FOR SURVEY CONTROL DATA, SEE SURVEY DATA SHEETS

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. DIST.	ROAD NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6		OKLA.			1	

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
STATE HIGHWAY
STATE AID PROJECT NO. SSP-229C(010)SS
BRIDGE & APPROACH PLANS
S.H. 30
HARMON COUNTY
STATE JOB NO. 28768(04)
CONTROL SECTION NO. 30-29-08
BRIDGE "A" LOCATION NO. 2908 1114X OLD NBI NO. 07348, NEW NBI NO. 31365

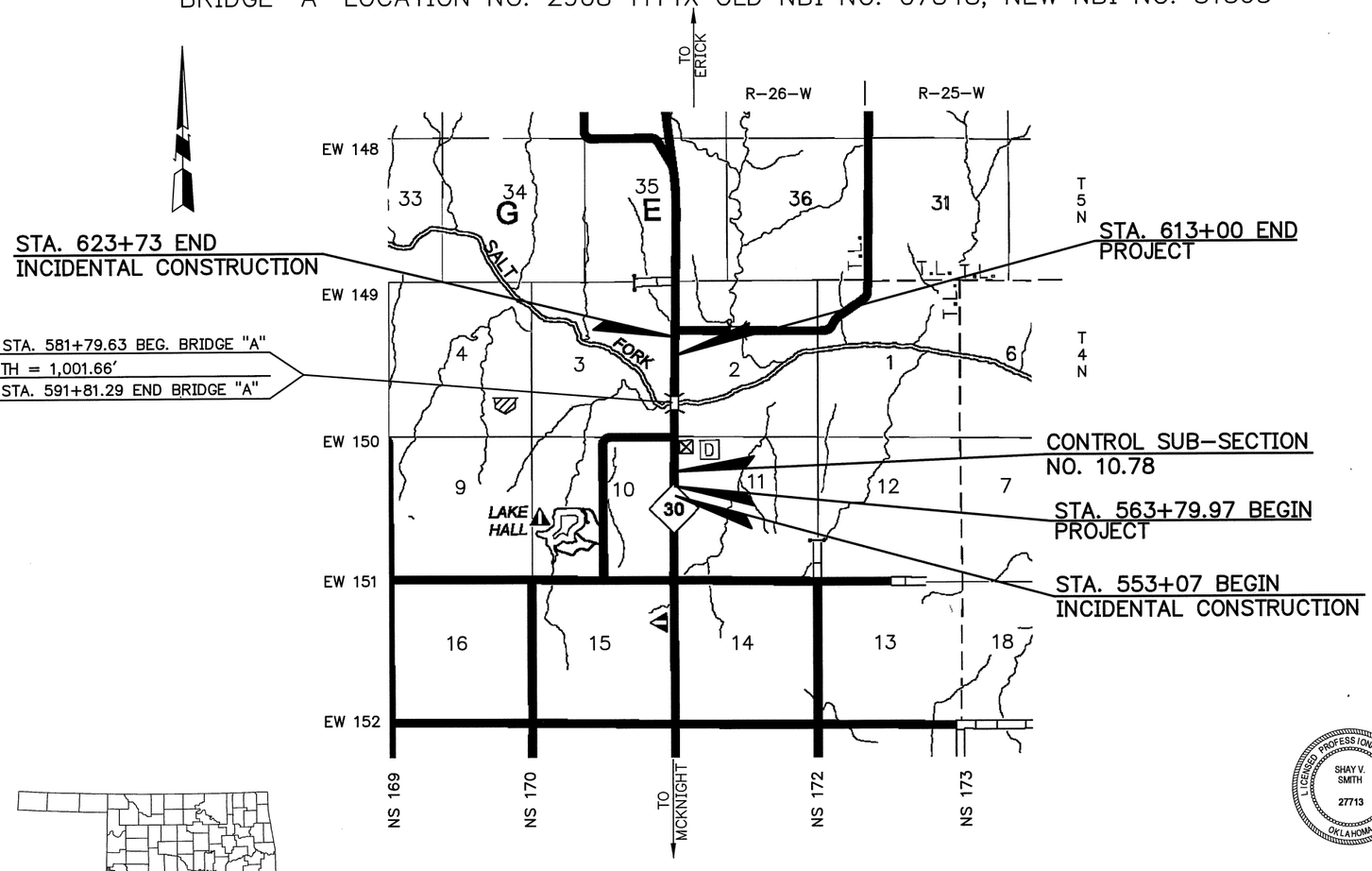
SEE SHEET 2 FOR INDEX OF SHEETS AND LIST OF STANDARDS

DESIGN DATA	
ADT 2016	= 412
ADT 2036	= 618
DHV	= 68 VPH
K	= 11%
D	= 55%
T (% DHV)	= 20%
T (% ADT)	= 22%
T3 (% ADT)	= 15%
V	= 65 MPH
FLEX. ESALS (20 YR.)	= 0.8 M

SCALES
PLAN 1" = 50'
PROFILE HOR. 1" = 50'
VER. 1" = 5'
LAYOUT MAP 1" = 3,000'

LEVEL DATA IS MEAN SEA LEVEL (USC&GS)
BEARINGS ARE FROM OBSERVATION OF POLARIS.

CONVENTIONAL SYMBOLS
- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- GROUND LINE
- EXISTING ROADS
- BASE LINE
- +2% -2% GRADE LINES
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- DRAINAGE STRUCTURES – IN PLACE
- DRAINAGE STRUCTURES – NEW
- PRES. R/W RIGHT-OF-WAY LINES – EXISTING
- R/W RIGHT-OF-WAY LINES – NEW
- RIGHT-OF-WAY MARKERS – IN PLACE
- RIGHT-OF-WAY MARKERS – REMOVE & REPLACE
- RIGHT-OF-WAY MARKERS – NEW
- CONTROLLED ACCESS
- RIGHT-OF-WAY FENCE



ROADWAY LENGTH ____3,918.37 FT. 0.742 MI.
BRIDGE LENGTH _____1,001.66 FT. 0.189 MI.
PROJECT LENGTH _____ 0.931 MI.

EQUATIONS: NONE

EXCEPTIONS: NONE

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

TRIAD DESIGN GROUP
Architecture • Engineering
3020 N.W. 149TH STREET
OKLAHOMA CITY, OK 73134
PH. (405) 752-1122
FAX (405) 752-8855
CA# 1759, RENEWAL 06-30-2017

LICENSED PROFESSIONAL ENGINEER SHAY V. SMITH 27713 OKLAHOMA

Shay V. Smith
SHAY V. SMITH
LICENSED PROFESSIONAL ENGINEER NO. 27713

9-15-16
DATE

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR

SWO 5007(1) F.A. PROJECT NO. SSP-229C(010)SS SHEET NO. 1

TRIAD DESIGN GROUP/MARK MURPHY P.E. NO. 28768(01)

THE FOLLOWING STANDARD DRAWINGS SHALL BE REQUIRED FOR THIS PROJECT:

ROADWAY		BRIDGE	TRAFFIC	
SSS-1-1	PUD-3-2	TR4-2-00E	SBS1-1-00	TCS8-1-00
TSC2-3-2	RDI-3-1	EJ-SQ-04E	SBS2-1-00	TCS9-1-01
TSD-2-0	PDT-1-3	EJ-DTL-02E	PM3-1-02	TCS10-1-00
LECS-4-1	RWF2-2-1	HP1-2-01E	PM4-1-01	TCS11-1-01
PED-3-2		B40-C-AS-03E	RSD1-1-00	TCS14-1-00
PSE-1-0		B40-C-TR4-0-1-01E	WSD3-1-00	TCS15-1-00
CET6S-3-2		B40-C-TR4-0-2-01E	GMS1-1-00	TCS19-1-01
PCES-4-1			GMS2-1-00	TCS20-1-00
SPI-4-1			SSA2-1-00	TCS21-1-02
SPB-1-4			FGS1-1-00	TCS22-1-00
FHTMPP-1-0			TCS1-1-01	TCS24-1-02
FHTCP-3-1			TCS2-1-00	THRI-1-02
			TCS3-1-01	SKT-1-00
			TCS4-1-01	GHW1-1-00
			TCS5-1-00	GHW2-1-00
			TCS6-1-02	RS1-2-00
			TCS7-1-02	

INDEX OF SHEETS

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

INDEX OF SHEETS
& STANDARDS

State Job No. 28768(04) Sheet No. 2

TEC
A CLEAR DIRECTION

R. WAYNE RUSSELL, P.E. # 16030
C.A. # 1160, RENEWAL 06-30-17

9-15-16
DATE

REGISTERED PROFESSIONAL ENGINEER
R. WAYNE RUSSELL
16030
OKLAHOMA

6000 S. Western, Suite 300 - Oklahoma City, OK 73139, Ph: 405-720-7721, Fax: 405-720-9848, Web: www.tecok.com

THIS SEAL COVERS SHEETS:
7, 8, 60–78

TRIAD DESIGN GROUP
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3020 N.W. 149TH STREET
OKLAHOMA CITY, OK 73134
PH. (405) 752-1122
FAX (405) 752-8855
CA# 1759, RENEWAL 06-30-2017

LICENSED PROFESSIONAL ENGINEER
CORT S. WESTPHAL
26202
OKLAHOMA

9-15-16
DATE

CORT S. WESTPHAL
LICENSED PROFESSIONAL ENGINEER NO. 26202

THIS SEAL COVERS SHEETS:
4–5, 9–29, X1–X61

TRIAD DESIGN GROUP
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PH. (405) 752-1122
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CA# 1759, RENEWAL 06-30-2017

LICENSED PROFESSIONAL ENGINEER
SHAY V. SMITH
27713
OKLAHOMA

9-15-16
DATE

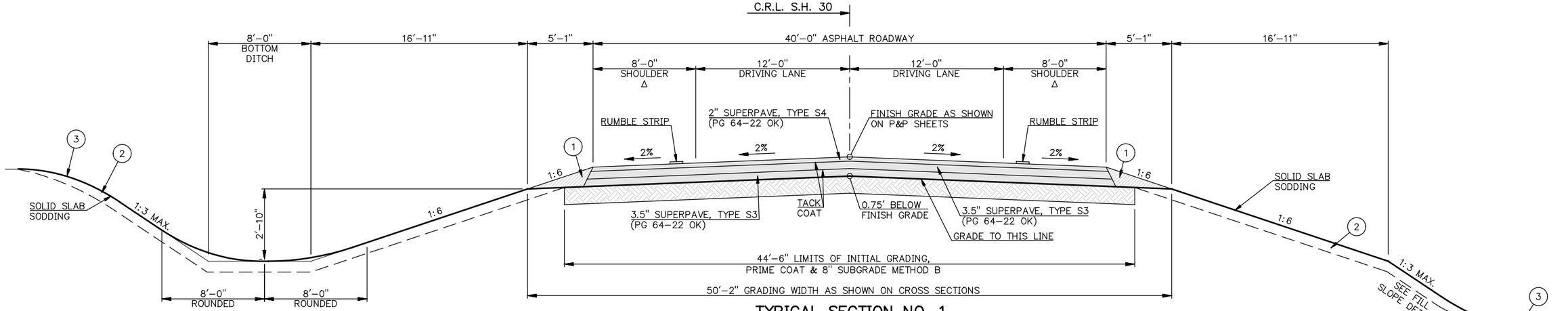
SHAY V. SMITH
LICENSED PROFESSIONAL ENGINEER NO. 27713

THIS SEAL COVERS SHEETS:
1–3, 6, 30–59

INDEX OF SEALS

State Job No. 28768(04) Sheet No. 3

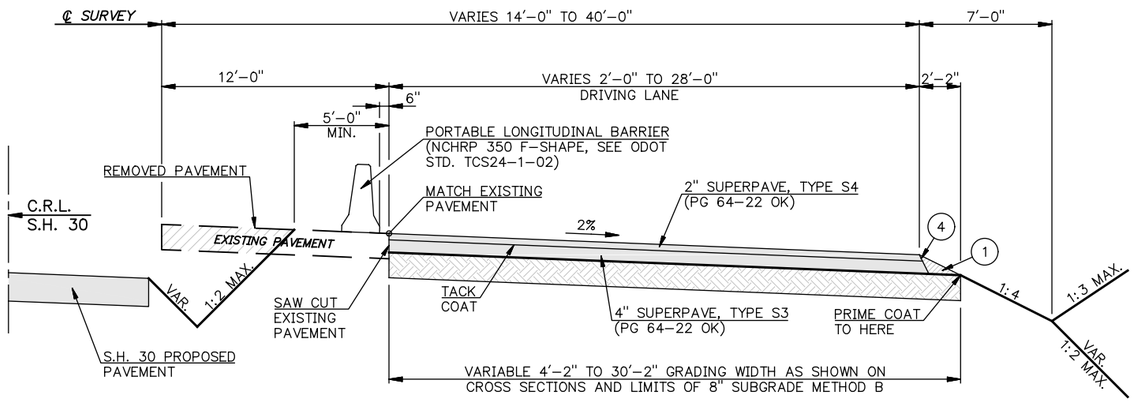
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



TYPICAL SECTION NO. 1

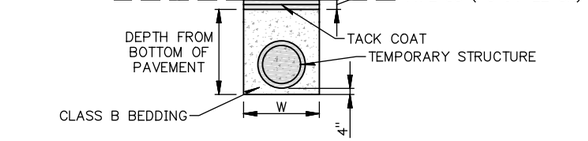
S.H. 30
STA. 563+79.97 TO STA. 581+49.63
STA. 592+11.29 TO STA. 613+00.00

Δ SHOULDER CONSTRUCTION VARIES 2′–0" TO 8′–0" STA. 563+29.97 TO STA. 563+79.96 AND STA. 613+00.00 TO STA. 614+80.00. SEE PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.



TYPICAL SECTION NO. 2

S.H. 30 DETOUR EAST
TEMPORARY ASPHALT WIDENING
STA. 553+07 TO STA. 581+82
STA. 594+28 TO STA. 623+73



CONSTRUCTION DETAIL NO. 1

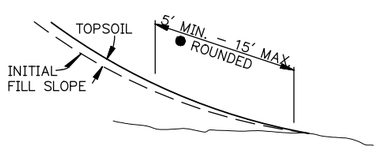
TEMPORARY STORM SEWER CROSS DRAIN TRENCH & ASPHALT CAP

NOTES:
1. FOR "W" DIMENSION, SEE STANDARD SPI–4–1 BASED ON STRUCTURE SIZE. "H" DIMENSION TO BE DETERMINED BY FIELD CONDITIONS.
2. NATIVE SOIL WILL NOT BE ALLOWED AT THESE LOCATIONS.
3. FOR USE ON TEMPORARY STRUCTURES T3, T4, & T5.

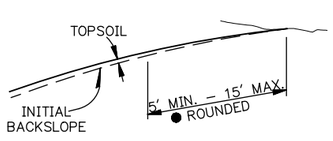
FOR GUARDRAIL FORESLOPE TRANSITION AND GUARDRAIL WIDENING DETAIL SEE SHEET 29.

ROUNDING DETAIL

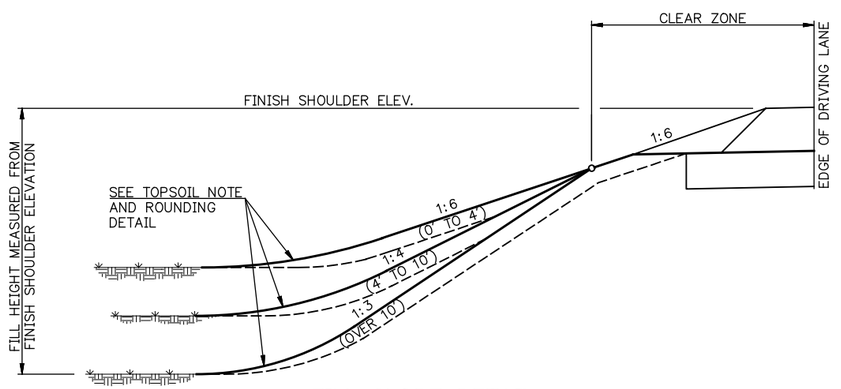
● INTERSECTION OF CUT AND/OR FILL SLOPES WITH GROUND LINE TO BE ROUNDED AS PART OF FINISHING OPERATIONS. ROUNDING SHALL BE 5′ MINIMUM FOR SMALLER CUTS AND FILLS TO 15′ MAXIMUM FOR LARGER CUTS AND FILLS OR AS DESIGNATED BY THE ENGINEER. COST OF ROUNDING TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK.



TOE OF FILL ROUNDING



TOP OF CUT ROUNDING



FILL SLOPE DETAIL

(1) **BACKFILL NOTE**

THIS AREA TO BE BACKFILLED & COMPACTED AS PART OF THE FINISHING OPERATIONS. COST TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS OF WORK.

(2) **TOPSOIL NOTE**

THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE MASSLINE BALANCE.

(3) SEE ROUNDING DETAIL

(4) SAFETY EDGE

TYPICAL SECTIONS

State Job No. 28768(04) Sheet No. 4

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

REVISION	DATE
⚠1 REV. ENVIRON. NOTES	8/17/2017

PAY QUANTITY NOTES

(R-4) INCLUDES 500 CU. YDS. FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS EARTHWORK.

(R-5) AN ESTIMATED QUANTITY OF 16552.44 C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5" ON COMPLETED FORESLOPES, DITCHES, AND BACKSLOPES. THIS QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE. ANY ADDITIONAL EXCAVATION REQUIRED IN CUT SECTIONS TO ALLOW FOR PLACEMENT OF TOPSOIL TO FINAL GRADE, SHALL BE INCLUDED IN THE PRICE BID.

(R-7) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST 10-20-10 FERTILIZER, ESTIMATED AT 200 POUNDS PER 1,000 SY. FOR TYPE A SALVAGE TOPSOIL PRICE BID TO INCLUDE COST OF 18-46-0 FERTILIZER, ESTIMATED AT 150 POUNDS PER 1000 S.Y.

(R-8) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 60 GALLONS PER S.Y.

(R-11) THE QUANTITIES ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 19 ACRES.

(R-16) QUANTITY BASED ON TWO APPLICATIONS.

(R-25) ESTIMATED AT 160 LBS. PER CU. FT.

(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-32) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.

(R-41) QUANTITY INCLUDES AN ESTIMATED 15 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

(R-46) ANY DRAINAGE STRUCTURE DESCRIBED AS TEMPORARY, SHALL AFTER COMPLETION OF THE PROJECT, BE REMOVED BY AND BECOME THE PROPERTY OF THE CONTRACTOR.

(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-50) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.

(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) THE COST OF PIPE UNDERDRAIN COVER MATERIAL AND TRENCH EXCAVATION TO BE INCLUDED IN OTHER ITEMS OF WORK.

(2) VEGATATIVE MULCH SHALL BE WHEAT HAY ONLY AND THE QUANTITY CALCULATED IS FOR EROSION CONTROL FOR APPROXIMATELY 4 ACRES OF TEMPORARY ASPHALT WIDENING SLOPES, AND 15 ACRES USED AS REQUIRED TO PROTECT PERMANENT SLOPES DURING CONSTRUCTION.

(3) ASPHALT TO BE COLD MILLED AND MILLINGS TO BECOME PROPERTY OF THE STATE. LOCATION TO BE WITHIN 8 MILES OF SITE AND SPECIFIED BY ENGINEER.

(4) ALL REMOVED GUARDRAIL AND ACCESSORIES TO BE STOCKPILED AND BECOME PROPERTY OF HARMON COUNTY.

(5) PRICE BID TO INCLUDE COST OF TRENCH EXCAVATION AND CLASS C BEDDING MATERIAL.

(6) USE OF AASHTO CLASS A3 SOILS ARE RESTRICTED IN BRIDGE HEADERS.

GENERAL CONSTRUCTION NOTES

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

MAINTENANCE OF THROUGH TRAFFIC INCLUDES THE MAINTENANCE OF THE EXISTING ROAD IN CLOSE PROXIMITY TO THE NEW CONSTRUCTION AS SHOWN ON THE PLANS.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING SECTION LINE ROADS TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

FOR PROJECTS THAT INCLUDE WIDENING AND/OR RESURFACING, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE POTENTIAL DROP-OFF HAZARDS AND SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE OPERATIONS BEGIN. ANY PORTION OF THE CONSTRUCTION OPERATIONS, SUCH AS SUPERPAVE LAYING OPERATIONS, EXCAVATION FOR PAVEMENT WIDENING, OR EXTENSION OF ROADWAY STRUCTURES, SHALL BE LIMITED TO ONE SIDE AT A TIME, AND THE PROCEDURES OUTLINED IN THE PAVEMENT DROP OFF TREATMENT STANDARD PDT-1 (LATEST REVISION) SHALL BE IMPLEMENTED. ONLY THAT AMOUNT OF OPEN TRENCH WILL BE ALLOWED THAT CAN BE SURFACED IN 1 (ONE) DAY'S TIME WITHOUT APPROVAL BY THE ENGINEER. LIGHTS, SIGNS AND BARRICADES SHALL BE MOVED AS WORK PROGRESSES.

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.

GENERAL CONSTRUCTION NOTES CONTINUED

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 FENCING SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST FOR TEMPORARY FENCING SHALL 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.

IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

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.

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.

PIPE UNDERDRAIN QUANTITIES ESTIMATED ONLY. LOCATION, IF AND WHERE REQUIRED, TO BE DETERMINED BY THE ENGINEER.

SURFACING OF RETURNS, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE OF THE SAME MATERIAL (BASE AND SURFACE) AS THAT OF THE ABUTTING SHOULDER OF THE MAINLINE. BASE AND SURFACE THICKNESS SHALL BE THE THICKNESS SHOWN ON PLANS.

T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER IN A MANNER APPROVED BY THE ENGINEER.

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 OKIE" 1-800-522-6543 OR 811.

THE CONTRACTOR SHALL MAINTAIN THE EXISTING ROADWAY, WHILE IT IS STILL IN SERVICE TO THE TRAVELING PUBLIC, AT THE DISCRETION OF THE RESIDENT ENGINEER. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

GEOTECHNICAL SUBSURFACE INVESTIGATION REPORTS ARE AVAILABLE FOR REVIEW AT THE OFFICE OF TRIAD DESIGN GROUP. CONTRACTOR TO REFER TO THESE REPORTS FOR RECOMMENDED EARTHWORK OPERATIONS.

⚠ 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 MIGRATORY BIRD SPECIES EXTENDS FROM APRIL 1 TO AUGUST 31. MIGRATORY BIRD NESTING USE OF THE BRIDGE NBI NO. 07348 INVOLVED WITH THIS PROJECT WAS OBSERVED. 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. IF PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION CANNOT BE COMPLETED BETWEEN SEPTEMBER 1 AND MARCH 31, THE BRIDGE SHALL BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO APRIL 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER-RESISTANT POLYPROPYLENE NETTING WITH 0.25-INCH OR SMALLER OPENINGS, PRIOR TO APRIL 1. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

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

T4N R26W
SECTION 2: NE ¼ NE ¼ SW ¼ NW ¼ NW ¼ SE ¼ SW ¼ SW ¼ SW ¼

SECTION 3: N ½ N ½ NE ¼ SE ¼ SE ¼ SE ¼

SECTION 10: SW ¼ NW ¼ SW ¼ W ½ SW ¼ SW ¼ E ½ N ½ NW ¼ SE ¼ NW ¼

T5N R26W
SECTION 35: S ½ SE ¼ SW ¼ SE ¼ SW ¼ SW ¼

PAY QUANTITIES - ROADWAY

ROADWAY 100

ITEM	PES NO.	DESCRIPTION	UNIT	QUANTITY
201(A)	0102	CLEARING AND GRUBBING	LSUM	1.0
202(A)	0183	UNCLASSIFIED EXCAVATION (6)	CY	58,631.0
202(D)	0184	UNCLASSIFIED BORROW (6),(R-4)	CY	37,242.0
205(A)	4229	TYPE A-SALVAGED TOPSOIL (R-5,7)	LSUM	1.0
221(C)	2801	TEMPORARY SILT FENCE	LF	4,025.0
221(F)	0100	TEMPORARY SILT DIKE	LF	924.0
230(A)	2806	SOLID SLAB SODDING (R-7,8)	SY	119,169.0
233(A)	2817	VEGETATIVE MULCHING (2),(R-11)	AC	19.0
241	2832	MOWING (R-16)	AC	50.0
310(B)	0149	SUBGRADE, METHOD B	SY	35,874.0
402(E)	0225	TRAFFIC BOUND SURFACE COURSE TYPE E (R-25)	TON	339.0
407(B)	0250	TACK COAT	GAL	7,819.0
408	5774	PRIME COAT (R-28)	GAL	12,987.0
411(B)	5945	SUPERPAVE, TYPE S3 (PG 64-22 OK) (R-32)	TON	10,703.0
411(C)	5960	SUPERPAVE, TYPE S4 (PG 64-22 OK) (R-32)	TON	3,794.0
413(B)	4863	RUMBLE STRIP-METHOD HMA-CYC	LF	7,718.0
509(D)	0325	CLASS C CONCRETE (R-41)	CY	15.0
601(B)	0536	TYPE I-A PLAIN RIPRAP	TON	25.0
601(C)	0538	TYPE I-A FILTER BLANKET	TON	8.0
613(A)	0492	24" R.C.PIPE CLASS III	LF	90.0
613(A)	0493	30" R.C.PIPE CLASS III (5)	LF	176.0
613(B)	0689	18" CORR. GALV. STEEL PIPE (R-46)	LF	262.0
613(B)	0690	24" CORR. GALV. STEEL PIPE (R-46)	LF	172.0
613(B)	0691	30" CORR. GALV. STEEL PIPE (R-46)	LF	24.0
613(H)	0450	6" PERFORATED PIPE UNDERDRAIN ROUND (1)	LF	375.0
613(I)	1096	6" NON-PERF.PIPE UNDERDRAIN RND. (1)	LF	125.0
613(L)	5732	30" PREFAB. CULVERT END SECTION, ROUND	EA	2.0
613(M)	7197	TYPE B6 CULVERT END TREATMENT	EA	2.0
613(M)	7198	TYPE C6 CULVERT END TREATMENT	EA	4.0
619(A)	0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS (R-48,49)	LSUM	1.0
619(B)	4727	REMOVAL OF CONCRETE PAVEMENT (R-49,50)	SY	6.0
619(B)	4728	REMOVAL OF ASPHALT PAVEMENT (3),(R-50)	SY	26,249.0
619(B)	4780	REMOVAL OF GUARDRAIL (4)	LF	526.0
619(C)	0924	SAWING PAVEMENT	LF	5,811.0
623(A)	0932	BEAM GUARDRAIL W-BEAM SINGLE	LF	850.0
623(G)	8590	GUARDRAIL END TREATMENT (31")	EA	4.0
623(I)	8700	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	EA	4.0
624(C)	4459	FENCE-STYLE SWF (5 BARBED WIRE) (R-52,53)	LF	5,197.0
853	9033	DELINEATORS (TYPE 2, CODE 1)	EA	28.0

PAY QUANTITIES - STAKING

STAKING 600

ITEM	PES. NO	DECRIPTION	UNIT	QUANTITY
642(B)	0096	CONSTRUCTION STAKING LEVEL II	LSUM	1

PAY QUANTITIES - CONSTRUCTION

CONSTRUCTION 640

ITEM	PES. NO	DECRIPTION	UNIT	QUANTITY
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1
640(A)	1426	FIELD OFFICE	EA.	1
641	1552	MOBILIZATION	LSUM	1

SUGGESTED SEQUENCE OF CONSTRUCTION

SEE SHEET 29 FOR SUGGESTED SEQUENCE OF CONSTRUCTION

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

PAY QUANTITIES & NOTES (ROADWAY)

State Job No. 28768(04) Sheet No. 5

GENERAL NOTES (BRIDGE "A")

SPECIFICATIONS:
COMPLY WITH THE REQUIREMENTS OF THE ODOT 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

ABUTMENT PILING CAPACITY:
THE FACTORED REACTION FOR EACH HP12x53 PILE AT EACH ABUTMENT ON BRIDGE "A" IS 103.0 TONS.

THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES:

AXIAL LOAD RESISTANCE = ϕ[(0.875$\sqrt{E}$ LOG_{10} (10N))-50] (TONS)

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 & 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 SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

PILE DRIVING EQUIPMENT:
USE A PILE DRIVING HAMMER OF THE SIZE AND TYPE CAPABLE OF CONSISTENTLY DELIVERING THE EFFECTIVE DYNAMIC ENERGY SUFFICIENT TO DRIVE THE PILES TO THE REQUIRED TIP ELEVATION AND TO ACHIEVE THE FACTORED PILE CAPACITY WITHOUT EXCEEDING THE LIMITATIONS SET ON THE ALLOWABLE DRIVING STRESSES IN ACCORDANCE WITH SECTION 514.03.A.2.

PILOT HOLES FOR ABUTMENT PILING - ABUTMENT NO. 1:
16" DIAMETER PILOT HOLES SHALL BE DRILLED FOR EACH HP12x53 PILING. PILOT HOLES SHALL BE DRILLED TO A MINIMUM ELEVATION OF 1710.00 FEET AND SHALL BE NO LESS THAN 5'-0" INTO THE BEDROCK. ONCE EACH PILE WITHIN THE PILOT HOLE HAS BEEN SEATED INTO THE BEDROCK AND VERIFIED FOR REQUIRED BEARING CAPACITY, THE CONTRACTOR SHALL THEN ENCASE EACH ESTIMATED CLASS "A" CONCRETE TO THE BOTTOM OF PILOT HOLE. SEE ODOT STANDARD DRAWING HP1-2. AN ESTIMATED QUANTITY OF 1.40 CY OF CLASS "A" CONCRETE QUANTITY IS REQUIRED PER HP12x53 PILE. ALL COSTS INCLUDING LABOR, EQUIPMENT, CLASS "A" CONCRETE, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID FOR FOR "(PL) PILOT HOLES".

DECK SLAB CONSTRUCTION AND STAY-IN-PLACE FORMS:
IN THE EVENT OF AN EMERGENCY, HALT THE PLACEMENT OF CONCRETE BY FORMING A CONSTRUCTION JOINT MADE PERPENDICULAR TO THE DIRECTION OF TRAFFIC OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE ANY HEAVY EQUIPMENT ON THE FINISHED DECK SLAB WITHIN 5' OF ANY CONSTRUCTION JOINT UNTIL CONCRETE IS IN PLACE ON BOTH SIDES OF THE RESPECTIVE JOINT AND AT LEAST 48 HOURS HAS ELAPSED SINCE CONCRETE PLACEMENT.

SEAL ALL DECK SLAB CONSTRUCTION JOINTS WITH HIGH MOLECULAR WEIGHT METHACRYLATE IN ACCORDANCE WITH SECTION 523 OF THE STANDARD SPECIFICATIONS. INCLUDE ALL COST OF EQUIPMENT AND LABOR FOR THE INSTALLATION OF THE HIGH MOLECULAR WEIGHT METHACRYLATE SEALER IN THE PRICE BID FOR "SEALER CRACK PREPARATION". INCLUDE ALL COST OF THE HIGH MOLECULAR WEIGHT METHACRYLATE SEALER IN THE PRICE BID FOR "SEALER RESIN". THE DEPARTMENT WILL NOT MEASURE THE PREPARATION AND SEALER OF EMERGENCY CONSTRUCTION JOINTS FOR PAYMENT.

THE DECK SLAB SHALL BE POURED ONE SPAN AT A TIME. A SPAN ADJACENT TO A FIXED OR CONTINUOUS EXPANSION PIER SHALL NOT BE POURED UNTIL AT LEAST 48 HOURS AFTER THE POUR OF ANY ADJACENT SPAN HAS BEEN COMPLETED.

DO NOT PLACE THE CONCRETE FOR THE DECK SLAB OR APPLY OTHER MASSIVE LOADS TO THE BEAMS OR DIAPHRAGMS UNTIL THE CONCRETE IN THE DIAPHRAGMS HAS BEEN IN PLACE FOR A MINIMUM OF 10 DAYS OR AT THE DISCRETION OF THE ENGINEER. THE ENGINEER MAY APPROVE SHORTENED TIME IF THE BEAMS AND DIAPHRAGM CONCRETE HAS ATTAINED 80% OF THE SPECIFIED COMPRESSIVE STRENGTH.

STAY-IN-PLACE DECK FORMS WILL NOT BE ALLOWED FOR USE ON THIS PROJECT.

CONCRETE END DIAPHRAGM VENT HOLES:
3" Ø PVC PIPE SLEEVES SHALL BE CAST IN THE CONCRETE END DIAPHRAGMS OVER THE PIERS. COST TO BE INCLUDED IN PRICE BID FOR "CLASS AA CONCRETE". SEE SHEET NO. 53 FOR DETAILS.

PENETRATING WATER REPELLENT SURFACE TREATMENT:
A PENETRATING WATER REPELLENT SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES OF THE BRIDGE:

(A) THE TOP OF SLAB FROM THE ROADWAY FACE OF THE TR4 POSTS OUTWARD, THE OUTSIDE EDGE OF SLAB CANTILEVER, UNDERSIDE CANTILEVER PORTION OF THE BRIDGE SLAB, THE OUTER FACE AND BOTTOM OF THE EXTERIOR P.C. BEAMS, THE ROADWAY FACE AND INSIDE FACES OF THE TR4 POSTS AND THE TOP, ROADWAY FACE AND BOTTOM SURFACES OF THE TR4 RAILS ON THE BRIDGE SLAB.

(B) THE ROADWAY FACES OF THE TR4 RAILS AND POSTS, AND THE TOP AND BOTTOM SURFACES OF THE TR4 RAILS ON THE APPROACH SLABS.

PENETRATING WATER REPELLENT SURFACE TREATMENT (CONT'D):

(C) THE FRONT FACE OF THE BACKWALL, TOP OF BRIDGE SEAT, AND ALL SURFACES OF THE PEDESTALS AT THE ABUTMENTS. THE FRONT FACE AND ENDS OF THE BRIDGE SEAT AND THE OUTSIDE SURFACES AND TOPS OF THE WINGS ABOVE THE FINISHED GROUND LINE.

(D) THE TOP OF THE PIER CAPS INCLUDING ALL SURFACES OF THE PEDESTALS, AND ALL VERTICAL SURFACES OF THE PIER CAPS.

APPROACH SLABS:
CLASS "AA" CONCRETE SHALL BE USED IN THE APPROACH SLABS. THE QUANTITY GIVEN IS BASED ON THE ACTUAL SQUARE YARDS OF THE APPROACH SLABS. THE PRICE BID FOR "APPROACH SLAB" SHALL BE FULL COMPENSATION FOR ALL CONCRETE, EPOXY COATED REINFORCING STEEL (INCLUDING SR1 BARS IN TRAFFIC RAILS), BACKER RODS, HIGH MOLECULAR WEIGHT METHACRYLATE, POLYSTYRENE, PAVEMENT SAWING, EXCAVATION, BASE PREPARATION, LABOR, EQUIPMENT AND OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED IN THE PLANS. FOR APPROACH SLAB CONSTRUCTION NOTES, SEE STD. B40-C-AS-03E.

RIPRAP AND SPUR DIKES:
A 24" THICK LAYER OF TYPE I-A PLAIN RIPRAP WITH A 6" THICK LAYER OF TYPE I-A FILTER BLANKET SHALL BE PLACED AT THE ABUTMENTS AND SPUR DIKES AS SHOWN ON THE PLANS. THE FILTER BLANKET SHALL BE PLACED IN ONE LAYER.

REFER TO ROADWAY PLANS FOR THE CONSTRUCTION OF THE SPUR DIKES AND THE ASSOCIATED EARTHWORK QUANTITIES.

ROADWAY EARTHWORK QUANTITIES INCLUDE THE EXCAVATION REQUIRED FOR THE RIPRAP LADLES ALONG THE SPUR DIKES. ANY OTHER EXCAVATIONS REQUIRED FOR THE PLACEMENT OF RIPRAP, NOT INCLUDED IN THE ROADWAY QUANTITIES, SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID FOR "TYPE I-A PLAIN RIPRAP".

PERFORATED AND NON-PERFORATED PIPE UNDERDRAINS:
FOR LOCATIONS OF 6" PERFORATED AND NON-PERFORATED PIPE UNDERDRAINS, SEE SHEET NOS. 30 AND 31, AND REFER TO STD. PUD-3-2 FOR INSTALLATION DETAILS AND NOTES.

STRUCTURAL STEEL:
ALL STRUCTURAL STEEL SHALL BE AASHTO M270 (GRADE 50W), UNLESS OTHERWISE NOTED.

DRILLED SHAFT CONCRETE:
CEMENT FOR DRILLED SHAFT CONCRETE SHALL BE TYPE V PORTLAND CEMENT IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. AS AN OPTION, TYPE II PORTLAND CEMENT MAY BE USED IN DRILLED SHAFT CONCRETE WITH THE ADDITION OF CLASS F FLY ASH TO THE DESIGN MIX. IF TYPE II PORTLAND CEMENT IS USED WITH THE ADDITION OF CLASS F FLY ASH, THE CONCRETE DESIGN SHALL BE APPROVED BY THE ENGINEER. ALL COSTS ASSOCIATED WITH THE USAGE OF TYPE V PORTLAND CEMENT, TYPE II PORTLAND CEMENT AND CLASS F FLY ASH INCLUDING LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN PRICE BID FOR "DRILLED SHAFTS 72" DIAMETER".

REMOVAL OF EXISTING BRIDGE STRUCTURE:
THE PRICE BID FOR "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF THE REMOVAL OF THE EXISTING 942.33' LG. BY 27.0' WIDE BRIDGE, CONSISTING OF THIRTEEN (13) STEEL I-BEAM SPANS (1-40' & 6-DOUBLE 75' CONTINUOUS SPANS) WITH A CONCRETE DECK AND CURBS, ASPHALT OVERLAY, CONCRETE POSTS AND RAILS, AND CONCRETE ABUTMENTS AND PIERS AT ℄ SURVEY STA. 587+31.59.

THE PRICE BID SHALL ALSO INCLUDE THE REMOVAL OF ANY ELEMENTS OF THE ORIGINAL BRIDGE, BUILT IN 1933 AND 1936, THAT INTERFERE WITH CONSTRUCTION OR THE FINAL GROUND LINE. EXISTING JETTIES SHALL NOT BE DISTURBED UNLESS DIRECTED BY THE ENGINEER.

THE EXISTING BRIDGE SHALL NOT BE REMOVED UNTIL THE NEW BRIDGE AND ROADWAY ARE OPENED TO TRAFFIC. THE REMOVAL OF THE EXISTING BRIDGE SHALL BE IN ACCORDANCE WITH SECTION 619.04.B.2 OF THE STANDARD SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. THE 27" X 40' LONG EXISTING STEEL I-BEAMS AT SPAN 1 SHALL BE SALVAGED AND STORED ON THE RIGHT OF WAY TO BECOME THE PROPERTY OF HARMON COUNTY. ALL OTHER MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

THE EXISTING STEEL BEAMS ARE COATED WITH A LEAD BASED PAINT. MEASURES SHALL BE TAKEN TO ENSURE WORKER SAFETY IN ACCORDANCE WITH 29 CFR 1926.62 AND ALL APPLICABLE OSHA STANDARDS. ANY PAINT REMOVED DURING THE SEQUENCE OF WORK SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH SECTION 512 OF THE STANDARD SPECIFICATIONS. ALL COSTS TO BE INCLUDED IN THE PRICE BID FOR "REMOVAL OF EXISTING BRIDGE STRUCTURE".

DRAINS AT END OF BRIDGE:
ASPHALT SHOULDER WIDENING, CURBS, SLOPE DRAINS AND SPLASH BASINS SHALL BE CONSTRUCTED AS SHOWN ON SHEET NO. 59. ASPHALT SHOULDER WIDENING FOR THE BRIDGE GUARD RAIL SHALL BE IN ACCORDANCE WITH STANDARDS THRI-1 AND GHW1-1 EXCEPT AS SHOWN IN THE PLANS. ALL COSTS OF ASPHALT SHOULDER WIDENING SHALL BE INCLUDED IN THE ROADWAY PAY ITEMS.

THERE IS 23.1 CUBIC YARDS OF CLASS "C" CONCRETE REQUIRED TO CONSTRUCT THE SLOPE DRAINS, SPLASH BASINS AND 6" CONCRETE CURBS AT THE ENDS OF THE BRIDGE. ALL COSTS FOR THE SLOPE DRAINS, SPLASH BASINS, 6" CONCRETE CURBS, CONCRETE, REINFORCING STEEL, EXCAVATIONS, AND BACKFILL INCLUDING ALL MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID FOR "CLASS C CONCRETE".

OBSTRUCTIONS:
EXISTING SUBSTRUCTURE COMPONENTS FROM THE FIRST BRIDGE CONSTRUCTED AT THIS SITE, BUILT IN 1933 AND 1936 UNDER PROJECT NUMBERS NRS 352-B AND SAP 887-SEC. "A", MAY BE ENCOUNTERED WHILE EXCAVATING THE DRILLED SHAFTS FOR THE PIERS ON THIS PROJECT. THE CONTRACTOR SHALL ANTICIPATE POSSIBLE DELAYS AND SHALL INCLUDE THE REMOVAL OF SUCH COMPONENTS OR OTHER MANMADE OBSTRUCTIONS ENCOUNTERED IN THE PRICE BID FOR "DRILLED SHAFTS 72" DIAMETER".

THE 1933/1936 BRIDGE WAS LOCATED ROUGHLY ALONG THE CRL ALIGNMENT FOR THIS PROJECT, WITHIN THE FOOT-PRINT OF THE PROPOSED BRIDGE.

OBSTRUCTIONS (CONT'D):
THE SUBSTRUCTURE COMPONENTS FROM THAT BRIDGE, SHOWN ON THE GENERAL PLAN AND ELEVATION SHEETS, WERE DRAWN AND LOCATED FROM AS-BUILT DATA, AND ONLY THOSE PORTIONS ORIGINALLY ABOVE THE GROUND LINE ARE SHOWN. FOUNDATION MATERIALS, SIZES AND DEPTHS FOR THE SOUTH ABUTMENT AND PIERS 1-4 ARE UNKNOWN, WHILE BENTS 5-21 AND THE NORTH ABUTMENT WERE SUPPORTED ON VERTICAL TIMBER PILES, THE DEPTHS OF WHICH ARE UNKNOWN. THE ENGINEER MAKES NO GUARANTEE THAT THE ORIGINAL SUBSTRUCTURE COMPONENTS ARE IN THE EXACT LOCATIONS INDICATED, THOUGH THEY WERE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE EXISTING SUBSTRUCTURE COMPONENTS FROM THE 1933/1936 BRIDGE WERE NOT PHYSICALLY LOCATED DURING THE FIELD SURVEY.

28768(04)

PAY QUANTITIES - BRIDGE "A"

0200 BRIDGE "A" 10 - 100' PC BEAM SPANS, 40'-0" CLR. RDWY. W/ CONC. TRAFFIC RAILS (TR4) SKEWED 0°

ITEM	PES NO.	DESCRIPTION		UNIT	QUANTITY
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	(1)(2)	CY	202.00
501(G)	6309	CLSM BACKFILL	(1)	CY	188.00
503(A)	1313	PRESTRESSED CONCRETE BEAMS (TYPE IV)	(1)	LF	4,983.30
504(A)	1304	APPROACH SLAB	(1)	SY	281.20
504(B)	1305	SAW-CUT GROOVING	(1)	SY	4,718.60
504(C)	6250	SEALED EXPANSION JOINT	(1)	LF	172.80
504(D)	6245	CONCRETE RAIL (TR4)	(1)	LF	2,139.40
506(A)	1322	STRUCTURAL STEEL	(1)	LB	4,500.00
507(A)	6170	STAINLESS STEEL FIXED BEARING ASSEMBLY	(1)(3)	EA	40.00
507(B)	6174	STAINLESS STEEL EXPANSION BEARING ASSEMBLY	(1)(3)	EA	60.00
509(A)	1326	CLASS AA CONCRETE	(1)	CY	1,144.90
509(B)	1328	CLASS A CONCRETE	(1)	CY	607.80
509(D)	1331	CLASS C CONCRETE		CY	23.10
511(A)	1332	REINFORCING STEEL	(1)	LB	4,970.00
511(B)	6010	EPOXY COATED REINFORCING STEEL	(1)	LB	423,390.00
513(B)	6019	CLASS B BRIDGE DECK REPAIR	(4)	SY	75.00
513(C)	6020	CLASS C BRIDGE DECK REPAIR	(4)	SY	25.00
514(A)	6010	PILES, FURNISHED (HP10x42)	(5)	LF	274.00
514(A)	6011	PILES, FURNISHED (HP12x53)	(5)	LF	907.00
514(B)	6292	PILES, DRIVEN (HP10x42)		LF	274.00
514(B)	6294	PILES, DRIVEN (HP12x53)		LF	907.00
514(K)	6260	(PL) PILOT HOLES		LF	196.00
514(L)	6220	PILE SPLICE, H-PILE (NON-BIDDABLE)		EA	1.00
515(A)	6013	WATER REPELLENT (VISUALLY INSPECTED)	(1)	SY	4,588.00
516(A)	6098	DRILLED SHAFTS 72" DIAMETER		LF	878.00
516(C)	6200	CROSSHOLE SONIC LOGGING		EA	4.00
523(A)	6550	SEALER CRACK PREPARATION	(1)	LF	204.00
523(B)	6560	SEALER RESIN	(1)	GAL	3.00
601(B)	1353	TYPE I-A PLAIN RIPRAP		TON	3,590.00
601(C)	1355	TYPE I-A FILTER BLANKET		TON	680.00
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND	(1)	LF	84.00
613(I)	6207	6" NON-PERF. PIPE UNDERDRAIN RND.		LF	80.00
619(D)	1397	REMOVAL OF EXISTING BRIDGE STRUCTURE		LSUM	1.00

PAY QUANTITY NOTES

(1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITIES. SEE THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 109.01.B "PLAN QUANTITIES".

(2) ROCK MAY BE ENCOUNTERED WITHIN THE LIMITS SHOWN FOR SUBSTRUCTURE EXCAVATION AT ABUTMENT NO. 1. PRICE BID FOR SUBSTRUCTURE EXCAVATION COMMON SHALL INCLUDE ALL REQUIRED ROCK EXCAVATION WITHIN THESE LIMITS. REFER TO FOUNDATION REPORT SHEET NO. 35 FOR ADDITIONAL INFORMATION.

(3) PROVIDE AND INSTALL BEARING ASSEMBLIES OF THE SIZE, SHAPE AND LOCATION DETAILED IN THE PLANS AT THE ABUTMENTS AND PIERS. THERE IS AN ESTIMATED 10,000.00 LBS. OF STAINLESS STEEL FOR THE FIXED BEARING ASSEMBLIES AND 15,500.00 LBS. OF STAINLESS STEEL FOR THE EXPANSION BEARING ASSEMBLIES. INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE ANCHOR PLATES, ANCHOR BOLTS, CONTACT PLATES, NUTS, WASHERS, AND ELASTOMERIC BEARING PADS, INCLUDING ALL MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN IN THE PLANS, IN THE PRICE BID FOR "STAINLESS STEEL FIXED BEARING ASSEMBLY" OR "STAINLESS STEEL EXPANSION BEARING ASSEMBLY" AS APPLICABLE.

(4) ESTIMATED QUANTITY ONLY, TO BE USED FOR REPAIRING THE EXISTING BRIDGE DECK DURING CONSTRUCTION OF THE NEW BRIDGE, AS DIRECTED BY THE ENGINEER.

(5) ALL ABUTMENT PILING SHALL BE AASHTO M270 GRADE 50 STEEL.

PAY QUANTITIES AND GENERAL NOTES (BRIDGE "A")

State Job No. 28768(04) Sheet No. 6

S.H. 30 BRIDGE & APPROACHES HARMON COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

GENERAL CONSTRUCTION NOTES

ALL REGULATORY SIGNS SHALL BE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION) FOR TYPE III SHEETING.

ALL WARNING SIGNS SHALL HAVE FLUORESCENT YELLOW SHEETING. THE FLUORESCENT YELLOW SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION) REQUIREMENTS FOR TYPE VIII SHEETING.

ALL GREEN AND BLUE SIGNS ON CONVENTIONAL HIGHWAYS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION) FOR TYPE III SHEETING.

ALL PANEL AND OVERHEAD SIGNS SHALL HAVE TYPE III HIGH INTENSITY BACKGROUND WITH TYPE VIII LEGENDS AND BORDERS. THE TYPE III BACKGROUND AND THE TYPE VIII LEGENDS AND BORDERS SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION).

THE MANUFACTURER SHALL FURNISH A TYPE "A" CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS, LATEST EDITION, SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON THE MATERIAL SUBMITTED FOR APPROVAL.

THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.

POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE 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 THE UTILITIES, THE CONTRACTOR SHALL CALL FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION LISTED WITH THE FOLLOWING AGENCIES:
THE "OKIE" NOTIFICATION CENTER 811 OR (405)522-6543 OR WWW.CALLOKIE.COM OR THE LOCAL COUNTY CLERK'S OFFICE.

PAY QUANTITY NOTES

(TS-19) QUANTITY SHOWN INCLUDES 10,140 L.F. TRAFFIC STRIPE (PLASTIC) (WHITE) AND 1,395 L.F. TRAFFIC STRIPE (PLASTIC) (YELLOW)AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE.

(TS-23) QUANTITY SHOWN INCLUDES 63 L.F. TRAFFIC STRIPE (PLASTIC) (WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY-FOUR INCH (24") WIDE TRAFFIC STRIPE.

(TS-33) INCLUDED IN THIS PAY ITEM IS ALL HARDWARE ASSOCIATED WITH PROPERLY ANCHORING AND MOUNTING THE HIGHWAY SIGN IN ACCORDANCE WITH O.D.O.T. PLANS AND STANDARD DRAWINGS SSA1-1 AND SSP1-1- (LATEST REVISION).

SIGNING AND STRIPING PAY QUANTITIES

SH 30 over Salt Fork Red River in Harmon County

0300 TRAFFIC

ITEM	DESCRIPTION		UNIT	TOTAL
850(A) 8110	SHEET ALUMINUM SIGNS		SF	58.22
851(C) 8324	2" SQUARE TUBE POST	(TS-33)	LF	146
855(A) 8812	TRAFFIC STRIPE (PLASTIC)(4" WIDE)	(TS-19)	LF	11535
855(A) 8825	TRAFFIC STRIPE (PLASTIC)(24" WIDE)	(TS-23)	LF	63

SIGN SUMMARY

SHEET NO.	ITEM NO.	APPROXIMATE STATION	APPROXIMATE LOCATION	SIGN TYPE	POSTS TYPE	POSTS A L.F.	POSTS B L.F.	POSTS SPACING	FOOTINGS DESIGN NO.	FOOTINGS CONCRETE C.Y.	FOOTINGS STEEL LBS.	SIGN AREA SHEET S.F.	SIGN AREA PANEL S.F.	SIGN AREA PANEL OVERHEAD S.F.	REMARKS
59	1	573+50	SH 30	W8-13	2" SQ. TUBE POST	15.0						6.25			
59	2	574+37	SH 30	R1-1	2" SQ. TUBE POST	14.0						5.18			
59	3	575+02	SH 30	R1-1	2" SQ. TUBE POST	14.0						5.18			
60	4	581+52	SH 30	SPECIAL SIGN NO. 1	2" SQ. TUBE POST	15.0	15.0	3'-0"				12.50			
60	5	592+06	SH 30	SPECIAL SIGN NO. 1	2" SQ. TUBE POST	15.0	15.0	3'-0"				12.50			
61	6	600+00	SH 30	W8-13	2" SQ. TUBE POST	15.0						6.25			
61	7	613+75	SH 30	R1-1	2" SQ. TUBE POST	14.0						5.18			
61	8	614+15	SH 30	R1-1	2" SQ. TUBE POST	14.0						5.18			
TOTAL					**2" SQ. TUBE POST**	**146.0**						**58.22**			

Design	RWR	9/13/2016
Drawn	SB	9/13/2016

TEC A CLEAR DIRECTION

PAY QUANTITIES AND NOTES (SIGNING, STRIPING, SUMMARY)

State Job No. 28768(04) Sheet No. 7

S.H. 30 BRIDGE & APPROACHES HARMON COUNTY

9/13/2016 G:\OIProjects\1-2356 SH 30 over Salt Fork of Red River\CAD\QUANT SIGN SUM.dgn

REVISIONS		
NO.	DESCRIPTION	DATE
1	MODIFIED NOTE AND PAY QUANTITIES	10/12/17

GENERAL CONSTRUCTION NOTES

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET ODOT'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES".

