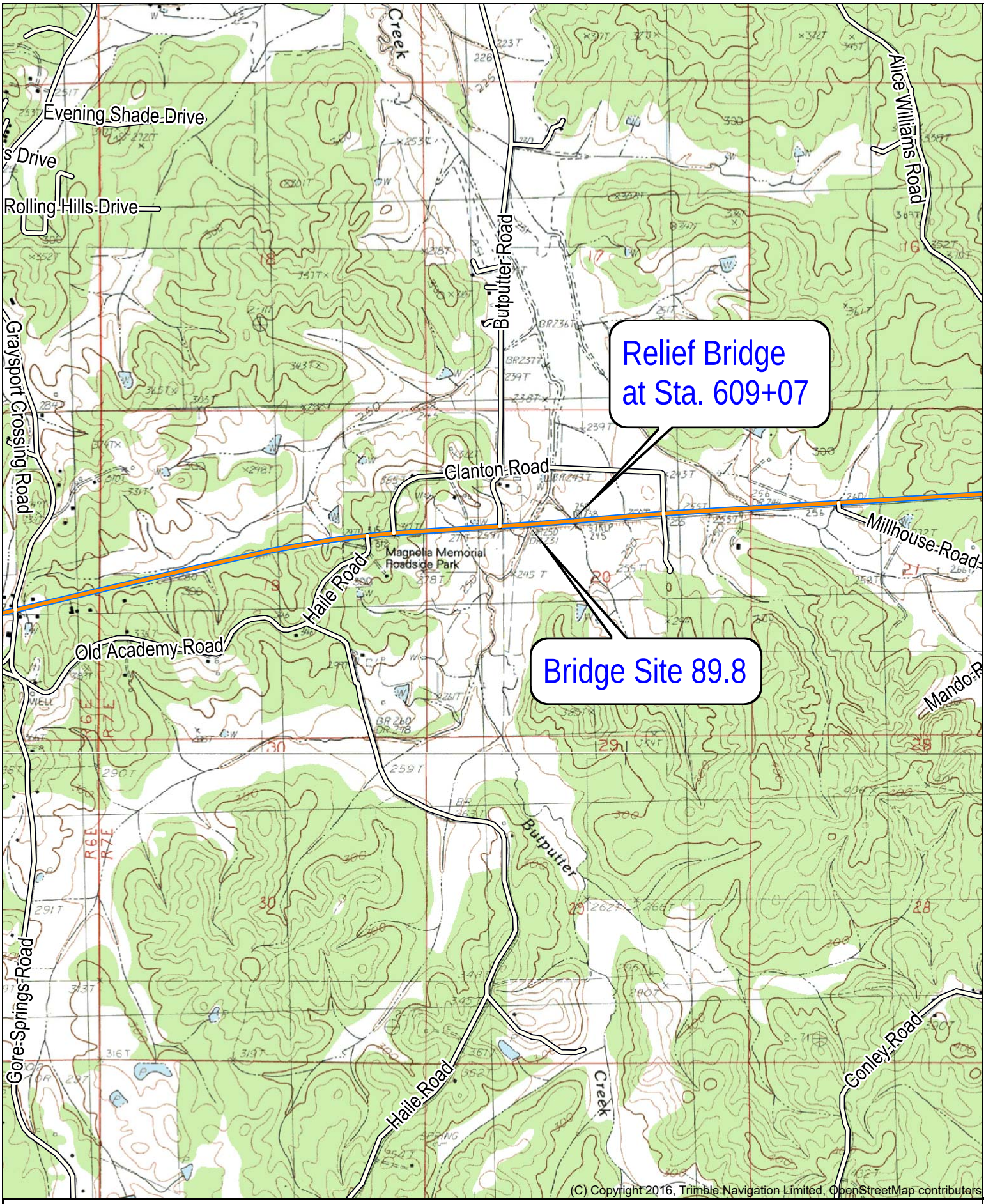
Calhoun/Grenada 8
BR-0016-03(027); 106968-301000
BR-0016-02(037); 106968-302000

Section 404 General Permit 46
and Section 401 Water Quality

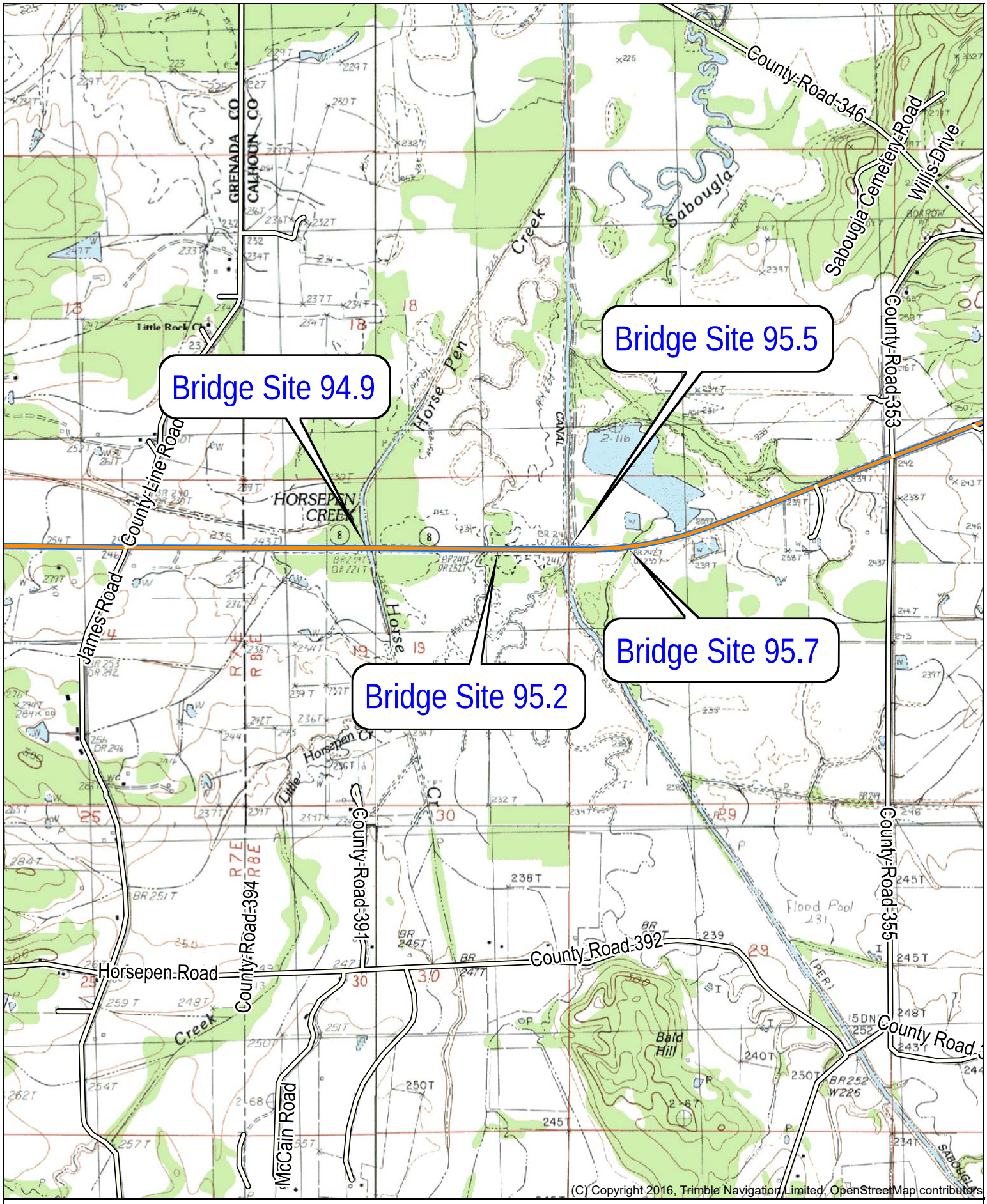
Location Maps



Name: Grenada and Calhoun
Date: 12/02/20
Scale: 1 inch = 2,000 ft.

Location: 033° 45' 24.3459" N, 089° 35' 25.3789" W
Grenada and Calhoun 8 bridge replacements
FMS: 106968/301000/302000

Datum: NAD27



Name: Grenada and Calhoun
Date: 12/02/20
Scale: 1 inch = 2,000 ft.

Location: 033° 45' 36.0335" N, 089° 29' 37.1578" W
Grenada and Calhoun 8 bridge replacements
FMS: 106968/301000/302000

Datum: NAD27

Table of Impacts

Table 1. Wetland Data Point Summary Table

Data Point	Wetland ID#	Site # OR Worksheet #	Latitude*	Longitude*	Approximate Station Number	Section-Township-Range	Area from ROW to ROW (Acres)	Cowardin Classification	Impact**
DP-7	W-1	7	33.763536	-89.483695	969+65	20-22N-8E	0.93	PFO	No impacts
DP-3	W-2	6, 7	33.764181	-89.482401	968+00	20-22N-8E	0.45	PSS	0.29 acres of temporary clear 0.33 acres of permanent fill
DP-11	W-3	6	33.763301	-89.486576	960+30	20-22N-8E	0.63	PFO	No impacts
DP-17	W-4	5	33.762946	-89.496869	928+90	19-22N-8E	1.57	PFO	No impacts
DP-18	W-5	5	33.762601	-89.499121	922+00	19-22N-8E	2.84	PEM	No impacts
N/A	W-6	5	33.762300	-89.499900	919+75	19-22N-8E	0.25	PEM	No impacts
N/A	W-7	5	33.762900	-89.501100	919+00	19-22N-8E	0.90	PFO	0.04 acres of temporary clear
N/A	W-8	5	33.762900	-89.501100	918+00	19-22N-8E	1.58	PFO	0.87 acres of temporary clear 2.58 acres of permanent fill
N/A	W-9	4, 5	33.762900	-89.501100	908+00	19-22N-8E	2.22	PEM	0.44 acres of temporary clear 0.19 acres of permanent fill
N/A	W-10	5	33.761900	-89.500700	917+00	19-22N-8E	0.38	PEM	No impacts
N/A	W-11	5	33.761900	-89.500700	917+00	19-22N-8E	0.79	PFO	No impacts
DP-25	W-12	3	33.769508	-89.590079	598+00	20-22N-7E	0.59	PFO	0.06 acres of temporary clear 0.03 acres of permanent fill
DP-25	W-12	3	33.769508	-89.590079	597+00	20-22N-7E	0.59	PFO	0.004 acres of permanent fill

DP- Data point- collection point for sampling data for wetland assessment
W – Wetland – areas described as wetlands
PFO – Palustrine Forested
PEM – Palustrine Emergent
PSS – Palustrine Shrub-Scrub
Station Numbers are approximate
**Latitude and Longitude in Decimal Degrees, NAD 83, State Plane*
***Wetland Impacts are one of the following – Permanent Fill, Temporary Fill, Shading, Clearing with no grubbing*

Station Numbers are approximate

Wetland Summary:	**Total Present (acres)**	**Temporary Fill (acres)**	**Permanent Fill (acres)**	**Temporary Clear (acres)**
Forested:	3.58	0	2.61	0.97
Shrub-Scrub:	0.62	0	0.33	0.29
Emergent:	0.63	0	0.19	0.44
Total	**4.83**	**0**	**3.13**	**1.70**

Table 2. Channel Assessment Table

CA #	Site #/ OR Worksheet #	Latitude*	Longitude*	Section-Township-Range	Approximate Station Number	Type	Length in Project Area (feet)	Channel Width (feet)	Name	Impact**
2	6	33.762608	-89.486314	20-22N-8E	960+85	I	1496.11	70	Sabougla Canal Relief	17 linear feet new bridge shading
3	6	33.762487	-89.489472	20-22N-8E	948+95	P	762.33	130	Sabougla Canal	17 linear feet new bridge shading
4	5	33.762502	-89.494034	19-22N-8E	935+75	P	914.66	50	Sabougla Creek	17 linear feet new bridge shading
5	5	33.762542	-89.500330	19-22N-8E	916+20	P	691.15	60	Horse Pen Creek	17 linear feet new bridge shading
8	3	33.760561	-89.586257	20-22N-7E	609+07	I	749.50	55	Butputter Creek Relief	36 linear feet new bridge shading
9	3	33.760306	-89.588527	20-22N-7E	600+80	P	740.16	80	Butputter Creek	16 linear feet new bridge shading
9	3A	33.760306	-89.588527	20-22N-7E	109+62	P	749.50	25	Butputter Creek Relief	15 linear feet temporary bridge shading
9	3A	33.760306	-89.588527	20-22N-7E	101+22	P	740.16	60	Butputter Creek	30 linear feet temporary bridge shading

CA- Channel Assessment- Channel Assessment point location
Type:
P-Perennial
I-Intermittent
E-Ephemeral
Station numbers (Sta.) are approximate

CA Summary:	**Total Present (linear feet)**	**New Bridge Width Shade/ Clear (ft)**	**Temporary Bridge Width Shade/Clear (ft)**	**Culvert/ Pipe (ft)**	**Rip rap (ft)**	**Relocate and Fill (ft)**
Perennial	2533	67	45	0	0	0
Intermittent	0	53	0	0	0	0
Ephemeral	0	0	0	0	0	0
Total	**2533**	**120**	**45**	**0**	**0**	**0**

Note: Sheet ECD-17 will not be included with the plans.

Roadway and Bridge Plans

R.O.W. FMS 106968/202000 & 106968/201000	
PLANS STAGE	DATE PRINTED
☐ CONCEPTUAL	
☐ PRE–R.O.W.	
☐ FIELD INSPECTION	
☐ R.O.W. PLANS TO SMD	
☐ FINAL R.O.W.	
☐ R.O.W. REVISION	
☒ OFFICE REVIEW	08–04–2020

STATE	PROJECT NUMBER	SHEET NO.
MISSISSIPPI	BR–0016–02(037) BR–0016–03(027)	1

GENERAL INDEX

INCLUDED THIS PROJECT		BEGIN WITH SHEET
☒	ROADWAY	1
☐	PERMANENT SIGNS	1001
☐	TRAFFIC SIGNALS	2001
☐	ITS COMPONENTS	3001
☐	LIGHTING	4001
☐	(RESERVED)	5001
☒	ROADWAY STANDARD DWGS	6001
☐	BOX CULVERT STD. DRAWINGS (LRFD)	7001
☐	BOX CULVERT STD. DRAWINGS (STD. SPEC.)	7501
☒	BRIDGE	8001
☒	CROSS SECTIONS	9001

STATE OF MISSISSIPPI

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

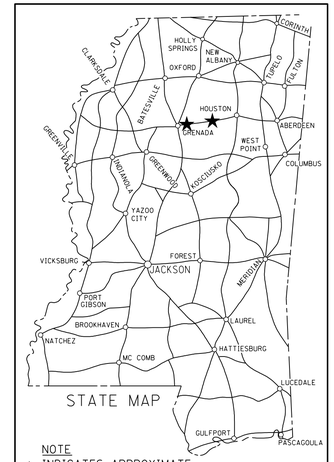
FEDERAL AID PROJECT NO. BR–0016–02(037) BR–0016–03(027)

SR 8 OVER BUTPUTTER CREEK (BRIDGE NO. 89.8) & RELIEF BRIDGE
SR 8 REPLACE FOUR BRIDGES (BRIDGE NOS. 94.9, 95.2, 95.5 & 95.7)
GRENADA & CALHOUN COUNTIES

FMS. CONST. NO. 106968/302000
106968/301000

SCALES

PLAN		1 IN. = 100 FT.
PROFILE	HOR.	1 IN. = 100 FT.
	VERT.	1 IN. = 10 FT.
LAYOUT		1 IN. = 3,000 FT.



STATE MAP

NOTE
★ INDICATES APPROXIMATE LOCATION OF PROJECT.

(GRENADA) LAT. 33°45'37" LONG. 89°35'19"
(CALHOUN) LAT. 33°45'45" LONG. 89°29'38"
(APPROX. MIDDLE OF PROJECT)

DESIGN CONTROL (RURAL ARTERIAL)
65 MPH = V (SPEED DESIGN)
ADT (2020) = 1,800 : ADT (2040) = 2,200
DHV = 240 : D = 60 % T= 16 %

PERMITS ACQUIRED BY MDOT
WETLANDS AND WATERS PERMITS

	WATERS	WETLANDS
NATIONWIDE #14	☐	☐
NATIONWIDE (OTHER)*	☐	☐
GENERAL*	☐	☐
INDIVIDUAL (404)*	☐	☐

STORMWATER PERMIT ☐

Y	REQUIRED, CNOI SUBMITTED BY MDOT (DISTURBED AREA = 5 ACRES)
S	REQUIRED, SCNOI TO BE SUBMITTED BY CONTRACTOR (1 TO 4.99 ACRES)
N	NO STORMWATER PERMIT REQUIRED (<1 ACRE)

APPROVED BY: _____

BRIDGE STRUCTURES REQ'D.

