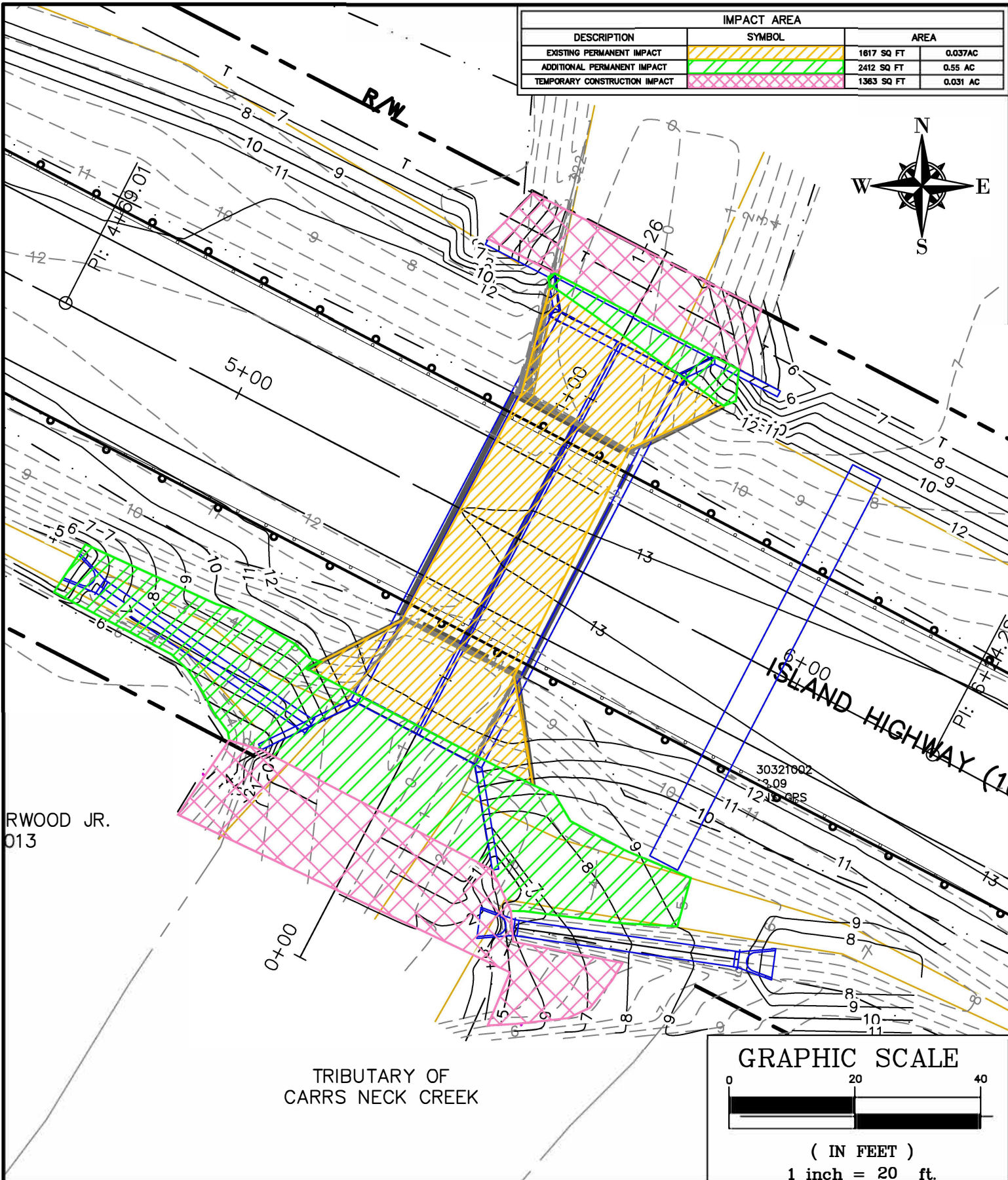
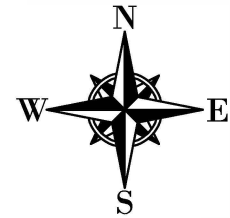
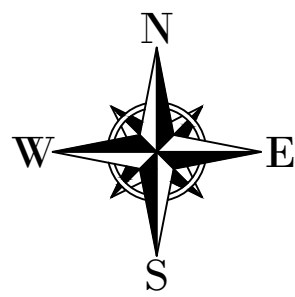


IMPACT AREA			
DESCRIPTION	SYMBOL	AREA	
EXISTING PERMANENT IMPACT		1617 SQ FT	0.037AC
ADDITIONAL PERMANENT IMPACT		2412 SQ FT	0.55 AC
TEMPORARY CONSTRUCTION IMPACT		1363 SQ FT	0.031 AC



RWOOD JR.
013

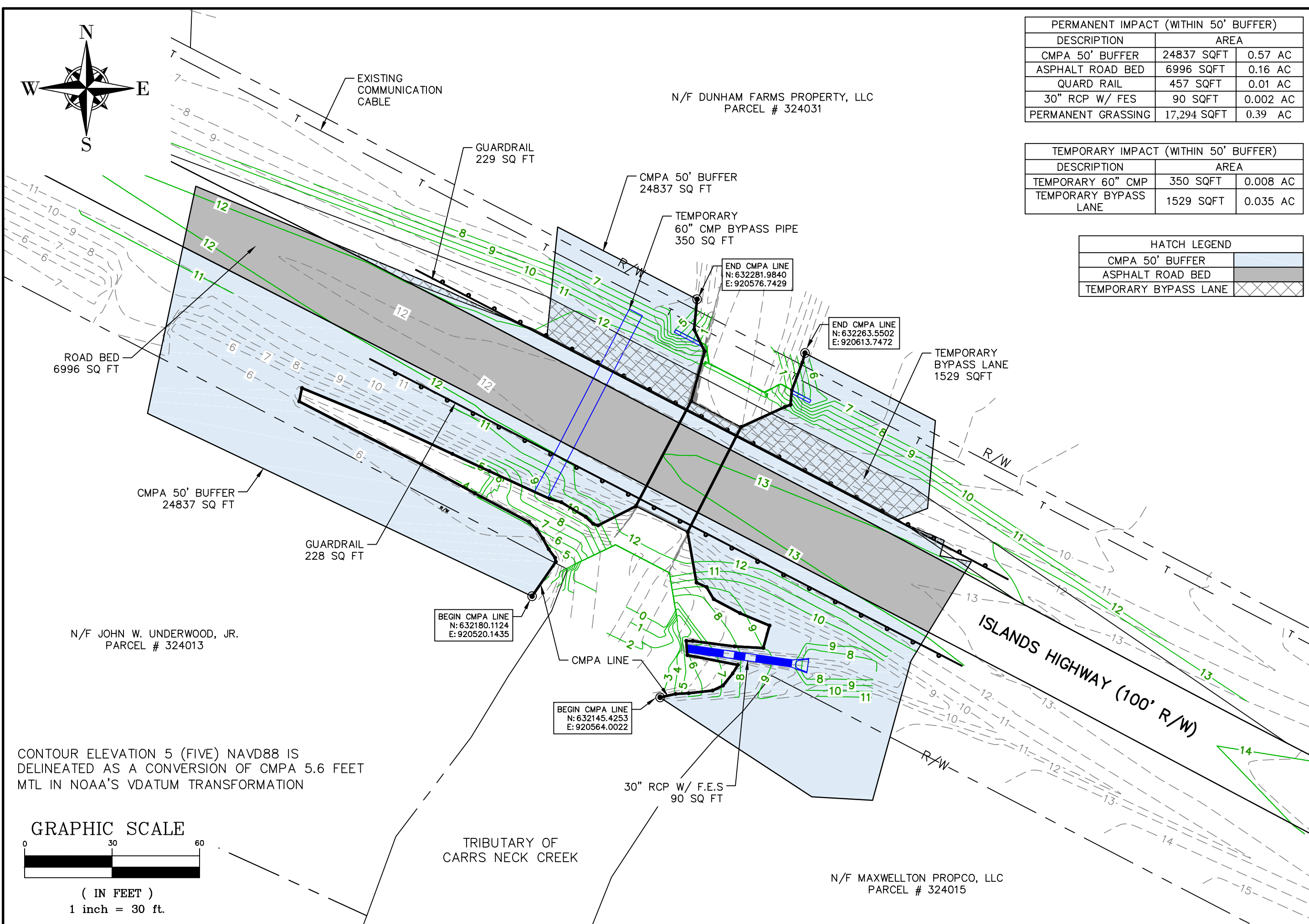


N/F DUNHAM FARMS PROPERTY, LLC
PARCEL # 324031

PERMANENT IMPACT (WITHIN 50' BUFFER)		
DESCRIPTION	AREA	
CMPA 50' BUFFER	24837 SQFT	0.57 AC
ASPHALT ROAD BED	6996 SQFT	0.16 AC
QUARD RAIL	457 SQFT	0.01 AC
30" RCP W/ FES	90 SQFT	0.002 AC
PERMANENT GRASSING	17,294 SQFT	0.39 AC

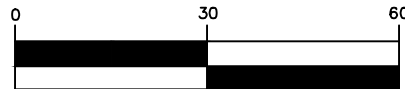
TEMPORARY IMPACT (WITHIN 50' BUFFER)		
DESCRIPTION	AREA	
TEMPORARY 60" CMP	350 SQFT	0.008 AC
TEMPORARY BYPASS LANE	1529 SQFT	0.035 AC

HATCH LEGEND	
CMPA 50' BUFFER	
ASPHALT ROAD BED	
TEMPORARY BYPASS LANE	



CONTOUR ELEVATION 5 (FIVE) NAVD88 IS
DELINEATED AS A CONVERSION OF CMPA 5.6 FEET
MTL IN NOAA'S VDUTUM TRANSFORMATION

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

ISLANDS HIGHWAY BOX CULVERT REPLACEMENT FOR LIBERTY COUNTY BOARD OF COMMISSIONERS

HINESVILLE:
114 North Commerce Street
Hinesville, Georgia 31313
(912) 368-5664

STATESBORO:
302 S Zetterower Avenue
Statesboro, Georgia 30458
(912) 335-1046



CMPA IMPACT AREA
ISLANDS HIGHWAY BOX CULVERT
LIBERTY COUNTY, GEORGIA
1359th G.M. DISTRICT
DATE: FEBRUARY 24, 2025
FILE NUMBER: 2011-05
PAGE 1 OF 1

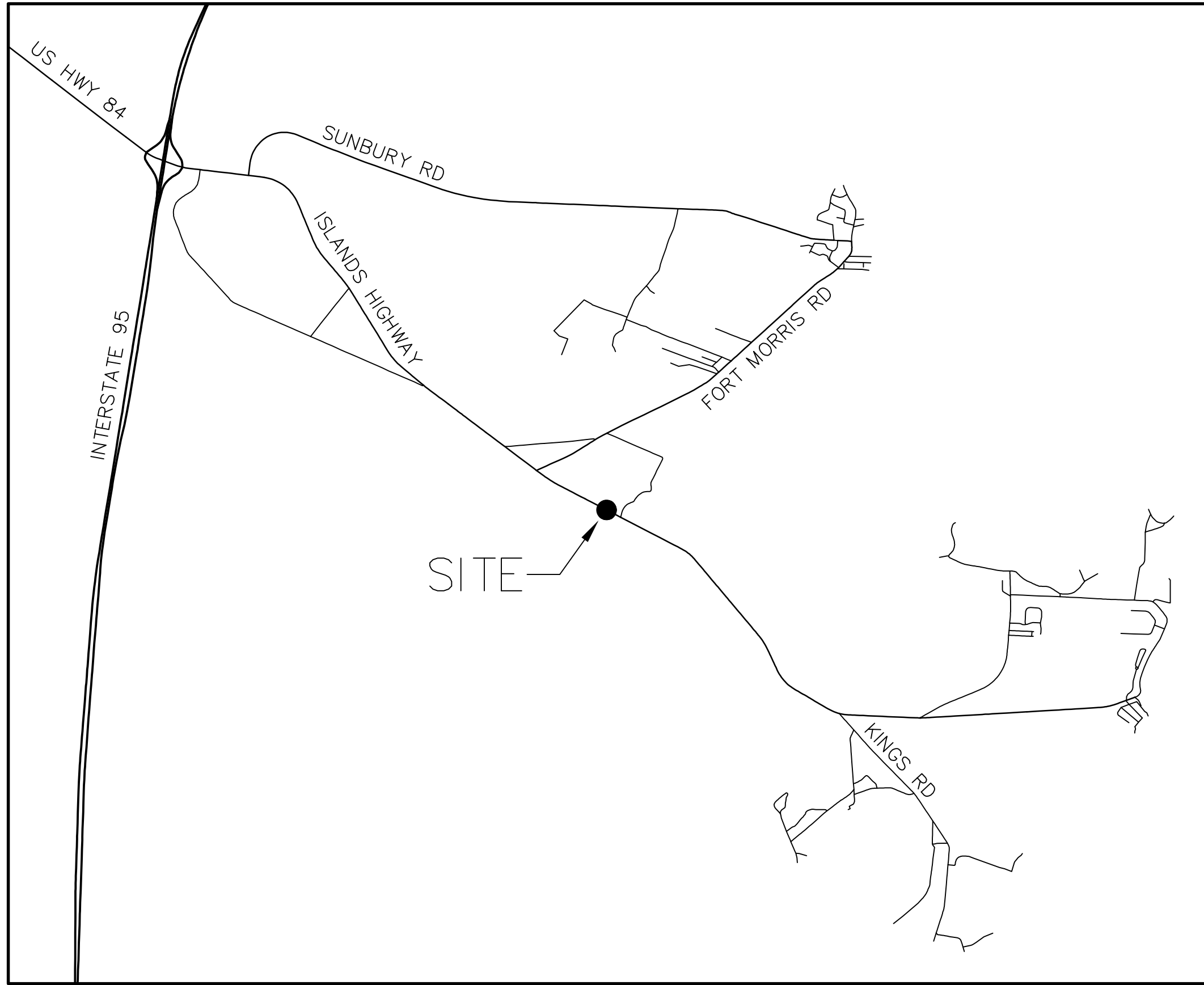
ISLANDS HWY BOX CULVERT REPLACEMENT FOR LIBERTY COUNTY BOARD OF COMMISSIONERS

OWNER
**LIBERTY COUNTY BOARD OF
COMMISSIONERS**
112 N. MAIN STREET, SUITE 201
HINESVILLE, GEORGIA
(912) 368-5664

24-HOUR CONTACT
TRENT LONG
(912) 368-5664
TRLONG@TRLONGENG.COM

CIVIL ENGINEERING PLANS	
SHEET C1.1	COVER SHEET
SHEET C2.1	EXISTING CONDITIONS
SHEET C3.1	BOX CULVERT REPLACEMENT PLAN
SHEET C3.2	BOX CULVERT PLAN & PROFILE
SHEET C3.3	NORTH END MODIFIED HEADWALL DETAIL
SHEET C3.4	TRAFFIC CONTROL PLAN, PHASE 1
SHEET C3.5	TRAFFIC CONTROL PLAN, PHASE 2
SHEET C3.6	OVERLAY PLAN
SHEET C3.7	OVERLAY PLAN
SHEET C3.8	PAVEMENT DETAILS
SHEET C3.9	PROJECT LAYOUT SHEET
SHEET C6.1	EROSION CONTROL PLAN (INITIAL)
SHEET C6.2	EROSION CONTROL PLAN (INTERMEDIATE)
SHEET C6.3	EROSION CONTROL PLAN (FINAL)
SHEET C6.4	EROSION CONTROL NOTES
SHEET C6.5	EROSION CONTROL NOTES
SHEET C6.6	EROSION CONTROL DETAILS
SHEET C6.7	EROSION CONTROL DETAILS

GEORGIA DOT STANDARD DETAILS	
D.O.T. STD 2402, PAGE 1	
D.O.T. STD 2402, PAGE 2	
D.O.T. STD 2402, PAGE 3	
D.O.T. STD 2404	
D.O.T. STD 2406-1	
D.O.T. STD 2406-2	
D.O.T. STD 2530	
D.O.T. STD 2535	



VICINITY MAP N.T.S.

