SEL

APR 2017

PROJECT ID: 2981-00-73

WITH: 2981-00-74

COUNTY: MILWAUKEE

ORDER OF SHEETS

TOTAL SHEETS = 42

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WHITNALL PARK DRIVE

BRIDGE OVER BRANCH ROOT RIVER (P-40-0564)

LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2981-00-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2981-00-73		

ACCEPTED FOR
MILWAUKEE COUNTY

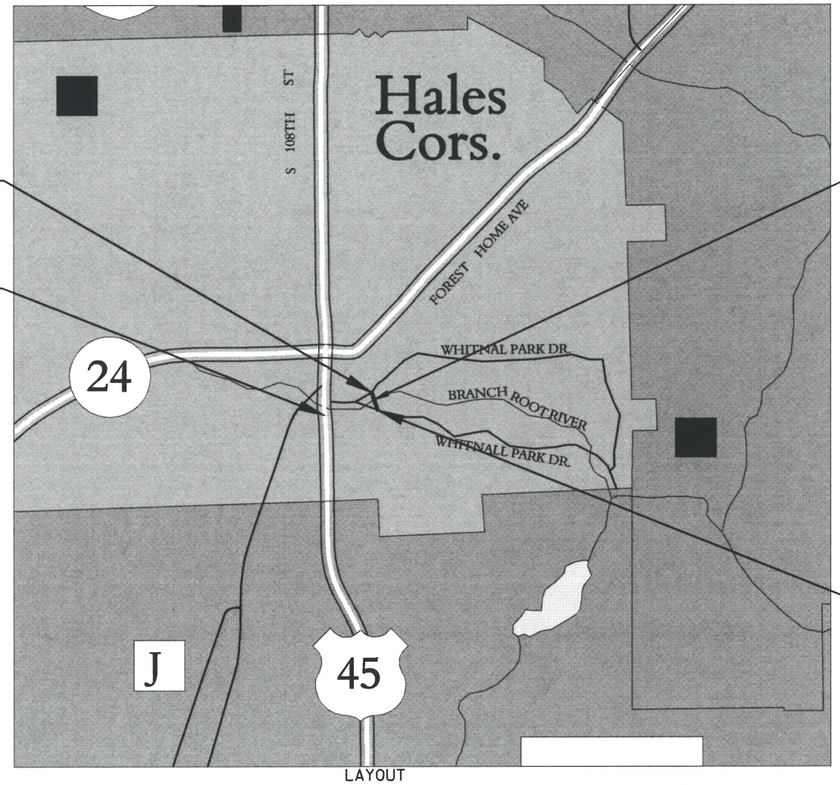
Nov. 30, 16 (Date)

Anj Alciow
MANAGING ENGINEER
(Signature & Title of Official)

DESIGN DESIGNATION

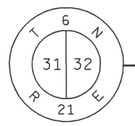
A.A.D.T.	2015	=	192
A.A.D.T.	2037	=	214
D.H.V.		=	
D.D.		=	67/33
T.		=	
DESIGN SPEED		=	30
ESALS		=	

END PROJECT
STA. 203+23.22



P-40-0564

BEGIN PROJECT 2981-00-73
STA. 200+58.40
Y= 261686.214
X= 569629.560



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 (300'EB)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

LAYOUT

SCALE 0 .5 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (1987), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1998 (2007).

ORIGINAL PLANS PREPARED BY

BLOOM COMPANIES, LLC
Infrastructure Innovation and Ingenuity

WISCONSIN
YAKOV N. NENAYDYKH
E-30610
Milwaukee, WI
PROFESSIONAL ENGINEER

11/30/16 (Date)

Yakov Nenaydykh (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	HIMALAYAN CONSULTANTS, LLC
Designer	BLOOM COMPANIES, LLC
Managment Consultant	DAAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 12/1/16

(Management Consultant Signature)

E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-73\SHEETSPLAN\010101-TI.DWG
LAYOUT NAME - 010101-TI - TITLE SHEET 1 IN EQ 1 MI

PLOT DATE : 11/8/2016 4:44 PM PLOT BY : VALBON LATIFI PLOT NAME :

2

GENERAL NOTES

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

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

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL,WHICH SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE ABANDONMENT OR REMOVAL ITEM.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

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

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

INLET PROTECTION SHALL BE PLACED AT ALL INLET LOCATIONS ACCEPTING STORM WATER FROM THE PROJECT AREA OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

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

DISTURBED AREAS EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, MULCHED AND SEEDED AS DIRECTED BY THE ENGINEER IN THE FIELD.

FERTILIZER SHALL NOT BE USED WITHIN 200' OF NAVIGABLE WATERWAYS OR WETLANDS. THE ROOT RIVER IS NAVIGABLE.

OTHER AGENCIES

MILWAUKEE COUNTY DOT

AZIZ ALEIOW
2711 W. WELLS ST.
MILWAUKEE, WI 53208
(414) 278-4911
Aziz.Aleiow@milwcnty.com

US GEOLOGICAL SURVEY

ROB WASCHBUSCH
8505 RESEARCH WAY
MIDDLETON, WI 53562
(608) 821-3868
rjwaschb@usgs.gov

VILLAGE OF HALES CORNERS

MICHAEL MARTIN
5635 S. NEW BERLIN RD.
HALES CORNERS, WI 53130
(414) 529-6161
mjmartin@halescorners.org

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

KRISTINA BETZOLD
2300 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
(414) 507-4946
kristina.betzold@wisconsin.gov

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

STANDARD ABBREVIATIONS

AECPRC	APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE
AECPRCHE	APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
AEW	APRON END WALL
B/C	BACK OF CURB
BM	BENCH MARK
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELIPTICAL
Δ	DELTA
HMA	HOT MIX ASPHALT
MIN	MINIMUM
PGL	PROFILE GRADE LINE
RC	REVERSE CROWN

2

HMA PAVEMENT LAYERS

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	TRAFFIC	ASPHALT BINDER	BINDER DESIGNATION LEVEL
5.0"	2.0" UPPER	4	LT	58-28	S
	3.0" LOWER	3	LT	58-28	S

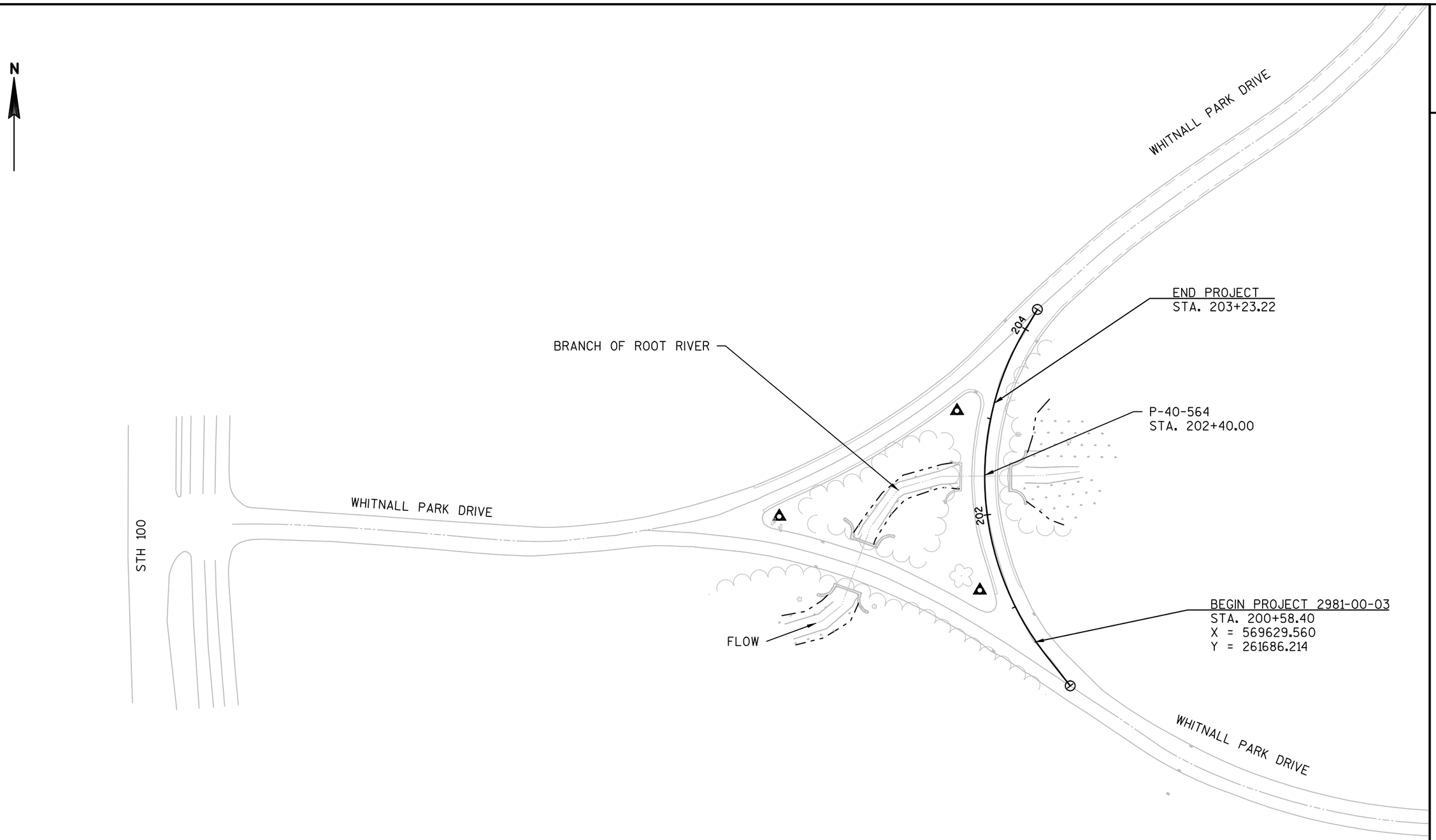
DESIGNER CONTACTS

BLOOM COMPANIES, LLC.

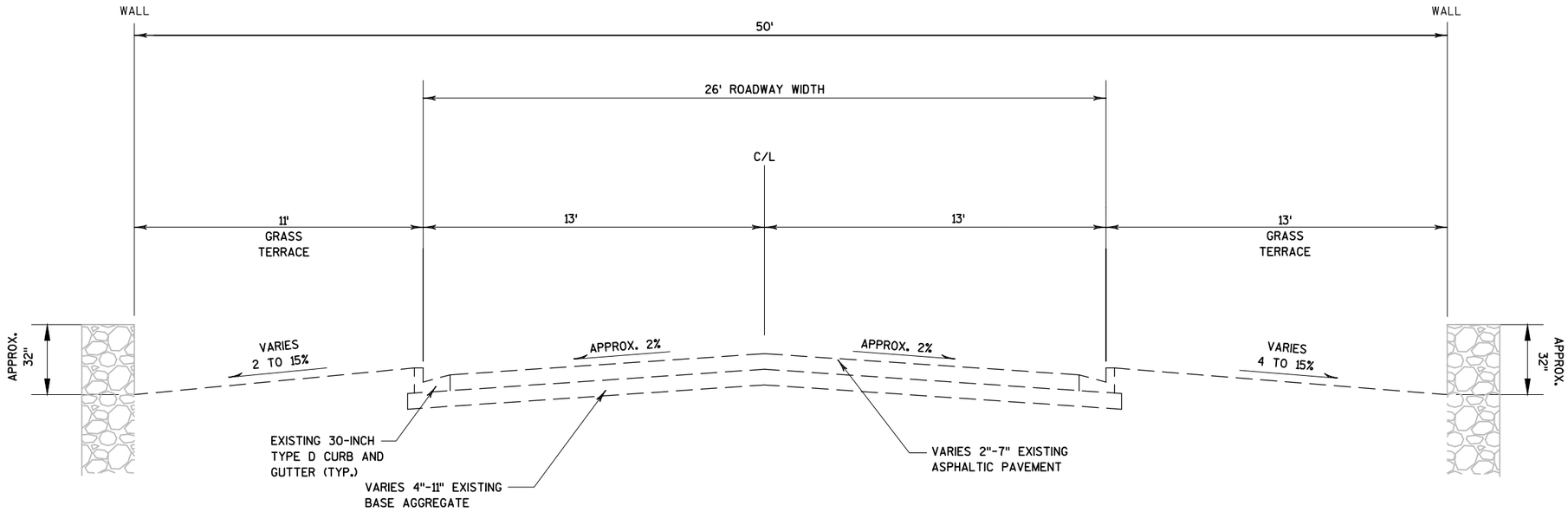
YAN NENAYDYKH
10501 W. RESEARCH DRIVE, SUITE 100
MILWAUKEE, WI 53226
(414) 292-4599
ynenaydykh@Bloomcos.com

ORDER OF SECTION 2 DETAIL SHEETS

2

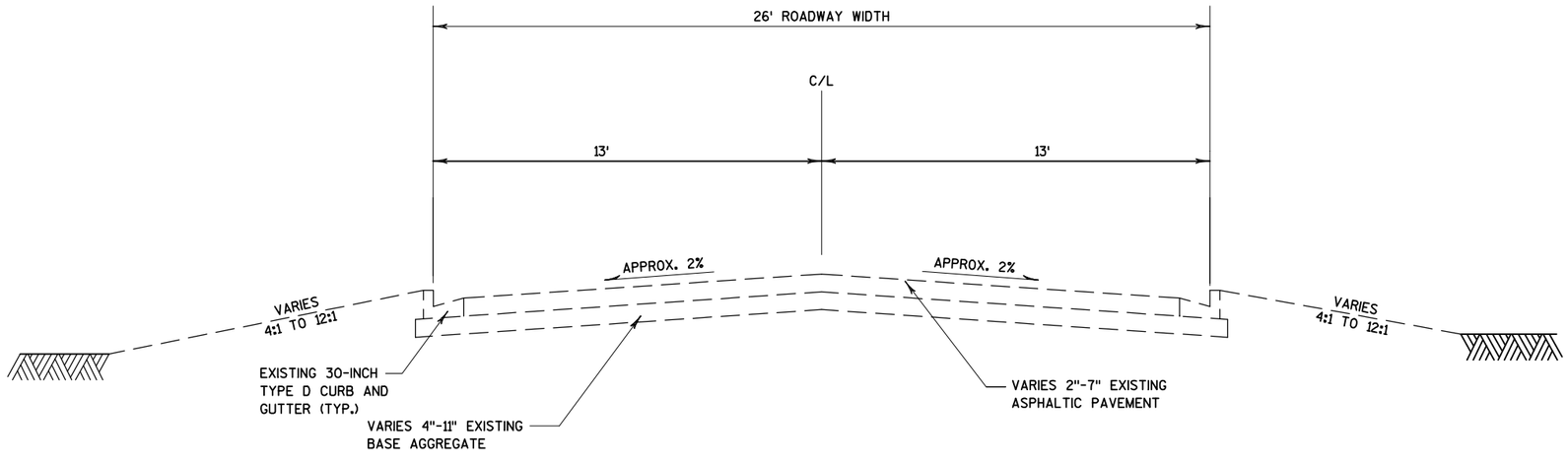


PROJECT NO:2981-00-73	HWY:LOCAL STREET	COUNTY:MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION

STA. 202+22.60 TO STA. 202+55.0 (P-40-564)

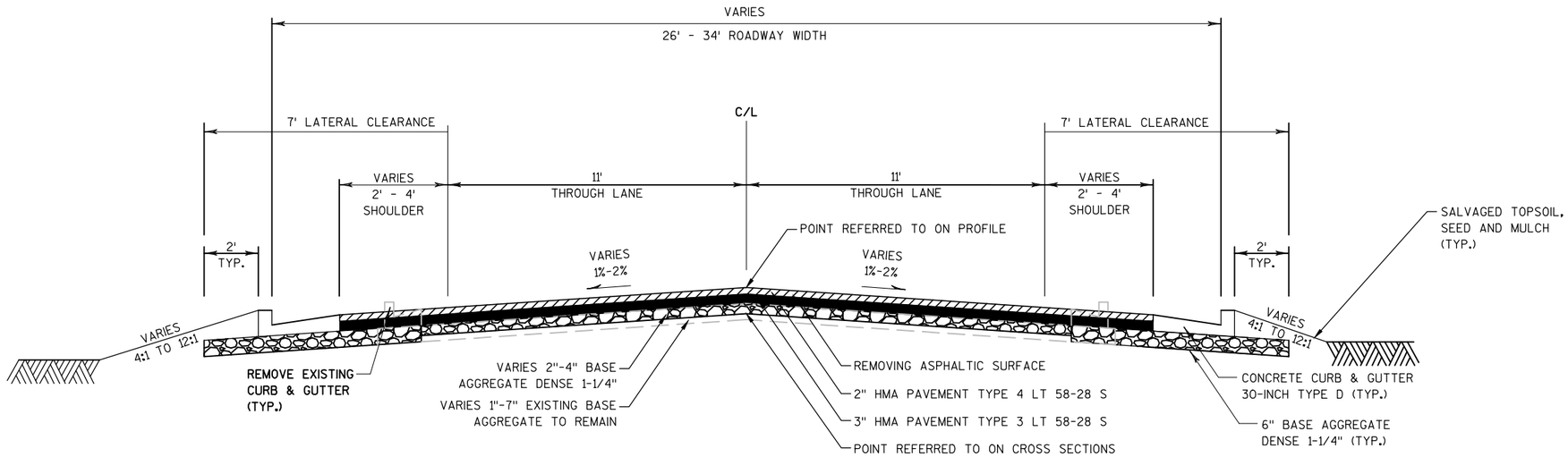


TYPICAL EXISITING SECTION

STA. 201+17.00 TO STA. 202+22.60
STA. 202+55.00 TO STA. 203+15.00

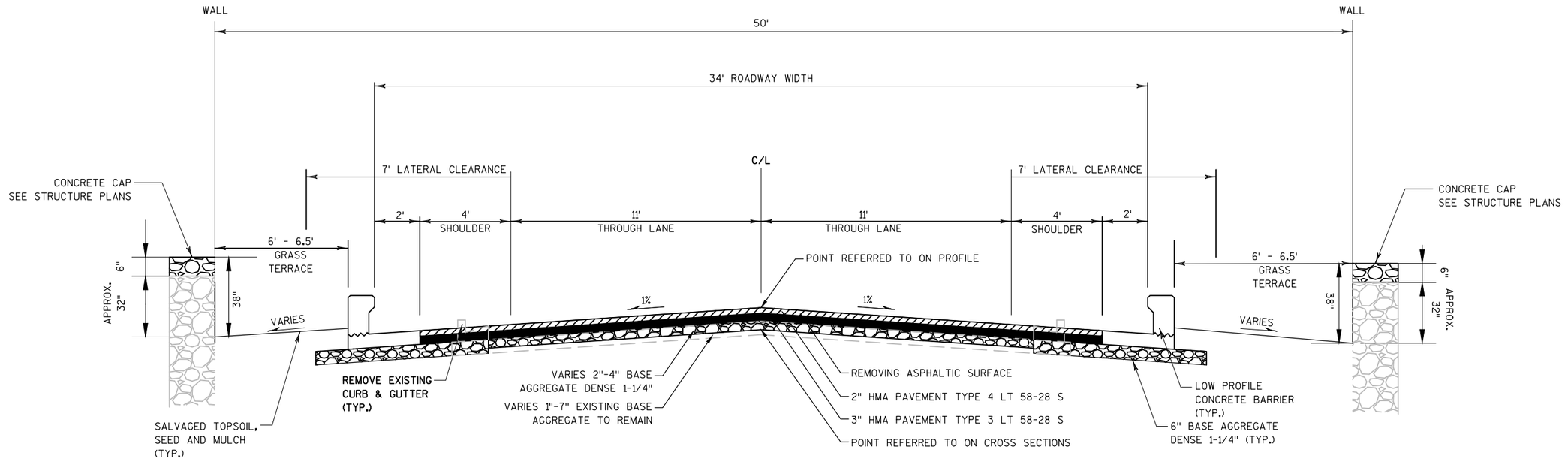
PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 4	E

2



TYPICAL FINISHED SECTION

STA. 200+58.40 TO STA. 202+22.60
STA. 202+55.00 TO STA. 203+23.22



TYPICAL FINISHED SECTION

STA. 202+22.60 TO STA. 202+55.00 (P-40-564)

PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

2

N

WHITNALL PARK DRIVE

BRANCH OF ROOT RIVER

CLEARING AND GRUBBING
300 SY

CLEARING AND GRUBBING
35 SY

15'

TEMPORARY ACCESS TO BE PAID
UNDER BID ITEM ARTICULATING
CONCRETE BLOCK REVETMENT
SYSTEM OPEN CELL (TYP.)

P-40-564

LOW PROFILE
CONCRETE BARRIER
SEE CONSTRUCTION DETAIL

CONCRETE SIDEWALK
5-INCH (TYP.)

CP 103

6" I.D. TREE TO REMAIN

CONCRETE CURB AND
GUTTER 30-INCH TYPE D

SLOPE INTERCEPT
(TYP.)

CP 102

761.22'

759.95'

R7'

INLET TO REMAIN

SAWCUT REQUIRED

END PROJECT
STA 203+23.22

763.23'

758.83'

WHITNALL PARK DR. ℄

202+00

761.52'

760.10'

758.60'

203+00

759.13'

R10'

WHITNALL PARK DRIVE

MATCH LINE PROJECT I.D. 2981-00-04
XXXX XXXX XXXX XXXX XXXX XXXX

765.18'

765.06'

763.53'

761.22'

759.95'

758.83'

763.23'

201+00

766.19'

758.35'

765.93'

HMA PAVEMENT

R325'

R272'

SAWCUT REQUIRED

SLOPE INTERCEPT
(TYP.)

ADJUST INLET

LOW PROFILE
CONCRETE BARRIER
SEE CONSTRUCTION DETAIL

24" I.D. TREE TO REMAIN

WETLAND BOUNDARY
(TYP.)

MATCH EXISTING

15'

20'

CLEARING AND GRUBBING
90 SY

CLEARING AND GRUBBING
35 SY

BEGIN PROJECT
STA 200+58.40
X= 569629.560
Y= 261686.214

CONCRETE CURB AND GUTTER
30-INCH TYPE D

36" I.D. TREE TO REMAIN

PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 6	E

2

NOTE

THE CONTRACTOR MAY CHOSE TO INSTALL THE CONCRETE REVETMENT SYSTEM BY CONSTRUCTING A TEMPORARY BYPASS DIVERSION PIPE FOR THE CREEK. IF THE CONTRACTOR CHOOSES THIS OPTION, ALL CONDITIONS DESCRIBED IN THE SPECIFICATION MUST BE MET.

LEGEND

- ###### EROSION MAT CLASS I URBAN TYPE A, SEEDING MIXTURE NO. 60, MULCHING, AND TEMPORARY SEEDING
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- COFFERDAM LIMITS
- INLET PROTECTION TYPE C
- SURFACE WATER FLOW
- TOPSOIL AND SEED

N

WHITNALL PARK DRIVE

COFFERDAM LINE STAGE 2 SEE STRUCTURE PLANS

COFFERDAM LINE STAGE 1 SEE STRUCTURE PLANS

WETLAND BOUNDARY (TYP.)

ARTICULATING CONCRETE BLOCK/HEAVY RIPRAP (TYP.) SEE STRUCTURE PLANS FOR DETAILS

2.5' MAX TYP

6' MINIMUM SPACE FOR WATER FLOW

WHITNALL PARK DR. ℄

202+00

203+00

END PROJECT STA 203+23.22

WHITNALL PARK DRIVE

MATCH LINE PROJECT I.D. 2981-00-04

XXXX XXXX XXXX XXXX XXXX XXXX XXXX

201+00

200+38.85

BEGIN PROJECT
STA 200+58.40
X= 569629.560
Y= 261686.214

WETLAND BOUNDARY (TYP.)

INLET PROTECTION STA. 203+90 RT

COFFERDAM LINE STAGE 1 SEE STRUCTURE PLANS

COFFERDAM LINE STAGE 2 SEE STRUCTURE PLANS

BRANCH OF ROOT RIVER

PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 7	E

2

LEGEND

SIGN ON PERMANENT SUPPORT

N

BRANCH OF ROOT RIVER

W5-52L
12"X36"

SLOPE INTERCEPT
(TYP.)

STOP
R1-1
30"X30"

W5-52R
12"X36"

WHITNALL PARK DR. ℄

202+00

203+00

END PROJECT
STA 203+23.22

MATCH LINE PROJECT I.D. 2981-00-04
XXXX XXXX XXXX XXXX XXXX XXXX XXXX

201+00

W5-52R
12"X36"

W5-52L
12"X36"

NO PARKING ANY TIME
R7-1-D
18"X24"

WETLAND BOUNDARY
(TYP.)

00+38.85

BEGIN PROJECT
200+58.40
X= 569629.560
Y= 261686.214

PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 8	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-73\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 01

PLOT DATE : 12/1/2016 9:15 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

N

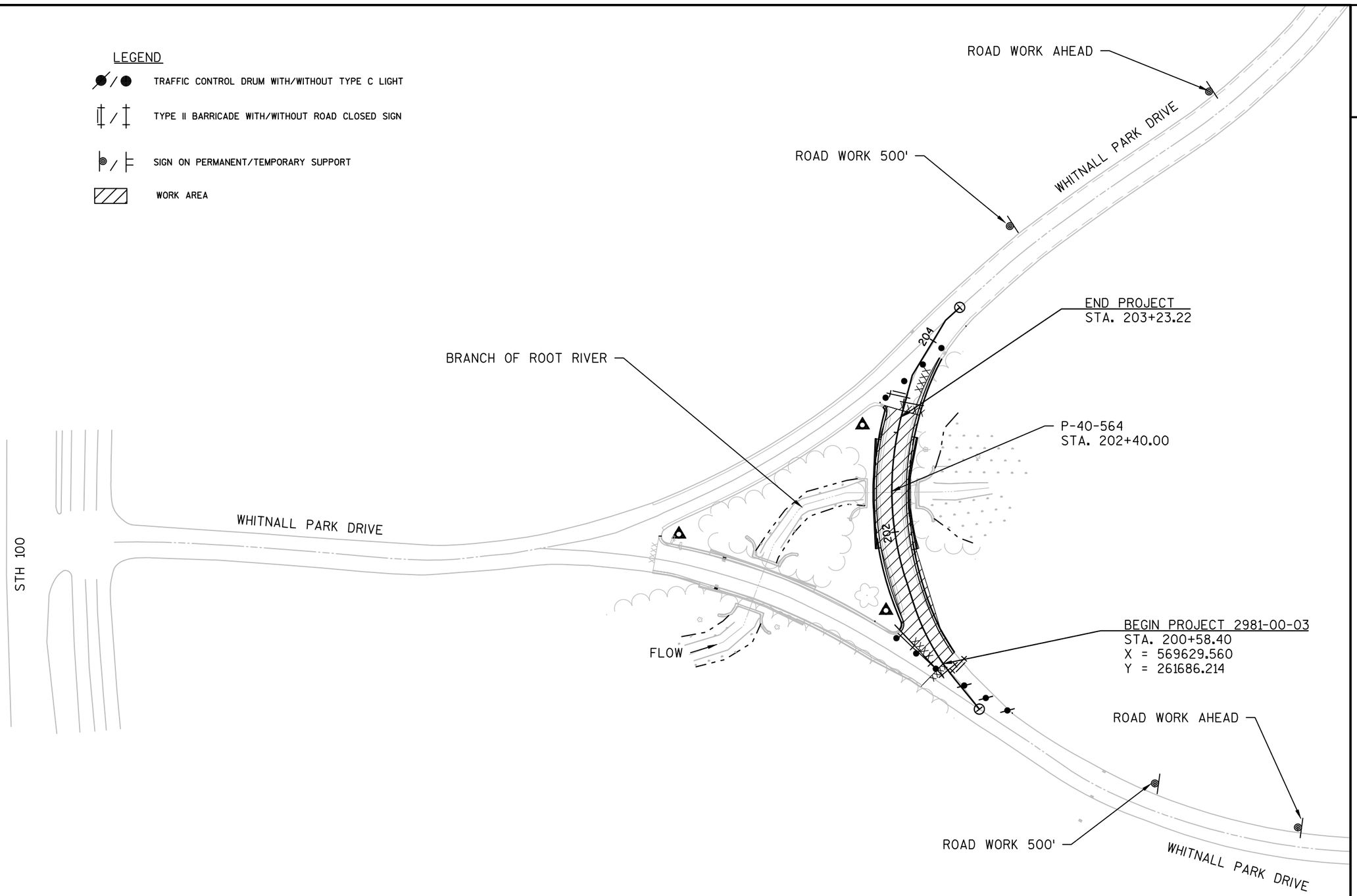
LEGEND

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT

TYPE II BARRICADE WITH/WITHOUT ROAD CLOSED SIGN

SIGN ON PERMANENT/TEMPORARY SUPPORT

WORK AREA



PROJECT NO:2981-00-73	HWY:LOCAL STREET	COUNTY:MILWAUKEE	TRAFFIC CONTROL	SHEET 9	E

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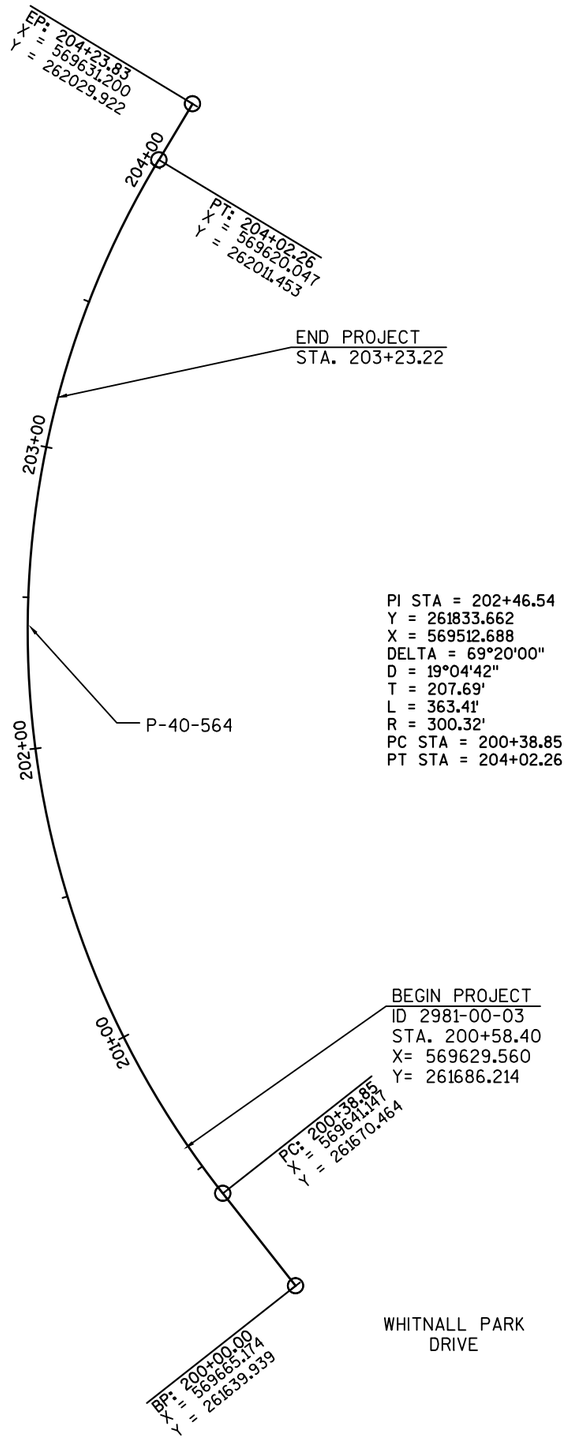
LAYOUT NAME - PO

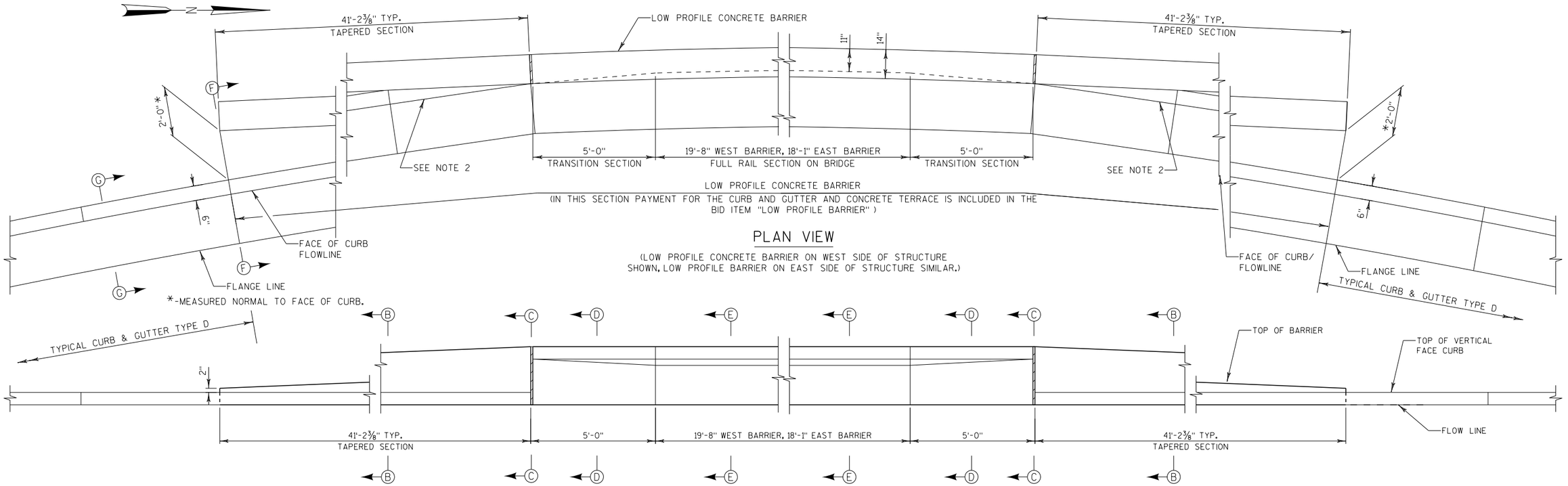
PLOT DATE : 12/1/2016 9:17 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:100 FT

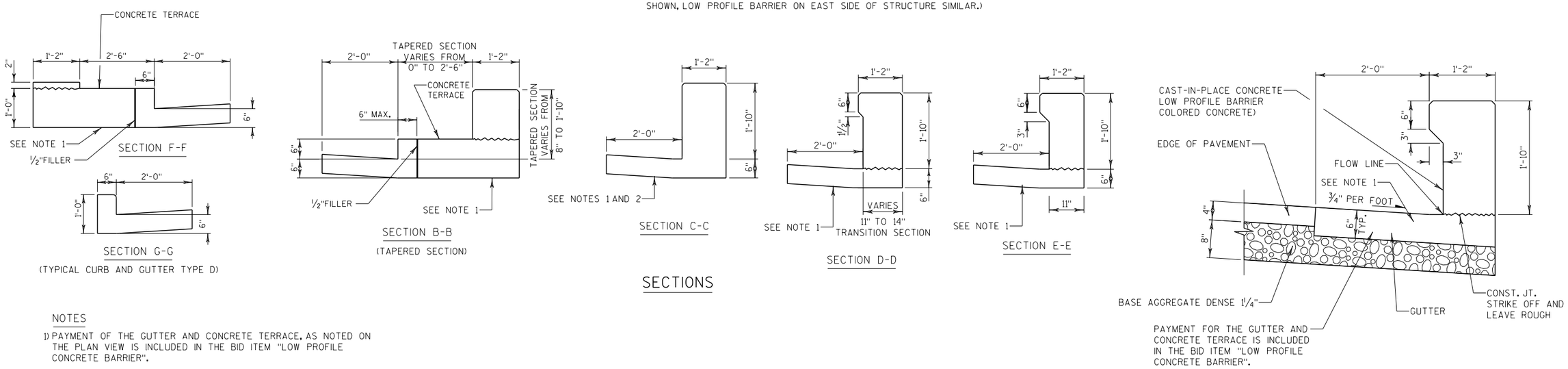
WISDOT/CADDS SHEET 42

2



PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 10	E

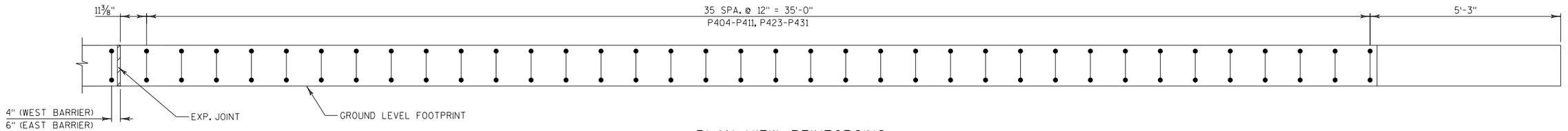




NOTES

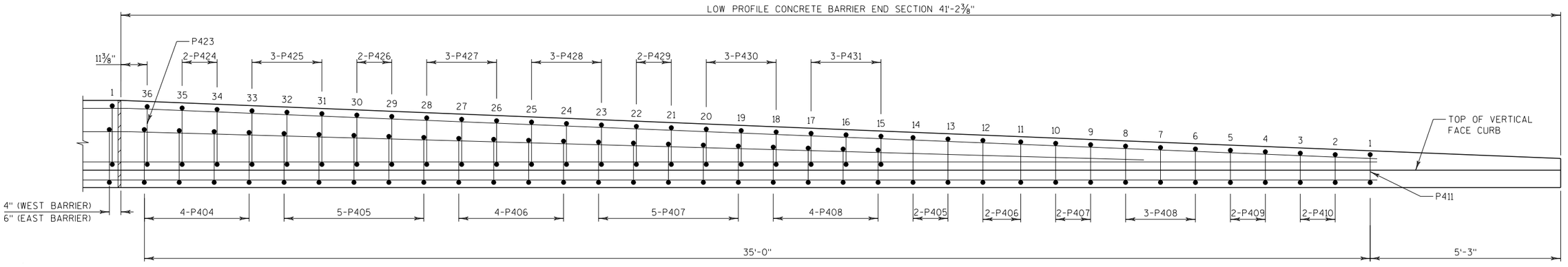
1) PAYMENT OF THE GUTTER AND CONCRETE TERRACE, AS NOTED ON THE PLAN VIEW IS INCLUDED IN THE BID ITEM "LOW PROFILE CONCRETE BARRIER".

2) THE CURB HEAD SHALL BE POURED MONOLITHICALLY WITH THE TAPERED SECTION OF THE LOW PROFILE CONCRETE BARRIER UNTIL A BUTT JOINT FOR A FULL CURB HEAD CAN BE ESTABLISHED.



