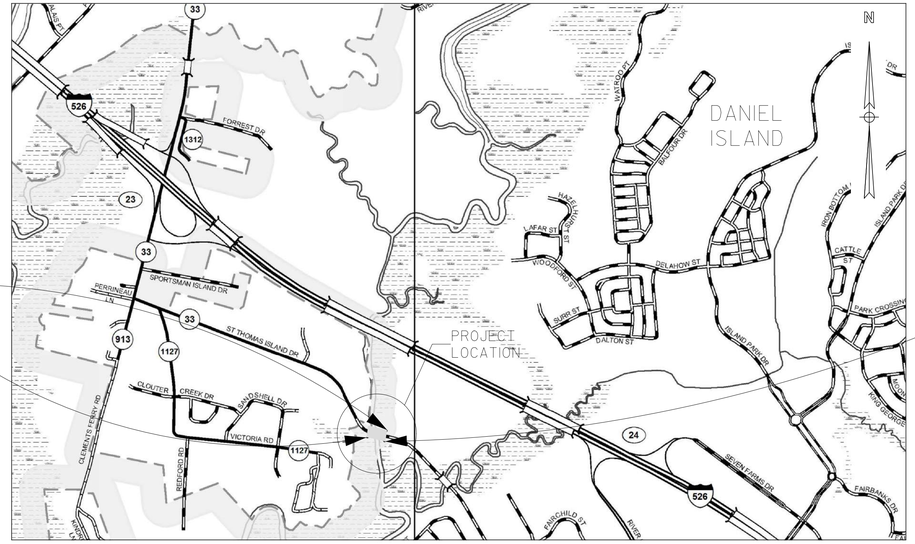
SHEET NO.	TOTAL SHEETS
1	55

INDEX OF SHEETS		
SHEET NO.	DESCRIPTION	SHEET SUBTOTALS
1	TITLE SHEET	1
2	SUMMARY OF EST. QUANTITIES	1
3	TYPICAL SECTIONS	1
4	RIGHT OF WAY DATA SHEET	1
4A	PROPERTY STRIP MAP	1
5	GENERAL CONSTRUCTION NOTES	1
5A	SURVEY CONTROL DATA SHEET	1
5B	REFERENCE DATA SHEET	1
6-7	PLAN PROFILE SHEETS	2
G1-G2	MARSH EMBANKMENT SHEETS	2
TC1	TRAFFIC CONTROL NOTES	1
CD101-CD102	SITE DEMO. SHEETS	2
C501-C505	DETAIL SHEETS	5
CSW101-CSW103	SWPPP SHEETS	3
CSW501-CSW503	SWPPP DETAILS	3
X1-X17	CROSS SECTIONS	17
S1-S12	BRIDGE STRUCTURE SHEETS	12
TOTAL		55

South Carolina Department of Transportation

PROPOSED PLANS FOR CITY OF CHARLESTON PROJECT ID P030592 DANIEL ISLAND DRIVE PEDESTRIAN BRIDGE OVER NOWELL CREEK



LAYOUT

SCALE 1 INCH = N.T.S. FEET

BERKELEY COUNTY

PROJECT ID P030592
BASELINE A
FROM STA. 10+00.00
TO STA. 15+82.46
BASELINE B
FROM STA. 200+00.00
TO STA. 204+41.19

END

BEGIN

PROJECT ID P030592
BEGIN BRIDGE FROM
STA 12+52.50 BASELINE A
END BRIDGE TO
STA. 14+49.75 BASELINE A

	DANIEL ISLAND DRIVE	TOTAL	
NET LENGTH OF SHARED USE PATH	0.157	0.157	MILES
NET LENGTH OF BRIDGES	0.037	0.037	MILES
NET LENGTH OF PROJECT	0.194	0.194	MILES
GROSS LENGTH OF PROJECT	0.194	0.194	MILES

NPDES PERMIT INFORMATION

Disturbed Area = 0.4 Acre(s)

Project Area = 0.4 Acre(s)

Approximate Location of Roadway is

Begin
Latitude 32° 52' 10" N
Longitude 79° 55' 22" W

End
Latitude 32° 52' 07" N
Longitude 79° 55' 12" W

Hydraulic and NPDES Design provided by:

JOHNSON, MIRMIRAN, & THOMPSON, INC.

Designs may be obtained from the SCDOT Design-Build Group

Design Reference for these plans is the:

2021

SCDOT Roadway Design Manual

Design Reference for these plans is the:

2012

AASHTO Guide for the Development of Bicycle Facilities

Hydraulic Design Reference for these plans is the:

2009

Edition of SCDOT's "Requirements for Hydraulic Design Studies"

STORMWATER DESIGN STANDARDS MANUAL (SWDSM) - DESIGN EXCEPTIONS			
APPLICABLE SECTIONS	DESCRIPTION OF DESIGN EXCEPTION	SUBMITTAL DATE	APPROVAL DATE
SECTION 3.9.2 SWDSM	WATER QUALITY VOLUME	4/3/23	
SECTION 3.9.3 SWDSM	PROJECT DISCHARGE	4/3/23	

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA

CALL 811

SOUTH CAROLINA 811 (SC811)
WWW.SC811.COM
ALL UTILITIES MAY NOT BE A MEMBER OF SC811

RAILROAD INVOLVEMENT?
YES (NO)

TRAFFIC DATA S-33

2024 ADT 3,233

N/A ADT N/A

TRUCKS 3.0 %

ENVIRONMENTAL PERMIT INFORMATION

USACE PERMIT	X YES	NO		
NEPA DOCUMENT	YES	X NO		
401 CERTIFICATION	X YES	NO		
OCRM CAP	X YES	NO		
NAVIGABLE WATERS	SC	USCG	USACE	X N/A

NOTE: EXCEPT AS MAY OTHERWISE BE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP ON THIS PROJECT SHALL CONFORM TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION) AND THE STANDARD DRAWINGS FOR ROAD CONSTRUCTION IN EFFECT AT THE TIME OF LETTING.

CONSULTING ENGINEERING FIRM

235 MAGRATH DARBY BLVD., SUITE 275
MT. PLEASANT, SC 29464
P: (843)556-2624 | F: (843)556-4329 | www.jmt.com

ENGINEER OF RECORD

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTIE

11.25.24

FOR CONSTRUCTION: _____ DATE _____

eolt1sl3.dgn

SCDOT
South Carolina Department of Transportation

SUMMARY OF ESTIMATED QUANTITIES

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE/ROAD NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	2

ITEM NO.	PAY ITEM	QUANTITY	PAY UNIT
1031000	MOBILIZATION	1.000	LS
1032010	BONDS AND INSURANCE	1.000	LS
1050800	CONST. STAKES, LINES & GRADES	1.000	EA
1071000	TRAFFIC CONTROL	1.000	LS
2011000	CLEAR. & GRUB. WITHIN R/W	1.000	LS
2031000	UNCLASSIFIED EXCAVATION	22.600	CY
2033000	BORROW EXCAVATION	1188.000	CY
2034000	MUCK EXCAVATION	280.000	CY
2037000	GEOGRID REINF.(UNIAXIAL)	820.000	SY
2037010	GEOGRID REINF.(BIAXIAL)	820.000	SY
2037120	GEOTEXTILE SOIL REINFORCEMENT	820.000	SY
2052010	STONE BRIDGE LIFT MATERIAL	130.600	TON
2081001	FINE GRADING	1130.000	SY
3050199	GRADED AGGREGATE BASE COURSE	76.000	TON
5019020	PERVIOUS CONCRETE	780.000	SY
6241015	8" WH. SLDLNES PERM.PVMT.MARKING	140.000	LF
6241025	24" WH SLDLNES PERM.PVMT.MARKING	120.000	LF
6510105	FLAT SHEET,TYPE III,FIXED SIZE	42.000	SF
6531205	U-SEC.POST FOR SGN SUPP. - 2P	96.000	LF
6825486	F&I ALUM PEDESTAL POLE CONC FOUNDATION	2.000	EA
682SP01	F&I-13' BREAK-AWAY ALUM PED POLE & BASE - *UNPAINTED*	2.000	EA
6865793	F&I PUSH BUTTON ASSEM(9"X12')	2.000	EA
686SP02	F&I-SOLAR POWERED RRFB ASSEMBLY	2.000	EA
7011400	CONC. FOR STRUC. - CLASS 4000	16.400	CY
7031200	REINF STEEL FOR STRUCT(BRIDGE)	3662.000	LB
7110001	DYNAMIC PILE ANAL.TEST SET-UP	2.000	EA
7110010	PILE DRIVING SET-UP	28.000	EA
7110180	PREST. CONC. PILING (18"SQ.)	99.000	LF
7110181	PILE BUILDUP PREPARATION-18"SQ	4.000	EA
7110186	PRESTR. INDEX PILING (18"SQ)	33.000	LF
7111106	PRESTRESSED PILE POINT (W8X58)	44.000	LF
7119100	TREATED TIMBER PILING	864.000	LF
7119101	PILE LD.TEST-T.T.PILE(12"SQ.)	2.000	EA
7143615	15" SMOOTH WALL PIPE	24.000	LF
7192205	24" X 24" JUNCTION BOX	1.000	EA
7204900	DETECTABLE WARNING MATERIAL	50.000	SF
7209000	PEDESTRIAN RAMP CONSTRUCTION	100.000	SY
8041020	RIP-RAP (CLASS B)	715.000	TON
8048210	GEOTEX/EROS.CONT(CLASS2)TYPE C	825.000	SY
8091010	RIGHT OF WAY MARKER(REBAR&CAP)	4.000	EA
8091050	RIGHT OF WAY PLAT	1.000	LS
8100101	PERM. GRASSING FOR SMALL PROJ.	0.400	ACRE
8114010	TREE PROTECTION	2.000	EA
8152007	SEDIMENT TUBES	200.000	LF
8153000	SILT FENCE	1600.000	LF
8153307	FLOAT.TURB.BAR.HVYDUTY(7'DEEP)	650.000	LF
8156490	STABILIZED CONSTR. ENTRANCE	1140.000	SY
8990003	WOOD BOLLARD	4.000	EA
8990004	42" SAFETY BARRIER	492.000	LF
8990005	TIMBER PIER AND FRAMING	2.000	EA
8990006	PERMEABLE LOW DENSITY CELLULAR CONCRETE	306.700	CY
8990007	ALUMINUM SUPERSTRUCTURE	1.000	EA
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

ITEM NO.	PAY ITEM	QUANTITY	PAY UNIT
-	-	-	-

9/25/2024
c:\pwworking\jmt\d0826856\[002_QuantitySheetwPayItems_22x36.xlsx]PASTE DATA HERE

SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 37338 KYLE J. MARPE

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD.
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

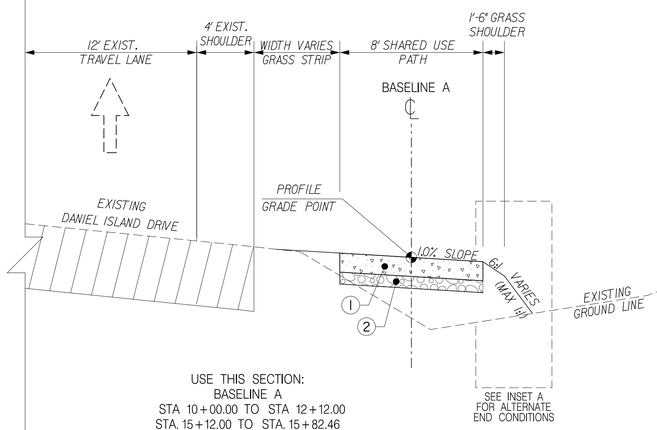
CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
SUMMARY OF ESTIMATED QUANTITES

SCALE: N/A RTE.

TYPICAL SECTION OF IMPROVEMENT
CITY OF CHARLESTON S.C.

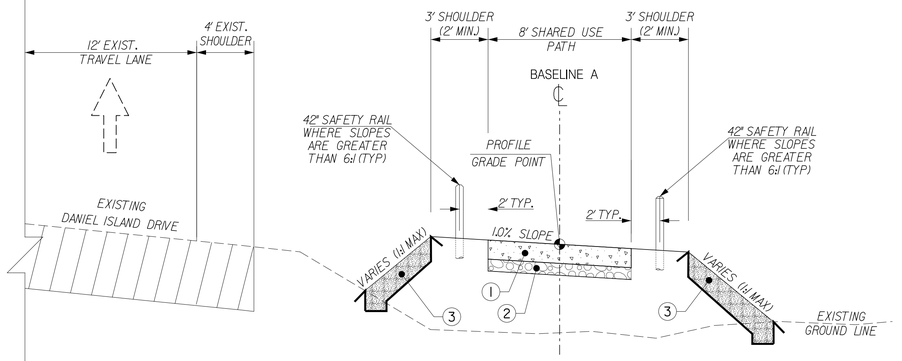
FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	3

①



USE THIS SECTION:
BASELINE A
STA 10+00.00 TO STA 12+12.00
STA. 15+12.00 TO STA. 15+82.46
(NOT TO SCALE)

②



USE THIS SECTION:
BASELINE A
STA 12+12.00 TO STA 12+52.50
STA. 14+49.75 TO STA. 15+12.00
(NOT TO SCALE)

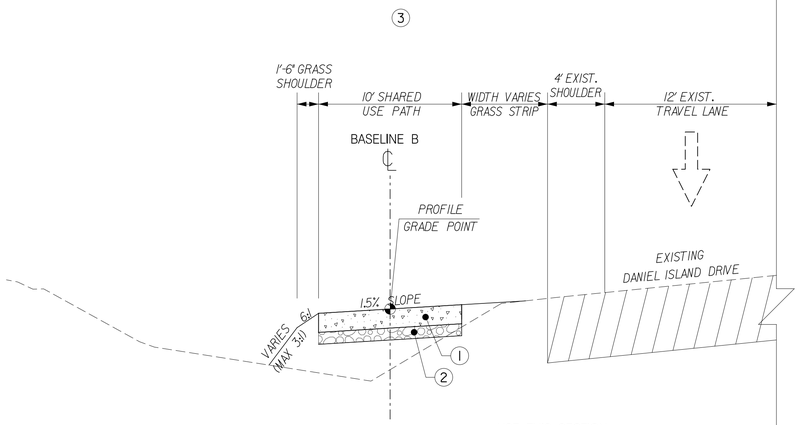
NOTES:

1. TIE-IN SIDE SLOPE MAY BE VARIED WHEN A DEEPER DITCH IS NECESSARY FOR DRAINAGE PURPOSES, USING A MINIMUM SLOPE OF 12:1 AND A MAXIMUM SLOPE OF 3:1 WHERE A DEEPER DITCH THAN PROVIDED BY A 3:1 IS NECESSARY, THE DITCH SHALL BE PLACED FARTHER FROM THE CENTERLINE CONTINUING THE 3:1 SLOPE TO PROVIDE FOR THE NECESSARY DEPTH WHERE POSSIBLE. SEE CROSS SECTIONS FOR ACTUAL DITCH SLOPES, WIDTHS, AND ELEVATIONS. SLOPE VARIES SEE CROSS SECTIONS FOR SLOPES.
2. PATH WIDTH IS 8' WIDE UNLESS OTHERWISE NOTED. SEE PLANS AND CROSS SECTIONS FOR LANE WIDTHS.
3. CURB RAMPS AND DETECTABLE WARNING SURFACES TO BE CONSTRUCTED IN ACCORDANCE WITH SCDOT STANDARD DRAWINGS SECTION 720-900.

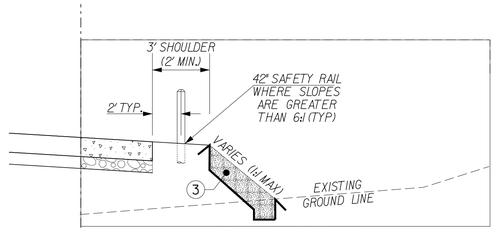
SLOPE MAY BE VARIED WHEN A DITCH IS NECESSARY FOR DRAINAGE PURPOSES, USING A MINIMUM SLOPE OF 12:1 AND A MAXIMUM SLOPE OF 4:1. WHERE A DEEPER DITCH THAN PROVIDED BY A 4:1 IS NECESSARY, THE DITCH SHALL BE PLACED FARTHER FROM THE CENTERLINE CONTINUING THE 4:1 SLOPE TO PROVIDE FOR THE NECESSARY DEPTH WHERE POSSIBLE. SEE CROSS SECTIONS FOR ACTUAL DITCH SLOPES, WIDTHS, AND ELEVATIONS.

FILL SLOPES:
0' TO 5' HEIGHT 6:1
5' TO 10' HEIGHT 4:1
OVER 10' HEIGHT 2:1

③



USE THIS SECTION:
BASELINE B
STA 200+00.00 TO STA 204+41.19
(NOT TO SCALE)



INSET A -USE THIS SECTION:
STA 10+51.70 TO STA 12+12.00
STA 15+12.00 TO STA 15+72.94
(NOT TO SCALE)

LEGEND

①	PERVIOUS CONCRETE SIDEWALK (4" UNIFORM)
②	GRADED AGGREGATE AASHTO #57 STONE BASE (2.5" UNIFORM)
③	CLASS B RIP RAP; 1.5' THICK MINIMUM

DESIGN SPEED		
ROUTE	FUNCTIONAL CLASSIFICATION	MPH
DANIEL ISLAND DRIVE	URBAN MAJOR COLLECTOR	40
SHARED USE PATH	N / A	16

EXCEPTIONS TO DESIGN SPEED			
ROUTE	STA. TO STA.		MPH

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTIE

7.30.24

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
TYPICAL SECTION

SCALE: RTE.

RIGHT-OF-WAY DATA SHEET

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE/ROAD NO.	SHEET NO.
3	S.C.	BERKELEY	C-SUB2023-0002	DANIEL ISLAND DRIVE	4

TRACT NO.	PROPERTY OWNER	TAX MAP REFERENCE	TOTAL TRACT ACRES	OBTAIN				REMAINDER LEFT ACRES [A]	REMAINDER RIGHT ACRES [A]	DATE ACQUIRED	TYPE OF INSTRUMENT	PERMISSION (YES)					REMARKS
				OUTFALL DITCH	LEFT	RIGHT	TOTAL					OUTFALL DITCH	SLOPE	DRAINAGE STRUCTURE	EROSION CONTROL	ENTRANCE CONSTRUCTION	
1	THOMAS ISLAND DR, LLC	275-00-00-033	2.44														
2	CITY OF CHARLESTON	275-00-00-159	0.06														
3	DANIEL ISLAND TOWN ASSOCIATION, INC	275-00-00-025	43.87			21324 SF (0.49 AC)	21324 SF (0.49 AC)		43.38								
4	HOLLAND PARK, LLC	275-00-00-086	11.11														
5	HOLLAND PARK, LLC	275-00-00-185	25.37														
6	JT INDUSTRIES LLC	275-00-00-080	0.63														
7	JT INDUSTRIES LLC	275-00-00-311	0.46														
8	JT INDUSTRIES LLC	275-00-00-312	0.51														
9	PROVIDENCE GROUP LLC	275-00-00-059	2.35														

DATE	TRACT NO.	REMARKS

R/W NOTE:
THE DEPARTMENT WILL UTILIZE THE PRESENT RIGHT OF WAY AS SHOWN BELOW EXCEPT AS OTHERWISE SHOWN ON PLANS.

ROAD / ROUTE #	FILE #	R/W WIDTH	YEAR ACQ'D.

NOTES:
A. SHOW REMAINDER IN SQUARE FEET WHEN LESS THAN 0.25 ACRE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	4A

PRES. 33' R/W PER PB CABO PG 301P M.H.W.

PRES. TRANS. R/W PER PB CABO PG 310A M.H.W.

PRES. TRANS. R/W PER PB CABO PG 310A M.H.W.

PRES. TRANS. R/W PER PB CABO PG 310A M.H.W.

STA +00.77
O.S. 116.62'

STA +08.63
O.S. 21.84'

STA +81.50
O.S. 33.84'

STA +82.22
O.S. 33.80'

STA +59.19
O.S. 64.54'

STA +79.85
O.S. 54.05'

STA +16.00
O.S. 57.24'

TRAIL

10+00

11+00

12+00

13+00

14+00

15+00

15+90

5+00

199+80 200+00

201+00

CWS PUMP STATION

PRES. TRANS. R/W PER PB CABQ PG 40-1 M.H.W.

GEODETIC MONUMENT:
"BLACKBAUD"
N: 378630.9300
E: 2331255.6300
Z: 10.860

JB

NEW TRANS. R/W

NEW 105' R/W

NEW TRANS. R/W

STA +71.21
O.S. 105.00'

STA +40.90
O.S. 105.00'

STA +63.45
O.S. 38.35'

N: 378565.2042
E: 2331217.1132

PRES. TRANS. R/W INST#202001937 M.H.W.

PROPERTY LINE
MEAN LOW WATER

1 2 3 4 5 8 9

NEW RIGHT-OF-WAY

CONSTRUCTION CENTERLINES AND EXISTING CENTERLINE SHOWN AS NOTED. SEE REFERENCE DATA SHEET FOR CENTERLINE DETAILS.

EXISTING RIGHT-OF-WAY IS MEASURED FROM EXISTING CENTERLINE. FOR EXISTING CENTERLINE INFORMATION SEE REFERENCE DATA SHEET.

NEW RIGHT-OF-WAY IS MEASURED AND STATIONED FROM THE EXISTING CENTERLINE. FOR EXISTING CENTERLINE INFORMATION SEE REFERENCE DATA SHEET.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 37336
KYLE J. MARPLE

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
PROPERTY STRIP MAP

SCALE: R.T.E.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	5

GENERAL CONSTRUCTION NOTE:

THE PROJECT MANAGER MUST SPECIFICALLY AUTHORIZE CHANGES INVOLVING INCREASED COST OF PROJECT OR CHANGES IN ALIGNMENT.

SEE INDIVIDUAL CURVES ON REFERENCE DATA SHEET FOR SUPERELEVATION RATE AND DESIGN SPEED, AS APPLICABLE.

QUANTITIES ARE NOT SHOWN IN DETAIL ON THE PLANS BUT ARE INCLUDED IN THE SUMMARY OF ESTIMATED QUANTITIES AND MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE PROJECT MANAGER.

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE SAFETY AS MANDATED BY OSHA, THE CITY, THE STATE, SCDOT, AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE.
2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID SUBMITTAL AND CONSTRUCTION.
3. ALL PERIMETER EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE ANY WORK BEGINS. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES, TEMPORARY AS WELL AS PERMANENT, THROUGHOUT THE LIFE OF THE PROJECT.
4. SWALES, PIPES, INLETS AND OTHER STORMWATER MANAGEMENT FACILITIES SHALL BE MAINTAINED IN DESIGN CONDITION AND KEPT FREE OF FILL AND OBSTRUCTIONS.
5. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL, AND OSHA REGULATIONS WHEN OPERATING EQUIPMENT AROUND UTILITIES AND ESPECIALLY EXISTING OVERHEAD POWER LINES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRENCH BARRICADING AND COVERING, SHEETING AND SHORING AS NECESSARY.
8. WHEN WoUS ARE TO BE IMPACTED, WORK CANNOT BE PERFORMED IN THESE DESIGNATED AREAS UNTIL ALL NECESSARY PERMITS HAVE BEEN ACQUIRED.
9. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURE IN ACCORDANCE WITH THE MUTCD, "WORK ZONE SAFETY GUIDELINES FOR THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION, MUNICIPALITIES, COUNTIES, UTILITIES, AND CONTRACTORS", SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND APPLICABLE SCDOT TRAFFIC ENGINEERING STANDARD DRAWINGS AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND LIMITATIONS ASSOCIATED WITH INSTALL AND MAINTAINING TRAFFIC CONTROL MEASURES. SEE MOT PLANS.
10. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED. A LICENSED HAZARDOUS MATERIALS CONTRACTOR SHALL DISPOSE OF CONTAMINATED SOILS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
11. ALL TREES AND OTHER LANDSCAPING FEATURES, THAT MAY BE DAMAGED AS A RESULT OF THE IMPROVEMENT WORK WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE EASEMENT AREA TO ITS EXISTING CONDITIONS PRIOR TO SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL RE-SEED ALL GRASSED AREAS, IF ANY ARE DISTURBED, AND RESTORE ANY DAMAGE TO TEMPORARY EASEMENTS AREA AND/OR THE PROPERTY RESULTING FROM THE IMPROVEMENT WORK.
12. UNLESS OTHERWISE NOTED IN THE PLANS OR SUPPLEMENTAL SPECIFICATION, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (SCDOT) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" AND "STANDARD SUPPLEMENTAL SPECIFICATIONS". ADDITIONAL TECHNICAL SPECIFICATIONS TO BE INCLUDED ON THIS PROJECT.
13. CONTRACTOR WILL ENSURE THAT ALL ASPECTS OF CONSTRUCTION WILL MEET OR EXCEED THE REQUIREMENTS OF THE CITY OF CHARLESTON STORMWATER MANUAL UNLESS OTHERWISE NOTED.
14. HORIZONTAL DATUM: NAD 1983/2011 (SC). VERTICAL DATUM: NAVD 1988.
15. CONTRACTOR SHALL ADHERE TO THE TERMS OF THE USACE & DHEC PERMITS FOR THIS PROJECT, INCLUDING CONSTRUCTION IN AND RESTORATION OF THE MARSH.

INCLUSIONS

MOBILIZATION	NEC.	LS	PER CONTRACT DOCUMENTS
BONDS AND INSURANCE	NEC.	LS	PER CONTRACT DOCUMENTS
CONSTRUCTION STAKES, LINES & GRADES	NEC.	LS	PER CONTRACT DOCUMENTS
TRAFFIC CONTROL	NEC.	LS	PER CONTRACT DOCUMENTS
BORROW EXCAVATION	392	CY	TO REPLACE MUCKING AREAS OR AS DIRECTED BY ENGINEER
MUCK EXCAVATION	280	CY	TO REPLACE UNSUITABLE SUBGRADE AREAS OR AS DIRECTED BY ENGINEER
SEDIMENT TUBES	200	LF	FOR EROSION CONTROL WHERE DIRECTED BY THE ENGINEER
STABILIZED CONSTRUCTION ENTRANCE	1140	SY	FOR EROSION CONTROL WHERE DIRECTED BY THE ENGINEER

SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER KYLE J. MARPE

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD.
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
GENERAL CONSTRUCTION NOTES

SCALE: N/A RTE.

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROAD/ROUTE NO.	SHEET NO.
3	SC	Berkeley	P030592	Daniel Island Drive	5A

PROPERTY MONUMENTS FOUND

ALIGNMENT	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
DanielDr	14+75.53	38.90	378572.65	2331186.63	5RB
DanielDr	17+65.98	37.45	378462.20	2331436.40	5RB
DanielDr	OffChain	OffChain	377865.63	2332109.25	5 RBF
DanielDr	19+82.93	38.81	378316.13	2331586.33	5RB
DanielDr	16+86.79	37.30	378503.01	2331373.62	5RB

SURVEY CONTROL POINTS

POINT ID	ALIGNMENT	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
1	DanielDr	10+53.38	19.33	378723.7710	2330785.2870	8.26	PSC
2	DanielDr	15+60.17	-15.06	378601.8850	2331281.8520	9.82	PSC
3	DanielDr	20+97.15	-13.75	378268.2320	2331702.5770	6.26	PSC
4	DanielDr	OffChain	OffChain	377703.6720	2332196.7410	7.58	PSC
5	DanielDr	OffChain	OffChain	377054.5980	2332544.0390	7.38	PSC
6	DanielDr	OffChain	OffChain	376541.9580	2332895.7540	7.82	PSC

PROJECT BENCHMARKS

POINT ID	ALIGNMENT	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION

NOTES:

1. The alignment Station and Offset are referenced to the existing Survey Centerline.
2. Date of Survey: 2/2021-4/2021
3. Primary Survey Control will be used and Project BM. Contractor to set additional TBM's as needed
4. No boundary surveys were performed with this project
5. No Title Commitment was provided for this project

The Property Monuments Found listed on this sheet are assumed to be property corner monuments, field located during the course of this survey. The Department makes no claim that these located monuments are the true position of any property and takes no responsibility for this information being used as such. These monuments are tied to the control of this project in an effort to document and preserve their location in the event they are disturbed or destroyed during the construction of the project.

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

SURVEY CONTROL DATA

PROJECT DESCRIPTION

Daniel Island Drive Bridge Replacement

DATUM DESCRIPTION

This GRID Coordinate System developed for this project is based on NAD83(2011) South Carolina State Plane Coordinate System. A Combined Scale Factor (CSF) for each Survey Control Point must be computed and applied to horizontal ground distances. Elevations for this project are based on NAVD88 for 1 with an Elevation of 8.26

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	5B

℄ BASELINE A (NOWELL CREEK MULTI-USE PATH CONSTRUCTION CENTERLINE)

BEGINNING CHAIN BASELINE_A DESCRIPTION

POINT 800 N 378,772.7189 E 2,330,697.3013 STA 10+00.00

COURSE FROM 800 TO PC BASELINE_A1 S 87° 31′ 07.05" E DIST 14.2294

CURVE DATA

CURVE BASELINE_A1
P.I. STATION 10+33.89 N 378,771.2515 E 2,330,731.1627
DELTA = 42° 56′ 13.64" (RT)
DEGREE = 114° 35′ 29.61"
TANGENT = 19.6638
LENGTH = 37.4697
RADIUS = 50.0000
EXTERNAL = 3.7277
LONG CHORD = 36.5991
MID. ORD. = 3.4691
P.C. STATION 10+14.23 N 378,772.1028 E 2,330,711.5173
P.T. STATION 10+51.70 N 378,757.2459 E 2,330,744.9652
C.C. N 378,722.1497 E 2,330,709.3526
BACK = S 87° 31′ 07.05" E
AHEAD = S 44° 34′ 53.41" E
CHORD BEAR = S 66° 03′ 00.23" E

COURSE FROM PT BASELINE_A1 TO PC BASELINE_A2 S 44° 34′ 53.41" E DIST 49.6643

CURVE DATA

CURVE BASELINE_A2
P.I. STATION 11+06.16 N 378,718.4526 E 2,330,783.1959
DELTA = 10° 58′ 12.39" (LT)
DEGREE = 114° 35′ 29.61"
TANGENT = 4.8013
LENGTH = 9.5732
RADIUS = 50.0000
EXTERNAL = 0.2300
LONG CHORD = 9.5586
MID. ORD. = 0.2289
P.C. STATION 11+01.36 N 378,721.8723 E 2,330,779.8258
P.T. STATION 11+10.94 N 378,715.7367 E 2,330,787.1552
C.C. N 378,756.9685 E 2,330,815.4384
BACK = S 44° 34′ 53.41" E
AHEAD = S 55° 33′ 05.80" E
CHORD BEAR = S 50° 03′ 54.61" E

COURSE FROM PT BASELINE_A2 TO PC BASELINE_A3 S 55° 00′ 43.83" E DIST 29.7713

CURVE DATA

CURVE BASELINE_A3
P.I. STATION 11+87.37 N 378,671.9100 E 2,330,849.7745
DELTA = 34° 33′ 33.52" (RT)
DEGREE = 38° 11′ 49.87"
TANGENT = 46.6614
LENGTH = 90.4761
RADIUS = 150.0000
EXTERNAL = 7.0900
LONG CHORD = 89.1107
MID. ORD. = 6.7700
P.C. STATION 11+40.71 N 378,698.6658 E 2,330,811.5461
P.T. STATION 12+31.18 N 378,628.1902 E 2,330,866.0797
C.C. N 378,575.7747 E 2,330,725.5357
BACK = S 55° 00′ 43.83" E
AHEAD = S 20° 27′ 10.32" E
CHORD BEAR = S 37° 43′ 57.08" E

COURSE FROM PT BASELINE_A3 TO PC BASELINE_A4 S 20° 27′ 10.32" E DIST 2.2033

CURVE DATA

CURVE BASELINE_A4
P.I. STATION 12+56.42 N 378,604.5405 E 2,330,874.8998
DELTA = 49° 28′ 33.29" (LT)
DEGREE = 114° 35′ 29.61"
TANGENT = 23.0376
LENGTH = 43.1759
RADIUS = 50.0000
EXTERNAL = 5.0521
LONG CHORD = 41.8469
MID. ORD. = 4.5884
P.C. STATION 12+33.39 N 378,626.1257 E 2,330,866.8496
P.T. STATION 12+76.56 N 378,596.6342 E 2,330,896.5382
C.C. N 378,643.5976 E 2,330,913.6976
BACK = S 20° 27′ 10.32" E
AHEAD = S 69° 55′ 43.61" E
CHORD BEAR = S 45° 11′ 26.97" E

COURSE FROM PT BASELINE_A4 TO PC BASELINE_A5 S 69° 55′ 43.61" E DIST 36.6316

CURVE DATA

CURVE BASELINE_A5
P.I. STATION 13+17.22 N 378,582.6810 E 2,330,934.7268
DELTA = 9° 12′ 27.48" (LT)
DEGREE = 114° 35′ 29.61"
TANGENT = 4.0263
LENGTH = 8.0352
RADIUS = 50.0000
EXTERNAL = 0.1618
LONG CHORD = 8.0265
MID. ORD. = 0.1613
P.C. STATION 13+13.19 N 378,584.0627 E 2,330,930.9450
P.T. STATION 13+21.23 N 378,581.9221 E 2,330,938.6809
C.C. N 378,631.0261 E 2,330,948.1044
BACK = S 69° 55′ 43.61" E
AHEAD = S 79° 08′ 11.09" E
CHORD BEAR = S 74° 31′ 57.35" E

COURSE FROM PT BASELINE_A5 TO PC BASELINE_A6 S 79° 08′ 11.09" E DIST 102.1726

CONT'D ℄ BASELINE A (NOWELL CREEK MULTI-USE PATH CONSTRUCTION CENTERLINE)

CURVE DATA

CURVE BASELINE_A6
P.I. STATION 14+50.97 N 378,557.4696 E 2,331,066.0969
DELTA = 57° 44′ 31.91" (LT)
DEGREE = 114° 35′ 29.61"
TANGENT = 27.5696
LENGTH = 50.3896
RADIUS = 50.0000
EXTERNAL = 7.0966
LONG CHORD = 48.2841
MID. ORD. = 6.2146
P.C. STATION 14+23.40 N 378,562.6655 E 2,331,039.0224
P.T. STATION 14+73.79 N 378,577.5921 E 2,331,084.9413
C.C. N 378,611.7695 E 2,331,048.4460
BACK = S 79° 08′ 11.09" E
AHEAD = N 43° 07′ 17.00" E
CHORD BEAR = N 71° 59′ 32.95" E

COURSE FROM PT BASELINE_A6 TO PC BASELINE_A7 N 43° 07′ 17.00" E DIST 8.8856

CURVE DATA

CURVE BASELINE_A7
P.I. STATION 15+12.96 N 378,606.1836 E 2,331,111.7167
DELTA = 62° 24′ 27.80" (RT)
DEGREE = 114° 35′ 29.61"
TANGENT = 30.2857
LENGTH = 54.4610
RADIUS = 50.0000
EXTERNAL = 8.4570
LONG CHORD = 51.8085
MID. ORD. = 7.2335
P.C. STATION 14+82.68 N 378,584.0778 E 2,331,091.0151
P.T. STATION 15+37.14 N 378,598.0752 E 2,331,140.8968
C.C. N 378,549.9005 E 2,331,127.5104
BACK = N 43° 07′ 17.00" E
AHEAD = S 74° 28′ 15.20" E
CHORD BEAR = N 74° 19′ 30.90" E

COURSE FROM PT BASELINE_A7 TO 801 S 74° 28′ 15.20" E DIST 35.4136

POINT 801 N 378,588.5940 E 2,331,175.0176 STA 15+72.55

COURSE FROM 801 TO 802 N 13° 30′ 10.20" E DIST 9.9222

POINT 802 N 378,598.2419 E 2,331,177.3344 STA 15+82.47

ENDING CHAIN BASELINE_A DESCRIPTION

℄ BASELINE B (NOWELL CREEK MULTI-USE PATH CONSTRUCTION CENTERLINE)

BEGINNING CHAIN BASELINE_B DESCRIPTION

POINT 600 N 378,640.1322 E 2,331,161.6829 STA 199+80.00

COURSE FROM 600 TO PC BASELINE_B1 S 76° 29′ 49.80" E DIST 92.5586

CURVE DATA

CURVE BASELINE_B1 (CHORD DEFINITION)
P.I. STATION 201+32.94 N 378,604.4211 E 2,331,310.3981
DELTA = 13° 30′ 17.39" (RT)
DEGREE = 11° 15′ 09.15"
TANGENT = 60.3843
LENGTH = 120.0158
RADIUS = 510.0000
EXTERNAL = 3.5623
LONG CHORD = 119.9308
MID. ORD. = 3.5376
P.C. STATION 200+72.56 N 378,618.5204 E 2,331,251.6830
P.T. STATION 201+92.57 N 378,577.0000 E 2,331,364.1972
C.C. N 378,122.6176 E 2,331,132.6013
BACK = S 76° 29′ 49.80" E
AHEAD = S 62° 59′ 32.41" E
CHORD BEAR = S 69° 44′ 41.10" E

CURVE DATA

CURVE BASELINE_B2 (CHORD DEFINITION)
P.I. STATION 203+00.03 N 378,528.2041 E 2,331,459.9328
DELTA = 16° 48′ 55.44" (RT)
DEGREE = 7° 53′ 14.47"
TANGENT = 107.4538
LENGTH = 213.1945
RADIUS = 727.0000
EXTERNAL = 7.8982
LONG CHORD = 212.5980
MID. ORD. = 7.8133
P.C. STATION 201+92.57 N 378,577.0000 E 2,331,364.1972
P.T. STATION 204+05.77 N 378,453.7995 E 2,331,537.4587
C.C. N 377,929.2824 E 2,331,034.0595
BACK = S 62° 59′ 32.41" E
AHEAD = S 46° 10′ 36.97" E
CHORD BEAR = S 54° 35′ 04.69" E

CONT'D ℄ BASELINE B (NOWELL CREEK MULTI-USE PATH CONSTRUCTION CENTERLINE)

CURVE DATA

CURVE BASELINE_B3 (CHORD DEFINITION)
P.I. STATION 204+34.11 N 378,434.1734 E 2,331,557.9082
DELTA = 86° 44′ 49.28" (LT)
DEGREE = 0° 00′ 00.00"
TANGENT = 28.3437
LENGTH = 45.4206
RADIUS = 30.0004
EXTERNAL = 11.2717
LONG CHORD = 41.2056
MID. ORD. = 8.1933
P.C. STATION 204+05.77 N 378,453.7995 E 2,331,537.4587
P.T. STATION 204+51.20 N 378,453.4762 E 2,331,578.6631
C.C. N 378,475.4442 E 2,331,558.2320
BACK = S 46° 10′ 36.97" E
AHEAD = N 47° 04′ 33.75" E
CHORD BEAR = S 89° 33′ 01.61" E

COURSE FROM PT BASELINE_B3 TO 601 N 47° 04′ 33.75" E DIST 8.4483

POINT 601 N 378,459.2297 E 2,331,584.8494 STA 204+59.60

ENDING CHAIN BASELINE_B DESCRIPTION

℄ EXISTING DANIEL ISLAND DRIVE (FOR INFORMATION ONLY)

BEGINNING CHAIN DAN_DR_EX DESCRIPTION

POINT 100 N 378,947.5804 E 2,330,664.5242 STA 0+00.00

COURSE FROM 100 TO PC DAN_DR_EX1 S 26° 06′ 41.20" E DIST 123.5163

CURVE DATA

CURVE DAN_DR_EX1 (CHORD DEFINITION)
P.I. STATION 2+64.64 N 378,709.9497 E 2,330,780.9972
DELTA = 50° 23′ 08.59" (LT)
DEGREE = 19° 11′ 17.29"
TANGENT = 141.1236
LENGTH = 262.5879
RADIUS = 300.0000
EXTERNAL = 31.5356
LONG CHORD = 255.3999
MID. ORD. = 28.5360
P.C. STATION 1+23.52 N 378,836.6702 E 2,330,718.8860
P.T. STATION 3+86.10 N 378,676.9982 E 2,330,918.2199
C.C. N 378,968.7058 E 2,330,988.2679
BACK = S 26° 06′ 41.20" E
AHEAD = S 76° 29′ 49.80" E
CHORD BEAR = S 51° 18′ 15.50" E

COURSE FROM PT DAN_DR_EX1 TO PC DAN_DR_EX2 S 76° 29′ 49.80" E DIST 287.2244

CURVE DATA

CURVE DAN_DR_EX2 (CHORD DEFINITION)
P.I. STATION 8+80.69 N 378,561.5166 E 2,331,399.1307
DELTA = 33° 00′ 04.33" (RT)
DEGREE = 8° 11′ 31.52"
TANGENT = 207.3574
LENGTH = 402.8424
RADIUS = 700.0000
EXTERNAL = 30.0665
LONG CHORD = 397.6356
MID. ORD. = 28.8283
P.C. STATION 6+73.33 N 378,609.9332 E 2,331,197.5049
P.T. STATION 10+76.17 N 378,411.0948 E 2,331,541.8555
C.C. N 377,929.2824 E 2,331,034.0595
BACK = S 76° 29′ 49.80" E
AHEAD = S 43° 29′ 45.47" E
CHORD BEAR = S 59° 59′ 47.63" E

COURSE FROM PT DAN_DR_EX2 TO 101 S 43° 29′ 45.47" E DIST 514.3983

POINT 101 N 378,037.9385 E 2,331,895.9176 STA 15+90.57

ENDING CHAIN DAN_DR_EX DESCRIPTION

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 — CERTIFICATE OF AUTHORIZATION — SOUTH CAROLINA

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 31461 PYLANT MATTE 7.30.24

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV.NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
REFERENCE DATA SHEET

SCALE: N.A. RTE.