GRENADA COUNTY

BUTPUTTER CREEK BRIDGE
BRIDGE NO. 89.8
STA. 600+80
3@100'
LENGTH ALONG ℄ 300'

BUTPUTTER CREEK RELIEF BRIDGE
STA. 609+07
RELIEF
1@135'
LENGTH ALONG ℄ 135'

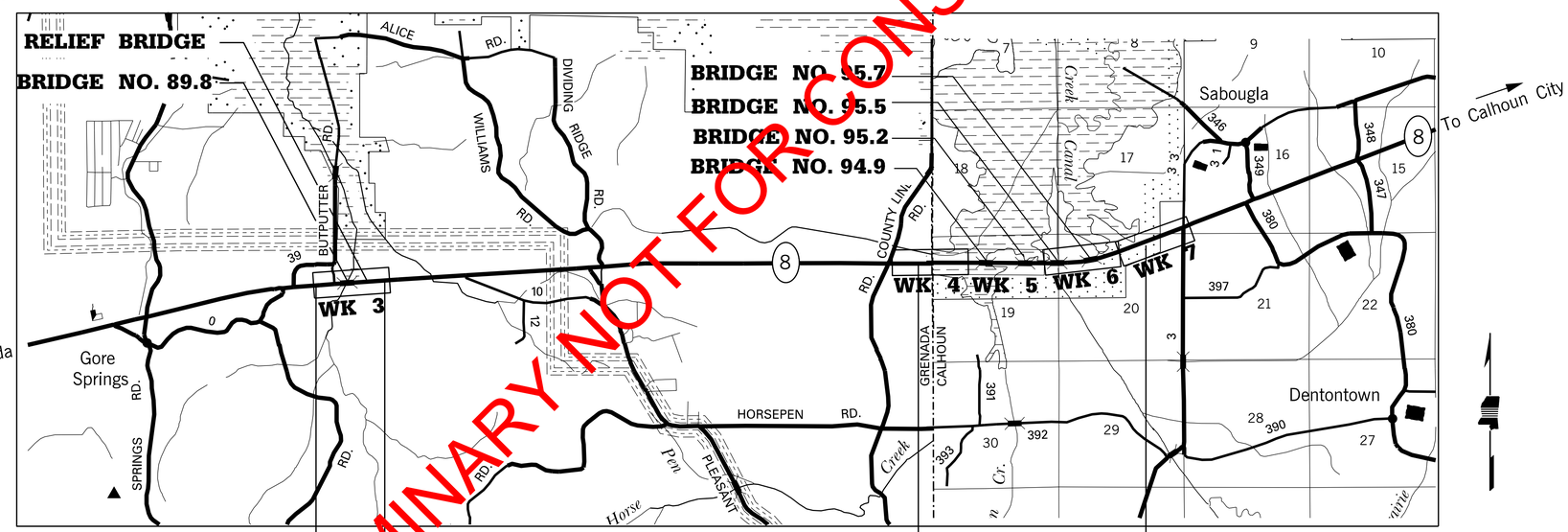
CALHOUN COUNTY

HORSE PEN CREEK BRIDGE
BRIDGE NO. 94.9
STA. 916+20
3@110'
LENGTH ALONG ℄ 330'

SABOUGLA CREEK BRIDGE
STA. 935+75
BRIDGE NO. 95.2
3@110'
LENGTH ALONG ℄ 330'

SABOUGLA CANAL BRIDGE
BRIDGE NO. 95.5
STA. 948+95
1@100', 1@130', 1@100'
LENGTH ALONG ℄ 330'

SABOUGLA CANAL RELIEF BRIDGE
BRIDGE NO. 95.7
STA. 960+85
1@80', 1@100', 1@80'
LENGTH ALONG ℄ 260'



BOX BRIDGES REQ'D.

N/A

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN CORPORATION LINE
SECTION LINE
EXISTING ROAD OR TRAVELED WAY
PROPOSED ROAD OR TRAVELED WAY
RAILROAD
SURVEY LINE
BRIDGES

EQUATIONS

CALHOUN COUNTY

STA 985+16.929 BK = –31.909 FT.
STA 985+48.838 AH

EXCEPTIONS

N/A

LENGTH DATA

GRENADA COUNTY

LENGTH OF ROADWAY	2,465.000 FT.	0.466 MI.
LENGTH OF BRIDGES	435.000 FT.	0.083 MI.
LENGTH OF PROJECT (NET)	2,900.000 FT.	0.549 MI.
LENGTH OF EXCEPTIONS	0.000 FT.	0 MI.
LENGTH OF PROJECT (GROSS)	2,900.000 FT.	0.549 MI.

CALHOUN COUNTY

LENGTH OF ROADWAY	8,018.091 FT.	1.519 MI.
LENGTH OF BRIDGES	1,250.000 FT.	0.237 MI.
LENGTH OF PROJECT (NET)	9,268.091 FT.	1.756 MI.
LENGTH OF EXCEPTIONS	0 FT.	MI.
LENGTH OF PROJECT (GROSS)	9,268.091 FT.	1.756 MI.

PROJECT TOTAL

LENGTH OF ROADWAY	10,483.091 FT.	1.984 MI.
LENGTH OF BRIDGES	1,685.000 FT.	0.320 MI.
LENGTH OF PROJECT (NET)	12,168.091 FT.	2.305 MI.
LENGTH OF EXCEPTIONS	0 FT.	0 MI.
LENGTH OF PROJECT (GROSS)	12,168.091 FT.	2.305 MI.

PRELIMINARY NOT FOR CONSTRUCTION

P S & E DATE:
APPROVED:
DEPUTY EXECUTIVE DIRECTOR / CHIEF ENGINEER
EXECUTIVE DIRECTOR

REVISIONS: DATE | BY

MDOT MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PRELIMINARY NOT FOR CONSTRUCTION

TITLE ROADWAY DESIGN DIVISION MISSISSIPPI DEPARTMENT OF TRANSPORTATION

8/4/2020 10:54AM L.E. DGN

FMS CON:106968/302000

STATE	PROJECT NO.
MISS.	BR-0016-02(037)

Curve SR8_DETOUR1
Δ = 13° 08′ 21.667″ (R
D = 4° 00′ 00.000″
L = 328.484′
T = 164.965′
R = 1,432.395′
BK N 85° 56′ 25.560″ E
AH S 80° 55′ 12.773″ E
PC 90+43.032
PT 93+71.516

CATHERINE CLAYTON WALTON
D.B. 292 PG. 492
TAX PARCEL 3.00

BEGINNING OF PROJECT
STA 590+00.00

ELSIE CLANTON HOOD
D.B. 292 PG. 490
TAX PARCEL 5.00

P.C.M. ELEV. 248.88
N. 1550559.910
E. 2523290.760
DESC. "51- 2 1/2" STAMPED ALUM. DISK SET ON TOP 5/8"x4' REBAR

ELSIE CLANTON HOOD
D.B. 292 PG. 490
TAX PARCEL 5.00

Curve SR8_DETOUR3
Δ = 13° 08′ 21.667″ (LT)
D = 4° 00′ 00.000″
L = 328.484′
T = 164.965′
R = 1,432.395′
BK N 85° 56′ 25.560″ E
AH N 72° 48′ 03.893″ E
PC 111+48.775
PT 114+77.259

SR 8 DETOUR
PT Sta. 118+05.743
SR 8 Sta. 618+05.743

END OF CONSTRUCTION
STA 619+00.00

PRC Sta. 114+77.259

591+71.959
75.000′ RT
TIE TO
EX ROW
PRC Sta. 93+71.516

SR 8 DETOUR
PC Sta. 90+43.032
SR 8 Sta. 590+43.032

597+00.000
155.000′ RT
PT Sta. 97+00.000

606+35.000
160.000′ LT

605+90.000
75.000′ LT
TIE TO
EX ROW

606+65.000
160.000′ LT

607+10.000
75.000′ LT
TIE TO
EX ROW

613+10.000
130.000′ LT

613+35.000
130.000′ LT

614+00.000
75.000′ LT
TIE TO
EX ROW

615+60.000
75.000′ RT
TIE TO
EX ROW

613+75.000
131.923′ RT

613+00.000
155.000′ RT

613+50.000
175.000′ RT

613+25.000
175.000′ RT

PC Sta. 111+48.775

TEMPORARY CONSTRUCTION EASEMENT

TEMPORARY CONSTRUCTION EASEMENT

TEMPORARY CONSTRUCTION EASEMENT

Curve SR8_DETOUR4
Δ = 13° 08′ 21.667″ (RT)
D = 4° 00′ 00.000″
L = 328.484′
T = 164.965′
R = 1,432.395′
BK N 72° 48′ 03.893″ E
AH N 85° 56′ 25.560″ E
PC 114+77.259
PT 118+05.743

CLAY DWAYNE HOOD
D.B. 2014 PG. 1439
D.B. 203 PG. 4466
TAX PARCEL 5.02

CLAY DWAYNE HOOD
D.B. 2014 PG. 1439
D.B. 203 PG. 4466
TAX PARCEL 5.02

Curve SR8_DETOUR2
Δ = 13° 08′ 21.667″ (LT)
D = 4° 00′ 00.000″
L = 328.484′
T = 164.965′
R = 1,432.394′
BK S 80° 55′ 12.773″ E
AH N 85° 56′ 25.560″ E
PC 93+71.516
PT 97+00.000

CATHERINE CLAYTON WALTON
D.B. 292 PG. 492
TAX PARCEL 3.00

B.M.ELEV. 240.44
DESC. TBM BP1 NAIL SET IN THE SIDE OF A TWIN CYPRESS TREE 116 RT CL STA 602+00

WETLAND SITE		
TEMPORARILY FILLED	0.06	AC.
PERMANENTLY FILLED	0.03	AC.
BRIDGED		AC.

IMPAIRED WATER BODY
Butputter Creek IS IMPAIRED DUE TO Pathogens

TYPICAL SECTION
CLEAR WATER DIVERSION DITCH
STA 102+35 - STA 106+25 RT
STA 106+65 - STA 110+50 RT

TYPICAL SECTION
CLEAR WATER DIVERSION DITCH
STA 111+20 - STA 114+10 RT

SCALE: 1" = 100′
DESIGN SPEED: 50 MPH

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	S.Y.		
SOIL REINF. MATERIAL	S.Y.		
PAVED DITCH	C.Y.		
RIPRAP	TON		
GEOTEXTILE	S.Y.		
SOLID SOD	S.Y.		

EARTHWORK TOTAL THIS SHEET		
Cut		CY
Fill		CY
Excess		CY
Surplus		CY
Borrow( )		CuYds

PRELIMINARY NOT FOR CONSTRUCTION

STA 90+64.85 RT
EXTEND EXISTING 44"X27" RCAP
W/16'-44"X27" RCAP REQ'D
1-44"X27" FES REQ'D

STA 92+25 RT
16' TEMPORARY DRIVE REQ'D
(DRY)

STA 98+00 LT
16' TEMPORARY DRIVE REQ'D
64'-18" ALT PIPE
US FL: 250.81
DS FL: 250.17

STA 99+30.17
56'-42" RCP REQ'D
1-42" FES REQ'D

STA 101+22 LT & RT
2-TERMINAL END
SECTIONS REQ'D

STA 101+22
BRIDGE NO. 89.8
156' BRIDGE REQ'D
30°LF SKEW
DA: 5.92 SQ. MIL

STA 102+78 LT & RT
2-TERMINAL END
SECTIONS REQ'D

STA 106+50 LT
16' TEMPORARY DRIVE REQ'D
(DRY)

STA 106+50 RT
16' TEMPORARY DRIVE REQ'D
(DRY)

STA 109+62 LT & RT
2-TERMINAL END
SECTIONS REQ'D

STA 109+62
BRIDGE NO.
136' BRIDGE REQ'D
15°RF SKEW
DA: RELIEF

STA 110+98 LT & RT
2-TERMINAL END
SECTIONS REQ'D

STA 113+25 LT
16' TEMPORARY DRIVE REQ'D
64'-18" ALT PIPE
US FL: 243.77
DS FL: 243.21

STA 113+25 RT
16' TEMPORARY DRIVE REQ'D
64'-18" ALT PIPE
US: 240.66
DS: 240.62

GRAPHIC GRADE | MATH GRADE

271.54
US FL: 261.26
DS FL: 260.37
VPC 93+25.000 EL. 269.137
-0.87572%
VPI 95+00.000
EL. 267.60
350.000' V.C.
K = 136
VPT 96+75.000 EL. 261.560
-3.45427%
VPC 98+50.000 EL. 255.515
VPI 100+00.000
EL. 250.33
300.000' V.C.
K = 107
US FL: 243.84
DS FL: 243.68
VPT 101+50.000 EL. 249.[illegible]
BEGIN BRIDGE STA 101+22
END BRIDGE STA 102+78
VPC 103+50.000 EL. 248.059
-0.65000%
VPI 105+00.000
EL. 247.08
300.000' V.C.
K = 261
VPT 106+50.000 EL. 247.834
+0.50000%
STA 102+35 RT
1-DITCH CHECK REQ'D
390' CLEAN WATER
DIVERSION REQ'D
(D:2';W:2')
STA 106+65 RT
390' CLEAN WATER
DIVERSION REQ'D
(D:2';W:2')
1-DITCH CHECK REQ'D
BEGIN BRIDGE STA 109+62
BEGIN BRIDGE STA 110+98
VPC 111+50.000 EL. 250.334
VPI 112+50.000
EL. 250.83
200.000' V.C.
K = 162
-0.73599%
VPT 113+50.000 EL. 250.098
VPC 113+75.000 EL. 249.914
VPI 114+50.000
EL. 249.36
150.000' V.C.
K = 118
+0.53612%
VPT 115+25.000 EL. 249.764
STA 111+20 RT
1-DITCH CHECK REQ'D
290' CLEAN WATER
DIVERSION REQ'D
(D:1';W:2')
64'-18" ALT PIPE REQ'D

Station	Elevation
91	271.45
92	270.82
93	270.45
94	270.04
95	269.65
96	269.35
97	268.90
98	268.27
99	267.47
100	266.48
101	265.30
102	263.94
103	262.40
104	260.70
105	258.97
106	257.24
107	255.51
108	253.90
109	252.53
110	251.39
111	250.48
112	249.80
113	249.36
114	249.03
115	248.71
116	248.38
117	248.06
118	247.78
119	247.60
120	247.51
121	247.53
122	247.63
123	247.83
124	248.08
125	248.33
126	248.58
127	248.83
128	249.08
129	249.33
130	249.58
131	249.83
132	250.08
133	250.33
134	250.51
135	250.52
136	250.39
137	250.10
138	249.76
139	249.60
140	249.66
141	249.89
142	250.10
143	250.27
144	250.42
145	250.65
146	250.87

Station	Elevation
91	271.45
92	270.82
93	270.45
94	270.04
95	269.62
96	267.75
97	267.44
98	265.10
99	266.21
100	265.99
101	261.13
102	261.15
103	254.17
104	247.03
105	248.03
106	246.99
107	244.26
108	243.82
109	244.54
110	245.68
111	245.70
112	243.22
113	240.97
114	229.24
115	242.49
116	240.41
117	241.43
118	241.53
119	242.21
120	242.33
121	242.26
122	243.18
123	242.10
124	241.46
125	241.76
126	241.28
127	241.62
128	241.06
129	241.01
130	241.18
131	239.98
132	241.44
133	242.40
134	241.43
135	241.54
136	241.77
137	241.93
138	241.97
139	242.58
140	243.18
141	246.77
142	249.99
143	250.27
144	250.42
145	250.65
146	250.87

Wk. Sh. 3A
Sh. No. PG

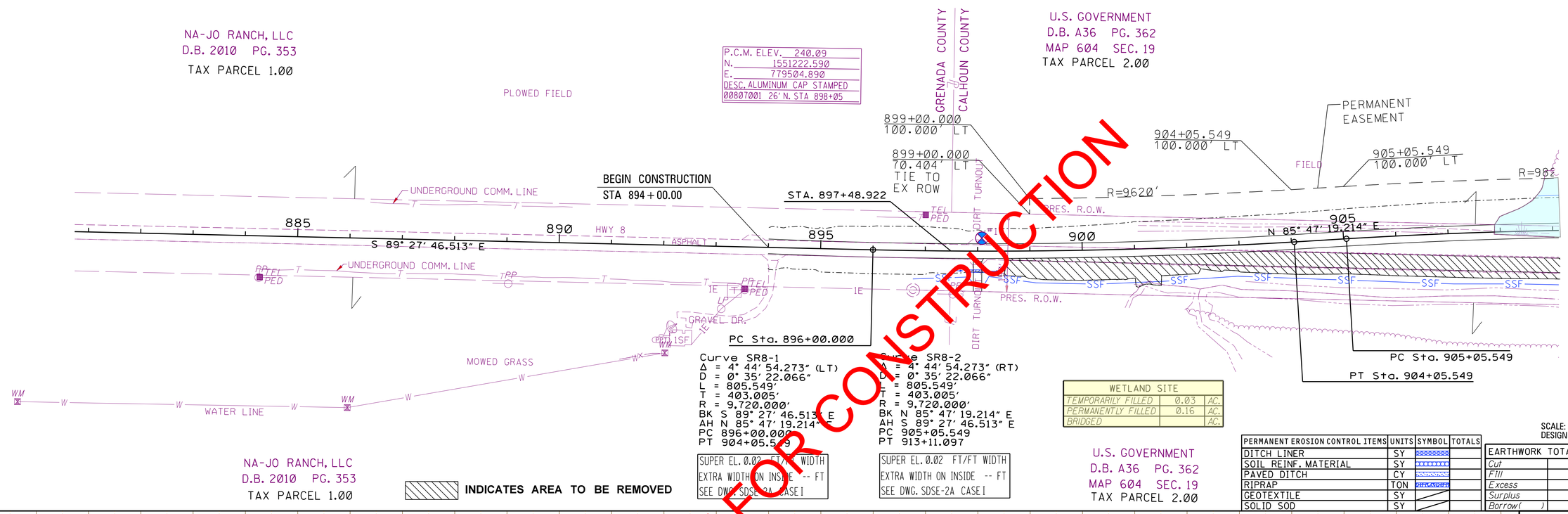
PLAN-PROFILE
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

1/6/2021 9:23:41 AMWK 3A.DGN

DESIGN TEAM: STANTEC FILENAME: WK 3A.DGN COUNTY: GRENADA PROJECT NO.: BR-0016-02(037) SHEET ID: SR 8 DETOUR

FMS CON:106968/301000

STATE	PROJECT NO.
MISS.	BR-0016-03(027)

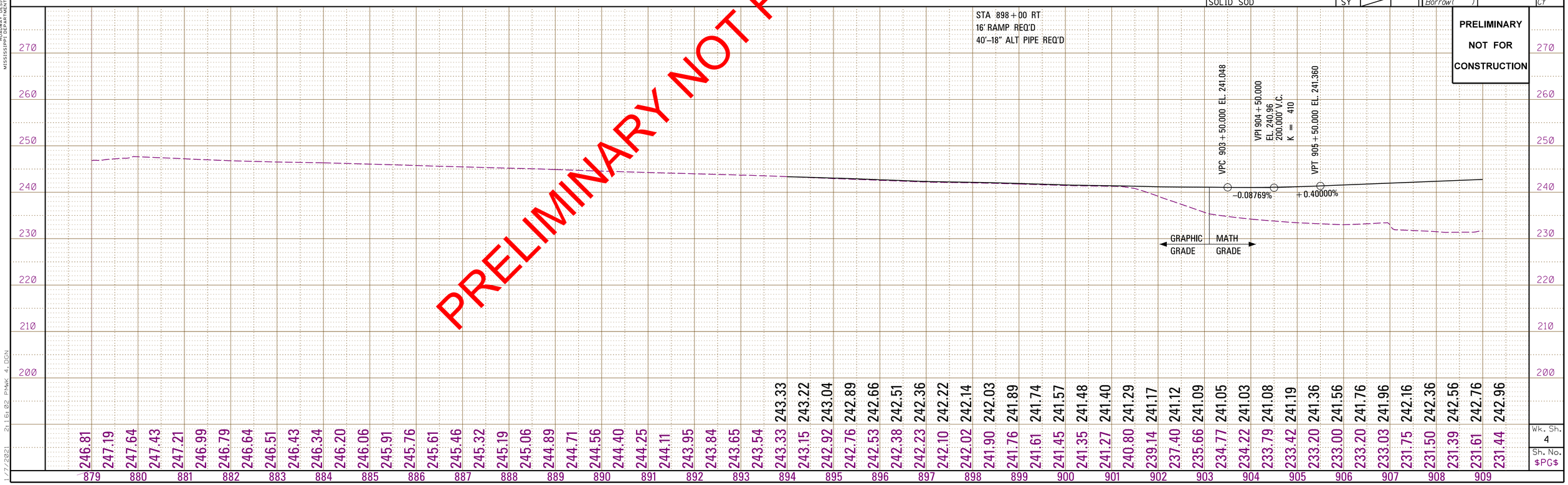


WETLAND SITE		
TEMPORARILY FILLED	0.03	AC.
PERMANENTLY FILLED	0.16	AC.
BRIDGED		AC.

