHEET 10 OF 20

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PLOT BY : MSCEKM
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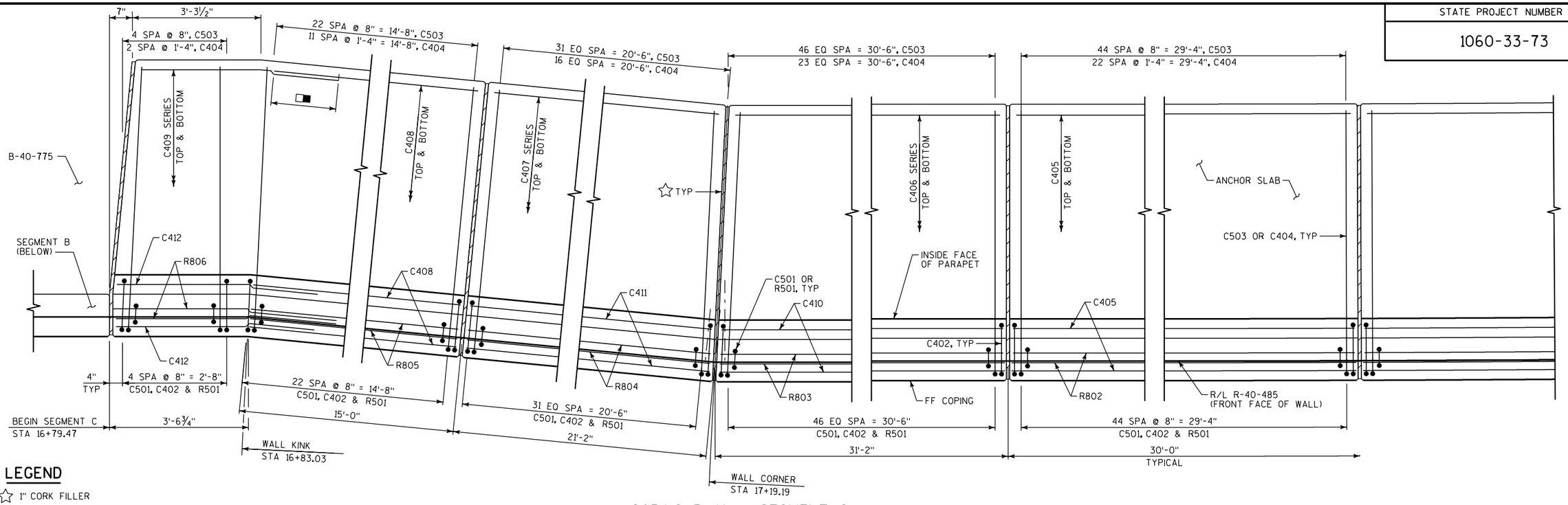
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-73



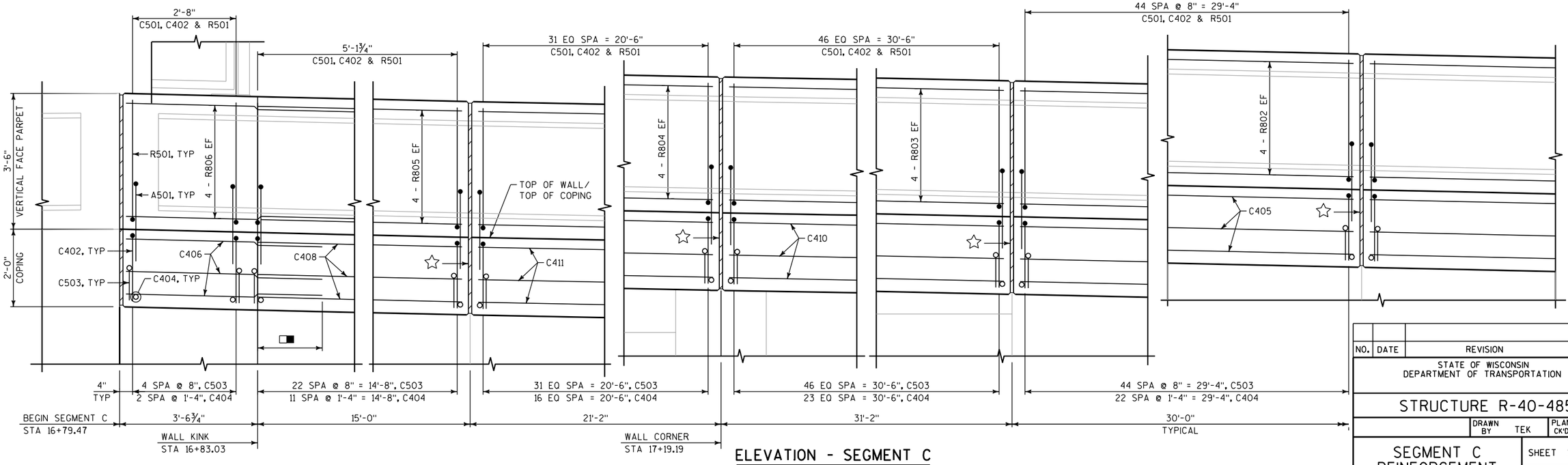
LEGEND

☆ 1" CORK FILLER

■ 1'-8" MIN LAP, NO 5 BARS
3'-8" MIN LAP, NO 8 BARS

COPING PLAN - SEGMENT C

DIMENSIONS ARE ALONG R/L R-40-485



ELEVATION - SEGMENT C

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-485

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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SEGMENT C REINFORCEMENT DETAILS (1 OF 2)

SHEET 11 OF 20

8 8

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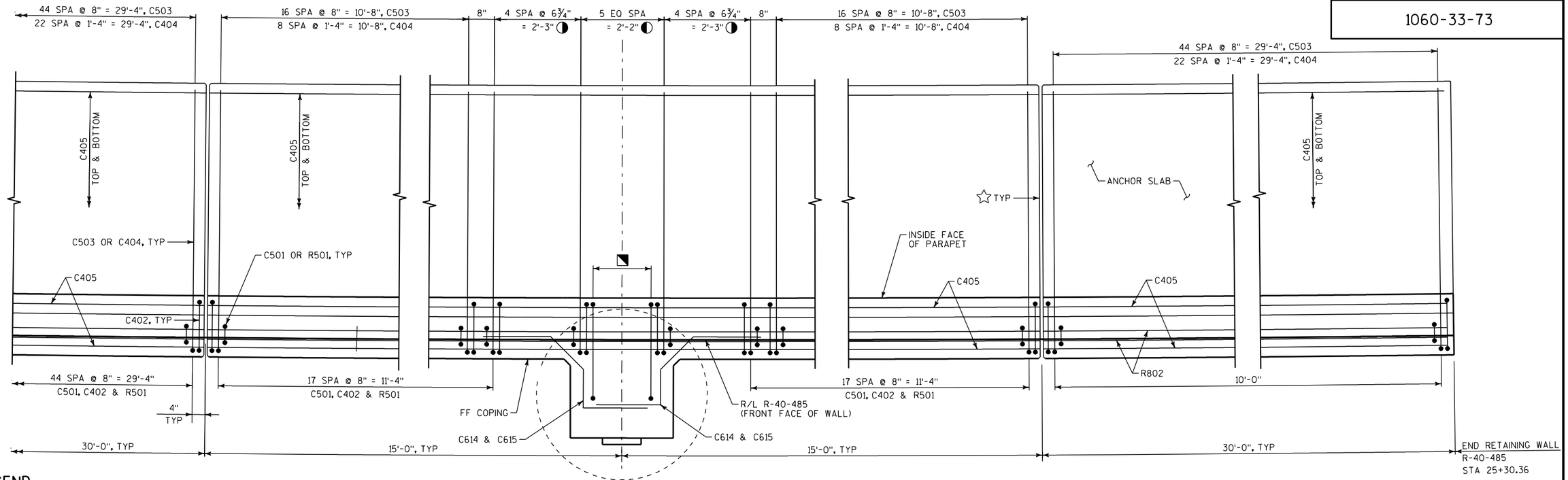


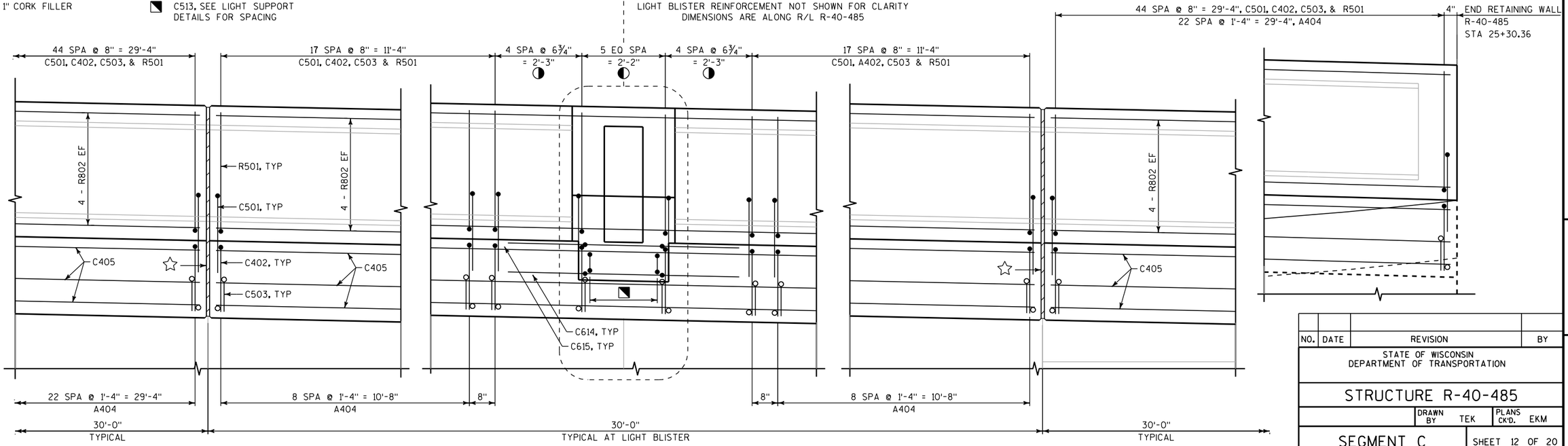
LEGEND

- ◐ C501, C402, C503 & C404
- ◑ C501, C402, C503, C404 & R501
- ☆ 1" CORK FILLER
- ◥ C513. SEE LIGHT SUPPORT DETAILS FOR SPACING

SEE LIGHT BLISTER DETAIL FOR ADDITIONAL REINFORCEMENT

COPING PLAN - SEGMENT C

LIGHT BLISTER REINFORCEMENT NOT SHOWN FOR CLARITY
DIMENSIONS ARE ALONG R/L R-40-485



ELEVATION - SEGMENT C

LOOKING AT FRONT FACE OF WALL - DIMENSIONS ARE ALONG R/L R-40-485

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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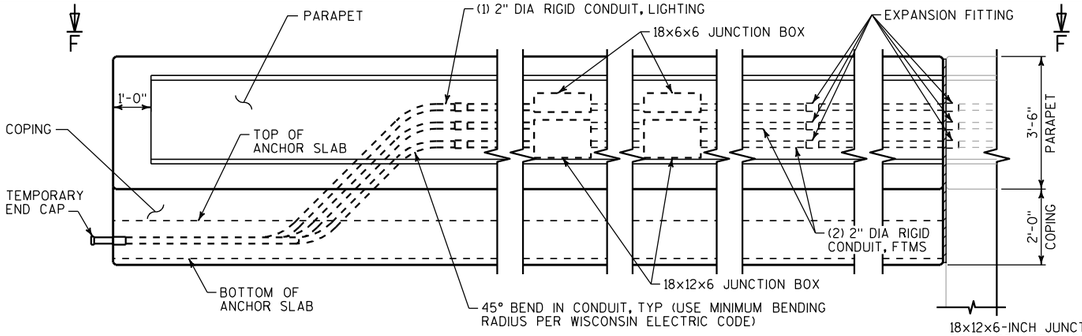
SEGMENT C REINFORCEMENT DETAILS (2 OF 2)

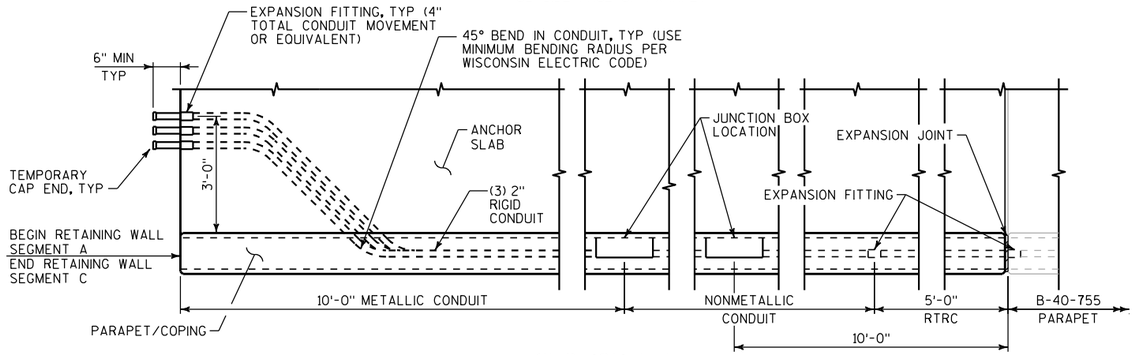
SHEET 12 OF 20

STATE PROJECT NUMBER
1060-33-73



PARAPET ELEVATION

OUTSIDE FACE OF PARAPET



SECTION F-F

SEGMENT A - 1 CONDUIT REQUIRED
SEGMENT C - 3 CONDUITS REQUIRED

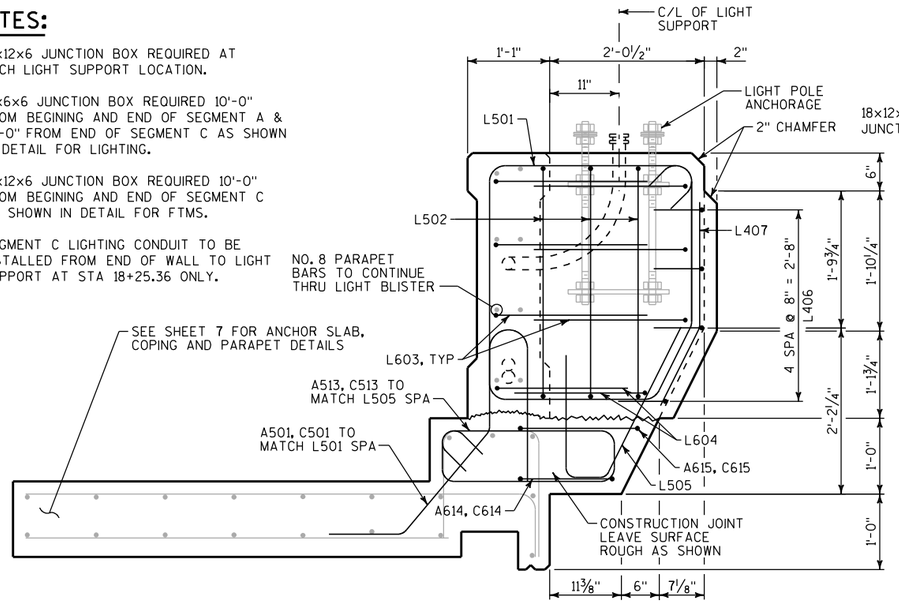
NOTES:

18x12x6 JUNCTION BOX REQUIRED AT EACH LIGHT SUPPORT LOCATION.

18x6x6 JUNCTION BOX REQUIRED 10'-0" FROM BEGINING AND END OF SEGMENT A & 10'-0" FROM END OF SEGMENT C AS SHOWN IN DETAIL FOR LIGHTING.

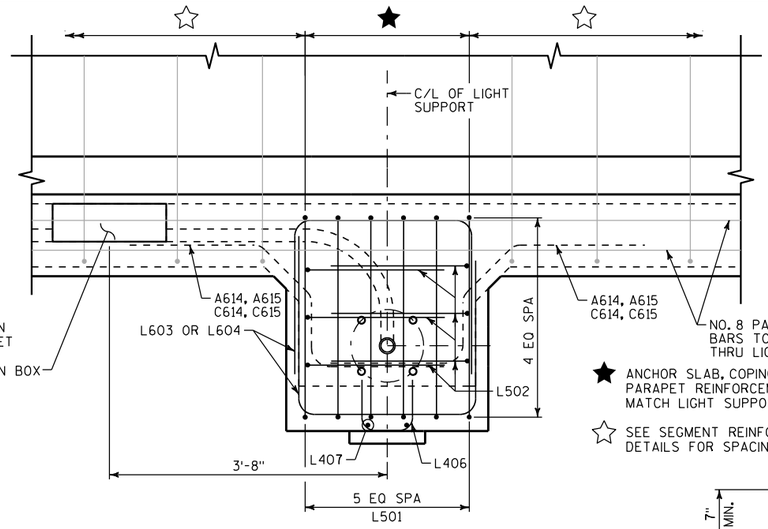
18x12x6 JUNCTION BOX REQUIRED 10'-0" FROM BEGINING AND END OF SEGMENT C AS SHOWN IN DETAIL FOR FTMS.

SEGMENT C LIGHTING CONDUIT TO BE INSTALLED FROM END OF WALL TO LIGHT SUPPORT AT STA 18+25.36 ONLY.



REINFORCEMENT IN LIGHT SUPPORT

CROSS SECTION AT C/L LIGHT SUPPORT

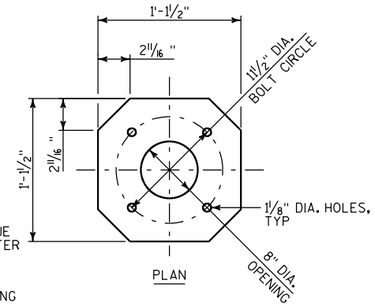


★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING

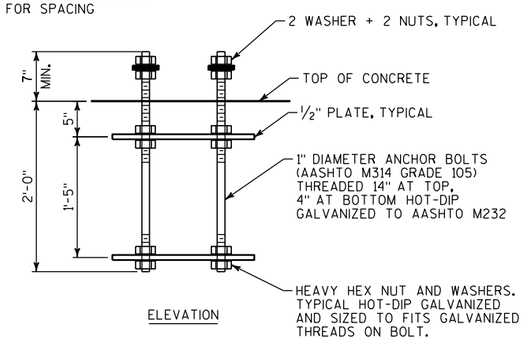
☆ SEE SEGMENT REINFORCEMENT DETAILS FOR SPACING

REINFORCEMENT IN LIGHT SUPPORT

SECTIONAL PLAN

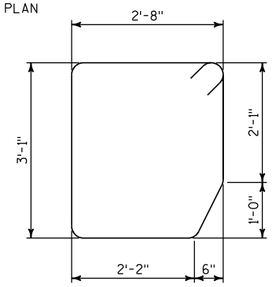


PLAN

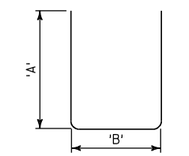


ELEVATION

ANCHOR ASSEMBLY
LIGHT POLE STRUCTURES

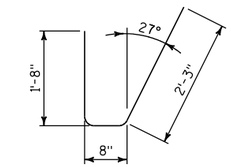


L501

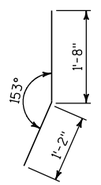


L502, L603, L604, L406

BAR MARK	DIM 'A'	DIM 'B'
L502	1'-11"	2'-11"
L603	2'-4"	2'-4"
L604	1'-9"	2'-4"
L406	8"	8"



L505

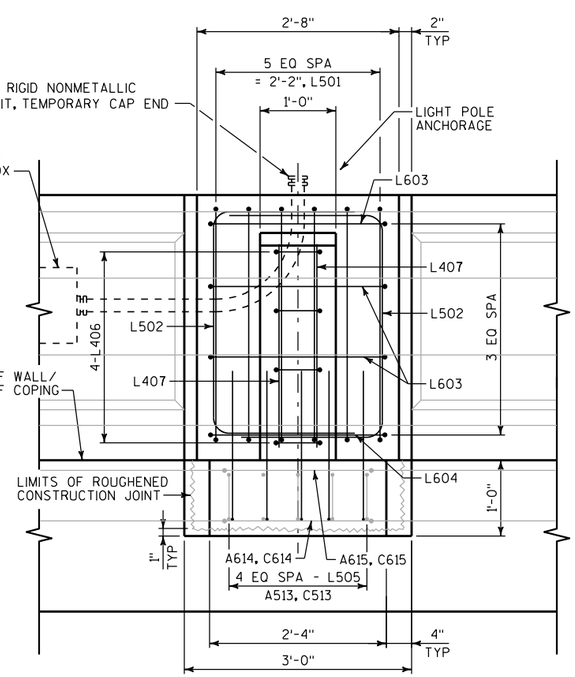


L407

LIGHT SUPPORT BILL OF BARS ✳✳

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L501	X	6	11'-8"	X	LIGHT SUPPORT - STIRRUP
L502	X	6	6'-6"	X	LIGHT SUPPORT -VERTICAL TIE
L603	X	6	6'-8"	X	LIGHT SUPPORT -HORIZONTAL TIE
L604	X	2	5'-6"	X	LIGHT SUPPORT -HORIZONTAL TIE
L505	X	5	4'-6"	X	LIGHT SUPPORT -VERTICAL TIE
L406	X	4	1'-10"	X	LIGHT SUPPORT -HORIZONTAL TIE
L407	X	2	2'-10"	X	LIGHT SUPPORT -VERTICAL

✳✳ NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE. BAR SCHEDULE FOR ONE (1) LIGHT SUPPORT ONLY. SEE SHEET 6 FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.



REINFORCEMENT IN LIGHT SUPPORT

INSIDE ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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LIGHT SUPPORT DETAILS

SHEET 13 OF 20

8

8

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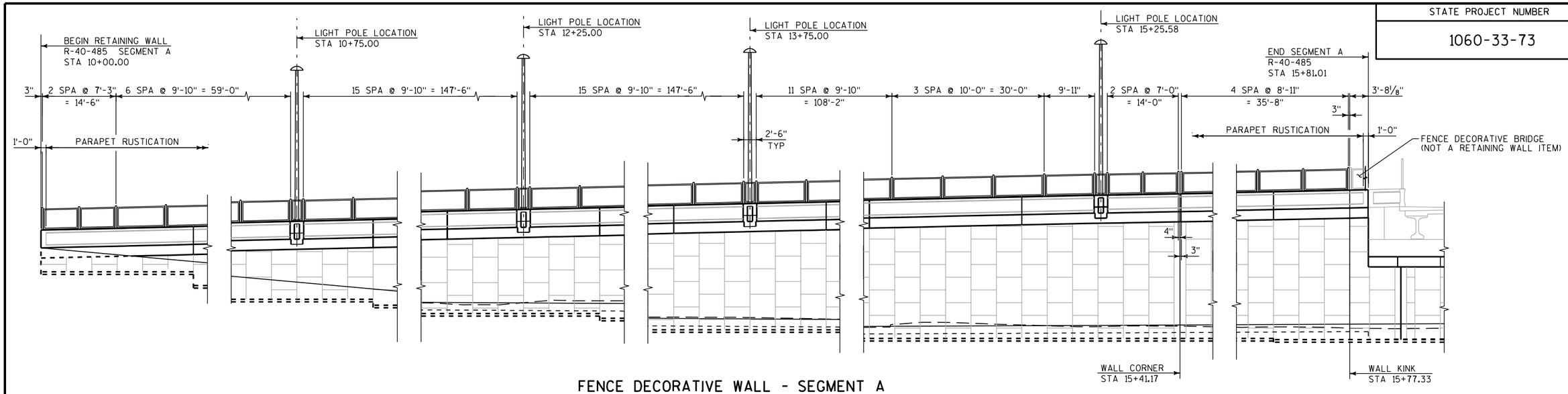
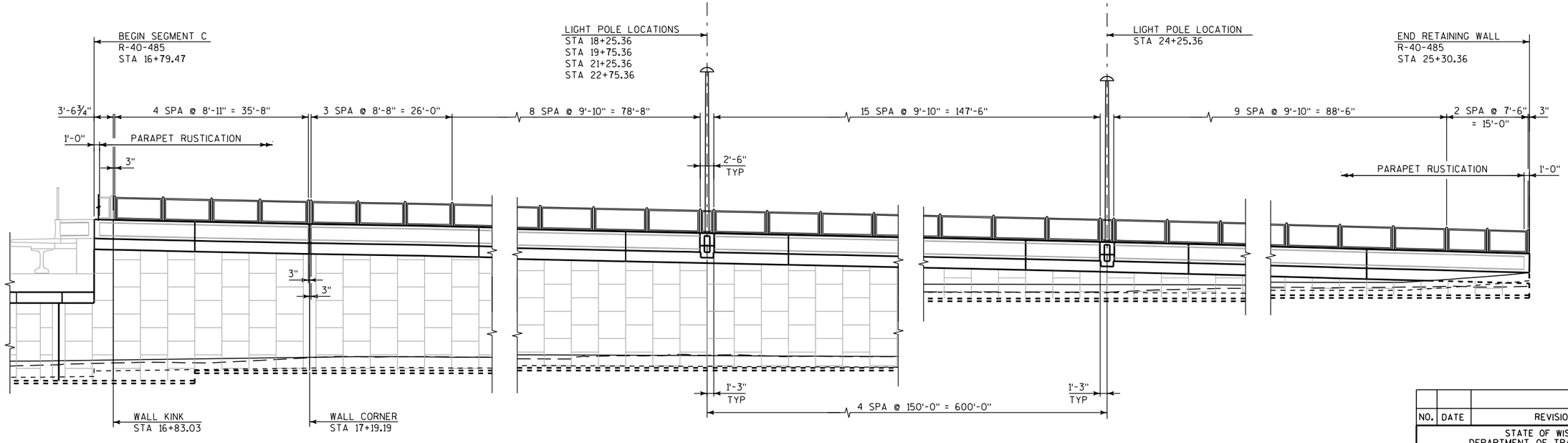


FENCE DECORATIVE WALL - SEGMENT A

ALL DIMENSIONS GIVEN ALONG R/L R-40-485
(FRONT FACE OF WALL)



FENCE DECORATIVE WALL - SEGMENT C

ALL DIMENSIONS GIVEN ALONG R/L R-40-485
(FRONT FACE OF WALL)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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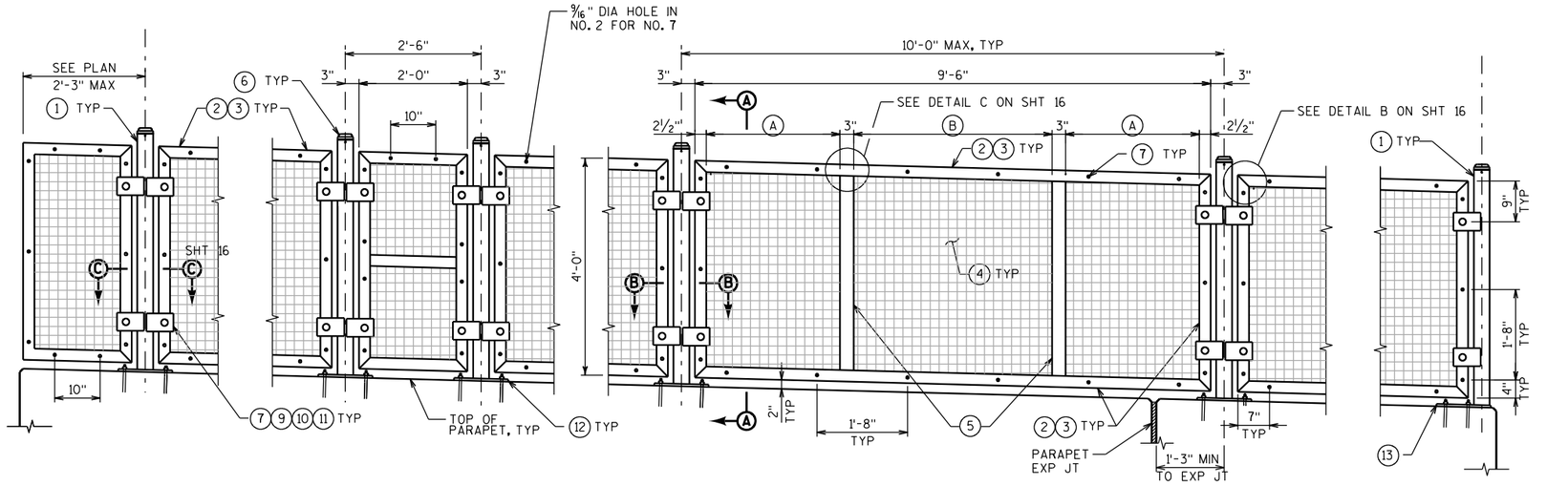
FENCE DECORATIVE WALL (1 OF 3)

SHEET 14 OF 20

STATE PROJECT NUMBER
1060-33-73



CANTILEVERED END ELEVATION
(LOOKING AT FRONT FACE OF WALL)

FENCE ELEVATION AT LIGHT POLE
(LOOKING AT FRONT FACE OF WALL)

TYPICAL FENCE ELEVATION
(LOOKING AT FRONT FACE OF WALL)

FLUSH END ELEVATION
(LOOKING AT FRONT FACE OF WALL)

LEGEND

1. HSS 3½ × 3½ × ⅜ POST WITH ¼" DIA. VENT HOLES TOP & BOTTOM ON THE OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO BASE PLATE AND NO. 6, TYP.
2. HSS 2½ X 2½ X ⅜. WELD TO NO. 5.
3. PL 2¾" × ¼" WELDED FRAME. WELD TO NO. 4. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET. WELD TO NO. 3.
5. HSS 3 X 2½ X ⅜. WELD TO NO. 2.
6. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
7. ½" DIA. CARRIAGE BOLT, WASHER AND NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 FOR SQUARE PORTION OF THE BOLT HEAD.
8. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 5" MINIMUM EMBEDMENT WITH A MINIMUM PULLOUT OF 10 KIPS.
9. PL ¼" X 4" X 6" CONNECTION WITH 1½" DIA. HOLES FOR NO. 7. USE NO. 11 TO COVER 1½" DIA. ADJUSTMENT HOLES.
10. PL ⅜" X 2" X 4".
11. PL WASHER ¼" X 3" X 3".
12. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
13. PL ½" X 8" X 1'-0" BASE PLATE. WELD TO NO. 1.
14. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

NOTES

THE BID ITEM WILL BE "FENCE DECORATIVE WALL" WHICH WILL INCLUDE ALL ITEMS SHOWN.

POST BASE PLATES WILL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS WILL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING WILL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, AND SHIMS WILL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND WILL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS WILL BE GALVANIZED.

THE STEEL MESH WILL BE TACK WELDED TO THE 2¾" X ¼" WELDED FRAME. THE MESH SHALL BE STRETCHED TO REMOVE SLACK.

VENT HOLES WILL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL WILL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.5.

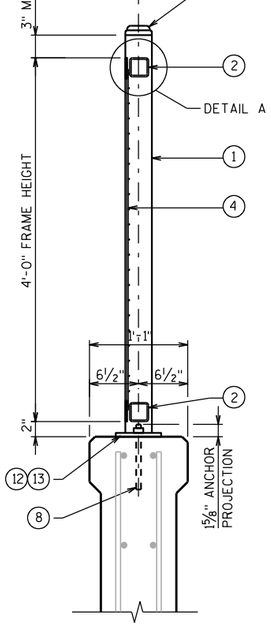
ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3/16".

COAT THE FENCE WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 - BLACK. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

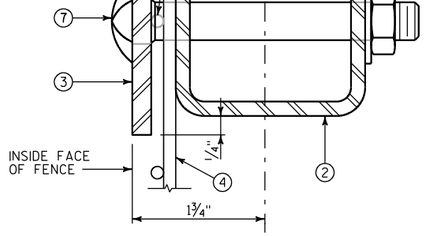
POST SPACING DIMENSIONS

POST SPACING	PATTERN DESCRIPTION (OPEN AREAS)
10 FT	(A) 2'-4¼" (B) 3'-10½"
7 FT TO 9.9 FT	REVISE (A) AND (B) WITH POST SPACING RATIO
4 FT TO 6.9 FT	TWO EQUAL PANELS
LESS THAN 4 FT	NOT ALLOWED, EXCEPT AT LIGHT POLES

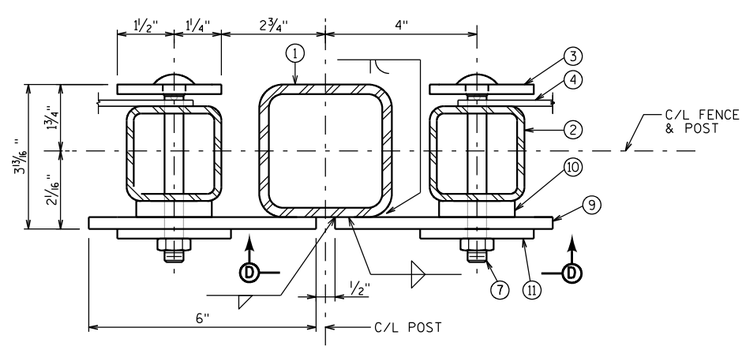
* SEE FENCE DECORATIVE WALL (1 OF 3) FOR POST SPACING.



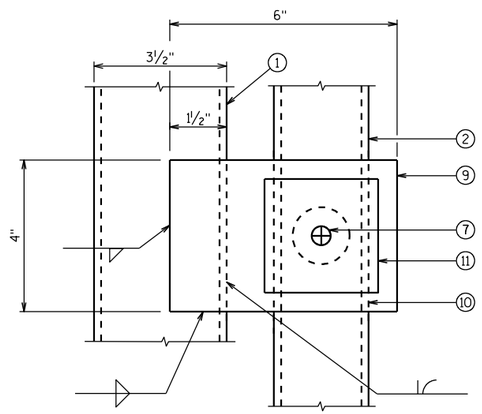
SECTION A-A



DETAIL A



SECTION B-B



ELEVATION D-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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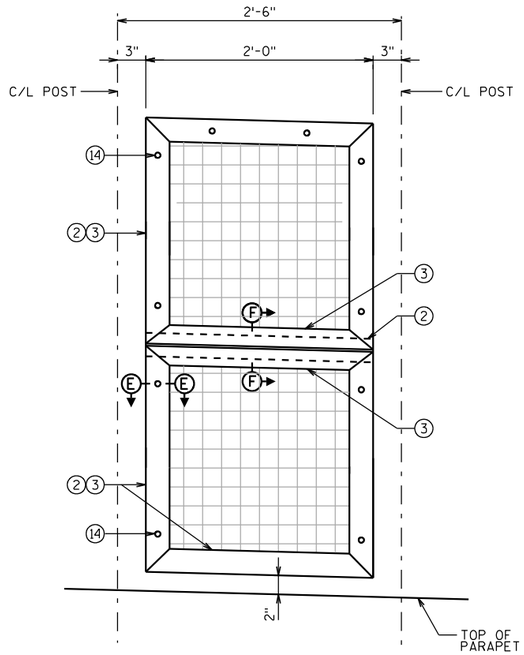
FENCE DECORATIVE WALL (2 OF 3)

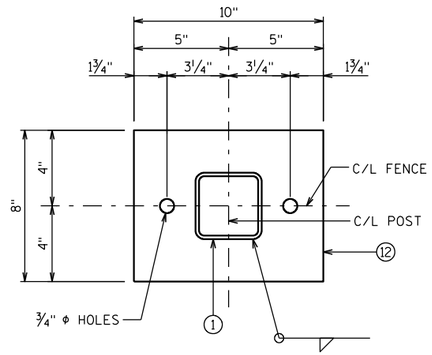
SHEET 15 OF 20

STATE PROJECT NUMBER
1060-33-73

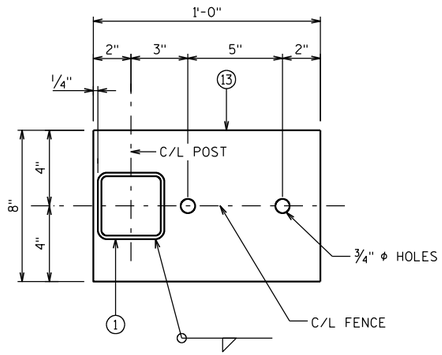


MAINTENANCE DOOR DETAIL

(INSIDE ELEVATION)



BASE PLATE



END BASE PLATE

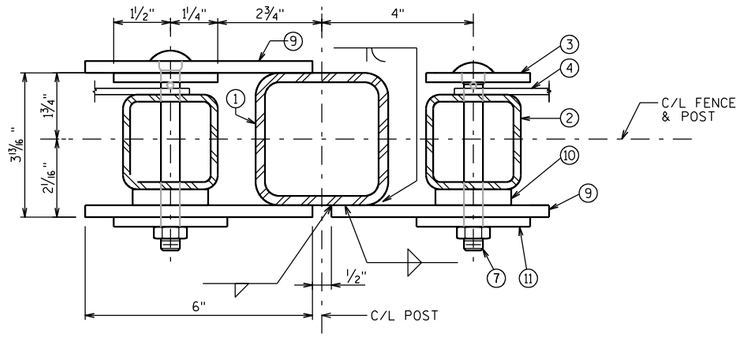
(INSTALL AT END SECTIONS)

NOTES

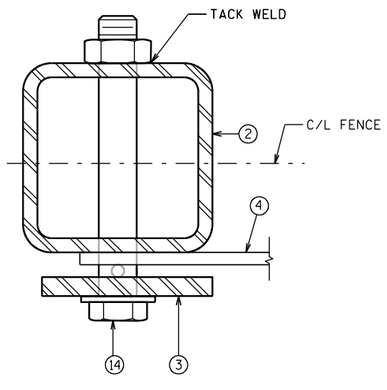
FOR NOTES AND LEGEND, SEE SHEET 15.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

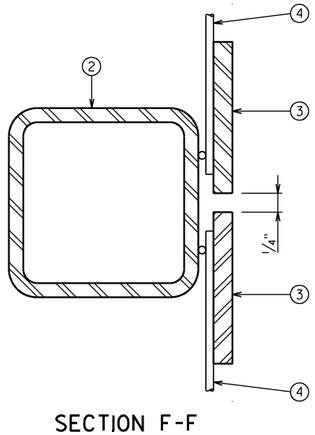
BASE PLATE DETAILS



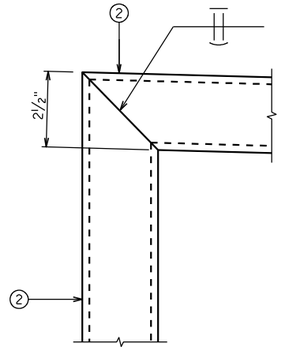
SECTION C-C



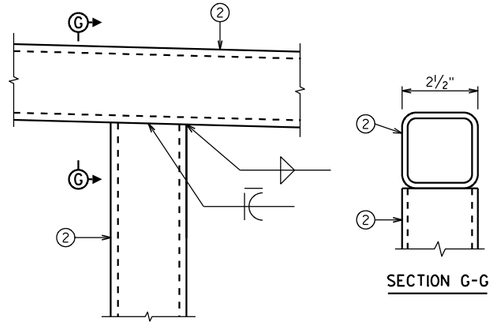
SECTION E-E



SECTION F-F



DETAIL B



SECTION G-G

DETAIL C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

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FENCE DECORATIVE WALL (3 OF 3)

SHEET 16 OF 20

8

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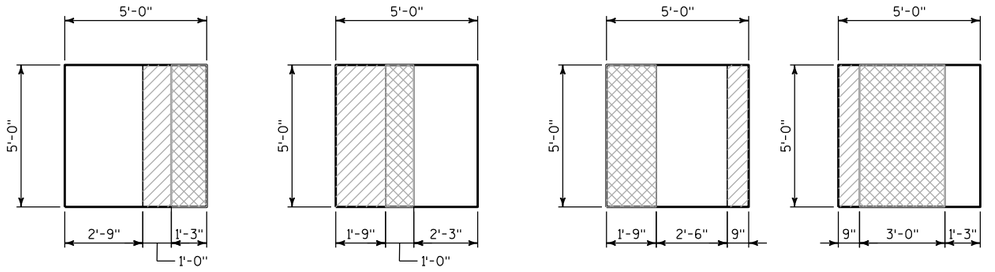
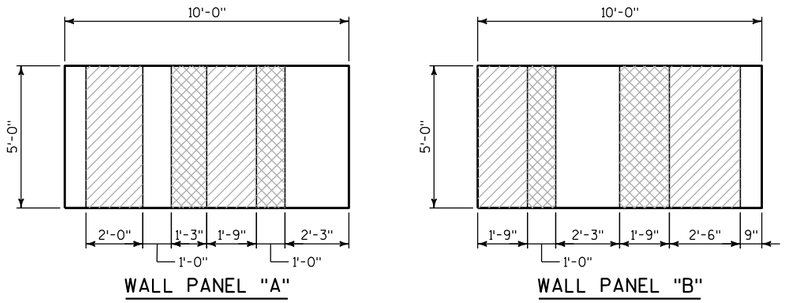


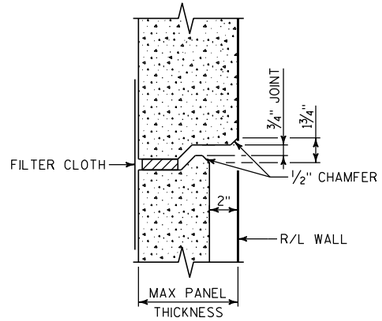
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



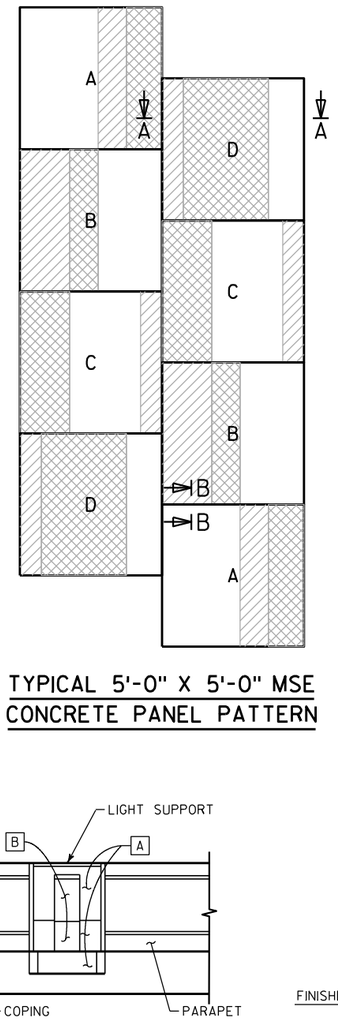
5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

LEGEND

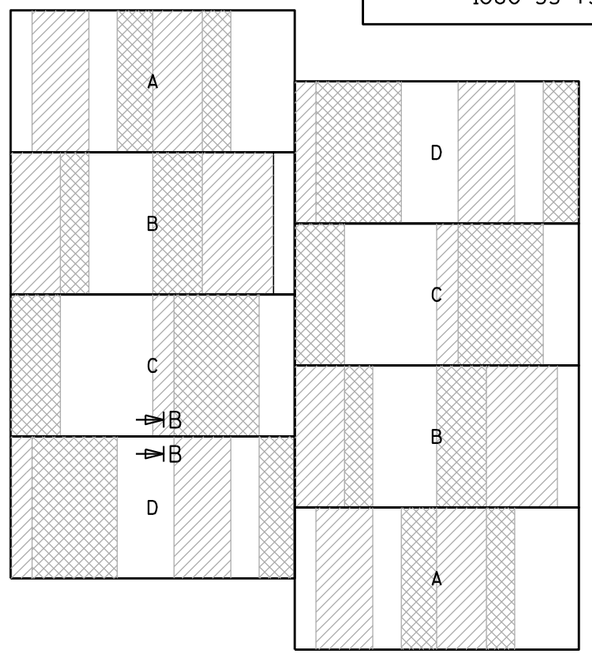
- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS + 0"



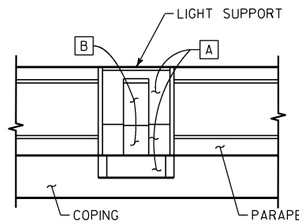
SECTION B-B



TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN

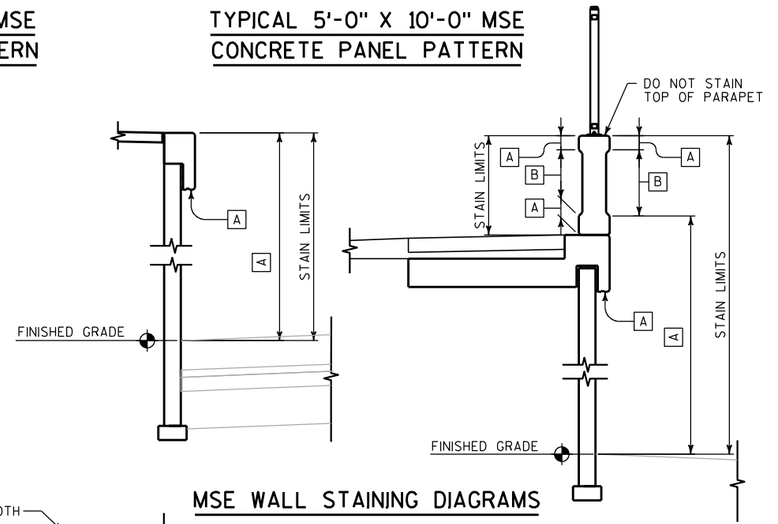


TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN



OUTSIDE ELEVATION OF PARAPET STAINING DIAGRAM

(AT LIGHT SUPPORT)



MSE WALL STAINING DIAGRAMS

CONCRETE STAINING SCHEDULE

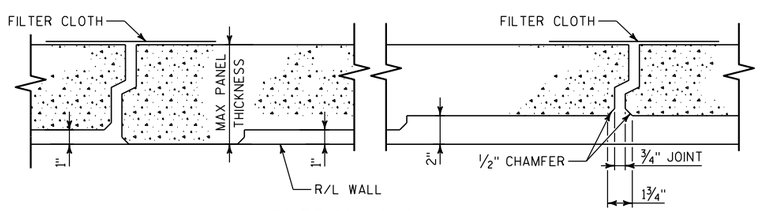
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR #1	VERTICAL FACE PARAPETS	RECESSED PANELS ON BOTH SIDES

STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR : 33564
ACCENT COLOR #1: 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



SECTION A-A

STATE PROJECT NUMBER

1060-33-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS

SHEET 17 OF 20

8

8

NOTE:

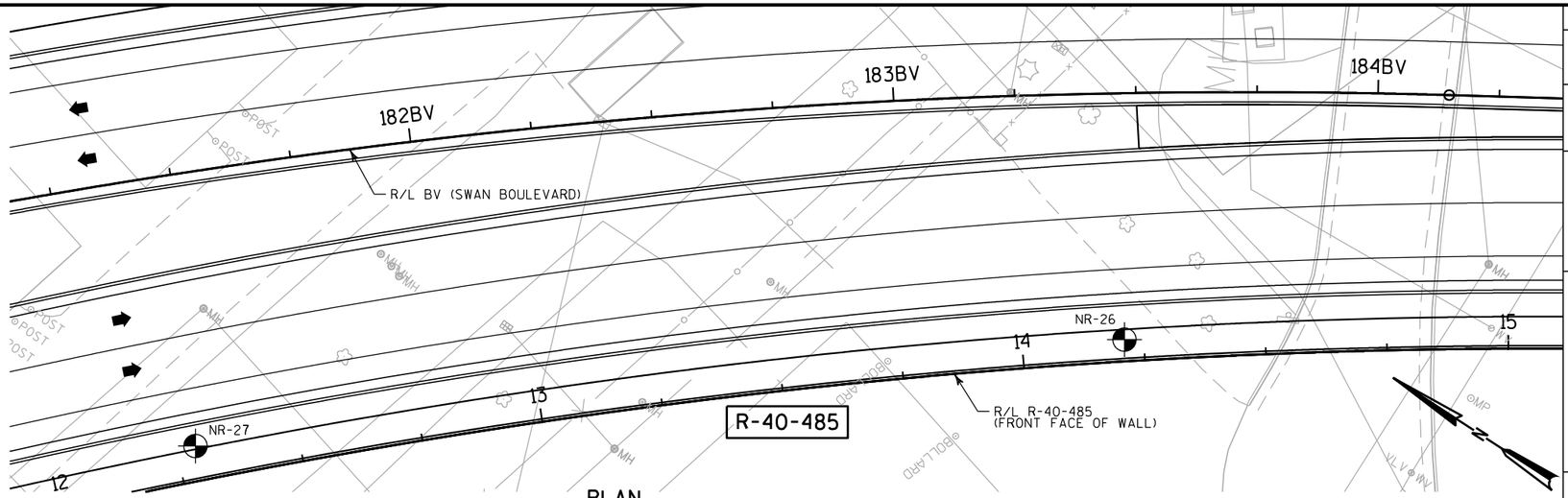
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-485.

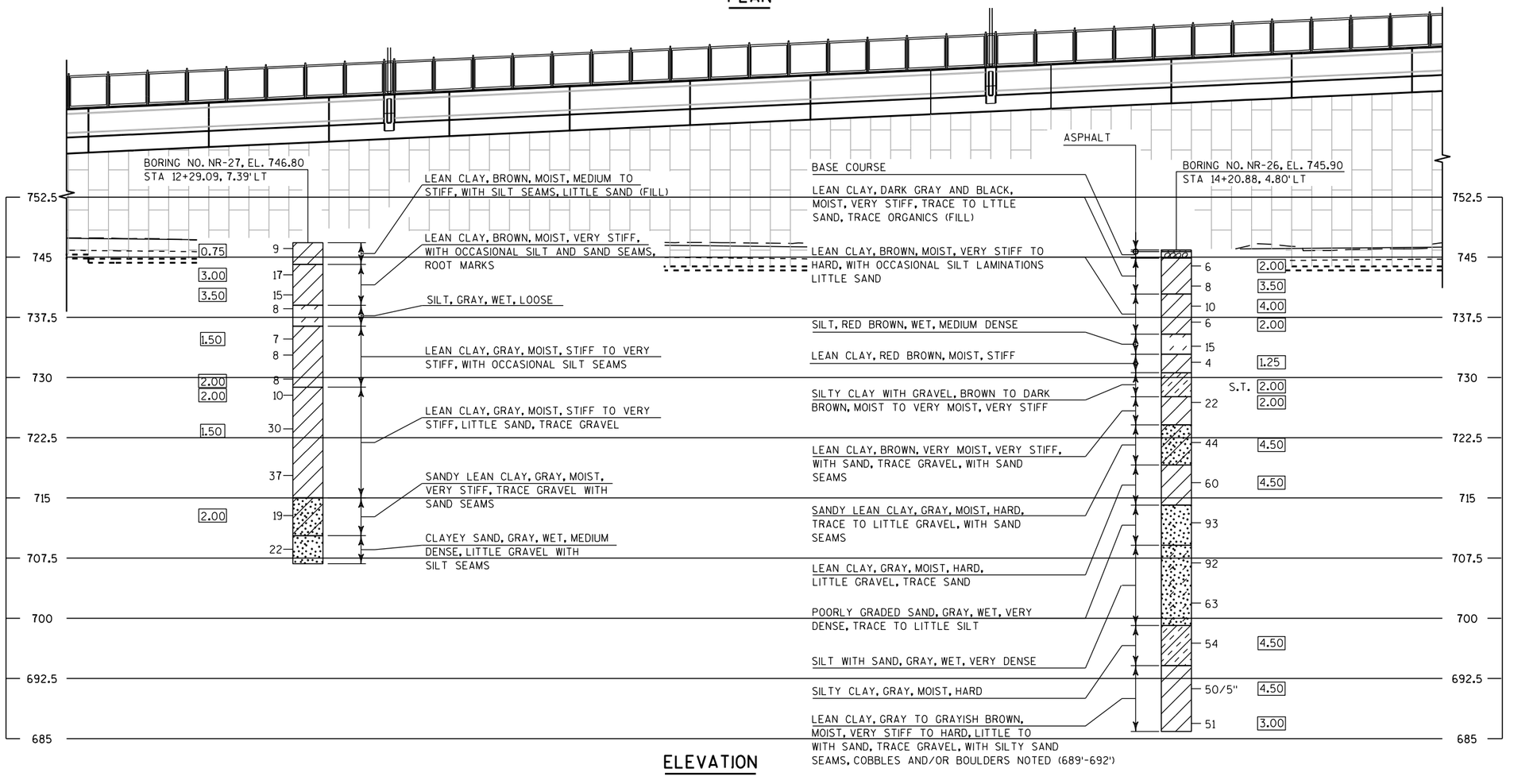
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
SEPTEMBER 27, 2011 - BORING NR-26
SEPTEMBER 30, 2011 - BORING NR-27



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-73

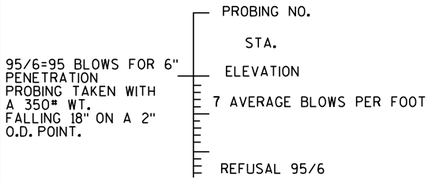
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

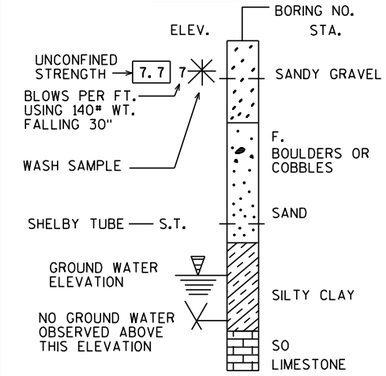
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (1 OF 3)

SHEET 18 OF 20

8

8

NOTE:

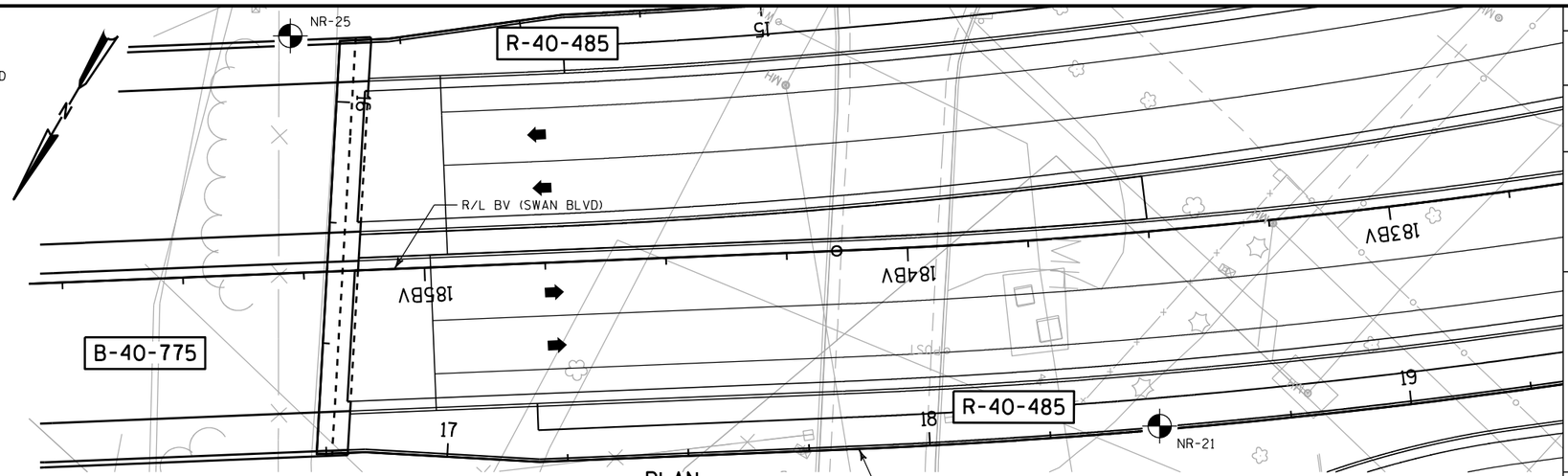
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-485 OR SWAN BLVD SERVICE RAMP XJ, AS APPLICABLE.

