

SURVEY CONTROL DATA

1. HORIZONTAL DATUM IS THE OKLAHOMA STATE PLANE COORDINATE SYSTEM, N.A.D. 83(2011) LAMBERT PROJECTION, SOUTH ZONE ADJUSTED TO N.G.S. STATE PLANE COORDINATES, UTILIZING OPUS.

A. ACCURACY - 3RD ORDER OR BETTER

2. BEARINGS:

THE BEARINGS SHOWN HEREIN OR HEREON ARE GRID BEARINGS DERIVED FROM THE USC & GS OKLAHOMA PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL.

3. VERTICAL CONTROLS:

A. LEVEL DATUM IS NGS, NAVD 88, TAKEN FROM ADJUSTED PRIMARY CONTROL UTILIZING DIFFERENTIAL LEVELING TECHNIQUES.
B. ACCURACY - 3RD ORDER OR BETTER

LATITUDE 34° 14' 16"
LONGITUDE 98° 10' 27"

DESIGN DATA

ADT 2015 - 150
ADT 2035 - 225
V - 45 M.P.H.

SCALES

PLAN 1:50
PROFILE HOR. 1:50
VER. 1:5
LAYOUT MAP 1" = 5280'

CONVENTIONAL SIGNS

- PROPOSED ROADS
- - - SECTION LINES
- - - QUARTER SECTION LINES
- x x FENCES
- - - EXISTING GRADE
- - - EXISTING ROADS
- - - BASE LINE
- - - PROPOSED GRADE
- TUG- COMMUNICATION LINES (EXISTING)
- P- POWER LINES (EXISTING)
- G- GAS LINE (EXISTING)
- SS- SANITARY SEWER LINES (EXISTING)
- W- WATER LINES (EXISTING)
- TUG- COMMUNICATION LINES (PROPOSED)
- P- POWER LINES (PROPOSED)
- G- GAS LINE (PROPOSED)
- SS- SANITARY SEWER LINES (PROPOSED)
- W- WATER LINES (PROPOSED)
- ▭ BUILDINGS
- - - DRAINAGE STRUCTURES (EXISTING)
- - - DRAINAGE STRUCTURES (PROPOSED)
- - - RIGHT-OF-WAY LINES (EXISTING)
- - - RIGHT-OF-WAY LINES (PROPOSED)
- - - RIGHT-OF-WAY FENCE
- - - FLOWLINE (EXISTING)
- - - FLOWLINE (PROPOSED)
- - - TOE OF SLOPE (EXISTING)
- - - TOE OF SLOPE (PROPOSED)
- - - CITY LIMITS
- - - LANDSCAPE

END BRIDGE "A" 122+11.25
BRIDGE LENGTH 86.50'
BEGIN BRIDGE "A" 121+24.75



STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

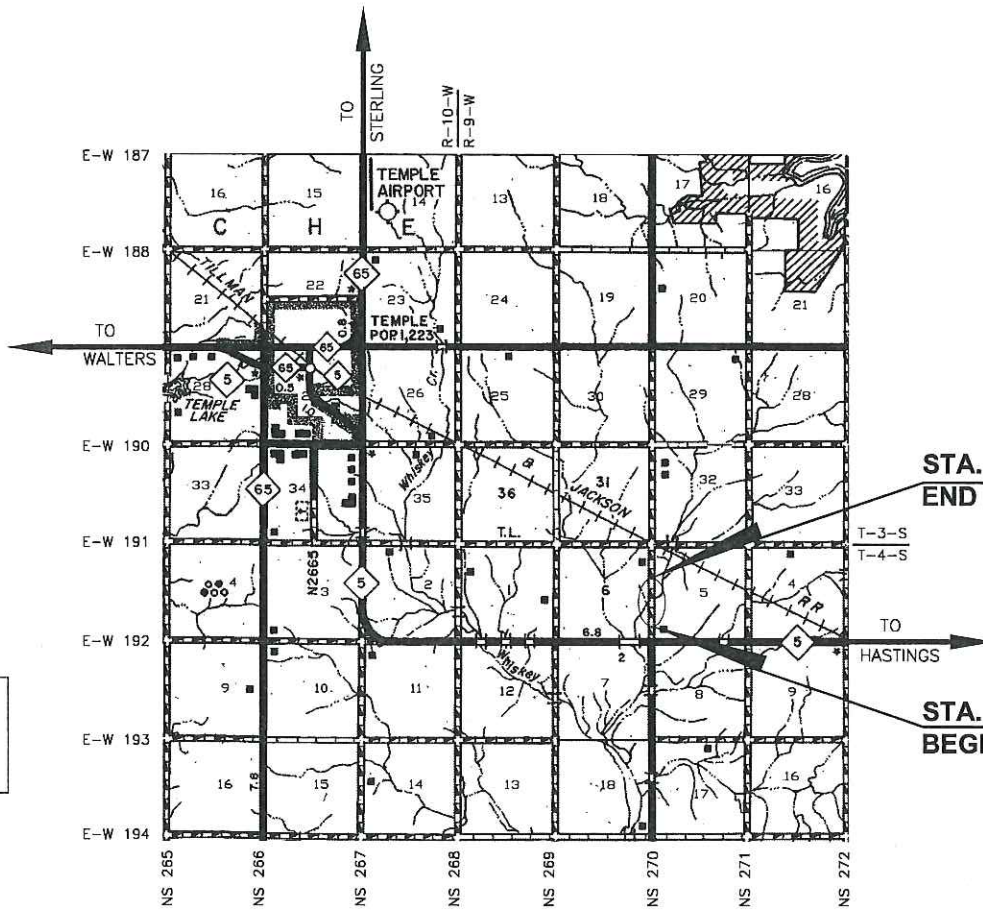
PLAN OF PROPOSED
COUNTY BRIDGE
BRIDGE AND APPROACH PLANS
TRIBUTARY TO WHISKEY CREEK
COTTON COUNTY

FEDERAL AID PROJECT NO. STP-217C(035)C1

STATE JOB NO. 31110(04)

LOCATION: 17N2700E1910006

CONSTRUCT NBI NO. 31989



STA. 125+80.00
END PROJECT

STA. 114+50.00
BEGIN PROJECT

INDEX OF SHEETS

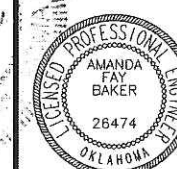
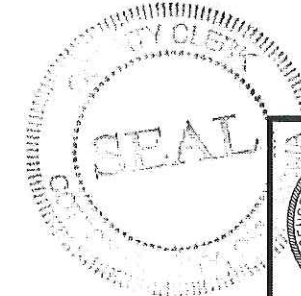
SHEET NO.	DESCRIPTION
0001.	TITLE SHEET
0002.	TYPICAL SECTION AND MISCELLANEOUS DETAILS
AR01.	SUMMARY OF PAY QUANTITIES AND GENERAL NOTES
B001.	GENERAL PLAN & ELEVATION BRIDGE "A"
B002.	GEOTECHNICAL INFORMATION
R001.	STORM WATER MANAGEMENT PLAN
R002.	EROSION CONTROL PLAN
R003.	PLAN AND PROFILE
S001.	SECTION CORNER REFERENCES AND STATION OFFSET TABLE
T001.	GUARDRAIL ANCHOR UNITS
T002. - T003.	GUARDRAIL AND HARDWARE SHEETS
X001. - X009.	X - SECTIONS

THE FOLLOWING STANDARDS WILL BE REQUIRED FOR THIS PROJECT.

2009 COUNTY BRIDGE	2009 STATE BRIDGE	ROADWAY 2009	TRAFFIC 2009
CB26-I-SKO-ABUT-PC3-01E	TR3-2-01E	SSS-1-1	TCS1-1-01
CB26-I-SKO-XSECT-PC234-01E	HP1-2-01E	TSC2-3-2	TCS2-1-00
CB26-I-SKO-LSECT-PCB-01E		TSD-2-0	TCS4-1-01
CB26-I-SKO-DKSLB-BLIST-PCB-01E		RWF2-2-1	TCS5-1-00
CB26-I-SKO-PCB-III-85-01E			TCS7-1-02
CB26-I-SKO-DIA-ABUT-PC3-01E			TCS9-1-01
CB26-I-SKO-DIA-INTPR-PCB-01E			DU2-1-00
CB26-I-SKO-BRG-PC3-01E			
CB26-I-SKO-SPR-QUAN-PCB-1-01E			
CB26..32-I-SKO-ABUT-MISC-01E			
CB26..32-I-SKO-WING-PC3-01E			
CB26..32-C..I-SKO..30-PCB-DTL-1-01E			
CB26..32-C..I-SKO..30-PCB-DTL-2-01E			
CB26..32-C..I-SKO..30-GRAU-BC-00E			

APPROVED
COTTON COUNTY BOARD OF COMMISSIONERS

DISTRICT NO. 1 DATE: 7-17-17
 DISTRICT NO. 2 DATE: 7-17-17
 DISTRICT NO. 3 DATE: 7-17-17
 ATTEST
 County Clerk DATE: 7-17-17



PREPARED BY:
CEC CORPORATION
CA32 PE/LS 6/30/2018
OKLAHOMA CITY, OKLAHOMA

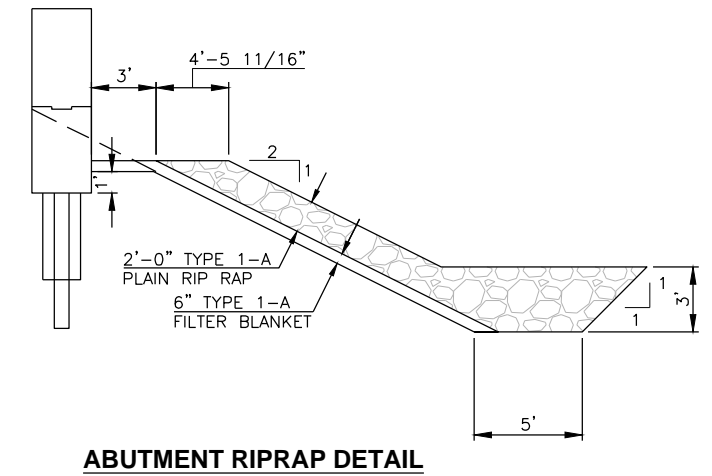
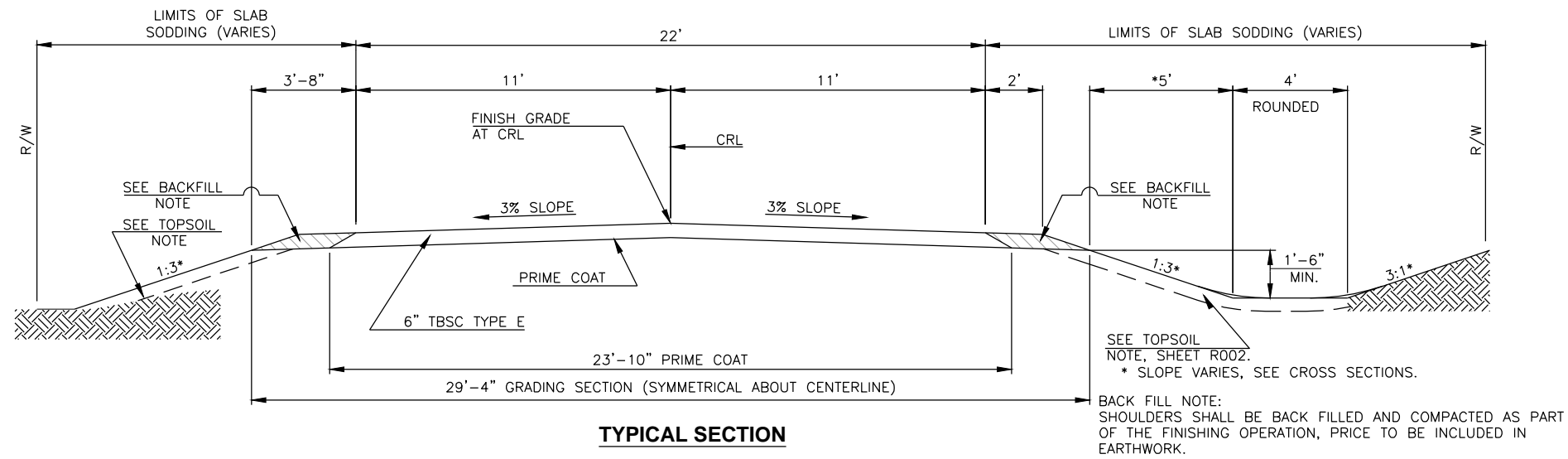
AMANDA FAY BAKER
OKLA. REG. NO. 26474
DATE: 8-14-17

PROJECT LENGTH BASED ON C.R.L.
 ROADWAY LENGTH: 1,043.50 FT. 0.197 MILES
 BRIDGE "A" LENGTH: 86.50 FT. 0.016 MILES
 PROJECT LENGTH: 0.214 MILES
 EQUATIONS: NONE
 EXCEPTIONS: NONE

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR
F.A. PROJECT NO. STP-217C(035)C1	SHEET NO. 0001