SCALE: 1" = 50'
DESIGN SPEED: 65 MPH

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	SY		
SOIL REINF. MATERIAL	SY		
PAVED DITCH	CY		
RIPRAP	TON		
GEOTEXTILE	SY		
SOLID SOD	SY		

EARTHWORK TOTAL THIS SHEET		
Cut		CY
Fill		CY
Excess		CY
Surplus		CY
Borrow( )		CY

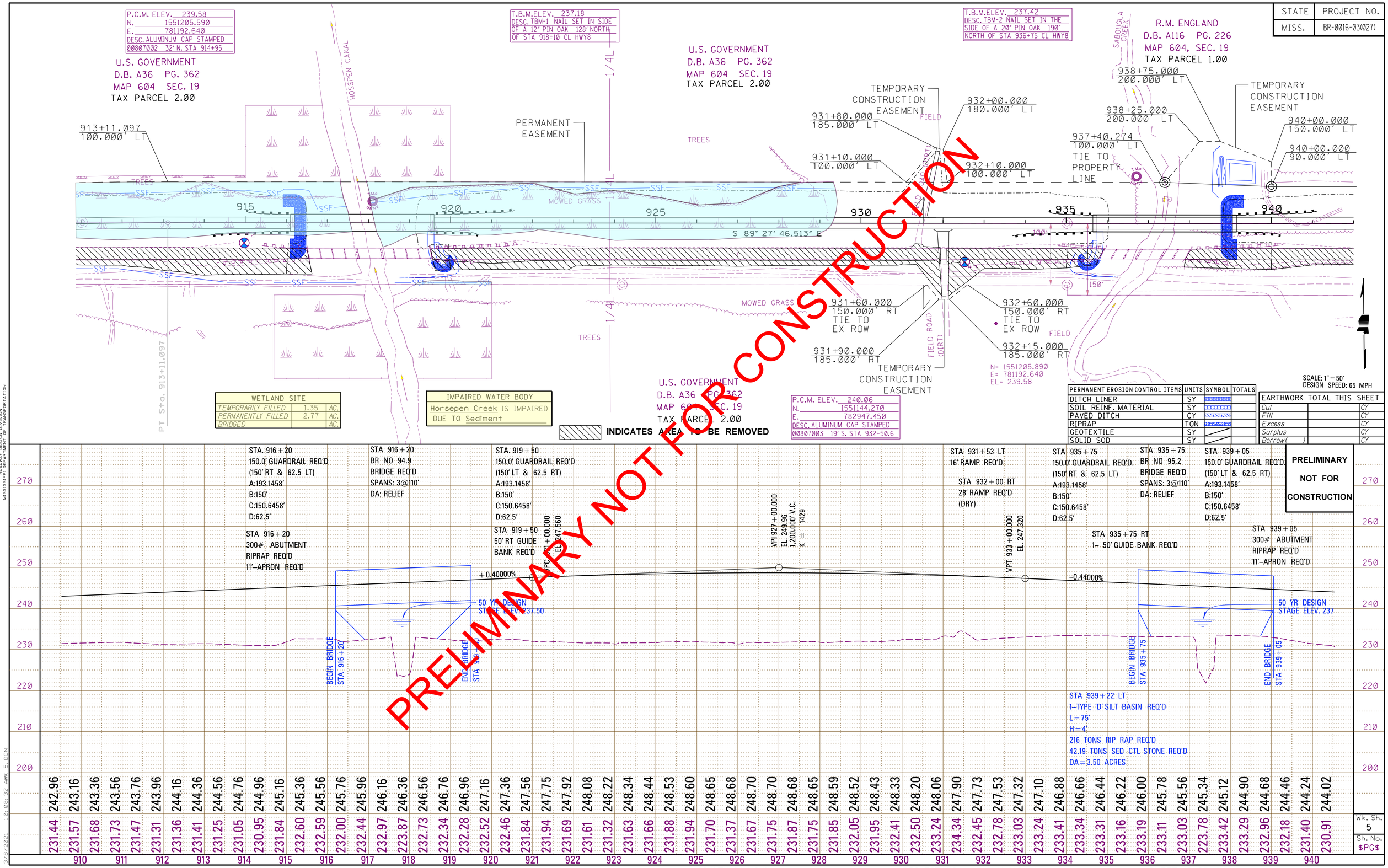


PLAN-PROFILE
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

1/7/2021 2:16:02 PM WK 4.DGN

FMS CON:106968/301000

STATE	PROJECT NO.
MISS.	BR-0016-03(027)



WETLAND SITE		
TEMPORARILY FILLED	1.35	AC.
PERMANENTLY FILLED	2.77	AC.
BRIDGED		AC.

IMPAIRED WATER BODY
Horsepen Creek IS IMPAIRED DUE TO Sediment

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	SY		
SOIL REINF. MATERIAL	SY		
PAVED DITCH	CY		
RIPRAP	TON		
GEOTEXTILE	SY		
SOLID SOD	SY		

EARTHWORK TOTAL THIS SHEET		
Cut		CY
Fill		CY
Excess		CY
Surplus		CY
Borrow( )		CY

Wk. Sh. 5

Sh. No. PG

PLAN-PROFILE
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

3/3/2021 10:08:32 WK 5.DGN

DESIGN TEAM: STANTEC FILENAME: WK 5.DGN COUNTY: CALHOUN PROJECT NO.: BR-0016-03(027) SHEET ID: SR 8

FMS CON:106968/301000

STATE	PROJECT NO.
MISS.	BR-0016-03(027)

R.M. ENGLAND
D.B. A116 PG. 226
MAP 604, SEC. 19
TAX PARCEL 1.00

T.B.M.ELEV. 239.76
DESC. TBM-3 NAIL SET IN THE SIDE OF A 29" PIN OAK 116' NORTH OF STA 949+73 CL HWY8

T.B.M.ELEV. 236.63
DESC. TBM-4 - NAIL SET IN THE SIDE OF A 20" SWEETGUM 157' NORTH OF STA 961+26 CL HWY8

U.S. GOVERNMENT
D.B. A36 PG. 459
MAP 604 SEC. 20
TAX PARCEL 4.00

TEMPORARY CONSTRUCTION EASEMENT
945+80.000 145.000' LT
945+55.000 90.000' LT
946+20.000 145.000' LT
946+50.151 90.000' LT
PC Sta. 946+50.151
950+31.554 90.000' LT TIE TO PROPERTY LINE
R=10410.00'
955+95.000 180.000' LT
955+60.000 160.000' LT
955+40.000 90.000' LT
TEMPORARY CONSTRUCTION EASEMENT
956+15.000 160.000' LT
956+15.000 90.000' LT
960+50.000 90.000' LT
PERMANENT EASEMENT
965+50.000 125.000' LT
R=10375.000'

TREES
945
950
955
960
965
970
FIELD ROAD (DIRT)
PAVED
SSF
SABOUGLA CANAL
SABOUGLA RELIEF

R.M. ENGLAND
D.B. A116 PG. 226
MAP 604, SEC. 19
TAX PARCEL 1.00

P.C.M. ELEV. 239.56
N. 1551172.250
E. 784478.170
DESC. ALUMINUM CAP STAMPED 00807004 23' N. STA 942+81

WETLAND SITE		
TEMPORARILY FILLED	0.27	AC.
PERMANENTLY FILLED	0.31	AC.
BRIDGED		AC.

IMPAIRED WATER BODY
Sabougla Creek IS IMPAIRED DUE TO Sediment

Curve SR8-3
Δ = 21° 06' 00.026" (LT)
D = 0° 32' 44.427"
L = 3,866.778'
T = 1,955.540'
R = 10,500.000'
BK S 89° 27' 46.513" E
AH N 69° 26' 13.461" E
PC 946+50.151
PT 985+16.929

SUPER EL. 0.02 FT/FT WIDTH
EXTRA WIDTH ON INSIDE ---FT
SEE DWG. SDSE-2A CASE I

INDICATES AREA TO BE REMOVED

SCALE: 1" = 50'
DESIGN SPEED: 65 MPH

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	S.Y.		
SOIL REINF. MATERIAL	S.Y.		
PAVED DITCH	C.Y.		
RIPRAP	TON		
GEOTEXTILE	S.Y.		
SOLID SOD	S.Y.		

EARTHWORK TOTAL THIS SHEET		
Cut		CY
Fill		CY
Excess		CY
Surplus		CY
Borrow( )		CY

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY NOT FOR CONSTRUCTION

STA 946+00 LT
24' RAMP REQ'D
(DRY)
STA 946+00 RT
18' RAMP REQ'D
(DRY)

STA 948+95
150.0' GUARDRAIL REQ'D.
(150' RT & 62.5 LT)
A:193.1458'
B:150'
C:150.6458'
D:62.5'
STA 948+95
300# ABUTMENT
RIPRAP REQ'D
9'-APRON REQ'D

STA 948+95
BR NO 95.5
BRIDGE REQ'D
SPANS: 1@100',1@130',1@100'
DA: 118 SQ. MI.

STA 952+25
150.0' GUARDRAIL REQ'D.
(150' LT & 62.5 RT)
A:193.1458'
B:150'
C:150.6458'
D:62.5'
STA 952+25
300# ABUTMENT
RIPRAP REQ'D
9'-APRON REQ'D

STA 955+75 LT
24' RAMP REQ'D
(DRY)
STA 955+75 RT
6' TEMPORARY RAMP REQ'D
72'-18" ALT PIPE REQ'D

STA 960+85
150.0' GUARDRAIL REQ'D.
(150' RT & 62.5 LT)
A:193.1458'
B:150'
C:150.6458'
D:62.5'
STA 960+85
300# ABUTMENT
RIPRAP REQ'D
8'-APRON REQ'D

STA 960+85
BR NO 95.7
BRIDGE REQ'D
SPANS: 1@80',1@100',1@80'
35°LF SKEW
DA: RELIEF

STA 963+45
150.0' GUARDRAIL REQ'D.
(150' LT & 62.5 RT)
A:193.1458'
B:150'
C:150.6458'
D:62.5'
STA 963+45
300# ABUTMENT
RIPRAP REQ'D
8'-APRON REQ'D

VPC 941+50.000 EL. 243.580
VPI 944+00.000 EL. 242.48 500.000' V.C. K = 549
VPT 946+50.000 EL. 243.655
VPC 953+70.000 EL. 247.039
VPI 955+00.000 EL. 247.65 260.000' V.C. K = 283
VPT 956+30.000 EL. 247.065

-0.44000%
+0.47000%
-0.45000%
.60

50 YR DESIGN STAGE ELEV. 237.20
50 YR DESIGN STAGE ELEV. 236.50

BEGIN BRIDGE STA 948+95
END BRIDGE STA 952+25
BEGIN BRIDGE STA 960+85
END BRIDGE STA 963+45

270 260 250 240 230 220 210 200

Station	Top	Bottom
941	244.02	230.91
942	243.80	230.93
943	243.58	231.13
944	243.38	231.11
945	243.23	230.97
946	243.12	230.83
947	243.06	230.91
948	243.05	231.03
949	243.08	230.89
950	243.15	230.73
951	243.28	231.46
952	243.44	232.28
953	243.65	233.59
954	243.89	233.51
955	244.12	233.46
956	244.36	233.93
957	244.59	234.12
958	244.83	235.21
959	245.06	235.69
960	245.30	231.98
961	245.53	221.54
962	245.77	221.72
963	246.00	234.85
964	246.24	233.10
965	246.47	233.65
966	246.71	234.51
967	246.94	234.65
968	247.16	234.22
969	247.30	234.30
970	247.35	234.22
971	247.31	233.58
	247.18	232.83
	246.97	232.82
	246.75	232.83
	246.52	232.96
	246.30	233.11
	246.07	233.14
	245.85	233.12
	245.62	232.84
	245.40	232.54
	245.17	232.61
	244.95	232.78
	244.72	233.16
	244.50	230.46
	244.27	232.56
	244.05	233.13
	243.82	232.58
	243.60	232.19
	243.37	232.13
	243.15	231.99
	242.92	231.80
	242.70	231.57
	242.47	231.23
	242.25	231.08
	242.02	231.15
	241.80	231.19
	241.57	231.12
	241.35	231.14
	241.12	231.07
	240.90	231.23
	240.67	231.70
	240.45	232.64
	240.22	234.19

WK. SH. 6
SH. NO. PG

PLAN-PROFILE
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

1/6/2021 2:46:17 PMWK 6.DGN

DESIGN TEAM: STANTEC FILENAME: WK 6.DGN COUNTY: CALHOUN PROJECT NO.: BR-0016-03(027) SHEET ID: SR 8

FMS CON:106968/301000

STATE	PROJECT NO.
MISS.	BR-0016-03(027)

975+00.000
150.000' LT

975+00.000
125.000' LT

TEMPORARY CONSTRUCTION EASEMENT

976+00.000
190.000' LT

977+00.000
125.000' LT

PERMENANT EASEMENT

980+00.000
125.000' LT

980+00.000
62.353' LT
TIE TO
EX ROW

U.S. GOVERNMENT
D.B. A36 PG. 459
MAP 604 SEC. 20
TAX PARCEL 4.00

TREES

PLOWED FIELD

R.M. ENGLAND
D.B. A116 PG. 226
MAP 604 SEC. 17
TAX PARCEL 2.00

END PROJECT
STA 987+00.00

975 980 985 990 995 1000

N 69° 26' 13

FL.=232.40

FL.=232.40

51'-18" RCP IN PL.
W/HEADWALLS

36'-9'X5' BOX CULVERT
IN PL. W/FES

40'-48" RCP IN PL.
W/HEADWALLS
US FL.=231.04
DS FL.=230.88

F.I.P.

EQUATION:
PT S+a 985+16.929 BK
S+a 985+48.838 AH

P.C.M. ELEV.	237.92
N.	1551918.440
E.	788274.270
DESC. ALUMINUM CAP STAMPED	
00807006 27' S. STA 986+91	

POND

PLOWED FIELD

R.M. ENGLAND
D.B. A116 PG. 226
MAP 604, SEC. 20
TAX PARCEL 1.00

INDICATES AREA TO BE REMOVED

SCALE: 1" = 50'
DESIGN SPEED: 65 MPH

WETLAND SITE		
TEMPORARILY FILLED	0.02	AC.
PERMANENTLY FILLED	0.02	AC.
BRIDGED		AC.

PERMANENT EROSION CONTROL ITEMS	UNITS	SYMBOL	TOTALS
DITCH LINER	SY		
SOIL REINF. MATERIAL	SY		
PAVED DITCH	CY		
RIPRAP	TON		
GEOTEXTILE	SY		
SOLID SOD	SY		

EARTHWORK TOTAL THIS SHEET		
Cut		CY
Fill		CY
Excess		CY
Surplus		CY
Borrow( )		CY

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY NOT FOR CONSTRUCTION

STA 972+00 LT
16' RAMP REQ'D
STA 972+00 RT
16' RAMP REQ'D
40'-18" TEMP. ALT PIPE REQ'D

STA 975+64
EXTEND EXISTING W/
64'-48" RCP REQ'D
1-JB-2 REQ'D
1-HEADWALL REQ'D
3:1 60°SKEW
35 TONS 100# RIPRAP REQ'D

VPC 975+00.000 EL. 238.650

VPI 976+50.000
EL. 237.97
300.000' V.C.
K = 343

VPT 978+00.000 EL. 238.612

-0.45000%

+0.42482%

US FL: 230.88
DS FL: 230.66

GRAPHIC GRADE

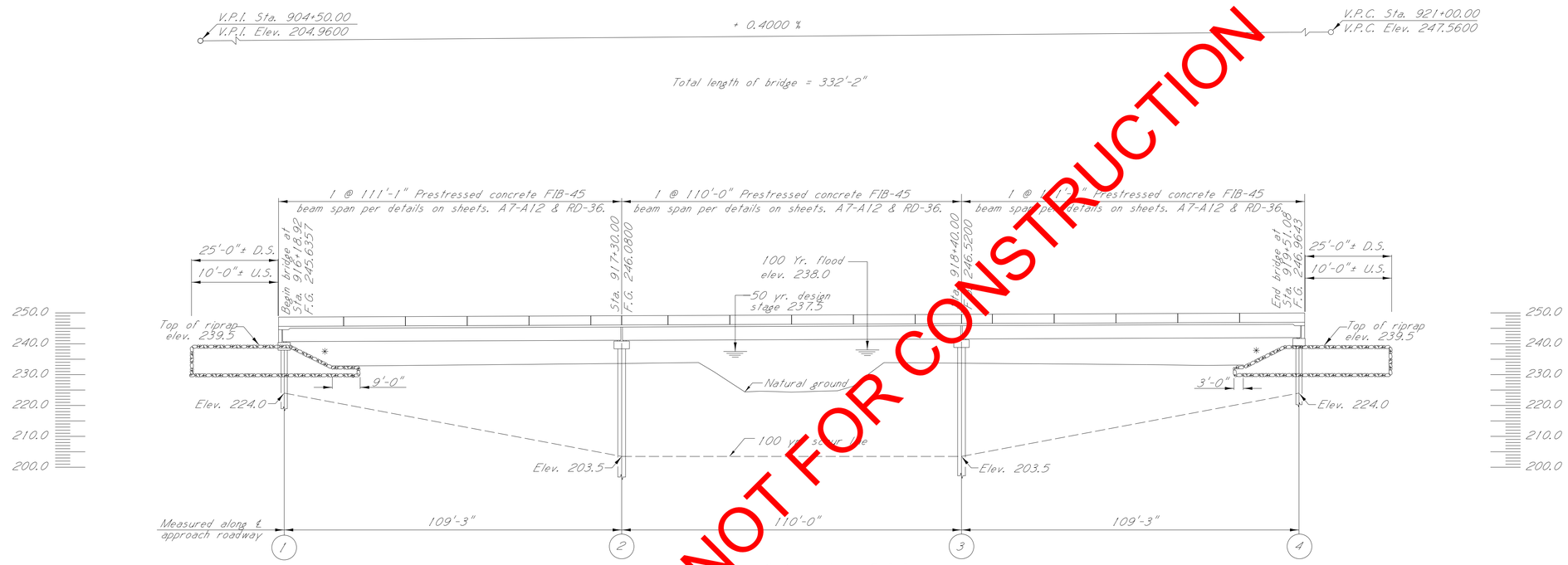
MATH GRADE

STA 976+50 LT
1-TYPE 'D'
SILT BASIN REQ'D
L=75'
H=4'
216.00 TONS RIP RAP REQ'D
42.16 TONS SED CTL STONE REQ'D
DA=4.03 ACRES

270 260 250 240 230 220 210 200

| | | |

STATE	PROJECT NO.
MISS.	BR-0016-03(027)



Steel pipe pile end bents no. 1 & 4
per details on sheets no. A4 - A5.
9 ~ 24"ϕ steel pipe piles per end bent.

