

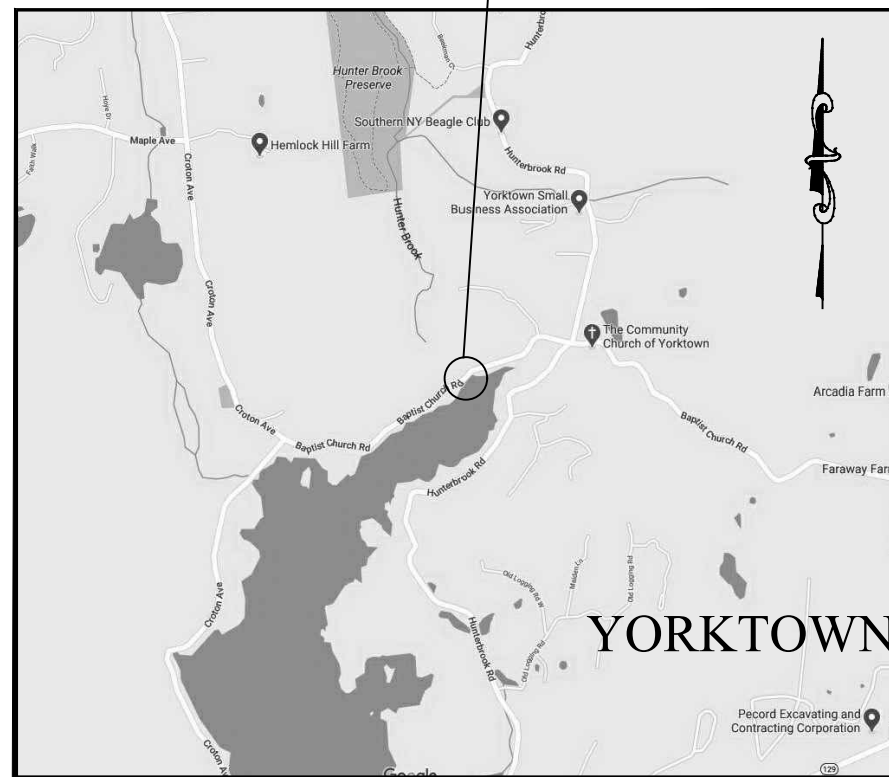


NEW YORK CITY
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

CAPITAL PROJECT WM-30
REPLACEMENT OF
BAPTIST CHURCH ROAD BRIDGE
TOWN OF YORKTOWN, WESTCHESTER COUNTY NY
CONTRACT CRO-530B

DATE 04/23/2021

BAPTIST CHURCH ROAD
 BRIDGE
 BIN 2-26243-0



KEY PLAN

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

SEAN McANDREW, PE.
 EXECUTIVE DIRECTOR, WATER SYSTEMS CAPITAL PROGRAM
 BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

ANA BARRIO
 DEPUTY COMMISSIONER
 BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

VINCENT SAPIENZA, PE.
 COMMISSIONER
 NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Last Saved By: & Date: Cshlyakhova, Friday, April 23, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 5:55:26 PM
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 Drawing Name: & Location: C:\Users\Cshlyakhova\Inprod\Arms38067\3-1.dwg

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SHEET NO.	ADDED	FIELD CHANGE	REVISED	DRAWING NO.	TITLE
1				G-1	TITLE SHEET
2				G-2	INDEX OF DRAWINGS
3				G-3	SYMBOLS & ABBREVIATIONS
4				G-4	ESTIMATE OF QUANTITIES
5				G-5	GENERAL NOTES - 1
6				G-6	GENERAL NOTES - 2
7				C-1	SURVEY & BASELINE TIES
8				C-2	TYPICAL SECTIONS (SHEET 1 OF 2)
9				C-3	TYPICAL SECTIONS (SHEET 2 OF 2)
10				C-4	PROPOSED ROADWAY ALIGNMENT AND SITE PLAN
11				C-5	ROADWAY PROFILE - 1
12				C-6	ROADWAY PROFILE - 2
13				C-7	ROADWAY DETAILS SHEET
14				MT - 1	WORK ZONE TRAFFIC CONTROL PLAN GENERAL NOTES
15				MT - 2	WORK ZONE TRAFFIC CONTROL PLAN DETOUR PLAN
16				MT - 3	WORK ZONE TRAFFIC CONTROL PLAN SIGN DATA TABLE
17				SGN-1	PROPOSED SIGNING AND STRIPING PLAN
18				ESC-1	BAPTIST CHURCH ROAD GRADING AND EROSION CONTROL PLAN
19				XS-1	BAPTIST CHURCH ROAD CROSS SECTIONS - SOUTH APPROACH
20				XS-2	BAPTIST CHURCH ROAD CROSS SECTIONS - NORTH APPROACH
21				GS-1	PROPOSED GENERAL PLAN AND ELEVATION
22				DS-1	DEMOLITION PLAN
23				DS-2	ARCH REMOVAL DETAILS
24				DS-3	EXCAVATION DETAILS
25				S-1	GEOMETRIC LAYOUT
26				S-2	SOUTH FOOTING PLAN
27				S-3	SOUTH FOOTING REINFORCEMENT
28				S-4	NORTH FOOTING PLAN
29				S-5	NORTH FOOTING REINFORCEMENT
30				S-6	SOUTH WINGWALL ELEVATIONS AND DETAILS
31				S-7	NORTH WINGWALL ELEVATIONS AND DETAILS
32				S-8	WINGWALL EXTENSION ELEVATIONS AND DETAILS
33				S-9	PYLON SECTION & DETAILS
34				S-10	PROPOSED GRANITE CAPSTONE AND SPANDREL WALL
35				S-11	MOMENT SLAB DETAILS
36				S-12	PRECAST DETAILS
37				S-13	SW RETAINING WALL - PLAN & ELEVATION
38				S-14	SW RETAINING WALL - REBAR DETAILS
39				S-15	NE RETAINING WALL - PLAN & ELEVATION
40				S-16	NE RETAINING WALL - REBAR DETAILS
41				RL-1	RAILING DETAILS -1
42				RL-2	RAILING DETAILS -2
43				RL-3	RAILING DETAILS -3
44				BL-1	BAR LIST & BENDING DIAGRAMS
45				LS-1	LANDSCAPING PLAN & TABLES
46				LS-2	LANDSCAPING DETAILS

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION DESIGN AND CONSTRUCTION DIVISION		
STANDARD DRAWING NO.	DATE OF LATEST REVISION	TITLE
209-01	9/1/2017	LINEAR MEASURES
209-06	9/2/2010	TURBIDITY CURTAIN
402-01	1/8/2009	HOT MIX ASPHALT OVERLAY SPLICE (PAVEMENT TERMINATION DETAIL)
606-04	1/1/2020	BOX BEAM GUIDE RAIL (SHEET 1 OF 5)
606-04	1/2/2020	BOX BEAM GUIDE RAIL (SHEET 2 OF 5)
606-04	1/2/2020	BOX BEAM GUIDE RAIL (SHEET 3 OF 5)
606-04	1/6/2011	BOX BEAM GUIDE RAIL (SHEET 4 OF 5)
607-01	1/8/2009	R.O.W. FENCING
608-03	3/7/2016	RESIDENTIAL AND MINOR COMMERCIAL DRIVEWAYS (SHEET 1 OF 9)
608-03	3/7/2016	RESIDENTIAL AND MINOR COMMERCIAL DRIVEWAYS (SHEET 2 OF 9)
608-03	3/7/2016	RESIDENTIAL AND MINOR COMMERCIAL DRIVEWAYS (SHEET 3 OF 9)
608-03	3/7/2016	RESIDENTIAL AND MINOR COMMERCIAL DRIVEWAYS (SHEET 4 OF 9)
608-03	2/5/2020	RESIDENTIAL AND MINOR COMMERCIAL DRIVEWAYS (SHEET 5 OF 9)
608-03	3/7/2016	RESIDENTIAL AND MINOR COMMERCIAL DRIVEWAYS (SHEET 9 OF 9)
611-01	9/6/2012	LANDSCAPE PLANTING DETAILS (SHEET 1 OF 2)
611-01	9/6/2012	LANDSCAPE PLANTING DETAILS (SHEET 2 OF 2)
619-01	9/1/2017	TEMPORARY CONCRETE BARRIER (SHEET 1 OF 3)
619-01	9/1/2017	TEMPORARY CONCRETE BARRIER (SHEET 2 OF 3)
619-01	9/1/2017	TEMPORARY CONCRETE BARRIER (SHEET 3 OF 3)
619-02	1/8/2009	TYPE III CONSTRUCTION BARRICADES (SHEET 1 OF 2)
619-02	1/8/2009	TYPE III CONSTRUCTION BARRICADES (SHEET 2 OF 2)
645-03	1/7/2010	POSITIONING OF TRAFFIC SIGNS (SHEET 1 OF 2)
685-01	8/21/2018	PAVEMENT MARKING DETAILS (SHEET 1 OF 9)

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
 J. CIRCOSTA
 CHECKED BY:
 R. ROMAN, PE
 DESIGN LEAD:
 O. HUNTER, PE
 SECTION MANAGER:

DRAWN BY:
 J. CIRCOSTA

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
 PAUL COSTA, PE
 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

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ENVIRONMENTAL PROTECTION
 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
 CORONA, NEW YORK 11368
 www.nyc.gov/dep

CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

 INDEX OF DRAWINGS

DATE: 04/23/2021
 SCALE: NOT TO SCALE
 SHEET NO:
 2 OF 46
 DRAWING NO.
G-2

Last Saved By: & Date: Cehlykhova, Tuesday, April 20, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 3:36 PM
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 Drawing Name: & Location: C:\Users\Cehlykhova\Inprods\Arms3007\3-3.dwg

LIST OF ABBREVIATIONS			
ABBREVIATIONS	DESCRIPTION	ABBREVIATIONS	DESCRIPTION
ABUT.	ABUTMENT	M.H.	MANHOLE
AH	AHEAD	M.H.W.	MEAN HIGH WATER
APPROX.	APPROXIMATELY	MIN.	MINIMUM
A.O.B.E.	AS ORDERED BY ENGINEER	MISC.	MISCELLANEOUS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING AND MATERIALS	M.O.	MIDDLE ORDINATE
B.C.	BOTTOM OF CURB	MON.	MONUMENT
B.I.N.	BRIDGE IDENTIFICATION NUMBER	N.E.	NORTH EAST
BK.	BACK	NO. or #	NUMBER
B.L.	BASELINE	N/A	NOT APPLICABLE
BLDG.	BUILDING	N.T.S.	NOT TO SCALE
B.M.	BENCH MARK	N.W.	NORTH WEST
B.O.S.	BOTTOM OF SLOPE	PVMT.	PAVEMENT
B.W.	BOTTOM OF RETAINING WALL	P.C.	POINT OF CURVE
B.W.S.	BUREAU OF WATER SUPPLY	P.C.C.	POINT OF COMPOUND CURVATURE
CATH.	CATHODIC PROTECTION	P.I.	POINT OF INTERSECTION
C.B.	CATCH BASIN	P.I.N.	PROJECT IDENTIFICATION NUMBER
C.C.	CENTER TO CENTER	P.L.	PROPERTY LINE
C.I.P.	CAST IRON PIPE	P.R.C.	POINT OF REVERSE CURVATURE
C.L.	CENTERLINE	PROP.	PROPOSED
C.L.F.	CHAIN LINKED FENCE	P.T.	POINT OF TANGENT
△	CENTRAL ANGLE	P.V.C.	POINT OF VERTICAL CURVATURE
CL	CLEARANCE	P.V.C.C.	POINT OF VERTICAL COMPOUND CURVE
CONC.	CONCRETE	P.V.I.	POINT OF VERTICAL INTERSECTION
CONSTR.	CONSTRUCTION	P.V.R.C.	POINT OF REVERSE CURVE
CONTR.	CONTRACTION	P.V.T.	POINT OF VERTICAL TANGENCY
C.M.P.	CORRUGATED METAL PIPE	R. or RAD.	RADIUS
C.P.	CONCRETE PIPE	R.C.P.	REINFORCED CONCRETE PIPE
C.R.W.	CONCRETE RETAINING WALL	RD.	ROAD
CUL.	CULVERT	RDWY	ROADWAY
C.Y.	CUBIC YARDS	RM.	ROOM
D.	DEGREE OF CURVE	R.O.W.	RIGHT OF WAY
DET.	DETAIL	R.R.	RAILROAD
D.I.P.	DUCTILE IRON PIPE	R.W.	RETAINING WALL
DIA.	DIAMETER	S.E.	SOUTH EAST
DWG.	DRAWING	S.F.	SQUARE FOOT
DWY.	DRIVEWAY	SPEC.	SPECIFICATION
EA.	EACH	S.M.H.	SEWER MANHOLE
E.I.C.	ENGINEER IN CHARGE	S.S.D.	STOPPING SIGHT DISTANCE
E.O.P.	EDGE OF PAVEMENT	ST.	STREET
ELEV.	ELEVATION	STA.	STATION
E.MAX.	MAXIMUM SUPERELEVATION	STD.	STANDARD
EQ.	EQUALITY	STK.	STAKE
E.S.	END SECTION	S.W.	SOUTH WEST
EST.	ESTIMATE	S.Y.	SQUARE YARD
EXIST.	EXISTING	T.	TANGENT
EXT.	EXTERNAL	T.C.	TOP OF CURB
F.D.	FOUNDATION	TEL.P.	TELEPHONE POLE
FED.	FEDERAL	T.G.	TOP OF GRATE
F.I.	FIELD INLET	T.G.L.	THEORETICAL GRADE LINE
FT.	FOOT	THK.	THICK
G.	GAS	T.M.H.	TELEPHONE MANHOLE
G.V.	GAS VALVE	T.O.S.	TOP OF SLOPE
HORIZ.	HORIZONTAL	T.R.N.S.	TRANSITE CONDUIT
H.P.G.	HIGH PRESSURE GAS	T.W.	TOP OF RETAINING WALL
H.S.D.	HEADLIGHT SIGHT DISTANCE	TYP.	TYPICAL
H.W.	HEAD WALL	U.P.	UTILITY POLE
HYD.	HYDRANT	V.C.	VERTICAL CURVE
INV.	INVERT	V.C.P.	VITRIFIED CLAY PIPE
JT.	JOINT	VERT.	VERTICAL
L.	LENGTH	V.T.P.	VITRIFIED TILE PIPE
L.F.	LINEAR FEET	W.	WATER
L.P.	LIGHT POLE	W.M.H.	WATER MANHOLE
CP	COMPLETE PENETRATION	W.W.	WINGWALL
L.P.G.	LOW PRESSURE GAS	W.P.	WORKING POINT
L.S.	LUMP SUM		
MAX.	MAXIMUM		

LEGEND		
FEATURE	PROPOSED	EXISTING
BARRICADE	■ ■ ■	
BASELINE		— 345+00 —
BENCH MARK		□ B.M. 12
BORING OR AUGER HOLE		⊙ B26
BOTTOM OF FILL	— — — — —	— — — — —
BOX BEAM OR W BEAM GUIDE RAILING		— — — — —
BOX BEAM OR W BEAM MALL BARRIER		— — — — —
BRIDGE RAIL (IDENTIFIED)		— — — — —
BRIDGE SCUPPER	■ SC.	□ SC.
BRUSH		BRUSH
BUILDING IN GENERAL		— — — — —
TRAFFIC CONTROL SIGNAL	○ →	○ →
TRAFFIC SIGNAL	⊕	⊕
CATCH BASIN	■ C.B.	□ C.B.
CATCH BASIN – ADJUSTMENT RINGS (LEVELING)	⊗	□ C.B.
CATCH BASIN – NEW FRAMES AND GRATES	■	□ C.B.
CATCH BASIN – REBUILDING TOP OF DRAINAGE STRUCTURES	■	□ C.B.
CATCH BASIN – RESET EXISTING FRAMES AND GRATES	⊗	□ C.B.
CENTERLINE	— — — — —	— — — — —
CHANNEL, OPEN ASPHALT	— — — — —	— — — — —
TRANSIT POINT		△
CONCRETE MEDIAN OR HALF SECTION BARRIER (INDICATED)	— — — — —	— — — — —
TREES, CONIFEROUS	⊗	⊗
TREES, DECIDUOUS	⊗	⊗
CONDUIT AND WIRING (SIZE AND TYPE AS SHOWN –N.Y.C.)	— E — E —	— E — E —
CONDUIT AND WIRING (SIZE AND TYPE AS SHOWN –CON EDISON)	— CE —	— CE —
CONDUIT – EMPIRE CITY SUBWAY	— ECS —	— ECS —
CONDUIT – TELEPHONE	— T —	— T —
CONDUIT – POLICE DEPARTMENT	— PD —	— PD —
TREES TO BE REMOVED		⊗
CONTOURS	70 80	70 80
CURB	— — — — —	— — — — —
DITCH	— — — — —	— — — — —
DROP INLET	□ D.I.	□ D.I.
FENCE (IDENTIFY)	— x —	— x —
FIELD INLET	□ F.I.	□ F.I.
FIRE ALARM SIGNAL BOX WITH ERS BOX	■ F	□ F
FIRE HYDRANT	●	○
GAS LINE (SIZE INDICATED WHERE KNOWN)	— G —	— G —
GAS VALVE	— G.V. —	— G.V. —
HEAD WALL		— — — — —
HEAVY POST BLOCKED-OUT CORRUGATED BEAM GUIDE RAILING	— — — — —	— — — — —

LEGEND		
FEATURE	PROPOSED	EXISTING
HEDGE	— — — — —	— — — — —
JUNCTION BOX (SIZE INDICATED)	□	□
LIGHT POLE	⊙	⊙
LIMIT OF PAVING	— — — — —	
MANHOLE – NEW	⊙ M.H.	
MANHOLE – ADJUSTMENT RINGS (LEVELING)	⊗	○ M.H.
MANHOLE – NEW FRAMES AND GRATES	⊙	○ M.H.
MANHOLE – REBUILDING TOP OF DRAINAGE STRUCTURES	⊙	○ M.H.
MANHOLE – RESET EXISTING FRAMES AND GRATES	⊗	○ M.H.
MONUMENT		□ CM
NORTH ARROW (TRUE)		— — — — —
ORIGINAL GROUND		— — — — —
POINT ON LINE		○
POLICE TELEPHONE	■ P	□ P
PRESSURE RELIEF JOINT	— — — — —	
TREES AND WOODS	⊗	⊗
RAILROAD TRACK		— — — — —
RETAINING WALL OR PARAPET (TYPE)	— — — — —	— — — — —
R.O.W. LINE	— — — — —	— — — — —
RIPRAP (STONE FILLING)	— — — — —	
ANCHORAGE UNIT FOR GUIDE RAIL	■	□
EASEMENT	— — — — —	
SEWER, SANITARY	— S —	— S —
SEWER, STORM	— ST —	— ST —
SEWER COMBINED		— STS —
SIGNS, GROUND MOUNTED	⊙	⊙
SIGN LOCATION	⊙	
SIGN, OVERHEAD	— — — — —	— — — — —
SPOT ELEVATION (DOT IS LOCATION)		103.2
UTILITY VALVE IDENTIFIED	— — — — —	— — — — —
STATE ROUTE MARKER	5	5
WATER VALVE	□ W.V.	□ W.V.
WATER LINE (SIZE INDICATED WHERE KNOWN)	— W —	— W —
UTILITY POLE	○	○
INTERSTATE	495	495
TEMPORARY PAVEMENT	— — — — —	
WATER PIPE INTERSECTION		⊗
WELDING SYMBOL	— — — — —	N.A.
REPAIR LOCATIONS	⊙	N.A.

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: J. CIRCOSTA	DRAWN BY: J. CIRCOSTA
CHECKED BY: R. ROMAN, PE	
DESIGN LEAD: O. HUNTER, PE	HARDESTY & HANOVER, LLC ENGINEERING
SECTION MANAGER:	1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE	*WARNING—IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*
PORTFOLIO MANAGER PAUL COSTA, PE	
EXECUTIVE DIRECTOR SEAN McANDREW, PE	

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 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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CAPITAL PROJECT WM-30
 IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 SYMBOLS & ABBREVIATIONS

DATE: 04/23/2021
SCALE: NOT TO SCALE
SHEET NO: 3 OF 46
DRAWING NO. G-3

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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 Drawing Name: & Location: C:\users\cshlykhtova\hprod\jms38067\G-4.dwg

ESTIMATE OF QUANTITIES				
BID NO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	LS-1	MOBILIZATION	LS	1
2	LS-2	GENERAL REQUIREMENTS	LS	1
3	LS-3	WORK RESULT	LS	1
4	LS-4	DE-MOBILIZATION	LS	1
5	UP-1	ROCK EXCAVATION	CY	350
6	UP-2	REMOVE AND RESET GRANITE CAPSTONES	SF	520
7	202.19	REMOVAL OF SUBSTRUCTURE	CY	870
8	203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	3600
9	203.03	EMBANKMENT IN PLACE	CY	1740
10	203.07	SELECT GRANULAR FILL	CY	1587
11	203.21	SELECT STRUCTURE FILL	CY	1704
12	206.01	STRUCTURE EXCAVATION	CY	1118
13	207.20	GEOTEXTILE BEDDING	SY	68
14	207.26	PREFABRICATED COMPOSITE STRUCTURAL DRAIN	SY	369
15	209.13	SILT FENCE - TEMPORARY	LF	605
16	209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	764
17	304.11	SUBBASE COURSE, TYPE 1	CY	472
18	402.000014	PLANT PRODUCTION QUALITY ADJUSTMENT TO HMA ITEMS	QU	37
19	402.128304	12.5 F3 TOP COURSE HMA, 80 SERIES COMPACTION	TON	143
20	402.198904	19 F9 BINDER COURSE HMA, 80 SERIES COMPACTION	TON	112
21	402.378904	37.5 F9 BASE COURSE, 80 SERIES COMPACTION	TON	456
22	407.0102	DILUTED TACK COAT	GALLON	197
23	490.30	MISCELLANEOUS COLD MILLING OF BITUMINOUS CONCRETE	SY	233
24	520.09000010	SAWCUTTING ASPHALT PAVEMENT, CONCRETE PAVEMENT AND ASPHALT OVERLAY ON CONCRETE PAVEMENT	LF	53
25	553.010001	COFFERDAMS (TYPE 1)	EACH	2
26	555.0105	CONCRETE FOR STRUCTURES, CLASS A	CY	418
27	555.02000010	CONCRETE FOR STRUCTURES, CLASS MP (MASS PLACEMENT)	CY	170
28	555.08	FOOTING CONCRETE, CLASS HP	CY	598
29	556.0202	EPOXY COATED BAR REINFORCEMENT FOR STRUCTURES	LB	156719
30	557.09	SUPERSTRUCTURE SLAB WITH SEPARATE WEARING SURFACE, BOTTOM FORMWORK NOT REQUIRED	SY	160
31	562.0101	REINFORCED CONCRETE SPAN UNITS	SY	216
32	568.52	STEEL BRIDGE RAIL (FIVE-RAIL)	LF	149
33	568.70	TRANSITION BRIDGE RAILING	LF	128
34	570.01	LEAD EXPOSURE CONTROL PROGRAM	LS	1
35	570.02	MEDICAL TESTING	DIRECT COST	1
36	570.03	PERSONAL EXPOSURE MONITORING SAMPLE ANALYSIS	DIRECT COST	1
37	570.04	DECONTAMINATION FACILITIES	CALENDAR WEEK	3
38	570.090001	ENVIRONMENTAL GROUND PROTECTION	LS	1
39	570.100001	ENVIRONMENTAL WATERWAY PROTECTION	LS	1

ESTIMATE OF QUANTITIES				
BID NO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
40	570.160001	CLASS B CONTAINMENT SYSTEM FOR PAINT REMOVAL	LS	1
41	571.03	DISPOSAL OF HAZARDOUS PAINT REMOVAL WASTE CONTAINING LEAD	LB	1
42	586.0201	DRILLING AND GROUTING BOLTS OR REINFORCEMENT BARS	EA	162
43	587.01	BRIDGE RAILING REMOVAL AND DISPOSAL	LF	128
44	606.100002	BOX BEAM GUIDE RAILING (SHOP BENT OR SHOP MITERED)	LF	393
45	606.120101	BOX BEAM END PIECE	EA	5
46	606.120201	BOX BEAM GUIDE RAILING END ASSEMBLY TYPE IIA	EACH	1
47	606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING	LF	213
48	607.41010010	TEMPORARY PLASTIC BARRIER FENCE	LF	962
49	608.020102	HMA SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS, AND VEGETATION CONTROL STRIPS	TON	26
50	610.1402	TOPSOIL - ROADSIDE	CY	105
51	614.060204	TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT - STUMPS GRUBBED	EACH	62
52	614.060304	TREE REMOVAL OVER 12 INCHES TO 18 INCHES DIAMETER BREAST HEIGHT - STUMPS GRUBBED	EACH	13
53	614.060404	TREE REMOVAL OVER 18 INCHES TO 24 INCHES DIAMETER BREAST HEIGHT - STUMPS GRUBBED	EACH	3
54	614.060504	TREE REMOVAL OVER 24 INCHES TO 36 INCHES DIAMETER BREAST HEIGHT - STUMPS GRUBBED	EACH	8
55	619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1
56	619.04	TYPE III CONSTRUCTION BARRICADES	EACH	5
57	619.1711	TEMPORARY POSITIVE BARRIER - CATEGORY 1 - PINNING PROHIBITED	LF	40
58	620.02	STONE FILLING (FINE)	CY	6
59	620.0802	BEDDING MATERIAL	CY	4
60	623.11	CRUSHED GRAVEL	CY	50
61	625.01	SURVEY OPERATIONS	LS	1
62	640.10	WHITE PAINT REFLECTORIZED PAVEMENT STRIPES - 15 MILS	LF	1140
63	640.11	YELLOW PAINT REFLECTORIZED PAVEMENT STRIPES - 15 MILS	LF	1140
64	645.5202	GROUND MOUNTED SIGN PANEL LESS THAN OR EQUAL TO 30 SF, WITH Z-BARS, HIGH VISIBILITY SHEETING	SF	38
65	645.81	TYPE A SIGN POST	EACH	5
66	647.61	REMOVE AND DISPOSE EXISTING SIGN AND SUPPORT	EACH	2

NOTE:
 ALL MEASUREMENTS AND PAYMENT ON THIS PROJECT SHALL BE IN ENGLISH UNITS AS TABULATED ON THIS DRAWING.

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
 CHECK BEFORE USE
 IF SHEET IS LESS THAN 22" X 34"
 IT IS A REDUCED PRINT SCALE
 ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
 J. CIRCOSTA
 CHECKED BY:
 R. ROMAN, PE
 DESIGN LEAD:
 S. LEWIS
 SECTION MANAGER:

DRAWN BY:
 J. CIRCOSTA

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
 PAUL COSTA, PE
 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

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NEW YORK CITY
ENVIRONMENTAL PROTECTION
 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
 CORONA, NEW YORK 11368
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
ESTIMATE OF QUANTITIES

DATE: 04/23/2021
 SCALE: NOT TO SCALE
 SHEET NO:
 4 OF 46
 DRAWING NO.
G-4

Last Saved By: & Date: Cahlykhova, Monday, July 26, 2021 and Date Plotted: Tuesday, August 03, 2021 Time: 12:20 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.336863 Plot Style Table: (N)_BENC_BW.ctb
 Drawing Name: & Location: C:\Users\Cahlykhova\Inprod\Arms58067\3-6.dwg

CONCRETE REMOVAL AND REPAIR

- ALL MATERIAL AND DEBRIS SHALL BE CONTAINED, COLLECTED AND SHALL NOT ENTER THE RESERVOIR SYSTEM OR HUNTER BROOK. COST SHALL BE PAID FOR UNDER ITEM 570.100001, ENVIRONMENTAL WATERWAY PROTECTION.
- THE CONTRACTOR MAY BE PERMITTED TO USE EQUIPMENT MOUNTED PAVEMENT BREAKERS, (E.G. HOE RAMS), IN THE REMOVAL OF CONCRETE PROVIDED THAT (A) THERE ARE NO UTILITIES PRESENT WITHIN OR BELOW THE AREA OF THE CONCRETE TO BE REMOVED. (B) THE PROVISIONS OF SUB-SECTIONS 580-3.01, 580-3.04 AND 580-3.05 OF THE NYSDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED MAY 1, 2019 CURRENTLY AMENDED ARE ADHERED TO. IF THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATION WOULD RESULT IN DAMAGE TO ANY CONCRETE OR ANY OTHER COMPONENT OF THE STRUCTURE THAT WILL REMAIN, THE CONTRACTOR SHALL MODIFY HIS REMOVAL PROCEDURE AT NO ADDITIONAL COST. THESE MODIFIED REMOVAL PROCEDURES SHALL INCLUDE THE USE OF HAND OPERATED CHIPPING HAMMERS IF SO ORDERED BY THE ENGINEER AND SHALL COMPLY WITH PROVISIONS OF 580-3.02.

LOAD RESTRICTION

- THE CONTRACTOR'S ATTENTION IS DIRECTED TO NEW YORK STATE STANDARD SPECIFICATIONS SUBSECTION 105-12, CONSTRUCTION EQUIPMENT.

BRIDGE DEMOLITION

- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF SUBSECTION 202-3.01 GENERAL AND SAFETY REQUIREMENTS. A REMOVAL PLAN, SIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK, SHALL BE SUBMITTED TO THE ENGINEER THIRTY (30) DAYS PRIOR TO BEGINNING THE DEMOLITION OF THE BRIDGE. THE REMOVAL PLAN MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO STARTING WORK.
- LIMITED RECORD PLANS FOR THIS STRUCTURE ARE AVAILABLE AT THE NYCDEP VALHALLA OFFICE, CONTACT MR. JEFFREY A. BUSSE, PE (914-749-5417).
- THE PAINT ON THE EXISTING BRIDGE RAILING CONTAINS LEAD. THE CONTRACTOR CAN REQUEST A COPY OF THE HAZARDOUS MATERIALS INVESTIGATION REPORT FROM NYCDEP, CONTACT MR. JEFFREY A. BUSSE, PE (914-749-5417).
- LOOSE AND/OR PEELING PAINT ON RAILING/MASONRY SURFACES MAY BECOME DISLODGED DURING REMOVAL OPERATIONS OR DURING TRANSPORTATION FROM THE SITE UNLESS APPROPRIATE MEASURES ARE TAKEN. THE CONTRACTOR SHALL FORMULATE AND SUBMIT A METHOD OF REMEDIATING THE CONDITION FOR APPROVAL BY THE ENGINEER. WORKER LEAD PROTECTION IN ACCORDANCE WITH OSHA 1926.62 MUST BE SATISFIED. ALTERNATIVES COULD INCLUDE TRANSPORTING AFFECTED MEMBERS IN CLOSED TRUCKS, WRAPPING AFFECTED MEMBERS PRIOR TO REMOVAL, ENCAPSULATING THE LOOSE PAINT OR REMOVAL OF LOOSE PAINT PRIOR TO DISMANTLING OPERATIONS. THE USE OF ENVIRONMENTAL GROUND AND /OR WATERWAY PROTECTION TREATMENT AND DISPOSAL OF PAINT REMOVAL WASTE ITEM MAY BE REQUIRED. ITEMS WILL BE REQUIRED. DEPENDING ON THE ALTERNATIVE CHOSEN, BECAUSE OF THE ABOVE MENTIONED CONDITION, THE CONTRACTOR SHALL EXAMINE THE CONDITION OF THE STRUCTURE'S PAINT PRIOR TO SUBMITTING A BID.
- THE FOLLOWING ITEMS SHALL BE USED TO IMPLEMENT AND MAINTAIN EFFECTIVE HEALTH AND SAFETY CONTROLS:
 - LEAD EXPOSURE CONTROL PLAN - 570.01
 - MEDICAL TESTING - 570.02
 - PERSONAL EXPOSURE MONITORING SAMPLE ANALYSIS - 570.03
 - DECONTAMINATION FACILITIES - 570.04

GRANITE CAPSTONE AND PYLONS

- THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF REMOVAL OF THE EXISTING GRANITE CAPSTONES AND PYLONS ON THE BRIDGE AS SHOWN ON THESE CONTRACT DRAWINGS INCLUDING ALL INCIDENTAL AND APPURTENANT WORK REQUIRED FOR A COMPLETE JOB.
- ALL MATERIALS EXCEPT GRANITE CAPSTONES AND PYLONS REMOVED AS PART OF THIS WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE WORK SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR'S OWN EXPENSE. THE EXISTING CYCLOPEAN STONE MASONRY REMOVED UNDER THIS CONTRACT SHALL REMAIN THE PROPERTY OF NYCDEP AND SHALL BE REUSED ON THE PROPOSED WINGWALL, WINGWALL EXTENSIONS AND ALONG THE PROPOSED SPANDREL WALLS. THE STONES SHALL BE CLEANED, CUT AND INSTALLED IN ACCORDANCE WITH 04 41 00 - REMOVE AND RESET GRANITE CAPSTONES.

- FOLLOWING THE REMOVAL OF THE STEEL PIPE RAILING FROM THE GRANITE CAPSTONES, THE EXISTING HOLES WHERE STEEL POSTS WERE FASTENED SHALL BE SUBSTANTIALLY CLEANED, FREE OF LOOSE DEBRIS, AND SHALL BE LEAD ABATED BY THE CONTRACTOR PRIOR TO REUSE ON THE PROPOSED BRIDGE STRUCTURE. LEAD PAINT REMOVAL AT THE EXISTING HOLES IN THE GRANITE CAPSTONES AFTER STEEL PIPE RAILING REMOVAL SHALL BE PAID FOR UNDER ITEM 570.160001.

CONSTRUCTION AND MATERIALS

STRUCTURAL CONCRETE - GENERAL

- REINFORCEMENT BARS SHALL BE EPOXY COATED DEFORMED BARS ASTM A615 GRADE 60 UNLESS NOTED. YIELD STRENGTH OF REINFORCEMENT, $f_y = 60$ KSI.
- CLASS A AND HP CONCRETE ARE USED AS STRUCTURAL CONCRETE FOR THE CAST-IN-PLACE SUBSTRUCTURES AS NOTED IN THE PLANS. THE STRUCTURAL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS: $f'_c = 4000$ PSI
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" UNLESS OTHERWISE NOTED ON THE PLANS
- UNLESS OTHERWISE SHOWN ON THE PLANS THE MINIMUM COVER FOR REINFORCEMENT SHALL BE AS SHOWN IN THE TABLE BELOW:

LOCATION	COVER
TOP OF MOMENT SLAB	3"
BOTTOM OF MOMENT SLAB	3"
WALLS ABOVE FOOTINGS	2"
FOOTINGS	3"
PRECAST ARCH EXPOSED SURFACE	1 1/2"
PRECAST ARCH OTHER SURFACES	2"

- DUE TO THE PROJECT'S TIME CONSTRAINTS, WINTER CONCRETING MAY BE NECESSARY. IF IT IS NECESSARY AND THE CONTRACTOR IS DIRECTED BY THE ENGINEER TO DO WINTER CONCRETING, THE COST OF THIS WORK SHALL BE INCLUDED IN THE APPROPRIATE CONCRETE BID ITEMS.
- COST OF REINFORCEMENT FOR MOMENT SLAB SHALL BE INCLUDED IN COST OF THE SLAB, ITEM NUMBER 557.22.
- PRECAST ARCH UNITS, PRECAST SPANDREL WALLS, CAST-IN-PLACE STEMS OF WINGWALLS AND THE ABUTMENT COLUMNS SHALL BE MADE FROM COLORED CONCRETE WITH A LIGHT SANDBLAST FINISH. PRIOR TO PLACING ANY COLORED CONCRETE SUBMIT A TEST SAMPLE CONSISTING OF 4'X4'X1' PANEL USING THE PROPOSED MIX. THE SAMPLE SHALL BE MADE AVAILABLE TO COMPARE WITH THE COLORING OF THE RESTORED GRANITE CAPSTONES PRIOR TO FINAL COLOR SELECTION. NO CONCRETE SHALL BE PLACED OR PANEL MANUFACTURED PRIOR TO THE ACCEPTANCE OF THE TEST SAMPLES BY THE ENGINEER. THE COST OF THE TEST SAMPLES SHALL BE INCLUDED IN COST OF ITEMS COVERED BY THE SAMPLES.


SUBSTRUCTURE

- ALL EMBANKMENTS OF SELECT STRUCTURAL FILL (ITEM 203.21) SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY AS DEFINED UNDER SUBSECTION 203-3.12 COMPACTION.
- HIGHWAY EMBANKMENT (HIGHWAY ESTIMATE), SELECT STRUCTURAL FILL, ITEM 203.21, SHALL BE PLACED SIMULTANEOUSLY IN CONTACT, ON BOTH SIDES OF THE VERTICAL PAYMENT LINE. SHEETING OR OTHER MEANS SHALL NOT BE USED TO SEPARATE THE MATERIALS.
- ALL EXCAVATION AND EMBANKMENTS ARE TO BE KEPT FREE OF WATER, ICE AND SNOW.
- EXCAVATION BELOW PLANNED FOOTING ELEVATION WILL NOT BE ALLOWED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. BACKFILL OF UNAUTHORIZED EXCAVATIONS BELOW OR BEYOND PAYMENT LINES WILL BE AT THE CONTRACTOR'S EXPENSE. BACKFILL MATERIAL WILL BE AS DIRECTED BY THE ENGINEER.