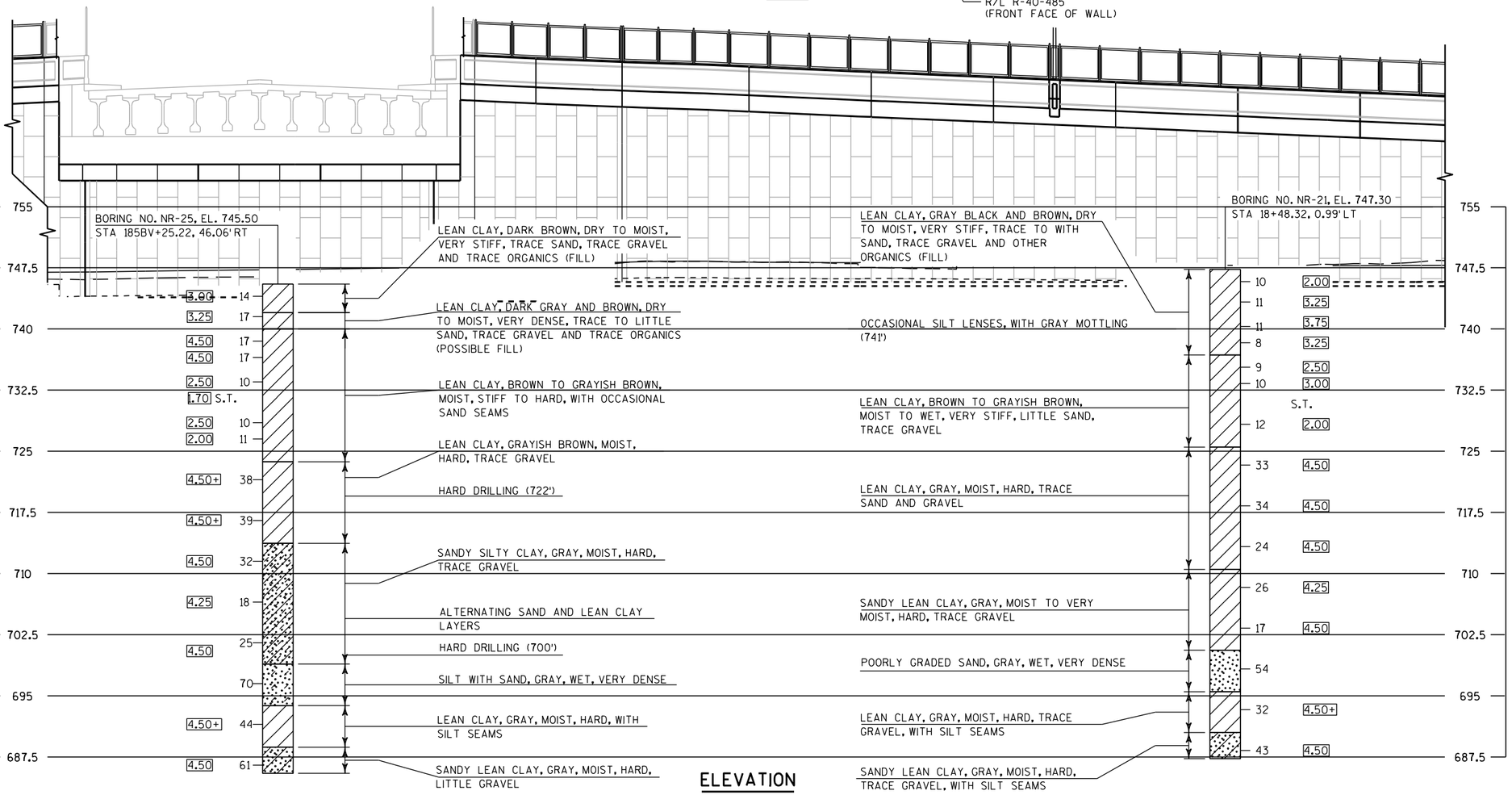
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
OCTOBER 5, 2011 - BORING NR-21
OCTOBER 5, 2011 - BORING NR-25



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-73

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
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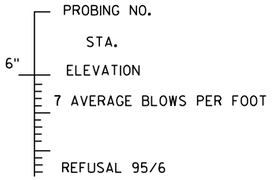
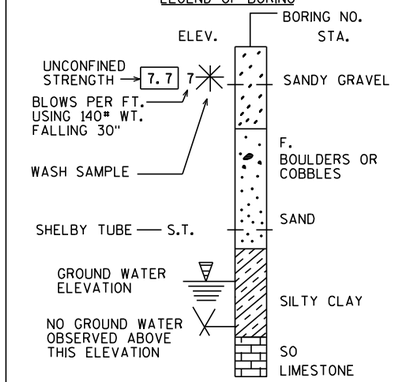
LEGEND OF PROBING



LEGEND OF BORING



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SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY MS · PLANS CK'D. EKM

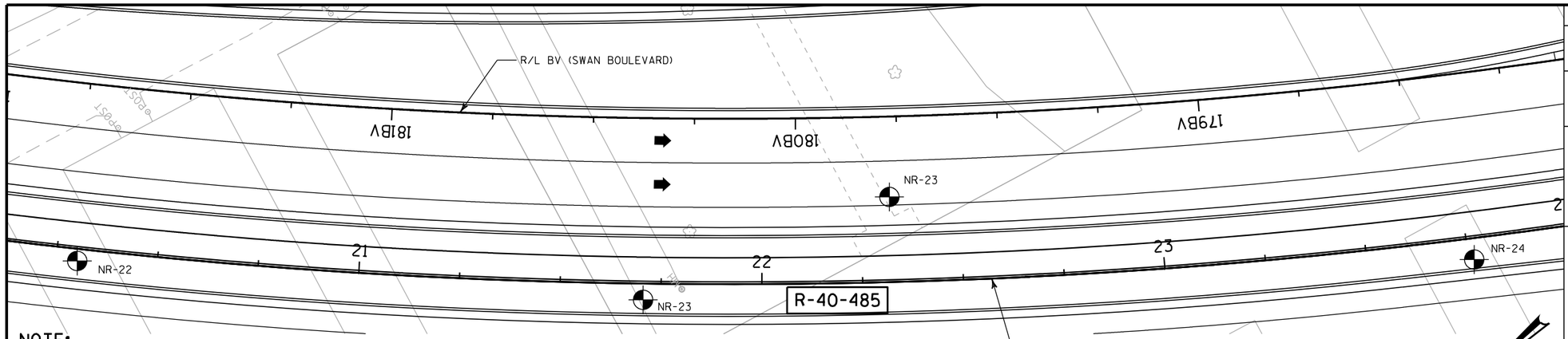
SUBSURFACE EXPLORATION (2 OF 3)

SHEET 19 OF 20

8

8

FILE NAME : W:\Cadd\Final\10603373_BV\Structs\R-40-485\cds\R485_080519_se.dgn PLOT DATE : 08-MAR-2013 12:10 PLOT BY : MSCEKM PLOT NAME : R485_080519_se PLOT SCALE : 30:1



PLAN

R/L R-40-485
(FRONT FACE OF WALL)

NOTE:

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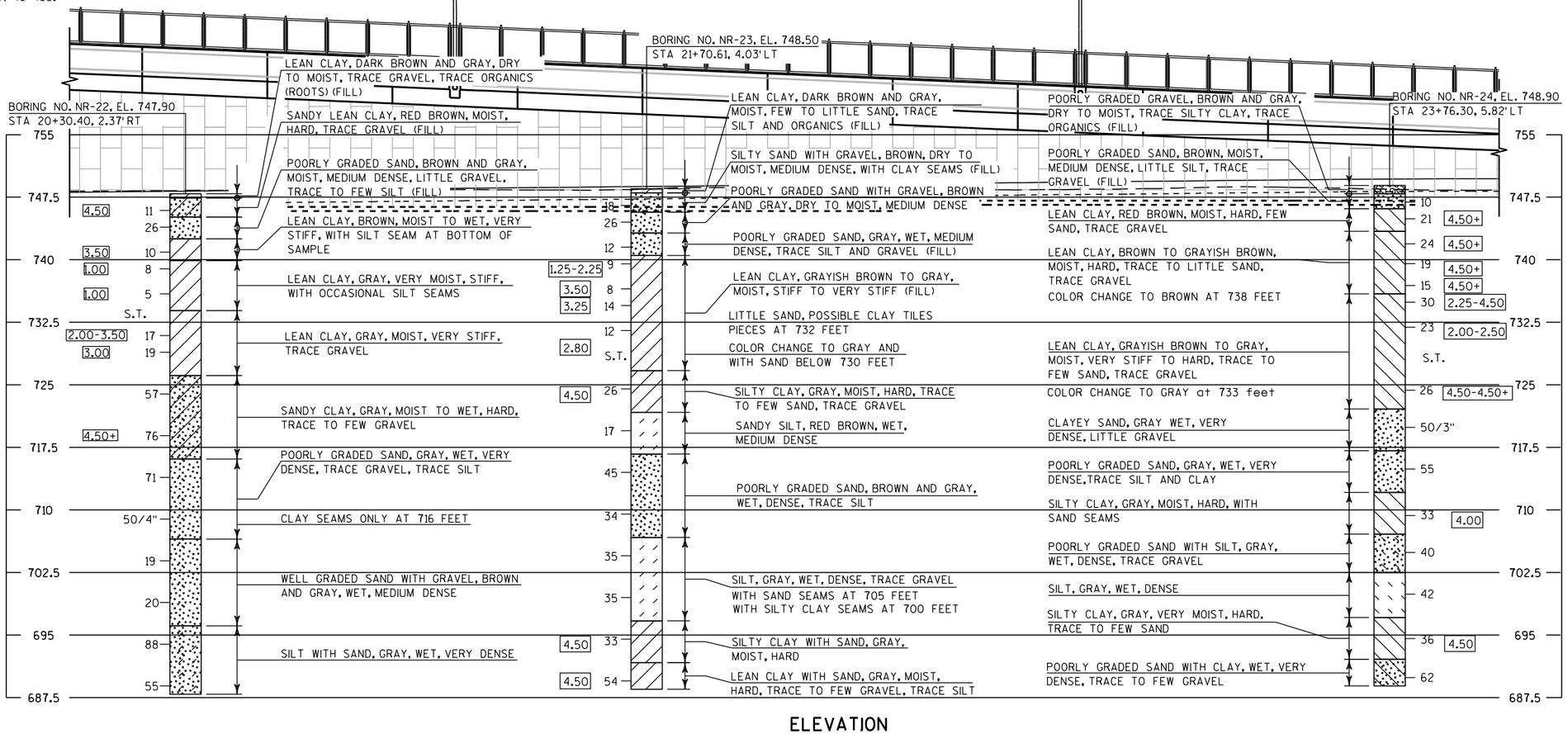
BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-485.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
OCTOBER 4, 2011 - BORING NR-22
OCTOBER 12, 2011 - BORING NR-23
OCTOBER 11, 2011 - BORING NR-24



ELEVATION

STATE PROJECT NUMBER

1060-33-73

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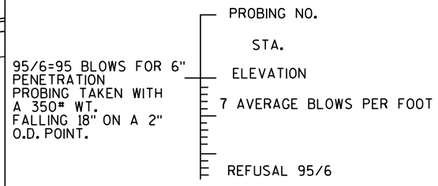
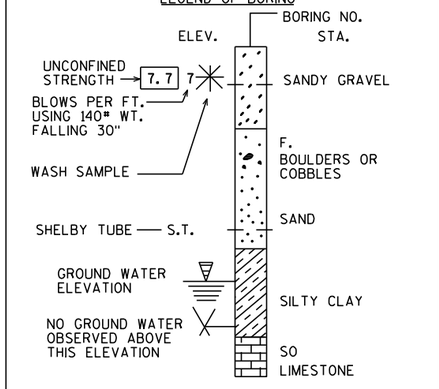
LEGEND OF PROBING



LEGEND OF BORING



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-485

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (3 OF 3)

SHEET 20 OF 20

8

8

FILE NAME : W:\Cadd\Final\10603373_BV\Structs\R-40-485\cds\R485_080520_se.dgn PLOT DATE : 08-MAR-2013 12:10 PLOT BY : MSCEKM PLOT NAME : R485_080520_se PLOT SCALE : 30:1

DIVISION 1 SWAN BLVD

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.20	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
166+92 AH	16692.11	0.00	374.91	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167+00	16700.00	7.89	344.52	0.00	37.03	0.00	105.12	0.00	5.56	0.00	105.12	6.67	0.00	0.00	98.45
167+50	16750.00	50.00	1025.53	0.00	0.00	128.84	1268.56	0.00	34.29	119.30	1373.68	-66.71	155.09	95.44	1440.39
168+00	16800.00	50.00	1273.80	0.00	0.00	124.30	2129.01	0.00	0.00	234.39	3502.69	-291.72	459.79	282.95	3794.41
168+50	16850.00	50.00	1443.19	0.00	0.00	121.79	2515.73	0.00	0.00	227.86	6018.42	-510.47	756.01	465.24	6528.89
169+00	16900.00	50.00	1508.93	0.00	0.00	121.79	2733.44	0.00	0.00	225.54	8751.87	-726.99	1049.21	645.67	9478.85
169+50	16950.00	50.00	1511.53	0.00	0.00	121.79	2796.72	0.00	0.00	225.54	11548.59	-943.50	1342.41	826.10	12492.09
170+00	17000.00	50.00	1485.81	0.00	0.00	121.08	2775.31	0.00	0.00	224.88	14323.90	-1159.39	1634.75	1006.00	15483.29
170+50	17050.00	50.00	1537.43	0.00	0.00	121.89	2799.30	0.00	0.00	224.97	17123.20	-1375.36	1927.21	1185.98	18498.56
171+00	17100.00	50.00	1312.75	0.00	0.00	124.37	2639.06	0.00	0.00	228.02	19762.26	-1594.26	2223.64	1368.39	21356.51
171+50	17150.00	50.00	1397.07	0.00	0.00	125.25	2509.09	0.00	0.00	231.13	22271.35	-1816.14	2524.11	1553.30	24087.49
172+00	17200.00	50.00	1303.02	0.00	0.00	126.69	2500.08	0.00	0.00	233.28	24771.43	-2040.09	2827.37	1739.92	26811.52
172+50	17250.00	50.00	987.21	0.00	0.00	132.23	2120.58	0.00	0.00	239.74	26892.01	-2270.24	3139.03	1931.71	29162.25
173+00	17300.00	50.00	604.80	0.00	0.00	120.04	1474.08	0.00	0.00	233.58	28366.10	-2494.48	3442.69	2118.58	30860.58
173+50	17350.00	50.00	316.85	0.00	12.94	126.34	853.38	0.00	11.98	228.13	29219.48	-2699.11	3739.26	2301.08	31918.58
174+00	17400.00	50.00	376.12	0.00	0.21	115.78	641.64	0.00	12.18	224.19	29861.12	-2899.71	4030.70	2480.43	32760.83
174+50	17450.00	50.00	464.22	0.00	7.15	115.21	778.09	0.00	6.81	213.88	30639.21	-3096.86	4308.74	2651.53	33736.07
175+00	17500.00	50.00	710.23	0.00	0.00	114.27	1087.45	0.00	6.62	212.48	31726.66	-3292.90	4584.97	2821.52	35019.56
175+50	17550.00	50.00	459.97	0.00	0.00	113.38	1083.52	0.00	0.00	210.79	32810.18	-3495.25	4858.99	2990.15	36305.43
176+00	17600.00	50.00	261.71	0.00	27.61	112.03	668.22	0.00	25.56	208.71	33478.40	-3664.94	5130.32	3157.12	37143.34
176+50	17650.00	50.00	139.65	0.00	77.56	110.27	371.63	0.00	97.38	205.83	33850.03	-3745.68	5397.90	3321.79	37595.72
177+00	17700.00	50.00	36.24	0.00	86.15	0.00	162.86	0.00	151.58	102.10	34012.89	-3661.80	5530.63	3403.47	37674.70
177+50	17750.00	50.00	58.42	0.00	206.38	0.00	87.65	0.00	270.86	0.00	34100.54	-3336.77	5530.63	3403.47	37437.31
178+00	17800.00	50.00	24.61	0.00	499.94	0.00	76.88	0.00	654.00	0.00	34177.42	-2551.97	5530.63	3403.47	36729.39
178+50	17850.00	50.00	0.10	0.00	671.55	0.00	22.88	0.00	1084.71	0.00	34200.30	-1250.31	5530.63	3403.47	35450.61
179+00	17900.00	50.00	7.49	0.00	789.73	0.00	7.03	0.00	1353.04	0.00	34207.33	373.33	5530.63	3403.47	33834.00
179+50	17950.00	50.00	10.49	0.00	743.33	0.00	16.65	0.00	1419.50	0.00	34223.98	2076.73	5530.63	3403.47	32147.25
180+00	18000.00	50.00	0.00	0.00	846.52	0.00	9.71	0.00	1472.08	0.00	34233.69	3843.23	5530.63	3403.47	30390.46
180+50	18050.00	50.00	0.15	0.00	834.43	0.00	0.14	0.00	1556.44	0.00	34233.83	5710.95	5530.63	3403.47	28522.88
181+00	18100.00	50.00	7.23	0.00	993.10	0.00	6.83	0.00	1692.16	0.00	34240.66	7741.54	5530.63	3403.47	26499.12
181+50	18150.00	50.00	22.00	0.00	1001.56	0.00	27.06	0.00	1846.91	0.00	34267.73	9957.83	5530.63	3403.47	24309.90
182+00	18200.00	50.00	40.78	0.00	1058.74	0.00	58.13	0.00	1907.69	0.00	34325.86	12247.05	5530.63	3403.47	22078.80
182+50	18250.00	50.00	48.54	0.00	1068.39	0.00	82.70	0.00	1969.56	0.00	34408.56	14610.53	5530.63	3403.47	19798.03
183+00	18300.00	50.00	33.08	0.00	1110.34	0.00	75.57	0.00	2017.34	0.00	34484.14	17031.34	5530.63	3403.47	17452.79
183+50	18350.00	50.00	1.93	0.00	1100.61	0.00	32.42	0.00	2047.18	0.00	34516.55	19487.95	5530.63	3403.47	15028.60
184+00	18400.00	50.00	1.51	0.00	1108.01	0.00	3.19	0.00	2045.02	0.00	34519.74	21941.98	5530.63	3403.47	12577.76
184+50	18450.00	50.00	12.30	0.00	1089.67	0.00	12.79	0.00	2034.89	0.00	34532.52	24383.84	5530.63	3403.47	10148.68

(CONTINUED ON NEXT SHEET)

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 SWAN BLVD (CONTINUED)

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
185+00		18500.00	50.00	4.34	0.00	1022.53	0.00	15.41	0.00	1955.74	0.00	34547.93	26730.73	5530.63	3403.47	7817.20
185+10	BK	18510.15	10.15	4.41	0.00	993.48	0.00	1.64	0.00	378.94	0.00	34549.58	27185.45	5530.63	3403.47	7364.12
							Column totals	34549.58	0.00	26058.01	4254.33					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

DIVISION 1 ROUNDABOUT

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
10+00	AH	1000.00	0.00	243.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+25		1025.00	25.00	264.36	0.00	0.00	0.00	235.08	0.00	0.00	0.00	235.08	0.00	0.00	0.00	235.08
10+50		1050.00	25.00	262.27	0.00	0.00	0.00	243.81	0.00	0.00	0.00	478.89	0.00	0.00	0.00	478.89
10+75		1075.00	25.00	181.03	0.00	0.00	0.00	205.23	0.00	0.00	0.00	684.13	0.00	0.00	0.00	684.13
11+00		1100.00	25.00	280.94	0.00	0.00	0.00	213.88	0.00	0.00	0.00	898.00	0.00	0.00	0.00	898.00
11+25		1125.00	25.00	258.74	0.00	0.00	0.00	249.85	0.00	0.00	0.00	1147.85	0.00	0.00	0.00	1147.85
11+50		1150.00	25.00	193.66	0.00	0.00	0.00	209.44	0.00	0.00	0.00	1357.30	0.00	0.00	0.00	1357.30
11+75		1175.00	25.00	279.33	0.00	0.63	0.00	218.98	0.00	0.29	0.00	1576.27	0.35	0.00	0.00	1575.92
12+00		1200.00	25.00	244.69	0.00	0.00	0.00	242.60	0.00	0.29	0.00	1818.88	0.70	0.00	0.00	1818.18
12+25		1225.00	25.00	256.00	0.00	0.00	0.00	231.80	0.00	0.00	0.00	2050.68	0.70	0.00	0.00	2049.98
12+50		1250.00	25.00	447.47	0.00	0.00	0.00	325.68	0.00	0.00	0.00	2376.36	0.70	0.00	0.00	2375.66
12+75		1275.00	25.00	243.21	0.00	0.00	0.00	319.76	0.00	0.00	0.00	2696.12	0.70	0.00	0.00	2695.42
12+76	BK	1276.45	1.45	243.43	0.00	0.00	0.00	13.07	0.00	0.00	0.00	2709.18	0.70	0.00	0.00	2708.48
							Column totals	2709.18	0.00	0.58	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 WLC ACCESS ROAD

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
3+25	AH	325.00	0.00	291.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3+50		350.00	25.00	415.36	0.00	0.00	0.00	327.15	0.00	0.00	0.00	327.15	0.00	0.00	0.00	327.15
4+00		400.00	50.00	447.1	0.00	0.00	0.00	798.57	0.00	0.00	0.00	1125.72	0.00	0.00	0.00	1125.72
4+45	BK	444.56	44.56	171.97	0.00	0.00	0.00	510.85	0.00	0.00	0.00	1636.57	0.00	0.00	0.00	1636.57
5+59	AH	558.77	0.00	224.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6+00		600.00	41.23	676.94	0.00	0.00	0.00	688.06	0.00	0.00	0.00	688.06	0.00	0.00	0.00	688.06
6+50		650.00	50.00	620.65	0.00	0.00	0.00	1201.47	0.00	0.00	0.00	1889.53	0.00	0.00	0.00	1889.53
7+00		700.00	50.00	586.02	0.00	0.00	0.00	1117.29	0.00	0.00	0.00	3006.82	0.00	0.00	0.00	3006.82
7+50		750.00	50.00	375.30	0.00	1.44	0.00	890.11	0.00	1.33	0.00	3896.93	1.60	0.00	0.00	3895.33
8+00		800.00	50.00	81.15	0.00	98.42	0.00	422.64	0.00	92.46	0.00	4319.57	112.56	0.00	0.00	4207.01
8+50		850.00	50.00	0.36	0.00	219.24	0.00	75.47	0.00	294.13	0.00	4395.04	465.51	0.00	0.00	3929.53
9+00		900.00	50.00	0.67	0.00	98.91	0.00	0.95	0.00	294.58	0.00	4396.00	819.01	0.00	0.00	3576.98
9+50		950.00	50.00	48.81	0.00	20.25	0.00	45.81	0.00	110.33	0.00	4441.81	951.41	0.00	0.00	3490.40
10+00		1000.00	50.00	36.18	0.00	23.89	0.00	78.69	0.00	40.87	0.00	4520.50	1000.46	0.00	0.00	3520.05
10+50		1050.00	50.00	16.57	0.00	44.67	0.00	48.84	0.00	63.48	0.00	4569.35	1076.63	0.00	0.00	3492.71
11+00		1100.00	50.00	40.56	0.00	38.51	0.00	52.90	0.00	77.02	0.00	4622.25	1169.06	0.00	0.00	3453.19
11+50		1150.00	50.00	55.03	0.00	19.66	0.00	88.51	0.00	53.86	0.00	4710.75	1233.69	0.00	0.00	3477.07
12+00		1200.00	50.00	54.47	0.00	9.33	0.00	101.39	0.00	26.84	0.00	4812.14	1265.90	0.00	0.00	3546.24
12+50		1250.00	50.00	15.00	0.00	19.40	0.00	64.32	0.00	26.60	0.00	4876.47	1297.82	0.00	0.00	3578.65
13+00		1300.00	50.00	11.75	0.00	20.76	0.00	24.77	0.00	37.19	0.00	4901.24	1342.44	0.00	0.00	3558.79
13+50		1350.00	50.00	29.27	0.00	13.27	0.00	37.98	0.00	31.51	0.00	4939.22	1380.26	0.00	0.00	3558.96
14+00		1400.00	50.00	24.22	0.00	16.35	0.00	49.53	0.00	27.43	0.00	4988.75	1413.17	0.00	0.00	3575.58
14+50		1450.00	50.00	35.19	0.00	9.11	0.00	55.01	0.00	23.57	0.00	5043.75	1441.46	0.00	0.00	3602.30
15+00		1500.00	50.00	49.62	0.00	3.54	0.00	78.53	0.00	11.71	0.00	5122.28	1455.51	0.00	0.00	3666.77
15+50		1550.00	50.00	66.36	0.00	1.18	0.00	107.39	0.00	4.37	0.00	5229.67	1460.76	0.00	0.00	3768.92
16+00		1600.00	50.00	73.13	0.00	0.18	0.00	129.16	0.00	1.26	0.00	5358.83	1462.27	0.00	0.00	3896.56
16+50		1650.00	50.00	81.23	0.00	0.00	0.00	142.93	0.00	0.17	0.00	5501.75	1462.47	0.00	0.00	4039.29
17+00		1700.00	50.00	89.31	0.00	0.00	0.00	157.91	0.00	0.00	0.00	5659.66	1462.47	0.00	0.00	4197.20
17+50		1750.00	50.00	70.65	0.00	78.91	0.00	148.11	0.00	73.06	0.00	5807.77	1550.14	0.00	0.00	4257.63
18+00		1800.00	50.00	69.19	0.00	140.41	0.00	129.48	0.00	203.07	0.00	5937.25	1793.83	0.00	0.00	4143.42
18+50		1850.00	50.00	111.57	0.00	4.38	0.00	167.37	0.00	134.06	0.00	6104.62	1954.71	0.00	0.00	4149.91
18+76	BK	1875.93	25.93	64.68	0.00	0.77	0.00	84.63	0.00	2.47	0.00	6189.26	1957.68	0.00	0.00	4231.58
							Column totals	7825.83	0.00	1631.40	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 UNDERWOOD PARKWAY

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.20	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
220+50 AH	22050.00	0.00	31.73	0.00	55.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221+00	22100.00	50.00	100.11	0.00	67.35	0.00	122.07	0.00	113.61	0.00	122.07	136.33	0.00	0.00	-14.26
221+50	22150.00	50.00	257.69	0.00	0.00	0.00	331.30	0.00	62.36	0.00	453.37	211.17	0.00	0.00	242.20
222+00	22200.00	50.00	143.11	0.00	0.00	0.00	371.11	0.00	0.00	0.00	824.48	211.17	0.00	0.00	613.31
222+03 BK	22202.81	2.81	85.11	0.00	0.00	0.00	11.88	0.00	0.00	0.00	836.36	211.17	0.00	0.00	625.19
223+27 AH	22327.41	0.00	283.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223+50	22350.00	22.59	585.25	0.00	0.00	0.00	363.34	0.00	0.00	0.00	363.34	0.00	0.00	0.00	363.34
224+00	22400.00	50.00	493.13	0.00	0.00	0.00	998.50	0.00	0.00	0.00	1361.84	0.00	0.00	0.00	1361.84
224+50	22450.00	50.00	310.38	0.00	2.03	0.00	743.99	0.00	1.88	0.00	2105.83	2.26	0.00	0.00	2103.58
225+00	22500.00	50.00	166.21	0.00	16.15	0.00	441.29	0.00	16.83	0.00	2547.12	22.46	0.00	0.00	2524.67
225+50	22550.00	50.00	121.72	0.00	27.52	0.00	266.60	0.00	40.44	0.00	2813.72	70.98	0.00	0.00	2742.75
226+00	22600.00	50.00	104.36	0.00	2.89	0.00	209.33	0.00	28.16	0.00	3023.06	104.77	0.00	0.00	2918.29
226+50	22650.00	50.00	66.72	0.00	0.19	0.00	158.41	0.00	2.85	0.00	3181.46	108.19	0.00	0.00	3073.27
226+60 BK	22659.59	9.59	48.40	0.00	0.55	0.00	20.44	0.00	0.13	0.00	3201.91	108.35	0.00	0.00	3093.56
					Column totals		4038.27	0.00	266.26	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 USH 45 SB DITCH

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
381+05	AH	38104.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
381+29		38129.00	24.50	0.00	0.00	0.20	0.00	0.00	0.00	0.09	0.00	0.00	0.11	0.00	0.00	-0.11
381+50		38150.00	21.00	0.00	0.00	3.70	0.00	0.00	0.00	1.52	0.00	0.00	1.93	0.00	0.00	-1.93
382+00		38200.00	50.00	0.00	0.00	8.38	0.00	0.00	0.00	11.19	0.00	0.00	15.35	0.00	0.00	-15.35
382+50		38250.00	50.00	1.23	0.00	19.49	0.00	1.14	0.00	25.81	0.00	1.14	46.32	0.00	0.00	-45.18
382+89		38289.00	39.00	0.07	0.00	0.37	0.00	0.94	0.00	14.34	0.00	2.08	63.53	0.00	0.00	-61.45
383+00		38300.00	11.00	0.00	0.00	0.00	0.00	0.01	0.00	0.08	0.00	2.09	63.62	0.00	0.00	-61.53
383+50		38350.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.09	63.62	0.00	0.00	-61.53
384+00		38400.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.09	63.62	0.00	0.00	-61.53
384+50		38450.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.09	63.62	0.00	0.00	-61.53
385+00	BK	38500.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.09	63.62	0.00	0.00	-61.53
							Column totals	2.09	0.00	53.02	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 USH 45 NB DITCH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
382+12 AH	38212.00	0.00	389.96	0.00	69.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
382+50	38250.00	38.00	168.67	0.00	1.18	0.00	393.11	0.00	50.06	0.00	393.11	60.07	0.00	0.00	333.04
383+00	38300.00	50.00	73.16	0.00	2.73	0.00	223.92	0.00	3.62	0.00	617.03	64.42	0.00	0.00	552.61
383+50	38350.00	50.00	96.25	0.00	116.09	0.00	156.86	0.00	110.02	0.00	773.89	196.44	0.00	0.00	577.45
384+00	38400.00	50.00	103.47	0.00	0.00	0.00	184.93	0.00	107.49	0.00	958.81	325.43	0.00	0.00	633.38
384+50	38450.00	50.00	43.67	0.00	0.00	0.00	136.24	0.00	0.00	0.00	1095.05	325.43	0.00	0.00	769.63
385+00 BK	38500.00	50.00	1.18	0.00	1.63	0.00	41.53	0.00	1.51	0.00	1136.58	327.24	0.00	0.00	809.34
						Column totals	1136.58	0.00	272.70	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 POND

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
10085.67 AH	10085.67	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10100	10100.00	14.33	89.08	0.00	0.24	0.00	24.23	0.00	0.06	0.00	24.23	0.08	0.00	0.00	24.15
10150	10150.00	50.00	238.83	0.00	0.02	0.00	303.62	0.00	0.24	0.00	327.85	0.37	0.00	0.00	327.49
10200	10200.00	50.00	84.89	0.00	4.78	0.00	299.74	0.00	4.44	0.00	627.59	5.70	0.00	0.00	621.89
10250	10250.00	50.00	0.51	0.00	217.97	0.00	79.07	0.00	206.25	0.00	706.67	253.20	0.00	0.00	453.47
10278.8 BK	10278.80	28.80	0.00	0.00	0.00	0.00	0.27	0.00	116.25	0.00	706.94	392.70	0.00	0.00	314.24
						Column totals	706.94	0.00	327.25	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 WISCONSIN OFF RAMP

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
341+00	AH	34100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
341+50		34150.00	50.00	864.27	0.00	0.00	0.00	800.25	0.00	0.00	0.00	800.25	0.00	0.00	0.00	800.25
342+00		34200.00	50.00	924.24	0.00	0.00	0.00	1656.03	0.00	0.00	0.00	2456.28	0.00	0.00	0.00	2456.28
342+50		34250.00	50.00	768.80	0.00	0.00	0.00	1567.63	0.00	0.00	0.00	4023.91	0.00	0.00	0.00	4023.91
343+00		34300.00	50.00	553.76	0.00	0.00	0.00	1224.59	0.00	0.00	0.00	5248.50	0.00	0.00	0.00	5248.50
343+50		34350.00	50.00	279.57	0.00	0.00	0.00	771.60	0.00	0.00	0.00	6020.10	0.00	0.00	0.00	6020.10
344+00		34400.00	50.00	319.01	0.00	0.00	0.00	554.24	0.00	0.00	0.00	6574.34	0.00	0.00	0.00	6574.34
344+50		34450.00	50.00	323.20	0.00	0.00	0.00	594.64	0.00	0.00	0.00	7168.98	0.00	0.00	0.00	7168.98
345+00		34500.00	50.00	316.66	0.00	0.00	0.00	592.46	0.00	0.00	0.00	7761.44	0.00	0.00	0.00	7761.44
345+50		34550.00	50.00	3.80	0.00	0.00	0.00	296.72	0.00	0.00	0.00	8058.17	0.00	0.00	0.00	8058.17
346+00		34600.00	50.00	281.26	0.00	0.00	0.00	263.94	0.00	0.00	0.00	8322.11	0.00	0.00	0.00	8322.11
346+50		34650.00	50.00	228.17	0.00	0.00	0.00	471.69	0.00	0.00	0.00	8793.81	0.00	0.00	0.00	8793.81
347+00		34700.00	50.00	169.92	0.00	0.00	0.00	368.60	0.00	0.00	0.00	9162.41	0.00	0.00	0.00	9162.41
347+50		34750.00	50.00	154.64	0.00	0.00	0.00	300.52	0.00	0.00	0.00	9462.93	0.00	0.00	0.00	9462.93
348+00		34800.00	50.00	195.29	0.00	0.00	0.00	324.01	0.00	0.00	0.00	9786.94	0.00	0.00	0.00	9786.94
348+50		34850.00	50.00	165.31	0.00	0.00	0.00	333.89	0.00	0.00	0.00	10120.82	0.00	0.00	0.00	10120.82
349+00	BK	34900.00	50.00	114.72	0.00	0.00	0.00	259.29	0.00	0.00	0.00	10380.11	0.00	0.00	0.00	10380.11
							Column totals	10380.11	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 USH 45 AND WISCONSIN

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
338+89 AH	33889.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
339+00	33900.00	11.00	17.58	0.00	0.00	0.00	3.58	0.00	0.00	0.00	3.58	0.00	0.00	0.00	3.58
339+50	33950.00	50.00	578.27	0.00	0.00	0.00	551.71	0.00	0.00	0.00	555.29	0.00	0.00	0.00	555.29
340+00	34000.00	50.00	254.53	0.00	0.00	0.00	771.11	0.00	0.00	0.00	1326.41	0.00	0.00	0.00	1326.41
340+50	34050.00	50.00	34.34	0.00	0.00	0.00	267.47	0.00	0.00	0.00	1593.88	0.00	0.00	0.00	1593.88
340+95 BK	34095.00	45.00	0.00	0.00	0.00	0.00	28.62	0.00	0.00	0.00	1622.49	0.00	0.00	0.00	1622.49
						Column totals	1622.49	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 WISCONSIN LOOP RAMP

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
335+05 AH	33505.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
335+46	33546.00	40.95	2329.56	0.00	0.00	0.00	1766.58	0.00	0.00	0.00	1766.58	0.00	0.00	0.00	1766.58
335+50	33550.00	4.00	2268.82	0.00	0.00	0.00	340.62	0.00	0.00	0.00	2107.20	0.00	0.00	0.00	2107.20
336+00	33600.00	50.00	2206.63	0.00	0.00	0.00	4143.94	0.00	0.00	0.00	6251.14	0.00	0.00	0.00	6251.14
336+50	33650.00	50.00	2089.90	0.00	0.00	0.00	3978.27	0.00	0.00	0.00	10229.41	0.00	0.00	0.00	10229.41
337+00	33700.00	50.00	1889.16	0.00	0.00	0.00	3684.31	0.00	0.00	0.00	13913.72	0.00	0.00	0.00	13913.72
337+50	33750.00	50.00	1608.64	0.00	0.00	0.00	3238.70	0.00	0.00	0.00	17152.43	0.00	0.00	0.00	17152.43
338+00	33800.00	50.00	1204.96	0.00	0.00	0.00	2605.19	0.00	0.00	0.00	19757.61	0.00	0.00	0.00	19757.61
338+50	33850.00	50.00	115.42	0.00	0.00	0.00	1222.57	0.00	0.00	0.00	20980.19	0.00	0.00	0.00	20980.19
338+55 BK	33855.00	5.00	6.15	0.00	0.00	0.00	11.26	0.00	0.00	0.00	20991.44	0.00	0.00	0.00	20991.44
						Column totals	20991.44	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 WISCONSIN TO BLUEMOUND

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
725+27 AH	72527.06	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
725+50	72550.00	22.94	179.89	0.00	0.00	0.00	76.57	0.00	0.00	0.00	76.57	0.00	0.00	0.00	76.57
726+00	72600.00	50.00	194.12	0.00	0.00	0.00	346.31	0.00	0.00	0.00	422.87	0.00	0.00	0.00	422.87
726+50	72650.00	50.00	295.66	0.00	0.00	0.00	453.50	0.00	0.00	0.00	876.37	0.00	0.00	0.00	876.37
727+00	72700.00	50.00	510.63	0.00	0.00	0.00	746.56	0.00	0.00	0.00	1622.94	0.00	0.00	0.00	1622.94
727+50	72750.00	50.00	560.34	0.00	0.00	0.00	991.64	0.00	0.00	0.00	2614.58	0.00	0.00	0.00	2614.58
728+00	72800.00	50.00	561.53	0.00	0.00	0.00	1038.77	0.00	0.00	0.00	3653.35	0.00	0.00	0.00	3653.35
728+50	72850.00	50.00	576.77	0.00	0.00	0.00	1053.98	0.00	0.00	0.00	4707.33	0.00	0.00	0.00	4707.33
729+00	72900.00	50.00	550.50	0.00	0.00	0.00	1043.77	0.00	0.00	0.00	5751.10	0.00	0.00	0.00	5751.10
729+50	72950.00	50.00	315.35	0.00	0.00	0.00	801.71	0.00	0.00	0.00	6552.81	0.00	0.00	0.00	6552.81
730+00	73000.00	50.00	405.44	0.00	0.00	0.00	667.40	0.00	0.00	0.00	7220.21	0.00	0.00	0.00	7220.21
730+50	73050.00	50.00	552.10	0.00	0.00	0.00	886.61	0.00	0.00	0.00	8106.82	0.00	0.00	0.00	8106.82
731+00	73100.00	50.00	533.38	0.00	0.00	0.00	1005.07	0.00	0.00	0.00	9111.89	0.00	0.00	0.00	9111.89
731+50	73150.00	50.00	506.93	0.00	0.00	0.00	963.25	0.00	0.00	0.00	10075.14	0.00	0.00	0.00	10075.14
732+00	73200.00	50.00	535.34	0.00	0.00	0.00	965.06	0.00	0.00	0.00	11040.21	0.00	0.00	0.00	11040.21
732+50	73250.00	50.00	549.08	0.00	0.00	0.00	1004.09	0.00	0.00	0.00	12044.30	0.00	0.00	0.00	12044.30
733+00	73300.00	50.00	536.85	0.00	0.00	0.00	1005.49	0.00	0.00	0.00	13049.79	0.00	0.00	0.00	13049.79
733+50 BK	73350.00	50.00	0.31	0.00	0.00	0.00	497.37	0.00	0.00	0.00	13547.16	0.00	0.00	0.00	13547.16
						Column totals	13547.16	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 1 EW CORE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
191+00 AH	19100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191+50	19150.00	50.00	692.80	0.00	0.00	0.00	641.48	0.00	0.00	0.00	641.48	0.00	0.00	0.00	641.48
192+00	19200.00	50.00	1176.79	0.00	0.00	0.00	1731.10	0.00	0.00	0.00	2372.58	0.00	0.00	0.00	2372.58
192+50	19250.00	50.00	2042.35	0.00	0.00	0.00	2980.69	0.00	0.00	0.00	5353.27	0.00	0.00	0.00	5353.27
193+00	19300.00	50.00	1912.02	0.00	0.00	0.00	3661.45	0.00	0.00	0.00	9014.72	0.00	0.00	0.00	9014.72
193+50	19350.00	50.00	1717.00	0.00	0.00	0.00	3360.20	0.00	0.00	0.00	12374.93	0.00	0.00	0.00	12374.93
194+00	19400.00	50.00	683.57	0.00	0.00	0.00	2222.75	0.00	0.00	0.00	14597.68	0.00	0.00	0.00	14597.68
194+48 BK	19448.14	48.14	191.68	0.00	0.00	0.00	780.27	0.00	0.00	0.00	15377.95	0.00	0.00	0.00	15377.95
						Column totals	15377.95	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 2 SWAN BLVD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
187+62 AH	18762.23	0.00	483.65	0.00	-629.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188+00	18800.00	37.77	421.71	0.00	2603.76	0.00	633.25	0.00	1381.00	0.00	633.25	1657.20	0.00	0.00	-1023.96
188+50	18850.00	50.00	222.92	0.00	2245.69	0.00	596.88	0.00	4490.23	0.00	1230.13	7045.48	0.00	0.00	-5815.35
189+00	18900.00	50.00	123.24	0.00	2027.88	0.00	320.52	0.00	3957.01	0.00	1550.65	11793.89	0.00	0.00	-10243.25
189+50	18950.00	50.00	40.07	0.00	1654.18	0.00	151.21	0.00	3409.31	0.00	1701.86	15885.07	0.00	0.00	-14183.21
190+00	19000.00	50.00	8.87	0.00	1318.73	0.00	45.31	0.00	2752.69	0.00	1747.17	19188.30	0.00	0.00	-17441.13
190+50	19050.00	50.00	2.25	0.00	1051.53	0.00	10.30	0.00	2194.69	0.00	1757.47	21821.93	0.00	0.00	-20064.46
191+00	19100.00	50.00	0.82	0.00	740.28	0.00	2.84	0.00	1659.08	0.00	1760.31	23812.83	0.00	0.00	-22052.51
191+50	19150.00	50.00	2.73	0.00	512.47	0.00	3.29	0.00	1159.95	0.00	1763.60	25204.77	0.00	0.00	-23441.17
192+00	19200.00	50.00	21.27	0.00	342.59	0.00	22.22	0.00	791.72	0.00	1785.82	26154.84	0.00	0.00	-24369.02
192+50	19250.00	50.00	40.60	0.00	199.60	0.00	57.29	0.00	502.03	0.00	1843.11	26757.27	0.00	0.00	-24914.16
193+00	19300.00	50.00	34.47	0.00	102.26	0.00	69.51	0.00	279.50	0.00	1912.62	27092.67	0.00	0.00	-25180.05
193+50	19350.00	50.00	25.90	0.00	34.94	0.00	55.90	0.00	127.04	0.00	1968.52	27245.12	0.00	0.00	-25276.60
194+00	19400.00	50.00	38.24	0.00	4.23	0.00	59.39	0.00	36.27	0.00	2027.91	27288.64	0.00	0.00	-25260.73
194+50	19450.00	50.00	56.03	0.00	1.91	0.00	87.29	0.00	5.69	0.00	2115.19	27295.46	0.00	0.00	-25180.27
195+00	19500.00	50.00	74.99	0.00	0.00	0.00	121.31	0.00	1.77	0.00	2236.51	27297.58	0.00	0.00	-25061.07
195+07 BK	19506.59	6.59	77.00	0.00	0.00	0.00	18.55	0.00	0.00	0.00	2255.06	27297.58	0.00	0.00	-25042.53
						Column totals	2255.06	0.00	22747.99	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 2 USH 45 NB DITCH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
381+37 AH	38137.48	0.00	374.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
381+50	38150.00	12.52	457.76	0.00	0.00	0.00	193.03	0.00	0.00	0.00	193.03	0.00	0.00	0.00	193.03
382+00	38200.00	50.00	453.37	0.00	23.69	0.00	843.64	0.00	21.94	0.00	1036.67	26.32	0.00	0.00	1010.35
382+12 BK	38212.48	12.48	389.96	0.00	69.95	0.00	194.90	0.00	21.64	0.00	1231.57	52.29	0.00	0.00	1179.28
						Column totals	1231.57	0.00	43.58	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 2 SHARED USE PATH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
10+00 AH	1000.00	0.00	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	9.63	0.00	0.00	0.00	17.85	0.00	0.00	0.00	17.85	0.00	0.00	0.00	17.85
11+00	1100.00	50.00	13.48	0.00	0.97	0.00	21.40	0.00	0.90	0.00	39.25	1.08	0.00	0.00	38.17
11+43 BK	1142.90	42.90	6.21	0.00	0.79	0.00	15.64	0.00	1.40	0.00	54.89	2.76	0.00	0.00	52.14
		Column totals					54.89	0.00	2.30	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 3 WLC ACCESS ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
2+45 AH	245.00	0.00	56.42	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2+50	250.00	5.00	50.07	0.00	0.30	0.00	9.86	0.00	0.07	0.00	9.86	0.08	0.00	0.00	9.78
3+00	300.00	50.00	108.82	0.00	0.00	0.00	147.12	0.00	0.28	0.00	156.98	0.41	0.00	0.00	156.57
3+25 BK	325.00	25.00	290.44	0.00	0.00	0.00	184.84	0.00	0.00	0.00	341.82	0.41	0.00	0.00	341.41
						Column totals	341.82	0.00	0.34	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

DIVISION 3 UNDERWOOD PARKWAY

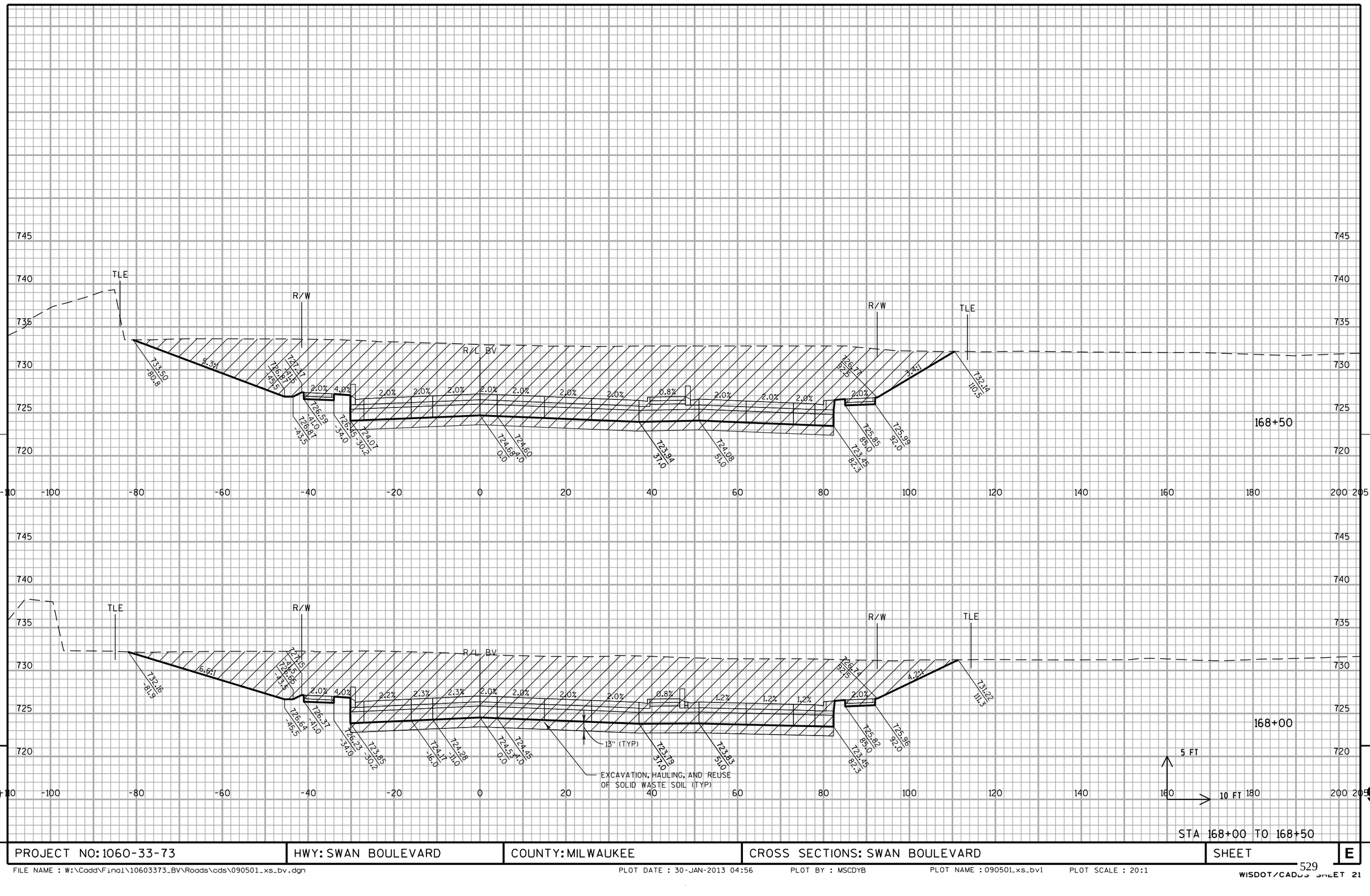
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
217+47 AH	21747.00	0.00	45.92	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217+50	21750.00	3.00	45.83	0.00	1.01	0.00	5.10	0.00	0.12	0.00	5.10	0.14	0.00	0.00	4.96
218+00	21800.00	50.00	45.50	0.00	0.04	0.00	84.56	0.00	0.97	0.00	89.66	1.31	0.00	0.00	88.36
218+50	21850.00	50.00	18.02	0.00	13.78	0.00	58.81	0.00	12.80	0.00	148.48	16.66	0.00	0.00	131.82
219+00	21900.00	50.00	24.78	0.00	22.30	0.00	39.63	0.00	33.41	0.00	188.11	56.75	0.00	0.00	131.36
219+50	21950.00	50.00	44.37	0.00	56.13	0.00	64.03	0.00	72.62	0.00	252.13	143.89	0.00	0.00	108.24
220+00	22000.00	50.00	7.79	0.00	74.93	0.00	48.30	0.00	121.35	0.00	300.43	289.52	0.00	0.00	10.91
220+50 BK	22050.00	50.00	31.73	0.00	55.35	0.00	36.59	0.00	120.63	0.00	337.02	434.27	0.00	0.00	-97.25
						Column totals	337.02	0.00	361.89	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv PLOT SCALE : 20:1



STA 168+00 TO 168+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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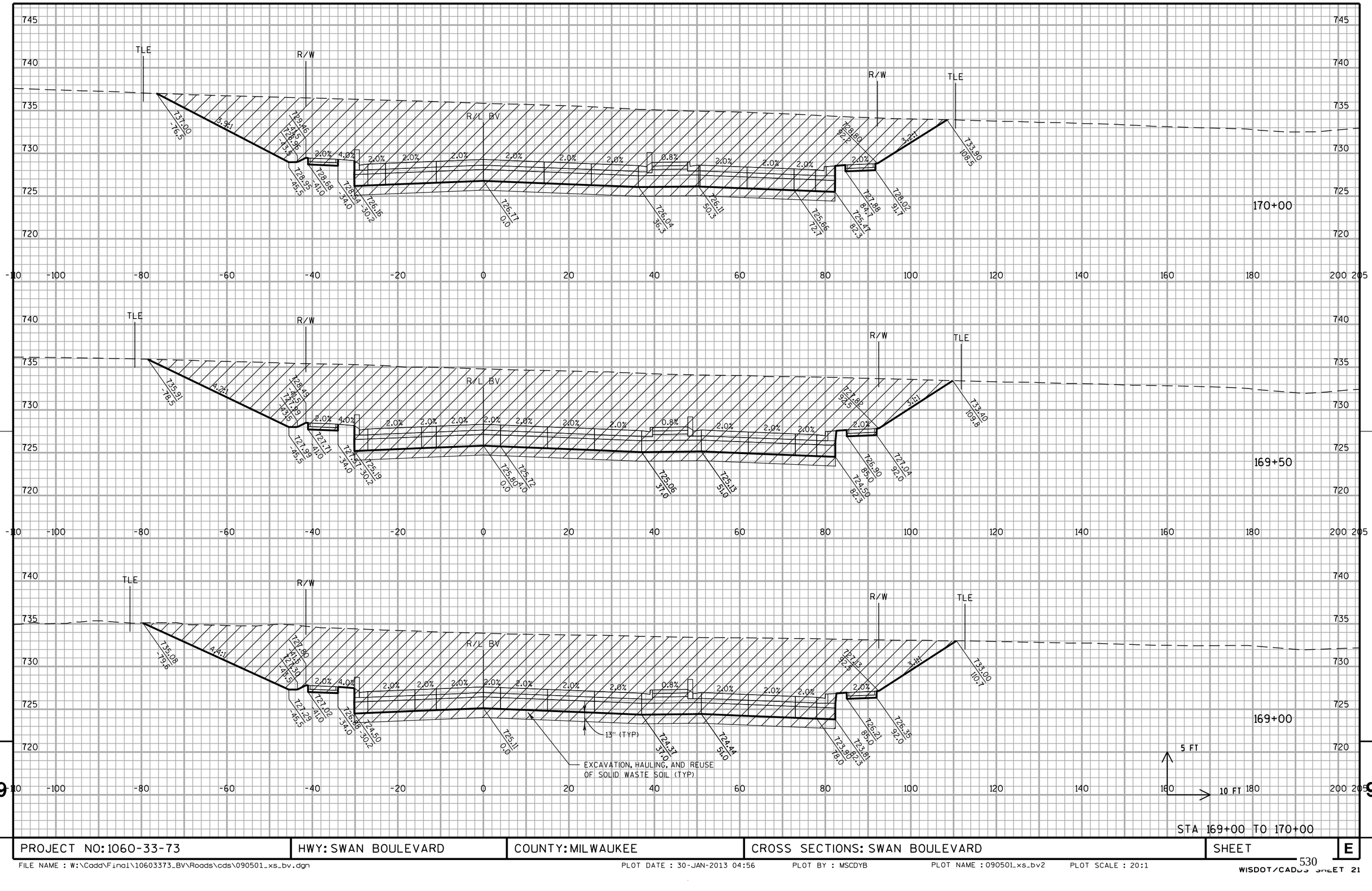