Steel pipe pile int. bents no. 2 & 3
per details on sheets no. A6.
5 ~ 30"ϕ steel pipe piles per int. bent.

ELEVATION WITH PROFILE ALONG ℄ APPROACH ROADWAY

Scale: 1" = 20'-0"

*NOTE:
2:1 slope end bent

NOTE:
For General Notes, Estimated Quantities and additonal details, see sheet no. A1.

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

NOTE:
For information plans, see sheet no. INFO-1B. Additional information on the existing bridge is available for inspection in the Bridge Division.

DRAINAGE DATA:
Drainage area. . . . . Relief
(50 (U.S.G.S.) . . . . . 7,662 c.f.s.
Effective area . . . . . 2,554 sq. ft.
(100 (U.S.G.S) . . . . . 8,871 c.f.s.

DESIGN DATA:
Specifications . . .A.A.S.H.T.O. LRFD 8th Edition, 2017 with 2018 interims
Loading HL-93
Roadway Width . . . . . 40'-0" Gutter To Gutter
Concrete . . . . . Class "AA" (4,000 psi)
Class "BDX" (4,500 psi)
Stay in place metal forms. . . . 18 lbs/sq. ft.
Seismic performance zone. 1
Seismic soil site class. C
Seismic operational class. . . . . Other

500 YEAR SCOUR ELEV.	
Bent no.	Elevation
1	221.5
2 - 3	200.5
4	221.5

PRELIMINARY NOT FOR CONSTRUCTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 916+18.92
SR 8 ACROSS HORSE PEN CREEK
LAYOUT

FMS: 106968/301000
COUNTY: Calhoun
PROJECT NUMBER: BR-0016-03(027)

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISION | BY | DATE

DESIGNER Jacob Friess CHECKER Lon Burt
DETAILER Jacob Friess ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

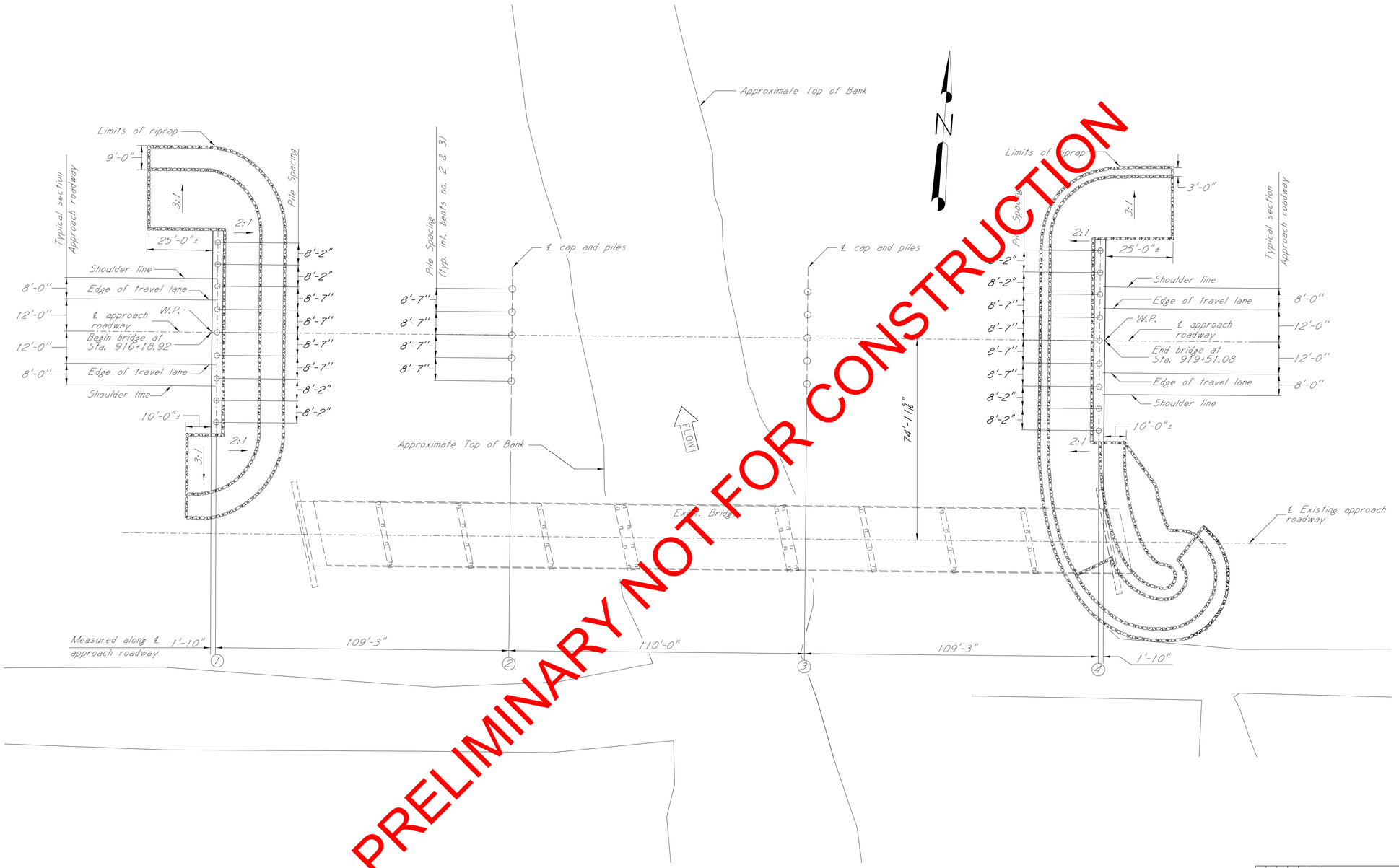
WORKING NUMBER A2 OF A12
SHEET NUMBER 8005

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

001.00 AMPM DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-03(027)



PRELIMINARY NOT FOR CONSTRUCTION

FOUNDATION PLAN:
Scale: 1" = 20'-0"

NOTE:
For general notes, quantities and additional details, see sheet no. A1.

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BRIDGE AT STA. 916+18.92

SR 8 ACROSS HORSE PEN CREEK
FOUNDATION PLAN

FMS: 106968 / 301000
COUNTY: Calhoun
PROJECT NUMBER: BR-0016-03(027)

DESIGNER Jacob Friess CHECKER Lon Burt
DETAILER Jacob Friess ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER
A3 of A12

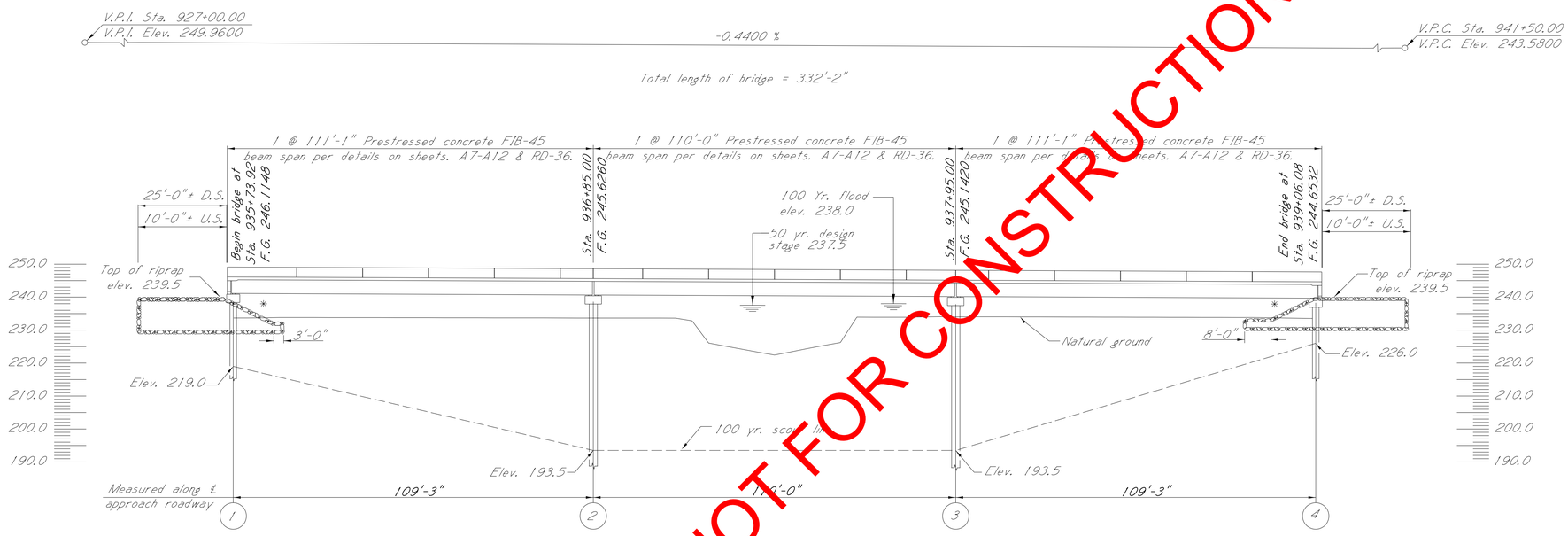
SHEET NUMBER
8006

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

001 00 AMPM DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-03(027)



*NOTE:
2:1 slope end bent

Steel pipe pile end bents no. 1 & 4
per details on sheets no. B4 & B5.
9 ~ 24"ϕ steel pipe piles per end bent.

Steel pipe pile int. bents no. 2 & 3
per details on sheets no. B6.
7 ~ 30"ϕ steel pipe piles per int. bent.

NOTE:
For General Notes, Estimated Quantities and additional details, see sheet no. B1.

ELEVATION WITH PROFILE ALONG ℄ APPROACH ROADWAY
Scale: 1" = 20'-0"

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

NOTE:
For information plans, see sheet no. INFO-1B.
Additional information on the existing bridge is available for inspection on the Bridge Division.

DRAINAGE DATA:
Drainage area. . . . . Relief
050 (U.S.G.S.) . . . . . 7,981 c.f.s.
Effective area . . . . . 2,347 sq. ft.
0100 (U.S.G.S.) . . . . . 9,261 c.f.s.

DESIGN DATA:
Specifications . . .A.A.S.H.T.O. LRFD 8th Edition, 2017 with 2018 interims
Loading HL-93
Roadway Width . . . . . .40'-0" Gutter To Gutter
Concrete . . . . . Class "AA" (4,000 psi)
Class "BDX" (4,500 psi)
Stay in place metal forms. . . . 18 lbs/sq. ft.
Seismic performance zone. 1
Seismic soil site class. C
Seismic operational class. . . . . Other

NOTE:
For Span Detail sheets, see sheets no. A7-A10.

For Beam Details and Bearing Details, see sheets no. A11 & A12.

500 YEAR SCOUR ELEV.	
Bent no.	Elevation
1	217.0
2 - 3	191.5
4	222.5

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY NOT FOR CONSTRUCTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 935+73.92

SR 8 ACROSS SABOUGLA CREEK
LAYOUT

FMS: 106968 / 301000
COUNTY: Calhoun
PROJECT NUMBER: BR-0016-03(027)

WORKING NUMBER B2 of B6
SHEET NUMBER 8017

REVISION | BY | DATE

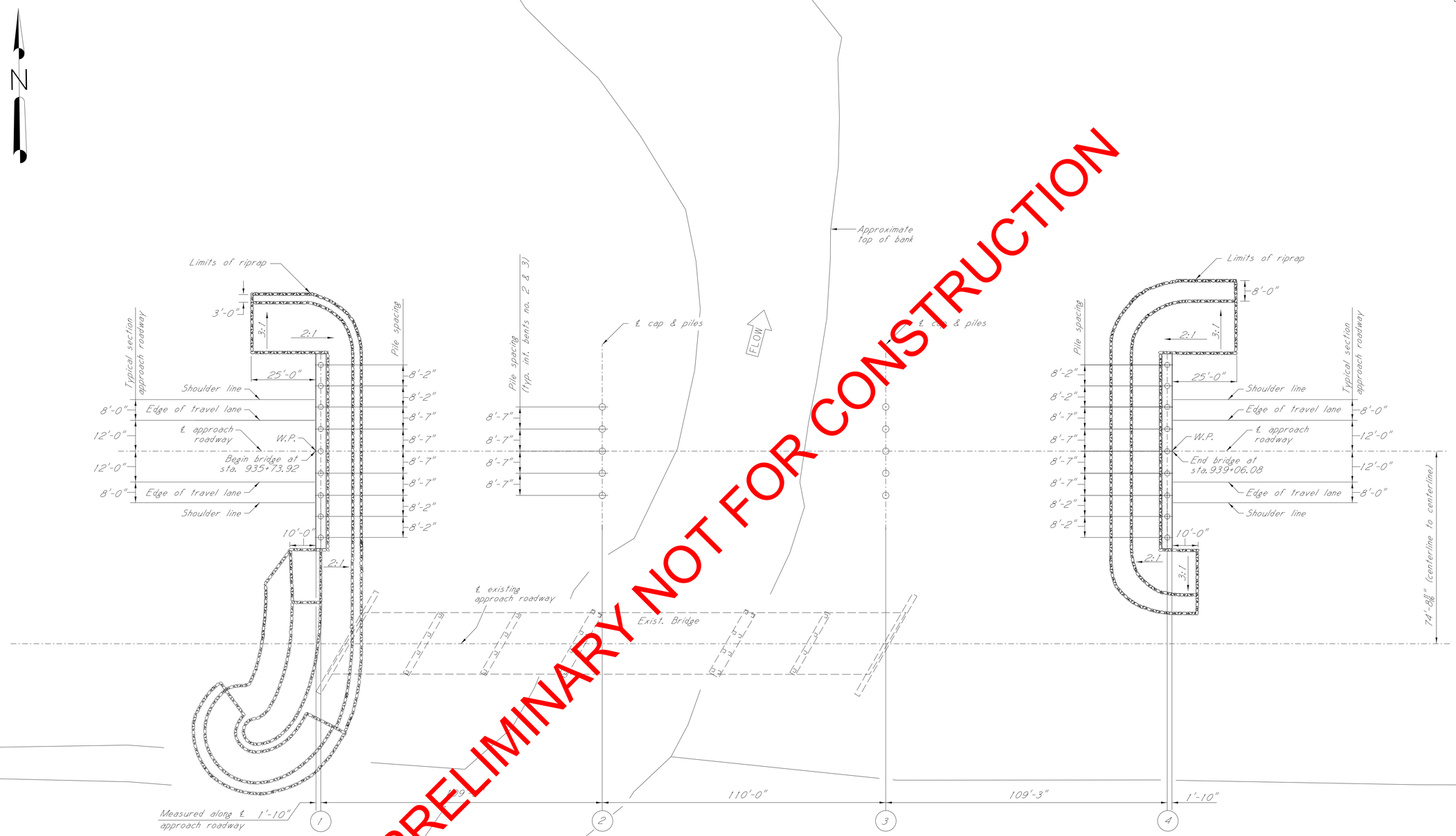
DESIGNER Jacob Friess CHECKER Lon Burt
DETAILER Jacob Friess ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

00: 00 AMPM DGNFILENAME

STATUS: OFFICE REVIEW

STATE	PROJECT NO.
MISS.	BR-0016-03(027)



PRELIMINARY NOT FOR CONSTRUCTION

NOTE:
For Span Detail sheets, see sheets no. A7-A10.