THE CONTRACTOR SHALL PROVIDE A PERSON TO BE ON 24 HOUR CALL AS NEEDED AND DETERMINED BY THE ENGINEER. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIANO OR TRAFFIC CONTROL SUPERVISOR.

EXISTING ROADWAY SHALL REMAIN OPEN DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, AND SIGNING WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS. CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES,(CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS.

PAY QUANTITY NOTES

△1 (1) 320 TOTAL CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE TOTAL CALENDAR DAYS ARE BROKEN DOWN BY PHASE TO CALCULATE THE SIGN DAY PAY ITEMS PER PHASE AS SHOWN BELOW. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION. THE FOLLOWING CALENDAR DAYS PER PHASE ARE AS FOLLOWS.

150 PHASE 1 CONSTRUCTION CALENDAR DAYS
25 PHASE 2 CONSTRUCTION CALENDAR DAYS
90 PHASE 3 CONSTRUCTION CALENDAR DAYS
55 PHASE 4 CONSTRUCTION CALENDAR DAYS

(2) WARNING LIGHTS TYPE "C" ARE NOT REQUIRED ON THIS PROJECT.

(3) SIGN PLACEMENT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

(TC-1) THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH LIGHTS, SIGNS, BARRICADES, AND PROVIDE FLAGGERS NECESSARY FOR THE CONTROL, SAFETY, AND MAINTENANCE OF TRAFFIC WHEN INSTALLING, RELOCATING OR DELIVERING PORTABLE LONGITUDINAL BARRIER.

(TC-17) INCLUDES AN ESTIMATED 12,500 L.F. (PAINT) (4" WIDE) WHITE 12,500 L.F. (PAINT)(4" WIDE) YELLOW STRIPE.

(TC-19) THIS ITEM INCLUDES AN ESTIMATED 13,400 L.F. (4" WIDE) WHITE AND 42,750 L.F. (4" WIDE) YELLOW STRIPE. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN O.D.O.T. APPROVED REMOVABLE PAVEMENT MARKING TAPE. COST FOR REMOVAL OF THIS TAPE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NON-REMOVABLE MARKING TAPE (FOIL BACK) SHALL NOT BE CONSIDERED AN APPROVED EQUAL FOR THIS ITEM.

(TC-20) ALL STRIPING TO BE PLACED ON TEMPORARY SURFACES OR ON SURFACES SCHEDULED TO BE REMOVED SHALL BE DONE WITH PAINT UNLESS OTHERWISE NOTED ON THE PLANS OR STANDARD DRAWINGS. TEMPORARY PAVEMENT MARKINGS PLACED ON FINISHED PAVEMENT OR EXISTING PAVEMENT TO REMAIN IN PLACE SHALL USE ONE OF THE FOLLOWING METHODS:
- REMOVABLE PAVEMENT MARKING TAPE
- CLASS A PAVEMENT MARKERS

(TC-22) AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT MARKING REMOVAL SHALL INCLUDE THE COST OF REMOVING STRIPE, ARROWS, WORDS AND SYMBOLS, AS SHOWN IN THE PLANS. THESE ITEMS MAY CONSIST OF PLASTIC, PAINT OR NON-REMOVABLE MARKING TAPE.

(TC-26) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.

(TC-28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH O.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.

(TC-39) THE CONTRACTOR SHALL PROVIDE A PERSON, 24 HOURS A DAY, SEVEN DAYS A WEEK, AT THE CONSTRUCTION SITE TO MAINTAIN AND KEEP ALL TRAFFIC CONTROL DEVICES IN POSITION ANYTIME TRAFFIC IS DIRECTED AWAY FROM THE NORMAL TRAFFIC LANES OR ANYTIME THE ENGINEER DEEMS IT NECESSARY. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.

(TC-52) ANY USED CHANGEABLE MESSAGE SIGNS AND CONSTRUCTION ZONE IMPACT ATTENUATORS TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.

(TC-61) ANY DAMAGE TO A FINISHED OR EXISTING SURFACE RESULTING FROM THE CONTRACTORS NEGLIGENCE IN THE REMOVAL OF CONSTRUCTION ZONE PAVEMENT MARKERS OR CHANNELIZING DEVICES AND THE BITUMINOUS ADHESIVE USED IN THEIR INSTALLATION, SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

(TC-70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.

(TC-73) QUANTITY SHOWN INCLUDES 2,680 EA. (WHITE) AND 8,550 EA. (YELLOW) CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS). THESE CONSTRUCTION ZONE PAVEMENT MARKERS SHALL BE EITHER "DAVIDSON PLASTICS: MODEL TOM", OR AN APPROVED EQUAL. PRICE BID FOR THIS ITEM SHALL INCLUDE THE INITIAL PLACEMENT, SUBSEQUENT REPLACEMENT, AND REMOVAL. THE CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON STANDARD DRAWING TCS21-1-(LATEST REVISION).

(TC-75) TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE THE SAME DAY THAT EXISTING PAVEMENT MARKINGS ARE REMOVED FROM ANY ROADWAY OPEN TO TRAFFIC. ALSO, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF FINAL STRIPING.

(TC-85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT:

http: //www.okladot.state.ok.us/traffic/qpl/index.php.

TRAFFIC CONTROL PAY QUANTITIES

SH 30 over Salt Fork Red River in Harmon County

0301 TRAFFIC

ITEM	DESCRIPTION		UNIT	TOTAL	
857(A) 8839	CONSTRUCTION TRAFFIC STRIPE (PAINT)(4" WIDE)	(TC-17,20,70,75)	LF	25,000.00	
857(C) 8851	REMOVABLE PAVEMENT MARKING TAPE (4" WIDE)	(TC-19,70,75)	LF	56,150.00	
857(E) 8887	(PL)CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TAB)TYPE 2-1	(TC-61,70,73,75)	EA	11,230.00	
857(F) 8006	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	(TC-22,70)	LF	15,000.00	
871(B) 8705	(SP) CONST. ZONE IMPACT ATTEN.	(TC-52)(1)	SD	1,305.00	△1
871(C) 8709	(SP) RELOCATION OF IMPACT ATTENUATOR	(TC-52)	EA	16.00	
877(B) 8484	DELIVER PORTABLE LONGITUDINAL BARRIER	(TC-1)	LF	5,950.00	
877(C) 8486	RELOCATION OF PORTABLE LONGITUDINAL BARRIER	(TC-1)	LF	11,625.00	
880(B) 8818	CONSTRUCTION SIGNS 0 TO 6.25 SF	(TC-26,28,33)(1)	SD	4,370.00	△1
880(B) 8821	CONSTRUCTION SIGNS 6.26 TO 15.99 SF	(TC-26,29,33)(1)	SD	5,040.00	△1
880(B) 8824	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	(TC-26,30,33)(1)	SD	3,880.00	△1
880(C) 8842	CONSTRUCTION BARRICADES (TYPE III)	(TC-26)(1)	SD	2,610.00	△1
880(C) 8848	WING BARRICADES	(TC-26)(1)	SD	1,280.00	△1
880(E) 8860	WARNING LIGHTS (TYPE A)	(TC-26)(1)	SD	9,100.00	△1
880(F) 8878	DRUMS	(TC-26)(1,2)	SD	2,275.00	△1
880(G) 8890	CHANNELIZER CONES	(TC-26)(1)	SD	2,750.00	△1
880(I) 8902	FLAGGER	(1)	SD	50.00	△1
880(K) 8908	SURVEILLANCE TRAFFIC CONTROL	(TC-39)(1)	SD	320.00	△1
882(A) 8306	PORT. CHANGEABLE MESSAGE SIGN	(TC-52,70,85)(1,3)	SD	640.00	△1

Design	RWR	10/12/17
Drawn	SB	10/12/17

TEC A CLEAR DIRECTION

PAY QUANTITIES AND NOTES (TRAFFIC CONTROL)

State Job No. 28768(04) Sheet No. 8

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

10/12/17 G:\OP rojects\1-2356 SH 30 over Salt Fork of Red River\CAD\QUANT TC.dgn

SUMMARY OF SURFACING

STATION EXTENTS	SUBGRADE METHOD B 310(B)	TACK COAT 407(B)	PRIME COAT 408	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)	RUMBLE STRIP-METHOD HMA-CYC 413(B)
	S.Y.	GAL.	GAL.	TONS	TONS	L.F.
S.H. 30						
STA. 559+00.00 TO STA. 574+00.00	5,113.18	1,395.36	1,789.61	1,838.70	515.49	2,040.07
STA. 574+00.00 TO STA. 589+00.00	3,823.48	1,102.81	1,338.22	1,452.87	428.34	1,500.25
STA. 589+00.00 TO STA. 604+00.00	5,873.53	1,663.01	2,055.74	2,193.21	635.36	2,377.41
STA. 604+00.00 TO STA. 619+00.00	4,992.20	1,353.25	1,747.27	1,784.04	499.30	1,800.00
DETOUR EAST						
STA. 553+07.00 TO STA. 623+73.00	16,071.39	2,214.64	5,843.20	3,332.75	1,648.54	
TOTALS	35,873.78	7,729.07	12,774.04	10,601.57	3,727.03	7,717.73

NOTE: QUANTITIES INCLUDE ASPHALT AND PRIME COAT QUANTITIES FOR GUARDRAIL WIDENING

SUMMARY OF EARTHWORK QUANTITIES

STATION EXTENTS	UNCLASSIFIED EXCAVATION 202(A)	EMBANKMENT +15%	EXCESS EXCAVATION	UNCLASSIFIED BORROW 202(D)
	C.Y.	C.Y.	C.Y.	C.Y.
S.H. 30				
PHASE 1				
STA. 576+00 TO STA. 596+00	2,756	34,107		31,351
SPUR DIKE SOUTH		1,856		1,856
SPUR DIKE NORTH		3,534		3,534
PHASE 2				
C.L. SURVEY STA. 553+07 TO STA. 623+73	13,088	11,032	2,056	
PHASE 3				
STA. 563+29.97 TO STA. 614+80	16,255	15,908	347	
PHASE 4				
STA. 553+07 TO STA. 623+75.14	26,532	1,470	25,062	
TOTALS	58,631	67,907	27,465	36,741

NOTE: SEE SHEETS X26-X32 FOR END AREAS AND VOLUMES OF PHASE 2 AND 4 EARTHWORK FROM STA. 553+07 TO STA. 563+00.

SUMMARY OF GUARDRAIL

STATION EXTENTS AND LOCATION	BEAM GUARDRAIL W-BEAM SINGLE 623(A)	GUARDRAIL END TREATMENT(31") 623(G)	GUARDRAIL BRIDGE CONN. THRIE BEAM(31") 623(I)	GUARDRAIL DELINEATORS (TYPE 2, CODE 1) 853
	L.F.	EA.	EA.	EA.
S.H. 30				
STA. 578+72.11 TO STA. 581+50.23 - LT.	212.50	1	1	7
STA. 578+72.11 TO STA. 581+50.23 - RT.	212.50	1	1	7
STA. 592+10.69 TO STA. 594+88.82 - LT.	212.50	1	1	7
STA. 592+10.69 TO STA. 594+88.82 - RT.	212.50	1	1	7
TOTALS	850.00	4	4	28

NOTE: ASPHALT AND PRIME COAT QUANTITIES FOR GUARDRAIL WIDENING ARE INCLUDED IN THE MAINLINE SURFACING QUANTITIES

SUMMARY OF DRAINAGE STRUCTURES

STRUCTURE NO.	STATION	DESCRIPTION	DESIGN	☼ TRENCH EXC.	STD. BEDDING MATERIAL	ELEVATIONS		R.C. PIPE CLASS III 613(A)		CORR. GALV. STEEL PIPE 613(B)			CET 613(M)		PCES 613(L)
					☼ CLASS C ☼	INLET FLOWLINE	DOWN STREAM FLOWLINE	24"	30"	18"	24"	30"	B6	C6	30"
				C.Y.	C.Y.	ELEV.	ELEV.	L.F.	L.F.	L.F.	L.F	L.F	EA.	EA.	EA.
1	SH-30 566+24.83	EXTEND EXIST. 30"x97' LG. RCP, 24' LG. INTO DITCH LT. W/ PCES LT. & RT.	SPI-4, SPB-1, PCES-4, FHTCP-3	17.63	11.38	1757.70	1757.13		24						2
2	SH-30 574+71.00	CONST. 24"x90' LG. RCP SIDE DRAIN W/ B6 CET, 50' RT.	SPI-4, SPB-1, CET6S-3-B6-RC-NG, FHTCP-3			1751.27	1750.63	90					2		
3	SH-30 609+10.00	CONST. 30"x78' LG. RCP SIDE DRAIN W/ C6 CET, 46' RT.	SPI-4, SPB-1, CET6S-3-C6-RC-NG, FHTCP-3			1739.41	1737.52		78					2	
4	SH-30 613+98.00	CONST. 30"x74' LG. RCP SIDE DRAIN W/ C6 CET, 47' RT.	SPI-4, SPB-1, CET6S-3-C6-RC-NG, FHTCP-3			1745.82	1745.05		74					2	
T1	C.L. SURVEY SH-30 566+24.89	EXTEND EXIST. 30"x97' LG. RCP, W/ 24' LG. CGSP INTO DITCH RT.	SPI-4, SPB-1, FHTMPP-1			1766.47	1764.44					24			
T2	C.L. SURVEY SH-30 574+75.00	CONST. 18"x62' LG. CGSP SIDE DRAIN, 49' RT.	SPI-4, SPB-1, FHTMPP-1			1754.38	1753.15			62					
T3	C.L. SURVEY SH-30 575+76.00	CONST. 18"x76' LG. CGSP AS CROSS DRAIN	SPI-4, SPB-1, FHTMPP-1			1752.27	1751.96			76					
T4	C.L. SURVEY SH-30 597+50.00	CONST. 18"x66' LG. CGSP AS CROSS DRAIN	SPI-4, SPB-1, FHTMPP-1			1733.33	1731.00			66					
T5	C.L. SURVEY SH-30 603+38.00	CONST. 18"x58' LG. CGSP AS CROSS DRAIN	SPI-4, SPB-1, FHTMPP-1			1733.57	1730.00			58					
T6	C.L. SURVEY SH-30 609+08.00	CONST. 2-24"x46' LG. CGSP SIDE DRAIN, 55' RT.	SPI-4, SPB-1, FHTMPP-1			1740.82	1740.23				92				
T7	C.L. SURVEY SH-30 613+96.00	CONST. 2-24"x40' LG. CGSP SIDE DRAIN, 47' RT.	SPI-4, SPB-1, FHTMPP-1			1746.26	1746.24				80				
			TOTALS	17.63	11.38			90	176	262	172	24	2	4	2

☼ FOR INFORMATION PURPOSES ONLY. PRICE BID TO BE INCLUDED IN COST OF PIPE.

SUMMARY OF FENCE

STATION EXTENTS AND LOCATION	FENCE - STYLE SWF (5 BARBED WIRE) 624(C)
	L.F.
S.H 30	
STA. 553+04.00 TO STA. 559+70.00 - LT.	673.00
STA. 562+05.00 TO STA. 574+20.00 - LT.	1,206.00
STA. 574+88.00 TO STA. 583+71.00 - LT.	1,137.00
STA. 600+88.00 TO STA. 613+67.00 - RT.	1,286.00
STA. 614+27.00 TO STA. 622+15.00 - RT.	793.00
TOTALS	5,095.00

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

SUMMARY SHEET

State Job No. 28768(04) Sheet No. 9

SUMMARY OF TEMPORARY SEDIMENT CONTROL

STATION EXTENTS	LOCATION AND DESCRIPTION	TEMPORARY SILT FENCE 221(C)	TEMPORARY SILT DIKE 221(F)	VEGETATIVE MULCHING 233(A)
		L.F.	L.F.	AC.
STA. 553+10.00 TO STA. 559+00.00	ACROSS TEMP. SLOPES RT.			0.25
STA. 554+50.00	ACROSS TEMP. DITCH RT.		7	
STA. 556+00.00	ACROSS TEMP. DITCH RT.		7	
STA. 557+25.00	ACROSS TEMP. DITCH RT.		7	
STA. 558+50.00	ACROSS TEMP. DITCH RT.		7	
STA. 559+00.00 TO STA. 574+00.00	ALONG TOE LT. & RT.	960	7	
STA. 559+00.00 TO STA. 574+00.00	ACROSS TEMP. SLOPES RT. & MEDIAN			1.53
STA. 559+75.00	ACROSS TEMP. DITCH RT.		7	
STA. 561+00.00	ACROSS TEMP. DITCH RT.		7	
STA. 566+50.00	ACROSS DITCH LT. AND TEMP. MEDIAN DITCH		14	
STA. 568+00.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 569+50.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 571+00.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 572+50.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 574+00.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 574+00.00 TO STA. 589+00.00	ACROSS TOE LT.	617		
STA. 574+00.00 TO STA. 589+00.00	ACROSS TEMP. SLOPES RT. & MEDIAN			0.48
STA. 575+50.00	ACROSS TEMP. MEDIAN DITCH		7	
STA. 576+00.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT.		35	
STA. 577+50.00	ACROSS DITCH RT. AND TEMP. DITCH RT. & MEDIAN		28	
STA. 579+00.00	ACROSS DITCH RT. AND TEMP. DITCH RT. & MEDIAN		28	
STA. 580+18.00	ACROSS DITCH LT.		14	
STA. 580+50.00	ACROSS DITCH RT. AND TEMP. DITCH RT. & MEDIAN		28	
STA. 581+50.00	ACROSS DITCH RT. AND TEMP. DITCH RT. & MEDIAN		28	
STA. 582+50.00	ACROSS DITCH RT. AND TEMP. DITCH RT.		21	
STA. 589+00.00 TO STA. 604+00.00	ALONG TOE LT. & RT.	1,514		
STA. 589+00.00 TO STA. 604+00.00	ACROSS TEMP. SLOPES RT. & MEDIAN			0.71
STA. 592+76.00	ACROSS DITCH LT. AND TEMP. MEDIAN DITCH		28	
STA. 594+50.00	ACROSS DITCH LT. AND TEMP. MEDIAN DITCH		28	
STA. 596+00.00	ACROSS DITCH LT. AND TEMP. MEDIAN DITCH		28	
STA. 597+40.00	ACROSS TEMP. MEDIAN DITCH		7	
STA. 597+50.00	ACROSS DITCH LT.		21	
STA. 597+60.00	ACROSS TEMP. MEDIAN DITCH		7	
STA. 599+00.00	ACROSS DITCH LT. AND TEMP. MEDIAN DITCH		28	
STA. 600+50.00	ACROSS DITCH LT.		21	
STA. 602+00.00	ACROSS DITCH LT. AND TEMP. MEDIAN DITCH		21	
STA. 603+30.00	ACROSS TEMP. MEDIAN DITCH		7	
STA. 603+50.00	ACROSS DITCH LT. & RT. AND TEMP. MEDIAN DITCH		35	
STA. 604+00.00 TO STA. 619+00.00	ACROSS TOE LT.	579		
STA. 604+00.00 TO STA. 619+00.00	ACROSS TEMP. SLOPES RT. & MEDIAN			0.84
STA. 605+00.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 606+50.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 608+00.00	ACROSS DITCH LT. & RT. AND TEMP. DITCH RT. & MEDIAN		42	
STA. 609+60.00	ACROSS DITCH RT. AND TEMP. DITCH RT.		21	
STA. 611+00.00	ACROSS DITCH RT. AND TEMP. DITCH RT.		21	
STA. 612+50.00	ACROSS DITCH RT. AND TEMP. DITCH RT.		21	
STA. 614+50.00	ACROSS DITCH RT. AND TEMP. DITCH RT.		21	
STA. 616+00.00	ACROSS TEMP. DITCH RT.		7	
STA. 617+50.00	ACROSS TEMP. DITCH RT.		7	
STA. 619+00.00	ACROSS TEMP. DITCH RT.		7	
STA. 619+00.00 TO STA. 623+75.00	ACROSS TOE RT.	355		
STA. 619+00.00 TO STA. 623+75.00	ACROSS TEMP. SLOPES RT.			0.12
	TOTALS	4,025	924	3.93

SUMMARY OF DRIVES

STATION AND LOCATION	WIDTH x LENGTH	TYPE	RADII (R1)	RADII (R2)	* 4" TBSC TYPE E 402(E)	TACK COAT 407(B)	PRIME COAT 408	3" SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	2" SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)
					TON	GAL.	GAL.	TON	TON
STA. 574+58 - LT.	12.00' x 40.00'	SL. RETURN Δ	25'	25'	55.29				
STA. 574+71 - RT.	21.00' x 94.66'	1	40'	40'	121.14	49.64	117.13	55.91	36.93
STA. 609+10 - RT.	16.00' x 75.14'	1	10'	10'	64.12	21.11	50.50	23.94	15.63
STA. 613+98 - RT.	14.00' x 59.17'	SL. RETURN Δ	50'	25'	50.07				
STA. 613+97 - LT.	12.00' x 29.08'	1	25'	25'	23.47	10.36	24.43	11.67	7.71
STA. 621+35 - LT.	12.00' x 37.82'	1	10'	10'	24.20	8.52	20.75	9.75	6.27
				TOTALS	338.29	89.63	212.81	101.27	66.54

* TBSC QUANTITIES ARE FOR TEMPORARY DRIVES

Δ SURFACING QUANTITIES INCLUDED IN MAINLINE SURFACING QUANTITIES

SUMMARY OF EROSION CONTROL

STATION EXTENTS	LOCATION AND DESCRIPTION	SOLID SLAB SODDING 230(A)	TYPE 1-A PLAIN RIPRAP 601(B)	TYPE 1-A FILTER BLANKET 601(C)
		S.Y.	TON	TON
SH 30				
STA. 553+07.00 TO STA. 559+00.00	LT. & RT. OF ROADWAY	5,098.21		
STA. 559+00.00 TO STA. 574+00.00	LT. & RT. OF ROADWAY	24,733.09	11.66	2.78
STA. 574+00.00 TO STA. 589+00.00	LT. & RT. OF ROADWAY	16,561.48	2.21	1.05
STA. 589+00.00 TO STA. 604+00.00	LT. & RT. OF ROADWAY	52,266.31		
STA. 604+00.00 TO STA. 619+00.00	LT. & RT. OF ROADWAY	17,498.45	11.04	3.94
STA. 619+00.00 TO STA. 623+75.14	LT. & RT. OF ROADWAY	3,010.49		
	TOTALS	119,168.03	24.91	7.77

SUMMARY OF REMOVAL QUANTITIES

STATION EXTENTS	REMOVAL OF FENCE •	REMOVAL OF CONCRETE PAVEMENT 619(B)	REMOVAL OF ASPHALT PAVEMENT 619(B)	REMOVAL OF GUARDRAIL 619(B)	SAWING PAVEMENT 619(C)
	L.F.	S.Y.	S.Y.	L.F.	L.F.
S.H. 30					
STA. 552+68.00 TO STA. 574+00.00	4,349.34		8,450.61		2,119.41
STA. 574+00.00 TO STA. 604+00.00	4,603.68	5.05	9,951.34	525.56	1,678.38
STA. 604+00.00 TO STA. 623+73.00	2,759.58		7,846.43		2,012.30
TOTALS	11,712.60	5.05	26,248.38	525.56	5,810.09

• FOR INFORMATION PURPOSES ONLY. PRICE BID TO BE INCLUDED IN OTHER ITEMS.

S.H. 30 BRIDGE & APPROACHES

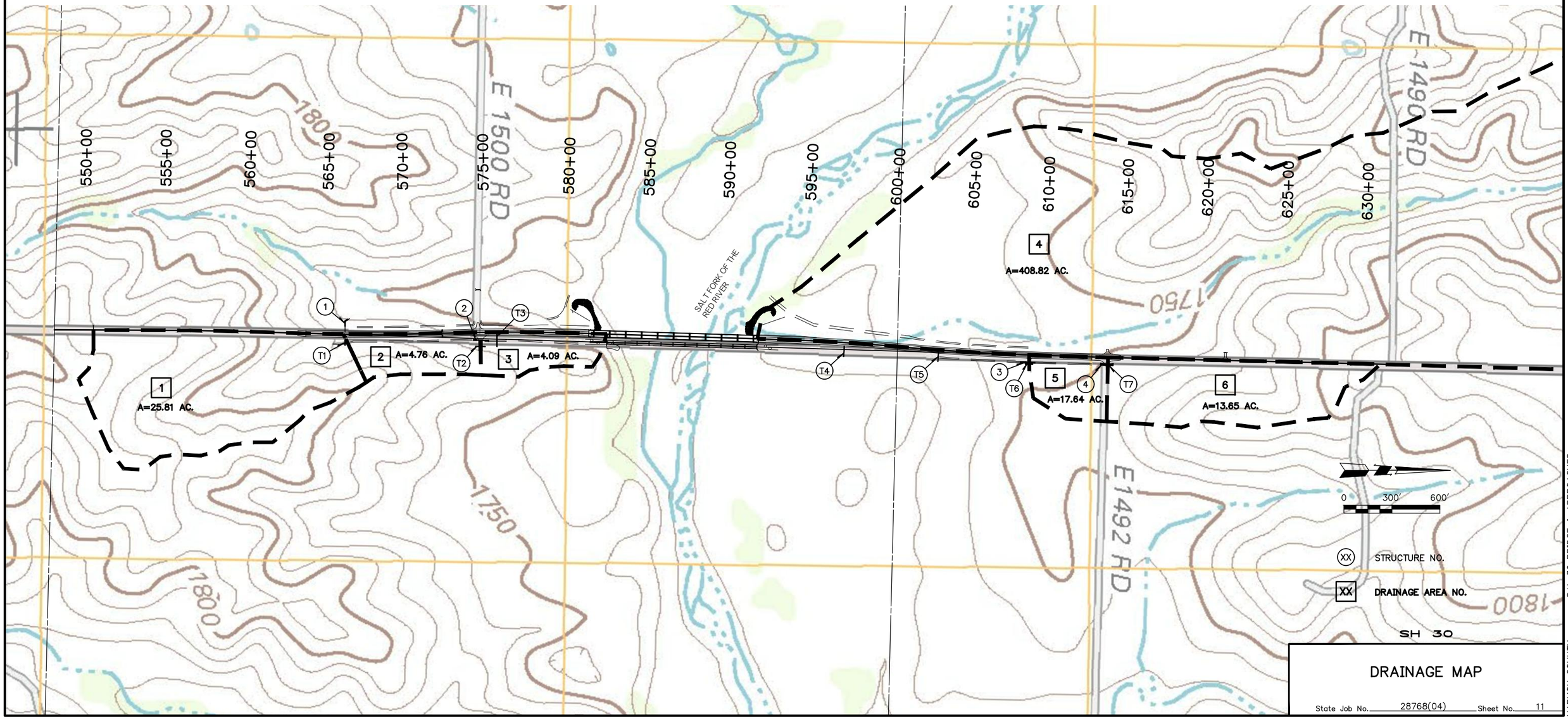
HARMON COUNTY

SUMMARY SHEET

State Job No. 28768(04) Sheet No. 10

DRAINAGE RECORD

Drainage Str.	Location (Station)	Location (Offset)	LT/RT	DA NO.	Area	C	T_C	I2	I10	Q2	Q10	Qin2	Qin10	Inlet Type	DESIGN Q	ADJ. CA	Total Q in Conduit	Pipe Diameter	Slope	Velocity	Length	Time in Pipe	Total T_C	Flowline	D.S. Flowline
					(AC)		(MIN)	(IN/HR)	(IN/HR)	(CFS)	(CFS)	(CFS)	(CFS)				(CFS)	(IN)	(FT/FT)	(FT/S)	(FT)	(MIN)	(MIN)	(FT)	(FT)
1	566+24.83	0.00'	ON C.L.	1	25.81	0.50	24.56	3.31	4.08	42.72	52.65	42.72	52.65	P.C.E.S	Q10	12.91	52.67	30"	0.0242	18.71	23.72	0.02	24.58	1757.70	1757.13
2	574+71.00	50.00'	RT.	2	4.76	0.50	15.22	4.35	5.11	10.35	12.16	10.35	12.16	P.C.E.S	Q10	2.38	12.16	24"	0.0071	6.45	89.96	0.23	15.45	1751.27	1750.63
3	609+10.00	46.00'	RT.	5	17.64	0.50	30.77	2.88	3.61	25.40	31.84	25.40	31.84	P.C.E.S	Q10	8.82	31.87	30"	0.0244	11.56	77.44	0.11	30.88	1739.41	1737.52
4	613+98.00	47.00'	RT.	6	13.65	0.50	28.23	3.04	3.79	20.75	25.87	20.75	25.87	P.C.E.S	Q10	6.83	25.86	30"	0.0106	9.25	72.84	0.13	28.36	1745.82	1745.05
T1	566+24.89	0.00'	ON C.L.	1	25.81	0.50	24.56	3.31	4.08	42.72	52.65	42.72	52.65	P.C.E.S	Q2	12.91	42.72	30"	0.0891	13.15	22.78	0.03	24.59	1766.47	1764.44
T2	574+75.00	49.00'	RT.	2	4.76	0.50	15.22	4.35	5.11	10.35	12.16	10.35	12.16	P.C.E.S	Q2	2.38	10.35	18"	0.0203	4.96	60.51	0.20	15.42	1754.38	1753.15
T3	575+76.00	0.00'	ON C.L.		0.48	0.50	5.67	6.69	7.02	1.61	1.68	1.61	1.68	P.C.E.S	Q2	0.24	1.61	18"	0.0041	2.81	75.72	0.45	6.12	1752.27	1751.96
T4	597+50.00	0.00'	ON C.L.		1.08	0.50	5.00	6.98	7.21	3.77	3.89	3.77	3.89	P.C.E.S	Q2	0.54	3.77	18"	0.0360	5.59	64.67	0.19	5.19	1733.33	1731.00
T5	603+38.00	0.00'	ON C.L.		1.08	0.50	5.00	6.98	7.21	3.77	3.89	3.77	3.89	P.C.E.S	Q2	0.54	3.77	18"	0.0618	6.80	57.74	0.14	5.14	1733.57	1730.00
T6	609+08.00	55.00'	RT.	5	17.64	0.50	30.77	2.88	3.61	25.40	31.84	25.40	31.84	P.C.E.S	Q2	8.82	25.40	24"	0.0131	4.96	45.04	0.15	30.92	1740.82	1740.23
T7	613+96.00	47.00'	RT.	6	13.65	0.50	28.23	3.04	3.79	20.75	25.87	20.75	25.87	P.C.E.S	Q2	6.83	20.75	24"	0.0005	5.54	40.16	0.12	28.35	1746.26	1746.24



DRAINAGE MAP

State Job No. 28768(04) Sheet No. 11

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: SH-30 OVER SALT FORK OF THE RED RIVER 11.2 MI. N. OF THE US-62 JUNCT.

PROJECT DESCRIPTION: SH-30 BRIDGE AND APPROACHES

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING. REPLACE SALVAGED TOPSOIL AND DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: CLAY-SHALE WITH MINOR AMOUNTS OF GYPSUM

AREA TO BE DISTURBED: 18.77 ACRES

OFFSITE AREA TO BE DISTURBED: . (FOR CONTRACTOR USE)

MAXIMUM ACRES TO BE DISTURBED AT ANY ONE TIME: . (FOR CONTRACTOR USE)

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 34.84478°N, 99.9124°W

NAME OF RECEIVING WATERS: SALT FORK OF THE RED RIVER, HALL LAKE CREEK, AND UNNAMED TRIBUTARIES

SENSITIVE WATER OR WATERSHEDS: YES ☐ NO ☒

303(d) IMPAIRED WATERS: YES ☒ NO ☐

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
- ___ X ___ PERMANENT SODDING, SPRIGGING OR SEEDING
- ___ X ___ 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
- ___ X ___ TEMPORARY SILT FENCE
- ___ X ___ TEMPORARY SILT DIKES
- ___ . ___ TEMPORARY FIBER LOGS
- ___ . ___ 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
- ___ X ___ RIP RAP
- ___ . ___ INLET SEDIMENT FILTER
- ___ . ___ TEMPORARY BRUSH SEDIMENT BARRIERS
- ___ . ___ SANDBAG BERMS
- ___ . ___ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- ___ X ___ HAUL ROADS DAMPENED FOR DUST CONTROL
- ___ X ___ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- ___ X ___ EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

SEE SHEETS 23-25 FOR EROSION CONTROL PLAN.

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 MATERIALS 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 MATERIALS
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, 2012.

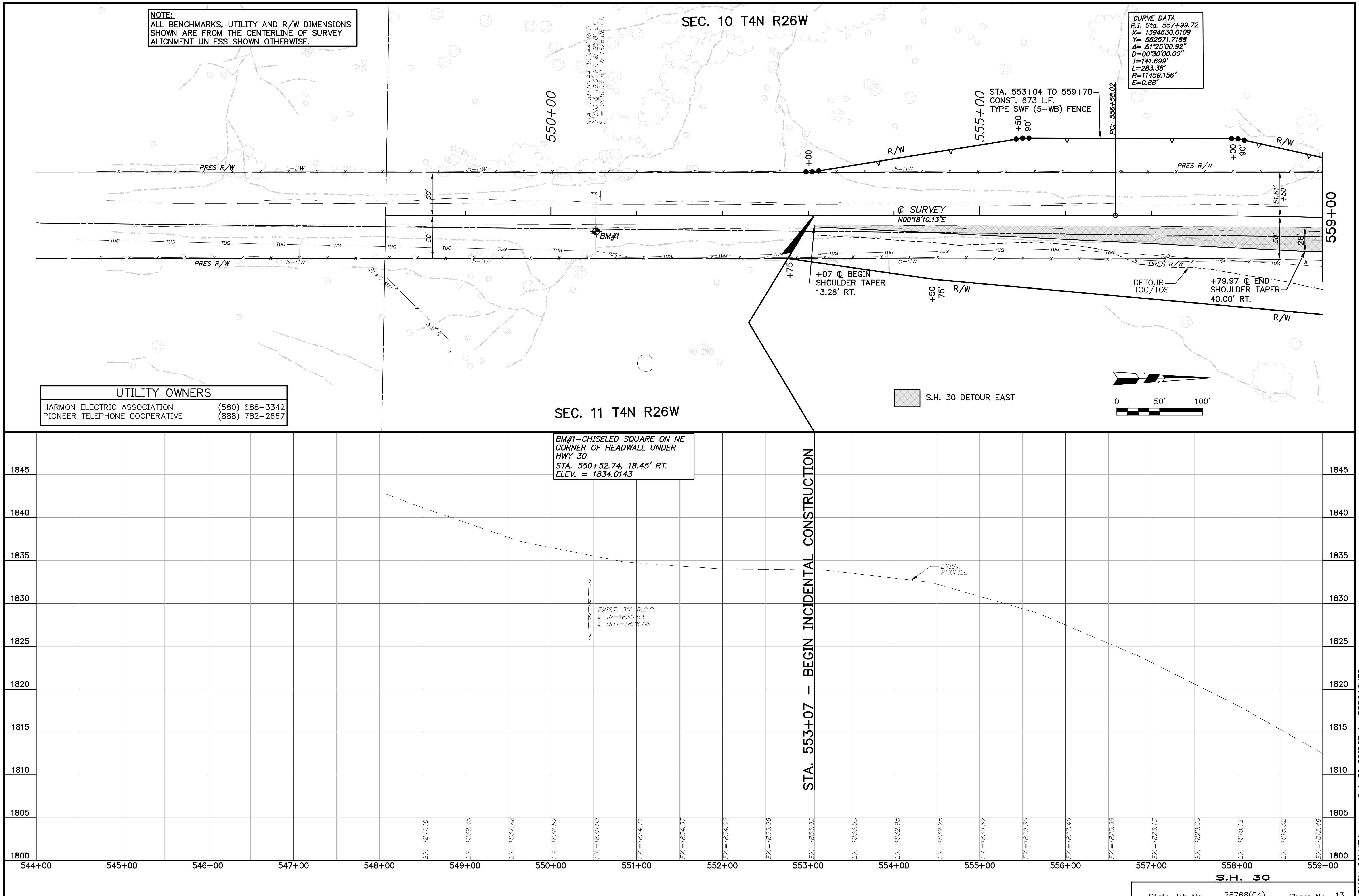
STORM WATER MANAGEMENT PLAN

State Job No. 28768(04) Sheet No. 12

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

REVISED (04-24-2014)


NOTE:
ALL BENCHMARKS, UTILITY AND R/W DIMENSIONS SHOWN ARE FROM THE CENTERLINE OF SURVEY ALIGNMENT UNLESS SHOWN OTHERWISE.
SEC. 10 T4N R26W
SEC. 11 T4N R26W
550+00
555+00
559+00
STA. 550+50.44 30"x44" RCP
"X"ING ℄ 19.0' RT. & 25.0' LT.
FL = 1830.53 RT. & 1826.06 LT.
CURVE DATA
P.I. Sta. 557+99.72
X= 1394630.0109
Y= 552571.7188
Δ= Ø1°25'00.92"
D=00°30'00.00"
T=141.699'
L=283.38'
R=11459.156'
E=0.88'
STA. 553+04 TO 559+70
CONST. 673 L.F.
TYPE SWF (5-WB) FENCE
PC: 556+58.02
PRES R/W
5-BW
R/W
TUG
BW GATE
℄ SURVEY
N00°18'10.13"E
BM#1
+07 ℄ BEGIN
SHOULDER TAPER
13.26' RT.
+79.97 ℄ END
SHOULDER TAPER
40.00' RT.
DETOUR
TOC/TOS
50'
51.61'
28'
+00
+50
90'
75'
+75
S.H. 30 DETOUR EAST
0
50'
100'
UTILITY OWNERS
HARMON ELECTRIC ASSOCIATION (580) 688-3342
PIONEER TELEPHONE COOPERATIVE (888) 782-2667
BM#1-CHISELED SQUARE ON NE CORNER OF HEADWALL UNDER HWY 30
STA. 550+52.74, 18.45' RT.
ELEV. = 1834.0143
STA. 553+07 - BEGIN INCIDENTAL CONSTRUCTION
EXIST. 30" R.C.P.
FL IN=1830.53
FL OUT=1826.06
EXIST.
PROFILE
1845
1840
1835
1830
1825
1820
1815
1810
1805
1800
EX.=1841.19
EX.=1839.45
EX.=1837.72
EX.=1836.52
EX.=1835.53
EX.=1834.71
EX.=1834.37
EX.=1834.02
EX.=1833.96
EX.=1833.92
EX.=1833.53
EX.=1832.95
EX.=1832.25
EX.=1830.82
EX.=1829.39
EX.=1827.49
EX.=1825.35
EX.=1823.13
EX.=1820.63
EX.=1818.12
EX.=1815.32
EX.=1812.49
544+00
545+00
546+00
547+00
548+00
549+00
550+00
551+00
552+00
553+00
554+00
555+00
556+00
557+00
558+00
559+00
S.H. 30
State Job No. 28768(04) Sheet No. 13
HARMON COUNTY S.H. 30 BRIDGE & APPROACHES

SEC. 10 T4N R26W

CURVE DATA
CURVE NO. C1
P.I. STA. 568+06.01
Δ = 03°35'51.15"
R = 13566.3506'
D = 00°25'20.41"
T = 426.0484'
L = 851.8168'
Ch = 851.6769'
E=2.8396'
e=0.08'/'
S=N/C
V=65 MPH

CURVE DATA
CURVE NO. C2
P.I. STA. 576+48.68
Δ = 03°40'25.10"
R = 13000.0000'
D = 00°26'26.65"
T = 416.9039'
L = 833.5221'
Ch = 833.3793'
E=2.9478'
e=0.08'/'
S=N.C.
V=65 MPH

PT: 559+41.40
PC: 563+79.96
PRC: 572+31.78

STA. 566+24.89 30'x97' RCP X'ING ℄ 44.0' RT. & 53.0' LT. ℄ = 1764.44 RT. & 1757.70 LT.

CONST. 11.66 TONS TYPE 1–A PLAIN RIPRAP AND 2.78 TON TYPE 1–A FILTER BLANKET

GRADE TO DRAIN

STA. 562+05 TO 574+20
CONST. 1,206 L.F.
TYPE SWF (5–WB) FENCE

STA. 573+50 TO 573+66
CONST. 16' WIRE GATE

℄ SURVEY
N01°43'11.05"E
2633.56'
N 00°56'44.52" E
N–S ℄ 171

ASPH.
CRL S.H. 30
C1
C2
PRES R/W
TOC/TOS
DETOUR TOC/TOS
BM#2
PIONEER
S.H. 30 DETOUR EAST

559+00 560+00 565+00 570+00 574+00

SEC. 11 T4N R26W

BM#2–5/8" IRON PIN WITH ORANGE PLASTIC CAP EAST SIDE OF HWY 30
STA. 561+30.09, 64.95' RT.
ELEV. = 1795.1835

800' V.C.
K=159

564+07.00 EL=1782.84
572+07.00 EL=1757.00

STR. NO. 1 ~ STA. 566+24.83
EXTEND EXIST. 30"x97' LG. RCP, 24' LG. INTO DITCH LT. W/ PCES LT. & RT.
℄=1757.70, DS ℄=1757.13

STR. NO. T1 ~ STA. 566+26.66
EXTEND EXIST. 30"x97' LG. RCP, W/ 24' LG. CGSP INTO DITCH RT.
℄=1766.47, DS ℄=1764.44

EXIST. PROFILE
FINISH GRADE
SP. DITCH RT.
EXIST. 30" R.C.P.
℄ IN=1764.44
℄ OUT=1757.70
IDENTICAL POINTS
STA. 563+79.97 – BEGIN PROJECT
+79.97~F.G.=1784.40
P.I. STA. 568+07 EL=1759.84
-5.75%
-0.71%
-1.54%
-1.22%
-0.90%
-0.71%

EX.=1812.49 EX.=1809.61 EX.=1806.71 EX.=1803.79 EX.=1800.87 EX.=1797.95 EX.=1794.95 EX.=1791.94 EX.=1789.00 EX.=1786.12
F.G.=1783.25 EX.=1783.32
F.G.=1780.43 EX.=1781.03
F.G.=1777.77 EX.=1778.75
F.G.=1775.26 EX.=1776.72
F.G.=1772.92 EX.=1774.73
F.G.=1770.73 EX.=1773.10
F.G.=1768.70 EX.=1771.68
F.G.=1766.82 EX.=1770.30
F.G.=1765.11 EX.=1769.15
F.G.=1763.55 EX.=1768.04
F.G.=1762.15 EX.=1767.06
F.G.=1760.91 EX.=1766.14
F.G.=1759.82 EX.=1765.06
F.G.=1758.89 EX.=1763.75
F.G.=1758.12 EX.=1762.30
F.G.=1757.51 EX.=1761.34
F.G.=1757.05 EX.=1760.24
F.G.=1756.69 EX.=1759.38
F.G.=1756.34 EX.=1758.20
F.G.=1755.98 EX.=1757.50
F.G.=1755.63 EX.=1756.49

559+00 560+00 561+00 562+00 563+00 564+00 565+00 566+00 567+00 568+00 569+00 570+00 571+00 572+00 573+00 574+00

S.H. 30

State Job No. 28768(04) Sheet No. 14

HARMON COUNTY S.H. 30 BRIDGE & APPROACHES

CURVE DATA
CURVE NO. C2
P.I. STA. 576+48.68
Δ = 03°40'25.10"
R = 13000.0000'
D = 00°26'26.65"
T = 416.9039'
L = 833.5221'
Ch = 833.3793'
E=2.9478'
e=0.08'/'
S=N.C.
V=65 MPH

CAUTION
TUG X-ING
O.H. POWER X-ING
LW ELEV.=1781.01

SEC. 3 T4N R26W

SEC. 2 T4N R26W

STA. 574+58 CONST. 26' ASPH. SL RETURN AS DIKE

STA. 574+71 CONST. 21' ASPH. PRIVATE DRIVE RT.

CONST. 2.21 TONS TYPE 1-A PLAIN RIPRAP AND 1.05 TON TYPE 1-A FILTER BLANKET

+00 ℄ BEGIN SHOULDER TAPER 40.00' RT.

+82 ℄ END SHOULDER TAPER 13.86' RT.

STA. 581+35.48 CONST. SLOPE DRAIN AND SPLASH BASIN

STA. 574+88 TO 583+71 CONST. 1,137 L.F. TYPE SWF (5-WB) FENCE

CONST. GUARDRAIL

(2) 10' CHAINLINK GATES

CRL S.H. 30 N01°47'44.96"E

℄ SURVEY N01°43'11.05"E

N-S ℄ 171 N01°47'44.94"E 2630.50'

EXIST. 6 (2-75' CONTINUOUS)
EXIST. 40' I-BEAM SPAN BRIDGE

S.H. 30 DETOUR EAST

SALT FORK RED RIVER

BM#4—SQUARE BOLT ON SE ABUTMENT WALL
STA. 582+61.02, 18.87' RT.
ELEV. = 1747.6371

STR. NO. T3 ~ STA. 575+76.00
CONST. 18'x76' LG. CGSP AS CROSS DRAIN
℄=1752.27, DS ℄=1751.96

1001'-8" BRIDGE LENGTH

BEGIN APPROACH +49.63
BEG. BRIDGE +79.63

FINISH GRADE

SP. DITCH RT.

EXIST. PROFILE

-0.71%
-1.45%

BRIDGE "A"
SALT FORK OF THE RED RIVER
D.A. = 1,208.70 SQ. MI.

Q_2=17,076 CFS	Q_{25}=129,703 CFS	Q_{500}=486,789 CFS
V_2=4.86 FPS	V_{25}=9.30 FPS	V_{500}=11.77 FPS
WS_2=1,727.70 FT.	WS_{25}=1,739.76 FT.	WS_{500}=1,754.27 FT.
Q_5=46,249 CFS	Q_{50}=181,171 CFS	$Q_{OT}=Q_{9.7}$=75,200 CFS
V_5=6.37 FPS	V_{50}=10.04 FPS	$V_{9.7}$=7.83 FPS
WS_5=1,732.58 FT.	WS_{50}=1,742.96 FT.	$WS_{9.7}$=1,735.70 FT.
Q_{10}=76,801 CFS	Q_{100}=249,944 CFS	CONTROLLED D.A.=
V_{10}=7.90 FPS	V_{100}=11.10 FPS	0.00 SQ. MI.
WS_{10}=1,735.86 FT.	WS_{100}=1,746.10 FT.	EFFECTIVE D.A.= 1,208.70 SQ. MI.

F.G.=1755.63 EX.=1756.49
F.G.=1755.27 EX.=1755.71
F.G.=1754.92 EX.=1752.05
F.G.=1754.56 EX.=1750.58
F.G.=1754.21 EX.=1749.66
F.G.=1753.85 EX.=1748.85
F.G.=1753.50 EX.=1747.83
F.G.=1753.14 EX.=1746.61
F.G.=1752.79 EX.=1745.27
F.G.=1752.43 EX.=1744.14
F.G.=1752.08 EX.=1743.45
F.G.=1751.72 EX.=1742.25
F.G.=1751.37 EX.=1741.38
F.G.=1751.01 EX.=1741.13
F.G.=1750.66 EX.=1738.17
F.G.=1750.30 EX.=1736.82
F.G.=1749.95 EX.=1737.95
F.G.=1749.59 EX.=1736.30
F.G.=1749.24 EX.=1732.58
F.G.=1748.88 EX.=1726.06
F.G.=1748.53 EX.=1724.42
F.G.=1748.17 EX.=1723.92
F.G.=1747.82 EX.=1722.95
F.G.=1747.46 EX.=1719.86
F.G.=1747.11 EX.=1717.91
F.G.=1746.75 EX.=1716.73
F.G.=1746.40 EX.=1714.70
F.G.=1746.04 EX.=1711.31
F.G.=1745.69 EX.=1718.61
F.G.=1745.33 EX.=1719.36
F.G.=1744.98 EX.=1718.15

574+00 575+00 576+00 577+00 578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00 586+00 587+00 588+00 589+00

1760 1755 1750 1745 1740 1735 1730 1725 1720 1715

S.H. 30

State Job No. 28768(04) Sheet No. 15

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

SEE R/W INSERT

SEC. 3 T4N R26W

R/W INSERT

592+10 350'
592+75 350'
+45.85 307.49'

590+00
595+00
600+00

R/W

+00 125'
+75 125'

PRES R/W

589+00
590+00
595+00
600+00
604+00

CRL S.H. 30
N01°47'44.96"E

STA. 592+81.71 BRIDGE FLOOR EL. = 1741.49
STA. 592+81.71 BRIDGE FLOOR EL. = 1741.49

PC: 593+42.67

STA. 594+82.50
CONST. SLOPE DRAIN
AND SPLASH BASIN

GRADE TO DRAIN

CONST. GUARDRAIL

TOC/TOS

5-BW

PIONEER

TUG

ASPH.

℄ SURVEY
N01°43'11.05"E

2639.39'
N01°47'44.94"E

N-S ℄ 177

+28 ℄ BEGIN
SHOULDER TAPER
14.20' RT.

STA. 594+82.50
CONST. SLOPE DRAIN
AND SPLASH BASIN

BM#5

54' +00

54.91' +00

10.64' +35.72

9.88' +07.47

52.42' +74.34

50' +10.58

T4

C3

C4

T5

CURVE DATA
CURVE NO. C3
P.I. STA. 597+34.09
Δ = 03°26'57.08"
R = 13000.0000'
D = 00°26'26.65"
T = 391.4164'
L = 782.5963'
Ch = 782.4782'
E=2.7265'
e=0.08'/'
S=N.C.
V=65 MPH

+20.58~SIGN 49.57' LT.
+19.33~SIGN 25.24' LT.
+19.66~SIGN 24.70' RT.

353'

DETOUR
TOC/TOS

+00 ℄ END
SHOULDER TAPER
40.00' RT.

28'

53' +81.01

BM#6

51.43' +00

E-W ℄ 149.5
2641.00'
S88°39'43.29"E
128.41'

PRC: 601+25.27

1317.96'
N1°27'02.77"E

STA. 600+88 TO 613+67
CONST. 1,286 L.F.
TYPE SWF (5-WB) FENCE

70'

2641.55'
S 88°35'40.22" E
+81.37~SIGN 51.32' LT.

0 50' 100'

S.H. 30 DETOUR EAST

SEC. 2 T4N R26W

BM#5-DOME TOP BOLT ON NE ABUTMENT WALL
STA. 592+05.71, 17.82' RT.
ELEV. = 1741.3144

BM#6-5/8" IRON PIN WITH ORANGE PLASTIC CAP EAST SIDE OF HWY 30
STA. 600+80.75, 49.36' RT.
ELEV. = 1726.6132

1001'-8" BRIDGE LENGTH

+81.29 END BRIDGE

+11.29 END APPROACH

600' V.C.
K=198

602+00.00
EL=1735.75

LOW PT. STA: 603+40.88
EL.=1735.25

-0.71%

FINISH GRADE

STR. NO. T4 ~ STA. 597+50.00
CONST. 18"x66' LG. CGSP AS CROSS DRAIN
℄=1733.33, DS ℄=1731.00

EXIST. PROFILE

0.38%

0.37%

SP. DITCH LT.