FED. ROAD DIV. NO.	STATE	COUNTY	PROJECT ID	NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		6

BEGIN CONSTRUCTION SHARED USE PATH STA. 10+00.00
CONTRACTOR TO TIE INTO EXISTING PATH
THOMAS ISLAND DRIVE
10+00
CURVE A1
BASELINE A
PC = 10+14.23
PT = 10+51.10
STA +82.22
O.S. 33.80'
11+00
PC = 11+01.36
PT = 11+10.94
CURVE A2
S 55°00' 44" E
CWS AIR RELEASE VALVE VAULT MODIFICATION
ADJUST TO GRADE AND SEE
CWS DETAIL WW-69A ON SHEET C-505
PRES. 66' R/W PER PB CABO PG 301P M.H.W.
NEW TRANS. R/W
PC = 11+40.71
CURVE A3
12+00
PT = 12+33.39
PT = 12+76.56
CURVE A4
PT = 12+31.18
8' CONCRETE SHARED USE PATH
SEE SHEET 3 FOR TYPICAL SECTION
SAFETY RAIL
SEE SHEET C-502
FOR DETAILS
WOOD BOLLARD
SEE SHEET C-502
FOR DETAILS
STA +71.21
O.S. 105.00'
BEGIN 8' BOARDWALK
STA.12+52.50
SEE STRUCTURAL PLANS
W5-4A (18" X 18")
PATH NARROWS
13+00
S 69°55' 44" E
CURVE A5
PC = 13+13.19
PT = 13+21.23
PRES. VARIABLE' R/W PER PB CABO PG 310A M.H.W.
BEGIN BRIDGE
BEGIN 10' SECTION
STA.13+43.77
SEE STRUCTURAL PLANS
END 8' BOARDWALK
BEGIN TRANSITION
TO 10' SECTION
STA.13+14.31
END BRIDGE
END 10' SECTION
STA.14+03.77
SEE STRUCTURAL PLANS
S 79°08' 11" E
14+00
PC = 14+23.40
PT = 14+73.79
BEGIN 8' BOARDWALK
STA.14+29.27
NEW 105' R/W
END 8' BOARDWALK
STA.14+49.75
STA +40.90
O.S. 105.00'
CURVE A6
CURVE A7
PC = 14+82.68
PT = 15+37.14
15+00
SAFETY RAIL
SEE SHEET C-502
FOR DETAILS
NEW TRANS. R/W
W5-4A (18" X 18")
WOOD BOLLARD
SEE SHEET C-502
FOR DETAILS
S 74°28' 15" E
BASELINE A
15+90
PI = 15+72.55
STA +63.45
O.S. 38.35'
PRES. VARIABLE' R/W PER PB CABO PG 310A M.H.W.
FLUORESCENT YELLOW-GREEN
WII-15 (36"x36") WITH W16-9P(24"x12")
AHEAD
CONTRACTOR SHALL COORDINATE
WITH ADJACENT DEVELOPER'S
CONTRACTOR TO PLACE STOP BAR
BEHIND CROSSWALK
DRIVEWAY, CULVERT, AND CURB
TO BE DEVELOPED UNDER
SEPERATE PROJECT
EXISTING TREE TO REMAIN
APPLY TREE PROTECTION FENCE
BEGIN CONSTRUCTION BASELINE B STA. 200+00.00
CONTRACTOR TO CONSTRUCT PED RAMP
TO MATCH EXISTING ROADWAY
BASELINE B 199+80 200+00
S 76° 29' 50" E
201+00
RELOC. PC = 200+72.56
CONST. PED. RAMP
(STD. DWG. 720-971-24)
STOP
R1-1(18"x18")
CONST. PED. RAMP
(STD. DWG. 720-971-24)
CONST. PED. RAMP
(STD. DWG. 720-969-11)
DANIEL ISLAND DRIVE
MATCHLINE
BASELINE B STA. 201+00.00
SEE SHEET 7
INSTALL HIGH VISIBILITY
CROSSWALK PAVEMENT MARKINGS
END CONSTRUCTION BASELINE A STA. 15+82.46
CONTRACTOR TO CONSTRUCT PED RAMP
TO MATCH EXISTING ROADWAY
EXISTING TREE TO REMAIN
APPLY TREE PROTECTION FENCE
INSTALL SOLAR POWERED RECTANGULAR
RAPID-FLASHING BEACON (RRFB) WITH
THERMAL PEDESTRIAN DETECTION,
ON POST WITH DOUBLE SIDED
FLUORESCENT YELLOW-GREEN WII-15
(30"x30") WITH W16-7P(24"x12").
SEE DETAIL SHEET
-N-
0 20 40 60 80

COMPANY	CONTACT	PHONE NO.
DOMINION ENERGY Power Distribution	Jim Swittenberg	(843)-576-8622
AT&T Telephone	Kaye Jefferson	(843)-745-4424
HOME TELECOM Telephone	Scott Pate	(843)-826-5471
SEGRA Telecom	James Gregg	(843)-296-5553
CHARLESTON WATER SYSTEM Water and Sewer	Chris Troutman	(843)-727-6875

GENERAL NOTES:
SEE REFERENCE DATA SHEET 5A FOR ALL CURVE DATA.

CONTRACTOR TO CONSTRUCT PEDESTRIAN RAMPS WITH DETECTABLE WARNING UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE RCE.

WHERE PROPOSED PAVEMENT ABUTS EXISTING PAVEMENT, MATCH LINE AND GRADE OF THE EXISTING PAVEMENT. SAWCUT EXISTING PAVEMENT CLEAN AND STRAIGHT AND TACK EXISTING EDGE PRIOR TO PAVING.

CONTRACTOR SHALL REFER TO THE MOST CURRENT EDITION OF THE SCDOT STANDARD DRAWINGS AS NECESSARY.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE SHEET

EXC. =	12.4 CY
BORR. EXC. =	668.7 CY
SUB TOT. =	681.1 CY
LESS BORR EXC =	668.7 CY
TOTAL =	12.4 CY

EMB. =	782.4 CY
40% =	312.9 CY
SUB TOT. =	1095.3 CY
LESS PLDCC LIFT =	306.7 CY
LESS STONE BRIDGE LIFT =	107.5 CY
LESS BORR EXC =	668.7 CY
TOTAL =	12.4 CY

BEGIN PROJECT
STA.10+00.00 (BASELINE A)
MATCH PROPOSED PATH
ELEV. = 5.61'
VPI = 10+64.23
ELEV 8.50
(+)4.36%
(-)0.00%
FINISH GRADE
EXISTING GRADE
VPC = 10+49.23
ELEV 7.85
SSD = 108.00'
K = 7
30.00' VC
DS = 14 MPH
ELEV 8.50
VPT = 10+79.23
BEGIN BOARDWALK
STA.12+52.50
SEE STRUCTURAL PLANS
BEGIN BRIDGE
STA.13+43.77
SEE STRUCTURAL PLANS
END BRIDGE
STA.14+03.77
SEE STRUCTURAL PLANS
END BOARDWALK
STA.14+49.75
SEE STRUCTURAL PLANS
MHHW ELEV. = 2.75'
MHW ELEV. = 2.42'
MLW ELEV. = -2.99'
MLLW ELEV. = -3.18'
FINISH GRADE
VPC = 15+00.00
ELEV 8.50
K = 11
30.00' VC
DS = 14 MPH
ELEV 8.94
VPT = 15+30.00
VPI = 15+45.00
ELEV 9.38
(-)0.00%
(+)2.93%
(+)2.93%
(-)0.00%
VPI = 15+15.00
ELEV 8.50
VPC = 15+30.00
ELEV 8.94
SSD = 102.00'
K = 11
30.00' VC
DS = 14 MPH
ELEV 9.38
VPT = 15+60.00
EXISTING GRADE
END CONSTRUCTION
STA.15+82.46 (BASELINE A)
MATCH EXISTING SURFACE
ELEV. = 9.38'
20 10 0 -10 -20
FINISH GRADE 5.70 7.88 8.50 8.50 8.50 8.50 8.50 8.50 8.50 8.50 8.50 9.28
EXIST. GROUND GRADE 5.61 8.07 7.74 7.06 7.06 1.86 1.45 -3.98 -3.13 0.46 3.60 7.22
10+00 11+00 12+00 13+00 14+00 15+00 16+00

HYDROLOGY DATA:
DA = 0.08 SQ MI
Q₂₅ = 203 CFS
VEL = 0.17 FT/SEC
10 YEAR W.S.ELEV = 5.40 FT
FLOW AREA = 1311.32 SQ FT
Q₁₀₀ = 348 CFS
VELOCITY = 0.10 FT/SEC
100 YEAR W.S.ELEV = 10.20 FT
FLOW AREA = 7489.54 SQ FT
OVERTOPPING FLOOD:
Q = 302 CFS
PROBABILITY = > 2%

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY: JMT
235 MAGRATH DARBY BLVD. SUITE 275 MT. PLEASANT, SC 29464 (843) 779-2060

SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. CERTIFICATE OF AUTHORIZATION No. 3943

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 31461 RYAN S. MATTIE 7.30.24

2PROLINE_S0.DGN

FED. ROAD DIV. NO.	STATE	COUNTY	PROJECT ID	NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		7

CONTRACTOR SHALL COORDINATE WITH ADJACENT DEVELOPER'S CONTRACTOR TO SEE IF NEW PIPE CAN BE INSTALLED TO ELIMINATE THE JUNCTION BOX
CONSTRUCT JUNTION BOX
PLACE 24 LF 15" SMOOTH WALL PIPE
8' CONCRETE SHARED USE PATH SEE SHEET 3 FOR TYPICAL SECTION
BASELINE B
END CONSTRUCTION SHARED USE PATH STA. 204+41.19 CONTRACTOR TO TIE INTO EXISTING SIDEWALK
SHARED USE PATH TO TIE INTO WORK BY ADJACENT DEVELOPER
DRIVEWAY, CULVERT, AND CURB TO BE DEVELOPED UNDER SEPERATE PROJECT
PRES. 78' R/W PER PB CABQ PG 40-2 M.H.W.
MATCHLINE BASELINE B STA. 201+00.00 SEE SHEET 6
201+00
CURVE B1
202+00
CURVE B2
203+00
204+00
CURVE B3
204+60
RELOC. PT = 204+52.73
RELOC. PCC = 201+92.57
RELOC. PRC = 204+05.77
℄ DANIEL ISLAND DRIVE
PRES. 78' R/W PER PB CABP PG 386A M.H.W.
INSTALL SOLAR POWERED RECTANGULAR RAPID-FLASHING BEACON (RRFB), WITH THERMAL PEDESTRIAN DETECTION, ON POST WITH DOUBLE SIDED FLUORESCENT YELLOW-GREEN W11-15 (36"x36") WITH W16-7P (24"x12"). SEE DETAIL SHEET
AHEAD
8
7
6
N
ONLY
20
0 20 40 60 80

GENERAL NOTES:
SEE REFERENCE DATA SHEET 5A FOR ALL CURVE DATA.

CONTRACTOR TO CONSTRUCT PEDESTRIAN RAMPS WITH DETECTABLE WARNING UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE RCE.

WHERE PROPOSED PAVEMENT ABUTS EXISTING PAVEMENT, MATCH LINE AND GRADE OF THE EXISTING PAVEMENT. SAWCUT EXISTING PAVEMENT CLEAN AND STRAIGHT AND TACK EXISTING EDGE PRIOR TO PAVING.

CONTRACTOR SHALL REFER TO THE MOST CURRENT EDITION OF THE SCDOT STANDARD DRAWINGS AS NECESSARY.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE SHEET

EXC. =	10.2 CY	EMB. =	98.2 CY
BORR. EXC. =	127.3 CY	40% =	39.3 CY
SUB TOT. =	137.5 CY	SUB TOT. =	137.5 CY
LESS BORR EXC =	127.3 CY	LESS BORR EXC =	127.3 CY
TOTAL =	10.2 CY	TOTAL =	10.2 CY

BEGIN CONSTRUCTION STA. 200+00.00 (BASELINE B) MATCH EXISTING SURFACE ELEV.= 9.75'
VPI = 200+80.00 ELEV 10.40
(+)0.81%
(-)0.42%
FINISH GRADE
EXISTING GRADE
VPC = 200+65.00 ELEV 10.28
VPT = 200+95.00 ELEV 10.34
SSD = 90.00' K = 25 30.00' VC DS = 14 MPH
END PROJECT STA. 204+41.19 (BASELINE B) TIE INTO PROPOSED SIDEWALK ELEV.= 8.82'
FINISH GRADE
EXIST. GROUND
9.75 10.16 10.32 10.11 9.90 9.69 9.48 9.27 9.06 8.85
8.85 9.77 10.01 9.68 9.62 9.35 8.61 8.43 7.86 8.64
199+00 200+00 201+00 202+00 203+00 204+00 205+00

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

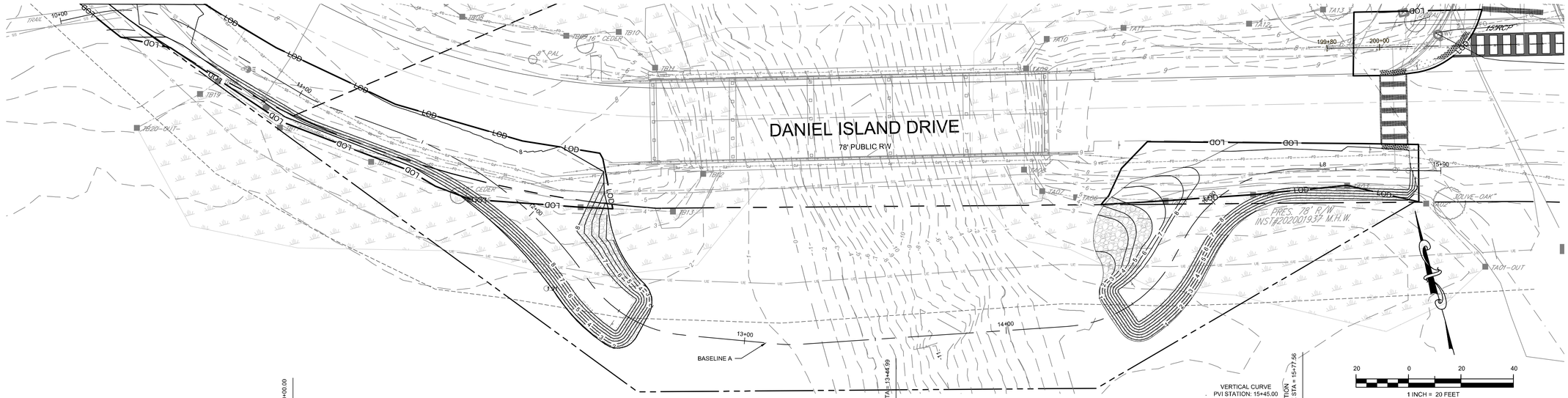
PLANS PREPARED BY: JMT
235 MAGRATH DARBY BLVD. SUITE 275 MT PLEASANT, SC 29464

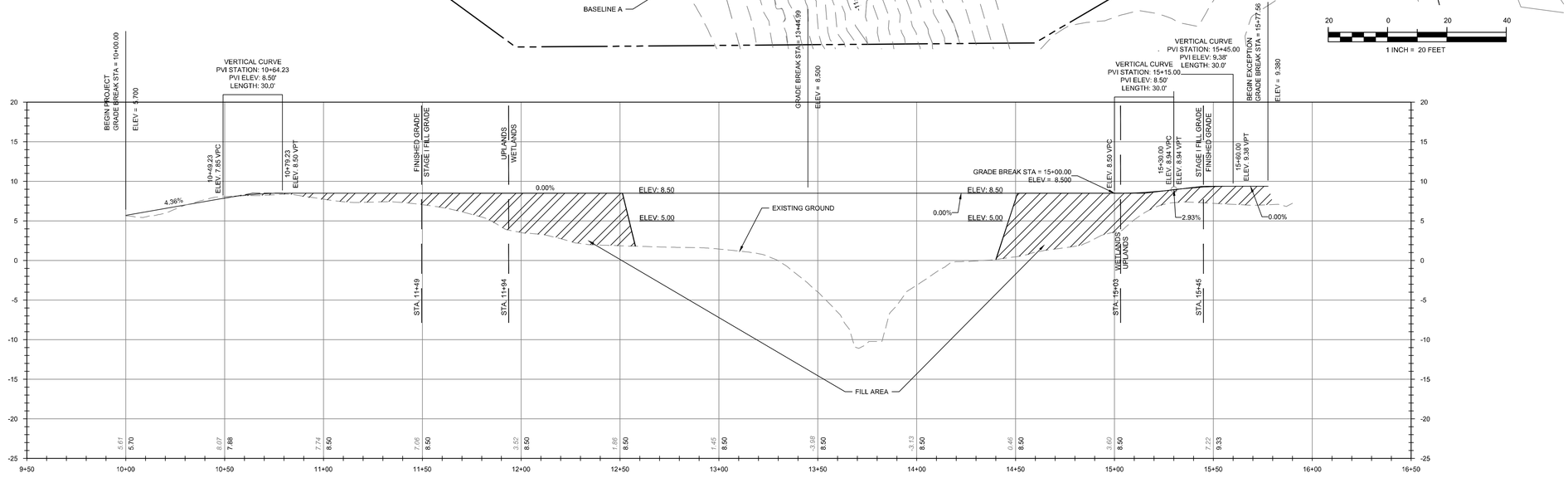
SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 31461 RYAN S. MATTIE 7.30.24

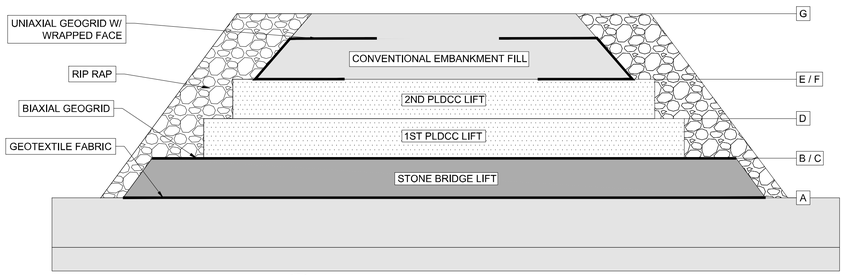
2PROLINE_50.DGN

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	G1





BASELINE A
HORIZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 5'



1 / G1 **TYPICAL EMBANKMENT SECTION**
N.T.S.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — S&ME, INC. C00473 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — No. 35390 11/25/24 — AUSTIN A. COX

PLANS PREPARED BY:
7410 NORTHSIDE DR.
SUITE 110
NORTH CHARLESTON, SC 29420
(843) 884-0032

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
MARSH EMBANKMENT FILL PLAN SHEET

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	G2

STAGED FILL PLAN NOTES:

1. NEW EMBANKMENT WORK IN THE PLANS IS NECESSARY TO CONNECT THE EXISTING ROADWAY EMBANKMENTS TO THE PILE SUPPORTED STRUCTURE THAT EXTENDS ACROSS THE CREEK.

2. STRUCTURE APPROACH EMBANKMENTS ARE TO BE CONSTRUCTED ENTIRELY WITHIN THE EASEMENT ADJACENT TO THE EXISTING CAUSEWAY.

3. THE GRADE WITHIN THE MARSH STRUCTURE APPROACH EMBANKMENTS, IS TO BE RAISED A MAXIMUM OF 9 FT ± ABOVE THE EXISTING MARSH GRADE (SEE DETAILS IN PLANS).

4. EMBANKMENT NOTES – STAGE 1:

   4.1. CONTRACTOR SHALL CONSTRUCT THE EMBANKMENTS WITH THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2007 EDITION, SUPPLEMENTAL SPECIFICATIONS, AND SUPPLEMENTAL TECHNICAL SPECIFICATIONS AND NOTES ON PLANS.

   4.2. PORTIONS OF THE EMBANKMENTS WILL BE CONSTRUCTED WITHIN THE SEMIDIURNAL TIDAL ZONE. CONTRACTOR SHOULD DETERMINE SEASONAL AND DAILY TIDE LEVEL PREDICTIONS AND CONSIDER HOW THEY WILL AFFECT CONSTRUCTION.

   4.3. CONTRACTOR SHALL FURNISH THE EMBANKMENT MATERIALS AND SEQUENCE EMBANKMENT CONSTRUCTION TO THE ELEVATIONS (NAVD88) SHOWN IN TABLE. REFER TO TYPICAL EMBANKMENT SECTION AND TABLE 1 EMBANKMENT CONSTRUCTION DETAILS, ON THIS SHEET, SHOWN FOR ILLUSTRATION.

   4.4. CONTRACTOR SHALL RESTRICT LOCATIONS OF STOCKPILE SOIL AWAY FROM NEWLY CONSTRUCTED EMBANKMENTS AND EXISTING EMBANKMENT EXTENDING THROUGH MARSH.

   4.5. TO LIMIT DISTURBANCE TO THE SUBGRADE AND EXISTING ROOT MAT, DO NOT GRUB IN THE TIDAL MARSH

   4.6. STRIP TOPSOIL AND REMOVE UNSUITABLE SOILS FROM SLOPES OF THE EXISTING EMBANKMENT.

   4.7. VERIFY MUDLINE (A) ELEVATIONS AGREE WITH ELEVATIONS PRESENTED IN THE TABLE. IF ELEVATIONS VARY BY MORE THAN 1 FT, CONTACT THE ENGINEER.

   4.8. WHERE EXISTING GROUND SURFACE ELEVATIONS EXCEED THE INSTALLATION ELEVATIONS PRESENTED IN THE TABLE, PLACEMENT OF THAT MATERIAL IS NOT REQUIRED.

   4.9. PLACE GEOTEXTILE (A) AT EXISTING MUDLINE ELEVATION WITH MACHINE DIRECTION PERPENDICULAR TO CENTERLINE, WITH 100 PERCENT COVERAGE ACROSS EMBANKMENT FOOTPRINT.

   4.10. PLACE STONE BRIDGE LIFT (B) OVER GEOTEXTILE (A) TO ELEVATIONS SHOWN IN TABLE.

   4.11. PLACE BIAXIAL GEOGRID (C) OVER BRIDGE LIFT (B) TO ELEVATIONS SHOWN IN TABLE WITH MACHINE DIRECTION PARALLEL TO CENTERLINE, WITH 100 PERCENT COVERAGE ACROSS FULL WIDTH OF BRIDGE LIFT.

   4.12. FABRICATE, INSTALL, AND MONITOR SETTLEMENT PLATES IMMEDIATELY AFTER PLACEMENT OF BRIDGE LIFT AND BIAXIAL GEOGRID IN ACCORDANCE WITH SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC–M–203–4, UNLESS NOTED OTHERWISE.

   – SETTLEMENT PLATES SHALL BE INSTALLED ALONG THE EMBANKMENT CENTERLINE AT STATIONS 12 + 20, 12 + 40, 14 + 60, AND 14 + 80.

   – AFTER INSTALLATION, SURVEY SETTLEMENT PLATE AND ADJACENT GROUND SURFACE ELEVATION DAILY DURING EMBANKMENT CONSTRUCTION, WEEKLY FOR THE FIRST MONTH AFTER TOPPING OUT EMBANKMENT, AND EVERY 2 WEEKS THEREAFTER.

   4.13. PLACE THE FIRST LIFT OF PERMEABLE LOW DENSITY CELLULAR CONCRETE (PLDCC) (D) OVER BIAXIAL GEOGRID (C) TO ELEVATIONS SHOWN IN TABLE.

   4.14. PLACE THE SECOND LIFT OF PLDCC (E) OVER FIRST LIFT OF PLDCC (D) TO ELEVATIONS SHOWN IN TABLE. LIFT MAY BE PLACED AFTER APPROPRIATE CURE TIME OF FIRST LIFT IN ACCORDANCE WITH SUPPLIER GUIDANCE.

   4.15. PLACE UNIAXIAL GEOGRID (F) OVER SECOND LIFT OF PLDCC WHERE SLOPES EXCEED 2(H):1(V), WITH MACHINE DIRECTION PERPENDICULAR TO CENTERLINE, MINIMUM EMBEDMENT LENGTH OF 4 FT PERPENDICULAR TO CENTERLINE, AND 100 PERCENT COVERAGE PARALLEL TO CENTERLINE.

   4.16. PLACE CONVENTIONAL EMBANKMENT FILL (G) OVER UNIAXIAL GEOGRID (F) TO ELEVATIONS SHOWN IN TABLE

   4.17. WRAP UNIAXIAL GEOGRID (F) OVER SLOPE FACE AND TUCK INTO EMBANKMENT FILL (G) FOR A MINIMUM RETURN EMBEDMENT LENGTH OF 4FT PERPENDICULAR TO THE CENTERLINE, AND MINIMUM EMBEDMENT DEPTH OF 6 INCHES (AS SHOWN ON TYPICAL SECTION).

   4.18. ARMOR EMBANKMENT SLOPES WITH GEOTEXTILE FABRIC AND RIP–RAP AS SHOWN ON DETAIL 2 SHEET C–501.

5.0 EMBANKMENT NOTES – STAGE 2

5.1 UPON COMPLETION OF THE STAGE 1 FILL TO THE ELEVATIONS DEFINED IN TABLE 1, CONTRACTOR SHALL NOT CONTINUE WITH EMBANKMENT WORK OR FOOTING CONSTRUCTION UNTIL DIRECTED BY ENGINEER.

5.2 CONTRACTOR SHALL MONITOR AND RECORD SETTLEMENTS AND PROVIDE A WEEKLY REPORT TO THE ENGINEER FOR CORRELATION WITH THE AMOUNTS EXPECTED AS PRESENTED IN TABLE 2.

5.3 CONTRACTOR SHALL PROCEED WITH STAGE 2 CONSTRUCTION AFTER THE ENGINEER REVIEWS THE SETTLEMENT PLATE DATA AND INDICATES POST–CONSTRUCTION SETTLEMENTS WILL BE ACCEPTABLE. THIS IS ANTICIPATED TO TAKE UP TO 18 MONTHS FROM COMPLETION OF STAGE 1, AND EMBANKMENT SETTLEMENTS OF APPROXIMATELY 10 TO 12 INCHES ARE EXPECTED OVER THIS TIME PERIOD.

5.4 STAGE 2 CONSTRUCTION SHALL INCLUDE PLACEMENT OF FINAL LIFT, FINAL SLOPE DRESSING /GRADING, CONSTRUCTION OF FOOTINGS FOR ABUTMENTS 1 AND 2, AND CONSTRUCTION OF FIRST AND LAST BOARDWALK APANS CONNECTING TO THE ABUTMENTS. FINAL LIFT INCLUDES CONVENTIONAL FILL TO OBTAIN FINAL GRADE, SODDING, PERVIOUS CONCRETE, AND ADDITIONAL ARMOR STONE AS NEEDED TO REACH FINAL SLOPE GRADE.

5.5 CONTRACTOR MAY PROPOSE, AT THEIR OWN COSTS, A DIFFERENT MEANS AND METHOD TO ACHIEVE THE DESIRED CONSTRUCTION SETTLEMENT, AND ACHIEVE THE ULTIMATE POST–CONSTRUCTION SETTLEMENT GOALS. ANY PROPOSED DEVIATION WOULD NEED TO BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER. POST CONSTRUCTION SETTLEMENT GOALS ARE NO MORE THAN 3 INCHES.

TABLE 1: EMBANKMENT CONSTRUCTION DETAILS

MATERIAL (SCDOT SPECIFICATION REFERENCE	STATION 11+60 TO 12+25	STATION 12+25 TO 12+60	STATION 14+40 TO 15+50
A: MUDLINE / GEOTEXTILE (TYPE GT3 GEOTEXTILE PER SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-203-3)	+2 TO +4	+2 TO +4	+0 TO +3
B: TOP OF STONE BRIDGE LIFT (STONE PER SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-205-3)	+4	+3 ½	+3
C: BIAXIAL GEOGRID (TYPE B4 GEOGRID PER SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-203-2)	+4	+3 ½	+3
D: TOP OF FIRST PLDCC LIFT (PER SECTION 6.3 OF FLOWABLE FILL SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-210, WITH MAXIMUM UNIT WEIGHT OF 30 PCF AND MINIMUM COMPRESSIVE STRENGTH OF 100 PSI)	+5 ½	+5 ½	+5
E: TOP OF SECOND PLDCC LIFT	+7	+7	+6 ½
F: UNIAXIAL GEOGRID WITH WRAPPED FACE (TYPE U2 GEOGRID PER SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-203-2)	+7	+7	+6 ½
G: TOP OF CONVENTIONAL EMBANKMENT FILL (SOIL TYPE A-1 MEETING SCDOT STANDARD SPECIFICATION REQUIREMENTS)	+8 ½	8 ½	+8 ½

TABLE 2 - EMBANKMENT SETTLEMENT ESTIMATES

Location	Total Predicted Settlement (inches)	Elapsed Settlement / Remaining Settlement (inches)							
		Months After Topping Out Embankment							
		1	4	6	9	12	18	24	36
End Bent 1 - Sta. 12+50	14	3 / 11	6 / 8	7 / 7	8 / 6	9 / 5	10 / 4	11 / 3	12 / 2
End Bent 16 - Sta. 14+50	14	4 / 10	8 / 6	9 / 5	10 / 4	11 / 3	12 / 2	13 / 1	13 / 1

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION S&ME, INC. C00473

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35390 11/25/24 AUSTIN A. COX

PLANS PREPARED BY:

7410 NORTHSIDE DR.
SUITE 110
NORTH CHARLESTON, SC 29420
(843) 556-7005

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CAROLOPOLIS CONDITA A.D. 1670

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
MARSH EMBANKMENT FILL
PLAN SHEET

SCALE: N/A RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	TC1

TRAFFIC CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE AT LEAST ONE (1) WEEK PRIOR TO STARTING CONSTRUCTION.
2. NO ROAD CLOSURES ARE ALLOWED UNDER THIS PERMIT. REQUESTS FOR ROAD CLOSURES MUST BE SUBMITTED TO THE SCDOT AND THE CITY IN WRITING ALONG WITH AN APPROPRIATE DETOUR PLAN FOR REVIEW AND APPROVAL.
3. THE CONTRACTOR MUST INCLUDE A TRAFFIC CONTROL PLAN FOR ALL LANE CLOSURES AND LANE SHIFTS: TO INCLUDE LOCATION, DATE AND TIME. THIS MUST BE RECEIVED BY THE SCDOT AND THE CITY 48 HOURS PRIOR TO THE START TIME OF THE PROPOSED WORK WITHIN THE RIGHT-OF-WAY (IF ONE WAS NOT APPROVED DURING INITIAL PERMIT REVIEW/APPROVAL).
4. THE LIMITS OF DISTURBANCE (LOD) SHALL BE DEFINED AND RESOURCES TO PROTECT SHALL BE DELINEATED.
5. SITE SHALL BE PREPARED ACCORDING TO SWPPP SHEET IN THIS DRAWING SET. EROSION AND SEDIMENT CONTROL BMPS SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION AND PROJECT COMPLETION.
6. TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE ERECTED. REFER TO PRELIMINARY TRAFFIC CONTROL PLAN AND TRAFFIC CONTROL DETAILS IN THIS PLAN SET. CONTRACTOR SHALL USE THESE SHEETS AS A SUPPLEMENT TO THEIR TRAFFIC CONTROL PLAN.
7. CONTRACTOR SHALL PROVIDE THE CITY WITH 14 DAYS NOTICE PRIOR TO CHANGES TO TRAFFIC CONTROL.
8. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SCDOT STANDARD DRAWINGS.
9. LANE CLOSURES ARE PROHIBITED MONDAY THROUGH FRIDAY FROM 6AM TO 8AM AND FROM 3PM TO 6PM.
10. THE POSTED SPEED LIMIT FOR ST. THOMAS ISLAND DR. IS 40 MPH.
11. SCDOT STANDARD DRAWING 610-005-010 SHOULD BE USED FOR FLAGGING OPERATIONS FOR ANY WORK WITHIN ROADWAY.

TRAFFIC & TRANSPORTATION NOTES

1. SIGHT DISTANCE VISIBILITY AT ALL EXITS AND/OR INTERSECTIONS WILL BE MAINTAINED IN ACCORDANCE WITH SCDOT'S ACCESS AND ROADSIDE MANAGEMENT STANDARDS MANUAL.
2. ALL TRAFFIC CONTROL DEVICES WILL BE TO MUTCD STANDARDS (MANUAL ON UNIFORM TRAFFICS CONTROL DEVICES)
3. IF TRAFFIC SIGNS OR MARKINGS WITHIN THE RIGHT-OF-WAY ARE IMPACTED, RELOCATION OF THESE ITEMS MUST BE COORDINATED WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
4. IF THE STREET IS BLOCKED OR IMPACTED DURING CONSTRUCTION AT ANY TIME FOR ANY REASON A STREET BLOCKING PERMIT WILL BE REQUIRED. COORDINATE WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
5. NO CONSTRUCTION PARKING OR STAGING WILL BE PERMITTED WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR AUTHORIZATION BY TRAFFIC AND TRANSPORTATION.
6. LANE CLOSURES OF ANY TYPE OR DURATION WITHIN THE PUBLIC RIGHT-OF-WAY MUST BE APPROVED BY TRAFFIC AND TRANSPORTATION WELL IN ADVANCE OF THE OCCURRENCE. COORDINATE WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
7. CONSTRUCTION AND DEMOLITION TRAFFIC MUST AVOID RESIDENTIAL STREETS AT ALL TIMES UNLESS THERE ARE NO ALTERNATIVE ROUTES. IF IMPACTS TO RESIDENTIAL STREET ARE ANTICIPATED, THE CONTRACTOR SHOULD CALL TRAFFIC AND TRANSPORTATION PRIOR TO THE ROUTE.
8. REMOVAL OR CHANGES TO PARKING METERS AND/OR PARKING METERED SPACES OR OTHER ON-STREET PARKING/LOADING ZONES MUST BE COORDINATED WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
9. IF METERED (OR NON-METERED) PARKING SPACES THAT ARE NOT APPROVED FOR REMOVAL ARE BLOCKED OR IMPACTED DURING DEMOLITION OR CONSTRUCTED AT ANY TIME FOR ANY REASON A METER BAG PERMIT (OR CONSTRUCTION PARKING PERMIT) WILL BE REQUIRED. COORDINATE WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
10. IF TRAFFIC SIGNALS OR TRAFFIC SIGNAL EQUIPMENT IS IMPACTED IN ANY WAY, SHOW EXISTING AND PROPOSED CHANGES. CHANGES OR IMPACTS TO TRAFFIC SIGNALS ITEMS MUST BE COORDINATED WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
11. IMPROVEMENTS TO THE RIGHT-OF-WAY PAVEMENT MARKINGS MAY BE REQUIRED. CROSSWALKS, CENTERLINES, PAVEMENT MARKING ARROWS, BIKE AND PEDESTRIAN MARKINGS, ETC. ADJACENT TO THE SITE MAY BE REQUIRED TO BE REPLACED IF DAMAGED DURING CONSTRUCTION.
12. ANY CURBS, SIDEWALKS, PAVEMENT, ETC. DAMAGED DURING CONSTRUCTION WILL BE REQUIRED TO BE REPAIRED/REPLACED.

TRAFFIC & SIGN STANDARD NOTES

1. TRAFFIC SIGNS SHOULD BE DESIGNED AND PLACED IN ACCORDANCE WITH THE LATEST REVISION OF THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.
2. NON-TRAFFIC RELATED SIGNS SHOULD BE APPROVED BY THE SCDOT AND/OR THE CITY OF CHARLESTON.
3. REGULATORY, WARNING, AND GUIDE SIGNS SHALL BE FABRICATED WITH ASTM INTERNATIONAL, FORMERLY AMERICAN SOCIETY FOR TESTING AND MATERIALS, TYPE III (HIGH INTENSITY) OR GREATER RETRO-REFLECTIVE SHEETING. UPON APPROVAL BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION PARKING SIGNS AND NONTRAFFIC RELATED SIGNS MAY BE FABRICATED WITH ASTM TYPE I (ENGINEER GRADE) OR GREATER MATERIAL.
4. THE CONTRACTOR SHALL RESET EXISTING STREET SIGNS IN LOCATIONS DESIGNATED BY THE CITY.
5. STREET NAME SIGNS SHALL BE FABRICATED USING EXTRUDED ALUMINUM BLADES 9 INCHES IN HEIGHT. THE MINIMUM LENGTH IS 24 INCHES WITH 48 INCHES AS THE MAXIMUM. THE ACTUAL LENGTH OF THE BLADE WILL BE DICTATED BY THE NUMBER OF LETTERS IN THE NAME.
6. THE STREET NAME COLOR SCHEME SHOULD BE WHITE ASTM TYPE III LETTERING ON A GREEN BACKGROUND.