For Beam Details and Bearing Details, see sheets no. A11 & A12

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

Approximate top of bank

FOUNDATION PLAN
Scale: 1" = 20'-0"

PRELIMINARY NOT FOR CONSTRUCTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 935+73.92

SR 8 ACROSS SABOUGLA CREEK
FOUNDATION PLAN

FMS: 106968 / 301000
COUNTY: Calhoun
PROJECT NUMBER: BR-0016-03(027)

REVISION | BY | DATE

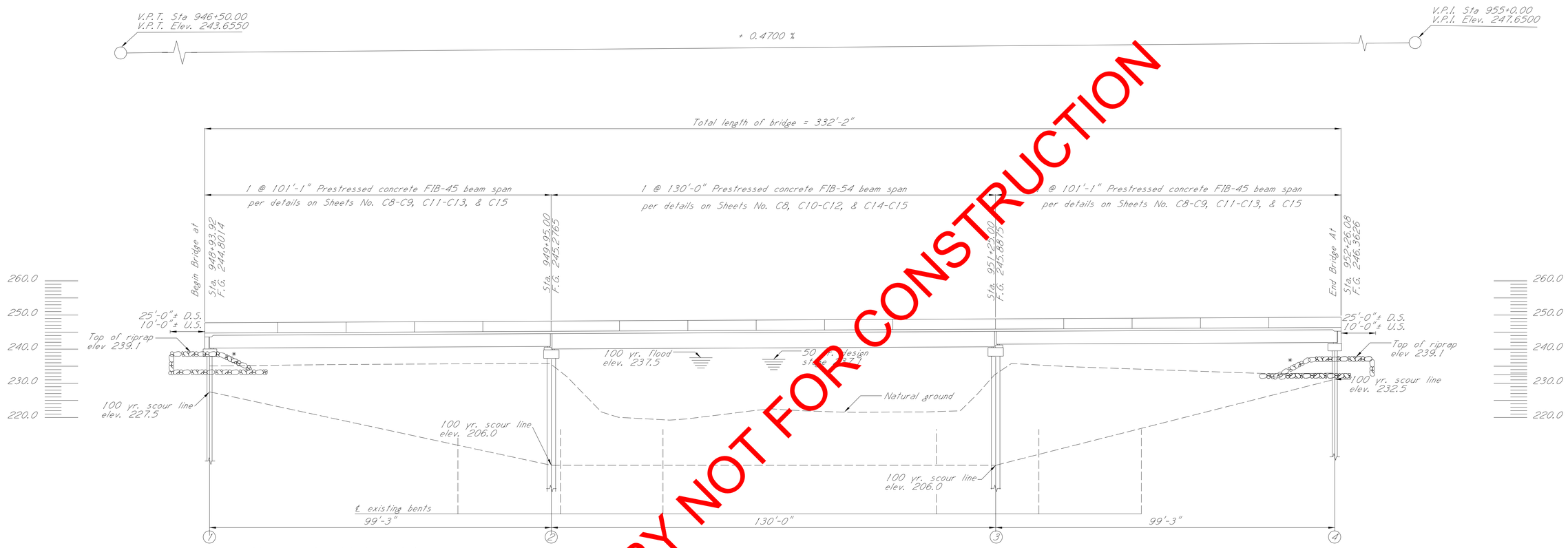
DESIGNER Jacob Friess CHECKER Lon Burt
DETAILER Jacob Friess ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER B3 of B6
SHEET NUMBER 8018

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
001.00 AMPM DGNFILENAME

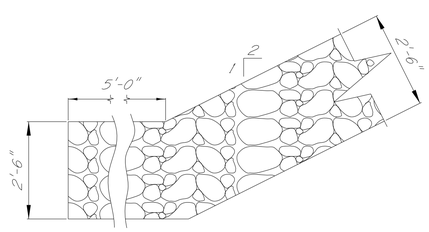
STATE	PROJECT NO.
MISS.	BR-0016-03(027)



ELEVATION WITH PROFILE ALONG ℄ APPROACH ROADWAY ARC

Scale: 1" = 15'-0"

NOTE: Existing roadway embankment shall be removed from Station 947+00 to Station 954+50 to natural ground elevation 234.0± along the existing alignment.



RIPRAP TOE DETAILS

500 Year Scour Elevation	
Bent no.	Elevation
1 - 3	223.0
2 - 3	203.0
4	223.0

NOTE:
For general notes, quantities and additional details, see sheet no. C1.

*NOTE:
2:1 slope normal to end bent

DESIGN DATA:
Specifications. . . . . A.A.S.H.T.O., LRFD 9th Edition, 2020
Loading. HL-93
Roadway width. . . . . 40'-0" Gutter to gutter
Concrete. . . . . Class "AA" (4,000 p.s.i.)
Class "BDX" (4,500 p.s.i.)
Stay-in-Place metal forms. . . 18lbs./sq. ft (between flanges)
Seismic Soil Site Class. C
Seismic Performance Zone. . . 1
Seismic Operational Class. . . . Other

DRAINAGE DATA:
Drainage area. . . . . 118 sq. mi.
Total Q50 (U.S.G.S.) . . . . . 10,514 c.f.s.
Effective area . . . . . 3,626 sq. ft.

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY NOT FOR CONSTRUCTION

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 948+93.92
SR 8 ACROSS SABOUGLA CANAL
LAYOUT

FMS: 106968 / 301000
COUNTY: CALHOUN
PROJECT NUMBER: BR-0016-03(027)

DESIGNER Stephen Diaz
DETAILER Stephen Diaz
CHECKER Sam Gloriosa
ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER
C2 OF C15

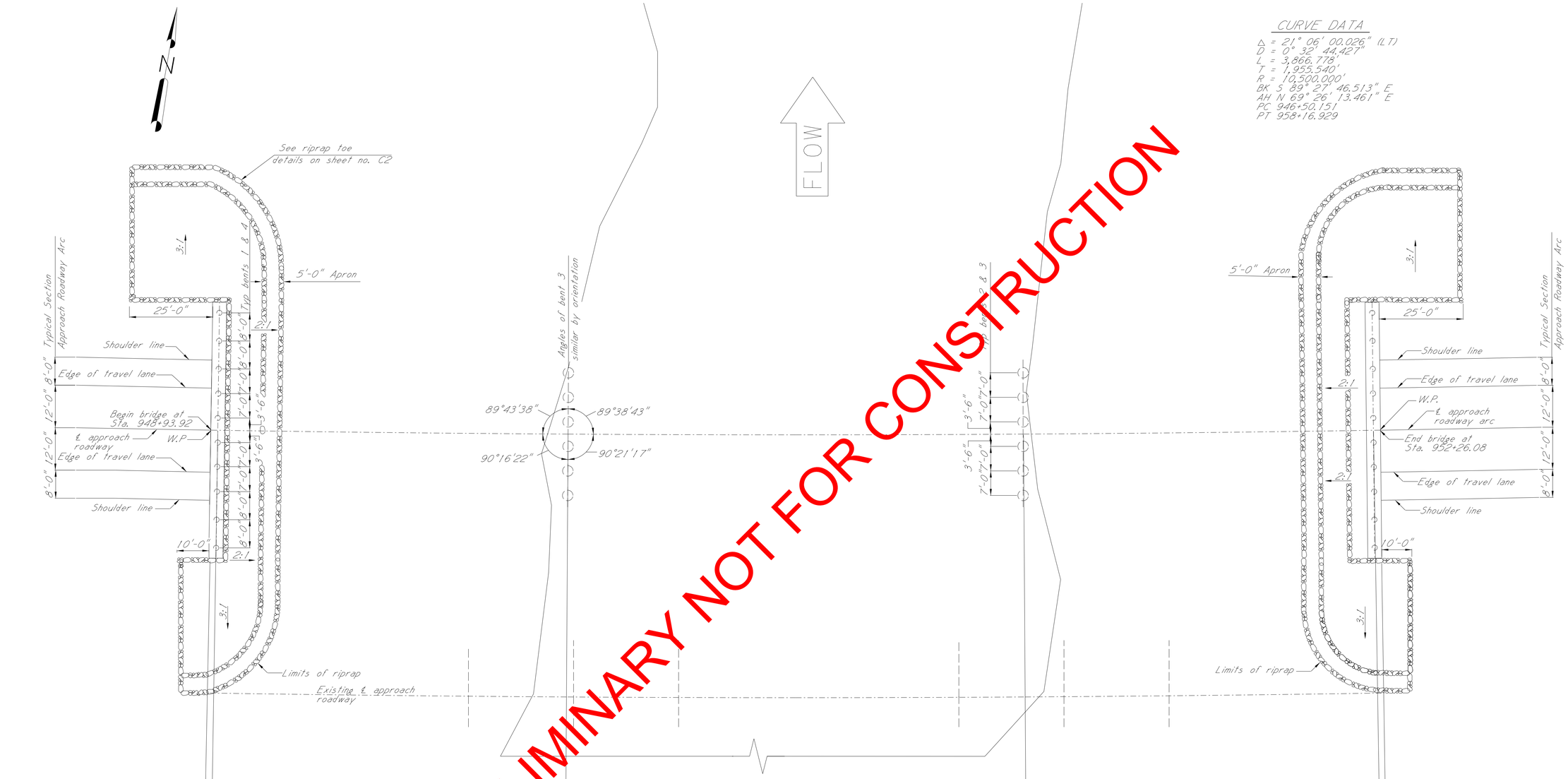
SHEET NUMBER
8023

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

00: 00 AMPM DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-03(027)



Foundation Plan

Scale: 1"= 15'-0"

PRELIMINARY NOT FOR CONSTRUCTION

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

NOTE:
All longitudinal dimensions are arc lengths.
Angles shown at end bents are measured from ℄ approach roadway chord to radial lines at the inside face of end wall.
Angles shown at int. bents are measured from ℄ approach roadway chord to radial lines at ℄ bent.

CURVE DATA

Δ = 21° 06' 00.026" (LT)
D = 0° 32' 44.427"
L = 3,866.778'
T = 1,955.540'
R = 10,500.000'
BK S 89° 27' 46.513" E
AH N 69° 26' 13.461" E
PC 946+50.151
PT 958+16.929

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

00:00AM DGNFILENAME

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BRIDGE AT STA. 948+93.92

SR 8 ACROSS SABOUGLA CANAL
FOUNDATION PLAN

FMS: 106968 / 301000
COUNTY: CALHOUN
PROJECT NUMBER: BR-0016-03(027)

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNER Stephen Diaz
DETAILER Stephen Diaz
CHECKER Sam Giarioso
ISSUE DATE 2020-12-16

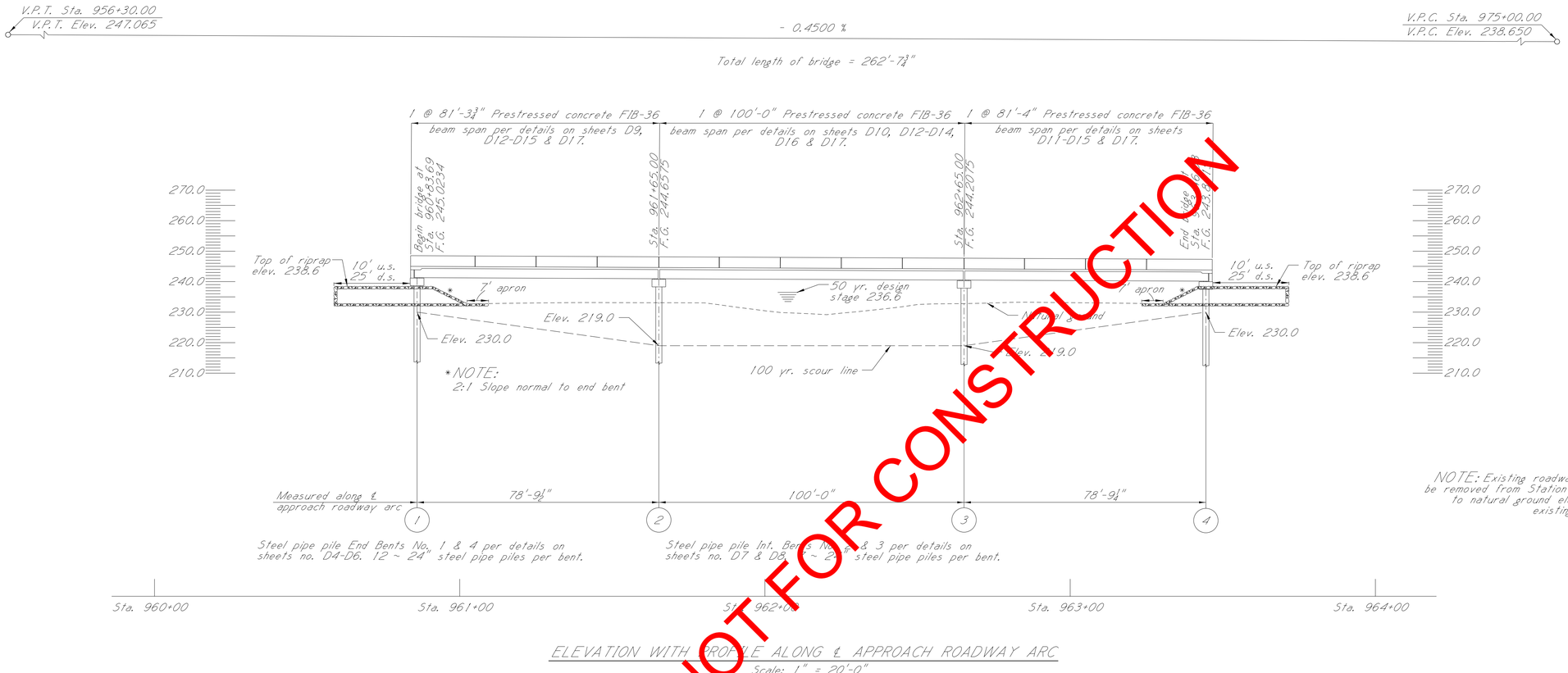
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER
C3 OF C15

SHEET NUMBER
8024

STATUS: OFFICE REVIEW

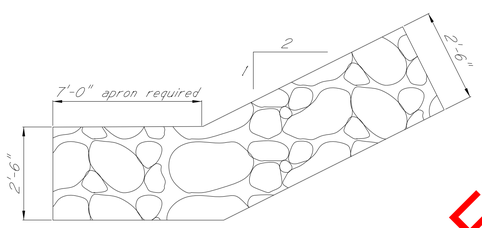
STATE	PROJECT NO.
MISS.	BR-0016-03(027)



ELEVATION WITH PROFILE ALONG ℄ APPROACH ROADWAY ARC

Scale: 1" = 20'-0"

NOTE: Existing roadway embankment shall be removed from Station 958+00 to Station 965+00 to natural ground elevation 233.0± along the existing alignment.



RIPRAP TOE DETAILS

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

NOTE:
For general notes, quantities, and additional details, see Sheet No. D1

DESIGN DATA:
Specifications. . . . . A.A.S.H.T.O., LRFD 9th Edition, 2020
Loading. HL-93
Roadway width. . . . . 40'-0" Gutter to gutter
Concrete. . . . . Class "AA" (4,000 p.s.i.)
Class "BDX" (4,500 p.s.i.)
Stay-in-Place metal forms. . . 18lbs./ft² (between flanges)
Seismic Performance Zone. . . 1
Seismic Soil Site Class. . . C
Seismic Operational Class. . . Other

DRAINAGE DATA:
Drainage area. . . . . relief
Total Q50 (U.S.G.S.) . . . . . 1,848 c.f.s.
Effective area . . . . . 972 sq. ft.
Total Q100 (U.S.G.S.) . . . . . 2,436 c.f.s.

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY NOT FOR CONSTRUCTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BRIDGE AT STA. 960+83.69

SR 8 ACROSS SABOUGLA CANAL RELIEF LAYOUT

FMS: 106968 / 301000

COUNTY: CALHOUN

PROJECT NUMBER: BR-0016-03(027)

DATE	REVISION	BY

DESIGNER Jack McMullan CHECKER Stephen Diaz
DETAILER Jack McMullan ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER D2 OF D18

SHEET NUMBER 8038

STATUS: OFFICE REVIEW

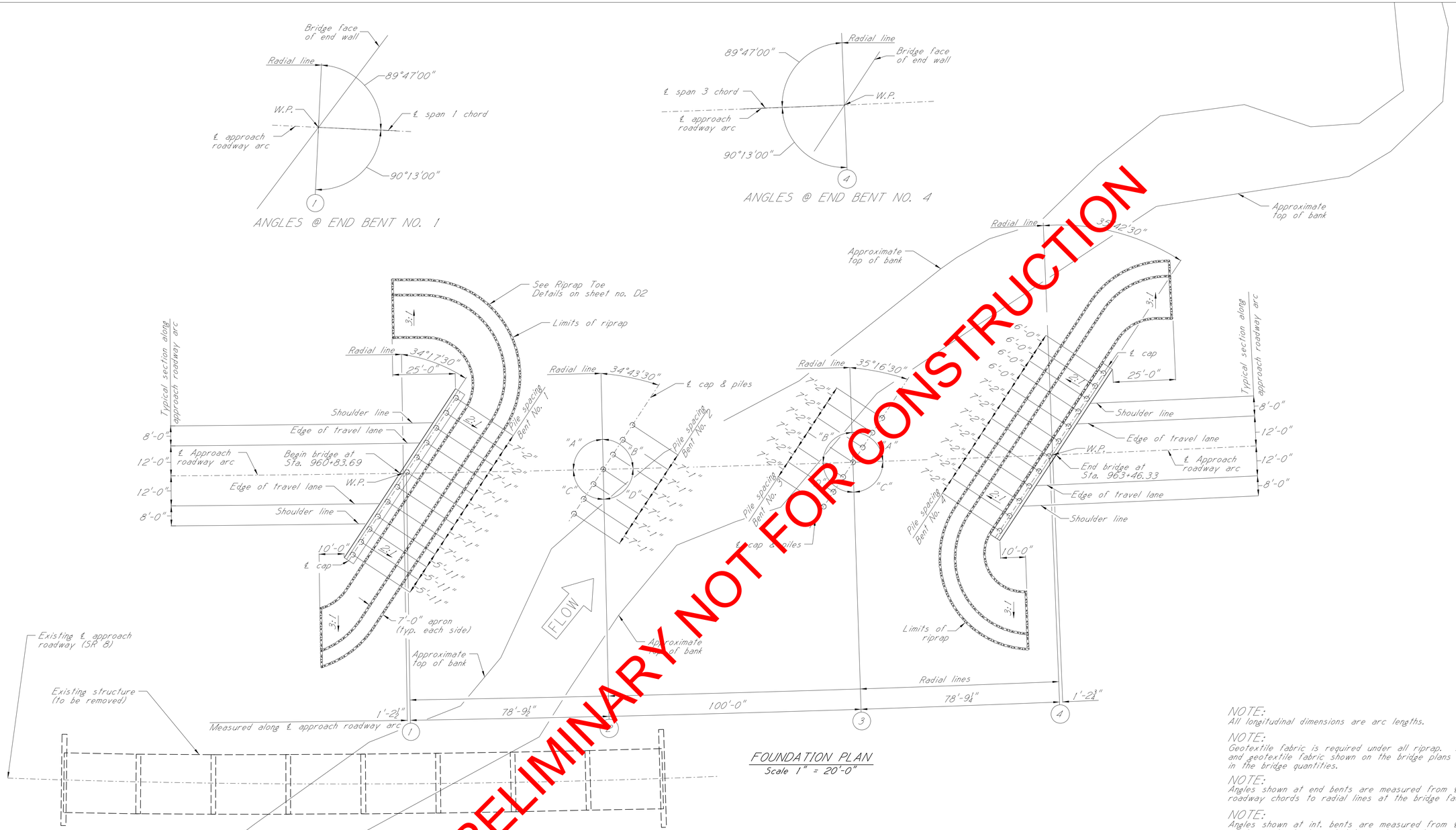
PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

001 00 AMPM DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-03(027)

ANGLES @ END BENT NO. 1

ANGLES @ END BENT NO. 4



FOUNDATION PLAN
Scale 1" = 20'-0"

PRELIMINARY NOT FOR CONSTRUCTION

NOTE:
All longitudinal dimensions are arc lengths.

