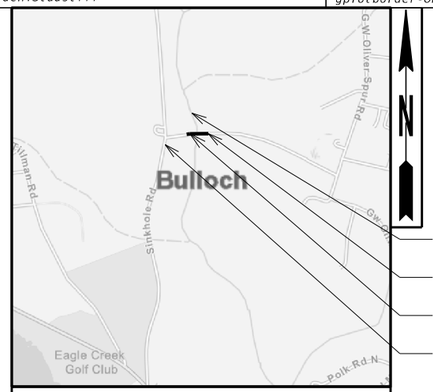
BULLOCH COUNTY
BOARD OF COMMISSIONERS

PLAN AND PROFILE OF PROPOSED
G.W. OLIVER ROAD
BRIDGE DESIGN

FEDERAL ROUTE No.: N/A
STATE ROUTE No.: N/A
P.I. No.: N/A

BULLOCH COUNTY PROJECT NUMBER
FY26-CP-E01



LOCATION SKETCH

DESIGN DATA:
SPEED DESIGN: 45 MPH - G.W. OLIVER ROAD

FUNCTIONAL CLASS:
RURAL MAJOR COLLECTOR (G.W. OLIVER ROAD)

THIS PROJECT IS 100% IN BULLOCH COUNTY AND IS 100% IN CONG. DIST. NO. 012.

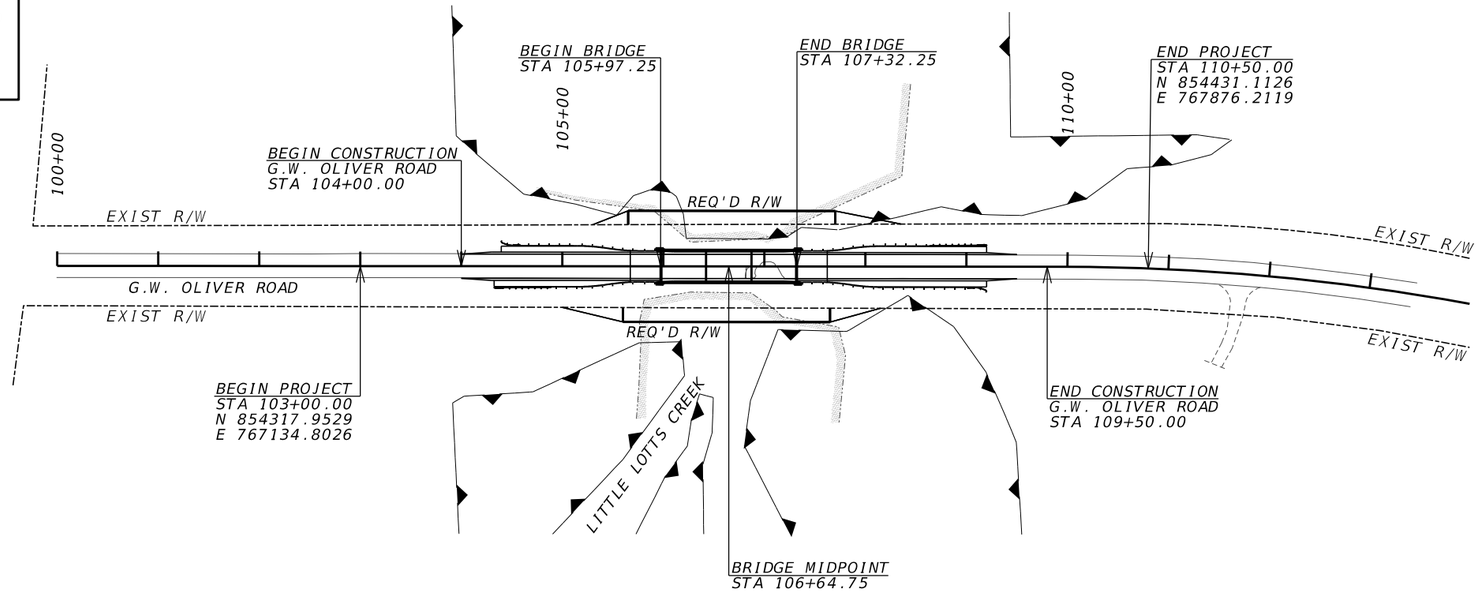
PROJECT DESIGNATION: EXEMPT

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983))/94 EAST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

PROJECT CONTACTS

OWNER:	BULLOCH COUNTY BOARD OF COMISSIONERS 115 NORTH MAIN STREET STATESBORO, GEORGIA 30458 PHONE: (912) 531-5708 CONTACT: RON NELSON
ENGINEER:	KIMLEY-HORN & ASSOCIATES 33 BULL STREET, SUITE 505 SAVANNAH, GA 30401 PHONE: (912) 328-4445 CONTACT: RHODES HUNT, P.E.

PROJECT MIDPOINT
STA 106+75.00
N 854371.0538
E 767480.7510



NOTE :
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO " STATE HIGHWAY DEPARTMENT OF GEORGIA ", " STATE HIGHWAY DEPARTMENT ", " GEORGIA STATE HIGHWAY DEPARTMENT", " HIGHWAY DEPARTMENT ", OR " DEPARTMENT " WHEN THE CONTEXT THERE OF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN BULLOCH COUNTY BOARD OF COMMISSIONERS.

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE 2026 CONSTRUCTION STANDARDS AND DETAILS BOOK AND ATTACHED APPLICABLE REVISIONS. THE 2026 CONSTRUCTION STANDARDS AND DETAILS BOOK IS AVAILABLE AT:
http://mydocs.dot.ga.gov//info/gdotpubs/ConstructionStandardsAndDetails/Forms/AllItems.aspx
ANY REVISIONS CONTAINED WITHIN THIS PLAN SET SUPERSEDE THE 2026 CONSTRUCTION STANDARDS AND DETAILS BOOK WHICH THEY REVISE OR IN WHICH THERE IS A CONFLICT.

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND ARE NOT BINDING IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE GEORGIA STANDARD SPECIFICATIONS.

LENGTH OF PROJECT	COUNTY No.031
	MILES
NET LENGTH OF ROADWAY	0.116
NET LENGTH OF BRIDGES	0.026
NET LENGTH OF PROJECT	0.142
NET LENGTH OF EXCEPTIONS	N/A
GROSS LENGTH OF PROJECT	0.142

SCALE IN FEET
0 75 150 300

BULLOCH COUNTY
CONSTITUTION WE THE PEOPLE JUSTICE LIBERTY 1796
EDUCATION AGRICULTURE RECREATION

PLANS PREPARED BY:

Kimley»Horn
Engineering, Planning, and Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

UNDER THE SUPERVISION OF:

RHODES HUNT,P.E.

W.RON NELSON
COUNTY ENGINEER
BULLOCH COUNTY BOARD OF COMMISSIONERS

PLANS COMPLETED: 04/02/2026	
REVISIONS	

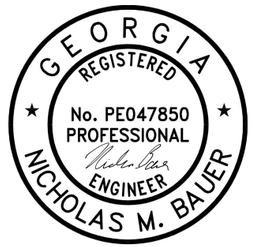
DRAWING No.
01-0001

THE DRAWINGS AS LISTED BELOW
HAVE BEEN SIGNED AND SEALED BY

RHODES S. HUNT
PE No 046667

KIMLEY-HORN AND ASSOCIATES, INC.
33 BULL STREET, SUITE 505
SAVANNAH, GEORGIA 31401
CERTIFICATE OF AUTHORIZATION #:PEF00037
CERTIFICATE OF AUTHORIZATION EXPIRATION DATE:06/30/2026

2026.04.02



THE DRAWINGS AS LISTED BELOW
HAVE BEEN SIGNED AND SEALED BY

NICHOLAS M. BAUER
PE No 047850

KIMLEY-HORN AND ASSOCIATES, INC.
817 WEST PEACHTREE STREET NW, SUITE 601
ATLANTA, GEORGIA 30308
CERTIFICATE OF AUTHORIZATION #:PEF00037
CERTIFICATE OF AUTHORIZATION EXPIRATION DATE:06/30/2026

2026.04.02

DRAWING No.	DRAWING DESCRIPTION
01-0001	COVER DRAWING
01-0002	SIGNATURE DRAWING
02-0001	INDEX DRAWING
04-0001 - 04-0003	GENERAL NOTES
05-0001	TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
11-0001	CONSTRUCTION LAYOUT
13-0001	CONSTRUCTION PLAN
15-0001	MAINLINE ROADWAY PROFILE
23-0001 - 23-0004	EARTHWORK CROSS SECTIONS
24-0000 - 24-0001	UTILITY PLANS
50-0001	EROSION CONTROL COVER SHEET
51-0001 - 51-0004	EROSION, SEDIMENTATION AND POLLUTION CONTROL GENERAL NOTES DRAWING
53-0001	ESPCP DRAINAGE AREA MAP
54-0001 - 54-0003	CONSTRUCTION BMP LOCATION DETAILS
55-0001	EROSION CONTROL WATERSHED MAP AND SITE MONITORING LOCATION

DRAWING No.	DRAWING DESCRIPTION
01-0002	SIGNATURE DRAWING
35-0001 - 35-0011	BRIDGE PLANS

NOTE: DRAWINGS IN SECTIONS 52 AND 56
ARE GDOT STANDARDS AND DETAILS AND ARE NOT
COVERED BY THIS SIGNATURE AND SEAL. DRAWINGS
IN SECTION 38 CONTAIN GDOT SPECIAL DESIGN DETAILS
AND ARE NOT COVERED BY THIS SIGNATURE AND SEAL
UNLESS OTHERWISE LISTED IN THE ABOVE DRAWING LIST.

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY
1796
EDUCATION AGRICULTURE RECREATION

REVISION DATES

SIGNATURE DRAWING

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		01-0002
VERIFIED:		DATE:		

DRAWING NO.	DESCRIPTION
1-0001	COVER DRAWING
1-0002	SIGNATURE DRAWING
2-0001	INDEX
4-0001	GENERAL NOTES
5-0001 TO 5-0011	TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
11-0001	CONSTRUCTION LAYOUT DRAWING
13-0001	CONSTRUCTION PLANS
15-0001	MAINLINE ROADWAY PROFILES
23-0001 TO 23-0004	CROSS SECTIONS
24-0000 TO 24-0001	UTILITY PLANS
35-0001 TO 35-0011	BRIDGE PLANS
38-0001 TO 38-0002	SPECIAL CONSTRUCTION DETAILS
50-0001	ESPCP COVER
51-0001 TO 51-0004	ESPCP GENERAL NOTES
52-0001	CONST. DETAIL (EC-L1) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 1 OF 7) (03-17)
52-0002	CONST. DETAIL (EC-L2) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 2 OF 7) (11-18)
52-0003	CONST. DETAIL (EC-L3) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 3 OF 7) (03-17)
52-0004	CONST. DETAIL (EC-L4) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 4 OF 7) (03-17)
52-0005	CONST. DETAIL (EC-L5) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 5 OF 7) (03-17)
52-0006	CONST. DETAIL (EC-L6) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 6 OF 7) (11-18)
52-0007	CONST. DETAIL (EC-L7) - EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 7 OF 7) (03-17)
53-0001	ESPCP DRAINAGE AREA MAP
54-0001 TO 54-0003	BMP LOCATION DETAILS
55-0001	WATERSHED MAP SITE MONITORING PLAN
	EROSION CONTROL DETAILS
56-0001	D-24A: TEMPORARY SILT FENCE (SHEET 1 OF 6)
56-0002	D-24B: TEMPORARY SILT FENCE BERM DITCH, INSTALLATION, BRUSH BARRIER (SHEET 2 OF 4)
56-0003	D-24C: TEMPORARY SILT FENCE J-HOOKS, INLET SEDIMENT TRAPS (SHEET 3 OF 4)
56-0004	D-41: CONSTRUCTION EXIT
56-0005	D-55A: RIPRAP OUTLET PROTECTION (SHEET 1 OF 2)
56-0006	D-55B: RIPRAP OUTLET PROTECTION (SHEET 2 OF 2)
	THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE 2026 CONSTRUCTION STANDARDS AND DETAILS
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DRAWING NO.	DESCRIPTION

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY
EST. 1796
EDUCATION AGRICULTURE RECREATION

REVISION DATES

INDEX

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		02-0001
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GPLN-CE
11/05/2020

PROJECT NOTES

1. THIS PROJECT DOES NOT REQUIRE AN NOI.
2. ALL BORROW AND WASTE SITES FOR THIS PROJECT SHALL BE ENVIRONMENTALLY APPROVED PRIOR TO CONSTRUCTION ACTIVITIES OCCURRING IN THEM. ALL COMMON FILL OR EXCESS MATERIAL DISPOSED OUTSIDE THE PROJECT RIGHT OF WAY SHALL BE PLACED IN EITHER A PERMITTED SOLID WASTE FACILITY, A PERMITTED INERT WASTE LANDFILL, OR IN AN ENGINEERED FILL. SEE SECTION 201 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION ("GDOT") STANDARD SPECIFICATIONS AND SUPPLEMENTS THERETO FOR ADDITIONAL INFORMATION.
3. THE CONTRACTOR SHALL ENSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE BUT NOT BE LIMITED TO, REPLACEMENT TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED OR REGRADING AS REQUIRED BY THE ENGINEER EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS IN THE PLANS AND HAVING SPECIFIC PAY ITEMS IN THE DETAILED ESTIMATE. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
4. ALL COSTS ASSOCIATED WITH THE DEMOLITION, REMOVAL, AND DISPOSAL OF THE EXISTING TWO 84-INCH REINFORCED CONCRETE PIPES AND FIVE 84-INCH BY 60-INCH ELLIPTICAL REINFORCED CONCRETE PIPES SHALL BE PAID UNDER THE BRIDGE REMOVAL PAY ITEM. THE CONTRACTOR SHALL PREPARE AND SUBMIT A DEMOLITION PLAN TO THE ENGINEER FOR ACCEPTANCE PRIOR TO THE START OF CONSTRUCTION.
5. THE CONTRACTOR SHALL MILL AND INLAY ASPHALT PAVEMENT AS REQUIRED TO ENSURE A SMOOTH TRANSITION FROM EXISTING ASPHALT PAVEMENT TO NEW ASPHALT PAVEMENT AT THE PROJECT TIE-IN LOCATIONS. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.

GEORGIA811 Contact 811 before you dig.

UTILITY OWNER	TYPE	CONTACT
GEORGIA POWER	ELECTRIC (DISTRIBUTION)	TIM NIPPER +1 (478) 451-7044 TANIPPER@SOUTHERNCO.COM

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2021 GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND 2024 SUPPLEMENTAL SPECIFICATIONS.
2. ALL KNOWN UTILITY FACILITIES ARE SHOWN SCHEMATICALLY ON ROADWAY PLANS, AND ARE NOT NECESSARILY ACCURATE IN LOCATION AS TO PLAN OR ELEVATION. UTILITY FACILITIES SUCH AS SERVICE LINES OR UNKNOWN FACILITIES WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO SHOW KNOWN UTILITY FACILITIES EXCEPT AS NOTED BELOW. "EXISTING UTILITY FACILITIES" MEANS ANY UTILITY THAT EXISTS ON THE ROADWAY PROJECT IN ITS ORIGINAL, RELOCATED OR NEWLY INSTALLED POSITION. ALL UTILITY FACILITIES, WHICH ARE IN CONFLICT WITH CONSTRUCTION AND ARE NOT COVERED AS SPECIFIC ITEMS IN THE DETAILED ESTIMATE ARE TO BE REMOVED OR RELOCATED TO CLEAR CONSTRUCTION IN ADVANCE OF WORK.
3. THE CONTRACTOR SHALL BE REQUIRED TO USE THE ONE-CALL CENTER TELEPHONE NUMBER 1-800-282-7411, FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES. THE CONTRACTOR'S ATTENTION IS CALLED TO SUB-SECTION 105.06 "COOPERATION WITH UTILITIES"
4. THE CONTRACTOR SHALL STRICTLY ADHERE TO DUST CONTROL REGULATIONS. ALL AREAS SUBJECTED TO DUST FORMATION MUST BE PERIODICALLY WATERED, SUFFICIENT TO RETARD DUST. ALL COSTS FOR DUST CONTROL SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.
5. INGRESS AND EGRESS SHALL BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES. REFER TO SUB-SECTION 107.07 OF THE STANDARD SPECIFICATIONS.CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNERS DURING CONSTRUCTION.
6. RIGHT-OF-WAY MARKERS IN RESIDENTIAL LAWN AND DEVELOPED COMMERCIAL AREAS SHALL BE PLACED FLUSH WITH FINISHED SURFACE.
7. A JOINT SHALL BE SAWED ON A LINE ESTABLISHED BY THE ENGINEER TO ENSURE PAVEMENT REMOVAL TO A NEAT LINE FOR ALL LOCATIONS WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO EXISTING PAVEMENT WITH A VERTICAL JOINT OR WHERE CURBING IS TO BE PLACED ACROSS A PAVED AREA. COST SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT. SAW CUTTING COSTS SHALL ALSO BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.
8. WHERE EXISTING PAVEMENT MARKINGS AND LINES ARE IN CONFLICT WITH THE TRAFFIC PATTERN BEING USED ON CONSTRUCTION, THE CONTRACTOR SHALL REMOVE OR OVERLAY LINES TO THE SATISFACTION OF THE ENGINEER SUCH THAT THE LINES DO NOT CONFUSE THE TRAVELING PUBLIC. ALL REMAINING LINES OR MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) CURRENT EDITION OR AS DIRECTED BY THE ENGINEER. ALL GRINDING AND TEMPORARY STRIPING COSTS SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.
9. EXISTING PAVED SHOULDERS SHALL BE REMOVED UNLESS NOTED ON THE PLANS AND REMOVAL SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT. SAWED LONGITUDINAL JOINTS ASSOCIATED WITH ASPHALT SHOULDER REMOVAL, AS WELL AS ALL OTHER EXISTING PAVEMENT REMOVAL AND PREPARATION SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.
10. THE CONTRACTOR SHALL PROTECT ALL POST-MOUNTED STREET NAME SIGNS WITHIN THE PROJECT LIMITS DURING CONSTRUCTION. IF A STREET NAME SIGN MUST BE MOVED DURING CONSTRUCTION, IT MUST BE RESET AT THE END OF EACH WORKDAY.ALL COUNTY AND MUTCD SIGNS MUST BE REPLACED AND SET AT THE FINAL LOCATION AT THE COMPLETION OF CONSTRUCTION TO ENSURE CURRENT RETROREFLECTIVITY STANDARDS ARE MET. ALL LABOR AND MATERIALS REQUIRED TO SATISFY THIS COMMENT SHALL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL - LUMP SUM.
11. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SIGNS AND LIGHT POLES WITHIN CONSTRUCTION LIMITS UNLESS PLANS OR PROJECT ENGINEER INIDICATE OTHERWISE. ALL WORK ASSOCIATED WITH REMOVAL SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.
12. THE CONTRACTOR IS RESPONSIBLE FOR TREE CLEARING WITHIN THE LIMITS OF RIGHT-OF-WAY, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH RON NELSON (912-531-5708) PRIOR TO ANY TREE CLEARINGS.

GENERAL NOTES - STANDARD SIGNS

1. ALL STANDARD ROADWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND THE GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR CONSTRUCTION, 2021 EDITION, OR AS SUBSEQUENTLY AMENDED.
2. SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. NO SIGN LOCATION SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD.
3. ALL STANDARD ROADWAY SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN OR ASSEMBLY. IF SIDEWALK IS PROPOSED OR EXISTING, THE SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE FINISHED GRADE.
4. HORIZONTAL CLEARANCE FOR STANDARD ROADWAY SIGNS SHALL BE 6 FEET FROM THE EDGE OF THE PAVED SHOULDER OR 12 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), WHICHEVER IS GREATER.
5. SIGN ASSEMBLIES SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL STRAP FRAMES. FOR DETAILS AND STRAP SPECIFICATIONS REFER TO SIGN ASSEMBLY-TYPICAL FRAMING DETAILS.
6. TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL STANDARD ROADWAY SIGNS REQUIRING REFLECTORIZED BACKGROUNDS EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE PLANS. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.
7. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3P, R5-1, R5-1A, R5-1B).
8. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW REFLECTIVE SHEETING SHALL BE USED FOR ALL WARNING SIGNS.
9. A 1/2 INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN AN ASSEMBLY.
10. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL 3/8 INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.
11. THE CONTRACTOR WILL BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR ARE CONTRARY TO THESE SIGN PLANS.

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

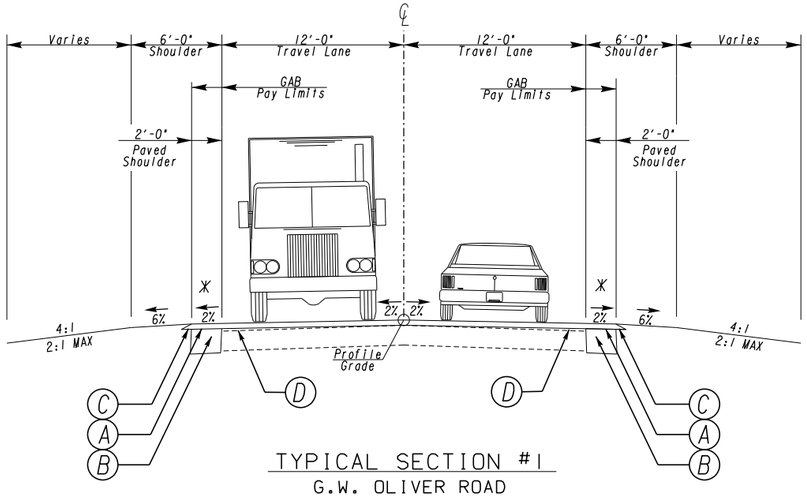
GENERAL NOTES

G.W. OLIVER ROAD
BRIDGE DESIGN

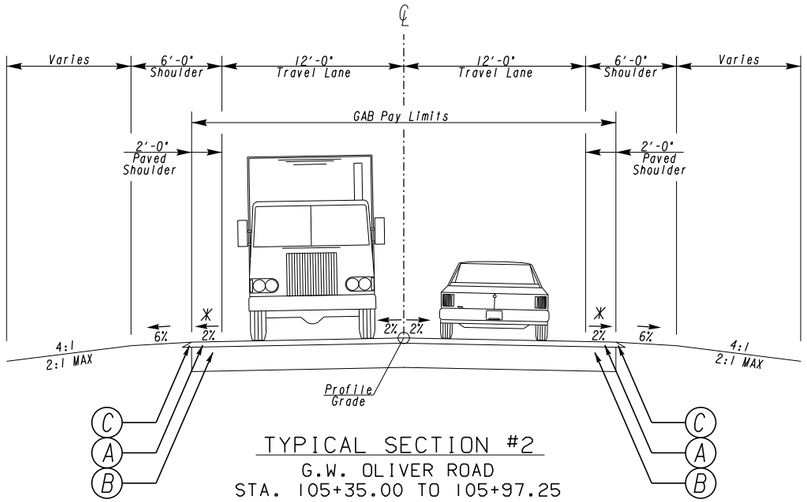
CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
04-0001

x SEE ROADWAY PLANS FOR LOCATION OF GUARDRAIL. REFER TO GDOT STD DETAIL S-4 WHERE GUARDRAIL IS ADJACENT TO PAVED SHOULDERS.



TYPICAL SECTION #1
G.W. OLIVER ROAD
STA. 104+00.00 TO 105+35.00
STA. 107+85.00 TO 109+50.00



TYPICAL SECTION #2
G.W. OLIVER ROAD
STA. 105+35.00 TO 105+97.25
STA. 107+32.25 TO 107+85.00

BRIDGE #1
G.W. OLIVER ROAD
STA. 105+97.25 TO 107+32.25
SEE SHEET 35-0004 FOR TYPICAL SECTIONS

PAVEMENT DESIGN
- (A) 165 LB/SY RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME
- (B) 8" GRADED AGGREGATE BASE
- (C) PAVEMENT SAFETY EDGE (GDOT DETAIL P-7)
- (D) RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME

NOTES
1. SHOULDER TO SLOPE AT NORMAL RATE, HOWEVER, THE ALGEBRAIC DIFFERENCE IN PAVING SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%. MINIMUM SHOULDER SLOPE TO BE 2%.
2. CONTRACTOR SHALL CONSTRUCT FILL AND CUT SLOPES IN ACCORDANCE WITH CROSS-SECTIONS.
3. CONTRACTOR TO REMOVE EXISTING PAVED SHOULDERS IF FULL-DEPTH ASPHALT PAVEMENT IS NOT PRESENT.

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BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

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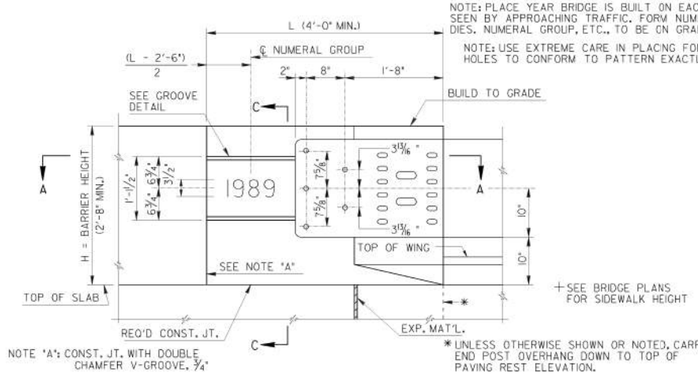
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
G.W. OLIVER ROAD
BRIDGE DESIGN

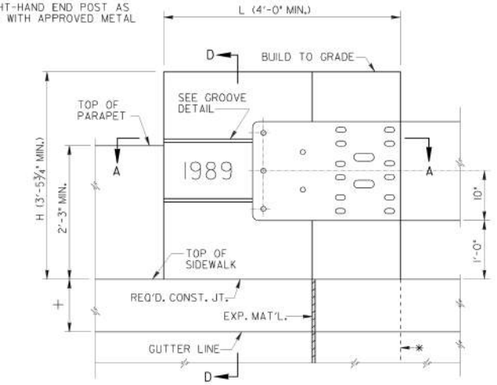
CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		05-0001
CORRECTED:		DATE:		
VERIFIED:		DATE:		

NOTE: PLACE YEAR BRIDGE IS BUILT ON EACH RIGHT-HAND END POST AS SEEN BY APPROACHING TRAFFIC. FORM NUMERALS WITH APPROVED METAL DIES. NUMERAL GROUP, ETC., TO BE ON GRADE.

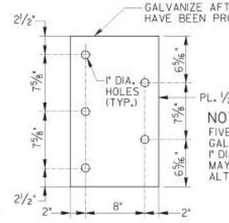
NOTE: USE EXTREME CARE IN PLACING FORMED HOLES TO CONFORM TO PATTERN EXACTLY.



FRONT ELEVATION - END POST
BARRIER
SCALE: 1"=1'-0"

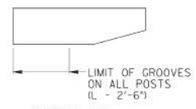


FRONT ELEVATION - END POST
SIDEWALK AND PARAPET
SCALE: 1" = 1'-0"



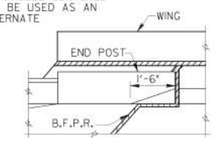
DETAIL "A"
NO SCALE

NOTE :
FIVE 3" × ½" × 3" GALV. PLATES WITH 1" DIA. HOLES CENTERED MAY BE USED AS AN ALTERNATE

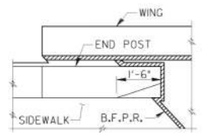


DETAIL "B"
NO SCALE

MATERIALS	
ITEM	SPECIFICATIONS
GUARDRAIL	A.A.S.T.H.O. SPECIFICATION M 180
½" PLATE	A.S.T.M. DESIGNATIONS A-36
NUTS & BOLTS	A.S.T.M. DESIGNATION A-307
WASHERS	MEDIUM STEEL
GALVANIZING	A.S.T.M. A-153

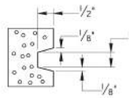


BARRIER



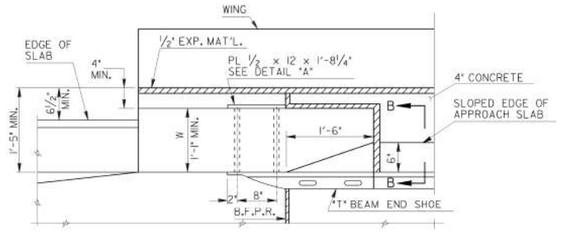
SIDEWALK AND PARAPET

TYPICAL SKEWED END DETAIL
SCALE: ½" = 1'-0"



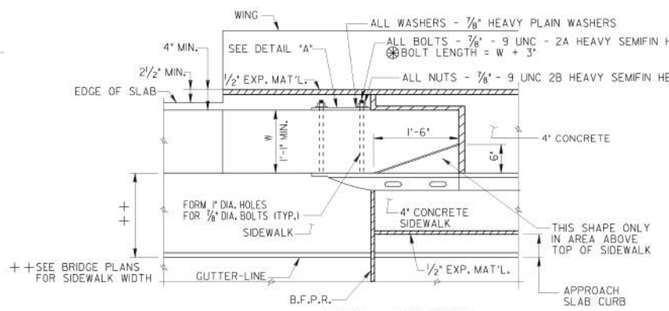
SEE DETAIL "B" FOR LIMITS OF GROOVE

GROOVE DETAIL
HALF SCALE



PLAN - END POST
BARRIER
SCALE: 1"=1'-0"

⊛ BOLT LENGTH SHALL BE OF SUFFICIENT LENGTH TO PROVIDE FOR FULL NUT ATTACHMENT. W + 3" DIMENSION SHALL BE FIELD VERIFIED PRIOR TO ORDERING BOLTS TO INSURE PROPER LENGTH.



PLAN - END POST
SIDEWALK AND PARAPET
SCALE: 1" = 1'-0"

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD.

LOCATION - ALL END POSTS UNLESS NOTED ON BRIDGE PLANS.

CHAMFER - CHAMFER ALL EXPOSED EDGES ¾".

GALVANIZING - ALL METAL PARTS SHALL BE GALVANIZED AFTER FABRICATION.

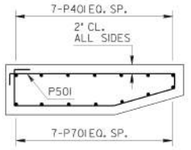
PAYMENT FOR MISCELLANEOUS HARDWARE - COST OF ½" PLATE AND MISCELLANEOUS HARDWARE SHALL BE INCLUDED IN THE PRICES BID FOR CONTRACT ITEMS.

PAYMENT FOR THE END POST - IF END POST IS A PORTION OF THE SUBSTRUCTURE, CONCRETE AND REINFORCEMENT ARE COMPUTED AND INCLUDED IN THE END BENT QUANTITIES.
IF END POST IS A PORTION OF THE SUPERSTRUCTURE, CONCRETE AND REINFORCEMENT ARE COMPUTED AND INCLUDED IN THE END SPAN QUANTITIES.

RESPONSIBILITY - WHEN THE BRIDGE CONTRACT IS SEPARATE FROM THE CONTRACT CONTAINING THE APPROACHING GUARDRAIL, THE BRIDGE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR THE CONSTRUCTION OF THE END POSTS AND FORMING OF THE 1" DIAMETER BOLT HOLES. THE CONTRACT CONTAINING THE APPROACHING GUARDRAIL SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING THE SPECAL END SHOE, PLATE, NUTS, WASHERS, AND BOLTS.

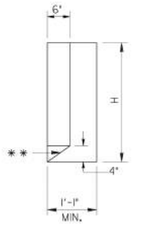
DIMENSIONS - FOR DIMENSIONS "L", "H", AND "W" AND OTHER DIMENSIONS, SEE BRIDGE PLANS.

END POST - END POST TO BE CONSTRUCTED AFTER HANDRAIL IS IN PLACE.
END POST TO BE CONSTRUCTED AFTER BARRIER IS CONSTRUCTED WHEN NO HANDRAIL IS USED.



SECTION A-A
SCALE: ¾" = 1'-0"

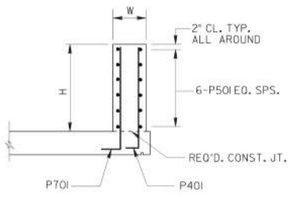
NOTE: IF END POST IS ON SUBSTRUCTURE, SEE BRIDGE PLANS FOR BARS THAT DOWEL FROM BELOW.



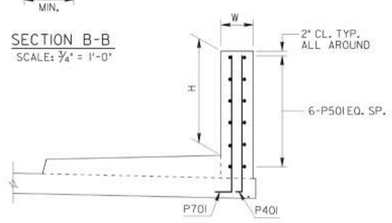
SECTION B-B
SCALE: ¾" = 1'-0"

** SLOPED PORTION OF END POST TO BE POURED MONOLITHIC WITH END POST

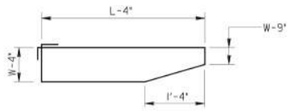
NO. BARS REQ'D		
MARK	BARRIER	SIDEWALK
P40	7	7
P50	6	6
P70	7	7



SECTION C-C
SCALE: ½" = 1'-0"



SECTION D-D
SCALE: ½" = 1'-0"



P50

FOR END POST ON SUPERSTRUCTURE:
A = H - 4" + SLAB DEPTH (FOR BARRIER)
A = H - 4" + SIDEWALK DEPTH + SLAB DEPTH (FOR SIDEWALK AND PARAPET)
B = 1'-0"

FOR END POST ON SUBSTRUCTURE:
A = H - 2"
B = 0"

NOTE: ROTATE P70 AND P40 AS NECESSARY TO MAINTAIN 2" MIN. CL. IN CONCRETE.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

	9-30-02	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
	6-30-88		
	REV. TRANSITION	REVISION	STANDARD END POST AND END POST GUARDRAIL ATTACHMENT DETAILS
	REDRAWN		SCALE: AS SHOWN — MAY 1989
G.W.P.	DESIGNED H.W.C.	(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER	NUMBER 3054
BY	DRAWN E.R.M.		
	CHECKED H.W.C.	(APPROVED) CHIEF ENGINEER	

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

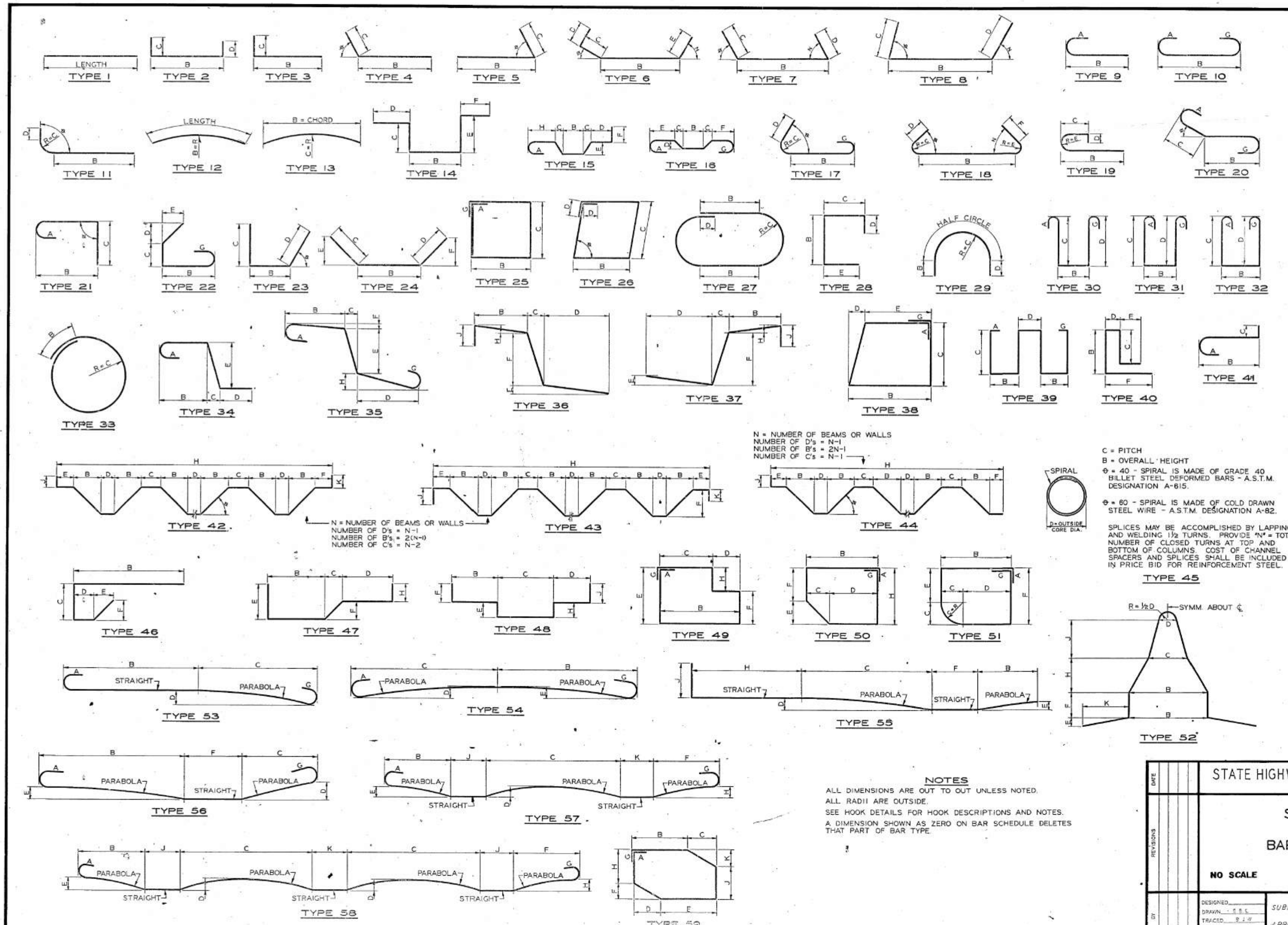
REVISION DATES		

TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
G.W. OLIVER ROAD BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		05-0002
VERIFIED:		DATE:		

GPLN-CE
11/05/2020

FED ROAD DIV. NO.	STATE	FED AID PROJ. NO.	STATE AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	GA.					



NOTES

ALL DIMENSIONS ARE OUT TO OUT UNLESS NOTED.
ALL RADII ARE OUTSIDE.
SEE HOOK DETAILS FOR HOOK DESCRIPTIONS AND NOTES.
A DIMENSION SHOWN AS ZERO ON BAR SCHEDULE DELETES THAT PART OF BAR TYPE.

HOOK DETAILS

RECOMMENDED 180° HOOKS
GRADE 40 ksi
D = 5d for #3 through #11
D = 10d for #14 and #18
GRADES 50-60-75 ksi
D = 6d for #3 through #8
D = 8d for #9, #10, and #11
D = 10d for #14 and #18

RECOMMENDED 180° END HOOK DIMENSIONS

BAR SIZE	GRADES 50-60-75 ksi		GRADE 40 ksi	
	A or G	J	A or G	J
#3	5	3	5	2¾
#4	6	4	6	3½
#5	7	5	7	4½
#6	8	6	8	5¼
#7	10	7	9	6¼
#8	11	8	10	7
#9	1-3	11¼	1-0	8
#10	1-5	1-0¾	1-1	9
#11	1-7	1-2¾	1-2	10
#14	2-2	1-8½	2-2	1-8½
#18	2-11	2-3	2-11	2-3
STYLE	1		2	

RECOMMENDED 90° END HOOK DIMENSIONS
ALL GRADES
D = 6d for #3 through #8
D = 8d for #9, #10, and #11
D = 10d for #14 and #18

BAR SIZE	HOOK A or G
#3	6
#4	8
#5	10
#6	1-0
#7	1-2
#8	1-4
#9	1-7
#10	1-10
#11	2-0
#14	2-7
#18	3-5
HOOK STYLE 3	

STIRRUP AND TIE HOOK

STIRRUPS
(TIES SIMILAR)

STIRRUP AND TIE HOOK DIMENSIONS
GRADES 40-50-60 ksi

BAR SIZE	D (in.)	90° HOOK	135° HOOK	
		HOOK A or G	HOOK A or G	H Approx.
#3	1½	4	4	2½
#4	2	4½	4½	3
#5	2½	6	5½	3¾
#6	3	6½	6½	4½
STYLE		4	5	

STYLE 6 = NO HOOK

HOOK STYLES DETAILED ON THIS SHEET ARE FOR ILLUSTRATION ONLY. ACTUAL HOOK STYLE FOR ANY PARTICULAR BAR WILL BE SHOWN UNDER A or G HEADING ON BAR SCHEDULE.

STATE HIGHWAY DEPARTMENT OF GEORGIA
BRIDGE DIVISION

STANDARD
BAR BENDING DETAILS

NO SCALE AUGUST 1969

DATE
REVISIONS
DESIGNED
DRAWN
TRACED
CHECKED
SUBMITTED R. L. Chapman Jr.
BRIDGE ENGINEER
APPROVED
STATE HIGHWAY ENGINEER
NUMBER 3901

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

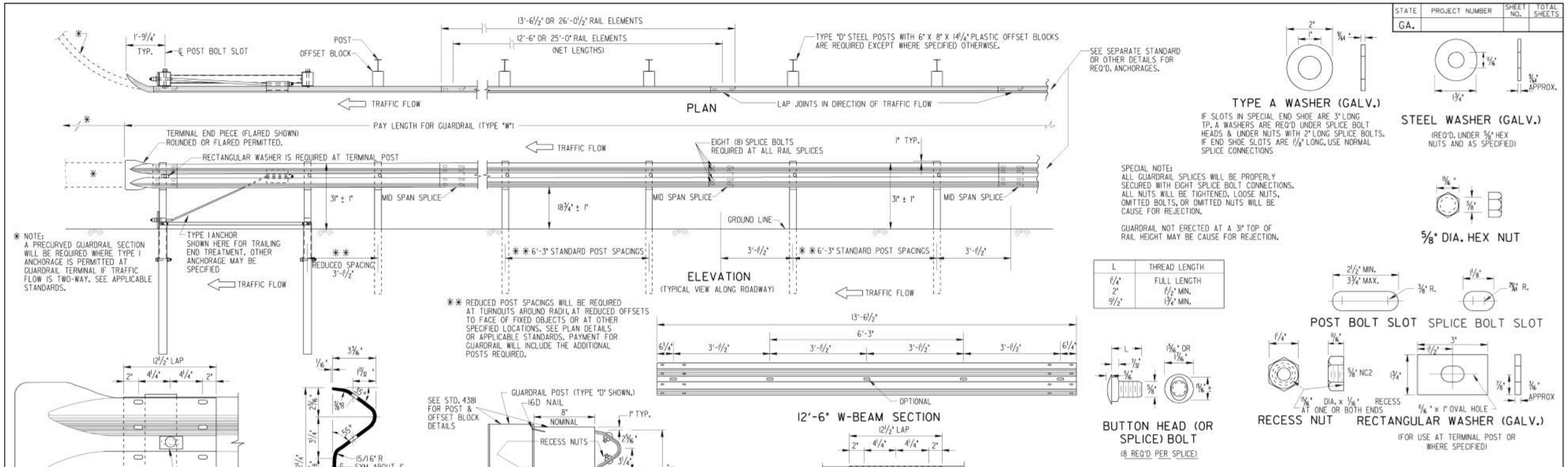
BULLOCH COUNTY
1796
EDUCATION AGRICULTURE RECREATION

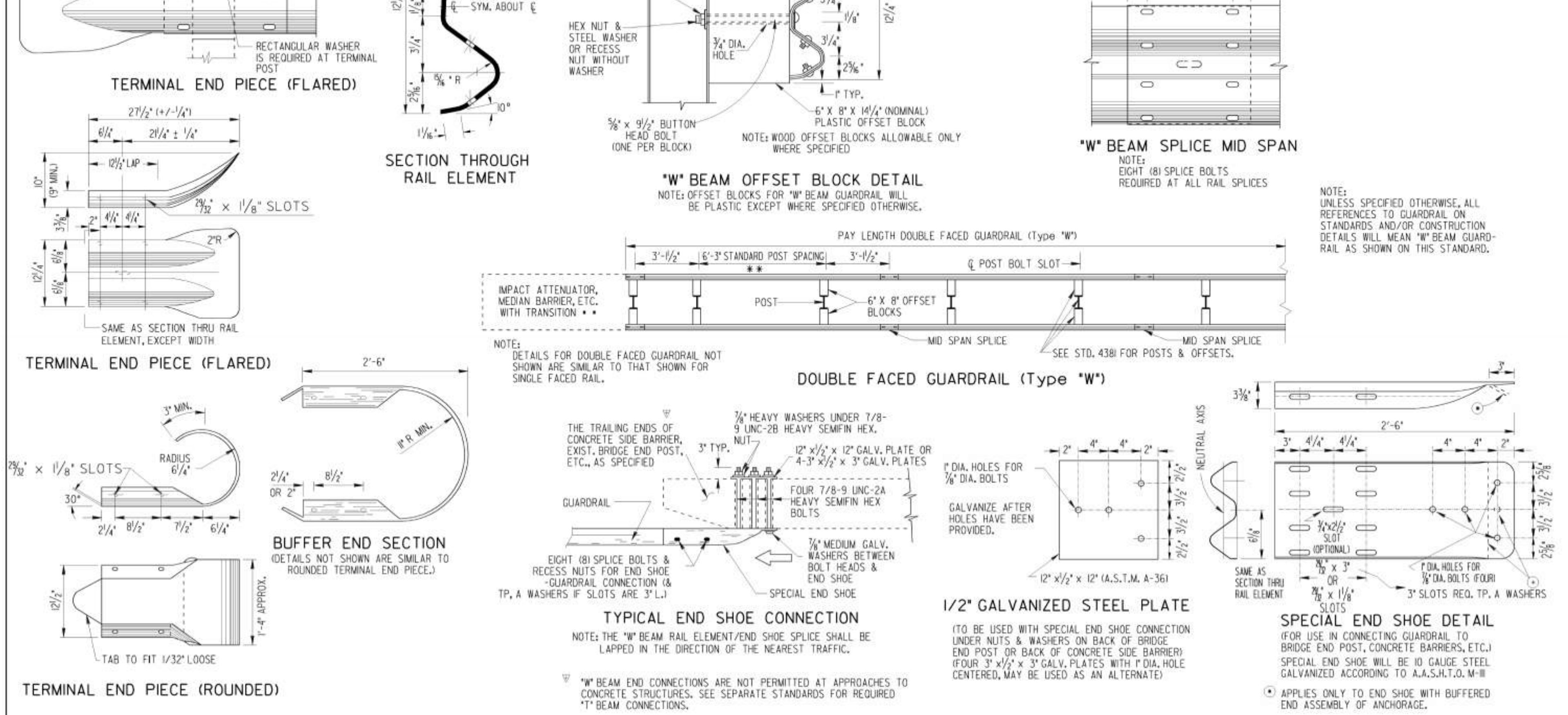
REVISION DATES

TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
05-0003





GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. NUTS, BOLTS, WASHERS, RAIL, TERMINAL SECTIONS, END SHOES, BACK-UP PLATES, END SECTIONS AND OTHER GUARDRAIL HARDWARE ARE IN ACCORDANCE WITH THE CURRENT ARTBA TECHNICAL BULLETIN NO. 268 .. UNLESS SPECIFIED OTHERWISE. DIMENSIONS FOR POSTS AND OFFSET BLOCKS WILL BE ACCORDING TO GA. STANDARD 4381.
3. FOR DETAILS OF GUARDRAIL ANCHORAGES, SEE APPLICABLE STANDARDS AND/OR CONSTRUCTION DETAILS.
4. FOR LOCATION OF GUARDRAIL SEE APPLICABLE LOCATION STANDARDS.
5. ALL STEEL HARDWARE COMPONENTS WILL BE GALVANIZED AFTER FABRICATION. GALVANIZING REPAIR COMPOUND (SEC. 645) WILL BE FIELD APPLIED TO ANY COATINGS DAMAGED.
6. WHEN GUARDRAIL IS REQUIRED ON CURVES WITH RADII LESS THAN 150', PRECURVED RAIL WILL BE REQUIRED.
7. PAYMENT FOR GUARDRAIL (Type "W") TO INCLUDE OFFSET BLOCKS, POST, BACK-UP PLATES WHERE REQUIRED, BOLTS, NUTS, WASHERS, TERMINAL SECTIONS, ADDITIONAL POST WHERE REQUIRED, LEAVE-OUTS INCLUDING GROUT WHERE REQUIRED, & REMOVAL AND REPLACEMENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS, OR CATCH BASINS WHERE NECESSARY.
8. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
9. STANDARD NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0". THESE LENGTHS SHALL BE ARRANGED TO PROVIDE AS NEARLY AS POSSIBLE THE REQUIRED LENGTH FOR EACH INSTALLATION.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
"W" BEAM GUARDRAIL
31 INCH GUARDRAIL HEIGHT

NO SCALE — AUGUST 2011

REV. W-BM BLOCK TO 8" DEPTH — 1-29-16

DES. G.L.O. (SUBMITTED) STATE DESIGN POLICY ENGINEER
DRW. G.L.O.
CHK. B.R.E. (APPROVED) CHIEF ENGINEER
REVIEW B.A.S.