TRAFFIC & SIGN STANDARD NOTES CONT'D

7. THE STREET NAME LETTER FONT (OR TYPEFACE) SHOULD BE FHWA SERIES $^7/_{32}$ C$^9/_{32}$; COMMONLY KNOWN AS HIGHWAY GOTHIC $^7/_{32}$ C$^9/_{32}$.
8. ALL STREET NAMES ARE TO CONSIST OF 6 INCH UPPER-CASE LETTERS WITH 4.5 INCH LOWER-CASE LETTERS. THE STREET DESIGNATIONS, E.G., ST, RD, DR, CIR, PKWY, AVE, BLVD ARE TO BE 50% SUPERSCRIPT.
9. THE STREET NAME, INCLUDING THE SUPERSCRIPT DESIGNATION, SHALL BE CENTERED VERTICALLY AND HORIZONTALLY ON THE BLADE.
10. THE SPACING FROM THE BLADE EDGE TO THE BEGINNING AND END OF THE STREET NAME, INCLUDING THE SUPERSCRIPT DESIGNATION, SHOULD BE A MINIMUM OF 2 INCHES.
11. STREET NAME SIGNS SHOULD BE MOUNTED WITH A VERTICAL CLEARANCE OF AT LEAST 8 FT. MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT. ALL OTHER SIGNS SHALL BE MOUNTED AT LEAST 7 FT. FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT, EXCEPT WHEN A SUPPLEMENTAL PLAQUE OR SECONDARY SIGN IS PERMITTED.
12. IF A SUPPLEMENTAL PLAQUE OR SECONDARY SIGN IS PERMITTED TO BE MOUNTED ON THE SAME ASSEMBLY AS ANOTHER SIGN, THE MAJOR (MOST IMPORTANT) SIGN SHALL BE INSTALLED ABOVE THE SUPPLEMENTAL PLAQUE OR SECONDARY SIGN. THE MINIMUM HEIGHT FROM THE BOTTOM OF THE SUPPLEMENTAL PLAQUE OR SECONDARY SIGN TO THE NEAR EDGE OF THE PAVEMENT SHALL BE 6 FT.
13. THE MINIMUM LATERAL OFFSET FOR INSTALLED SIGNS SHOULD BE 2 FT. MEASURED FROM THE NEAREST SIGN EDGE TO THE PAVEMENT EDGE (OR THE FACE OF CURB). A MINIMUM OFFSET OF 1 FT. FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.
14. ALL TRAFFIC SIGN POSTS SHOULD BE SECURELY INSTALLED AT LEAST 2 FT. IN THE GROUND. TRAFFIC SIGN POSTS SHOULD BE GREEN, 3 LBS/FT STEEL U-CHANNEL POSTS, BREAKAWAY, AND 12 FT. IN LENGTH EXCEPT FOR STREET NAME SIGN POSTS.
15. ALL STREET NAME POSTS SHOULD BE ROUND, 2 3/8 INCH OD, BREAKAWAY, ALUMINUM OR STEEL, AND AT LEAST 10 FT. IN LENGTH.
16. ALL SPEED LIMIT / STREET SIGNS THAT ARE IMPACTED OR REMOVED DURING CONSTRUCTION MUST BE REPLACED/REINSTALLED IN ACCORDANCE WITH SCDOT AND MUTCD STANDARDS.
17. IF TRAFFIC SIGNS OR MARKINGS WITHIN THE RIGHT-OF-WAY ARE IMPACTED, RELOCATION OF THESE ITEMS MUST BE COORDINATED WITH TRAFFIC AND TRANSPORTATION PRIOR TO CONSTRUCTION.
18. POSTED SPEED LIMIT: 35 MPH.
19. SIGNS SHALL MEET MUTCD STANDARDS FOR REFLECTIVITY.
20. THE MINIMUM LATERAL OFFSET FOR INSTALLED SIGNS SHALL BE 2 FT. MEASURED FROM THE NEAREST SIGN EDGE TO THE PAVEMENT EDGE (OR THE FACE OF THE CURB). A MINIMUM OFFSET OF 1 FT. FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE SIDEWALK WIDTH IS LIMITED OF WHERE EXISTING POLES ARE CLOSE TO THE CURB.
21. SIGNS SHALL BE INSTALLED PER THE STANDARD SCDOT SPECIFICATIONS.
22. THE SHARED USE PATH SHALL BE ADA COMPLIANT IN ACCORDANCE WITH THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
23. DANIEL ISLAND DRIVE, WITHIN THE LIMITS OF THE PROJECT, IS OWNED AND MAINTAINED BY THE CITY OF CHARLESTON.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIE
7.30.24

PLANS PREPARED BY: 235 MAGRATH DARBY BLVD. SUITE 275 MT. PLEASANT, SC 29464 (843) 779-3700

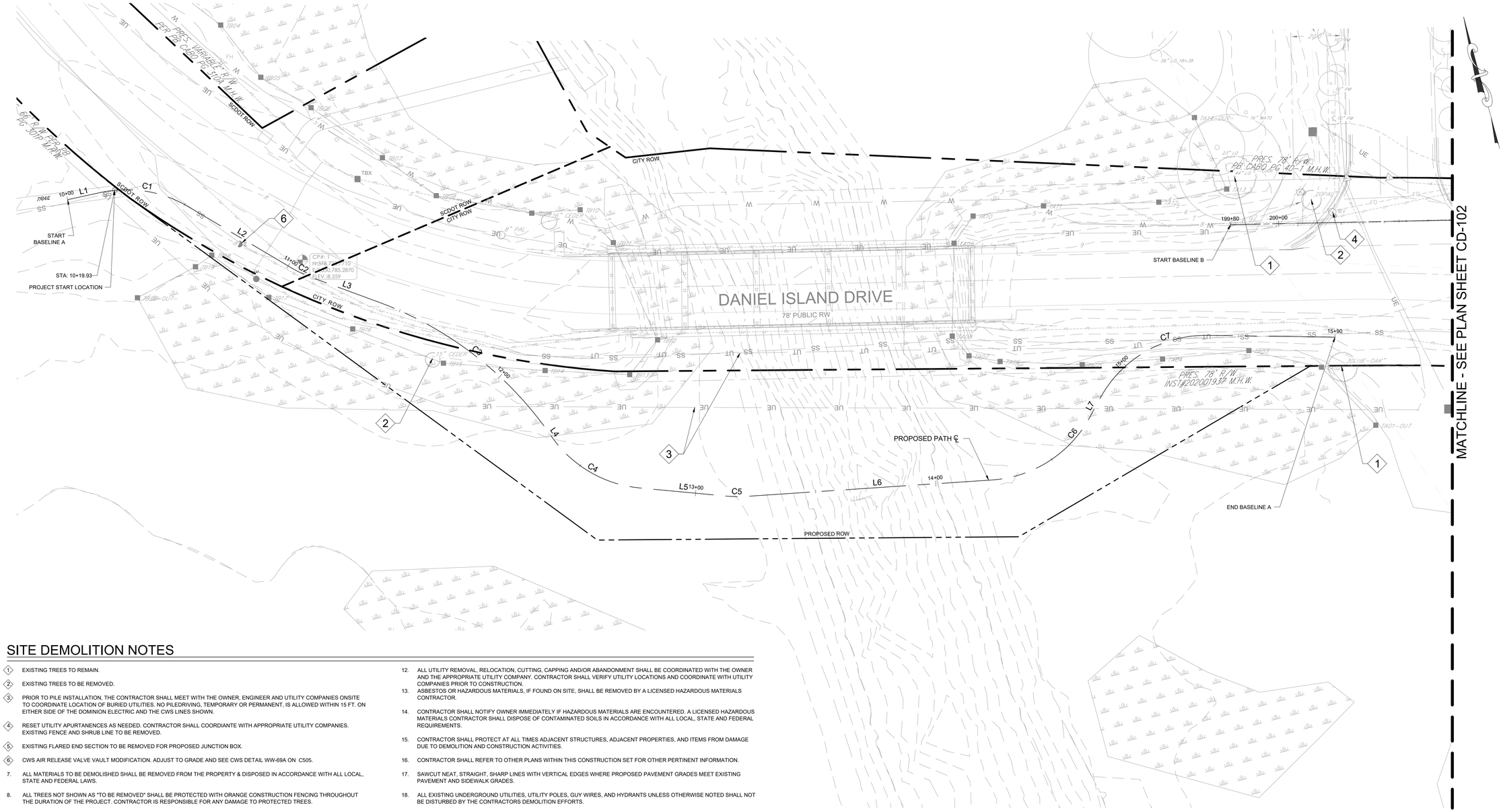
JMT®

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
TRAFFIC CONTROL NOTES

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CD-101



SITE DEMOLITION NOTES

1. EXISTING TREES TO REMAIN.
2. EXISTING TREES TO BE REMOVED.
3. PRIOR TO PILE INSTALLATION, THE CONTRACTOR SHALL MEET WITH THE OWNER, ENGINEER AND UTILITY COMPANIES ONSITE TO COORDINATE LOCATION OF BURIED UTILITIES. NO PILEDRIVING, TEMPORARY OR PERMANENT, IS ALLOWED WITHIN 15 FT. ON EITHER SIDE OF THE DOMINION ELECTRIC AND THE CWS LINES SHOWN.
4. RESET UTILITY APURTANENCES AS NEEDED. CONTRACTOR SHALL COORDIANTE WITH APPROPRIATE UTILITY COMPANIES. EXISTING FENCE AND SHRUB LINE TO BE REMOVED.
5. EXISTING FLARED END SECTION TO BE REMOVED FOR PROPOSED JUNCTION BOX.
6. CWS AIR RELEASE VALVE VAULT MODIFICATION. ADJUST TO GRADE AND SEE CWS DETAIL WW-69A ON C505.
7. ALL MATERIALS TO BE DEMOLISHED SHALL BE REMOVED FROM THE PROPERTY & DISPOSED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS.
8. ALL TREES NOT SHOWN AS "TO BE REMOVED" SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCING THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO PROTECTED TREES.
9. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE CITY AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF THE CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
11. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES AND PERMIT REQUIREMENTS.
12. ALL UTILITY REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE OWNER AND THE APPROPRIATE UTILITY COMPANY. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND COORDINATE WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION.
13. ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR.
14. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED. A LICENSED HAZARDOUS MATERIALS CONTRACTOR SHALL DISPOSE OF CONTAMINATED SOILS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
15. CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES, ADJACENT PROPERTIES, AND ITEMS FROM DAMAGE DUE TO DEMOLITION AND CONSTRUCTION ACTIVITIES.
16. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
17. SAWCUT NEAT, STRAIGHT, SHARP LINES WITH VERTICAL EDGES WHERE PROPOSED PAVEMENT GRADES MEET EXISTING PAVEMENT AND SIDEWALK GRADES.
18. ALL EXISTING UNDERGROUND UTILITIES, UTILITY POLES, GUY WIRES, AND HYDRANTS UNLESS OTHERWISE NOTED SHALL NOT BE DISTURBED BY THE CONTRACTORS DEMOLITION EFFORTS.
19. EXISTING CURB AND GUTTER AND CONCRETE SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT. NO PATCHING WILL BE PERMITTED.
20. CONTRACTOR TO CLEAN UP DEBRIS/TRASH AND REMOVE/SPREAD DIRT PILES.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 31461 — RYAN E. MATTIE — 7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

SC811

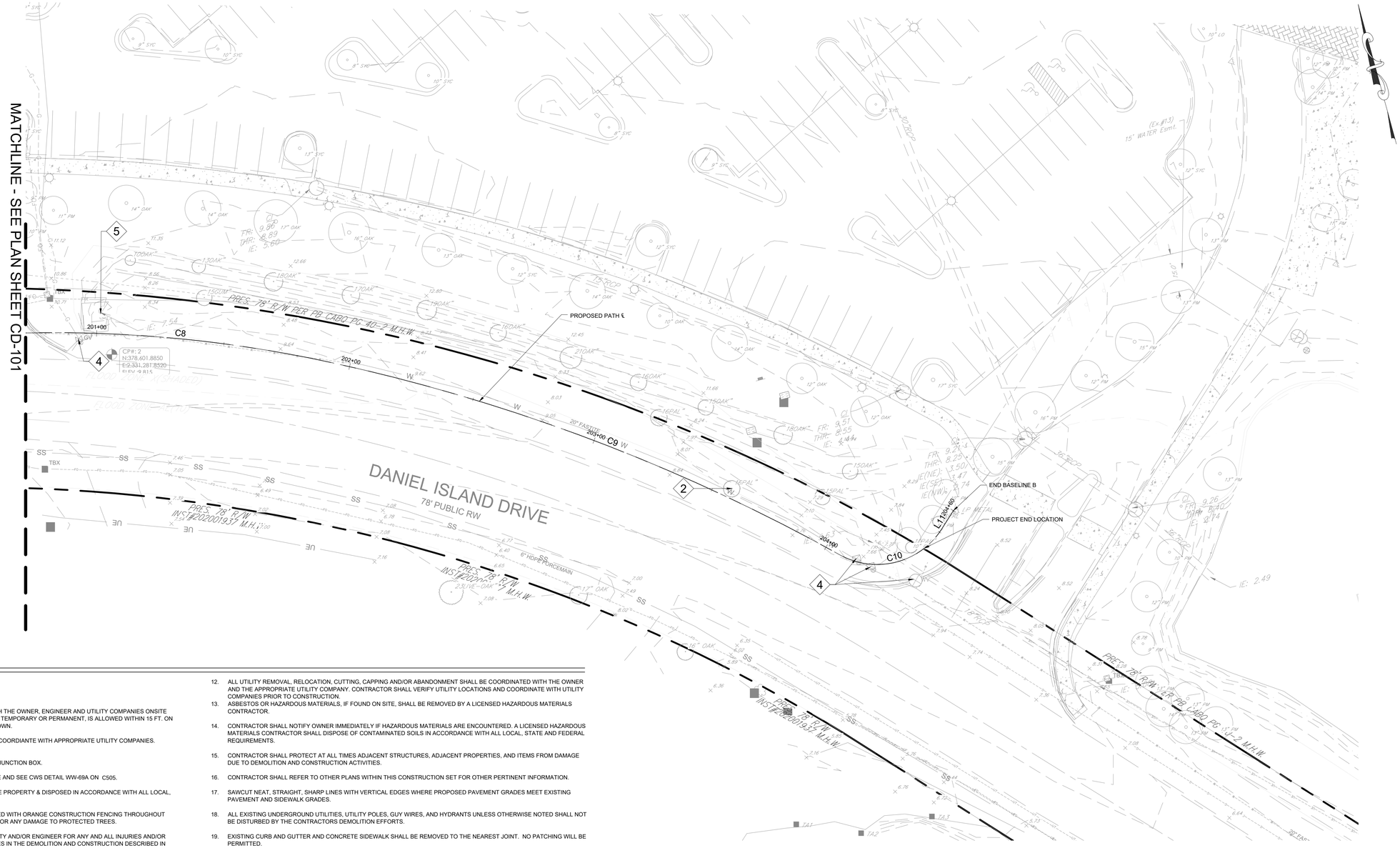
20 0 20 40
1 INCH = 20 FEET

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CD-101



SITE DEMOLITION NOTES

1. EXISTING TREES TO REMAIN.
2. EXISTING TREES TO BE REMOVED.
3. PRIOR TO PILE INSTALLATION, THE CONTRACTOR SHALL MEET WITH THE OWNER, ENGINEER AND UTILITY COMPANIES ONSITE TO COORDINATE LOCATION OF BURIED UTILITIES. NO PILEDRIVING, TEMPORARY OR PERMANENT, IS ALLOWED WITHIN 15 FT. ON EITHER SIDE OF THE DOMINION ELECTRIC AND THE CWS LINES SHOWN.
4. RESET UTILITY APURTANENCES AS NEEDED. CONTRACTOR SHALL COORDIANTE WITH APPROPRIATE UTILITY COMPANIES. EXISTING FENCE AND SHRUB LINE TO BE REMOVED.
5. EXISTING FLARED END SECTION TO BE REMOVED FOR PROPOSED JUNCTION BOX.
6. CWS AIR RELEASE VALVE VAULT MODIFICATION. ADJUST TO GRADE AND SEE CWS DETAIL WW-69A ON C505.
7. ALL MATERIALS TO BE DEMOLISHED SHALL BE REMOVED FROM THE PROPERTY & DISPOSED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS.
8. ALL TREES NOT SHOWN AS "TO BE REMOVED" SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCING THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO PROTECTED TREES.
9. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE CITY AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF THE CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
11. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES AND PERMIT REQUIREMENTS.
12. ALL UTILITY REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE OWNER AND THE APPROPRIATE UTILITY COMPANY. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND COORDINATE WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION.
13. ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR.
14. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED. A LICENSED HAZARDOUS MATERIALS CONTRACTOR SHALL DISPOSE OF CONTAMINATED SOILS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
15. CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES, ADJACENT PROPERTIES, AND ITEMS FROM DAMAGE DUE TO DEMOLITION AND CONSTRUCTION ACTIVITIES.
16. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
17. SAWCUT NEAT, STRAIGHT, SHARP LINES WITH VERTICAL EDGES WHERE PROPOSED PAVEMENT GRADES MEET EXISTING PAVEMENT AND SIDEWALK GRADES.
18. ALL EXISTING UNDERGROUND UTILITIES, UTILITY POLES, GUY WIRES, AND HYDRANTS UNLESS OTHERWISE NOTED SHALL NOT BE DISTURBED BY THE CONTRACTORS DEMOLITION EFFORTS.
19. EXISTING CURB AND GUTTER AND CONCRETE SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT. NO PATCHING WILL BE PERMITTED.
20. CONTRACTOR TO CLEAN UP DEBRIS/TRASH AND REMOVE/SPREAD DIRT PILES.

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SC811

20 0 20 40
1 INCH = 20 FEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTE

7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

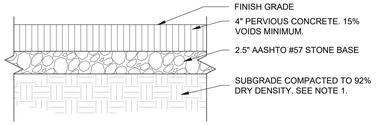
JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	C501

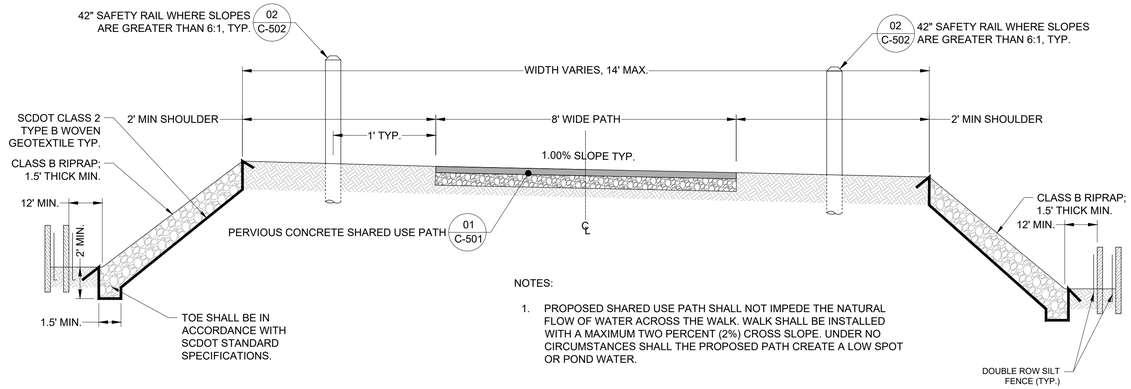


NOTE:

1. THE SUB-GRADE MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS OF A THICKNESS THAT CAN BE COMPACTED BY A MECHANICAL VIBRATORY ROLLER OR COMPACTOR TO A MINIMUM DENSITY OF 94% ± 2% AS DETERMINED BY ASTM D-1557 OR AASHTO-T-180. A MINIMUM LIMERICK BEARING RATIO (LBR) OF 20 ± 2 SHALL BE OBTAINED IN THE TOP 6 INCHES OF SUB-GRADE. SUBGRADE STABILIZATION SHALL BE PERFORMED IF, AND AS, DIRECTED BY A QUALIFIED ENGINEER. SUCH ENGINEERING SERVICES SHALL BE PERFORMED IF NEEDED AT THE EXPENSE AND OVERSIGHT OF THE CONTRACTOR. IF FILL MATERIAL (EMBANKMENT) IS REQUIRED TO BRING SUB-GRADE TO FINAL ELEVATION, IT SHALL BE CLEAN AND FREE OF DELETERIOUS MATERIALS. IT SHALL BE PLACED AND COMPACTED IN MAXIMUM LAYERS OF 8". LAYERS SHALL BE COMPACTED BY A MECHANICAL VIBRATORY ROLLER OR COMPACTOR TO A MINIMUM DENSITY OF 92% OF MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM-D 1557-D OR AASHTO-T-180.
2. CONTRACTOR SHALL PROVIDE IN-SITU TESTING FOR THE PERVIOUS SIDEWALK IN ACCORDANCE WITH SECTION 6.9 AND 3.10.4 OF THE SWDSM. MINIMUM INFILTRATION RATE SHALL BE 0.5 IN/HR.

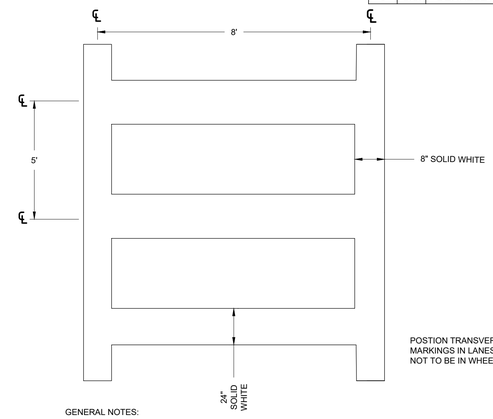
01 C-501 PERVIOUS CONCRETE SHARED USE PATH

NOT TO SCALE



NOTES:

1. PROPOSED SHARED USE PATH SHALL NOT IMPEDE THE NATURAL FLOW OF WATER ACROSS THE WALK. WALK SHALL BE INSTALLED WITH A MAXIMUM TWO PERCENT (2%) CROSS SLOPE. UNDER NO CIRCUMSTANCES SHALL THE PROPOSED PATH CREATE A LOW SPOT OR POND WATER.



GENERAL NOTES:

1. ALL STOPLINES ARE TO BE MARKED WITH 24" SOLID WHITE LINES.
2. WHERE CROSSWALK MARKINGS EXIST, STOPLINES SHOULD BE PLACED IN ADVANCE OF, AND PARALLEL TO, THE NEAREST CROSSWALK LINE. A MINIMUM DISTANCE OF 4' SHOULD EXIST BETWEEN THE CROSSWALK AND STOPBAR.
3. ALL PAVEMENT MARKINGS SHALL BE WHITE THERMOPLASTIC IN ACCORDANCE WITH SECTION 627 OF THE STANDARD SCDOT SPECIFICATIONS.

03 C-501 CROSSWALK PAVEMENT MARKINGS

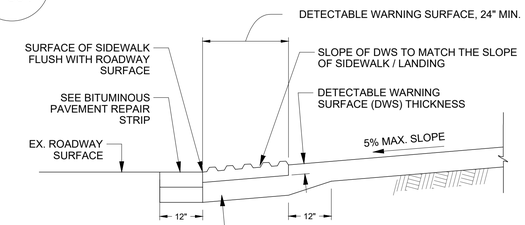
NOT TO SCALE

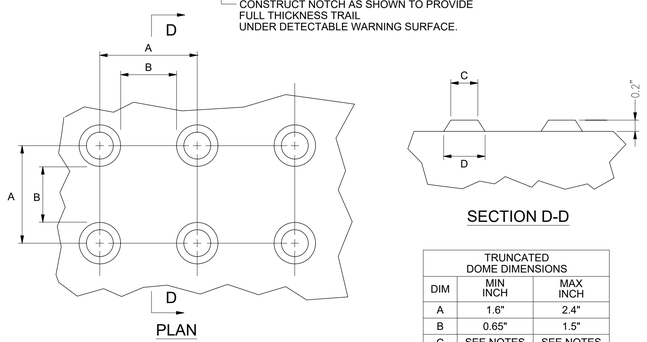
ADA DETECTABLE WARNING NOTES:

1. USE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION) SECTION 270, SCDOT QUALIFIED PRODUCT LIST 61 AND DETECTABLE WARNING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. PROVIDE EXPANSION JOINT MATERIAL 1/2" THICK WHERE THE PATH ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
3. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
4. ALIGN DETECTABLE WARNING DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE PATH AND PERPENDICULAR TO THE ROADWAY.
5. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF PATH AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
6. FOR LOCATIONS THAT REQUIRE A TURNING MANEUVER, THE MAXIMUM SLOPE IS 2.00% IN ALL DIRECTIONS.
7. SIDEWALK/PATH TO BE BUILT IN ACCORDANCE WITH THE REVISED DRAFT GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS-OF-WAY (NOVEMBER 23, 2005).
8. PLACE ALL STYLE DETECTABLE WARNING SURFACES FLUSH WITH TOP OF SIDEWALK (FLUSH ± $\frac{1}{8}$").
9. ALIGN TRUNCATED DOME PATTERN IN LINE WITH DIRECTION PEDESTRIAN TRAVEL ACROSS THE WARNING SURFACE.
10. GROOVE A $\frac{1}{4}$" X $\frac{1}{4}$" JOINT IN THE CONCRETE PAD DIRECTLY AROUND THE PERIMETER OF THE DETECTABLE WARNING SURFACE FOR ALL WET INSET AND PAVER STYLE WARNING SURFACES.
11. CURB RAMPS AND DETECTABLE WARNING SURFACES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE SCDOT STANDARD DRAWINGS. SEE PLANS FOR LOCATIONS OF SIDEWALK CURB RAMPS AND DETECTABLE WARNING SURFACES.
12. CONSTRUCT PEDESTRIAN RAMP WITH DETECTABLE WARNING SURFACE SCDOT STD DWG 720-961-11. SEE SCDOT STD DWG 720-901-01 AND ASSOCIATED DRAWLINGS FOR ADDITIONAL PEDESTRIAN RAMP DETAILS

02 C-501 TYPICAL MARSH TRAIL SECTION

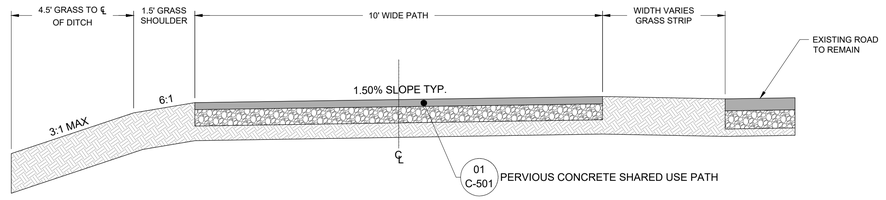
NOT TO SCALE





TRUNCATED DOME DIMENSIONS		
DIM	MIN INCH	MAX INCH
A	1.6"	2.4"
B	0.65"	1.5"
C	SEE NOTES	SEE NOTES
D	0.9"	1.4"

1. THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.
2. CONSTRUCTION JOINTS ARE SHOWN TO DEPICT A 90 DEGREE GRID. ACTUAL SIZE AND SHAPE MAY VARY.
3. ONE CORNER OF THE DWS MUST BE WITHIN 8" OF THE FACE OF CURB. NO OTHER POINT ON THE LEADING EDGE OF THE DWS MAY BE MORE THAN 60" AWAY FROM THE FACE OF CURR



NOTES:

1. PROPOSED SHARED USE PATH SHALL NOT IMPEDE THE NATURAL FLOW OF WATER ACROSS THE WALK. WALK SHALL BE INSTALLED WITH A MAXIMUM TWO PERCENT (2%) CROSS SLOPE. UNDER NO CIRCUMSTANCES SHALL THE PROPOSED PATH CREATE A LOW SPOT OR POND WATER.

05 C-501 TYPICAL NON-MARSH TRAIL SECTION

NOT TO SCALE

04 C-501 ADA DETECTABLE WARNING SURFACE

NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTIE — 7.30.24

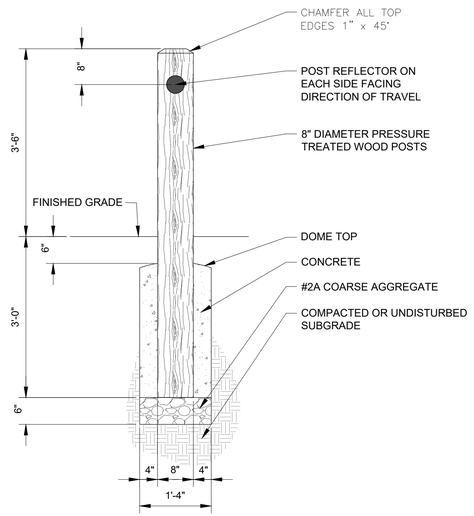
PLANS PREPARED BY: JMT — 235 MAGRATH DARBY BLVD, SUITE 275, MT. PLEASANT, SC 29464, (843) 779-3700

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

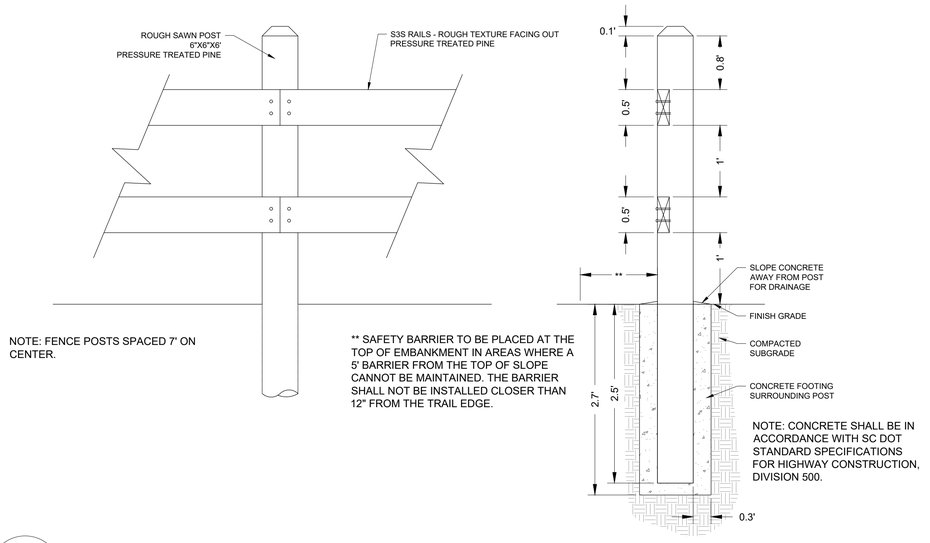
CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
DETAIL SHEET

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	C502



01 C-502 **WOOD BOLLARD**
NOT TO SCALE



NOTE: FENCE POSTS SPACED 7' ON CENTER.

** SAFETY BARRIER TO BE PLACED AT THE TOP OF EMBANKMENT IN AREAS WHERE A 5' BARRIER FROM THE TOP OF SLOPE CANNOT BE MAINTAINED. THE BARRIER SHALL NOT BE INSTALLED CLOSER THAN 12" FROM THE TRAIL EDGE.

NOTE: CONCRETE SHALL BE IN ACCORDANCE WITH SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, DIVISION 500.

02 C-502 **SAFETY RAIL**
NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 31461 RYAN E. MATTIE 7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
DETAIL SHEET

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROAD/ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY		L-1520	TS 1

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	C503

NOTES:

1.) EACH RECTANGULAR RAPID-FLASHING BEACON (RRFB) SHALL CONSIST OF TWO RECTANGULAR-SHAPED YELLOW INDICATIONS, EACH WITH AN LED-ARRAY BASED LIGHT SOURCE. EACH RRFB INDICATION SHALL BE A MINIMUM OF APPROXIMATELY 5 INCHES WIDE BY APPROXIMATELY 2 INCHES HIGH.

2.) THE TWO RRFB INDICATIONS SHALL BE ALIGNED HORIZONTALLY, WITH THE LONGER DIMENSION HORIZONTAL AND WITH A MINIMUM SPACE BETWEEN THE TWO INDICATIONS OF APPROXIMATELY SEVEN INCHES (7 IN.) MEASURED FROM INSIDE EDGE OF ONE INDICATION TO INSIDE EDGE OF THE OTHER INDICATION.

3.) THE OUTSIDE EDGES OF THE RRFB INDICATIONS, INCLUDING ANY HOUSING, SHALL NOT PROJECT BEYOND THE OUTSIDE EDGES OF THE W11-2 SIGN.

4.) WHEN ACTIVATED, THE TWO YELLOW INDICATIONS IN EACH RRFB SHALL FLASH IN A RAPIDLY ALTERNATING "WIG-WAG" FLASHING SEQUENCE (LEFT LIGHT ON, THEN RIGHT LIGHT ON).

5.) AS A SPECIFIC EXCEPTION TO 2003 MUTCD SECTION 4K.01 REQUIREMENTS FOR THE FLASH RATE OF BEACONS, RRFB'S SHALL USE A MUCH FASTER FLASH RATE, EACH OF THE TWO YELLOW INDICATIONS OF AN RRFB SHALL PROVIDE 75 FLASHING PERIODS PER MINUTE DURING EACH 800 MILLISECOND FLASHING SEQUENCE, THE LEFT AND RIGHT RRFB INDICATIONS SHALL OPERATE USING THE FOLLOWING SEQUENCE:

- THE RRFB INDICATION ON THE LEFT HAND SIDE SHALL BE ILLUMINATED FOR APPROXIMATELY 50 MILLISECONDS. BOTH RRFB INDICATIONS SHALL BE DARK FOR APPROXIMATELY 50 MILLISECONDS.
- THE RRFB INDICATION ON THE RIGHT HAND SIDE SHALL BE ILLUMINATED FOR APPROXIMATELY 50 MILLISECONDS. BOTH RRFB INDICATIONS SHALL BE DARK FOR APPROXIMATELY 50 MILLISECONDS.
- THE RRFB INDICATION ON THE LEFT HAND SIDE SHALL BE ILLUMINATED FOR APPROXIMATELY 50 MILLISECONDS. BOTH RRFB INDICATIONS SHALL BE DARK FOR APPROXIMATELY 50 MILLISECONDS.
- THE RRFB INDICATION ON THE RIGHT HAND SIDE SHALL BE ILLUMINATED FOR APPROXIMATELY 50 MILLISECONDS. BOTH RRFB INDICATIONS SHALL BE DARK FOR APPROXIMATELY 50 MILLISECONDS.
- BOTH RRFB INDICATIONS SHALL BE ILLUMINATED FOR APPROXIMATELY 50 MILLISECONDS. BOTH RRFB INDICATIONS SHALL BE DARK FOR APPROXIMATELY 50 MILLISECONDS.
- BOTH RRFB INDICATIONS SHALL BE ILLUMINATED FOR APPROXIMATELY 50 MILLISECONDS. BOTH RRFB INDICATIONS SHALL BE DARK FOR APPROXIMATELY 250 MILLISECONDS.

6.) THE FLASH RATE OF EACH INDIVIDUAL YELLOW INDICATION, AS APPLIED OVER THE FULL ON-OFF SEQUENCE OF A FLASHING PERIOD OF THE INDICATION, SHALL NOT BE BETWEEN 5 AND 30 FLASHES PER SECOND, TO AVOID FREQUENCIES THAT MIGHT CAUSE SEIZURES.

7.) THE LIGHT INTENSITY OF THE YELLOW INDICATIONS SHALL MEET THE MINIMUM SPECIFICATIONS OF SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J595 (DIRECTIONAL FLASHING OPTICAL WARNING DEVICES FOR AUTHORIZED EMERGENCY, MAINTENANCE, AND SERVICE VEHICLES) DATED JANUARY 2005.

8.) THE RRFB SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AT A PREDETERMINED TIME. THE DURATION OF THE FLASHING BEACON SHALL BE 27 SECONDS. THE BEACON SHALL CEASE UNTIL REACTIVATED BY THE PEDESTRIAN PUSH BUTTON.

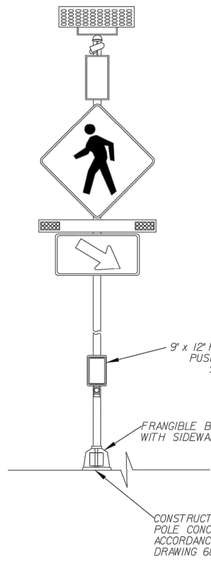
9.) ALL RRFB'S ASSOCIATED WITH A GIVEN CROSSWALK SHALL, WHEN ACTIVATED, SIMULTANEOUSLY COMMENCE OPERATION OF THEIR ALTERNATING RAPID FLASHING INDICATIONS AND SHALL CEASE OPERATION SIMULTANEOUSLY.

10.) A SMALL LIGHT DIRECTED AT AND VISIBLE TO PEDESTRIANS IN THE CROSSWALK SHALL BE INSTALLED INTEGRAL TO THE RRFB OR PUSH BUTTON TO GIVE CONFIRMATION THAT THE RRFB IS IN OPERATION.

11.) PROVIDE A SPEECH PUSHBUTTON INFORMATION MESSAGE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

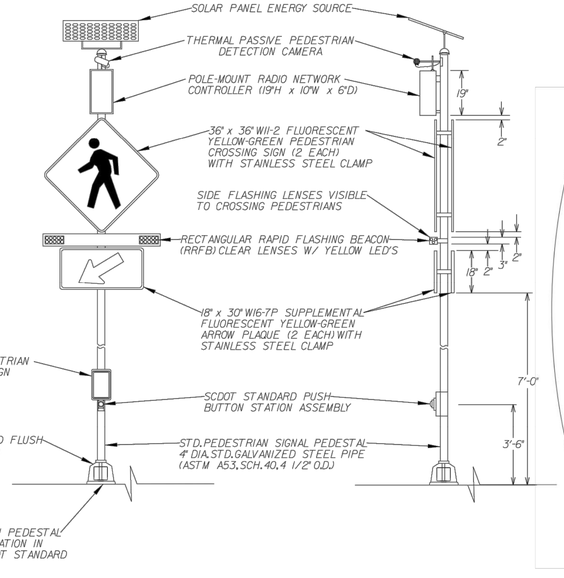
- PROVIDE A LOCATOR TONE FOR BUTTON
- THE AUDIBLE INFORMATION DEVICE SHALL NOT USE A VIBROTACTILE INDICATION OR PERCUSSIVE INDICATIONS.
- SPEECH AUDITORY MESSAGE: "YELLOW LIGHTS ARE FLASHING". THE MESSAGE SHOULD BE SPOKEN TWICE.

FLASHER ASSEMBLY A

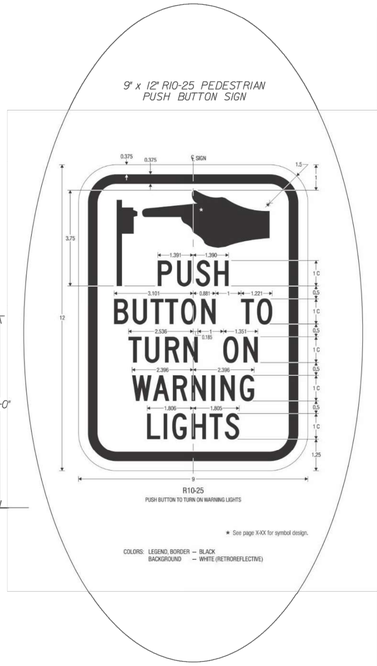


FRONT VIEW

FLASHER ASSEMBLY B



FRONT VIEW



SIDE VIEW

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
5			
4			
3			
2			
1			

KIMLEY-HORN AND ASSOCIATES, INC. No. C00106 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 27504 11/1/2021 — Richard M. Ball

CITY OF CHARLESTON

RECTANGULAR RAPID-FLASHING BEACON (RRFB) DETAIL

SCALE 1" =NTS

01 C-503 **RECTANGULAR RAPID-FLASHING BEACON**
NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 31461 — RYAN S. MATTIE — 7.30.24

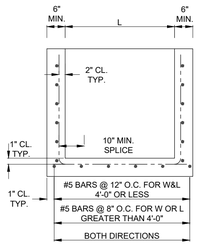
PLANS PREPARED BY: JMT — 235 MAGRATH DARBY BLVD, SUITE 275, MT. PLEASANT, SC 29464 (843) 779-3700

REV.NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

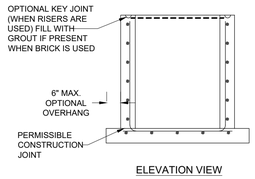
CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
DETAIL SHEET

SCALE: N.A. RTE.