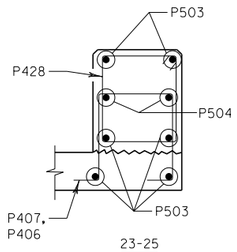
PLAN VIEW REINFORCING

(LOW PROFILE CONCRETE BARRIER AT NORTHWEST QUADRANT OF STRUCTURE SHOWN, OTHER TAPERED END SECTIONS SIMILAR)

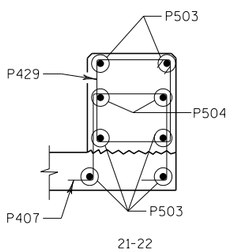


PROFILE VIEW REINFORCING

(LOW PROFILE CONCRETE BARRIER AT NORTHWEST QUADRANT OF STRUCTURE SHOWN, OTHER TAPERED END SECTIONS SIUMILAR)



23-25



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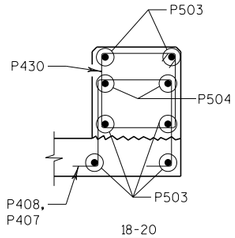

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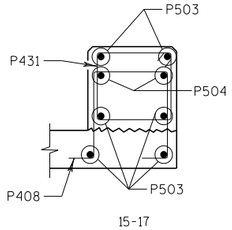

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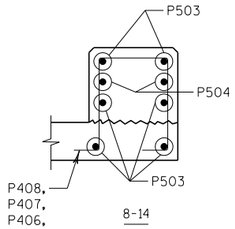

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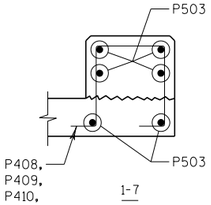

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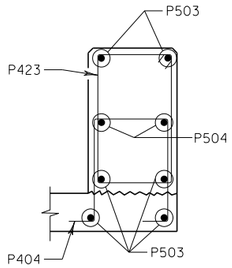

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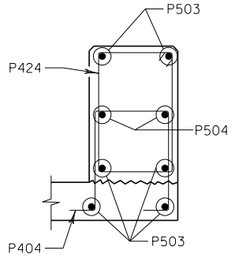

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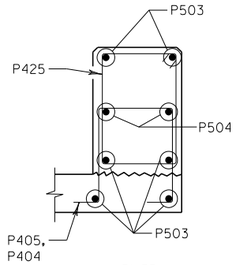

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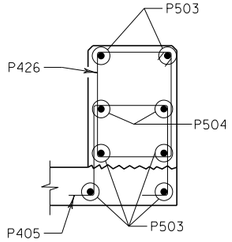

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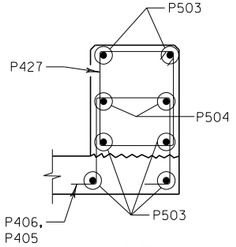
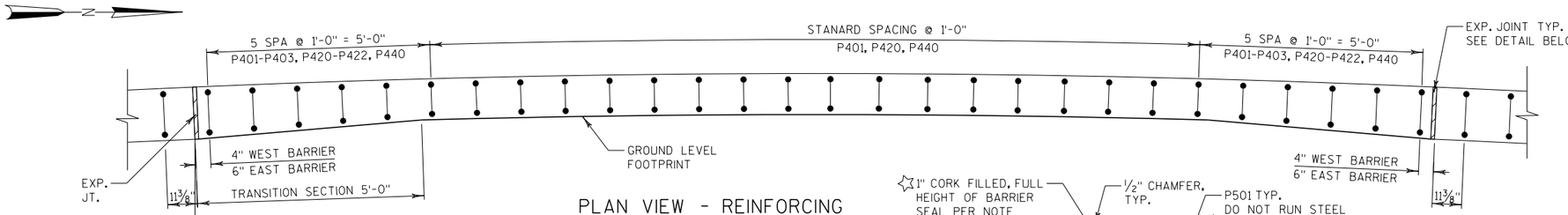


26-28

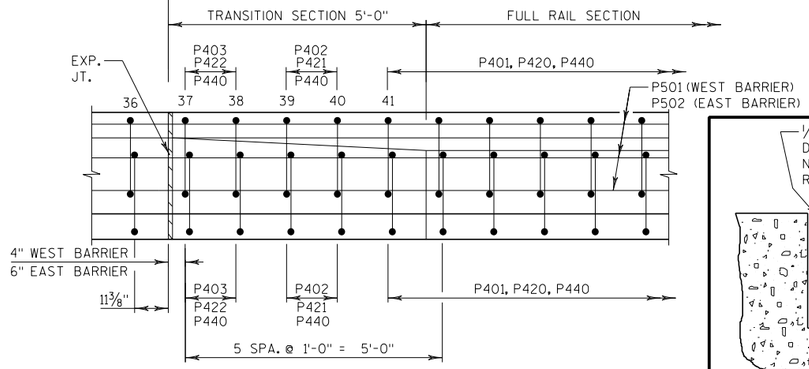
PROJECT NO: 2981-00-73	HWY: WHITNALL PARK BRIDGES	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 12	E



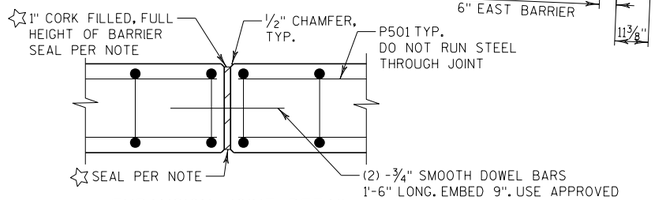
PLAN VIEW - REINFORCING

TYPICAL AT LOW PROFILE CONCRETE BARRIER ON BRIDGE AND APPROACHES

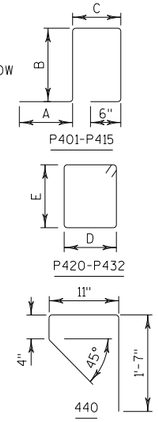
SEE PREVIOUS SHEET FOR END SECTION



PROFILE VIEW - REINFORCING



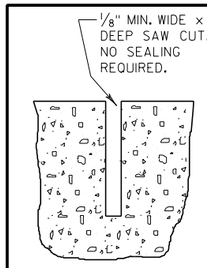
EXPANSION JOINT DETAIL



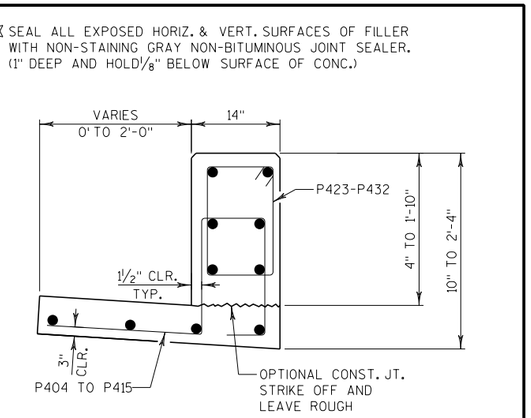
BENDING DIAGRAMS

BAR MARK	DIMENSIONS A	B	C
P401	2'-3"	1'-5"	8"
P402	2'-2"	1'-5"	9"
P403	2'-1"	1'-5"	10"
P404	2'-0"	1'-2"	11"
P405	2'-0"	1'-1"	11"
P406	2'-0"	1'-0"	11"
P407	2'-0"	11"	11"
P408	2'-0"	10"	11"
P409	2'-0"	9"	11"
P410	2'-0"	8"	11"
P411	2'-0"	7"	11"

BAR MARK	DIMENSIONS D	E
P420	8"	1'-4"
P421	9"	1'-4"
P422	10"	1'-4"
P423	11"	1'-4"
P424	11"	1'-3"
P425	11"	1'-2"
P426	11"	1'-1"
P427	11"	1'-0"
P428	11"	11"
P429	11"	10"
P430	11"	9"
P431	11"	8"

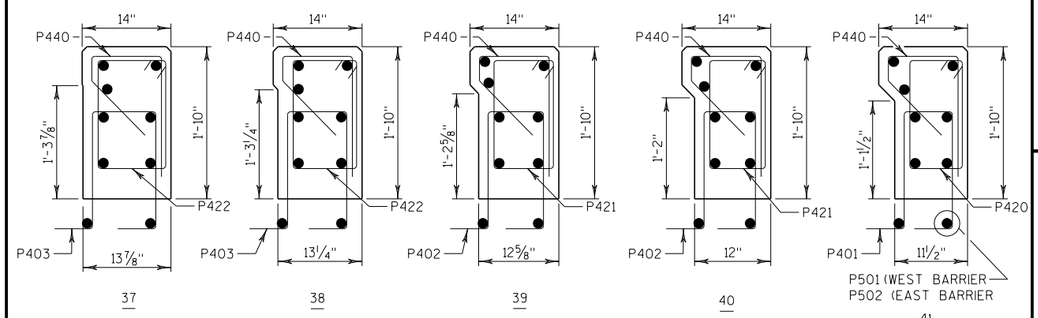


CONTRACTION JOINT DETAIL

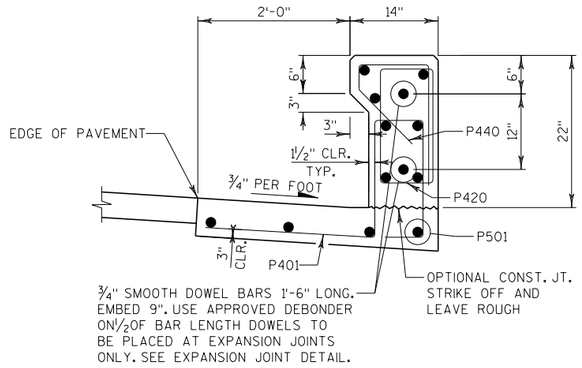


LOW PROFILE CONCRETE BARRIER SECTION AT TAPER

(FOR HORIZ. REINFORCMENT, SEE SHEET XX))



REBAR PLACEMENT - TRANSITION CROSS SECTIONS



TYPICAL LOW PROFILE CONCRETE BARRIER SECTION

(TYPICAL FULL RAIL SECTION AT APPROACHES)

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	42	6'-1"	X	-	VERTICAL AT FULL AND TRANSITION
P402	X	8	6'-1"	X	-	VERTICAL AT TRANSITION SECTION
P403	X	8	6'-1"	X	-	VERTICAL AT TRANSITION SECTION
P404	X	16	5'-5"	X	-	VERT.AT TRANS. AND TAPER
P405	X	28	5'-3"	X	-	VERTICAL AT TAPER SECTION
P406	X	24	5'-1"	X	-	VERTICAL AT TAPER SECTION
P407	X	28	4'-11"	X	-	VERTICAL AT TAPER SECTION
P408	X	28	4'-9"	X	-	VERTICAL AT TAPER SECTION
P409	X	8	4'-7"	X	-	VERTICAL AT TAPER SECTION
P410	X	8	4'-5"	X	-	VERTICAL AT TAPER SECTION
P411	X	4	4'-3"	X	-	VERTICAL AT TAPER SECTION
P420	X	42	4'-2"	X	-	VERTICAL AT FULL AND TRANSITION
P421	X	8	4'-4"	X	-	VERTICAL AT TRANSITION SECTION
P422	X	8	4'-6"	X	-	VERTICAL AT TRANSITION SECTION
P423	X	4	4'-8"	X	-	VERTICAL AT TAPER SECTION
P424	X	8	4'-6"	X	-	VERTICAL AT TAPER SECTION
P425	X	12	4'-4"	X	-	VERTICAL AT TAPER SECTION
P426	X	8	4'-2"	X	-	VERTICAL AT TAPER SECTION
P427	X	12	4'-0"	X	-	VERTICAL AT TAPER SECTION
P428	X	12	3'-10"	X	-	VERTICAL AT TAPER SECTION
P429	X	8	3'-8"	X	-	VERTICAL AT TAPER SECTION
P430	X	12	3'-6"	X	-	VERTICAL AT TAPER SECTION
P431	X	12	3'-4"	X	-	VERTICAL AT TAPER SECTION
P440	X	58	3'-9"	X	-	VERT. AT FULL SECTION AND TRANSITION
P501	X	9	29'-8"	-	-	LONGIT. AT FULL SECTION AND TRANSITION(WEST)
P502	X	9	28'-1"	-	-	LONGIT. AT FULL SECTION AND TRANSITION(EAST)
P503	X	24	36'-0"	-	-	LONGIT. AT TAPER SECTION
P504	X	8	29'-6"	-	-	LONGIT. AT TAPER SECTION

NOTES

1. USE 1 1/2" CLEAR CONCRETE COVER FOR REBAR IN BARRIER, AND 3" CLEAR FOR CONCRETE CAST AGAINST THE 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 3/4" 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".

2981-00-73

Line	Item	Item Description	Unit	Total	Qty
0010	201.0110	Clearing	SY	460.000	460.000
0020	201.0210	Grubbing	SY	460.000	460.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 202+38.67	LS	1.000	1.000
0040	204.0150	Removing Curb & Gutter	LF	475.000	475.000
0060	205.0100	Excavation Common	CY	332.000	332.000
0070	206.1000	Excavation for Structures Bridges (structure) 01. P-40-564	LS	1.000	1.000
0080	206.5000	Cofferdams (structure) 01. P-40-564	LS	1.000	1.000
0100	210.1500	Backfill Structure Type A	TON	5.000	5.000
0110	213.0100	Finishing Roadway (project) 01. 2981-00-73	EACH	1.000	1.000
0130	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	285.000	285.000
0140	311.0110	Breaker Run	TON	152.000	152.000
0150	405.0200	Coloring Concrete Custom	CY	15.000	15.000
0160	455.0605	Tack Coat	GAL	25.000	25.000
0170	460.2000	Incentive Density HMA Pavement	DOL	158.000	158.000
0180	460.5223	HMA Pavement 3 LT 58-28 S	TON	147.000	147.000
0190	460.5224	HMA Pavement 4 LT 58-28 S	TON	98.000	98.000
0200	502.0100	Concrete Masonry Bridges	CY	2.000	2.000
0210	502.4204	Adhesive Anchors No. 4 Bar	EACH	30.000	30.000
0220	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	100.000	100.000
0230	509.1500	Concrete Surface Repair	SF	50.000	50.000
0240	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	465.000	465.000
0250	602.0410	Concrete Sidewalk 5-Inch	SF	155.000	155.000
0280	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0290	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	30.000	30.000
0300	619.1000	Mobilization	EACH	0.500	0.500
0310	624.0100	Water	MGAL	5.000	5.000
0320	625.0500	Salvaged Topsoil	SY	465.000	465.000
0330	627.0200	Mulching	SY	360.000	360.000
0340	628.1104	Erosion Bales	EACH	215.000	215.000
0350	628.1504	Silt Fence	LF	535.000	535.000
0360	628.1520	Silt Fence Maintenance	LF	535.000	535.000
0370	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0380	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0390	628.2006	Erosion Mat Urban Class I Type A	SY	360.000	360.000
0400	628.7015	Inlet Protection Type C	EACH	4.000	4.000
0410	630.0160	Seeding Mixture No. 60	LB	5.000	5.000
0420	630.0200	Seeding Temporary	LB	1.700	1.700
0430	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	6.000	6.000

2981-00-73

Line	Item	Item Description	Unit	Total	Qty
0440	637.2210	Signs Type II Reflective H	SF	8.180	8.180
0450	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0460	642.5201	Field Office Type C	EACH	0.500	0.500
0470	643.0100	Traffic Control (project) 01. 2981-00-73	EACH	1.000	1.000
0490	643.0300	Traffic Control Drums	DAY	1,375.000	1,375.000
0500	643.0410	Traffic Control Barricades Type II	DAY	275.000	275.000
0510	643.0715	Traffic Control Warning Lights Type C	DAY	165.000	165.000
0520	643.0900	Traffic Control Signs	DAY	220.000	220.000
0540	650.5000	Construction Staking Base	LF	325.000	325.000
0550	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	465.000	465.000
0560	650.6500	Construction Staking Structure Layout (structure) 01. P-40-564	LS	1.000	1.000
0580	650.9910	Construction Staking Supplemental Control (project) 01. 2981-00-73	LS	1.000	1.000
0600	650.9920	Construction Staking Slope Stakes	LF	568.000	568.000
0610	690.0150	Sawing Asphalt	LF	175.000	175.000
0620	SPV.0035	Special 01. SPLIT FACED FIELD STONE MASONRY	CY	7.000	7.000
0630	SPV.0035	Special 02. FIELD STONE RIPRAP HEAVY	CY	40.000	40.000
0640	SPV.0090	Special 01. STONE MASONRY POINTING	LF	484.000	484.000
0660	SPV.0090	Special 03. LOW PROFILE CONCRETE BARRIER	LF	225.000	225.000
0670	SPV.0180	Special 01. ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL	SY	320.000	320.000

3

CLEARING AND GRUBBING ITEMS

CATEGORY	LOCATION		CLEARING 201.0110 SY	GRUBBING 201.0210 SY
0010	WHITNALL PARK DR			
	202+00	LT	300	300
	202+00	RT	90	90
	202+60	LT	35	35
	202+60	RT	35	35
TOTAL			460	460

REMOVING CURB & GUTTER

CATEGORY	LOCATION	OFFSET	204.0150 LF
0010	WHITNALL PARK DR		
	201+19 - 203+85	RT	260
	201+19 - 203+23	LT	215
TOTAL			475

3

3

3

EARTHWORK SUMMARY

CATEGORY	DIVISION	LOCATION	STATION	TO	STATION	(C) CUT EXCAVATION CY	(1) 205.0100 EXCAVATION COMMON CY	(S) SALVAGED PAVEMENT MATERIAL CY	(2) AVAILABLE MATERIAL CY	(3) 120% EXPANDED FILL CY	(4) MASS ORDINATE EXCESS (SHORTAGE) CY
0010	1	WHITNALL PARK DR	200+58	-	203+23	225	225	105	120	30	90
0020	1	WHITNALL PARK DR	202+23	-	202+55	107	107	--	107	--	107
TOTALS							332				197

NOTES

1) EXCAVATION COMMON IS THE SUM OF THE CUT (C) AND EBS EXCAVATION (E).
2) AVAILABLE MATERIAL = CUT (C) - SALVAGED PAVEMENT MATERIAL (S).
3) EXPANDED FILL = UNEXPANDED FILL * 120% FILL FACTOR.
4) MASS ORDINATE = AVAILABLE MATERIAL (2) - EXPANDED FILL (3).

3

BASE AGGREGATE ITEMS

CATEGORY	LOCATION	OFFSET	305.0120 BASE AGGREGAT DENSE 1 1/4-INCH TON	* 624.0100 WATER MGAL
0010	WHITNALL PARK DR			
	200+58 - 203+23	RT	146	1.5
	200+58 - 203+23	LT	139	1.5
	TOTALS		285	3.0

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALT PAVEMENT ITEMS

CATEGORY	LOCATION	455.0605 TACK COAT GAL	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
0010	WHITNALL PARK DR				
	200+58 - 203+23	25	158	147	98
	TOTALS	25	158	147	98

3

CONCRETE ITEMS

CATEGORY	LOCATION	OFFSET	* 405.0200 COLORING CONCRETE CUSTOM CY	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	SPV.0090.03 LOW PROFILE CONCRETE BARRIER LF
0010	WHITNALL PARK DR					
	200+58 - 202+14	RT	--	155	--	--
	202+55 - 203+89	RT	--	125	--	--
	201+06 - 202+24	LT	--	110	--	--
	202+62 - 203+23	LT	--	75	--	--
	201+87 - 202+08	LT	--	--	20	--
	201+79 - 201+95	RT	--	--	50	--
	202+67 - 202+91	LT	--	--	35	--
	202+61 - 202+99	RT	--	--	50	--
	201+87 - 202+91	LT	6.4	--	--	113.5
	201+79 - 202+99	RT	6.6	--	--	111.5
	TOTALS		13	465	155	225

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ADJUSTING INLET COVERS

CATEGORY	LOCATION	OFFSET	611.8115 EACH
0010	WHITNALL PARK DR		
	200+80	RT	1
	TOTAL		1

3

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	OFFSET	* 624.0100 WATER MGAL	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.7015 INLET PROTECTION TYPE C EACH	630.0160 SEEDING MIXTURE NO. 60 LB	630.0200 SEEDING TEMPORARY LB
0010	1	WHITNALL PARK DR													
		200+58 - 203+23	LT/RT	2.0	370	285	170	425	425	2	4	285	4	4.0	1.3
		UNDISTRIBUTED		--	95	75	45	110	110	--	--	75	--	1.0	0.3
		TOTALS		2.0	465	360	215	535	535	2	4	360	4	5.0	1.7

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-73\SHEETSPLAN\030201-MQ.DWG
LAYOUT NAME - 030201-MQ - 030201_MQ (4)
PLOT DATE : 2/13/2017 11:58 AM PLOT BY : VALBON LATIFI PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

3

PERMANENT SIGNING ITEMS

CATEGORY	SIGN #	SIGN CODE	SIGN DIM	634.0612 POSTS WOOD 4x6-INCH X 12 FEET EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF
0010	P1-1	W5-52R	12"X36"	1	--	3.00
	P1-2	W5-52L	12"X36"	1	--	3.00
	P1-3	W5-52R	12"X36"	1	--	3.00
	P1-4	W5-52L	12"X36"	1	--	3.00
	P1-5	R1-1	30"X30"	1	5.18	--
	P1-6	R7-1-D	18"X24"	1	3.00	--
	TOTALS			6	8.18	12.00

SAWING ASPHALT

CATEGORY	LOCATION	OFFSET	690.0150 LF	REMARKS
0010	WHITNALL PARK DR			
	200+58	LT/RT	80	BEGIN PROJECT
	203+23	LT/RT	95	END PROJECT
	TOTALS		175	

3

TRAFFIC CONTROL ITEMS

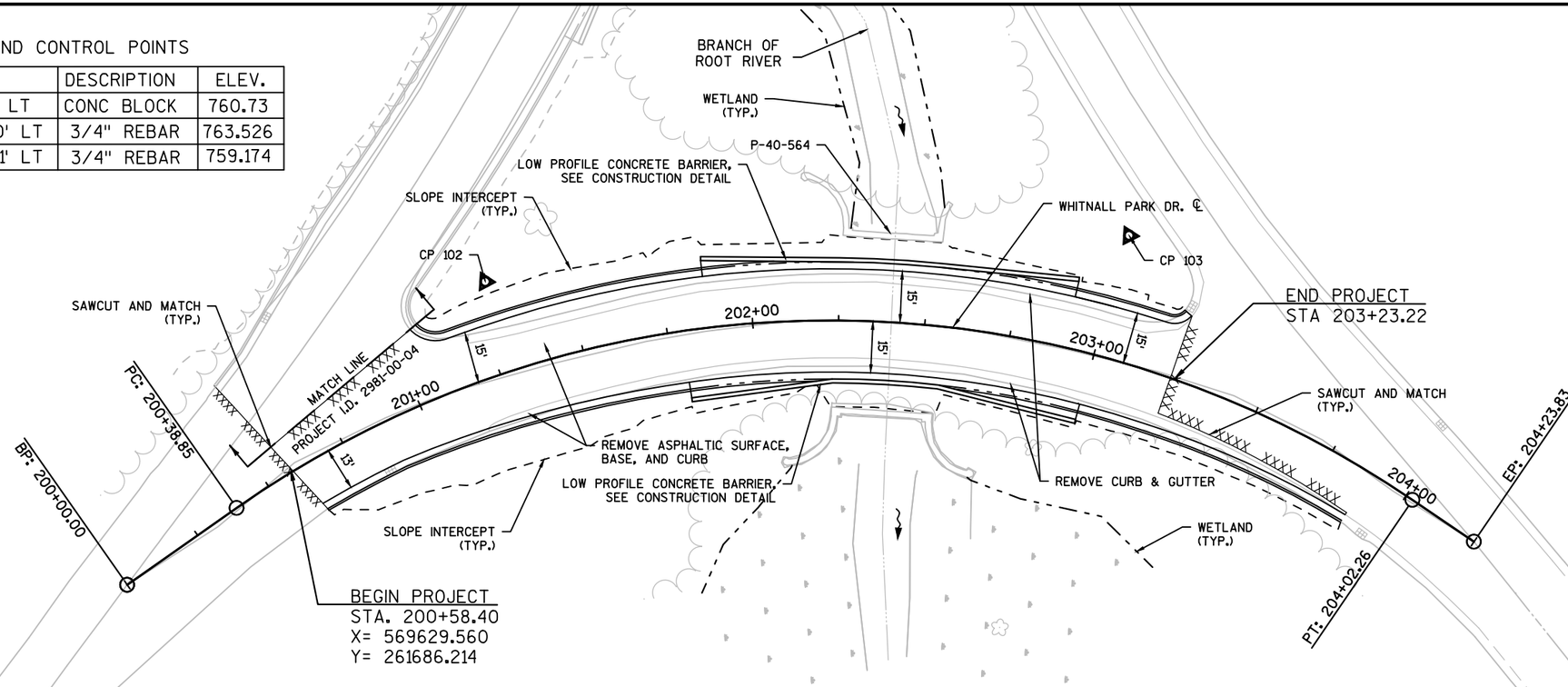
CATEGORY	LOCATION	STAGE DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS
0010	WHITNALL PARK DR.	55	25	1,375	5	275	3	165	4	220
	TOTALS	55		1,375		275		165		220

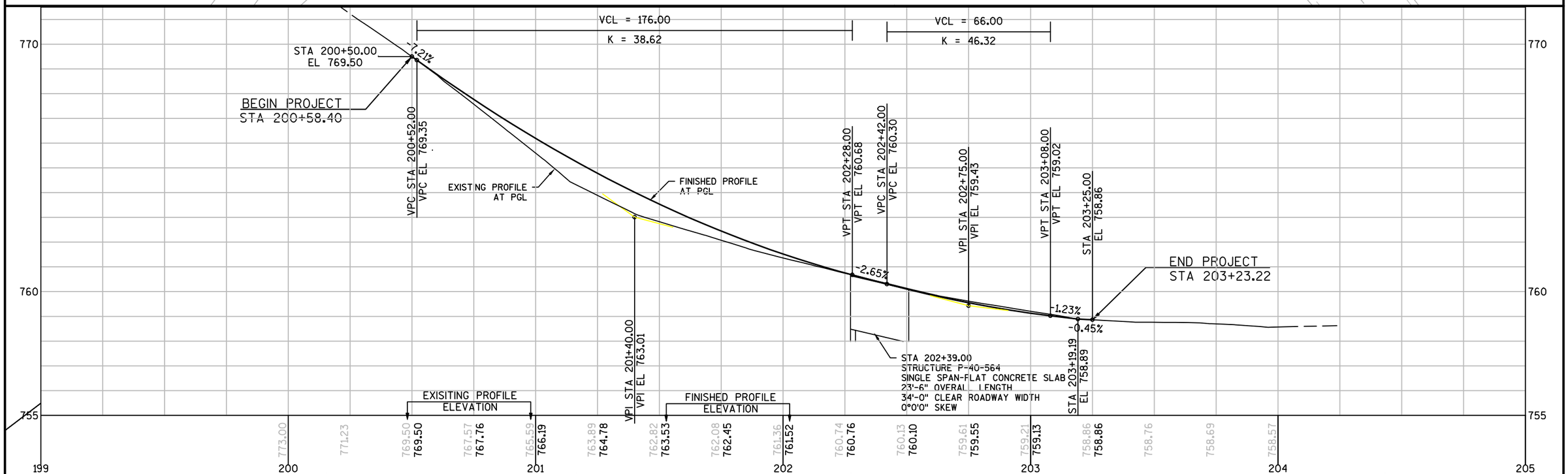
CONSTRUCTION STAKING ITEMS

CATEGORY	STAGE	LOCATION	OFFSET	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. P-40-564 LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 2981-00-73 LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	1	WHITNALL PARK DR						
		200+58 - 203+23	LT/RT	325	465	1	1	568
		TOTALS		325	465	1	1	568

BENCH MARKS AND CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
1627	202+18.75, 16.12' LT	CONC BLOCK	760.73
CP 102	201+29.08, 27.00' LT	3/4" REBAR	763.526
CP 103	203+00.97, 36.01' LT	3/4" REBAR	759.174

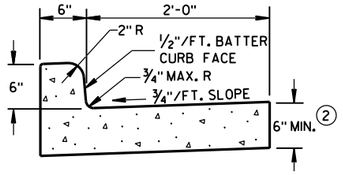




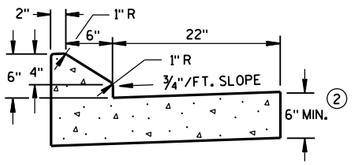
PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE: BRIDGE (P-40-564)	SHEET 21 E

Standard Detail Drawing List

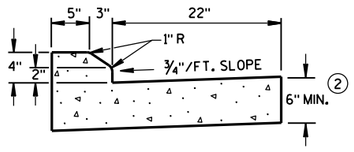
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS



TYPES A & D ①

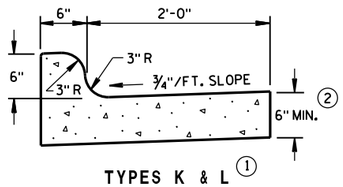


6" SLOPED CURB TYPES G & J ①

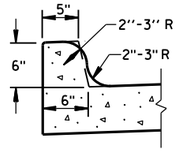


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

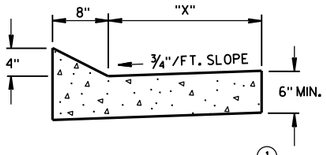


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

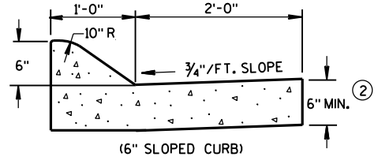
CONCRETE CURB & GUTTER 30"



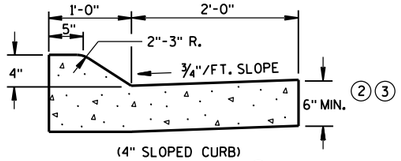
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

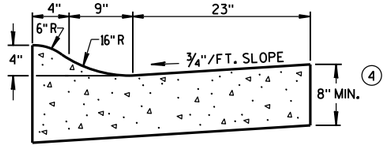


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

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

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

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

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

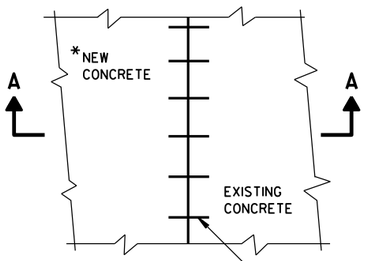
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

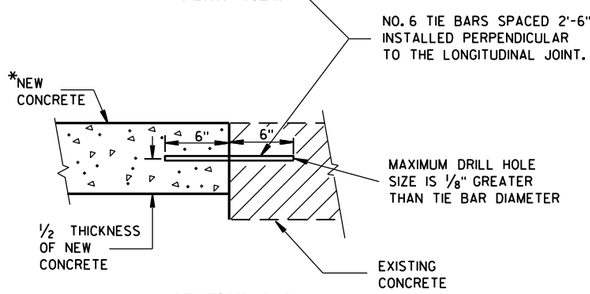
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



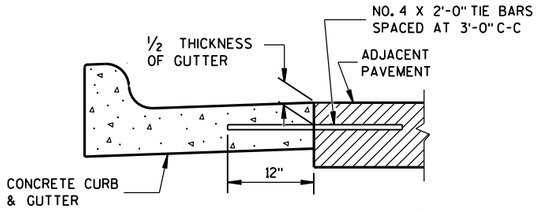
PLAN VIEW

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

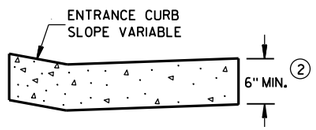


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

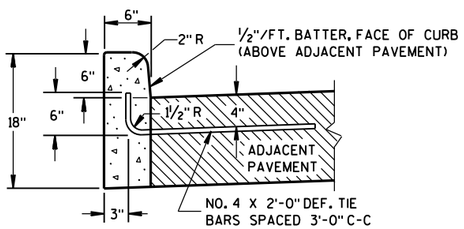


TYPICAL TIE BAR LOCATION ①

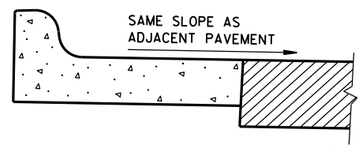


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

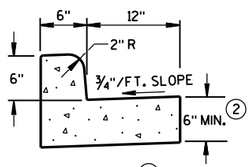


① TYPES A & D



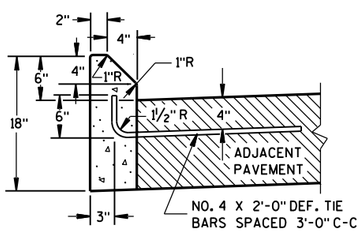
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



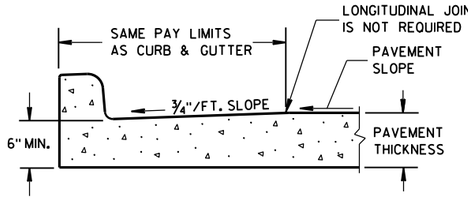
① TYPES A & D

CONCRETE CURB & GUTTER 18"

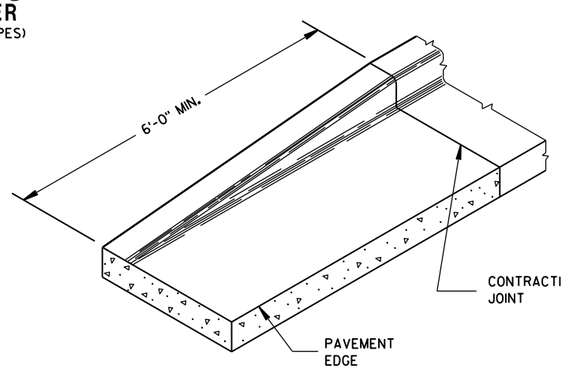


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

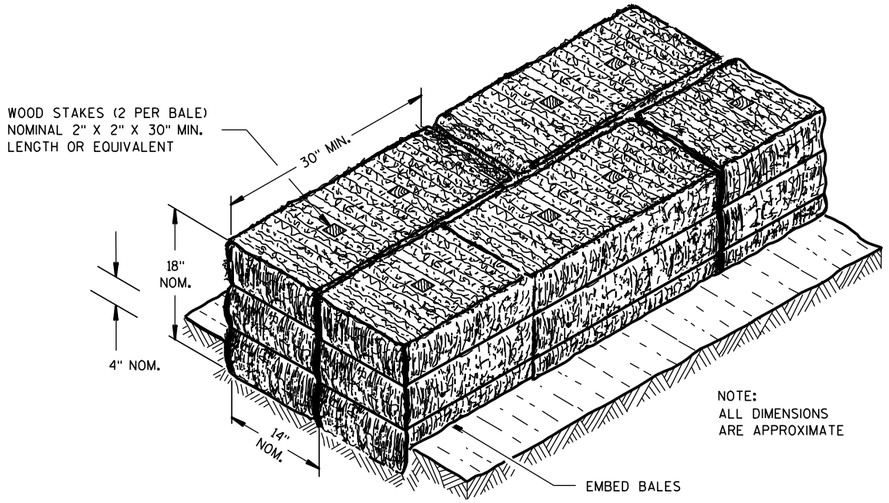
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

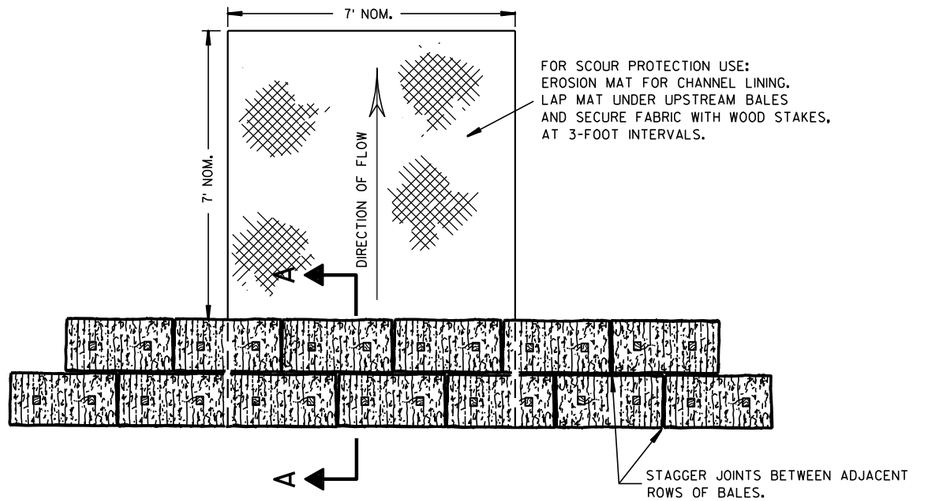
APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

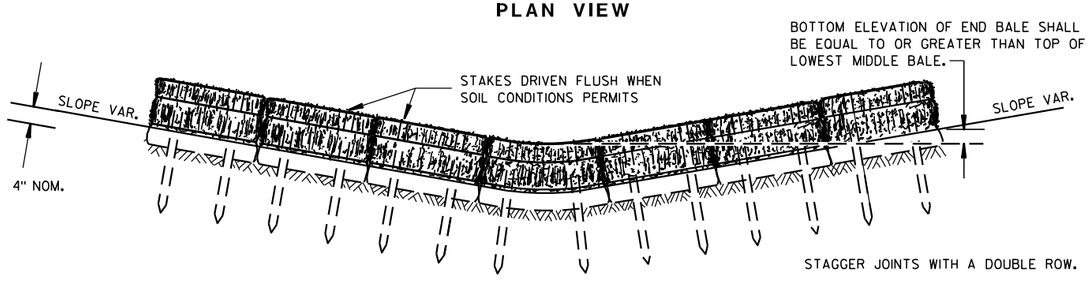
S.D.D. 8 D 1-19



SECTION A-A



PLAN VIEW



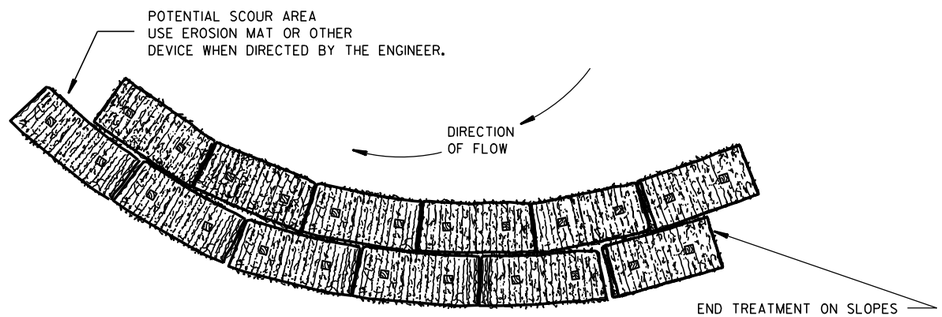
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

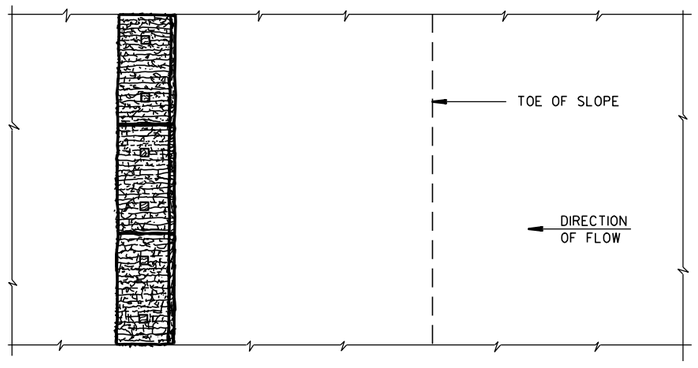
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

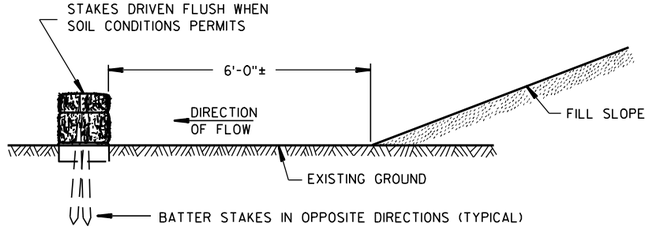


PLAN VIEW

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

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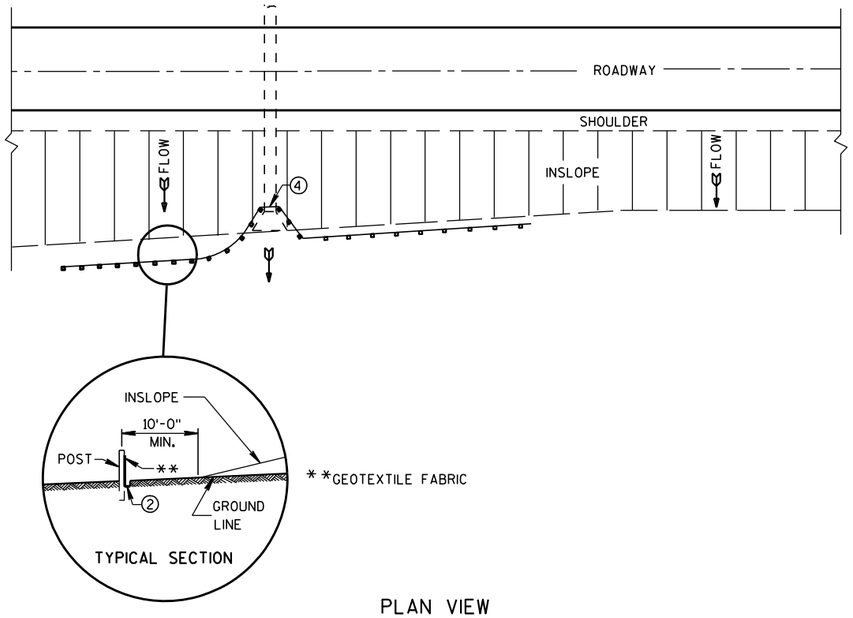
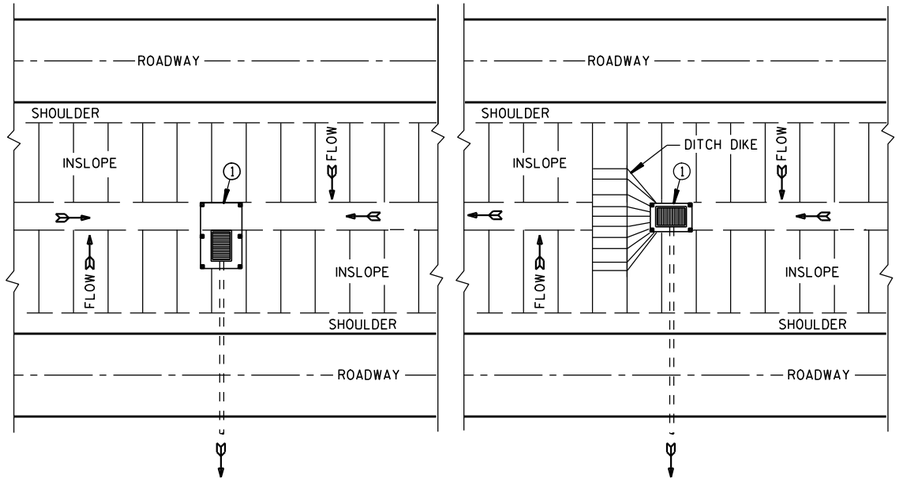
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



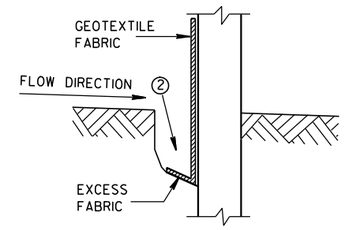
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

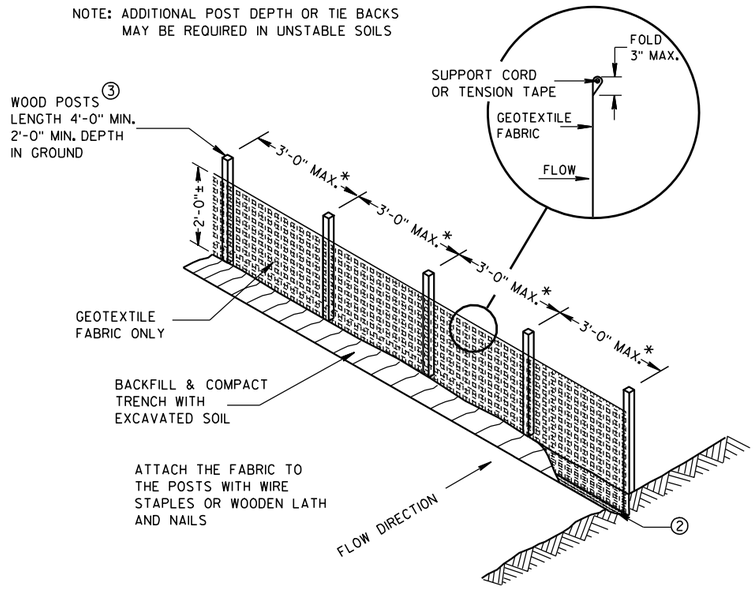
GENERAL NOTES

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

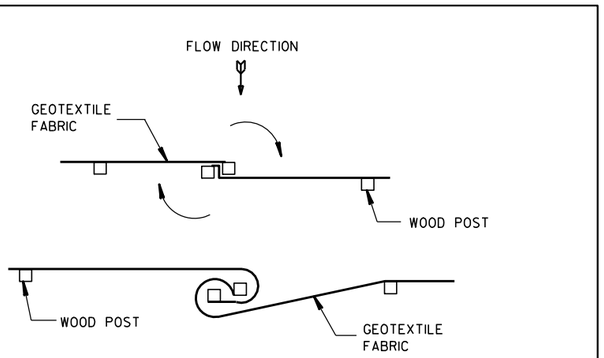
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



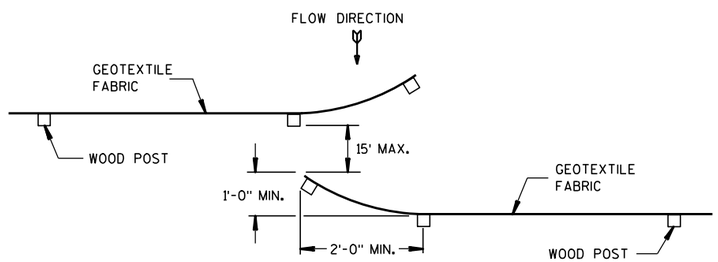
TRENCH DETAIL



SILT FENCE

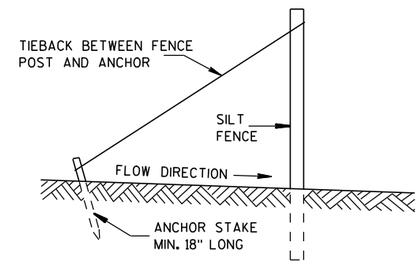


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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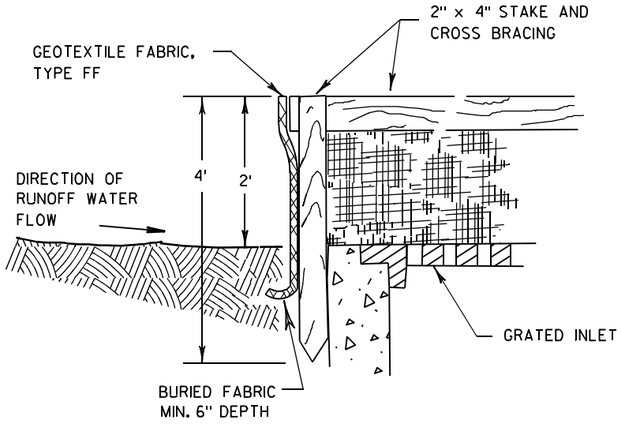
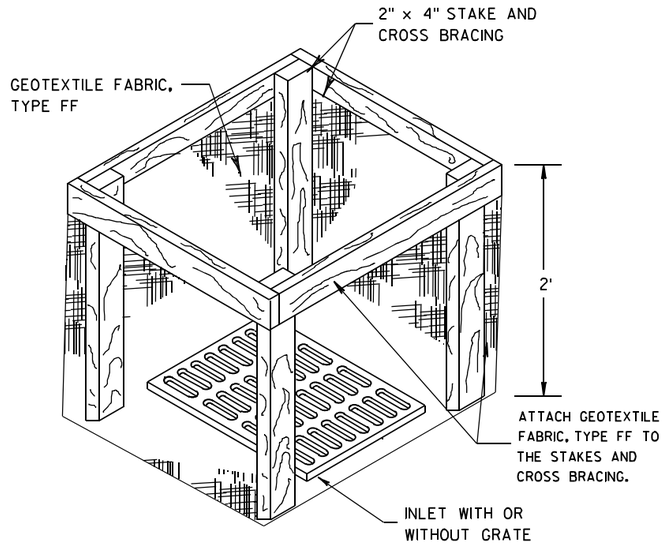
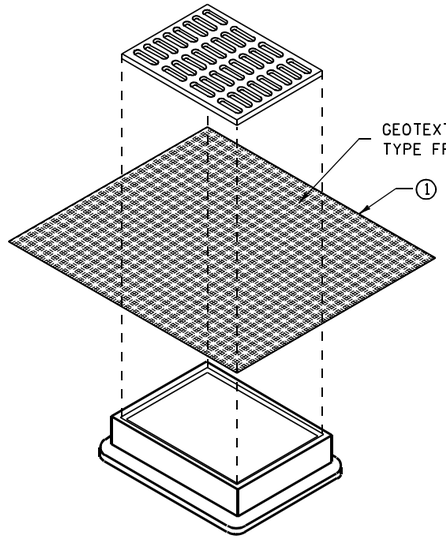
S.D.D. 8 E 9-6