NUMBER 4380

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

REVISION DATES

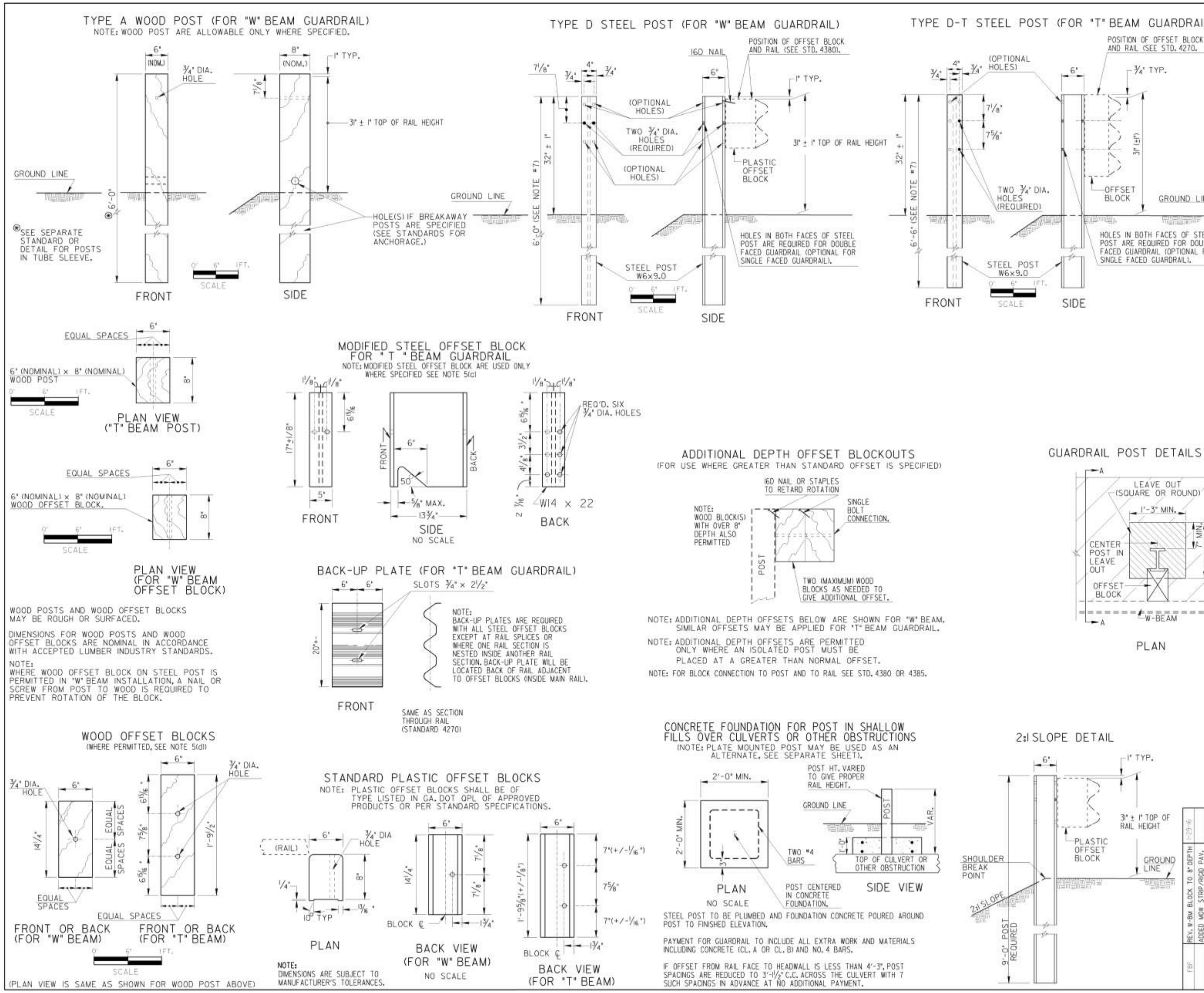
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

G.W. OLIVER ROAD BRIDGE DESIGN

CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No.
05-0004

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



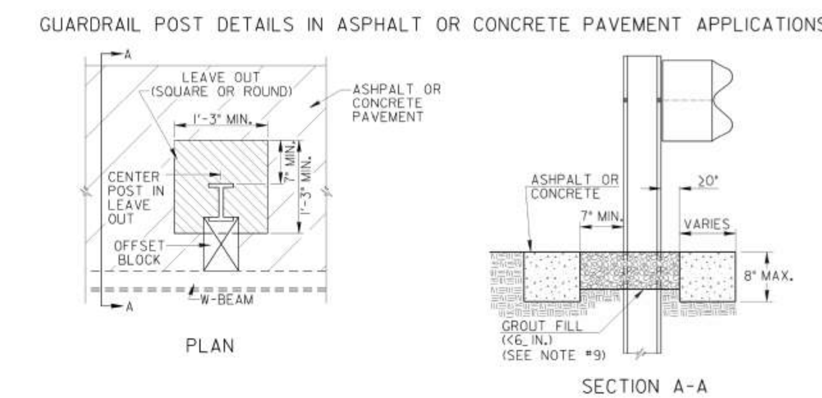
GENERAL NOTES:

1. SPECIFICATIONS GEORGIA STANDARD, CURRENT EDITION AND SUPPLEMENTS THERETO.
2. STEEL POSTS MAY BE EITHER ROLLED OR WELDED STRUCTURAL SHAPES. STEEL OFFSET BLOCKS SHALL BE ROLLED. WELDED POSTS SHALL BE SEAL WELDED BETWEEN WEB AND FLANGE BEFORE GALVANIZING.
3. WHERE WOOD POST OR WOOD OFFSET BLOCKS ARE PERMITTED, THE WOOD SHALL BE TREATED IN ACCORDANCE WITH GEORGIA STANDARD SPECIFICATIONS.
4. ALL BOLTS USED FOR FASTENING THE RAIL AND OFFSET BLOCKS TO WOOD POSTS SHALL HAVE SUFFICIENT LENGTH TO EXTEND AT LEAST 1/4" BEYOND THE FULL NUT, UP TO 3" BEYOND.
5. (a) "W" BEAM GUARDRAIL: ALL OFFSET BLOCKS SHALL BE 8" DEPTH PLASTIC BLOCKS EXCEPT FOR (d) BELOW.

   (b) "T" BEAM GUARDRAIL: STANDARD INSTALLATION WILL USE 8" DEPTH PLASTIC BLOCKS UNLESS OTHERWISE APPROVED.

   (c) 13 3/4" DEPTH MODIFIED STEEL OFFSETS MAY BE SPECIFIED WHERE JUSTIFIED FOR MORE SEVERE CONDITIONS. PAY ITEM IS --GUARDRAIL, TP T, MODIFIED OFFSET BLOCK---PER LIN. FT.

   (d) WOOD OFFSET BLOCKS MAY BE USED ONLY AT AN ISOLATED LOCATION WITHIN A RUN OF GUARDRAIL, WHERE OTHER BLOCK TYPES WOULD NOT PROVIDE PROPER FIT, AS DETERMINED BY THE ENGINEER OR SHOWN IN THE PLANS.
6. POSTS WILL BE SPACED AT 6'-3" C. TO C., UNLESS OTHERWISE NOTED.
7. ADDITIONAL LENGTH POSTS, WHERE SPECIFIED, SHALL BE 7'-0" AND 7'-6" LONG FOR "W" BEAM AND "T" BEAM GUARDRAILS RESPECTIVELY, WITH HOLES DIMENSIONED FROM THE POST-TOP THE SAME AS SHOWN.
8. 9'-0" POST REQUIRED IF GUARDRAIL INSTALLED ON A 2:1 SLOPE.
9. GROUT FILL SHALL BE A CONTROLLED LOW STRENGTH FLOWABLE FILL THAT HAS A MAXIMUM 28-DAY COMPRESSIVE STRENGTH OF 100 P.S.I. ACCORDING TO SPEC. 600.



REVISION	DATE
REV. W-BM BLOCK TO 8" DEPTH ADDED MOW STRIP/RGD PAV. INSTALLATION DETAILS	1-29-16

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
POSTS AND OFFSET BLOCKS
FOR "W" & "T" BEAM GUARDRAIL
31 INCH GUARDRAIL HEIGHT

SCALE: AS SHOWN — AUGUST 2011

DES. G.L.O. DRW. G.L.O. CHK. B.R.E. REVIEW B.A.S.
(SUBMITTED) STATE DESIGN POLICY ENGINEER
(APPROVED) CHIEF ENGINEER

NUMBER 4381

REVISION DATES		

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY — 1796 — EDUCATION AGRICULTURE RECREATION

TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
G.W. OLIVER ROAD BRIDGE DESIGN

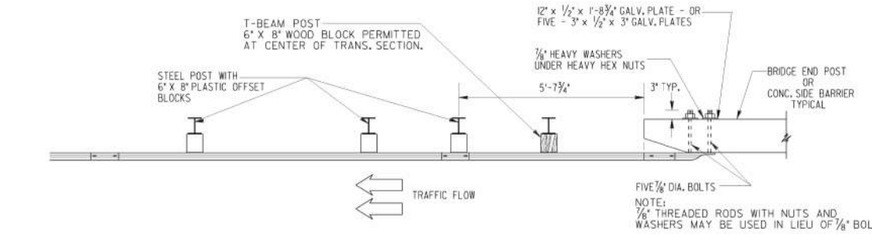
CHECKED:	DATE:
BACKCHECKED:	DATE:
CORRECTED:	DATE:
VERIFIED:	DATE:

DRAWING No. 05-0005

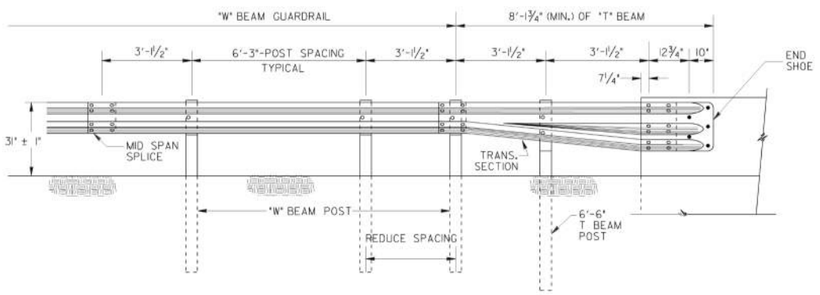
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

31INCH HEIGH GUARDRAIL CONNECTION AT TRAILING ENDS

(SEE NOTE AT BOTTOM LEFT)



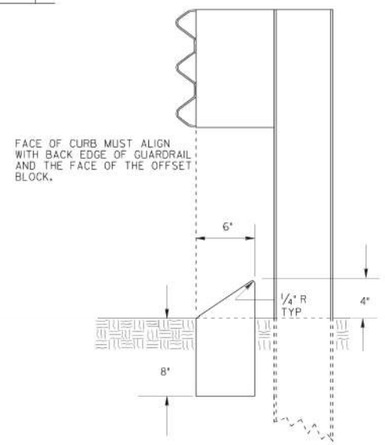
PLAN



ELEVATION

NOTE:
DETAILS AT TOP LEFT ARE APPLICABLE FOR CONNECTIONS AT THE TRAILING ENDS OF ONE-WAY TRAFFIC OR AT THE TRAILING END OF MULTI-LANE (4 OR MORE) FACILITIES.

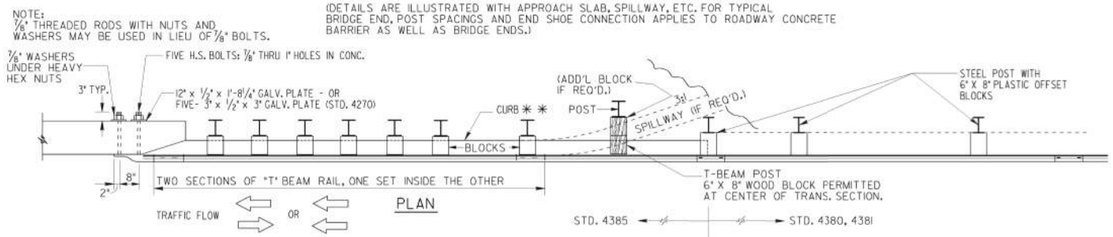
NOTE:
DETAILS AT TOP RIGHT ARE APPLICABLE FOR CONNECTIONS AT THE APPROACH ENDS OF BRIDGES OR CONCRETE SIDE BARRIERS OR AT ALL FOUR ENDS FOR TWO-LANE, TWO WAY TRAFFIC.



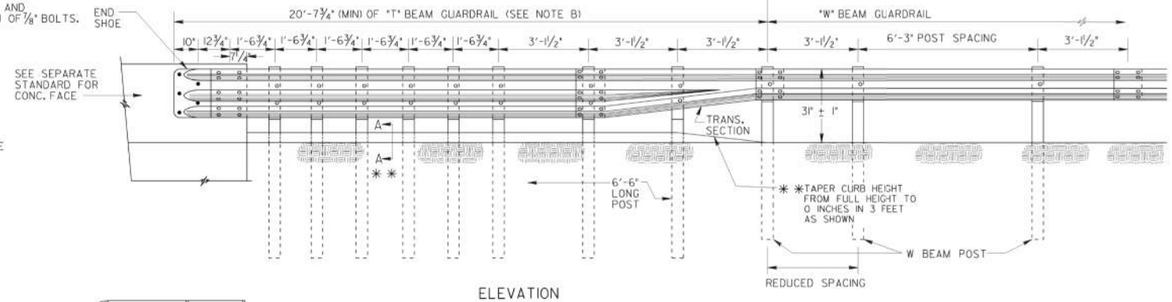
SECTION A-A * *

GUARDRAIL CONNECTION AT BRIDGE END (OR CONCRETE BARRIER)

(DETAILS ARE ILLUSTRATED WITH APPROACH SLAB, SPILLWAY, ETC. FOR TYPICAL BRIDGE END, POST SPACINGS AND END SHOE CONNECTION APPLIES TO ROADWAY CONCRETE BARRIER AS WELL AS BRIDGE ENDS.)



PLAN



ELEVATION

NOTES FOR GUARDRAIL CONNECTION:

A. WHERE GREATER THAN THE MINIMUM LENGTH OF T-BEAM GUARDRAIL IS REQUIRED ADDITIONAL POST REMAIN AS SHOWN WITHIN THE FIRST 20'-7¾" LENGTH, WITH NORMAL (6'-3" C. TO C.) SPACINGS FOR THE REMAINDER OF THE INSTALLATION (STD. 4385) UNLESS SPECIFIED OTHERWISE.

B. PAYMENT FOR GUARDRAIL TYPE T INCLUDES ALL ADDITIONAL POST, ALL ADDITIONAL OFFSET BLOCKS, THE SPECIAL END SHOE CONNECTION WITH ACCOMPANY HARDWARE, THE EXTRA SECTION OF "T" BEAM RAIL NESTED INSIDE THE OTHER, AND THE "T" BEAM TO "W" BEAM TRANSITION SECTION.

C. WHERE GUARDRAIL POST ARE ERECTED THRU SPILLWAY, CONCRETE CAP OR PAVING UNDER GUARDRAIL, PAYMENT FOR GUARDRAIL OF ANY TYPE SHALL INCLUDE REPLACING THE BLOCKED OUT CONCRETE AND/OR REMOVING AND REPLACING PORTIONS OF SPILLWAY, CONCRETE, OR GROUT AS NECESSARY FOR POST INSTALLATIONS.

* * FOR CURB DETAILS ASSOCIATED WITH APPROACH SLAB, SEE APPROACH SLAB STANDARD. FOR GUARDRAIL INSTALLATION LOCATIONS WHERE AN APPROACH SLAB IS NOT USED, PROVIDE A CONCRETE CURB IN ACCORDANCE WITH SECTION "A-A". CONCRETE CURB SHALL BE PAID FOR PER LINEAR FOOT.

NOTE: POST SPACINGS SHOWN ARE TYPICAL AVERAGE WITH NORMAL CONSTRUCTION TOLERANCES ALLOWED.

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
2. FOR DETAILS OF GUARDRAIL HARDWARE, POST, OFFSET BLOCKS, END SHOE, TRANSITION SECTION, ETC., SEE SEPARATE STANDARDS AS APPLICABLE.
3. GUARDRAIL INSTALLATIONS, INCLUDING ANCHORAGES AND CONNECTIONS, ARE TO BE COMPLETED BEFORE BEING SUBJECT TO TRAFFIC UNLESS OTHERWISE APPROVED.
4. OFFSET BLOCKS SHALL BE PLASTIC UNLESS SPECIFIED OTHERWISE. OFFSET BLOCKS ARE REQUIRED AT ALL POSTS.
5. THE COST FOR DRILLING HOLES FOR THE END SHOE CONNECTION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE GUARDRAIL.

REVISION	BY	DATE
REV. W-BM BLOCK TO 8"	FDF	1-29-16

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

GUARDRAIL CONNECTION AT BRIDGE END
OR AT CONCRETE BARRIER END
FOR 31INCH HIGH GUARDRAIL

NO SCALE — AUGUST 2011

DES. G.L.O. (SUBMITTED) STATE DESIGN POLICY ENGINEER
DRW. G.L.O.
CHK. B.R.E.
REVIEW B.A.S. (APPROVED) CHIEF ENGINEER

NUMBER 4382

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

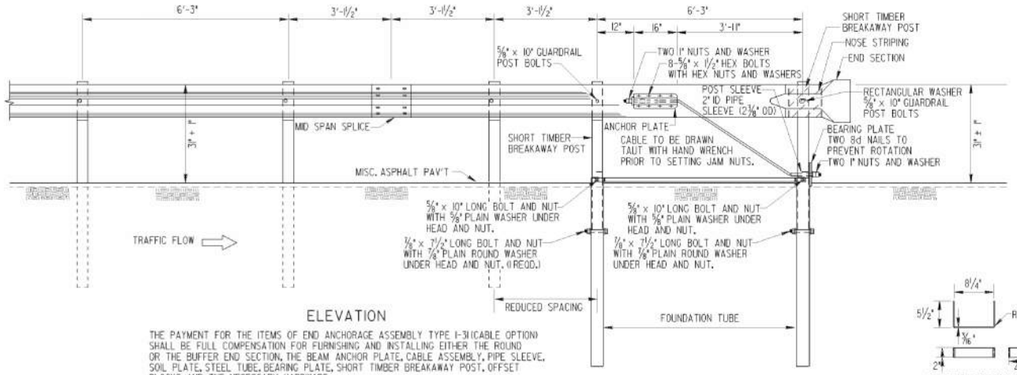
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		05-0006
CORRECTED:		DATE:		
VERIFIED:		DATE:		

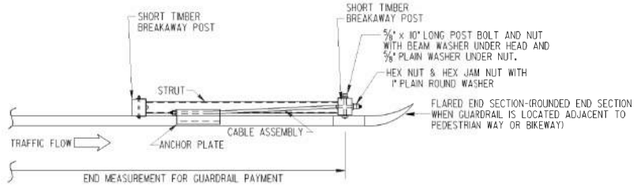
GPLN-CE
11/05/2020

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

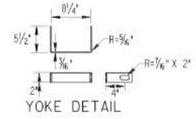


ELEVATION

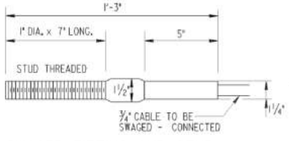
THE PAYMENT FOR THE ITEMS OF END ANCHORAGE ASSEMBLY TYPE I-31(CABLE OPTION) SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING EITHER THE ROUND OR THE BUFFER END SECTION, THE BEAM ANCHOR PLATE, CABLE ASSEMBLY, PIPE SLEEVE, SOIL PLATE, STEEL TUBE, BEARING PLATE, SHORT TIMBER BREAKAWAY POST, OFFSET BLOCKS AND THE NECESSARY HARDWARE.



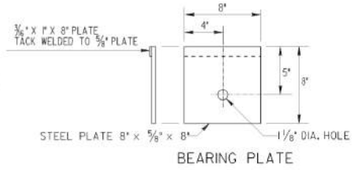
CABLE ANCHOR



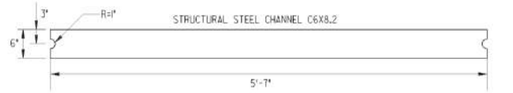
YOKE DETAIL



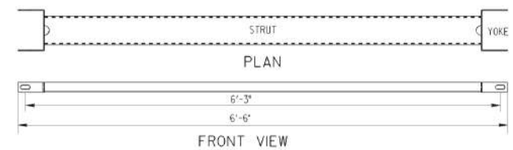
SWAGED FITTING AND STUD



BEARING PLATE

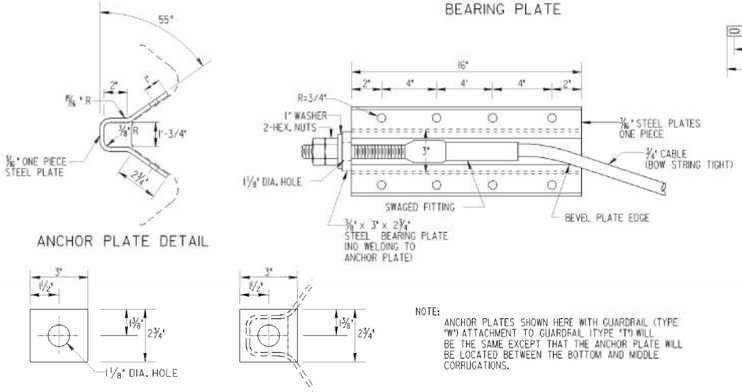


STRUT DETAIL



PLAN

FRONT VIEW

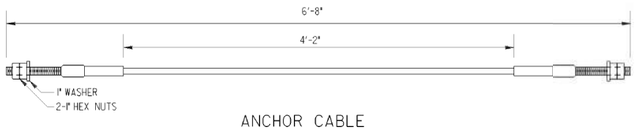


ANCHOR PLATE DETAIL

ANCHOR PLATE BEARING PLATE DETAIL

NOTE:
ANCHOR PLATES SHOWN HERE WITH GUARDRAIL (TYPE "W") ATTACHMENT TO GUARDRAIL (TYPE "T") WILL BE THE SAME EXCEPT THAT THE ANCHOR PLATE WILL BE LOCATED BETWEEN THE BOTTOM AND MIDDLE CORRUGATIONS.

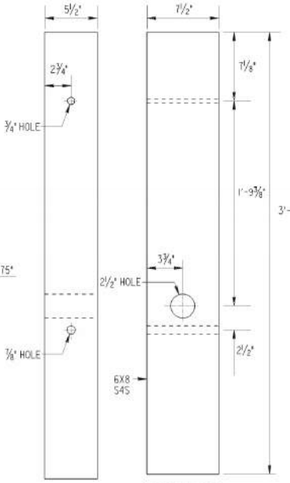
STANDARD ANCHOR PLATE DETAILS



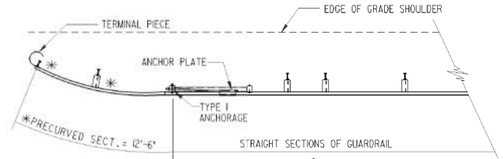
ANCHOR CABLE

FOUNDATION TUBE

NOTE: SEE STANDARD 4382 FOR GUARDRAIL CONNECTION TO CONCRETE FACE.

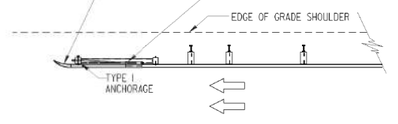


SHORT TIMBER BREAKAWAY POST



* PRECURVED SECTION SHALL UTILIZE POST OF THE SAME LENGTH AS REQUIRED FOR THE ADJOINING STRAIGHT SECTIONS, REGARDLESS OF DISTANCE TO GRADED SHOULDER EDGE.

AT TRAILING END OF TWO-WAY TRAFFIC
(WHICH FALLS OUTSIDE CLEAR ZONE OF OPPOSING TRAFFIC)



AT TRAILING END OF ONE-WAY TRAFFIC

NOTE:
SEE STD. 4388 OR OTHER APPLICABLE DETAILS FOR REQUIREMENT OF TYPE 12 ANCHORAGE ON THE TRAILING END.

GENERAL NOTES:
1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERE TO.
2. FOR DETAILS OF GUARDRAIL HARDWARE, POST, OTHER TYPE ANCHORAGE, LOCATION, ETC. SEE SEPARATE STANDARDS AS APPLICABLE.
3. GUARDRAIL INSTALLATIONS, INCLUDING ANCHORAGES AND CONNECTIONS, ARE TO BE COMPLETED BEFORE BEING SUBJECT TO TRAFFIC UNLESS OTHERWISE APPROVED.
4. PAYMENT FOR ANCHORAGE INCLUDES ANCHOR PLATE; ¾" CABLE; BREAKAWAY POSTS; FOUNDATION TUBES; STRUT AND ALL ACCOMPANYING HARDWARE.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

GUARDRAIL ANCHORAGE TYPE I
31 INCH GUARDRAIL HEIGHT

NO SCALE — AUGUST 2011

DES. G.L.O. DRW. G.L.O. CHK. B.R.E. REVIEW B.A.S.

(SUBMITTED) STATE DESIGN POLICY ENGINEER

(APPROVED) CHIEF ENGINEER

NUMBER 4383

REVISION DATE BY

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY
1796
EDUCATION AGRICULTURE RECREATION

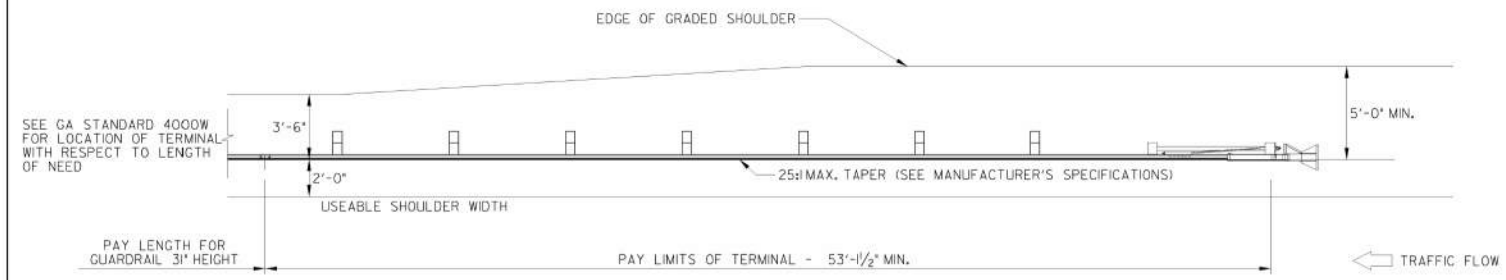
REVISION DATES

TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

G.W. OLIVER ROAD BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		05-0007
CORRECTED:		DATE:		
VERIFIED:		DATE:		

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

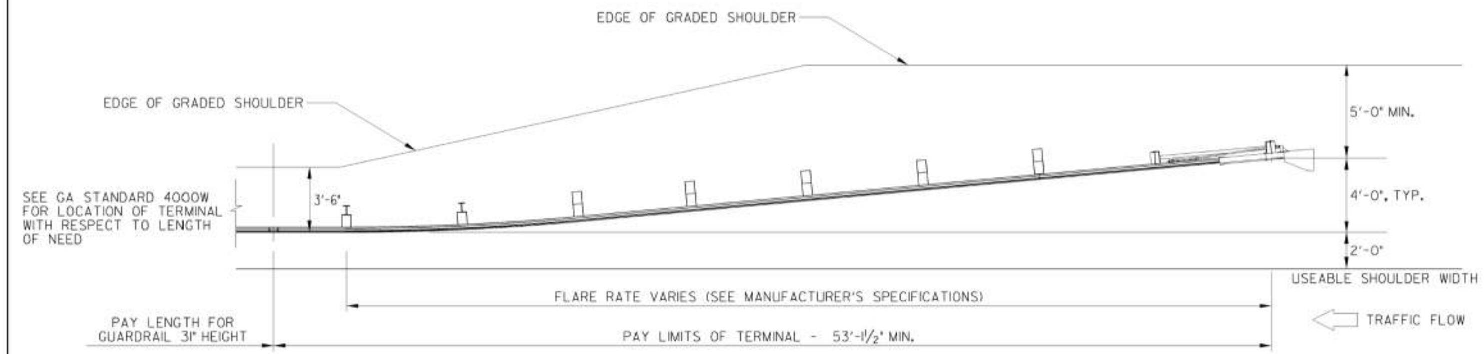


TYPE 12A - 31" GUARDRAIL TERMINAL
(TANGENT, ENERGY-ABSORBING)

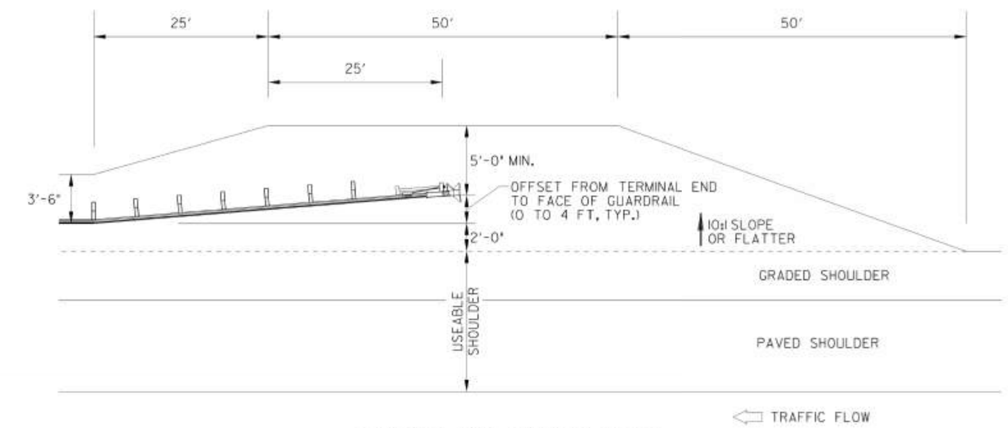
GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. SEE GDOT QPL 64 FOR APPROVED PRODUCTS.
3. THIS SHEET DEPICTS THE PAY LIMITS FOR GUARDRAIL AND TYPE 12 TERMINALS. TYPE 12 TERMINALS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
4. W-BEAM INSTALLATIONS LESS THAN 150 FEET IN ADVANCE OF ANY SHIELDED OBJECT OR TOTAL LENGTH OF W-BEAM INSTALLATION IS LESS THAN ABOUT 150 FEET, AN ENGERGY-ABSORBING TERMINAL SHOULD BE SELECTED.

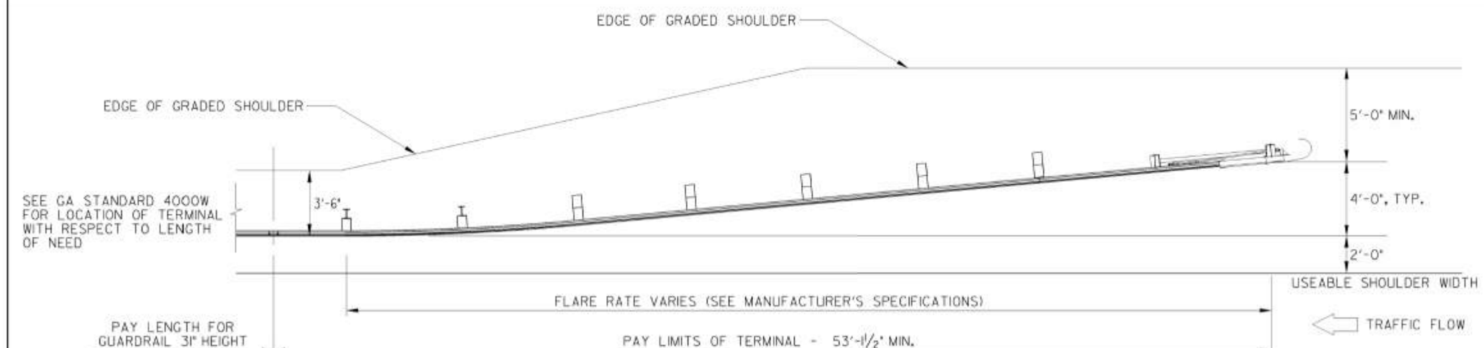
ITEM NO.	UNITS	DESCRIPTION
641-5015	EA	GUARDRAIL TERMINAL, TP 12A - 31", TANGENT, ENERGY-ABSORBING
641-5020	EA	GUARDRAIL TERMINAL, TP 12B - 31", FLARED, ENERGY-ABSORBING
641-5025	EA	GUARDRAIL TERMINAL, TP 12C - 31", FLARED, NON-ENERGY-ABSORBING



TYPE 12B - 31" GUARDRAIL TERMINAL
(FLARED, ENERGY-ABSORBING)



TERMINAL PAD GRADING DETAIL



TYPE 12C - 31" TERMINAL
(FLARED, NON-ENERGY-ABSORBING)

DATE	REVISION	BY
1-29-16	ADDED 12A, 12B, & 12C; ADDED GRADING DTL.	FBF

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

GUARDRAIL TERMINALS,
TYPE 12A, 12B, AND 12C
31 INCH GUARDRAIL HEIGHT

NO SCALE — AUGUST 2011

DES. G.L.O. (SUBMITTED) — STATE DESIGN POLICY ENGINEER
DRW. G.L.O.
CHK. B.R.E. (APPROVED) — CHIEF ENGINEER
REVIEW B.A.S.

NUMBER 4384

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY — 1796 — EDUCATION AGRICULTURE RECREATION

REVISION DATES

TYPICAL SECTIONS AND
MISCELLANEOUS DETAILS

G.W. OLIVER ROAD
BRIDGE DESIGN

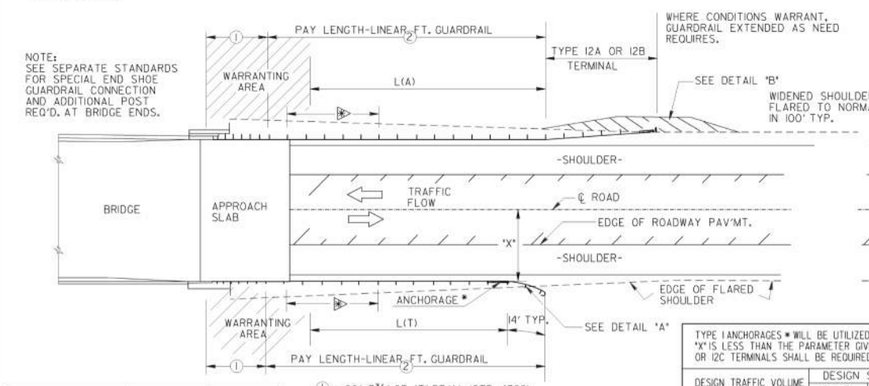
CHECKED:		DATE:
BACKCHECKED:		DATE:
CORRECTED:		DATE:
VERIFIED:		DATE:

DRAWING No.
05-0008

3/4/2016 9:52:59 AM \\GDOT-DSN1\GOPLOT\OCE\OGC.pdf bquarles P:\Policy&Lighting\Standards\GA Standards\4388\Revised_2016-1-29\4388_Revised_2016-1-29.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

NOTE:
FOR MINIMAL REDUCTION (TO 2') OF SHOULDER ACROSS BRIDGE, ALIGNMENT SHALL BE STRAIGHT FOR SHORT INSTALLATIONS (LESS THAN 200' TOTAL) AS SHOWN HEREON. FOR LONGER INSTALLATIONS, OR GREATER REDUCTION OF SHOULDER WIDTH, GUARDRAIL INSTALLATION SHALL BE AS PER DETAIL AT BOTTOM MIDDLE.



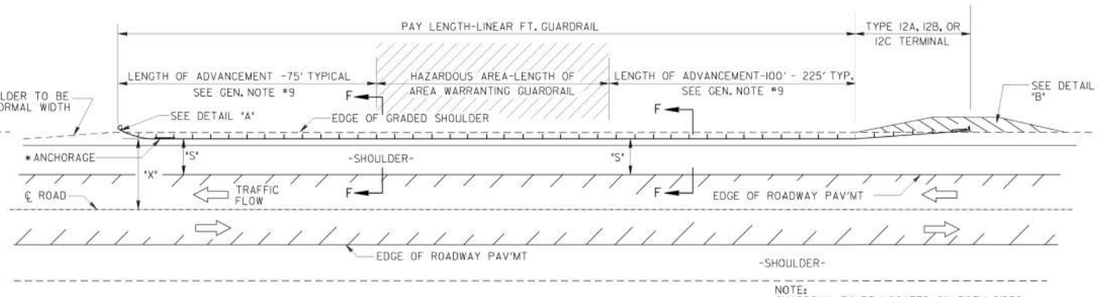
① = 20'-7¾" OF 'T' BEAM (STD. 4382)
② = VARIABLE LENGTH OF 'W' BEAM (6'-3" POST SPA.)

GUARDRAIL LOCATION AT BRIDGE ENDS

20' 10' 0 20'
SCALE

TRAFFIC VOLUME	MIN. L(T)	MIN. L(A)
DHV OVER 400	100'-0"	137'-6"
DHV 200-400	87'-6"	125'-0"
DHV 100-200	75'-0"	112'-6"
ADT 400 & OVER	62'-6"	100'-0"
ADT UNDER 400	50'-0"	87'-6"

NOTE: THESE MINIMUM LENGTHS ARE FOR STRAIGHT ALIGNMENTS IN ADVANCE OF WARRANTING AREA.



GUARDRAIL LOCATION ALONG ROADWAY

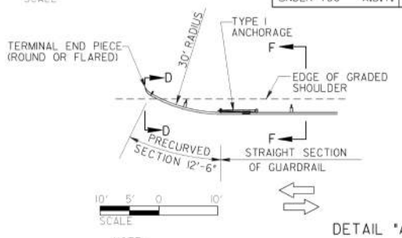
20' 10' 0 20'
SCALE

NOTE:
GUARDRAIL TO BE LOCATED ON BOTH SIDES OF ROAD IF CONDITIONS WARRANT.

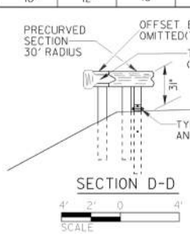
TYPE I ANCHORAGES * WILL BE UTILIZED AT THE TRAILING END, UNLESS THE DISTANCE 'X' IS LESS THAN THE PARAMETER GIVEN IN THIS TABLE IN WHICH CASE TYPE 12A, 12B, OR 12C TERMINALS SHALL BE REQUIRED.

DESIGN TRAFFIC VOLUME	DESIGN SPEEDS (AS SHOWN ON COVER SHEET)				
	40 MPH	50 MPH	55 MPH	60 MPH	70 MPH
OVER 6000 A.D.T.	14'	20'	22'	30'	30'
1500 - 6000 A.D.T.	12'	16'	20'	26'	28'
750 - 1500 A.D.T.	10'	14'	16'	20'	24'
UNDER 750 A.D.T.	7'	10'	12'	16'	20'

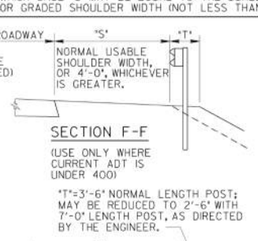
'S' IS THE OFFSET TO THE FACE OF THE GUARDRAIL; THIS WILL BE TWO(2) FEET GREATER THAN THE USABLE SHOULDER WIDTH (PER AASHTO MINIMUM SHOULDER REQUIREMENTS) EXCEPT WHERE THE CURRENT A.D.T. IS UNDER 400, IN WHICH CASE 'S' MAY BE EQUAL TO THE USABLE OR GRADED SHOULDER WIDTH (NOT LESS THAN 4).



DETAIL 'A'

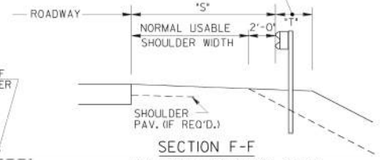


SECTION D-D



SECTION F-F
(USE ONLY WHERE CURRENT ADT IS UNDER 400)

'T'=3'-6" NORMAL LENGTH POST; MAY BE REDUCED TO 2'-6" WITH 7'-0" LENGTH POST, AS DIRECTED BY THE ENGINEER.

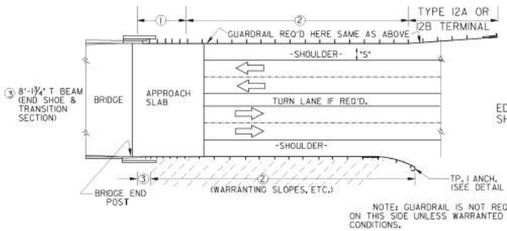


SECTION F-F
(USE FOR ALL CONDITIONS, EXCEPT WHERE CURRENT ADT IS UNDER 400.)

GENERAL NOTES:

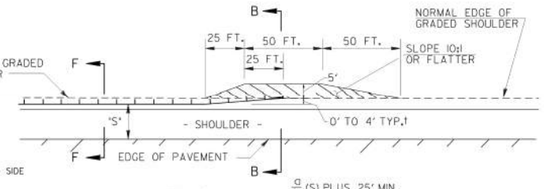
1. GUARDRAIL, ITS FITTINGS, PARTS, ETC. ARE TO BE IN ACCORDANCE WITH GEORGIA STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
2. FOR DETAILS OF BEAM TYPE GUARDRAIL, ACCESSORIES, GUARDRAIL POST, OFFSET BLOCKS, GUARDRAIL ANCHORAGE TYPE I, TERMINALS TYPE 12A, 12B, AND 12C, & BRIDGE END CONNECTION DETAILS, SEE APPLICABLE GEORGIA STANDARD PLANS AND/OR CONSTRUCTION DETAILS.
3. ALL OFFSET AND LENGTHS HERE SHOWN ARE APPLIED TO FACE OF GUARDRAIL.
4. POST SPACING SHALL BE 6'3" C. TO C., UNLESS OTHERWISE NOTED.
5. TYPE 12A, 12B, AND 12C TERMINALS SHOULD BE TERMINATED ON SLOPES 10:1 OR FLATTER. WHERE NORMAL SLOPE IS STEEPER, A 10:1 OR FLATTER SLOPE SHOULD BE CONSTRUCTED.
6. GUARDRAIL SHALL NOT BE ERECTED ON SLOPES WHICH ARE STEEPER THAN 10:1, EXCEPT FOR THE PORTION OF PRECURVED (SHOP CURVED) SECTION THAT EXTENDS BACK OF THE SHOULDER AS SHOWN IN DETAIL 'A' WHICH IS ERECTED ON NORMAL SLOPES OR EXCEPT WHERE SHOWN OTHERWISE IN PLANS.
7. PAY LENGTH SHALL BE MEASURED ALONG FACE OF GUARDRAIL.
8. W. BEAM GUARDRAIL WILL HAVE A CONSTANT TOP OF RAIL HT. OF 31" THROUGHOUT INSTALLATION EXCEPT WHERE A PORTION OF THE PRECURVED SECTION SHOWN IN DETAIL 'A' EXTENDS BACK OF THE GRADED SHOULDER.
9. GUARDRAIL WILL EXTEND PAST HAZARD ON BOTH THE APPROACH & TRAILING ENDS TO PREVENT VECHICLE PENETRATION BEHIND THE RAIL INTO THE HAZARDOUS AREA. THE TYPICAL LENGTHS OF ADVANCEMENT SHOWN MAY BE INCREASED OR DECREASED WHEN SHOWN IN THE PLANS, OR WHERE DIRECTED BY THE ENGINEER BECAUSE OF SPEED DESIGN, ROADSIDE GEOMETRY, SIZE OF HAZARD, OR OTHER CONDITIONS. IF FURTHER INFORMATION IS DESIRED; SEE THE AASHTO 'ROADSIDE DESIGN GUIDE'.

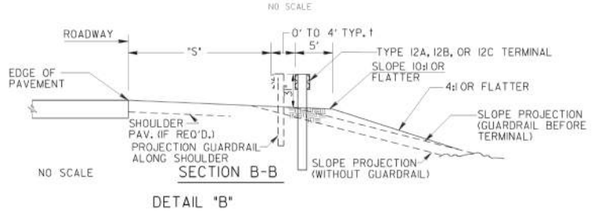
SPECIAL NOTE:
LOCATION AND QUANTITIES GIVEN IN THE PLANS FOR GUARDRAIL, TERMINALS, AND ANCHORAGES ARE ESTIMATES MADE FROM OFFICE COMPUTATIONS. A FINAL DETERMINATION AS TO LOCATIONS AND QUANTITIES OF GUARDRAIL, TERMINALS, AND ANCHORAGES WILL BE MADE BY THE ENGINEER OR A REPRESENTATIVE FROM THE OFFICE OF TRAFFIC OPERATIONS AFTER CONSTRUCTION OF ROADWAY.



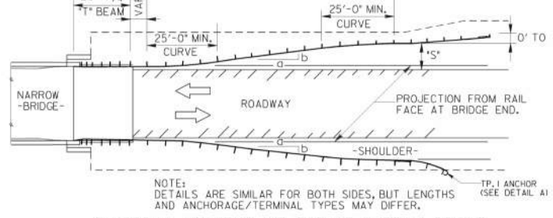
NOTE: GUARDRAIL IS NOT REQUIRED ON THIS SIDE UNLESS WARRANTED BY ROAD SIDE CONDITIONS.

GUARDRAIL AT BRIDGE END OF MULTI-LANE UNDIVIDED HIGHWAY
NO SCALE





DETAIL 'B'



NOTE:
DETAILS ARE SIMILAR FOR BOTH SIDES, BUT LENGTHS AND ANCHORAGE/TERMINAL TYPES MAY DIFFER.

GUARDRAIL LOCATION AT END OF NARROW BRIDGE
(NOTE: DETAILS NOT SHOWN HERE ARE SIMILAR TO THOSE AT TOP LEFT.)

FLARE RATE			
DESIGN SPEED (mph)	SHY-LINE OFFSET (ft)	(a/b) BARRIER INSIDE SHY-LINE	(a/b) BARRIER AT OR BEYOND SHY-LINE
70	9	30	15
60	8	26	14
55	7	24	12
50	6.5	21	11
45	6	18	10
40	5	16	8
30	4	13	7

IF THE OFFSET FROM THE EDGE OF THE TRAVEL LANE TO THE FACE OF THE GUARDRAIL AT ANY POINT ALONG THE INSTALLATION IS LESS THAN THE SHY-LINE OFFSET, USE THE FLATTER RATES GIVEN IN THE TABLE.

† SEE GA STANDARD 4384 FOR OFFSETS AND FLARE RATES FOR TYPE 12A, 12B, AND 12C TERMINALS.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
GUARDRAIL LOCATION DETAILS FOR UNDIVIDED HIGHWAYS AND ROADS (WITH SHOULDERS ADJACENT TO THE ROADWAY)
31 INCH GUARDRAIL HEIGHT

SCALE AS SHOWN AUGUST 2011

DATE	REVISION	BY
1-29-16	REV. TO ① TO ②A/B/C; REV. NOTES, AND FLARE TBL	FBF

DES. G.L.O. (SUBMITTED) [signature] STATE DESIGN POLICY ENGINEER
DRW. G.L.O.
CHK. B.R.E.
REVIEW B.A.S. (APPROVED) Margaret B Pavlo CHIEF ENGINEER

NUMBER 4388

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY CONSTITUTION 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

G.W. OLIVER ROAD BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		05-0009
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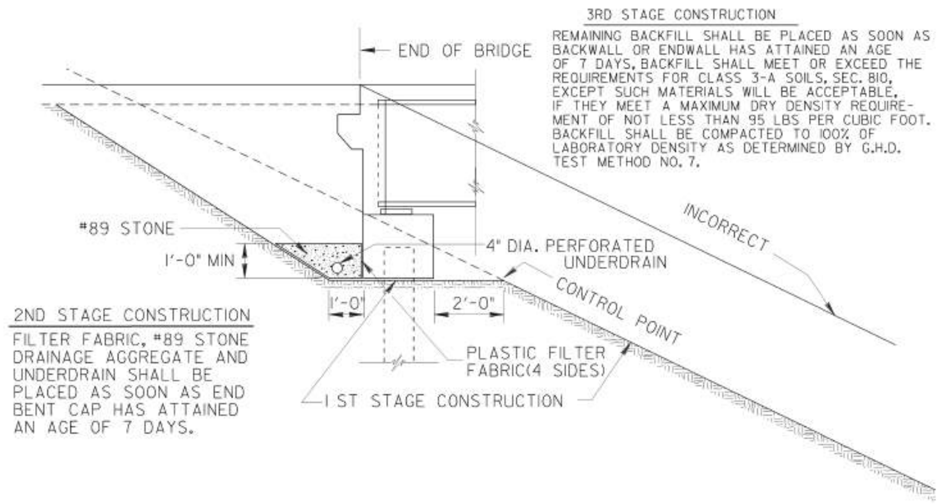
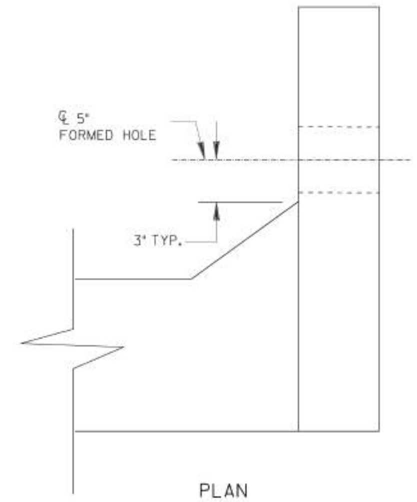
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

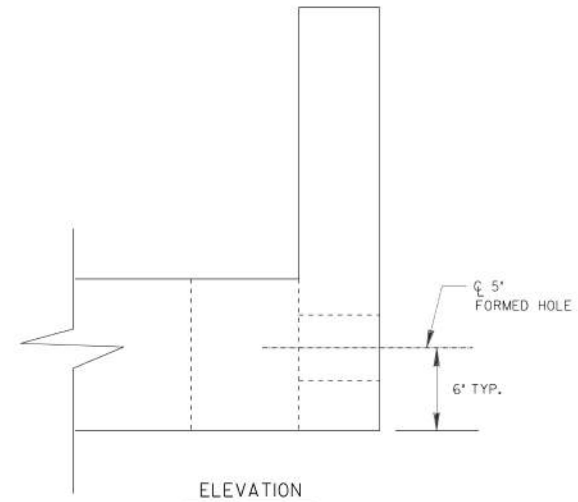


SKETCH SHOWING CONSTRUCTION OF FILLS AT ENDS OF BRIDGES

NO SCALE

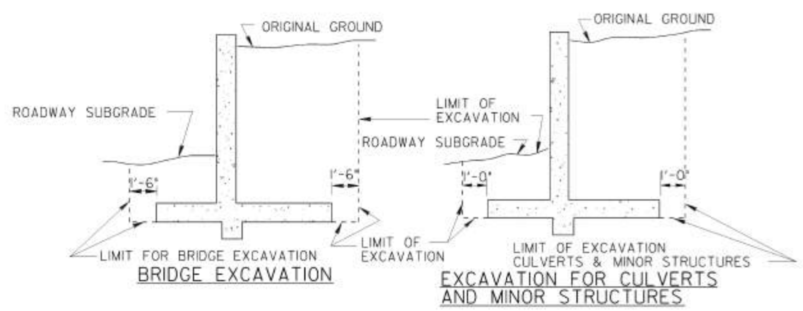


PLAN



ELEVATION

WINGWALL DETAIL



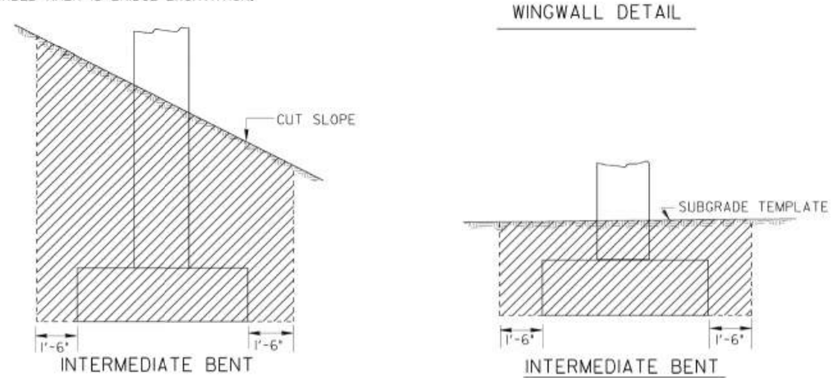
TYPICAL DETAILS OF EXCAVATION AT STRUCTURES

NOTE: WHERE FILL IS PLACED BEFORE CONSTRUCTION OF STRUCTURES THE COST OF EXCAVATION AND BACKFILL WILL BE INCLUDED IN THE COST OF OTHER ITEMS. THERE WILL BE NO PAYMENT FOR EXCAVATION UNDER THIS CONDITION.