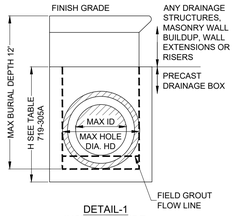
FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	C504



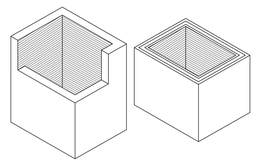
SECTION - A
FRONT ELEVATION



ELEVATION VIEW



DETAIL-1
INSTALLED SIDE ELEVATION

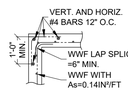


DETAIL-2
ISOMETRIC VIEW

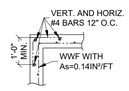
PLAN VIEW

GENERAL NOTES

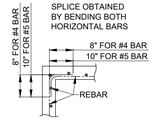
1. JUNCTION BOX TO HAVE A COVER WITH A MANHOLE LID



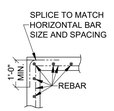
DETAIL-3
WWF DETAIL



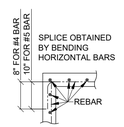
DETAIL-4
WWF DETAIL



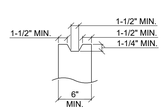
DETAIL-5
REBAR DETAIL



DETAIL-6
REBAR DETAIL



DETAIL-7
REBAR DETAIL



DETAIL-8
KEY JOINT

ACCEPTABLE SPLICE OPTIONS
DETAILS 3-7

TABLE 719-305A		
STANDARD BOX SIZE* (WXLXH)	SUGGESTED MAX. PIPE OUTSIDE DIA. (OD) SEE 714	MAX. HOLE DIA. IN (LONG SIDE OF BOX) (HD)
2'X2'X2'	23"	24"
2'X2'X3'	23"	24"
2'X2'X4'	23"	24"
2'X2'X5'	23"	24"
2'X2'X6'	23"	24"
2'X3'X2'	23"	24"
2'X3'X3'	35"	36"
2'X3'X4'	35"	36"
2'X3'X5'	35"	36"
2'X3'X6'	35"	36"
2'X4'X2'	23"	24"
2'X4'X3'	35"	36"
2'X4'X4'	47"	48"
2'X4'X5'	47"	48"
2'X4'X6'	47"	48"
3'X3'X2'	23"	24"
3'X3'X3'	35"	36"
3'X3'X4'	35"	36"
3'X3'X5'	35"	36"
3'X3'X6'	35"	36"
3'X4'X2'	23"	24"
3'X4'X3'	35"	36"
3'X4'X4'	47"	48"
3'X4'X5'	47"	48"
3'X4'X6'	47"	48"
3'X5'X2'	23"	24"
3'X5'X3'	35"	36"
3'X5'X4'	47"	48"
3'X5'X5'	58"	60"
3'X5'X6'	58"	60"
3'X6'X2'	23"	24"
3'X6'X3'	35"	36"
3'X6'X4'	47"	48"
3'X6'X5'	58"	60"
3'X6'X6'	72"	72"
4'X4'X2'	23"	24"
4'X4'X3'	35"	36"
4'X4'X4'	47"	48"
4'X4'X5'	47"	48"
4'X4'X6'	47"	48"
4'X5'X2'	23"	24"
4'X5'X3'	35"	36"
4'X5'X4'	47"	48"
4'X5'X5'	58"	60"
4'X5'X6'	58"	60"
4'X6'X2'	23"	24"
4'X6'X3'	35"	36"
4'X6'X4'	47"	48"
4'X6'X5'	58"	60"
4'X6'X6'	72"	72"
5'X5'X2'	23"	24"
5'X5'X3'	35"	36"
5'X5'X4'	47"	48"
5'X5'X5'	58"	60"
5'X5'X6'	58"	60"
5'X6'X2'	23"	24"
5'X6'X3'	35"	36"
5'X6'X4'	47"	48"
5'X6'X5'	58"	60"
5'X6'X6'	72"	72"
6'X6'X2'	23"	24"
6'X6'X3'	35"	36"
6'X6'X4'	47"	48"
6'X6'X5'	58"	60"
6'X6'X6'	72"	72"
6'X6'X7'	72"	72"

MAX PIPE OUTSIDE DIAMETER = HD-0.5"
TO FIND MAX HOLE DIA. IN SHORT SIDE.
FIND SQUARE BOX WITH SAME H
[IE:3'X5'X5' BOX=>3'X3'X5'=>HD=36" IN THE 3' SIDE]
[IE:4'X6'X5' BOX=>4'X4'X5'=>HD=48" IN THE 4' SIDE]

* NOTE: ALL PROPOSED INLETS ARE TO HAVE A 1-FOOT SUMP AT THE BOTTOM OF THE STRUCTURE FOR SEDIMENT AND DEBRIS COMPLIANCE IN ACCORDANCE WITH SECTION 3.4.6.5.12 OF THE CHARLESTON STORMWATER DESIGN STANDARDS MANUAL.

GENERAL NOTES:

1. PRECAST CONCRETE MANUFACTURER MUST HAVE THEIR BOX INCLUDED ON THE DEPARTMENT'S QUALIFIED PRODUCT LIST 14 PRIOR TO FABRICATION. DESIGN CALCULATION AND ENGINEERING DRAWINGS OF EACH SIZE BOX (W X L) MUST BE PREPARED. VARIABLE DEPTHS (H) MAY BE INCLUDED ON THE SAME DRAWING. ENGINEERING DRAWINGS SHOULD BE PROVIDED ON 11"X17" SHEET. DRAWING MUST INCLUDE ALL DIMENSIONS, CLEARANCES, STEEL LAYOUT DETAILS AND CONSTRUCTION NOTES. EACH ENGINEERING DRAWING MUST STATE THE ASTM SPECIFICATION THAT IT MEETS AND ALL MATERIAL SPECIFICATIONS. A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF SOUTH CAROLINA MUST SIGN AND SEAL ALL ENGINEERING DRAWINGS AND DESIGN CALCULATIONS. SUBMITTALS MUST INCLUDE ONE ORIGINAL AND TWO COPIES OF THE DESIGN CALCULATIONS WITH DRAWINGS AS SPECIFIED ABOVE.
2. PRECAST CONCRETE COMPONENTS FOR DRAINAGE ITEMS AT EACH LOCATION MUST BE SUPPLIED FROM A SINGLE SOURCE PRECAST MANUFACTURER THAT HAS BEEN INSPECTED AND APPROVED BY THE MATERIALS AND RESEARCH ENGINEER.
3. THE PRECAST CONCRETE DRAINAGE BOX MAY BE USED WITH THE FOLLOWING DRAINAGE STRUCTURES:
   - CATCH BASIN TYPE 1
   - CATCH BASIN TYPE 1 (SPECIAL)
   - CATCH BASIN TYPE 9 & TYPE 9 MH DROP INLETS
   - CATCH BASIN TYPE 12
   - CATCH BASIN TYPE 16
   - CATCH BASIN TYPE 17
   - CATCH BASIN TYPE 18
   - JUNCTION BOXES
   - INCLUDING ALL INLET ADAPTORS
4. DESIGN FOR PRECAST DRAINAGE STRUCTURES MUST MEET OF EXCEED ASTM C 890 OF ASTM C 913 AND THE DESIGN REQUIREMENTS SHOWN ON THIS SHEET. ALL DESIGN COMPUTATIONS WILL BW PROVIDED FOR A DEPTH OF 12'-0". A JOINT DESIGN FOR RISERS AND TOP OF BOX MUST ALSO BE PROVIDED.
5. THE BURIAL DEPTH FROM THE TOP OF THE DRAINAGE BOX BOTTOM SLAB TO THE TOP OF THE GROUND SHALL NOT EXCEED 12'-0".
6. DRAWINGS OF PRECAST DRAINAGE BOX WITH SOLID WALLS SHALL INDICATE LOCATION OF CONSTRUCTION JOINTS & ADDITIONAL CONSTRUCTION DETAILS REQUIRED BY THE MANUFACTURER.
7. ONLY THOSE STRUCTURES SIZES (W X L X H) SHOWN IN TABLE 719-305A WILL BE SUBMITTED FOR DESIGN APPROVAL.
8. DURING MANUFACTURING, DRAINAGE BOX SIZES (W X L X H), MAY VARY BETWEEN THE APPROVED DESIGN BOX SIZES. WHEN DRAINAGE BOX SIZE HEIGHT 'H', WIDTH 'W' OR LENGTH 'L' FALLS BETWEEN THE APPROVED DESIGN SIZES. THE BOX WITH GREATER SIZES MUST BE USED FOR DESIGN OF THAT BOX. BOX HEIGHT 'H' GREATER THAN THE MAXIMUM APPROVED DESIGN SIZES WILL NOT BE STANDARD.

MATERIAL NOTES:

9. CONCRETE FOR PRECAST STRUCTURES SHALL BE CLASS 4000P MEETING THE REQUIREMENTS OF SECTION 701 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
10. REINFORCEMENT STEEL SHALL BE ASTM A-706. LOW ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55, OR M 221.

DETAIL NOTES:

11. BRICK MASONRY OR CLASS 4000 CONCRETE MAY BE USED TO FINISH THE PORTION ABOVE THE TOP OF THE BOX (2 FT. MAX.) TO BRING TO GRADE OR TO COMPLETE AN INLET STRUCTURE. THESE MATERIALS SHALL CONFORM TO SECTION 719 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
12. LIFT HOLES AND/OR DEVICES MAY BE PLACED AS NECESSARY. ALL LIFT HOLES SHALL BE GROUTED PRIOR TO COMPLETION OF THE INSTALLATION. ALL LIFTING METHODS MUST MEET OSHA REGULATIONS.
13. FORM OPENINGS FOR PIPE AS REQUIRED TO ACCOMMODATE PIPE SIZE AND LOCATION SPECIFIED. ORIENT PRECAST DRAINAGE STRUCTURE SO THAT PIPES ENTER THROUGH THE WALLS. PIPES MAY ENTER THROUGH THE CORNERS OF SOLID WALL BOXES ID A MINIMUM OF 6" OF WALL IS PROVIDED ABOVE THE HOLE TO THE TOP OF THE BOX OR TO ANOTHER OPENING.
14. DURING MANUFACTURING OF THE PRECAST DRAINAGE BOX, THE WALL (FULL THICKNESS) MAY BE EXTENDED A MAXIMUM OF 2 FEET ABOVE THE TOP OF THE BOX TO BRING TO GRADE OR TO COMPLETE AN INLET STRUCTURE. IF THIS OPTION IS TO BE USED. THE SHOP DRAWING SUBMITTAL MUST INCLUDE ALL DIMENSIONS AND DETAILS FOR THESE BOXES. CONTINUE REINFORCEMENT FROM BOX INTO THE EXTENDED HEIGHT.
15. TOP OF WALL SHALL BE CAST WITH A KEY JOINT WHEN PRECAST RISERS ARE USED.
16. THE HEIGHT OF PRECAST DRAINAGE BOX WITH SOLID WALLS CAN BE INCREASED BY USE OF RISERS TO THE REQUIRED DEPTH UP TO A MAXIMUM BURIAL DEPTH OF 12' (SEE STD. 719-315-00).
17. JOINTS SHALL BE SEALED WITH A FLEXIBLE BUTYL OR BITUMINOUS SEALANT CONFORMING TO AASHTO M 199.
18. WHEN BURIAL DEPTH EXCEEDS 4'-6". PLACE STEPS IN ACCORDANCE WITH STANDARD DRAWING NO. 719-550-00.
19. GROUT THE FLOW LINE FROM THE BASE TO THE OUTLET PIPE TO MAINTAIN A CONTINUOUS FLOW. GROUT SHALL BE TYPE M MORTAR MATERIAL IN ACCORDANCE WITH SECTION 718 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
20. THE MINIMUM STEEL REINFORCEMENT REQUIRED FOR ALL BOX SIZES SHALL BE AS SHOWN ON THIS SHEET.
21. PRECAST CONCRETE CIRCULAR STRUCTURES (AS SHOWN ON 719-420-00) ARE REQUIRED FOR THE FOLLOWING APPLICATIONS UNLESS PROHIBITED BY THE PLANS OR SPECIAL PROVISIONS.
    a. ON DRAINAGE STRUCTURES WITH A DEPTH EQUAL TO OR GRATER THAN 12 FEET.
    b. ON DRAINAGE STRUCTURES WHERE THE FLOW LINE ELEVATION OF THE INLET PIPE IS EQUAL TO OR HIGHER THAN THE INSIDE TOP (SOFFIT) OF THE OUTLET PIPE.
    c. AS REQUIRED BY THE PROJECT PLANS.

01
C-504

JUNCTION BOX (SCDOT STANDARD DETAIL 819-305-00 - DRAINAGE SUBSTRUCTURE RECTANGULAR)

NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTIE — 7.30.24

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD.
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

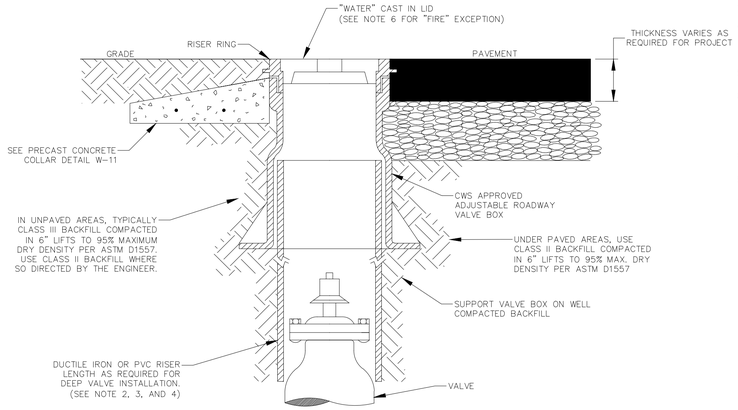
JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
DETAIL SHEET

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	C505



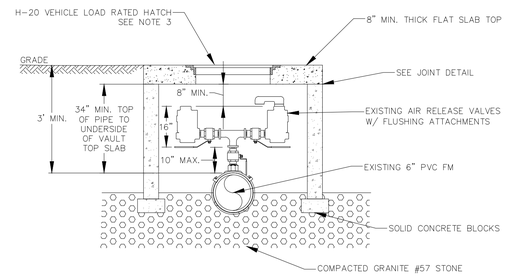
NOTES:

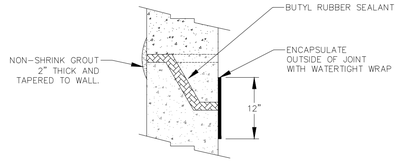
1. CENTER VALVE BOX OVER OPERATING NUT TO ENSURE FREE VALVE OPERATION.
2. USE 6" DIAMETER PIPE FOR RISER.
3. DO NOT ALLOW VALVE BOX OR RISER TO REST ON ANY PORTION OF VALVE.
4. RISER LENGTH AS REQUIRED WITH VALVE BOX ADJUSTED FULLY DOWN. VALVE BOX SHALL BE ADJUSTED UP TO MATCH FINISH PAVEMENT ELEVATION OR 1" ABOVE FINISH GRADE.
5. REFER TO CWS MINIMUM STANDARDS FOR APPROVED INSTALLATION REQUIREMENTS.
6. IF VALVE BOX IS USED WITH GATE VALVE AS AN ALTERNATIVE TO A FIRE SERVICE POST INDICATOR VALVE, THE UPPER BOX INTERIOR AND LID SHALL BE PAINTED RED AND "FIRE" SHALL BE CAST IN THE LID.
7. NO MORE THAN TWO (2) RISER RINGS SHALL BE ALLOWED.
8. IF MORE THAN TWO (2) RISER RINGS ARE REQUIRED A NEW RISER PIPE SHALL BE INSTALLED.
9. INTERIM ADJUSTMENTS DURING CONSTRUCTION TO OBTAIN FINAL GRADE SHALL BE MADE AT NO COST TO THE OWNER.
10. REFER TO CWS MINIMUM STANDARDS FOR APPROPRIATE MANUFACTURERS, MODEL NUMBERS, INSTALLATION REQUIREMENTS, AND OTHER INFORMATION.

Charleston Water System

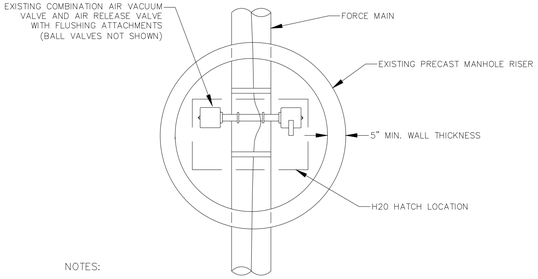
DOCUMENT NO.:	DETAIL NO.
EC-4.3.2-CD-W	W-10A
REVISION DATE: DEC 1, 2021	

TYPICAL EXISTING VALVE BOX ADJUSTMENT
NOT TO SCALE





JOINT



NOTES:

1. REMOVE EXISTING ARV VAULT FRAME/COVER AND TOP SLAB. REPLACE WITH NEW TOP SLAB WITH INSET HATCH TO MATCH PROPOSED GRADE.
2. REPAIR/REPLACE COATING ON INTERIOR OF VAULT WITH RAVEN 405 EPOXY PROTECTIVE LINER.
3. USE U.S. Foundry model AHS H-20 VEHICLE LOAD RATED SINGLE COVER (DOOR) FOR 4 FT OR 5 FT INSIDE DIAMETER MANHOLE/VAULT. THE FOLLOWING HATCH SIZE:
   -30" X 30" FRAME FOR 4 FT MANHOLE/VAULT
   -30" X 48" FRAME FOR 5 FT MANHOLE/VAULT
4. NOTIFY CWS SEVEN (7) DAYS IN ADVANCE OF WORK ON ARV VAULT.
5. PRIOR TO ORDERING MATERIALS CONTRACTOR TO CONFIRM EXISTING CONDITIONS AND NOTIFY ENGINEER AND CWS OF ANY DISCREPANCIES.
6. WORK ON THE ARV VAULT OR ANY CWS INFRASTRUCTURE SHALL ONLY BE PERFORMED BY A CONTRACTOR CURRENTLY ON CWS'S APPROVED CONTRACTORS LIST FOR LARGE PROJECTS.
7. REFER TO CWS MINIMUM STANDARDS FOR APPROPRIATE MANUFACTURERS, MODEL NUMBERS, INSTALLATION REQUIREMENTS, AND OTHER INFORMATION.

AIR RELEASE VALVE VAULT MODIFICATION FOR
Nowell Creek Pedestrian Bridge
NOT TO SCALE

Charleston Water System

DOCUMENT NO.:	DETAIL NO.
EC-4.3.2-CD-WW	WW-69A
REVISION DATE: JULY 14, 2023	

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA No. 31461 REGISTERED PROFESSIONAL ENGINEER RYAN E. MATTE 7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
DETAIL SHEET

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CSW101

SEEDING AND MULCHING NOTES:

1. DISTRIBUTE SEED, FERTILIZER, MULCH AND LIME AS INDICATED IN SCDOT TECHNICAL SPECIFICATION SC-M-810-4.
2. SEED SHALL BE SPREAD BY HYDROSEEDING.

SEEDING SCHEDULE

COMMON NAME	PLANTING RATE (LBS/ACRE)	PLANTING DATES	INTENDED USE
PERMANENT SEEDING			
COMMON BERMUDAGRASS (HULLED)	30	MARCH - AUGUST	N/A
COMMON BERMUDAGRASS (UNHULLED)	60	SEPTEMBER - MARCH	N/A
*CENTIPEDEGRASS	10	MARCH - AUGUST	LAWN AREAS
WEEPING LOVEGRASS	10	YEAR ROUND	SLOPES
TEMPORARY SEEDING			
SUDANGRASS	60	MARCH - AUGUST	SLOPES, BUFFERS
BROWN TOP MILLET	40	MARCH - AUGUST	GENERAL, SLOPES
RYE GRAIN	110	AUGUST - MARCH	GENERAL, SLOPES

CONSTRUCTION SEQUENCE

GENERAL CONSTRUCTION SEQUENCE NOTES

- A COPY OF THE APPROVED SWPPP MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- INSTALL EROSION AND SEDIMENT CONTROLS PER THE CONSTRUCTION DETAILS AND LOCATIONS PROVIDED ON THE PLAN.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
- BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE SWPPP PREPARER, AND A REPRESENTATIVE OF THE DHEC TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- PRIOR TO ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND / OR THE PALMETTO UTILITY PROTECTION SERVICE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE AMOUNT OF SOIL EXPOSED DURING CONSTRUCTION SHOULD BE KEPT TO A MINIMUM. THIS MAY BE ACCOMPLISHED BY MINIMIZING THE AMOUNT THE DISTURBED AREA WITHIN THE PERMITTED LIMITS OF DISTURBANCE (SHOWN ON THE APPROVED CONSTRUCTION SITE PLANS) TO ONLY THAT WHICH IS NECESSARY TO COMPLETE THE PROPOSED WORK. FOR AREAS THAT HAVE ALREADY BEEN DISTURBED AND WHERE CONSTRUCTION ACTIVITIES WILL NOT BEGIN FOR A PERIOD OF 14 DAYS OR MORE, TEMPORARY STABILIZATION TECHNIQUES MUST BE IMPLEMENTED.
- PRIOR TO IMPLEMENTATION OF ANY MAJOR GRADING ACTIVITIES, TOPSOIL IS TO BE PRESERVED BY PLACING IT IN AREAS OFFSITE FOR STOCKPILING UNTIL FINAL GRADES ARE REACHED. EACH STOCKPILE MUST BE LOCATED OFFSITE AND COMPLY WITH ALL OF SCDHEC STANDARDS. ONCE FINAL GRADES HAVE BEEN REACHED, THE PRESERVED TOPSOIL SHOULD BE UTILIZED TO APPLY TO AREAS IDENTIFIED FOR STABILIZATION. TOPSOIL CONTAINS NUTRIENTS AND ORGANISMS THAT AID IN THE GROWTH OF VEGETATION. NOTE, THERE IS LIMITED SPACE WITHIN THIS SITE TO WORK. CONTRACTOR SHALL DESIGNATE AN APPROVED DESIGNATED OFFSITE AREA FOR STOCKPILES, IF NEEDED.
- THE COMPACTION OF SOIL SHOULD ALSO BE MINIMIZED TO THE DEGREE PRACTICABLE DURING GRADING ACTIVITIES. THIS IS ESPECIALLY IMPORTANT DURING THE REPLACEMENT OF TOPSOIL TO AID IN A QUICK ESTABLISHMENT OF VEGETATIVE COVER. COMPACTION OF SOIL MAY ALSO REDUCE RAINFALL'S ABILITY TO INFILTRATE INTO THE SOIL, INCREASING THE AMOUNT OF STORMWATER RUNOFF.
- NO WORK SHALL BEGIN UNTIL ALL NECESSARY USACE PERMITS AND SCDHEC 401 CERTIFICATIONS HAVE BEEN OBTAINED.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE:

1. FIELD MARK THE LIMIT OF DISTURBANCE FOR THE SHARED USE PATH AS SHOWN ON THE PLANS. **1 WEEK**
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS NEEDED. **1 WEEK**
3. INSTALL THE SILT FENCE, TURBIDITY BARRIER, AND ALL OTHER SWPPP BMPs AS NOTED ON THE PLANS. **1 WEEK**
4. CLEAR AND GRUB THE AREA OF THE PROPOSED WORK. CLEARING AND GRUBBING IS TO BE EXCLUSIVELY LIMITED TO THE ACTUAL AREA OF CONSTRUCTION. DISTURBANCE TO THE SURROUNDING VEGETATION IS TO BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE. ALL AREAS DISTURBED IN EXCESS OF THOSE NECESSARY FOR THE INSTALLATION OF THE PROPOSED WORK ARE TO BE VEGETATED IMMEDIATELY. **1 WEEK**
5. STRIP TOPSOIL IN THE AREAS OF PROPOSED DISTURBANCE AND STOCKPILE ACCORDINGLY. SILT FENCE SHALL BE INSTALLED AROUND ALL TOPSOIL STOCKPILES. ALL EXCAVATED SOIL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR UNLESS DIRECTED BY ENGINEER. USE DOUBLE ROW SILT FENCE WITHIN 50' OF WETLANDS. **1 WEEK**
6. BACKFILL AND COMPACT THE EMBANKMENT TO THE EXTENT SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. ALLOW THE FILL IN THE MARSH AREA TO SURCHARGE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. THE PROJECT WORK MAY CONTINUE IN AREAS NOT REQUIRED TO SURCHARGE. CONTRACTOR SHALL PROVIDE IN-SITU TESTING FOR THE PERVIOUS SIDEWALK IN ACCORDANCE WITH SECTION 6.9 AND 3.10.4 OF THE SWDSM. MINIMUM INFILTRATION RATE SHALL BE 0.5 IN/HR. **6 MONTHS**
7. CONSTRUCT THE SHARED USE PATH, BOARDWALK, AND BRIDGE AS INDICATED ON THE CONSTRUCTION PLANS. **8 MONTHS**
8. THE CONTRACTOR SHALL TAKE MEASURES IN ACCORDANCE WITH THE DHEC STORMWATER MANAGEMENT BMP FIELD MANUAL TO ENSURE SOIL FROM THE SITE IS NOT TRACKED ONTO ADJACENT ROADS. **CONTINUOUS**
9. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE CITY OF CHARLESTON FOR AN INSPECTION PRIOR TO THE REMOVAL OF THE BMPS.
10. UPON CITY APPROVAL, REMOVE THE BMPs AND IMMEDIATELY STABILIZE THE AFFECTED AREA:
    a. REMOVE ACCUMULATED SEDIMENT BEHIND SILT FENCES THEN REMOVE ALL ALL SILT FENCE MATERIAL FROM THE SITE AND PROPERLY DISPOSE OF. **1 WEEK**
    b. PERFORM FINAL SEDIMENT CLEANOUT OF ALL FACILITIES, INCLUDING STORM SEWERS, OUTLET STRUCTURES, AND INFILTRATION BMPs. **1 WEEK**

MAINTENANCE SCHEDULE

MAINTENANCE ACTIVITY	FREQUENCY
REMOVE LITTER AND DEBRIS FROM VEGETATION	REGULARLY (FREQUENTLY)
INSPECT FOR EROSION, RILLS AND GULLIES, AND REPAIR	ANNUAL OR AS NEEDED
REPAIR SPARSE VEGETATION	ANNUAL OR AS NEEDED
INSPECT TO ENSURE THAT GRASS HAS ESTABLISHED. IF NOT, REPLACE WITH AN ALTERNATIVE SPECIES	ANNUAL OR AS NEEDED
NUTRIENT AND PESTICIDE MANAGEMENT	ANNUAL OR AS NEEDED
AERATION OF SOIL	ANNUAL OR AS NEEDED
INSPECT PERVIOUS PAVEMENT TO ENSURE IT IS CLEAN OF DEBRIS & SEDIMENT AND DEWATERS BETWEEN STORMS	MONTHLY
INSPECT PERVIOUS PAVEMENT SURFACE FOR DETERIORATION OR SPALLING.	ANNUAL OR AS NEEDED

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

STORMWATER / SWPPP NOTES:

1. SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE KEPT ONSITE OR WITHIN THIRTY (30) MINUTES OF THE SITE AT ALL TIMES FROM THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS ACHIEVED. THESE ITEMS ARE TO BE IN A DESIGNATED AREA THAT IS ACCESSIBLE TO INSPECTORS.
2. THE PROJECT / SITE MUST BE BUILT ACCORDING TO APPROVED CITY AND SCDHEC PLANS UNLESS SWPPP DOCUMENTS ARE UPDATED BY THE ORIGINAL SWPPP PREPARER, OTHERWISE PERMITS AND APPROVALS WILL BE INVALIDATED.
3. ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND STORMWATER BMPS SHALL BE IN ACCORDANCE WITH CURRENT SC DHEC REGULATIONS.

PERVIOUS CONCRETE PAVEMENT

1. OPERATION AND MAINTENANCE
    a. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1.5-INCHES OF RAINFALL, INSPECT PERVIOUS CONCRETE PAVEMENTS AND AREAS DRAINING TO PERVIOUS PAVEMENTS.
    b. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1.5-INCHES OF RAINFALL, REMOVE SEDIMENT, TRASH, AND OTHER DEBRIS FROM PERVIOUS CONCRETE SURFACES AND AREAS DRAINING TO PERVIOUS CONCRETE.
    c. AT LEAST FOUR TIMES EACH YEAR, VACUUM PERVIOUS PAVEMENTS WITH COMMERCIAL CLEANING UNITS.
    d. MAINTAIN AREAS DRAINING TO PERVIOUS PAVEMENTS TO PREVENT SOIL WASHOUT INTO THE PAVEMENTS. IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS.
    e. IMMEDIATELY CLEAN SOIL WASHED OR DEPOSITED ONTO PERVIOUS CONCRETE.
    f. FOR ICE, APPLY NON-TOXIC ORGANIC DEICER, AS WITHER BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID OR AS PRETREATED SALT. PROHIBIT APPLICATION OF SAND OR CINDERS.
    g. PROHIBIT SEAL COATING OF PERVIOUS CONCRETE AREAS.

STANDARD DHEC STORMWATER / SWPPP NOTES:

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
    2.1. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS. STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
    2.2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OG THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HRS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. ALL WATERS OF THE STATE (WoS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WoS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WoS.
8. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED TIMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMMING A POLLUTANT SOURCE FOR IN STORMWATER DISCHARGES.
9. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
10. SWPPP SHOULD INCLUDE A CONCRETE WASHOUT STAGING AREA FOR SITE AND BUILDING CONSTRUCTION AND ALL OTHER PURPOSES OF THE DEVELOPMENT TO INCLUDE BUT NOT BE LIMITED TO PAINTERS.
11. A CERTIFIED STORMWATER AS-BUILT MUST BE SUBMITTED TO THE CITY OF CHARLESTON PRIOR TO LETTER OF OCCUPANCY, CLOSEOUT PACKAGE, AND TO SCDHEC PRIOR TO RECEIVING A NOTICE OF TERMINATION.
12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE BEEN PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.)
16. THE FOLLOWING DISCHARGE SHALL BE PROHIBITED:
    16.1. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL.
    16.2. WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
    16.3. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
    16.4. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITH WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.
20. ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND STORMWATER BMPS SHALL BE IN ACCORDANCE WITH CURRENT SC DHEC REGULATIONS.

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN E. MATTIE — 7.30.24

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

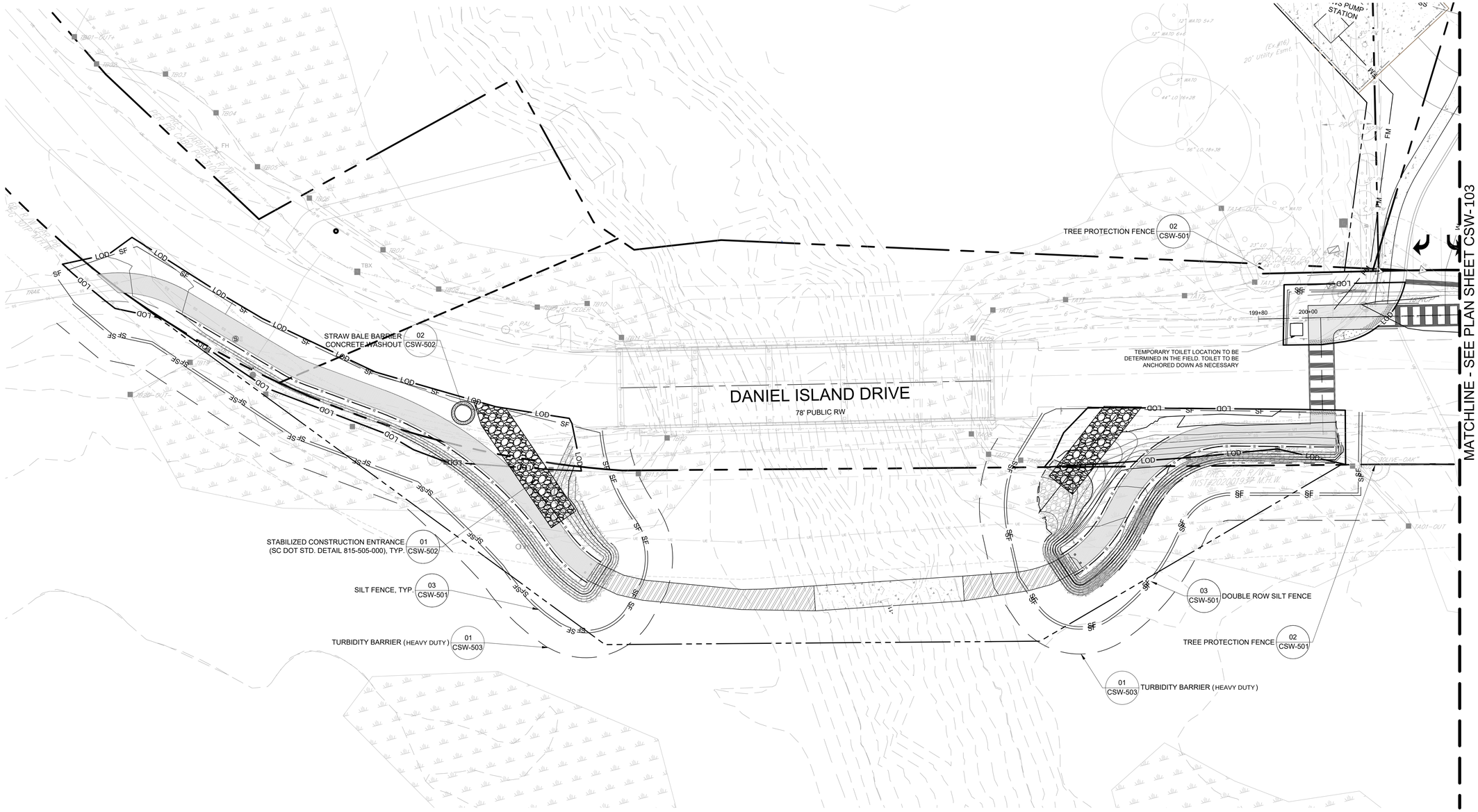
REV.NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CHARLESTOWNE CONDITA A.D. 1670

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
STORMWATER POLLUTION PREVENTION SHEETS

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CSW102



GENERAL NOTES

1. CONCRETE WASHOUTS MAY BE SET UP WHEREVER PRACTICAL WITHIN THE PROJECT LIMITS, AND SHALL AT ALL TIMES COMPLY WITH THE DETAILS IN THIS PLAN SET AND STANDARD DHEC REQUIREMENTS.
2. STOCKPILE AREAS ARE TO BE AT AN OFFSITE LOCATION THAT COMPLIES WITH STANDARD DHEC REQUIREMENTS.
3. A FLOATING TURBIDITY BARRIER IN ACCORDANCE WITH THE MOST RECENT SCDOT SPECIFICATIONS AND DETAILS IS TO BE USED ON THE DOWNSTREAM END OF ALL CONSTRUCTION ACTIVITIES, IN WETLANDS WHERE SURFACE WATERS ARE, OR CAN BE PRESENT. BARRIER SHALL BE PLACED ALONG LOD AND TIE INTO EXISTING GRADE TO ENSURE THAT NO SEDIMENT LADEN RUNOFF IS ENTERING THE DOWNSTREAM WATERS WITHOUT PROPER TREATMENT.
4. TOTAL LIMIT OF DISTURBANCE IS 0.54 ACRES

20 0 20 40
1 INCH = 20 FEET

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIE
7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-5700

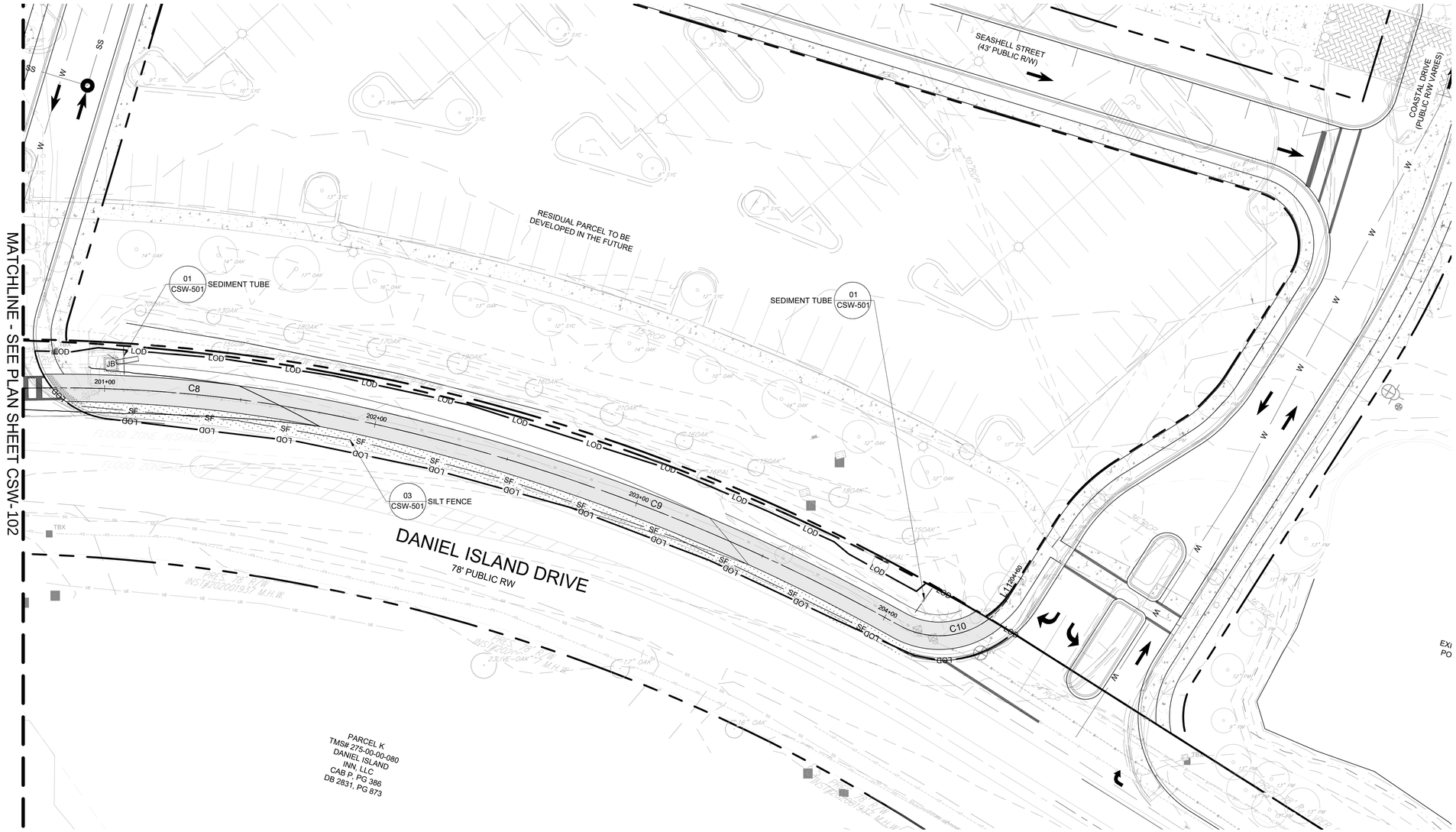
JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
STORMWATER POLLUTION PREVENTION SHEETS

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CSW103



GENERAL NOTES

1. CONCRETE WASHOUTS MAY BE SET UP WHEREVER PRACTICAL WITHIN THE PROJECT LIMITS, AND SHALL AT ALL TIMES COMPLY WITH THE DETAILS IN THIS PLAN SET AND STANDARD DHEC REQUIREMENTS.
2. STOCKPILE AREAS ARE TO BE AT AN OFFSITE LOCATION THAT COMPLIES WITH STANDARD DHEC REQUIREMENTS.
3. A FLOATING TURBIDITY BARRIER IN ACCORDANCE WITH THE MOST RECENT SCDOT SPECIFICATIONS AND DETAILS IS TO BE USED ON THE DOWNSTREAM END OF ALL CONSTRUCTION ACTIVITIES, IN WETLANDS WHERE SURFACE WATERS ARE, OR CAN BE PRESENT. BARRIER SHALL BE PLACED ALONG LOD AND TIE INTO EXISTING GRADE TO ENSURE THAT NO SEDIMENT LADEN RUNOFF IS ENTERING THE DOWNSTREAM WATERS WITHOUT PROPER TREATMENT.
4. TOTAL LIMIT OF DISTURBANCE IS 0.54 ACRES

20 0 20 40
1 INCH = 20 FEET

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN E. MATTIE — 7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

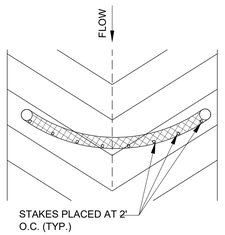
JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
STORMWATER POLLUTION PREVENTION SHEETS

SCALE: N.A. RTE.

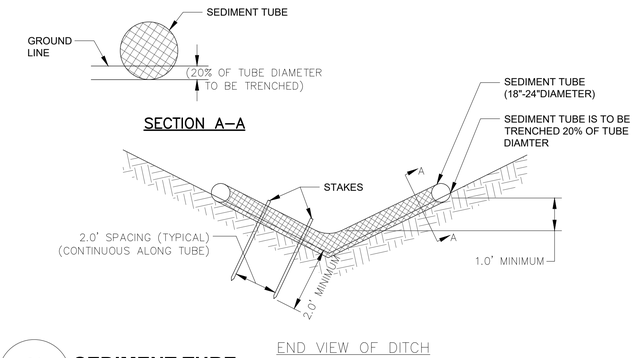
FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CSW501



TOP VIEW OF DITCH

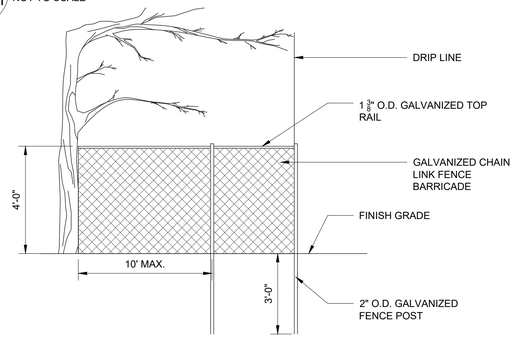
GENERAL NOTES:
1. REFER TO SCDOT STANDARD DRAWING 815-205-00.