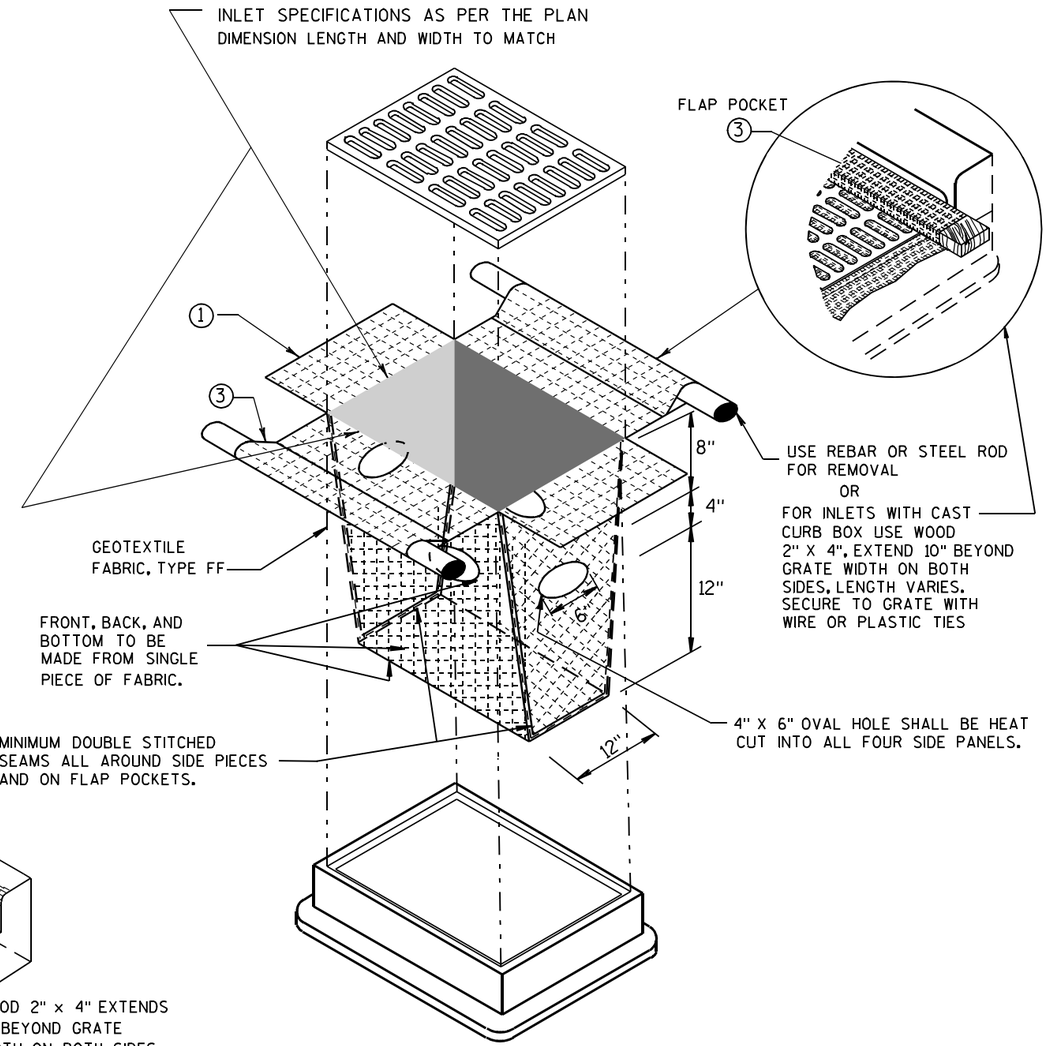


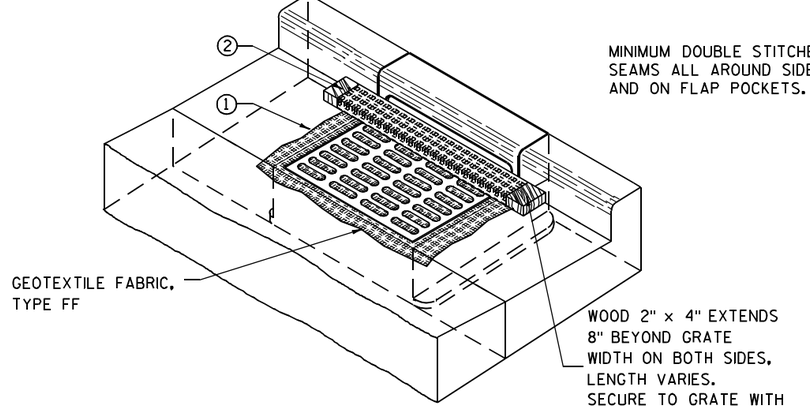
INLET PROTECTION, TYPE A



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

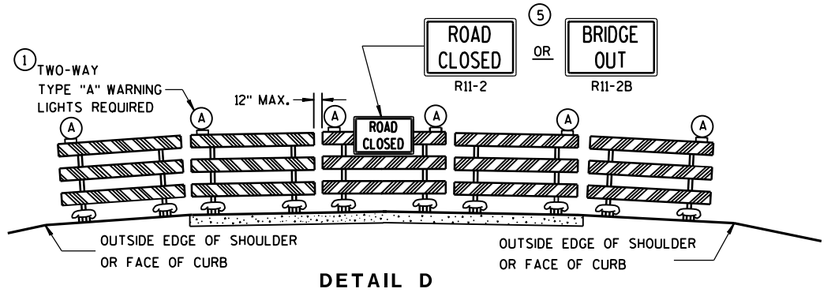
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

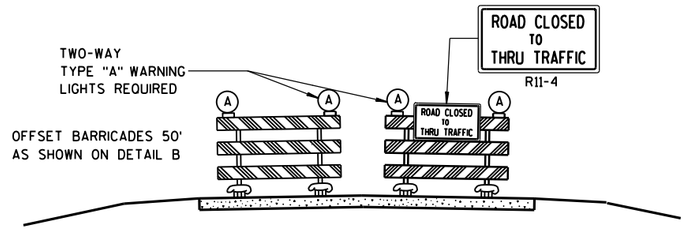
6
S.D.D. 8 E 10-2



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

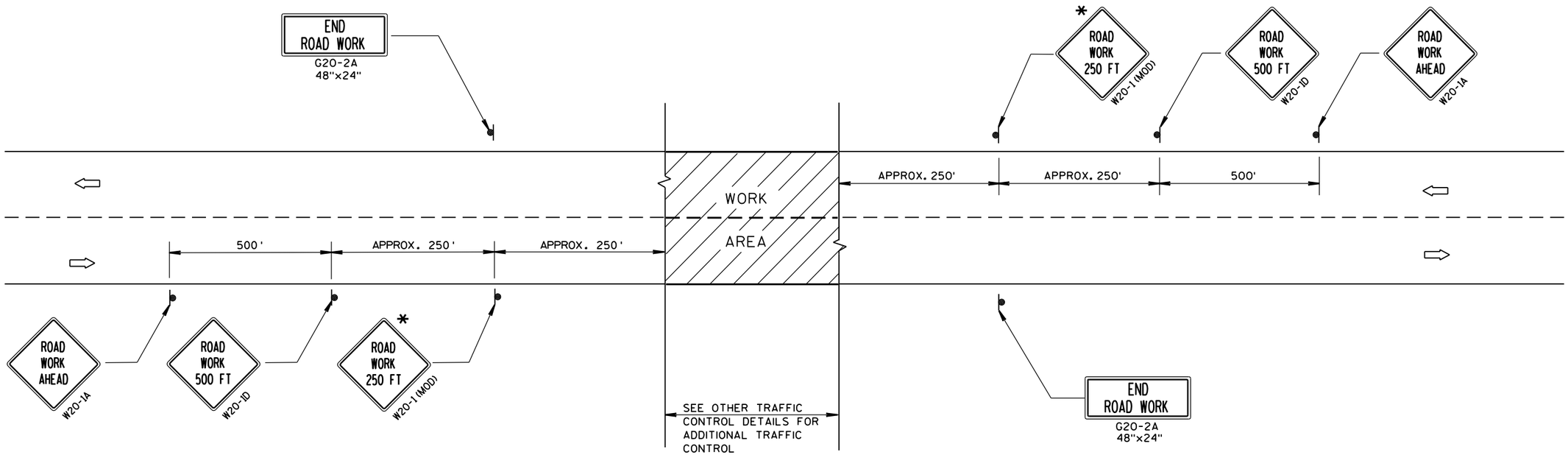
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

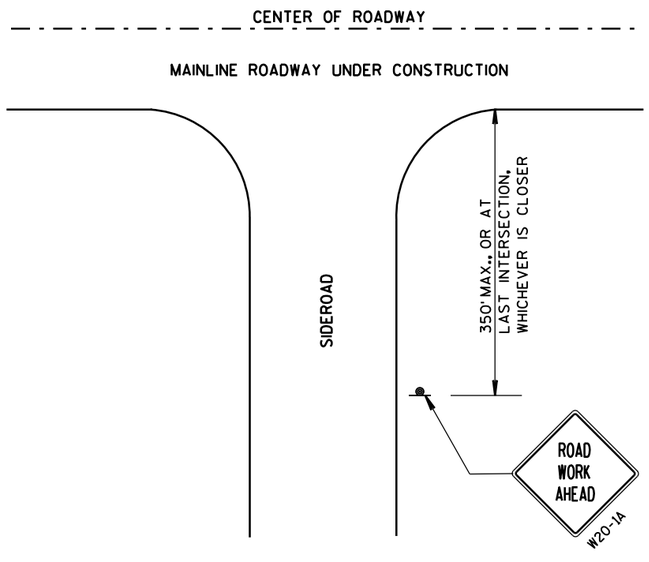
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FIC — FHWA

6

S.D.D. 15 C 2-6b



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

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

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

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

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

LEGEND

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

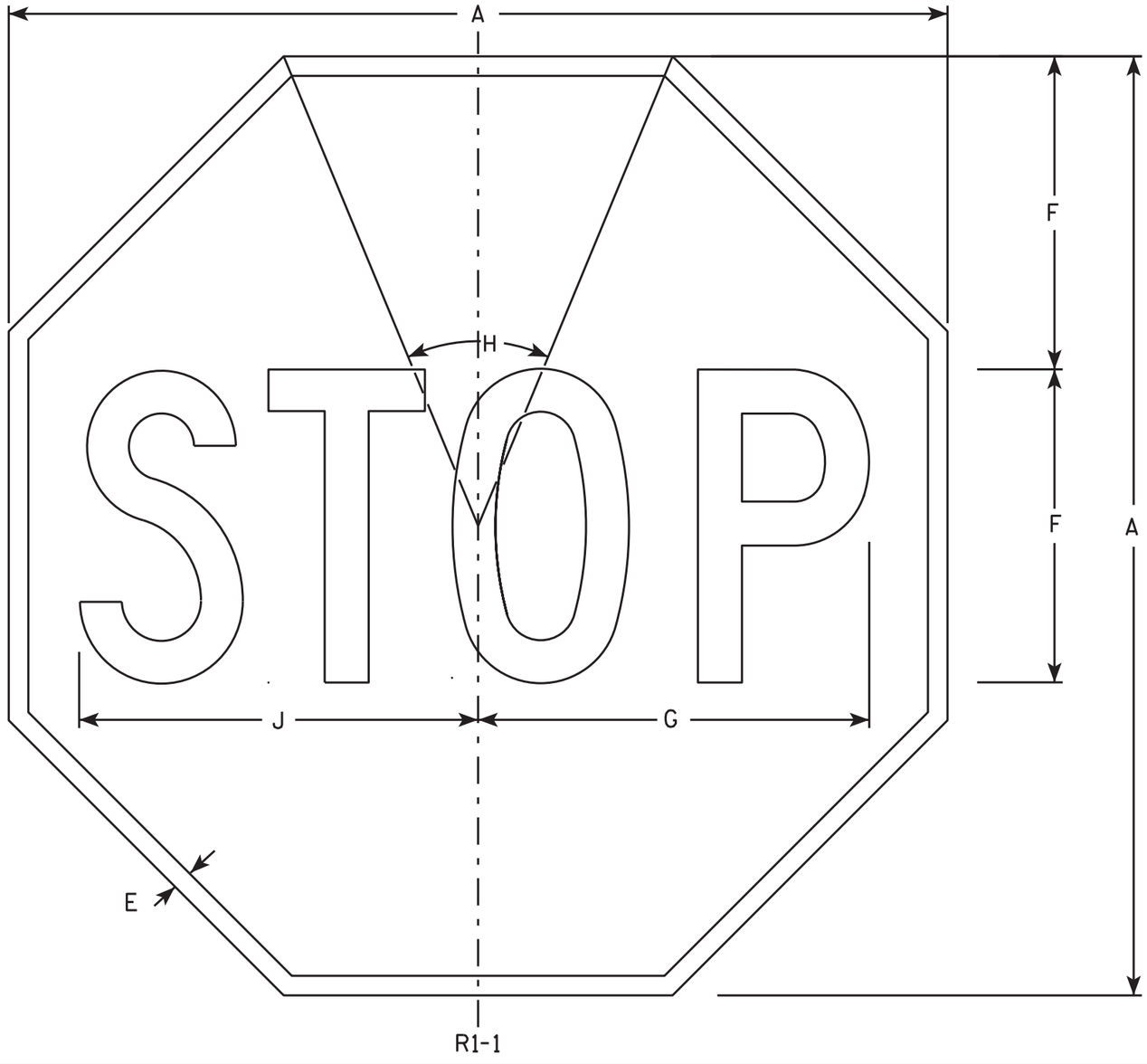
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
IC
FHWA

6

S.D.D. 15 C 5-3



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

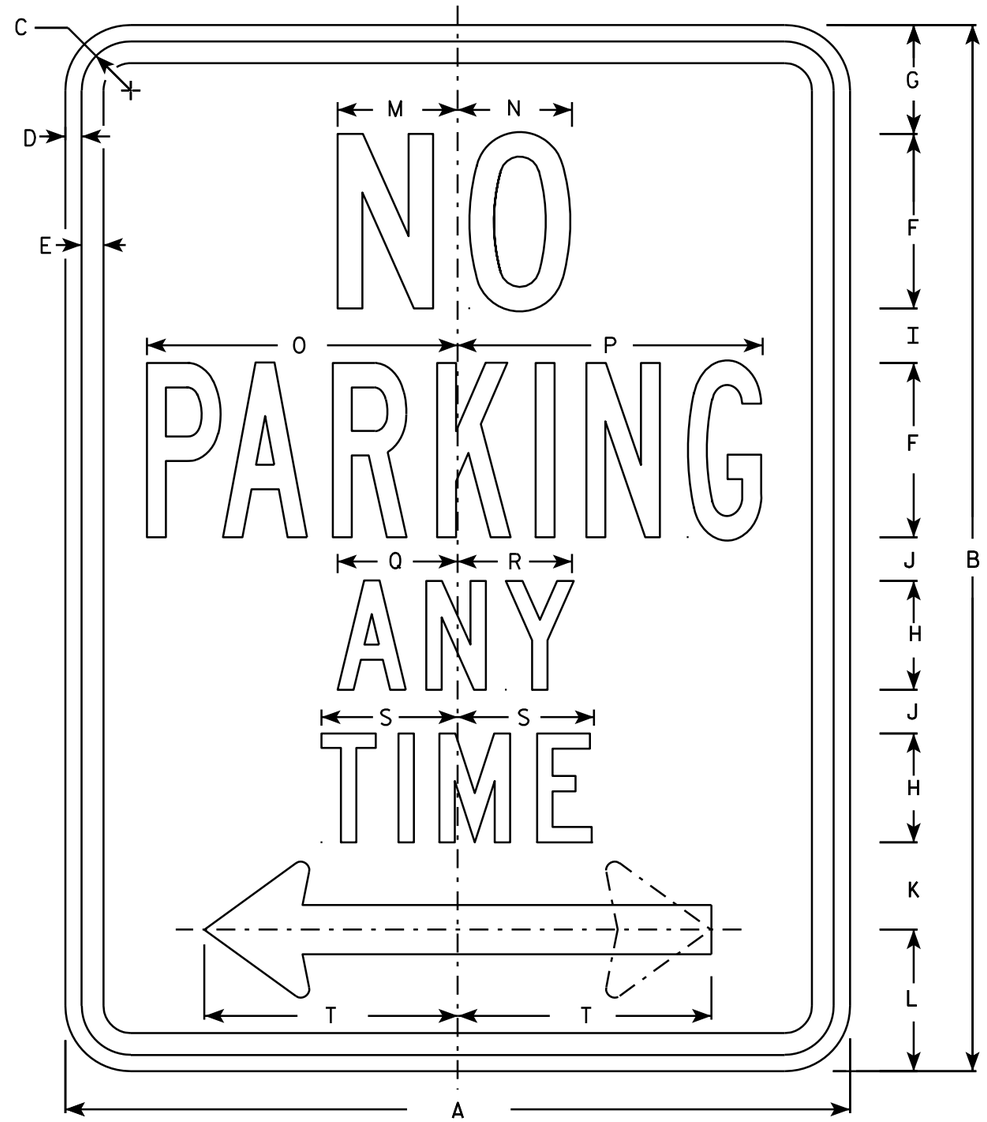
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

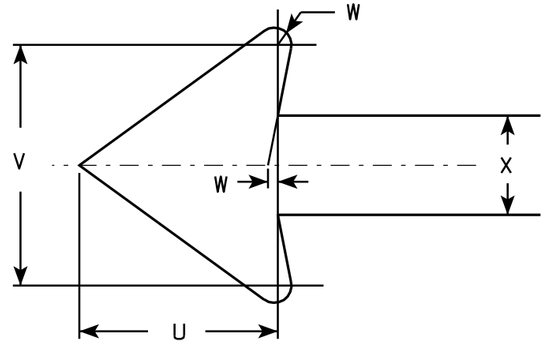
PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE		SHEET NO:	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

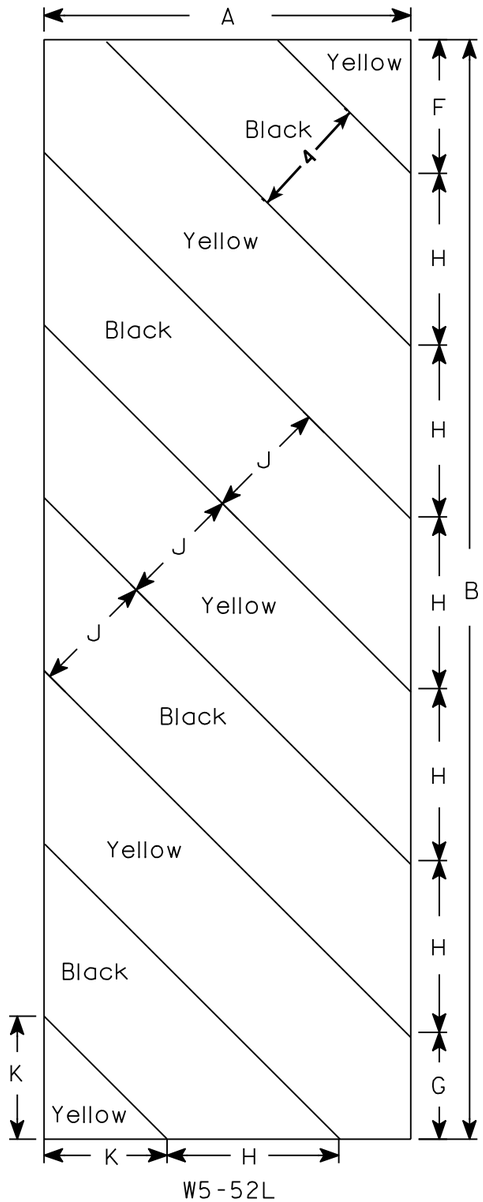
APPROVED Matthew R Rauch
for State Traffic Engineer

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

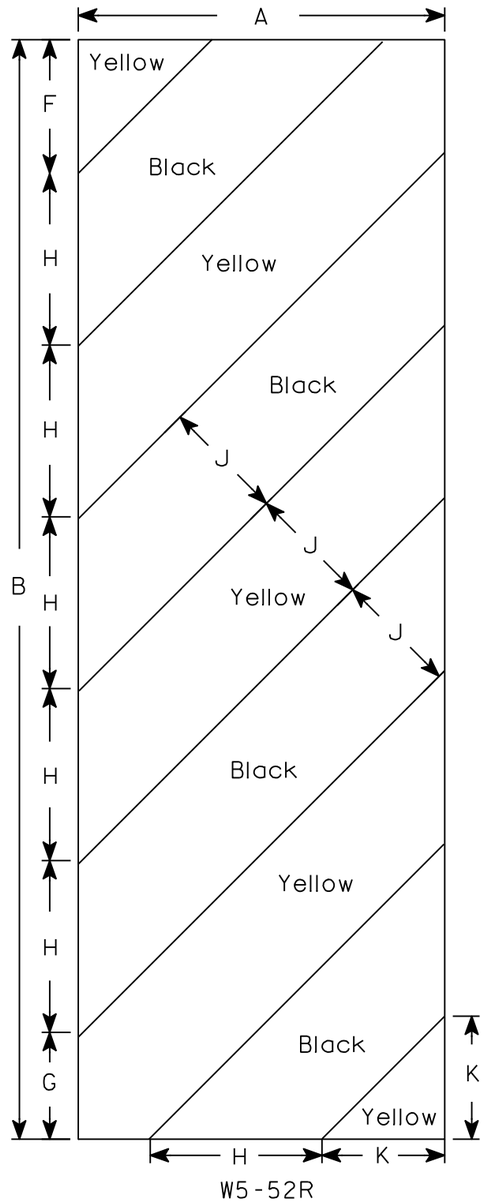
PROJECT NO: 2981-00-73 | HWY: LOCAL STREET | COUNTY: MILWAUKEE | SHEET NO: 30 | E

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

WISDOT/CADDS SHEET 42



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

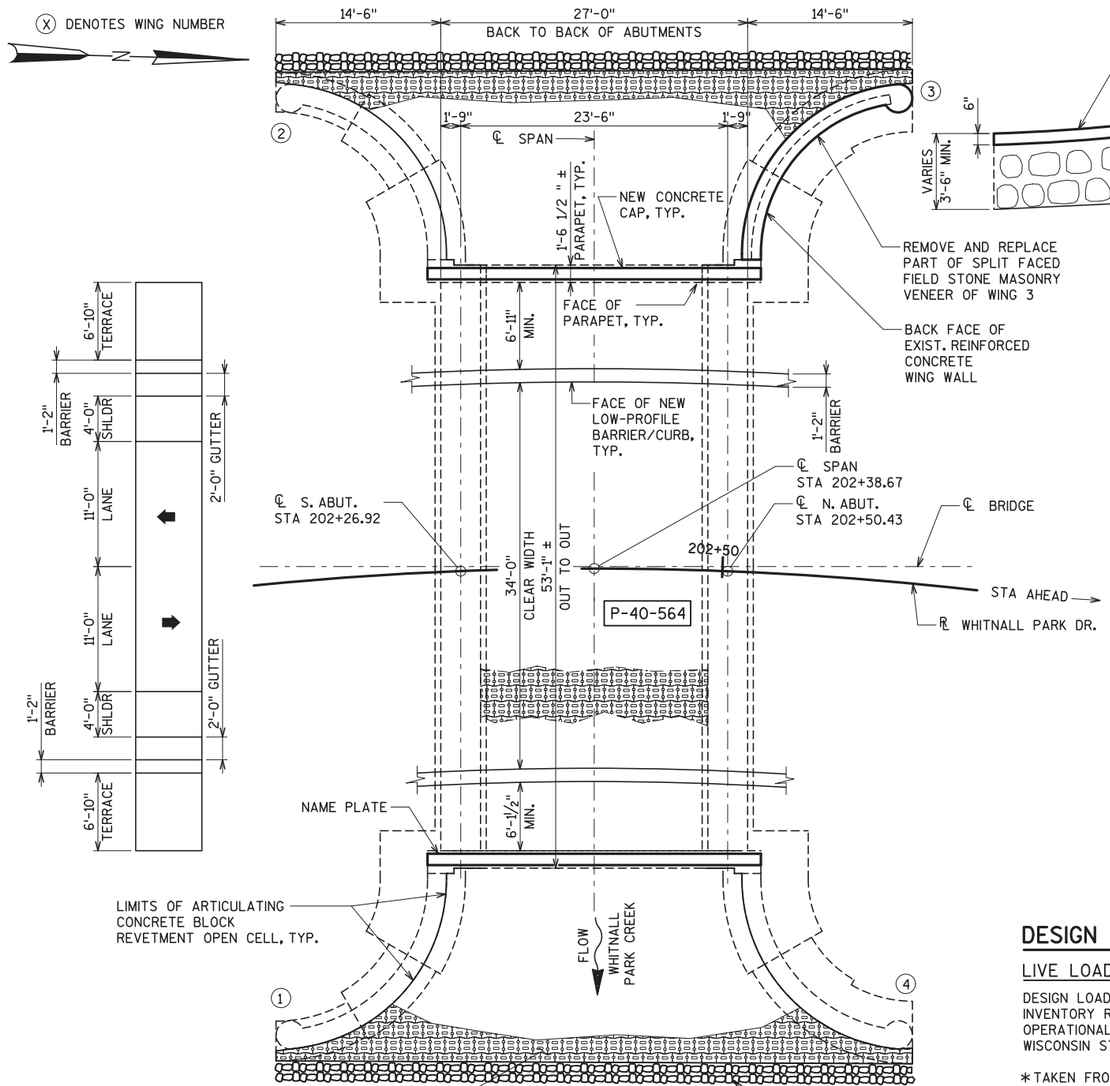
PROJECT NO: **2981-00-73** | HWY: **LOCAL STREET** | COUNTY: **MILWAUKEE** | SHEET NO: 31 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

WISDOT/CADDS SHEET 42

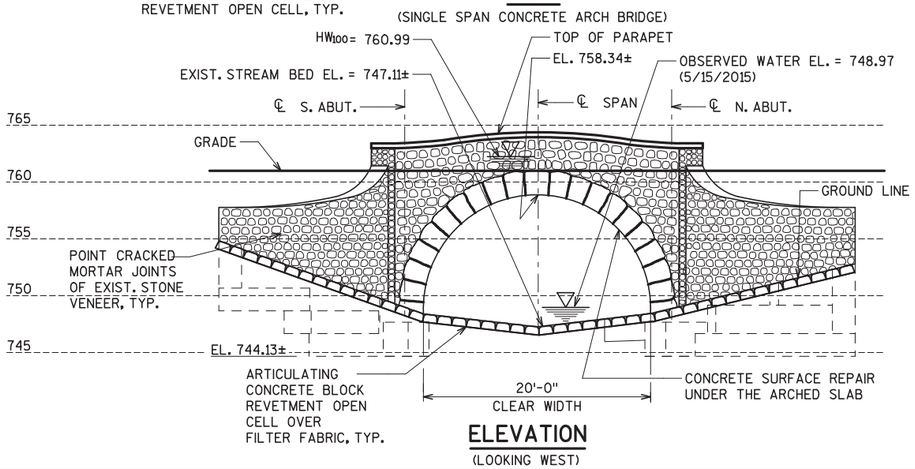
7

7



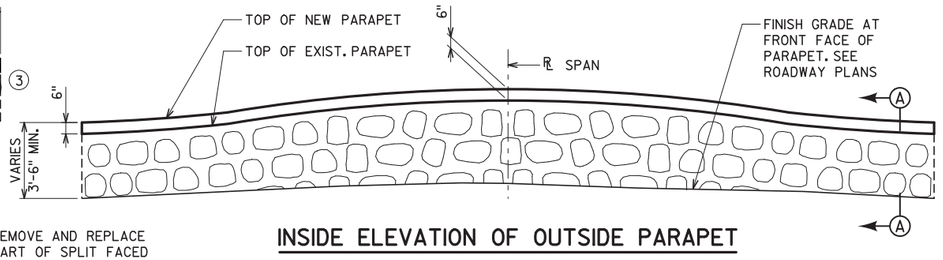
PLAN

(SINGLE SPAN CONCRETE ARCH BRIDGE)

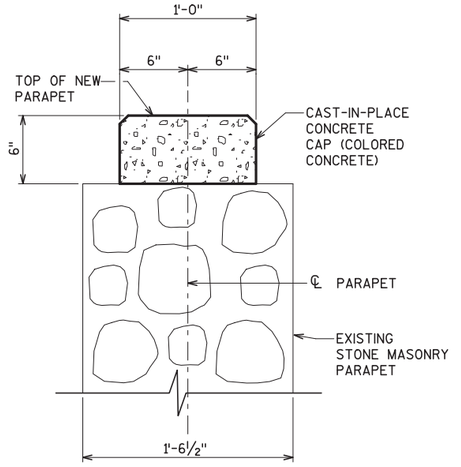


ELEVATION

(LOOKING WEST)



INSIDE ELEVATION OF OUTSIDE PARAPET



SECTION A-A

DESIGN DATA

LIVE LOAD*

DESIGN LOAD: H15
INVENTORY RATING: HS15
OPERATIONAL RATING: HS33
WISCONSIN STANDARD PERMIT VEHICLE LOAD (WIS-SPV): ..... 190 KIPS

*TAKEN FROM HSI 10/5/2016

MATERIAL PROPERTIES

CONCRETE MASONRY
SUPERSTRUCTURE ..... f'c = 4,000 psi
OTHER ..... f'c = 3,500 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ... fy = 60,000 psi

TRAFFIC DATA

WHITNALL PARK DRIVE

A.D.T. = 192 (2015)
A.D.T. =214 (2037)
R.D.S. = 30 MPH

CURVE DATA

PI STA = 202+46.54
X=569512.688
Y=261833.662
DELTA = 69° 20' 00"
D = 19° 04' 42"
T = 207.69'
L = 363.41'
R = 300.32'
PC STA = 200+38.85
PT STA = 204+02.26

HYDRAULIC DATA

Q_{100} ---------- = 1800 CFS
Q_{BRIDGE} ---------- = 1408 CFS
$Q_{ROADWAY}$ ---------- = 392 CFS
HW_{100} ---------- = 760.99
VELOCITY ---------- = 11.46 FT/SEC MAX.
WATERWAY AREA ---------- = 141 SQ FT
DRAINAGE AREA ---------- = 4.4 SQ MI
Q_2 ---------- = 522 CFS
HW_2 ---------- = 753.99
SCOUR CRITICAL CODE ---- = 7

ROADWAY OVERTOPPING
FREQUENCY ---------- : > 50 YEARS
Q_{50} ---------- = 1550 CFS

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION
3. WING 3 REPAIR
4. PARAPET CAP DETAILS
5. SCOUR PROTECTION

BENCHMARK

POINT ID: CP 102
DESCRIPTION: 3/4" REBAR
STA 201+29.09, 27.00' LT.
EL. = 763.526

POINT ID: CP 103
DESCRIPTION: 3/4" REBAR
STA 203+00.97, 36.01' LT.
EL. = 759.174

WISCONSIN
BABU D. THENGANAKUNNEL
E-35905
MILWAUKEE, WI
PROFESSIONAL ENGINEER
2/7/17

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT:
YAN NENAYDYKH
(414) 292-4599

STATE PROJECT NUMBER

2981-00-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ELEVATIONS ARE REFERENCED TO THE NAVD 88 (1991) DATUM.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. THE NEW NAME PLATE SHALL SHOW THE ORIGINAL CONSTRUCTION YEAR. ORIGINAL CONSTRUCTION YEAR IS 1933

ALL NEW BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL LIMITS SHALL BE DEFINED BY A 3/4" DEEP SAWCUT.

PLANS OF THE EXISTING BRIDGE ARE ON FILE AND ARE AVAILABLE FOR INSPECTION AT THE WISCONSIN DEPARTMENT OF TRANSPORTATION,SOUTHEAST REGION.

THE STREAM BED UNDER THE BRIDGE AND IN FRONT OF THE WINGS SHALL BE COVERED WITH ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL AND FIELD STONE HEAVY RIPRAP AS SHOWN ON THE PLANS.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

CONCRETE SURFACE REPAIR AND STONE MASONRY POINTING REQUIRED IN AREAS DESIGNATED BY THE FIELD ENGINEER. QUANTITIES SHOWN ARE APPROXIMATE AND UNDISTRIBUTED.

NEW STONE MASONRY VENEER SHALL BE PAID FOR UNDER THE BID ITEM "SPLIT FACE FIELD STONE MASONRY".

SEE SHEET 2 FOR ADDITIONAL GENERAL NOTES.

NO.	DATE	REVISION	BY

BLOOM COMPANIES, LLC
Infrastructure Innovation and Ingenuity
10501 W. Research Drive • Milwaukee, WI 53226
Phone: (414) 771-3390 Fax: (414) 771-4490

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/08/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE P-40-564

WHITNALL PARK DRIVE
OVER WHITNALL PARK CREEK

COUNTY	MILWAUKEE	VILLAGE	HALES CORNERS
DESIGN SPEC.	REHABILITATION		N/A

DESIGNED BY	BDT	DESIGN CK'D.	YNN	DRAWN BY	TAL	PLANS CK'D.	BDT

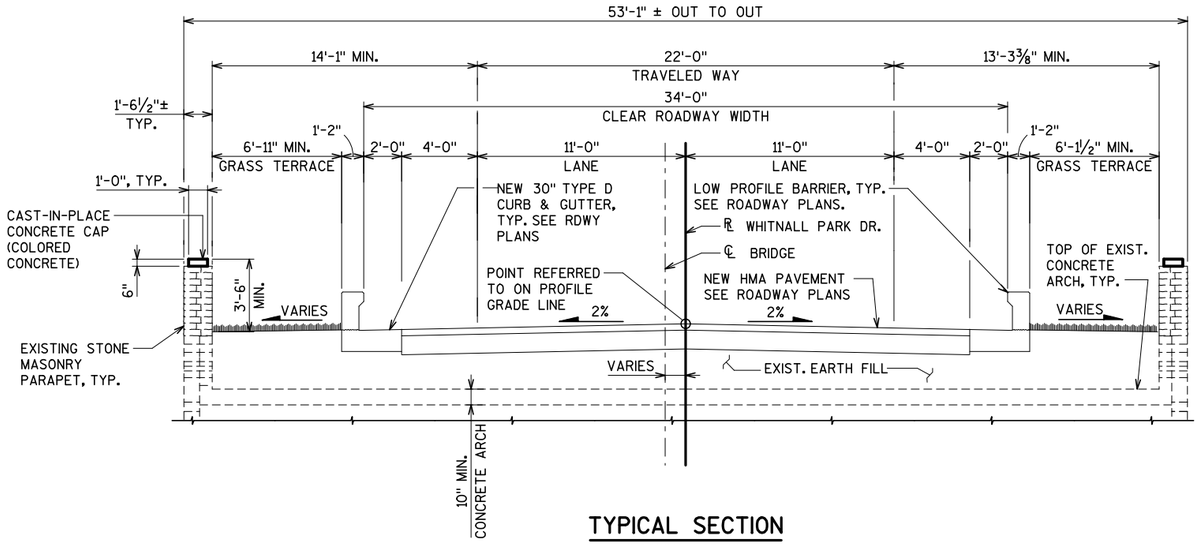
GENERAL PLAN AND ELEVATION

SHEET 1 OF 5
32

DESIGN ID: 2981-00-03 DECEMBER 2016

8

STATE PROJECT NUMBER
2981-00-73



TYPICAL SECTION

(LOOKING NORTH)

TOTAL ESTIMATED QUANTITIES

	BID ITEMS	UNIT	SOUTH ABUTMENT	NORTH ABUTMENT	SUPER	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 202+38.67	LS	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES P-40-564	LS	-	-	-	1
206.5000	COFFERDAMS P-40-564	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	5	-	5
311.0110	BREAKER RUN	TON	76	76	-	152
405.0200	COLORING CONCRETE CUSTOM	CY	-	-	2	2
502.0100	CONCRETE MASONRY BRIDGES	CY	-	-	2	2
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	-	-	30	30
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	-	-	100	100
509.1500	CONCRETE SURFACE REPAIR	SF	-	-	50	50
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	30	-	30
SPV.0035.01	SPLIT FACED FIELD STONE MASONRY	CY	-	7	-	7
SPV.0035.02	FIELD STONE RIPRAP HEAVY	CY	20	20	-	40
SPV.0090.01	STONE MASONRY POINTING	LF	194	145	145	484
SPV.0180.01	ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL	SY	160	160	-	320

GENERAL NOTES (CONT'D)

PART OF EXISTING STONE VENEER ON WING 3 SHALL BE REMOVED AS PART OF THIS PROJECT. CONCRETE WALL BEHIND THE STONE FACING SHALL REMAIN IN PLACE.

REMOVING OF EXISTING STONE MASONRY VENEER SHALL BE PAID FOR UNDE THE BID ITEM " REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 202+38.67"

EXISTING STONES OF WING 3 STONE VENEER SHALL BE EXAMINED FOR SOUNDNESS AND INTEGRITY, CLEANED OF EXPOSED MORTAR, AND REUSED WHEREVER FEASIBLE. IF THE EXISTING STONES ARE USED THEY SHALL BE INTERMIXED WITH NEW STONES.

EXCAVATION AND GRADING OF THE GROUND IN FRONT OF WING WALLS AND WITHIN THE STREAM TO PLACE SCOUR PROTECTION MATERIAL IS INCLUDED IN THE BID ITEM "ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL". EXCAVATION SHALL INCLUDE REMOVAL OF ALL MATERIALS INCLUDING EXISTING FIELD STONES AND DEAD TREES THAT INTERFERE WITH THE INSTALLATION OF THE NEW REVETMENT SYSTEM.

EXISTING FIELD STONES WITHIN THE LIMITS OF THE ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM THAT ARE TO BE REMOVED TO INSTALL THE REVETMENT SYSTEM MAY BE REUSED ON THE PROJECT AS FIELD STONE RIPRAP HEAVY IF IT MEETS THE REQUIREMENTS OF THE SPECIAL PROVISIONS.

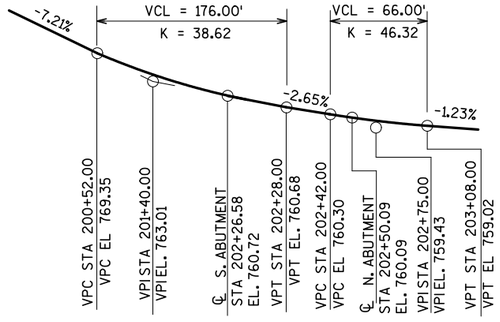
REMOVE AND STOCKPILE EXISTING FIELD STONE HEAVY RIPRAP IF REQUIRED TO MAKE ACCESS TO THE WORK AREA. REINSTALL THE STONES OVER GEOTEXTILE TYPE HR AFTER THE NEW REVETMENT SYSTEM IS IN PLACE . COST INCLUDED IN THE BID ITEM "ARTICULATING CONCERETE BLOCK REVETMENT OPEN CELL". TYPICAL AT ALL WINGS.

BREAKER RUN PLACED BELOW THE ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL SHALL BE PAID FOR UNDE THE BID ITEM " BREAKER RUN". ANY FINER GRANULAR MATERIAL PLACED OVER THE BREAKER RUN TO ACHIEVE A SMOOTH BEDDING SURFACE FOR THE ARTICULATING CONCRETE BLOCK SHALL BE INCLUDED IN THE COST OF THE BID ITEM "ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL".

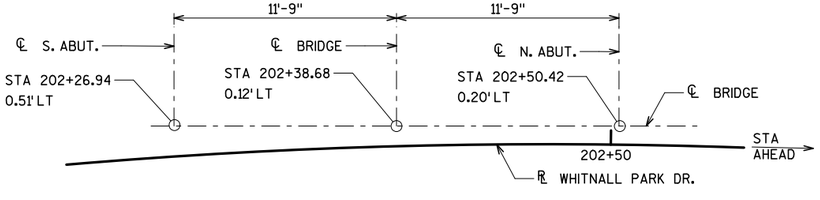
EXCAVATION REQUIRED TO CONSTRUCT THE STONE VENEER OF WING 3 IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES P-40-564"

AT THE BACKFACE OF WING 3 ALL VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

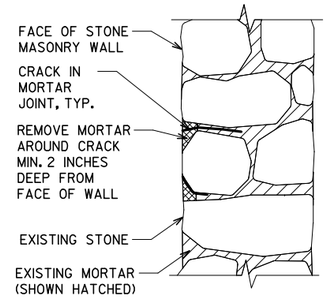
THE CONTRACTOR MAY CHOOSE TO INSTALL THE CONCRETE BLOCK REVETMENT SYSTEM BY CONSTRUCTING A TEMPORARY BYPASS DIVERSION PIPE FOR THE CREEK. IF THE CONTRACTOR CHOOSES THIS OPTION, ALL CONDITIONS DESCRIBED IN THE SPECIFICATIONS MUST BE MET.