NOTES:

1. PERFORATED UNDERDRAIN SHALL EXTEND TO THE INSIDE FACE OF WING AT THE HIGH END OF THE CAP.
2. AT THE LOW END OF THE CAP, CONNECT PERFORATED UNDERDRAIN TO A COMPATIBLE SOLID PIPE FROM THE INSIDE FACE OF WING UNTIL IT EXITS THE SLOPE. SOLID PIPE SHALL HAVE A MINIMUM SLOPE OF 2%.
3. SOLID PIPE MAY BE PLACED AT EITHER END OF CAPS WITH LEVEL BOTTOM.
4. PERFORATED UNDERDRAIN SHALL BE INSTALLED PARALLEL TO BOTTOM OF CAP. LOW POINTS OR SAGS THAT MAY TRAP WATER WILL NOT BE ALLOWED.
5. FILTER FABRIC SHALL NOT BE ATTACHED TO THE END BENT CAP.
6. COST FOR PROVIDING AND INSTALLING FILTER FABRIC, UNDERDRAIN, AND STONE SHALL BE INCLUDED IN THE PRICE BID FOR CONTRACT ITEMS.

SHADED AREA IS BRIDGE EXCAVATION.



TYPICAL EXCAVATION DETAILS AT BRIDGE BENTS IN CUT SECTIONS

NO SCALE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TYPICAL FILL DETAIL AT END OF BRIDGE

NO SCALE REDRAWN SEPT., 1999

DES. DRW. TRA. CHK. (SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) CHIEF ENGINEER

NUMBER 9037

DATE REVISION BY

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY
1796
EDUCATION AGRICULTURE RECREATION

REVISION DATES

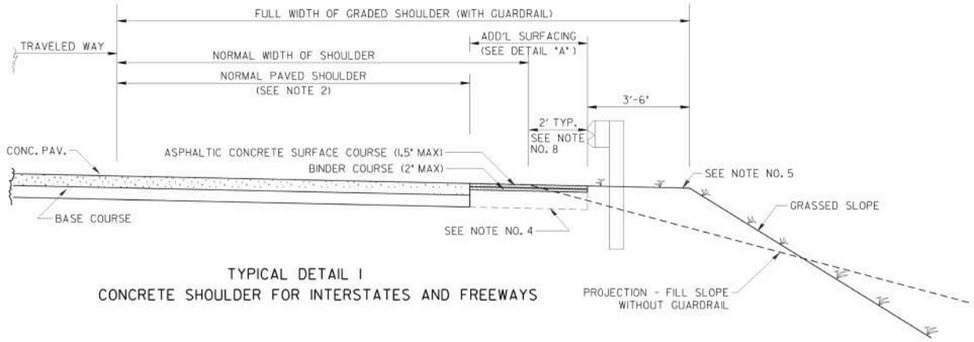
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

G.W. OLIVER ROAD BRIDGE DESIGN

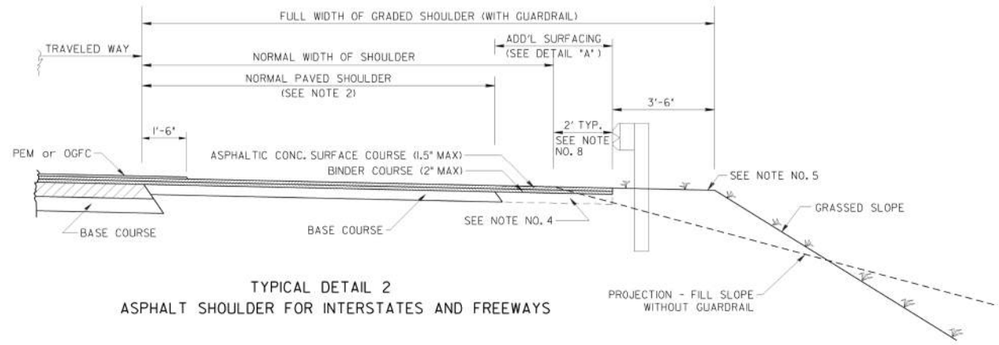
CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No.
05-0010

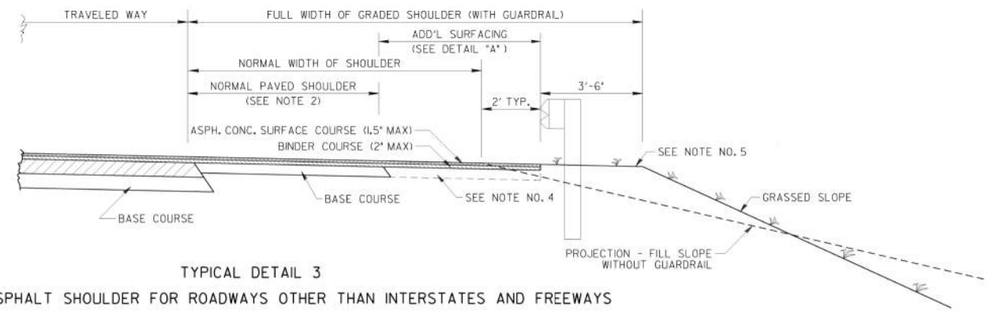
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



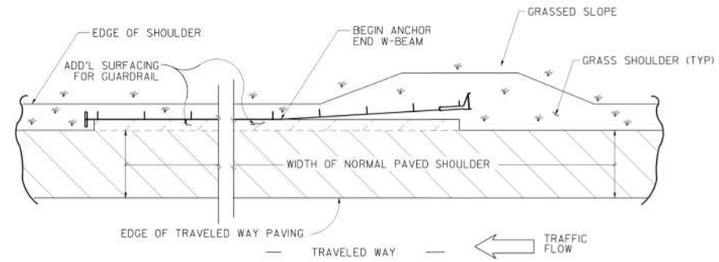
TYPICAL DETAIL 1
CONCRETE SHOULDER FOR INTERSTATES AND FREEWAYS



TYPICAL DETAIL 2
ASPHALT SHOULDER FOR INTERSTATES AND FREEWAYS



TYPICAL DETAIL 3
ASPHALT SHOULDER FOR ROADWAYS OTHER THAN INTERSTATES AND FREEWAYS



DETAIL "A"
ADDITIONAL SURFACING AT GUARDRAIL
TYPICAL PLAN VIEW

GENERAL NOTES:

1. USE OF THESE DETAILS IS WHERE A PAVED SHOULDER WIDTH IS SPECIFIED AND GUARDRAIL IS REQUIRED
2. DETAILS OF NORMAL SHOULDER PAVING ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE PROJECT PLANS FOR MATERIALS AND DIMENSIONS.
3. ADDITIONAL SURFACING SHALL TERMINATE AT THE FACE OF THE GUARDRAIL.
4. THE NORMAL PAVED SHOULDER WIDTH MAY BE EXTENDED TO THE FACE OF THE GUARDRAIL, WHERE SPECIFIED ON PROJECT PLANS.
5. IN AREAS WITH HIGHLY ERODIBLE SOIL, TEMPORARY EROSION CONTROL MEASURES SHALL BE PLACED ON THE SHOULDER UNTIL THE FORESLOPE IS FULLY GRASSED AND STABILIZED.
6. SEE GUARDRAIL STANDARDS FOR SHOULDER WIDENING DIMENSIONS AT ANCHORAGE, WHERE REQUIRED
7. SEE PROJECT PLANS FOR SHOULDER DIMENSIONS.
8. THE 2-FT OFFSET IS NOT REQUIRED FOR FREEWAYS AND INTERSTATES WITH 14-FT WIDE NORMAL SHOULDERS

BJD	4-19-16	ADDED NOTE 8
FBF	3-1-16	REM PVMT UNDER GUARDRAIL
		Rev. NOTES 3 &5, DETAIL 4
	9-30-02	COMBINED TWO S-4 DETAILS
	4-23-02	REVISED
BY	DATE	REVISION

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL
SHOULDER PAVING AND SURFACING AT GUARDRAIL

NO SCALE RE-DRAWN APRIL 2013

NUMBER S-4

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BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

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G.W. OLIVER ROAD BRIDGE DESIGN

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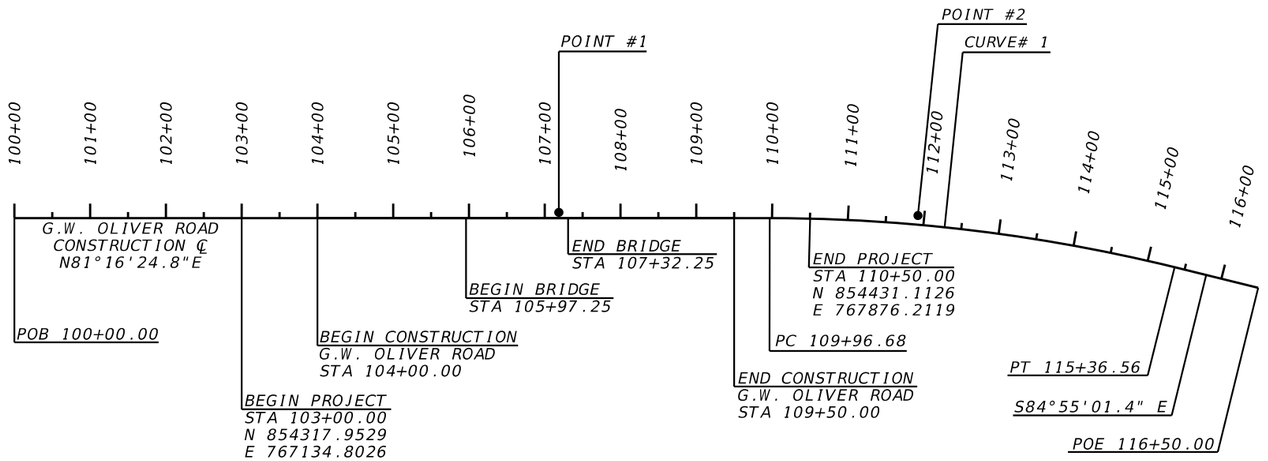
VERIFIED:		DATE:		

GPLN-CE
11/05/2020

CURVE# 1
PI 112+67.94
N 854,464.8054
E 768,091.535
Δ 13°48'33.8"
D 02°33'28.25"
T 271.26'
L 539.88'
R 2240.00'
E 16.36'
ed EXIST
eMAX EXIST
D.S. 45 mph



SURVEY CONTROL						
POINT NO.	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESCRIPTION
#1	854388.9900	767547.3100	143.64'	107+18.51	7.63'LT	MAGNAIL IN ASPHALT
#2	854456.7900	768016.4300	149.95'	111+91.69	12.00'LT	MAGNAIL IN ASPHALT

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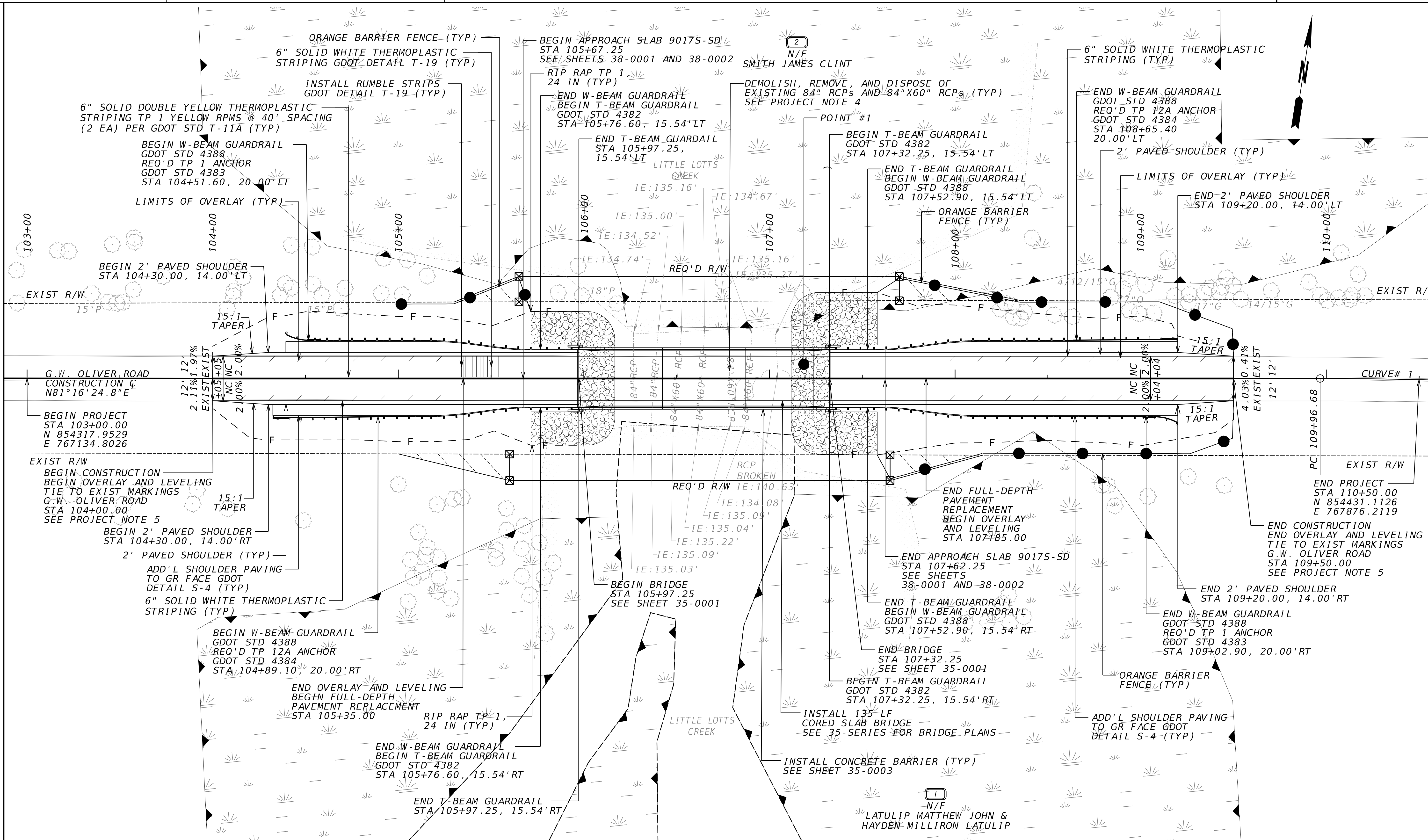
SCALE IN FEET
0 100 200 400

REVISION DATES

CONSTRUCTION LAYOUT DRAWING

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		11-0001
CORRECTED:		DATE:		
VERIFIED:		DATE:		


ORANGE BARRIER FENCE (TYP)
6" SOLID WHITE THERMOPLASTIC STRIPING GDOT DETAIL T-19 (TYP)
INSTALL RUMBLE STRIPS GDOT DETAIL T-19 (TYP)
6" SOLID DOUBLE YELLOW THERMOPLASTIC STRIPING TP 1 YELLOW RPMS @ 40' SPACING (2 EA) PER GDOT STD T-11A (TYP)
BEGIN W-BEAM GUARDRAIL GDOT STD 4388 REQ'D TP 1 ANCHOR GDOT STD 4383 STA 104+51.60, 20.00'LT
LIMITS OF OVERLAY (TYP)
BEGIN APPROACH SLAB 9017S-SD STA 105+67.25 SEE SHEETS 38-0001 AND 38-0002
RIP RAP TP 1, 24 IN (TYP)
END W-BEAM GUARDRAIL BEGIN T-BEAM GUARDRAIL GDOT STD 4382 STA 105+76.60, 15.54'LT
END T-BEAM GUARDAIL STA 105+97.25, 15.54'LT
2
N/F
SMITH JAMES CLINT
DEMOLISH, REMOVE, AND DISPOSE OF EXISTING 84" RCPs AND 84"X60" RCPs (TYP) SEE PROJECT NOTE 4
POINT #1
BEGIN T-BEAM GUARDRAIL GDOT STD 4382 STA 107+32.25, 15.54'LT
END T-BEAM GUARDRAIL BEGIN W-BEAM GUARDRAIL GDOT STD 4388 STA 107+52.90, 15.54'LT
ORANGE BARRIER FENCE (TYP)
6" SOLID WHITE THERMOPLASTIC STRIPING (TYP)
END W-BEAM GUARDRAIL GDOT STD 4388 REQ'D TP 12A ANCHOR GDOT STD 4384 STA 108+65.40 20.00'LT
2' PAVED SHOULDER (TYP)
LIMITS OF OVERLAY (TYP)
END 2' PAVED SHOULDER STA 109+20.00, 14.00'LT
N
LITTLE LOTTS CREEK
IE:135.16'
IE:134.67'
IE:135.00'
IE:134.52'
IE:134.74'
IE:135.16'
IE:135.27'
REQ'D R/W
103+00
104+00
105+00
106+00
107+00
108+00
109+00
110+00
BEGIN 2' PAVED SHOULDER STA 104+30.00, 14.00'LT
EXIST R/W
15"P
18"P
4/12/15"G
17"G
14/15"G
15:1 TAPER
G.W. OLIVER ROAD CONSTRUCTION ℄ N81°16'24.8"E
CURVE# 1
84" RCP
84"X60" RCP
BEGIN PROJECT STA 103+00.00 N 854317.9529 E 767134.8026
EXIST R/W
BEGIN CONSTRUCTION BEGIN OVERLAY AND LEVELING TIE TO EXIST MARKINGS G.W. OLIVER ROAD STA 104+00.00 SEE PROJECT NOTE 5
15:1 TAPER
BEGIN 2' PAVED SHOULDER STA 104+30.00, 14.00'RT
2' PAVED SHOULDER (TYP)
ADD'L SHOULDER PAVING TO GR FACE GDOT DETAIL S-4 (TYP)
6" SOLID WHITE THERMOPLASTIC STRIPING (TYP)
BEGIN W-BEAM GUARDRAIL GDOT STD 4388 REQ'D TP 12A ANCHOR GDOT STD 4384 STA 104+89.10, 20.00'RT
END OVERLAY AND LEVELING BEGIN FULL-DEPTH PAVEMENT REPLACEMENT STA 105+35.00
RIP RAP TP 1, 24 IN (TYP)
END W-BEAM GUARDRAIL BEGIN T-BEAM GUARDRAIL GDOT STD 4382 STA 105+76.60, 15.54'RT
END T-BEAM GUARDRAIL STA 105+97.25, 15.54'RT
RCP BROKEN
REQ'D R/W IE:140.63'
IE:134.08'
IE:135.09'
IE:135.04'
IE:135.22'
IE:135.09'
IE:135.03'
BEGIN BRIDGE STA 105+97.25 SEE SHEET 35-0001
LITTLE LOTTS CREEK
INSTALL 135 LF CORED SLAB BRIDGE SEE 35-SERIES FOR BRIDGE PLANS
INSTALL CONCRETE BARRIER (TYP) SEE SHEET 35-0003
1
N/F
LATULIP MATTHEW JOHN & HAYDEN MILLIRON LATULIP
END FULL-DEPTH PAVEMENT REPLACEMENT BEGIN OVERLAY AND LEVELING STA 107+85.00
END APPROACH SLAB 9017S-SD STA 107+62.25 SEE SHEETS 38-0001 AND 38-0002
END T-BEAM GUARDRAIL BEGIN W-BEAM GUARDRAIL GDOT STD 4388 STA 107+52.90, 15.54'RT
END BRIDGE STA 107+32.25 SEE SHEET 35-0001
BEGIN T-BEAM GUARDRAIL GDOT STD 4382 STA 107+32.25, 15.54'RT
ADD'L SHOULDER PAVING TO GR FACE GDOT DETAIL S-4 (TYP)
ORANGE BARRIER FENCE (TYP)
END W-BEAM GUARDRAIL GDOT STD 4388 REQ'D TP 1 ANCHOR GDOT STD 4383 STA 109+02.90, 20.00'RT
END 2' PAVED SHOULDER STA 109+20.00, 14.00'RT
END CONSTRUCTION END OVERLAY AND LEVELING TIE TO EXIST MARKINGS G.W. OLIVER ROAD STA 109+50.00 SEE PROJECT NOTE 5
END PROJECT STA 110+50.00 N 854431.1126 E 767876.2119
EXIST R/W
PC 109+96.68
15:1 TAPER

Legend	
PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	C F
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	
BEGIN LIMIT OF ACCESS	BLA
END LIMIT OF ACCESS	ELA
EXISTING LIMIT OF ACCESS	
REQ'D LIMIT OF ACCESS	
EXISTING LIMIT OF ACCESS & R/W	
REQ'D LIMIT OF ACCESS & R/W	
ORANGE BARRIER FENCE	
ESA - ENV. SENSITIVE AREA	

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SCALE IN FEET
0 25 50 100

REVISION DATES

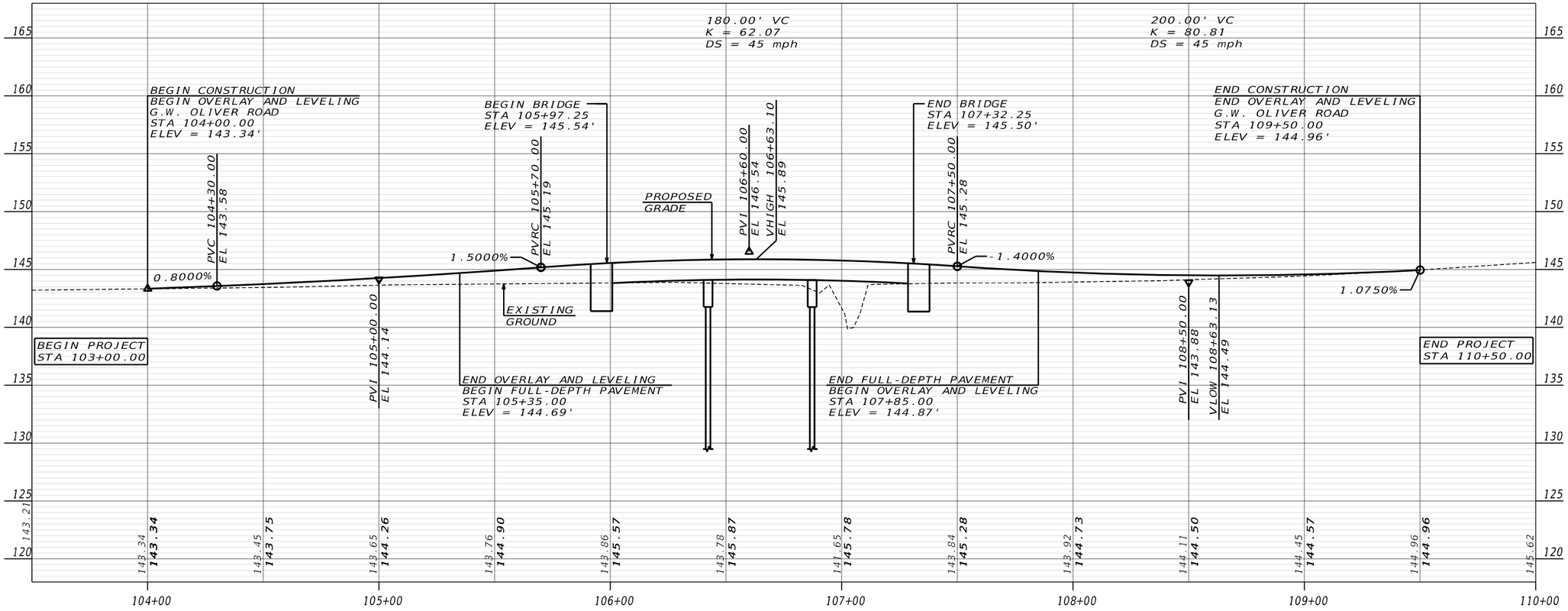
CONSTRUCTION PLAN

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
13-0001

GPLN-CE 11/05/2020



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
EXISTING LIMIT OF ACCESS
REQ'D LIMIT OF ACCESS
EXISTING LIMIT OF ACCESS & R/W
REQ'D LIMIT OF ACCESS & R/W
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA

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VERTICAL 1" = 10'
HORIZONTAL 1" = 50'

REVISION DATES

MAINLINE PROFILE

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED: DATE:
BACKCHECKED: DATE:
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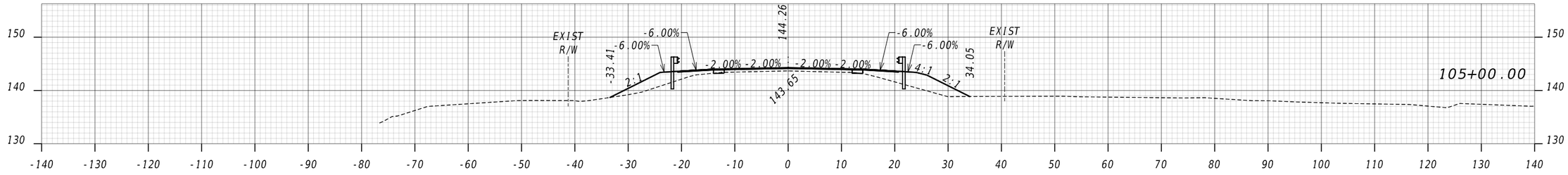
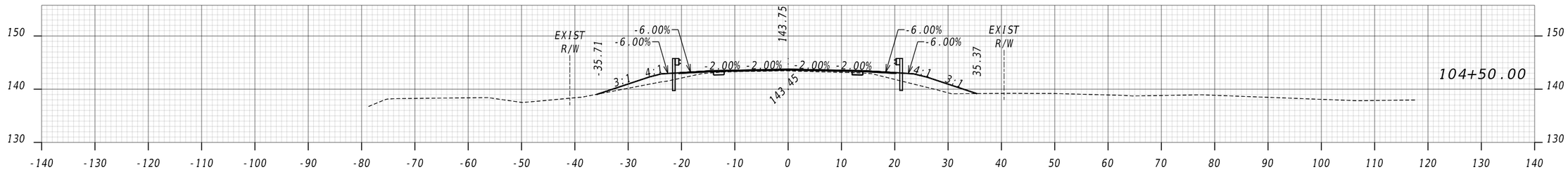
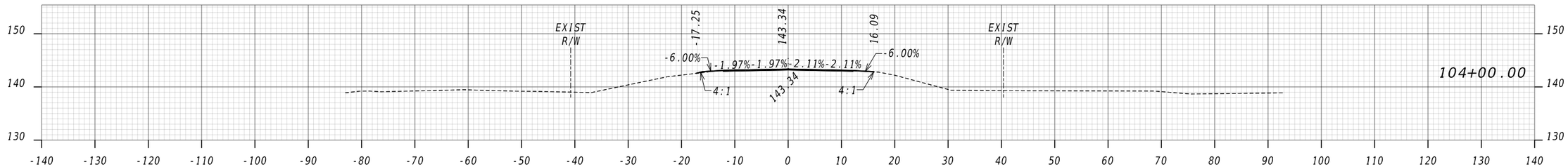
VERIFIED: DATE:

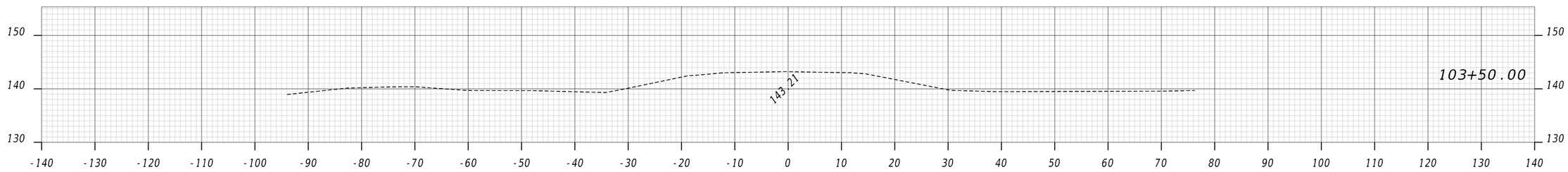
DRAWING No.
15-0001

GPLN-CE
11/05/2020









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VERTICAL 1" = 20'
HORIZONTAL 1" = 20'

REVISION DATES

EARTHWORK CROSS SECTIONS

G.W. OLIVER ROAD BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
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VERIFIED:		DATE:		

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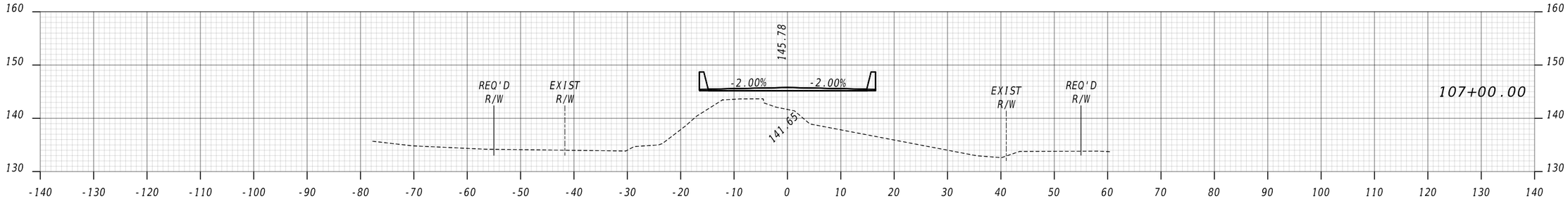
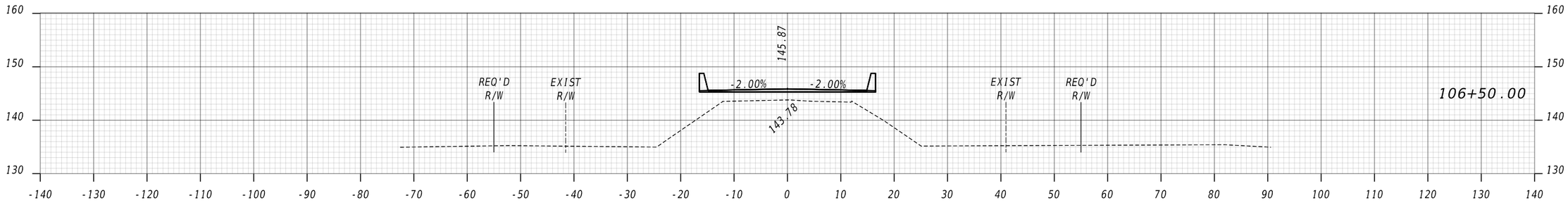
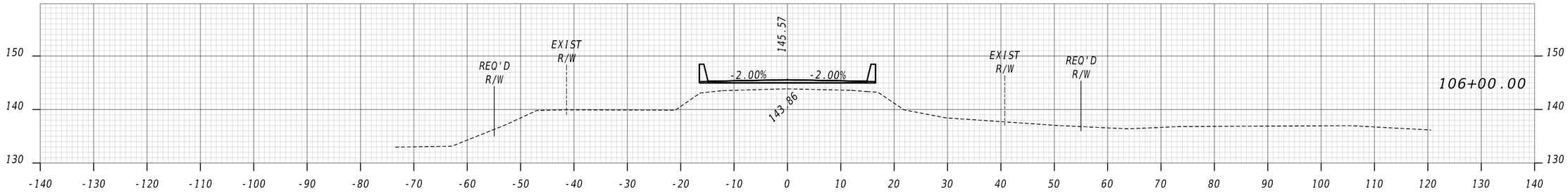
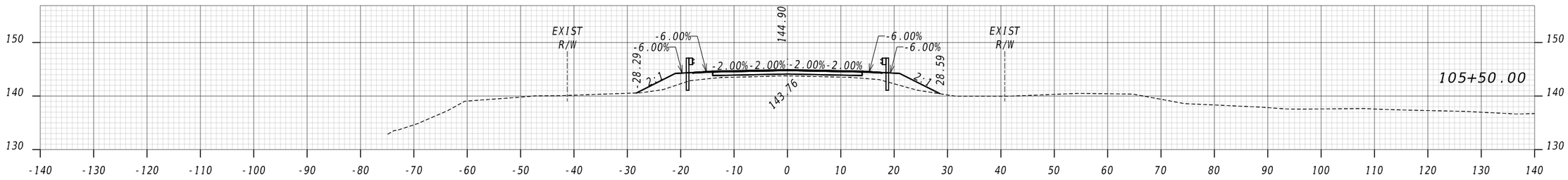
END BRIDGE STA 107+32.25







BEGIN BRIDGE STA 105+97.25



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BULLOCH COUNTY

VERTICAL 1" = 20'
HORIZONTAL 1" = 20'

REVISION DATES

EARTHWORK CROSS SECTIONS

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		23-0002
VERIFIED:		DATE:		

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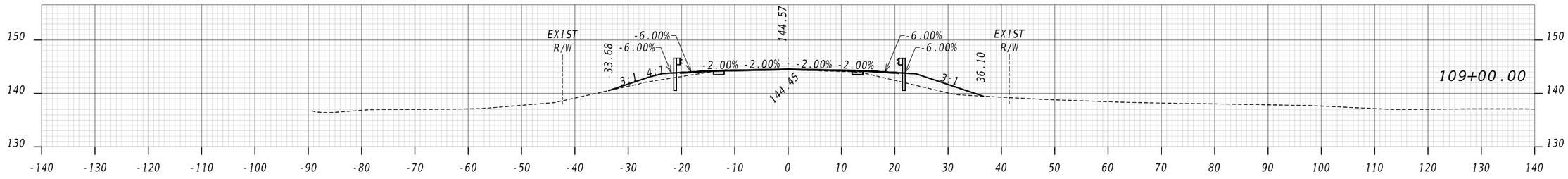

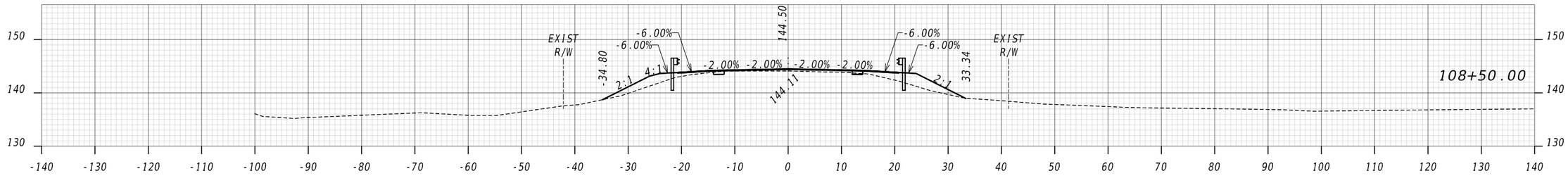

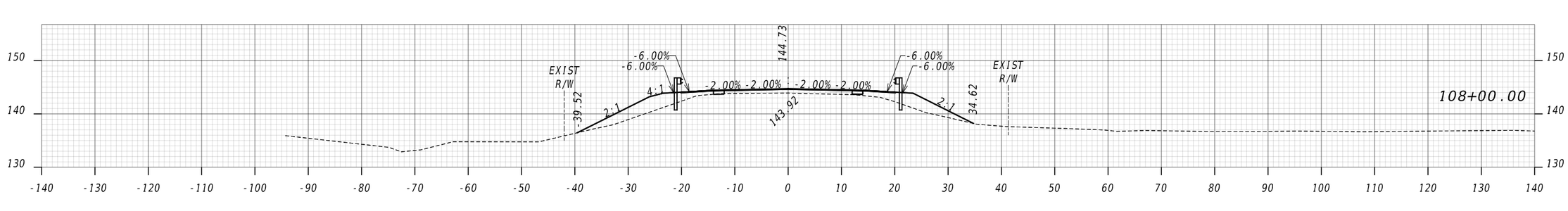

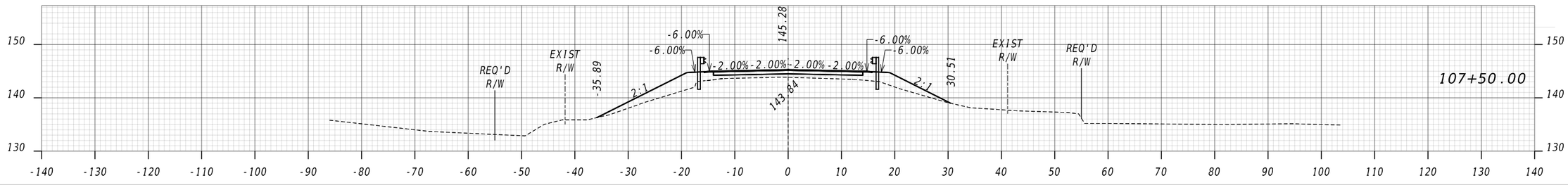

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VERTICAL 1" = 20'
HORIZONTAL 1" = 20'

REVISION DATES

EARTHWORK CROSS SECTIONS

G.W. OLIVER ROAD
BRIDGE DESIGN

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BACKCHECKED:		DATE:		23-0003
CORRECTED:		DATE:		
VERIFIED:		DATE:		

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11/05/2020

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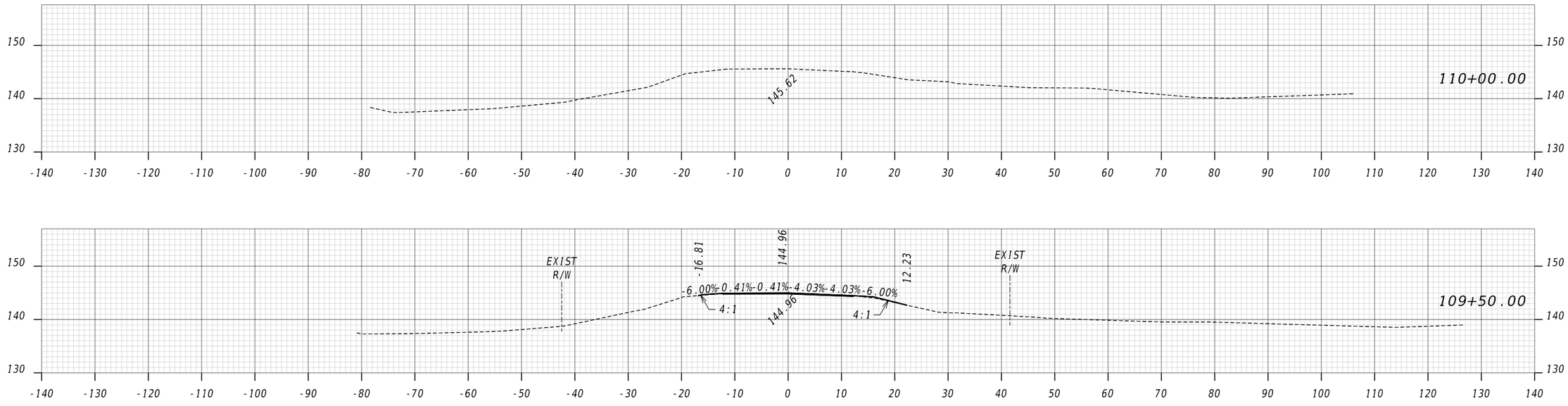

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BULLOCH COUNTY

VERTICAL 1" = 20'
HORIZONTAL 1" = 20'

REVISION DATES

EARTHWORK CROSS SECTIONS

G.W. OLIVER ROAD
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UTILITY LINECODES

OVERHEAD

EXISTING	TO BE REMOVED	PROPOSED	TYPE OF UTILITY
			ELECTRIC
			ELECTRIC/TELECOMMUNICATIONS
			ELECTRIC/CABLE TV
			ELECTRIC/TELECOMMUNICATIONS/CABLE TV
			ELECTRIC/TRAFFIC CONTROL
			ELECTRIC/TELECOMMUNICATIONS/TRAFFIC CONTROL
			GUY WIRE
			TRAFFIC CONTROL
			TELECOMMUNICATIONS
			TELECOMUNICATIONS/CABLE TV
			CABLE TV

UNDERGROUND

			ELECTRIC
			TELECOMMUNICATIONS
			CABLE TV
			WATER
			WATER FOR LABELED PIPE SIZES
			NON-POTABLE WATER
			NON-POTABLE WATER FOR LABELED PIPE SIZES
			STEAM
			STEAM FOR LABELED PIPE SIZES
			SANITARY SEWER WITH FLOW DIRECTION
			SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES
			SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION
			GAS
			GAS FOR LABELED PIPE SIZES
			PETROLEUM
			PETROLEUM FOR LABELED PIPE SIZES

UTILITY SYMBOLS

EXISTING	PROPOSED	TEMPORARY	
			UTILITY POLE/GUY POLE
			LIGHT POLE
			GUY ANCHOR
			MARKER
			SPLICE BOX
			CABINET
			VENT
			PEDESTRIAN LIGHTING
			ELECTRIC MANHOLE
			HAND HOLE
			TRANSFORMER
			ELECTRIC METER
			ELECTRIC BOX
			TRANSMISSION TOWER
			TELECOMMUNICATIONS MANHOLE
			TELECOMMUNICATIONS BOX
			TELECOMMUNICATIONS MARKER
			SUBCRIBER LOOP CARRIER (aka "SLICK")
			PHONE BOOTH
			CABLE TV PEDESTAL
			CABLE TV MANHOLE
			WATER VALVE
			WATER METER
			WATER MANHOLE

EXISTING	PROPOSED	TEMPORARY	
			FIRE HYDRANT ASSEMBLY (INCLUDES ASSOCIATED VALVE)
BFP	BFP	BFP	BACKFLOW PREVENTER
PIV	PIV	PIV	PRESSURE INDICATOR VALVE
ARV	ARV	ARV	AIR RELEASE VALVE
W	W	W	WELL
W	W	W	WATER VAULT
W	W	W	WATER VALVE MARKER
			STAND PIPE
			CLEANOUT
SS	SS	SS	SANITARY SEWER MANHOLE
ARV	ARV	ARV	AIR RELEASE VALVE
GT	GT	GT	GREASE TRAP
S	S	S	SANITARY SEWER FORCE MAIN VALVE
G	G	G	GAS VALVE
G	G	G	GAS METER
G	G	G	GAS MANHOLE
G	G	G	GAS MARKER
GPR	GPR	GPR	GAS PRESSURE REGULATOR
G	G	G	GAS VAULT
GTS	GTS	GTS	GAS TEST STATION
P	P	P	PETROLEUM VALVE

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
EXISTING LIMIT OF ACCESS
REQ'D LIMIT OF ACCESS
EXISTING LIMIT OF ACCESS & R/W
REQ'D LIMIT OF ACCESS & R/W
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA

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BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

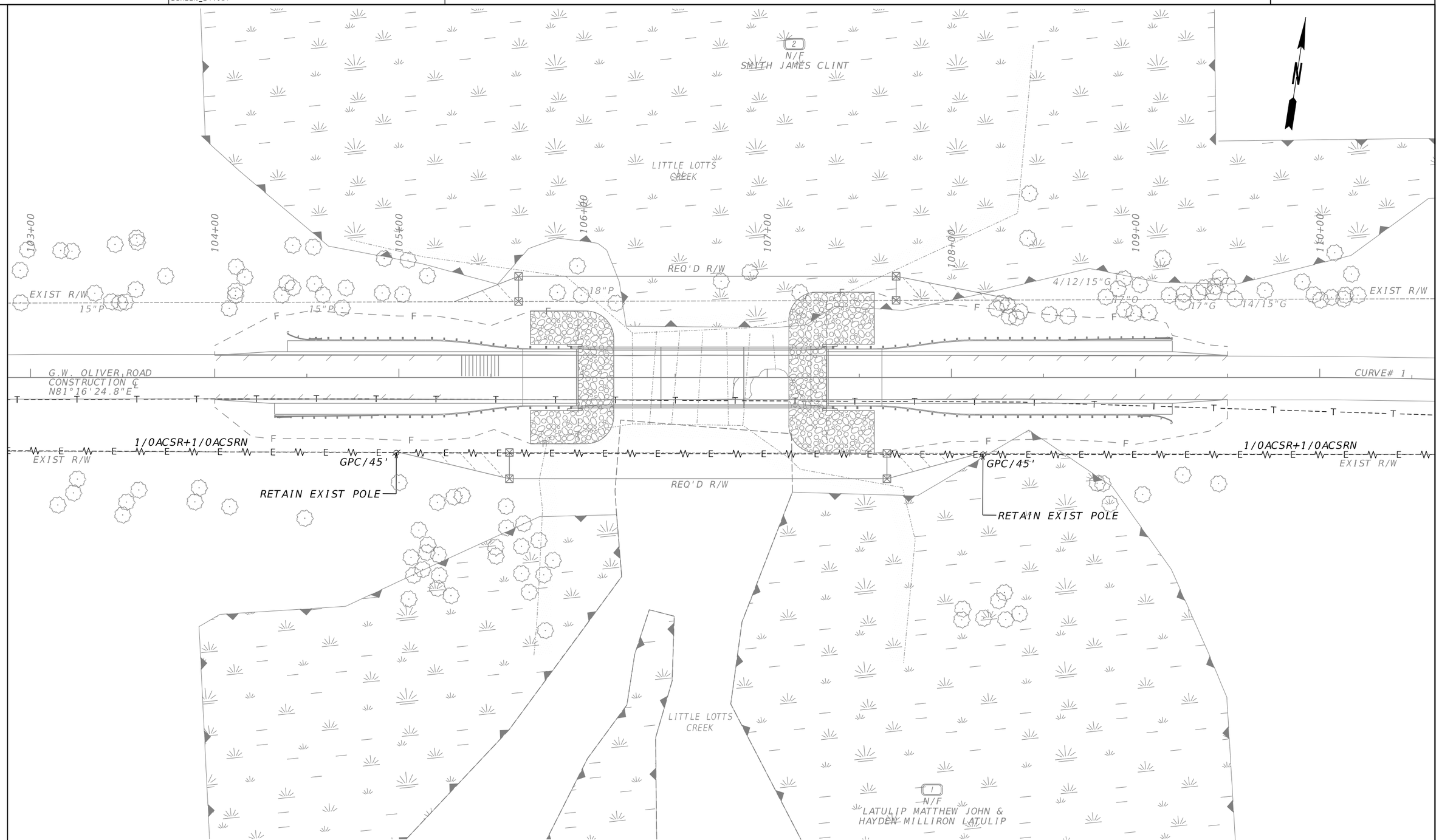
UTILITY PLANS

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		24-0000
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GEORGIA811 Contact 811 before you dig.