1.22%

STR. NO. T5 ~ STA. 603+38.00
CONST. 18"x58' LG. CGSP AS CROSS DRAIN
℄=1733.57, DS ℄=1730.00

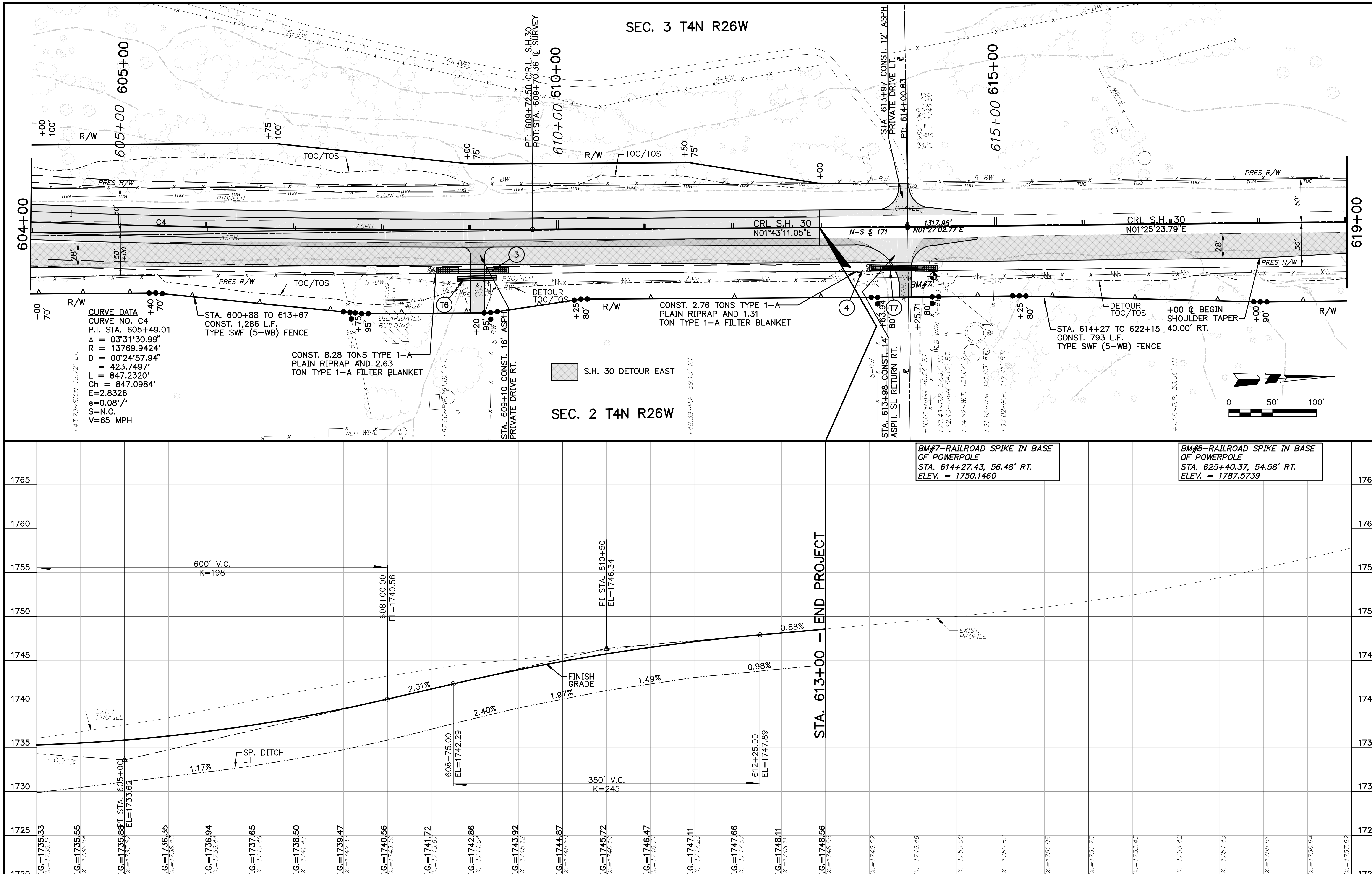
1755
1750
1745
1740
1735
1730
1725
1720
1715
1710

589+00	590+00	591+00	592+00	593+00	594+00	595+00	596+00	597+00	598+00	599+00	600+00	601+00	602+00	603+00	604+00
F.G.=1744.98 EX.=1718.15	F.G.=1744.62 EX.=1718.17	F.G.=1744.27 EX.=1718.44	F.G.=1743.91 EX.=1724.13	F.G.=1743.56 EX.=1724.66	F.G.=1743.20 EX.=1731.54	F.G.=1742.85 EX.=1730.53	F.G.=1742.49 EX.=1730.96	F.G.=1742.14 EX.=1729.22	F.G.=1741.78 EX.=1729.84	F.G.=1741.43 EX.=1728.23	F.G.=1741.07 EX.=1727.76	F.G.=1740.72 EX.=1726.16	F.G.=1740.36 EX.=1726.52	F.G.=1740.01 EX.=1726.79	F.G.=1739.65 EX.=1726.51	F.G.=1739.30 EX.=1726.73	F.G.=1738.94 EX.=1726.85	F.G.=1738.59 EX.=1727.05	F.G.=1738.23 EX.=1727.23	F.G.=1737.88 EX.=1727.84	F.G.=1737.52 EX.=1728.60	F.G.=1737.17 EX.=1729.22	F.G.=1736.81 EX.=1730.27	F.G.=1736.46 EX.=1730.68	F.G.=1736.10 EX.=1731.81	F.G.=1735.75 EX.=1732.93	F.G.=1735.45 EX.=1733.59	F.G.=1735.29 EX.=1734.23	F.G.=1735.25 EX.=1735.25	F.G.=1735.33 EX.=1736.11

S.H. 30

State Job No. 28768(04) Sheet No. 16

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



S.H. 30

State Job No. 28768(04) Sheet No. 17

HARMON COUNTY S.H. 30 BRIDGE & APPROACHES

SEC. 3 T4N R26W

SEC. 2 T4N R26W

619+00 620+00 621+00 625+00 630+00

STA. 621+35 CONST. 12' ASPH. PRIVATE DRIVE LT.

18" X 24' CMP FL N = 1758.25 FL S = 1758.36

PRES R/W 5-BW TUG

NB PIONEER

℄ SURVEY N01°25'23.79"E

1768.70' N 01°27'02.77" E

N-S ℄ 171

ASPH.

℄ SURVEY N01°25'23.79"E

50'

50'

CRL S.H. 30 N01°25'23.79"E

PRES R/W

PSO/AEP 5-BW

DETOUR TOC/TOS +12.29 56.03'

+50

+73 ℄ END SHOULDER TAPER 14.17' RT.

BM#8

R/W DETOUR TOC/TOS +00 90

STA. 614+27 TO 622+15 CONST. 793 L.F. TYPE SWF (5-WB) FENCE

+83.46=P.P. 56.44' RT.

WEB WIRE

BW GATE

E-W ℄ 149

DRIVE

S.H. 30 DETOUR EAST

0 50' 100'

BM#8-RAILROAD SPIKE IN BASE OF POWERPOLE
STA. 625+40.37, 54.58' RT.
ELEV. = 1787.5739

STA. 623+73 – END INCIDENTAL CONSTRUCTION

IDENTICAL POINTS

EXIST. PROFILE

EX.=1757.82 EX.=1759.24 EX.=1760.66 EX.=1762.40 EX.=1764.13 EX.=1766.15 EX.=1768.25 EX.=1770.51 EX.=1772.90 EX.=1775.36 EX.=1778.00 EX.=1780.64 EX.=1783.30 EX.=1785.97 EX.=1788.46 EX.=1790.85 EX.=1793.25 EX.=1795.76 EX.=1798.27 EX.=1800.78 EX.=1803.29 EX.=1805.67 EX.=1807.96 EX.=1810.22 EX.=1812.41 EX.=1814.60

1795 1790 1785 1780 1775 1770 1765 1760 1755 1750

1830 1825 1820 1815 1810 1805 1800 1795 1790 1785

619+00 620+00 621+00 622+00 623+00 624+00 625+00 626+00 627+00 628+00 629+00 630+00 631+00 632+00 633+00 634+00

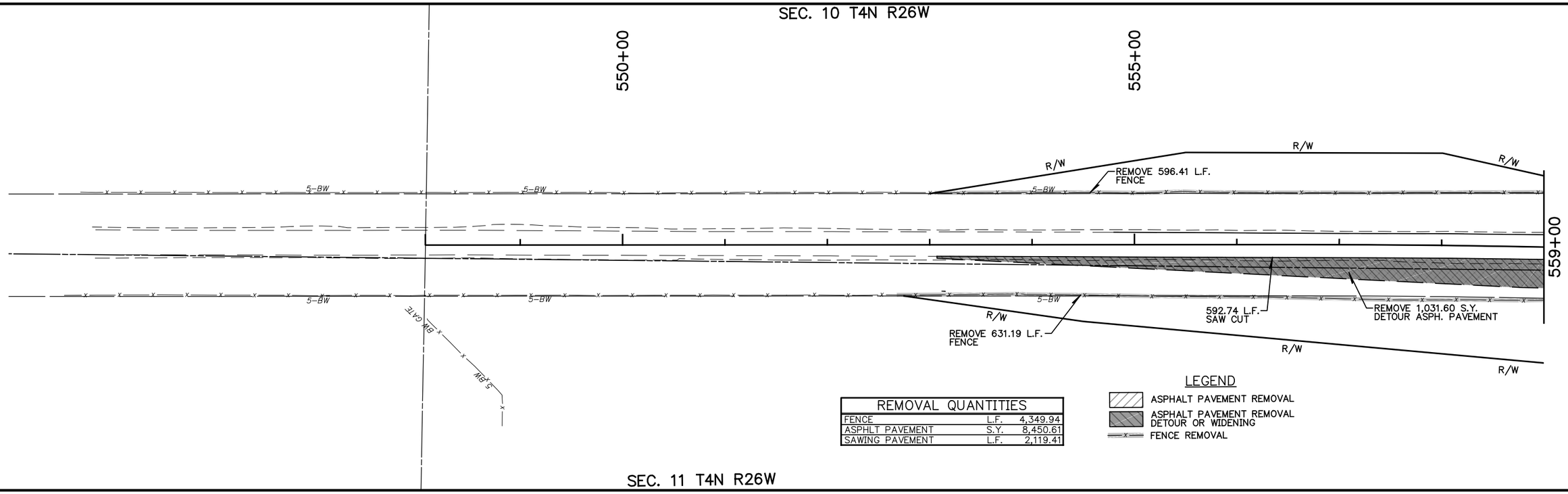
S.H. 30

State Job No. 28768(04) Sheet No. 18

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

SEC. 10 T4N R26W



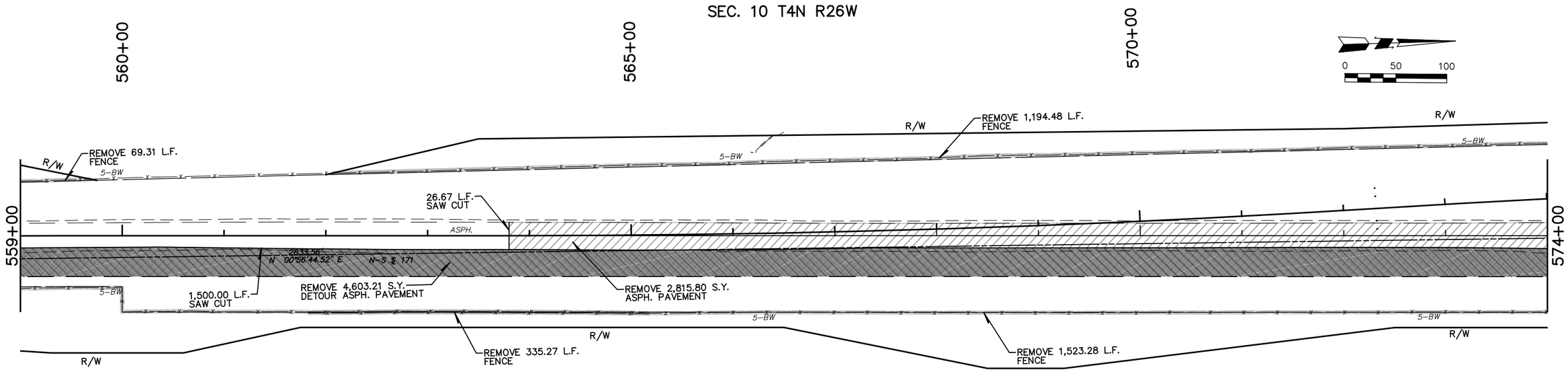
REMOVAL QUANTITIES		
FENCE	L.F.	4,349.94
ASPHLT PAVEMENT	S.Y.	8,450.61
SAWING PAVEMENT	L.F.	2,119.41

LEGEND

- ASPHALT PAVEMENT REMOVAL
- ASPHALT PAVEMENT REMOVAL DETOUR OR WIDENING
- FENCE REMOVAL

SEC. 11 T4N R26W

SEC. 10 T4N R26W



SEC. 11 T4N R26W

REMOVAL SHEET
B.O.P. TO 574+00

State Job No. 28768(04) Sheet No. 19

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

SEC. 3 T4N R26W

SEC. 2 T4N R26W

574+00 575+00 580+00 585+00 589+00

REMOVE 34.27 L.F. FENCE
CONC.
12.00 L.F. SAW CUT
REMOVE 5.05 S.Y. CONC. PAVEMENT
REMOVE 195.82 S.Y. ASPH. PAVEMENT
ASPH.
R/W
5-BW
REMOVE 207.39 L.F. FENCE
REMOVE 972.73 L.F. FENCE
(2) 10' CHAINLINK GATE
REMOVE 131.40 L.F. GUARDRAIL
REMOVE 131.77 L.F. GUARDRAIL
GRAVEL
2639.59'
N-S ℄ 171
N01°47'44.94"E
657.41 L.F. SAW CUT
REMOVE 2,326.65 S.Y. ASPH. PAVEMENT
REMOVE 1,575.10 S.Y. DETOUR ASPH. PAVEMENT
REMOVE 167.18 S.Y. ASPH. PAVEMENT
12.97 L.F. SAW CUT
6' CHAINLINK 3-BW
4-BW
24.00 L.F. SAW CUT
REMOVE 8.81 L.F. FENCE
2654.53'
E-W ℄ 150
S 88°49'37.25" E
6' CHAINLINK 3-BW
2' PIPE GATE
SHED
SINGLE STORY BUILDING
6' WOVEN WIRE 1-BW

REMOVAL QUANTITIES		
FENCE	L.F.	4,603.68
ASPHALT PAVEMENT	S.Y.	9,951.34
GUARDRAIL	L.F.	525.56
SAWING PAVEMENT	L.F.	1,678.38
CONC. PAVEMENT	S.Y.	5.05

LEGEND
- ASPHALT PAVEMENT REMOVAL
- CONCRETE PAVEMENT REMOVAL
- ASPHALT PAVEMENT REMOVAL DETOUR OR WIDENING
- FENCE REMOVAL
- GUARDRAIL REMOVAL

SEC. 3 T4N R26W

SEC. 2 T4N R26W

589+00 590+00 595+00 600+00 604+00

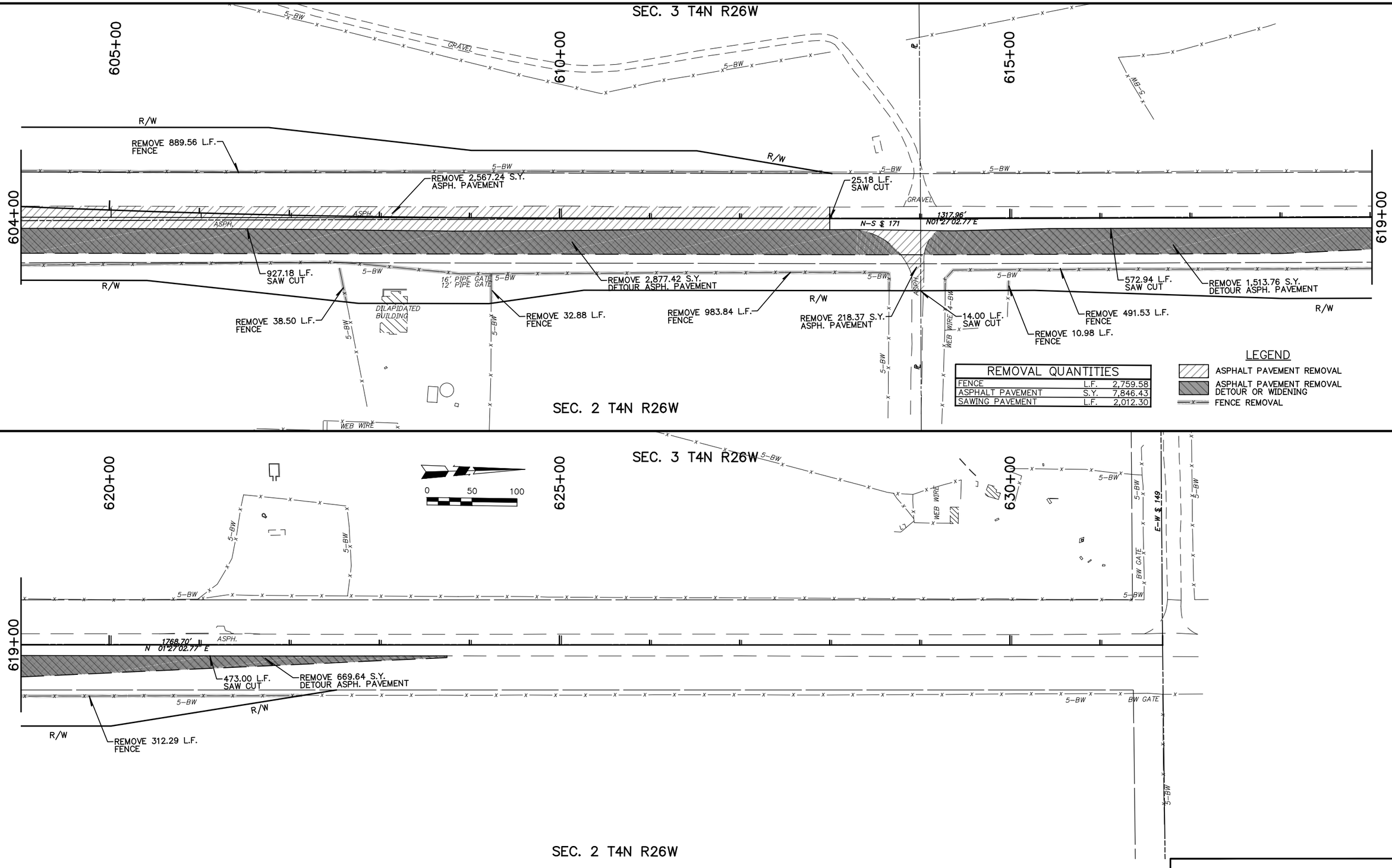
REMOVE 261.29 L.F. FENCE
5-BW
R/W
REMOVE 745.58 L.F. FENCE
REMOVE 131.17 L.F. GUARDRAIL
REMOVE 131.22 L.F. GUARDRAIL
ASPH.
2639.59'
N-S ℄ 171
N01°47'44.94"E
1317.96'
N1°27'02.77"E
REMOVE 2,249.09 S.Y. DETOUR ASPH. PAVEMENT
REMOVE 3,437.50 S.Y. ASPH. PAVEMENT
REMOVE 1,192.91 L.F. FENCE
972.00 L.F. SAW CUT
REMOVE 848.19 L.F. FENCE
REMOVE 332.51 L.F. FENCE
2647.00'
S88°39'43.2"
E-W ℄ 149.5
2641.55'
S 88°35'40.22" E

0 50 100

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

REMOVAL SHEET
574+00 TO 604+00

State Job No. 28768(04) Sheet No. 20



REMOVAL SHEET
604+00 TO E.O.P.

State Job No. 28768(04) Sheet No. 21

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

SUMMARY OF DISTURBED DRAINAGE AREAS

ALIGNMENT	DISTURBED AREA NO.	OUTFLOW LOCATION (STATION)	DISTURBED AREA (STATION TO STATION)	DIRECTION FROM OUTFALL	DESCRIPTION OF AREA	EROSION CONTROL MEASURES	DISTURBED AREA (AC.)
SH 30	D1	566+24.83	STA. 553+07 TO STA. 566+75	S.	ROADWAY AND DITCH RT.	SILT FENCE, SILT DIKE, SOLID SLAB SOD, AND VEGETATIVE MULCHING	1.53
SH 30	D2	566+51.00	STA. 563+30 TO STA. 567+00	E.	ROADWAY AND FORESLOPE LT.	SILT FENCE, SILT DIKE, AND SOLID SLAB SOD	0.56
SH 30	D3	575+75.00	STA. 563+79.97 TO STA. 576+00	S.	MEDIAN DITCH BETWEEN PROPOSED AND EXISTING ROADWAY	SILT DIKE AND VEGETATIVE MULCH	0.60
SH 30	D4	574+71.00	STA. 566+75 TO STA. 574+71	S.	ROADWAY AND DITCH RT.	SILT DIKE, SOLID SLAB SOD, AND VEGETATIVE MULCH	1.48
SH 30	D5	574+34.00	STA. 567+00 TO STA. 574+58	S. & E.	ROADWAY AND DITCH LT.	SILT DIKE AND SOLID SLAB SOD	1.10
SH 30	D6	580+18.00	STA. 574+58 TO STA. 582+26	S. & E.	ROADWAY, DITCH LT., AND SPUR DIKE	SILT FENCE, SILT DIKE, AND SOLID SLAB SOD	1.85
SH 30	D7	582+62.00	STA. 574+71 TO STA. 582+69	S.	ROADWAY AND DITCH RT.	SILT DIKE, SOLID SLAB SOD, AND VEGETATIVE MULCH	1.17
SH 30	D8	581+50.00	STA. 576+00 TO STA. 582+62	S.	MEDIAN DITCH BETWEEN PROPOSED AND EXISTING ROADWAY	SILT DIKE AND VEGETATIVE MULCH	0.50
SH 30	D9	592+76.00	STA. 591+27 TO STA. 609+00	N. & E.	ROADWAY, DITCH LT., AND SPUR DIKE	SILT FENCE, SILT DIKE, AND SOLID SLAB SOD	4.28
SH 30	D10	597+50.00	STA. 592+03 TO STA. 601+00	N. & S.	MEDIAN DITCH BETWEEN PROPOSED AND EXISTING ROADWAY	SILT DIKE AND VEGETATIVE MULCH	0.65
SH 30	D11	N/A	STA. 592+03 TO STA. 609+10	S. & W.	ROADWAY AND DITCH RT.	SILT FENCE, SILT DIKE, SOLID SLAB SOD, AND VEGETATIVE MULCHING	2.58
SH 30	D12	603+38.00	STA. 601+00 TO STA. 613+00	N. & S.	MEDIAN DITCH BETWEEN PROPOSED AND EXISTING ROADWAY	SILT DIKE AND VEGETATIVE MULCH	0.42
SH 30	D13	N/A	STA. 609+00 TO STA. 614+80	E.	ROADWAY AND FORESLOPE LT.	SILT FENCE AND SOLID SLAB SOD	0.60
SH 30	D14	609+10.00	STA. 609+10 TO STA. 613+98	N.	ROADWAY AND DITCH RT.	SILT DIKE, SOLID SLAB SOD, AND VEGETATIVE MULCH	0.58
SH 30	D15	613+98.00	STA. 613+98 TO STA. 623+75	N.	ROADWAY AND DITCH RT.	SILT FENCE, SILT DIKE, SOLID SLAB SOD, AND VEGETATIVE MULCHING	0.87
						TOTAL	18.77

NOTES:

1) SEE SEQUENCE OF CONSTRUCTION NOTES SHEET NO. 5 FOR PLACING SOLID SLAB SODDING.

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

SUMMARY OF DISTURBED DRAINAGE AREAS

State Job No. 28768(04) Sheet No. 22

SEC. 10 T4N R26W

550+00

555+00

559+00

D1

LEGEND

TEMP. SILT DIKE

TEMP. SILT FENCE XXXXX

RIPRAP

DRAINAGE DIRECTION

0 50′ 100′

SEC. 11 T4N R26W

SEC. 10 T4N R26W

560+00

565+00

570+00

559+00

574+00

CONST. 345 L.F. SILT FENCE

CONST. 104 L.F. SILT FENCE

CONST. 510 L.F. SILT FENCE

D1

D2

D3

D4

D5

0 50′ 100′

SEC. 11 T4N R26W

EROSION CONTROL
B.O.P. TO 574+00

State Job No. 28768(04) Sheet No. 23

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

SEC. 3 T4N R26W

575+00

580+00

585+00

CONST. 617 L.F.
SILT FENCE

D5

D6

D3

D8

D4

D7

574+00

589+00

0 50′ 100′

LEGEND

TEMP. SILT DIKE

TEMP. SILT FENCE XXXXX

RIPRAP

DRAINAGE DIRECTION

SEC. 2 T4N R26W

SEC. 3 T4N R26W

590+00

595+00

600+00

CONST. 331 L.F.
SILT FENCE

D9

D10

D11

589+00

604+00

D12

CONST. 1183 L.F.
SILT FENCE

0 50′ 100′

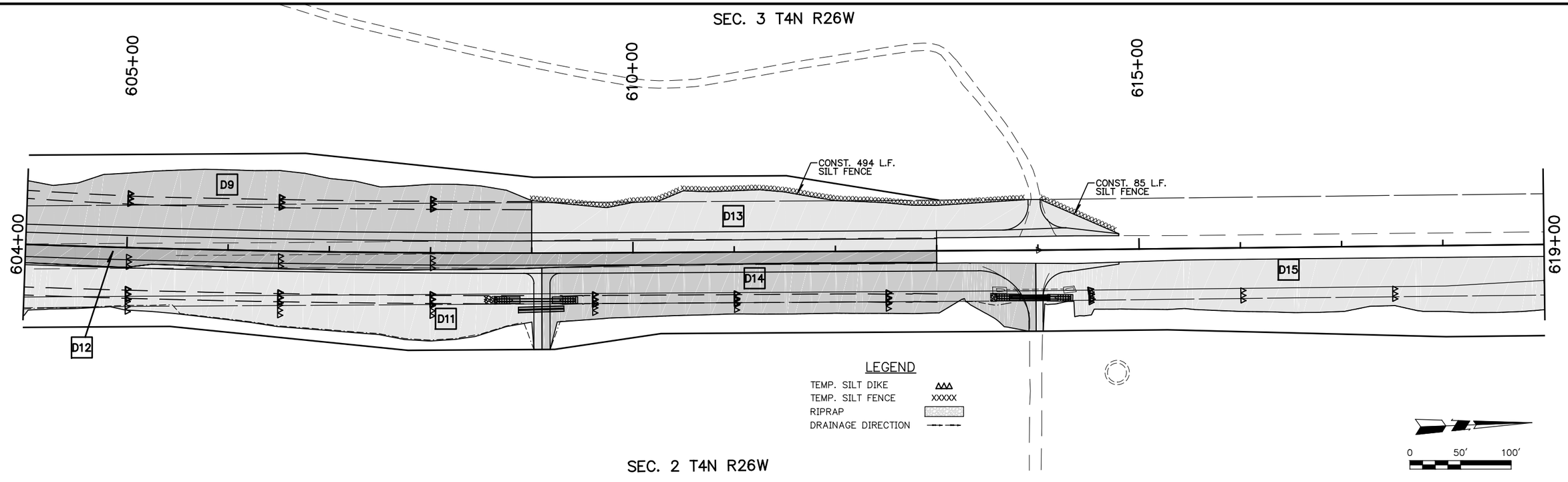
SEC. 2 T4N R26W

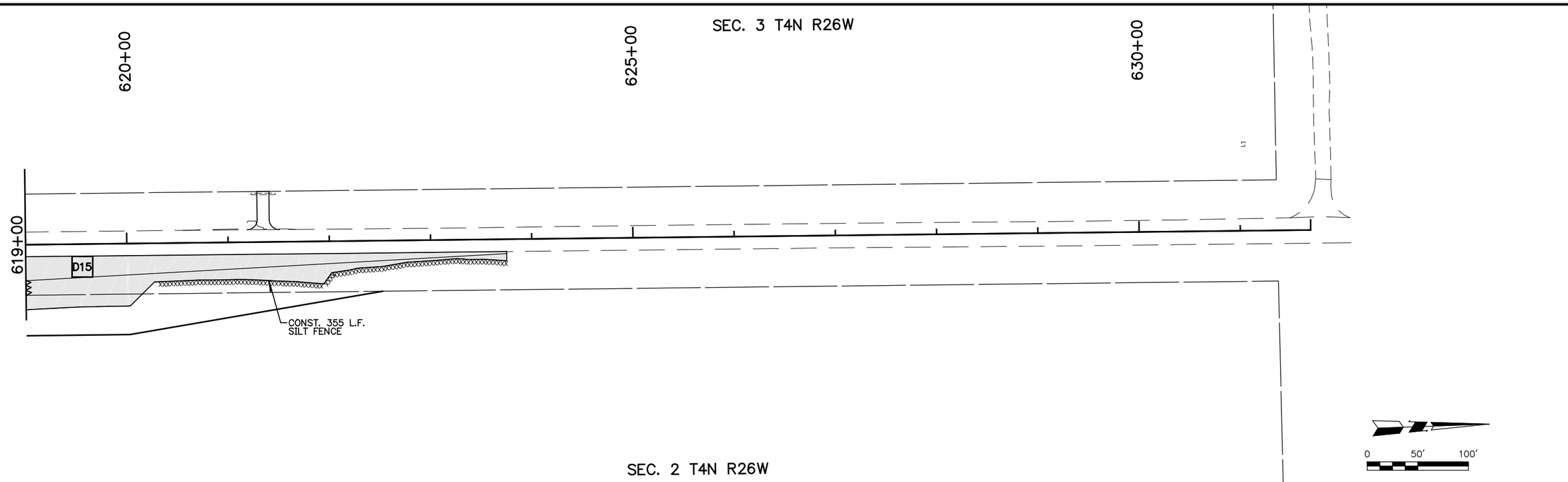
EROSION CONTROL
574+00 TO 604+00

State Job No. 28768(04) Sheet No. 24

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

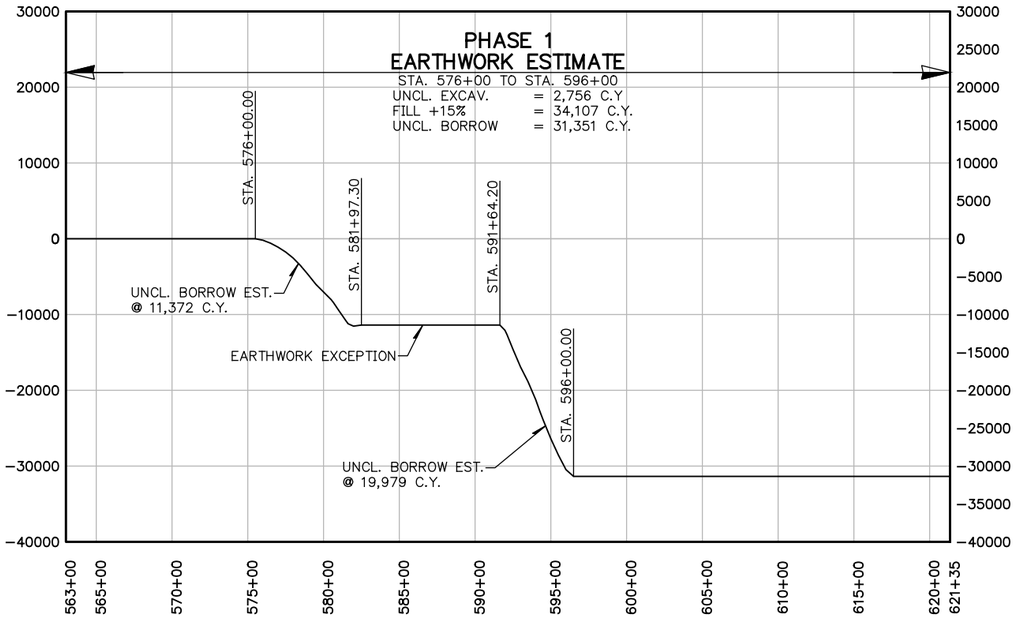




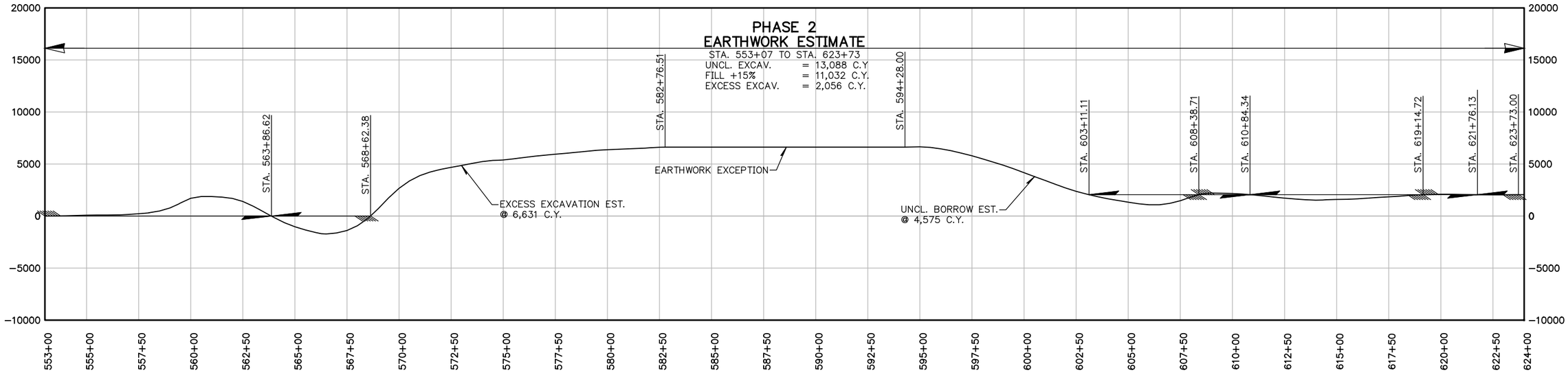
EROSION CONTROL
604+00 TO E.O.P.

State Job No. 28768(04) Sheet No. 25

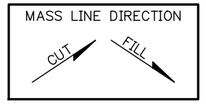
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



PHASE 1 MASS DIAGRAM DOES NOT DEPICT OR INCLUDE CUT/FILL VOLUMES FOR SPUR DIKES AT BRIDGE ABUTMENTS. PRISMOIDAL EARTHWORK VOLUMES FOR SPUR DIKES ARE SHOWN IN SUMMARY OF EARTHWORK ON SHEET 9.



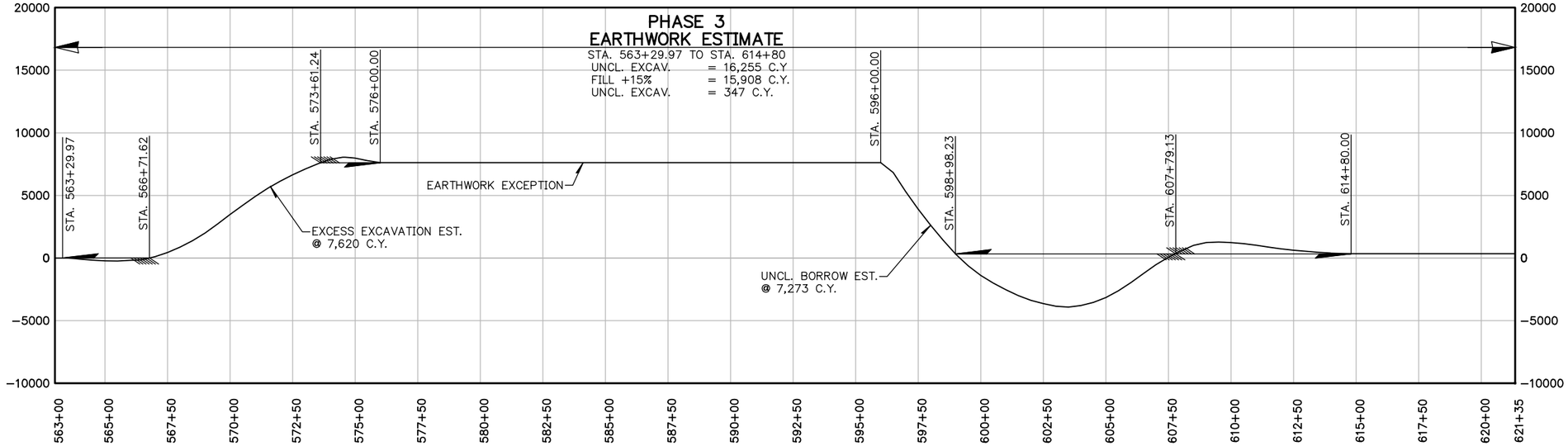
MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTIONS FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

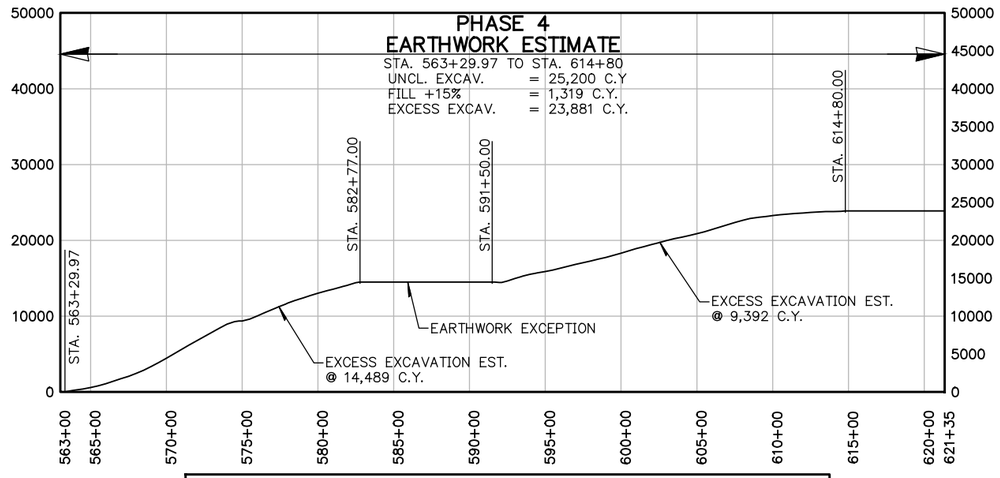


MASS DIAGRAMS

State Job No. 28768(04) Sheet No. 26

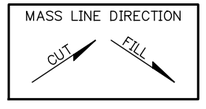
SH 30 OVER SALT FORK RED RIVER
HARMON COUNTY





PHASE 4 MASS DIAGRAM DOES NOT DEPICT OR INCLUDE CUT/FILL VOLUMES FROM STA. 553+07 TO STA. 563+29.97 TOTALING 1036 C.Y. CUT/70 C.Y. FILL AND FROM STA. 614+80 TO STA. 623+75.14 TOTALING 296 C.Y CUT/81 C.Y. FILL. QUANTITIES FOR THESE EXTENTS HAVE BEEN INCLUDED IN THE SUMMARY OF EARTHWORK ON SHEET 9.

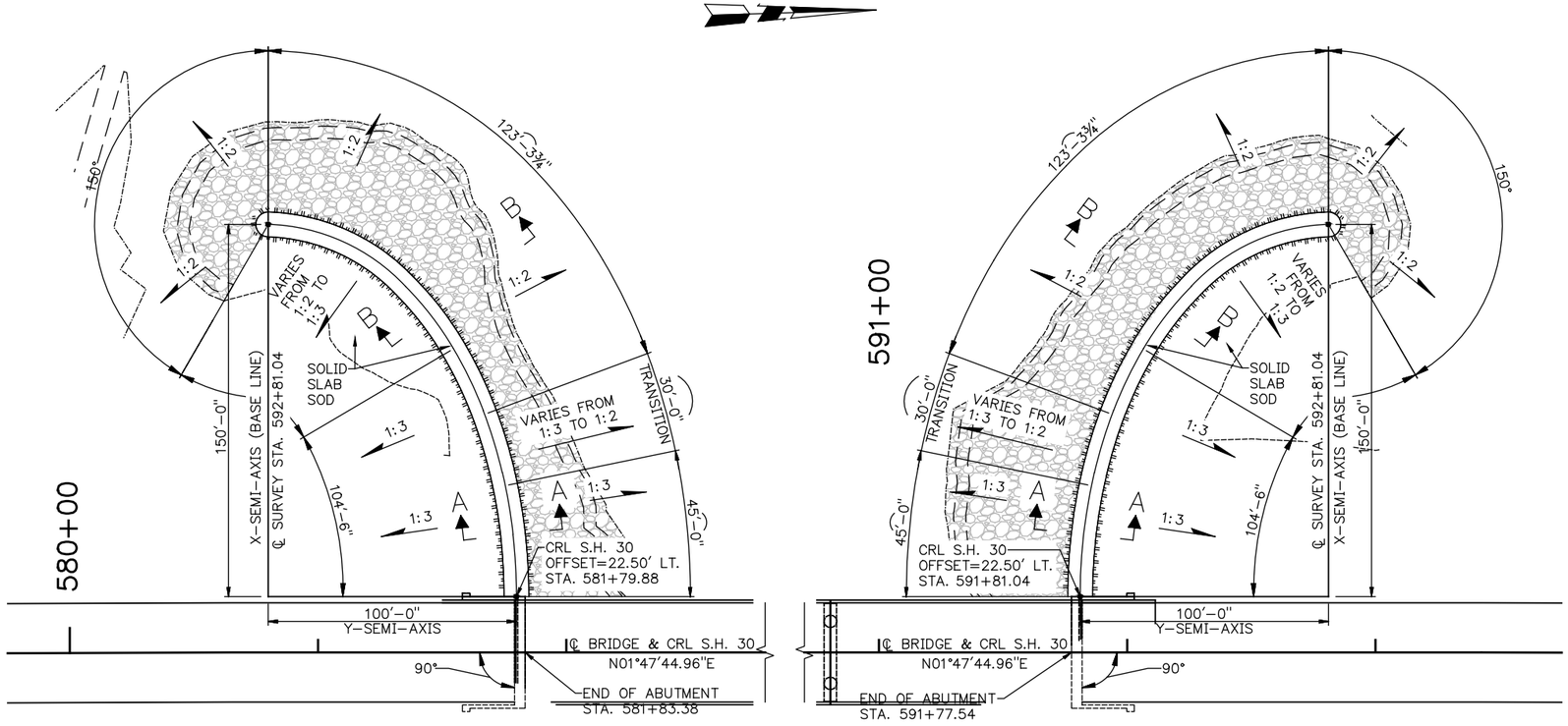
MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTIONS FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.



MASS DIAGRAMS

State Job No. 28768(04) Sheet No. 27

SH 30 OVER SALT FORK RED RIVER
HARMON COUNTY

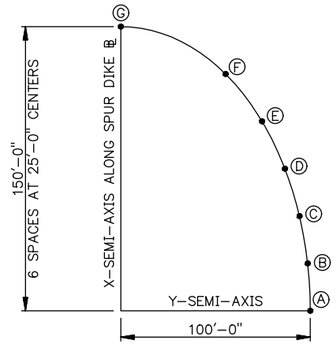


SPUR DIKE PLAN AT SOUTH ABUTMENT

NOTE: BRIDGE SUPERSTRUCTURE NOT SHOWN FOR CLARITY
SCALE 1"=360'

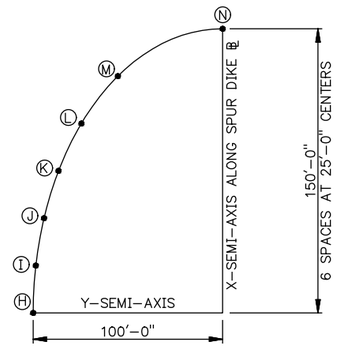
SPUR DIKE PLAN AT NORTH ABUTMENT

NOTE: BRIDGE SUPERSTRUCTURE NOT SHOWN FOR CLARITY
SCALE 1"=360'



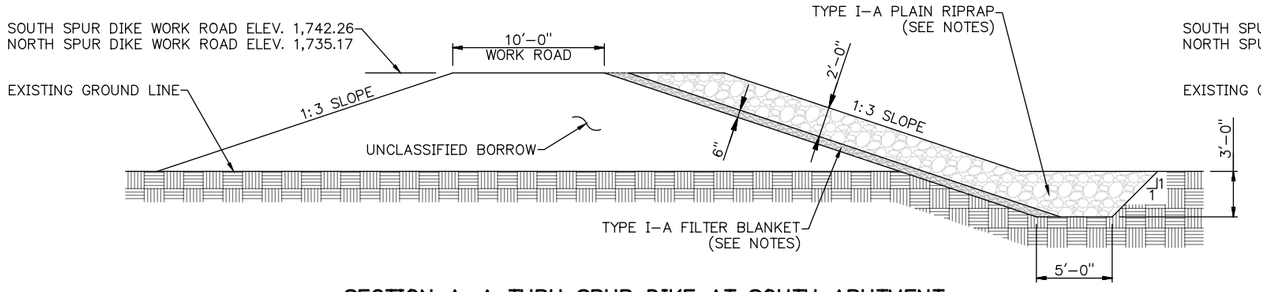
SPUR DIKE AT SOUTH ABUTMENT ORDINATES FROM BASE LINE		
POINT	X-AXIS (FEET)	Y-AXIS (FEET)
A	0.00	100.00
B	25.00	98.60
C	50.00	94.28
D	75.00	86.60
E	100.00	74.53
F	125.00	55.28
G	150.00	0.00

SPUR DIKE LAYOUT AT SOUTH ABUTMENT



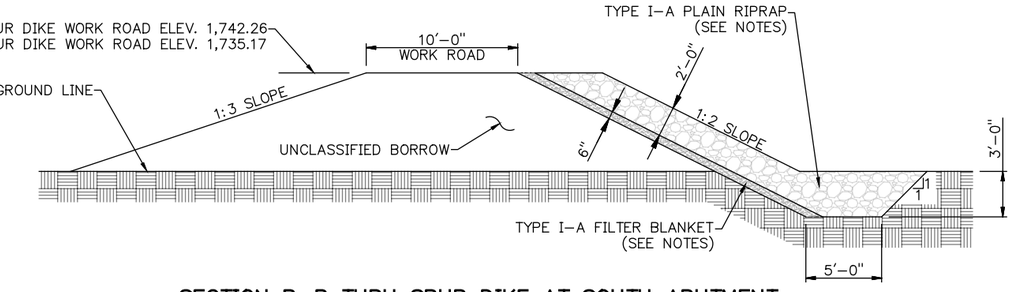
SPUR DIKE AT NORTH ABUTMENT ORDINATES FROM BASE LINE		
POINT	X-AXIS (FEET)	Y-AXIS (FEET)
H	0.00	100.00
I	25.00	98.60
J	50.00	94.28
K	75.00	86.60
L	100.00	74.53
M	125.00	55.28
N	150.00	0.00

SPUR DIKE LAYOUT AT NORTH ABUTMENT



SECTION A–A THRU SPUR DIKE AT SOUTH ABUTMENT

NOTE: MIRROR FOR SPUR DIKE AT NORTH ABUTMENT
N.T.S.



SECTION B–B THRU SPUR DIKE AT SOUTH ABUTMENT

NOTE: MIRROR FOR SPUR DIKE AT NORTH ABUTMENT
N.T.S.

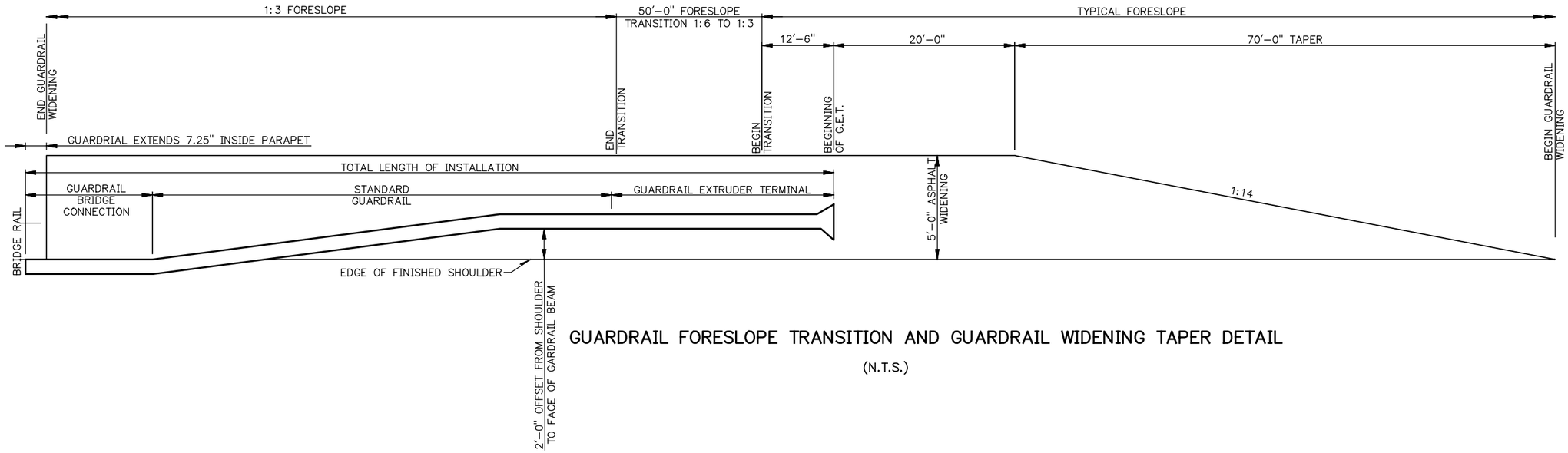
NOTE: APPROXIMATELY 4,687.00 C.Y. OF "UNCLASSIFIED BORROW" MATERIAL IS REQUIRED FOR CONSTRUCTING THE SPUR DIKES. ALL COSTS OF BORROW MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE SPUR DIKE AS SHOWN SHALL BE INCLUDED IN THE ROADWAY PAY ITEM FOR "UNCLASSIFIED BORROW".

NOTE: SEE BRIDGE SHEET NO. 33 FOR "TYPE I-A PLAIN RIPRAP" AND "TYPE I-A FILTER BLANKET" QUANTITIES.

SPUR DIKE DETAILS

State Job No. 28768(04) Sheet No. 28

HARMON COUNTY S.H. 30 BRIDGE & APPROACHES



GUARDRAIL FORESLOPE TRANSITION AND GUARDRAIL WIDENING TAPER DETAIL

(N.T.S.)

SUGGESTED SEQUENCE OF CONSTRUCTION

1. NORMAL TRAFFIC ON SH-30

A. CONSTRUCT NEW BRIDGE.

B. CONSTRUCT FULL SECTION SH-30 PAVING AND DRAINAGE (C.R.L. SH-30 STA. 576+00 TO STA. 596+00).

C. CONSTRUCT SPUR DIKES AT NORTH AND SOUTH BRIDGE ABUTMENTS.

D. CONSTRUCT TEMPORARY CROSS DRAIN UNDER EXISTING PAVEMENT USING FLAG MEN.

2. SHIFT TRAFFIC WEST TO EDGE OF SH-30 (ONE LANE EACH DIRECTION)

A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF EXISTING PAVEMENT.

B. CONSTRUCT TEMP. CROSS DRAINS USING FLAGMEN.

C. CONSTRUCT TEMP. ASPHALT WIDENING (C.L. SURV. SH-30 STA. 553+07 TO STA. 581+82 AND STA. 594+28 TO STA. 623+73).

3. SHIFT TRAFFIC EAST TO TEMP. ASPHALT WIDENING OF SH-30 (ONE LANE EACH DIRECTION)

A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG WEST EDGE OF DETOURED SOUTHBOUND LANE.

B. CONSTRUCT NEW SH-30 PAVING, WEST SHOULDER, SLOPES AND DRAINAGE, TYING TO EXISTING PAVEMENT (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00).