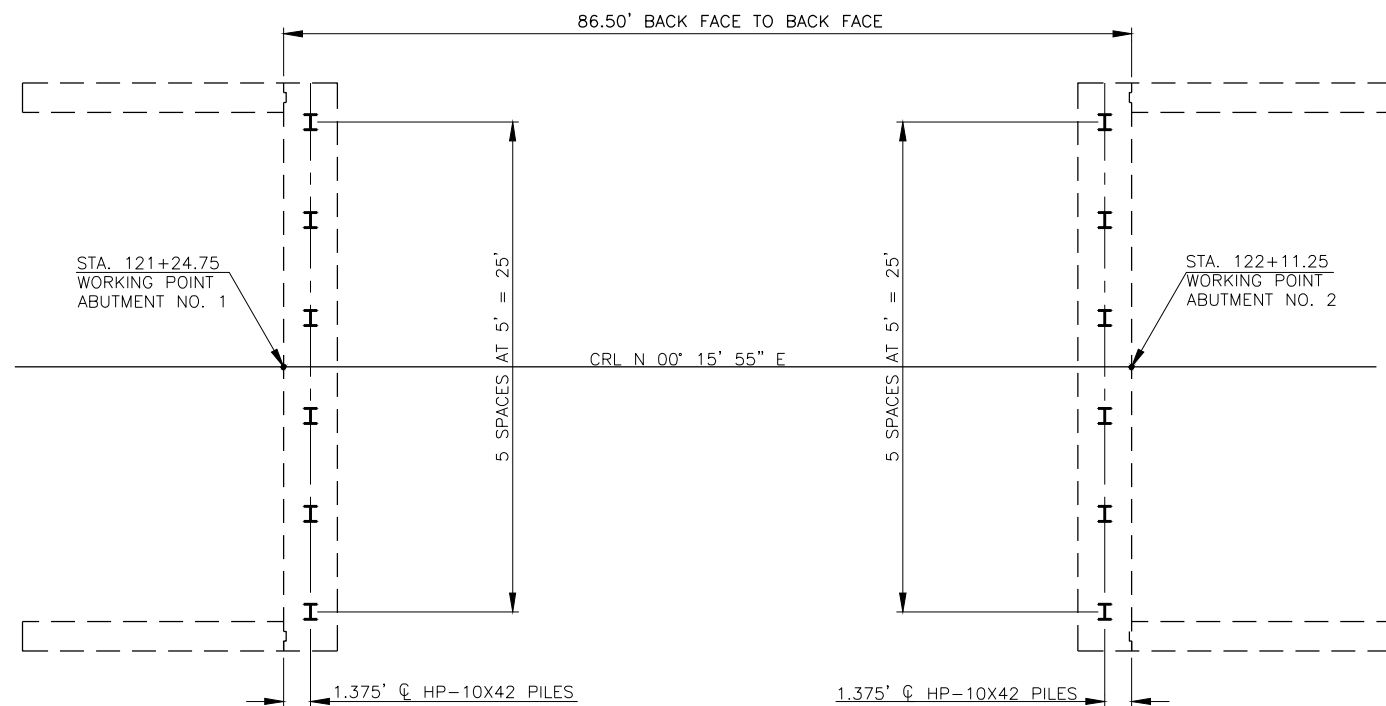
RICKY WARDELL, COMMISSIONER, DISTRICT NO. 2, COTTON COUNTY
SHELLY MOODY, DIVISION CHIEF, LOCAL GOVERNMENT, OKLAHOMA DEPARTMENT OF TRANSPORTATION, P.E. NO. 31110(01)

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4, 2010.

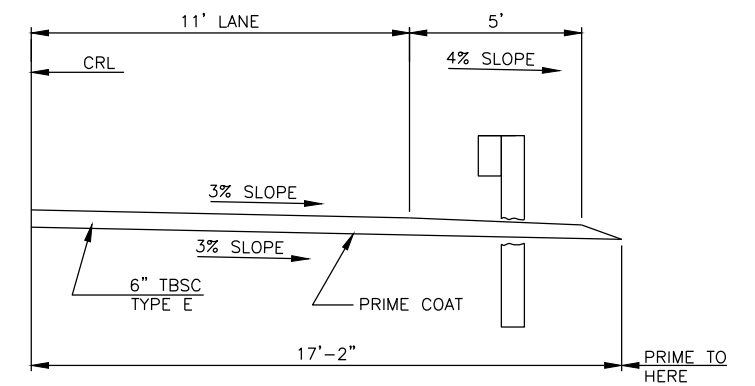


EROSION CONTROL AND CONSTRUCTION NOTES

SEE EROSION CONTROL PLAN, SHEET NO. R002, FOR EROSION CONTROL, CONSTRUCTION AND TOPSOIL NOTES.



STAKING DIAGRAM



0200 - BRIDGE BRIDGE "A" PAY QUANTITIES				
85' x 26' CLEAR ROADWAY INTEGRAL TYPE III PCB SPAN SKEWED ZERO DEGREES				
ITEM	DESCRIPTION		UNITS	QUANTITY
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	(R-1) CY	100.00
501(F)	6352	GRANULAR BACKFILL	(R-1) CY	56.00
503(A)	1312	PRESTRESSED CONCRETE BEAMS (TYPE III)	(R-1) LF	254.00
504(D)	6239	CONCRETE RAIL (TR3)	(R-1) LF	226.60
506(A)	1322	STRUCTURAL STEEL	(R-1) LB	320.00
507(A)	6172	WEATHERING STEEL FIXED BEARING ASSEMBLY	EA	6.00
509(A)	1326	CLASS AA CONCRETE	(R-1)(1) CY	85.50
509(B)	1328	CLASS A CONCRETE	(R-1) CY	39.20
511(A)	1332	REINFORCING STEEL	(R-1) LB	21,470.00
514(A)	6010	PILES, FURNISHED (HP 10X42)	LF	516.00
514(B)	6292	PILES, DRIVEN (HP 10X42)	LF	516.00
514(L)	6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA	1.00
601(B)	1353	TYPE I-A PLAIN RIPRAP	(2) TON	1,337.00
601(C)	1355	TYPE I-A FILTER BLANKET	(3) TON	273.00
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	52.00
613(I)	6207	6" NON-PERF. PIPE UNDERDRAIN RND.	LF	50.00
623(F)	5686	GUARDRAIL ANCHOR UNIT (TYPE D-BF)	EA	4.00
623(F)	6029	GUARDRAIL ANCHOR UNIT (TYPE A)	(4) EA	4.00

0300 - TRAFFIC CONTROL TRAFFIC CONTROL PAY QUANTITIES				
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL	(5) LSUM	1.00

0640 - CONSTRUCTION CONSTRUCTION PAY QUANTITIES				
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1.00
641	1399	MOBILIZATION	LSUM	1.00

0600 - STAKING STAKING PAY QUANTITIES				
642(B)	0096	CONSTRUCTION STAKING LEVEL II	(6) LSUM	1.00

0100 - ROADWAY ROADWAY PAY QUANTITIES				
ITEM	DESCRIPTION		UNITS	QUANTITY
201(A)	0102	CLEARING AND GRUBBING	LSUM	1.00
202(H)	0185	EARTHWORK	(7)(8) LSUM	1.00
221(C)	2801	TEMPORARY SILT FENCE	(9) LF	1,000.00
221(F)	0100	TEMPORARY SILT DIKE	(9) LF	300.00
230(A)	2806	SOLID SLAB SODDING	(R-7)(R-8) SY	12,224.00
233(A)	2817	VEGETATIVE MULCHING	(R-11) AC	6.30
402(E)	0225	TRAFFIC BOUND SURFACE COURSE TYPE E	(10)(12) TON	939.00
408	5774	PRIME COAT	(R-28) GAL	1,084.00
509(D)	0325	CLASS C CONCRETE	(R-41) CY	10.00
619(A)	0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R-48)(R-49)(13) LSUM	1.00
624(C)	4458	FENCE-STYLE SWF (4 BARBED WIRE)	(R-52)(R-53)(11) LF	1,290.00
624(C)	7181	FENCE-STYLE SWF (6 BARBED WIRE)	(R-52)(R-53)(11) LF	1,314.00

SUMMARY OF GUARDRAILS					
STATION TO STATION	LT.	RT.	TYPE D-BF (EACH)	TYPE A (EACH)	LENGTH INCLUDING ANCHOR UNITS (FEET)
120+12.42 TO 121+12.42	X		1	1	100.00
120+12.42 TO 121+12.42		X	1	1	100.00
122+23.58 TO 123+23.58	X		1	1	100.00
122+23.58 TO 123+23.58		X	1	1	100.00
TOTALS			4	4	400.00

SUMMARY OF FENCING								
SHT. NO.	ALIGNMENT	LT.	RT.	PERM. OR TEMP.	STATION TO STATION	FENCE STYLE SWF (4 BARBED WIRE) 624(C) (LF)	FENCE STYLE SWF (6 BARBED WIRE) 624(C) (LF)	STYLE
R003	CL SRVY	X		PERM.	113+29 TO 125+81	1,264.00		SWF
R003	CL SRVY		X	PERM.	113+56 TO 126+23		1,288.00	SWF
TOTALS						1,264.00	1,288.00	SWF

PAY QUANTITY NOTES

- (R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.
- (R-7) FOR 230(A) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 LBS. PER 1,000 SQUARE YARDS.
- (R-8) FOR 230(A) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 80 GALLONS PER SQUARE YARD.
- (R-11) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 3.15 ACRES.
- (R-28) PRIME COAT SHALL BE APPLIED AT AN ESTIMATED RATE OF 0.35 GAL. PER SQ. YD. WHEN APPLIED TO SUBGRADE, AND 0.25 GAL. PER SQ. YD. WHEN APPLIED TO AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR, AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.
- (R-41) QUANTITY INCLUDES AN ESTIMATED 10 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.
- (R-48) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES AND OTHER STRUCTURES WITHIN THE RIGHT-OF-WAY.
- (R-49) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- (R-52) INCLUDES 2% FOR GROUND MEASUREMENT.
- (R-53) ALL GATES AND GATE END POSTS FOR STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (1) COST OF FINISHING BRIDGE DECK IN ACCORDANCE WITH SPECIAL PROVISION 504.01 THROUGH 504.04 SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
- (2) ESTIMATED AT 110 LBS./CU. FT.
- (3) ESTIMATED AT 105 LBS./CU. FT.
- (4) PRICE BID TO INCLUDE THE COST OF 4 TYPE 1 CODE 3 DELINEATORS (AMBER COLOR).
- (5) CONSTRUCTION TRAFFIC CONTROL SHALL INCLUDE ALL BARRICADES AND SIGNS REQUIRED ON EACH END OF THE CONSTRUCTION AREA AND OTHER AREAS DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNS, BARRICADES, LIGHTS, ETC., ACCORDING TO THE STANDARDS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND AS SHOWN ON THE STANDARD DRAWINGS. COST OF ALL NECESSARY CONSTRUCTION SIGNING WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "CONSTRUCTION TRAFFIC CONTROL."
- (6) IN ADDITION TO THE RESPONSIBILITIES SHOWN IN THE SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND/OR REESTABLISHING THE SURVEY CONTROL POINTS SHOWN ON THE PLANS, STAKING THE CENTERLINE OF CONSTRUCTION AND REESTABLISHING RIGHT-OF-WAY STAKES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING BENCH MARKS SHOWN ON THE PLANS AND FOR ESTABLISHING NEW BENCH MARKS AS NEEDED TO CONSTRUCT THE PROJECT.
- (7) SEE SUMMARY OF GRADING QUANTITIES, SHEET NO. R003.
- (8) INCLUDES COST OF SALVAGING AND PLACING TOPSOIL APPROXIMATELY 25 FEET WIDE BY 5 INCHES DEEP FROM STA. 114+50 TO 125+80 AND 18-46-0 FERTILIZER (ESTIMATED AT 150 LBS PER ACRE). SEE TOPSOIL NOTE, SHEET NO. R002.
- (9) PRICE BID TO INCLUDE COST OF TEMPORARY SEDIMENT REMOVAL.
- (10) INCLUDES 102 TONS FOR GUARD RAIL WIDENING.
- (11) ALL CORNER AND STRETCH POSTS SHALL BE STEEL PIPE.
- (12) ESTIMATED AT 140 LBS./CU. FEET.
- (13) ITEM "REMOVAL OF STRUCTURES AND OBSTRUCTIONS" INCLUDES REMOVAL OF THREE EXISTING 96' X 40' CGMP'S. CONTRACTOR SHALL REMOVE PIPES WITHOUT DAMAGE. IF PIPES ARE DAMAGED DURING REMOVAL, CONTRACTOR SHALL REPLACE THEM. PIPES TO BECOME PROPERTY OF THE COUNTY. COST OF REMOVAL SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "REMOVAL OF STRUCTURES AND OBSTRUCTIONS."

ENVIRONMENTAL MITIGATION NOTES:

MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST BIRD SPECIES EXTENDS FROM APRIL 1 TO AUGUST 31. THE PROJECT WAS SURVEYED FOR MIGRATORY BIRD NESTS IN 2016. ALTHOUGH NO NESTS WERE OBSERVED, THE SURVEY IS ONLY VALID UNTIL THE 2017 NESTING SEASON. THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-521-2515 IF ANY BIRD USE OF THE EXISTING STRUCTURES IS OBSERVED. IF BIRDS ARE OBSERVED THEN PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGE/STRUCTURES SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND MARCH 31, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED.

LOCATIONS OUTSIDE THE PROJECT AREA IN THE FOLLOWING AREA MUST NOT BE UTILIZED FOR BORROW, EQUIPMENT STAGING, HAUL ROADS, SPOIL DUMPS OR ANY OFF-SITE PROJECT-RELATED ACTIVITY.

T3S R9W:
SECTION 31: SE1/4 SE1/4 SW1/4

T4S R9W
SECTION 5: SE1/2 SW1/4 SW1/4

GENERAL NOTES

SPECIFICATIONS: COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION JANUARY 4, 2010, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

AIR VENTS: 2" PVC PIPE SHALL BE PLACED VERTICALLY THROUGH THE DECK BETWEEN THE BEAMS AS SHOWN IN THE DETAIL SHOWN ON THE GENERAL PLAN AND ELEVATION.

ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

CREEK AND RIVER BANKS SHALL BE KEPT IN THEIR NATURAL STATE AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL NOT UNDULY STRIP EXISTING PROTECTIVE VEGETATION IN THE VICINITY OF THE STREAM BANKS AND SHALL SO CONDUCT HIS OPERATIONS AS NOT TO DAMAGE THE BANKS WITH HIS EQUIPMENT. NO BANK UPSTREAM OR DOWNSTREAM SHALL BE EXCAVATED EXCEPT AS APPROVED FOR AND AS SHOWN ON THE PLANS. NO WORK ROADS SHALL BE CONSTRUCTED UPSTREAM WHERE IT IS NECESSARY TO CUT THE STREAM OR RIVER BANKS EXCEPT BY THE APPROVAL OF THE ENGINEER. BANK CUTS FOR WORK ROADS SHALL BE LOCATED DOWNSTREAM AND REPLACED BY THE CONTRACTOR TO THEIR ORIGINAL SHAPE AND DENSITY. UNNECESSARY STRIPPING OF VEGETATION GROWTH ALONG BANKS IN THE CONSTRUCTION AREA IS NOT PERMITTED.

THE FOLLOWING ITEMS WILL BE THE RESPONSIBILITY OF THE COUNTY AND NOT A PART OF THIS CONTRACT: (1) ACQUISITION AND STAKING OF RIGHT-OF-WAY; (2) UTILITY RELOCATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION AND DETOUR SIGNING.

ROADWAY SHALL BE CLOSED TO THROUGH TRAFFIC DURING THE CONSTRUCTION PERIOD. CONTRACTOR SHALL PROVIDE ACCESS TO ADJACENT LAND OWNERS AND TENANTS.

(CAUTION) THE LOCATION AND DEPTH OF ALL UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC. PRIOR TO DIGGING NEAR UTILITIES. IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE1" 1-800-522-6543 OR 811.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT-OF-WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED AND PERMANENT RIGHT-OF-WAY FENCE SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST OF TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOTIFY THE COTTON COUNTY BOARD OF COMMISSIONERS, CED 6 AND ODOT DIVISION VII OFFICE IN DUNCAN, IN WRITING, FOURTEEN CALENDAR DAYS PRIOR TO BEGINNING CONSTRUCTION.

PILE DRIVING AND CAPACITY -
THE FACTORED REACTION FOR EACH HP 10X42 PILE AT THE ABUTMENT IS 73.5 TONS ON BRIDGE "A". THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES.

$$\text{AXIAL LOAD RESISTANCE} = \phi \left[(0.875 \sqrt{E} \log_{10}(10N)) - 50 \right]$$

WHERE:
 ϕ = RESISTANCE FACTOR OF 0.4
 E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.
 N = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:
 - THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY AND SINGLE ACTING HAMMERS ONLY).
 - THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED.
 - THE PENETRATION IS QUICK AND UNIFORM.
 - THERE IS NO APPRECIABLE REBOUND OF THE HAMMER AND A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD, AS DETERMINED BY THE ENGINEER. IF WATER JETS ARE USED IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

TRIBUTARY TO WHISKEY CREEK COTTON COUNTY

SUMMARY OF PAY QUANTITIES AND GENERAL NOTES

JOB PIECE NO. 31110(04) SHEET NO. AR01

APPROX. LIMITS OF RIPRAP: 61 FEET LEFT, 59 FEET RIGHT
CARRY RIPRAP TO FOURTH GUARD RAIL POST AT EACH WING WALL.

HYDRAULIC DATA

DRAINAGE AREA = 6.17 SQ. MI.

Q2 = 467 CFS	Q25 = 2,470 CFS
V2 = 1.43 FPS	V25 = 6.05 FPS
CHW = 936.56 FT	CHW = 938.67 FT
Q5 = 1,010 CFS	Q50 = 3,210 CFS
V5 = 2.78 FPS	V50 = 7.64 FPS
CHW = 937.88 FT	CHW = 939.31 FT
Q10 = 1,550 CFS	Q100 = 4,080 CFS
V10 = 4.03 FPS	V100 = 9.56 FPS
CHW = 938.13 FT	CHW = 940.10 FT

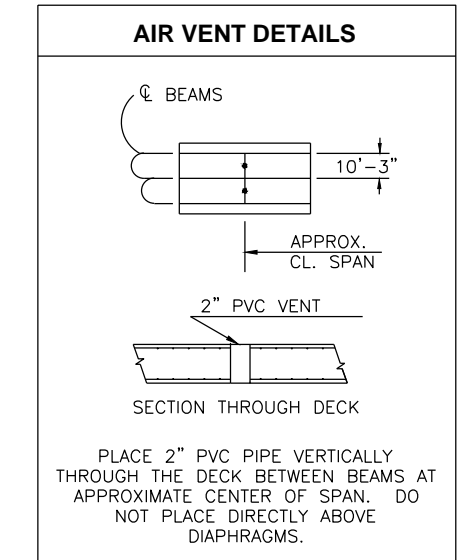
Q_{tot} = Q27

LOAD AND RESISTANCE FACTOR DESIGN DATA

CONCRETE CLASS AA f'_c = 4 KSI
 CONCRETE CLASS A f'_c = 3 KSI
 REINF. STEEL f_y = 60 KSI
 STRUCTURAL STEEL
 M270 (GRADE 50W) F_y = 50 KSI

LFD OPERATING RATING: HS 43.0
 LOADING: HL-93
 20 P.S.F. FUTURE WEARING SURFACE.
 5 P.S.F. STAY-IN-PLACE FORMS

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION WITH 2010 INTERIMS, EXCEPT AS MODIFIED BY CURRENT ODOT BRIDGE DIVISION DESIGN POLICIES. ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.



ABUTMENT FOUNDATION DATA

ABUTMENTS: HP 10X42 PILING **ABUTMENTS NO. 1 & 2**
 REQUIRED ULTIMATE PILE CAPACITY 73.5 TON/PILE

PILE CAPACITY SHALL BE VERIFIED USING THE ODOT MODIFIED GATES EQUATION SHOWN ON SHEET AR01. ALL ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL TO POINT BEARING ON SOLID FOUNDATION MATERIAL. PILING SHALL BE DRIVEN TO THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF THE REQUIRED ULTIMATE PILE CAPACITY IS NOT OBTAINED AT THIS ELEVATION, DRIVING SHALL CONTINUE UNTIL THE REQUIRED ULTIMATE PILE CAPACITY IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.

BRIDGE "A" PAY QUANTITIES

85' X 26' CLEAR ROADWAY INTEGRAL TYPE III PCB SPAN ZERO DEGREE SKEW

ITEM	DESCRIPTION	UNITS	ABUTS.	SUPSTR.	TOTALS
501(B)	SUBSTRUCTURE EXCAVATION COMMON	CY	100.00		100.00
501(F)	GRANULAR BACKFILL	CY	56.00		56.00
503(A)	PRESTRESSED CONCRETE BEAMS (TYPE III)	LF		254.00	254.00
504(D)	CONCRETE RAIL (TR3)	LF	53.60	173.00	226.60
506(A)	STRUCTURAL STEEL	LB		320.00	320.00
507(A)	WEATHERING STEEL FIXED BEARING ASSEMBLY	EA		6.00	6.00
509(A)	CLASS AA CONCRETE	CY		85.50	85.50
509(B)	CLASS A CONCRETE	CY	39.20		39.20
511(A)	REINFORCING STEEL	LB	6,040.00	15,430.00	21,470.00
514(A)	PILES, FURNISHED (HP 10X42)	LF	516.00		516.00
514(B)	PILES, DRIVEN (HP 10X42)	LF	516.00		516.00
601(B)	TYPE I-A PLAIN RIPRAP	TON	1,337.00		1,337.00
601(C)	TYPE I-A FILTER BLANKET	TON	273.00		273.00
613(H)	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	52.00		52.00
613(I)	6" NON-PERF. PIPE UNDERDRAIN RND.	LF	50.00		50.00
623(F)	GUARDRAIL ANCHOR UNIT (TYPE D-BF)	EA	4.00		4.00
623(F)	GUARDRAIL ANCHOR UNIT (TYPE A)	EA	4.00		4.00

BRIDGE "A" - 85' TYPE III P.C. BEAM SPAN BRIDGE, CENTERLINE STATION 121+68.00.

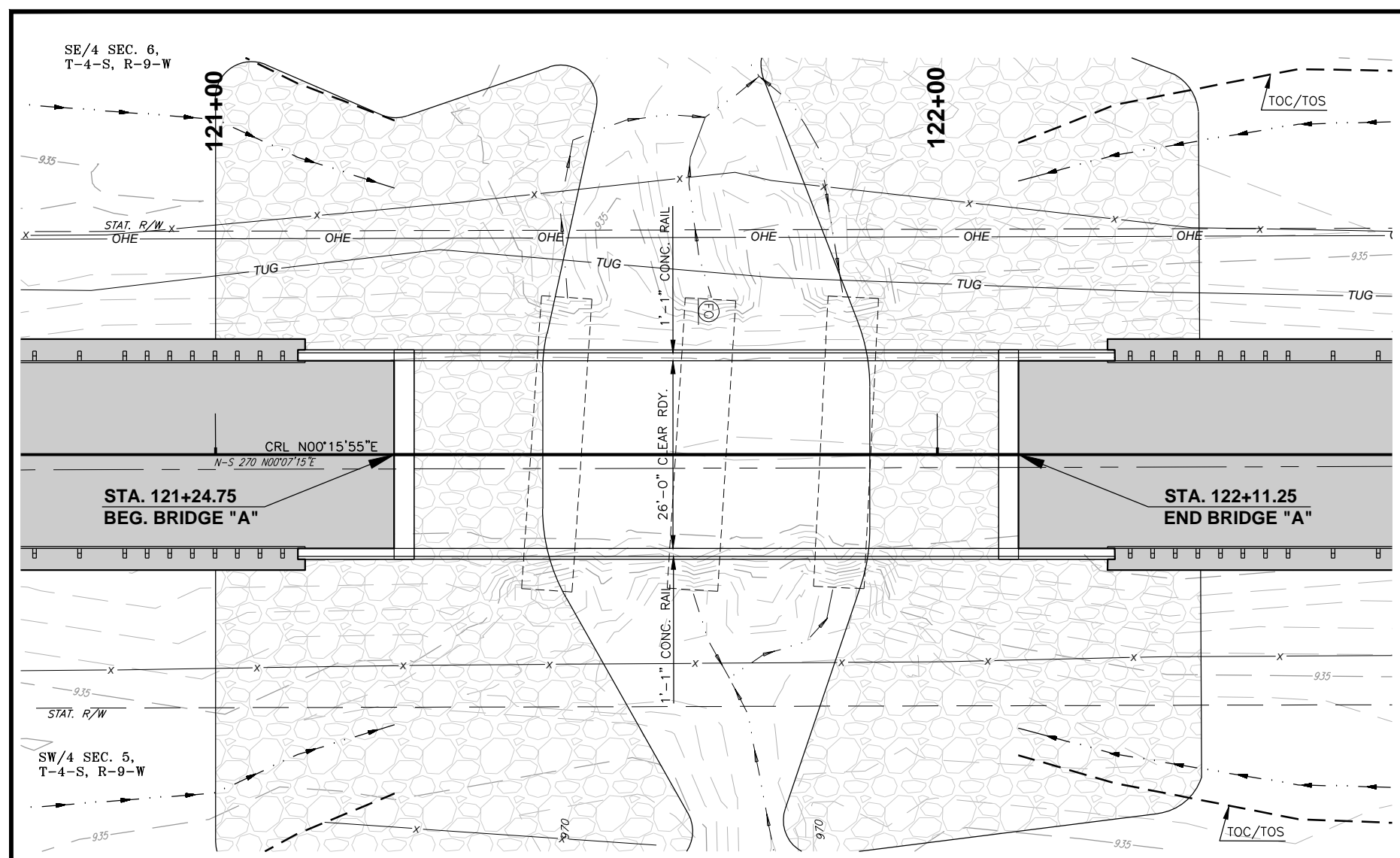
EXISTING STRUCTURE - 3-96" X 40' CGMP. (REMOVE)