LOCATION: N31° 44' 07.69", W81° 18' 58.12"
(31.735741, -81.316146)

DRAWING LEGEND		
DESCRIPTION	PROPOSED	EXISTING
RIGHT OF WAY	--- R/W	--- R/W
EDGE OF PAVEMENT	---	---
DITCH CENTERLINE	---	---
SANITARY SEWER	8"S	---
WATER LINE	10"W	--- 10"W
FORCE MAIN	FM	--- FM
UNDERGROUND GAS LINE	8"G	--- 8"G
CONTOURS	81	--- 81
STORM DRAINAGE PIPE	---	==
ELEVATION	FG: 78.15	X 81.90
SILT FENCE NON-SENSITIVE	Sd1-NS	
SILT FENCE SENSITIVE	Sd1-S	
INLET PROTECTION	Sd2-P	
CHECK DAM- HAY BALE	Cd-Hb	
CHECK DAM - RIP RAP	Cd-Rp	
CONSTRUCTION EXIT	Co	
STORM OUTLET PROTECTION	St	
SILT FENCE	Sd1	
MULCHING	Ds1	
TEMPORARY GRASSING	Ds2	
PERMANENT GRASSING	Ds3	
FIRE HYDRANT		
SEWER MANHOLE		
WATER VALVE		
DRAINAGE FLOW		
WATER METER		
BENCHMARK		
WELL		
GUY POLE		
IRON PIN	SET O I.P.S	FOUND O I.P.F
TELEPHONE PEDESTAL		
POWER POLE		

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GSWCC# 0000020134

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(912) 335-1046

ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
TITLE SHEET

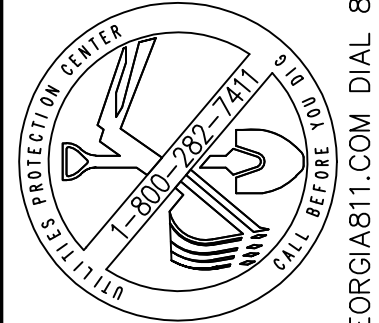
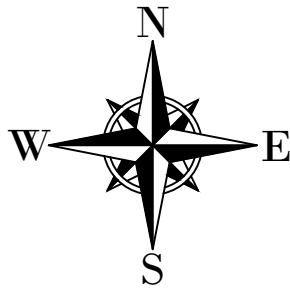
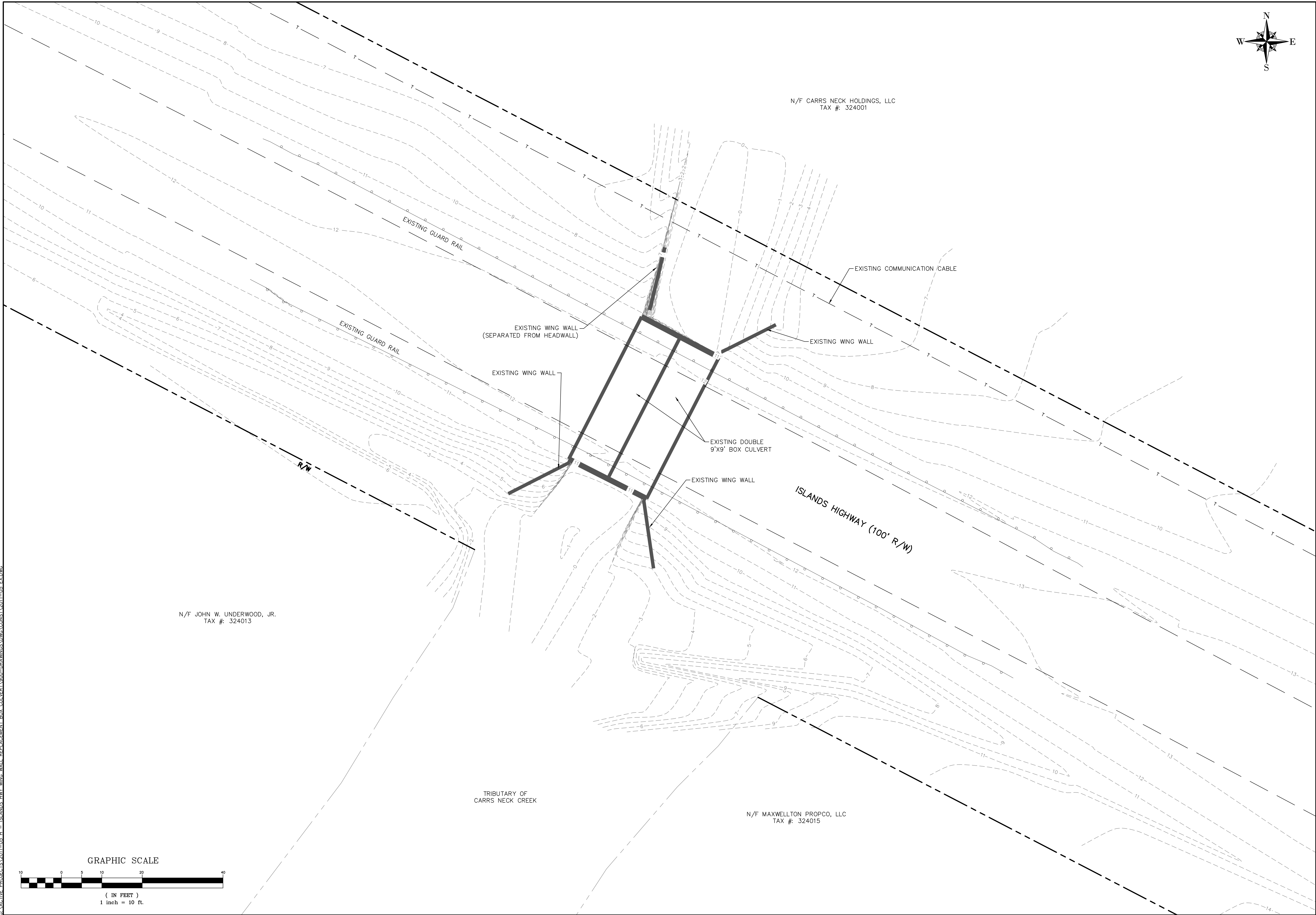
REVISIONS:

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2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
4.	
5.	
6.	
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9.	
10.	

INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:
C1.1

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Hinesville, Georgia 31313
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Suite 304
Pooler, Georgia 31322
(912) 535-1046



ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

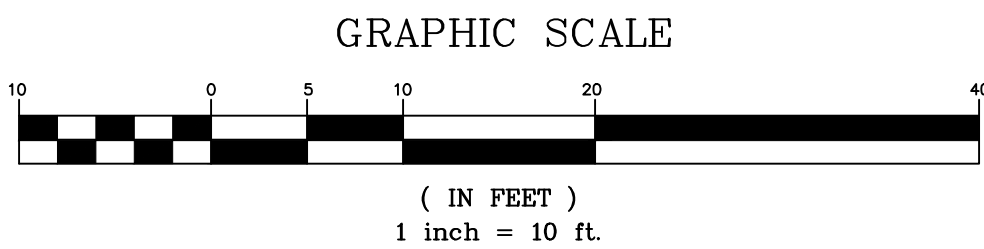
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EXISTING
CONDITIONS

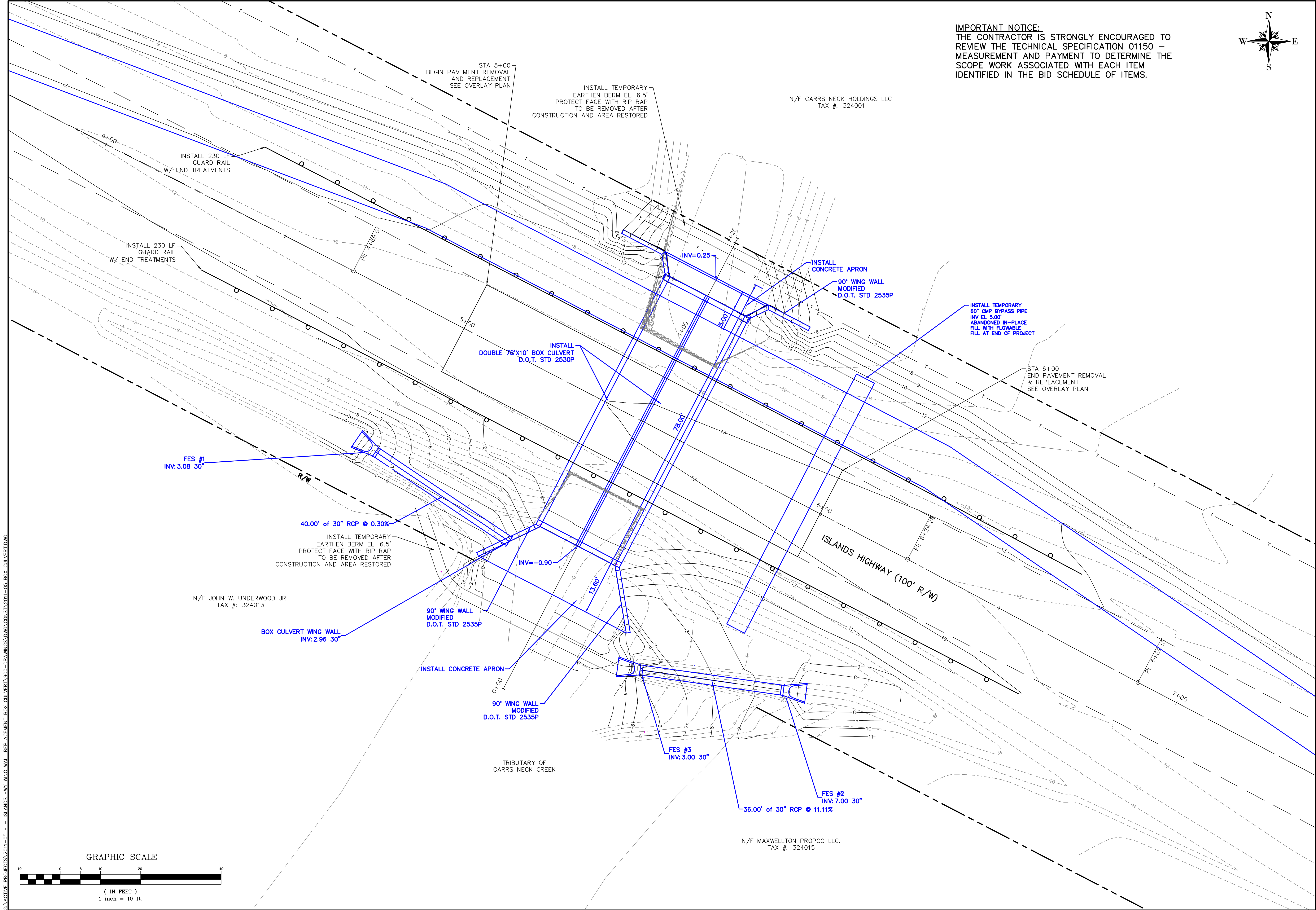
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3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

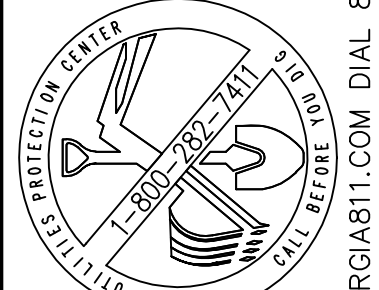
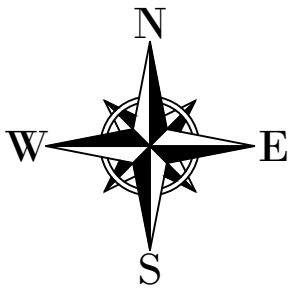
SHEET NUMBER:

C2.1





IMPORTANT NOTICE:
THE CONTRACTOR IS STRONGLY ENCOURAGED TO REVIEW THE TECHNICAL SPECIFICATION 01150 – MEASUREMENT AND PAYMENT TO DETERMINE THE SCOPE WORK ASSOCIATED WITH EACH ITEM IDENTIFIED IN THE BID SCHEDULE OF ITEMS.



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ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
BOX CULVERT
REPLACEMENT PLAN

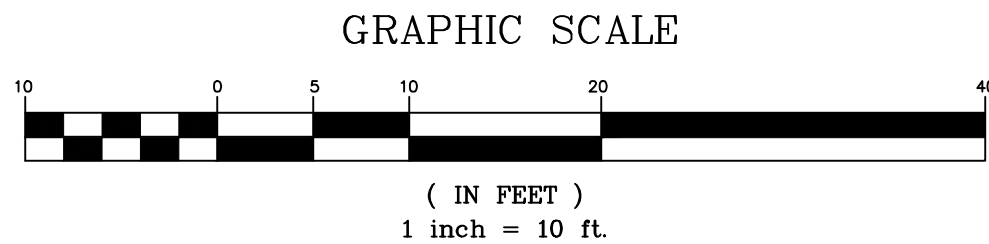
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3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

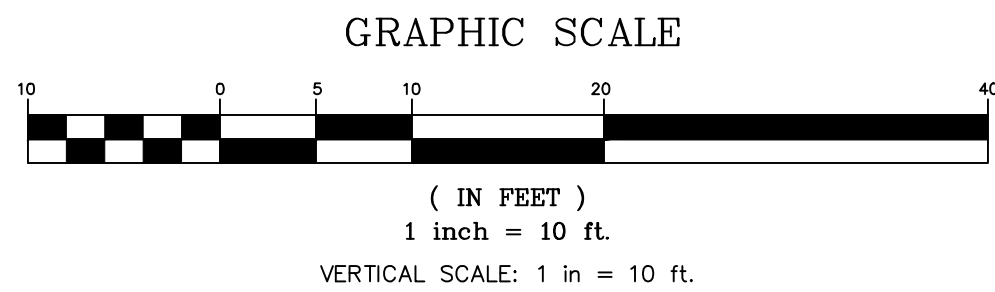
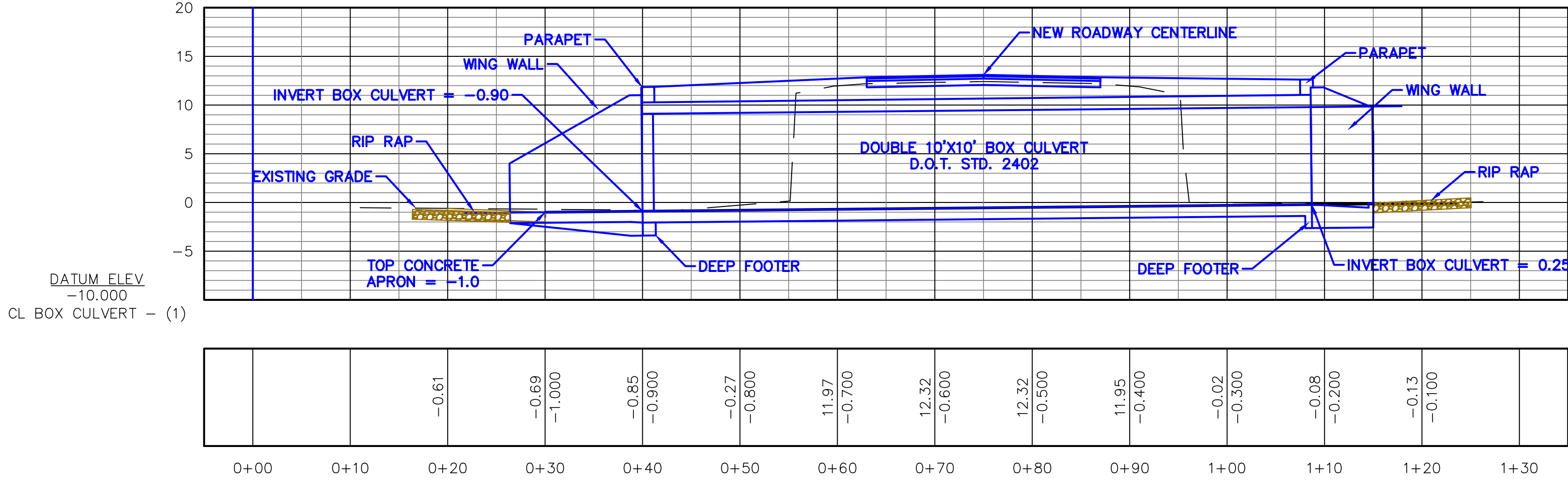
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ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
BOX CULVERT PLAN
& PROFILE