C. CONSTRUCT E1500 ROAD.

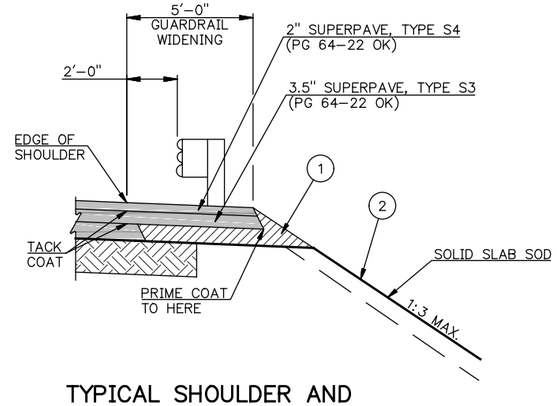
4. SHIFT TRAFFIC WEST TO NEW BRIDGE AND PAVING OF SH-30 (ONE LANE EACH DIRECTION)

A. RELOCATE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF MAINLINE.

B. REMOVE EXISTING BRIDGE.

C. REMOVE EXIST. ROADWAY AND WIDENING.

D. FINISH CONSTRUCTION OF REMAINDER OF MAIN LINE SH-30 RT. SHOULDER PAVING, DRAINAGE, SLOPES AND DRIVES (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00).



TYPICAL SHOULDER AND GUARDRAIL PLACEMENT

S.H. 30

STA. 578+72.11 TO STA. 581+50.23 LT. & RT.
STA. 592+10.69 TO STA. 594+88.82 LT. & RT.

GUARDRAIL WIDENING DETAIL

State Job No. 28768(04) Sheet No. 29

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

SEC. 3 T4N
R26W

TIE POINT: CRL STA. 581+00.00 = 52.29' LT. OF ℄ SURVEY STA. 580+98.90

TOE OF SLOPE

BEGIN APPR. SLAB STA. 581+49.63

END APPR. SLAB & BEGIN BRIDGE STA. 581+79.63

SEE ROADWAY PLANS FOR SPUR DIKE CONSTRUCTION DETAILS.

(2)

5–BW FENCE

PRES. R/W

TREE LINE (TYP.)

℄ PIER 1 STA. 582+80.46

℄ PIER 2 STA. 583+80.46

℄ PIER 3 STA. 584+80.46

℄ PIER 4 STA. 585+80.46

℄ PIER 5 STA. 586+80.46

R/W

EDGE OF WATER

SALT FORK OF THE RED RIVER

B–1

B–2

B–3

B–4

B–5

B–6

90° (TYP.)

CRL S.H. 30

N01°47'44.96"E

EXIST. CONCRETE PARAPET REMOVE

EXIST. CHAIN LINK GATES REMOVE

(1) APPROX. LOCATION OF 1933/1936 BRIDGE SUBSTRUCTURE UNIT. SEE "OBSTRUCTIONS" NOTE, SHEET NO. 6.

40'–0" CLR. RDWY.

20'–0"

20'–0"

42'–2" OUT-TO-OUT

SLOPE 2%

SLOPE 2%

1'–1" CONC. TRAFFIC RAIL (TR4)

1'–1" CONC. TRAFFIC RAIL (TR4)

6" PERFORATED PIPE UNDERDRAIN

6" NON–PERFORATED PIPE UNDERDRAIN

5'–0" GUARDRAIL WIDENING (TYP.)

90°

EXISTING ASPHALT PAVEMENT

℄ SURVEY S.H. 30

℄ NS 171

N01°43'11.05"E

N01°47'44.94"E

EXIST. BRIDGE

LIMITS OF EXIST. RIPRAP (LEAVE IN PLACE)

SEE SHEET NO. 59 FOR SLOPE DRAIN AND SPLASH BASIN DETAILS.

MATCH LINE STA. 587+00 (SEE SHEET NO. 31)

℄ SURVEY STA. 580+98.90

TOE OF SLOPE

℄ SURVEY STA. +60.56 BEG. EXIST. BRIDGE

EXIST. GRAVEL ROAD

℄ SURVEY +42.60 56.00' RT.

PRES. R/W

PRES. R/W

NOTES: ALL STATIONING FOLLOWS CRL S.H. 30, UNLESS NOTED OTHERWISE.

SEE SHEET NO. 32 FOR DESIGN AND FOUNDATION DATA, FINISH GRADE DATA, HYDRAULIC DATA, SUMMARY OF QUANTITIES, EXISTING BRIDGE NOTE AND INDEX OF SHEETS.

FOR RIPRAP DETAILS, SEE SHEET NOS. 33 AND 34.

FOR TRAFFIC RAIL POST AND OPENING SPACINGS, SEE STD. B40–C–TR4–0–1.

SEE ROADWAY PLANS FOR PRES. AND NEW R/W.

PLAN
SCALE 1"=20'

SEC. 2 T4N
R26W

NOTE: PIER AND CONTRACTION SCOUR SHOWN FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR CONSTRUCTION.

BM #4, SQUARE BOLT ON SE ABUTMENT WALL, 18.87' RT. ℄ SURVEY STA. 582+61.02 ELEV.= 1747.64

BEG. BRIDGE STA. 581+79.63 F.G. ELEV. 1750.09

℄ PIER 1 STA. 582+80.46 F.G. ELEV. 1749.38

(2) SEE ROADWAY PLAN AND PROFILE SHEETS FOR GUARD RAIL REQUIREMENTS (TYP.).

℄ PIER 2 STA. 583+80.46 F.G. ELEV. 1748.67

℄ PIER 3 STA. 584+80.46 F.G. ELEV. 1747.96

℄ PIER 4 STA. 585+80.46 F.G. ELEV. 1747.25

BM #5, DOME TOP BOLT ON NE ABUTMENT WALL, 17.82' RT. ℄ SURVEY STA. 592+05.71 ELEV.= 1741.31

℄ PIER 5 STA. 586+80.46 F.G. ELEV. 1746.54

BRIDGE LENGTH = 1001'–8"

SPAN 1 = 100'–10" | SPAN 2 = 100'–0" | SPAN 3 = 100'–0" | SPAN 4 = 100'–0" | SPAN 5 = 100'–0" | SPAN 6 = 100'–0"

BR. SEAT ELEV. 1743.75

S.G. STA. 581+63.24
S.G. ELEV. 1749.45

ELEV. 1736.00

TOP OF RAIL

TOP OF SLAB

FINISH GRADE

−0.71%

FIX. EXP. EXP. CONT. EXP. CONT. EXP. FIX. FIX. EXP. EXP. FIX. FIX.

(4)

2–HP10x42x38' PILES (1 EA. WING)

3–HP12x53x34' PILES

4–HP12x53x34' PILES (BATTERED 2:12)

1736.1

1715.5

1683.5

B–1

24" TYPE I–A PLAIN RIPRAP

6" TYPE I–A FILTER BLANKET

INTERPRETED FOUNDATION LINE (3)

72" ø DRILLED SHAFTS (TYP.)

BOTTOM OF DRILLED SHAFTS ELEV. 1704.00

TOP OF PIER ELEV. 1743.04

3'–0"

TOP OF DRILLED SHAFTS ELEV. 1733.00

1732.5

1719.0

B–2

1687.5

PIER SCOUR ELEV. 1719.00

CONTRACTION SCOUR LINE

TOP OF DRILLED SHAFTS ELEV. 1724.50

1724.0

1704.0

PIER SCOUR ELEV. 1704.00

BOTTOM OF DRILLED SHAFTS ELEV. 1688.50

1671.5

B–3

TOP OF PIER ELEV. 1742.33

PIER SCOUR (TYP.)

Q2 NORMAL WATER SURFACE ELEV. = 1727.70

TOP OF DRILLED SHAFTS ELEV. 1724.00

1724.3

PIER SCOUR ELEV. 1701.26

1694.0

B–4

BOTTOM OF DRILLED SHAFTS ELEV. 1679.00

1662.0

TOP OF PIER ELEV. 1741.62

EXIST. PROFILE ALONG CRL

TOP OF DRILLED SHAFTS ELEV. 1718.00

1717.8

PIER SCOUR ELEV. 1698.0

1698.0

B–5

BOTTOM OF DRILLED SHAFTS ELEV. 1683.00

1666.5

TOP OF PIER ELEV. 1740.91

TOP OF PIER ELEV. 1740.20

1716.9

TOP OF DRILLED SHAFTS ELEV. 1716.00

B–6

PIER SCOUR ELEV. 1700.0

1701.0

BOTTOM OF DRILLED SHAFTS ELEV. 1686.00

1669.0

MATCH LINE STA. 587+00 (SEE SHEET NO. 31)

586+00

587+00

581+00

582+00

583+00

584+00

585+00

ELEVATION
SCALE 1"=20'

(3) FOR ESTIMATION PURPOSES ONLY.

(4) UNCLASSIFIED EXCAVATION, SEE SHEET NO. 9 FOR QUANTITIES.

CONST. (10–100') PRESTRESSED CONCRETE BEAM SPANS; 40'–0" CLR. RDWY. W/ CONC. TRAFFIC RAILS (TR4) SKEWED 0°

GENERAL PLAN AND ELEVATION (BRIDGE "A")

(SHEET 1 OF 3)

C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 30

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

MATCH LINE STA. 587+00
(SEE SHEET NO. 30)

SEC. 3 T4N
R26W

SEC. 2 T4N
R26W

PLAN
SCALE 1"=20'

EDGE OF WATER (TYP.)

PROPERTY LINE

℄ SURVEY +60.38
101.71' LT.

℄ PIER 6
STA. 587+80.46

℄ PIER 7
STA. 588+80.46

℄ PIER 8
STA. 589+80.46

℄ SURVEY +95.72
101.64' LT.

℄ PIER 9
STA. 590+80.46

R/W

TREE LINE (TYP.)

PRES. R/W

(1) APPROX. LOCATION OF 1933/1936 BRIDGE SUBSTRUCTURE UNIT. SEE "OBSTRUCTIONS" NOTE, SHEET NO. 6.

B-7 B-8 B-9 B-10 B-11

CRL S.H. 30

N01°47'44.96"E

40'-0" CLR. RDWY.

20'-0"

20'-0"

42'-2" OUT-TO-OUT

1'-1" CONC. TRAFFIC RAIL (TR4)

SEE ROADWAY PLANS FOR SPUR DIKE CONSTRUCTION DETAILS.

END BRIDGE & BEGIN APPR. SLAB
STA. 591+81.29

℄ SURVEY +07.47
93.88' LT.

END APPR. SLAB
STA. 592+11.29

SEE ROADWAY PLAN AND PROFILE SHEETS FOR GUARD RAIL REQUIREMENTS (TYP.).

TOE OF SLOPE

TIE POINT:
CRL STA. 593+00.00 =
50.70' LT. OF ℄ SURVEY
STA. 592+98.90

5-BW FENCE

SLOPE 2%

90° (TYP.)

6" PERFORATED PIPE UNDERDRAIN

6" NON-PERFORATED PIPE UNDERDRAIN

5'-0" GUARDRAIL WIDENING (TYP.)

EXISTING ASPHALT PAVEMENT

℄ SURVEY S.H. 30

℄ NS 171

EXIST. BRIDGE

N01°43'11.05"E

N01°47'44.94"E

℄ SURVEY STA. 587+31.59
~℄ EXIST. 13-SPAN
STEEL I-BEAM BRIDGE
(1-40' SPAN AND
6-DOUBLE 75' CONT. SPANS)
REMOVE FOLLOWING
NEW CONST.

℄ SURVEY +61.34
55.64' RT.

PROPERTY LINE

PRES. R/W

℄ SURVEY STA. 592+98.90 =
℄ SURVEY +00.00
54.00' RT.

℄ SURVEY +01.75
END EXIST. BRIDGE

NOTE: SEE SHEET NO. 59 FOR SLOPE DRAIN AND SPLASH BASIN DETAILS.

NOTE: PIER AND CONTRACTION SCOUR SHOWN FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR CONSTRUCTION.

NOTES:

ALL STATIONING FOLLOWS CRL S.H. 30, UNLESS NOTED OTHERWISE.

SEE SHEET NO. 32 FOR DESIGN AND FOUNDATION DATA, FINISH GRADE DATA, HYDRAULIC DATA, SUMMARY OF QUANTITIES, EXISTING BRIDGE NOTE AND INDEX OF SHEETS.

FOR RIPRAP DETAILS, SEE SHEET NOS. 33 AND 34.

FOR TRAFFIC RAIL POST AND OPENING SPACINGS, SEE STD. B40-C-TR4-0-1.

SEE ROADWAY PLANS FOR PRES. AND NEW R/W.

℄ PIER 6
STA. 587+80.46
F.G. ELEV. 1745.83

℄ PIER 7
STA. 588+80.46
F.G. ELEV. 1745.12

℄ PIER 8
STA. 589+80.46
F.G. ELEV. 1744.41

℄ PIER 9
STA. 590+80.46
F.G. ELEV. 1743.70

END BRIDGE
STA. 591+81.29
F.G. ELEV. 1742.98

CONST. (10-100') PRESTRESSED CONCRETE BEAM SPANS;
40'-0" CLR. RDWY. W/ CONC. TRAFFIC RAILS (TR4) SKEWED 0°

BM #4, SQUARE BOLT ON SE ABUTMENT WALL, 18.87' RT.
℄ SURVEY STA. 582+61.02
ELEV.= 1747.64

BM #5, DOME TOP BOLT ON NE ABUTMENT WALL, 17.82' RT.
℄ SURVEY STA. 592+05.71
ELEV.= 1741.31

BRIDGE LENGTH = 1001'-8"

SPAN 6 = 100'-0" SPAN 7 = 100'-0" SPAN 8 = 100'-0" SPAN 9 = 100'-0" SPAN 10 = 100'-10"

TOP OF RAIL TOP OF SLAB FINISH GRADE

EXP. EXP. FIX. FIX. CONT. EXP. CONT. EXP. EXP. EXP. FIX.

Q2 NORMAL WATER SURFACE ELEV. = 1727.70

TOP OF PIER ELEV. 1739.49 TOP OF PIER ELEV. 1738.78 TOP OF PIER ELEV. 1738.07 TOP OF PIER ELEV. 1737.36

TOP OF DRILLED SHAFTS ELEV. 1719.00 TOP OF DRILLED SHAFTS ELEV. 1719.00

TOP OF DRILLED SHAFTS ELEV. 1718.00

72" ø DRILLED SHAFTS (TYP.)

1717.7 1719.6 1718.7 1724.9

INTERPRETED FOUNDATION LINE (2)

EXIST. PROFILE ALONG CRL

PIER SCOUR (TYP.)

TOP OF DRILLED SHAFTS ELEV. 1725.00

CONTRACTION SCOUR LINE

PIER SCOUR ELEV. 1695.26 PIER SCOUR ELEV. 1696.26 PIER SCOUR ELEV. 1696.26 PIER SCOUR ELEV. 1702.26

1693.0 1666.0 1663.0 1655.0

1662.5 1634.0 1631.0 1623.0

BOTTOM OF DRILLED SHAFTS ELEV. 1678.00 BOTTOM OF DRILLED SHAFTS ELEV. 1651.00 BOTTOM OF DRILLED SHAFTS ELEV. 1648.00 BOTTOM OF DRILLED SHAFTS ELEV. 1640.00

(2) FOR ESTIMATION PURPOSES ONLY.

BR. SEAT ELEV. 1736.66

S.G. STA. 591+96.93
S.G. ELEV. 1742.11

24" TYPE I-A PLAIN RIPRAP ELEV. 1726.00

3'-0" (3) 3 FIX. 1 3 1

1731.1

-0.71%

2-HP10x42x99' PILES (1 EA. WING)

B-11

6" TYPE I-A FILTER BLANKET

4-HP12x53x96' PILES (BATTERED 2:12)

3-HP12x53x95' PILES

MATCH LINES

1645.0
1612.0

(3) UNCLASSIFIED EXCAVATION, SEE SHEET NO. 9 FOR QUANTITIES.

1770 1760 1750 1740 1730 1720 1710 1700 1690 1680 1660 1650 1620

587+00 588+00 589+00 590+00 591+00 592+00

ELEVATION
SCALE 1"=20'

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

GENERAL PLAN AND ELEVATION (BRIDGE "A")

(SHEET 2 OF 3)

C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 31

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN DATA

CLASS "AA" CONCRETE	F'c	= 4,000 PSI
CLASS "A" CONCRETE	F'c	= 3,000 PSI
REINFORCING STEEL (Gr. 60)	Fy	= 60,000 PSI
STRUCTURAL STEEL AASHTO M270 (Gr. 50W)	Fy	= 50,000 PSI
STAINLESS STEEL A240 (TYPE 316)	Fy	= 30,000 PSI

LOADING: HL–93 OR OKLAHOMA OVERLOAD TRUCK
20 PSF FUTURE WEARING SURFACE

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION, WITH 2016 INTERIM REVISIONS.
ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.
ANSI/AWS D1.6 STRUCTURAL WELDING CODE – STAINLESS STEEL.

LFD OPERATING RATING: HS 60.41

FOUNDATION DATA

ABUTMENTS (HP12x53 PILING):

(1) MAXIMUM FACTORED PILE REACTION = 103.0 TONS/PILE

INDEX OF SHEETS (BRIDGE "A")

THE FOLLOWING STANDARDS SHALL BE REQUIRED:

TR4–2–00E
EJ–SQ–04E
EJ–DTL–02E
HP1–2–01E
B40–C–AS–03E
B40–C–TR4–0–1–01E
B40–C–TR4–0–2–01E
LECS–4–1
PUD–3–2

SUMMARY OF QUANTITIES - BRIDGE "A"

	DESCRIPTION	UNIT	ABUTS.	PIERS	SUPSTR.	APPR. SLABS	TOTAL
	SUBSTRUCTURE EXCAVATION COMMON	CY	202.00				202.00
	CLSM BACKFILL	CY	188.00				188.00
	PRESTRESSED CONCRETE BEAMS (TYPE IV)	LF			4,983.30		4,983.30
	APPROACH SLAB	SY				281.20	281.20
	SAW-CUT GROOVING	SY			4,452.00	266.60	4,718.60
	SEALED EXPANSION JOINT	LF			172.80		172.80
	CONCRETE RAIL (TR4)	LF			2,019.40	120.00	2,139.40
	STRUCTURAL STEEL	LB			4,500.00		4,500.00
	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA			40.00		40.00
①	STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA			60.00		60.00
	CLASS AA CONCRETE	CY			1,144.90		1,144.90
	CLASS A CONCRETE	CY	96.80	511.00			607.80
	CLASS C CONCRETE	CY					23.10
	REINFORCING STEEL	LB		4,970.00			4,970.00
	EPOXY COATED REINFORCING STEEL	LB	13,120.00	107,700.00	302,570.00		423,390.00
	CLASS B BRIDGE DECK REPAIR	SY					75.00
	CLASS C BRIDGE DECK REPAIR	SY					25.00
	PILES, FURNISHED (HP10x42)	LF	274.00				274.00
	PILES, FURNISHED (HP12x53)	LF	907.00				907.00
	PILES, DRIVEN (HP10x42)	LF	274.00				274.00
	PILES, DRIVEN (HP12x53)	LF	907.00				907.00
	(PL) PILOT HOLES	LF	196.00				196.00
	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA	1.00				1.00
	WATER REPELLENT (VISUALLY INSPECTED)	SY	140.00	675.00	3,717.00	56.00	4,588.00
	DRILLED SHAFTS 72" DIAMETER	LF		878.00			878.00
	CROSSHOLE SONIC LOGGING	EA		4.00			4.00
	SEALER CRACK PREPARATION	LF			204.00		204.00
	SEALER RESIN	GAL			3.00		3.00
	TYPE I-A PLAIN RIPRAP	TON	3,590.00				3,590.00
	TYPE I-A FILTER BLANKET	TON	680.00				680.00
	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	84.00				84.00
	6" NON-PERF. PIPE UNDERDRAIN RND.	LF	80.00				80.00
	REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM					1.00

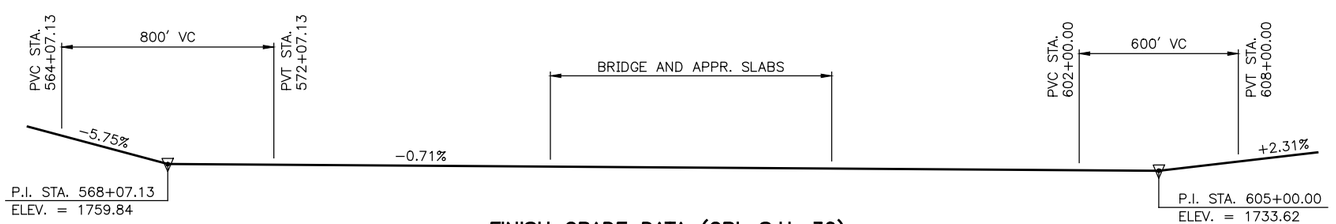
① BONDING BETWEEN THE ANCHOR PLATE AND BEARING PAD IS REQUIRED ON ALL EXPANSION BEARINGS AT EXPANSION PIERS. BONDING IS NOT REQUIRED ON FIXED BEARINGS OR EXPANSION BEARINGS AT CONTINUOUS EXPANSION PIERS.

PIERS (72" DIAMETER DRILLED SHAFTS)		PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9
FACTORED REACTION (TONS/SHAFT)	=	701.4	734.3	757.7	741.0	730.1	751.6	822.7	829.3	854.1
NOMINAL UNIT BEARING RESISTANCE (TSF)	=	60.0	36.7	60.0	60.0	60.0	60.0	43.1	60.0	60.0
BEARING RESISTANCE FACTOR	=	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
FACTORED BEARING RESISTANCE (TONS/SHAFT)	=	1187.5	726.1	1187.5	1187.5	1187.5	1187.5	852.2	1187.5	1187.5
NOMINAL UNIT FRICTION RESISTANCE (TSF)	=	9.0	4.0	9.0	9.0	9.0	9.0	5.1	9.0	9.0
FRICTION RESISTANCE FACTOR	=	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
FACTORED FRICTION RESISTANCE (TONS/SHAFT)	=	687.1	322.3	687.1	687.1	687.1	687.1	385.6	687.1	687.1
DEPTH OF ROCK NEGLECTED FOR FRICTION (FT.)	=	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
MINIMUM DEPTH INTO ROCK (FT.)	=	15.0	15.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0
TOTAL FACTORED RESISTANCE (TONS/SHAFT)	=	1874.6	1048.4	1874.6	1874.6	1874.6	1874.6	1237.8	1874.6	1874.6

(1) ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL. PILING SHALL BE DRIVEN TO POINT BEARING ON SOLID FOUNDATION MATERIAL AT THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF THE FACTORED PILE CAPACITY IS NOT OBTAINED AT THIS ELEVATION, DRIVING SHALL CONTINUE UNTIL THE FACTORED PILE CAPACITY IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.

EXISTING BRIDGE NOTE:

THE EXISTING BRIDGE SHALL BE REMOVED IN ACCORDANCE WITH THE NOTES ON SHEET NO. 6.



FINISH GRADE DATA (CRL S.H. 30)

HYDRAULIC DATA

TOTAL D.A.	=	1208.70 sq. mi.	Q25	=	129703 cfs
CONTROLLED D.A.	=	0.00 sq. mi.	V25	=	9.30 fps
EFFECTIVE D.A.	=	1208.70 sq. mi.	Q25 CHW	=	1739.76 ft.
Q2	=	17076 cfs	Q50	=	181171 cfs
V2	=	4.86 fps	V50	=	10.04 fps
Q2 CHW	=	1727.70 ft.	Q50 CHW	=	1742.96 ft.
Q5	=	46249 cfs	Q100	=	249944 cfs
V5	=	6.37 fps	V100	=	11.10 fps
Q5 CHW	=	1732.58 ft.	Q100 CHW	=	1746.10 ft.
Q0.T. = Q9.7	=	75200 cfs	Q500	=	486789 cfs
V0.T.	=	7.83 fps	V500	=	11.77 fps
O.T. CHW	=	1735.70 ft.	Q500 CHW	=	1754.27 ft.

		Q0.T. = Q9.7	Q100
O.T. ELEV. = 1735.25 ft.	MAX. CALC. TOTAL SCOUR =	19.83 ft.	22.74 ft.
	CONTRACTION SCOUR =	7.37 ft.	8.95 ft.
Q10 = 76801 cfs	PIER SCOUR =	12.46 ft.	13.79 ft.
V10 = 7.90 fps			
Q10 CHW = 1735.86 ft.			

CONST. (10–100') PRESTRESSED CONCRETE BEAM SPANS;
40'–0" CLR. RDWY. W/ CONC. TRAFFIC RAILS (TR4) SKEWED 0°

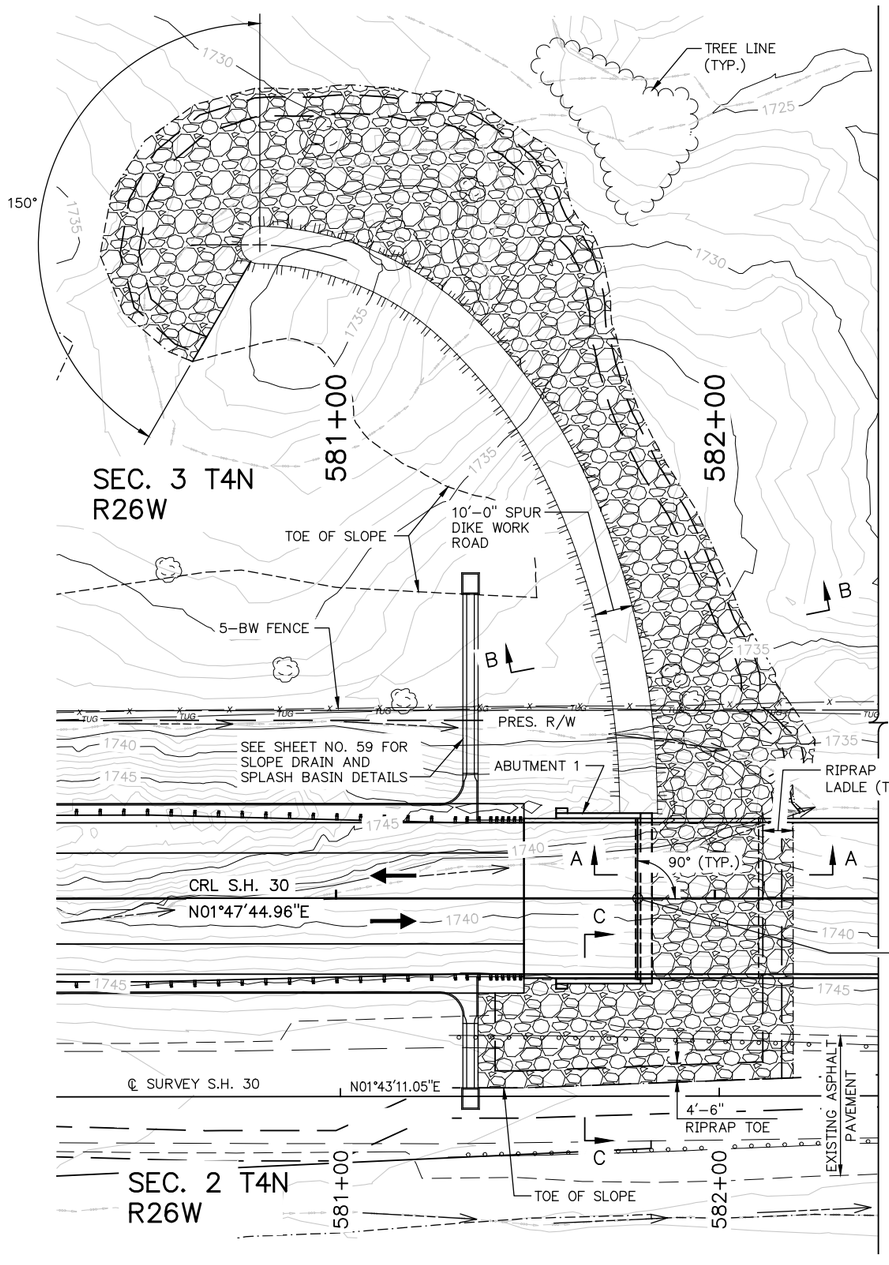
GENERAL PLAN AND ELEVATION (BRIDGE "A")

(SHEET 3 OF 3)

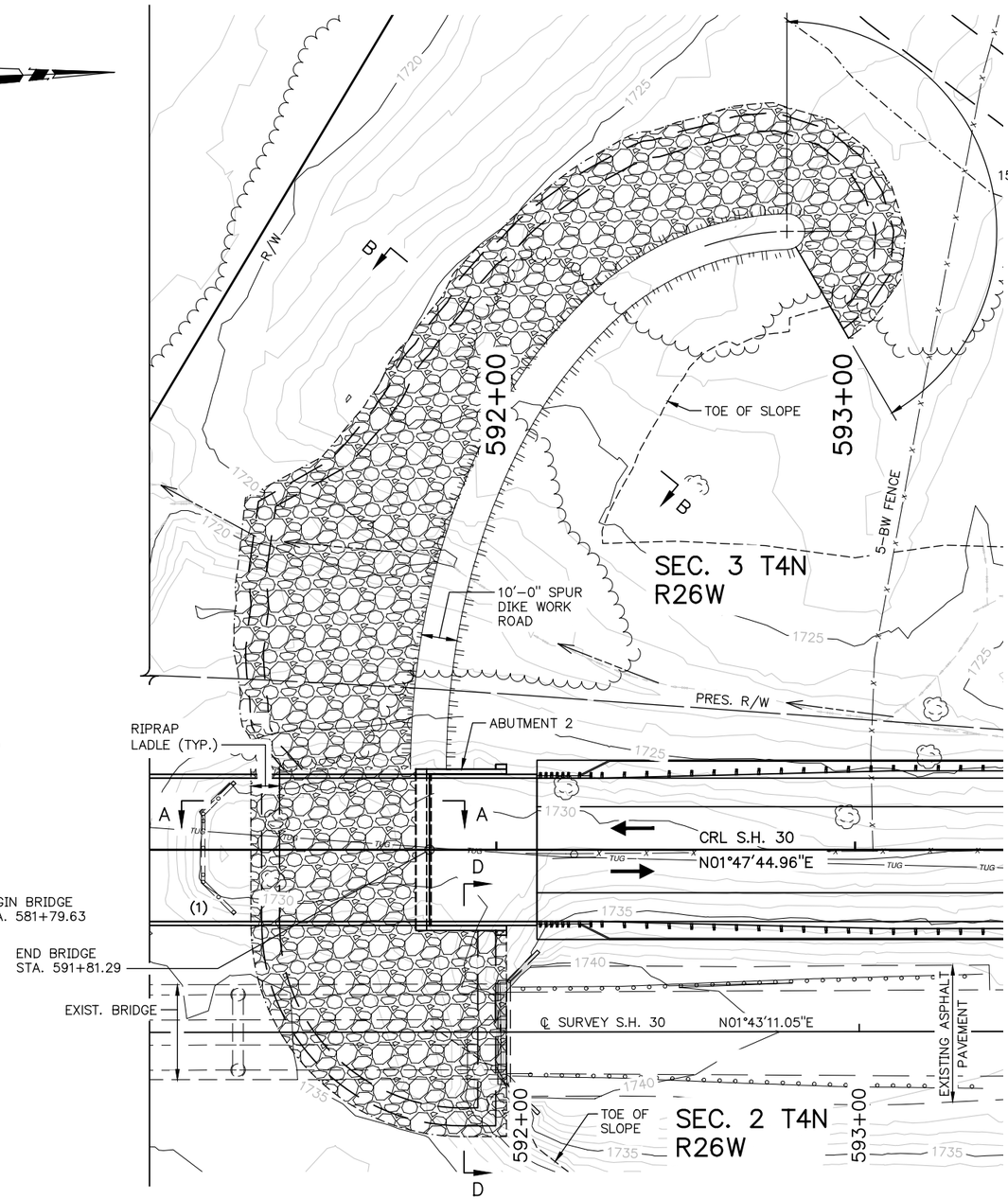
C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 32

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



RIPRAP PLAN AT ABUTMENT 1



RIPRAP PLAN AT ABUTMENT 2

SCALE: 1"=20'

RIPRAP QUANTITIES		
ITEM	UNITS	TOTAL
TYPE I-A PLAIN RIPRAP	TON	3,590.00
TYPE I-A FILTER BLANKET	TON	680.00

LEGEND

24" TYPE I-A PLAIN RIPRAP AND 6" TYPE I-A FILTER BLANKET

(1) APPROX. LOCATION OF 1933/1936 BRIDGE SUBSTRUCTURE UNIT. SEE GENERAL PLAN AND ELEVATION SHEETS AND "OBSTRUCTIONS" NOTE, SHEET NO. 6.

NOTES:

ALL STATIONING FOLLOWS CRL S.H. 30, UNLESS NOTED OTHERWISE.

FOR RIPRAP SECTIONS, SEE SHEET NO. 34.

THIS SHEET PERTAINS TO THE CONSTRUCTION OF THE RIPRAP ONLY. REFER TO ROADWAY PLANS FOR THE CONSTRUCTION OF THE SPUR DIKES AND THE ASSOCIATED EARTHWORK QUANTITIES.

ROADWAY EARTHWORK QUANTITIES INCLUDE THE EXCAVATION REQUIRED FOR THE RIPRAP LADLES ALONG THE SPUR DIKES. ANY OTHER EXCAVATIONS REQUIRED FOR THE PLACEMENT OF RIPRAP, NOT INCLUDED IN THE ROADWAY QUANTITIES, SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID FOR "TYPE I-A PLAIN RIPRAP".

SEE ROADWAY PLANS FOR PRESENT AND NEW R/W, WHERE NOT SHOWN.

RIPRAP DETAILS

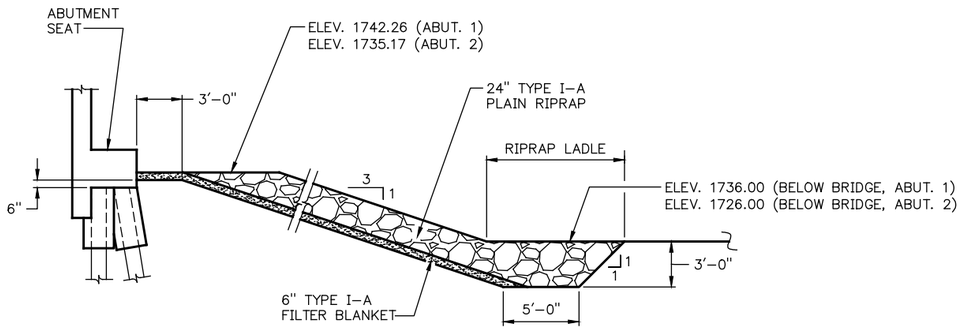
(SHEET 1 OF 2)

BRIDGE "A" C.R.L. STA. 586+80.46

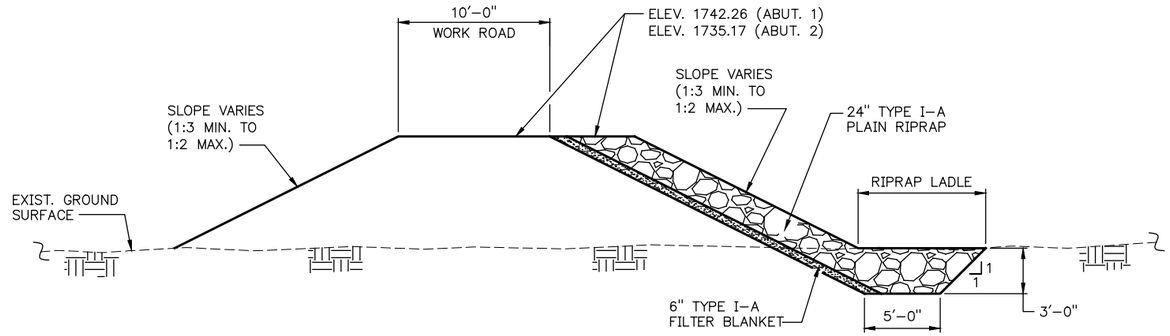
State Job No. 28768(04) Sheet No. 33

S.H. 30 BRIDGE & APPROACHES

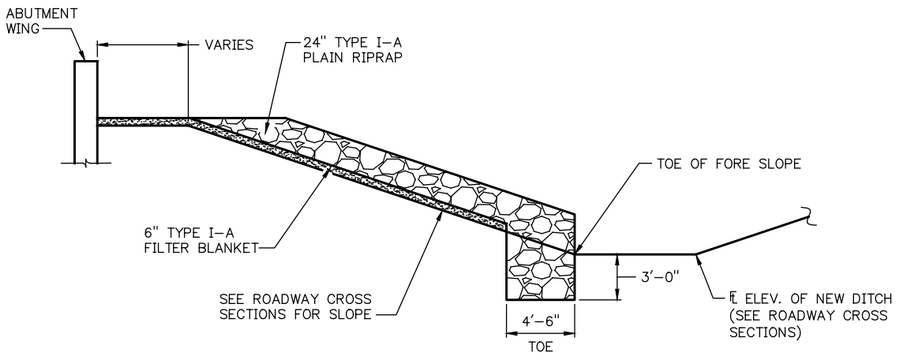
HARMON COUNTY



SECTION A–A
(BELOW BRIDGE AND TO EAST WITH LADLE)

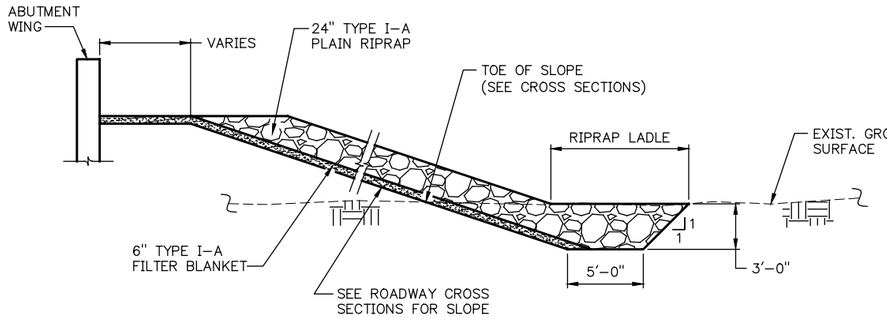


SECTION B–B
(SPUR DIKE)



SECTION C–C
(EAST SIDE OF ABUTMENT 1 ONLY)

NOTE: RIPRAP LIMITS SHALL EXTEND SOUTH TO THE CONCRETE DRAIN FLUME AND SPLASH BASIN.



SECTION D–D
(EAST SIDE OF ABUTMENT 2 ONLY)

NOTES: SEE SHEET NO. 33 FOR RIPRAP PLAN LIMITS AND RIPRAP QUANTITIES.

THIS SHEET PERTAINS TO THE CONSTRUCTION OF THE RIPRAP ONLY. REFER TO ROADWAY PLANS FOR THE CONSTRUCTION OF THE SPUR DIKES AND THE ASSOCIATED EARTHWORK QUANTITIES.

ROADWAY EARTHWORK QUANTITIES INCLUDE THE EXCAVATION REQUIRED FOR THE RIPRAP LADLES ALONG THE SPUR DIKES. ANY OTHER EXCAVATIONS REQUIRED FOR THE PLACEMENT OF RIPRAP, NOT INCLUDED IN THE ROADWAY QUANTITIES, SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID FOR "TYPE I-A PLAIN RIPRAP".

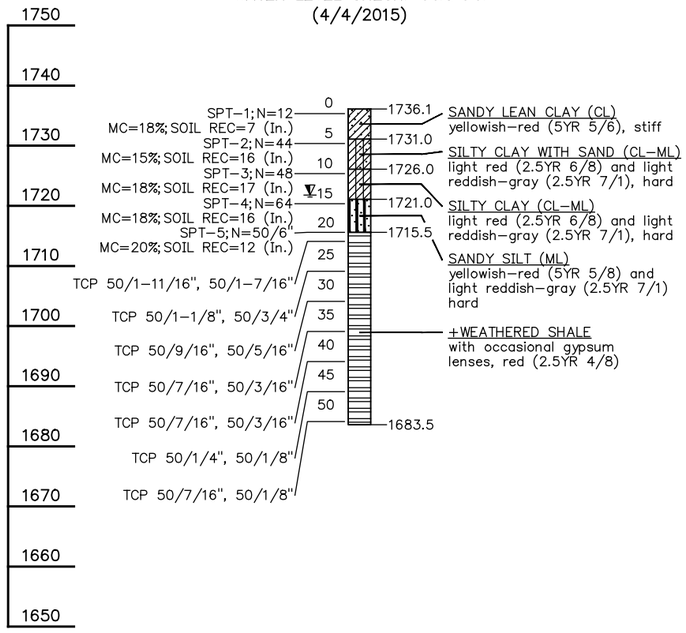
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

RIPRAP DETAILS
(SHEET 2 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 34

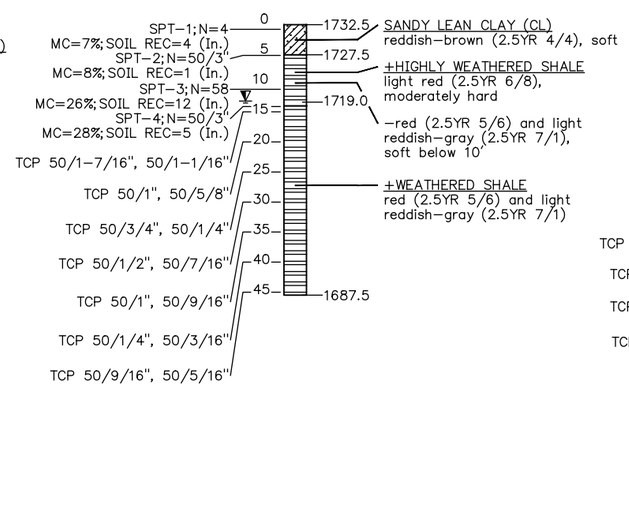
BORING NO. B–1
CRL STA. 581+70
5′ LT.

WATER LEVEL CHECK: 14.3 FT.
(4/4/2015)



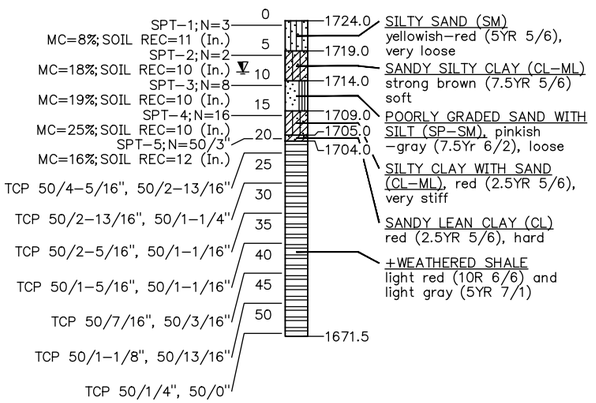
BORING NO. B–2
CRL STA. 582+86
40′ LT.

WATER LEVEL CHECK: 12.7 FT.
(4/4/2015)



BORING NO. B–3
CRL STA. 583+81
20′ RT.

WATER LEVEL CHECK: 8.5 FT.
(4/4/2015)



GEOLOGY:

THE GEOLOGY OF THIS SITE CONSISTS OF DOG CREEK UNIT OF PERMIAN AGE. THE DOG CREEK UNIT CONSISTS DOMINANTLY OF SALTY, REDDISH–BROWN, BLOCKY CLAY–SHALE WITH MINOR AMOUNT OF GYPSUM AND DOLOMITE PRESENT IN BEDS LESS THAN 2 FEET THICK. THE TOTAL THICKNESS OF THE UNIT VARIES FROM 157 TO 190 FEET ON THE NORTH FLANK OF THE ANADARKO BASIN IN BLAINE COUNTY. ON THE SOUTH FLANK OF THE BASIN, THE THICKNESS VARIES FROM 120 TO 220 FEET. IT THEN THINS TO ABOUT 80 FEET IN NORTHERN GREER AND NORTHERN HARMON COUNTIES WHERE IT OVERLIES THE WICHITA MOUNTAIN UPLIFT. SOUTHWARD, IT THICKENS TO A MAXIMUM OF 180 FEET NEAR THE CENTER OF THE HOLLIS BASIN IN CENTRAL HARMON COUNTY.

NOTE: GROUNDWATER LEVELS WERE OBTAINED DURING THE DRILLING OPERATIONS, AND MAY FLUCTUATE THROUGHOUT THE YEAR.

▽ WATER LEVEL +24 HOURS AFTER DRILLING

NOTES: FOR ADDITIONAL TESTING INFORMATION, SEE THE GEOTECHNICAL ENGINEERING REPORT.

BORING LOCATIONS (STATIONS) ARE NOT TO SCALE HORIZONTALLY.

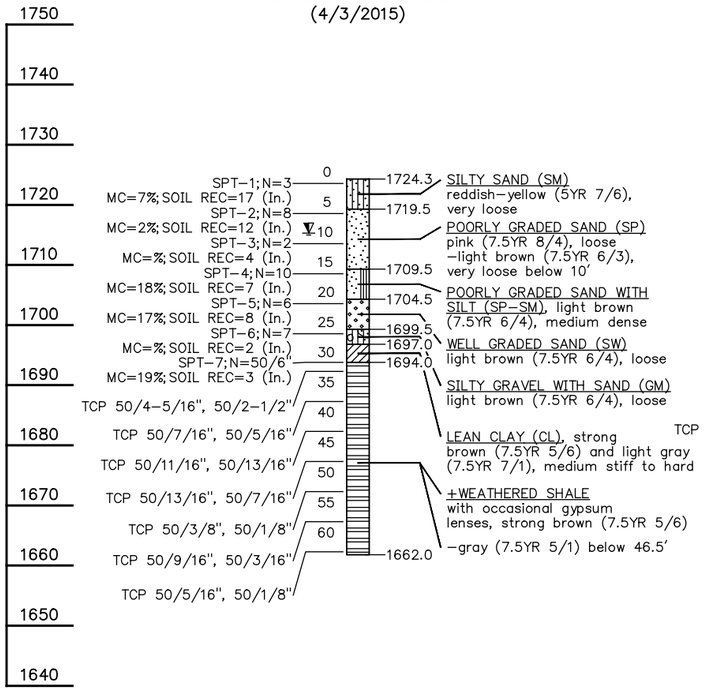
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

FOUNDATION REPORT
(SHEET 1 OF 4)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 35

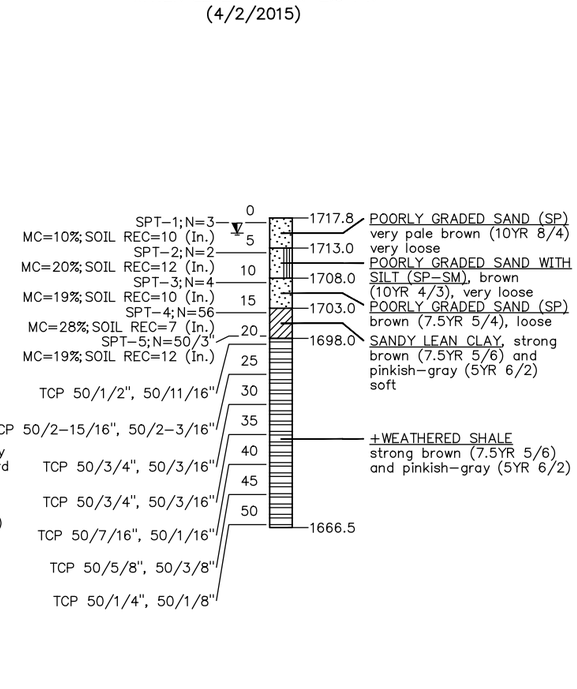
BORING NO. B–4
CRL STA. 584+81
20′ LT.

WATER LEVEL CHECK: 9.0 FT.
(4/3/2015)



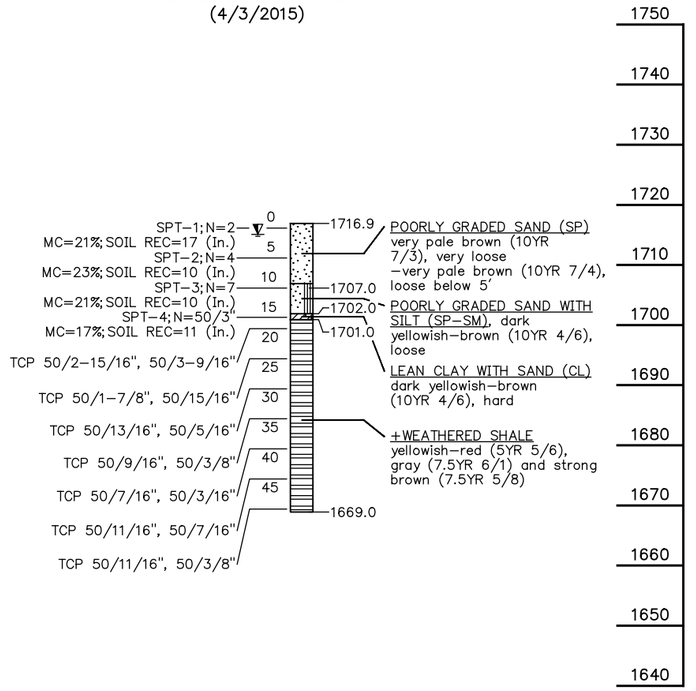
BORING NO. B–5
CRL STA. 585+81
20′ RT.

WATER LEVEL CHECK: 2.5 FT.
(4/2/2015)



BORING NO. B–6
CRL STA. 586+69
20′ LT.

WATER LEVEL CHECK: 1.8 FT.
(4/3/2015)



GEOLOGY:

THE GEOLOGY OF THIS SITE CONSISTS OF DOG CREEK UNIT OF PERMIAN AGE. THE DOG CREEK UNIT CONSISTS DOMINANTLY OF SALTY, REDDISH–BROWN, BLOCKY CLAY–SHALE WITH MINOR AMOUNT OF GYPSUM AND DOLOMITE PRESENT IN BEDS LESS THAN 2 FEET THICK. THE TOTAL THICKNESS OF THE UNIT VARIES FROM 157 TO 190 FEET ON THE NORTH FLANK OF THE ANADARKO BASIN IN BLAINE COUNTY. ON THE SOUTH FLANK OF THE BASIN, THE THICKNESS VARIES FROM 120 TO 220 FEET. IT THEN THINS TO ABOUT 80 FEET IN NORTHERN GREER AND NORTHERN HARMON COUNTIES WHERE IT OVERLIES THE WICHITA MOUNTAIN UPLIFT. SOUTHWARD, IT THICKENS TO A MAXIMUM OF 180 FEET NEAR THE CENTER OF THE HOLLIS BASIN IN CENTRAL HARMON COUNTY.

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▽ WATER LEVEL +24 HOURS AFTER DRILLING

NOTES: FOR ADDITIONAL TESTING INFORMATION, SEE THE GEOTECHNICAL ENGINEERING REPORT.

BORING LOCATIONS (STATIONS) ARE NOT TO SCALE HORIZONTALLY.