INSPECTION AND MAINTENANCE:
1. INSPECT SEDIMENT TUBES AFTER INSTALLATION FOR GAPS UNDER THE SEDIMENT TUBES AND FOR GAPS BETWEEN THE JOINTS OF ADJACENT ENDS OF SEDIMENT TUBES. INSPECT SEDIMENT TUBES EVERY 7 DAYS. REPAIR ALL RILLS, GULLIES, AND UNDERCUTTING NEAR SEDIMENT TUBES. REMOVE ALL SEDIMENT DEPOSITS THAT IMPAIR THE FILTRATION CAPABILITY OF SEDIMENT TUBES WHEN THE SEDIMENT REACHES ½ THE HEIGHT OF THE EXPOSED SEDIMENT TUBE.
2. REMOVE AND/OR REPLACE INSTALLED SEDIMENT TUBES AS REQUIRED TO ADAPT TO CHANGING CONSTRUCTION SITE CONDITIONS. REMOVE SEDIMENT TUBES WHEN THE FUNCTIONAL LONGEVITY IS EXCEEDED AS DETERMINED BY THE ENGINEER, INSPECTOR, OR MANUFACTURER'S REPRESENTATIVE. GATHER SEDIMENT TUBES AND DISPOSE OF THEM IN REGULAR MEANS AS NON-HAZARDOUS, INERT MATERIAL.
3. PRIOR TO FINAL STABILIZATION, BACKFILL ALL TRENCHES, DEPRESSIONS, AND OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF SEDIMENT TUBES.



END VIEW OF DITCH

01 CSW-501 **SEDIMENT TUBE**
NOT TO SCALE



TREE PROTECTION NOTES:

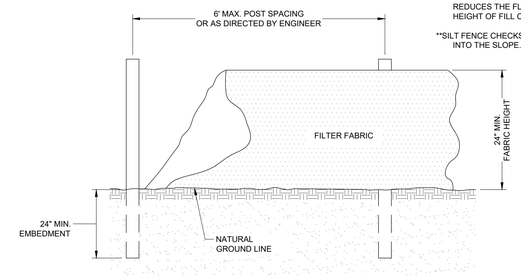
1. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TREE PROTECTION FENCING. LOCATION OF TREE PROTECTION FENCE IS INDICATED ON DRAWINGS.
2. TREE PROTECTION FENCE SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION PROCESS. CONTRACTOR SHALL NOT REMOVE/MODIFY THE BARRICADE AT ANY TIME DURING CONSTRUCTION OF PROPOSED WORK.
3. EXERCISE EXTREME CAUTION IN REMOVING PAVEMENT WITHIN DRIP LINE OF EXISTING TREES TO REMAIN.
4. EXERCISE EXTREME CAUTION WHEN REMOVING TREES, ADJACENT TO EXISTING TREES TO REMAIN. USE HAND METHODS IN CANOPIES AND ROOT ZONES OF EXISTING TREES.
5. TRENCHING WILL NOT BE ALLOWED WITHIN THE TREE PROTECTION ZONE.
6. AVOID DAMAGING EXISTING TREES. DAMAGE INCLUDES BUT IS NOT LIMITED TO: CUTTING, BREAKING, SKINNING OR COMPACTING OF ROOTS, SKINNING AND BRUISING OF BARK AND BREAKING OF BRANCHES AND LIMBS.
7. CONTRACTOR SHALL NOT PARK OR STORE EQUIPMENT AND SUPPLIES WITHIN THE TREE PROTECTION FENCING.
8. INSTALL TREE PROTECTION TO EDGE OF THE DRIP LINE AS NOTED ABOVE OR TO THE LIMITED OF THE PROPOSED WORK AS NOTED ON THE PLANS.

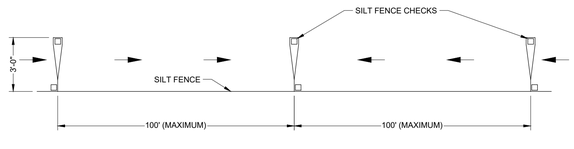
02 CSW-501 **TREE PROTECTION FENCE**
NOT TO SCALE

SILT FENCE				
HEIGHT OF FILL (y) IN FEET	FILL SLOPE	MINIMUM SILT FENCE OFFSET FROM TOE OF SLOPE (x) IN FEET	MINIMUM RIGHT OF WAY OFFSET FROM TOE OF SLOPE (NPDES LINE) (z) IN FEET	CHECK LENGTH IN FEET **
< 6	2:1 4:1 6:1	2	3	2
6-10	2:1	12*	13*	5
	4:1 6:1	3	4	3
> 10	2:1	12*	13*	5
	4:1 6:1	4	5	4

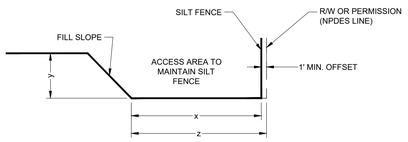
*THESE MINIMUM OFFSETS MAY BE REDUCED WHEN CURB AND GUTTER OR SOME OTHER FEATURE REDUCES THE FLOW OF WATER DOWN THE SLOPE. THE SMALL OFFSETS OF EACH GROUP OF HEIGHT OF FILL CANNOT BE REDUCED.

**SILT FENCE CHECKS WILL HAVE A MAXIMUM LENGTH OF FIVE (5) FEET OR UNTIL THEY TIE BACK INTO THE SLOPE.





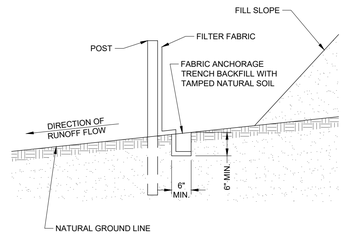
SILT FENCE CHECKS



STANDARD SILT FENCE

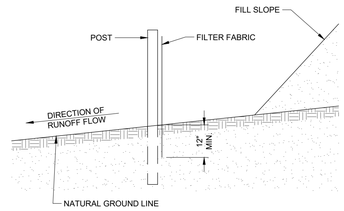
GENERAL NOTES:
1. SILT FENCE CHECKS MUST BE LOCATED EVERY 100 FT. MAXIMUM AND AT LOW POINTS. FILTER FABRICS SHALL CONFORM TO SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
2. USE POSTS CONFORMING TO SCDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS. POSTS SHALL BE A MINIMUM OF 5 FEET LONG AND INSTALLED TO A MINIMUM DEPTH OF 24 INCHES WITH NO MORE THAN 3 FEET OF THE POST ABOVE GROUND. AT LEAST 1 TO 2 INCHES OF THE POSTS SHALL EXTEND ABOVE THE TOP OF THE FABRIC. POST SPACING WILL BE A MAXIMUM OF 6 FEET ON CENTER.
3. POSTS SHALL HAVE PROJECTIONS FOR FASTENING THE FABRIC TO THE POST. POSTS SHALL ALSO HAVE A SOIL PLATE NEAR THE BOTTOM OF THE POST. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON-SITE.
4. ATTACH FABRIC TO POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN ALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES.
5. TYPICAL SILT FENCE APPLICATIONS REQUIRE 24 INCHES OF THE FABRIC TO BE ABOVE GROUND. WHEN NEEDED, THE HEIGHT OF SILT FENCE FABRIC ABOVE THE GROUND MAY BE GREATER THAN 24".
6. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE LENGTH OF POST WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING AND BURIED DEPTHS WILL REMAIN AS SHOWN HEREON. EXTRA HEIGHT FABRIC WILL BE 4, 5 OR 6 FEET TOTAL WIDTH.

INSPECTION AND MAINTENANCE:
1. SILT SHALL BE REMOVED AND DISPOSED OF WHEN SILT ACCUMULATES TO 1/3 THE HEIGHT OF THE FENCE. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON-SITE. MAINTENANCE OF SILT FENCE WILL BE MEASURED AND PAID FOR BY THE ITEM OF SILT BASIN.

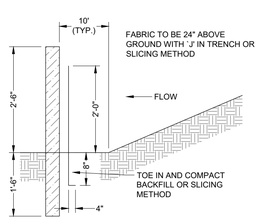


TRENCH METHOD

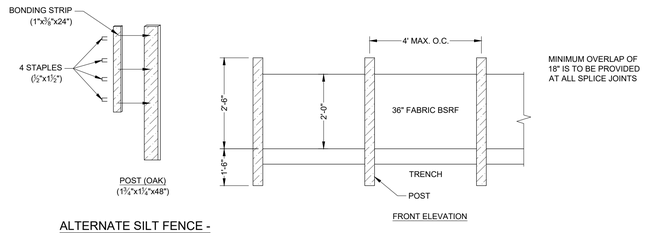
12" OF THE FABRIC SHALL BE BURIED REGARDLESS, IF PLACED PNEUMATICALLY OR BY AND WITH A TRENCHER. BOTH METHODS ARE SHOWN HERE.



PNEUMATIC METHOD



SIDE VIEW



FRONT ELEVATION

ALTERNATE SILT FENCE - BELTED SILT RETENTION FENCE (BSRF)

03 CSW-501 **SILT FENCE**
NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTIE

7.30.24

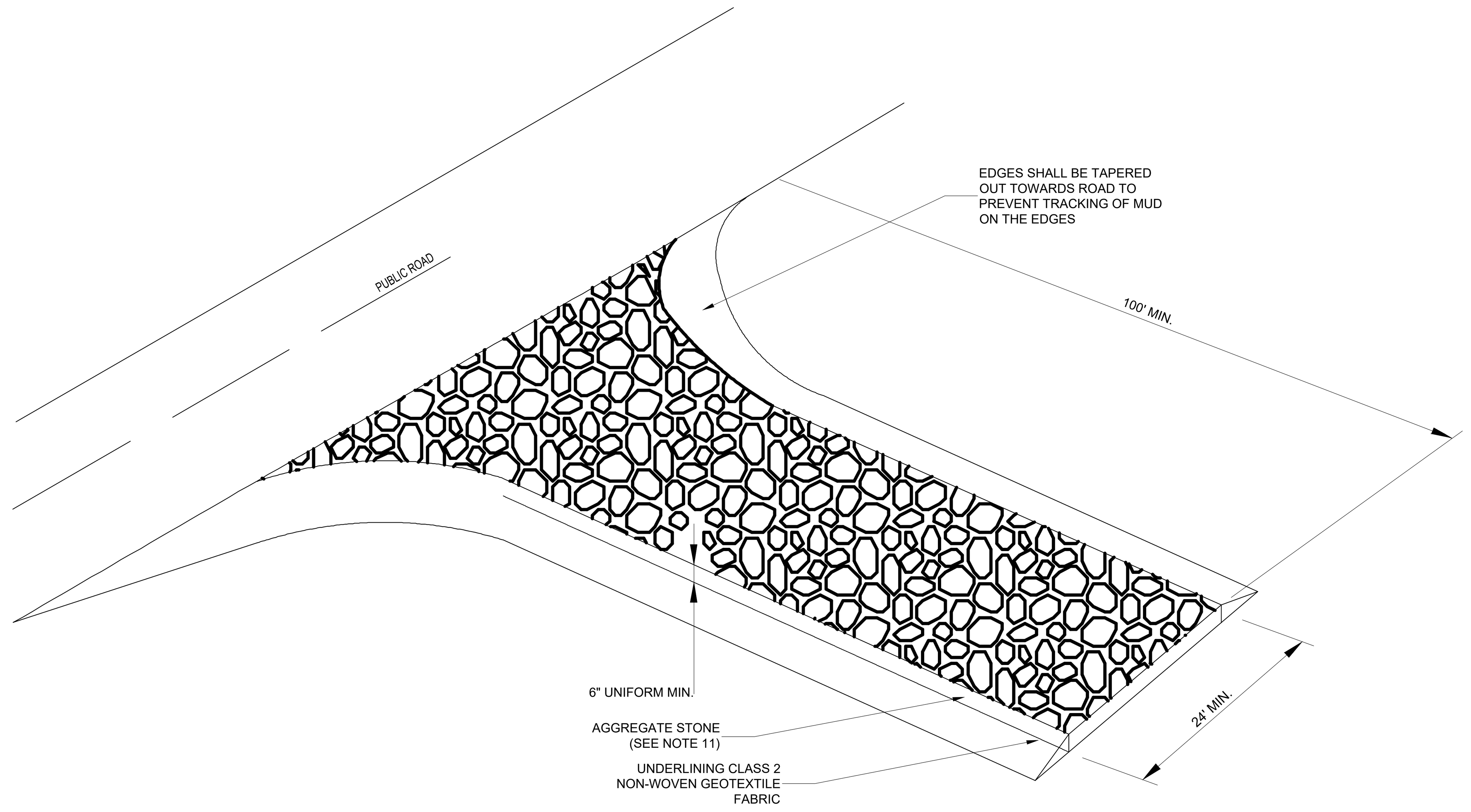
PLANS PREPARED BY:
235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
STORMWATER POLLUTION PREVENTION DETAILS

SCALE: N.A. RTE.

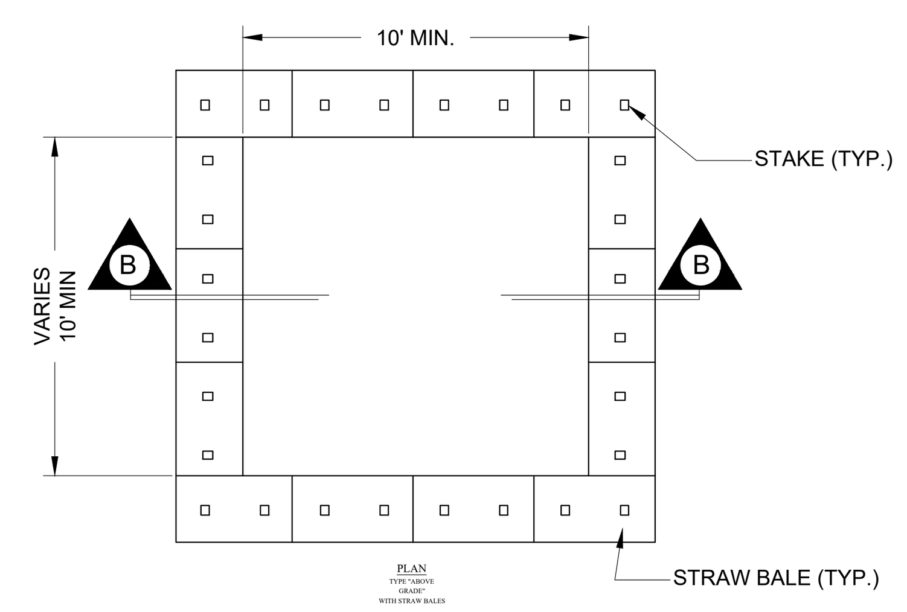


NOTES:

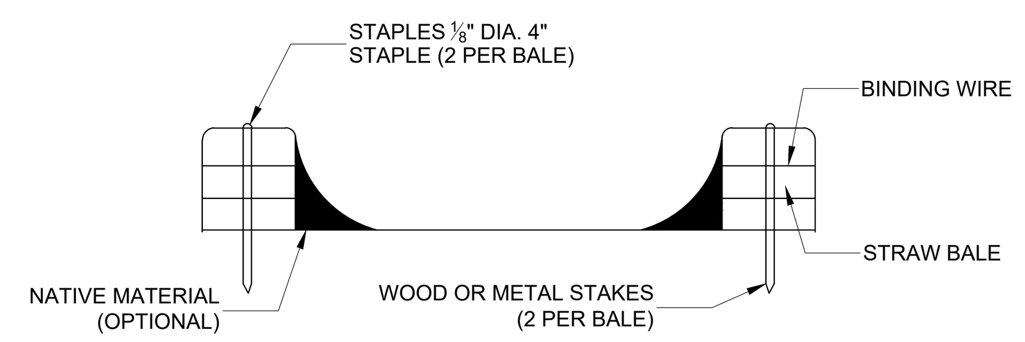
1. STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.
2. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDOT AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN. CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.
3. REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
4. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.
5. INSTALL A CLASS 2 NON-WOVEN GEOTEXTILE FABRIC THAT MEETS THE REQUIREMENTS OF SECTION 804 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION, PRIOR TO PLACING ANY STONE.
6. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FT WIDE x 100-FT LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
7. INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS. CHECK FOR MUD AND SEDIMENT BUILDUP, AS WELL AS PAD INTEGRITY. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
8. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY THE ENGINEER. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.
9. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR
10. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.
11. USE AGGREGATE No. 1, 2, 24, OR 3 AS CONSTRUCTION ENTRANCE MATERIAL.

01 / CSW-502 STABILIZED CONSTRUCTION ENTRANCE (SC DOT STD. DETAIL 815-505-000)

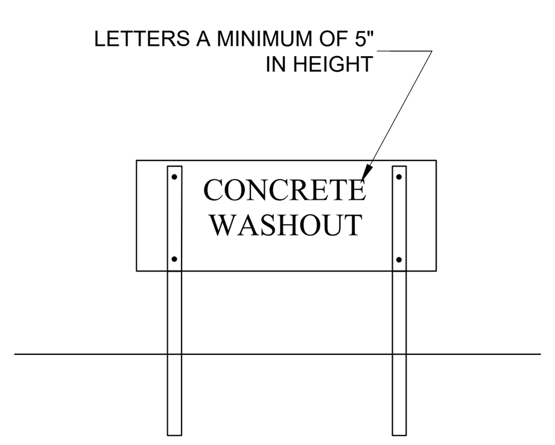
NOT TO SCALE



PLAN
TYPE "ABOVE GRADE" WITH STRAW BALES



SECTION B-B



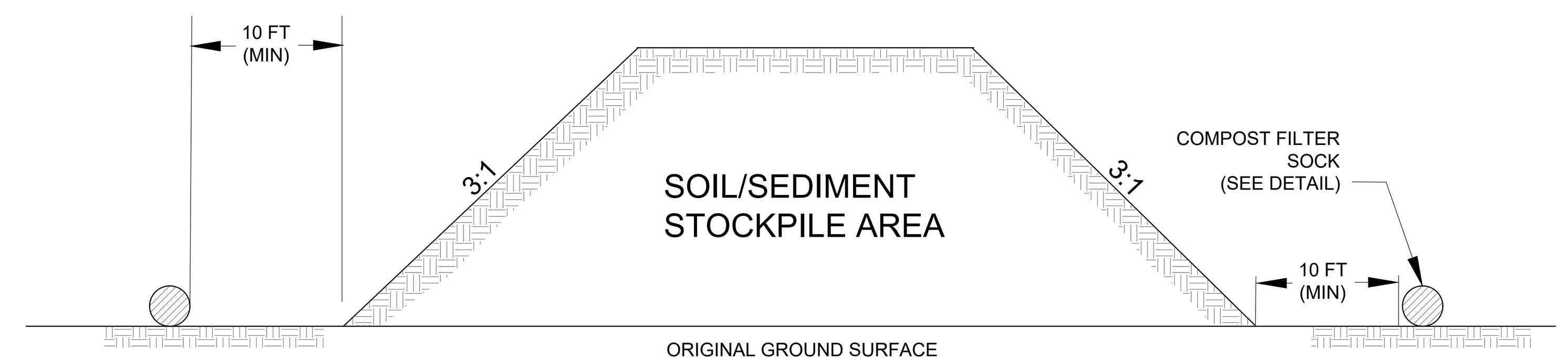
CONCRETE WASHOUT SIGN DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.
8. CONCRETE WASHOUTS SHALL BE LINED WITH PLASTIC.

02 / CSW-502 STRAW BALE BARRIER CONCRETE WASHOUT

NOT TO SCALE



NOTES:

1. COMPOST FILTER SOCK TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOPE THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN–GRADIENT.
2. THE COMPOST FILTER SOCK IS TO BE PLACED A MINIMUM OF 10 FEET AWAY FROM THE BASE OF THE STOCK PILE AT ALL LOCATIONS.
3. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED. NO STOCKPILE TO REMAIN FOR MORE THAN 180 DAYS.
4. COMPOST FILTER SOCK SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
5. THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
6. OFFSITE STOCKPILING FOR STAGING WILL BE DISCUSSED DURING THE REQUIRED PRE–CONSTRUCTION MEETING.

03 / CSW-502 TEMPORARY STOCKPILE AREA

NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. — No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 31461 — RYAN S. MATTIE

7.30.24

PLANS PREPARED BY: 235 MAGRATH DARBY BLVD. SUITE 275 MT. PLEASANT, SC 29464 (843) 779-3700

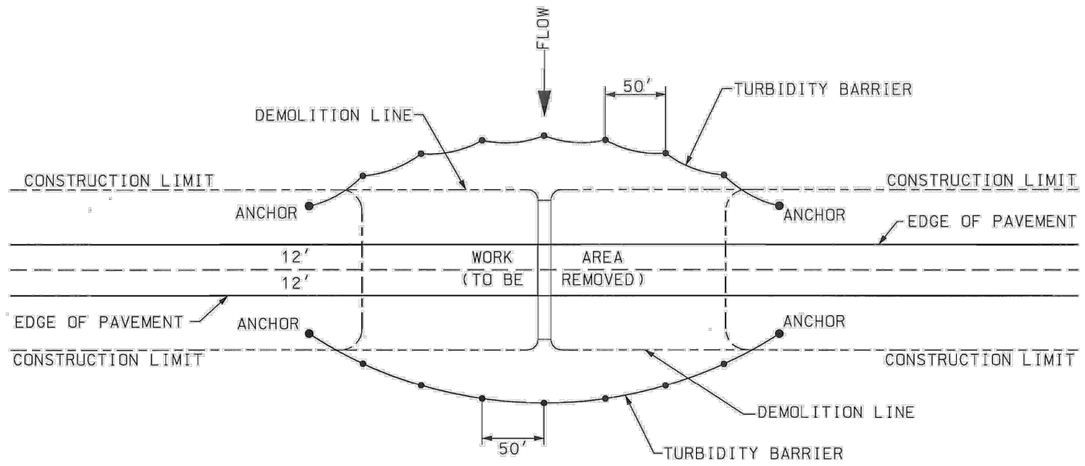
JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
STORMWATER POLLUTION PREVENTION DETAILS

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	SHEET NO.
3	S.C.	BERKELEY	CSW503



AREA SHOWING PLACEMENT OF TURBIDITY BARRIER WHERE FILL SECTION IS TO BE REMOVED AND BRIDGE IS TO BE CONSTRUCTED.

NOTES:

1. THE PURPOSE OF THE FLOATING TURBIDITY BARRIER IS TO PROVIDE SEDIMENT PROTECTION CAUSED BY FILL THAT IS PLACED IN WATER OR INFLUENCED BY TIDAL FLOW.

2. MATERIALS USED IN THE FLOATING TURBIDITY BARRIER SHALL MEET THE FOLLOWING REQUIREMENTS:

	LIGHT DUTY	MEDIUM DUTY	HEAVY DUTY
FABRIC – POLYESTER REINFORCED VINYL (OZ/SY)	18	22	22
FLOATATION (LB/FT)*	13	22	22
TOP LOAD CABLE	---	---	5/16" GALVANIZED 10K#
STRESS PLATES	---	---	5/8" POLYPROPYLENE
ROPE RETAINER	5/8" POLYPROPYLENE	5/8" POLYPROPYLENE	5/8" POLYPROPYLENE
GROMMETS	#4 BRASS	#4 BRASS	#4 BRASS
SEAMS HEAT WELDED	YES	YES	YES
BOTTOM LOAD CHAIN	1/4" GALVANIZED 0.63 LBS/FT (MIN)	5/16" GALVANIZED 0.95 LBS/FT (MIN)	5/16" GALVANIZED 0.95 LBS/FT (MIN)
CONNECTING HARDWARE	GALVANIZED STEEL	GALVANIZED STEEL	GALVANIZED STEEL
STANDARD DEPTH	5 FT. – 15 FT.	5 FT. – 23 FT.	5 FT. – 23 FT.
STANDARD LENGTH**	50 & 100 FT.	50 & 100 FT.	50 & 100 FT.

*FLOATATION FOR BARRIERS OF DEPTHS GREATER THAN 10 FEET IS TO BE 60 POUNDS PER FOOT. FLOATATION MUST BE SUFFICIENT TO MAINTAIN THE TOP OF THE BARRIER AT AN ELEVATION 3 INCHES ABOVE THE WATER.

**THE MAXIMUM LENGTH FOR BARRIERS OF DEPTH GREATER THAN 10 FEET IS 50 FEET.

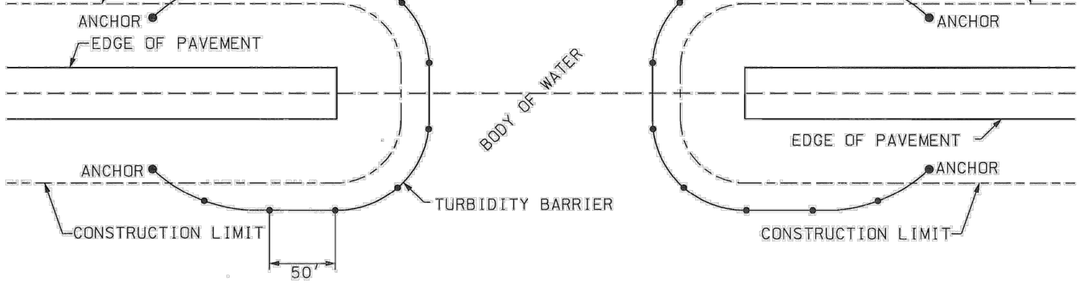
3. BOUYS USED IN CONJUNCTION WITH FLOATING TURBIDITY BARRIER SHALL COMPLY WITH THE SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES' LAW ENFORCEMENT BOUY SPECIFICATIONS.

4. FLOATING TURBIDITY BARRIERS SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE PLANS, AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMENDATIONS. THE END POINTS SHALL BE ANCHORED ON THE UNDISTURBED SHORELINE WITH SUFFICIENT SUPPORT TO SECURE THE BARRIER IN PLACE DURING TURBULENT CONDITIONS. REFER TO SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 815.

5. THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER SHALL INCLUDE ALL MATERIALS, ANCHORS, EQUIPMENT, LABOR, AND WORK INCIDENTAL TO THE CONSTRUCTION OF THE BARRIER.

6. IF NO DEPTH OF MATERIAL IS CALLED FOR, THE BID ITEM SHALL BE IN SQUARE FEET. WHEN THE DEPTH IS SPECIFIED, IT WILL BE IN INCREMENTS OF FEET.

7. THE BID ITEM SHALL BE
FLOATING TURBIDITY BARRIER __DUTY_____SF
FLOATING TURBIDITY BARRIER __DUTY (__FEET DEEP)_____LF.



AREA SHOWING PLACEMENT OF TURBIDITY BARRIER WHERE CONSTRUCTION IS TO BE PERFORMED ON FILL SECTION OF BRIDGE ENDS.

THIS DRAWING IS NOT TO SCALE

01 CSW-503 **TURBIDITY BARRIER**
NOT TO SCALE

ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET

SOUTH CAROLINA JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 31461 RYAN S. MATTIE 7.30.24

PLANS PREPARED BY:

235 MAGRATH DARBY BLVD, SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

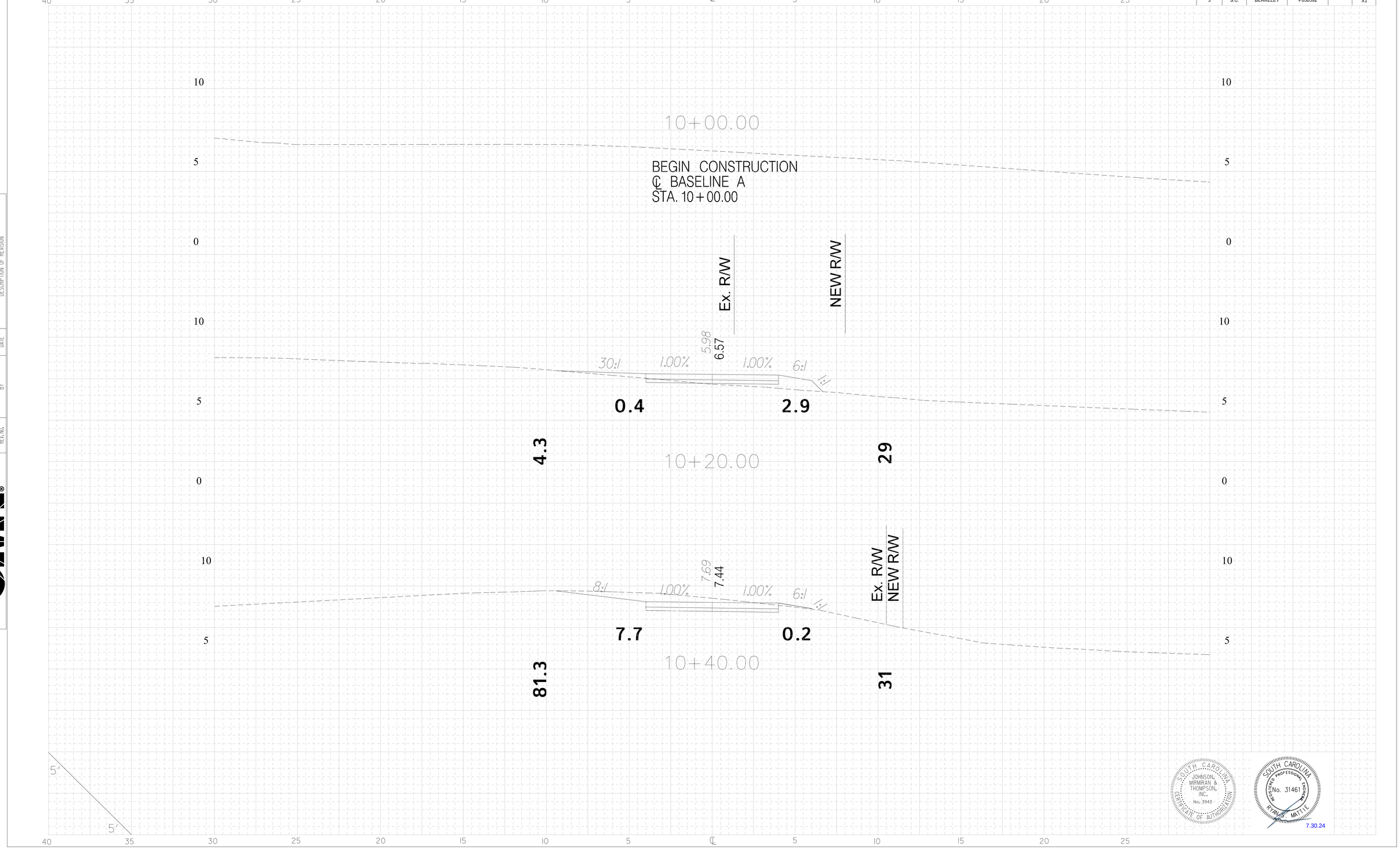
JMT

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
6			
5			
4			
3			
2			
1			

CITY OF CHARLESTON
SHARED USE PATH ALONG DANIEL ISLAND DRIVE
STORMWATER POLLUTION PREVENTION DETAILS

SCALE: N.A. RTE.

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X1



REV. NO.	DESCRIPTION OF REVISION	BY	DATE
4			
3			
2			
1			

PLANS PREPARED BY:

JMT

235 MAGNOLIA DAIRY BLVD.
SUITE 210
MT. PLEASANT, SC 29464
(843) 779-2705

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED Professional Engineer
No. 31461
RYAN S. MATTLE
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X2

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY:
JMT
235 MAGRATH DARBY BLVD.
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIE
7.30.24

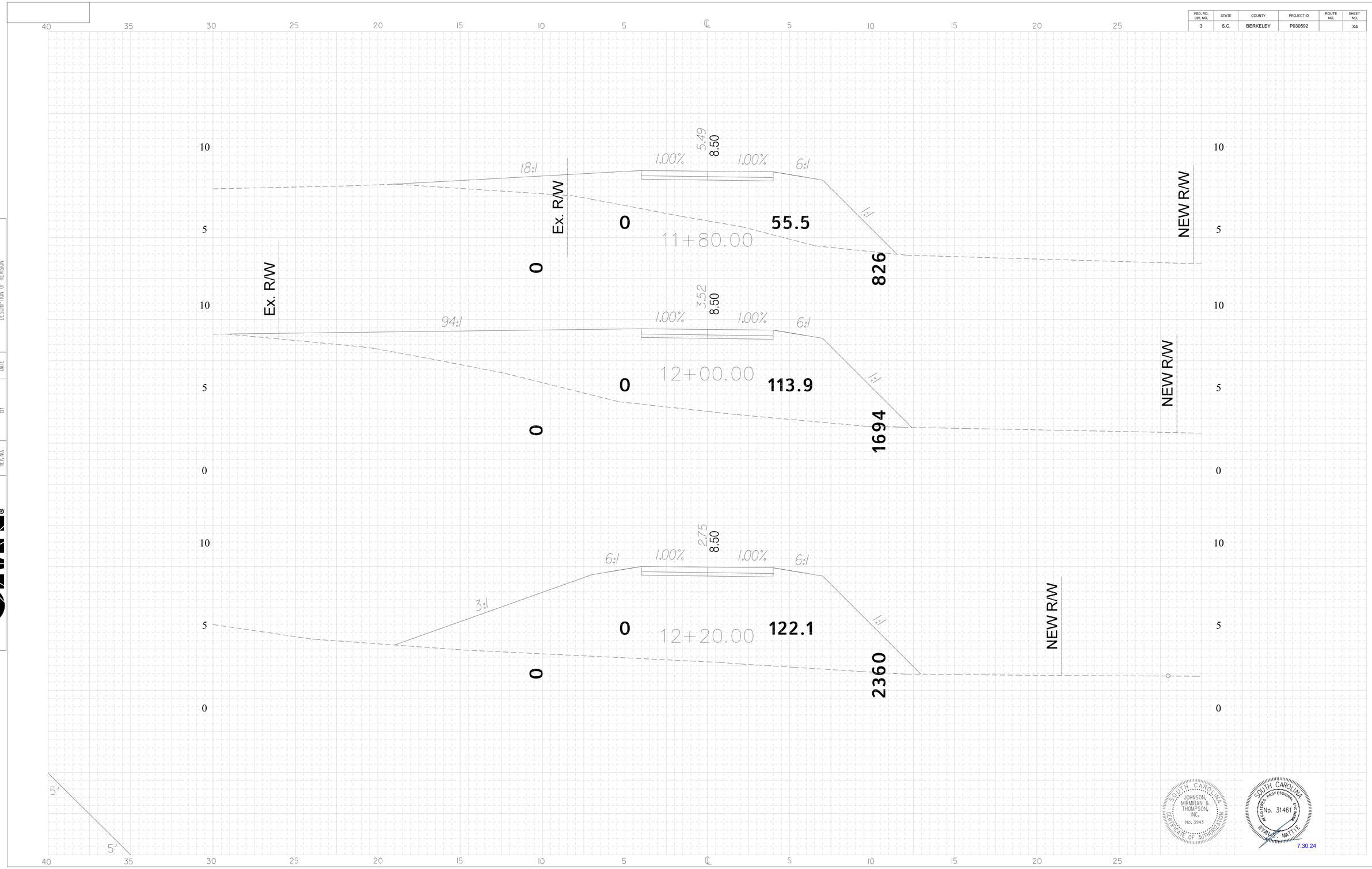
FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X3

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY: JMT

235 MAGRATH DARBY BLVD. SUITE 210, MT. PLEASANT, SC 29464 (843) 779-3700

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X4



PLANS PREPARED BY:

JMT
295 MEDIPARK DAIRY BLVD.
SUITE 210
CHARLESTON, SC 29464
(843) 779-2700

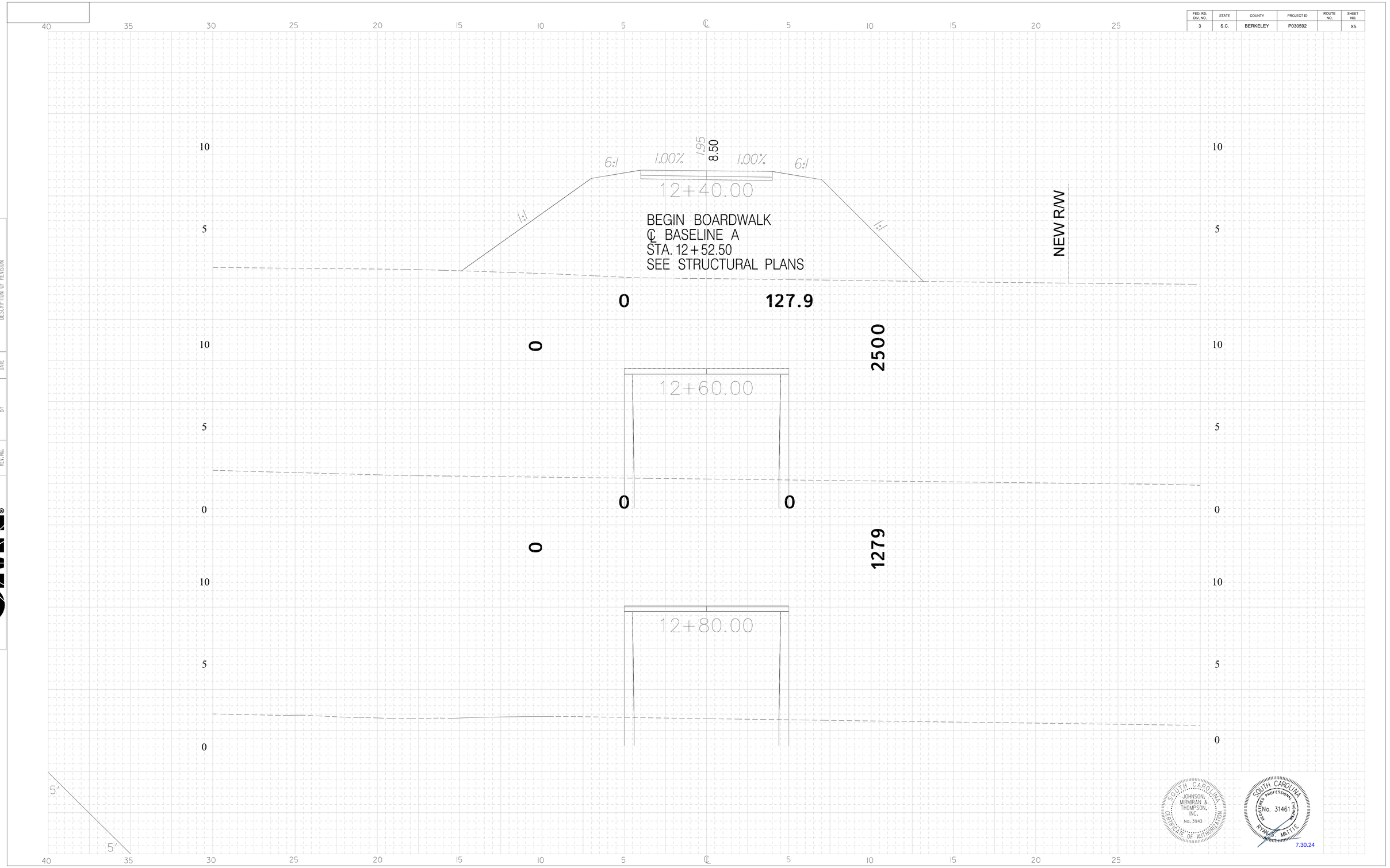
REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED Professional ENGINEER
No. 31461
RYAN M. MATTIX
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X5



REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

PLANS PREPARED BY:

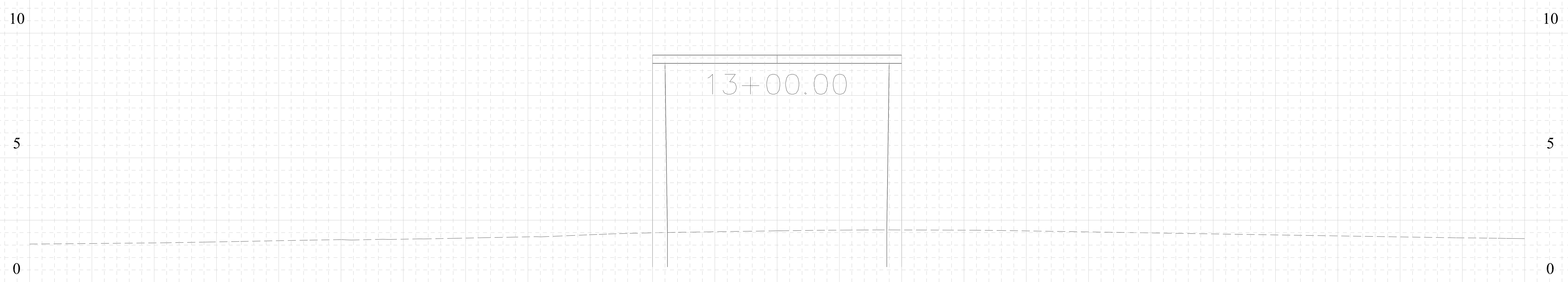
JMT
729 MAGNOLIA DAIRY BLVD.
SUITE 270
MT. PLEASANT SC 29464
(843) 779-2700

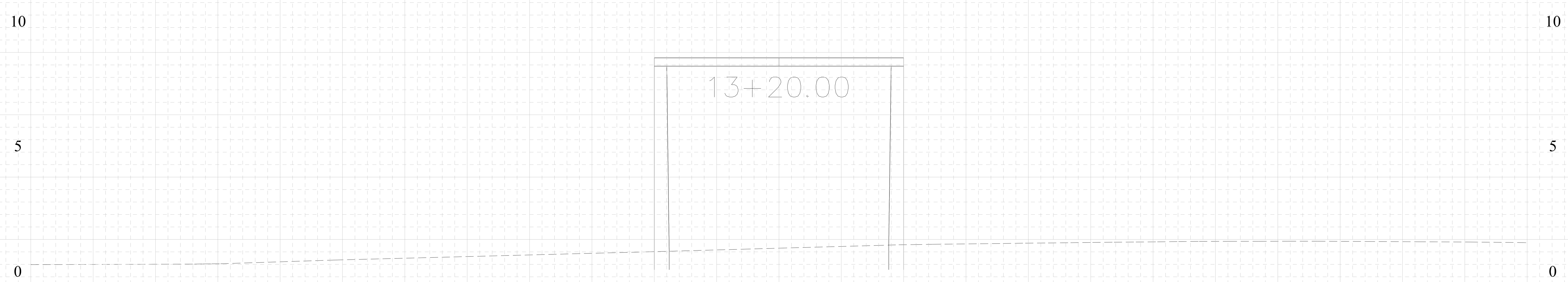
SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN J.S. MATTY
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X6





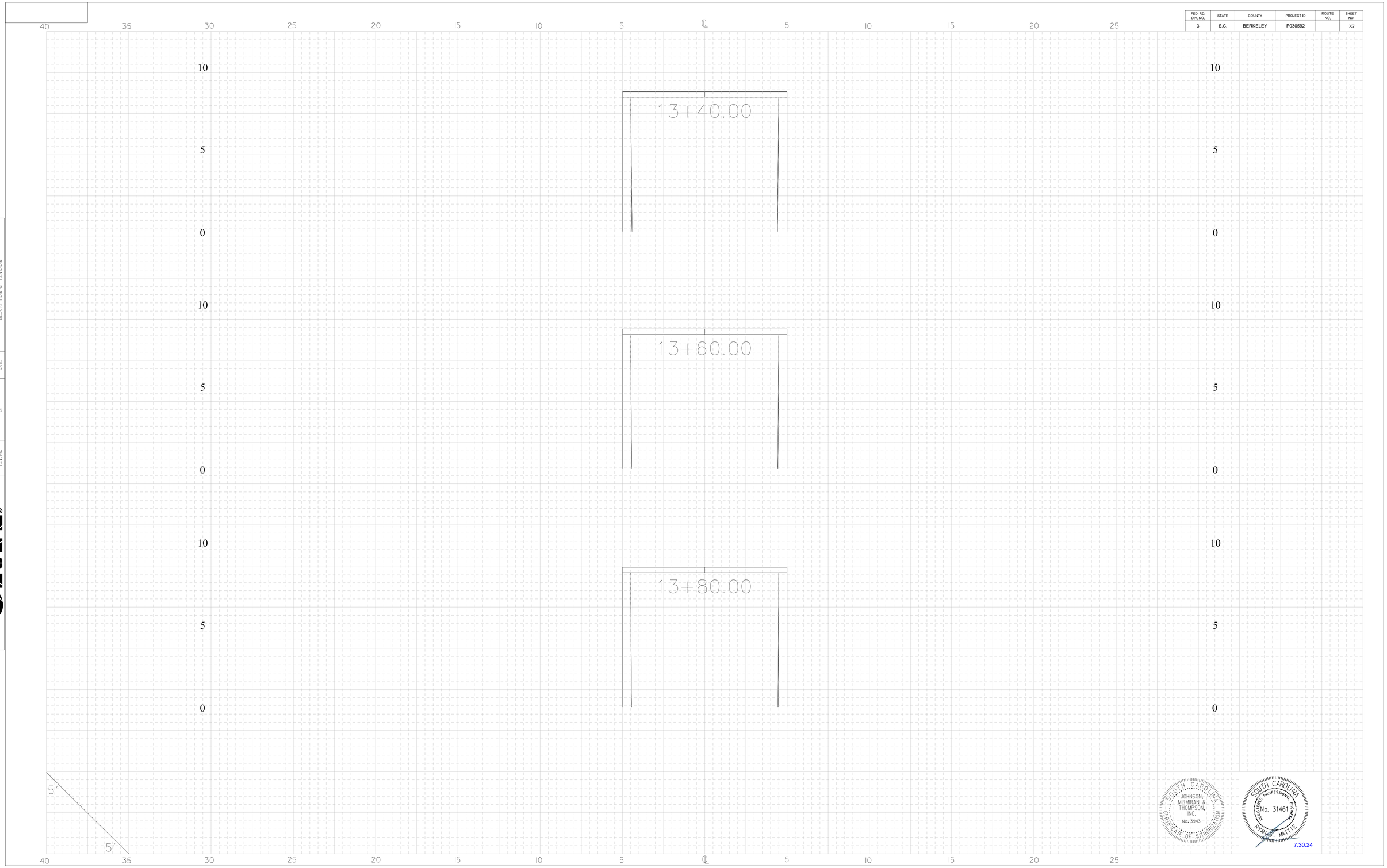
REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY: JMT
235 MAGRATH DARBY BLVD.
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIE
7.30.24

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X7



REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

PLANS PREPARED BY:

JMT
706 MAGNOLIA DAIRY BLVD.
SUITE 270
MT. PLEASANT SC 29464
(843) 779-2700

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTY
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X8

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIE
7.30.24

PLANS PREPARED BY:
235 MAGRATH DARBY BLVD.
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-3700

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X9

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY: JMT

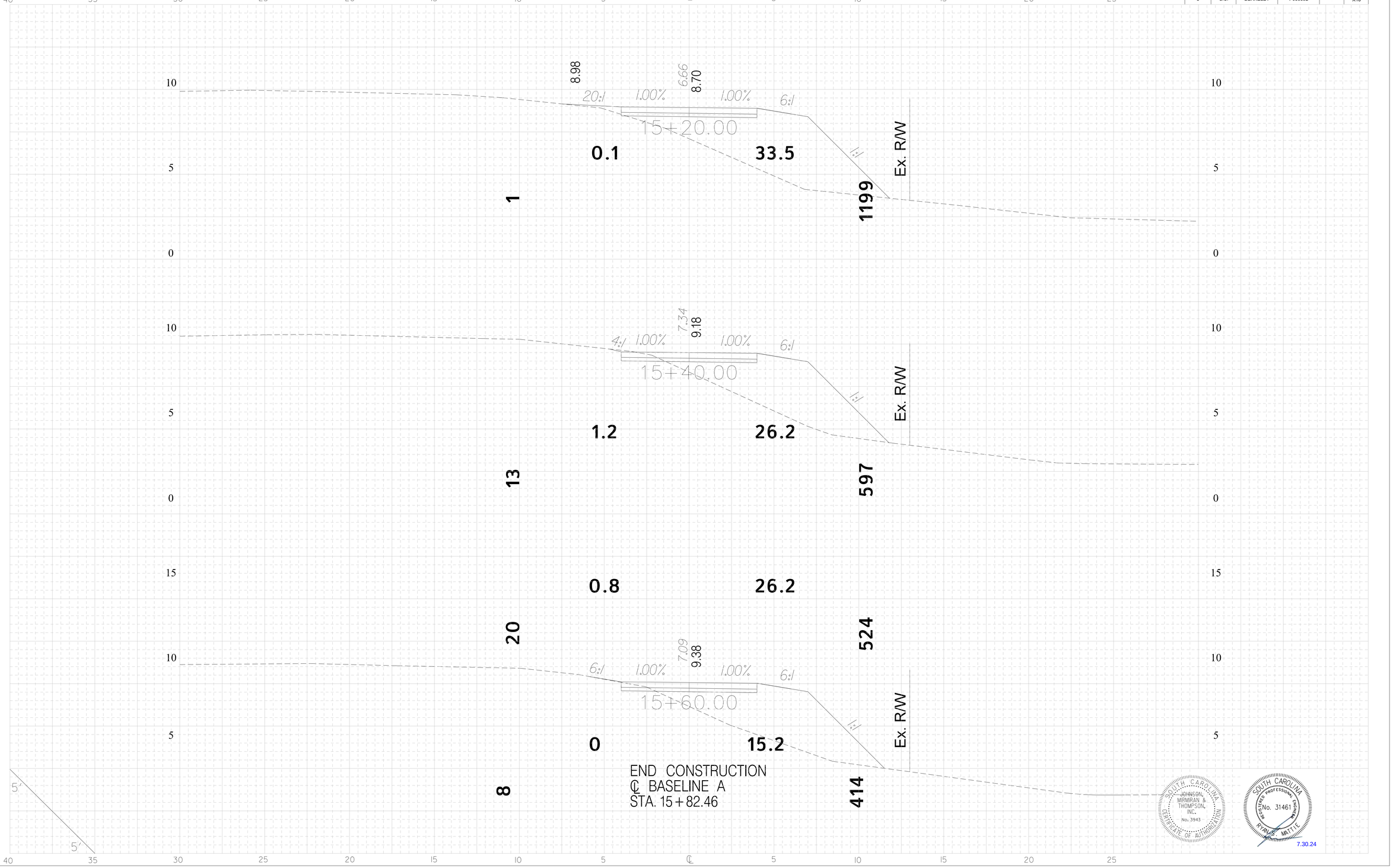
235 MAGRATH DARBY BLVD. SUITE 270 MT. PLEASANT, SC 29464 (843) 779-3700

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X10

NO.	DESCRIPTION OF REVISION	DATE	BY
4			
3			
2			
1			

PLANS PREPARED BY:

JMT
235 MAGNOLIA DAIRY BLVD.
SUITE 210
MT. PLEASANT, SC 29464
(843) 779-2700

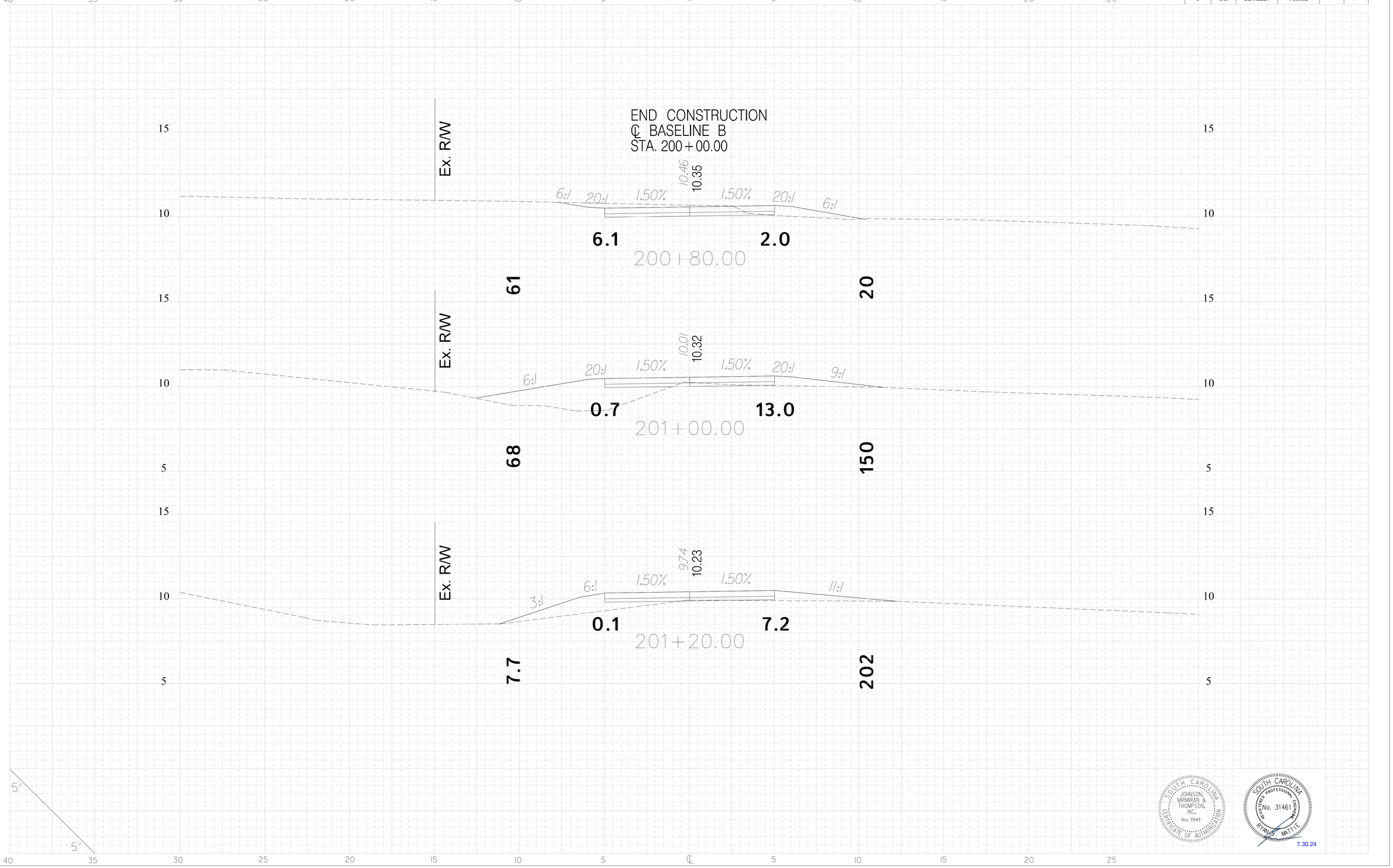


SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED Professional Engineer
No. 31461
RYAN K. MATTLE
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X11



REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

PLANS PREPARED BY:

295 MAGNOLIA DAIRY BLVD.
SUITE 210
MT. PLEASANT, SC 29464
(843) 779-3700

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN M. MATTIE
7.30.24

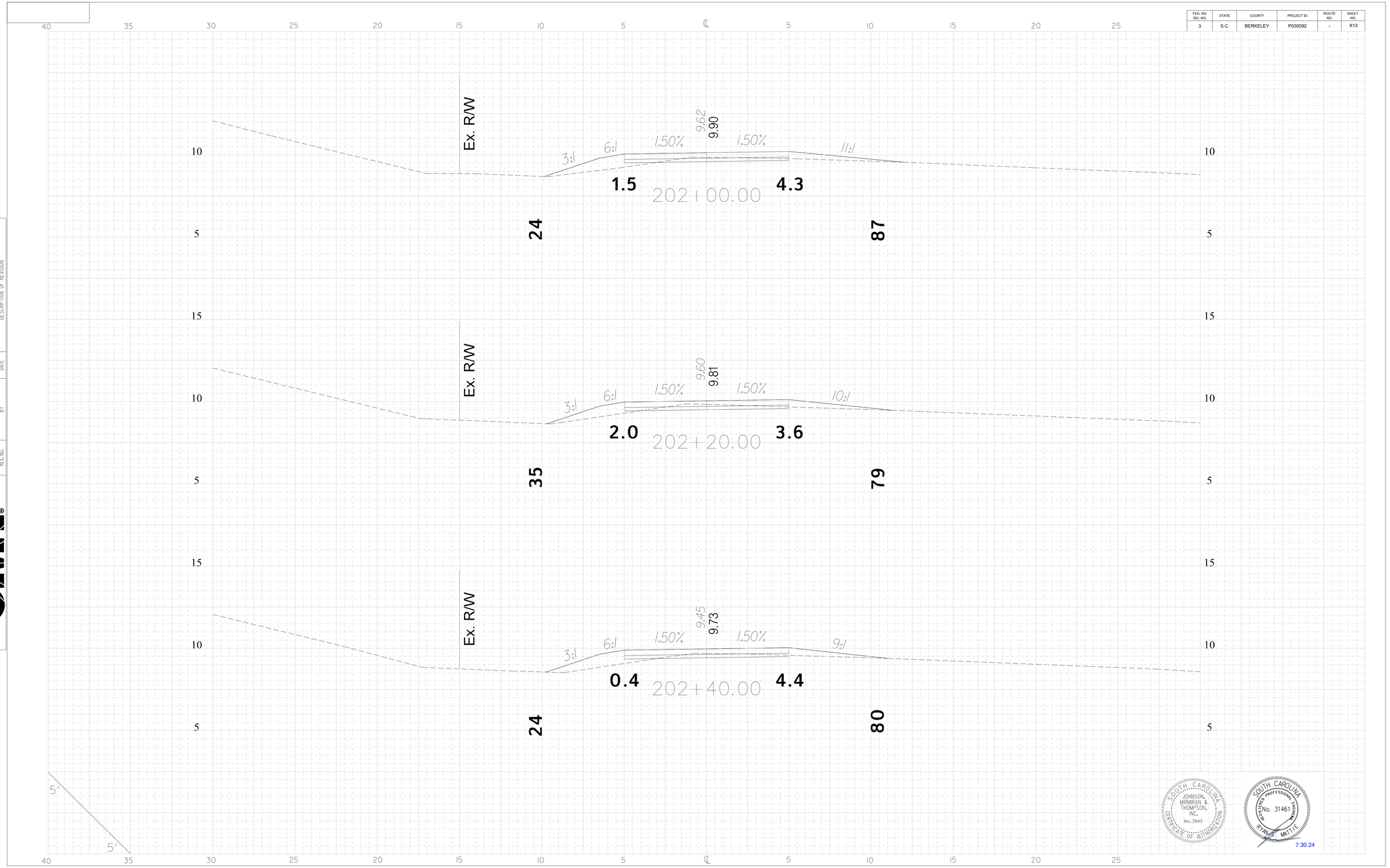
xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592		X12

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY: JMT
235 MAGRATH DARBY BLVD. SUITE 275 MT. PLEASANT, SC 29464 (843) 779-3700

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X13



REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY:

JMT
250 MAGNUM DRIVE
SUITE 275
MT. PLEASANT, SC 29464
(843) 779-2700

SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIE
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X14

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

PLANS PREPARED BY:

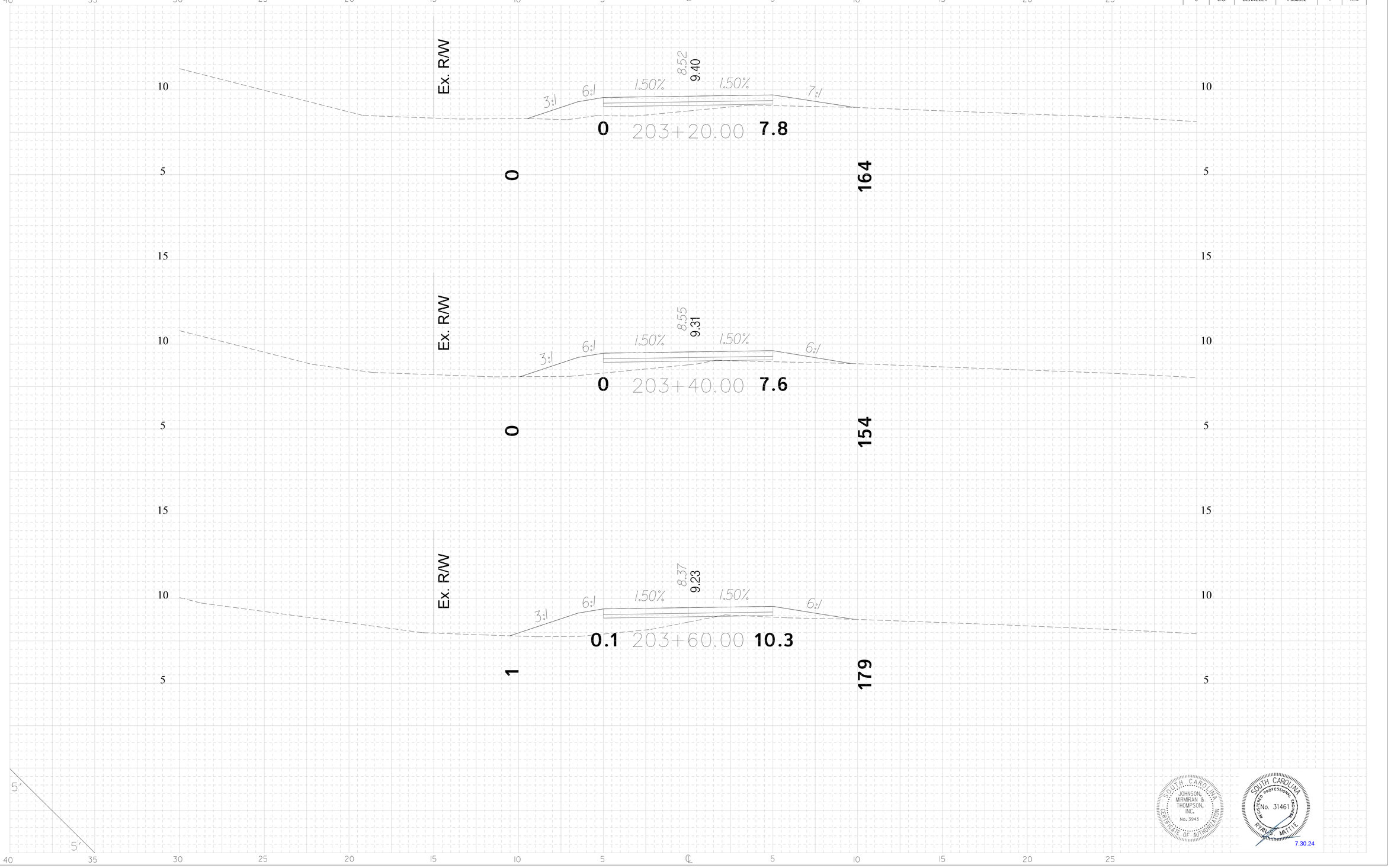
JMT
235 MAGNOLIA DAIRY BLVD.
SUITE 210
GOOSE CREEK, SC 29445
(843) 779-2100

SOUTH CAROLINA
JOHNSON, MIMMRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN M. MATTIE
7.30.24

xs_sheet10x5_pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X15



NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

PLANS PREPARED BY:

295 MGRATH DARBY BLVD.
SUITE 210
HANAHAN, SC 29464
(843) 779-2370

JMT

5'
5'

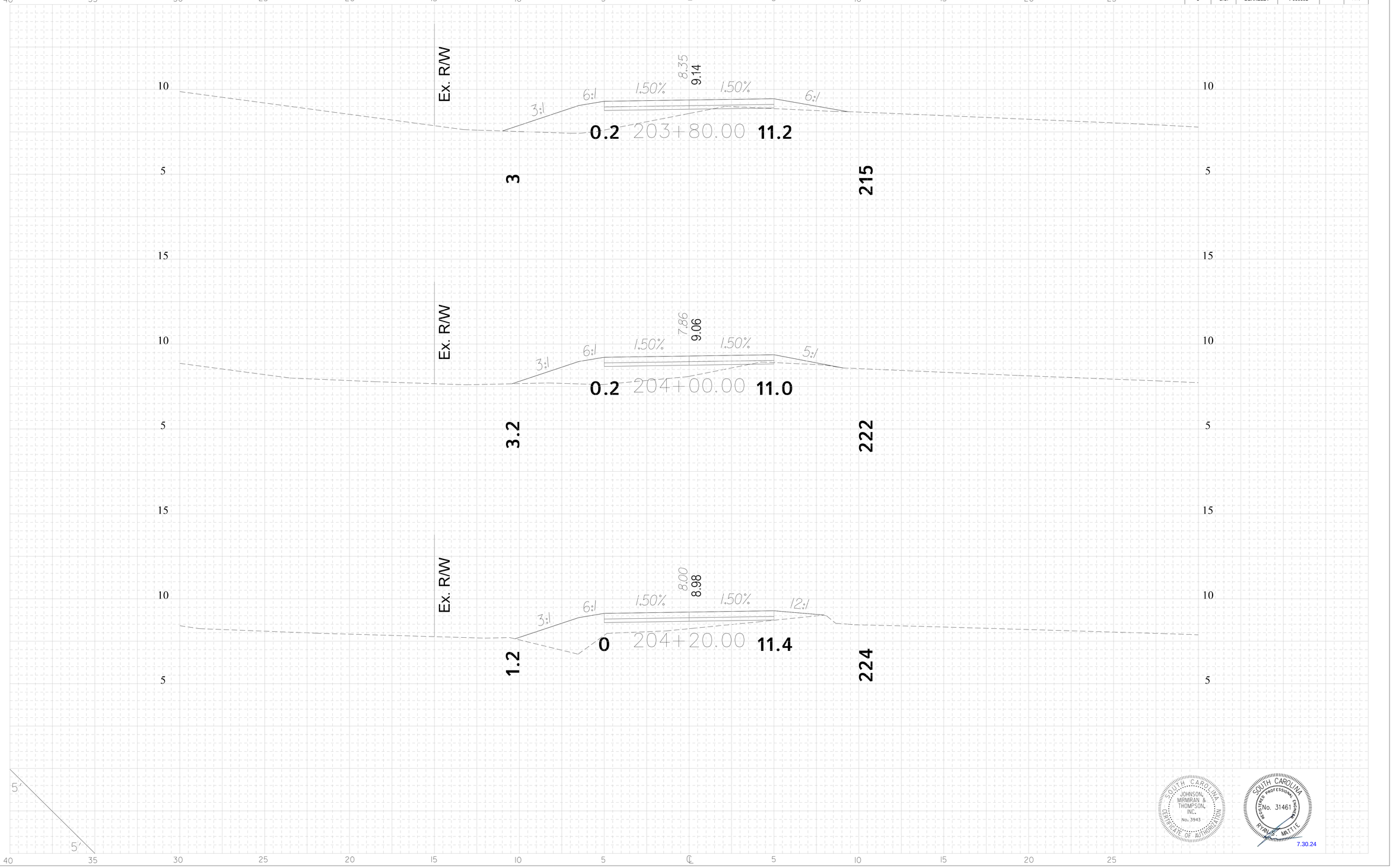
SOUTH CAROLINA
JOHNSON, MIRMIRAN & THOMPSON, INC.
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN S. MATTIC

7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X16



NO.	REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4				
3				
2				
1				

PLANS PREPARED BY:

295 MAGNOLIA DAIRY BLVD.
SUITE 210
MT. PLEASANT, SC 29464
(843) 779-3700

JOHNSON, MIRMIRAN & THOMPSON, INC.
SOUTH CAROLINA
No. 3943
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 31461
RYAN J. MATTIE
7.30.24

xs_sheet10x5.pe

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	S.C.	BERKELEY	P030592	-	X17

PLANS PREPARED BY: JMT
235 MAGRATH DARBY BLVD. SUITE 275 MT. PLEASANT, SC 29464 (843) 779-3700

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
1			
2			
3			
4			

BRIDGE PLANS ID	SHEET NO.
030592-B01	S1

GENERAL NOTES

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED IN CONFORMANCE WITH THE STATE OF SOUTH CAROLINA AND ALL OTHER APPLICABLE CODES AND REGULATIONS OF AGENCIES HAVING JURISDICTION. CONSTRUCTION MUST CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED IN THE ATTACHED SPECIFICATIONS

   SCDOT 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION
   AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION
   LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION
   NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 2015 EDITION

2. METHODS OF CONSTRUCTION AND INSTALLATION OF MATERIALS IS THE CONTRACTOR'S RESPONSIBILITY.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS SPECIFIED ON THESE CONTRACT PLANS, THE CONTRACT PROJECT SPECIFICATIONS, HEREIN REFERRED TO SIMPLY AS THE SPECIFICATIONS, AND SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2007. NOTES BELOW ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SAFETY OF THE SITE AND ALL PERSONS ON THE SITE UNTIL PROJECT IS COMPLETE.

5. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS FOR SUCCESSFUL COMPLETION OF THE PROJECT.

6. THE CONTRACTOR SHALL MAKE NO DEVIATION FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE OWNER.

7. ALL ELEVATIONS REFERENCED ON THESE PLANS ARE BASED ON NAVD88. THE NOWELL CREEK MEAN HIGHER-HIGH WATER MHHW)IS 2.75' (NAVD '88) AND MEAN LOWER-LOW WATER (MLLW) IS -3.18' (NAVD '88). ALL ELEVATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

8. CONTRACTOR SHALL FINE GRADE, SMOOTH, AND RAKE THE DISTURBED AREAS AT THE DIRECTION OF THE CITY.

9. CONTRACTOR SHALL PERFORM WORK EXPEDITIOUSLY IN ORDER TO MINIMIZE THE PERIOD OF DISTURBANCE TO THE ENVIRONMENT. ANY DISTURBED CRITICAL AREA ADJACENT TO THE CONSTRUCTION SITE TO BE RESTORE TO ORIGINAL CONTOURS AND CONDITIONS UP PROJECT COMPLETION.

10. CONTRACTOR SHALL SUBMIT A WORK PLAN THAT ADDRESSES HOW THE IMPACT TO THE CRITICAL AREA (MARSH) SHALL BE MINIMIZED AND HOW THE CONTRACTOR PLANS TO RESTORE IT TO ITS ORIGINAL CONDITION UPON PROJECT COMPLETION.

11. ALL WORK WITHIN CRITICAL AREA SHALL BE RESTRICTED TO WITHIN THE LIMITS OF DISTURBANCE.

12. AT THE CONTRACTORS DISCRETION, VALUE ENGINEERING PROPOSALS MAY BE SUBMITTED TO THE ENGINEER FOR CONSIDERATION AND APPROVAL. ALTERNATIVE STRUCTURAL CONCEPTS WILL BE CONSIDERED ON AN "AS-EQUAL" BASIS TO WHAT IS DEPICTED IN THESE CONTRACT DOCUMENTS, PROVIDED SUFFICIENT VALUE CAN BE PROVEN BY THE CONTRACTOR FOR THE PROJECT.

    IF AN ALTERNATIVE CONCEPT IS APPROVED, SHOP DRAWINGS, CALCULATIONS, SPECIFICATIONS AND RELATED INFORMATION MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PILES

1. PILE FACTORED DESIGN AXIAL LOADS:
   11.7 KIPS FOR TIMBER PILES
   46.0 KIPS FOR CONCRETE PILES

2. MINIMUM PILE TIP ELEVATIONS FOR PILES:
   -27 FOR TIMBER PILES
   -27 FOR CONCRETE PILES

3. TIMBER PILES SHALL HAVE AN 8 INCH TIP AND A 12 INCH BUTT.

TIMBER

1. ALL LUMBER SHALL BE VISUALLY GRADED IN ACCORDANCE WITH CURRENT W.W.P.A. GRADING RULES. ALL DIMENSIONAL LUMBER SHOWN ON PLANS SHALL BE S4S SEASONED LUMBER OF THE FOLLOWING GRADES:
   A. 2X AND WIDER LUMBER - SOUTHERN PINE #1

2. ALL WOOD MEMBERS WERE DESIGNED IN ACCORDANCE WITH THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 2015 EDITION (NDS-2015)

3. FOR REQUIRED PRESERVATIVE TREATMENT OF ALL TIMBER, SEE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION SECTION 8.4.3., SCDOT 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTIONS 706 (WOOD PRODUCTS FOR USE IN HIGHWAY CONSTRUCTION) AND SECTION 708 (TIMBER STRUCTURE HARDWARE), SUPPLEMENTAL SPECIFICATION SECTION 707 (PRESERVATIVE TREATMENT OF WOOD PRODUCTS), AND SUPPLEMENTAL TECHNICAL SPECIFICATION FOR TIMBER PILES.

4. ALL SIZES INDICATED ON PLANS ARE FOR NOMINAL LUMBER DIMENSIONS, NOT ACTUAL.

CONCRETE

1. PROVIDE THE CLASS OF CONCRETE AS NOTED IN THE CONTRACT DOCUMENTS. FOR CAST-IN-PLACE STRUCTURAL ELEMENTS, USE CLASS 4000 CONCRETE WHERE THE CLASS OF CONCRETE IS NOT SPECIFIED IN THE CONTRACT DOCUMENTS.

2. CHAMFER ALL EXPOSED EDGES ¾" UNLESS OTHERWISE NOTED.

3. THE MINIMUM ACCEPTABLE CONCRETE COVER FOR REINFORCING STEEL IS ½" LESS THAN THE PLAN DIMENSIONS WHEN REQUIRED BY REINFORCING BAR FABRICATION TOLERANCES.

4. CAST BUILD-UPS AND SHEAR KEYS ON BENT CAPS MONOLITHIC WITH THE CAP UNLESS INDICATED OTHERWISE IN THESE PLANS. CONSTRUCT THE TOP OF EACH BUILD-UP LEVEL.

SPECIFICATIONS

1. ATTACHED SPECIFICATIONS

2. SCDOT 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION

4. LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION

5. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 2015 EDITION

6. SUPPLEMENTAL TECHNICAL SPECIFICATION FOR TIMBER PILES (SCDOT DESIGNATION: SC-M-711-1 (01/23)

DESIGN DATA

1. LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

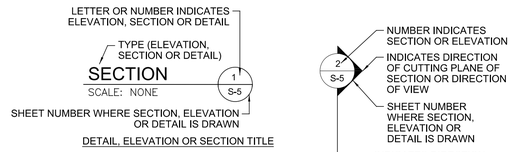
2. LIVE LOAD: 90 PSF

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APP'D	APPROVED
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BOTT	BOTTOM
BTW	BETWEEN
CC	CENTER-TO-CENTER
CF	CUBIC FEET
CIP	CAST-IN-PLACE
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONT'D	CONTINUED
CY	CUBIC YARDS
DHEC	DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
DIA	DIAMETER
DWG	DRAWING
E	EAST
EA	EACH
EL	ELEVATION
ELEV	ELEVATION
EMBED	EMBEDMENT
EQ	EQUAL
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FT	FEET
HL	HAIRLINE
HORIZ	HORIZONTAL
IMP	IMPENDING
IN	INCHES
INCL	INCLUDING
INFO	INFORMATION
JT	JOINT
LBS.	POUNDS
LF	LINEAR FEET
MATL	MATERIAL
MAX	MAXIMUM
MFR	MANUFACTURER
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
N	NORTH
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NGS	NATIONAL GEODETIC SURVEY
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NTS	NOT TO SCALE
O.C.	ON CENTER
OCRM	OCEAN AND COASTAL RESOURCE MANAGEMENT
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P/C	PRECAST
P/S	PRESTRESSED
PEN	PENETRATION
QTY	QUANTITY
REQ'D	REQUIRED
REINF	REINFORCED
REV.	REVISION
S	SOUTH
SCGS	SOUTH CAROLINA GEODETIC SURVEY
SCH	SCHEDULE
SCDHEC	SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENT CONTROL
SF	SQUARE FOOT
SHT	SHEET
SQ	SQUARE
STD	STANDARD
STL	STEEL
T&B	TOP AND BOTTOM
TEMP	TEMPORARY OR TEMPERATURE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
W	WEST OR WATER
W/	WITH
WOS	WATERS OF THE STATE
W.P.	WORK POINT
WT	WALL THICKNESS
WWF	WELDED WIRE FABRIC

"	SECONDS OR INCH
'	MINUTES OR FEET
*	ASTERISK
#	NUMBER OR POUNDS
&	AND
@	AT
℄	CENTERLINE
Ø	DIAMETER
°	DEGREES
P	PLATE
±	PLUS OR MINUS

SYMBOLS LEGEND



235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 39441
PAUL D. ROSENBECK
7/15/2024

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	---	---	---
DR.	LMB	PDR	3-24
DES.	---	---	---
	BY	CHK.	DATE

CITY OF CHARLESTON

STRUCTURAL GENERAL NOTES

COUNTY	ROUTE
CHARLESTON	DANIEL ISLAND DRIVE

4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S2

TABULATION OF ESTIMATED QUANTITIES

ITEM NO.	8990005	8990007	7011400	7031200	7110001	7110010	7110180	7110181	7110186	7111106	7119100	7119101
ITEM	TIMBER PIER AND FRAMING	ALUMINUM SUPERSTRUCT.	CONC. FOR STRUCTURES - CLASS 4000	REINF. STEEL FOR STRUCTURES (BRIDGE)	DYNAMIC PILE ANALYZER TEST SET-UP	PILE DRIVING SET-UP	PREST. CONC. PILING (18" SQ.)	PILE BUILD-UP PREPARATION (18" SQ.)	PRESTRESSED INDEX PILING (18" SQ.)	PRESTRESSED PILE POINT (W8X58)	TREATED TIMBER PILING	PILE LOAD TEST - TREATED TIMBER PILING
	EA	EA	CY	LB	EA	EA	LF	EA	LF	LF	LF	EA
SUBSTRUCTURE												
TIMBER BENT						24					864	2
END BENT 1			2.3	632								
INTERIOR BENT 10			5.9	1,199	2	2	33	2	33	22		
INTERIOR BENT 11			5.9	1,199		2	66	2		22		
END BENT 16			2.3	632								
SUPERSTRUCTURE												
TIMBER BEGIN APPROACH	1											
ALUMINUM MAIN SPAN		1										
TIMBER END APPROACH	1											
TOTALS	2	1	16.4	3,662	2	28	99	4	33	44	864	2

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
8990005	TIMBER PIER AND FRAMING	EA	2
8990007	ALUMINUM SUPERSTRUCTURE	EA	1
7011400	CONC. FOR STRUCTURES - CLASS 4000	CY	16.4
7031200	REINF. STEEL FOR STRUCTURES (BRIDGE)	LB	3,662
7110001	DYNAMIC PILE ANALYZER TEST SET-UP	EA	2
7110010	PILE DRIVING SET-UP	EA	28
7110180	PREST. CONC. PILING (18" SQ.)	LF	99
7110181	PILE BUILD-UP PREPARATION (18" SQ.)	EA	4
7110186	PRESTRESSED INDEX PILING (18" SQ.)	LF	33
7111106	PRESTRESSED PILE POINT (W8X58)	LF	44
7119100	TREATED TIMBER PILING	LF	864
7119101	PILE LOAD TEST - TREATED TIMBER PILING	EA	2

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 39441
PAUL D. ROSENBECK
7/15/2024

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	LMB	PDR	3-24
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

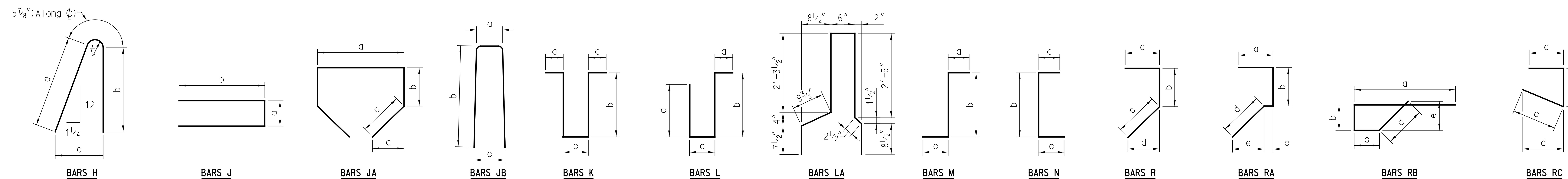
CITY OF CHARLESTON

SUMMARY OF ESTIMATED QUANTITIES

COUNTY	ROUTE
CHARLESTON	DANIEL ISLAND DRIVE

4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S3



Notes:

Fabricate reinforcing bars in accordance with the current CSRI Manual of Standard Practice, except as noted.

♯ - $1^5/_8$" Inside Radius for non-galvanized reinforcing steel

♯♯ - Outside Radius = b/2

◪ - $1^1/_2$ turns @ a closed pitch secured by an ultimate welded lap splice.

REINFORCING STEEL CODE

TYPE	SIZE	SERIES	COUPLER
A	16	01	(2)

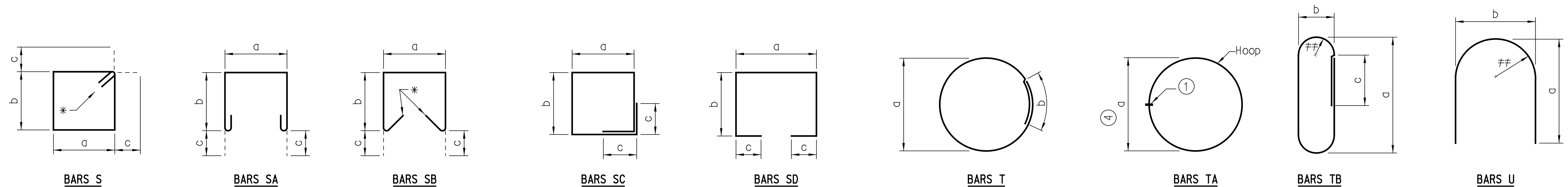
(1) Ultimate Butt-Welded Splice - Use complete joint penetration butt weld conforming to the requirements of AWS D1.4/D1.4M Structural Welding Code - Reinforcing Steel (Latest Edition) and the Standard Specifications.

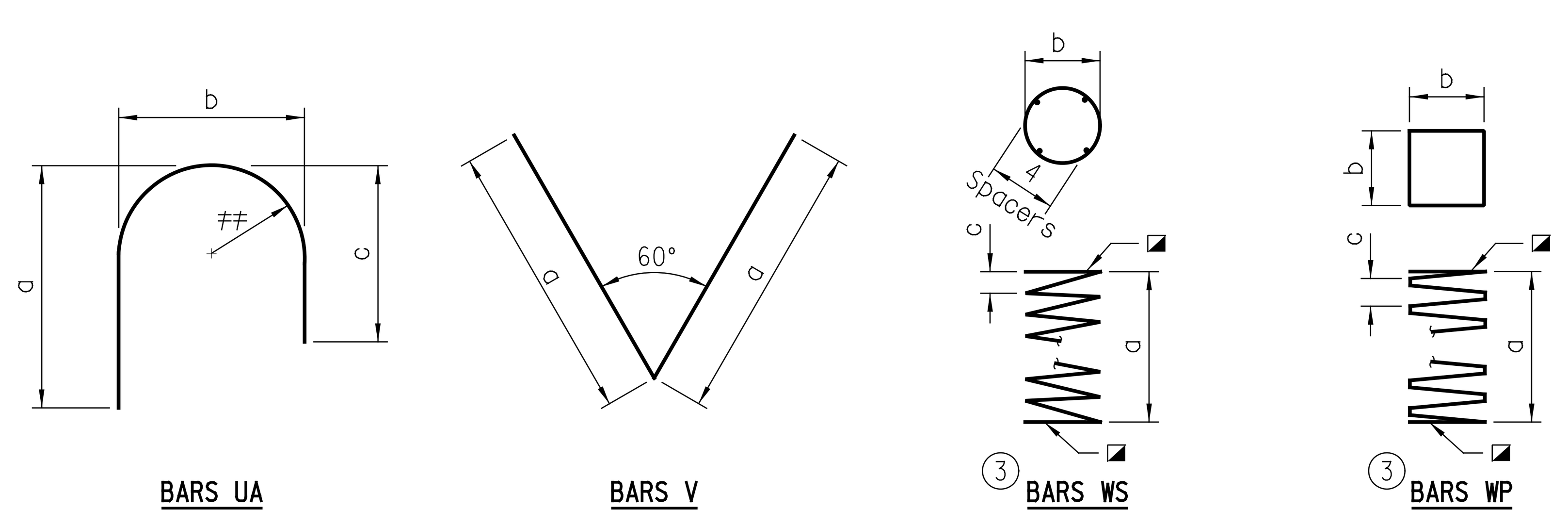
(2) If a mechanical coupler is required, the reinforcing steel code includes a designation of "S" for a service level coupler and a designation of "U" for an ultimate strength coupler. Unless noted otherwise, bar lengths shown in the Reinforcing Steel Schedules are to the center of the coupler. If necessary, adjust the length of the bars to maintain the required concrete cover.

(3) Splice WS and WP bars with either ultimate welded lap splices or ultimate mechanical couplers. Use over and under lap splices, not side by side, to maintain bar clearances.

(4) The fabrication tolerance for welded hoop diameter is ± 1/2 inch.

(5) This 135° hook requirement does not apply to stirrups extending from prestressed concrete beams.



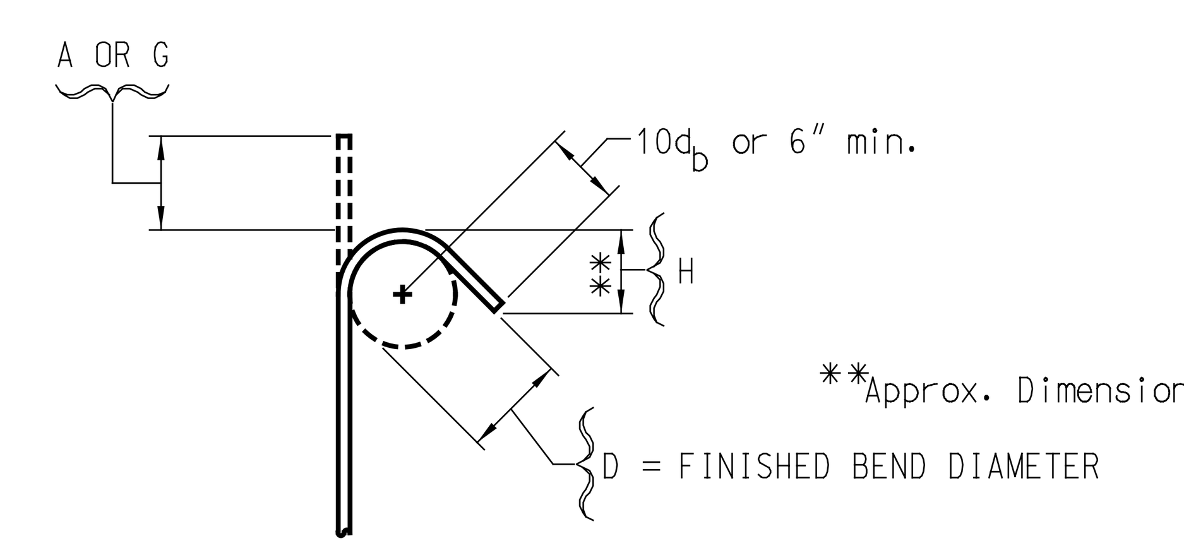


UNCOATED BARS - MINIMUM FINISHED BEND DIAMETER	
BAR SIZE AND USE	MINIMUM FINISHED DIAMETER
#10 THROUGH #16 - GENERAL	6.0 d_b
#10 THROUGH #16 - STIRRUPS AND TIES	4.0 d_b
#19 THROUGH #25	6.0 d_b
#29, #32, AND #36	8.0 d_b
#43 AND #57	10.0 d_b[1]

GALVANIZED BARS - MINIMUM FINISHED BEND DIAMETER	
BAR SIZE AND USE	MINIMUM FINISHED DIAMETER
#10 THROUGH #19	6.0 d_b
#22 THROUGH #25	8.0 d_b
#29, #32, AND #36	8.0 d_b
#43 AND #57	10.0 d_b[1]

d_b = nominal diameter of reinforcing bar (in.)

[1] Due to safety concerns CRSI does not recommend bending bars larger than #43 with grade designation of Grade 75 or higher



(5) * STANDARD 135° SEISMIC HOOK
(SEE TABLE BELOW FOR DIMENSIONS)

STANDARD 135° HOOK DIMENSIONS						
	UNCOATED			GALVANIZED		
SIZE	D (IN)	A OR G (IN)	H (IN)	D (IN)	A OR G (IN)	H (IN)
#13	2.50	7.75	5.00	3.00	8.00	5.25
#16	3.25	8.50	5.50	3.75	9.00	5.50
#19	4.50	10.75	6.75	4.50	10.75	6.75

JMT
235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

REV.	LMB	PDR	4-24
	030592-B01		
REV.	PCW	HL	06-23
	DM0123/0223/0323		
REV.	PCW	HL	03-21
	Rev. Bars LA		
REVIEWED			
QUAN.			
DR.	BMH	MRW	11-10
DES.			
	BY	CHK.	DATE

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 39441 PAUL D. ROSENBECK 7/15/2024

CITY OF CHARLESTON

REINFORCING BENDING DETAILS

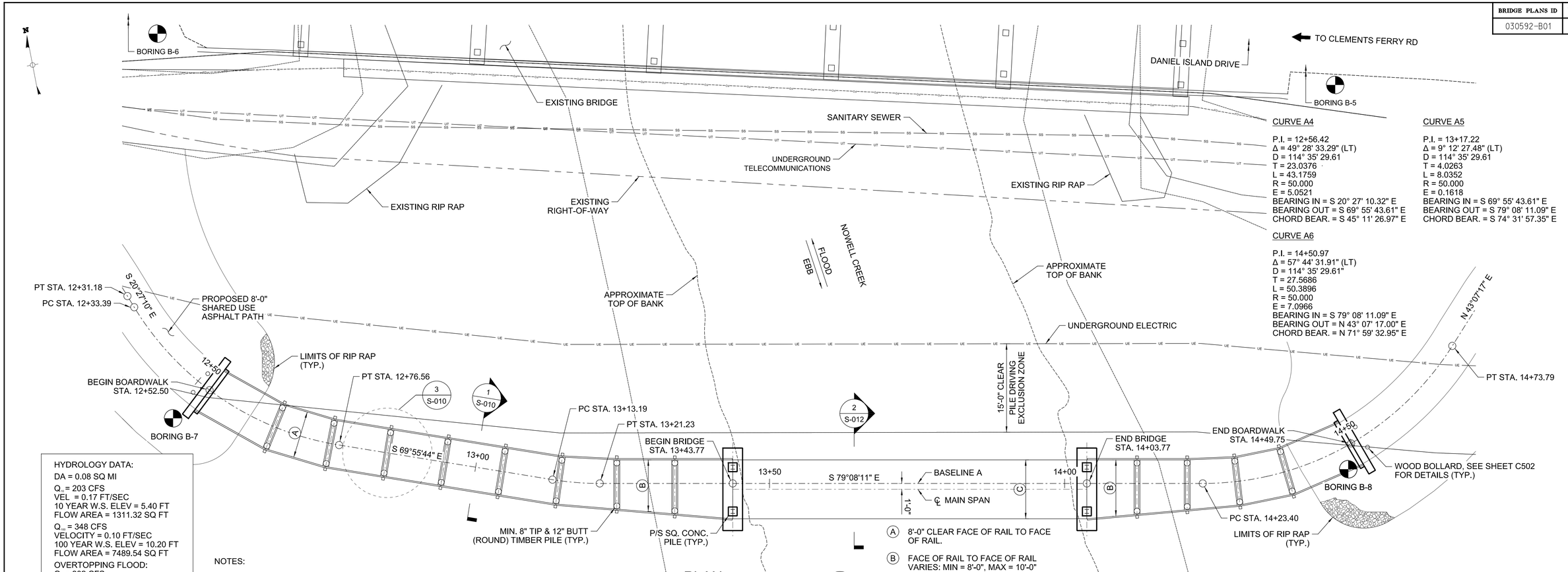
COUNTY: CHARLESTON

ROUTE: DANIEL ISLAND DRIVE

DRAWING NO. 703-01

4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S4



CURVE A4

P.I. = 12+56.42
Δ = 49° 28' 33.29" (LT)
D = 114° 35' 29.61
T = 23.0376
L = 43.1759
R = 50.000
E = 5.0521
BEARING IN = S 20° 27' 10.32" E
BEARING OUT = S 69° 55' 43.61" E
CHORD BEAR. = S 45° 11' 26.97" E

CURVE A5

P.I. = 13+17.22
Δ = 9° 12' 27.48" (LT)
D = 114° 35' 29.61
T = 4.0263
L = 8.0352
R = 50.000
E = 0.1618
BEARING IN = S 69° 55' 43.61" E
BEARING OUT = S 79° 08' 11.09" E
CHORD BEAR. = S 74° 31' 57.35" E

CURVE A6

P.I. = 14+50.97
Δ = 57° 44' 31.91" (LT)
D = 114° 35' 29.61"
T = 27.5686
L = 50.3896
R = 50.000
E = 7.0966
BEARING IN = S 79° 08' 11.09" E
BEARING OUT = N 43° 07' 17.00" E
CHORD BEAR. = N 71° 59' 32.95" E

HYDROLOGY DATA:
DA = 0.08 SQ MI
Q_{10} = 203 CFS
VEL = 0.17 FT/SEC
10 YEAR W.S. ELEV = 5.40 FT
FLOW AREA = 1311.32 SQ FT
Q_{100} = 348 CFS
VELOCITY = 0.10 FT/SEC
100 YEAR W.S. ELEV = 10.20 FT
FLOW AREA = 7489.54 SQ FT
OVERTOPPING FLOOD:
Q_{OT} = 302 CFS
PROBABILITY = > 2%

NOTES:

1. FOR BASELINE A CURVE DATA, SEE REFERENCE DATA SHEET 5A

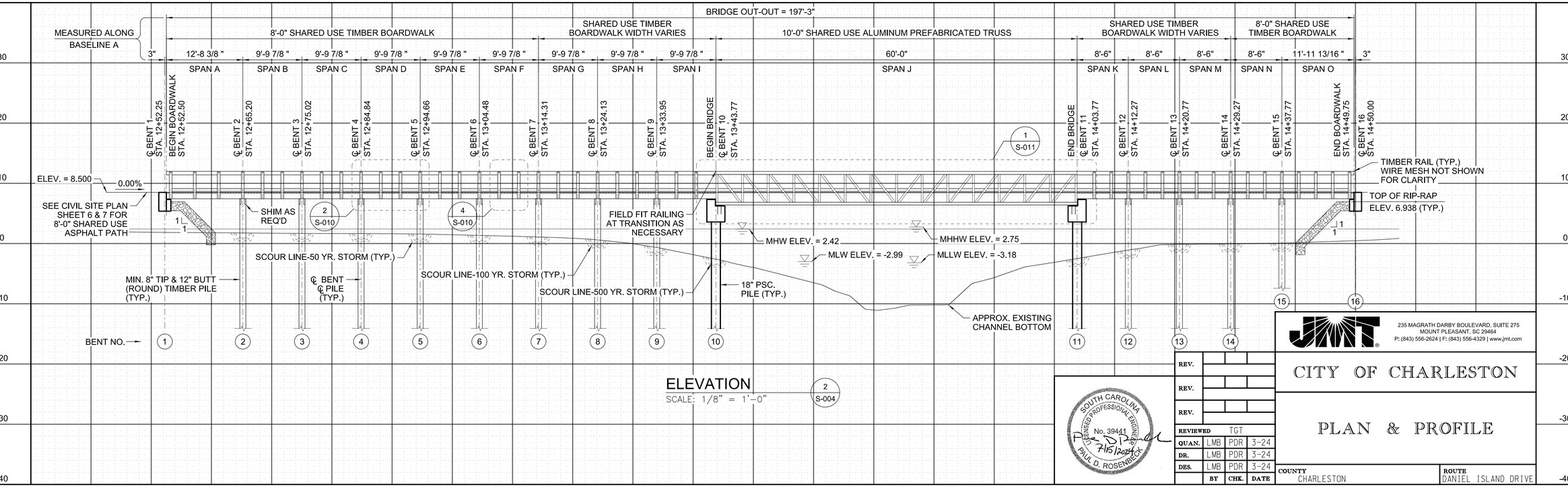
PLAN

SCALE: 1/8" = 1'-0" (1 / S-004)

(A) 8'-0" CLEAR FACE OF RAIL TO FACE OF RAIL.

(B) FACE OF RAIL TO FACE OF RAIL VARIES: MIN = 8'-0", MAX = 10'-0"

(C) 10'-0" CLEAR FACE OF RAIL TO FACE OF RAIL.



ELEVATION

SCALE: 1/8" = 1'-0" (2 / S-004)

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 39441
PAUL D. ROSENBECK
7/15/2024

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	LMB	PDR	3-24
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

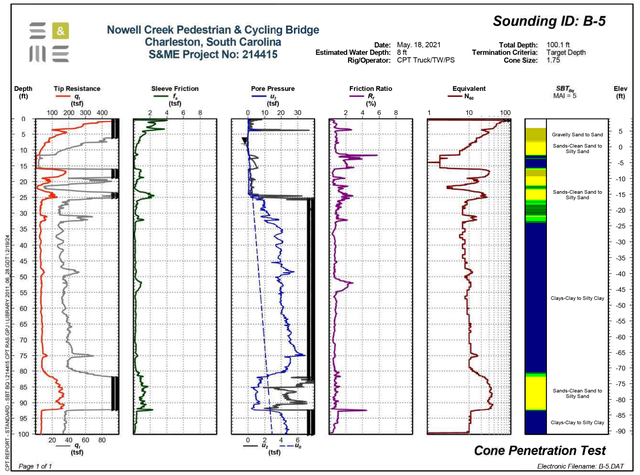
CITY OF CHARLESTON

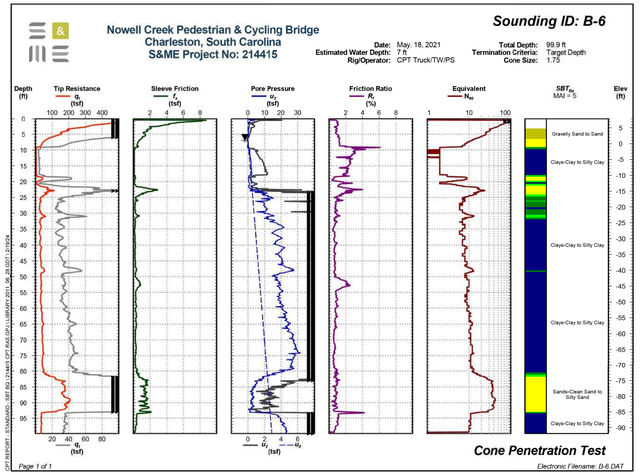
PLAN & PROFILE

COUNTY: CHARLESTON
ROUTE: DANIEL ISLAND DRIVE

4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S5





PROJECT: Nowell Creek Pedestrian & Cycling Bridge, Daniel Island, South Carolina, S&ME Project No. 214415 — **BORING LOG: B-7** — *Sheet 1 of 2*

DATE DRILLED: 01/23/2024 — **ELEVATION:** 2 ft — **NOTES:** SS-4 collected from 10-11.5 ft. ST-3 collected from 10-12 ft in offset borehole
DRILL RIG: CME-45C (Amphibious) — **DATUM:** NAVD88
DRILLER: MAD — **BORING DEPTH:** 40.0 ft
HAMMER TYPE: Auto Hammer (140 lb) — **CLOSURE:** Cuttings
DRILLING METHOD: Mud Rotary — **LOGGED BY:** Clayton Cogdill — **LATITUDE:** 32.869156 **LONGITUDE:** -79.922310
SAMPLING METHOD: SH, SS — **PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane South Carolina FIPS 3900 Feet

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (△ % Fines, ○ MAC, □ PL–LL)	ELEVATION
0				SS-1 (0 in)	ORGANIC CLAY (OH), very soft, dark gray, wet	0-0-0-0/0" N = WOH		2
	ST-1: NMC=236.9%, %200=89.7%, LL=121, PL=36, PI=85			ST-1 REC-100%				
	SS-2: NMC=130.8%, %200=71.1%, LL=97, PL=39, PI=58			SS-2 (24 in)		0-0-0-0/0" N = WOH		-3
	ST-2: NMC=200.9%, %200=88.4%, LL=116, PL=33, PI=83	Coastal Plain		ST-2 REC-100%				
	SS-3: NMC=115.0%, %200=65.3%, LL=125, PL=42, PI=83			SS-3 (24 in)		0-0-0-0/0" N = WOH		-8
	ST-3: NMC=151.2%, %200=77.3%, LL=93, PL=34, PI=59			SS-4 (24 in) ST-3 REC-100%				
12.0	SS-5: NMC=30.3%, %200=12.1%, NP			SS-5 (24 in)	CLAYEY SAND (SC), trace shell fragments, very loose, dark gray brown, fine to medium grained, wet	1-1-1-1/0" N = 2		
14.0					*gray green* SILTY SAND (SM), very loose to loose, gray green, fine to medium grained, moist			-13
	SS-6: NMC=32.7%, %200=25.2%, NP	Cooper Marl		SS-6 (18 in)		2-2-2 N = 4		
20								

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	01/24/2024	0.0	Tidal
END OF DRILLING	▽			
AFTER DRILLING	▽			
AFTER DRILLING	▽			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT: Nowell Creek Pedestrian & Cycling Bridge, Daniel Island, South Carolina, S&ME Project No. 214415 — **BORING LOG: B-7** — *Sheet 2 of 2*

DATE DRILLED: 01/23/2024 — **ELEVATION:** 2 ft — **NOTES:** SS-4 collected from 10-11.5 ft. ST-3 collected from 10-12 ft in offset borehole
DRILL RIG: CME-45C (Amphibious) — **DATUM:** NAVD88
DRILLER: MAD — **BORING DEPTH:** 40.0 ft
HAMMER TYPE: Auto Hammer (140 lb) — **CLOSURE:** Cuttings
DRILLING METHOD: Mud Rotary — **LOGGED BY:** Clayton Cogdill — **LATITUDE:** 32.869156 **LONGITUDE:** -79.922310
SAMPLING METHOD: SH, SS — **PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane South Carolina FIPS 3900 Feet

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (△ % Fines, ○ MAC, □ PL–LL)	ELEVATION
25				SS-7 (18 in)	SILTY SAND (SM), very loose to loose, gray green, fine to medium grained, moist	4-4-4 N = 8		-23
27.0					SANDY LEAN CLAY (CL), firm to stiff, olive, moist			
		Cooper Marl		SS-8 (18 in)		3-4-6 N = 10		-28
30				SS-9 (18 in)		3-3-3 N = 6		-33
35				SS-10 (18 in)		3-5-10 N = 15		
40								

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	01/24/2024	0.0	Tidal
END OF DRILLING	▽			
AFTER DRILLING	▽			
AFTER DRILLING	▽			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT: Nowell Creek Pedestrian & Cycling Bridge, Daniel Island, South Carolina, S&ME Project No. 214415 — **BORING LOG: B-8** — *Sheet 1 of 2*

DATE DRILLED: 01/24/2024 — **ELEVATION:** 0 ft — **NOTES:**
DRILL RIG: CME-45C (Amphibious) — **DATUM:** NAVD88
DRILLER: MAD — **BORING DEPTH:** 40.0 ft
HAMMER TYPE: Auto Hammer (140 lb) — **CLOSURE:** Cuttings
DRILLING METHOD: Mud Rotary — **LOGGED BY:** Clayton Cogdill — **LATITUDE:** 32.869024 **LONGITUDE:** -79.921680
SAMPLING METHOD: SH, SS — **PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane South Carolina FIPS 3900 Feet

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (△ % Fines, ○ MAC, □ PL–LL)	ELEVATION
0				SS-1 (0 in)	ORGANIC CLAY (OH), very soft, dark gray, wet	0-0-0-0/0" N = WOH		0
	ST-1: NMC=193.5%, %200=96.7%, LL=129, PL=40, PI=89			ST-1 REC-100%				
	ST-2: NMC=106.%, %200=64.4%, LL=102, PL=30, PI=72	Coastal Plain		ST-2 REC-100%		2-6-5-3/0" N = 11		-5
8.5				SS-2 (24 in)	SANDY LEAN CLAY (CL), stiff, gray, wet			
9.0	SS-3: NMC=25.2%, %200=16.7%, NP			SS-3 (24 in)	SILTY SAND (SM), very loose to medium dense, gray, medium to coarse grained, wet	2-4-2-3/0" N = 6		-10
				SS-4 (18 in)	SILTY SAND (SM), very loose to loose, gray tan, fine to coarse grained	0-0-1-1/0" N = 1		-15
14.5		Cooper Marl			*fine to medium*			
	SS-5: NMC=33.7%, %200=24.5%, NP			SS-5 (18 in)		3-2-3 N = 5		
20								

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	01/24/2024	0.0	Tidal
END OF DRILLING	▽			
AFTER DRILLING	▽			
AFTER DRILLING	▽			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT: Nowell Creek Pedestrian & Cycling Bridge, Daniel Island, South Carolina, S&ME Project No. 214415 — **BORING LOG: B-8** — *Sheet 2 of 2*

DATE DRILLED: 01/24/2024 — **ELEVATION:** 0 ft — **NOTES:**
DRILL RIG: CME-45C (Amphibious) — **DATUM:** NAVD88
DRILLER: MAD — **BORING DEPTH:** 40.0 ft
HAMMER TYPE: Auto Hammer (140 lb) — **CLOSURE:** Cuttings
DRILLING METHOD: Mud Rotary — **LOGGED BY:** Clayton Cogdill — **LATITUDE:** 32.869024 **LONGITUDE:** -79.921680
SAMPLING METHOD: SH, SS — **PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane South Carolina FIPS 3900 Feet

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (△ % Fines, ○ MAC, □ PL–LL)	ELEVATION
25				SS-6 (18 in)	SILTY SAND (SM), very loose to loose, gray tan, fine to coarse grained	4-5-5 N = 10		-25
27.0					SANDY LEAN CLAY (CL), firm to stiff, olive, wet to moist			
		Cooper Marl		SS-7 (18 in)		2-2-3 N = 5		-30
30				SS-8 (18 in)		3-4-3 N = 7		-35
35				SS-9 (18 in)		3-4-7 N = 11		
40								

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	01/24/2024	0.0	Tidal
END OF DRILLING	▽			
AFTER DRILLING	▽			
AFTER DRILLING	▽			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

FOR INFORMATION ONLY

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	----	----	----
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

CITY OF CHARLESTON

BORING LOGS

COUNTY: CHARLESTON — ROUTE: DANIEL ISLAND DRIVE

4/12/2024

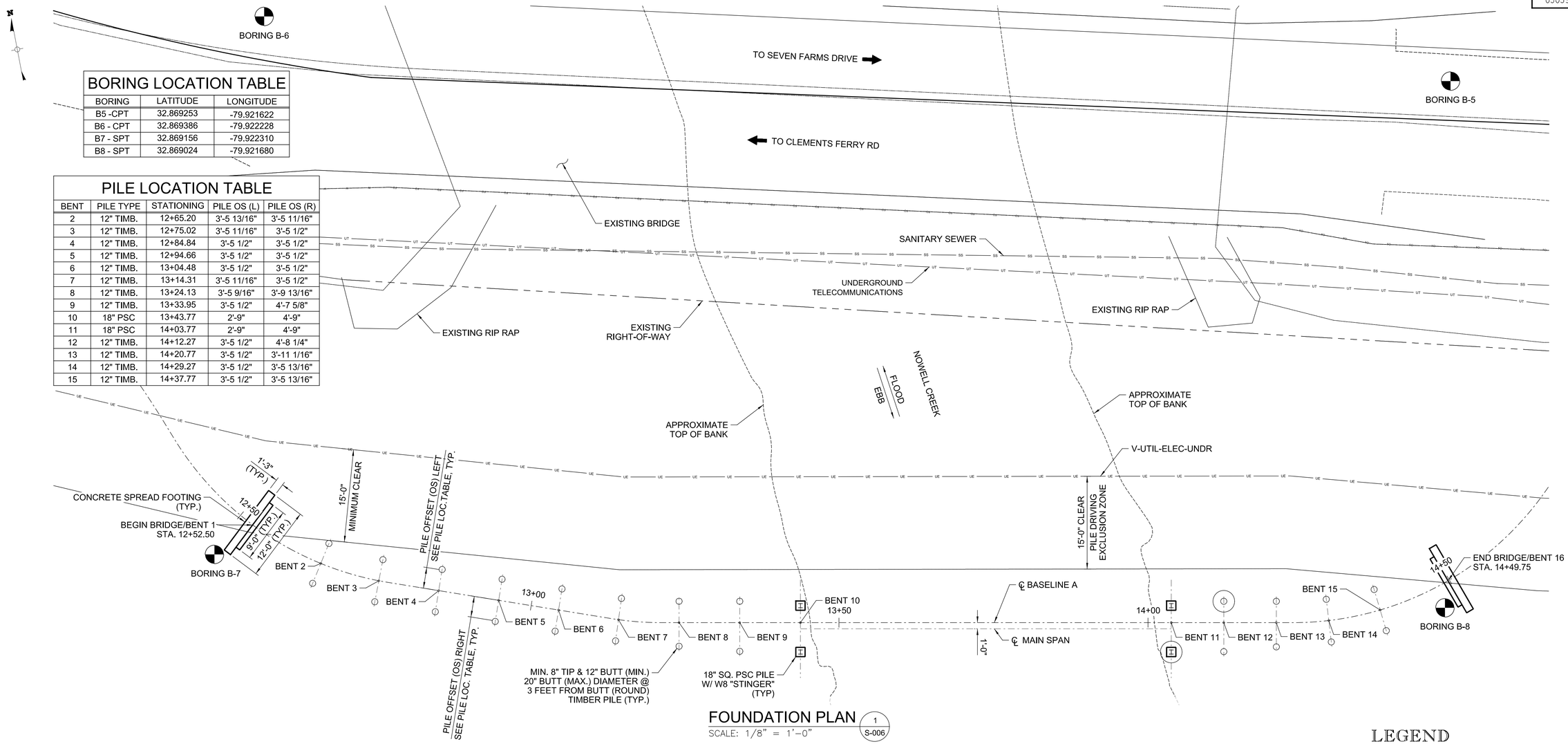
BRIDGE PLANS ID	SHEET NO.
030592-B01	S6

BORING LOCATION TABLE

BORING	LATITUDE	LONGITUDE
B5 -CPT	32.869253	-79.921622
B6 - CPT	32.869386	-79.922228
B7 - SPT	32.869156	-79.922310
B8 - SPT	32.869024	-79.921680

PILE LOCATION TABLE

BENT	PILE TYPE	STATIONING	PILE OS (L)	PILE OS (R)
2	12" TIMB.	12+65.20	3'-5 13/16"	3'-5 11/16"
3	12" TIMB.	12+75.02	3'-5 11/16"	3'-5 1/2"
4	12" TIMB.	12+84.84	3'-5 1/2"	3'-5 1/2"
5	12" TIMB.	12+94.66	3'-5 1/2"	3'-5 1/2"
6	12" TIMB.	13+04.48	3'-5 1/2"	3'-5 1/2"
7	12" TIMB.	13+14.31	3'-5 11/16"	3'-5 1/2"
8	12" TIMB.	13+24.13	3'-5 9/16"	3'-9 13/16"
9	12" TIMB.	13+33.95	3'-5 1/2"	4'-7 5/8"
10	18" PSC	13+43.77	2'-9"	4'-9"
11	18" PSC	14+03.77	2'-9"	4'-9"
12	12" TIMB.	14+12.27	3'-5 1/2"	4'-8 1/4"
13	12" TIMB.	14+20.77	3'-5 1/2"	3'-11 1/16"
14	12" TIMB.	14+29.27	3'-5 1/2"	3'-5 13/16"
15	12" TIMB.	14+37.77	3'-5 1/2"	3'-5 13/16"



FOUNDATION PLAN

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

(1 / S-006)

PILE BEARING

PARAMETERS	PRESTRESSED CONCRETE	TIMBER
FACTORED DESIGN LOAD	46 KIPS	11.7 KIPS
GEOTECHNICAL RESISTANCE FACTOR	0.65	0.65
NOMINAL RESISTANCE	71 KIPS	18 KIPS
REQUIRED DRIVING RESISTANCE	71 KIPS	18 KIPS

PILE DRIVING NOTES:

METHOD OF CONTROLLING INSTALLATION OF PILES AND VERIFYING THEIR RESISTANCE: RESISTANCE WILL BE VERIFIED BY HIGH-STRAIN DYNAMIC TESTING WITH A PILE DRIVING ANALYZER (PDA) AND SIGNAL MATCHING (CAPWAP) ANALYSIS OF ONE CONCRETE AND ONE TIMBER PILE DURING RESTRIKE.

PERFORM DYNAMIC PILE TESTING WITH A PDA DURING RESTRIKE ON THE FIRST PRODUCTION PILE OF EACH TYPE. PDA GAGES ARE ATTACHED A MINIMUM OF 1.5D BELOW THE PILE TOP AND CANNOT FUNCTION BELOW GRADE OR IN WATER. THEREFORE, ACCOMMODATIONS FOR THIS MUST BE MADE. TWO TOTAL TESTS SHOULD BE PERFORMED (ONE RESTRIKE ON A PSC PILE AND ONE RESTRIKE ON A TIMBER PILE). INSTALL TEST PILES TO THE ESTIMATED TIP ELEVATION. IF A CAPWAP ANALYSIS DETERMINES THAT THE REQUIRED DRIVING RESISTANCE HAS NOT BEEN ACHIEVED, ADDITIONAL RESTRIKES AFTER ALLOWING THE PILE TO SIT LONGER MAY BE REQUIRED. WE ANTICIPATE A MINIMUM 5-DAY IDLE PERIOD BETWEEN INSTALLATION AND RESTRIKE TEST. PRODUCTION PILE TIP ELEVATIONS WILL BE CONFIRMED BASED ON THE RESTRIKE TEST RESULTS.

IF PILES ARE NOT INSTALLED IN ONE CONTINUOUS OPERATION, THEY MAY "SET UP" AND REQUIRE ADDITIONAL EFFORT TO CONTINUE INSTALLATION. IF VIBRATORY INSTALLATION IS PROPOSED, IT SHOULD NOT BE USED TO INSTALL PILE TIPS BELOW AN ELEVATION OF -17 FT. INCLUDE DETAILS OF ANY ANTICIPATED TEMPORARY DRIVING DISCONTINUANCES INCLUDING ANTICIPATED TIME INTERVALS IN THE PILE INSTALLATION PLAN.

DRIVABILITY ANALYSIS

PARAMETER	PSC PILES	TIMBER PILES
SKIN QUAKE (IN.)	0.10	0.10
TOE QUAKE (IN.)	0.10	0.15
SKIN DAMPING (S/FT.)	0.20	0.20
TOE DAMPING (S/FT.)	0.15	0.15
% SKIN FRICTION	60%	75%
% END BEARING	40%	25%
DISTRIBUTION SHAPE NO.	VARIABLE [A]	VARIABLE [B]
BEARING GRAPH	PROPORTIONAL	PROPORTIONAL
TOE NO. 2 QUAKE	0.3	N/A
TOE NO. 2 DAMPING	0.15	N/A
END BEARING FRACTION (TOE NO. 2)	0.9	N/A
PILE PENETRATION	80%	75%
HAMMER ENERGY RANGE	30 TO 60 FT-KIPS	10 TO 20 FT-KIPS

A. UNIFORM AT 0.5 FROM DEPTH OF 0 AND 17 FT, UNIFORM AT 2 FROM 17 TO 27 FT, AND UNIFORM AT 3.0 FROM 27 TO 32 FT.

B. UNIFORM AT 0.5 FROM DEPTH OF 0 AND 17 FT, UNIFORM AT 2 FROM 17 TO 27 FT.

NOTES: HAMMER SELECTION IS THE RESPONSIBILITY OF THE CONTRACTOR. HAMMER APPROVAL IS BASED ON A WAVE EQUATION ANALYSIS THAT ACCURATELY REFLECTS THE CONTRACTOR'S PROPOSED DRIVING SYSTEM.

SUMMARY OF PRESTRESSED CONCRETE PILES - BENTS 10 & 11

LOCATION	PILE SIZE	W8X58 PILE POINT LENGTH (FT)	ESTIMATED 18 IN. PSC TIP ELEVATION (FT-NAVD88)	MINIMUM 18 IN. PSC TIP ELEVATION (FT-NAVD88)	NUMBER OF TEST PILES	MINIMUN DYNAMIC TEST SET-UPS (RESTRIKE)
BENTS 10 & 11	18 IN. PSC WITH W8X58 PILE POINT	5	-27	-27	1	1

SUMMARY OF TIMBER PILES - BENTS 2-9 &12-15

LOCATION	PILE SIZE	ESTIMATED TIMBER TIP ELEVATION (FT-NAVD88)	MINIMUM TIMBER TIP ELEVATION (FT-NAVD88)	NUMBER OF TEST PILES	MINIMUN DYNAMIC TEST SET-UPS (RESTRIKE)
BENTS 2-9 & 12-15	8 IN. (MIN.) TIP 12 IN. (MIN.) BUTT 20 IN. (MAX.) BUTT	-27	-27	1	1

NOTES: DRIVEN PILES SHALL BE CONSTRUCTED IN ACCORDANCE WITH SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION FOR DRIVEN PILE FOUNDATIONS, SECTION 711.