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
 CHECK BEFORE USE
 IF SHEET IS LESS THAN 22" X 34"
 IT IS A REDUCED PRINT. SCALE
 ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: J. CIRCOSTA	DRAWN BY: J. CIRCOSTA
CHECKED BY: R. WUTTRICH, PE	
DESIGN LEAD: O. HUNTER, PE	
SECTION MANAGER:	HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway New York, NY 10036

ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE	*WARNING-IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*
PORTFOLIO MANAGER PAUL COSTA, PE	
EXECUTIVE DIRECTOR SEAN McANDREW, PE	

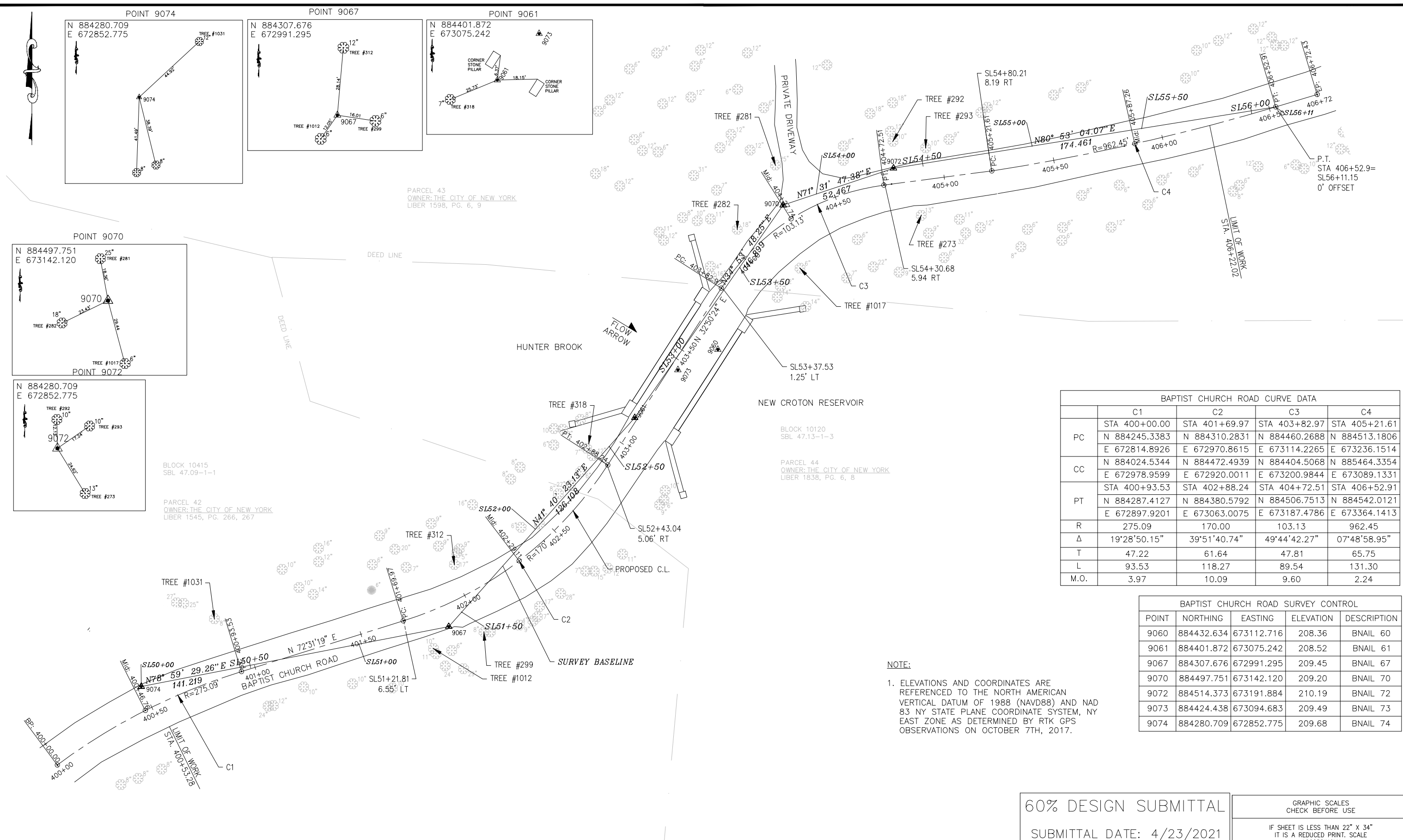
**NEW YORK CITY
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 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION**
 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
 CORONA, NEW YORK 11368
 www.nyc.gov/dep

**CAPITAL PROJECT WM-30
 IN WESTCHESTER COUNTY, NEW YORK
 CONTRACT CRO-530B**

GENERAL NOTES - 2

DATE: 04/23/2021
 SCALE: NOT TO SCALE
 SHEET NO:
 6 OF 46
 DRAWING NO.
 G-6

Last Saved By & Date: Ncrevier, Friday, April 23, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 2:13 PM
 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Scale: 0.388663 Plot Style Table: (N)_BDC_BW.ctb
 Drawing Name: C:\Users\cshiyakova\hprod\dms37923\BAPTIST CHURCH_TIE AND ALIGNMENT.dwg



PARCEL 43
 OWNER: THE CITY OF NEW YORK
 LIBER 1598, PG. 6, 9

BLOCK 10120
 SBL 47.13-1-3

PARCEL 44
 OWNER: THE CITY OF NEW YORK
 LIBER 1838, PG. 6, 8

BLOCK 10415
 SBL 47.09-1-1

PARCEL 42
 OWNER: THE CITY OF NEW YORK
 LIBER 1545, PG. 266, 267

BAPTIST CHURCH ROAD CURVE DATA				
	C1	C2	C3	C4
PC	STA 400+00.00	STA 401+69.97	STA 403+82.97	STA 405+21.61
	N 884245.3383 E 672814.8926	N 884310.2831 E 672970.8615	N 884460.2688 E 673114.2265	N 884513.1806 E 673236.1514
CC	N 884024.5344 E 672978.9599	N 884472.4939 E 672920.0011	N 884404.5068 E 673200.9844	N 885464.3354 E 673089.1331
PT	STA 400+93.53	STA 402+88.24	STA 404+72.51	STA 406+52.91
	N 884287.4127 E 672897.9201	N 884380.5792 E 673063.0075	N 884506.7513 E 673187.4786	N 884542.0121 E 673364.1413
R	275.09	170.00	103.13	962.45
Δ	19°28'50.15"	39°51'40.74"	49°44'42.27"	07°48'58.95"
T	47.22	61.64	47.81	65.75
L	93.53	118.27	89.54	131.30
M.O.	3.97	10.09	9.60	2.24

BAPTIST CHURCH ROAD SURVEY CONTROL				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
9060	884432.634	673112.716	208.36	BNAIL 60
9061	884401.872	673075.242	208.52	BNAIL 61
9067	884307.676	672991.295	209.45	BNAIL 67
9070	884497.751	673142.120	209.20	BNAIL 70
9072	884514.373	673191.884	210.19	BNAIL 72
9073	884424.438	673094.683	209.49	BNAIL 73
9074	884280.709	672852.775	209.68	BNAIL 74

NOTE:
 1. ELEVATIONS AND COORDINATES ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND NAD 83 NY STATE PLANE COORDINATE SYSTEM, NY EAST ZONE AS DETERMINED BY RTK GPS OBSERVATIONS ON OCTOBER 7TH, 2017.

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
 CHECK BEFORE USE
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
 N. CREVIER, PE
 CHECKED BY:
 C. JENNE, PE
 DESIGN LEAD:
 O. HUNTER, PE
 SECTION MANAGER:

DRAWN BY:
 N. CREVIER, PE

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
 PAUL COSTA, PE
 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

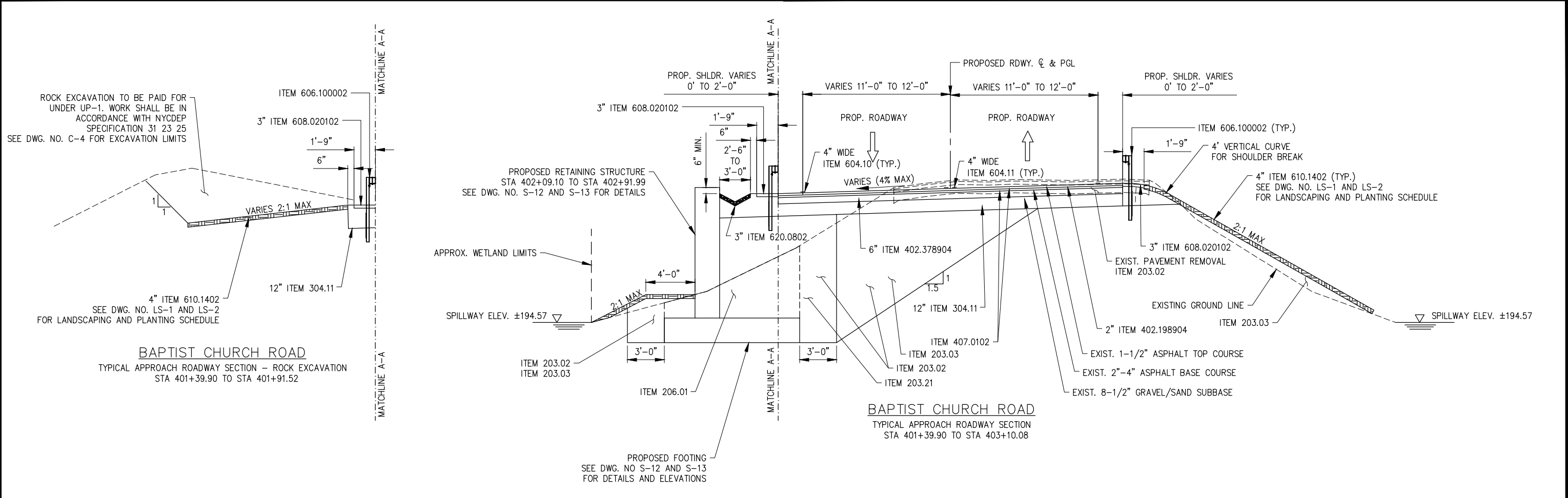
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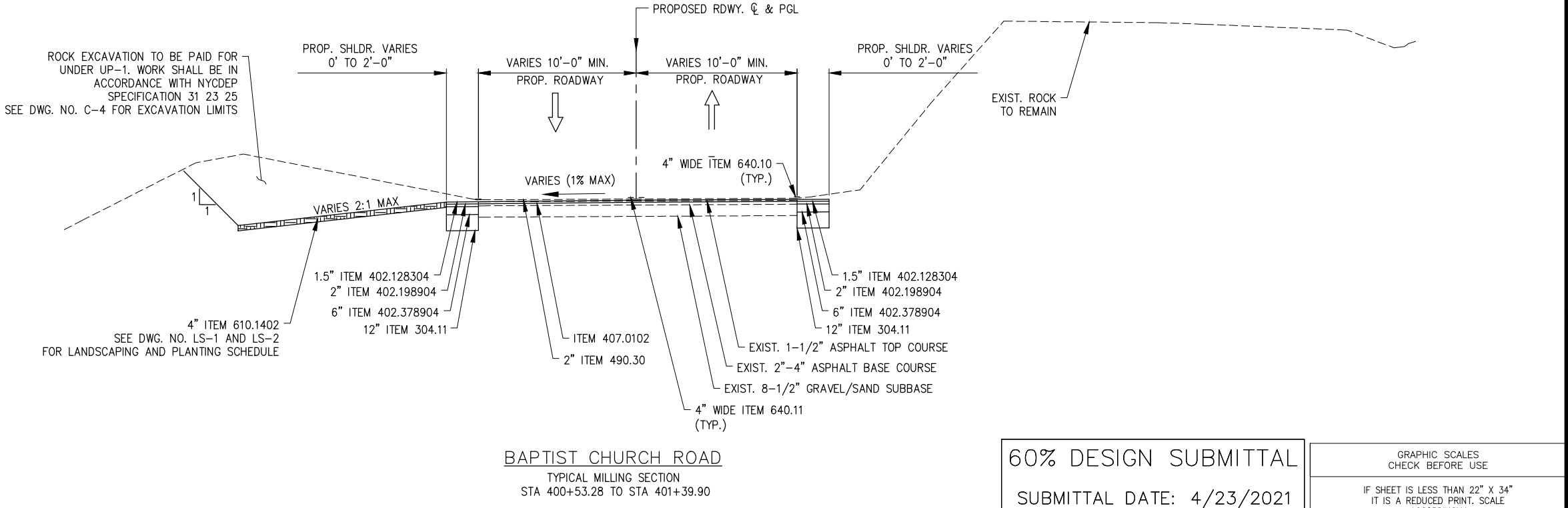
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 SURVEY & BASELINE TIES

DATE: 04/23/2021
 SCALE: 1" = 20'-0"
 SHEET NO:
 7 OF 46
 DRAWING NO.
 C-1

Last Saved By & Date: Norevler, Friday, April 23, 2021 and Date Plotted: Tuesday, July 06, 2021 Time: 11:51 AM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.388663 Plot Style Table: (N)_BDDC_BW.ctb
 Drawing Name: C:\Users\norevler\hprod\dm37923\BAPTIST-CROSS-TYPICAL-SECTION.dwg



ITEM	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION	CY
203.03	EMBANKMENT IN PLACE	CY
203.21	SELECT STRUCTURE FILL	CY
206.01	STRUCTURE EXCAVATION	CY
304.11	SUBBASE COURSE TYPE 1	CY
407.0102	DILUTED TACK COAT	GAL
402.128304	12.5 F3 TOP COURSE HMA (80 SERIES COMPACTION)	TON
402.198904	19 F9 BINDER COURSE HMA (80 SERIES COMPACTION)	TON
402.378904	37.5 F9 BASE COURSE HMA (80 SERIES COMPACTION)	TON
490.30	MISCELLANEOUS COLD MILLING OF BITUMINOUS CONCRETE	SY
606.10	BOX BEAM GUIDE RAILING	LF
610.1402	TOP SOIL - ROADSIDE	CY
640.10	WHITE PAINT REFLECTORIZED PAVEMENT STRIPES - 15 MILS	LF
640.11	YELLOW PAINT REFLECTORIZED PAVEMENT STRIPES - 15 MILS	LF



60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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DESIGNED BY:
N. CREVER, PE
 CHECKED BY:
R. ROMAN, PE
 DESIGN LEAD:
O. HUNTER, PE
 SECTION MANAGER:



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
PAUL COSTA, PE
 EXECUTIVE DIRECTOR
SEAN McANDREW, PE

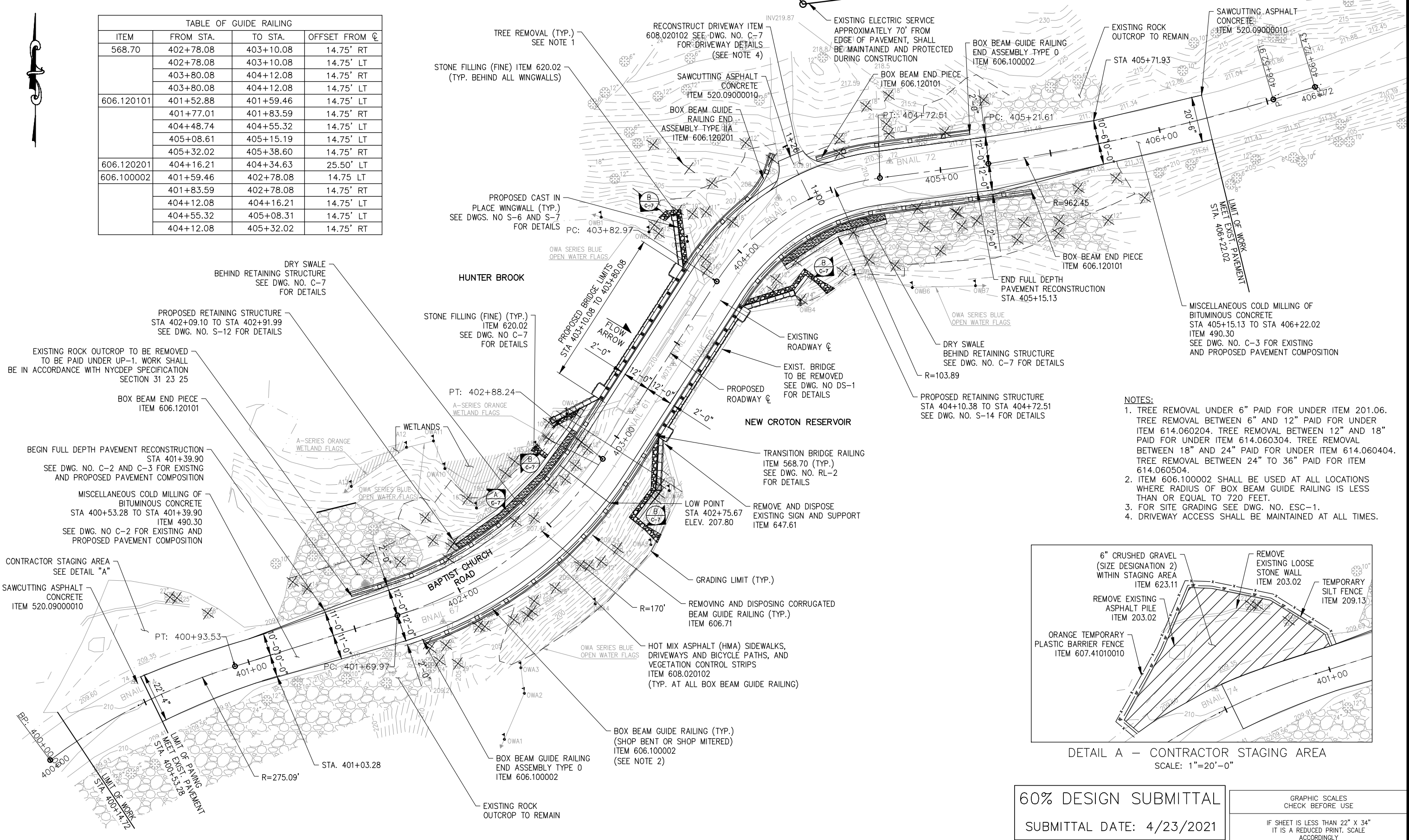
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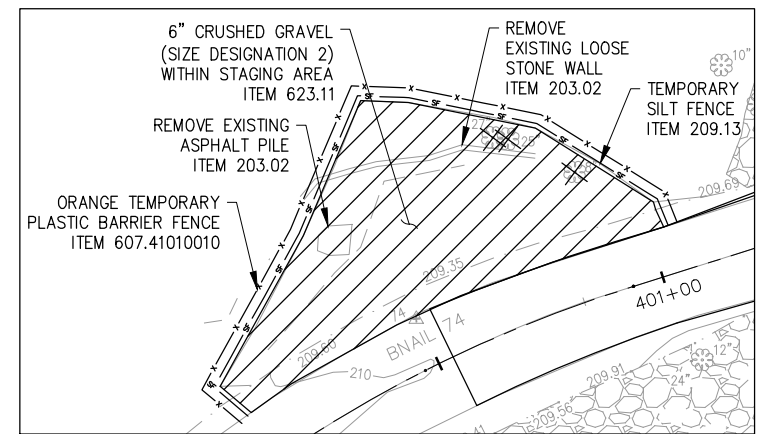
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 TYPICAL SECTIONS
 (SHEET 1 OF 2)

DATE: 04/23/2021
 SCALE: 1"=4'
 SHEET NO:
 8 OF 46
 DRAWING NO.
 C-2

TABLE OF GUIDE RAILING			
ITEM	FROM STA.	TO STA.	OFFSET FROM C
568.70	402+78.08	403+10.08	14.75' RT
	402+78.08	403+10.08	14.75' LT
	403+80.08	404+12.08	14.75' RT
606.120101	403+80.08	404+12.08	14.75' LT
	401+52.88	401+59.46	14.75' LT
	401+77.01	401+83.59	14.75' RT
606.120201	404+48.74	404+55.32	14.75' LT
	405+08.61	405+15.19	14.75' LT
	405+32.02	405+38.60	14.75' RT
606.100002	404+16.21	404+34.63	25.50' LT
606.100002	401+59.46	402+78.08	14.75' LT
	401+83.59	402+78.08	14.75' RT
	404+12.08	404+16.21	14.75' LT
	404+55.32	405+08.31	14.75' LT
	404+12.08	405+32.02	14.75' RT



- NOTES:**
- TREE REMOVAL UNDER 6" PAID FOR UNDER ITEM 201.06. TREE REMOVAL BETWEEN 6" AND 12" PAID FOR UNDER ITEM 614.060204. TREE REMOVAL BETWEEN 12" AND 18" PAID FOR UNDER ITEM 614.060304. TREE REMOVAL BETWEEN 18" AND 24" PAID FOR UNDER ITEM 614.060404. TREE REMOVAL BETWEEN 24" TO 36" PAID FOR ITEM 614.060504.
 - ITEM 606.100002 SHALL BE USED AT ALL LOCATIONS WHERE RADIUS OF BOX BEAM GUIDE RAILING IS LESS THAN OR EQUAL TO 720 FEET.
 - FOR SITE GRADING SEE DWG. NO. ESC-1.
 - DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES.



DETAIL A - CONTRACTOR STAGING AREA
SCALE: 1"=20'-0"

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Scale: 0.388663 Plot Style Table: (N)_BDDC_BW.ctb
 Drawing Name: C:\users\norevier\hprod\dm37923\BAPTIST CHURCH ROAD PLAN.dwg

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: N. CREMER, PE	DRAWN BY:
CHECKED BY: C. JENNE, PE	
DESIGN LEAD: O. HUNTER, PE	HARDESTY & HANOVER, LLC ENGINEERING
SECTION MANAGER:	1501 Broadway, New York, NY 10036

ACCOUNTABLE MANAGER
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PORTFOLIO MANAGER
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EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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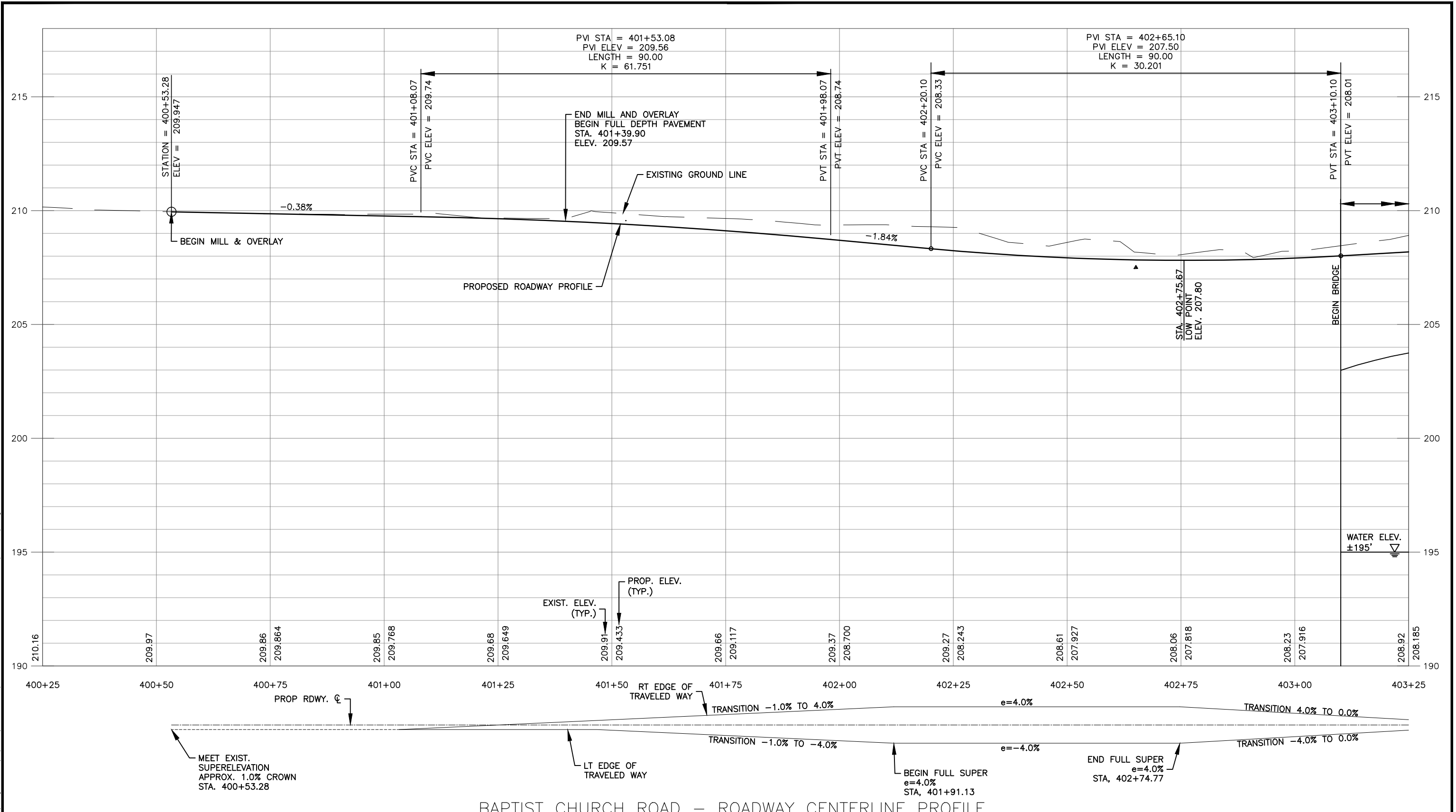
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

PROPOSED ROADWAY ALIGNMENT
AND SITE PLAN

DATE: 04/23/2021
SCALE: 1" = 20'-0"
SHEET NO:
10 OF 46
DRAWING NO.
C-4

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By: & Date: Ncrevier, Friday, April 23, 2021, and Date Plotted: Tuesday, June 01, 2021, Time: 11:54 AM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.366863 Plot Style Table: (N) _BDDC_BW.ctb
 Drawing Name: & Location: C:\users\csnyk\OneDrive\Documents\37923\BAPTIST CHURCH ROAD_PROFILE (1 OF 2).dwg



BAPTIST CHURCH ROAD – ROADWAY CENTERLINE PROFILE

SCALE:
 1" = 20' HORIZONTAL
 1" = 4' VERTICAL

GRAPHIC SCALES
 CHECK BEFORE USE
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 N. CREVIER, PE
 CHECKED BY:
 C. JENNE, PE
 DESIGN LEAD:
 O. HUNTER, PE
 SECTION MANAGER:

DRAWN BY:
 N. CREVIER, PE

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
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 SEAN McANDREW, PE

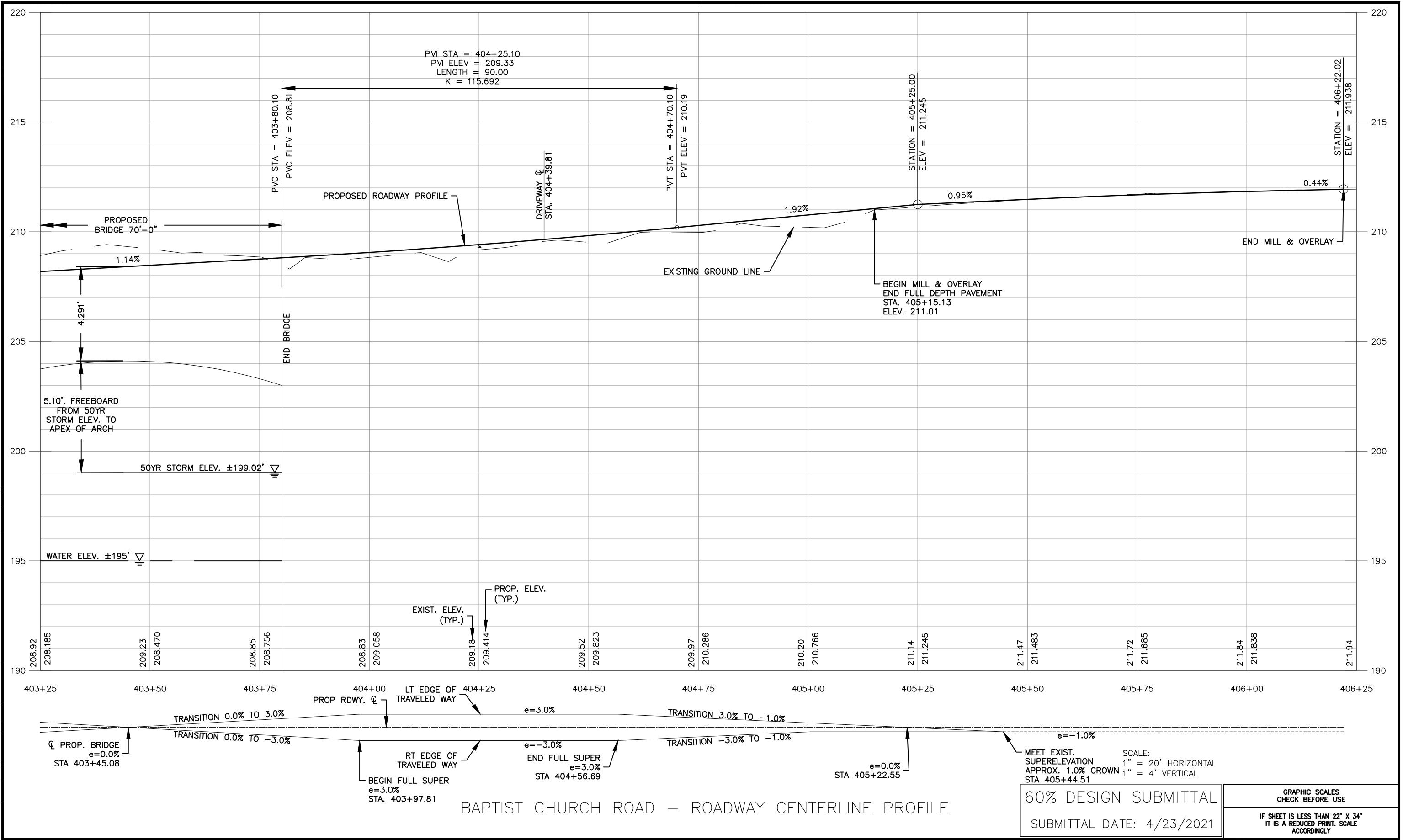
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 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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 CORONA, NEW YORK 11368
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CAPITAL PROJECT WM-30
 IN WESTCHESTER COUNTY, NEW YORK
 CONTRACT CRO-530B
 ROADWAY PROFILE - 1

DATE: 04/23/2021
 SCALE: AS NOTED
 SHEET NO:
 11 OF 46
 DRAWING NO.
 C-5

Last Saved By: & Date: Ncrevier, Friday, April 23, 2021, and Date Plotted: Tuesday, June 01, 2021, Time: 11:56 AM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.386863 Plot Style: (N)_BDDC_BW.ctb
 Drawing Name: & Location: C:\Users\kshykhkrova\Myprod\kms37923\BAPTIST CHURCH ROAD_PROFILE (2 OF 2).dwg



BAPTIST CHURCH ROAD - ROADWAY CENTERLINE PROFILE

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: N.CREVIER, PE CHECKED BY: C. JENNE, PE DESIGN LEAD: O. HUNTER, PE SECTION MANAGER:	DRAWN BY: N.CREVIER, PE HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway New York, NY 10036
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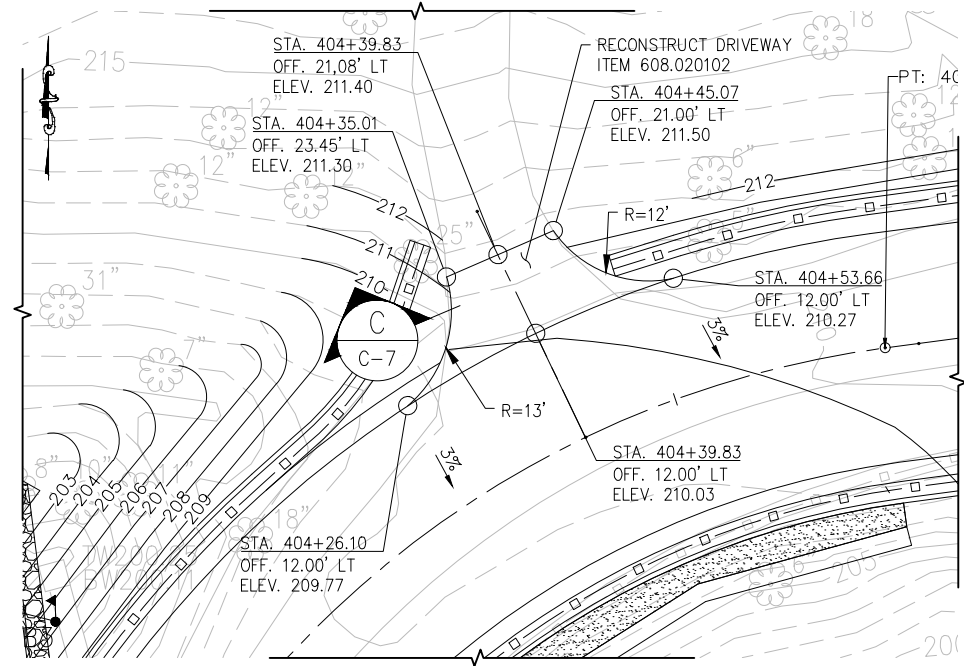
ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE PORTFOLIO MANAGER PAUL COSTA, PE EXECUTIVE DIRECTOR SEAN McANDREW, PE
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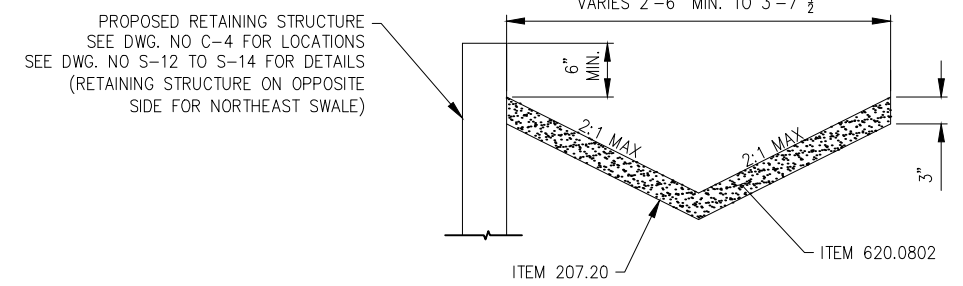
NEW YORK CITY ENVIRONMENTAL PROTECTION
 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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 CORONA, NEW YORK 11368
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CAPITAL PROJECT WM-30
 IN WESTCHESTER COUNTY, NEW YORK
 CONTRACT CRO-530B
 ROADWAY PROFILE-2

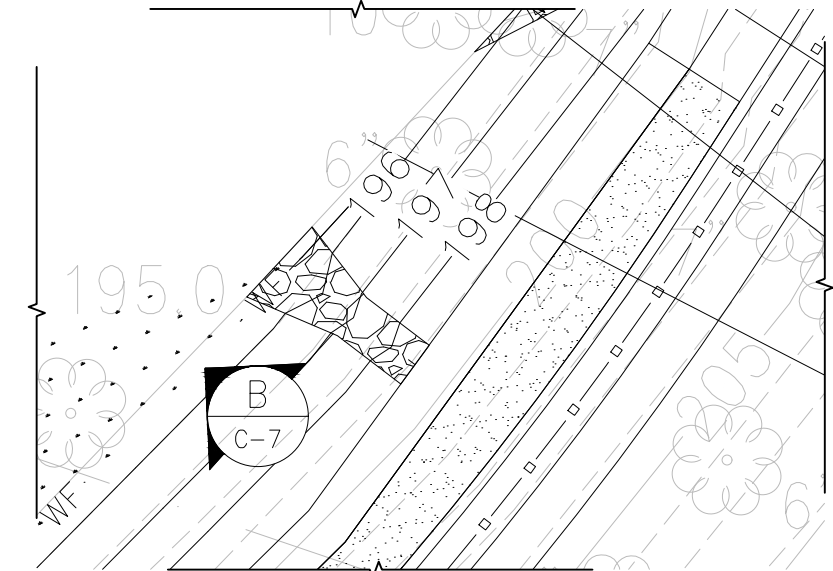
DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO: 12 OF 46
DRAWING NO. C-6



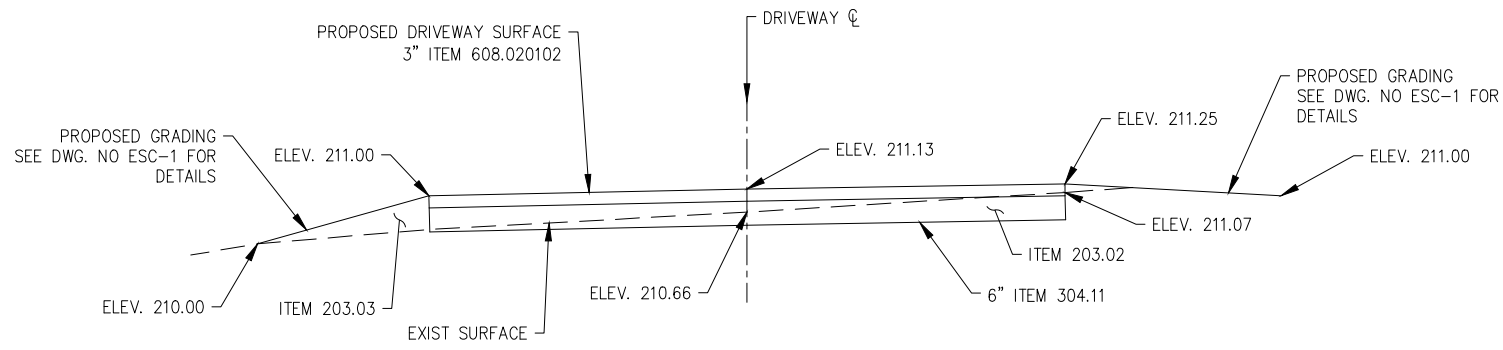
DRIVEWAY PLAN
SCALE: 1"=10'-0"



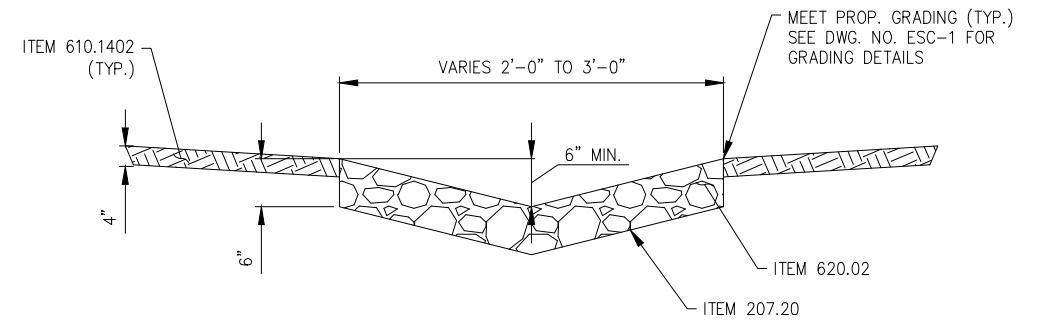
A DRY SWALE DETAIL
C-4 N.T.S.



STONE OUTFALL - PLAN VIEW
SCALE: 1"=4'



C DRIVEWAY SECTION
C-7 N.T.S.



B STONE OUTFALL DETAIL (TYP. BEHIND ALL WINGWALLS AND AT OUTFALLS)
C-7 N.T.S.