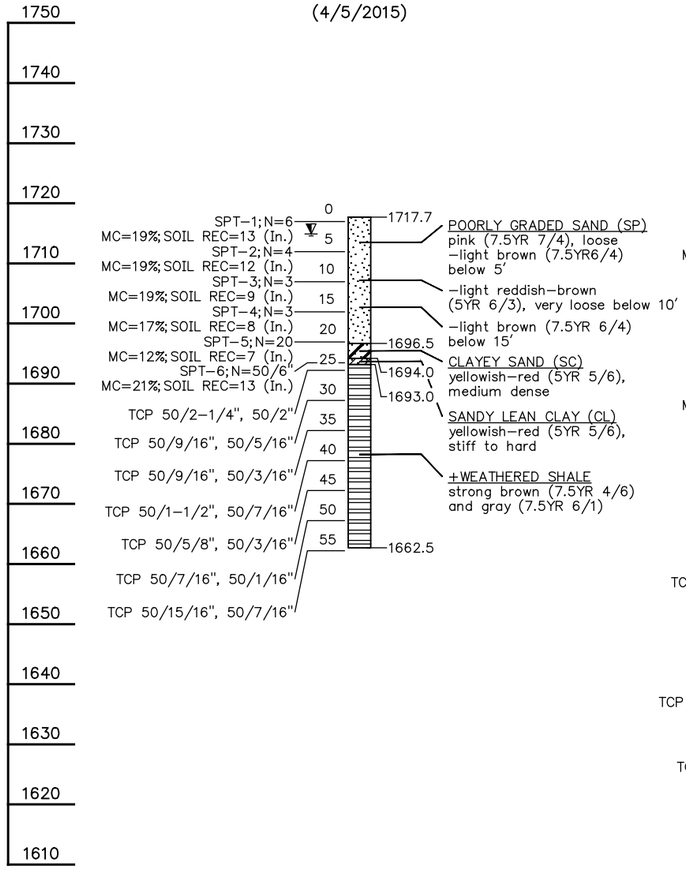
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

FOUNDATION REPORT
(SHEET 2 OF 4)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 36

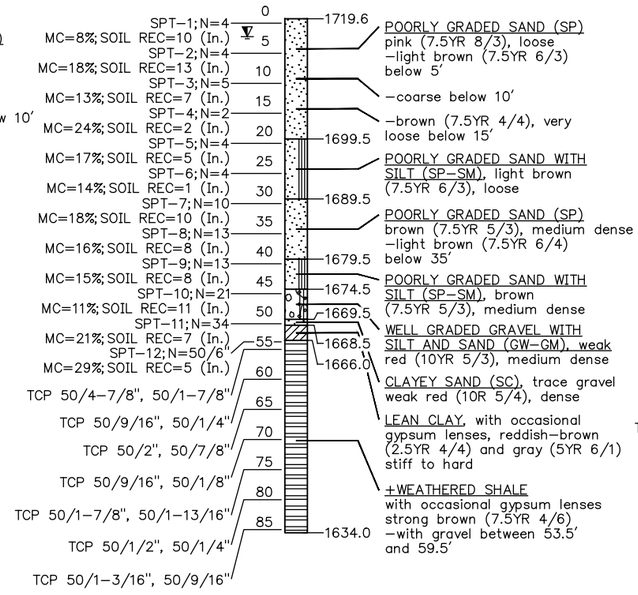
BORING NO. B–7
CRL STA. 587+81
20′ RT.

WATER LEVEL CHECK: 2.8 FT.
(4/5/2015)



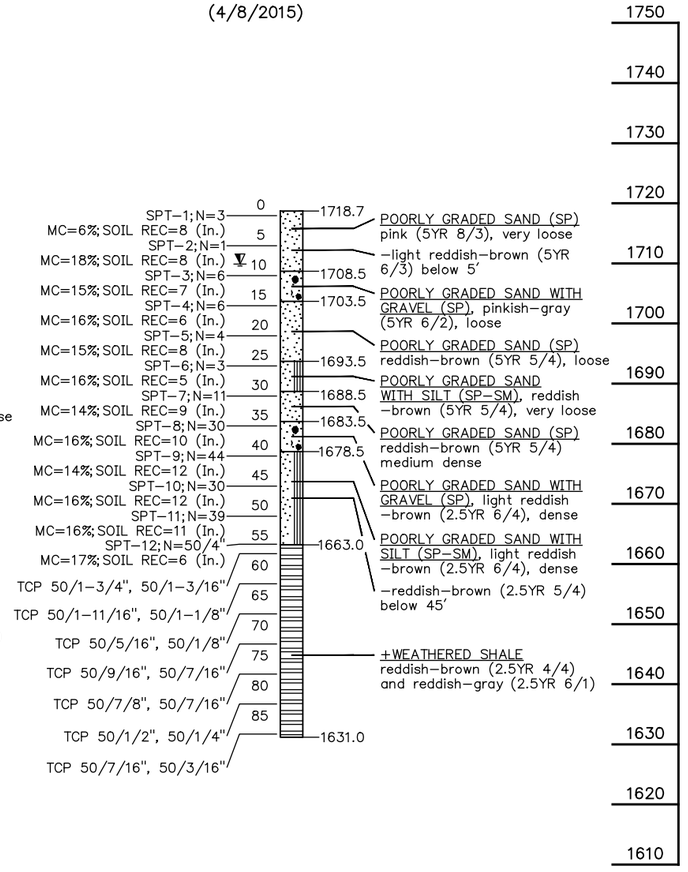
BORING NO. B–8
CRL STA. 588+81
16′ LT.

WATER LEVEL CHECK: 3.0 FT.
(4/7/2015)



BORING NO. B–9
CRL STA. 589+75
20′ RT.

WATER LEVEL CHECK: 8.8 FT.
(4/8/2015)



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NOTES: FOR ADDITIONAL TESTING INFORMATION, SEE THE GEOTECHNICAL ENGINEERING REPORT.

BORING LOCATIONS (STATIONS) ARE NOT TO SCALE HORIZONTALLY.

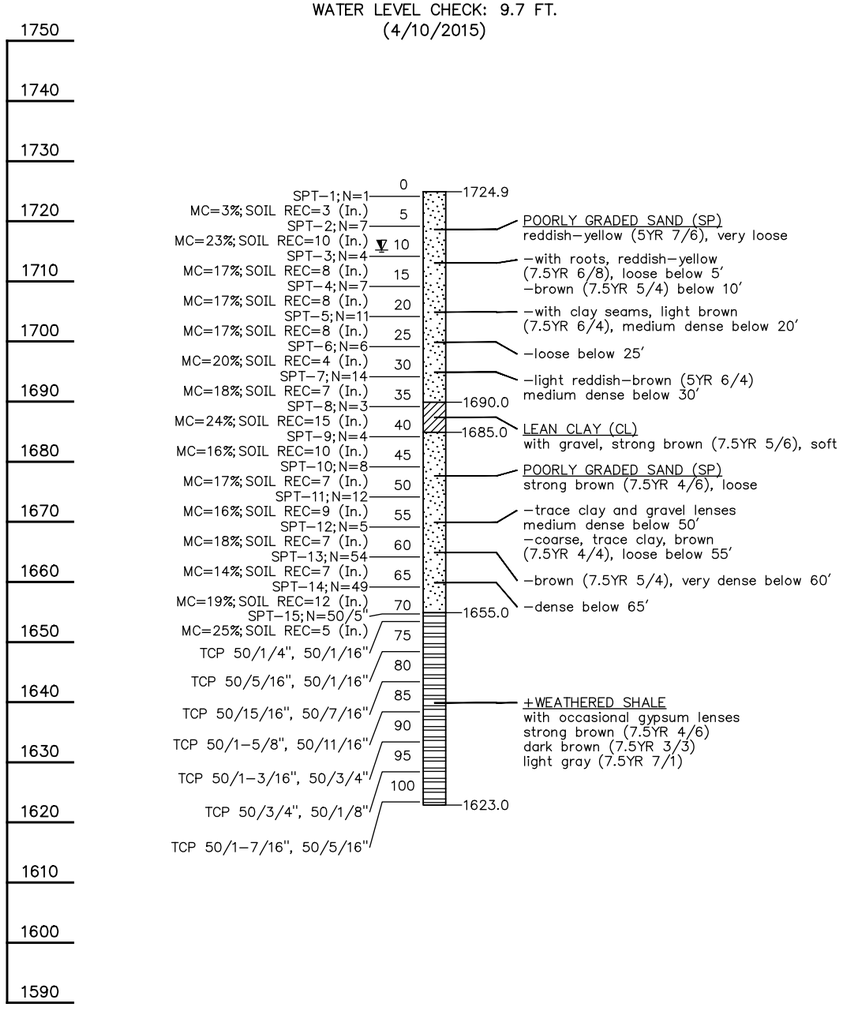
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

FOUNDATION REPORT
(SHEET 3 OF 4)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 37

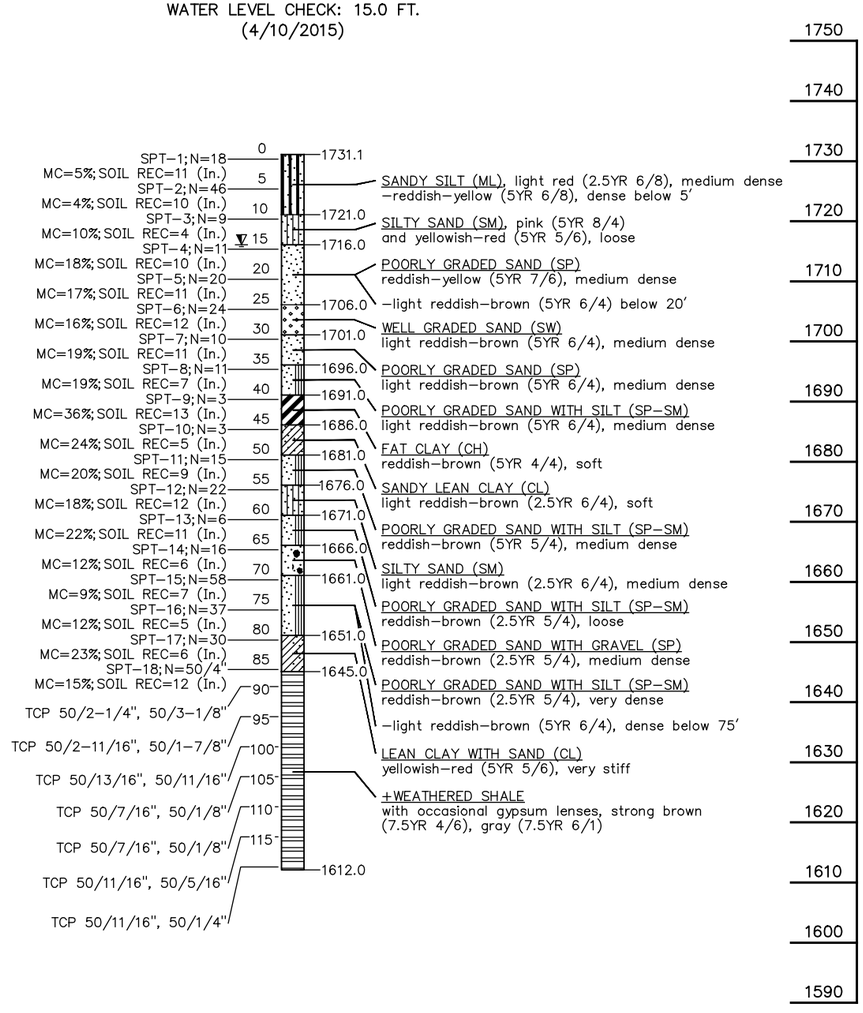
BORING NO. B–10
CRL STA. 590+81
20′ LT.

WATER LEVEL CHECK: 9.7 FT.
(4/10/2015)



BORING NO. B–11
CRL STA. 591+79
2′ LT.

WATER LEVEL CHECK: 15.0 FT.
(4/10/2015)



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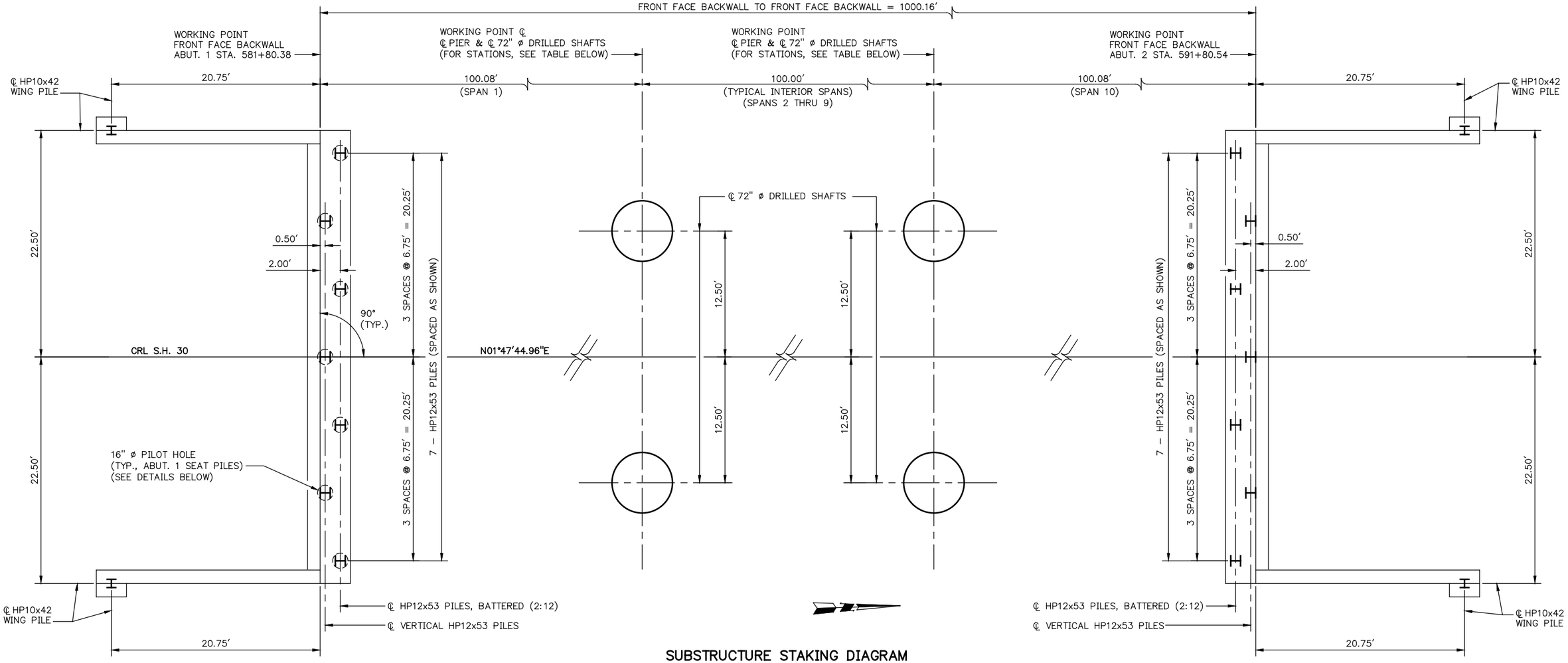
BORING LOCATIONS (STATIONS) ARE NOT TO SCALE HORIZONTALLY.

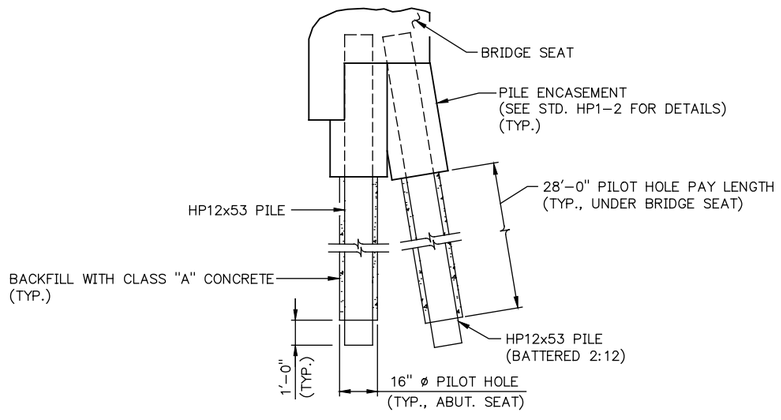
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

FOUNDATION REPORT
(SHEET 4 OF 4)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 38



SUBSTRUCTURE STAKING DIAGRAM
(NOT TO SCALE)



PILOT HOLE DETAILS
(USE AT ABUTMENT 1 SEAT PILES ONLY)

TOP OF PILE ELEVATION SCHEDULE		
LOCATION	ABUTMENT 1	ABUTMENT 2
BRIDGE SEAT	1742.25	1735.16
WINGS	1746.25	1739.16

℄ PIER STATION	
PIER	CRL STATION
1	582+80.46
2	583+80.46
3	584+80.46
4	585+80.46
5	586+80.46
6	587+80.46
7	588+80.46
8	589+80.46
9	590+80.46

NOTES: ALL DIMENSIONS ARE HORIZONTAL DIMENSIONS.

FOR THE SUMMARY OF QUANTITIES, SEE SHEET NO. 32.

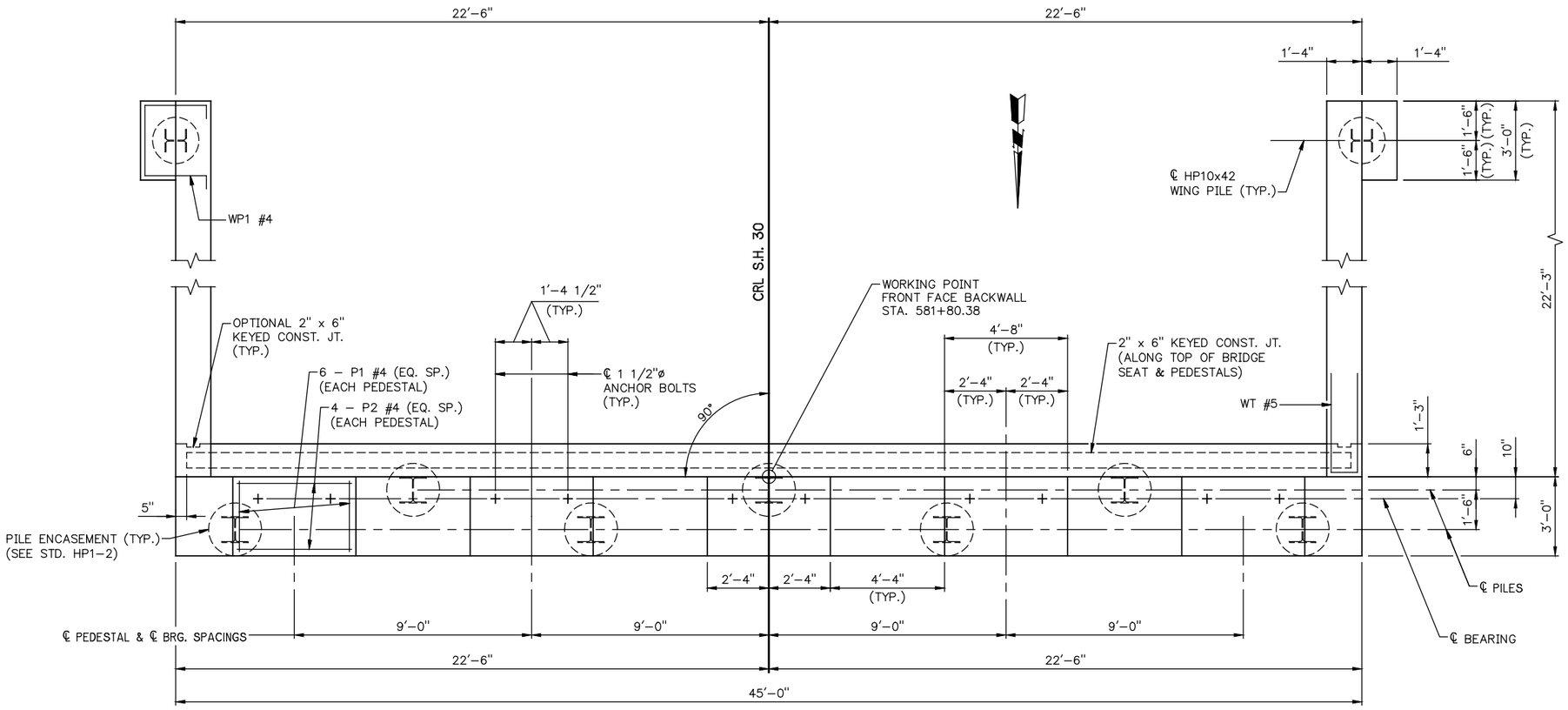
SEE STD. HP1–2 FOR STEEL PILE ENCASEMENT DETAILS.

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

SUBSTRUCTURE STAKING DIAGRAM
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 39



PLAN

NOTES: ALL REINFORCING STEEL BETWEEN BRIDGE SEAT AND/OR BACKWALL AND WINGS SHALL BE TIED IN PLACE PRIOR TO POURING BRIDGE SEAT AND BACKWALL (BV AND WT BARS).

ALL EDGES OF THE ABUTMENT AND WINGS SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE SHOWN.

FOR WING DETAILS, BAR BENDS, BAR LISTS AND QUANTITIES, SEE SHEET NO. 41.

FOR SUBSTRUCTURE STAKING DIAGRAM, SEE SHEET NO. 39.

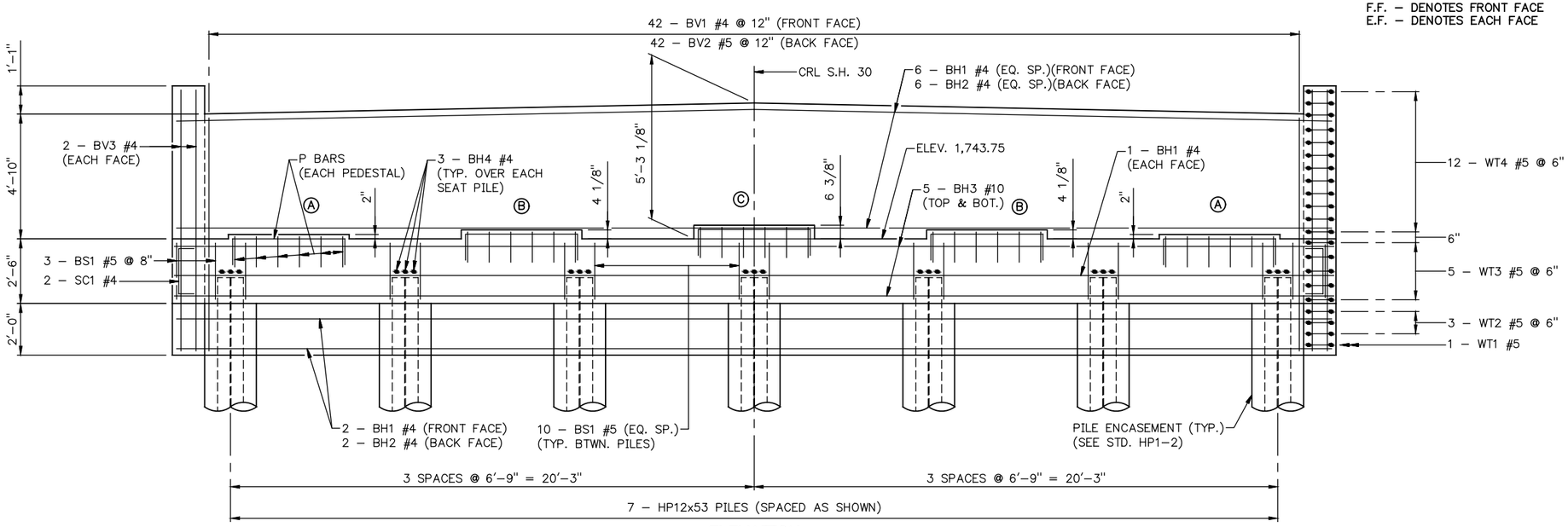
NOTES: TREAT FRONT FACE OF BACKWALL, TOP OF ABUTMENT SEAT, ALL SURFACES OF PEDESTALS WITH A PENETRATING WATER REPELLENT SURFACE TREATMENT.

TREAT FRONT FACE OF ABUTMENT SEAT ABOVE THE FINISHED GROUND LINE WITH PENETRATING WATER REPELLENT SURFACE TREATMENT.

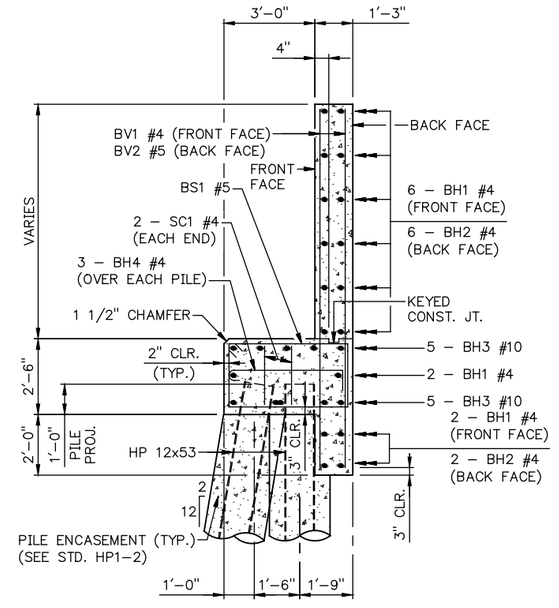
SCHEDULE OF PEDESTAL ELEVATIONS

PEDESTAL	ELEVATIONS
A	1743.92
B	1744.10
C	1744.28

NOTES:
B.F. – DENOTES BACK FACE
F.F. – DENOTES FRONT FACE
E.F. – DENOTES EACH FACE



ELEVATION
(LOOKING BACK–STATION)

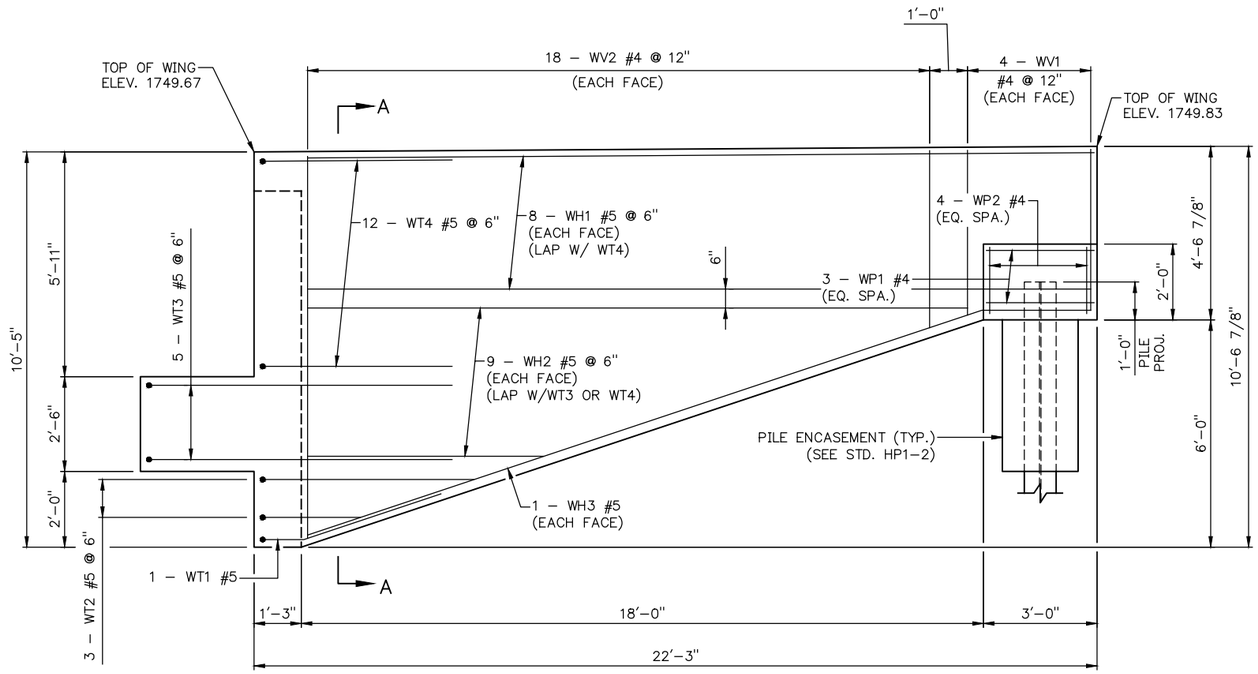


TYPICAL SECTION THRU SEAT

ABUTMENT 1 DETAILS
(SHEET 1 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46

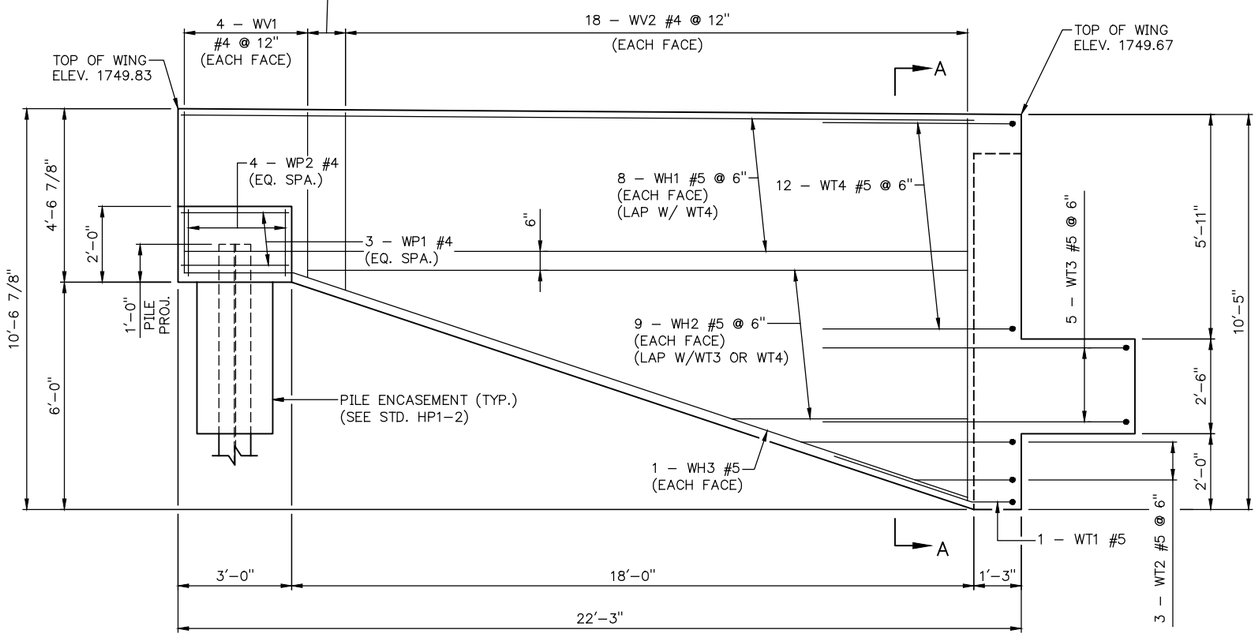
State Job No. 28768(04) Sheet No. 40

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

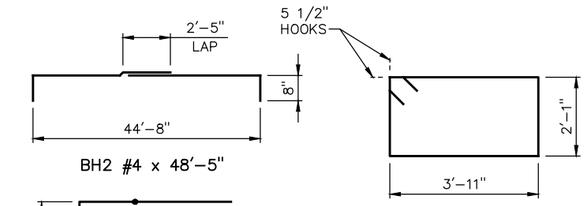


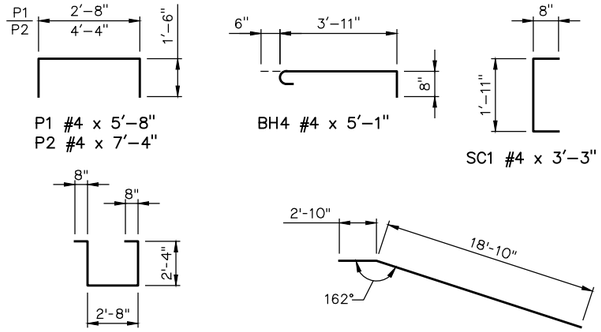
WEST WING ELEVATION

NOTES: TREAT ENDS OF BRIDGE SEAT AND ALL EXPOSED SURFACES OF WINGS WITH A WATER REPELLENT SURFACE TREATMENT, ABOVE THE FINISHED GROUND LINE.

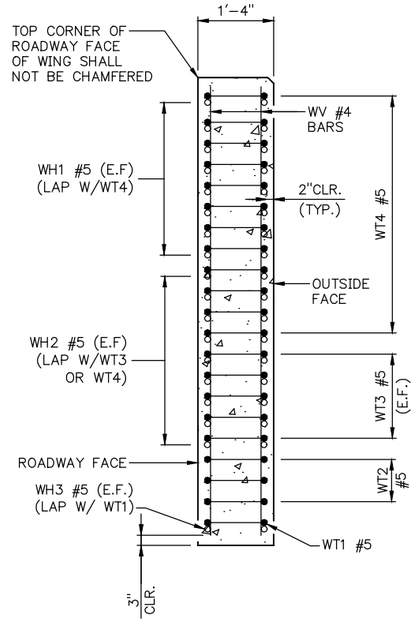


EAST WING ELEVATION





BAR BEND DETAILS



SECTION A–A

ABUTMENT 1 BAR LIST

	MARK	NO.	SIZE	FORM	LENGTH	REMARKS
	PLAIN REINFORCING BARS					
(1)	BH1	10	#4	STR.	47'-1"	
(1)	BH2	8	#4	BNT.	48'-5"	
	BH3	10	#10	STR.	44'-8"	
	BH4	21	#4	BNT.	5'-1"	
	BS1	66	#5	BNT.	12'-11"	
(2)	BV1	42	#4	STR.	9'-1" AVG.	8'-11" TO 9'-3"
(2)	BV2	42	#5	STR.	9'-1" AVG.	8'-11" TO 9'-3"
	BV3	8	#4	STR.	10'-0"	
	P1	30	#4	BNT.	5'-8"	
	P2	20	#4	BNT.	7'-4"	
	SC1	4	#4	BNT.	3'-3"	
	WH1	32	#5	STR.	20'-8"	
(3)	WH2	36	#5	STR.	11'-10" AVG.	6'-0" TO 17'-8"
	WH3	4	#5	BNT.	21'-8"	
	WP1	6	#4	BNT.	8'-8"	
	WP2	8	#4	STR.	1'-7"	
	WT1	2	#5	BNT.	8'-6"	
(4)	WT2	6	#5	BNT.	9'-0" AVG.	6'-0" TO 12'-0"
	WT3	10	#5	BNT.	17'-0"	
	WT4	24	#5	BNT.	11'-0"	
	WV1	16	#4	STR.	4'-1"	
(5)	WV2	72	#4	STR.	7'-3" AVG.	4'-6" TO 10'-0"

ABUTMENT 1 QUANTITIES

ITEM	UNITS	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	CY	101.00
CLSM BACKFILL	CY	94.00
CLASS A CONCRETE	CY	48.60
EPOXY COATED REINFORCING STEEL	LB	6,570.00
PILES, FURNISHED (HP10x42)	LF	76.00
PILES, FURNISHED (HP12x53)	LF	238.00
PILES, DRIVEN (HP10x42)	LF	76.00
PILES, DRIVEN (HP12x53)	LF	238.00
(PL) PILOT HOLES	LF	196.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	70.00
6" PERFORATED PIPE UNDERDRAIN ROUND	LF	42.00
6" NON-PERF. PIPE UNDERDRAIN RND.	LF	30.00

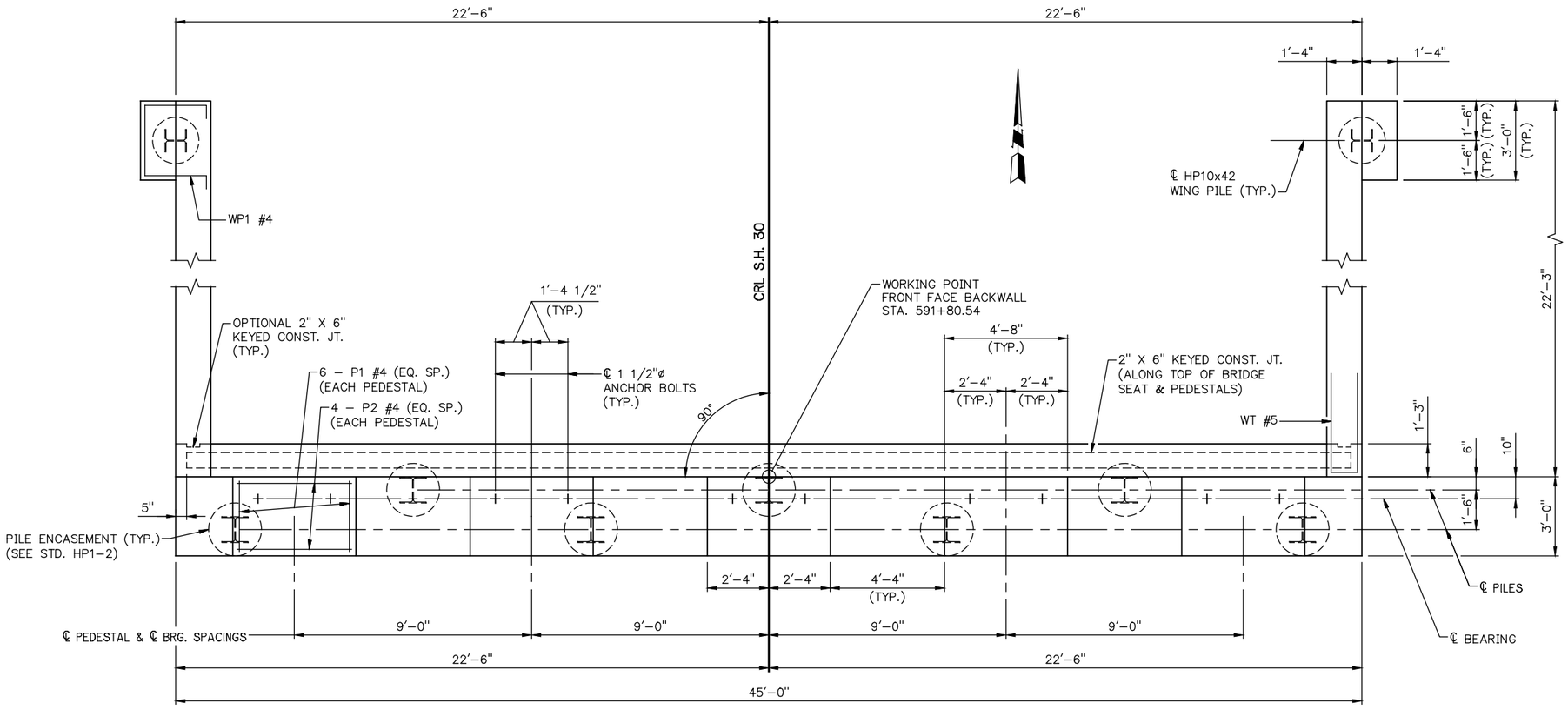
(1) LENGTH INCLUDES ONE (1) 2'-5" LAP SPLICE.
(2) TWO SETS OF 21 BARS EACH.
(3) FOUR SETS OF 9 BARS EACH.
(4) TWO SETS OF 3 BARS EACH.
(5) FOUR SETS OF 18 BARS EACH.

ABUTMENT 1 DETAILS

(SHEET 2 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 41

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



PLAN

NOTES: ALL REINFORCING STEEL BETWEEN BRIDGE SEAT AND/OR BACKWALL AND WINGS SHALL BE TIED IN PLACE PRIOR TO POURING BRIDGE SEAT AND BACKWALL (BV AND WT BARS).

ALL EDGES OF THE ABUTMENT AND WINGS SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE SHOWN.

FOR WING DETAILS, BAR BENDS, BAR LISTS AND QUANTITIES, SEE SHEET NO. 43.

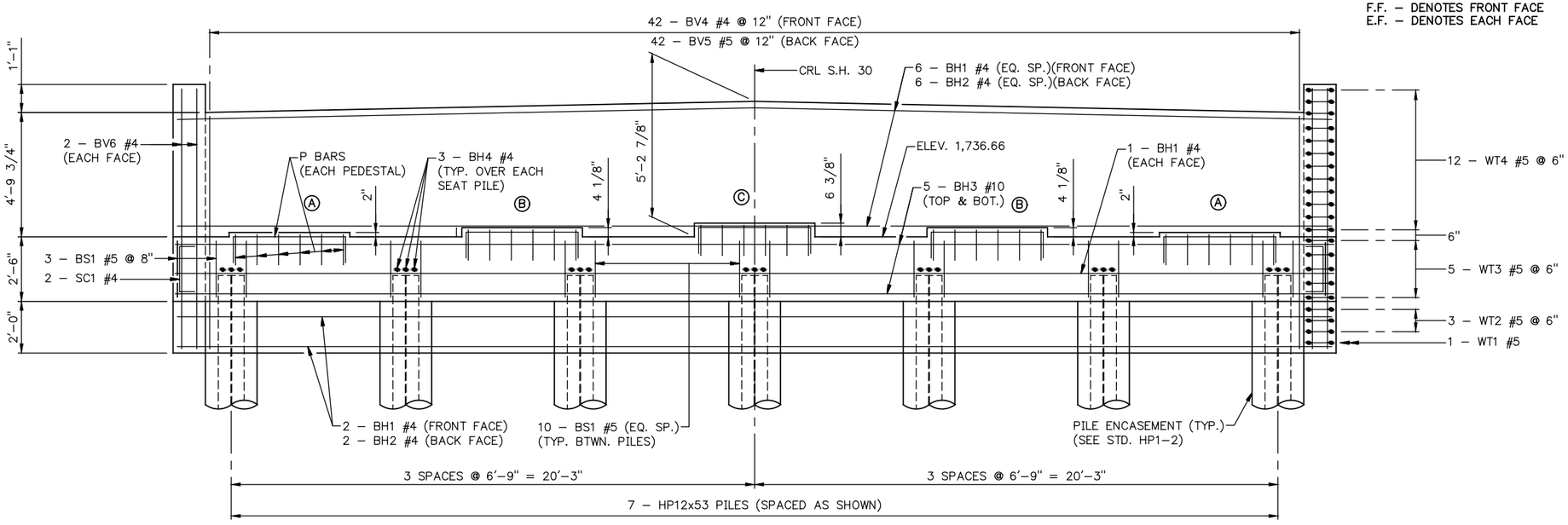
FOR SUBSTRUCTURE STAKING DIAGRAM, SEE SHEET NO. 39.

NOTES: TREAT FRONT FACE OF BACKWALL, TOP OF ABUTMENT SEAT, ALL SURFACES OF PEDESTALS WITH A PENETRATING WATER REPELLENT SURFACE TREATMENT.

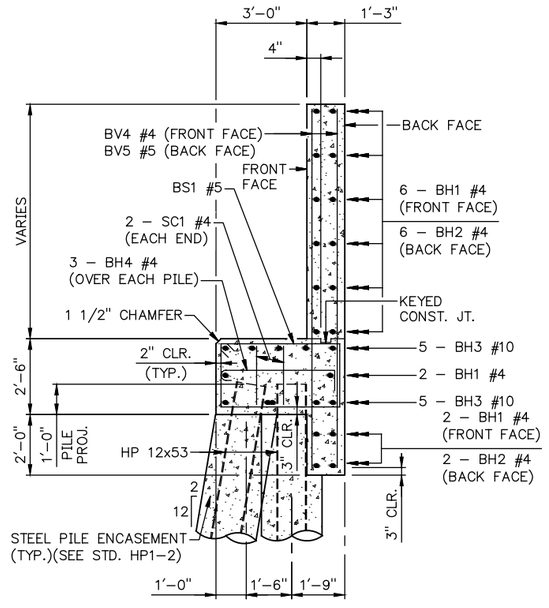
TREAT FRONT FACE OF ABUTMENT SEAT ABOVE THE FINISHED GROUND LINE WITH PENETRATING WATER REPELLENT SURFACE TREATMENT.

SCHEDULE OF PEDESTAL ELEVATIONS	
PEDESTAL	ELEVATIONS
A	1736.83
B	1737.01
C	1737.19

NOTES:
B.F. – DENOTES BACK FACE
F.F. – DENOTES FRONT FACE
E.F. – DENOTES EACH FACE



ELEVATION
(LOOKING UP–STATION)

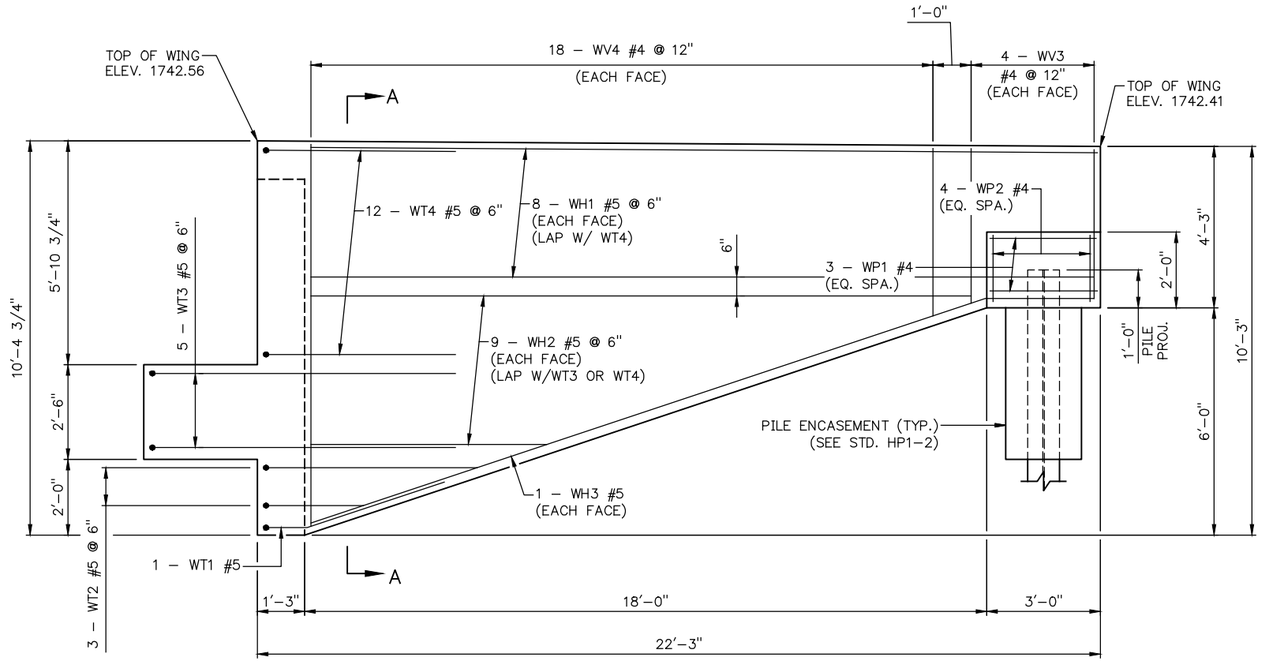


TYPICAL SECTION THRU SEAT

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

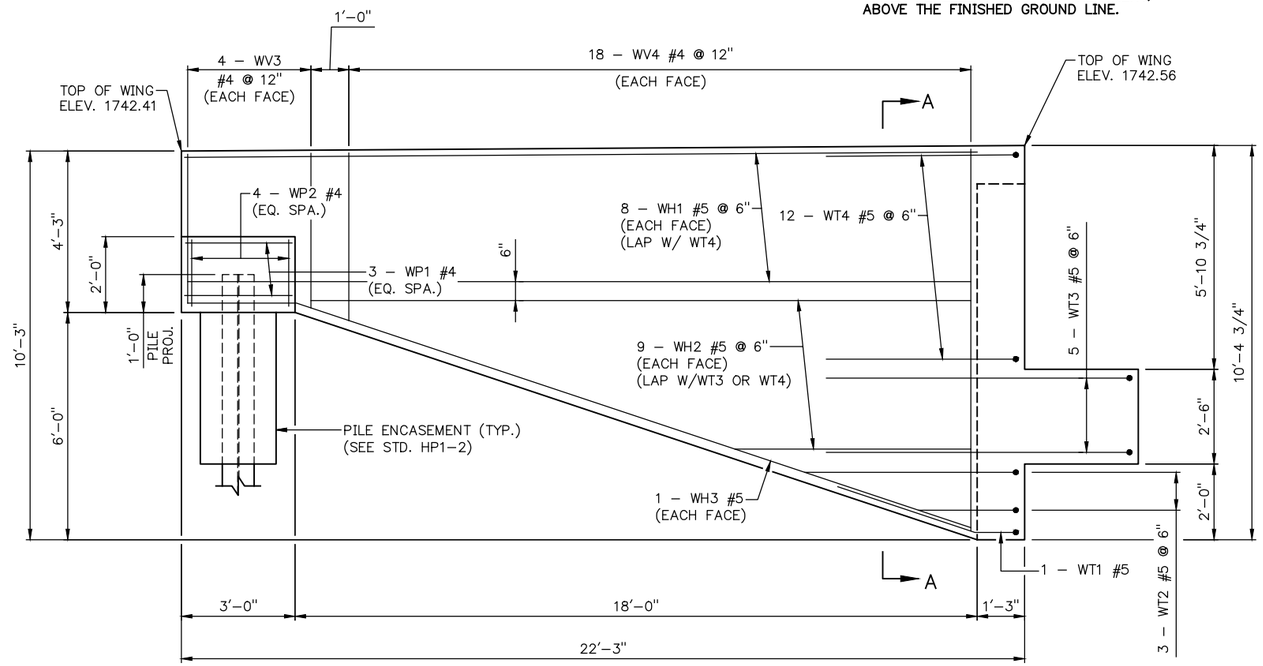
ABUTMENT 2 DETAILS
(SHEET 1 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 42

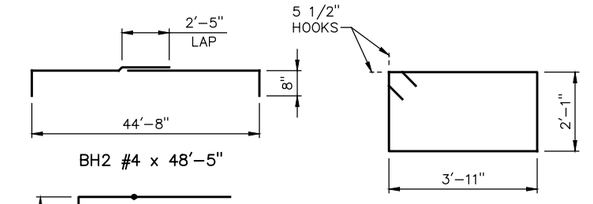


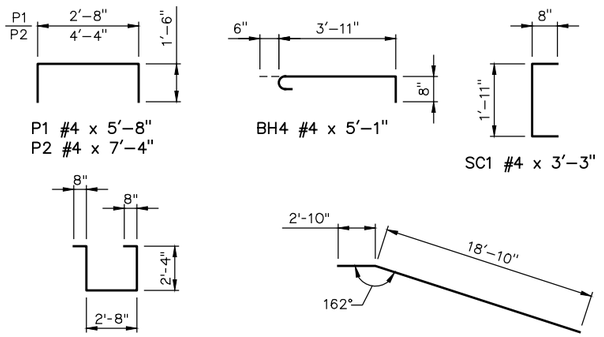
EAST WING ELEVATION

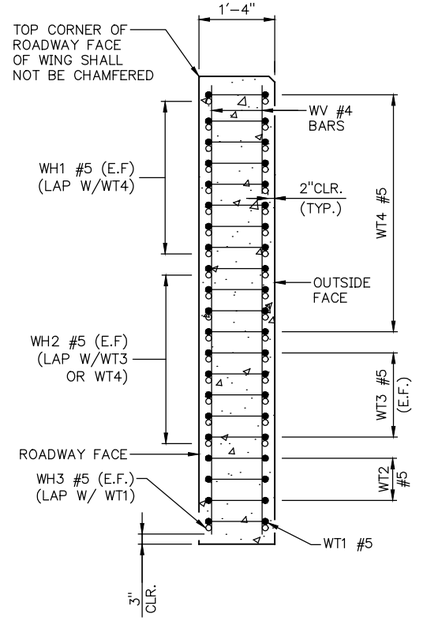
NOTES: TREAT ENDS OF BRIDGE SEAT AND ALL EXPOSED SURFACES OF WINGS WITH A WATER REPELLENT SURFACE TREATMENT, ABOVE THE FINISHED GROUND LINE.