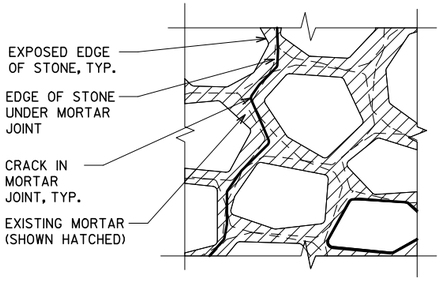
PROFILE GRADE LINE



ALIGNMENT DIAGRAM



SECTION



ELEVATION

TYPICAL STONE MASONRY POINTING DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-564

DRAWN BY	TAL	PLANS CK'D.	BDT

TYPICAL SECTION

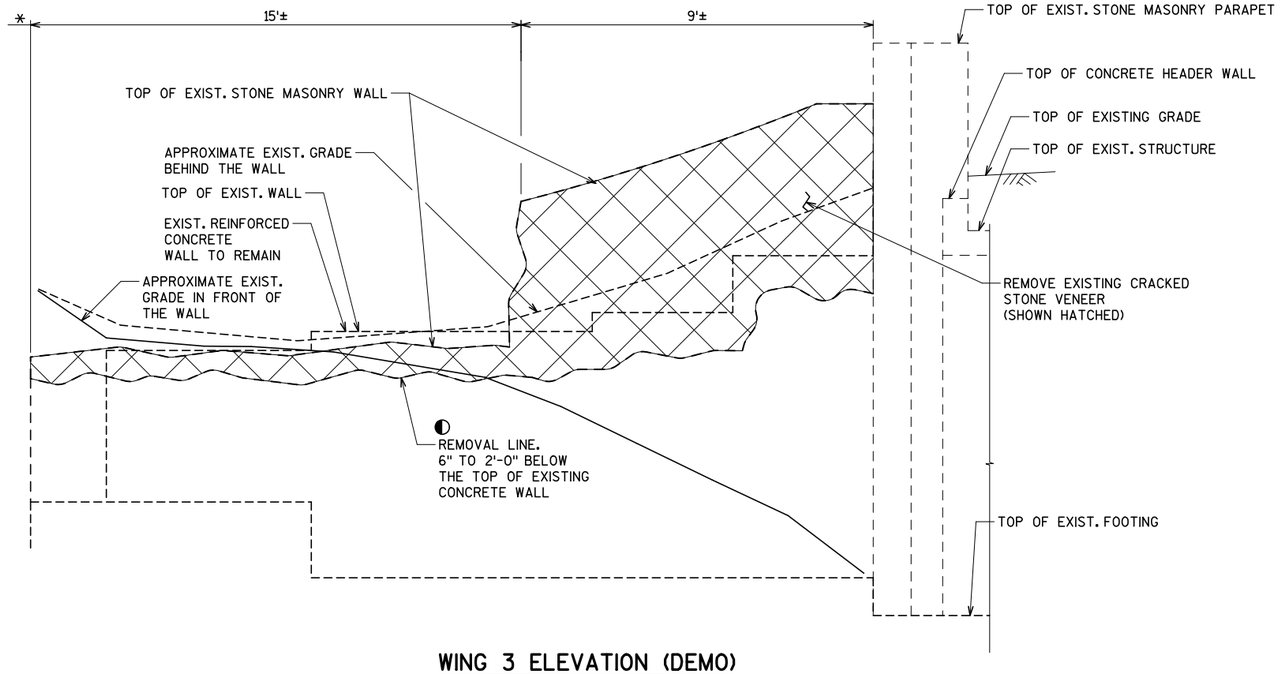
SHEET 2 OF 5

33

8

8

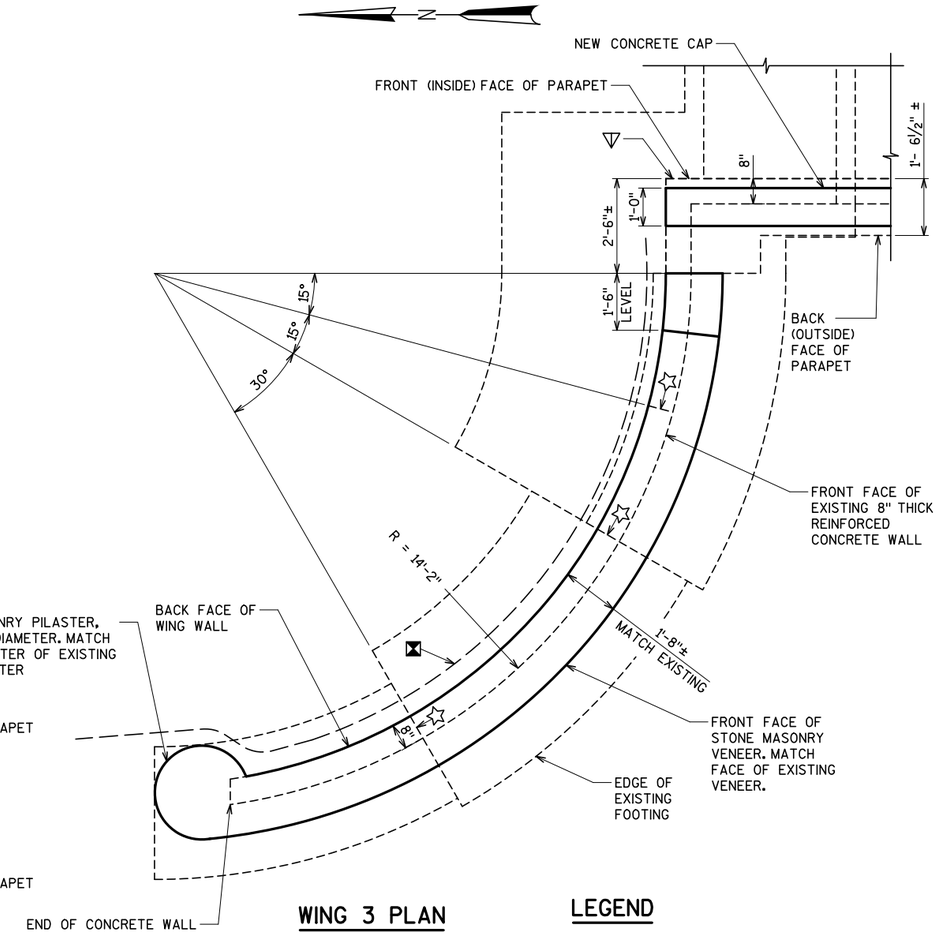
STATE PROJECT NUMBER
2981-00-73



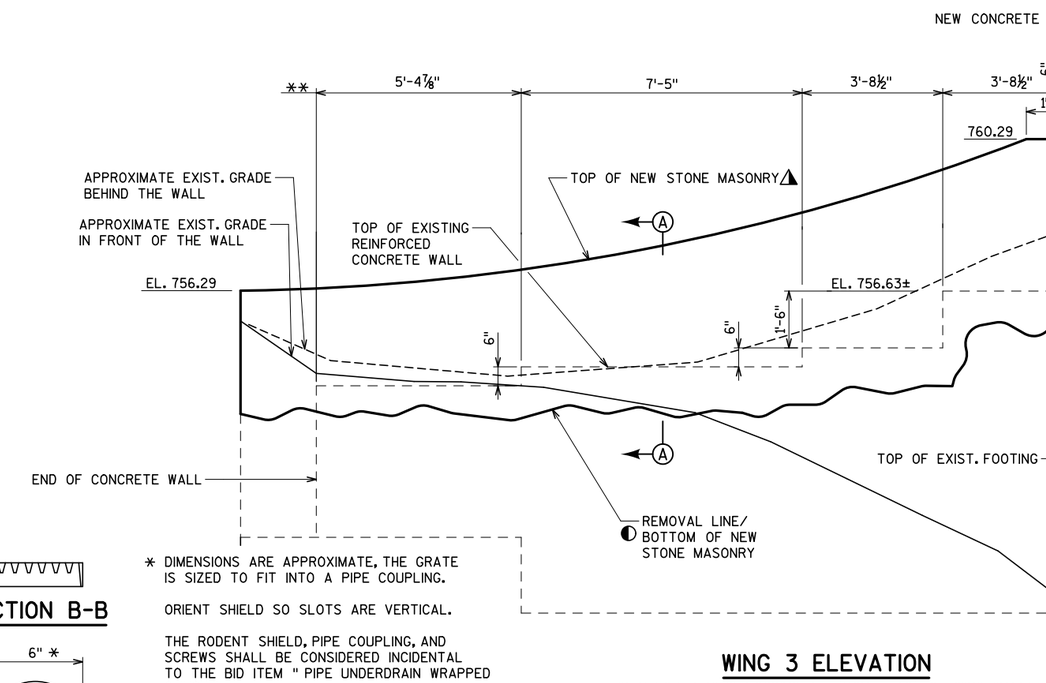
WING 3 ELEVATION (DEMO)

(DEVELOPED VIEW LOOKING AT FRONT FACE OF WING WALL)

* MEASURED ALONG THE FRONT FACE OF STONE MASONRY VENEER



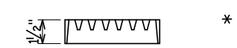
WING 3 PLAN



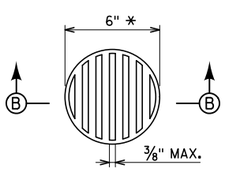
WING 3 ELEVATION

(DEVELOPED VIEW LOOKING AT FRONT FACE OF WING WALL)

** MEASURED ALONG THE FRONT FACE OF EXIST. CONCRETE WALL



SECTION B-B



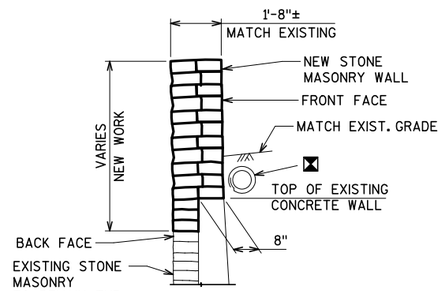
RODENT SHIELD

* DIMENSIONS ARE APPROXIMATE, THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING, AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM " PIPE UNDERDRAIN WRAPPED 6-INCH."

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



SECTION A-A

LEGEND

- ◐ DO NOT SAWCUT THROUGH EXISTING STONES. REMOVAL LINE TO FOLLOW ALONG EXISTING MORTAR JOINTS. REMOVE ALL LOOSE MORTAR BEFORE CONSTRUCTING NEW STONE MASONRY.
- ☆ LOCATION OF STEP AT TOP OF EXIST. CONCRETE WALL
- ◭ MATCH THE TOP PROFILE OF EXISTING WING WALL 2
- ⊠ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE MIN. 0.5% TOWARDS SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT END.
- ▽ REMOVE CRACKED MORTAR AT THE BASE OF STONE PARAPET AND SET THE LOOSE STONE IN NEW MORTAR. COST INCIDENTAL TO THE BID ITEM "SPLIT FACED FIELD STONE MASONRY".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-564

DRAWN BY	TAL	PLANS CK'D.	BDT

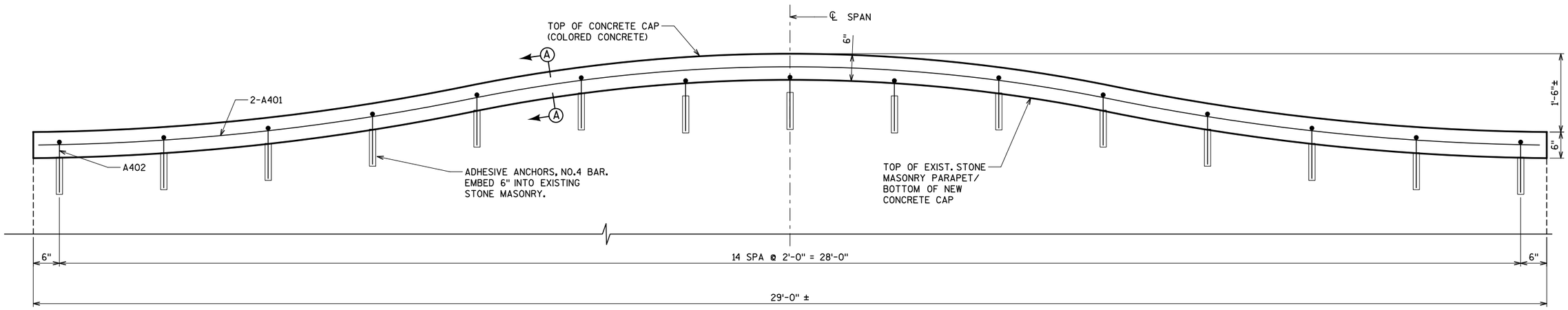
WING 3 REPAIR

SHEET 3 OF 5
34

8

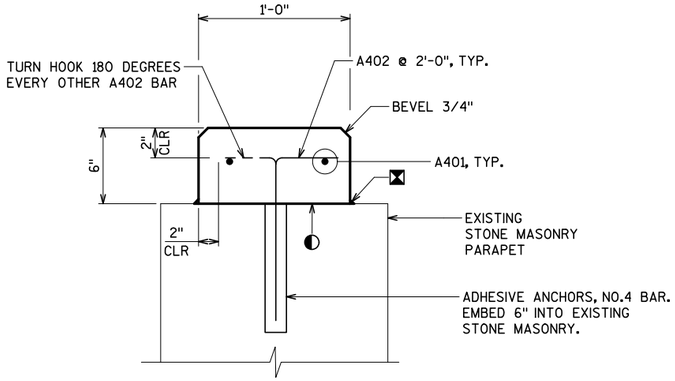
8

STATE PROJECT NUMBER
2981-00-73



CONCRETE CAP ELEVATION

(LOOKING AT FRONT FACE OF PARAPET)



SECTION A-A

BILL OF BARS

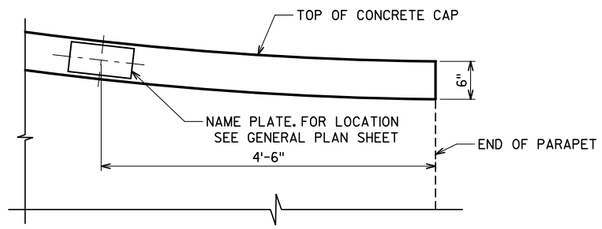
BAR MARK	COAT	NO.	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	4	28'-11"	-		PARAPET CAP, LONGITUDINAL
☒ A402	X	30	1'-1"	X		PARAPET CAP, VERTICAL

QUANTITY SHOWN IS FOR TWO PARAPETS

☒ BARS USED AS ADHESIVE ANCHORS

BENDING DIAGRAM

BAR A402



NAME PLATE

LEGEND

◐ APPLY BOND BREAKER TO THE TOP OF EXISTING PARAPET WITHIN THE WIDTH OF THE CONCRETE CAP OR PLACE CONCRETE ON A LAYER OF POLYETHYLENE SHEET

☒ CAULK THE JOINT WITH 1/4" x 1/4" BEAD OF NON-STAINING GRAY NON-BITUMINOUS JOINT SEALANT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-564

DRAWN BY TAL | PLANS CK'D. BDT

PARAPET CAP DETAILS

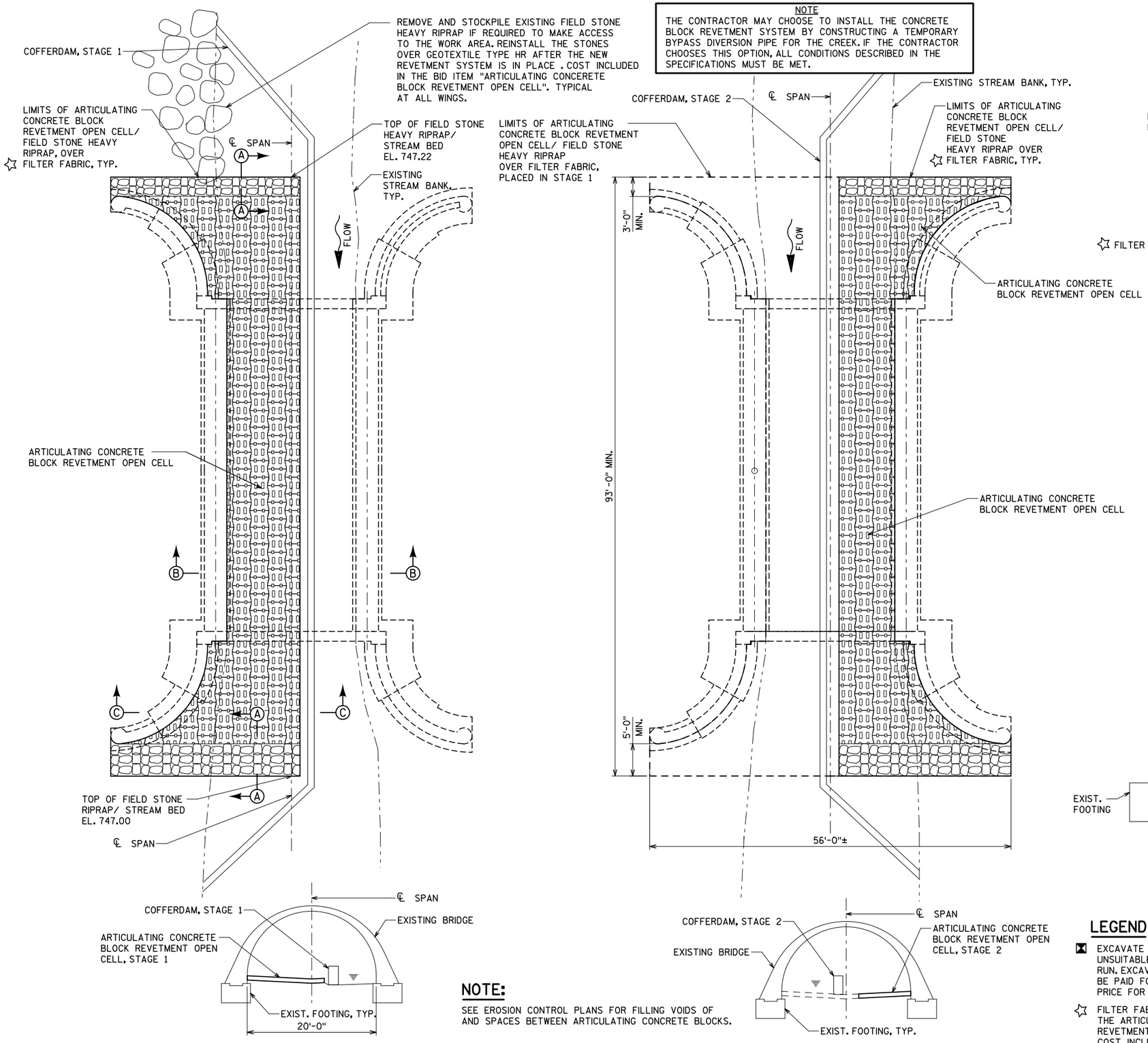
SHEET 4 OF 5

8

8

STATE PROJECT NUMBER
2981-00-73

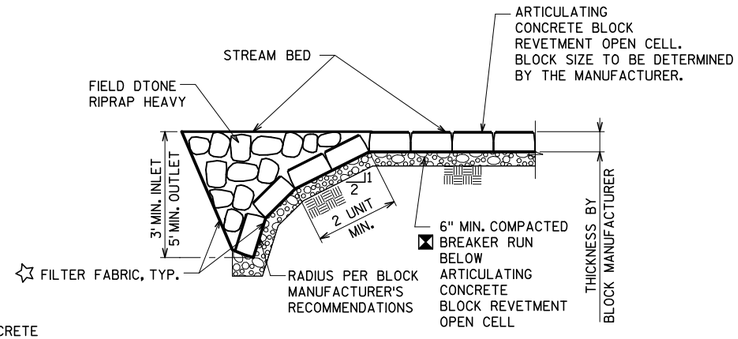
NOTE
THE CONTRACTOR MAY CHOOSE TO INSTALL THE CONCRETE BLOCK REVETMENT SYSTEM BY CONSTRUCTING A TEMPORARY BYPASS DIVERSION PIPE FOR THE CREEK. IF THE CONTRACTOR CHOOSES THIS OPTION, ALL CONDITIONS DESCRIBED IN THE SPECIFICATIONS MUST BE MET.



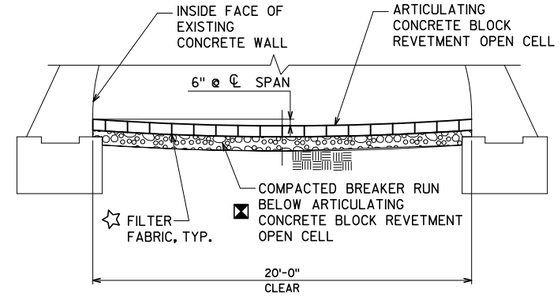
CONSTRUCTION STAGE 1

CONSTRUCTION STAGE 2

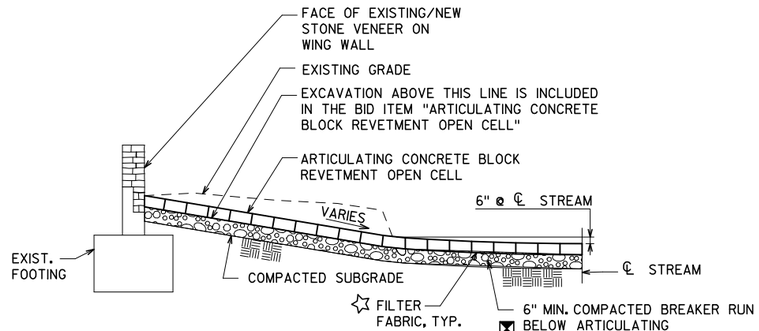
NOTE:
SEE EROSION CONTROL PLANS FOR FILLING VOIDS OF AND SPACES BETWEEN ARTICULATING CONCRETE BLOCKS.



SECTION A-A
(STAGE 1 SHOWN. STAGE 2 SIMILAR)



SECTION B-B
(SHOWS BOTH STAGES)



SECTION C-C
(STAGE 1 SHOWN. STAGE 2 SIMILAR)

LEGEND

- ☒ EXCAVATE BELOW SUBGRADE TO REMOVE UNSUITABLE SOIL AND FILL WITH BREAKER RUN. EXCAVTION BELOW SUBGRADE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR BID ITEM " COMMON EXCAVATION".
- ☆ FILTER FABRIC TO BE DESIGNED BY THE ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM DESIGNER. COST INCLUDED IN THE BID ITEM "ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-564

DRAWN BY TAL | PLANS CK'D. BDT

SCOUR PROTECTION

SHEET 5 OF 5
36

8

8

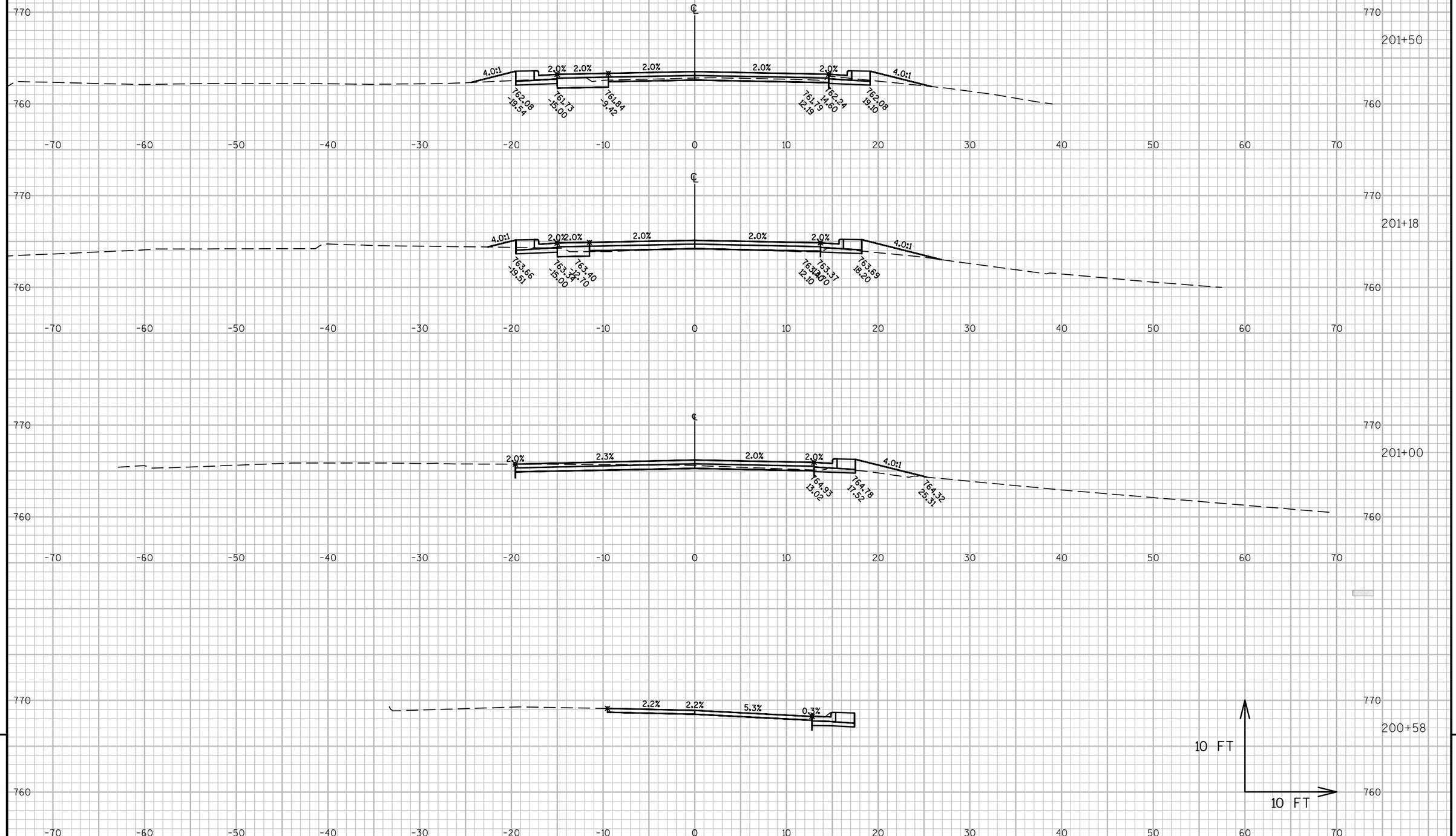
STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)	
		CUT	FILL	CUT	FILL
200+64.28	-	12.16	-	-	-
200+72.59	8.30	9.45	1.74	3.32	0.54
200+82.41	9.83	7.76	3.55	3.13	0.96
200+94.78	12.37	15.19	4.52	5.26	1.85
201+03.67	8.89	16.44	5.45	5.21	1.64
201+13.76	10.08	10.19	6.40	4.97	2.21
201+25.00	11.24	9.40	6.97	4.08	2.78
201+36.66	11.65	10.97	7.23	4.40	3.06
201+50.00	13.35	18.01	5.81	7.16	3.22
201+75.00	25.00	33.00	1.54	23.62	3.40
202+00.00	25.00	30.70	2.10	29.49	1.69
202+25.00	25.00	24.68	0.22	25.64	1.07
202+50.00	25.00	23.69	1.45	22.39	0.77
202+75.00	25.00	31.03	0.71	25.33	1.00
203+00.00	25.00	40.43	0.00	33.08	0.33
203+23.62	23.63	21.35	0.08	27.03	0.04
			TOTALS	224.12	24.57

9

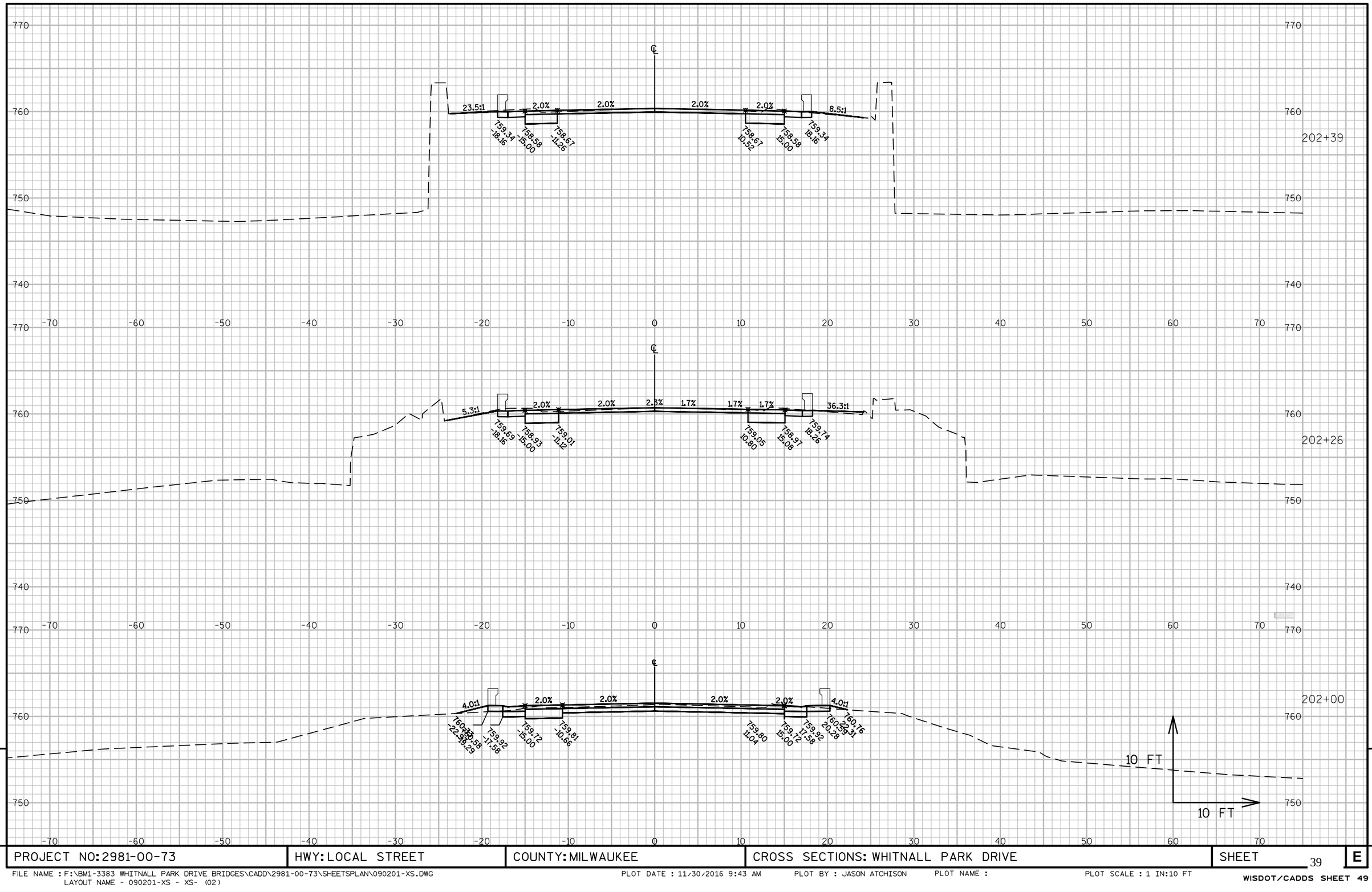
9

PROJECT NO: 2981-00-73 | HWY: LOCAL STREET | COUNTY: MILWAUKEE | CROSS SECTIONS: EARTHWORK DATA | SHEET: 37 | E

FILE NAME :F:\BM1-3383 Whitnall Park Drive Bridges\CADD\2981-00-73\Design\Quantities\EARTHWORK.dwg PLOT DATE : 12/1/2016 09:56:04 PLOT BY : PLOT NAME PLOT SCALE : 1:1



PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 38	E

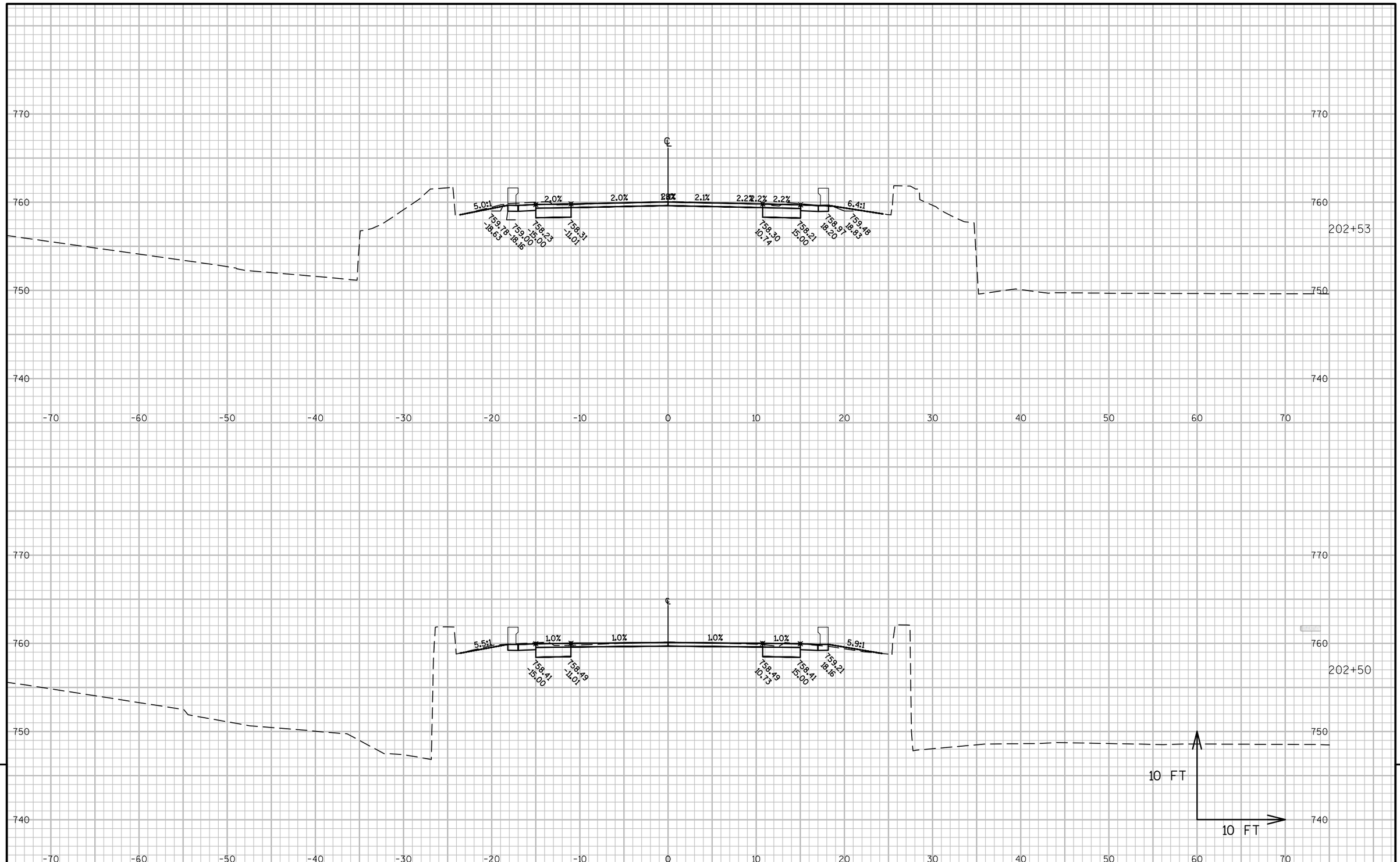


PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 39	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-73\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - XS- (02)

PLOT DATE : 11/30/2016 9:43 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



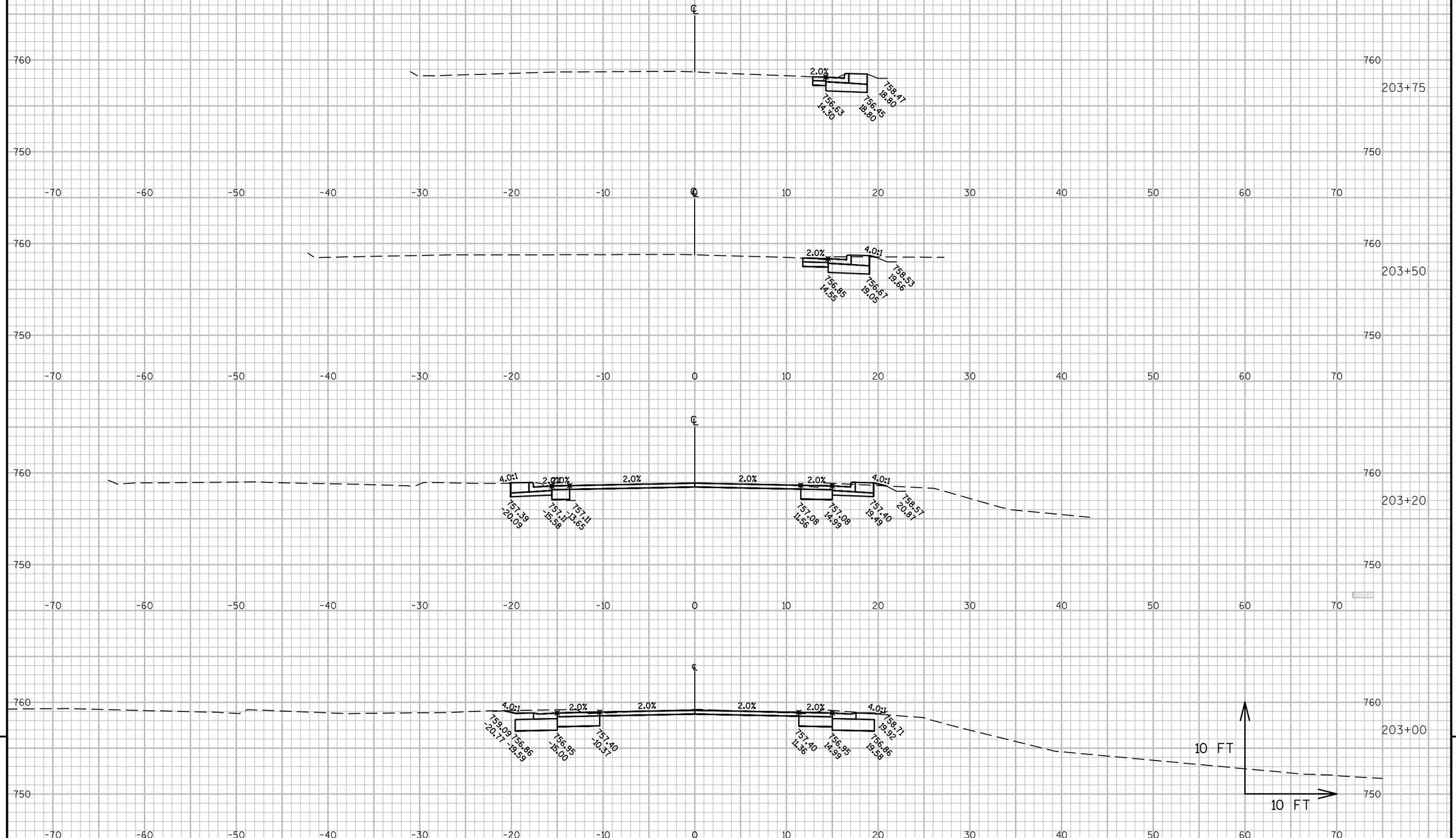
9

9

PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 40	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-73\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - XS- (03)

PLOT DATE : 11/30/2016 9:43 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

9

PROJECT NO: 2981-00-73	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 41	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-73\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - XS-(4)

PLOT DATE : 11/30/2016 9:43 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

SEL

APR 2017

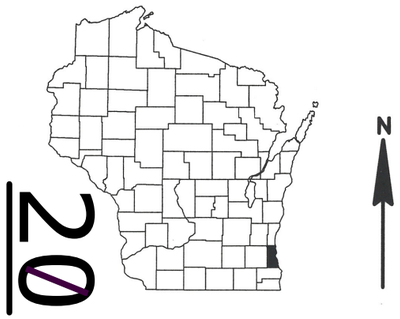
PROJECT ID: 2981-00-74

WITH: 2981-00-73

COUNTY: MILWAUKEE

ORDER OF SHEETS

TOTAL SHEETS = 46



N

DESIGN DESIGNATION

A.A.D.T.	2015	= 321
A.A.D.T.	2037	= 359
D.H.V.		=
D.D.		= 46/54
T.		=
DESIGN SPEED		= 30
ESALS		=

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 (300'EB)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WHITNALL PARK DRIVE

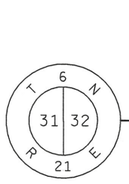
BRIDGE OVER BRANCH ROOT RIVER (P-40-0565)

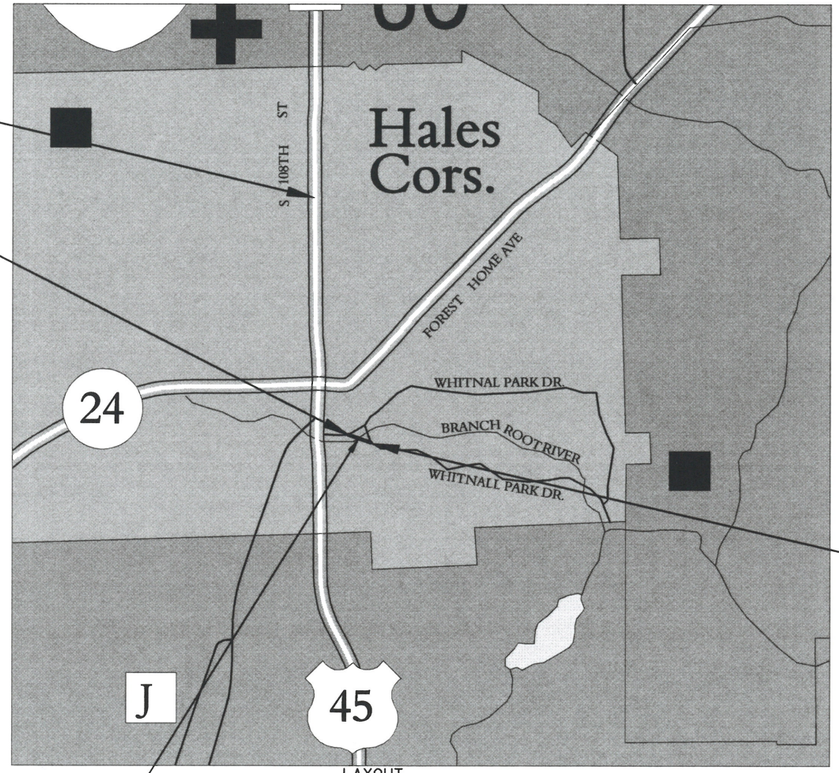
LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2981-00-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2981-00-74		





BEGIN PROJECT 2981-00-74
STA. 100+73.41
X= 569339.567
Y= 261790.964

END PROJECT
STA. 103+77.05

P-40-0565

LAYOUT

SCALE 0 .5 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (1987), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1998 (2007).

ACCEPTED FOR MILWAUKEE COUNTY

Nov. 30, 16 (Date) — Aaj Aleiow — MANAGING ENGINEER (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

BLOOM COMPANIES, LLC
Infrastructure Innovation and Ingenuity

WISCONSIN
YAKOV N. NENAYDYKH
E-30610
Milwaukee, WI
PROFESSIONAL ENGINEER

11/30/16 (Date) — Yakov Nenaydykh (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	HIMALAYAN CONSULTANTS, LLC
Designer	BLOOM COMPANIES, LLC
Managment Consultant	DAAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 12/1/16 — (Management Consultant Signature)

E

2

GENERAL NOTES

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

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

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL,WHICH SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE ABANDONMENT OR REMOVAL ITEM.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

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

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

INLET PROTECTION SHALL BE PLACED AT ALL INLET LOCATIONS ACCEPTING STORM WATER FROM THE PROJECT AREA OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

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

DISTURBED AREAS EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, MULCHED AND SEEDED AS DIRECTED BY THE ENGINEER IN THE FIELD.

FERTILIZER SHALL NOT BE USED WITHIN 200' OF NAVIGABLE WATERWAYS OR WETLANDS. THE ROOT RIVER IS NAVIGABLE.

OTHER AGENCIES

MILWAUKEE COUNTY DOT

AZIZ ALEIOW
2711 W. WELLS ST.
MILWAUKEE, WI 53208
(414) 278-4911
Aziz.Aleiow@milwcnty.com

US GEOLOGICAL SURVEY

ROB WASCHBUSCH
8505 RESEARCH WAY
MIDDLETON, WI 53562
(608) 821-3868
rjwaschb@usgs.gov

VILLAGE OF HALES CORNERS

MICHAEL MARTIN
5635 S. NEW BERLIN RD.
HALES CORNERS, WI 53130
(414) 529-6161
mjmartin@halescorners.org

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

KRISTINA BETZOLD
2300 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
(414) 507-4946
kristina.betzold@wisconsin.gov

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

STANDARD ABBREVIATIONS

AECPRC	APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE
AECPRCHE	APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
AEW	APRON END WALL
B/C	BACK OF CURB
BM	BENCH MARK
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELIPTICAL
Δ	DELTA
HMA	HOT MIX ASPHALT
MIN	MINIMUM
PGL	PROFILE GRADE LINE
RC	REVERSE CROWN

2

HMA PAVEMENT LAYERS

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	TRAFFIC	ASPHALT BINDER	BINDER DESIGNATION LEVEL
5.0"	2.0" UPPER	4	LT	58-28	S
	3.0" LOWER	3	LT	58-28	S

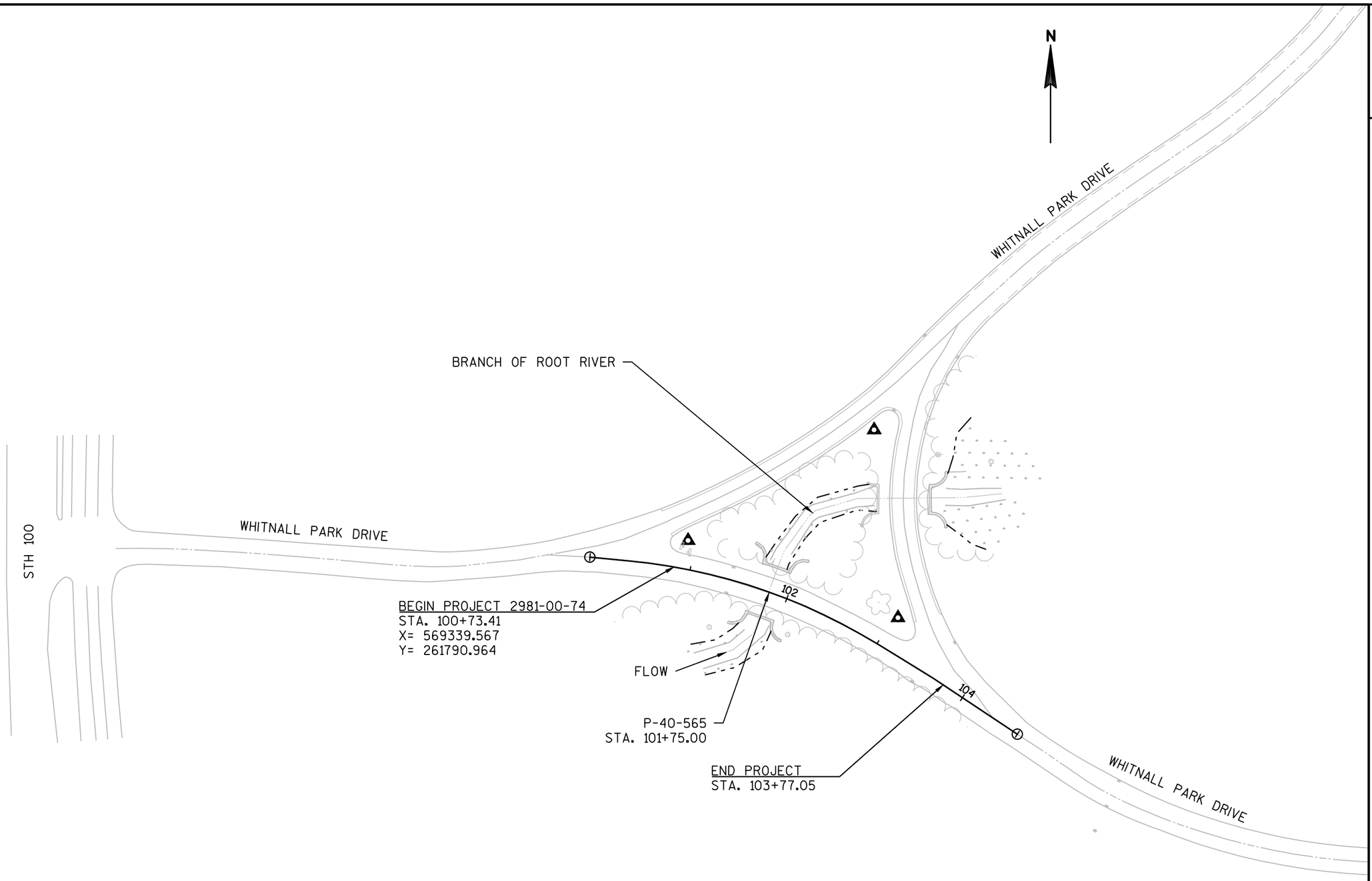
DESIGNER CONTACTS

BLOOM COMPANIES, LLC.

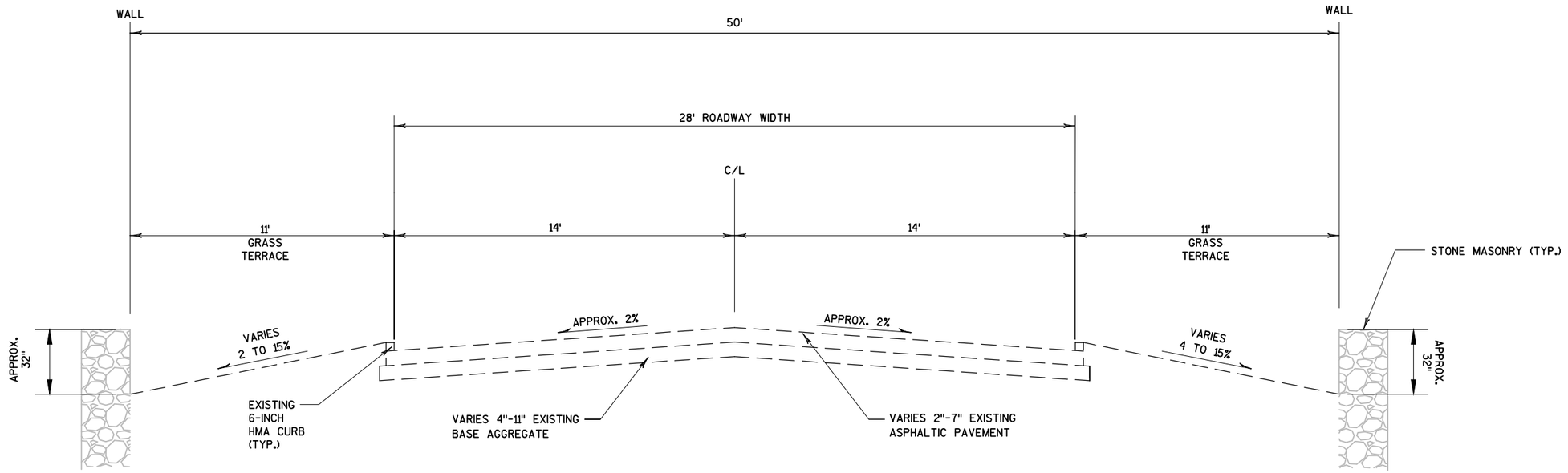
YAN NENAYDYKH
10501 W. RESEARCH DRIVE, SUITE 100
MILWAUKEE, WI 53226
(414) 292-4599
ynenaydykh@Bloomcos.com

ORDER OF SECTION 2 DETAIL SHEETS

2

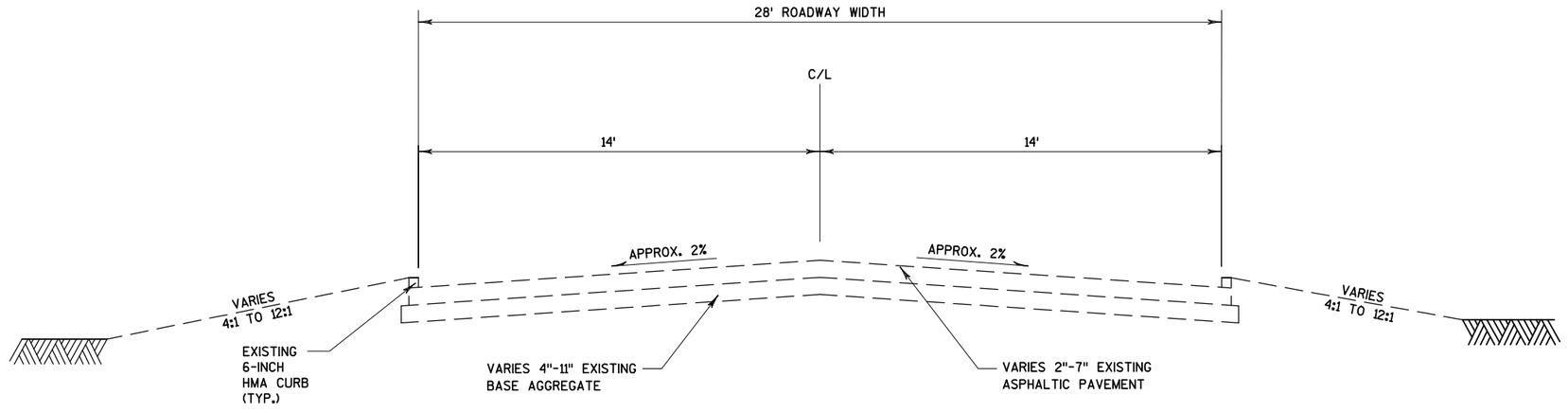


PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION

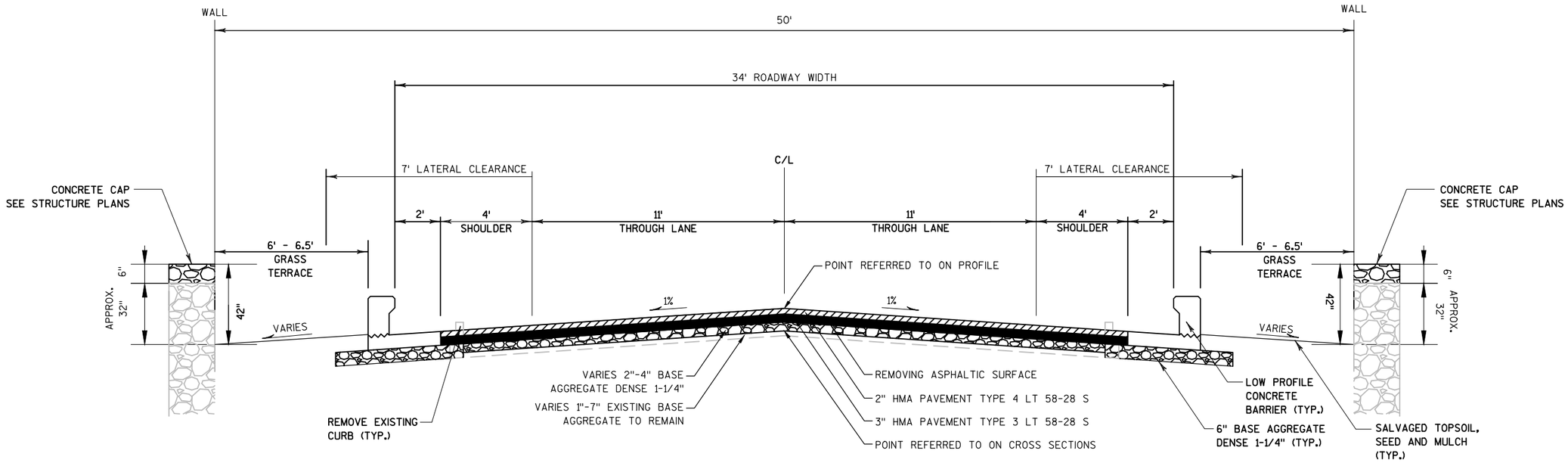
STA. 101+57.50 TO STA. 101+88.40 (P-40-565)



TYPICAL EXISTING SECTION

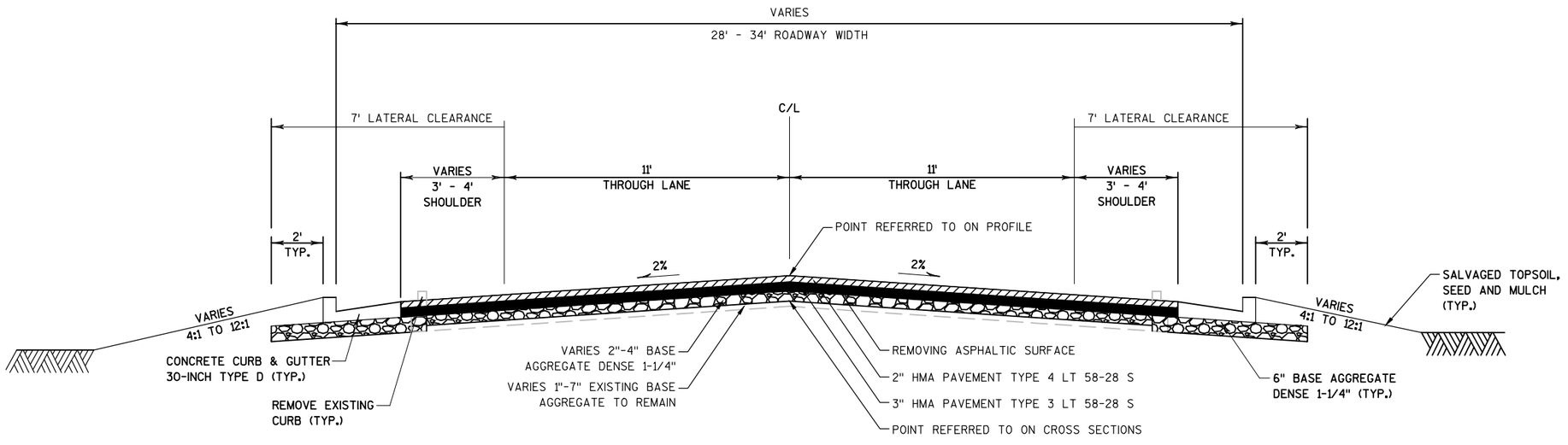
STA. 100+73.41 TO STA. 101+57.50
STA. 101+88.40 TO STA. 103+77.05

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION

STA. 101+57.50 TO STA. 101+88.40 (P-40-565)



TYPICAL FINISHED SECTION

STA. 100+73.41 TO STA. 101+57.50
STA. 101+88.40 TO STA. 103+77.05

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

2

WHITNALL PARK DRIVE

WETLAND BOUNDARY (TYP.)

BRANCH OF ROOT RIVER

CLEARING AND GRUBBING 45 SY

15'

CLEARING AND GRUBBING SEE PROJECT I.D. 2981-00-03

TEMPORARY ACCESS TO BE PAID UNDER BID ITEM ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM OPEN CELL (TYP.)

WHITNALL PARK DRIVE

N

+75.80, -31.67' LT

CONCRETE SIDEWALK 5-INCH (TYP.)

P-40-565

LOW PROFILE CONCRETE BARRIER SEE CONSTRUCTION DETAIL

CONCRETE CURB AND GUTTER 30-INCH TYPE D

100+82.99, -25.04' LT

R10'

CP 101

SLOPE INTERCEPT (TYP.)

CP 102

R10'

103+18.25, -25.00' LT

760.19'

+65.59, -17.00' LT

760.67'

+94.32, -17.00' LT

761.86'

+33.92, -15.00' LT

760.11'

+82.96, -15.00' LT

+25.76, -15.00' LT

15'

765.18'

764.16'

+18.25, -15.00' LT

765.06'

MATCH LINE PROJECT I.D. 2981-00-03

SAWCUT REQUIRED

101+00

760.41'

760.34'

102+00

760.97'

WHITNALL PARK DR. ℄

762.16'

103+00

764.46'

WHITNALL PARK DRIVE

767.57'

SAWCUT REQUIRED

+59.91, 15.00' RT

+64.92, 17.00' RT

+96.01, 17.00' RT

+23.23, 14.11' RT

+94.35, 12.05' RT

760.16'

760.22'

760.67'

+38.01, 15.00' RT

761.86'

764.16'

+16.70, 15.00' RT

12'

18" I.D. TREE TO REMAIN

+73.43, 12.05' RT

MATCH EXISTING

BEGIN PROJECT
STA. 100+73.41
X= 569339.567
Y= 261790.964

CONCRETE CURB AND GUTTER 30-INCH TYPE D

LOW PROFILE CONCRETE BARRIER SEE CONSTRUCTION DETAIL

HMA PAVEMENT

767.32'

ADJUST INLET

+61.48, 11.72' RT

+74.83, 11.91' RT

MATCH EXISTING

36" I.D. TREE TO REMAIN

15'

20'

CLEARING AND GRUBBING 35 SY

CLEARING AND GRUBBING 105 SY

WETLAND BOUNDARY (TYP.)

END PROJECT
STA. 103+77.05

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 6	E

2

NOTE

THE CONTRACTOR MAY CHOSE TO INSTALL THE CONCRETE REVETMENT SYSTEM BY CONSTRUCTING A TEMPORARY BYPASS DIVERSION PIPE FOR THE CREEK. IF THE CONTRACTOR CHOOSES THIS OPTION, ALL CONDITIONS DESCRIBED IN THE SPECIFICATION MUST BE MET.

LEGEND

- EROSION MAT CLASS I URBAN TYPE A, SEEDING MIXTURE NO. 60, MULCHING, AND TEMPORARY SEEDING
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- COFFERDAM LIMITS
- INLET PROTECTION TYPE C
- SURFACE WATER FLOW
- TOPSOIL AND SEED

BRANCH OF ROOT RIVER

COFFERDAM LINE STAGE 1 SEE STRUCTURE PLANS

COFFERDAM LINE STAGE 2 SEE STRUCTURE PLANS

ARTICULATING CONCRETE BLOCK/HEAVY RIPRAP SEE STRUCTURE PLANS FOR DETAILS

2.5' MAX TYP

6' MINIMUM SPACE FOR WATER FLOW

101+00

102+00

103+00

WHITNALL PARK DR. ℄

MATCH LINE PROJECT I.D. 2981-00-03

BEGIN PROJECT
STA. 100+73.41
X= 569339.567
Y= 261790.964

END PROJECT
STA. 103+77

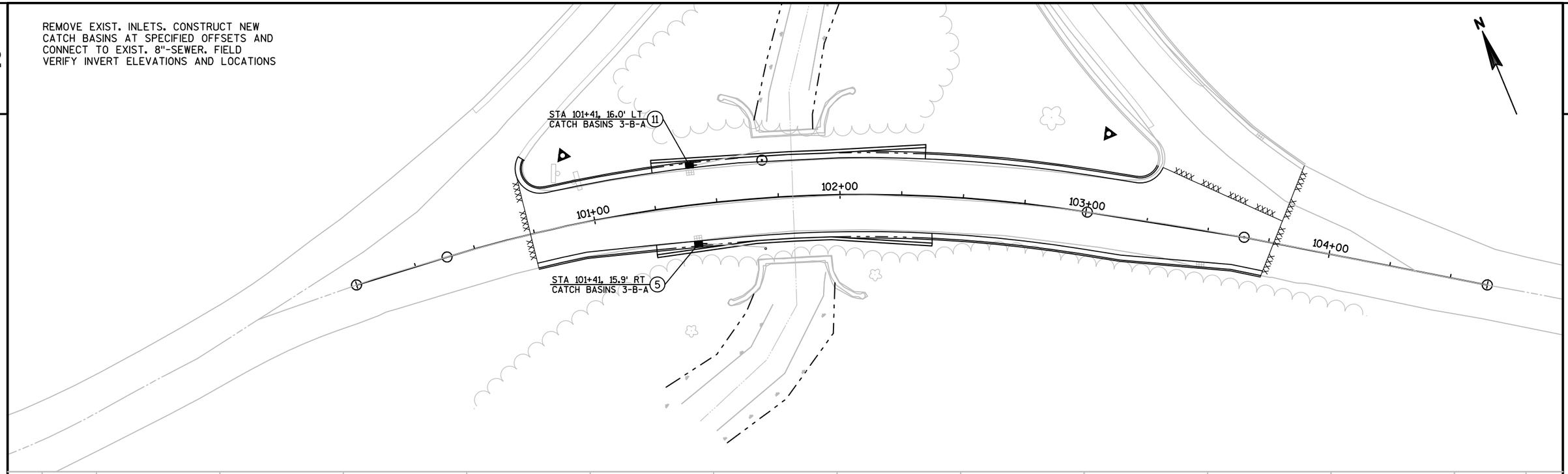
COFFERDAM LINE STAGE 2 SEE STRUCTURE PLANS

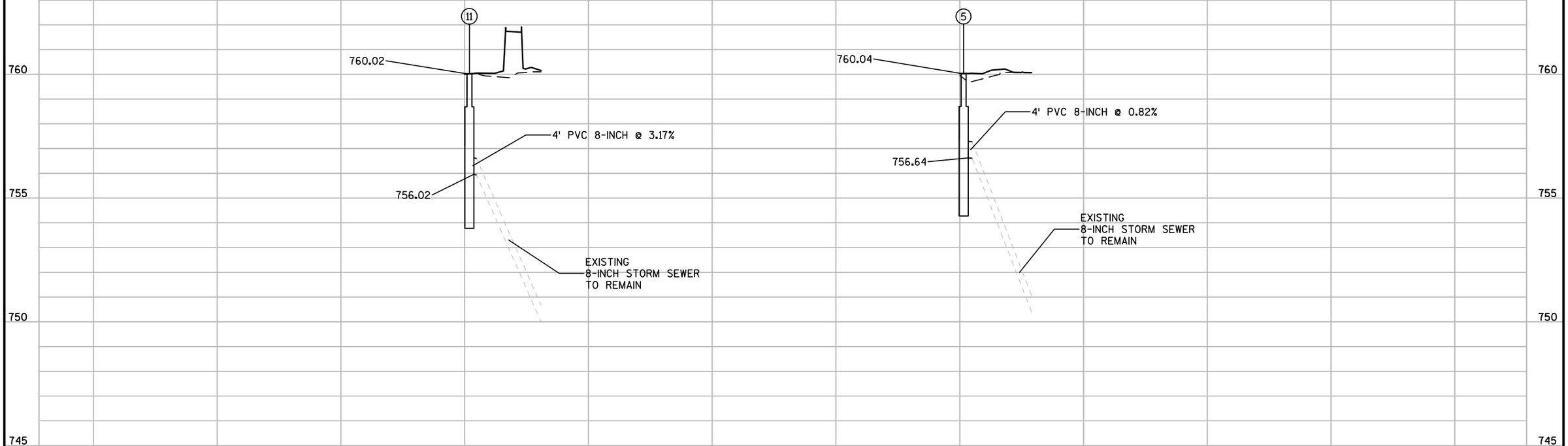
WETLAND BOUNDARY (TYP.)

COFFERDAM LINE STAGE 1 SEE STRUCTURE PLANS

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 7	E

REMOVE EXIST. INLETS. CONSTRUCT NEW CATCH BASINS AT SPECIFIED OFFSETS AND CONNECT TO EXIST. 8"-SEWER. FIELD VERIFY INVERT ELEVATIONS AND LOCATIONS





PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET 8	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-74\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022501

PLOT DATE : 12/1/2016 10:16 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

SIGN ON PERMANENT SUPPORT

N

BRANCH OVER ROOT RIVER

STOP
R1-1
30"X30"

W5-52L
12"X36"

SLOPE INTERCEPT
(TYP.)

W5-52R
12"X36"

101+00

102+00

103+00

MATCH LINE PROJECT I.D. 2981-00-03

WHITNALL PARK DR. ℄

BEGIN PROJECT
STA. 100+73.41
X= 569339.567
Y= 261790.964

W5-52R
12"X36"

W5-52L
12"X36"

END PROJECT
STA. 103+77.05

WETLAND BOUNDARY
(TYP.)

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PAVT. MARKING AND SIGNING	SHEET 9	E

2

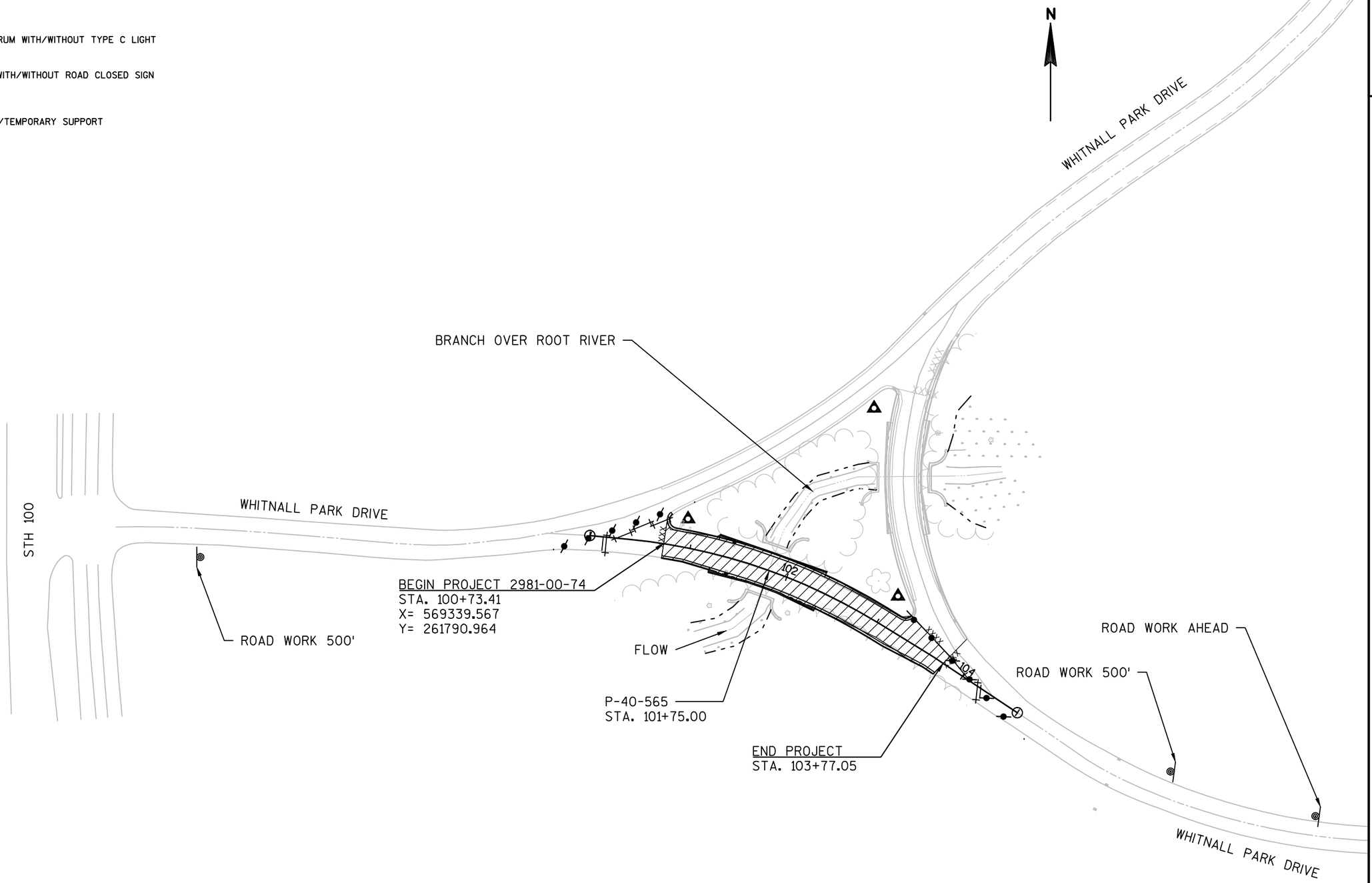
LEGEND

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT

TYPE II BARRICADE WITH/WITHOUT ROAD CLOSED SIGN

SIGN ON PERMANENT/TEMPORARY SUPPORT

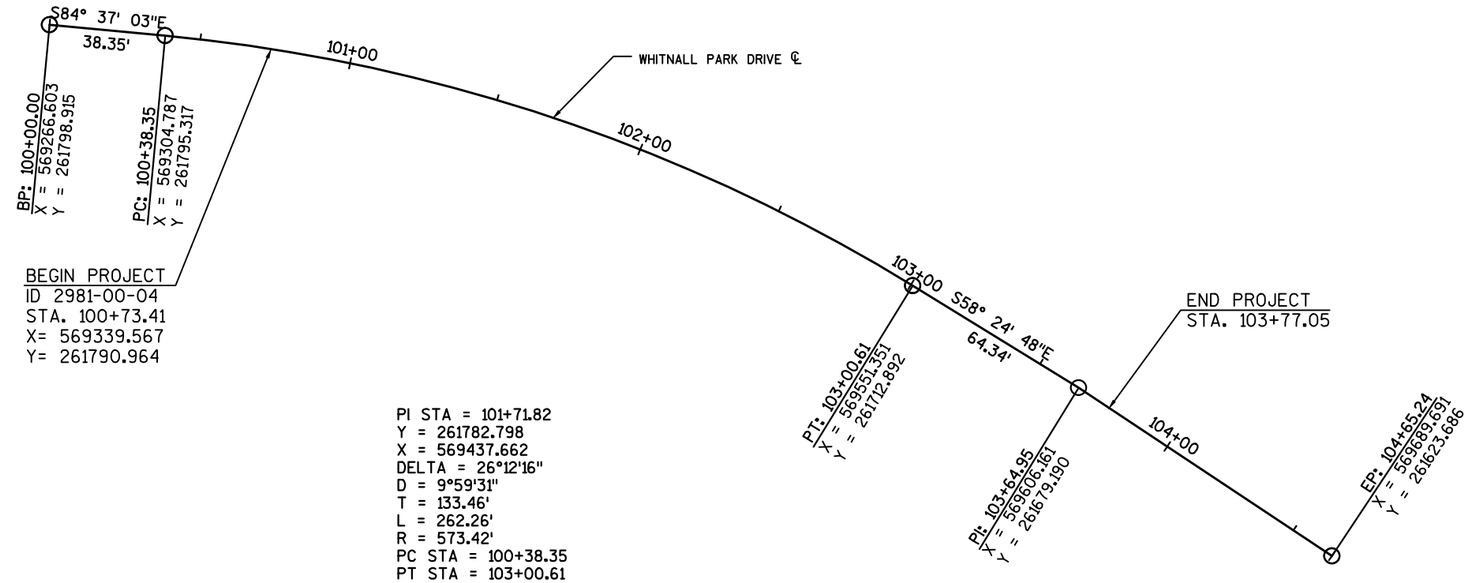
WORK AREA



2

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SHEET 10	E

2

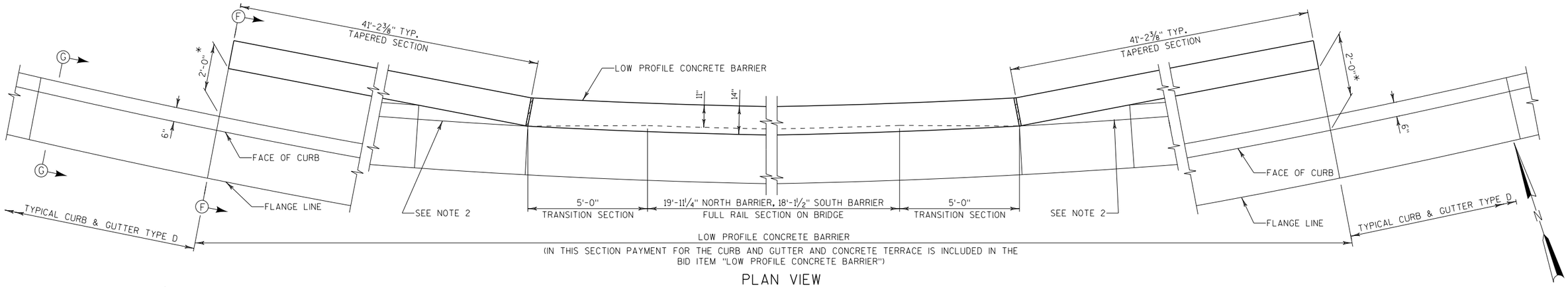


PI STA = 101+71.82
Y = 261782.798
X = 569437.662
DELTA = 26°12'16"
D = 9°59'31"
T = 133.46'
L = 262.26'
R = 573.42'
PC STA = 100+38.35
PT STA = 103+00.61

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 11	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-74\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 027201-AD

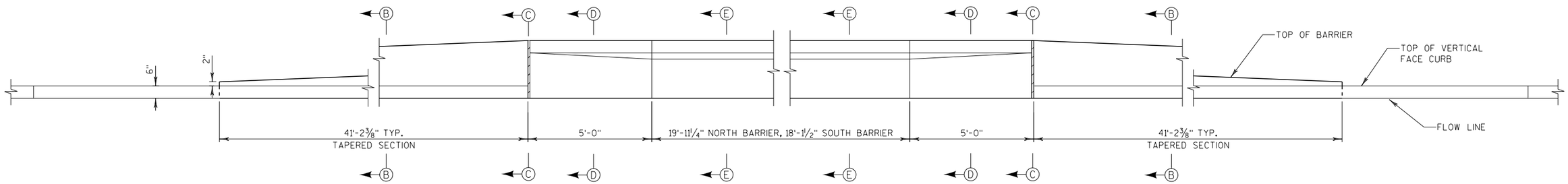
PLOT DATE : 11/30/2016 9:49 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:50 FT



*-MEASURED NORMAL TO FACE OF CURB.

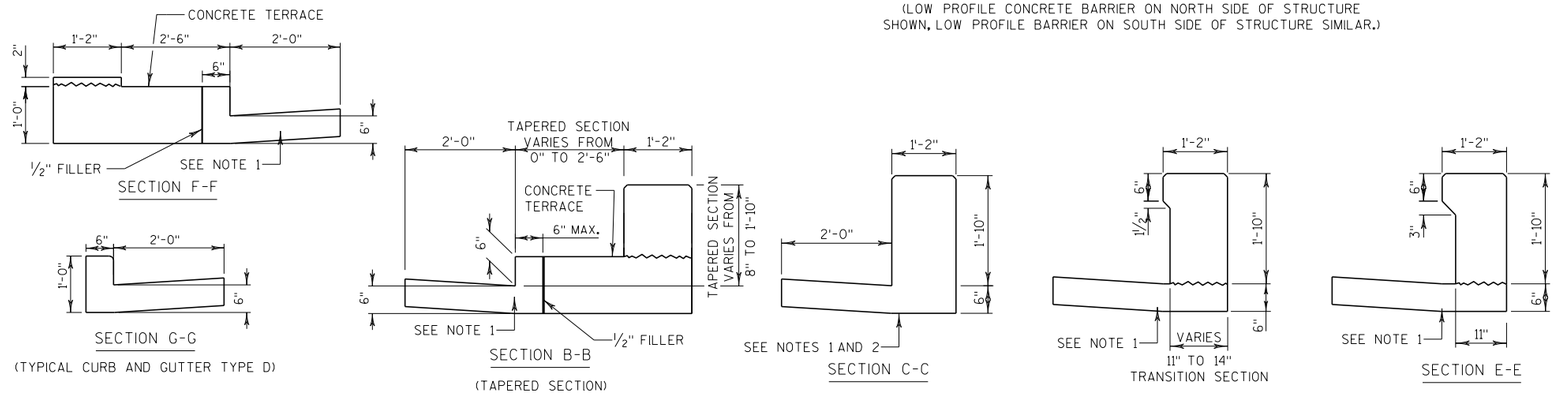
PLAN VIEW

(LOW PROFILE CONCRETE BARRIER ON NORTH SIDE OF STRUCTURE SHOWN, LOW PROFILE BARRIER ON SOUTH SIDE OF STRUCTURE SIMILAR.)

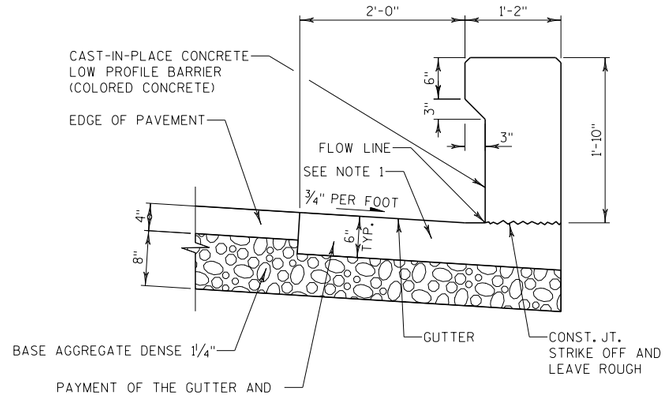


ELEVATION VIEW

(LOW PROFILE CONCRETE BARRIER ON NORTH SIDE OF STRUCTURE SHOWN, LOW PROFILE BARRIER ON SOUTH SIDE OF STRUCTURE SIMILAR.)



SECTIONS



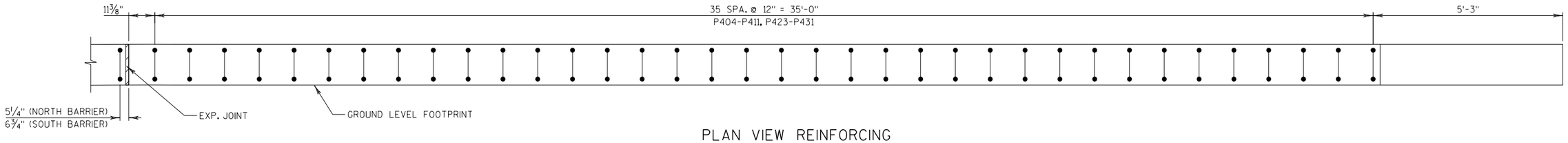
TYPICAL LOW PROFILE CONCRETE BARRIER SECTION

(TYPICAL FULL RAIL SECTION AT APPROACHES)

NOTES

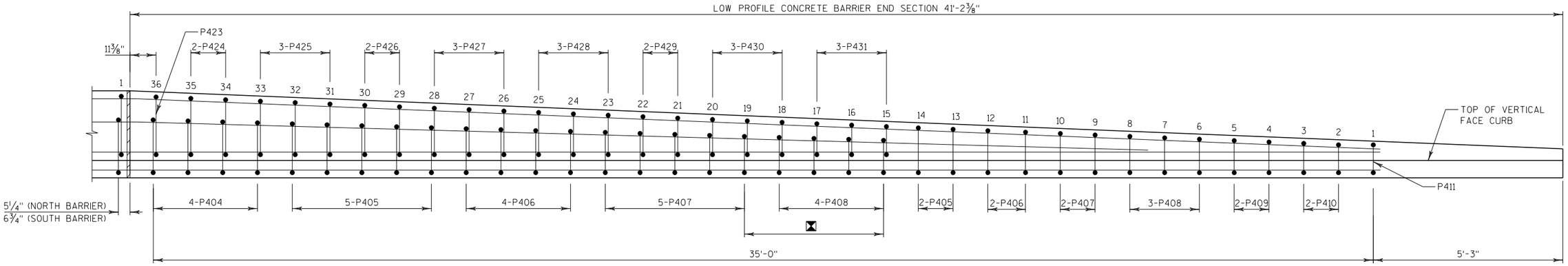
1) PAYMENT FOR THE GUTTER AND CONCRETE TERRACE, AS NOTED ON THE PLAN VIEW IS INCLUDED IN THE BID ITEM "LOW PROFILE CONCRETE BARRIER".

2) THE CURB HEAD SHALL BE POURED MONOLITHICALLY WITH THE TAPERED SECTION OF THE LOW PROFILE CONCRETE BARRIER UNTIL A BUTT JOINT FOR A FULL CURB HEAD CAN BE ESTABLISHED.