REVISIONS:	
1.	6/16/2023 BID SET
2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

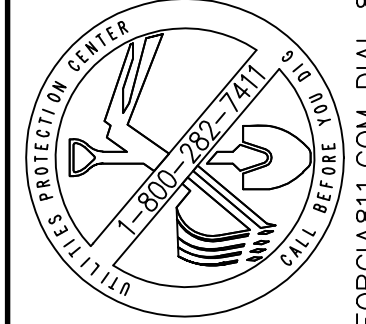
SHEET NUMBER:

C3.2



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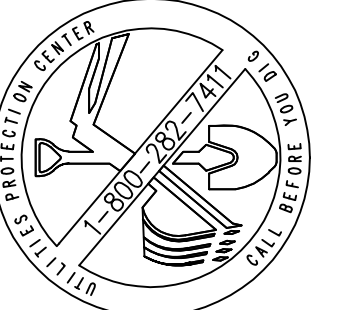
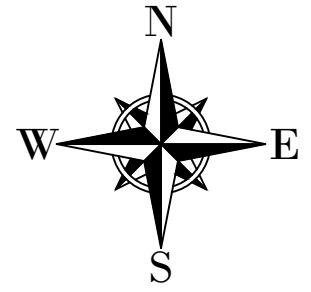
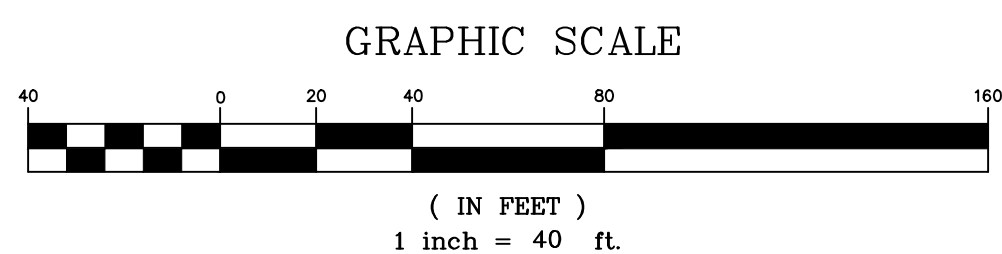


CSWCC# 00000202134

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PLAN VIEW (WING WALL)

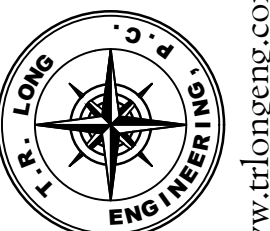


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GSWCC# 0000002134

SAVANNAH
306 Commercial Drive
Savannah, Georgia 31406
Office(912) 335-1046



I.R.L.
HINESVILLE
1114 North Commerce St.
Hinesville, Georgia 31313
Office(912) 368-5664

www.guggenheim.org

PROPOSED IMPROVEMENTS FOR
ISLANDS HIGHWAY HEADWALL
LIBERTY COUNTY, GEORGIA

HEET NAME:
NORTH END
MODIFIED
HEADWALL DETAIL

REVISIONS:

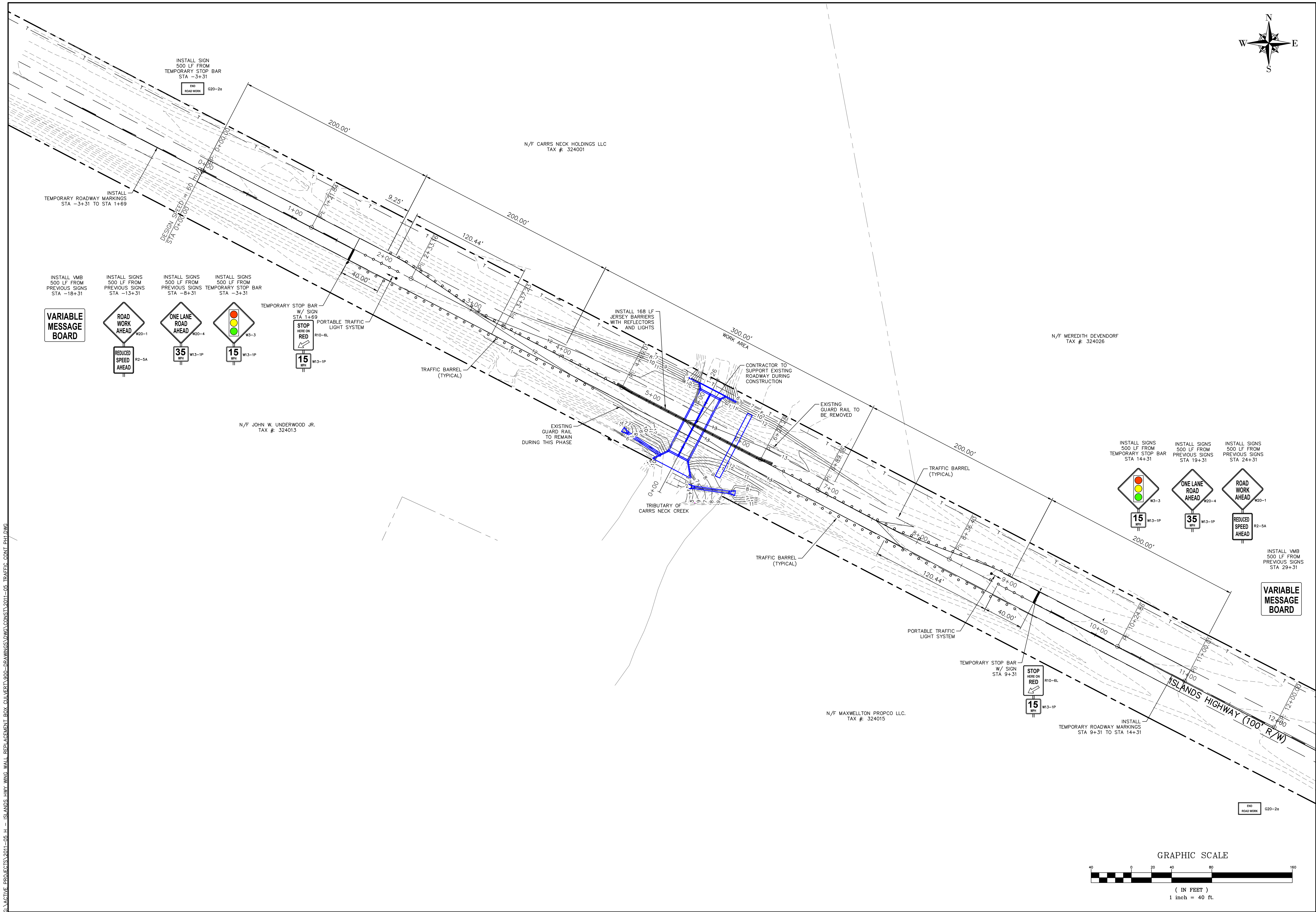
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INITIAL DATE: JANUARY 2011
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:

C3.3

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ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
TRAFFIC CONTROL
PLAN, PHASE I

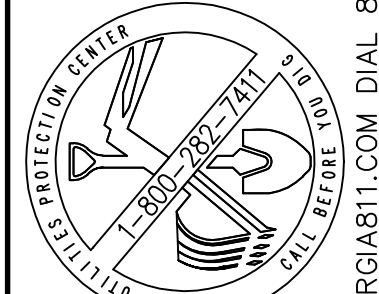
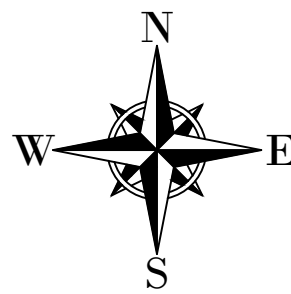
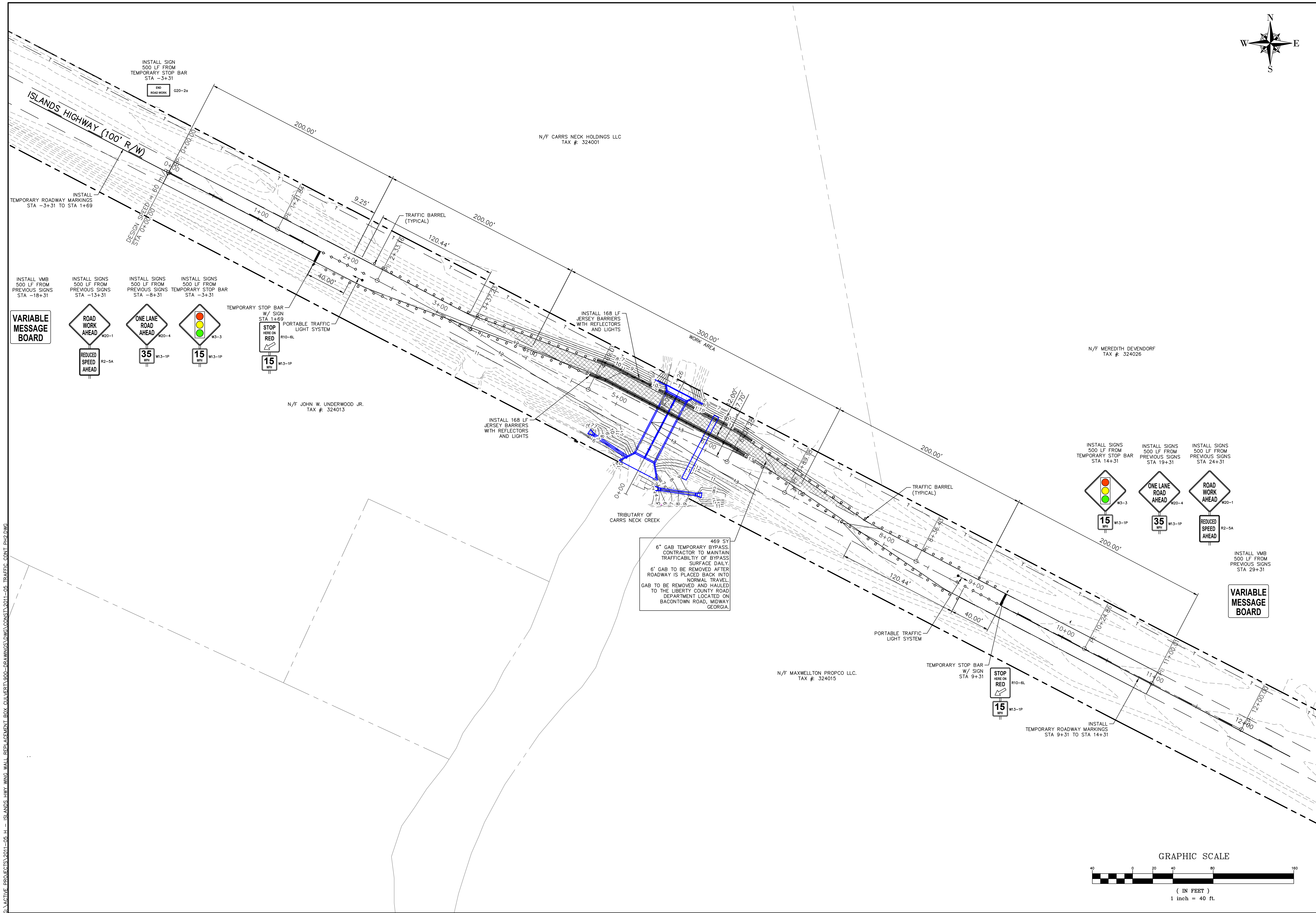
REVISIONS:

1.	6/16/2023 BID SET
2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:
C3.4

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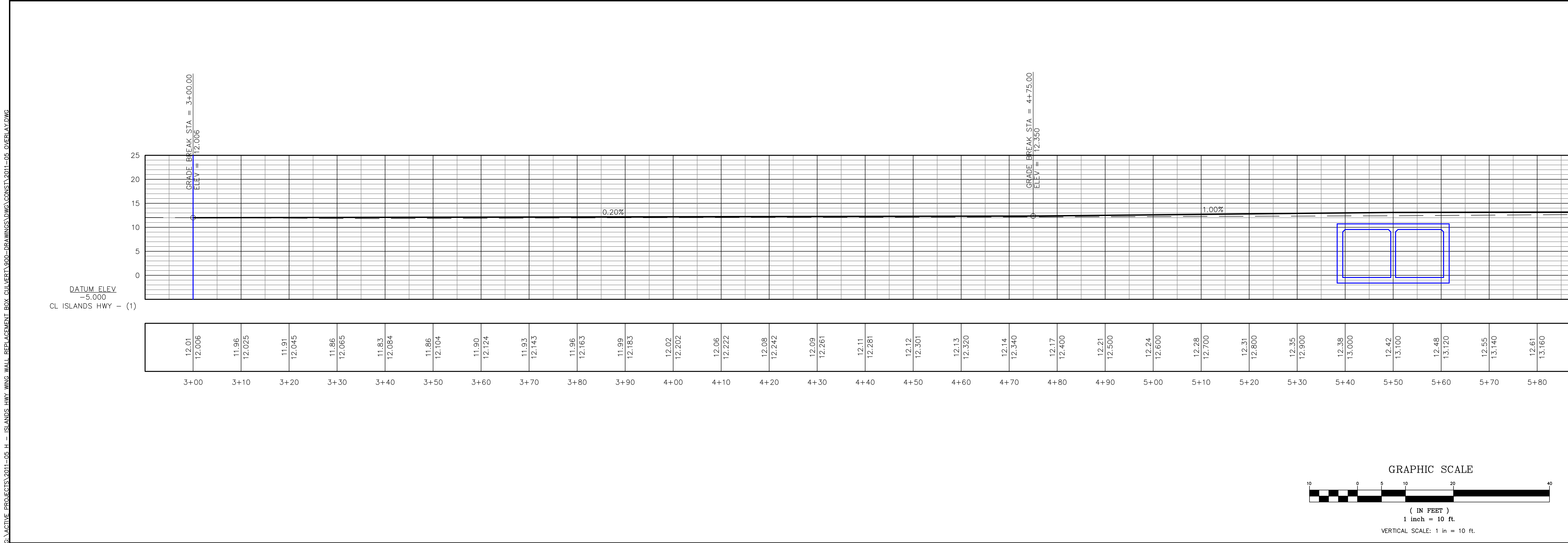
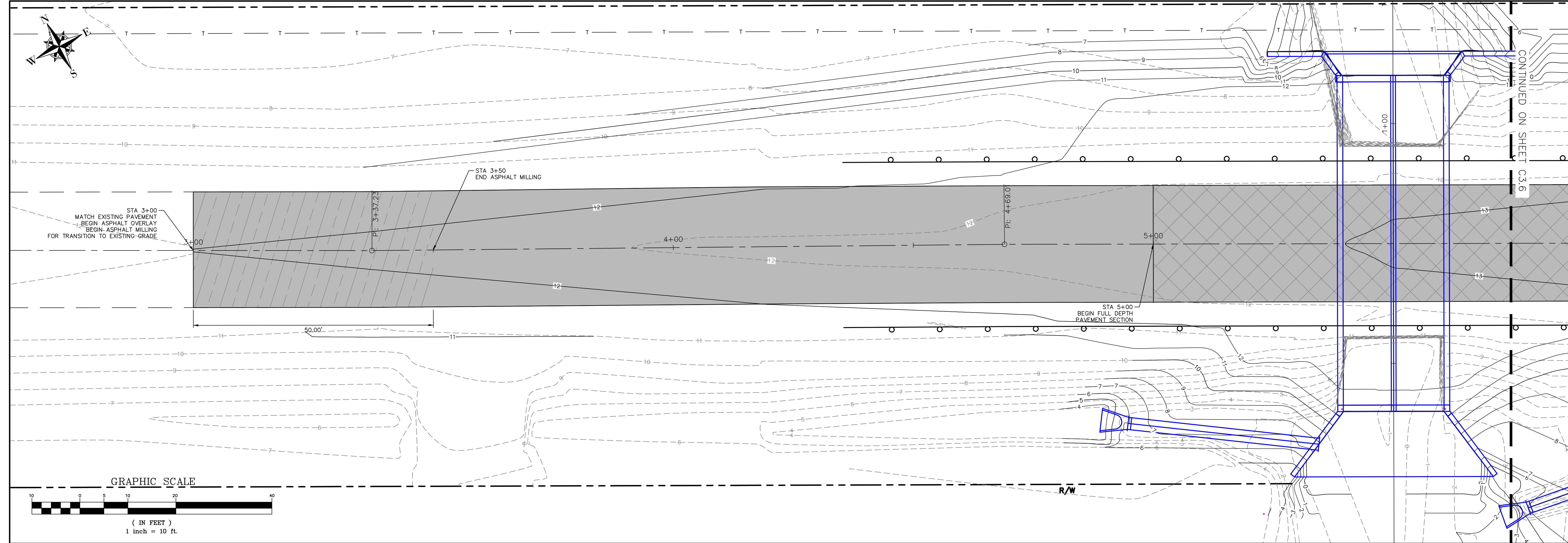
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ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:	TRAFFIC CONTROL PLAN, PHASE 2
REVISIONS:	
1.	6/16/2023 BID SET
2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
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INITIAL DATE:	3/22/23
DRAWN BY:	TRL
CHECKED BY:	TRL
PROJECT #:	2011-05
SHEET NUMBER:	C3.5



