

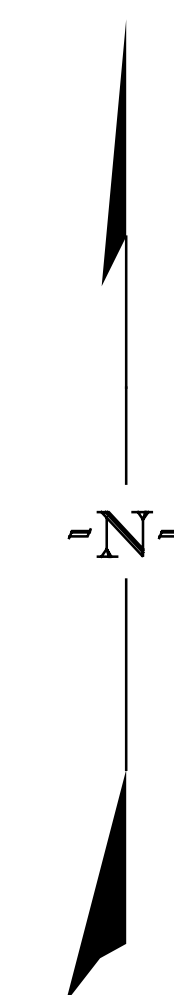
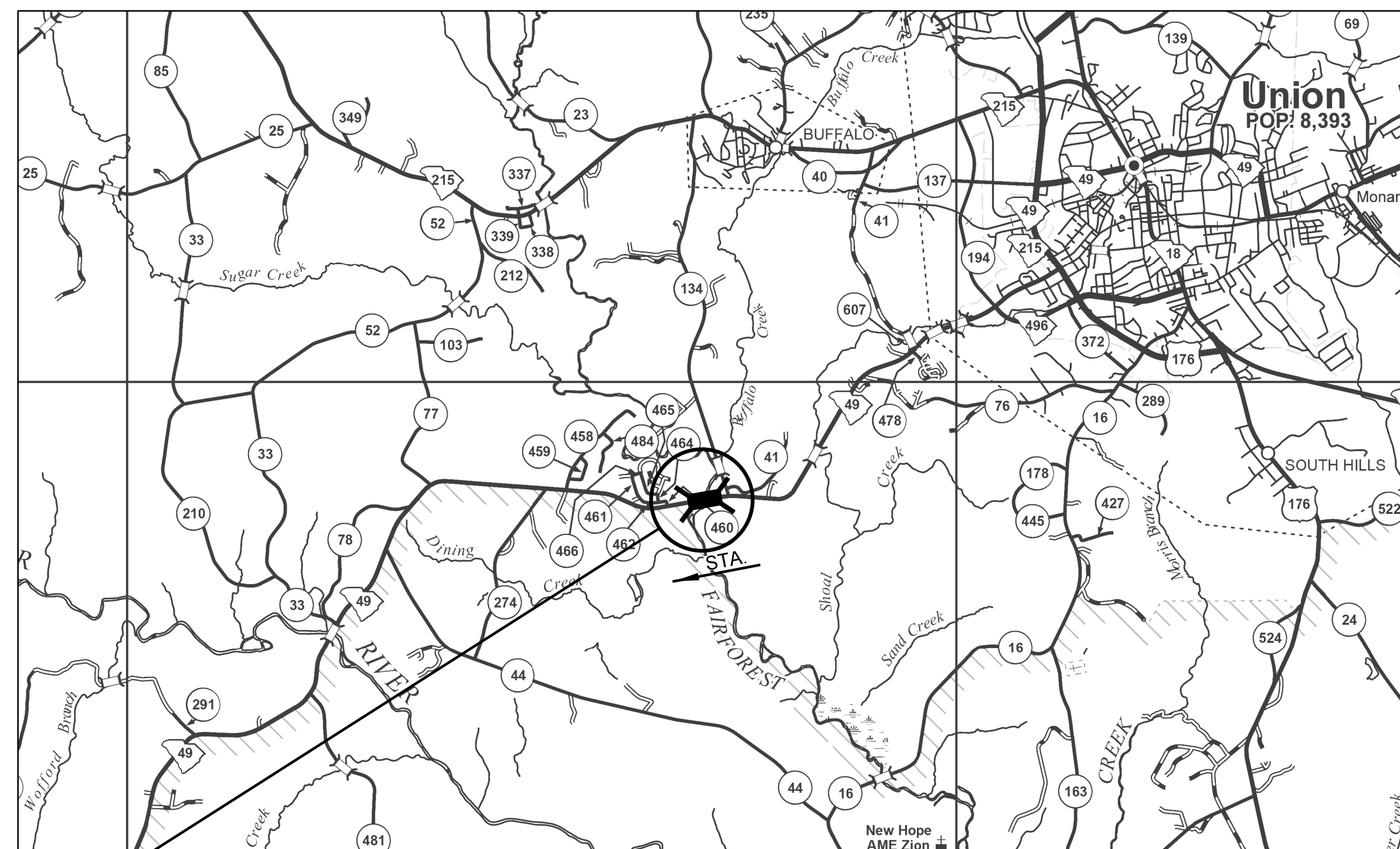


South Carolina Department of Transportation

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 BRIDGE PLAN AND PROFILE
- 3 BRIDGE TYPICAL SECTION

PROPOSED PLANS
FOR
UNION COUNTY
PROJECT ID P041238
STATE ROUTE SC 49 (CROSS KEYS HWY.)
REPLACE BRIDGE OVER FAIRFOREST CREEK



Approximate Location of Bridge is

Latitude 34° 40' 55" N

Longitude 81° 41' 11" W

3 DAYS BEFORE DIGGING IN
SOUTH CAROLINA
CALL 811
SOUTH CAROLINA 811 (SC811)
WWW.SC811.COM
ALL UTILITIES MAY NOT BE A MEMBER OF SC811

ASSET ID NOT ASSIGNED

TRAFFIC DATA			
2024	ADT	3,300	V.P.D.
*2044	ADT	*4,500	V.P.D.
TRUCKS		11	%
*DESIGN TRAFFIC DATA			

SITE LOCATION

LAYOUT

NET LENGTH OF ROADWAY	0.000	MILES
NET LENGTH OF BRIDGES	0.077	MILES
NET LENGTH OF PROJECT	0.077	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.077	MILES

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

CONSULTING ENGINEERING FIRM

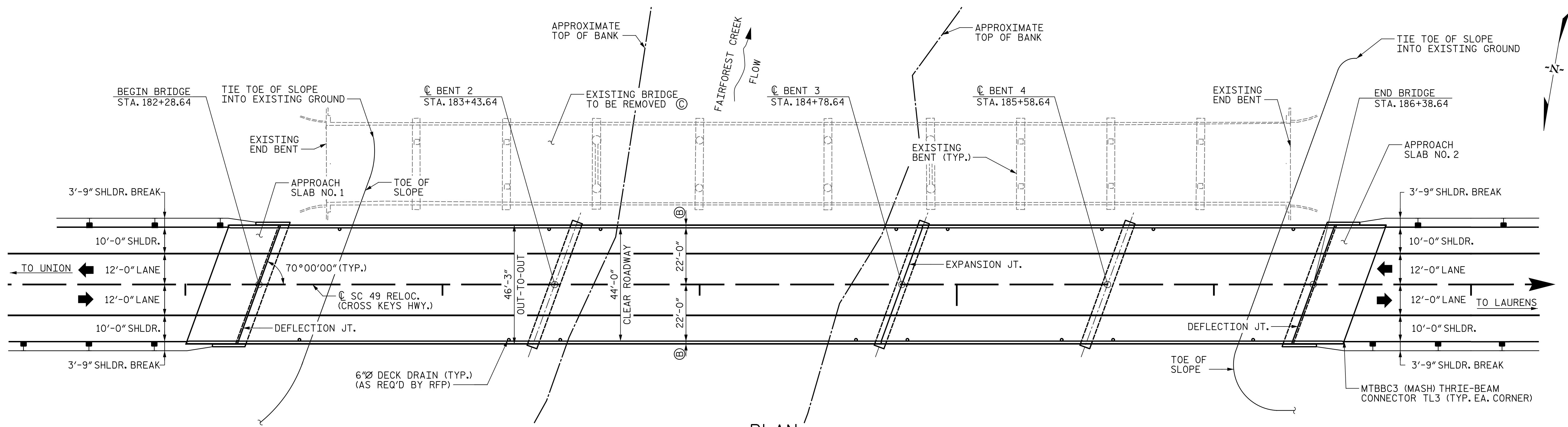
ENGINEER OF RECORD

**CONCEPTUAL
PLANS
NOT FOR
CONSTRUCTION**

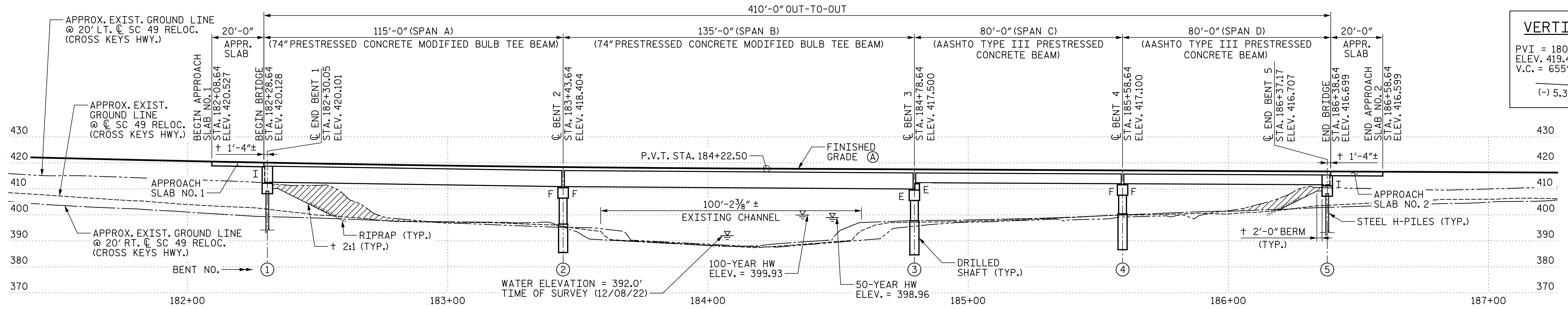
FOR CONSTRUCTION : _____ DATE _____

REVIEWED	DR.	RAM	JTE	DJS	03-23
		BY	CHK		03-23
					DATE

RMCKENNA
 03-21-23
 BP041238-B01_ls.dgn



PLAN
(NOTE: BRIDGE END DRAINAGE IS NOT SHOWN)

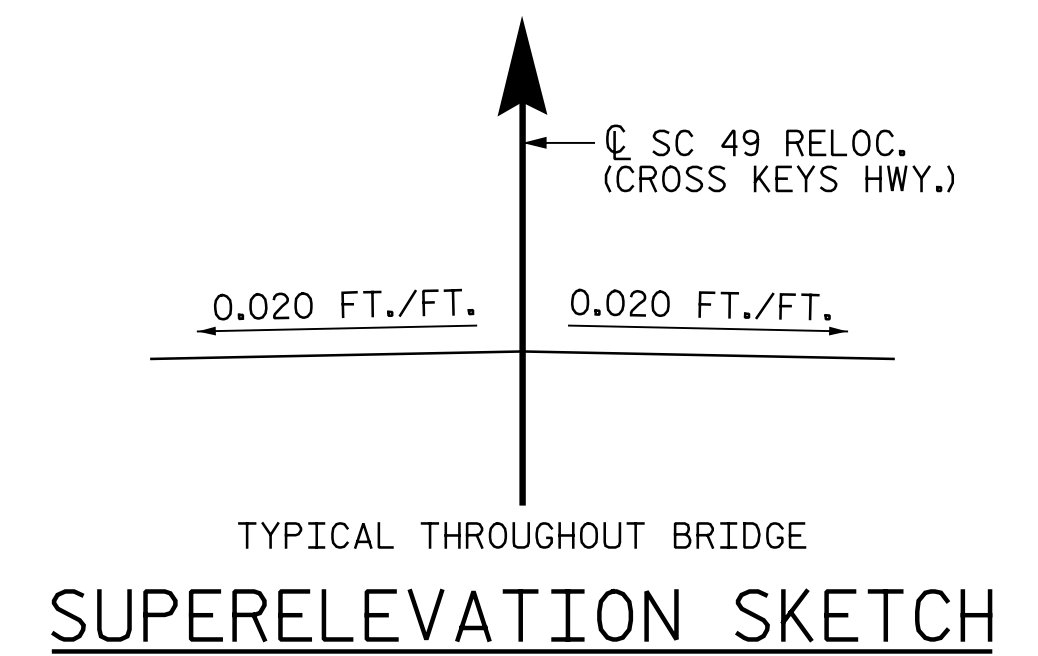


VERTICAL CURVE DATA

PVI = 180+95.00 ELEV. 419.42 V.C. = 655'	PVI = 192+40.00 ELEV. 413.69 V.C. = 630'
(-) 5.30% (-) 0.50% (+) 4.10%	

**SECTION ALONG @ SC 49 RELOC.
(CROSS KEYS HWY.)**

- NOTES:**
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1 1/2" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 37'-6" x 375'-0"± CONCRETE TEE BEAM, AASHTO BEAM BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.
- E - DENOTES EXPANSION BEARING
F - DENOTES FIXED BEARING
I - DENOTES INTEGRAL END BENT
+ - NORMAL TO SKEW
- = EXCAVATE HATCHED AREA OF EXISTING BANK TO ALLOW FOR HYDRAULIC OPENING



CONTROL POINTS

BM1 RR SPIKE IN PP BASE ELEVATION = 415.48' N 1037190.700 E 1793883.300
BM2 RR SPIKE IN PP BASE ELEVATION = 411.30' N 1037107.200 E 1793388.200
CP PSC 3 ELEVATION = 412.74' N 1037021.350 E 1792974.795

HYDROLOGY DATA

D.A. = 186.0 SQ. MILES
Q_{.50} = 11,213 CFS
VELOCITY_{.50} = 8.5 FPS
AREA FURNISHED UNDER_{.50} = 1,324.4 SQ. FT.
INCLUDING 0.65 FT. OF BACKWATER
Q_{.100} = 12,901 CFS
VELOCITY_{.100} = 8.8 FPS
AREA FURNISHED UNDER_{.100} = 1,631.6 SQ. FT.
INCLUDING 0.73 FT. OF BACKWATER

OVERTOPPING FLOOD

Q > 16,910 CFS
PROBABILITY < 0.2%

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS

HDR ENGINEERING INC.
OF THE CAROLINAS
1201 MAIN STREET
SUITE 800
COLUMBIA, SC 29201
803-509-6600

NOT FOR CONSTRUCTION

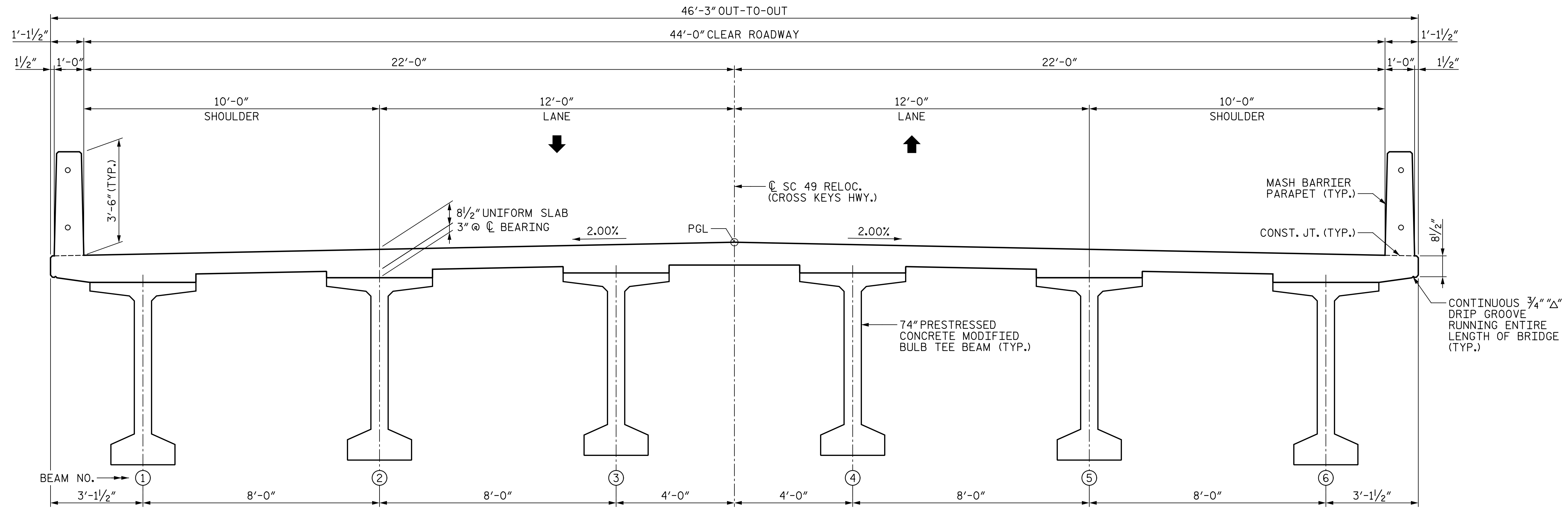
SOUTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BRIDGE PLAN AND PROFILE