BM # 202 STA. 120+87.19 50.97' LT.
SET 5/8 IP ELEV= 936.62

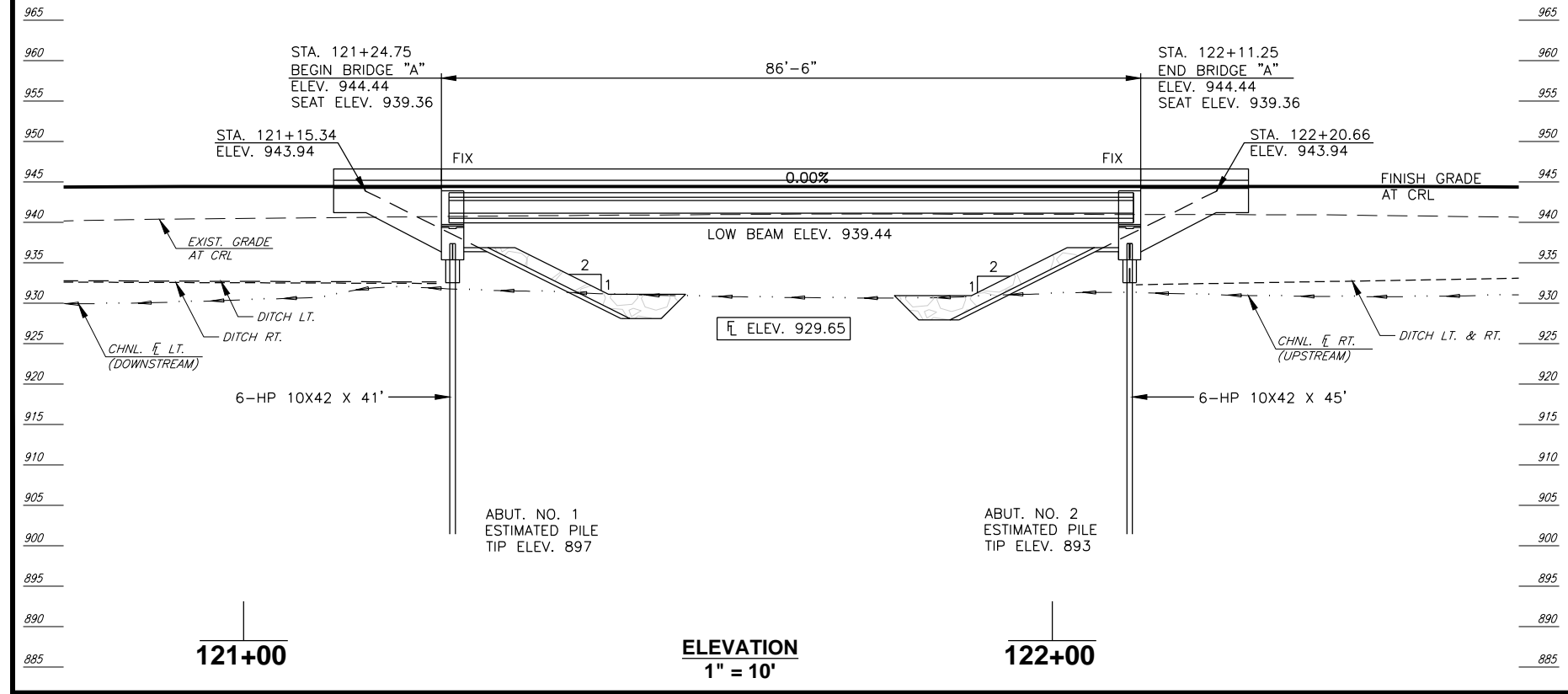
BM # 203 STA. 124+42.72 57.75' RT.
SET 5/BIN IP ELEV= 936.96

TRIBUTARY TO WHISKEY CREEK COTTON COUNTY

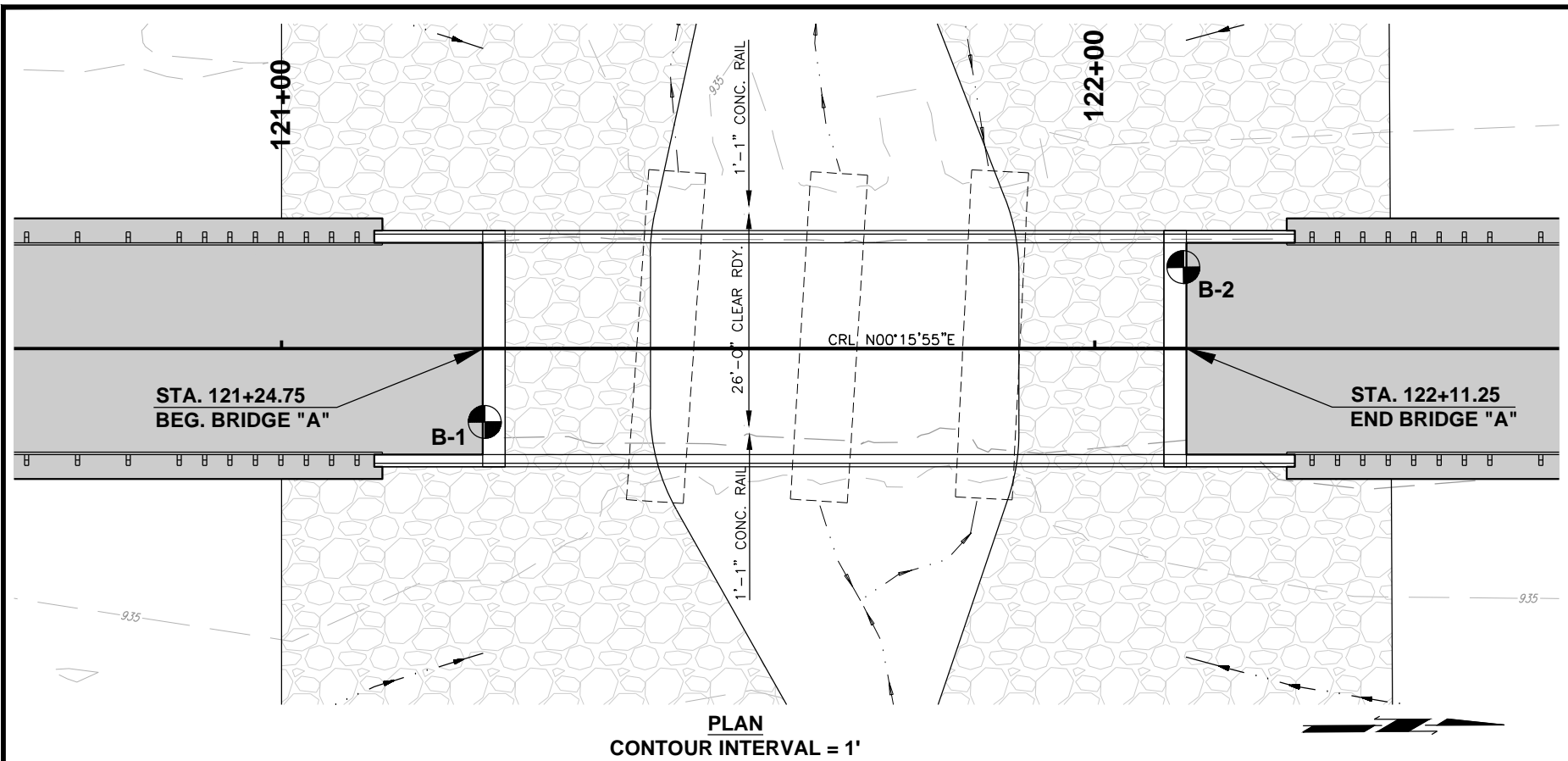
GENERAL PLAN AND ELEVATION BRIDGE "A"



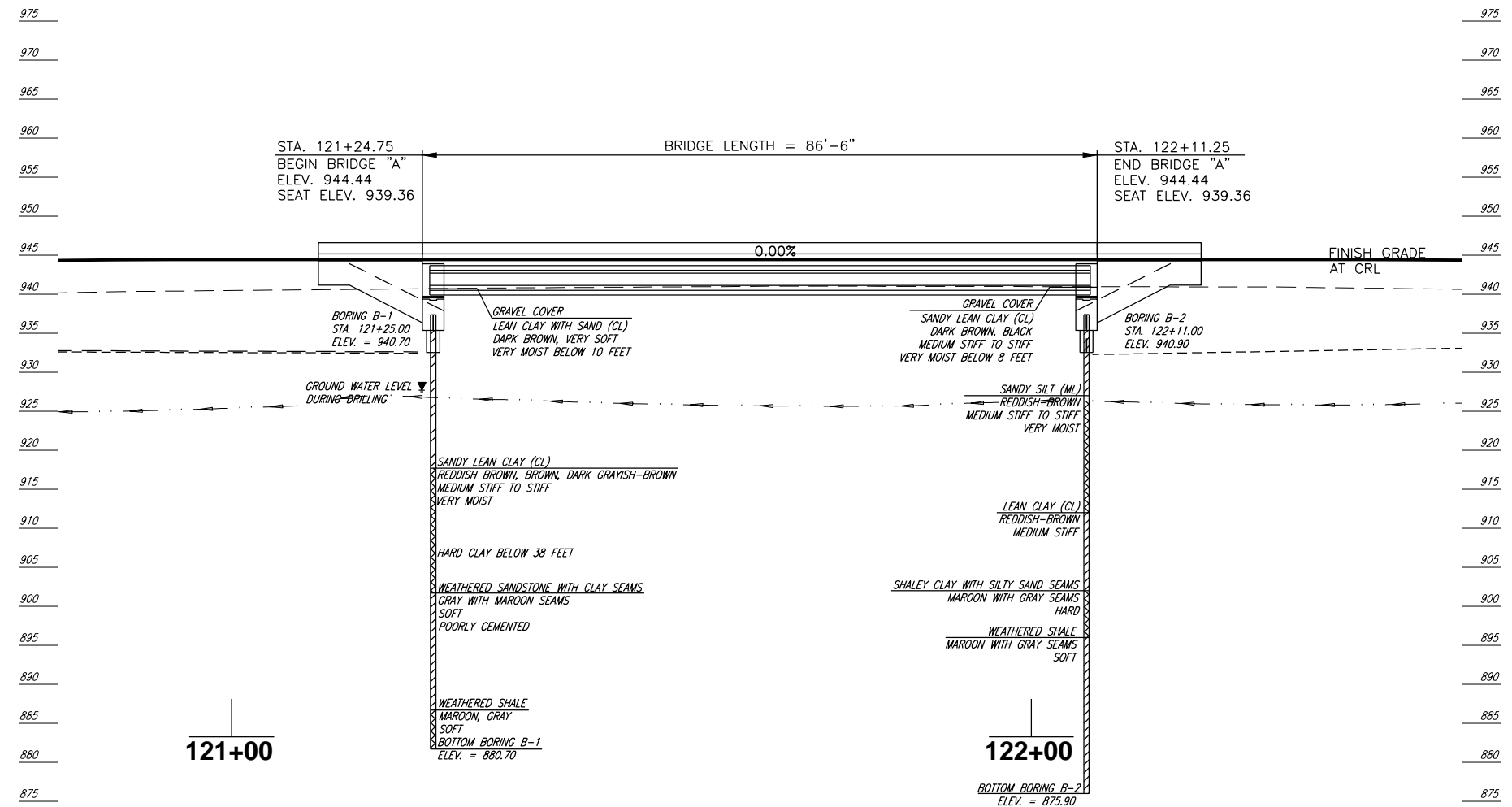
PLAN
CONTOUR INTERVAL = 1'



ELEVATION
1" = 10'



PLAN
CONTOUR INTERVAL = 1'



ELEVATION
1" = 10'

PENETROMETER RESULTS

BORING NO. 1			
TEST TYPE	ELEV.	RESULTS	
TC	901.2	50/1.5"	50/1.0"
TC	897.2	50/1.8"	50/0.9"
TC	892.2	50/1.6"	50/1.0"
TC	887.2	50/1.4"	50/1.1"
TC	882.2	50/2.5"	50/1.0"
BORING NO. 2			
TEST TYPE	ELEV.	RESULTS	
TC	895.9	50/1.4"	50/0.9"
TC	892.4	50/1.8"	50/0.8"
TC	887.4	50/2.0"	50/1.3"
TC	882.4	50/1.6"	50/1.3"
TC	877.4	50/1.4"	50/1.5"

BM # 202 STA. 120+87.19 50.97' LT.
SET 5/8 IP ELEV= 936.62

BM # 203 STA. 124+42.72 57.75' RT.
SET 5/8 IN IP ELEV= 936.96

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: PROJECT LIES ALONG N-S SECTION LINE 270 (LONESTAR ROAD) WITHIN THE WEST HALF OF SECTION 5, T-4-S, R-9-W AND EAST HALF OF SECTION 6, T-4-S, R-9-W, COTTON COUNTY, OKLAHOMA.

PROJECT DESCRIPTION: CONSTRUCTION OF AN 85' INTEGRAL TYPE III PCB SPAN BRIDGE AND APPROACH ROADWAYS.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: _____

1. INSTALL PERIMETER EROSION CONTROL DEVICES.
2. VEGETATIVE STRIPPING, UNDERCUT AND STOCKPILE TOPSOIL.
3. ROADWAY EXCAVATION AND EMBANKMENT.
4. INSTALL SILT FENCE, DIKES WITHIN PROJECT LIMITS.
5. ABUTMENT CONSTRUCTION.
6. PLACE CHANNEL RIPRAP.
7. COMPLETE BRIDGE CONSTRUCTION.
8. CULVERT TRENCHING AND CONSTRUCTION.
9. VEGETATIVE MULCHING.
10. CONST. FINISHED ROADWAY PAVING.
11. SPREAD TOPSOIL.
12. INSTALL SOLID SLAB SOD.