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

NOTE:
Angles shown at end bents are measured from ℄ approach roadway chords to radial lines at the bridge face of the end wall (W.P.).

NOTE:
Angles shown at int. bents are measured from ℄ approach roadway chords to radial lines at ℄ bent.

ANGLE DATA

A = 89°47'00"
B = 89°43'30"
C = 90°13'00"
D = 90°16'30"

CURVE DATA

Δ = 21°06'00.026" (LT)
D = 0°32'44.427"
L = 3,866.778'
T = 1,955.540'
R = 10,500.000'
BK S 89°27'46.513" E
AH N 69°26'13.461" E
PC 946+50.151
PT 985+16.929

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BRIDGE AT STA. 960+83.69

SR 8 ACROSS
SABOUGLA CANAL RELIEF
FOUNDATION PLAN

FMS: 106968 / 301000
COUNTY: CALHOUN
PROJECT NUMBER: BR-0016-03(027)

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNER Jack McMullan CHECKER Stephen Diaz
DETAILER Jack McMullan ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER D3 OF D18
SHEET NUMBER 8039

STATUS: OFFICE REVIEW

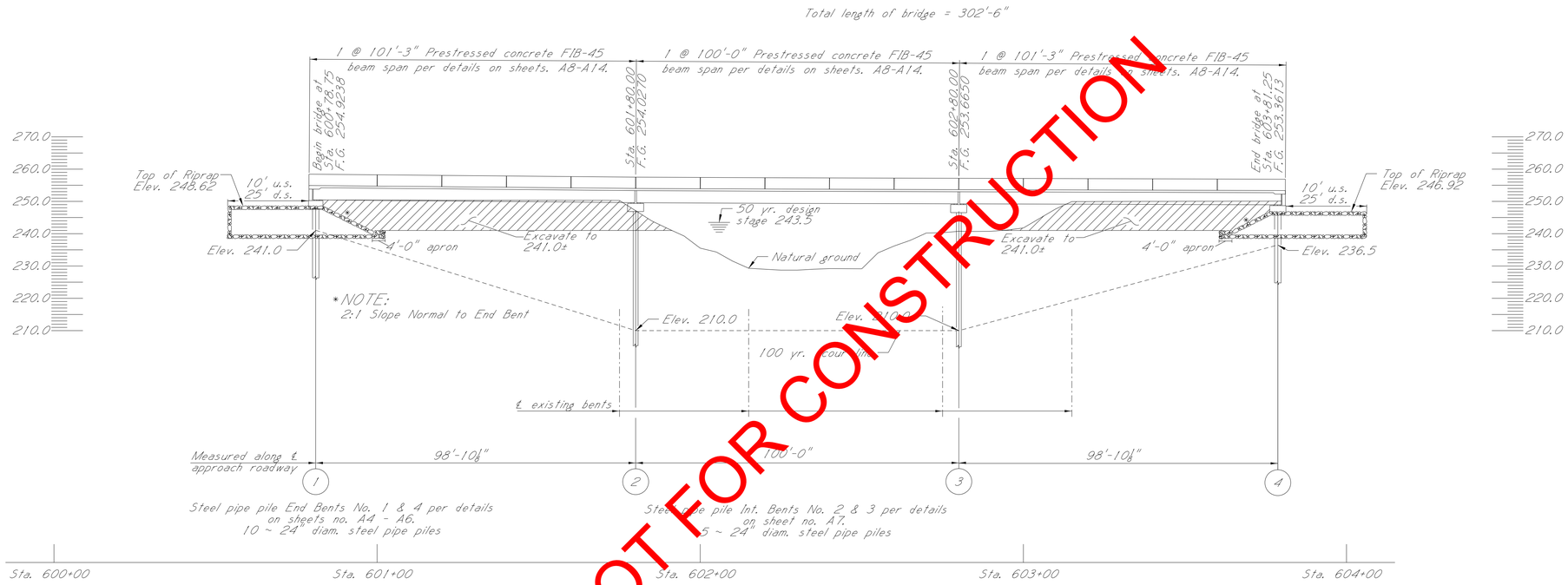
PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

001.00.AMPM.DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-02(037)

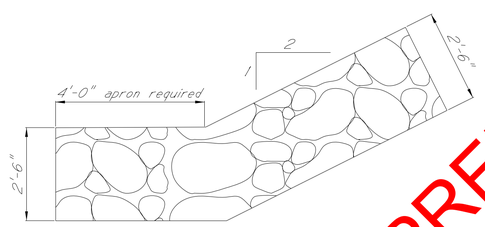
400 FT. VERTICAL CURVE

NOTE:
Existing roadway embankment shall be removed to natural ground elevation 241.0± under the proposed bridge



ELEVATION WITH PROFILE ALONG ℄ APPROACH ROADWAY

Scale: 1" = 20'-0"



RIPRAP TOE DETAILS

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

DESIGN DATA:

Specifications. . . . . A.A.S.H.T.O., LRFD 9th Edition, 2020
Loading. HL-93
Roadway width. . . . . 40'-0" Gutter to gutter
Concrete. . . . . .Class "AA" (4,000 p.s.i.)
Class "BDX" (4,500 p.s.i.)
Stay-in-Place metal forms. . . 18lbs./ft² (between flanges)
Seismic Performance Zone. . . 1
Seismic Soil Site Class. . . C
Seismic Operational Class. . . Other

DRAINAGE DATA:

Drainage area. . . . . 5.92 sq. mi.
Total 050 (U.S.G.S.) . . . . . 2,199 c.f.s.
Effective area . . . . . 1,570 sq. ft.
Total 0100 (U.S.G.S.) . . . . . 2,441 c.f.s.

NOTE:
For general notes, quantities, and additional details, see Sheet No. A1

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY NOT FOR CONSTRUCTION

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 600+78.75
SR 8 ACROSS BUTPUTTER CREEK
LAYOUT

FMS: 106968 / 302000
COUNTY: GRENADA
PROJECT NUMBER: BR-0016-02(037)

DESIGNER Jack McMullan CHECKER Stephen Diaz
DETAILER Jack McMullan ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

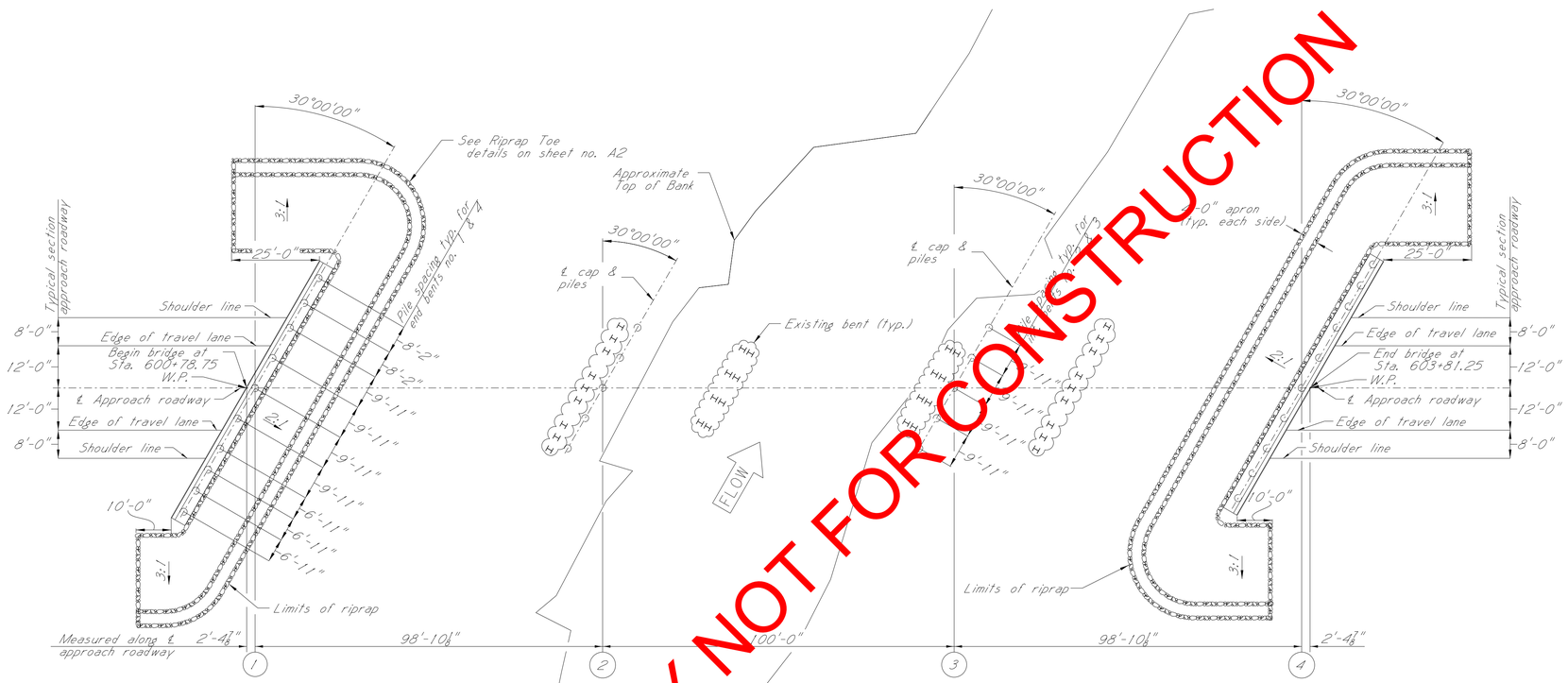
WORKING NUMBER A2 OF A14
SHEET NUMBER 8069

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

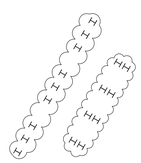
00:00AM PM DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-02(037)



FOUNDATION PLAN

Scale 1" = 20'-0"



Denotes existing substructure.

Approximate Top of Bank

NOTES:

Geotextile fabric is required under all riprap
All Riprap and Geotextile fabric shown on the Bridge plans are included in the bridge quantities.

For general notes, quantities and additional details, see Sheet No. A1.

PRELIMINARY NOT FOR CONSTRUCTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BRIDGE AT STA. 600+78.75

SR 8 ACROSS
BUTPUTTER CREEK
FOUNDATION PLAN

FMS: 106968 / 302000
COUNTY: GRENADA
PROJECT NUMBER: BR-0016-02(037)

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISION	BY	DATE

DESIGNER Jack McMullan CHECKER Stephen Diaz
DETAILER Jack McMullan ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

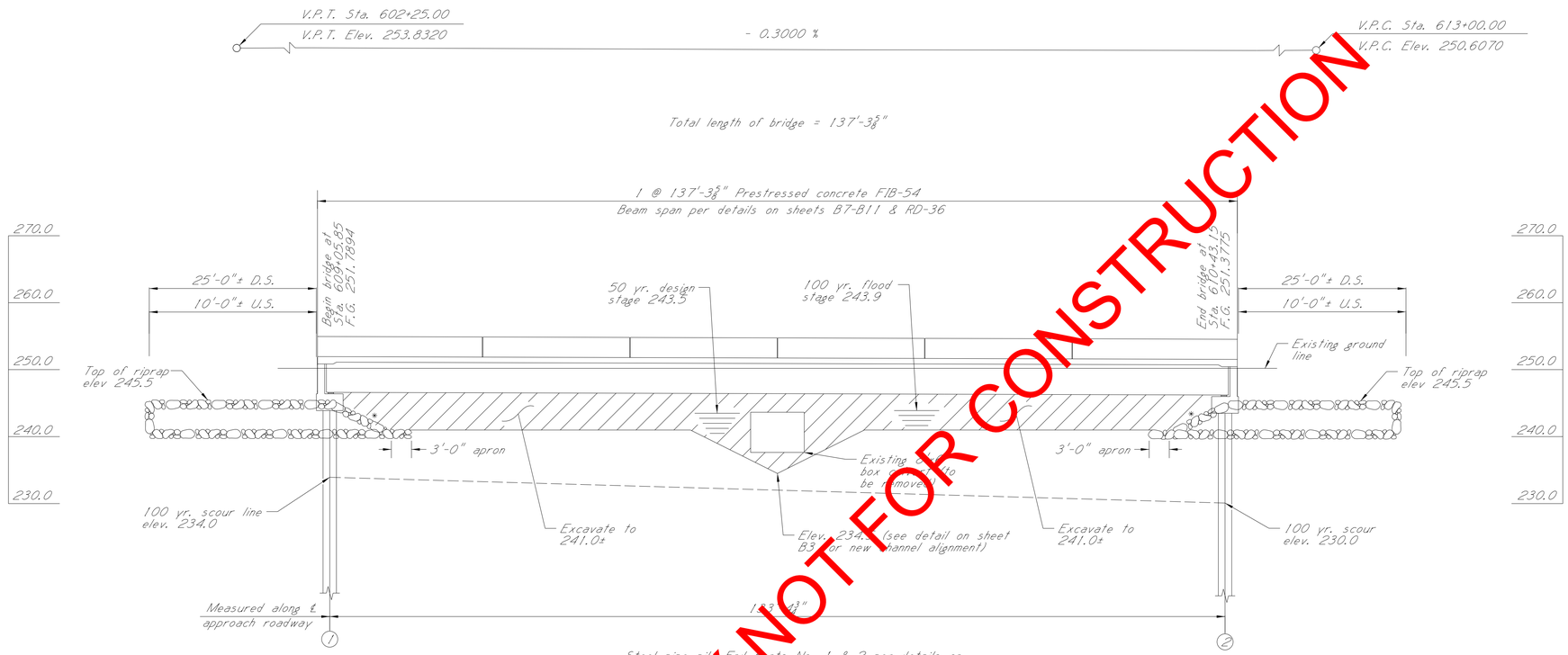
WORKING NUMBER A3 OF A14
SHEET NUMBER 8070

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

001 00 AMPM DGNFILENAME

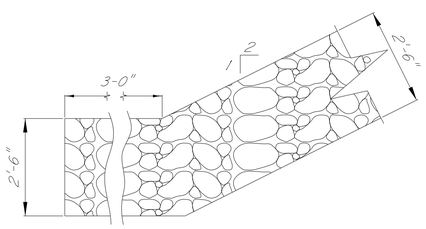
STATE	PROJECT NO.
MISS.	BR-0016-02(037)



Steel pipe piles End Bents No. 1 & 2 per details on sheets no. B4 & B5. 13 ~ 24" diam. steel pipe pile.

ELEVATION WITH PROFILE ALONG ℄ APPROACH ROADWAY

Scale: 1" = 10'-0"



RIPRAP TOE DETAILS

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

DESIGN DATA:

Specifications. . . . . A.A.S.H.T.O., LRFD 9th edition, 2020
Loading. HL-93
Roadway width. . . . . 40'-0" Gutter to Gutter
Concrete. . . . . Class "AA" (4,000 p.s.i.)
Class "BDX" (4,500p.s.i.)
Stay-in-Place metal forms. . . 18lbs./ft² (between flanges)
Seismic Soil Site Class. C
Seismic Performance Zone. . . . 1
Seismic Operational Class. . . . Other

DRAINAGE DATA:

Drainage area. . . . . Relief
Total 050 (U.S.G.S.) . . . . . 1,587 c.f.s.
Effective area . . . . . 237 sq. ft.
Total 0100 (U.S.G.S.) . . . . . 1,907 c.f.s.

NOTE:
For general notes, quantities and additional details, see sheet no. B1

*NOTE:
2:1 Slope Normal to End Bent

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY
NOT FOR
CONSTRUCTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 609+05.85
SR 8 ACROSS
BUTPUTTER CREEK RELIEF
LAYOUT

FMS: 106968 / 302000
COUNTY: GRENADA
PROJECT NUMBER: BR-0016-02(037)

REVISION	BY	DATE

DESIGNER Barrett Germond CHECKER Jack McMullan
DETAILER Barrett Germond ISSUE DATE 2020-12-16
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

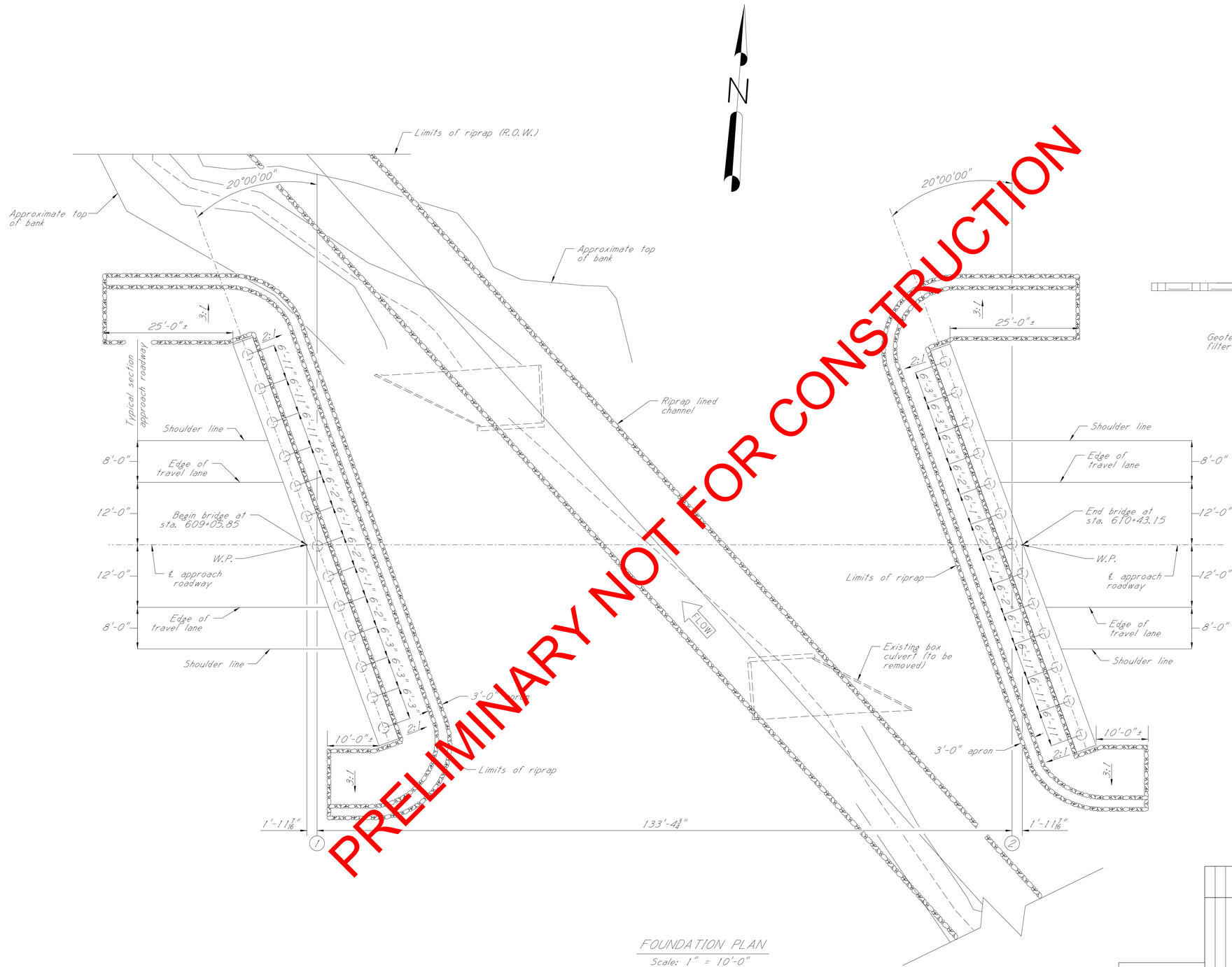
WORKING NUMBER
B2 OF B11
SHEET NUMBER
8083

STATUS: OFFICE REVIEW

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

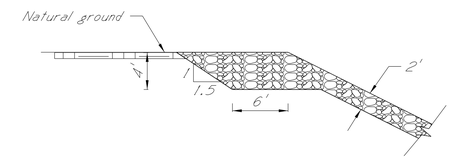
001.00 AMPM DGNFILENAME

STATE	PROJECT NO.
MISS.	BR-0016-02(037)

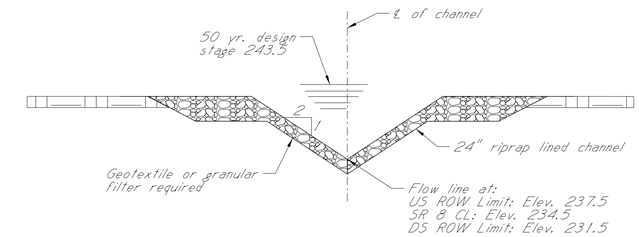


FOUNDATION PLAN

Scale: 1" = 10'-0"



TYPICAL SECTION
KEY TRENCH DETAIL



TYPICAL SECTION
RELIEF CHANNEL

NOTE:
Riprap shall be used to reshape the channel from the upstream ROW limits to approx. 100' downstream of the existing box culvert as shown in the ditch typical section on plans.