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ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

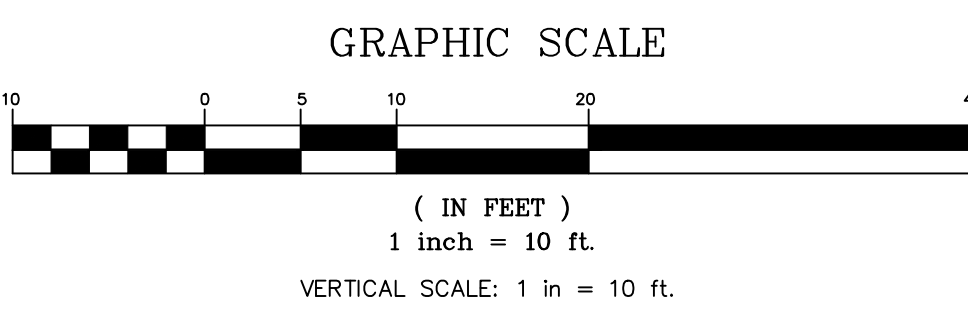
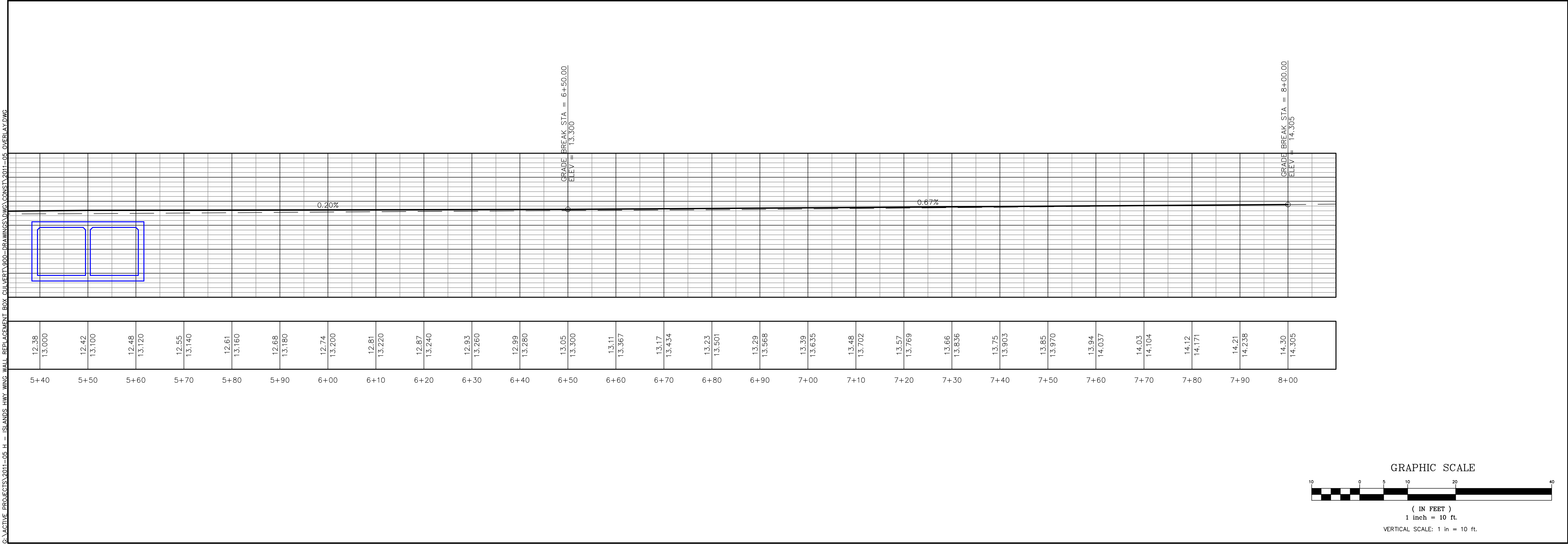
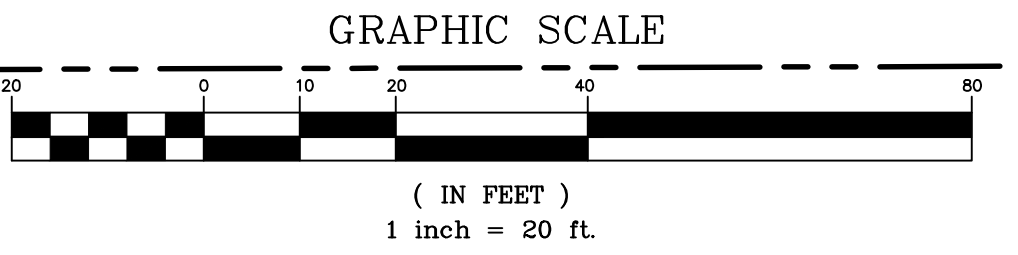
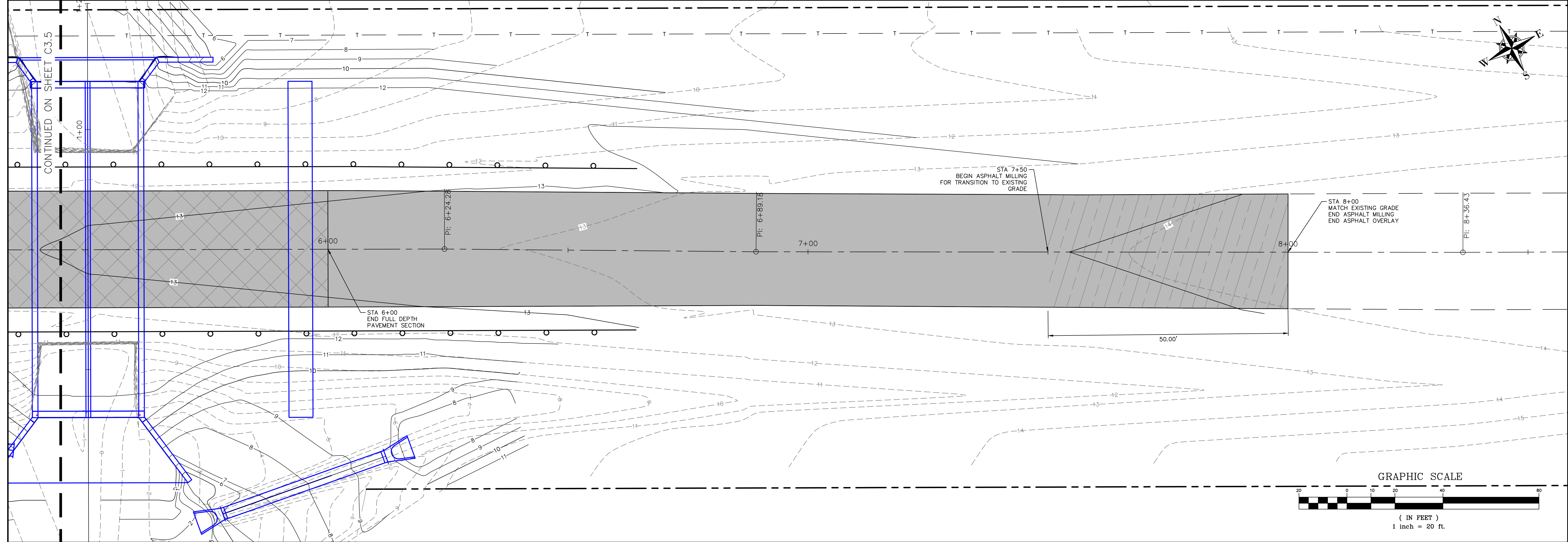
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OVERLAY PLAN

REVISIONS:

1.	6/16/2023 BID SET
2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:
C3.6



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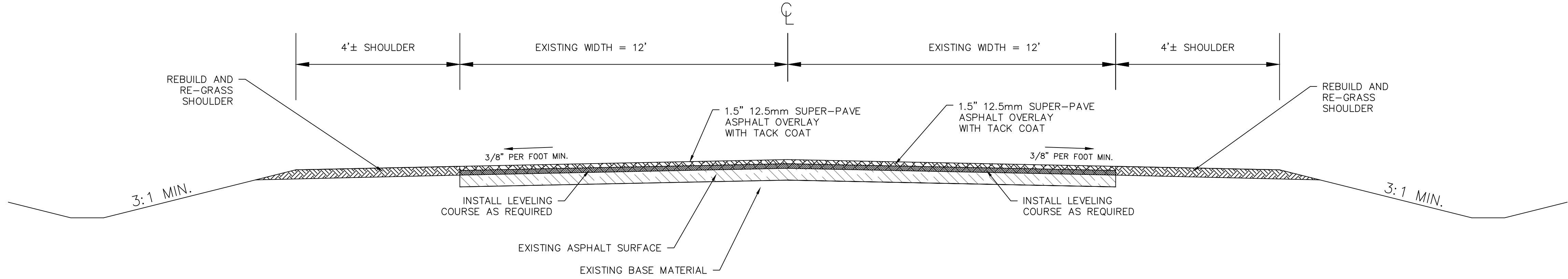
ISLANDS HWY BOX CULVERT REPLACEMENT FOR LIBERTY COUNTY BOARD OF COMMISSIONERS

SHEET NAME:
OVERLAY PLAN

REVISIONS:
1. 6/16/2023 BID SET
2. 3/29/2024 REMID SET
3. 8/26/2024 PLATINUM
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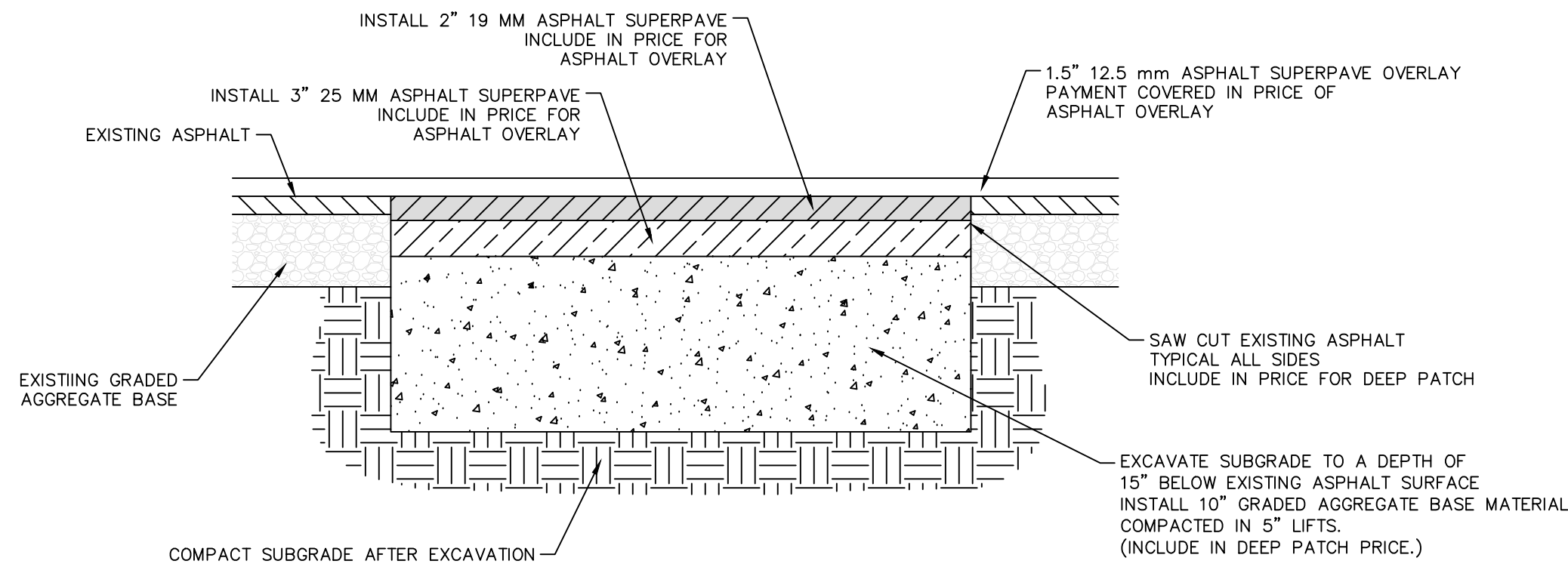
INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:
C3.7



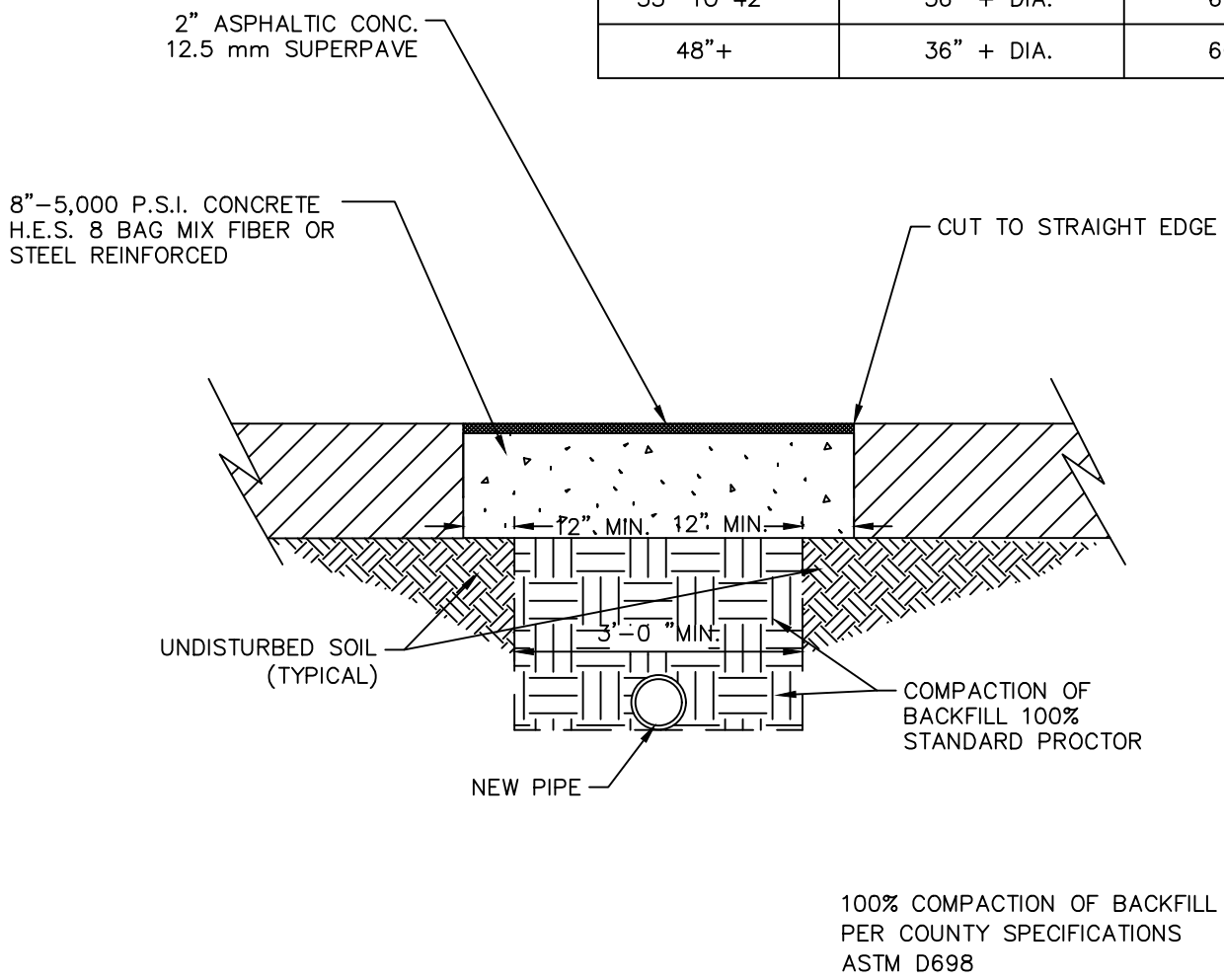
- NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACEMENT, MAINTENANCE AND INSPECTION OF ALL TRAFFIC CONTROL DEVICES.
 2. ALL STRIPING TO BE REPLACED WITH HIGH BUILD PAINT MEETING GEORGIA D.O.T. STANDARD SPECIFICATIONS.
 3. ALL WORK SHALL COMPLY WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES, MOST CURRENT EDITION.
 4. 5" WHITE STRIPING SHALL BE 4" FROM EDGE OF NEW PAVEMENT.

TYPICAL ROAD CROSS-SECTION
N.T.S.



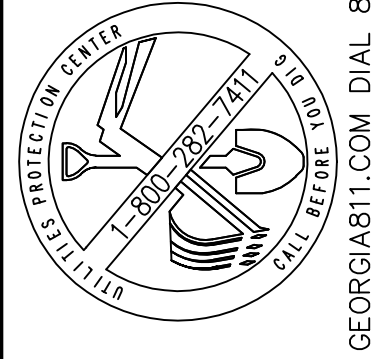
DEEP PATCH DETAIL
N.T.S.

PIPE DIAMETER	MAXIMUM TRENCH WIDTH	MAXIMUM PAYMENT WIDTH
6" TO 15"	16" + DIA.	40" + DIA.
18" TO 21"	20" + DIA.	44" + DIA.
24" TO 30"	24" + DIA.	48" + DIA.
33" TO 42"	36" + DIA.	60" + DIA.
48"+	36" + DIA.	60" + DIA.



- NOTES:
1. COMPACT BASE AND SUB-BASE TO 100% STANDARD PROCTOR.
 2. CONCRETE IN THE RIGHT OF WAY TO BE 5000 PSI AND REINFORCED WITH FIBERMESH OR STEEL.
 3. ALL LATERAL STREET CUTS MUST BE COVERED WITH STEEL PLATES OF SUFFICIENT THICKNESS TO SPAN THE CUT WITHOUT NOTICABLE DEFLECTION. PLATES TO REMAIN IN PLACE UNTIL THE CONCRETE BASE HAS GAINED SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS (24 HOUR MINIMUM).
 4. ALL LONGITUDINAL CUTS EXCEEDING 150' IN LENGTH WILL REQUIRE AN ASPHALT OVERLAY OF THE ENTIRE ROADWAY WIDTH. CONCRETE IN THE TRENCH WILL BE BROUGHT FLUSH WITH THE EXISTING PAVEMENT. PAVING WILL BE SAW CUT TO A STRAIGHT EDGE AND THE ENTIRE WIDTH OF THE ROADWAY WILL BE RESURFACED WITH A MINIMUM OF 1.5" OF 9.5mm ASPHALT SUPERPAVE.
 5. ALL STREET PATCHES MUST BE SQUARE OR RECTANGULAR WITH STRAIGHT, SAW CUT EDGES.

BITUMINOUS PAVEMENT REPLACEMENT
N.T.S.



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HINESVILLE:
114 North Commerce Street
Hinesville, Georgia 31313
(912) 368-5664

POOLER:
1000 Towne Center Blvd
Suite 304
Pooler, Georgia 31322
(912) 335-1046



ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
PAVEMENT DETAILS

REVISIONS:
1. 6/16/2023 BID SET
2. 3/29/2024 REMID SET
3. 8/26/2024 PLATINUM
4.
5.
6.
7.
8.
9.
10

INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:

C3.8



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CSWCC# 000002134

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114 North Commerce Street
Hinesville, Georgia 31313
(812) 368-5664

POOLER:
1000 Towne Center Blvd
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Pooler, Georgia 31322
(812) 335-1046

www.trlongeng.com

ISLANDS HWY BOX CULVERT
REPLACEMENT
FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
PROJECT LAYOUT
SHEET

REVISIONS:
1. 6/16/2023 BID SET
2. 3/29/2024 REMID SET
3. 8/26/2024 PLATINUM
4.
5.
6.
7.
8.
9.
10

INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:
C3.9



THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND-DISTURBING ACTIVITIES."

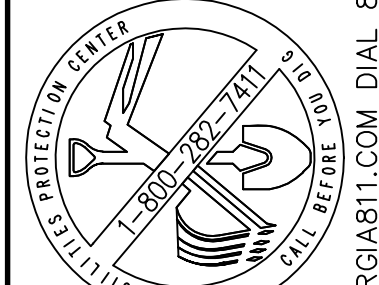
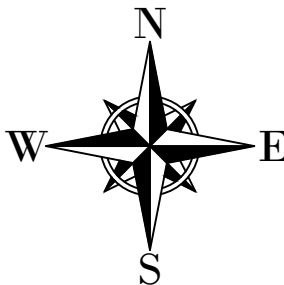
ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 CALENDAR DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

MAINTENANCE: EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

AMENDMENTS/REVISIONS TO THE ESA&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL AND SUBMITTED TO THE LOCAL ISSUING AUTHORITY FOR REVIEW.

THERE ARE NO STATE WATERS WITHIN 200 FEET OF THE SITE.



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GSWCC# 0000002134

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POOLER:
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Suite 304
Pooler, Georgia 31322
(912) 335-1046

ISLANDS HWY BOX CULVERT
REPLACEMENT FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

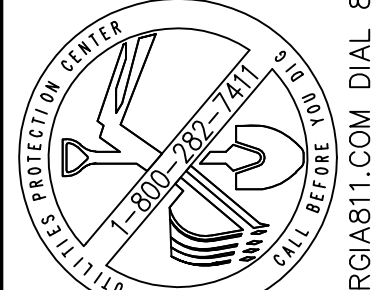
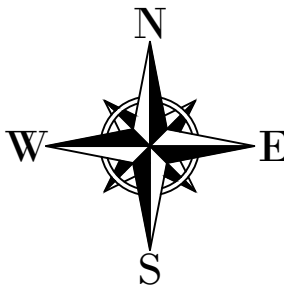
SHEET NAME:
INITIAL EROSION
CONTROL PLAN

REVISIONS:
1. 6/16/2023 BID SET
2. 3/29/2024 REBID SET
3. 8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:

C6.1



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ISLANDS HWY BOX CULVERT
REPLACEMENT FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
INTERMEDIAT
EROSION CONTROL
PLAN

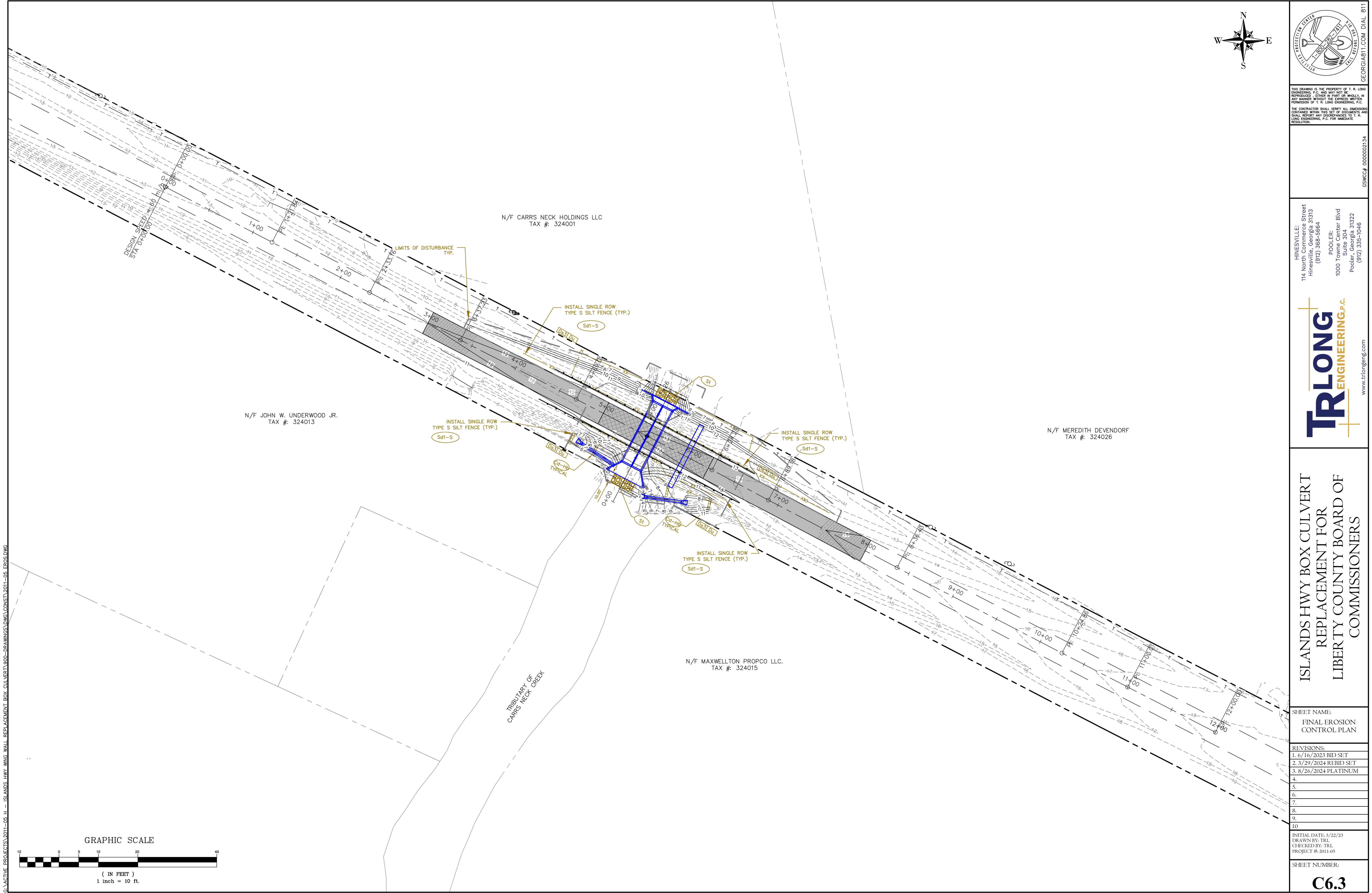
REVISIONS:	
1.	6/16/2023 BID SET
2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

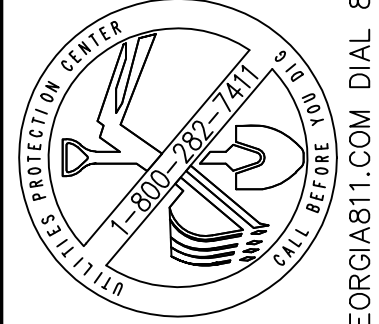
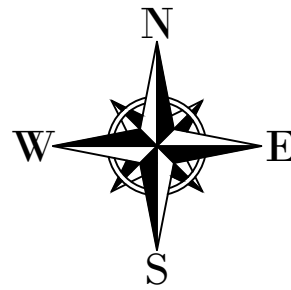
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Pooler, Georgia 31322
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ISLANDS HWY BOX CULVERT
REPLACEMENT FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS

SHEET NAME:
FINAL EROSION
CONTROL PLAN

REVISIONS:	
1.	6/16/2023 BID SET
2.	3/29/2024 REMID SET
3.	8/26/2024 PLATINUM
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INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

SHEET NUMBER:
C6.3

GRAPHIC SCALE



(IN FEET)
1 inch = 10 ft.

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PROJECT INFORMATION

PROJECT TITLE: ISLANDS HWY BOX CULVERT REPLACEMENT

OWNER: LIBERTY COUNTY BOARD OF COMMISSIONERS
112 N. MAIN STREET, SUITE 201
HINESVILLE, GEORGIA
(912) 368-5664

24 HOUR CONTACT: TRENT LONG
(912) 368-5664
TRLONG@TRLONGENG.COM

ENGINEER: T.R. LONG ENGINEERING, P.C.
114 NORTH COMMERCE ST.
HINESVILLE, GEORGIA 31313
(912) 368-5664

GOVERNING AUTHORITY: LIBERTY COUNTY
112 N. MAIN STREET
HINESVILLE, GA 31313
(912) 876-8454

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: COASTAL GEORGIA
PROJECT NAME: ISLANDS HWY BOX CULVERT REPLACEMENT ADDRESS: HWY 84
CITY/COUNTY: LIBERTY DATE ON PLANS: 3/22/23
NAME & EMAIL OF PERSON FILLING OUT CHECKLIST: TRENT LONG, trlong@trlongeng.com

EROSION, SEDIMENT, & POLLUTION CONTROL PLAN CHECKLIST

1. REQUIREMENT: THE APPLICABLE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN CHECKLIST ESTABLISHED BY THE COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED.

RESPONSE: THE 2024 EROSION, SEDIMENT AND POLLUTION CONTROL PLAN CHECKLIST FOR INFRASTRUCTURE WAS USED FOR THIS PROJECT.

2. REQUIREMENT: LEVEL II CERTIFICATION NUMBER ISSUED BY THE COMMISSION, SIGNATURE AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL.

RESPONSE: THE LEVEL II CERTIFICATION NUMBER ISSUED BY THE COMMISSION, SIGNATURE AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL IS FOUND ON THE UPPER RIGHT HAND SIDE OF ALL SHEETS.

3. REQUIREMENT: THE NAME AND PHONE NUMBER OF THE 24-HOUR LOCAL CONTACT RESPONSIBLE FOR EROSION, SEDIMENTATION AND POLLUTION CONTROL.

RESPONSE: THE NAME AND PHONE NUMBER OF THE 24-HOUR LOCAL CONTACT IS SHOWN IN THE ABOVE "PROJECT INFORMATION" SECTION.

4. REQUIREMENT: PROVIDE THE NAME, ADDRESS, EMAIL ADDRESS AND PHONE NUMBER OF THE PRIMARY PERMITTEE.

RESPONSE: THE NAME, ADDRESS AND PHONE NUMBER OF THE PRIMARY PERMITTEE IS SHOWN ABOVE ON THE "PROJECT INFORMATION" SECTION.

5. REQUIREMENT: NOTE TOTAL AND DISTURBED ACREAGE OF THE PROJECT OR PHASE UNDER CONSTRUCTION.

RESPONSE: THE TOTAL ACREAGE OF THE SITE IS 3.54 AND THE DISTURBED ACREAGE IS 0.58

6. REQUIREMENT: PROVIDE THE GPS LOCATIONS OF THE BEGINNING AND END OF THE INFRASTRUCTURE PROJECT. GIVE THE LATITUDE AND LONGITUDE IN DECIMAL DEGREES.

RESPONSE: THE GPS LOCATIONS OF THE BEGINNING OF THE PROJECT IS N31.735741", W81.316148" AND END OF THE PROJECT IS N31.735471", W81.316148".

7. REQUIREMENT: INITIAL DATE OF THE PLAN AND THE DATES OF ANY REVISIONS MADE TO THE PLAN INCLUDING THE ENTITY WHO REQUESTED THE REVISIONS.

RESPONSE: THE INITIAL DATE AND ANY REVISIONS ARE ON THE BOTTOM RIGHT SIDE OF ALL SHEETS

8. REQUIREMENT: DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY AND EXISTING SITE CONDITIONS.

RESPONSE: THE PROJECT CONSISTS OF THE REMOVING AND REPLACING A CONCRETE BOX CULVERT UNDERNEATH ISLANDS HWY.

9. REQUIREMENT: PROVIDE VICINITY MAP SHOWING SITE'S RELATION TO SURROUNDING AREAS. INCLUDE DESIGNATION OF SPECIFIC PHASE, IF NECESSARY.

RESPONSE: A VICINITY MAP IS SHOWN ON THE TITLE SHEET OF THESE PLANS.

10. REQUIREMENT: IDENTIFY THE PROJECT RECEIVING WATERS AND DESCRIBE ALL SENSITIVE ADJACENT AREAS INCLUDING STREAMS, LAKES, RESIDENTIAL AREAS, WETLANDS, ETC. WHICH MAY BE AFFECTED.

RESPONSE: THE SITE CURRENTLY DRAINS TO DRAINAGE DITCHES LOCATED IN THE RIGHT OF WAY OF ISLANDS HWY, AND DRAIN INTO CARRS NECK CREEK.

11. REQUIREMENT: DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE SITE WAS VISITED PRIOR TO DEVELOPMENT OF THE ES&PC PLAN AS STATED ON PART IV PAGE 21 OF THE PERMIT.

RESPONSE: PLEASE SEE THE DESIGN PROFESSIONAL'S CERTIFICATION SECTION ON THIS SHEET.

12. REQUIREMENT: DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE PERMITTEE'S ES&PC PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BMPs AND SAMPLING TO MEET PERMIT REQUIREMENTS AS STATED ON PART IV PAGE 20 OF THE PERMIT.

RESPONSE: PLEASE SEE THE DESIGN PROFESSIONAL'S 7 DAY VISIT CERTIFICATION ON SECTION ON THIS SHEET.

13. REQUIREMENT: DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE PERMITTEE'S ES&PC PLAN PROVIDES REPRESENTATIVE SAMPLING AS STATED ON PART IV D.6.c(3) PAGE 37 OF THE PERMIT AS APPLICABLE.

RESPONSE: PLEASE SEE THE DESIGN PROFESSIONAL'S 7 DAY VISIT CERTIFICATION ON SECTION ON THIS SHEET.

14. REQUIREMENT: CLEARLY NOTE THE STATEMENT THAT "THE DESIGN PROFESSIONAL, WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION." IN ACCORDANCE WITH PART IV A.5, PAGE 26 OF THE PERMIT.

RESPONSE: PLEASE SEE THE DESIGN PROFESSIONAL'S 7 DAY VISIT CERTIFICATION ON SECTION ON THIS SHEET.

15. REQUIREMENT: CLEARLY NOTE THE STATEMENT THAT "NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS."

RESPONSE: NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITH 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

16. REQUIREMENT: PROVIDE A DESCRIPTION OF ANY BUFFER ENCROACHMENTS AND INDICATE WHETHER A BUFFER VARIANCE IS REQUIRED.

RESPONSE: THIS PROJECT SHOULD NOT ENCROACH ON ANY BUFFERS.

17. REQUIREMENT: CLEARLY NOTE THE STATEMENT THAT "AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL."

RESPONSE: AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

18. REQUIREMENT: CLEARLY NOTE THE STATEMENT THE "WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT."

RESPONSE: WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

19. REQUIREMENT: CLEARLY NOTE THE STATEMENT THAT "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES."

RESPONSE: THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

20. REQUIREMENT: CLEARLY NOTE STATEMENT THAT "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE."

RESPONSE: EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

21. REQUIREMENT: CLEARLY NOTE THE STATEMENT "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

RESPONSE: ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. SEE MULCHING AND VEGETATIVE PLAN REQUIREMENTS ON DETAIL SHEETS.

22. REQUIREMENT: ANY CONSTRUCTION ACTIVITY WHICH DISCHARGES STORM WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT MUST COMPLY WITH PART III, C. OF THE PERMIT. INCLUDE THE COMPLETED APPENDIX 1 LISTING ALL THE BMPs THAT WILL BE USED FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO THE IMPAIRED STREAM SEGMENT.

RESPONSE: NO CONSTRUCTION ACTIVITY WILL DISCHARGE IN STORM WATER INTO AN IMPAIRED STREAM OR 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATER SHED AS, ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT. THE SITE IS NOT LOCATED WITHIN ONE MILE OF AN IMPAIRED STREAM.

23. REQUIREMENT: IF A TMDL IMPLEMENTATION PLAN FOR SEDIMENT HAS BEEN FINALIZED FOR THE IMPAIRED STREAM SEGMENT (IDENTIFIED IN ITEM 22 ABOVE) AT LEAST SIX MONTHS PRIOR TO SUBMITTAL OF NOI, THE ES&PC PLAN MUST ADDRESS ANY SITE SPECIFIC CONDITIONS OR REQUIREMENTS INCLUDED IN THE TMDL IMPLEMENTATION PLAN.

RESPONSE: NO TMDL IMPLEMENTATION PLAN IS NEEDED FOR THIS SITE.

24. REQUIREMENT: BMPs FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

RESPONSE: A CONCRETE WASHOUT AREA HAS BEEN ILLUSTRATED ON EACH EROSION CONTROL SHEET. NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON-SITE.

25. REQUIREMENT: PROVIDE BMPs FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS.

RESPONSE:
• CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
• MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
• SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
• ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
• FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
• FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
• FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
• FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
• THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ON SITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

26. REQUIREMENT: DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED.
RESPONSE:
• DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
a. USED TO PROVIDE A PROTECTED COVER FOR EXPOSED AREAS INCLUDING CUTS, FILLS, DAMS, AND OTHER DENuded AREAS.
b. FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, AT LEAST 70% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION OR EQUIVALENT PERMANENT STABILIZATION MEASURES.
c. PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES, SHRUBS, PERENNIAL VINES; A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE REGION, SUCH THAT WITHIN THE GROWING SEASON A 70% COVERAGE BY PERENNIAL VEGETATION SHALL BE ACHIEVED
d. USE CONVENTIONAL PLANTING METHODS WHEN POSSIBLE.
e. WHEN MIXED PLANTINGS ARE DONE DURING MARGINAL PLANTING PERIODS, COMPANION CROPS SHALL BE USED.
f. IRRIGATION SHOULD BE USED WHEN THE SOIL IS DRY OR WHEN SUMMER PLANTINGS ARE DONE.
g. LOW MAINTENANCE PLANTS, AS WELL AS NATIVES, SHOULD BE USED TO ENSURE LONG-LASTING EROSION CONTROL.
h. MOWING SHOULD NOT BE PERFORMED DURING QUAIL NESTING SEASON (MAY TO SEPTEMBER).
i. WILDLIFE PLANTINGS SHOULD BE INCLUDED IN CRITICAL AREA PLANTINGS.
j. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT.
k. AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS ALLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED.
l. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE. LIME SPREAD BY CONVENTIONAL EQUIPMENT SHALL BE "GROUND LIMESTONE" AND LIME SPREAD BY HYDRAULIC SEEDING EQUIPMENT SHALL BE "FINELY GROUND LIMESTONE".
m. WHEN HYDRAULIC SEEDING EQUIPMENT IS USED, THE INITIAL FERTILIZER SHALL BE MIXED WITH SEED, INOCULANT (IF NEEDED), AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH AND APPLIED IN A SLURRY. IF NEEDED, SHALL BE MIXED WITH THE SEED PRIOR TO BEING PLACED INTO THE HYDRAULIC SEEDER. THE SLURRY MIXTURE WILL BE AGITATED DURING APPLICATION TO KEEP THE INGREDIENTS THOROUGHLY MIXED. THE MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER BEING PLACED IN THE HYDROSEEDER.
n. WHEN CONVENTIONAL PLANTING IS TO BE DONE, LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY IN ONE OF THE FOLLOWING WAYS: 1. APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED WITH THE SOIL DURING SEEDBED PREPARATION. 2. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS. 3. BROADCAST AFTER STEEP SURFACES ARE SCAFFLED, PITTED OR TRENCHED. 4. FERTILIZER PELLET SHALL BE PLACED AT ROOT DEPTH IN THE CLOSING HOLE BESIDE EACH PINE TREE SEEDLING.
o. MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE. WOOD CELLULOSE OR WOOD FIBER MULCH SHALL BE APPLIED UNIFORMLY WITH HYDRAULIC SEEDING EQUIPMENT.
p. MOW SERICEA LESPEDEZA ONLY AFTER FROST TO ENSURE THAT THE SEEDS ARE MATURE. MOW BETWEEN NOVEMBER AND MARCH. BERMUDAGRASS, BAHIA GRASS AND TALL FESCUE MAY BE MOWED AS DESIRED. MAINTAIN AT LEAST 6 INCHES OF TOP GROWTH UNDER ANY USE AND MANAGEMENT. MODERATE USE OF TOP GROWTH IS BENEFICIAL AFTER ESTABLISHMENT. EXCLUDE TRAFFIC UNTIL THE PLANTS ARE WELL ESTABLISHED. BECAUSE OF THE QUAIL NESTING SEASON, MOWING SHOULD NOT TAKE PLACE BETWEEN MAY AND SEPTEMBER.
q. APPLY ONE TON OF AGRICULTURAL LIME EVERY 4 TO 6 YEARS OR AS INDICATED BY SOIL TESTS. SOIL TESTS CAN BE CONDUCTED TO DETERMINE MORE ACCURATE REQUIREMENTS IF DESIRED.

• VEGETATED WATERWAY OR STORMWATER CONVEYANCE
a. A NATURAL OR CONSTRUCTED CHANNEL THAT IS SHAPED OR GRADED TO REQUIRED DIMENSIONS AND ESTABLISHED IN SUITABLE VEGETATION FOR THE STABLE CONVEYANCE OF RUNOFF WITHOUT CAUSING DAMAGE EITHER BY EROSION OR BY FLOODING.
b. THIS STANDARD APPLIES TO ALL SITES WHERE ADDED CHANNEL CAPACITY AND/OR STABILIZATION IS REQUIRED TO CONTROL EROSION RESULTING FROM CONCENTRATED RUNOFF AND WHERE SUCH CONTROL CAN BE ACHIEVED BY THIS PRACTICE ALONE OR IN COMBINATION WITH OTHERS
c. THE MINIMUM CAPACITY SHALL BE THAT REQUIRED TO CONVEY THE PEAK RUNOFF EXPECTED FROM A 25-YEAR, 24-HOUR STORM OR THE STORM SPECIFIED IN THE GSWCC EROSION AND SEDIMENT CONTROL MANUAL.
d. CONSTRUCTION SPECIFICATIONS
d.1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
d.2. THE WATERWAY OR OUTLET SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN. IT WILL BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPED NORMAL FLOW. IF THE CHANNEL MUST HAVE EROSION PROTECTION OTHER THAN VEGETATION, THE LINING SHALL NOT COMPROMISE THE CAPACITY OF THE EMERGENCY SPILLWAY, I.E. THE CHANNEL SHALL BE OVER-EXCAVATED SO THAT THE LINING WILL BE FLUSH WITH THE SLOPE SURFACE.
d.3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED WATERWAY.
d.4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH WATERWAY FUNCTIONING.
d.5. STABILIZATION: APPLICABLE VEGETATIVE STANDARDS SHALL BE FOLLOWED FOR TIME OF SEEDING, SPRIGGING OR SODDING, LINING AND FERTILIZING, AND SITE AND SEEDBED PREPARATION. EROSION CONTROL BLANKETS OR MATTING OR SOD SHALL BE USED TO AID IN THE ESTABLISHMENT OF VEGETATION. INSTALLATION METHODS SHOULD FOLLOW MANUFACTURER RECOMMENDATIONS.
e. MULCHING SHALL BE A REQUIREMENT FOR ALL SEEDED OR SPRIGGED CHANNELS. TEMPORARY PROTECTION DURING ESTABLISHMENT SHOULD BE PROVIDED WHEN CONDITIONS PERMIT THROUGH TEMPORARY DIVERSIONS OR OTHER MEANS TO DISPOSE OF WATER.

27. DESCRIPTION OF PRACTICES TO PROVIDE COVER FOR BUILDING MATERIALS AND BUILDING PRODUCTS ON SITE.

RESPONSE: PLASTIC SHEETING OR TEMPORARY ROOFS TO BE UTILIZED TO COVER BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTE, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS IN ORDER TO MINIMIZE EXPOSURE TO PRECIPITATION AND TO STORMWATER.

28. REQUIREMENT: DESCRIPTION OF THE PRACTICES THAT WILL BE USED TO REDUCE THE POLLUTANTS IN STORM WATER DISCHARGES.

RESPONSE:
PRODUCT SPECIFIC PRACTICES

• PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS, AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS, AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

• POINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

• CONCRETE TRUCK WASHING - A CONCRETE WASHOUT AREA HAS BEEN DETAILED FOR THIS SITE.

• FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR THE EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

• BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES

• PRIOR TO THE LAND DISTURBING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE AREA SITE DEVELOPMENT INSPECTOR.

OTHER PRACTICES
• THE CONTRACTOR SHALL OBSERVE THE PROJECT SEQUENCE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO INSURE THAT LAND STRIPPED OF ITS NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.

• A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.

• PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE AND ALL STREAM BUFFERS SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.

• THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
a. THE CONSTRUCTION EXIT, CONSISTING OF A MINIMUM PAD SIZE OF 20 FEET BY 50 FEET WITH A MINIMUM OF 6" THICK STONE, SHALL BE PLACED AS SHOWN ON THE PLAN. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAD ON A GEOTEXTILE UNDERLINER. THE GEOTEXTILE UNDERLINER SHALL MEET THE REQUIREMENTS OF AASHTO M28-86, SECTION 7.3 SEPARATION REQUIREMENTS.
b. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXITS, ALL PERIMETER EROSION CONTROL AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE INITIAL PHASE EROSION CONTROL PLAN.
c. SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE PLAN. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA. THE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SALT FENCING SHOULD BE REPAIRED IMMEDIATELY.

• AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTION.

• AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT PONDS AND DIVERSION DIKES AS SHOWN ON THE INITIAL PHASE PLAN TO CONTROL EROSION AND STORM WATER RUN OFF.

• NO BURN OR BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE WITHOUT WRITTEN PERMISSION BY THE OWNER AND/OR THE ENGINEER OF RECORD.

• ADDITIONAL SILT BARRIERS MUST BE PLACED AS SHOWN ON THE PLAN AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL TAKE PLACE UNTIL SILT BARRIER INSTALLATION AND SEDIMENT PONDS ARE CONSTRUCTED AS SHOWN ON THE INITIAL PHASE EROSION CONTROL PLAN.

• MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.

• ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.

• SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

• THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

• CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.

• EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON-SITE INSPECTOR OR THE CIVIL ENGINEER.FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.

• THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE PRELIMINARY GRADING PHASE OF CONSTRUCTION:

• INLET SEDIMENT TRAPS WILL BE INSTALLED AROUND ALL NEW INLETS.

• EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.

• STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.

• ALL DRAINAGE SWALES SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.

• MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.

• SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

• INSTALL TEMPORARY SEDIMENT TRAP.

29. REQUIREMENT: DESCRIPTION AND CHART OR TIMELINE OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH DISTURB SOILS FOR THE MAJOR PORTION OF THE SITE (I.E. INITIAL PERIMETER AND SEDIMENT STORAGE BMPs, CLEARING AND GRUBBING ACTIVITIES, EXCAVATION ACTIVITIES, UTILITY ACTIVITIES, TEMPORARY AND FINAL STABILIZATION).

RESPONSE: SEE CHART BELOW.

INFRASTRUCTURE	2024					
	JUN	JUL	AUG	SEP	OCT	NOV
INSTALLATION OF INITIAL BEST MANAGEMENT PRACTICES						
CLEARING & GRUBBING						
BY-PASS CONSTRUCTION						
BUILDING BOX CULVERT						
INSTALL INTERMEDIATE PHASE EROSION BEST MANAGEMENT PRACTICES						
PAVEMENT						
INSTALL FINAL PHASE EROSION BEST MANAGEMENT PRACTICES						
REMOVE TEMPORARY EROSION MEASURES AND TREE PROTECTION FENCING						
MAINTENANCE OF EROSION BMPs						

DESIGN PROFESSIONAL'S CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORMWATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR100002."

I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

Trent R Long 000002134
GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

THE DESIGN PROFESSIONAL WHO PREPARED THE EX&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION

DATE OF INSPECTION

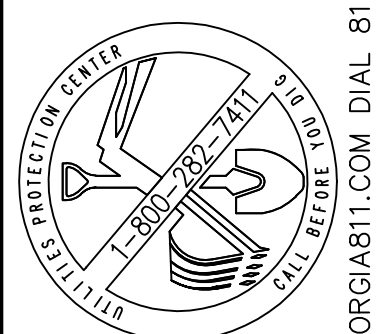
I CERTIFY THE SITE WAS IN COMPLIANCE WITH ES&PC PLAN ON THE DATE OF INSPECTION.

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN:

4.
5.
6.
7.
8.
9.
10

THESE DEFICIENCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.



THIS DRAWING IS THE PROPERTY OF T. R. LONG ENGINEERING, P.C. AND MAY NOT BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF T. R. LONG ENGINEERING, P.C. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS CONTAINED WITHIN THIS SET OF DOCUMENTS AND SHALL REPORT ANY DISCREPANCIES TO T. R. LONG ENGINEERING, P.C. FOR IMMEDIATE RESOLUTION.

HINESVILLE:
114 North Commerce Street
Hines

G:\ACTIVE PROJECTS\2011-05-H - ISLANDS HWY BOX CULVERT\900-DRAWINGS\DWG\CONST\2011-05-EROS.DWG

DS1
DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DEFINITION
APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS, PRODUCED ON THE SITE IF POSSIBLE, TO THE SOIL SURFACE.

PURPOSE
1. TO REDUCE RUNOFF EROSION
2. TO CONSERVE MOISTURE
3. TO PREVENT SURFACE COMPACTION OR CRUSTING
4. TO CONTROL UNDESIRABLE VEGETATION
5. TO INCREASE BIOLOGICAL ACTIVITY IN THE SOIL.

REQUIREMENT FOR REGULATORY COMPLIANCE
MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATIVE TECHNIQUES SHALL BE EMPLOYED.

SPECIFICATIONS
MULCHING WITHOUT SEEDING
THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT CAN BE STABILIZED WITH A MULCH COVER.

SITE PREPARATION
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

MULCHING MATERIALS
SELECT ONE OF THE FOLLOWING MATERIALS AND APPLY AT THE DEPTH INDICATED:
1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE. ONE ADVANTAGE OF THIS MATERIAL IS EASY APPLICATION.
2. WOOD WASTE (CHIPS, SAMOUST OR BARK) SHALL BE APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE OF DEVELOPMENT SHOULD REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH. THIS METHOD OF MULCHING CAN GREATLY REDUCE EROSION CONTROL COSTS.
3. POLYETHYLENE FILM SHALL BE SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION. THIS MATERIAL CAN BE SALVAGED AND REUSED.

APPLYING MULCH
WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.
1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
3. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH
1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK."DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MULCH OF 1 IN ANCHORED. THE DISK SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED. TACKIFIERS, BINDERS AND HYDRAULIC MULCH WITH TACKIFIERS SPECIFICALLY DESIGNED FOR TACKLING STRAW CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLEASE REFER TO SPECIFICATION TACKIFIERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
3. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

APPLICATION RATE FOR EACH TYPE OF SOIL ENCOUNTERED ON THE SITE.

MULCHING: MULCHING IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCHING APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:
1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.
2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT A RATE OF 500 LBS PER ACRE. DRY STRAW R DRY HAY SHALL BE APPLIED AFTER HYDRAULIC SEEDING.
3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OF WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES GREATER THAN 3/4:1 OR STEEPER.
4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.
5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3" FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITIES MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCHING IS NOT REQUIRED.

MULCHING
NOT TO SCALE [Ds1]

DS2
DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

DEFINITION
THE ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDED AREAS.

PUPROSE
TO REDUCE RUNOFF AND SEDIMENT DAMAGE OF DOWN STRAM RESOURCES
TO PROTECT THE SOIL SURFACE FROM EROSION
TO IMPROVE WILDLIFE HABITAT
TO IMPROVE AESTHETICS
TO IMPROVE TILTH, INFILTRATION AND AERATION AS WELL AS ORGANIC MATTER FOR PERMANENT PLANTINGS

REQUIREMENT FOR REGULATORY COMPLIANCE
MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTUR- BANCE. TEMPORARY GRASSING, INSTEAD OF MULCH, CAN BE APPLIED TO ROUGH GRADED AREAS THAT WILL BE EXPOSED FOR LESS THAN SIX MONTHS. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, PERMANENT PERENNIAL VEGETATION SHALL BE USED. IF OPTIMUM PLANTING CONDITIONS FOR TEMPORARY GRASSING IS LACKING, MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE.

CONDITIONS
TEMPORARY GRASSING, INSTEAD OF MULCH, CAN BE APPLIED TO ROUGH GRADED AREAS THAT WILL BE EXPOSED FOR LESS THAN SIX MONTHS. TEMPORARY VEGETATIVE MEASURES SHOULD BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL AND EFFECTIVE STABILIZATION. MOST TYPES OF TEMPORARY VEGETATION ARE IDEAL TO USE AS COMPANION CROPS UNTIL THE PERMANENT VEGETATION IS ESTABLISHED.

SPECIFICATIONS
GRADING AND SHAPING
EXCESSIVE WATER RUN-OFF SHALL BE REDUCED BY PROPERLY DESIGNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS SLOPED DITCHES, DIKES, DIVERSIONS, SEDIMENT BARRIERS AND OTHERS. NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED.

SEEDBED PREPARATION
WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. WHEN USING CONVENTIONAL OR HANDSEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL.
WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

LIME AND FERTILIZER
AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION. SOILS CAN BE TESTED TO DETERMINE IF FERTILIZER IS NEEDED, ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, LIME APPLICATION SHALL BE REQUIRED ONLY ON SOILS WITH VERY LOW FERTILITY. 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OR THE EQUIVALENT PER ACRE (12-16 LBS./1,000 SQ. FT.) SHALL BE APPLIED. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL.

SEEDING
SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR. SEED SHALL BE APPLIED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). DRILL OR CULTIPACKER SEEDERS SHOULD NORMALLY PLACE SEED ONE-QUARTER TO ONE-HALF INCH DEEP. APPROPRIATE DEPTH OF PLANTING IS TEN TIMES THE SEED DIAMETER. SOIL SHOULD BE "RAKED"LIGHTLY TO COVER SEED WITH SOIL IF SEEDBED BY HAND.

MULCHING
TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT TERM PROTECTION. REFER TO DS1-DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

IRRIGATION
DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION. THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL INSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

GRASSING TEMPORARY
NOT TO SCALE [Ds2]

SEEDING RATES FOR TEMPORARY SEEDING.

SPECIES	RATE PER 1,000 SQ.FT.	RATE PER ACRE*	PLANTING DATES**
RYE	3.9 LBS.	3 BU	9/1 - 3/1
RYE GRASS	0.9 LBS.	40 LBS.	8/15 - 4/1
ANNUAL LESPEDEZA	0.9 LBS.	40 LBS.	1/15 -9/15
WEeping LOVEGRASS	0.1 LBS.	4 LBS.	2/15 - 6/15
SUNDANGRASS	1.4 LBS.	60 LBS.	3/1 - 8/1
BROWN MILLET	0.9 LBS.	40 LBS.	4/1 - 7/15
WHEAT	4.1 LBS.	3 BU	9/15 - 2/1

* UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES.
** SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND CONDITIONS.

DU

DUST CONTROL ON DISTURBED AREAS

DEFINITION
CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

CONDITIONS
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHOD AND MATERIALS
A. TEMPORARY METHODS

MULCHES. SEE STANDARD DS1-DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO STANDARD TB-TACKIFIERS AND BINDERS. RESINS SUCH AS CURASOL OR TERRATAK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

VEGETATIVE COVER. SEE STANDARD DS2- DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

SPRAY-ON ADHESIVES. THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS) KEEP TRAFFIC OFF THESE AREAS. REFER TO STANDARD TB-TACKIFIERS AND BINDERS.

TILLAGE. THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON INWARD SIDE OF SITE; CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

IRRIGATION. THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.

BARRIERS. SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

CALCIUM CHLORIDE. APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

B. PERMANENT METHODS

PERMANENT VEGETATION. SEE STANDARD DS3-DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

TOPSOILING. THIS ENTAILS COVERING THE SURFACE WITH LESS EROSIVE SOIL MATERIAL. SEE STANDARD TP-TOPSOILING.

STONE. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE STANDARD CR-CONSTRUCTION ROAD STABILIZATION.

DUST CONTROL
NOT TO SCALE [Du]

TABLE 6-5.1 FERTILIZER REQUIREMENTS

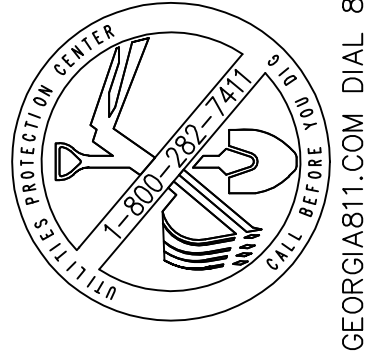
TYPE OF SPECIES	YEAR	ANALYSIS FOR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 10-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50-100 LBS./AC. 1/2-30
2. COOL SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	0-50 LBS./AC. 1/-
3. GROUND COVERS	FIRST SECOND MAINTENANCE	10-10-10 10-10-10 10-10-10	1300 LBS./AC. 1300 LBS./AC. 1100 LBS./AC.	-/-
4. PINE SEEDLINGS	FIRST	20-10-6	ONE 21-GRAM PELLET PER SEEDLING PLACED IN THE CLOSING HOLE	-/-
5. SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10 0-10-10	700 LBS./AC. 700 LBS./AC.4/	-/-
6. TEMPORARY COVER CROPS SEEDDED ALONE	FIRST	10/10/2010	500 LBS./AC.	30 LB./ACRE/ 5/
7. WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50-100 LBS./AC. 2/6/ 30 LBS./AC.
8. WARM SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50 LBS./AC./6/

1/ APPLY IN SPRING FOLLOWING SEEDING.
2/ APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
3/ APPLY IN 3 SPLIT APPLICATIONS.
4/ APPLY WHEN PLANTS ARE PRUNED.
5/ APPLY TO GRASS SPECIES ONLY.
6/ APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

FOR BEST RESULTS TAKE AT LEAST ONE SAMPLE OF SOIL TO THE COUNTY EXTENSION AGENT FOR ANALYSIS TO DETERMINE THE BEST FERTILIZER

1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.
2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRYSTRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER.
4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.
5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED

AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION. SOILS CAN BE TESTED TO DETERMINE IF FERTILIZER IS NEEDED, ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED. FOR SOILS WITH VERY LOW FERTILITY, 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OR THE EQUIVALENT PER ACRE (12-16 LBS./1,000 SQ. FT.) SHALL BE APPLIED. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL.



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ISLANDS HWY BOX CULVERT
REPLACEMENT FOR
LIBERTY COUNTY BOARD OF
COMMISSIONERS
TAX PARCEL NUMBER: CITY, COUNTY, STATE:

SHEET NAME:

EROSION CONTROL
DETAILS

REVISIONS:

