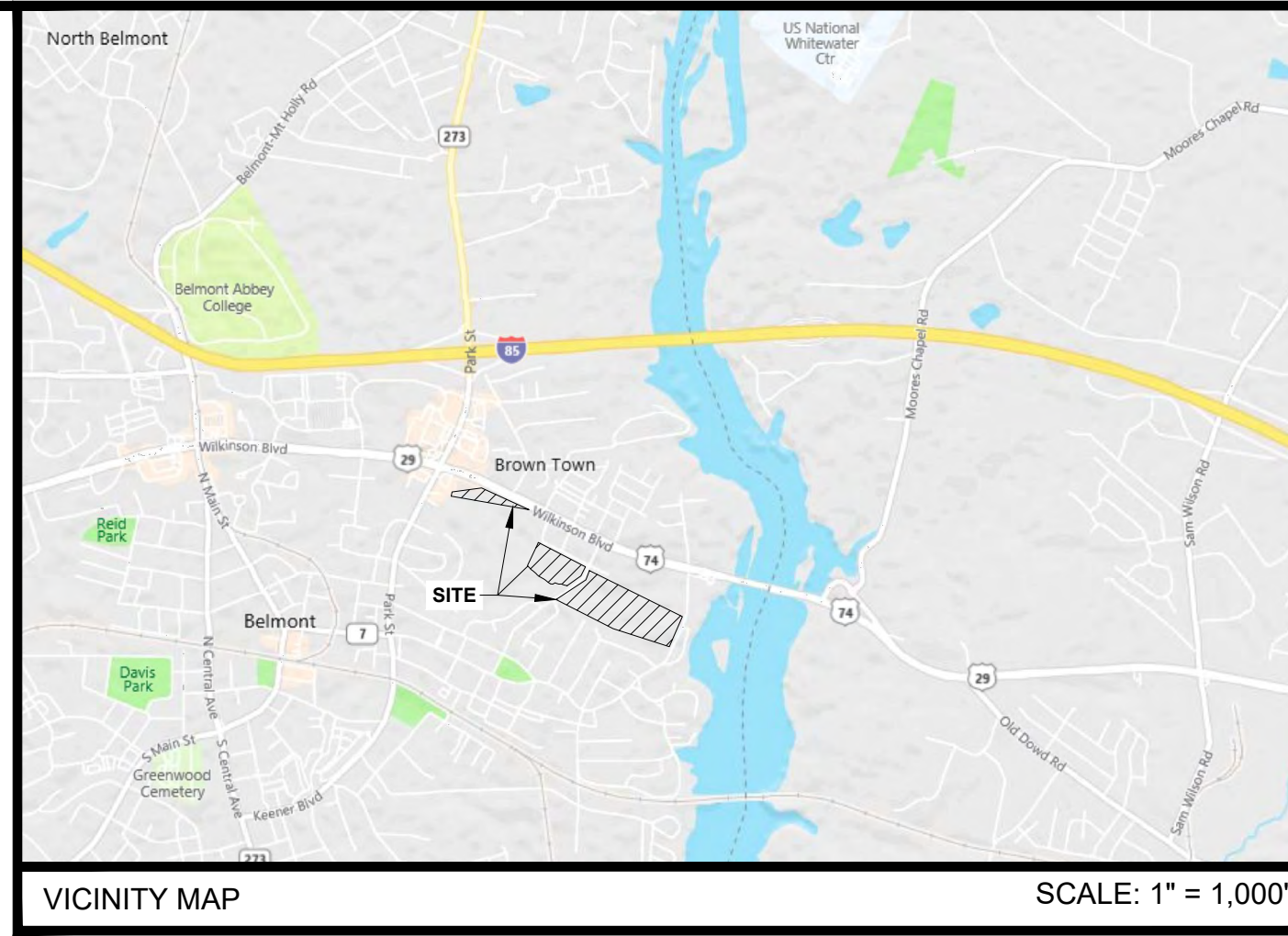
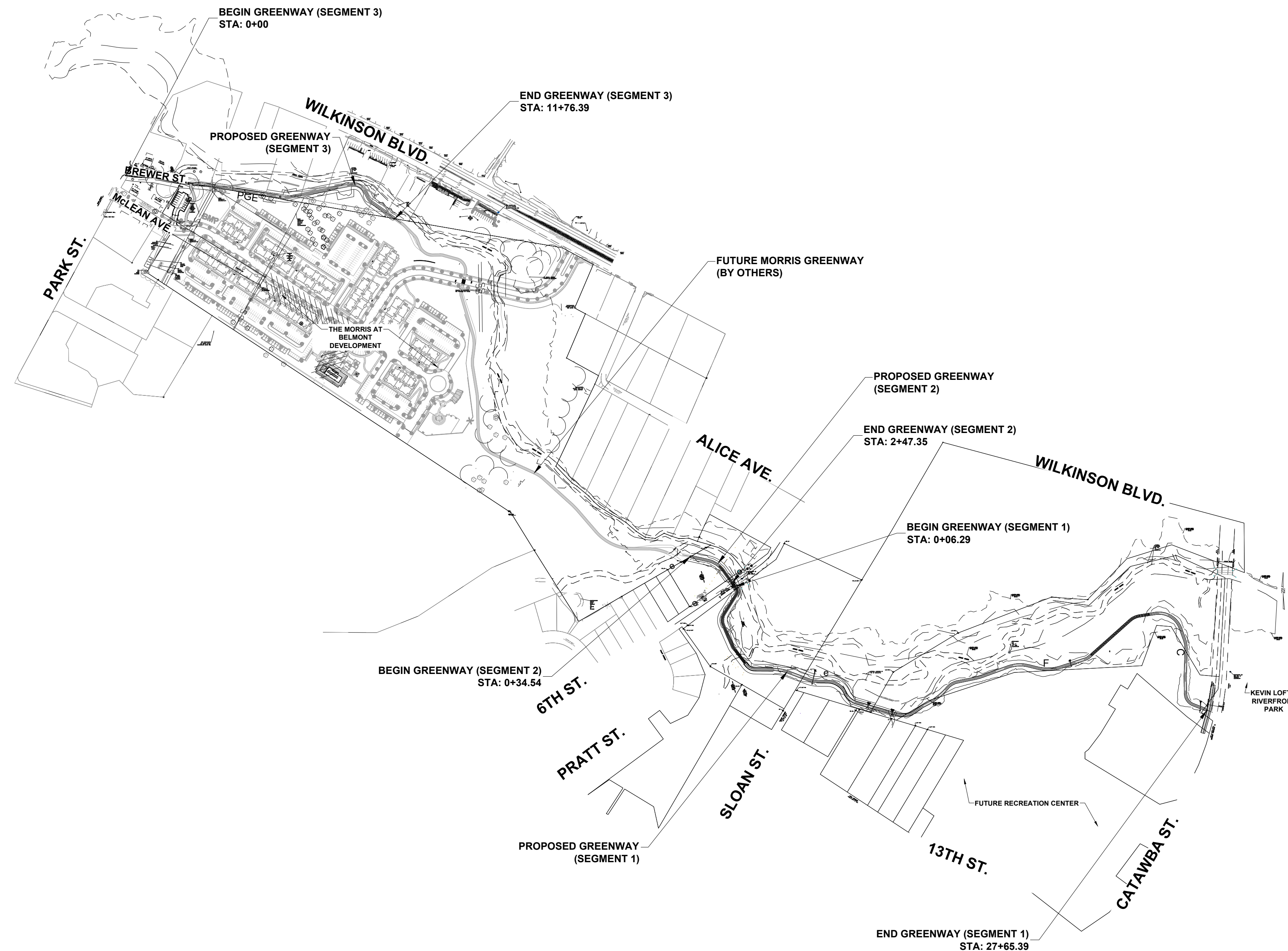


# ABBHEY CREEK GREENWAY

## LOCATED IN BELMONT, NORTH CAROLINA



INDEX OF SHEETS			
SHEET NO.	SHEET NAME	ORIGINAL DATE	REVISED DATE
C0.0	COVER SHEET	8-16-2021	
C0.1	SHEET INDEX	8-16-2021	
C1.2	GENERAL NOTES	8-16-2021	
C2.0 - C2.4	TYPICAL SECTIONS	8-16-2021	
C2.5 - C2.11	DETAILS	8-16-2021	
C3.0 - C3.6	PLAN AND PROFILE (SEG. 1)	8-16-2021	
C3.8	PLAN AND PROFILE (SEG. 2)	8-16-2021	
C3.9 - C3.11	PLAN AND PROFILE (SEG. 3)	8-16-2021	
C3.12	PARKING LOT LAYOUT	8-16-2021	
C6.0 - C6.1	CONSTRUCTION ACCESS PLANS	8-16-2021	
C7.0	EROSION CONTROL NOTES	8-16-2021	
C7.1 - C7.2	EROSION CONTROL DETAILS	8-16-2021	
C7.3 - C7.9	EROSION CONTROL (SEG. 1)	8-16-2021	
C7.10	EROSION CONTROL (SEG. 2)	8-16-2021	
C7.11 - C7.13	EROSION CONTROL (SEG. 3)	8-16-2021	
C11.0 - C11.1	CROSS SECTIONS (SEG. 1)	8-16-2021	
C11.2	CROSS SECTIONS (SEG. 2)	8-16-2021	
C11.3	CROSS SECTIONS (SEG. 3)	8-16-2021	
S-0 - S-6	STRUCTURE SHEETS	8-16-2021	



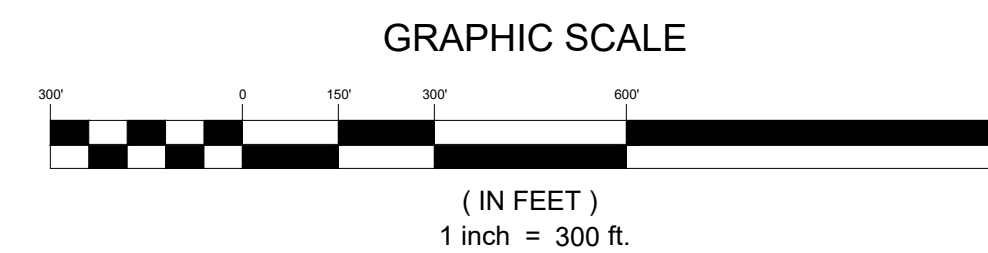
**ENGINEERING FIRM:** ESP ASSOCIATES, INC.  
 ADDRESS: 3475 LAKEMONT BLVD.  
 FORT MILL, SC 29708  
 PHONE: (803) 802-2440  
 FAX: (802) 802-2515  
 CONTACT: JOHN SCOTT CHILDERS, P.E.

**DEVELOPER:** CITY OF BELMONT  
 ADDRESS: 37 N MAIN STREET  
 BELMONT, NORTH CAROLINA 28012  
 PHONE: (704) 829-4010  
 CONTACT: TIFFANY FARO, CZO

**REVIEW AGENCY:** CITY OF BELMONT PLANNING DEPARTMENT  
 ADDRESS: 37 N MAIN STREET  
 BELMONT, NORTH CAROLINA 28012  
 PHONE: (704) 901-2610

**REVIEW AGENCY:** GASTON COUNTY NATURAL RESOURCES  
 ADDRESS: 1303 CHERRYVILLE HIGHWAY  
 DALLAS, NORTH CAROLINA 28034  
 PHONE: (704) 922-2157

THIS SET IS CURRENT THROUGH SHEET DATE 8-16-2021



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 3475 Lakemont Blvd.  
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 704-802-2440 (NC)  
 803-802-2440 (SC)  
 www.espassociates.com

**ESP**

PRELIMINARY  
 NOT FOR  
 CONSTRUCTION

NO.	DATE	REVISION	BY

**COVER SHEET**

**ABBHEY CREEK GREENWAY**

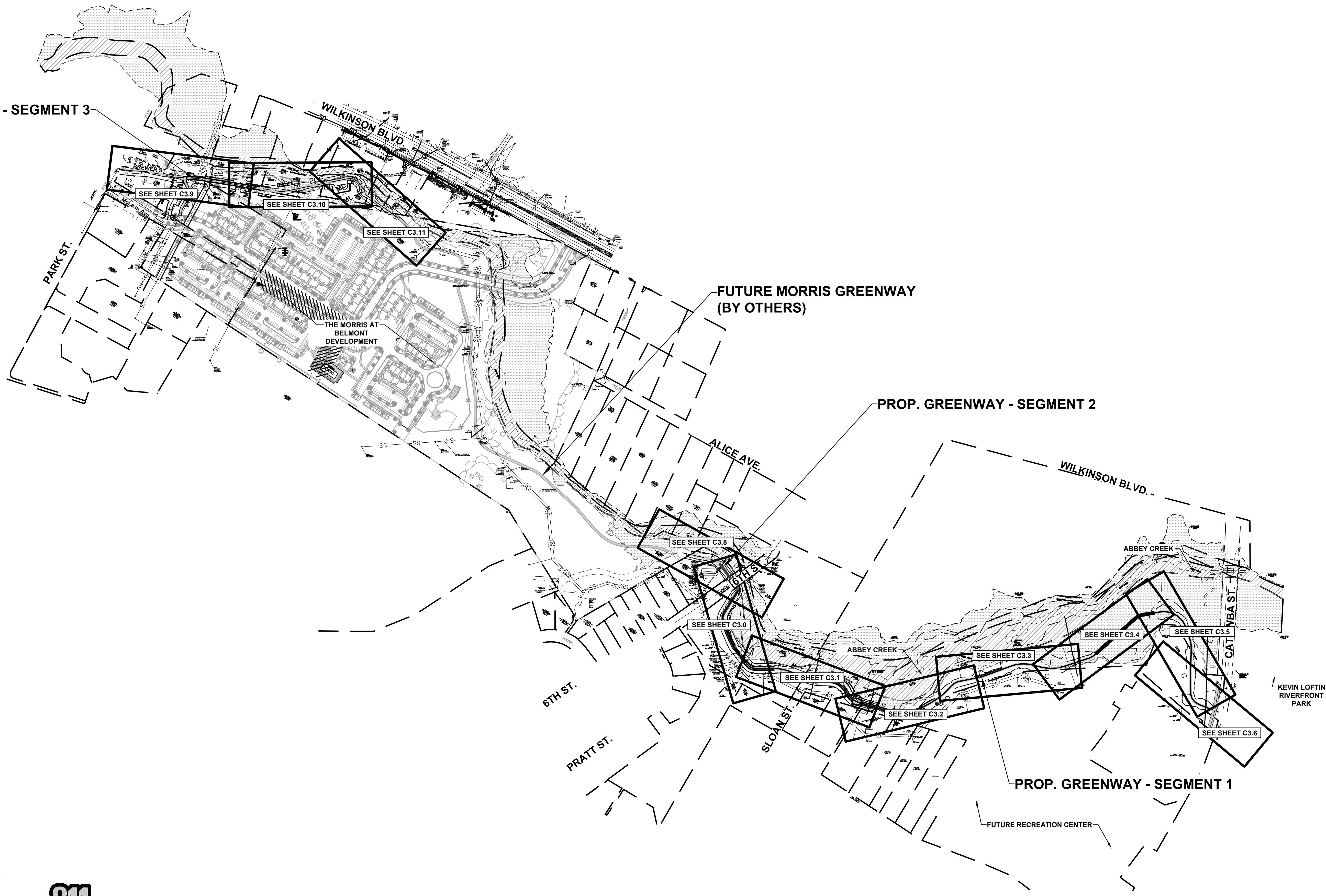
BELMONT, NORTH CAROLINA

CITY OF BELMONT

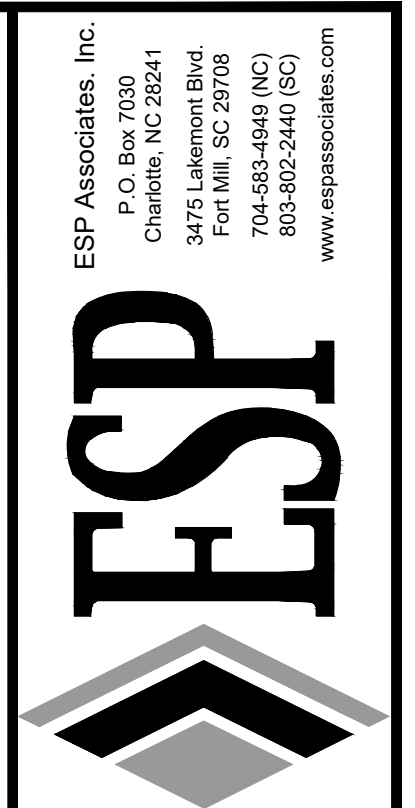
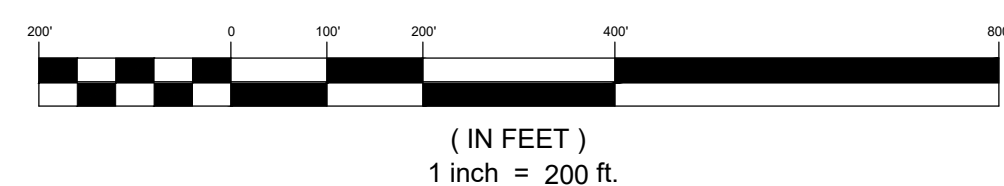
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DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C0.0</b>

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PROP. GREENWAY - SEGMENT 3



GRAPHIC SCALE



PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

**SHEET INDEX**  
**ABBEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C0.1</b>

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GENERAL NOTES

PROPOSED CURB ELEVATIONS:

THE CONTRACTOR SHALL SET AND ADJUST PROPOSED CURB ELEVATIONS AS NECESSARY TO ENSURE PROPER LONGITUDINAL GRADE FOR DRAINAGE. A MINIMUM SLOPE OF 0.50% SHALL BE MAINTAINED. THE CONTRACTOR SHALL RETAIN EXISTING PAVEMENT, UNLESS OTHERWISE NOTED.

DRIVEWAYS AND SIDEWALKS:

PROPOSED DRIVEWAY ENTRANCE DIMENSIONS ARE FROM EXPANSION JOINT TO EXPANSION JOINT. MATCH REPLACEMENT MATERIALS TO THE EXISTING SURFACE ACCORDINGLY:

- CONCRETE - SIX INCH PORTLAND CEMENT CONCRETE (3600 PSI)
• ASPHALT - (COMMERCIAL) TWO INCH SF9.5B COURSE AND FOUR INCH 119.0B INTERMEDIATE COURSE. (RESIDENTIAL) TWO INCH SF9.5B COURSE AND FOUR INCH AGGREGATE BASE (ABC) COURSE.
• GRAVEL - SIX INCH INCIDENTAL STONE (UNLESS OTHERWISE NOTED ON THE PLANS).

SIDEWALK SHALL BE FOUR INCHES THICK, AND SIX INCHES THICK AT DRIVEWAY CROSSINGS, PER CITY STD. NO. 10.22.

CROSS SLOPES ON SIDEWALKS SHALL NOT EXCEED 2.0%.

RUNNING SLOPES ALONG SIDEWALKS SHALL NOT EXCEED 5.0%, OR THE ADJACENT ROADWAY SLOPE AS MEASURED AT THE GUTTER PAN, WHICHEVER IS GREATER.

A CROSS SLOPE TRANSITION PANEL MAY BE REQUIRED WHERE PROPOSED SIDEWALK MEETS EXISTING SIDEWALK WITH A CROSS SLOPE GREATER THEN 2.0%. THE TRANSITION PANEL SHALL NOT EXCEED 2.0% ON THE SIDE OF THE PROPOSED SIDEWALK AND/OR RAMP, AND SHALL MATCH THE EXISTING CROSS SLOPE ON THE SIDE OF THE EXISTING SIDEWALK.

DRAINAGE STRUCTURES:

GRADES, ELEVATIONS AND LOCATIONS SHOWN ARE APPROXIMATE. AS DIRECTED BY THE ENGINEER, THEY MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN CONDITIONS. STATIONS, OFFSETS AND ELEVATIONS REFER TO THE CENTER OF DROP INLETS, MANHOLES AND JUNCTION BOXES, AND THE MIDPOINT OF THE LIP FOR CATCH BASINS. PIPE AND BOX CULVERT LENGTHS ARE REPORTED IN THE CONSTRUCTION DOCUMENTS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, INCLUDING TRANSITIONS, HORIZONTAL AND VERTICAL BENDS. ALL PIPES SHALL BE RCP CLASS III, UNLESS OTHERWISE NOTED. WEEP HOLES ARE TO BE CONSTRUCTED AS DIRECTED BY THE ENGINEER. IF REQUIRED, WEEP HOLES ARE TO BE CONSTRUCTED IN THE BOTTOM 1/3 OF THE STRUCTURE. ATTACH HARDWARE CLOTH (ALUMINUM OR GALVANIZED STEEL NO. 4 WIRE REINFORCEMENT) TO THE OUTSIDE OF THE STRUCTURE WITH HEAVY DUTY CONSTRUCTION ADHESIVE OVER THE WEEP HOLE. PLACE A POROUS FABRIC BAG FILLED WITH ONE CUBIC FOOT OF NO. 78M STONE AT EACH WEEP HOLE AGAINST THE HARDWARE CLOTH. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.

UTILITIES:

UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. THE CITY OF BELMONT WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF UTILITY LOCATIONS, SIZES, DEPTHS, OR FOR COMPLETENESS OF UTILITY INFORMATION.

PRIOR TO CONSTRUCTION AND VIA THE CITY UTILITY COORDINATOR AND CITY INSPECTOR, THE CONTRACTOR SHALL NOTIFY AND MEET WITH ALL UTILITIES AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY HIS OPERATIONS OR THOSE OF HIS AGENTS. THE CONTRACTOR SHALL HOLD THE CITY HARMLESS FOR ANY THIRD-PARTY INCONVENIENCE CREATED BY WORK OF HIS OWN FORCES OR THAT OF HIS AGENTS. ANY DAMAGES INCURRED SHALL BE THE CONTRACTORS FINANCIAL RESPONSIBILITY.

- AS NEEDED, THE CONTRACTOR SHALL ADJUST/RELOCATE THE SANITARY SEWER AND WATER LINES ONLY. ALL OTHER ADJUSTMENTS/RELOCATIONS WILL BE PERFORMED BY THE VARIOUS UTILITY OWNERS. VIA THE CITY UTILITY COORDINATOR AND CITY INSPECTOR, THE CONTRACTOR SHALL COORDINATE WORK WITH UTILITY OWNERS SO AS NOT TO ADVERSELY AFFECT THE PROJECT SCHEDULE. THE CITY WILL NOT BE HELD RESPONSIBLE FOR ANY DELAYS OR DISRUPTIONS TO THE WORK SCHEDULE OF OTHER UTILITY OWNERS. THE CONTRACTOR SHALL STAY A MINIMUM OF 5 FEET AWAY FROM ALL UTILITY POLES.
• AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
• WARNING: OVERHEAD UTILITIES. UNLESS OTHERWISE NOTED FOR RELOCATION, THE CONTRACTOR IS TO WORK UNDER ALL EXISTING OVERHEAD UTILITIES.

THE CONTRACTOR SHALL ADJUST ALL WATER VALVES, WATER METER BOXES AND WATER VAULTS TO FINISHED GRADE. WATER METERS LOCATED IN SIDEWALKS OR CONCRETE DRIVEWAYS SHALL BE INSTALLED WITHIN CONCRETE BOXES.

GAS LINES WILL BE ADJUSTED/RELOCATED AS NEEDED BY PIEDMONT NATURAL GAS. VIA THE CITY UTILITY COORDINATOR AND CITY INSPECTOR, THE CONTRACTOR SHALL CONTACT PIEDMONT NATURAL GAS AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION.

IN THE AREA OF THE DUKE HIGH TRANSMISSION LINE, CONCRETE BARRIERS SHOULD BE PLACED AROUND THE TOWER (NO CLOSER THAN 10') TO PROTECT THE TOWER.

THE CONTRACTOR SHALL FOLLOW OSHA GUIDELINES AND UTILITY OWNER GUIDELINES WHEN WORKING NEAR UTILITIES.

EXISTING SANITARY SEWER AND WATER LINE:

THE CONTRACTOR SHALL USE CARE WHEN WORKING AROUND SANITARY SEWERS AND WATER LINES. SHOULD THE CONTRACTOR DAMAGE EXISTING SEWER OR WATER LINES, HE SHALL IMMEDIATELY REPLACE THE LINE AT HIS EXPENSE WITH DUCTILE IRON PIPE. THE CONTRACTOR SHALL REPLACE SANITARY SEWER AND/OR WATER LINE, WITH A MINIMUM TEN FOOT SECTION OF DUCTILE IRON PIPE WHEN DRAINAGE PIPE COMES WITHIN TWO FEET OF SAID LINES, VERTICALLY OR HORIZONTALLY.

MAIL BOXES:

THE CONTRACTOR SHALL RELOCATE ALL MAIL BOXES AS REQUIRED BY SECTION 107-11 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. COORDINATE THIS WORK WITH THE U.S. POSTAL SERVICE.

FENCES:

THE CONTRACTOR SHALL REMOVE AND RESET FENCES AS NOTED ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

TREES, SHRUBS, AND HEDGES:

THE CONTRACTOR SHALL REMOVE TREES, SHRUBS, AND HEDGES WITHIN THE LIMITS OF DISTURBANCE UNLESS SHOWN ON THE PLANS TO BE PROTECTED AND THOSE THAT FALL WITHIN THE TREE PROTECTION BARRIERS. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER OR OTHER APPROVED METHOD IN ACCORDANCE WITH NCDOT LANDSCAPE CONSTRUCTION STANDARDS. PRUNING SHALL BE PER THE LATEST STANDARD OF THE LANDSCAPE CONSTRUCTION STANDARDS MANUAL (TYP.) USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK. USE CLD STD. 40.11 FOR BRIDGING TREE ROOTS. TREES SPECIFIED BY THE PLANS TO HAVE ASPHALT CURBING MUST USE CLD STD. 40.13. TREE PROTECTION SHALL BE IN ACCORDANCE WITH CLD STD. 40.02 AND WITH SECTION 1000 OF THE CITY OF CHARLOTTE LANDSCAPE CONSTRUCTION STANDARDS. WHEN THE TREE IS CLOSE TO THE WORK AREA TREE PROTECTION CLD STD. 40.12 SHALL BE USED.

CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY OF BELMONT PRIOR TO REMOVING ANY TREES. IN ADDITION, ALL TREES LOCATED WITHIN THE LOD THAT ARE TO REMAIN AFTER CONSTRUCTION SHALL BE INSPECTED BY THE CITY TO VERIFY THEY ARE SUITABLE TO REMAIN.

FOLLOWING CONSTRUCTION STAKING THE PROJECT TEAM (CONTRACTOR, CITY INSPECTOR, CITY ARBORIST AND CONSULTANT, IF APPLICABLE) WILL HOLD AN ON-SITE MEETING TO ENSURE THE LIMITS OF DISTURBANCE AND THAT TREES PROPOSED FOR PROTECTION ARE CLEARLY IDENTIFIED. THE TEAM WILL WALK THE PROJECT AREA AND AGREE ON THE TREES TO BE PROTECTED AND THOSE TO REMOVE, DISCUSS PROPOSED CONSTRUCTION ACTIVITIES, AND IDENTIFY ANY ADDITIONAL TREES TO PROTECT THAT WERE NOT ORIGINALLY MARKED AS SUCH. THE CONTRACTOR WILL BE GIVEN APPROVAL FOR TREE REMOVAL, IN WRITING, AFTER APPROPRIATE TREE PROTECTION HAS BEEN INSTALLED AND BEFORE ANY CLEARING OR REMOVAL CAN BEGIN.

THERE WILL BE NO ADDITIONAL PAYMENT FOR TREE PROTECTION INSTALLED AROUND ADDITIONAL TREES IDENTIFIED FOR PROTECTION.

THE CONTRACTOR ASSUMES RESPONSIBILITY FOR "IN-KIND" REPLACEMENT OF TREES DAMAGED THAT HAVE BEEN MARKED FOR PROTECTION OR NOT MARKED FOR REMOVAL.

IN THE EVENT OF DAMAGE, REPAIR ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM IMMEDIATELY.

- REPAIR ROOTS BY CUTTING OFF DAMAGED AREAS AND PAINTING THEM WITH TREE PAINT. SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.
• REPAIR DAMAGE TO BARK BY TRIMMING AROUND DAMAGED AREA, TAPER THE CUT TO PROVIDE DRAINAGE, AND PAINT WITH TREE PAINT.
• CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH. USE A SEPARATE CUT TO AVOID PEELING BARK FORM HEALTHY AREAS OF THE TREE.
• REFER TO THE NCDEQ EROSION CONTROL MANUAL FOR MORE INFORMATION.

TOLERANCE:

STRUCTURES INCLUDING STORM DRAIN PIPE, STORM STRUCTURES, SEWER PIPE, AND RETAINING WALLS SHALL HAVE A TOLERANCE OF ±0.10 FEET. STRUCTURES INCLUDING RISERS, WEIRS, AND ORIFICES, SHALL HAVE A TOLERANCE OF ±0.05 FEET.

STREAM IMPROVEMENT STRUCTURES SHALL HAVE A VERTICAL TOLERANCE OF ±0.10 FEET, AND A PLANIMETRIC TOLERANCE OF ±0.50 FEET.

SIDE SLOPES:

LIMITS OF PROPOSED SLOPES ARE INDICATED IN THE PLANS, DETAILS AND STANDARD DRAWINGS. THE MAXIMUM SLOPE SHALL NOT EXCEED A 2:1 (HORIZONTAL TO VERTICAL) UNLESS DESIGNATED BY THE ENGINEER. A CUT SLOPE OF 1.5:1 MAXIMUM WILL BE USED ONLY AS DIRECTED BY THE ENGINEER.

ACCESSIBLE RAMPS AND DEPRESSED CURB:

THE CONTRACTOR SHALL CONSTRUCT 6-INCH THICK CONCRETE ACCESSIBLE CURB RAMPS AT INTERSECTIONS IN ACCORDANCE WITH THE LATEST REVISIONS FOR ACCESSIBLE CURB RAMPS DETAILS, "PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" (PROWAG), CONSTRUCTION PLANS & NCDOT STANDARD DRAWINGS.

RUNNING SLOPES ALONG CURB RAMPS SHALL NOT EXCEED 8.3%, BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL PANELS OF THE RAMP MUST EQUAL THE SAME PERCENTAGE.

FLARES SHALL BE 10.0% MAXIMUM SLOPE (WHERE APPLICABLE), UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

RAMP CROSS SLOPE SHALL NOT EXCEED 2.0% OR THE ADJACENT ROADWAY SLOPE AS MEASURED AT THE GUTTER PAN, WHICHEVER IS GREATER.

A TURNING SPACE (LANDING) SHALL BE PROVIDED AT ALL LOCATIONS WHERE A PEDESTRIAN MIGHT TURN TO CHANGE DIRECTION OF TRAVEL. THE LANDING SHALL BE A MINIMUM OF 4 FEET BY 4 FEET, UNLESS NOTED BY THE ENGINEER. TYPICALLY LANDING DIMENSIONS WILL MATCH SIDEWALK WIDTH. THE LANDING SHALL NOT EXCEED 2.0% SLOPE MEASURED PERPENDICULAR TO THE ROADWAY. THE LANDING ALSO SHALL NOT EXCEED 2.0% OR ADJACENT ROADWAY SLOPE, WHICHEVER IS GREATER, MEASURED PARALLEL TO THE ROADWAY.

SAWCUTS:

THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT AND/OR CONCRETE SURFACES PRIOR TO REMOVAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SAW CUT WIDTH SHALL BE 1 FOOT MINIMUM FROM THE EXISTING EDGE OF PAVEMENT. SAW CUT PAVEMENT SHALL BE REPLACED AS WELL AS ADDITIONAL PAVEMENT REQUIRED TO TIE-IN TO FACE OF PROPOSED CURB AND GUTTER.

STANDARDS

THE FOLLOWING STANDARDS AND THE LATEST REVISION THERETO ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE CONSIDERED A PART OF THESE PLANS. NCDOT STANDARDS SHALL BE USED. CHARLOTTE LAND DEVELOPMENT STANDARDS MAY BE USED IF THERE IS NOT AN APPLICABLE NCDOT STANDARD.

NCDOT 2018 STANDARD DRAWINGS:

Table with 2 columns: STD. NO., TITLE. Rows include 200.02 METHOD OF CLEARING - METHOD II and 300.01 METHOD OF PIPE INSTALLATION.

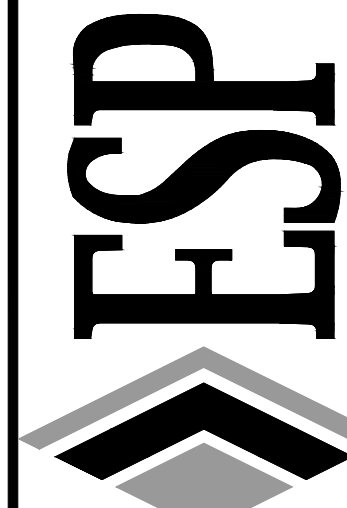
BASE DATA

EXISTING CONDITIONS TAKEN FROM A COMPILATION OF GROUND SURVEYS BY ESP ASSOCIATES DATED FEBRUARY 4, 2021 AND APRIL 29, 2021. ALL COORDINATES BASED ON NAD 83 AND NAD 88.

ABBREVIATIONS

Table of abbreviations and their full names, including ABAND, ASPH, APPROX, B/C, BIT, BM, BRG, CB, C&G, CL, C/L FENCE, CMP, CONC, CONST, DB, DCB, DI, DIA, DW, DIM, EA, ELEV, EOP, ESMT, EX, F/C, FES, FH, FOC, GV, HORIZ, INT, INV, IP, L, LF, LT, LB, LP, MAX, MIN, MONO, MPH, MTL, N, NTS, O/H, OC, PAVT, PSE, PC, PERM, PG, PI, PK, PP, PSE, PT, PVI, PUE, R, RT, RCP, RELOC, R/W, S, SD, SDE, SF, S/R FENCE, SS, STA, STD, SW, TAN, TCE, TEMP, TP, T/W, TYP, U/G, VC, VERT, W, W/, WM, W VAULT, WV, 60p, ', ". Includes 'NOT TO SCALE' for NTS.

ESP Associates, Inc. P.O. Box 7030 Charlotte, NC 28211 3675 Lakeshore Blvd. Suite 200 Charlotte, NC 28205 704.653.4848 (NC) 803.802.2440 (SC) www.espaceassociates.com



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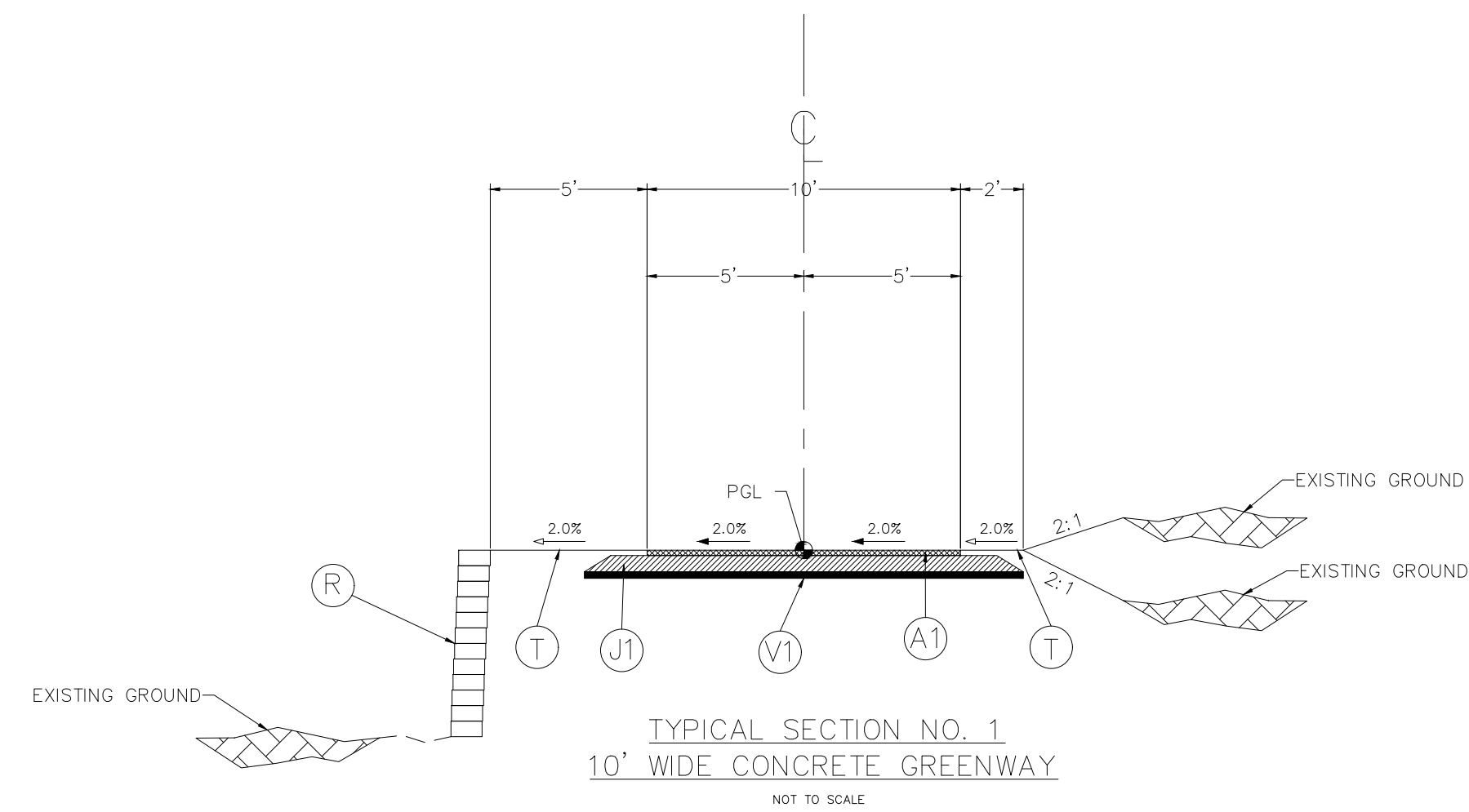
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GENERAL NOTES ABBEY CREEK GREENWAY BELMONT, NORTH CAROLINA

PROJECT INFORMATION table with fields: PROJECT MANAGER: GMS, DESIGNED BY: GMS, DRAWN BY: GMS, PROJECT NUMBER: IR37.100, DATE: 8-16-2021, SHEET: C1.2

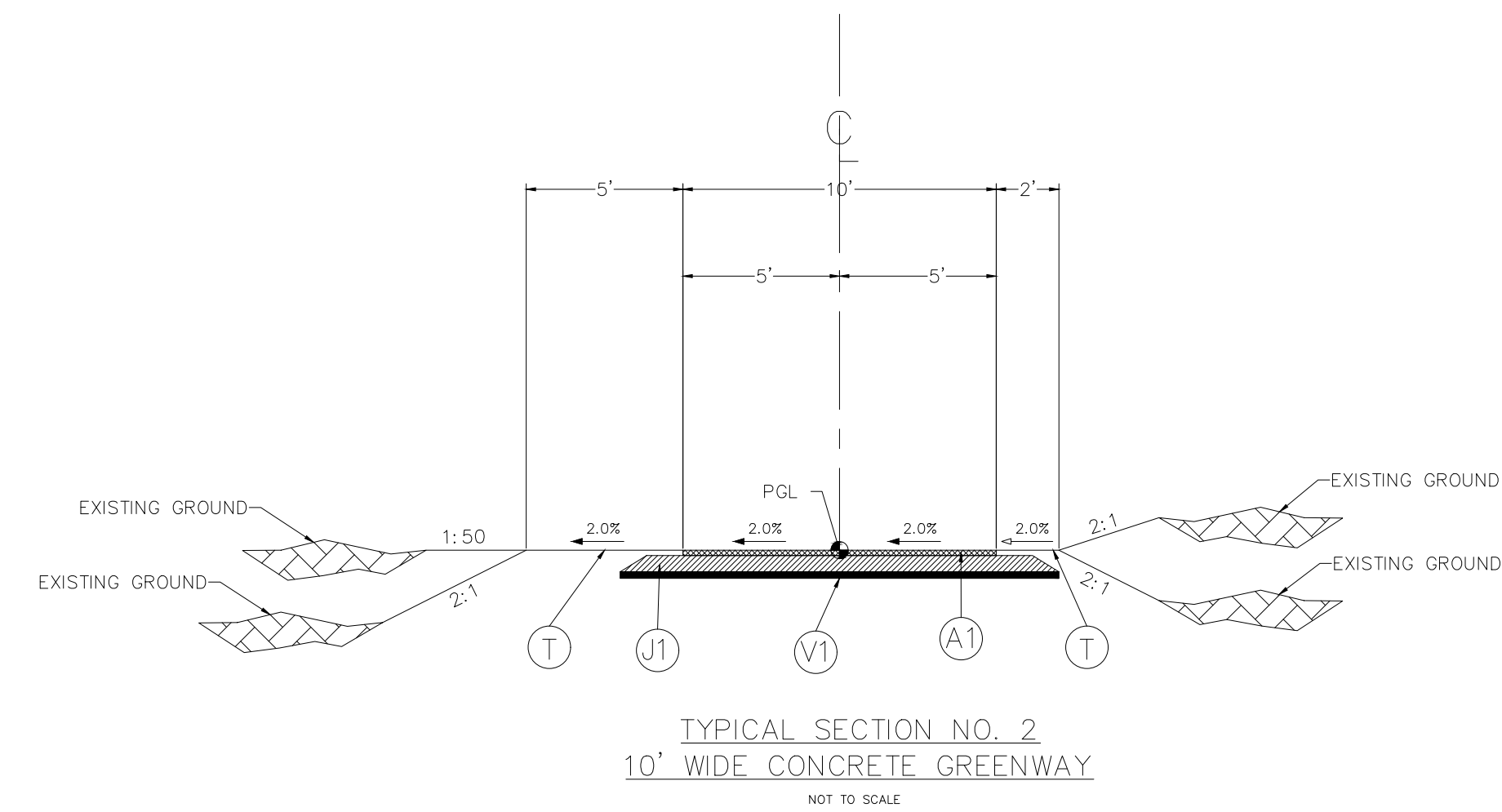


Know what's below. Call before you dig.



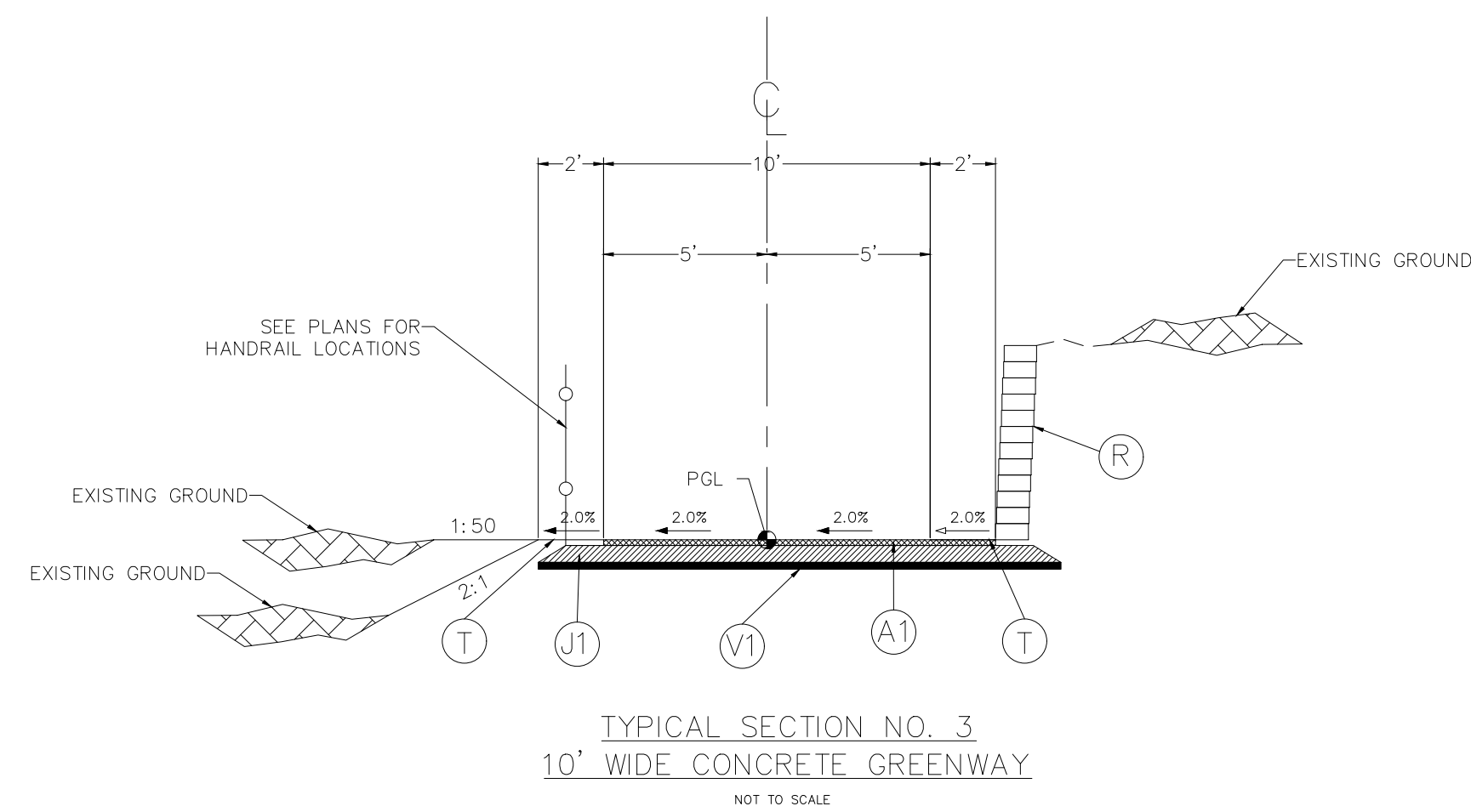
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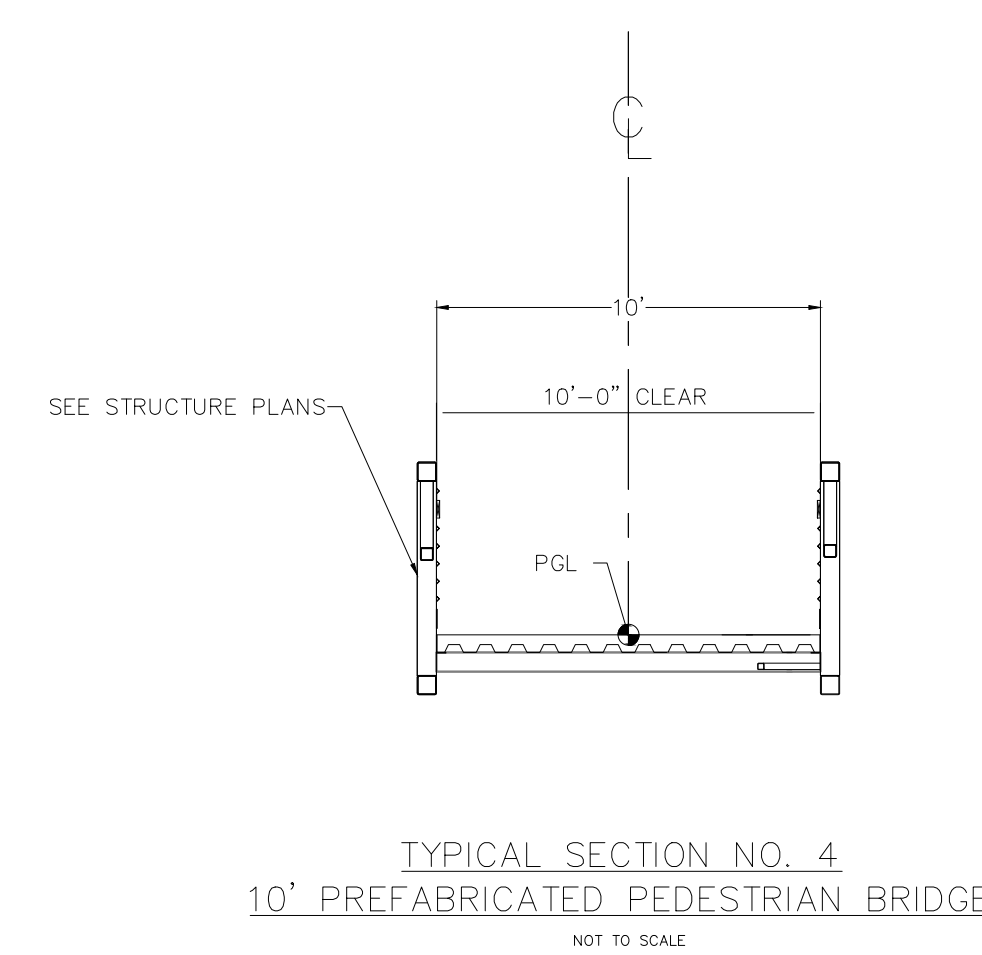
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10' WIDE CONCRETE GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	0+45	1+99



TYPICAL SECTION NO. 3  
10' WIDE CONCRETE GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	1+99	2+99



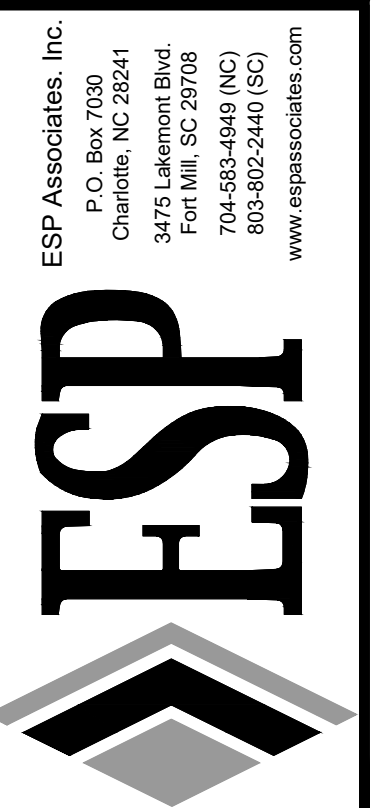
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10' PREFABRICATED PEDESTRIAN BRIDGE  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	2+99	3+65

PAVEMENT SCHEDULE

(A1)	6" CONCRETE (FIBER REINFORCED)
(C1)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE (S9.5B) AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(J1)	6" AGGREGATE BASE COURSE
(R)	RETAINING WALL
(T)	EARTH MATERIAL
(V1)	GEOGRID

1. SLOPE GREENWAY AND SHOULDERS PER PLANS.
2. ALL SLOPES SHALL BE 3:1 PREFERRED, 2:1 MAX. UNLESS OTHERWISE NOTED BY ENGINEER.



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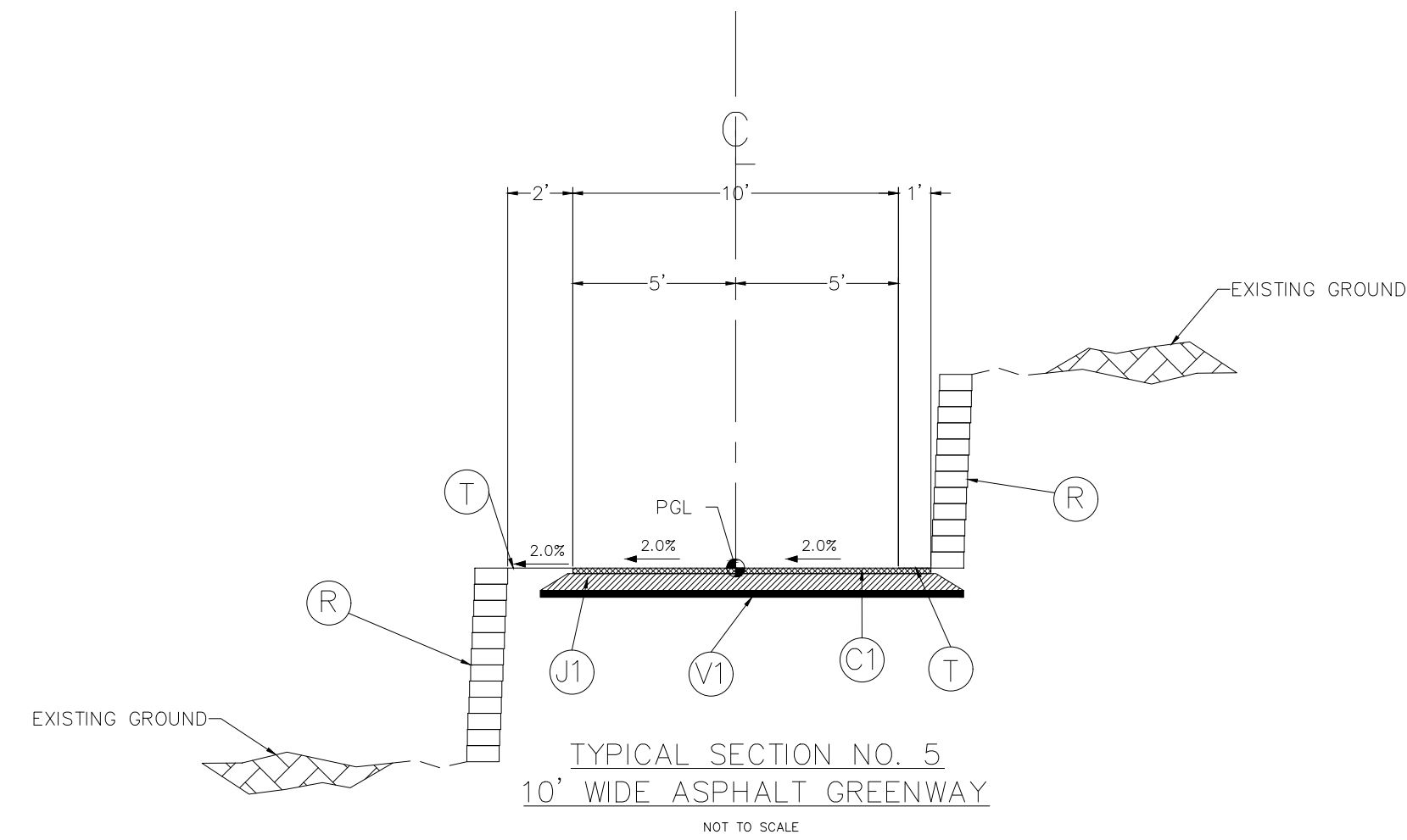
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

TYPICAL SECTIONS  
ABBEEY CREEK GREENWAY  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

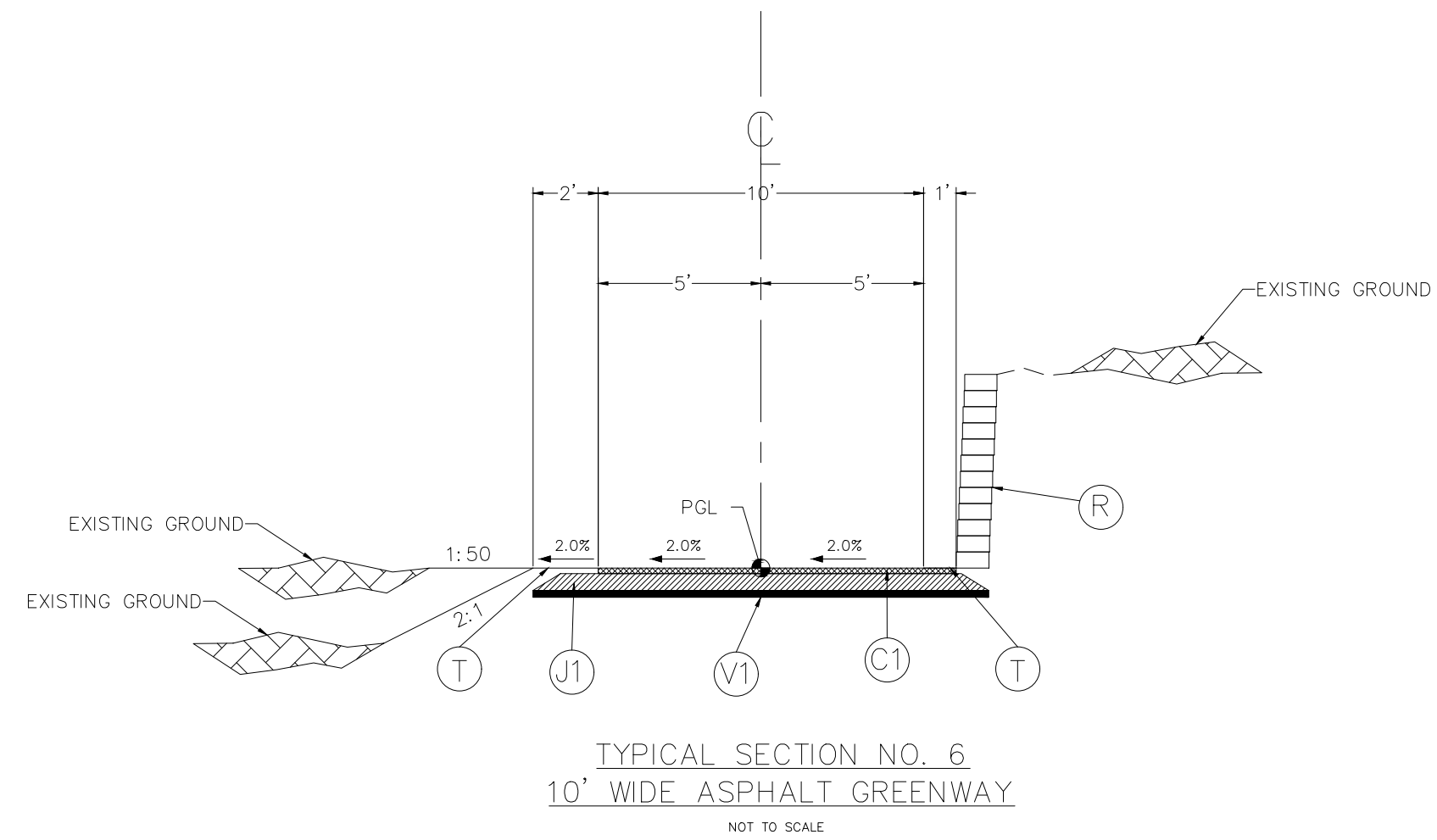
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PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET:  
**C2.0**



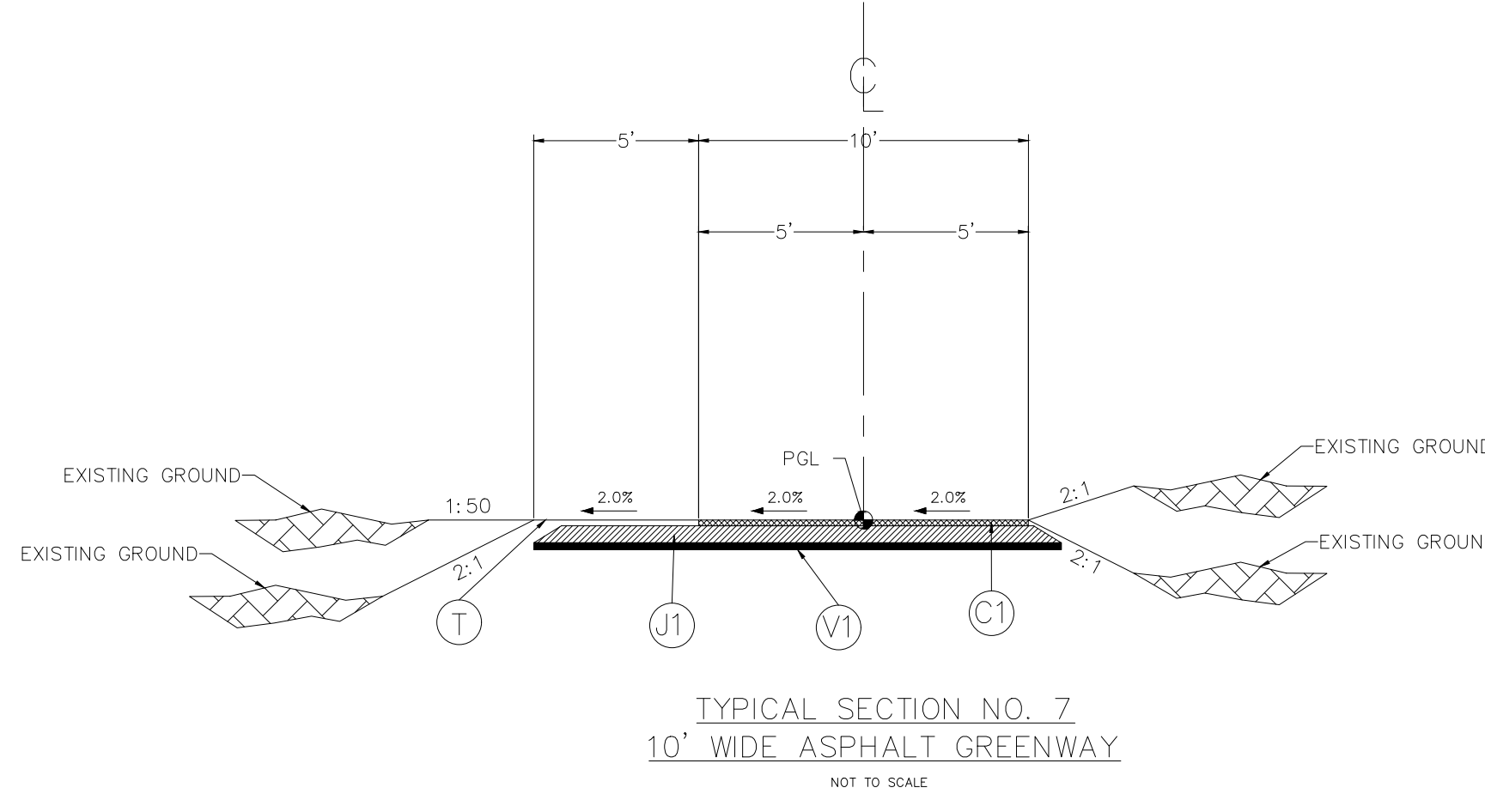
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NOT TO SCALE

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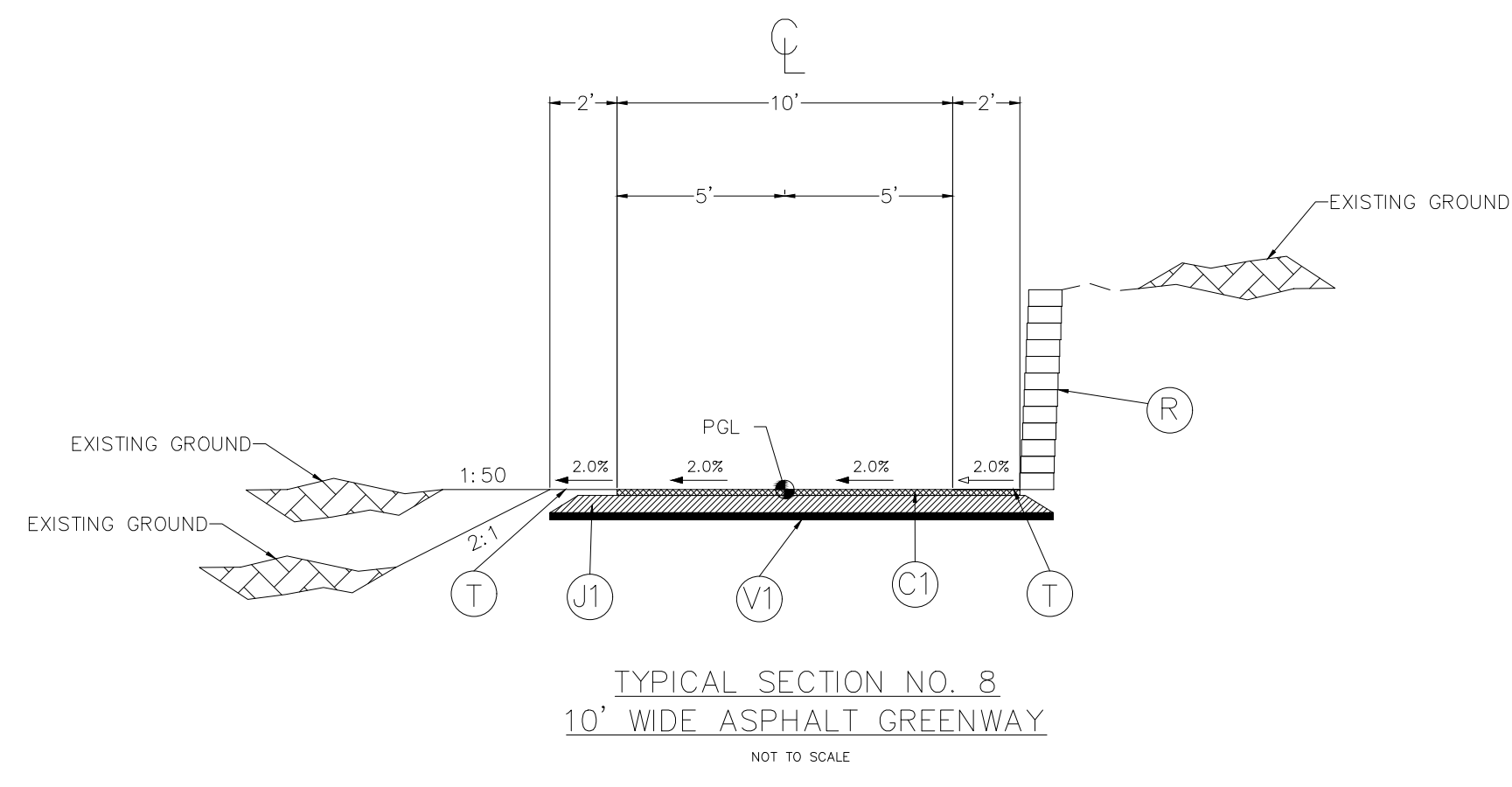
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10' WIDE ASPHALT GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	3+84	4+91



TYPICAL SECTION NO. 7  
10' WIDE ASPHALT GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	4+91	6+77
-SEG 1 -	11+50	14+08
-SEG 1 -	15+22	15+94



TYPICAL SECTION NO. 8  
10' WIDE ASPHALT GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	6+77	7+83

PAVEMENT SCHEDULE

(A1)	6" CONCRETE (FIBER REINFORCED)
(C1)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE (S9.5B) AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(J1)	6" AGGREGATE BASE COURSE
(R)	RETAINING WALL
(T)	EARTH MATERIAL
(V1)	GEOGRID

1. SLOPE GREENWAY AND SHOULDERS PER PLANS.  
2. ALL SLOPES SHALL BE 3:1 PREFERRED, 2:1 MAX. UNLESS OTHERWISE NOTED BY ENGINEER.