WEST WING ELEVATION







SECTION A–A

BAR BEND DETAILS

ABUTMENT 2 BAR LIST

	MARK	NO.	SIZE	FORM	LENGTH	REMARKS
	PLAIN REINFORCING BARS					
(1)	BH1	10	#4	STR.	47'-1"	
(1)	BH2	8	#4	BNT.	48'-5"	
	BH3	10	#10	STR.	44'-8"	
	BH4	21	#4	BNT.	5'-1"	
	BS1	66	#5	BNT.	12'-11"	
(2)	BV4	42	#4	STR.	9'-0" AVG.	8'-10" TO 9'-2"
(2)	BV5	42	#5	STR.	9'-0" AVG.	8'-10" TO 9'-2"
	BV6	8	#4	STR.	9'-11"	
	P1	30	#4	BNT.	5'-8"	
	P2	20	#4	BNT.	7'-4"	
	SC1	4	#4	BNT.	3'-3"	
	WH1	32	#5	STR.	20'-8"	
(3)	WH2	36	#5	STR.	11'-10" AVG.	6'-0" TO 17'-8"
	WH3	4	#5	BNT.	21'-8"	
	WP1	6	#4	BNT.	8'-8"	
	WP2	8	#4	STR.	1'-7"	
	WT1	2	#5	BNT.	8'-6"	
(4)	WT2	6	#5	BNT.	9'-0" AVG.	6'-0" TO 12'-0"
	WT3	10	#5	BNT.	17'-0"	
	WT4	24	#5	BNT.	11'-0"	
	WV3	16	#4	STR.	3'-10"	
(5)	WV4	72	#4	STR.	7'-0" AVG.	4'-2" TO 9'-10"

ABUTMENT 2 QUANTITIES

ITEM	UNITS	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	CY	101.00
CLSM BACKFILL	CY	94.00
CLASS A CONCRETE	CY	48.20
EPOXY COATED REINFORCING STEEL	LB	6,550.00
PILES, FURNISHED (HP10x42)	LF	198.00
PILES, FURNISHED (HP12x53)	LF	669.00
PILES, DRIVEN (HP10x42)	LF	198.00
PILES, DRIVEN (HP12x53)	LF	669.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	70.00
6" PERFORATED PIPE UNDERDRAIN ROUND	LF	42.00
6" NON-PERF. PIPE UNDERDRAIN RND.	LF	50.00

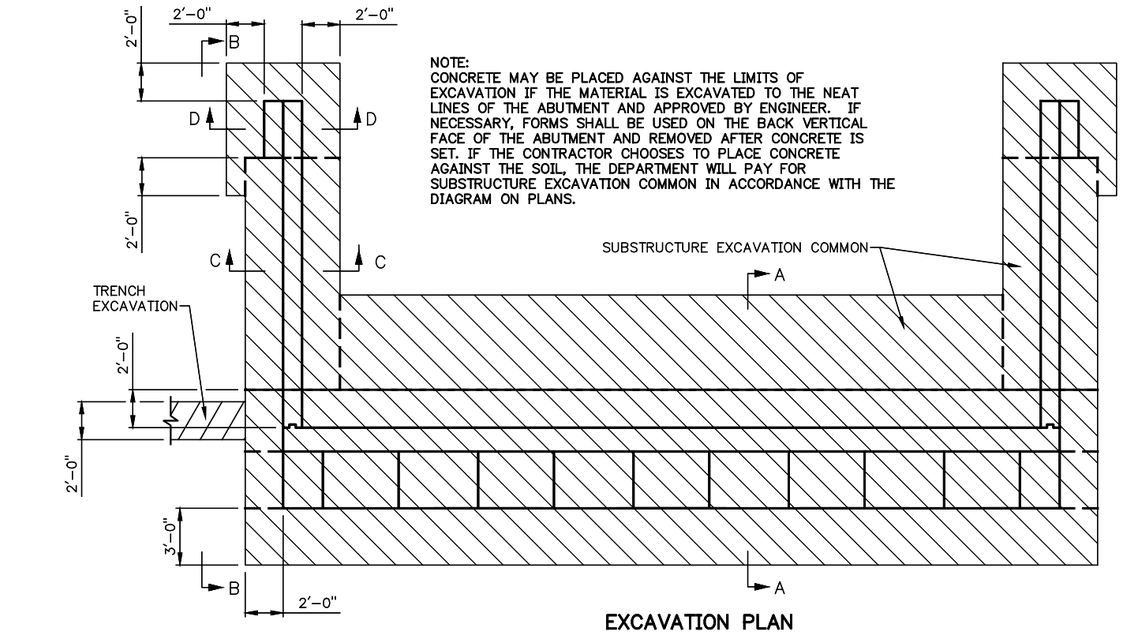
(1) LENGTH INCLUDES ONE (1) 2'-5" LAP SPLICE.
(2) TWO SETS OF 21 BARS EACH.
(3) FOUR SETS OF 9 BARS EACH.
(4) TWO SETS OF 3 BARS EACH.
(5) FOUR SETS OF 18 BARS EACH.

ABUTMENT 2 DETAILS

(SHEET 2 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 43

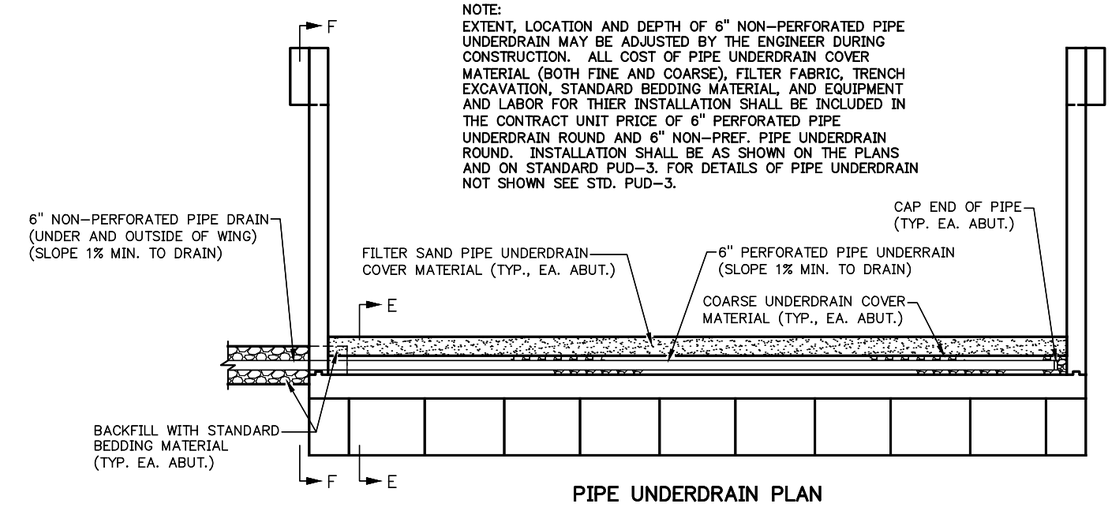
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



NOTE:
CONCRETE MAY BE PLACED AGAINST THE LIMITS OF EXCAVATION IF THE MATERIAL IS EXCAVATED TO THE NEAT LINES OF THE ABUTMENT AND APPROVED BY ENGINEER. IF NECESSARY, FORMS SHALL BE USED ON THE BACK VERTICAL FACE OF THE ABUTMENT AND REMOVED AFTER CONCRETE IS SET. IF THE CONTRACTOR CHOOSES TO PLACE CONCRETE AGAINST THE SOIL, THE DEPARTMENT WILL PAY FOR SUBSTRUCTURE EXCAVATION COMMON IN ACCORDANCE WITH THE DIAGRAM ON PLANS.

EXCAVATION PLAN

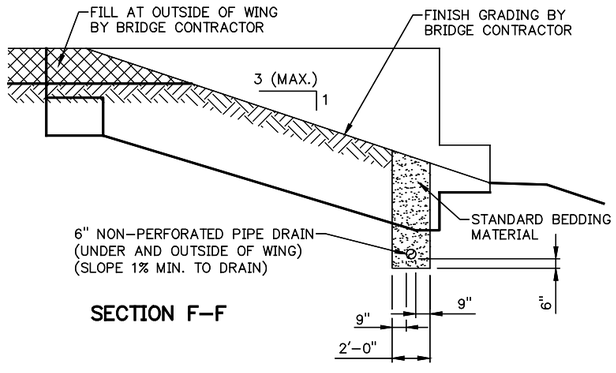
ABUTMENT 1 PIPE UNDERDRAIN SHOWN. MIRROR FOR ABUTMENT 2.



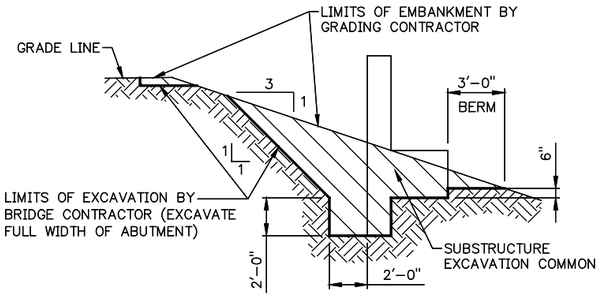
NOTE:
EXTENT, LOCATION AND DEPTH OF 6" NON-PERFORATED PIPE UNDERDRAIN MAY BE ADJUSTED BY THE ENGINEER DURING CONSTRUCTION. ALL COST OF PIPE UNDERDRAIN COVER MATERIAL (BOTH FINE AND COARSE), FILTER FABRIC, TRENCH EXCAVATION, STANDARD BEDDING MATERIAL, AND EQUIPMENT AND LABOR FOR THIER INSTALLATION SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF 6" PERFORATED PIPE UNDERDRAIN ROUND AND 6" NON-PREF. PIPE UNDERDRAIN ROUND. INSTALLATION SHALL BE AS SHOWN ON THE PLANS AND ON STANDARD PUD-3. FOR DETAILS OF PIPE UNDERDRAIN NOT SHOWN SEE STD. PUD-3.

PIPE UNDERDRAIN PLAN

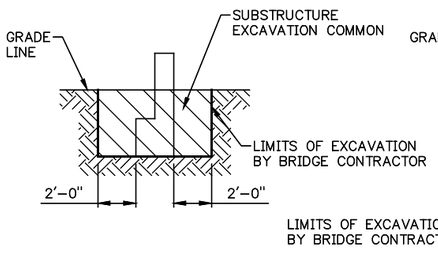
ABUTMENT 1 PIPE UNDERDRAIN SHOWN. MIRROR FOR ABUTMENT 2.



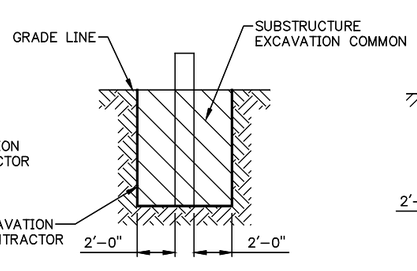
SECTION F-F



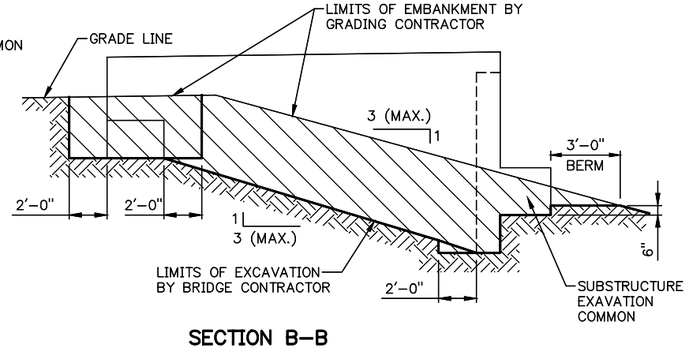
SECTION A-A



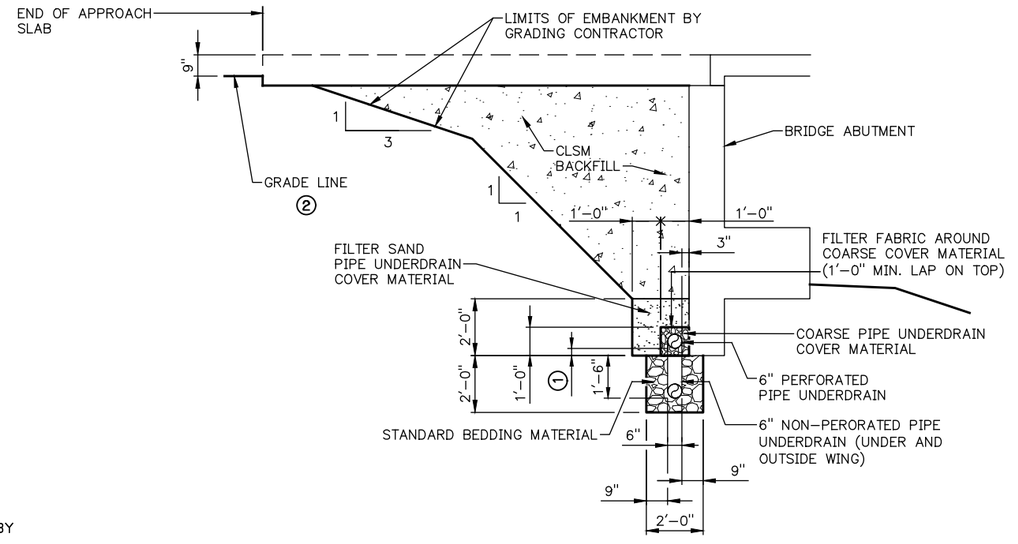
SECTION D-D



SECTION C-C



SECTION B-B



SECTION E-E

① SET BOTTOM OF PIPE 3" ABOVE THE BOTTOM OF THE ABUTMENT AT THE LOW END.

② GRADE LINE ASSUMED TO BE LOCATED 9" BELOW TOP OF APPROACH SLAB FOR COMPUTING CLSM BACKFILL QUANTITY SHOWN ON PLANS. THE DEPARTMENT WILL PAY FOR CLSM BACKFILL IN ACCORDANCE WITH THE PLAN QUANTITY AND NO ADJUSTMENT WILL BE MADE FOR ACTUAL LOCATION OF GRADE LINE.

BACKFILL NOTE: CLSM BACKFILL SHALL NOT BE PLACED UNTIL THE ABUTMENT WINGS HAVE ATTAINED A STRENGTH OF 3000 P.S.I.

THE OUTSIDE FACES OF THE WINGS SHALL BE BACKFILLED TO THE ORIGINAL EMBANKMENT LIMITS (MIN.), PRIOR TO PLACING CLSM BACKFILL.

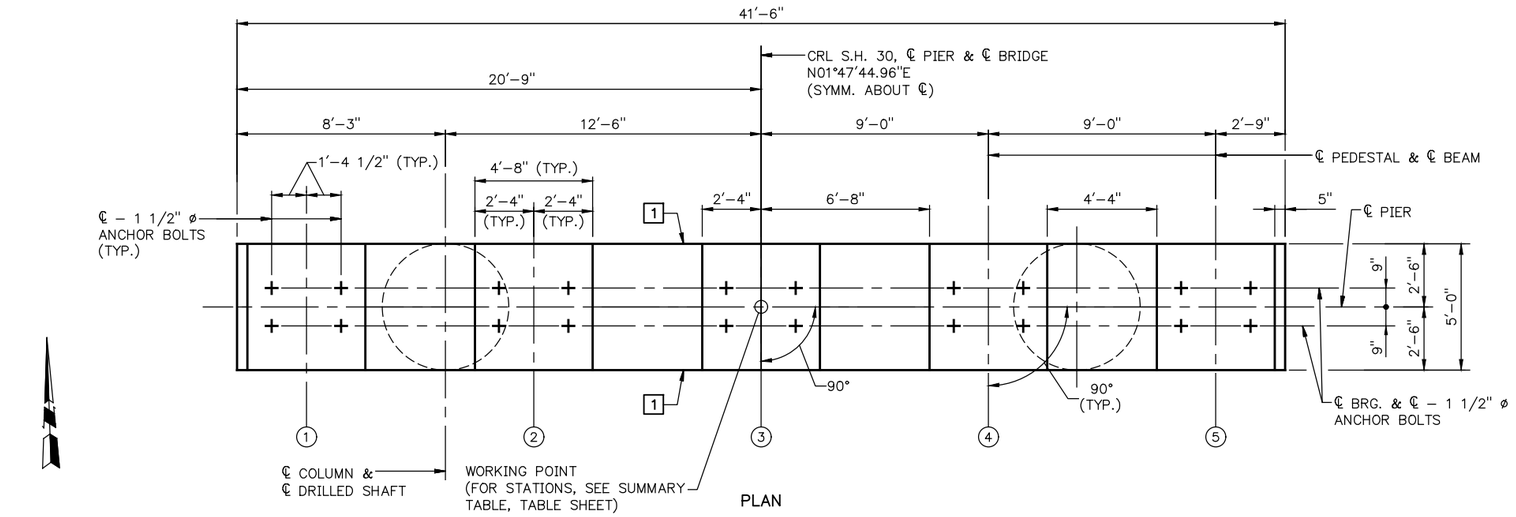
SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN ASSEMBLY DETAILS

BRIDGE "A" C.R.L. STA. 586+80.46

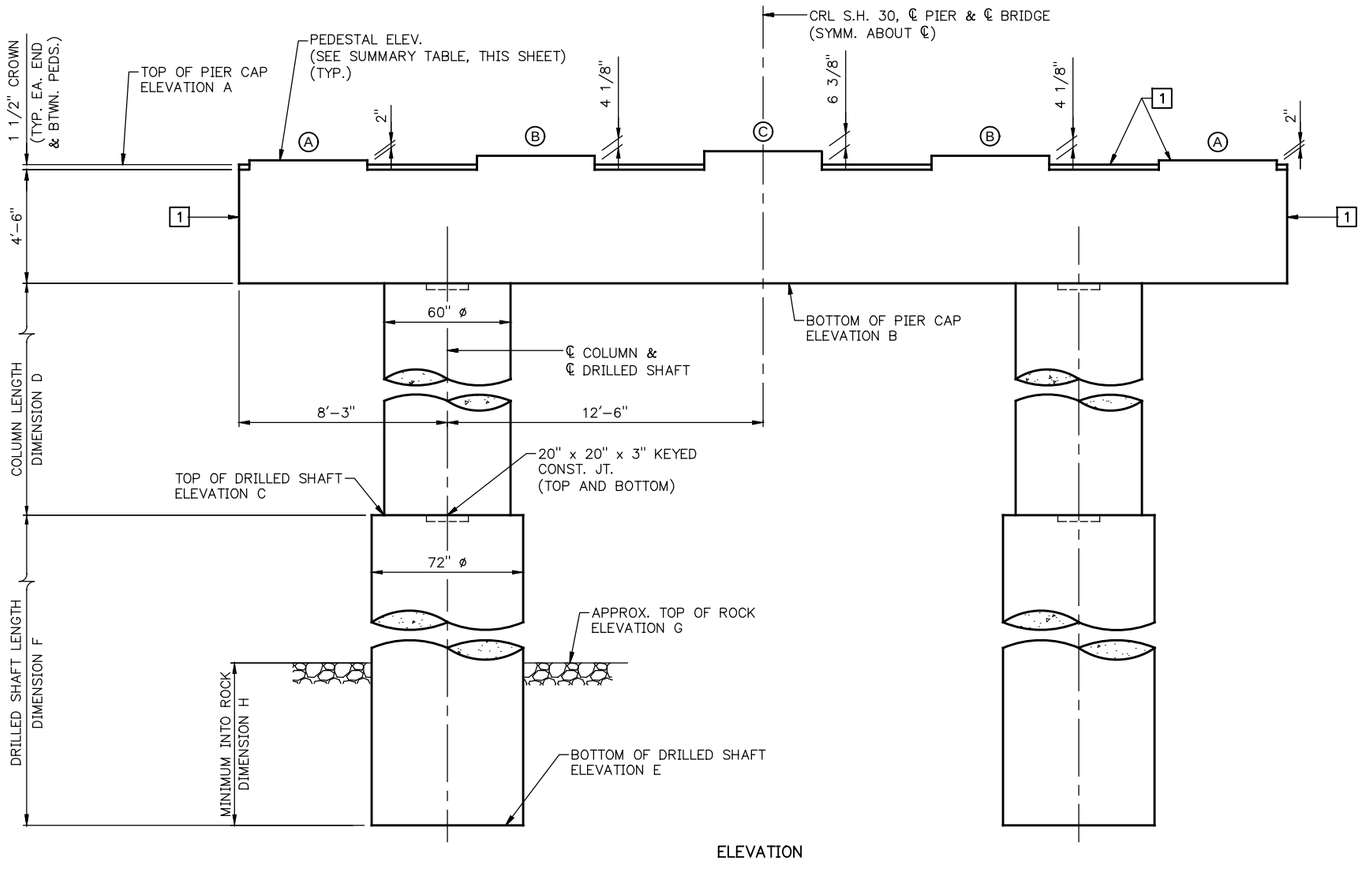
State Job No. 28768(04) Sheet No. 44

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY



PLAN



ELEVATION

TYPICAL PIER GEOMETRY AND DETAILS

[1] TREAT TOP OF PIER CAP, INCLUDING ALL SURFACES OF PEDESTALS, AND ALL VERTICAL FACES OF THE PIER CAP WITH A PENETRATING WATER REPELLENT SURFACE TREATMENT.

NOTES: ALL DIMENSIONS AND DETAILS ARE TYPICAL FOR PIERS 1 THRU 9 UNLESS NOTED OR SHOWN OTHERWISE.

FOR TYPICAL PIER CAP AND COLUMN AND DRILLED SHAFT REINFORCING DETAILS, SEE SHEET NOS. 46, 47 AND 48.

FOR PIER QUANTITIES, SEE SHEET NO. 48.

ALL EDGES OF THE PIER CAP SHALL HAVE A 1 1/2" CHAMFER, EXCEPT FOR EDGES OF PEDESTALS, WHICH SHALL HAVE 3/4" CHAMFERS.

SUMMARY OF STATIONS, DIMENSIONS AND ELEVATIONS FOR PIERS

LOCATION	WORKING POINT STATION AT ℄ PIER	PEDESTAL Ⓐ	PEDESTAL Ⓑ	PEDESTAL Ⓒ	TOP OF PIER CAP	BOTTOM OF PIER CAP	TOP OF DRILLED SHAFT
		ELEV.	ELEV.	ELEV.	A	B	C
PIER 1	582+80.46	1743.21	1743.39	1743.57	1743.04	1738.42	1733.00
PIER 2	583+80.46	1742.50	1742.68	1742.86	1742.33	1737.71	1724.50
PIER 3	584+80.46	1741.79	1741.97	1742.15	1741.62	1737.00	1724.00
PIER 4	585+80.46	1741.08	1741.26	1741.44	1740.91	1736.29	1718.00
PIER 5	586+80.46	1740.37	1740.55	1740.73	1740.20	1735.58	1716.00
PIER 6	587+80.46	1739.66	1739.84	1740.02	1739.49	1734.87	1718.00
PIER 7	588+80.46	1738.95	1739.13	1739.31	1738.78	1734.16	1719.00
PIER 8	589+80.46	1738.24	1738.42	1738.60	1738.07	1733.45	1719.00
PIER 9	590+80.46	1737.53	1737.71	1737.89	1737.36	1732.74	1725.00

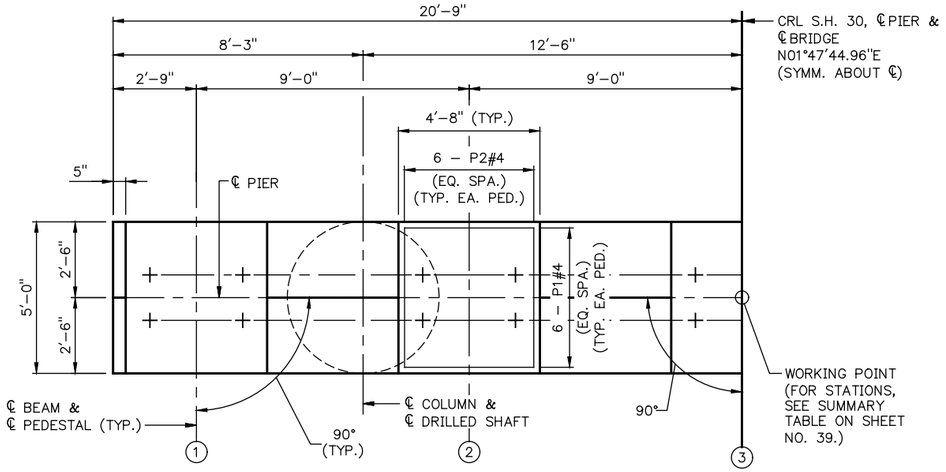
SUMMARY OF STATIONS, DIMENSIONS AND ELEVATIONS FOR PIERS - CONT'D

LOCATION	COLUMN LENGTH	BOTTOM OF DRILLED SHAFT	DRILLED SHAFT LENGTH	EST. TOP OF ROCK	MIN. LENGTH INTO ROCK
	D	E	F	G	H
PIER 1	5'-5"	1704.00	29'-0"	1719.00	15-0"
PIER 2	13'-2 1/2"	1688.50	36'-0"	1704.00	15'-6"
PIER 3	13'-0"	1679.00	45'-0"	1694.00	15'-0"
PIER 4	18'-3 1/2"	1683.00	35'-0"	1698.00	15'-0"
PIER 5	19'-7"	1686.00	30'-0"	1701.00	15'-0"
PIER 6	16'-10 1/2"	1678.00	40'-0"	1693.00	15'-0"
PIER 7	15'-1 7/8"	1651.00	68'-0"	1666.00	15'-0"
PIER 8	14'-5 3/8"	1648.00	71'-0"	1663.00	15'-0"
PIER 9	7'-8 7/8"	1640.00	85'-0"	1655.00	15'-0"

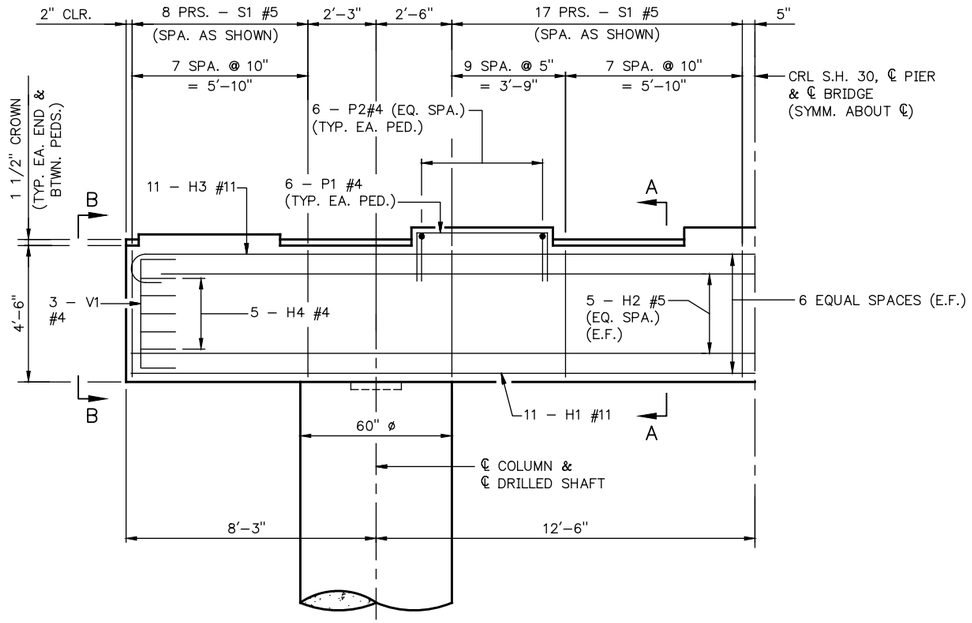
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

PIER DETAILS
(SHEET 1 OF 4)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 45

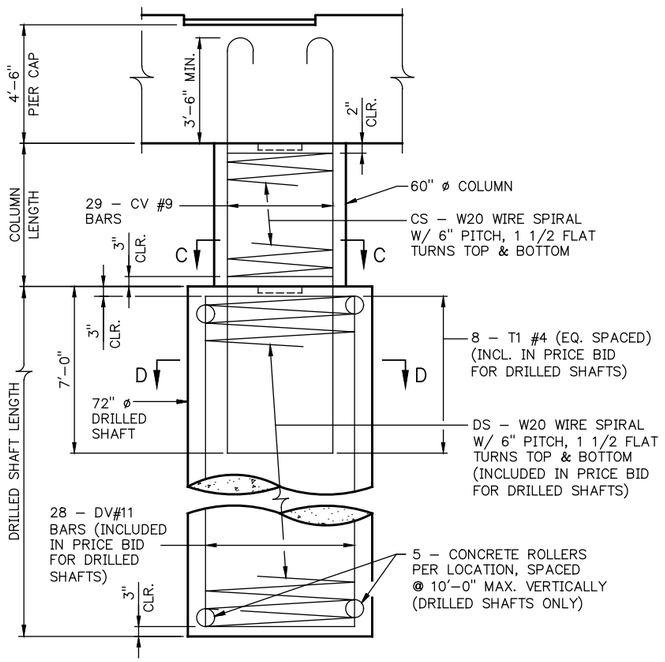


HALF PLAN



HALF ELEVATION

TYPICAL PIER CAP REINFORCING DETAILS

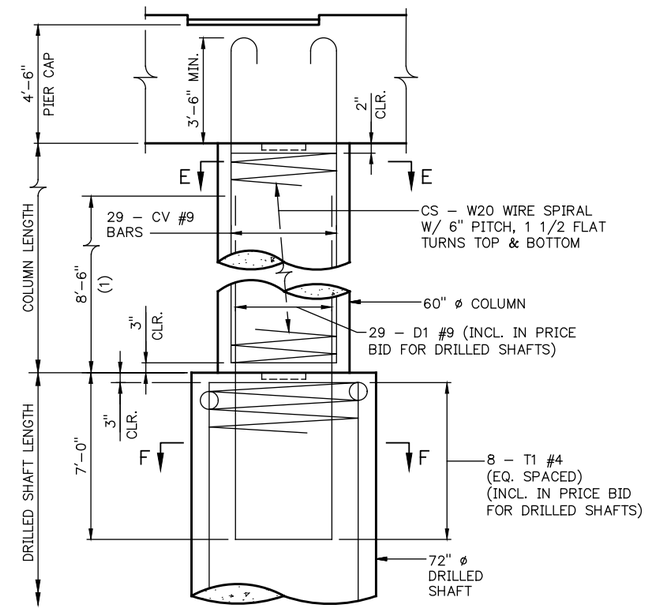


(TYPICAL DRILLED SHAFT REINFORCING DETAILS, UNLESS OTHERWISE SHOWN)

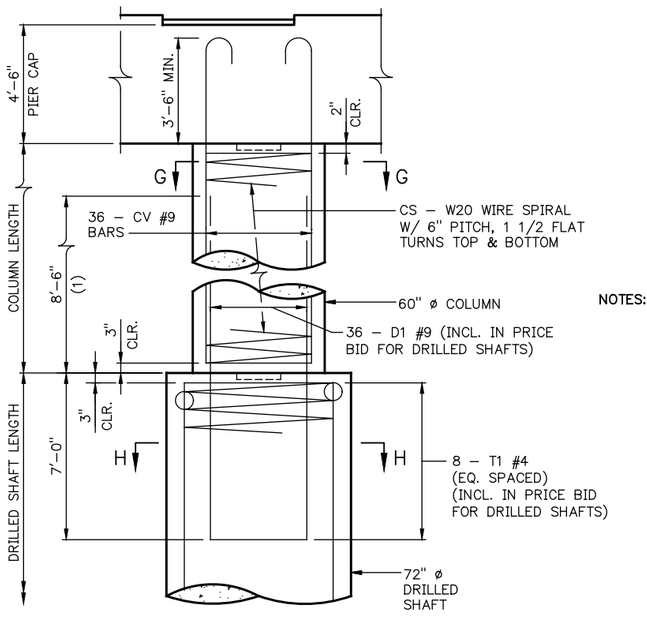
PIERS 1 AND 9

E.F. – DENOTES EACH FACE

(1) NOT TO BE CONSIDERED AS ADDITIONAL DRILLED SHAFT PAY LENGTH.



PIERS 2 AND 3



PIERS 4–8

TYPICAL COLUMN AND DRILLED SHAFT REINFORCING DETAILS

NOTES: ALL DIMENSIONS AND DETAILS ARE TYPICAL FOR PIERS 1 THRU 9 UNLESS NOTED OR SHOWN OTHERWISE.

FOR TYPICAL PIER GEOMETRY AND DETAILS, SEE SHEET NO. 45.

FOR SECTION VIEWS, SPIRAL REINFORCING AND CONCRETE ROLLER DETAILS, BAR LISTS, BAR BEND DETAILS AND QUANTITIES, SEE SHEET NOS. 47 AND 48.

PIER DETAILS

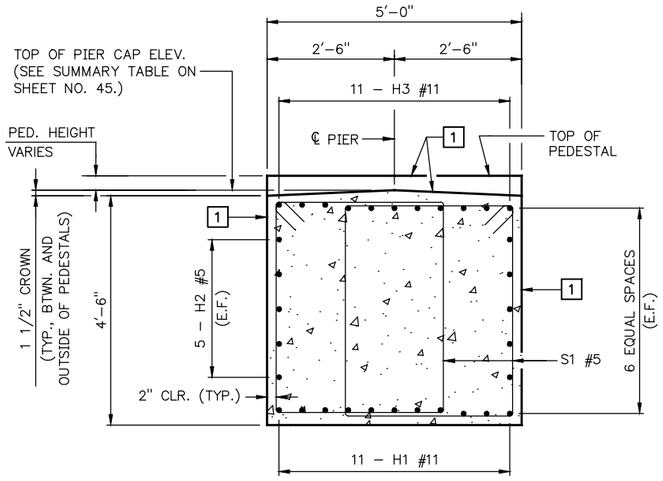
(SHEET 2 OF 4)

BRIDGE "A" C.R.L. STA. 586+80.46

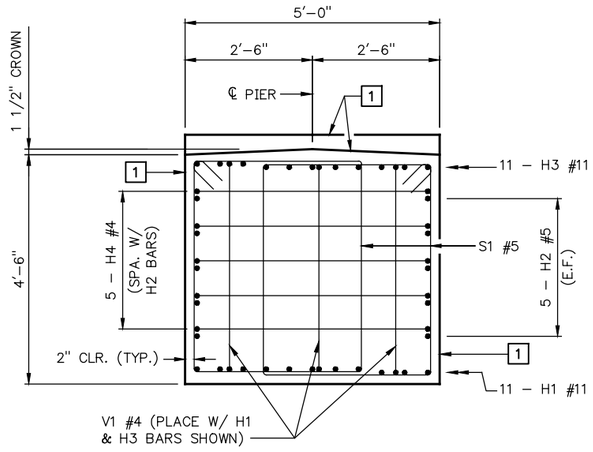
State Job No. 28768(04) Sheet No. 46

S.H. 30 BRIDGE & APPROACHES

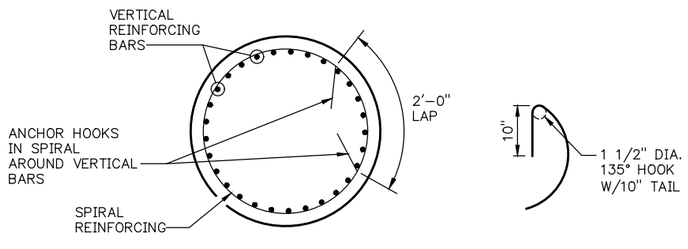
HARMON COUNTY



SECTION A–A

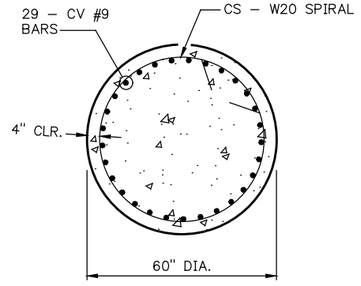


VIEW B–B
(TYP. EACH END OF CAP)
(FOR DETAILS NOT SHOWN, SEE SECTION A–A.)

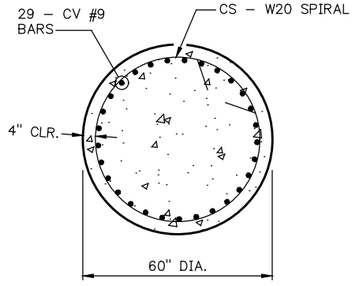


SPIRAL REINFORCING SPLICE DETAIL

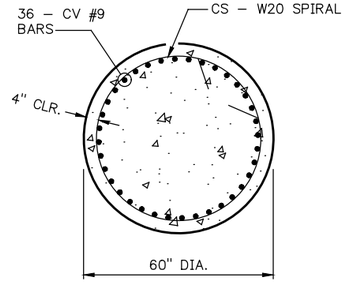
NOTE: SPIRAL BARS SHALL CONFORM TO AASHTO M32. SPIRAL BAR LENGTHS DO NOT INCLUDE LAPS. IF LAPS ARE REQUIRED, THE LENGTH OF THE LAP SHALL BE 2'–0" WITH 10" HOOKS.



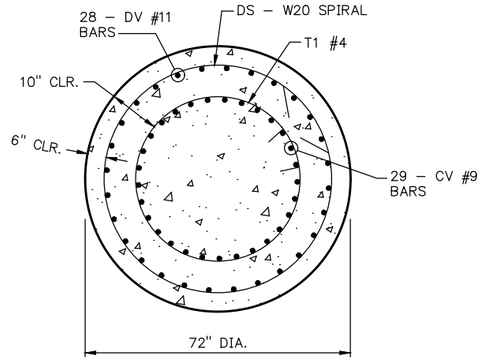
SECTION C–C



SECTION E–E

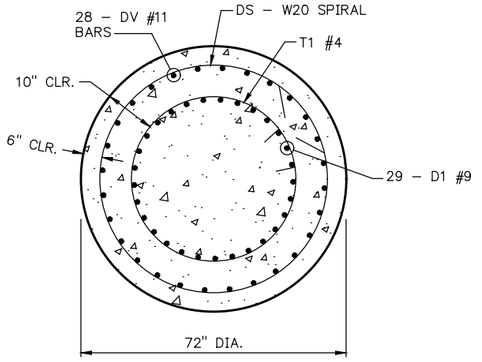


SECTION G–G



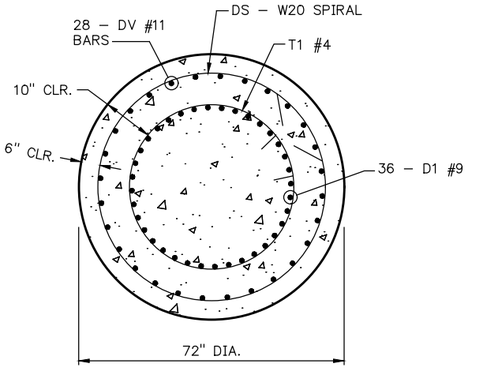
SECTION D–D

PIERS 1 AND 9



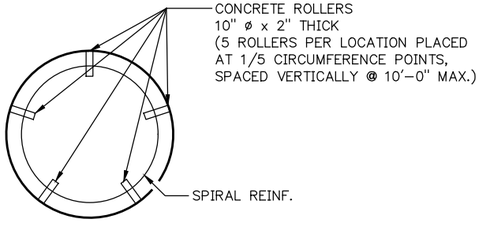
SECTION F–F

PIERS 2 AND 3

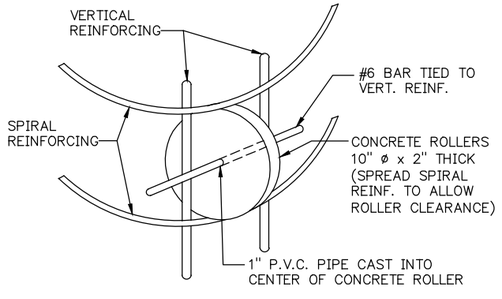


SECTION H–H

PIERS 4–8



ROLLER PLACEMENT DETAIL



DETAIL OF ROLLER INSTALLATION

ROLLER NOTES:

CONCRETE USED IN THE CONCRETE ROLLERS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. SLAB BOLSTERS, HIGH CHAIRS, AND PLASTIC ROLLERS SHALL NOT BE SUBSTITUTED FOR THE CONCRETE ROLLERS.

ALL MATERIALS, LABOR, AND INCIDENTALS REQUIRED FOR THE INSTALLATION OF THE CONCRETE ROLLERS TO BE INCLUDED IN THE PRICE BID FOR "DRILLED SHAFTS 72" DIAMETER".

1 TREAT TOP OF PIER CAP, INCLUDING ALL SURFACES OF PEDESTALS, AND ALL VERTICAL FACES OF THE PIER CAP WITH A PENETRATING WATER REPELLENT SURFACE TREATMENT.

NOTES: E.F. – DENOTES EACH FACE

ALL DIMENSIONS AND DETAILS ARE TYPICAL FOR PIERS 1 THRU 9 UNLESS NOTED OR SHOWN OTHERWISE.

FOR BAR LISTS, BAR BEND DETAILS AND QUANTITIES, SEE SHEET NO. 48.

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

PIER DETAILS

(SHEET 3 OF 4)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 47

PIER CAP BAR LIST (9 REQ'D)				
MARK	NO.	SIZE	FORM	LENGTH
(EPOXY COATED)				
H1	11	#11	STR.	41'-2"
H2	10	#5	STR.	41'-2"
H3	11	#11	BNT.	44'-4"
H4	10	#4	BNT.	6'-6"
P1	30	#4	BNT.	7'-6"
P2	30	#4	BNT.	7'-10"
S1	100	#5	BNT.	15'-11"
V1	6	#4	BNT.	6'-0"

	PIER 1 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV1	58	#9	BNT.	17'-3"
	(NON-EPOXY COATED)				
	CS1	2	W20	SPIRAL	178'-0"
	PIER 1 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	DV1	56	#11	STR.	28'-6"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS1	2	W20	SPIRAL	937'-0"

	PIER 2 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV2	58	#9	BNT.	17'-9"
	(NON-EPOXY COATED)				
	CS2	2	W20	SPIRAL	388'-0"
	PIER 2 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	58	#9	STR.	15'-6"
(1)	DV2	56	#11	STR.	35'-6"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS2	2	W20	SPIRAL	1155'-0"

	PIER 3 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV3	58	#9	BNT.	17'-6"
	(NON-EPOXY COATED)				
	CS3	2	W20	SPIRAL	382'-0"
	PIER 3 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	58	#9	STR.	15'-6"
(1)	DV3	56	#11	STR.	44'-6"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS3	2	W20	SPIRAL	1436'-0"

	PIER 4 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV4	72	#9	BNT.	22'-10"
	(NON-EPOXY COATED)				
	CS4	2	W20	SPIRAL	525'-0"
	PIER 4 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	72	#9	STR.	15'-6"
(1)	DV4	56	#11	STR.	34'-6"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS4	2	W20	SPIRAL	1124'-0"

	PIER 5 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV5	72	#9	BNT.	24'-1"
	(NON-EPOXY COATED)				
	CS5	2	W20	SPIRAL	560'-0"
	PIER 5 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	72	#9	STR.	15'-6"
(1)	DV5	56	#11	STR.	29'-6"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS5	2	W20	SPIRAL	968'-0"

	PIER 6 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV6	72	#9	BNT.	21'-5"
	(NON-EPOXY COATED)				
	CS6	2	W20	SPIRAL	487'-0"
	PIER 6 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	72	#9	STR.	15'-6"
(1)	DV6	56	#11	STR.	39'-6"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS6	2	W20	SPIRAL	1280'-0"

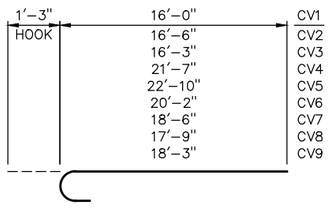
	PIER 7 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV7	72	#9	BNT.	19'-9"
	(NON-EPOXY COATED)				
	CS7	2	W20	SPIRAL	441'-0"
	PIER 7 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	72	#9	STR.	15'-6"
(1)(2)	DV7	56	#11	STR.	76'-0"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS7	2	W20	SPIRAL	2153'-0"

	PIER 8 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV8	72	#9	BNT.	19'-0"
	(NON-EPOXY COATED)				
	CS8	2	W20	SPIRAL	422'-0"
	PIER 8 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)	D1	72	#9	STR.	15'-6"
(1)(2)	DV8	56	#11	STR.	79'-0"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS8	2	W20	SPIRAL	2246'-0"

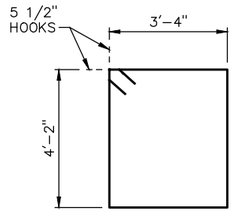
	PIER 9 BAR LIST				
	MARK	NO.	SIZE	FORM	LENGTH
	(EPOXY COATED)				
	CV9	58	#9	BNT.	19'-6"
	(NON-EPOXY COATED)				
	CS9	2	W20	SPIRAL	240'-0"
	PIER 9 DRILLED SHAFTS				
	(EPOXY COATED)				
(1)(2)	DV9	56	#11	STR.	93'-0"
(1)	T1	16	#4	BNT.	16'-8"
	(NON-EPOXY COATED)				
(1)	DS9	2	W20	SPIRAL	2683'-0"

(1) INCLUDED IN PRICE BID PER LINEAR FOOT FOR "DRILLED SHAFTS 72" DIAMETER".

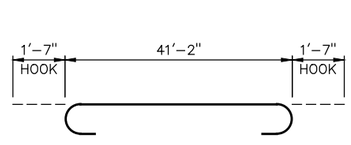
(2) LENGTH INCLUDES ONE (1) 8'-6" LAP SPLICE, LAP SPLICES SHALL BE STAGGERED.



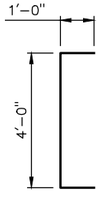
CV1 #9 x 17'-3"
CV2 #9 x 17'-9"
CV3 #9 x 17'-6"
CV4 #9 x 22'-10"
CV5 #9 x 24'-1"
CV6 #9 x 21'-5"
CV7 #9 x 19'-9"
CV8 #9 x 19'-0"
CV9 #9 x 19'-6"



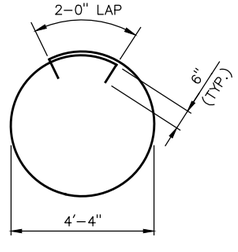
S1 #5 x 15'-11"



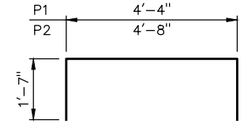
H3 #11 x 44'-4"



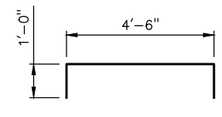
V1 #4 x 6'-0"



T1 #4 x 16'-8"



P1 #4 x 7'-6"
P2 #4 x 7'-10"



H4 #4 x 6'-6"

BAR BEND DETAILS

PIER QUANTITIES											
ITEM	UNITS	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	TOTAL
CLASS A CONCRETE	CY	44.70	56.00	55.70	63.40	65.30	61.30	58.80	57.80	48.00	511.00
REINFORCING STEEL	LB	250.00	530.00	520.00	720.00	770.00	670.00	600.00	580.00	330.00	4,970.00
EPOXY COATED REINFORCING STEEL	LB	10,880.00	10,980.00	10,930.00	13,060.00	13,370.00	12,720.00	12,310.00	12,130.00	11,320.00	107,700.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	675.00
DRILLED SHAFTS 72" DIAMETER	LF	58.00	72.00	90.00	70.00	60.00	80.00	136.00	142.00	170.00	878.00
① CROSSHOLE SONIC LOGGING	EA	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	4.00

① ESTIMATED QUANTITY ONLY, PER PIER, TO BE USED AS DIRECTED BY THE ENGINEER.

PIER DETAILS

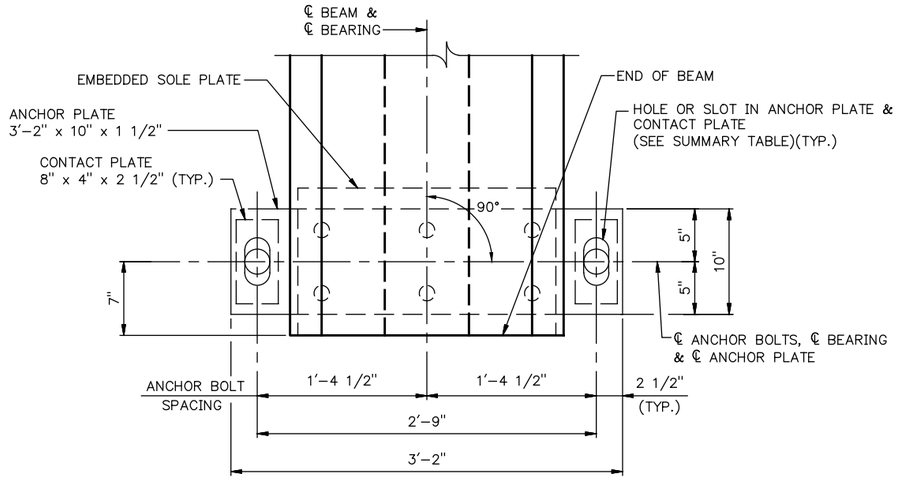
(SHEET 4 OF 4)

BRIDGE "A" C.R.L. STA. 586+80.46

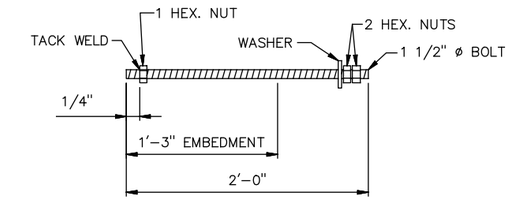
State Job No. 28768(04) Sheet No. 48

S.H. 30 BRIDGE & APPROACHES

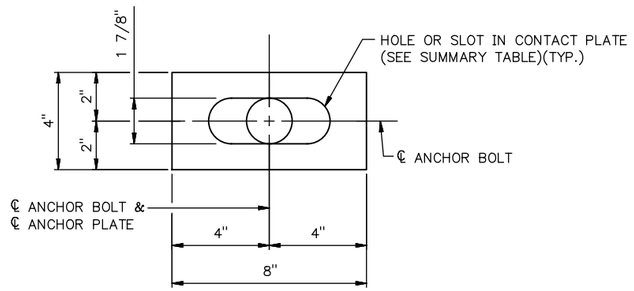
HARMON COUNTY



PLAN VIEW



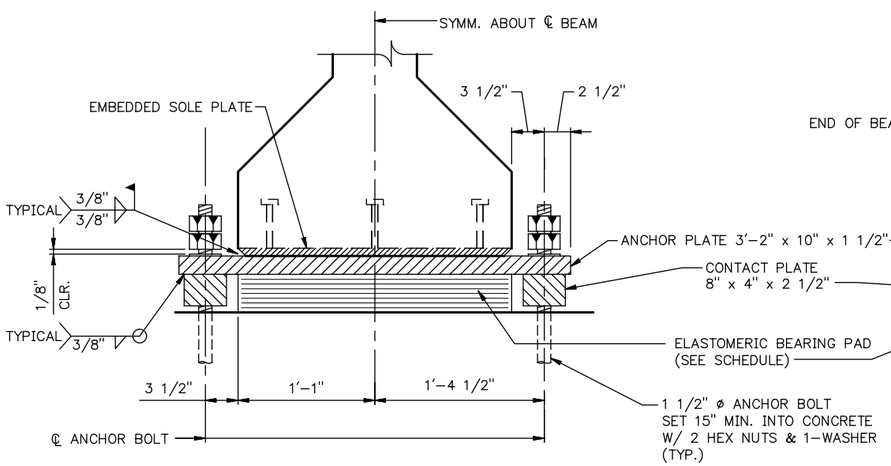
ANCHOR BOLT DETAIL



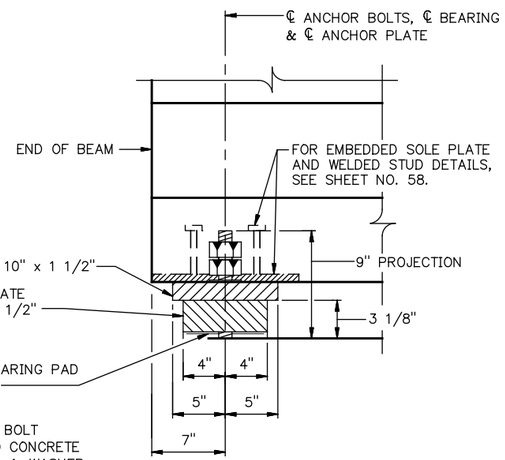
DETAIL OF CONTACT PLATE
(2 1/2" THICK)

BEARING PAD SCHEDULE FOR PIERS (DURO 60) (100 REQ'D)
SIZE - 8" x 2'-2" x 3 1/8" WITH
6 - 1/8" STEEL LAMINATES
2 - 1/4" EXTERIOR ELASTOMER LAYERS
5 - 3/8" INTERIOR ELASTOMER LAYERS

SUMMARY OF DIMENSIONS FOR HOLES & SLOTS		
LOCATION	IN ANCHOR PLATE	IN CONTACT PLATE
EXPANSION OR CONTINUOUS BEARING	2 3/8" x 5 1/2" SLOT	1 7/8" x 5" SLOT
FIXED BEARING	2 3/8" HOLE	1 7/8" HOLE



END VIEW



SIDE VIEW

BEARING ASSEMBLY DETAILS

NOTES: PROVIDE STRUCTURAL STEEL FOR ANCHOR PLATES AND CONTACT PLATES IN ACCORDANCE WITH ASTM A240 (AUSTENITIC STAINLESS STEEL, TYPE 316 OR 316L, CHARPY V–NOTCH TESTING NOT REQUIRED). FOR ANCHOR BOLTS, PROVIDE CONTINUOUSLY THREADED BARS IN ACCORDANCE WITH ASTM A320, CLASS 2, GRADE B8M (AUSTENITIC STAINLESS STEEL, TYPE 316 OR 316L, CHARPY V–NOTCH TESTING NOT REQUIRED). USE AUSTENITIC STAINLESS STEEL NUTS AND WASHERS CONFORMING TO ASTM A194, GRADE 8M, AND ASTM A320, TYPE 316 OR 316L, RESPECTIVELY. PERFORM ALL WELDING CONSISTENT WITH PROCEDURES FOR STAINLESS STEEL.

ANCHOR PLATES FOR BEARING ASSEMBLIES SHALL BE MATCH–MARKED, SHIPPED LOOSE, AND FIELD WELDED TO THE ENCASED SOLE PLATE IN ORDER THAT MINOR HORIZONTAL ADJUSTMENT OF THE BEARING LOCATION MAY BE MADE IF NECESSARY.

METAL USED IN FIELD WELDS WILL NOT BE MEASURED FOR PAYMENT.

ALL BEARING PADS SHALL BE CENTERED BETWEEN ANCHOR BOLTS AT THE PIERS.

AT THE TIME OF SETTING THE BEARING ASSEMBLIES AT THE PIERS, THE SLOT IN THE ANCHOR PLATES SHALL BE CENTERED ON THE ANCHOR BOLTS. THE DIMENSION FROM THE END OF THE BEAM TO THE CENTERLINE OF THE ANCHOR BOLTS MAY VARY FROM THAT SHOWN, DEPENDING ON THE SETTING TEMPERATURE.

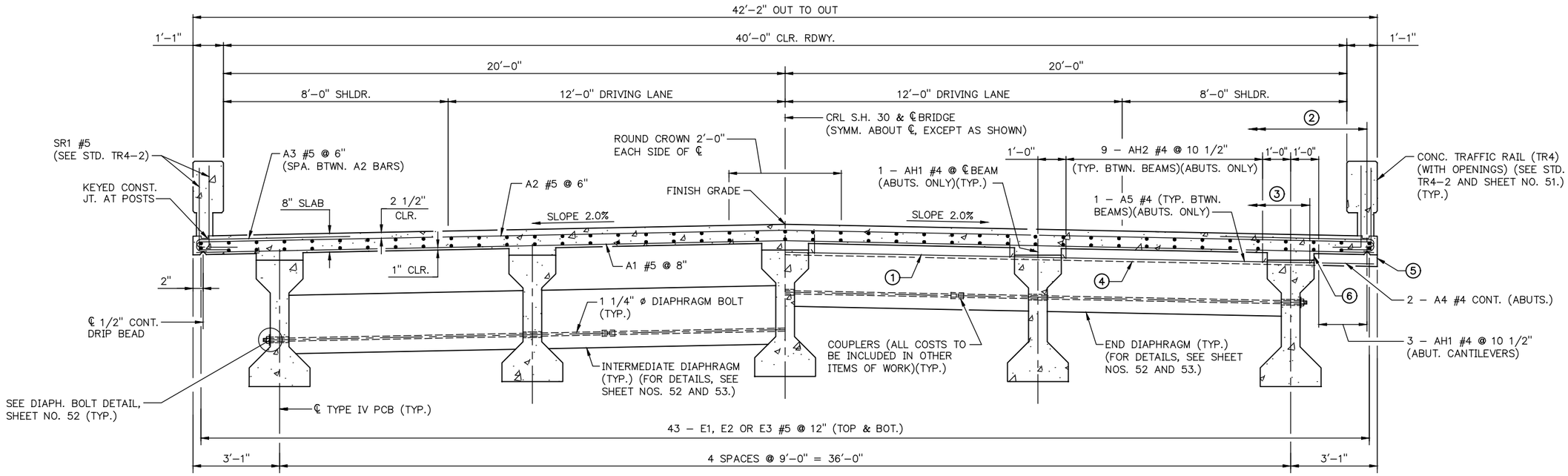
BONDING BETWEEN THE ANCHOR PLATE AND BEARING PAD IS REQUIRED ON ALL EXPANSION BEARINGS AT EXPANSION PIERS. BONDING IS NOT REQUIRED ON FIXED BEARINGS OR EXPANSION BEARINGS AT CONTINUOUS EXPANSION PIERS.

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

BEARING DETAILS

BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 49



HALF SECTION WITHIN SPAN

HALF SECTION NEAR ABUTMENTS AND PIERS

TYPICAL CROSS SECTION

NOTE: ROTATE A2 AND A3 BARS TO ENSURE MINIMUM CLEARANCE IS MET TOP & BOTTOM OF HOOK(S).

NOTES: SR1 BARS IN TRAFFIC RAILS SHALL BE TIED IN PLACE PRIOR TO POURING SLABS.

FOR LONGITUDINAL SECTION AND TRAFFIC RAIL POST SPACINGS, SEE SHEET NO. 51.

FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE SHEET NOS. 52 AND 53.

FOR SLAB REINFORCING PLANS, SEE SHEET NOS. 56 AND 57.

FOR BAR BEND DETAILS, SEE SHEET NO. 52.

FOR BRIDGE SLAB NOTES, SEE SHEET NOS. 56 AND 57.

FOR PC BEAM DETAILS AND DEAD LOAD DEFLECTION DIAGRAM, SEE SHEET NO. 58.

① 1 – A6 #4 CONT. (PIERS 1, 4, 6 & 9 ONLY) (EA. SIDE OF EXP. DEVICE);
1 – A7 #4 CONT. (PIERS 2, 3, 5, 7 & 8 ONLY) (EA. SIDE OF CONST. JT.).

② 43 – EPH1 #4 @ 12" (PIERS 1, 4, 6 & 9 ONLY) (EA. SIDE OF EXP. DEVICE).

③ 36 – FPH1 #4 @ 12" (PIERS 2, 3, 5, 7 & 8 ONLY).

④ BOTTOM OF SLAB THICKENING IS 2" BELOW THE TOP OF THE BEAMS AT THE ABUTMENTS (SHOWN) AND LEVEL WITH THE TOP OF THE BEAMS AT THE PIERS.

⑤ OUTSIDE EDGE OF SLAB THICKENING AT THE ABUTMENTS AND PIERS 1, 4, 6 AND 9.

⑥ OUTSIDE EDGE OF SLAB THICKENING AT PIERS 2, 3, 5, 7 AND 8.

SUPERSTRUCTURE BAR LIST

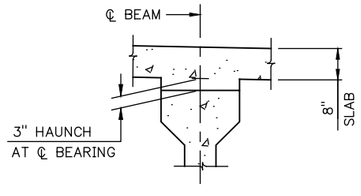
	MARK	NO.	SIZE	FORM	LENGTH	REMARKS
				(EPOXY COATED)		
	A1	1528	#5	STR.	41'-10"	
	A2	2012	#5	BNT.	43'-0"	
	A3	4004	#5	BNT.	6'-0"	
	A4	4	#4	STR.	41'-10"	
	A5	8	#4	STR.	7'-0"	
	A6	8	#4	STR.	41'-10"	
	A7	10	#4	STR.	41'-10"	
(1)	E1	172	#5	STR.	103'-5"	
(2)(3)	E2	172	#5	STR.	314'-6"	
(3)(4)	E3	86	#5	STR.	208'-6"	
	AH1	22	#4	BNT.	3'-1"	
	AH2	72	#4	BNT.	4'-7"	
	EPH1	344	#4	BNT.	3'-1"	
	FPH1	180	#4	BNT.	4'-9"	
	F1	240	#4	STR.	8'-0"	
	F2	320	#4	STR.	7'-0"	
	F3	160	#4	STR.	8'-0"	
	U1	360	#4	BNT.	4'-9"	
	U2	720	#4	BNT.	6'-3"	
(5)	SR1	3912	#5	BNT.	4'-1"	
	AS1	86	#4	BNT.	5'-0"	

(1) LENGTH INCLUDE ONE (1) 3'-0" LAP SPLICE. LAP SPLICES SHALL BE STAGGERED.
(2) LENGTH INCLUDES FIVE (5) 3'-0" LAP SPLICES. LAP SPLICES SHALL BE STAGGERED.
(3) DO NOT LAP WITHIN 10'-0" OF CENTERLINE OF PIER.
(4) LENGTH INCLUDES THREE (3) 3'-0" LAP SPLICES. LAP SPLICES SHALL BE STAGGERED.
(5) FOR BAR BEND DETAILS, SEE STD. TR4-2.

SUPERSTRUCTURE QUANTITIES

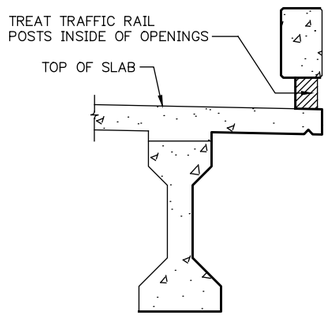
ITEM	UNITS	TOTAL
PRESTRESSED CONCRETE BEAMS (TYPE IV)	LF	4,983.30
SAW-CUT GROOVING	SY	4,452.00
SEALED EXPANSION JOINT	LF	172.80
CONCRETE RAIL (TR4)	LF	2,019.40
STRUCTURAL STEEL	LB	4,500.00
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	40.00
STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA	60.00
CLASS AA CONCRETE	CY	1,144.90
EPOXY COATED REINFORCING STEEL	LB	302,570.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	3,717.00
SEALER CRACK PREPARATION	LF	204.00
SEALER RESIN	GAL	3.00

NOTE: DO NOT PLACE THE CONCRETE FOR THE BRIDGE SLAB OR APPLY OTHER MASSIVE LOADS TO THE BEAMS OR DIAPHRAGMS UNTIL THE CONCRETE IN THE DIAPHRAGMS HAS BEEN IN PLACE A MINIMUM OF 10 DAYS, OR AT THE DISCRETION OF THE ENGINEER. THE ENGINEER MAY APPROVE SHORTENED TIME IF THE BEAM AND DIAPHRAGM CONCRETE HAS ATTAINED 80% OF THE SPECIFIED COMPRESSIVE STRENGTH.



HAUNCH DETAIL AT BEARINGS

NOTE: PLAN QUANTITIES FOR "CLASS AA CONCRETE" INCLUDE 37.60 CY FOR BEAM HAUNCHES. HAUNCH HEIGHT SHOWN IS THE THEORETICAL HAUNCH HEIGHT AT THE CENTERLINE BEARING ONLY, MEASURED FROM THE BOTTOM OF THE SLAB TO THE TOP OF THE BEAM, AND VARIES ACROSS THE SPAN. DETERMINE THE ACTUAL HAUNCH HEIGHT (ACCOUNTING FOR BEAM CAMBER, DEAD LOAD DEFLECTION AND ROADWAY GRADE) AFTER ERECTION OF THE BEAMS AND SUBMIT TO THE ENGINEER FOR APPROVAL. THE ENGINEER WILL NOT MEASURE DIFFERENCES BETWEEN THE THEORETICAL AND THE ACTUAL HAUNCH HEIGHTS FOR PAYMENT.



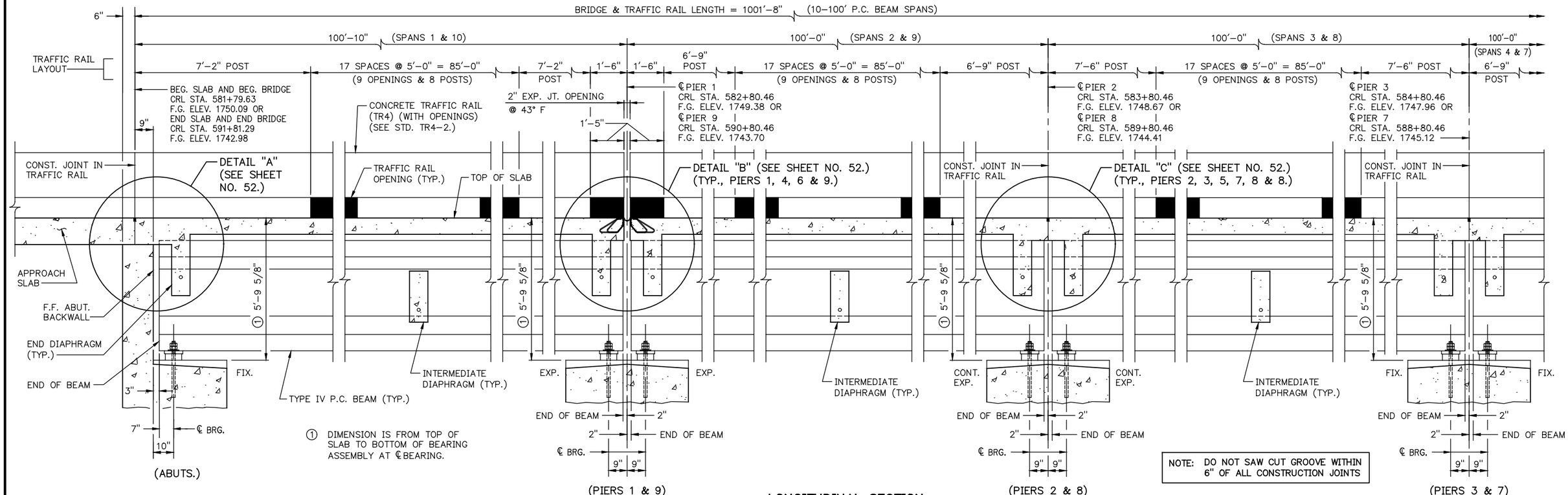
WATER REPELLENT SURFACE TREATMENT

NOTE: SURFACES INDICATED WITH HEAVY LINES SHALL BE TREATED WITH A PENETRATING WATER REPELLENT SURFACE TREATMENT. (TYP. EA. SIDE)

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

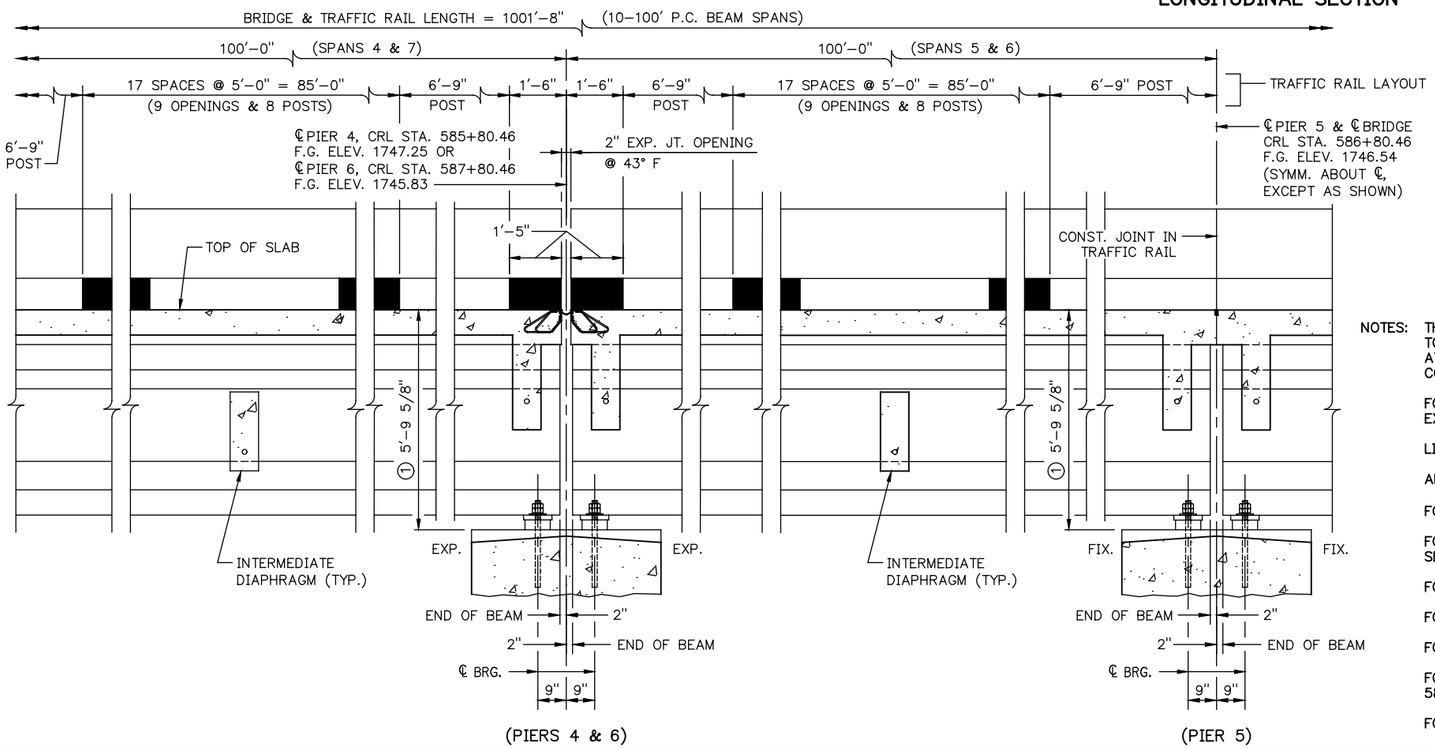
TYPICAL CROSS SECTION
BRIDGE "A" C.R.L. STA. 586+80.46

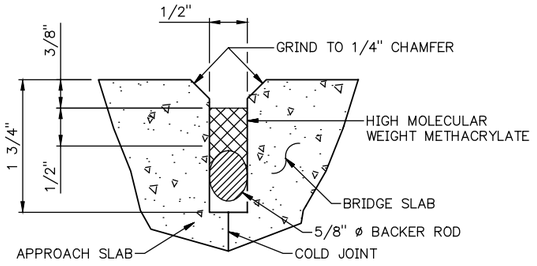
State Job No. 28768(04) Sheet No. 50



NOTE: DO NOT SAW CUT GROOVE WITHIN 6" OF ALL CONSTRUCTION JOINTS

LONGITUDINAL SECTION





1/2" SAWED AND SEALED CONSTRUCTION JOINT

EXPANSION DEVICE SETTING TABLE	
TEMPERATURE	OPENING
7 F	2 5/8"
14 F	2 1/2"
21 F	2 3/8"
2 F	2 1/4"
36 F	2 1/8"
43 F	2"
5 F	1 7/8"
58 F	1 3/4"
65 F	1 5/8"
72 F	1 1/2"
7 F	1 3/8"
87 F	1 1/4"
4 F	1 1/8"
1 1 F	1"

NOTES:

THE DECK SLAB SHALL BE POURED ONE SPAN AT A TIME. A SPAN ADJACENT TO A FIXED OR CONTINUOUS EXPANSION PIER SHALL NOT BE POURED UNTIL AT LEAST 48 HOURS AFTER THE POUR OF ANY ADJACENT SPAN HAS BEEN COMPLETED.

FOR EXPANSION JOINT DETAILS, SEE STDS. EJ-SQ AND EJ-DTL. FOLLOW EXPANSION DEVICE SETTING TABLE SHOWN ON THIS SHEET.

LINEAR INTERPOLATION MAY BE USED BETWEEN TEMPERATURE VALUES SHOWN.

ALL LONGITUDINAL DIMENSIONS ARE HORIZONTAL DIMENSIONS.

FOR DETAILS "A", "B" AND "C", SEE SHEET NO. 52.

FOR INTERMEDIATE AND END DIAPHRAGM LAYOUT & REINFORCING DETAILS, SEE SHEET NOS. 52 AND 53.

FOR SLAB REINFORCING PLANS, SEE SHEET NOS. 56 AND 57.

FOR BAR BEND DETAILS, SEE SHEET NO. 52.

FOR BRIDGE SLAB NOTES, SEE SHEET NOS. 56 AND 57.

FOR PC BEAM DETAILS AND DEAD LOAD DEFLECTION DIAGRAM, SEE SHEET NO. 58.

FOR DETAIL AND REQUIREMENTS OF JOINTS AND SEALERS, SEE STD. LECS-4.

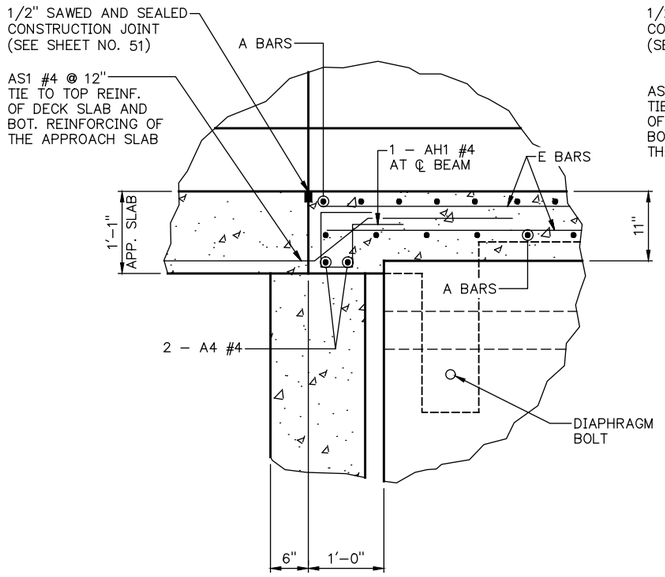
TYPICAL LONGITUDINAL SECTION

BRIDGE "A" C.R.L. STA. 586+80.46

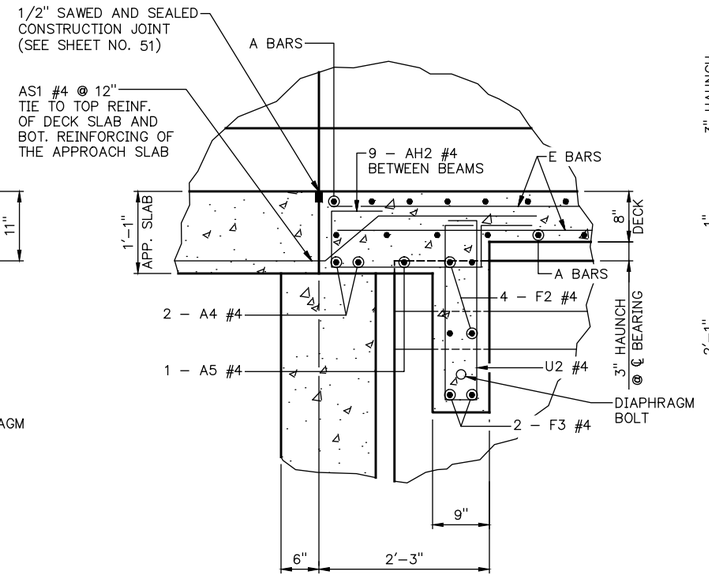
State Job No. 28768(04) Sheet No. 51

S.H. 30 BRIDGE & APPROACHES

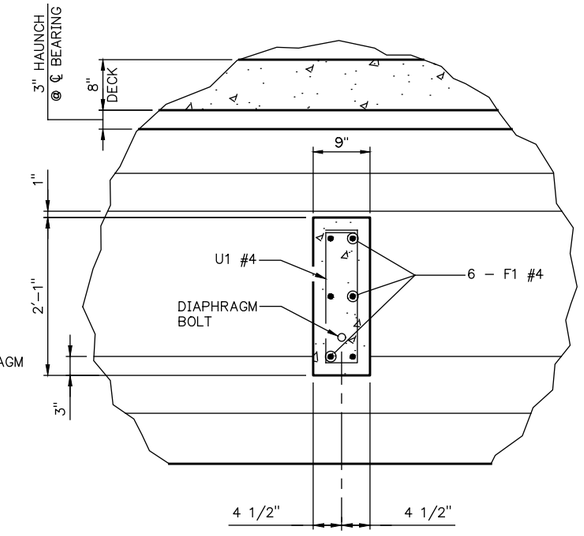
HARMON COUNTY



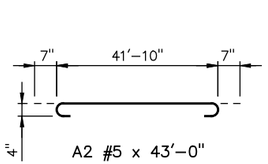
DETAIL "A" (AT BEAM ℄)



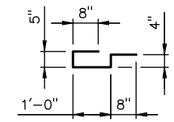
DETAIL "A" (BTWN. BEAMS)



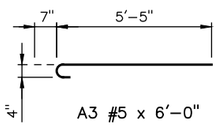
INTERMEDIATE DIAPHRAGM



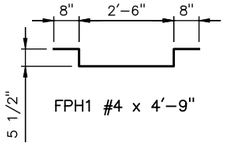
A2 #5 x 43'–0"



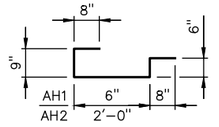
EPH1 #4 x 3'–1"



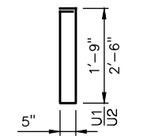
A3 #5 x 6'–0"



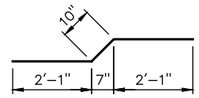
FPH1 #4 x 4'–9"



AH1 #4 x 3'–1"
AH2 #4 x 4'–7"

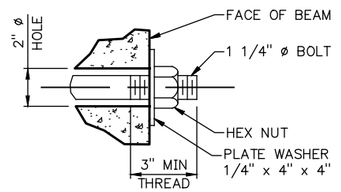


U1 #4 x 4'–9"
U2 #4 x 6'–3"



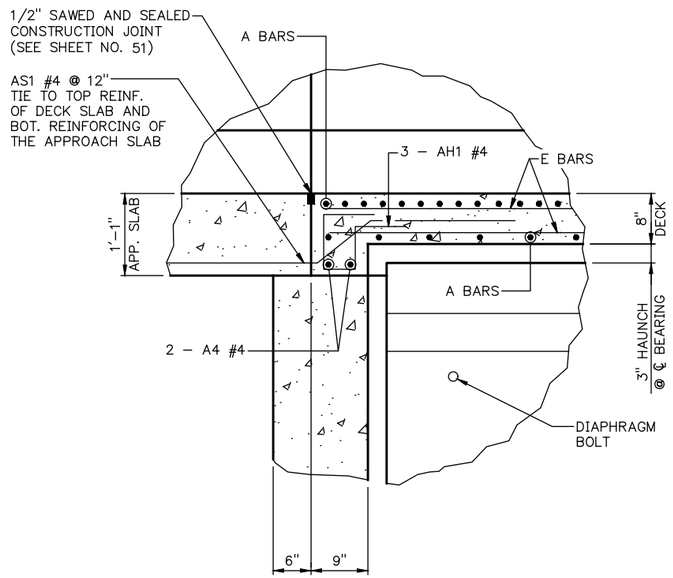
AS1 #4 x 5'–0"

BAR BEND DETAILS

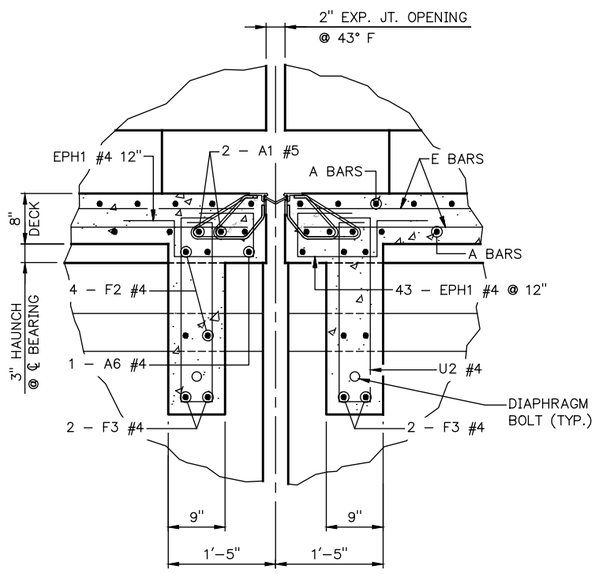


DIAPHRAGM BOLT DETAIL

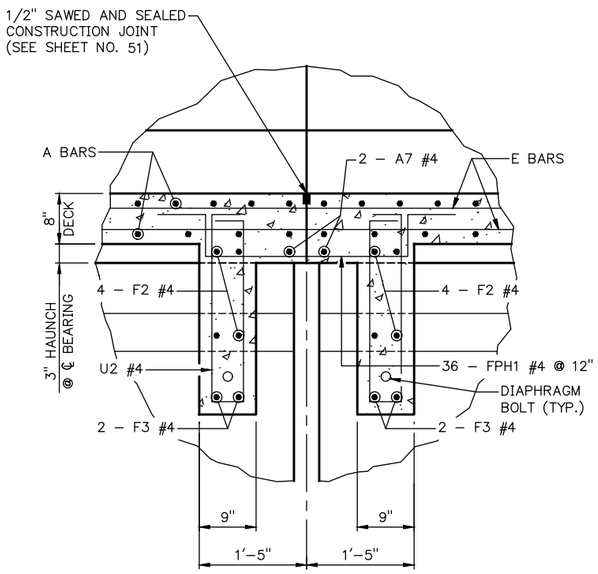
DIAPHRAGM BOLT NOTE:
STRUCTURAL STEEL FOR DIAPHRAGM BOLTS AND PLATE WASHERS SHALL CONFORM TO AASHTO M270 (ASTM A709), GRADE 50W (WEATHERING STEEL, CHARPY V–NOTCH TESTING NOT REQUIRED). A #10 REINFORCING BAR CONFORMING TO AASHTO M31, GRADE 60, AND THREADED AT THE ENDS AS SHOWN MAY BE SUBSTITUTED FOR THE DIAPHRAGM BOLT. HEX NUTS SHALL CONFORM TO AASHTO M291 (ASTM A563). PAINT EXPOSED DIAPHRAGM BOLT, HEX NUTS AND PLATE WASHERS WITH TWO (2) COATS OF ZINC RICH PAINT (6 MIL. THICKNESS) AFTER ASSEMBLY. ALL COSTS OF DIAPHRAGM BOLTS, PLATE WASHERS AND HEX NUTS TO BE INCLUDED IN THE PRICE BID FOR "STRUCTURAL STEEL".



DETAIL "A" (AT CANTILEVERS)



DETAIL "B"



DETAIL "C"

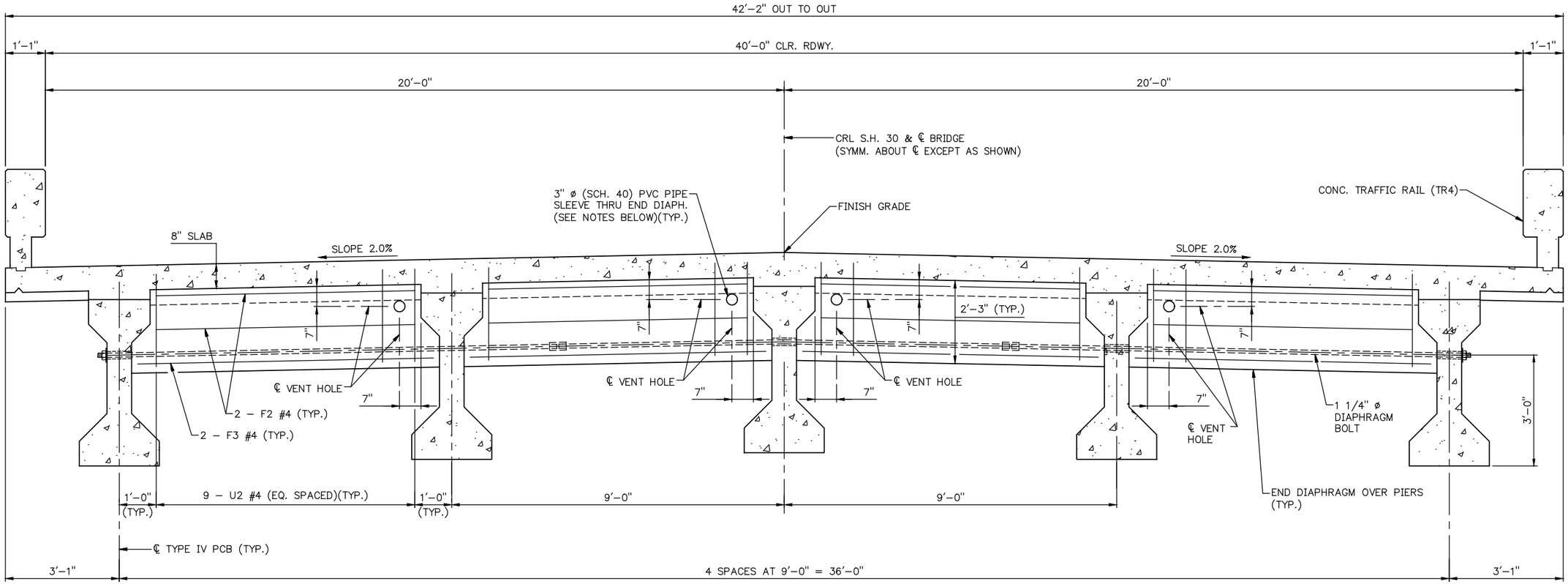
DIAPHRAGM DETAILS

(SHEET 1 OF 2)

BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 52

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



END DIAPHRAGM DETAIL

NOTES: VENT HOLES (PVC SLEEVES) SHALL BE PLACED THRU EACH CONCRETE END DIAPHRAGM, ONE (1) PER BAY, OVER EVERY PIER.

THE 3" ø PVC PIPE SLEEVES SHALL BE PLACED TO PROVIDE A MINIMUM OF 2" CLR. TO THE REINFORCING STEEL.

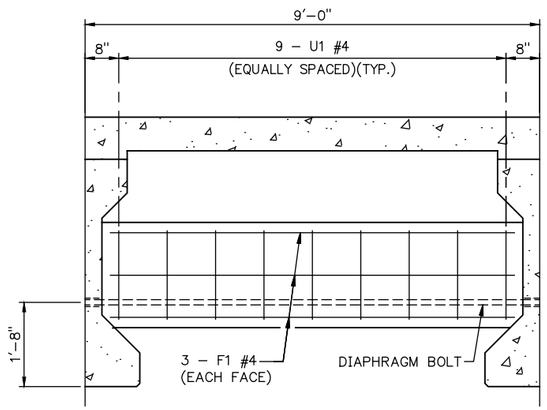
ALL COSTS FOR INSTALLING THE 3" ø PVC PIPE SLEEVES, INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID FOR "CLASS AA CONCRETE".

FOR ADDITIONAL INTERMEDIATE AND END DIAPHRAGM SECTION & REINFORCING DETAILS, SEE SHEET NO. 52.

FOR SLAB REINFORCING PLANS, SEE SHEET NOS. 56 AND 57.

FOR BAR BEND DETAILS, SEE SHEET NO. 52.

FOR BRIDGE SLAB NOTES, SEE SHEET NOS. 56 AND 57.

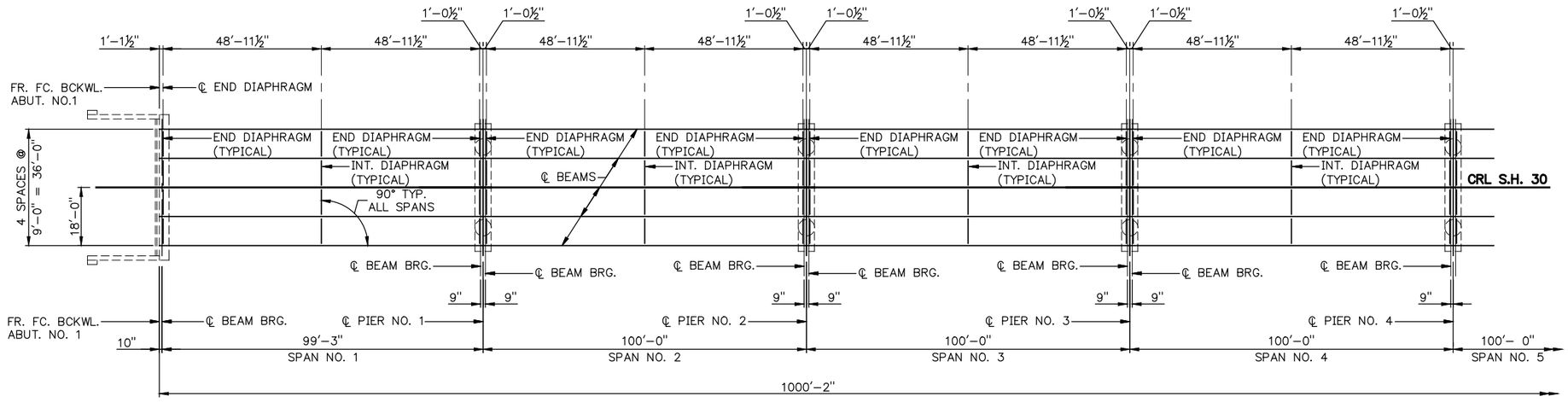


INTERMEDIATE DIAPHRAGM DETAIL

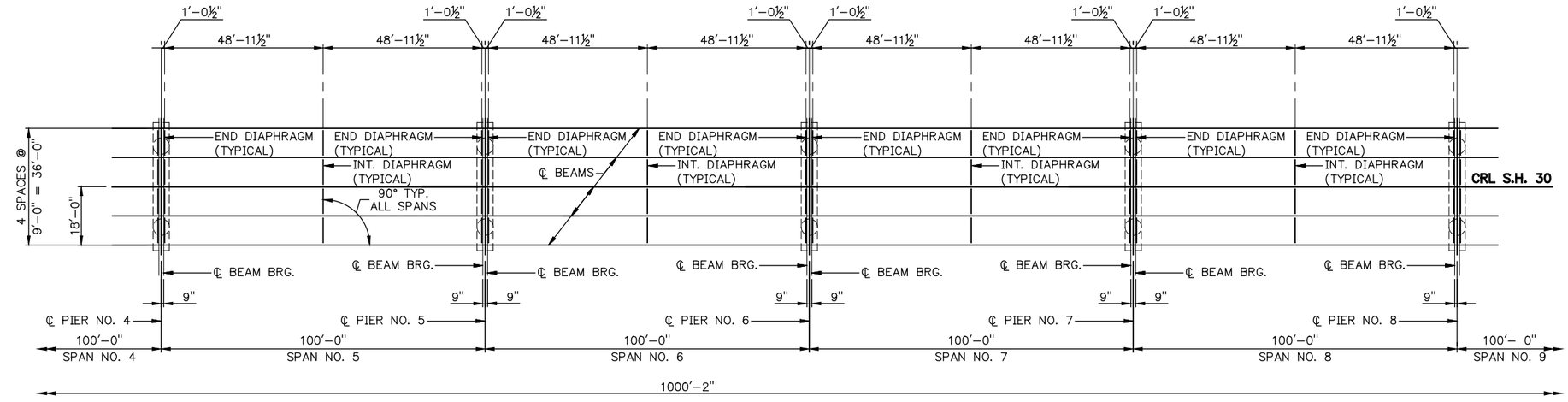
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

DIAPHRAGM DETAILS
(SHEET 2 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 53



SPAN NO. 1, 2, 3, AND 4
BEAM FRAMING PLAN
(DIMENSIONS SHOWN ARE ALONG ℄ BEAM)



SPAN NO. 5, 6, 7, AND 8
BEAM FRAMING PLAN
(DIMENSIONS SHOWN ARE ALONG ℄ BEAM)

NOTES: FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE SHEET NOS. 52 AND 53.

FOR BEARING ASSEMBLY DETAILS SEE, SHEET NO. 49.

FOR PRESTRESSED CONCRETE BEAM DETAILS, SEE SHEET NO. 58.

P.C. BEAM AND DIAPHRAGM LAYOUT PLAN

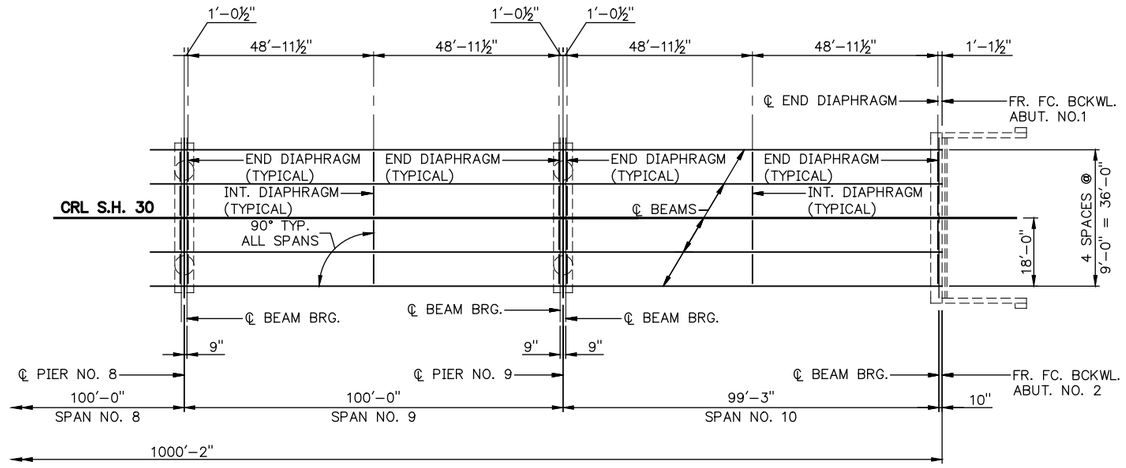
(SHEET 1 OF 2)

BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 54

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY



SPAN NO. 9 AND 10
BEAM FRAMING PLAN
(DIMENSIONS SHOWN ARE ALONG ℄ BEAM)

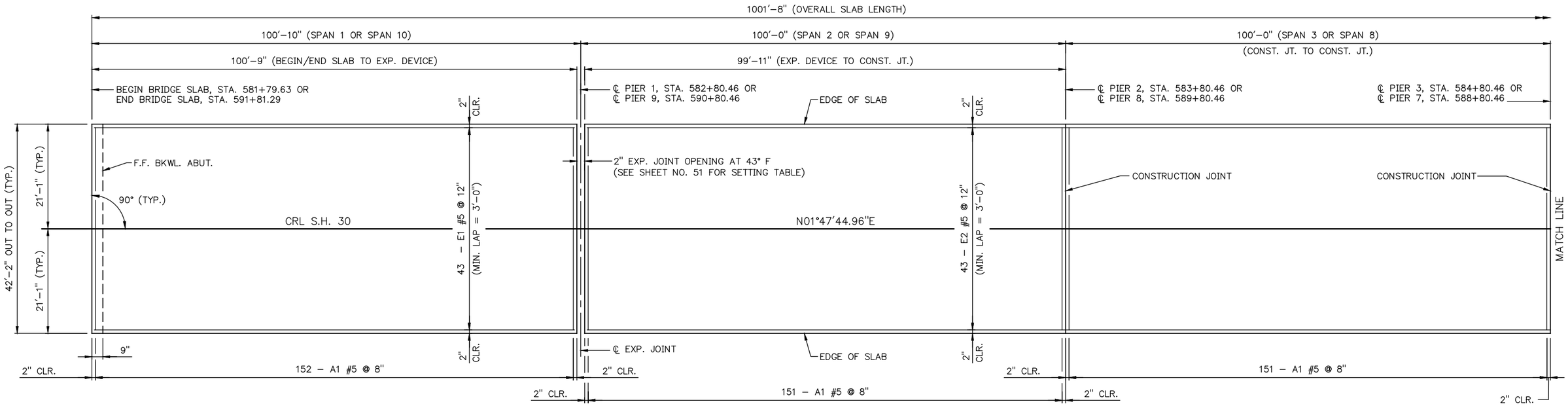
NOTES: FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE SHEET NOS. 52 AND 53.

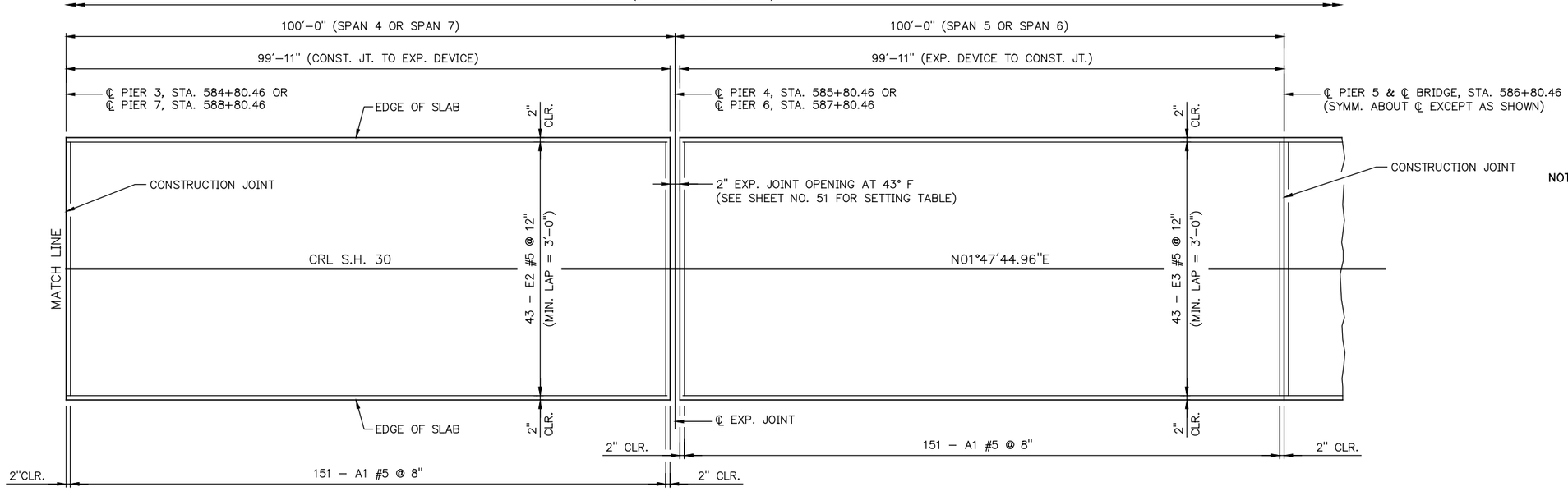
FOR BEARING ASSEMBLY DETAILS SEE, SHEET NO. 49.

FOR PRESTRESSED CONCRETE BEAM DETAILS, SEE SHEET NO. 58.

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

P.C. BEAM AND DIAPHRAGM LAYOUT PLAN
(SHEET 2 OF 2)
BRIDGE "A" C.R.L. STA. 586+80.46
State Job No. 28768(04) Sheet No. 55





NOTES: ALL LONGITUDINAL DIMENSIONS ARE HORIZONTAL DIMENSIONS.

ALL LAP SPLICES SHALL BE STAGGERED.

FOR BRIDGE SLAB NOTES, BAR BEND DETAILS AND BAR LIST, SEE SHEET NOS. 50 THRU 53.

AH1, AH2, EPH1, FPH1, AND A4 THRU A7 BARS OVER ABUTMENT AND PIER END DIAPHRAGMS ARE NOT SHOWN FOR CLARITY. SEE DETAILS ON SHEET NO. 52 FOR PLACEMENT. THIS STEEL SHALL BE TIED IN PLACE WITH AND BELOW THE BOTTOM MAT OF SLAB REINFORCING STEEL.

SR1 BARS IN TRAFFIC RAILS SHALL BE TIED IN PLACE PRIOR TO SLAB POUR. FOR DETAILS AND BAR SPACINGS, SEE STD. TR4–2. FOR TRAFFIC RAIL LAYOUT AND POST SPACINGS, SEE SHEET NOS. 50 AND 51.

FOR EXPANSION JOINT DETAILS, SEE STDS. EJ–SQ AND EJ–DTL. W1 AND W2 EXPANSION JOINT ANCHOR BARS SHALL BE ANCHORED WITH THE A1 #5 BARS AS SHOWN ON THE STANDARD DRAWINGS.

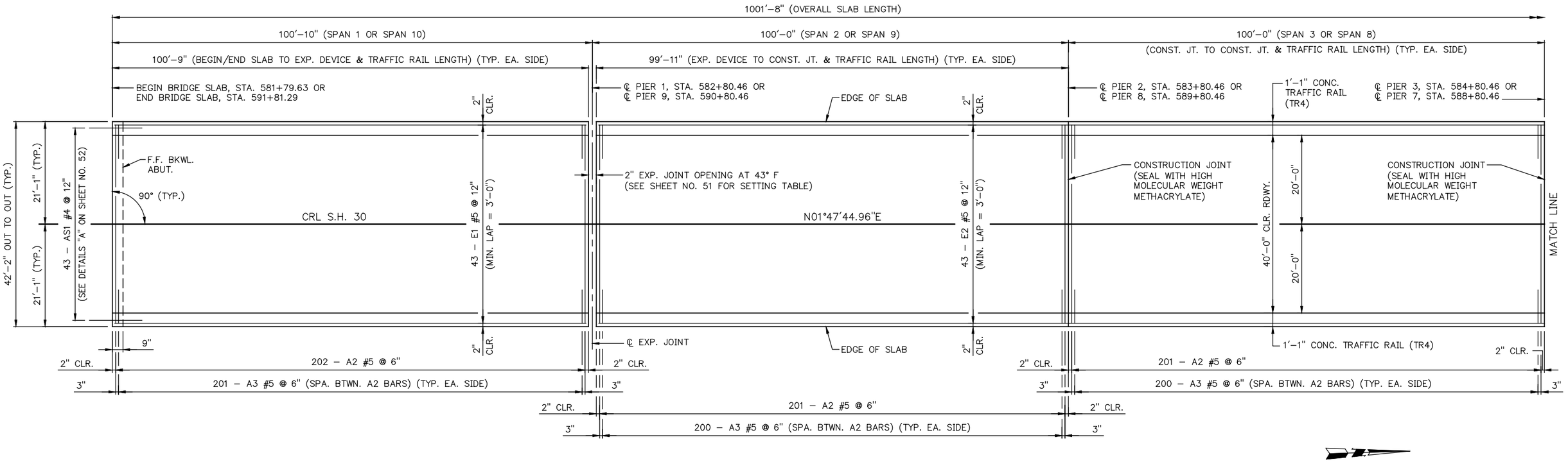
FOR TOP SLAB REINFORCING PLAN, SEE SHEET NO. 57.