ITEM	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION	CY
203.03	EMBANKMENT IN PLACE	CY
207.20	GEOTEXTILE BEDDING	SY
304.11	SUBBASE COURSE, TYPE 1	CY
608.020102	HOT MIX ASPHALT (HMA) SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS, AND VEGETATION CONTROL STRIPS	TON
610.1402	TOPSOIL - ROADSIDE	CY
620.02	STONE FILLING (FINE)	CY
620.0802	BEDDING MATERIAL - TYPE 2	CY

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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 Drawing Name: C:\Users\cshiyakova\hpro\dm\37923\BAPTIST CHURCH ROAD -RDWY DETAIL SHEET.dwg

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
N.CREVIER, PE
CHECKED BY:
E. RECIO, PE
DESIGN LEAD:
O. HUNTER, PE
SECTION MANAGER:

DRAWN BY:
N.CREVIER, PE

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

ROADWAY DETAILS SHEET

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
13 OF 46
DRAWING NO.
C-7

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES

1. ALL MAINTENANCE AND PROTECTION OF TRAFFIC WORK SHALL CONFORM TO THE NEW YORK STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, EXCEPT AS MODIFIED BY THE PLANS AND SPECIFICATIONS.
2. THE BOTTOM OF TEMPORARY CONSTRUCTION SIGNS SHALL BE A MINIMUM OF 7'-0" ABOVE THE PAVEMENT ON LOCAL ROADS AND 5'-0" ABOVE THE PAVEMENT ON HIGHWAYS AND A MINIMUM OF 2'-0" CLEAR OF THE TRAVEL LANE, AS SHOWN, OR AS ORDERED BY THE RESIDENT ENGINEER.
3. THE CONTRACTOR SHALL NOTIFY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGIONAL OFFICE, THE LOCAL POLICE DEPARTMENTS, NYCDEP, TOWN OF YORKTOWN AND THE FIRE DEPARTMENT AT LEAST TWO WEEKS IN ADVANCE OF BEGINNING OF WORK ON A TRAVEL LANE OR SHOULDER. NOTIFICATION SHALL BE IN WRITING AFTER RECEIPT OF CONCURRENCE OF THE RESIDENT ENGINEER.
4. THE CONTRACTOR SHALL PROVIDE THE ENGINEER IN WRITING WITH NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS. THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO NYCDEP, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, THE LOCAL FIRE DEPARTMENT AND THE LOCAL POLICE.
5. ALL CONSTRUCTION SIGNS SHALL BE COVERED OR REMOVED WHEN THE WORK THEY PERTAIN TO IS NOT IN PROGRESS.
6. ALL CONSTRUCTION SIGNS SHALL HAVE AN ORANGE BACKGROUND AND BLACK LETTERS AND BORDERS. ALL SIGNS ARE TO BE REFLECTORIZED IN ACCORDANCE TO WITH SUBSECTION 619-2.02 OF THE NYS DOT STANDARD SPECIFICATIONS.
7. NO SIGNS SHALL BE PLACED AT ANY LOCATION WHERE IT IS OBSCURED BY TEMPORARY OR PERMANENT OBJECTS.
8. NO NEW DETOUR IS TO BE PLACED IN OPERATION ON MONDAY, FRIDAY, OR ON THE DAY PRECEDING A HOLIDAY UNLESS OTHERWISE APPROVED IN WRITING BY THE RESIDENT ENGINEER AND WITH THE CONCURRENCE OF THE NYCDEP.
9. UNDER THE BASIC MAINTENANCE AND PROTECTION OF TRAFFIC ITEM, THE CONTRACTOR WILL BE REQUIRED TO PERFORM MAINTENANCE CLEANING OF THE PAVEMENT WITHIN THE CONTRACT LIMITS WHEN ORDERED BY THE RESIDENT ENGINEER. MAINTENANCE CLEANING SHALL MEAN THE REMOVAL OF DEBRIS FROM ANY SOURCE, WHICH IN THE OPINION OF THE RESIDENT ENGINEER IMPEDES FLOW OF TRAFFIC OR STORM WATER. THIS REQUIREMENT SHALL NOT BE CONSTRUED TO CHANGE THE PROVISIONS OF ARTICLE 619-1.02K SNOW AND ICE CONTROL OF NYS DOT STANDARD SPECIFICATIONS.
10. TO ENSURE A SAFE TRAFFIC FLOW AT ALL TIMES. STORAGE OF MATERIALS AND EQUIPMENT (INCLUDING EMPLOYEE CARS) SHALL NOT BE PERMITTED WITHIN THE TRAVELED WAY OF ANY ROADWAY. STORAGE AREAS SHALL BE SEPARATED FROM THE TRAVELED WAY BY A CLEAR SPACE OF 30 FEET MINIMUM WIDTH. BY CONCRETE BARRIER OR PERMANENTLY INSTALLED BRIDGE RAILING.
11. THE MAINTENANCE AND PROTECTION OF TRAFFIC SCHEMES SHOWN IN THE PLANS OR PROPOSAL ARE TO PROTECT THE TRAVELING PUBLIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT THE WORKERS. THE COST OF ADDITIONAL LABOR, MATERIAL AND EQUIPMENT TO PROTECT THE WORKERS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 619.01 BASIC WORK ZONE TRAFFIC CONTROL.
12. ALL TEMPORARY SIGNS FOR WORK ZONE TRAFFIC CONTROL SHALL BE PAID FOR UNDER ITEM 619.01 BASIC WORK ZONE TRAFFIC CONTROL.
13. IN REFERENCE TO THE NYS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES THE FOLLOWING STIPULATIONS SHALL APPLY UNLESS OTHERWISE SPECIFIED BY THE RESIDENT ENGINEER:
 1. WHERE SIGNS ARE SHOWN IN BOTH DIAMOND AND RECTANGULAR SHAPES. ONLY DIAMOND SHAPES WILL BE PERMITTED.
 2. WHERE SIGNS ARE SHOWN IN ALTERNATE SIZES. THE LARGEST SIZE MUST BE USED UNLESS OTHERWISE SPECIFIED BY THE RESIDENT ENGINEER, OR SHOWN IN THE PLANS.
14. THE TRAVEL LANE SHALL BE SWEEPED CLEAN BY THE CONTRACTOR BEFORE THE LANE IS RE-OPENED TO TRAFFIC.
15. SIGNS ARE TO BE DISPLAYED ONLY DURING THE TIME THAT THE TEXT APPLIES. ALL APPROPRIATE SIGNS MUST BE COMPLETELY IN PLACE AND ON DISPLAY JUST PRIOR TO COMMENCEMENT OF A PARTICULAR STAGE OF WORK.
16. ALL MATERIAL AND EQUIPMENT NOT IN USE INCLUDING EMPLOYEES CARS SHALL NOT BE STORED OR PARKED IN THE PROJECT AREA EXCEPT WITHIN DESIGNATED STAGING AREA OR SHALL BE POSITIONED APPROPRIATELY IN ADVANCE OF THE WORK.
17. THE CONTRACTOR SHALL PROVIDE FLAGGERS WITH APPROPRIATE SIGNING WHEREVER OPERATIONS INTERFERE WITH TRAFFIC. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO. DELIVERY/REMOVAL OF MATERIALS LIFTING OPERATIONS AND OTHER ACTIVITIES AS ORDERED BY THE RESIDENT ENGINEER. COST TO BE INCLUDED UNDER ITEM 619.01.
18. THE SOLE DUTY OF THE FLAGGER SHALL BE TO DIRECT TRAFFIC PROPERLY AT ALL TIMES. THEY SHALL NOT BE USED TO MOVE TEMPORARY SIGNS OR ASSIST IN OTHER WORK AND SHALL BE POSITIONED APPROPRIATELY IN ADVANCE OF THE WORK.
19. THE CONTRACTOR SHALL RESTORE ALL PAVEMENT, CONCRETE AND GRADED AREA DUE TO THE INSTALLATION AND REMOVAL OF TRAFFIC CONTROL DEVICES SUCH AS CONCRETE BARRIERS, ETC.. THE AFFECTED AREA SHALL BE RESTORED TO THEIR ORIGINAL OR UNDISTURBED STATE WITH MATERIALS MEETING THE SPECIFICATIONS AND APPROVAL OF THE RESIDENT ENGINEER. NO SEPARATE PAYMENT FOR THIS WORK SHALL BE ALLOWED.



CONSTRUCTION SEQUENCE – BAPTIST CHURCH ROAD BRIDGE

1. ALL TRAFFIC EXCEPT LOCAL TRAFFIC WILL BE DETOURED FROM BAPTIST CHURCH RD ONTO HUNTER BROOK RD AND CROTON AVE. SEE PLAN AND DETOUR SIGNS ON DWGS NOS. MT-2 & MT-3.
2. THE CONTRACTOR SHALL INSTALL ALL DETOUR SIGNS AND ROAD CLOSURE BARRICADES AS SHOWN ON THE TRAFFIC CONTROL PLAN AND A.O.B.E.. DETOUR SIGNS SHALL BE IN PLACE PRIOR TO CLOSING THE ROAD AND COVERED UNTIL JUST PRIOR TO ROAD CLOSURE.
3. AFTER THE IMPLEMENTATION OF THE APPROVED WORK ZONE TRAFFIC CONTROL PLAN. IT MAY BE NECESSARY FOR THE RESIDENT ENGINEER TO ALTER THIS PLAN AS TRAFFIC CONDITIONS WARRANT. ALTERATIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE ADDITION, REPLACEMENT, OR MODIFICATION OF SIGNS AND DELINEATION DEVICES. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR CONSTRUCTION SIGNS AND BASIC MAINTENANCE AND PROTECTION OF TRAFFIC.
4. TYPE III CONSTRUCTION BARRICADES AT THE PROJECT LOCATION SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE ROADWAY. EXTENDING MINIMUM OF TWO FEET BEYOND THE EDGE OF THE SHOULDER.
5. PRIOR TO OPENING THE ROADWAY TO TRAFFIC ALL GUIDE RAILS SHALL BE IN PLACE AS SHOWN ON THE CONSTRUCTION PLAN.
6. IMMEDIATELY AFTER ROAD IS OPENED REMOVE ALL DETOUR SIGNS.
7. DURING THE RECONSTRUCTION, THE BRIDGE WILL BE CLOSED TO PEDESTRIANS FOR A PERIOD OF SIX (6) TO EIGHT (8) MONTHS.
8. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING PRIVATE DRIVEWAY ON THE NORTHWEST SIDE OF THE PROJECT AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE CONSTRUCTION MEANS AND METHODS TO FACILITATE ACCESS. A CRANE PLACEMENT PLAN SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.

20. THE CONTRACTOR WILL BE REQUIRED TO REPAIR OR REPLACE ANY MAINTENANCE OF TRAFFIC COMPONENT, CALLED FOR IN THE PLANS, WHICH IS DAMAGED DURING THE LIFE OF THE CONTRACT AT NO ADDITIONAL COST TO THE CITY.
21. ALL WORK ON THE MAINTENANCE OF TRAFFIC DRAWING WHICH HAS NOT BEEN GIVEN A SPECIFIC ITEM NUMBER SHALL BE PAID UNDER ITEM 619.01 BASIC WORK ZONE TRAFFIC CONTROL.
22. ADDITIONAL ACCESS FOR THE CONTRACTOR THROUGH THE LINE OF TEMPORARY CONCRETE BARRIER SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.
23. DETOUR ROUTE IMPLEMENTATION
THE CONTRACTOR SHALL PLAN HIS OPERATIONS TO MINIMIZE THE DURATION THAT THE BRIDGE IN THIS CONTRACT IS CLOSED TO TRAFFIC.
THE CONTRACTOR SHALL SUBMIT A BAR CHART OF THE INTENDED CONSTRUCTION SEQUENCE TO THE RESIDENT ENGINEER FOR APPROVAL.
24. THE TRAFFIC MAINTENANCE SCHEMES SHOWN IN FIGURE 302-4 OF SUBCHAPTER H OF THE NEW YORK STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES DESCRIBE THE RECOMMENDED METHOD AND CONTROL DEVICES NECESSARY. THE RESIDENT ENGINEER MAY ORDER ADDITIONAL DEVICES AND/OR METHODS TO MEET FIELD CONDITIONS
25. WORK ZONES SHOULD BE LIMITED TO ONE SIDE OF THE TRAVELED WAY AT A TIME, UNLESS APPROVED BY THE RESIDENT ENGINEER. WORK ZONES ON OPPOSITE SIDES OF THE ROAD SHALL NOT OVERLAP. WORK ZONE IS DEFINED AS THAT AREA IN WHICH TRAFFIC IS RESTRICTED BECAUSE OF CONSTRUCTION ACTIVITIES, OR THAT AREA WHICH INVOLVES A DROPOFF NEXT TO THE PAVEMENT.
26. CONSTRUCTION EQUIPMENT SHOULD BE REMOVED FROM THE 30 FEET CLEAR ROADSIDE AREA DURING NON-WORKING HOURS.
27. NO MATERIAL IS TO BE PLACED ON THE SHOULDER. OR WITHIN 30 FEET FROM THE EDGE OF PAVEMENT. EXCEPT THAT WHICH IS TO BE PLACED THAT DAY.
28. SAFE AND ADEQUATE ACCESS TO EXISTING DRIVEWAYS SHALL BE PLACED THAT DAY.
29. FLASHING WARNING LIGHTS SHALL BE MOUNTED ON CONSTRUCTION SIGNS AS SHOWN. LIGHTS SHALL BE LOCATED ADJACENT TO THE SIGN PANEL AND AFFIXED TO THE SIGN SUCH THAT THE LIGHT WILL NOT SEPARATE FROM THE SIGN ON IMPACT. SEPARATELY MOUNTED POWER PACK SHALL BE TETHERED TO THE SIGN TO PREVENT SEPARATION FROM THE SIGN UPON IMPACT.
30. ALL FLASHING WARNING LIGHTS SHALL BE TYPE B, HIGH INTENSITY, CONFORMING TO SECTION 294.3 OF THE NYS M.U.T.C.D. AND SECTION CONFORMING TO SECTION 619 OF THE NYS DOT STANDARD SPECIFICATIONS. THE COST OF FURNISHING FLASHING WARNING LIGHTS ON INDIVIDUAL SIGNS IS TO BE INCLUDED UNDER ITEM 619.01. CONSTRUCTION SIGNS.
31. THE SIGN LOCATIONS SHOWN ARE APPROXIMATE. THEIR FINAL FIELD LOCATION SHALL BE IN ACCORDANCE WITH NYS M.U.T.C.D.. A.O.B.E.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL SIGNS, DRUMS, CONES, BARRICADES, AND RELATED DEVICES REMAIN IN PLACE AND IN GOOD CONDITION. THE SOLE JUDGE OF THE CONTRACTOR'S EFFORTS IN REGARDS TO THE PROTECTION OF TRAFFIC AND PERSONNEL SHALL BE THE ENGINEER.
33. THE SIGNING SHOWN ON THE FOLLOWING DRAWINGS IS THE MINIMUM REQUIRED AND SHALL BE PAID UNDER ITEM 619.02 THE SOLE JUDGE OF THE CONTRACTOR'S ADDITIONAL SIGNS MAY BE REQUIRED A.O.B.E. NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL SIGNS SO ORDERED.
34. A CERTIFIED TRAFFIC WORK ZONE SUPERVISOR AND CERTIFIED FLAGGERS SHALL BE PROVIDED BY THE CONTRACTOR. THE TRAFFIC WORK ZONE SUPERVISOR AND FLAGGERS MUST BE CERTIFIED AND MUST BE TRAINED AND QUALIFIED AS PER THE SECTION 20. WORK ZONE TRAFFIC CONTROL, OF THE NYCDEP BEDC STANDARDS.

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

IF SHEET IS LESS THAN 22" X 34"
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ACCORDINGLY

DESIGNED BY: M. BAHADA CHECKED BY: J. MILLER DESIGN LEAD: M. BAHADA SECTION MANAGER:				DRAWN BY: M. BAHADA  505 EIGHTH AVENUE NEW YORK, N.Y. 10018 TEL. (212) 967-6588		 ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE PORTFOLIO MANAGER PAUL COSTA, PE EXECUTIVE DIRECTOR SEAN McANDREW, PE		*WARNING--IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*		NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep		CAPITAL PROJECT WM-30 IN WESTCHESTER COUNTY, NEW YORK CONTRACT CRO-530B WORK ZONE TRAFFIC CONTROL PLAN GENERAL NOTES		DATE: 04/23/2021 SCALE: N.T.S. SHEET NO: 14 OF 46 DRAWING NO. MT-1	
NO.	DATE	REVISIONS/DESCRIPTION		APPR'D.											

TEMPORARY SIGN DATA

ITEM NO.	TEXT NO.	TEXT	LETTER		SIZE (W X H)	M.U.T.C.D.	COLOR		TYPE OF MOUNTING
			SIZE	TYPE			BACKG-ROUND	CHARAC-TERS	
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619.01	②		8' 8'	D	36 X 36	R11 - 2B	WHITE	BLACK	GR. MTD.
619.01	③		5' 5'	D	36 X 36	W20 - 3	ORANGE	BLACK	GR. MTD.
619.01	④		5' 5'	D	36 X 36	W20 - 3	ORANGE	BLACK	GR. MTD.
619.01	⑤		5' 5'	D	36 X 36	W20 - 3	ORANGE	BLACK	GR. MTD.
619.01	⑥		4' 5'	D	68 X 8 30 X 24	CUST. M4 - 9L	ORANGE	BLACK	GR. MTD.
619.01	⑦		4' 5'	D	68 X 8 30 X 24	CUST. M4 - 9A	ORANGE	BLACK	GR. MTD.
619.01	⑧		4' 5'	D	68 X 8 30 X 24	CUST. M4 - 9R	ORANGE	BLACK	GR. MTD.
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619.01	⑩		6'	D	48 X 18	M4 - 10R	ORANGE	BLACK	GR. MTD.
619.01	⑪		6'	D	48 X 18	M4 - 10L	ORANGE	BLACK	GR. MTD.
619.01	⑫			SYMBOL	30' X 30'	R3 - 2	WHITE	BLACK & RED	GR. MTD.
619.01	⑬			SYMBOL	30' X 30'	R3-1	WHITE	BLACK & RED	GR. MTD.

NOTES:

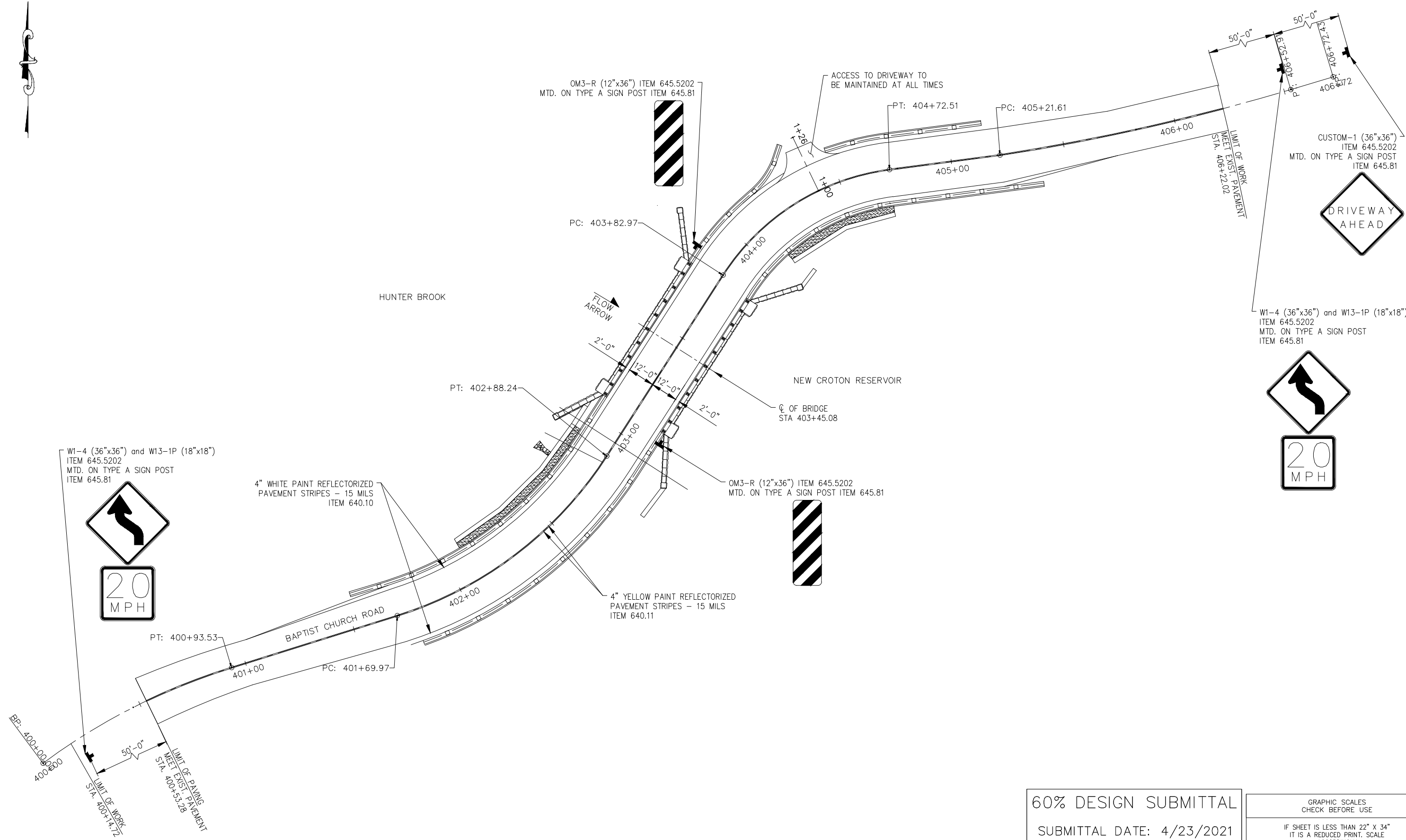
1. SEE DRAWING MT-1 FOR WORK ZONE TRAFFIC CONTROL NOTES.

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

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DESIGNED BY: M. BAHADA	DRAWN BY: M. BAHADA	 505 EIGHTH AVENUE NEW YORK, N.Y. 10018 TEL. (212) 967-6588	ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE	*WARNING-IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*	NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep	CAPITAL PROJECT WM-30 IN WESTCHESTER COUNTY, NEW YORK CONTRACT CRO-530B WORK ZONE TRAFFIC CONTROL PLAN SIGN DATA TABLE	DATE: 04/23/2021
CHECKED BY: J. MILLER			PORTFOLIO MANAGER PAUL COSTA, PE				SCALE: N.T.S.
DESIGN LEAD: M. BAHADA			EXECUTIVE DIRECTOR SEAN McANDREW, PE				SHEET NO: 16 OF 46
SECTION MANAGER:							DRAWING NO. MT-3

Last Saved By & Date: Ncrevier, Friday, April 23, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 12:00 PM
 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Scale: 0.386863 Plot Style Table: (N)_BEDC_BW.ctb
 Drawing Name: & Location: C:\users\cshlyakhova\hpro\dm\37923\BAPTIST CHURCH SIGNING AND STRIPING.dwg



60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
 N. CREVIER, PE
 CHECKED BY:
 R. ROMAN, PE
 DESIGN LEAD:
 O. HUNTER, PE
 SECTION MANAGER:

DRAWN BY:

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036

NYC
 Environmental
 Protection

ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
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 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

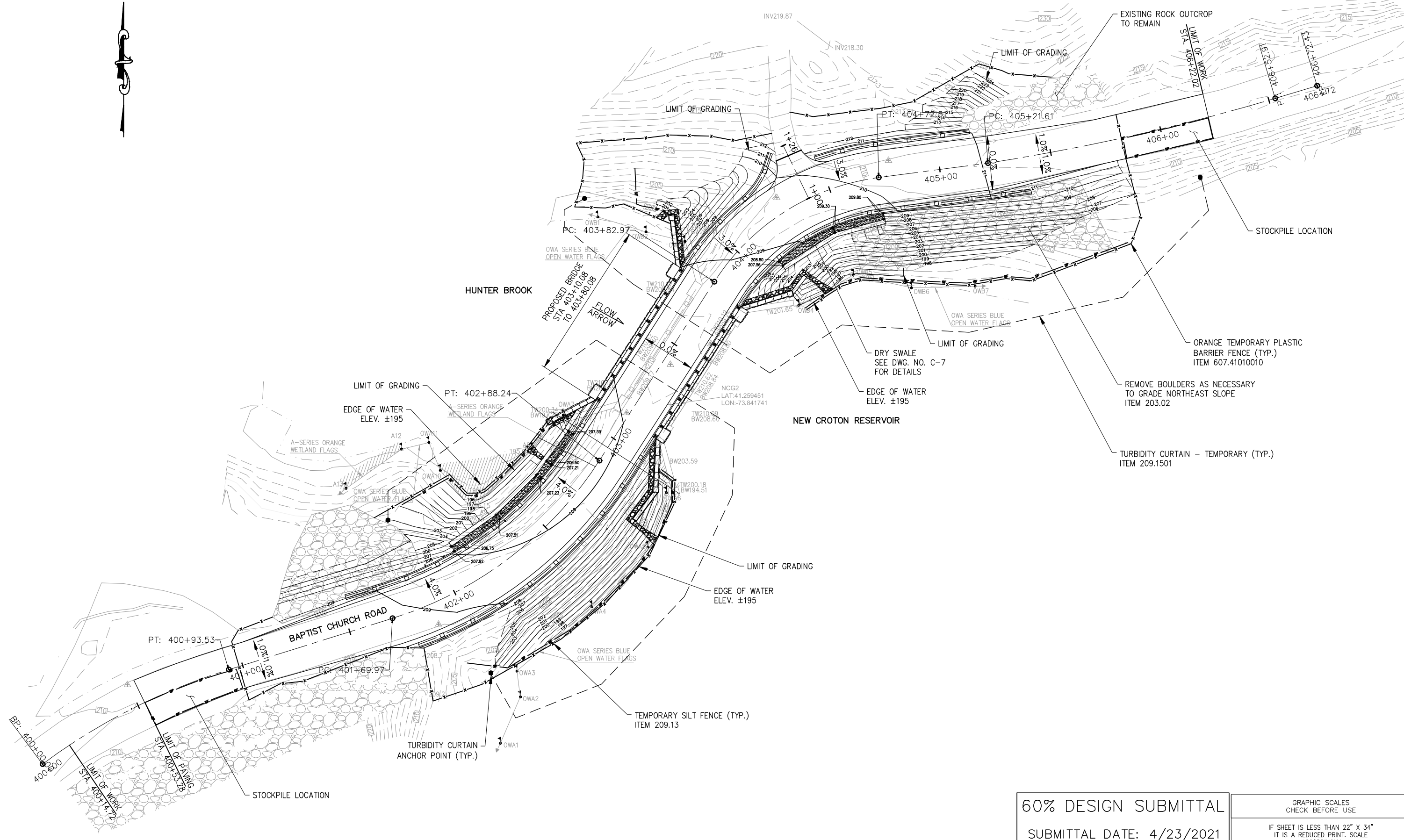
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 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 PROPOSED SIGNING AND
 STRIPING PLAN

DATE: 04/23/2021
 SCALE: 1" = 20'-0"
 SHEET NO:
 17 OF 46
 DRAWING NO.
 SGN-1

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.



Last Saved By & Date: Norevier, Tuesday, July 06, 2021 and Date Plotted: Tuesday, July 06, 2021 Time: 10:11 AM
 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Scale: 0.388663 Plot Style Table: (N)_BEDC_BW.ctb
 Drawing Name: C:\users\norevier\hprod\dms37923\BAPTIST CHURCH ROAD - ESC.dwg

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
N. CREVER, PE
 CHECKED BY:
C. JENNE, PE
 DESIGN LEAD:
R.ROMAN, PE
 SECTION MANAGER:

DRAWN BY:

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
 PAUL COSTA, PE
 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

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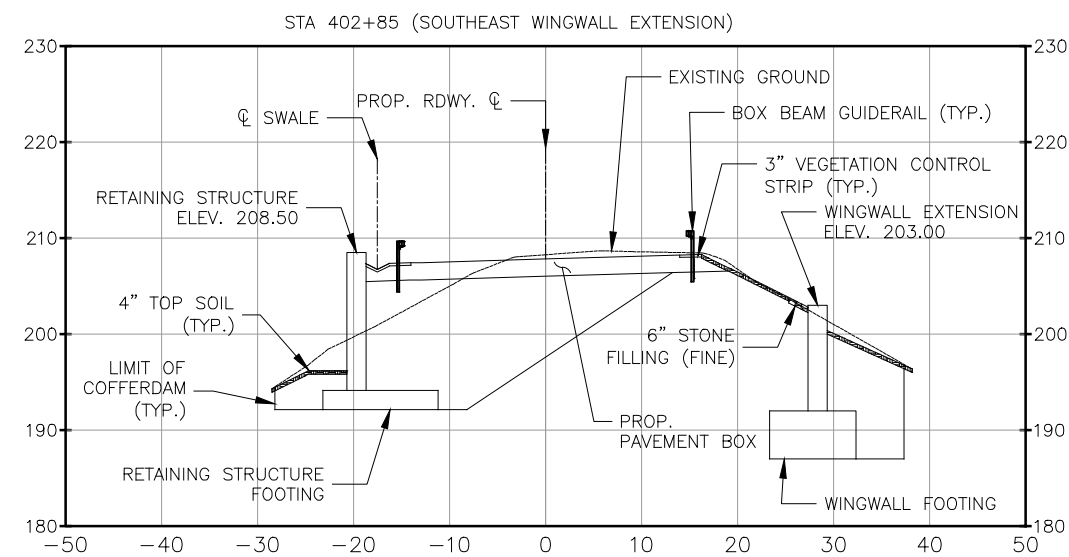
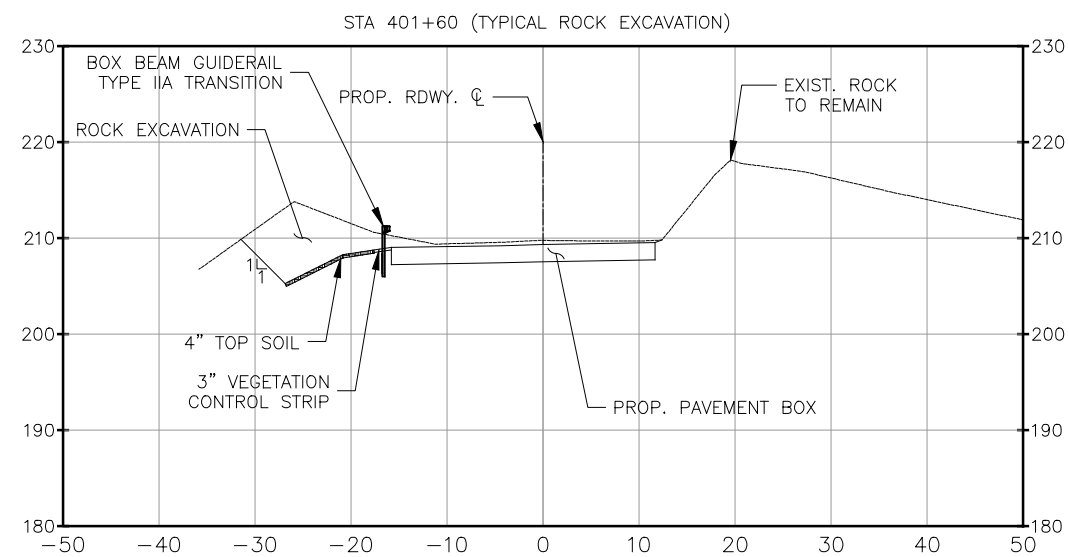
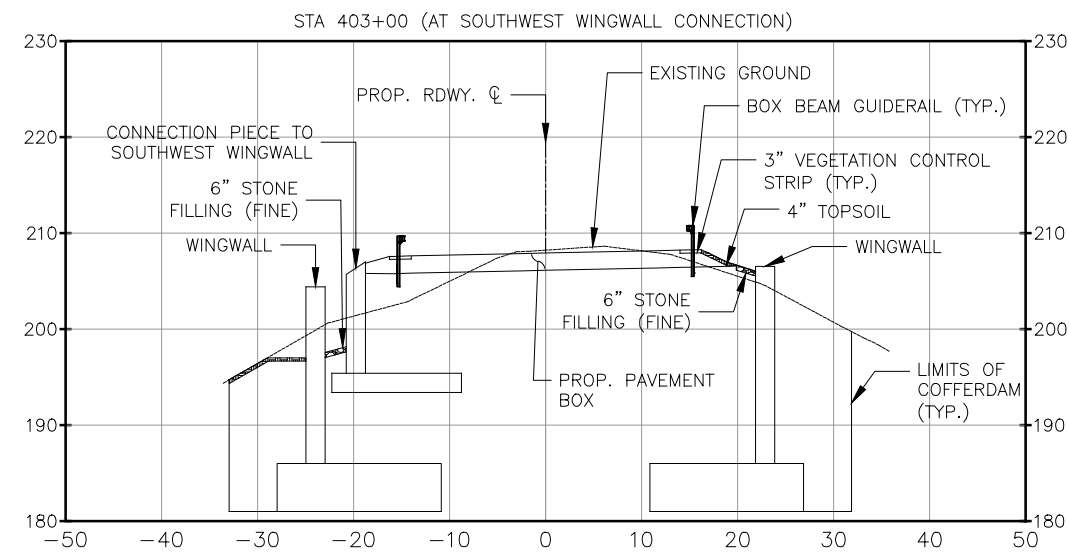
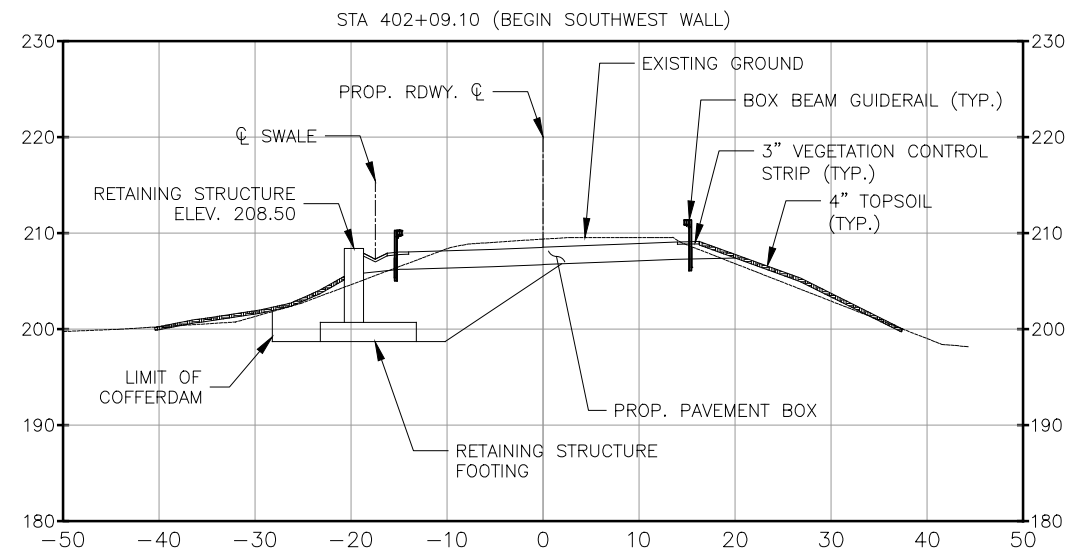
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 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 BAPTIST CHURCH ROAD
 GRADING AND EROSION CONTROL PLAN

DATE: 04/23/2021
 SCALE: 1" = 20'-0"
 SHEET NO:
 18 OF 46
 DRAWING NO.
 ESC-1

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

- NOTES:
 1. FOR PAVEMENT COMPOSITION AND EXCAVATION DETAILS SEE DWG. NO. C-2
 2. FOR RETAINING STRUCTURE DETAILS SEE DWG. NO. S-12 AND S-13
 3. FOR WINGWALL AND EXTENSION DETAILS SEE DWG. NO. S-6 AND S-8
 4. FOR GRADING SEE DWG. NO. ESC-1



Last Saved By & Date: Ncrevier, Wednesday, May 05, 2021 and Date Plotted: Tuesday, July 06, 2021 Time: 9:10 AM
 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Scale: 0.388663 Plot Style Table: (N)_BEDC_BW.ctb
 Drawing Name: C:\users\Ncrevier\hpprod\dms37923\BAPTIST CHURCH ROAD - XS1.dwg

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
 CHECK BEFORE USE
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
N. CREVIER, PE
 CHECKED BY:
C. JENNE, PE
 DESIGN LEAD:
O. HUNTER, PE
 SECTION MANAGER:

DRAWN BY:

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036


 ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
 PAUL COSTA, PE
 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

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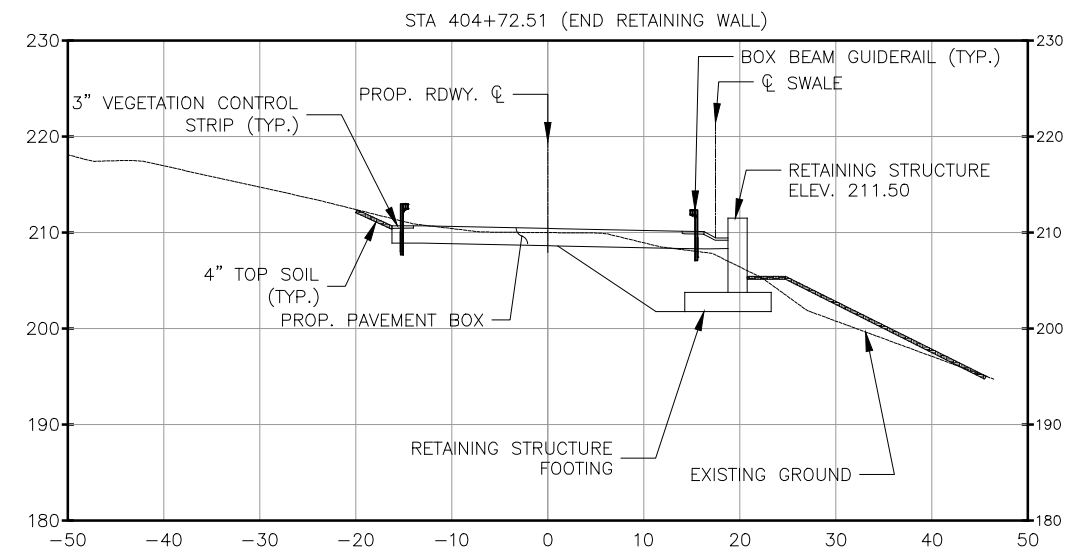
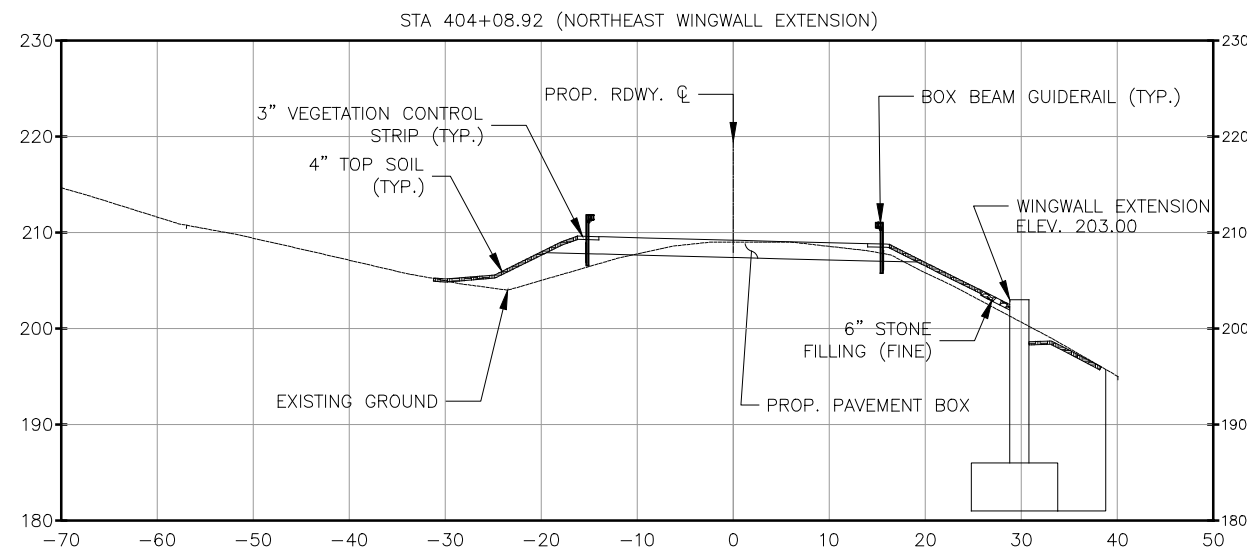
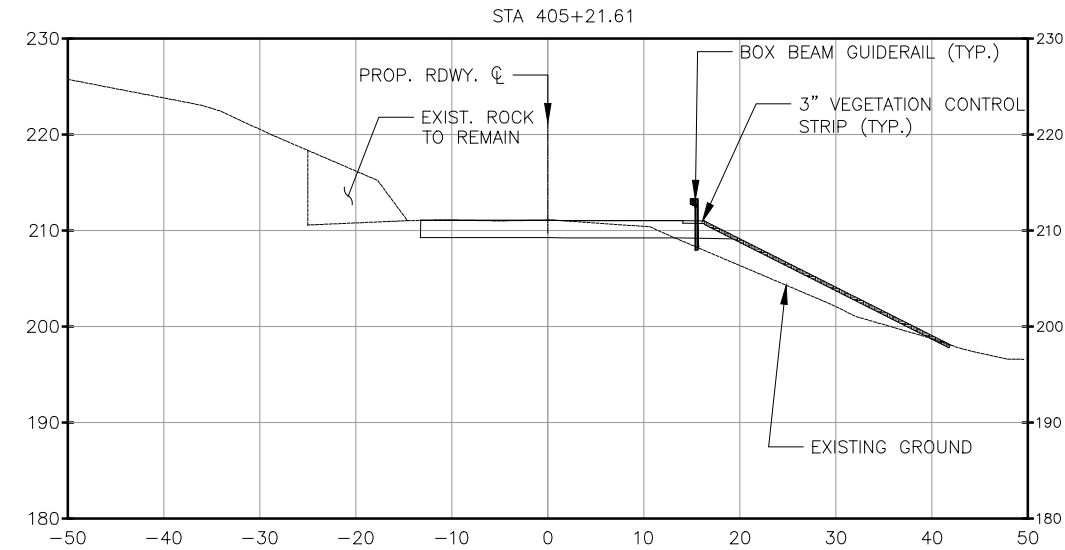
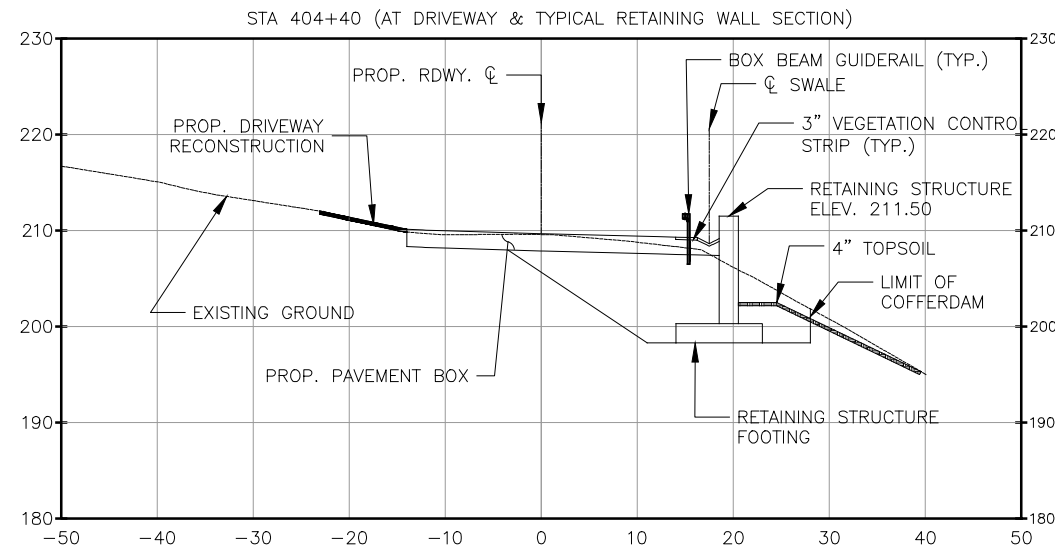
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 BAPTIST CHURCH ROAD
 CROSS SECTIONS - SOUTH APPROACH