GPLN-CE
11/05/2020



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
EXISTING LIMIT OF ACCESS
REQ'D LIMIT OF ACCESS
EXISTING LIMIT OF ACCESS & R/W
REQ'D LIMIT OF ACCESS & R/W
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY

SCALE IN FEET
0 25 50 100

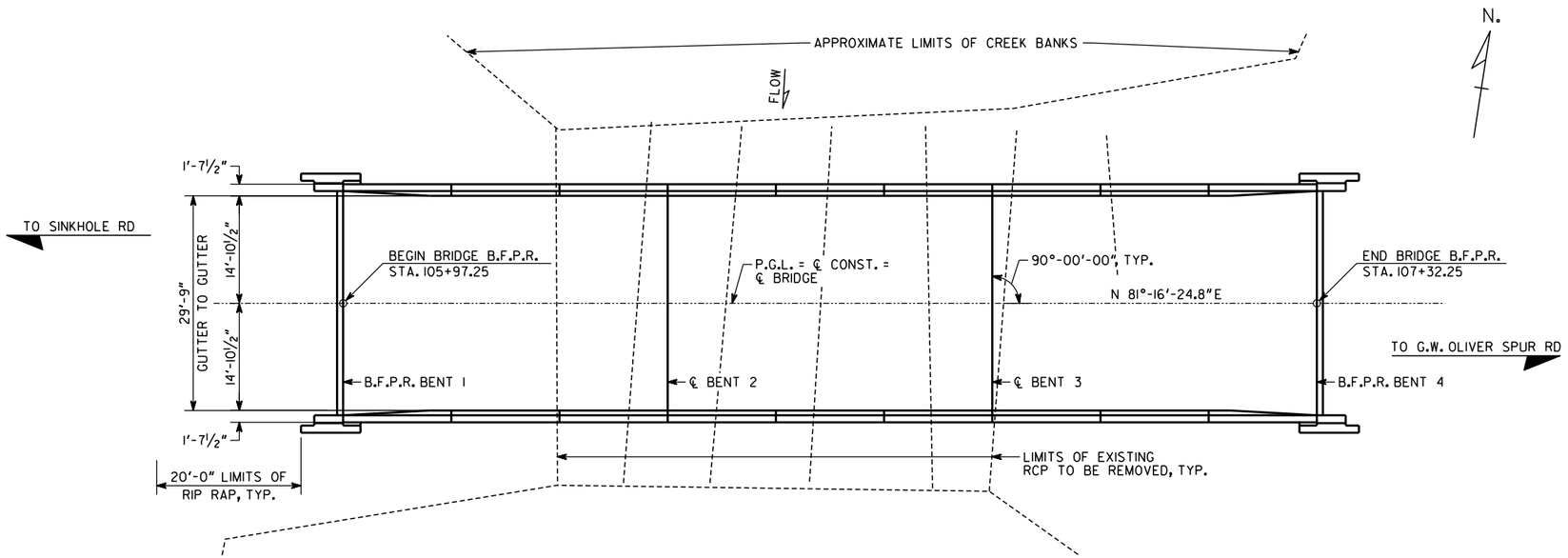
REVISION DATES

UTILITY PLANS

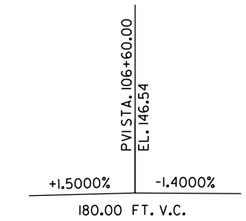
G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		24-0001
CORRECTED:		DATE:		
VERIFIED:		DATE:		

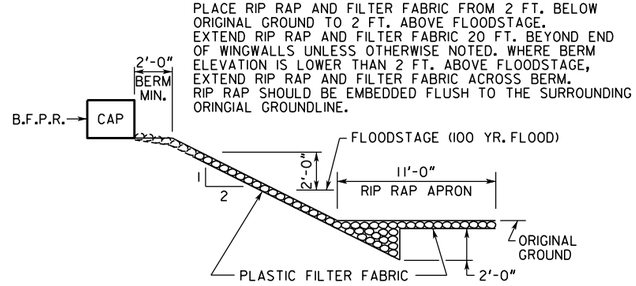
GPLN-CE
11/05/2020



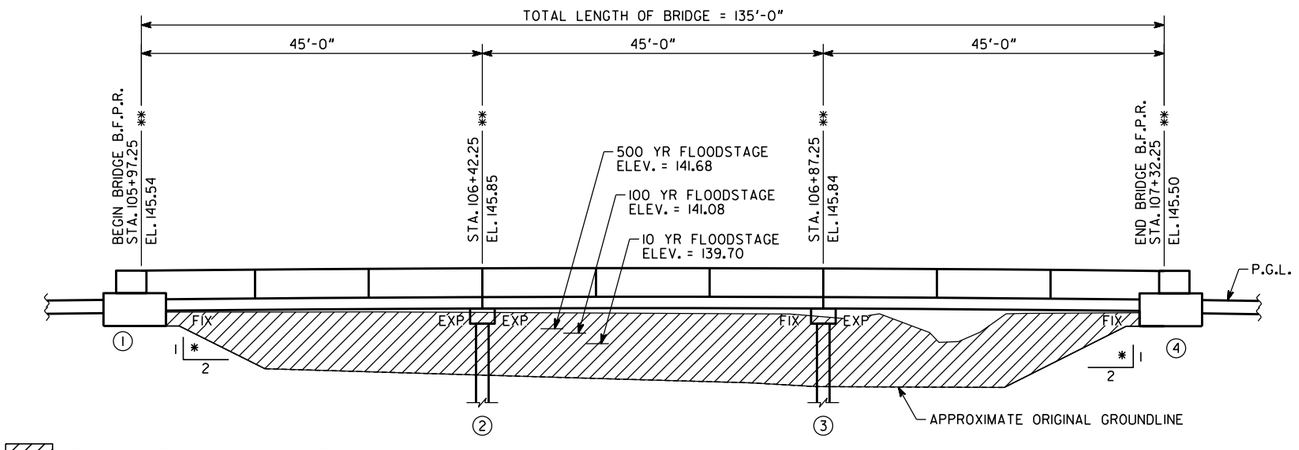
PLAN



VERTICAL CURVE DATA



RIP RAP DETAIL
NO SCALE



ELEVATION

NOTES

1. ALL BENTS ARE PARALLEL TO BENT 3.
2. END BENT PILES NOT SHOWN.
* 3. SLOPE NORMAL TO END BENT.
** 4. STATIONS AND ELEVATIONS ARE AT INTERSECTION OF PROFILE GRADE LINE AND B.F.P.R. OR ℄ BENT.

BRIDGE SERIAL NO. 031-5051-0

BRIDGE I.D. NO. 031-00252X-006.48N

BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

PLAN AND ELEVATION
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK
BULLOCH COUNTY

SCALE: 1" = 10'-0" (UNLESS OTHERWISE NOTED) MARCH 2026

DRAWING NO. 35-0001

BRIDGE SHEET 1 OF 11

DATE	REVISIONS	BY

DESIGNED HTB | CHECKED NMB | REVIEWED
DRAWN ZLH | DESIGN GROUP | APPROVED

Zach.Hodges 3/12/2026 8:24:49 AM

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BRIDGE CONSISTS OF

3 - 45'-0" PSC, 21 IN, CORED SLAB SPANS ---------- SPECIAL DESIGN

2 - PSC PILE END BENTS ---------- SPECIAL DESIGN

2 - PSC PILE INTERMEDIATE BENTS ---------- SPECIAL DESIGN

4 - END POST AND GUARDRAIL ATTACHMENT DETAIL --------- GA. STD. 3054 (9-30-02)
(L = 4'-0"; W = 1'-1"; H = 3'-6")

BAR BENDING DETAILS ---------- GA. STD. 3901 (8-69)

TYPICAL FILL DETAIL AT END OF BRIDGE ---------- GA. STD. 9037 (9-99)

DRAINAGE DATA

DRAINAGE AREA ---------- 22.8 SQ MILES

FLOOD FREQUENCY	TOTAL DISCHARGE	DISCHARGE THRU BRIDGE	MEAN VELOCITY	AREA OF OPENING UNDER FLOODSTAGE	BACKWATER
10 YEAR	1,250 CFS	1,250 CFS	1.37 FPS	984 SQ FT	0.29 FT
100 YEAR	2,460 CFS	2,460 CFS	2.10 FPS	1,248 SQ FT	0.51 FT
500 YEAR	3,484 CFS	3,484 CFS	2.71 FPS	1,400 SQ FT	0.38 FT

TRAFFIC DATA

NO TRAFFIC DATA

UTILITIES

NO UTILITES ON BRIDGE

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD SPECIFICATIONS, 2021 EDITION, AND 2024 SUPPLEMENTAL SPECIFICATIONS AS MODIFIED BY CONTRACT DOCUMENTS.

REINFORCING STEEL - PLACE AND TIE ALL REINFORCING STEEL IN ACCORDANCE WITH THE GEORGIA DOT SPECIFICATIONS. DO NOT WELD REINFORCING STEEL. MAINTAIN 2 INCH MINIMUM CLEARANCE ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

CHAMFER - CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROLS - ROAD TO BE CLOSED DURING BRIDGE CONSTRUCTION.

EXISTING BRIDGE PLANS - ORIGINAL BRIDGE PLANS ARE NOT AVAILABLE.

WAITING PERIOD - NONE REQUIRED.

PLAN DRIVING OBJECTIVE - SEE SUBSTRUCTURE DETAILS.

DRIVING RESISTANCE - DETERMINE DRIVING RESISTANCE FOR PILES USING DYNAMIC PILE TESTING IN ACCORDANCE WITH SUB-SECTION 520.3.05.D.2 OF THE GEORGIA DOT SPECIFICATION. DYNAMIC PILE TESTING SHALL BE REQUIRED FOR EACH TEST PILE.

DYNAMIC PILE TESTING - PERFORM PILE TESTING USING THE PILE DRIVING ANALYZER (PDA) IN ACCORDANCE WITH SPECIAL PROVISION SECTION 523. NOTIFY THE OWNER AND GEOTECHNICAL ENGINEER OF RECORD TWO WEEKS PRIOR TO DRIVING TWO WEEKS PRIOR TO DRIVING PILES. SUBMIT ALL FILES REQUIRED BY SPECIAL PROVISION 523 FOR REVIEW AND APPROVAL.

WAVE EQUATION - PERFORM WAVE EQUATION ANALYSIS (WEAP) IN ACCORDANCE WITH SUB-SECTION 520.3.05.D.2 OF THE GEORGIA DOT SPECIFICATIONS. PROVIDE RESULTS OF THE WEAP TO THE OWNER AND GEOTECHNICAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL TWO WEEKS PRIOR TO DRIVING PILES.

PILE LENGTHS - ERRATIC PILE LENGTHS CAN BE EXPECTED.

GENERAL NOTES (CONT.)

PILE DRIVING - SHOULD PILES FAIL TO OBTAIN DRIVING RESISTANCE AFTER ACHIEVING THE PILE TIP ELEVATIONS SHOWN, ALLOW PILES TO FREEZE A MINIMUM OF 24 HOURS AND RESTRIKE WITH A WARM HAMMER.

BENT NUMBER	PILE TIP ELEVATION
1	70.00
2	55.00
3	55.00
4	70.00

TEST PILES - DRIVE TEST PILES AT THE FOLLOWING LOCATIONS:

ONE 20 IN SQ PSC X 77 FT AT BENT 1 LEFT
ONE 20 IN SQ PSC X 92 FT AT BENT 2 RIGHT
ONE 20 IN SQ PSC X 92 FT AT BENT 3 LEFT
ONE 20 IN SQ PSC X 77 FT AT BENT 4 RIGHT

SMOOTH DOWEL BARS - PLACE SMOOTH DOWEL BARS IN FORMED 3" DIAMETER X 12" DEEP HOLES AND GROUT IN PLACE SIMILAR TO ANCHOR BOLTS, SEE SUB-SECTION 501.3.05.B.3 OF THE GEORGIA DOT SPECIFICATIONS. STIRRUPS MAY BE SHIFTED SLIGHTLY TO CLEAR FORMED HOLES.

WELDING - ALL WELDING ON GEORGIA DOT PROJECTS SHALL BE PERFORMED BY GDOT CERTIFIED WELDERS THAT HAVE IN THEIR POSSESSION A CURRENT WELDING CERTIFICATION CARD ISSUED BY THE OFFICE OF MATERIALS AND TESTING. USE ONLY E70XX (EXCLUDING E7014 AND E7024) LOW HYDROGEN ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING.

BRIDGE CULVERT REMOVAL - REMOVE EXISTING BRIDGE CULVERT AS PER SUB-SECTION 540.3.05 OF THE GEORGIA DOT SPECIFICATIONS. INCLUDE THE COST IN THE PRICE BID FOR "LUMP - REMOVAL OF EXISTING BR, BR NO-1".

SALVAGE MATERIAL - NO MATERIAL REMOVED FROM THE EXISTING STRUCTURE SHALL BE SALVAGED FOR USE BY THE OWNER.

ASPHALT PLACEMENT - USE OF VIBRATORY ROLLERS FOR ASPHALT PLACEMENT ON THE BRIDGE IS NOT ALLOWED. ONLY USE STATIC COMPACTION ON THE BRIDGE.

JOINTS IN OVERLAY - WITHIN 24 HOURS AFTER OVERLAY IS PLACED MAKE A 1/2 INCH WIDE BY 3/4 INCH DEEP SAW CUT OVER EACH EXPANSION JOINT LOCATION AND SEAL WITH RUBBERIZED ASPHALT IN ACCORDANCE WITH SECTION 407 OF THE GEORGIA DOT SPECIFICATIONS. INCLUDE COST OF RUBBERIZED ASPHALT IN THE OVERALL BID SUBMITTED.

WATERPROOFING MEMBRANE - INSTALL APPROVED BRIDGE DECK WATERPROOFING MEMBRANE IN ACCORDANCE WITH SECTION 533 OF THE GEORGIA DOT SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS. TURN MEMBRANE 4 INCHES UP AT FACE OF EACH BARRIER AND EXTEND MEMBRANE 18 INCHES PAST BEGINNING AND END OF BRIDGE. SEE QPL-22 FOR APPROVED WATERPROOFING MATERIALS.

GROUT - FILL ALL SHEAR KEYS WITH 5,000 PSI 3 DAY STRENGTH GROUT AS PER SECTION 506 OF THE GEORGIA DOT SPECIFICATIONS. CURE GROUT A MINIMUM OF 5 DAYS BEFORE CASTING CONCRETE BARRIERS. IN LIEU OF MIXING MORTAR ON SITE, PRE-MIXED BAG MORTAR MEETING THE REQUIREMENTS IN SECTION 506 MAY BE USED. PREPACKAGED MATERIAL MUST MEET THE REQUIREMENTS OF ASTM C1107/C1107M-14A AND INCLUDE ALUMINUM POWDER. INCLUDE COST OF GROUT IN THE PRICE BID FOR 'PSC CORED SLAB BEAMS."

SHOP DRAWING SUBMISSION - SUBMIT SHOP DRAWINGS WITH DEPENDENT INFORMATION AS A SET. SHOP DRAWINGS FOR BEAMS, METAL DECK FORMS AND STEEL DIAPHRAGMS WILL NOT BE REVIEWED UNTIL ALL HAVE BEEN RECEIVED.

INCIDENTAL ITEMS - INCLUDE THE COST INCIDENTAL TO THE WORK THAT IS NOT SPECIFICALLY COVERED BY THE GEORGIA STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS IN THE OVERALL BID SUBMITTED. THIS INCLUDES THE COST OF WATERPROOFING, JOINT FILLERS AND OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK.

DESIGN DATA

SPECIFICATIONS ---------- AASHTO LRFD 9TH EDITION, 2020
(DESIGNED FOR SEISMIC PERFORMANCE ZONE 2, AS = 0.202, SDI = 0.213)

DESIGN VEHICLE LIVE LOAD ---------- HL-93

SNBI BRIDGE RAIL CODE ---------- M094

FUTURE PAVING ALLOWANCE ---------- 30 LBS PER SQ FT

CONCRETE: BARRIER ---------- CLASS D, f'_c = 4,000 PSI
PSC BEAMS ---------- CLASS AAA, f'_c = SEE BEAM SHEETS
PSC BEAM ALLOWABLE TENSION ---------- SEE BEAM SHEETS
SUBSTRUCTURE ---------- CLASS A, f'_c = 3,000 PSI

REINFORCEMENT STEEL: ---------- GRADE 60, f_y = 60,000 PSI

PRETENSIONING STRANDS: ---------- f'_s = 270,000 PSI

SUMMARY OF QUANTITIES

PAY ITEM NUMBER	QUANTITY	UNIT	PAY ITEM
500-2100	267	LF	CONCRETE BARRIER
500-3101	43	CY	CLASS A CONCRETE
507-1021	1464	LF	PSC CORED SLAB BEAMS, 21 IN, BR NO - 1
511-1000	9654	LB	BAR REINF STEEL
511-3000	LUMP	LS	SUPERSTR REINF STEEL, BR NO - 1 (5408)
520-2220	1600	LF	PILING, PSC, 20 IN SQ
520-3220	4	EA	TEST PILE, PSC, 20 IN SQ
520-4220	1	EA	LOAD TEST, PSC, 20 IN SQ (IF REQD)
523-1100	4	EA	DYNAMIC PILE TEST
533-0010	457	SY	BRIDGE DECK WATERPROOFING MEMBRANE, METHOD A
540-1102	LUMP	LS	REMOVAL OF EXISTING BR, BR NO-1
603-2024	610	SY	STN DUMPED RIP RAP, TP 1, 24 IN
603-7000	610	SY	PLASTIC FILTER FABRIC

BRIDGE NO.1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

GENERAL NOTES
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK
BULLOCH COUNTY

NO SCALE MARCH 2026

DESIGNED HTB CHECKED NMB REVIEWED
DRAWN ZLH CRP DESIGN GROUP APPROVED

DRAWING NO. 35-0002
BRIDGE SHEET 2 OF 11

DATE | REVISIONS | BY

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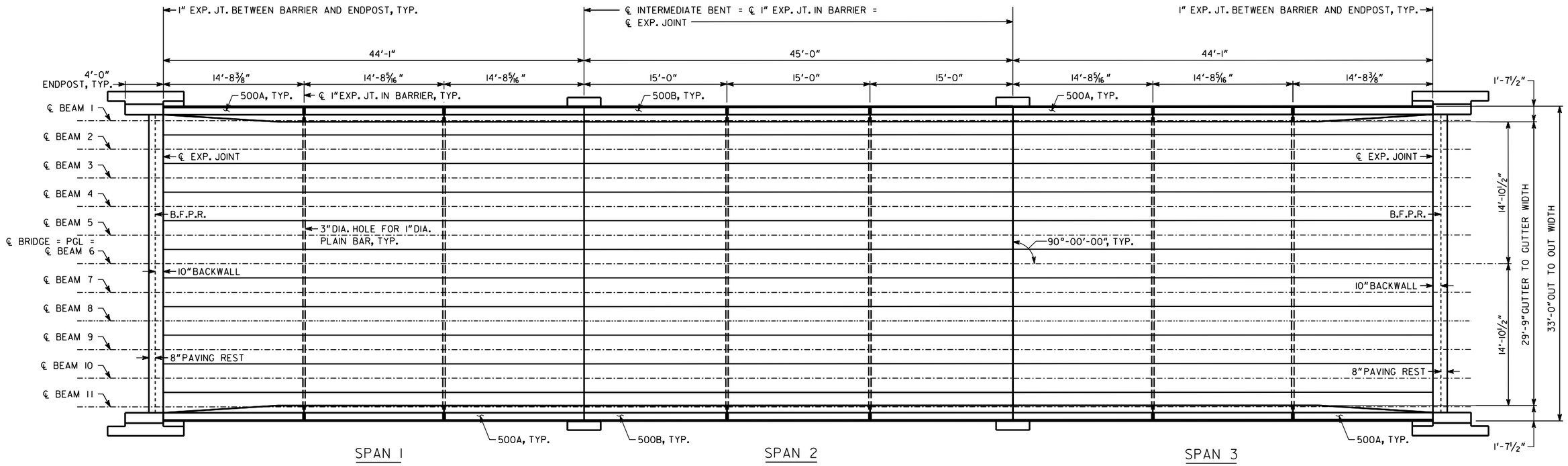
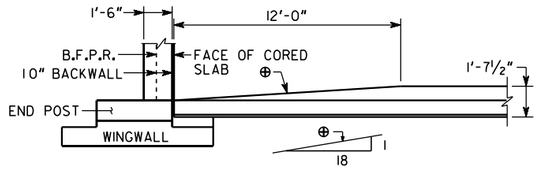
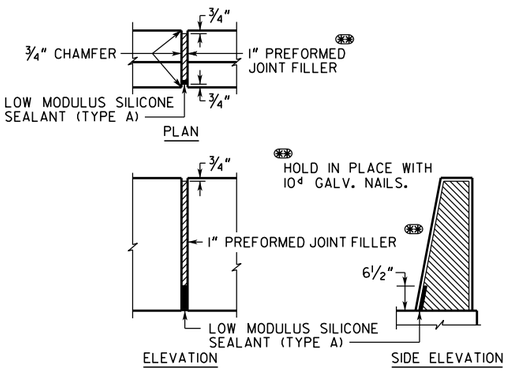




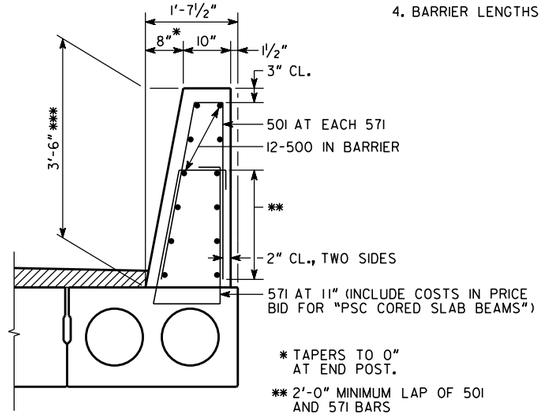
BARRIER TRANSITION DETAIL

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



DETAILS OF 1" EXPANSION JOINT IN BARRIER

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



BARRIER DETAIL

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

* TAPERS TO 0" AT END POST.

** 2'-0" MINIMUM LAP OF 501 AND 571 BARS

*** VARY DIMENSION TO ACCOUNT FOR BEAM CAMBER SO TOP OF BARRIER FOLLOWS ROADWAY PROFILE.

NOTES

1. SEE CORED SLAB BEAM DETAILS SHEET FOR LOCATIONS OF HOLES FOR 1" DIA. PLAIN BARS.
2. CAST BARRIER AFTER ALL KEYS HAVE BEEN FILLED WITH MORTAR FOR A MINIMUM OF 5 DAYS.
3. BARRIER EXPANSION JOINTS MAY BE SHIFTED SLIGHTLY TO AVOID 571 BARS CAST IN BEAMS.
4. BARRIER LENGTHS ARE MEASURED ALONG FRONT FACE OF BARRIER.

SUPERSTRUCTURE QUANTITIES				
ITEM	SPAN 1	SPAN 2	SPAN 3	TOTAL
LUMP - LB SUPERSTR REINF STEEL	1794	1820	1794	5408

BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

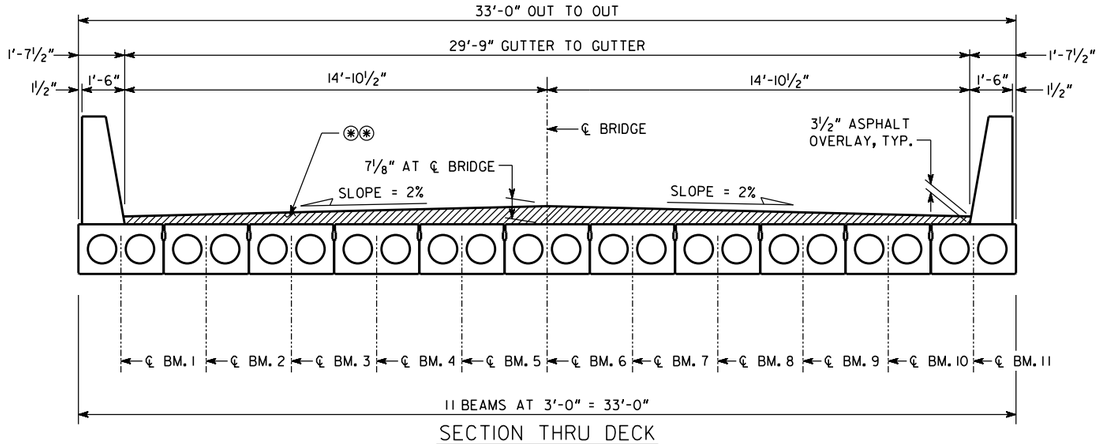
DECK PLAN
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK
BULLOCH COUNTY

SCALE: 3/16" = 1'-0" (UNLESS OTHERWISE NOTED) MARCH 2026

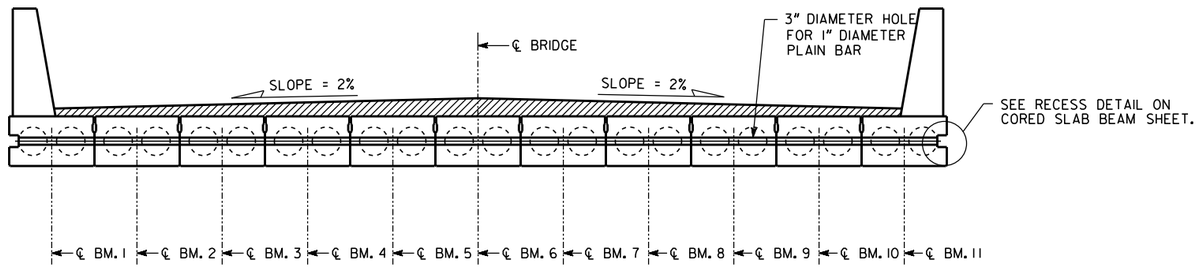
DRAWING NO. 35-0003
BRIDGE SHEET 3 OF 11

REVISIONS | DATE | BY

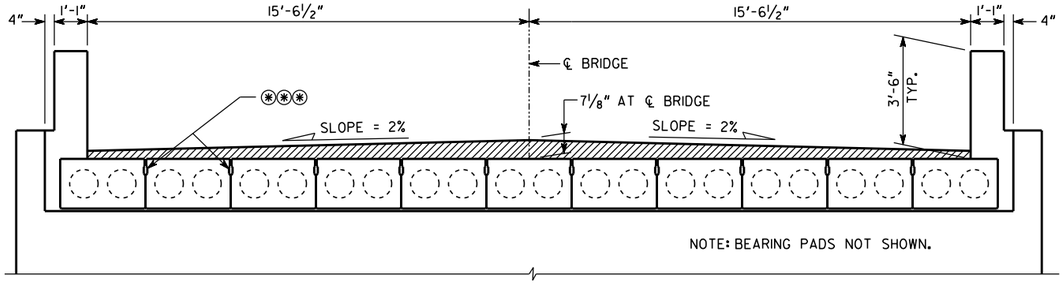
DESIGNED HTB | CHECKED NMB | REVIEWED
DRAWN ZLH CRP | DESIGN GROUP | APPROVED



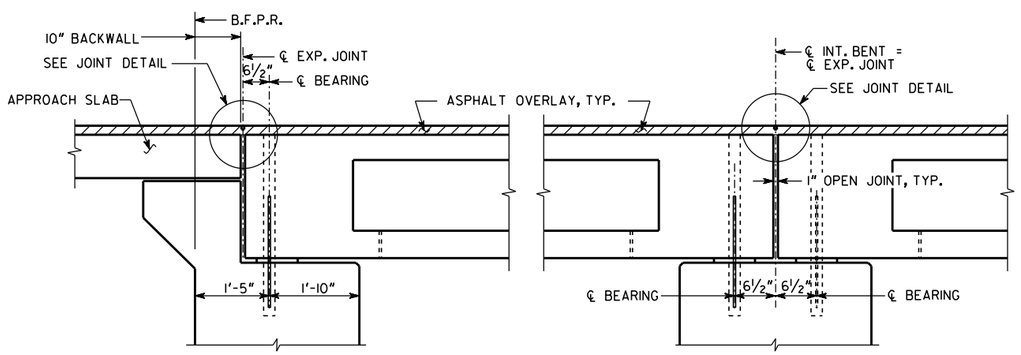
SECTION THRU DECK



SECTION THRU DIAPHRAGM



SECTION THRU DECK AT END BENT

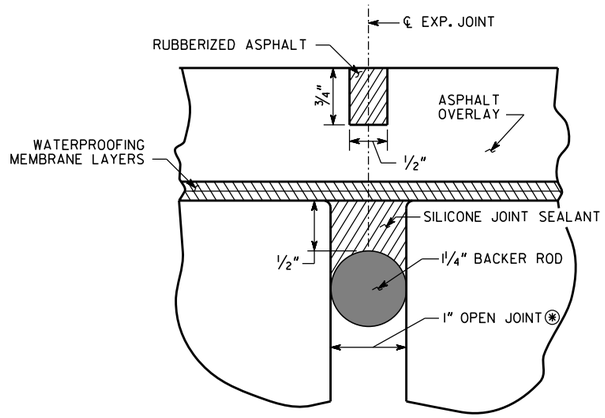


SECTION AT END BENT

SCALE: ¾" = 1'-0"

SECTION AT INTERMEDIATE BENT

SCALE: ¾" = 1'-0"



JOINT DETAIL

NO SCALE

NOTES:

ADDITIONAL ASPHALT MAY BE REQUIRED AT BEAM ENDS DUE TO BEAM CAMBER AND VERTICAL CURVE. ADJUST ASPHALT THICKNESS TO PROVIDE VERTICAL PROFILE.

⊛ JOINT SHALL BE 1 INCH MINIMUM AND SHALL BE UNIFORM ACROSS.

⊛⊛ ASPHALT OVERLAY, TYP. SEE ROADWAY PLANS FOR DETAILS AND PAYMENT.

⊛⊛⊛ FILL ALL KEYS FULL AND CONTINUOUS AS PER STANDARD SPECIFICATION 506, TYP. INCLUDE COST OF MATERIALS AND WORK IN PRICE BID FOR "PSC CORED SLAB BEAMS".

BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

DECK SECTION
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK

BULLOCH COUNTY

SCALE: ⅜" = 1'-0" (UNLESS OTHERWISE NOTED) MARCH 2026

DRAWING NO. 35-0004

BRIDGE SHEET 4 OF 11

DESIGNED HTB CHECKED NMB REVIEWED

DRAWN ZLH CRP DESIGN GROUP APPROVED

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LAST UPDATED: DEC 27, 2022

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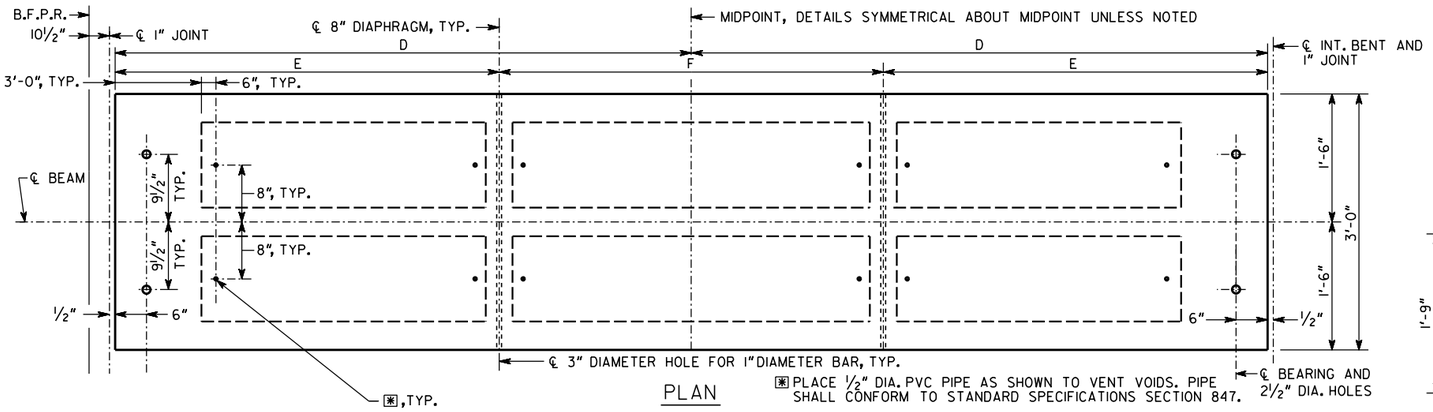
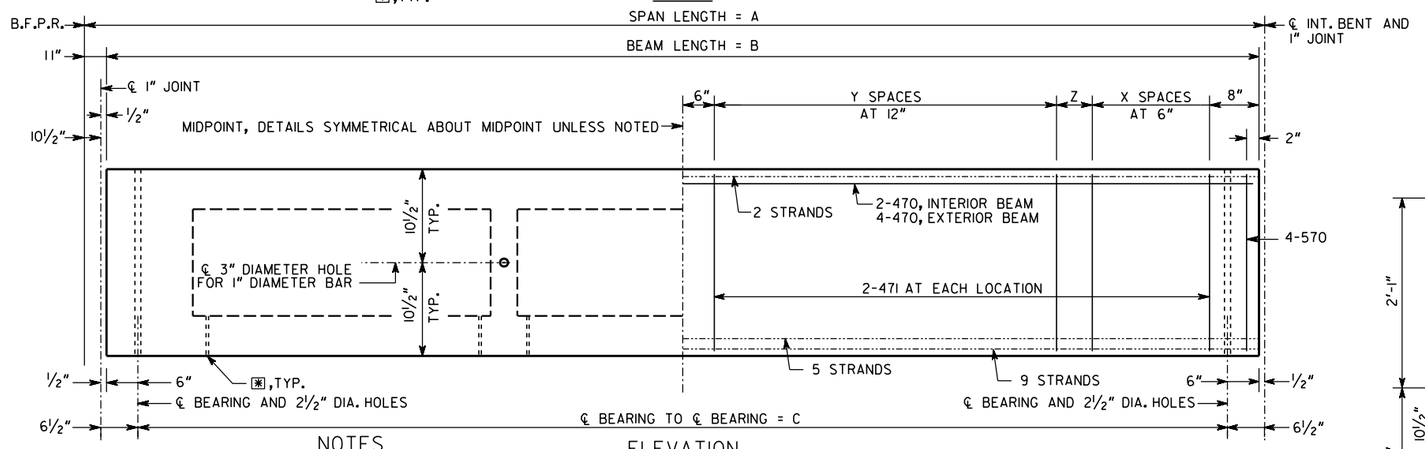
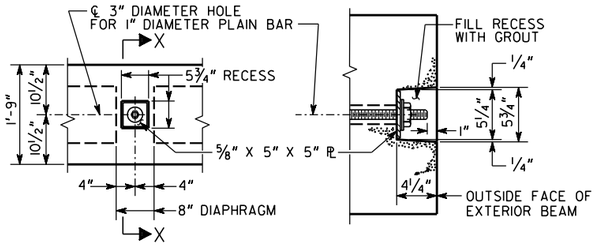




NOTES

1. BEAMS SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES AND SHALL BE PICKED UP WITHIN 2'-8" FROM THEIR ENDS. DISREGARDING THIS REQUIREMENT COULD LEAD TO COLLAPSE OF THE BEAM. PICK-UPS SHALL BE EMBEDDED TO WITHIN 4" OF THE BOTTOM OF THE BEAM. DETAILS OF PICK-UPS SHALL BE INCLUDED IN THE SHOP DRAWINGS.
2. CHAMFER EDGES OF BEAMS ½" OR ¾".
3. HORIZONTAL DIMENSIONS ARE IN PLACE DIMENSIONS. THE BEAM LENGTH INCLUDES THE ⅛" EPOXY MORTAR AT EACH END. SHOP DRAWINGS SHALL ADJUST HORIZONTAL DIMENSIONS FOR GRADE AND FABRICATION EFFECTS SUCH AS SHRINKAGE AND ELASTIC SHORTENING.
4. AT ℄ BEARING, FORM 2½" DIAMETER X 2I" DEEP HOLES FOR A 1" DIAMETER SMOOTH DOWEL. THE ℄ FOR THE HOLES ARE 9½" ON EACH SIDE OF ℄ BEAM AS SHOWN.
5. TOPS OF BEAMS SHALL RECEIVE BROOM FINISH AT APPROXIMATELY THE TIME OF INITIAL SET. ENTIRE TOP SHALL BE SCRUBBED TRANSVERSELY WITH A COARSE BRUSH TO REMOVE ALL LAITANCE. CONCRETE FINS OR PROJECTIONS SHALL BE REMOVED TO PRODUCE A VERTICAL FACE AT THE EDGE OF THE BEAM.
6. STRANDS SHALL MEET ALL REQUIREMENTS OF ASTM A 416 GRADE 270.
7. PRESTRESSING DATA IS AS FOLLOWS:
   - A. USE I6 - 0.6" DIAMETER LOW-RELAXATION (A = 0.2I7 SQ IN) STRANDS. PRETENSION STRANDS TO 43,943 LBS EACH.
   - B. PRETENSIONED STRANDS SHALL BE RELEASED AFTER THE CONCRETE HAS REACHED A MINIMUM STRENGTH (f'_{ci}) OF 5,000 PSI.
   - C. THE TOTAL JACKING FORCE OF PRETENSIONING IS 703,088 LBS.
   - D. THE NET PRESTRESSING FORCE OF THE STRANDS AFTER ALL LOSES IS 576,6I7 LBS.
8. CONCRETE STRENGTH (f'_c) = 5,500 PSI.
9. ALLOWABLE TENSION = 445 PSI.
10. IN EACH SPAN, SET THE MIDDLE BEAM OR ONE OF THE TWO MIDDLE BEAMS FIRST. SET REMAINING BEAMS ADJACENT TO IN-PLACE BEAMS, WORKING TOWARD THE OUTSIDE OF THE BRIDGE.



ELEVATION SECTION X-X

DIAPHRAGM ROD SHALL BE A 1" DIAMETER PLAIN BAR CONFORMING TO ASTM A449, THREADED 5" ON EACH END, WITH ¼" X 3" DIAMETER WASHERS (ASTM F436) AND HEX NUTS (ASTM A563).

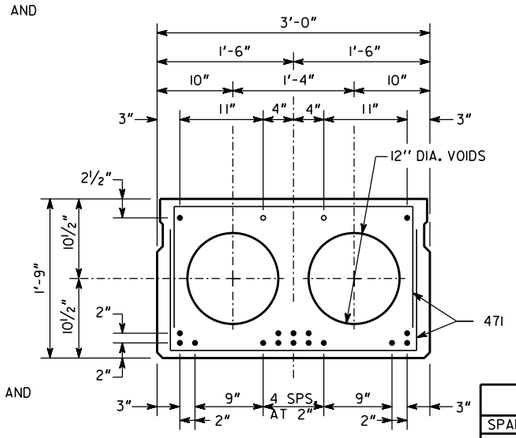
DIAPHRAGM ROD SHALL BE TIGHTENED TO PROVIDE A MINIMUM TENSION FORCE OF 42 KIPS. VERIFY TENSION FORCE BY USE OF DIRECT TENSION INDICATING (DTI) WASHER CONFORMING TO ASTM F959. SECURE ROD TO PREVENT TURNING DURING TENSIONING.

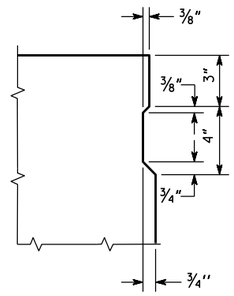
AFTER EXCESS DIAPHRAGM ROD HAS BEEN CUT OFF, END OF DIAPHRAGM ROD, WASHER, AND NUT EXPOSED IN RECESS SHALL **BE PAINTED WITH SPECIAL PROTECTIVE COATING NO. 2 P AS PER** SECTION 535 OF THE GEORGIA DOT SPECIFICATIONS. AFTER **PAINTING, THE RECESS SHALL BE FILLED WITH AN APPROVED EPOXY GROUT.**

GALVANIZING OF DIAPHRAGM ROD AS PER SUB-SECTION 865.2.01.B.12 OF THE GEORGIA DOT SPECIFICATIONS IS NOT REQUIRED.

RECESS DETAIL FOR DIAPHRAGM ROD ENDS OF EXTERIOR CORED SLAB BEAMS

- INDICATES 0.6" DIAMETER PRESTRESSED STRANDS.
- ○ INDICATES 470 REINFORCING BARS

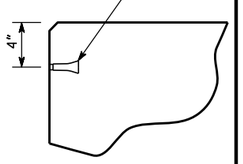




SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON EXTERIOR FACE OF EXTERIOR BEAMS.

PERMITTED THREADED INSERT CAST IN OUTSIDE FACE OF EXTERIOR UNIT AND RECESSED ⅜", SIZE TO BE DETERMINED BY CONTRACTOR.



THREADED INSERT DETAIL

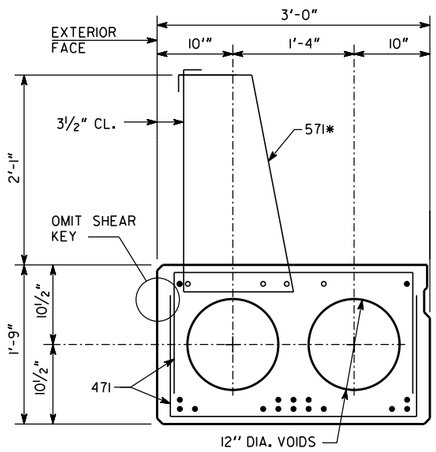
BEAM DIMENSIONS

SPAN	A	B	C	D	E	F	X	Y	Z
1 & 3	45'-0"	44'-0½"	43'-0½"	22'-0¼"	14'-0¼"	16'-0"	10	15	10¼"
2	45'-0"	44'-11"	43'-11"	22'-5½"	13'-5½"	18'-0"	9	16	9½"

DEAD LOAD DEFLECTION AND CAMBER

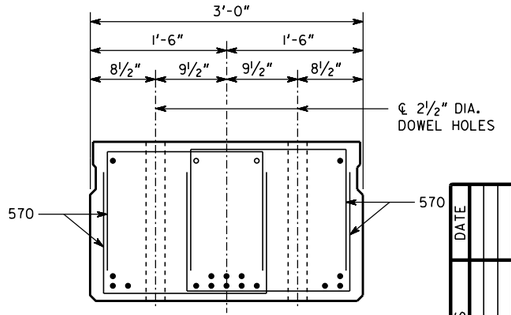
	SPAN 1 & 3	SPAN 2
CAMBER (PRESTRESS AND SELF-WEIGHT)	1½"	1⅜"
DEFLECTION DUE TO BARRIER AND ASPHALT OVERLAY	¼"	5/16"

INTERIOR BEAM SECTION



EXTERIOR BEAM SECTION

✱ SHIFT 571 BARS ON END SPANS TO ALLOW FOR BARRIER TRANSITION. SEE DECK PLAN SHEET.

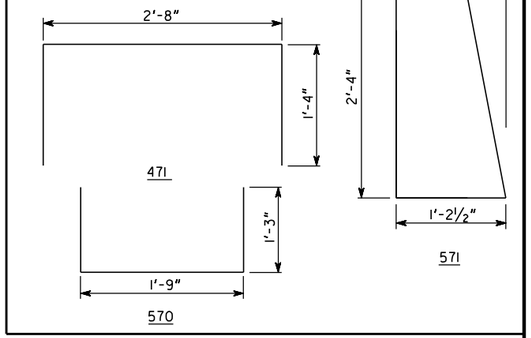


END SECTION

INTERIOR BEAM SHOWN
EXTERIOR BEAM SIMILAR

REINFORCEMENT

ALL BAR DIMENSIONS ARE OUT TO OUT



BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

21"PSC CORED SLAB DETAILS - ALL SPANS
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK
BULLOCH COUNTY

NO SCALE — MARCH 2026

DESIGNED HTB — CHECKED NMB — REVIEWED
DRAWN ZLH — DESIGN GROUP — APPROVED

DRAWING NO. 35-0005
BRIDGE SHEET 5 OF 11

REVISIONS — DATE — BY

LAST UPDATED: DEC 27, 2022

Zach. Hodges — 3/12/2026 — 8:25:05 AM

1 INCH WHEN PRINTED FULL SIZE

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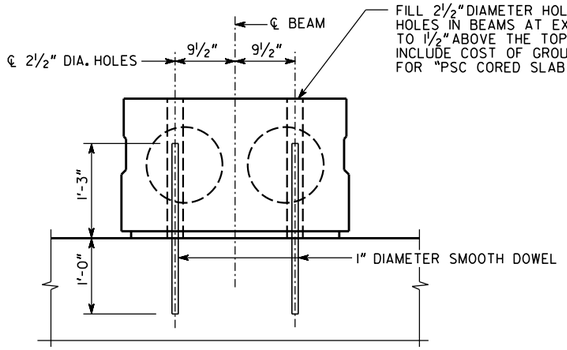
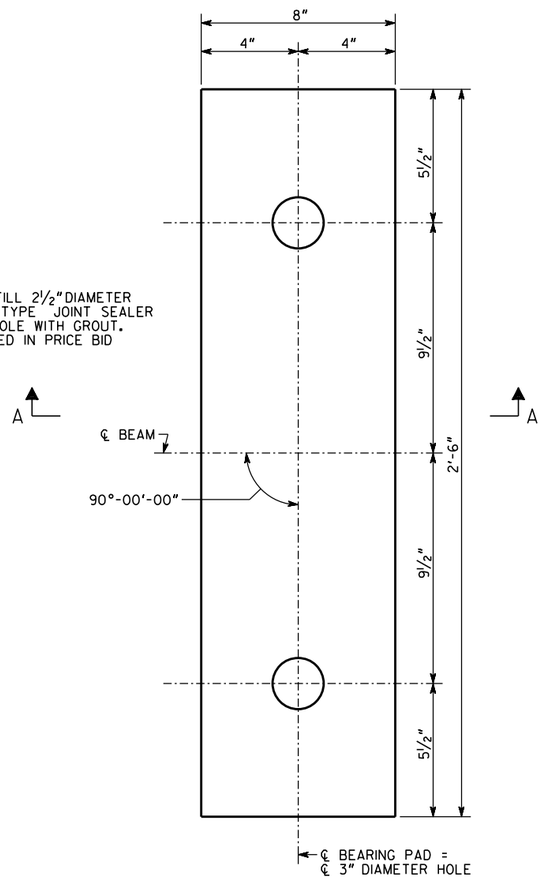
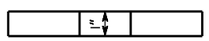


FILL 2½"DIAMETER HOLES IN BEAMS AT FIXED ENDS WITH GROUT. FILL 2½"DIAMETER HOLES IN BEAMS AT EXPANSION ENDS WITH ELASTOMERIC POLYMER TYPE JOINT SEALER TO 1½"ABOVE THE TOP OF DOWELS AND FILL THE REMAINDER OF HOLE WITH GROUT. INCLUDE COST OF GROUT, ELASTOMERIC POLYMER AND WORK REQUIRED IN PRICE BID FOR "PSC CORED SLAB BEAMS."

SECTION AT BEARING



PLAN



SECTION A-A

BEARING PAD

NOTES

1. BEARING PAD SHALL BE FURNISHED IN ACCORDANCE WITH AASHTO SPECIFICATIONS LRFD BRIDGE, CONSTRUCTION SPECIFICATIONS, SECTION 18, BEARINGS DEVICES.
2. 1" DIAMETER SMOOTH DOWELS SHALL BE ASTM A 709 GRADE 50.
3. BEARING PADS SHALL BE MADE OF 60 DUROMETER HARDNESS NEOPRENE, GRADE 2 OR HIGHER.
4. 3" DIAMETER HOLE IN BEARING PADS MAY BE FORMED OR DRILLED.
5. USE OF 1½° MOLD DRAFT IS OPTIONAL.
6. COST OF FURNISHING AND INSTALLING BEARING PADS SHALL BE INCLUDED IN THE PRICE BID FOR "PSC CORED SLAB BEAMS."

BRIDGE NO. 1

Kimley»Horn

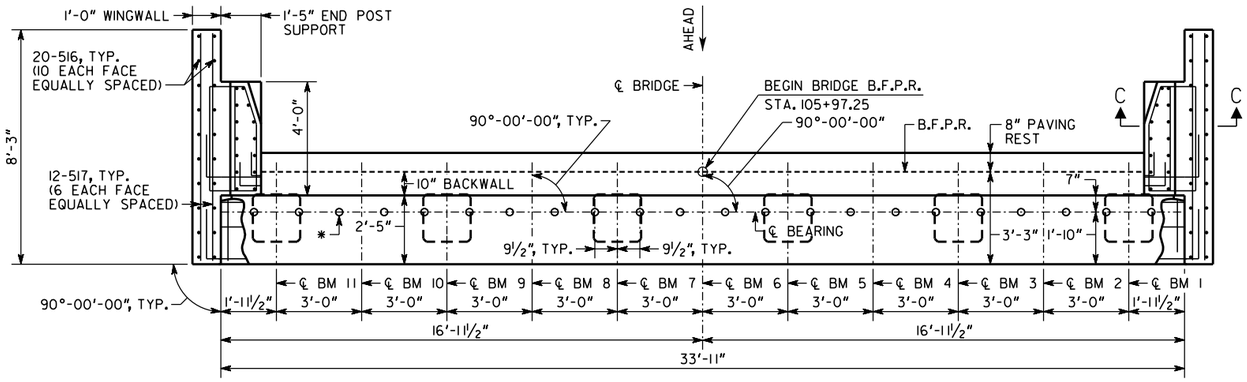
BULLOCH COUNTY
BOARD OF COMMISSIONERS

BEARING PAD DETAILS
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK

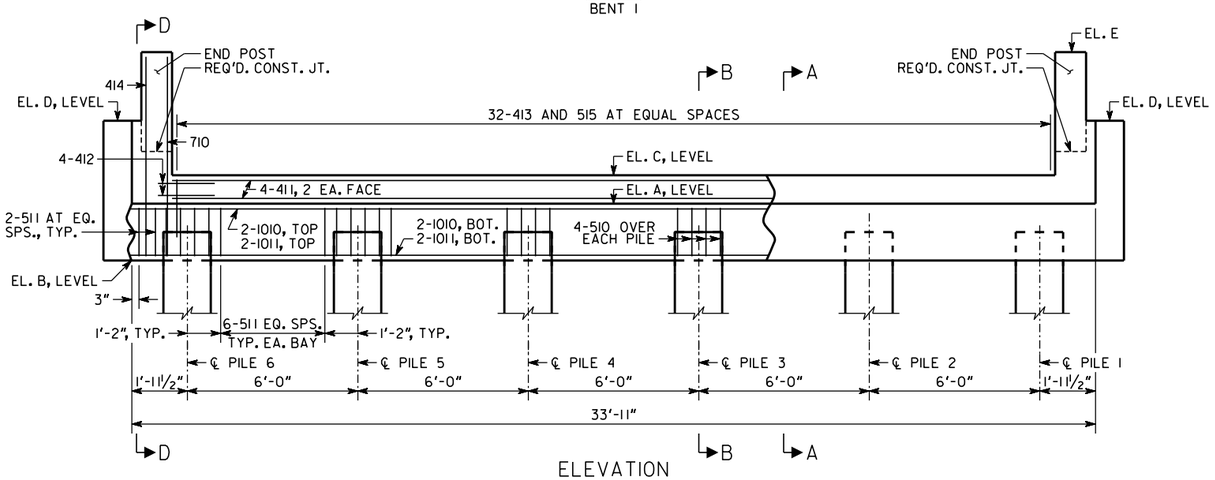
BULLOCH COUNTY

DRAWING NO. 35-0006	NO SCALE	MARCH 2026
BRIDGE SHEET 6 OF 11	DESIGNED BDW · DRAWN BDW · CHECKED NMB · DESIGN GROUP	REVIEWED · APPROVED

DATE · REVISIONS · BY



PLAN
BENT 1

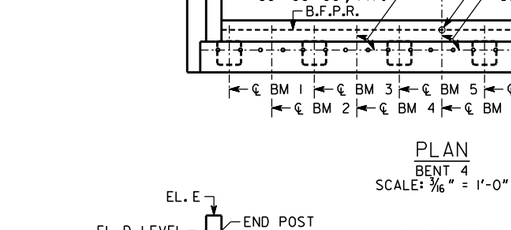


ELEVATION
BENT 1
LOOKING BACK

SECTION C-C
SCALE: ½" = 1'-0"

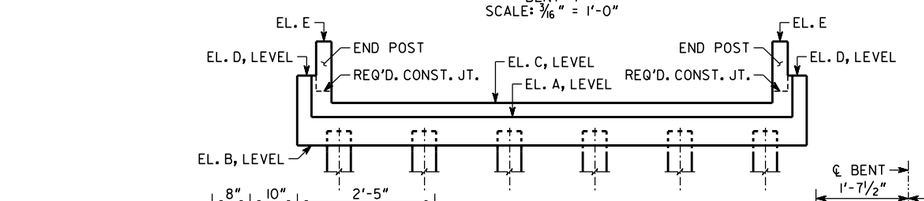
SECTION D-D
SCALE: ½" = 1'-0"

END POST DETAIL
SCALE: ¾" = 1'-0"

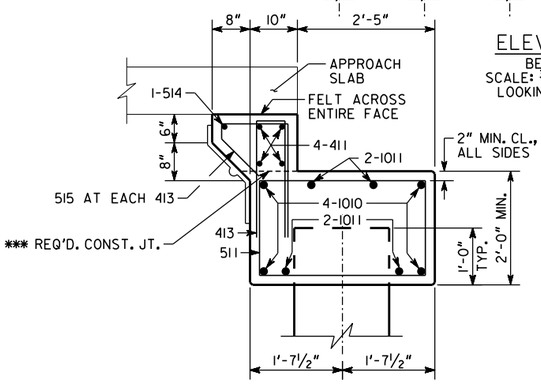


END POST SUPPORT DETAIL
SCALE: ½" = 1'-0"

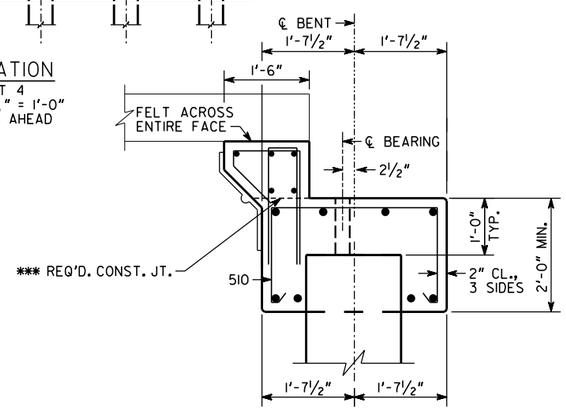
PLAN
BENT 4
SCALE: 3/16" = 1'-0"



ELEVATION
BENT 4
SCALE: 3/16" = 1'-0"
LOOKING AHEAD



SECTION A-A
SCALE: ¾" = 1'-0"



SECTION B-B
SCALE: ¾" = 1'-0"

PILES ARE DESIGNED FOR A MAXIMUM FACTORED AXIAL LOAD OF 214 KIPS AT BENT 1 AND 4.