PLAN VIEW REINFORCING

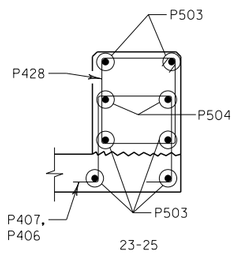
(LOW PROFILE CONCRETE BARRIER AT NORTHWEST QUADRANT OF STRUCTURE SHOWN, OTHER TAPERED END SECTIONS SIMILAR)



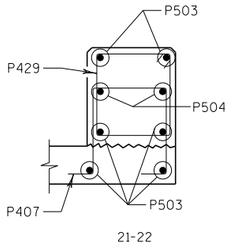
PROFILE VIEW REINFORCING

(LOW PROFILE CONCRETE BARRIER AT NORTHWEST QUADRANT OF STRUCTURE SHOWN, OTHER TAPERED END SECTIONS SIUMILAR)

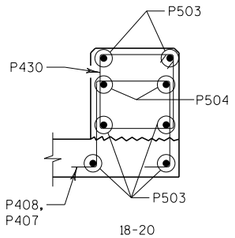
⧓ SEE TABLE FOR BARS



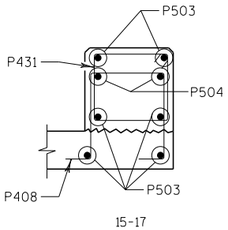
23-25



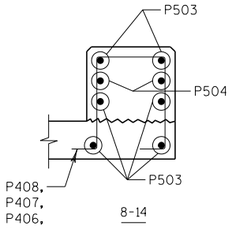
21-22



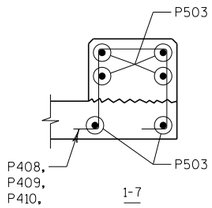
18-20



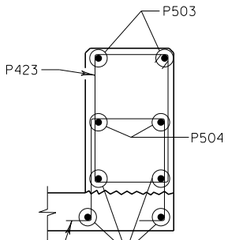
15-17



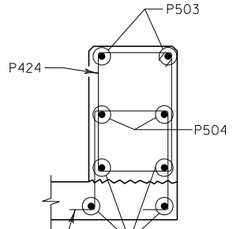
8-14



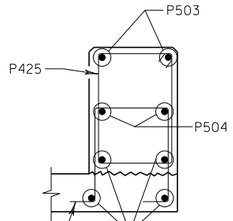
1-7



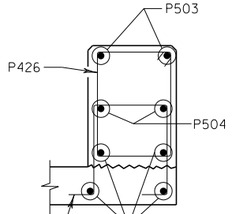
36



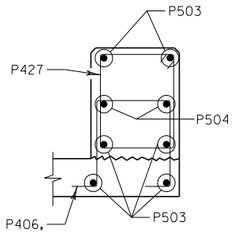
34-35



31-33

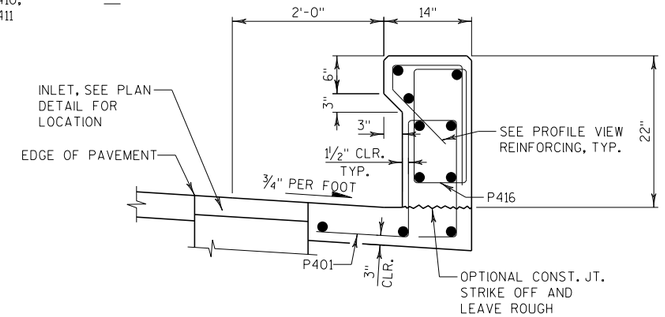


29-30



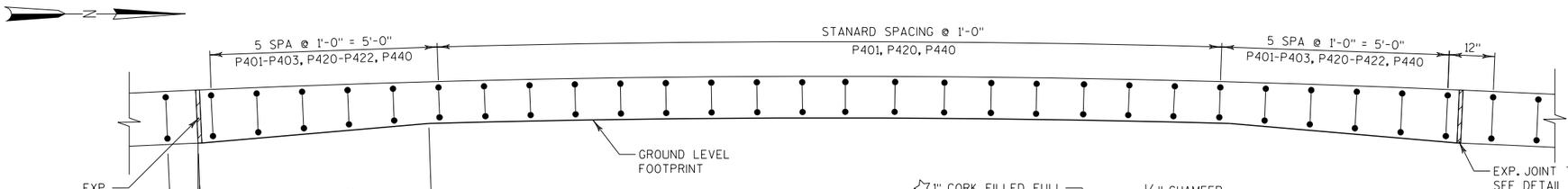
26-28

SECTION	NORTH BARRIER		SOUTH BARRIER	
	WEST END	EAST END	WEST END	EAST END
15	P414	P407	P407	P407
16	P413	P406	P406	P406
17	P413	P406	P413	P406
18	P405	P405	P412	P405
19	P405	P405	P412	P405



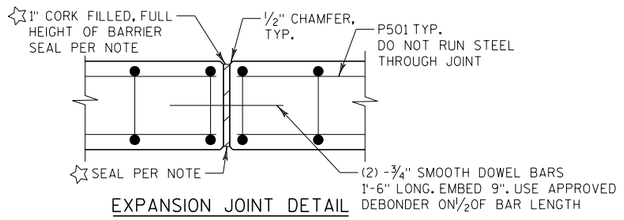
SECTION AT INLETS

PROJECT NO: 2981-00-74	HWY: WHITNALL PARK BRIDGES	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 13	E

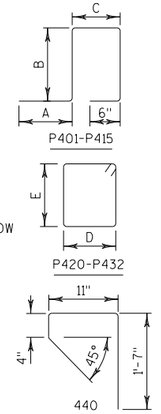


PLAN VIEW - REINFORCING

TYPICAL AT LOW PROFILE CONCRETE BARRIER ON BRIDGE AND APPROACHES



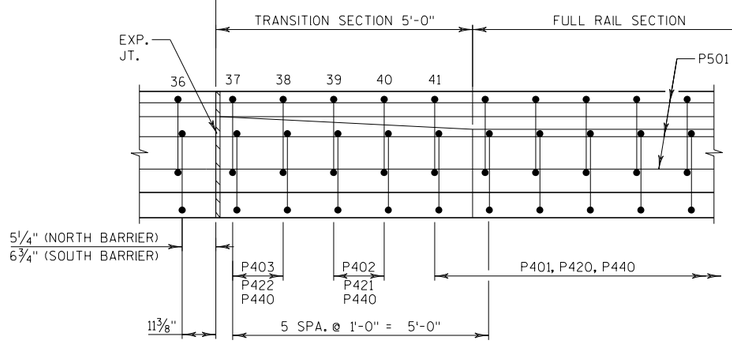
EXPANSION JOINT DETAIL



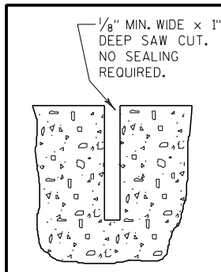
BENDING DIAGRAMS

BAR MARK	DIMENSIONS D	E
P420	8"	1'-4"
P421	9"	1'-4"
P422	10"	1'-4"
P423	11"	1'-4"
P424	11"	1'-3"
P425	11"	1'-2"
P426	11"	1'-1"
P427	11"	1'-0"
P428	11"	11"
P429	11"	10"
P430	11"	9"
P431	11"	8"

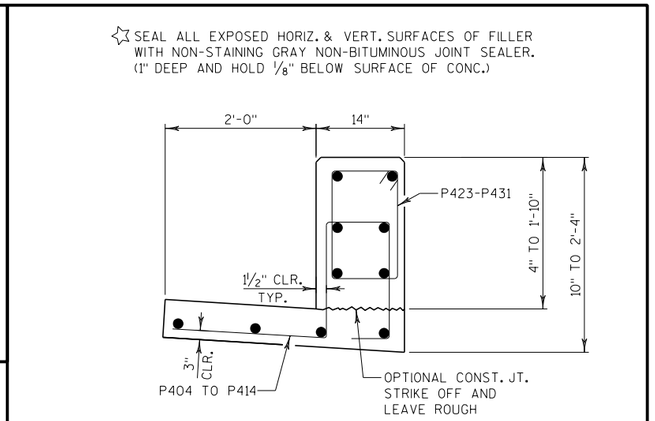
BAR MARK	DIMENSIONS A	B	C
P401	2'-3"	1'-5"	8"
P402	2'-2"	1'-5"	9"
P403	2'-1"	1'-5"	10"
P404	2'-0"	1'-2"	11"
P405	2'-0"	1'-1"	11"
P406	2'-0"	1'-0"	11"
P407	2'-0"	11"	11"
P408	2'-0"	10"	11"
P409	2'-0"	9"	11"
P410	2'-0"	8"	11"
P411	2'-0"	7"	11"
P412	10"	1'-1"	11"
P413	10"	1'-0"	11"
P414	10"	11"	11"



PROFILE VIEW - REINFORCING

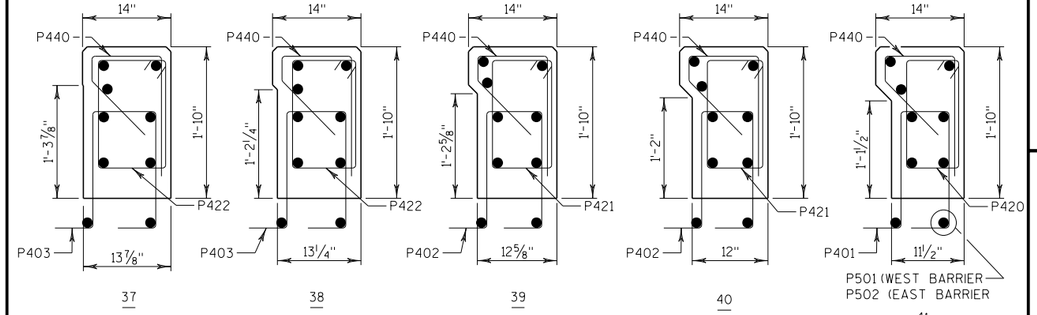


CONTRACTION JOINT DETAIL

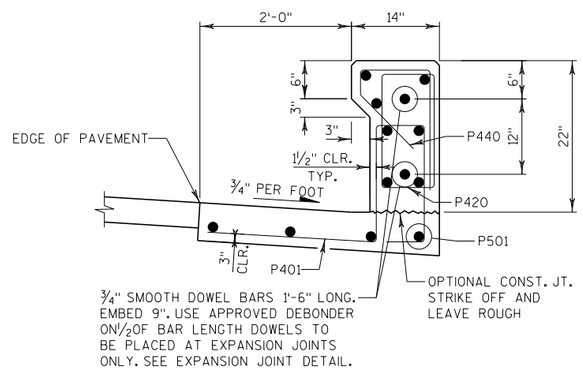


LOW PROFILE CONCRETE BARRIER SECTION AT TAPER

(FOR HORIZ, REINFORCMENT, SEE SHEET XX))



REBAR PLACEMENT - TRANSITION CROSS SECTIONS



TYPICAL LOW PROFILE CONCRETE BARRIER SECTION

(TYPICAL FULL RAIL SECTION AT APPROACHES)

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	42	6'-1"	X	-	VERTICAL AT FULL AND TRANSITION
P402	X	8	6'-1"	X	-	VERTICAL AT TRANSITION SECTION
P403	X	8	6'-1"	X	-	VERTICAL AT TRANSITION SECTION
P404	X	16	5'-5"	X	-	VERT.AT TRANS. AND TAPER
P405	X	26	5'-3"	X	-	VERTICAL AT TAPER SECTION
P406	X	21	5'-1"	X	-	VERTICAL AT TAPER SECTION
P407	X	27	4'-11"	X	-	VERTICAL AT TAPER SECTION
P408	X	28	4'-9"	X	-	VERTICAL AT TAPER SECTION
P409	X	8	4'-7"	X	-	VERTICAL AT TAPER SECTION
P410	X	8	4'-5"	X	-	VERTICAL AT TAPER SECTION
P411	X	4	4'-3"	X	-	VERTICAL AT TAPER SECTION
P412	X	2	4'-1"	X	-	VERTICAL AT STORM WATER INLET
P413	X	3	3'-11"	X	-	VERTICAL AT STORM WATER INLET
P414	X	1	3'-9"	X	-	VERTICAL AT STORM WATER INLET
P420	X	42	4'-2"	X	-	VERTICAL AT FULL AND TRANSITION
P421	X	8	4'-4"	X	-	VERTICAL AT TRANSITION SECTION
P422	X	8	4'-6"	X	-	VERTICAL AT TRANSITION SECTION
P423	X	4	4'-8"	X	-	VERTICAL AT TAPER SECTION
P424	X	8	4'-6"	X	-	VERTICAL AT TAPER SECTION
P425	X	12	4'-4"	X	-	VERTICAL AT TAPER SECTION
P426	X	8	4'-2"	X	-	VERTICAL AT TAPER SECTION
P427	X	12	4'-0"	X	-	VERTICAL AT TAPER SECTION
P428	X	12	3'-10"	X	-	VERTICAL AT TAPER SECTION
P429	X	8	3'-8"	X	-	VERTICAL AT TAPER SECTION
P430	X	12	3'-6"	X	-	VERTICAL AT TAPER SECTION
P431	X	12	3'-4"	X	-	VERTICAL AT TAPER SECTION
P440	X	58	3'-9"	X	-	VERT. AT FULL SECTION AND TRANSITION
P501	X	9	29'-7"	-	-	LONGIT. AT FULL SECTION AND TRANSITION(NORTHT)
P502	X	9	27'-10"	-	-	LONGIT. AT FULL SECTION AND TRANSITION(SOUTH)
P503	X	24	36'-0"	-	-	LONGIT. AT TAPER SECTION
P504	X	8	29'-6"	-	-	LONGIT. AT TAPER SECTION

NOTES

1. USE 1 1/2" CLEAR CONCRETE COVER FOR REBAR IN BARRIER, AND 3" CLEAR FOR CONCRETE CAST AGAINST THE 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 3/4" 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".

2981-00-74

Line	Item	Item Description	Unit	Total	Qty
0010	201.0110	Clearing	SY	185.000	185.000
0020	201.0210	Grubbing	SY	185.000	185.000
0050	204.0220	Removing Inlets	EACH	2.000	2.000
0060	205.0100	Excavation Common	CY	437.000	437.000
0090	206.5000	Cofferdams (structure) 02. P-40-565	LS	1.000	1.000
0120	213.0100	Finishing Roadway (project) 02. 2981-00-74	EACH	1.000	1.000
0130	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	270.000	270.000
0140	311.0110	Breaker Run	TON	228.000	228.000
0150	405.0200	Coloring Concrete Custom	CY	15.000	15.000
0160	455.0605	Tack Coat	GAL	30.000	30.000
0170	460.2000	Incentive Density HMA Pavement	DOL	176.000	176.000
0180	460.5223	HMA Pavement 3 LT 58-28 S	TON	165.000	165.000
0190	460.5224	HMA Pavement 4 LT 58-28 S	TON	110.000	110.000
0200	502.0100	Concrete Masonry Bridges	CY	2.000	2.000
0210	502.4204	Adhesive Anchors No. 4 Bar	EACH	30.000	30.000
0220	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	100.000	100.000
0230	509.1500	Concrete Surface Repair	SF	45.000	45.000
0240	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	510.000	510.000
0250	602.0410	Concrete Sidewalk 5-Inch	SF	105.000	105.000
0260	611.0609	Inlet Covers Type B-A	EACH	2.000	2.000
0270	611.1003	Catch Basins 3-FT Diameter	EACH	2.000	2.000
0300	619.1000	Mobilization	EACH	0.500	0.500
0310	624.0100	Water	MGAL	5.000	5.000
0320	625.0500	Salvaged Topsoil	SY	415.000	415.000
0330	627.0200	Mulching	SY	290.000	290.000
0340	628.1104	Erosion Bales	EACH	225.000	225.000
0350	628.1504	Silt Fence	LF	560.000	560.000
0360	628.1520	Silt Fence Maintenance	LF	560.000	560.000
0370	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0380	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0390	628.2006	Erosion Mat Urban Class I Type A	SY	290.000	290.000
0400	628.7015	Inlet Protection Type C	EACH	2.000	2.000
0410	630.0160	Seeding Mixture No. 60	LB	4.100	4.100
0420	630.0200	Seeding Temporary	LB	1.400	1.400
0430	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0450	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0460	642.5201	Field Office Type C	EACH	0.500	0.500
0480	643.0100	Traffic Control (project) 02. 2981-00-74	EACH	1.000	1.000
0490	643.0300	Traffic Control Drums	DAY	1,375.000	1,375.000
0500	643.0410	Traffic Control Barricades Type II	DAY	330.000	330.000

2981-00-74

Line	Item	Item Description	Unit	Total	Qty
0510	643.0715	Traffic Control Warning Lights Type C	DAY	165.000	165.000
0520	643.0900	Traffic Control Signs	DAY	165.000	165.000
0530	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0540	650.5000	Construction Staking Base	LF	325.000	325.000
0550	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	510.000	510.000
0570	650.6500	Construction Staking Structure Layout (structure) 02. P-04-565	LS	1.000	1.000
0590	650.9910	Construction Staking Supplemental Control (project) 02. 2981-00-74	LS	1.000	1.000
0600	650.9920	Construction Staking Slope Stakes	LF	577.000	577.000
0610	690.0150	Sawing Asphalt	LF	110.000	110.000
0630	SPV.0035	Special 02. FIELD STONE RIPRAP HEAVY	CY	40.000	40.000
0640	SPV.0090	Special 01. STONE MASONRY POINTING	LF	541.000	541.000
0650	SPV.0090	Special 02. STORM SEWER PIPE CORRUGATED PVC 8-INCH	LF	8.000	8.000
0660	SPV.0090	Special 03. LOW PROFILE CONCRETE BARRIER	LF	225.000	225.000
0670	SPV.0180	Special 01. ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL	SY	320.000	320.000

CLEARING AND GRUBBING ITEMS

CATEGORY	LOCATION		CLEARING 201.0110 SY	GRUBBING 201.0210 SY
0010	WHITNALL PARK DR			
	101+70	LT	45	45
	101+70	RT	35	35
	102+20	RT	105	105
	TOTAL		185	185

REMOVING INLETS

CATEGORY	LOCATION		204.0220 EACH
0010	WHITNALL PARK DR		
	101+40	LT	1
	101+40	RT	1
	TOTAL		2

3

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-74\SHEETSPLAN\030201-MQ.DWG
LAYOUT NAME - 030201-MQ - 030201_MQ (1)
PLOT DATE : 2/13/2017 11:51 AM PLOT BY : VALBON LATIFI PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

3

3

EARTHWORK SUMMARY

CATEGORY	DIVISION	LOCATION	STATION	TO	STATION	(C) CUT EXCAVATION CY	(1) 205.0100 EXCAVATION COMMON CY	(S) SALVAGED PAVEMENT MATERIAL CY	(2) AVAILABLE MATERIAL CY	(3) 120% EXPANDED FILL CY	(4) MASS ORDINATE EXCESS (SHORTAGE) CY
0010	1	WHITNALL PARK DR.	100+73	-	103+77	330	330	196	134	12	122
0020	1	WHITNALL PARK DR.	101+58	-	101+88	107	107	--	107	--	107
		TOTALS					437				229

NOTES

1) EXCAVATION COMMON IS THE SUM OF THE CUT (C) AND EBS EXCAVATION (E).
2) AVAILABLE MATERIAL = CUT (C) - SALVAGED PAVEMENT MATERIAL (S).
3) EXPANDED FILL = UNEXPANDED FILL* 120% FILL FACTOR.
4) MASS ORDINATE = AVAILABLE MATERIAL (2) - EXPANDED FILL (3).

3

BASE AGGREGATE ITEMS

CATEGORY	LOCATION			OFFSET	305.0120 BASE AGGREGAT DENSE 1 1/4-INCH TON	* 624.0100 WATER MGAL
0010	WHITNALL PARK DR					
	100+75	-	103+77	LT	133	1.5
	100+75	-	103+77	RT	137	1.5
	TOTALS				270	3.0

* ADDITIONAL QUANTITES SHOWN ELSEWHERE

ASPHALT PAVEMENT ITEMS

CATEGORY	LOCATION		OFFSET	455.0605 TACK COAT GAL	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
0010	WHITNALL PARK DR						
	100+75	103+77	LT/RT	30	176	165	110
	TOTALS			30	176	165	110

CONCRETE ITEMS

CATEGORY	LOCATION			OFFSET	* 405.0200 COLORING CONCRETE CUSTOM CY	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	SPV.0090.03 LOW PROFILE CONCRETE BARRIER LF
0010	WHITNALL PARK DR							
	100+73	-	103+77	LT	--	235	--	--
	100+73	-	103+77	RT	--	275	--	--
	101+23	-	101+65	RT	--	--	30	--
	101+26	-	101+60	LT	--	--	20	--
	101+96	-	102+38	RT	--	--	30	--
	102+08	-	102+34	LT	--	--	25	--
	101+26	-	102+34	LT	6.4	--	--	113.5
	101+23	-	102+38	RT	6.6	--	--	111.5
	TOTALS				13	510	105	225

* ADDITONAL QUANTITIES SHOWN ELSEWHERE

3

STORM SEWER ITEMS

CATEGORY	STRUCT NO.	LOCATION	OFFSET	SLOPE	ELEVATIONS RIM	INVERT	DISCHARGE	STRUCT BOTTOM	STRUCT DEPTH	STRUCTURE FROM	TO	611.0609 INLET COVER TYPE B-A EACH	611.1003 CATCH BASIN 3-FT DIAMETER EACH	SPV.0090.02 STORM SEWER PIPE CORRUGATED PVC 8-INCH DIAMETER LF	REMARKS
0010	WHITNAL PARK DRIVE														
	11	101+41	16 LT	3.2%	760.02	756.02	755.89	754.00	4.85	11	EXISTING SS	1	1	4	
	5	101+41	15.9 RT	0.7%	760.04	756.64	756.61	754.50	4.37	5	EXISTING SS	1	1	4	
	TOTALS											2	2	8	

3

3

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	* 624.0100 WATER MGAL	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.7015 INLET PROTECTION TYPE C EACH	630.0160 SEEDING MIXTURE NO. 60 LB	630.0200 SEEDING TEMPORARY LB
0010	1	WHITNALL PARK DR												
		100+84 - 103+77	2.0	330	230	178	446	446	2	4	230	2	3.3	1.1
		UNDISTRIBUTED	--	85	60	47	114	114	--	--	60	--	0.8	0.3
		TOTALS	2.0	415	290	225	560	560	2	4	290	2	4.1	1.4

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

PERMANENT SIGNING ITEMS

CATEGORY	SIGN #	SIGN CODE	SIGN SIZE	SIGN DIM	634.0612 POSTS WOOD 4x6-INCH X 12 FEET EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF
0010	P1-1	W5-52R	(2M)	12"X36"	1	3.00
	P1-2	W5-52L	(2M)	12"X36"	1	3.00
	P1-3	W5-52R	(2M)	12"X36"	1	3.00
	P1-4	W5-52L	(2M)	12"X36"	1	3.00
	TOTALS				4	12.00

SAWING ASPHALT

CATEGORY	LOCATION	OFFSET	690.0150 LF	REMARKS
0010	WHITNALL PARK DR			
	100+84	LT/RT	30	BEGIN PROJECT
	103+77	LT/RT	80	END PROJECT
	TOTALS		110	

3

TRAFFIC CONTROL ITEMS

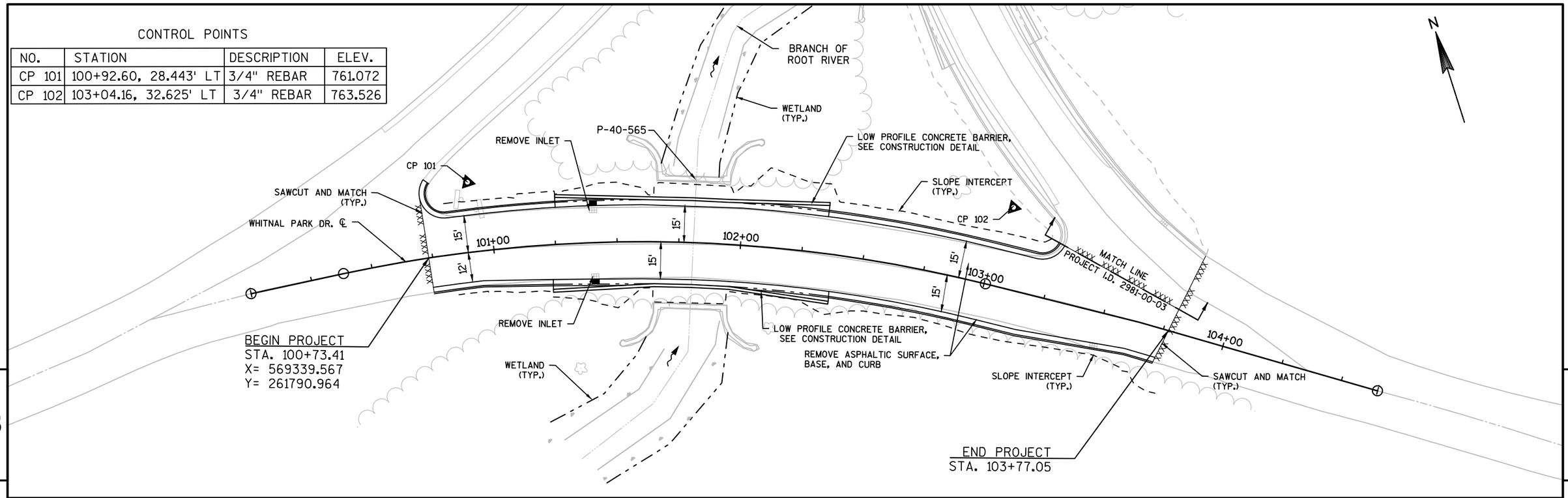
CATEGORY	LOCATION	STAGE DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS
0010	WHITNALL PARK DR.	55	25	1,375	6	330	3	165	3	165
	TOTALS	55		1,375		330		165		165

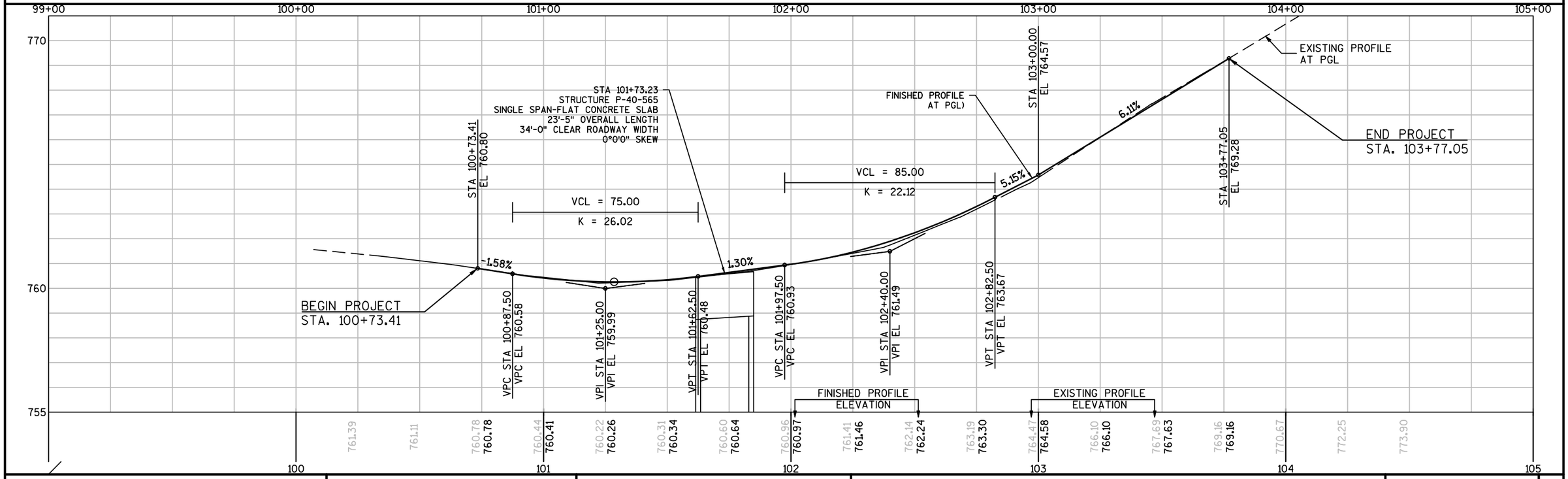
CONSTRUCTION STAKING ITEMS

CATEGORY	STAGE	LOCATION	OFFSET	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. P-40-565 LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 2981-00-74 LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	1	WHITNALL PARK DR							
		200+58 - 203+23	LT/RT	2	325	510	1	1	577
		TOTALS		2	325	510	1	1	577

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
CP 101	100+92.60, 28.443' LT	3/4" REBAR	761.072
CP 102	103+04.16, 32.625' LT	3/4" REBAR	763.526





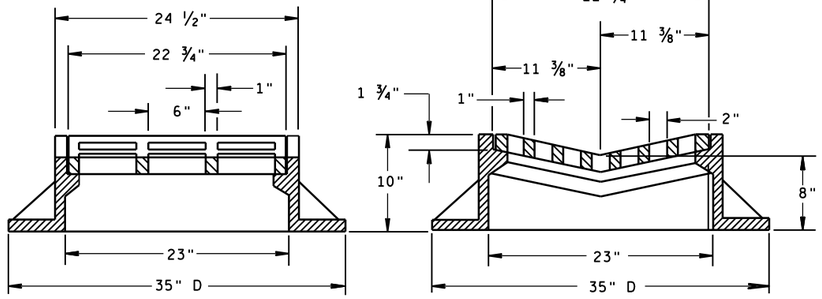
PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE: BRIDGE (P-40-565)	SHEET 22	E

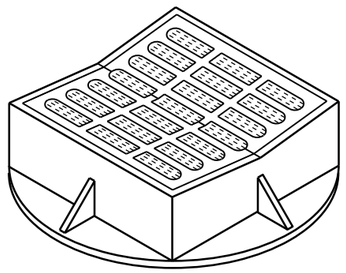
Standard Detail Drawing List

08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E12-01	SILT SCREEN
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS

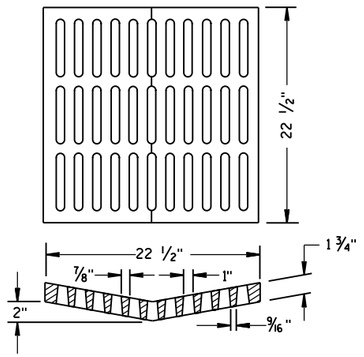
6

6



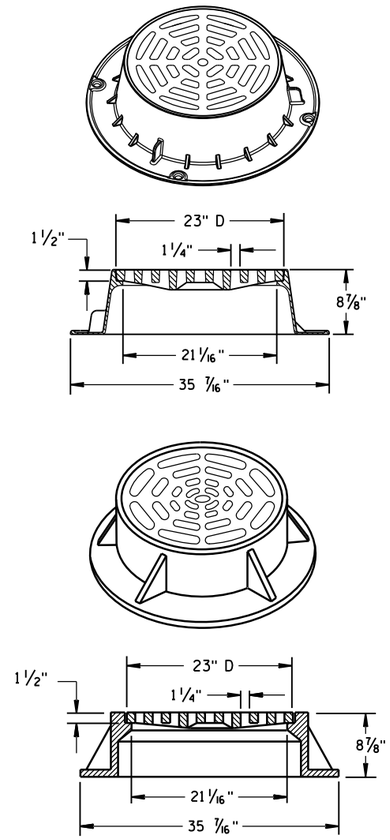


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

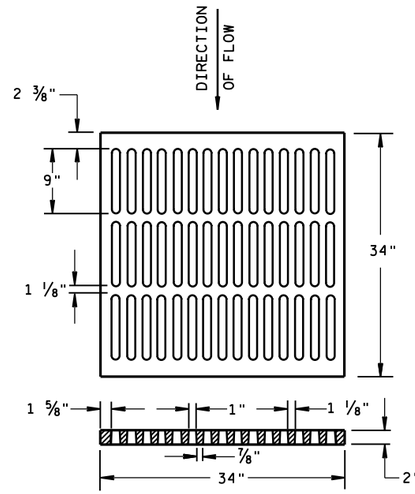
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

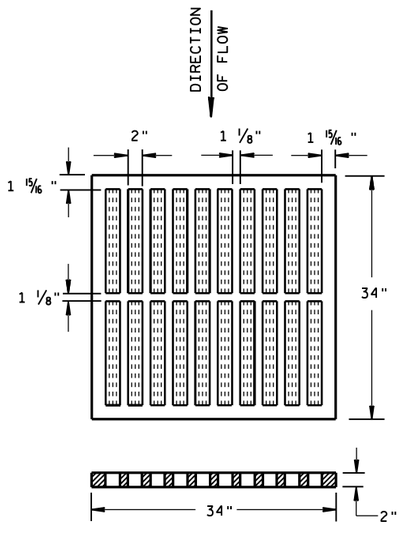
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



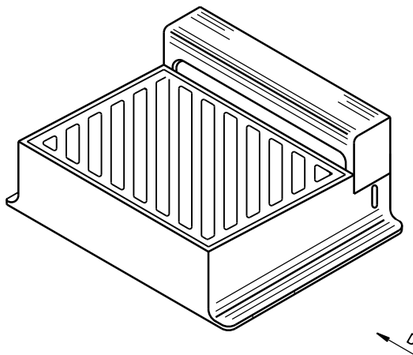
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

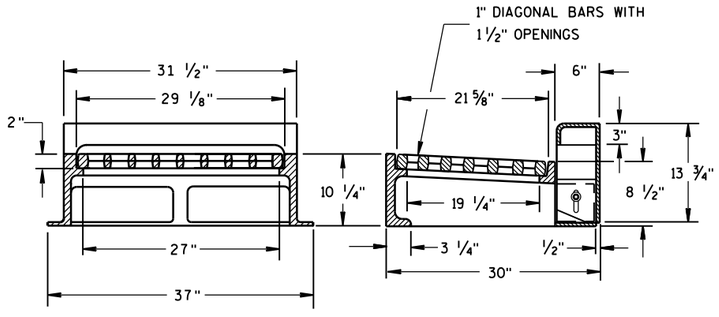


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

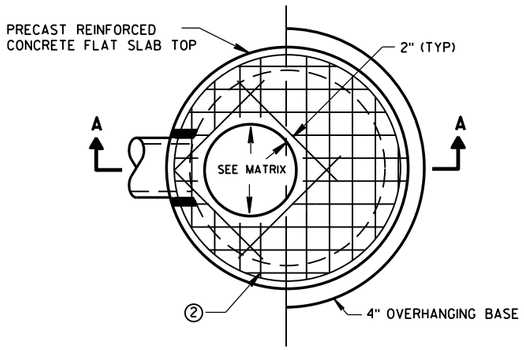
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

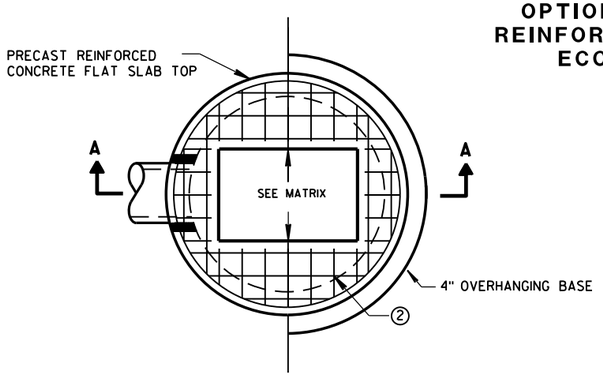
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

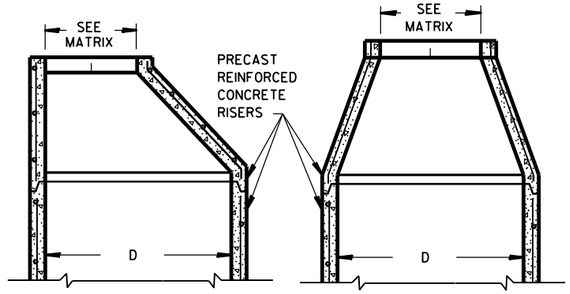
S.D.D. 8 A 5-19b



PLAN VIEW CIRCULAR OPENING

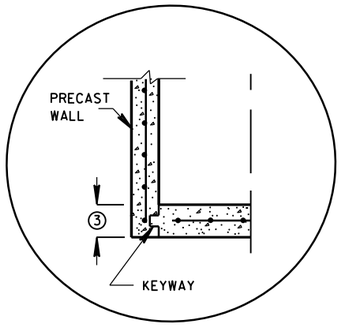


PLAN VIEW RECTANGULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

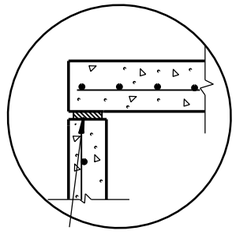
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



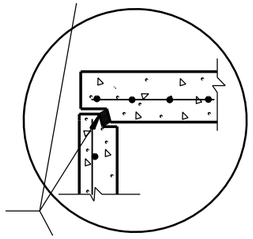
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

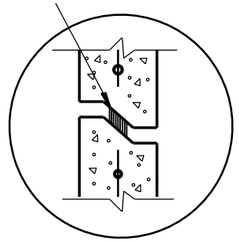


TOP WITH PLAIN END JOINT



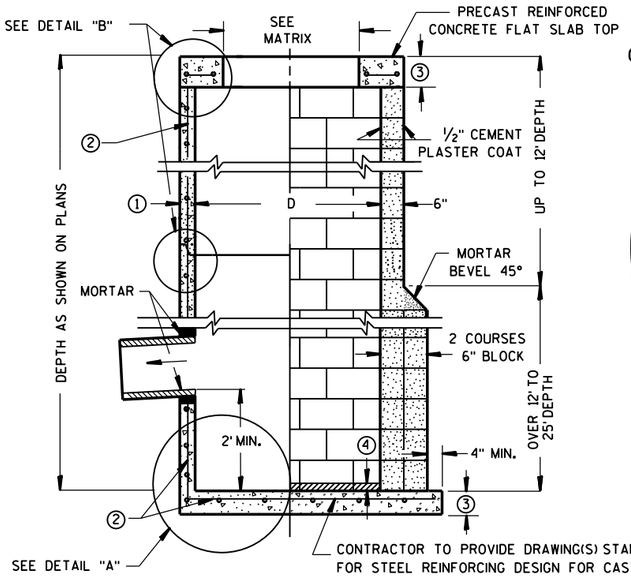
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

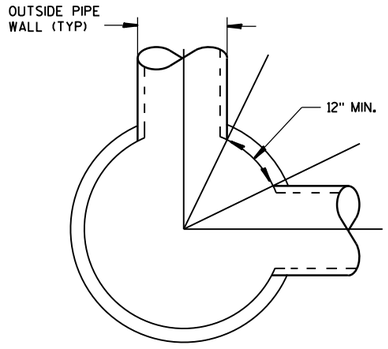
DETAIL "B"



SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



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 CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

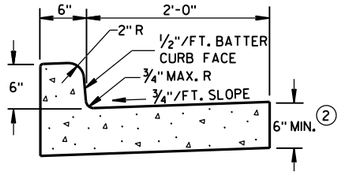
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

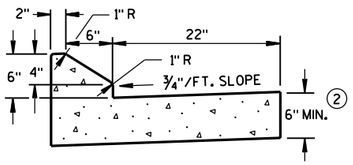
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

S.D.D. 8 A 8-2

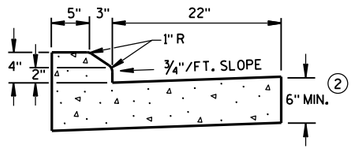
S.D.D. 8 A 8-2



TYPES A & D ①

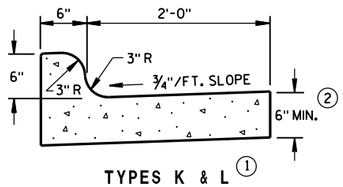


6" SLOPED CURB TYPES G & J ①

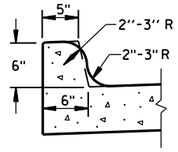


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

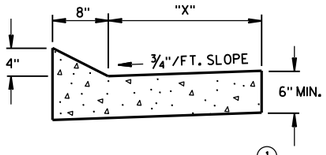


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

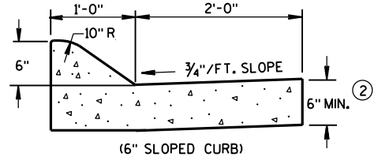
CONCRETE CURB & GUTTER 30"



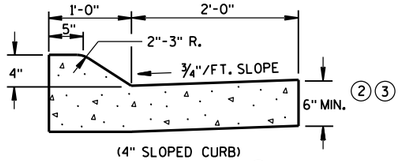
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

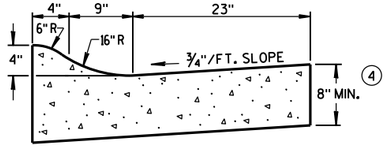


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

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

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

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

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

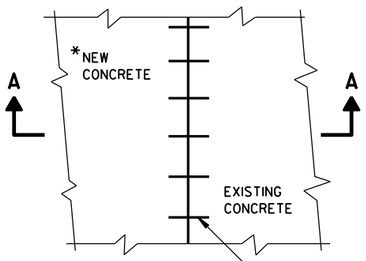
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

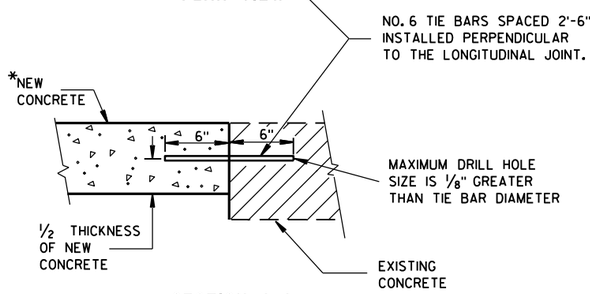
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



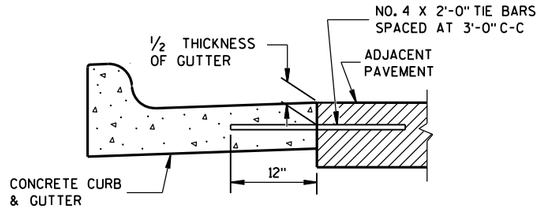
PLAN VIEW

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

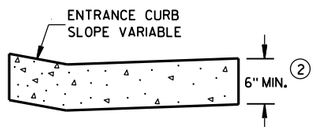


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

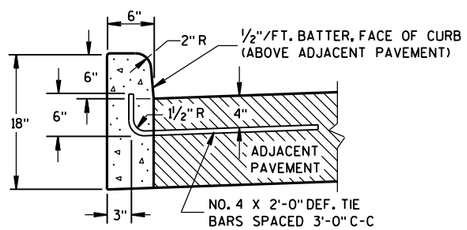


TYPICAL TIE BAR LOCATION ①

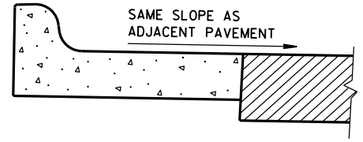


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

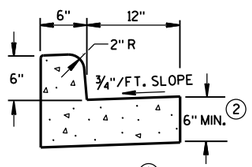


① TYPES A & D



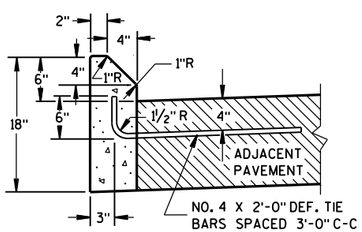
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



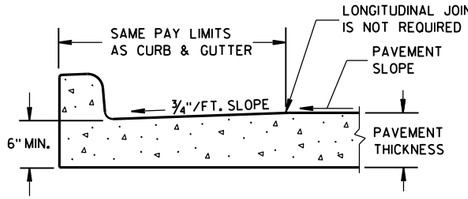
① TYPES A & D

CONCRETE CURB & GUTTER 18"

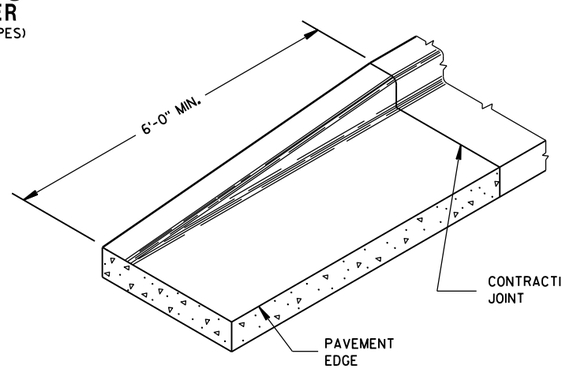


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

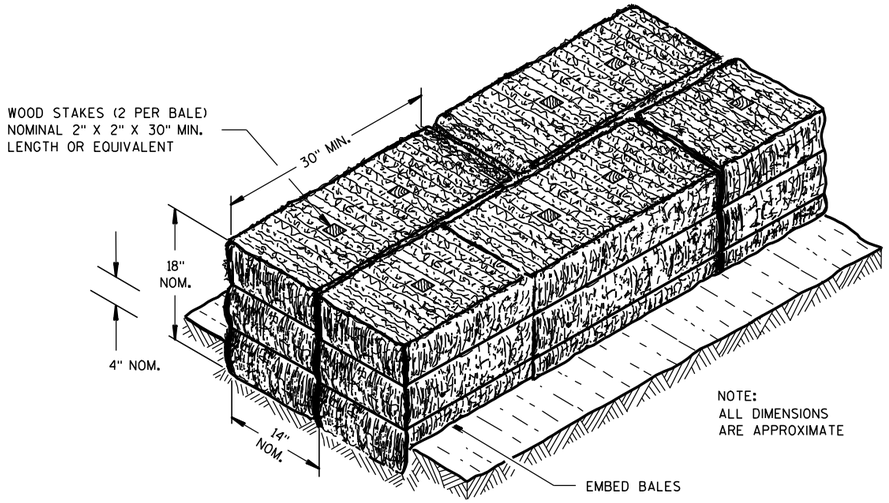
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

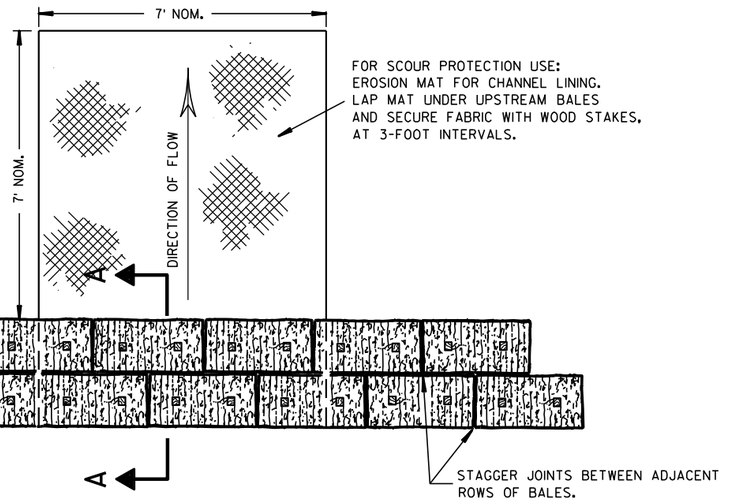
APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

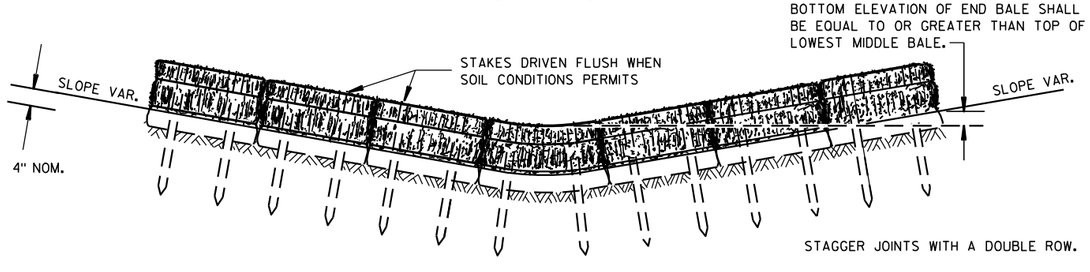
S.D.D. 8 D 1-19



SECTION A-A



PLAN VIEW



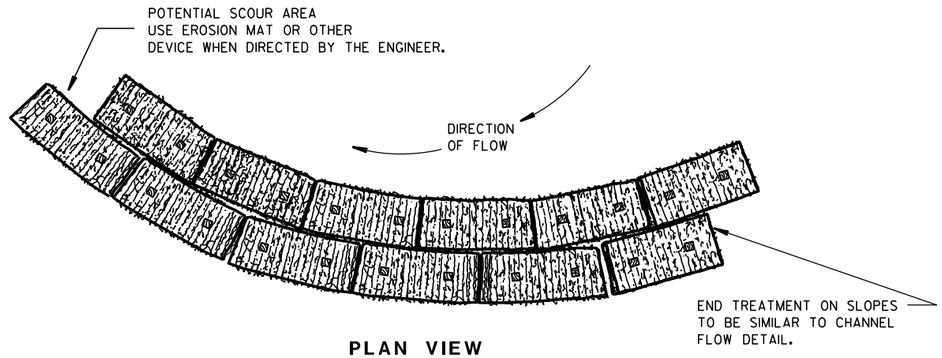
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