NOTE:
Geotextile fabric is required under all riprap. All riprap and geotextile fabric shown on the bridge plans are included in the bridge quantities.

NOTE:
For general notes, quanitities and additional details, see sheet no. B1.

PRELIMINARY NOT FOR CONSTRUCTION

PLAN
BRIDGE DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

00: 00 AMPM DGNFILENAME

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BRIDGE AT STA. 609+05.85

SR 8 ACROSS
BUTPUTTER CREEK RELIEF
FOUNDATION PLAN

FMS: 106968 / 302000
COUNTY: GRENADA
PROJECT NUMBER: BR-0016-02(037)

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE	REVISION	BY

DESIGNER Barrett Germond
DETAILER Barrett Germond
CHECKER Jack McMullan
ISSUE DATE 2020-12-16

DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER, P.E.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD, P.E.

WORKING NUMBER
B3 OF B11

SHEET NUMBER
8084

STATUS: OFFICE REVIEW

404 Permit Conditions &
401 Water Quality Certification

US Army Corps of Engineers
Vicksburg District
4155 Clay Street
Vicksburg, MS 39183-3435
www.mvk.usace.army.mil

GENERAL PERMIT

FILE NO.: GENERAL PERMIT – 46
DATE: October 2, 2019
EXPIRES: October 2, 2024

FOR: **REGULATED ACTIVITIES ASSOCIATED WITH THE DISCHARGE OF DREDGED OR FILL MATERIAL IN WATERS OF THE UNITED STATES AND/OR STRUCTURES OR WORK AFFECTING NAVIGABLE WATERS OF THE UNITED STATES ASSOCIATED WITH THE CONSTRUCTION AND STABILIZATION OF ROADWAY EMBANKMENTS AND BRIDGE ABUTMENTS**

WHERE: **THE STATE OF MISSISSIPPI**

BY WHOM: **DISTRICT ENGINEER, VICKSBURG DISTRICT, ON BEHALF OF THE MISSISSIPPI DEPARTMENT OF TRANSPORTATION (MDOT)**

The U.S. Army Corps of Engineers (USACE), Vicksburg District, is hereby reissuing a Department of the Army General Permit for the discharge of dredged or fill material in waters of the United States and/or structures or work affecting navigable waters of the United States associated with the construction and stabilization of roadway embankments and bridge abutments performed by or having oversight from MDOT within the State of Mississippi. This General Permit shall authorize activities such as the repair and stabilization of existing roadway embankments and bridge abutments; the installation of additional traffic lanes to existing roadways; the upgrading of bridges and other stream-crossing structures; and, construction along new alignments.

This action is being taken pursuant to Federal regulations printed in the Federal Register on November 13, 1986, concerning permits for activities in waters of the United States (U.S.). These regulations state the U.S. Army Corps of Engineers' responsibility for regulating structures or work in or affecting waters of the United States under Section 10 of the Rivers and Harbors Act of 1899 (30 Stat. 1151; 33 U.S.C. 403); and discharges of dredged and/or fill material into waters of the United States under Section 404 of the Clean Water Act (33 U.S.C. 1344).

An agreement was finalized between MDOT, the Federal Highway Administration

(FHWA), and the U.S. Army Corps of Engineers with concurrence from the appropriate Districts on December 12, 2008, which specifies that all MDOT projects within the State will be evaluated by the Vicksburg District. The address is USACE, Vicksburg District, ATTN: Regulatory Branch, 4155 Clay Street, Vicksburg, Mississippi 39183-3435.

Upon expiration of the agreement, since portions of the State are within jurisdictional boundaries of five United States Army Corps of Engineers Districts (enclosure 1), subsequent authorizations to proceed with work proposed under this General Permit will be granted by letter from the appropriate District within whose boundaries the work will be located. The MDOT will be notified of any changes to the agreement and furnished the mailing address of each district.

This General Permit contains certain limitations intended to protect the environment and natural and cultural resources. Conformance with conditions contained in the General Permit does not necessarily guarantee authorization under this General Permit. In cases where the District Engineer considers it necessary, an application will be required for an individual permit.

Regulated construction, dredging, or fill operations not specifically covered by this General Permit are prohibited unless authorized by a separate permit.

General Permits may be issued for a category or categories of activities when: (1) those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts; or (2) the General Permit would result in avoiding unnecessary duplication of the regulatory control exercised by another Federal, State, or local agency, provided it has been determined that the environmental consequences of the actions are individually and cumulatively minimal. The determination that the proposed activities comply with the requirements for the issuance of General Permits was made using information which is available for inspection at the office of the Vicksburg District's Regulatory Branch at 4155 Clay Street, Vicksburg, Mississippi.

In compliance with requirements of Section 401 of the Clean Water Act, the Vicksburg District has obtained water quality certification from the Mississippi Department of Environmental Quality (enclosure 2).

The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable at the project site (i.e., on site). Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

In order to compensate for any unavoidable losses of functions of jurisdictional waters of the United States associated with the work authorized by this General Permit; the Mississippi Department of Transportation shall develop a compensatory mitigation plan. The compensatory mitigation plan will be fully described in accordance with 33 CFR

Parts 325 and 332, Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, April 2008.

REQUEST FOR AUTHORIZATION UNDER THE GENERAL PERMIT: IN ORDER TO BE AUTHORIZED BY THIS GENERAL PERMIT, THE MISSISSIPPI DEPARTMENT OF TRANSPORTATION ARE REQUIRED TO SUBMIT TO THE DISTRICT ENGINEER, IN WRITING, THE FOLLOWING INFORMATION A MINIMUM OF 60 DAYS PRIOR TO THE PROPOSED BID ADVERTISEMENT DATE:

a. Statement that the work will be conducted in compliance with the terms and conditions of General Permit 46, will not adversely impact adjoining properties, and will be mitigated for in accordance with the terms of this General Permit.

b. A location map showing the proposed worksite (including Section, Township, Range, and County).

c. A brief description of the proposed worksite in its present condition.

d. For the selected site, a full set of construction plans (including quantities and types of any fill and quantities of any excavation), maps, and engineering drawings for the proposed activity at that site. These shall include a map of sufficient scale that illustrates an "overlay" of the proposed construction/development activity (e.g. construction roads, ditches, parking areas, lay-down pads, temporary work areas, remaining natural areas, etc.) on jurisdictional waters of the U.S.

e. The estimated starting and completion dates of the proposed construction.

f. Name, mailing address, telephone number, and email address, of the person acting as the point of contact for the requested authorization.

g. If wetlands or other waters of the U.S. are to be impacted, the following information is required:

(1) A map delineating the wetlands and other waters of the U.S. and copies of the associated data form(s) for routine wetland determinations from the 1987 Corps of Engineers Wetland Delineation Manual and its subsequent Regional Supplement Manual(s) covering the proposed project area(s).

(2) The type and date of approval of the NEPA documentation by the FHWA and a copy of their findings as required by Executive Order 11990.

h. A discussion of how adverse impacts to waters of the U.S. from the proposed activity will be avoided and minimized to the maximum extent practicable at the construction site.

i. If the loss or conversion to waters of the United States at a single and complete project site exceeds 0.1 acre, the application shall include a compensatory mitigation plan based on an approved wetland functional assessment methodology. Such recommendations should include copies of all factual information (e.g. worksheets) used in performing the calculations of the functional assessment. (Note: The District Engineer will consider this recommendation, however, the District Engineer retains discretionary authority in making the final decision on compensatory mitigation measures).

j. If impacts to a natural waterway at a single and complete project site exceed 100 linear feet, MDOT shall include a compensatory mitigation plan based on an approved stream functional assessment methodology. Such recommendations shall include copies of all factual information (e.g. worksheets) used in performing the calculations of the functional assessment. (Note: The District Engineer will consider this recommendation, however, the District Engineer retains discretionary authority in making the final decision on compensatory mitigation measures).

k. Comments from the Mississippi Department of Wildlife, Fisheries and Parks, Mississippi Department of Archives and History (including the results of any National Historic Preservation Act, Section 106, consultation actions), United States Fish and Wildlife Service (including the results of any Endangered Species Act, Section 7, consultation actions), and the Mississippi Department of Environmental Quality on the project.

l. Concurrence in writing from the Mississippi Department of Marine Resources (related to the Coastal Zone Management Act) and the National Marine Fisheries Service (including the results of any Magnuson-Steven Fisheries Conservation and Management Act, essential fish habitat consultation actions), if the project is located in Hancock, Harrison, or Jackson County, Mississippi. (See Special Condition h. below).

Upon receipt of this information, the District Engineer will: advise MDOT, in writing, either that the work will be evaluated for authorization under the General Permit 46; will request additional information, if needed; or will advise MDOT that the proposed activity will be evaluated as an individual permit.

Special Conditions:

a. No more than 7 acres of wetlands and other waters shall be directly impacted by the placement of fill at each single and complete crossing of a water of the United States where the proposed work involves either upgrading an existing highway within an established corridor or where the work is to be constructed along a new alignment. Any wetlands cut off from their natural hydrologic regime as a result of project work would be considered as directly impacted.

b. For stream or river crossings, discharges of permanent fill material and temporary

fill material shall be the minimum necessary to complete the crossing. The term fill refers to earthen material, riprap, concrete, and any other materials associated with the work.

c. The stabilization or construction work shall not interfere with navigation (including recreational boating) or adversely impact the flow-carrying capacity of the affected waterbody.

d. Material to be used for fill must be nonpolluting and may be obtained either offsite or from site preparation. Offsite material shall not be obtained from wetlands outside the 7-acre limit or from other areas which may adversely affect adjacent wetlands. Any excess material shall be placed in an upland area and properly contained or stabilized to prevent entry into adjacent water-bodies or wetlands.

e. Disturbed areas on the site shall be stabilized to minimize erosion. Stabilization of erodible areas shall be accomplished by seeding or sodding as soon as practicable to restore vegetative cover. If initial re-vegetation is unsuccessful, the area shall be reseeded or re-sodded until re-vegetation is successful. In areas subject to currents, riprap may be required for slope protection.

f. No activity that has the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, or a site that has previously been unevaluated, shall be authorized by this General Permit until the requirements of Section 106 of the National Historic Preservation Act have been satisfied. Additional fill material should not be taken from a known historical or archaeological site within or outside of regulated areas. If the permittee, during prosecution of work authorized herein, inadvertently discovers or accidently destroys a cultural resource such as a cemetery, shipwreck, mound, historic structure, or archaeological site, within the area subject to Department of the Army jurisdiction, they must cease work in the immediate area and notify the District Engineer within 24 hours. The District Engineer, in consultation with the appropriate State Historic Preservation Officer and the Federally recognized Tribe, shall comply with the procedures set forth in 33 CFR 325, Appendix C, paragraph 11 (Historic Properties Discovered During Construction).

g. The work shall not occur in a National Wildlife Refuge, State Game Management Area, or other such Federal or State lands, or lands leased to those entities without the appropriate Federal or State authorization in writing.

h. For work within the Mississippi Coastal Zone Management Area, including all areas below Interstate I-10, a set of complete plans shall be sent to the three agencies listed below for review and/or approval as appropriate. Comments and concurrence resulting from this coordination should be submitted with the request for authorization under this General Permit.

1. The Mississippi Department of Marine Resources
   1141 Bayview Avenue
   Suite 101
   Biloxi, Mississippi 39530

2. National Marine Fisheries Service
   Southeast Regional Office
   Protected Resources
   Attention: Ms. Karla Reece
   263 13th Ave. S.
   St. Petersburg, Florida 33701
   Email: Karla.reece@noaa.gov

3. National Marine Fisheries Service
   Room 266, Military Science Building
   Attention: Mr. Brandon Howard
   South Stadium Drive
   La. State University
   Baton Rouge, Louisiana 70803-7535

i. All temporary fills must consist of non-erodible material or be protected to prevent erosion.

j. Any materials used for temporary structures such as cofferdams, equipment pads, or temporary crossings, shall be removed as soon as practicable, and the waterway should be restored to preconstruction contours.

k. Disturbance to riparian vegetation shall be kept to a minimum during construction.

l. No activity shall be authorized under this General Permit which is likely to directly or indirectly jeopardize the continued existence of a Federally-listed threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will likely directly or indirectly destroy or adversely modify the critical habitat of such species. No activity shall be authorized under this General Permit which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed. No activity shall be authorized under this General Permit which "may affect" essential fish habitat as identified under Magnuson-Stevens Fishery Conservation and Management Act, unless essential fish habitat consultation addressing the effects of the proposed activity has been completed.

m. Discharges shall not restrict or impede the movement of aquatic species indigenous to the waters.

n. All work shall be performed in a manner that will minimize increased turbidity of the water in the project area and otherwise avoid adverse effects on water quality and aquatic life especially during fish spawning season. This may require avoiding construction activities during the peak spawning months of April, May, and June.

o. The discharge shall not adversely affect a public water supply intake or a National or State Fish Hatchery intake.

p. The discharge shall not contain unacceptable levels of pathogenic organisms (as prescribed in standards set by the Mississippi Department of Environmental Quality) in areas used for water-contact sports.

q. The construction activity shall not result in the permanent diversion or relocation of a stream or a river channel except where needed to align a waterway crossing to avoid potential damage to the roadway. In no case, should any realignment extend beyond 150 feet upstream and 150 feet downstream from the centerline of a crossing structure. The construction activity shall not result in stream flow impediment or drain adjacent wetlands.

r. Authorization under this General Permit is valid until the General Permit expires. Activities authorized under this General Permit which are under construction, or that are under contract to commence by the expiration of this General Permit, will remain authorized provided the activity is completed within 12 months of the date of expiration.

s. Current standards and practices shall be used to determine what type drainage structure is required at a particular stream crossing (box culvert, bridge, etc.).

t. To minimize potential adverse impacts to wetlands within the right-of-way or associated with the project, the Mississippi Department of Transportation shall incorporate into each project's design all practicable measures to:

(1) Minimize impact on hydrology in wetland areas.

(2) Minimize potential for toxic spills and leaching into wetland areas.

(3) Minimize discharge of materials, such as silt, into wetlands.

(4) Maintain adequate flow through wetlands by providing culverts, ditches, and other hydrologic structures.

(5) Provide berms, traps, or ditches to direct potential toxic spills away from wetlands.

(6) Provide for animal migration to and from wetland areas or habitat corridors.

(7) Provide erosion and sediment control features throughout the construction phase of a project which will minimize both short- and long-term impacts to water quality.

(8) Provide treatment facilities which may be required to treat highway runoff which would otherwise adversely affect wetlands.

(9) Provide contractual provisions for stopwork orders, project staging, and other specifications pertaining to minimizing impacts on wetlands and to onsite monitoring.

General Conditions:

a. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

b. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

c. This permit does not grant any property rights or exclusive privileges.

d. This permit does not authorize any injury to the property or rights of others.

e. This permit does not authorize interference with any existing or proposed Federal project.

f. In issuing this permit, the Federal Government does not assume any liability for the following:

(1) Damages to the permitted project, or uses thereof, as a result of other permitted or unpermitted activities or from natural causes.

(2) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

(3) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

(4) Design or construction deficiencies associated with the permitted work.

(5) Damage claims associated with any future modification, suspension, or revocation of this permit.

g. In issuing individual authorizations under this General Permit, the Government shall rely on the information and data which the permittee provides in connection with

the permit application. If, subsequent to the authorization, such information and data prove to be false, incomplete, or inaccurate, this authorization may be modified, suspended, or revoked, in whole or in part, and/or the Government may, in addition, institute appropriate legal proceedings.

h. This office may re-evaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

(1) Failure to comply with the terms and conditions of this permit.

(2) The information provided in support of a request for authorization proves to have been false, incomplete, or inaccurate (See g. above).