U:\2020 Projects\01937 - Abbey Creek Greenway (City of Belmont)\R37\Sheet\R37-GREENWAY-TYP-SEC.dwg, C2.1 - TYPICAL SECTIONS.gdtg

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P.O. Box 7030  
Charlotte, NC 28241  
3475 Lakenont Blvd.  
Charlotte, NC 28218  
704.652.4416 (NC)  
803.802.3410 (SC)  
www.espsociates.com



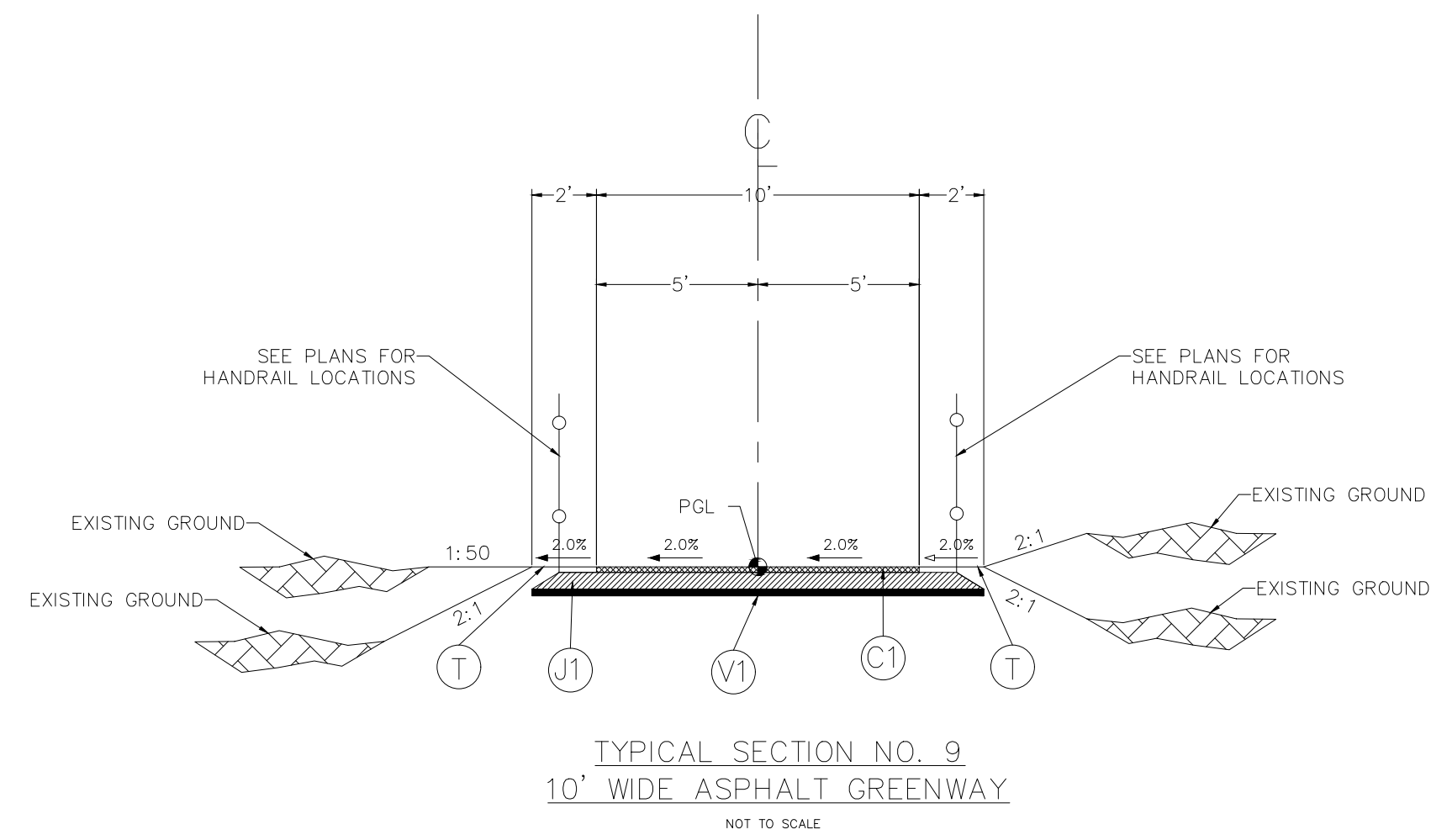
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION	BY

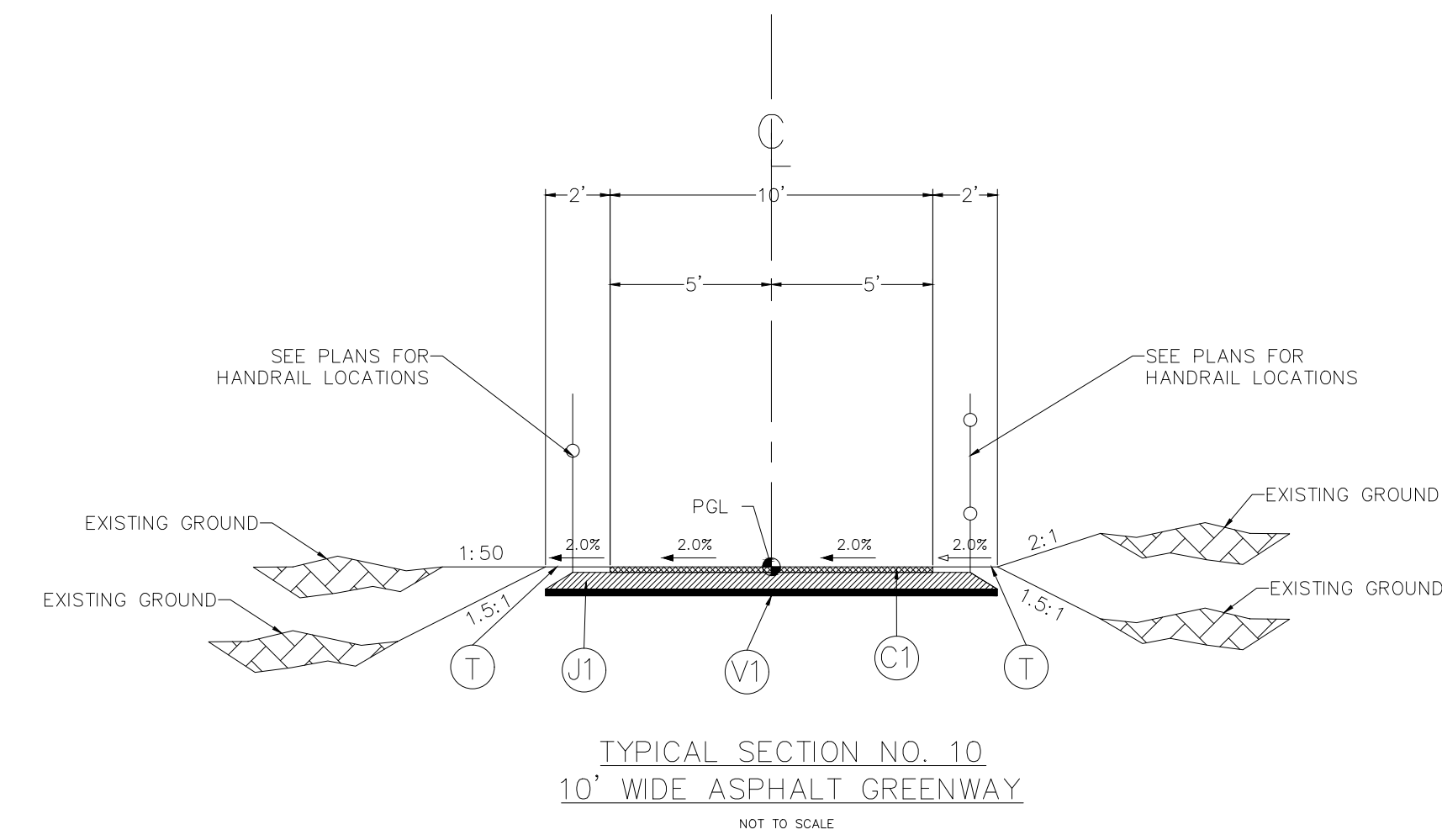
TYPICAL SECTIONS  
ABBAY CREEK GREENWAY  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

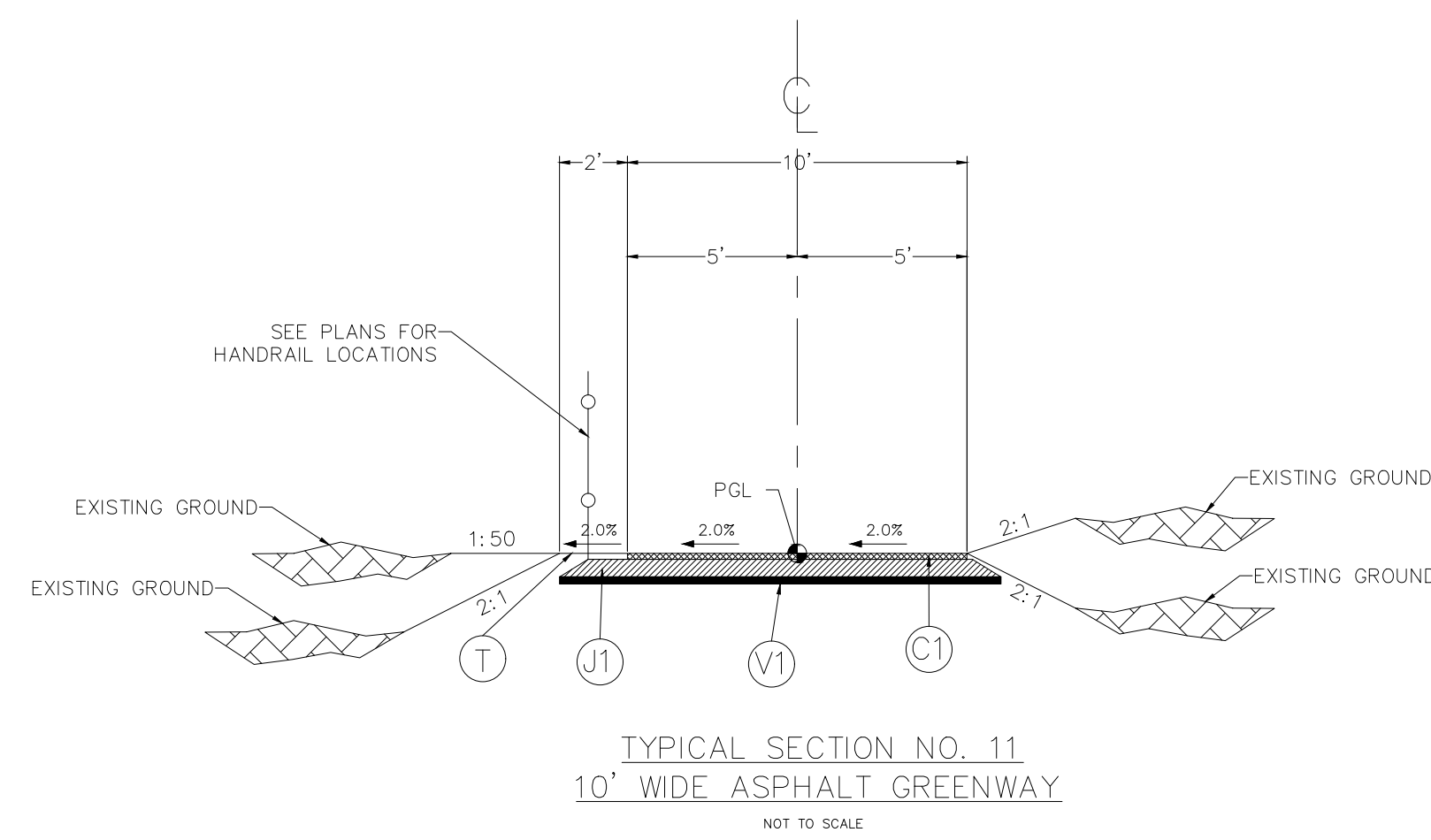
SHEET: **C2.1**



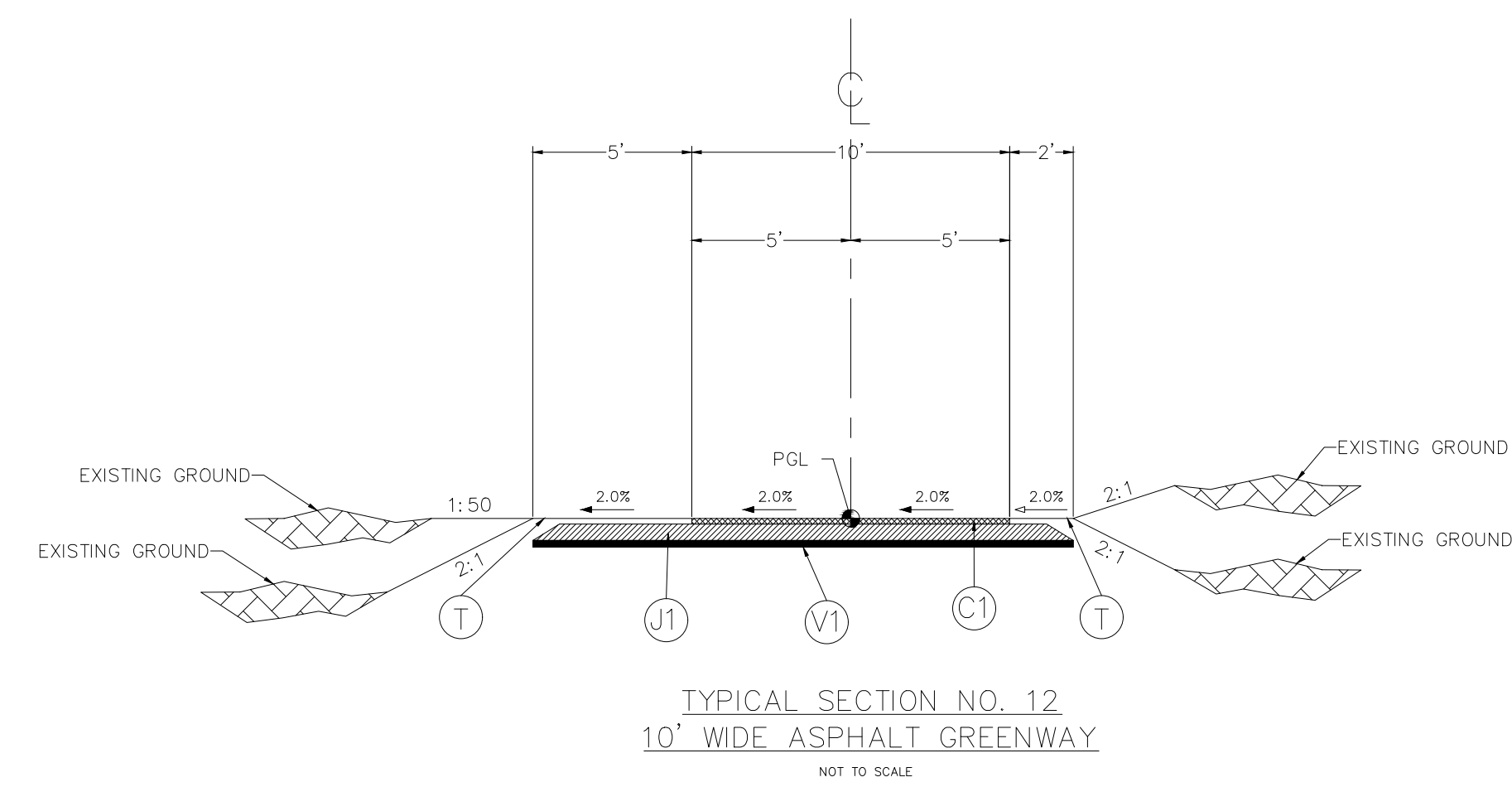
ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	7+83	8+65



ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	8+65	11+50



ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	14+08	15+22



ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	15+94	19+15
-SEG 1 -	22+27	27+75

PAVEMENT SCHEDULE

(A1)	6" CONCRETE (FIBER REINFORCED)
(C1)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE (S9.5B) AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(J1)	6" AGGREGATE BASE COURSE
(R)	RETAINING WALL
(T)	EARTH MATERIAL
(V1)	GEOGRID

1. SLOPE GREENWAY AND SHOULDERS PER PLANS.
2. ALL SLOPES SHALL BE 3:1 PREFERRED, 2:1 MAX, UNLESS OTHERWISE NOTED BY ENGINEER.

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www.espsociates.com



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NOT FOR  
CONSTRUCTION

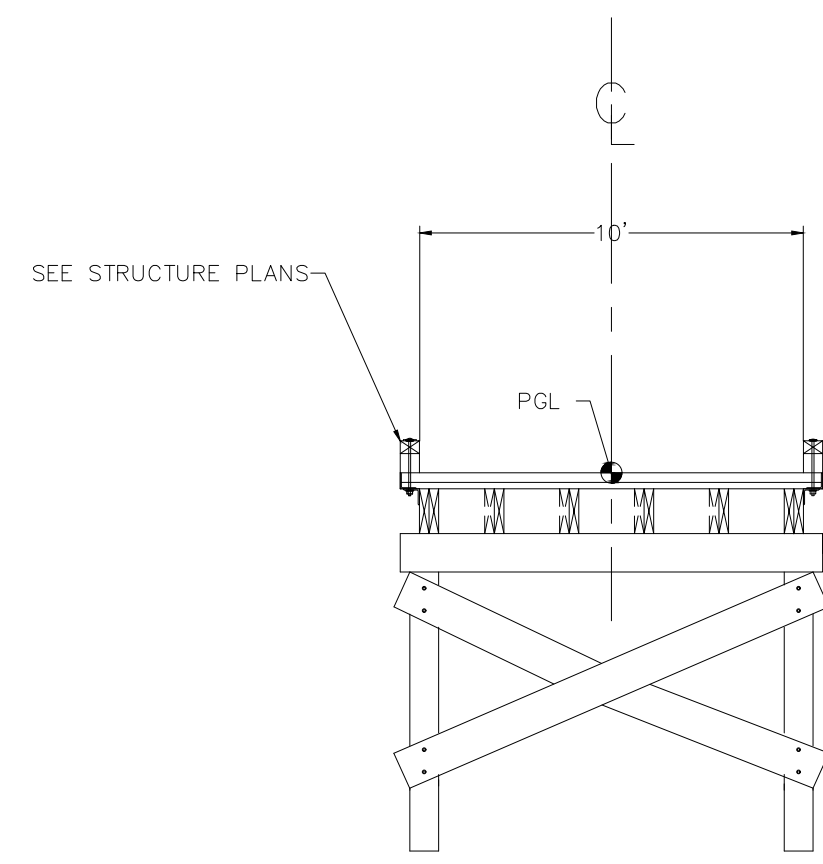
NO.	DATE	REVISION	BY

TYPICAL SECTIONS  
ABBNEY CREEK GREENWAY  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

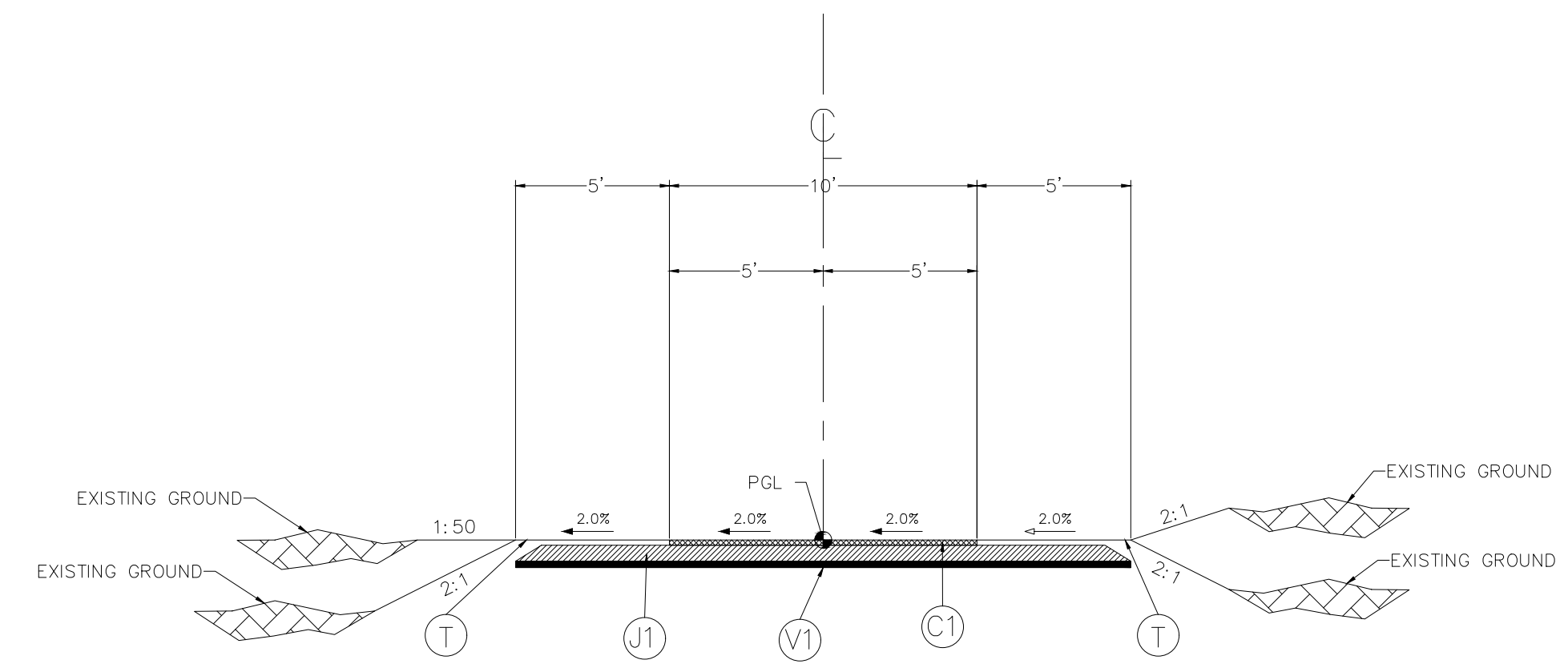
SHEET:  
**C2.2**

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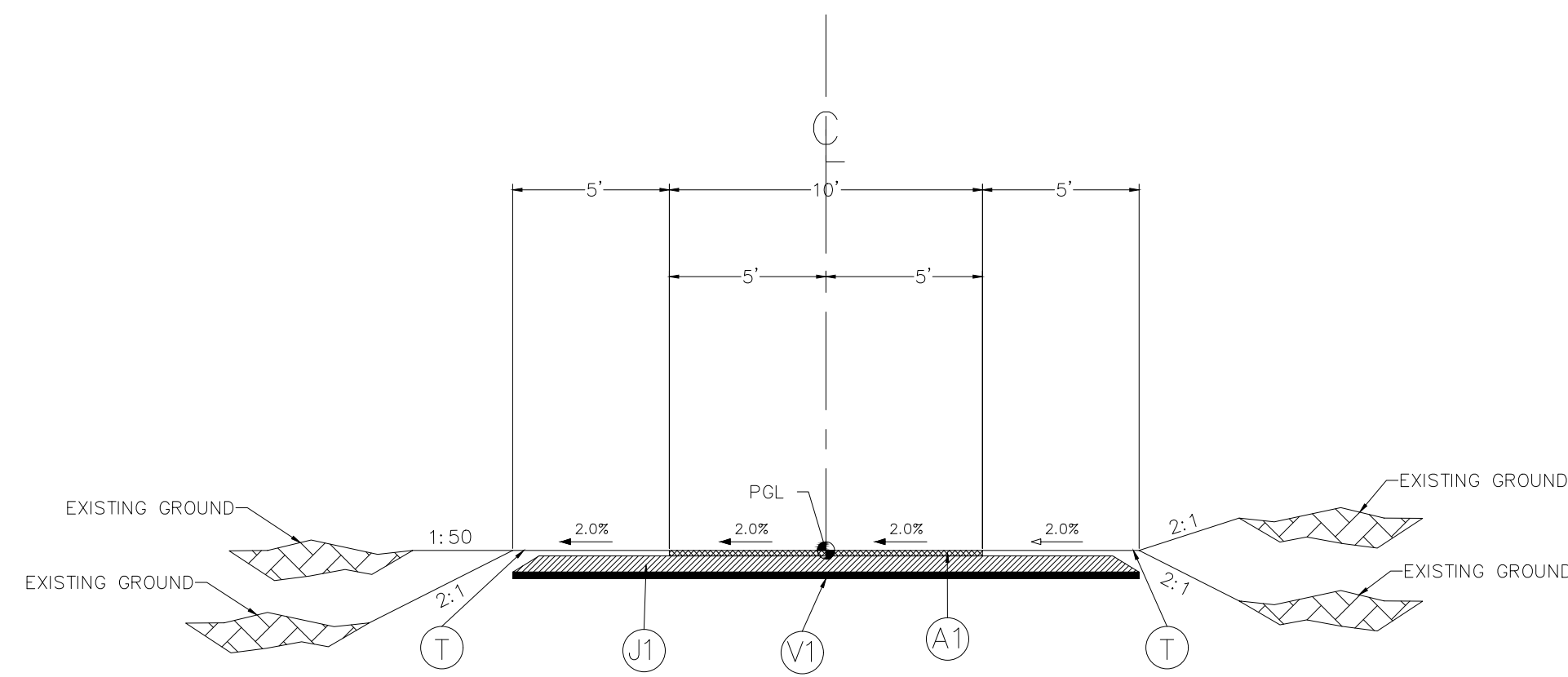
TYPICAL SECTION NO. 13  
10' TIMBER BOARDWALK  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 1 -	19+15	22+27



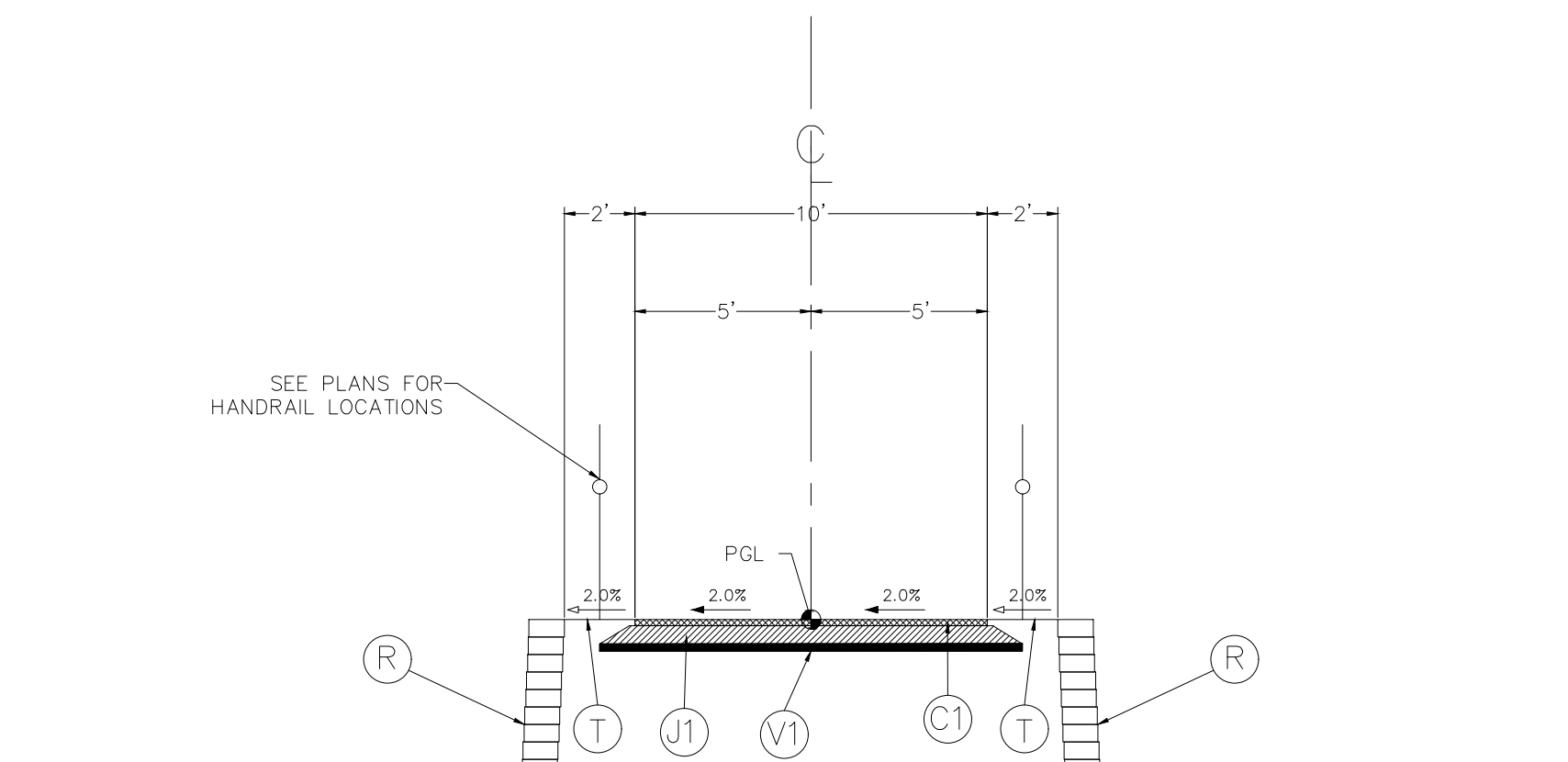
TYPICAL SECTION NO. 14  
10' WIDE ASPHALT GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 2 -	0+34	1+60



TYPICAL SECTION NO. 15  
10' WIDE CONCRETE GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 2 -	1+60	2+47



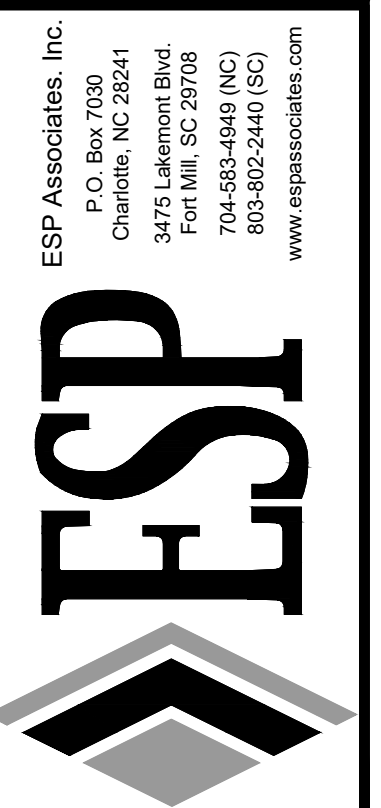
TYPICAL SECTION NO. 16  
10' WIDE ASPHALT GREENWAY  
NOT TO SCALE

ALIGNMENT	BEGIN STATION	END STATION
-SEG 3 -	2+80	5+75

PAVEMENT SCHEDULE

(A1)	6" CONCRETE (FIBER REINFORCED)
(C1)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE (S9.5B) AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(J1)	6" AGGREGATE BASE COURSE
(R)	RETAINING WALL
(T)	EARTH MATERIAL
(V1)	GEOGRID

1. SLOPE GREENWAY AND SHOULDERS PER PLANS.
2. ALL SLOPES SHALL BE 3:1 PREFERRED, 2:1 MAX, UNLESS OTHERWISE NOTED BY ENGINEER.



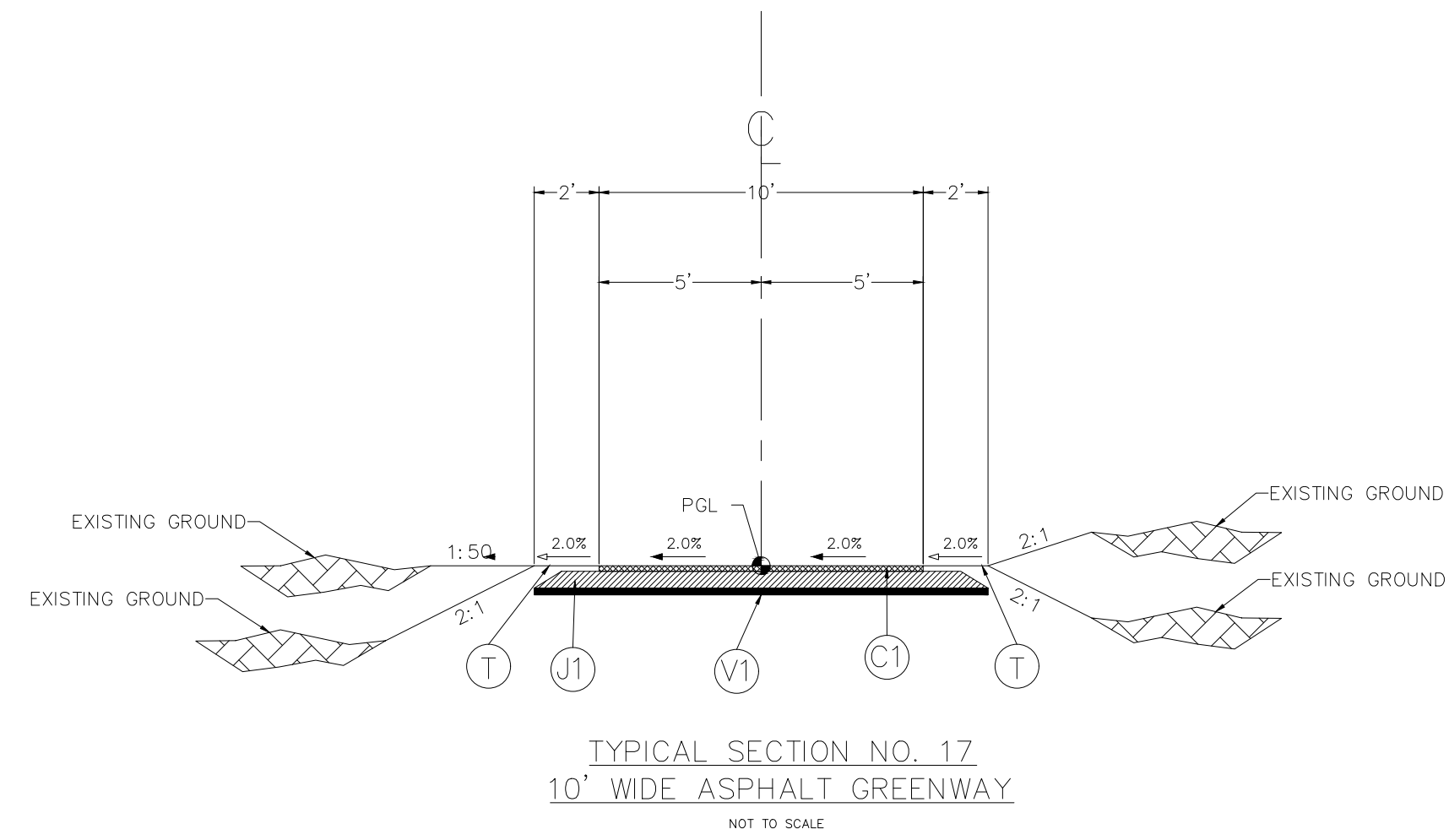
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION	BY

TYPICAL SECTIONS  
ABBEEY CREEK GREENWAY  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET:  
**C2.3**



ALIGNMENT	BEGIN STATION	END STATION
-SEG 3 -	5+75	11+76

PAVEMENT SCHEDULE

(A)	6" CONCRETE (FIBER REINFORCED)
(C)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE (S9.5B) AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(J1)	6" AGGREGATE BASE COURSE
(R)	RETAINING WALL
(T)	EARTH MATERIAL
(V1)	GEOGRID

1. SLOPE GREENWAY AND SHOULDERS PER PLANS.
2. ALL SLOPES SHALL BE 3:1 PREFERRED, 2:1 MAX, UNLESS OTHERWISE NOTED BY ENGINEER.

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www.espatassociates.com



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CONSTRUCTION

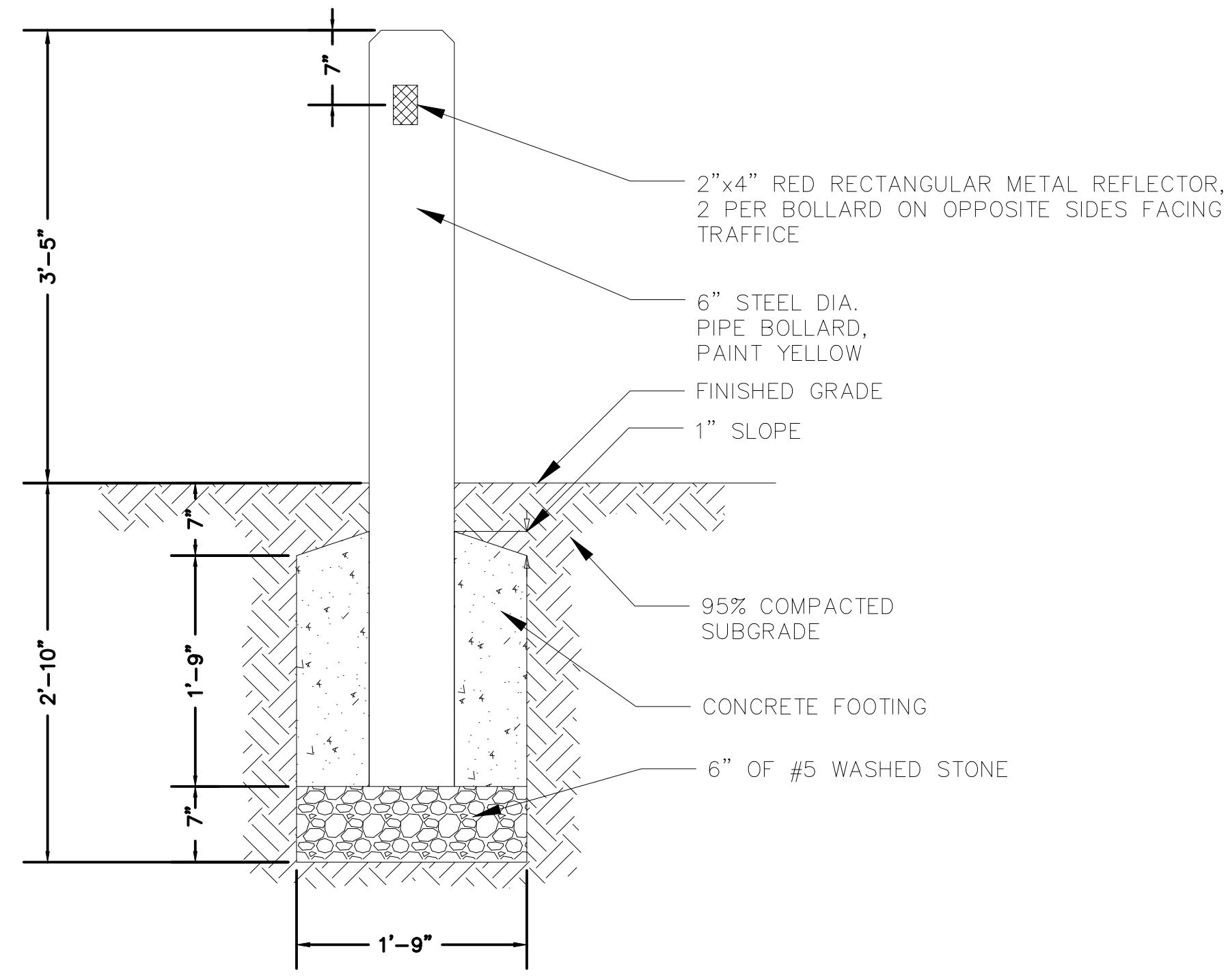
NO.	DATE	REVISION	BY

**TYPICAL SECTIONS**  
**ABBEE CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

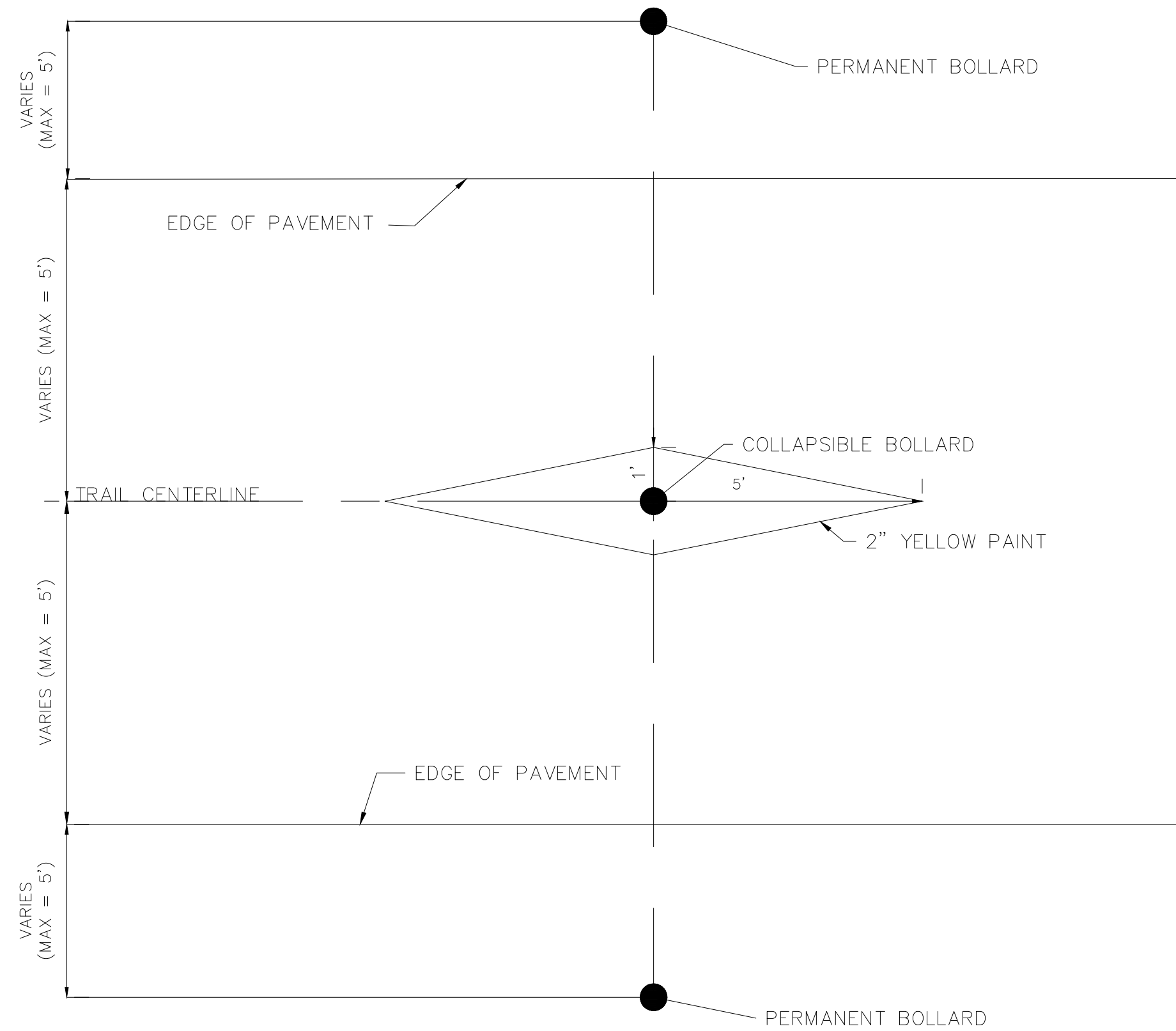
PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C2.4**



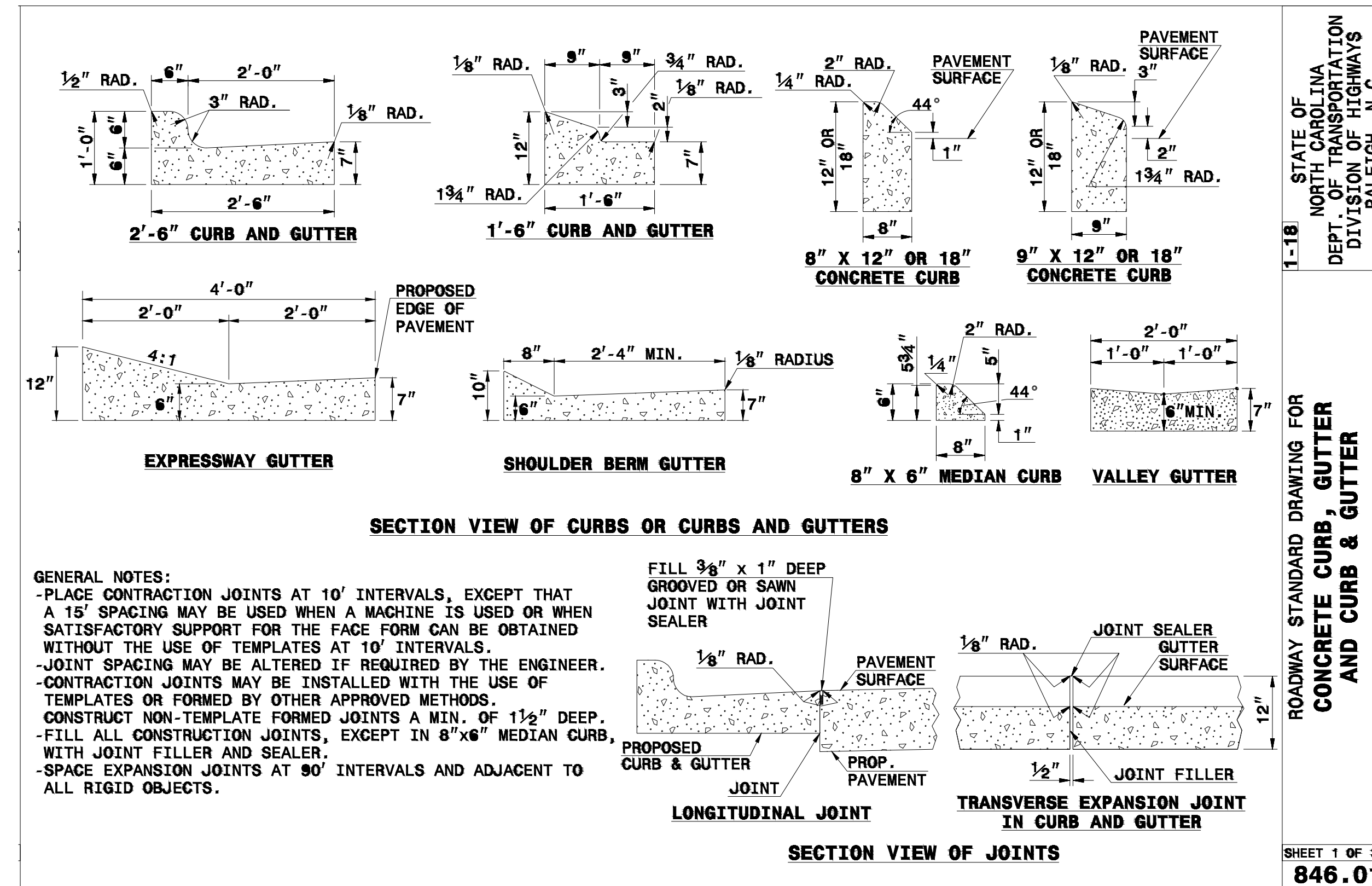


PERMANENT BOLLARD DETAIL (FOOTING ONLY)  
NOT TO SCALE



- BOLLARD NOTES:**
1. ALL BOLLARD POSTS TO BE REFLECTORIZED
  2. BOLLARD PLACEMENT OFFSET FROM INTERSECTIONS IS A MINIMUM OF 5 FEET
  3. REFER TO PLANS FOR LOCATIONS OF BOLLARDS

BOLLARD PLACEMENT AND MARKING  
NOT TO SCALE

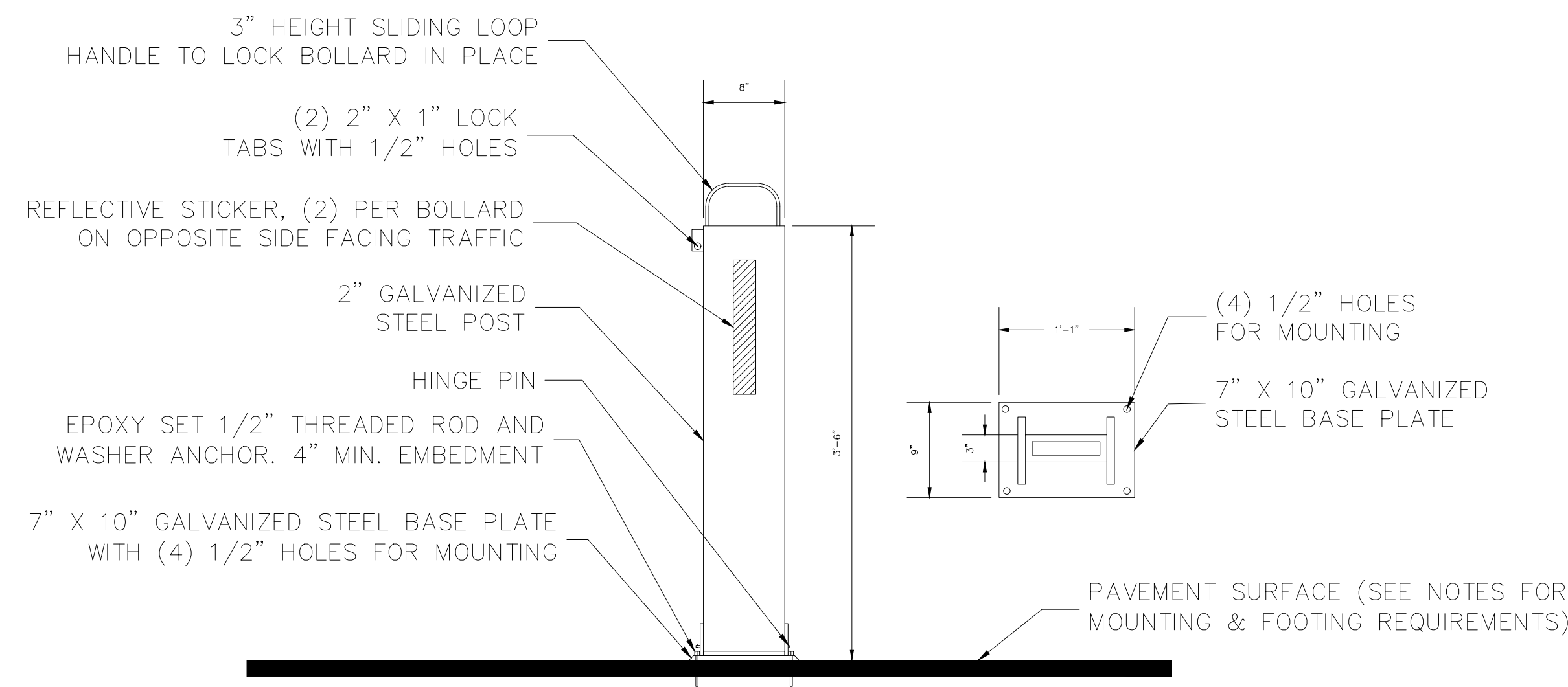


STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
CONCRETE CURB, GUTTER  
AND CURB & GUTTER

1-18

SHEET 1 OF 3  
846.01



- NOTES:**
1. PROVIDE 12" X 12" X 12" MIN. CONCRETE FOOTING IF PLACING BOLLARD IN ASPHALT PAVEMENT.
  2. PROVIDE THICKENED SLAB, 6" MIN. THICKNESS, IF PLACING BOLLARD IN LIGHT DUTY 4" CONCRETE PAVEMENT.
  3. MOUNT DIRECTLY INTO CONCRETE PAVEMENT OF 6" OR GREATER THICKNESS.

COLLAPSIBLE STEEL BOLLARD DETAIL (FOOTING ONLY)  
NOT TO SCALE

U:\2020 Projects\01937 -Abbey Creek Greenway (City of Belmont)\R37\Sheets\R37-CONVPY\DETAILS.dwg, C2.5 - DETAILS.dwg

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P.O. Box 7030  
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803-802-3440 (SC)  
www.espsociates.com

**ESP**

PRELIMINARY  
NOT FOR  
CONSTRUCTION

BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_

NO. \_\_\_\_\_

**DETAILS**

**ABBAY CREEK GREENWAY**

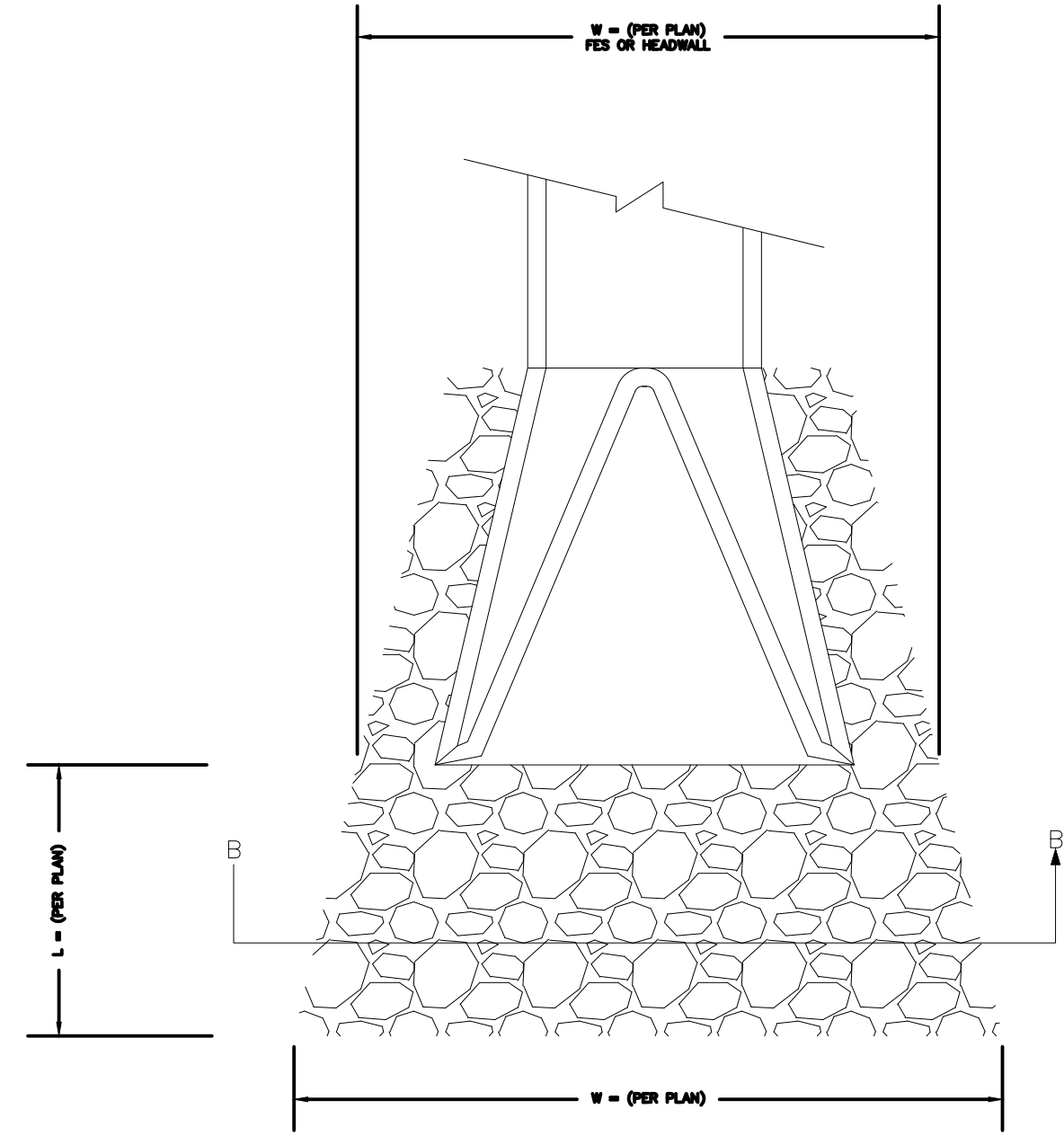
BELMONT, NORTH CAROLINA

CITY OF BELMONT

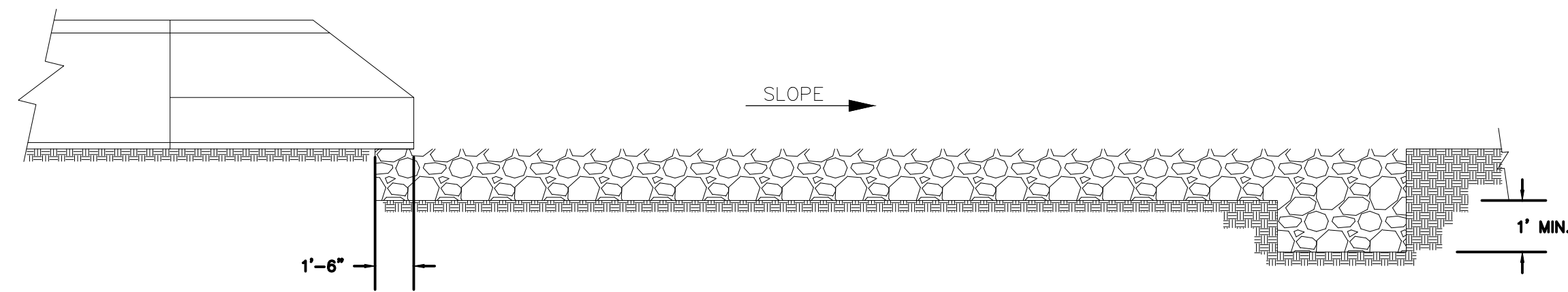
PROJECT INFORMATION

PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

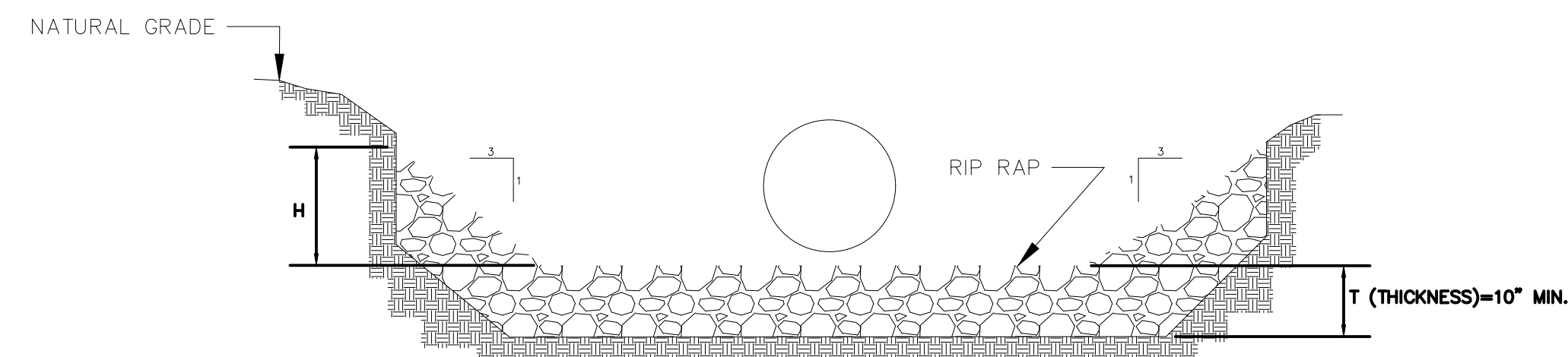
SHEET: **C2.5**



PLAN



ELEVATION



SECTION B-B

RIPRAP APRON AT PIPE OUTFALLS  
NOT TO SCALE

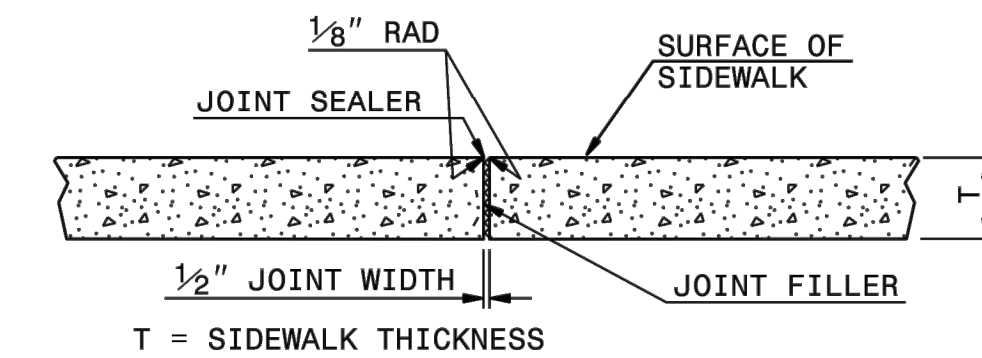
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NOTES:

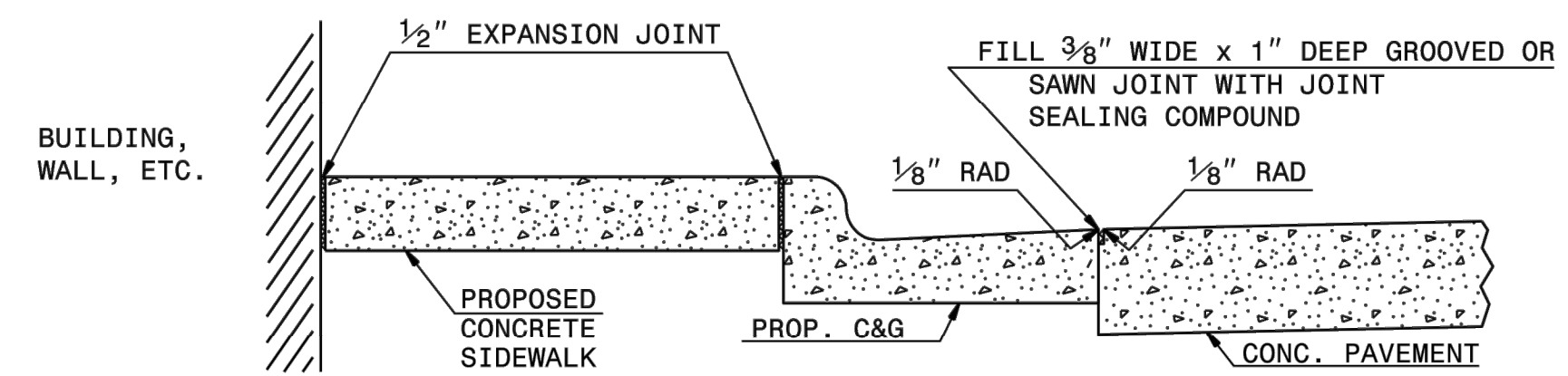
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

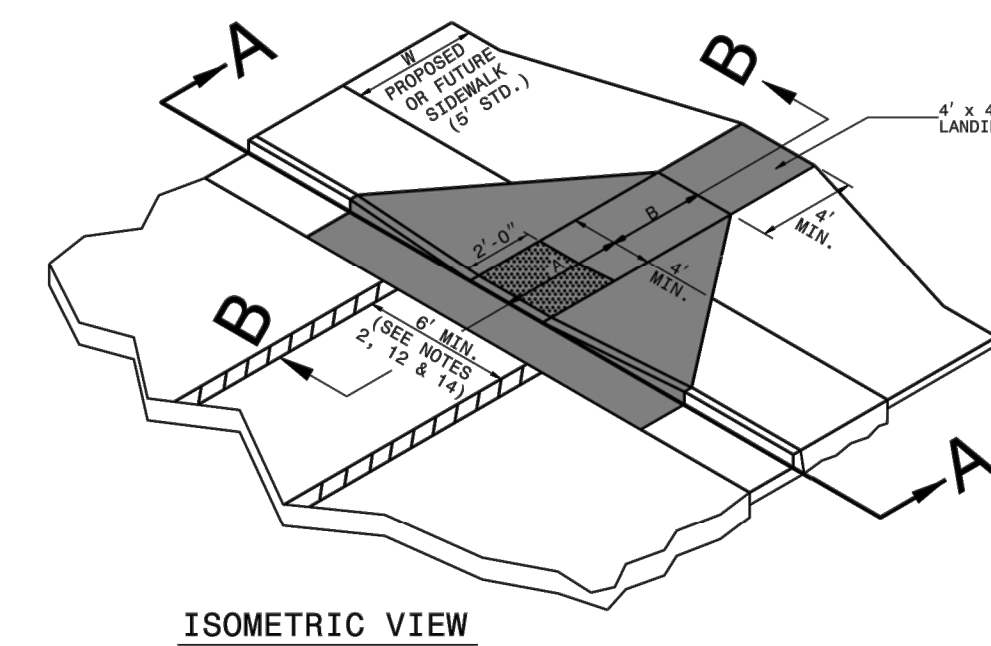
SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK



ISOMETRIC VIEW

- NOTES:
1. DETECTABLE WARNING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. DETECTABLE WARNING DOMES WILL CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

RAMP WIDTH AREA IS VARIABLE

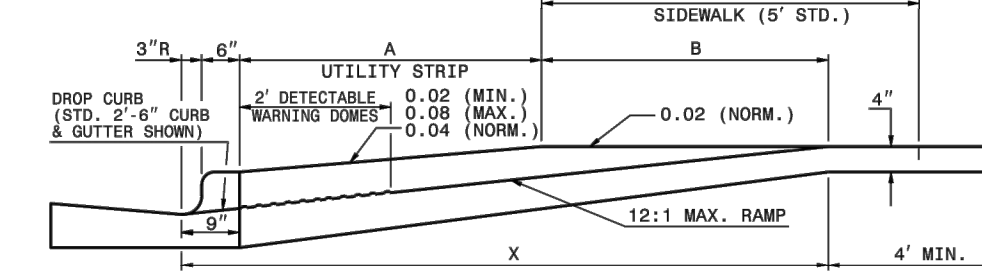
W	A	W+A/2*	X	B
5'	0.0'	5.8'	5.8'	5.0'
5'	0.0'	6.8'	6.8'	6.0'
5'	0.0'	7.8'	7.3'	6.5'
5'	0.0'	8.8'	7.3'	6.5'
5'	2.0'	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.0'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4.0'	9.8'	8.6'	3.3'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

BASE DIAMETER: 0.9" TO 1.40" R

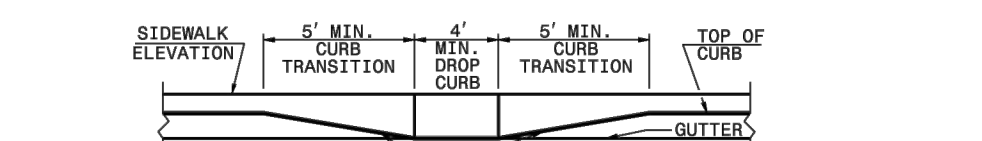
TOP DIAMETER OF NO LESS THAN 50% TO NO MORE THAN 65% OF THE BASE DIAMETER



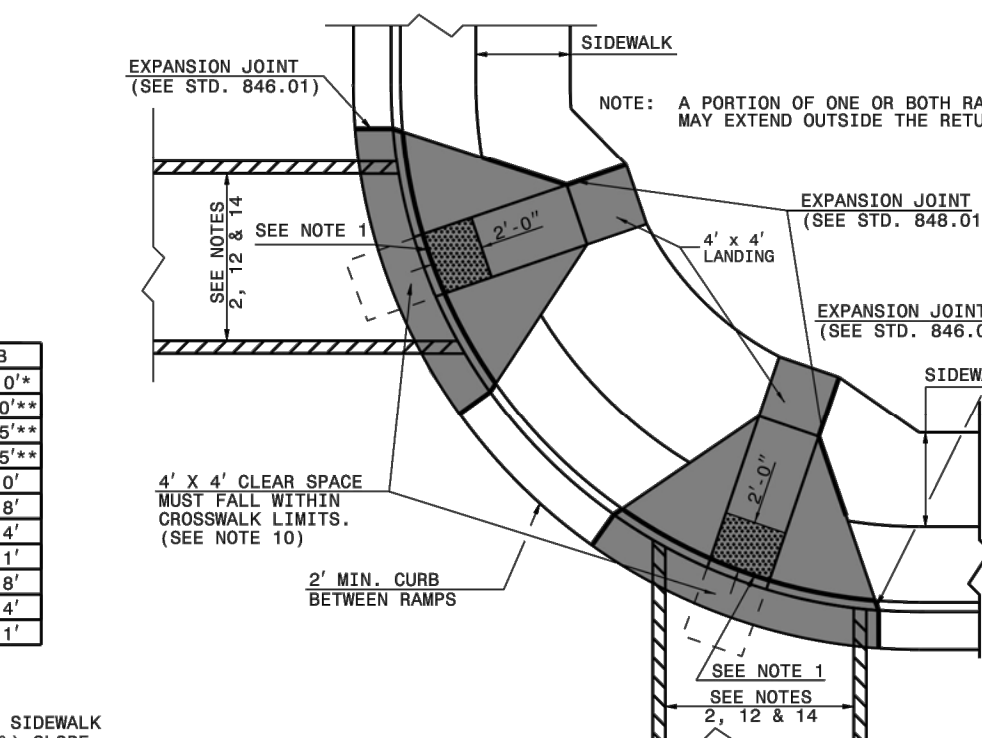
DETECTABLE WARNING DOMES



SECTION B-B



SECTION A-A



PLAN VIEW

DUAL RAMP ANY RADII (4' MIN. FLOOR WIDTH)

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE SIDEWALK

SHEET 1 OF 1  
848.01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CURB RAMP PROPOSED CURB AND GUTTER

SHEET 1 OF 3  
848.05

PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

DETAILS  
ABBAY CREEK GREENWAY  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

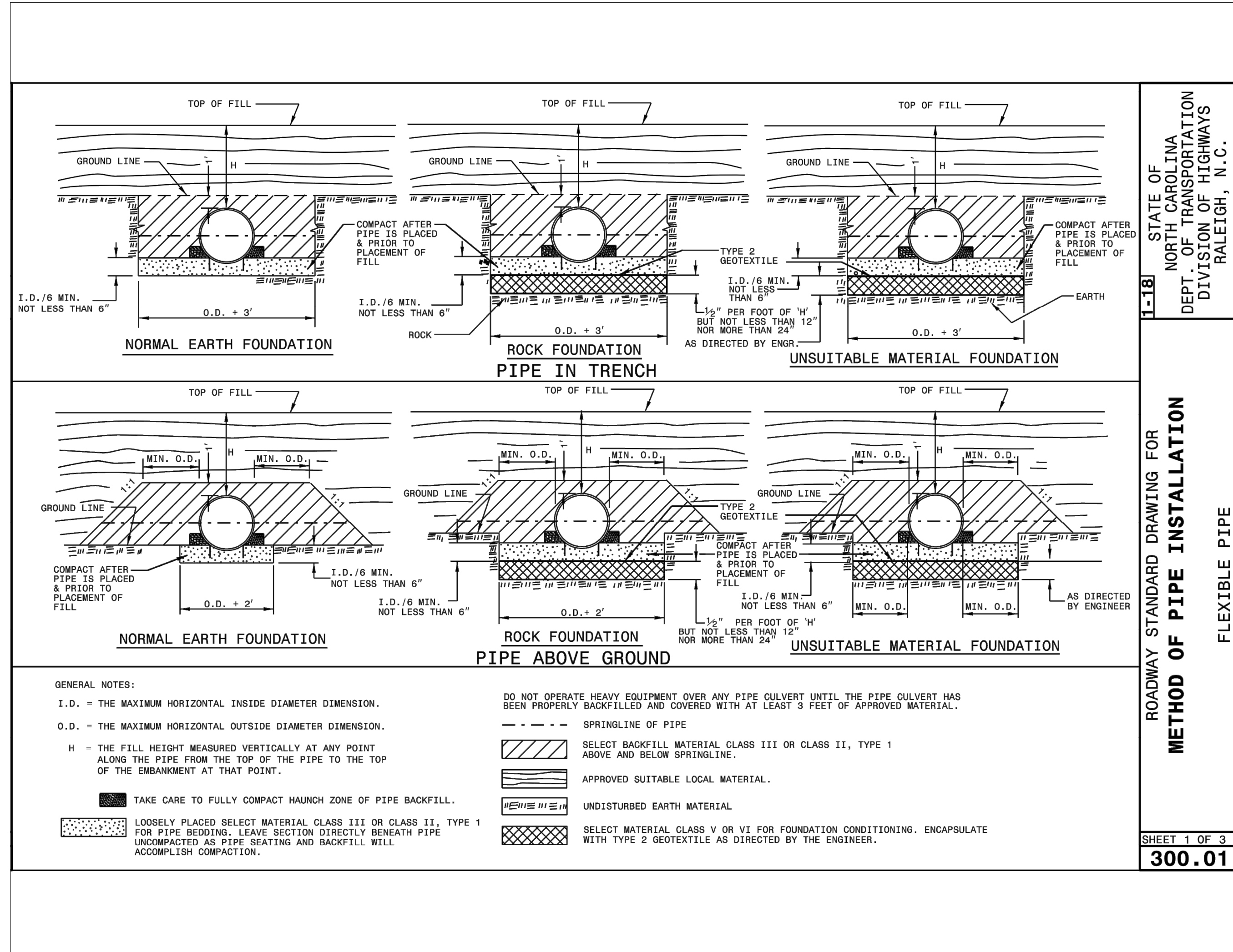
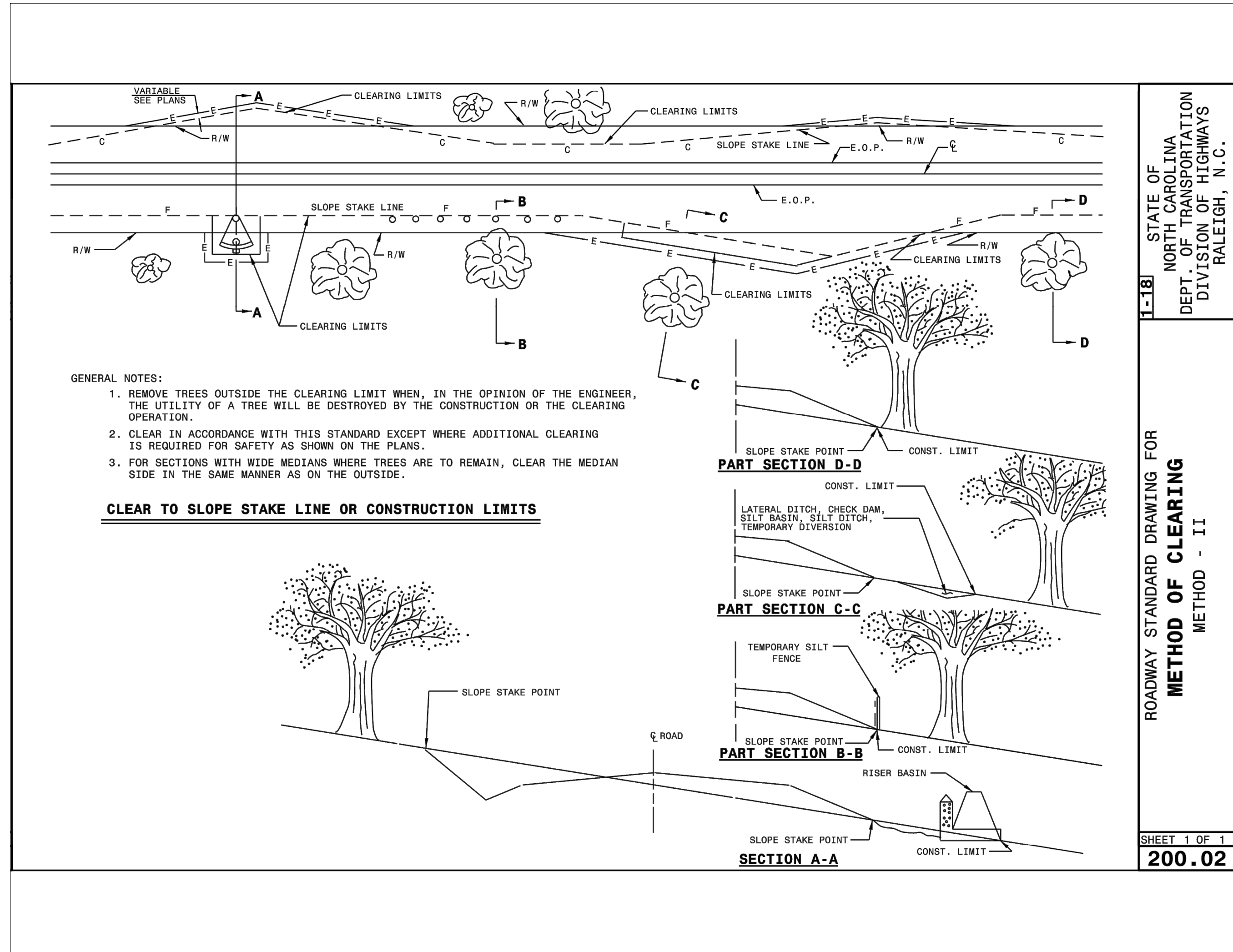
PROJECT INFORMATION

PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

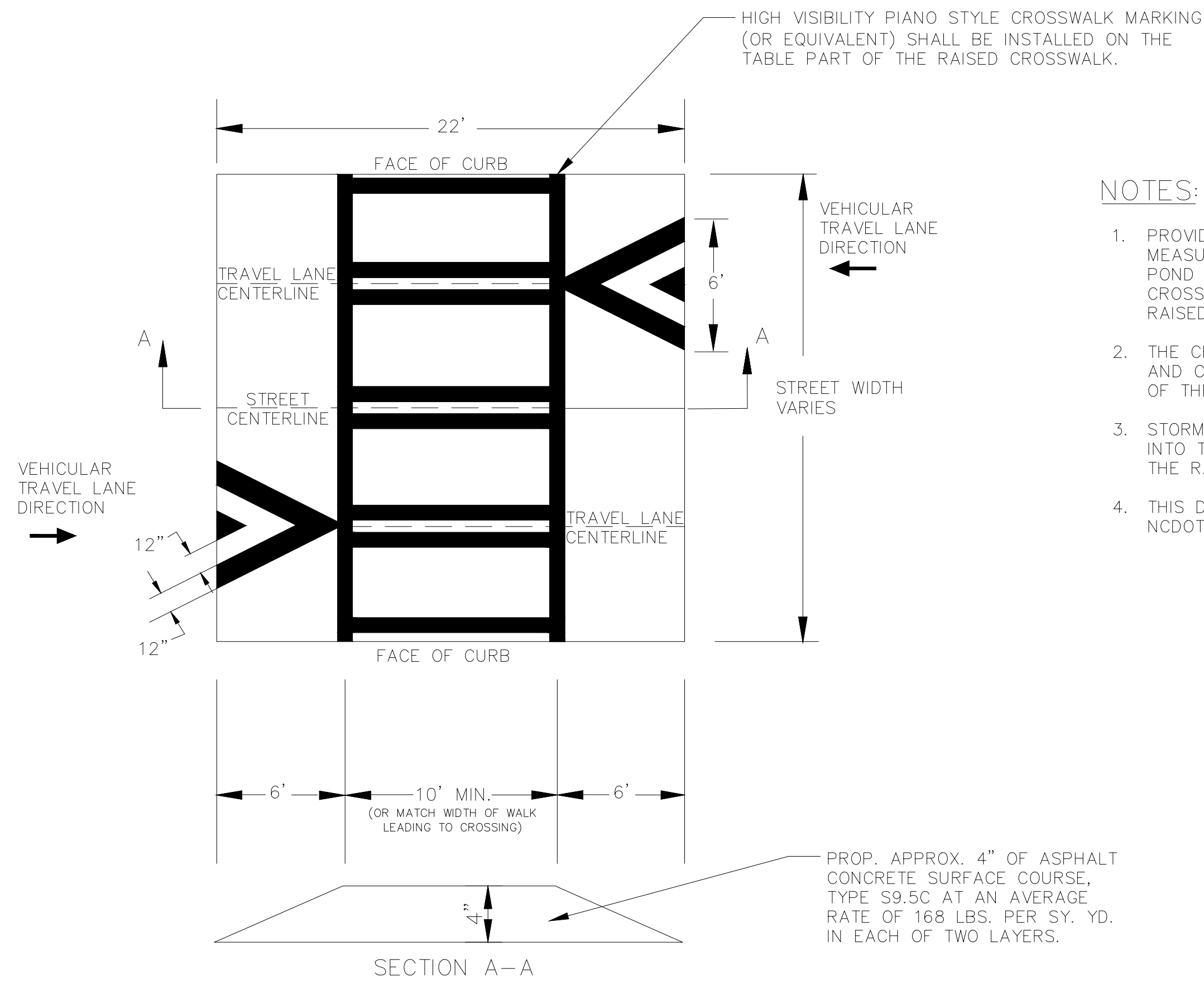
SHEET: **C2.6**

ESP Associates, Inc.  
P.O. Box 7030  
Charlotte, NC 28241  
3275 Lakemont Blvd.  
Raleigh, NC 27604  
Tel: 866-446-6666  
803-802-3440 (SC)  
www.espsoc.com





U:\2020 Projects\01937 -Abbey Creek Greenway (City of Belmont)\_R37 Sheet\01937-01\DETAILS\01937-01-DETAILS.dwg, C2.7 - DETAILS.dwg



**RAISED CROSSWALK**

ESP Associates, Inc.  
P.O. Box 7030  
Charlotte, NC 28241  
3475 Lakenont Blvd.  
Raleigh, NC 27609  
Tel: 866-446-4646 (N.C.)  
803-802-3440 (S.C.)  
www.espsocietainc.com



**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION

**DETAILS**

**ABBAY CREEK GREENWAY**

BELMONT, NORTH CAROLINA

CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C2.7</b>

Locations:

- See Greenway Plan and Profile Sheets C3.0-C3.6
- See Structural Sheets S.0-S.6

General Notes: (see structural drawings)

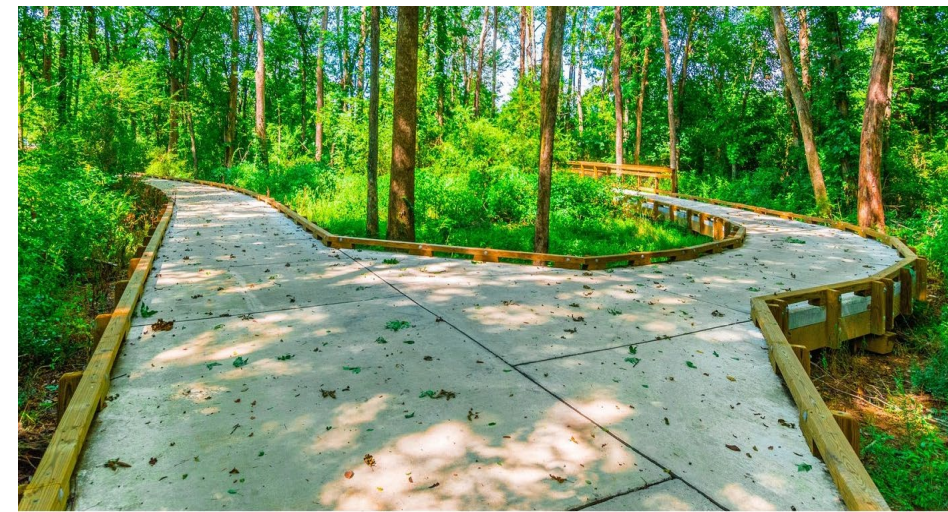
- 10' wide
- Timber Frame (see Structural Sheets)
- +/- 4" concrete poured in place concrete on metal deck pan
- 4000psi @ 28 days

Finishes: (see structural drawings)

- Treated Timber Curb rail
- Broom finish
- Hand tooled scoring pattern approximately every 10' on center
- Expansion Joint every 20' on center.

Bid Options

- Final Design by General Contractor (two options presented for structural design for more competitive based bidding).



**Timber Frame Boardwalk (Or Equal) with Poured in Place Concrete Deck and Timber Curb Rail**  
Not to Scale

Locations:

- See Greenway Plan and Profile Sheets C3.0-C3.6
- See Structural Sheets S.0-S.6
- Add Alternate finishes for all flatwork Concrete shown on the plans (boardwalk deck, bridge deck, concrete approaches, or concrete trail)

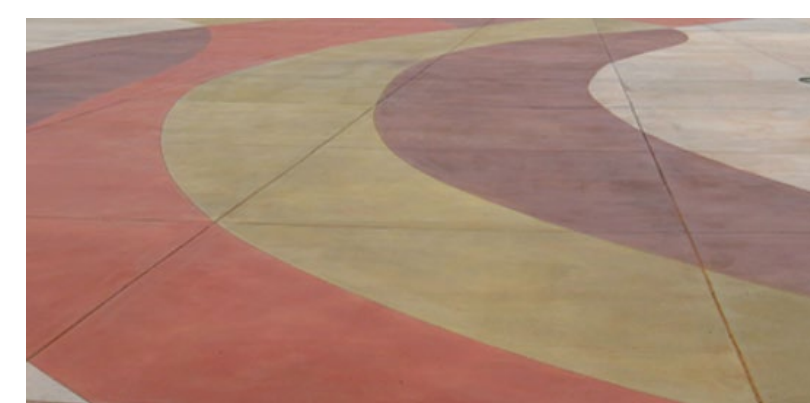
General Notes and Bidding Options:

- The following are images and of options the City can choose to pursue more detailed design and specifications beyond 50% CD's if they should choose.
- It is assumed all options shown would be additional cost to construct at time of bid opening.
- The owner can choose to accept or not accept any and all "alternatives" at the time of negotiating final contract with the apparent and awarded low bidder after a public bid opening.

Finishes:

- Stamped Concrete (Top picture)
- Integral Color(s) and Pattern (Middle Picture)
- Sandblasted Pattern (Bottom picture)
- Combination of all and the above. (Note Cost increases and quality can be an issue low bid projects because lack of skilled tradesman

*CONS: Expensive and hard to maintain or patch in the future if ever needed.*



**Poured in Place Decking- ADD Alternative Options (Bridge and Boardwalk)**  
Not to Scale

Locations:

- See Greenway Plan and Profile Sheets C3.0-C3.6
- See Structural Sheets S.0-S.6

General Notes: (see structural drawings)

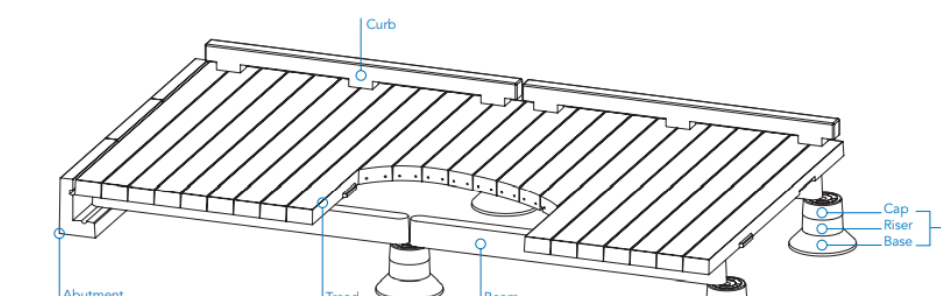
- 10' wide
- Timber Frame (see Structural Sheets)
- Precast Concrete Decking
- Spec's for Concrete to meet AASHTO standards and all loads in final design

Finishes: (see structural drawings)

- Treated Timber Curb rail
- Slip resistant/Broom finish for Concrete Deck
- Turn-key system made off site and delivered

Bid Options

- Final Design by General Contractor and Supplier (two options presented for structural design for more competitive based bidding).



**Precast Frame Boardwalk (Or Equal) with Precast Panel Concrete Deck and Timber Curb Rail**  
Not to Scale

Locations:

- See Greenway Plan and Profile Sheets C3.0-C3.6
- See Structural Sheets S.0-S.6
- Add Alternate finishes for all flatwork Concrete shown on the plans (precast frame boardwalk if chosen)

General Notes and Bidding Options:

- The following are images and of options the City can choose to pursue more detailed design and specifications beyond 50% CD's if they should choose.
- It is assumed all options shown would be additional cost to construct at time of bid opening.
- The owner can choose to accept or not accept any and all "alternatives" at the time of negotiating final contract with the apparent and awarded low bidder after a public bid opening.

Finishes:

- Stamped Concrete
- Textured Concrete
- Sandblasted
- Integral Color(s)

*PROS: Likely most inexpensive option if Precast Boardwalk system is chosen in order to add visual value to concrete decking if precast treads are used.*



**Precast Tread Decking- ADD Alternative Options (If Precast Boardwalk System is selected)**  
Not to Scale

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P.O. Box 7030  
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www.espsociates.com

**ESP**

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NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

**DETAILS**

**ABBEE CREEK GREENWAY**

BELMONT, NORTH CAROLINA

CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
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PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C2.9</b>



**WOOD (basis of design)**



**Galvanized Pipe Rail- Painted Black**



**Combination (wood/cable)- ADD ALTERNATE**

**STANDARD Guard Rail**

Not to Scale



**Custom Guard Railing- ADD Alternative Options (Bridge and Segment 1 station 8+65 to 11+00)**

Not to Scale



**PRECAST Concrete- Big Block Segmental Walls**

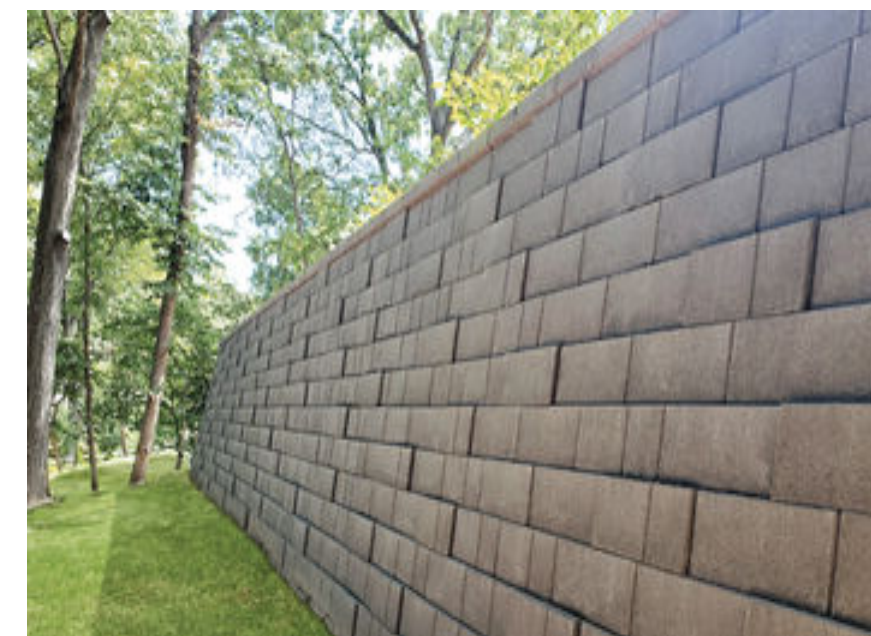
Locations:

- See Greenway Plan and Profile Sheets C3.0-C3.6 and Typical Details for all site wall locations and heights

General Notes and Finishes:

- Does not require GeoGrid under 8' typically
- Resembles larger cut block stone
- Precast Concrete Per Manufacturer Specs
- Standard Grey color (other colors and textures available but will add costs)

Basis of Design Manufacturer (or equal)  
Redi-Rock, Bronco, VersaLok, Etc.



**Retaining Wall (Segmental)- ADD ALTERNATE**

Locations:

- See Greenway Plan and Profile Sheets C3.0-C3.6 and Typical Details for all site wall locations and heights

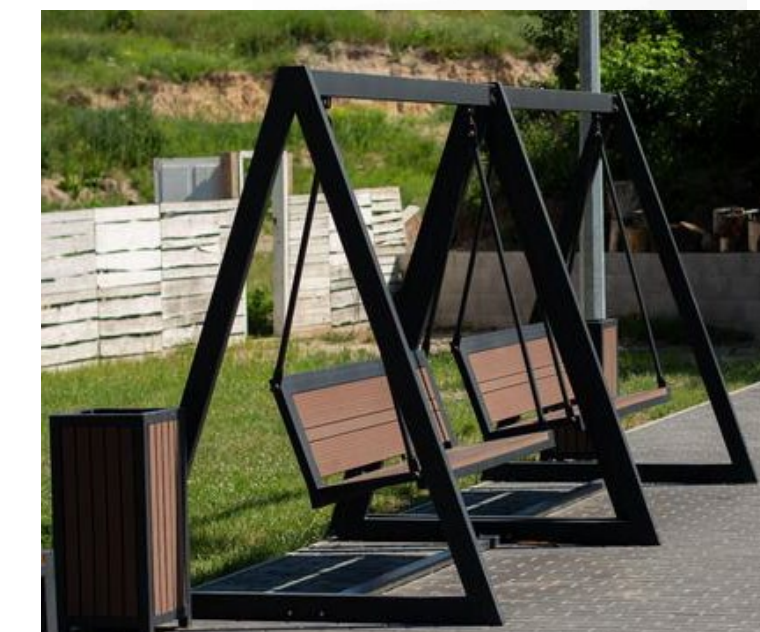
General Notes and Finishes:

- Requires GeoGrid tiebacks (increases grading limits)
- More variety in colors and textures
- Can resemble natural stone (ADDITIONAL COST)
- Variety of colors and caps (ADDITIONAL COST)

Basis of Design Manufacturer (or equal)  
VersaLok, Keystone, Allan, Heritage, Etc.

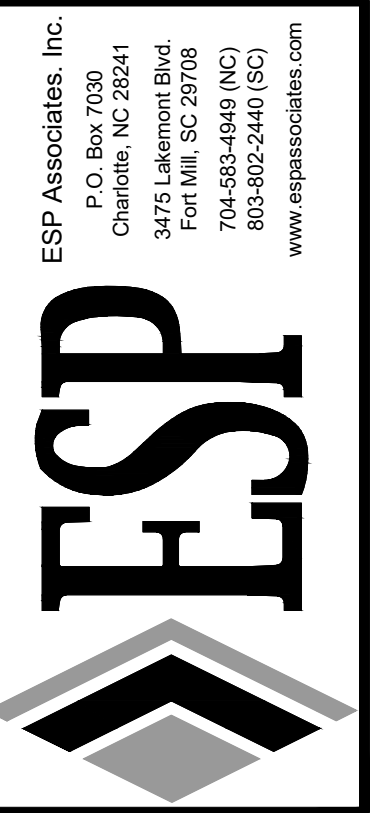
**Retaining Walls- Basis of Design and Alternate Options ( Does not include Wing Wall and Bridge Abutments)**

Not to Scale



**Trailhead Furniture UPGRADE Options (Benches, Swings, Trash Cans)**

Not to Scale

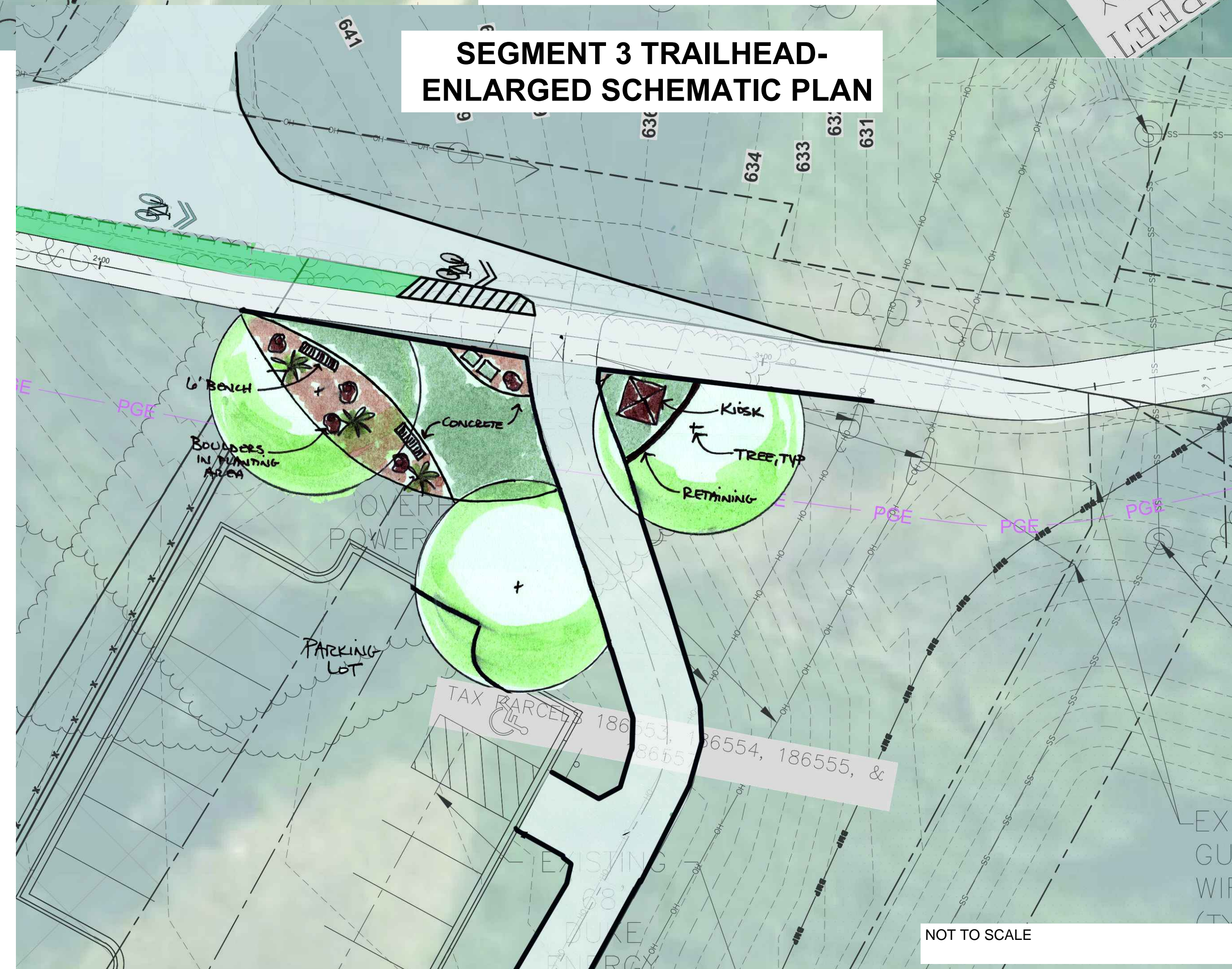
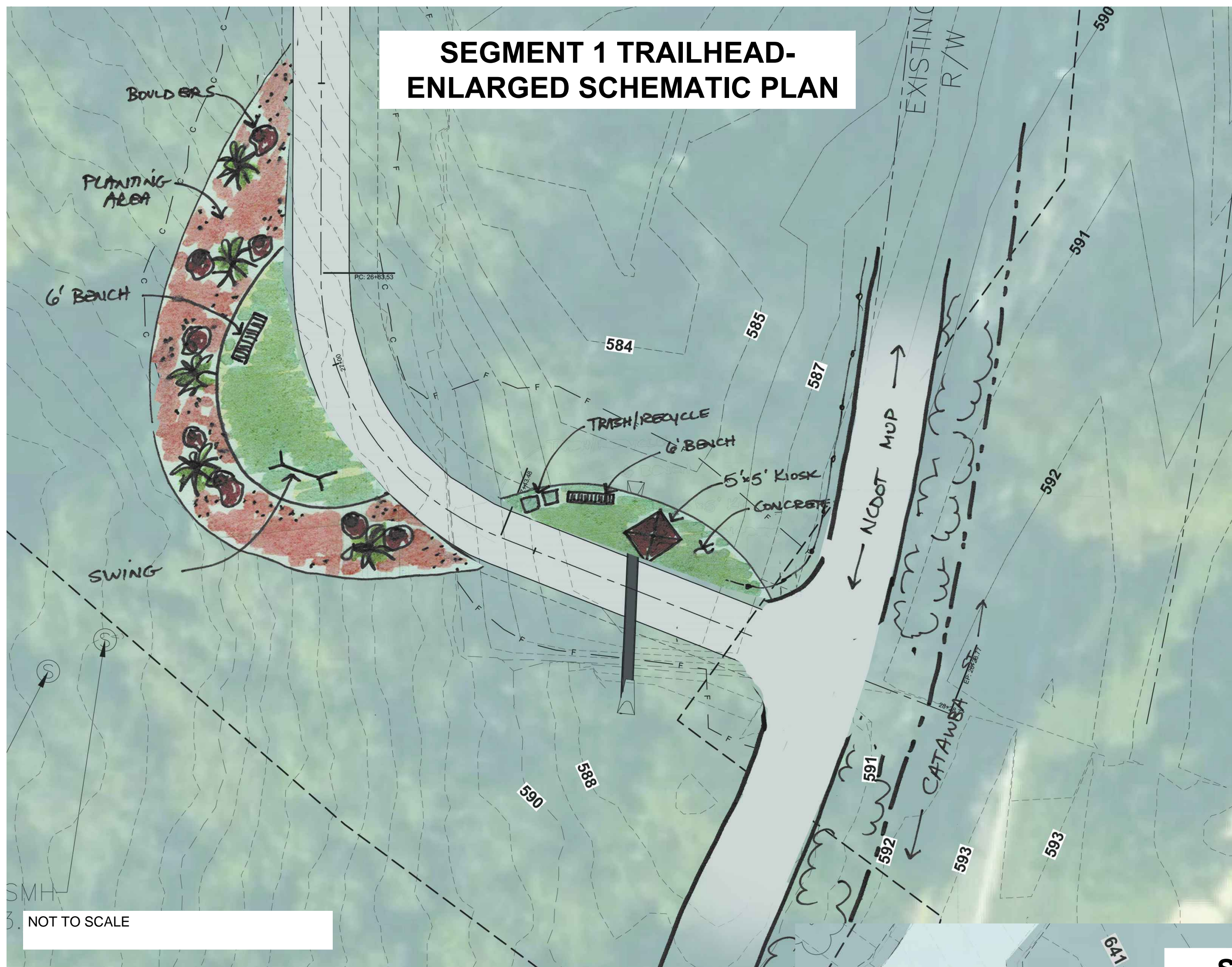


**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION	BY

**DETAILS**  
**ABBAY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C2.10</b>



**Note:**

- 1) The following plans are not to scale, and schematic in nature for owner review and comment.
- 2) Once owner provides direction on final Trailhead locations and allowance and budget for each, the following plans will be updated and incorporated into the final CAD layout of the overall Greenway
- 3) Allowances for each Trailhead have been included, however, it does not include wayfinding signage costs (owner provided).
- 4) Permanent Greenway easement limits will need to be defined for Segment 2 and Segment 3 Trailhead locations once owner provides feedback and desired program and incorporated as part of the overall plats the City of Belmont wishes to record as part of the overall Greenway easements for Abbey Creek Greenway.

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PROJECT INFORMATION	
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U:\2020 Projects (IR37) - Abbey Creek Greenway (City of Belmont)\_IR37\_Schematic\_Greenway\_Details\_Sheet\_C2.8 - DETAILS.dwg

RESERVED FOR FINAL ADD ALTERNATE DETAILS AND TRAIL  
HEAD ENLARGEMENTS PER OWNER DIRECTION AFTER  
REVIEW OF 50% CONSTRUCTION DOCUMENT OPTIONS

PROJECT INFORMATION	
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PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C2.11</b>

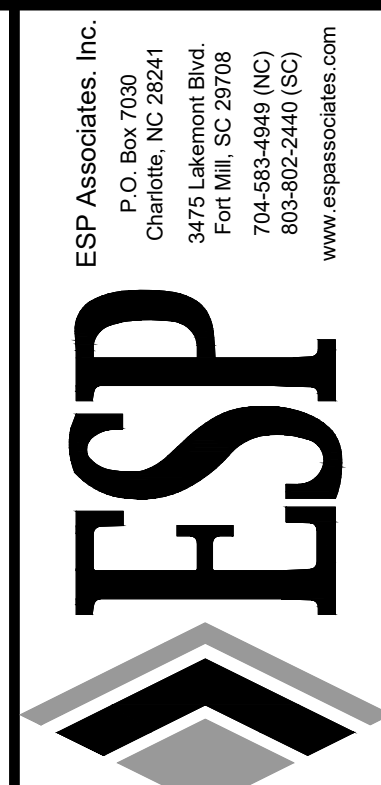
**DETAILS**

ABBNEY CREEK GREENWAY

CITY OF BELMONT  
BELMONT, NORTH CAROLINA

NO.	DATE	REVISION	BY

PRELIMINARY  
NOT FOR  
CONSTRUCTION

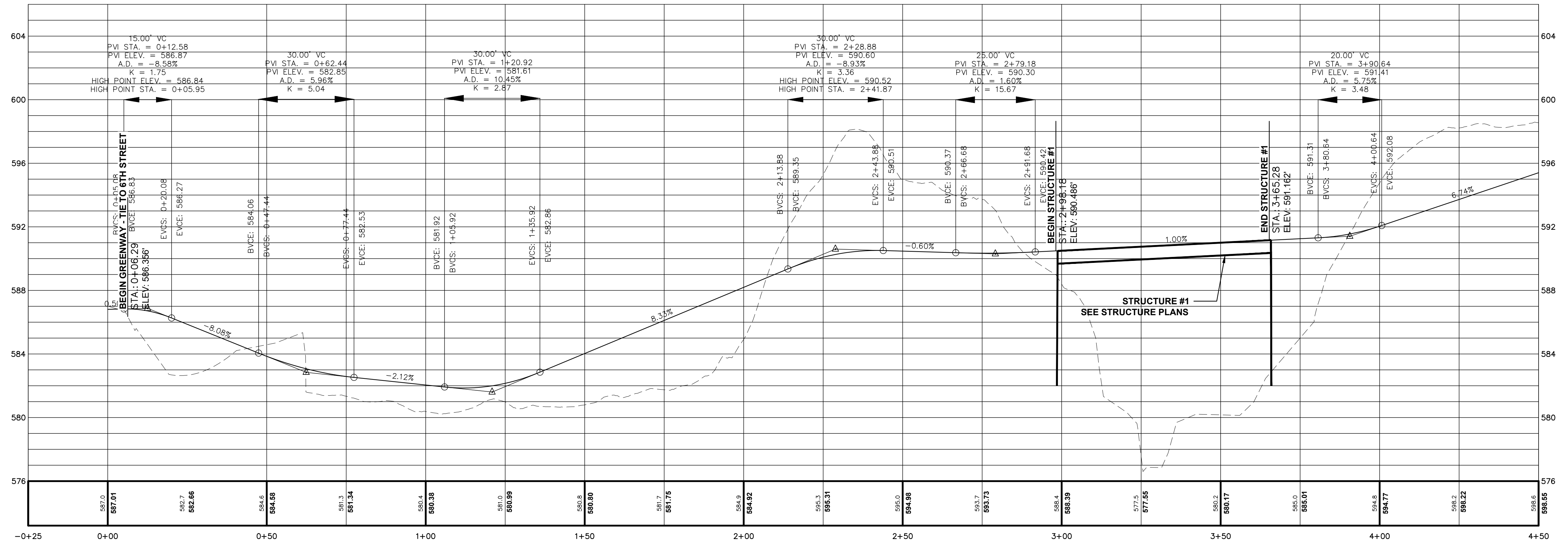
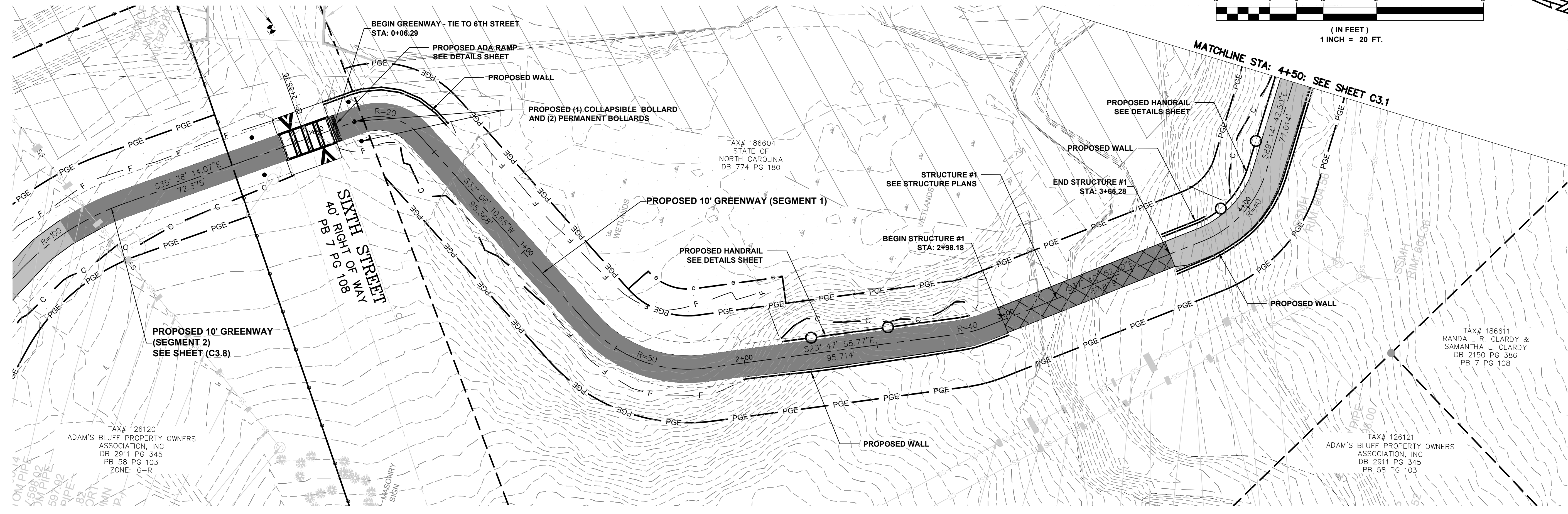
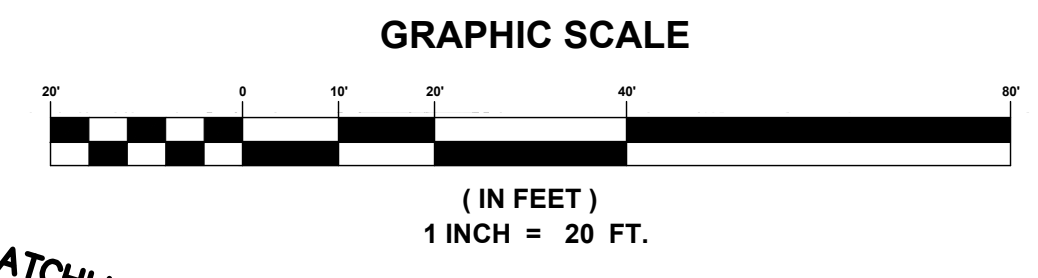


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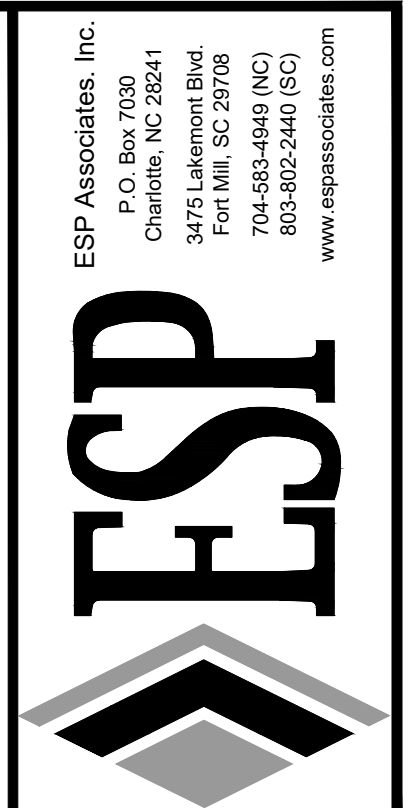
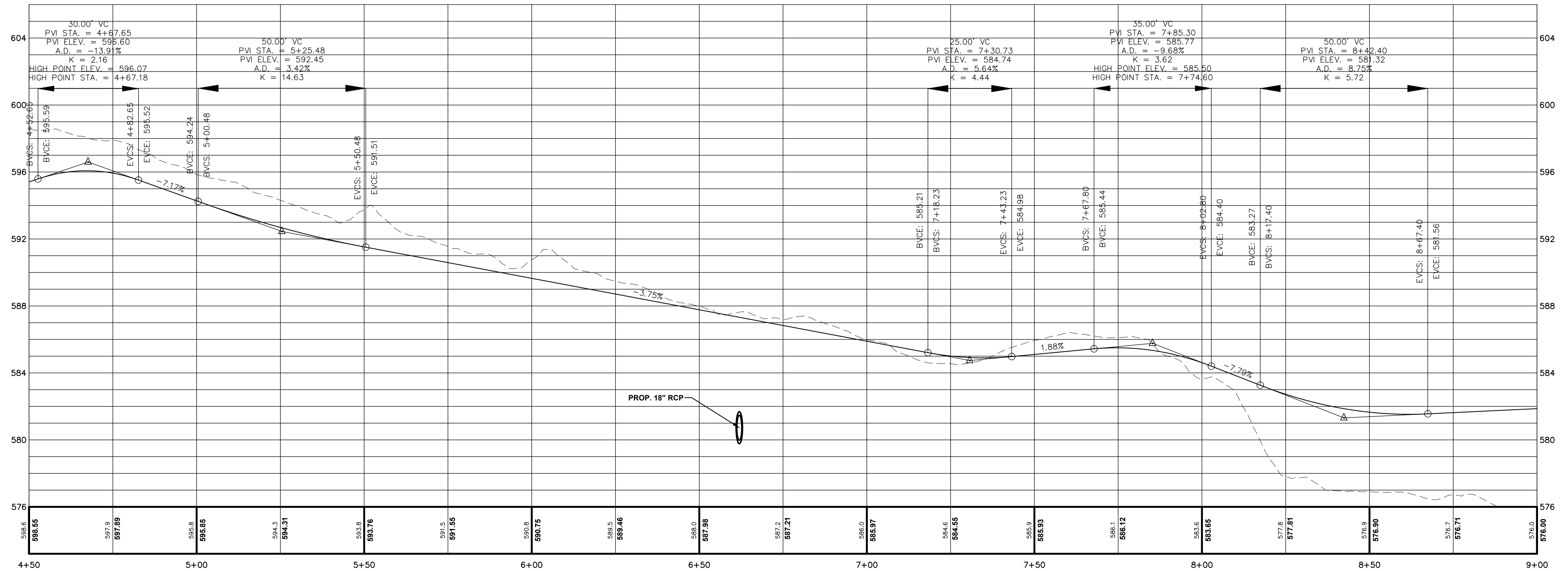
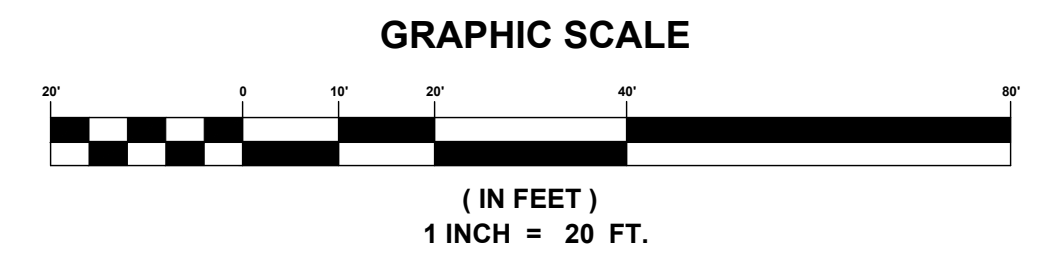
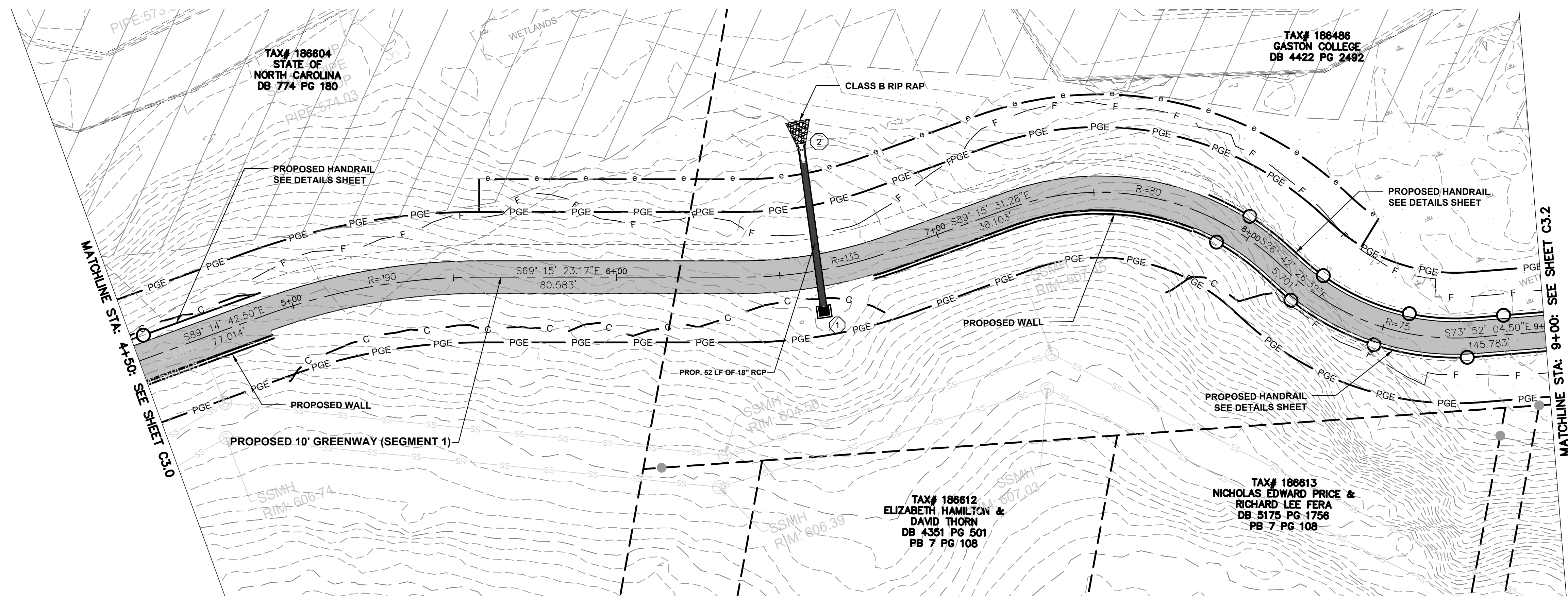
NO.	DATE	REVISION

**PLAN AND PROFILE (SEG. 1)**  
**ABBEEY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C3.0







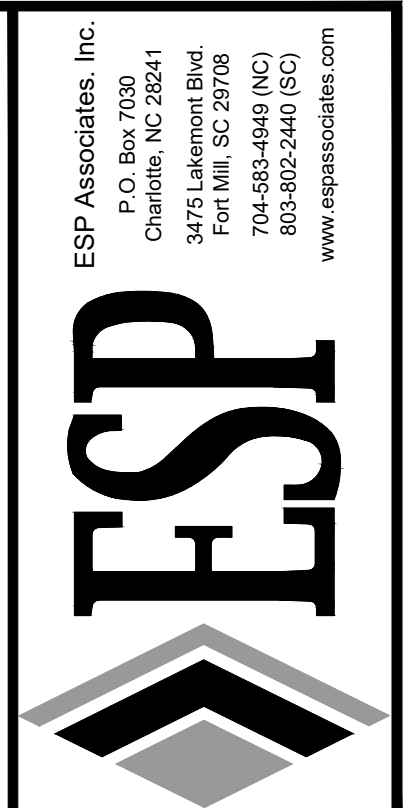
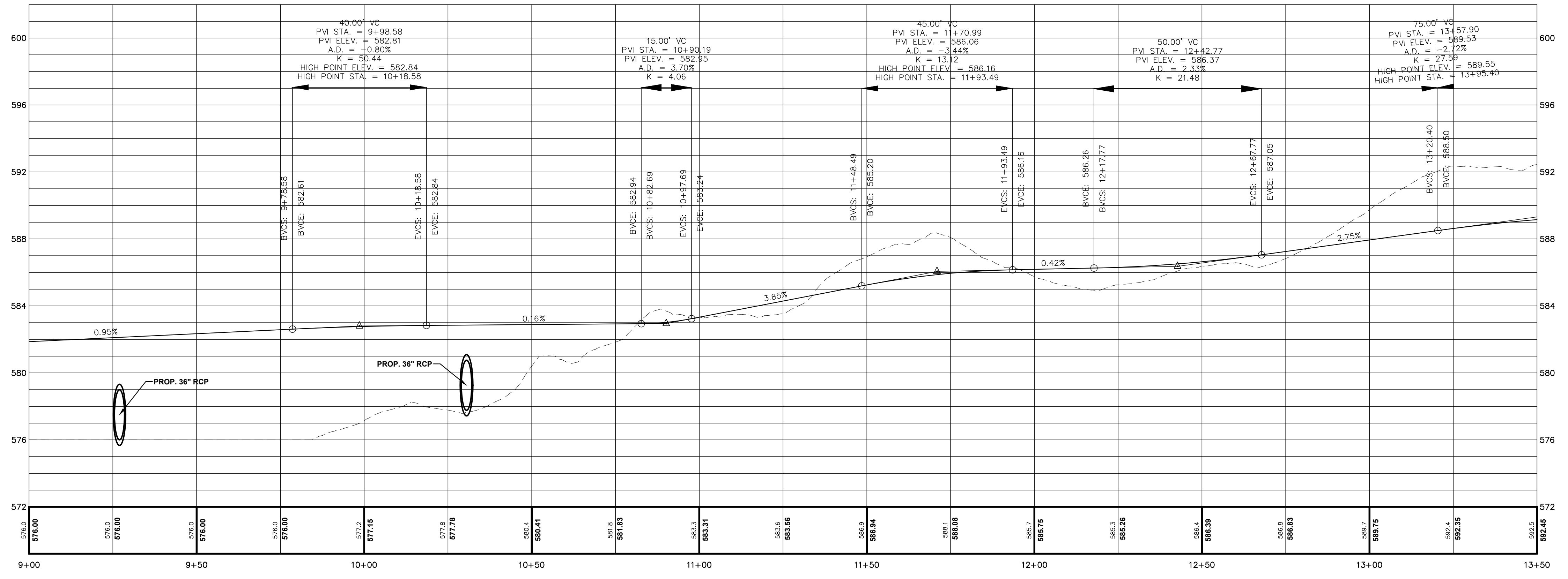
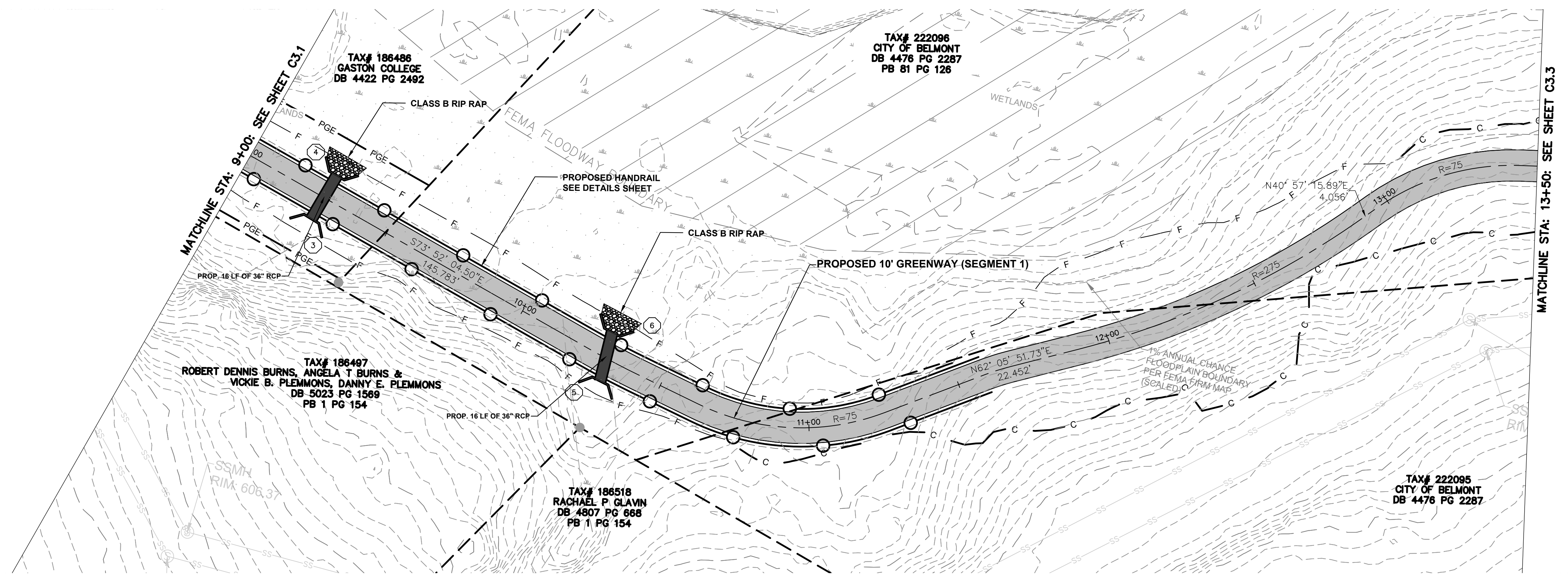
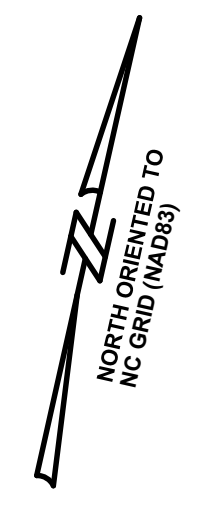
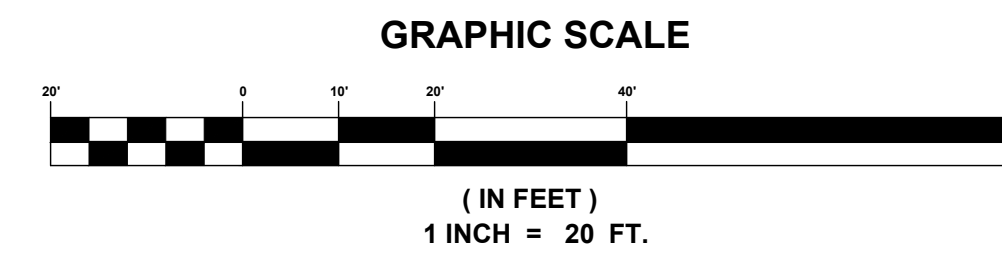
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

**PLAN AND PROFILE (SEG. 1)**  
**ABBEY CREEK GREENWAY**  
CITY OF BELMONT  
BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	

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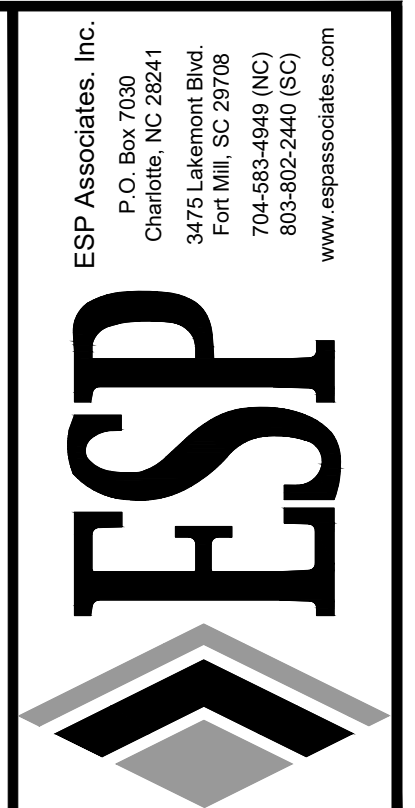
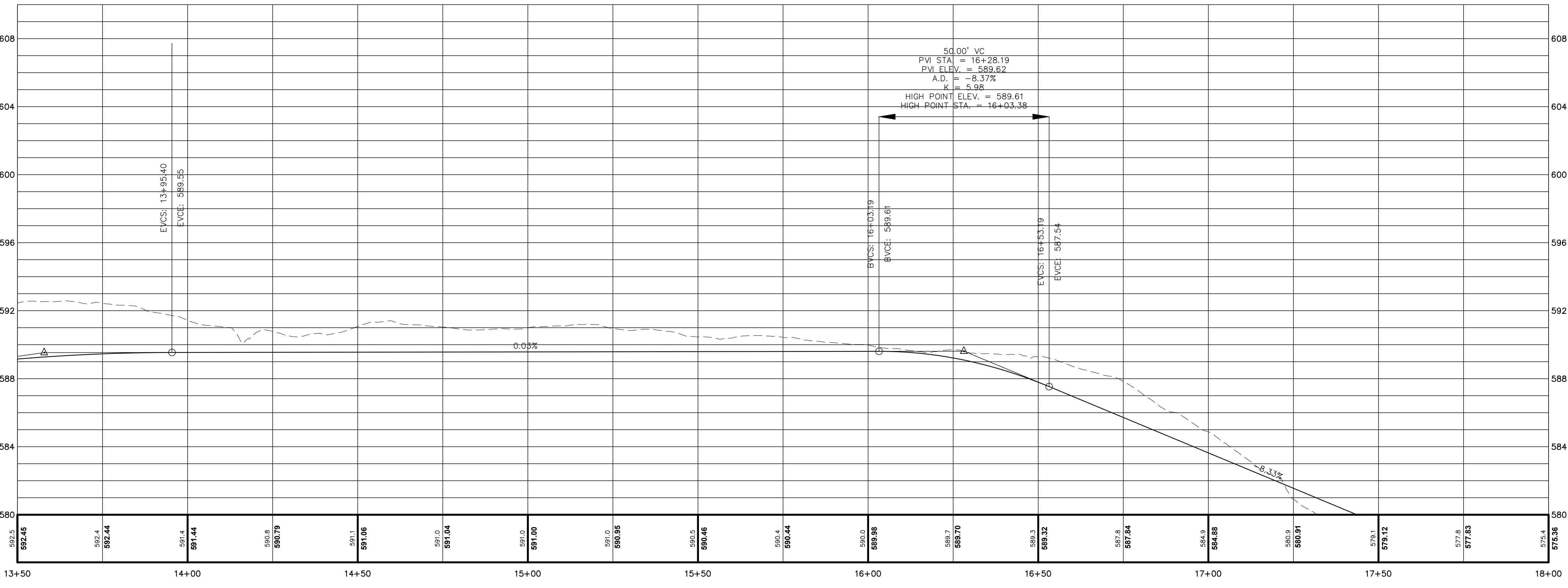
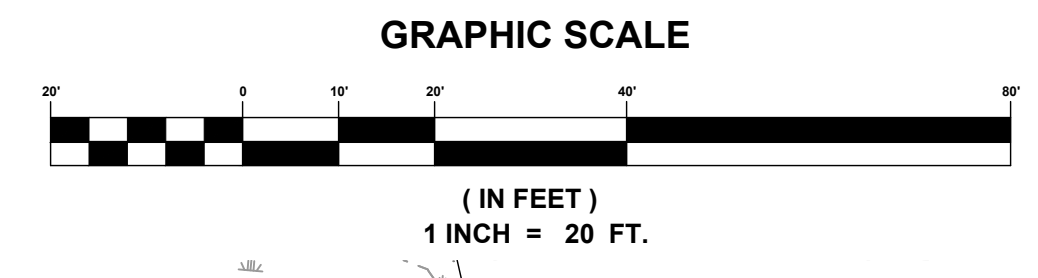
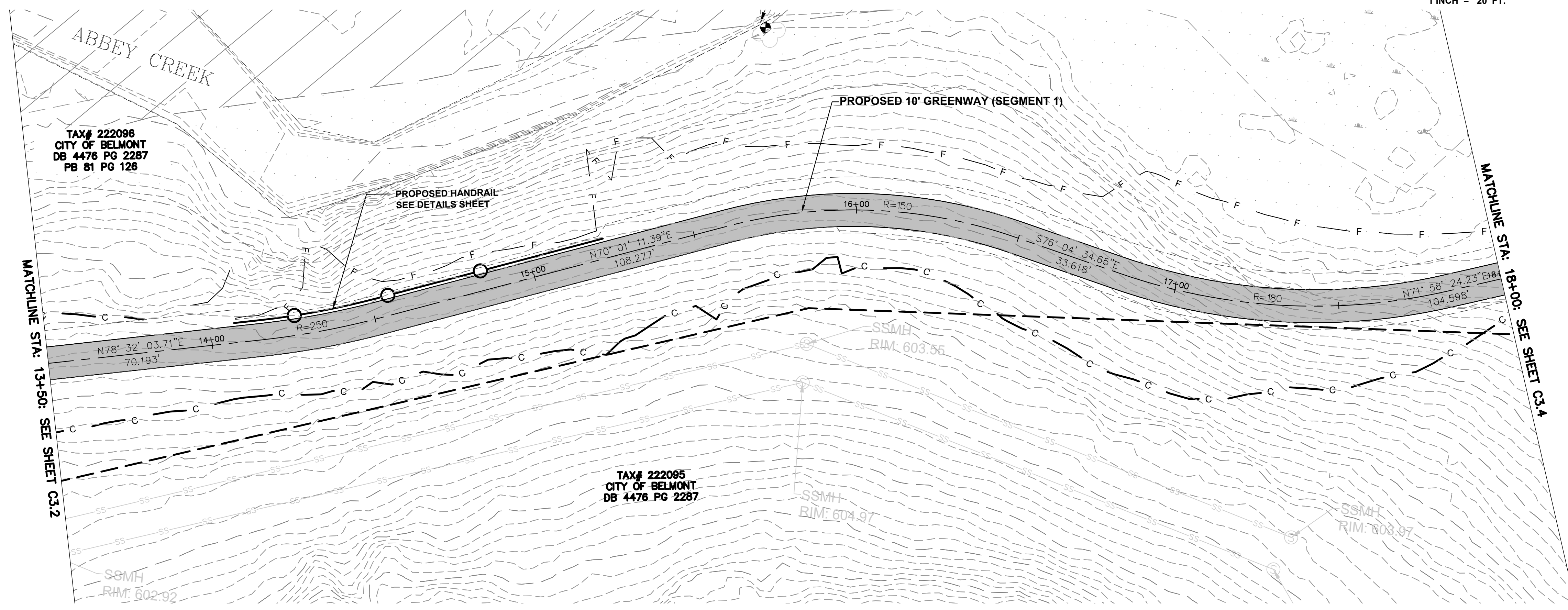


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NOT FOR  
CONSTRUCTION**

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**PLAN AND PROFILE (SEG. 1)**  
**ABBEEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
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PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C3.2



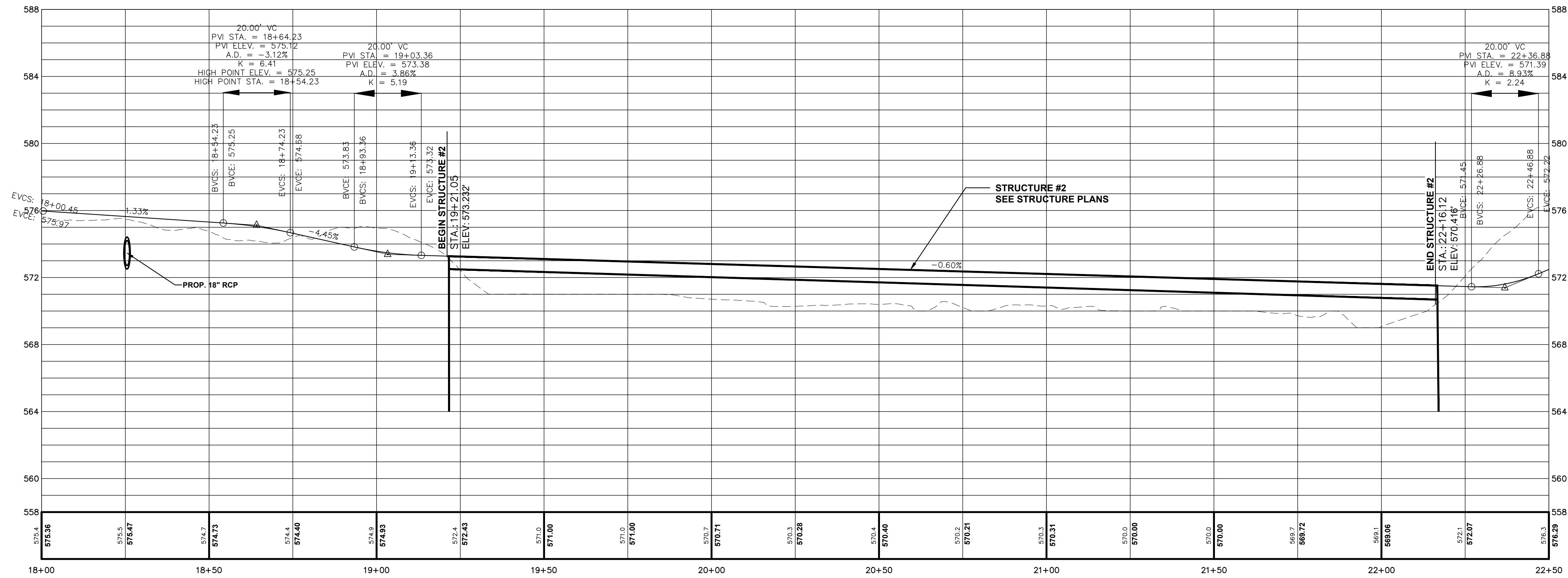
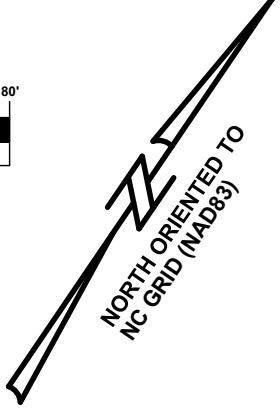
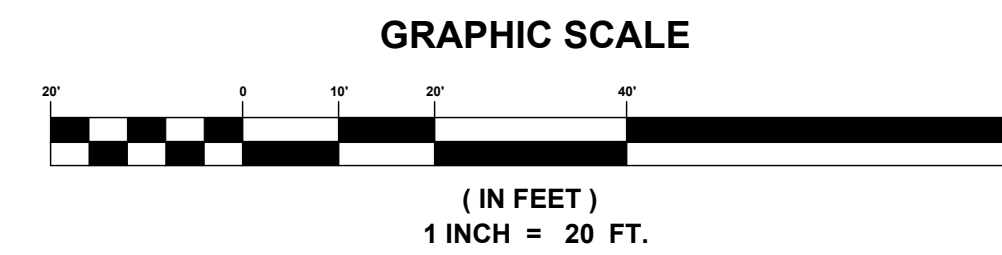
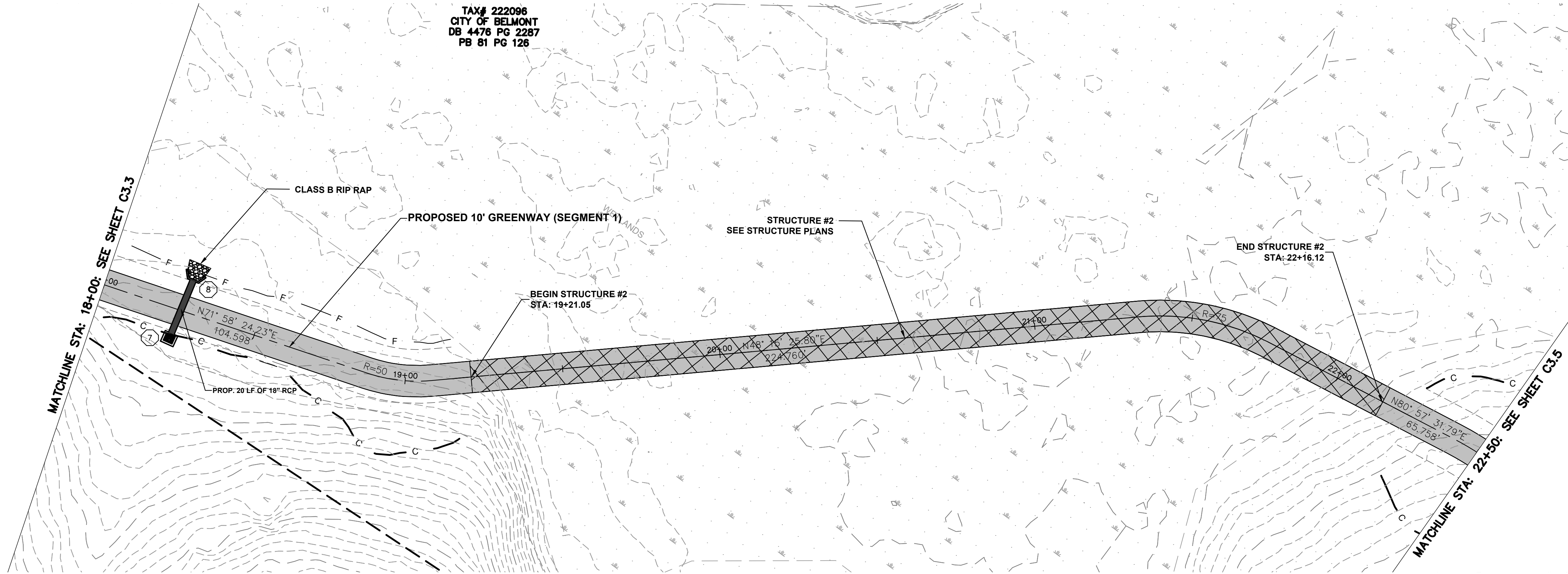
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NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION

**PLAN AND PROFILE (SEG. 1)**  
**ABBNEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

**C3.3**



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Charlotte, NC 28241  
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www.espaceassociates.com

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CONSTRUCTION

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PLAN AND PROFILE (SEG. 1)

ABBAY CREEK GREENWAY

BELMONT, NORTH CAROLINA

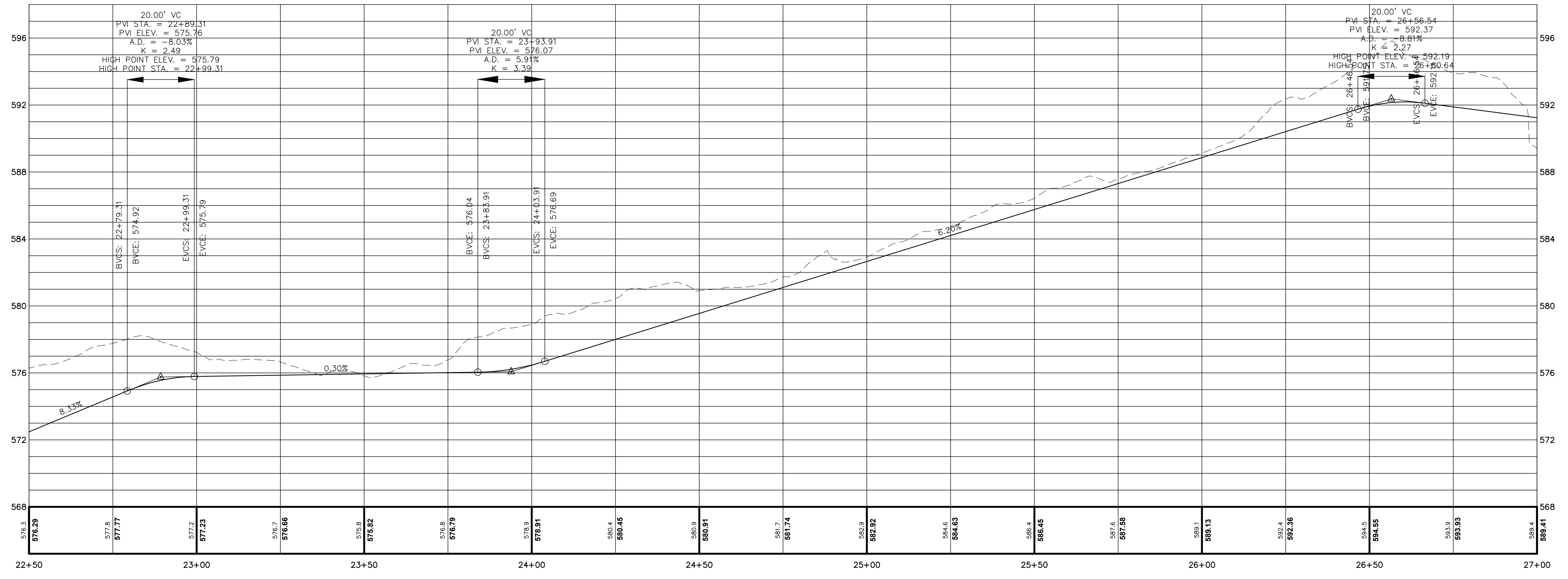
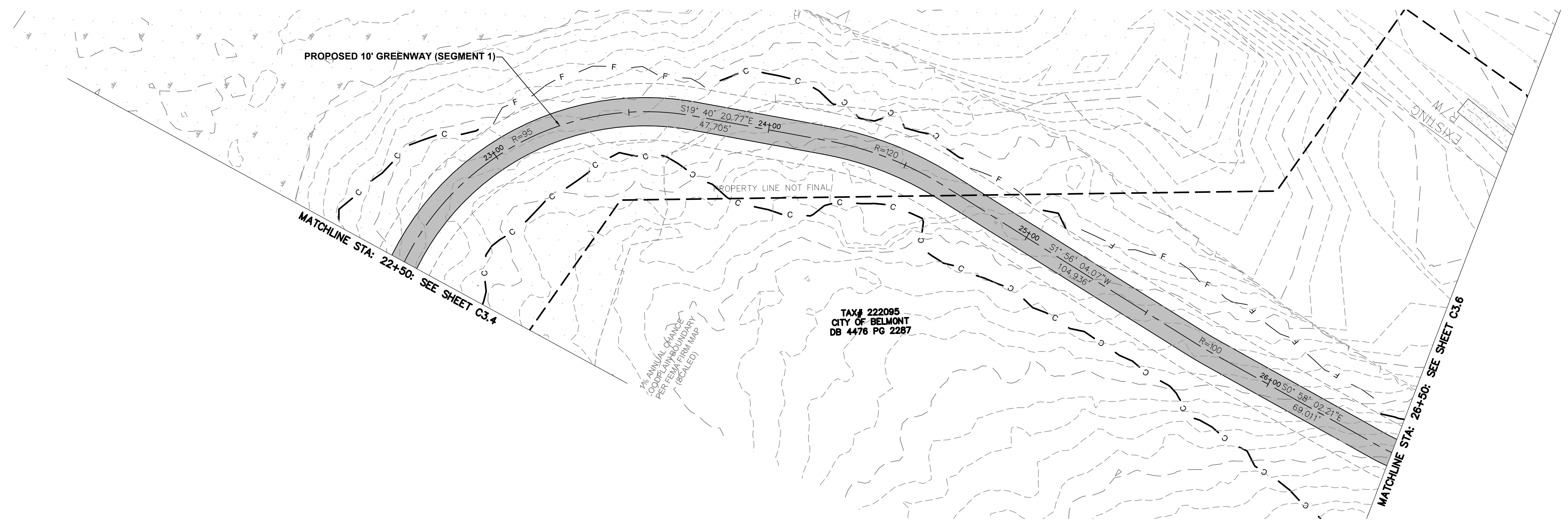
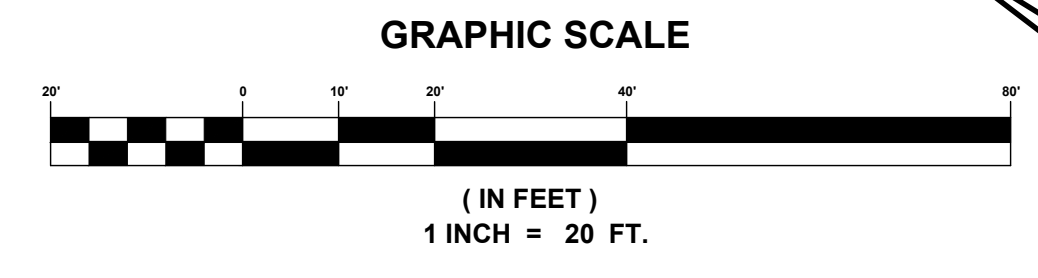
CITY OF BELMONT

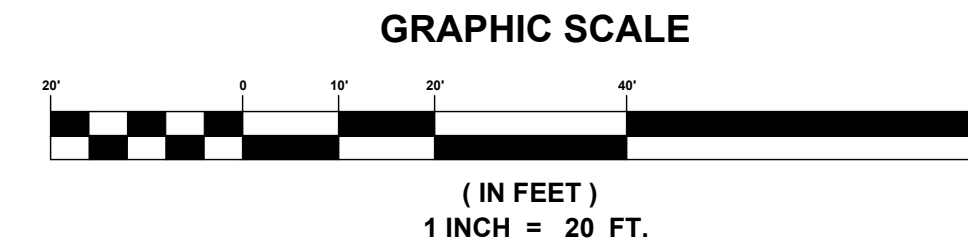
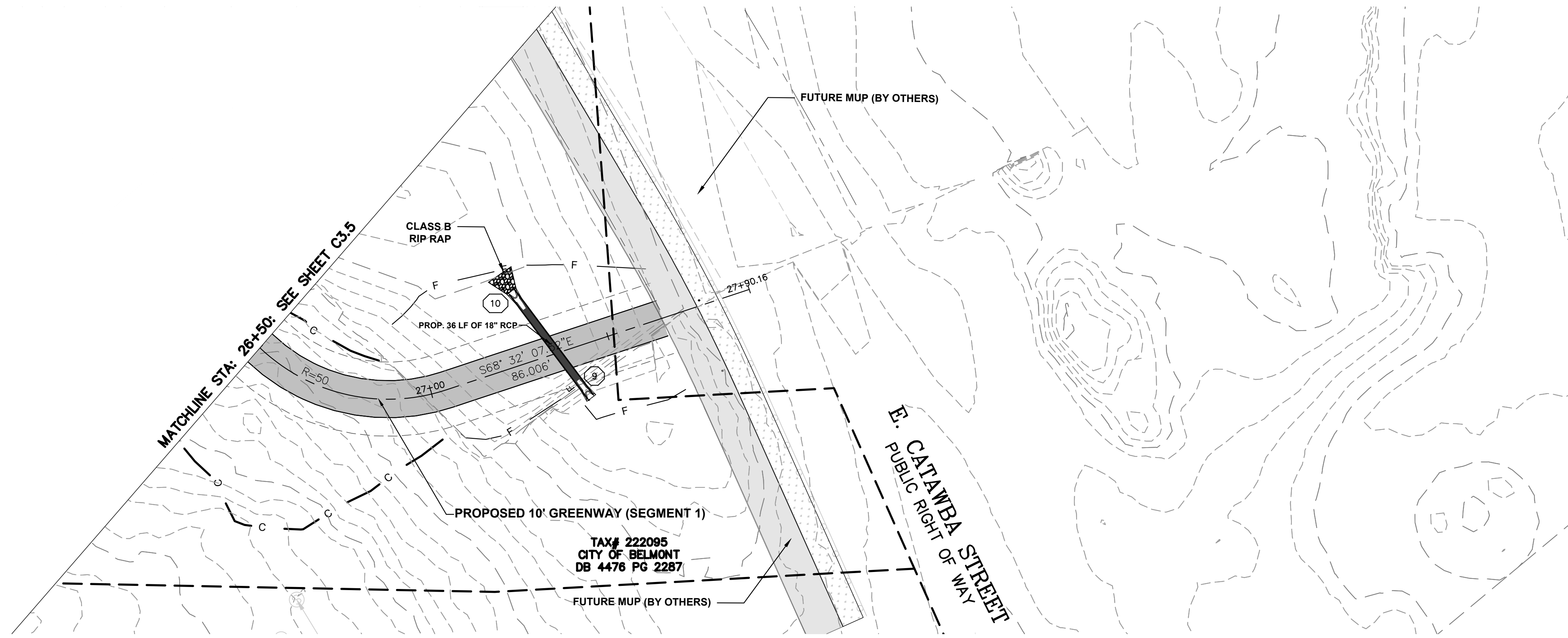
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PROJECT INFORMATION	
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DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C3.4

PRELIMINARY  
NOT FOR  
CONSTRUCTION

PROJECT INFORMATION  
PROJECT MANAGER: GMS  
DESIGNED BY: GMS  
DRAWN BY: GMS  
PROJECT NUMBER: IR37.100  
DATE: 8-16-2021  
SHEET: C3.5





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19300 W. HARRIS  
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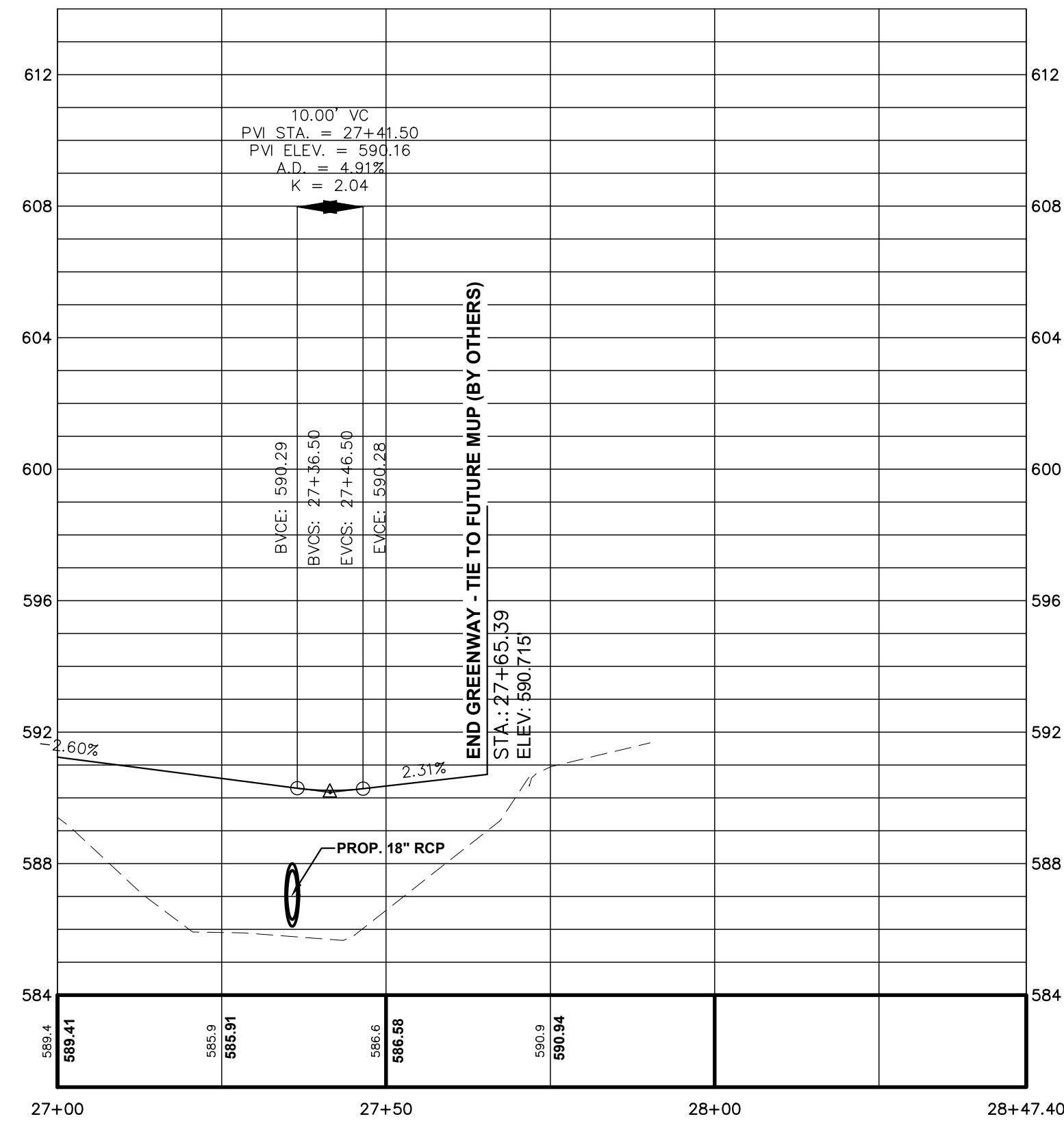
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**PLAN AND PROFILE (SEG. 1)**

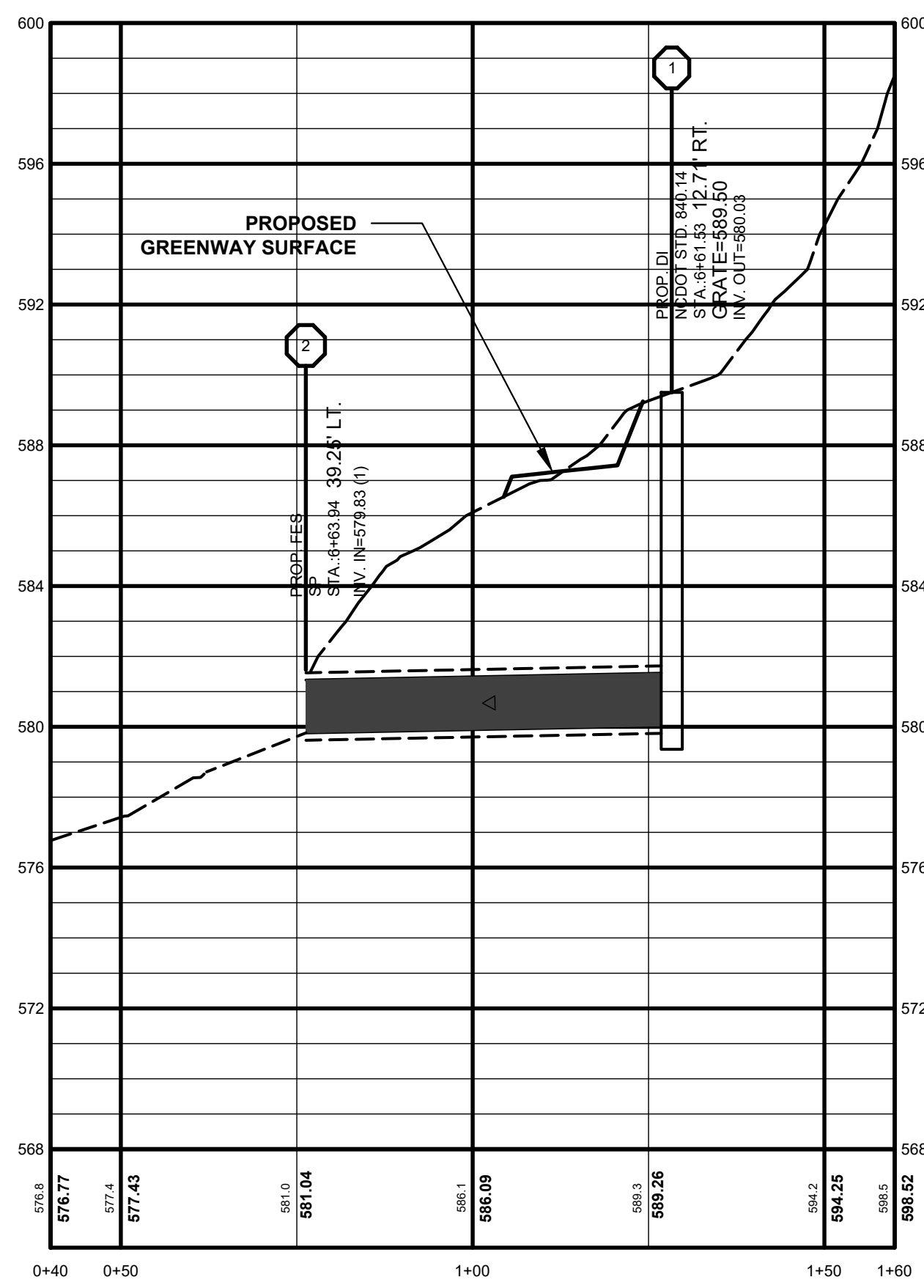
**ABBAY CREEK GREENWAY**

CITY OF BELMONT  
BELMONT, NORTH CAROLINA

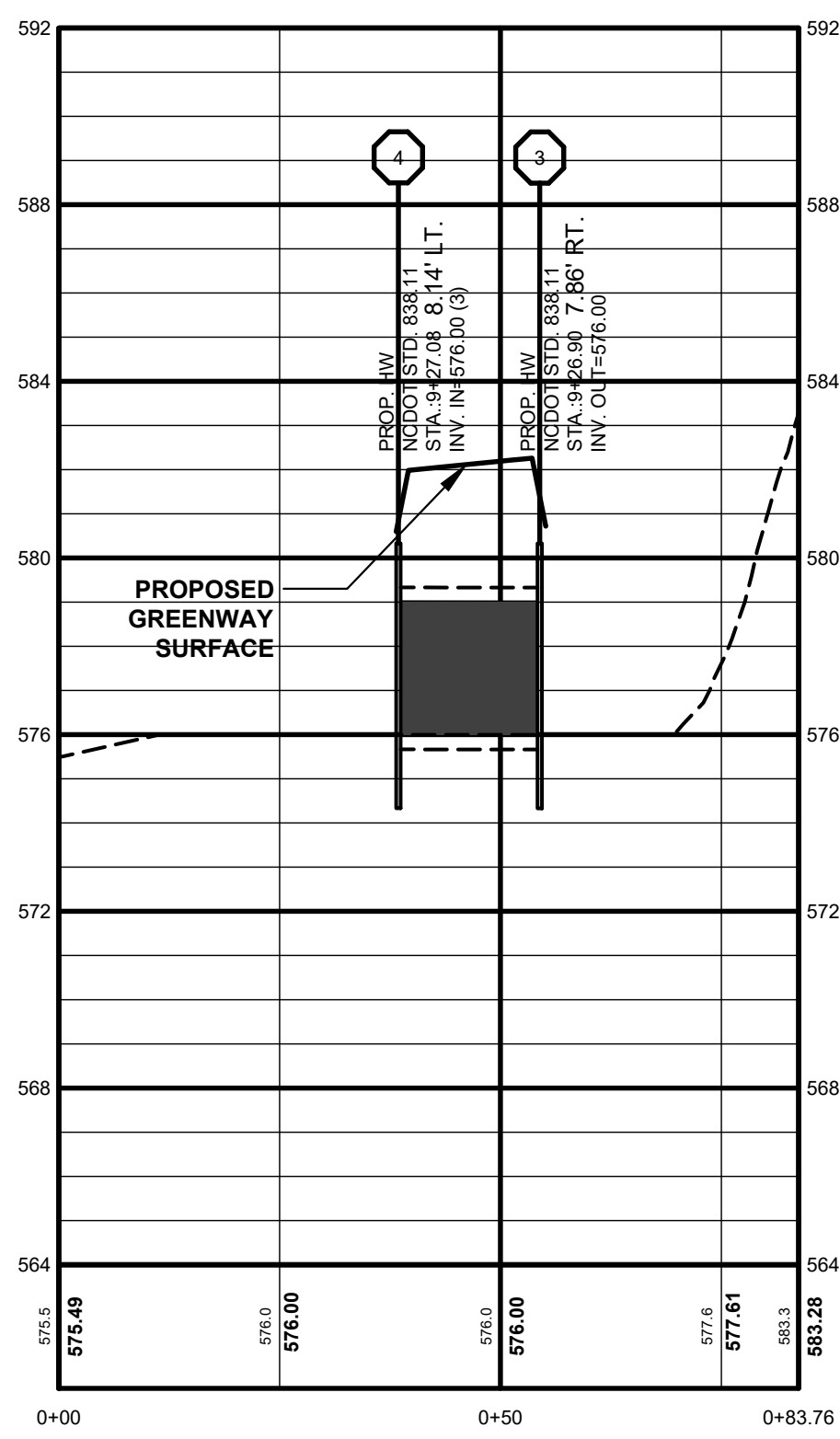
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DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021



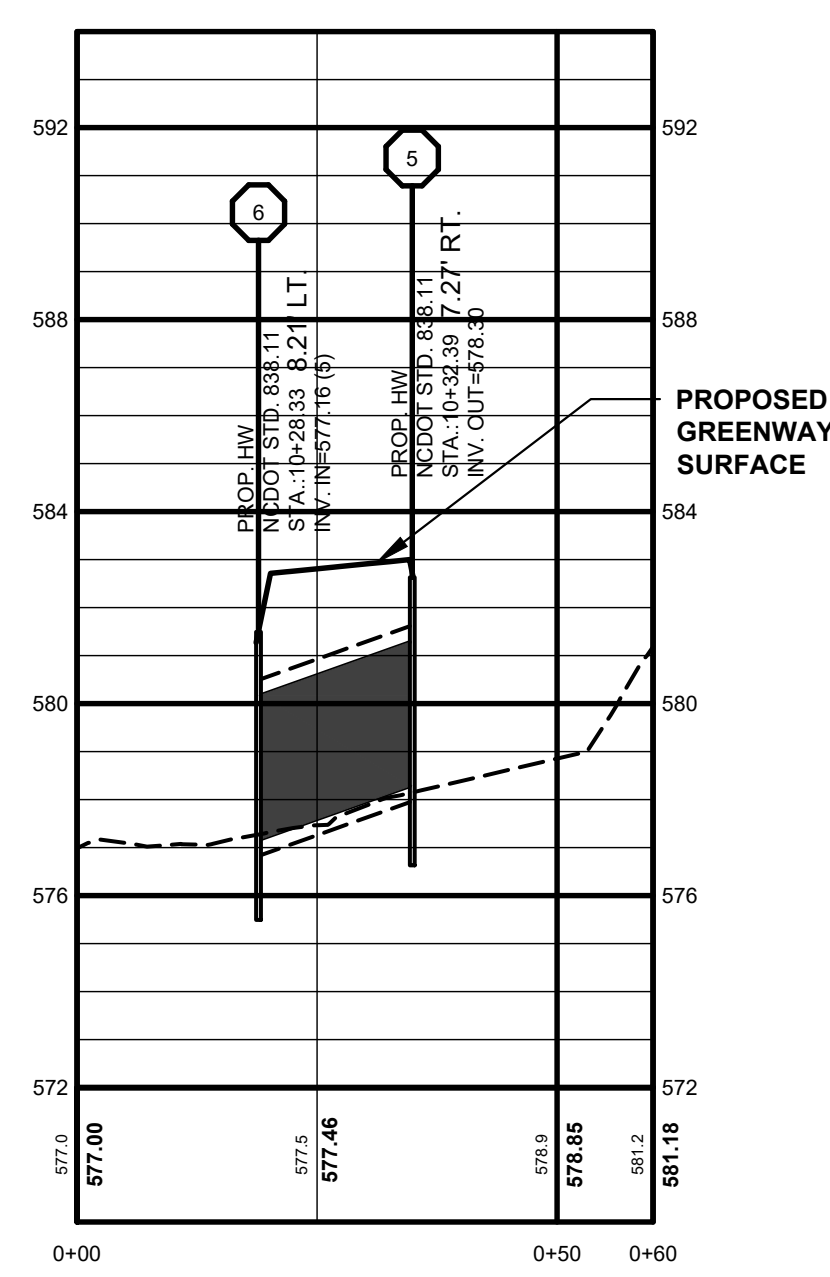
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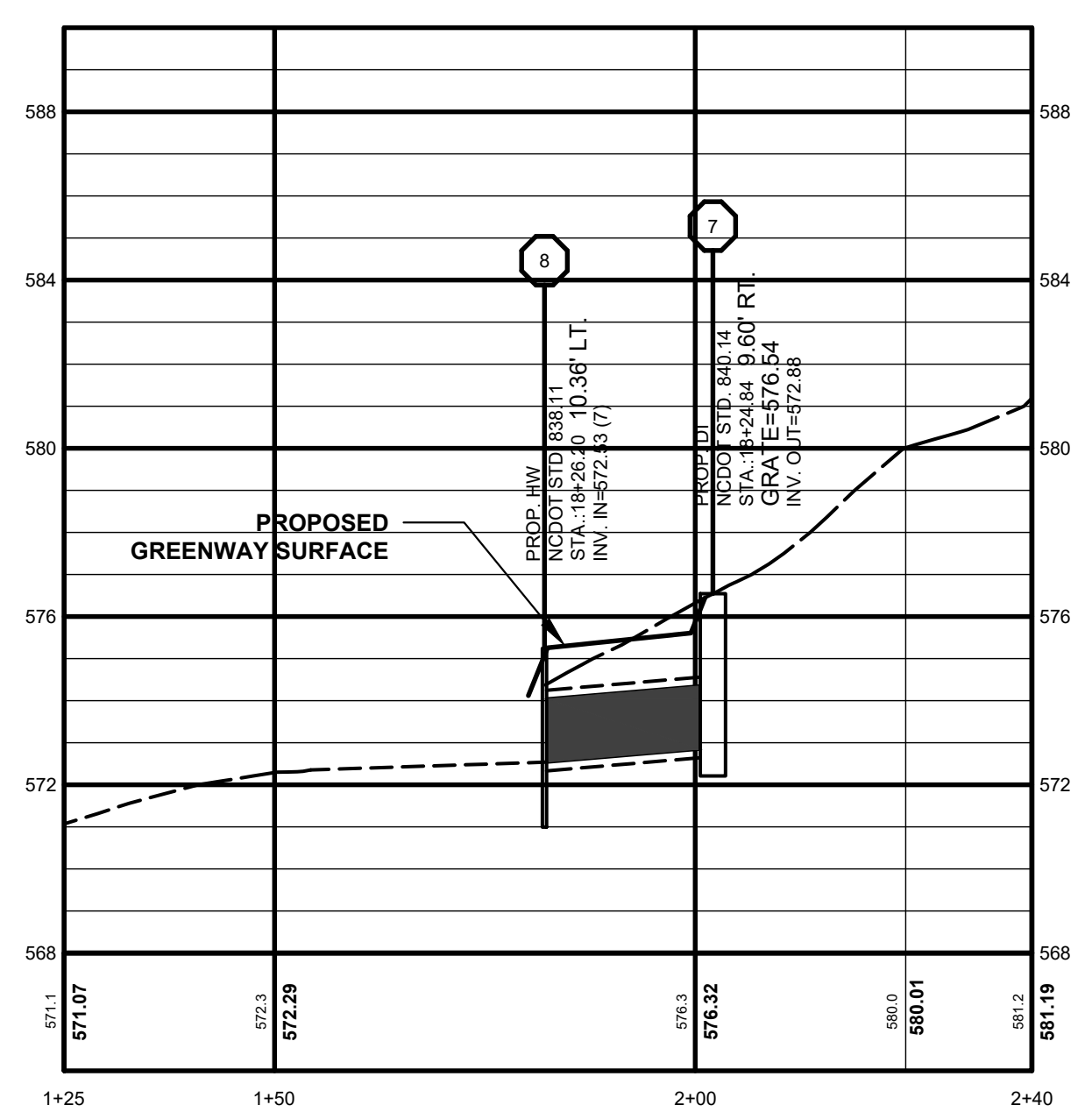
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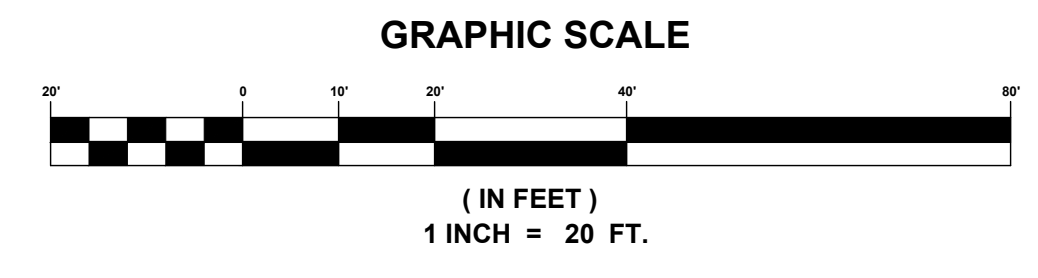
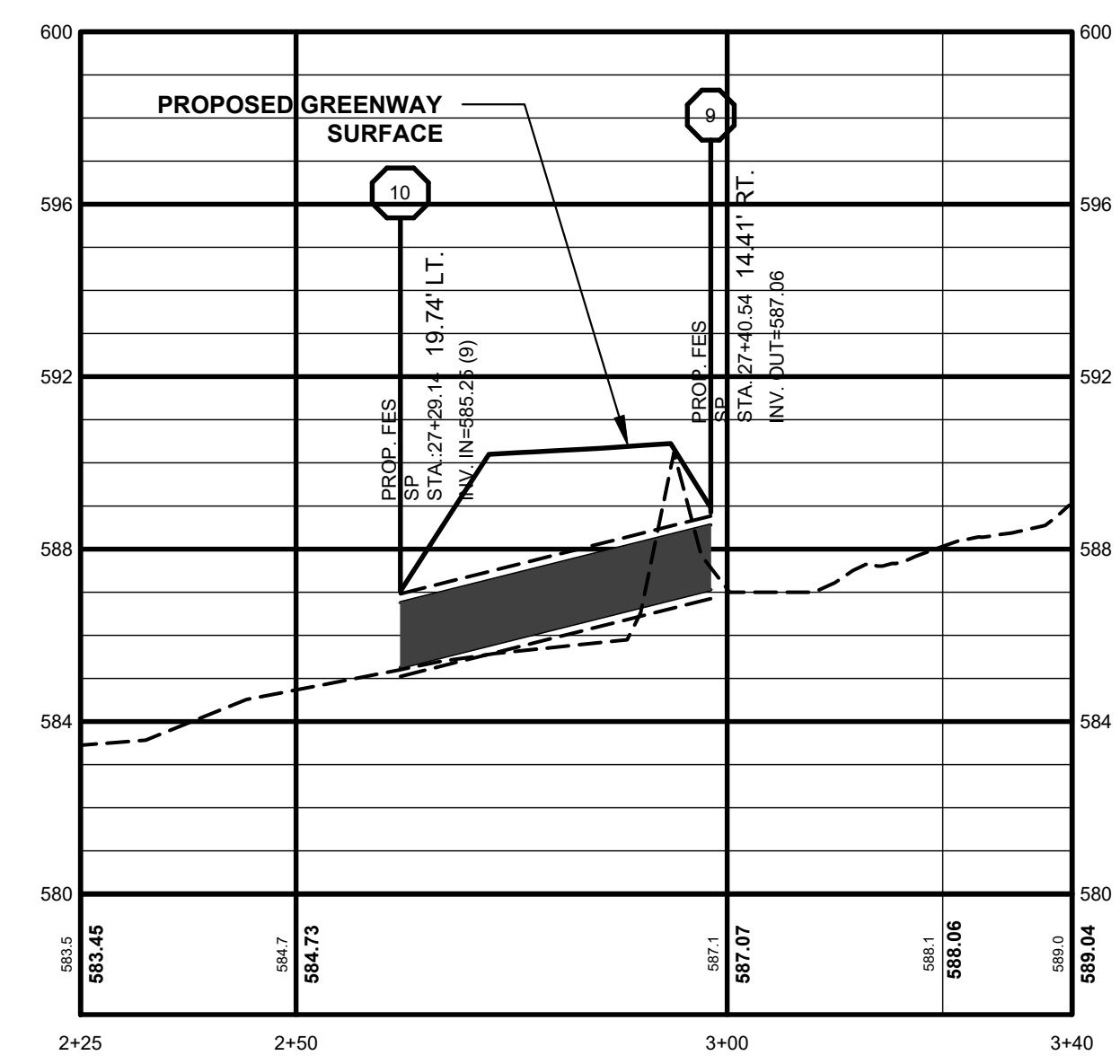
**STORM - PIPE 3**



**STORM - PIPE 4**



**STORM - PIPE 5**



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 CONSTRUCTION**

NO.	DATE	REVISION	BY

**STORM PROFILES (SEG. 1)**  
**ABBEY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C3.7

NO.	DATE	REVISION	BY

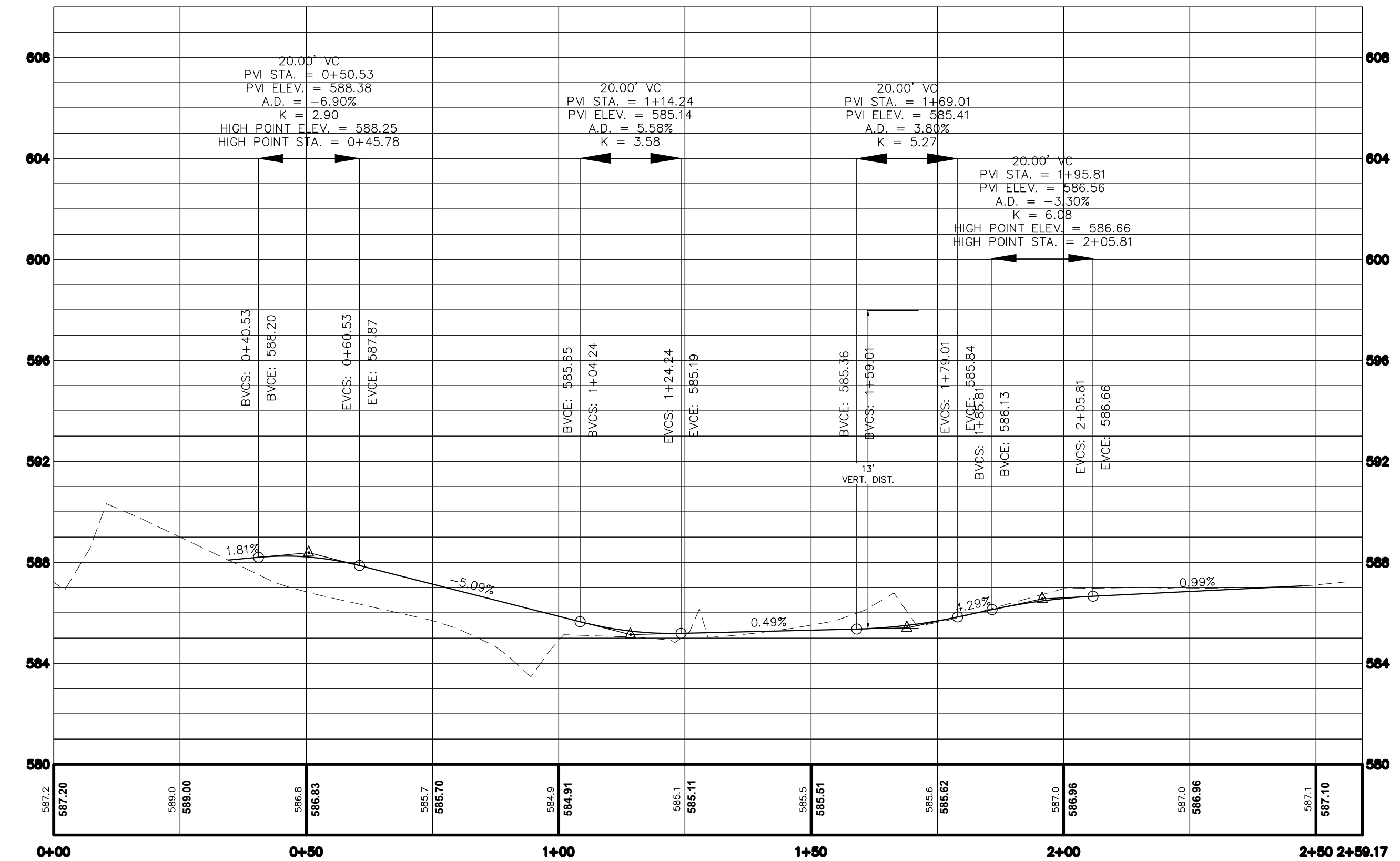
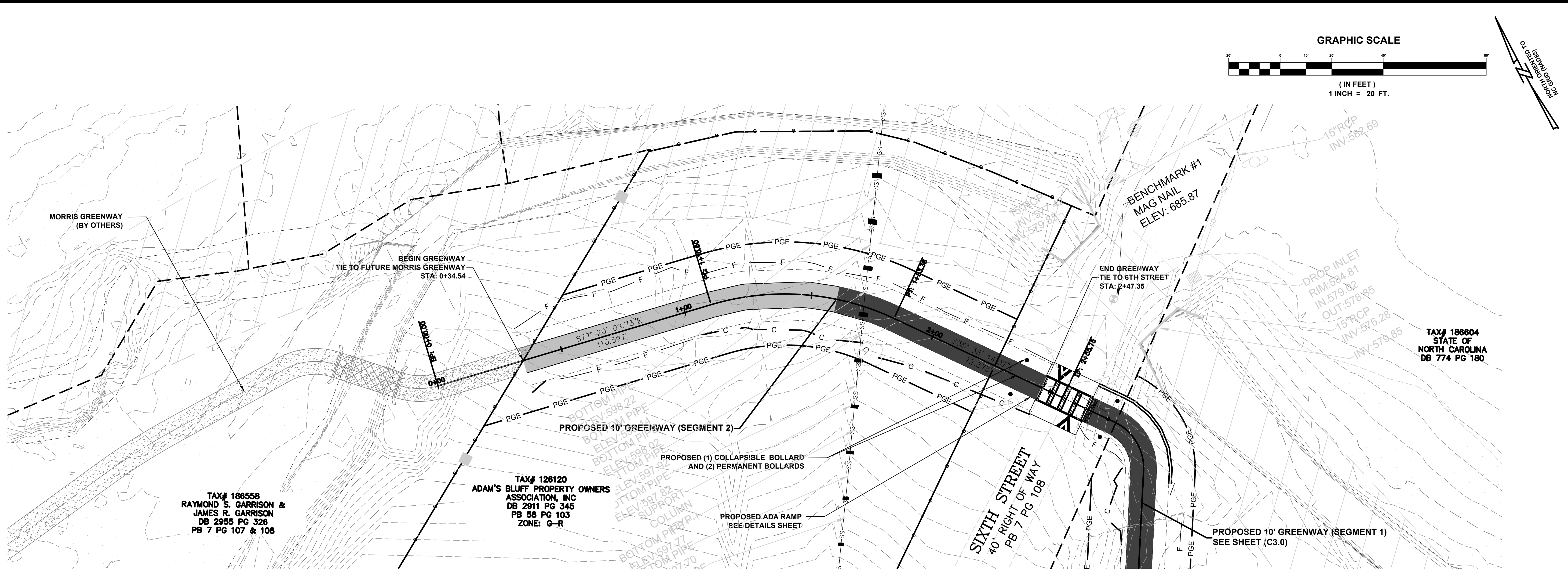
**PLAN AND PROFILE (SEG. 2)**

**ABBEEY CREEK GREENWAY**

BELMONT, NORTH CAROLINA

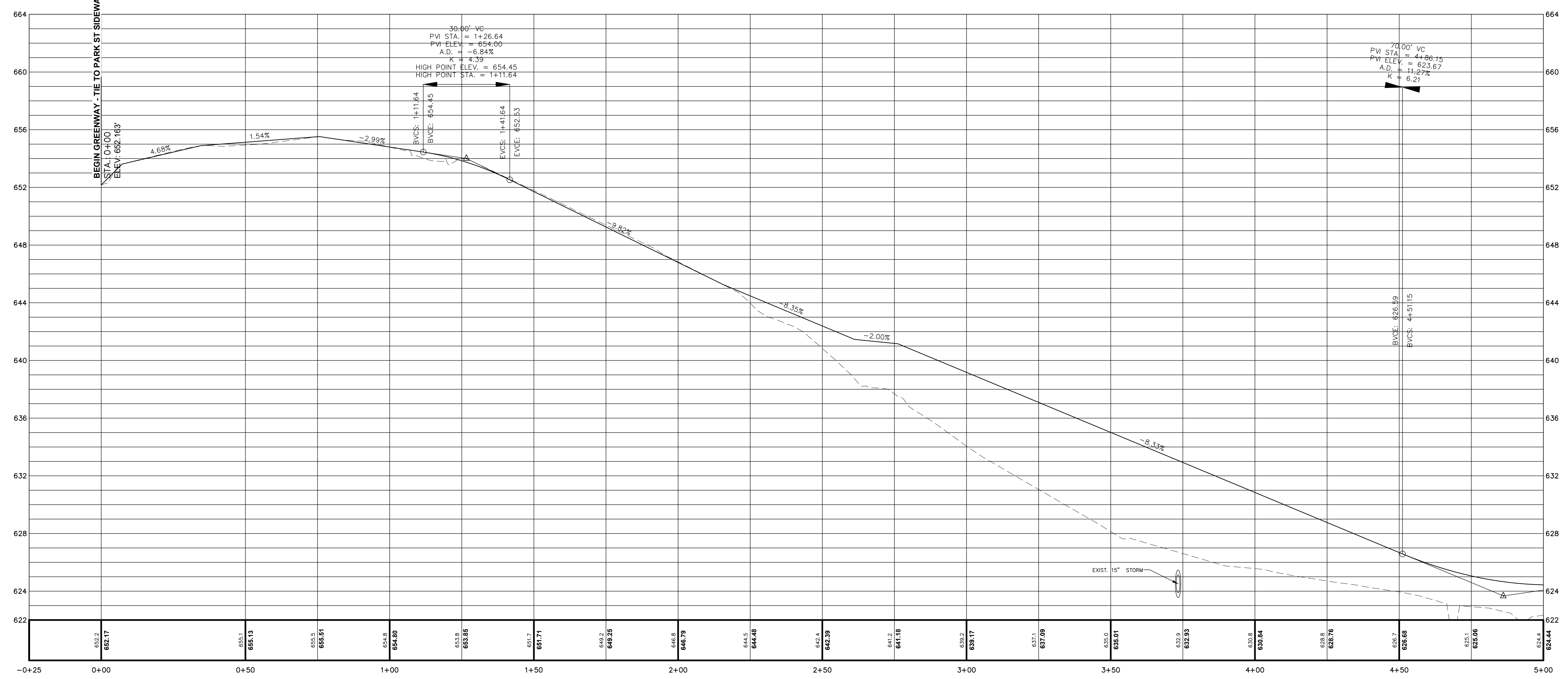
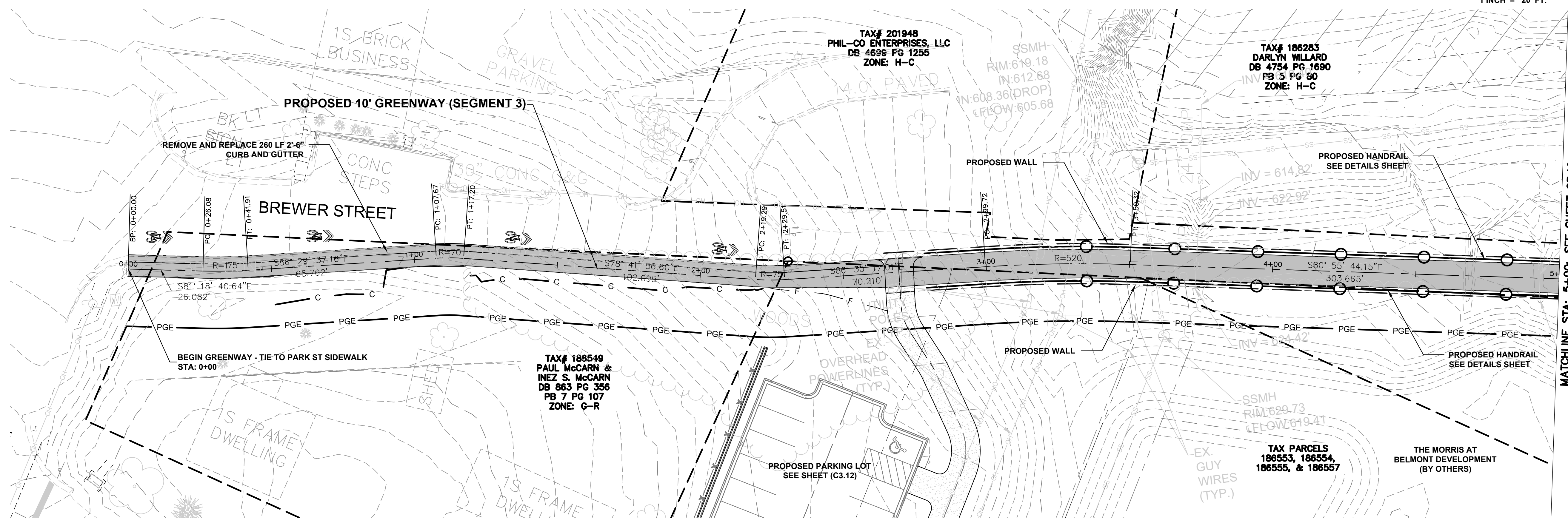
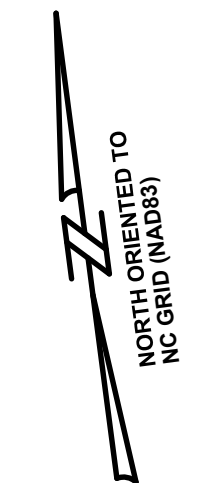
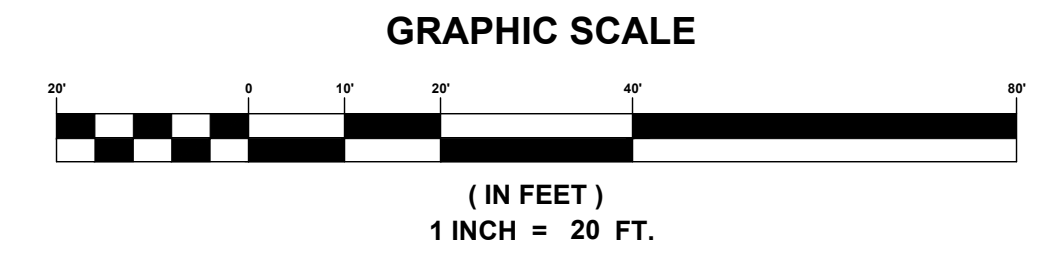
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	



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3525 Lenoir Street, Suite 200  
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803.802.2440 (SC)  
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CONSTRUCTION

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PLAN AND PROFILE (SEG. 3)

**ABBEEY CREEK GREENWAY**

BELMONT, NORTH CAROLINA

PROJECT INFORMATION

PROJECT MANAGER: GMS

DESIGNED BY: GMS

DRAWN BY: GMS

PROJECT NUMBER: IR37.100

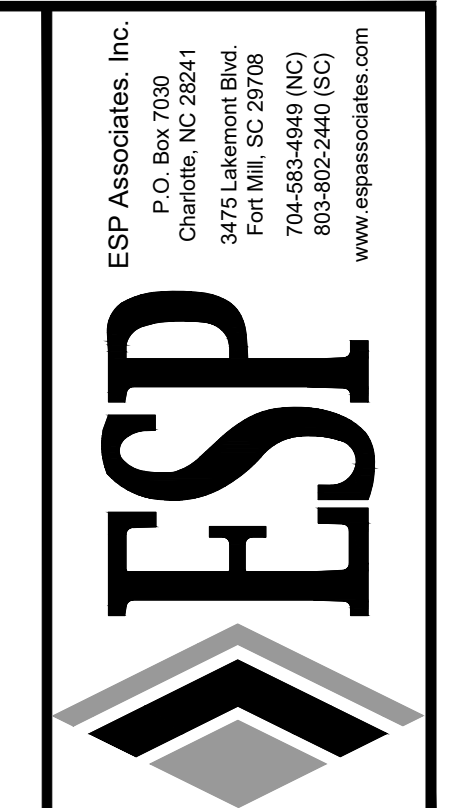
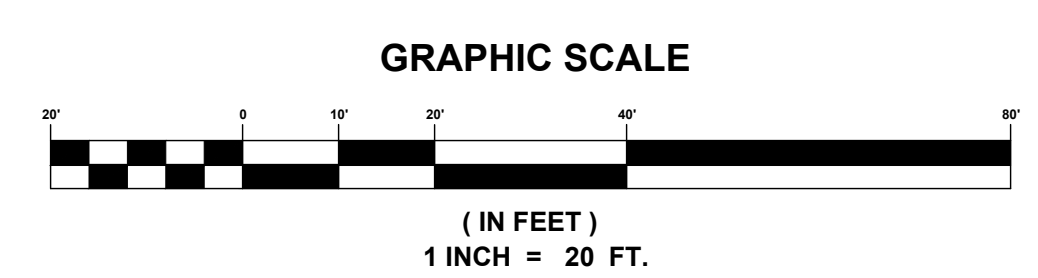
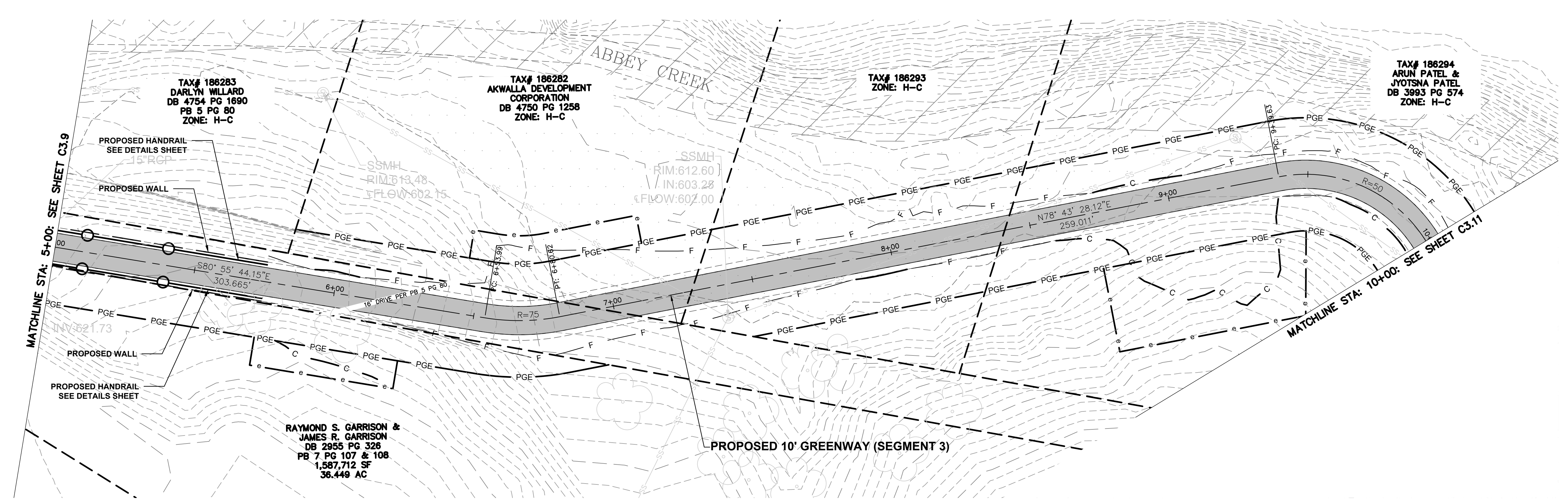
DATE: 8-16-2021

SHEET:

C3.9

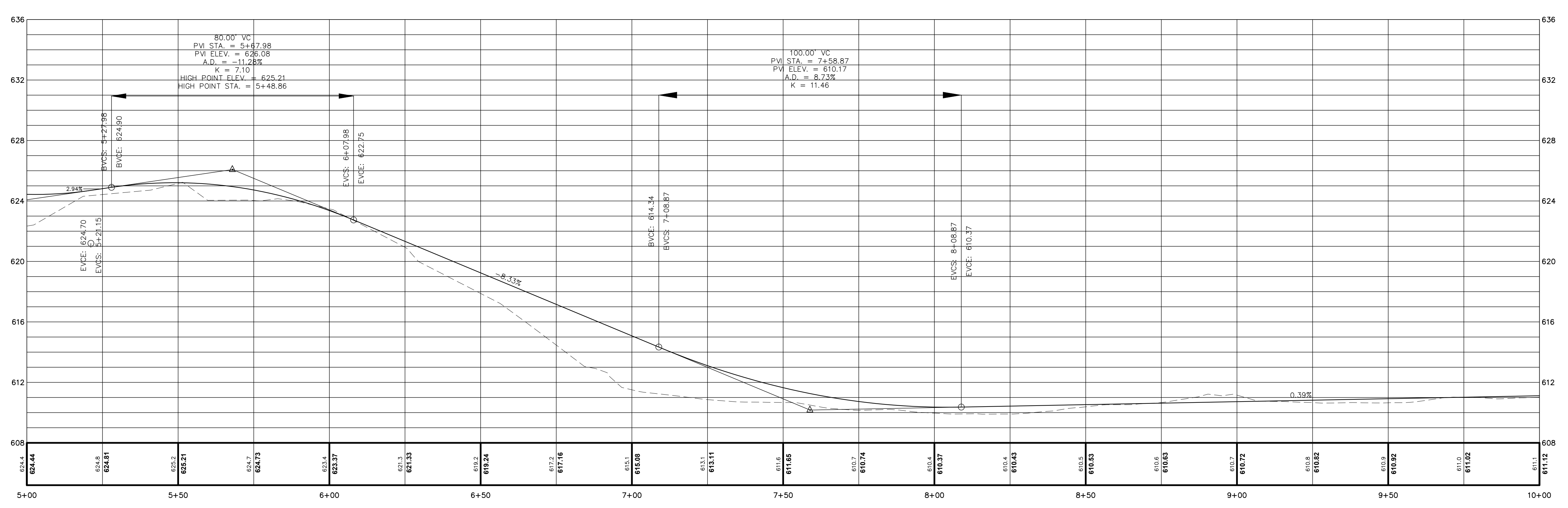
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NOT FOR  
CONSTRUCTION**

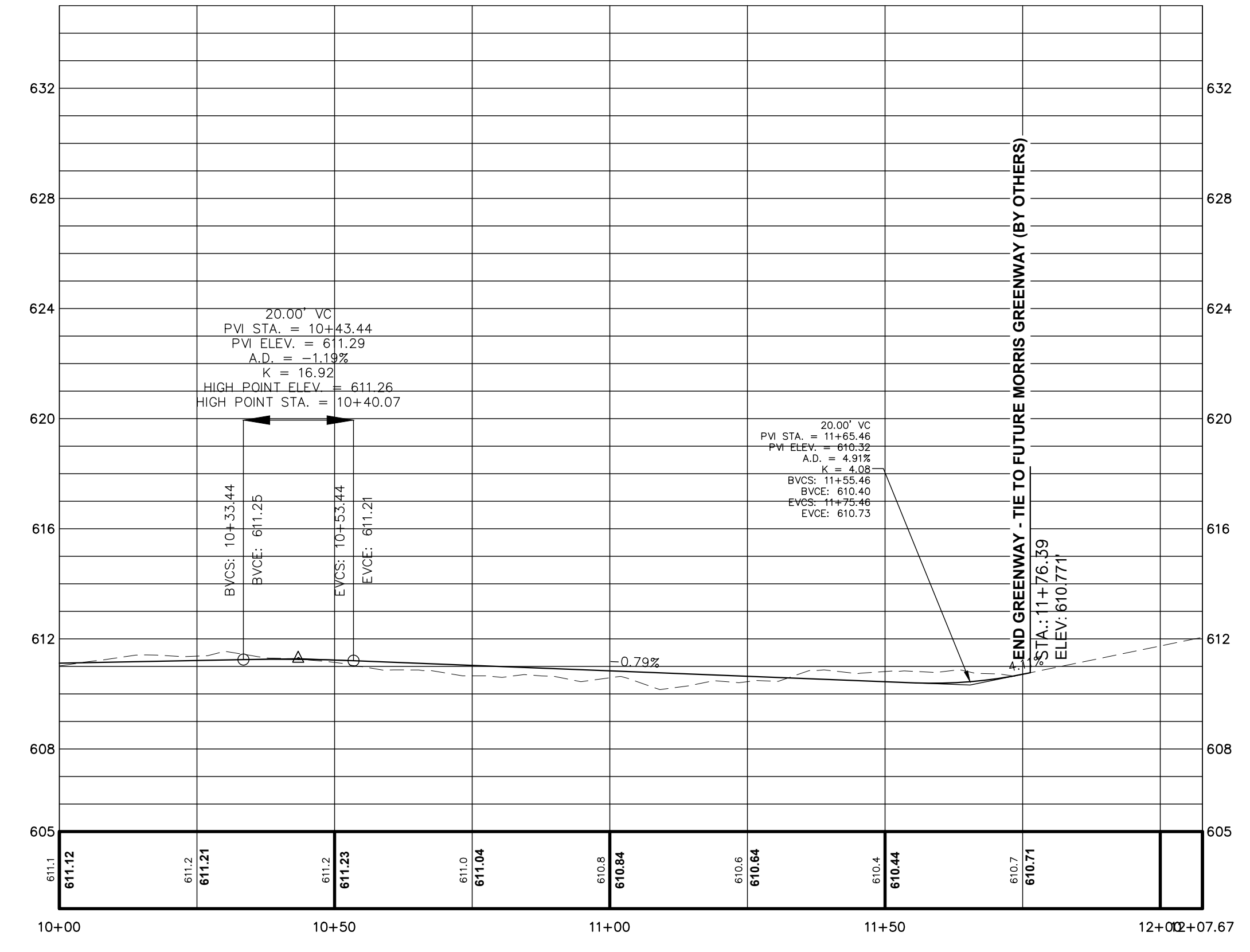
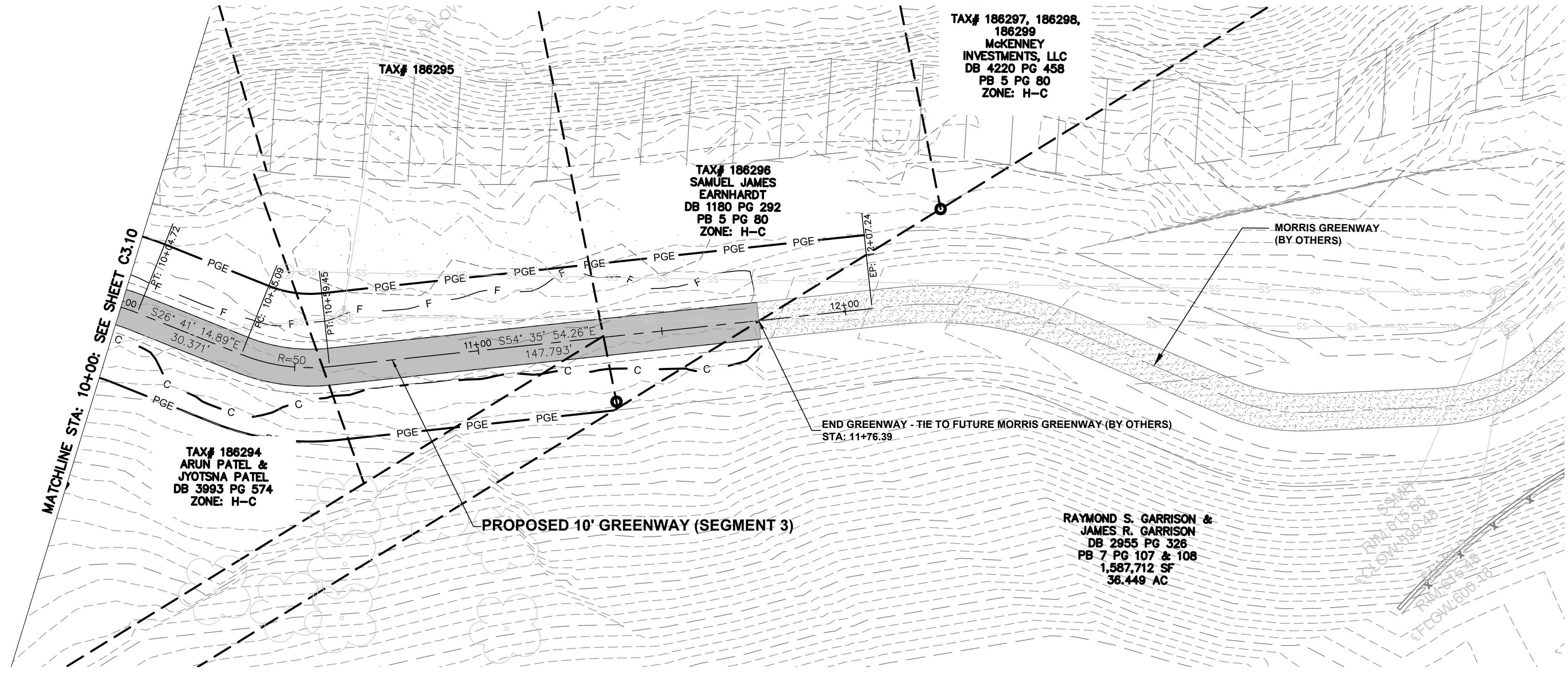
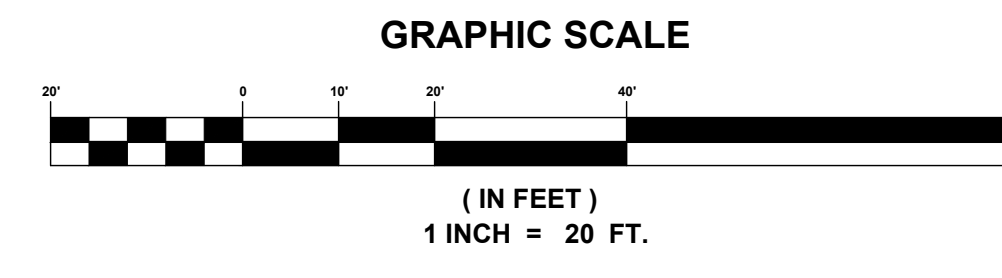
NO.	DATE	REVISION



**PLAN AND PROFILE (SEG. 3)**  
**ABBEEY CREEK GREENWAY**  
CITY OF BELMONT  
BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C3.10**



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Raleigh, NC 27604  
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803.802.2440 (SC)  
www.espaceonline.com

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CONSTRUCTION

BY: \_\_\_\_\_

NO. \_\_\_\_\_

DATE \_\_\_\_\_

REVISION \_\_\_\_\_

PLAN AND PROFILE (SEG. 3)

PROJECT INFORMATION

PROJECT MANAGER: GMS

DESIGNED BY: GMS

DRAWN BY: GMS

PROJECT NUMBER: IR37.100

DATE: 8-16-2021

SHEET:

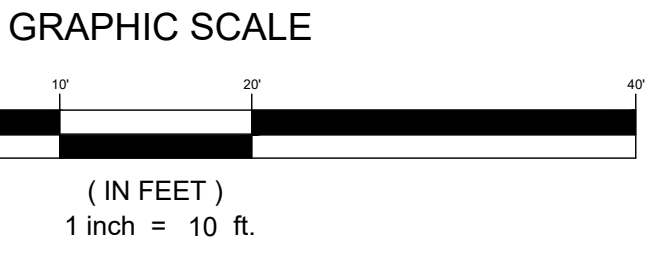
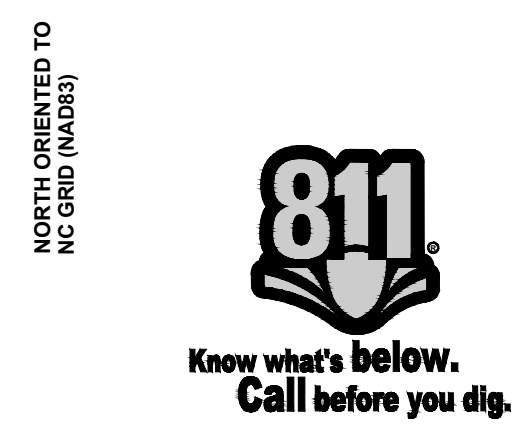
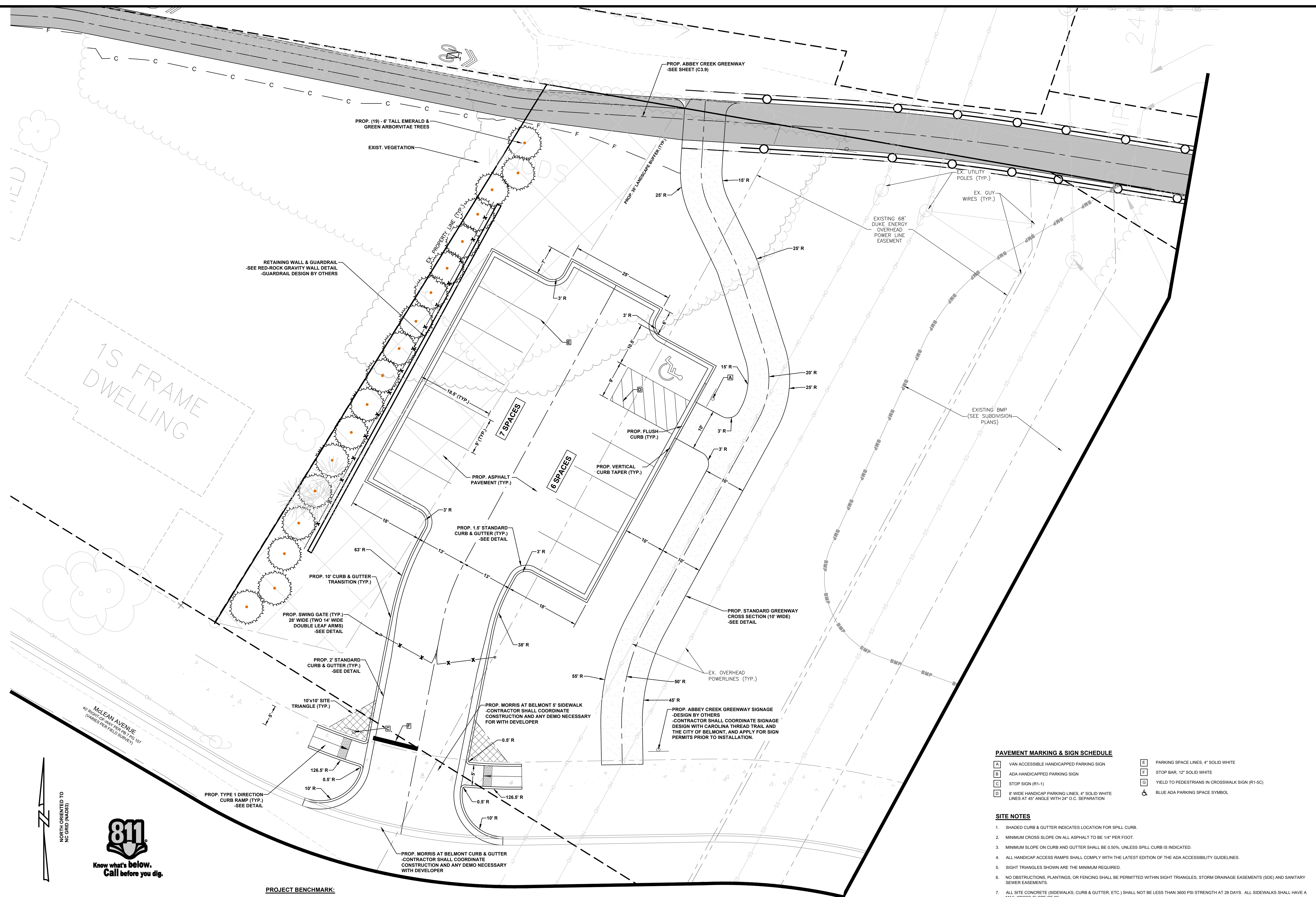
CITY OF BELMONT

ABBEEY CREEK GREENWAY

BELMONT, NORTH CAROLINA

C3.11

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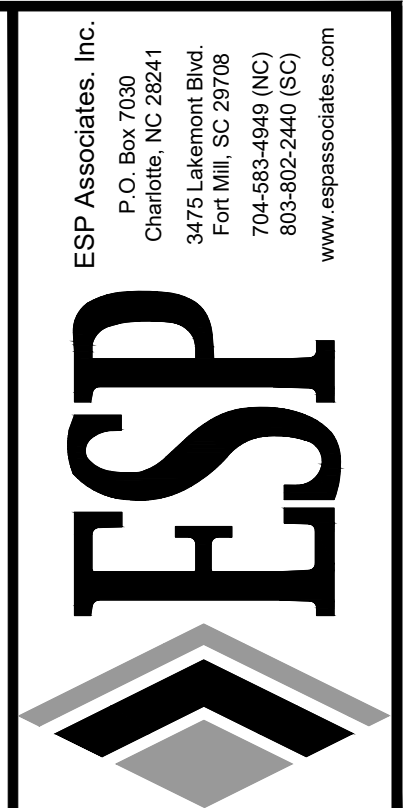
**PROJECT BENCHMARK:**  
NCGS MONUMENT "ME 27"  
NC GRID COORDS. (NAD 83/2011)  
NORTH: 547,943.42  
EAST: 1,407,876.28  
ELEV. 630.38 (NAVD 88)

**PAVEMENT MARKING & SIGN SCHEDULE**

- A VAN ACCESSIBLE HANDICAPPED PARKING SIGN
- B ADA HANDICAPPED PARKING SIGN
- C STOP SIGN (R1-1)
- D 8' WIDE HANDICAP PARKING LINES, 4" SOLID WHITE LINES AT 45° ANGLE WITH 24" O.C. SEPARATION
- E PARKING SPACE LINES, 4" SOLID WHITE
- F STOP BAR, 12" SOLID WHITE
- G YIELD TO PEDESTRIANS IN CROSSWALK SIGN (R1-3C)
- H BLUE ADA PARKING SPACE SYMBOL

**SITE NOTES**

1. SHADED CURB & GUTTER INDICATES LOCATION FOR SPILL CURB.
2. MINIMUM CROSS SLOPE ON ALL ASPHALT TO BE 1/4" PER FOOT.
3. MINIMUM SLOPE ON CURB AND GUTTER SHALL BE 0.50%, UNLESS SPILL CURB IS INDICATED.
4. ALL HANDICAP ACCESS RAMPS SHALL COMPLY WITH THE LATEST EDITION OF THE ADA ACCESSIBILITY GUIDELINES.
5. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
6. NO OBSTRUCTIONS, PLANTINGS, OR FENCING SHALL BE PERMITTED WITHIN SIGHT TRIANGLES, STORM DRAINAGE EASEMENTS (SIDE) AND SANITARY SEWER EASEMENTS.
7. ALL SITE CONCRETE (SIDEWALKS, CURB & GUTTER, ETC.) SHALL NOT BE LESS THAN 3600 PSI STRENGTH AT 28 DAYS. ALL SIDEWALKS SHALL HAVE A MAX. CROSS-SLOPE OF 2%.
8. PLAN SHOWN FOR DIMENSIONAL AND MATERIAL PURPOSES ONLY.
9. ALL DIMENSIONS AND RADII SHOWN ON PLANS ARE TO BACK OF CURB OR EDGE OF PAVEMENT UNLESS NOTED.
10. DIGITAL FILES SHALL BE PROVIDED TO CONTRACTOR AS NECESSARY FOR THE PURPOSES OF LAYOUT AND STAKING.



ESP Associates, Inc.  
P.O. Box 7020  
Charlotte, NC 28241  
3675 Lenoir Street  
704.652.4040 (NC)  
803.802.2440 (SC)  
www.espaceassociates.com

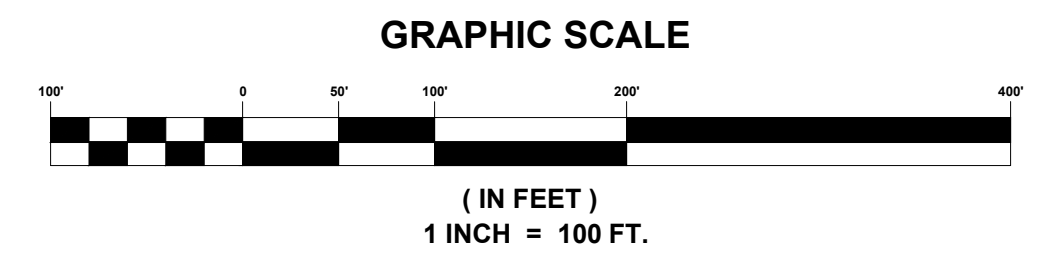
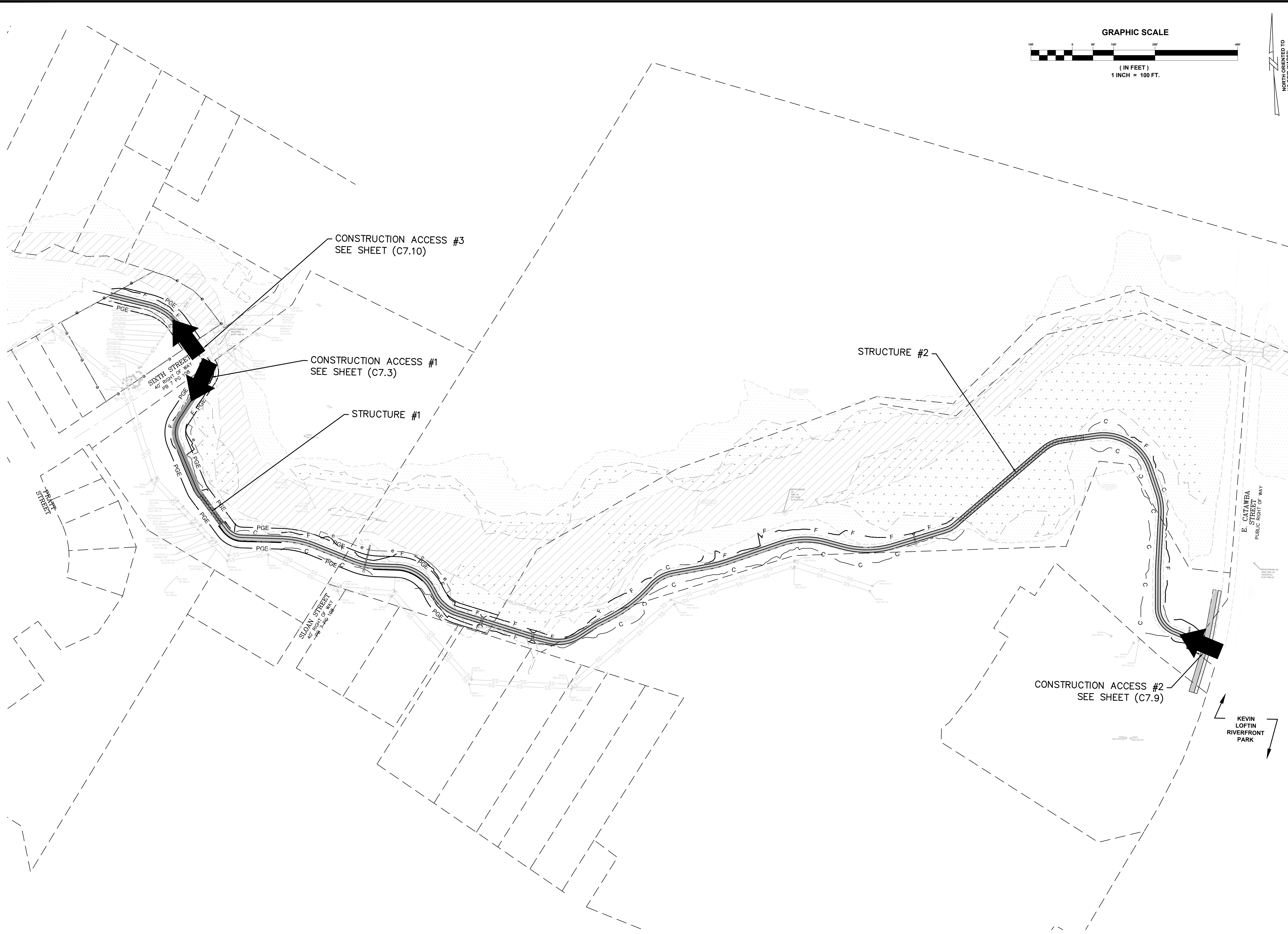
**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION

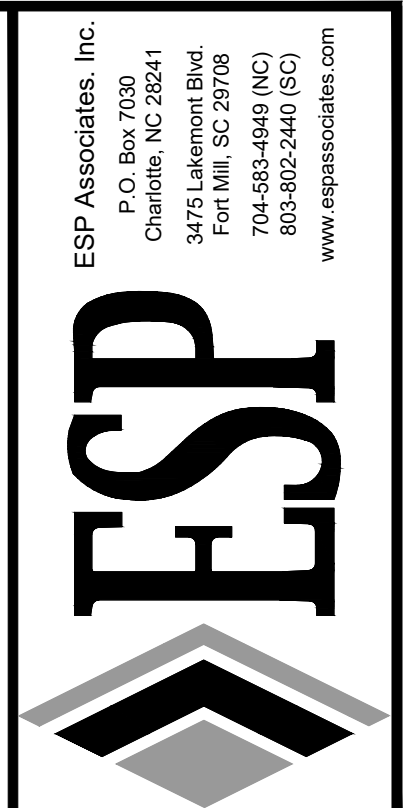
**PARKING LOT LAYOUT**  
**ABBEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C3.12

U:\2020 Projects\1937 - Abbey Creek Greenway (City of Belmont)\1937\Sheets\1937\_GRWAY\_CON\_ACCESS.dwg, C:\3 CONSTRUCTION ACCESS PLANS, gtaga



NORTH ORIENTED TO  
NC GRID (NAD83)



PRELIMINARY  
NOT FOR  
CONSTRUCTION

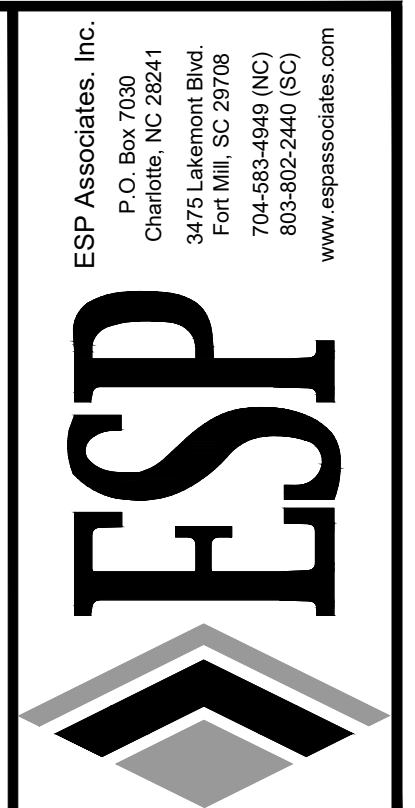
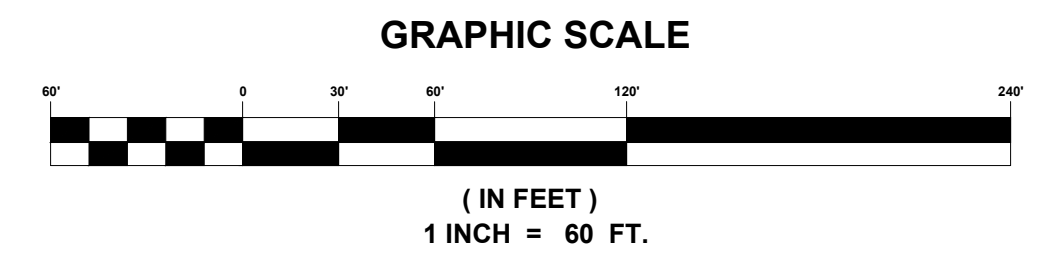
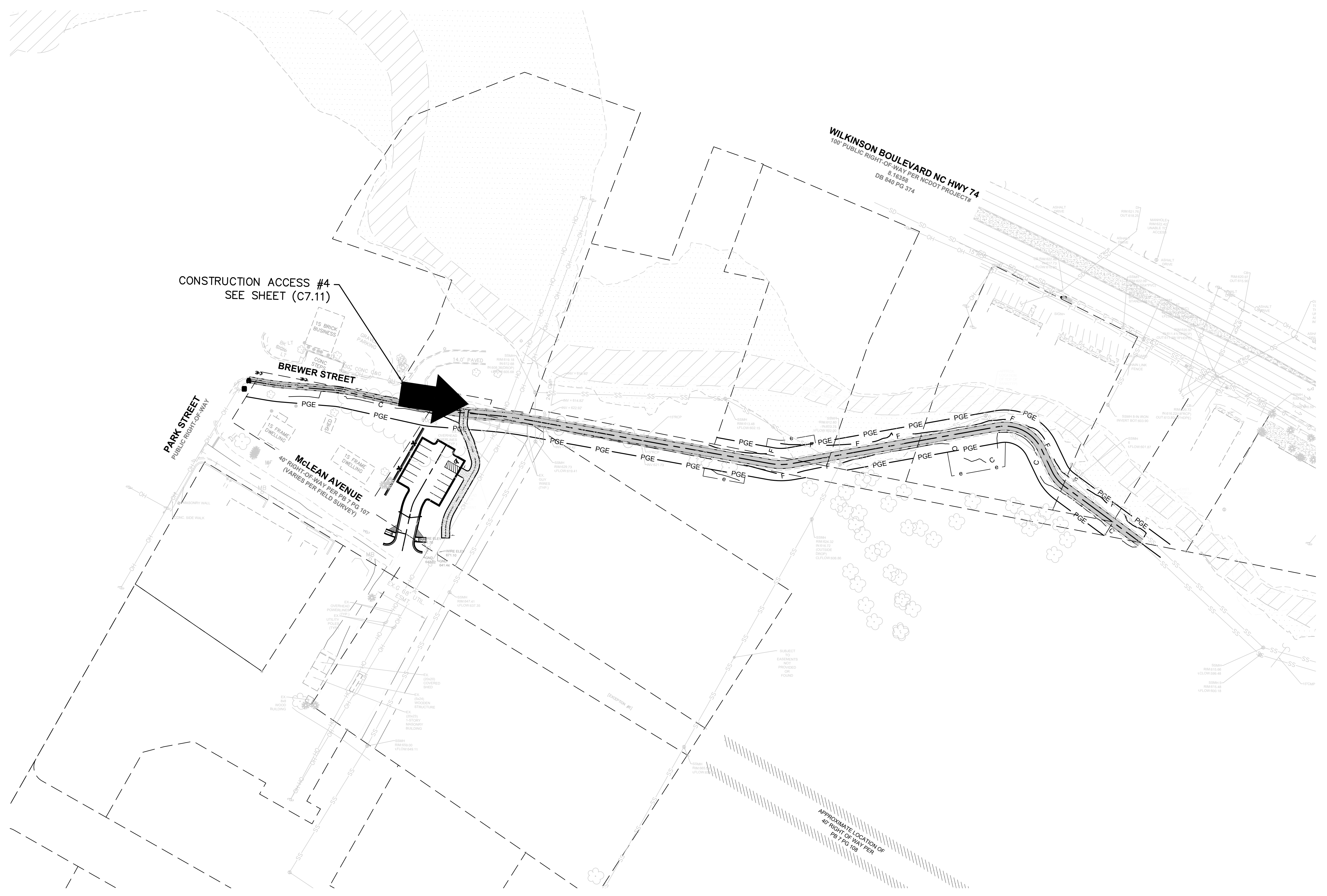
NO.	DATE	REVISION	BY

**CONSTRUCTION ACCESS PLANS**  
**ABBAY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C6.0**

U:\2020 Projects\19377 - Abbey Creek Greenway (City of Belmont)\19377\Sheets\19377-CONSTRUCTION ACCESS PLANS.gdtg



**PRELIMINARY  
 NOT FOR  
 CONSTRUCTION**

NO.	DATE	REVISION	BY

**CONSTRUCTION ACCESS PLANS**  
**ABBAY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

**C6.1**



**NOTES**

USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.

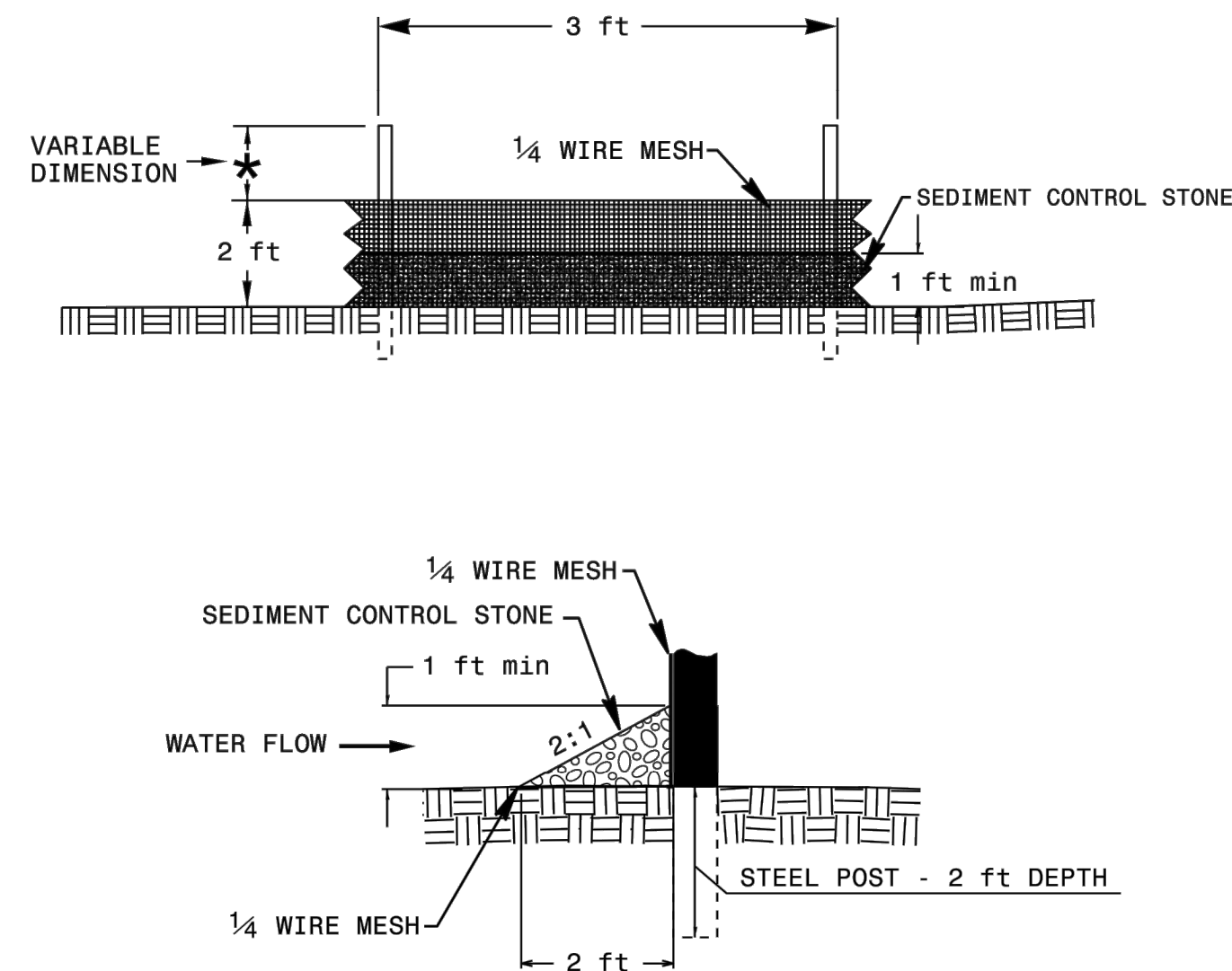
USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.

INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.

ATTACH HARDWARE CLOTH TO POSTS WITH WIRE STAPLE OR OTHER ACCEPTABLE METHODS.

SPACE POSTS A MAXIMUM OF 3 FT.

FOR INSTALLATION BETWEEN SECTIONS OF SILT FENCE, EXTEND SEDIMENT CONTROL STONE A MINIMUM OF 12" ON EACH SIDE OF SPECIAL SEDIMENT CONTROL FENCE SECTION.



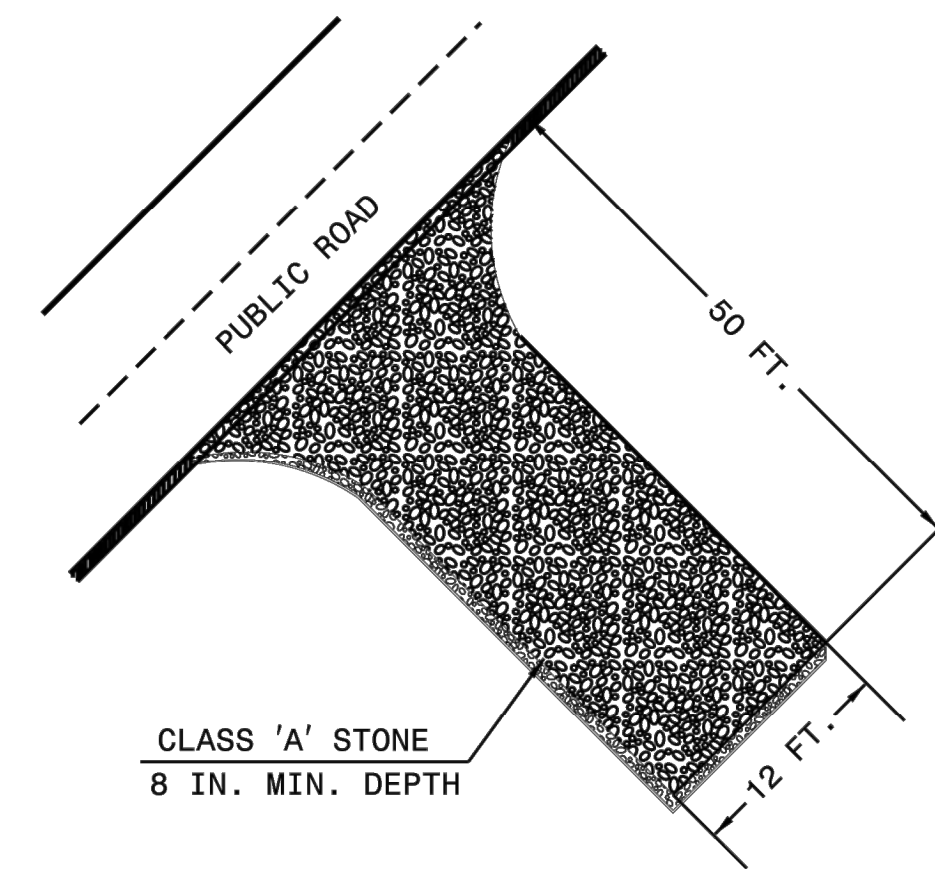
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**SPECIAL SEDIMENT CONTROL FENCE**

SHEET 1 OF 1  
**1606.01**

**NOTES**

1. PROVIDE TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS.
2. LOCATE ENTRANCES TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY.
4. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
5. LOCATE GRAVEL CONSTRUCTION ENTRANCE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. PROVIDE FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE.
6. NUMBER AND LOCATION OF CONSTRUCTION ENTRANCES TO BE DETERMINED BY THE ENGINEER.
7. USE CLASS 'A' STONE OR OTHER COARSE AGGREGATE APPROVED BY THE ENGINEER.
8. INSTALL CONSTRUCTION ENTRANCES IN A WAY TO PREVENT VEHICLES FROM BYPASSING CONSTRUCTION ENTRANCE LEAVING PROJECT SITE.



NOTE: PLACE GEOTEXTILE FOR DRAINAGE BENEATH STONE

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**GRAVEL CONSTRUCTION ENTRANCE**

SHEET 1 OF 1  
**1607.01**

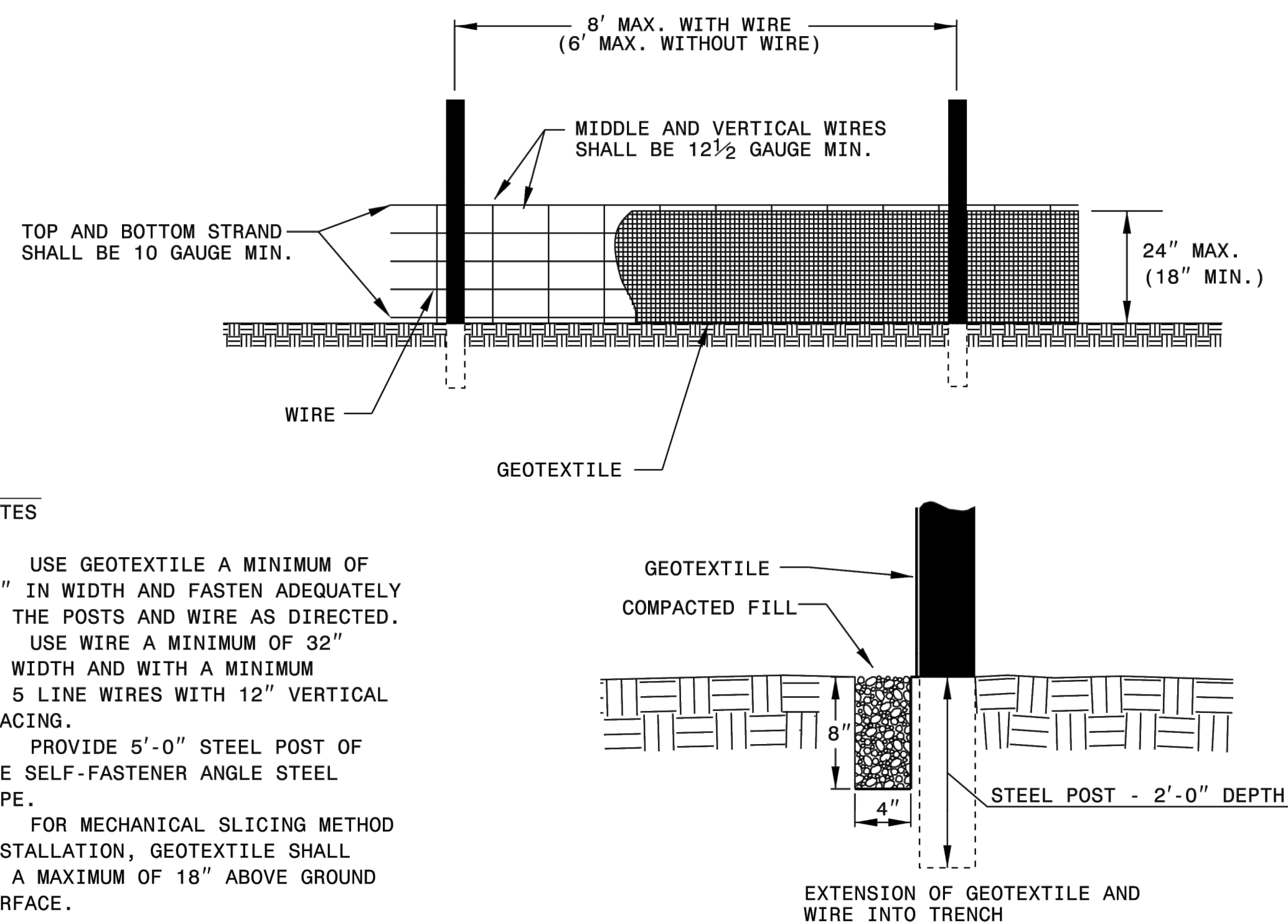
**NOTES**

USE GEOTEXTILE A MINIMUM OF 36" IN WIDTH AND FASTEN ADEQUATELY TO THE POSTS AND WIRE AS DIRECTED.

USE WIRE A MINIMUM OF 32" IN WIDTH AND WITH A MINIMUM OF 5 LINE WIRES WITH 12" VERTICAL SPACING.

PROVIDE 5'-0" STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE.

FOR MECHANICAL SLICING METHOD INSTALLATION, GEOTEXTILE SHALL BE A MAXIMUM OF 18" ABOVE GROUND SURFACE.



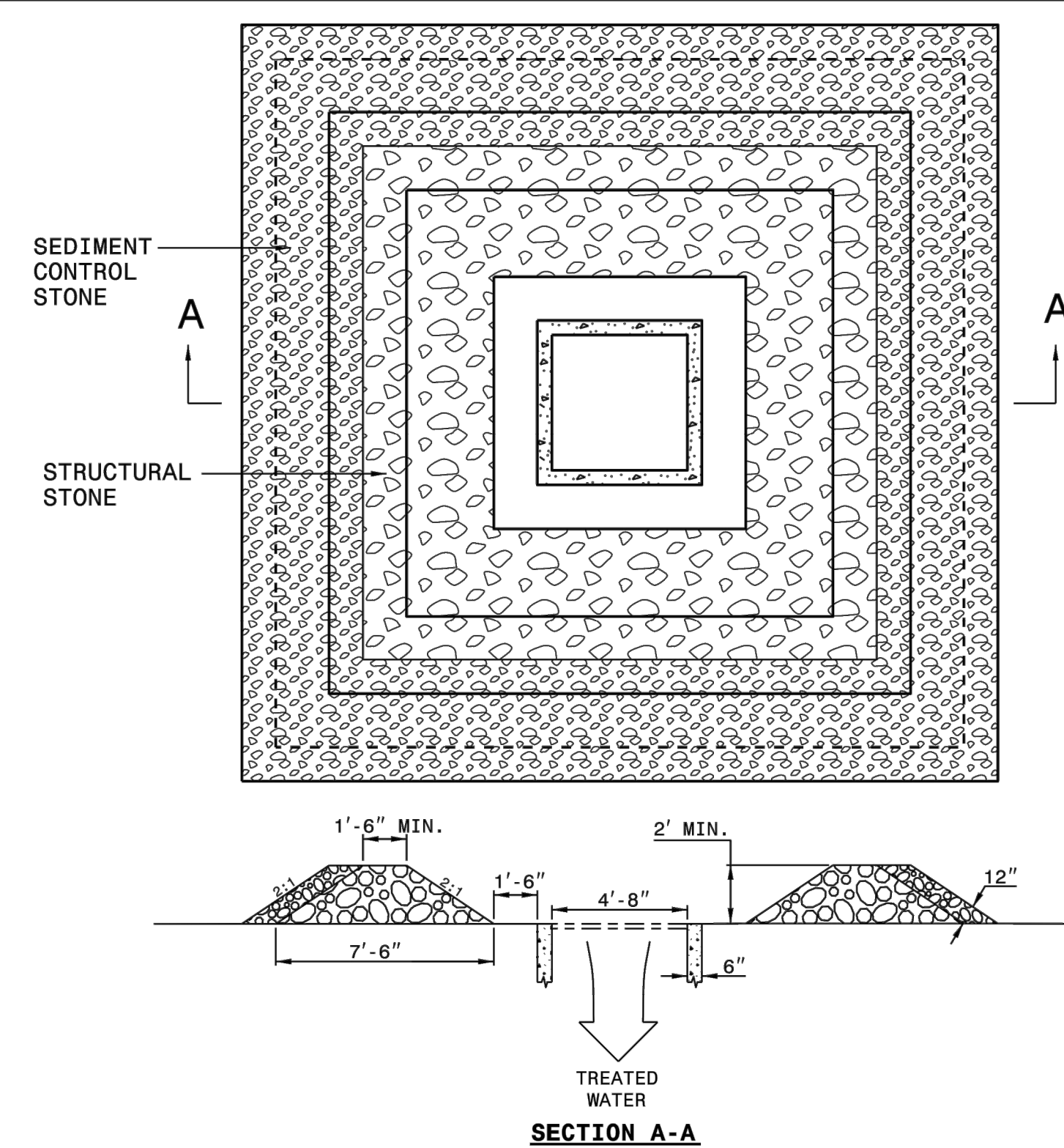
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**TEMPORARY SILT FENCE**

SHEET 1 OF 1  
**1605.01**

**NOTES**

- CLEAN SEDIMENT WHEN 1/2 FULL AND AS DIRECTED.  
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.  
USE CLASS B STONE FOR STRUCTURAL STONE.  
CONSTRUCT TOP OF BERM A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.



STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**ROCK INLET SEDIMENT TRAP TYPE A**

SHEET 1 OF 1  
**1632.01**

ESP Associates, Inc.  
P.O. Box 7030  
Charlotte, NC 28211  
3275 Lenoir Blvd.  
Raleigh, NC 27604  
704.652.4949 (NC)  
803.802.2440 (SC)  
www.espassociates.com



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NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

**EROSION CONTROL DETAILS**  
**ABBEEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

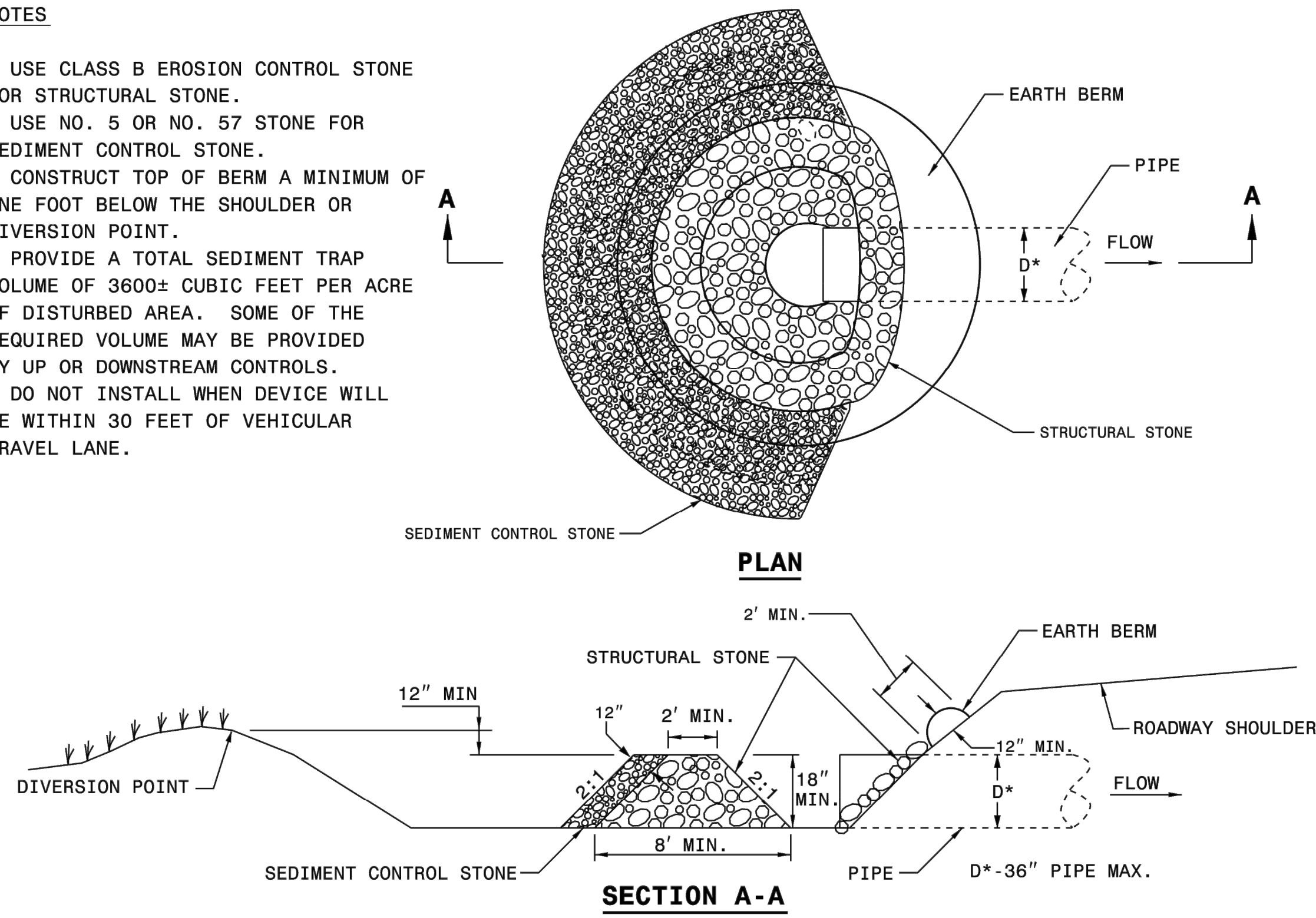
PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C7.1**



**NOTES**

USE CLASS B EROSION CONTROL STONE FOR STRUCTURAL STONE.  
 USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.  
 CONSTRUCT TOP OF BERM A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR DIVERSION POINT.  
 PROVIDE A TOTAL SEDIMENT TRAP VOLUME OF 3600± CUBIC FEET PER ACRE OF DISTURBED AREA. SOME OF THE REQUIRED VOLUME MAY BE PROVIDED BY UP OR DOWNSTREAM CONTROLS.  
 DO NOT INSTALL WHEN DEVICE WILL BE WITHIN 30 FEET OF VEHICULAR TRAVEL LANE.

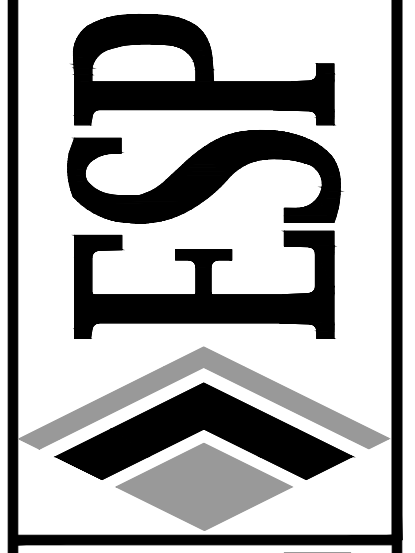


STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**ROCK PIPE INLET SEDIMENT TRAP TYPE A**

SHEET 1 OF 1  
**1635.01**

ESP Associates, Inc.  
 P.O. Box 7030  
 Charlotte, NC 28241  
 3275 Lakeside Blvd.  
 Raleigh, NC 27604  
 704.652.4949 (NC)  
 803.802.2440 (SC)  
 www.espsociates.com



PRELIMINARY  
 NOT FOR  
 CONSTRUCTION

NO.	DATE	REVISION	BY

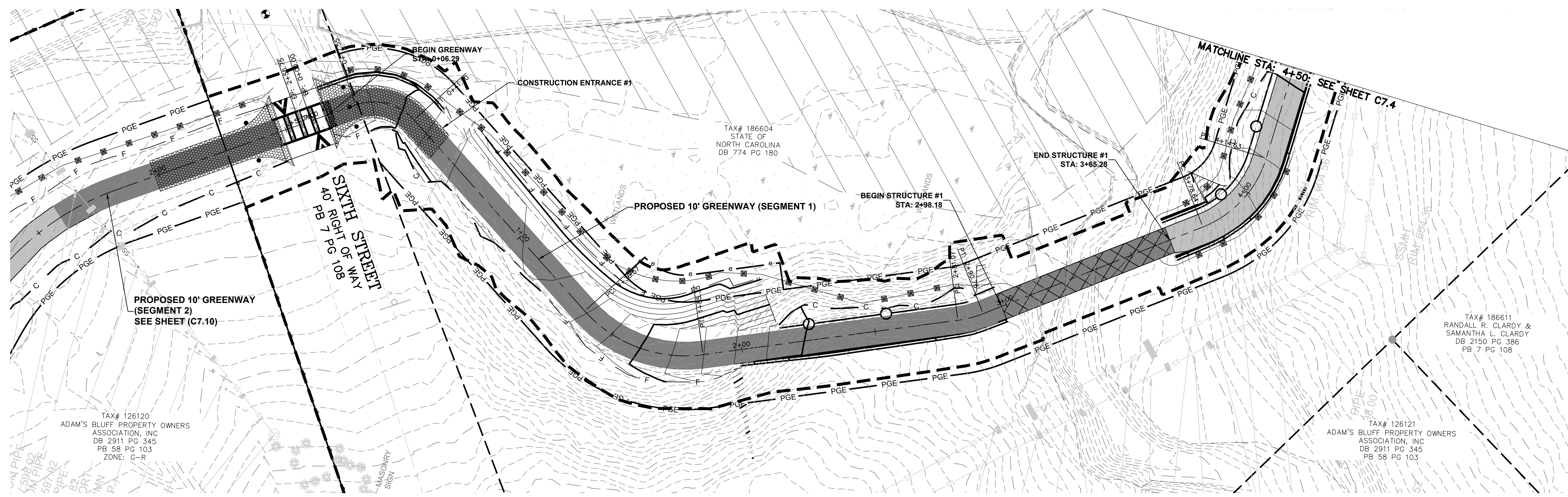
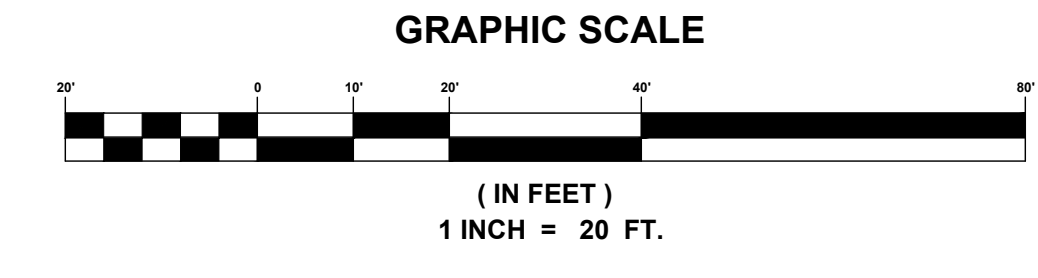
**EROSION CONTROL DETAILS**

**ABBEEY CREEK GREENWAY**

CITY OF BELMONT  
 BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C7.2**



PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

PROPOSED CONTOURS SHOWN AS APPROXIMATE ONLY TO ILLUSTRATE GENERAL FLOW PATHS. SEE CROSS SECTIONS FOR ACTUAL ELEVATIONS.

DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY PROJECT DISTURBED AREA

ESP Associates, Inc.  
P.O. Box 7030  
Charlotte, NC 28241  
3675 Lakeshore Blvd.  
Suite 200  
704.653.4949 (NC)  
803.802.2440 (SC)  
www.espaceassociates.com



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CONSTRUCTION

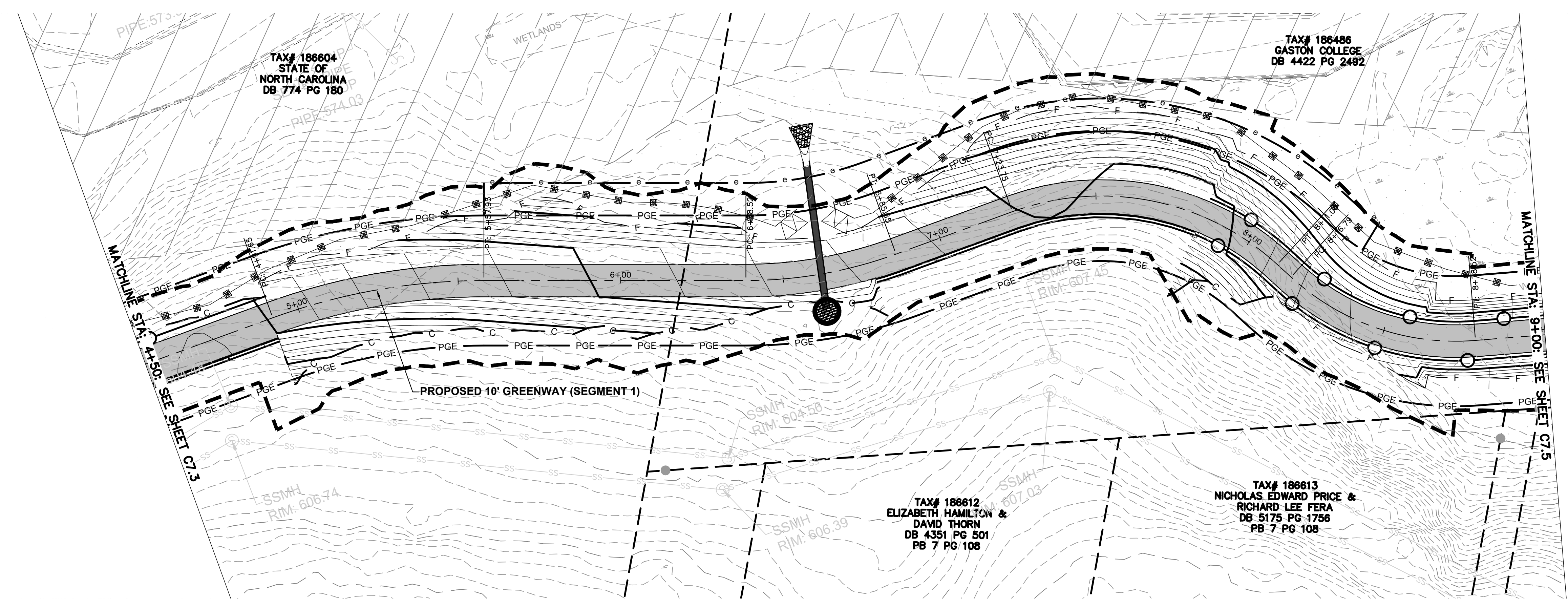
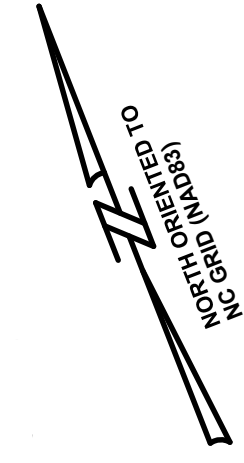
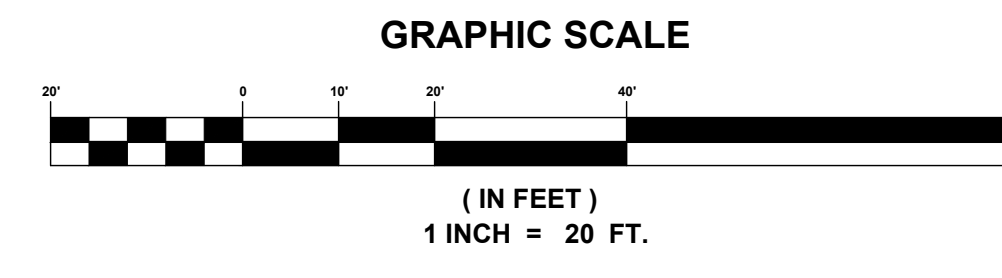
NO.	DATE	REVISION

**EROSION CONTROL (SEG. 1)**  
**ABBAY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C7.3

U:\2020 Projects\1937 - Abbey Creek Greenway (City of Belmont)\1937\Sheet\IR37\GREENWAY-EC-PLANS-SEG 1.dwg, C7.3, gshgpa

U:\2020 Projects\19327 - Abbey Creek Greenway (City of Belmont)\19327\Sheets\19327\_GRWAY-EC-PLANS - SEG 1.dwg, C7.4, gmpa



TAX# 186604  
STATE OF  
NORTH CAROLINA  
DB 774 PG 180

TAX# 186486  
GASTON COLLEGE  
DB 4422 PG 2482

TAX# 186612  
ELIZABETH HAMILTON &  
DAVID THORN  
DB 4351 PG 501  
PB 7 PG 108

TAX# 186613  
NICHOLAS EDWARD PRICE &  
RICHARD LEE FERA  
DB 5175 PG 1756  
PB 7 PG 108

PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

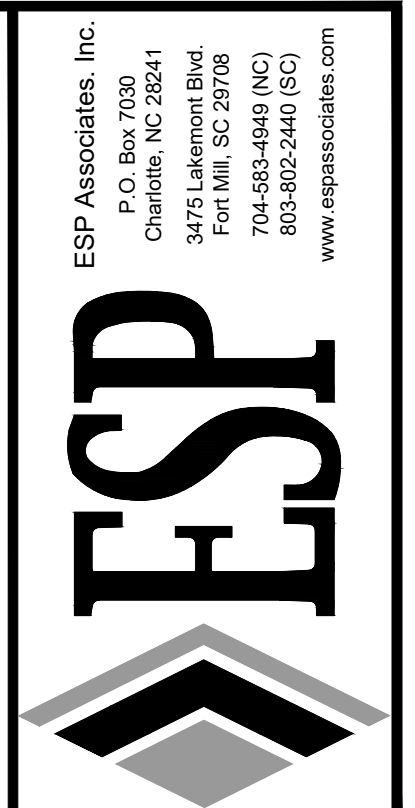
PROPOSED CONTOURS SHOWN AS APPROXIMATE ONLY TO ILLUSTRATE GENERAL FLOW PATHS. SEE CROSS SECTIONS FOR ACTUAL ELEVATIONS.

DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
PROJECT DISTURBED AREA



**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 1)**

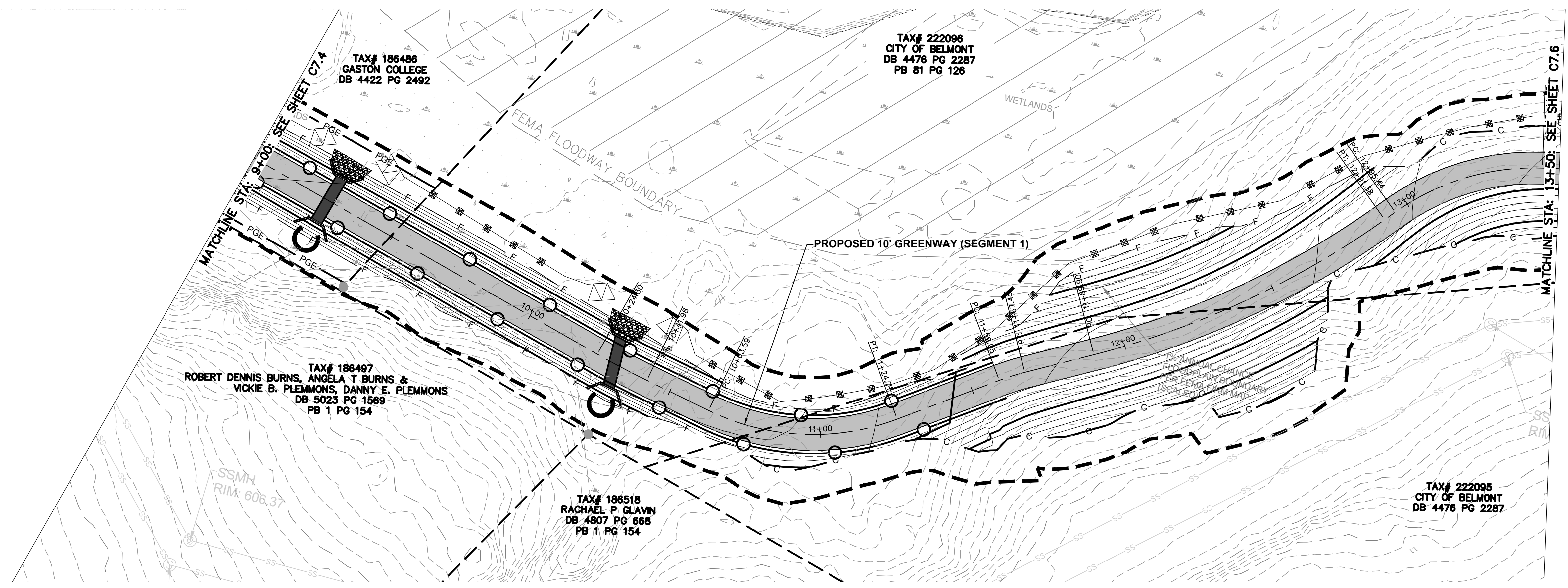
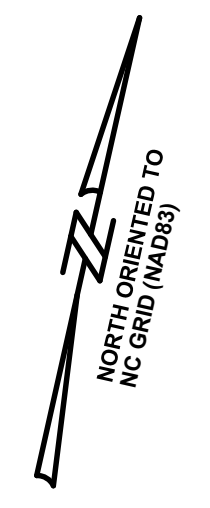
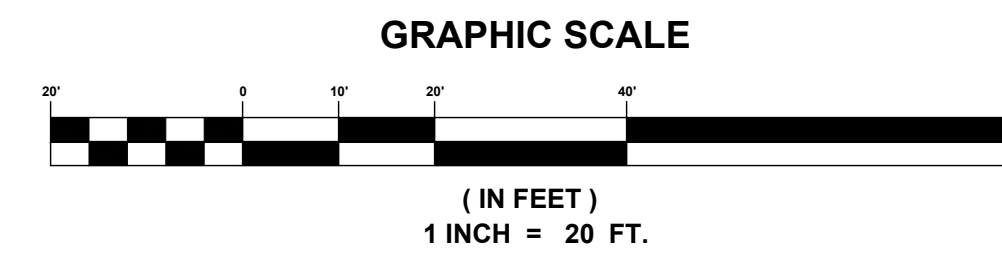
**ABBAY CREEK GREENWAY**

BELMONT, NORTH CAROLINA

CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

**C7.4**



TAX# 186486  
GASTON COLLEGE  
DB 4422 PG 2492

TAX# 222096  
CITY OF BELMONT  
DB 4476 PG 2287  
PB 81 PG 126

TAX# 186497  
ROBERT DENNIS BURNS, ANGELA T BURNS &  
VICKIE B. PLEMMONS, DANNY E. PLEMMONS  
DB 5023 PG 1589  
PB 1 PG 154

TAX# 186518  
RACHAEL P. GLAVIN  
DB 4807 PG 668  
PB 1 PG 154

TAX# 222095  
CITY OF BELMONT  
DB 4476 PG 2287

PROPOSED EROSION CONTROL INFO

	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

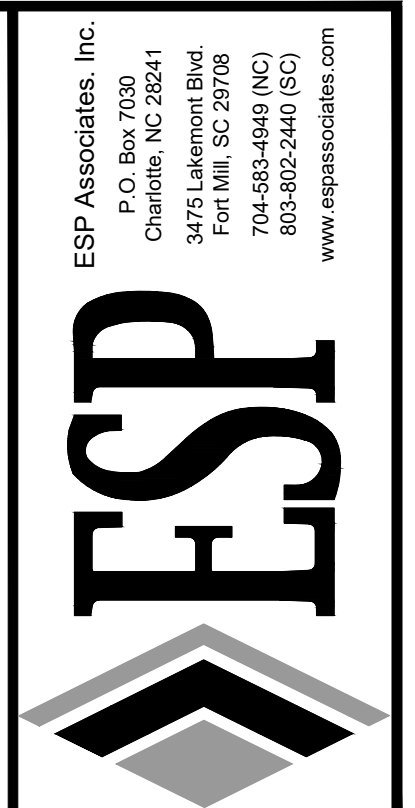
PROPOSED CONTOURS SHOWN AS APPROXIMATE ONLY TO ILLUSTRATE GENERAL FLOW PATHS. SEE CROSS SECTIONS FOR ACTUAL ELEVATIONS.

DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
PROJECT DISTURBED AREA



PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION

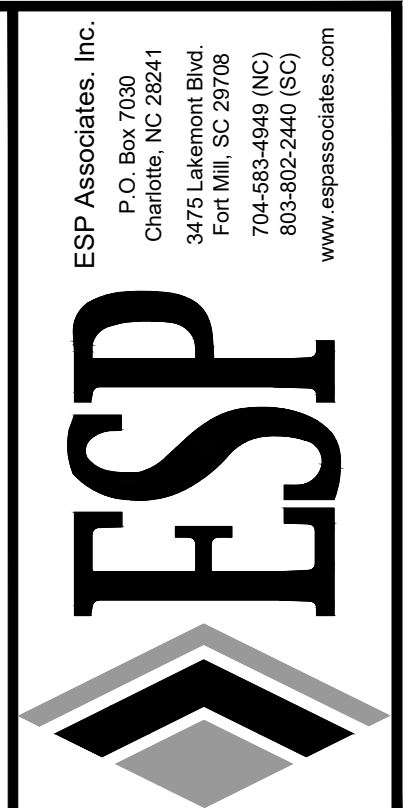
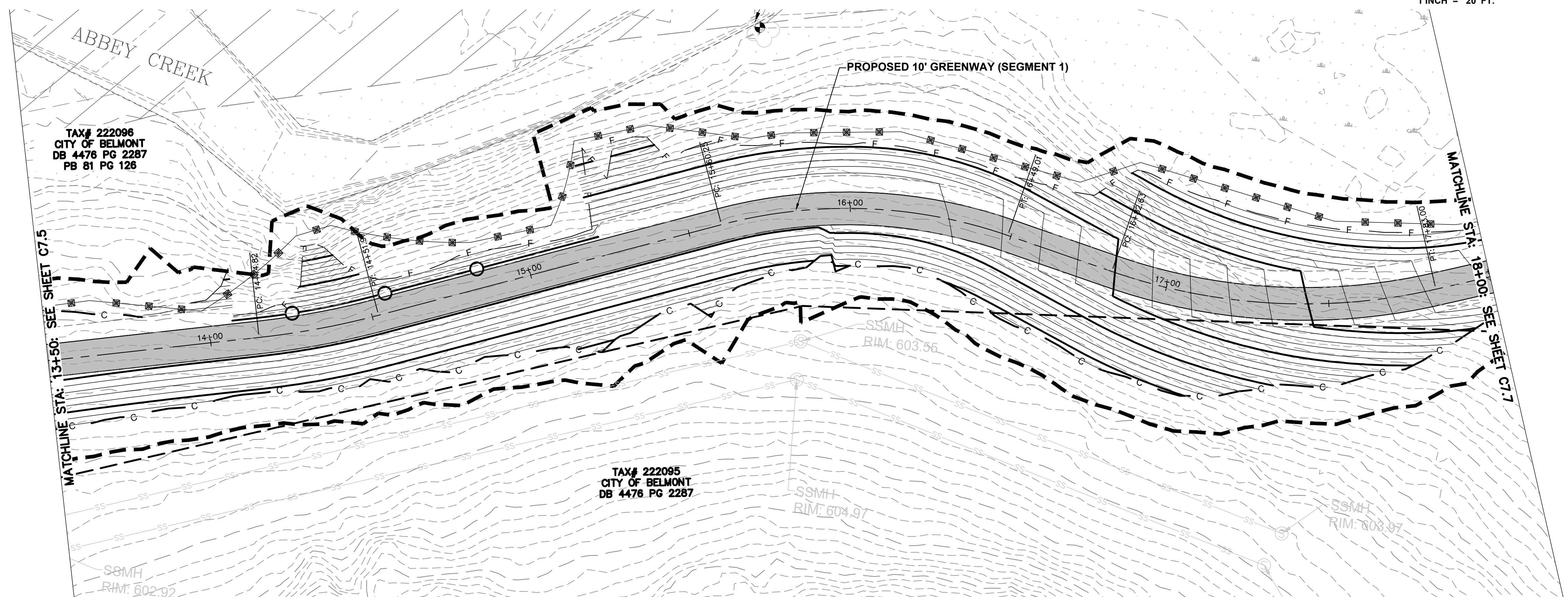
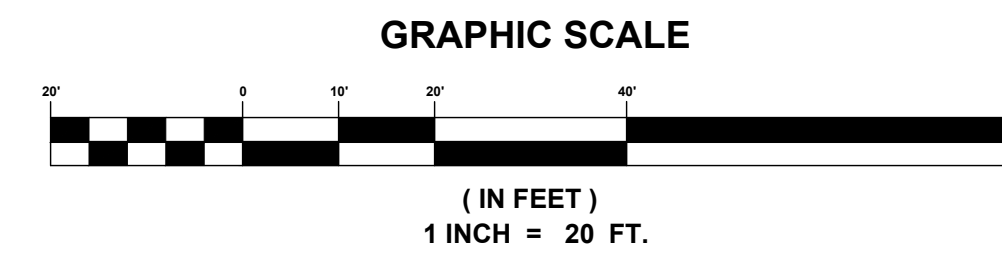
**EROSION CONTROL (SEG. 1)**  
**ABBEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

C7.5

U:\2020 Projects\1937 - Abbey Creek Greenway (City of Belmont)\1937\Sheets\1937\_GREENWAY\_EC\_PLANS - SEG 1.dwg, C7.5, gmpg

U:\2020 Projects\19327 - Abbey Creek Greenway (City of Belmont)\1937\Sheets\1937\_GRWAY\_EC\_PLANS - SEG 1.dwg, CT 6, gmpa



**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 1)**  
**ABBAY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C7.6**

PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

PROPOSED CONTOURS SHOWN AS APPROXIMATE ONLY TO ILLUSTRATE GENERAL FLOW PATHS. SEE CROSS SECTIONS FOR ACTUAL ELEVATIONS.

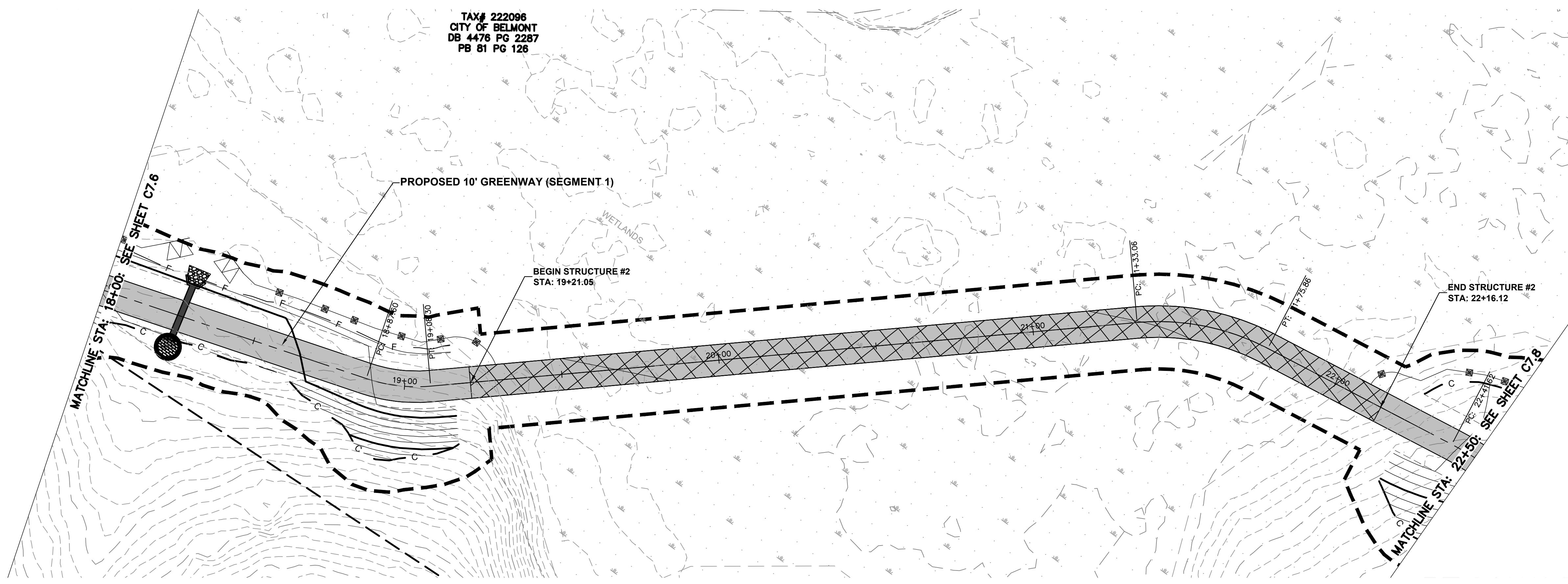
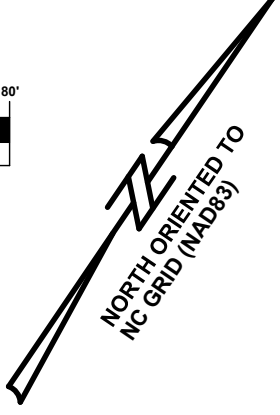
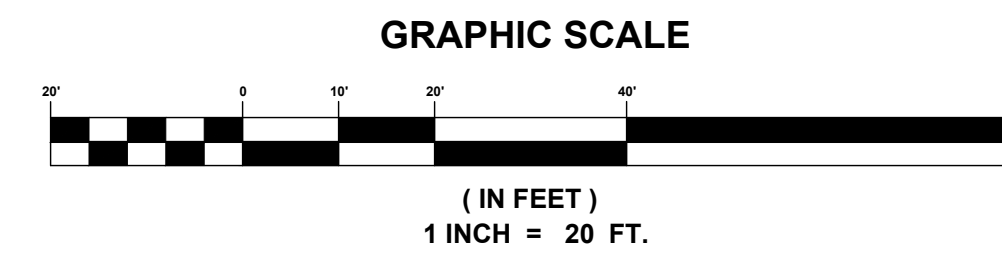
DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
PROJECT DISTURBED AREA

U:\2020 Projects\19327 - Abbey Creek Greenway (City of Belmont)\19327\Sheets\19327\_GRWAY-EC-PLANS - SEG 1.dwg, C7.7, gmpa



TAX# 222096  
CITY OF BELMONT  
DB 4476 PG 2287  
PB 81 PG 126

PROPOSED 10' GREENWAY (SEGMENT 1)

BEGIN STRUCTURE #2  
STA: 19+21.05

END STRUCTURE #2  
STA: 22+16.12

MATCHLINE STA: 18+00: SEE SHEET C7.6

MATCHLINE STA: 22+30: SEE SHEET C7.8

PROPOSED EROSION CONTROL INFO

	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

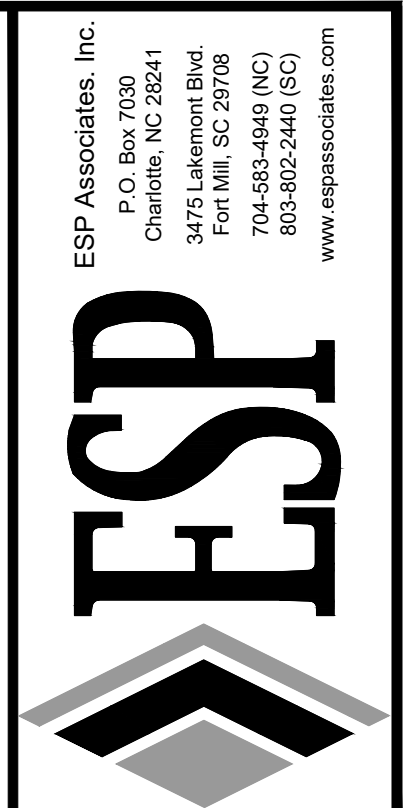
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ACREAGE SUMMARY  
PROJECT DISTURBED AREA



PRELIMINARY  
NOT FOR  
CONSTRUCTION

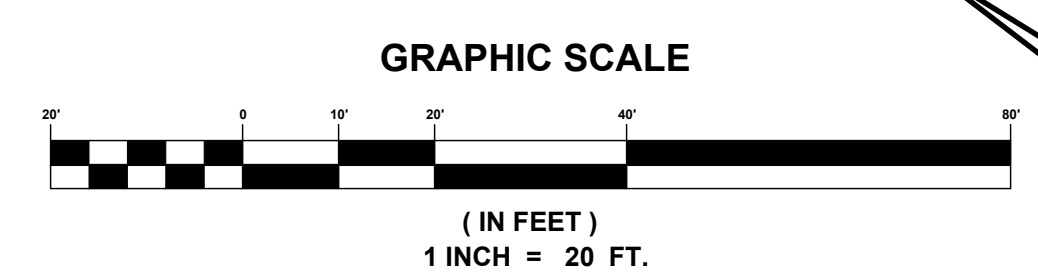
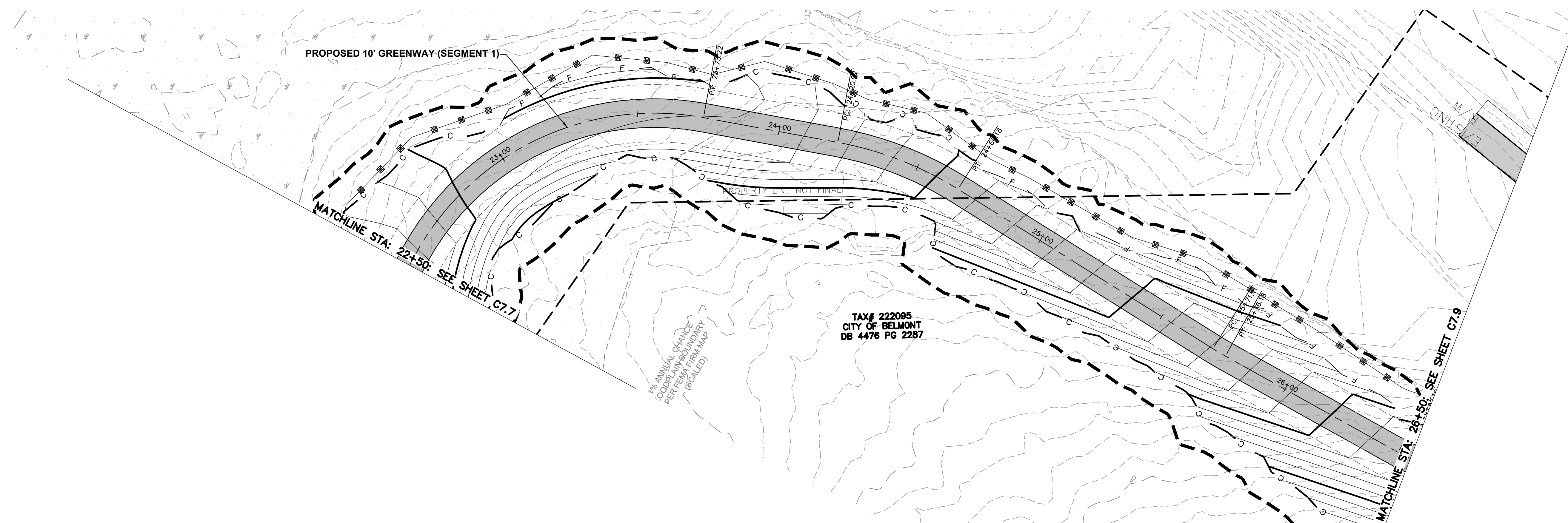
NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 1)**  
**ABBEE CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C7.7**

U:\2020 Projects\19327 - Abbey Creek Greenway (City of Belmont)\1937\Sheets\1937\_GREENWAY\_EC\_PLANS - SEG 1.dwg, C7.8, gmpaga



(NORTH POINT TO BE DETERMINED TO NORTH BY REMAINING TO NORTH)

PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

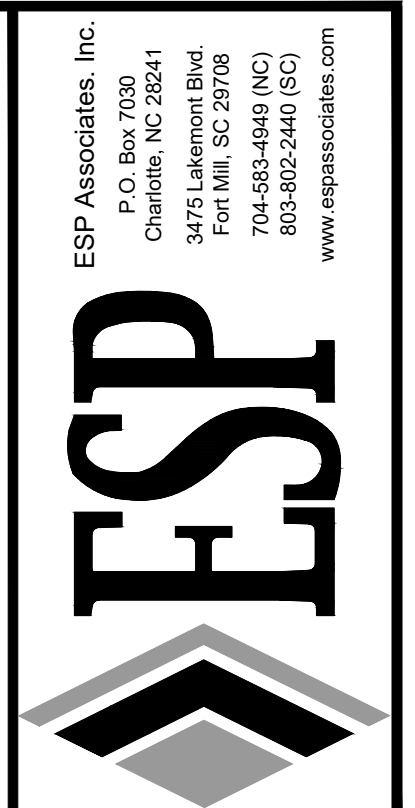
PROPOSED CONTOURS SHOWN AS APPROXIMATE ONLY TO ILLUSTRATE GENERAL FLOW PATHS. SEE CROSS SECTIONS FOR ACTUAL ELEVATIONS.

DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
PROJECT DISTURBED AREA



**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 1)**

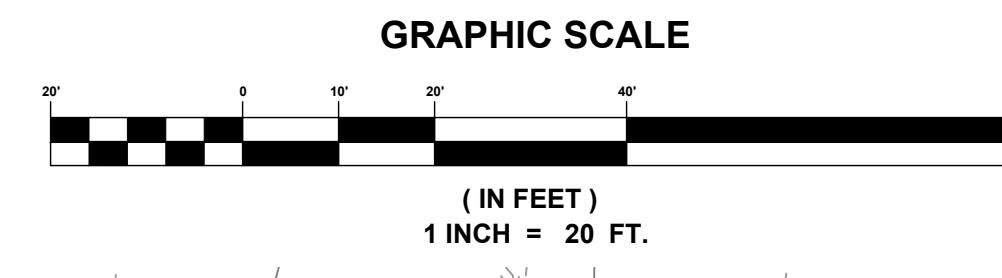
**ABBEY CREEK GREENWAY**

BELMONT, NORTH CAROLINA

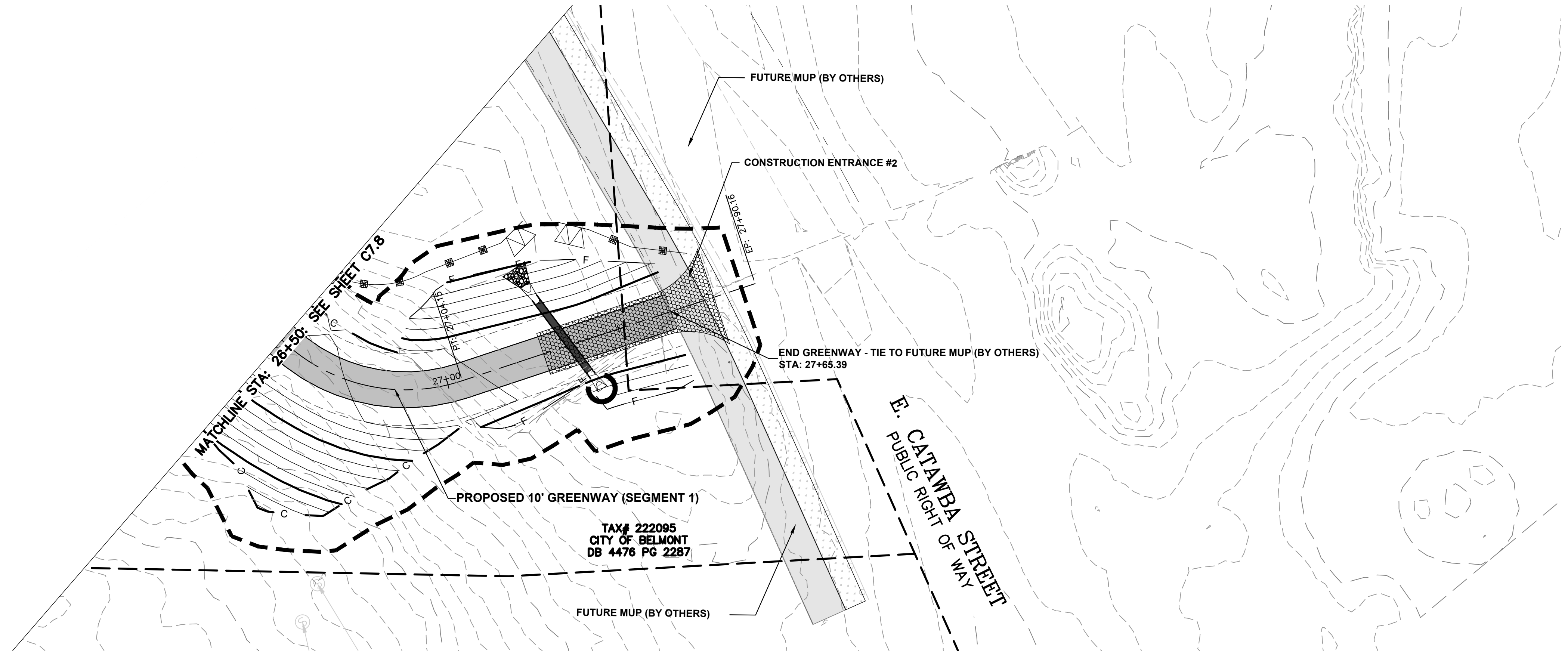
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

U:\2020 Projects\19327 - Abbey Creek Greenway (City of Belmont)\19327-SheetSet\19327-GRNWAY-EC-PLANS - SEG 1.dwg, CT 1.a, gmp.dwg



ESP ASSOCIATES, INC.  
 10100 W. HUNTERS LANE  
 CHARLOTTE, NC 28211  
 704.552.4444 (NC)  
 803.802.2440 (SC)  
 www.espassociates.com



TAX# 222095  
 CITY OF BELMONT  
 DB 4476 PG 2287

PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

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DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
 PROJECT DISTURBED AREA

ESP Associates, Inc.  
 P.O. Box 7030  
 Charlotte, NC 28211  
 3675 Lakeshore Blvd.  
 704.552.4444 (NC)  
 803.802.2440 (SC)  
 www.espassociates.com

PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION	BY

EROSION CONTROL (SEG. 1)

ABBEE CREEK GREENWAY

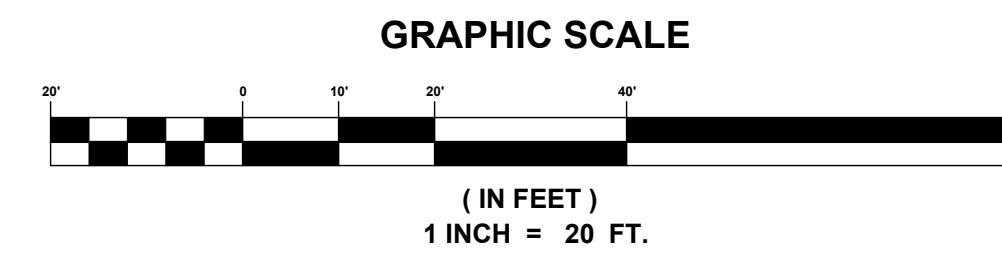
BELMONT, NORTH CAROLINA

CITY OF BELMONT

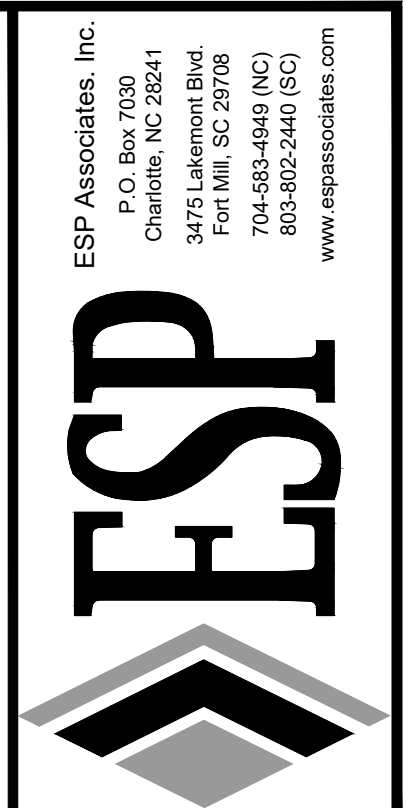
PROJECT INFORMATION

PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C7.9





ESP Associates, Inc.  
 P.O. Box 7030  
 Charlotte, NC 28211  
 3275 Lakeside Blvd.  
 Suite 200  
 704.652.4949 (NC)  
 803.802.2440 (SC)  
 www.espaceassociates.com



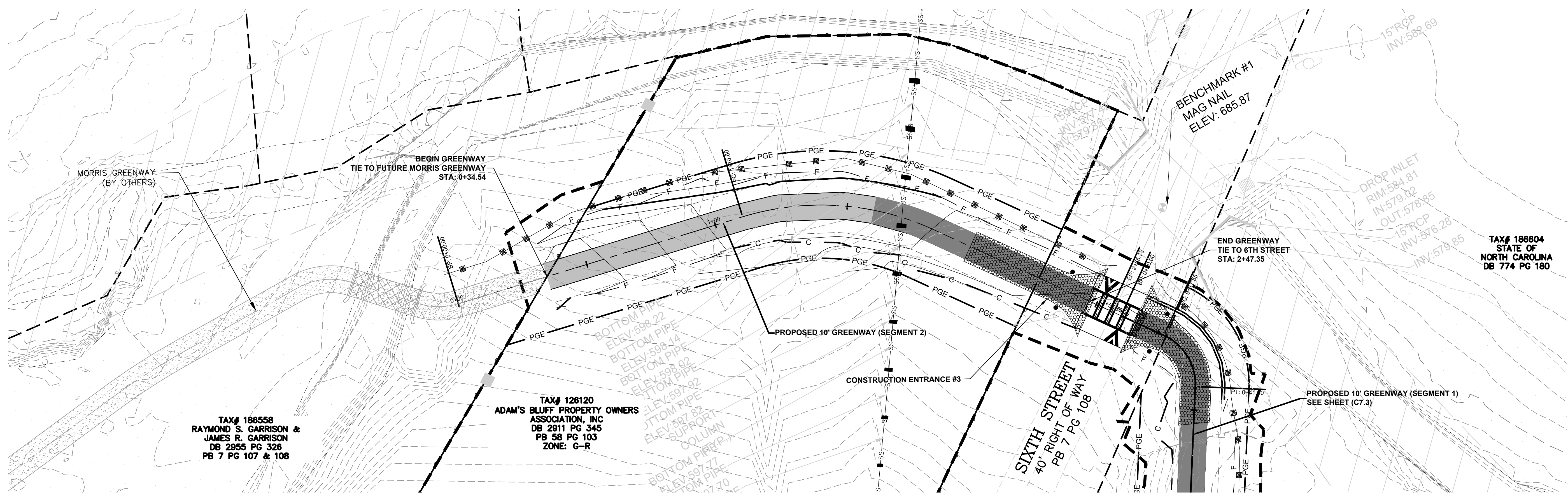
**PRELIMINARY  
 NOT FOR  
 CONSTRUCTION**

NO.	DATE	REVISION

**EROSION CONTROL (SEG. 2)**  
**ABBEY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C7.10**



TAX# 186558  
 RAYMOND S. GARRISON &  
 JAMES R. GARRISON  
 DB 2955 PG 326  
 PB 7 PG 107 & 108

TAX# 126120  
 ADAM'S BLUFF PROPERTY OWNERS  
 ASSOCIATION, INC  
 DB 2911 PG 345  
 PB 58 PG 103  
 ZONE: G-R

PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

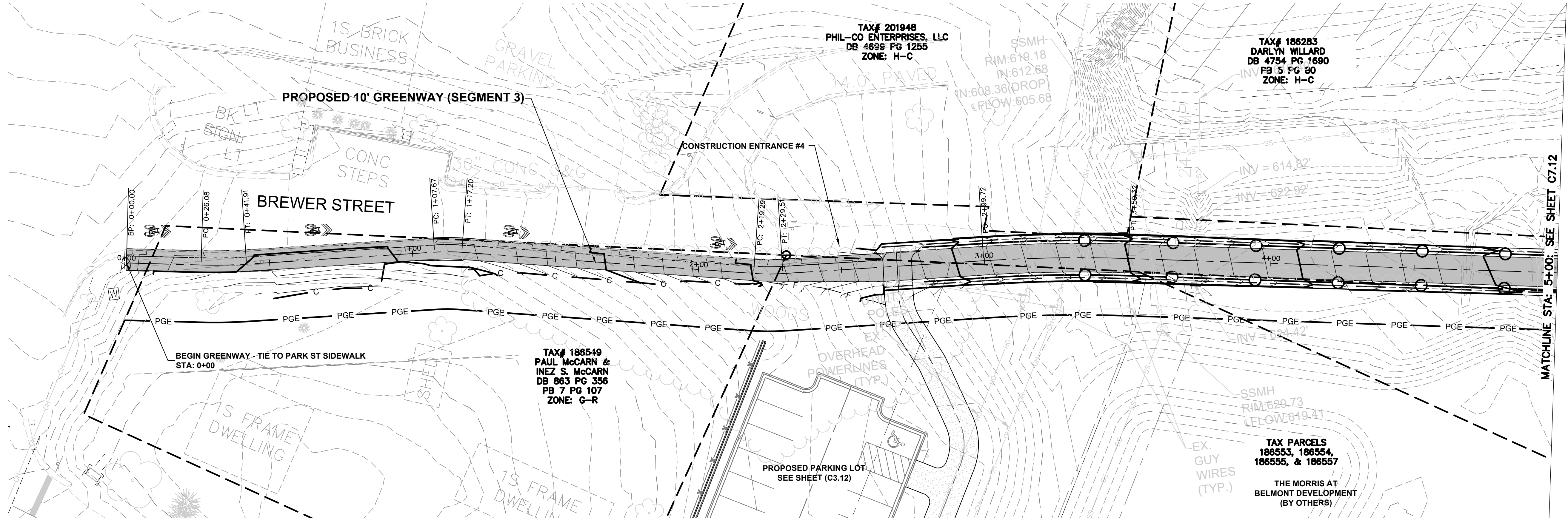
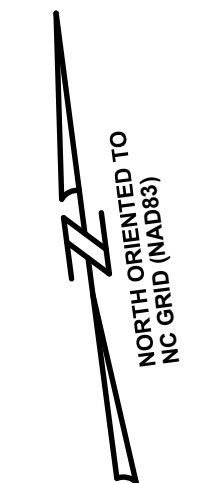
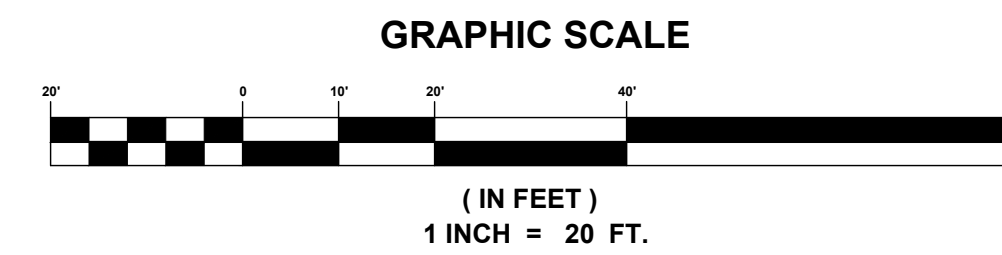
PROPOSED CONTOURS SHOWN AS APPROXIMATE ONLY TO ILLUSTRATE GENERAL FLOW PATHS. SEE CROSS SECTIONS FOR ACTUAL ELEVATIONS.

DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
 PROJECT DISTURBED AREA



ESP Associates, Inc.  
 P.O. Box 7030  
 Charlotte, NC 28241  
 3275 Lakeside Blvd.  
 Suite 200  
 704.653.4949 (NC)  
 803.802.2440 (SC)  
 www.espace.com

**ESP**

PRELIMINARY  
 NOT FOR  
 CONSTRUCTION

NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 3)**

**ABBEY CREEK GREENWAY**

BELMONT, NORTH CAROLINA

CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C7.11**

PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

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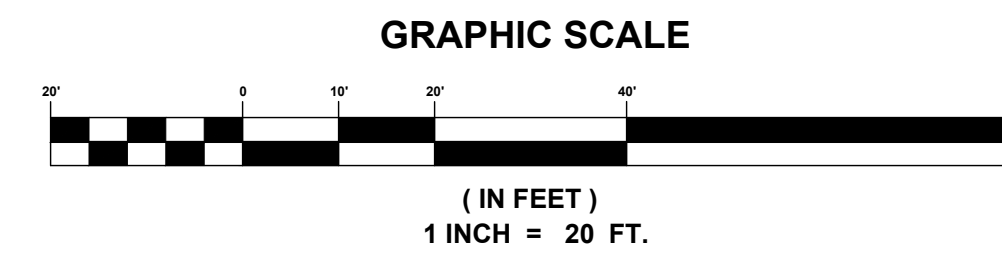
DO NOT INSTALL FILTER BAG INLET PROJECTION UNTIL GRADING BEGINS THAT WILL REQUIRE THE PROTECTION.

STABILIZE ALL SLOPES 3:1 AND GREATER WITH MULCH AND SEED AS NOTED IN EROSION CONTROL DETAILS.

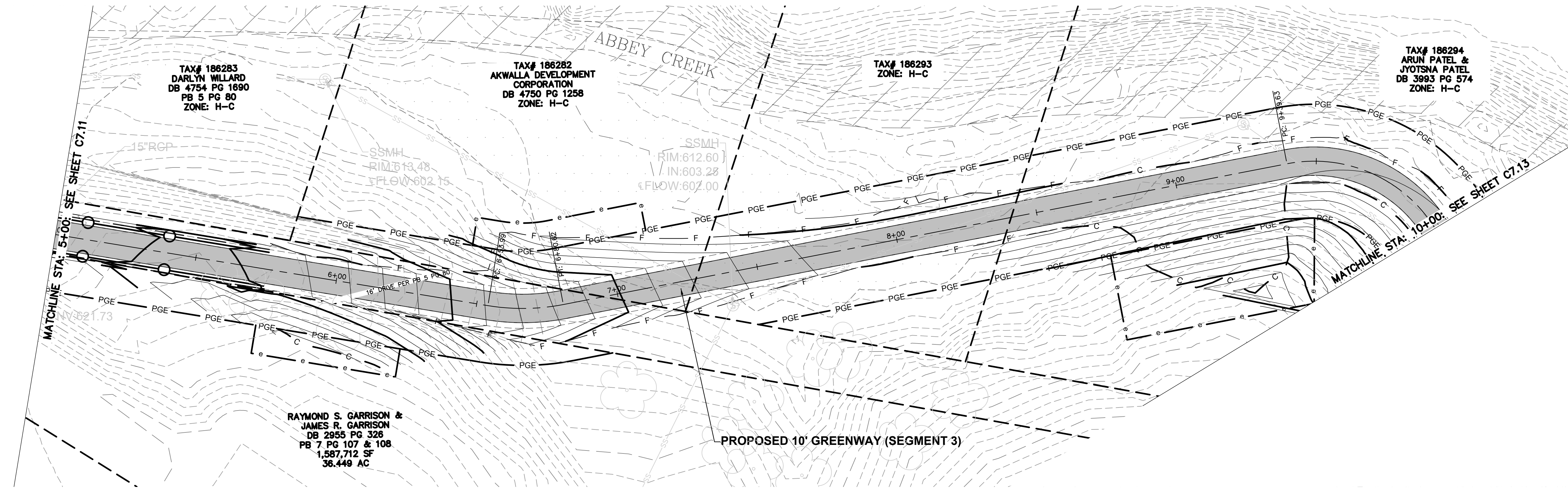
STABILIZE AS SHOWN (UNLESS OTHERWISE NOTED) ON THIS PLAN WITHIN 14 DAYS OF COMPLETION PER EROSION CONTROL NOTES.

ACREAGE SUMMARY  
 PROJECT DISTURBED AREA

U:\2020 Projects \IR37 - Abbey Creek Greenway (City of Belmont)\IR37\Sheets\IR37\_GREENWAY\_EC\_PLANS - SEG 3.dwg, 7-11 - EROSION CONTROL - (SEG. 3).gbr



NORTH ORIENTED TO  
NC GRID (NAD83)



TAX# 186283  
DARLYN WILLARD  
DB 4754 PG 1690  
PB 5 PG 80  
ZONE: H-C

TAX# 186282  
AKWALLA DEVELOPMENT  
CORPORATION  
DB 4750 PG 1258  
ZONE: H-C

TAX# 186293  
ZONE: H-C

TAX# 186294  
ARUN PATEL &  
JYOTSNA PATEL  
DB 3993 PG 574  
ZONE: H-C

RAYMOND S. GARRISON &  
JAMES R. GARRISON  
DB 2955 PG 326  
PB 7 PG 107 & 108  
1,587,712 SF  
36.449 AC

PROPOSED 10' GREENWAY (SEGMENT 3)

PROPOSED EROSION CONTROL INFO

	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKES ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

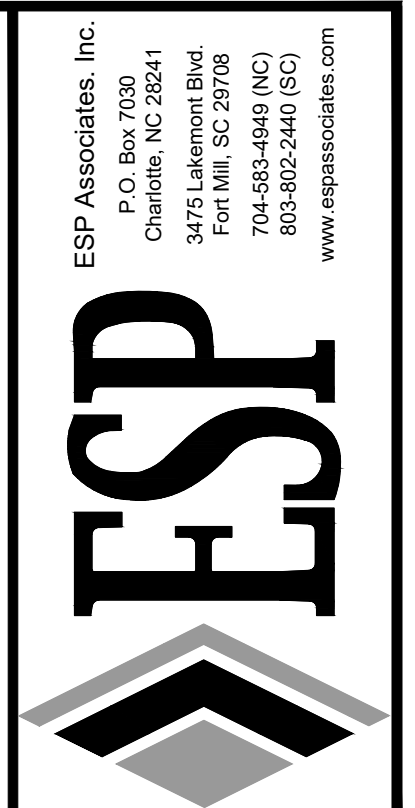
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ACREAGE SUMMARY  
PROJECT DISTURBED AREA



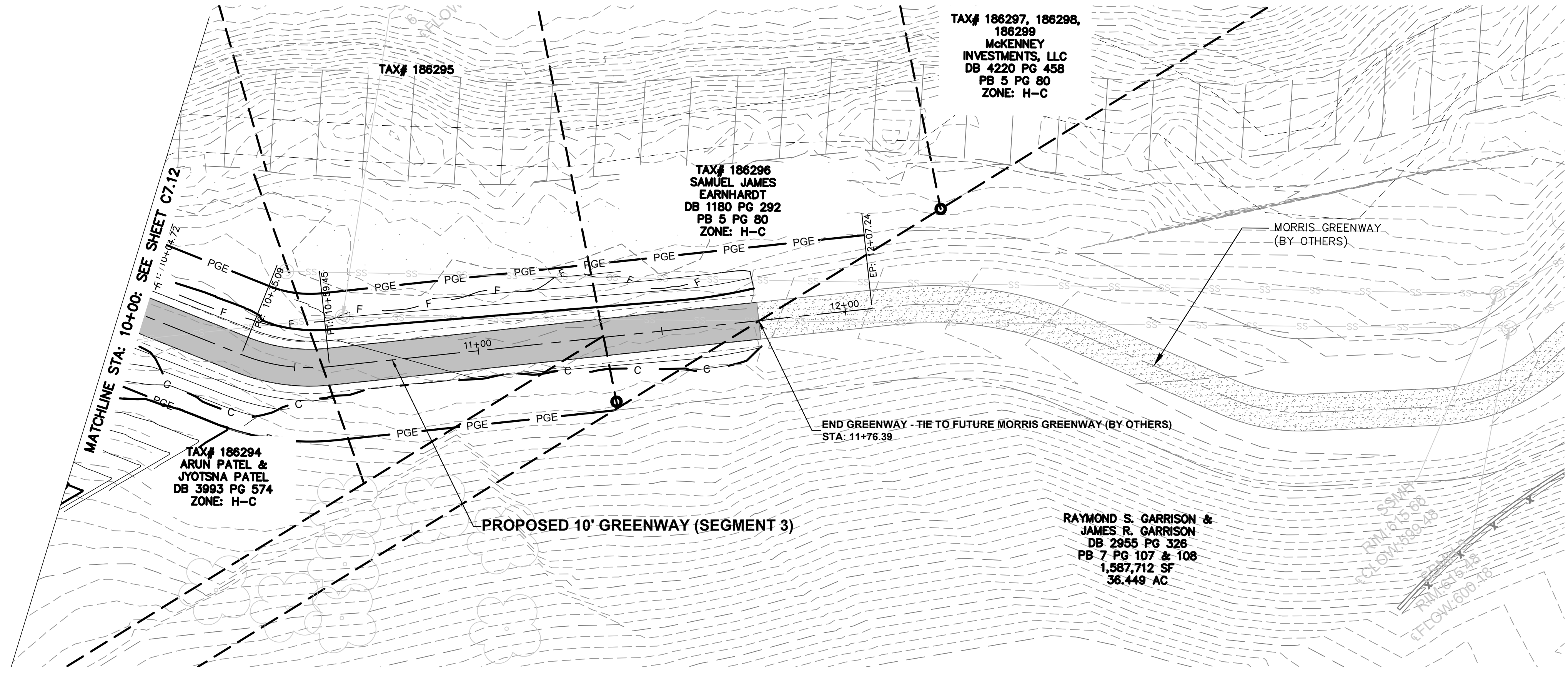
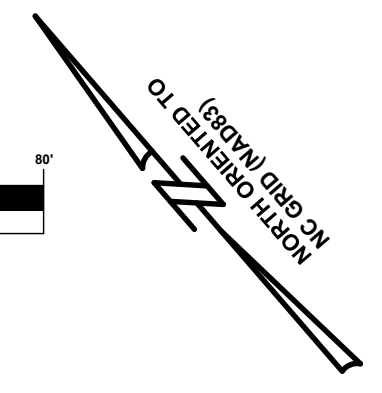
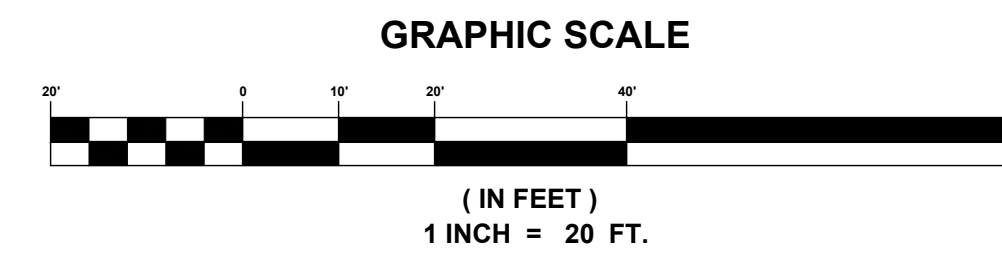
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 3)**  
**ABBEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C7.12

U:\2020 Projects\19327 - Abbey Creek Greenway (City of Belmont)\1937\Sheet\IR37\_GREENWAY\_EC\_PLANS - SEG 3.dwg, C7.12 - EROSION CONTROL - (REV. 3).gsp



PROPOSED EROSION CONTROL INFO	
	DISTURBED AREA
	PROPOSED CONTOURS
	EXISTING CONTOURS
	SILT FENCE
	SPECIAL SEDIMENT CONTROL FENCE
	CONSTRUCTION ENTRANCE
	RIP RAP APRON
	ROCK INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1632.01
	ROCK PIPE INLET SEDIMENT TRAP, TYPE A, NCDOT STD. 1635.01

CONTRACTOR TO INSTALL IMPERVIOUS DIKS ALONG THE STREAM AS NEEDED AND UTILIZE SPECIAL STILLING BASINS FOR DEWATERING.

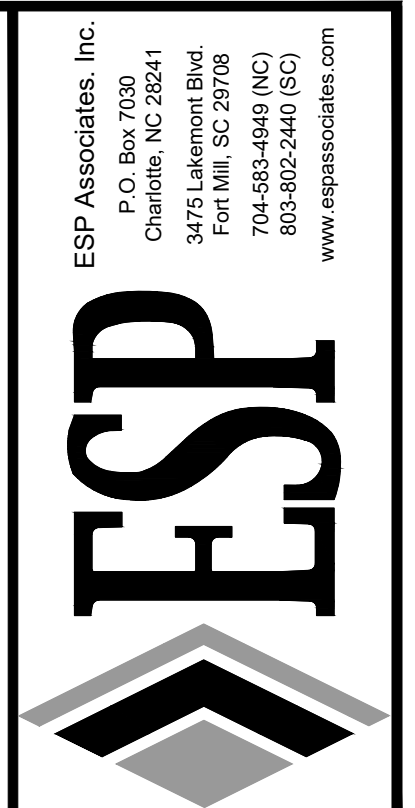
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ACREAGE SUMMARY  
PROJECT DISTURBED AREA



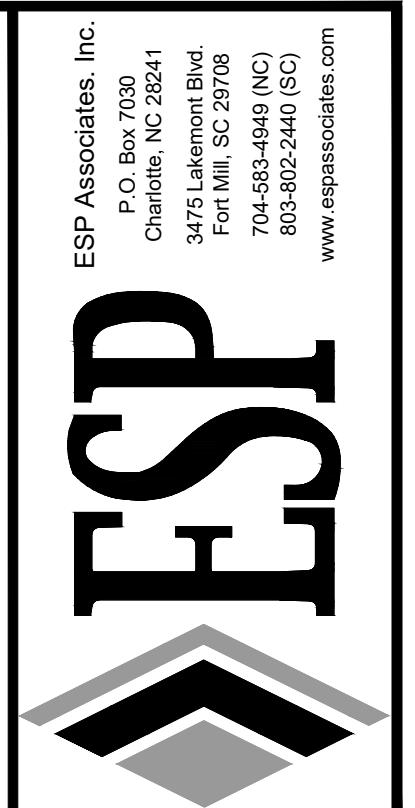
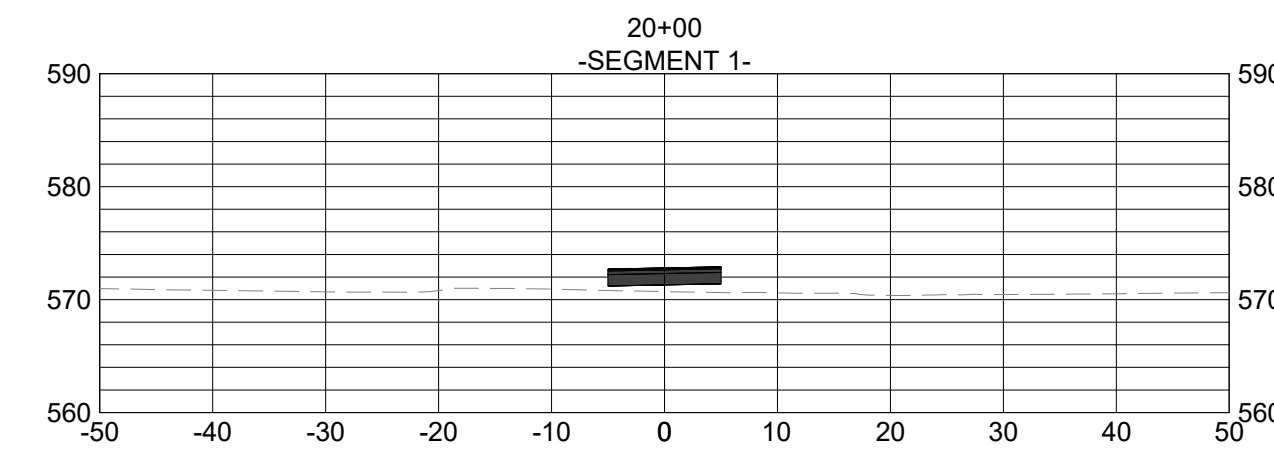
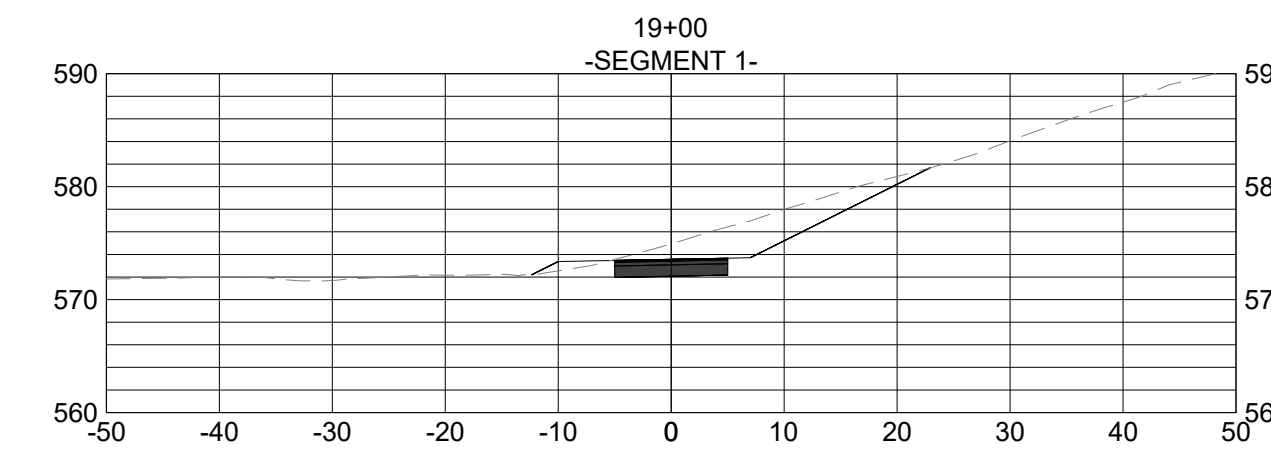
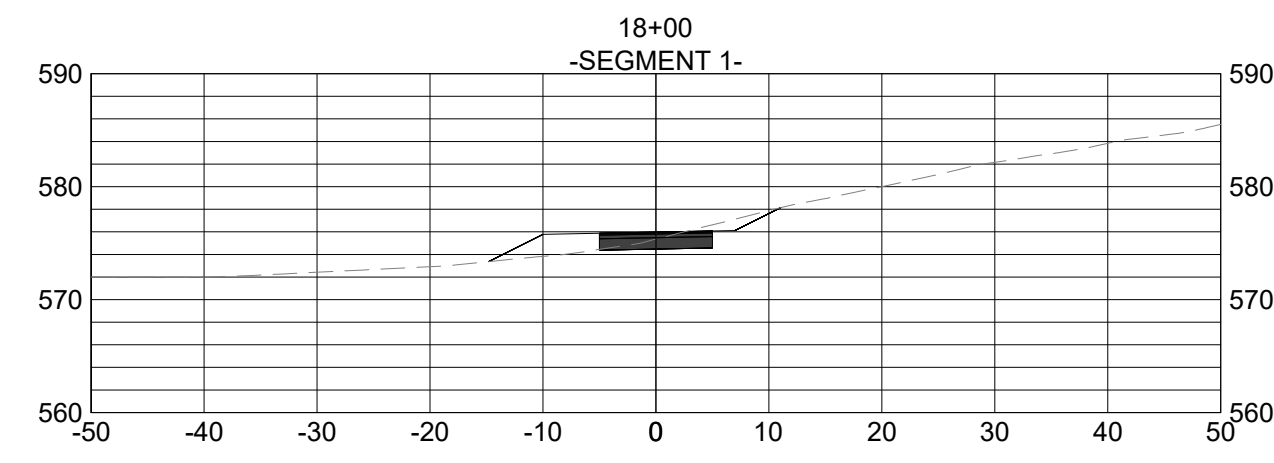
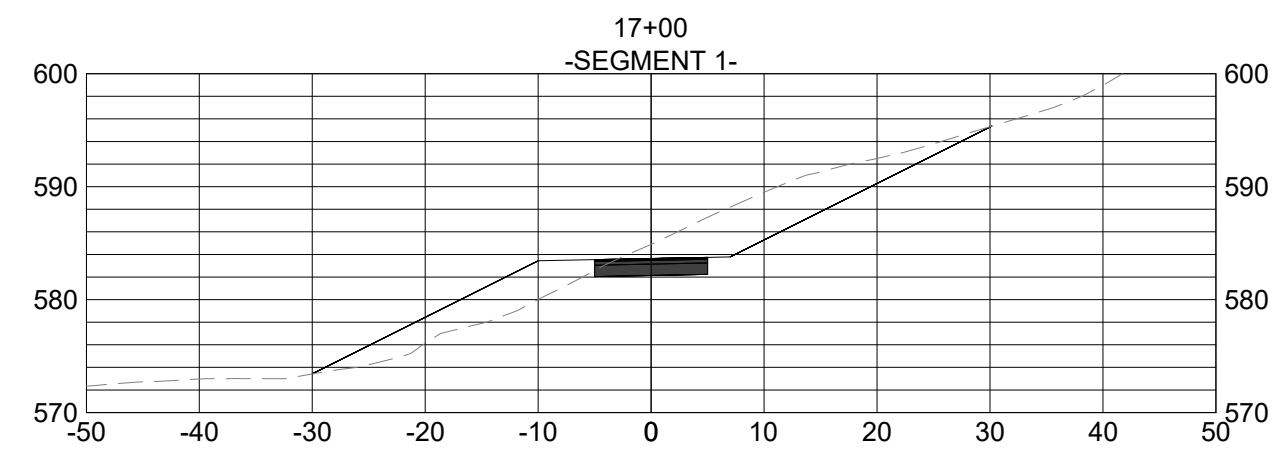
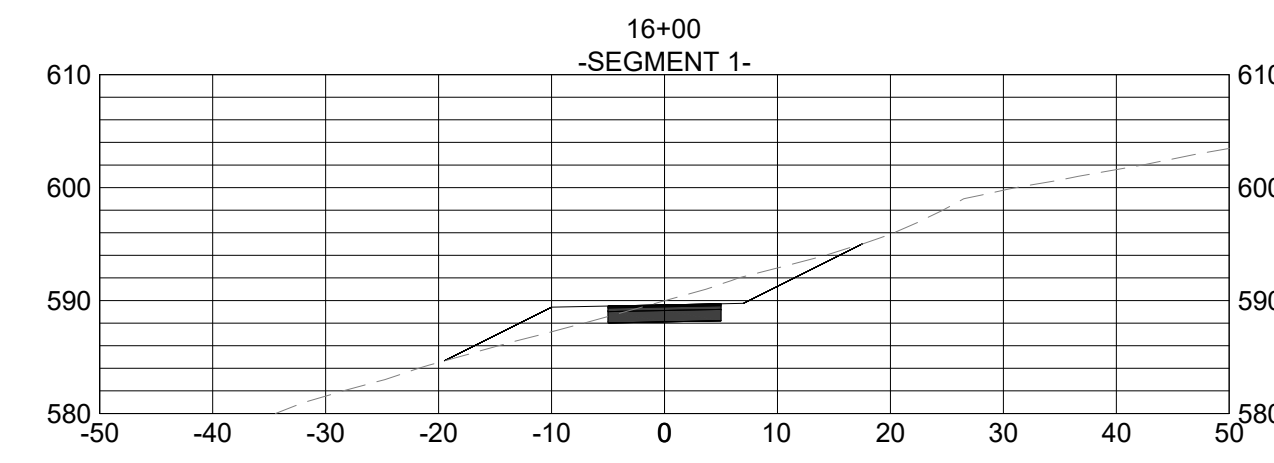
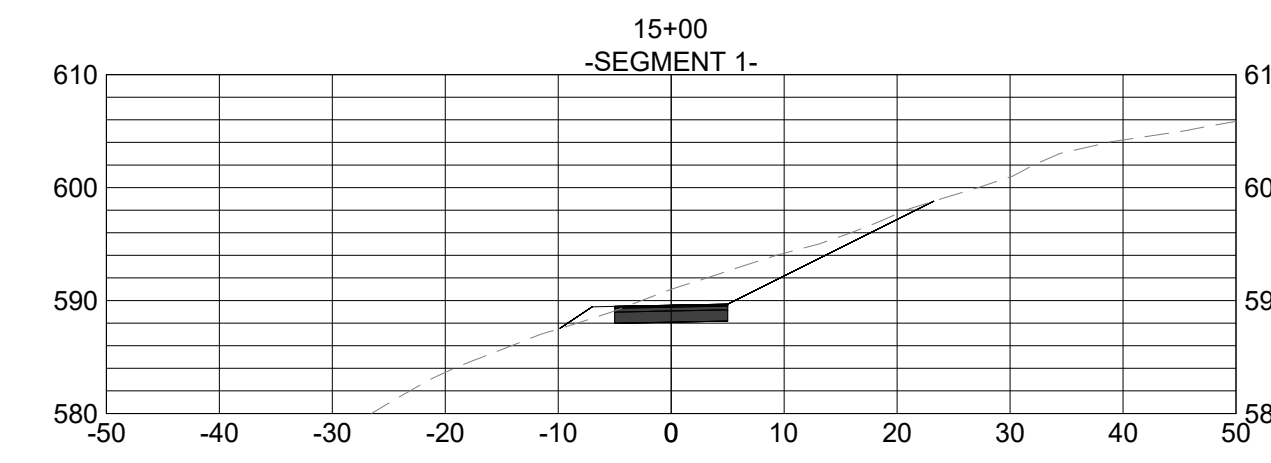
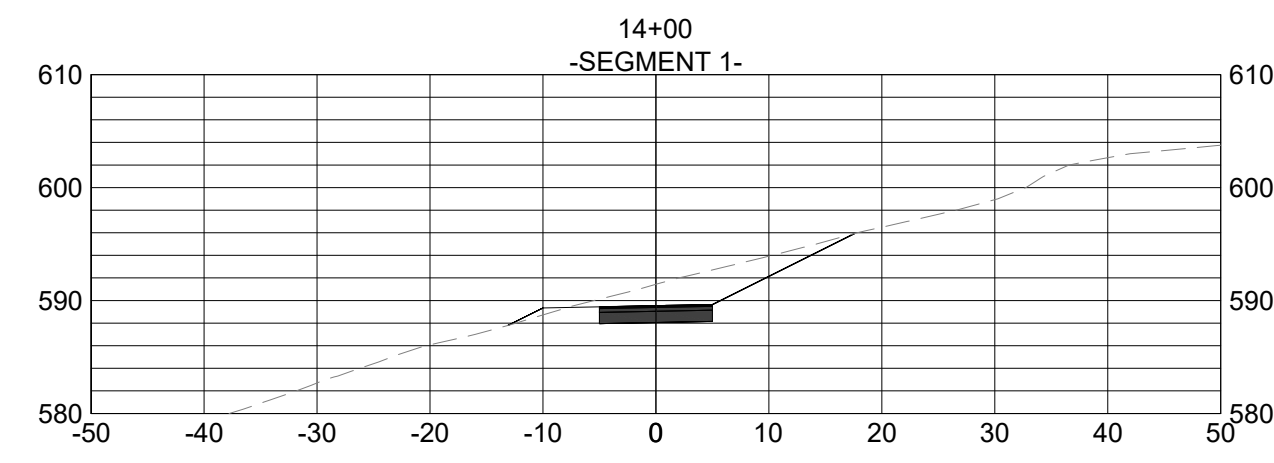
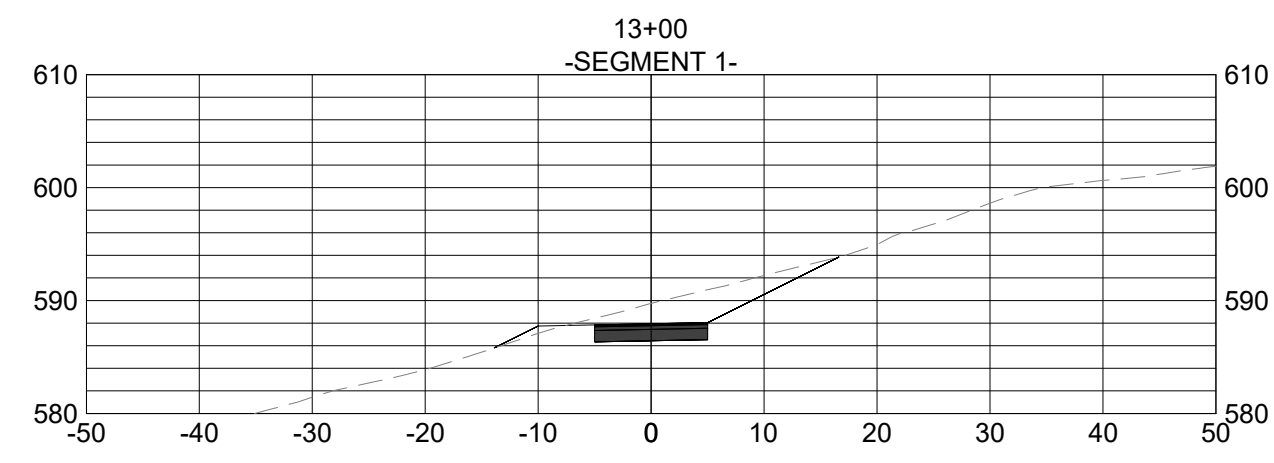
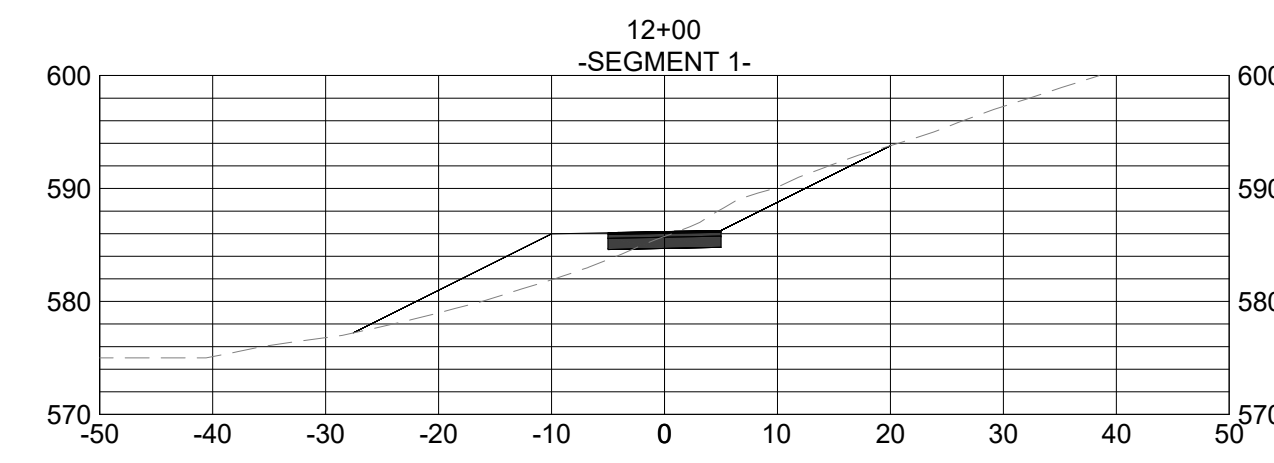
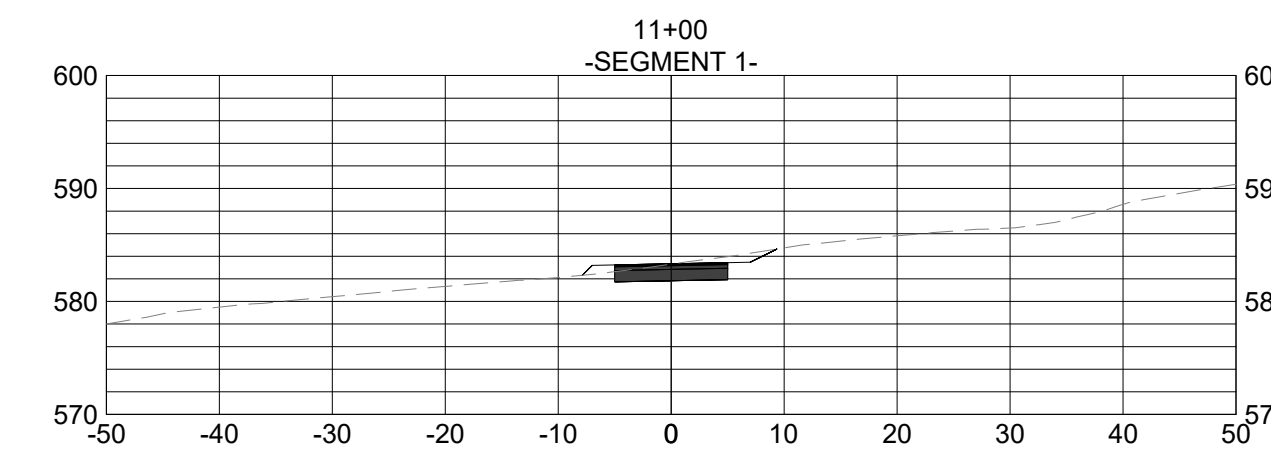
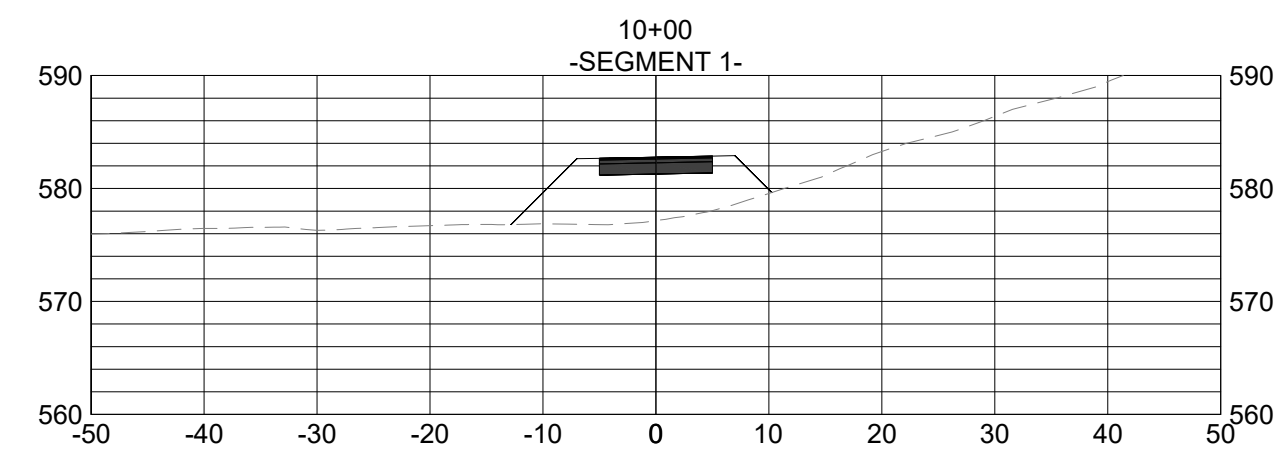
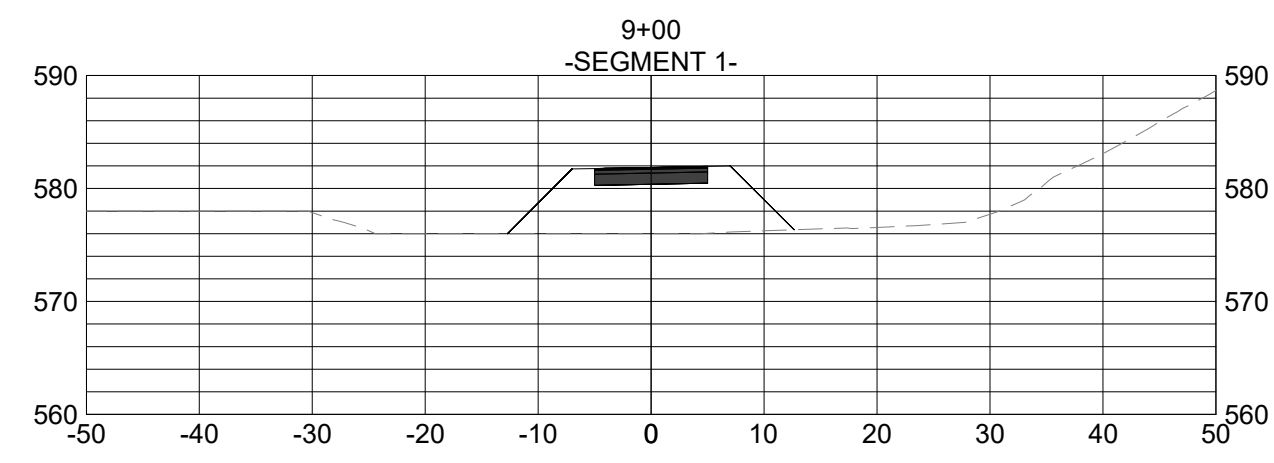
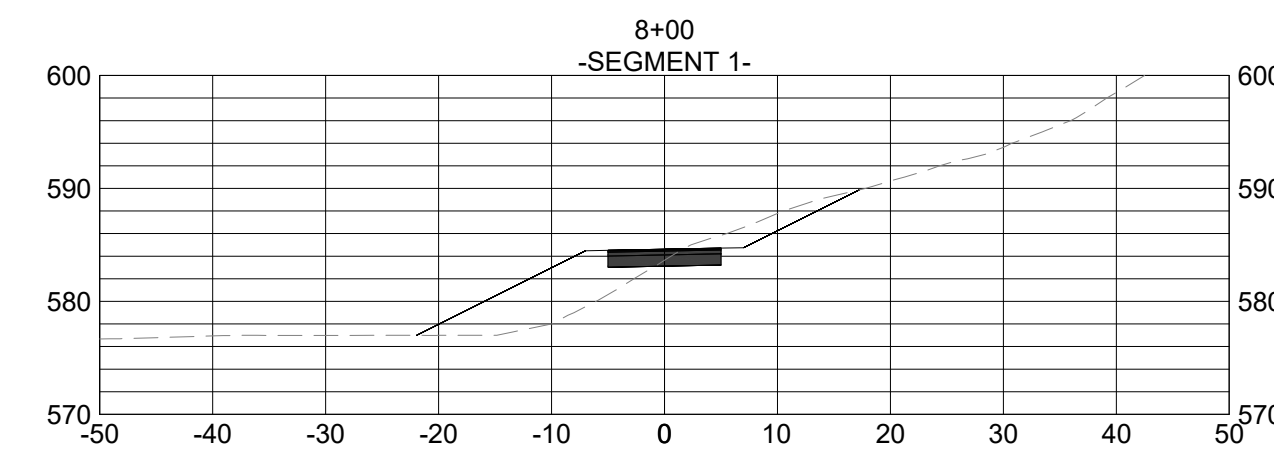
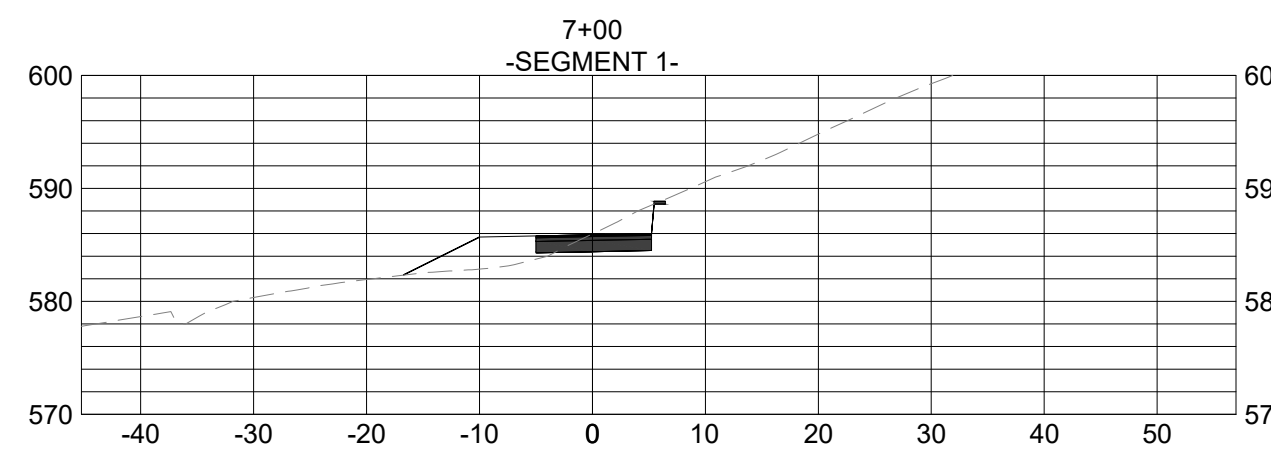
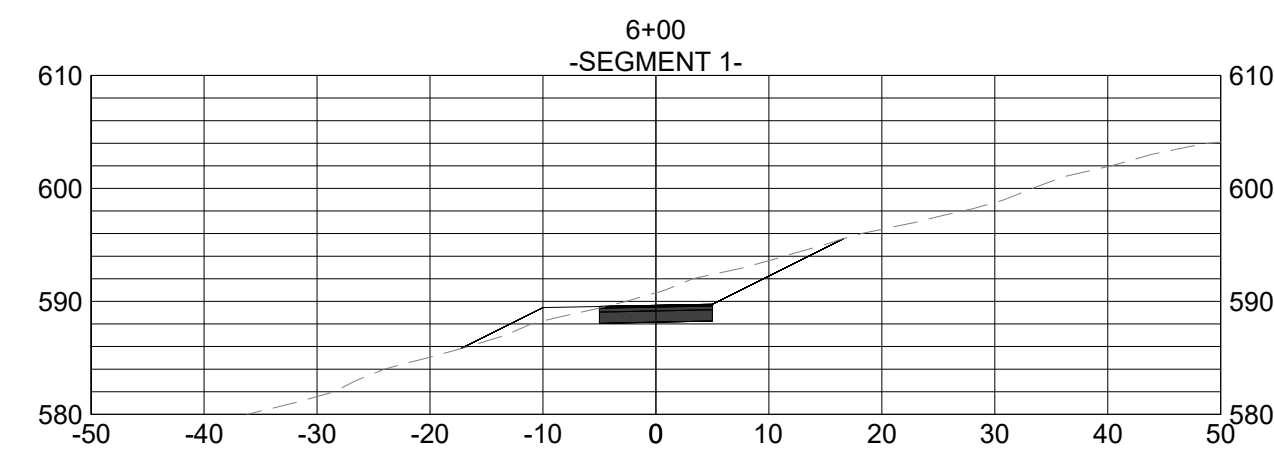
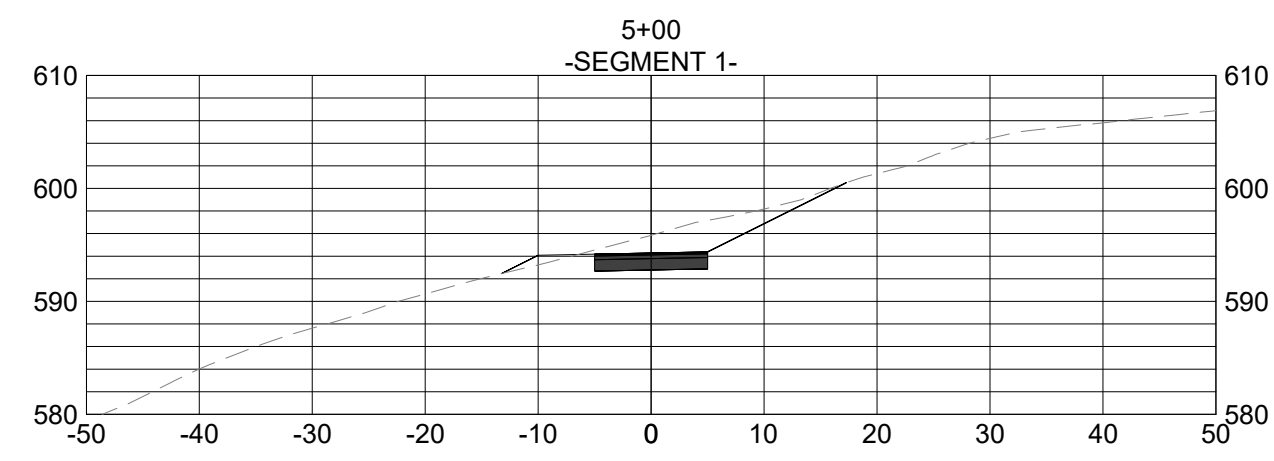
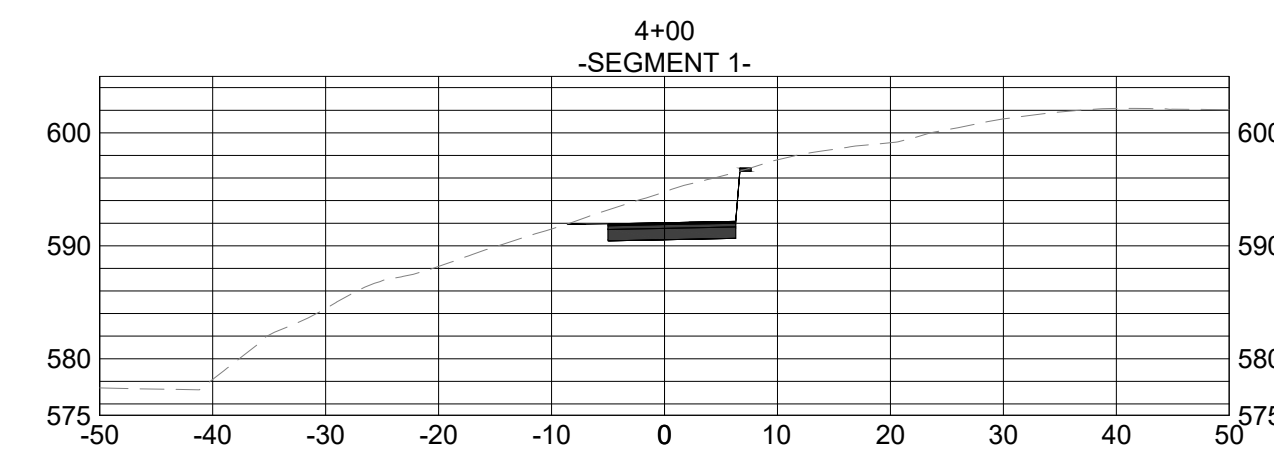
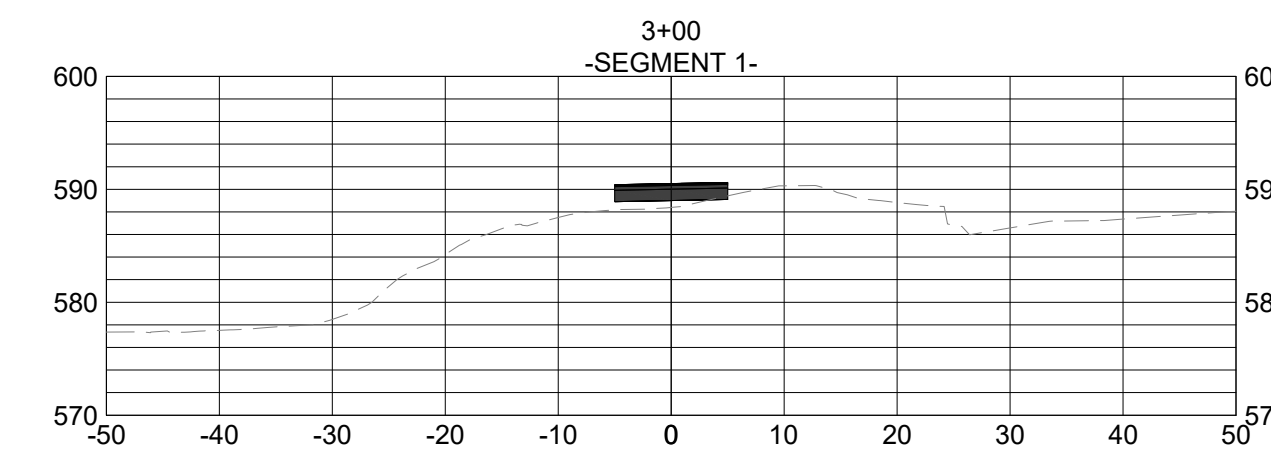
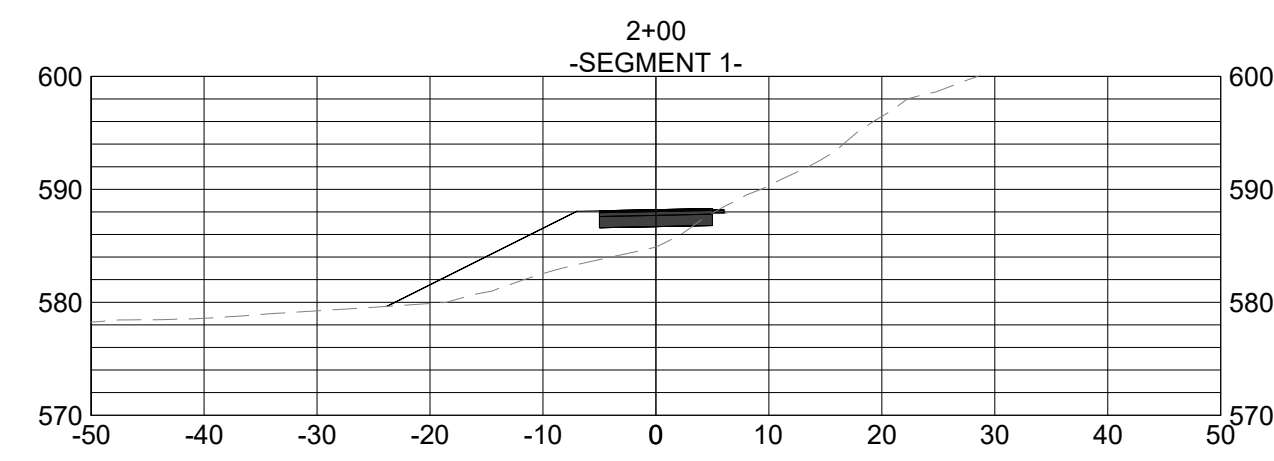
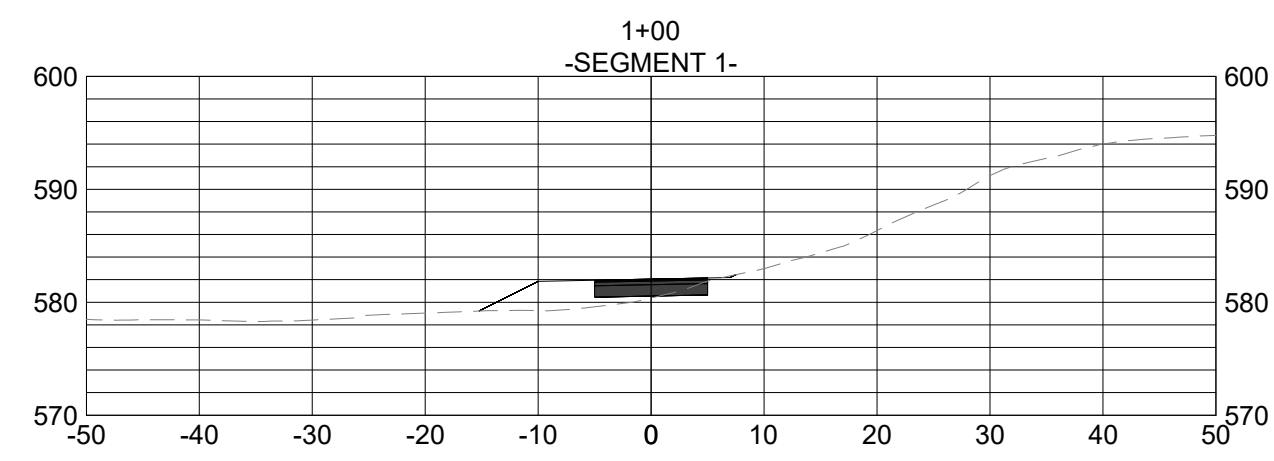
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION	BY

**EROSION CONTROL (SEG. 3)**  
**ABBEY CREEK GREENWAY**  
BELMONT, NORTH CAROLINA  
CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	C7.13

U:\2020 Projects\19377-Abbey Creek Greenway (City of Belmont)\19377-Sheet\19377-GRNWAY-ASECS.dwg, 10-CROSS SECTIONS (SEG. 1), gshaha



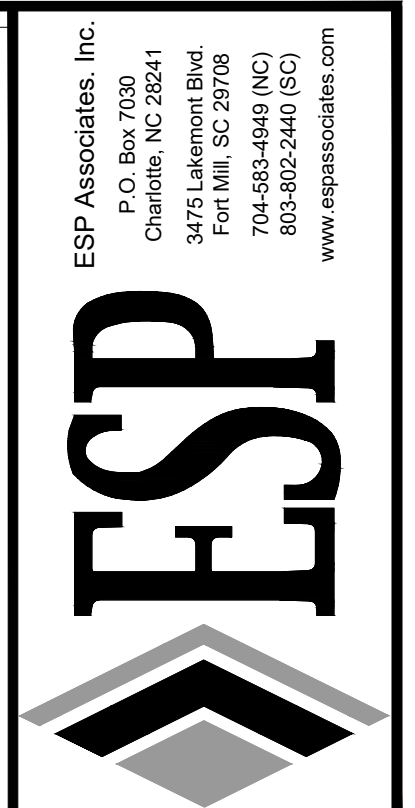
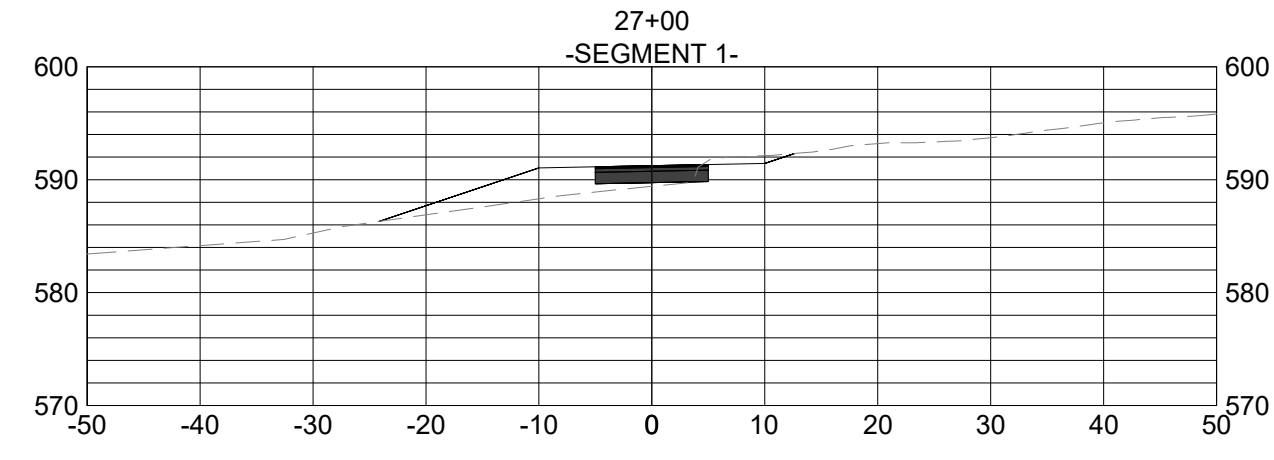
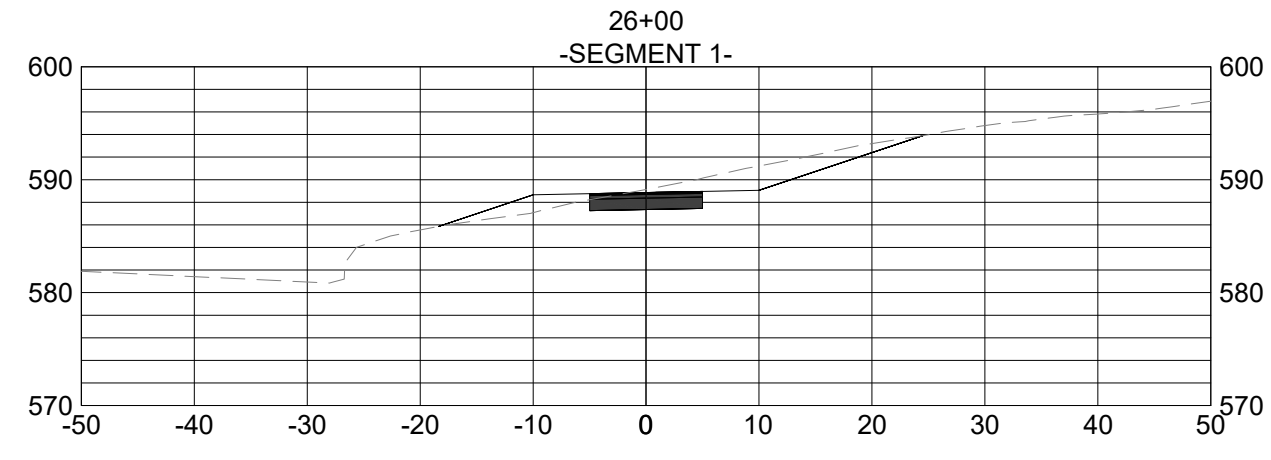
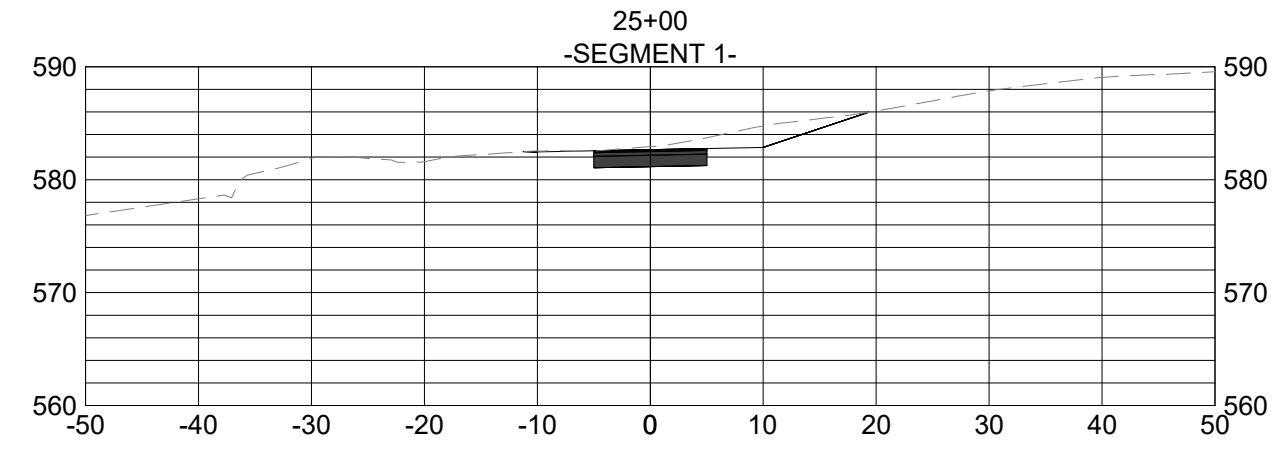
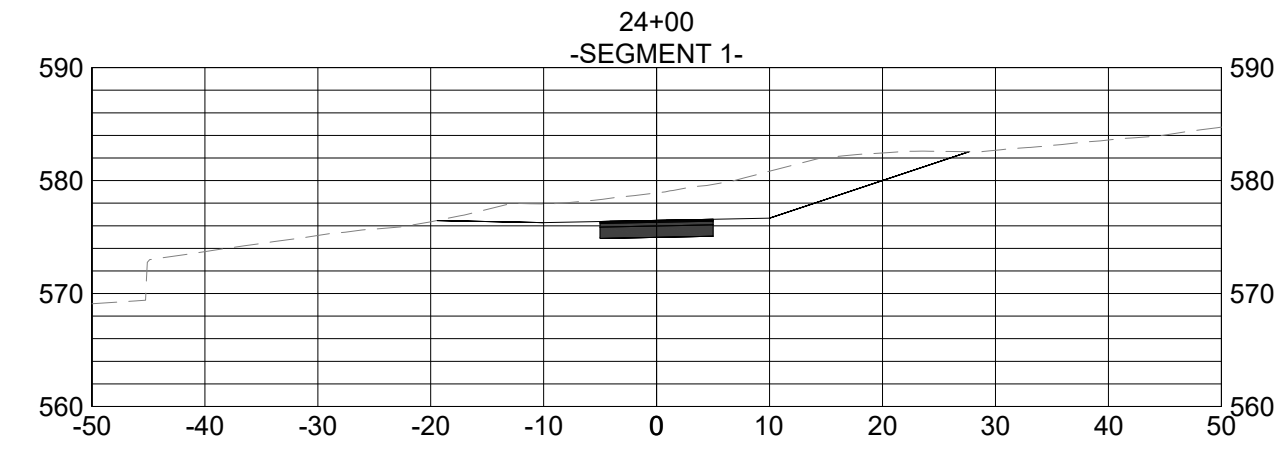
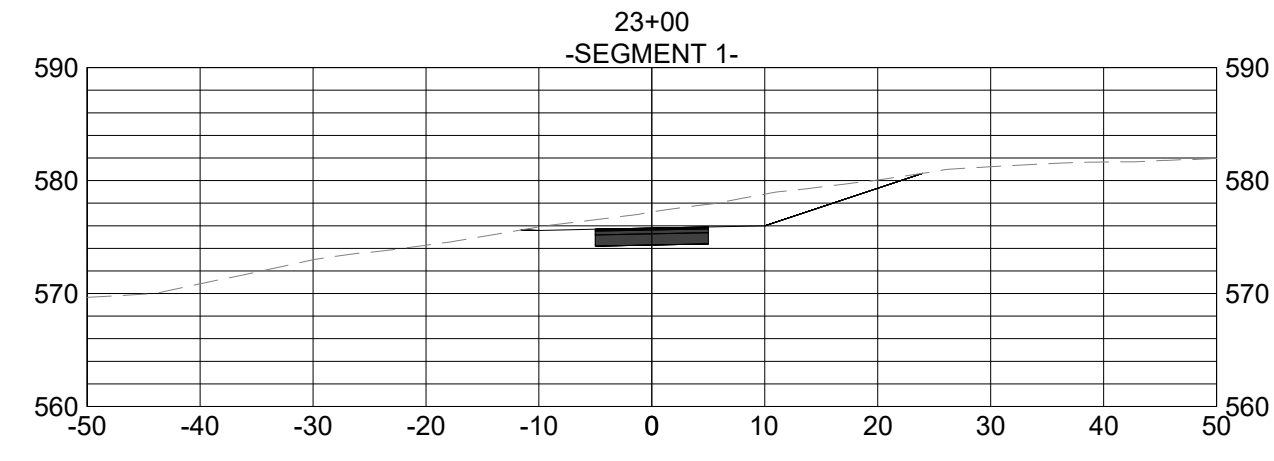
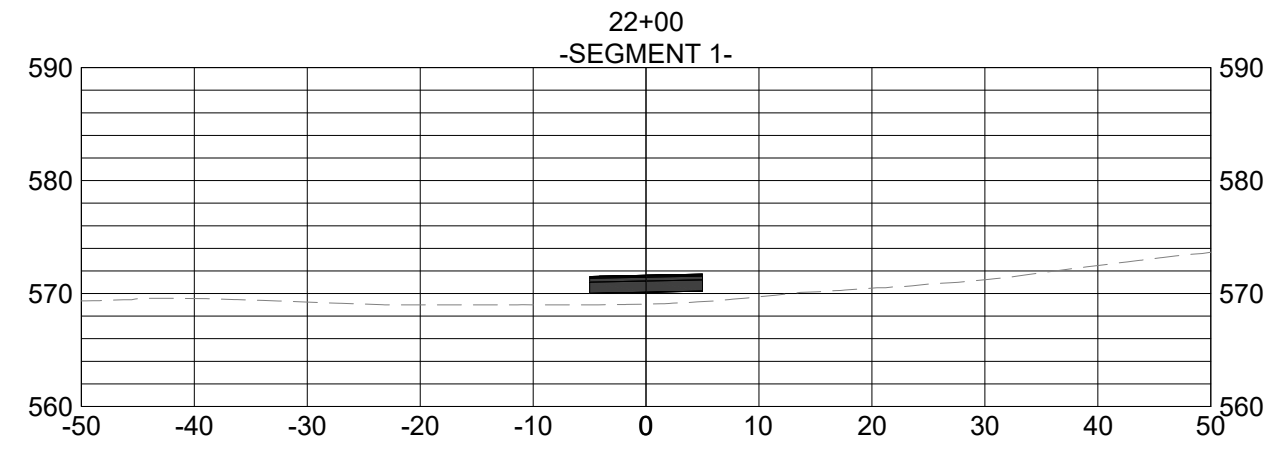
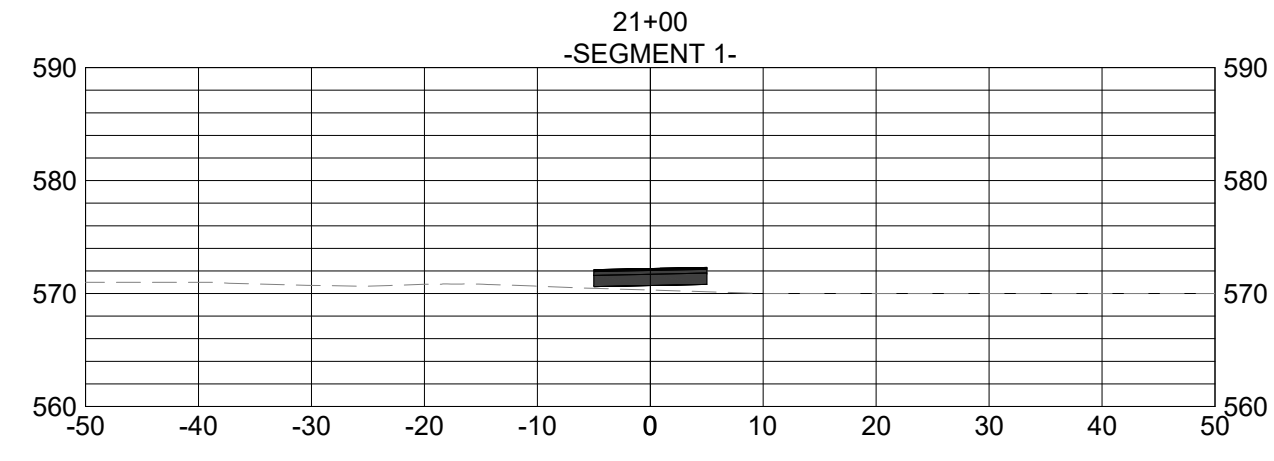
PRELIMINARY  
NOT FOR  
CONSTRUCTION

NO.	DATE	REVISION	BY

**CROSS SECTIONS (SEG. 1)**  
**ABBAY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C11.0**



**PRELIMINARY  
 NOT FOR  
 CONSTRUCTION**

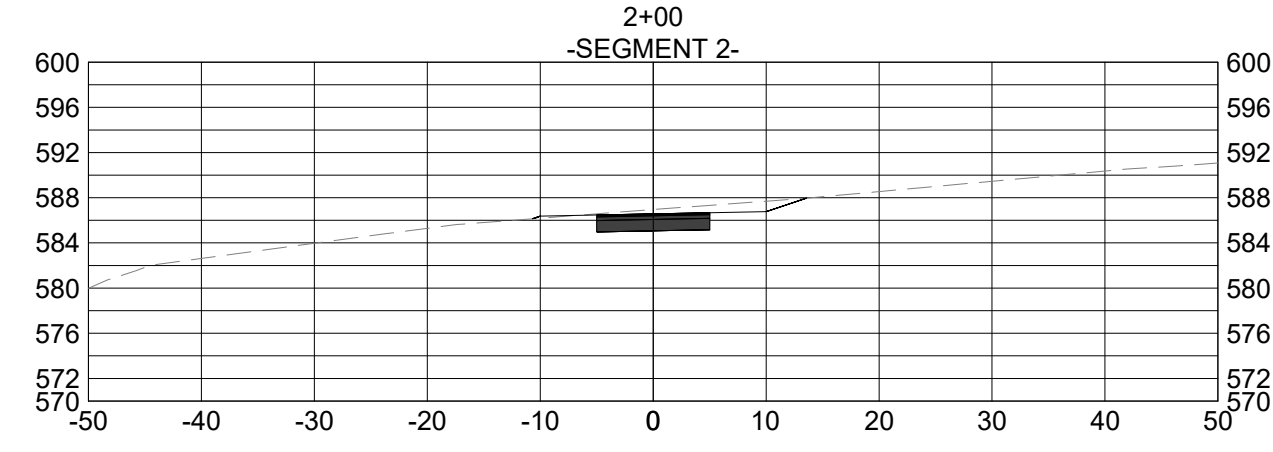
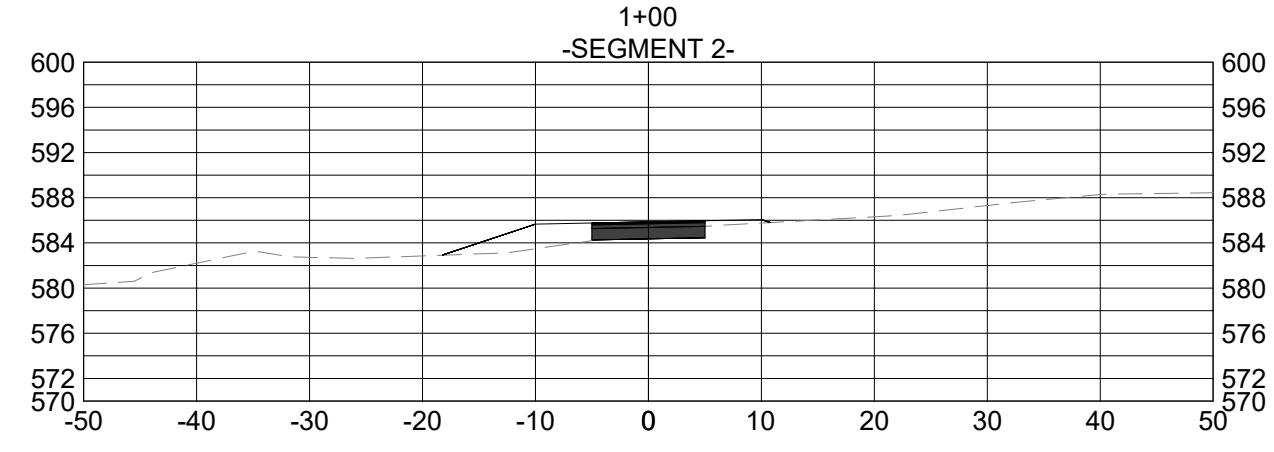
NO.	DATE	REVISION	BY

**CROSS SECTIONS (SEG. 1)**

**ABBAY CREEK GREENWAY**

CITY OF BELMONT  
 BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021
SHEET:	<b>C11.1</b>

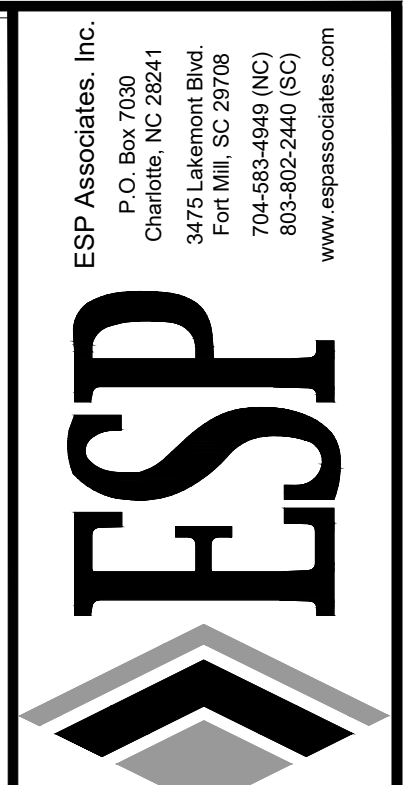


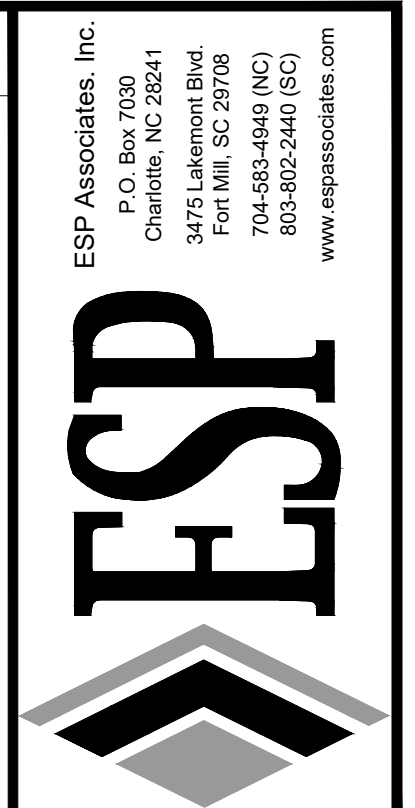
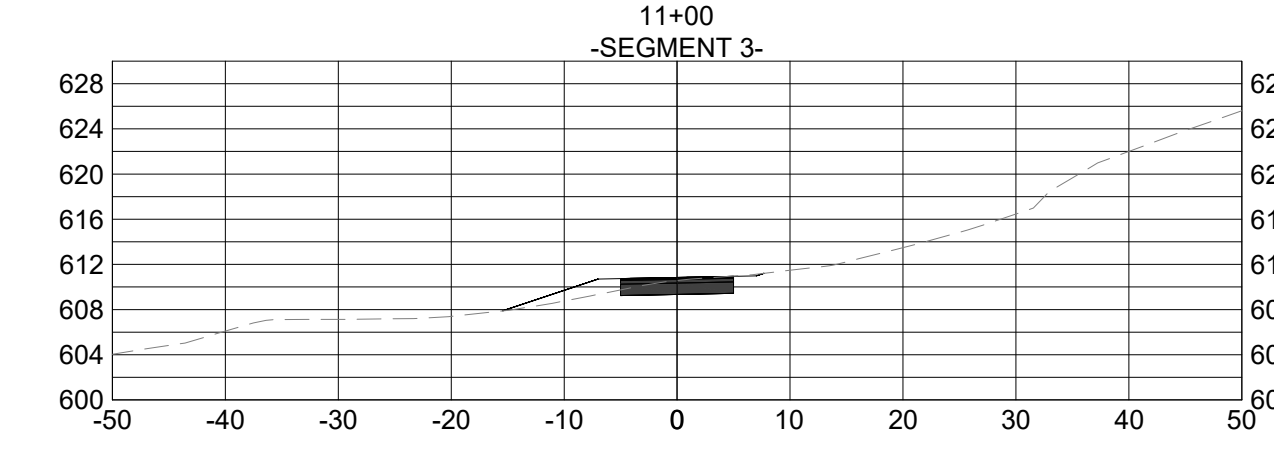
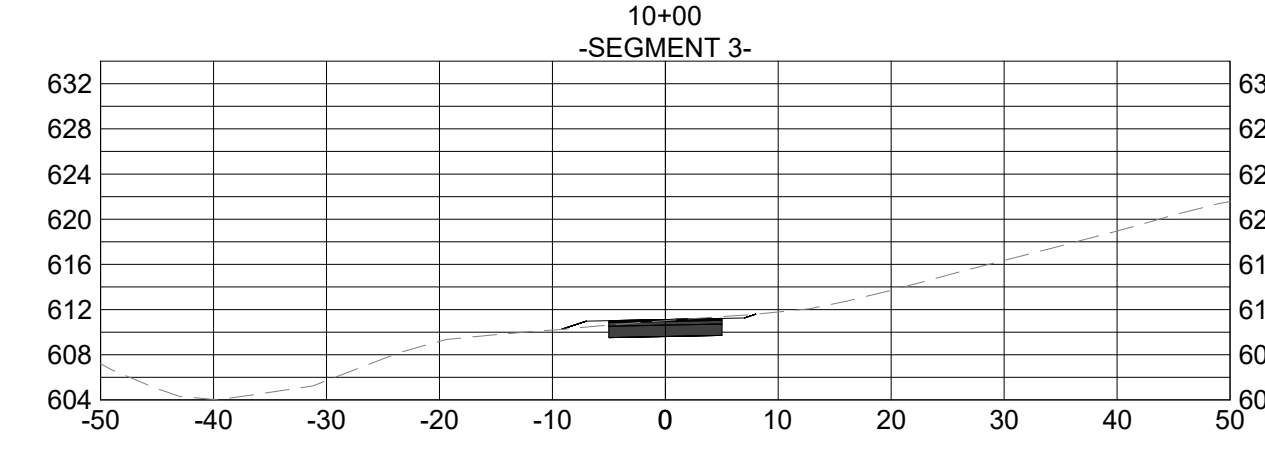
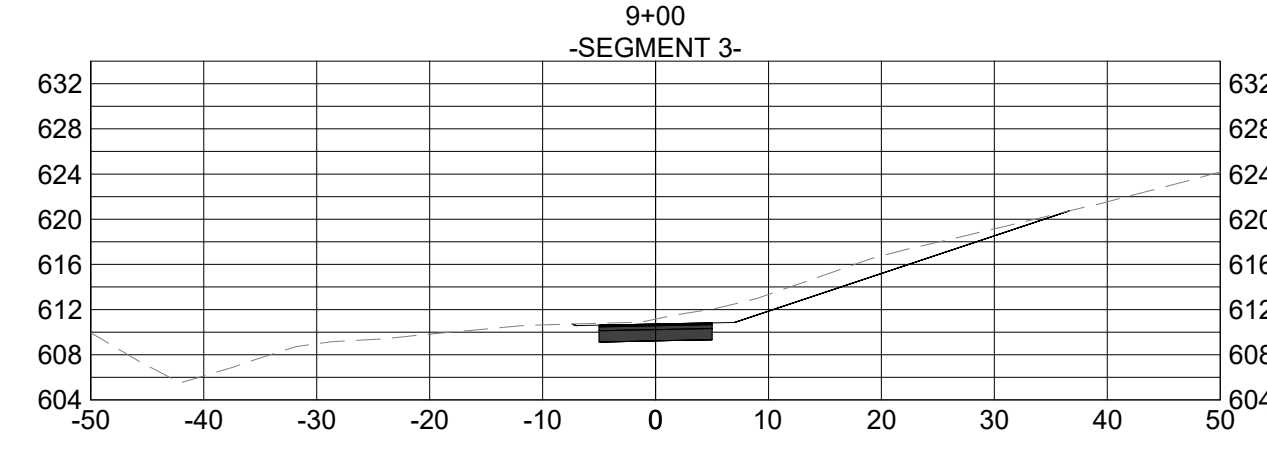
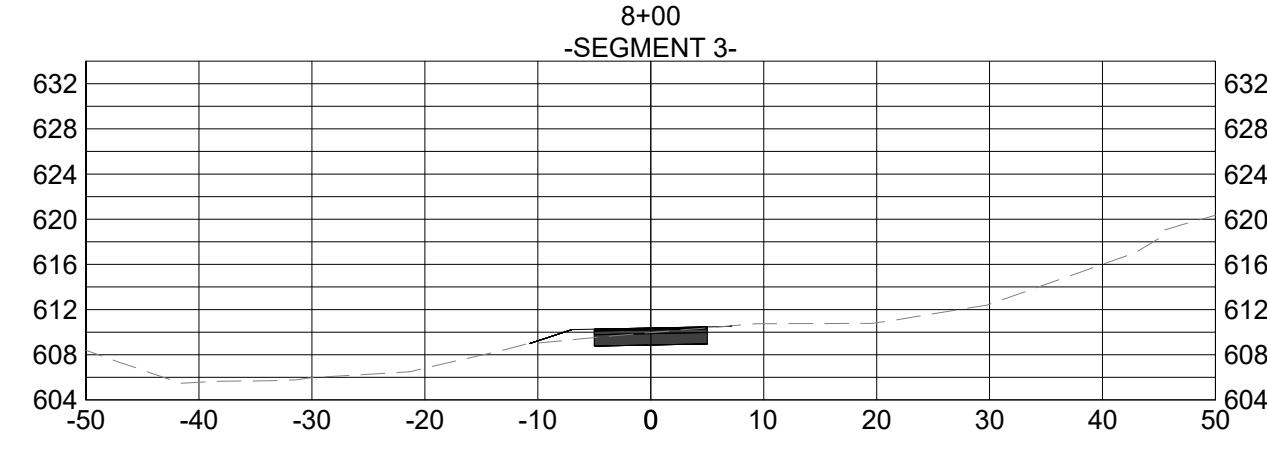
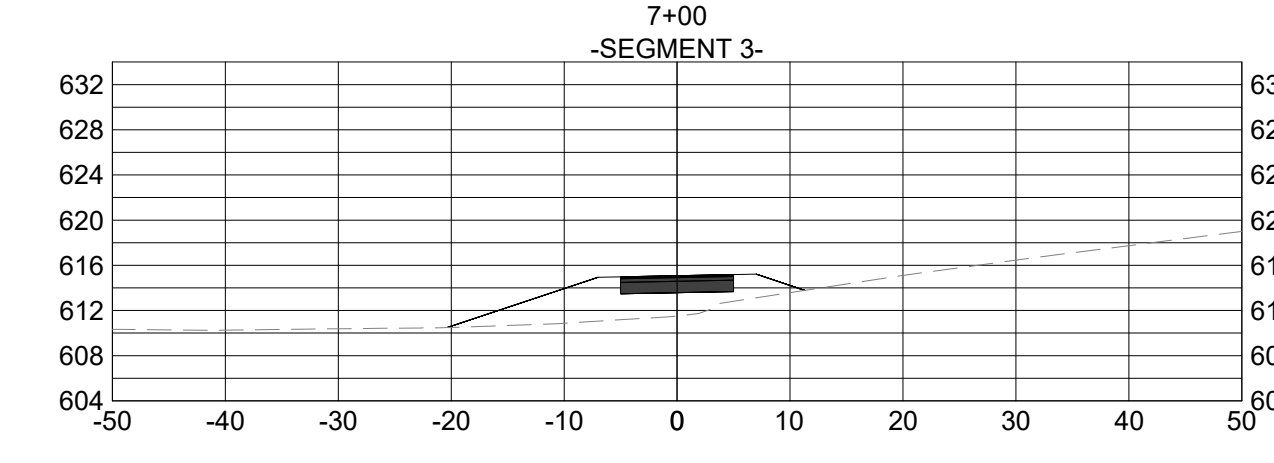
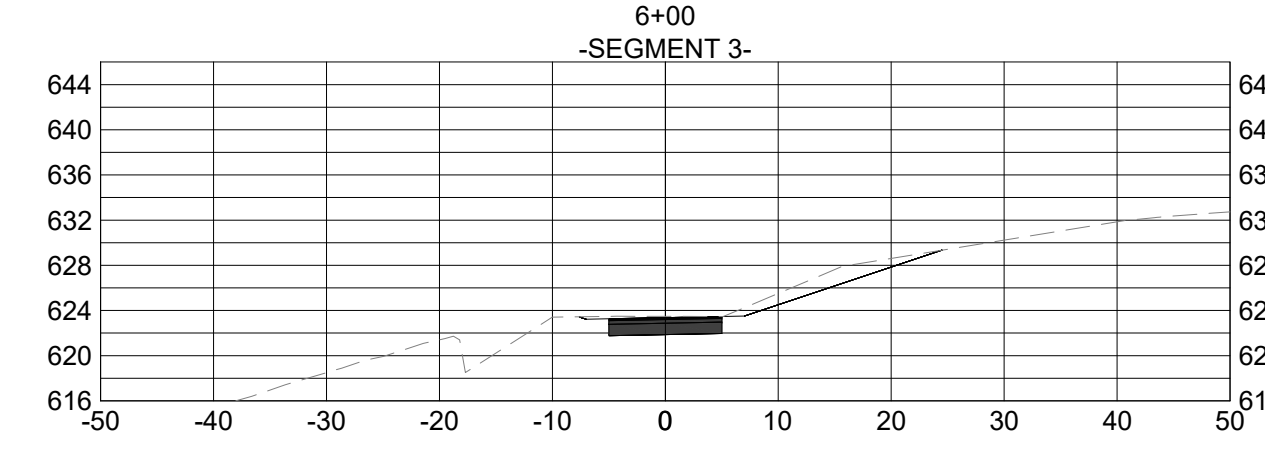
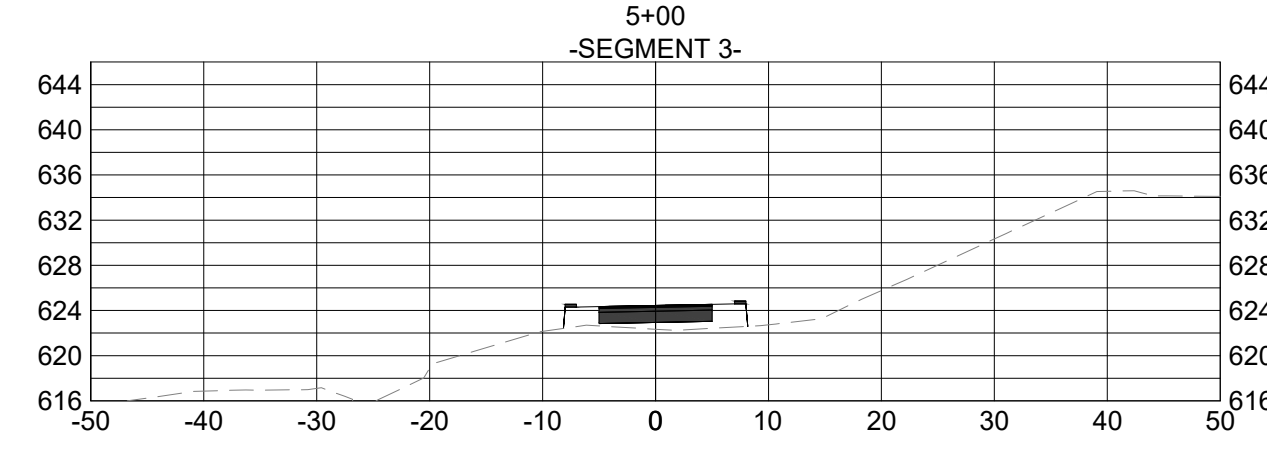
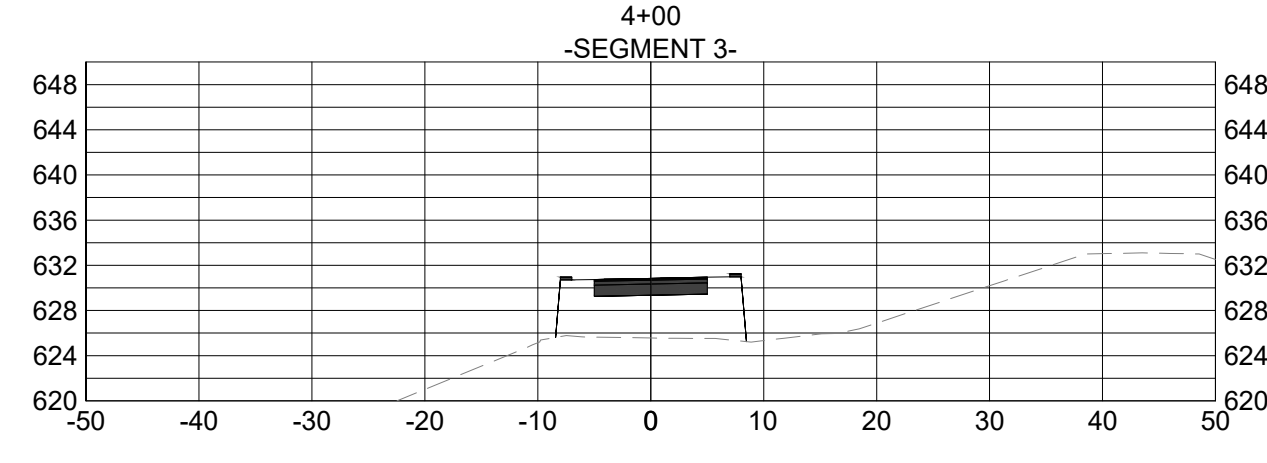
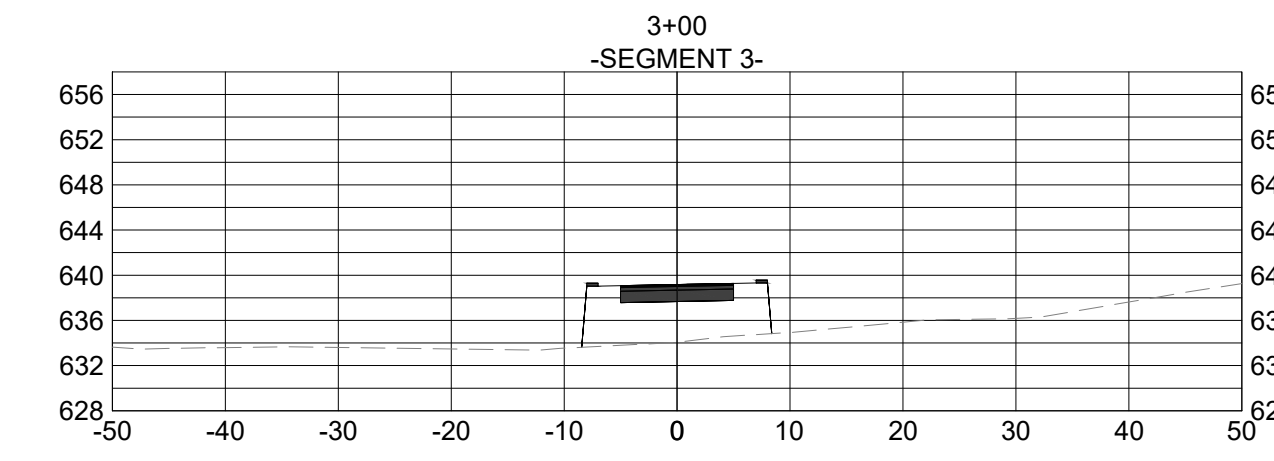
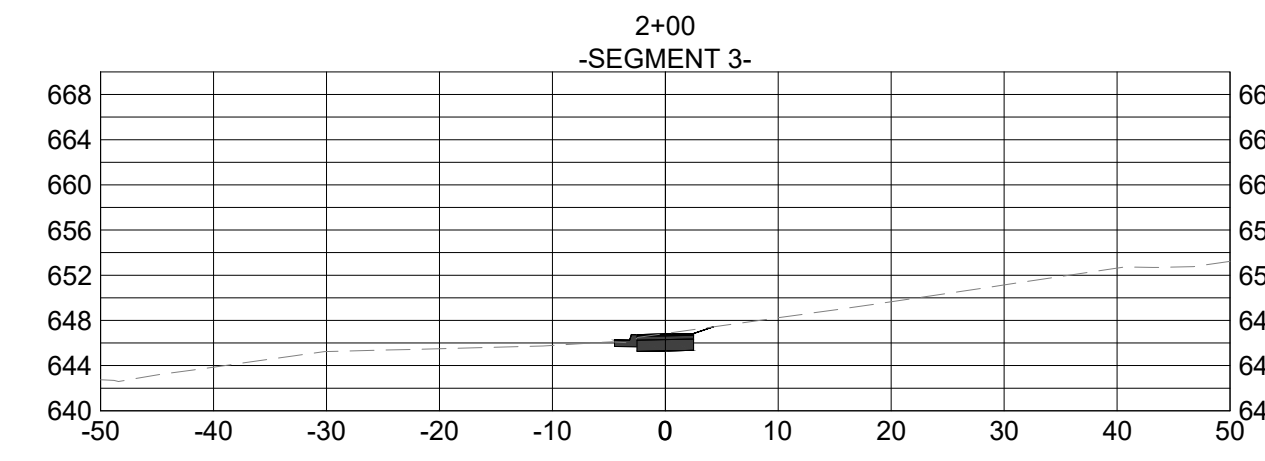
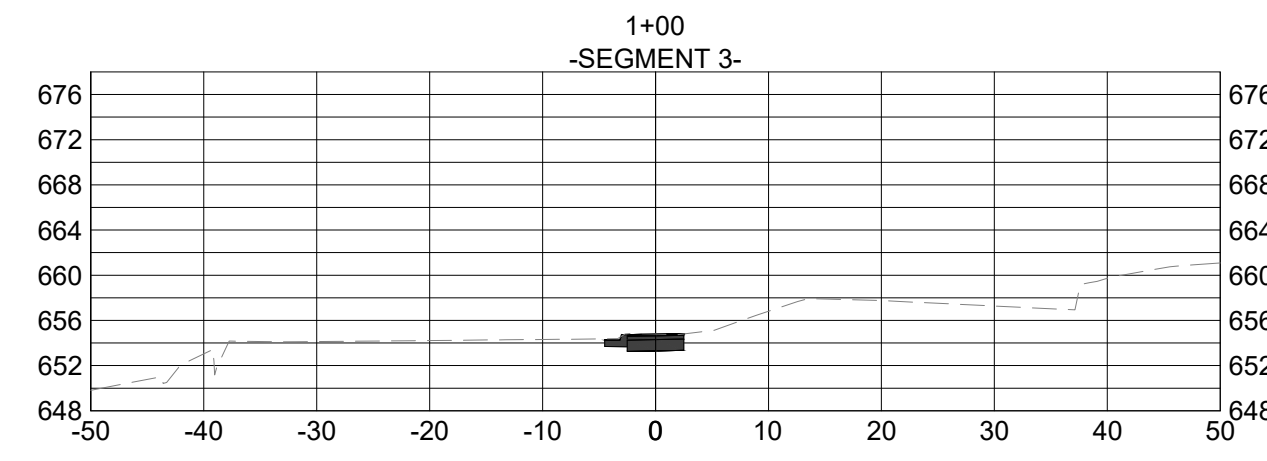
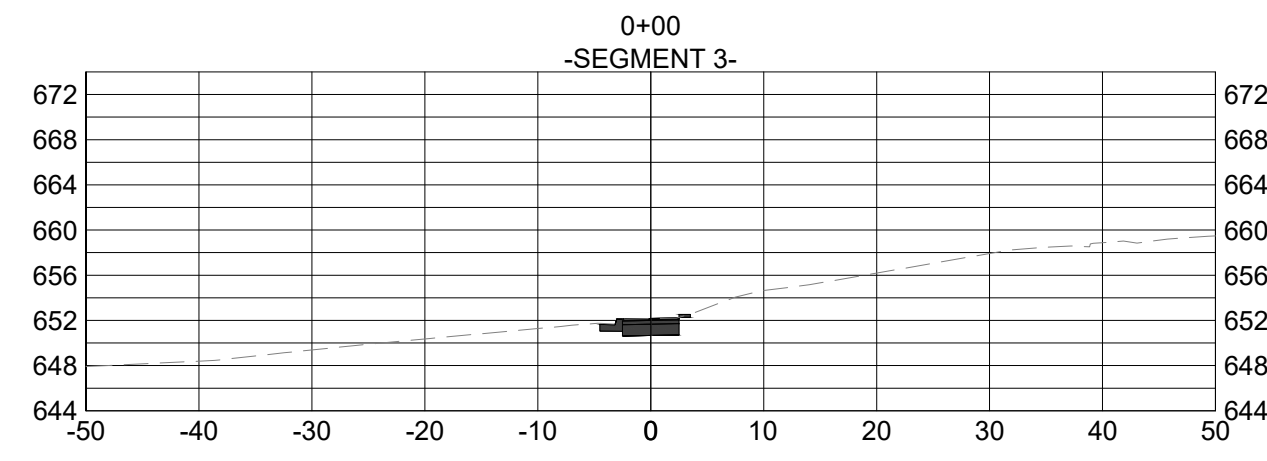
PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

**CROSS SECTIONS (SEG. 2)**  
**ABBAY CREEK GREENWAY**  
 CITY OF BELMONT  
 BELMONT, NORTH CAROLINA

NO.	DATE	REVISION	BY

**PRELIMINARY  
 NOT FOR  
 CONSTRUCTION**





ESP Associates, Inc.  
 P.O. Box 7030  
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 3275 Lakeside Blvd.  
 Raleigh, NC 27604  
 704.652.4949 (NC)  
 803.802.2440 (SC)  
 www.espace.com

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NO.	DATE	REVISION	BY

**CROSS SECTIONS (SEG. 3)**  
**ABBEE CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	GMS
DRAWN BY:	GMS
PROJECT NUMBER:	IR37.100
DATE:	8-16-2021

SHEET: **C11.3**



**GENERAL NOTES:**

1. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH ALL OTHER CONTRACT DOCUMENTS.
2. ALL WORK SHALL COMPLY WITH THE SECOND EDITION OF THE AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, THE EIGHTH EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THE AMERICAN CONCRETE INSTITUTE BUILDING CODE AND COMMENTARY ACI 318-19 AND ACI 318R-19.
3. DESIGN LIVE LOAD SHALL BE FOR AN AASHTO H-5 VEHICLE WEIGHING 10,000 POUNDS AND/OR A PEDESTRIAN LOAD OF 100 PSF. LATERAL LOADS, THERMAL LOADS, AND WIND LOADS ARE ALL IN ACCORDANCE WITH AASHTO REQUIREMENTS.
4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL MATERIALS PRIOR TO FABRICATION. THESE STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
5. THE CONTRACTOR SHALL CHECK AND VERIFY ALL EXISTING DIMENSIONS AND FIELD CONDITIONS, BOTH NEW AND EXISTING, PRIOR TO THE START OF ANY WORK. IN THE EVENT OF A DISCREPANCY BETWEEN THESE STRUCTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS OR EXISTING FIELD CONDITIONS THAT PREVENTS THE EXECUTION OF THE WORK AS DEPICTED BY THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
6. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STRUCTURAL INTEGRITY OF ALL ADJACENT STRUCTURES AND STRUCTURAL ELEMENTS DURING CONSTRUCTION.
8. THE STRUCTURES DEPICTED BY THESE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED FOR THE FORCES EXPECTED TO OCCUR IN ITS FINAL COMPLETED STATE. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED BRACING AND/OR TEMPORARY SHORING THAT MAY BE REQUIRED TO MAINTAIN THE STABILITY AND SAFETY OF THESE STRUCTURES DURING CONSTRUCTION.
9. ALL STEEL ANGLES SHALL CONFORM TO ASTM A36.
10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL OF THE CONTRACT DOCUMENTS AND LATEST ADDENDA AND FOR SUBMITTING SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS.
11. THE GENERAL CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND WITHIN THESE STRUCTURAL DRAWINGS TO THE ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY NEW CONSTRUCTION.

**CAST-IN-PLACE CONCRETE NOTES:**

1. ALL CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 PSI.
2. PLACEMENT OF CONCRETE INCLUDING SLUMP, MECHANICAL VIBRATION, AND CALCIUM CHLORIDE CONTENT, SHALL BE IN ACCORDANCE WITH ACI 301 AND NCDOT STANDARD SPECIFICATION SECTIONS 420 AND 425.
3. ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER.
4. CURING OF ALL CAST-IN-PLACE CONCRETE SHALL BE IN ACCORDANCE WITH THE NCDOT STANDARD SPECIFICATIONS.

**REINFORCING STEEL NOTES:**

1. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 GRADE 60.
2. CONCRETE COVER FOR ALL CAST-IN-PLACE CONCRETE SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE ON THESE DRAWINGS:
 

2.1. FOR CONCRETE STRUCTURES CAST AGAINST THE EARTH	3"
2.2. FOR FORMED SURFACES EXPOSED TO THE EARTH	2"
2.3. FOR FORMED SURFACES EXPOSED TO THE AIR	1 1/2"
3. ALL LAP AND SPLICE LENGTHS SHALL CONFORM TO NCDOT STANDARD SPECIFICATIONS.

**PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE NOTES:**

1. PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE, ANCHOR BOLTS, AND BEARING PADS SHALL BE DESIGNED BY THE BRIDGE MANUFACTURER BASED UPON THE DESIGN CRITERIA STATED ON THESE DRAWINGS. THE BRIDGE SUPERSTRUCTURE PLANS AND DESIGN CALCULATIONS SHALL BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA WHO SHALL SEAL ALL DESIGN DOCUMENTS RELATED TO THE BRIDGE SUPERSTRUCTURE. ALL SUCH DOCUMENTS SHALL BE SUBMITTED FOR REVIEW. THE BRIDGE MANUFACTURER SHALL PROVIDE ALL REACTIONS FOR THE BRIDGE TO THE ENGINEER OF RECORD FOR VERIFICATION OF THE BRIDGE ABUTMENT AND FOUNDATION DESIGN. FABRICATION OF THE BRIDGE SUPERSTRUCTURE SHALL NOT BEGIN UNTIL BRIDGE REACTIONS AND THE REQUIRED SUBMITTALS HAVE BEEN MADE AND APPROVED.
2. BRIDGE SUPERSTRUCTURE SHALL BE DESIGNED AND FABRICATED WITH TWO MAIN SIDE TRUSSES AND THE DECK STRUCTURE AS SHOWN ON THESE DRAWINGS. THE CLEAR WIDTH SHALL BE TEN FEET.
3. ALL STRUCTURAL STEEL FOR THE PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE SHALL BE WEATHERING STEEL CONFORMING TO NCDOT STANDARD SPECIFICATIONS:
  - 3.1. ALL STRUCTURAL STEEL TUBE SHAPES SHALL CONFORM TO ASTM A847.
  - 3.2. ALL OTHER STRUCTURAL STEEL SHAPES, PLATES, AND BARS SHALL CONFORM TO ASTM A588.
  - 3.3. ALL ANCHOR BOLTS SHALL BE GALVANIZED AND SHALL CONFORM TO ASTM A499.
  - 3.4. ALL BOLTS SHALL BE HIGH STRENGTH WEATHERING STEEL CONFORMING TO ASTM A325. WASHERS AND NUTS SHALL MATCH BOLT FINISHES.
4. ALL WELDS SHALL CONFORM TO THE LATEST PROVISIONS OF THE STRUCTURAL WELDING CODE, ANSI/AWS D1.1. ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE ABOVE DOCUMENTS.
5. IF SPLICES ARE REQUIRED FOR THE BRIDGE SUPERSTRUCTURE, THEY SHALL BE CLEARLY NOTED ON THE SUBMITTAL DRAWINGS. SPLICE DESIGNS SHALL BE INCLUDED IN THE DESIGN CALCULATIONS.

**PREFABRICATED PEDESTRIAN BRIDGE SUBSTRUCTURE NOTES:**

1. THE PEDESTRIAN BRIDGE SUBSTRUCTURE FINAL DESIGN WILL BE BASED UPON THE FINAL REACTIONS PROVIDED BY THE BRIDGE MANUFACTURER. AS A RESULT, CONSTRUCTION OF THE BRIDGE SUBSTRUCTURE SHALL NOT BEGIN UNTIL ALL SUBMITTALS HAVE BEEN MADE AND PROCESSED AND ALL CONFLICTS RESOLVED.
2. REINFORCEMENT IN ABUTMENT MAY BE SHIFTED TO AVOID ANCHOR BOLTS.
3. THE BEARING SURFACE OF THE BRIDGE ABUTMENTS SHALL BE SLOPED A MINIMUM OF 2% TOWARD THE EXPOSED FACE OF THE ABUTMENT WALL FOR DRAINAGE.
4. ABUTMENT BACKWALLS SHALL NOT BE BUILT UNTIL THE BRIDGE SUPERSTRUCTURE HAS BEEN ERECTED TO INSURE THAT THE TOP ELEVATION MATCHES THE BRIDGE DECK GRADES.

**STRUCTURAL TIMBER AND LUMBER NOTES:**

1. ALL TIMBER STRUCTURAL FRAMING SHALL BE PRESSURE TREATED SOUTHERN PINE SURFACE DRY (S4S) WITH A MOISTURE CONTENT OF 19% OR LESS MEETING THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS.
2. ALL TIMBER AND LUMBER SHALL BE TREATED WITH WATERBOURNE PRESERVATIVES (CCA OR ACQ) IN ACCORDANCE WITH AWPA STANDARD U1, COMMODITY SPECIFICATION A, TO THE REQUIREMENTS OF THE UC3B USE CATEGORY.
3. ALL SAW CUTS, BOLT HOLES, AND OTHER HOLES SHALL BE TREATED WITH THE APPROPRIATE PRESERVATIVE PRIOR TO INSTALLING BOLTS.
4. ALL MECHANICAL WOOD CONNECTIONS, INCLUDING MANUFACTURED CONNECTORS, SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS WITH ALL BOLT HOLES FILLED.
5. ALL FASTENERS, CONNECTORS, AND BOLTS SHALL BE HOT-DIP GALVANIZED.
6. ALL BOLTED CONNECTIONS SHALL INCLUDE OVERSIZED OGEE WASHERS INSTALLED BETWEEN THE BOLT HEAD AND THE WOOD AND BETWEEN THE NUT AND THE WOOD.

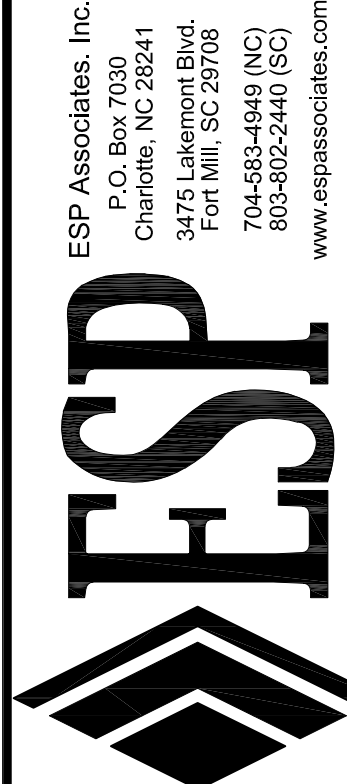
**BOARDWALK NOTES:**

1. THESE STRUCTURAL DRAWINGS PRESENT TWO OPTIONS FOR THE BOARDWALK MATERIALS AND DESIGNS. OPTION ONE CONSISTS OF CAST-IN-PLACE CONCRETE ON A STEEL DECK SUPPORTED BY TIMBER FRAMING ON TIMBER PILES. OPTION TWO CONSISTS OF A PRECAST PLANK DECK SUPPORTED BY PRECAST BEAMS ON TIMBER PILES. BOTH OPTIONS INCLUDE A TIMBER CURB ON BOTH SIDES OF THE BOARDWALK FOR THE ENTIRE LENGTH OF THE BOARDWALK. SEE PILE LAYOUT PLAN FOR DIFFERENCES IN PILE LAYOUTS FOR EACH OPTION. CONTRACTOR BIDS SHALL INCLUDE SEPARATE PRICING FOR EACH OPTION.
2. IF OPTION TWO IS SELECTED, DESIGN OF THE PRECAST ELEMENTS SHALL BE INCLUDED IN THE PRECAST MANUFACTURER'S PRICE. DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A LICENSED ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA AND THESE DOCUMENTS SHALL BE SUBMITTED FOR REVIEW. CONSTRUCTION SHALL NOT BEGIN UNTIL ALL APPROVALS HAVE BEEN RECEIVED.

**FOUNDATION NOTES:**

1. FOUNDATION DESIGN IS BASED UPON THE RECOMMENDATIONS IN THE JUNE 18, 2021 REPORT OF PRELIMINARY SUBSURFACE EXPLORATION FOR THE ABBEY CREEK GREENWAY BY ESP ASSOCIATES, INC. (ESP PROJECT NUMBER E4-IR37.300).
2. ABUTMENT FOUNDATIONS FOR THE PEDESTRIAN BRIDGE ARE DESIGNED AS SPREAD FOOTINGS WITH AN ALLOWABLE NET SOIL BEARING PRESSURE OF 3000 PSF.
3. ABUTMENTS AND INTERIOR BENTS FOR THE BOARDWALK ARE FOUNDED ON TIMBER PILES. MINIMUM PILE TIP DIAMETER IS 8 INCHES.
4. MAXIMUM AXIAL SERVICE PILE LOAD (UNFACTORED) FOR THIS STRUCTURE IS 25 KIPS. ALL PILES ARE TO BE DRIVEN TO A RESISTANCE OF 25 TONS.
5. ESTIMATED PILE TIP DEPTHS BELOW EXISTING GRADES ARE ON THE ORDER OF 15 TO 20 FEET.
6. ALL PILES AND PILE DRIVING TECHNIQUES SHALL MEET THE REQUIREMENTS OF NCDOT STANDARD SPECIFICATIONS.
7. SPECIAL INSPECTIONS ARE REQUIRED FOR ALL DRIVEN PILES. THE SPECIAL INSPECTOR MUST BE ON SITE FOR ALL PILE DRIVING OPERATIONS. THE SPECIAL INSPECTOR SHALL MAINTAIN A PILE DRIVING LOG NOTING THE DEPTH DRIVEN AND THE TERMINATION LOAD RESISTANCE FOR EACH PILE. ALL OTHER INSPECTION REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE CHAPTER 17 SPECIAL INSPECTIONS SHALL BE FOLLOWED.

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 BLE Project No. 2104



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NO.	DATE	REVISION	BY
1	08-13-21	50% DESIGN SUBMITTAL	BOL

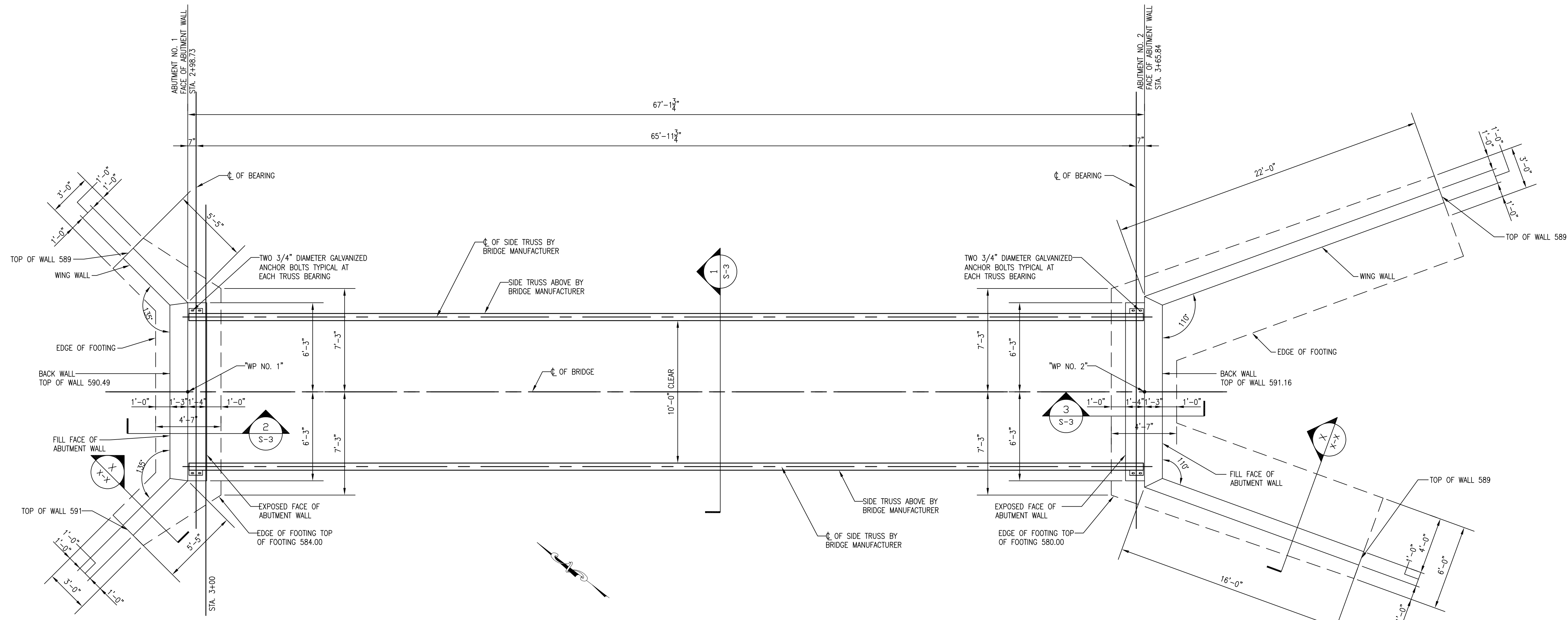
**GENERAL NOTES**

**ABBEY CREEK GREENWAY**

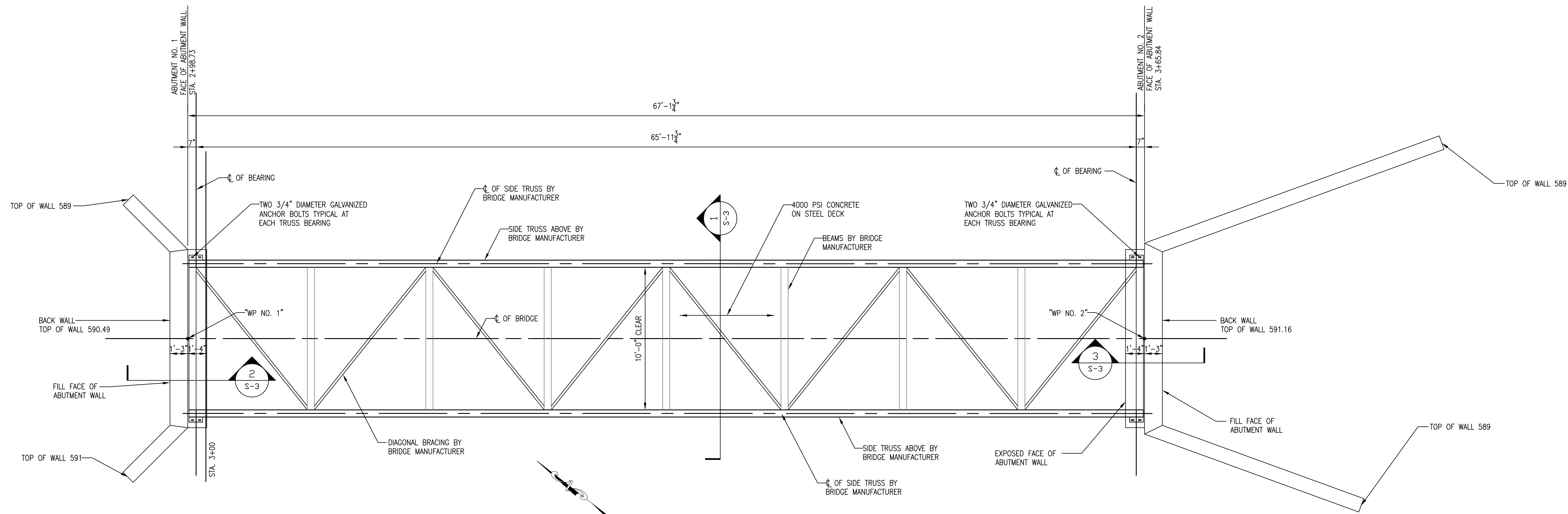
CITY OF BELMONT  
 BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021
SHEET:	<b>S-0</b>

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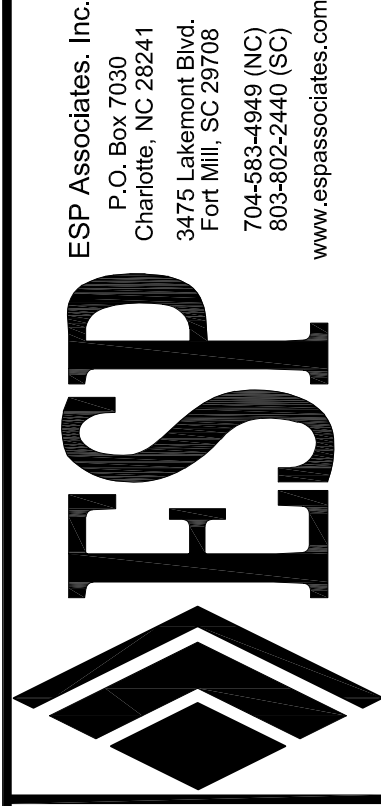


1  
S-1 BRIDGE FOUNDATION PLAN  
SCALE: 1/4" = 1'-0"



2  
S-1 BRIDGE FRAMING PLAN  
SCALE: 1/4" = 1'-0"

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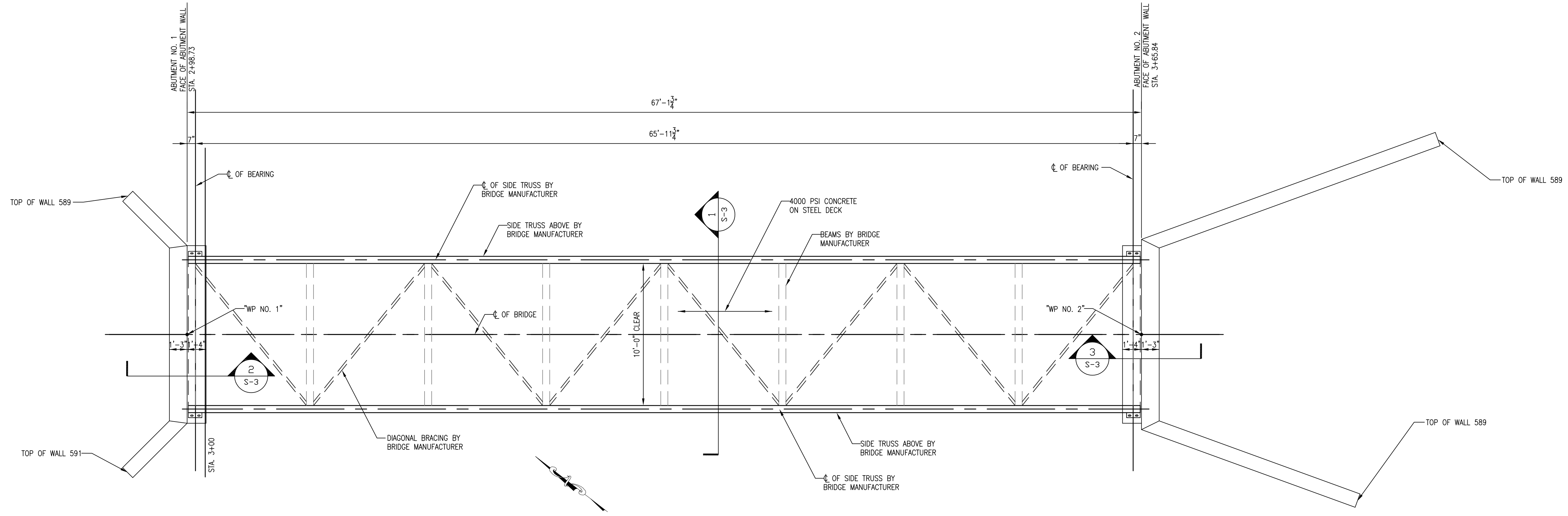


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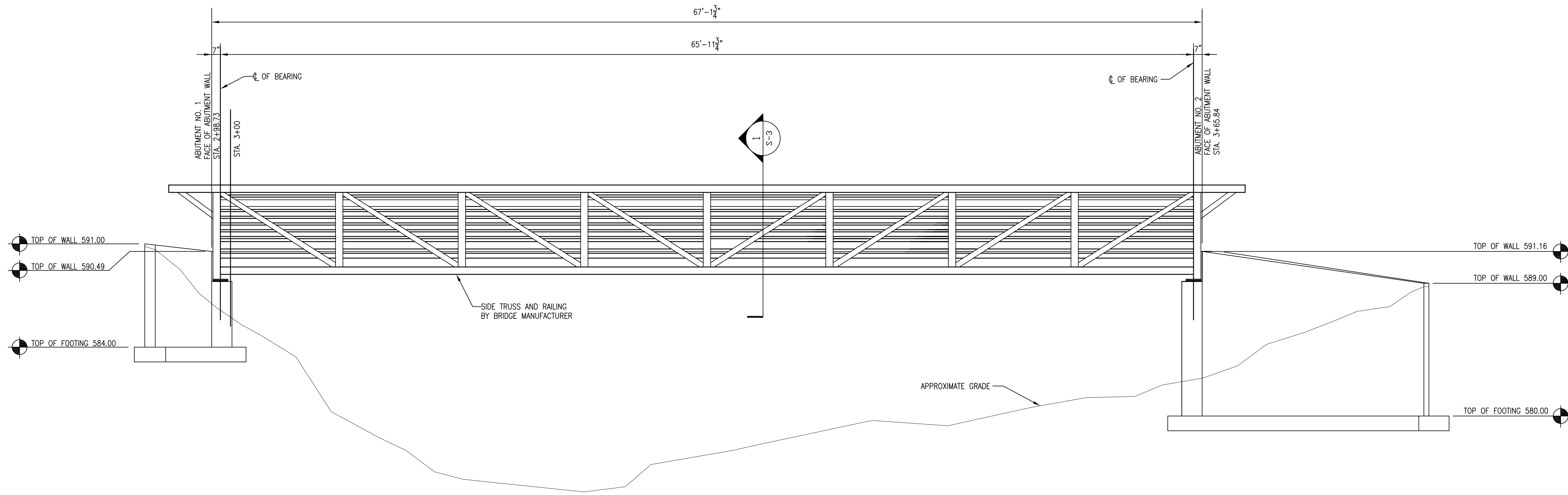
NO.	DATE	REVISION	BY	BOL
1	08-13-21	50% DESIGN SUBMITTAL		

**BRIDGE FOUNDATION & FRAMING PLANS**  
**ABBEY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021
SHEET:	S-1

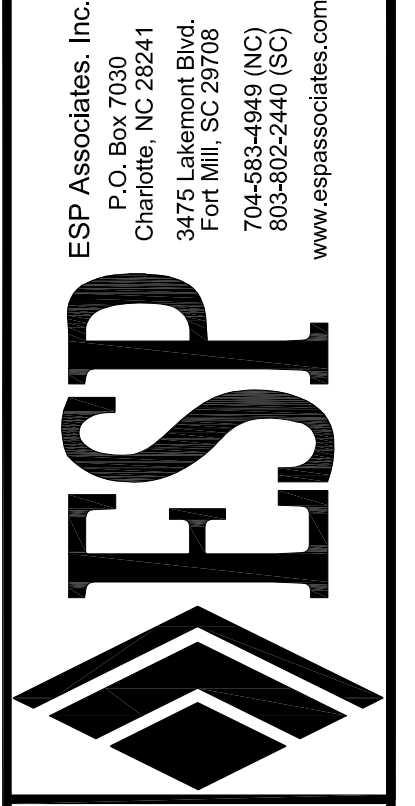


1  
S-2  
**BRIDGE DECK PLAN**  
SCALE: 1/4" = 1'-0"



2  
S-2  
**BRIDGE ELEVATION**  
SCALE: 1/4" = 1'-0"

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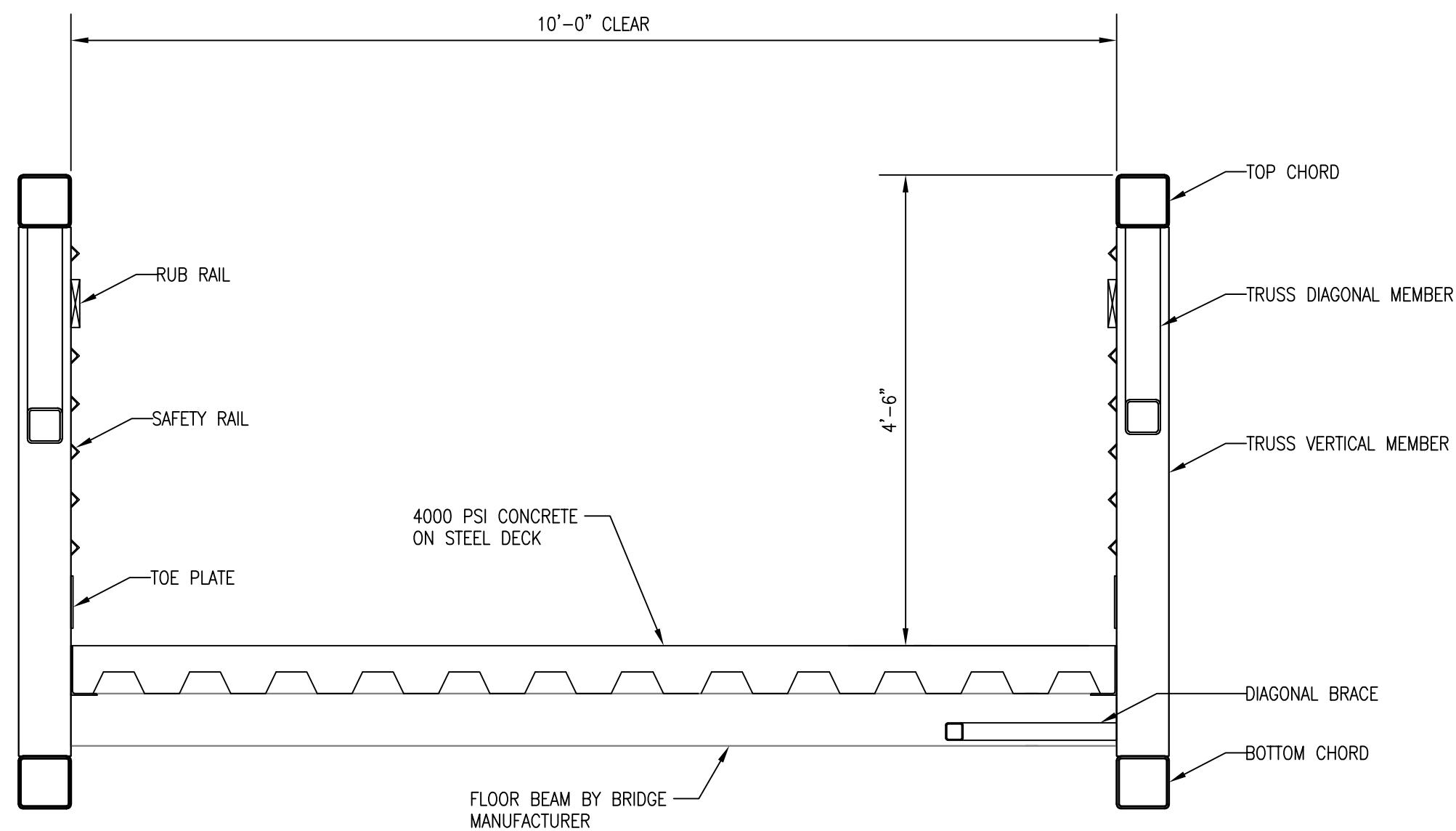
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1	08-13-21	50% DESIGN SUBMITTAL		

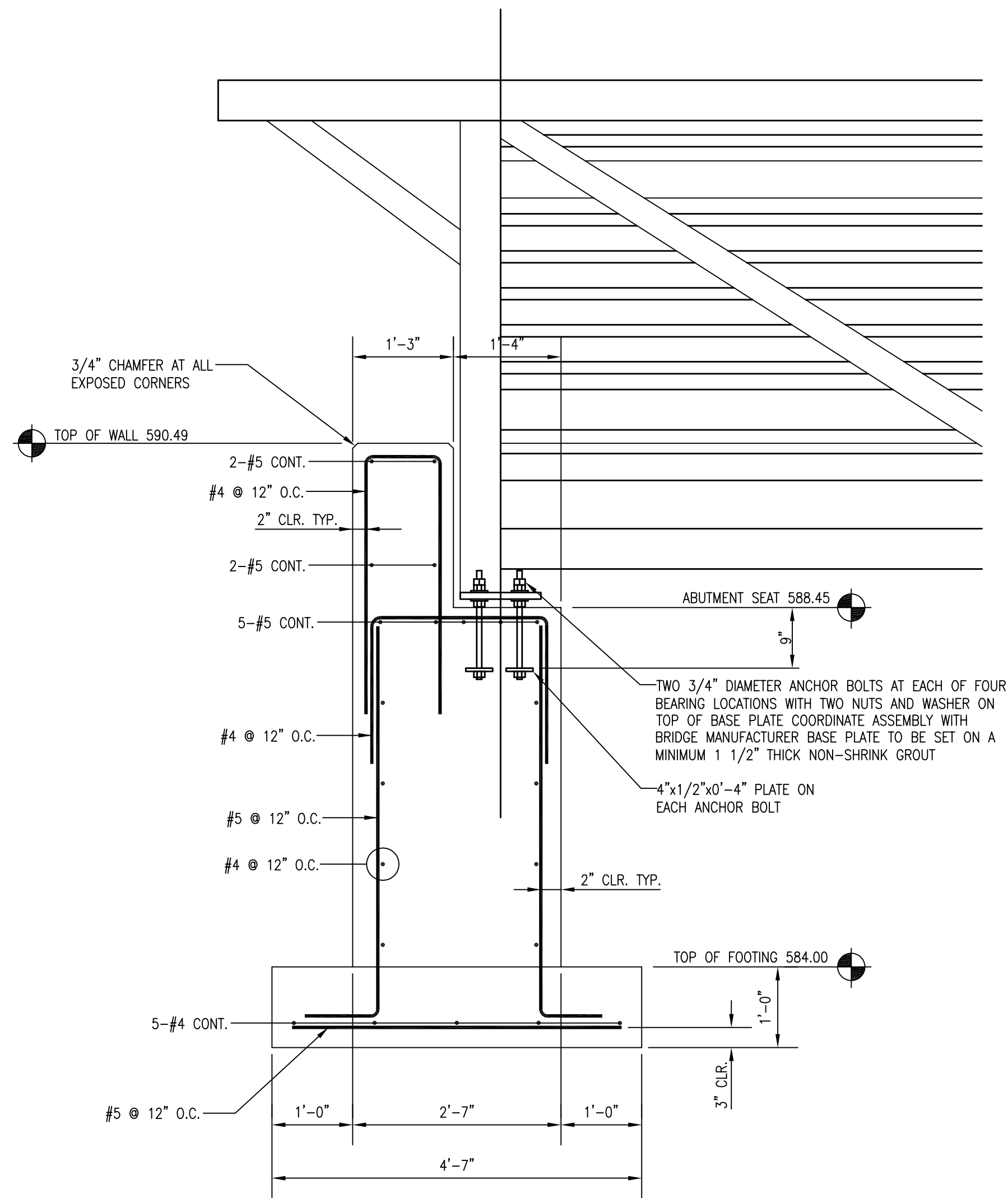
**BRIDGE DECK PLAN & ELEVATION**  
**ABBEEY CREEK GREENWAY**  
CITY OF BELMONT  
BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021

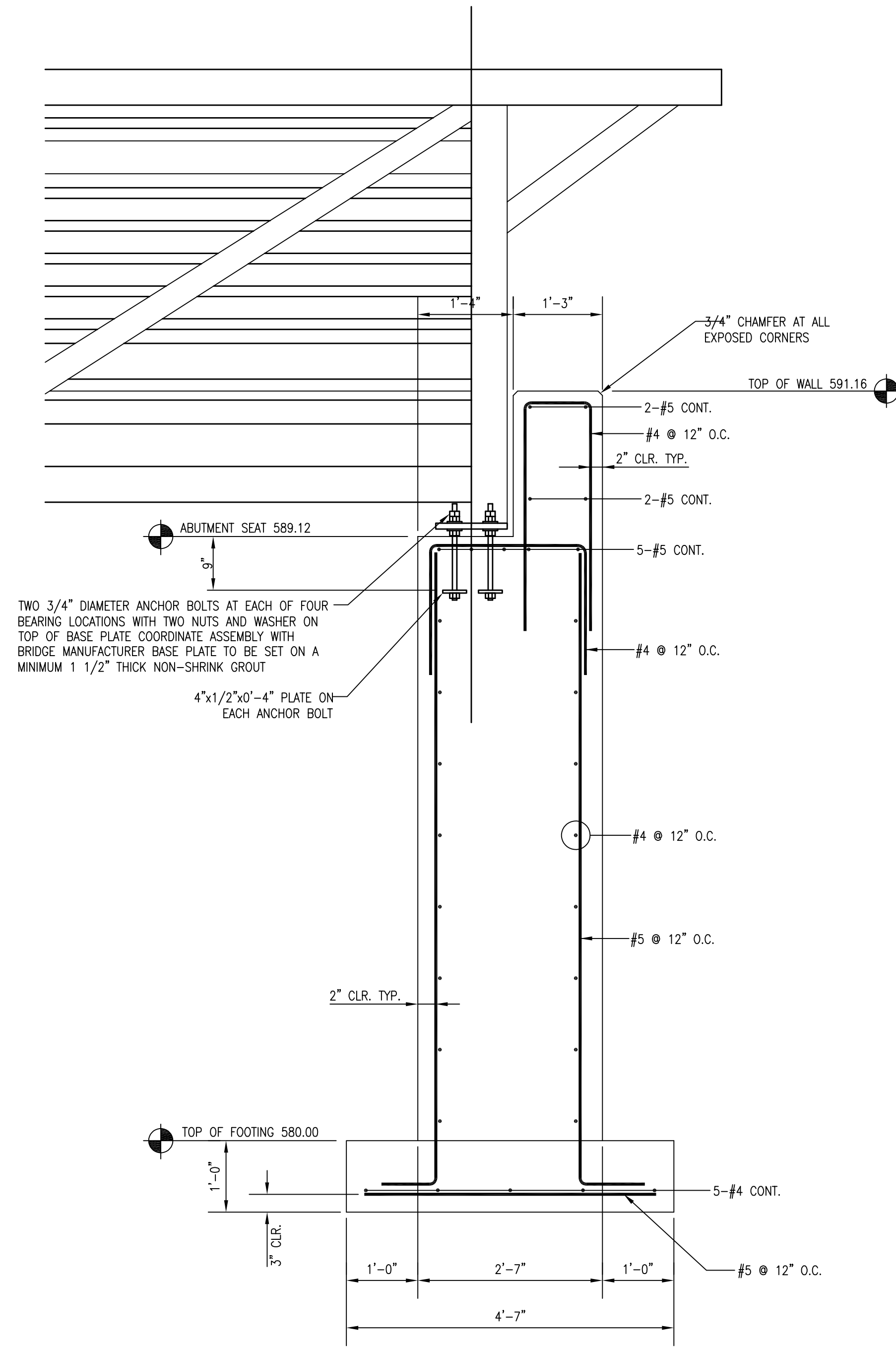
SHEET: **S-2**



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

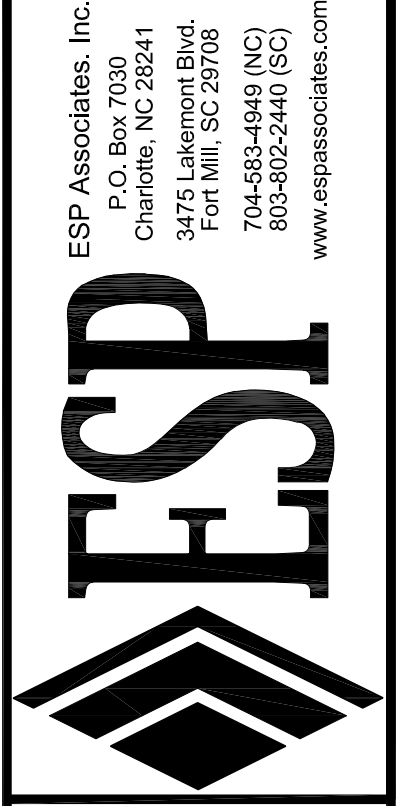


2 SECTION  
S-3 SCALE: 3/4" = 1'-0"



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

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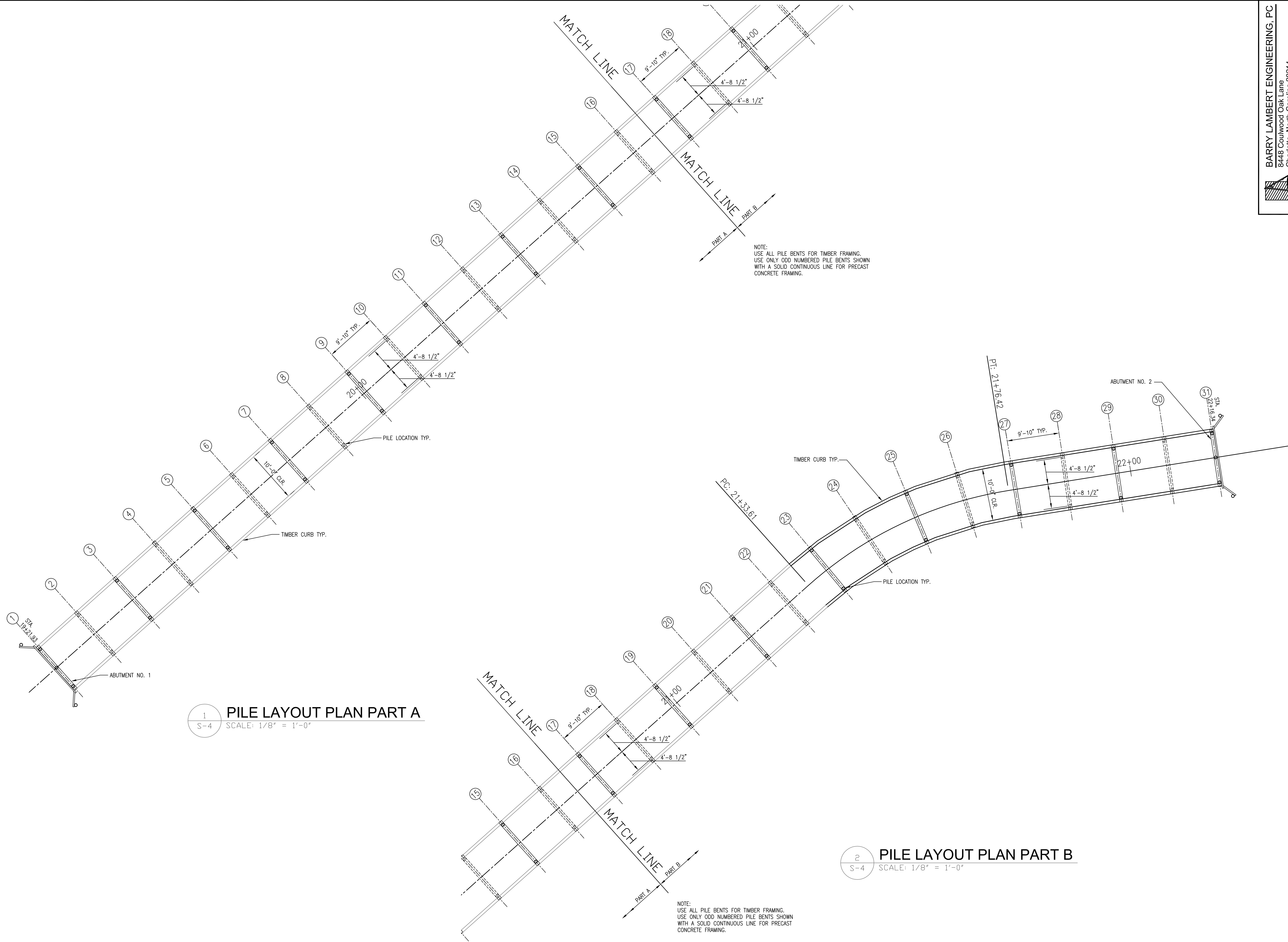
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1	08-13-21	50% DESIGN SUBMITTAL		

**BRIDGE SECTIONS & DETAILS**  
**ABBEY CREEK GREENWAY**  
 BELMONT, NORTH CAROLINA  
 CITY OF BELMONT

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021
SHEET:	S-3

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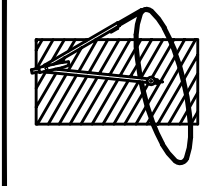


1  
S-4 PILE LAYOUT PLAN PART A  
SCALE: 1/8" = 1'-0"

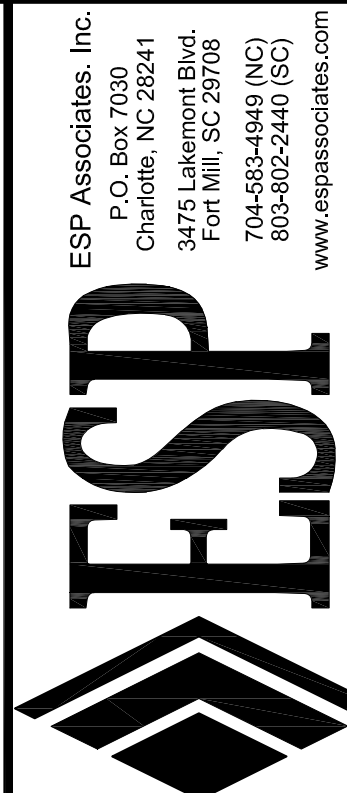
2  
S-4 PILE LAYOUT PLAN PART B  
SCALE: 1/8" = 1'-0"

NOTE:  
USE ALL PILE BENTS FOR TIMBER FRAMING.  
USE ONLY ODD NUMBERED PILE BENTS SHOWN  
WITH A SOLID CONTINUOUS LINE FOR PRECAST  
CONCRETE FRAMING.

NOTE:  
USE ALL PILE BENTS FOR TIMBER FRAMING.  
USE ONLY ODD NUMBERED PILE BENTS SHOWN  
WITH A SOLID CONTINUOUS LINE FOR PRECAST  
CONCRETE FRAMING.



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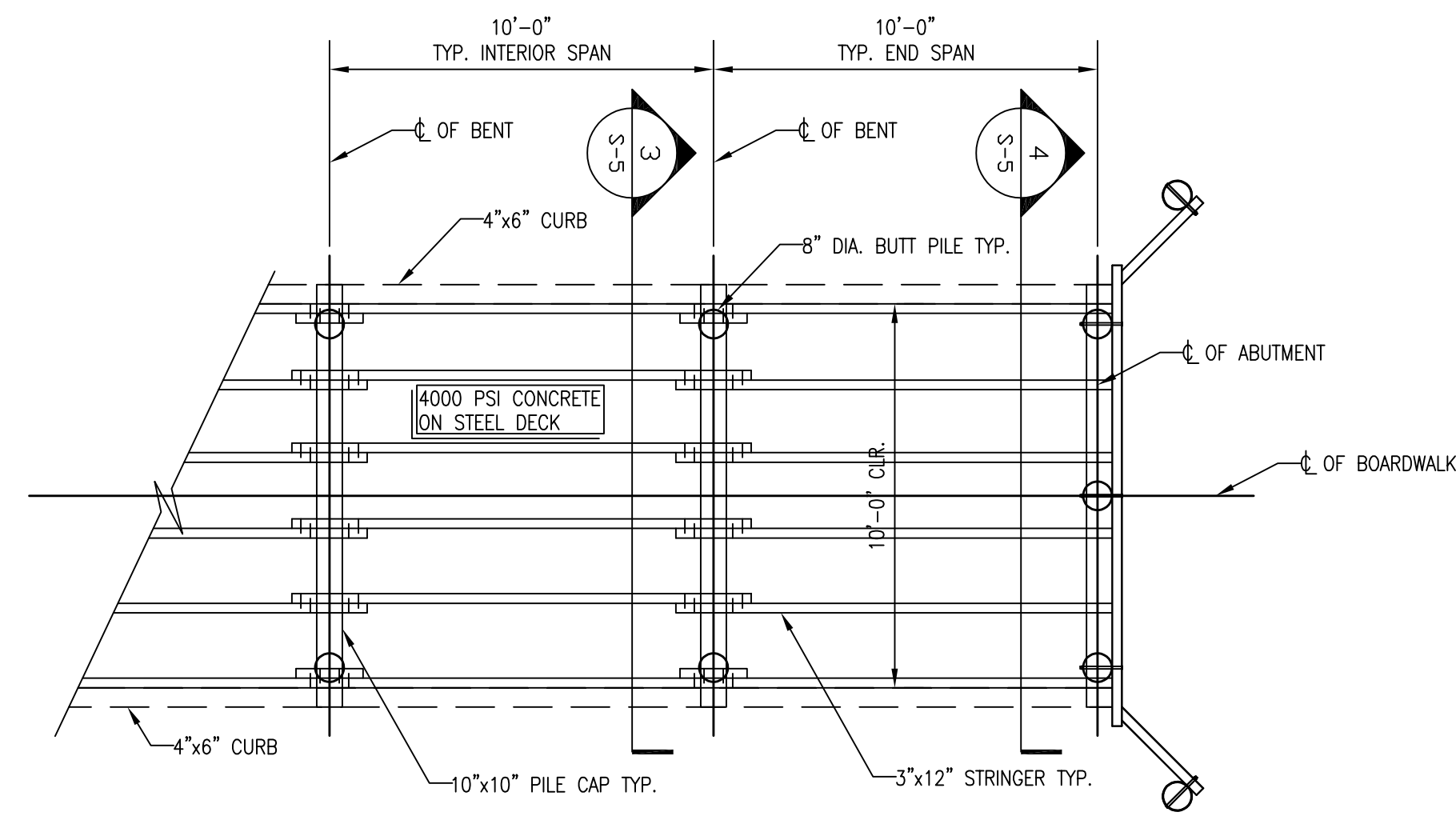
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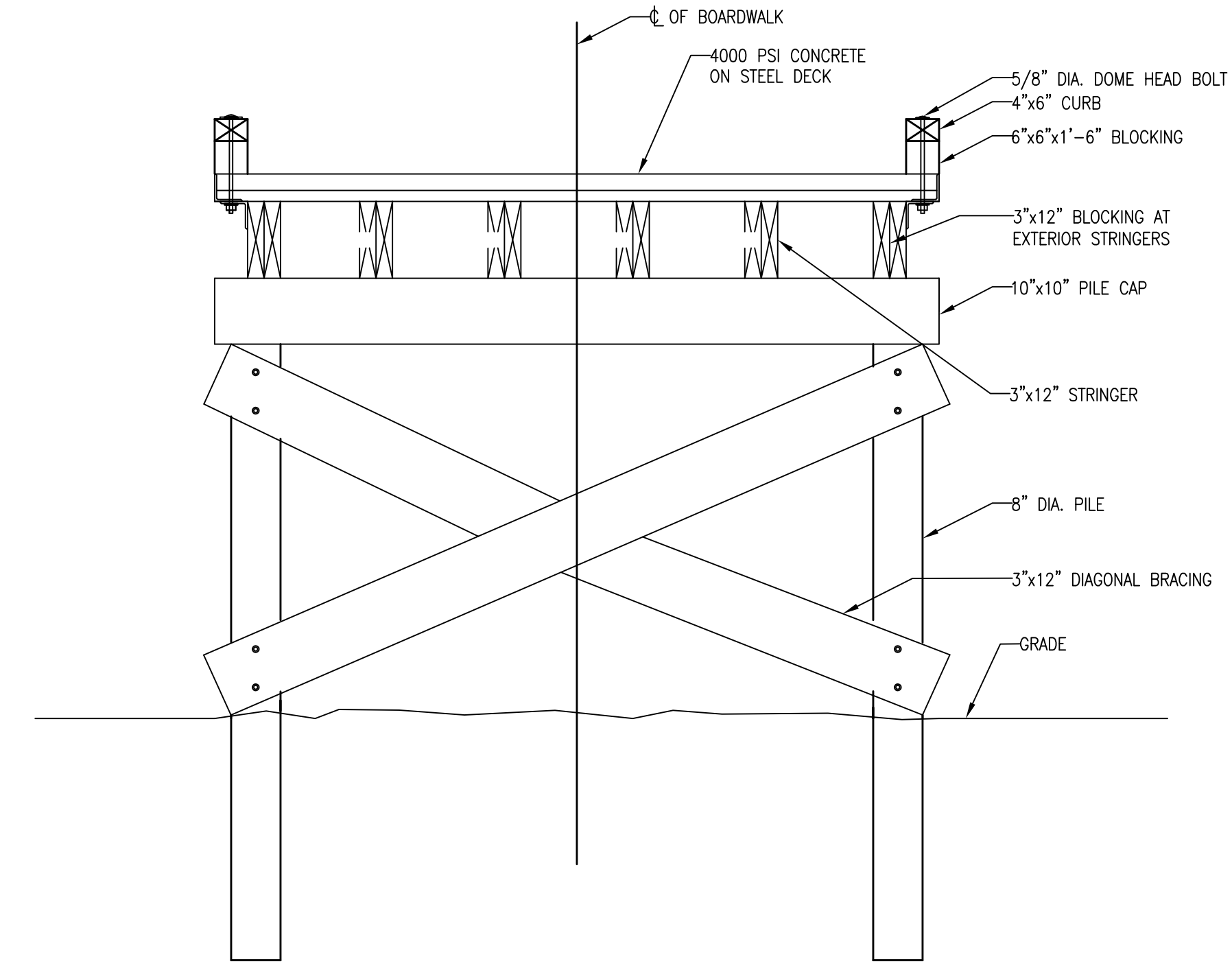
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1	08-13-21	50% DESIGN SUBMITTAL		

**BOARDWALK PILE LAYOUT PLAN**  
**ABBEY CREEK GREENWAY**  
CITY OF BELMONT  
BELMONT, NORTH CAROLINA

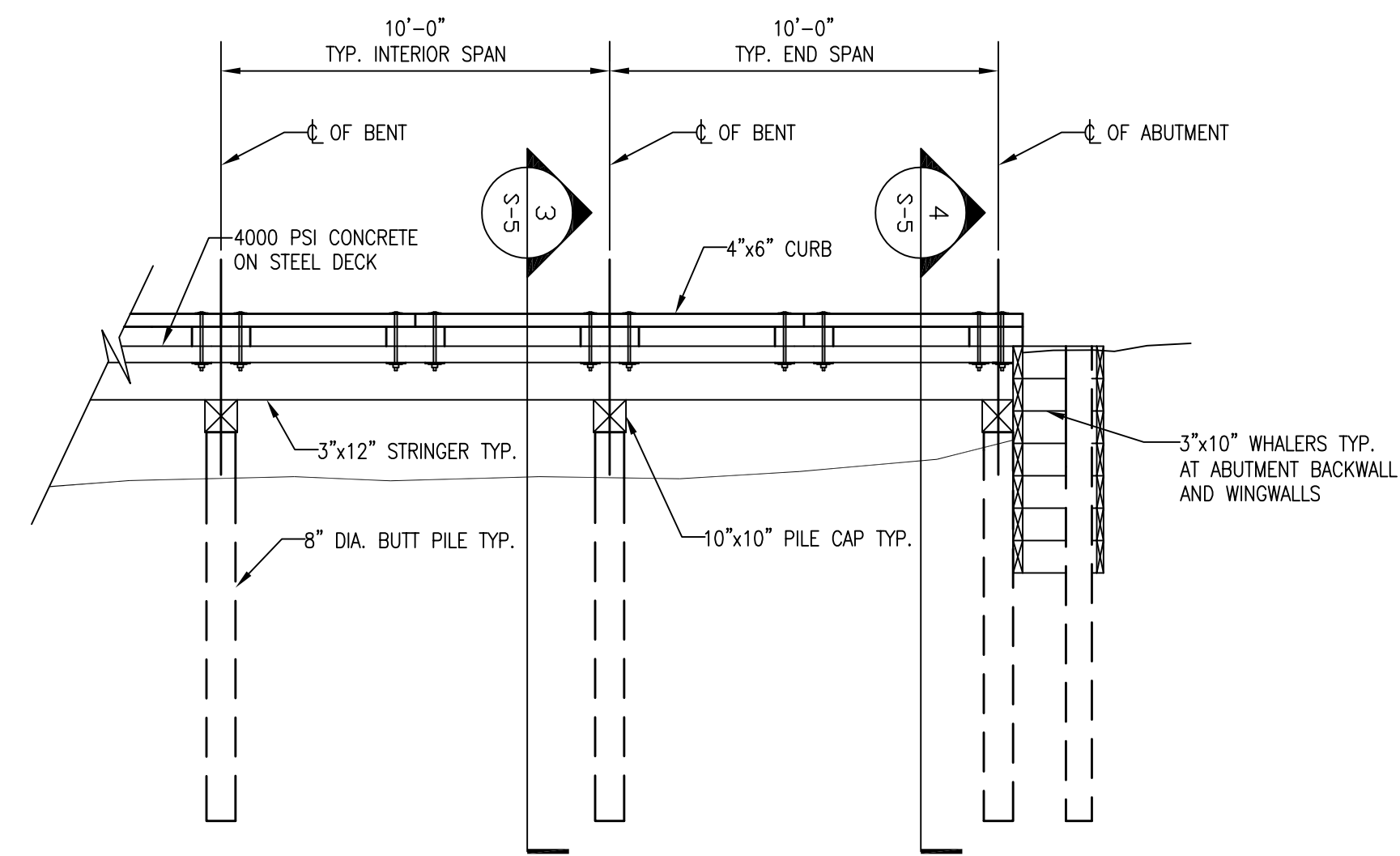
PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021



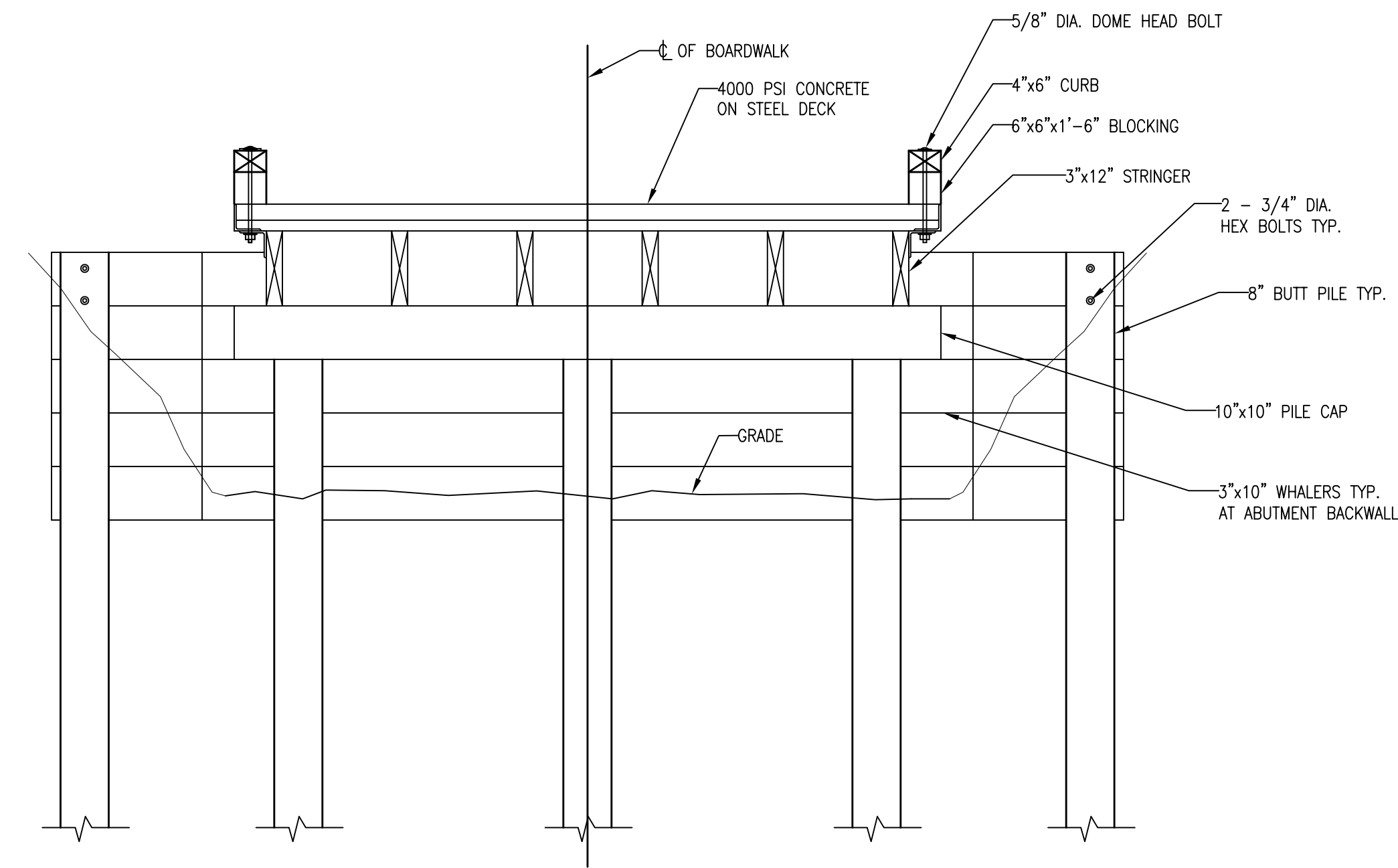
1 PARTIAL FRAMING PLAN  
S-5 SCALE: 1/4" = 1'-0"



3 SECTION - INTERIOR BENT  
S-5 SCALE: 1/2" = 1'-0"

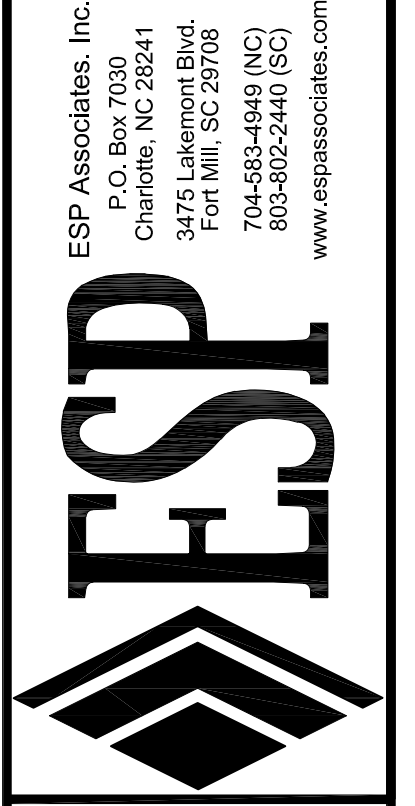


2 PARTIAL ELEVATION  
S-5 SCALE: 1/4" = 1'-0"



4 SECTION - ABUTMENT  
S-5 SCALE: 1/2" = 1'-0"

**BARRY LAMBERT ENGINEERING, PC**  
3448 Couwood Oak Lane  
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BLE Project No. 2104



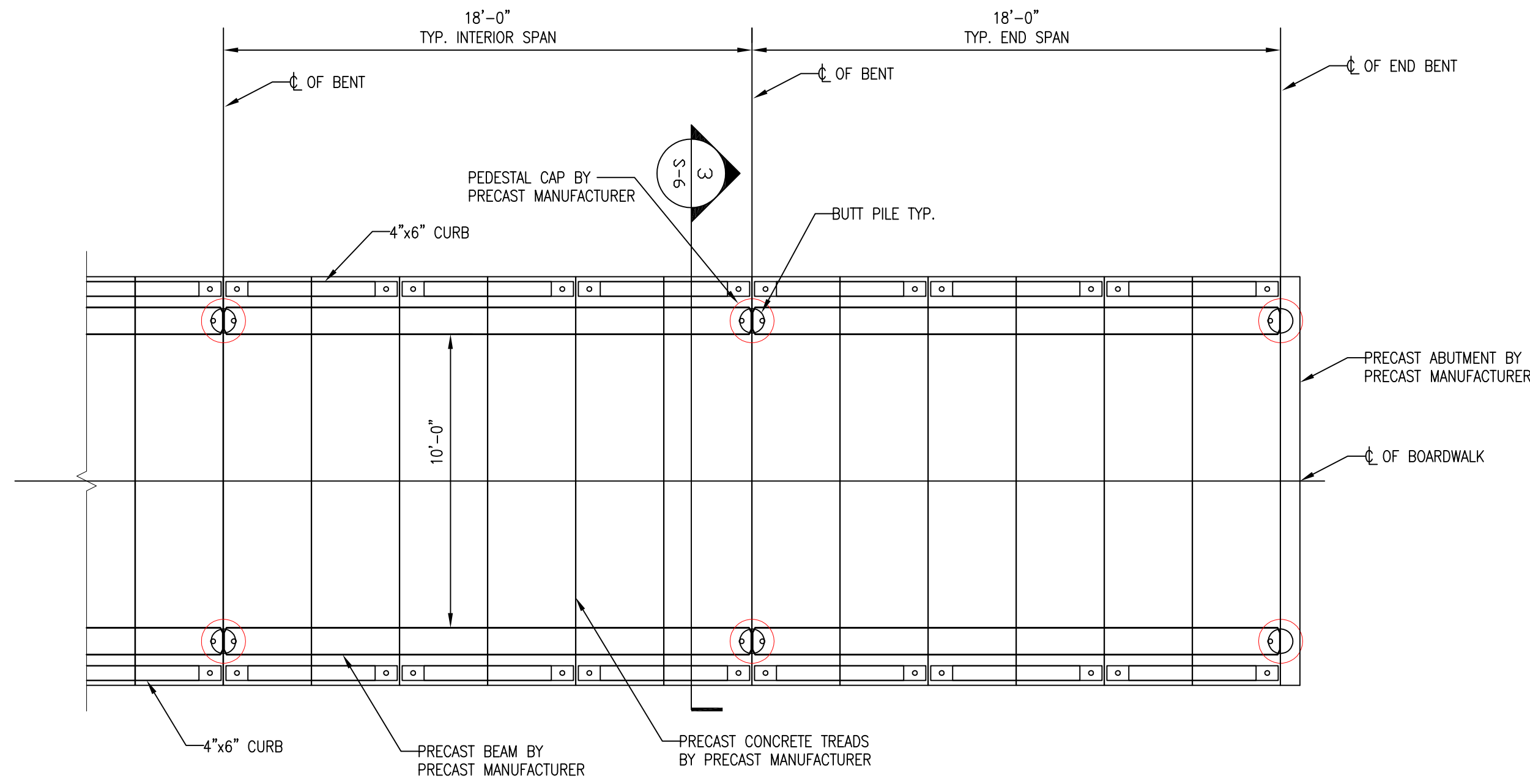
**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISION	BY	BOL
1	08-13-21	50% DESIGN SUBMITTAL		

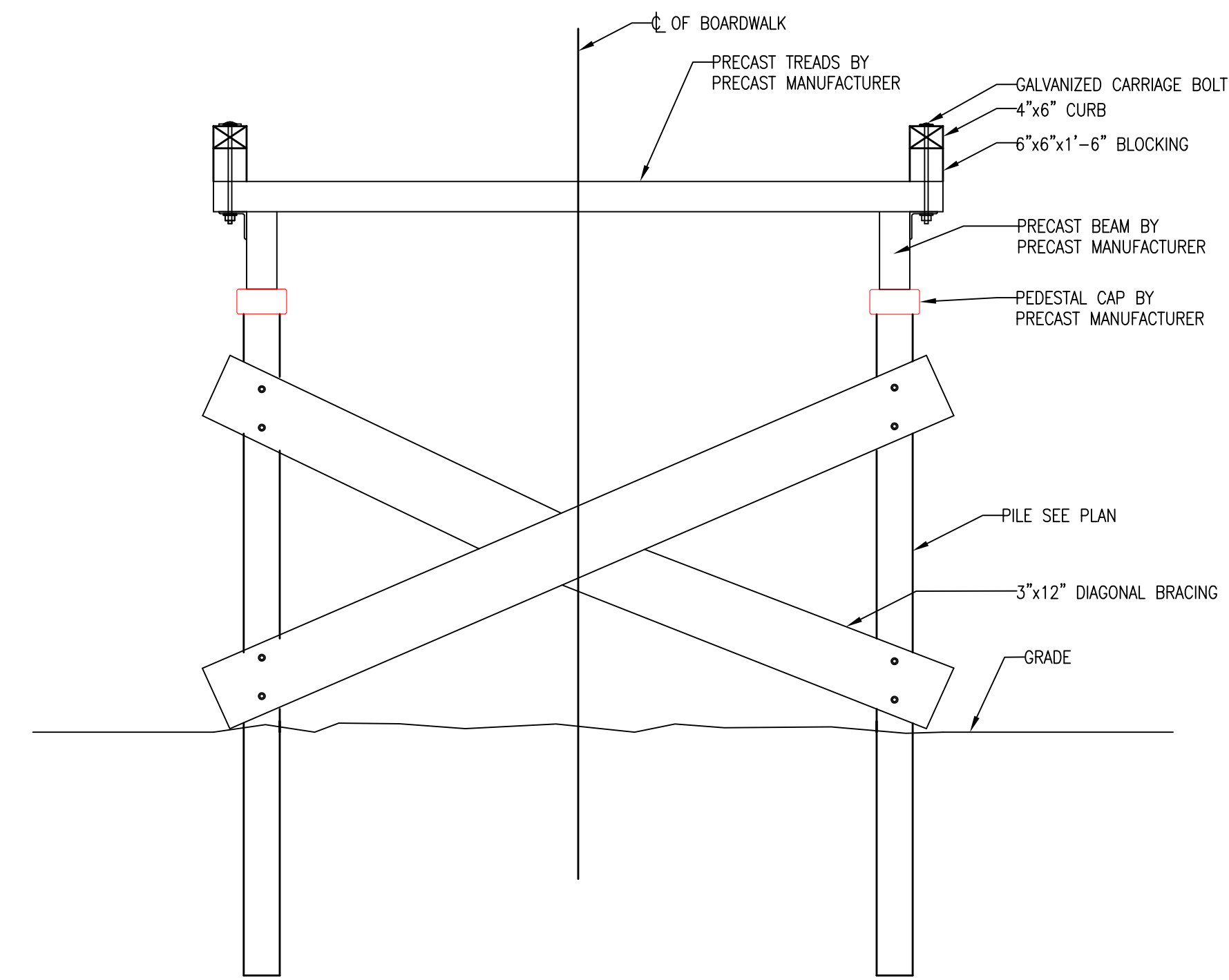
**BOARDWALK DETAILS TIMBER FRAMING**  
**ABBEEY CREEK GREENWAY**  
CITY OF BELMONT  
BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021
SHEET:	<b>S-5</b>

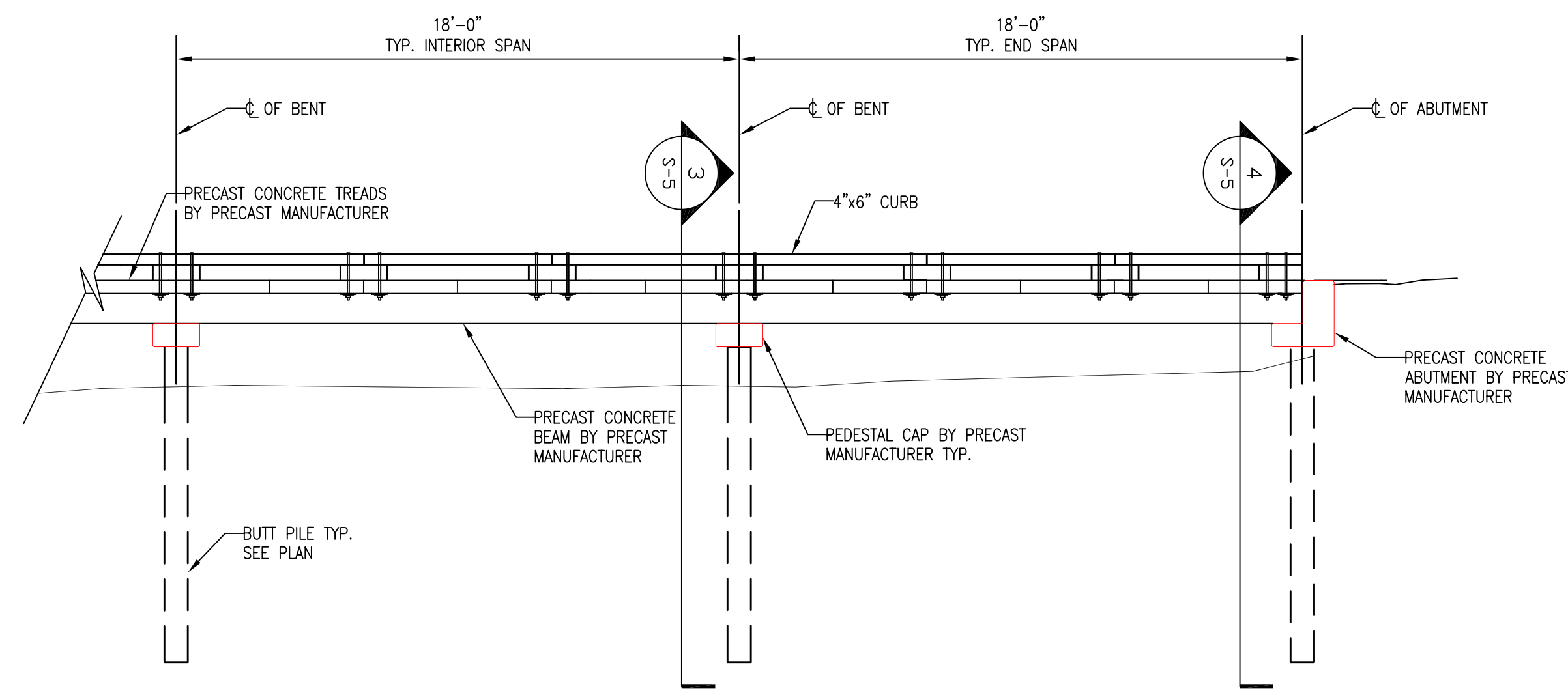
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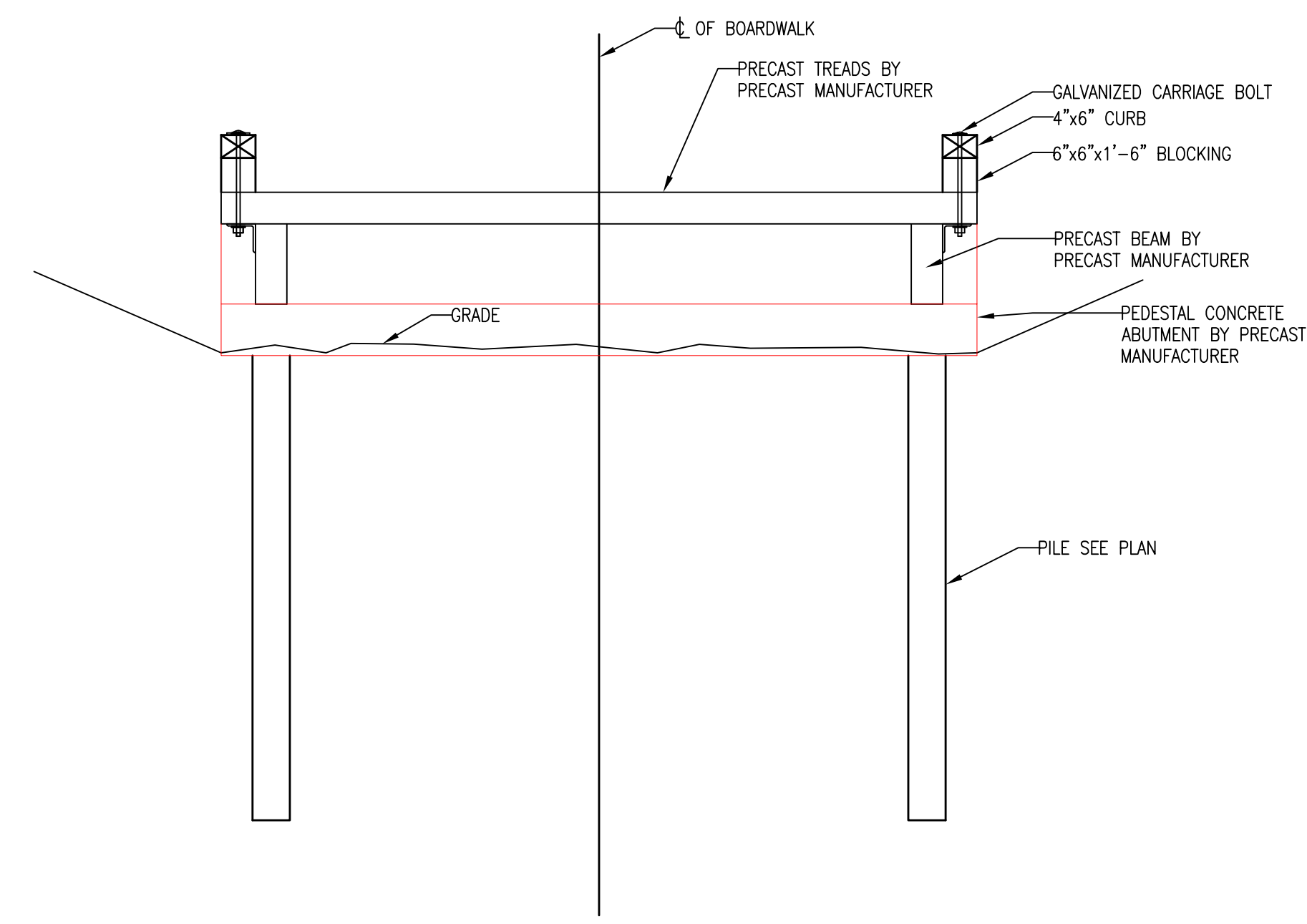
1 PARTIAL FRAMING PLAN  
S-6 SCALE: 1/4" = 1'-0"



3 SECTION - INTERIOR BENT  
S-6 SCALE: 1/2" = 1'-0"

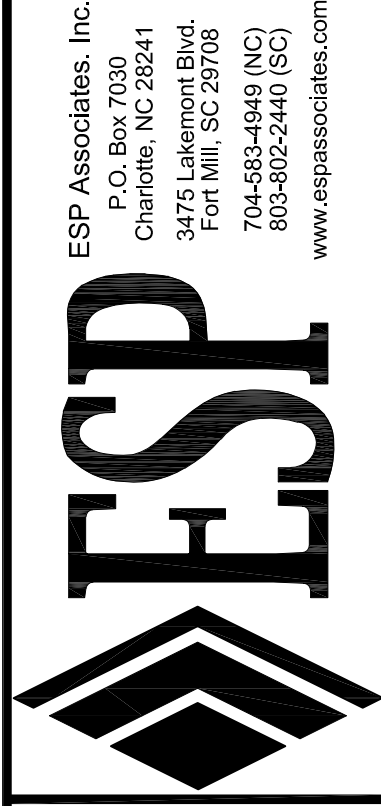


2 PARTIAL ELEVATION  
S-6 SCALE: 1/4" = 1'-0"



4 SECTION - ABUTMENT  
S-6 SCALE: 1/2" = 1'-0"

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CONSTRUCTION**

NO.	DATE	REVISION	BY
1	08-13-21	50% DESIGN SUBMITTAL	BOL

**BOARDWALK DETAILS CONC. FRAMING**  
**ABBAY CREEK GREENWAY**  
CITY OF BELMONT  
BELMONT, NORTH CAROLINA

PROJECT INFORMATION	
PROJECT MANAGER:	GMS
DESIGNED BY:	BOL
DRAWN BY:	BOL
PROJECT NUMBER:	IR37.100
DATE:	08-13-2021
SHEET:	S-6