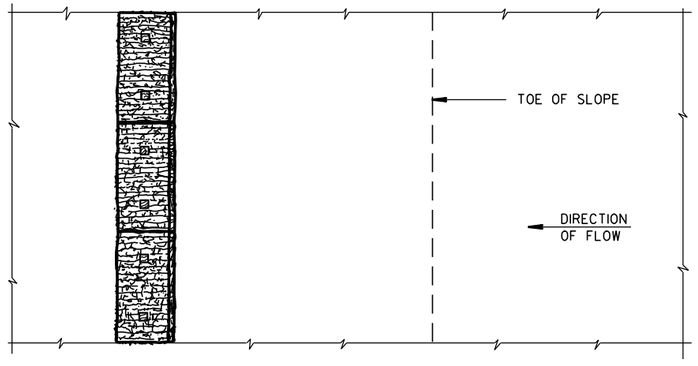
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

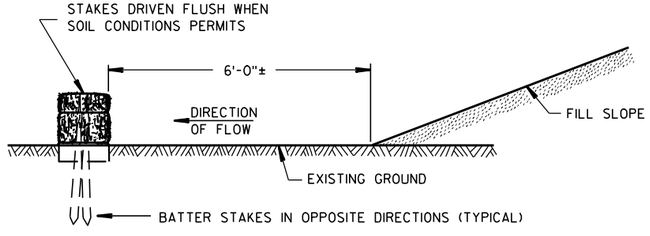


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

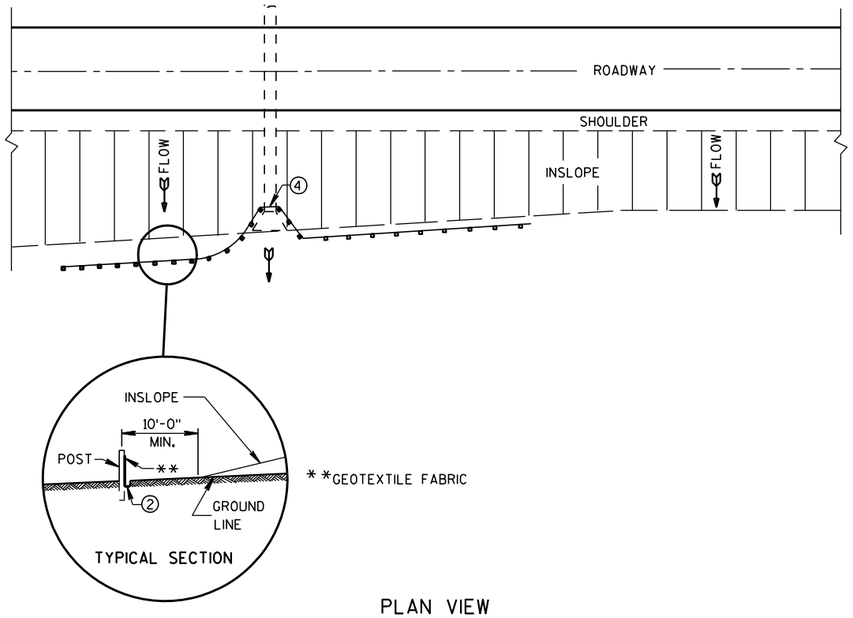
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

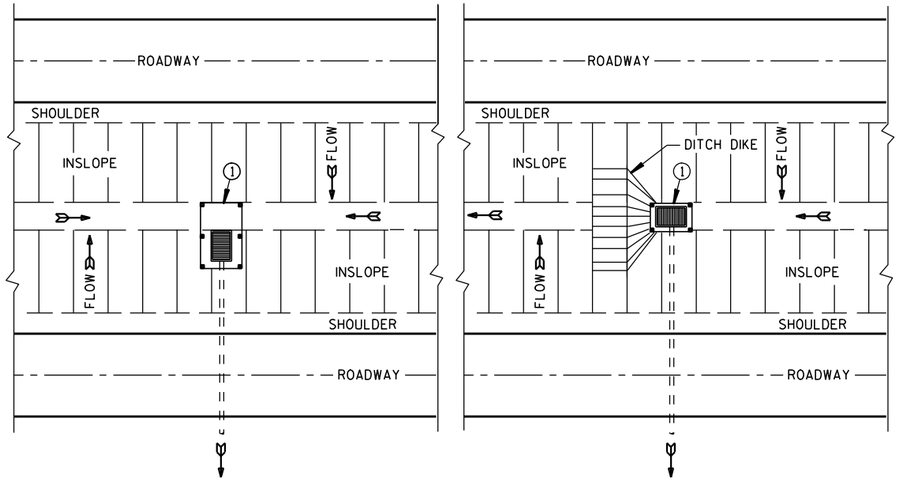
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



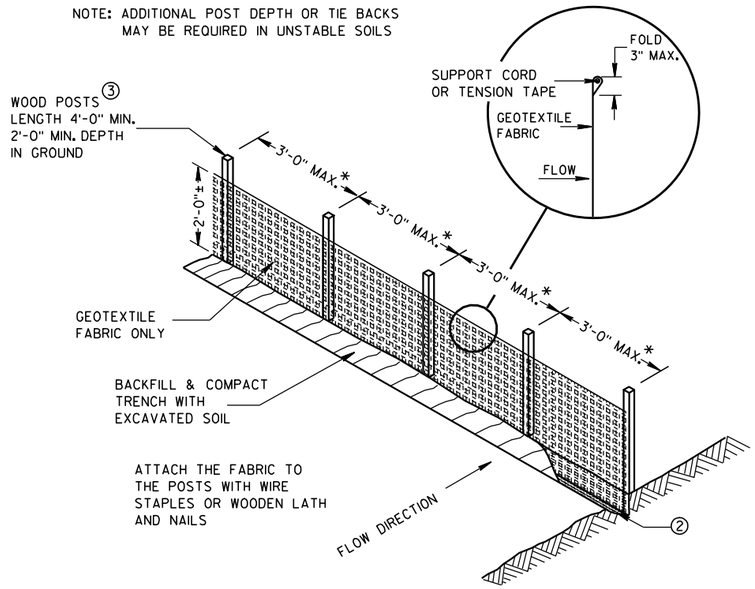
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



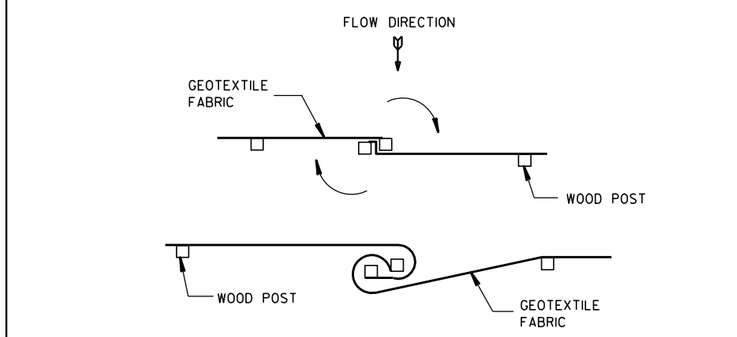
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

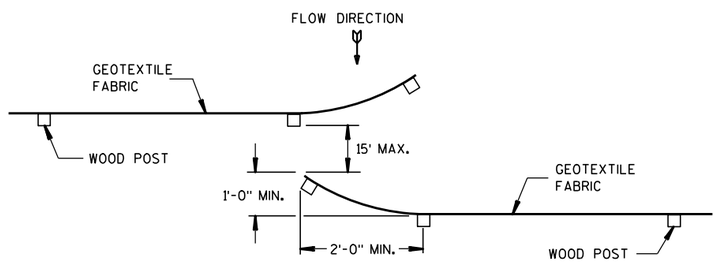


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



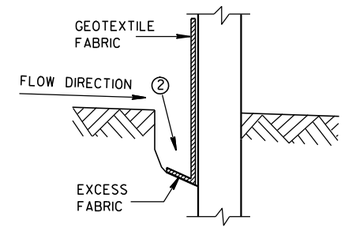
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

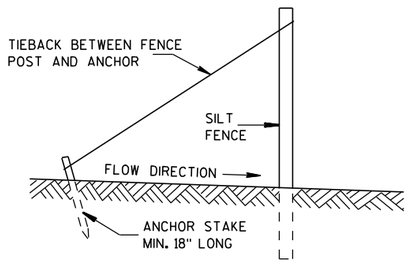
GENERAL NOTES

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)

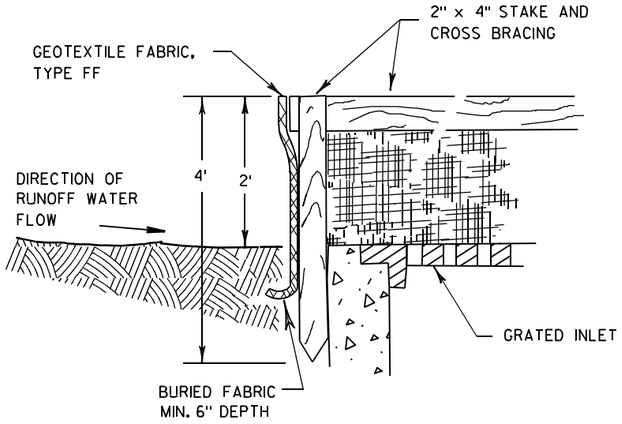
SILT FENCE

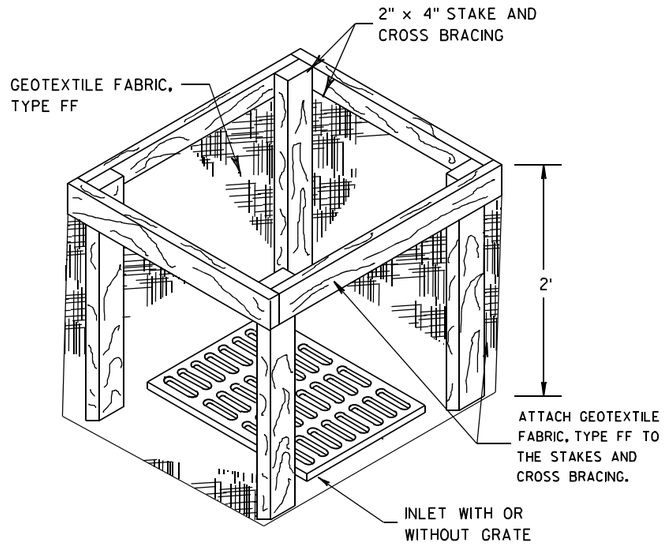
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

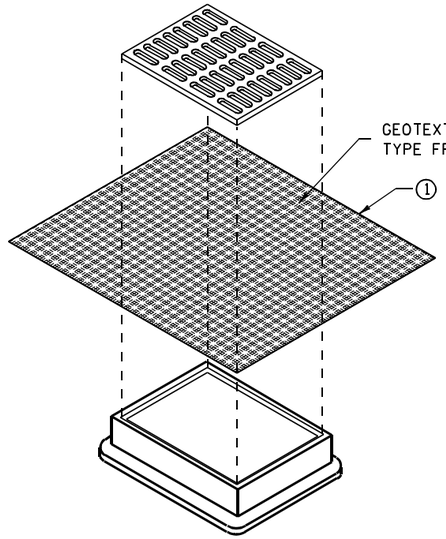
S.D.D. 8 E 9-6

6



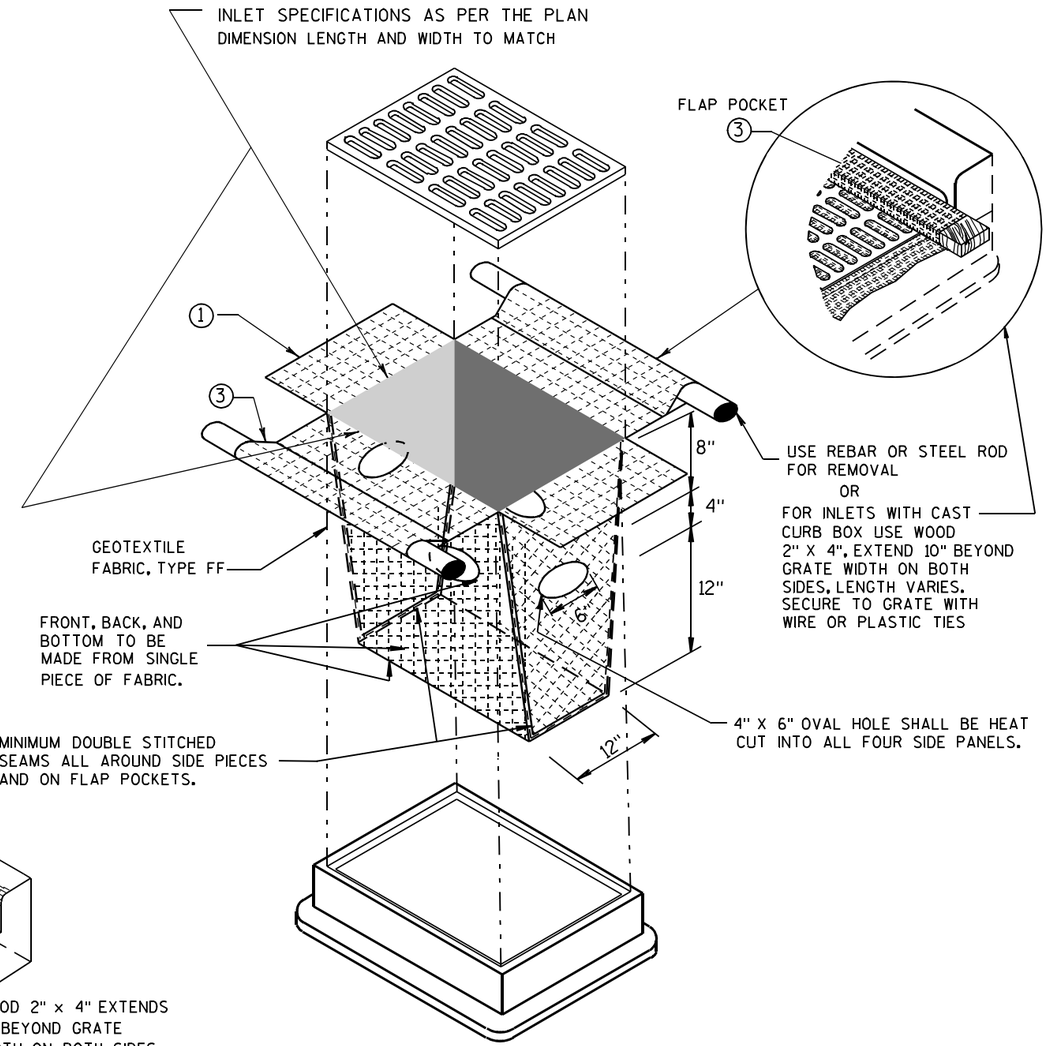


INLET PROTECTION, TYPE A



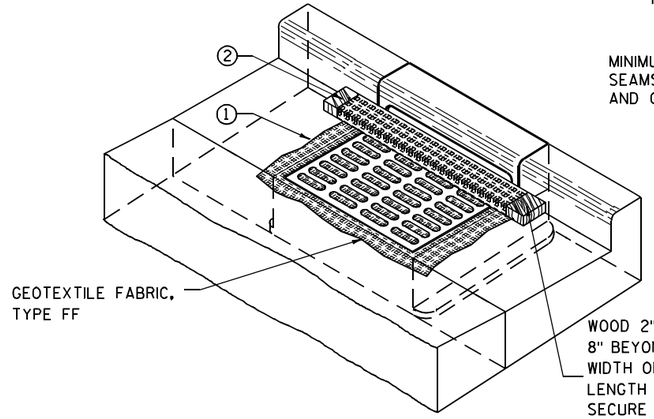
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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

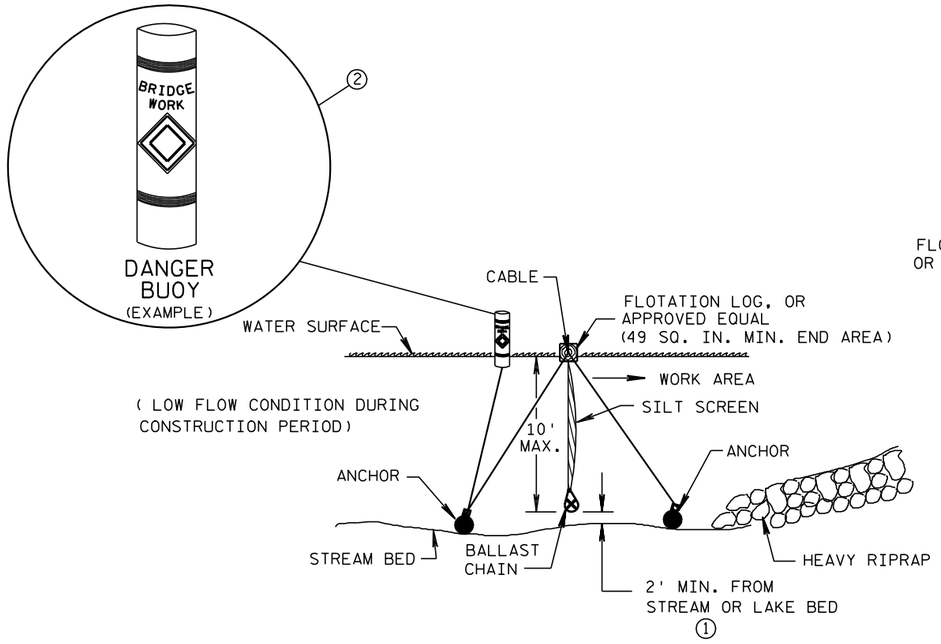
6
S.D.D. 8 E 10-2

GENERAL NOTES

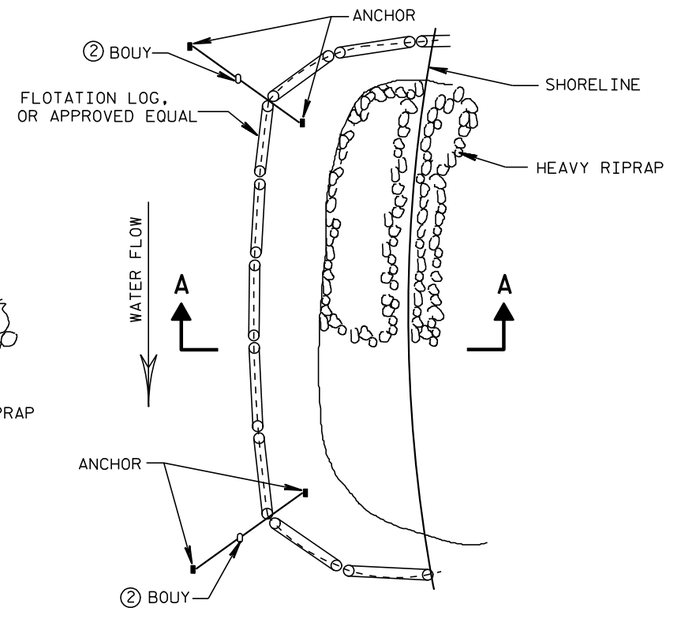
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① 2' MINIMUM SHALL BE MAINTAINED DURING CONSTRUCTION PERIOD.

② USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



SECTION A-A



PLAN VIEW

SILT SCREEN PLACEMENT DETAIL

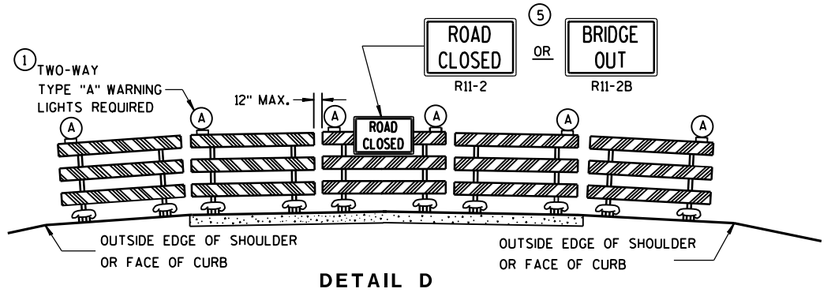
SILT SCREEN
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER FHWA

6

S.D.D. 8 E 12-1

6

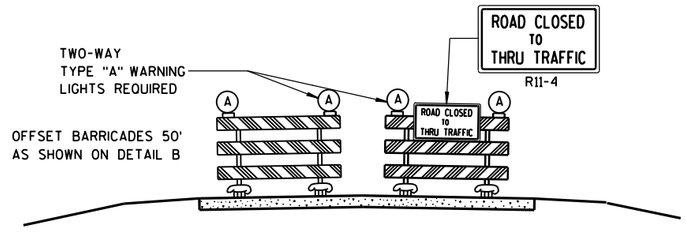
S.D.D. 8 E 12-1



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

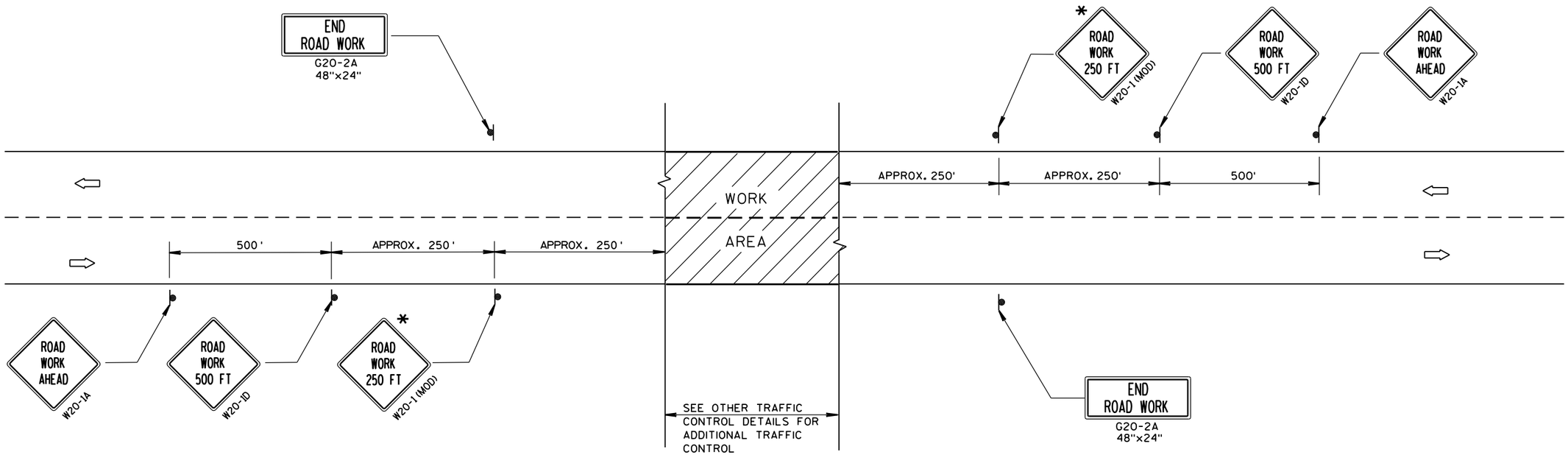
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC

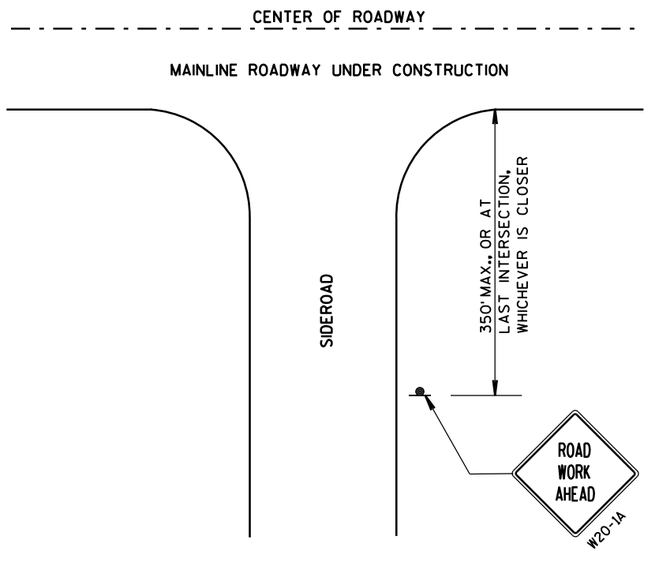
FHWA

6

S.D.D. 15 C 2-6b



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

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

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

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

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

LEGEND

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

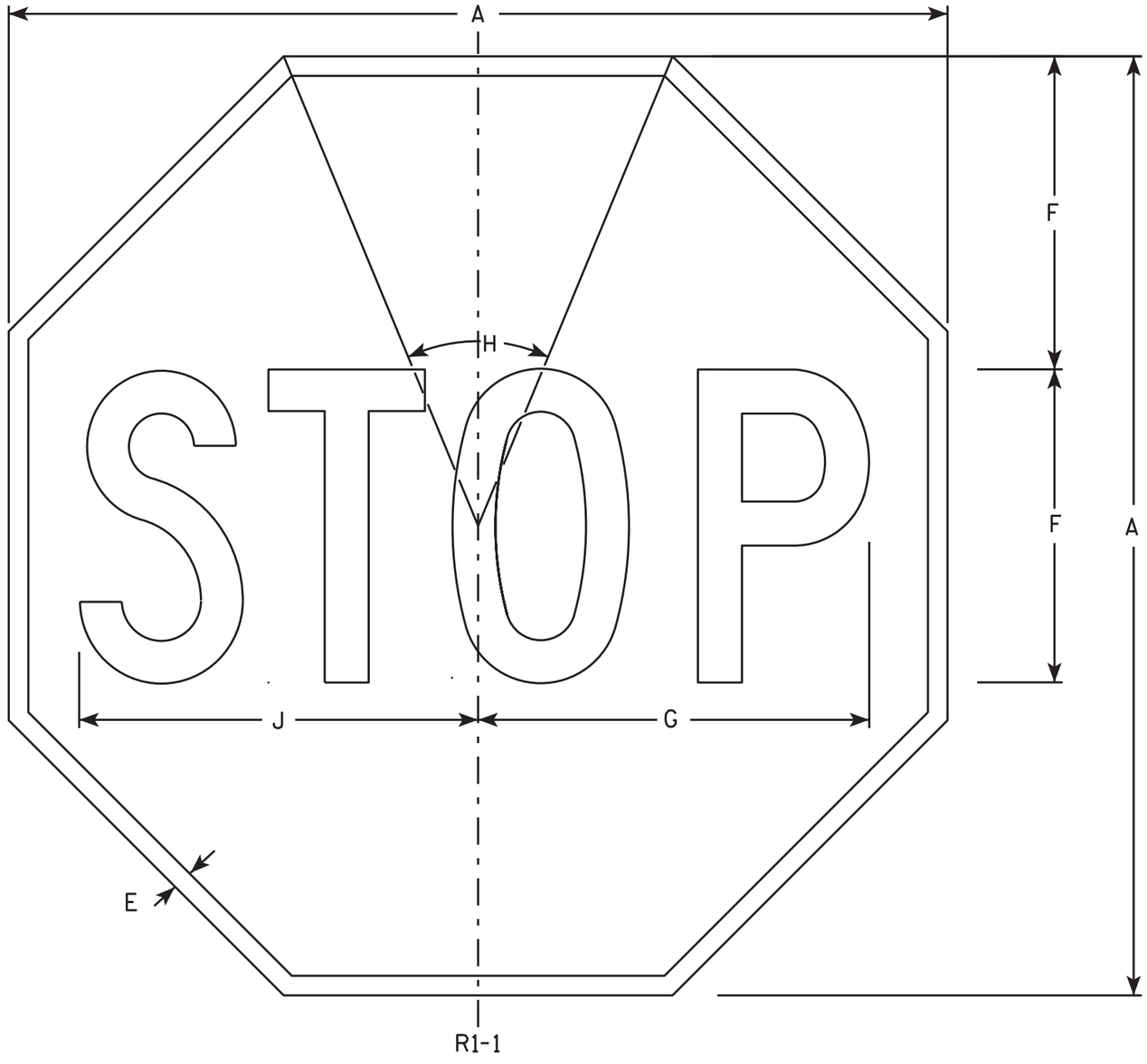
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
IC
FHWA

6

S.D.D. 15 C 5-3



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

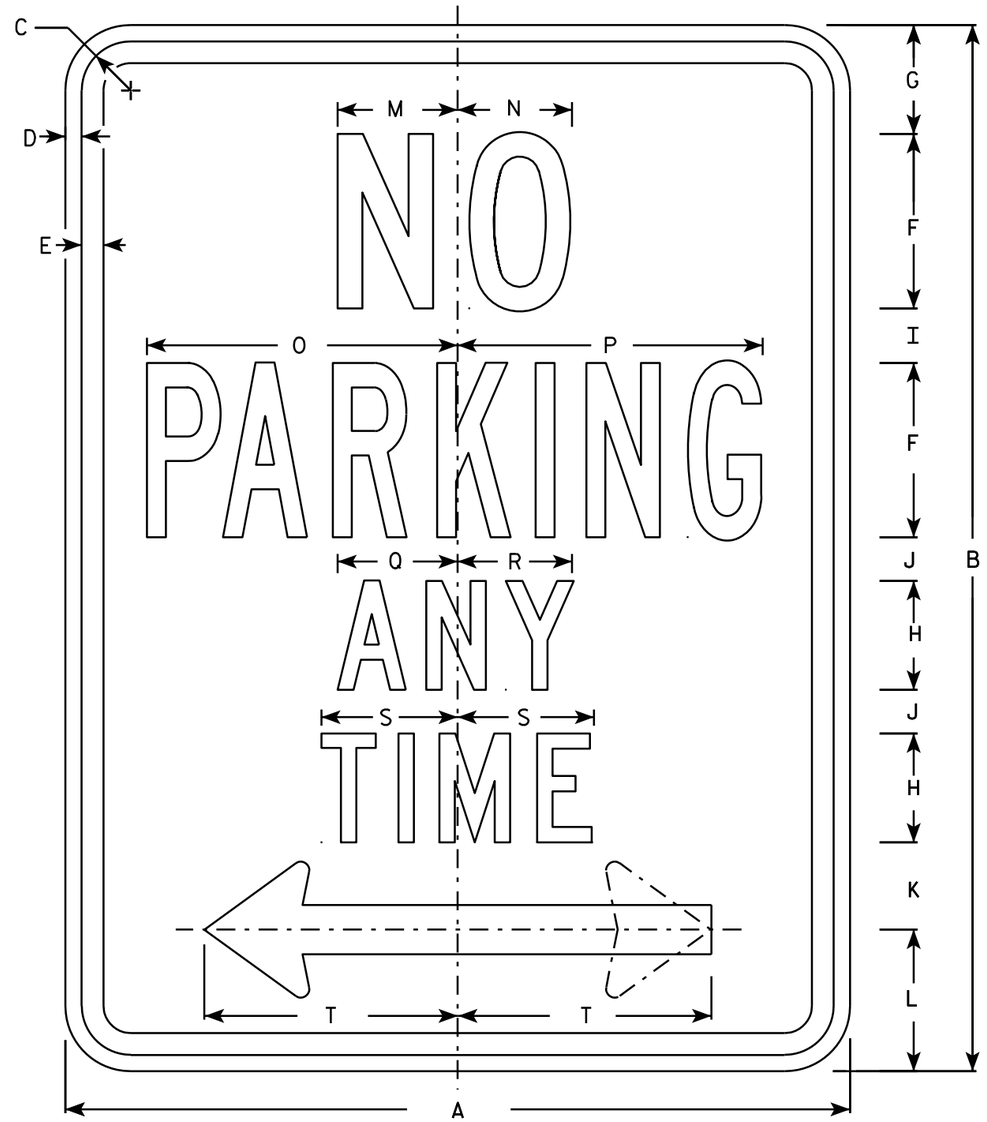
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

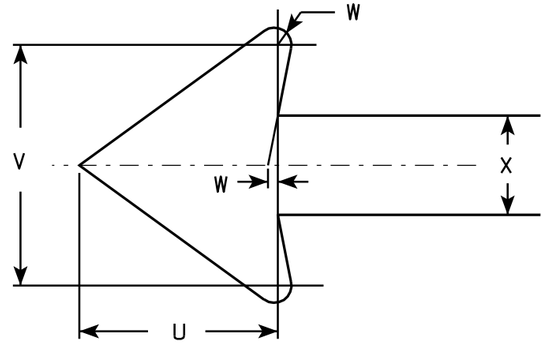
PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE		SHEET NO:	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

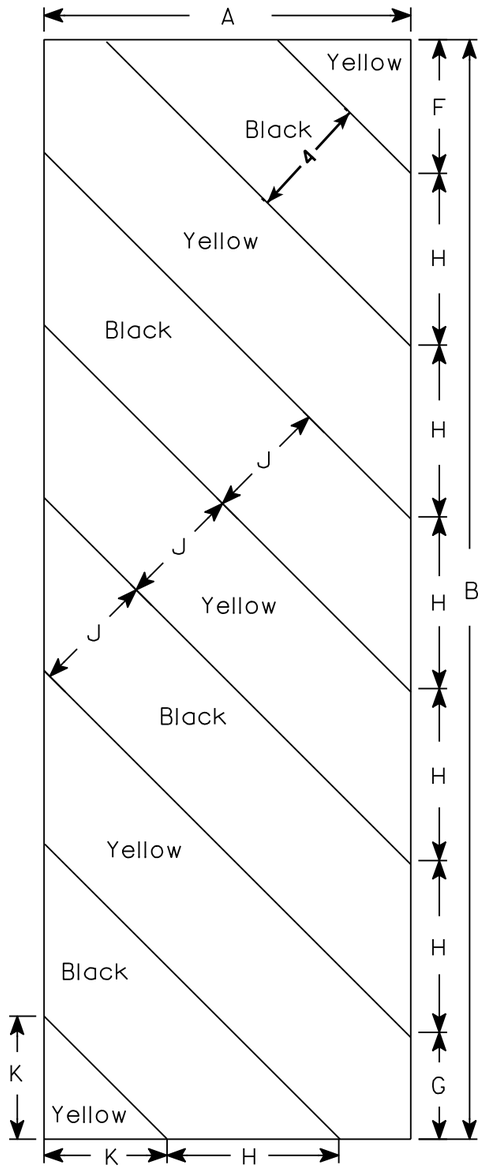
APPROVED Matthew R Rauch
for State Traffic Engineer

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

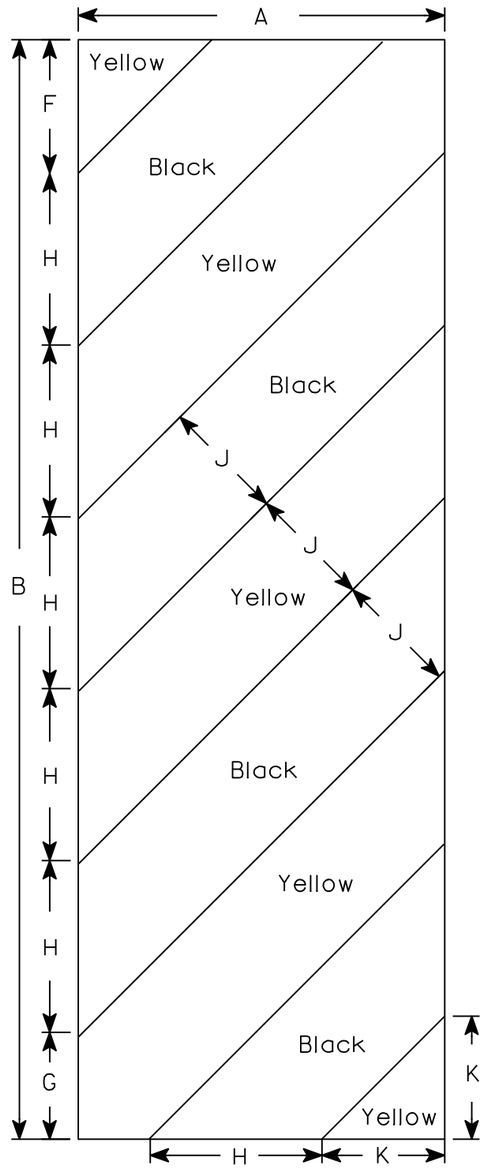
PROJECT NO: 2981-00-74 | HWY: LOCAL STREET | COUNTY: MILWAUKEE | SHEET NO: 34 | E

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

WISDOT/CADDS SHEET 42



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

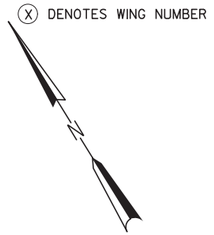
DATE 5/29/12 PLATE NO. W5-52.9

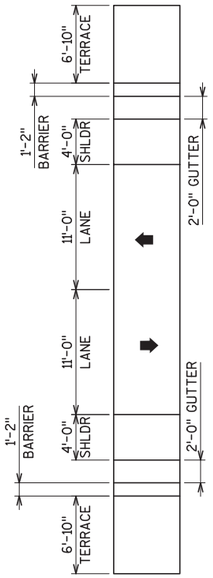
PROJECT NO: **2981-00-74**	HWY: **LOCAL STREET**	COUNTY: **MILWAUKEE**		SHEET NO: 35	E

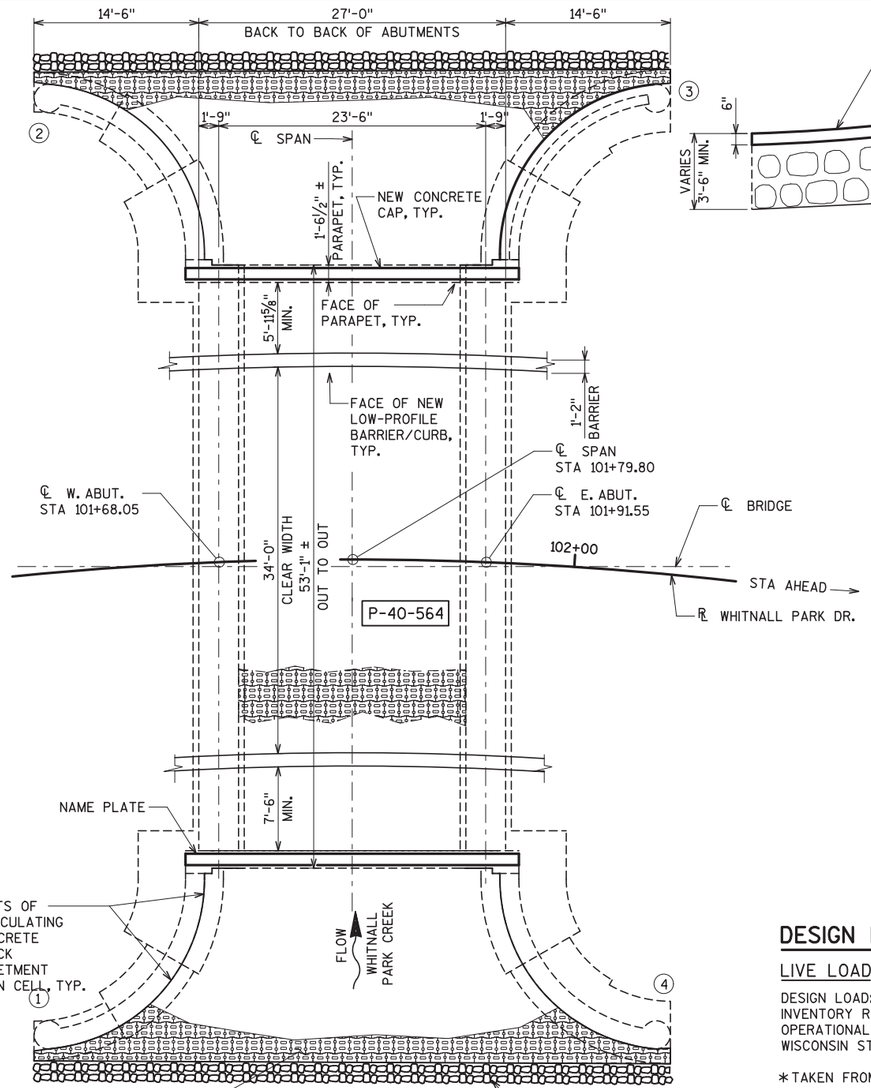
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

7

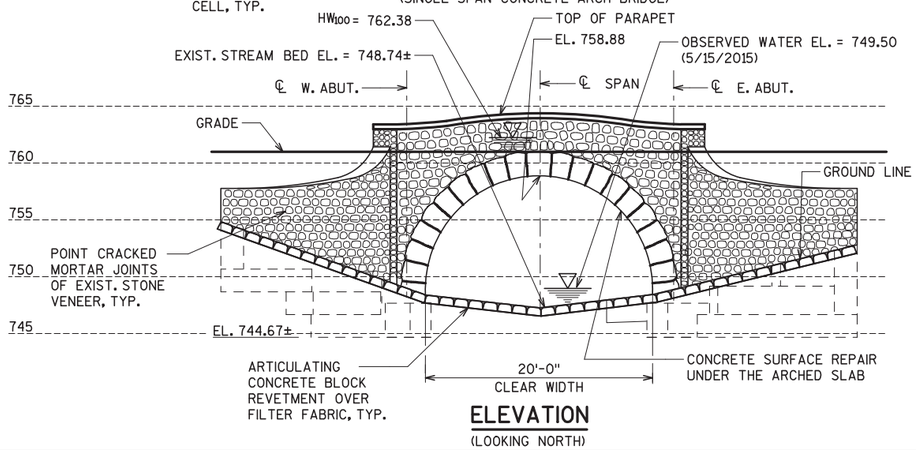
STATE PROJECT NUMBER
2981-00-74



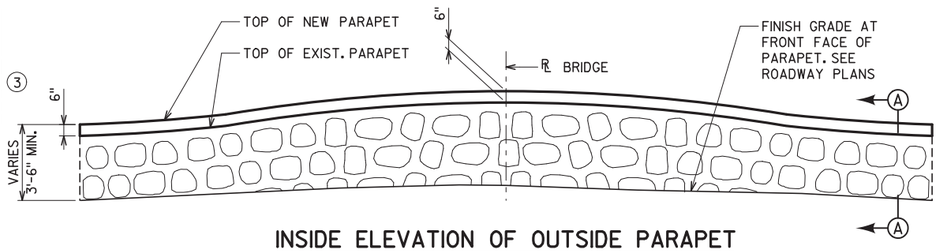




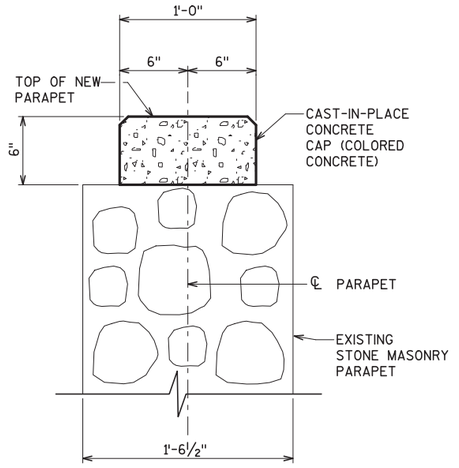
PLAN
(SINGLE SPAN CONCRETE ARCH BRIDGE)



ELEVATION
(LOOKING NORTH)



INSIDE ELEVATION OF OUTSIDE PARAPET



SECTION A-A

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ELEVATIONS ARE REFERENCED TO THE NAVD 88 (1991) DATUM.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. THE NEW NAME PLATE SHALL SHOW THE ORIGINAL CONSTRUCTION YEAR. ORIGINAL CONSTRUCTION YEAR IS 1933.

ALL NEW BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL LIMITS SHALL BE DEFINED BY A 3/4" DEEP SAWCUT.

PLANS OF THE EXISTING BRIDGE ARE ON FILE AND ARE AVAILABLE FOR INSPECTION AT THE WISCONSIN DEPARTMENT OF TRANSPORTATION,SOUTHEAST REGION.

THE STREAM BED UNDER THE BRIDGE AND IN FRONT OF THE WINGS SHALL BE COVERED WITH ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL AND FIELD STONE HEAVY RIPRAP AS SHOWN ON THE PLANS.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

CONCRETE SURFACE REPAIR AND STONE MASONRY POINTING REQUIRED IN AREAS DESIGNATED BY THE FIELD ENGINEER. QUANTITIES SHOWN ARE APPROXIMATE AND UNDISTRIBUTED.