DATE: 04/23/2021
 SCALE: 1" = 10'-0"
 SHEET NO:
 19 OF 46
 DRAWING NO.
 XS-1

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

- NOTES:
 1. FOR PAVEMENT COMPOSITION SEE DWG. NO. C-3
 2. FOR RETAINING STRUCTURE DETAILS SEE DWG. NO. S-14
 3. FOR WINGWALL AND CONNECTION DETAILS SEE DWG. NO. S-7 AND S-8
 4. FOR DRIVEWAY GRADING AND INFORMATION SEE DWG. NO. C-7
 5. FOR GRADING DETAILS SEE DWG. NO. ESC-1



Last Saved By & Date: Ncrevier, Monday, June 07, 2021 and Date Plotted: Tuesday, July 06, 2021 Time: 12:27 PM
 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Style Table: (N)_BDDC_BW.ctb
 Drawing Name: C:\Users\Ncrevier\hprod\dms37923\BAPTIST CHURCH ROAD - XS2_Rev 4.13.21.dwg

60% DESIGN SUBMITTAL

SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
N. GREVIER, PE

CHECKED BY:
C. JENNE, PE

DESIGN LEAD:
O. HUNTER, PE

SECTION MANAGER:

DRAWN BY:



HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE

PORTFOLIO MANAGER
PAUL COSTA, PE

EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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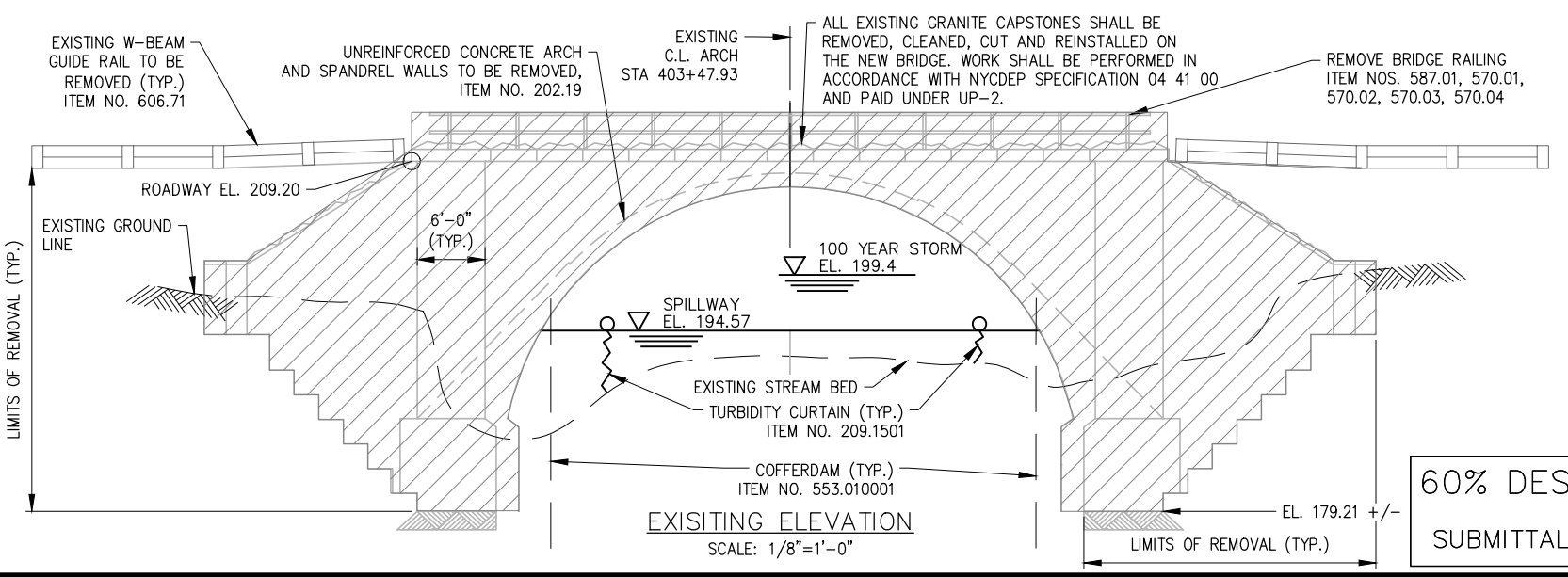
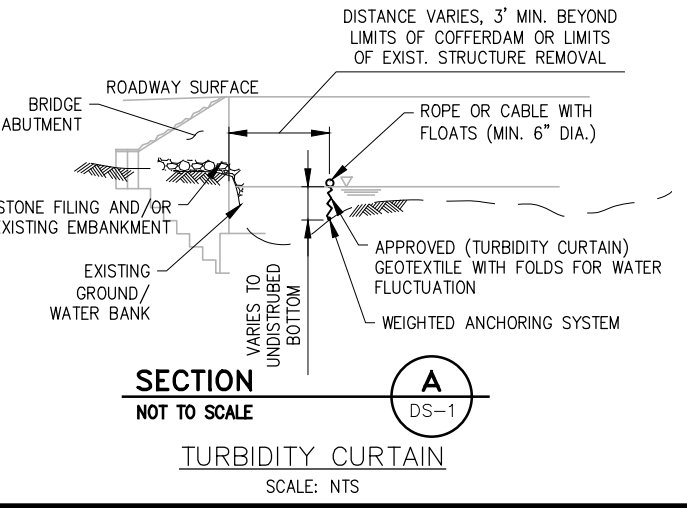
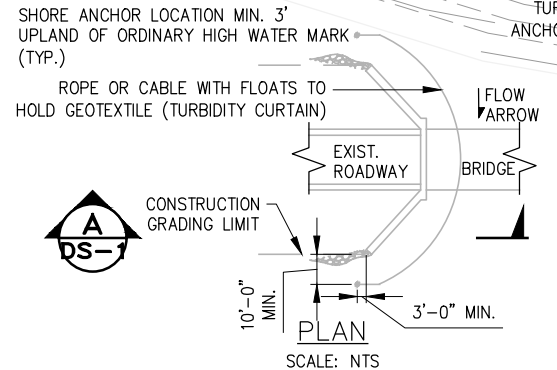
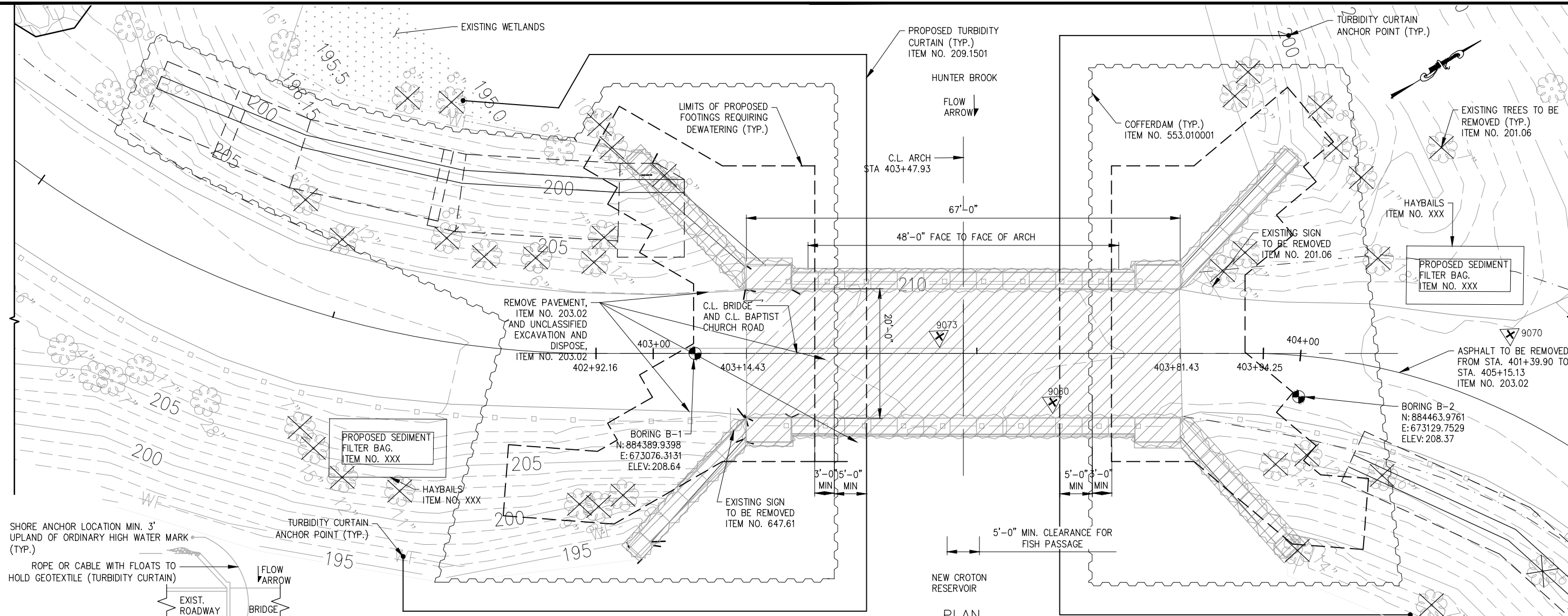
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

BAPTIST CHURCH ROAD
 CROSS SECTIONS - NORTH APPROACH

DATE: 04/23/2021
 SCALE: 1" = 10'-0"
 SHEET NO:
 20 OF 46
 DRAWING NO.
 XS-2

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By: D:\Data\Chalkhova, Wednesday, June 30, 2021 and Date Plotted: Monday, July 12, 2021 Time: 1:10 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.336663 Plot Style Table: (N) BENCH.BW.ctb
 Drawing Name: & Location: C:\Users\chalkhova\OneDrive\Projects\7850\PAR-TIST CHURCH DEMOLITION PLAN.dwg




- NOTES:**
1. THE CONTRACTOR SHALL PIECE MARK AND DISMANTLE THE EXISTING GRANITE CAPSTONES ON THE EXISTING STRUCTURES
 2. THE CONTRACTOR SHALL FIELD MEASURE EACH CAPSTONE PRIOR TO REMOVAL
 3. THE CAPSTONES SHALL BE REMOVED AND STORED AT A SECURE LOCATION WHICH HAS BEEN APPROVED BY THE RESIDENT ENGINEER. THE BRIDGE SUBSTRUCTURE SHALL BE COMPLETELY REMOVED. DEMOLITION OF THE SUBSTRUCTURE SHALL BE PAID FOR UNDER ITEM 202.19.
 4. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, MAINTAIN AND REMOVE COFFERDAMS WHICH COMPLETELY ENCLOSE BOTH ABUTMENTS AND WINGWALLS AND ALLOW EXCAVATION, DEMOLITION AND NEW CONSTRUCTION TO PROCEED WITHOUT CAUSING SEDIMENT TO ENTER THE WATERWAY.
 5. LIMITS OF COFFERDAM SHOWN ARE SCHEMATIC. CONTRACTOR SHALL DETERMINE THE LAYOUT AND LIMITS OF COFFERDAM AS REQUIRED TO COMPLETE THE WORK.
 6. TURBIDITY CURTAINS SHALL BE INSTALLED PRIOR TO COFFERDAM CONSTRUCTION

60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES CHECK BEFORE USE
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: J. CIRCOSTA
 CHECKED BY: O. HUNTER, PE
 DESIGN LEAD: O. HUNTER, PE
 SECTION MANAGER:
 DRAWN BY: J. CIRCOSTA

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway, New York, NY 10036



ACCOUNTABLE MANAGER
 JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
 PAUL COSTA, PE
 EXECUTIVE DIRECTOR
 SEAN McANDREW, PE

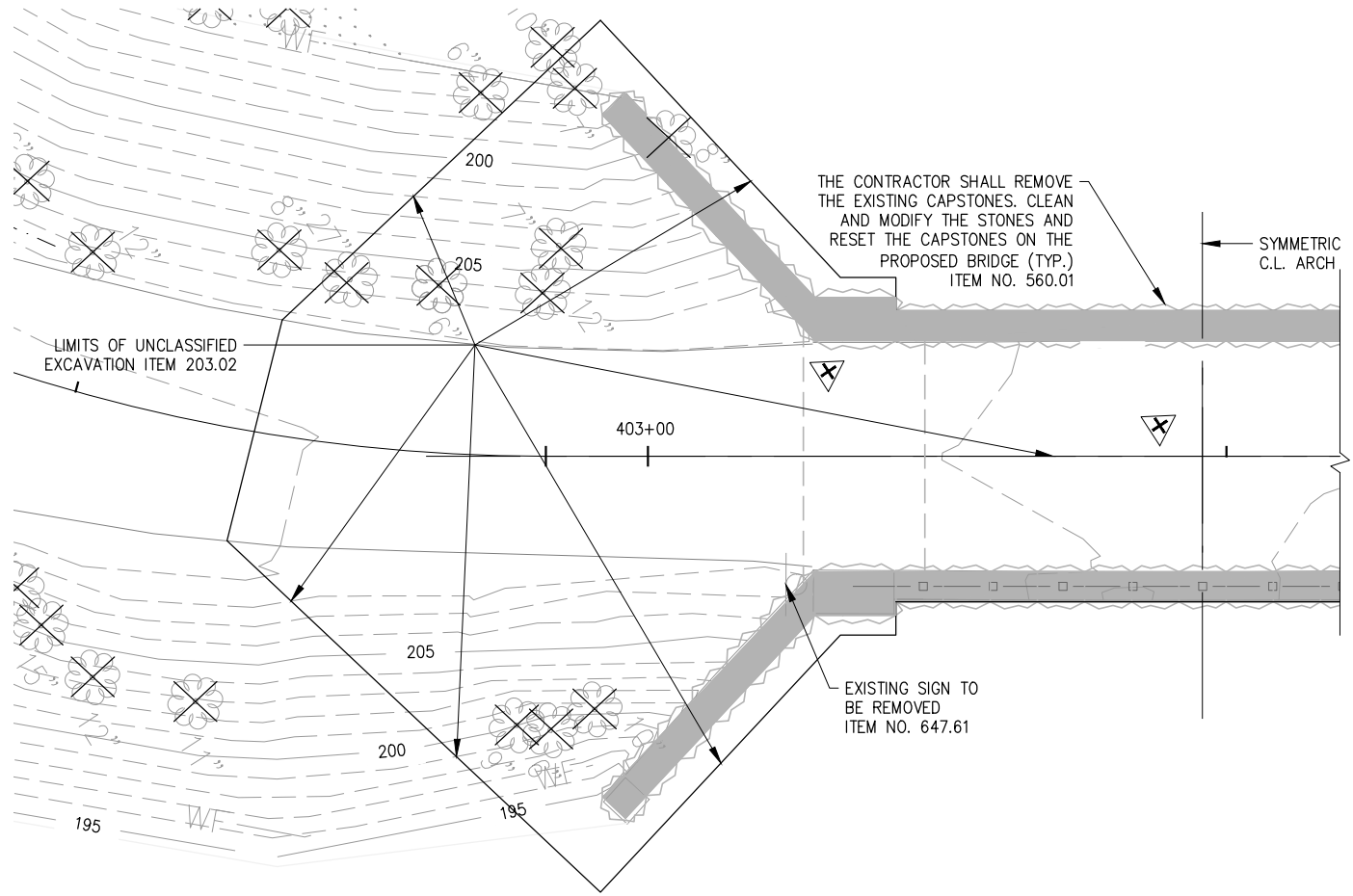
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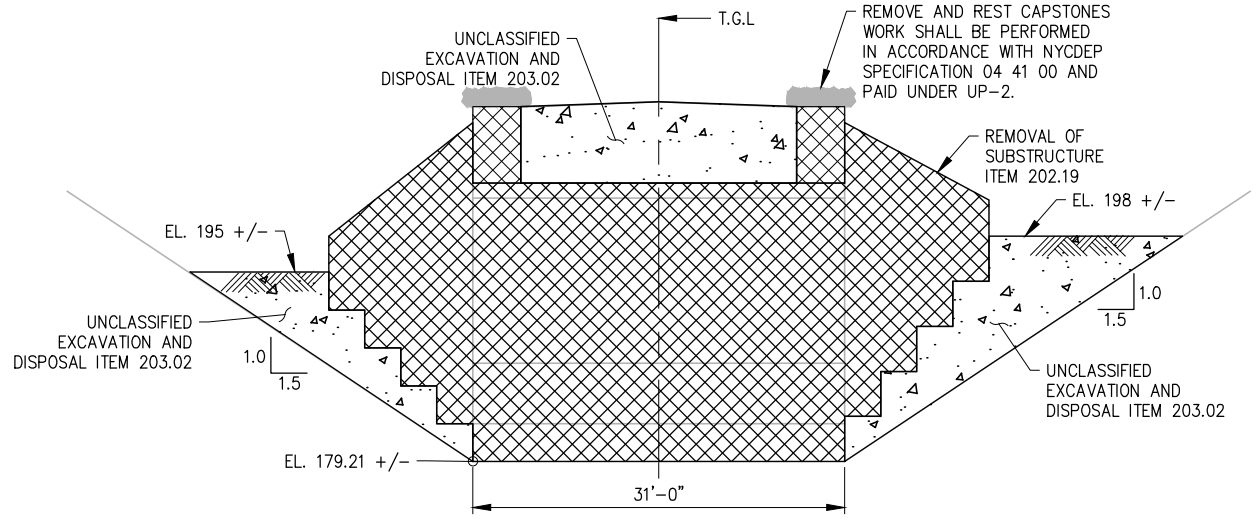
CAPITAL PROJECT WM-30 IN WESTCHESTER COUNTY, NEW YORK CONTRACT CRO-530B
 DEMOLITION PLAN

DATE: 04/23/2021
 SCALE: 1/8"=1'-0"
 SHEET NO: 22 OF 46
 DRAWING NO: DS-1

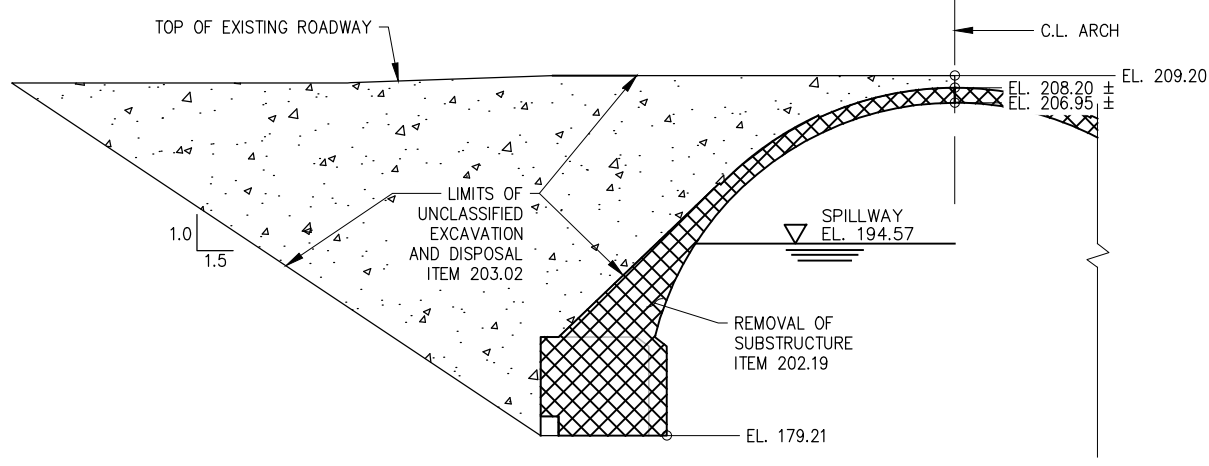
Last Saved By: & Date: Cehlykhova, Friday, April 23, 2021, and Date Plotted: Tuesday, June 01, 2021 Time: 4:04 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.356863 Plot Style Table: (N)_BRED_BW.ctb
 Drawing Name: & Location: C:\users\cehlykhova\Myprod\Arms37850\REMOVAL DETAILS.dwg



ARCH REMOVAL - PLAN
SCALE: 1/8"=1'-0"



ARCH REMOVAL - END ELEVATION
SCALE: 1/8"=1'-0"



ARCH REMOVAL - SECTION
SCALE: 1/8"=1'-0"

NOTE:
 1. TREE REMOVAL UNDER 6" PAID FOR UNDER ITEM 201.06. TREE REMOVAL BETWEEN 6" AND 12" PAID FOR UNDER ITEM 614.060204. TREE REMOVAL BETWEEN 12" AND 18" PAID FOR UNDER ITEM 614.060304. TREE REMOVAL BETWEEN 18" AND 24" PAID FOR UNDER ITEM 614.060404. TREE REMOVAL BETWEEN 24" TO 36" PAID FOR ITEM 614.060504.

LEGEND:

- UNCLASSIFIED EXCAVATION AND DISPOSAL ITEM NO. 203.02
- REMOVAL OF SUBSTRUCTURE ITEM NO. 202.19
- REMOVE AND RESET GRANITE STONES WORK SHALL BE PERFORMED IN ACCORDANCE WITH NYC DEP SPECIFICATION 04 41 00 AND PAID UNDER UP-2.

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 SUBMITTAL DATE: 4/23/2021

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 CHECK BEFORE USE
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
J. CIRCOSTA
 CHECKED BY:
O. HUNTER, P.E.
 DESIGN LEAD:
O. HUNTER, P.E.
 SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
PAUL COSTA, PE
 EXECUTIVE DIRECTOR
SEAN McANDREW, PE

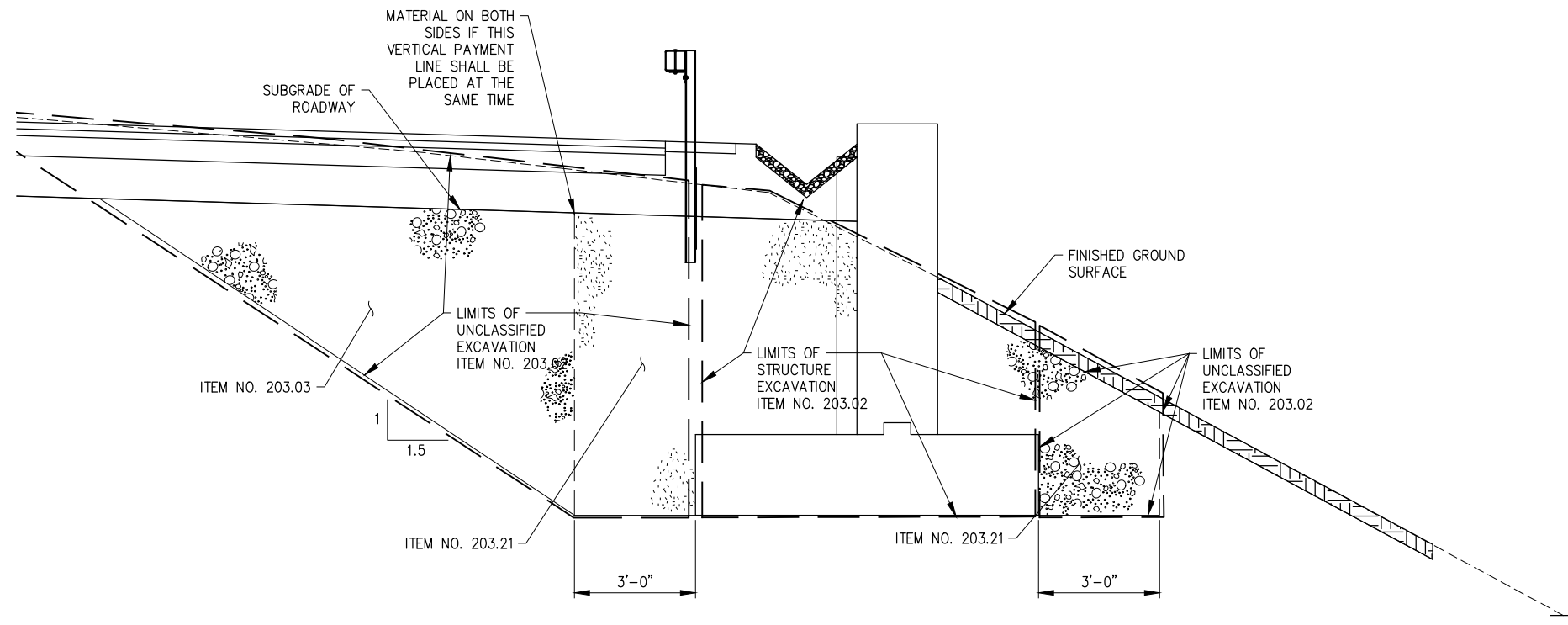
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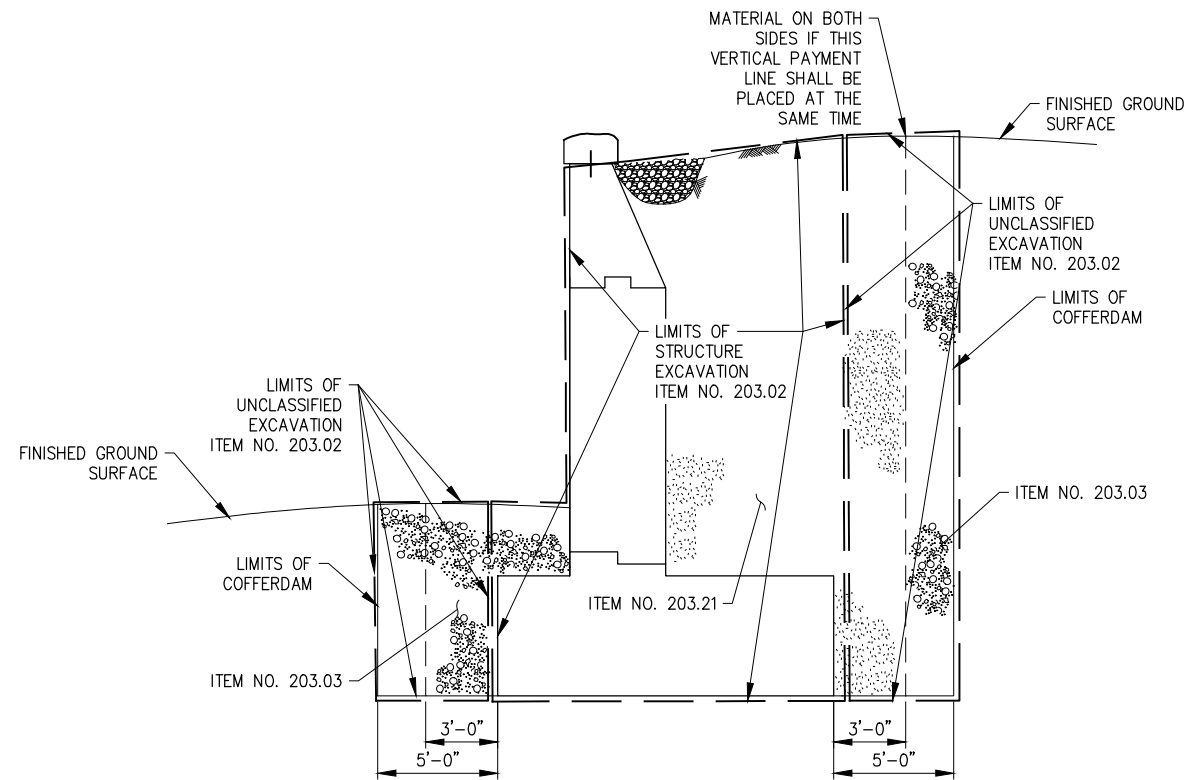
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 ARCH REMOVAL DETAILS

DATE: 04/23/2021
 SCALE: 1/8" = 1'-0"
 SHEET NO:
23 OF 46
 DRAWING NO.
DS-2



Last Saved By: & Date: Cahlykhova, Friday, April 23, 2021, and Date Plotted: Tuesday, June 01, 2021 Time: 3:55 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.356863 Plot Style Table: (N) BADC_BW.ctb
 Drawing Name: & Location: C:\Users\Cahlykhova\Inprod\Arms37850\BAP\TIST\CHURCH_RW EXCAVATION.dwg



TYPICAL RETAINING WALL SECTION
SCALE: 1/2"=1'-0"



TYPICAL WINGWALL SECTION
SCALE: 1/4"=1'-0"

- LEGEND:
-  - SELECT STRUCTURAL FILL
ITEM NO. 203.21
 -  - EMBANKMENT IN PLACE
ITEM NO. 203.03

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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DESIGNED BY:
O. HUNTER, P.E.
CHECKED BY:
M. YOUNG, PE
DESIGN LEAD:
O. HUNTER, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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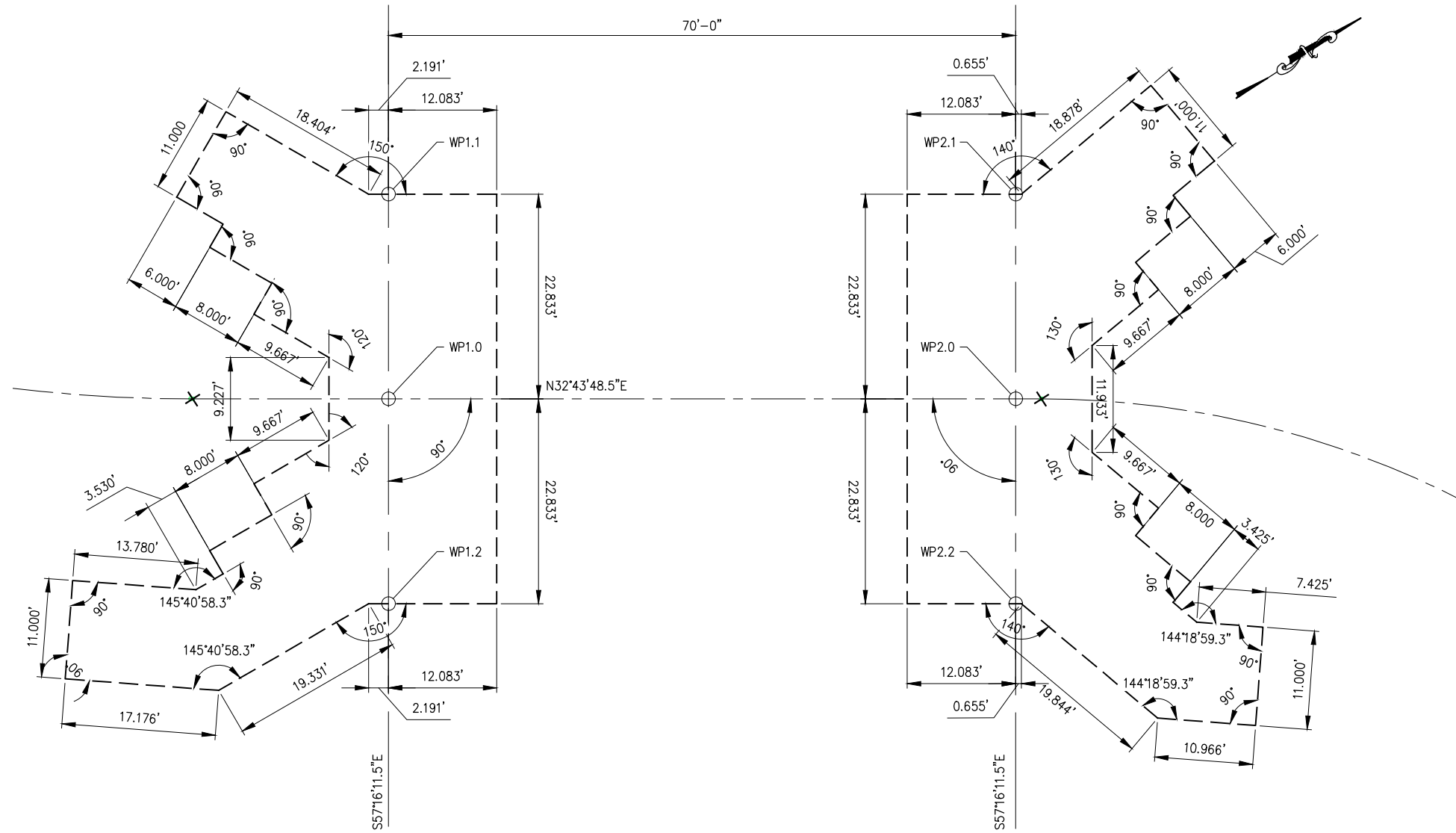
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

EXCAVATION DETAILS

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
24 OF 46
DRAWING NO.
DS-3

Last Saved By: & Date: Cehlykhova, Friday, April 23, 2021, and Date Plotted: Tuesday, June 01, 2021 Time: 5:27 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.356863 Plot Style Table: (N) BEND_BW.ctb
 Drawing Name: & Location: C:\Users\cehlykhova\Inp\prod\Arms37850\PAR-TIST CHURCH GEOMETRIC LAYOUT_2.dwg



GEOMETRIC LAYOUT
SCALE: 1/8"=1'-0"

WORK POINT	COORDINATES		C.L. BAPTIST CHURCH ROAD	
	NORTHING	EASTING	STATION	OFFSET
WP 1.0	884,398.9477	673,074.8135	403+10.077	0.000
WP 1.1	884,411.2933	673,055.6054	403+10.077	-22.833
WP 1.2	884,386.6021	673,094.0215	403+10.077	22.833
WP 2.0	884,457.8335	673,112.6613	403+80.077	0.000
WP 2.1	884,470.1791	673,093.4532	403+80.077	-22.833
WP 2.2	884,445.4879	673,131.8643	403+80.077	22.833

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

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DESIGNED BY:
O. HUNTER, P.E.
CHECKED BY:
N. CREWER, P.E.
DESIGN LEAD:
O. HUNTER, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRICOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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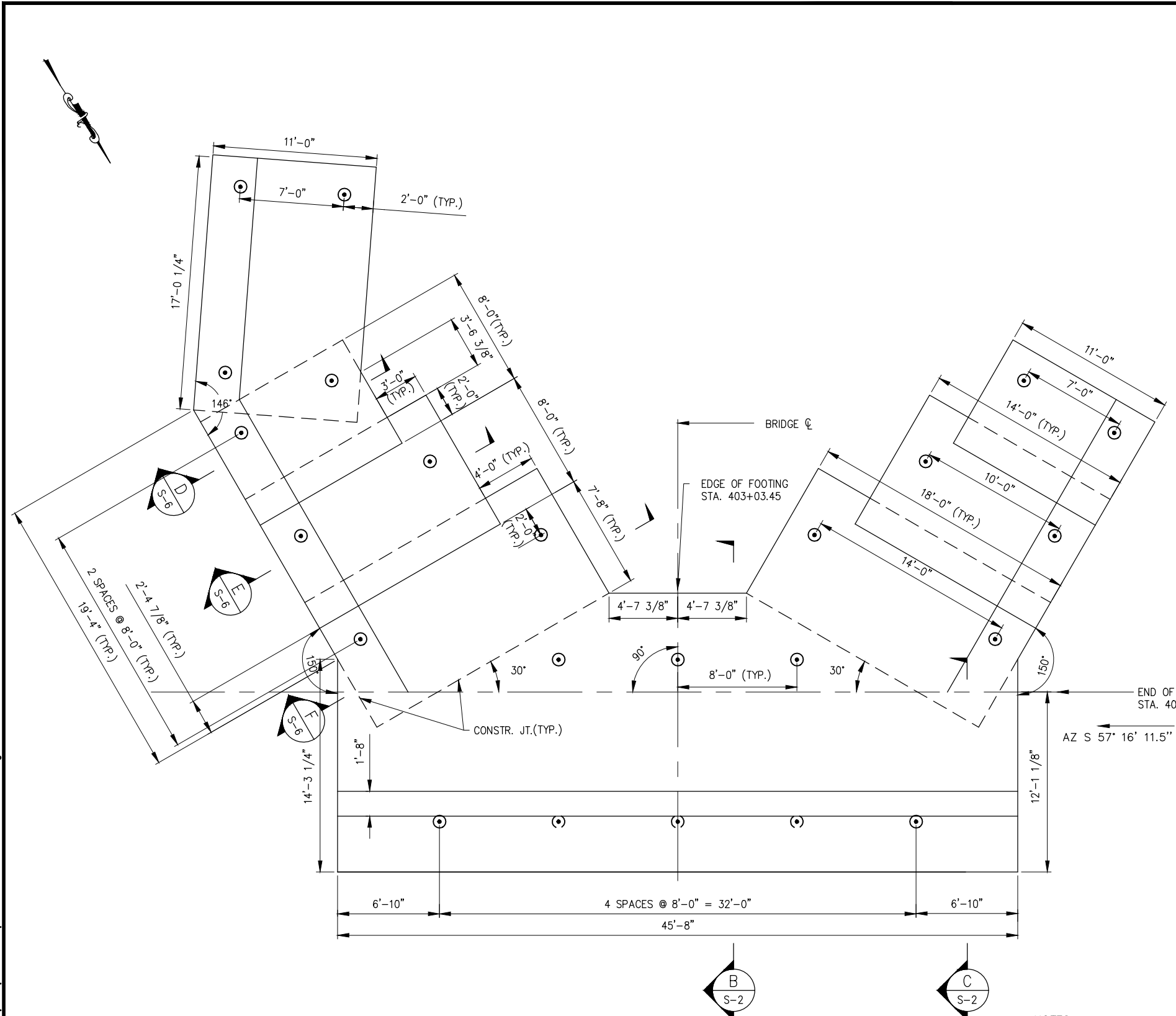
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

GEOMETRIC LAYOUT

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
25 OF 46
DRAWING NO.
S-1

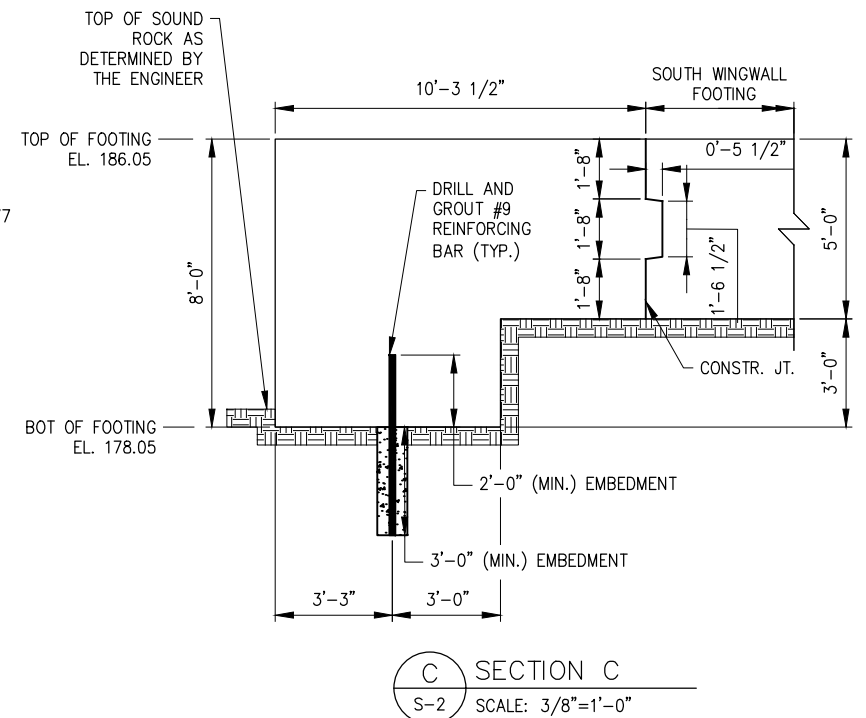
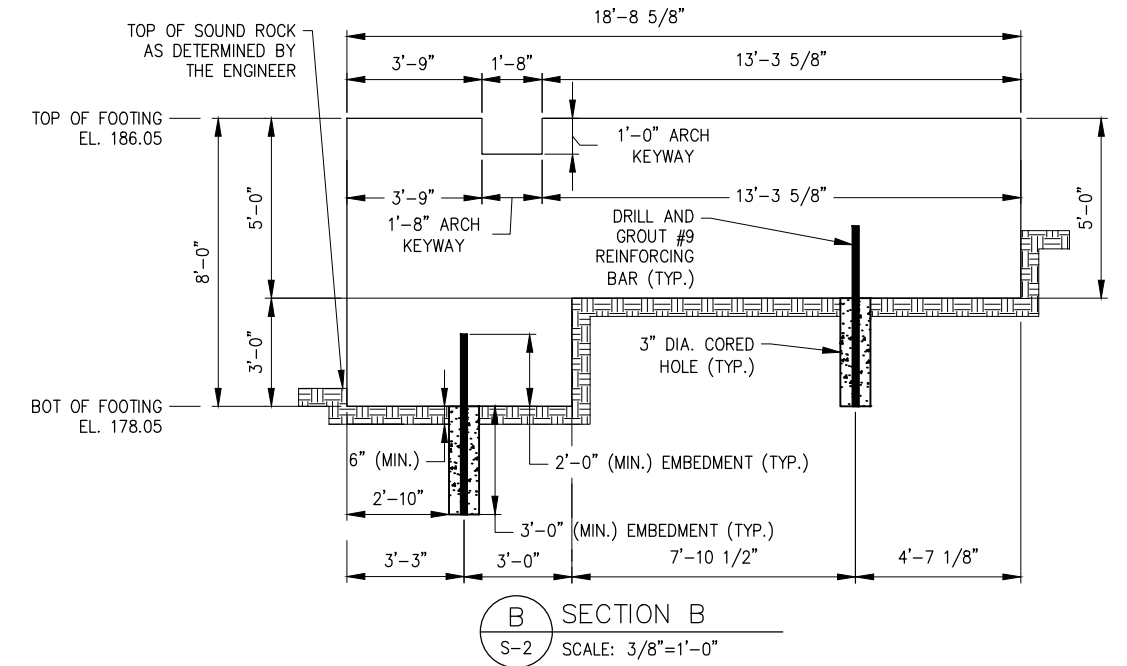
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 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.366863 Plot Style Table: (N)_BDDC_BW.ctb
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FOOTING PLAN
SCALE: 1/4" = 1'-0"

- LEGEND:**
- ROCK DOWELS
 - SOUND ROCK

- NOTES:**
- REINFORCING BARS FOR ROCK DOWELS SHALL BE GRADE 60 GALVANIZED CARBON-STEEL BARS PER ASTM A 615
 - ROCK EXCAVATION IS ANTICIPATED FOR FOOTING CONSTRUCTION. WORK SHALL BE PAID UNDER UP-1 AND PERFORMED IN ACCORDANCE WITH NYDEP SPECIFICATION SECTION 31 23 25.
 - SEE DRAWING G-5 FOR STRUCTURAL NOTES ON REINFORCING STEEL AND CONCRETE.



60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34"
IT IS A REDUCED PRINT. SCALE
ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: O. HUNTER, P.E.	DRAWN BY: J. CIRCOСТА
CHECKED BY: R. ROMAN, P.E.	
DESIGN LEAD: O. HUNTER, P.E.	
SECTION MANAGER:	

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER PAUL COSTA, PE
EXECUTIVE DIRECTOR SEAN McANDREW, PE

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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B



SOUTH FOOTING PLAN

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO: 26 OF 46
DRAWING NO. S-2

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

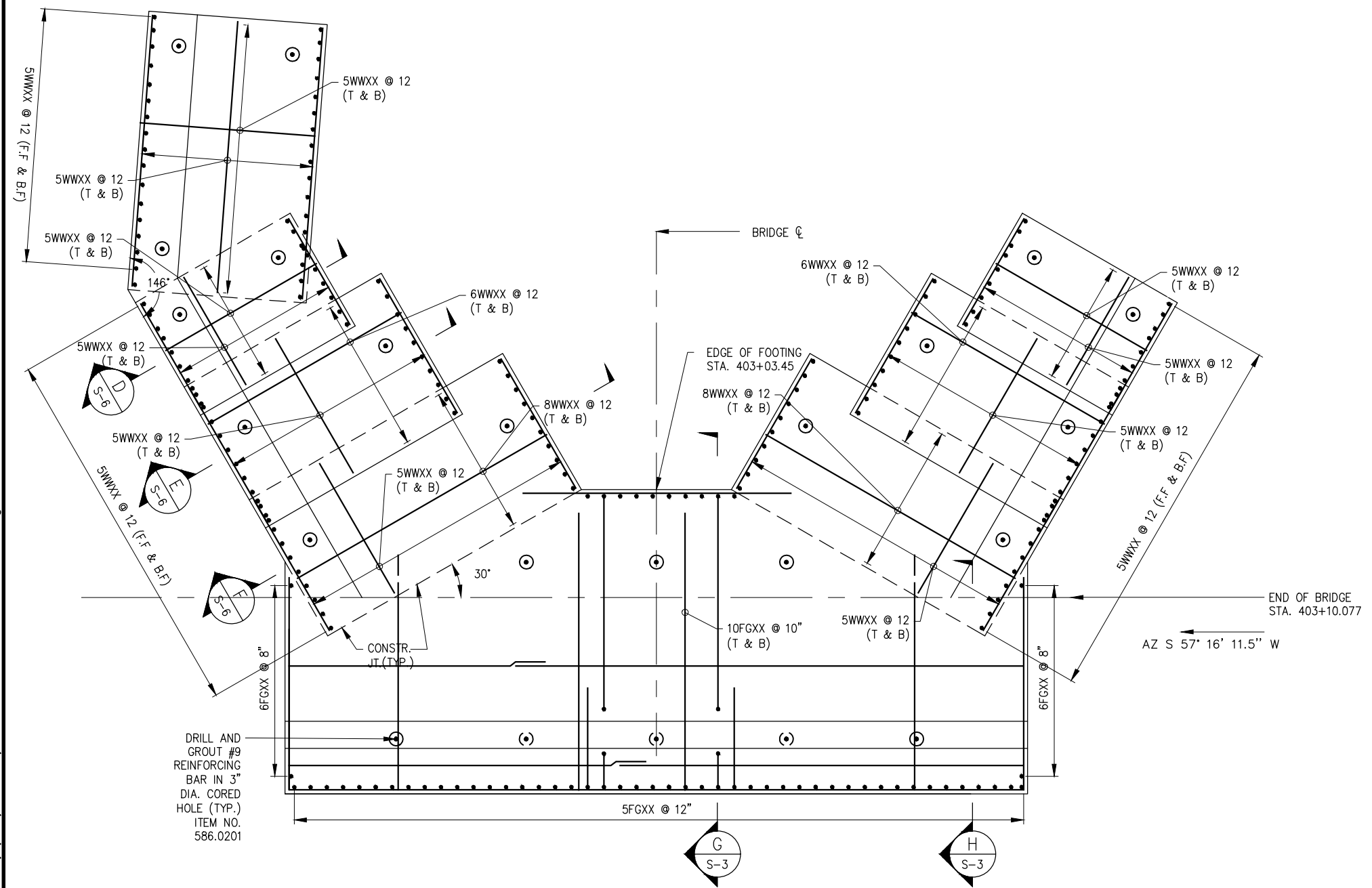
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 Drawing Name: & Location: C:\Users\cehlykhova\Inprod\Arms37850\South Footing Reinforcement Details.dwg

LEGEND:

-  - ROCK DOWELS
-  - SOUND ROCK

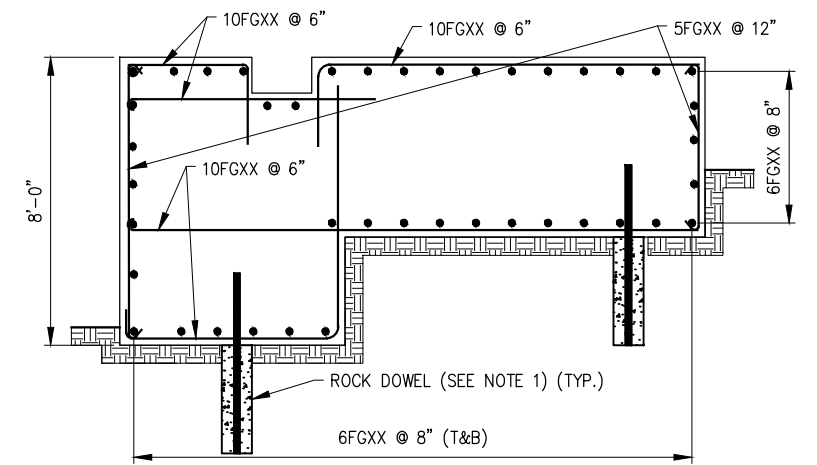
NOTES:

1. FOR ROCK DOWEL LAYOUT AND NOTES SEE DWG NO S-2.
2. MINIMUM CONCRETE COVER WILL BE NO LESS THAN 3 INCHES.
3. SEE DRAWING G-6 FOR STRUCTURAL NOTES ON REINFORCING STEEL AND CONCRETE.

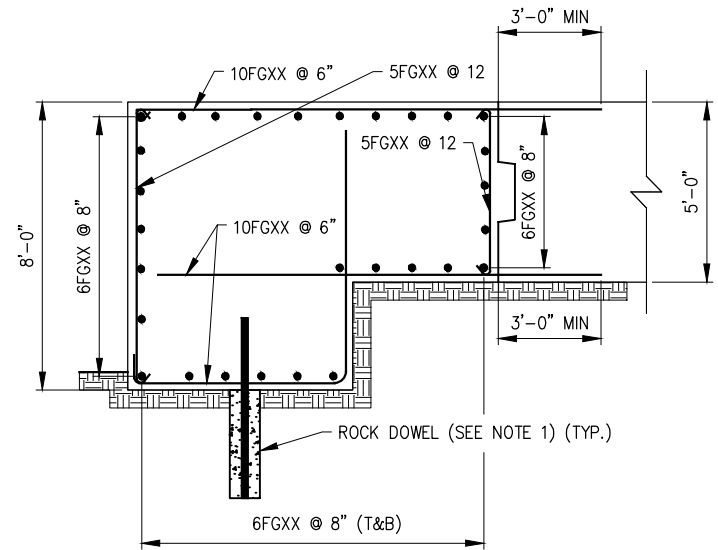


DRILL AND GROUT #9 REINFORCING BAR IN 3" DIA. CORED HOLE (TYP.)
 ITEM NO. 586.0201

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



G SECTION G
S-3 SCALE: 3/8"=1'-0"



H SECTION H
S-3 SCALE: 3/8"=1'-0"

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
CHECK BEFORE USE

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ACCORDINGLY

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DESIGNED BY:
O. HUNTER, P.E.
 CHECKED BY:
R. ROMAN, P.E.
 DESIGN LEAD:
O. HUNTER, P.E.
 SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

 HARDESTY & HANOVER, LLC
 ENGINEERING
 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
 PORTFOLIO MANAGER
PAUL COSTA, PE
 EXECUTIVE DIRECTOR
SEAN McANDREW, PE

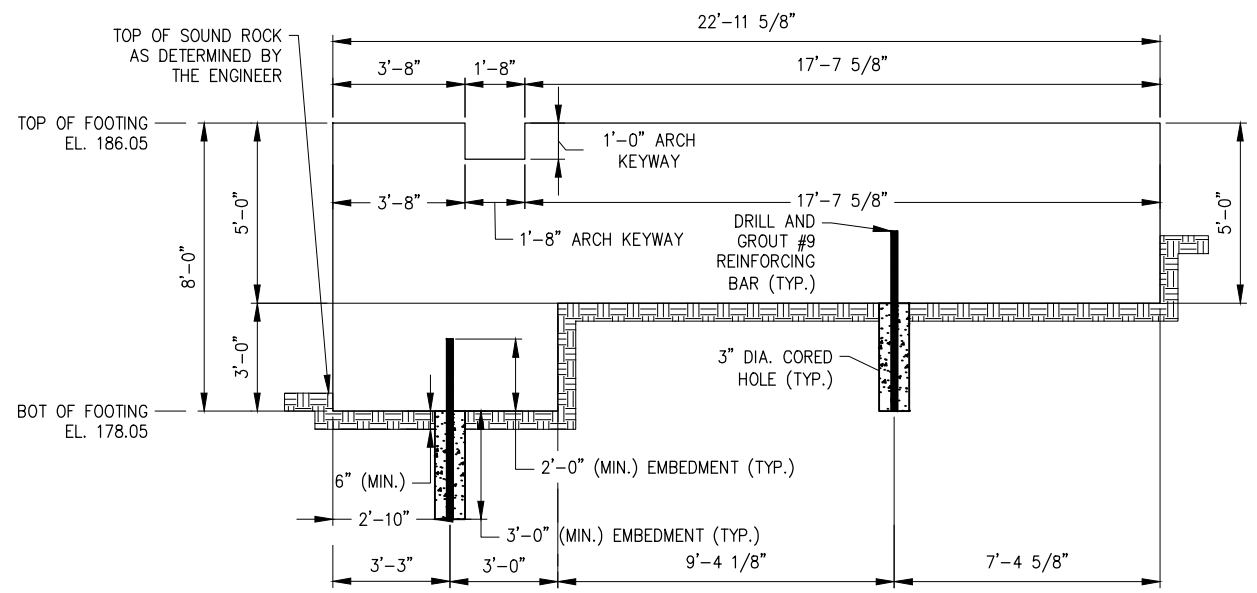
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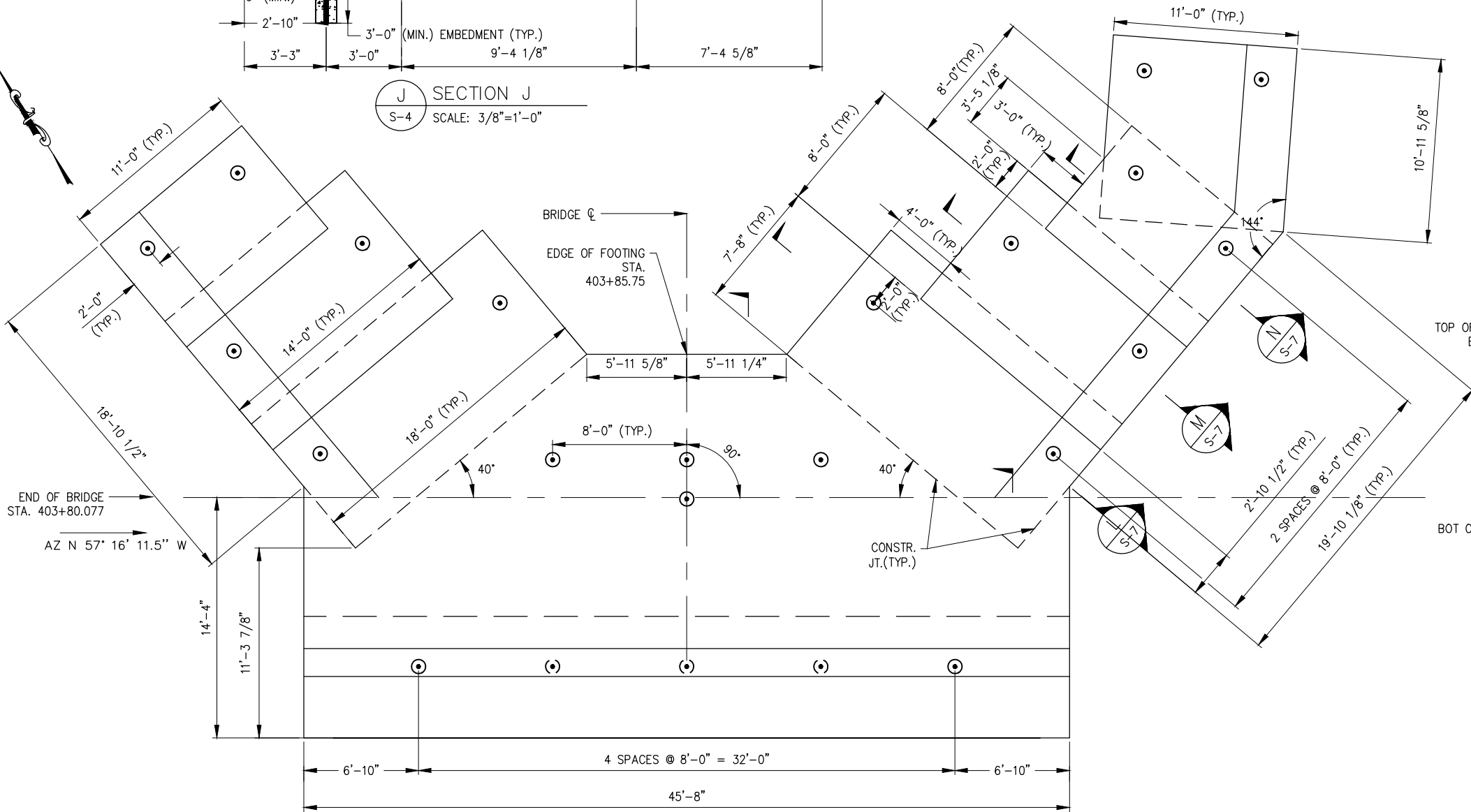
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 SOUTH FOOTING REINFORCEMENT

DATE: 04/23/2021
 SCALE: AS NOTED
 SHEET NO:
27 OF 46
 DRAWING NO.
S-3

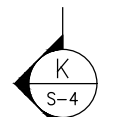
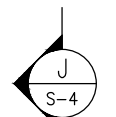
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 Drawing Name: & Location: C:\Users\cehlykhova\OneDrive\Projects\37850\North Footing Details_PLOT.dwg



J SECTION J
S-4 SCALE: 3/8"=1'-0"

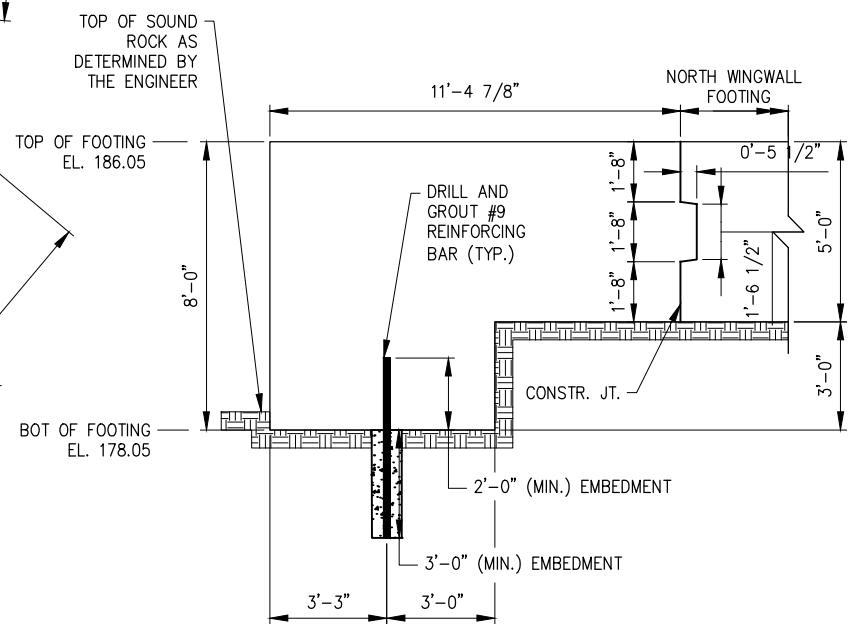


FOOTING PLAN
SCALE: 1/4" = 1'-0"



- NOTES:**
- REINFORCING BARS FOR ROCK DOWELS SHALL BE GRADE 60 GALVANIZED CARBON-STEEL BARS PER ASTM A 615
 - ROCK EXCAVATION IS ANTICIPATED FOR FOOTING CONSTRUCTION. WORK SHALL BE PAID UNDER ITEM UP-1 AND PERFORMED IN ACCORDANCE WITH NYCDEP SPECIFICATION SECTION 31 23 25.

- LEGEND:**
- ROCK DOWELS
 - SOUND ROCK



K SECTION K
S-4 SCALE: 3/8"=1'-0"

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: O. HUNTER, P.E.	DRAWN BY: J. CIRICOSTA
CHECKED BY: R. ROMAN, P.E.	
DESIGN LEAD: O. HUNTER, P.E.	
SECTION MANAGER:	



ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER PAUL COSTA, PE
EXECUTIVE DIRECTOR SEAN McANDREW, PE

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CAPITAL PROJECT WM-30 IN WESTCHESTER COUNTY, NEW YORK CONTRACT CRO-530B



NORTH FOOTING PLAN

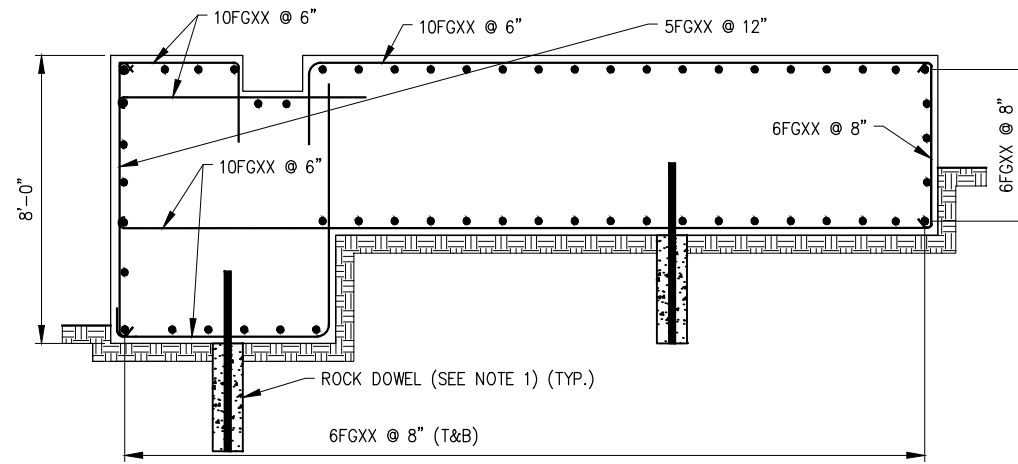
DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO: 28 OF 46
DRAWING NO. S-4

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

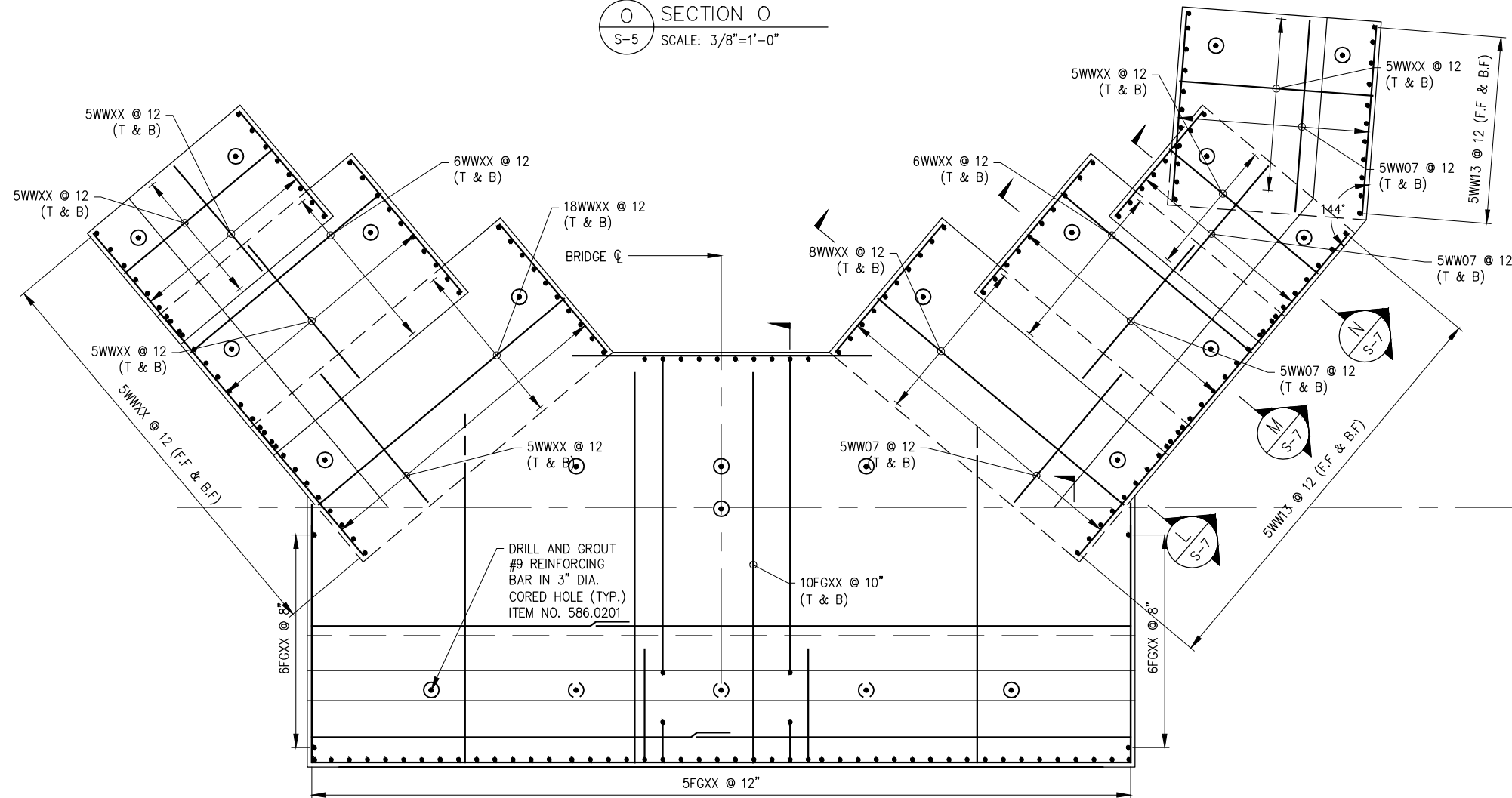
Last Saved By: & Date: jcircosta, Friday, April 23, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 1:59 PM
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- NOTES:**
- FOR ROCK DOWEL LAYOUT AND NOTES SEE DWG NO S-2.
 - MINIMUM CONCRETE COVER WILL BE NO LESS THAN 3 INCHES.
 - SEE DRAWING G-5 FOR STRUCTURAL NOTES ON REINFORCING STEEL AND CONCRETE.

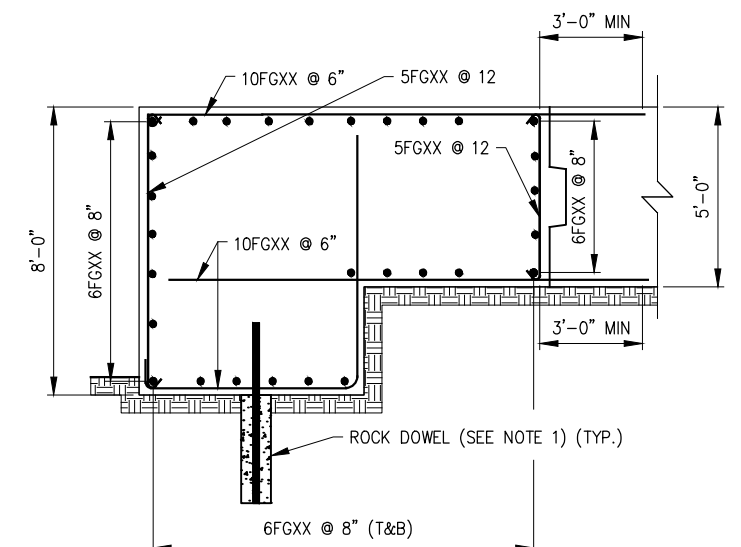
- LEGEND:**
-  - ROCK DOWELS
 -  - SOUND ROCK



SECTION O
S-5 SCALE: 3/8"=1'-0"



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



SECTION P
S-5 SCALE: 3/8"=1'-0"

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SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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ACCORDINGLY

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O. HUNTER, P.E.
CHECKED BY:
R. ROMAN, P.E.
DESIGN LEAD:
O. HUNTER, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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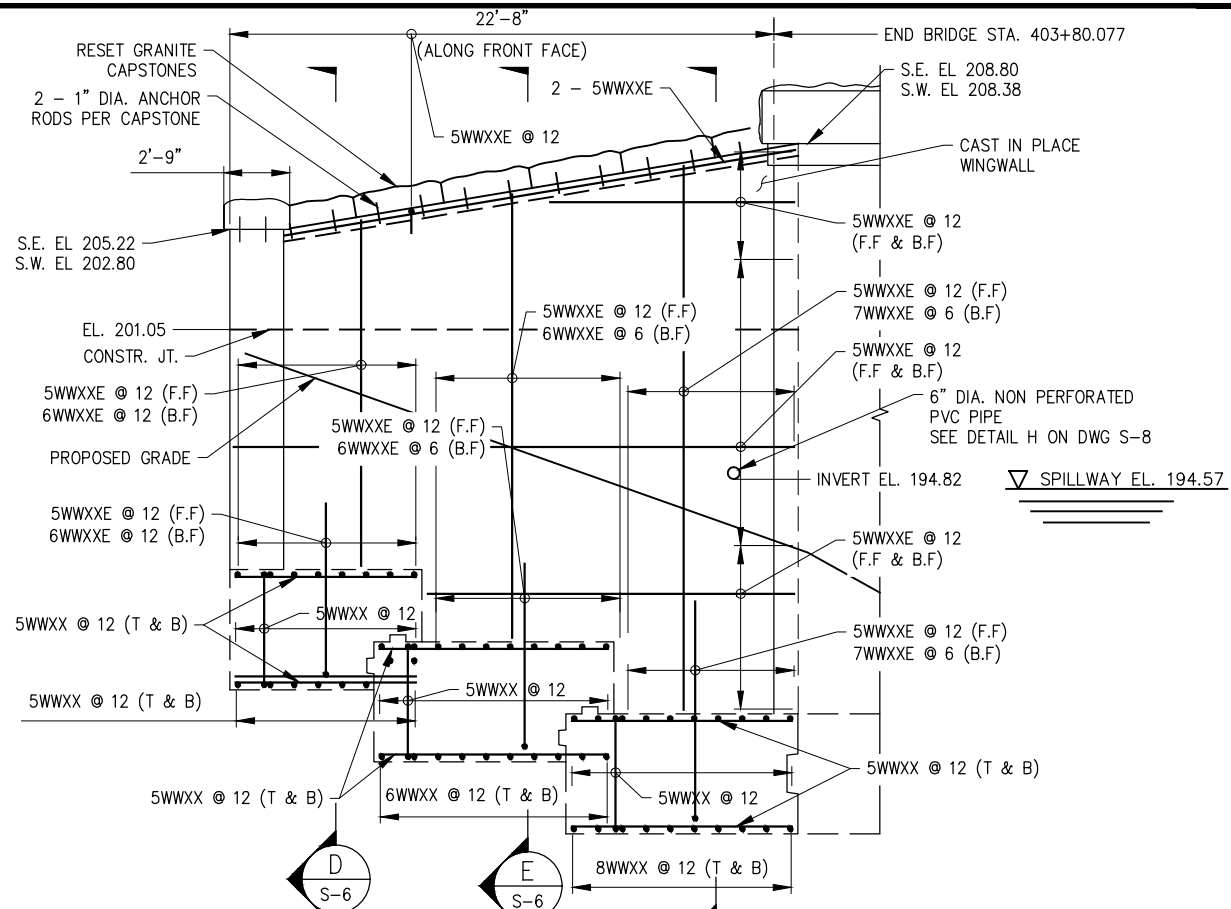
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

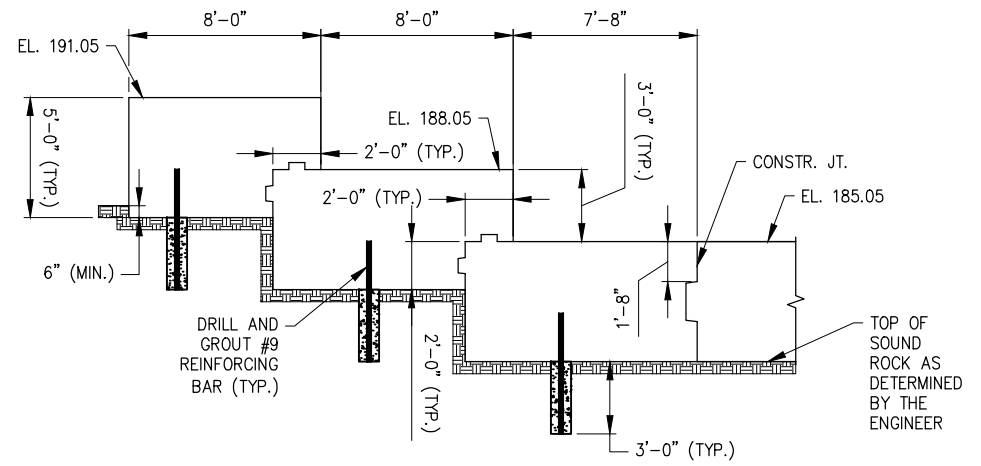
NORTH FOOTING REINFORCEMENT

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
29 OF 46
DRAWING NO.
S-5

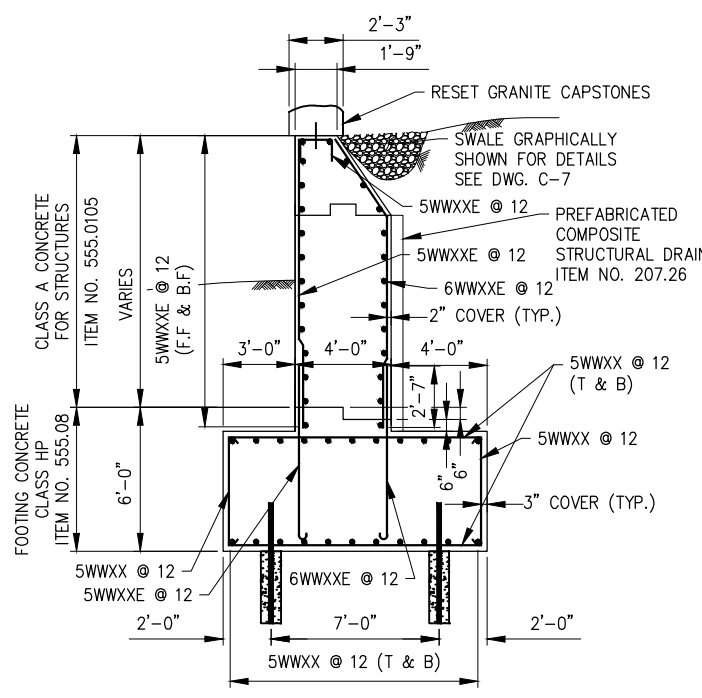
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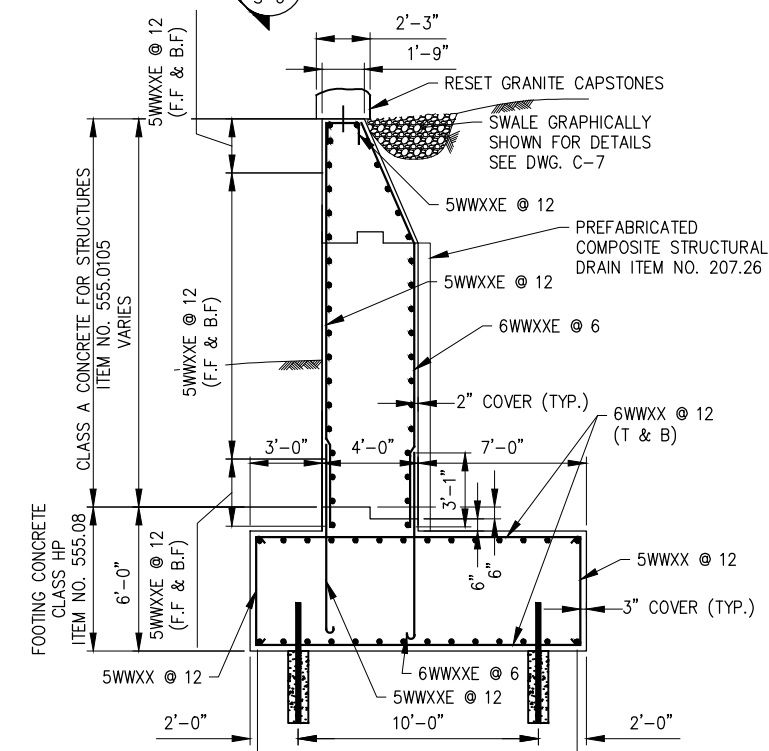
S.E. WINGWALL ELEVATION (S.W. SIMILAR)
SCALE: 1/4"=1'-0"



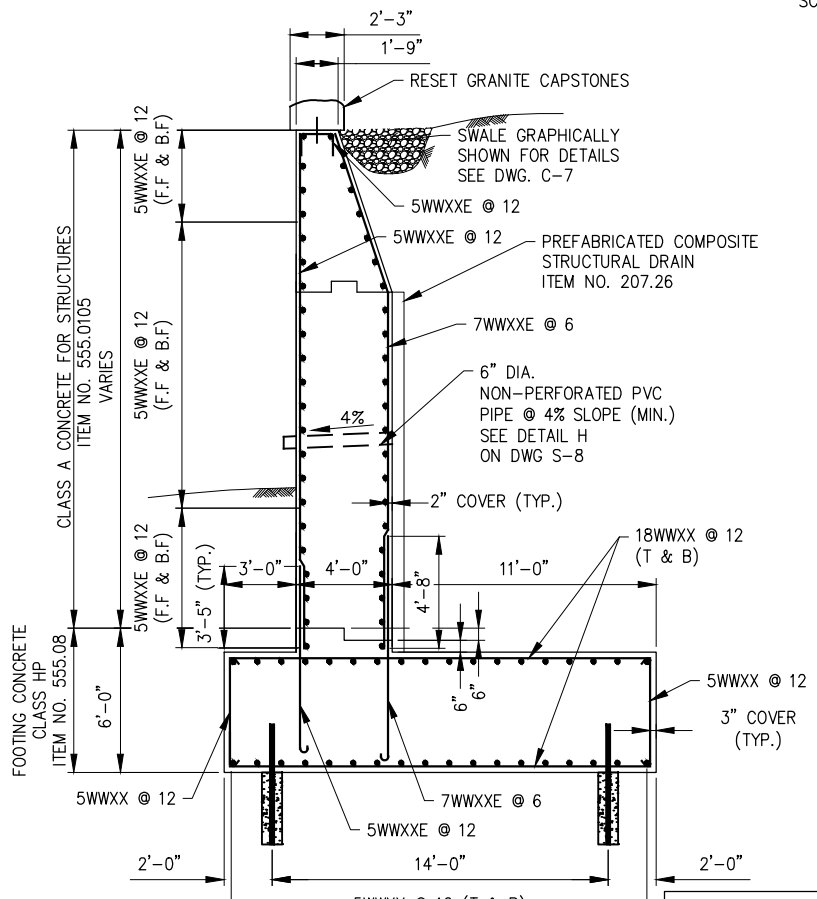
S.E. WINGWALL FOOTING DETAILS (S.W. SIMILAR)
SCALE: 1/4"=1'-0"



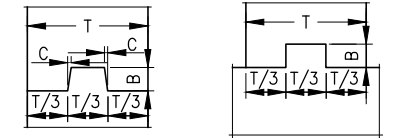
SECTION D
SCALE: 1/4"=1'-0"



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

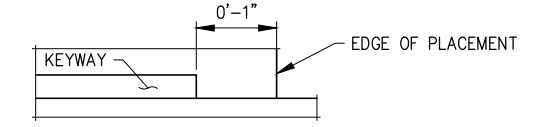


SECTION F
SCALE: 1/4"=1'-0"



NOTE: WATERSTOP NOT SHOWN.
VERTICAL

NOTE: WATERSTOP NOT SHOWN.
HORIZONTAL



CONSTRUCTION AND CONTRACTION JOINTS		
C	B	T/3
3/16	1 1/2	0 TO 6"
3/8	3 1/2	6" TO 10"
3/4	5 1/2	10" AND OVER

KEYWAY DETAILS
NOT TO SCALE

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GRAPHIC SCALES
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Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.366863 Plot Style Table: (N)_REDY_BW.ctb
Drawing Name: & Location: C:\Users\Cehlykhova\OneDrive\Documents\45611 SOUTH WINGWALL DETAILS_PLOT.dwg

DESIGNED BY: C. SHLYAKHOVA	DRAWN BY: J. CIRCOSTA
CHECKED BY: O. HUNTER, P.E.	
DESIGN LEAD: R. ROMAN, P.E.	HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway, New York, NY 10036
SECTION MANAGER:	



ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE	*WARNING—IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*
PORTFOLIO MANAGER PAUL COSTA, PE	
EXECUTIVE DIRECTOR SEAN McANDREW, PE	

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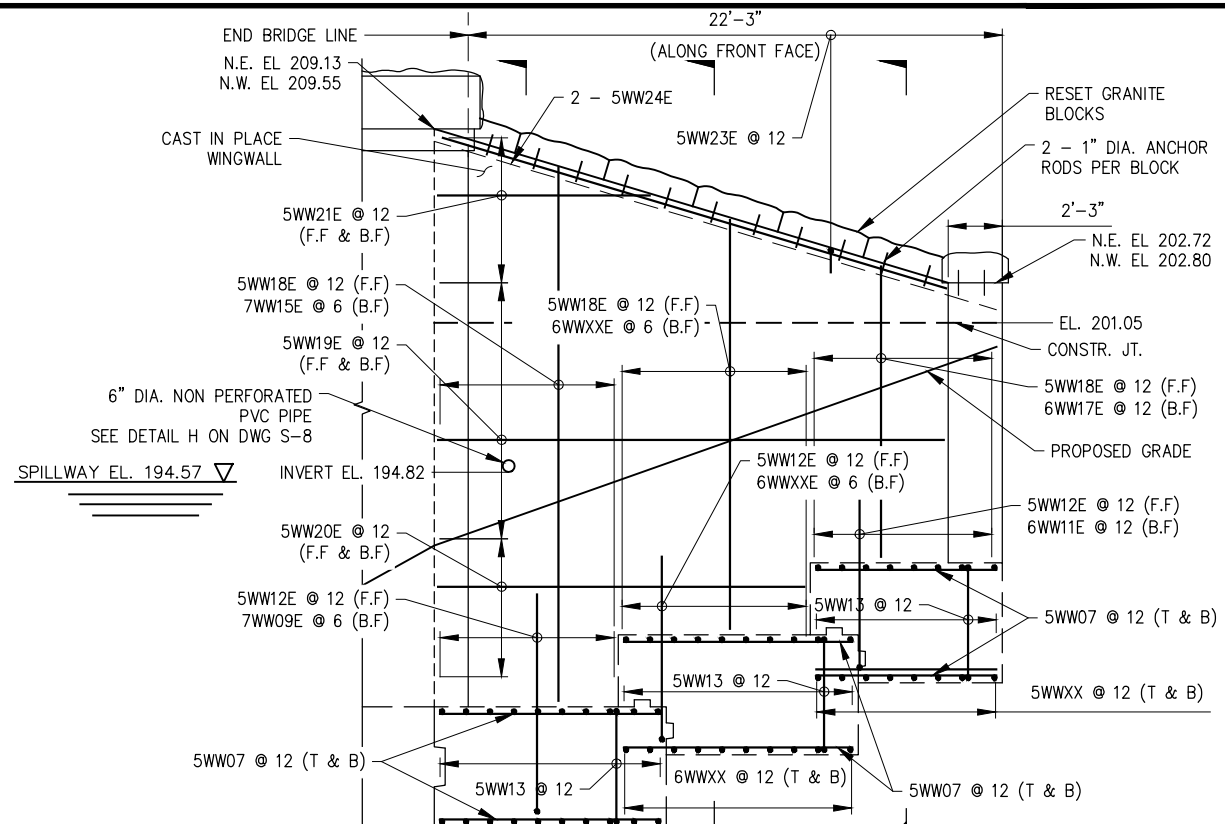
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

SOUTH WINGWALL ELEVATIONS AND DETAILS

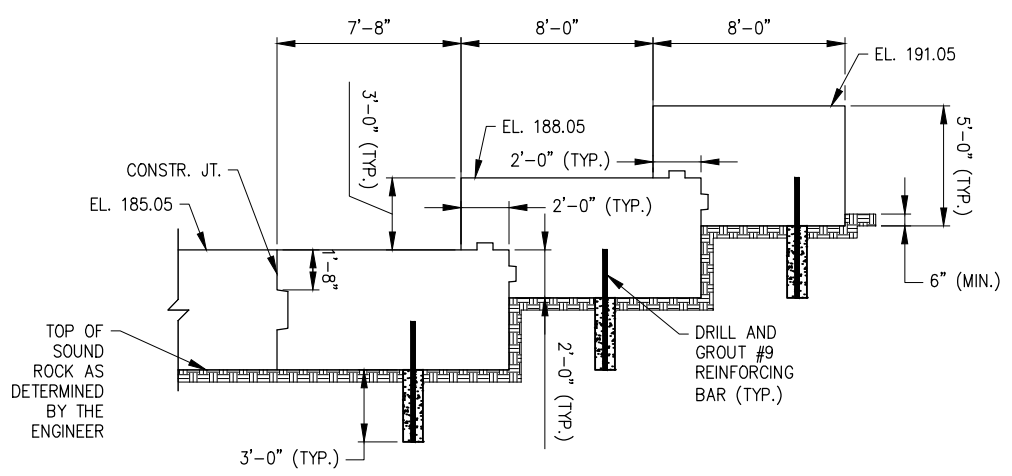
DATE: 04/23/2021
SCALE: 1/4"=1'-0"
SHEET NO: 30 OF 46
DRAWING NO. S-6

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Last Saved By: & Date: Cehlykhova, Tuesday, August 10, 2021 and Date Plotted: Tuesday, August 10, 2021 Time: 1:51 PM
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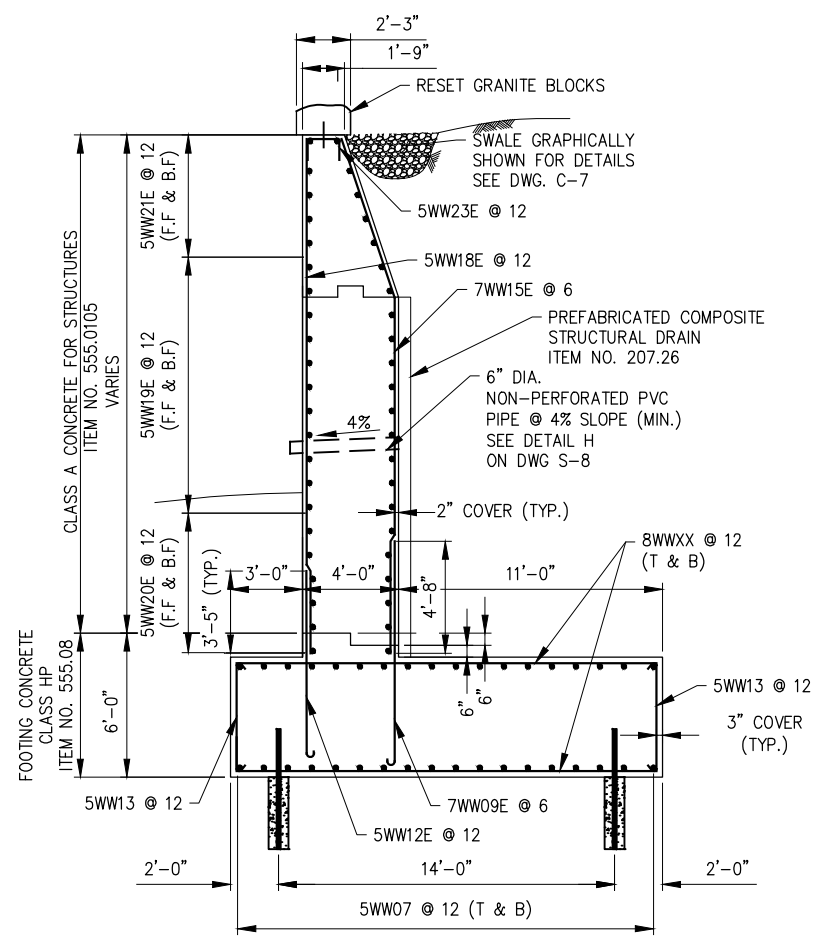


NOTE:
 1. ROCK EXCAVATION IS ANTICIPATED FOR FOOTING CONSTRUCTION. WORK SHALL BE PAID UNDER UP-1 AND PERFORMED IN ACCORDANCE WITH NYCDEP SPECIFICATION SECTION 31 23 25.

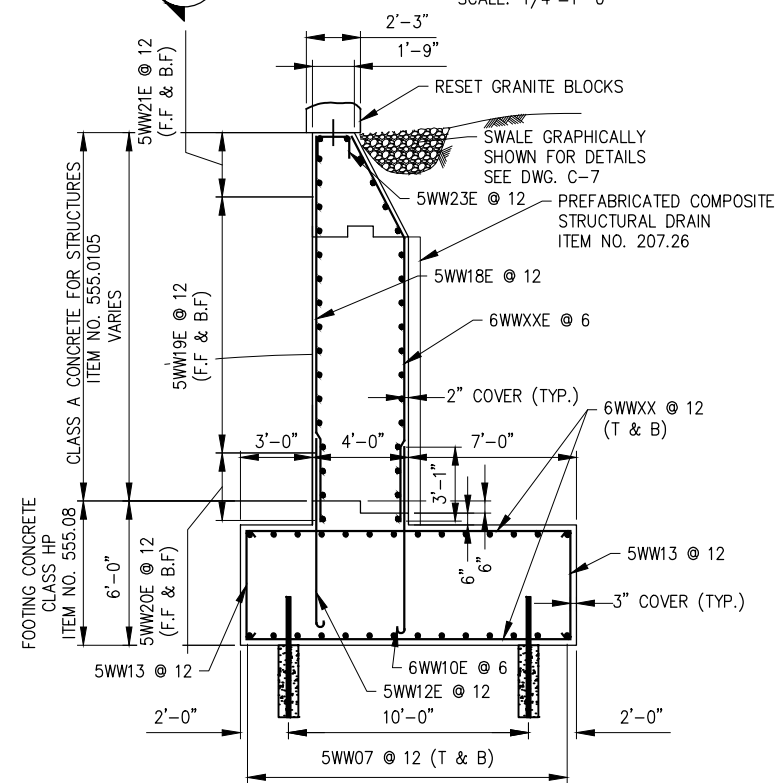


N.E. WINGWALL FOOTING DETAILS (N.W. SIMILAR)
 SCALE: 1/4"=1'-0"

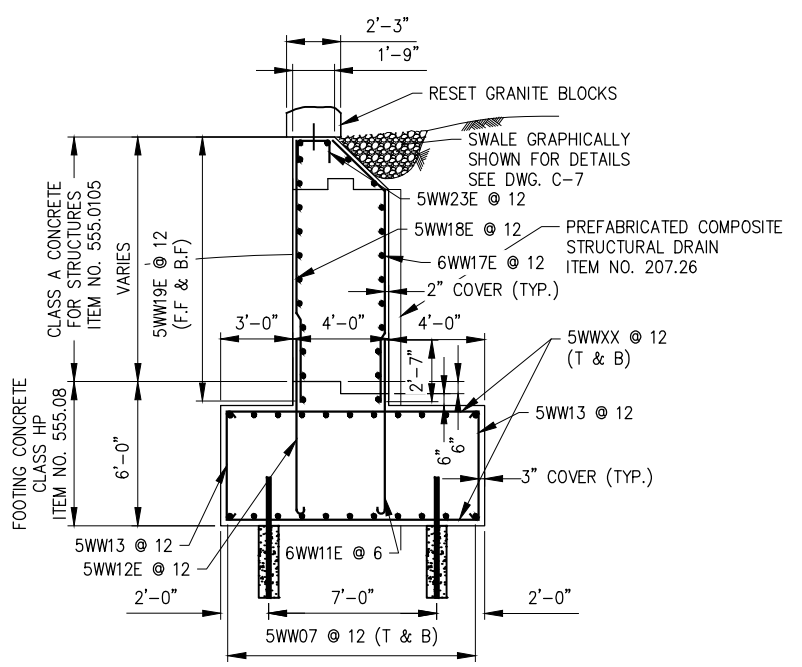
N.E. WINGWALL ELEVATION (N.W. SIMILAR)
 SCALE: 1/4"=1'-0"



SECTION L
 S-7
 SCALE: 1/4"=1'-0"



SECTION M
 S-7
 SCALE: 1/4"=1'-0"



SECTION N
 S-7
 SCALE: 1/4"=1'-0"

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 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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CHECKED BY: R. ROMAN, P.E.	
DESIGN LEAD: R. ROMAN, P.E.	HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway New York, NY 10036
SECTION MANAGER:	



ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE	*WARNING—IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*
PORTFOLIO MANAGER PAUL COSTA, PE	
EXECUTIVE DIRECTOR SEAN McANDREW, PE	

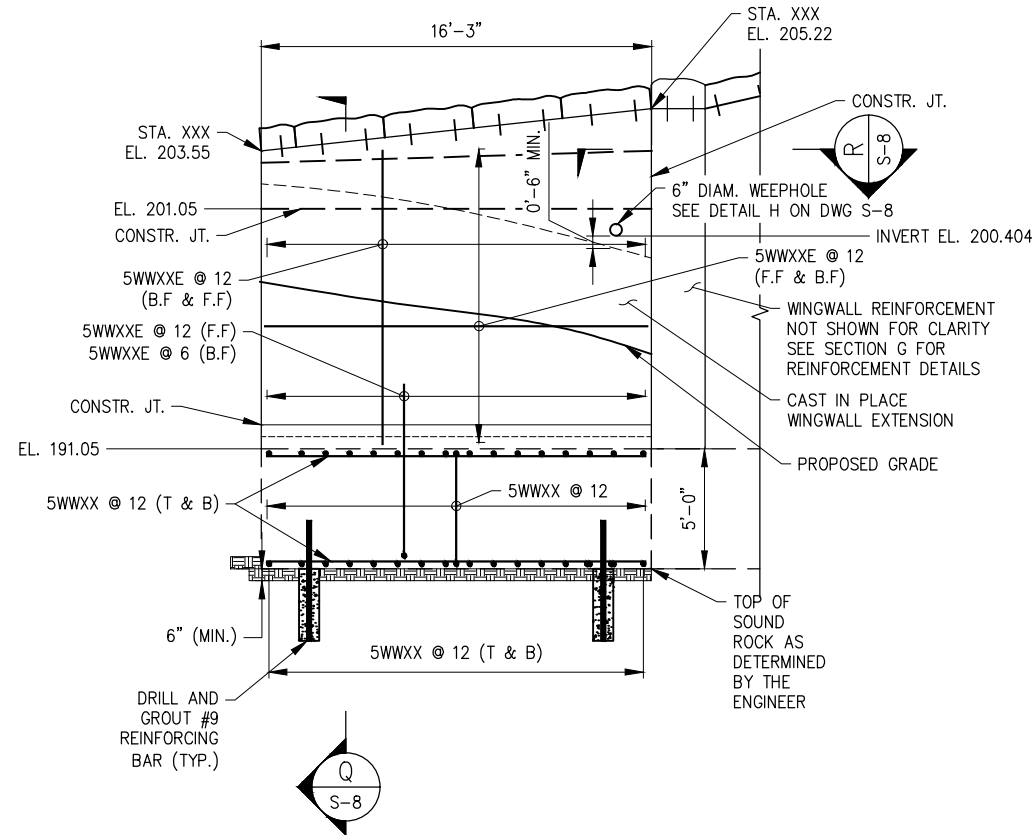
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IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

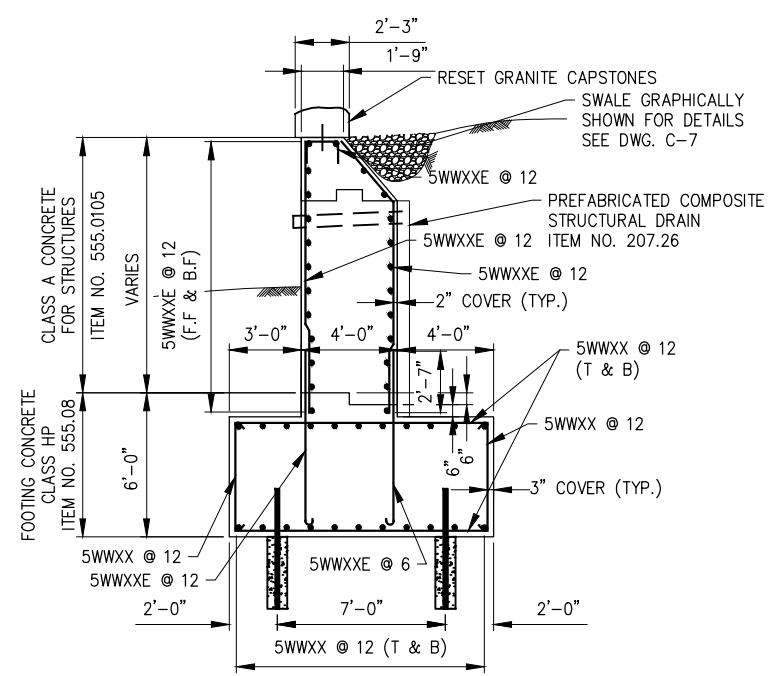
NORTH WINGWALL ELEVATIONS AND DETAILS
 DRAWING NO.
S-7

DATE: 04/23/2021
SCALE: 1/4"=1'-0"
SHEET NO:
31 OF 46
DRAWING NO. S-7

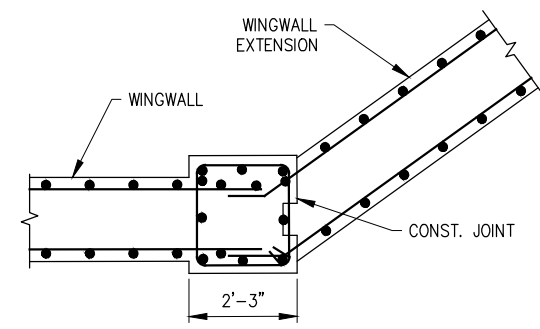
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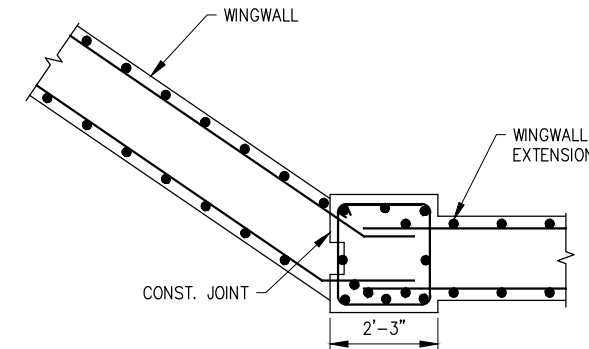
S.E. WINGWALL EXTENSION ELEVATION
SCALE: 1/4"=1'-0"



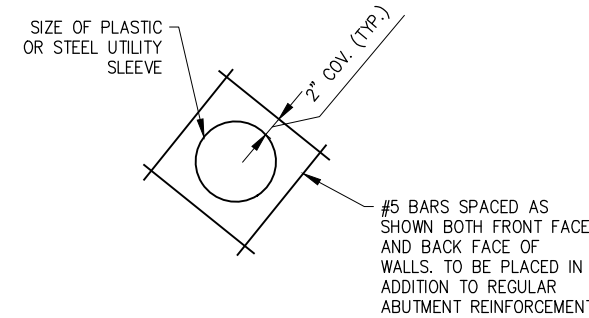
SECTION Q
SCALE: 1/4"=1'-0"



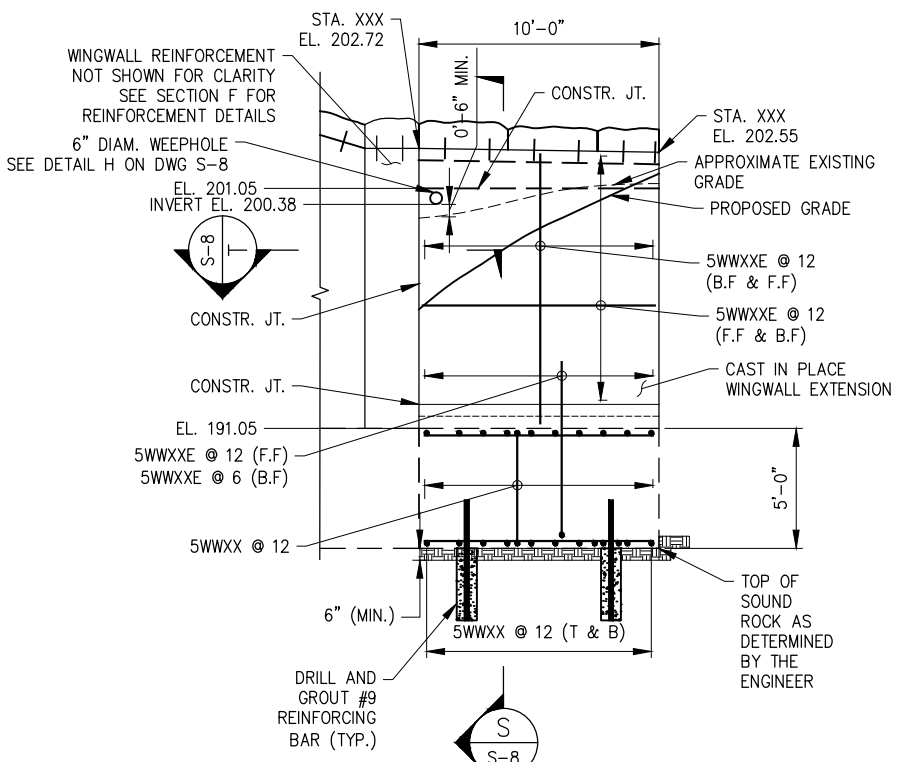
SECTION R
SCALE: 1/2"=1'-0"



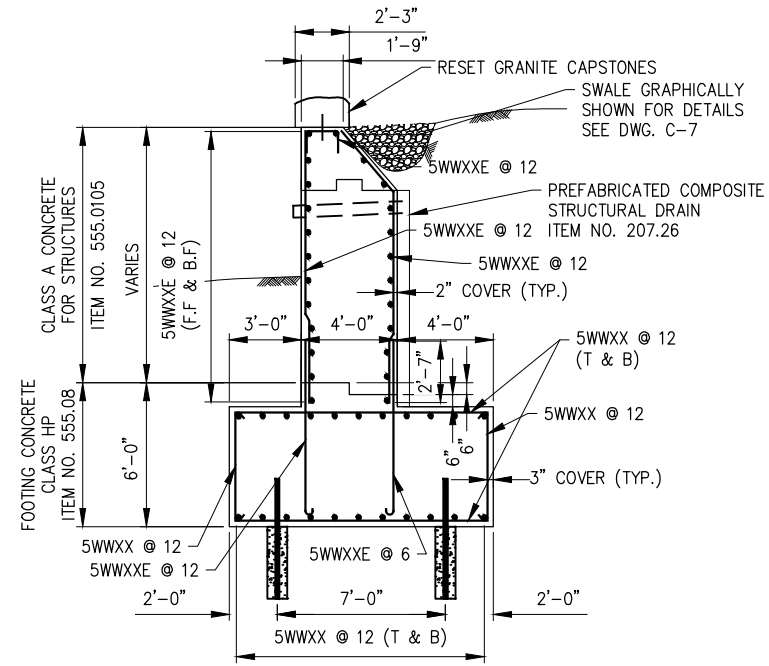
SECTION T
SCALE: 1/2"=1'-0"



CIRCULAR UTILITY SLEEVE REINFORCEMENT
SCALE: NTS



N.E. WINGWALL EXTENSION ELEVATION
SCALE: 1/4"=1'-0"



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

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
CHECK BEFORE USE

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Last Saved By: & Date: Cehlykhova, Tuesday, August 10, 2021 and Date Plotted: Tuesday, August 10, 2021 Time: 3:33 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.366863 Plot Style Table: (N)_REDY_BW.ctb
 Drawing Name: & Location: C:\Users\Cehlykhova\Inpord\Arms45611\South Wingwall Details_PLOT.dwg

DESIGNED BY: O. HUNTER, P.E.	DRAWN BY: J. CIRCOSTA
CHECKED BY: R. ROMAN, P.E.	
DESIGN LEAD: R. ROMAN, P.E.	HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway, New York, NY 10036
SECTION MANAGER:	



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE

PORTFOLIO MANAGER
PAUL COSTA, PE

EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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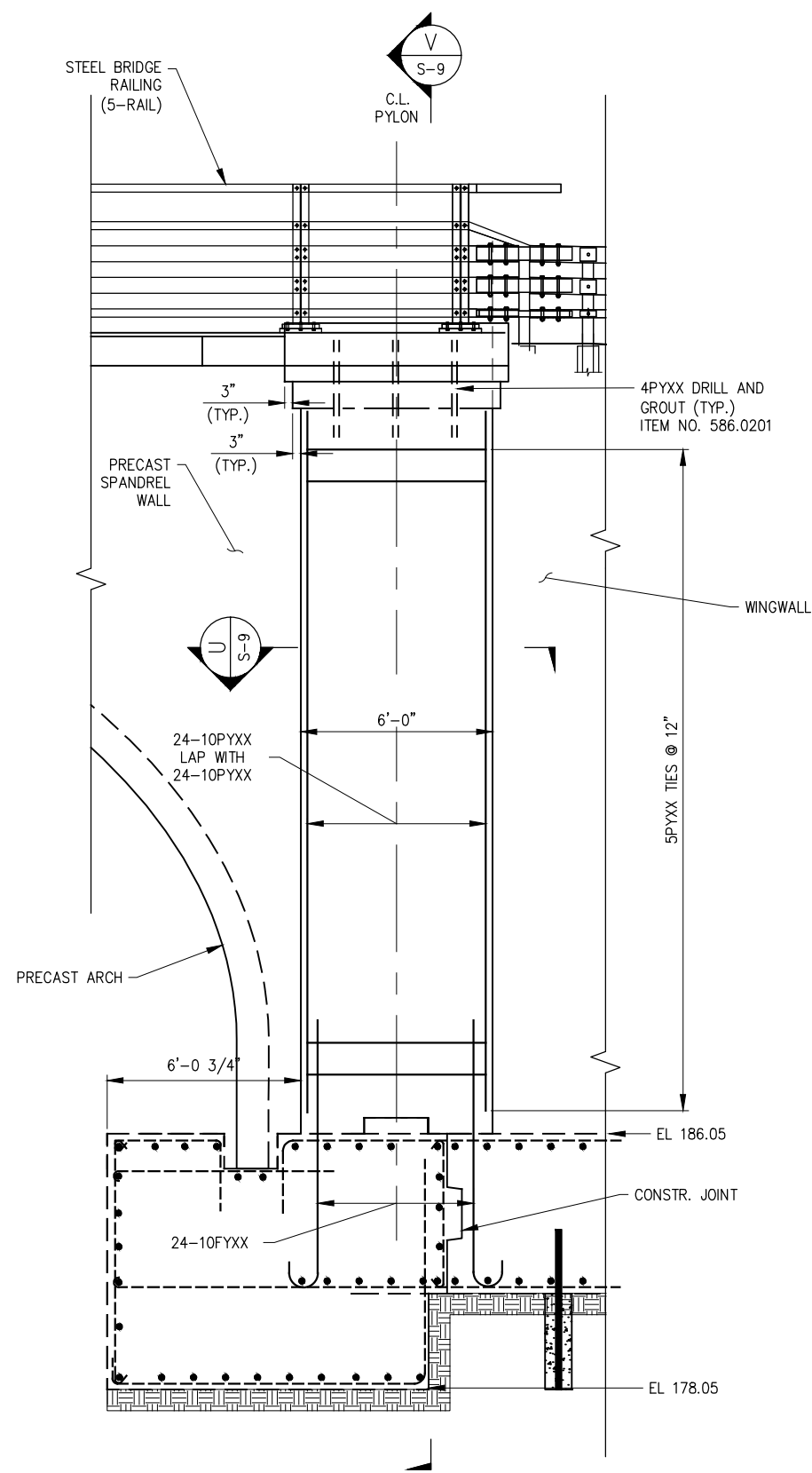
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

WINGWALL EXTENSIONS
ELEVATIONS AND DETAILS

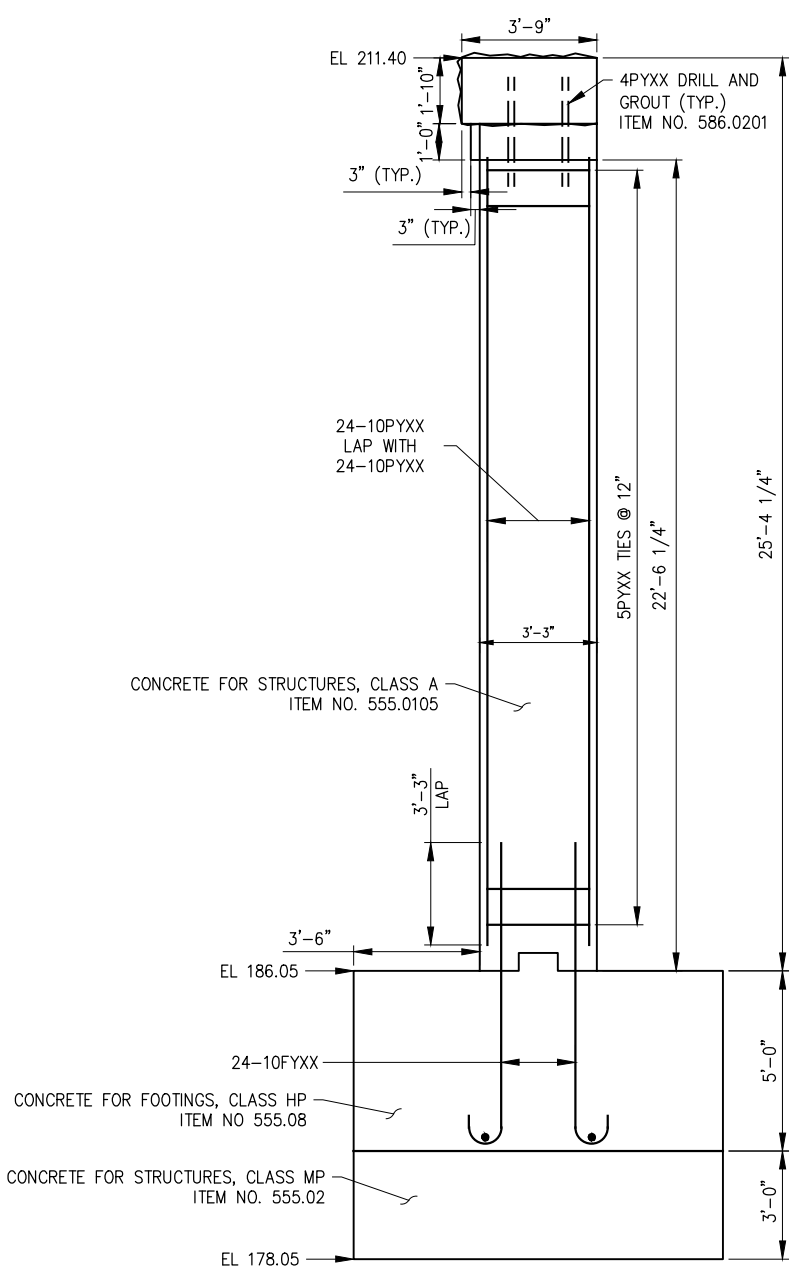
DATE: 04/23/2021
SCALE: 1/4"=1'-0"
SHEET NO:
32 OF 46
DRAWING NO.
S-8

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

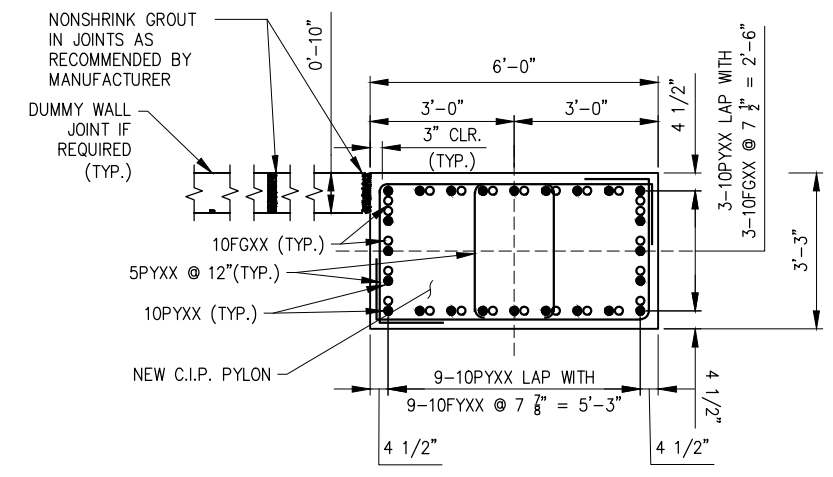
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 Paper Size: ANSI A (8.50 x 11.00 Inches) Plot Scale: 0.388863 Plot Style Table: (N)_BDDC_BW.ctb
 Drawing Name: & Location: C:\users\cshlyakhova\hprod\dms37850\PLYON SECTION & DETAILS.dwg



PLYON ELEVATION
SCALE: 3/8"=1'-0"



SECTION V
S-9 SCALE: 3/8"=1'-0"



SECTION U
S-9 SCALE: 1/2"=1'-0"

- NOTES:**
1. MINIMUM CONCRETE COVER WILL BE NO LESS THAN 2 INCHES FOR WALLS ABOVE THE FOOTINGS AND NO LESS THAN 3 INCHES FOR REINFORCEMENT IN THE FOOTINGS.
 2. SEE DRAWING G-6 FOR STRUCTURAL NOTES ON REINFORCING STEEL, CONCRETE, AND GROUT MATERIAL.
 3. LOCATE AND DRILL 1 1/2" DIAMETER HOLES IN GRANITE CAPSTONES TO RECEIVE #4 BARS DRILLED AND GROUTED INTO PYLON.
 4. PLACE MORTAR JOINTS AS NECESSARY TO LEVEL STONES AND PROVED COPING CONTINUITY.
 5. LOWER CAPSTONES ONTO PYLONS ENSURING #4 GROUTED ANCHORS FIT INTO DRILLED RECEIVING SOCKETS IN GRANITE STONES.

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
CHECK BEFORE USE
IF SHEET IS LESS THAN 22" X 34"
IT IS A REDUCED PRINT. SCALE
ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPRD.

DESIGNED BY:
O. HUNTER, P.E.
CHECKED BY:
R. ROMAN, P.E.
DESIGN LEAD:
O. HUNTER, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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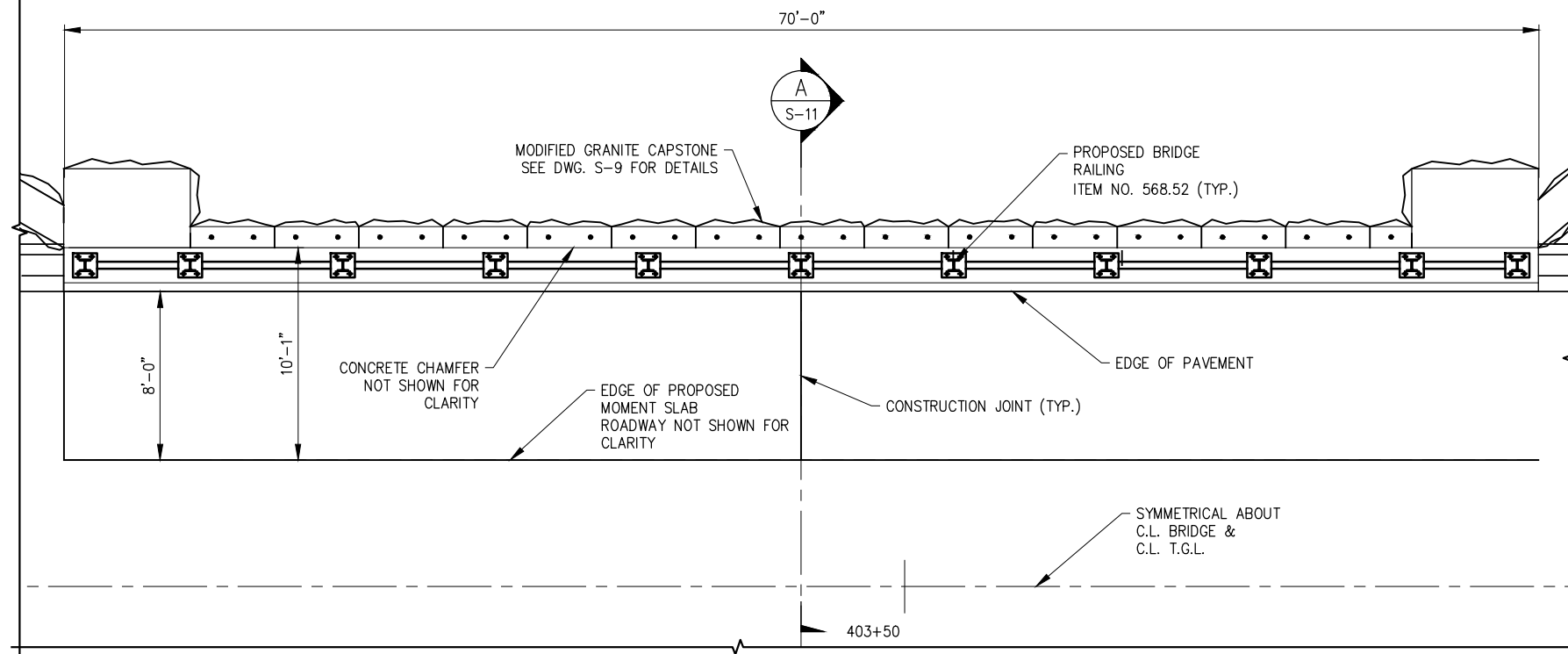
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

PLYON SECTION & DETAILS

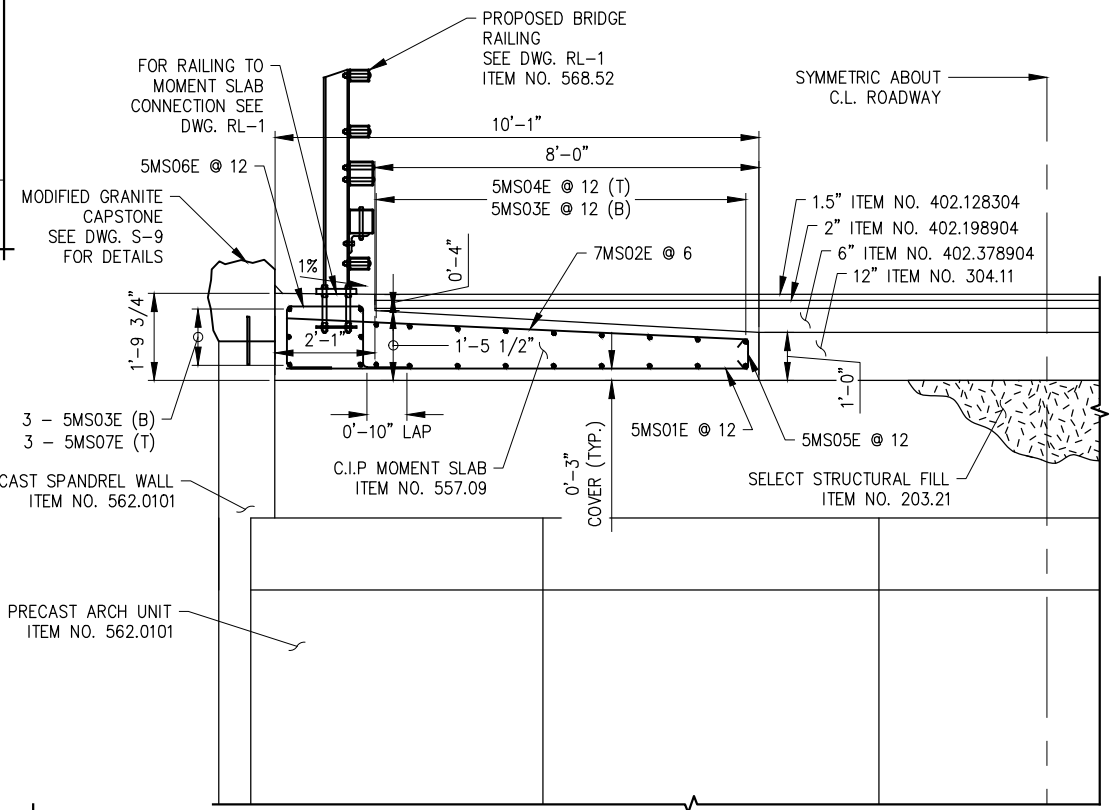
DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
30 OF 46
DRAWING NO.
S-9

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

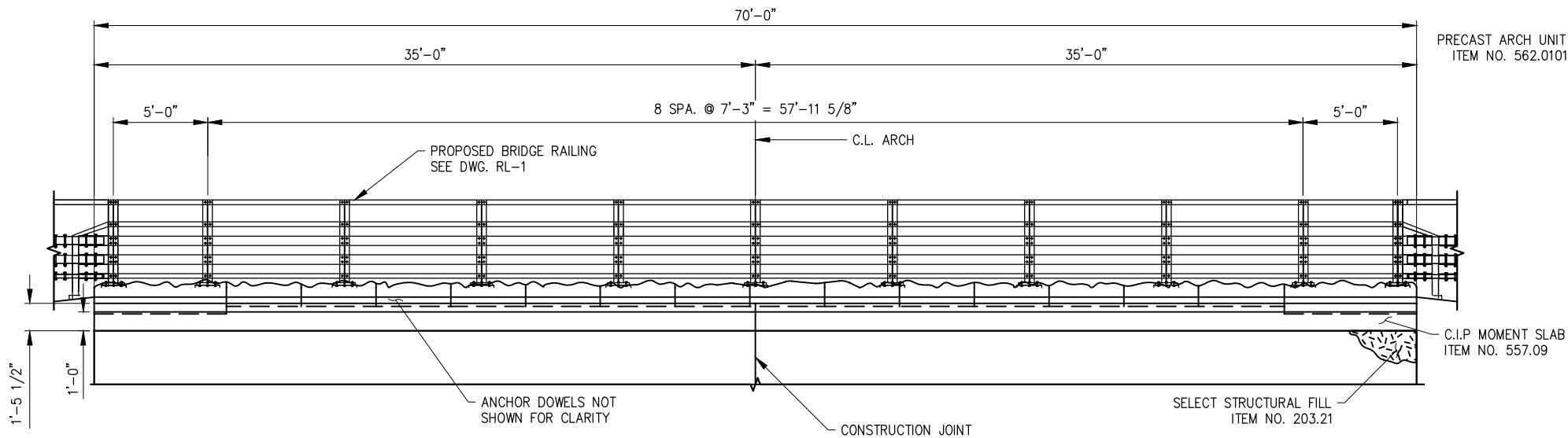
NOTE:
1. FOR RAILING DETAILS SEE DWG. RL-1



MOMENT SLAB PLAN
SCALE: 1/4"=1'-0"



A SECTION A
S-11 SCALE: 1/2"=1'-0"



MOMENT SLAB ELEVATION
SCALE: 1/4"=1'-0"

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SUBMITTAL DATE: 4/23/2021

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Last Saved By: & Date: Cahlykhova, Monday, May 03, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 1:18 PM
Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.336863 Plot Style Table: (N) BEND.BW.ctb
Drawing Name: & Location: C:\Users\Cahlykhova\Inprod\Arms37850\SPRINT\CHURCH MOMENT SLAB DETAILS.dwg

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
C. SHLYAKHOVA
CHECKED BY:
O. HUNTER, P.E.
DESIGN LEAD:
R. ROMAN, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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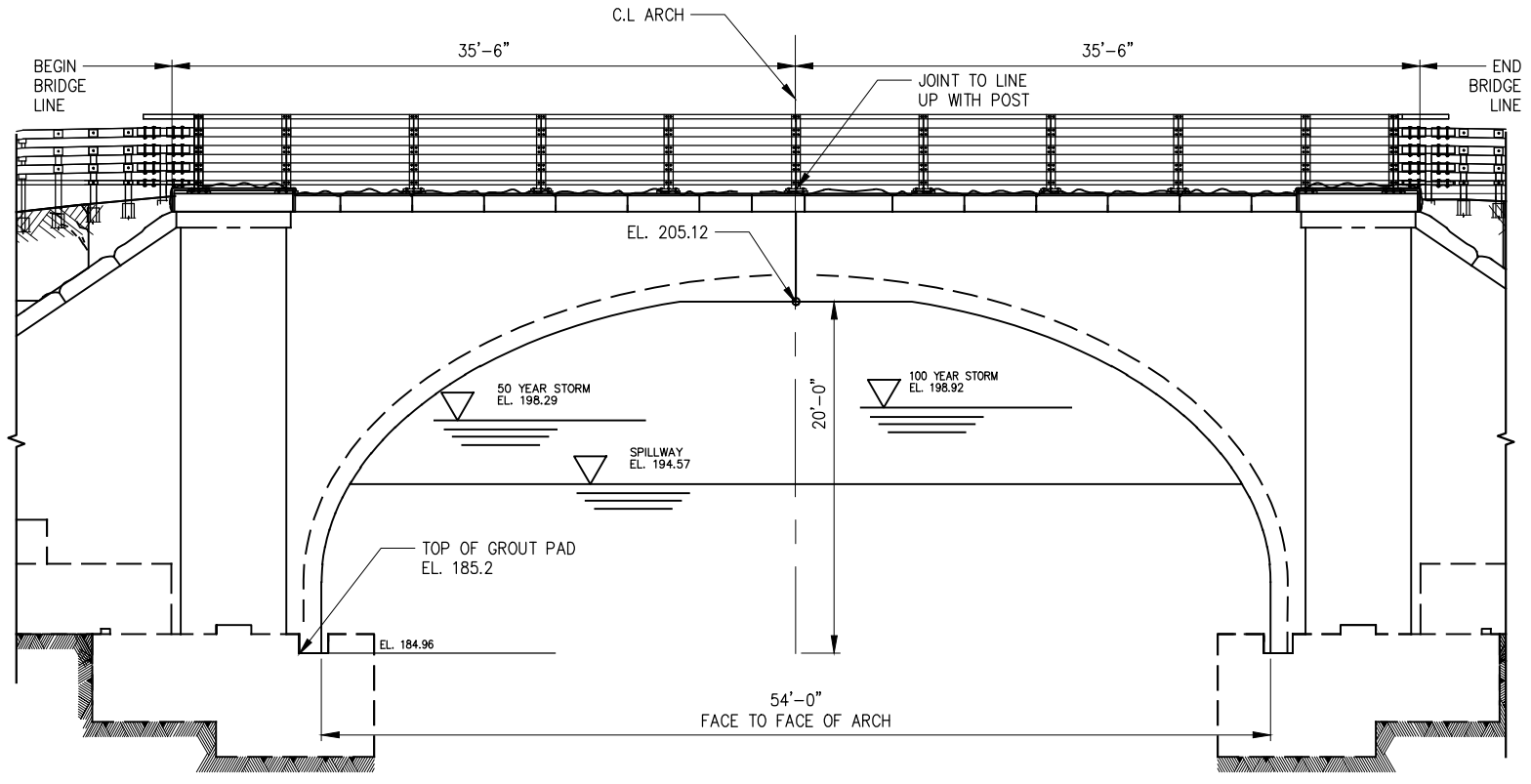
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

MOMENT SLAB DETAILS

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
35 OF 46
DRAWING NO.
S-11

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By & Date: Cshlyakhova, Friday, April 23, 2021 and Date Plotted: Monday, July 19, 2021 Time: 1:07 PM
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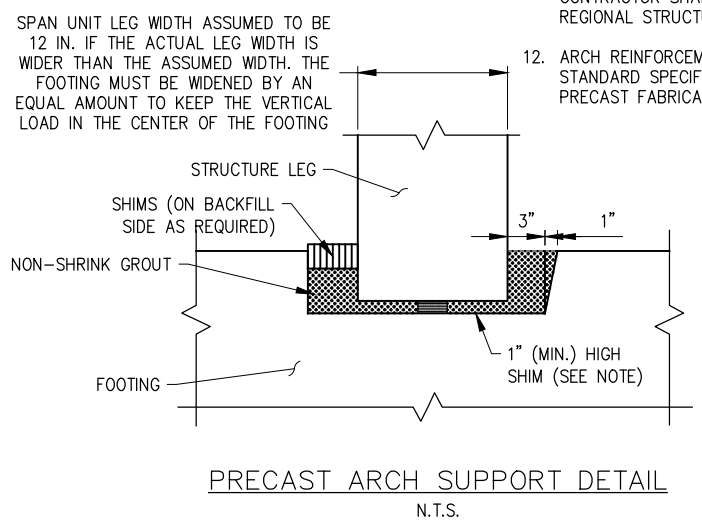
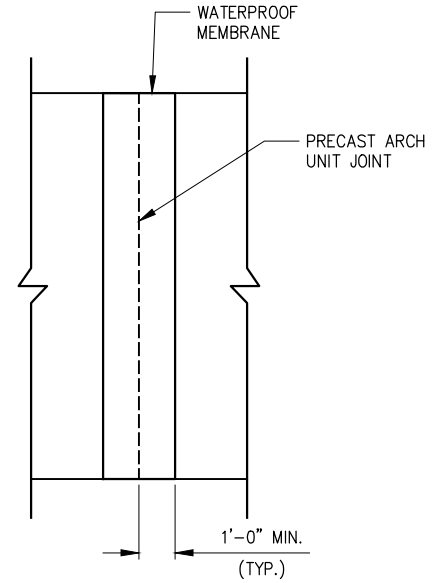
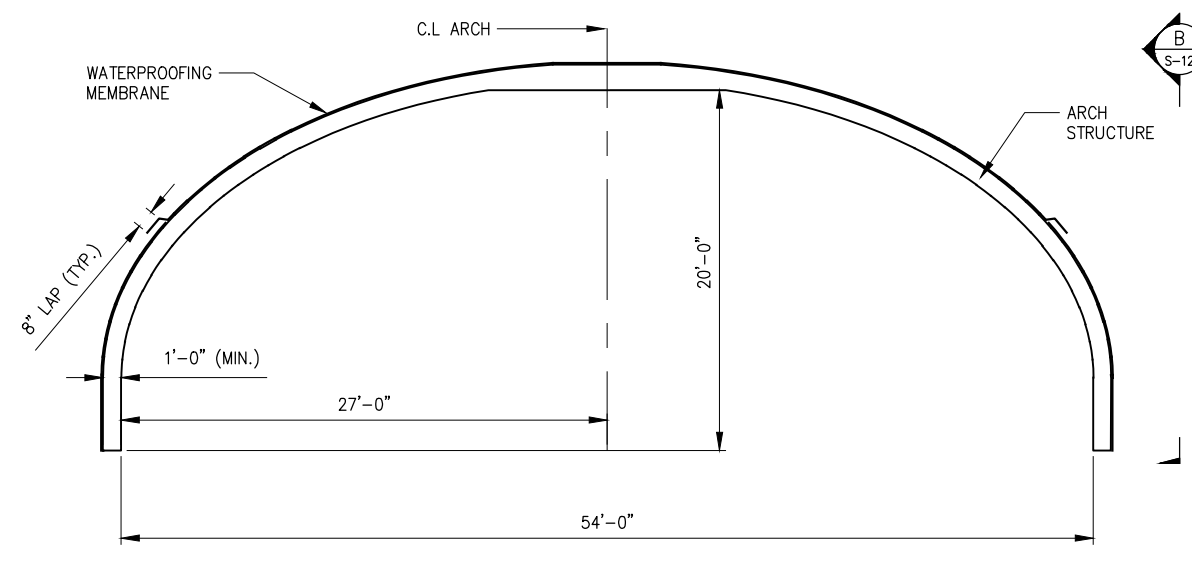
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MAX SERVICE BEARING RESISTANCE, KSF	16
SOIL UNIT WT. KIPS/CF	0.125
FRICTION ANGLE, DEG	32
COEFFICIENT OF SLIDING FRICTION	1

ASSUMED FOOTING LOADS	
VERTICAL, KIPS/FT	46.1
HORIZONTAL, KIPS/FT	3.5

LOAD RATING (LFD)		
	HS	TONS
INVENTORY		
OPERATING		

LRFR RATING FACTORS		
	HL-93	TONS
INVENTORY		
OPERATING		

- NOTES:
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DESIGN SUBMISSIONS FOR ALL PRECAST COMPONENTS, INCLUDING COMPLETE SET OF WORKING DRAWINGS, A COMPLETE SET OF DESIGN AND LOAD RATING CALCULATIONS, AND DETAILED INSTALLATION PROCEDURE. THE DRAWINGS AND THE DESIGN CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN NEW YORK STATE. FABRICATION REQUIREMENTS ARE CONTAINED IN SECTION 562 OF THE STANDARD SPECIFICATIONS.
 - THE LENGTH OF EACH STRUCTURE SEGMENT SHALL BE DETERMINED BY THE CONTRACTOR. IF THE STAGE CONSTRUCTION IS EMPLOYED, THE PRECAST THREE SIDED STRUCTURE SEGMENT LENGTH MUST BE COMPATIBLE WITH STAGING REQUIREMENTS.
 - THE ASSUMED VERTICAL AND HORIZONTAL REACTIONS ARE IN THE ASSUMED FOOTING LOADS TABLE ON THIS SHEET. THE CONTRACTOR MUST SUBMIT A REVISED FOUNDATION DESIGN TO THE ENGINEER IN CHARGE IF THE ACTUAL LOADS OF THE SUPPLIED STRUCTURE EXCEED THESE ASSUMED VALUES. THE REVISED DESIGN SHALL BE SUBMITTED AT THE SAME TIME THE DESIGN CALCULATIONS FOR THE THREE-SIDED STRUCTURE ARE SUBMITTED FOR APPROVAL.
 - FOOTING LOADS IN EXCESS OF THE ASSUMED FOOTING LOADS TABLE REQUIRE THAT THE FOOTING DESIGN BE VERIFIED BY THE CONTRACTOR'S LICENSED ENGINEER.
 - DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.
 - THE PRECAST CONCRETE SPAN UNIT SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THE SUPPLIED PRECAST STRUCTURE SHALL MAINTAIN THE SPAN CLEAR WIDTH AND HEIGHT INDICATED IN THE CONTRACT PLANS.
 - WATERPROOFING MEMBRANE SHALL BE SHEET APPLIED MEMBRANE FROM NYSDOT APPROVED LIST AS COVERED IN SECTION 717-02 OF THE SPECIFICATION. THE COST (FURNISH AND INSTALL) SHALL BE INCLUDED IN THE COST OF THE PRECAST ARCH, ITEM NO. 562.0101.
 - THE FINAL FOUNDATION LOCATION SHALL BE DEPENDENT ON THE WIDTH OF THE ACTUAL ARCH USED. THE CONTRACTOR SHALL ADJUST THE ABUTMENT LOCATION ACCORDINGLY TO ACCOMMODATE THE ACTUAL ARCH SPAN USED WHILE MAINTAINING THE SPAN CLEAR WIDTH AND HEIGHT INDICATED IN THE CONTRACT PLANS.
 - ARCH SHAPE ASSUMED BEBO E54/T6 FOR PURPOSE OF HYDRAULIC FLOW ANALYSIS. CONTRACTOR SHALL DEMONSTRATE THAT THE PROPOSED ARCH PROVIDES EQUIVALENT HYDRAULIC FLOW PERFORMANCE.
 - ADDITIONAL SHIMS ARE ALLOWED AT THE CONTRACTOR'S OPTION. LEG EMBEDMENT INTO FOOTINGS SHALL BE A MINIMUM OF 3". GROUT SHALL MEET THE REQUIREMENTS OF STANDARD SPEC 701-05 OR 701-06.
 - THE LOAD RATING TABLE SHALL BE FILLED IN BY THE EIC FROM INFORMATION RECEIVED FROM THE CONTRACTOR AFTER REVIEW AND APPROVAL BY THE DCES. THE SUBMITTED LOAD RATING INFORMATION SHALL BE IN ACCORDANCE WITH THE AASHTO "MANUAL FOR BRIDGE EVALUATION" WITH ALL INTERIM PROVISIONS IN EFFECT. THE CONTRACTOR SHALL PROVIDE THE LOAD RATINGS IN BOTH LOAD FACTOR RATING (LFD) METHOD AND THE LOAD AND RESISTANCE FACTOR RATING (LRFR) METHOD. THE CONTRACTOR SHALL ALSO PROVIDE ALL LOAD RATING COMPUTATIONS TO THE REGIONAL STRUCTURES ENGINEER.
 - ARCH REINFORCEMENT SHALL BE EPOXY COATED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION 709-04, UNLESS OTHERWISE RECOMMENDED BY THE PRECAST FABRICATOR AND APPROVED BY NYCDEP.



60% DESIGN SUBMITTAL
 SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
 CHECK BEFORE USE
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 IT IS A REDUCED PRINT. SCALE
 ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: J. CIRCOSTA	DRAWN BY: J. CIRCOSTA
CHECKED BY: R. ROMAN, PE	 HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway New York, NY 10036
DESIGN LEAD: O. HUNTER, PE	
SECTION MANAGER:	

NEW YORK CITY
ENVIRONMENTAL PROTECTION
 BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE	*WARNING—IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*
PORTFOLIO MANAGER PAUL COSTA, PE	
EXECUTIVE DIRECTOR SEAN McANDREW, PE	

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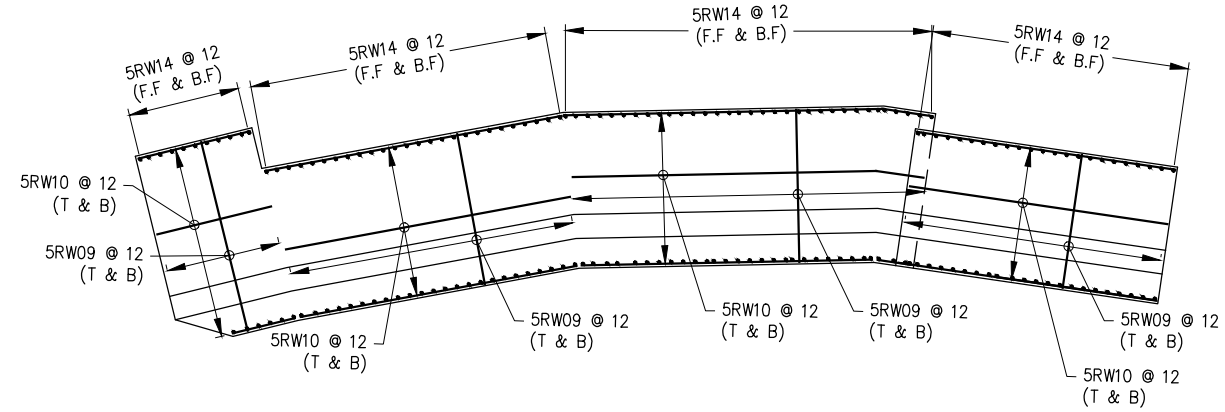
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

PRECAST DETAILS

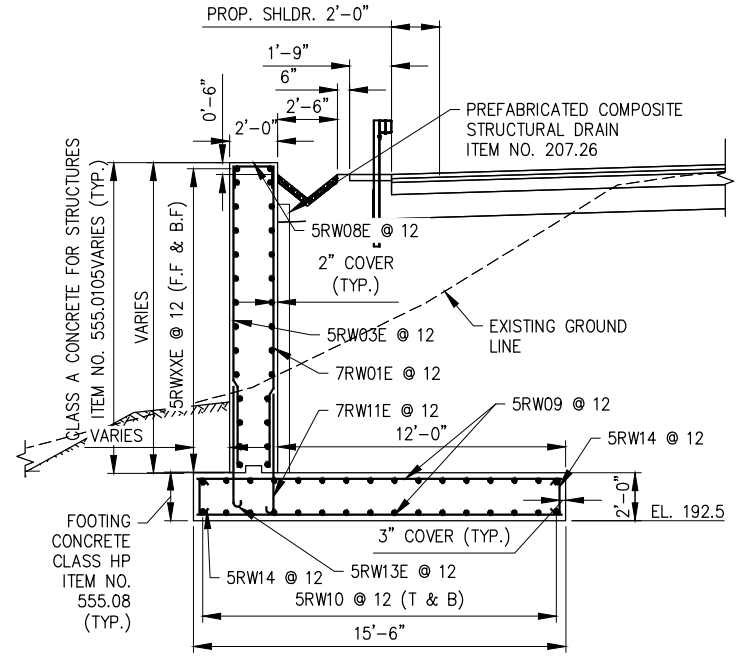
DATE: 04/23/2021
SCALE: NOT TO SCALE
SHEET NO: 36 OF 46
DRAWING NO. S-12

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

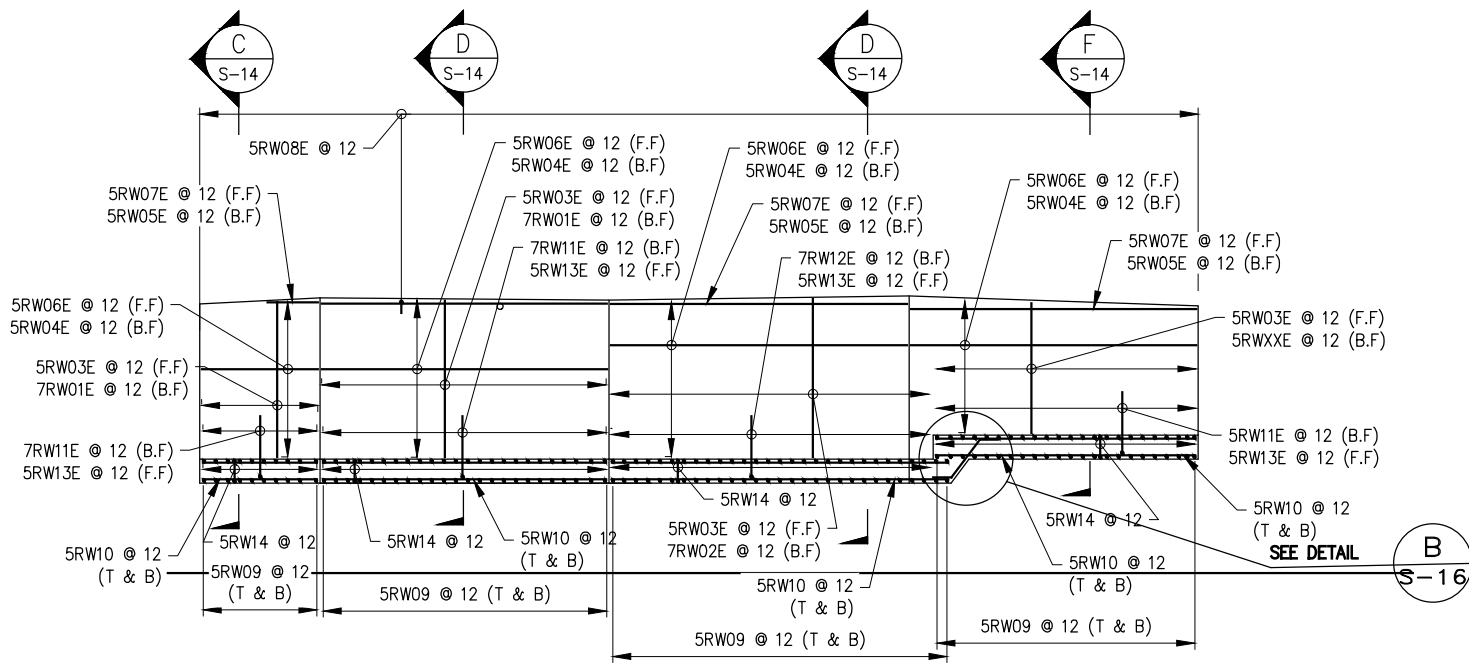
NOTE:
1. SEE DWG S-13 FOR GEOMETRIC DETAILS.



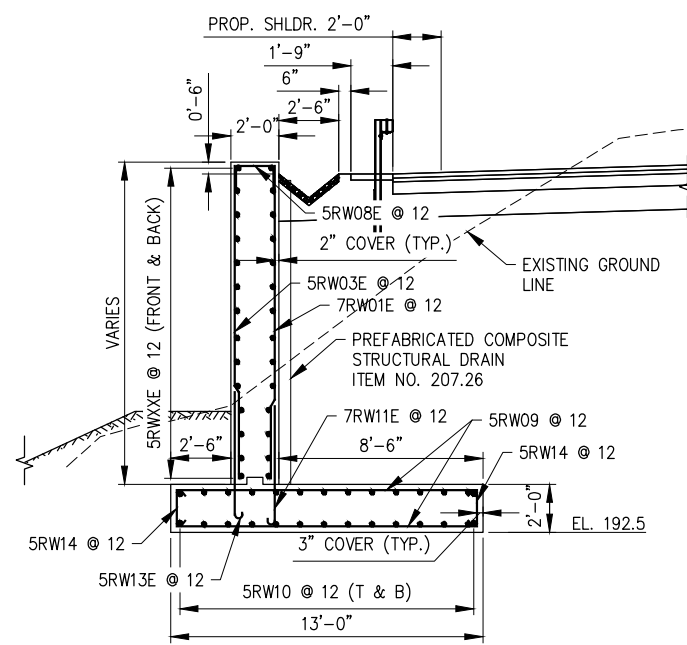
PLAN
SCALE: 1/8"=1'-0"



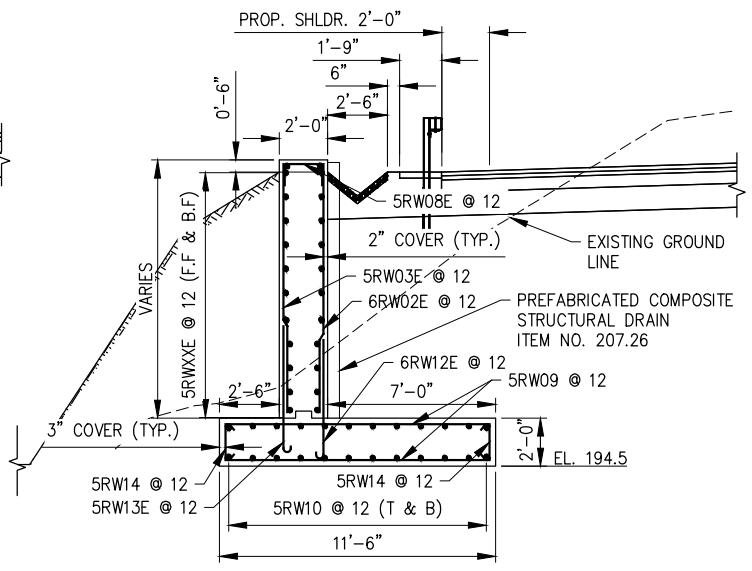
C SECTION C
S-14 SCALE: 1/4"=1'-0"



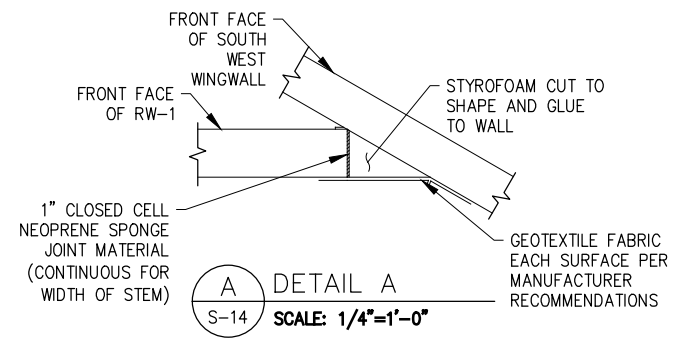
ELEVATION
SCALE: 1/8"=1'-0"



D SECTION D
S-14 SCALE: 1/4"=1'-0"



F SECTION F
S-14 SCALE: 1/4"=1'-0"



A DETAIL A
S-14 SCALE: 1/4"=1'-0"

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SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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Last Saved By: & Date: Cahlyakova, Tuesday, July 06, 2021 and Date Plotted: Wednesday, July 07, 2021 Time: 5:21 PM
Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.366863 Plot Style Table: (N) RED.ctb
Drawing Name: & Location: C:\Users\Cahlyakova\Inprod\Arms37850\34P\TIST CHURCH RW1 Plan & Elevation.dwg

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
C. SHLYAKHOVA
CHECKED BY:
O. HUNTER, P.E.
DESIGN LEAD:
O. HUNTER, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway, New York, NY 10036


Environmental Protection

ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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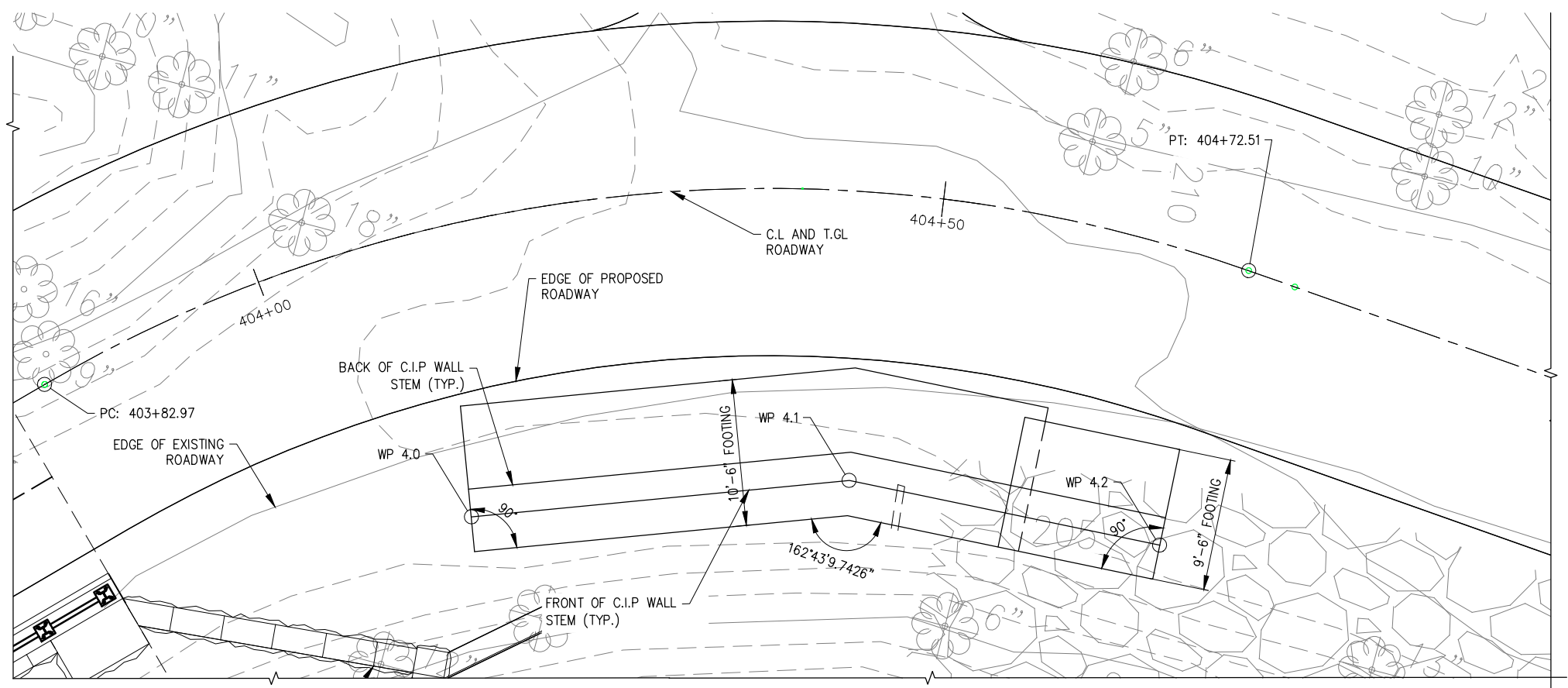
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

SW RETAINING WALL - REBAR DETAILS

DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
38 OF 46
DRAWING NO.
S-14

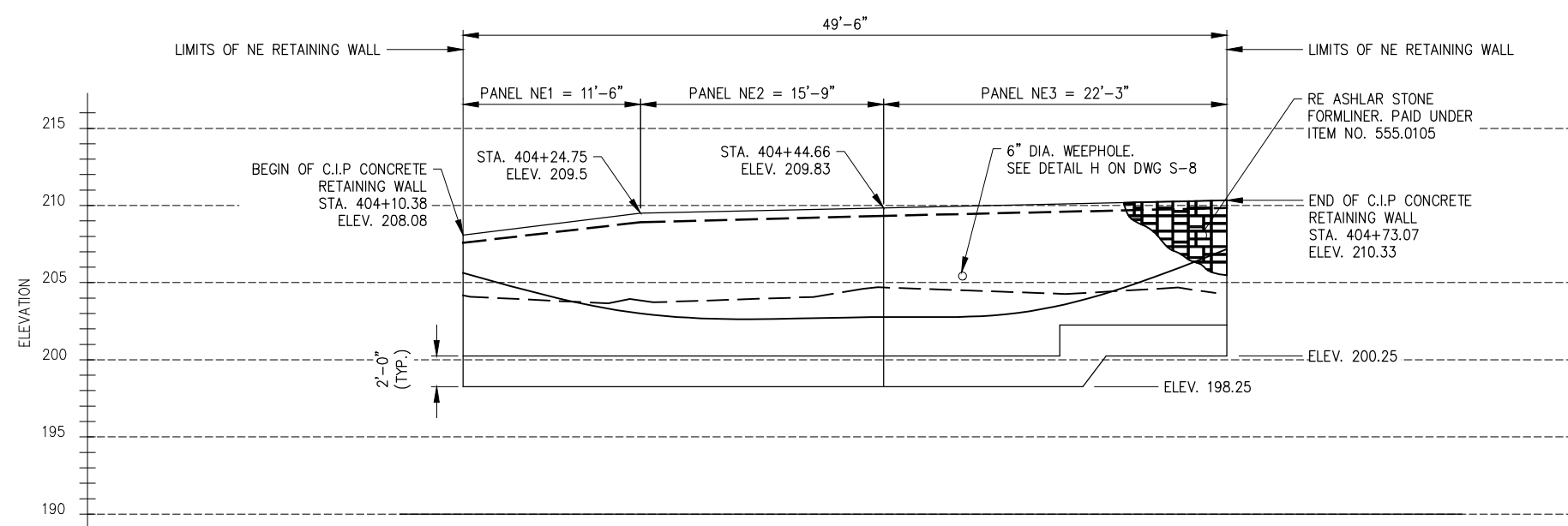
All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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 Drawing Name: & Location: C:\Users\Cshlyakhova\OneDrive\Projects\7850\34P\TIST CHURCH_R1W2 GEOMETRIC LAYOUT.dwg



PLAN
SCALE: 3/16"=1'-0"

NOTE:
1. SEE DWG S-16 FOR DETAILS AND REINFORCEMENT.



ELEVATION
SCALE: 3/16"=1'-0"

WORK POINT	COORDINATES		C.L. BAPTIST CHURCH ROAD	
	NORTHING	EASTING	STATION	OFFSET
WP 4.0	884,465.690200	673,145.816600	404+10.3849	20.750
WP 4.1	884,480.339890	673,168.743743	404+44.6559	20.750
WP 4.2	884,486.320022	673,190.743698	404+73.0744	20.683

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
C. SHLYAKHOVA
CHECKED BY:
O. HUNTER, P.E.
DESIGN LEAD:
O. HUNTER, P.E.
SECTION MANAGER:

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



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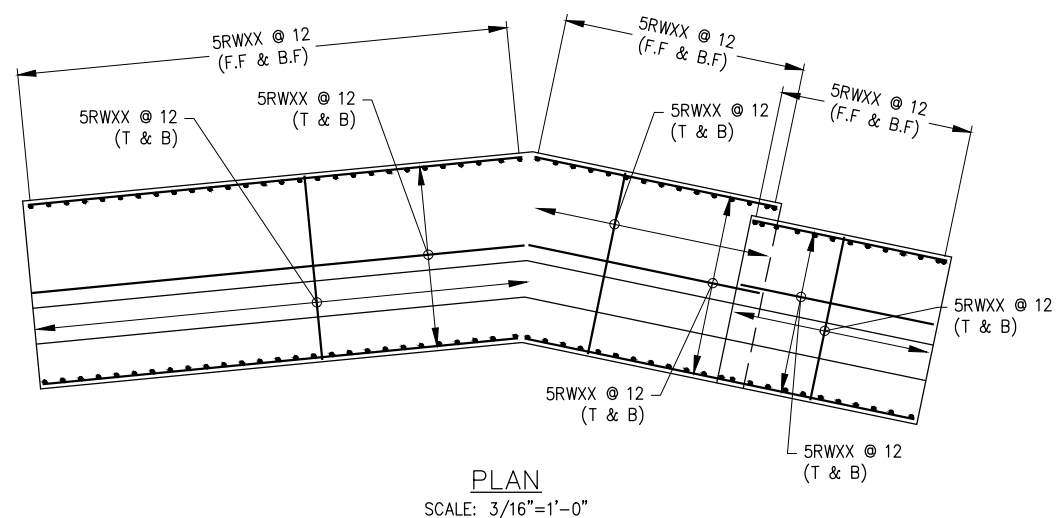
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

NE RETAINING WALL- PLAN & ELEVATION

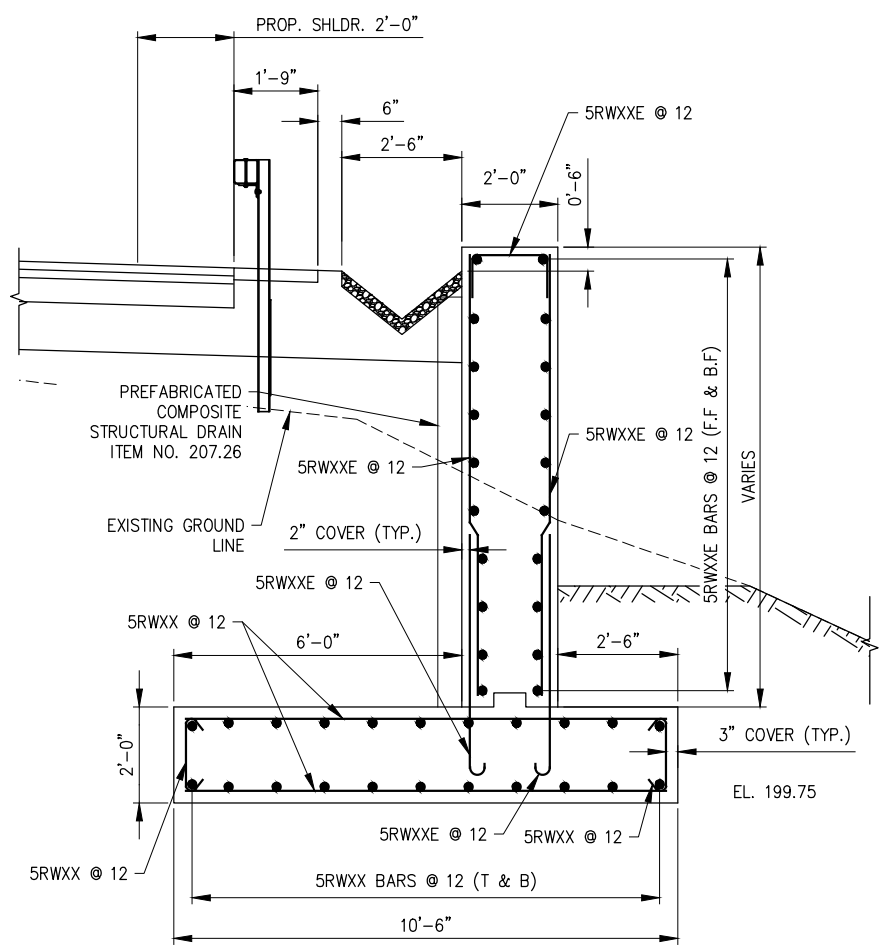
DATE: 04/23/2021
SCALE: AS NOTED
SHEET NO:
39 OF 46
DRAWING NO.
S-15

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

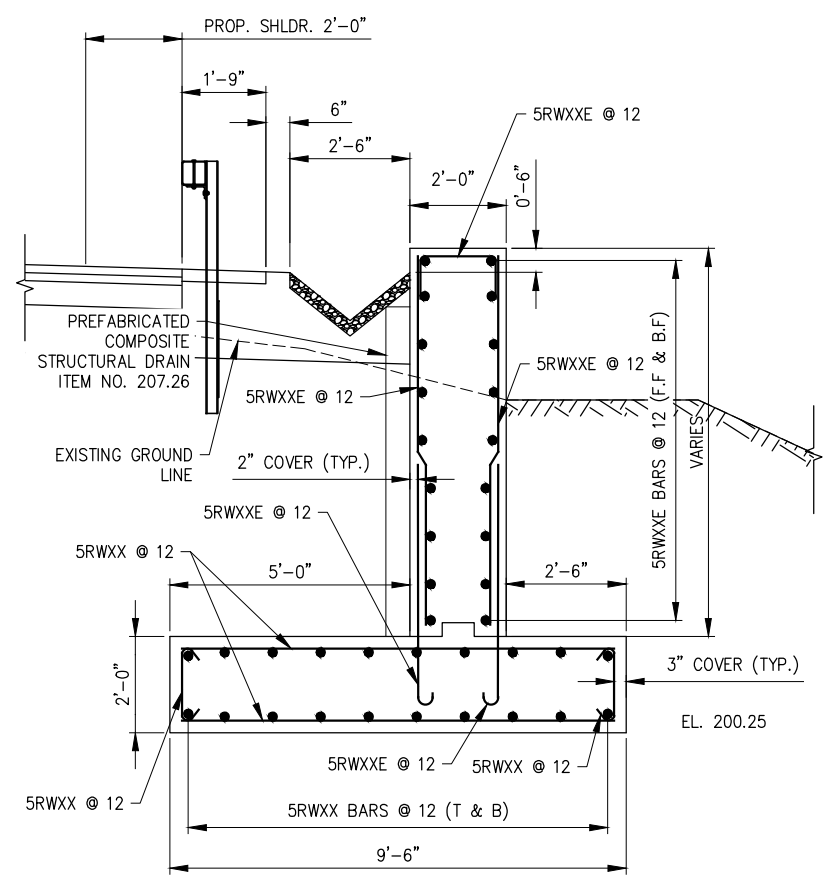
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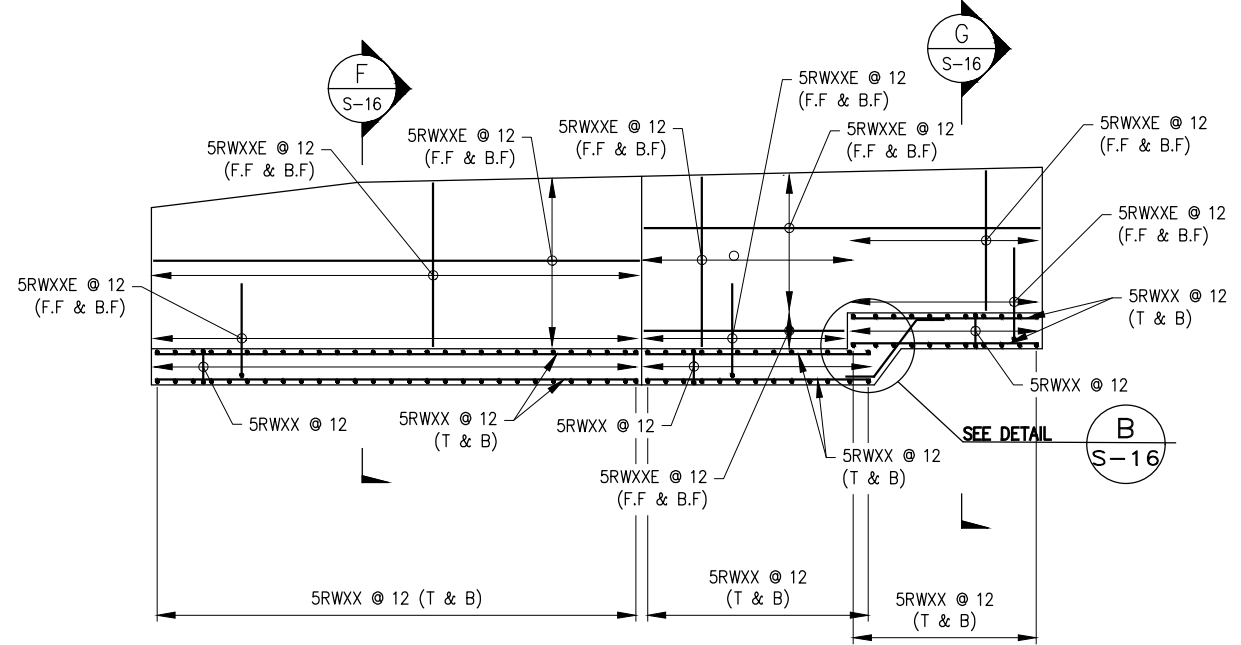
PLAN
SCALE: 3/16"=1'-0"



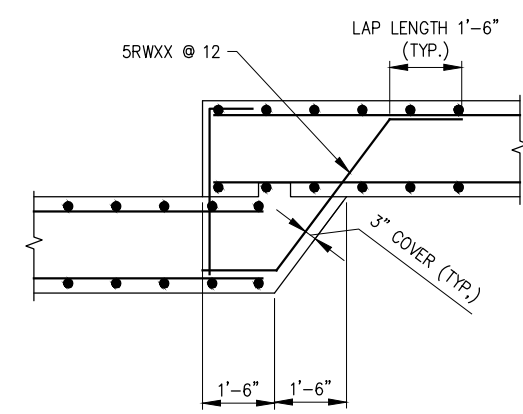
F SECTION F
SCALE: 1/2"=1'-0"



G SECTION G
SCALE: 1/2"=1'-0"



ELEVATION
SCALE: 3/16"=1'-0"





B DETAIL B
SCALE: 1/2"=1'-0"

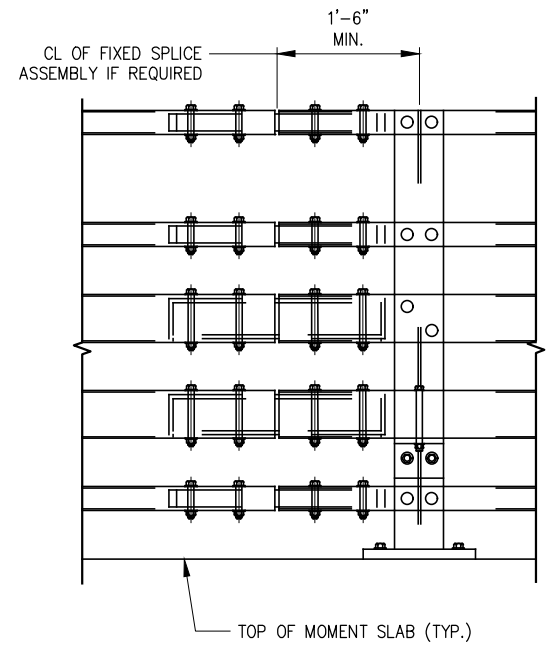
NOTE:
1. SEE DWG S-15 FOR GEOMETRIC DETAILS.

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

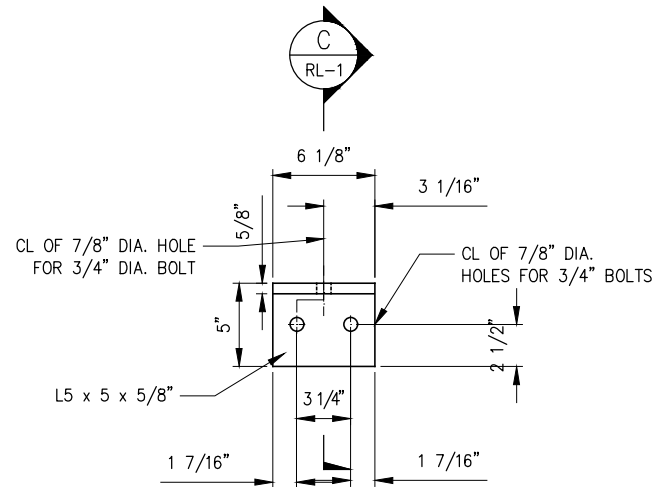
GRAPHIC SCALES
CHECK BEFORE USE
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IT IS A REDUCED PRINT. SCALE
ACCORDINGLY

DESIGNED BY: C. SHLYAKHOVA CHECKED BY: O. HUNTER, P.E. DESIGN LEAD: O. HUNTER, P.E. SECTION MANAGER:		DRAWN BY: J. CIRCOSTA  HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway, New York, NY 10036				ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE PORTFOLIO MANAGER PAUL COSTA, PE EXECUTIVE DIRECTOR SEAN McANDREW, PE		*WARNING—IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.*		NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep		CAPITAL PROJECT WM-30 IN WESTCHESTER COUNTY, NEW YORK CONTRACT CRO-530B NE RETAINING WALL - REBAR DETAILS		DATE: 04/23/2021 SCALE: AS NOTED SHEET NO: 40 OF 46 DRAWING NO. S-16	
NO.	DATE	REVISIONS/DESCRIPTION		APPR'D.											

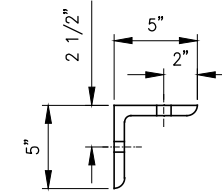
All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.



ELEVATION: STEEL BRIDGE RAILING SPLICE DETAILS
(FIVE-RAIL) - CURBLESS



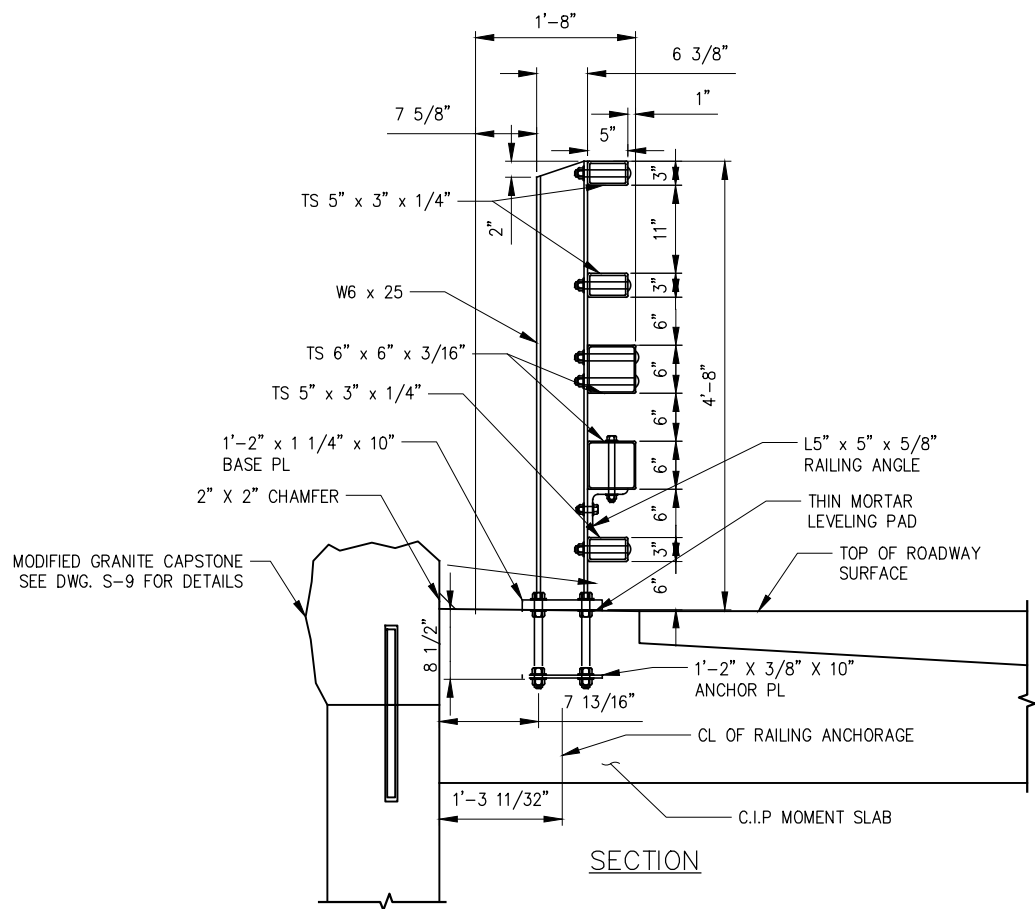
PLAN



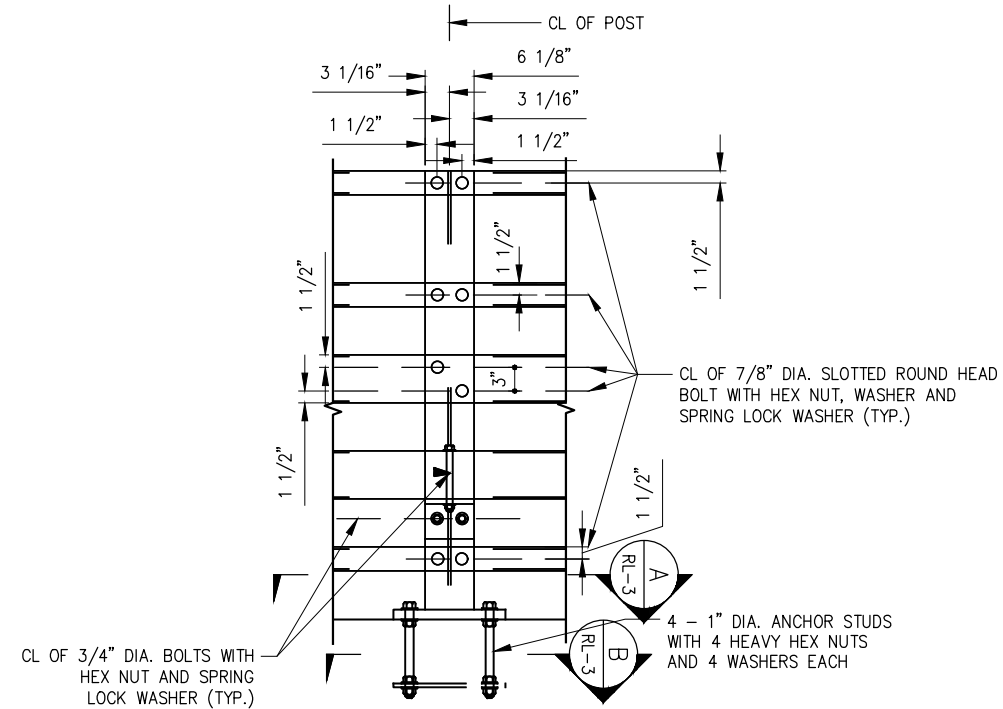
SECTION C
RAILING ANGLE DETAILS
SCALE: NTS

NOTES:

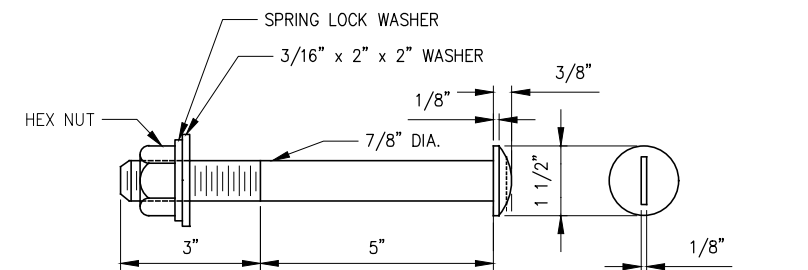
1. ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 568 OF THE STANDARD SPECIFICATIONS.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF $\frac{1}{16}$ ".
3. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB)
4. ALL RAILING IS TO BE FABRICATED AND ERECTED SO THAT THE RAILS ARE PARALLEL TO EACH OTHER AND TO THE GRADE. THE POSTS ARE TO BE TRULY VERTICAL.
5. WHEN THE RAILING IS TO BE PLACED ON A PREFORMED SURFACE, THE BASE PLATE MAY BE MADE PARALLEL TO THE GRADE OR MAY BE PERPENDICULAR TO THE POST AND MADE LEVEL BY THE USE OF (1:1 RATIO CEMENT TO SAND) MORTAR.
6. TUBULAR STEEL RAILS, RAIL POSTS, NUTS AND WASHERS, CARRIAGE BOLTS, BASE PLATE ASSEMBLIES, ANCHOR STUDS, ANCHOR PLATES, ANY NECESSARY SHIMS AND MORTAR PADS TO BE PAID FOR UNDER THE RAILING ITEM.
7. RAILING COMPONENTS ARE TO BE GALVANIZED IN ACCORDANCE WITH MATERIAL SPECIFICATION 719-01.
8. CEMENT MORTAR PADS SHALL BE PAID FOR UNDER THE RAILING ITEM.
9. REPAIRS TO ALL DAMAGED GALVANIZED SURFACES INCLUDING ANCHOR STUDS SHALL BE MADE IN ACCORDANCE WITH MATERIAL SPECIFICATION 719-01.
10. DETAILS ON THE DRAWING LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.
11. FOR FULL ELEVATION OF RAILING SEE DWG S-11.



SECTION
STEEL BRIDGE RAILING SPLICE DETAILS
(FIVE-RAIL) - CURBLESS



ELEVATION



SLOTTED ROUND HEAD BOLT

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

GRAPHIC SCALES
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Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.356863 Plot Style Table: (N) BDED_BW.ctb
Drawing Name: & Location: C:\Users\cehlykhova\Inprod\Arms37850\RAILING DETAILS 1.dwg

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY:
J. CIRCOSTA
CHECKED BY:
R. ROMAN, PE
DESIGN LEAD:
O. HUNTER, PE
SECTION MANAGER:
ENTER SECTION CHIEF NAME

DRAWN BY:
J. CIRCOSTA

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

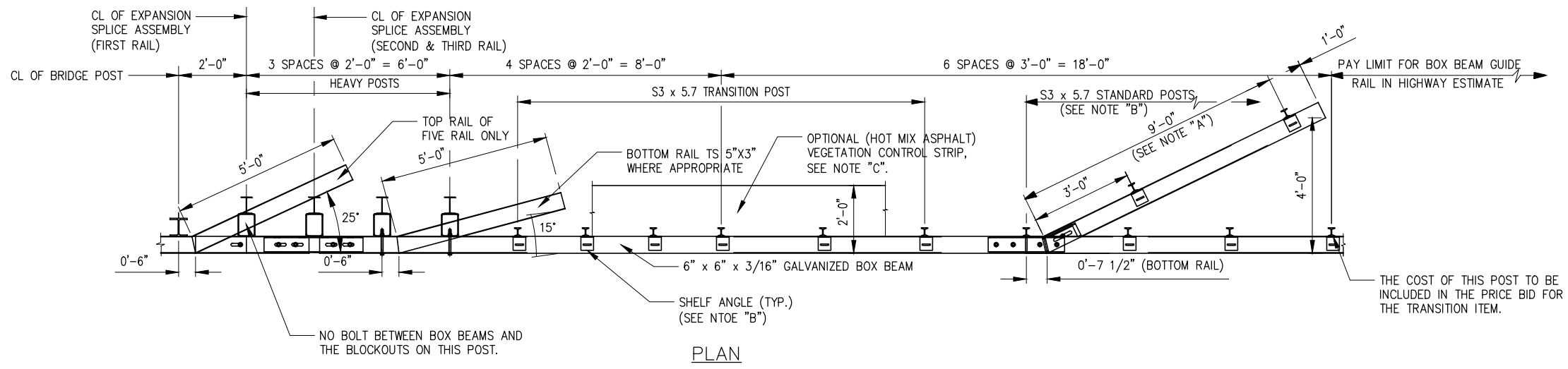
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

RAILING DETAILS-1

DATE: 04/23/2021
SCALE: **NTS**
SHEET NO:
41 OF **46**
DRAWING NO.
RL-1



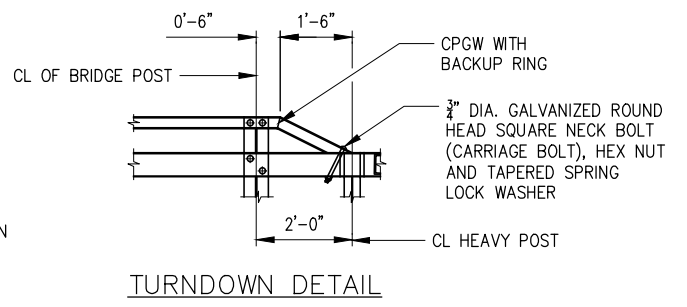
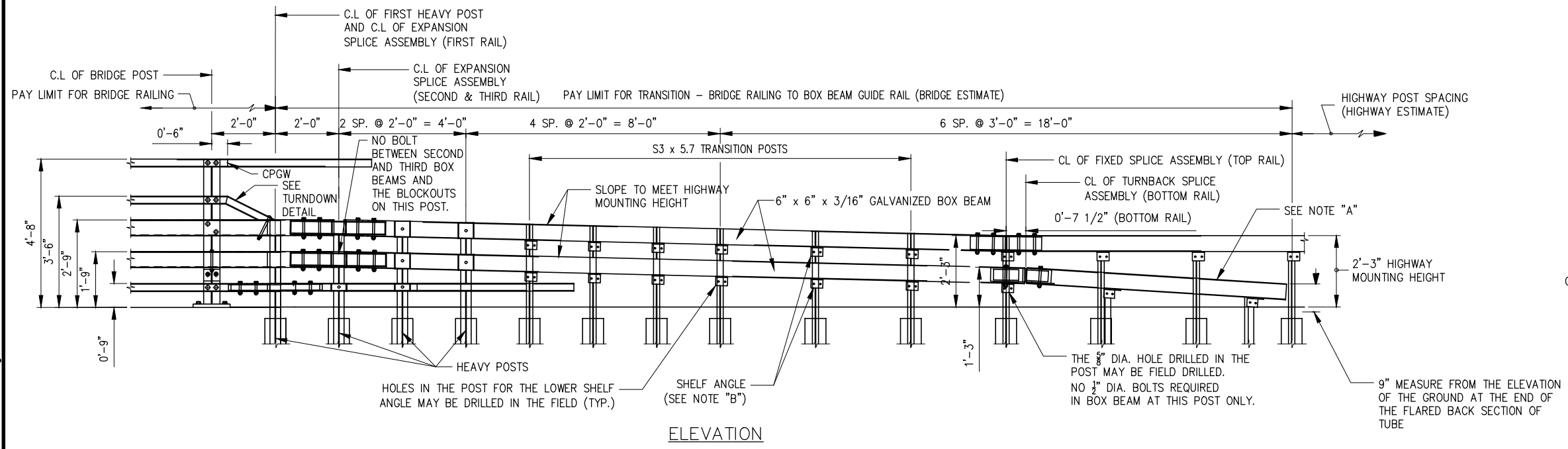
NOTES:

NOTE "A":
THE COST OF THE POSTS, SPLICE TUBE AND RAIL FOR THE LOWER TUBE FLARE SECTION IS INCLUDED IN THE PRICE BID FOR THE TRANSITION ITEM.

NOTE "B":
SEE TYPICAL RAIL TO POST CONNECTION DETAIL ON CURRENT HIGHWAY STANDARD SHEET TITLED "BOX BEAM GUIDE RAIL" FOR FURTHER GUIDANCE REFER TO INDEX OF DRAWINGS SHEET, G-2.

NOTE "C":
PAVE THIS AREA WITH THE SAME MATERIAL USED IN THE STABILIZED SHOULDER. PAYMENT WILL BE MADE UNDER THE SHOULDER MATERIAL ITEM (HIGHWAY ESTIMATE).

TRANSITION LAYOUT NOTE:
TYPICAL STRAIGHT LINE TRANSITION SHOWN. CONTRACTOR TO DEVELOP AND SUBMIT SHOP DRAWINGS FOR ACTUAL TRANSITION AT EACH CORNER OF THE BRIDGE TOGETHER WITH BRIDGE RAILING SHOP DRAWINGS.



Last Saved By: & Date: jcircosta, Friday, April 23, 2021 and Date Plotted: Tuesday, June 01, 2021 Time: 5:46 PM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.396863 Plot Style Table: (N) BRED_BW.ctb
 Drawing Name: & Location: C:\users\jcircosta\Myprod\Arms37850\RAILING DETAILS 2.dwg

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

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DESIGNED BY: J. CIRCOSTA	DRAWN BY: J. CIRCOSTA
CHECKED BY: R. ROMAN, PE	
DESIGN LEAD: O. HUNTER, PE	
SECTION MANAGER: ENTER SECTION CHIEF NAME	HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER PAUL COSTA, PE
EXECUTIVE DIRECTOR SEAN McANDREW, PE

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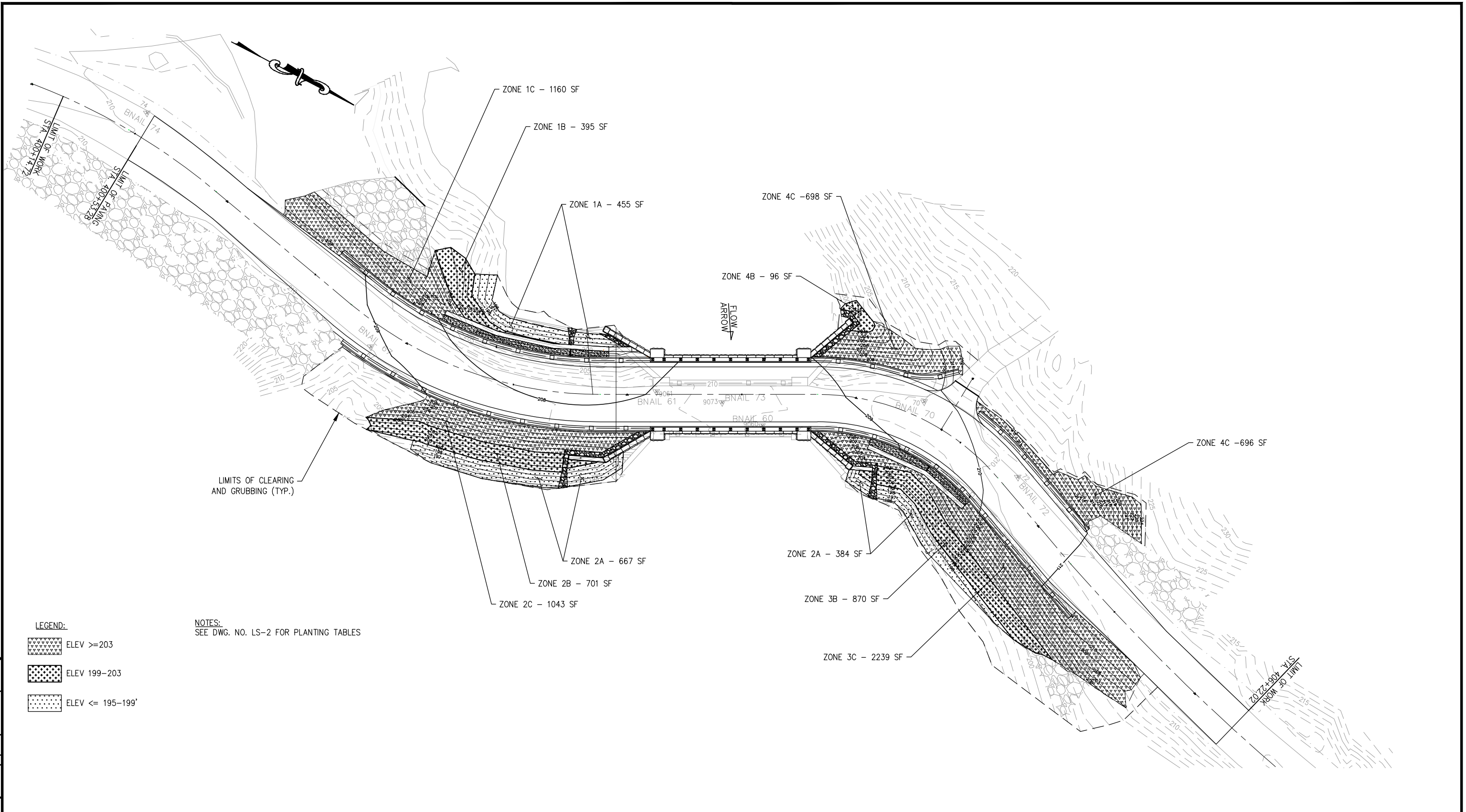
CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

RAILING DETAILS -2

DATE: 04/23/2021
SCALE: NOT TO SCALE
SHEET NO: 42 OF 46
DRAWING NO. RL-2

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By: & Date: Ncrevier, Wednesday, May 05, 2021, and Date Plotted: Tuesday, June 01, 2021, Time: 9:10 AM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.356883 Plot Style Table: (N)_BEDC_BW.ctb
 Drawing Name: & Location: C:\Users\cshlyakrova\improd\ams37923\LS-1.dwg



LEGEND:

	ELEV >=203
	ELEV 199-203
	ELEV <= 195-199'

NOTES:
SEE DWG. NO. LS-2 FOR PLANTING TABLES

60% DESIGN SUBMITTAL
SUBMITTAL DATE: 4/23/2021

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DESIGNED BY:
E. BOETSCH
CHECKED BY:
R. ROMAN, PE
DESIGN LEAD:
O. HUNTER, PE
SECTION MANAGER:

DRAWN BY:
N.CREVIEW, PE

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036



ACCOUNTABLE MANAGER
JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER
PAUL COSTA, PE
EXECUTIVE DIRECTOR
SEAN McANDREW, PE

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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B

LANDSCAPING PLAN

DATE: 04/23/2021
SCALE: 1"=20'-0"
SHEET NO:
45 OF 46
DRAWING NO.
LS-1

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Last Saved By: & Date: Norevier, Friday, April 23, 2021, and Date Plotted: Tuesday, June 01, 2021, Time: 11:45 AM
 Paper Size: ANSI A (8.50 x 11.00 inches) Plot Scale: 0.386863 Plot Style Table: (N)_BEDC_BW.ctb
 Drawing Name: & Location: C:\Users\cshlyakrova\Myprod\Arms37923\LS-2.dwg

ZONE 1A -DISTURBED AREA 195-199'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
SPECKLED ALDER	ALNUS INCANA	FACW	1 INCH CALIPER	3
			TREE TOTAL	3
SHRUBS				
BUTTONBUSH	CEPHALANTUS OCCIDENTALIS	OBL	1 GALLON	3
			SHRUB TOTAL	3

ZONE 1B-DISTURBED AREA 199-203'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
AMERICAN HORNBEAM	CARPINUS CAROLINIANA	FAC	1 INCH CALIPER	1
			TREE TOTAL	1
SHRUBS				
SPICEBUSH	LINDERA BENZOIN	FACW	1 GALLON	1
			SHRUB TOTAL	1

ZONE 1C-DISTURBED AREA 203+'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
NORTHERN RED OAK	QUERCUS RUBRA	FACU	1 INCH CALIPER	3
BLACK OAK	QUERCUS VELUTINA	FACU	1 INCH CALIPER	3
SWEETGUM	LIQUIDAMBAR STYRACIFLUA	FACU	1 INCH CALIPER	2
			TREE TOTAL	8
SHRUBS				
WITCH HAZEL	HAMAMELIS VIRGINIANA	FACU	1 GALLON	3
GREAT LAUREL	RHODODENDRON MAXIMUM	FAC	1 GALLON	3
MAPLE LEAF VIBURNUM	VIBURNUM ACERIFOLIUM	UPL	1 GALLON	3
FLOWERING DOGWOOD	CORNUS FLORIDA	FACU	1 GALLON	3
			SHRUB TOTAL	12

ZONE 2A-DISTURBED AREA 195-199'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
SPECKLED ALDER	ALNUS INCANA	FACW	1 INCH CALIPER	2
AMERICAN ELM	ULMUS AMERICANA	FACW	1 INCH CALIPER	2
			TREE TOTAL	4
SHRUBS				
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	1 GALLON	2
WINTERBERRY	ILEX VERTICILLATA	FACW	1 GALLON	3
			SHRUB TOTAL	5

ZONE 2B-DISTURBED AREA 199-203'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
RIVER BIRCH	BETULA NIGRA	FACW	1 INCH CALIPER	2
AMERICAN HORNBEAM	CARPINUS CAROLINIANA	FAC	1 INCH CALIPER	2
			TREE TOTAL	4
SHRUBS				
PUSSY WILLOW	SALIX DISCOLOR	FACW	1 GALLON	3
HUGHBUSH BLUEBERRY	VACCINIUM CORYMBOSUM	FACW	1 GALLON	3
			SHRUB TOTAL	6

ZONE 2C-DISTURBED AREA 203+'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
NORTHERN RED OAK	QUERCUS RUBRA	FACU	1 INCH CALIPER	3
COMMON SERVICEBERRY	AMELANCHIER ARBOREA	FACU	1 INCH CALIPER	3
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	1 INCH CALIPER	3
SWEET BIRCH	BETULA LENTA	FAC	1 INCH CALIPER	2
			TREE TOTAL	11
SHRUBS				
WITCH HAZEL	HAMAMELIS VIRGINIANA	FACU	1 GALLON	3
GREAT LAUREL	RHODODENDRON MAXIMUM	FAC	1 GALLON	3
MAPLE LEAF VIBURNUM	VIBURNUM ACERIFOLIUM	UPL	1 GALLON	3
FLOWERING DOGWOOD	CORNUS FLORIDA	FACU	1 GALLON	3
LOW BUSH BLUEBERRY	VACCINIUM ANGUSTIFLORIUM	FACU	1 GALLON	4
			SHRUB TOTAL	16

ZONE 3A-DISTURBED AREA 195-199'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
SPECKLED ALDER	ALNUS INCANA	FACW	1 INCH CALIPER	2
AMERICAN ELM	ULMUS AMERICANA	FACW	1 INCH CALIPER	2
			TREE TOTAL	4
SHRUBS				
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	1 GALLON	3
WINTERBERRY	ILEX VERTICILLATA	FACW	1 GALLON	5
			SHRUB TOTAL	8

ZONE 3B-DISTURBED AREA 199-203'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
RIVER BIRCH	BETULA NIGRA	FACW	1 INCH CALIPER	3
RED MAPLE	ACER RUBRUM	FAC	1 INCH CALIPER	3
AMERICAN HORNBEAM	CARPINUS CAROLINIANA	FAC	1 INCH CALIPER	2
			TREE TOTAL	8
SHRUBS				
PUSSY WILLOW	SALIX DISCOLOR	FACW	1 GALLON	3
HUGHBUSH BLUEBERRY	VACCINIUM CORYMBOSUM	FACW	1 GALLON	3
SPICEBUSH	LINDERA BENZOIN	FACW	1 GALLON	4
			SHRUB TOTAL	10

ZONE 3C-DISTURBED AREA 203+'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
NORTHERN RED OAK	QUERCUS RUBRA	FACU	1 INCH CALIPER	3
BLACK OAK	QUERCUS VELUTINA	FACU	1 INCH CALIPER	3
SWEETGUM	LIQUIDAMBAR STYRACIFLUA	FACU	1 INCH CALIPER	3
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	1 INCH CALIPER	3
SWEET BIRCH	BETULA LENTA	FAC	1 INCH CALIPER	3
COMMON SERVICEBERRY	AMELANCHIER ARBOREA	FACU	1 INCH CALIPER	2
			TREE TOTAL	17
SHRUBS				
WITCH HAZEL	HAMAMELIS VIRGINIANA	FACU	1 GALLON	3
GREAT LAUREL	RHODODENDRON MAXIMUM	FAC	1 GALLON	3
MAPLE LEAF VIBURNUM	VIBURNUM ACERIFOLIUM	UPL	1 GALLON	4
FLOWERING DOGWOOD	CORNUS FLORIDA	FACU	1 GALLON	3
LOW BUSH BLUEBERRY	VACCINIUM ANGUSTIFLORIUM	FACU	1 GALLON	6
CANADIAN SERVICEBERRY	AMELANCHEIR CANADENIS VAR. CANADENIS	FAC	1 GALLON	6
			SHRUB TOTAL	25

ZONE 4B-DISTURBED AREA 199-203'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
RIVER BIRCH	BETULA NIGRA	FACW	1 INCH CALIPER	1
AMERICAN HORNBEAM	CARPINUS CAROLINIANA	FAC	1 INCH CALIPER	2
			TREE TOTAL	3
SHRUBS				
PUSSY WILLOW	SALIX DISCOLOR	FACW	1 GALLON	1
HUGHBUSH BLUEBERRY	VACCINIUM CORYMBOSUM	FACW	1 GALLON	2
			SHRUB TOTAL	3

ZONE 4C-DISTURBED AREA 203+'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
NORTHERN RED OAK	QUERCUS RUBRA	FACU	1 INCH CALIPER	3
BLACK OAK	QUERCUS VELUTINA	FACU	1 INCH CALIPER	3
SWEETGUM	LIQUIDAMBAR STYRACIFLUA	FACU	1 INCH CALIPER	2
SWEET BIRCH	BETULA LENTA	FAC	1 INCH CALIPER	2
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	1 INCH CALIPER	3
			TREE TOTAL	13
SHRUBS				
WITCH HAZEL	HAMAMELIS VIRGINIANA	FACU	1 GALLON	3
GREAT LAUREL	RHODODENDRON MAXIMUM	FAC	1 GALLON	3
AMERICAN HYDRANGEA	HYDRANGEA ABORESCENS	FACU	1 GALLON	6
LOW BUSH BLUEBERRY	VACCINIUM ANGUSTIFLORIUM	FACU	1 GALLON	5
CANADIAN SERVICEBERRY	AMELANCHEIR CANADENIS VAR. CANADENIS	FAC	1 GALLON	3
			SHRUB TOTAL	20


ZONE 4D-DISTURBED AREA 203+'

COMMON NAME	SCIENTIFIC NAME	WETLAND STATUS	SIZE	QUANTITY
TREES				
NORTHERN RED OAK	QUERCUS RUBRA	FACU	1 INCH CALIPER	1
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	1 INCH CALIPER	1
SWEET BIRCH	BETULA LENTA	FAC	1 INCH CALIPER	1
			TREE TOTAL	3
SHRUBS				
CANADIAN SERVICEBERRY	AMELANCHEIR CANADENIS VAR. CANADENIS	FAC	1 GALLON	3
			SHRUB TOTAL	3

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 SUBMITTAL DATE: 4/23/2021

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: N. CREVIER, PE	DRAWN BY: N. CREVIER, PE
CHECKED BY: C. JENNE, PE	 HARDESTY & HANOVER, LLC ENGINEERING 1501 Broadway New York, NY 10036
DESIGN LEAD: R. ROMAN, PE	
SECTION MANAGER:	



ACCOUNTABLE MANAGER JEFFREY A. BUSSE, PE
PORTFOLIO MANAGER PAUL COSTA, PE
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CAPITAL PROJECT WM-30
IN WESTCHESTER COUNTY, NEW YORK
CONTRACT CRO-530B
 LANDSCAPING PLANTING TABLES

DATE: 04/23/2021
SCALE: 1"=20'-0"
SHEET NO: 46 OF 46
DRAWING NO. LS-2