SOIL TYPE: CLAYPOOL UNIT (Pc1)

TOTAL AREA OF THE CONSTRUCTION SITE: 3.31 AC

ESTIMATED AREA TO BE DISTURBED: 3.15 AC

OFFSITE AREA TO BE DISTURBED (FOR CONTRACTOR USE) _____

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: .48 AC

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: .59 AC

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: .45 AC

LATITUDE & LONGITUDE OF CENTER OF PROJECT:
 LATITUDE 34° 14' 16"
 LONGITUDE 98° 10' 27"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: TRIBUTARY TO WHISKEY CREEK

SENSITIVE WATERS OR WATERSHEDS: YES NO

303(d) IMPAIRED WATERS: YES NO

IF YES, LIST IMPAIRMENT: _____

LOCATED IN A TMDL: YES NO

LAKE THUNDERBIRD TMDL: YES NO

MS4 ENTITY: YES NO

IF YES, LOCATION: _____

NOTE:
 THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- _____ TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- _____ SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- _____ STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- _____ TEMPORARY FIBER LOG
- _____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- _____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- _____ ROCK FILTER DAMS
- _____ TEMPORARY SLOPE DRAIN
- _____ PAVED DITCH W/ DITCH LINER PROTECTION
- _____ TEMPORARY DIVERSION CHANNELS
- _____ TEMPORARY SEDIMENT BASINS
- _____ TEMPORARY SEDIMENT TRAPS
- _____ TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- _____ INLET SEDIMENT FILTER
- _____ TEMPORARY BRUSH SEDIMENT BARRIERS
- _____ SANDBAG BERMS
- _____ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPAILIN
- _____ EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIAL IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
- 221 TEMPORARY SEDIMENT CONTROL

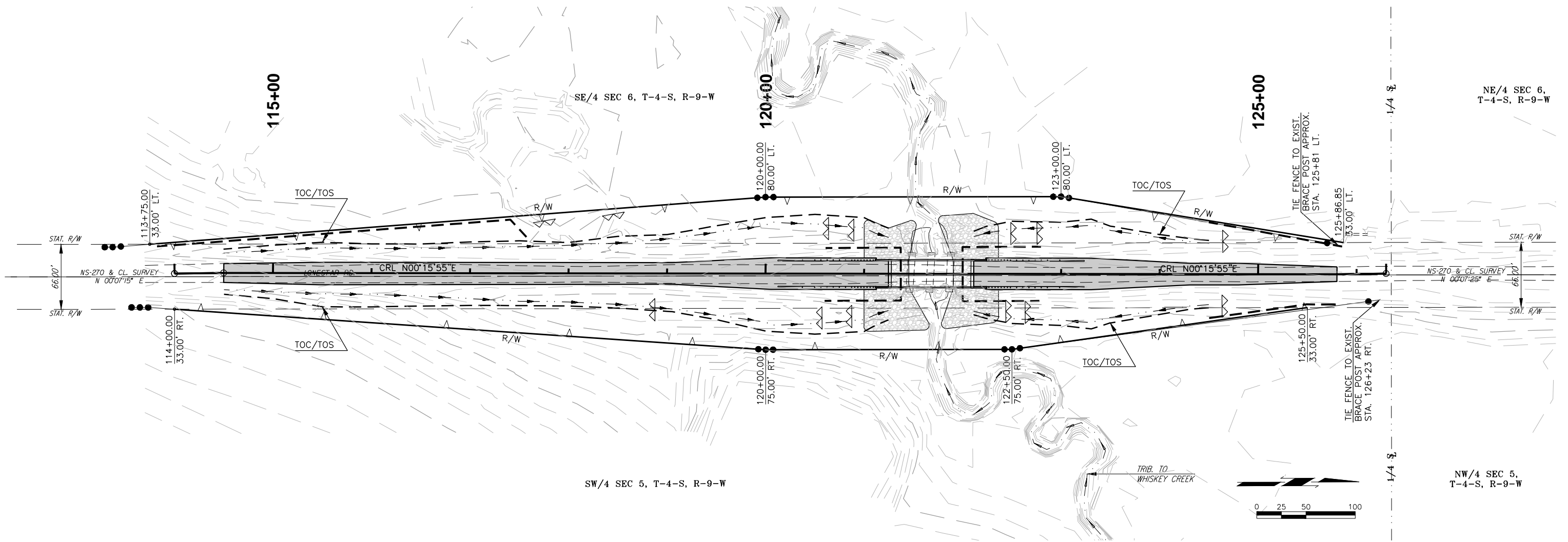
IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

TRIBUTARY TO WHISKEY CREEK COTTON COUNTY

STORM WATER MANAGEMENT PLAN

JOB PIECE NO. 31110(04) SHEET NO. R001



EROSION CONTROL AND CONSTRUCTION NOTES

SOLID SLAB SODDING SHALL BE PLACED ON ALL DISTURBED AREAS.

THE PLANTING OF SOLID SLAB SOD SHALL BE RESTRICTED TO THE PERIOD FROM MARCH 1 TO AUGUST 31.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER, SHALL BE FERTILIZED AND WATERED AS CALLED FOR ON THE PLANS, BUT SHALL NOT BE SEEDED, SODDED OR SPRIGGED.

VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "MULCHING-TILLER METHOD", AS SPECIFIED IN 233.04B(2) OF THE STANDARD SPECIFICATIONS.

TOPSOIL NOTE:
RESERVED TOPSOIL SHALL BE SPREAD APPROX. 5 INCHES THICK FIRST ON COMPLETED FORE SLOPES OF FILL SECTIONS AND THE REMAINDER ON COMPLETED CUT SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER.

AREAS ON WHICH SALVAGED TOPSOIL IS TO BE REPLACED SHALL HAVE 18-46-0 FERTILIZER APPLIED AT THE RATE OF 150 POUNDS PER ACRE JUST PRIOR TO THE REPLACEMENT OF SALVAGED TOPSOIL.

EROSION CONTROL QUANTITIES			
DESCRIPTION	UNITS	QUANTITY	
TEMPORARY SILT FENCE	(1) LF	1,000.00	
TEMPORARY SILT DIKE	(1) LF	300.00	
SOLID SLAB SODDING	SY	12,224.00	
VEGETATIVE MULCHING	(2) AC	6.30	
CLASS C CONCRETE	(3) CY	10.00	
TYPE 1-A PLAIN RIPRAP	TON	1,337.00	
TYPE 1-A FILTER BLANKET	TON	273.00	

- (1) ESTIMATED QUANTITY FOR USE IN CONJUNCTION WITH THIS SHEET AND AS DIRECTED BY THE ENGINEER.
- (2) QUANTITY BASED ON 3.15 ACRES AT TWO APPLICATIONS.
- (3) QUANTITY INCLUDES 10 C.Y. FOR USE AS DIRECTED BY THE ENGINEER.

LEGEND	
TEMPORARY SILT FENCE	---
TEMPORARY SILT DIKE	▲▲▲▲
SOLID SLAB SOD DITCH	— · · —
RIPRAP	▨

TRIBUTARY TO WHISKEY CREEK COTTON COUNTY

EROSION CONTROL PLAN

JOB PIECE NO. 31110(04) SHEET NO. R002

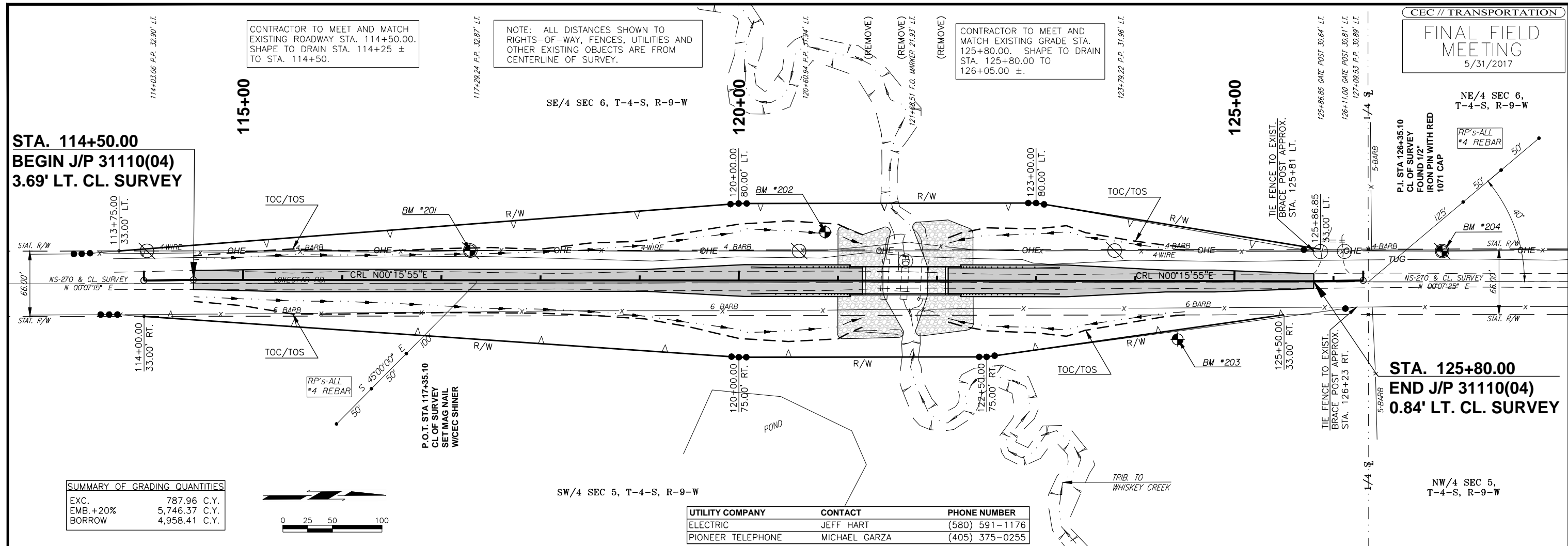
STA. 114+50.00
BEGIN J/P 31110(04)
3.69' LT. CL. SURVEY

STA. 125+80.00
END J/P 31110(04)
0.84' LT. CL. SURVEY

CONTRACTOR TO MEET AND MATCH EXISTING ROADWAY STA. 114+50.00. SHAPE TO DRAIN STA. 114+25 ± TO STA. 114+50.

NOTE: ALL DISTANCES SHOWN TO RIGHTS-OF-WAY, FENCES, UTILITIES AND OTHER EXISTING OBJECTS ARE FROM CENTERLINE OF SURVEY.

CONTRACTOR TO MEET AND MATCH EXISTING GRADE STA. 125+80.00. SHAPE TO DRAIN STA. 125+80.00 TO 126+05.00 ±.

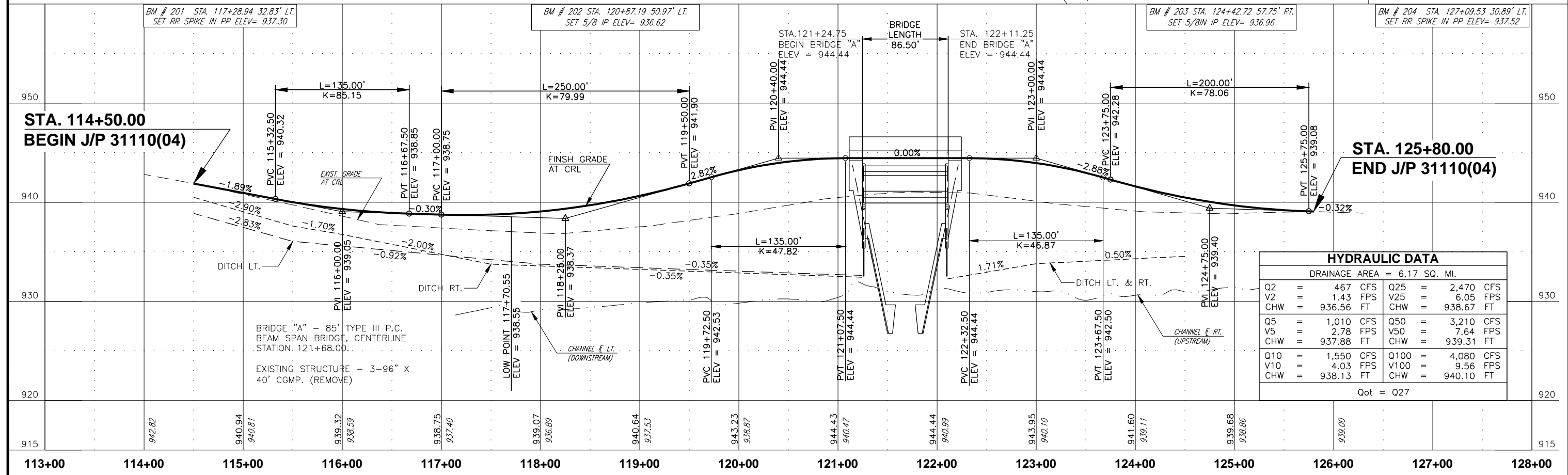


SUMMARY OF GRADING QUANTITIES

EXC.	787.96 C.Y.
EMB.+20%	5,746.37 C.Y.
BORROW	4,958.41 C.Y.



UTILITY COMPANY	CONTACT	PHONE NUMBER
ELECTRIC	JEFF HART	(580) 591-1176
PIONEER TELEPHONE	MICHAEL GARZA	(405) 375-0255



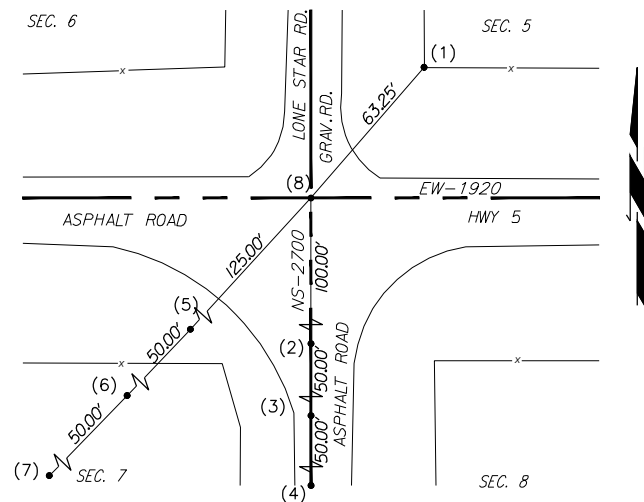
HYDRAULIC DATA

DRAINAGE AREA = 6.17 SQ. MI.

Q2 = 467 CFS	Q25 = 2,470 CFS
V2 = 1.43 FPS	V25 = 6.05 FPS
CHW = 936.56 FT	CHW = 938.67 FT
Q5 = 1,010 CFS	Q50 = 3,210 CFS
V5 = 2.78 FPS	V50 = 7.64 FPS
CHW = 937.88 FT	CHW = 939.31 FT
Q10 = 1,550 CFS	Q100 = 4,080 CFS
V10 = 4.03 FPS	V100 = 9.56 FPS
CHW = 938.13 FT	CHW = 940.10 FT

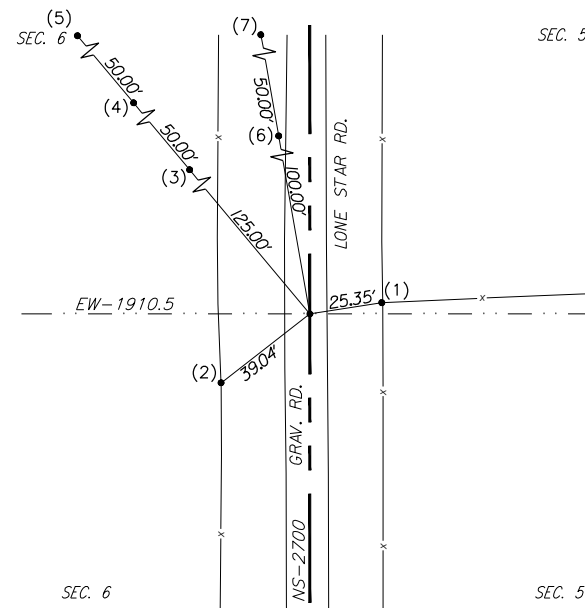
Qot = Q27

STATION AND OFFSET TABLE		
CRL	CENTERLINE OF SURVEY	
STATION	STATION	OFFSET
114+00.00	114+00.00	3.16 LT
114+50.00	114+50.00	3.69 LT
115+00.00	115+00.00	3.57 LT
116+00.00	116+00.00	3.31 LT
117+00.00	117+00.00	3.06 LT
118+00.00	118+00.00	2.81 LT
119+00.00	119+00.00	2.56 LT
120+00.00	120+00.00	2.30 LT
121+00.00	121+00.00	2.05 LT
122+00.00	122+00.00	1.80 LT
123+00.00	123+00.00	1.55 LT
124+00.00	124+00.00	1.30 LT
125+00.00	125+00.00	1.04 LT
126+00.00	126+00.00	1.06 LT
126+30.00	126+30.00	1.38 LT



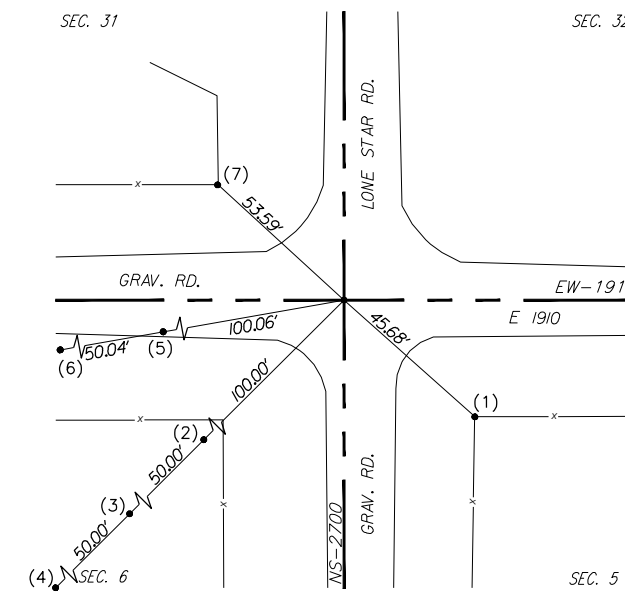
STA. 100+00.00
SE COR. SEC 6, T-4-S, R-9-W
FOUND MAG NAIL W/ SHINER

- 1) FOUND SOUTHWEST FACE OF 4" STEEL CNR. POST 63.25' @ N 35°53'58" E
- 2) FOUND A MAG NAIL FLUSH IN A 100.00' @ S 00°00'07" W
- 3) FOUND A MAG NAIL FLUSH IN A 150.00' @ S 00°00'07" W
- 4) FOUND A MAG NAIL FLUSH IN A 200.00' @ S 00°00'07" W
- 5) SET 1/2" IRON PIN 125.00' @ S 45°00'00" W
- 6) SET 1/2" IRON PIN 175.00' @ S 45°00'00" W
- 7) SET 1/2" IRON PIN 225.00' @ S 45°00'00" W
- 8) FOUND MAG NAIL 1.48' @ N 04°19'26" E



STA. 126+35.10
E/4 SEC 6, T-4-S, R-9-W
FOUND 1/2" IRON PIN

- 1) FOUND WEST FACE 5" STEEL CNR. POST 25.35' @ N 81°05'12" E
- 2) FOUND EAST FACE 2" STEEL CNR. POST 39.04' @ S 52°10'32" W
- 3) SET 1/2" IRON PIN FLUSH 125.00' @ N 39°52'35" W
- 4) SET 1/2" IRON PIN FLUSH 175.00' @ N 39°52'35" W
- 5) SET 1/2" IRON PIN FLUSH 225.00' @ N 39°52'35" W
- 6) FOUND 1/2" IRON PIN 100.00' @ N 09°57'70" W
- 7) FOUND 1/2" IRON PIN 150.00' @ N 09°57'70" W



STA. 153+17.61
NE COR. SEC 6, T-4-S, R-9-W
FOUND RR SPK

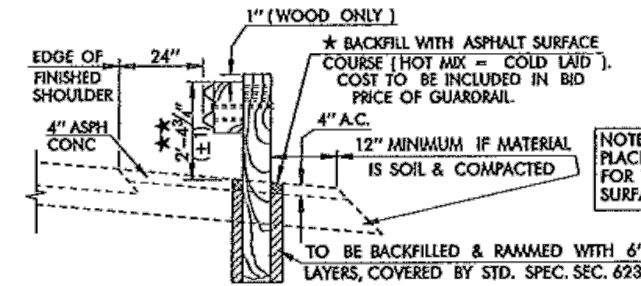
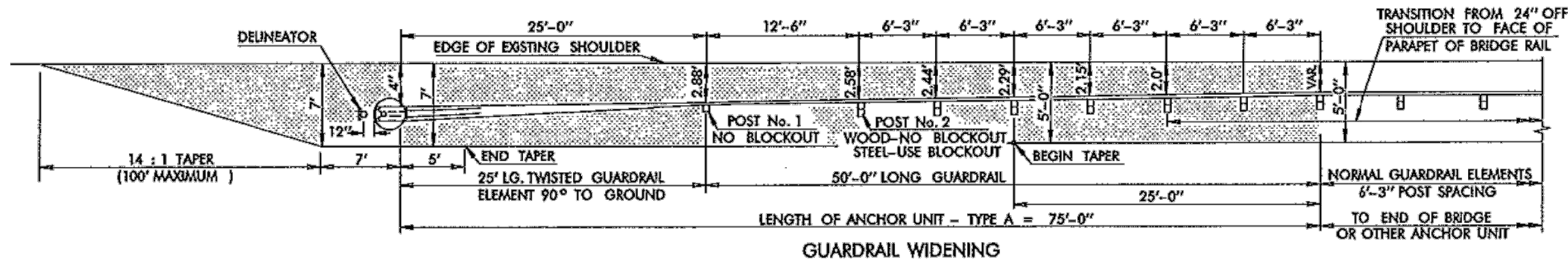
- 1) FOUND NORTHWEST FACE OF 5" STEEL CORNER POST 45.68' @ S 48°19'46" E
- 2) SET 1/2" IRON PIN FLUSH 100.00' @ S 45°00'00" W
- 3) SET 1/2" IRON PIN FLUSH 150.00' @ S 45°00'00" W
- 4) SET 1/2" IRON PIN FLUSH 200.00' @ S 45°00'00" W
- 5) FOUND NORTHWEST FACE OF 5" STEEL CORNER POST 100.06' @ S 80°00'12" W
- 6) FOUND 1/2" IRON POST 150.04' @ S 80°00'44" W
- 7) FOUND SOUTHWEST FACE OF 2" STEEL CORNER POST 44.49' @ N 47°35'27" W

SECTION CORNER REFERENCES

TRIBUTARY TO WHISKEY CREEK COTTON COUNTY

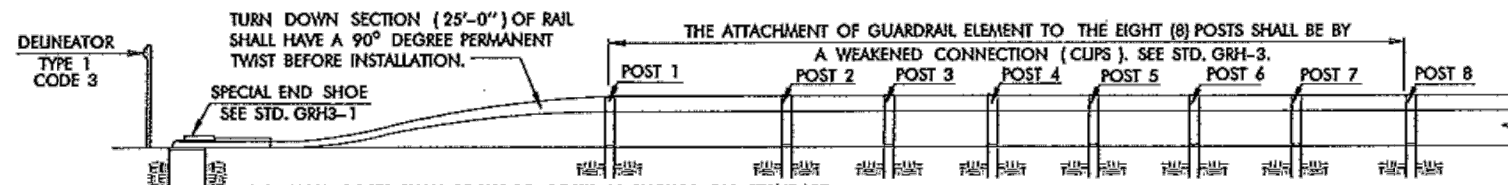
SECTION CORNER REFERENCES AND STATION OFFSET TABLE

JOB PIECE NO. 31110(04) SHEET NO. 5001



DETAIL OF GUARDRAIL POST IN SHOULDER BASE WIDENING

- ★ SEE 2009 STD. SPECIFICATIONS-SEC. 411, ASPH SURFACE COURSE (HOT MIX-COLD LAID)
- ★★ MEASURE DIRECTLY BELOW RAIL, GUARDRAIL TO BE INSTALLED THIS DIMENSION. WHEN INSTALLING GUARDRAIL IN AN AREA WITH NO SHOULDER WIDENING THE RAIL HEIGHT SHALL BE MEASURED AS FOLLOWS:
 FOR NEGATIVE GRADE SHOULDERS, MEASURE TO A LINE FROM THE SHOULDER ON THE SAME SLOPE AS THE SHOULDER.
 FOR POSITIVE GRADE & LEVEL SHLDRS, MEASURE FROM A LINE LEVEL WITH THE EDGE OF SHOULDER.

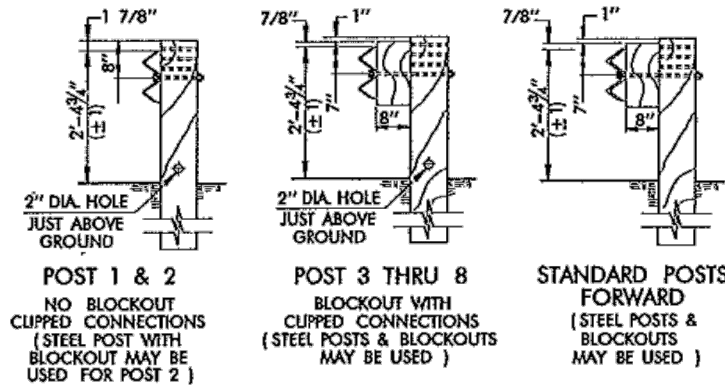


TURN DOWN SECTION (25'-0") OF RAIL SHALL HAVE A 90° DEGREE PERMANENT TWIST BEFORE INSTALLATION.

THESE EIGHT POSTS SHALL BE WOOD POSTS AS SHOWN ON STANDARD DRAWING GRH3-1. WEAKEN POSTS BY DRILLING ONE 2" DIAMETER HOLE THROUGH THE POST & ABOVE THE GROUND LINE PARALLEL WITH THE EDGE OF PAVEMENT. DRILLED HOLES SHOULD BE ANGLED SLIGHTLY VERTICAL TO PREVENT WATER FROM STANDING. HOLES SHALL BE TREATED WITH AN APPROVED PRESERVATIVE. BLOCKOUT SHALL NOT BE USED AT POST 1 & 2.

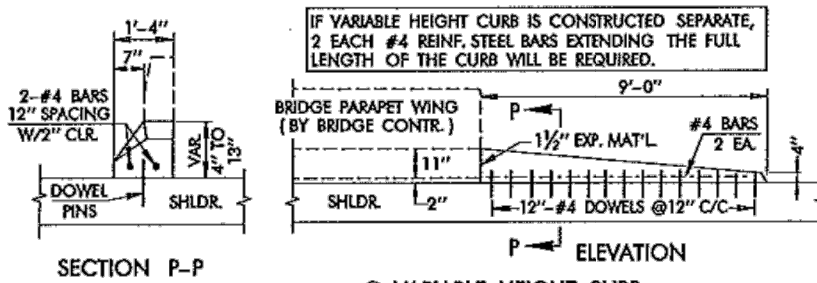
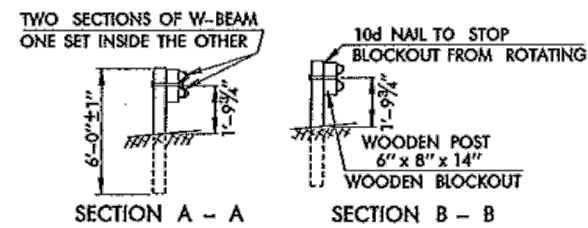
POST 1 SHALL BE A WOOD POST WITH NO BLOCKOUT AND WITH A 2" DIAMETER HOLE DRILLED THROUGH THE POST PARALLEL TO EDGE OF PAVEMENT JUST ABOVE GROUND LINE. POST 2 THRU 8 SHALL BE STEEL POSTS WITH BLOCKOUTS. SEE STANDARD DRAWING GRH3-1 FOR POST DETAILS.

WOOD POSTS OPTION ANCHOR UNIT - TYPE A STEEL POSTS OPTION

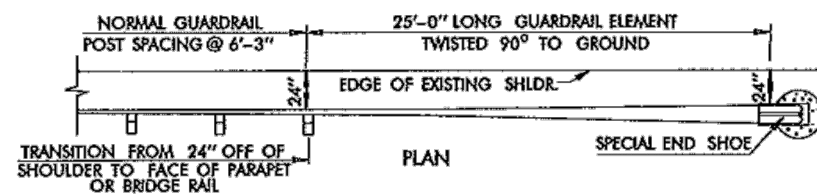


WOOD POST DETAIL RECTANGULAR POSTS SHOWN SEE MAINTENANCE STD. DRAWING GRH3-1

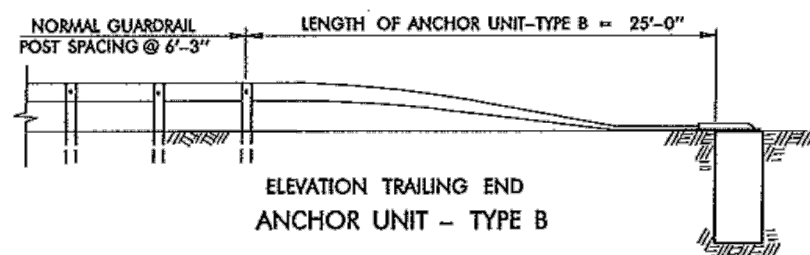
ANCHOR UNIT - TYPE A - APPROACH END



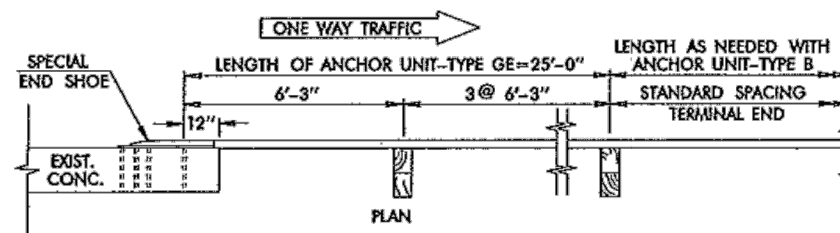
○ VARIABLE HEIGHT CURB



ONE WAY TRAFFIC →



ELEVATION TRAILING END ANCHOR UNIT - TYPE B



ANCHOR UNIT - TYPE GE ONLY TO BE USED AT EXISTING ENDS OF ONE WAY BRIDGES

GENERAL NOTES

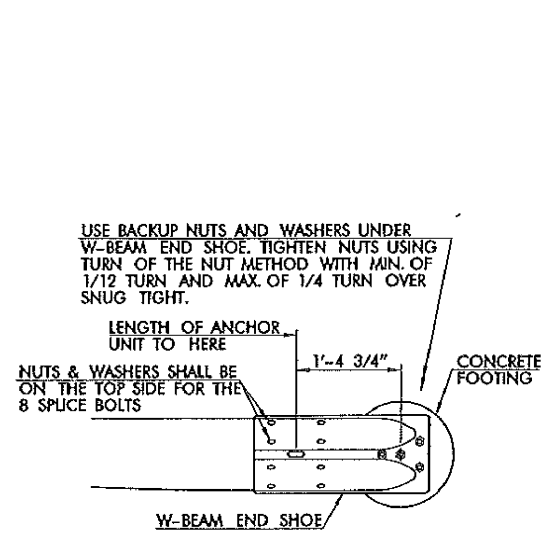
- ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2009 ENGLISH STANDARD SPECIFICATIONS.
- THE BRIDGE CONTRACTOR SHALL PROVIDE HOLES FOR THE CONNECTION OF W-BEAM TERMINAL CONNECTOR (SPECIAL END SHOE) TO BRIDGE RAIL AND SLOPED FACE PARAPET. RETROFIT CONNECTIONS FOR GUARDRAIL (SPECIAL END SHOE) SHALL BE FIELD DRILLED BY THE SURFACING CONTRACTOR.
- GUARDRAIL COMPONENTS SHALL MEET NCHRP-350, THE APPLICABLE STANDARDS OF "A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE" PREPARED AND APPROVED BY THE AASHTO-ARTBA-AGC JOINT COMMITTEE, TECHNICAL BULLETIN NO. 268 B.
- POST SPACING AND FACE OF RAIL ALIGNMENT REMAINS THE SAME.

BASIS OF PAYMENT		
ITEM NO.	ITEM	UNIT
623.06(F)	GUARDRAIL ANCHOR UNIT (TYPE ▲)	EA.

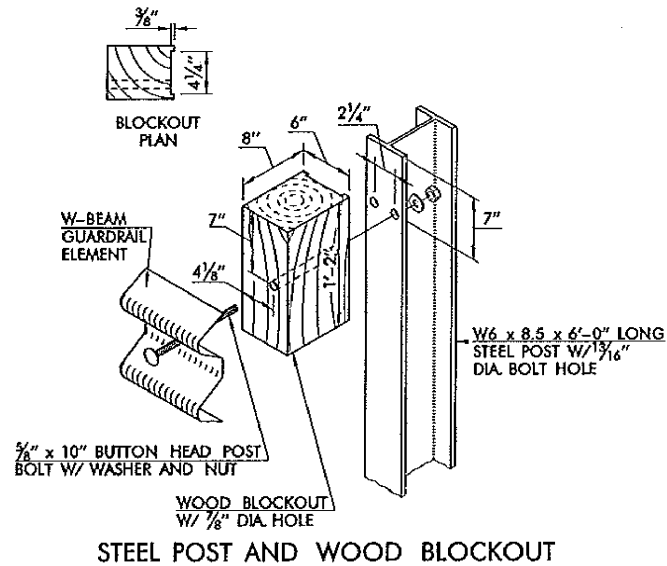
▲ TYPE OF GUARDRAIL ANCHOR UNIT TO BE SPECIFIED.

TRIBUTARY TO WHISKEY CREEK COTTON COUNTY

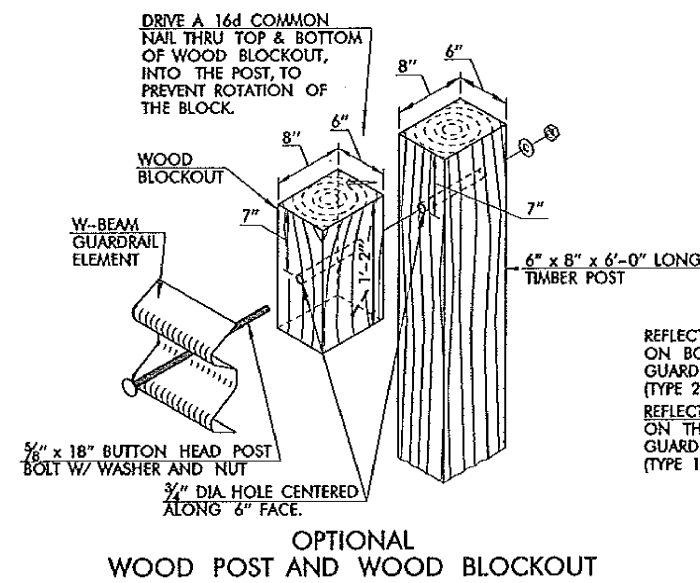
GUARDRAIL AND UNITS



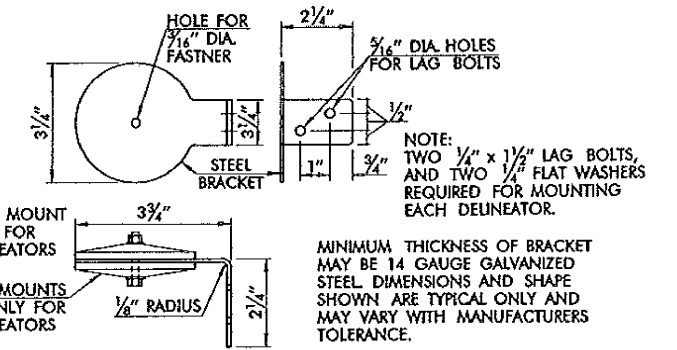
GROUND ANCHOR FOOTING DETAIL



STEEL POST AND WOOD BLOCKOUT



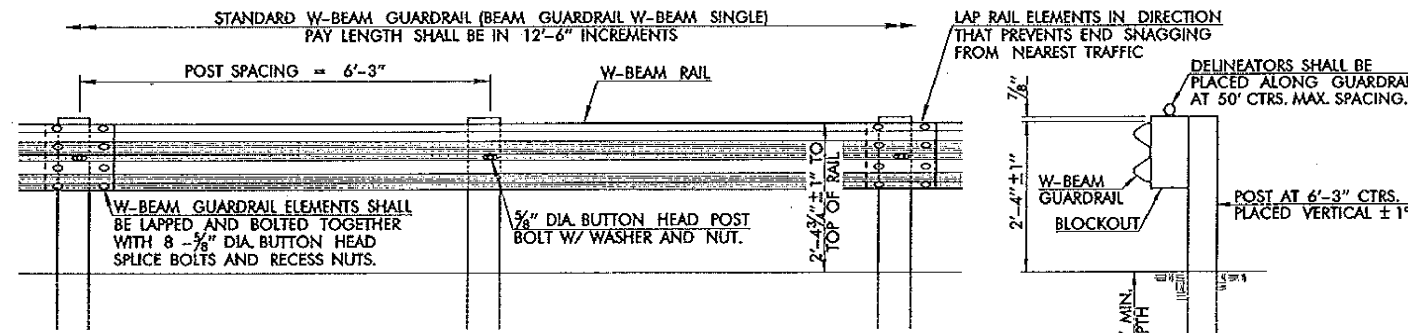
OPTIONAL WOOD POST AND WOOD BLOCKOUT



TYPICAL BRACKET FOR MOUNTING 3 1/4\"/>

OPTIONAL TYPE POSTS OR BLOCKOUTS FOR STANDARD GUARDRAIL

THE CONTRACTOR MAY, AT HIS OPTION, SELECT AND USE ONE OF THE TYPE POSTS AND BLOCKOUTS SHOWN ABOVE, OR AN APPROVED ALTERNATE. THIS POST & BLOCKOUT CHOICE MUST BE USED ON THE ENTIRE PROJECT. ALTERNATE POST (INCLUDING SPECIAL SHAPES) MAY BE USED UPON THE APPROVAL OF THE ENGINEER. ALTERNATE BLOCKOUTS (SUCH AS RECYCLED MATERIAL, RUBBER, PLASTIC AND COMPOSITE PRODUCTS) MAY BE USED IF PRODUCT HAS BEEN EVALUATED AND APPROVED BY ODOT.

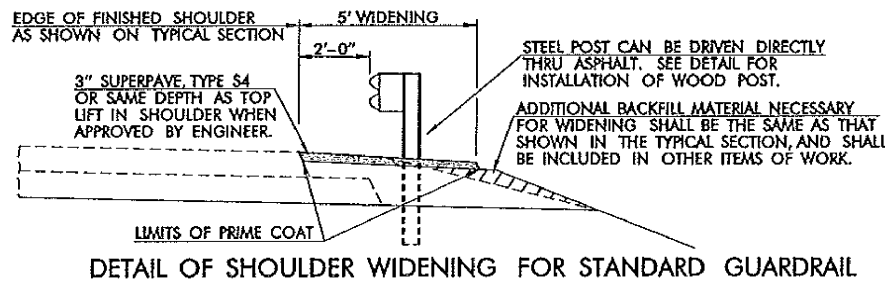


STANDARD W-BEAM GUARDRAIL ELEVATION

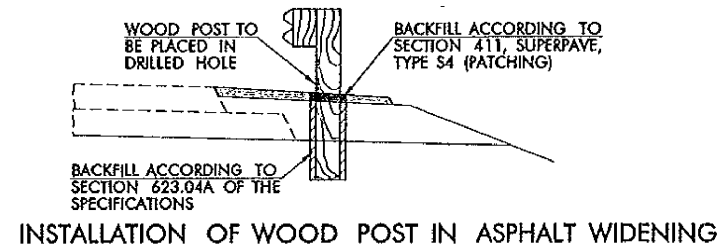
STANDARD W-BEAM GUARDRAIL SECTION

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2009 ODOT STANDARD SPECIFICATIONS.
2. STANDARD GUARDRAIL WITH 6'-3" POST SPACING MEETS NHCPR-350, TEST LEVEL 3. IF A RIGID HAZARD IS TO BE LEFT BEHIND THE GUARDRAIL, WITHIN 3'-0" OF THE RAIL, CONSIDER USING A DIFFERENT TREATMENT.
3. WOOD POSTS AND BLOCKOUTS SHALL BE STRESS GRADE 1200F.
4. ALL STANDARD GUARDRAIL AND GUARDRAIL EXTRUDER TERMINALS SHALL BE OFFSET SO THAT RAIL FACE IS TWO FEET OUTSIDE THE SHOULDER. FOR TRANSITION FROM BRIDGE RAIL TO TWO FOOT OFFSET, BEGINNING AT THE GUARDRAIL BRIDGE CONNECTION, TRANSITION THE STANDARD GUARDRAIL AT A 30:1 TAPER, UNTIL THE RAIL REACHES THE OFFSET DISTANCE.
5. ALL GUARDRAIL, METAL POSTS, PLATES AND HARDWARE SHALL BE GALVANIZED AFTER FABRICATION.
6. ANY FIELD CUTS OR HOLES DRILLED IN GALVANIZED MATERIALS SHALL BE COATED WITH A ZINC OXIDE PAINT. SEE SECTION 730 OF THE SPECIFICATIONS.
7. GUARDRAIL DELINEATORS (TYPE 2, CODE 1) WILL BE REQUIRED FOR ALL TWO-LANE ROADWAYS. ALL OTHER ROADWAYS WILL REQUIRE GUARDRAIL DELINEATORS (TYPE 1, CODE 1).



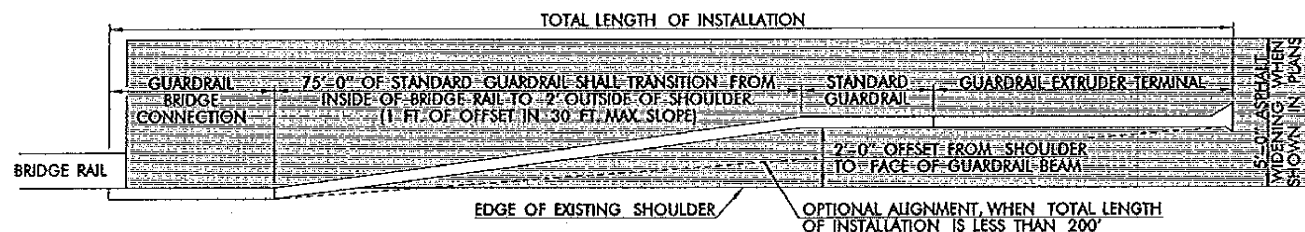
DETAIL OF SHOULDER WIDENING FOR STANDARD GUARDRAIL



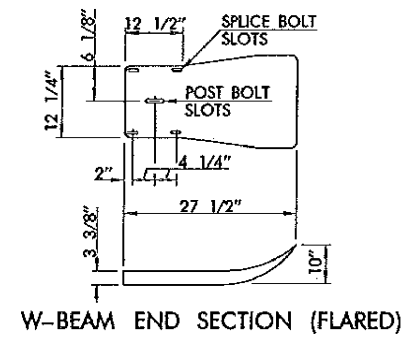
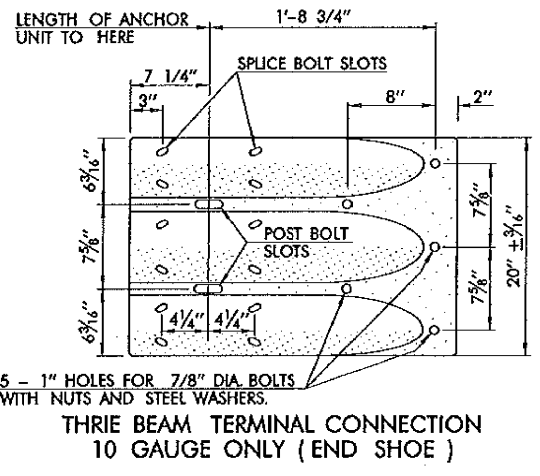
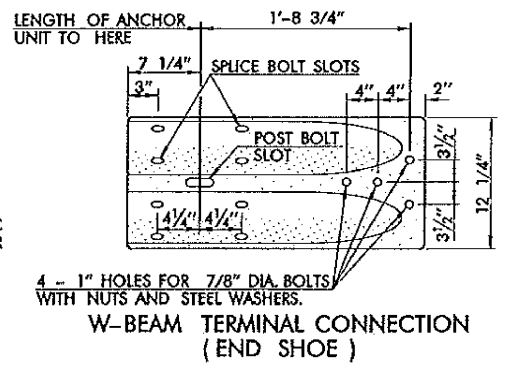
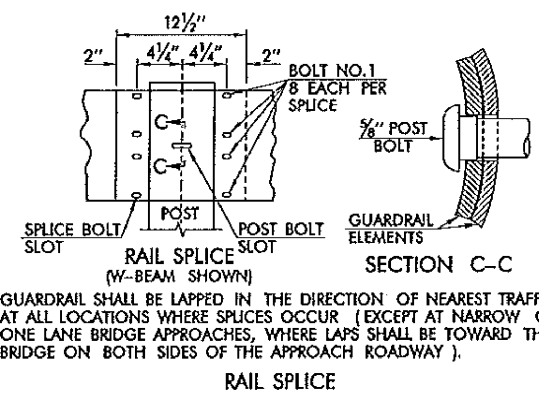
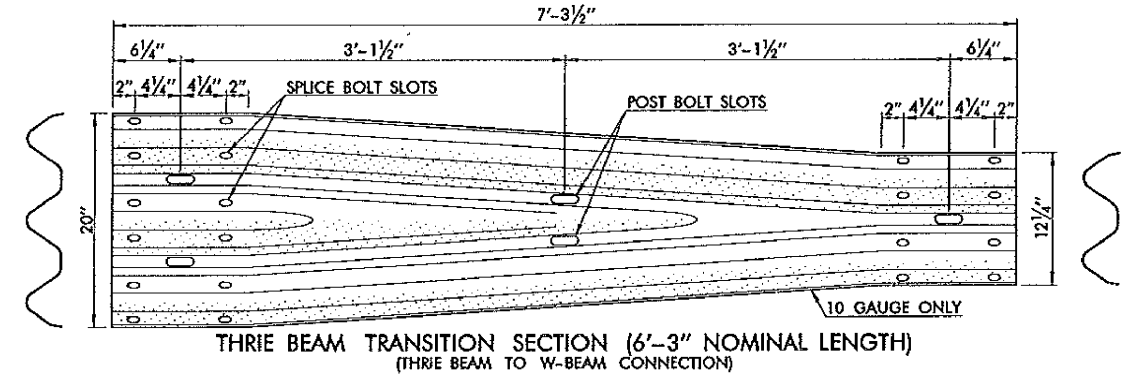
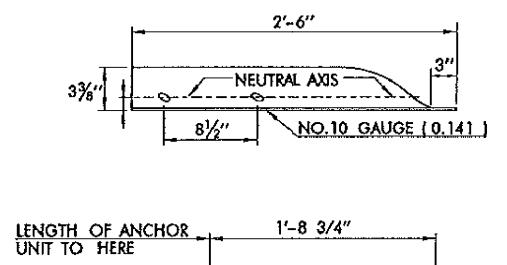
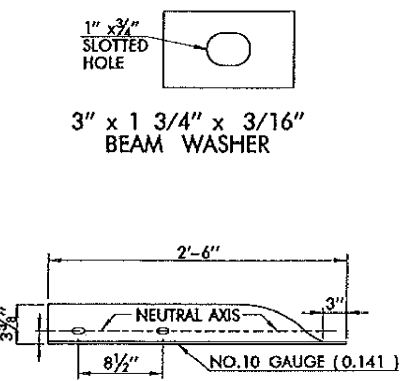
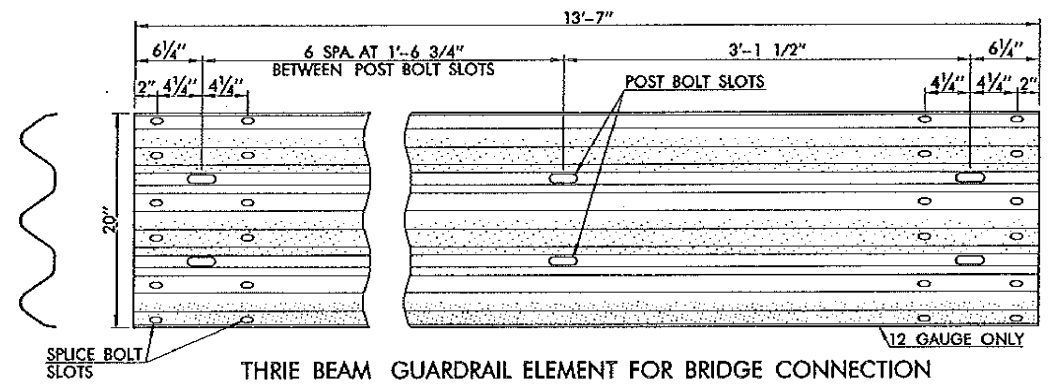
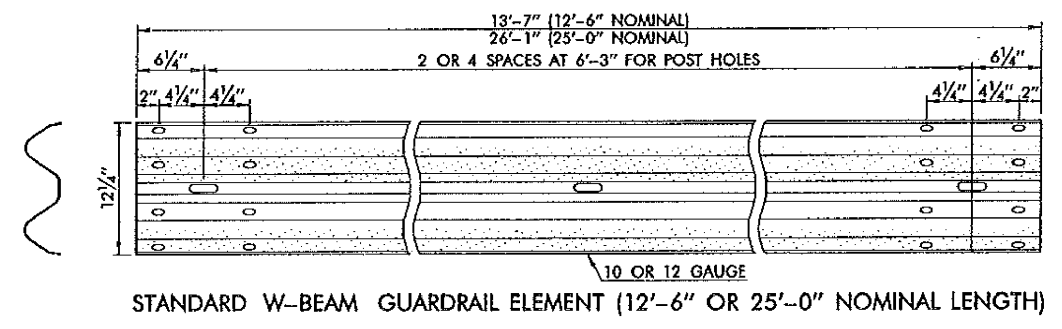
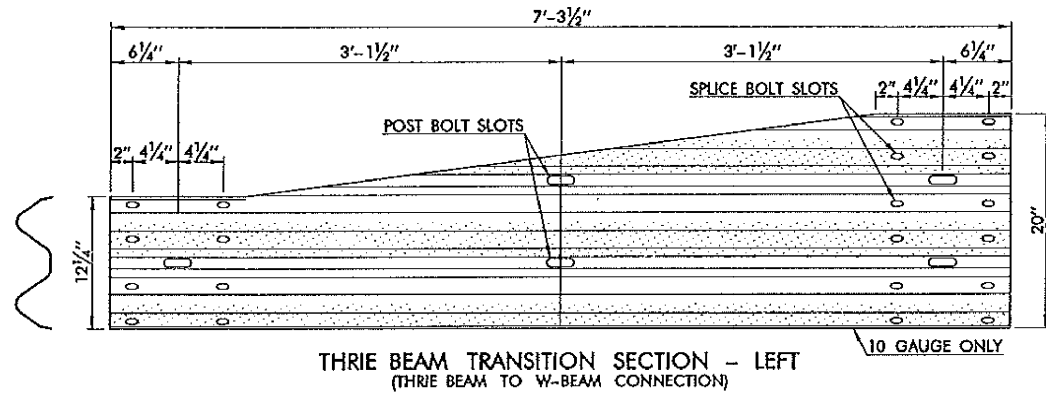
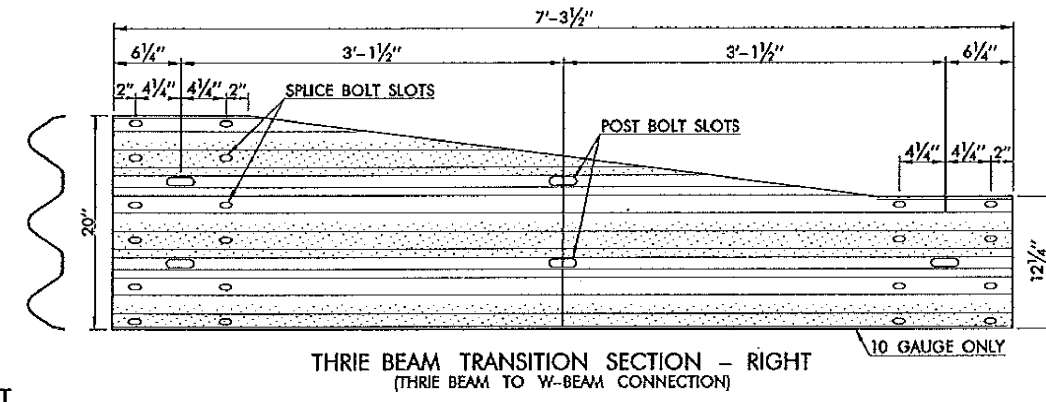
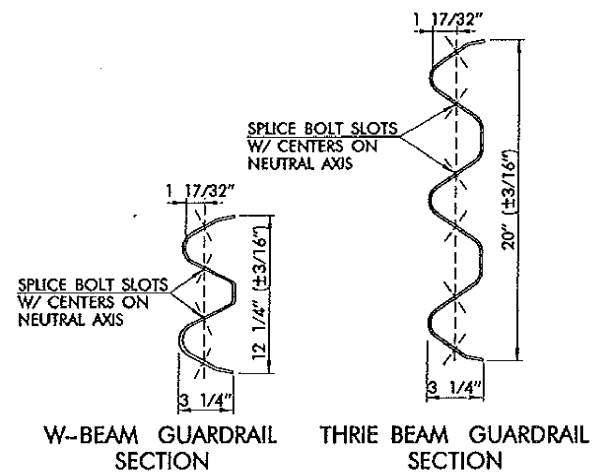
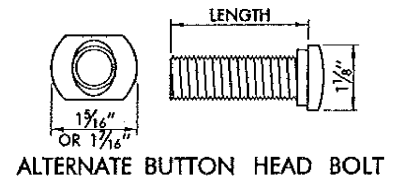
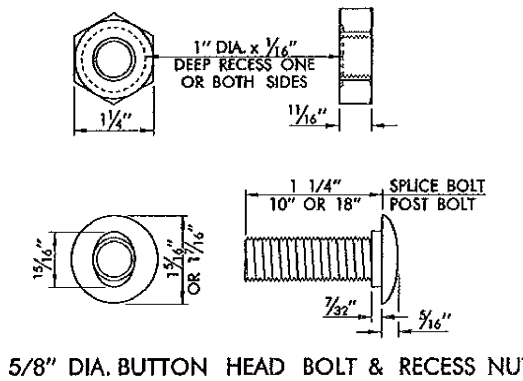
INSTALLATION OF WOOD POST IN ASPHALT WIDENING

BASIS OF PAYMENT		
ITEM NO.	ITEM	UNIT
623 (A)	BEAM GUARDRAIL W-BEAM SINGLE	L.F.
853	GUARDRAIL DELINEATORS (TYPE 1, CODE 1)	EA.
853	GUARDRAIL DELINEATORS (TYPE 2, CODE 1)	EA.

NOTE: PAYITEM GUARDRAIL ANCHOR UNIT TYPE B INCLUDES ALL LABOR AND MATERIALS TO INSTALL 25'-0" TWISTED RAIL ELEMENT, W-BEAM END SHOE, CONC. FOOTING, AND FOUR ANCHOR BOLTS.



TYPICAL GUARDRAIL INSTALLATION AT BRIDGE



- GENERAL NOTES**
1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2009 ODOT STANDARD SPECIFICATIONS.
 2. ALL GUARDRAIL BEAMS, END SHOES, AND END SECTIONS ON THIS STANDARD DRAWING SHALL BE IN ACCORDANCE WITH AASHTO M 180.
 3. ALL SPLICE BOLT SLOTS SHALL BE 29/32" WIDE x 1 1/8" LONG.
 4. ALL POST BOLT SLOTS SHALL BE 3/4" WIDE x 2 1/2" LONG.