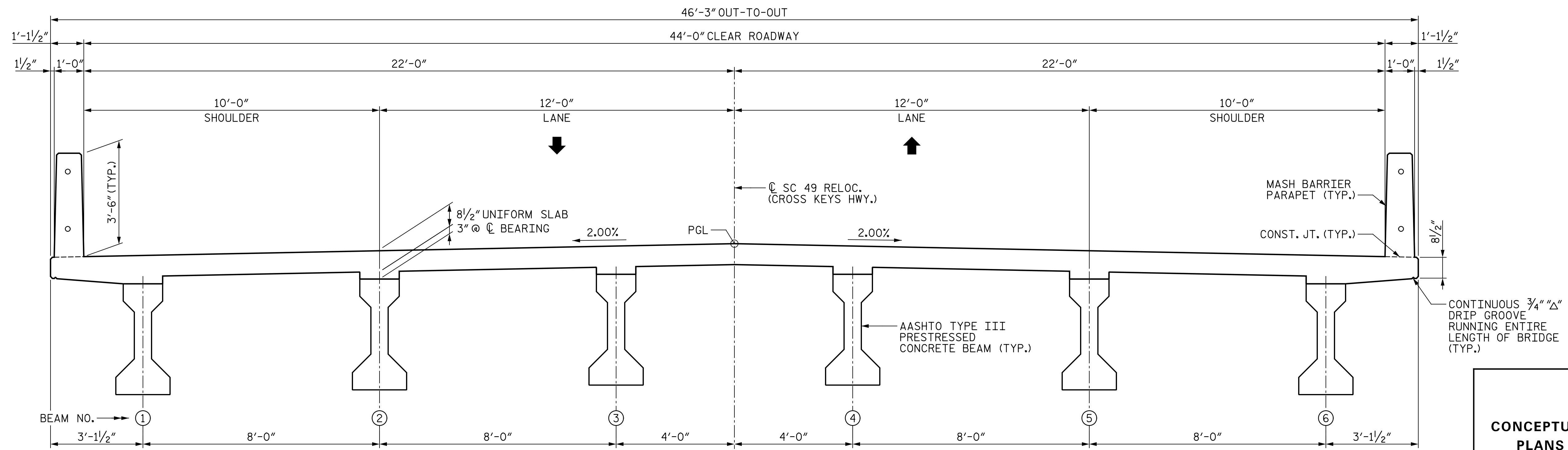
SC 49 (CROSS KEYS HWY.) BRIDGE REPLACEMENT
OVER FAIRFOREST CREEK

COUNTY	UNION	ROUTE	SC 49
--------	-------	-------	-------

CADD FILE INFORMATION IIR049 AM
PLOTTED DATE: 03-21-23
FILE NAME: P041238-B01.bb.dgn

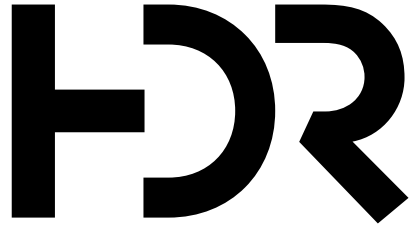


TYPICAL SECTION - SPANS A & B
(LOOKING IN DIRECTION OF STATIONING)



TYPICAL SECTION - SPANS C & D
(LOOKING IN DIRECTION OF STATIONING)

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600	
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE TYPICAL SECTION		
	SC 49 (CROSS KEYS HWY.) BRIDGE REPLACEMENT OVER FAIRFOREST CREEK		
	COUNTY	UNION	ROUTE SC 49

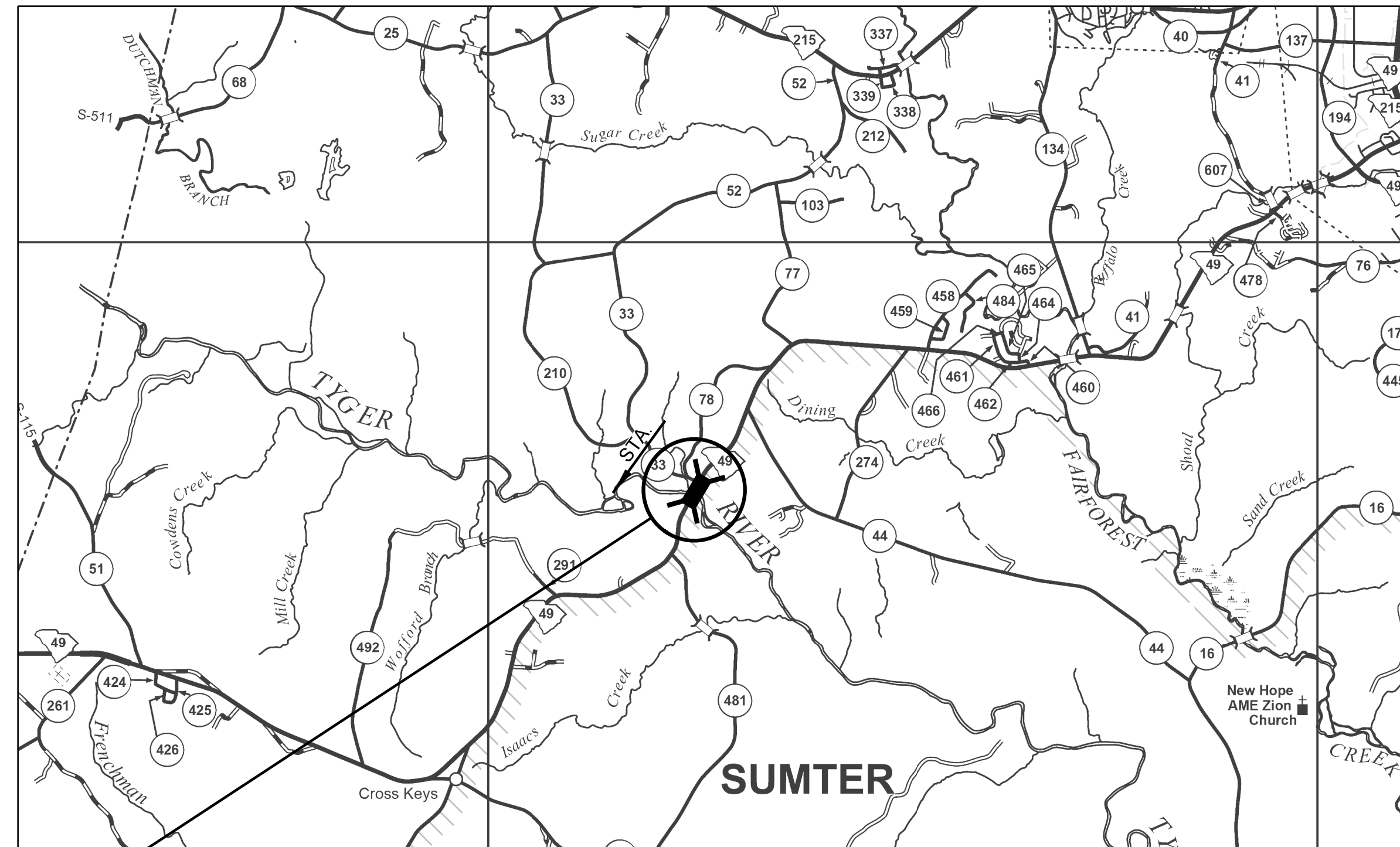


South Carolina Department of Transportation

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 BRIDGE PLAN AND PROFILE (1 OF 2)
- 3 BRIDGE PLAN AND PROFILE (2 OF 2)
- 4 BRIDGE TYPICAL SECTION

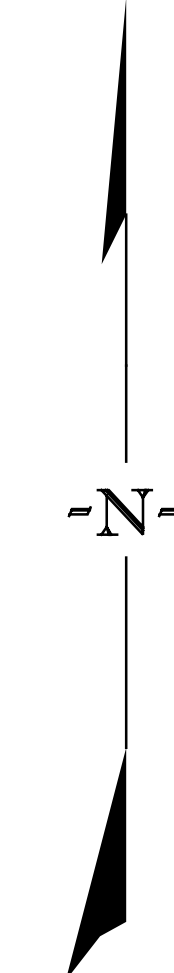
PROPOSED PLANS
FOR
UNION COUNTY
PROJECT ID P041237
STATE ROUTE SC 49 (CROSS KEYS HWY.)
REPLACE BRIDGE OVER TYGER RIVER



Approximate Location of Bridge is

Latitude 34°39'57" N

Longitude 81°44'22" W



SITE LOCATION

LAYOUT

3 DAYS BEFORE DIGGING IN
 SOUTH CAROLINA
CALL 811
 SOUTH CAROLINA 811 (SC811)
 WWW.SC811.COM
 ALL UTILITIES MAY NOT BE A MEMBER OF SC811

ASSET ID NOT ASSIGNED

TRAFFIC DATA			
2024	ADT	3,200	V.P.D.
*2044	ADT	*4,300	V.P.D.
TRUCKS		11	%
*DESIGN TRAFFIC DATA			

NET LENGTH OF ROADWAY	0.000	MILES
NET LENGTH OF BRIDGES	0.106	MILES
NET LENGTH OF PROJECT	0.106	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.106	MILES

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

CONSULTING ENGINEERING FIRM

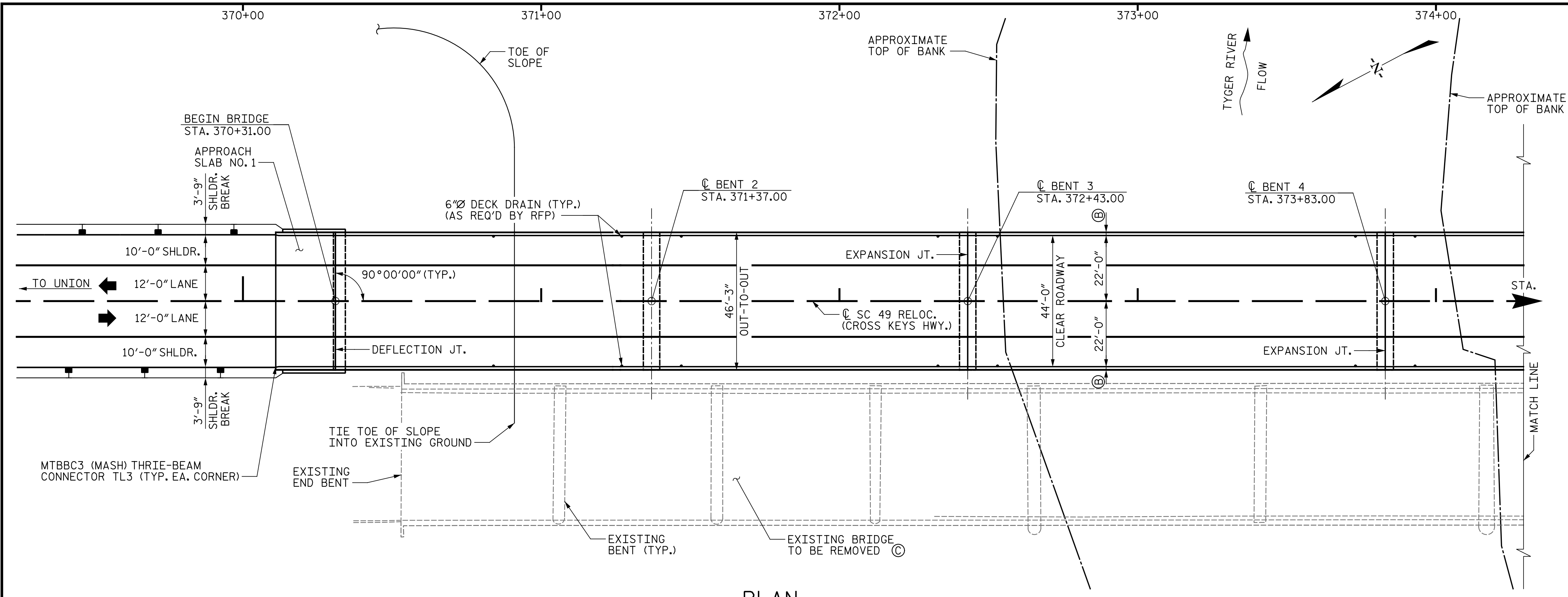
ENGINEER OF RECORD

**CONCEPTUAL
PLANS
NOT FOR
CONSTRUCTION**

FOR CONSTRUCTION : _____ DATE _____

REVIEWED	DR.	RAM	JTE	DJS	03-23
		BY	CHK		DATE

RMCKENNA
 03-21-23
 BP041237-B01_ls.dgn

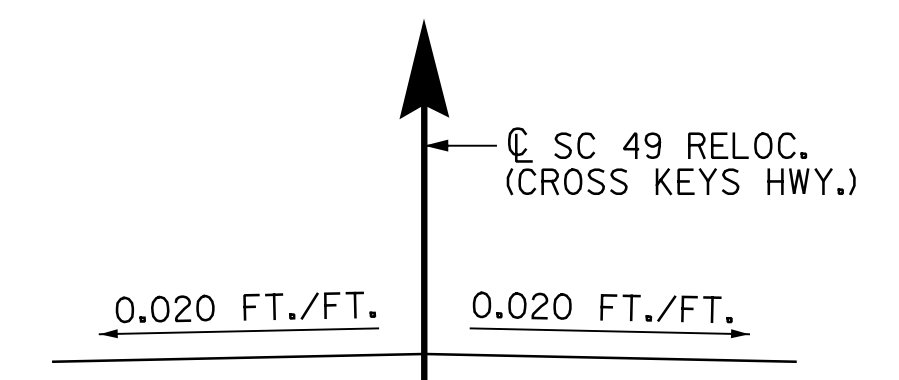


PLAN

(NOTE: BRIDGE END DRAINAGE IS NOT SHOWN)

- NOTES:
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1 1/2" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 48'-3" x 525'-0"± CONCRETE TEE BEAM / CONCRETE BEAM BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.

E - DENOTES EXPANSION BEARING
F - DENOTES FIXED BEARING
I - DENOTES INTEGRAL END BENT



TYPICAL THROUGHOUT BRIDGE SUPERELEVATION SKETCH

CONTROL POINTS

BM1 RR SPIKE IN PP BASE
ELEVATION = 410.60'
N 1031814.200 E 1777858.800

BM2 RR SPIKE IN PP BASE
ELEVATION = 412.22'
N 1031041.100 E 1777450.700

HYDROLOGY DATA

D.A. = 447 SQ. MILES
Q₅₀ = 25,800 CFS
VELOCITY₅₀ = 5.4 FPS
AREA FURNISHED UNDER₅₀ = 4,856.4 SQ. FT.
INCLUDING 0.33 FT. OF BACKWATER
Q₁₀₀ = 29,200 CFS
VELOCITY₁₀₀ = 5.6 FPS
AREA FURNISHED UNDER₁₀₀ = 5,317.2 SQ. FT.
INCLUDING 0.36 FT. OF BACKWATER

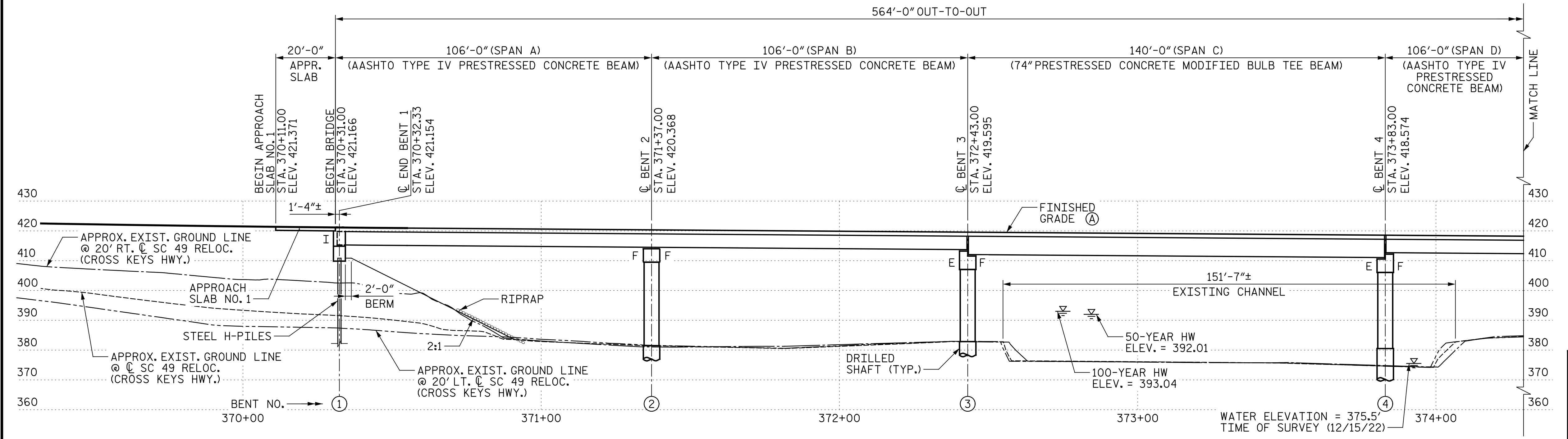
OVERTOPPING FLOOD

Q > 37,700 CFS
PROBABILITY < 0.2%

VERTICAL CURVE DATA

PVI = 367+50.00 PVI = 379+50.00
ELEV. 423.19 ELEV. 414.44
V.C. = 610' V.C. = 775'

(-) 6.00% (-) 0.73% (+) 5.99%

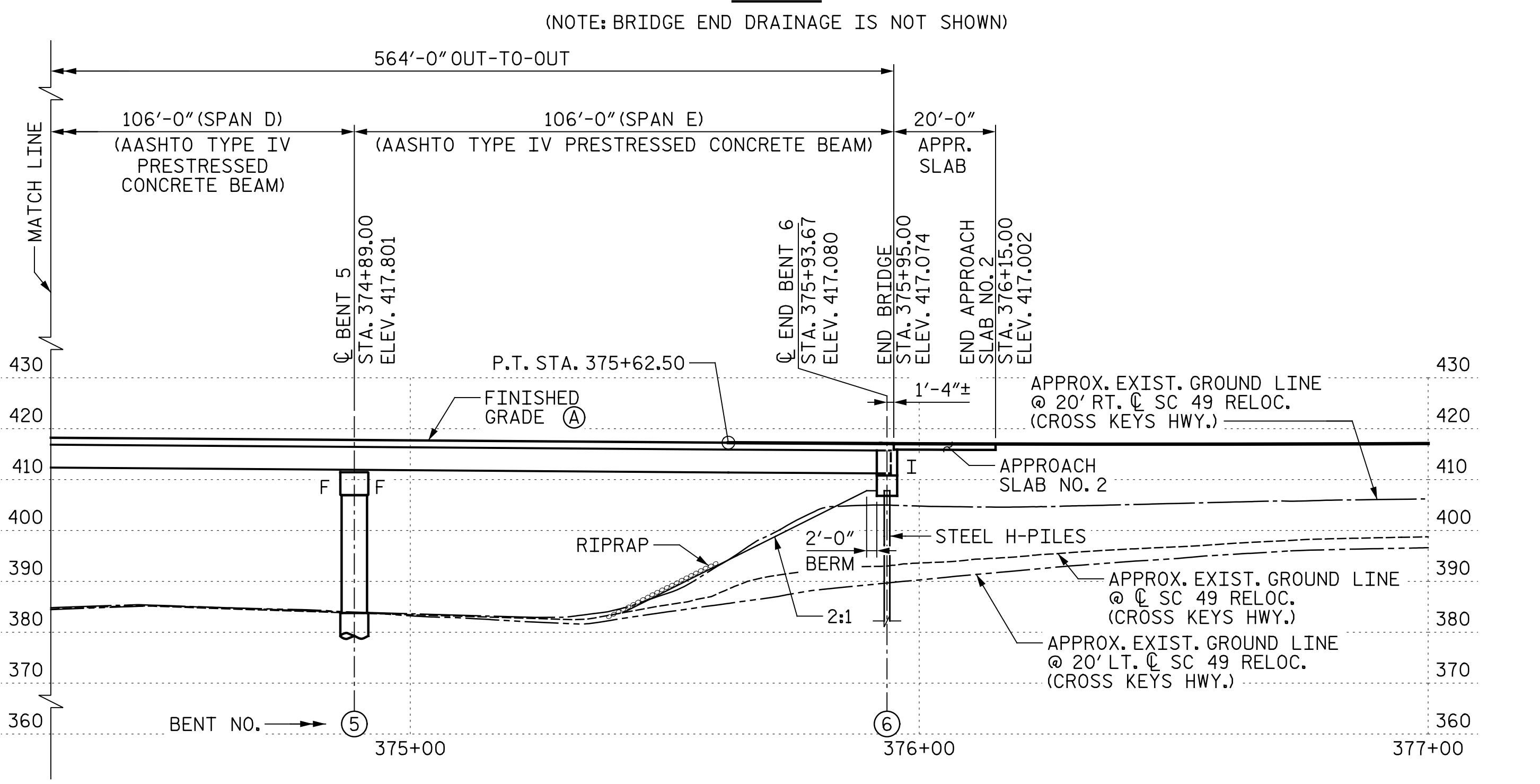
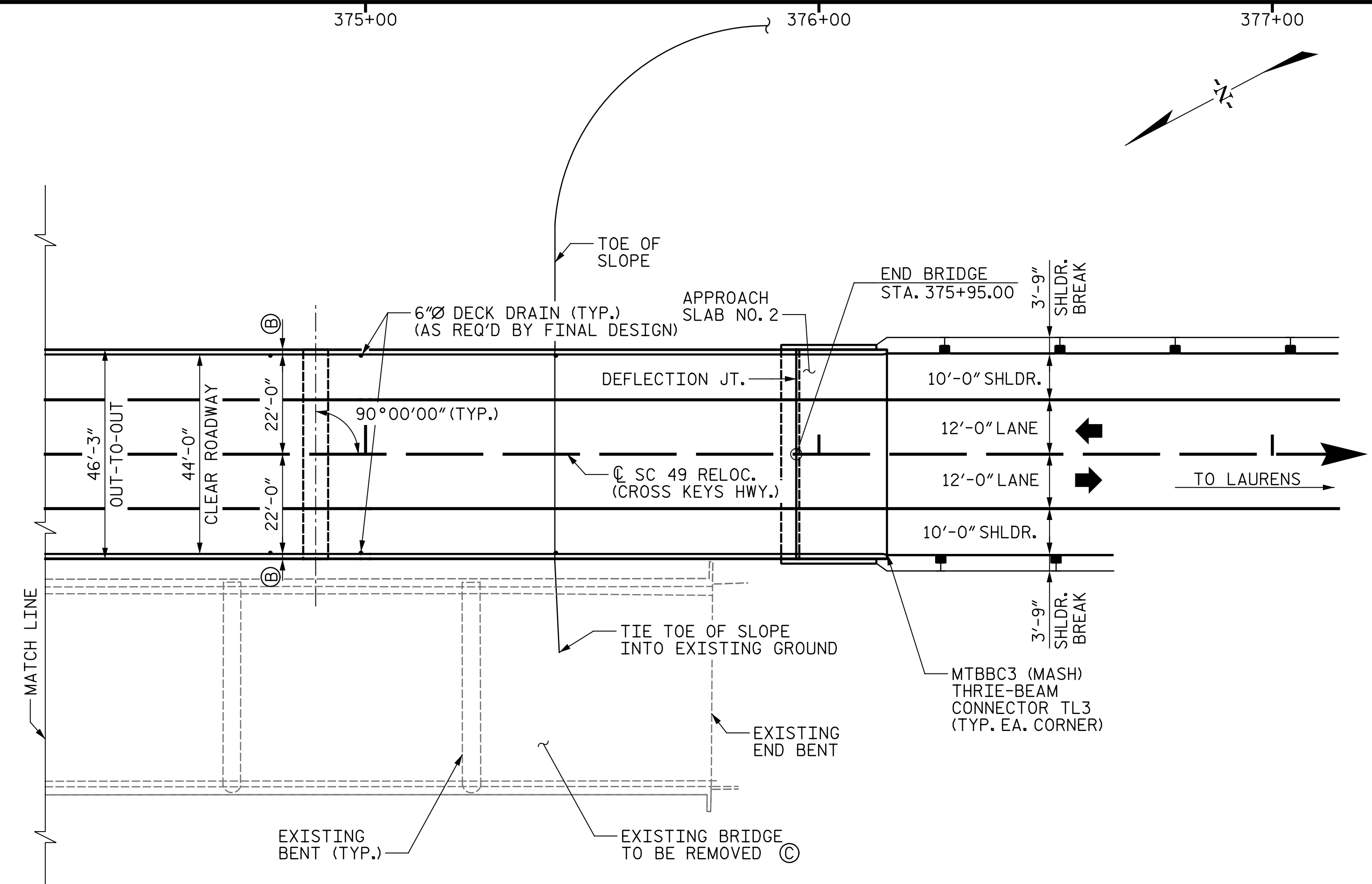


**SECTION ALONG C SC 49 RELOC.
(CROSS KEYS HWY.)**

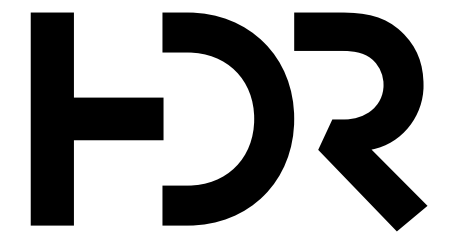
CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600	
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE PLAN AND PROFILE (1 OF 2)		
	SC 49 (CROSS KEYS HWY.) BRIDGE REPLACEMENT OVER TYGER RIVER		
	COUNTY	UNION	ROUTE SC 49

REV.			
REV.			
REV.			
REVIEWED	JTE	03-23	
QUAN.			
DR.	RAM	DJS	03-23
DES.			
BY	CHK.	DATE	

CADD FILE INFORMATION 10:48:43 AM
PLOTTED DATE: 03-21-23
FILE NAME: D:\P041237-B01.bpl.dgn

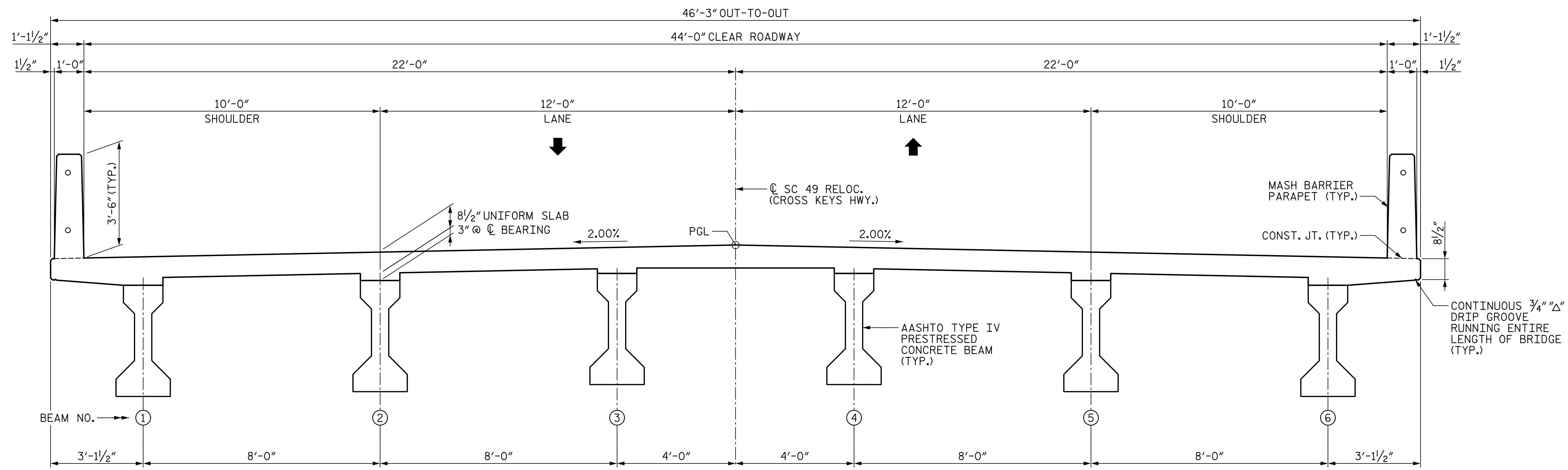


- NOTES:
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1/2" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 48'-3" x 525'-0" ± CONCRETE TEE BEAM / CONCRETE BEAM BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.
- E - DENOTES EXPANSION BEARING
 F - DENOTES FIXED BEARING
 I - DENOTES INTEGRAL END BENT
- FOR ADDITIONAL ROADWAY AND HYDRAULIC INFORMATION, SEE SHEET NO. 2.

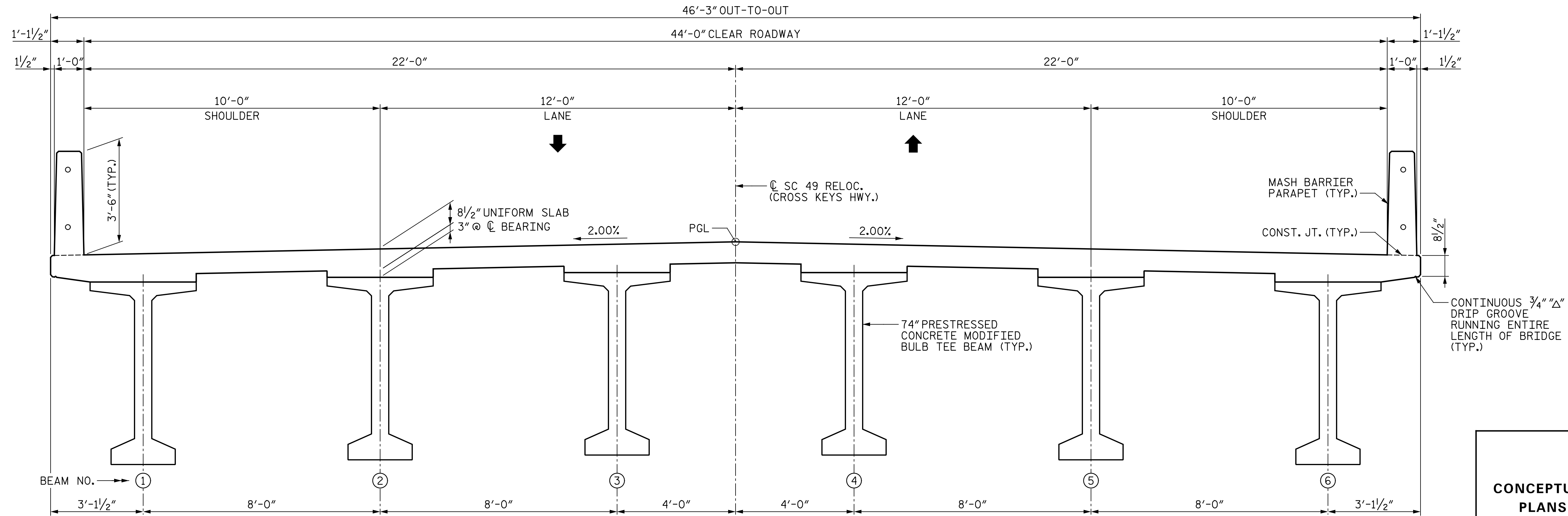
CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS	
		1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600	
NOT FOR CONSTRUCTION	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION		
	BRIDGE PLAN AND PROFILE (2 OF 2)		
	SC 49 (CROSS KEYS HWY.) BRIDGE REPLACEMENT OVER TYGER RIVER		
	COUNTY	UNION	ROUTE

REV.			
REV.			
REV.			
REVIEWED	JTE	03-23	
QUAN.			
DR.	RAM	DJS	03-23
DES.			
BY	CHK.	DATE	

CADD FILE INFORMATION 10:49:02 AM
 PLOTTED DATE: 03-21-23
 FILE NAME: P041237-B01.bp2.dgn

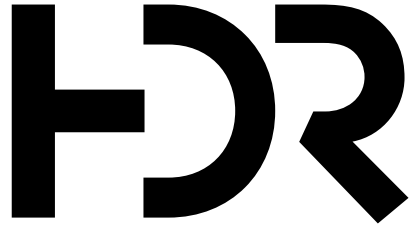


TYPICAL SECTION - SPANS A, B, D & E
(LOOKING IN DIRECTION OF STATIONING)



TYPICAL SECTION - SPAN C
(LOOKING IN DIRECTION OF STATIONING)

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600	
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE TYPICAL SECTION		
	SC 49 (CROSS KEYS HWY.) BRIDGE REPLACEMENT OVER TYGER RIVER		
	COUNTY	UNION	ROUTE SC 49

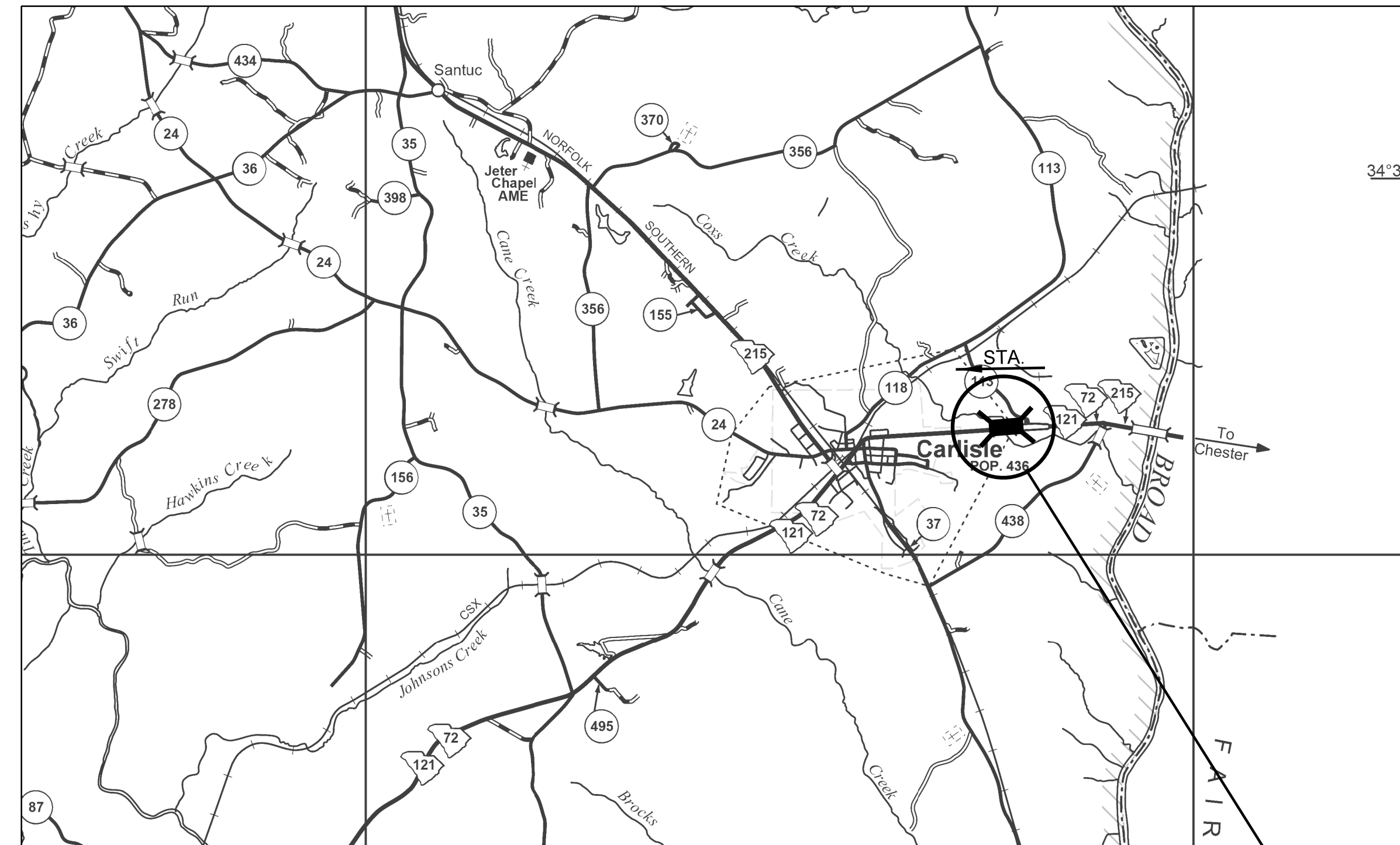


South Carolina Department of Transportation

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 STAGES OF CONSTRUCTION
- 3 BRIDGE PLAN AND PROFILE
- 4 BRIDGE TYPICAL SECTION

PROPOSED PLANS
FOR
UNION COUNTY
PROJECT ID P041235
STATE ROUTE SC 72 (CARLISLE CHESTER HWY.)
REPLACE BRIDGE OVER COXS CREEK



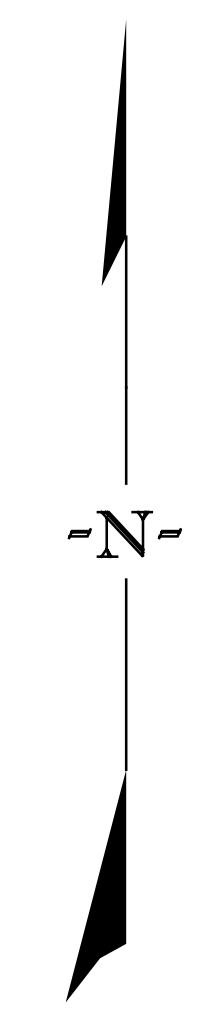
LAYOUT

SITE LOCATION

Approximate Location of Bridge is

Latitude 34°35'43" N

Longitude 81°26'31" W



3 DAYS BEFORE DIGGING IN
 SOUTH CAROLINA
CALL 811
 SOUTH CAROLINA 811 (SC811)
 WWW.SC811.COM
 ALL UTILITIES MAY NOT BE A MEMBER OF SC811

ASSET ID NOT ASSIGNED

TRAFFIC DATA			
2024	ADT	2,400	V.P.D.
*2044	ADT	*3,200	V.P.D.
	TRUCKS	31	%
*DESIGN TRAFFIC DATA			

NET LENGTH OF ROADWAY	0.000	MILES
NET LENGTH OF BRIDGES	0.020	MILES
NET LENGTH OF PROJECT	0.020	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.020	MILES

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

CONSULTING ENGINEERING FIRM

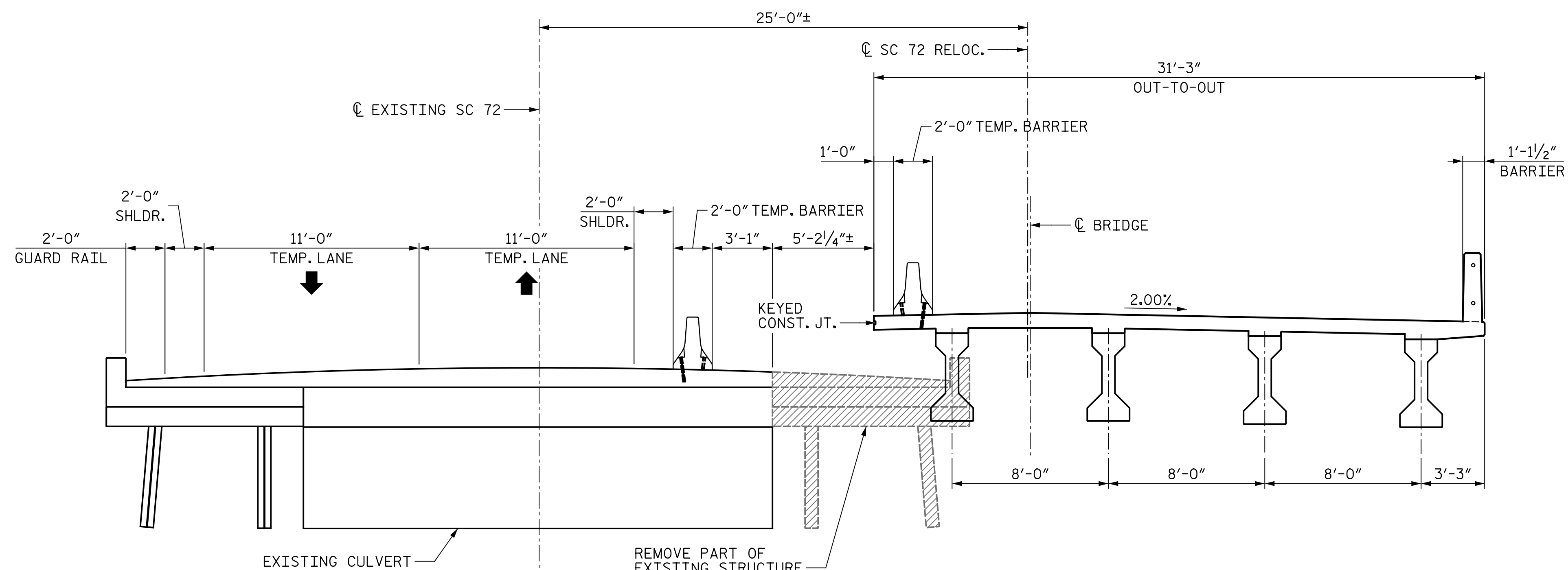
ENGINEER OF RECORD

**CONCEPTUAL
PLANS
NOT FOR
CONSTRUCTION**

FOR CONSTRUCTION : _____ DATE _____

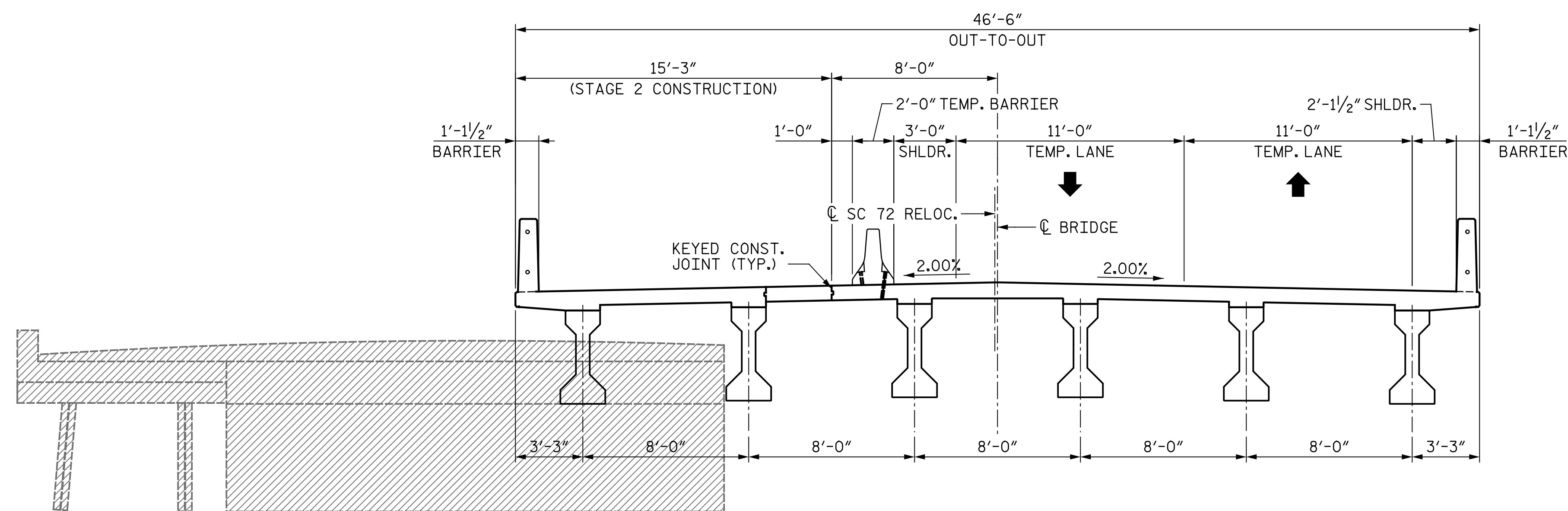
REVIEWED	DR.	RAM	JTE	DJS	03-23
	BY	CHK	DATE		

D:\SPRINT\03-23\03-23\BP041235-B01_ls.dgn



STAGE 1

(LOOKING IN DIRTECTION OF STATIONING)



STAGE 2

(LOOKING IN DIRTECTION OF STATIONING)

STAGE 1 CONSTRUCTION

INSTALL TEMPORARY CONCRETE TRAFFIC BARRIER ON EXISTING BRIDGE PER SCDOT STANDARD DRAWINGS 605-205-05.

INSTALL TEMPORARY SHORING AS NECESSARY.

REMOVE PART OF EXISTING STRUCTURE AS SHOWN IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS.

CONSTRUCT RIGHT SIDE OF BRIDGE, AS SHOWN.

INSTALL TEMPORARY CONCRETE TRAFFIC BARRIER ON PARTIAL BRIDGE PER SCDOT STANDARD DRAWINGS 605-205-05.

SHIFT TRAFFIC ONTO NEWLY CONSTRUCTED BRIDGE.

STAGE 2 CONSTRUCTION

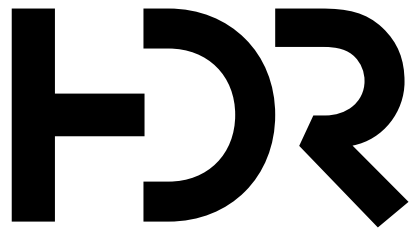
REMOVE EXISTING BRIDGE/CULVERT IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS.

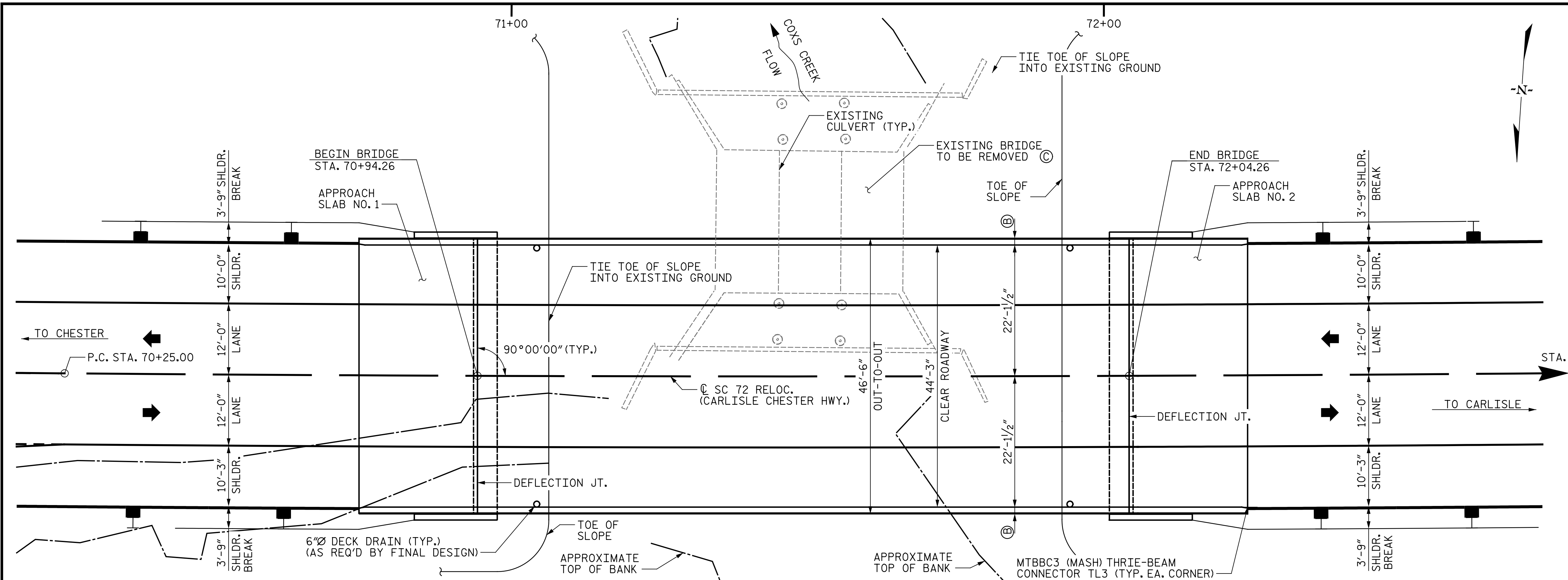
CONSTRUCT LEFT SIDE OF BRIDGE, AS SHOWN.

REMOVE TEMPORARY TRAFFIC BARRIER AND SHIFT TRAFFIC TO THE FINAL CONFIGURATION SHOWN.

CADD FILE INFORMATION 4/19/09 PM
 PLOTTED DATE: 03-05-23
 FILE NAME: P041235-B01.sc.dgn

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600
	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	STAGES OF CONSTRUCTION	
	SC 72 (CARLISLE CHESTER HWY.) BRIDGE REPLACEMENT OVER COXS CREEK	
	COUNTY UNION	ROUTE SC 72

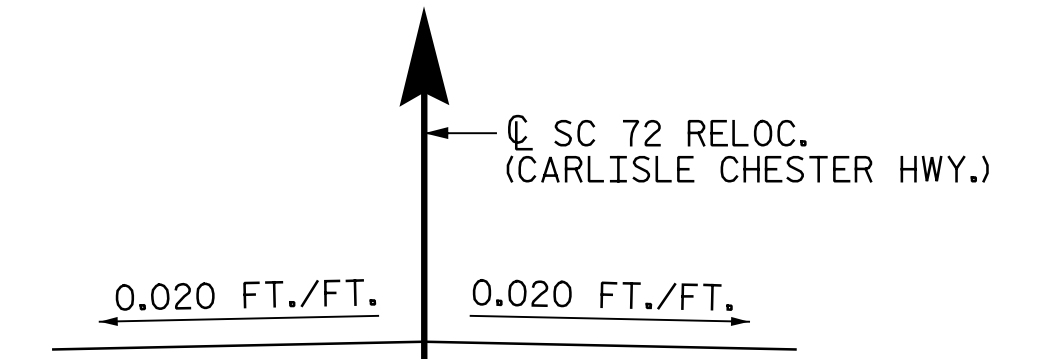


PLAN

(NOTE: BRIDGE END DRAINAGE IS NOT SHOWN)

- NOTES:
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1/2" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 42'-2" x 51'-6"± CULVERT, FLAT SLAB BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.
- I - DENOTES INTEGRAL END BENT

[Hatched Area] = EXCAVATE HATCHED AREA OF EXISTING BANK TO ALLOW FOR HYDRAULIC OPENING



TYPICAL THROUGHOUT BRIDGE SUPERELEVATION SKETCH

HORIZONTAL CURVE DATA

P.I. = 70+42.56	P.I. = 79+75.66
Δ = 5°09'19" (LT.)	Δ = 2°34'39" (RT.)
Dc = 0°22'55"	Dc = 0°29'54"
T = 675.28'	T = 258.73'
L = 1,349.65'	L = 517.36'
E = 15.19'	E = 2.91'
R = 15,000.00'	R = 11,500.00'

BENCHMARKS

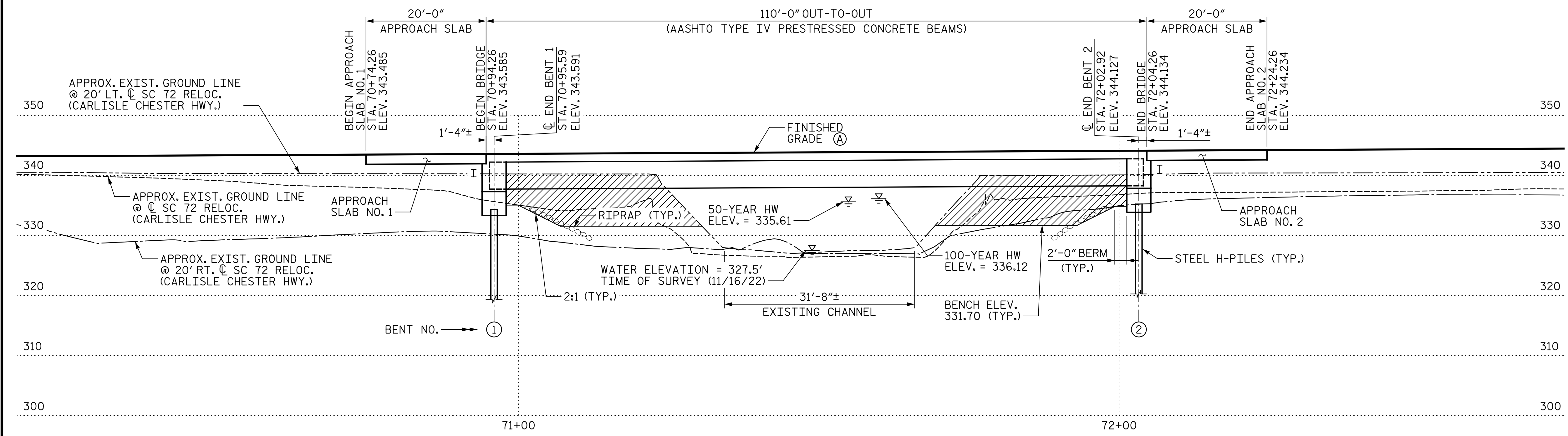
CP PSC2 ELEVATION = 346.74' N 1005218.440 E 1866465.440
CP PSC3 ELEVATION = 344.38' N 1005283.580 E 1867507.680
CP PSC4 ELEVATION = 351.12' N 1005307.830 E 1867900.910

HYDROLOGY DATA

D.A. = 4.2 SQ. MILES
Q_{.50} = 1,634 CFS
VELOCITY_{.50} = 4.6 FPS
AREA FURNISHED UNDER_{.50} = 624.2 SQ. FT.
INCLUDING 0.23 FT. OF BACKWATER
Q₁₀₀ = 1,900 CFS
VELOCITY₁₀₀ = 4.8 FPS
AREA FURNISHED UNDER₁₀₀ = 679.3 SQ. FT.
INCLUDING 0.37 FT. OF BACKWATER

OVERTOPPING FLOOD

Q > 2,565 CFS
PROBABILITY < 0.2%



SECTION ALONG C SC 72 RELOC. (CARLISLE CHESTER HWY.)

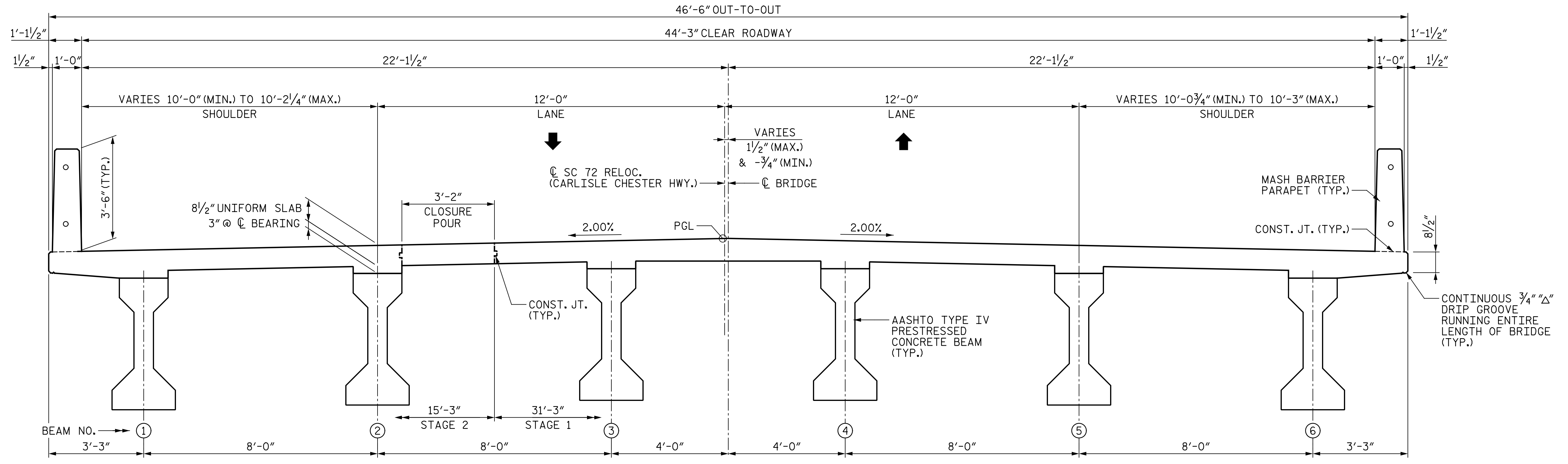
VERTICAL CURVE DATA

PVI = 68+25.00 ELEV. 342.24 V.C. = 400'	PVI = 76+50.00 ELEV. 346.36 V.C. = 525'
(-) 2.44% (+) 0.50% (+) 4.35%	

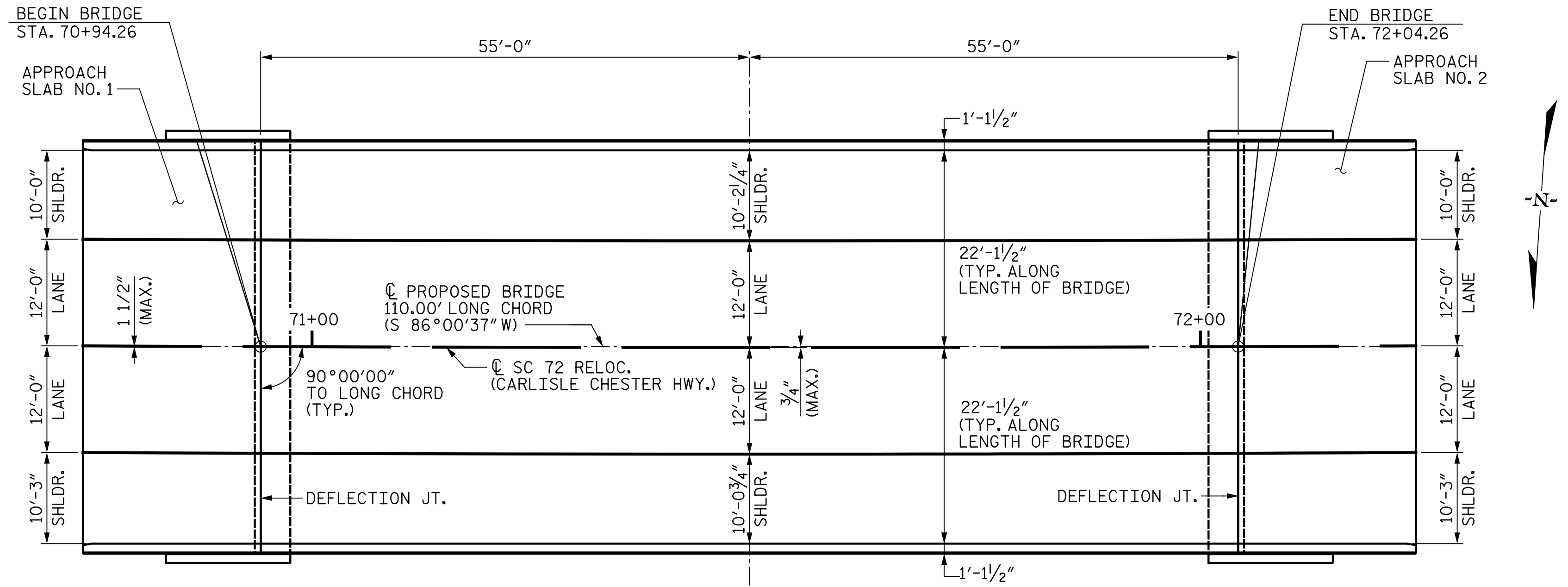
REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
NOT FOR CONSTRUCTION	BRIDGE PLAN AND PROFILE	
	SC 72 (CARLISLE CHESTER HWY.) BRIDGE REPLACEMENT OVER COXS CREEK	
	COUNTY	ROUTE
	UNION	SC 72

CADD FILE INFORMATION 5/08/24 PM
PLOTTED DATE: 03-05-23
FILE NAME: P041235-B01_bp.dgn

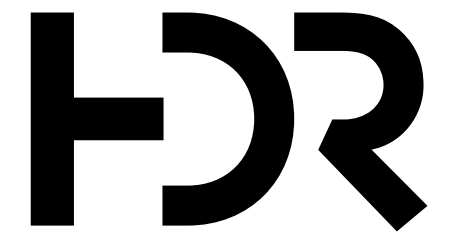


TYPICAL SECTION
(LOOKING IN DIRECTION OF STATIONING)



BRIDGE LAYOUT SKETCH
(NOTE: BARRIERS AND GIRDERS ARE ALIGNED PARALLEL WITH LONG CHORD)

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600	
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE TYPICAL SECTION		
	SC 72 (CARLISLE CHESTER HWY.) BRIDGE REPLACEMENT OVER COXS CREEK		
	COUNTY	UNION	ROUTE SC 72

CADD FILE INFORMATION 4/04/25 PM
 PLOTTED DATE: 03-05-23
 FILE NAME: P041235-B01.ss.dgn

INDEX OF SHEETS

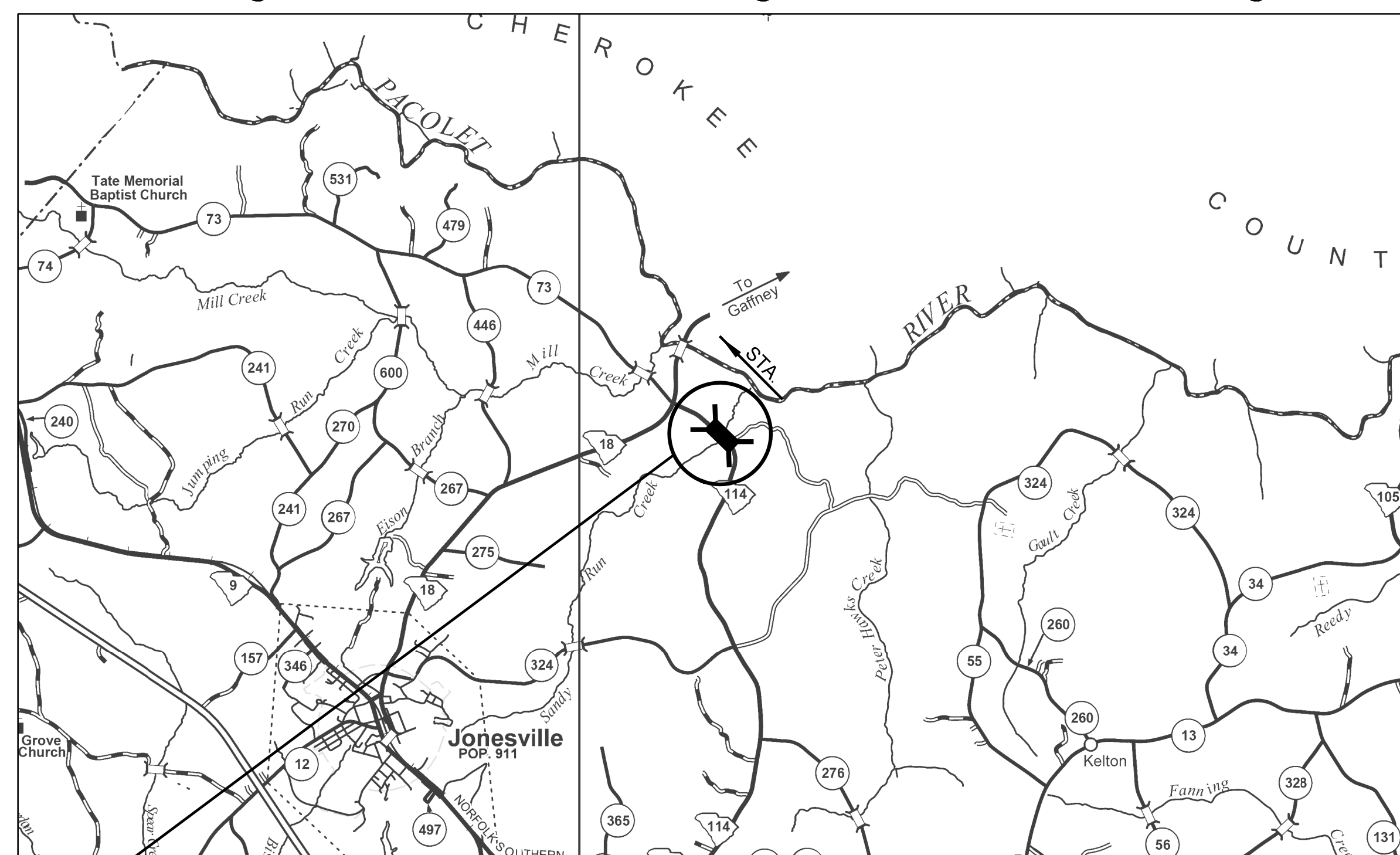
- 1 TITLE SHEET
- 2 BRIDGE PLAN AND PROFILE
- 3 BRIDGE TYPICAL SECTION



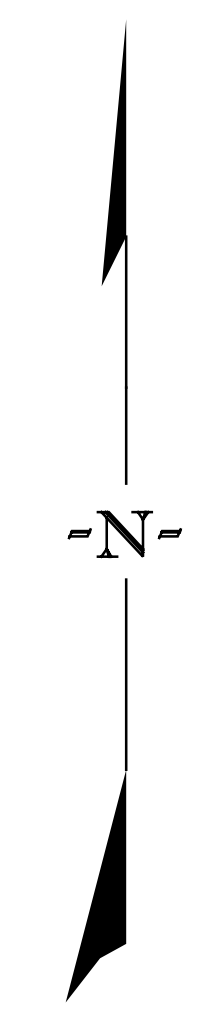
South Carolina Department of Transportation

PROPOSED PLANS
FOR
UNION COUNTY
PROJECT ID P041239

STATE ROUTE SC 114 (BOBBY FAUCETTE RD.)
REPLACE BRIDGE OVER SANDY RUN CREEK



Approximate Location of Bridge is
Latitude 34°52'11" N
Longitude 81°37'56" W



3 DAYS BEFORE DIGGING IN
SOUTH CAROLINA
CALL 811
SOUTH CAROLINA 811 (SC811)
WWW.SC811.COM
ALL UTILITIES MAY NOT BE A MEMBER OF SC811

ASSET ID NOT ASSIGNED

TRAFFIC DATA			
2024	ADT	900	V.P.D.
*2044	ADT	*1,500	V.P.D.
TRUCKS <u>9</u> %			
*DESIGN TRAFFIC DATA			

SITE LOCATION

LAYOUT

NET LENGTH OF ROADWAY	0.000	MILES
NET LENGTH OF BRIDGES	0.034	MILES
NET LENGTH OF PROJECT	0.034	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.034	MILES

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

CONSULTING ENGINEERING FIRM

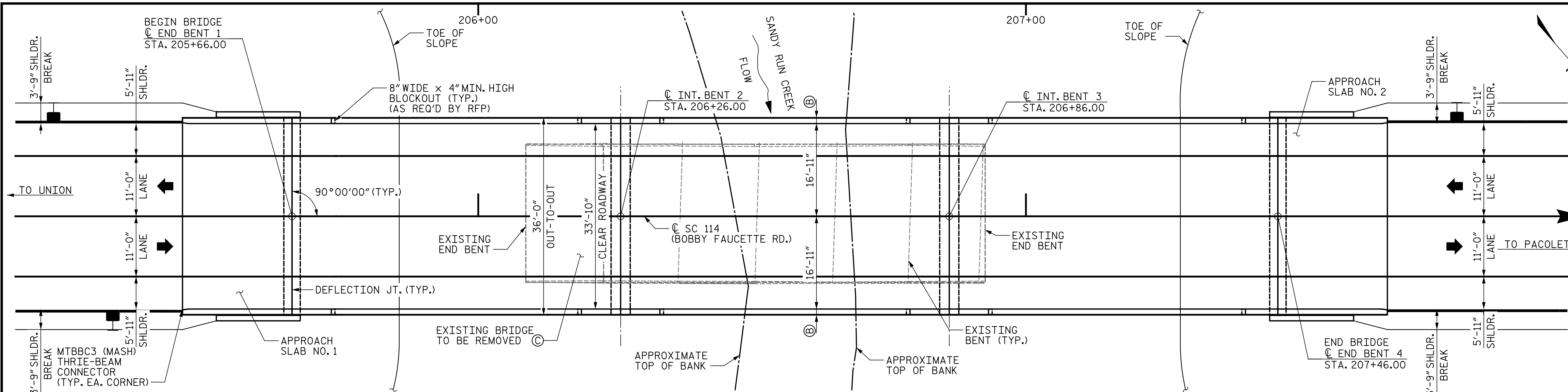
ENGINEER OF RECORD

**CONCEPTUAL
PLANS
NOT FOR
CONSTRUCTION**

FOR CONSTRUCTION : _____ DATE _____

REVIEWED	DR.	RAM	JTE	DJS	03-23
		BY	CHK		DATE

RMCKENNA
04-17-23
BP041239-B01_ls.dgn



PLAN

(NOTE: BRIDGE END DRAINAGE IS NOT SHOWN)

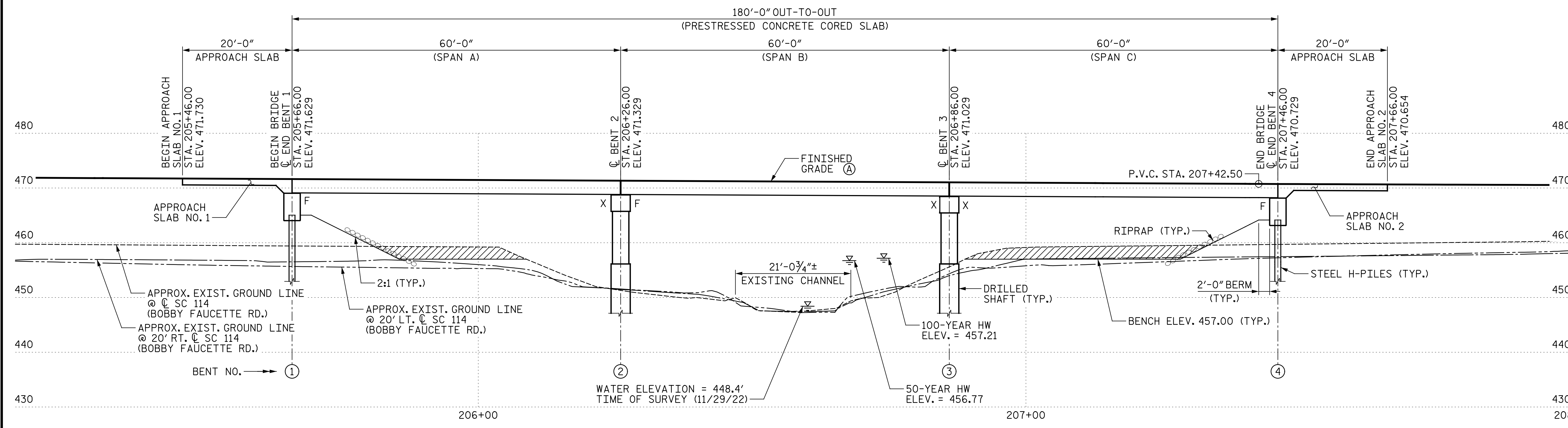
HORIZONTAL CURVE DATA

P.I.	= 198+40.13
Δ	= 67°28'33" (LT.)
Dc	= 5°00'00"
T	= 765.33'
L	= 1,349.52'
E	= 232.07'
R	= 1,145.92'

VERTICAL CURVE DATA

PVI	= 201+62.50	PVI	= 211+45.00
ELEV.	473.65	ELEV.	468.73
V.C.	= 590'	V.C.	= 805'

(-) 5.60% (+) 0.50% (+) 6.50%



**SECTION ALONG C SC 114
(BOBBY FAUCETTE RD.)**

BENCHMARKS

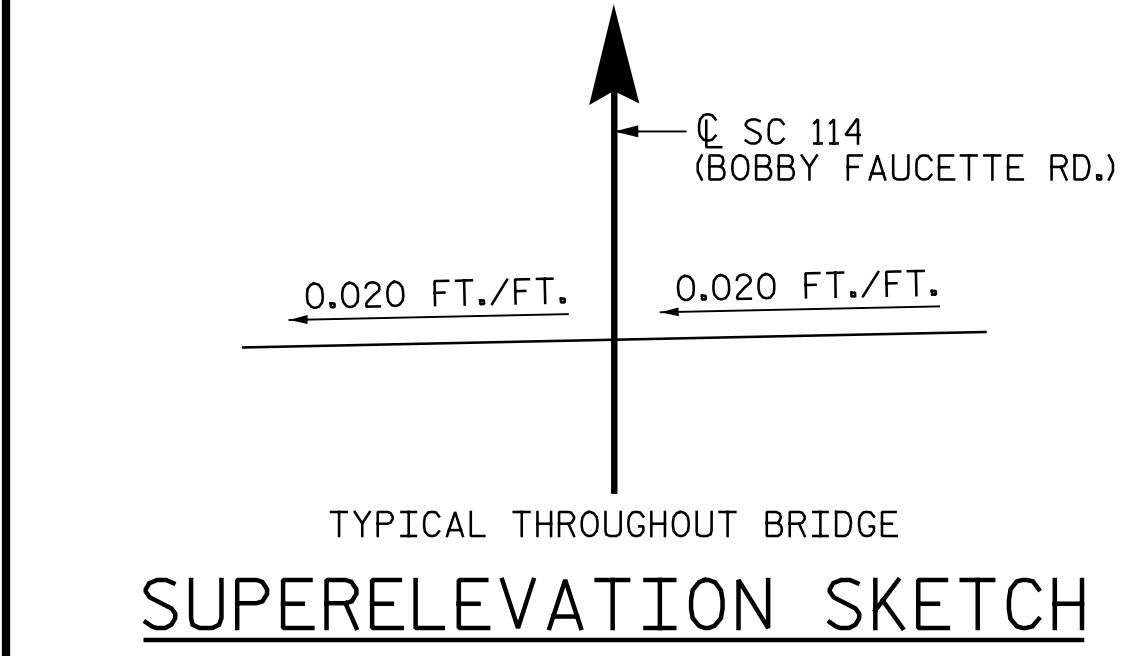
BM1 RR SPIKE IN PP BASE	ELEVATION = 462.18'
N 1105580.100	E 1810178.500
Bm2 RR SPIKE IN PP BASE	ELEVATION = 460.17'
N 1105228.200	E 1810577.500
CP PSC3	ELEVATION = 470.78'
N 1105726.600	E 1809989.640

HYDROLOGY DATA

D.A.	= 8.2 SQ. MILES
Q _{.50}	= 2,240 CFS
VELOCITY _{.50}	= 3.9 FPS
AREA FURNISHED UNDER _{.50}	= 721.4 SQ. FT.
INCLUDING 0.89 FT. OF BACKWATER	
Q _{.100}	= 2,600 CFS
VELOCITY _{.100}	= 4.2 FPS
AREA FURNISHED UNDER _{.100}	= 777.7 SQ. FT.
INCLUDING 0.99 FT. OF BACKWATER	

OVERTOPPING FLOOD

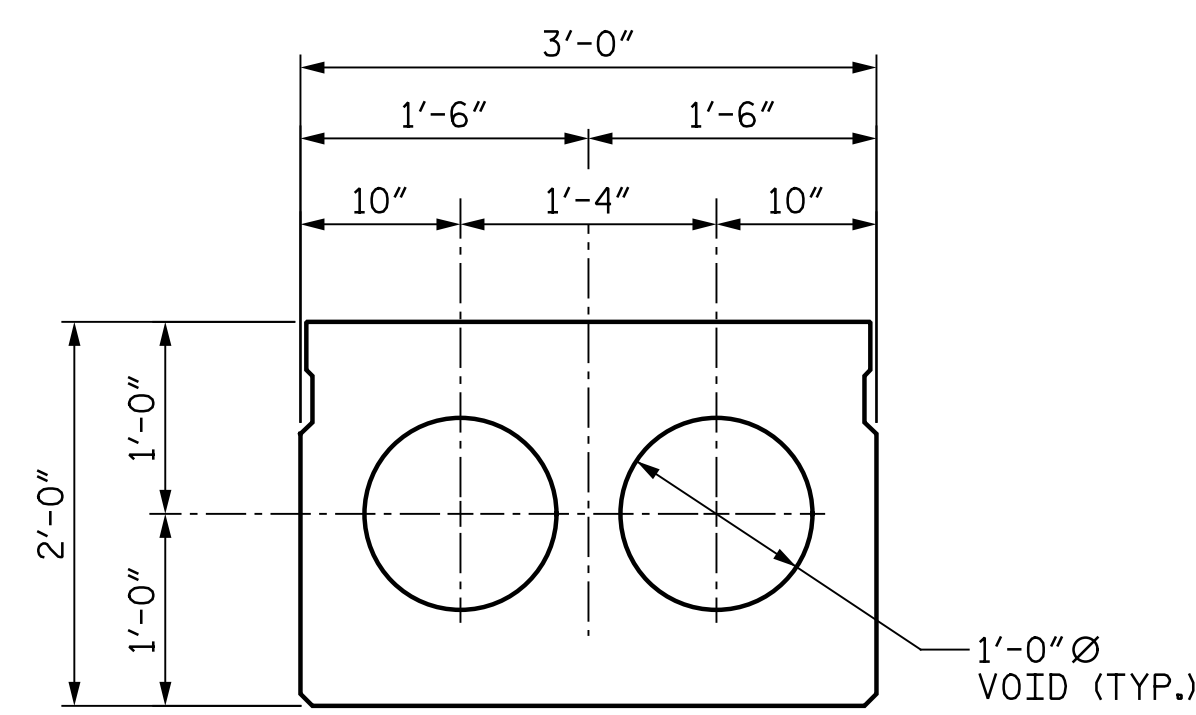
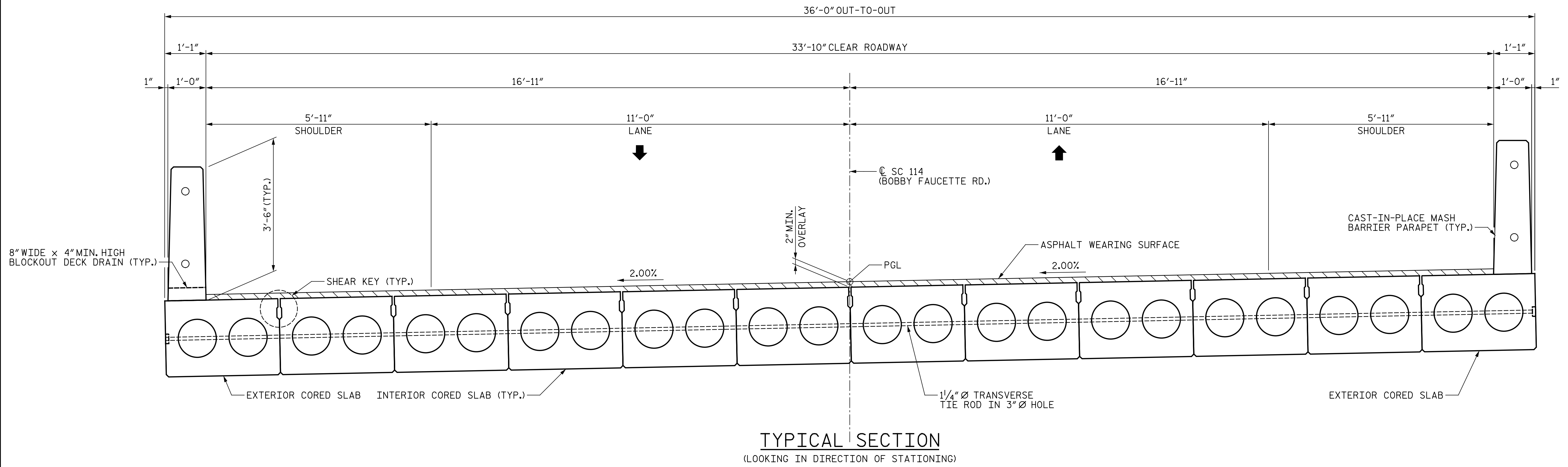
Q > 3,510 CFS
PROBABILITY < 0.2%



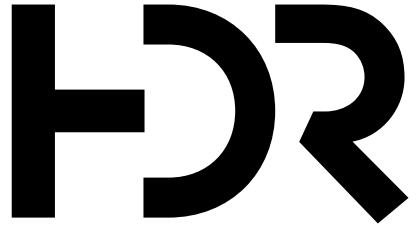
- NOTES:
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 25'-6" x 83'-0"± CONCRETE SLAB BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.
- E - DENOTES EXPANSION BEARING
F - DENOTES FIXED BEARING
- = EXCAVATE HATCHED AREA OF EXISTING BANK TO ALLOW FOR HYDRAULIC OPENING

REV.		
REV.		
REV.		
REVIEWED	JTE	04-23
QUAN.		
DR.	RAM	DJS 04-23
DES.		
BY	CHK.	DATE

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
NOT FOR CONSTRUCTION	BRIDGE PLAN AND PROFILE	
	SC 114 (BOBBY FAUCETTE RD.) BRIDGE REPLACEMENT OVER SANDY RUN CREEK	
	COUNTY UNION	ROUTE SC 114



REV.			
REV.			
REV.			
REVIEWED	JTE	04-23	
QUAN.			
DR.	RAM	DJS	04-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC 29201 803-509-6600	
		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE TYPICAL SECTION		
	SC 114 (BOBBY FAUCETTE RD.) BRIDGE REPLACEMENT OVER SANDY RUN CREEK		
	COUNTY UNION	ROUTE SC 114	

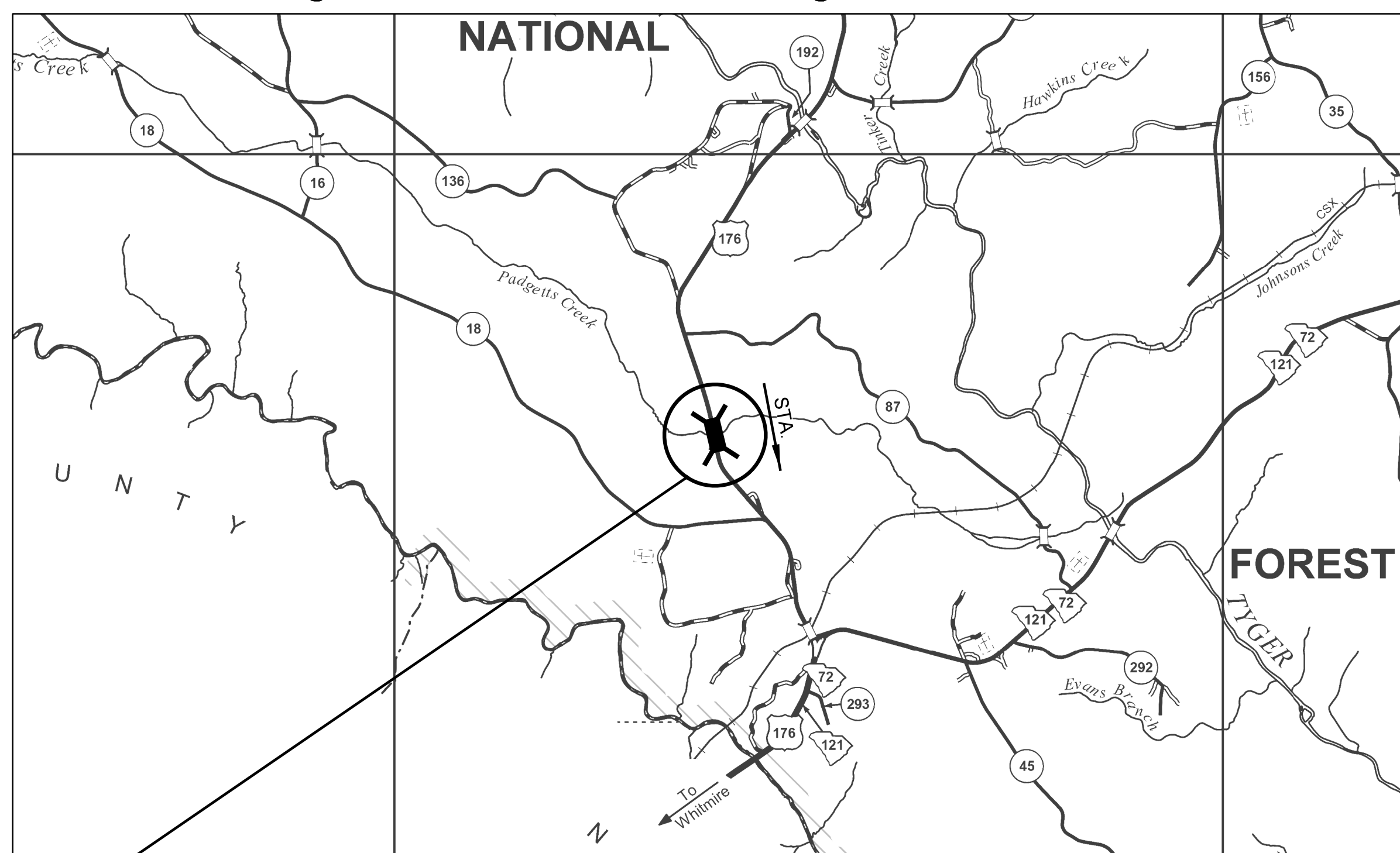


South Carolina Department of Transportation

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 BRIDGE PLAN AND PROFILE
- 3 BRIDGE TYPICAL SECTION

PROPOSED PLANS
FOR
UNION COUNTY
PROJECT ID P041234
U.S.ROUTE 176 (WHITMIRE HWY.)
REPLACE BRIDGE OVER PADGETTS CREEK



Approximate Location of Bridge is	
Latitude	34°32'49" N
Longitude	81°36'16" W

-N-

SITE LOCATION

LAYOUT

3 DAYS BEFORE DIGGING IN
SOUTH CAROLINA
CALL 811
SOUTH CAROLINA 811 (SC811)
WWW.SC811.COM
ALL UTILITIES MAY NOT BE A MEMBER OF SC811

ASSET ID NOT ASSIGNED

TRAFFIC DATA			
2024	ADT	2,000	V.P.D.
*2044	ADT	*2,700	V.P.D.
TRUCKS		18	%
*DESIGN TRAFFIC DATA			

NET LENGTH OF ROADWAY	0.000	MILES
NET LENGTH OF BRIDGES	0.024	MILES
NET LENGTH OF PROJECT	0.024	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.024	MILES

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

CONSULTING ENGINEERING FIRM

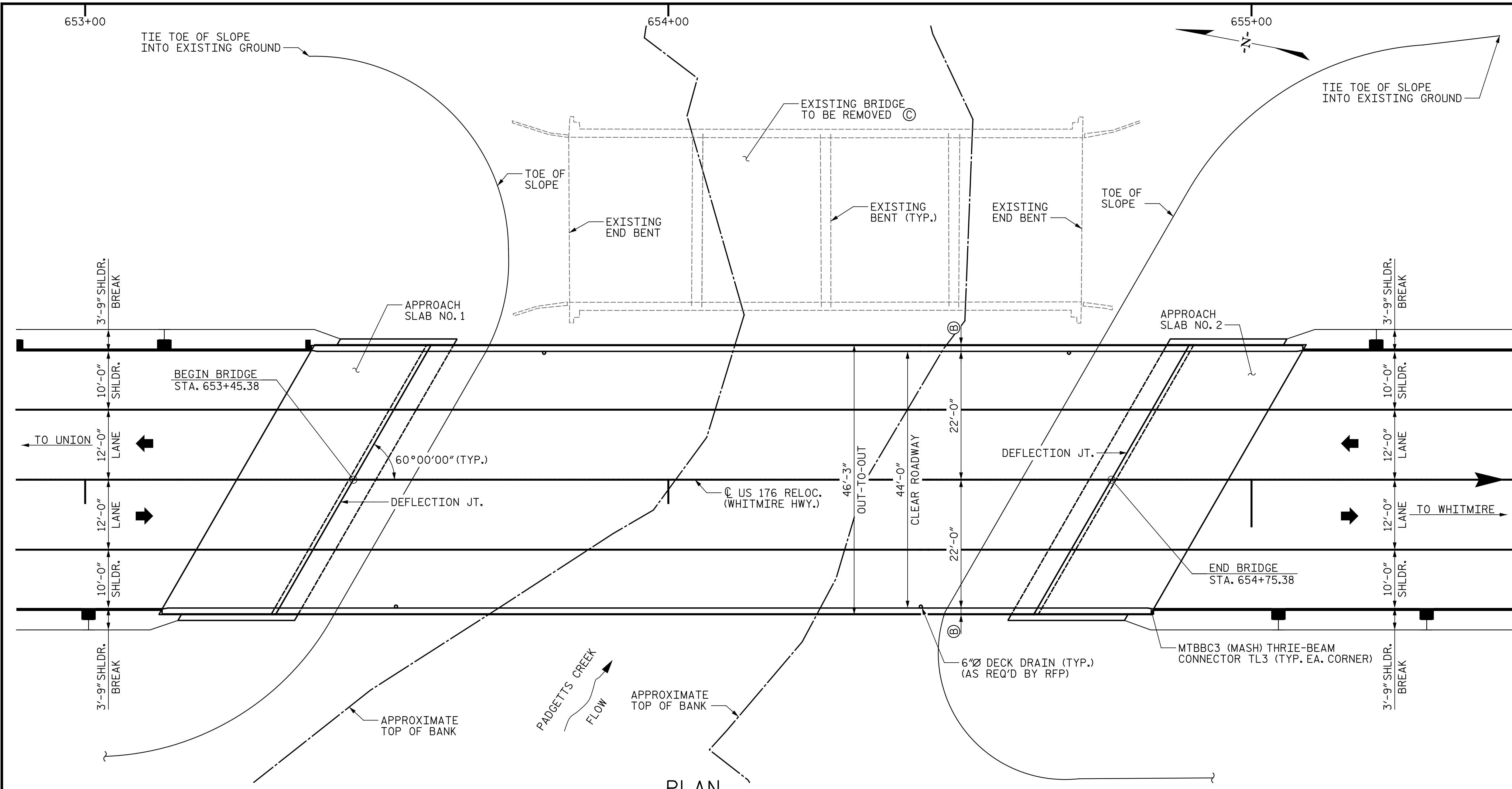
ENGINEER OF RECORD

**CONCEPTUAL
PLANS
NOT FOR
CONSTRUCTION**

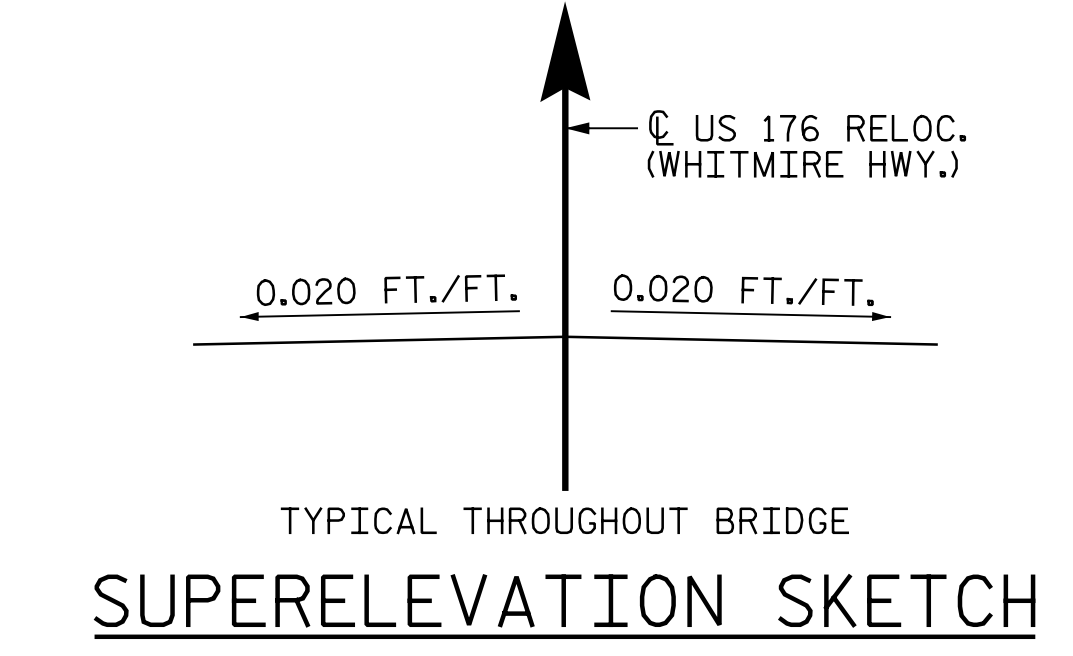
FOR CONSTRUCTION : _____ DATE _____

REVIEWED	DR.	RAM	JTE	DJS	03-23
	BY	CHK	DATE		

RMCKENNA
 03-21-23
 BP041234-B01_ls.dgn



- NOTES:
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1/2" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 33'-6" x 88'-0"± CONCRETE TEE BEAM BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.
- I - DENOTES INTEGRAL END BENT
 † - DENOTES NORMAL TO SKEW
- = EXCAVATE HATCHED AREA OF EXISTING BANK TO ALLOW FOR HYDRAULIC OPENING



HYDROLOGY DATA
 D.A. = 9.3 SQ. MILES
 Q_{.50} = 2,340 CFS
 VELOCITY_{.50} = 4.4 FPS
 AREA FURNISHED UNDER_{.50} = 811.0 SQ. FT.
 INCLUDING 0.50 FT. OF BACKWATER
 Q_{.100} = 2,720 CFS
 VELOCITY_{.100} = 4.6 FPS
 AREA FURNISHED UNDER_{.100} = 878.5 SQ. FT.
 INCLUDING 0.53 FT. OF BACKWATER

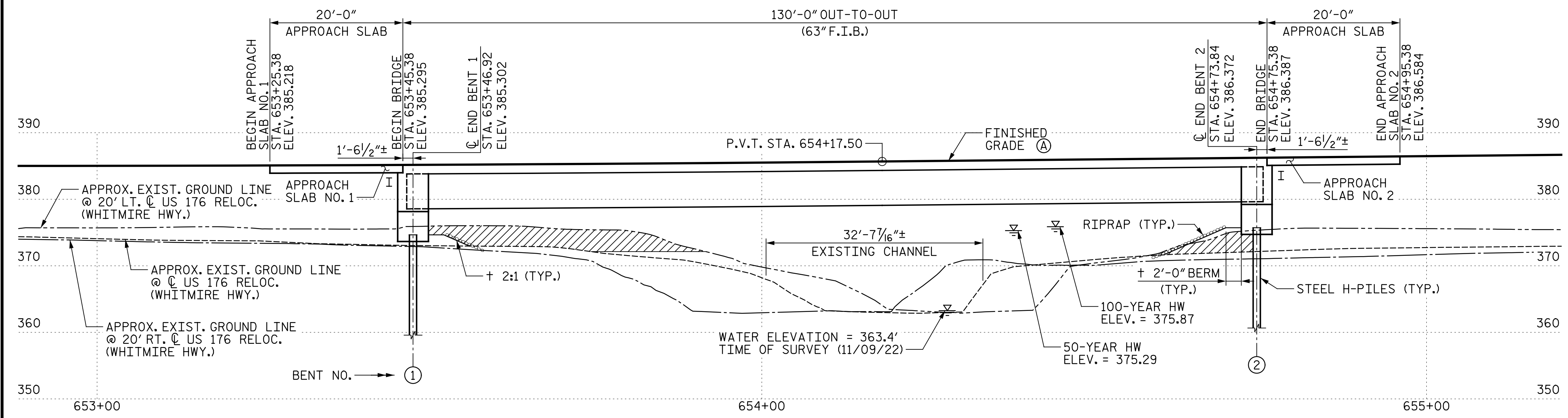
OVERTOPPING FLOOD
 Q > 3,670 CFS
 PROBABILITY < 0.2%

BENCHMARKS
 BM1 RR SPIKE IN PP BASE
 ELEVATION = 376.57'
 N 987729.600 E 1818044.900
 BM2 RR SPIKE IN PP BASE
 ELEVATION = 375.72'
 N 988032.100 E 1817985.000

VERTICAL CURVE DATA

VPI = 649+75.00	VPI = 659+50.00
Elev. = 381.45	Elev. = 391.07
V.C. = 885'	V.C. = 545'

(-) 5.50% (+) 0.99% (+) 4.97%



REV.			
REV.			
REV.			
REVIEWED	JTE	03-23	
QUAN.			
DR.	RAM	DJS	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS

HDR ENGINEERING INC.
 OF THE CAROLINAS
 1201 MAIN STREET
 SUITE 800
 COLUMBIA, SC 29201
 803-509-6600

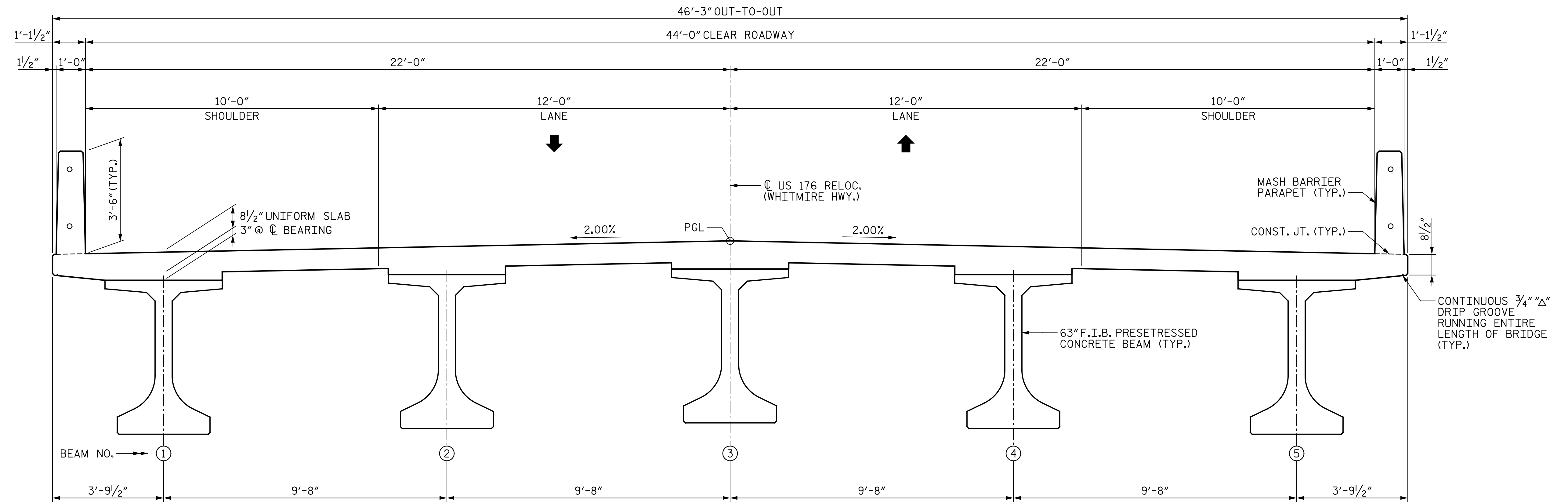
NOT FOR CONSTRUCTION

SOUTH CAROLINA
 DEPARTMENT OF TRANSPORTATION

BRIDGE PLAN AND PROFILE
 US 176 (WHITMIRE HWY.) BRIDGE REPLACEMENT
 OVER PADGETTS CREEK

COUNTY	UNION	ROUTE	US 176
--------	-------	-------	--------

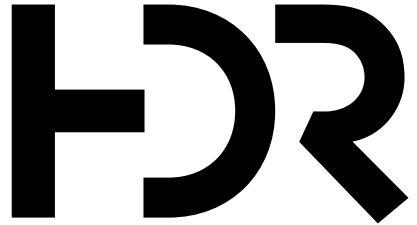
CADD FILE INFORMATION 1009337 AM
 PLOTTED DATE: 03-21-23
 FILE NAME: DPO41234-B01.bb.dgn



TYPICAL SECTION
(LOOKING IN DIRECTION OF STATIONING)

CADD FILE INFORMATION 10:09:56 AM
PLOTTED DATE: 03-21-23
FILE NAME: D:\P041234-B01.ss.dgn

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC. 29201 803-509-6600
	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE TYPICAL SECTION	
	US 176 (WHITMIRE HWY.) BRIDGE REPLACEMENT OVER PADGETTS CREEK	
	COUNTY UNION	ROUTE US 176

INDEX OF SHEETS

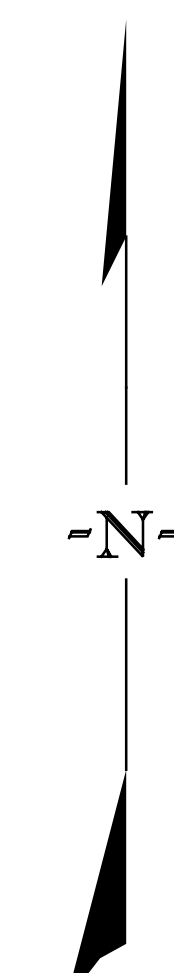
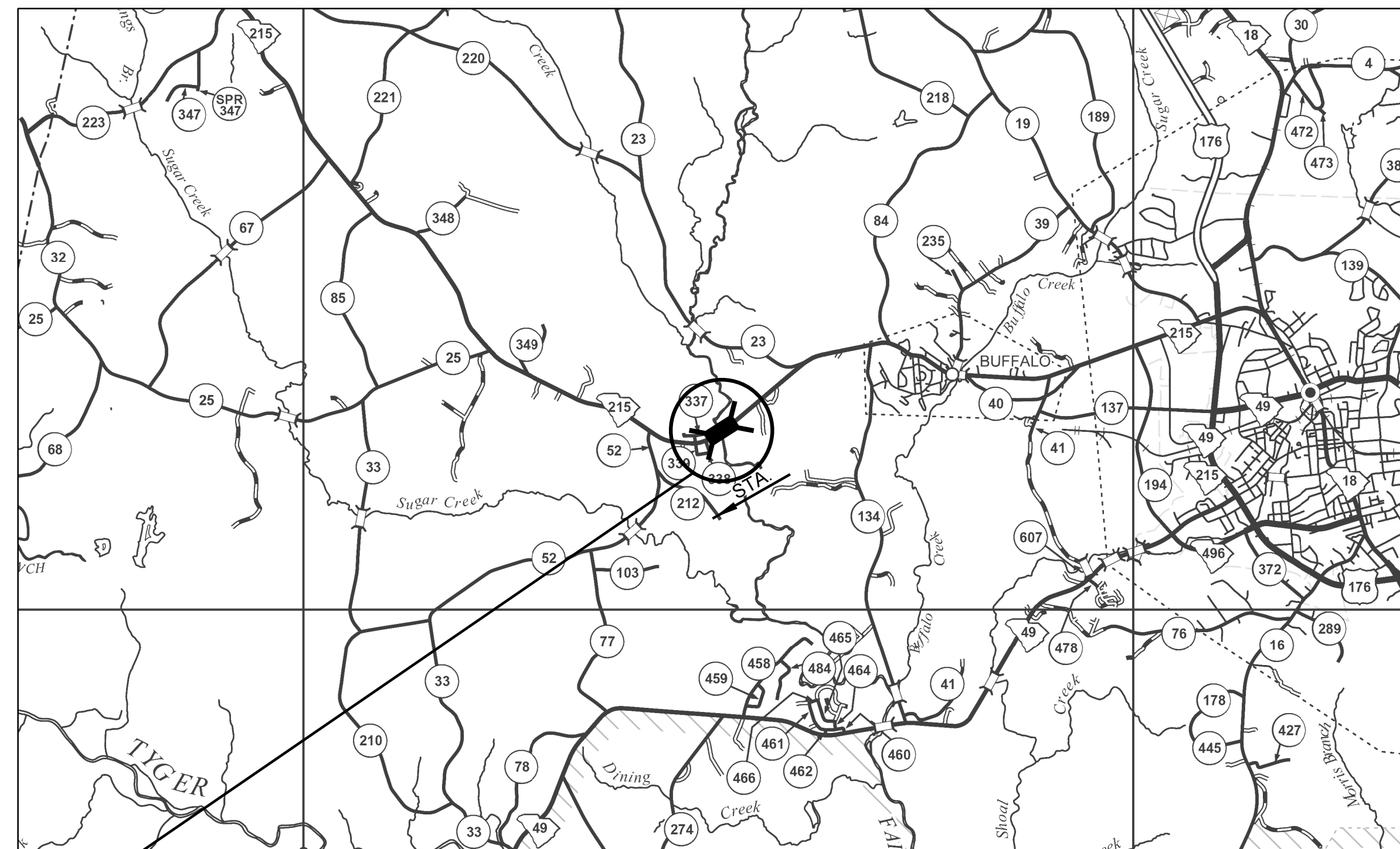
- 1 TITLE SHEET
- 2 BRIDGE PLAN AND PROFILE
- 3 BRIDGE TYPICAL SECTION



South Carolina Department of Transportation

PROPOSED PLANS FOR UNION COUNTY PROJECT ID P041236

STATE ROUTE SC 215 (BUFFALO WEST SPRINGS HWY.) REPLACE BRIDGE OVER FAIRFOREST CREEK



Approximate Location of Bridge is	
Latitude	34° 42' 59" N
Longitude	81° 42' 34" W

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA CALL 811 SOUTH CAROLINA 811 (SC811) WWW.SC811.COM ALL UTILITIES MAY NOT BE A MEMBER OF SC811
--

ASSET ID <u>NOT ASSIGNED</u>

TRAFFIC DATA	
2024	ADT 2,400 V.P.D.
*2044	ADT *3,200 V.P.D.
TRUCKS	6 %
*DESIGN TRAFFIC DATA	

SITE LOCATION

LAYOUT

NET LENGTH OF ROADWAY	0.000	MILES
NET LENGTH OF BRIDGES	0.056	MILES
NET LENGTH OF PROJECT	0.056	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.056	MILES

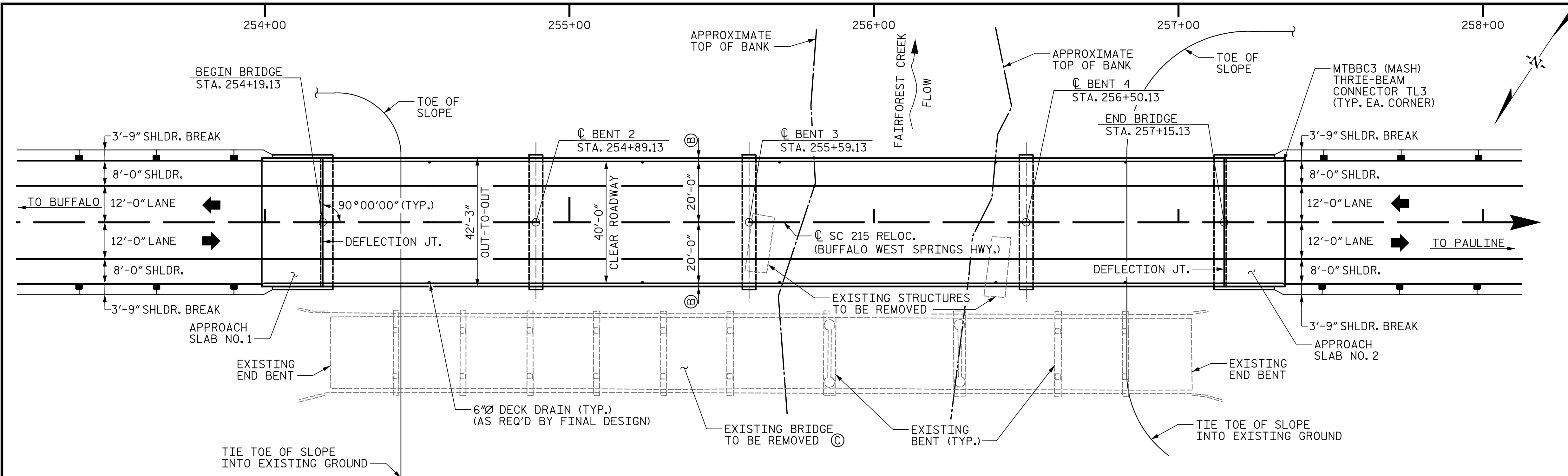
NOTE: EXCEPT AS MAY OTHERWISE BE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP ON THIS PROJECT SHALL CONFORM TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION) AND THE STANDARD DRAWINGS FOR ROAD CONSTRUCTION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

CONSULTING ENGINEERING FIRM
HDR

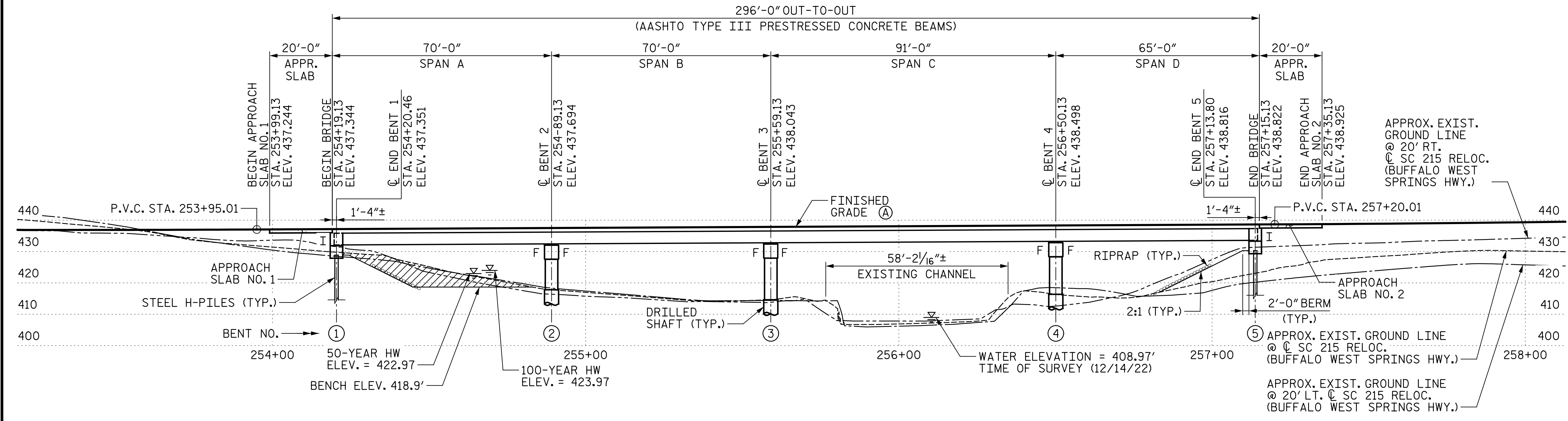
ENGINEER OF RECORD
CONCEPTUAL PLANS NOT FOR CONSTRUCTION
FOR CONSTRUCTION : _____ DATE _____

REVIEWED	DR.	RAM	JTE	DJS	03-23
	BY	CHK	DATE		

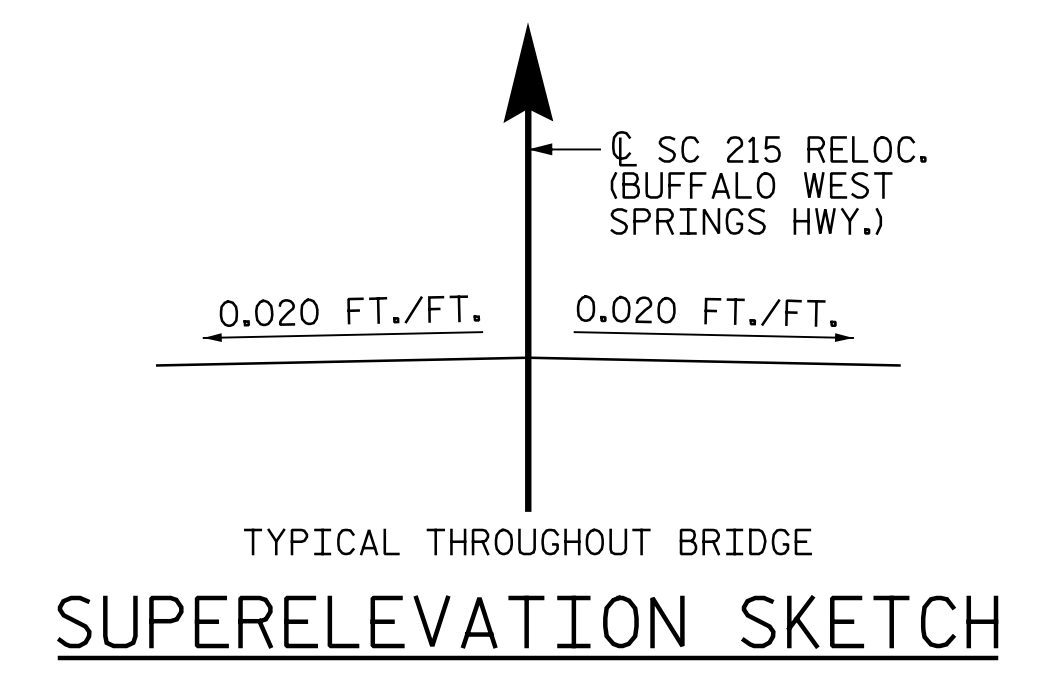
RMCKENNA
 02/22/23
 BP041236-B01_ls.dgn



PLAN
(NOTE: BRIDGE END DRAINAGE IS NOT SHOWN)



**SECTION ALONG C SC 215 RELOC.
(BUFFALO WEST SPRINGS HWY.)**



BENCHMARKS
 BM1 RR SPIKE IN PP BASE
 ELEVATION = 435.55'
 N 1049774.100 E 1786878.700
 BM2 RR SPIKE IN PP BASE
 ELEVATION = 435.02'
 N 1049616.200 E 1786636.400

HYDROLOGY DATA
 D.A. = 153 SQ. MILES
 Q₅₀ = 9,835 CFS
 VELOCITY₅₀ = 6.1 FPS
 AREA FURNISHED UNDER₅₀ = 1,925.0 SQ. FT.
 INCLUDING 0.4 FT. OF BACKWATER
 Q₁₀₀ = 11,327 CFS
 VELOCITY₁₀₀ = 6.3 FPS
 AREA FURNISHED UNDER₁₀₀ = 2,131.5 SQ. FT.
 INCLUDING 0.45 FT. OF BACKWATER

OVERTOPPING FLOOD
 Q > 14,881 CFS
 PROBABILITY < 0.2%

VERTICAL CURVE DATA

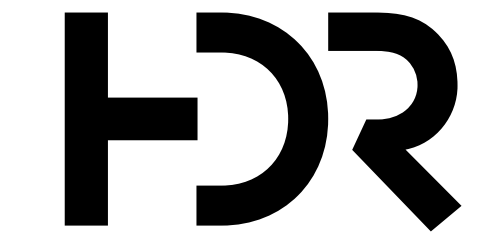
PVI = 251+90.01	PVI = 259+45.01
ELEV. 436.20	ELEV. 439.97
V.C. = 410'	V.C. = 450'

(-) 3.03% (+) 0.50% (+) 4.38%

- NOTES:**
- (A) PROPOSED PROFILE SET SO THAT THE LOW CHORD ELEVATION IS AT OR ABOVE THE EXISTING LOW CHORD ELEVATION.
 - (B) INCLUDES 1'-0" MASH BARRIER PARAPET AND 1/2" SLAB EXTENSION.
 - (C) REMOVE AND DISPOSE OF EXISTING 31'-6" x 284'-0"± CONCRETE TEE BEAM BRIDGE AND APPURTENANCES IN ACCORDANCE WITH SECTION 202.4.2 OF THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL REQUIREMENTS.
- F - DENOTES FIXED BEARING
 I - DENOTES INTEGRAL END BENT
 [Hatched Area] = EXCAVATE HATCHED AREA

REV.			
REV.			
REV.			
REVIEWED	JTE	03-23	
QUAN.			
DR.	RAM	DJS	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS



HDR ENGINEERING INC.
OF THE CAROLINAS
1201 MAIN STREET
SUITE 800
COLUMBIA, SC 29201
803-509-6600

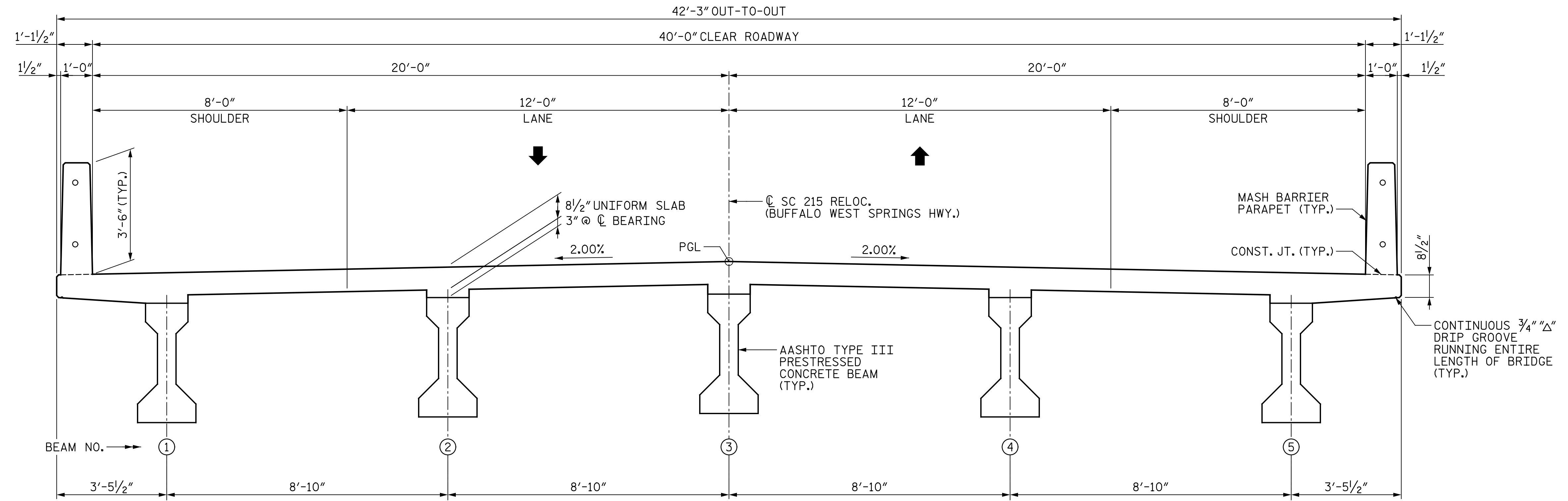
NOT FOR CONSTRUCTION

SOUTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BRIDGE PLAN AND PROFILE
 SC 215 (BUFFALO WEST SPRINGS HWY.) BRIDGE
 REPLACEMENT OVER FAIRFOREST CREEK

COUNTY	ROUTE
UNION	SC 215

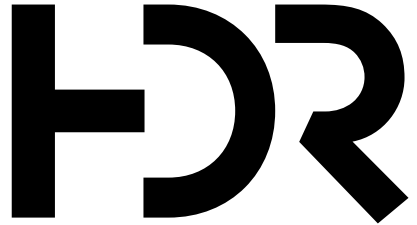
CADD FILE INFORMATION 5:34:11 PM
 PLOTTED DATE: 03-05-23
 FILE NAME: P041236-B01.bb.dgn



TYPICAL SECTION
(LOOKING IN DIRECTION OF STATIONING)

CADD FILE INFORMATION 11/31/16 AM
PLOTTED DATE: 02-21-23
FILE NAME: D:\P041236-B01.ss.dgn

REV.			
REV.			
REV.			
REVIEWED	DJS	03-23	
QUAN.			
DR.	RAM	JTE	03-23
DES.			
BY	CHK.	DATE	

CONCEPTUAL PLANS		HDR ENGINEERING INC. OF THE CAROLINAS 1201 MAIN STREET SUITE 800 COLUMBIA, SC, 29201 803-509-6600
	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NOT FOR CONSTRUCTION	BRIDGE TYPICAL SECTION	
	SC 215 (BUFFALO WEST SPRINGS HWY.) BRIDGE REPLACEMENT OVER FAIRFOREST CREEK	
	COUNTY UNION	ROUTE SC 215