LEGEND

- BORING LOCATION
- PSC INDEX PILE
- TIMBER INDEX PILE

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 39441 PAUL D. ROSENBECK

JMT
235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	----	----	----
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

CITY OF CHARLESTON

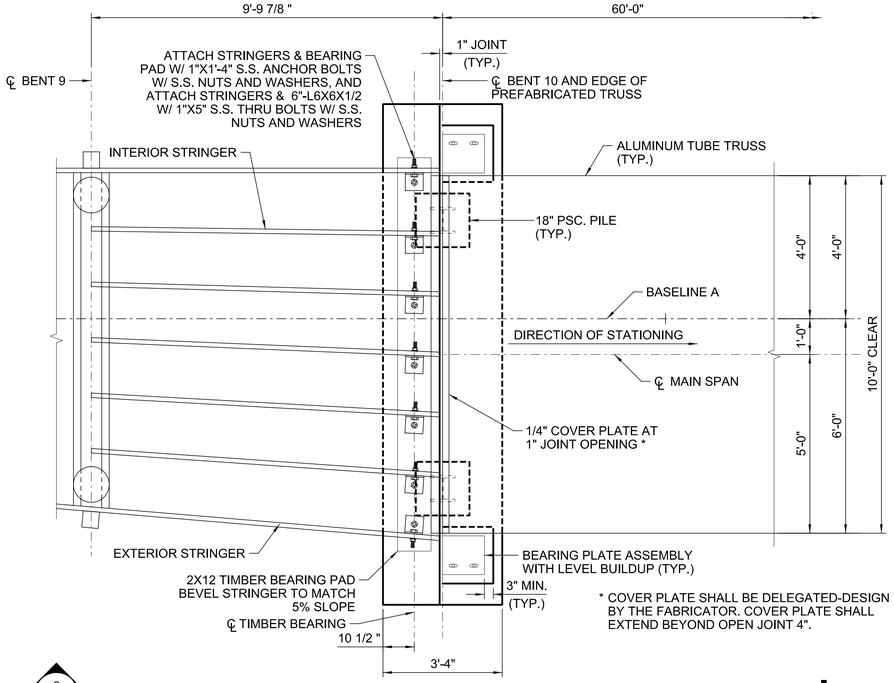
FOUNDATION LAYOUT

COUNTY: CHARLESTON

ROUTE: DANIEL ISLAND DRIVE

4/12/2024

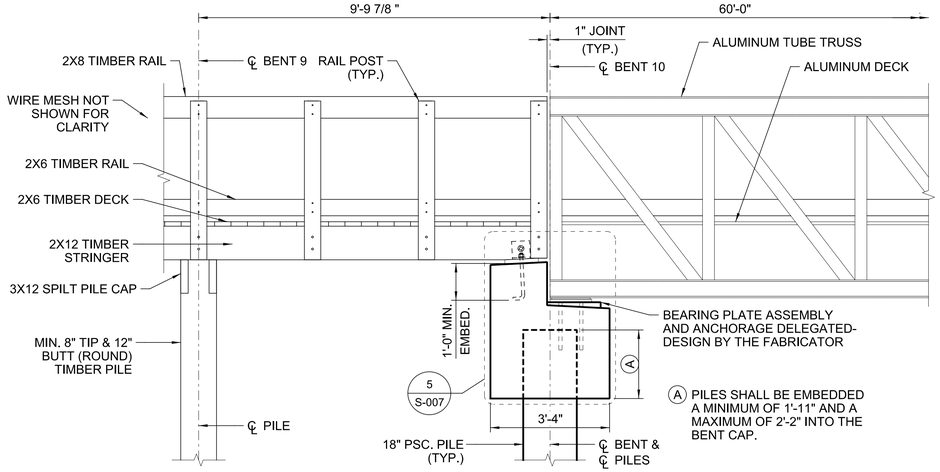
BRIDGE PLANS ID	SHEET NO.
030592-B01	S7



2 S-007

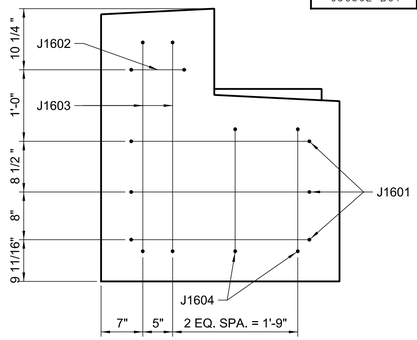
PART. PLAN AT BENT 10

SCALE: 1/2" = 1'–0" (BENT 11 SIMILAR) — 1 S-007



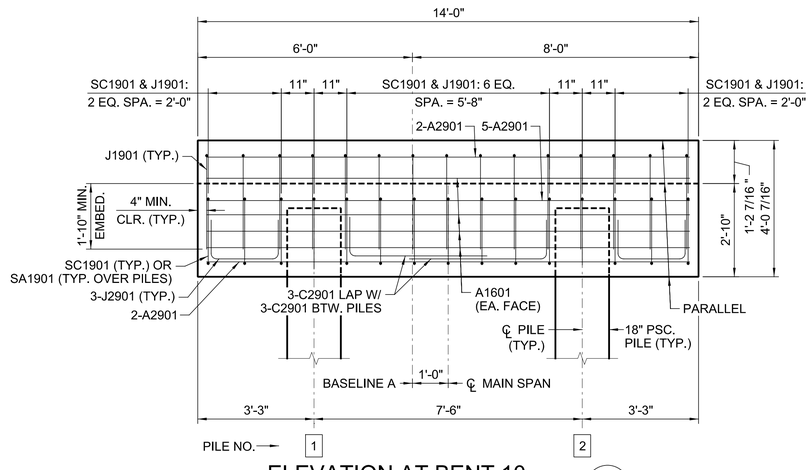
PART. ELEVATION AT BENT 10

SCALE: 1/2" = 1'–0" (BENT 11 SIMILAR) — 2 S-007



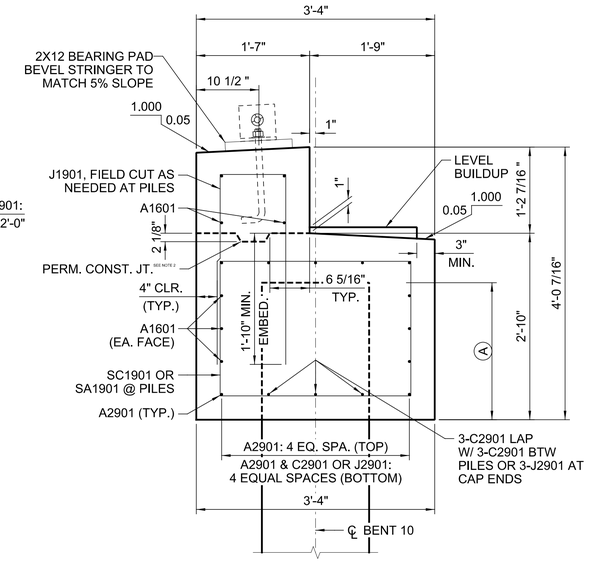
BENT 10 CAP END ELEVATION

SCALE: 1" = 1'–0" (BENT 11 SIMILAR) — 3 S-007



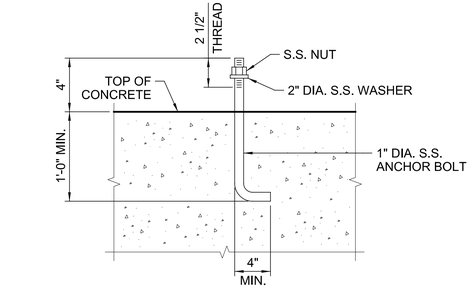
ELEVATION AT BENT 10

SCALE: 1/2" = 1'–0" (LOOKING IN DIRECTION OF STATIONING. BENT 11 SIMILAR) — 4 S-007



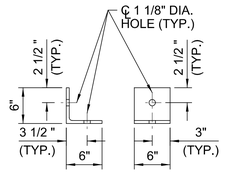
SECTION AT BENT 10

SCALE: 1" = 1'–0" (BENT 11 SIMILAR) — 5 S-007



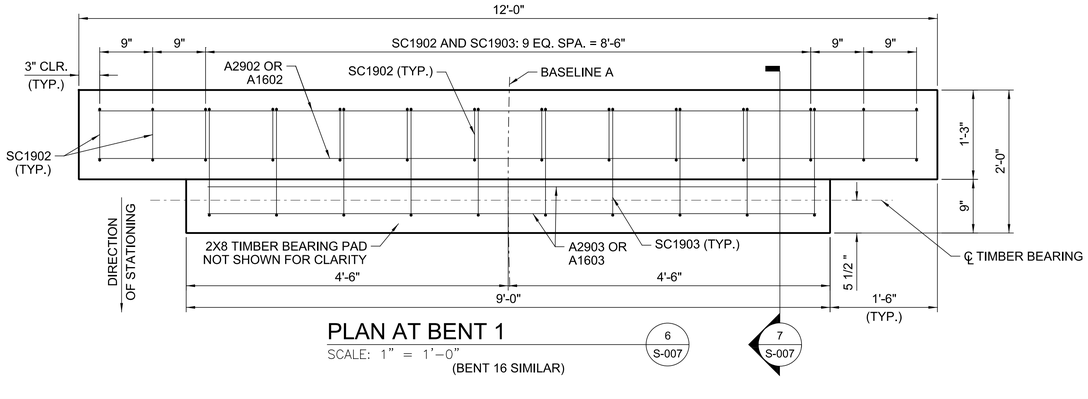
ANCHOR BOLT DETAILS

SCALE: NTS — 8 S-007



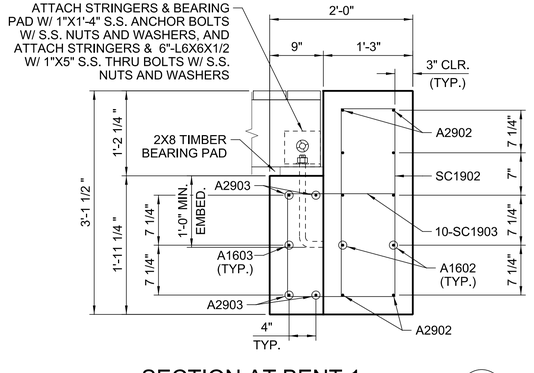
L6X6X1/2 DETAILS

SCALE: NTS — 9 S-007



PLAN AT BENT 1

SCALE: 1" = 1'–0" (BENT 16 SIMILAR) — 6 S-007 — 7 S-007



SECTION AT BENT 1

SCALE: 1" = 1'–0" (BENT 16 SIMILAR) — 7 S-007

NOTES:

1. PROVIDE STAINLESS STEEL ANCHOR BOLTS AND THRU BOLTS MEETING THE REQUIREMENTS OF ASTM F 593, AND NUTS, WASHERS, AND ANGLES MEETING THE REQUIREMENTS OF ASTM F 594.
2. * BEFORE MAKING SUBSEQUENT POUR, WAIT EITHER A MINIMUM OF 96 HOURS AFTER PLACEMENT OF THE INTIAL POUR OR UNTIL THE INITIAL POUR CONCRETE HAS ATTAINED A MINIMUM OF 75% OF THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH AS VERIFIED BY TESTING EXTRA CYLINDERS.

JMT
235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 39441 PAUL D. ROSENBECK 7/15/2024

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	---	---	---
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

CITY OF CHARLESTON

CONCRETE BENT DETAILS

COUNTY: CHARLESTON

ROUTE: DANIEL ISLAND DRIVE

4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S8

END BENT 1

REINF. STEEL SCHED.

MARK	NO. REQ'D	DIMENSION				LENGTH
		"A"	"B"	"C"	"D"	
A1602	6	11'-6"				11'-6"
A1603	1	8'-6"				8'-6"
A2902	4	11'-6"				11'-6"
A2903	4	8'-6"				8'-6"
SC1902	14	0'-9"	2'-7 1/2"	0'-8"		8'-1"
SC1903	10	1'-6"	1'-5 1/4"	0'-8"		7'-3"
1" DIA. ANCHOR BOLTS - LENGTH 1'-8"				EA		9

QUANTITIES

ITEM	UNIT	TOTAL
CONC. FOR STRUCTURES - CLASS 4000	CY	2.3
REINF. STEEL FOR STRUCTURES	LB	632

INTERIOR BENT 10

REINF. STEEL SCHED.

MARK	NO. REQ'D	DIMENSION				LENGTH
		"A"	"B"	"C"	"D"	
A1601	8	13'-4"				13'-4"
A2901	9	13'-4"				13'-4"
C2901	6	4'-8 1/2"	1'-7"			6'-4"
J1601	6	2'-6 1/2"	0'-10"			4'-3"
J1602	2	0'-9 1/2"	0'-10"			2'-6"
J1603	4	3'-2 1/4"	0'-10"			4'-11"
J1604	4	1'-11 3/4"	0'-10"			3'-8"
J1901	15	0'-11"	2'-8"			6'-3"
J2901	6	1'-11"	1'-7"			5'-1"
SA1901	2	2'-8"	2'-1 1/4"	0'-8"		8'-3"
SC1901	13	2'-8"	2'-1 1/4"	0'-8"		10'-11"
1" DIA. ANCHOR BOLTS - LENGTH 1'-8"					EA	7

QUANTITIES

ITEM	UNIT	TOTAL
CONC. FOR STRUCTURES - CLASS 4000	CY	5.9
REINF. STEEL FOR STRUCTURES	LB	1,199
DYNAMIC PILE ANALYZER TEST SET-UP	EA	2
PILE DRIVING SET-UP	EA	2
PRESTRESSED CONCRETE PILING (18" SQ.)	LF	33
PILE BUILD-UP PREPARATION	EA	2
PRESTRESSED INDEX PILING (18" SQ.)	LF	33
PRESTRESSED PILE POINT (W8X58)	LF	22

INTERIOR BENT 11

REINF. STEEL SCHED.

MARK	NO. REQ'D	DIMENSION				LENGTH
		"A"	"B"	"C"	"D"	
A1601	8	13'-4"				13'-4"
A2901	9	13'-4"				13'-4"
C2901	6	4'-8 1/2"	1'-7"			6'-4"
J1601	6	2'-6 1/2"	0'-10"			4'-3"
J1602	2	0'-9 1/2"	0'-10"			2'-6"
J1603	4	3'-2 1/4"	0'-10"			4'-11"
J1604	4	1'-11 3/4"	0'-10"			3'-8"
J1901	15	0'-11"	2'-8"			6'-3"
J2901	6	1'-11"	1'-7"			5'-1"
SA1901	2	2'-8"	2'-1 1/4"	0'-8"		8'-3"
SC1901	13	2'-8"	2'-1 1/4"	0'-8"		10'-11"
1" DIA. ANCHOR BOLTS - LENGTH 1'-8"					EA	7

QUANTITIES

ITEM	UNIT	TOTAL
CONC. FOR STRUCTURES - CLASS 4000	CY	5.9
REINF. STEEL FOR STRUCTURES	LB	1,199
PILE DRIVING SET-UP	EA	2
PRESTRESSED CONCRETE PILING (18" SQ.)	LF	66
PILE BUILD-UP PREPARATION	EA	2
PRESTRESSED PILE POINT (W8X58)	LF	22

END BENT 16

REINF. STEEL SCHED.

MARK	NO. REQ'D	DIMENSION				LENGTH
		"A"	"B"	"C"	"D"	
A1602	6	11'-6"				11'-6"
A1603	1	8'-6"				8'-6"
A2902	4	11'-6"				11'-6"
A2903	4	8'-6"				8'-6"
SC1902	14	0'-9"	2'-7 1/2"	0'-8"		8'-1"
SC1903	10	1'-6"	1'-5 1/4"	0'-8"		7'-3"
1" DIA. ANCHOR BOLTS - LENGTH 1'-8"				EA		9

QUANTITIES

ITEM	UNIT	TOTAL
CONC. FOR STRUCTURES - CLASS 4000	CY	2.3
REINF. STEEL FOR STRUCTURES	LB	632

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 39441
PAUL D. ROSENBECK
7/15/2024

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	LMB	PDR	3-24
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

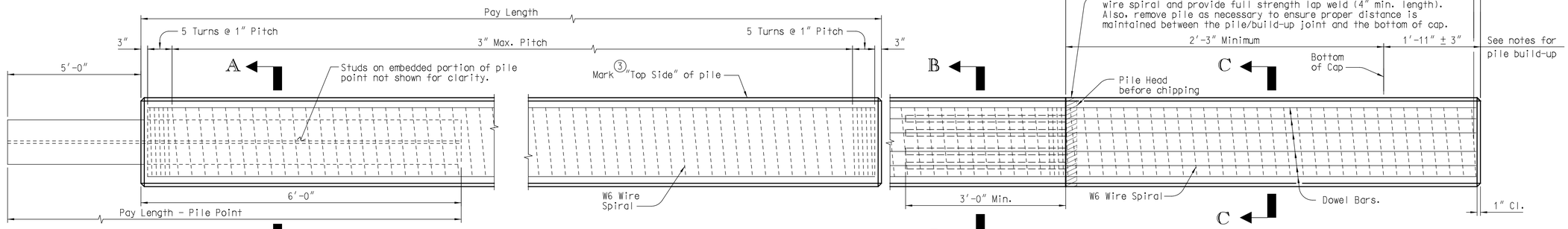
CITY OF CHARLESTON

SUBSTRUCTURE REINF. STEEL SCHEDULE

COUNTY	ROUTE
CHARLESTON	DANIEL ISLAND DRIVE

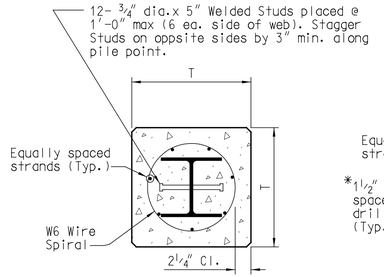
4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S9

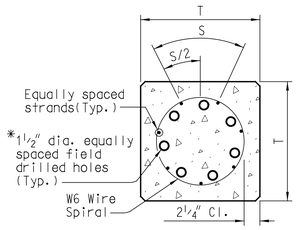


TYPICAL PILE ELEVATION

BUILD-UP

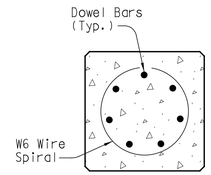


SECTION A-A



SECTION B-B

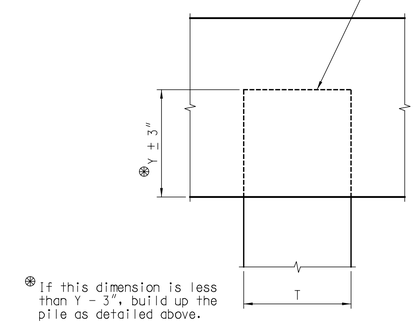
*Field drill dowel holes. Locate dowel holes to provide ½" cl. to wire spiral.



SECTION C-C

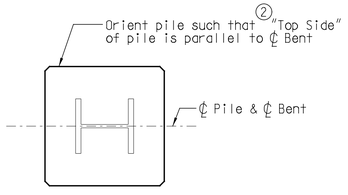
STRAND DATA		
DIAMETER	AREA (in²)	TENSIONING LOAD
9/16"	0.192	38.9 kips

PILE DATA ①					
PILE SIZE "T"	PILE EMBEDMENT "Y"	STRANDS	STRESS (ksi)	DOWEL BARS	PILE POINT SIZE
18"	23"	7 - 9/16"	0.710	7 # 29	W8X58



If this dimension is less than Y - 3", build up the pile as detailed above.

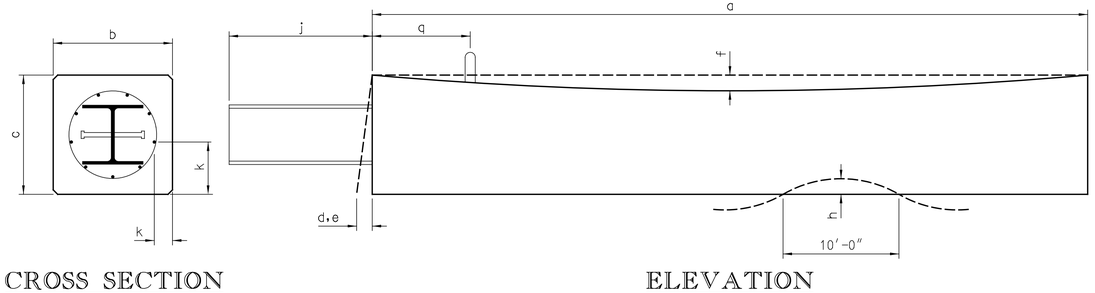
PILE ANCHORAGE DETAILS



PILE ORIENTATION DETAIL

② "Top Side" is the top surface of the pile when it was poured in the casting bed.

DESIGN DATA
Low Relaxation Strands
Tensile Strength (fpu) = 270 ksi Initial Prestress (0.75 fpu) = 202.5 ksi
Class 5000 Concrete
f'c = 5 ksi f'ci = 3.5 ksi



CROSS SECTION

ELEVATION

TOLERANCES

a. Length ---------- ± 1"
b. Width or Diameter---------- ± ⅜", + ½" (including form draft)
c. Depth---------- ± ⅜"
d. Variation from Specified Plan End Squareness or Skew---------- ± ¼" per 12", ± ½" maximum
e. Variation from Specified Elevation End Squareness or Skew---------- ± ¼" per 12", ± ½" maximum
f. Sweep (Variation from straight line parallel to centerline of member) (considered to be a form tolerance)---- ± ⅛" per 10'
h. Local Smoothness of Any Surface-------- ¼" in 10'
j. Projection of steel pile point from end of pile---------- ± 1"
Position of steel pile point---------- ± ½"
Alignment of steel pile point---------- ± ½"
Length of steel pile point---------- - 3", + 6"
k. Location of Strand---------- ± ¼"
q. Location of Handling Device---------- ± 6"
Longitudinal Spacing of Stirrups or Spiral Reinforcement---------- ± ¾"

NOTES FOR BUILD-UP

Chip back top of piles and field drill holes as shown. Grout dowel bars in the holes using an approved non-shrink grout with f'c = 5 ksi. Terminate dowel bars 1" clear from the top of pile. Submit dowel bar lengths to the RCE for approval. Include all costs associated with preparation of the pile for build-up in the unit price bid for Pile Build-up Preparation.

Build up all piles that have an embedment length less than the minimum shown in the plans. Use the build-up details shown on this sheet. The option is available to cast build-ups with bent caps provided rebar and wire spiral are continued a distance equal to "Y" into the cap and the cap is cast with Class 5000 concrete. Pay for cap concrete as Class 4000 concrete regardless of the actual class used. Include an embedment length of "Y" in the pile build-up length measured for payment. Pay for the pile build-up, including all costs for dowel bars, wire spirals, and build-up concrete as an additional length of prestressed concrete piling equal to the build-up pay length shown in the build-up detail.

GENERAL NOTES

Chamfer all exposed edges ¾" unless noted otherwise.

All dimensions relative to reinforcing steel are to centers of bars (except as noted).

Release alternate strands simultaneously at opposite ends without shock.

Tie wire spiral to cables and reinforcing bars as required to maintain pitch of the spiral. Splice wire spiral using full strength lap welds.

Anchor the piles into the bent caps using the details shown on this sheet. Include all costs for this work in the unit price bid for prestressed concrete piling.

MATERIALS

Prestressing Strand	- Grade 270, Low Relaxation	AASHTO M 203
Wire Spiral	-	AASHTO M 32, M 225
Reinforcing Steel	- Grade 60	AASHTO M 31, Type W
Concrete	- Class 5000	Standard Spec. Sect. 701
W or HP Pile Point	- Grade 36 or 50▲	AASHTO M 270
Studs	- Grade 1015, 1018, or 1020	AASHTO M 169

① Determine pick-up points using the following:

1. Determine maximum lengths for pick-up of the composite pile (as a unit or in parts) using the following load assumption and allowable stresses.
   a. Loading: 1½ times the full dead load
   b. Allowable tensile stress in precast, prestressed concrete portion of the pile: $0.158\sqrt{f'c}$ (ksi)
   c. Allowable bending stress in Pile Point section: 20 ksi.
2. Stress and loading criteria are based on normal care in handling the pile. If handling is such that damage in the pile becomes evident, the Engineer may require a higher load factor or lower allowable stress as necessary to insure no damage to piles.
3. Mark piles at pick-up points to indicate proper points for attaching handling lines.

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 39441 PAUL D. ROSENBECK
4/15/2024

REV.			
	LMB	PDR	3-24
	030592-B01		
REV.	PCW	HL	10-20
	AASHTO M31		
REV.	JXY	SAN	3-14
	New Border		
REVIEWED			
QUAN.			
DR.	SRM/PNP	GFD/SAN	12-07
DES.	GFD	SAN	12-07
	BY	CHK.	DATE

CITY OF CHARLESTON

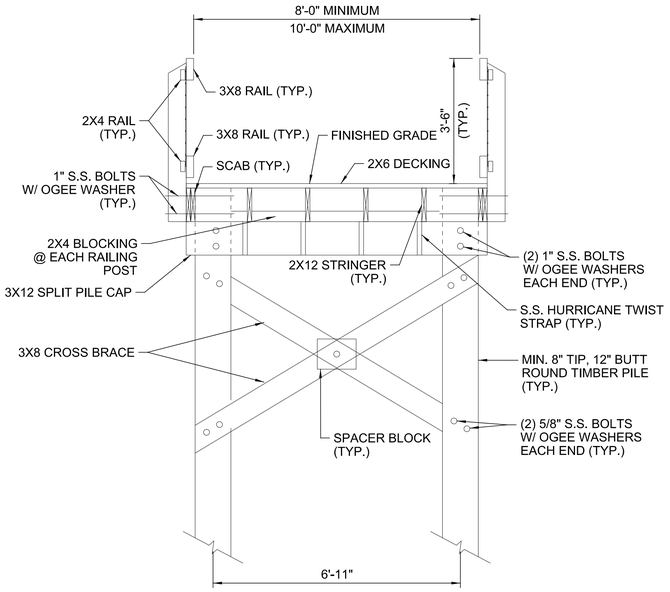
PRESTRESSED CONCRETE PILES WITH POINTS

COUNTY	ROUTE
CHARLESTON	DANIEL ISLAND DRIVE

DRAWING NO. 704-02

4/12/2024

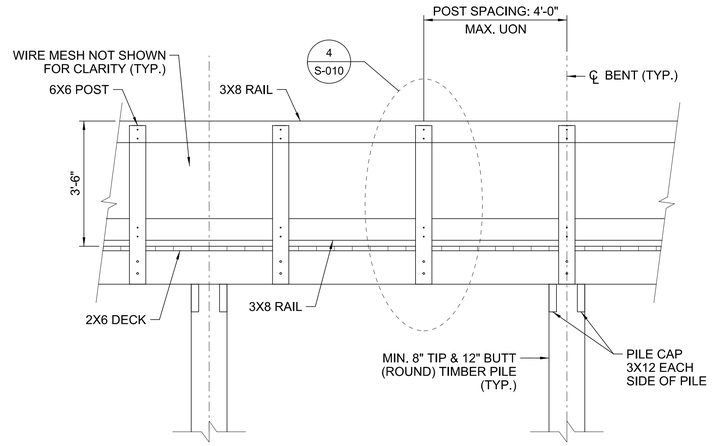
BRIDGE PLANS ID	SHEET NO.
030592-B01	S10



TYPICAL SECTION AT TIMBER WALKWAY

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

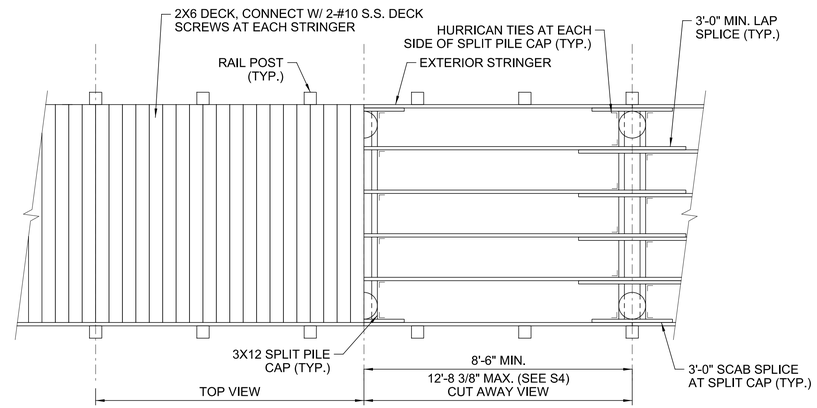
1 S-010



PART ELEVATION AT TYPICAL TIMBER WALKWAY

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

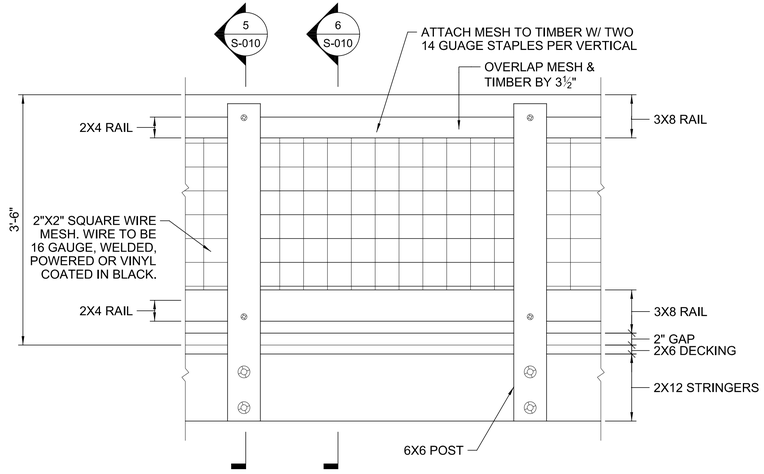
2 S-010



PART PLAN OF TYPICAL TIMBER WALKWAY

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

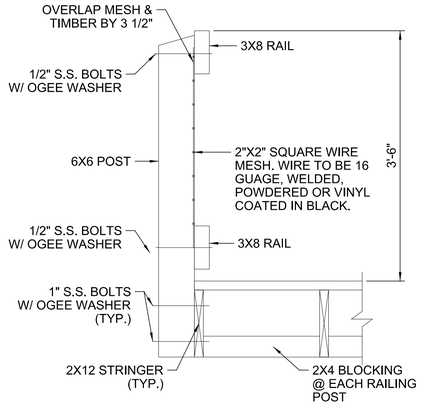
3 S-010



ELEVATION AT TIMBER WALKWAY RAILING

SCALE: 1" = 1'-0"

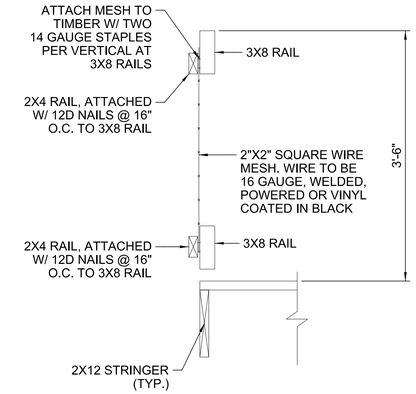
4 S-010



SECTION AT RAIL POST

SCALE: 1" = 1'-0"

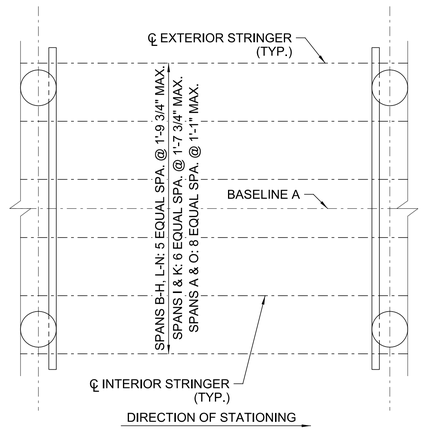
5 S-010



SECTION BETWEEN RAIL POST

SCALE: 1" = 1'-0"

6 S-010



PART PLAN OF STRINGER LAYOUT

SCALE: 1" = 1'-0"

7 S-010

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

CITY OF CHARLESTON

TIMBER STRUCTURE DETAILS I

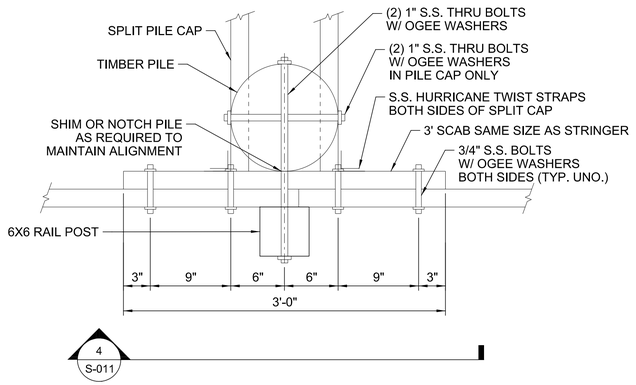
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 39441
PAUL D. ROSENBERG
4/15/2025

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	---	---	---
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

COUNTY	ROUTE
CHARLESTON	DANIEL ISLAND DRIVE

4/12/2024

BRIDGE PLANS ID	SHEET NO.
030592-B01	S11

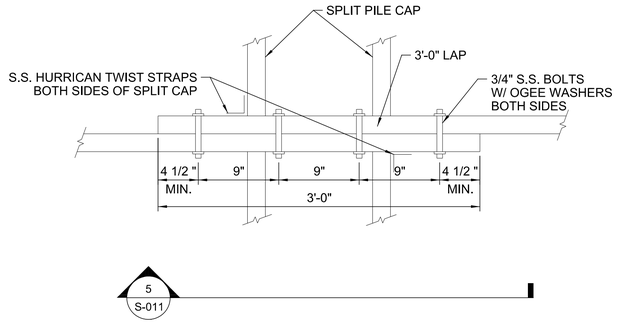


4 S-011

TYPICAL SCAB SPLICE DETAIL (3'-0")

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

1 S-011

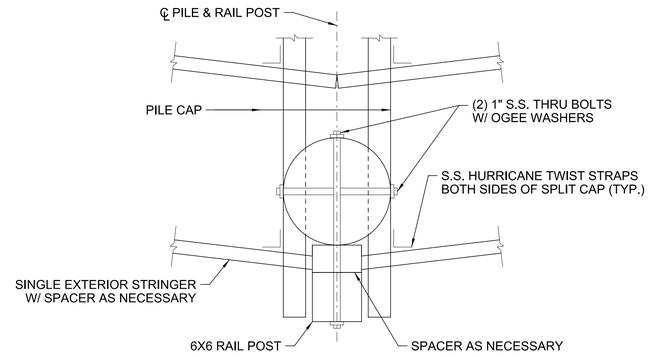


5 S-011

TYPICAL INTERIOR STRINGER LAP SPLICE DETAIL (3'-0")

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

2 S-011

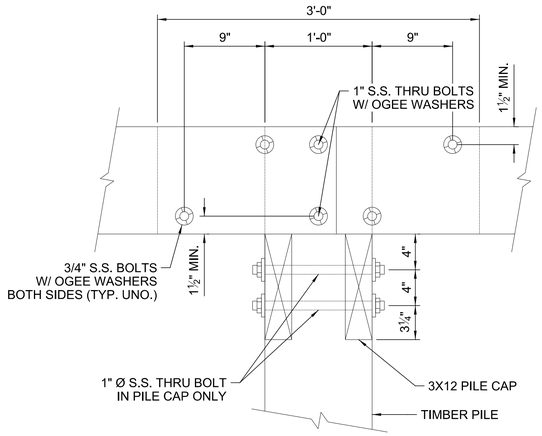


6 S-011

PART PLAN AT TIMBER WALKWAY CORNER

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

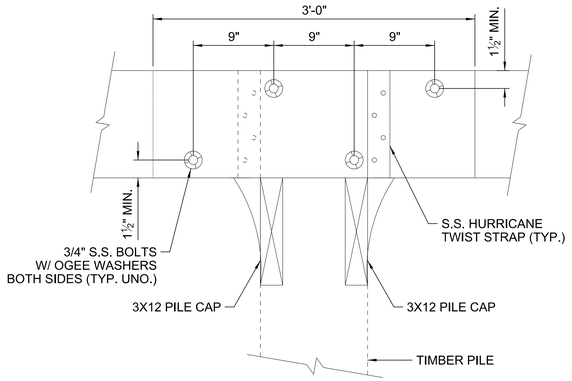
3 S-011



ELEVATION AT EXTERIOR SCAB SPLICE

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

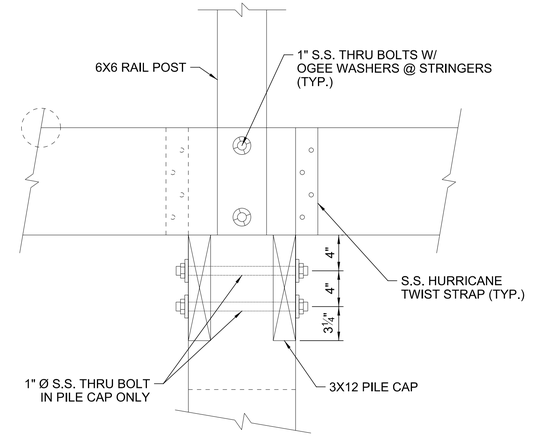
4 S-011



ELEVATION AT INTERIOR SCAB SPLICE

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

5 S-011



PART ELEV. AT EXTERIOR TIMBER WALKWAY CORNER

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

6 S-011

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	---	---	---
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 39441 PAUL D. ROSENBERGH 7/15/2024

CITY OF CHARLESTON

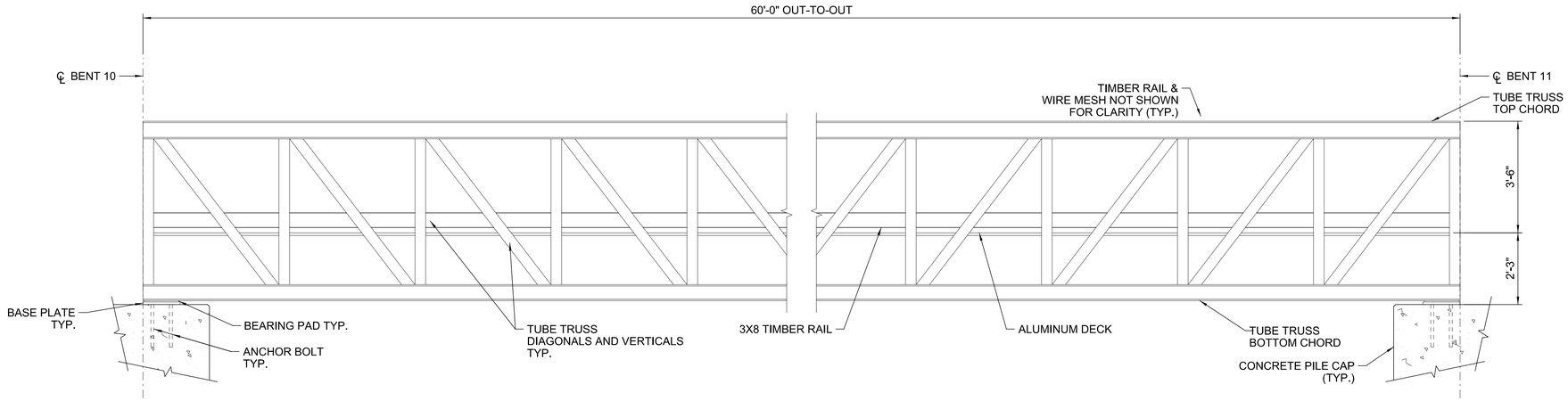
TIMBER STRUCTURE DETAILS II

COUNTY: CHARLESTON

ROUTE: DANIEL ISLAND DRIVE

4/12/2024

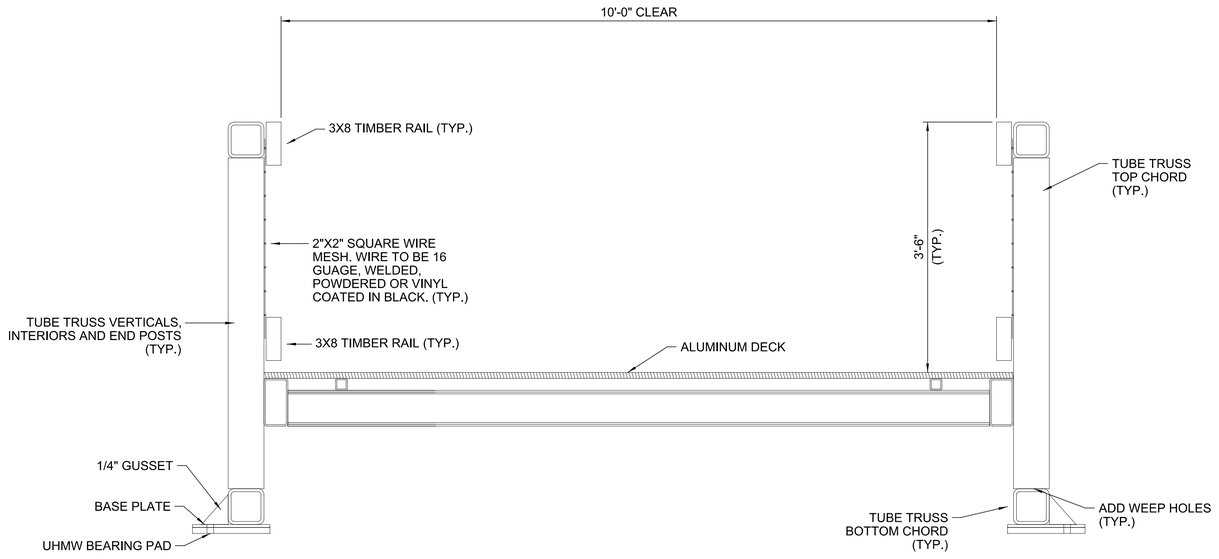
BRIDGE PLANS ID	SHEET NO.
030592-B01	S12



ELEVATION AT MAIN SPAN

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

1 / S-012



TYPICAL SECTION AT MAIN SPAN

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

2 / S-012

NOTES:

1. BRIDGE SHALL BE DELEGATED-DESIGN BY THE FABRICATOR. TRUSS SHOWN IS PRATT CONFIGURATION. OTHER SIMILAR STRUCTURES, MEETING ALL INDICATED CRITERIA, SHALL BE CONSIDERED IF SUBMITTED POST-AWARD. ALL "AS EQUAL" STRUCTURES MUST MEET THE CRITERIA AS DEFINED IN THE SPECIFICATIONS.
2. BRIDGE SHALL BE DESIGNED TO SUPPORT A LIVE LOAD OF 90 PSF, AND WIND AND SEISMIC ACCORDING TO AASHTO.
3. PREFABRICATED STRUCTURE, FRAMING MEMBERS AND COMPONENTS SHALL BE COMPOSED OF ALLOY 6061-T6 ALUMINUM AS INDICATED IN SPECIFICATIONS.
4. SHOP PLANS AND DESIGN CALCULATIONS SHALL BE SEALED BY A SC LICENSED PROFESSIONAL ENGINEER, SUBMITTED AND APPROVED BY EOR AND ACCEPTED BY SCDOT PRIOR TO FABRICATION.

235 MAGRATH DARBY BOULEVARD, SUITE 275
MOUNT PLEASANT, SC 29464
P: (843) 556-2624 | F: (843) 556-4329 | www.jmt.com

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 39441
PAUL D. ROSENBERG
7/15/2025

REV.			
REV.			
REV.			
REVIEWED	TGT		
QUAN.	---	---	---
DR.	LMB	PDR	3-24
DES.	LMB	PDR	3-24
	BY	CHK.	DATE

CITY OF CHARLESTON

ALUMINUM MAIN SPAN DETAILS

COUNTY	ROUTE
CHARLESTON	DANIEL ISLAND DRIVE

4/12/2024