ALL PILES SHALL BE PSC, 20 IN SQ.

PLAN DRIVING OBJECTIVE

ALL PILES SHALL BE DRIVEN TO DRIVING RESISTANCE AFTER ACHIEVING MINIMUM TIP ELEVATION AT EACH BENT.

	DRIVING RESISTANCE (KIPS)	MINIMUM TIP ELEVATION
BENT 1:	329	82
BENT 4:	329	80

BRIDGE NO. 1

SUBSTRUCTURE QUANTITIES		
ITEM	BENT 1	BENT 4
CY CLASS A CONCRETE	14.0	14.0
LB BAR REINF STEEL	3132	3132

END POST CONCRETE AND BAR REINFORCEMENT STEEL INCLUDED IN END BENT QUANTITIES.

TABLE OF ELEVATIONS					
BENT	A	B	C	D	E
1	143.00	141.00	144.00	145.95	148.33
4	142.96	140.96	143.96	145.92	148.29

NOTES:

1. POUR CAP, WINGWALLS AND END POST SUPPORT MONOLITHICALLY.
2. BOTTOM OF WINGWALLS ARE LEVEL.
3. SEE GA. STD. 9037 FOR DRAINAGE DETAILS AT END BENTS.
4. SEE GA. STD. 3054 FOR GUARDRAIL ATTACHMENT AND MISCELLANEOUS END POST DETAILS. OMIT BARS P401, P501, AND P701 FROM END POST STANDARD.
5. BARS 410, 512, 513 AND 514 NOT SHOWN IN ELEVATION VIEW.
* 6. FORM 3" DIAMETER X 12" DEEP HOLES FOR DOWEL BARS, TYP.
** 7. RAISE SLOPED PORTION DEPICTED IN STD. 3054 - SECTION B-B 3½" TO CLEAR ASPHALT OVERLAY ON BRIDGE DECK.
*** 8. PROVIDE 2'-0" WIDE WATERPROOFING CENTERED AT THE REQUIRED CONSTRUCTION JOINT. SEE SECTION 530 OF THE GEORGIA DOT SPECIFICATIONS.

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

END BENTS 1 AND 4
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK

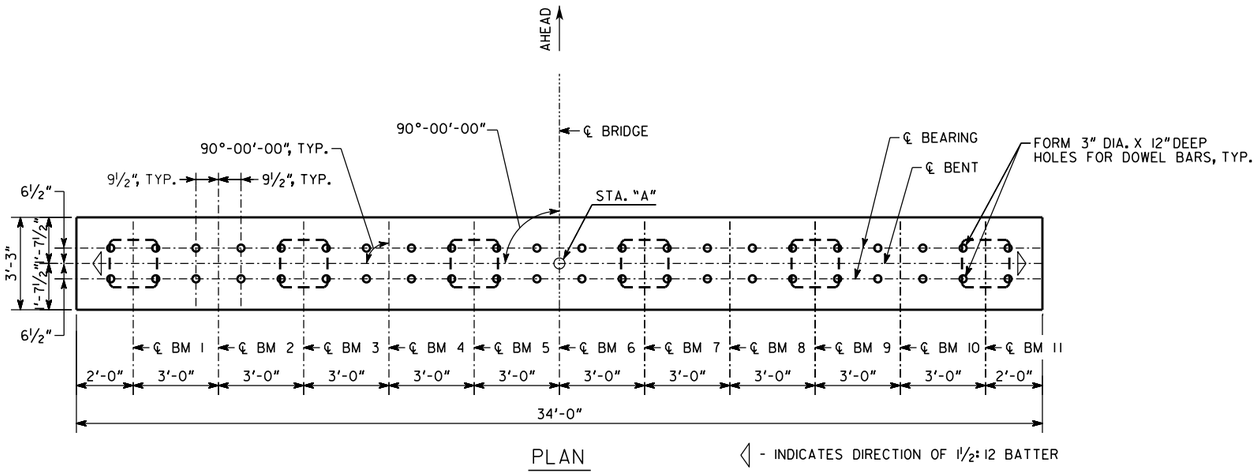
BULLOCH COUNTY

DRAWING NO. 35-0007
BRIDGE SHEET 7 OF 11

REVISIONS | DATE | BY

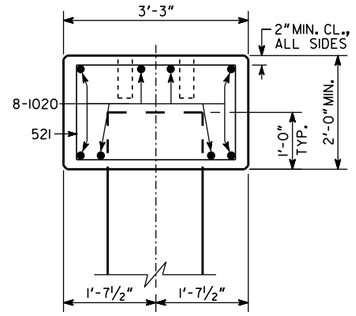
SCALE: 3/8" = 1'-0" (UNLESS OTHERWISE NOTED) MARCH 2026

DESIGNED HTB | CHECKED NMB | REVIEWED
DRAWN ZLH | DESIGN GROUP | APPROVED

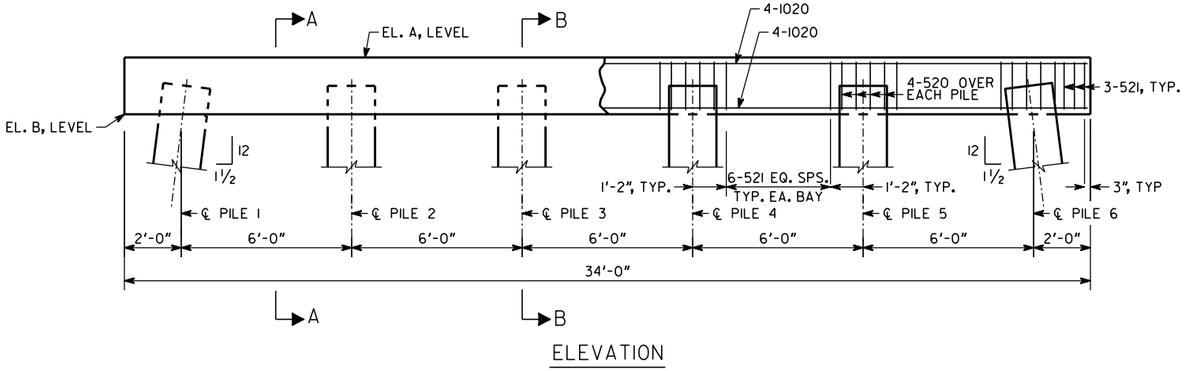


PLAN

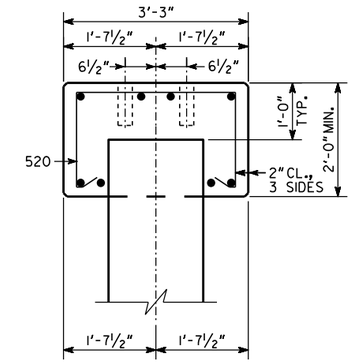
△ - INDICATES DIRECTION OF 1½:12 BATTER



SECTION A-A
SCALE: ¾" = 1'-0"



ELEVATION



SECTION B-B
SCALE: ¾" = 1'-0"

PILES ARE DESIGNED FOR A MAXIMUM FACTORED AXIAL LOAD OF 281 KIPS AT BENT 2 AND 3.

ALL PILES SHALL BE PSC, 20 IN SQ.

PLAN DRIVING OBJECTIVE

ALL PILES SHALL BE DRIVEN TO DRIVING RESISTANCE AFTER ACHIEVING MINIMUM TIP ELEVATION AT EACH BENT.

	DRIVING RESISTANCE (KIPS)	MINIMUM TIP ELEVATION
BENT 2:	467	68
BENT 3:	470	70

TABLE OF ELEVATIONS		
BENT	A	B
2	143.28	141.28
3	143.27	141.27

SUBSTRUCTURE QUANTITIES		
ITEM	BENT 2	BENT 3
CY CLASS A CONCRETE	7.6	7.6
LB BAR REINF STEEL	1695	1695

STA "A"	
BENT	"A"
2	106+42.25
3	106+87.25

BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

INTERMEDIATE BENT
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK

BULLOCH COUNTY

SCALE: ⅜" = 1'-0" (UNLESS OTHERWISE NOTED) MARCH 2026

DRAWING NO. 35-0008

BRIDGE SHEET 8 OF 11

DESIGNED HTB
DRAWN ZLH CRP
CHECKED NMB
DESIGN GROUP
REVIEWED
APPROVED

DATE | REVISIONS | BY

Zach.Hodges 3/12/2026 8:25:14 AM

1 INCH WHEN PRINTED FULL SIZE

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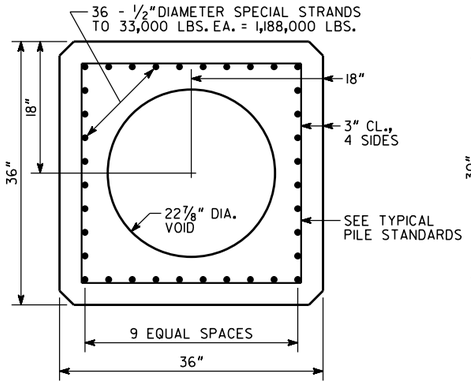
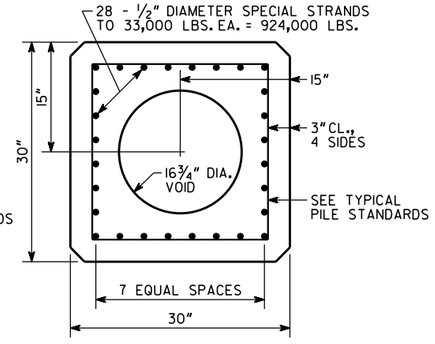


36"X 36"



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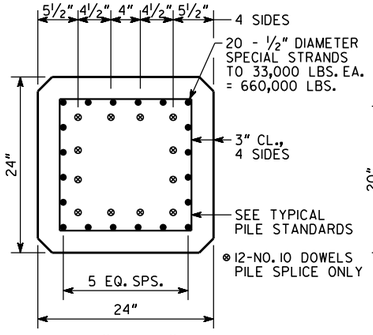

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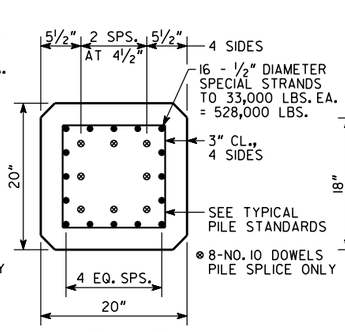

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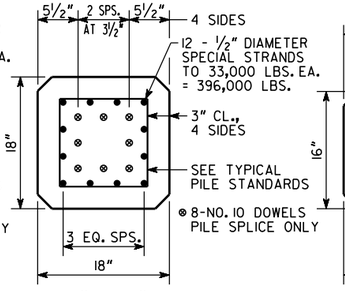
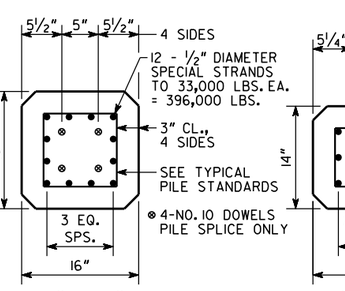
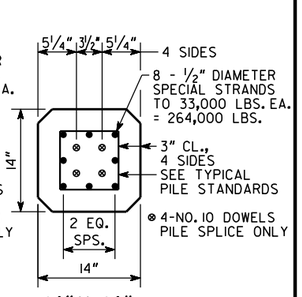


18"X 18"



16"X 16"



14"X 14"

DESIGN DATA

SPECIFICATIONS ---------- AASHTO LRFD 9TH EDITION, 2020

CONCRETE: FINAL ---------- CLASS AAA, f'_c = 6,500 PSI
RELEASE ---------- CLASS AAA, f'_{ci} = 5,000 PSI

REINFORCEMENT STEEL: ---------- GRADE 60, f_y = 60,000 PSI

PRETENSIONING STRANDS: ---------- f'_s = 270,000 PSI

WIRE SPIRALS: ---------- ASTM A82 OR AASHTO M32

TOTAL LOSSES: ---------- 15% OF INITIAL PRETENSION FORCE

GENERAL NOTES

REINFORCING STEEL - PLACE AND TIE ALL REINFORCING STEEL IN ACCORDANCE WITH THE GEORGIA DOT SPECIFICATIONS. DO NOT WELD REINFORCING STEEL.

CHAMFER - CHAMFER PILE EDGES 1" AND PILE ENDS 3/4" X 3" UNLESS OTHERWISE NOTED.

PICK-UP POINTS - CLEARLY MARK PILES TO INDICATE PROPER PICK-UP POINTS AFTER REMOVAL OF FORMS. PROPER RIGGING IS REQUIRED IN HANDLING AND TRANSPORTATION.

SPLICE BONDING MATERIAL - DOWEL HOLES ARE FILLED WITH A TYPE VIII EPOXY COMPOUND AND THE SPLICE JOINTS ARE A TYPE III EPOXY COMPOUND IN ACCORDANCE WITH GDOT STANDARD SPECIFICATION SECTION 886 AND SHALL BE CONTAINED ON THE QUALIFIED PRODUCTS LIST (QPL). USE EPOXY BONDING COMPOUND OR EPOXY MORTAR AS RECOMMENDED BY THE MANUFACTURER AND IN THE PROPORTIONS RECOMMENDED.

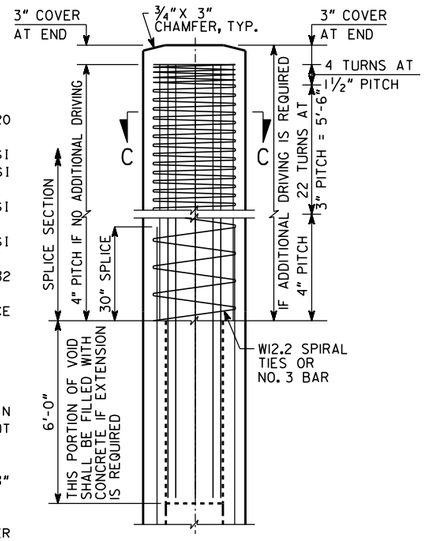
SPIRAL TIES - EACH TURN OF SPIRALS SHALL BE TIED TO AT LEAST TWO CORNER STRANDS. ONE TURN REQUIRED FOR SPIRAL SPLICES.

MAXIMUM LENGTH - PICK-UP MAXIMUM LENGTHS, L, ARE BASED ON CONCRETE RELEASE STRENGTH OF 5,000 PSI, NUMBER OF PICK-UP POINTS AND A LOAD THAT IS 1.5 TIMES THE MEMBERS SELF-WEIGHT.

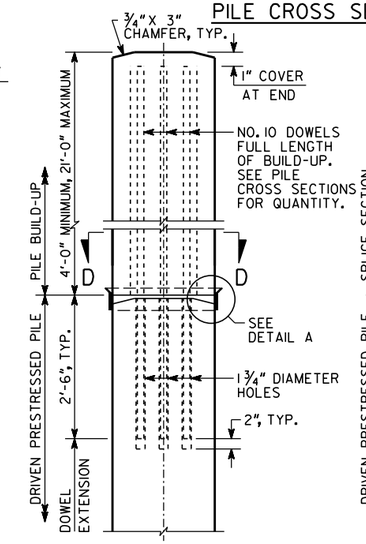
COMPOSITE PILE - TO BE USED WHEN REQUIRED BY SPECIAL PLANS. TEST PILE LENGTHS GIVEN ON SPECIAL PLANS DO NOT INCLUDE STEEL H-PILE IN TIP OF COMPOSITE PLANS.

VOIDED PILE - VOIDS SHALL BY LOCATED WITHIN 1/2" OF POSITION SHOWN. VENT HOLES OF 1" DIAMETER SHALL BE FORMED IN ONE FACE AT 5'-0" ON CENTER.

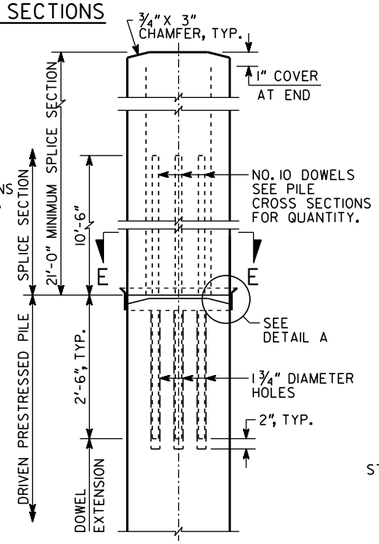
PILE CROSS SECTIONS



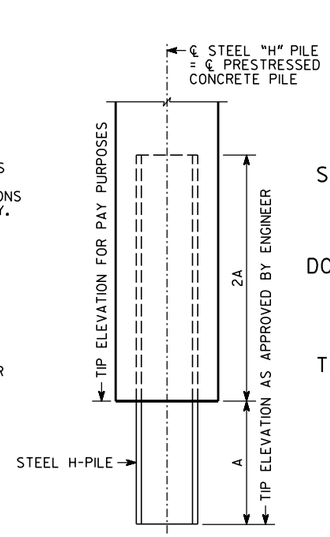
REINFORCED CONCRETE
PILE SPLICE WITH VOID DETAIL



NON-DRIVABLE REINFORCED
CONCRETE PILE BUILD-UP DETAIL

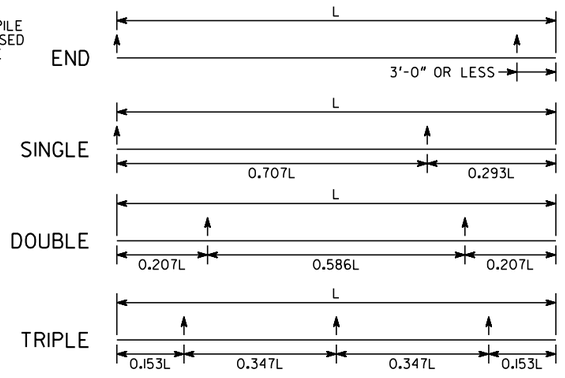


DRIVABLE PRESTRESSED
CONCRETE PILE SPLICE DETAIL



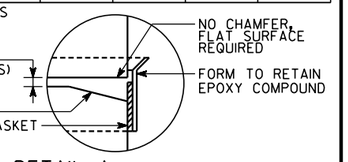
COMPOSITE PILE DETAILS

PICK-UP POINTS/SUPPORTS

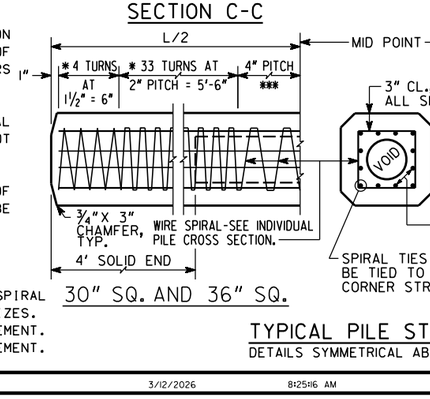


PILE SIZE	AREA	WEIGHT	N	PICK-UP POINTS MAX LENGTH, L			
				END	SINGLE	DOUBLE	TRIPLE
	IN²	LB/FT	PSI	FEET	FEET	FEET	FEET
14x14	196	204	1145	38	66	93	127
16x16	256	267	1315	43	75	106	143
18x18	324	338	1039	42	72	102	139
20x20	400	417	1122	46	78	111	151
24x24	576	600	974	48	81	115	156
30x30⊙	680	708	1155	63	105	148	201
36x36⊙	885	922	1141	71	116	165	223

N = EFFECTIVE PRESTRESS
⊙ VOIDED SECTION



DETAIL A
BRIDGE NO. 1



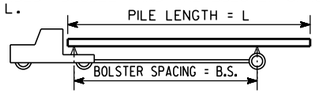
30" SQ. AND 36" SQ. | 14" SQ. THRU 24" SQ.

SECTION C-C | SECTION D-D | SECTION E-E | ALTERNATE PILE CROSS SECTION

SINGLE OVERHANG OR TWO UNEQUAL OVERHANGS											
L	FT.	25	30	35	40	45	50	55	60	65	70
B.S.	FT.	16-25	19-30	22-35	25-38	28-39	31-40	36-42	41-44	46	49-50
MAX. O.H.	FT.	9	11	13	15	17	19	19	19	19	21
MIN. PILE	-	14x14	14x14	14x14	14x14	14x14	14x14	14x14	14x14	14x14	16x16
L	FT.	75	80	85	90	95	100	105	110	115	120
B.S.	FT.	52-54	56-57	56-69	62-70	65-72	70-74	75-76	76-82	81-84	--
MAX. O.H.	FT.	23	24	29	28	30	30	30	34	34	--
MIN. PILE	-	20x20	24x24	30x30•	30x30•	30x30•	30x30•	30x30•	36x36•	36x36•	--

TWO EQUAL OVERHANGS •VOIDED SECTION

THE MAXIMUM PERMITTED PILE LENGTH SHALL BE THAT TABULATED IN THE COLUMN HEADED "DOUBLE" AND THE BOLSTER SPACING SHALL BE EQUAL TO 0.586 L.



* USE W12.2 OR NO. 3 BARS FOR SPIRAL REINFORCEMENT FOR ALL PILE SIZES.
** USE W3.9 FOR SPIRAL REINFORCEMENT.
*** USE W4.0 FOR SPIRAL REINFORCEMENT.

TYPICAL PILE STANDARDS
DETAILS SYMMETRICAL ABOUT MIDPOINT

● FOR DESIGNATION, NUMBER, AND SIZE, SEE INDIVIDUAL PILE CROSS SECTION.

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

SQUARE PRESTRESSED CONCRETE PILES
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK
BULLOCH COUNTY

DRAWING NO. 35-0009
BRIDGE SHEET 9 OF 11

NO SCALE | MARCH 2026

DESIGNED EMH | DRAWN EMH | CHECKED SKG | DESIGN GROUP | REVIEWED DLC/SKG | APPROVED DPD

DATE | REVISIONS | BY

Zach.Hodges 3/12/2026 8:25:16 AM

1 INCH WHEN PRINTED FULL SIZE

017983004-35-0009_PILE.dgn

AS-BUILT FOUNDATION INFORMATION		
BENT	PILE LOCATION	PILE TIP ELEVATION
1	PILE 1	
	PILE 2	
	PILE 3	
	PILE 4	
	PILE 5	
	PILE 6	
2	PILE 1	
	PILE 2	
	PILE 3	
	PILE 4	
	PILE 5	
	PILE 6	
3	PILE 1	
	PILE 2	
	PILE 3	
	PILE 4	
	PILE 5	
	PILE 6	
4	PILE 1	
	PILE 2	
	PILE 3	
	PILE 4	
	PILE 5	
	PILE 6	

NOTE- THIS "AS-BUILT FOUNDATION INFORMATION" SHEET SHALL BE FILLED IN BY THE PROJECT ENGINEER AND THE COMPLETED PDF FORWARDED TO THE OWNER AND ENGINEER OF RECORD AFTER INSTALLATION OF ALL PILES FOR POSTING TO THE PLANS AS A PERMANENT RECORD OF THE BRIDGE CONSTRUCTION.

PROJECT ENGINEER _____ DATE _____

(AREA CODE) TELEPHONE NUMBER _____

BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

AS-BUILT FOUNDATION INFORMATION
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK
BULLOCH COUNTY

DATE	BY	REVISIONS

DRAWING NO. 35-0010
BRIDGE SHEET 10 OF 11

NO SCALE MARCH 2026

DESIGNED BDW CHECKED NMB REVIEWED
DRAWN BDW DESIGN GROUP APPROVED

1 INCH WHEN PRINTED FULL SIZE

LOCATION	NO. OF LOC.	MARK	LENGTH FT.	LENGTH IN.	NO. BARS REQ'D.	TYPE	A	G	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	J FT.	J IN.	K FT.	K IN.	N	θ
SPAN 1 AND 3	2																									
		500A	14- 4		72	1																				
		501	6- 9		102	23			0- 6		3- 1		3- 2													79
SPAN 2	1																									
		500B	14- 8		72	1																				
		501	6- 9		102	23			0- 6		3- 1		3- 2													79
BENT 1 AND 4	2																									
		410	3- 8		10	1																				
		411	31- 1		4	1																				
		412	3- 3		8	3			2- 3		1- 0															
		413	5- 8		32	2			0- 6		2- 7		2- 7													
		414	7- 0		14	1																				
		510	7- 2		24	32	5	5	2-11		1- 8		1- 8													
		511	10- 2		34	25	4	4	2-11		1- 8															
		512	11- 6		10	50	4	4	3- 8		1- 4		2- 4		0- 5		1- 4		1- 9							
		513	9- 6		12	50	4	4	3- 8		1- 4		2- 4		0- 5		0- 4		0- 9							
		514	31- 1		1	1																				
		515	4-11		37	46			2- 7		1- 2		0- 3		0- 8		0- 8									
		516	4- 8		40	1																				
		517	7- 9		24	1																				
		710	7- 0		14	1																				
		1010	38- 7		4	2			34-11		1-10		1-10													
		1011	34- 5		4	1																				
BENT 2 AND 3	2																									
		520	6-11		24	32	5	5	2- 8		1- 8		1- 8													
		521	9- 8		36	25	4	4	2- 8		1- 8															
		1020	33- 8		8	1			2- 8																	

BRIDGE NO. 1

Kimley»Horn

BULLOCH COUNTY
BOARD OF COMMISSIONERS

BAR REINFORCEMENT DETAILS
G.W. OLIVER ROAD OVER
LITTLE LOTTS CREEK

BULLOCH COUNTY

DRAWING NO.	REVISIONS	DATE	BY
35-0011			
BRIDGE SHEET 11 OF 11			

NO SCALE — MARCH 2026

DESIGNED HTB — CHECKED NMB — REVIEWED
DRAWN ZLH — DESIGN GROUP — APPROVED

1 INCH WHEN PRINTED FULL SIZE

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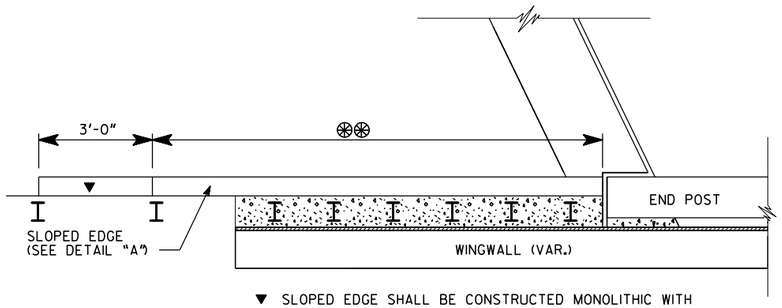
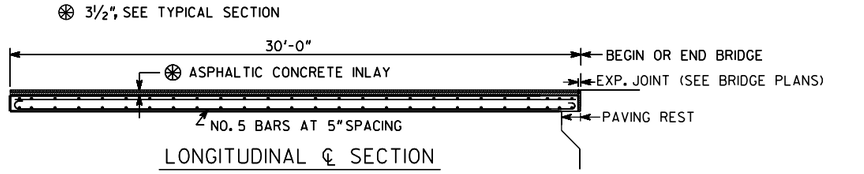
Zach. Hodges 3/12/2026 8:25:20 AM



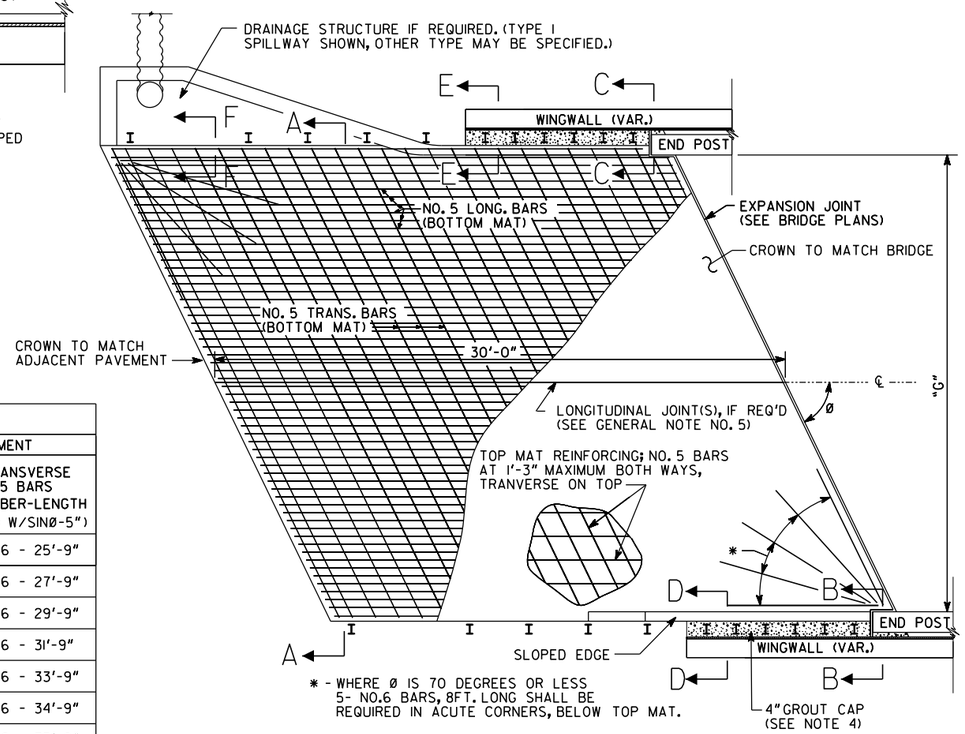
▼ SLOPED EDGE SHALL BE CONSTRUCTED MONOLITHIC WITH APPROACH SLAB. SLOPED EDGE SHALL BE TAPERED OUT BEYOND WINGWALL, EXCEPT WHERE BRIDGE DRAINAGE MUST BE CARRIED ACROSS SLAB TO ROADWAY STRUCTURE, SLOPED EDGE SHALL THEN RUN FULL LENGTH OF SLAB.

⊛⊛ SLOPED EDGE LENGTH SHALL EXTEND TO END OF WINGWALL OR SHALL BE 12'-0"IN LENGTH, WHICHEVER IS GREATER.

SLOPED EDGE



LONGITUDINAL ℄ SECTION



* - WHERE Ø IS 70 DEGREES OR LESS 5- NO.6 BARS, 8FT. LONG SHALL BE REQUIRED IN ACUTE CORNERS, BELOW TOP MAT.

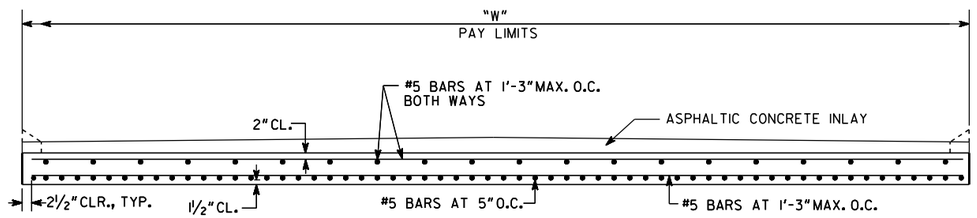
PLAN

NOTE:
PLAN VIEW IS PRESENTED WITH A TYPE I SPILLWAY ON ONE SIDE AND NO DRAINAGE STRUCTURE ON THE OTHER SIDE. SPILLWAY, WHERE REQUIRED, MAY BE TYPE I, 2, 3 OR 4 AND ON BOTH SIDES OF APPROACH SLAB, ON JUST ONE SIDE, OR NO SPILLWAY, AS CONDITIONS WARRANT. APPROACH SLAB QUANTITIES AND PAY ITEM WILL NOT BE EFFECTED BY SPILLWAY REQUIREMENTS. SLOPED EDGE IS REQUIRED BOTH WITH AND WITHOUT SPILLWAY.

QUANTITIES & REINFORCEMENT FOR TYPICAL SLAB SIZES**

"G"	"W" =(G+2X0.5)	SQ. YDS. OF APPR. SLAB =(W)X30/9	BOTTOM MAT REINFORCEMENT: 28'-11"LONG #5 LONGIT. BARS -NUMBER- =(W'-.417)÷.417+1	BOTTOM MAT REINFORCEMENT: TRANSVERSE #5 BARS NUMBER-LENGTH (= W/SINØ-5")	TOP MAT REINFORCEMENT: 29'-7"LONG #5 LONGIT. BARS -NUMBER- =(W'-.417)÷1.25+1	TOP MAT REINFORCEMENT: TRANSVERSE #5 BARS NUMBER-LENGTH (= W/SINØ-5")
25'-2"	26'-2"	87.22	63	26 - 25'-9"	22	26 - 25'-9"
27'-2"	28'-2"	93.89	68	26 - 27'-9"	24	26 - 27'-9"
29'-2"	30'-2"	100.56	73	26 - 29'-9"	25	26 - 29'-9"
31'-2"	32'-2"	107.22	78	26 - 31'-9"	27	26 - 31'-9"
33'-2"	34'-2"	113.89	82	26 - 33'-9"	28	26 - 33'-9"
34'-2"	35'-2"	117.22	85	26 - 34'-9"	29	26 - 34'-9"
35'-2"	36'-2"	120.56	87	26 - 35'-9"	30	26 - 35'-9"
36'-2"	37'-2"	123.89	90	26 - 36'-9"	31	26 - 36'-9"
37'-2"	38'-2"	127.22	92	26 - 37'-9"	32	26 - 37'-9"
38'-2"	39'-2"	130.56	94	26 - 38'-9"	32	26 - 38'-9"
39'-2"	40'-2"	133.89	97	26 - 39'-9"	33	26 - 39'-9"
41'-2"	42'-2"	140.56	102	26 - 41'-9"	35	26 - 41'-9"
43'-2"	44'-2"	147.22	106	26 - 43'-9"	36	26 - 43'-9"
45'-2"	46'-2"	153.89	111	26 - 45'-9"	38	26 - 45'-9"
47'-4"	48'-4"	161.11	116	26 - 47'-11"	40	26 - 47'-11"
49'-4"	50'-4"	167.78	121	26 - 49'-11"	41	26 - 49'-11"
51'-4"	52'-4"	174.44	126	26 - 51'-11"	43	26 - 51'-11"

** DATA ABOVE IS BASED ON COMMON BRIDGE WIDTHS AND A 90 DEGREE SKEW. WHERE OTHER SKEW ANGLES OR "W" DIMENSIONS ARE ENCOUNTERED, THE FORMULAE AT COLUMN TOPS MAY BE USED TO COMPUTE THE NEEDED QUANTITIES, EXCEPT WHEN THE SLAB IS WIDE ENOUGH TO REQUIRE A JOINT AND LAP SPLICES IN TRANSVERSE REINFORCEMENT. LENGTH OF BOTTOM MAT LONGITUDINAL BAR INCLUDES LENGTH OF HOOK AND IS SHOWN FOR 90 DEGREE SKEW. ADJUST THE LENGTH OF BOTTOM MAT LONGITUDINAL BAR FOR OTHER SKEWS. SEE SPLICE BAR DETAIL TO DETERMINE REQUIRED LENGTH OF BOTTOM MAT LONGITUDINAL SPLICE BAR. AN EXPANSION JOINT WIDTH OF 1½" IS ASSUMED FOR DETAILS AND QUANTITIES TABLE.



SECTION A-A

GENERAL NOTES

1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. USE CLASS A CONCRETE FOR APPROACH SLAB, AND MONOLITHIC SLOPED EDGE. USE GRADE 60 FOR ALL REINFORCING STEEL.
3. USE THIS CONSTRUCTION DETAIL WHERE THE ROADWAY PAVING IS ASPHALTIC CONCRETE AND NO CURB AND GUTTER OR SIDEWALK IS NEEDED.
4. ALL AREAS BETWEEN WINGWALL AND APPROACH SLAB SHALL BE CAPPED WITH 4" MIN. THICK LOW STRENGTH GROUT FOLLOWING GUARDRAIL POST INSTALLATION. LOW STRENGTH GROUT SHALL BE CONTROLLED LOW STRENGTH FLOWABLE FILL THAT HAS A MAXIMUM 28-DAY COMPRESSIVE STRENGTH OF 100 P.S.I. ACCORDING TO SPECIFICATION SECTON 600. PAYMENT FOR APPROACH SLAB INCLUDES THE 1/2" EXPANSION MATERIAL AND CONCRETE CAP WITH THE BLOCKED OUT HOLES, OR LOW STRENGTH GROUT ALTERNATIVE.
5. ALL APPROACH SLABS EXCEEDING 42' IN WIDTH SHALL CONTAIN A LONGITUDINAL CONSTRUCTION JOINT. SLABS EXCEEDING 60' AND 90' IN WIDTH SHALL CONTAIN 2 AND 3 LONGITUDINAL CONSTRUCTION JOINTS RESPECTIVELY. SECTIONS BETWEEEN JOINTS OR BETWEEN A JOINT AND SLAB EDGE SHALL NOT BE LESS THAN 12' OR MORE THAN 30' WIDE. REINFORCEMENT STEEL REMAINS UNCHANGED AND SHALL EXTEND THRU JOINTS. TRANSVERSE REINFORCEMENT SHALL BE LAP SPLICED A MINIMUM OF 2'-2". JOINTS SHALL BE LOCATED AT LANE LINES TO PROVIDE OFFSET FROM WHEEL PATHS.
6. WHERE APPROACH SLAB IS INTERCEPTED BY THE BRIDGE END POST, CUT BARS IN CONFLICT TO PROVIDE 2½" CLEARANCE TO STRUCTURE.
7. KEEP THE EXPANSION JOINT AT THE END BENT CONTINUOUS AROUND END POST TO THE WINGWALL. USE THE EXPANSION WIDTH SHOWN ON THE BRIDGE PLANS AT THE END OF THE END POST.
8. PAY AREA FOR APPROACH SLAB IN SQUARE YARDS IS COMPUTED AS THE PRODUCT OF THE GROSS WIDTH OF REINFORCED SLAB (W/3) MULTIPLIED BY THE SLAB LENGTH (30/3) WITH NO DEDUCTIONS MADE FOR AREAS OCCUPIED BY THE END POST AND EXPANSION JOINT. PAY FOR APPROACH SLAB AS "REINF.CONC APPROACH SLAB, INCL SLOPED EDGE".
9. COST FOR SUBBASE SHALL BE INCLUDED IN OVERALL PRICE BID FOR APPROACH SLAB.
10. ASPHALTIC CONCRETE OVERLAY SHALL BE PAID UNDER ROADWAY PAY ITEM FOR ASPHALTIC CONCRETE.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DESIGN DETAIL 9017S-SD

REINFORCED CONCRETE APPROACH SLAB WITH ASPHALT INLAY

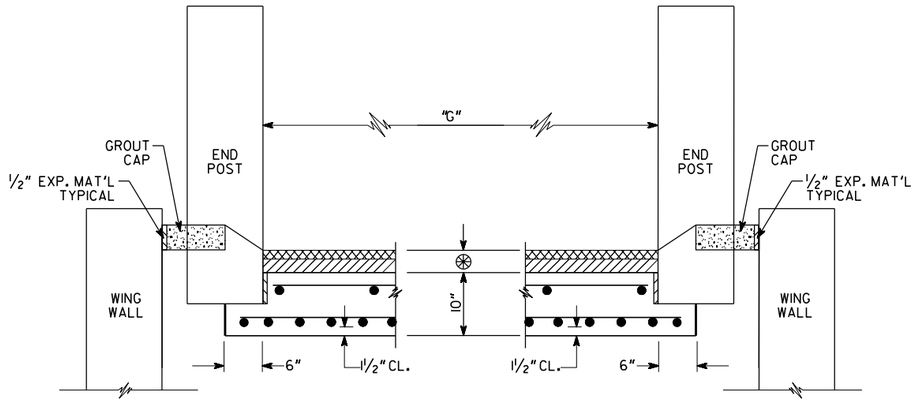
TYPICAL USE: WHERE SHOULDER IS ADJACENT TO TRAVELED WAY

(SHEET 1 OF 2)

DATE: JANUARY 2025
NOT TO SCALE

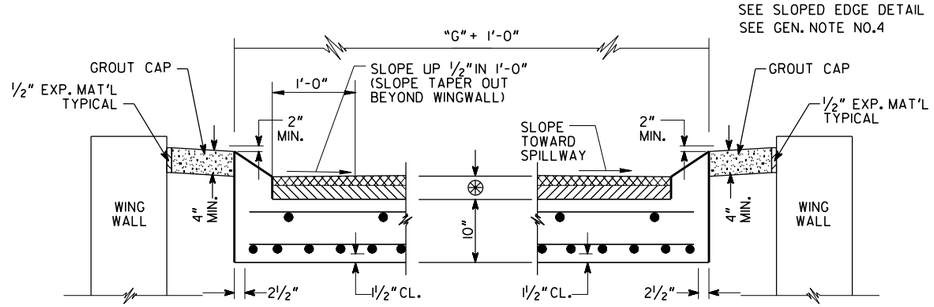
REVISION
BY

NUMBER 38-0001



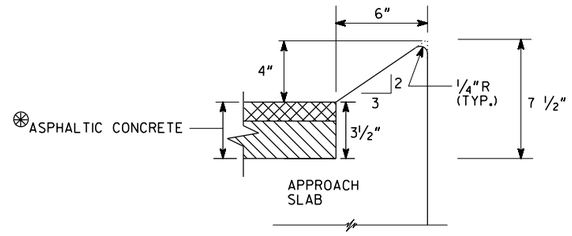
SECTION B-B SECTION C-C

NOTE: WHERE END POST INTERSECTS APPROACH SLAB, THE INTERCEPTED REINFORCING, BOTH LONGITUDINAL & TRAVERSE, SHALL BE SHORTENED AS NEEDED TO GIVE 2½" + CLEARANCE TO THE END POST.

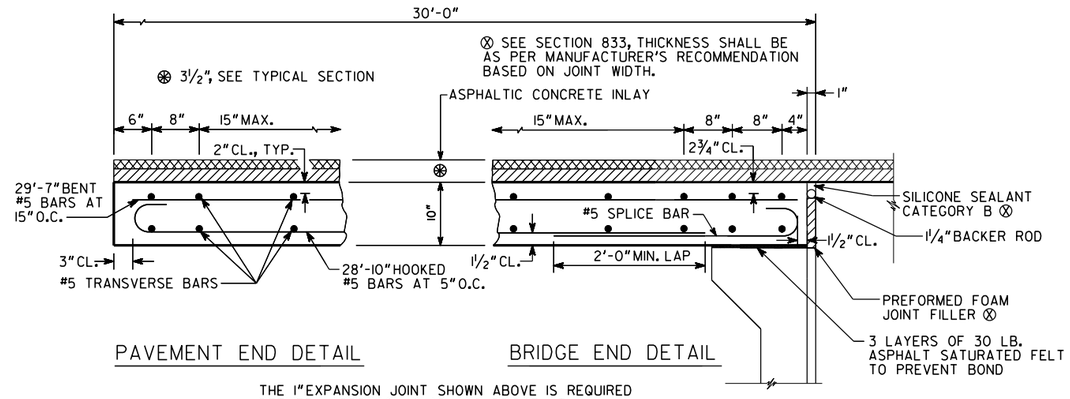


SECTION D-D
(SHOWN WHERE SPILLWAY IS NOT REQ'D.)

SECTION E-E
(SHOWN WHERE SPILLWAY IS REQ'D.)

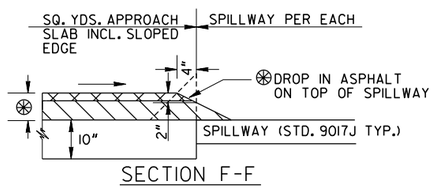


DETAIL A

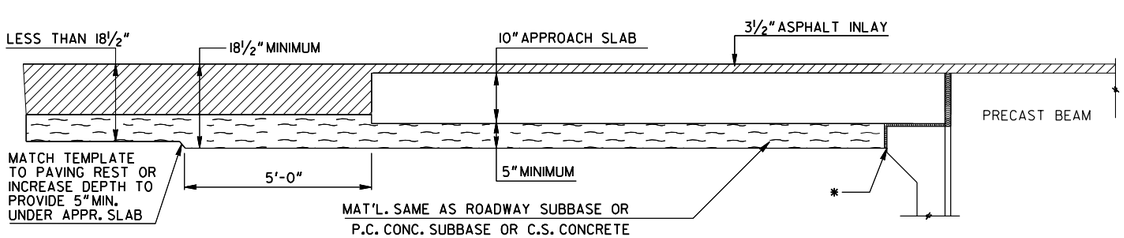


PAVEMENT END DETAIL BRIDGE END DETAIL

THE 1" EXPANSION JOINT SHOWN ABOVE IS REQUIRED BETWEEN APPROACH SLAB AND BRIDGE AT ALL LOCATIONS. EXCEPT WHERE BRIDGE DECK JOINT SEAL (SEPARATE PLAN DETAILS) IS SPECIFIED.



SECTION F-F



* EXPANSION JOINT WIDTH REQ'D. SAME AS BETWEEN APPROACH SLAB AND BRIDGE, IF SUBBASE IS P.C. CONC. OR CLASS "CS" CONCRETE.

APPROACH SLAB SUBBASE

NOTES:

WHERE THE CONTRACT FOR THE BRIDGE AND APPROACH SLABS IS LET SEPARATE FROM THE ROADWAY PAVING CONTRACT, THE SUBBASE FOR THE APPROACH SLAB WILL BE CLASS "CS" CONCRETE ACCORDING TO SECTION 500.

WHERE THE ROADWAY PAVING AND THE BRIDGE ARE LET UNDER THE SAME CONTRACT, THE APPROACH SLAB SUBBASE MAY BE EITHER CLASS "CS" CONCRETE OR MAY BE THE SAME MATERIAL AS REQUIRED FOR THE ROADWAY BASE OR SUBBASE SUCH AS GRADED AGGREGATE, P.C. CONC. SUBBASE, ETC.

IF "CS" CONCRETE OR P.C. CONC. SUBBASE IS USED, CLEAR POLYETHYLENE SHEETING 8 MILS, MIN. THICKNESS, WITH A 6" OVERLAP, UNIFORMALLY LAYED, SHALL BE REQUIRED UNDER THE APPROACH SLAB TO PREVENT BONDING POLYETHYLENE SHEETING SHALL BE NEW, UNUSED AND FREE OF HOLES, RIPS AND TEARS.

0001

1

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DESIGN DETAIL 9017S-SD

REINFORCED CONCRETE APPROACH SLAB WITH ASPHALT INLAY

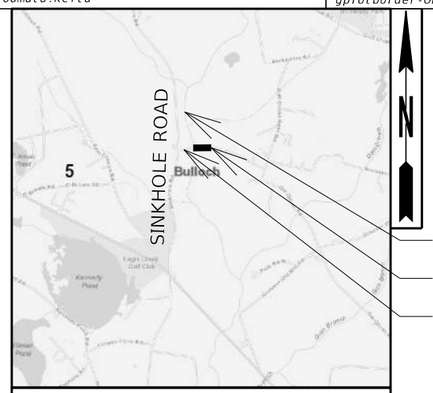
TYPICAL USE: WHERE SHOULDER IS ADJACENT TO TRAVELED WAY

(SHEET 2 OF 2)

DATE | REVISION | BY

JANUARY 2025
NOT TO SCALE

NUMBER 38-0002



LOCATION SKETCH

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983)/94 EAST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

BEGIN-POINT COORDINATES
Latitude: 32.3482°
Longitude: -81.8083°

MID-POINT COORDINATES
Latitude: 32.3485°
Longitude: -81.8061°

END-POINT COORDINATES
Latitude: 32.3486°
Longitude: -81.8049°

PRIMARY PERMITTEE

BULLOCH COUNTY BOARD OF COMMISSIONERS
115 NORTH MAIN STREET
STATESBORO, GEORGIA 30458
PHONE: (912) 531-5708
CONTACT: RON NELSON

24 HOUR CONTACT:

Name

Street Address

City. State Zip

Phone Number

Email Address

Contractor shall complete the information in this box.