1. 6/16/2023 RID SET
2. 3/29/2024 REMID SET
3. 8/26/2024 PLATINUM
4.
5.
6.
7.
8.
9.
10

INITIAL DATE: 3/22/23
DRAWN BY: TRL
CHECKED BY: TRL
PROJECT #: 2011-05

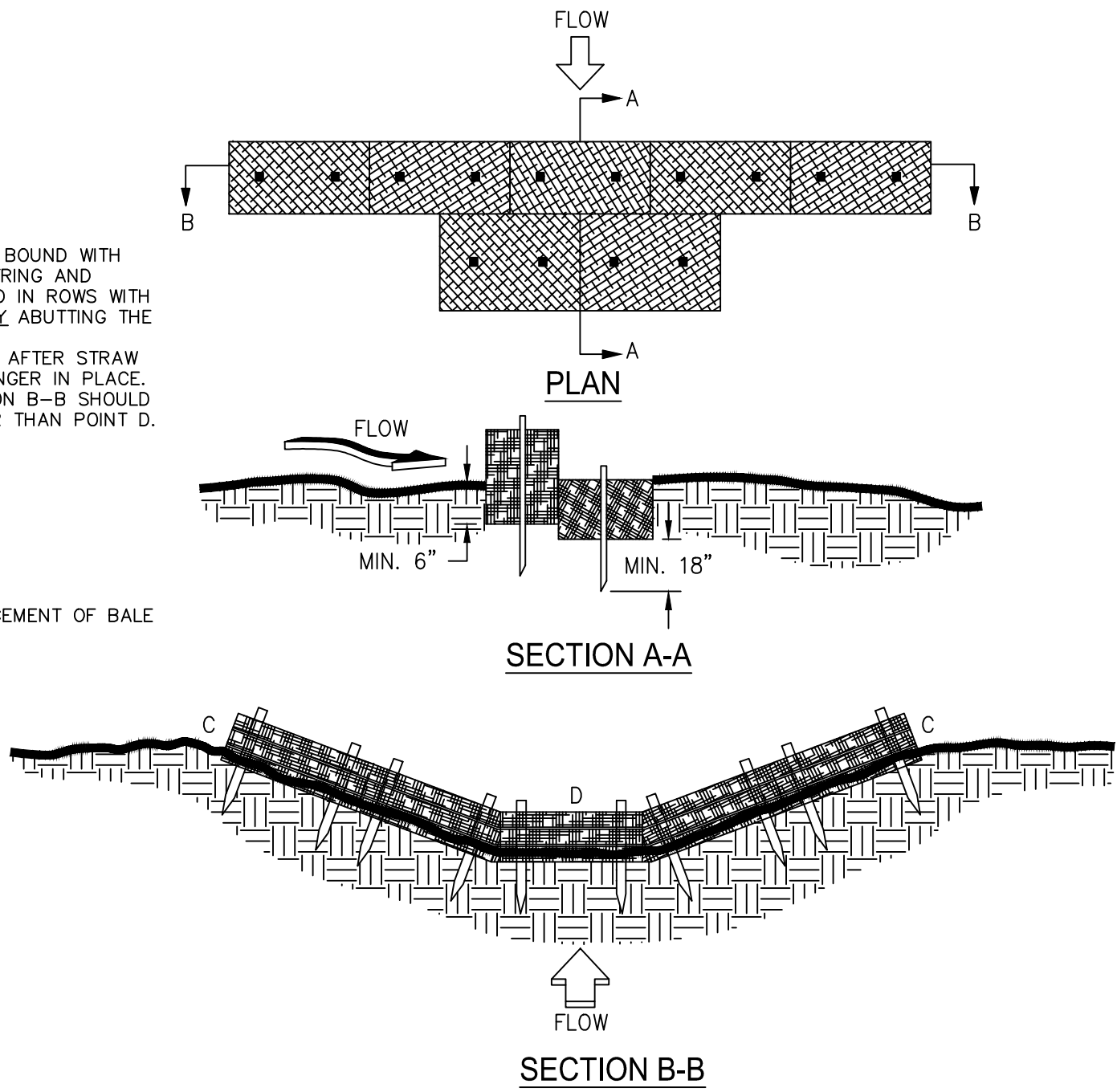
SHEET NUMBER:

C6.6

G:\ACTIVE PROJECTS\2011-05_H - ISLANDS HWY WALL REPLACEMENT BOX CULVERT\900-DRAWINGS\DWG\CONST\2011-05_EROS.DWG

- NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ADJUTING THE ADJACENT BALES.
 2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
 3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

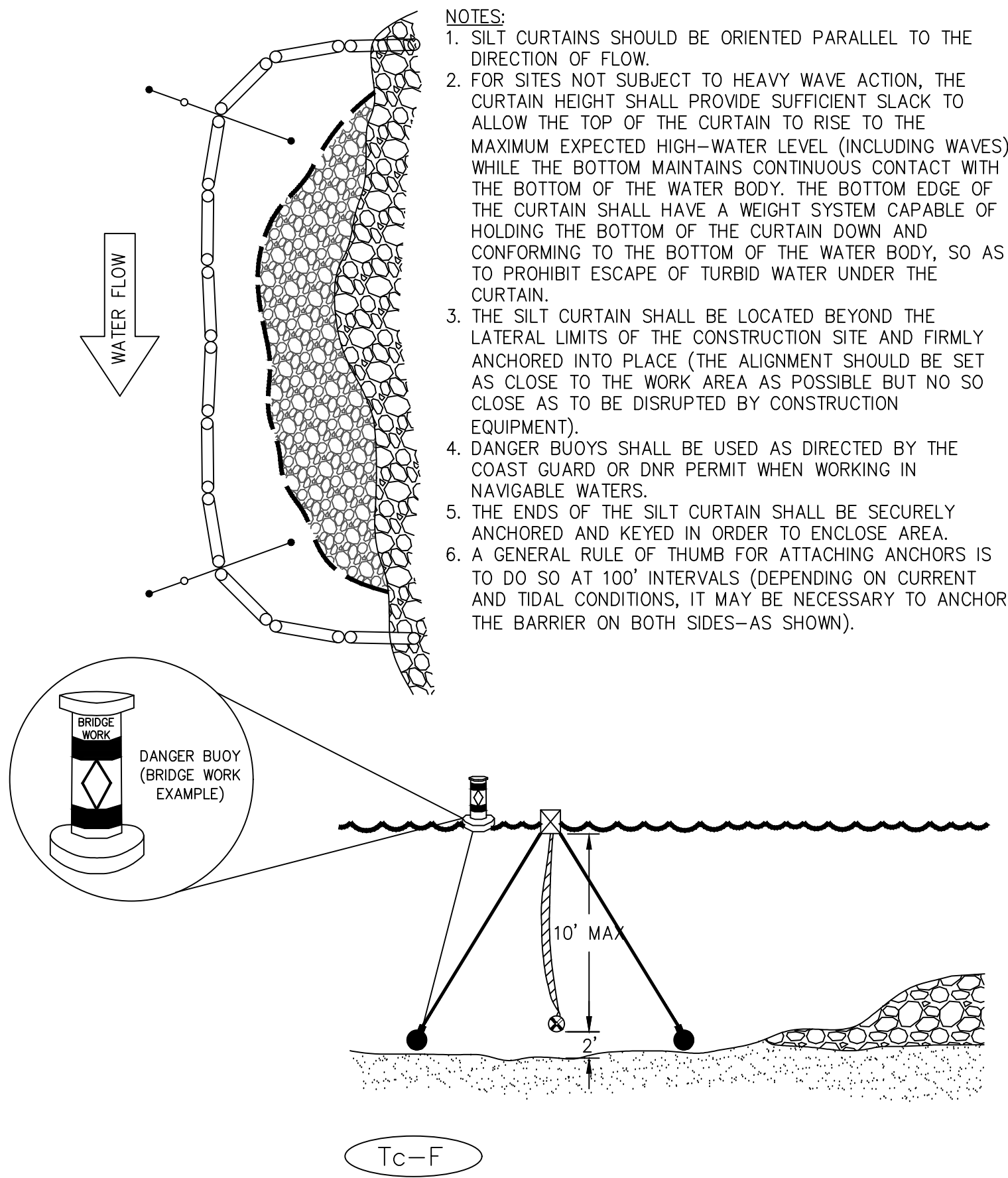
SEE DETAIL FOR PLACEMENT OF BALE



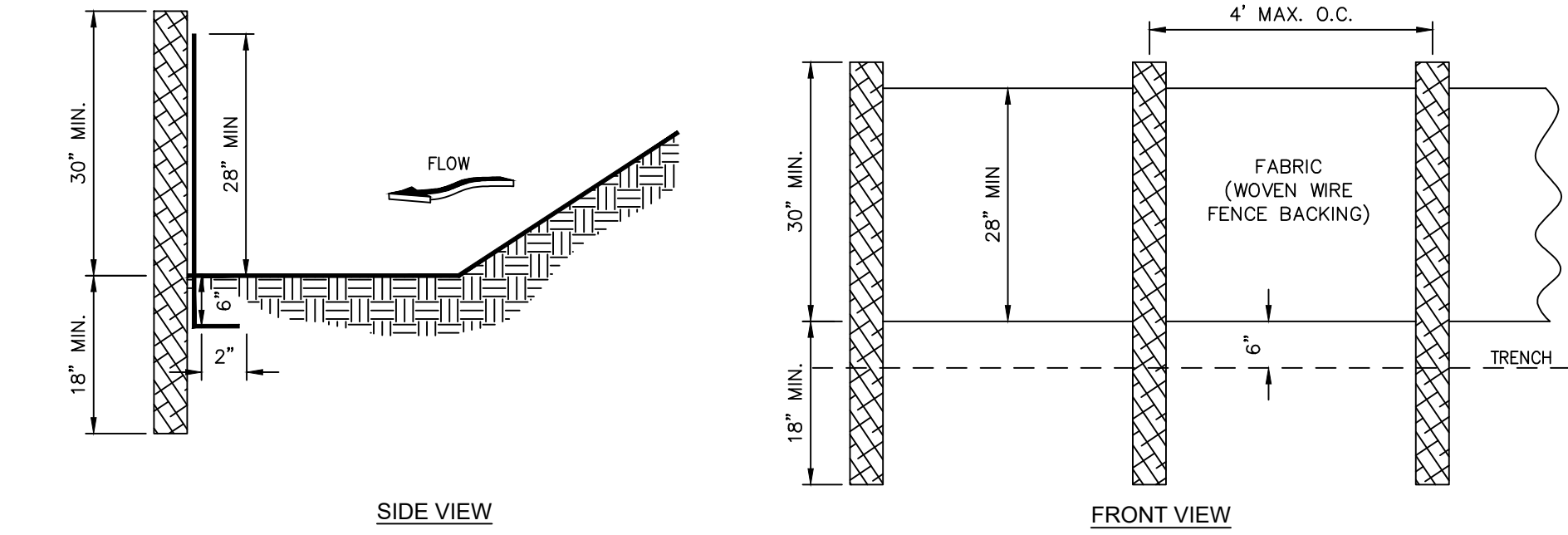
HAY BALE CHECK DAM (Cd-Hb)
NOT TO SCALE

TURBIDITY CURTAIN SYSTEM

ANCHOR SYSTEM AND LAYOUT DETAILS

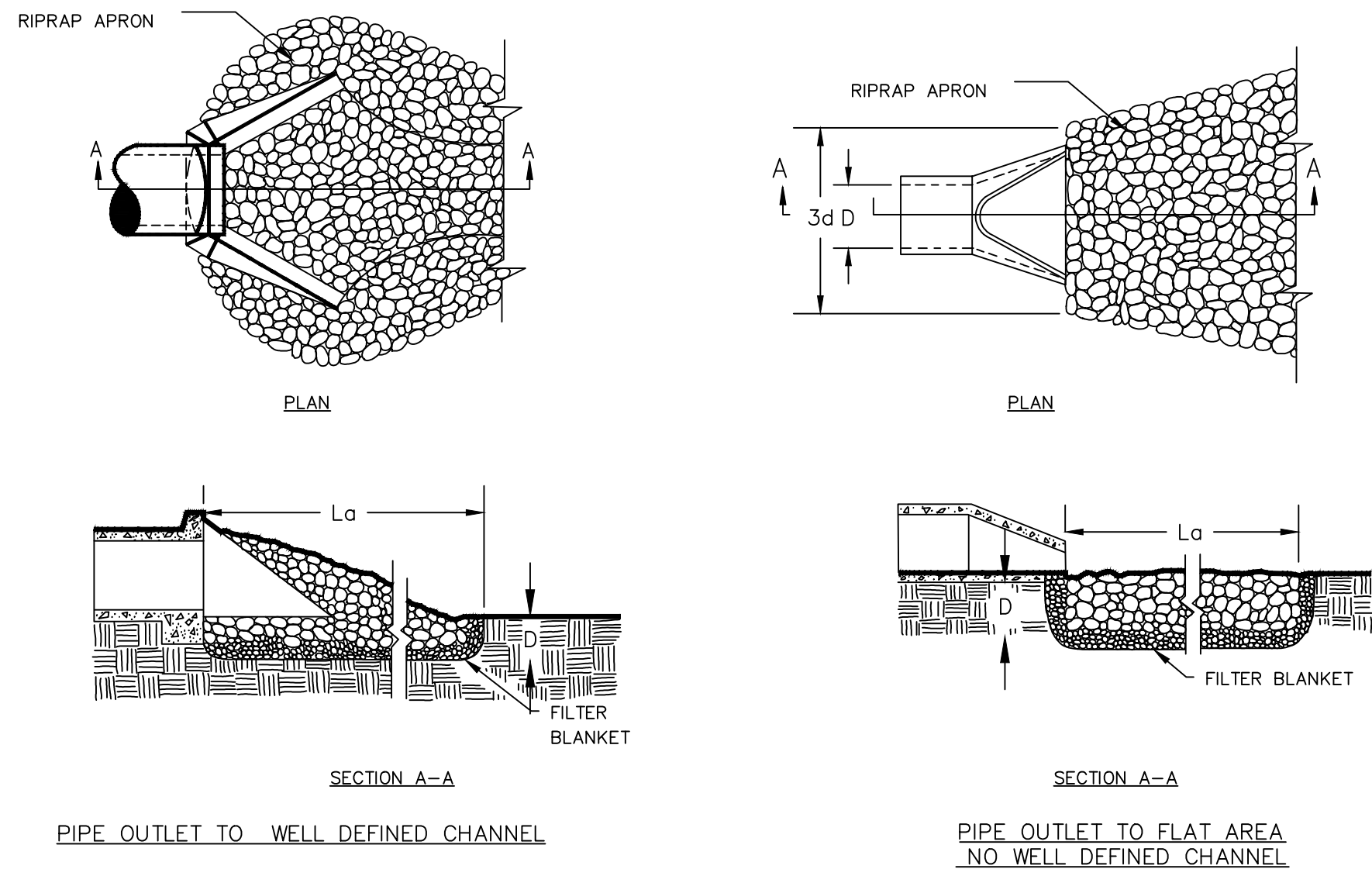


- NOTES:
1. SILT CURTAINS SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF FLOW.
 2. FOR SITES NOT SUBJECT TO HEAVY WAVE ACTION, THE CURTAIN HEIGHT SHALL PROVIDE SUFFICIENT SLACK TO ALLOW THE TOP OF THE CURTAIN TO RISE TO THE MAXIMUM EXPECTED HIGH-WATER LEVEL (INCLUDING WAVES) WHILE THE BOTTOM MAINTAINS CONTINUOUS CONTACT WITH THE BOTTOM OF THE WATER BODY. THE BOTTOM EDGE OF THE CURTAIN SHALL HAVE A WEIGHT SYSTEM CAPABLE OF HOLDING THE BOTTOM OF THE CURTAIN DOWN AND CONFORMING TO THE BOTTOM OF THE WATER BODY, SO AS TO PROHIBIT ESCAPE OF TURBID WATER UNDER THE CURTAIN.
 3. THE SILT CURTAIN SHALL BE LOCATED BEYOND THE LATERAL LIMITS OF THE CONSTRUCTION SITE AND FIRMLY ANCHORED INTO PLACE (THE ALIGNMENT SHOULD BE SET AS CLOSE TO THE WORK AREA AS POSSIBLE BUT NO SO CLOSE AS TO BE DISRUPTED BY CONSTRUCTION EQUIPMENT).
 4. DANGER BUOYS SHALL BE USED AS DIRECTED BY THE COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERS.
 5. THE ENDS OF THE SILT CURTAIN SHALL BE SECURELY ANCHORED AND KEYED IN ORDER TO ENCLOSE AREA.
 6. A GENERAL RULE OF THUMB FOR ATTACHING ANCHORS IS TO DO SO AT 100' INTERVALS (DEPENDING ON CURRENT AND TIDAL CONDITIONS, IT MAY BE NECESSARY TO ANCHOR THE BARRIER ON BOTH SIDES-AS SHOWN).



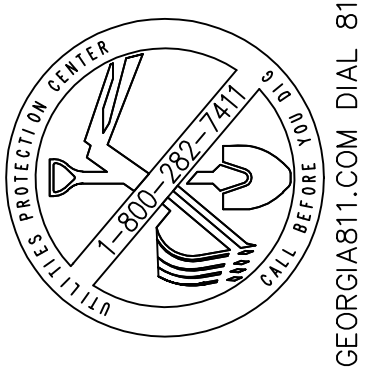
- NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
 2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

SILT FENCE - TYPE S (Sd1-S)
Sensitive - Type C
NOT TO SCALE



- NOTES:
1. L_o IS THE LENGTH OF THE REPRAP APRON.
 2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
 3. IN A WELL-DEFINED CHANNEL, EXTEND TO APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAIL WATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
 4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION

RIPRAP OUTLET PROTECTION (St)
NOT TO SCALE



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