EXCAVATION AND GRADING OF THE GROUND IN FRONT OF WING WALLS AND WITHIN THE STREAM TO PLACE SCOUR PROTECTION MATERIAL IS INCLUDED IN THE BID ITEM "ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL". EXCAVATION SHALL INCLUDE REMOVAL OF ALL MATERIALS INCLUDING EXISTING FIELD STONES AND DEAD TREES THAT INTERFERE WITH THE INSTALLATION OF THE NEW REVETMENT SYSTEM.

SEE SHEET 2 FOR ADDITIONAL GENERAL NOTES.

DESIGN DATA

LIVE LOAD*

DESIGN LOAD: H15
INVENTORY RATING: HS15
OPERATIONAL RATING: HS33
WISCONSIN STANDARD PERMIT VEHICLE LOAD (WIS-SPV): ..... 190 KIPS
*TAKEN FROM HSI 10/5/2016

MATERIAL PROPERTIES

CONCRETE MASONRY
SUPERSTRUCTURE ..... f'c = 4,000 psi
OTHER ..... f'c = 3,500 psi

HIGH STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 ... fy = 60,000 psi

TRAFFIC DATA

WHITNALL PARK DRIVE

A.D.T. = 321 (2015)
A.D.T. =359 (2037)
R.D.S. = 30 MPH

CURVE DATA

PI STA = 101+71.82
X=569437.662
Y=261782.798
DELTA = 26° 12' 16"
D = 9° 59' 31"
T = 133.46'
L = 262.26'
R = 573.42'
PC STA = 100+38.35
PT STA = 103+00.61

HYDRAULIC DATA

Q_{100} ---------- = 1800 CFS
Q_{BRIDGE} ---------- = 1149 CFS
$Q_{ROADWAY}$ ---------- = 651 CFS
HW_{100} ---------- = 762.38
VELOCITY ---------- = 9.4 FT/SEC
WATERWAY AREA ---------- = 143 SQ FT
DRAINAGE AREA ---------- = 4.4 SQ MI
Q_2 ---------- = 522 CFS
HW_2 ---------- = 755.05
SCOUR CRITICAL CODE ---- = 7

ROADWAY OVERTOPPING
FREQUENCY --------- : > 50 YEARS
Q_{50} ---------- = 1320 CFS

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION
3. PARAPET CAP DETAILS
4. SCOUR PROTECTION

BENCHMARK

POINT ID: CP 101
DESCRIPTION: 3/4" REBAR
STA 100+92.60, 28.443' LT.
EL. = 761.072

POINT ID: CP 102
DESCRIPTION: 3/4" REBAR
STA 103+04.16, 32.625' LT.
EL. = 763.526

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT:
YAN NENAYDYKH
(414) 292-4599

NO.	DATE	REVISION	BY

BLOOM COMPANIES, LLC
Infrastructure Innovation and Ingenuity
10501 W. Research Drive • Milwaukee, WI 53226
Phone: (414) 771-3390 Fax: (414) 771-4490

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/08/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE P-40-565

WHITNALL PARK DRIVE
OVER WHITNALL PARK CREEK

COUNTY	MILWAUKEE	VILLAGE	HALES CORNERS
DESIGN SPEC.	REHABILITATION		N/A

DESIGNED BY	BDT	DESIGN CK'D.	YNN	DRAWN BY	TAL	PLANS CK'D.	BDT

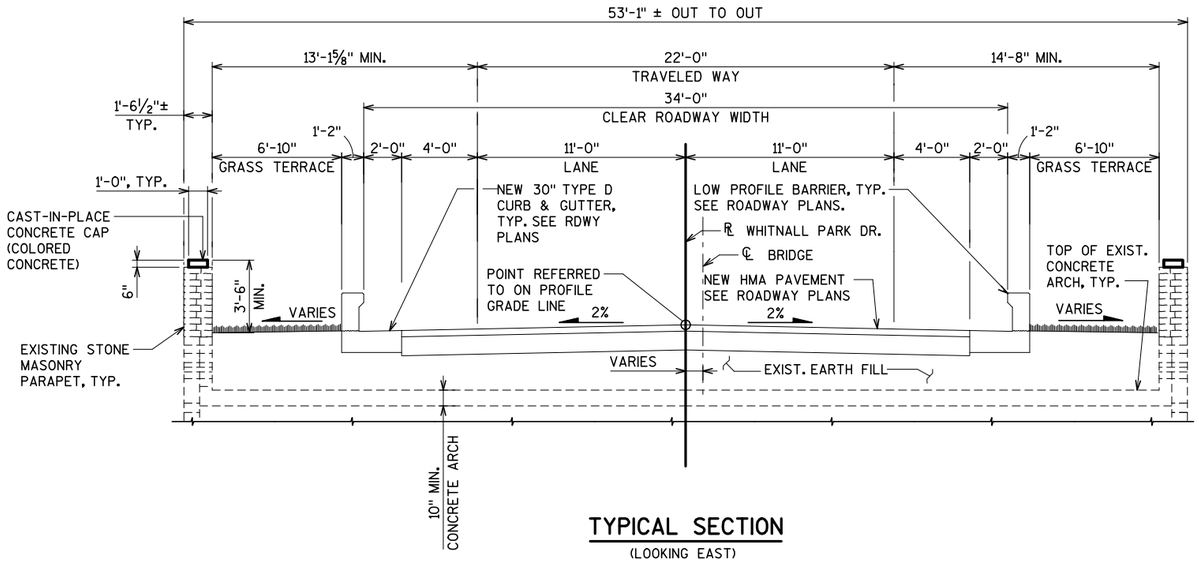
GENERAL PLAN AND ELEVATION

SHEET 1 OF 4
36

DESIGN ID: 2981-00-04 DECEMBER 2016

8

STATE PROJECT NUMBER
2981-00-74



TYPICAL SECTION

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

	BID ITEMS	UNIT	WEST ABUTMENT	EAST ABUTMENT	SUPER	TOTAL
206.5000	COFFERDAMS P-40-565	LS	-	-	-	1
311.0110	BREAKER RUN	TON	114	114	-	228
405.0200	COLORING CONCRETE CUSTOM	CY	-	-	2	2
502.0100	CONCRETE MASONRY BRIDGES	CY	-	-	2	2
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	-	-	30	30
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	-	-	100	100
509.1500	CONCRETE SURFACE REPAIR	SF	-	-	45	45
SPV.0035.02	FIELD STONE RIPRAP HEAVY	CY	20	20	-	40
SPV.0090.01	STONE MASONRY POINTING	LF	196	205	140	541
SPV.0180.01	ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL	SY	160	160	-	320

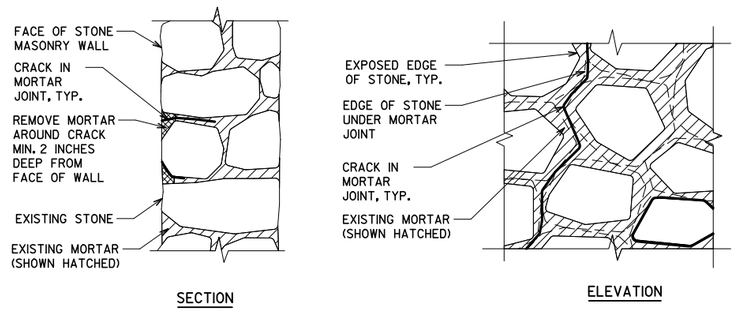
GENERAL NOTES (CONT'D)

EXISTING FIELD STONES WITHIN THE LIMITS OF THE ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM THAT ARE TO BE REMOVED TO INSTALL THE REVETMENT SYSTEM MAY BE REUSED ON THE PROJECT AS FIELD STONE RIPRAP HEAVY IF IT MEETS THE REQUIREMENTS OF THE SPECIAL PROVISIONS.

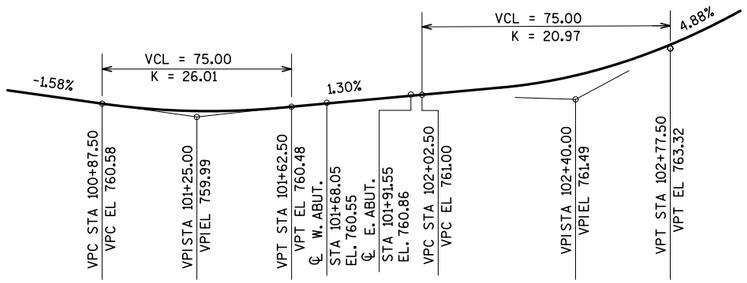
REMOVE AND STOCKPILE EXISTING FIELD STONE HEAVY RIPRAP IF REQUIRED TO MAKE ACCESS TO THE WORK AREA. REINSTALL THE STONES OVER GEOTEXTILE TYPE HR AFTER THE NEW REVETMENT SYSTEM IS IN PLACE . COST INCLUDED IN THE BID ITEM "ARTICULATING CONCERETE BLOCK REVETMENT OPEN CELL". TYPICAL AT ALL WINGS.

BREAKER RUN PLACED BELOW THE ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL SHALL BE PAID FOR UNDE THE BID ITEM " BREAKER RUN". ANY FINER GRANULAR MATERIAL PLACED OVER THE BREAKER RUN TO ACHIEVE A SMOOTH BEDDING SURFACE FOR THE ARTICULATING CONCRETE BLOCK SHALL BE INCLUDED IN THE COST OF THE BID ITEM "ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL".

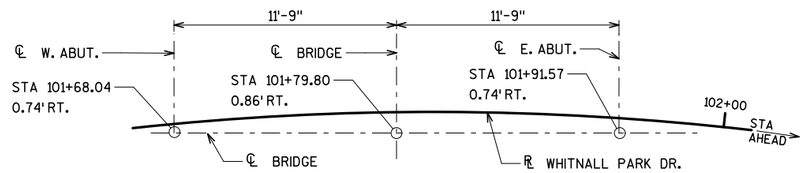
THE CONTRACTOR MAY CHOOSE TO INSTALL THE CONCRETE BLOCK REVETMENT SYSTEM BY CONSTRUCTING A TEMPORARY BYPASS DIVERSION PIPE FOR THE CREEK. IF THE CONTRACTOR CHOOSES THIS OPTION, ALL CONDITIONS DESCRIBED IN THE SPECIFICATIONS MUST BE MET.



TYPICAL STONE MASONRY POINTING DETAIL



PROFILE GRADE LINE



ALIGNMENT DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-565

DRAWN BY TAL | PLANS CK'D. BDT

TYPICAL SECTION

SHEET 2 OF 4
37

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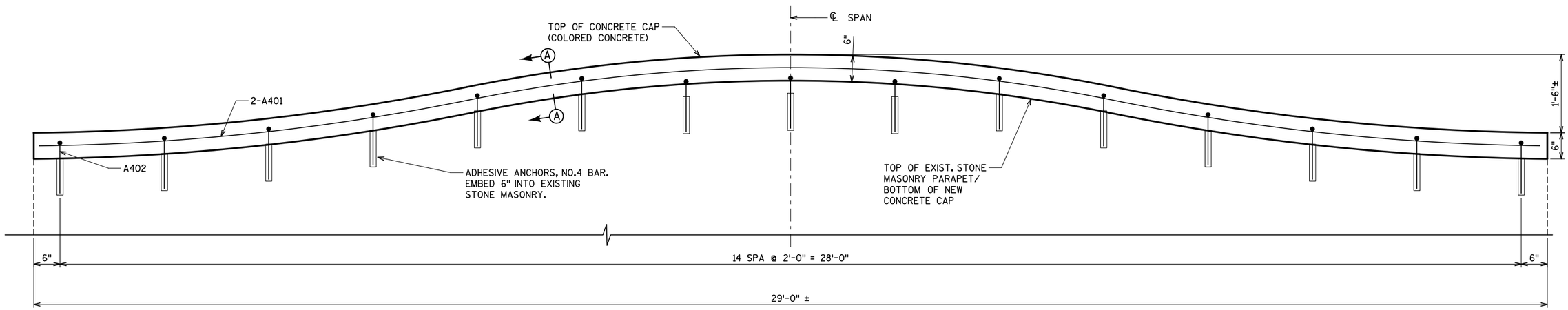
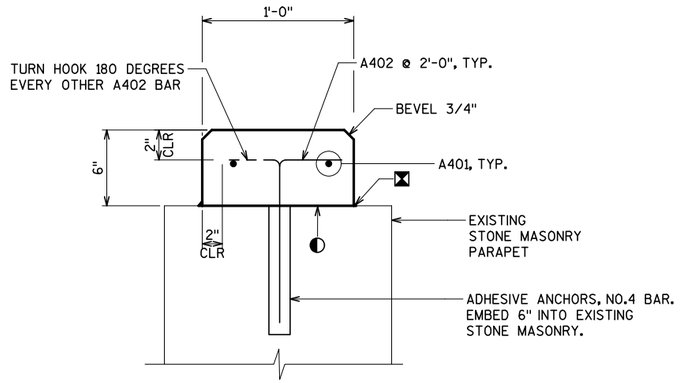
STATE PROJECT NUMBER
2981-00-74



CONCRETE CAP ELEVATION

(LOOKING AT FRONT FACE OF PARAPET)



SECTION A-A

BILL OF BARS

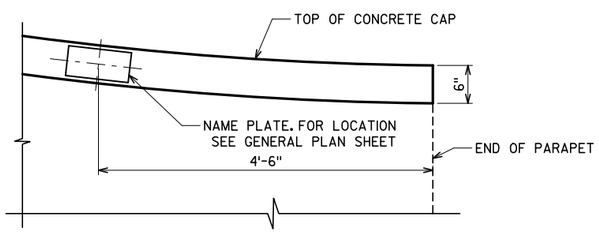
BAR MARK	COAT	NO.	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	4	28'-11"	-		PARAPET CAP, LONGITUDINAL
☒ A402	X	30	1'-1"	X		PARAPET CAP, VERTICAL

QUANTITY SHOWN IS FOR TWO PARAPETS

☒ BARS USED AS ADHESIVE ANCHORS

BENDING DIAGRAM

BAR A402



NAME PLATE

LEGEND

◐ APPLY BOND BREAKER TO THE TOP OF EXISTING PARAPET WITHIN THE WIDTH OF THE CONCRETE CAP OR PLACE CONCRETE ON A LAYER OF POLYETHYLENE SHEET

☒ CAULK THE JOINT WITH 1/4" x 1/4" BEAD OF NON-STAINING GRAY NON-BITUMINOUS JOINT SEALANT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-565

DRAWN BY TAL | PLANS CK'D. BDT

PARAPET CAP DETAILS

SHEET 3 OF 4

8

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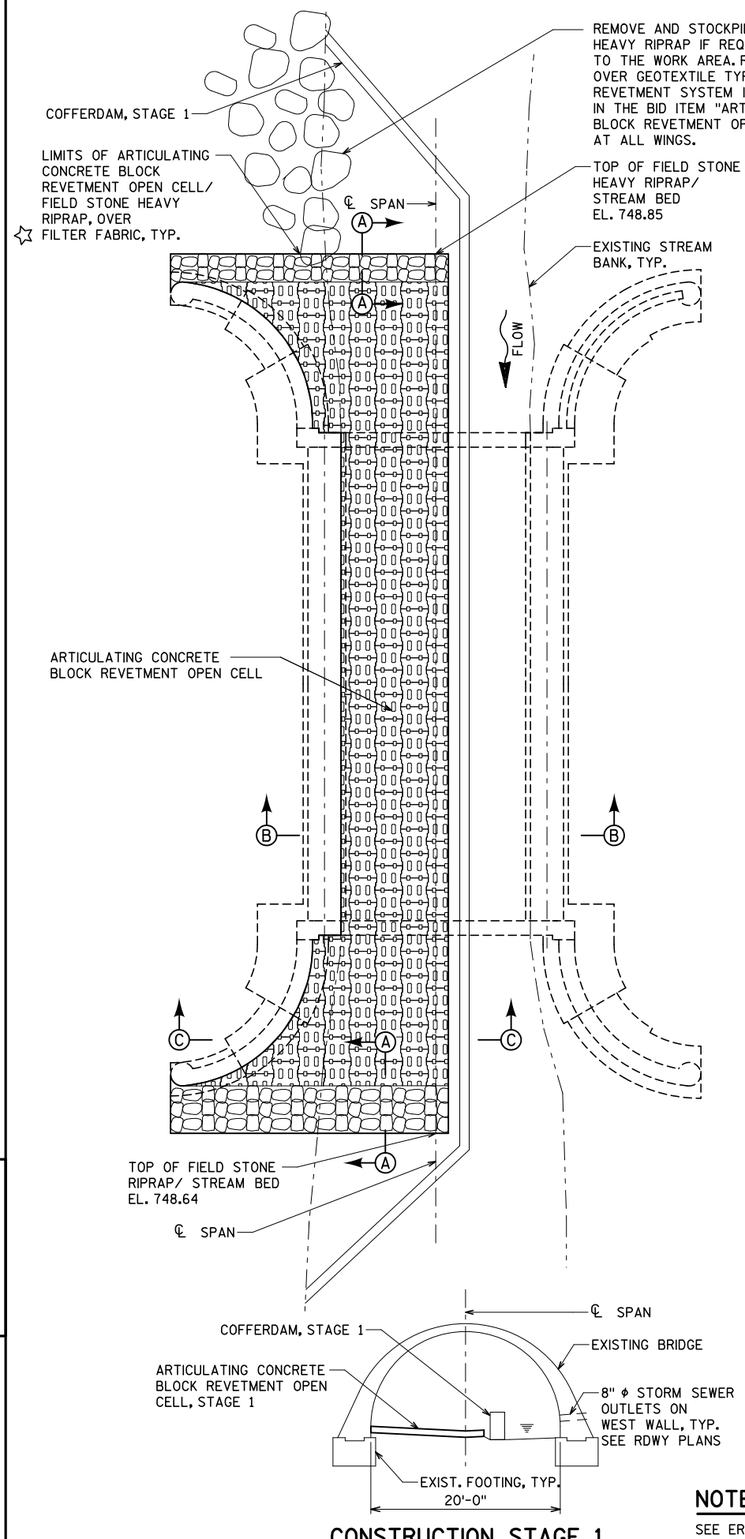
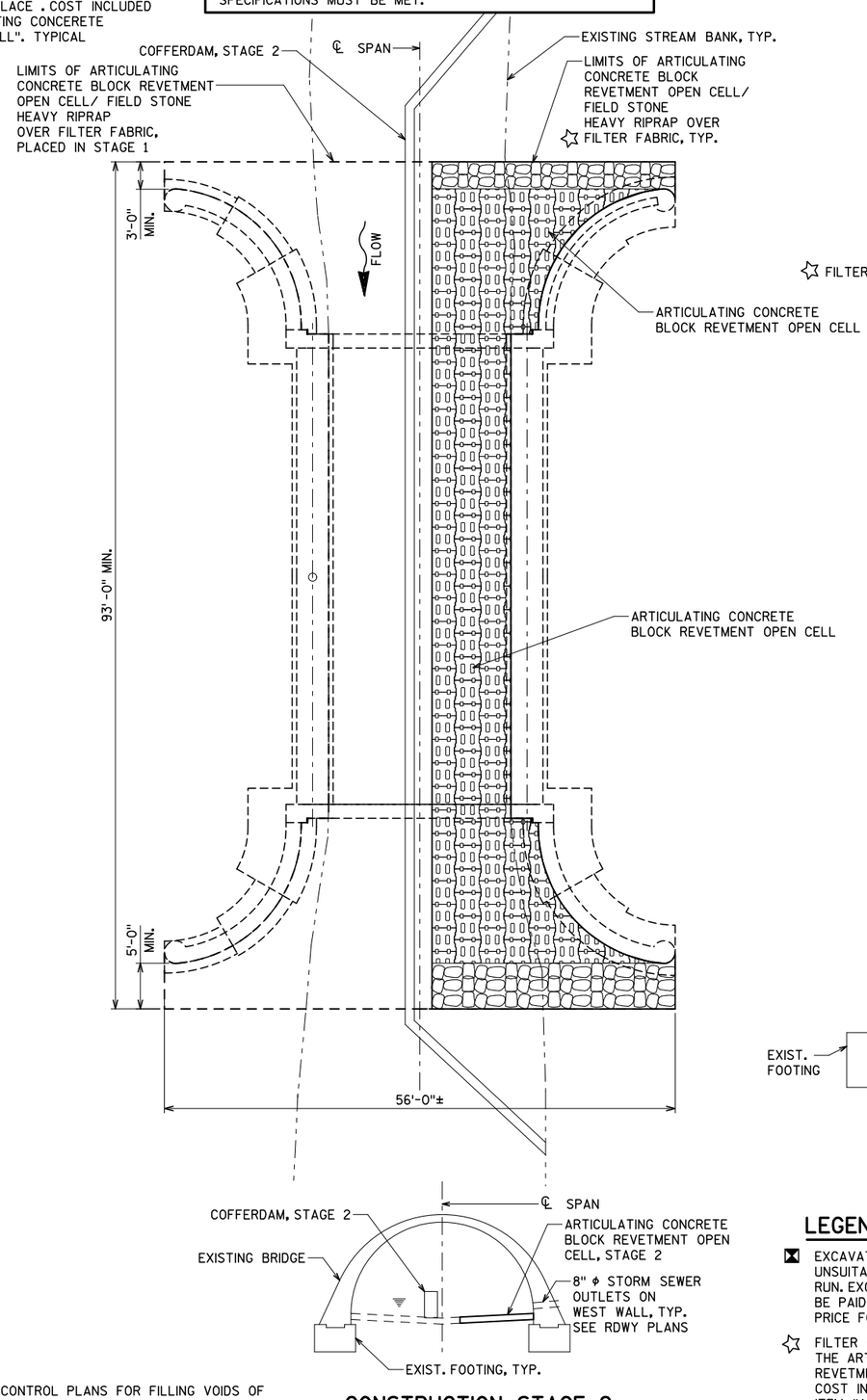
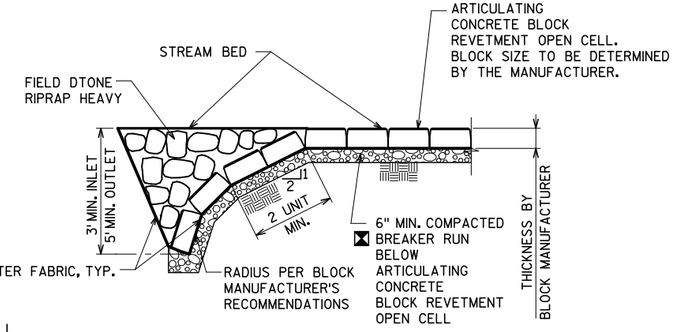
STATE PROJECT NUMBER
2981-00-74

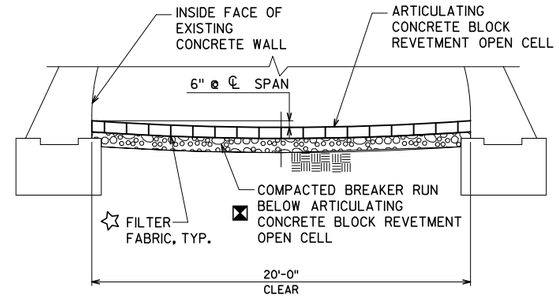
NOTE
THE CONTRACTOR MAY CHOOSE TO INSTALL THE CONCRETE BLOCK REVETMENT SYSTEM BY CONSTRUCTING A TEMPORARY BYPASS DIVERSION PIPE FOR THE CREEK. IF THE CONTRACTOR CHOOSES THIS OPTION, ALL CONDITIONS DESCRIBED IN THE SPECIFICATIONS MUST BE MET.



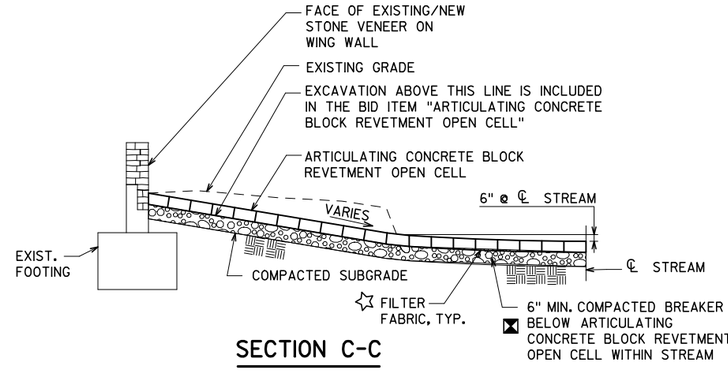




SECTION A-A
(STAGE 1 SHOWN. STAGE 2 SIMILAR)



SECTION B-B
(SHOWS BOTH STAGES)



SECTION C-C
(STAGE 1 SHOWN. STAGE 2 SIMILAR)

CONSTRUCTION STAGE 1

CONSTRUCTION STAGE 2

NOTE:
SEE EROSION CONTROL PLANS FOR FILLING VOIDS OF AND SPACES BETWEEN ARTICULATING CONCRETE BLOCKS.

LEGEND

- ☒ EXCAVATE BELOW SUBGRADE TO REMOVE UNSUITABLE SOIL AND FILL WITH BREAKER RUN. EXCAVTION BELOW SUBGRADE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR BID ITEM " COMMON EXCAVATION".
- ☆ FILTER FABRIC TO BE DESIGNED BY THE ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM DESIGNER. COST INCLUDED IN THE BID ITEM "ARTICULATING CONCRETE BLOCK REVETMENT OPEN CELL".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-565

DRAWN BY	TAL	PLANS CK'D.	BDT

SCOUR PROTECTION

SHEET 4 OF 4
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STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)	
		CUT	FILL	CUT	FILL
100+75.00	-	33.79	0.00	-	-
100+82.30	7.30	31.34	0.00	8.80	0.00
100+90.00	7.70	32.82	0.00	9.15	0.00
101+00.00	10.00	32.61	0.02	12.12	0.00
101+10.00	10.00	33.45	0.00	12.23	0.00
101+20.00	10.00	34.86	0.00	12.65	0.00
101+30.00	10.00	28.31	0.83	11.70	0.15
101+40.00	10.00	25.40	2.55	9.95	0.63
101+50.00	10.00	25.86	3.09	9.49	1.04
101+60.00	10.00	28.15	0.45	10.00	0.66
101+69.48	9.48	28.06	0.49	9.87	0.17
101+70.00	0.52	28.00	0.44	0.54	0.01
101+80.00	10.00	32.14	0.00	11.14	0.08
101+90.00	10.00	28.39	0.08	11.21	0.01
102+00.00	10.00	27.13	0.97	10.28	0.19
102+10.00	10.00	27.00	2.96	10.02	0.73
102+20.00	10.00	29.12	4.63	10.39	1.41
102+30.00	10.00	30.82	3.13	11.10	1.44
102+40.00	10.00	34.07	0.49	12.02	0.67
102+50.00	10.00	34.73	0.32	12.74	0.15
102+62.50	12.50	28.04	0.63	14.53	0.22
102+75.76	13.26	27.00	0.31	13.52	0.23
102+87.35	11.59	29.56	0.28	12.14	0.13
103+00.00	12.65	33.68	0.50	14.81	0.18
103+10.77	10.77	33.11	0.64	13.32	0.23
103+17.25	6.48	32.56	0.59	7.88	0.15
103+25.00	7.75	29.39	0.00	8.89	0.08
103+35.08	10.08	30.51	0.00	11.18	0.00
103+45.23	10.15	26.78	0.00	10.77	0.00
103+50.00	4.77	23.01	0.01	4.40	0.00
103+60.87	10.87	19.73	0.41	8.60	0.08
103+70.86	9.99	17.33	0.93	6.86	0.25
103+78.54	7.68	17.61	2.98	4.97	0.56
		TOTALS		327.27	9.45

9

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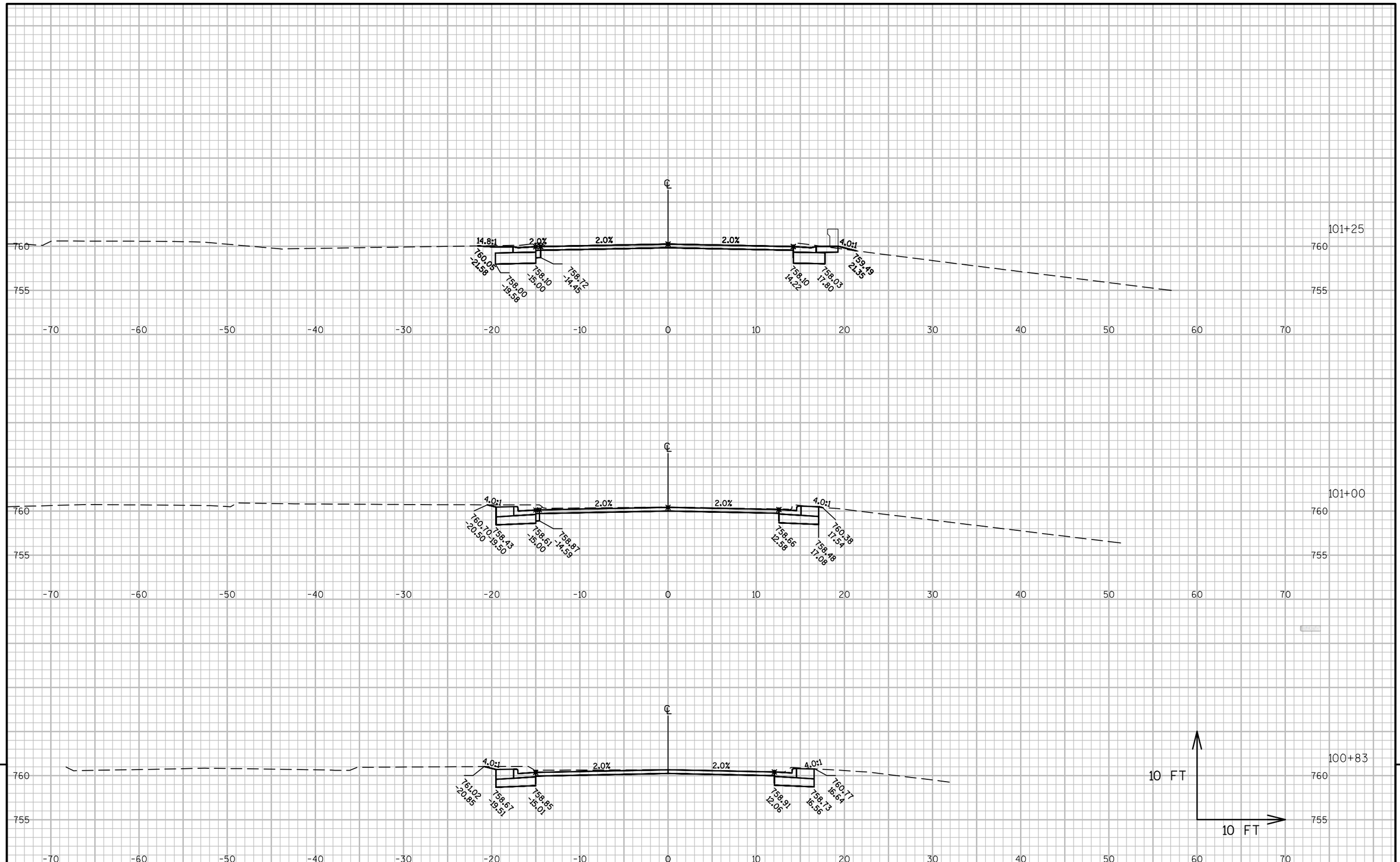
PROJECT NO: 2981-00-74 | HWY: LOCAL STREET | COUNTY: MILWAUKEE | CROSS SECTIONS: EARTHWORK DATA | SHEET: 40 | E

FILE NAME :F:\BM1-3383 Whitnall Park Drive Bridges\CADD\2981-00-74\Design\Quantities\EARTHWORK.dwg PLOT DATE : 12/1/2016 10:01:50 PLOT BY : PLOT NAME PLOT SCALE : 1:1



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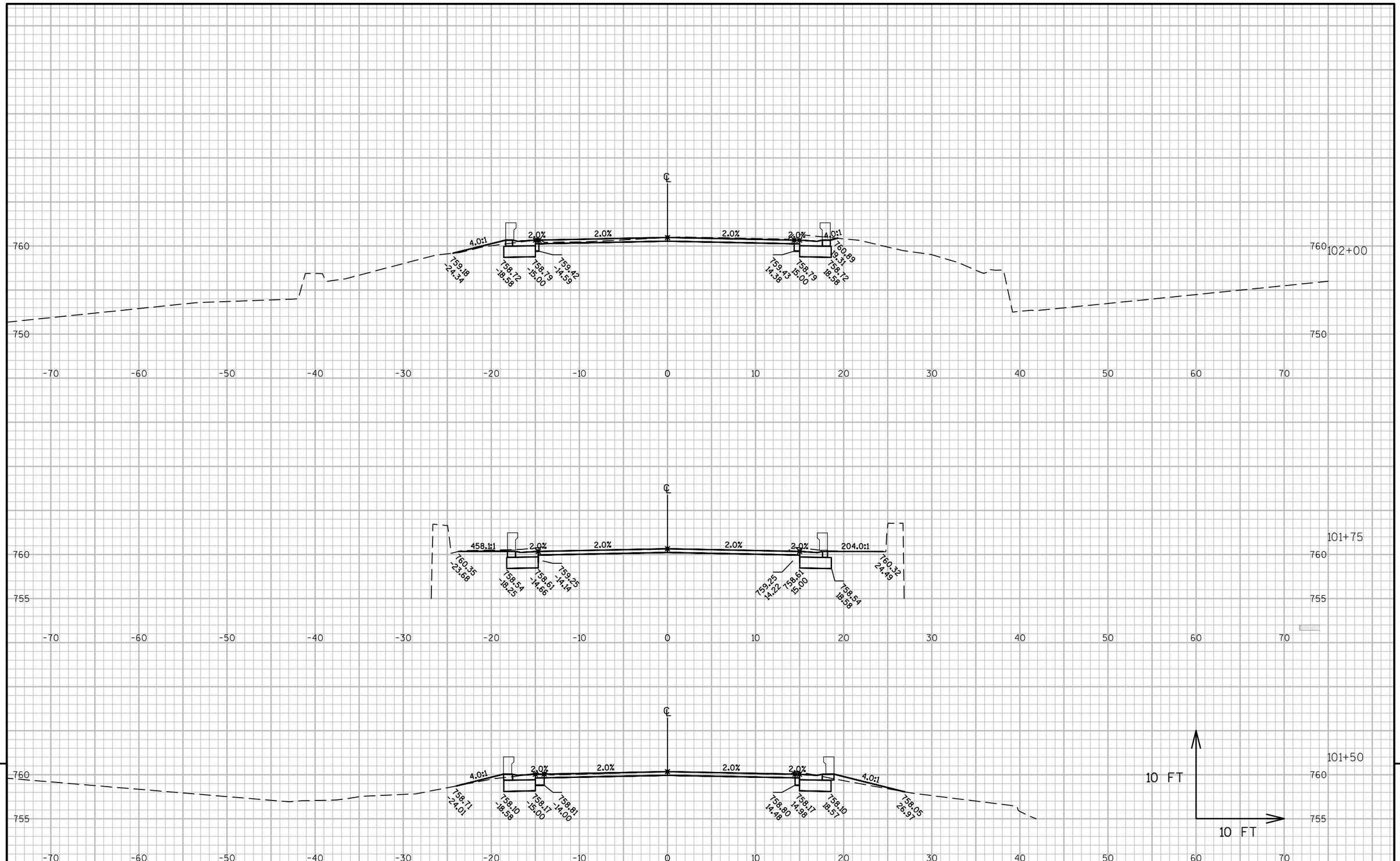
9

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 41	E

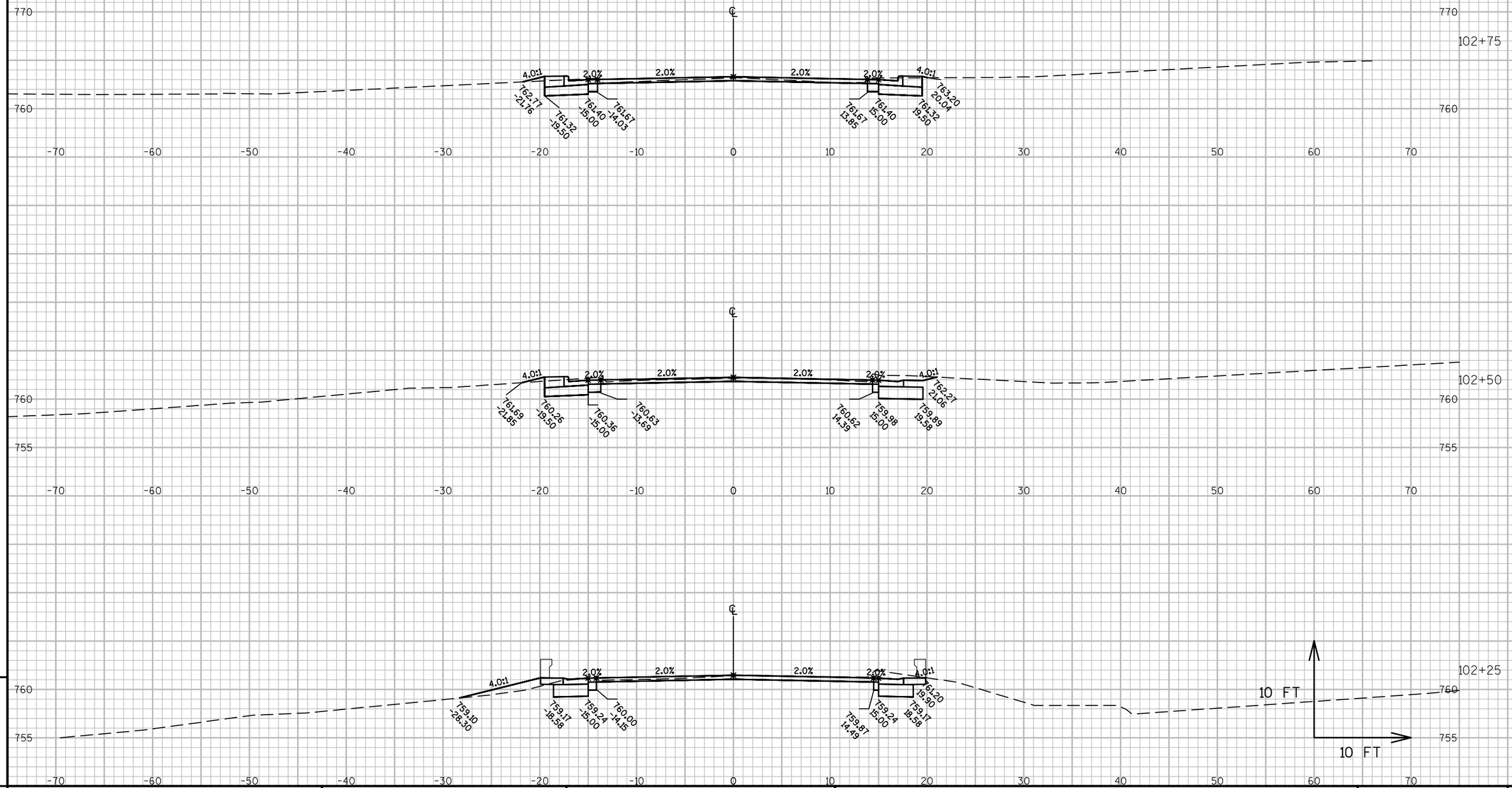
FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-74\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - XS - (01)

PLOT DATE : 11/30/2016 9:50 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 42	E

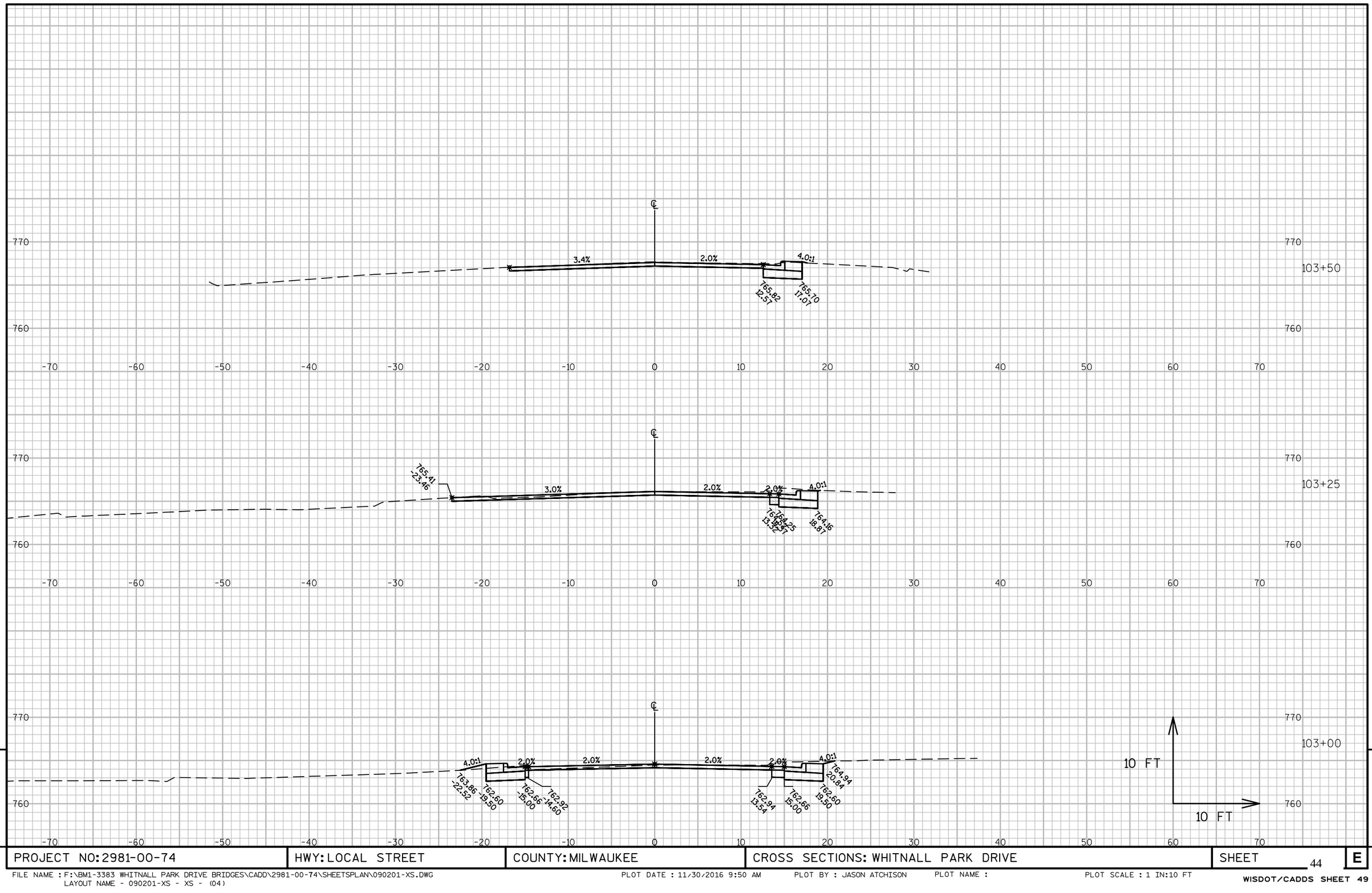


9

9

PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 43	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-74\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - XS - (03)
PLOT DATE : 11/30/2016 9:50 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 2981-00-74	HWY: LOCAL STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: WHITNALL PARK DRIVE	SHEET 44	E

FILE NAME : F:\BM1-3383 WHITNALL PARK DRIVE BRIDGES\CADD\2981-00-74\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - XS - (04)

PLOT DATE : 11/30/2016 9:50 AM PLOT BY : JASON ATCHISON PLOT NAME : PLOT SCALE : 1 IN:10 FT

Notes

Wisconsin Department of Transportation

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