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

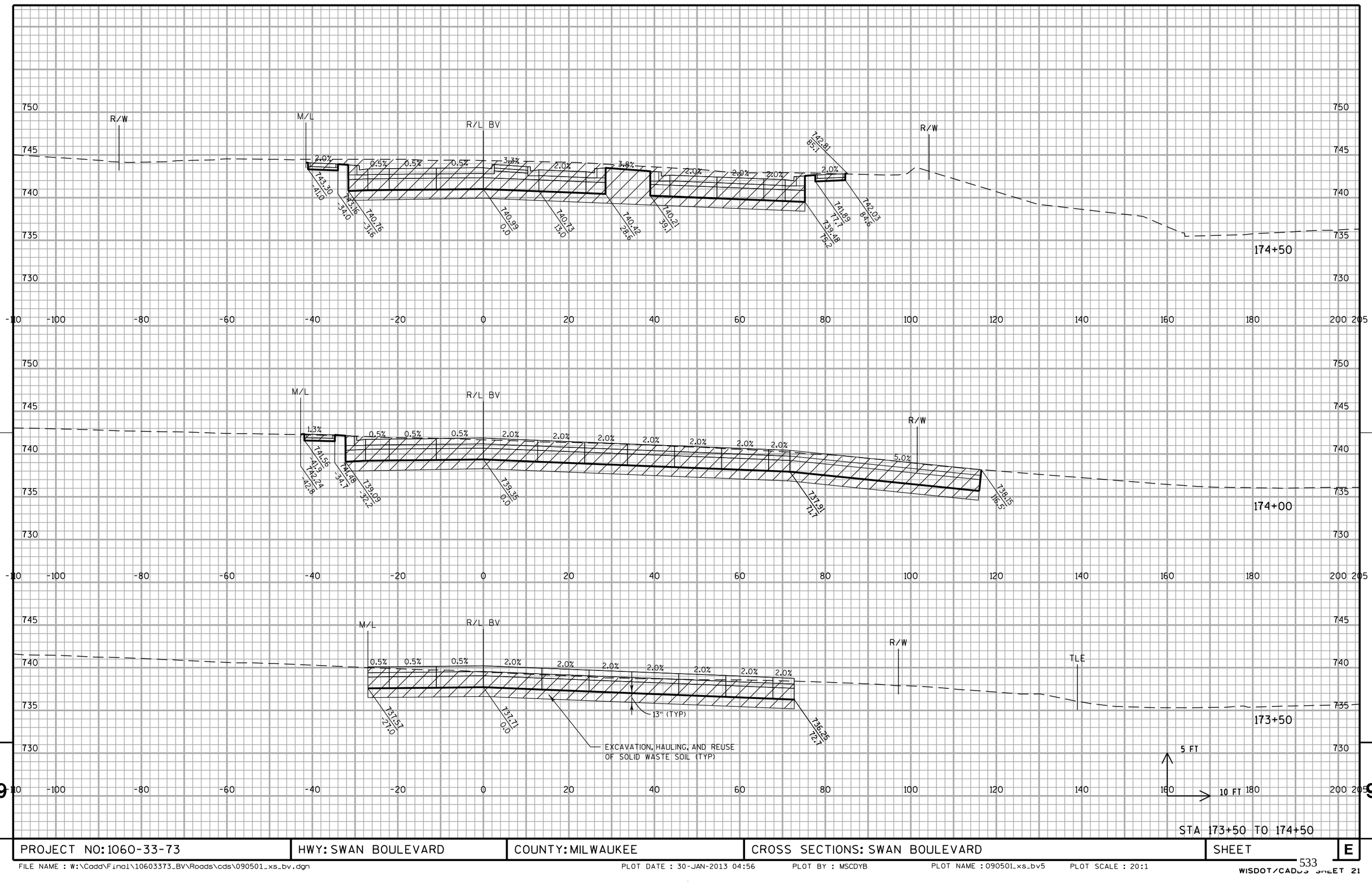
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

STA 172+00 TO 173+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv4 PLOT SCALE : 20:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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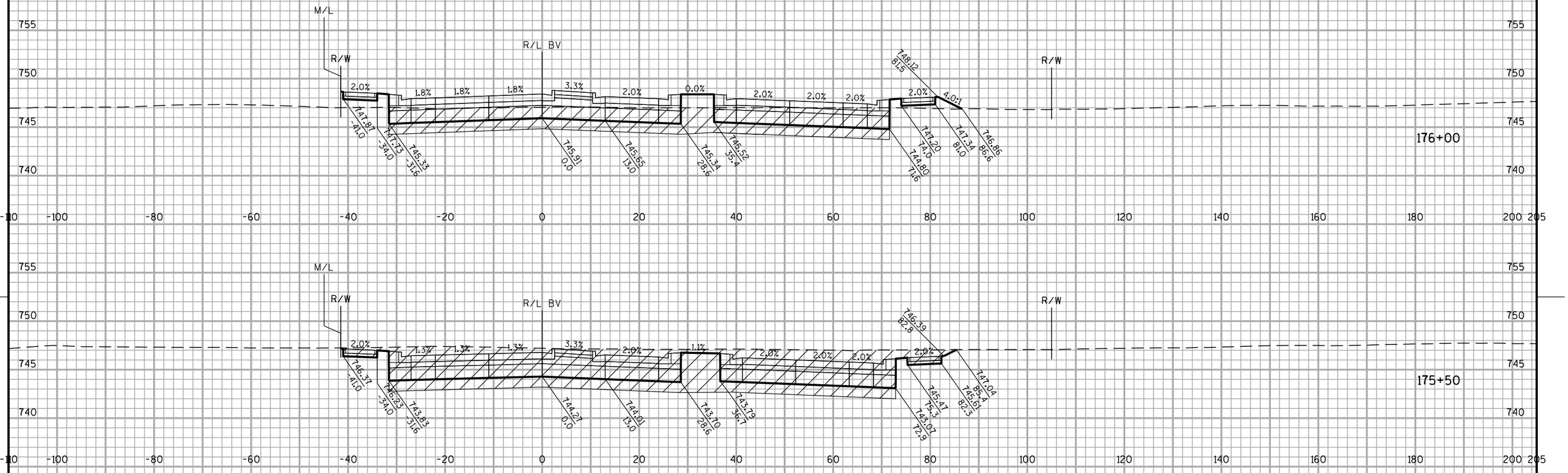
WISDOT/CADDS SHEET 21


M/L
R/W
R/L BV
R/W
2.0%
1.8%
1.8%
1.8%
3.3%
2.0%
0.0%
2.0%
2.0%
2.0%
2.0%
4.0:1
748.12
81.5
747.87
-41.0
747.73
-34.0
745.33
-31.6
745.91
0.0
745.65
13.0
745.34
26.6
745.52
35.4
747.20
74.0
747.34
84.0
746.86
96.6
744.80
77.6
755
750
745
740
-110
-100
-80
-60
-40
-20
0
20
40
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80
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120
140
160
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200 205
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M/L
R/W
R/L BV
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746.39
82.8
746.37
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746.23
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743.83
-31.6
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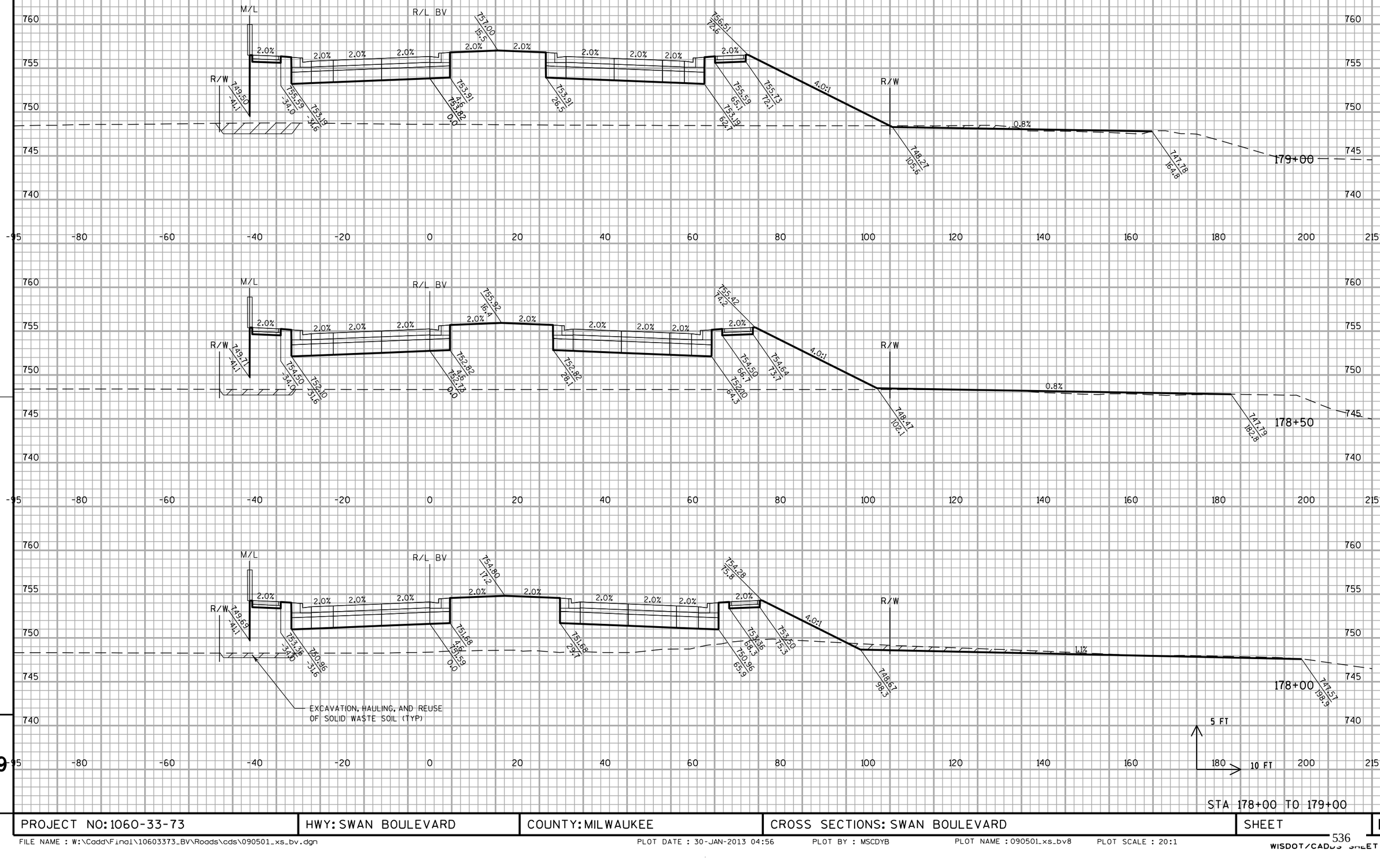
744.01
15.0
743.70
28.6
743.79
36.7
745.47
75.3
747.04
85.4
745.61
82.3
743.01
72.9
755
750
745
740
-110
-100
-80
-60
-40
-20
0
20
40
60
80
100
120
140
160
180
200 205
175+50
M/L
R/W
EXCAVATION, HAULING, AND REUSE
OF SOLID WA$TE SOIL (TYP)
R/L BV
R/W
2.0%
0.8%
0.8%
0.8%
3.3%
2.0%
3.0%
2.0%
2.0%
2.0%
2.0%
2.0%
4.0%
744.35
84.0
744.87
-41.0
744.73
-34.0
742.33
-31.6
13" (TYP)
742.63
0.0
742.37
13.0
742.06
28.6
741.96
37.9
743.64
76.5
743.78
83.5
747.39
95.3
741.24
755
750
745
740
-110
-100
-80
-60
-40
-20
0
20
40
60
80
100
120
140
160
180
200 205
175+00
5 FT
10 FT
STA 175+00 TO 176+00
9
9
PROJECT NO: 1060-33-73
HWY: SWAN BOULEVARD
COUNTY: MILWAUKEE
CROSS SECTIONS: SWAN BOULEVARD
SHEET
E
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn
PLOT DATE : 30-JAN-2013 04:56
PLOT BY : MSCDYB
PLOT NAME : 090501_xs_bv6
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E



STA 178+00 TO 179+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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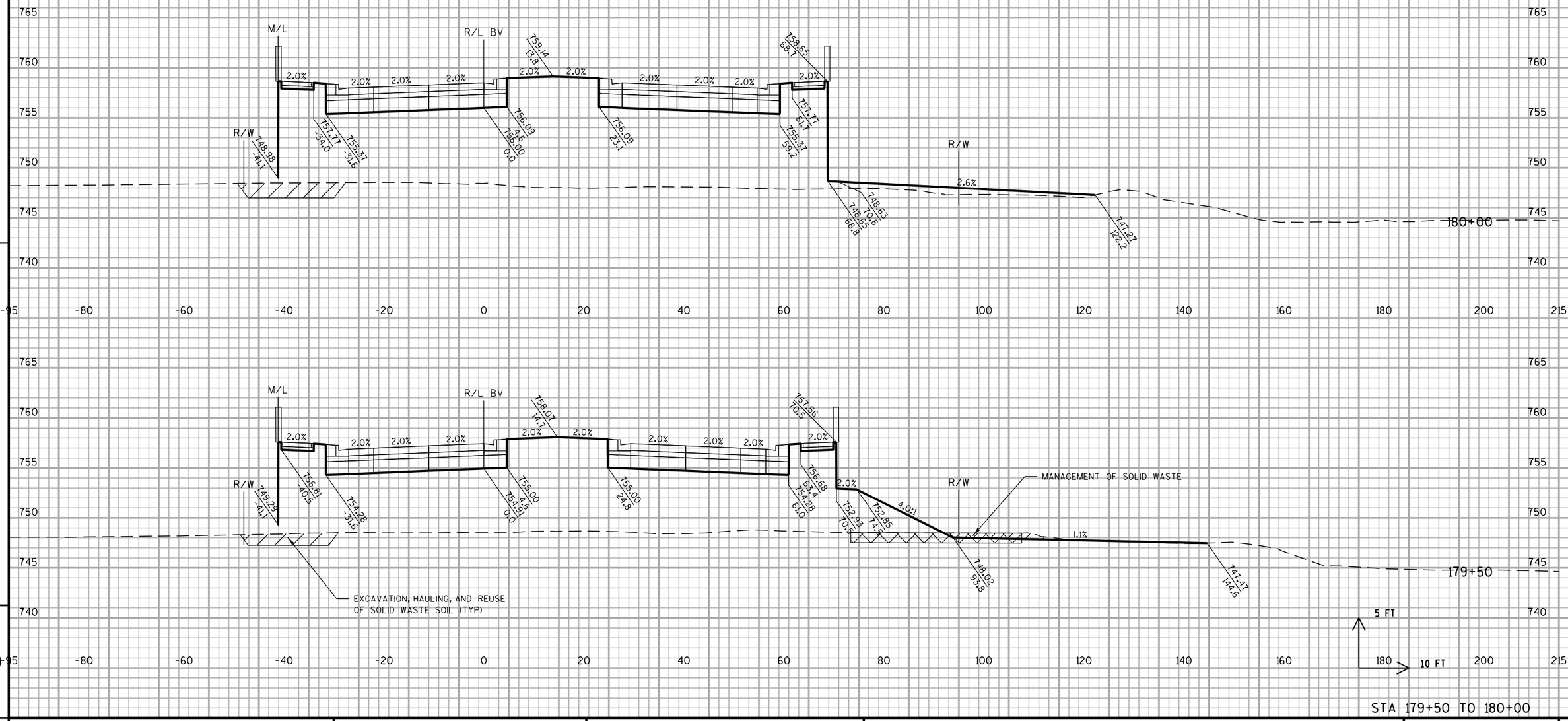
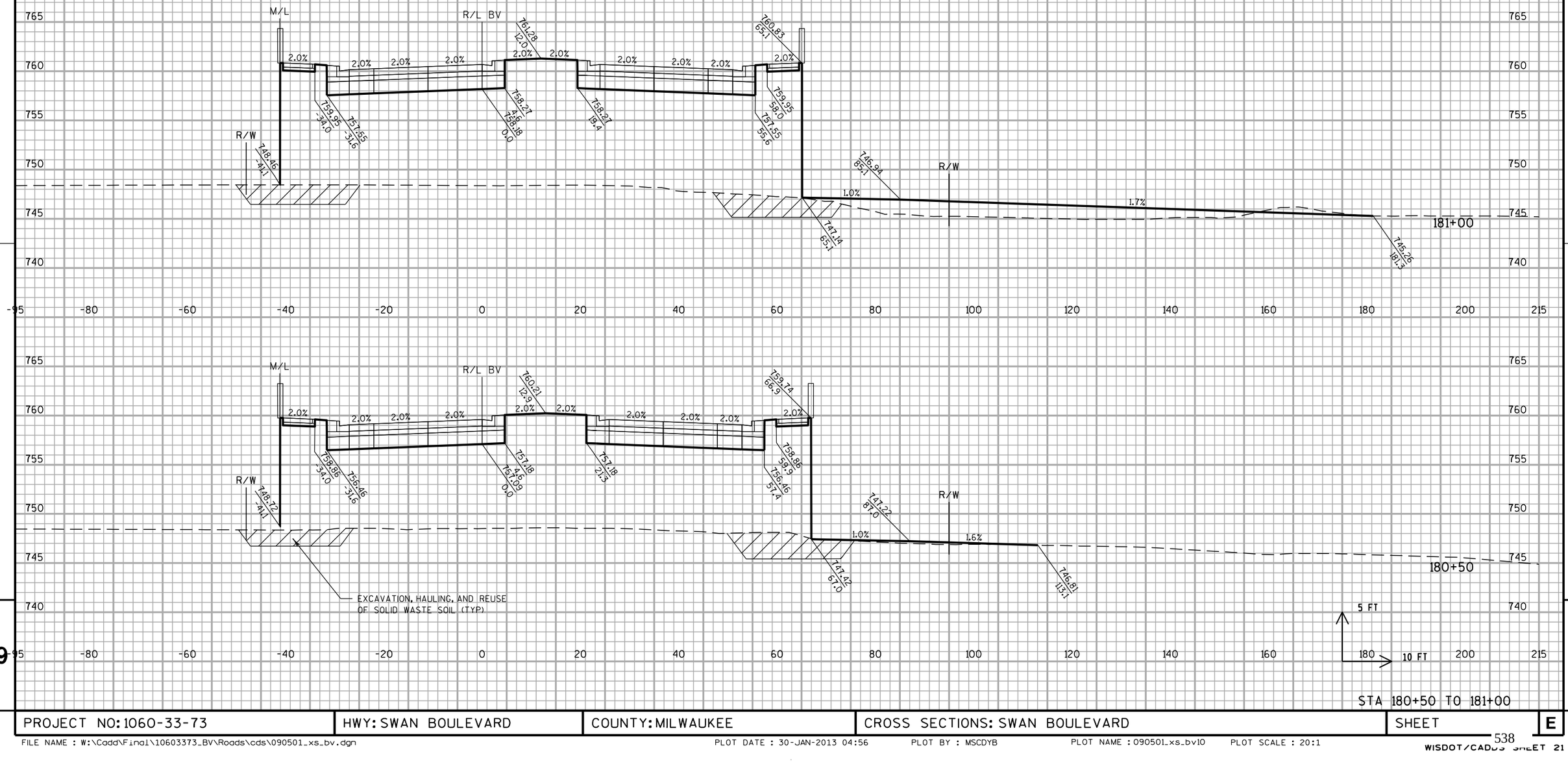


STA 179+50 TO 180+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E



STA 180+50 TO 181+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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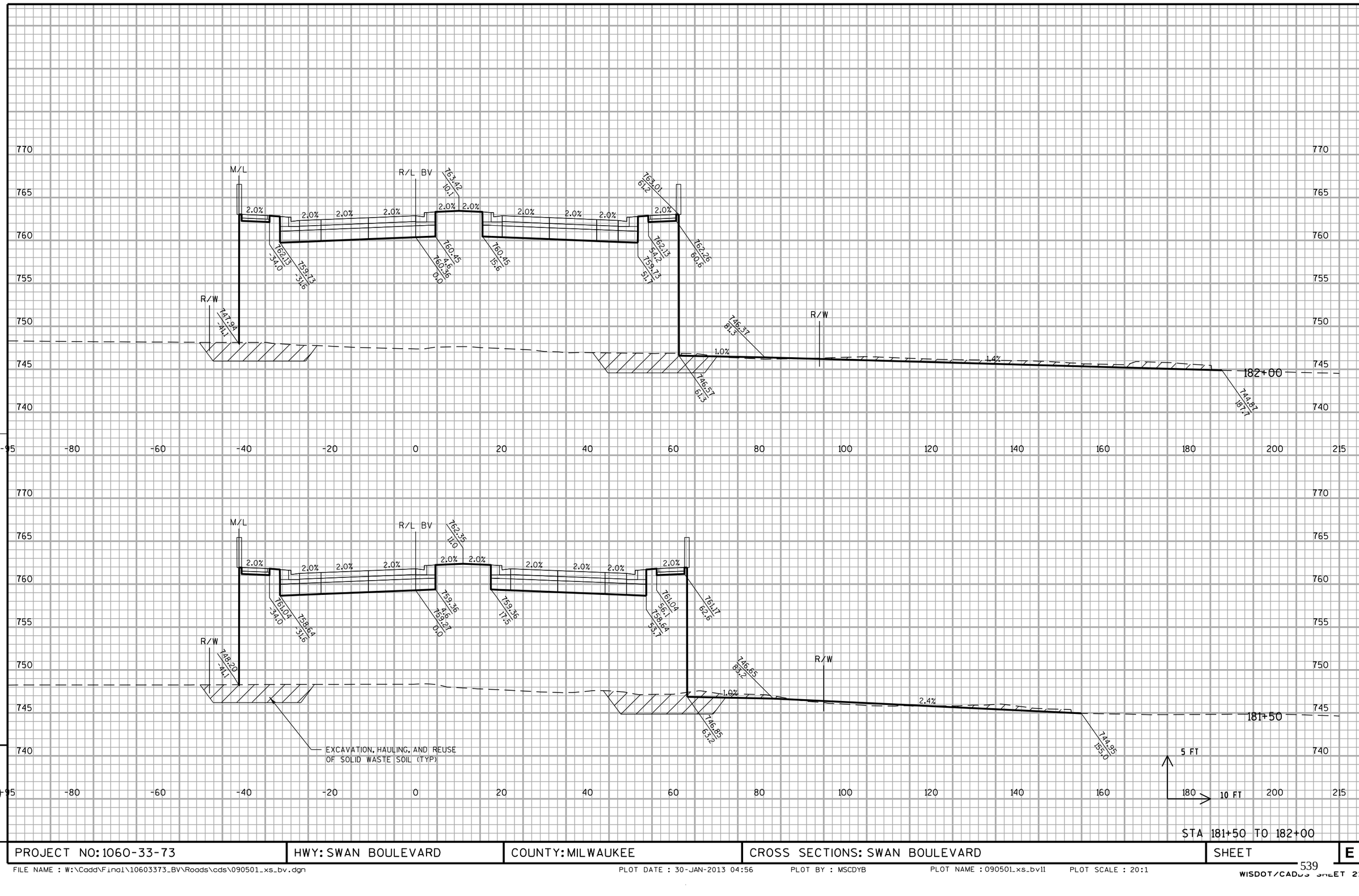

STA 181+50 TO 182+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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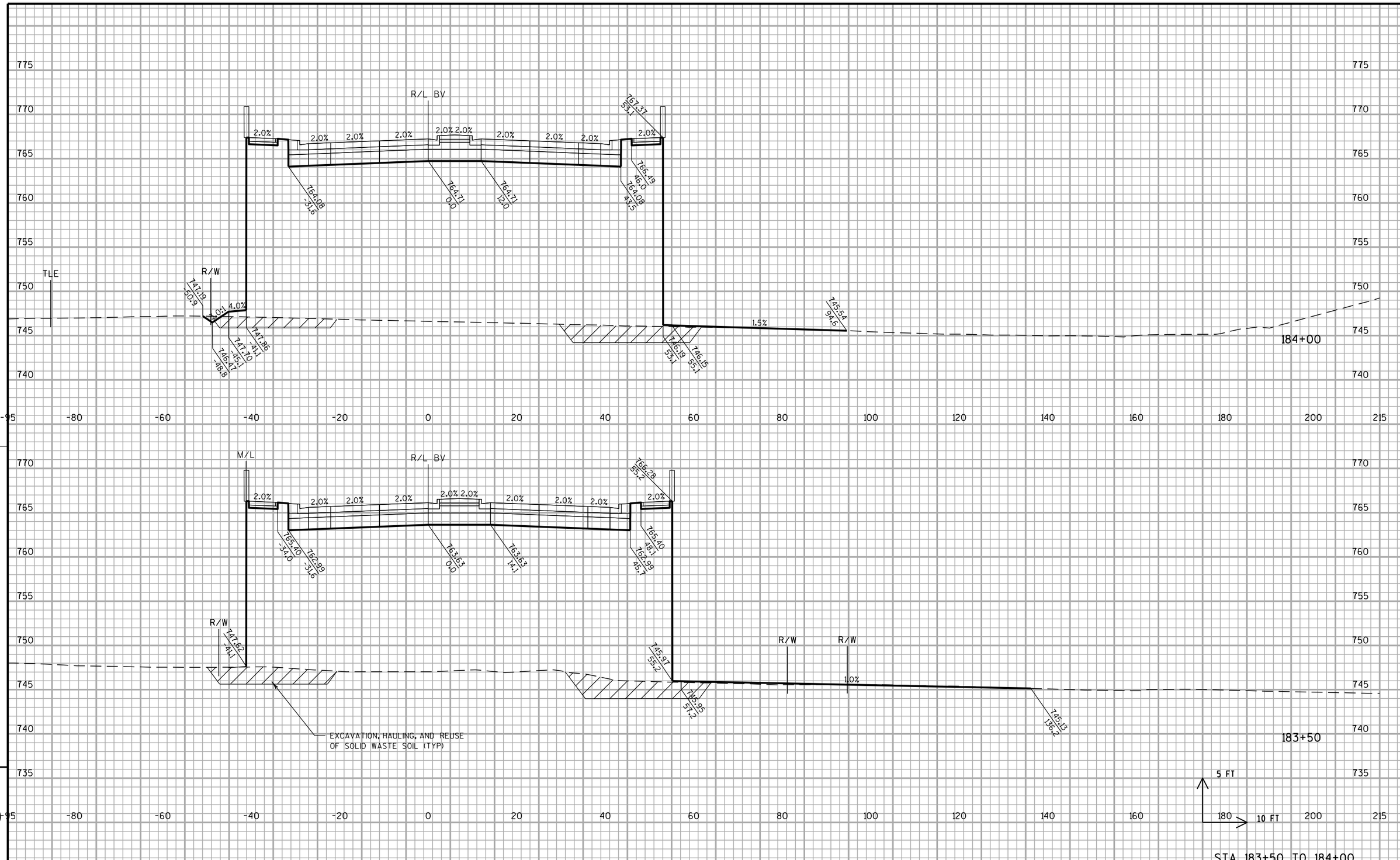
WISDOT/CADDS SHEET 21

STA 182+50 TO 183+00

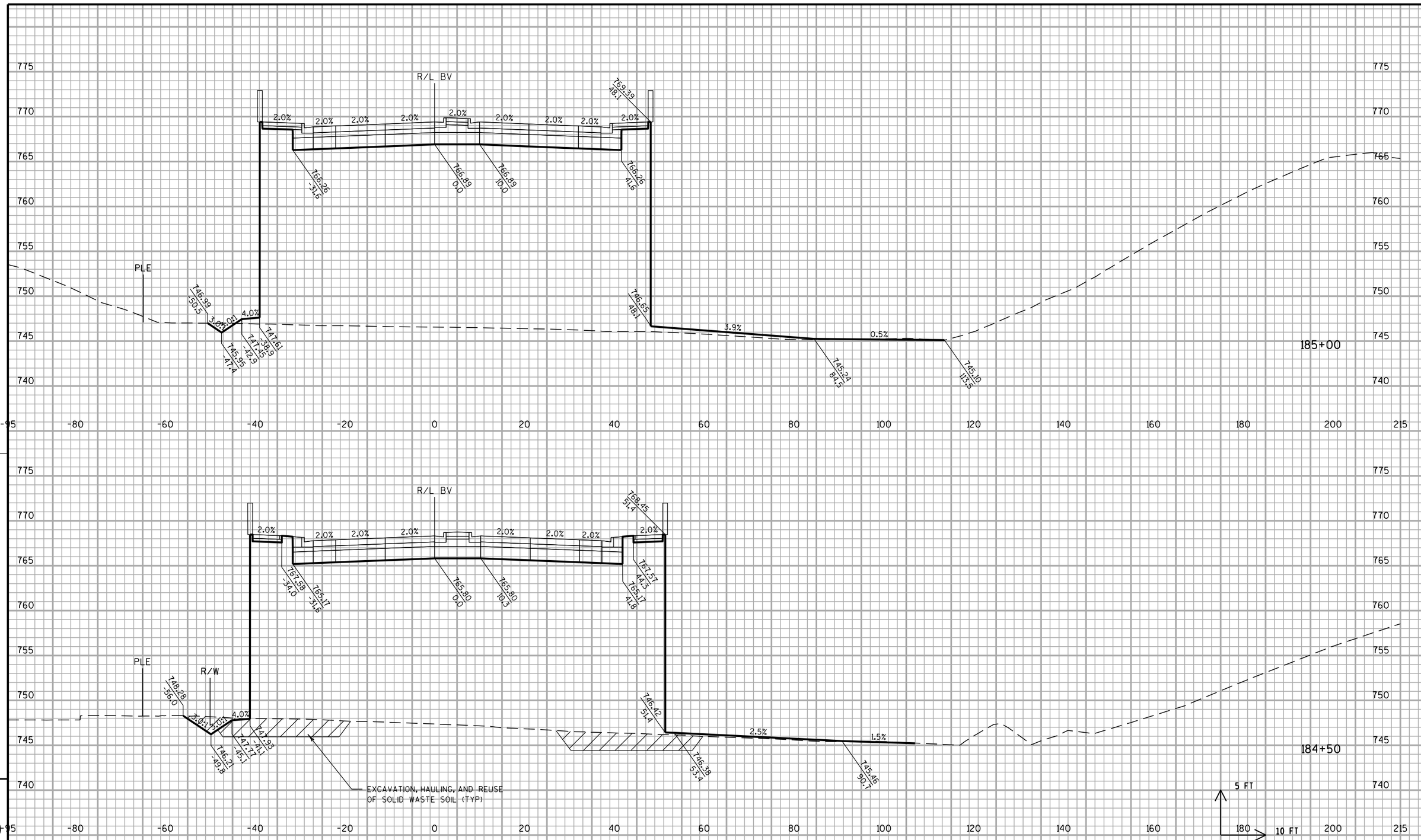
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv12 PLOT SCALE : 20:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv13 PLOT SCALE : 20:1



STA 184+50 TO 185+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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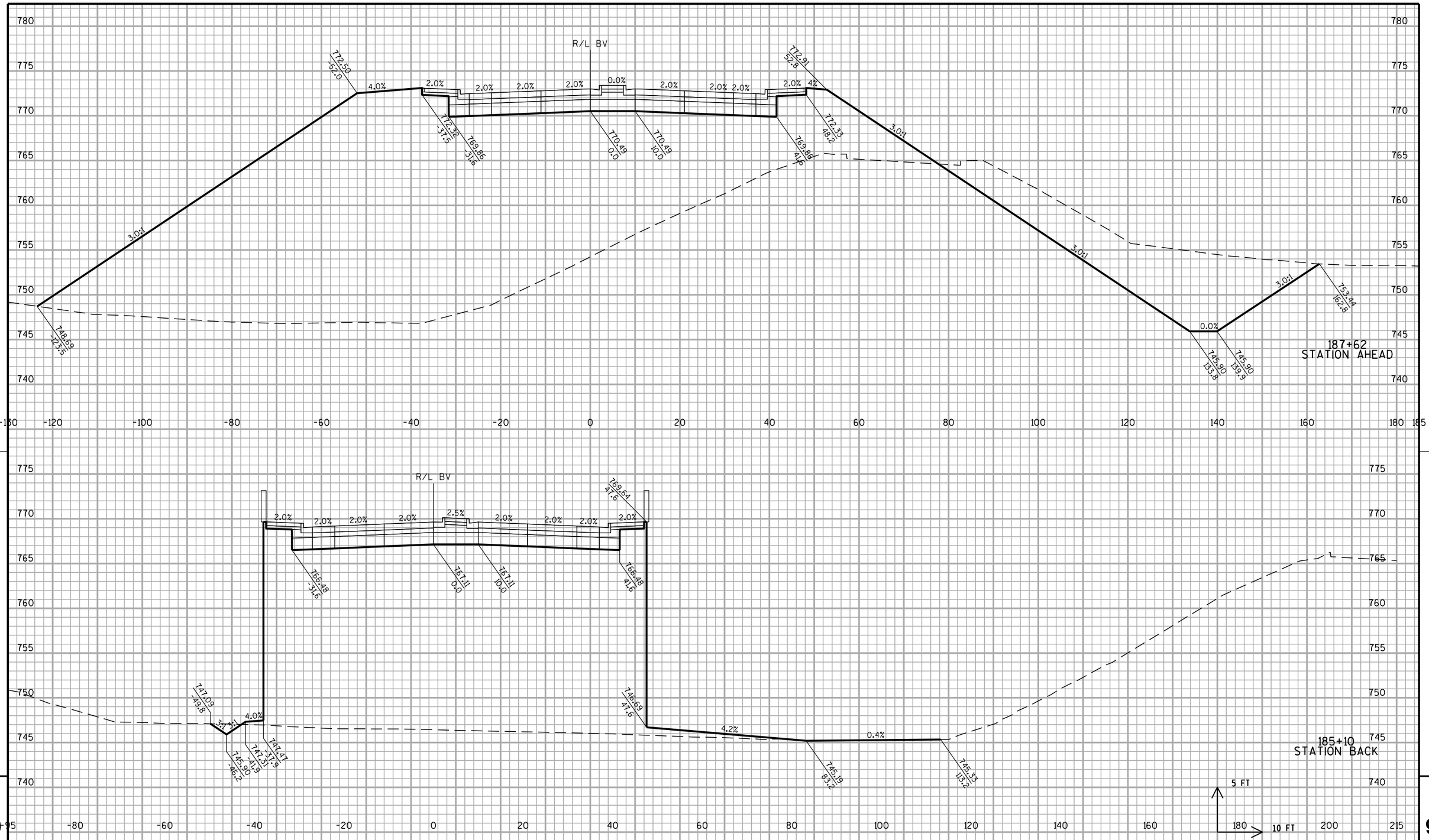


9

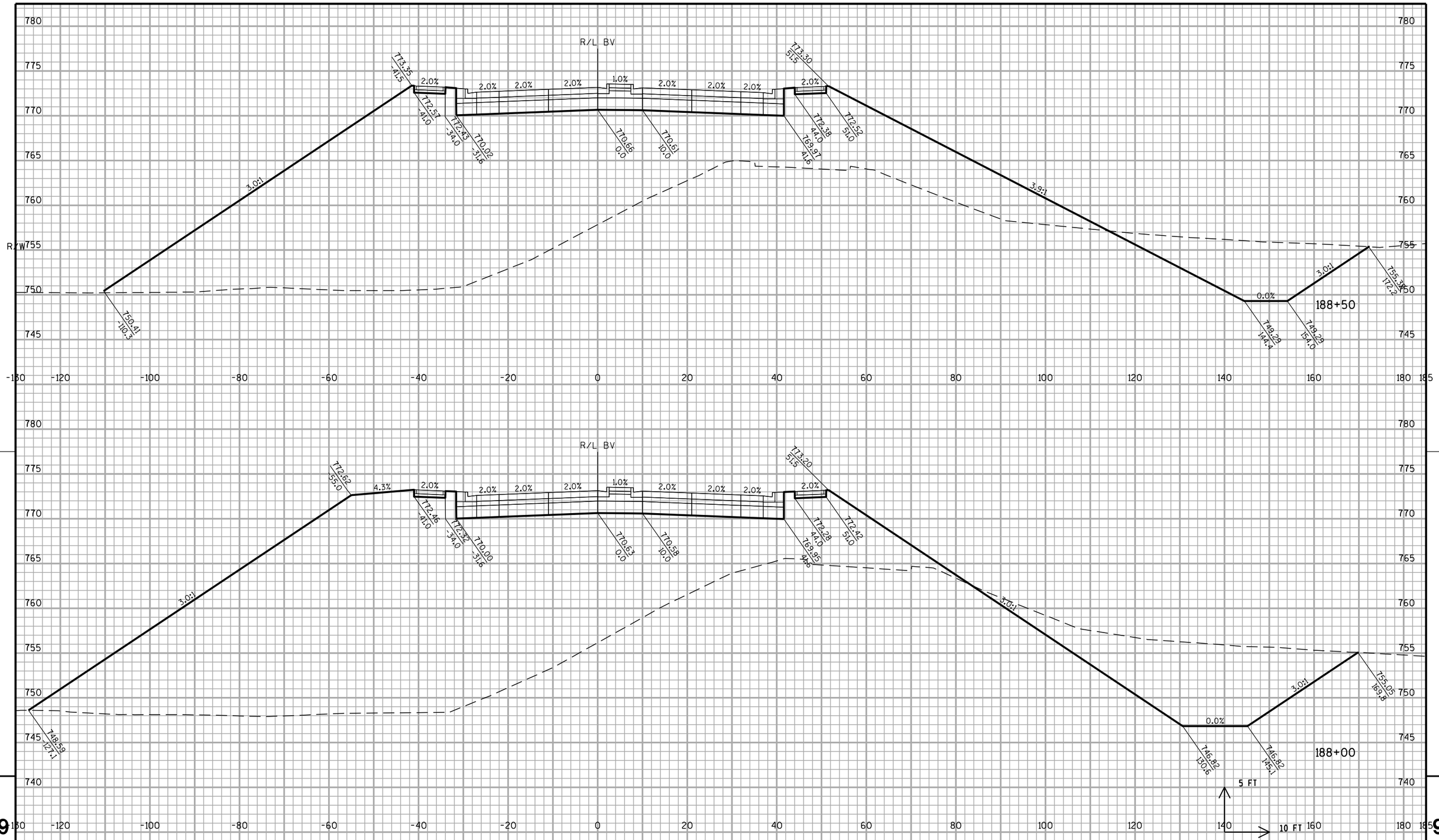
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

STA 185+10 TO 187+62

9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv15 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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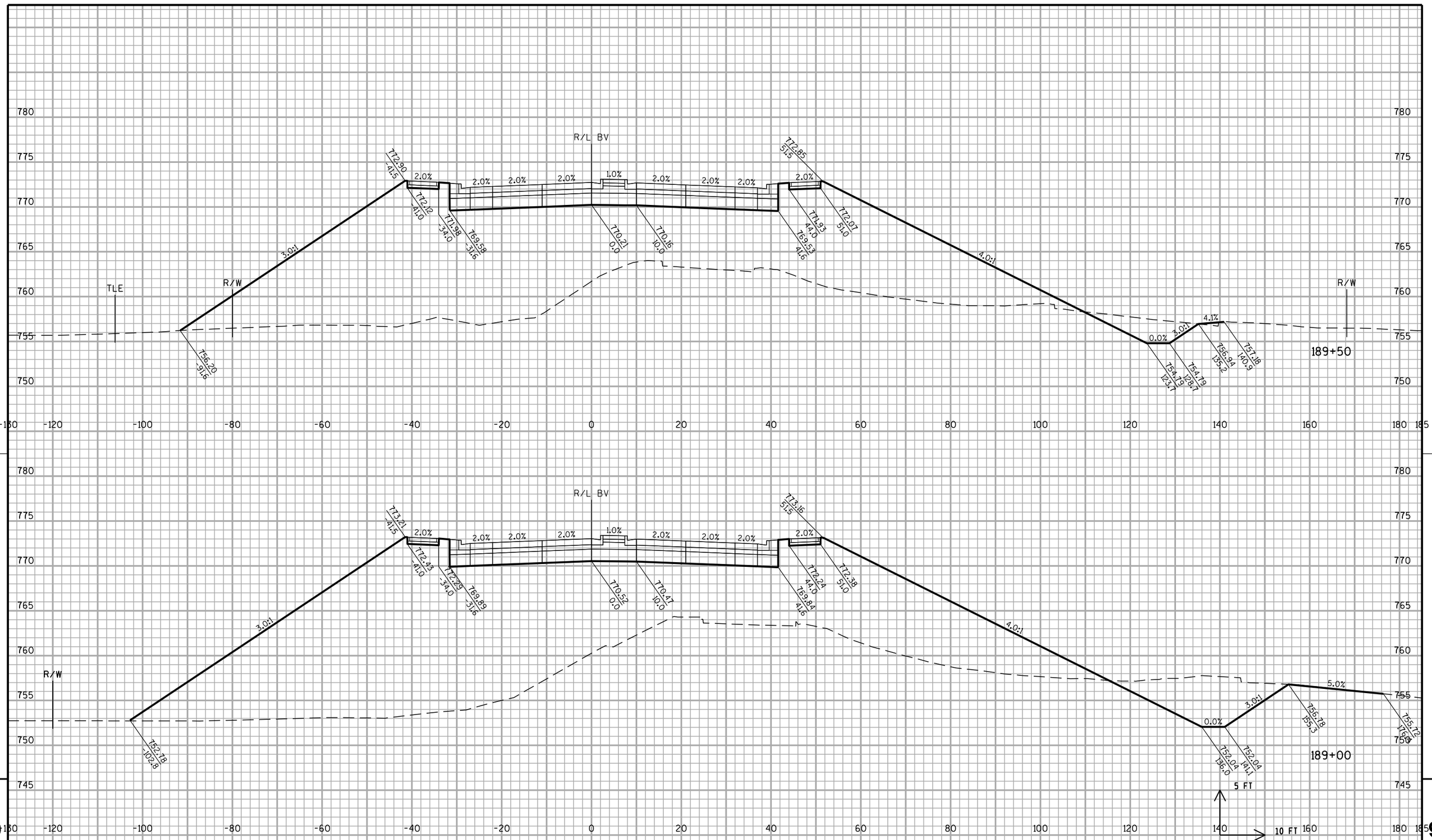
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

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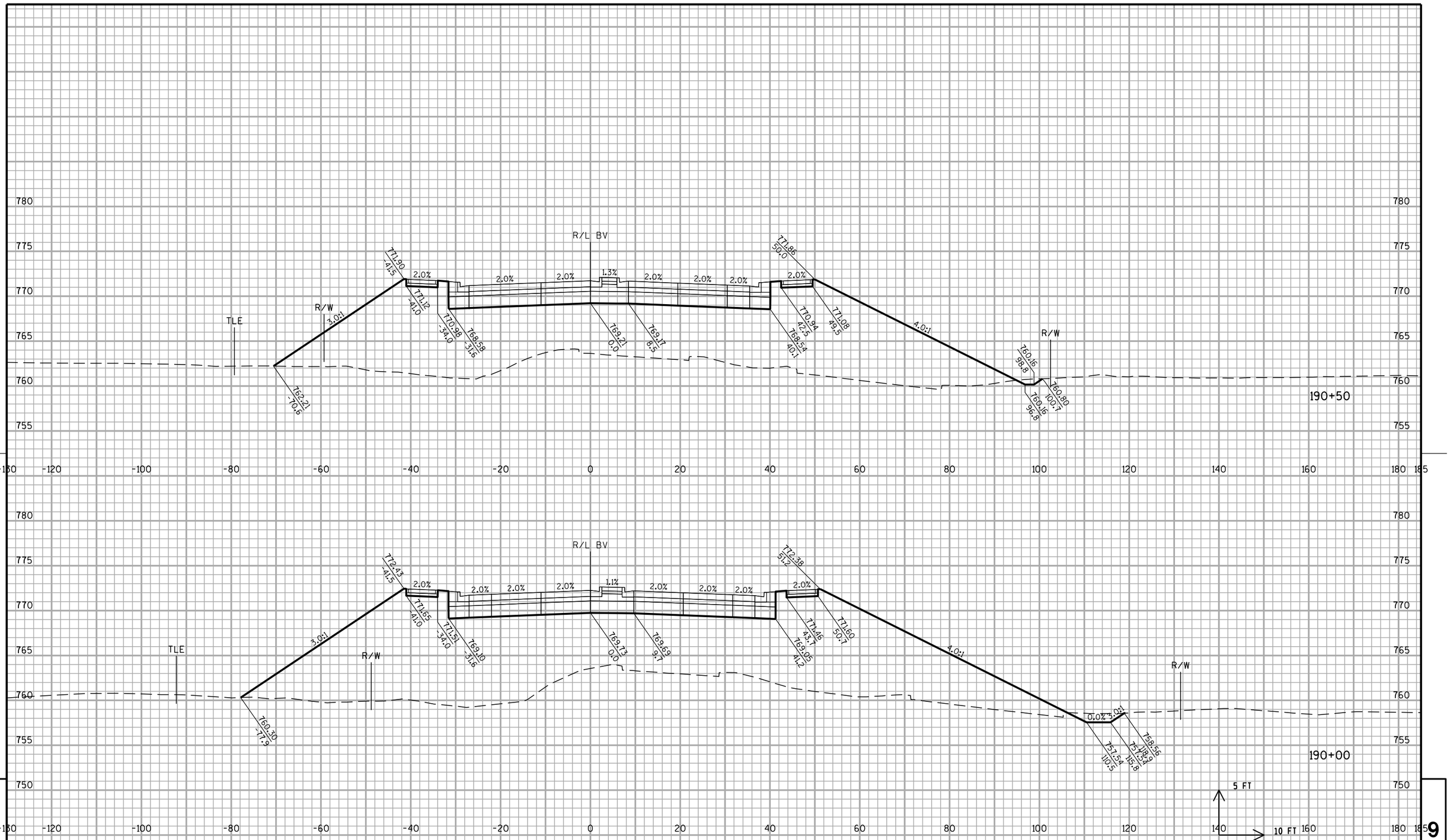
WISDOT/CADDS SHEET 21



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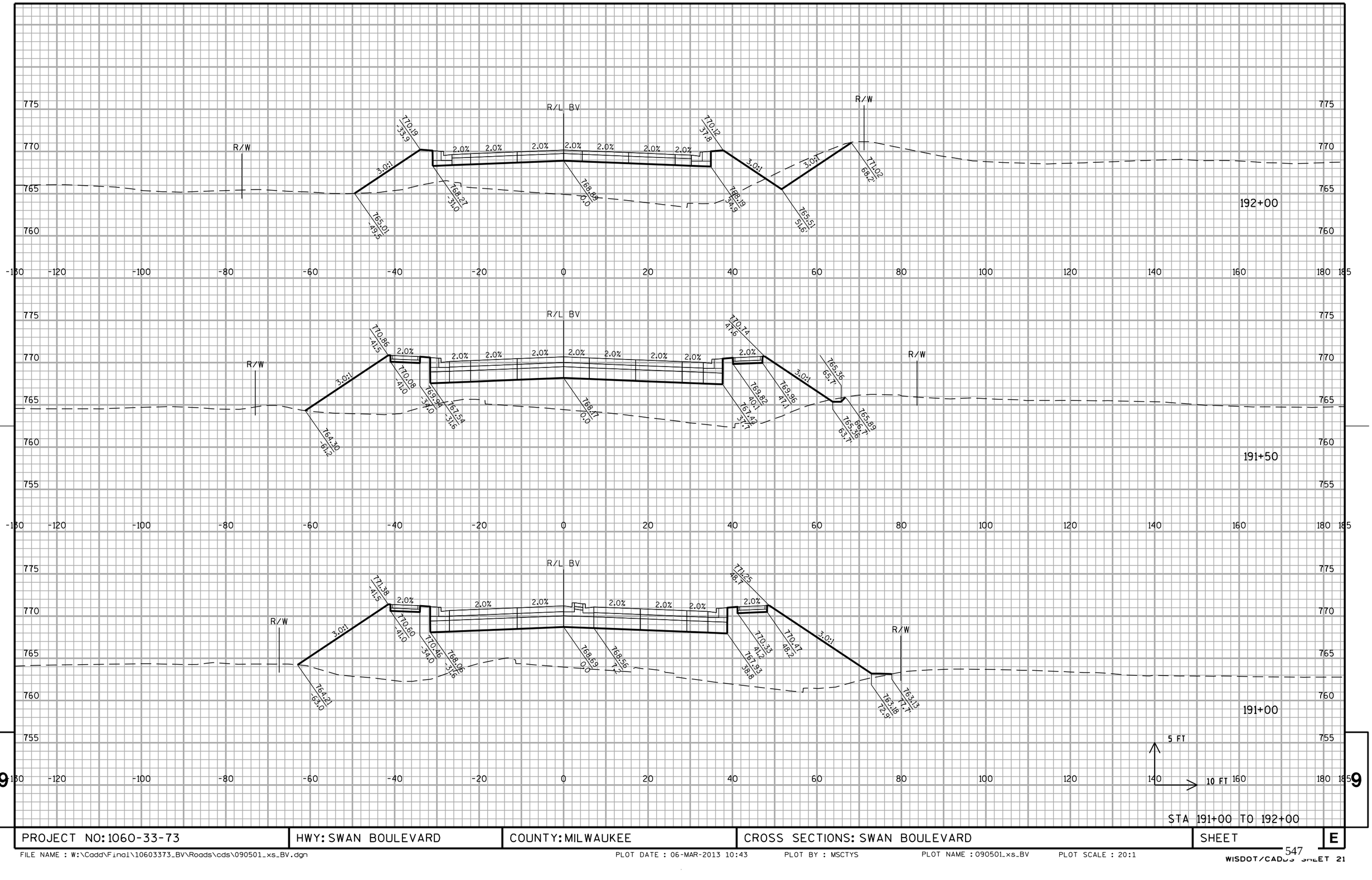
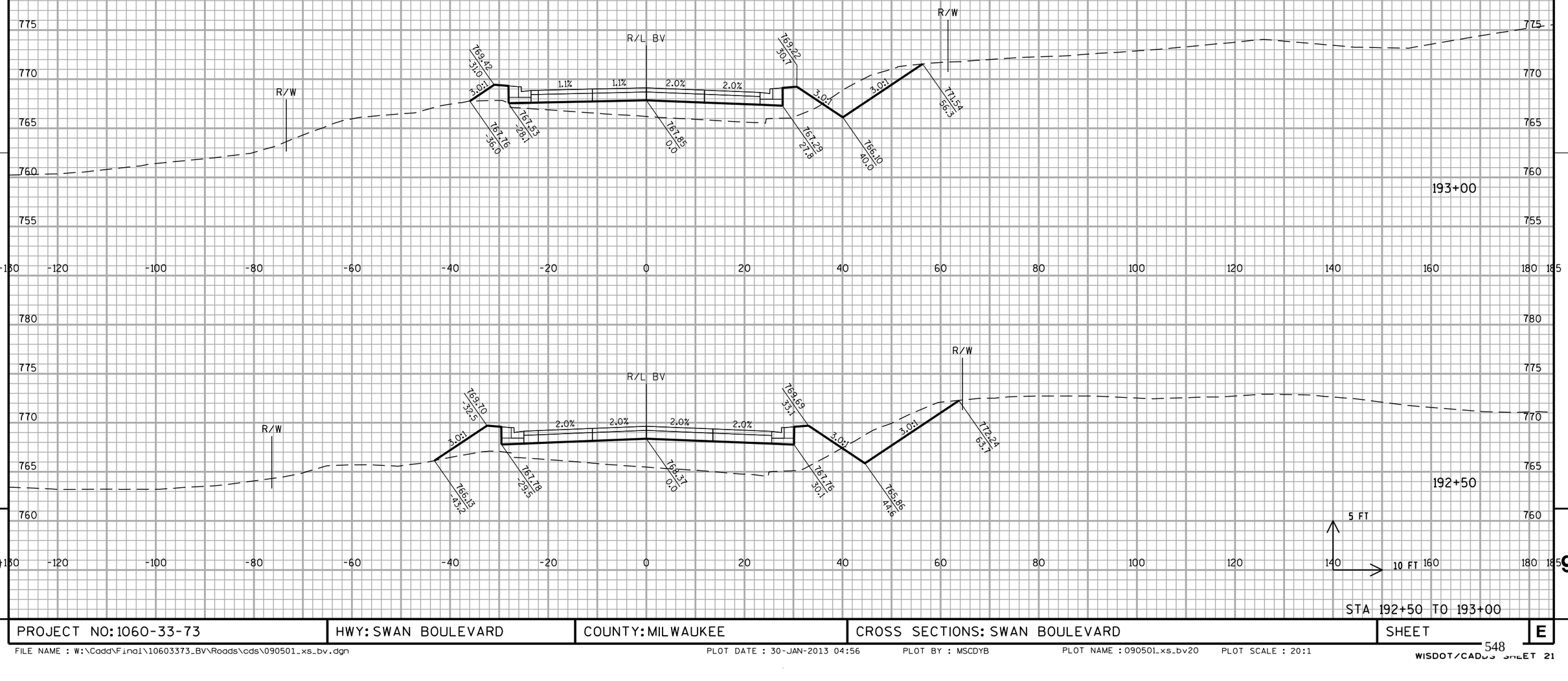
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

STA 190+00 TO 190+50



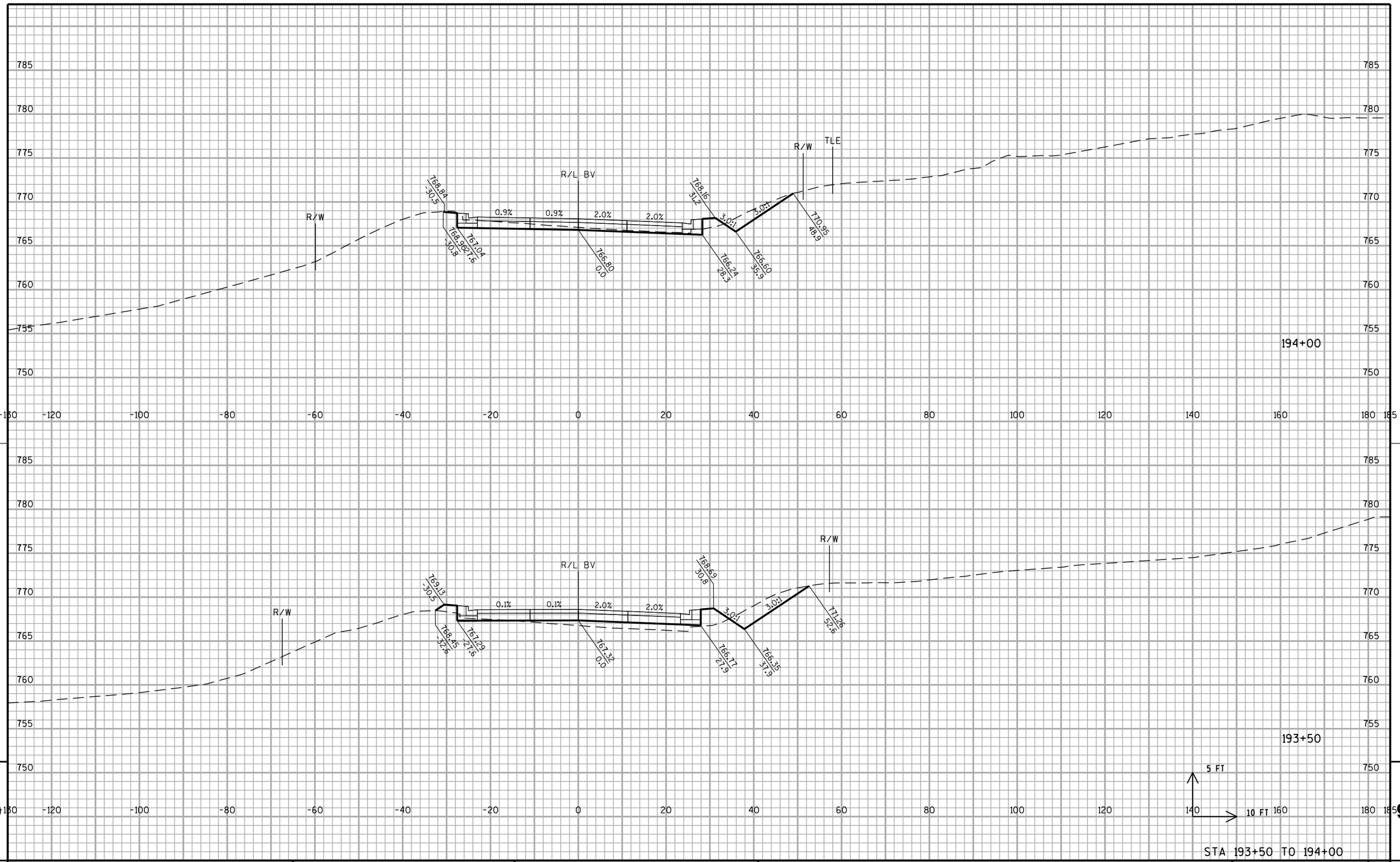
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET E



STA 192+50 TO 193+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

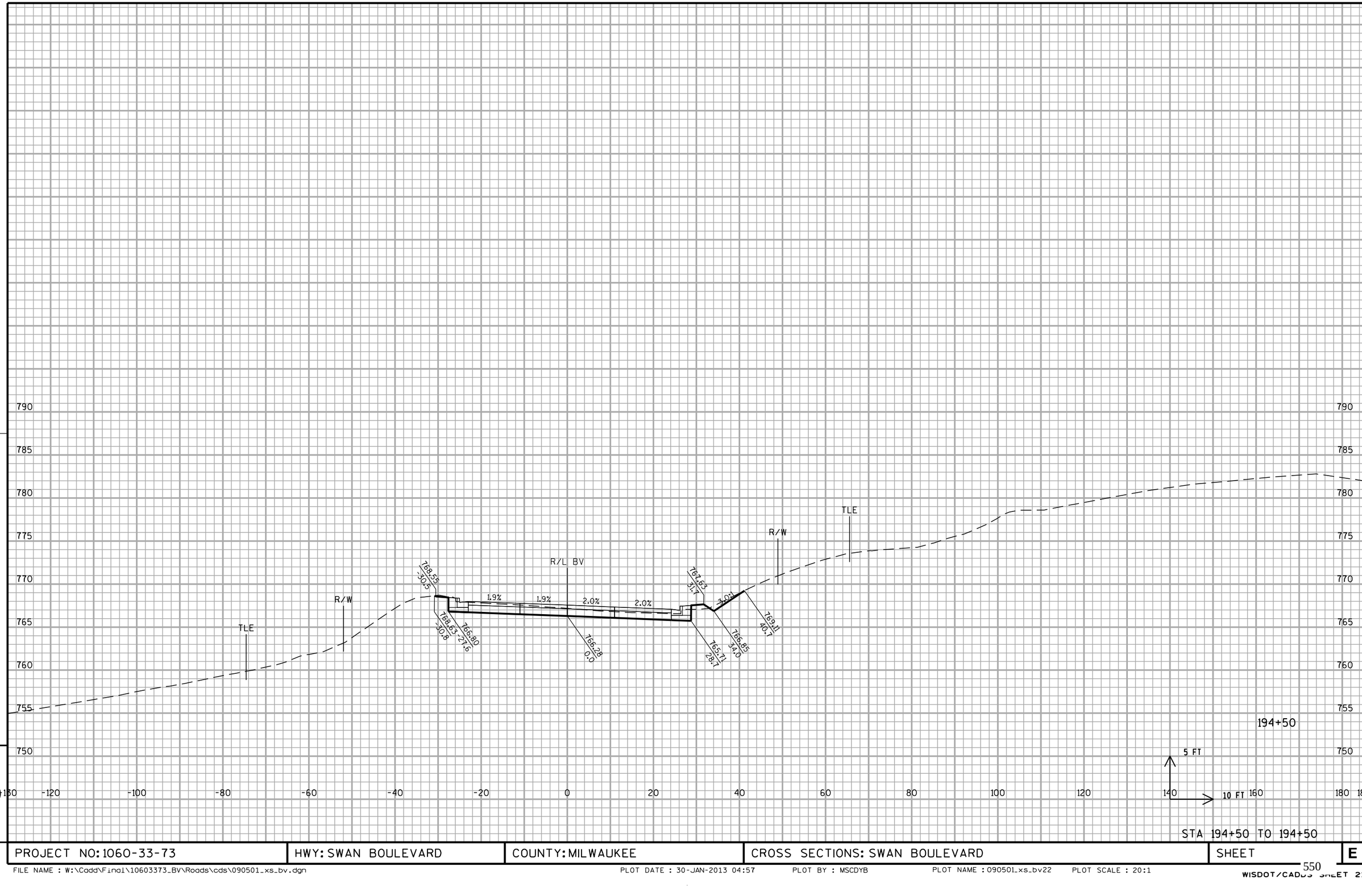
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv20 PLOT SCALE : 20:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:56 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv21 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



9

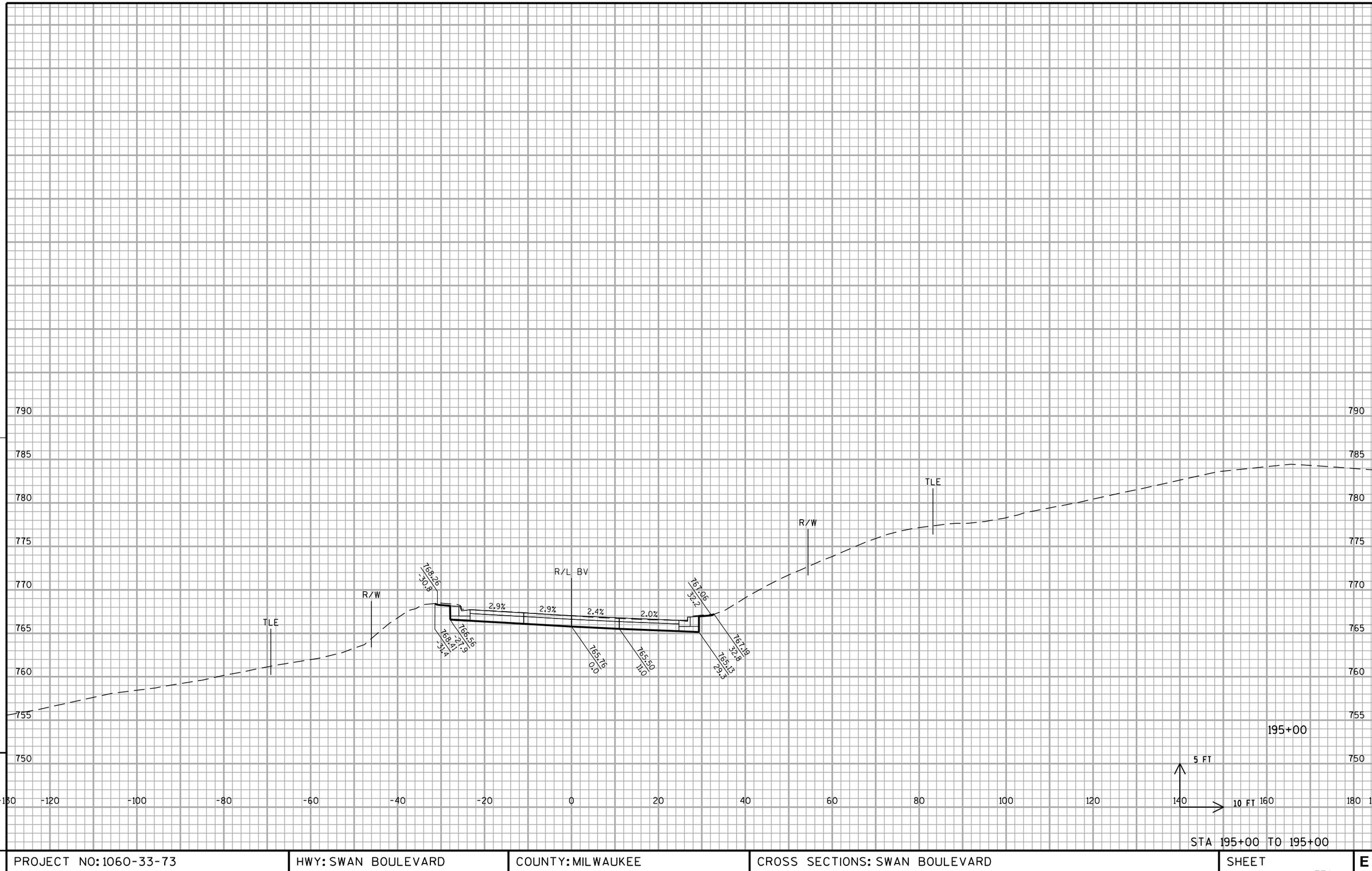
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

STA 194+50 TO 194+50

9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv22 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



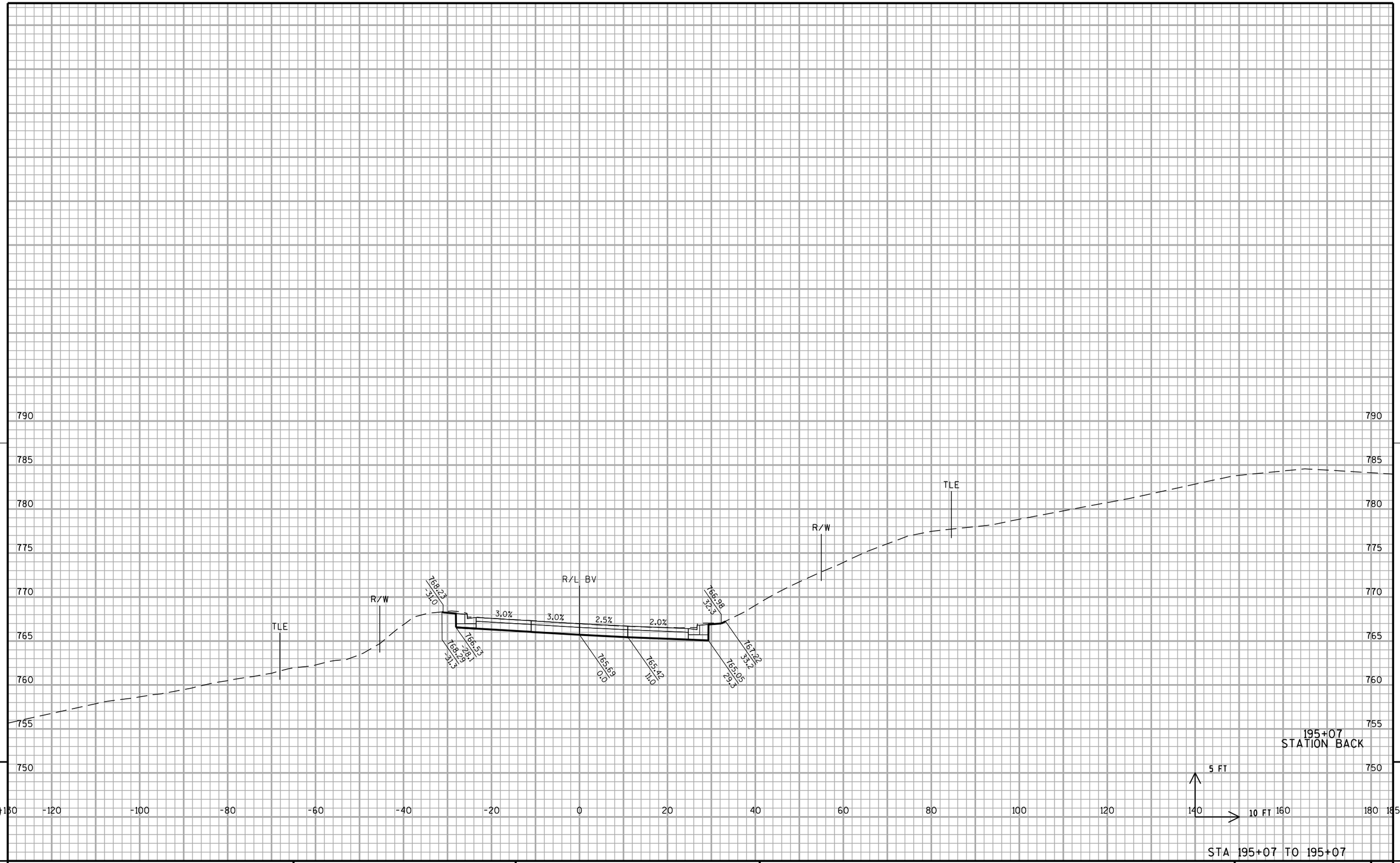
9

STA 195+00 TO 195+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv23 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

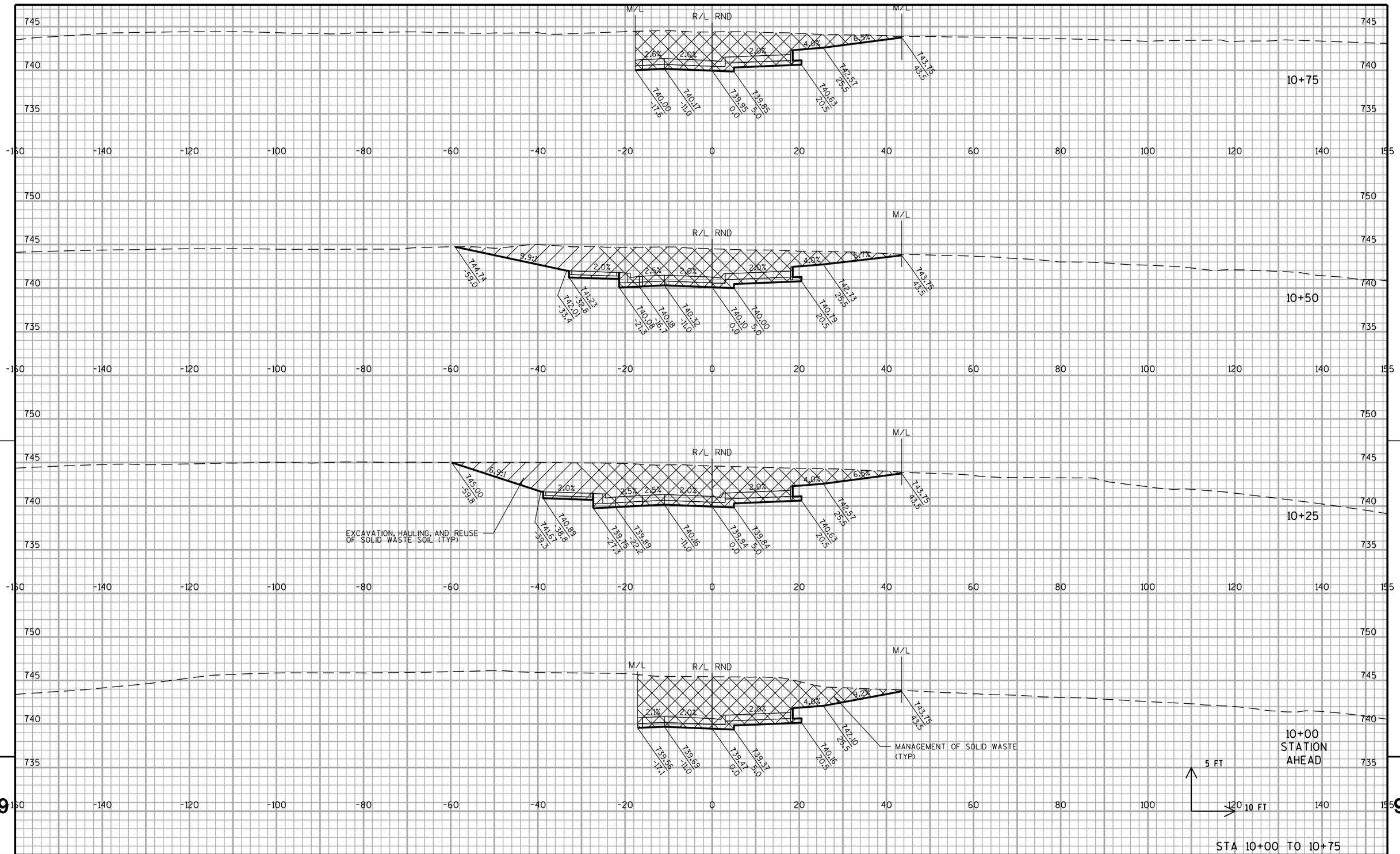


STA 195+07 TO 195+07

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BOULEVARD	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090501_xs_bv.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090501_xs_bv24 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

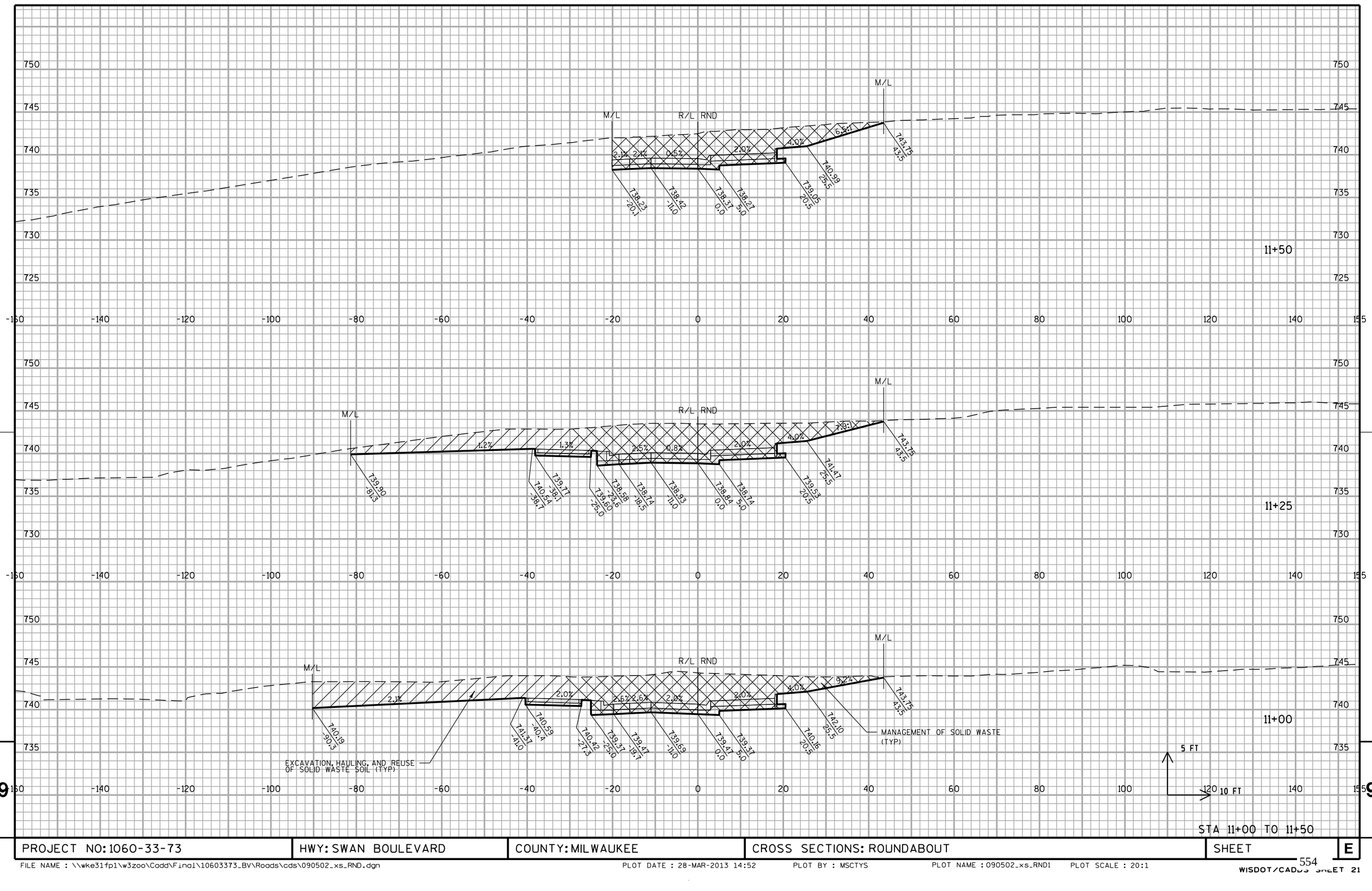


STA 10+00 TO 10+75

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: ROUNDABOUT	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090502_xs_RND.dgn PLOT DATE : 28-MAR-2013 14:52 PLOT BY : MSCTYS PLOT NAME : 090502_xs_RND PLOT SCALE : 20:1

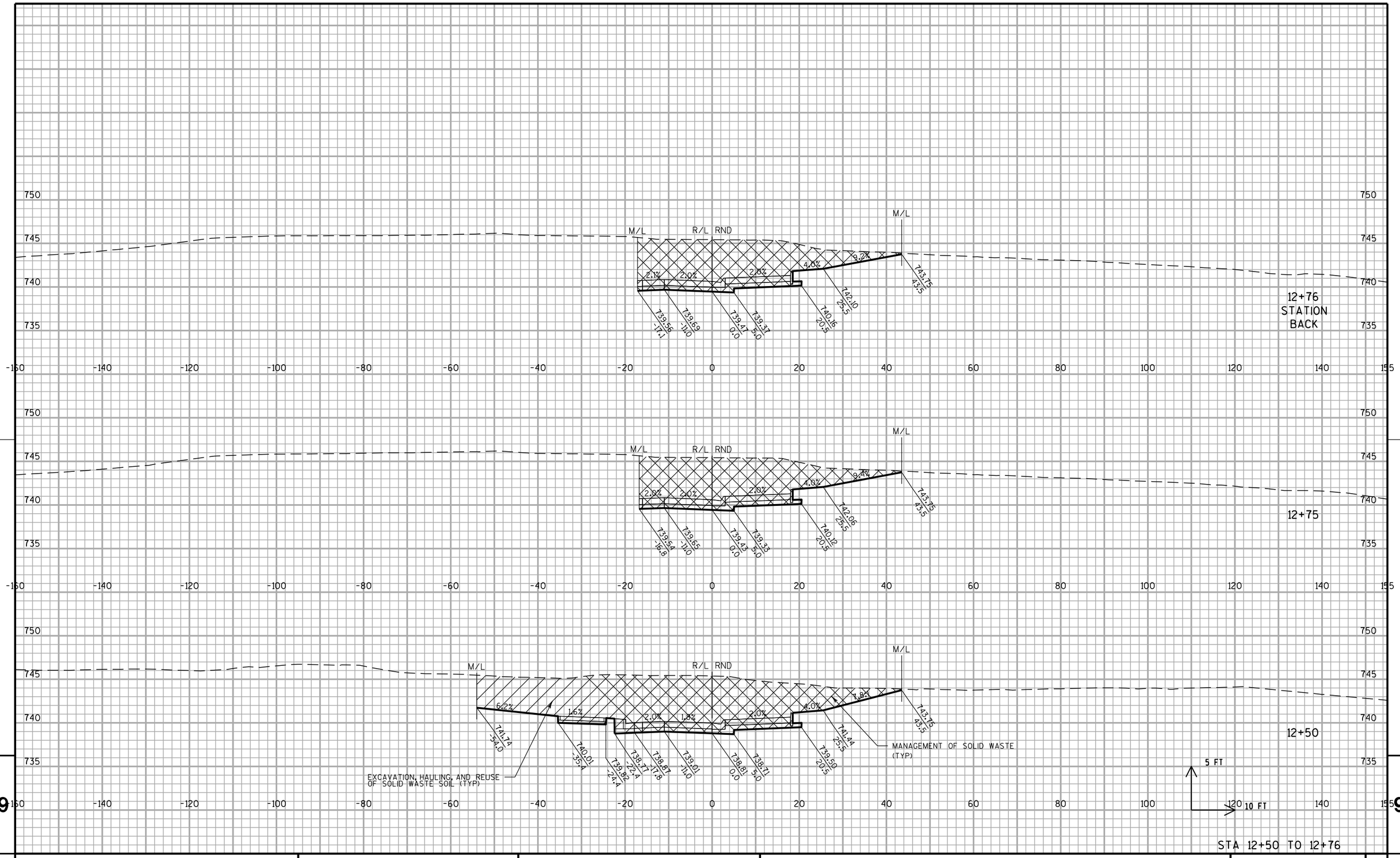
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: ROUNDABOUT	SHEET	E

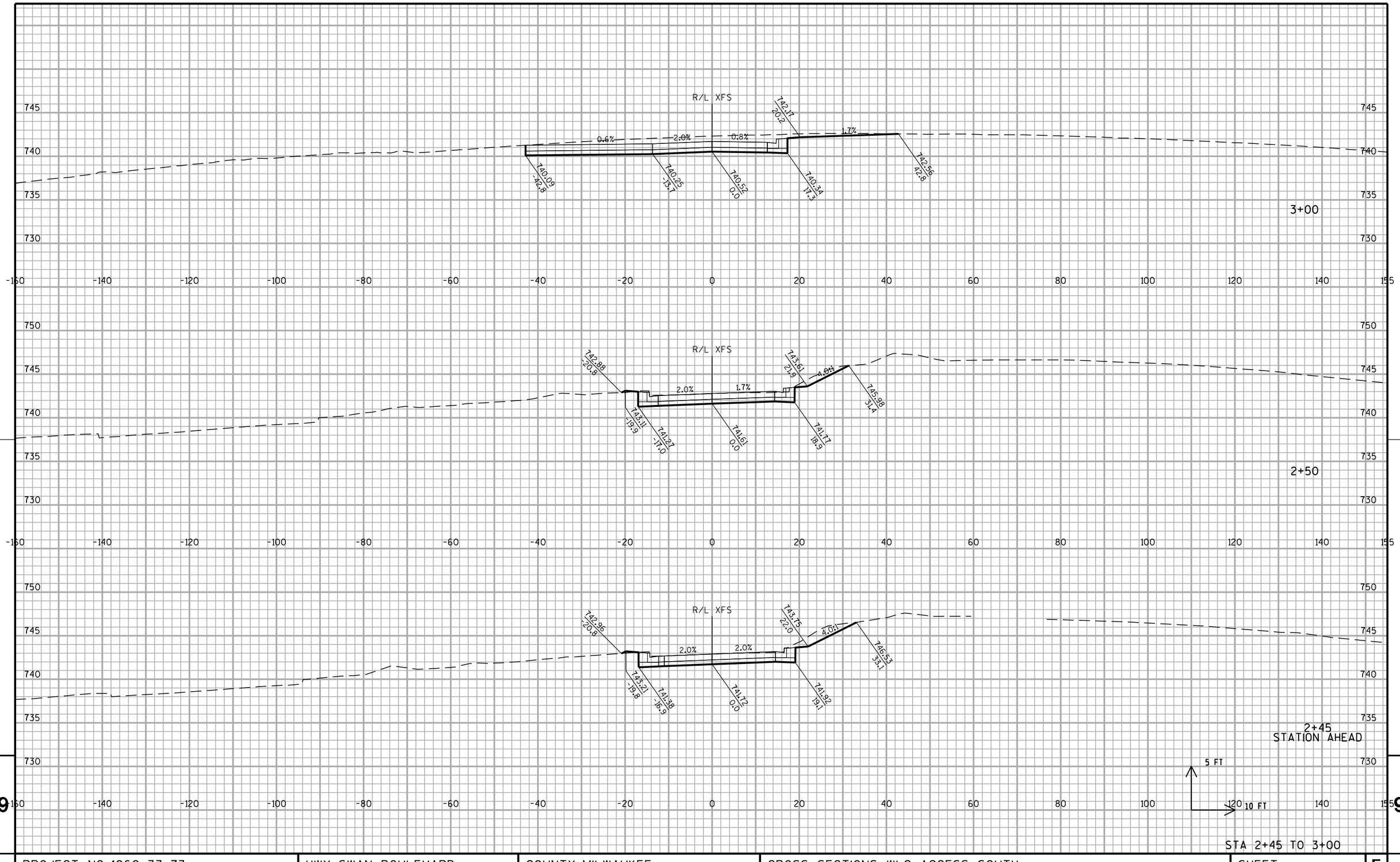
STA 11+75 TO 12+25

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: ROUNDABOUT	SHEET	E

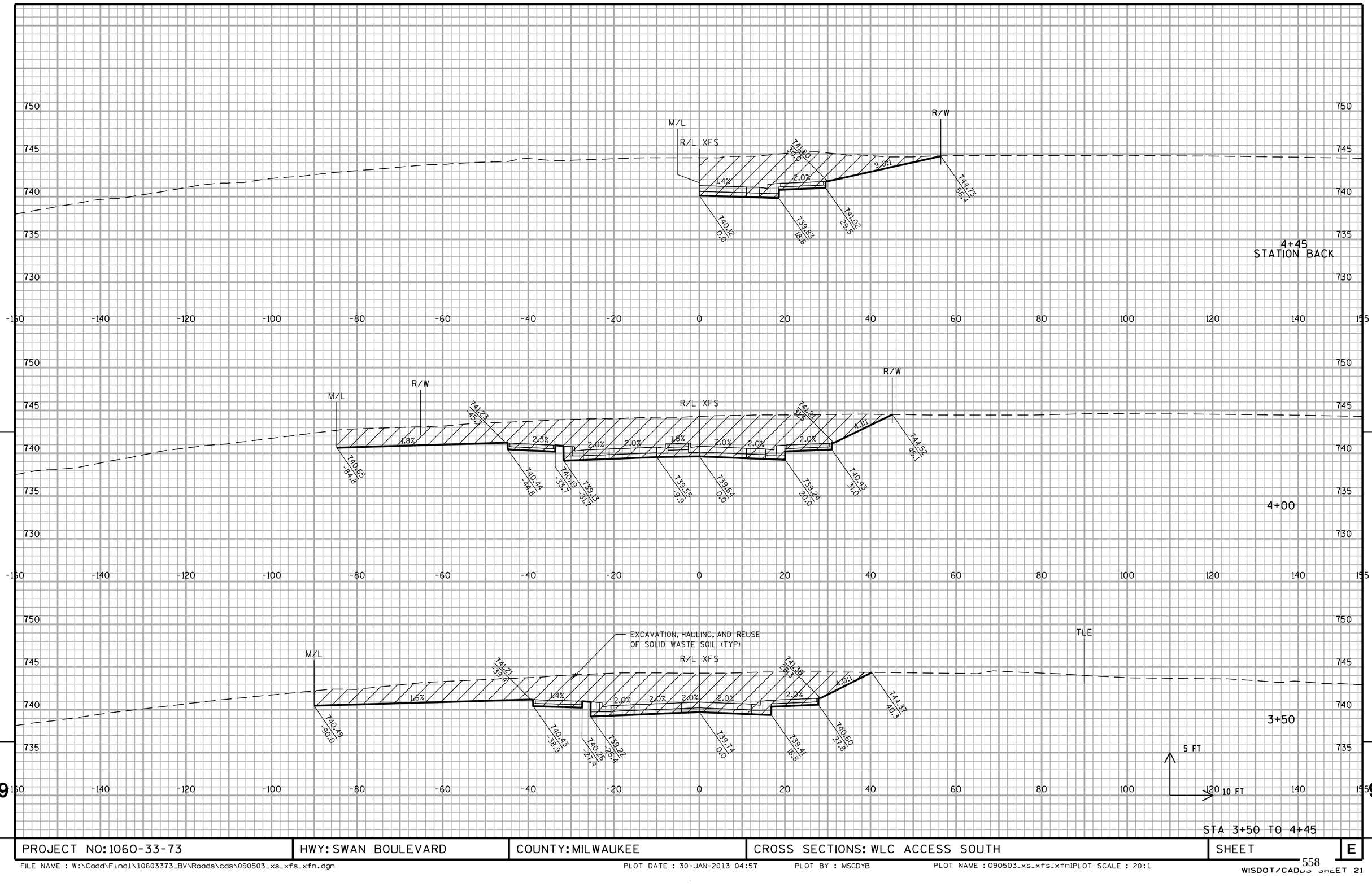


STA 12+50 TO 12+76

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: ROUNDABOUT	SHEET	E

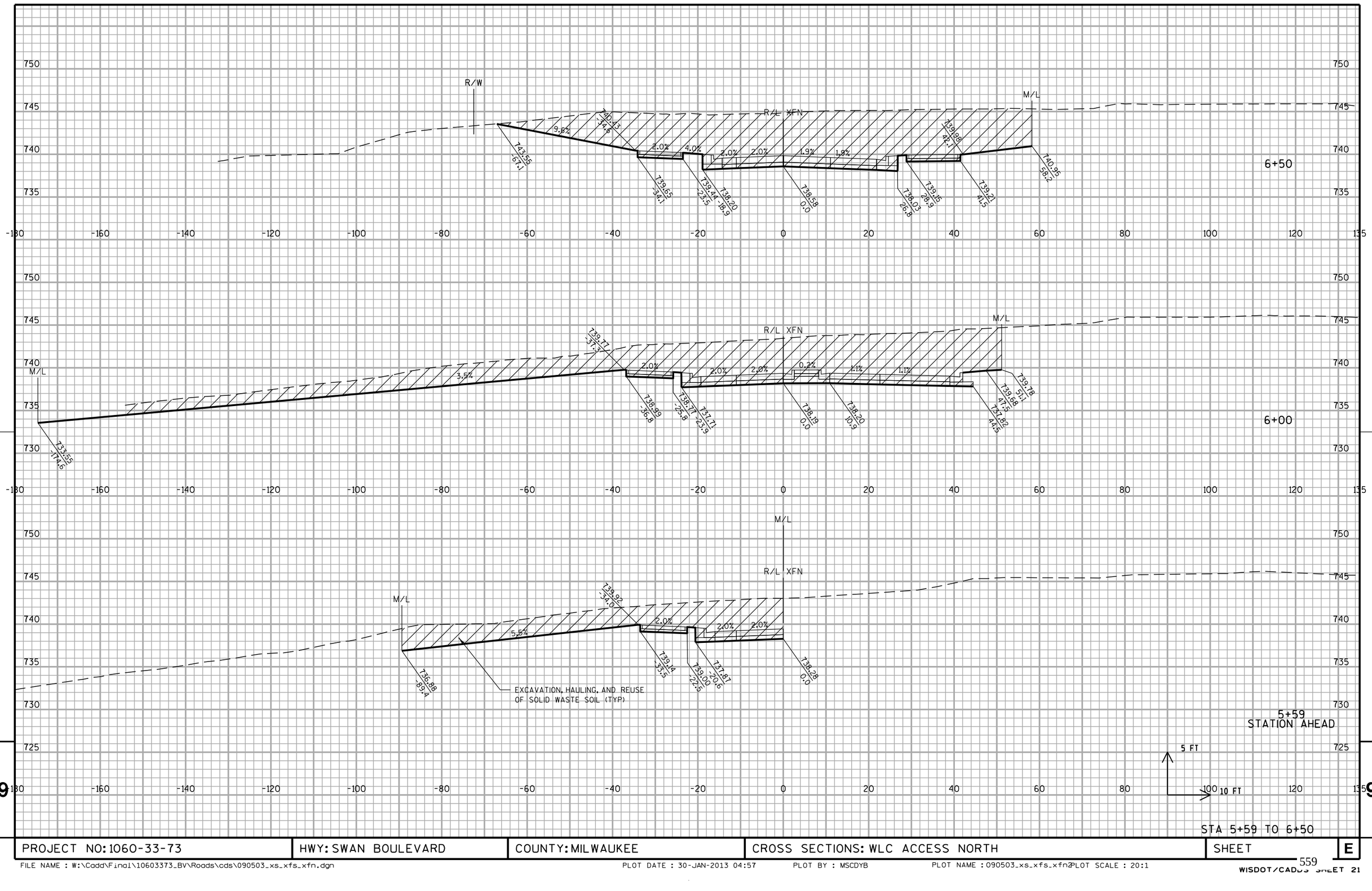


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS SOUTH	SHEET	E

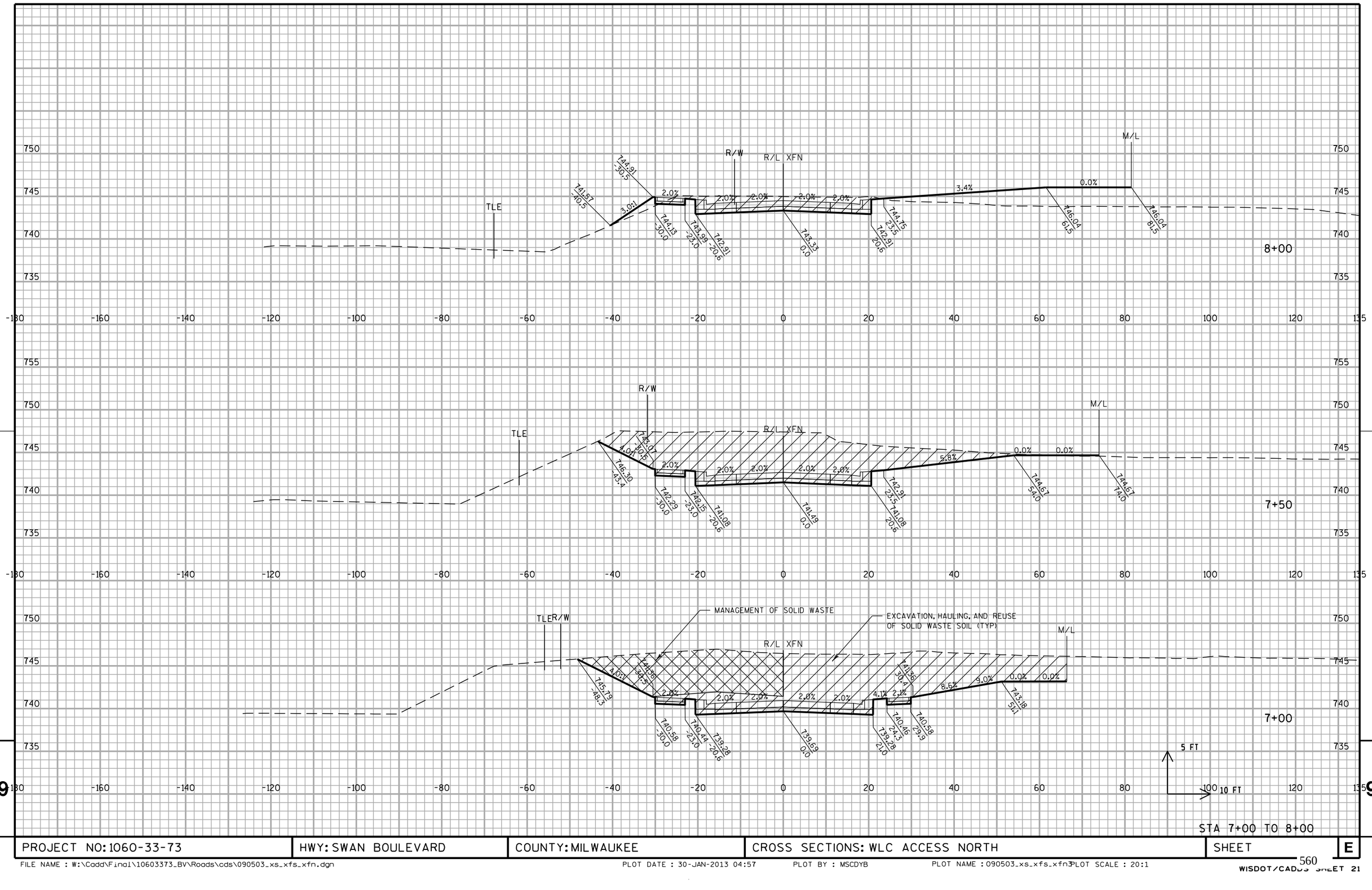


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS SOUTH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090503_xs_xfs_xfn.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090503_xs_xfs_xfn PLOT SCALE : 20:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

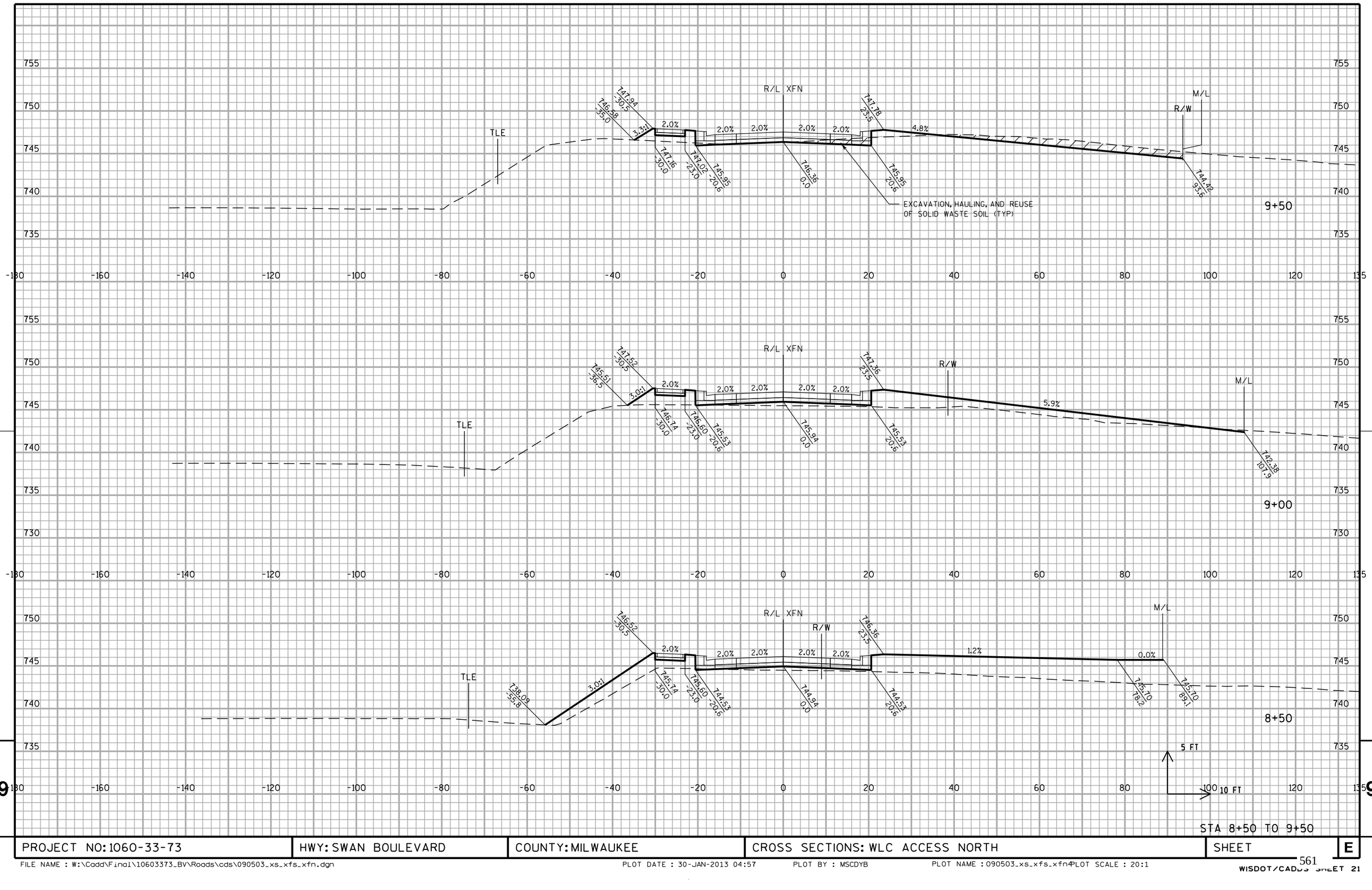


STA 7+00 TO 8+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090503_xs_xfs_xfn.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090503_xs_xfs_xfn3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

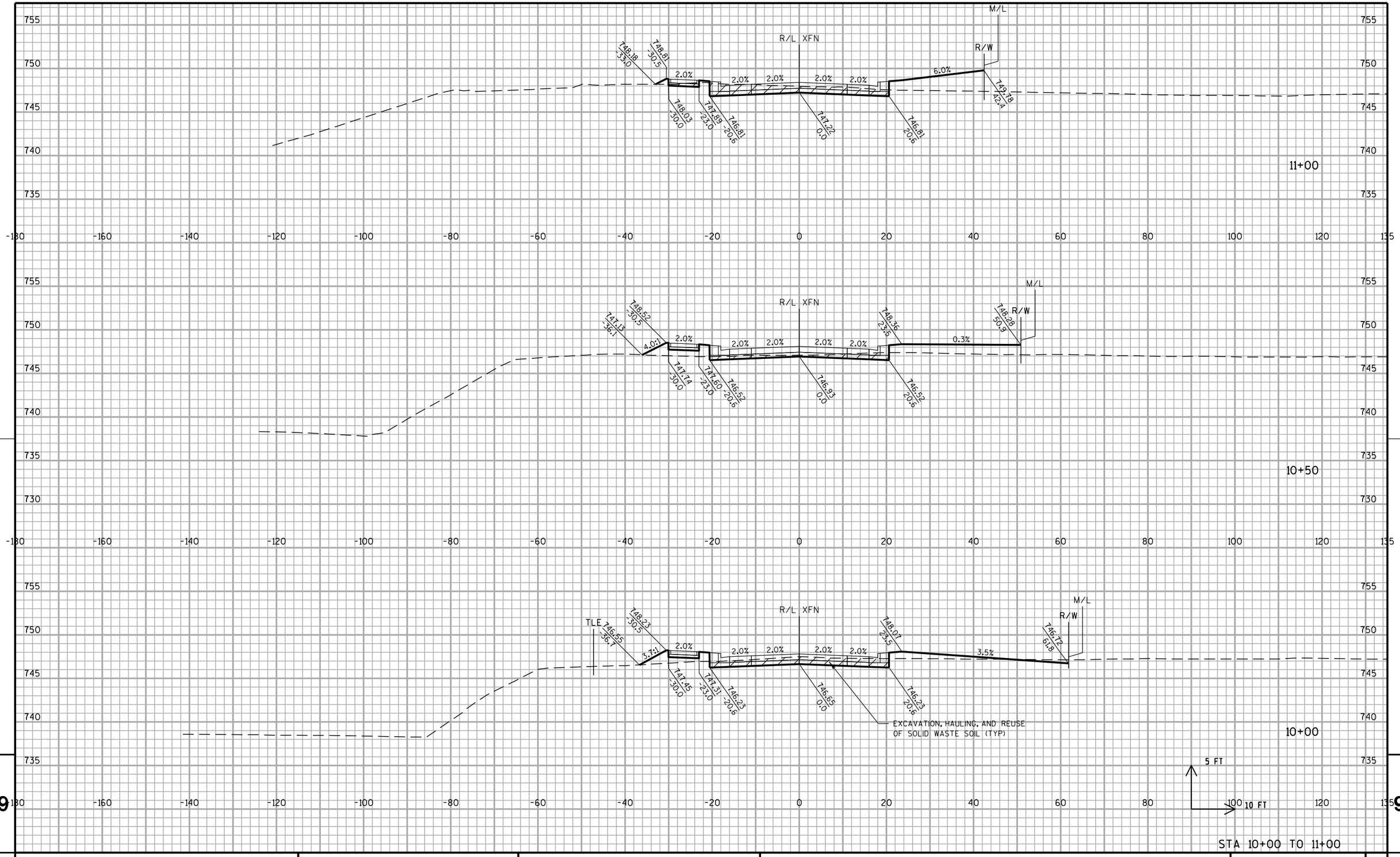


STA 8+50 TO 9+50

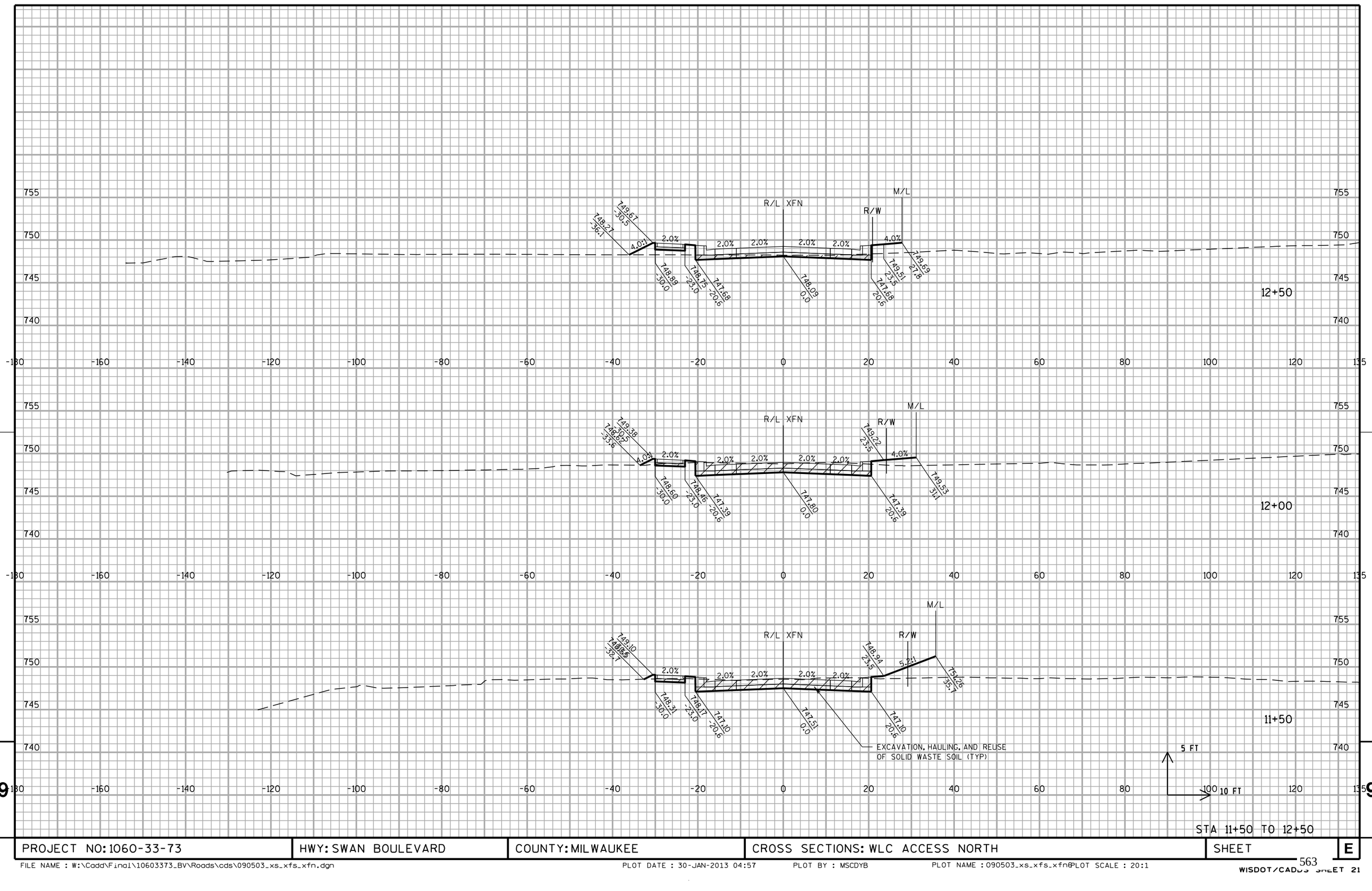
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090503_xs_xfs_xfn.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090503_xs_xfs_xfn4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

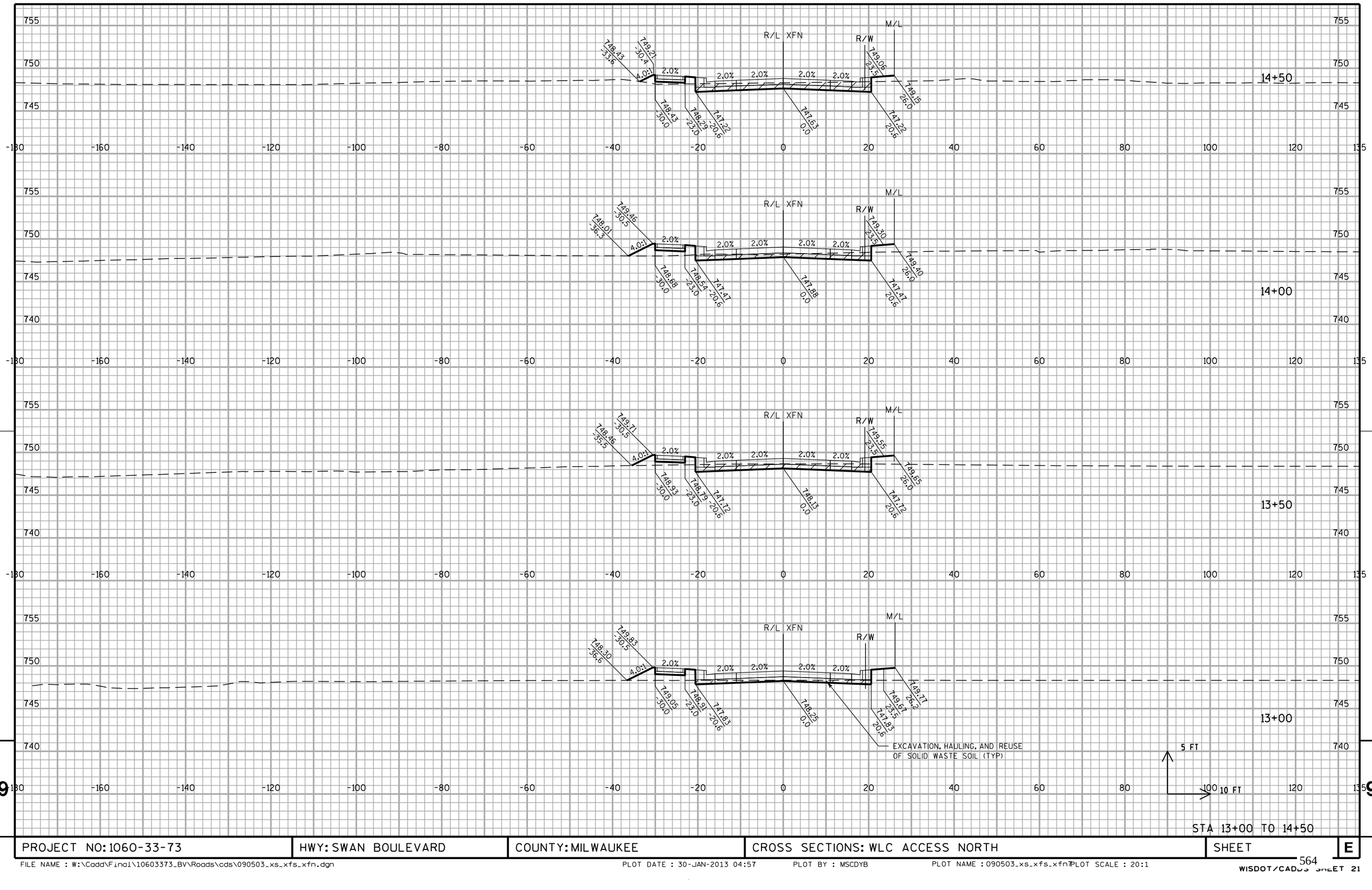


STA 11+50 TO 12+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090503_xs_xfs_xfn.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090503_xs_xfs_xfn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



9

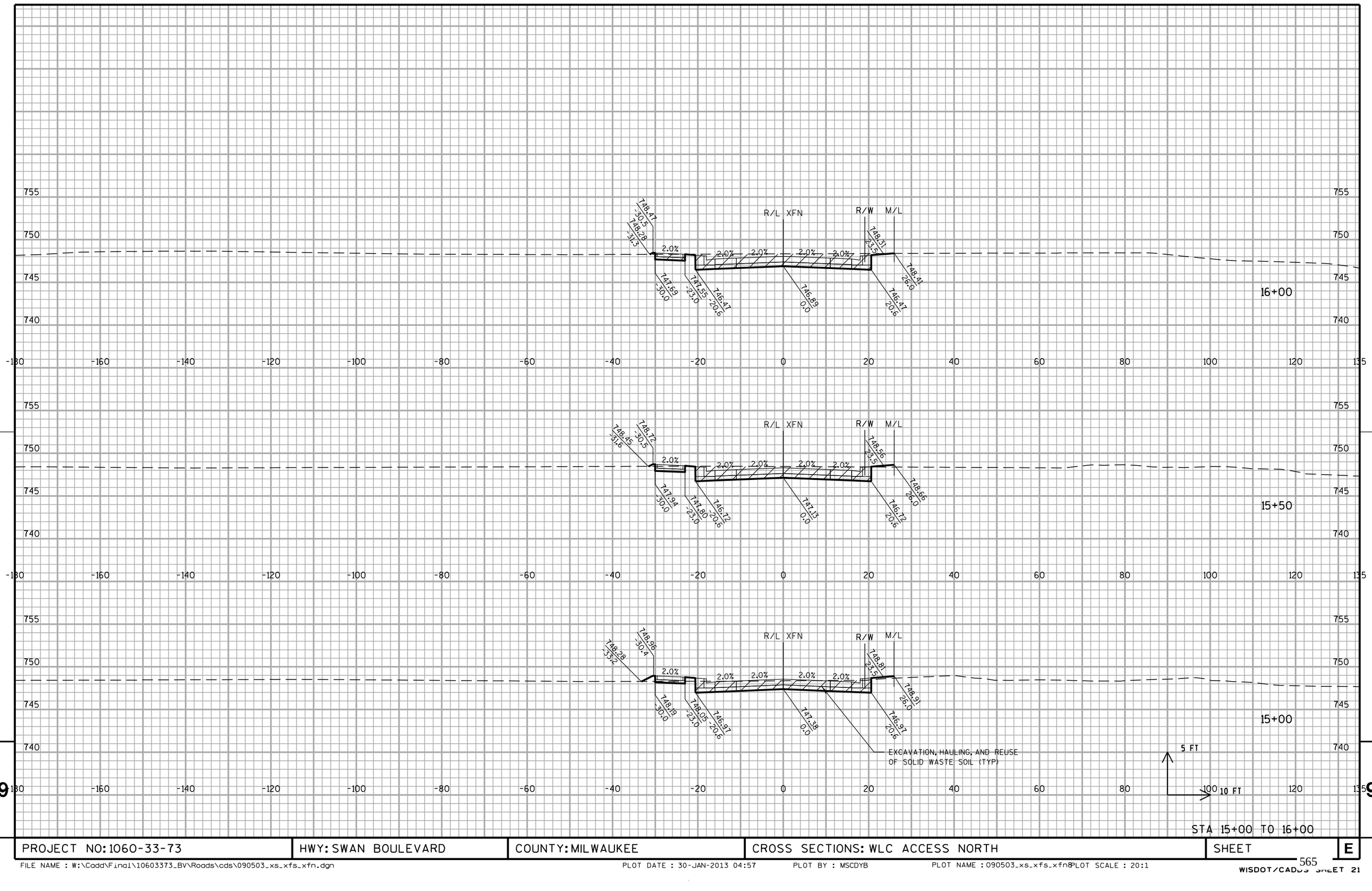
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

STA 13+00 TO 14+50

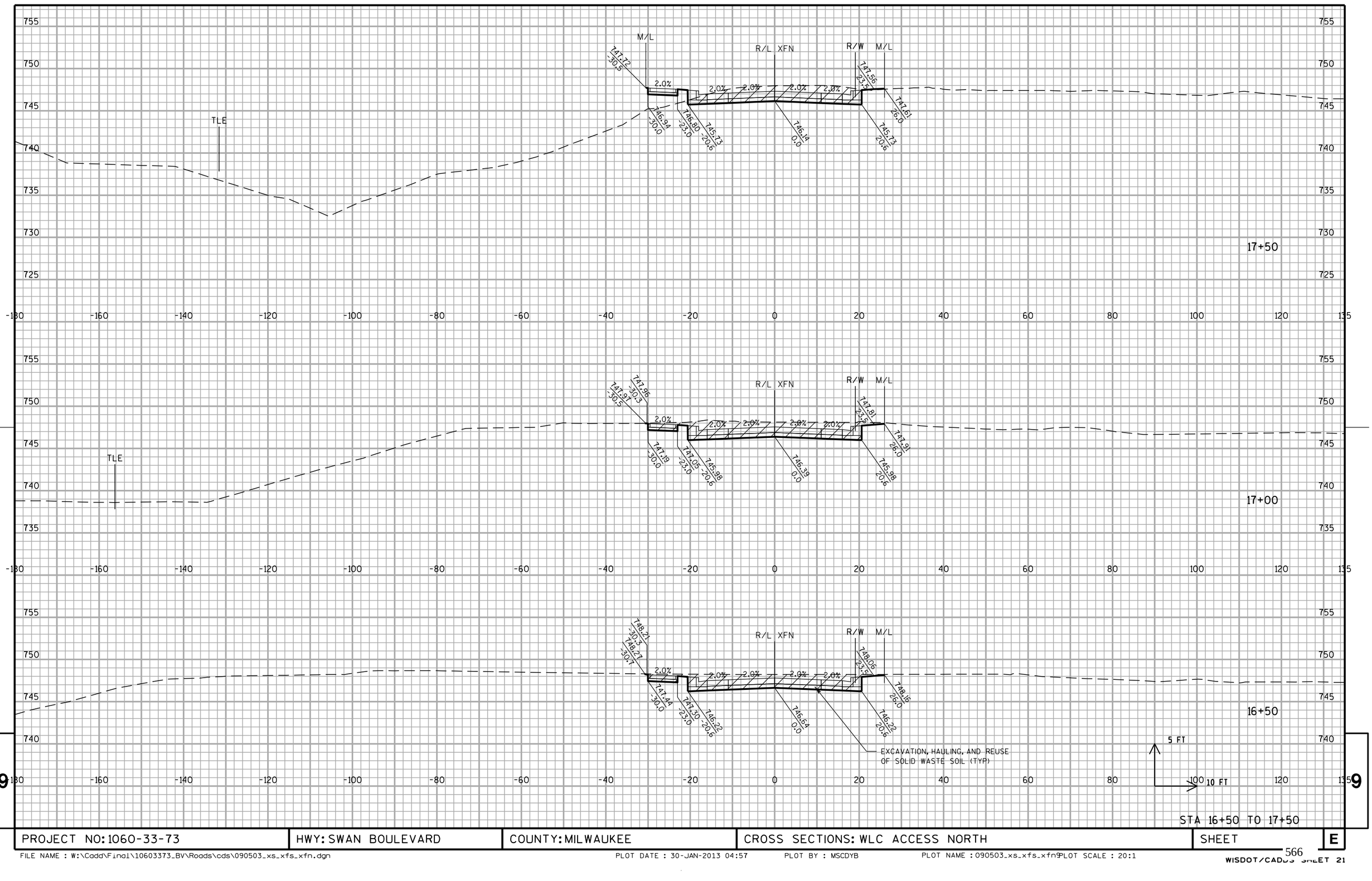
9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090503_xs_xfs_xfn.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090503_xs_xfs_xfn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

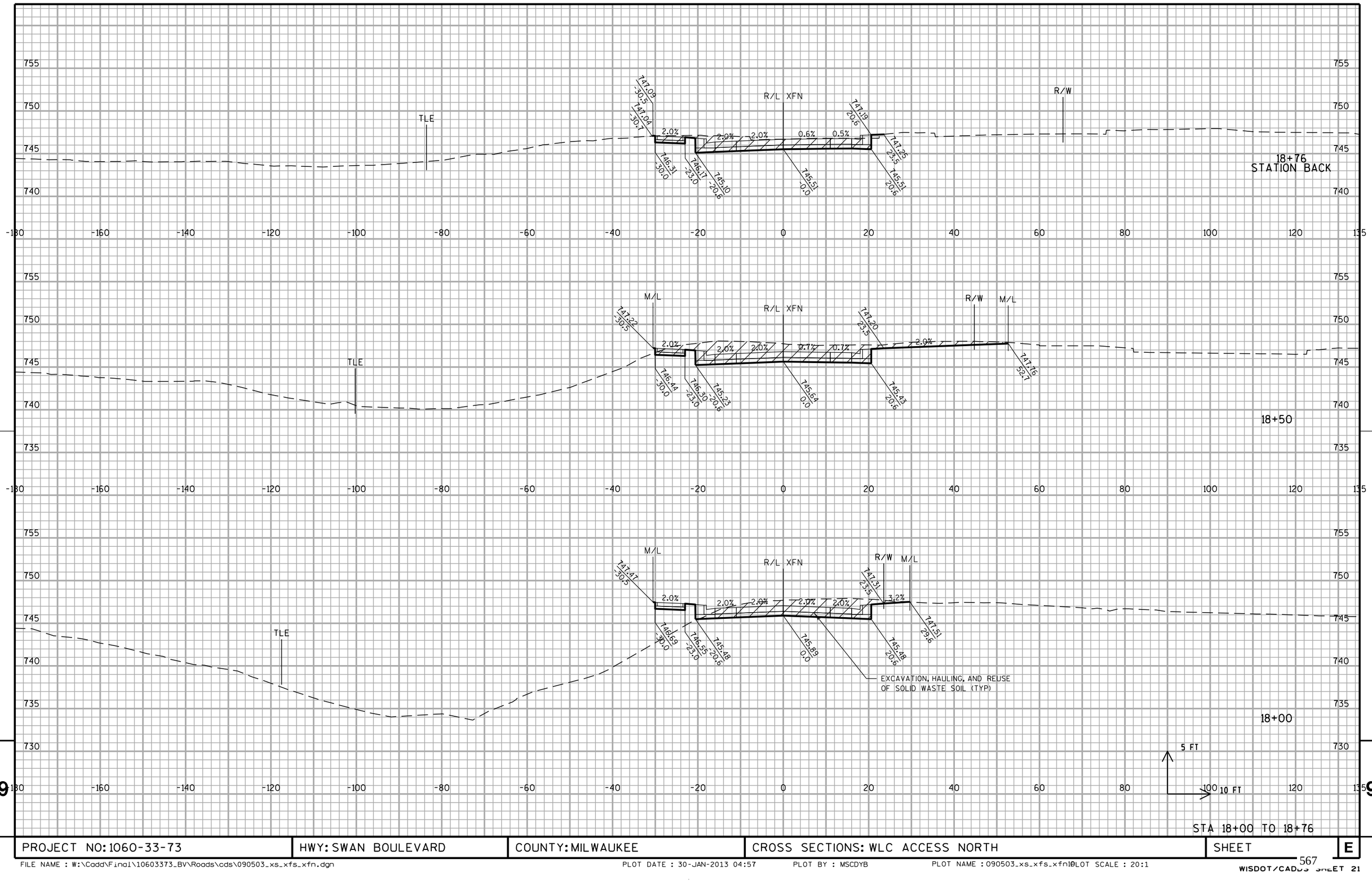


STA 16+50 TO 17+50

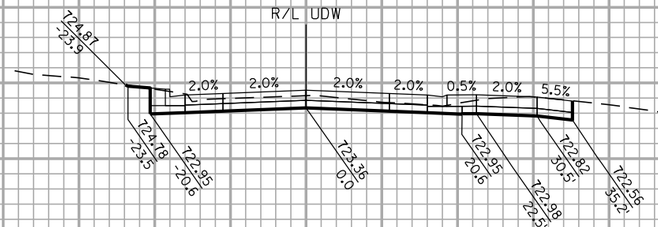
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090503_xs_xfs_xfn.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090503_xs_xfs_xfn PLOT SCALE : 20:1

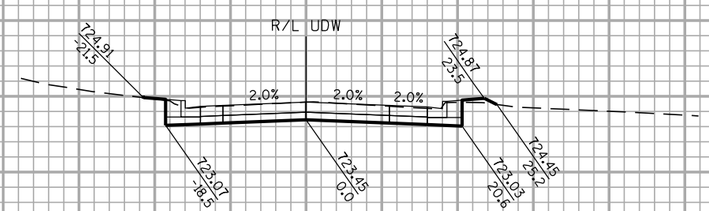
WISDOT/CADDS SHEET 21



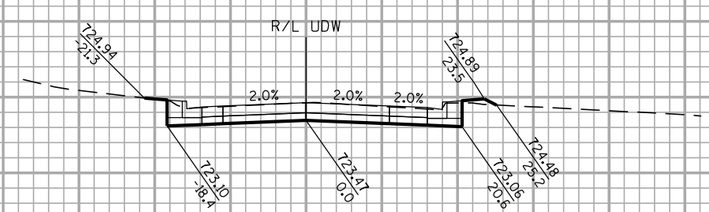
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WLC ACCESS NORTH	SHEET	E



218+00



217+50



217+47
STATION AHEAD

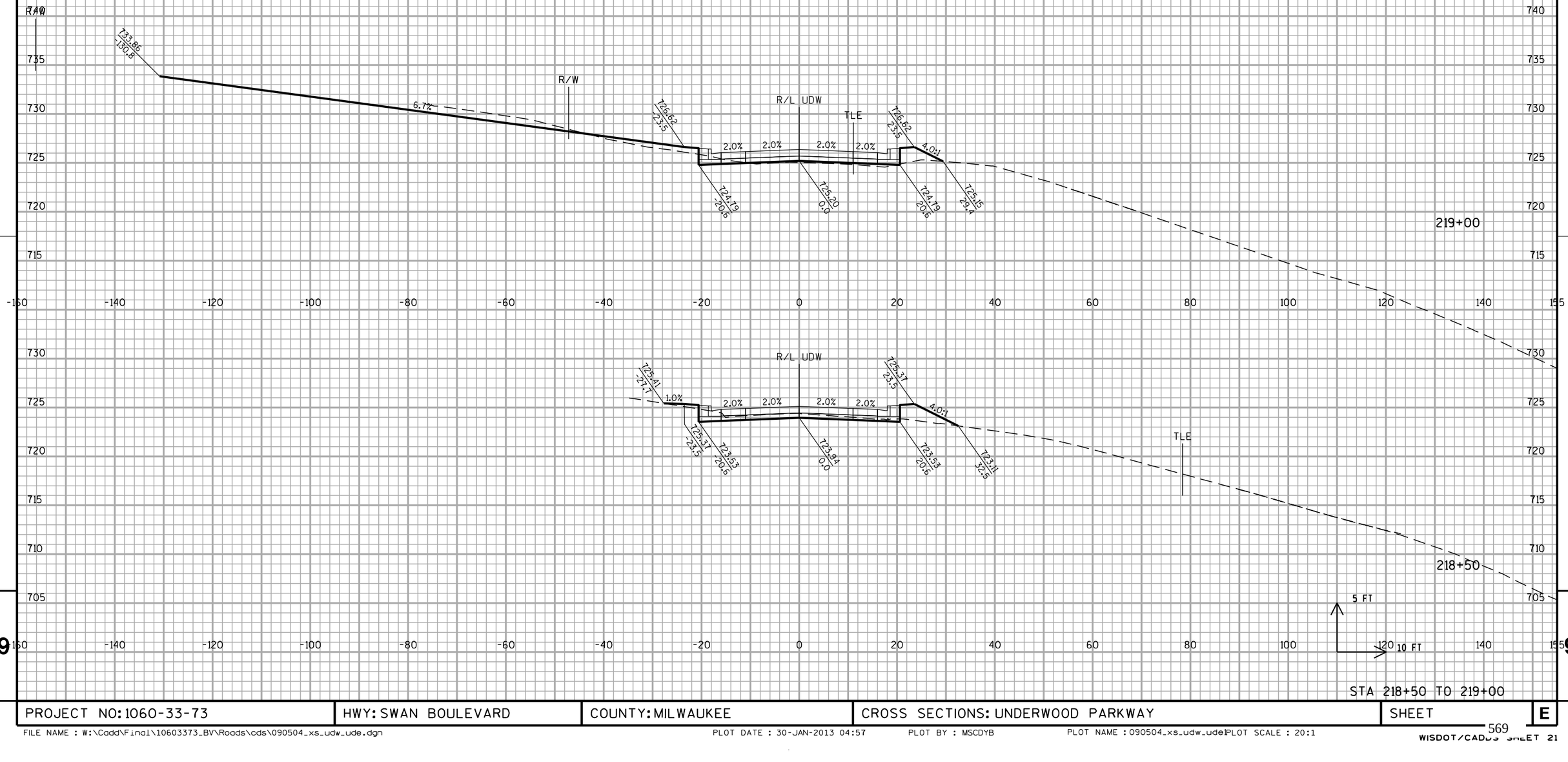
5 FT
10 FT

STA 217+47 TO 218+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090504_xs_UDW_UDE.dgn PLOT DATE : 12-MAR-2013 09:15 PLOT BY : MSCTYS PLOT NAME : 090504_xs_UDW_UDE PLOT SCALE : 20:1

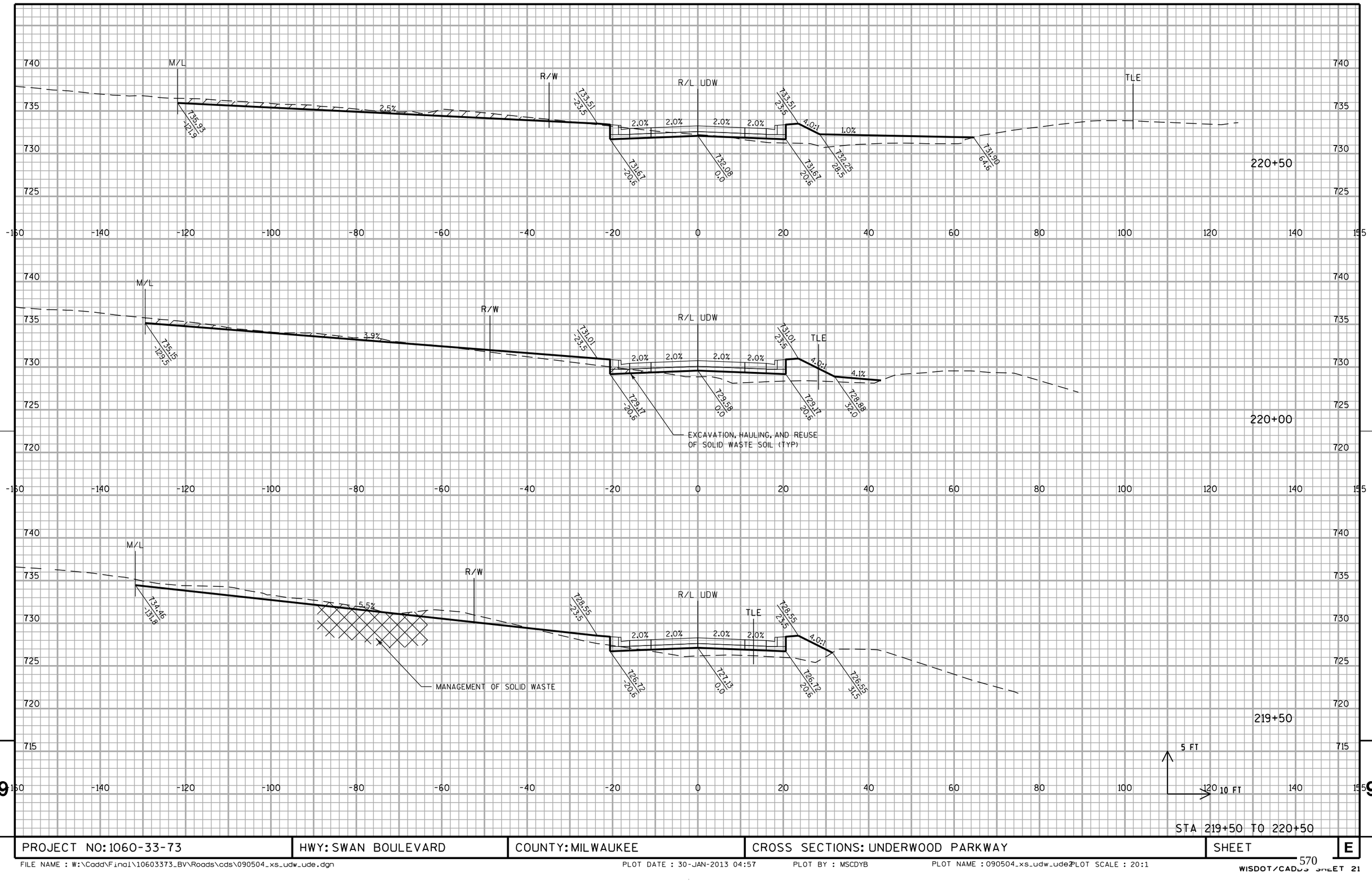
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

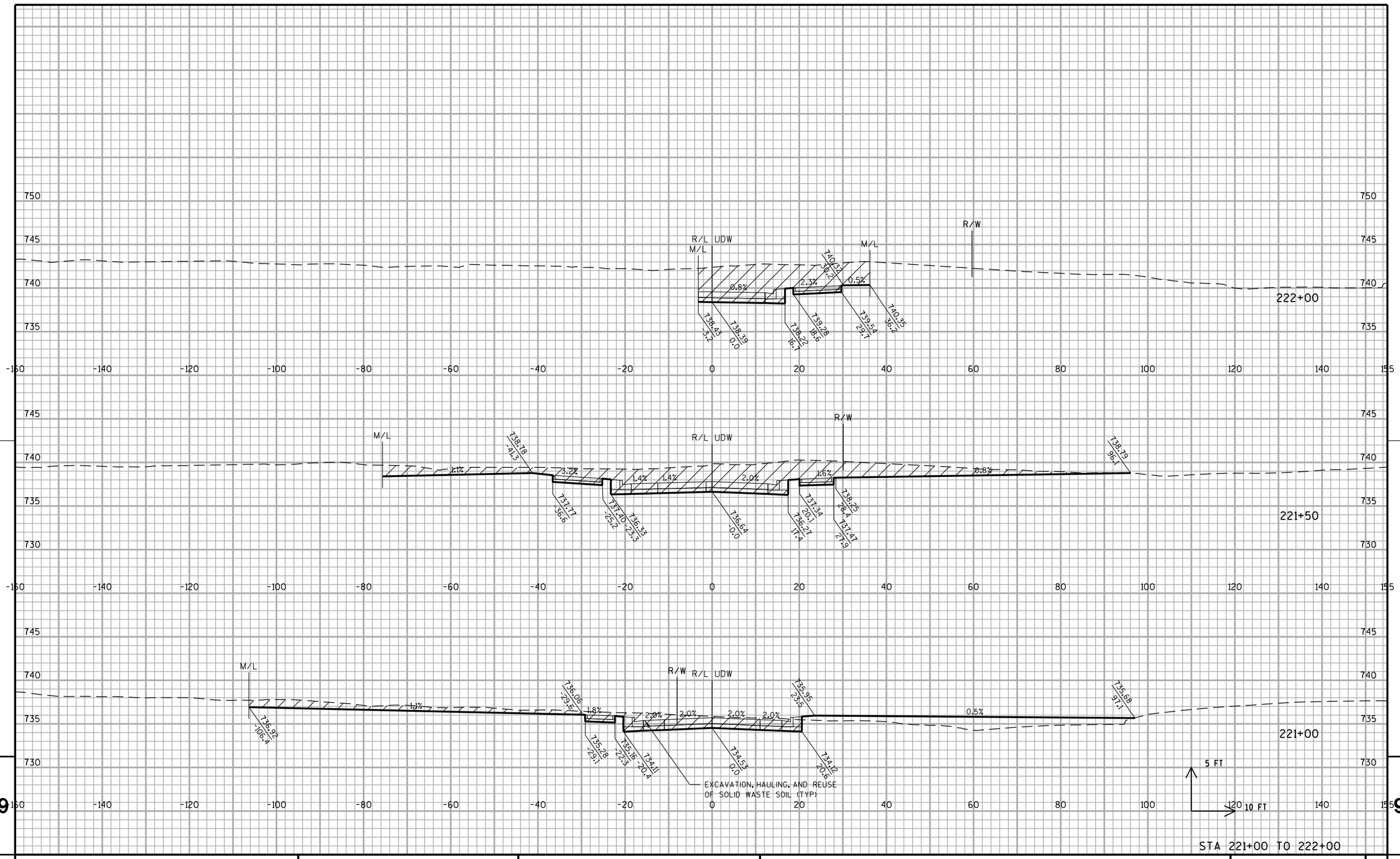
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090504_xs_udw_ude.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090504_xs_udw_ude PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



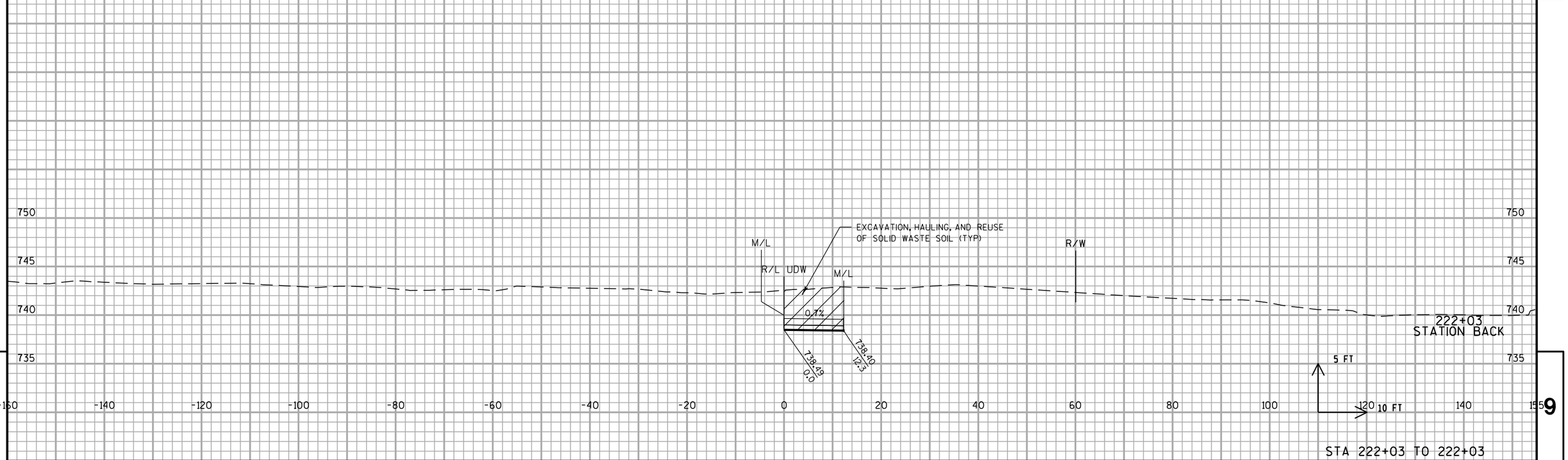
STA 219+50 TO 220+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090504_xs_udw_ude.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090504_xs_udw_ude3 PLOT SCALE : 20:1



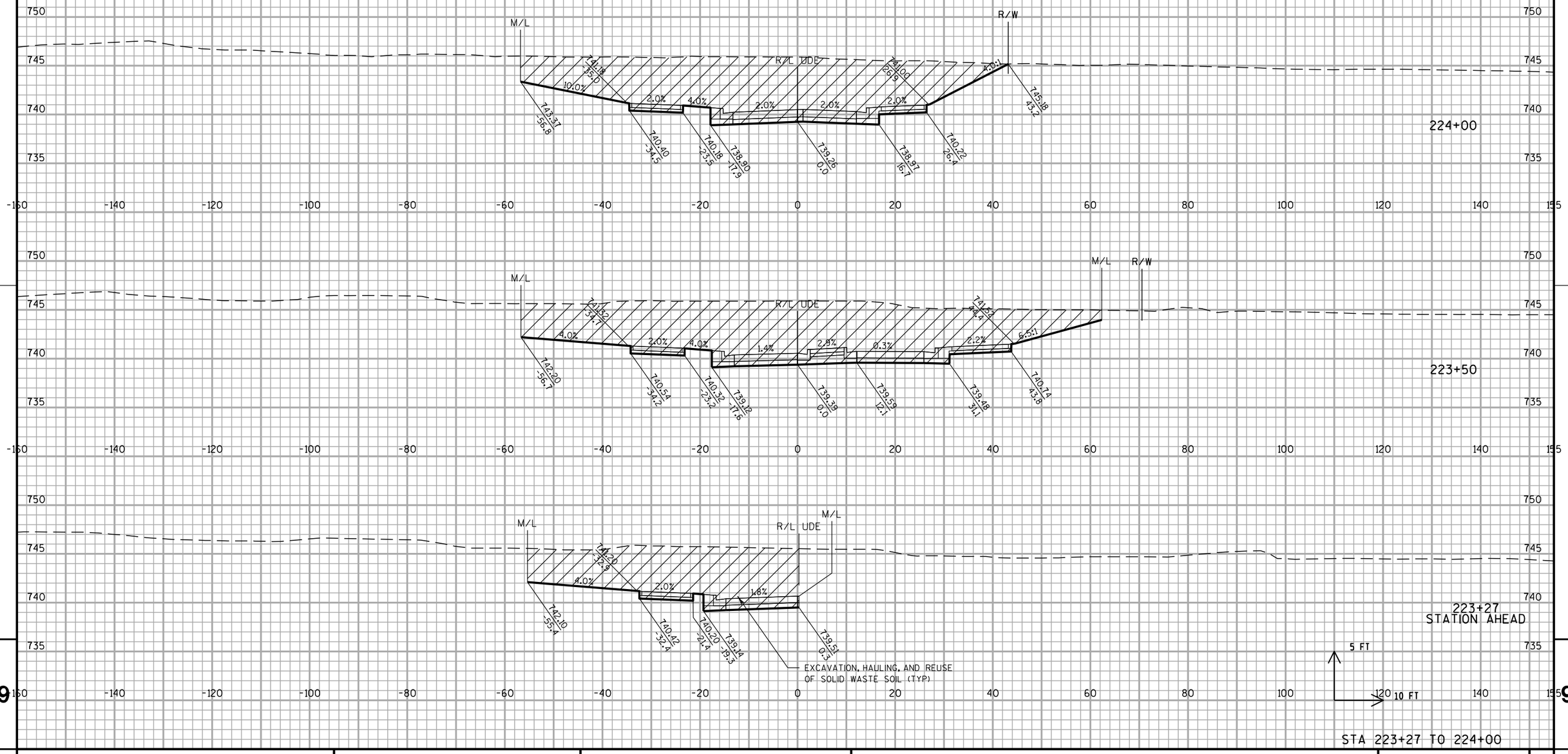
9

9

STA 222+03 TO 222+03

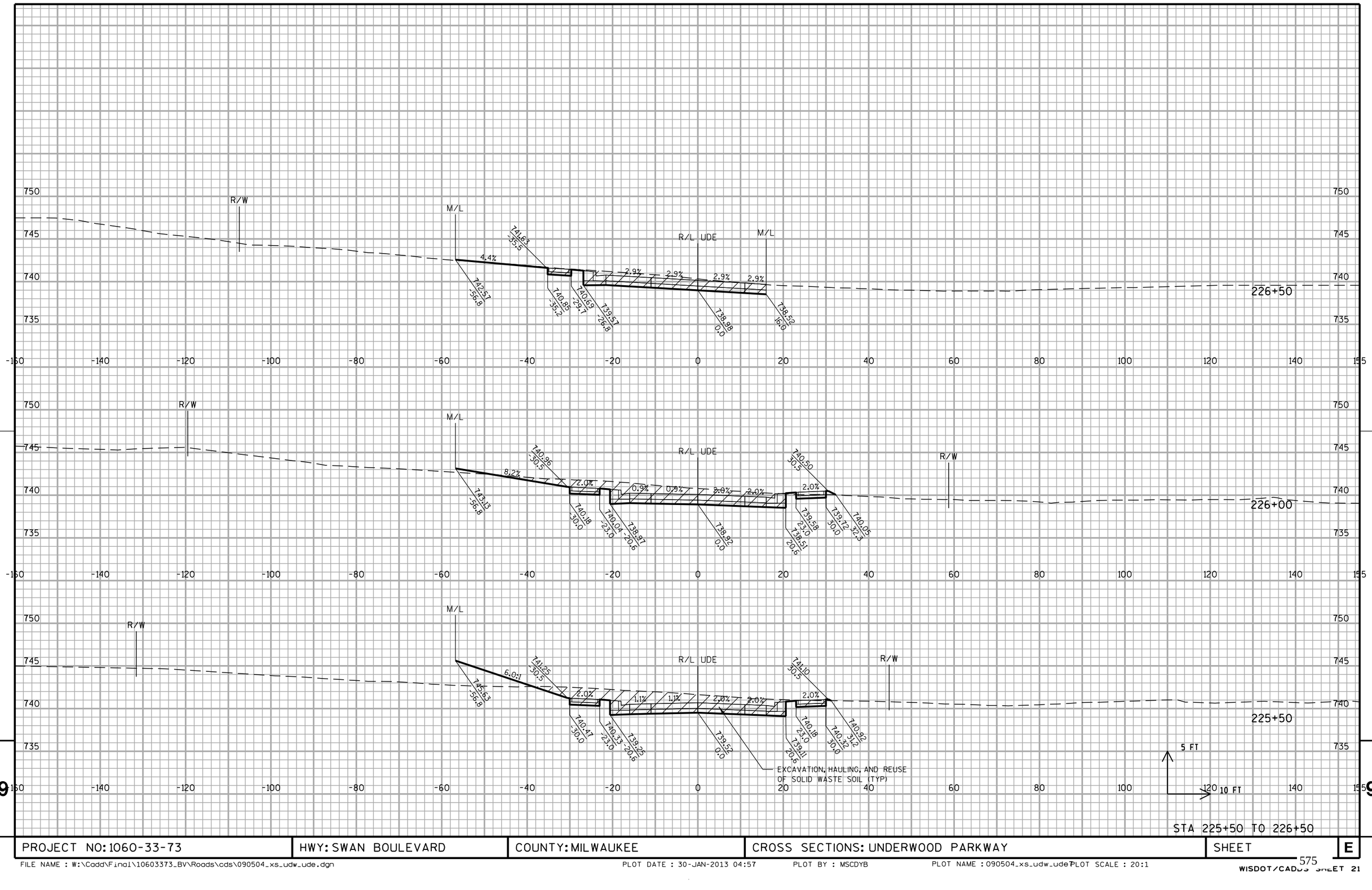
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090504_xs_udw_ude.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090504_xs_udw_ude PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



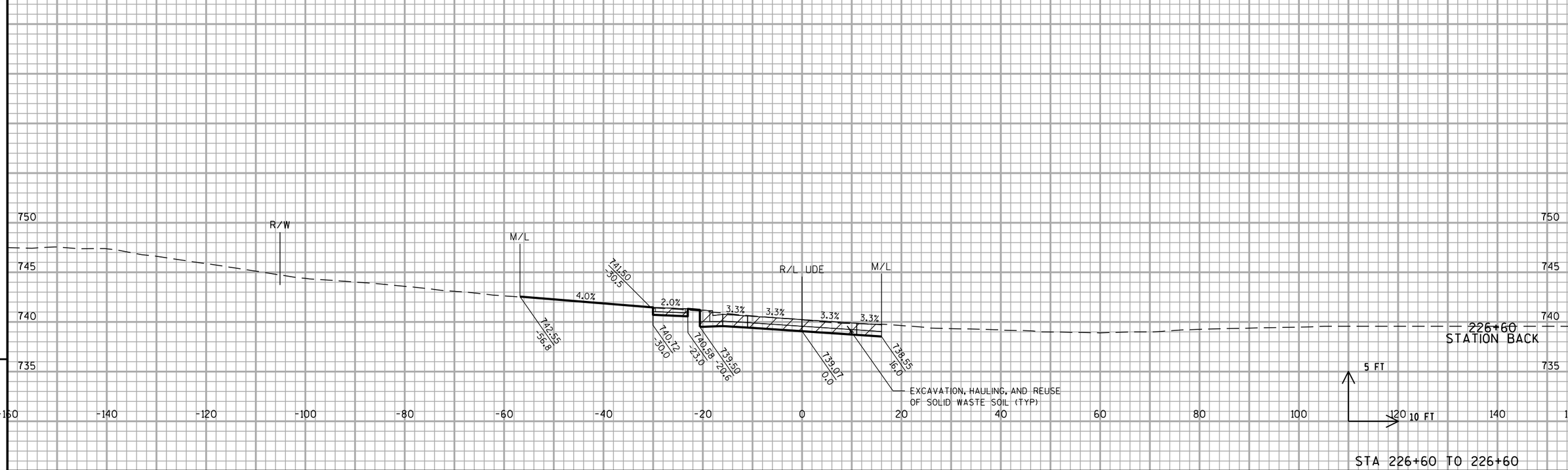
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

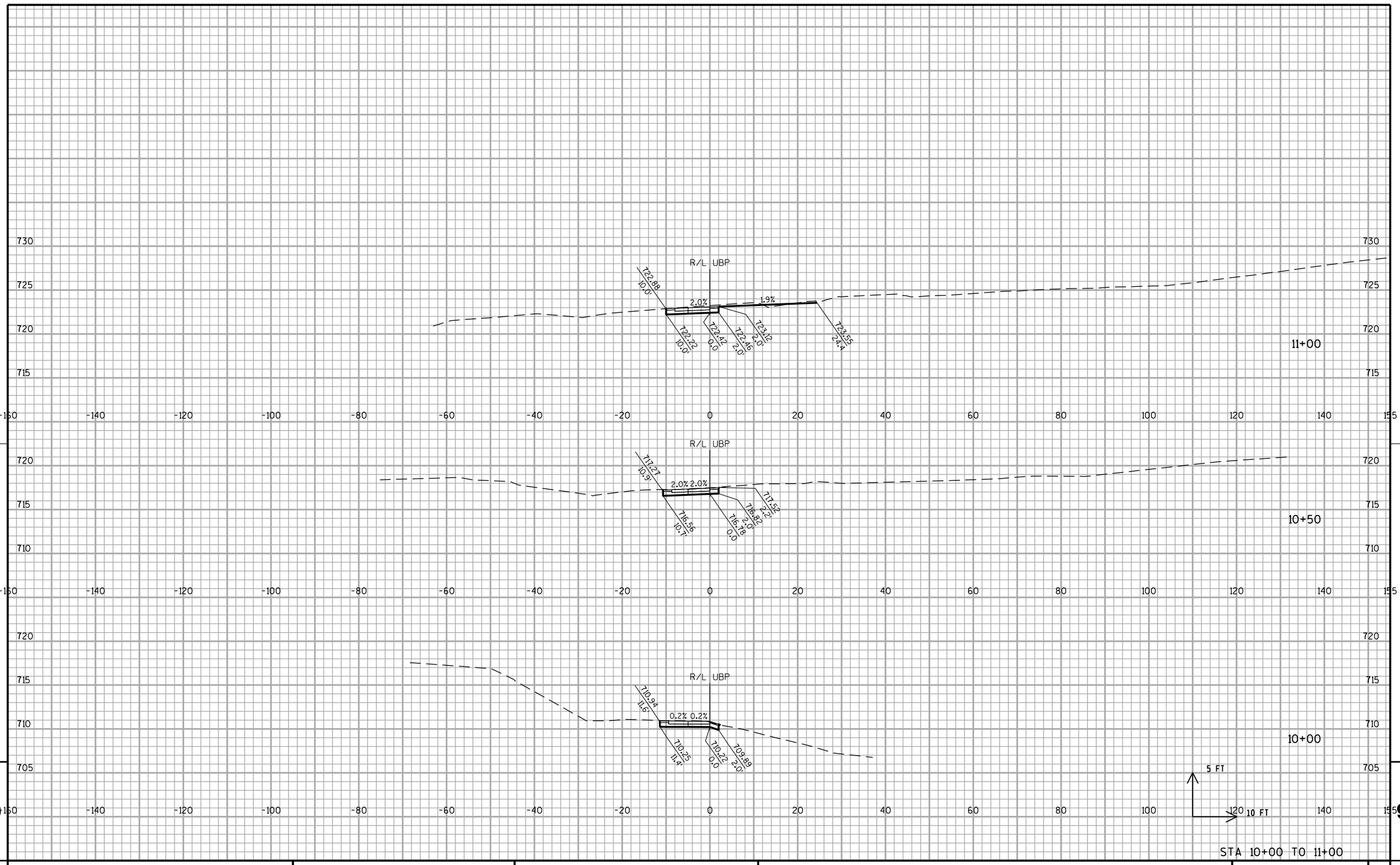


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090504_xs_udw_ude.dgn PLOT DATE : 30-JAN-2013 04:57 PLOT BY : MSCDYB PLOT NAME : 090504_xs_udw_ude PLOT SCALE : 20:1



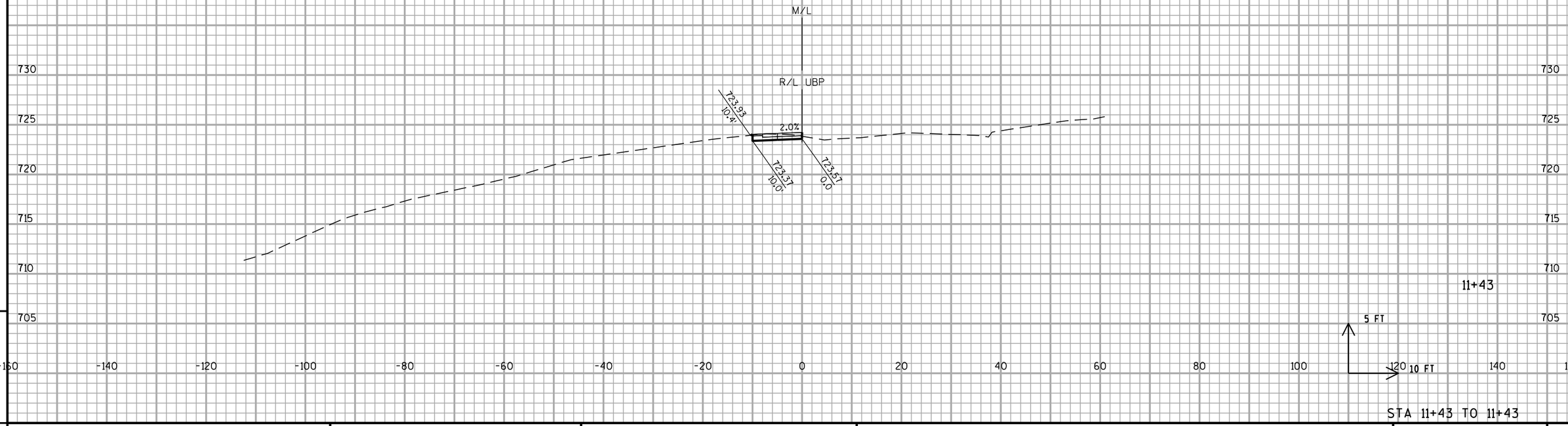
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: UNDERWOOD PARKWAY	SHEET	E



STA 10+00 TO 11+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SHARED USE PATH	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090505_xs_UBP.dgn PLOT DATE : 12-MAR-2013 11:09 PLOT BY : MSCTYS PLOT NAME : 090505_xs_UBP PLOT SCALE : 20:1

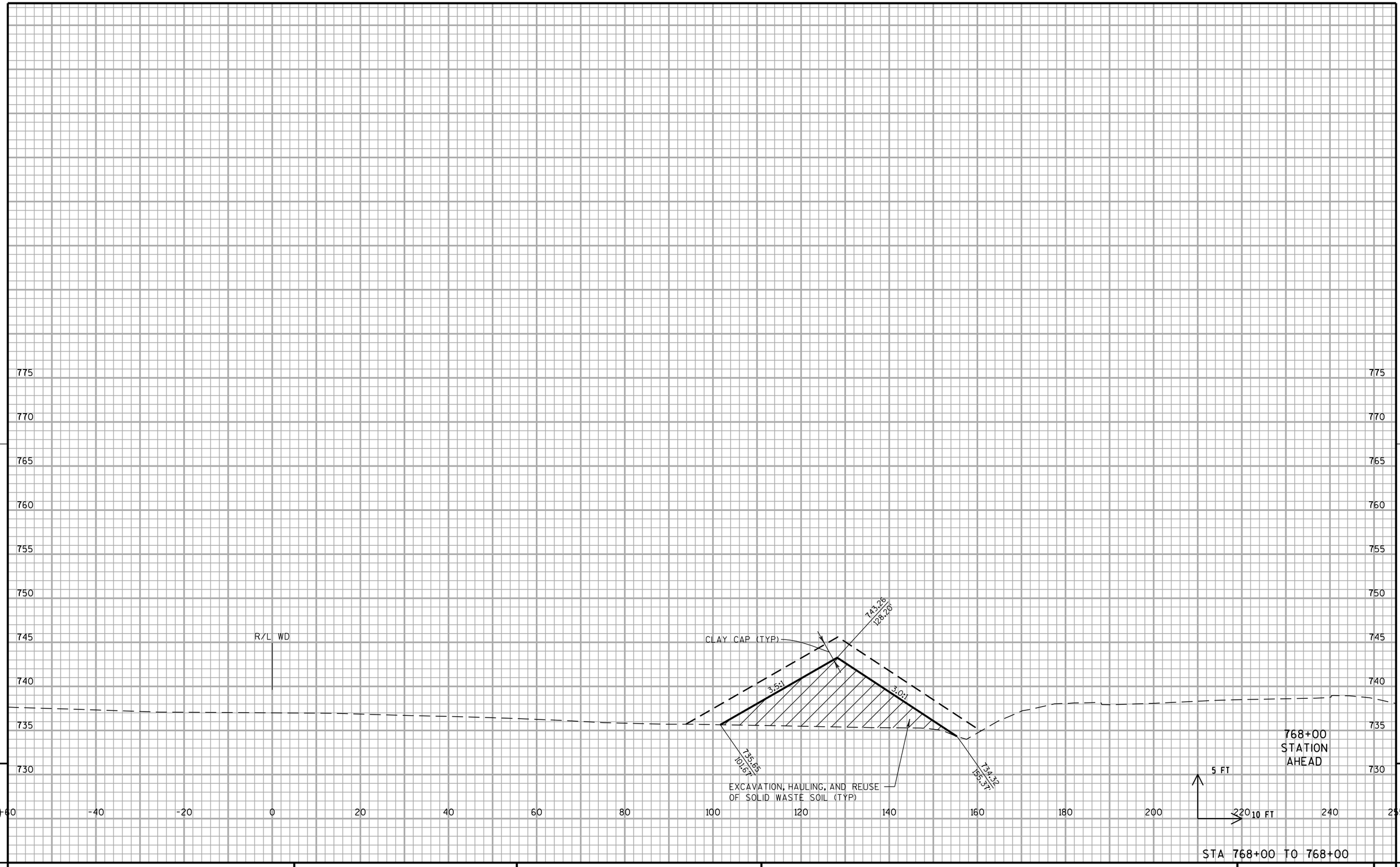


STA 11+43 TO 11+43

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SHARED USE PATH	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090505_xs_UBP.dgn PLOT DATE : 12-MAR-2013 11:09 PLOT BY : MSCTYS PLOT NAME : 090505_xs_UBP1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



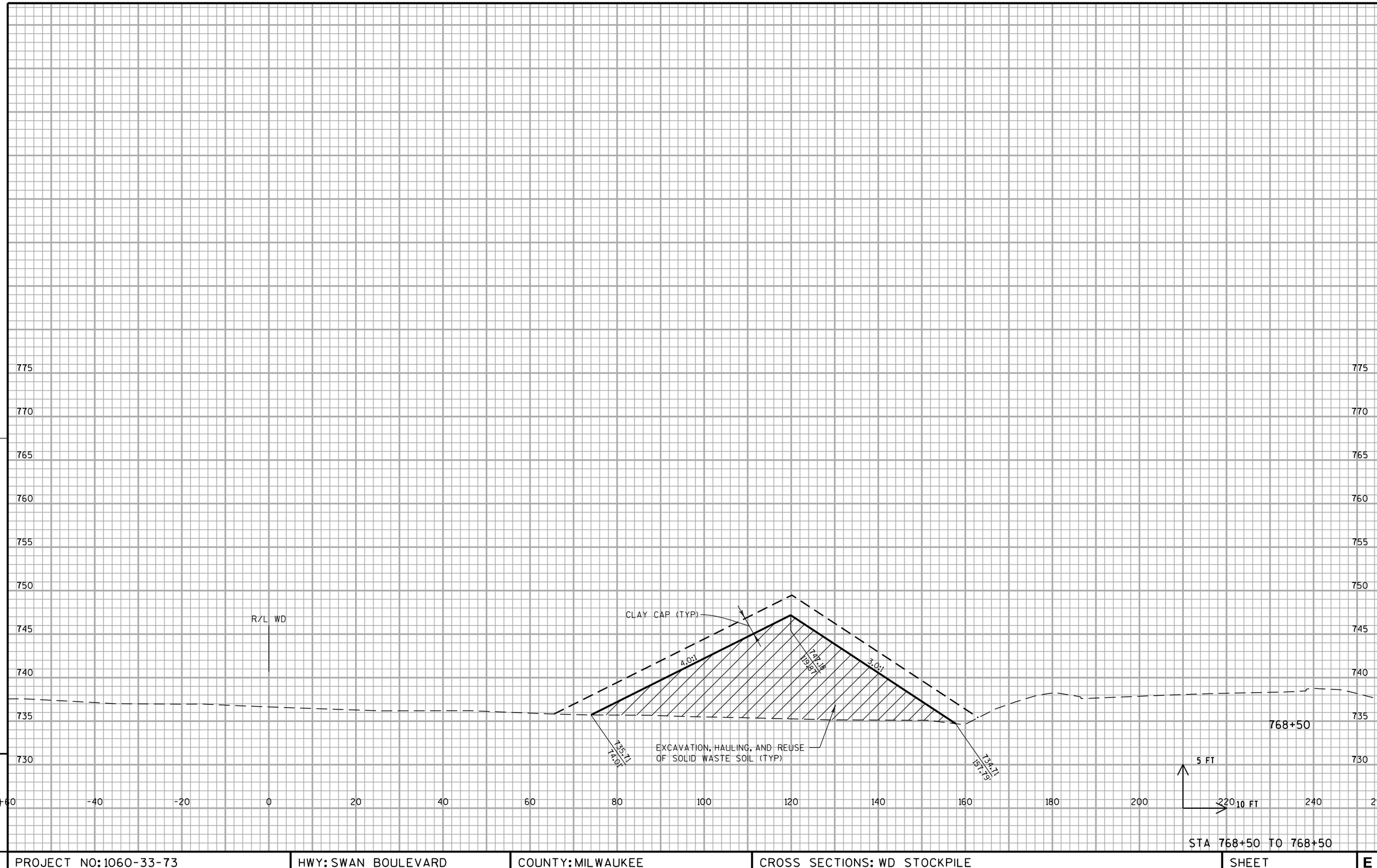
9

STA 768+00 TO 768+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn PLOT DATE : 20-FEB-2013 15:12 PLOT BY : MSCTYS PLOT NAME : 090506_xs_Stockpile PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

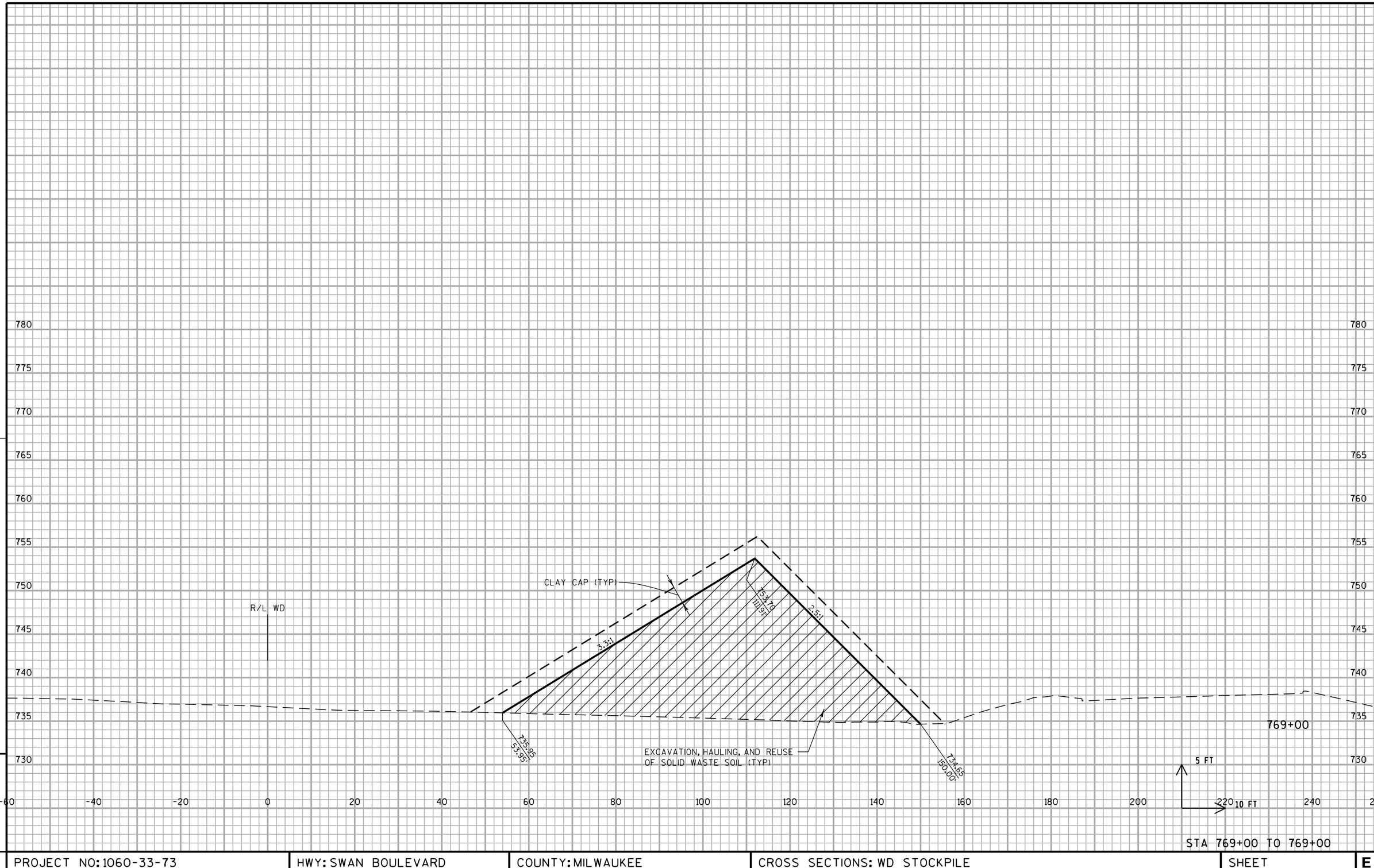


STA 768+50 TO 768+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn PLOT DATE : 20-FEB-2013 15:12 PLOT BY : MSCTYS PLOT NAME : 090506_xs_Stockpile PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

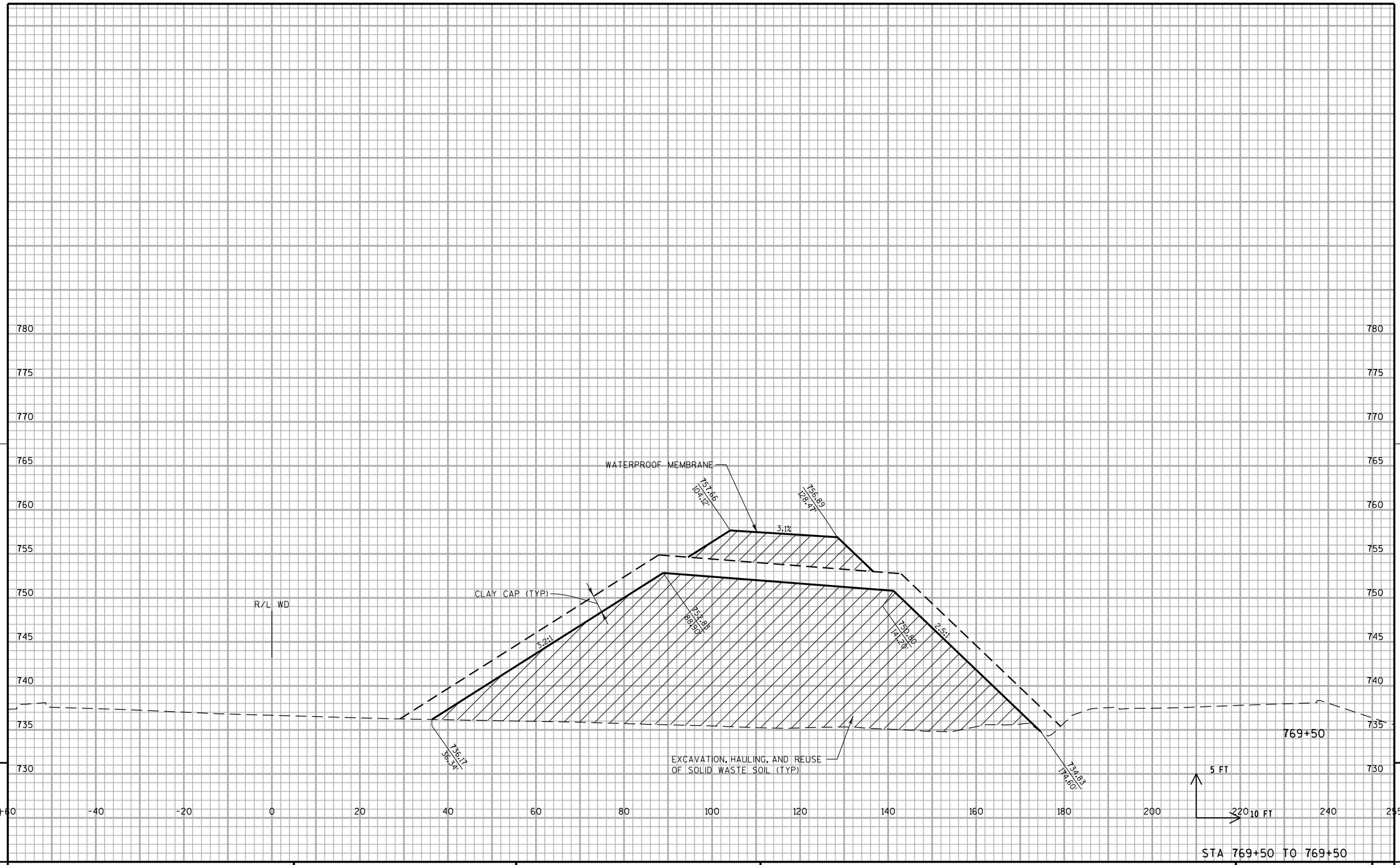


STA 769+00 TO 769+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn PLOT DATE : 20-FEB-2013 15:12 PLOT BY : MSCTYS PLOT NAME : 090506_xs_Stockpile2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

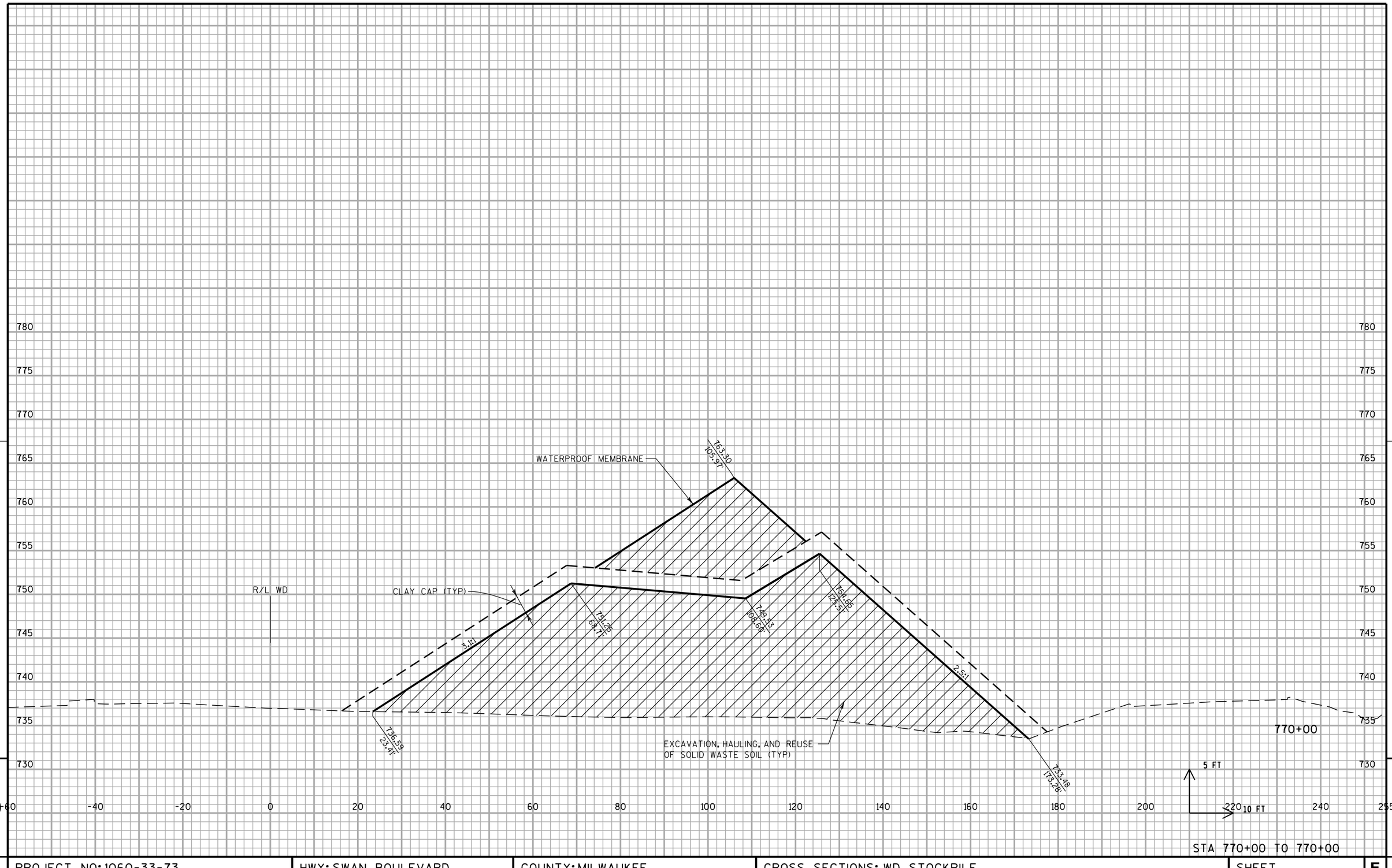


STA 769+50 TO 769+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn PLOT DATE : 20-FEB-2013 15:12 PLOT BY : MSCTYS PLOT NAME : 090506_xs_Stockpile.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

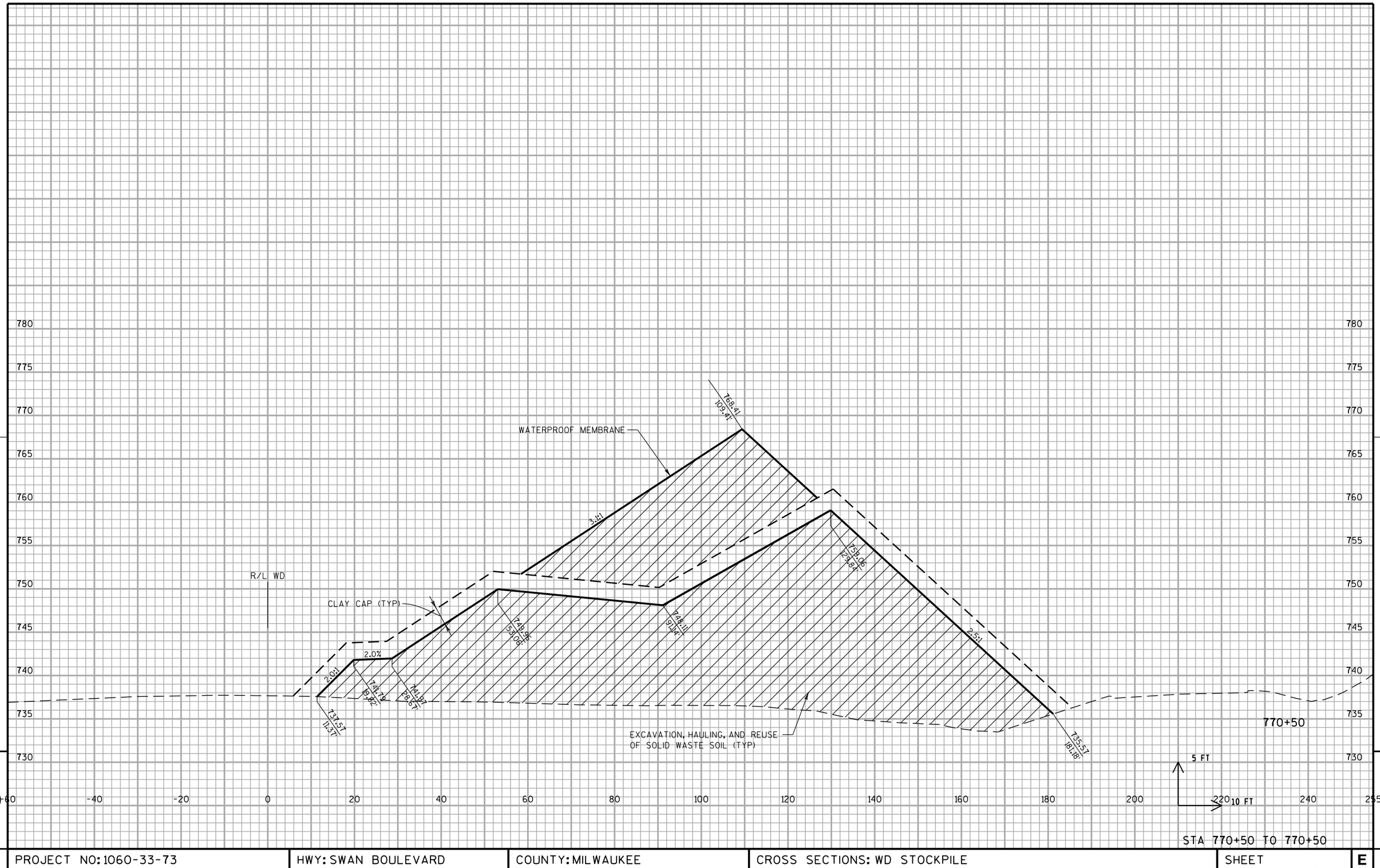


STA 770+00 TO 770+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

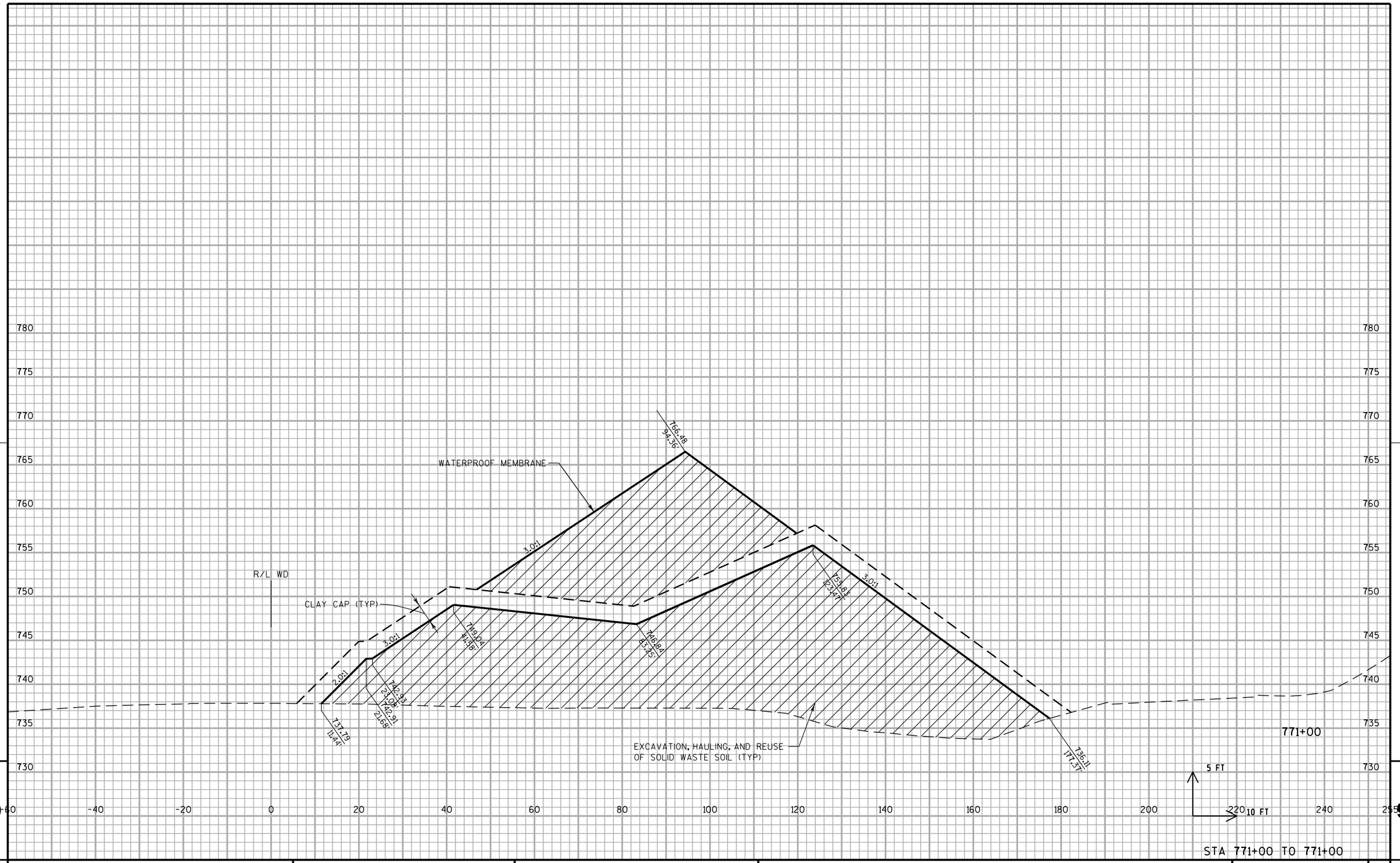
FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn PLOT DATE : 20-FEB-2013 15:12 PLOT BY : MSCTYS PLOT NAME : 090506_xs_Stockpile PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



STA 770+50 TO 770+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

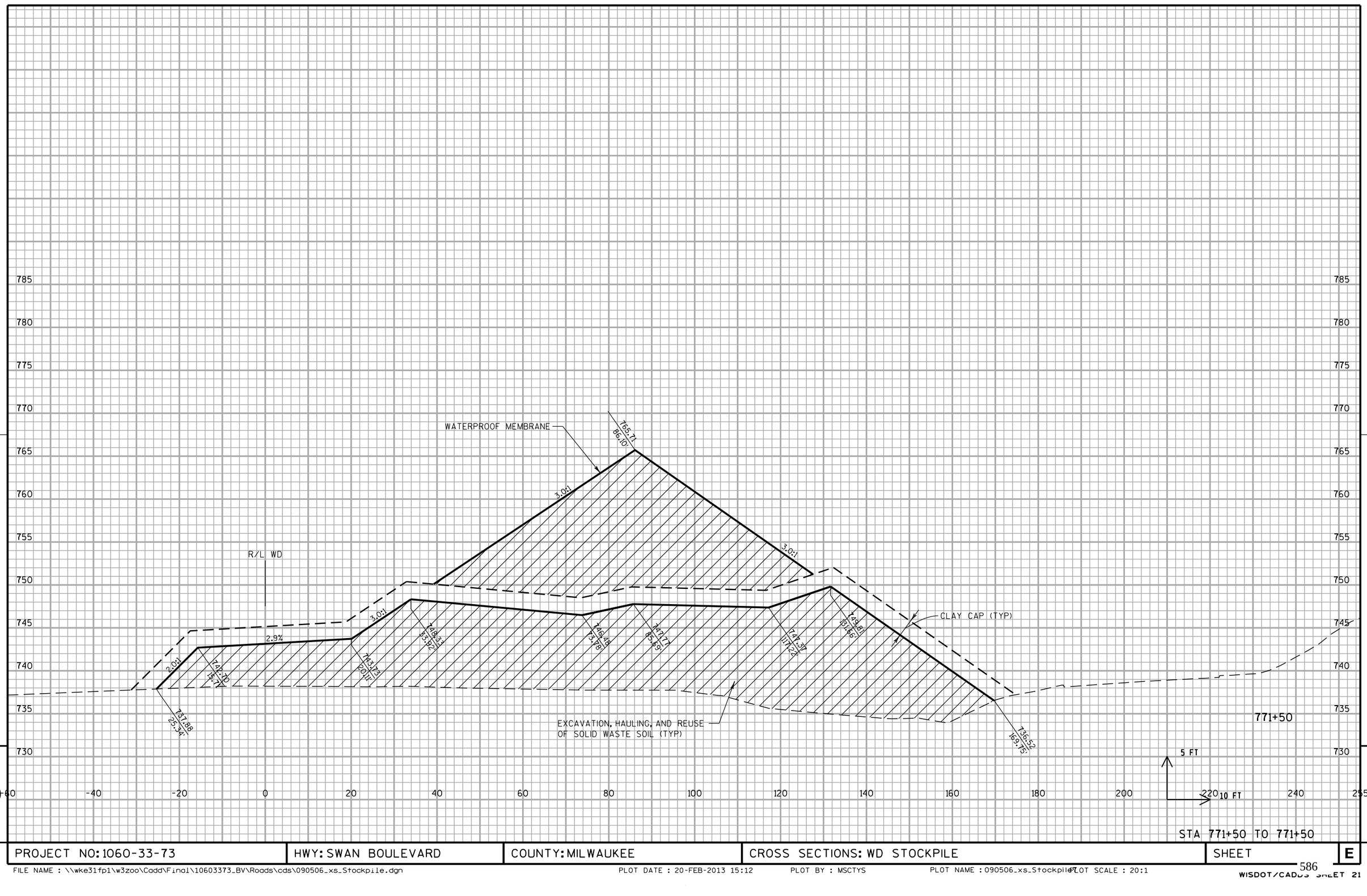


STA 771+00 TO 771+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn PLOT DATE : 20-FEB-2013 15:12 PLOT BY : MSCTYS PLOT NAME : 090506_xs_Stockpile PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

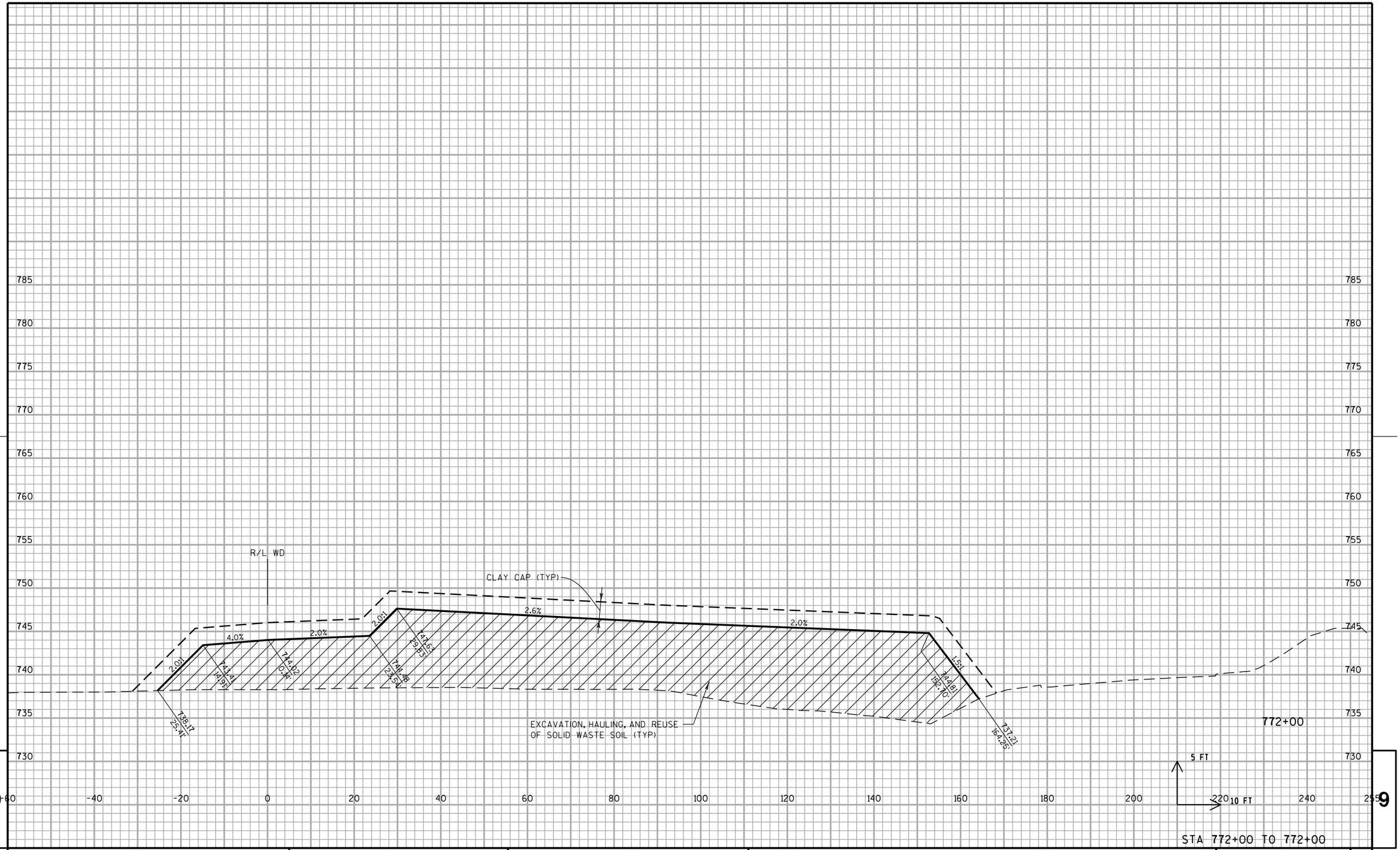


STA 771+50 TO 771+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

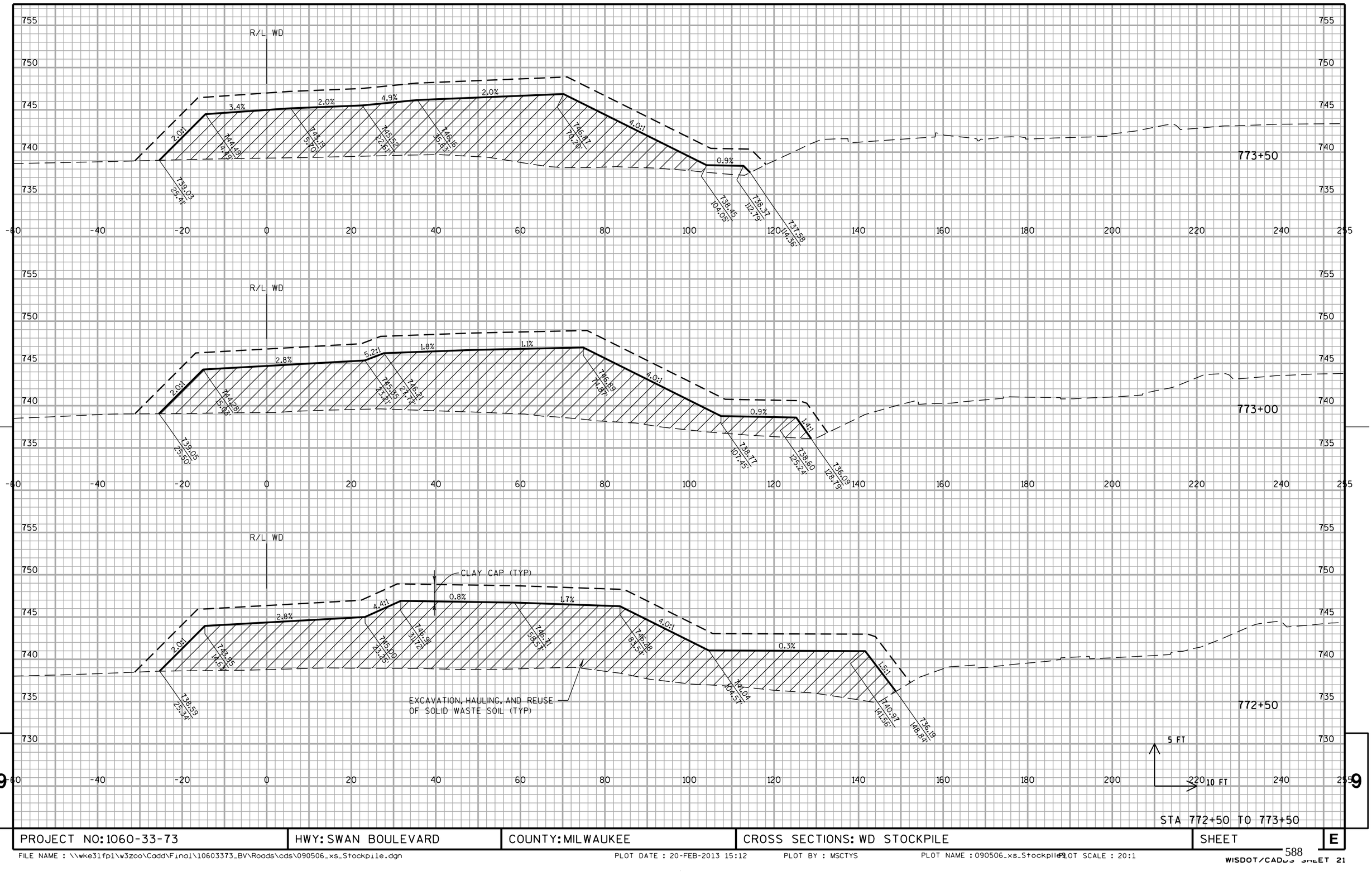
FILE NAME : \\wke31fp1\w3zoo\Cadd\Final\10603373_BV\Roads\cds\090506_xs_Stockpile.dgn
PLOT DATE : 20-FEB-2013 15:12
PLOT BY : MSCTYS
PLOT NAME : 090506_xs_Stockpile.PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

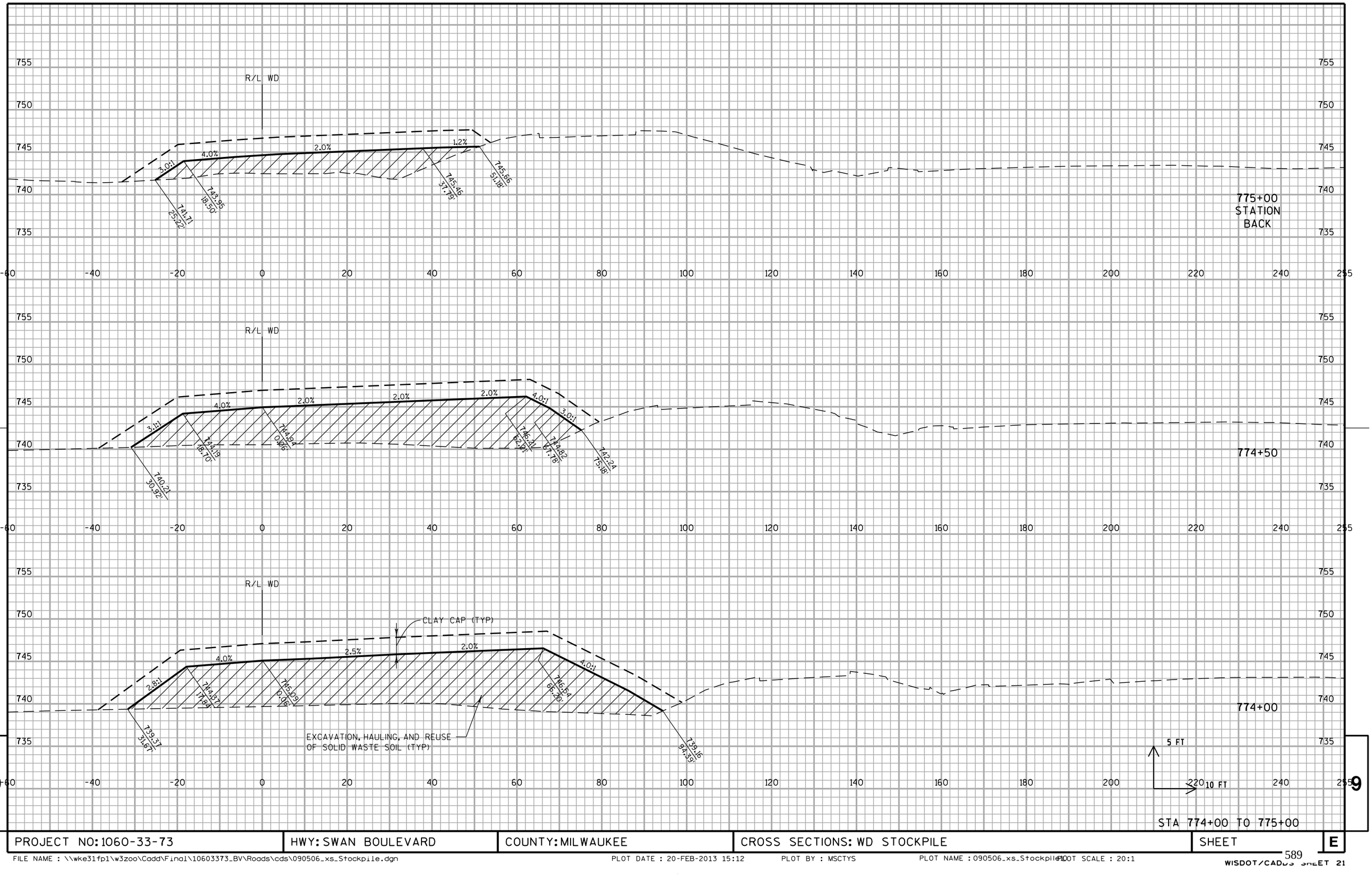


STA 772+00 TO 772+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

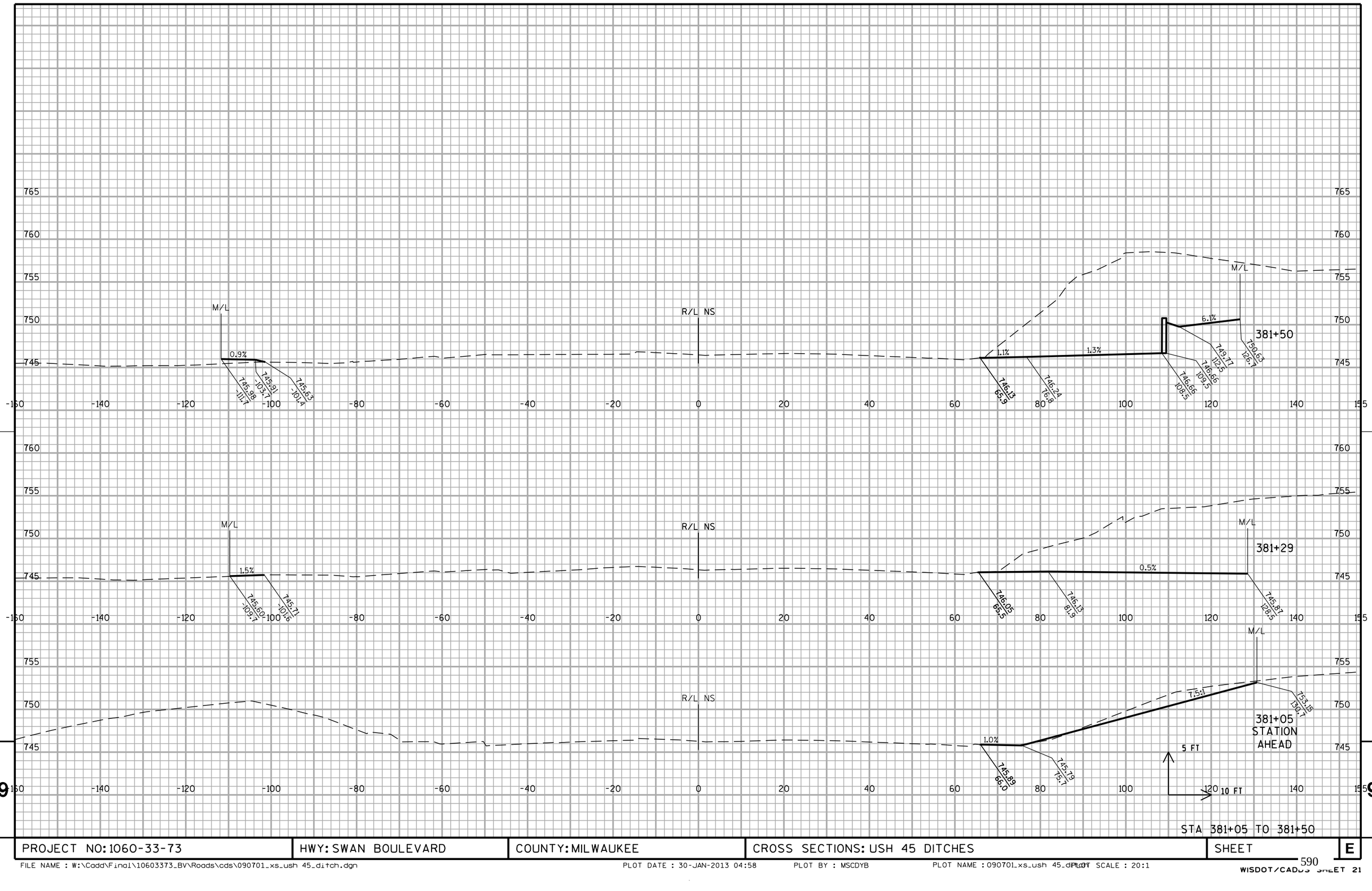


PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E

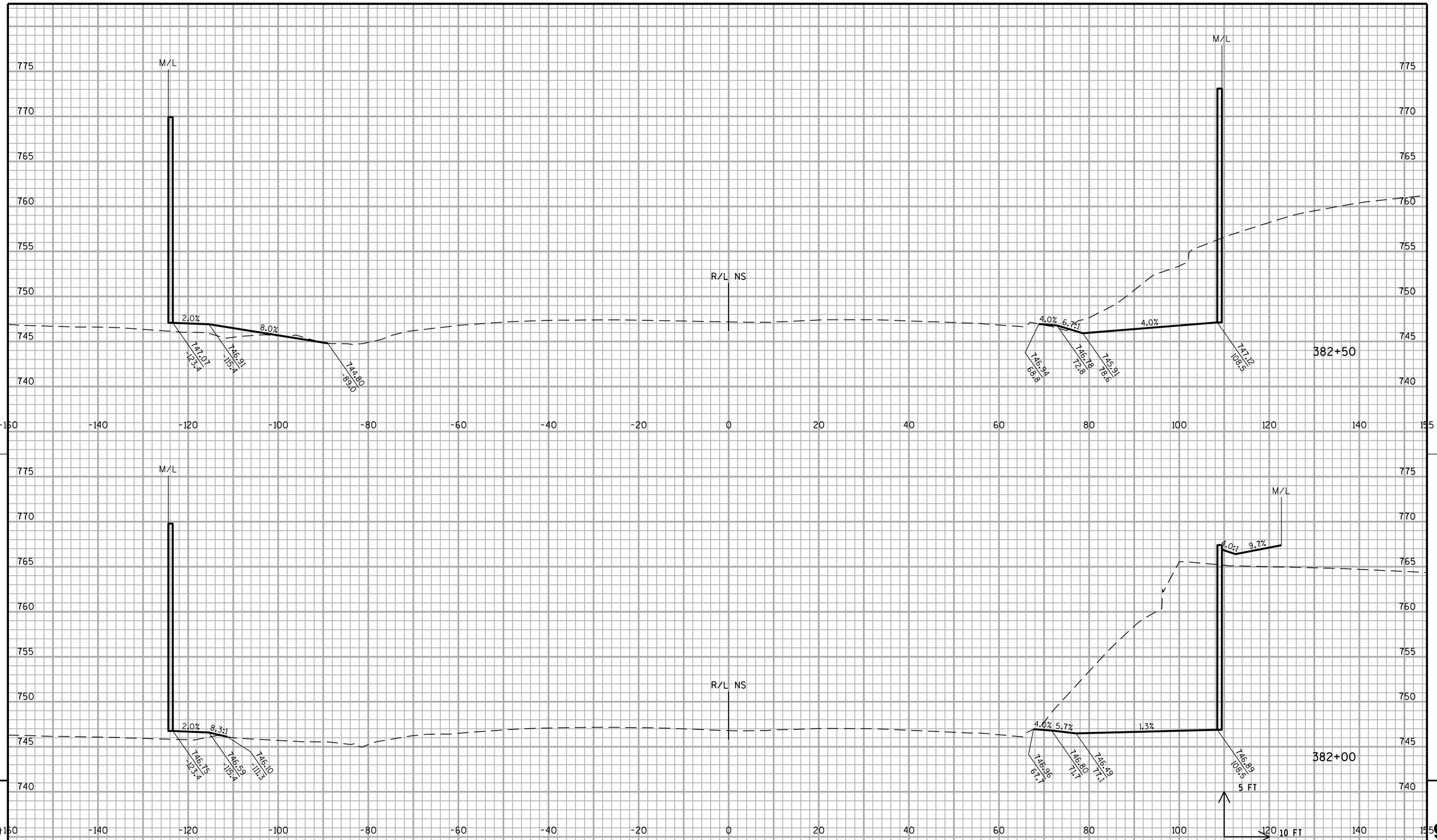


STA 774+00 TO 775+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: WD STOCKPILE	SHEET	E



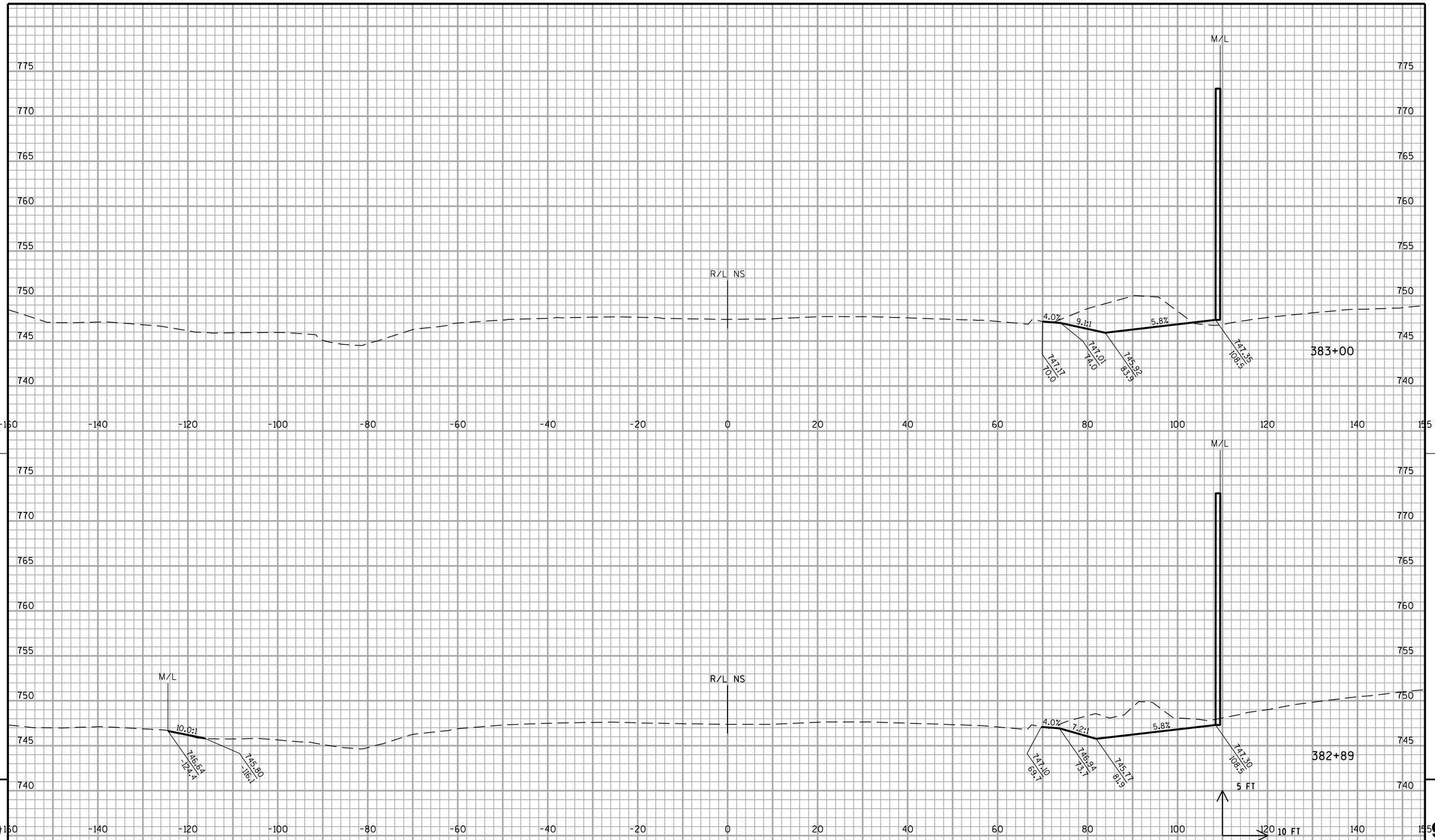
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 DITCHES	SHEET	E



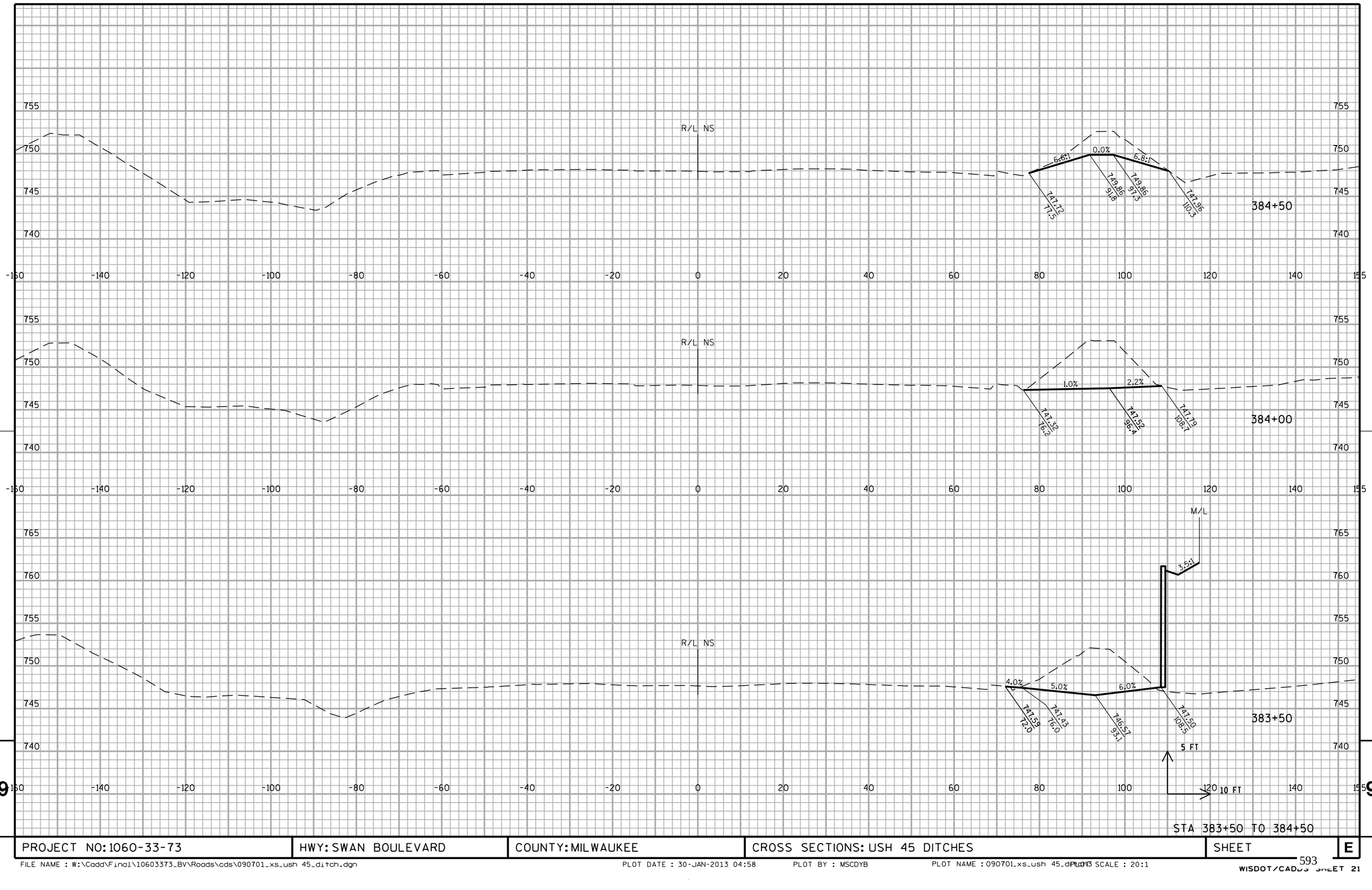
STA 382+00 TO 382+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 DITCHES	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090701_xs_ush 45_ditch.dgn
PLOT DATE : 30-JAN-2013 04:58
PLOT BY : MSCDYB
PLOT NAME : 090701_xs_ush 45_ditch
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 DITCHES	SHEET	E

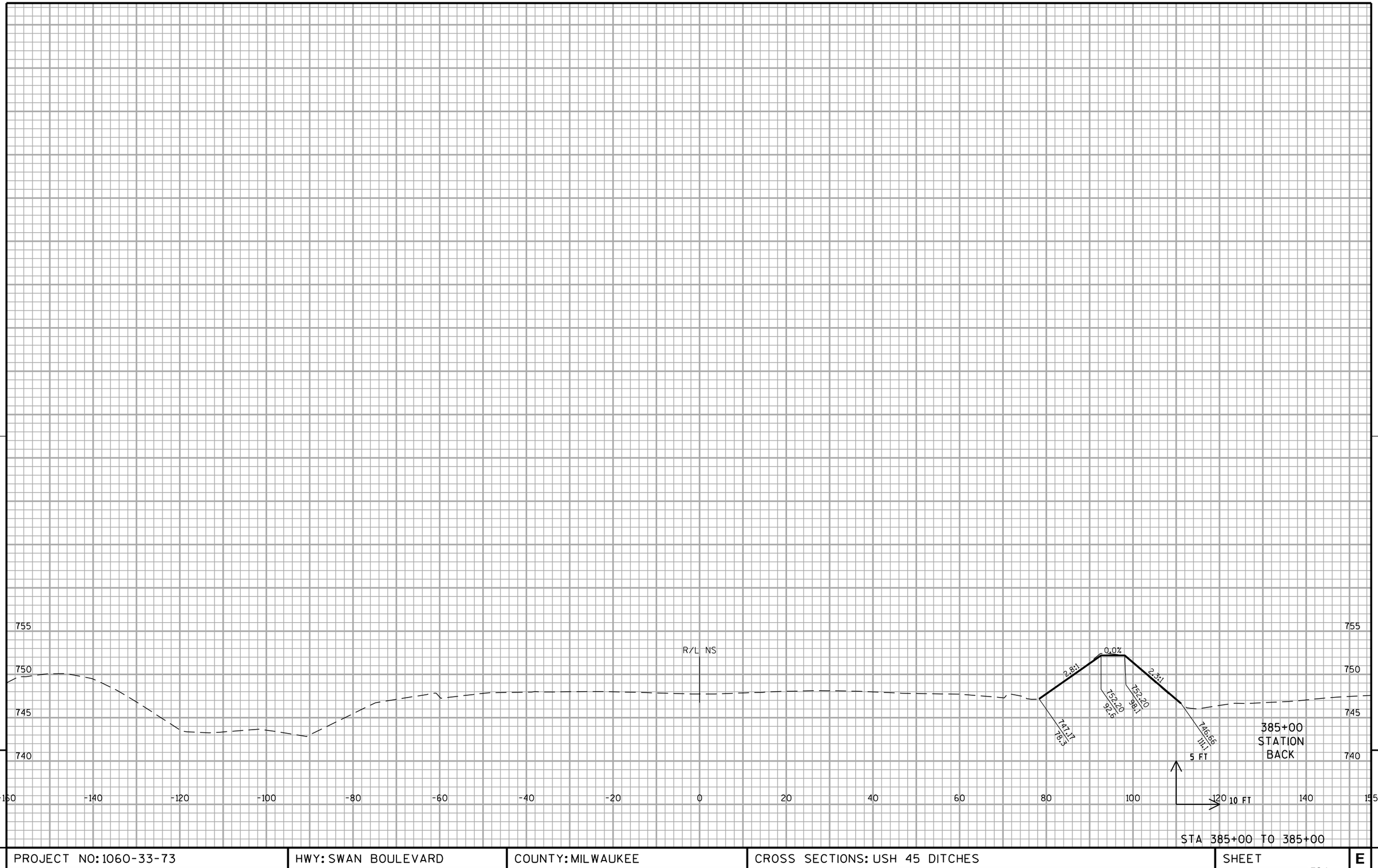


STA 383+50 TO 384+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 DITCHES	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090701_xs_ush 45_ditch.dgn PLOT DATE : 30-JAN-2013 04:58 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ush 45_ditch PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

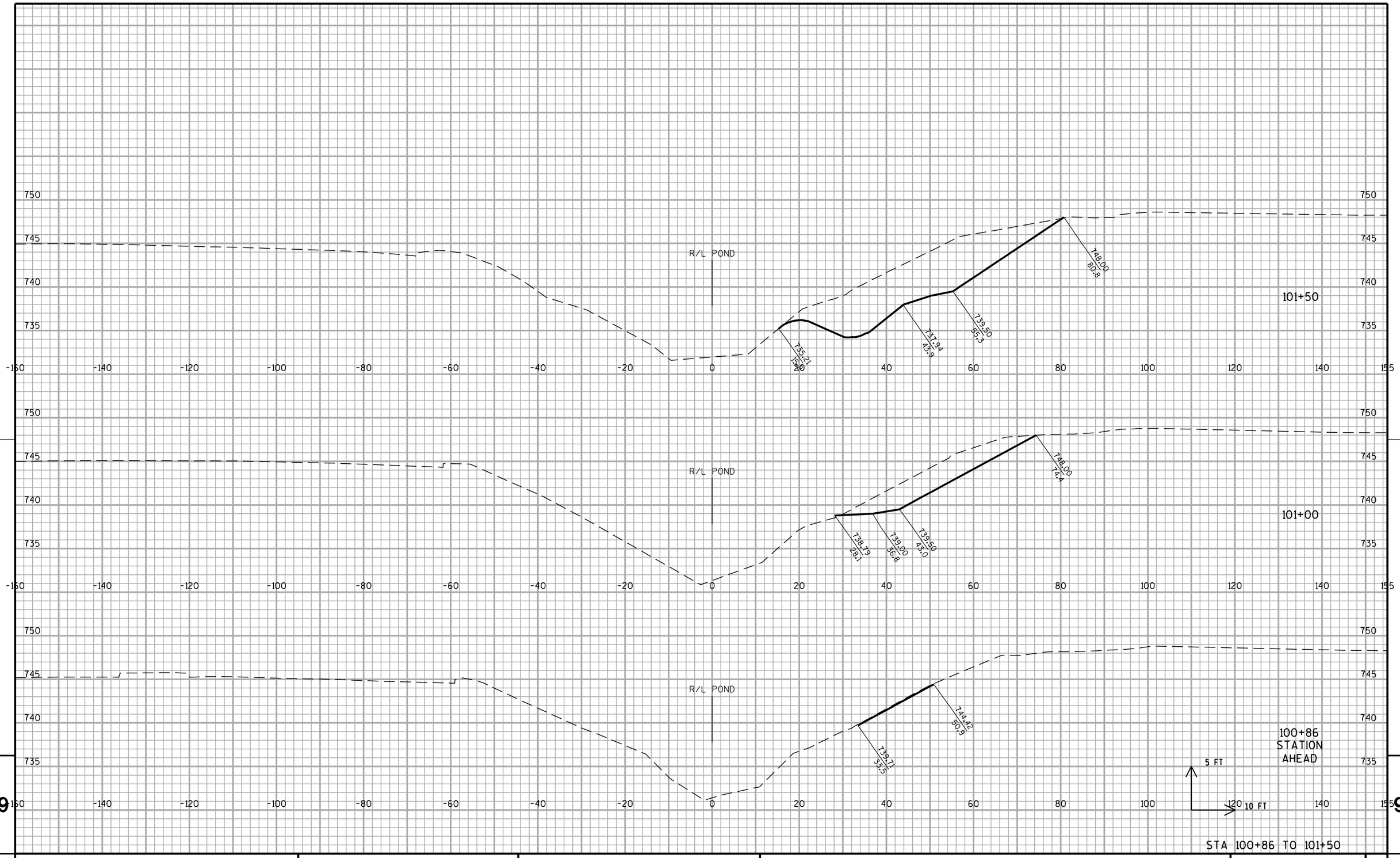


STA 385+00 TO 385+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 DITCHES	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090701_xs_ush 45_ditch.dgn PLOT DATE : 30-JAN-2013 04:58 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ush 45_ditch.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: POND	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090702_xs_bv_pond.dgn PLOT DATE : 30-JAN-2013 04:58 PLOT BY : MSCDYB PLOT NAME : 090702_xs_bv_pond PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