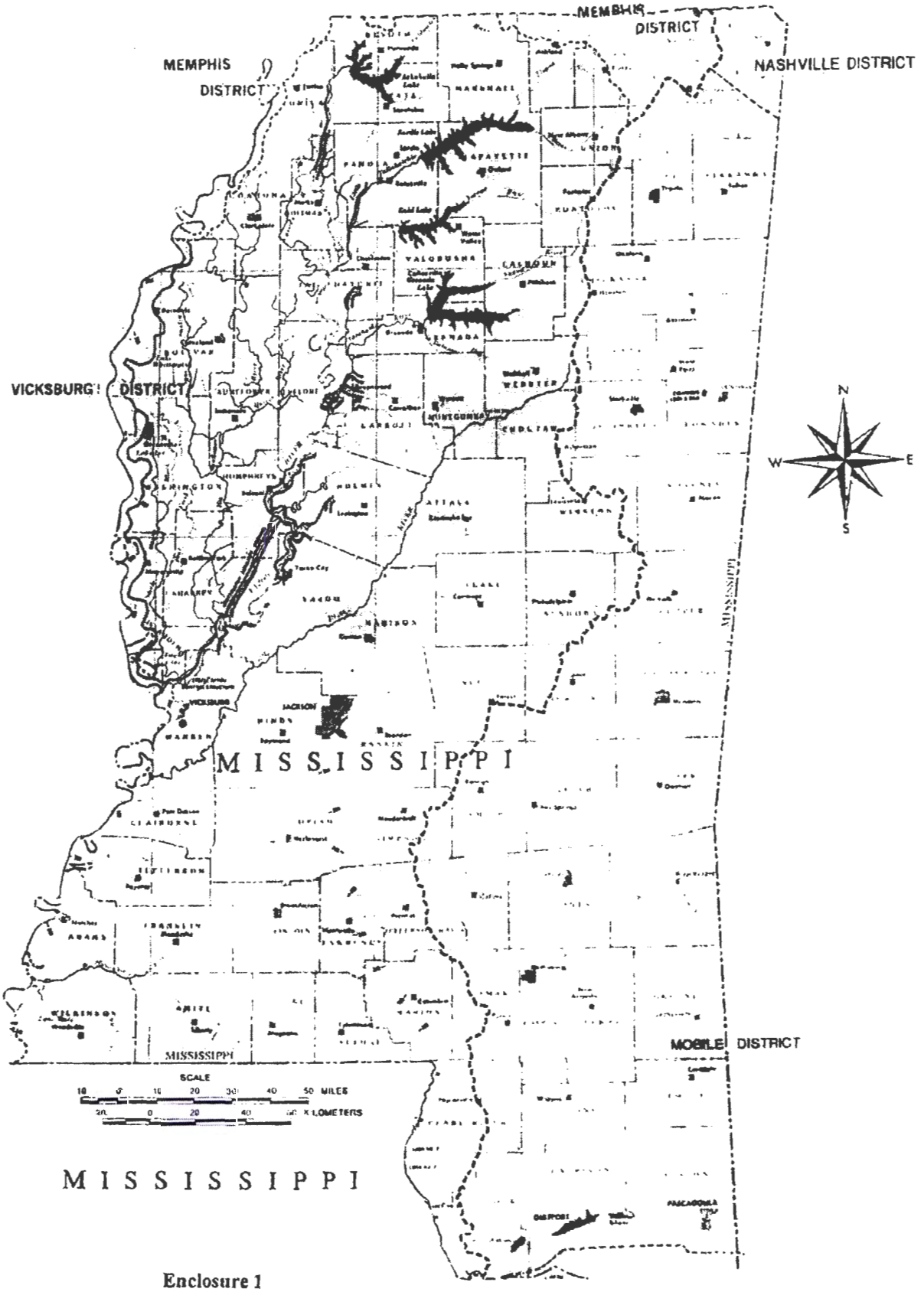
(3) Significant new information surfaces which was not considered in reaching the original public interest decision.

i. The General Permit is valid for 5 years from the date of the issuance. At the end of that time, the cumulative environmental effects of completed work will be reviewed and reissuance of the permit may be considered. However, if unforeseen adverse environmental effects result from the issuance of this General Permit, it may be modified or terminated at any time.

j. Authorization under this General Permit is valid until the General Permit expires. Activities authorized under this General Permit which are under construction, or that are under contract to commence by the expiration of this General Permit, will remain authorized provided the activity is completed within 12 months of the date of expiration.

Cori Carraway

Cori Carraway
Acting Chief, Regulatory Branch



Enclosure 1

(Encl 1)

STATE OF MISSISSIPPI

PHIL BRYANT

GOVERNOR

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

GARY C. RIKARD, EXECUTIVE DIRECTOR

January 30, 2019

Certified Mail No. 7017 0530 0000 5971 7466

Ms. Jennifer Mallard
U.S. Army Corps of Engineers
Vicksburg District
4155 Clay Street
Vicksburg, Mississippi 39183-3435

Dear Ms. Mallard:

Re: U. S. Army Corps of Engineers
Vicksburg District
General Permit 46, MDOT
Warren County
COE No. MVK20180808
WQC No. WQC2018047

Pursuant to Section 401 of the Federal Water Pollution Control Act (33 U. S. C. 1251, 1341), the Office of Pollution Control (OPC) issues this Certification, after public notice and opportunity for public hearing, to the U.S. Army Corps of Engineers, Vicksburg District, an applicant for a Federal License or permit to conduct the following activity:

> U.S. Army Corps of Engineers, Vicksburg District, General Permit 46: Proposed reissuance of a statewide General Permit for the discharge of dredged or fill material in waters of the United States and/or structures or work affecting navigable waters of the United States associated with the construction and stabilization of roadway embankments and bridge abutments. This General Permit would authorize activities such as the repair and stabilization of existing roadway embankments and bridge abutments; the installation of additional traffic lanes to existing roadways; the upgrading of bridges and other stream-crossing structures; and construction along new alignments.
>
> This proposed General Permit contains certain limitations intended to protect the environment and natural and cultural resources. Conformance with conditions contained in the General Permit does not necessarily guarantee authorization under this General Permit. In cases where the District Engineer considers it necessary, an application will be required for an individual permit. Regulated construction, dredging, or fill operations not specifically authorized by this General Permit would be prohibited unless authorized by a separate permit.

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General Permits may be issued for a category or categories of activities when: (1) those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts; or (2) the General Permit would result in avoiding unnecessary duplication of the regulatory control exercised by another Federal, State, or local agency, provided it has been determined that the environmental consequences of the actions are individually and cumulatively minimal.

In order to be authorized by this General Permit, the Mississippi Department of Transportation would be required to submit to the District Engineer in writing, the following information a minimum of 60 days prior to the proposed bid advertisement date:

a. Statement that the work would be conducted in compliance with the terms and conditions of General Permit 46, would not adversely impact adjoining properties, and would be mitigated for in accordance with the terms of this General Permit.

b. A location map showing the proposed worksite (including Section, Township, Range, and County).

c. A brief description of the proposed worksite in its present condition.

d. For the selected site, a full set of construction plans (including quantities and types of any fill and quantities of any excavation), maps, and engineering drawings for the proposed activity at that site. These shall include a map of sufficient scale that illustrates an "overlay" of the proposed construction/development activity (e.g. construction roads, ditches, parking areas, lay-down pads, temporary work areas, remaining natural areas, etc.) on jurisdictional waters of the U.S.

e. The estimated starting and completion dates of the proposed construction.

f. Name, mailing address, telephone number, and email address of the person acting as the point of contact for the requested authorization.

g. If wetlands or other waters of the U.S. are to be impacted, the following information is required:

    (1) A map delineating the wetlands and other waters of the U.S. and copies of the associated data form(s) for routine wetland determinations from the 1987 Corps of Engineers Wetland

Delineation Manual and its subsequent Regional Supplement Manual(s) covering the proposed project area(s).

(2) The type and date of approval of the NEPA documentation by the FHWA and a copy of their findings as required by Executive Order 11990.

h. A discussion of how adverse impacts to waters of the U.S. from the proposed activity will be avoided and minimized to the maximum extent practicable at the construction site.

i. If the loss or conversion to waters of the United States at a single and complete project site exceeds 0.1 acre, the application shall include a compensatory mitigation plan based on an approved wetland functional assessment methodology. Such recommendations should include copies of all factual information (e.g. worksheets) used in performing the calculations of the functional assessment. (Note: The District Engineer will consider this recommendation; however, the District Engineer retains discretionary authority in making the final decision on compensatory mitigation measures).

j. If impacts to a natural waterway at a single and complete project site exceed 100 linear feet, MDOT would include a compensatory mitigation plan based on an approved stream functional assessment methodology. Such recommendations would include copies of all factual information (e.g. worksheets) used in performing the calculations of the functional assessment. (Note: The District Engineer will consider this recommendation, however, the District Engineer retains discretionary authority in making the final decision on compensatory mitigation measures).

k. Comments from the Mississippi Department of Wildlife, Fisheries and Parks, Mississippi Department of Archives and History (including the results of any National Historic Preservation Act, Section 106, consultation actions), United States Fish and Wildlife Service (including the results of any Endangered Species Act, Section 7, consultation actions), and the Mississippi Department of Environmental Quality on the project.

l. Concurrence in writing from the Mississippi Department of Marine Resources (related to the Coastal Zone Management Act) and the National Marine Fisheries Service (including the results of any Magnuson-Steven Fisheries Conservation and Management Act, essential fish habitat consultation actions) if the project is located in

Hancock, Harrison, or Jackson County, Mississippi. (See Special Condition h. below).

Upon receipt of this information the District Engineer will: advise MDOT, in writing, either that the work will be evaluated for authorization under the General Permit 46; will request additional information, if needed; or will advise MDOT that the proposed activity will be evaluated as an individual permit.

Special Conditions of the General Permit:

a. No more than 7 acres of wetlands and other waters would be directly impacted by the placement of fill at each single and complete crossing of a water of the United States where the proposed work involves either upgrading an existing highway within an established corridor or where the work is to be constructed along a new alignment. Any wetlands cut off from their natural hydrologic regime as a result of project work would be considered as directly impacted.

b. For stream or river crossings, discharges of permanent fill material and temporary fill material would be the minimum necessary to complete the crossing. The term fill refers to earthen material, riprap, concrete, and any other materials associated with the work.

c. The stabilization or construction work would not interfere with navigation (including recreational boating) or adversely impact the flow-carrying capacity of the affected waterbody.

d. Material to be used for fill must be nonpolluting and may be obtained either offsite or from site preparation. Offsite material would not be obtained from wetlands outside the 7-acre limit or from other areas which may adversely affect adjacent wetlands. Any excess material would be placed in an upland area and properly contained or stabilized to prevent entry into adjacent water-bodies or wetlands.

e. Disturbed areas on the site would be stabilized to minimize erosion. Stabilization of erodible areas would be accomplished by seeding or sodding as soon as practicable to restore vegetative cover. If initial re-vegetation is unsuccessful, the area would be reseeded or re-sodded until re-vegetation is successful. In areas subject to currents, riprap may be required for slope protection.

f. No activity that may adversely affect a site listed in or eligible for listing in the National Register of Historic Places would be authorized by this General Permit until the requirements of Section 106 of the National Historic Preservation Act have been satisfied. Additional material would not be taken from a known historical or archaeological site. If you discover any previously

unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the District Engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The District Engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

g. The work would not occur in a National Wildlife Refuge, State Game Management Area, or other such Federal or State lands, or lands leased to those entities without the appropriate Federal or State authorization in writing.

h. For work within the Mississippi Coastal Zone Management Area, including all areas below Interstate I-10, a set of complete plans would be sent to the two agencies listed below for review and/or approval as appropriate. Comments and concurrence resulting from this coordination would be submitted with the request for authorization under this General Permit.

1. Mississippi Department of Marine Resources
   1141 Bayview Avenue
   Suite 101
   Biloxi, Mississippi 39530

2. National Marine Fisheries Service
   Southeast Regional Office
   Protected Resources
   Attention: Ms. Karla Reece
   263 13th Avenue S.
   St. Petersburg, Florida 33701
   Email: Karla.reece@noaa.gov

3. National Marine Fisheries Service
   Room 266, Military Science Building
   Attention: Mr. Brandon Howard
   South Stadium Drive
   La. State University
   Baton Rouge, Louisiana 70803-7535

i. All temporary fills must consist of non-erodible material or be protected to prevent erosion.

j. Any materials used for temporary structures such as cofferdams, equipment pads, or temporary crossings, would be removed as soon as practicable, and the waterway would be restored to preconstruction contours.

k. Disturbance to riparian vegetation would be kept to a minimum during construction.

l. No activity shall be authorized under this General Permit which would likely directly or indirectly jeopardize the continued existence of a Federally-listed threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which would likely directly or indirectly destroy or adversely modify the critical habitat of such species. No activity shall be authorized under this General Permit which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed. No activity shall be authorized under this General Permit which "may affect" essential fish habitat as identified under Magnuson-Stevens Fishery Conservation and Management Act, unless essential fish habitat consultation addressing the effects of the proposed activity has been completed.

m. Discharges would not restrict or impede the movement of aquatic species indigenous to the waters.

n. All work would be performed in a manner that would minimize increased turbidity of the water in the project area and otherwise avoid adverse effects on water quality and aquatic life especially during fish spawning season. This may require avoiding construction activities during the peak spawning months of April, May, and June.

o. The discharge would not adversely affect a public water supply intake or a National or State Fish Hatchery intake.

p. The discharge would not contain unacceptable levels of pathogenic organisms (as prescribed in standards set by the Mississippi Department of Environmental Quality) in areas used for water-contact sports.

q. The construction activity would not result in the permanent diversion or relocation of a stream or a river channel except where needed to align a waterway crossing to avoid potential damage to the roadway. In no case, would any realignment extend beyond 150 feet upstream and 150 feet downstream from the centerline of a crossing structure. The construction activity would result in neither stream flow impediment nor drain adjacent wetlands.

r. Authorizations under this General Permit would be valid for five (5) years from the date of the authorizing letter.

s. Current standards and practices would be used to determine what type drainage structure is required at a particular stream crossing (box culvert, bridge, etc.).

t. To minimize potential adverse impacts to wetlands within the right-of-way or associated with the project, the Mississippi Department of Transportation would incorporate into each project's design all practicable measures to:

(1) Minimize impact on hydrology in wetland areas.

(2) Minimize potential for toxic spills and leaching into wetland areas.

(3) Minimize discharge of materials, such as silt, into wetlands.

(4) Maintain adequate flow through wetlands by providing culverts, ditches, and other hydrologic structures.

(5) Provide berms, traps, or ditches to direct potential toxic spills away from wetlands.

(6) Provide for animal migration to and from wetland areas or habitat corridors.

(7) Provide erosion and sediment control features throughout the construction phase of a project which would minimize both short- and long-term impacts to water quality.

(8) Provide treatment facilities which may be required to treat highway runoff which would otherwise adversely affect wetlands.

(9) Provide contractual provisions for stopwork orders, project staging, and other specifications pertaining to minimizing impacts on wetlands and to onsite monitoring.

[MVK20180808, WQC2018047]

The Office of Pollution Control certifies that the above-described activity will be in compliance with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act and Section 49-17-29 of the Mississippi Code of 1972, if the applicant complies with the following conditions:

1. The Mississippi Department of Environmental Quality (MDEQ) shall be given a minimum 30-day commenting period for new alignment work that impacts more than three (3) acres of wetlands or 300 linear feet of stream.

2. Prior to the start of construction activities, coverage under a Stormwater Construction General NPDES Permit shall be obtained. No construction activities shall begin until such approvals are obtained.

3. Extreme care shall be taken to prevent the permanent restriction or impedance of water flow. Pre-construction hydrology shall be maintained.

4. All stream impacts (including streams identified as ephemeral by the U.S. Army Corps of Engineers and described as non-relatively permanent waters) shall be mitigated in kind with stream mitigation elements. In the event that stream mitigation is not available and alternate mitigation proposals are provided, a pre-construction notification shall be provided to MDEQ and 10 working days shall be allowed to provide comments.

5. A pre-construction notification shall be provided to MDEQ for projects that include channel work within waterways found on the latest version of the State of Mississippi's Section 303(d) List of Impaired Water Bodies for sediment or biological impairment or waterways with a completed Total Maximum Daily Load (TMDL) for sediment or biological impairment. This notification shall include the following:

    a. Justification of why the impacts cannot be avoided;

    b. Proposed best management practices that would minimize the impacts to receiving sensitive waters; and

    c. Compensatory mitigation primarily along the same reach of stream or on another impaired stream within the same drainage basin.

6. The turbidity outside the limits of a 750-foot mixing zone shall not exceed the ambient turbidity by more than 50 Nephelometric Turbidity Units.

7. No sewage, oil, refuse, or other pollutants shall be discharged into the watercourse.

The Office of Pollution Control also certifies that there are no limitations under Section 302 nor standards under Sections 306 and 307 of the Federal Water Pollution Control Act which are applicable to the applicant's above-described activity.

This certification is valid for the project as proposed. Any deviations without proper modifications and/or approvals may result in a violation of the 401 Water Quality Certification. If we can be of further assistance, please contact us.

Sincerely,

Krystal Rudolph

Krystal Rudolph, P.E., BCEE
Chief, Environmental Permits Division

KR: chb

cc: Tony Lobred, U.S. Army Corps of Engineers, Vicksburg District
Willa Brantley, Department of Marine Resources
David Felder, U.S. Fish and Wildlife Service
Molly Martin, Environmental Protection Agency

CERTIFICATION OF COMPLIANCE
WITH DEPARTMENT OF THE ARMY PERMIT

General Permit	RGP 46
Number: Identification	MVK-2021-787
Number: Name of	MDOT
Permittee: Issued	11/12/2021
Date: Evaluator Name:	Anthony Lobred
Expiration Date:	10/02/2024

Upon completion of the activity authorized by this permit, sign this certification and return it to the following address:

USACE, Vicksburg District
ATTN: Regulatory Division
4155 Clay Street
Vicksburg, Mississippi 39183-3435

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit modification, suspension, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit including any required mitigation.

Date Work was Completed: _____

_____ _____
Signature of Permittee Date Signed

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: MDOT	File Number: MVK-2021-787	Date: 12 Nov 2021
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
x	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Anthony R Lobred
USACE Vicksburg District
4155 Clay Street
Vicksburg MS 39183-3439
(601) 631-5470

If you only have questions regarding the appeal process you may also contact:

Regulatory Appeals Review Officer
USACE – Mississippi Valley Division
P.O. Box 80
Vicksburg, MS 39181-0080
(601) 634-5820

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number: