

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	1
FEDERAL AID PROJECT		ILLINOIS	CONTRACT NO. 95951	

04-26-2024 LETTING ITEM 218

SEE SHEET 2 FOR INDEX OF SHEETS AND LIST OF ILLINOIS DOT HIGHWAY STANDARDS

UTILITY CONTACTS:

UTILITY TYPE:

ELECTRIC
AMEREN ILLINOIS (SOUTH)
ATTN: SAM KASSING
PHONE: (618) 972-1965

UTILITY TYPE:

TELEPHONE
ILLINOIS CONSOLIDATED TELEPHONE
ATTN: WES CHAMBERS
PHONE: (217) 235-3355

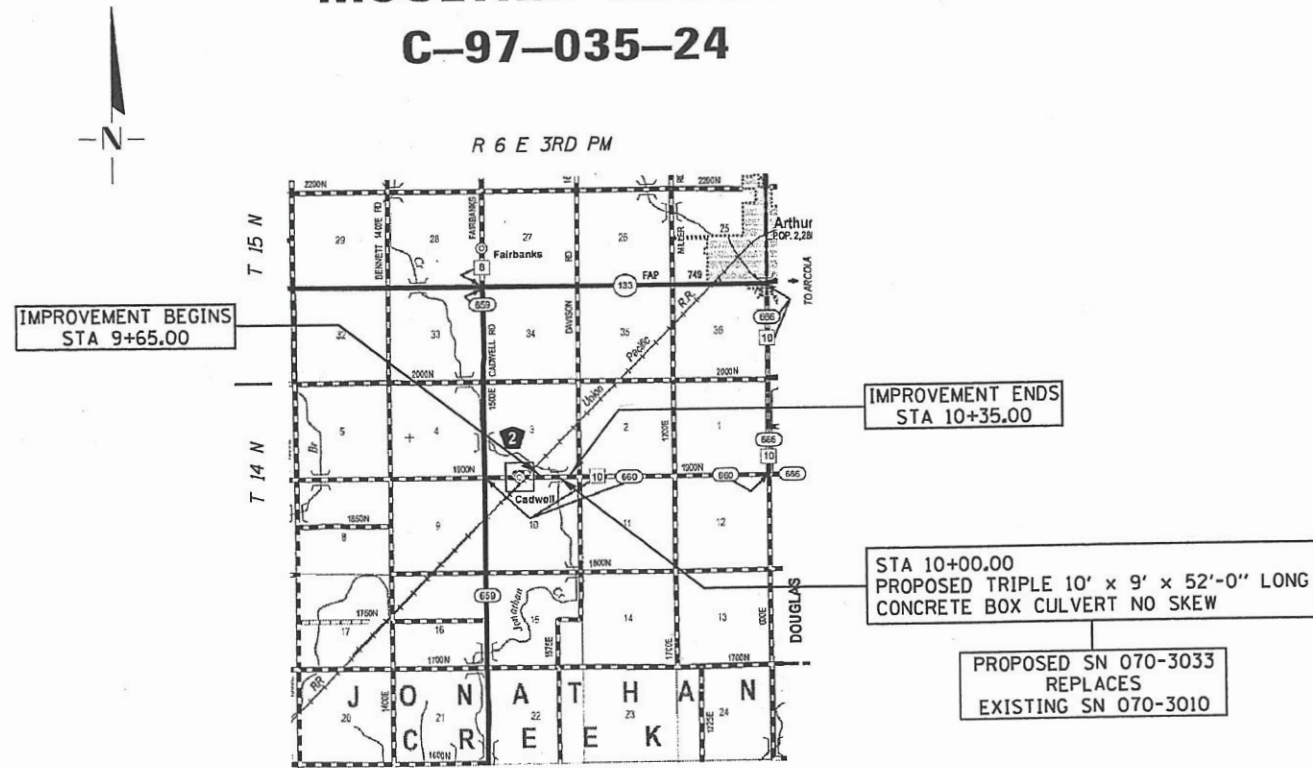
UTILITY TYPE:

WATER
MOULTRIE COUNTY RURAL PUBLIC WATER DISTRICT
PHONE: (217) 728-8842

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL-AID PROJECT
HSIP FUNDS

FAS 660 (CH 10)
SECTION 21-00081-01-DR
PROJECT NO. 04P1(736)
MOULTRIE COUNTY
C-97-035-24

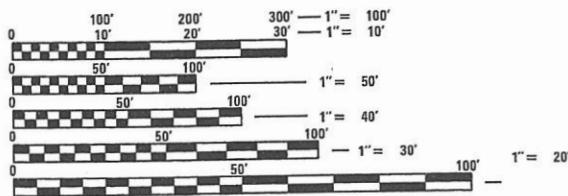


LAYOUT

Net Length of Section = 70.00 Feet = 0.013 Miles



FUNCTIONAL CLASSIFICATION : MAJOR COLLECTOR
DESIGN SPEED 50 MPH
CURRENT ADT= 1000 (2020)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

CONTRACT NO. 95951



Kimberly S. Cummins 2-20-24
ILLINOIS PROFESSIONAL NO. 56816
(Expires 11/30/25)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED February 21, 2024

PASSED 02/22/24

RELEASED FOR BID BASED ON LIMITED REVIEW 02/29/24

MOULTRIE COUNTY ENGINEER

DISTRICT SEVEN ENGINEER OF LOCAL ROADS AND STREETS

REGION FOUR ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	TITLE
1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND FIELD TILE JUNCTION VAULTS DETAIL
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5	SCHEDULES OF QUANTITIES
6	ALIGNMENT, BENCHMARKS, AND CROSS TIES
7	PLAN AND PROFILE
8-II	CULVERT PLANS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
701901-09	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

GENERAL NOTES

- ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE EDITION, AS INDICATED BY THE SUB-NUMBER, LISTED IN THE INDEX OF SHEETS, OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- THE THICKNESS OF HOT-MIX ASPHALT MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIX ASPHALT MIXTURE IS PLACED.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON NAVD 88 DATUM.
- WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE TYPE OF WORK ENCOUNTERED.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AND AS DIRECTED BY THE ENGINEER. SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION.
- THE FINISHED GROUND, WHERE EXISTING SOIL HAS BEEN DISTURBED DURING CONSTRUCTION, SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF POROUS GRANULAR EMBANKMENT.
- ALL EARTHWORK OUTSIDE OF THE ROADWAY SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE BOX CULVERT.
- THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

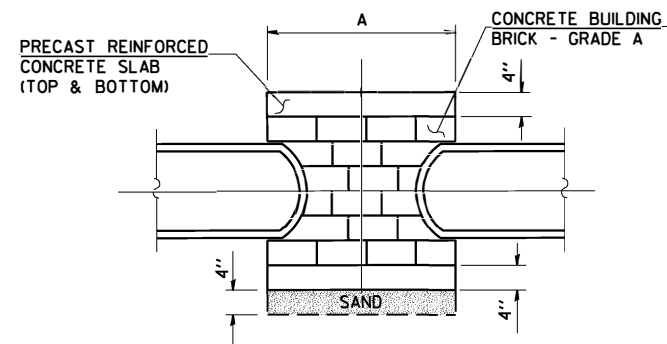
Location	CH 10 Binder	CH 10 Surface
Mixture Use	PG 64-22	PG 64-22
DESIGN AIR Voids %	4.0 @ Ndes=70	4.0 @ Ndes=70
Mix Comp (Gradation)	IL-19.0	IL-9.5
Friction Aggregate	N.A.	Mix "C"
Mixture Weight	112	112

APPLICATION RATES USED IN QUANTITY CALCULATIONS

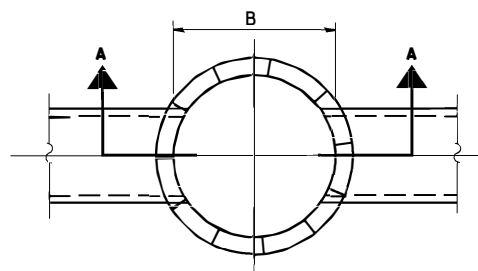
TEMPORARY EROSION CONTROL SEEDING _____ 100 LBS/ACRE
 GRANULAR MATERIALS _____ 2.05 TONS/CU YD
 RIPRAP _____ 1.5 TONS/CU YD
 HOT MIX ASPHALT _____ 112 LBS/SQ YD/INCH
 BITUMINOUS MATERIALS (TACK COAT) ON HMA _____ 0.025 LBS/SQ FT
 BITUMINOUS MATERIALS (TACK COAT) ON AGG _____ 0.250 LBS/SQ FT

COMMITMENTS

NONE AT THIS TIME



SECTION A-A



PLAN

TABLE FOR DIMENSIONS

J. BOX	A	B
2' DIA	3'-0"	2'-0"
3' DIA	4'-0"	3'-0"
4' DIA	5'-0"	4'-0"

2' DIAMETER JUNCTION BOX FOR USE WITH PIPE DRAINS HAVING INSIDE DIAMETERS OF 6" THROUGH 10".

3' DIAMETER JUNCTION BOX FOR USE WITH PIPE DRAINS HAVING INSIDE DIAMETERS OF 12" THROUGH 18".

4' DIAMETER JUNCTION BOX FOR USE WITH PIPE DRAINS HAVING INSIDE DIAMETER OF 21" AND 24".

THE PRECAST CONCRETE SLAB SHALL BE CONSTRUCTED OF CLASS PC CONCRETE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 504 OF THE STANDARD SPECIFICATIONS.

FOR JUNCTION BOXES REQUIRING A TYPE 1 FRAME WITH A CLOSED LID, THE COST OF FURNISHING A TYPE 1 FRAME WITH CLOSED LID SHALL BE INCLUDED WITH THE PAY ITEM FOR FIELD TILE JUNCTION VAULTS OF THE SIZE SPECIFIED.

DETAIL OF FIELD TILE JUNCTION VAULTS

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 PLOT DATE = 2/27/2024

DESIGNED - CDS
 DRAWN - DJR
 CHECKED - CGF
 DATE - 12/13/2023

REVISED -
 REVISED -
 REVISED -
 REVISED -

CH 10 IMPROVEMENTS

INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND FIELD TILE JUNCTION VAULTS DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	2
				CONTRACT NO. 95951
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20700220	POROUS GRANULAR EMBANKMENT	CU YD	180
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	17
28000500	INLET AND PIPE PROTECTION	EACH	4
35101400	AGGREGATE BASE COURSE, TYPE B	TON	78
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	462
40603085	HOT MIX ASPHALT BINDER COURSE, 1L-19.0, N70	TON	60
40604052	HOT MIX ASPHALT SURFACE COURSE, 1L-9.5, MIX "C", N70	TON	17
44000100	PAVEMENT REMOVAL	SQ YD	171
48101200	AGGREGATE SHOULDERS, TYPE B	TON	36
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	70
50800105	REINFORCEMENT BARS	POUND	42,150
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	204.6

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	248
60100945	PIPE DRAINS 12"	FOOT	105
60100965	PIPE DRAINS 18"	FOOT	195
61133200	FIELD TILE JUNCTION VAULTS, 3' DIA.	EACH	3
63200310	GUARDRAIL REMOVAL	FOOT	88
67100100	MOBILIZATION	L SUM	1
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25
X2810808	STONE DUMPED RIPRAP, CLASS A4 (SPECIAL)	TON	180
X5810103	WATERPROOFING MEMBRANE SYSTEM FOR BURIED STRUCTURES	SQ YD	195
X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1

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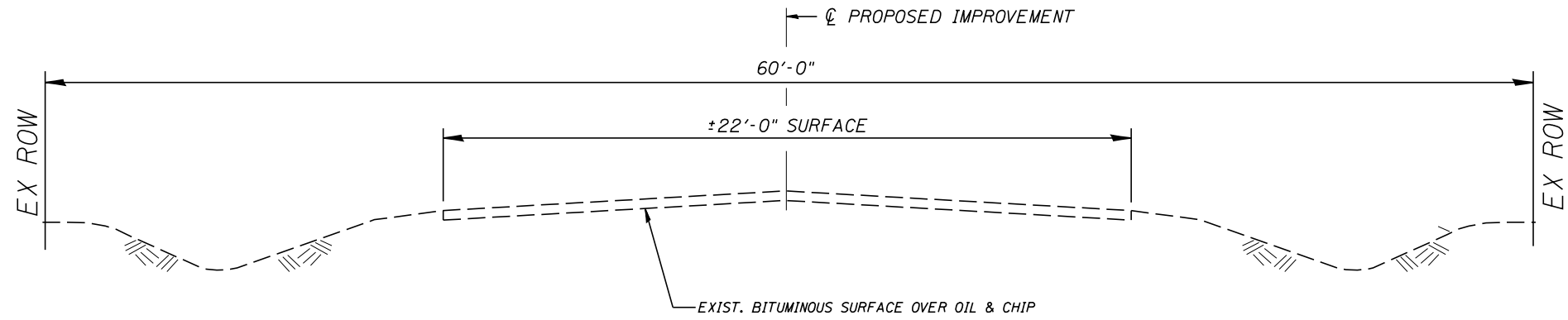
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CH 10 IMPROVEMENTS

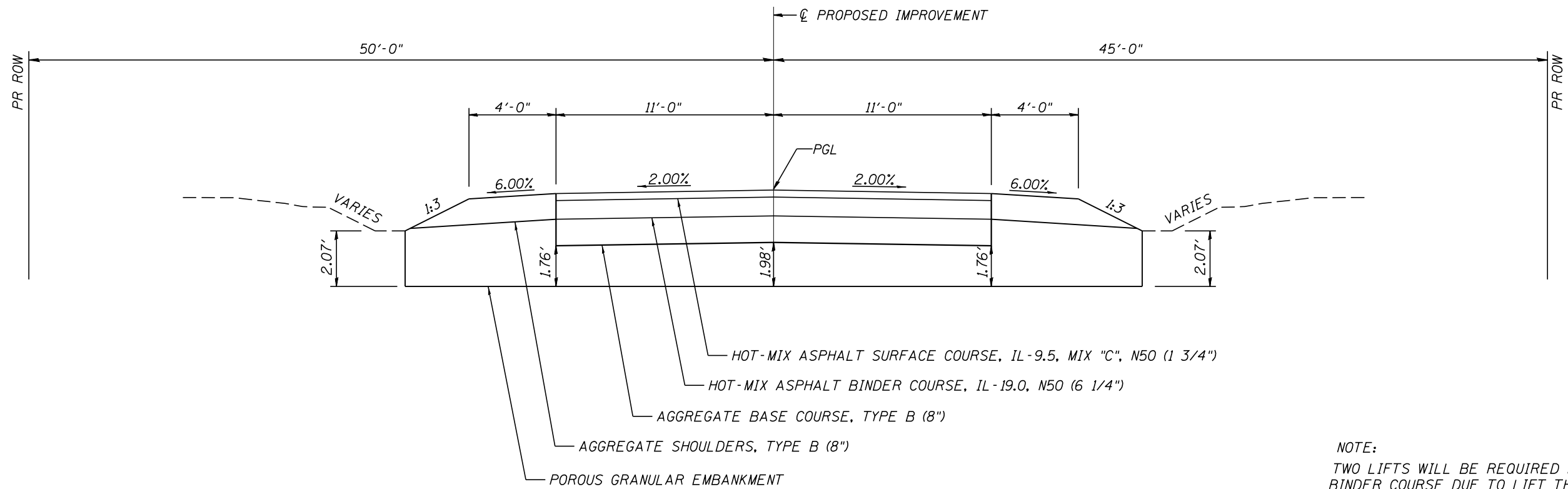
SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	3
CONTRACT NO. 95951			ILLINOIS FED. AID PROJECT	



EXISTING TYPICAL SECTION
STA 9+65.00 TO STA 10+35.00



PROPOSED TYPICAL SECTION
STA 9+65.00 TO STA 10+35.00

NOTE:
TWO LIFTS WILL BE REQUIRED FOR THE BINDER COURSE DUE TO LIFT THICKNESS.

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CEC Cummins
Engineering
Corporation
ENGINEERS & SURVEYORS

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DATE - 12/13/2023

REVISED -
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CH 10 IMPROVEMENTS

TYPICAL SECTIONS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	4
CONTRACT NO. 95951				
ILLINOIS FED. AID PROJECT				

20700220 POROUS GRANULAR EMBANKMENT				
LOCATION	WIDTH	DEPTH	CU YD	
	FOOT	FOOT		
LT STA 9+65.00 TO STA 10+35.00	6	VARIES FROM 2.07' TO 2.43'	36.6	
STA 9+65.00 TO STA 10+35.00	22	VARIES FROM 1.76' TO 1.98'	106.7	
RT STA 9+65.00 TO STA 10+35.00	6	VARIES FROM 2.43' TO 2.07'	36.6	
TOTAL			179.9	
USE			180	

28000250 TEMPORARY EROSION CONTROL SEEDING		
LOCATION	POUND	
LT STA 9+60.00 TO STA 10+65.00	7	
RT STA 9+60.00 TO STA 11+00.00	10	
TOTAL	17	

28000500 INLET AND PIPE PROTECTION		
LOCATION	EACH	
RT STA 9+50.00	1	
LT STA 9+60.00	1	
LT STA 10+62.00	1	
RT STA 10+98.00	1	
TOTAL	4	

35101400 AGGREGATE BASE COURSE, TYPE B			
LOCATION	WIDTH	TON	
	FOOT		
STA 9+65.00 TO STA 10+35.00	22	77.95	
TOTAL		77.95	
USE		78	

40600290 BITUMINOUS MATERIALS (TACK COAT)					
LOCATION	NUMBER OF APPLICATIONS	RATE	WIDTH	POUND	
		LB/SQ FT	FOOT		
ON HMA					
STA 9+65.00 TO STA 10+35.00	2	0.025	22	77	
ON AGG					
STA 9+65.00 TO STA 10+35.00	1	0.250	22	385	
TOTAL				462	

40603085 HOT MIX ASPHALT BINDER COURSE, IL-19.0, N70			
LOCATION	WIDTH	TON	
	FOOT		
STA 9+65.00 TO STA 10+35.00	22	59.89	
TOTAL		59.89	
USE		60	

40604052 HOT MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70			
LOCATION	WIDTH	TON	
	FOOT		
STA 9+65.00 TO STA 10+35.00	22	16.77	
TOTAL		16.77	
USE		17	

44000100 PAVEMENT REMOVAL			
LOCATION	WIDTH	SQ YD	
	FOOT		
STA 9+65.00 TO STA 10+35.00	22	171.11	
TOTAL		171.11	
USE		171	

48101200 AGGREGATE SHOULDERS, TYPE B			
LOCATION	THICKNESS	TON	
	INCH		
LT STA 9+65.00 TO STA 10+35.00	8	17.72	
RT STA 9+65.00 TO STA 10+35.00	8	17.72	
TOTAL		35.43	
USE		36	

50105220 PIPE CULVERT REMOVAL			
LOCATION	TYPE	FOOT	
RT STA 10+20.30 TO STA 10+90.00	18" CMP	70	
TOTAL		70	

60100945 PIPE DRAINS 12"		
LOCATION	FOOT	
RT STA 9+50.00 TO STA 9+80.00	40	
LT STA 10+18.00 TO STA 10+50.00	40	
RT STA 10+20.00 TO STA 10+40.00	25	
TOTAL	105	

60100965 PIPE DRAINS 18"		
LOCATION	FOOT	
RT STA 9+50.00 TO STA 9+80.00	35	
LT STA 9+60.00 TO STA 9+80.00	30	
LT STA 10+18.00 TO STA 10+62.00	50	
RT STA 10+20.00 TO STA 10+98.00	80	
TOTAL	195	

61133200 FIELD TILE JUNCTION VAULTS, 3' DIA.		
LOCATION	EACH	
RT STA 9+50.00	1	
RT STA 10+40.00	1	
LT STA 10+50.00	1	
TOTAL	3	

63200310 GUARDRAIL REMOVAL		
LOCATION	FOOT	
LT STA 9+79.70 TO STA 10+20.20	37.5	
RT STA 9+67.30 TO STA 10+20.90	50.0	
TOTAL	87.5	
USE	88	

X2501000 SEEDING, CLASS 2 (SPECIAL)		
LOCATION	ACRE	
LT STA 9+60.00 TO STA 10+65.00	0.07	
RT STA 9+60.00 TO STA 11+00.00	0.10	
TOTAL	0.17	
USE	0.25	

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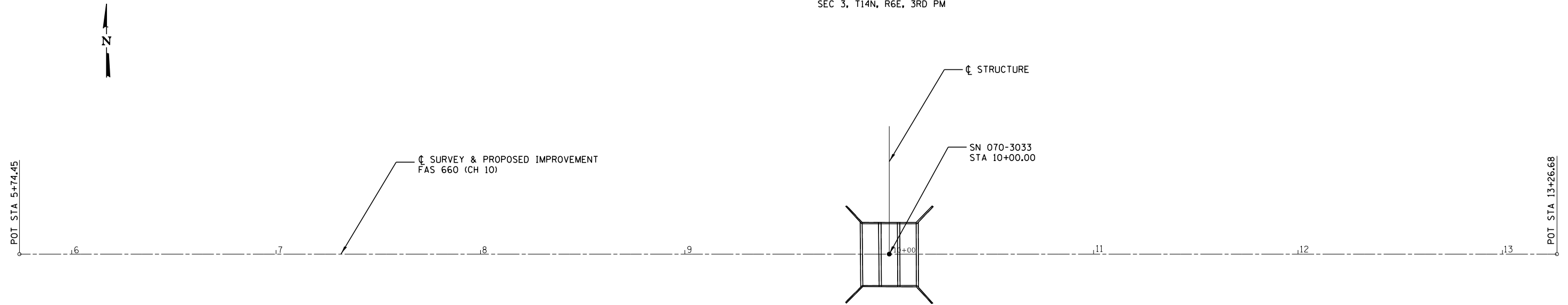
CH 10 IMPROVEMENTS

SCHEDULES OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	5
CONTRACT NO. 95951				
ILLINOIS FED. AID PROJECT				

SEC 3, T14N, R6E, 3RD PM



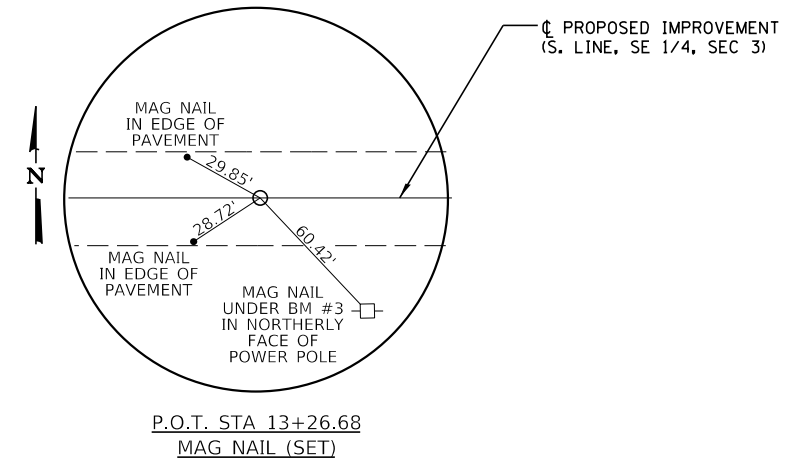
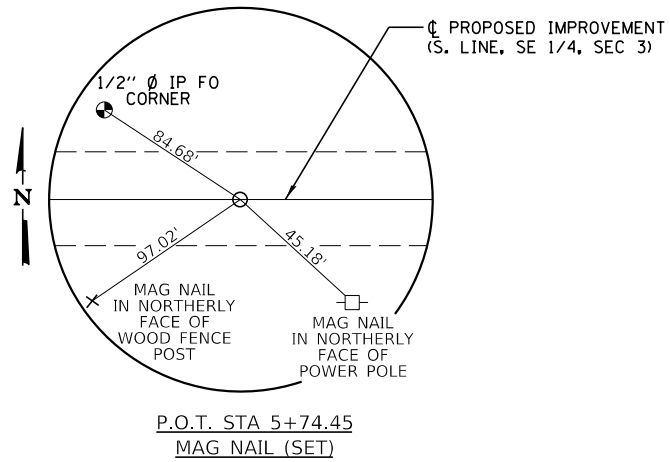
SEC 10, T14N, R6E, 3RD PM

BM#1 - CHISELED "X" ON TOP OF 12" RCP
 STA. 6+61, 22' RT
 ELEV. 666.46

BM#2 - MAG NAIL IN NORTHERLY FACE OF POWER POLE
 STA. 9+70, 27' RT
 ELEV. 664.80

BM#3 - SURVEY SPIKE IN NORTHERLY FACE OF POWER POLE
 STA. 13+80, 29' RT
 ELEV. 664.61

CENTERLINE PROPOSED IMPROVEMENT			
CONTROL POINT	STATION	COORDINATES	
		NORTHING	EASTING
P.O.T	5+74.45	1097650.96	932902.12
P.O.T.	13+26.68	1097648.01	933654.34



CH 10 IMPROVEMENTS

ALIGNMENT, BENCHMARKS, AND CROSS TIES

SCALE: SHEET OF SHEETS STA. TO STA.

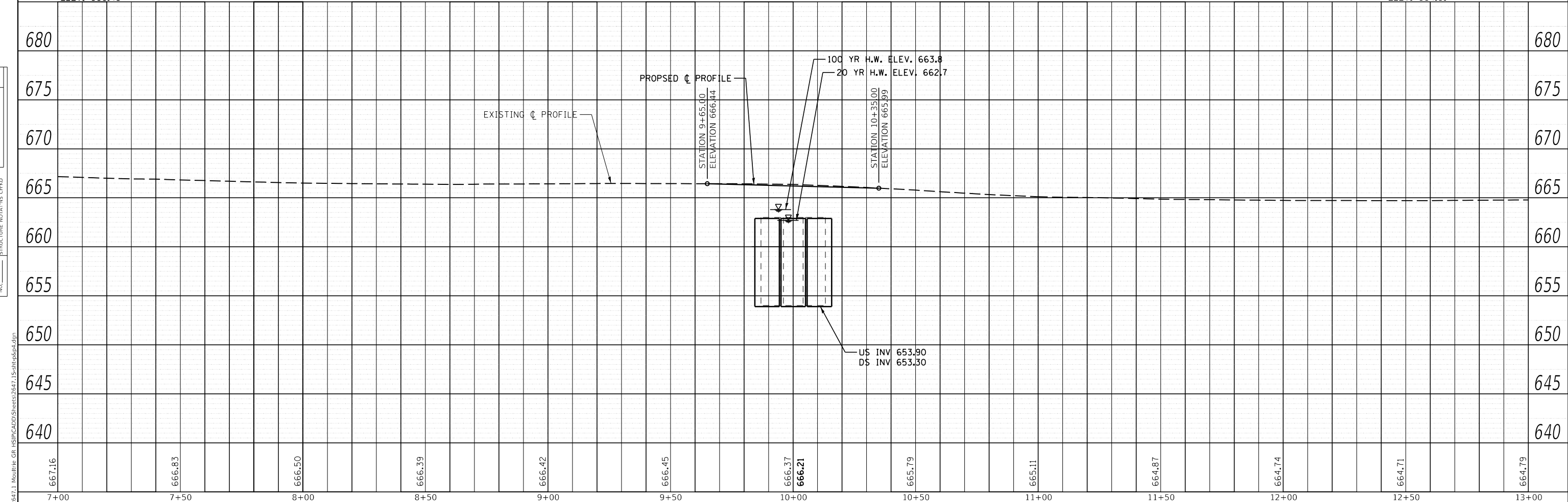
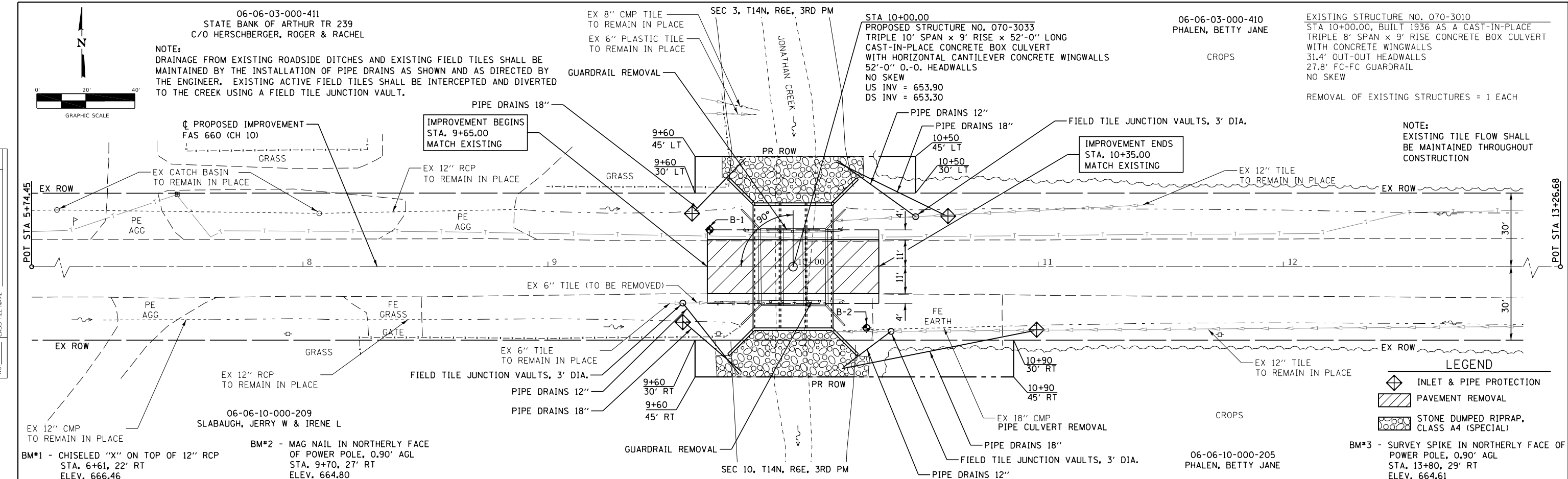
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 95951	

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DATE	
BY	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
NOTE BOOK NO.	
CADD FILE NAME	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.	
NO.	



7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00
667.16	666.83	666.50	666.39	666.42	666.45	666.37 666.21	665.79	665.11	664.87	664.74	664.71	664.79

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

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CH 10 IMPROVEMENTS

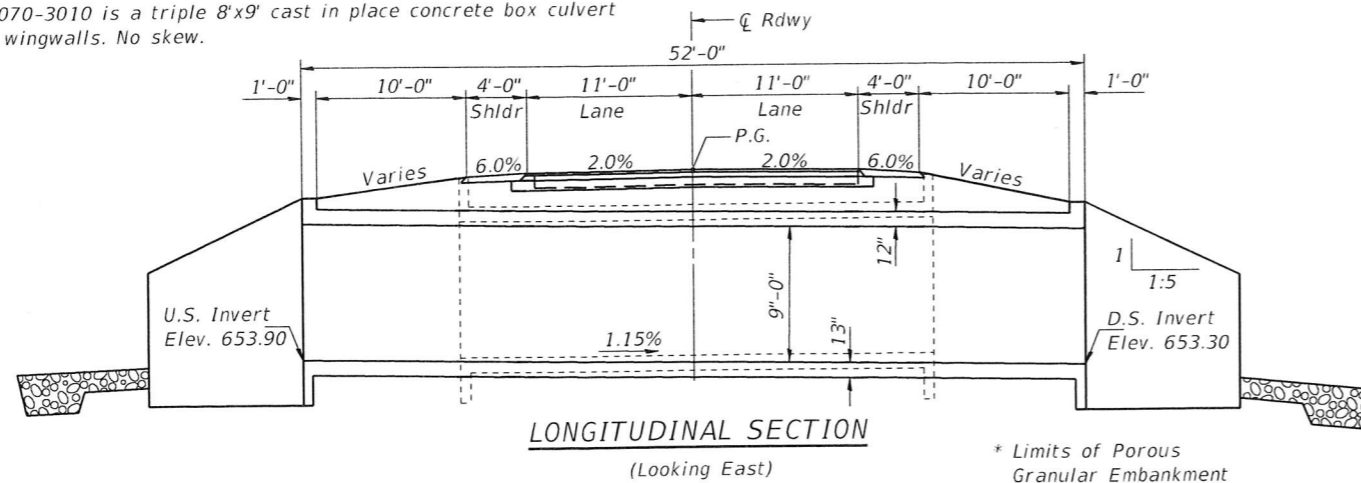
PLAN AND PROFILE	
SCALE: 1" = 40'	SHEET OF SHEETS STA. 7+00.00 TO STA. 13+00.00

F.A.S. RTE. 660	SECTION 21-00081-01-DR	COUNTY MOULTRIE	TOTAL SHEETS 11	SHEET NO. 7
CONTRACT NO. 95951				
ILLINOIS FED. AID PROJECT				

Benchmark: #2 Mag Nail in Power Pole Sta. 9+69.69, 27.24' Rt. Elev. 664.80

Existing S.N. 070-3010 is a triple 8'x9' cast in place concrete box culvert with concrete wingwalls. No skew.

No Salvage



LONGITUDINAL SECTION
(Looking East)

* Limits of Porous Granular Embankment

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2-3 Culvert Details
- 4 Soil Boring Logs

JONATHAN CREEK
BUILT 20__ BY
MOULTRIE COUNTY
SEC. 21-00081-01-DR
STA. 10+00
STR. NO. 070-3033 LOADING HL-93

LETTERING FOR NAME PLATE
See Std. 515001

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

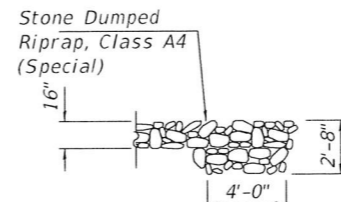
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

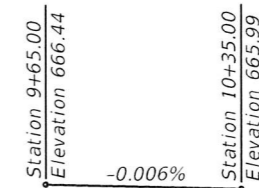
DESIGN STRESSES

FIELD & EXISTING UNITS

$f'_c = 3,500$ psi (Substructure)
 $f_y = 60,000$ psi (Reinforcement)



SECTION B-B

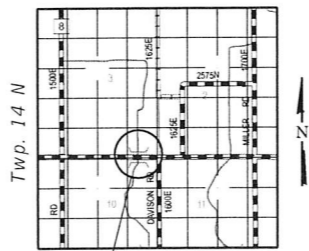


PROFILE GRADE

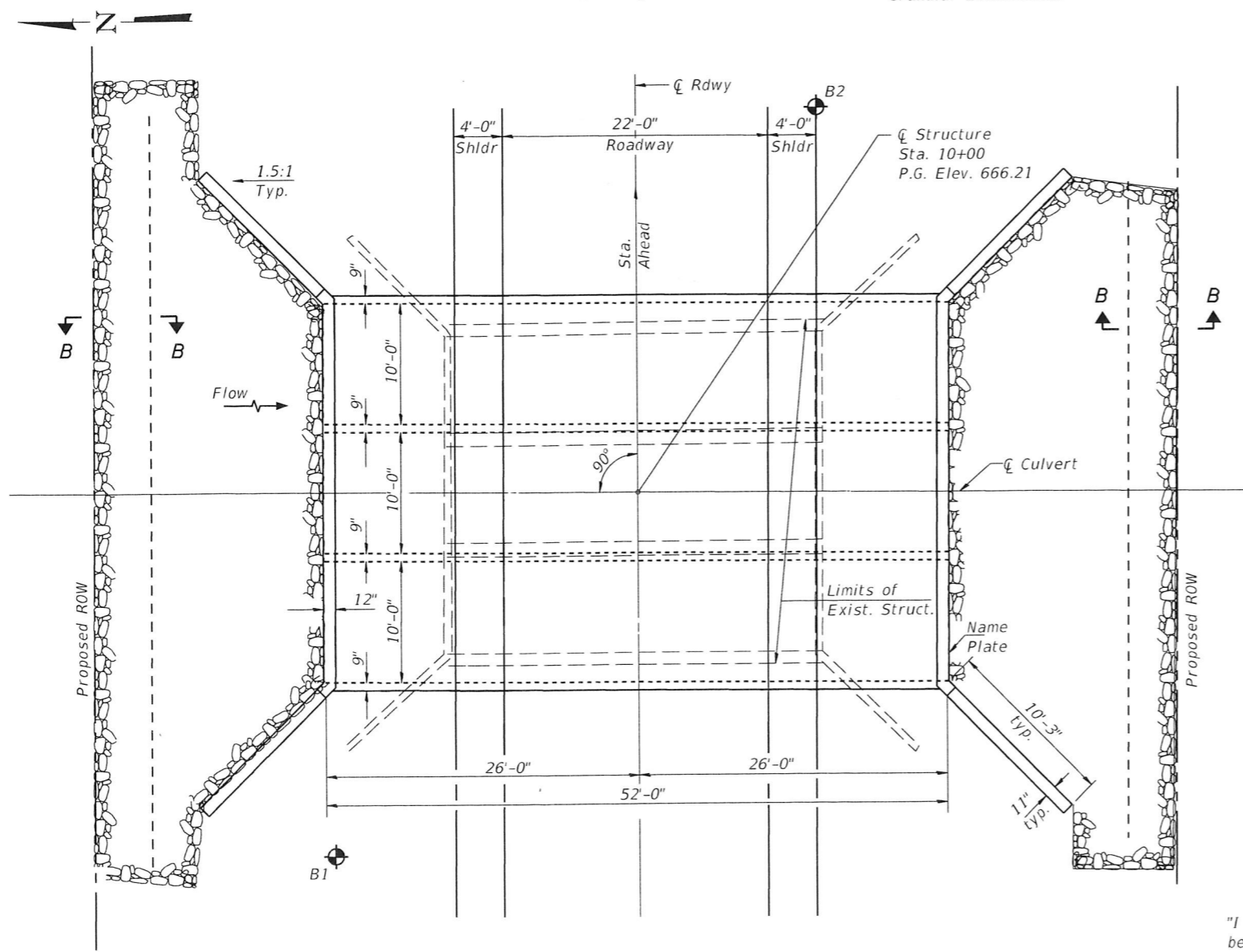
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Structures	Each	1
Concrete Box Culverts	Cu. Yd.	204.6
Reinforcement Bars	Pound	42150
Name Plates	Each	1
Stone Dumped Riprap, Class A4 (Special)	Ton	180
Controlled Low-Strength Material	Cu. Yd.	248
Waterproofing Membrane System for Buried Structures	Sq. Yd.	195

Range 6 E, 2nd P.M.



LOCATION SKETCH



PLAN

WATERWAY INFORMATION

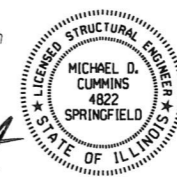
Drainage Area = 11.7 sq.mi. Exist. Low Grade Elevation = ± 664.7 ft. @ Sta. 12+50.00

Flood	Freq. Yr.	Dis. C.F.S.	Waterway Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
			Existing	Proposed		Exist.	Prop.	Exist.	Prop.
Design	20	1,168	210	264	662.7	0.6	0.3	663.3	663.0
Base	100	1,700	216	270	663.8	1.3	0.9	665.1	664.7
Scour	200	1,942	216	270	664.2	1.3	1.0	665.5	665.2
Max.	200	2,260	216	270	664.6	1.3	1.0	665.9	665.6

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Bridge Design Specifications'."

Michael D. Cummins 2-27-24

ILLINOIS STRUCTURAL NO. 4822 (Expires 11/30/24)



GENERAL PLAN AND ELEVATION
CH 10 OVER JONATHAN CREEK

SECTION 21-00081-00-DR

MOULTRIE COUNTY

STA 10+00

STRUCTURE NO. 070-3033



JOB = 2647.15	DESIGNED - AAN	REVISED -
FILE = 070-3033-GPE.dgn	CHECKED - MDC	REVISED -
DATE = 10/17/2023	DRAWN - DJR	REVISED -
	CHECKED - AAN	REVISED -

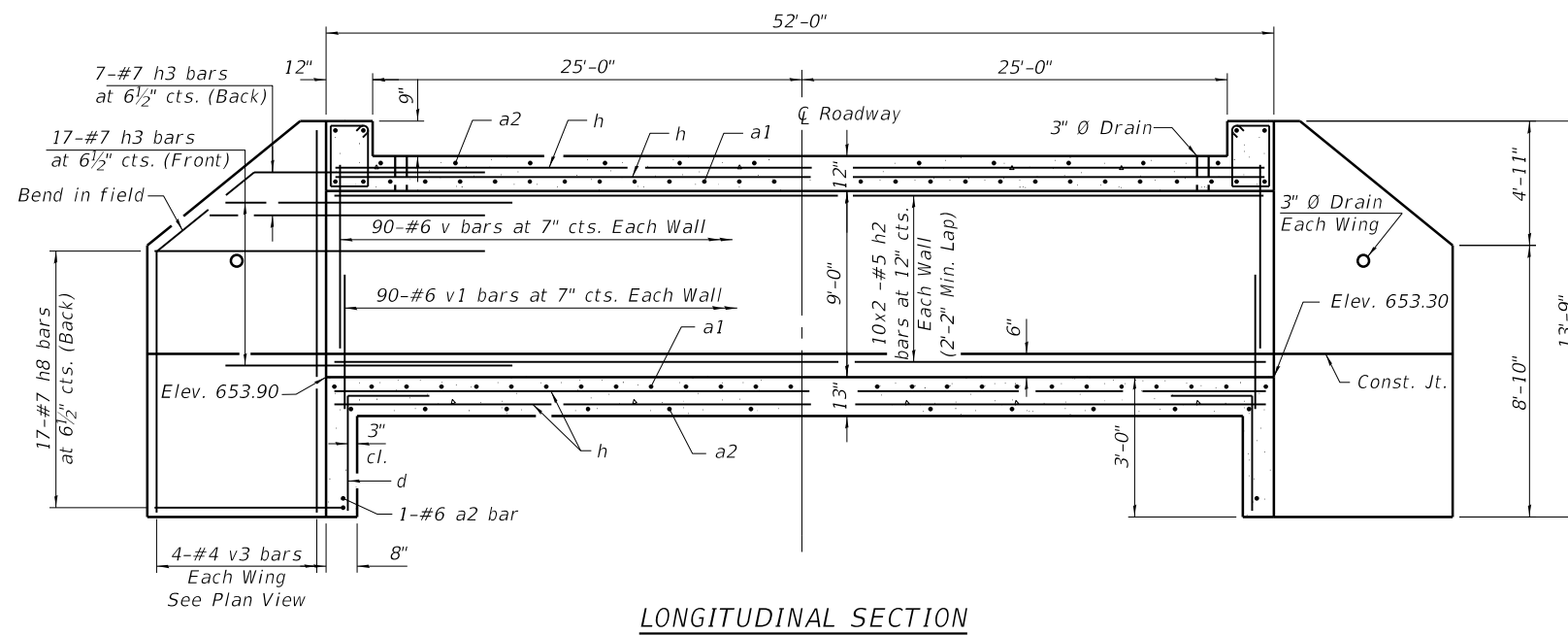
CH 10 IMPROVEMENTS

GENERAL PLAN AND ELEVATION

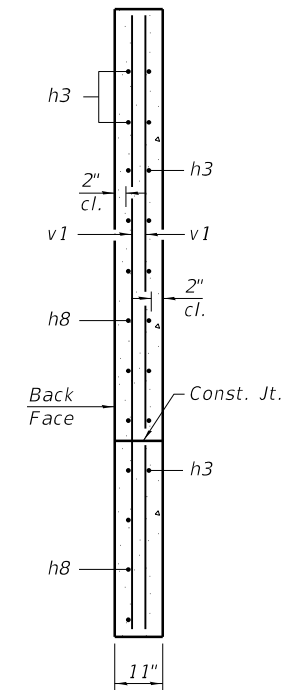
SHEET NO. 1 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	8

CONTRACT NO. 95951
ILLINOIS FED. AID PROJECT



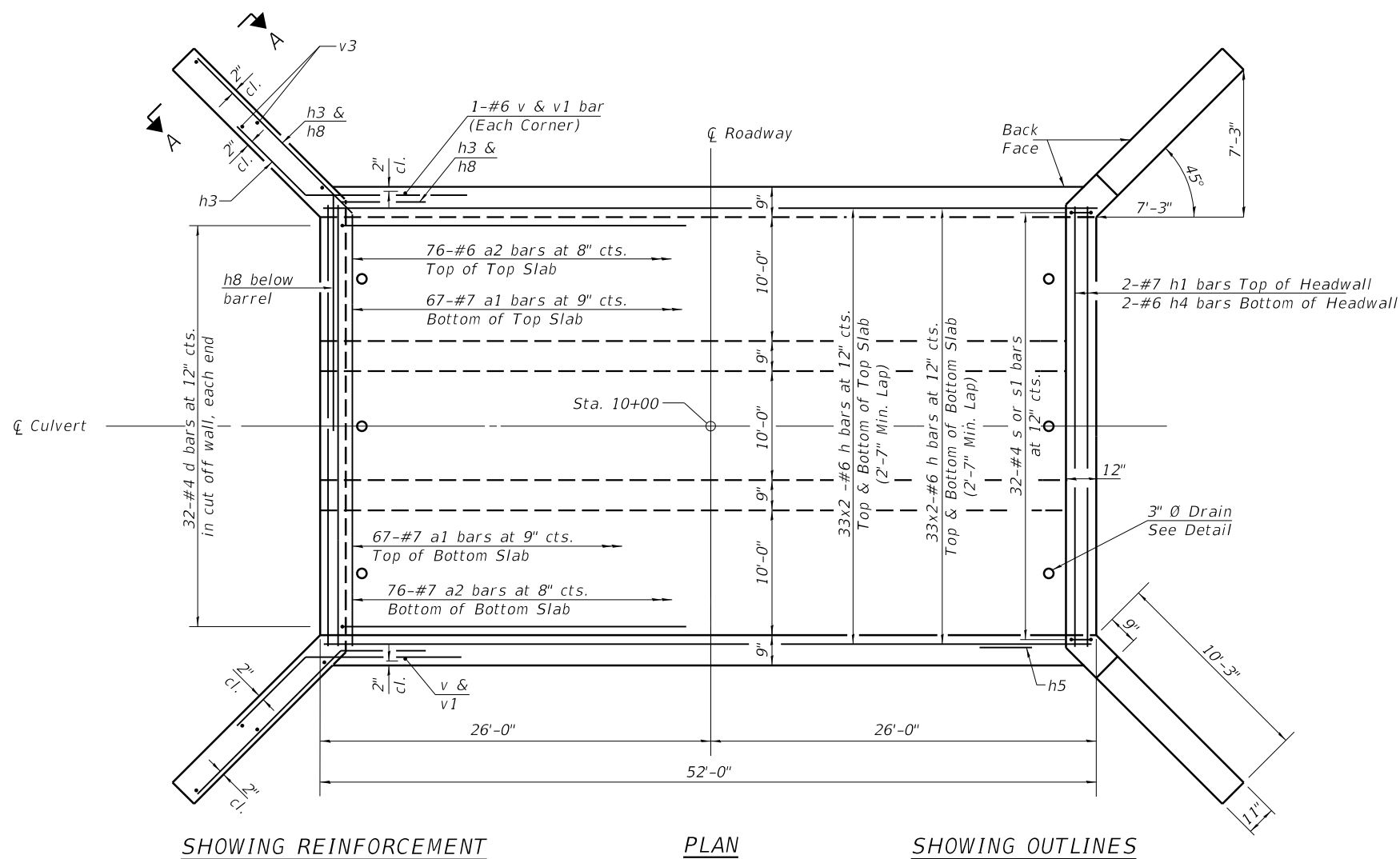
LONGITUDINAL SECTION



SECTION A-A

MINIMUM BAR LAP

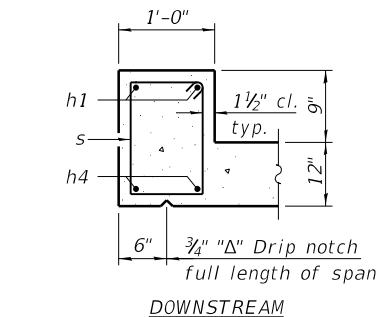
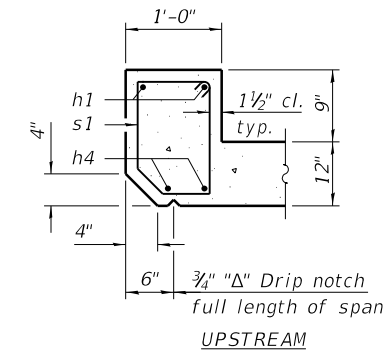
#5 BAR = 2'-2"
#6 BAR = 2'-7"



SHOWING REINFORCEMENT

PLAN

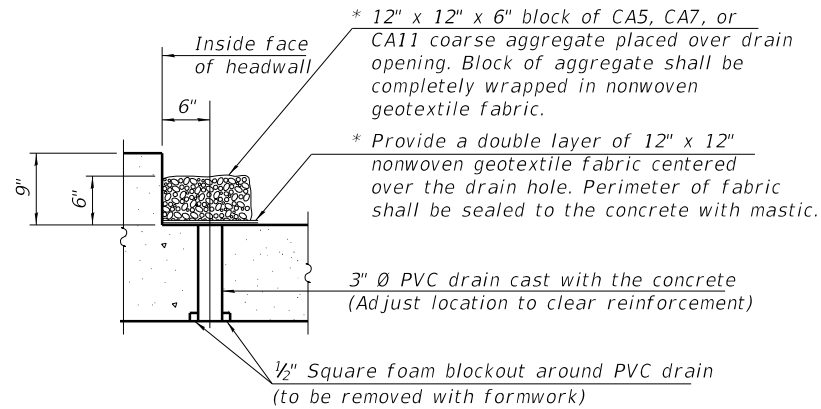
SHOWING OUTLINES



SECTION THRU HEADWALL

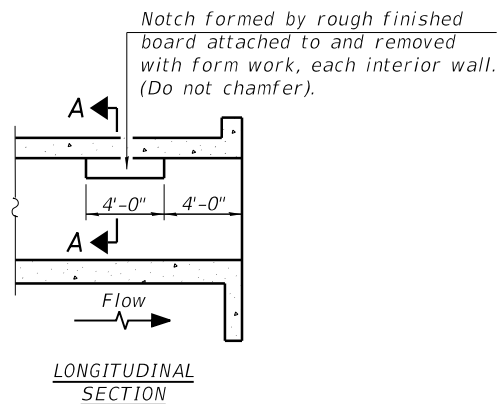
Notes:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
At the Contractor's option, a longer v bar may be ordered to replace the v1 bar. No reduction in quantities shall be made for this substitution.

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

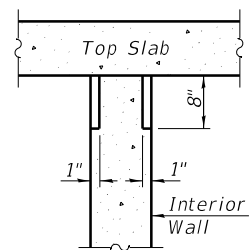


DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

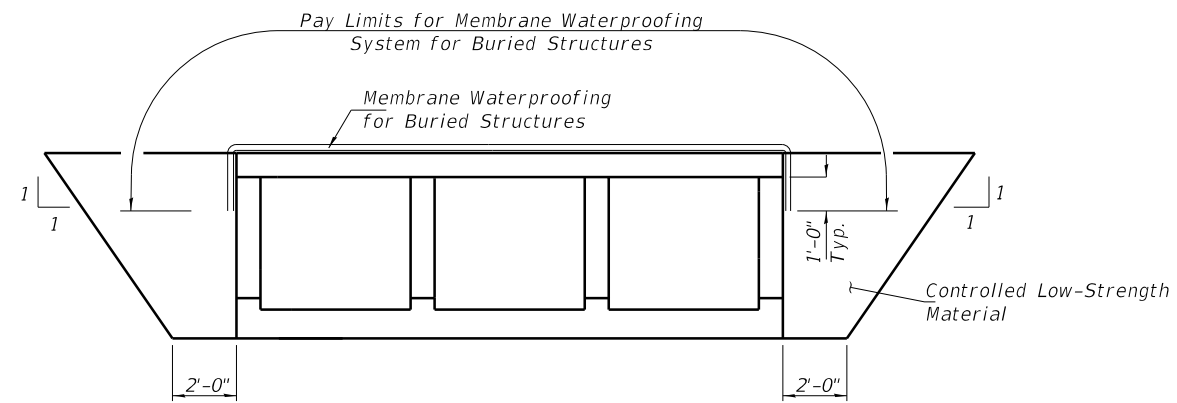


LONGITUDINAL SECTION



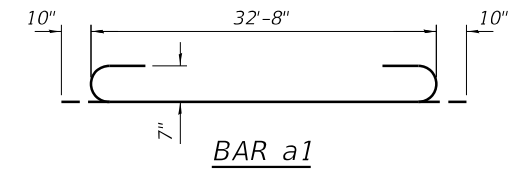
SECTION A-A

**PHOEBE NESTING
SITE DETAILS
(Downstream End Only)**

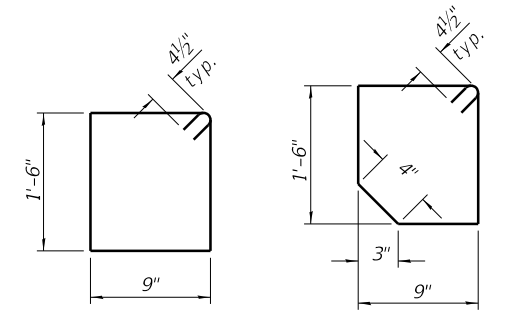


BACKFILL DETAIL

Notes:
Excavation for placement of CLSM is included in the cost of Concrete Box Culverts. Any excavation beyond the limits shown shall not be paid for.
The lateral limits for placement of CLSM shall be 20' on either side of the ϕ of roadway.

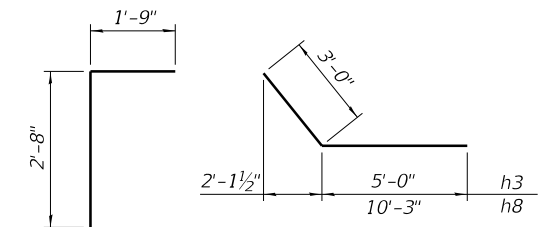


BAR a1



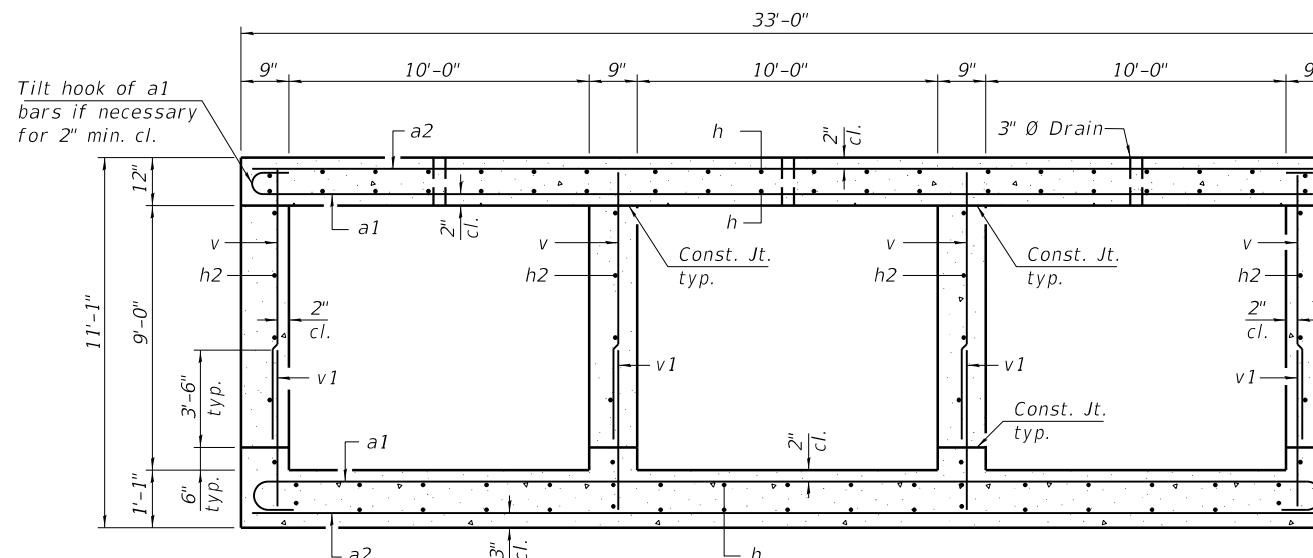
BAR s

BAR s1



BAR d

BARS h3 & h8



SECTION THRU BARREL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	134	#7	34'-4"	
a2	154	#6	32'-8"	
d	64	#4	4'-5"	
h	264	#6	27'-2"	
h1	4	#7	32'-0"	
h2	80	#5	26'-11"	
h3	96	#7	8'-0"	
h4	4	#6	32'-8"	
h8	68	#7	13'-3"	
s	32	#4	5'-3"	
s1	32	#4	5'-1"	
v	364	#6	9'-3"	
v1	364	#6	4'-11"	
v3	16	#4	13'-5"	
		Concrete Box Culverts	Cu. Yd.	204.6
		Reinforcement Bars	Pound	42150
		Controlled Low-Strength Material	Cu. Yd.	248

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Route: CH 10 (FAS 660)
 Section: 21-00081-01-DR
 County: Moultrie
 Structure No. 070-3010 (Existing)
 Station: 9+66
 Offset: 15' LT

Boring: B-1
 Page: Page 1 of 1
 Date of Boring: June 20, 2023
 Drilled By: Nick Schneider
 Checked By: Nick Wendling
 MET Project No: C33084

Surface Water Elevation: 653.0 Ground Water Elevation: when drilling: -651.2 ft. at completion: -654.0 ft.	DEPTH (ft.)	BLOWS (6")	Qu (tsf)	MC (%)	Soil Description	DEPTH (ft.)	BLOWS (6")	Qu (tsf)	MC (%)
Ground Surface Elevation: 666.2 ft.			4.5P	15	3" Topsoil over 5" Crushed Stone				
					Gray silty CLAY (CL) with sand and small gravel - Till	4		4.5P	13
						10			
					Brown and dark brown mixed silty CLAY (CL) with sand - Fill	5			
						2		4.0P	16
					Black organic clayey SILT (OH)	3			
						3		2.3P	81
					Dark gray silty CLAY (CL)	5			
						3		1.7B	23
					Brown and gray silty CLAY (CL) with sand	10			
						2		1.4B	19
					Gray silty CLAY (CL) with sand and small gravel - Till	15			
						2		2.4B	16
					Gray medium SAND (SP)	20			
						3		3.6B	14
					Gray silty CLAY (CL) with sand and small gravel - Till	25			
						12		-	15
					Gray fine to medium SAND (SP)	45			
						4		-	23
					Gray silty CLAY (CL) with sand and small gravel - Till	50			
						12		8.8B	10
					Gray silty CLAY (CL) with sand and small gravel - Till	55			
						10		4.6B	12
					Gray silty CLAY (CL) with sand and small gravel - Till	60			
						4		1.3B	13
					END OF BORING @ -31.5 FEET	65			
						5			

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
 MC- Moisture Content - Percent of dry weight
 Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test B-Bulge
 S-Shear
 P-Penetrometer

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Route: CH 10 (FAS 660)
 Section: 21-00081-01-DR
 County: Moultrie
 Structure No. 070-3010 (Existing)
 Station: 10+30
 Offset: 25' RT

Boring: B-2
 Page: Page 1 of 1
 Date of Boring: June 20, 2023
 Drilled By: Nick Schneider
 Checked By: Nick Wendling
 MET Project No: C33084

Surface Water Elevation: 653.0 Ground Water Elevation: when drilling: -651.8 ft. at completion: -652.8 ft.	DEPTH (ft.)	BLOWS (6")	Qu (tsf)	MC (%)	Soil Description	DEPTH (ft.)	BLOWS (6")	Qu (tsf)	MC (%)
Ground Surface Elevation: 663.8 ft.			4.5P	8	8" Topsoil				
					Dark brown silty CLAY (CL) with sand - Possible Fill	50/5"			17
						30			
					Brown and gray silty CLAY (CL)	14			15
						26			
					Gray clayey SILT (ML)	35			
						4		2.8P	16
					Gray silty CLAY (CL) with sand and small gravel - Till	40			
						4		1.1B	19
					Gray fine to medium SAND (SP)	45			
						4		4.2B	13
					Gray silty CLAY (CL) with sand and small gravel - Till	50			
						10		-	19
					Gray fine to medium SAND (SP)	55			
						5		-	18
					Gray silty CLAY (CL) with sand and small gravel - Till	60			
						3		-	17
					Gray silty CLAY (CL) with sand and small gravel - Till	65			
						7		-	18
					Gray silty CLAY (CL) with sand and small gravel - Till	70			
						8		-	19
					Gray silty CLAY (CL) with sand and small gravel - Till	75			
						15		-	17
					END OF BORING @ -31.5 FEET	80			
						11			

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
 MC- Moisture Content - Percent of dry weight
 Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test B-Bulge
 S-Shear
 P-Penetrometer



JOB = 2647.1S	DESIGNED - AAN	REVISED -
FILE = 070-3035-GPE.dgn	CHECKED - MDC	REVISED -
DATE = 10/17/2023	DRAWN - DJR	REVISED -
	CHECKED - AAN	REVISED -

CH 10 IMPROVEMENTS

BORING LOGS
 STRUCTURE 070-0033

SHEET NO. 4 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
660	21-00081-01-DR	MOULTRIE	11	11
			CONTRACT NO. 95951	

ILLINOIS FED. AID PROJECT