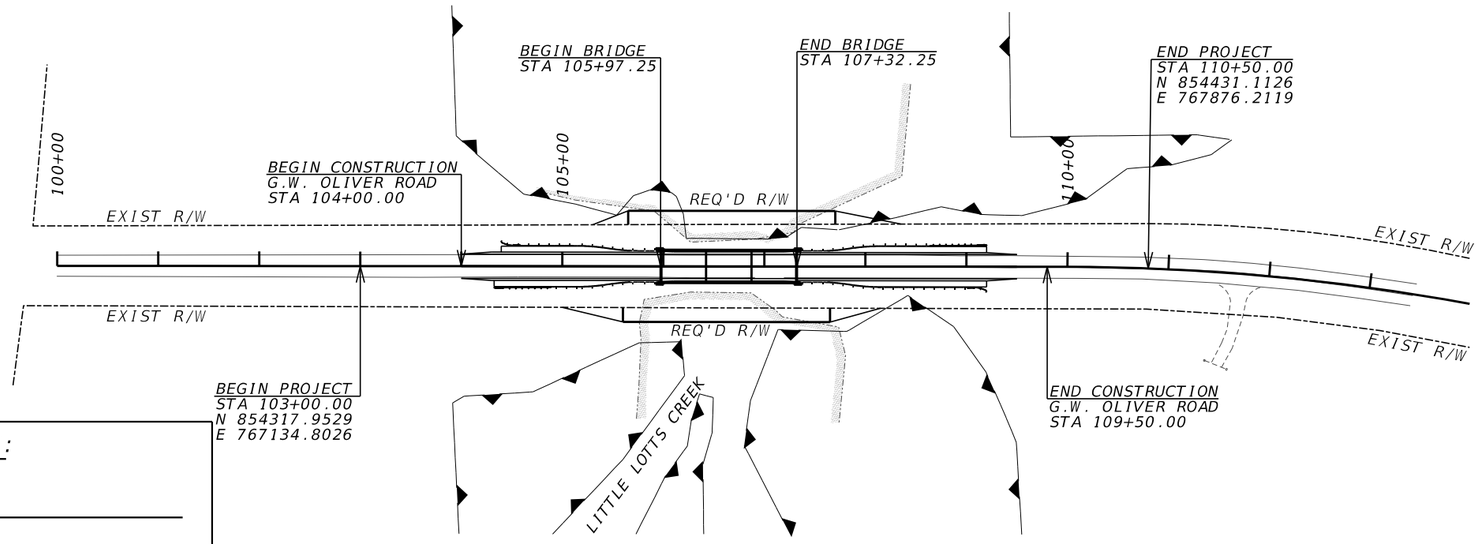
BULLOCH COUNTY BOARD OF COMMISSIONERS

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

G.W. OLIVER ROAD BRIDGE DESIGN

FEDERAL ROUTE No.: N/A
STATE ROUTE No.: N/A
P.I. No.: N/A

BULLOCH COUNTY PROJECT NUMBER
FY26-CP-E01



SCALE IN FEET
0 75 150 300

LENGTH OF PROJECT	COUNTY No.31
	MILES
NET LENGTH OF ROADWAY	0.116
NET LENGTH OF BRIDGES	0.026
NET LENGTH OF PROJECT	0.142
NET LENGTH OF EXCEPTIONS	N/A
GROSS LENGTH OF PROJECT	0.142

"I certify that this Erosion, Sedimentation and Pollution Control Plan has been prepared in accordance with Part IV PAGE 21, of the General NPDES Permit No.GAR100002."

"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 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 certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No.GAR100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

"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."

Rhodes S Hunt

SIGNATURE

BULLOCH COUNTY — 1796 — EDUCATION AGRICULTURE RECREATION

PLANS PREPARED BY:

Kimley»Horn

Engineering, Planning, and Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

UNDER THE SUPERVISION OF:

RHODES HUNT, P.E.

GSWCC LEVEL II CERTIFICATION
NUMBER 0000104979

GEORGIA — REGISTERED — No. 046667 PROFESSIONAL ENGINEER — RHODES S. HUNT

PLANS COMPLETED

REVISIONS

DATE	ENTITY REQUESTING REVISION(S)	DRAWING NUMBER(S)	SIGNATURE	GSWCC LEVEL II CERT.#

DRAWING No.
50-0001

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS GAR100002

SWCD: Coastal SWCD

Project Name: G.W. Oliver Road Bridge Design
Local Issuing Authority: Bulloch County
Name & Email of person filling out checklist:

Address: G.W. Oliver Road, Statesboro, Georgia 30458
Date on Plans: 03/20/2026
Rhodes Hunt: Rhodes.Hunt@kimley-horn.com

Plan Page #	Included Y/N		TO BE SHOWN ON ES&PC PLAN
51-0001	Y	1	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. The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed. **Permit IV.D.1. pg 28**
50-0001	Y	2	Level II certification number issued by the Commission, signature and seal of the certified design professional. Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed. The Level II certification must be issued to the Design Professional, after completion of a GSWCC approved course, and whose signature and seal are on the Plan.
50-0001	Y	3	The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
50-0001	Y	4	Provide the name, address, email address, and phone number of Primary Permittee.
53-0001	Y	5	Note total and disturbed acreages of the project or phase under construction.
50-0001	Y	6	Provide the GPS locations of the beginning and end of the infrastructure project. Give the Latitudes and Longitudes in decimal degrees.
50-0001	Y	7	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
51-0002	Y	8	Descriptions of the nature of construction activity and existing site conditions.
50-0001	Y	9	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
51-0003, 53-0001, 55-0001	Y	10	Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
50-0001	Y	11	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.
50-0001	Y	12	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 21** of the permit. *
	N/A	13	Design professional certification statement and signature that the Permittee's ES&PC Plan provides for representative sampling as stated on **Part IV.D.6.c.(3). page 37** of the permit as applicable. *
	N/A	14	Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect and certify the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." *
51-0003	N/A	15	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."
51-0003	Y	16	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
	N/A	17	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." *
	N/A	18	Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
51-0002	Y	19	Clearly note 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."
51-0002	Y	20	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."
51-0002	Y	21	Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
	N/A	22	Any construction activity which discharges storm water into a Biota Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as any portion of a Biota Impaired Stream Segment, must comply with **Part III.C.** of the permit. Include the completed Appendix 1 of this checklist with at least 4 of the chosen BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
	N/A	23	If a TMDL Implementation Plan for sediment has been finalized for the Biota 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. *
	N/A	24	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Include statement that washout of the drum at the construction site is prohibited. *
51-0002	Y	25	Provide BMPs for the remediation of all petroleum spills and leaks.
	N/A	26	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. *
	N/A	27	Description of practices to provide cover for building materials and building products on site. *
	N/A	28	Description of the practices that will be used to reduce the pollutants in storm water discharges. *
51-0002	Y	29	Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, grading, infrastructure, temporary and final stabilization).
	N/A	30	Provide complete requirements of Inspections and record keeping by the Primary Permittee. *
	N/A	31	Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
	N/A	32	Provide complete details for Retention of Records as per **Part IV.F.** of the permit. *
	N/A	33	Description of analytical methods to be used to collect and analyze the samples from each location. *
	N/A	34	Appendix B rationale for NTU values at all outfall sampling points where applicable. *
	N/A	35	Delineate all sampling locations on all phases of the Plan, and perennial and intermittent streams and other water bodies into which storm water is discharged. *
	N/A	36	A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all BMPs into a single phase plan. *
54-SERIES	Y	37	Graphic scale and North arrow.
54-SERIES	Y	38	Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: Existing Contours: USGS 1": 2000' Topographical Sheets Proposed Contours: 1" : 400' Centerline Profile
51-0002	Y	39	Use of Alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
	N/A	40	Use of Alternative BMP for application to the Equivalent BMP List. Refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
54-SERIES	Y	41	Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State Waters and any additional buffers as required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
54-SERIES	Y	42	Delineation of all State Waters and wetlands located on or within 200 feet of the project site.
53-0001	Y	43	Delineation and acreage of contributing drainage basins on the project site.
55-0001	Y	44	Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.
53-0001	Y	45	Estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
51-0003	Y	46	Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate at all storm water discharge points.
51-0002	Y	47	Soil series for the project site and their delineation.
54-SERIES	Y	48	The limits of disturbance for each phase of construction.
51-0002	Y	49	Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, Permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
54-SERIES	Y	50	Location of Best Management Practices that are consistent with, and no less stringent than, the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual Chapter 6, with legend.
52-SERIES, 56-SERIES	Y	51	Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
51-0004	Y	52	Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

*** If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.**

Effective January 1, 2026

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S. HUNT

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BULLOCH COUNTY CONSTITUTION 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

ESPCP GENERAL NOTES

G.W. OLIVER ROAD
CULVERT REPLACEMENT

CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
51-0001

ESPCP GENERAL NOTES

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.

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.

ESPCP ALTERATIONS

This Erosion, Sedimentation, and Pollution Control Plan (ES&PC Plan) is provided by the Department. It addresses the staged construction of the project on the basis of common construction methods and techniques. If the Contractor elects to alter the staged construction from that shown in the plans or utilize construction techniques that render this plan ineffective, the Contractor shall revise the plans in accordance to Special Provision 161-Control of Soil Erosion and Sedimentation of the contract.

The Contractor, the Certified Design Professional, and the WECS shall carefully evaluate this plan prior to commencing land-disturbing activities. 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. Additional BMPs may be added per Special Provision 161-Control of Soil Erosion and Sedimentation.

CONSTRUCTION SCHEDULE AND SEQUENCE OF MAJOR ACTIVITIES

The Contractor is responsible for developing the construction schedule for the project. The construction schedule for this project shall be submitted after the project is awarded. A copy of the construction schedule shall be maintained at the project site.

The project budget includes sufficient funds for the payment of construction exits. The Contractor is responsible for establishing at least one (1) construction exit per the specifications of the construction exit detail included in this ESPCP to minimize or eliminate the vehicle tracking of dirt, soils, and sediments off site. To facilitate project logistics, the Contractor is also responsible for selecting the location(s) of the construction exit(s).

PHASE 1 - INITIAL BMP'S

Install the following prior to roadway construction:
1. Perimeter control silt fence
2. Construction Exit
3. Orange barrier fence
4. Apply temporary grassing and mulch as necessary to disturbed areas

Work in the remaining phases includes grading, overlay, full-depth pavement, and construction of the proposed 135' cored slab span bridge along G.W. Oliver Road.

PHASE 2 - INTERMEDIATE BMP'S

While earthwork and roadway paving are progressing, do the following:
1. Apply temporary grassing and mulch as necessary to disturbed areas
2. Mulch and plant temporary grass as required by the special provisions
3. Slope stabilization
4. Install riprap aprons
5. Fill slope embankment armoring

Work in the final phase includes final grading and installation of permanent BMP's.

PHASE 3 - FINAL BMP'S

As soon as final grade has been established in any area of the project, install the following:
1. Permanent grassing
2. Slope stabilization

SITE STABLIZATION AND VEGETATION PLANTING SCHEDULE

The EPD General NPDES GAR100002 permit states that any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding. However in special cases, the Project Engineer may require the contractor to perform stabilization more often than 14 days.

Disturbed areas shall be stabilized with suitable material listed in the current edition of the Department's Standard Specifications (or Special Provisions) Sections 161, 163, 700, or 711 on the basis of when construction activities are expected to resume.

All temporary and permanent vegetative practices including plant species, planting dates, seeding, fertilizing, liming, and mulching rates for this project can be found in Section 700 of the current edition of the Department's Standard Specifications (or Special Provisions) and other applicable contract documents or landscaping plans.

BMP INSTALLATION AND MAINTENANCE MEASURES

See the Department's Standard Specifications (or Special Provisions) 161, 163, 165, 700, 711, and other contract documents for installation and maintenance measures.

PETROLEUM STORAGE, SPILLS AND LEAKS

These plans expressly delegate the responsibility of proper on-site hazardous material management to the Contractor. The Contractor shall at a minimum provide an action plan and keep the necessary materials on site for the capture, clean up, and disposal of any petroleum product, or other hazardous material, leaks or spills associated with the servicing, refueling or operation of any equipment utilized at the site. A copy of the action plan shall be submitted to the Project Engineer and maintained on the project site. All personnel operating or servicing equipment shall be familiar with the action plan. The Contractor shall not park, refuel, or maintain equipment within stream buffers.

If the Contractor elects to store petroleum products on site, the Contractor shall prepare an ESPCP addendum that addresses the additional BMPs needed for onsite storage and spill prevention for petroleum products. This plan shall be prepared by a Certified Design Professional as required by GAR100002 for inclusion with these plans. The Contractor's attention is specifically directed to Standard Specification 107-Legal Regulations and Responsibility to the public for additional requirements.

WASTE DISPOSAL

Where attainable, locate waste collection areas, dumpsters, trash cans and portable toilets at least 50 feet away from streets, gutters, watercourses and storm drains. Secondary containment shall be provided around liquid waste collection areas to minimize the likelihood of contaminated discharges. The Contractor shall comply with applicable state and local waste storage and disposal regulations and obtain all necessary permits. Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

DEWATERING AND PUMPING ACTIVITIES

Any pumped discharge from an excavation or disturbed area shall be routed through an appropriately sized sediment basin, silt filter bag, or shall be treated equivalently with suitable BMP's. The contractor shall ensure the post BMP treated discharge is sheet flowing. Failure to create sheet flow will obligate the contractor to perform water quality sampling of pumped discharges. The contractor shall prepare sampling plans in accordance with the current GAR100002 NPDES permit by utilizing a Certified Design Professional. No separate payment will be made for water quality sampling of pump discharges.

NONSTORMWATER DISCHARGES

Nonstormwater discharges defined in Part III.A.2 of the NPDES Permit will be identified after construction has commenced. These discharges shall be subject to the same requirements as storm water discharges required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, the Manual for Erosion and Sediment Control in Georgia, Department Standards, and other contract documents. The NPDES does not authorize the discharge of soaps or solvents used in vehicle and equipment washing or the discharge of wastewater containing stucco, paint, oils, curing compounds, and other construction materials.

READY MIX CHUTE WASH DOWN

The washing of ready-mix concrete drums and dump truck bodies used in the delivery of Portland cement concrete is prohibited on this site.

In accordance with Standard Specification 107: Legal Regulations and Responsibility to the Public, only the discharge chute utilized in the delivery of Portland cement concrete may be rinsed free of fresh concrete remains. The Contractor shall excavate a pit outside of State water buffers, at least 25 feet from any storm drain and outside of the travelled way, including shoulders, for a wash-down pit. The pit shall be large enough to store all wash-down water without overtopping. Immediately after the wash-down operations are completed and after the wash-down water has soaked into the ground, the pit shall be filled in, and the ground above it shall be graded to match the elevation of the surrounding areas. Alternate wash-down plans must be approved by the Project Engineer.

Wash-down plans describe procedures that prevent wash-down water from entering streams and rivers. Never dispose of wash-down water down a storm drain. Establish a wash-down pit that includes the following: (1) a location away from any storm drain, stream, or river, (2) access to the vehicle being used for wash down, (3) sufficient volume for wash-down water, and (4) permission to use the area for wash down.

On sites where permission or access to excavate a wash-down pit is unavailable, the Contractor may have to wash-down into a sealable 55-gallon drum or other suitable container and then transport the container to a proper disposal site. For additional information, refer to the Georgia Small Business Environmental Assistance Program's "A Guide for Ready Mix Chute/Hopper Wash-down".

OTHER CONTROLS

If the Contractor elects to store building material, building products, construction waste, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials on the site, the Contractor shall provide an appropriate covering to minimize the exposure of those materials or products to precipitation and stormwater to minimize the discharge of pollutants. Minimization of exposure is not required in cases where exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of the specific material or product poses little risk to stormwater contamination or is intended for outdoor use.

The Contractor shall follow this ESPCP and ensure and demonstrate compliance with all applicable State and/or local regulations for waste disposal, sanitary sewer and septic systems, and petroleum storage.

The Contractor shall control dust from the site in accordance with Section 161 of the current edition of the Department's Standard Specifications.

POSTCONSTRUCTION BMPs FOR STORMWATER MANAGEMENT

All permanent postconstruction BMPs are shown in the construction plans and in the ESPCP plan. The postconstruction BMPs for this project consist of vegetated swales/ditches, riprap, at pipe outlets for velocity dissipation and outlet stabilization, channel/ditch stabilization with turf reinforcing mats.

SOIL SERIES INFORMATION

The following is a summary of the soils that are expected to be found on the project site:

Bulloch County, Georgia			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LsA	Leefield loamy sand	0.4	28.3%
Rpa	Rutlege and Portsmouth soils	1.2	71.7%
Total for Area of Interest		1.6	100%

Due to the size and scope of this project and the nature of soil series maps, it is not reasonably practical to delineate the precise locations of the above listed soils on the construction plans. The NRCS soil survey and soil series maps for the project site are also available online at http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

USE OF ALTERNATIVE AND/OR ADDITIONAL BMPS:

No alternative or additional BMPs will be used on this project.

SEDIMENT STORAGE

The site has a total disturbed area of 0.95 acres. The following table summarizes the required and available sediment storage for every outfall on this project. The Contractor shall provide and maintain the storage volumes for the BMP's specified in this table.

Location	Total Drainage Area (acres)	Disturbed Area (acres)	Required Sediment Storage Volume (yd^3)	Total Storage Volume Provided (yd^3)	Temporary Sediment Basins		Silt Fence ($0.3\ yd^3$/ft)	
					Basin #	Total Volume (yd^3)	Length (ft)	Total Volume (yd^3)
Outfall 1	14611	0.47	31	0	N/A	0	0	0
Total Sheet Flow	0.68	0.48	32	390	N/A	0	1300	390

Outfall #1
The area drained is 14611 acres. The disturbed area within this drainage basin is 0.47 acres. The disturbance activities consist of pavement construction, grading, drainage, and construction of a 135' cored slab span bridge. The BMPs shown on the erosion control plans provide 0 CY of the 31 CY required for sediment storage within this basin. The outfall for this basin is a proposed 135' cored slab span bridge along G.W. Oliver Road that drains into Little Lotts Creek. Due to the nature of this corridor, constructing a sediment basin would cause substaintial adverse impacts to adjacent wetlands and private property. Therefore a sediment basin is NOT recommended. Due to the size of the area draining to this outfall, it is not feasible to provide the required storage for the entire area drained without impacting adjacent wetlands. Therefore, in lieu of a sediment basin, BMPs have been shown on the plans to the fullest extent possible. The Contractor shall strictly adhere to the BMP maintenance requirements and shall establish vegetation on disturbed areas as soon as possible.

Total Sheet Flow
Stormwater flowing over disturbed graded areas along the edges of the project and not collected into defined conveyances is defined as sheet flow into Little Lotts Creek. The area drained is 0.68 acres. The disturbed area within this drainage basin is 0.48 acres. The disturbance activities consist of construction of a bridge, pavement construction and grading. The BMPs shown on the erosion control plans provide 390 CY of the 32 CY required for sediment storage within this basin. Due to the nature of this corridor and substantial adverse impacts to adjacent wetlands, construction of a sediment basin is NOT recommended. Further, other BMPs can provide the required storage within the proposed limits of disturbance. Therefore, in lieu of a sediment basin, BMPs have been shown on the plans to the fullest extent possible. The Contractor shall strictly adhere to the BMP maintenace requirements and shall establish vegetation on disturbed areas as soon as possible.

CHANNEL PROTECTION

All channels may be stabilized exclusively with permanent grassing.

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BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

ESPCP GENERAL NOTES

G.W. OLIVER ROAD
CULVERT REPLACEMENT

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		51-0002
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GPLN-CE
11/05/2020

STATE-WATER BUFFER IMPACTS

State-water buffers, as defined by O.C.G.A. 12-7-1, are not impacted by this project.

Non-exempt activities shall not be conducted within the 25- or 50-foot undisturbed stream buffers as measured from the point 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.

SILT FENCE INSTALLATION WITH J HOOKS AND SPURS

Silt fence should never be run continuously. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique is called using J hooks (or spurs). The J hooks shall be utilized on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J hooks shall be spaced in accordance with GDOT Construction Detail D-24C. The maximum J-hook spacing is reached when the top of the J hook is at the same elevation as the bottom of the immediately upgradient J hook. J Hooks shall be paid for as silt fence items per linear foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

RETENTION OF RECORDS

The Department will retain all records related to the implementation of this ESPCP in accordance with Part IV.F of the General Permit GAR100002.

WATER QUALITY INSPECTING AND SAMPLING PROCEDURES

See Special Provision 167 and other contract documents for the inspecting and sampling procedures. Sampling locations are provided in the Sampling Location table herein.

INSPECTIONS AND REPORTING

As the primary permittee, the Department must retain the design professional who prepared the ESPCP, or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days of installation over the entire infrastructure project. Alternatively, for linear infrastructure projects, the permittee must retain either of these personnel to inspect the initial sediment storage requirements and perimeter control BMPs for the initial segment, as defined by Part IV.A.5. of the current GAR100002 Permit, within 7 days of installation and all sediment basins within the entire linear infrastructure project within 7 days of installation. The inspecting design professional shall report the results to the primary permittee within 7 days, and the permittee must correct all deficiencies within 2 business days of receipt of the inspection report, unless on-site weather conditions are such that more time is required. Additionally, the Department's Construction Project Engineer will be responsible for all subsequent 7 day inspections for all new BMP installations.

All other inspections shall be documented on the appropriate Department inspection forms. See Standard Specification (or Special Provision) 167 and other contract documents for inspection and reporting requirements. These inspections shall continue until the Notice of Termination (NOT) is submitted.

Whenever the Department finds that a BMP has failed or is deficient beyond routine maintenance and has resulted in sediment deposition into waters of the State, the Contractor shall take reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be corrected by the close of the next business day from the time of discovery. A repair requiring a new or replacement BMP or significant repair must be operational by no later than 7 days from the time of discovery. If the repair time within 7 days is infeasible, the Contractor and the Department shall schedule the BMP repair to be operational as soon as practical after the 7 day time frame.

Failure to perform inspections as required by the contract documents and the NPDES permit shall result in the cessation of all construction activities with the exception of Traffic Control and Erosion Control. Continued failure to perform inspections shall result in non-refundable deductions as specified in the contract documents.

The design professional who prepared the ES&PC Plan is to inspect and certify the installation of the initial sediment storage requirements, and perimeter control BMPs within 7 days after installation.

SAMPLING LOCATIONS AND GENERAL NOTES

Representative sampling may be utilized on this project as explained here. The individual outfall drainage basins along the project corridor have been carefully evaluated and compared on the basis of four characteristics: the type of construction activity, the disturbed acreage, the average slope about the outfall, and the soil erosion index 0-10, 10 being the most erodible soil. The construction activity types are new road on fill, new road in cut, road widening, and maintenance/safety. The disturbed area classes are less than or equal to 1 acre, greater than 1 acre to less than 2 acres, and equal to or greater than 2 acres. The average outfall slope is mild if it is equal to or less than 0.03, and steep if it is greater than 0.03. The soil erosion index is low if it is less than or equal to 5 and high if it is greater than 5. After evaluation of these characteristics as presented in the project's drainage area map, hydrology and hydraulic studies, construction plans, geotechnical soil survey, and erosion sedimentation and pollution control plans, the Department has determined that the representative sampling scheme shown below is valid for the duration of the project. The table shows the groups of similar outfall drainage basins.

The increase in turbidity at the specified locations in the table below will be representative of the alternate outfall drainage basins when similar outfall drainage basins exist. Approved primary and alternate representative sampled features are identified in the table below.

Note: The Total Site Area is 1.43 acres.

SAMPLING INFORMATION											Representative Sampling Scheme: OUTFALL CHARACTERISTICS				
Primary Sampled Feature	Location (Station and Offset)	Name of Receiving Water	Applicable Construction Stage for Sampling	Sampling Type (Outfall or Receiving water)	Drainage Area for Receiving Water (mi^2)	Upstream Disturbed Area (acres)	Warm or Cold Water Stream	Appendix B NTU Value (Outfall Sampling only)	Allowable NTU Increase (Receiving water sampling only)	Location Description	Construction Activity	Disturbed Area (acres)	Average Outfall Slope (Rise/Run)	Soil Erosion Index	Represented Outfall Drainage Basins
1	106+65, 55'LT	Little Lotts Creek	All	Receiving Water	22.83	0.70	Warm	N/A	25	Upstream at Required Right-of-Way Line	N/A	N/A	N/A	N/A	N/A
2	106+65, 55'RT	Little Lotts Creek	All	Receiving Water	22.83	0.25	Warm	N/A	25	Downstream at Required Right-of-Way Line					

The primary sampled features specified should be used as the initial sampling locations. An alternate sampled feature may be used if additional sampling is required or to replace a primary sampled feature that is no longer located within the active phase of construction.

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BULLOCH COUNTY GEORGIA 1796 EDUCATION AGRICULTURE RECREATION

REVISION DATES

ESPCP GENERAL NOTES

G.W. OLIVER ROAD
CULVERT REPLACEMENT

CHECKED: DATE:
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DRAWING No.
51-0003

GPLN-CE
11/05/2020

Ds1 - MULCHING

MATERIAL	DEPTH
DRY STRAW OR HAY	2" TO 4"
WOOD WASTE (SAWDUST, BARK, CHIPS)	2" TO 3"
BLACK POLYETHYLENE FILM	COMPLETELY COVER AREA; HOLD IN PLACE WITH SOIL ON OUTER EDGE

Ds2 - TEMPORARY SEEDING

PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER OR COMPANION CROPS

SPECIES	RATES PER 1,000 SQ. FT.	RATES PER ACRE	PLANTING DATES BY REGION		
			M-L	P	C
BARLEY	3.3 LBS.	3 BU.	9/1-10/31	9/15-11/15	10/1-12/31
OATS	3.3 LBS.	3 BU.	9/1-10/31	9/15-11/15	10/1-12/31
TRITCALE	3.3 LBS.	3 BU.	9/1-10/31	9/15-11/15	10/1-12/31
RYEGRASS, ANNUAL RYE LESPEDEZA, ANNUAL	0.9 LBS. 0.6 LBS. 0.9 LBS.	40 LBS. 0.5 BU. 40 LBS.	8/15-11/15 8/15-10/31 3/1-3/31	9/15-12/15 9/15-11/30 3/1-3/31	9/15-12/31 10/1-12/31 2/1-2/28
WEEPING LOVEGRASS	0.1 LBS.	4 LBS.	4/1-5/31	4/1-5/31	3/1-5/31
SUDANGRASS	1.4 LBS.	60 LBS.	4/1-8/31	4/1-8/31	3/1-7/31
MILLET, BROWNTOP MILLET, PEARL	0.9 LBS. 1.1 LBS.	40 LBS. 50 LBS.	4/15-6/15 5/15-7/15	10/1-12/15	10/15-12/31
WHEAT	4.1 LBS.	3 BU.	9/15-11/30	10/1-12/15	10/15-12/31

1. TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF PLANTED TOO HEAVILY.

2. REDUCE SEEDING RATES BY 50% WHEN DRILLED.

3. UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES.

4. SEEDING RATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS.

M-L REPRESENTS THE MOUNTAIN, BLUE RIDGE, AND RIDGES & VALLEYS MLRAS.

P REPRESENTS THE SOUTHERN PIEDMONT REGION MLRA.

C REPRESENTS THE SOUTHERN COASTAL PLAIN, SAND HILLS, BLACK LANDS, AND ATLANTIC COAST FLATWOODS MLRAS.

FERTILIZER REQUIREMENTS FOR TEMPORARY VEGETATION

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	N TOP DRESSING RATE (LBS./ACRE)
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
COOL SEASON GRASSES & LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 - -
TEMPORARY COVER CROPS	FIRST	10-10-10	500	30
SEEDED ALONE WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

Ds3 - PERMANENT GRASSING

PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

TYPES OF SPECIES	RATES PER ACRE	RATES PER 1,000 SF	PLANTING DATES BY REGION			REMARKS
			M-L	P	C	
BAHIA, PENSACOLA ALONE OR WITH TEMPORARY COVER WITH PERENNIALS	60 LBS. 30 LBS.	1.4 LBS. 0.7 LBS.	-	4/1-5/31	3/1-5/31	LOW GROWING AND SOD FORMING. ALLOW TO ESTABLISH. WILL SPREAD INTO BERMUDA LAWNS.
BAHIA, WILMINGTON ALONE OR WITH TEMPORARY COVER WITH PERENNIALS	60 LBS. 30 LBS.	1.4 LBS. 0.7 LBS.	3/15-5/31	3/1-5/31	-	LOW GROWING AND SOD FORMING. ALLOW TO ESTABLISH. WILL SPREAD INTO BERMUDA LAWNS.
BERMUDA, COMMON (HULLED SEED) ALONE OR WITH TEMPORARY COVER WITH PERENNIALS	10 LBS. 6 LBS.	0.2 LBS. 0.1 LBS.	-	4/1-5/31	3/15-5/31	QUICK COVER. LOW GROWING AND SOD FORMING. NEEDS FULL SUN.
BERMUDA, COMMON (UNHULLED SEED) ALONE OR WITH TEMPORARY COVER WITH PERENNIALS	10 LBS. 6 LBS.	0.2 LBS. 0.1 LBS.	-	10/1-2/28	11/1-1/31	PLANT WITH WINTER ANNUALS PLANT WITH TALL FESCUE
BERMUDA, SPRIGS TEMPORARY COVER	40 CF SOD PLUGS 3' X 3'	0.9 CF	4/15-6/15	4/15-6/15	4/1-5/31	1 CF = 650 SPRIGS 1 BU. = 1.25 CF OR 800 SPRIGS.
CENTIPEDE	BLOCK SOD ONLY		-	11/1-5/31	11/1-5/31	DROUGHT TOLERANT; FULL SUN OR PARTIAL SHADE; EFFECTIVE ADJACENT TO CONCRETE AND IN CONCENTRATED FLOW AREAS; IRRIGATION NEEDED UNTIL FULLY ESTABLISHED; DO NOT PLANT NEAR PASTURES.
CROWN VETCH WITH WINTER ANNUALS OR COOL WINTER GRASSES	15 LBS.	0.3 LBS.	9/1-10/15	9/1-10/10	-	MIX WITH 30 LBS. TALL FESCUE OF 15 LBS. RYE; INNOCULATE SEED; ONLY NORTH OF ATLANTA, DENSE GROWTH; DROUGHT TOLERANT AND FIRE RESISTENT
FESCUE, TALL ALONE WITH OTHER PERENNIALS	50 LBS. 30 LBS.	1.1 LBS. 0.7 LBS.	3/1-4/1 OR 8/15-10/15	9/1-10/15 OR 2/15-4/15	-	NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWNVETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTINGS. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS. 227,000 SEED PER POUND.
LESPEDEZA, SERICEA SCARIFIED	60 LBS.	1.4 LBS.	4/1-5/31	3/15-5/31	3/1-5/15	WIDELY ADAPTED AND LOW MAINTENANCE. TAKES 2-3 YEARS TO ESTABLISH. EXCELLENT ON ROADBANKS. INOCULATE SEED WITH EL INOCULANT. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, HAHIA, OR TALL FESCUE.
UNSCARIFIED	75 LBS.	1.7 LBS.	9/1-2/28	9/1-2/28	9/1-2/28	MIX WITH TALL FESCUE OR WINTER ANNUALS
SEED-BEARING HAY	3 TONS	138 LBS.	10/1-1/31	10/1-1/31	9/15-1/15	CUT WHEN SEED IS MATURE, BUT BEFORE IT SHATTERS. ADD TALL FESCUE OR WINTER ANNUALS.
LESPEDEZA, AMBRO VIRGETA OR APPALOW SCARIFIED UNSCARIFIED	60 LBS. 75 LBS.	1.4 LBS. 1.7 LBS.	4/1-5/31 9/1-2/28	3/15-5/31 9/1-2/28	3/15-5/15 9/1-2/28	SPREADING GROWTH WITH HEIGHT OF 18"-24". GOOD IN URBAN AREAS. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, TALL FESCUE, OR WINTER ANNUALS. DO NOT MIX WITH SERICEA LESPEDEZA. SLOW TO DEVELOP SOLID STANDS. INOCULATE SEED WITH EL INOCULANT.
LESPEDEZA, SHRUB (LESPEDEZA BICOLOR OR LESPEDEZA THUMBERGIL) PLANTS	3' X 3' SPACING		10/1-3/31	11/1-3/15	11/15-2/28	PLANT IN SMALL CLUMPS FOR WILDLIFE FOOD AND COVER.
LOVEGRASS, WEEPING ALONE WITH OTHER PERENNIALS	4 LBS. 2 LBS.	0.1 LBS 0.05 LBS	4/1-5/31	3/15-5/31	3/1-5/31	QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.
MAIDENCANE SPRIGS	2' X 3' SPACING		2/1-3/31	2/1-3/31	2/1-3/31	FOR VERY WET SITES SUCH AS RIVERBANKS AND SHORELINES. DIG SPRIGS LOCALLY. MAY CLOG CHANNELS.
PANICGRASS, ATLANTIC COASTAL	20 LBS.	0.5 LBS	-	3/1-4/30	3/1-4/30	GROWS WELL ON COASTAL SAND DUNES, BORROW AREAS, AND GRAVEL PITS. PROVIDES WINTER COVER FOR WILDLIFE. MIX WITH SERICEA LESPEDEZA EXCEPT ON SAND DUNES.
REED CANARY GRASS ALONE WITH OTHER PERENNIALS	50 LBS. 30 LBS.	1.1 LBS. 0.7 LBS.	6/15-10/15	9/1-10/15	-	GROWS SIMILAR TO TALL FESCUE
SUNFLOWER, 'AZTEC' MAXIMILLIAN	10 LBS.	0.27 LBS.	4/15-5/31	4/15-5/31	4/1-5/31	MIX WITH WEEPING LOVEGRASS, LEGUMES, OR OTHER LOW GROWING GRASSES.

Ds3 - PERMANENT SEEDING

FERTILIZER REQUIREMENTS FOR PERMANENT VEGETATION

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	N TOP DRESSING RATE (LBS./ACRE)
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
COOL SEASON GRASSES & LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 - -
GROUND COVERS	FIRST SECOND MAINTENANCE	10-10-10 10-10-10 10-10-10	1300 1300 1300	- - -
PINE SEEDLINGS	FIRST	20-10-5	ONE 21-GRAM PELLET PER SEEDLING PLACED IN THE CLOSING HOLE	-
SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10 0-10-10	700 700	- -
TEMPORARY GROUND COVER CROPS SEEDED ALONE	FIRST	10-10-10	500	30
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30
WARM SEASON GRASSES & LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 1000 400	50 - -

APPLY AGRICULTURAL LIME AS PRESCRIBED BY SOIL TESTS OR AT A RATE OF 1-2 TONS PER ACRE

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S. HUNT

Kimley»Horn
Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

BULLOCH COUNTY 1796 EDUCATION AGRICULTURE RECREATION

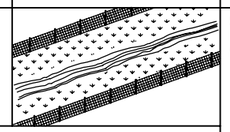
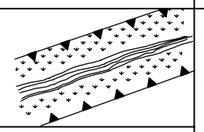
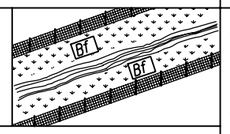
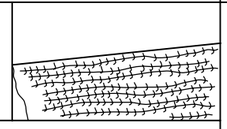
REVISION DATES

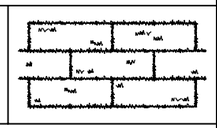
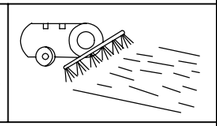
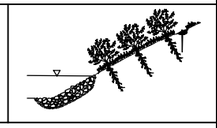
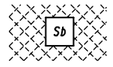
ESPCP GENERAL NOTES

G.W. OLIVER ROAD
CULVERT REPLACEMENT

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		51-0004
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GPLN-CE
11/05/2020

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
	ORANGE BARRIER FENCE		ORANGE BARRIER FENCE DELINEATES ENVIRONMENTALLY SENSITIVE AREAS WHERE THE CONTRACTOR SHALL NOT CLEAR, GRUB, OR PLACE CONSTRUCTION MATERIALS OR EQUIPMENT WITHIN THIS AREA.
		LINE CODE  ORANGE BARRIER FENCE	
ESA	ENVIRONMENTALLY SENSITIVE AREA		AN ENVIRONMENTALLY SENSITIVE AREA (ESA) CONTAINS RESOURCES THAT ARE ENVIRONMENTALLY, CULTURALLY, OR HISTORICALLY SENSITIVE. ESAs INCLUDE, BUT ARE NOT LIMITED TO: STATE WATER BUFFERS, HISTORIC SITES, ARCHAEOLOGICAL SITES, AND PROTECTED ANIMAL AND PLANT SPECIES HABITATS. IF WORK IS AUTHORIZED IN THIS AREA, THE WORK MUST BE PERFORMED IN ACCORDANCE WITH SECTION 107 AND ANY OTHER APPLICABLE SPECIAL PROVISIONS AND APPLICABLE PLAN NOTES.
		LINE CODE  ESA-25'(OR 50')STREAM BUFFER, ETC.	
Bf	BUFFER ZONE		A STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION, OR THE RE-ESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS, PONDS, WETLANDS, LAKES, AND COASTAL WATERS. WHEN NECESSARY, BUFFER ZONES ARE TO BE PROTECTED BY ORANGE BARRIER FENCE.
		SYMBOL Bf	
Ds1	MULCH SECTION 163		THIS IS AN APPLICATION OF STRAW MULCH USED TO REDUCE SOIL EROSION AND STABILIZE THE SOIL. IT IS USED TO CONTROL EROSION IN AREAS WHERE PERMANENT VEGETATION IS OUT OF SEASON OR TO TEMPORARILY STABILIZE AREAS PRIOR TO FINAL GRADING. MULCHING REQUIREMENTS ARE ADDRESSED BY STANDARD SPECIFICATIONS AND/OR THE PROJECT ENGINEER. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
		SYMBOL Ds1	
Ds2	TEMPORARY GRASSING SECTION 163, 700		THE SOWING OF A QUICK GROWING SPECIES OF GRASS SUITABLE TO THE AREA AND SEASON. IT IS TYPICALLY USED TO CONTROL EROSION IN AREAS LONGER THAN MULCHING IS EXPECTED TO LAST. TEMPORARY GRASSING SHOULD BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATIONS. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
		SYMBOL Ds2	

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ds3	PERMANENT GRASSING SECTION 700		THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON. PERMANENT VEGETATION SHALL BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATION. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
		SYMBOL Ds3	
Ds4	SODDING CONSTRUCTION DETAIL D-54 SECTION 700, 890		THE INSTALLATION OF A SPECIES OF GRASS SODDING SUITABLE TO THE AREA AND SEASON TO PROVIDE IMMEDIATE PERMANENT VEGETATION. SODDING MAY BE SHOWN FOR HIGHLY SENSITIVE AREAS, TO IMPROVE AESTHETICS, OR FOR SPECIAL PLANTING REQUIREMENTS ON THE BASIS OF ENVIRONMENTAL COMMITMENTS OR LANDSCAPING REQUIREMENTS. THE BMP PATTERN FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
		PATTERN 	
Fl-Co	FLOCCULANTS COAGULANTS SECTION 163, 700, 895		FLOCCULANTS AND COAGULANTS ARE USED TO SETTLE SUSPENDED SEDIMENT, HEAVY METALS, AND HYDROCARBONS (TSS) IN SLOW MOVING RUNOFF FROM CONSTRUCTION SITES FOR WATER CLARIFICATION. ANIONIC POLYACRYLAMIDES (PAM) MAY BE USED IN CONJUNCTION WITH BMPs WITHIN CHANNELS UPSTREAM OF A POST-CONSTRUCTION POND, TEMPORARY SEDIMENT BASIN, OR TEMPORARY SEDIMENT TRAP. FLOCCULANTS SHALL NOT BE USED DOWNSTREAM OF AFOREMENTIONED BMPs! FLOCCULANTS/COAGULANTS ARE TO BE SHOWN ON PLANS WITH APPLICABLE BMP IF NEEDED. PAYMENT FOR PAM AS A FLOCCULANT WILL BE INCLUDED IN THE PRICE FOR THE INSTALLATION AND/OR MAINTENANCE OF THE BMP IT IS USED IN CONJUNCTION WITH. NO SEPARATE PAYMENT WILL BE MADE.
		SYMBOL Fl-Co POLYACRYLAMIDE	
Sb	STREAMBANK STABILIZATION SECTION 702		STREAMBANK STABILIZATION IS THE USE OF READILY AVAILABLE NATIVE PLANT MATERIALS TO MAINTAIN AND ENHANCE STREAMBANKS, OR TO PREVENT, OR RESTORE AND REPAIR SMALL STREAMBANK EROSION PROBLEMS. STREAMBANK STABILIZATION AREAS SHOULD BE SHOWN ON THE PLANS WHEN APPLICABLE TO THE PROJECT. REFER TO THE PROJECT'S STREAM AND STREAM BUFFER MITIGATION PLANS FOR PLANT SPECIES, LOCATIONS, AND OTHER PLANTING DETAILS.
		PATTERN 	

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA'.

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

NO SCALE

REVISION DATES
3/2/2017

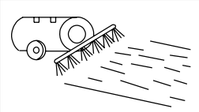
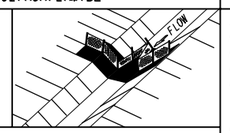
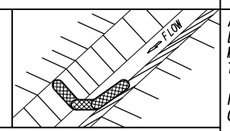
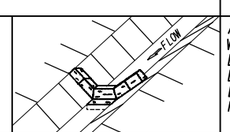
EROSION CONTROL LEGEND

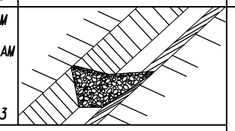
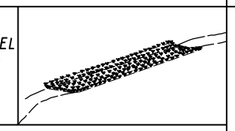
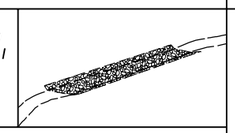
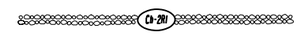
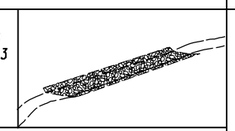
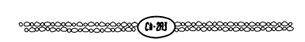
UNIFORM CODE SHEET

SHEET 1 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0001
CORRECTED:		DATE:		
VERIFIED:		DATE:		

7/31/2015 GPLN

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ss	SLOPE STABILIZATION CONSTRUCTION DETAIL D-35 SECTION 716	 PATTERN 	SLOPE STABILIZATION (EROSION CONTROL MATTING) IS A PROTECTIVE COVERING USED TO PREVENT EROSION AND ESTABLISH TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, SHORE LINES, OR CHANNELS. SLOPE STABILIZATION MAY BE A ROLLED EROSION CONTROL PRODUCT (RECP) OR A HYDRAULIC EROSION CONTROL PRODUCT (HECP). SLOPE STABILIZATION SHALL BE USED ON ALL CUT OR FILL SLOPES OF 2.5:1 OR STEEPER AND WITHIN 50 FEET OF ALL CROSS DRAINS AND CULVERTS. NOTE: ONLY COCONUT FIBER BLANKET OR WOOD FIBER BLANKET SHALL BE USED AS SLOPE STABILIZATION WITHIN BUFFERED AREAS.
Tac	TACKIFIERS SECTION 163, 700, 895	 SYMBOL Tac POLYACRYLAMIDE	TACKIFIERS HYDRATE IN WATER AND READILY BLEND WITH OTHER SLURRY MATERIALS AND ARE USED TO TIE-DOWN FOR SOIL, COMPOST, SEED, STRAW, HAY OR MULCH. TACKIFIERS REQUIREMENTS, SUCH AS ANIONIC POLYACRYLAMIDES (PAM) ARE ADDRESSED BY STANDARD SPECIFICATIONS AND ARE NOT TYPICALLY SHOWN ON THE PLANS. PAM IS TYPICALLY USED BY THE CONTRACTOR FOR TEMPORARY OR PERMANENT GRASSING. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR CRITERIA.
Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL D-24D SECTION 171	 SYMBOL Cd-F	A CHECK DAM COMPOSED OF SYNTHETIC FIBER FABRIC, WIRE REINFORCED, POST, OVERFLOW WEIR, AND TURF REINFORCEMENT MATTING (TRM) SPLASHPAD PLACED IN DITCHES IN A SPECIAL CONFIGURATION WHICH CONTROLS ENERGY DISSIPATION AND FILTRATION OF STORM WATER. SEE CONSTRUCTION DETAIL D-24D FOR ADDITIONAL INFORMATION AND SPACING REQUIREMENTS. THIS ITEM IS SUITABLE FOR USE IN ROADSIDE DITCHES THAT ARE PART OF INFRASTRUCTURE CONSTRUCTION PROJECTS AND WITHIN THE CLEAR ZONE. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Cd-Fs	COMPOST FILTER SOCK CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163	 SYMBOL Cd-Fs	A COMPOST FILTER SOCK CHECK DAM IS COMPOSED OF A PHOTODEGRADABLE OR BIODEGRADABLE KNITTED MESH MATERIAL CONTAINING A WEED FREE FILLER MATERIAL DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. THEY SHALL BE PROPERLY STAKED FOR DITCH APPLICATIONS. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR MATERIAL SPECIFICATIONS. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Cd-Hb	BALED STRAW CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163	 SYMBOL Cd-Hb	A BALE STRAW CHECK DAM IS COMPOSED OF BALES PREFERABLY BOUND WITH WIRE OR NYLON INSTEAD OF TWINE. BALES SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING ADJACENT BALES. THE DOWNSTREAM ROW OF BALES SHALL BE PLACED IN A TRENCH TO ALLOW THE TOP OF THE BALE'S LONG, WIDE SIDE TO BE LEVEL WITH THE GROUND AS A NON-ERODIBLE SPLASH PAD. PROPER STAKING IS ALSO REQUIRED FOR DITCH APPLICATIONS. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Cd-S	STONE CHECK DAM OR SANDBAG CHECK DAM CONSTRUCTION DETAIL D-56 SECTION 163, 603	 SYMBOL Cd-S	STONE CHECK DAMS ARE CONSTRUCTED OF TYPE-3 RIP-RAP WITH GEOTEXTILE UNDERLINER. STONE CHECK DAMS ARE PREFERRED IN ROADWAY DITCHES OUTSIDE THE CLEAR ZONE. CONSIDERATION SHOULD BE GIVEN TO USING OTHER APPROPRIATE CHECK DAMS AND/OR BMPs WITHIN THE CLEAR ZONE. SANDBAG CHECK DAMS ARE RECOMMENDED IN CONCRETE LINED CHANNELS FOR TEMPORARY VELOCITY CONTROL ONLY. ENSURE DISCHARGE POINT IS PROPERLY STABILIZED AND INCLUDE APPROPRIATE BMPs FOR SEDIMENT STORAGE UPSTREAM AND/OR DOWNSTREAM OF CONCRETE LINED CHANNELS. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Ch-1	VEGETATED CHANNEL STABILIZATION SECTION 700	 LINE CODE 	A NEW OR EXISTING CHANNEL MAY BE LINED WITH PERMANENT VEGETATION ONLY FOR VELOCITIES UP TO 5.0 fps. THIS MEASURE SHALL BE DESIGNED IN ACCORDANCE WITH THE GDOT CHANNEL LINING DESIGN PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. TYPICALLY NOT SHOWN IN PLANS.
Ch-2R1	CHANNEL STABILIZATION RIP-RAP, TYPE 1 CONSTRUCTION DETAIL D-49 SECTION 603	 LINE CODE 	THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 1 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2R3	CHANNEL STABILIZATION RIP-RAP, TYPE 3 CONSTRUCTION DETAIL D-49 SECTION 603	 LINE CODE 	THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 3 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

NO SCALE

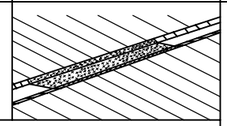
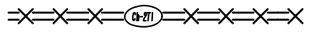
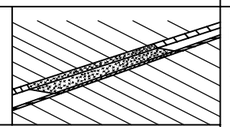
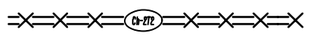
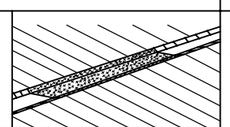
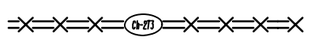
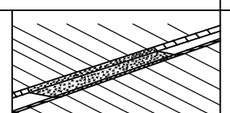
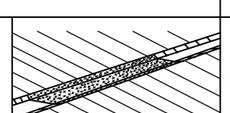
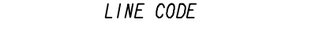
REVISION DATES
3/2/2017
11/28/2018

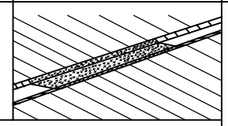
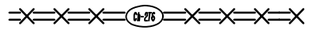
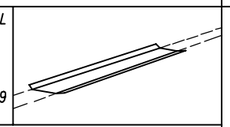
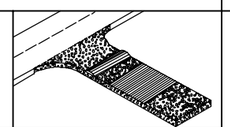
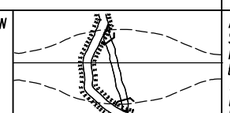
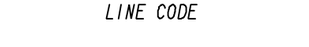
EROSION CONTROL LEGEND
UNIFORM CODE SHEET
SHEET 2 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No. 52-0002

7/31/2015 GPLN

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T1	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-2 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T2	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-4 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T3	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-6 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T4	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-8 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T5	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-10 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T6	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-12 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-3	CONCRETE CHANNEL STABILIZATION CONSTRUCTION DETAIL D-10, D-49 SECTION 441	 LINE CODE 	CHANNELS ARE LINED WITH CONCRETE FOR VELOCITIES >/= 10 fps. THIS ITEM CONSISTS OF CONSTRUCTING A 4" THICK CONCRETE CHANNEL. THE CONCRETE SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH 'Dp' RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. 'Dp' SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN. RIP-RAP SHOULD BE USED TO DISSIPATE ENERGY DOWNSTREAM OF CONCRETE LINED CHANNELS.
Co	CONSTRUCTION EXIT CONSTRUCTION DETAIL D-41 SECTION 163, 800	 SYMBOL Co	A CONSTRUCTION EXIT IS A STONE STABILIZED PAD THAT REDUCES OR ELIMINATES THE TRANSPORT OF MUD FROM CONSTRUCTION AREAS ONTO PUBLIC ROADS BY EQUIPMENT OR RUNOFF. BEST USED AT ACCESS POINTS, i.e. NEW LOCATION PROJECTS, BORROW PITS, WASTE PITS, ACCESS ROADS, ETC. SHOULD BE MINIMUM 20' WIDE, 50' LONG, 6" THICK, AND REQUIRES A GEOTEXTILE UNDERLINER. ON SITES WHERE THE GRADE TOWARD A PAVED AREA IS GREATER THAN 2%, A FULL WIDTH DIVERSION RIDGE 6" TO 8" HIGH WITH 3:1 SLOPES SHALL BE CONSTRUCTED APPROXIMATELY 15' UPSTREAM OF PAVED AREA. A TIRE WASHING AREA TO REMOVE MUD MAY ALSO BE REQUIRED PRIOR TO ENTRANCE ONTO PUBLIC ROADWAYS. ALL CONSTRUCTION EXIT REQUIREMENTS ARE INCLUDED IN THE PRICE OF THE CONSTRUCTION EXIT.
Dc-A	STREAM DIVERSION CHANNEL GEOTEXTILE, POLYETHYLENE FILM SECTION 163	 LINE CODE 	A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE OR POLYETHYLENE FILM. INSTALL TWO ROWS OF Sdl-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 0 - 2.5 fps. THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA'.

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

NO SCALE

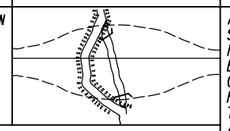
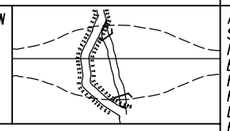
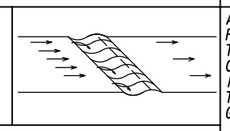
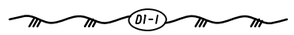
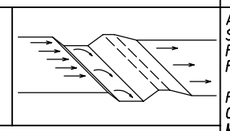
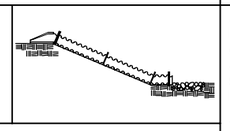
REVISION DATES		
3/2/2017		

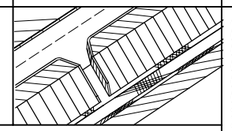
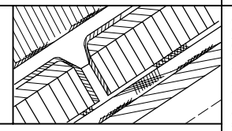
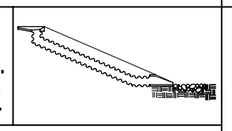
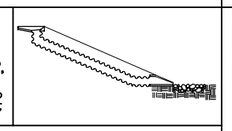
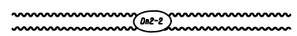
EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 3 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0003
CORRECTED:		DATE:		
VERIFIED:		DATE:		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dc-B	STREAM DIVERSION CHANNEL GEOTEXTILE ONLY SECTION 163	 LINE CODE 	A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE ONLY. INSTALL TWO ROWS OF SdI-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 2.5 - 9.0 fps. THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
Dc-C	STREAM DIVERSION CHANNEL RIP-RAP & GEOTEXTILE SECTION 163	 LINE CODE 	A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH RIP-RAP AND GEOTEXTILE. INSTALL TWO ROWS OF SdI-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 9.0 - 13.0 fps. THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
DI-1	DIVERSION BERM CONSTRUCTION DETAIL D-47 SECTION 205	 LINE CODE 	A NON-DESIGNED TEMPORARY EARTHEN BERM WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO BE USED AT THE EDGE OF EMBANKMENT DURING THE GRADING OPERATION. THE BERMS ARE ALSO CONSTRUCTED ABOVE, ACROSS OR BELOW A SLOPE TO REDUCE THE LENGTH OF A SLOPE. THEY ARE USED TO INTERCEPT RUNOFF, PREVENTING SLOPE EROSION AND TO DIRECT THE RUNOFF TO A STABLE OUTLET, DOWN DRAINS 'DnI'OR CATCHMENT AREAS AND ON ALL GRADING PROJECTS.
DI-2	DIVERSION CHANNEL SECTION 205	 LINE CODE 	A DESIGNED TEMPORARY OR PERMANENT CHANNEL WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO DIVERT OFFSITE RUNOFF AWAY FROM DISTURBED AREAS WITHIN THE PROJECT AREA. CHANNEL FOR OFFSITE RUNOFF SHALL BE STABILIZED WITH APPROPRIATE CHANNEL STABILIZATION. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA. A DIVERSION CHANNEL DETAIL MUST ALSO BE PROVIDED IN THE ESPCP. RUNOFF FROM DISTURBED AREAS WITHIN THE PROJECT AREA SHALL NOT BE ALLOWED TO CONVERGE WITH OFFSITE RUNOFF WITHIN THIS DIVERSION.
DnI	TEMPORARY DOWNDRAIN STRUCTURE FLEXIBLE CONSTRUCTION DETAIL D-19 SECTION 163	 LINE CODE 	A TEMPORARY PIPE SLOPE DRAIN IS A PLASTIC FLEXIBLE PIPE TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TEMPORARY SLOPE DRAINS SHOULD BE PLACED AT INTERVALS OF 350 FEET ON 0% - 2% GRADES, 200 FEET ON STEEPER GRADES AND MORE FREQUENTLY AS DICTATED BY FIELD CONDITIONS. THE TYPICAL PIPE SIZE IS A CORRUGATED 10". THE PIPE WILL BE ANCHORED WITH STAKES AT INTERVALS NOT TO EXCEED 10'. THE OUTLET AREA SHALL BE STABILIZED FOR VELOCITY DISSIPATION AND EROSION CONTROL.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dn2-A	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441	 LINE CODE 	A CONCRETE FLUME TYPE 'A' IS USED TO DIRECT SURFACE RUNOFF DOWN A ROADWAY SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN ALL DEPRESSED AREAS WHERE WATER WILL FLOW DOWN THE SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OTHER CRITERIA).
Dn2-B	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441	 LINE CODE 	A CONCRETE FLUME TYPE 'B' IS USED TO DIRECT SURFACE DITCH RUNOFF DOWN A BACK SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN DEPRESSED AREAS WHERE CONCENTRATED OFFSITE WATER REACHES THE CUT SLOPE. IT IS DESIGNED TO SAFELY CONVEY WATER DOWN THE CUT SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
Dn2-I	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP1, 9017J TP1, DETAIL D-26 TP1 SECTION 576, 577	 LINE CODE 	CONCRETE DRAIN INLET WITH METAL PIPE IS USED TO DRAIN CURBS, ON A GRADE, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
Dn2-2	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP2, 9017J TP2, DETAIL D-26 TP2 SECTION 576, 577	 LINE CODE 	CONCRETE DRAIN INLET AND METAL PIPE IS USED TO DRAIN CURB, IN A SAG, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

NO SCALE

REVISION DATES
3/2/2017

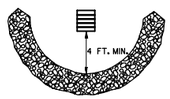
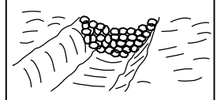
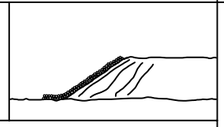
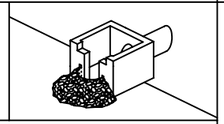
EROSION CONTROL LEGEND

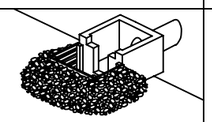
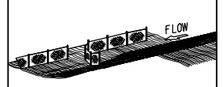
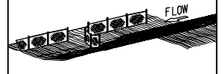
UNIFORM CODE SHEET

SHEET 4 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0004
CORRECTED:		DATE:		
VERIFIED:		DATE:		

7/31/2015 GPLN

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Fr	FILTER RING CONSTRUCTION DETAIL D-46 SECTION 163		A TEMPORARY STONE BARRIER CONSTRUCTED AT DRAINAGE STRUCTURE INLETS AND POST-CONSTRUCTION POND OUTLETS. IT REDUCES RUNOFF VELOCITY AND HELPS PREVENT SEDIMENT FROM LEAVING SITE PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA. REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR ADDITIONAL INFORMATION ON USAGE.
	SYMBOL: Fr		
Rd	ROCK FILTER DAM CONSTRUCTION DETAIL D-43 SECTION 163, 603		ROCK FILTER DAMS ARE CONSTRUCTED OF TYPE 3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. THEY ARE PLACED ACROSS DRAINAGEWAYS WHICH DRAIN 50 ACRES OR LESS. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING ROCK FILTER DAMS. THE DAM SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS. ROCK FILTER DAMS SHOULD BE USED IN DITCHES PRIOR TO DISCHARGING INTO STREAMS, WETLANDS, OPEN-WATERS, OR OTHER ESAs.
	SYMBOL: Rd		
Rd-B	STONE FILTER BERM CONSTRUCTION DETAIL D-50 SECTION 163, 603		STONE FILTER BERMS ARE CONSTRUCTED SIMILAR TO ROCK FILTER DAMS FOR A LINEAR APPLICATION. THEY ARE CONSTRUCTED OF TYPE-3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING STONE FILTER BERMS. STONE FILTER BERMS ARE IDEAL ALONG THE PERIMETER FOR SHEET FLOW AND/OR SHALLOW CONCENTRATED FLOW TO A COMMON LOW AREA WHERE PERIMETER SILT FENCE ALONE MAY BE INSUFFICIENT, THERE IS NO WELL-DEFINED CHANNEL FOR A STANDARD ROCK FILTER DAM, AND/OR CONSTRUCTING A ROCK OUTLET TEMPORARY SEDIMENT TRAP IS NOT APPLICABLE.
	LINE CODE: —Rd-B—		
Rp	RIP-RAP SECTION 603		RIP-RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND BRIDGE END ROLLS. RIP-RAP TYPE-I SHOULD BE PLACED ON TOP OF A GEOTEXTILE UNDERLINER AT A MINIMUM 24" THICKNESS OR AS INDICATED ON THE PLANS. RIP-RAP MAY ALSO BE USED AT DRAINAGE STRUCTURE OUTLETS WITHIN THE RIGHT-OF-WAY. HOWEVER, APPROPRIATE OUTLET PROTECTION SHOULD BE PROVIDED AT OUTFALLS. REFER TO STORM DRAIN OUTLET PROTECTION FOR ADDITIONAL INFORMATION ON USING RIP-RAP AT OUTFALLS.
	PATTERN: Rp		
Rt-P	RETROFITTING PERFORATED HALF-ROUND PIPE CONSTRUCTION DETAIL D-44 SECTION 163		A PERFORATED HALF-ROUND PIPE WITH STONE FILTER PLACED IN FRONT OF A PERMANENT STORMWATER DETENTION POND OUTLET STRUCTURE TO SERVE AS A TEMPORARY SEDIMENT FILTER. SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 30 ACRES TOTAL DRAINAGE AREA. SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA. REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR DESIGN CRITERIA.
	SYMBOL: Rt-P		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Rt-B	RETROFITTING SLOTTED BOARD DAM CONSTRUCTION DETAIL D-45 SECTION 163		A SLOTTED BOARD DAM CONSISTS OF STONE AND/OR FILTER FABRIC AND BOARDS WITH 0.5" - 1.0" SPACING TO SERVE AS A TEMPORARY SEDIMENT FILTER. PERMANENT STORMWATER DETENTION POND OUTLET: -DRAINAGE AREA UP TO 100 ACRES -DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA ROADWAY DRAINAGE STRUCTURE: -OPEN END PIPES, WINGED HEADWALLS, OR CONCRETE WEIR OUTLETS WITH DRAINAGE AREA LESS THAN 30 ACRES REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR DESIGN CRITERIA.
	SYMBOL: Rt-B		
Rt-Sg1 Rt-Sg2 Rt-Sg3	RETROFITTING SILT CONTROL GATES CONSTRUCTION DETAIL D-20 SECTION 163		A SILT CONTROL GATE CONSISTS OF BOARDS WITHOUT SPACING AND FILTER FABRIC TO BE USED FOR TEMPORARY SEDIMENT STORAGE ON ROADWAY PROJECTS AT THE INLET OF STRUCTURES WITH A DRAINAGE AREA UP TO 50 ACRES. THE DISTURBED AREA WITHIN THE DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. SILT CONTROL GATES SHOULD NOT BE USED ALONE, BUT WITH ANOTHER BMP DOWNSTREAM PRIOR TO DISCHARGE LEAVING PROJECT AREA. DO NOT USE SILT GATES IN STATE WATERS. Rt-Sg1=TYPE 1: USED ON BOX CULVERTS Rt-Sg2=TYPE 2: USED ON STRAIGHT HEADWALLS Rt-Sg3=TYPE 3: USED ON FLARED END SECTIONS AND TAPERED HEADWALLS
	SYMBOL: Rt-Sg1 Rt-Sg2 Rt-Sg3		
Sdi-NS	SEDIMENT BARRIER (NON-SENSITIVE) SILT FENCE TYPE A CONSTRUCTION DETAIL D-24 SECTION 171		SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW. TYPE-A SILT FENCE IS TYPICALLY USED IN NON-ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS LESS THAN 10'. IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.
	LINE CODE: —A—A—A—SdI-NS—A—A—A—		
Sdi-S	SEDIMENT BARRIER (SENSITIVE) SILT FENCE TYPE C CONSTRUCTION DETAIL D-24 SECTION 171		SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW. TYPE-C SILT FENCE IS TYPICALLY USED IN ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS 10' AND GREATER. ALL ENVIRONMENTALLY SENSITIVE AREAS (ESAs) SHALL BE PROTECTED WITH A DOUBLE-ROW OF TYPE-C SILT FENCE REGARDLESS OF FILL HEIGHT. A SINGLE-ROW MAY BE USED FOR OTHER APPLICATIONS. IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.
	LINE CODE: —C—C—C—SdI-S—C—C—C—		

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA'.

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

NO SCALE

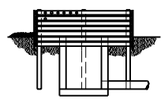
REVISION DATES
3/2/2017

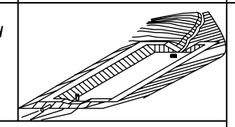
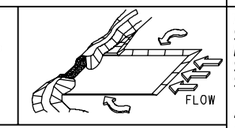
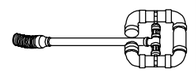
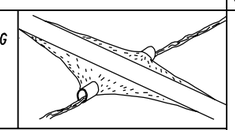
EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 5 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0005
CORRECTED:		DATE:		
VERIFIED:		DATE:		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd1-BB	SEDIMENT BARRIER BRUSH BARRIER CONSTRUCTION DETAIL D-24B SECTION 201	 LINE CODE * * * Sd1-BB * * *	THIS ITEM CONSISTS OF INTERMINGLED BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM. CONSTRUCTED AT THE TOE OF FILL SLOPES ONLY DURING THE CLEARING AND GRUBBING OPERATION. THE BARRIER SHOULD BE USED AT THE TOE OF FILL SLOPES ON GRADING PROJECTS IN RURAL AREAS WHERE SUFFICIENT RIGHT OF WAY OR EASEMENT IS AVAILABLE (10 FEET OR MORE). THE BARRIER SHOULD RUN ROUGHLY PERPENDICULAR TO THE FLOW OF WATER WHERE THIS DOES NOT CONFLICT WITH RIGHT-OF-WAY OR EASEMENT LIMITS. THEY WILL NOT BE PLACED IN WETLANDS. TYPICALLY NOT SHOWN ON PLANS. PAYMENT FOR THIS ITEM IS INCLUDED IN THE CLEARING AND GRUBBING COST. NO SEPARATE PAYMENT SHALL BE MADE.
Sd2-B	INLET SEDIMENT TRAP (BAFFLE BOX) CONSTRUCTION DETAIL D-42 SECTION 163	 SYMBOL Sd2-B	BAFFLE BOX INLET SEDIMENT TRAP USED FOR INLETS RECEIVING HIGH FLOW RATE AND/OR VELOCITY. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES 7 cfs AND GREATER.
Sd2-Bg	INLET SEDIMENT TRAP (BLOCK & GRAVEL) CONSTRUCTION DETAIL D-42 SECTION 163	 SYMBOL Sd2-Bg	BLOCK AND GRAVEL DROP INLET PROTECTION USED FOR WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. CAN BE USED AT CULVERT INLETS. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 5 - 7 cfs.
Sd2-F	INLET SEDIMENT TRAP (FILTER FABRIC) CONSTRUCTION DETAIL D-24C SECTION 163	 (a) (b) (c) SYMBOL Sd2-F	(a) A SEDIMENT BARRIER CONSISTING OF A PREFABRICATED FRAME WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (b) A SEDIMENT BARRIER CONSISTING OF A PERFORATED METAL STAND PIPE WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (c) TYPE C SILT FENCE WITH SUPPORTING FRAME CAN BE USED AS AN ALTERNATE TO INLET SEDIMENT TRAP FOR AREAS WITH SLOPES < 5%. THIS ITEM IS USED TO PREVENT SILT FROM ENTERING THE PIPE SYSTEM. SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS. RECOMMENDED FOR INLET RECEIVING FLOW RATES THAT RANGE FROM 0 - 4 cfs.
Sd2-G	INLET SEDIMENT TRAP (GRAVEL) CONSTRUCTION DETAIL D42 SECTION 163	 SYMBOL Sd2-G	GRAVEL DROP INLET PROTECTION USED WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. STONE AND GRAVEL ARE USED TO TRAP SEDIMENT. THE SLOPE TOWARD THE INLET SHALL BE NO MORE THAN 3:1. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 3 - 5 cfs.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd3	TEMPORARY SEDIMENT BASIN CONSTRUCTION DETAIL D-22A, D-22B SECTION 163	 SYMBOL Sd3	A BASIN CREATED BY EXCAVATING AN AREA, DAMMING CONCENTRATED FLOW, OR A COMBINATION OF BOTH. THE BASIN IS DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DRAINAGE AREA. THE DRAINAGE AREA SHOULD NOT EXCEED 150 ACRES. BASINS TYPICALLY CONSISTS OF A DAM, PRINCIPAL SPILLWAY, AND AN EMERGENCY SPILLWAY. A FLOATING SURFACE SKIMMER SHALL BE REQUIRED AS PART OF THE PRINCIPAL SPILLWAY UNLESS INFEASIBLE. SUFFICIENT RIGHT-OF-WAY OR EASEMENT IS NEEDED FOR BASIN CONSTRUCTION AND MAINTENANCE ACCESS. SEDIMENT BASINS SHALL BE CONSIDERED ON ALL PROJECTS, BUT MAY NOT BE PRACTICAL. BASINS SHOULD BE LOCATED TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND UTILITIES. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Sd4-C	ROCK OUTLET TEMPORARY SEDIMENT TRAP CONSTRUCTION DETAIL D-53 SECTION 163	 FLOW SYMBOL Sd4-C	TEMPORARY POND WITH ROCK OUTLET DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER DRAINAGE AREA. DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. DISTINGUISHED FROM TEMPORARY SEDIMENT BASIN BY LACK OF PRINCIPAL SPILLWAY. MAXIMUM POND DEPTH FROM BOTTOM OF POND TO EMERGENCY SPILLWAY IS 4 FEET. A TEMPORARY SEDIMENT BASIN SHALL BE EVALUATED PRIOR TO CONSIDERING A TEMPORARY SEDIMENT TRAP. A TEMPORARY SEDIMENT TRAP IS IDEAL FOR SMALL AREAS WITH NO UNUSUAL DRAINAGE FEATURES AND EFFECTIVE AGAINST COARSE SEDIMENT, BUT NOT AGAINST SILT OR CLAY PARTICLES THAT REMAIN SUSPENDED. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Sk	FLOATING SURFACE SKIMMER CONSTRUCTION DETAIL D-22A, D-22B SECTION 163	 SYMBOL Sk	A BUOYANT DEVICE THAT DRAINS WATER FROM THE SURFACE OF A TEMPORARY SEDIMENT BASIN AT A CONTROLLED FLOW RATE. THE INLET/ORIFICE SIZE IS DESIGNED TO DRAIN THE BASIN WITHIN 24 - 48 HOURS. THE SKIMMER INFORMATION SHALL BE PROVIDED IN CONJUNCTION WITH THE SEDIMENT BASIN INFORMATION IN PLANS. IF A SKIMMER IS INFEASIBLE, THE DESIGNER SHALL PROVIDE A WRITTEN JUSTIFICATION IN THE PLANS. SKIMMERS ARE ATTACHED TO A RISER WITHOUT PERFORATIONS AND ACTS AS THE PRIMARY SPILLWAY. THE SKIMMER BMP SYMBOL SHALL BE SHOWN IN CONJUNCTION WITH THE TEMPORARY SEDIMENT BASIN BMP SYMBOL WHEN APPLICABLE. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR ADDITIONAL INFORMATION.
Sr	TEMPORARY STREAM CROSSING SECTION 107	 SYMBOL Sr	A TEMPORARY STRUCTURE INSTALLED ACROSS A FLOWING STREAM OR WATERCOURSE FOR USE BY CONSTRUCTION EQUIPMENT. THIS BMP PROVIDES A MEANS TO CROSS STREAMS OR WATERCOURSES WITHOUT MOVING SEDIMENT INTO STREAMS, DAMAGING THE STREAM BED OR CHANNEL, OR CAUSING FLOODING. THIS BMP SHOULD NOT BE USED ON STREAMS WITH DRAINAGE AREAS GREATER THAN ONE SQUARE MILE, UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE THE ADDITIONAL DRAINAGE AREA BY THE DESIGN PROFESSIONAL. A CERTIFICATION STATEMENT AND SIGNATURE SHALL ACCOMPANY THE DESIGN. THIS BMP SHALL BE DESIGNED ACCORDING TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". FOR CONTRACTOR'S USE ONLY!

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

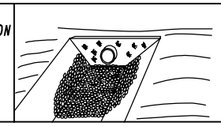
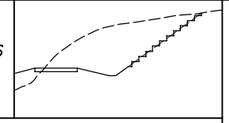
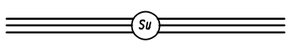
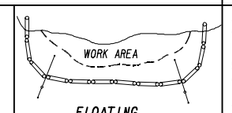
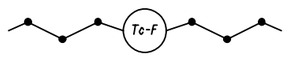
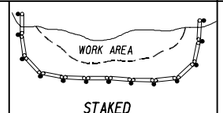
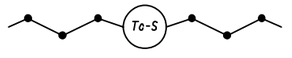
NO SCALE

REVISION DATES
3/2/2017
11/28/2018

EROSION CONTROL LEGEND
UNIFORM CODE SHEET
SHEET 6 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No. 52-0006

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
St	STORM DRAIN OUTLET PROTECTION GA. STD. 1125 & 2332	 SYMBOL St	A PIPE OR BOX CULVERT OUTLET HEADWALL WITH AN APRON AND DISSIPATOR BLOCKS IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. IT IS USED ON THE OUTLET OF ALL BOX CULVERTS AND ON 48" AND LARGER PIPES. MAY BE USED ON INLET FOR FLOWING STREAMS. USE ON SMALL PIPES WHEN OUTLET VELOCITY OF THE 25-YEAR STORM IS 12 fps AND GREATER.
St-Rp	STORM DRAIN OUTLET PROTECTION (RIP-RAP) CONSTRUCTION DETAIL D-55 SECTION 603	 PATTERN FLAT AREA St-Rp OR St-Rp WELL-DEFINED CHANNEL	RIP-RAP OUTLET PROTECTION IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE, CHANNEL, OR STRUCTURE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. THE MINIMUM DESIGN OF RIP-RAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM PEAK FLOW, BUT LARGER STORMS ARE RECOMMENDED. TYPE-1 RIP-RAP AT A DEPTH OF 36" AND PLACED ON FILTER FABRIC IS PREFERRED FOR ALL d50 </= 1.2 FEET. TYPE-3 RIP-RAP AT A DEPTH OF 18" AND PLACED ON FILTER FABRIC MAY BE USED FOR d50 </= 0.7 FEET. REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR REQUIRED DESIGN DIMENSIONS AND OTHER INFORMATION TO BE INCLUDED IN THE PLANS.
Su	SURFACE ROUGHENING SERRATED SLOPES CONSTRUCTION DETAIL S-7 SECTION 205	 LINE CODE 	PROVIDING A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS, BY OPERATING A CLEATED DOZER ON THE SLOPE IN A VERTICAL DIRECTION. CREATING SERRATED SLOPES IN THE GRADING PROCESS TO CONSTRUCT BENCHES WILL REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION OF WATER. IN MOST CASES THIS BMP IS NOT REQUIRED TO BE SHOWN ON THE PLANS, BUT REQUIRED TO BE COMPLETED BY THE CONTRACTOR UNDER ALL PROJECTS. IF SERRATED SLOPES ARE SPECIFIED BY THE SOIL SURVEY, THEN THIS BMP SHALL BE SHOWN ON THE PLANS WHERE SERRATED SLOPES ARE TO BE USED.
Tc-F	TURBIDITY CURTAIN FLOATING CONSTRUCTION DETAIL D-51 SECTION 170	 FLOATING LINE CODE 	A FLOATING TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED WHERE CONSTRUCTION IS REQUIRED IN A LARGE BODY OF WATER SUCH AS LAKES AND RIVERS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs. IT MAY ALSO BE REFERRED TO AS A FLOATING BOOM, SILT BARRIER, OR SILT CURTAIN.
Tc-S	TURBIDITY CURTAIN STAKED CONSTRUCTION DETAIL D-51 SECTION 170	 STAKED LINE CODE 	A STAKED TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED IN SHALLOW INUNDATED AREAS. IT MAY BE USED TO PROTECT A SMALL STREAM BEING REALIGNED OR RESTORED. IN THIS CASE, CURTAIN SHOULD EXTEND TO BOTTOM OF STREAMBED. THE HEIGHT SHOULD BE LIMITED TO 5 FEET UNLESS DIRECTED AND EXTEND 2 FEET ABOVE NORMAL WATER ELEVATION. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs. IT MAY BE REFERRED TO AS A SILT BARRIER OR SILT CURTAIN.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA'.

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

NO SCALE

REVISION DATES
3/2/2017

EROSION CONTROL LEGEND

UNIFORM CODE SHEET

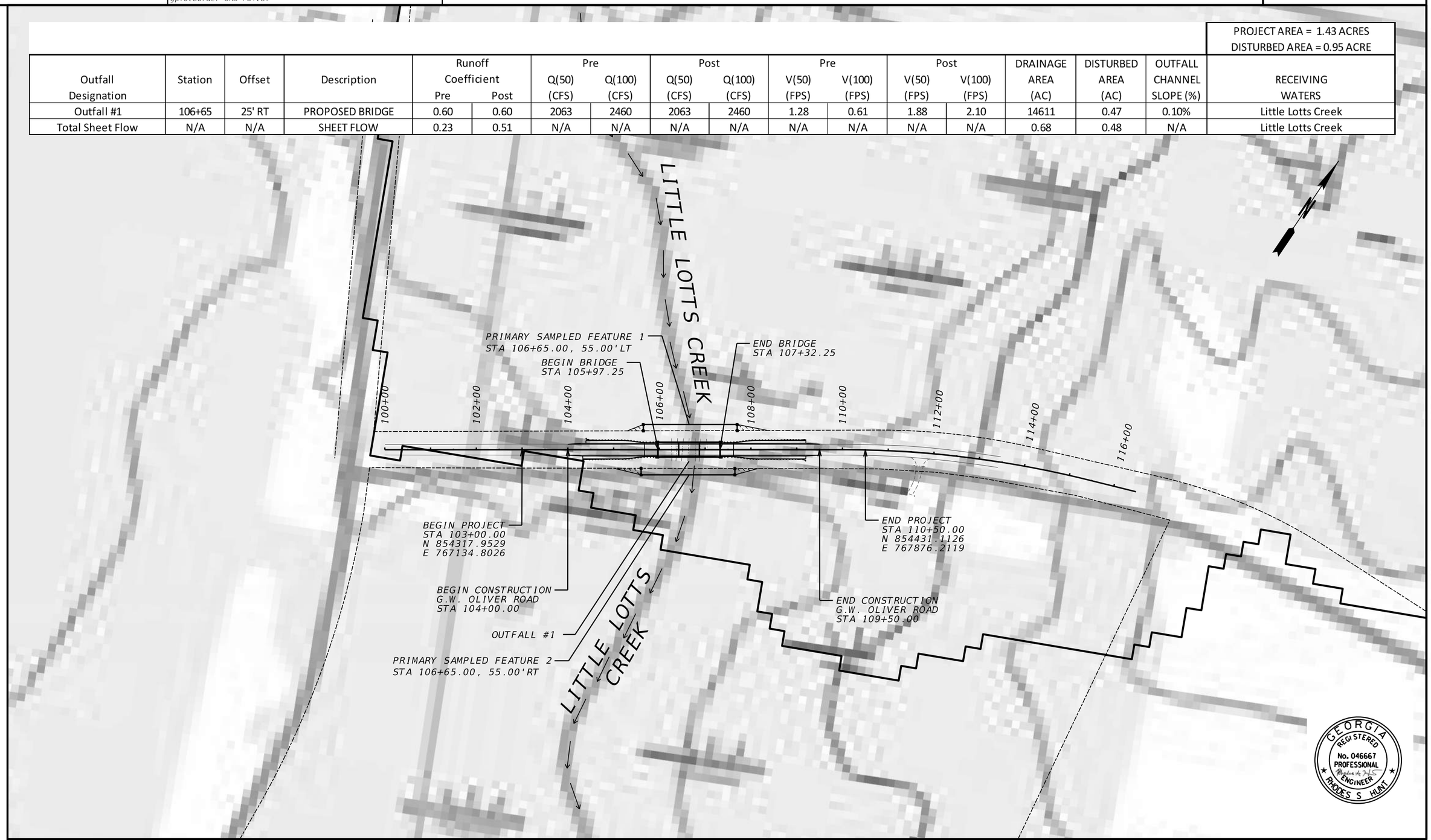
SHEET 7 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0007
CORRECTED:		DATE:		
VERIFIED:		DATE:		

7/31/2015 GPLN

PROJECT AREA = 1.43 ACRES
DISTURBED AREA = 0.95 ACRE

Outfall Designation	Station	Offset	Description	Runoff Coefficient Pre	Runoff Coefficient Post	Pre Q(50) (CFS)	Pre Q(100) (CFS)	Post Q(50) (CFS)	Post Q(100) (CFS)	Pre V(50) (FPS)	Pre V(100) (FPS)	Post V(50) (FPS)	Post V(100) (FPS)	DRAINAGE AREA (AC)	DISTURBED AREA (AC)	OUTFALL CHANNEL SLOPE (%)	RECEIVING WATERS
Outfall #1	106+65	25' RT	PROPOSED BRIDGE	0.60	0.60	2063	2460	2063	2460	1.28	0.61	1.88	2.10	14611	0.47	0.10%	Little Lotts Creek
Total Sheet Flow	N/A	N/A	SHEET FLOW	0.23	0.51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.68	0.48	N/A	Little Lotts Creek



GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
EXISTING LIMIT OF ACCESS
REQ'D LIMIT OF ACCESS
EXISTING LIMIT OF ACCESS & R/W
REQ'D LIMIT OF ACCESS & R/W
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA

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Engineering, Planning, And Environmental Consultants
33 Bull Street, Suite 505
Savannah, Georgia 31401

SCALE IN FEET
0 100 200 400

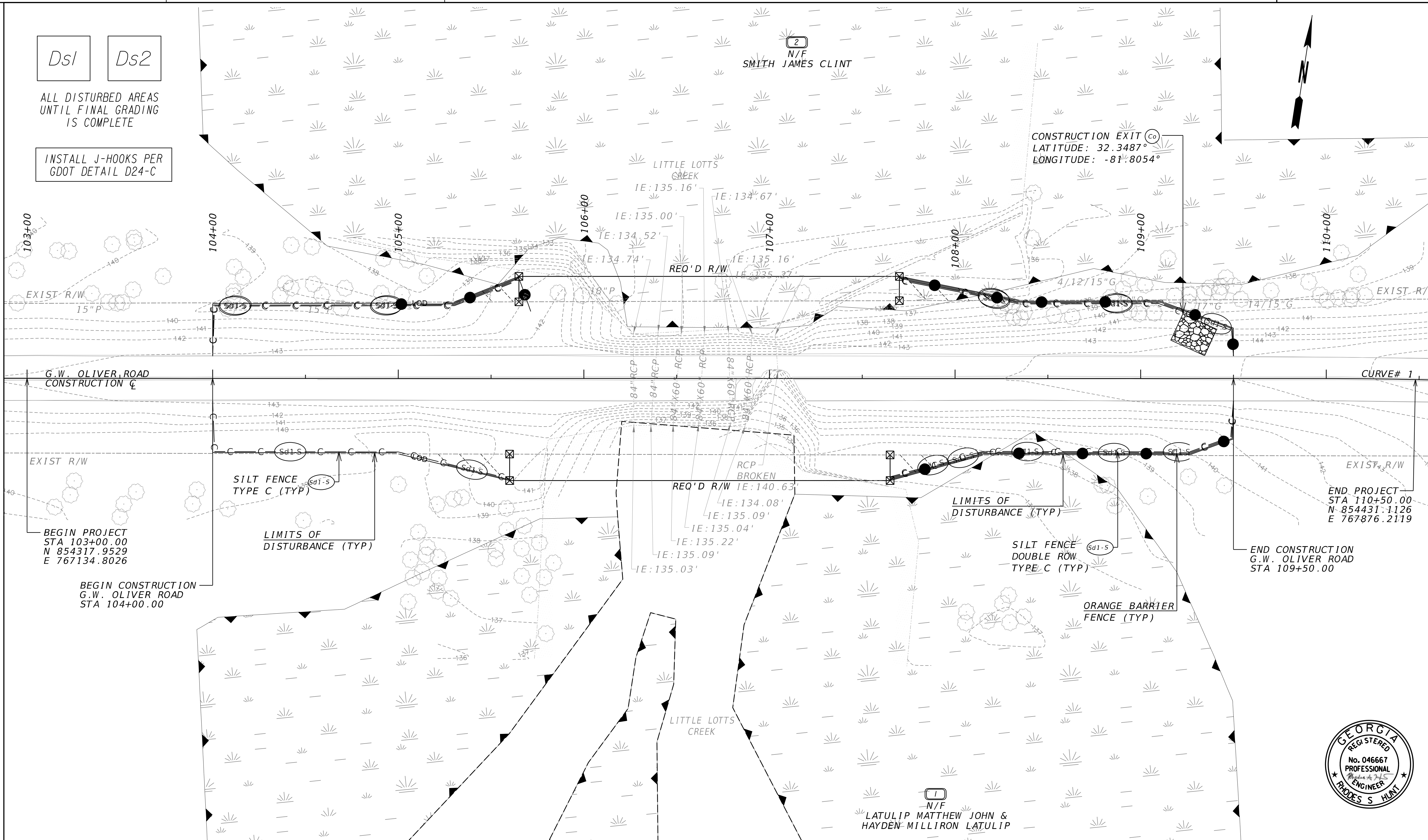
REVISION DATES

EROSION CONTROL DRAINAGE AREA MAP

G.W. OLIVER ROAD
BRIDGE DESIGN

		DATE:		DRAWING No.
CHECKED:		DATE:		53-0001
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GPLN-CE
11/05/2020



PROPERTY AND EXISTING R/W LINE	----℞----
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	—C— —F—
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	
BEGIN LIMIT OF ACCESS............BLA	
END LIMIT OF ACCESS..............ELA	
EXISTING LIMIT OF ACCESS	
REQ'D LIMIT OF ACCESS	
EXISTING LIMIT OF ACCESS & R/W	
REQ'D LIMIT OF ACCESS & R/W	
ORANGE BARRIER FENCE	
ESA - ENV. SENSITIVE AREA	

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Savannah, Georgia 31401

SCALE IN FEET
0 25 50 100

REVISION DATES

BMP LOCATION DETAILS
INITIAL PHASE BMP LOCATION DETAILS

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:	DRAWING No.
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	54-0001
VERIFIED:		DATE:	

Ds1 Ds2

ALL DISTURBED AREAS UNTIL FINAL GRADING IS COMPLETE

Ds3

ALL DISTURBED AREAS PLACE PERMANENT VEGETATION AS SOON AS FINAL GRADING IS COMPLETE

Ss

ALL DISTURBED AREAS STEEPER THAN 2.5:1 UNTIL FINAL GRADING IS COMPLETE

N

2 N/F SMITH JAMES CLINT

RIP-RAP (Rp)

ORANGE BARRIER FENCE

LIMITS OF DISTURBANCE (TYP)

SILT FENCE DOUBLE ROW TYPE C (TYP) (Sd1-S)

LITTLE LOTTS CREEK

CONSTRUCTION EXIT (Co)
LATITUDE: 32.3487°
LONGITUDE: -81.8054°

103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00

IE:135.16' IE:134.67' IE:135.00' IE:134.52' IE:134.74' IE:135.16' IE:135.27'

REQ'D R/W

EXIST R/W

15"P 18"P 4/12/15"G 14/15"G 17"G

G.W. OLIVER ROAD CONSTRUCTION ℄
N81°16'24.8"E

CURVE# 1

8'-RCP 84"RCP 84"X60" RCP 84"X60" RCP 84"X60" RCP 84"RCP

RCP BROKEN

REQ'D R/W IE:140.63' IE:134.08' IE:135.09' IE:135.04' IE:135.22' IE:135.09' IE:135.03'

SILT FENCE TYPE C (TYP) (Sd1-S)

LIMITS OF DISTURBANCE (TYP)

BEGIN PROJECT
STA 103+00.00
N 854317.9529
E 767134.8026

BEGIN CONSTRUCTION
G.W. OLIVER ROAD
STA 104+00.00

DEMOLISH, REMOVE, AND DISPOSE OF EXISTING 84" RCPs AND 84"X60" RCPs (TYP) SEE PROJECT NOTE 4

LITTLE LOTTS CREEK

SILT FENCE DOUBLE ROW TYPE C (TYP) (Sd1-S)

ORANGE BARRIER FENCE (TYP)

INSTALL 135 LF CORED SLAB BRIDGE SEE 35-SERIES FOR BRIDGE PLANS

END PROJECT
STA 110+50.00
N 854431.1126
E 767876.2119

END CONSTRUCTION
G.W. OLIVER ROAD
STA 109+50.00

1 N/F LATULIP MATTHEW JOHN & HAYDEN MILLIRON LATULIP

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

PROPERTY AND EXISTING R/W LINE	BEGIN LIMIT OF ACCESS.....BLA
REQUIRED R/W LINE	END LIMIT OF ACCESS.....ELA
CONSTRUCTION LIMITS	EXISTING LIMIT OF ACCESS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	REQ'D LIMIT OF ACCESS
EASEMENT FOR CONSTR OF SLOPES	EXISTING LIMIT OF ACCESS & R/W
EASEMENT FOR CONSTR OF DRIVES	REQ'D LIMIT OF ACCESS & R/W
	ORANGE BARRIER FENCE
	ESA - ENV. SENSITIVE AREA

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Savannah, Georgia 31401

SCALE IN FEET
0 25 50 100

REVISION DATES

BMP LOCATION DETAILS
INTERMEDIATE PHASE BMP LOCATION DETAILS
G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		54-0002
CORRECTED:		DATE:		
VERIFIED:		DATE:		

Ds3

ALL DISTURBED AREAS
PLACE PERMANENT VEGETATION
AS SOON AS FINAL
GRADING IS COMPLETE

N

2
N/F
SMITH JAMES CLINT

RIP-RAP Rp

RIP-RAP Rp

LITTLE LOTTS CREEK

103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00

REQ'D R/W

EXIST R/W

15"P 15"P 18"P 4/12/15"G 17"G 17"G 14/15"G

EXIST R/W

G.W. OLIVER ROAD
CONSTRUCTION ℄
N81°16'24.8"E

CURVE# 1

EXIST R/W

EXIST R/W

REQ'D R/W

END PROJECT
STA 110+50.00
N 854431.1126
E 767876.2119

BEGIN PROJECT
STA 103+00.00
N 854317.9529
E 767134.8026

END CONSTRUCTION
G.W. OLIVER ROAD
STA 109+50.00

BEGIN CONSTRUCTION
G.W. OLIVER ROAD
STA 104+00.00

LITTLE LOTTS CREEK

1
N/F
LATULIP MATTHEW JOHN &
HAYDEN MILLIRON LATULIP

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
EXISTING LIMIT OF ACCESS
REQ'D LIMIT OF ACCESS
EXISTING LIMIT OF ACCESS & R/W
REQ'D LIMIT OF ACCESS & R/W
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA

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Savannah, Georgia 31401

BULLOCH COUNTY

SCALE IN FEET
0 25 50 100

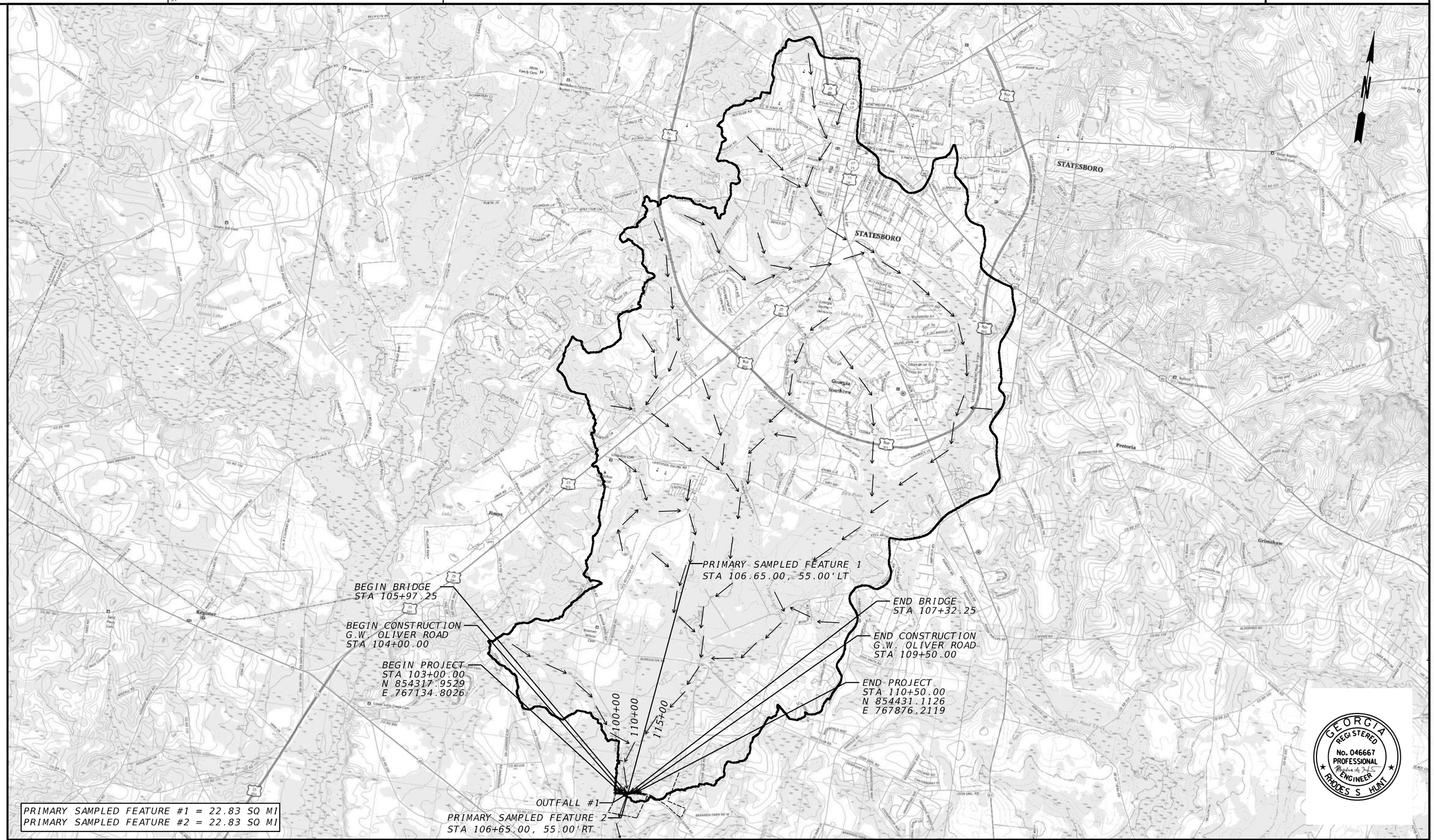
REVISION DATES

BMP LOCATION DETAILS
FINAL PHASE BMP LOCATION DETAILS

G.W. OLIVER ROAD
BRIDGE DESIGN

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		54-0003
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GPLN-CE
11/05/2020



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
EXISTING LIMIT OF ACCESS
REQ'D LIMIT OF ACCESS
EXISTING LIMIT OF ACCESS & R/W
REQ'D LIMIT OF ACCESS & R/W
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA

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Savannah, Georgia 31401

BULLOCH COUNTY

SCALE IN FEET
0 2500 5000 10000

REVISION DATES

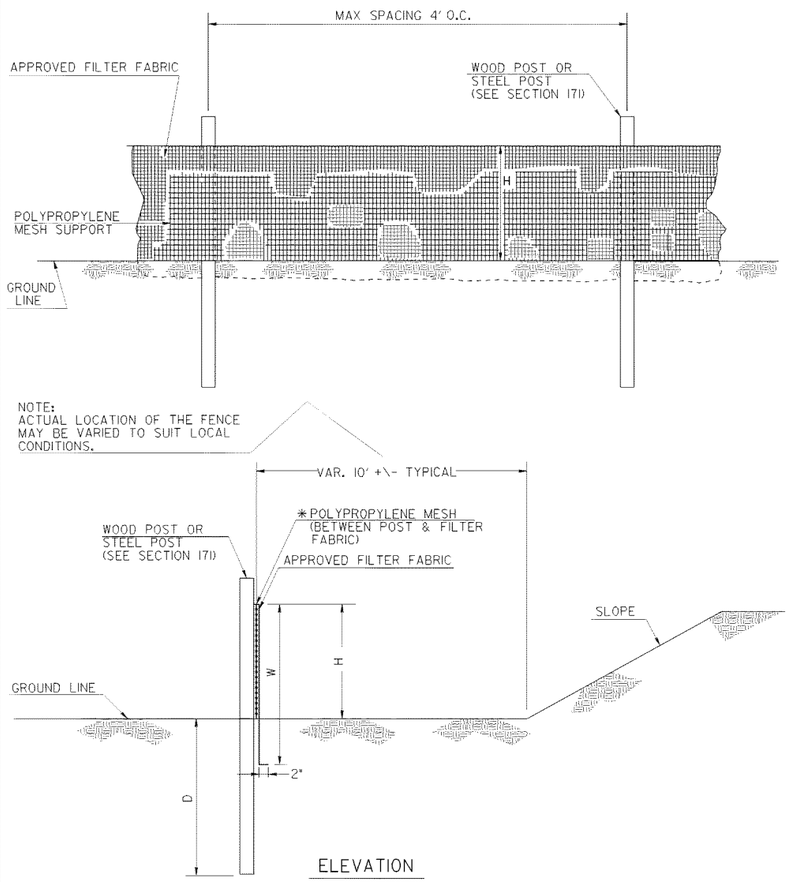
WATERSHED MAP SITE MONITORING PLAN

G.W. OLIVER ROAD
BRIDGE DESIGN

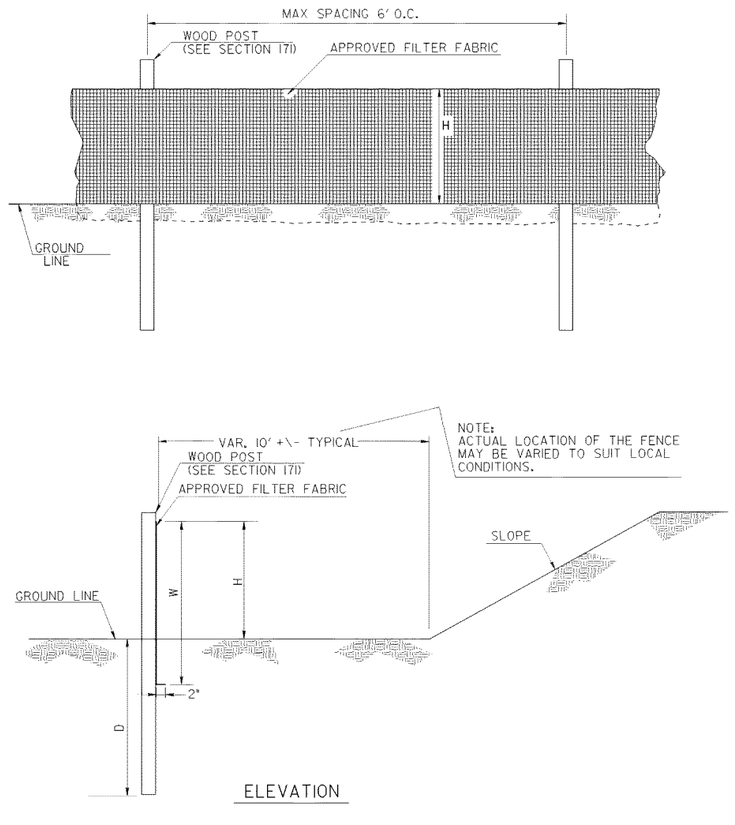
CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		55-0001
CORRECTED:		DATE:		
VERIFIED:		DATE:		

GPLN-CE
11/05/2020

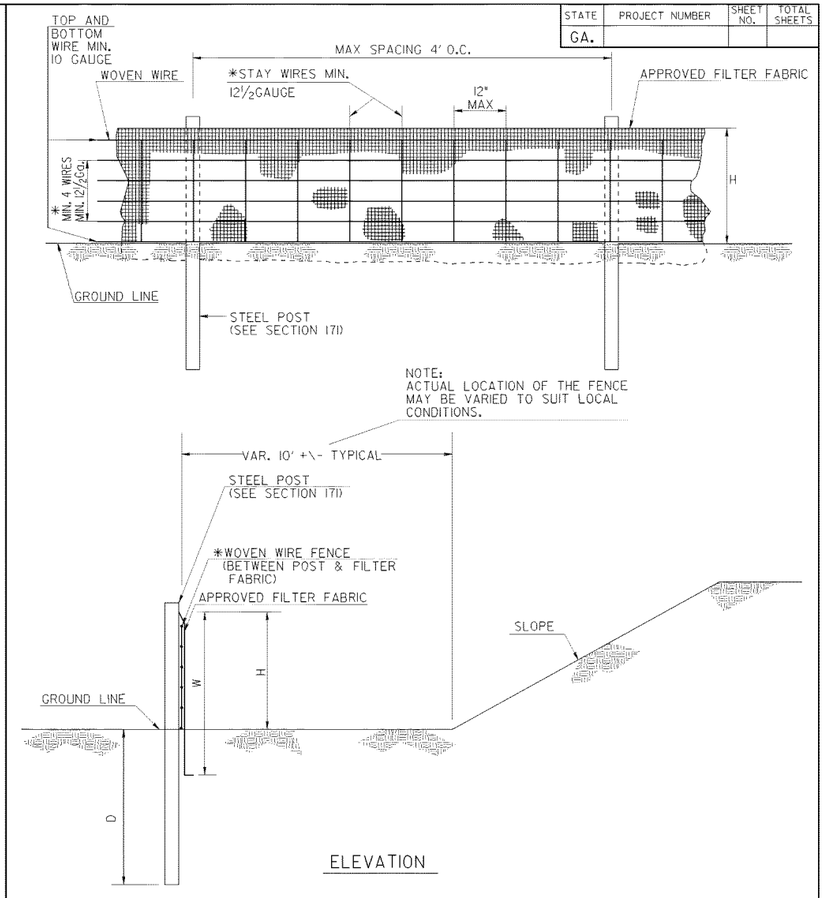
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



SINGLE ROW TYPE C SILT FENCE WITH POLYPROPYLENE MESH SUPPORT



SINGLE ROW TYPE A SILT FENCE



SINGLE ROW TYPE C SILT FENCE WITH WOVEN WIRE SUPPORT

FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

NOTES:

1. WIRE STAPLES SHALL BE AT LEAST 17 GAUGE. WITH LEGS AT LEAST 1/2 INCHES LONG AND A CROWN AT LEAST 3/4 INCHES WIDE. NAILS SHALL BE AT LEAST 14 GAUGE, 1 INCH LONG , WITH BUTTON HEADS AT LEAST 3/4 INCHES WIDE.
2. NAILS OR STAPLES SHALL BE EVENLY PLACED WITH AT LEAST 5 PER POST FOR TYPE A FENCE AND 4 PER POST FOR TYPE C FENCE.
3. THE VERTICAL WIRES FOR THE WOVEN WIRE SUPPORT FENCE SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12½ GAUGE.
4. TEMPORARY SILT FENCE INSTALLATION IS DIFFERENT THAN THE SILT RETENTION BARRIER INSTALLATION.
5. SEE SECTION 171 FOR SILT FENCE SPECIFICATIONS.
6. SEE SECTION 894 FOR FENCING SPECIFICATIONS.
7. SEE QPL-36 FOR A LIST APPROVED SILT FENCE FABRIC.
8. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

TEMPORARY SILT FENCE

NO SCALE

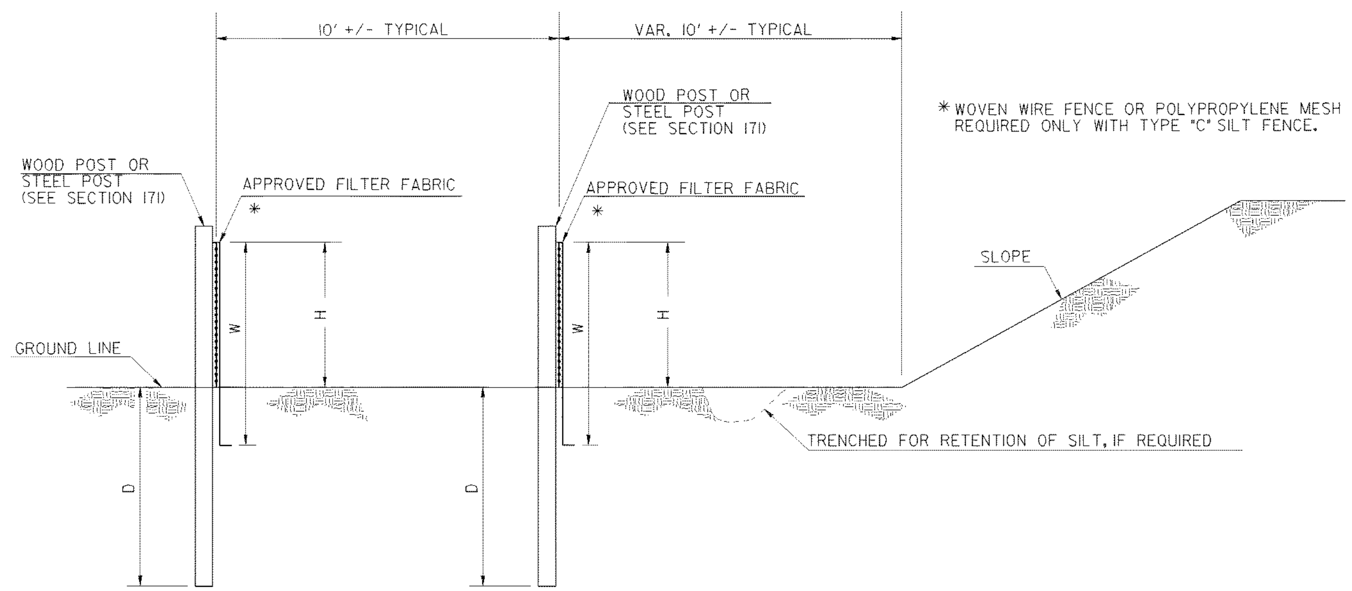
REV. AND REDRAWN JAN. 2011

DATE | REVISION | BY

56-0001

NUMBER D-24A
(SHEET 1 OF 4)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS

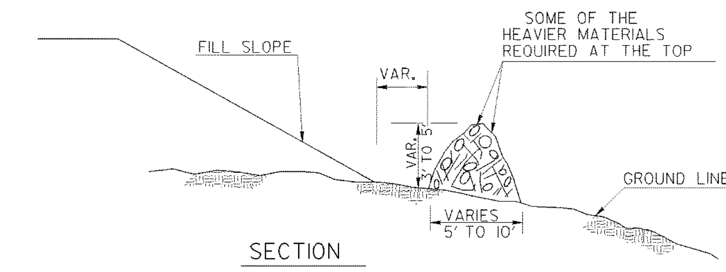


* WOVEN WIRE FENCE OR POLYPROPYLENE MESH REQUIRED ONLY WITH TYPE "C" SILT FENCE.

ELEVATION

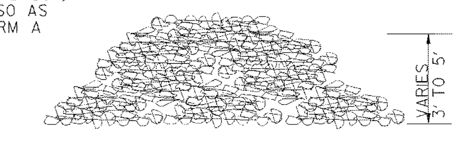
DOUBLE ROW SILT FENCE

FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.



SECTION

NOTE: INTERMINGLE BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM.

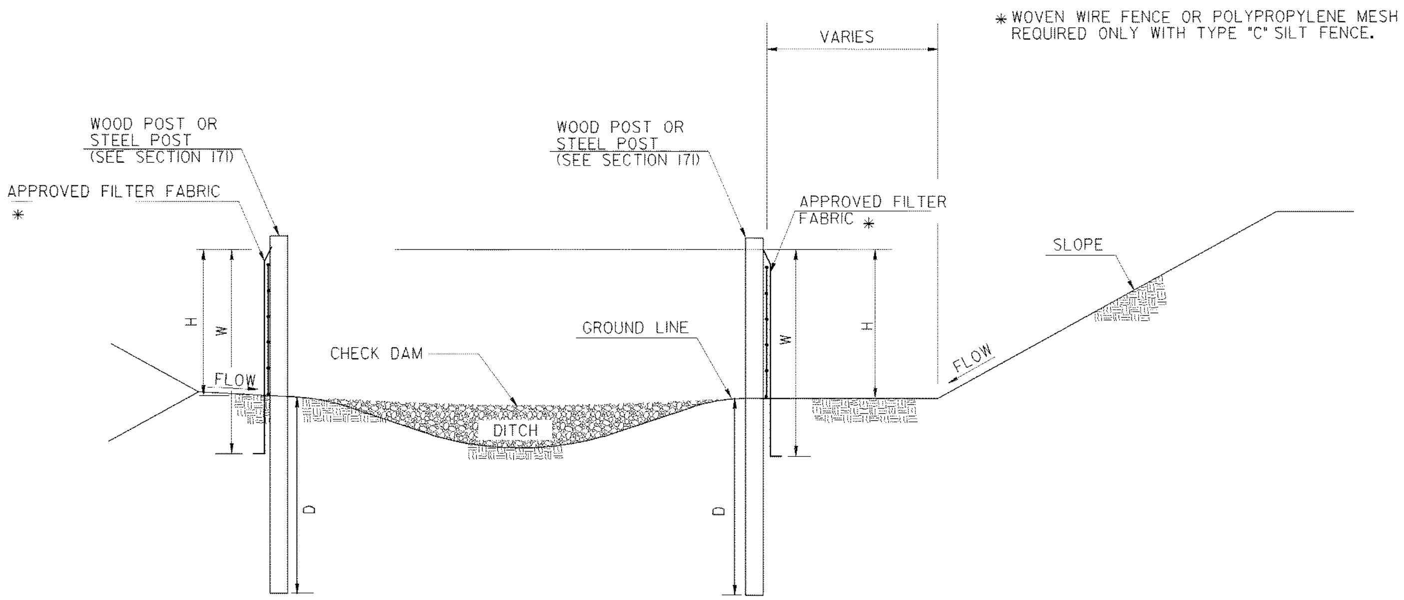


FRONT VIEW

NOTE: BRUSH BARRIER(S) WILL BE INCLUDED IN PAYMENT FOR CLEARING & GRUBBING.

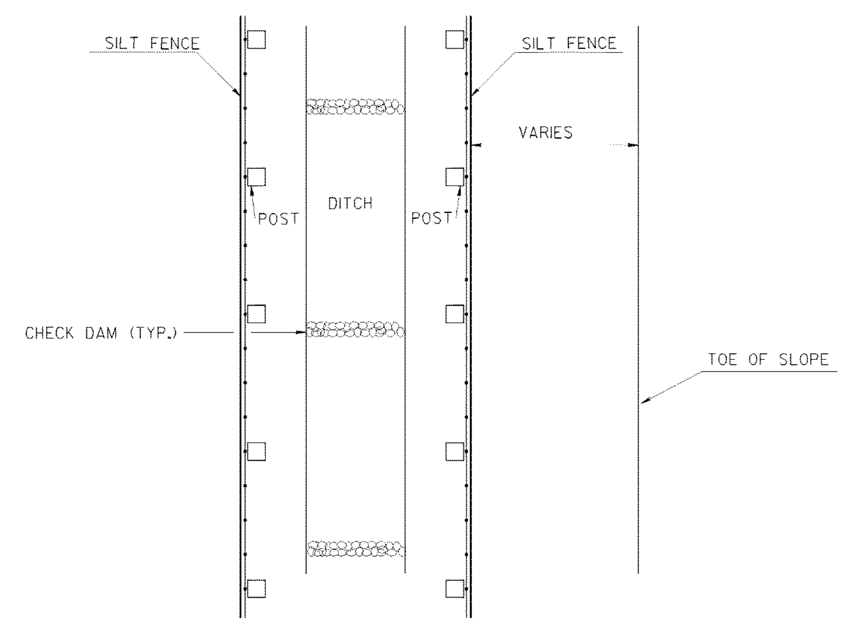
BRUSH BARRIER DETAILS

(FOR USE IN RURAL AREAS)



* WOVEN WIRE FENCE OR POLYPROPYLENE MESH REQUIRED ONLY WITH TYPE "C" SILT FENCE.

ELEVATION



PLAN

FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

SILT FENCE
PERIMETER INSTALLATION ALONG DITCH SECTION

NOTE: TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

DATE | REVISION | BY

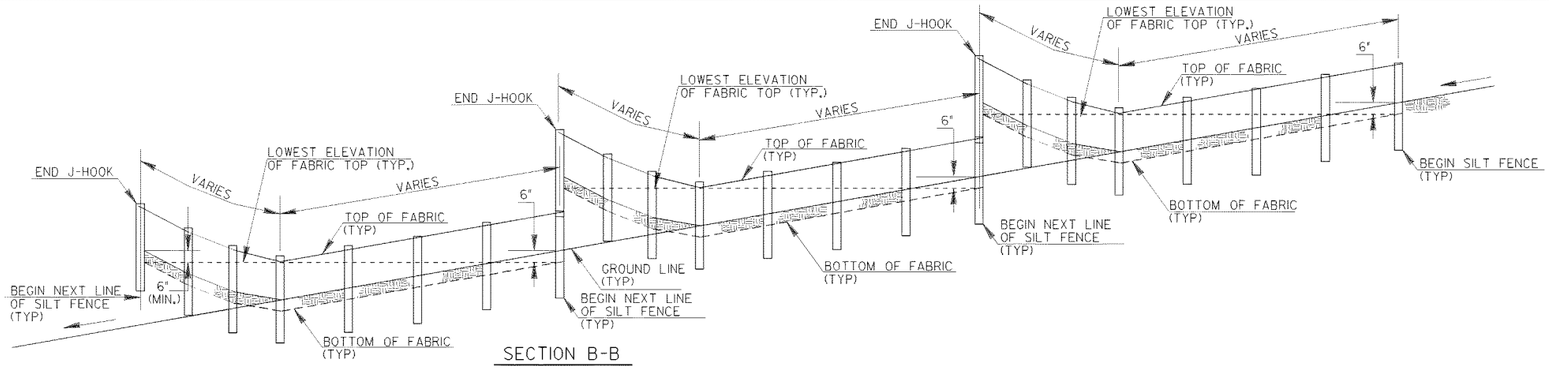
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS
TEMPORARY SILT FENCE
BERM DITCH, INSTALLATION, BRUSH BARRIER

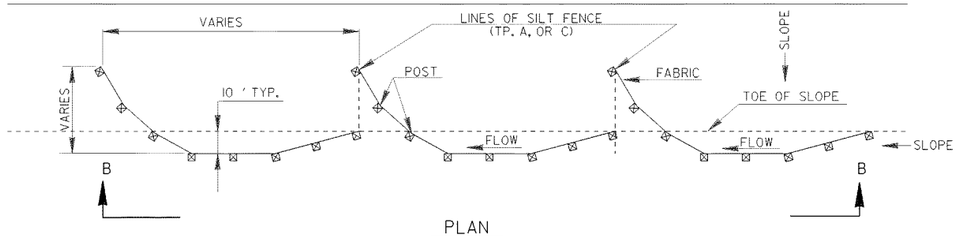
NO SCALE — REV. AND REDRAWN JAN. 2011

56-0002

NUMBER D-24B (SHEET 2 OF 4)

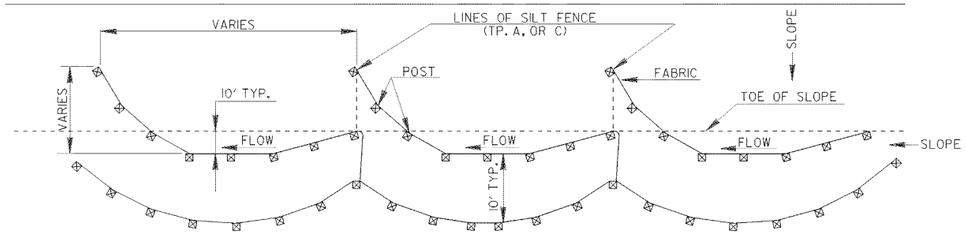


SECTION B-B



PLAN

SINGLE ROW SILT FENCE



PLAN

DOUBLE ROW SILT FENCE

TYPICAL J HOOK SPACING		
SLOPE PERCENT	TYPE OF SILT FENCE	MINIMUM SPACING (FEET)
1% TO 2%	TYPE A	100' ±
2% TO 3%	TYPE A	50' ±
3% TO 4%	TYPE C	50' ±
4% TO 5%	TYPE C	25' ±

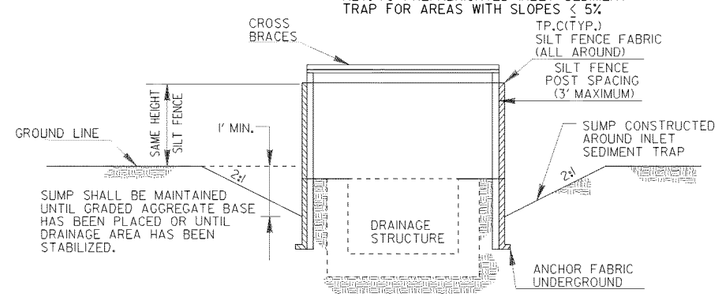
NOTE:

1. IF THE GRADE IS BETWEEN 0 TO 1 PERCENT, THE SILT FENCE SHALL BE PLACED ACROSS THE DITCH.
2. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

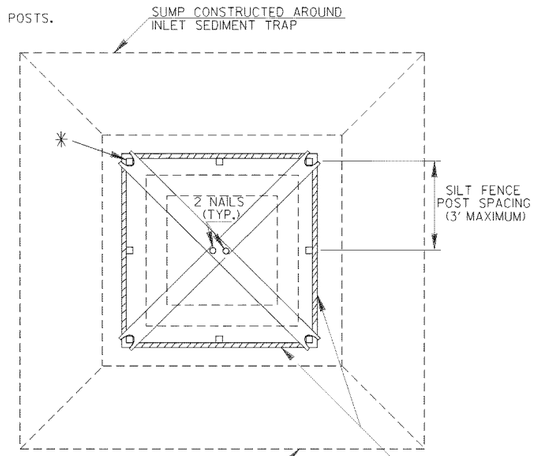
TYPICAL LOCATION AROUND DROP INLETS

ALT. TO PREFABRICATED INLET SEDIMENT TRAP FOR AREAS WITH SLOPES < 5%



ELEVATION

✳ CROSS BRACING REQUIRED WHEN USING "ALTERNATE" TYPE C PRODUCTS WHICH USE WOOD POSTS.



PLAN

CROSS BRACES:

TWO - 2 X 4's WITH ENDS TO FIT POST, PROVIDING STURDY SUPPORT, OR AN APPROVED ALTERNATE

NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH.

NOTE:
SEE SEPARATE SHEET ENTITLED "TEMPORARY SILT FENCE DETAILS" FOR SILT FENCE ERECTION DETAILS.

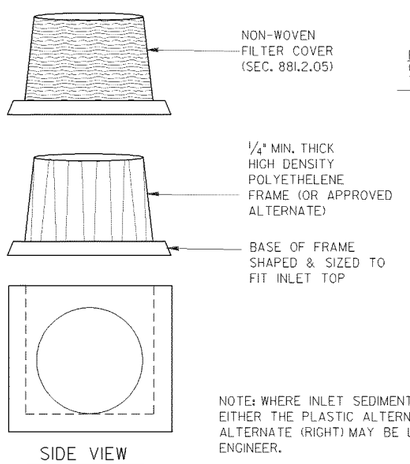
(PLASTIC ALTERNATE)

NOTE:
THE DRAINAGE AREA ENTERING THE INLET SEDIMENT TRAP SHALL BE NO GREATER THAN ONE ACRE.

TYPICAL CONSTRUCTION SEQUENCE FOR INLET SEDIMENT TRAP ALTERNATE

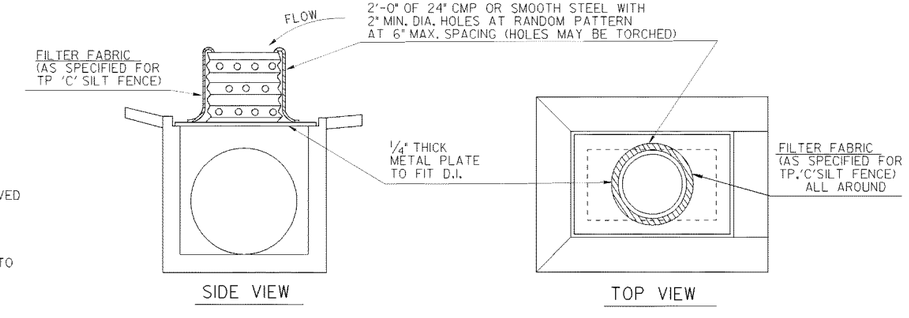
1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.
3. SLIDE THE FILTER OVER THE FRAME.
4. FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE.
5. BACK FILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER, BACK FILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.

NOTE:
INLET SEDIMENT TRAP ALTERNATE SHALL BE AS APPROVED BY THE GA. D.O.T. OFFICE OF MATERIALS & RESEARCH. DETAILS & SPECIFICATIONS NOT SHOWN ARE PER THE MANUFACTURER'S REQUIREMENTS.



SIDE VIEW

(METAL ALTERNATE)



SIDE VIEW

TOP VIEW

NOTE: WHERE INLET SEDIMENT TRAPS ARE SPECIFIED, EITHER THE PLASTIC ALTERNATE (LEFT) OR THE METAL ALTERNATE (RIGHT) MAY BE USED AS APPROVED BY THE ENGINEER.

NOTE:
INLET SEDIMENT TRAP AND INLET TO BE BUILT CONTINUOUS WITH PIPE

NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH

NOTE: SEE SEPARATE DETAILS FOR SILT FENCE AROUND DROP INLETS.

INLET SEDIMENT TRAP - FOR DROP INLETS

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

DATE | REVISION | BY

CONSTRUCTION DETAILS

TEMPORARY SILT FENCE J-HOOK, INLET SEDIMENT TRAPS

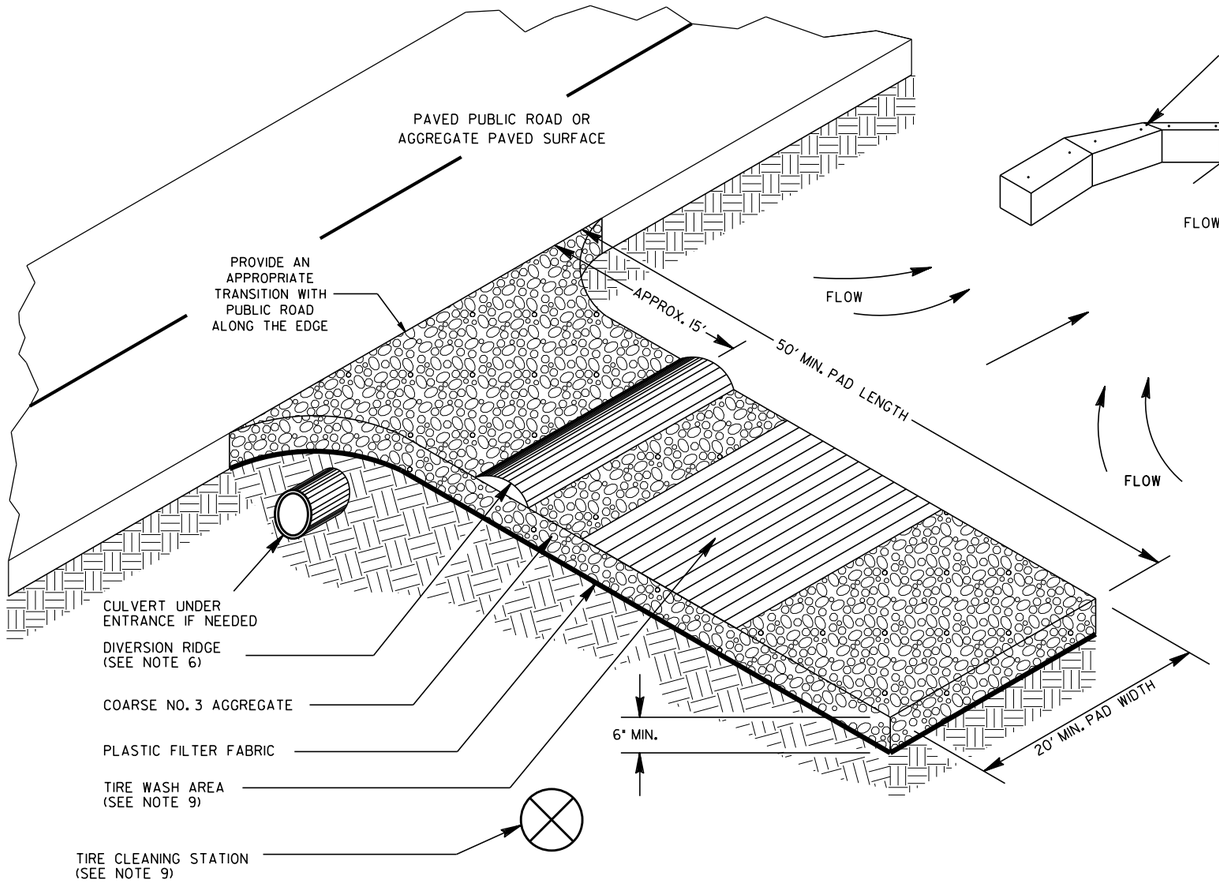
NO SCALE — JANUARY 2011

56-0003

NUMBER D-24C (SHEET 3 OF 4)

1/18/2017 2:08:33 PM \\DOT-DSN\COPLOT\DCF\DO_RP8000.pc? "gawahs" V:\GAN\Rev. Construction Details\D-24C\D-24C.prt

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



GENERAL NOTES:

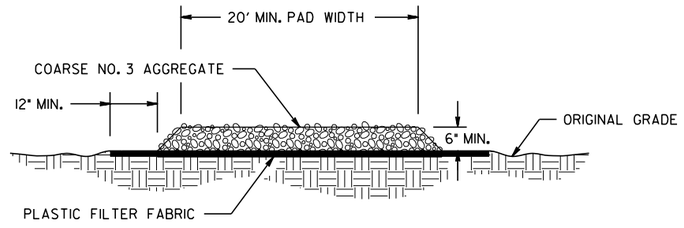
1. AVOID LOCATING CONSTRUCTION EXITS ON STEEP SLOPES OR AT SHARP CURVES ON PUBLIC ROADS. CONSTRUCTION EXITS ARE NOT REQUIRED FOR DIRT PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA AND GRADE FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE COARSE NO. 3 AGGREGATE WITH 0.0% PASSING THE 1.06 INCH U.S. STANDARD SIEVE.
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES AND PLACED ON APPROVED PLASTIC FILTER FABRIC.
5. GRAVEL PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. PROVIDE A TRAVERSABLE DIVERSION RIDGE CONSTRUCTED OF AGGREGATE 6 INCHES TO 8 INCHES HIGH WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL CULVERT UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. TIRE WASH AREA INCLUDES SEDIMENT TRAP OR OTHER ACCEPTABLE SEDIMENT STORAGE DEVICE AND SHALL BE CONSTRUCTED EVEN IF CONSTRUCTION EXIT TIRE CLEANING STATION IS NOT USED.
9. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD DOES NOT SUFFICIENTLY REMOVE THE MUD PRIOR TO ENTERING PUBLIC ROADS THUS DICTATING ADDITIONAL TIRE CLEANING MEASURES, THE CONTRACTOR SHALL ADD A CONSTRUCTION EXIT TIRE CLEANING STATION TO AN EXISTING CONSTRUCTION EXIT OR WHEN DIRECTED BY THE ENGINEER. THE CONSTRUCTION EXIT TIRE CLEANING STATION INCLUDES: WATER SOURCE, LABOR AND ALL MATERIALS NECESSARY TO PERFORM TASK. THIS WILL BE PAID FOR AS SHOWN IN SECTION 163.

   THE WASHING SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE THAT DRAINS INTO A SEDIMENT TRAP OR OTHER ACCEPTABLE SEDIMENT STORAGE DEVICE. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE CONSTRUCTION EXIT TO THE SEDIMENT CONTROL DEVICE. ACCEPTABLE SEDIMENT STORAGE DEVICE EXAMPLES INCLUDE TEMPORARY SEDIMENT TRAPS, HAY BALES OR STONE FILTER RING WITH THE SEDIMENT STORAGE SIZED FOR 67 CUBIC YARDS PER ACRE OF DRAINAGE. TIRE WASHING SHALL BE DONE MANUALLY OR BY EQUIPMENT SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.
10. AGGREGATE SHALL BE KEPT LOOSE OR SCARIFIED WHEN AGGREGATE BECOMES CONSOLIDATED.
11. CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR, AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. MAINTENANCE OF CONSTRUCTION EXIT MAY BE PAID WITH OR WITHOUT THE MAINTENANCE OF CONSTRUCTION EXIT TIRE WASH AREA. WHEN DIRECTED BY THE ENGINEER. ALL MUD AND DEBRIS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

SEE SECTION 163 FOR THE CONSTRUCTION AND REMOVAL OF CONSTRUCTION EXITS. SEE SECTION 165 FOR THE MAINTENANCE OF CONSTRUCTION EXITS.

PAY ITEM:		
163-0301	CONSTRUCT AND REMOVE CONSTRUCTION EXITS	(EA)
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	(EA)
165-0310	MAINTENANCE OF CONSTRUCTION EXIT TIRE WASH AREA	(EA)
PAY ITEM:	**FOR FIELD USE ONLY ACCORDING TO SECTION 163**	
163-0310	CONSTRUCTION EXIT TIRE CLEANING STATION	(DAY)

ENTRANCE ELEVATION



GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

DATE	REVISION	BY
11-04-20	REV GEN NOTES & 8-11	HAC
	REV PAY ITEM DESCS/REFS	
04-18-18	REV. TIRE WASH & NOTES	DLE
04-22-16	REV. GSWCC 2016 MANUAL	DLE
01-19-11	REV. CONSTR. EXIT LABELS	TPC

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

CONSTRUCTION EXIT

NO SCALE — FEBRUARY 2001

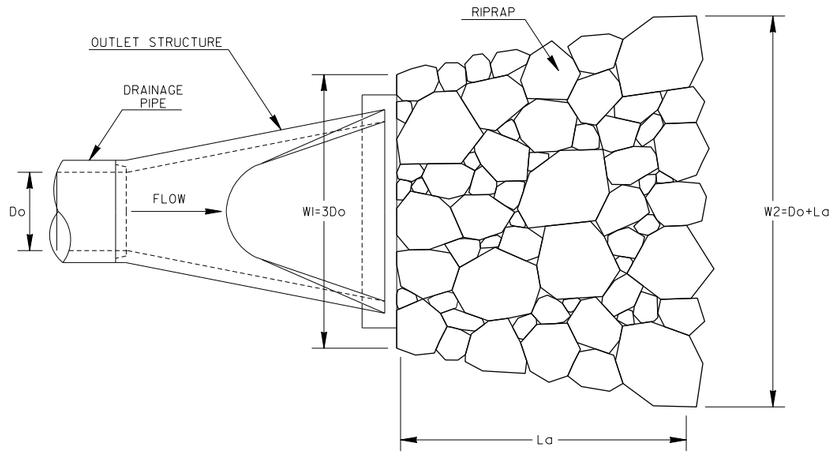
DESIGNED ____
DRAWN DLE
TRACED ____
CHECKED ____

56-0004

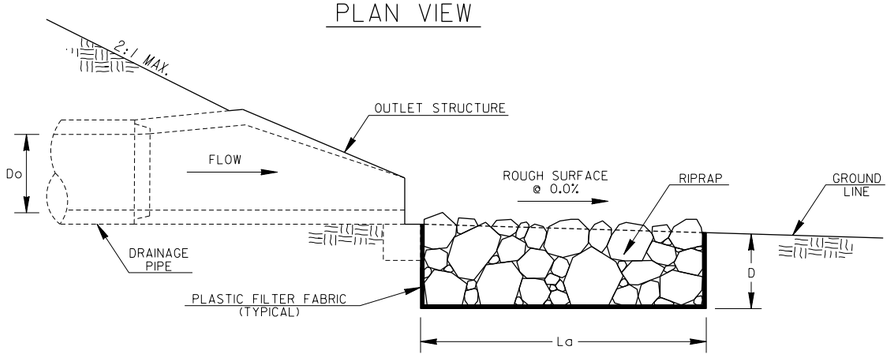
NUMBER D-41

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

OUTLET TO FLAT AREA

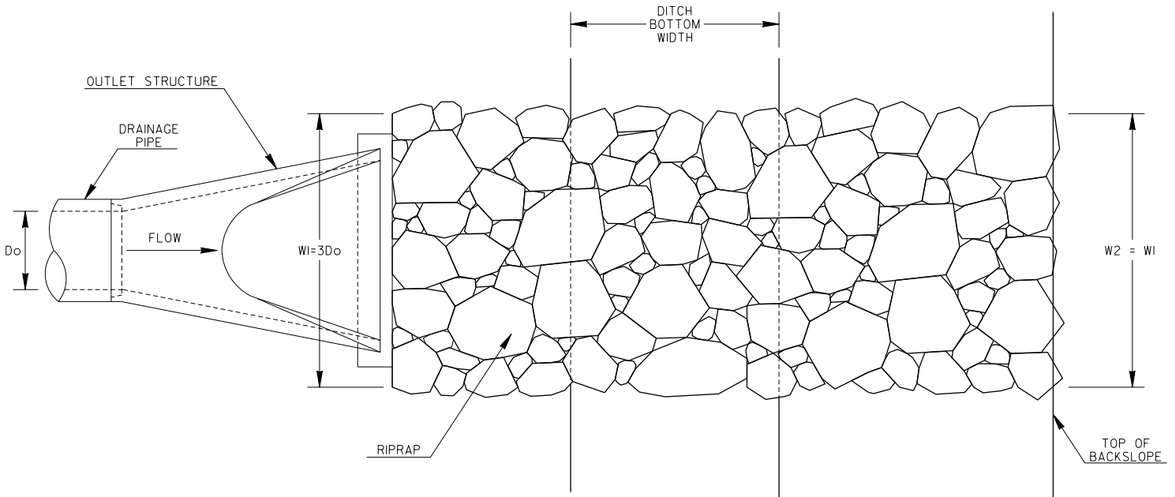


PLAN VIEW

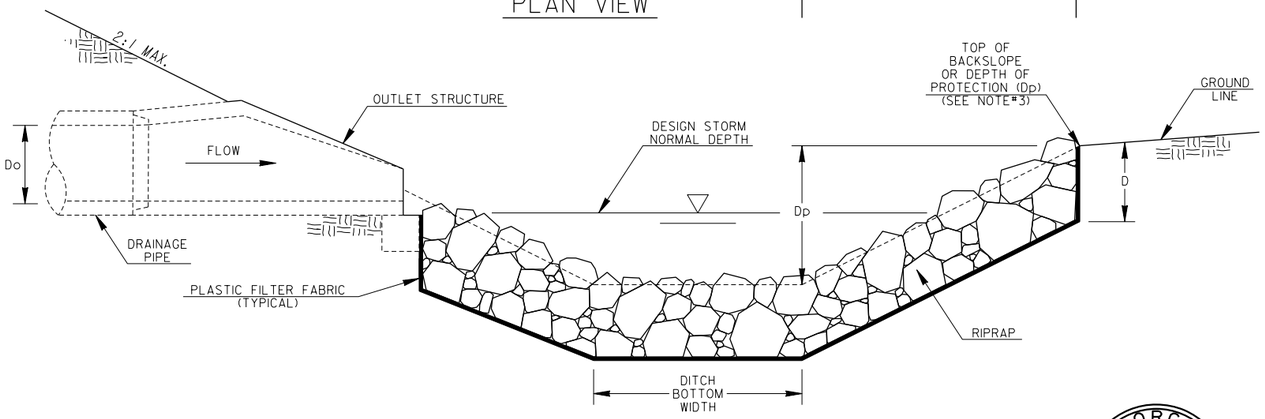


PROFILE VIEW

OUTLET PERPENDICULAR TO WELL-DEFINED CHANNEL



PLAN VIEW



PROFILE VIEW

GENERAL NOTES:

1. RIPRAP OUTLET PROTECTION SHOULD BE USED TO REDUCE A DRAINAGE STRUCTURE'S DISCHARGE VELOCITY.
   RIPRAP OUTLET PROTECTION IS SHOWN FOR GEORGIA STANDARD 1120, BUT IS INSTALLED SIMILARLY FOR OTHER DRAINAGE OUTLET STRUCTURES.

2. RIPRAP OUTLET PROTECTION SHALL BE DESIGNED IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
   THE DESIGNER SHALL PROVIDE THE FOLLOWING IN THE PLANS: PIPE DIAMETER (Do), FLOW RATE OF DESIGN STORM (Q), VELOCITY (V), TAILWATER CONDITION (Tw), APRON LENGTH (La), APRON WIDTH AT DRAINAGE STRUCTURE (WI), APRON WIDTH DOWNSTREAM (W2), AVERAGE STONE DIAMETER (d50), INSTALLATION DEPTH (D), AND TYPE OF RIPRAP WITH QUANTITY.

   THE MINIMUM DESIGN FOR RIPRAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM EVENT, BUT LARGER STORMS ARE RECOMMENDED.

3. THE APRON WIDTHS SHALL BE THE SAME WHEN THE DRAINAGE STRUCTURE DISCHARGES PERPENDICULAR INTO A WELL-DEFINED CHANNEL.
   THE LENGTH SHALL EXTEND ACROSS THE CHANNEL AND UP TO THE TOP OF THE CHANNEL BACKSLOPE OR 1-FOOT ABOVE THE NORMAL DEPTH OF THE CHANNEL'S DESIGN STORM (WHICHEVER IS LESS). THE DESIGNER SHALL PROVIDE THE DEPTH OF PROTECTION (Dp) IF THE APRON DOES NOT EXTEND TO THE TOP OF THE BACKSLOPE.

4. IF THE OUTLET HYDRAULICS REQUIRE A d50<=0.70 FEET, TYPE-3 RIPRAP MAY BE USED.
   IF THE OUTLET HYDRAULICS REQUIRE A d50<=1.20 FEET, TYPE-1 RIPRAP SHOULD BE USED.
   IF THE OUTLET HYDRAULICS REQUIRE A d50>1.20 FEET, THE DESIGNER SHALL DESIGN AND PROVIDE A SPECIAL DETAIL FOR APPROPRIATE OUTLET PROTECTION.

5. PLASTIC FILTER FABRIC IS REQUIRED UNDERNEATH RIPRAP APRON.

6. PAYMENT FOR RIPRAP SHALL BE MEASURED IN SQUARE YARDS FOR SPECIFIED INSTALLATION DEPTH. PAYMENT FOR PLASTIC FILTER FABRIC SHALL BE MEASURED IN SQUARE YARDS CONSISTENT WITH RIPRAP QUANTITY AND PAID FOR SEPARATELY.

Do = PIPE DIAMETER
Q = DESIGN STORM FLOW RATE
V = DESIGN STORM VELOCITY
Tw = TAILWATER CONDITION/DESIGN STORM NORMAL DEPTH
La = APRON LENGTH
WI = APRON WIDTH UPSTREAM
W2 = APRON WIDTH DOWNSTREAM
d50 = AVERAGE STONE DIAMETER
D = INSTALLATION DEPTH
Dp = DEPTH OF PROTECTION

RIPRAP TYPE	REQUIRED d50 (FT)	MIN. DEPTH "D" (IN)
1	≤1.20	36
3	≤0.67	18

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

RIPRAP OUTLET PROTECTION
(SHEET 1 OF 2)

NO SCALE — 4-22-2016

DESIGNED DLE
DRAWN DLE
TRACED ____
CHECKED ____

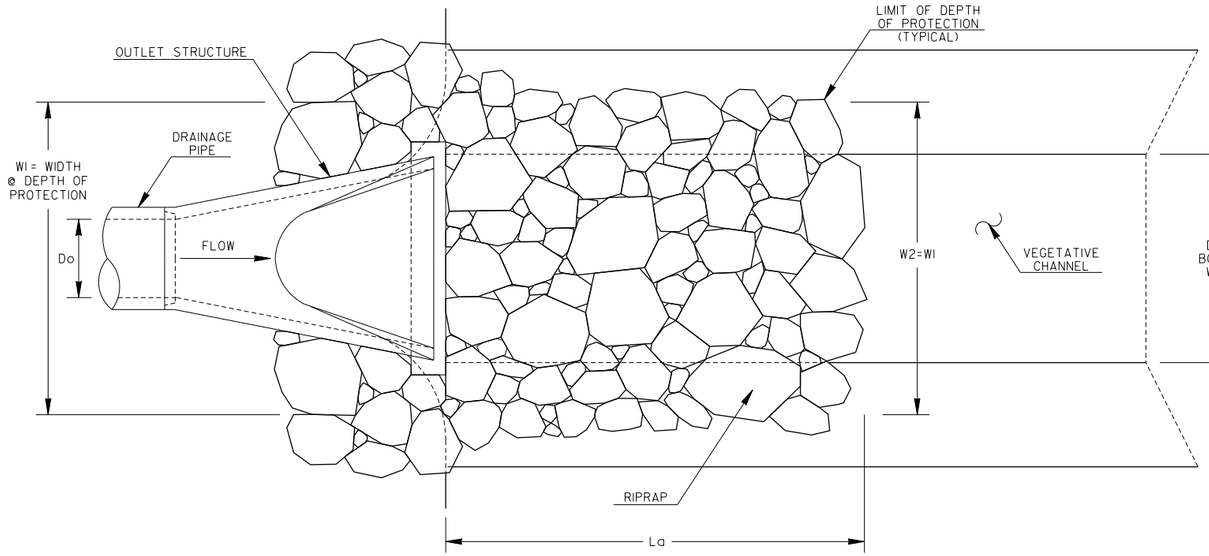
56-0005

NUMBER D-55A

DATE | REVISION | BY

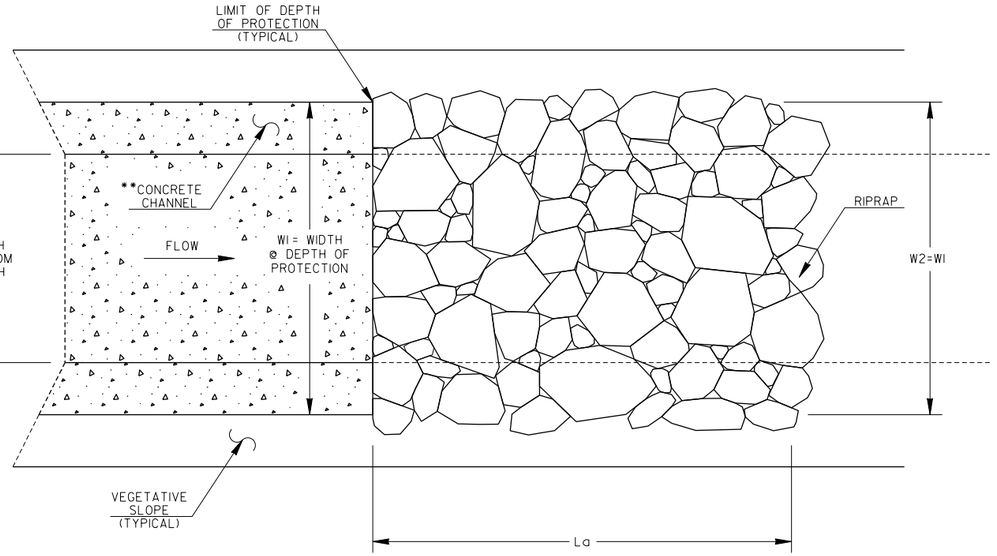
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

OUTLET PARALLEL TO WELL-DEFINED CHANNEL



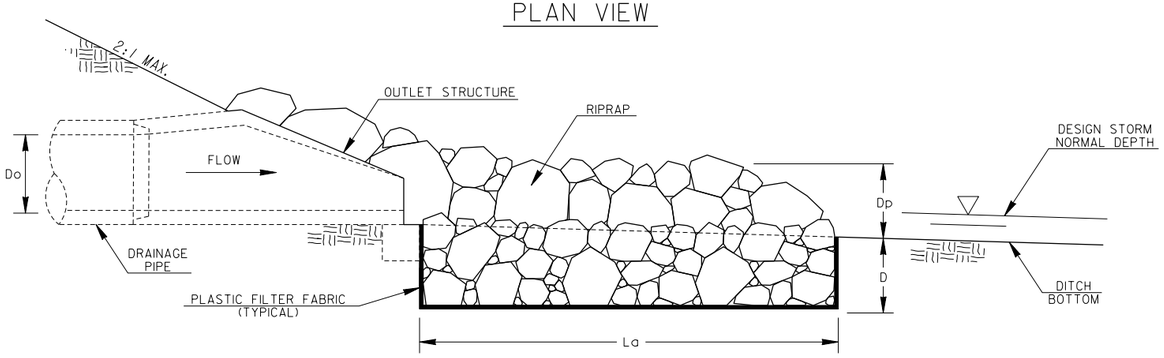
PLAN VIEW

CONCRETE CHANNEL TO RIPRAP TRANSITION

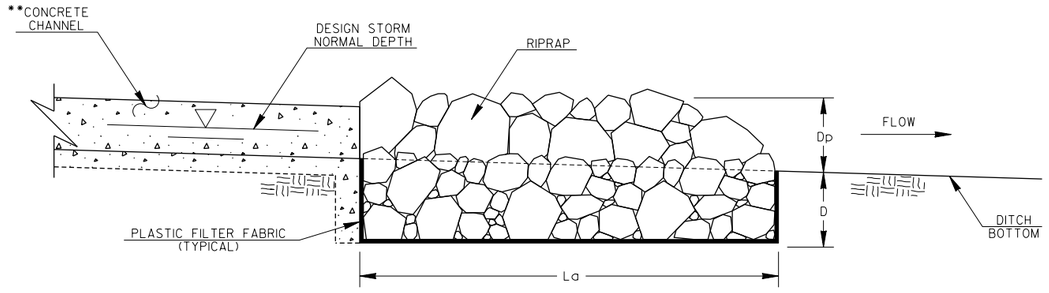


**REFER TO CONSTRUCTION DETAIL D-10 FOR CONCRETE DITCH PAVING INFORMATION

PLAN VIEW



PROFILE VIEW



PROFILE VIEW

GENERAL NOTES:

1. RIPRAP OUTLET PROTECTION SHOULD BE USED TO REDUCE A DRAINAGE STRUCTURE'S DISCHARGE VELOCITY.
   RIPRAP OUTLET PROTECTION IS SHOWN FOR GEORGIA STANDARD 1120, BUT IS INSTALLED SIMILARLY FOR OTHER DRAINAGE OUTLET STRUCTURES.
   RIPRAP OUTLET PROTECTION IS SHOWN FOR A CONCRETE DITCH, BUT IS INSTALLED SIMILARLY TO TRANSITION FROM OTHER CHANNEL LININGS.

2. RIPRAP OUTLET PROTECTION SHALL BE DESIGNED IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". THE DESIGNER SHALL PROVIDE THE FOLLOWING IN THE PLANS: PIPE DIAMETER (Do), FLOW RATE OF DESIGN STORM (Q), VELOCITY (V), TAILWATER CONDITION (Tw), APRON LENGTH (La), APRON WIDTH AT DRAINAGE STRUCTURE (W1), APRON WIDTH DOWNSTREAM (W2), AVERAGE STONE DIAMETER (d50), INSTALLATION DEPTH (D), AND TYPE OF RIPRAP WITH QUANTITY.

   THE MINIMUM DESIGN FOR RIPRAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM EVENT, BUT LARGER STORMS ARE RECOMMENDED.

3. THE APRON WIDTHS SHALL BE THE SAME WHEN THE DRAINAGE STRUCTURE DISCHARGES PARALLEL INTO A WELL-DEFINED CHANNEL. THE APRON WIDTHS IN THIS CASE SHALL REPRESENT THE WIDTH AT THE DEPTH OF PROTECTION. THE RIPRAP SHALL BE INSTALLED TO THE TOP OF CHANNEL OR 1-FOOT ABOVE THE NORMAL DEPTH OF THE CHANNEL'S DESIGN STORM (WHICHEVER IS LESS). THE DESIGNER SHALL PROVIDE THE DEPTH OF PROTECTION (Dp) IF THE RIPRAP SHOULD NOT BE INSTALLED TO THE TOP OF THE CHANNEL. RIPRAP SHOULD ALSO BE INSTALLED TO ARMOR CHANNEL CORNER AT THE OUTLET STRUCTURE.

4. IF THE OUTLET HYDRAULICS REQUIRE A d50<=0.70 FEET, TYPE-3 RIPRAP MAY BE USED.
   IF THE OUTLET HYDRAULICS REQUIRE A d50<=1.20 FEET, TYPE-1 RIPRAP SHOULD BE USED.
   IF THE OUTLET HYDRAULICS REQUIRE A d50>1.20 FEET, THE DESIGNER SHALL DESIGN AND PROVIDE A SPECIAL DETAIL FOR APPROPRIATE OUTLET PROTECTION.

5. PLASTIC FILTER FABRIC IS REQUIRED UNDERNEATH RIPRAP APRON.

6. PAYMENT FOR RIPRAP SHALL BE MEASURED IN SQUARE YARDS FOR SPECIFIED INSTALLATION DEPTH. PAYMENT FOR PLASTIC FILTER FABRIC SHALL BE MEASURED IN SQUARE YARDS CONSISTENT WITH RIPRAP QUANTITY AND PAID FOR SEPARATELY.

Do	=	PIPE DIAMETER
Q	=	DESIGN STORM FLOW RATE
V	=	DESIGN STORM VELOCITY
Tw	=	TAILWATER CONDITION/DESIGN STORM NORMAL DEPTH
La	=	APRON LENGTH
W1	=	APRON WIDTH UPSTREAM AT DEPTH OF PROTECTION
W2	=	APRON WIDTH DOWNSTREAM AT DEPTH OF PROTECTION
d50	=	AVERAGE STONE DIAMETER
D	=	INSTALLATION DEPTH
Dp	=	DEPTH OF PROTECTION

RIPRAP TYPE	REQUIRED d50 (FT)	MIN. DEPTH "D" (IN)
1	≤1.20	36
3	≤0.67	18

GEORGIA REGISTERED No. 046667 PROFESSIONAL ENGINEER RHODES S HUNT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

RIPRAP OUTLET PROTECTION
(SHEET 2 OF 2)

NO SCALE 4-22-2016

DATE / REVISION / BY

DESIGNED DLE
DRAWN DLE
TRACED
CHECKED

56-0006

NUMBER D-55B