765
760
755
750
745
740
735

R/L POND
M/L
746.93
52.9
746.58
3.0
102+79
STATION
BACK

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

M/L
R/L POND
747.00
24.8
741.49
34.2
740.75
29.0
102+50

R/L POND
748.00
14.1
743.00
55.3
739.50
39.6
739.00
32.0
737.90
21.8
733.38
12.7
731.74
3.8
102+00

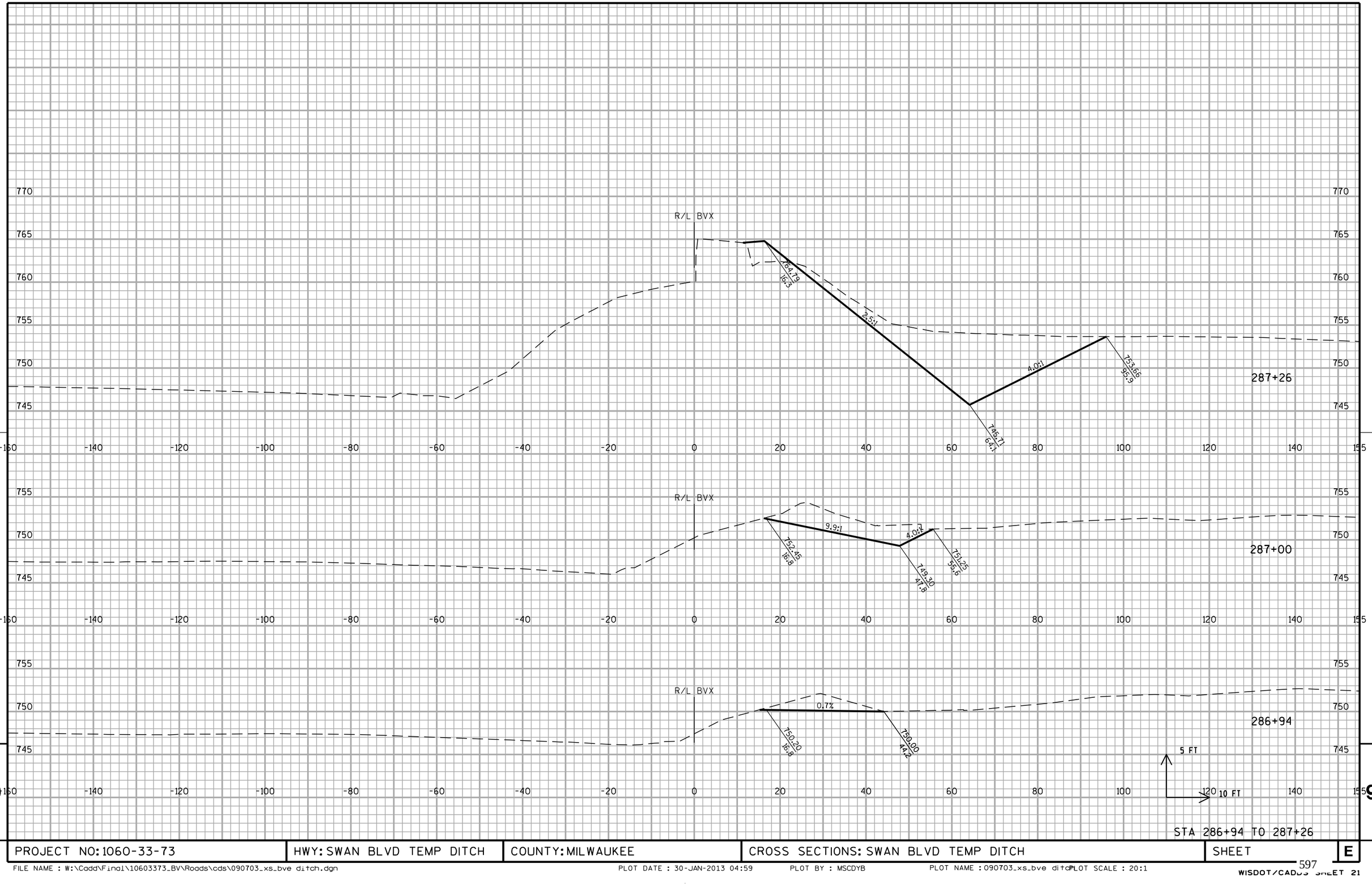
5 FT
10 FT

STA 102+00 TO 102+79

9

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: POND	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090702_xs_bv_pond.dgn
PLOT DATE : 30-JAN-2013 04:58
PLOT BY : MSCDYB
PLOT NAME : 090702_xs_bv_pondPLOT SCALE : 20:1

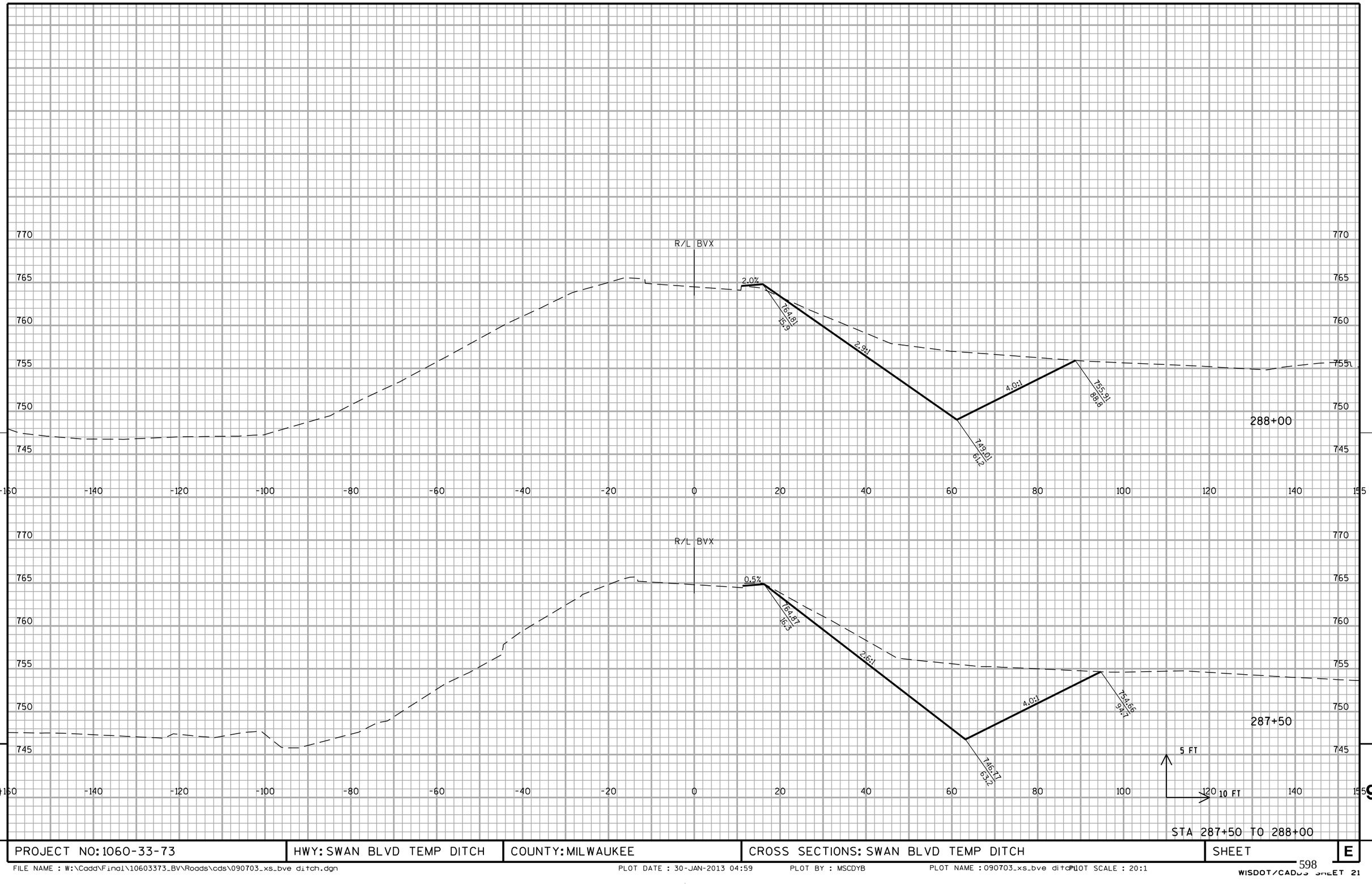


STA 286+94 TO 287+26

PROJECT NO: 1060-33-73	HWY: SWAN BLVD TEMP DITCH	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BLVD TEMP DITCH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090703_xs_bve ditch.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090703_xs_bve ditch PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-73	HWY: SWAN BLVD TEMP DITCH	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BLVD TEMP DITCH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090703_xs_bve ditch.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090703_xs_bve ditch PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

R/L BVX

765
760
755
750

1.4%
763.34
16.4
5.2%
4.0:1
757.03
49.1
759.28
58.1

289+50

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

R/L BVX

765
760
755
750

1.4%
763.63
16.2
4.0:1
4.0:1
757.82
74.5
753.48
57.2

289+00

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

R/L BVX

765
760
755
750
745

2.6%
764.54
15.6
3.3:1
4.0:1
756.75
81.2
751.24
59.2

288+50

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

5 FT
10 FT

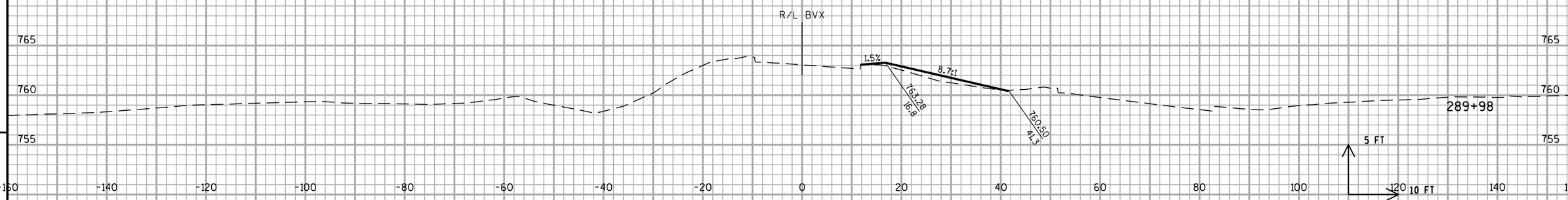
STA 288+50 TO 289+50

9 9

PROJECT NO: 1060-33-73	HWY: SWAN BLVD TEMP DITCH	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BLVD TEMP DITCH	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090703_xs_bve ditch.dgn
PLOT DATE : 30-JAN-2013 04:59
PLOT BY : MSCDYB
PLOT NAME : 090703_xs_bve ditch.PLT
PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



9

9

STA 289+98 TO 289+98

PROJECT NO: 1060-33-73	HWY: SWAN BLVD TEMP DITCH	COUNTY: MILWAUKEE	CROSS SECTIONS: SWAN BLVD TEMP DITCH	SHEET	E

770
765
760
755
750
745

763.20
-163.5

3.0:1

755.47
-140.2

0.5%

R/L NS

754.77
-10.6

0.5%

754.42
60.4

335+50

-220 -200 -180 -160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 95

335+05
STATION
AHEAD

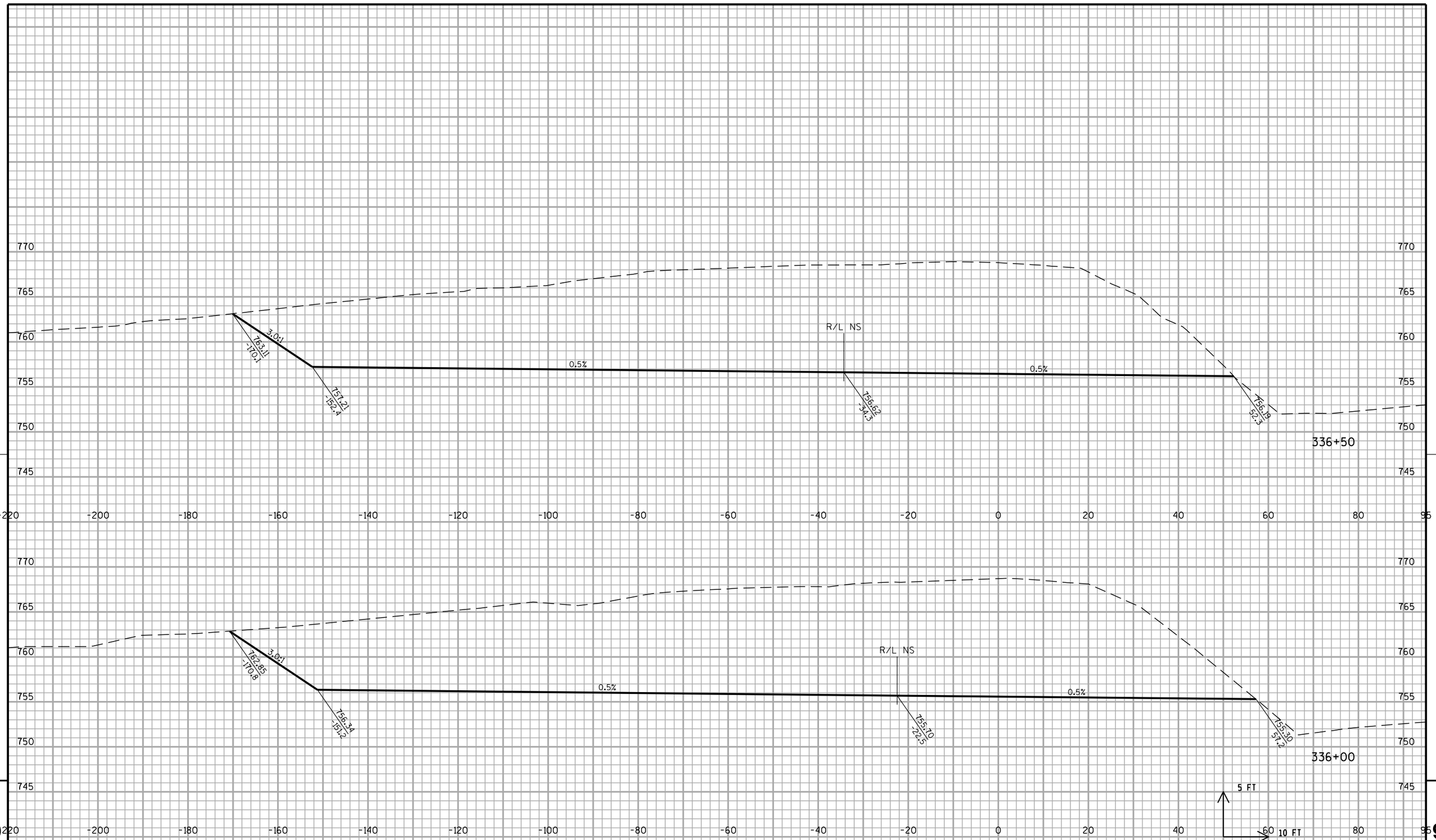
5 FT

10 FT

STA 335+05 TO 335+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN LOOP RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090704_xs_wisc loop ramp.dgn
PLOT DATE : 30-JAN-2013 04:59
PLOT BY : MSCDYB
PLOT NAME : 090704_xs_wisc loop ramp.dgn
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

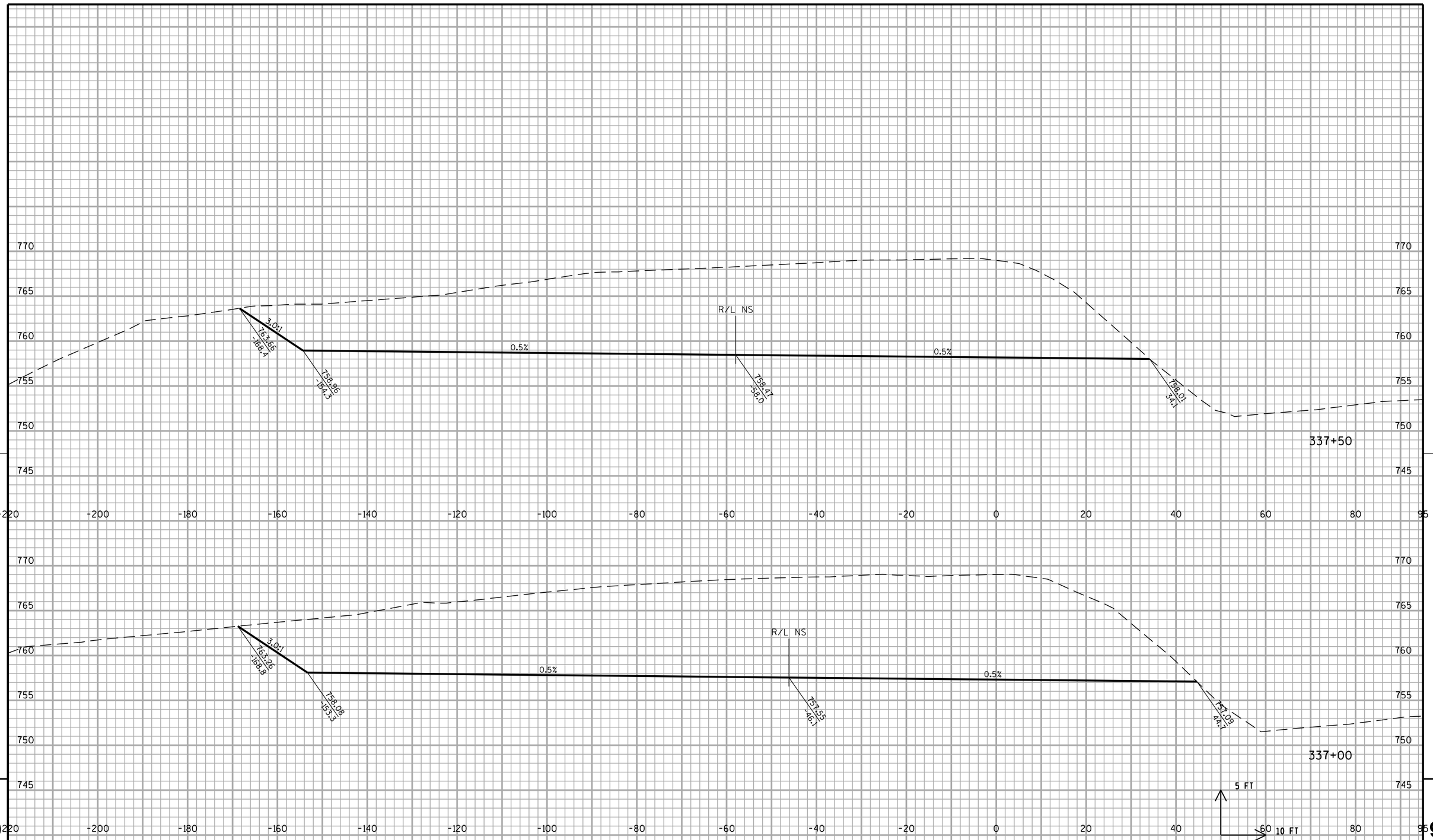


STA 336+00 TO 336+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN LOOP RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090704_xs_wisc loop ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090704_xs_wisc loop ramp.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



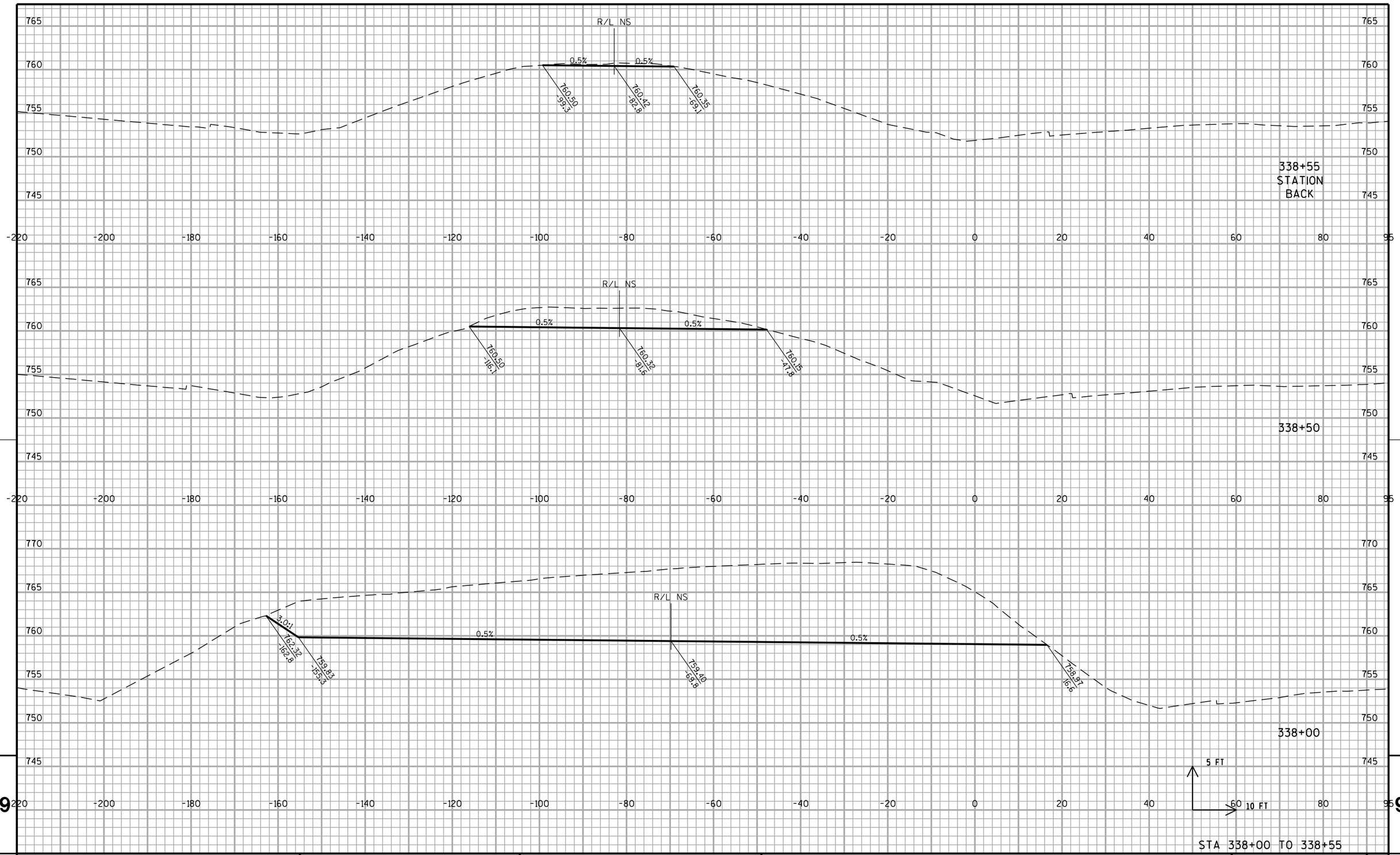
STA 337+00 TO 337+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN LOOP RAMP	SHEET	E

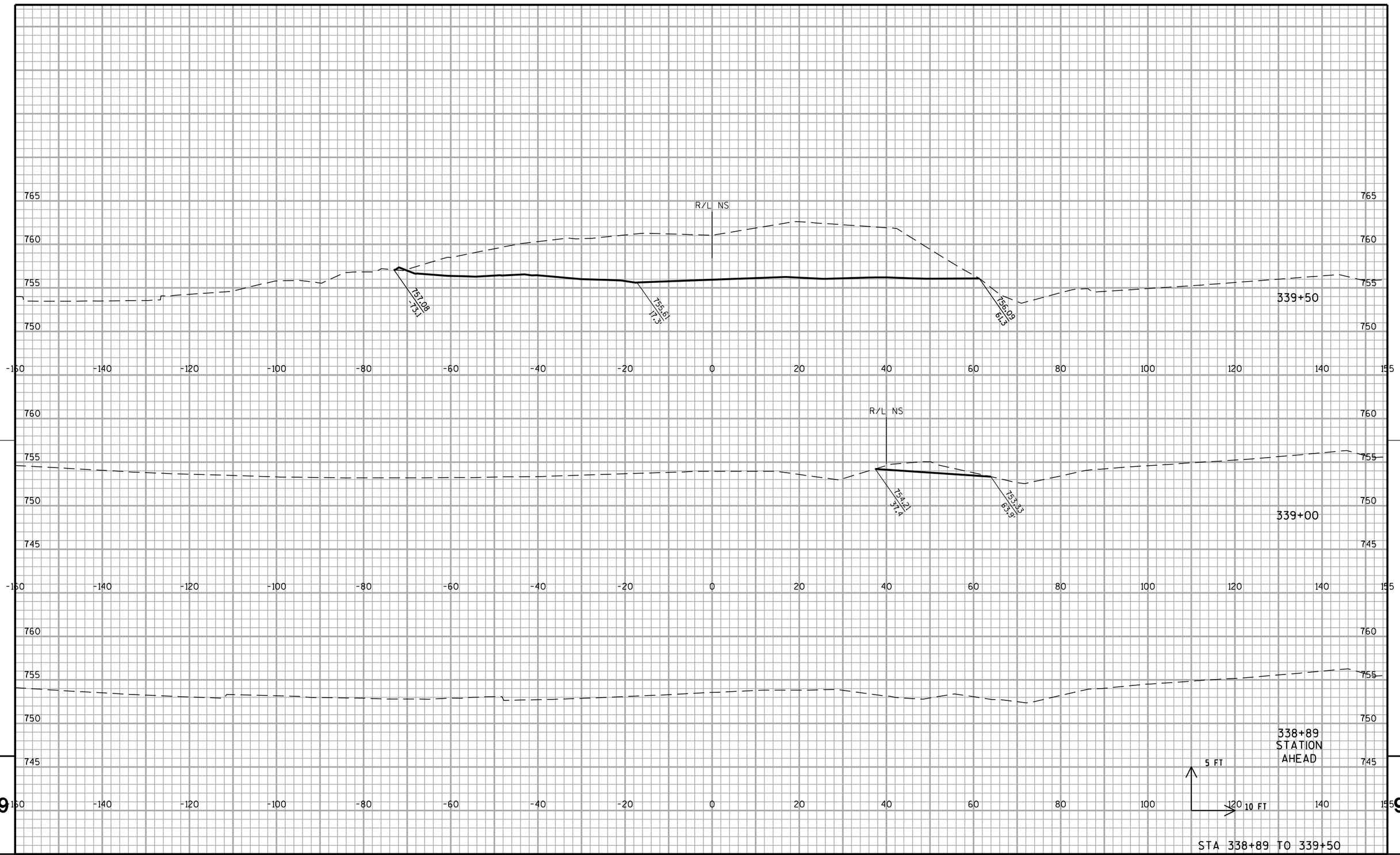
9 9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090704_xs_wisc loop ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090704_xs_wisc loop ramp.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



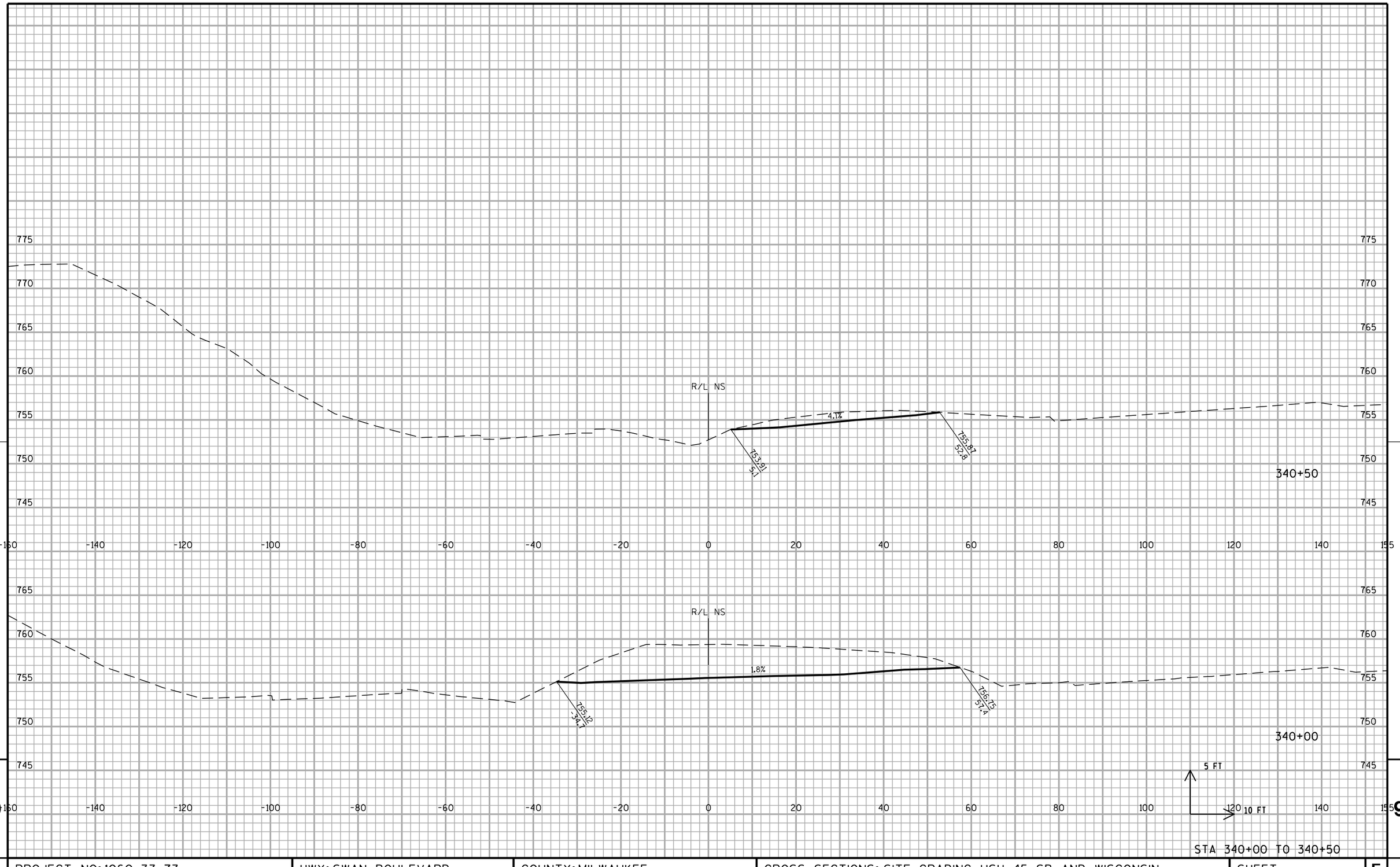
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN LOOP RAMP	SHEET	E



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION USH 45 SB AND WISCONSIN	SHEET	E

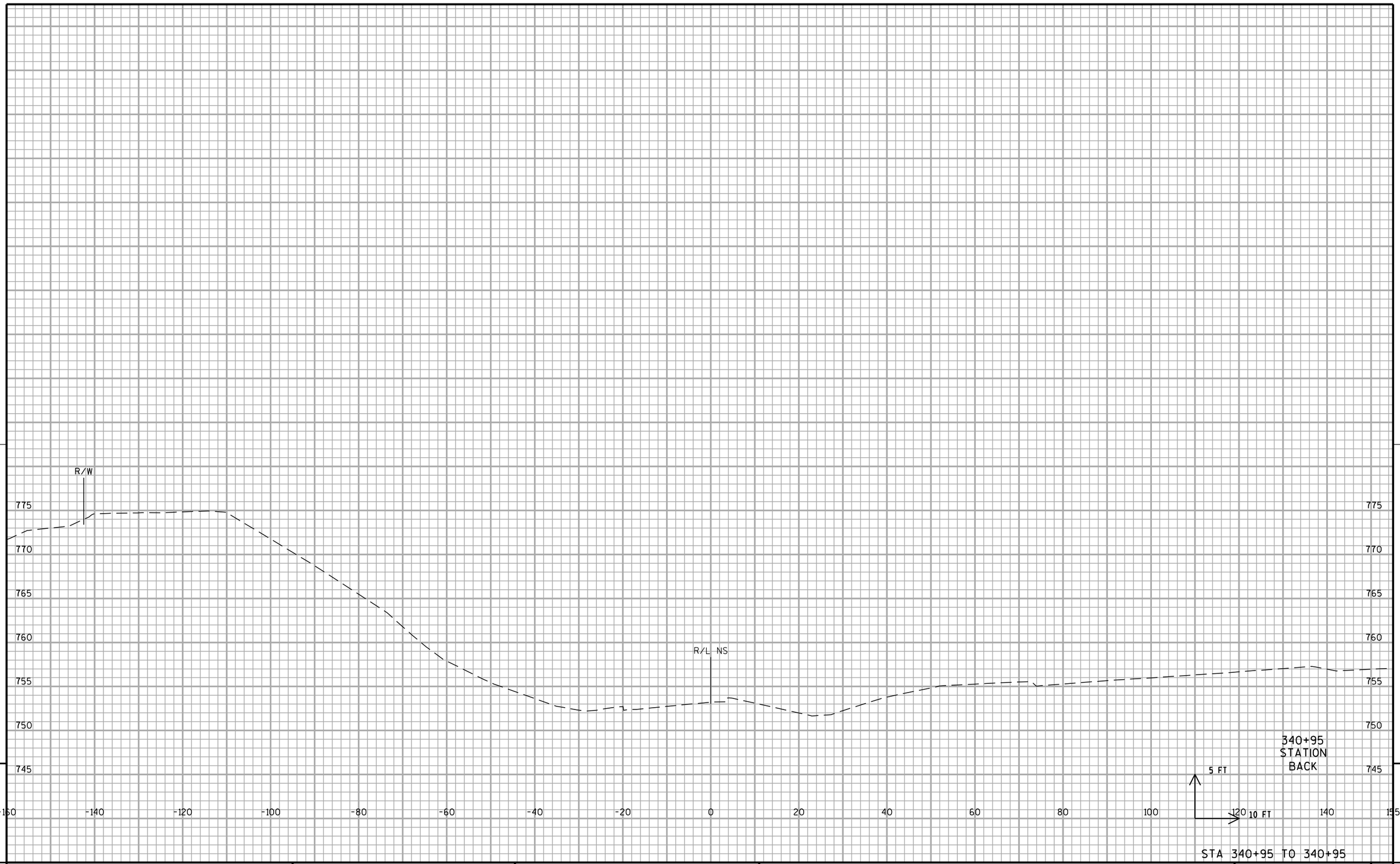
9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090705_xs_ush 45 sb_wisc.dgn
PLOT DATE : 30-JAN-2013 04:59
PLOT BY : MSCDYB
PLOT NAME : 090705_xs_ush 45 sb_wisc.tsk
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



STA 340+00 TO 340+50

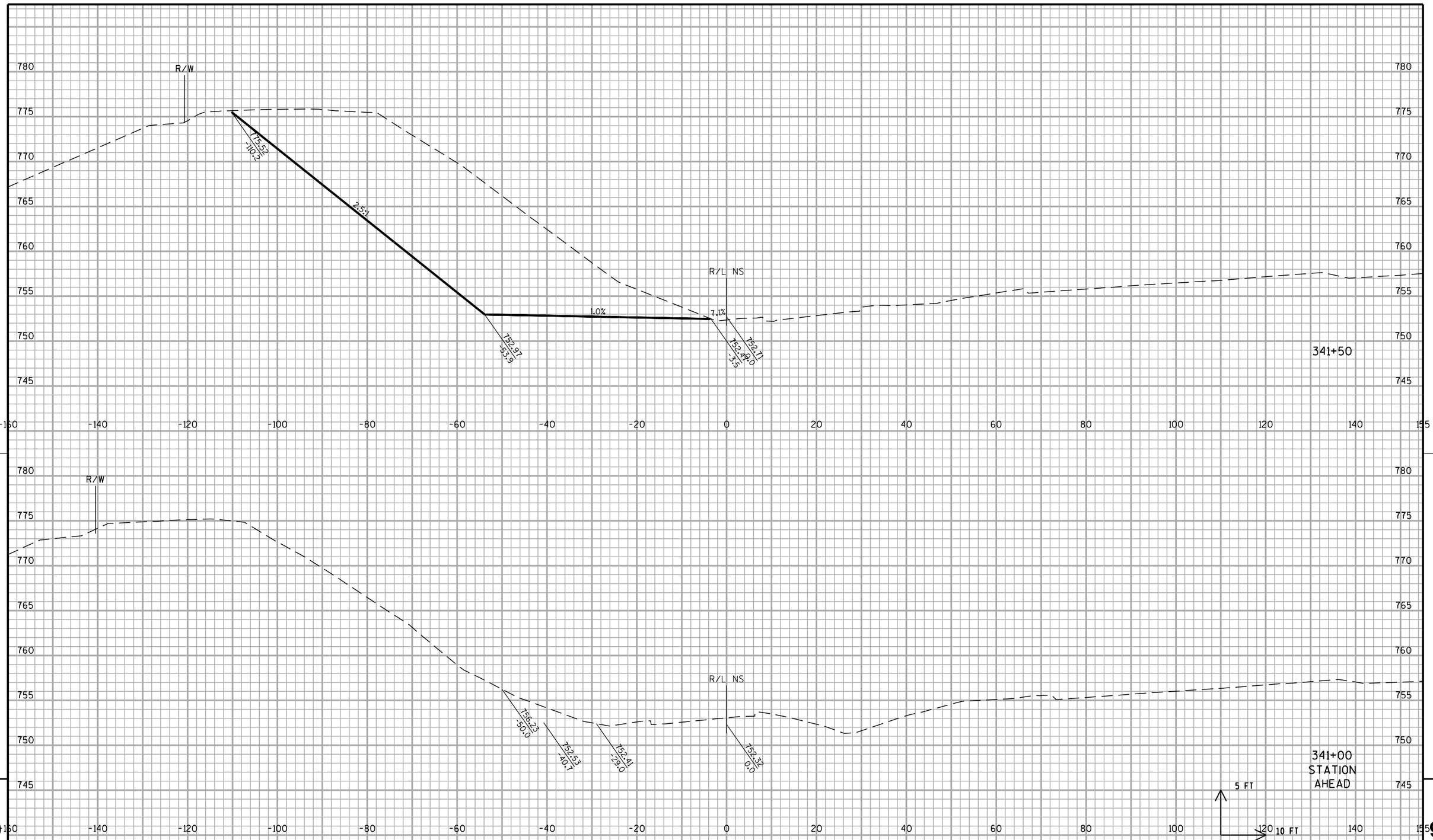
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE GRADING USH 45 SB AND WISCONSIN	SHEET	E



STA 340+95 TO 340+95

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE GRADING USH 45 SB AND WISCONSIN	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090705_xs_ush 45 sb_wisc.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090705_xs_ush 45 sb_wisc.dgn PLOT SCALE : 20:1

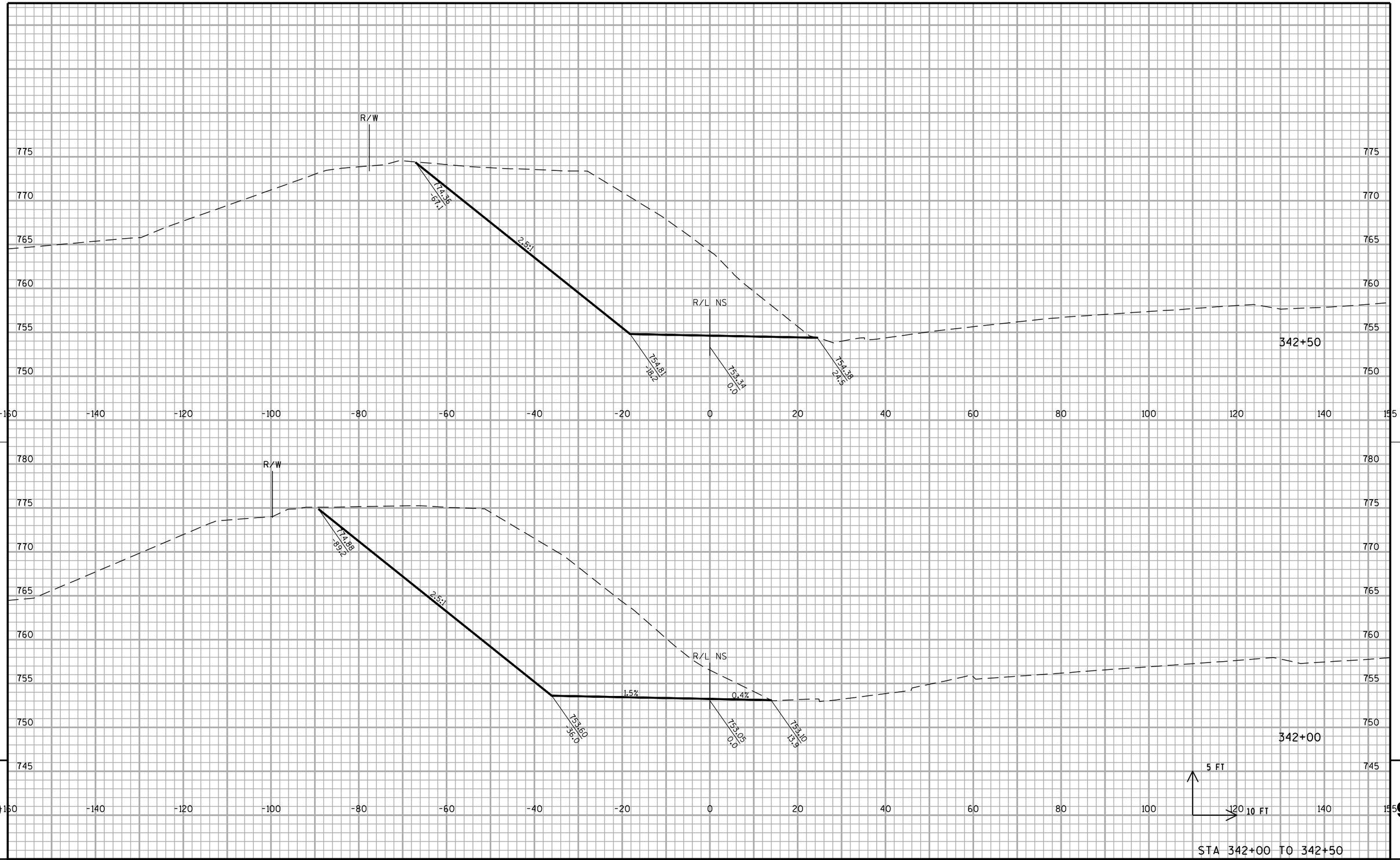


STA 341+00 TO 341+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090706_xs_ush 45 sb_wisc off ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090706_xs_ush 45 sb_wisc off ramp.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

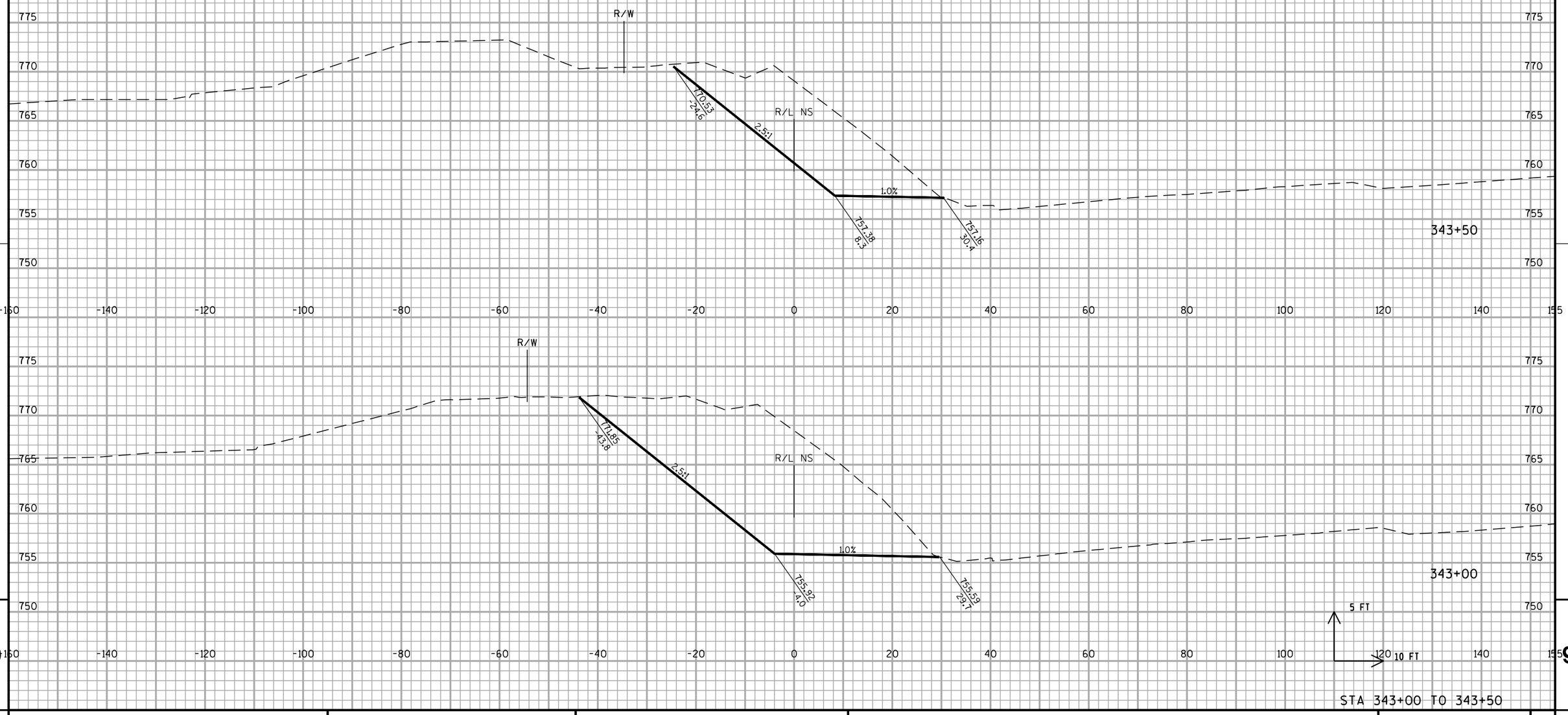


STA 342+00 TO 342+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090706_xs_ush 45 sb_wisc off ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090706_xs_ush 45 sb_wisc off ramp.pl

WISDOT/CADDS SHEET 21

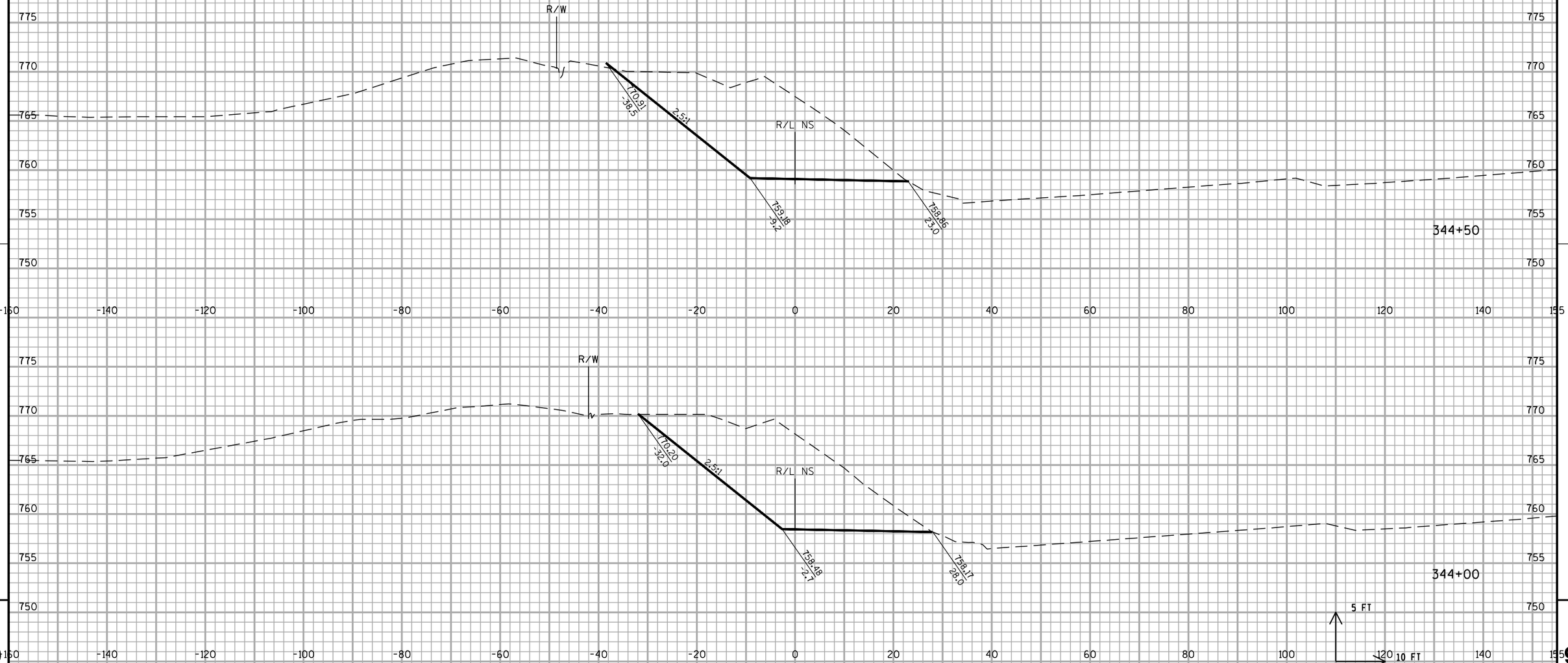


STA 343+00 TO 343+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090706_xs_ush 45 sb_wisc off ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090706_xs_ush 45 sb_wisc off ramp.pdf PLOT SCALE : 20:1

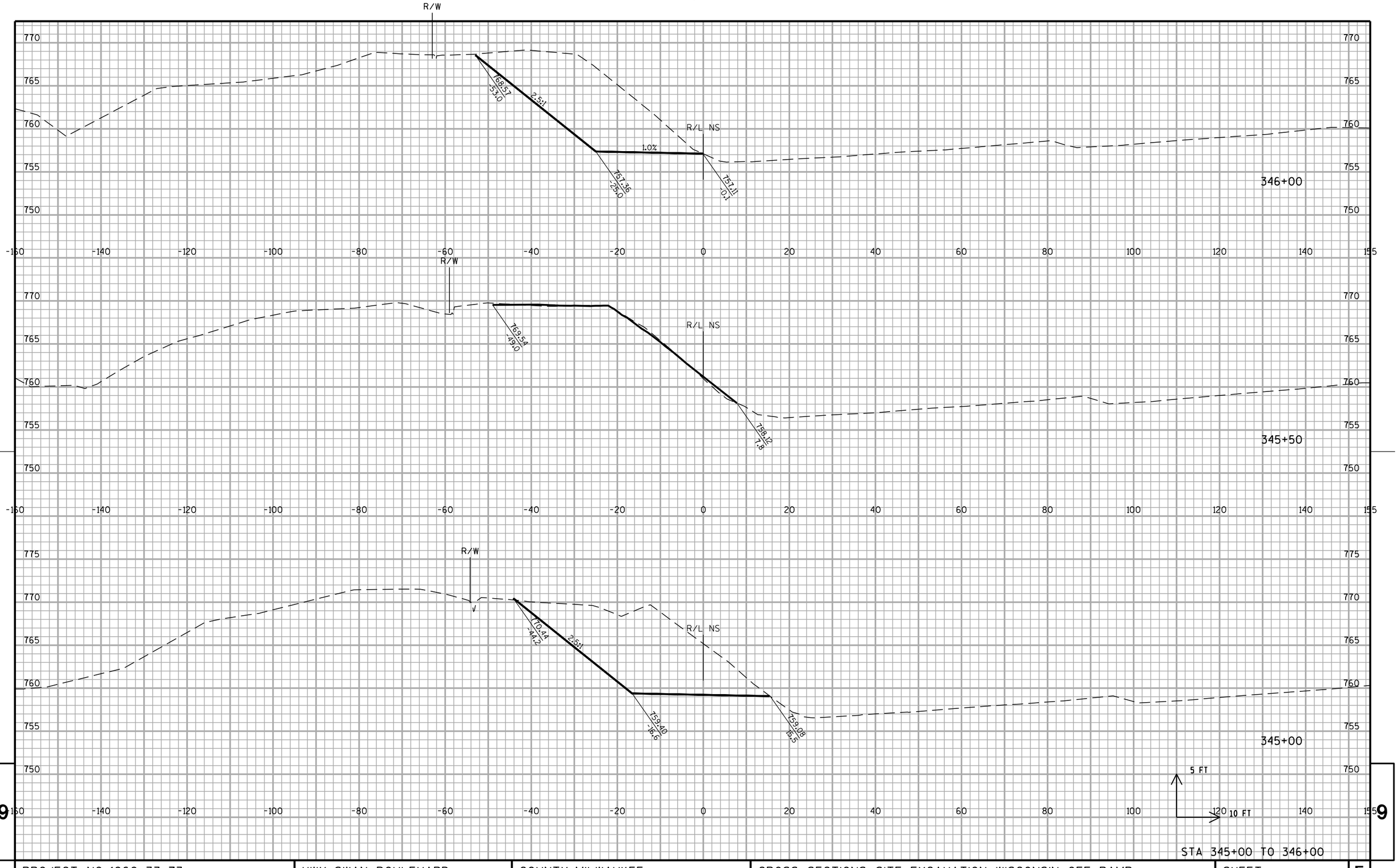
WISDOT/CADDS SHEET 21



STA 344+00 TO 344+50

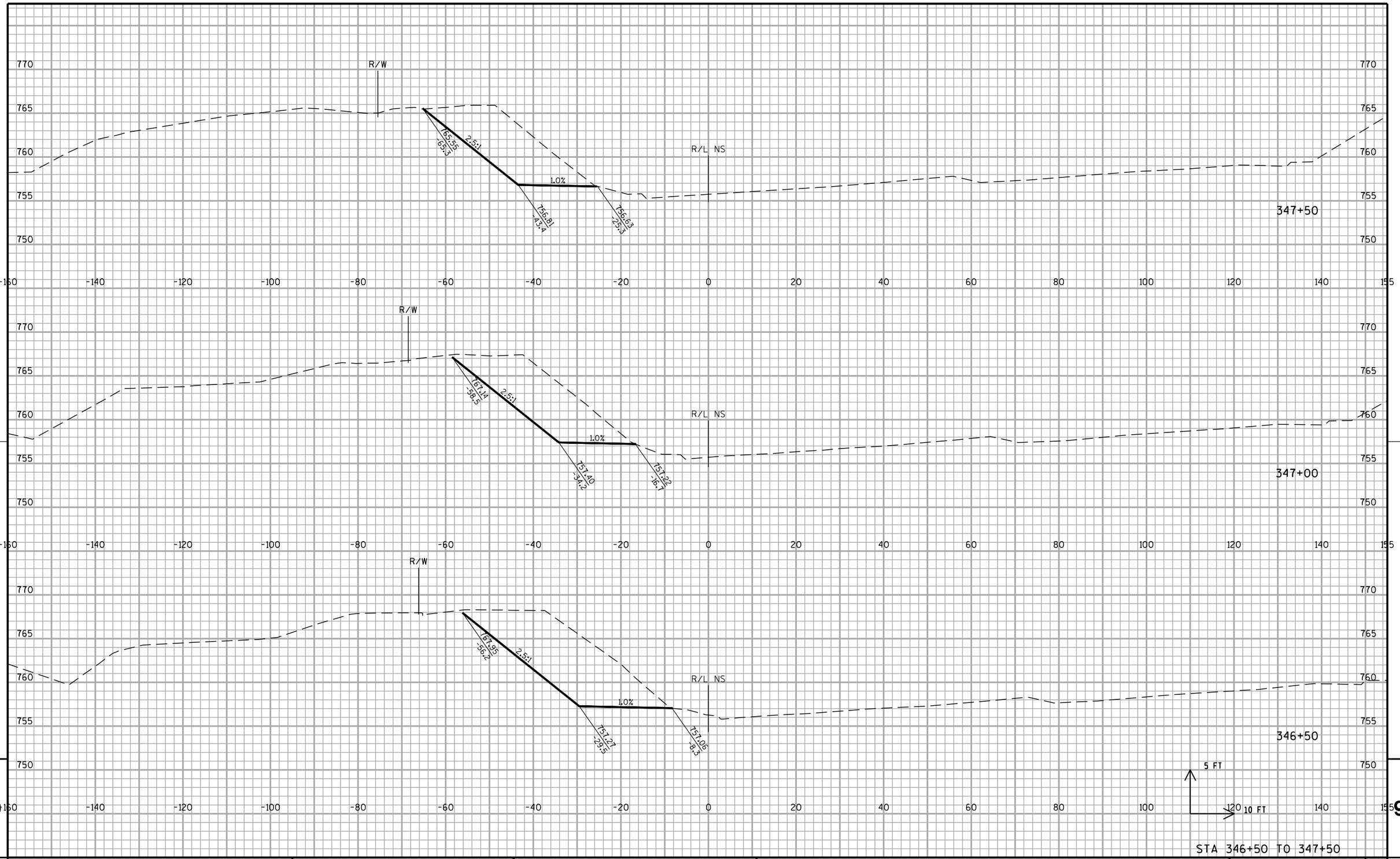
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090706_xs_ush 45 sb_wisc off ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090706_xs_ush 45 sb_wisc off ramp.dgn PLOT SCALE : 20.0 '/ IN
WISDOT/CADDS SHEET 21



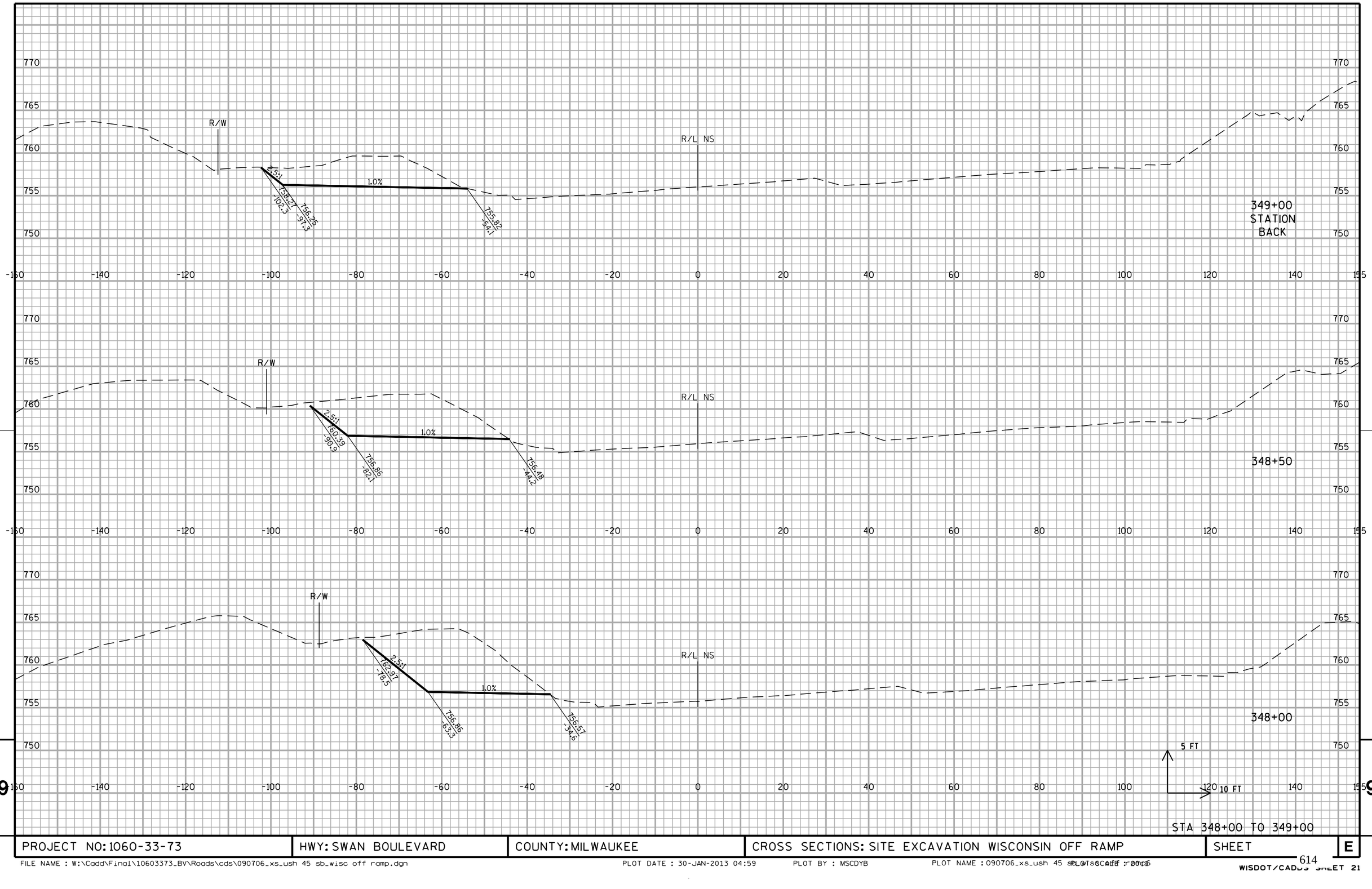
STA 345+00 TO 346+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E



STA 346+50 TO 347+50

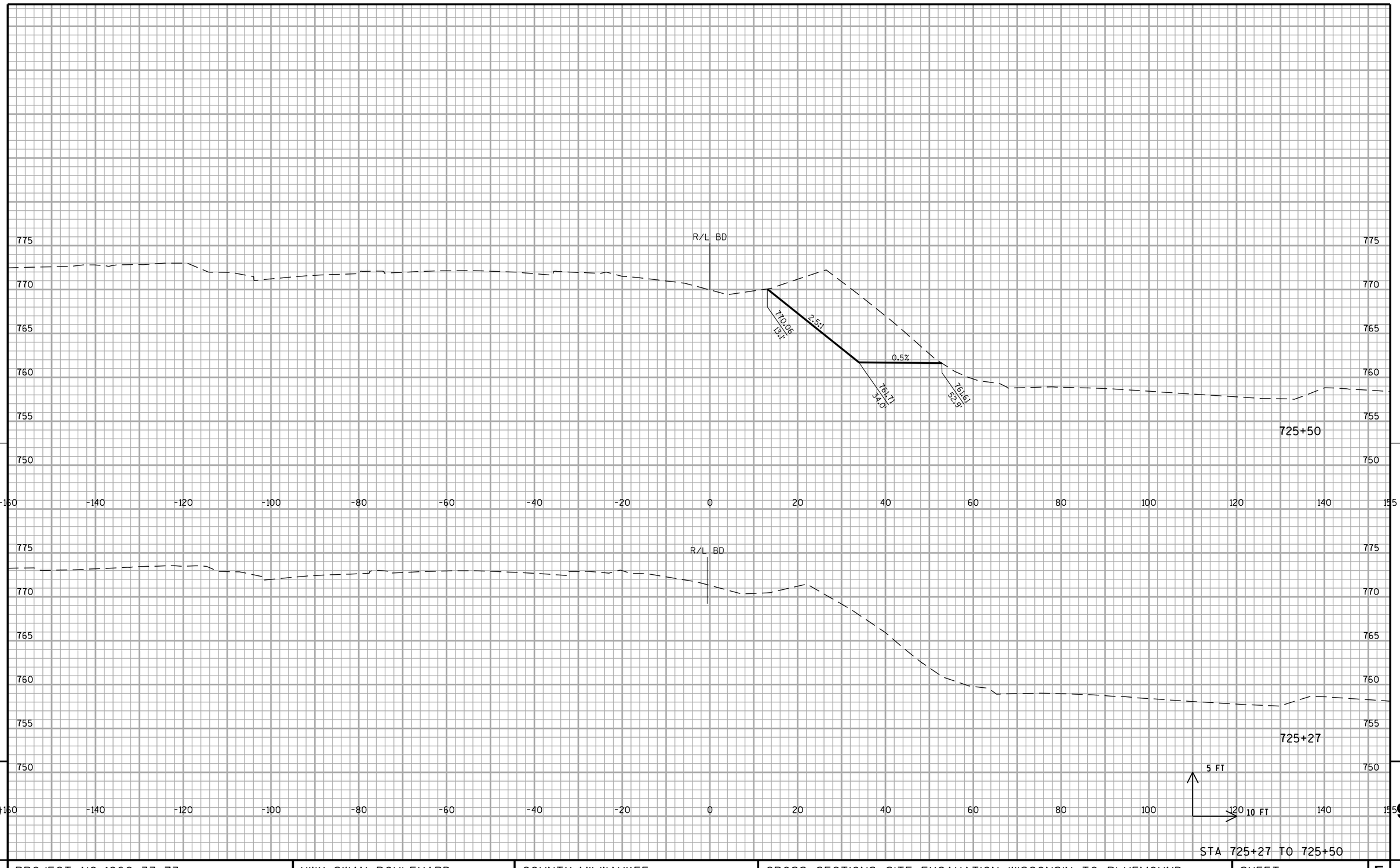
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN OFF RAMP	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090706_xs_ush 45 sb_wisc off ramp.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090706_xs_ush 45 sb_wisc off ramp.pdf PLOT SCALE : 20.0

WISDOT/CADDS SHEET 21



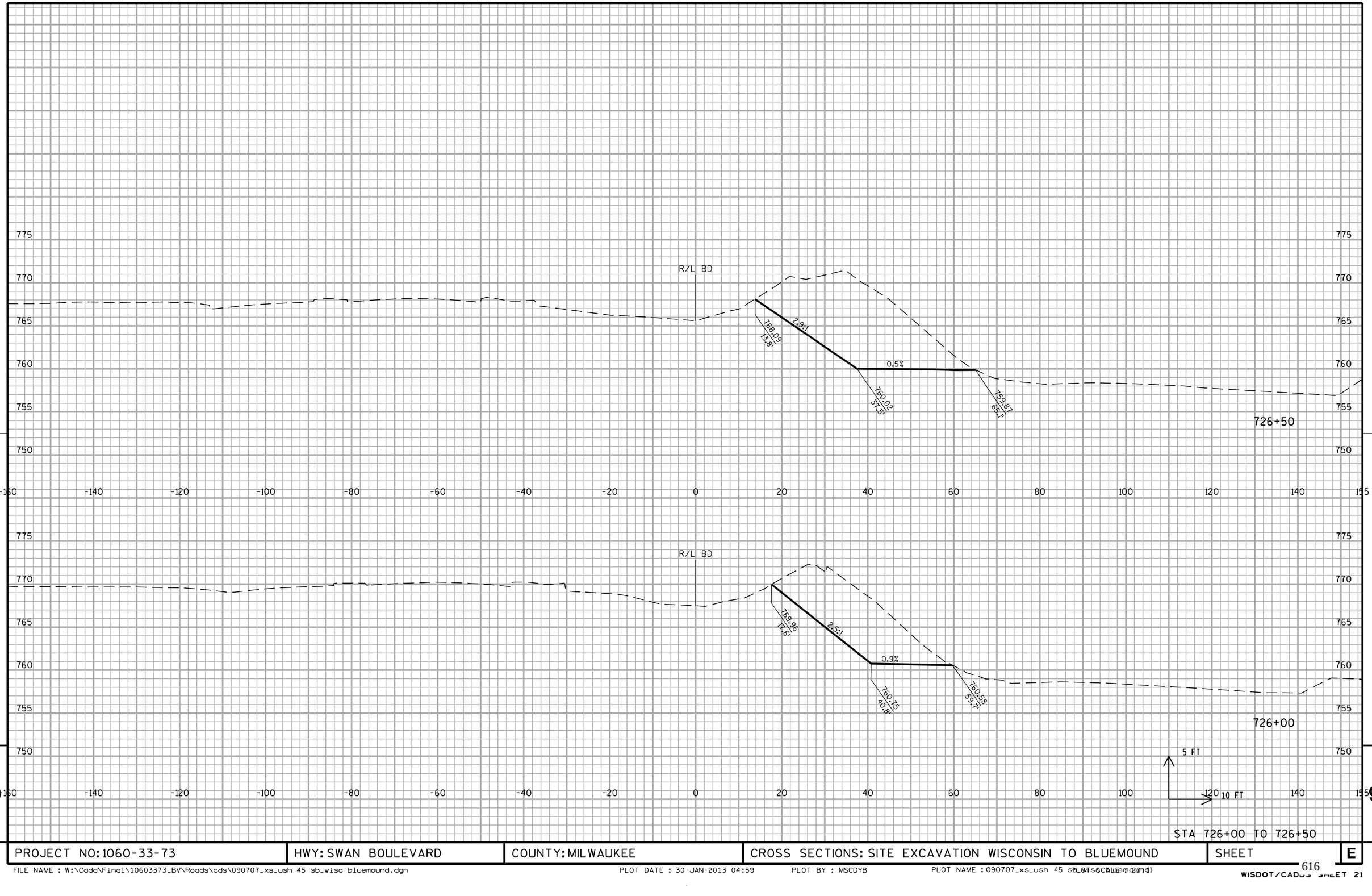
STA 725+27 TO 725+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_ush 45 sb_wisc bluemound.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090707_xs_ush 45 sb_wisc bluemound.plt PLOT SCALE : 2.0:1

WISDOT/CADDS SHEET 21



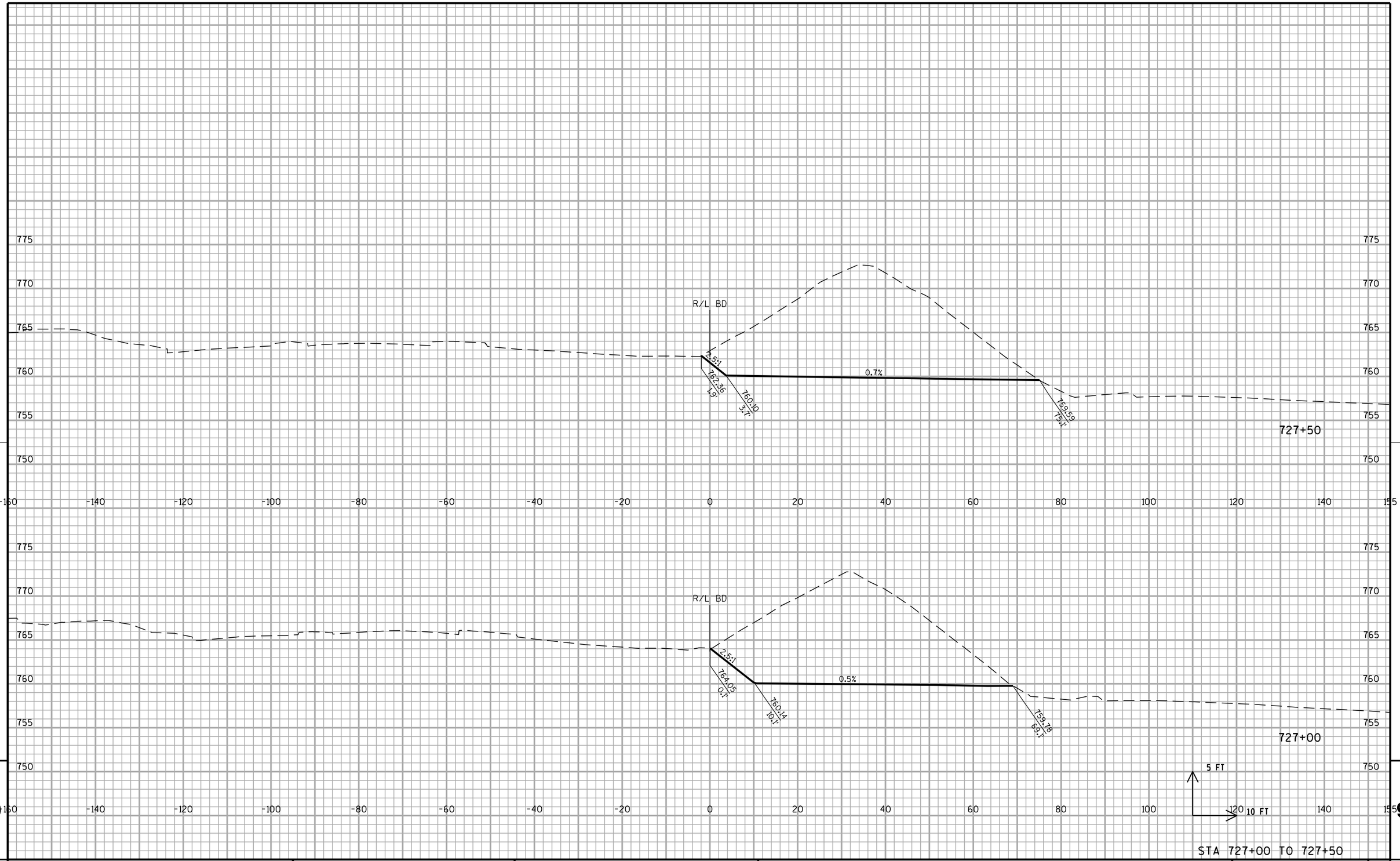
STA 726+00 TO 726+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

9 9

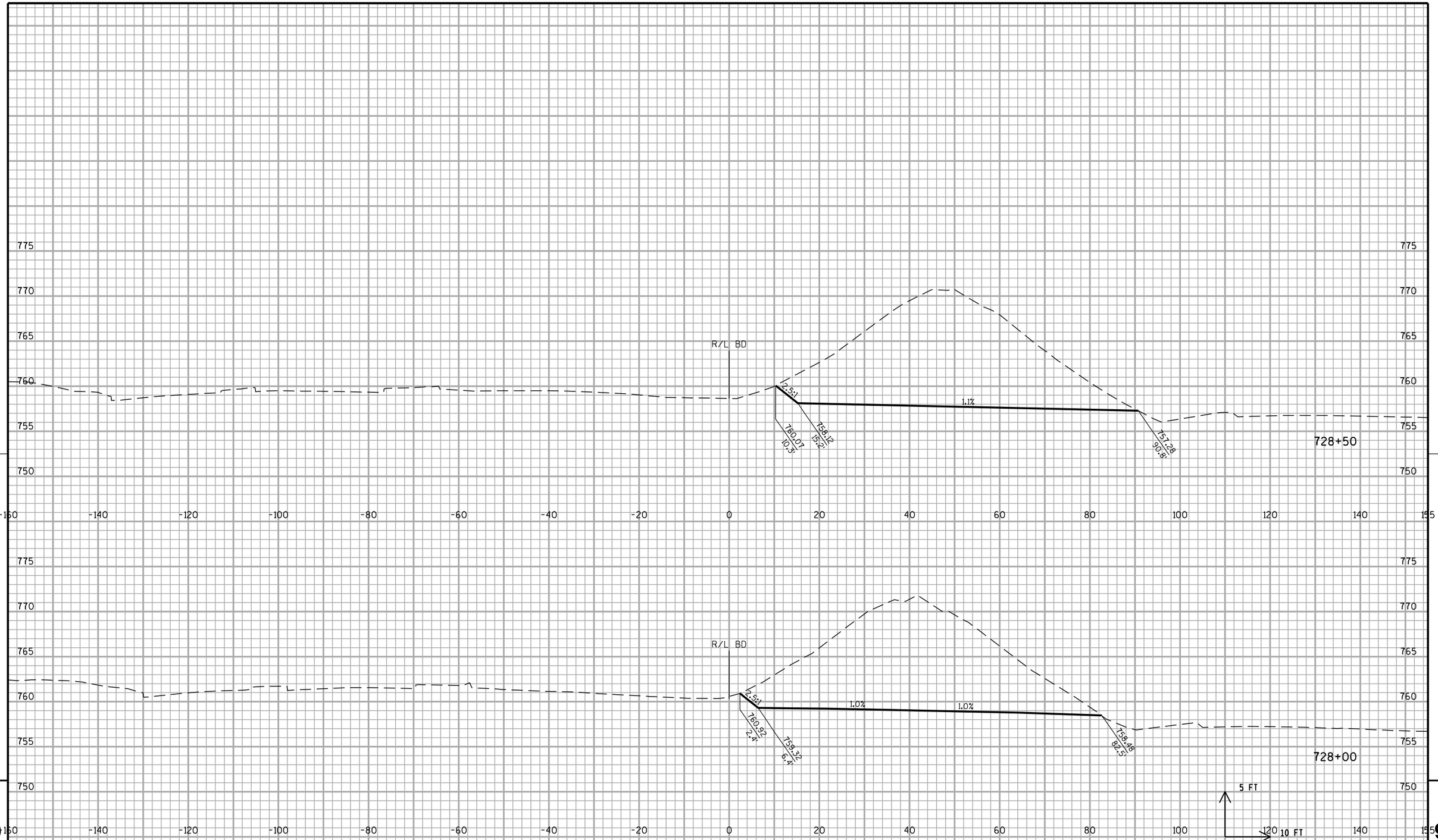
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_ush 45 sb_wisc bluemound.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090707_xs_ush 45 sb_wisc bluemound.pltPLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



STA 727+00 TO 727+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

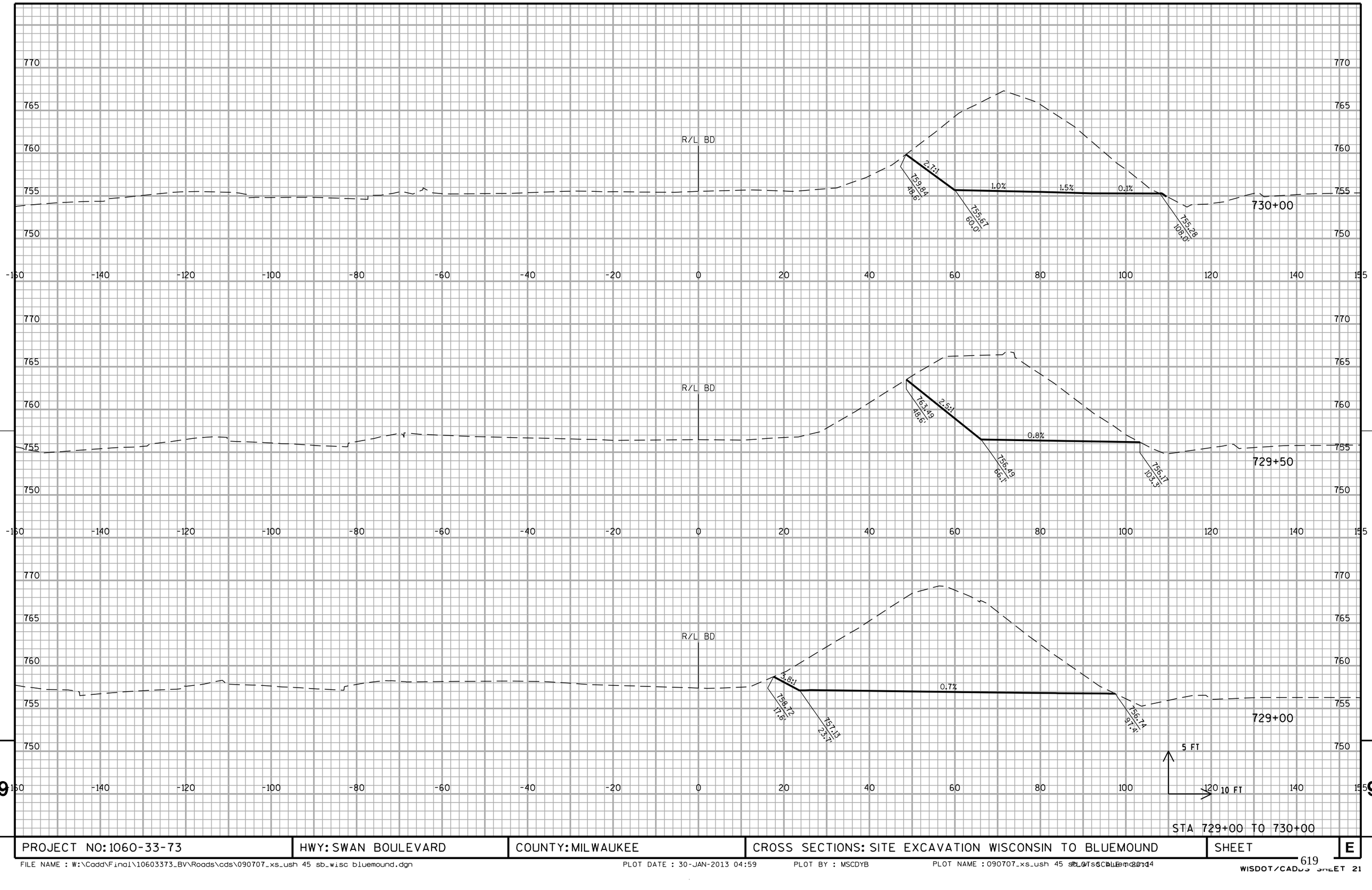


STA 728+00 TO 728+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_ush 45 sb_wisc bluemound.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090707_xs_ush 45 sb_wisc bluemound.dgn PLOT SCALE : 2.0000

WISDOT/CADDS SHEET 21

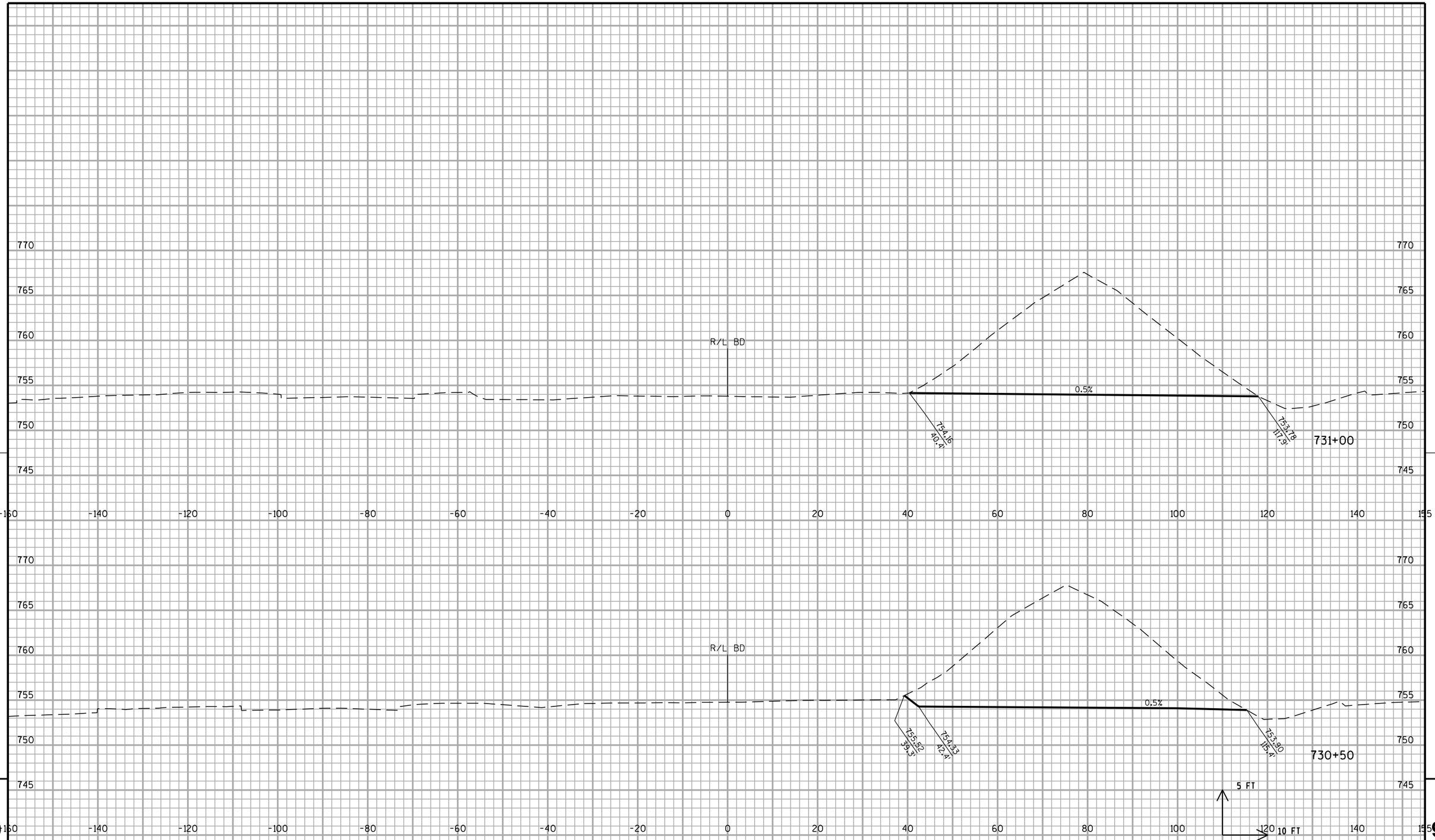


STA 729+00 TO 730+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_ush 45 sb_wisc bluemound.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090707_xs_ush 45 sb_wisc bluemound.dgn PLOT SCALE : 2.0000

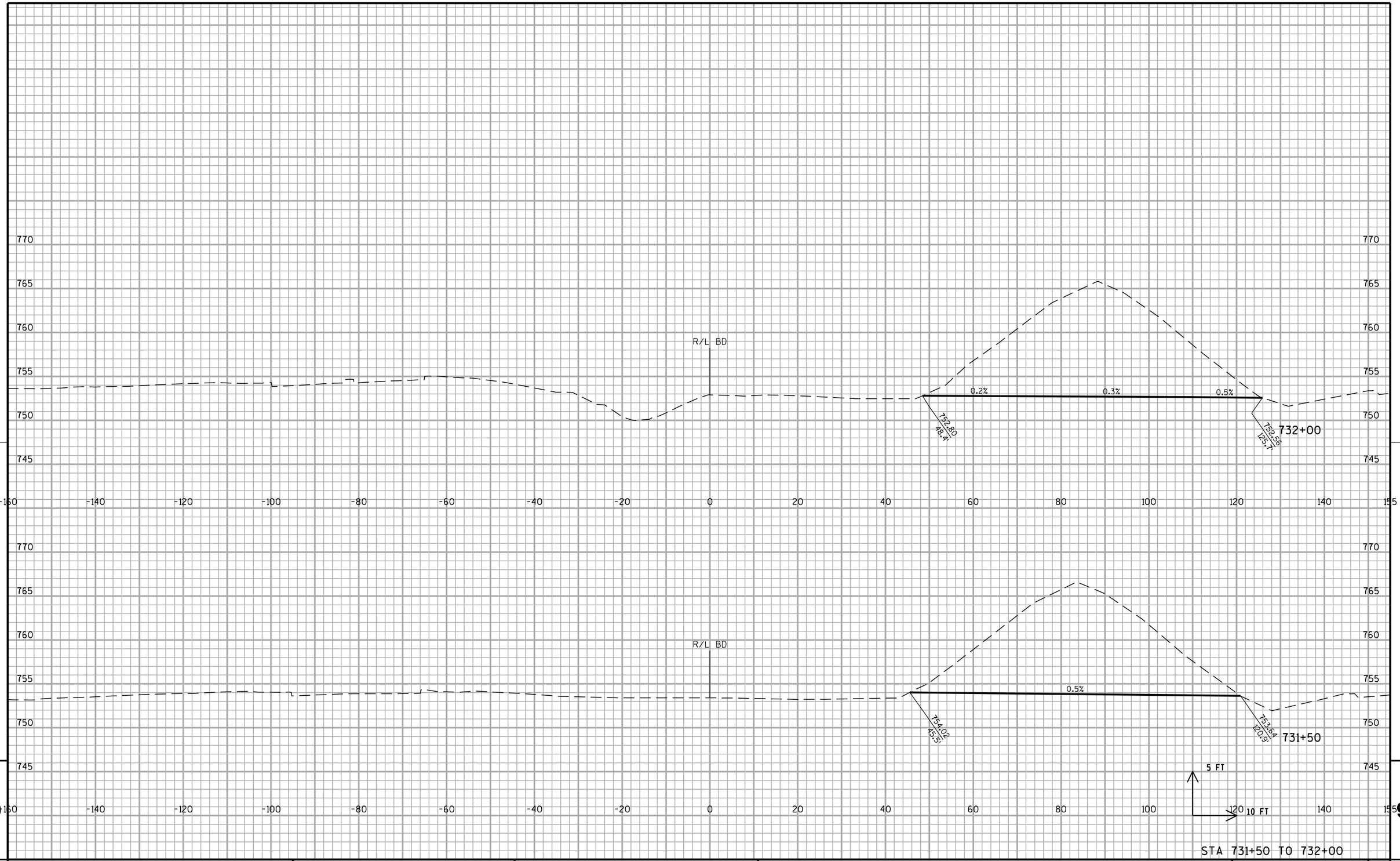
WISDOT/CADDS SHEET 21



STA 730+50 TO 731+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_ush 45 sb_wisc bluemound.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090707_xs_ush 45 sb_wisc bluemound.pltPLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

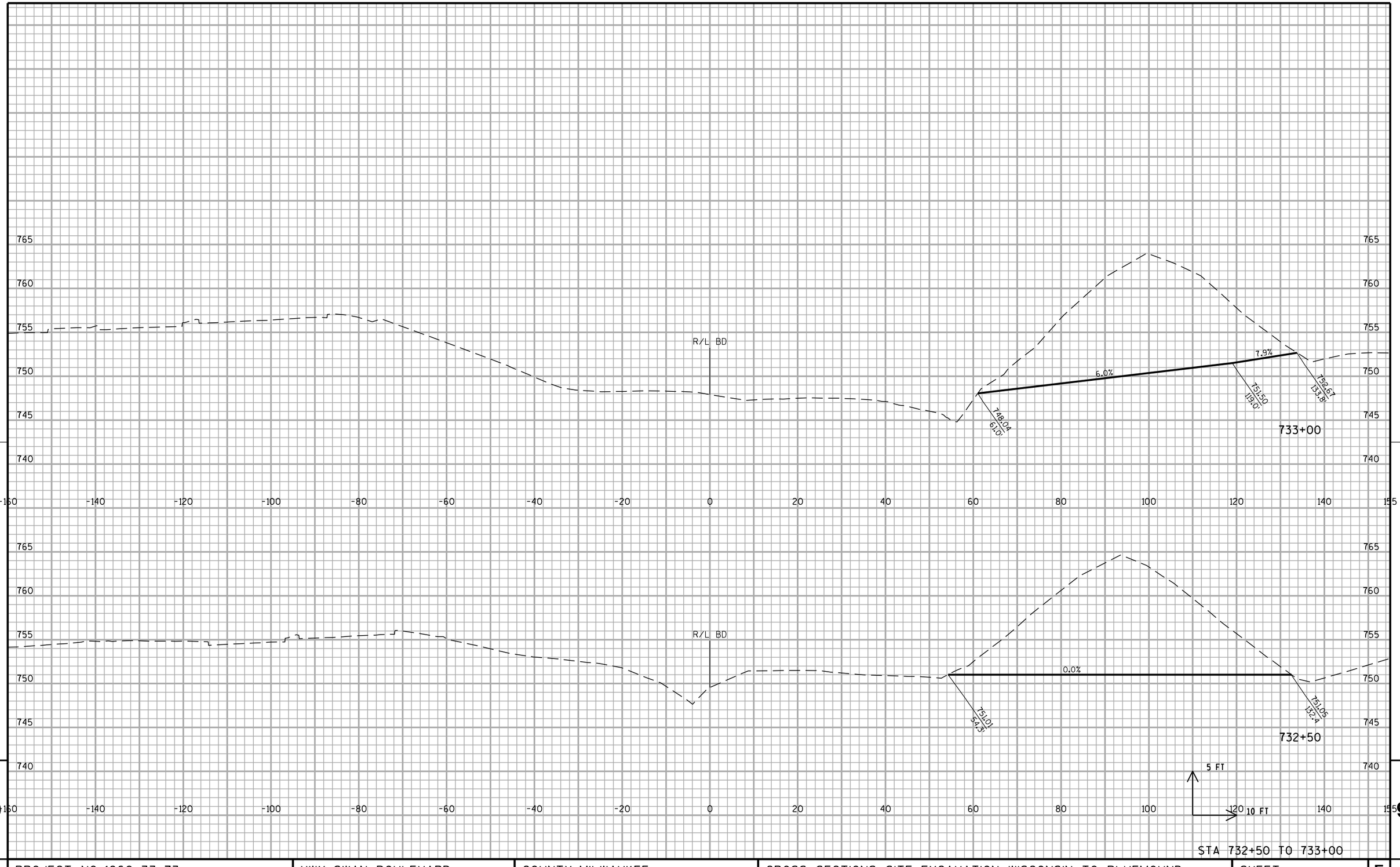


STA 731+50 TO 732+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_USH 45 SB_Wisc Bluemound.dgn PLOT DATE : 30-JAN-2013 16:30 PLOT BY : MSCD1S PLOT NAME : 090707_xs_USH 45 SB_Wisc Bluemound.plt PLOT SCALE = 20.1

WISDOT/CADDS SHEET 21



9

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_USH 45 SB_Wisc Bluemound.dgn PLOT DATE : 30-JAN-2013 16:30 PLOT BY : MSCD1S PLOT NAME : 090707_xs_USH 45 SB_Wisc Bluemound.plt PLOT SCALE = 20.1

WISDOT/CADDS SHEET 21

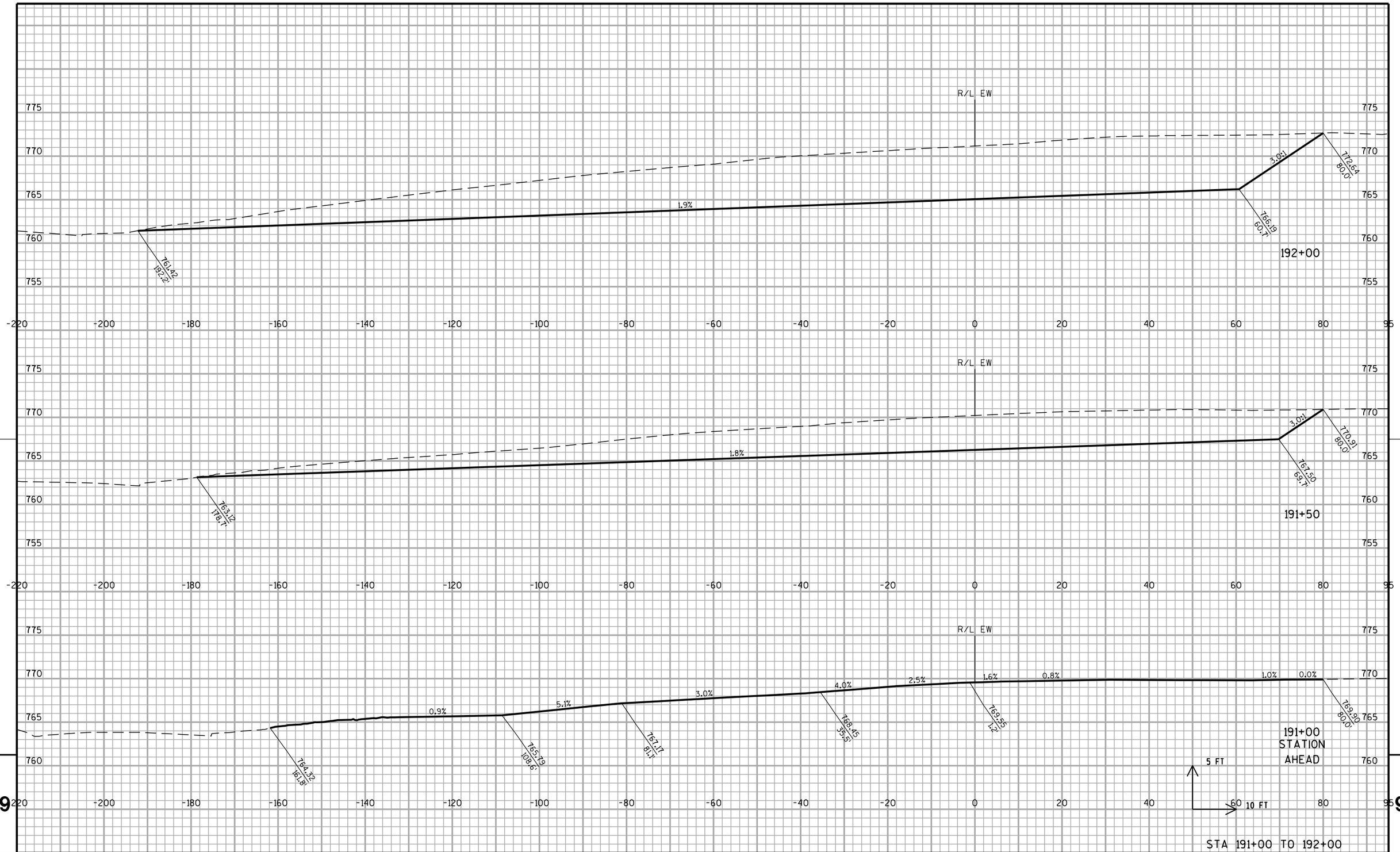
765
760
755
750
745
-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160
R/L BD
3.0:1
758.61
122.6'
754.11
136.5'
733+50
5 FT
10 FT
STA 733+50 TO 733+50

9 9

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION WISCONSIN TO BLUEMOUND	SHEET	E

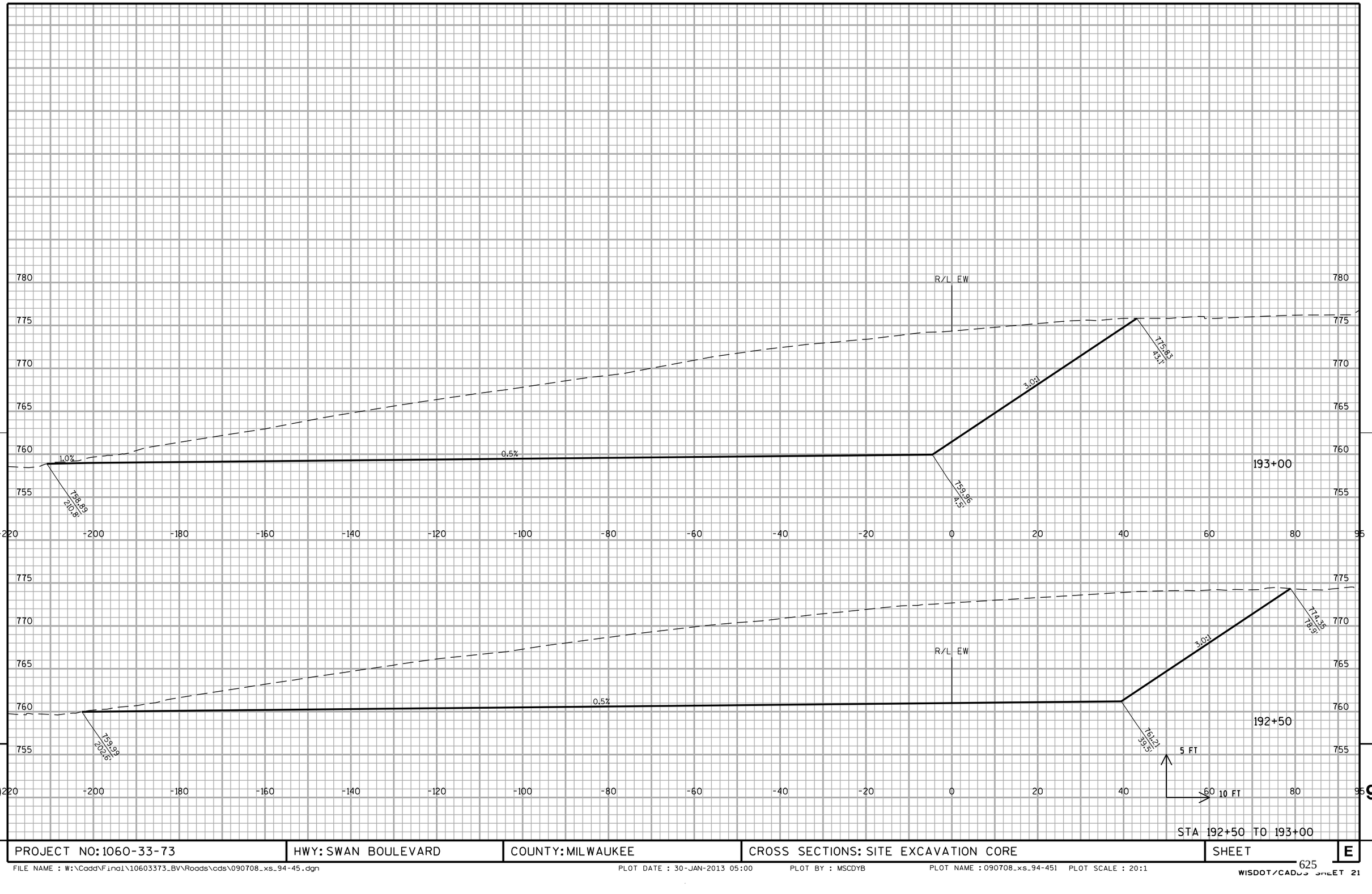
FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090707_xs_ush 45 sb_wisc bluemound.dgn PLOT DATE : 30-JAN-2013 04:59 PLOT BY : MSCDYB PLOT NAME : 090707_xs_ush 45 sb_wisc bluemound.pltPLOT SCALE = 20.000

WISDOT/CADDS SHEET 21



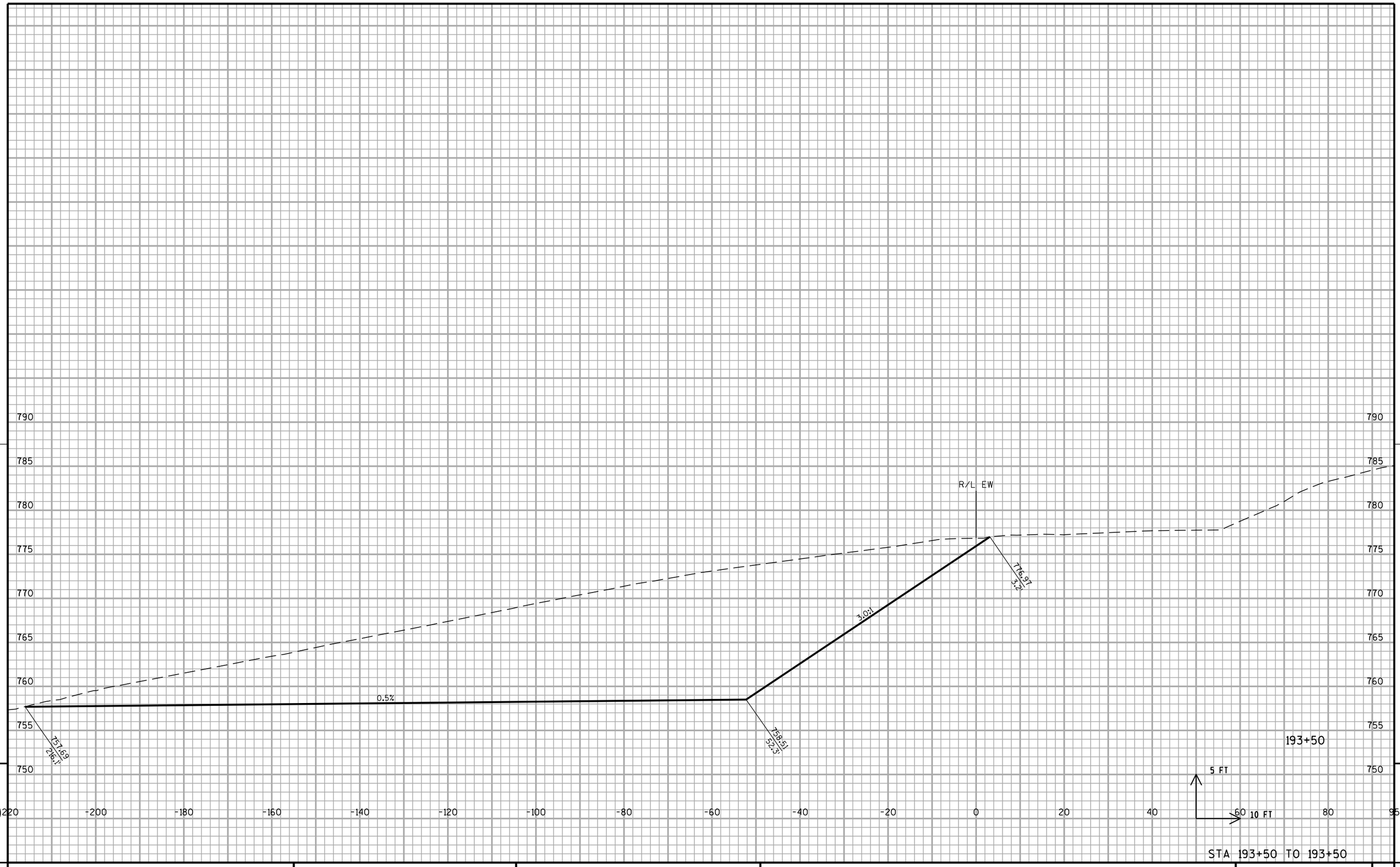
PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION CORE	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090708_xs_94-45.dgn PLOT DATE : 30-JAN-2013 05:00 PLOT BY : MSCDYB PLOT NAME : 090708_xs_94-45 PLOT SCALE : 20:1



PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION CORE	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090708_xs_94-45.dgn PLOT DATE : 30-JAN-2013 05:00 PLOT BY : MSCDYB PLOT NAME : 090708_xs_94-451 PLOT SCALE : 20:1



9 9

STA 193+50 TO 193+50

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION CORE	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090708_xs_94-45.dgn PLOT DATE : 30-JAN-2013 05:00 PLOT BY : MSCDYB PLOT NAME : 090708_xs_94-452 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

790
785
780
775
770
765
760
755
750

R/L EW

6.9%

4.7:1

757.08
218.3

765.00
103.41

777.70
43.2

194+00

5 FT
10 FT

-220 -200 -180 -160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 95

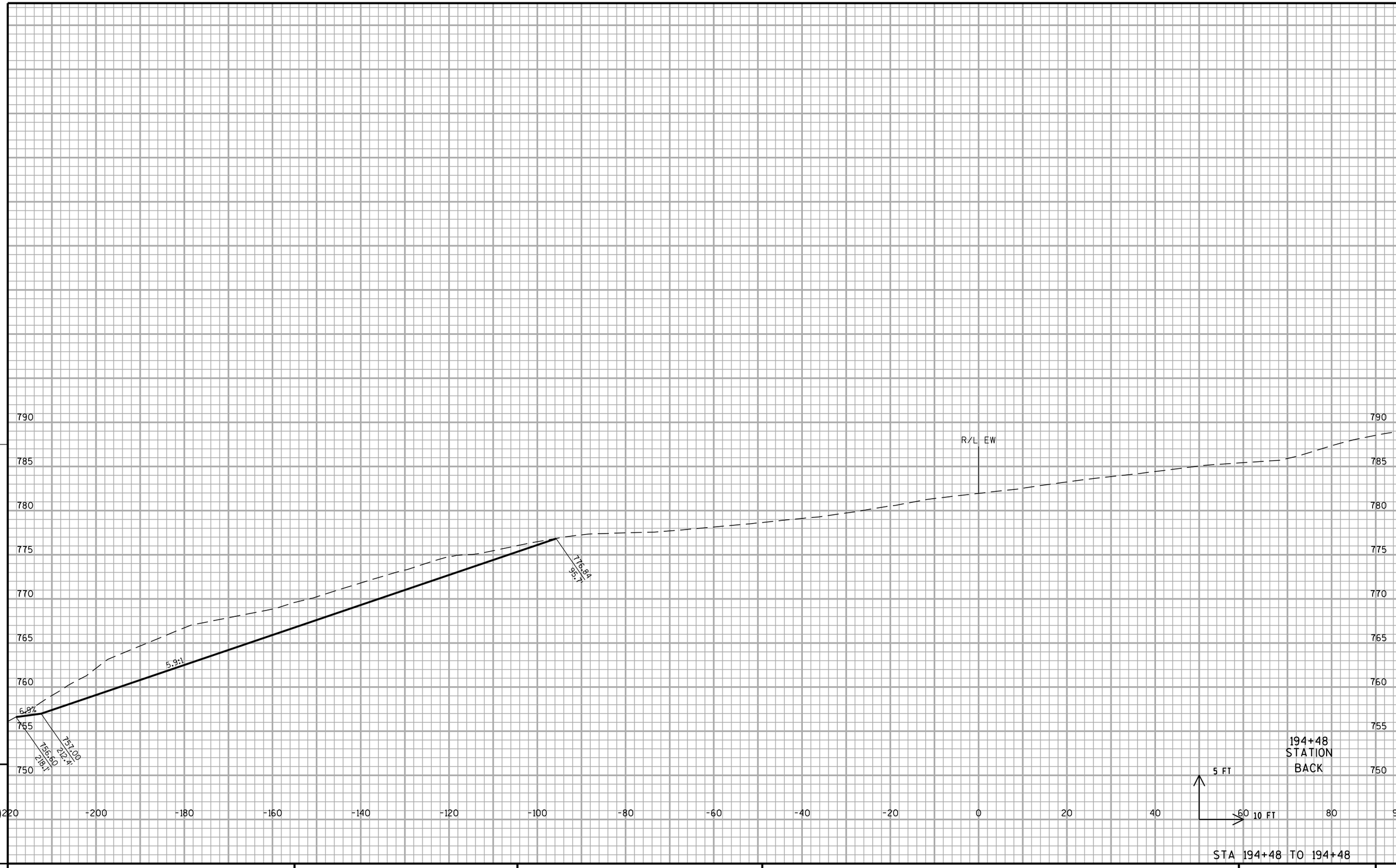
9

STA 194+00 TO 194+00

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION CORE	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090708_xs_94-45.dgn PLOT DATE : 30-JAN-2013 05:00 PLOT BY : MSCDYB PLOT NAME : 090708_xs_94-453 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



9 9

STA 194+48 TO 194+48

PROJECT NO: 1060-33-73	HWY: SWAN BOULEVARD	COUNTY: MILWAUKEE	CROSS SECTIONS: SITE EXCAVATION CORE	SHEET	E

FILE NAME : W:\Cadd\Final\10603373_BV\Roads\cds\090708_xs_94-45.dgn PLOT DATE : 30-JAN-2013 05:00 PLOT BY : MSCDYB PLOT NAME : 090708_xs_94-454 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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http://www.dot.wisconsin.gov