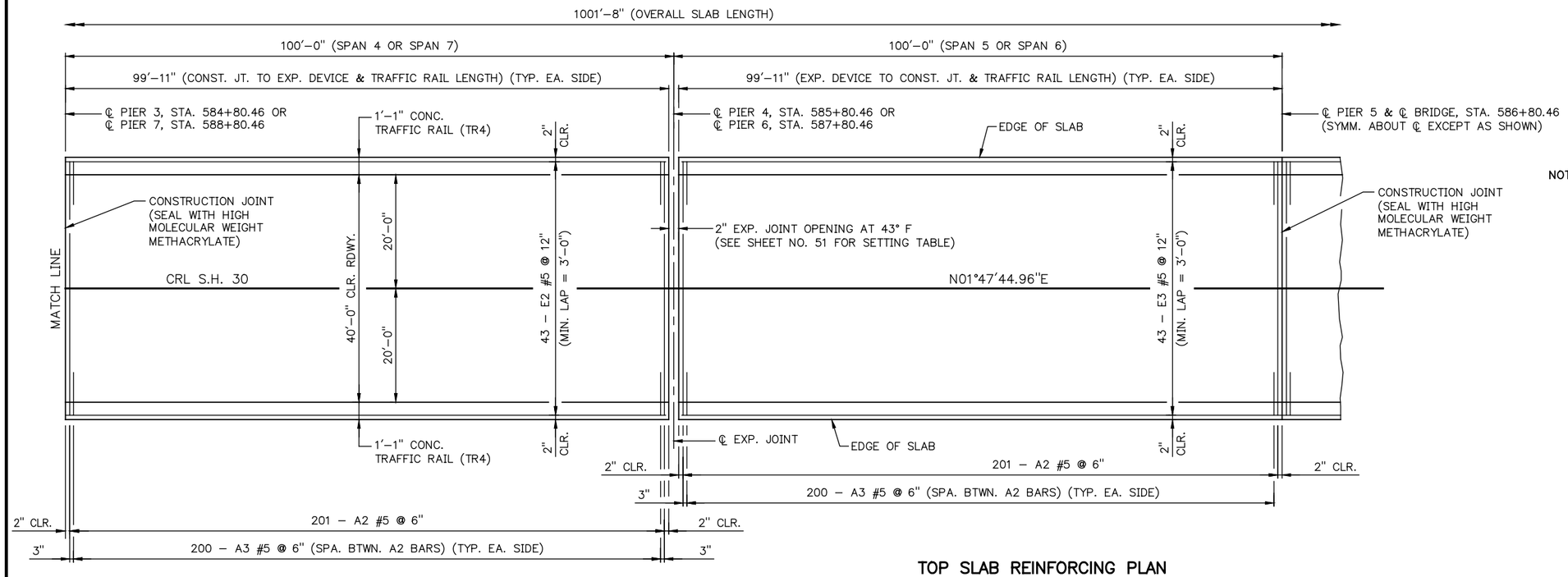
BOTTOM SLAB REINFORCING PLAN
(NOT TO SCALE)

BOTTOM SLAB REINFORCING PLAN
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 56

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY





TOP SLAB REINFORCING PLAN
(NOT TO SCALE)

NOTES:

ALL LONGITUDINAL DIMENSIONS ARE HORIZONTAL DIMENSIONS.

ALL LAP SPLICES SHALL BE STAGGERED.

FOR BRIDGE SLAB NOTES, BAR BEND DETAILS AND BAR LIST, SEE SHEET NOS. 50 THRU 53.

AH1, AH2, EPH1, FPH1, AND A4 THRU A7 BARS OVER ABUTMENT AND PIER END DIAPHRAGMS ARE NOT SHOWN FOR CLARITY. SEE DETAILS ON SHEET NO. 52 FOR PLACEMENT. THIS STEEL SHALL BE TIED IN PLACE WITH AND BELOW THE BOTTOM MAT OF SLAB REINFORCING STEEL.

SR1 BARS IN TRAFFIC RAILS SHALL BE TIED IN PLACE PRIOR TO SLAB POUR. FOR DETAILS AND BAR SPACINGS, SEE STD. TR4–2. FOR TRAFFIC RAIL LAYOUT AND POST SPACINGS, SEE SHEET NOS. 50 AND 51.

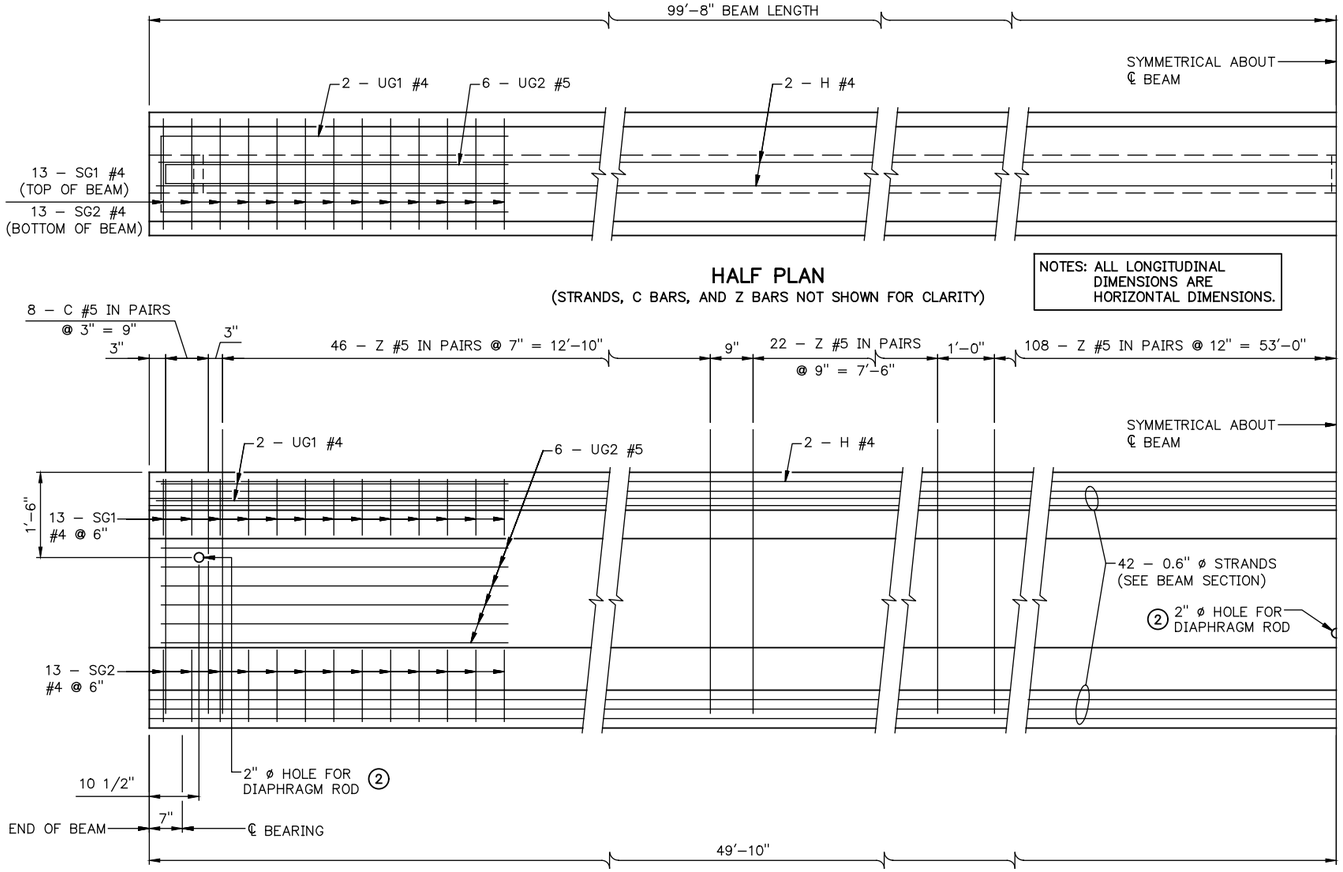
FOR EXPANSION JOINT DETAILS, SEE STDS. EJ–SK AND EJ–DTL. W1 AND W2 EXPANSION JOINT ANCHOR BARS SHALL BE ANCHORED WITH THE A1 #5 BOTTOM SLAB REINFORCING AS SHOWN ON THE STANDARD DRAWINGS.

FOR BOTTOM SLAB REINFORCING PLAN, SEE SHEET NO. 56.

TOP SLAB REINFORCING PLAN
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 57

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



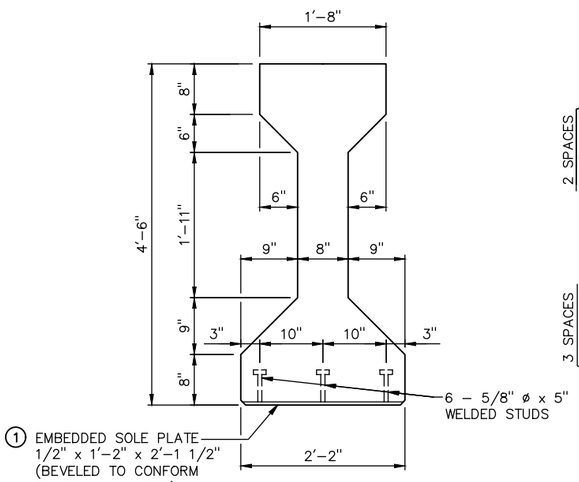
HALF PLAN

(STRANDS, C BARS, AND Z BARS NOT SHOWN FOR CLARITY)

NOTES: ALL LONGITUDINAL DIMENSIONS ARE HORIZONTAL DIMENSIONS.

HALF ELEVATION

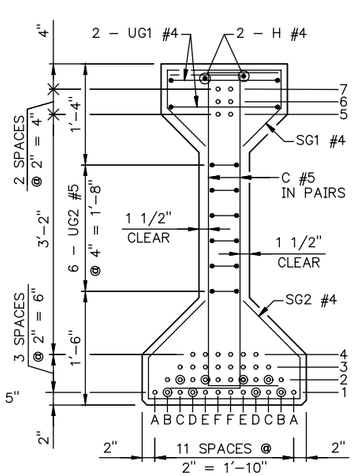
* DEBOND LENGTH FROM END OF BEAM = 13'–0" (ROW "1")
17'–0" (ROW "2")



TYPICAL SECTION

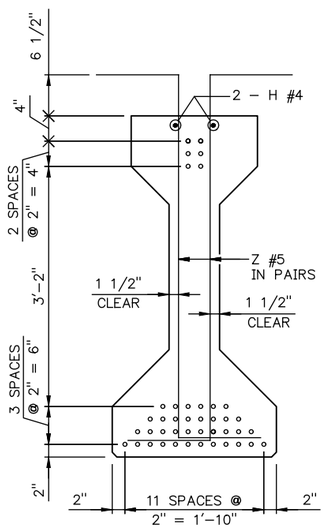
(STRANDS, C BARS, AND Z BARS NOT SHOWN FOR CLARITY)

∘ – DENOTES PRESTRESSING STRAND
◎ – DENOTES DEBONDED STRAND *



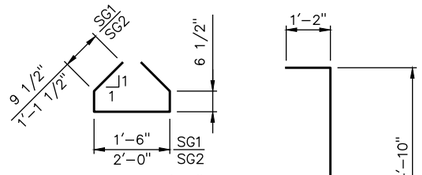
END SECTION

NOTE: WELDED STUDS & EMBEDDED SOLE PLATE OMITTED FOR CLARITY

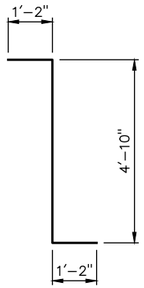


℄ SECTION

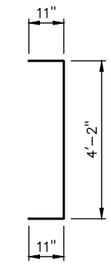
42 – 0.6" DIA. STRANDS



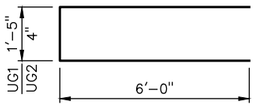
SG1 #4 x 4'–2"
SG2 #4 x 5'–4"



Z #5 X 7'–2"
(EPOXY COATED)

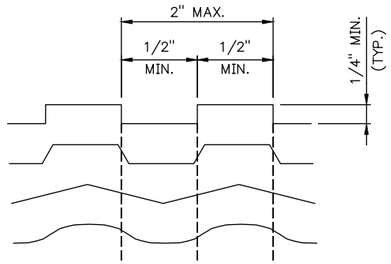


C #5 X 6'–0"



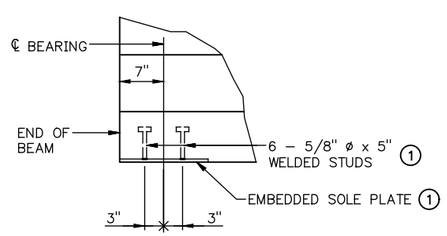
UG1 #4 x 13'–5"
UG2 #5 x 12'–4"

BAR BEND DETAILS



INTENTIONALLY ROUGHENED SURFACE EXAMPLES

INTENTIONALLY ROUGHEN THE ENTIRE TOP SURFACE OF THE P.C. BEAM TO A MINIMUM HEIGHT OF 1/4" OVER A MAXIMUM PITCH OF 2" MEASURED LONGITUDINALLY ALONG THE LENGTH OF THE BEAM. PROVIDE A CREST AND TROUGH ASSOCIATED WITH THE HEIGHT OF NOT LESS THAN 1/2". PRODUCE THE ROUGHENED SURFACE SHOWN IN THE DETAILS, BY CLEANING THE CONCRETE SURFACE WITH A STIFF WIRE BRUSH (OR BLASTING) TO EXPOSE THE AGGREGATE TO A HEIGHT OF 1/4", OR BY USING ANOTHER APPROVED METHOD. SUBMIT THE METHOD TO BE USED FOR APPROVAL BY THE ENGINEER. REPAIR ANY DAMAGE TO REINFORCEMENT'S EPOXY COATING BEFORE PLACEMENT OF DECK CONCRETE.



EMBEDDED SOLE PLATE DETAIL AT END OF BEAM

PC BEAM NOTES:

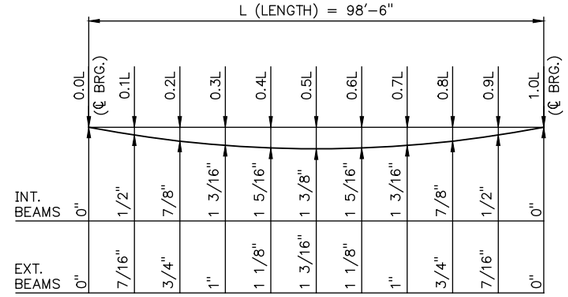
COMPRESSIVE STRENGTH: PROVIDE CONCRETE WITH A COMPRESSIVE STRENGTH OF 7,000 PSI AT TRANSFER OF PRESTRESS AND 10,000 PSI AT 28 DAYS.

STRAND TYPE: PROVIDE LOW–RELAXATION STRANDS HAVING A NOMINAL DIAMETER OF 0.6" WITH AN ULTIMATE TENSILE STRENGTH OF 270 KSI.

LFD OPERATING RATING = HS 60.41
FOR ADDITIONAL DESIGN DATA, SEE SHEET NO. 32.

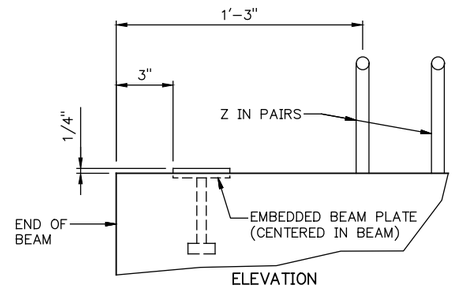
① INSTALL AT EACH END OF BEAM.

② SHIFT PLAIN REINFORCING STEEL AS NECESSARY TO PROVIDE 1" MIN. CLEAR TO DIAPHRAGM ROD HOLE.

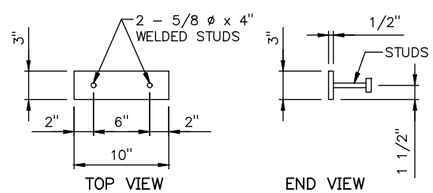


DEAD LOAD DEFLECTION DIAGRAM

NOTE: THE DEAD LOAD DEFLECTIONS SHOWN ABOVE ARE DUE TO THE SLAB, DIAPHRAGMS, HAUNCH, AND TRAFFIC RAILS AND ARE THEORETICAL ONLY. (DEFLECTIONS DO NOT INCLUDE BEAM WEIGHT OR FUTURE WEARING SURFACE.) DEAD LOAD DEFLECTION SHALL BE TAKEN INTO CONSIDERATION IN FORMING AND POURING THE SLAB AND HAUNCHES.



ELEVATION



EMBEDDED BEAM PLATE DETAILS

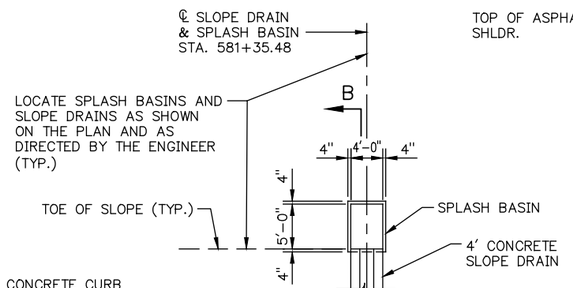
NOTE: PROVIDE AN EMBEDDED BEAM PLATE AT EXPANSION ENDS ONLY

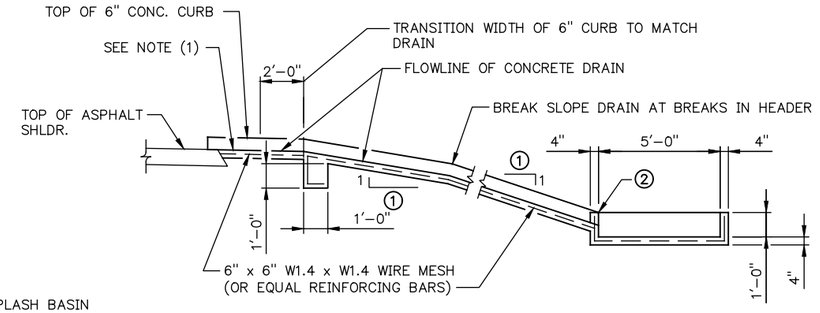
TYPE IV P.C. BEAM DETAILS

(SPAN NO. 1 THRU 10)
BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 58

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

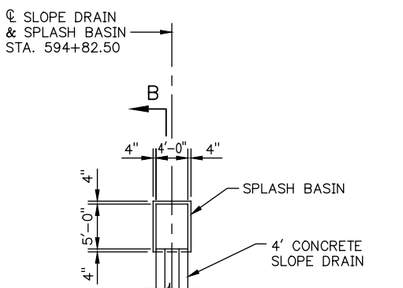




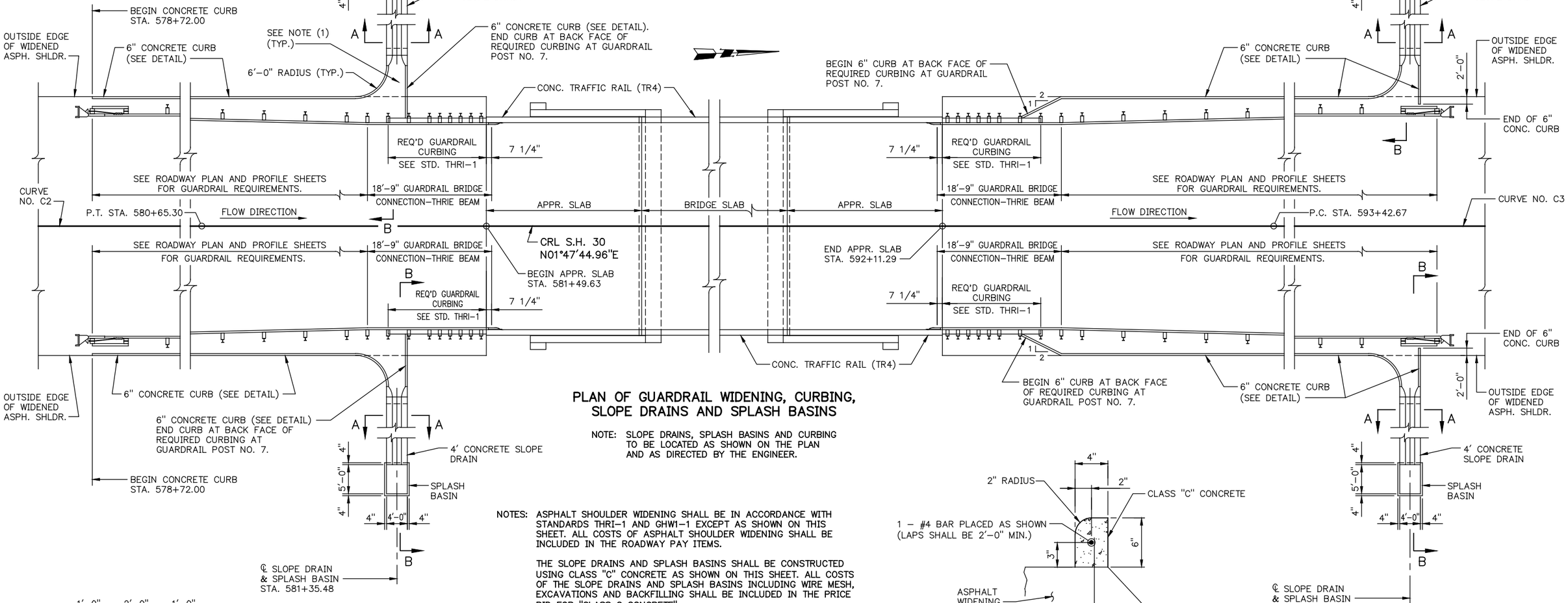
SECTION B–B

① SLOPE TO MATCH SLOPE OF HEADER.

② SET THIS POINT AT TOE OF SLOPE.

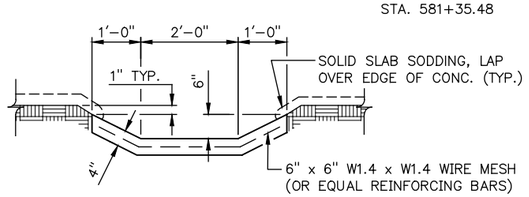


NOTE (1): BETWEEN EDGE OF ASPHALT SHOULDER AND TOP OF CONCRETE SLOPE DRAIN, CONSTRUCT 4" CONCRETE BASE OVER AREA OUTLINED BY CURBING. COST TO BE INCLUDED IN PRICE BID FOR "CLASS C CONCRETE".



PLAN OF GUARDRAIL WIDENING, CURBING, SLOPE DRAINS AND SPLASH BASINS

NOTE: SLOPE DRAINS, SPLASH BASINS AND CURBING TO BE LOCATED AS SHOWN ON THE PLAN AND AS DIRECTED BY THE ENGINEER.



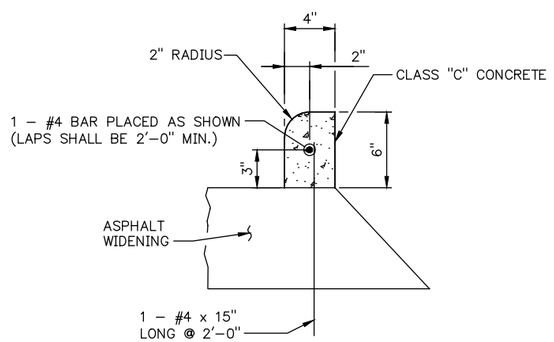
SECTION A–A

NOTES: ASPHALT SHOULDER WIDENING SHALL BE IN ACCORDANCE WITH STANDARDS THRI-1 AND GHW1-1 EXCEPT AS SHOWN ON THIS SHEET. ALL COSTS OF ASPHALT SHOULDER WIDENING SHALL BE INCLUDED IN THE ROADWAY PAY ITEMS.

THE SLOPE DRAINS AND SPLASH BASINS SHALL BE CONSTRUCTED USING CLASS "C" CONCRETE AS SHOWN ON THIS SHEET. ALL COSTS OF THE SLOPE DRAINS AND SPLASH BASINS INCLUDING WIRE MESH, EXCAVATIONS AND BACKFILLING SHALL BE INCLUDED IN THE PRICE BID FOR "CLASS C CONCRETE".

THE 6" CONCRETE CURBS SHALL BE CONSTRUCTED AS SHOWN ON THIS SHEET IN ADDITION TO THE REQUIRED GUARDRAIL CURBING. ALL COSTS TO CONSTRUCT THE 6" CONCRETE CURBS INCLUDING CONCRETE AND REINFORCING STEEL SHALL BE INCLUDED IN THE PRICE BID FOR "CLASS C CONCRETE".

THE 15'–0" LONG CONCRETE CURBING SHOWN ON STD. THRI–1 SHALL BE INCLUDED IN THE PRICE BID FOR "GUARDRAIL BRIDGE CONN–THRIE BEAM (31")", AT ALL FOUR CORNERS OF THE BRIDGE.



DETAIL OF 6" CONCRETE CURB

(SHOWN AT OUTSIDE EDGE OF WIDENED ASPHALT SHOULDER)

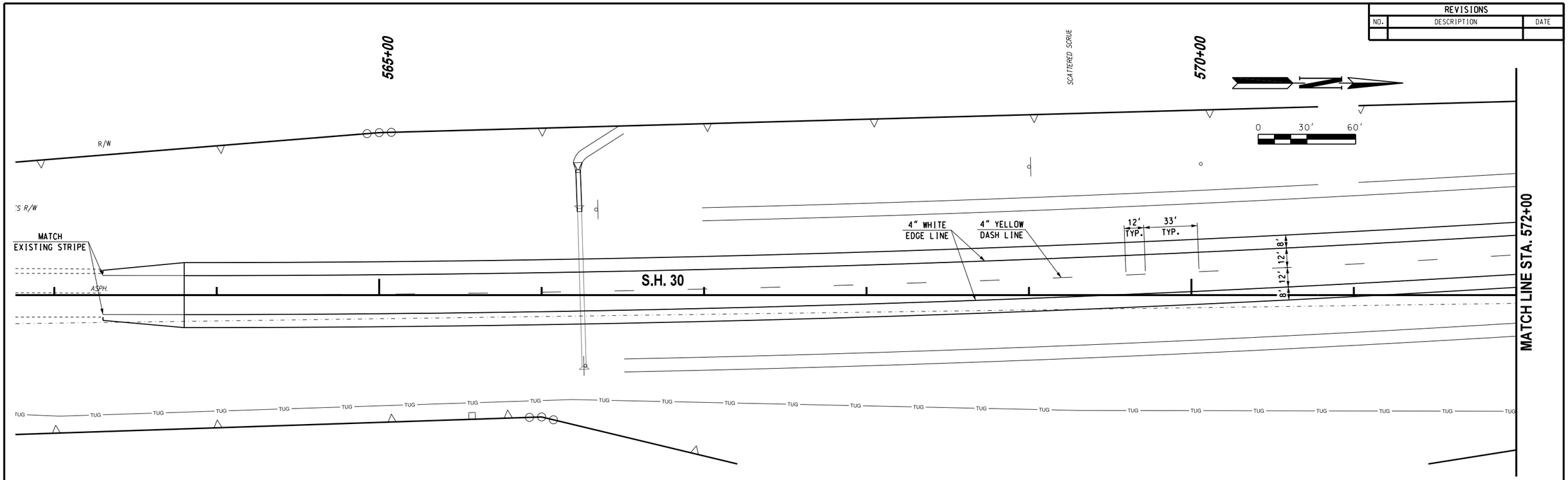
DRAIN AT END OF BRIDGE DETAILS

BRIDGE "A" C.R.L. STA. 586+80.46

State Job No. 28768(04) Sheet No. 59

S.H. 30 BRIDGE & APPROACHES HARMON COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



THERMO. PLASTIC STRIPING SUM. TABLE

DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (PLASTIC) 4" WHITE	L.F.	3540
TRAFFIC STRIPE (PLASTIC) 4" YELLOW	L.F.	480
TRAFFIC STRIPE (PLASTIC) 6" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 6" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 6" BLACK	L.F.	0
TRAFFIC STRIPE (PLASTIC) 8" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 12" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 24" WHITE	L.F.	35
TRAFFIC STRIPE (PLASTIC) ARROWS	EA.	0
TRAFFIC STRIPE (PLASTIC) WORDS	EA.	0
TRAFFIC STRIPE (PLASTIC) SYMBOLS	EA.	0

FOR DIMENSIONS NOT SHOWN ON THE PLANS FOR PAVEMENT MARKING, REFERENCE SHALL BE MADE TO THE STANDARD O.D.O.T. DRAWINGS (LATEST REV.).

Design	RWR	9/13/2016
Drawn	SB	9/13/2016

TEC
A CLEAR DIRECTION

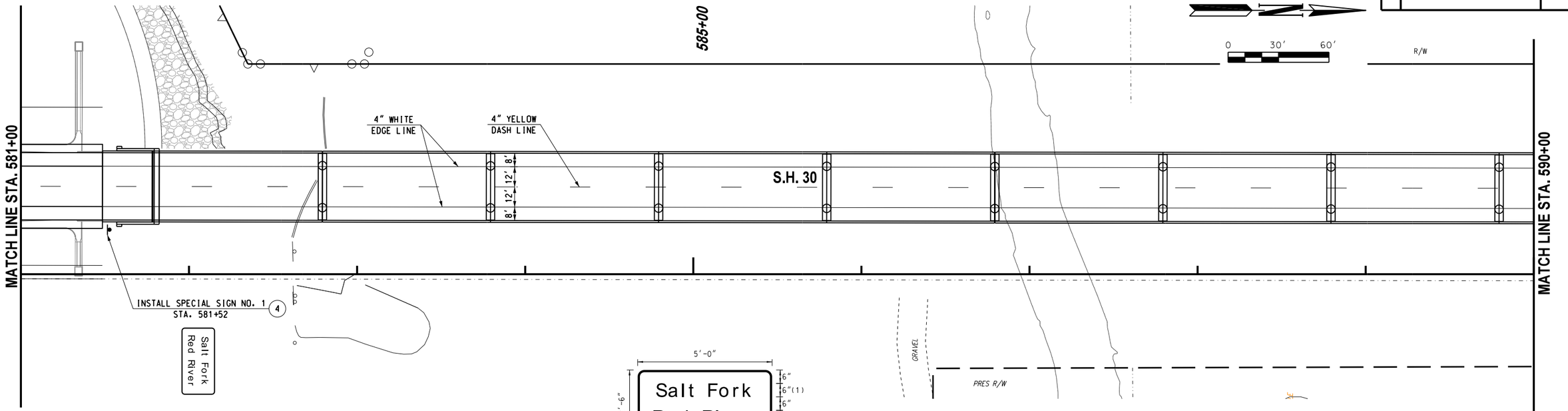
SIGNING & STRIPING PLAN
STA. 563+79.97 TO STA. 581+00.00

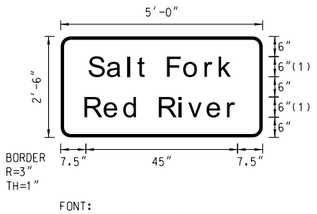
State Job No. 28768(04) Sheet No. 60

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

9/13/2016 G:\0Projects\T-2356 SH 30 over Sdt Fork of Red River\CAD\STRIPE.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

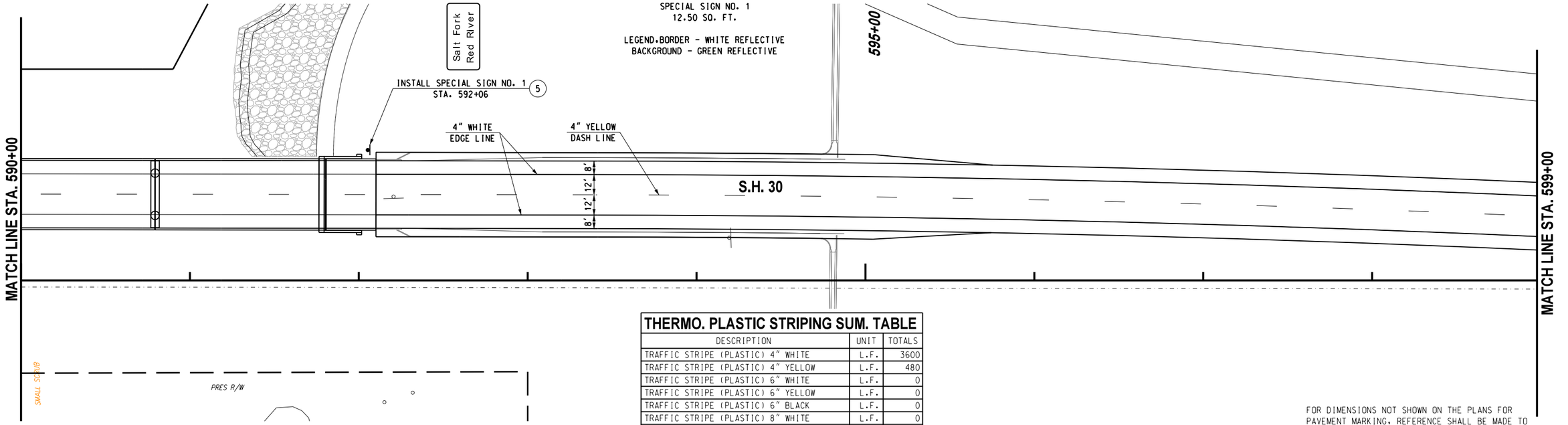




FONT:
(1) ClearviewHwy-4-W

SPECIAL SIGN NO. 1
12.50 SQ. FT.

LEGEND.BORDER - WHITE REFLECTIVE
BACKGROUND - GREEN REFLECTIVE



THERMO. PLASTIC STRIPING SUM. TABLE

DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (PLASTIC) 4" WHITE	L.F.	3600
TRAFFIC STRIPE (PLASTIC) 4" YELLOW	L.F.	480
TRAFFIC STRIPE (PLASTIC) 6" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 6" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 6" BLACK	L.F.	0
TRAFFIC STRIPE (PLASTIC) 8" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 12" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 24" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) ARROWS	EA.	0
TRAFFIC STRIPE (PLASTIC) WORDS	EA.	0
TRAFFIC STRIPE (PLASTIC) SYMBOLS	EA.	0

FOR DIMENSIONS NOT SHOWN ON THE PLANS FOR PAVEMENT MARKING, REFERENCE SHALL BE MADE TO THE STANDARD O.D.O.T. DRAWINGS (LATEST REV.).

Design	RWR	9/13/2016
Drawn	SB	9/13/2016

TEC
A CLEAR DIRECTION

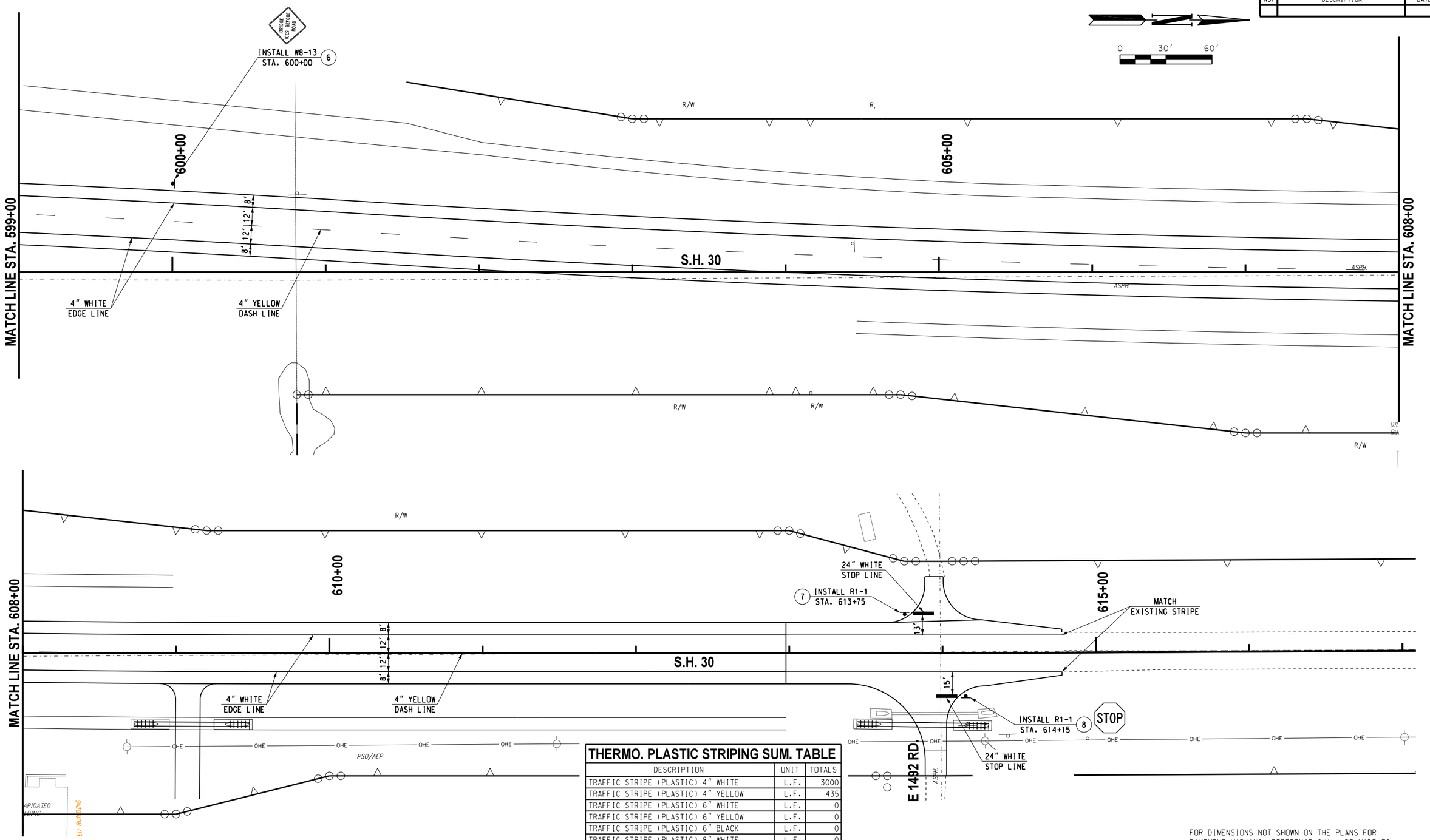
SIGNING & STRIPING PLAN
STA. 581+00 TO STA. 599+00

State Job No. 28768(04) Sheet No. 61

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

9/13/2016 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\STRIPE 2.dgn

REVISIONS		
NO.	DESCRIPTION	DATE



THERMO. PLASTIC STRIPING SUM. TABLE

DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (PLASTIC) 4" WHITE	L.F.	3000
TRAFFIC STRIPE (PLASTIC) 4" YELLOW	L.F.	435
TRAFFIC STRIPE (PLASTIC) 6" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 6" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 6" BLACK	L.F.	0
TRAFFIC STRIPE (PLASTIC) 8" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 12" WHITE	L.F.	0
TRAFFIC STRIPE (PLASTIC) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (PLASTIC) 24" WHITE	L.F.	28
TRAFFIC STRIPE (PLASTIC) ARROWS	EA.	0
TRAFFIC STRIPE (PLASTIC) WORDS	EA.	0
TRAFFIC STRIPE (PLASTIC) SYMBOLS	EA.	0

FOR DIMENSIONS NOT SHOWN ON THE PLANS FOR PAVEMENT MARKING, REFERENCE SHALL BE MADE TO THE STANDARD O.D.O.T. DRAWINGS (LATEST REV.).

Design	RWR	9/13/2016
Drawn	SB	9/13/2016

TEC
A CLEAR DIRECTION

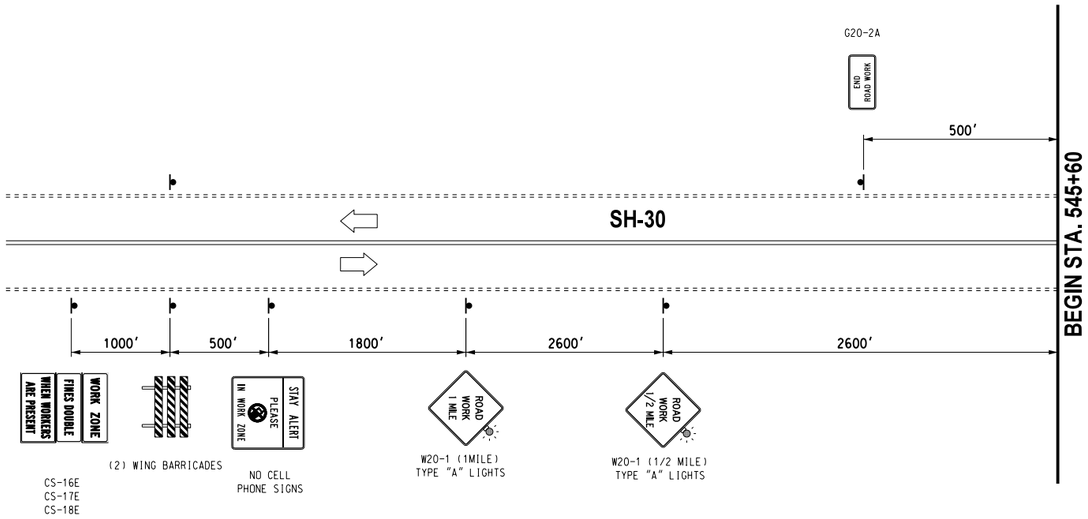
SIGNING & STRIPING PLAN
STA. 599+00 TO STA. 617+00

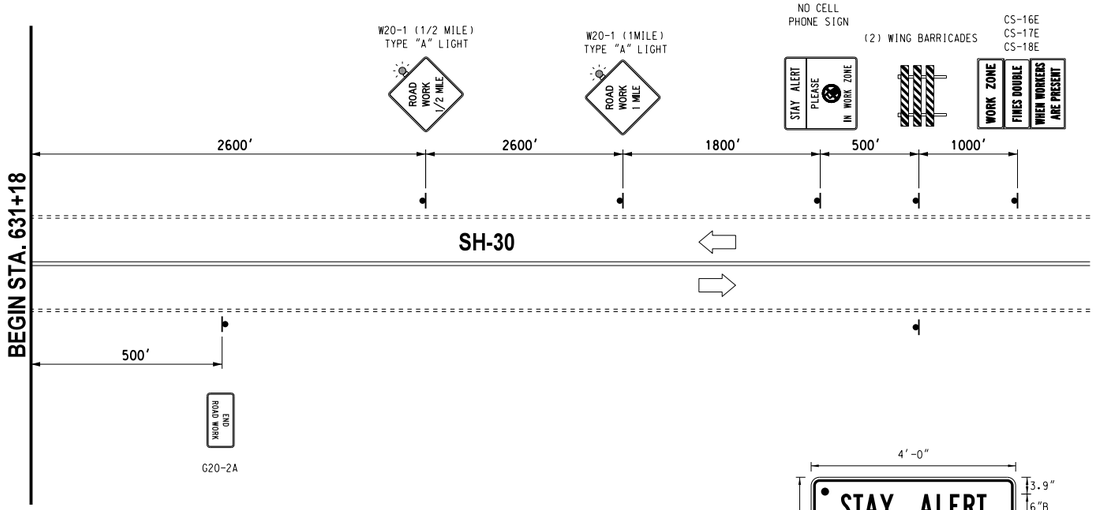
State Job No. 28768(04) Sheet No. 62

9/13/2016 G:\0Projects\T-2356 SH 30 over Sdt Fork of Red River\CAD\STRIPE 3.dgn

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE





NO CELL PHONE SIGN

48"X48"

● LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - YELLOW REFELCTIVE

▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - ORANGE REFLECTIVE

DRAWING NOT TO SCALE

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TYPICAL ADVANCE WARNING SIGNS PHASE 1

State Job No. 28768(04) Sheet No. 63

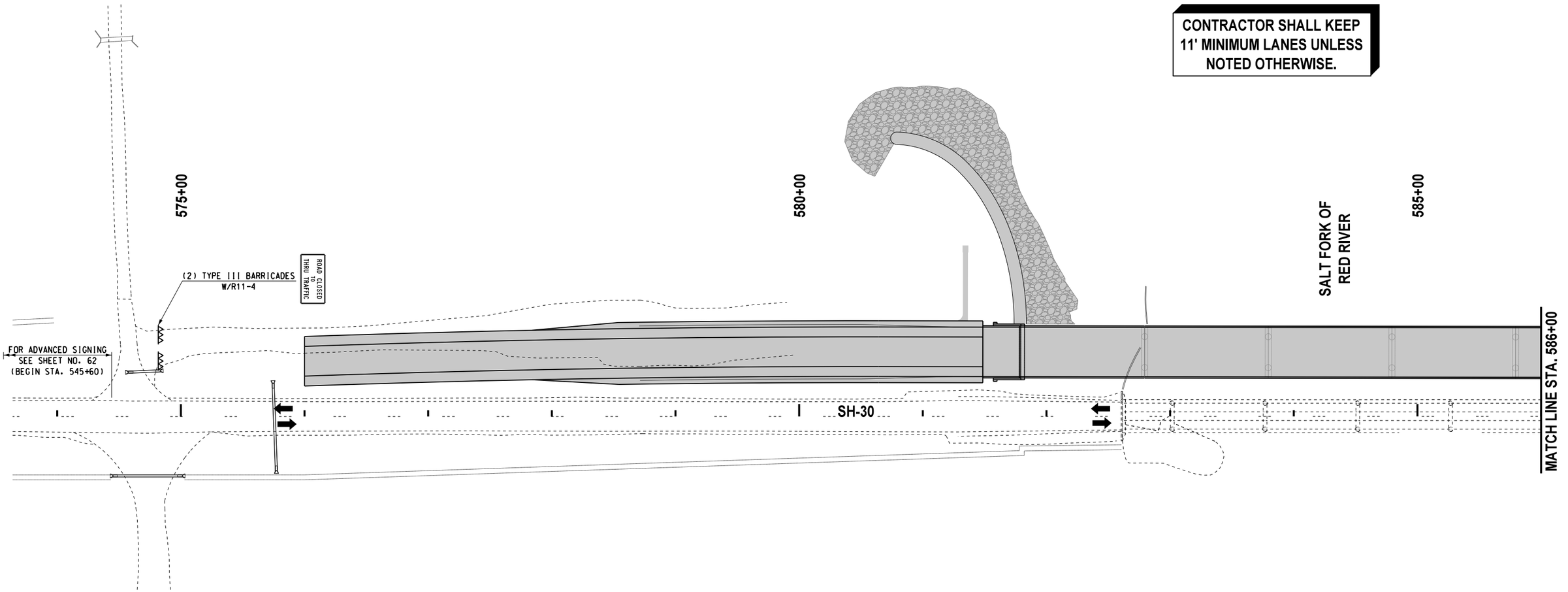
9/13/2016 G:\OPProjects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE I ADVANCE SIGNING.dgn

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

0 40' 80'

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.



SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 1. NORMAL TRAFFIC ON SH-30
- A. CONSTRUCT NEW BRIDGE
- B. CONSTRUCT FULL SECTION SH-30 PAVING AND DRAINAGE (C.R.L. SH-30 STA. 576+00 TO STA. 596+00)
- C. CONSTRUCT SPUR DIKES AT NORTH AND SOUTH BRIDGE ABUTMENTS

LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 1 (1 OF 2)

State Job No. 28768(04) Sheet No. 64

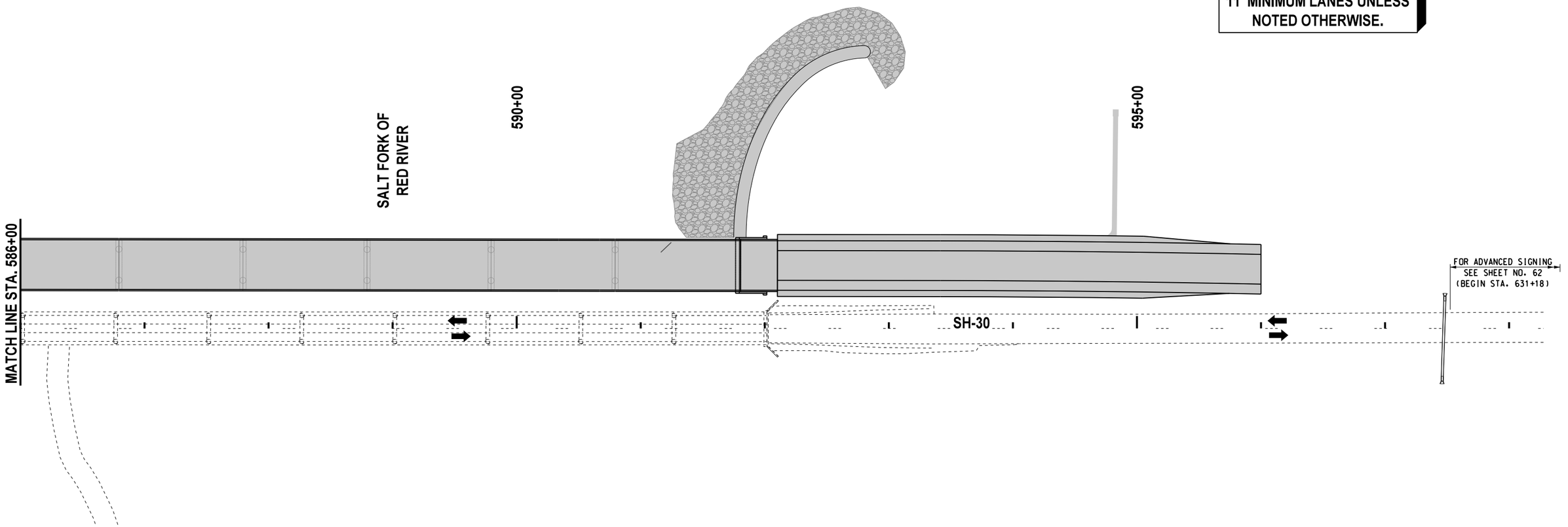
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

9/13/2016 G:\OPprojects\T-2356 SH 30 over Salt Fork of Red River\CAD\TIC PHASE 1ABC - 1.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

0 40' 80'

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.



SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 1. NORMAL TRAFFIC ON SH-30
- A. CONSTRUCT NEW BRIDGE
- B. CONSTRUCT FULL SECTION SH-30 PAVING AND DRAINAGE (C.R.L. SH-30 STA. 576+00 TO STA. 596+00)
- C. CONSTRUCT SPUR DIKES AT NORTH AND SOUTH BRIDGE ABUTMENTS

LEGEND

- △△△ - TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- ● - DRUM
- ○ - CHANNELIZER CONE
- ▬ - PORTABLE CONC. BARRIER WALL
- ▬ - CONSTRUCTION ZONE IMPACT ATTENUATOR
- ▭ - WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

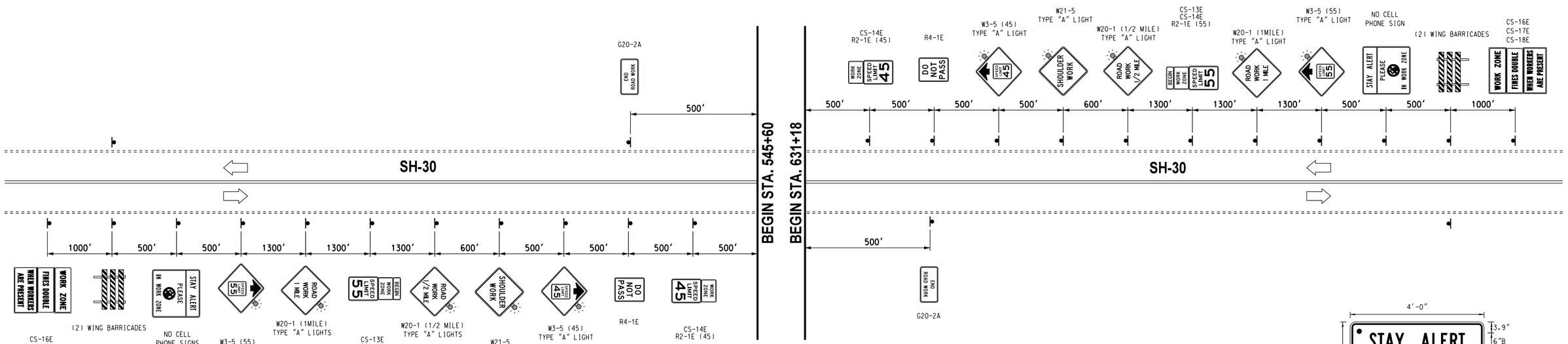
TRAFFIC CONTROL PLANS PHASE 1 (2 OF 2)

State Job No. 28768(04) Sheet No. 65

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

9/13/2016 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 1ABC - 2.dgn

REVISIONS		
NO.	DESCRIPTION	DATE



NO CELL PHONE SIGN

48″X48″

● LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - YELLOW REFELCTIVE

▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - ORANGE REFLECTIVE

DRAWING NOT TO SCALE

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

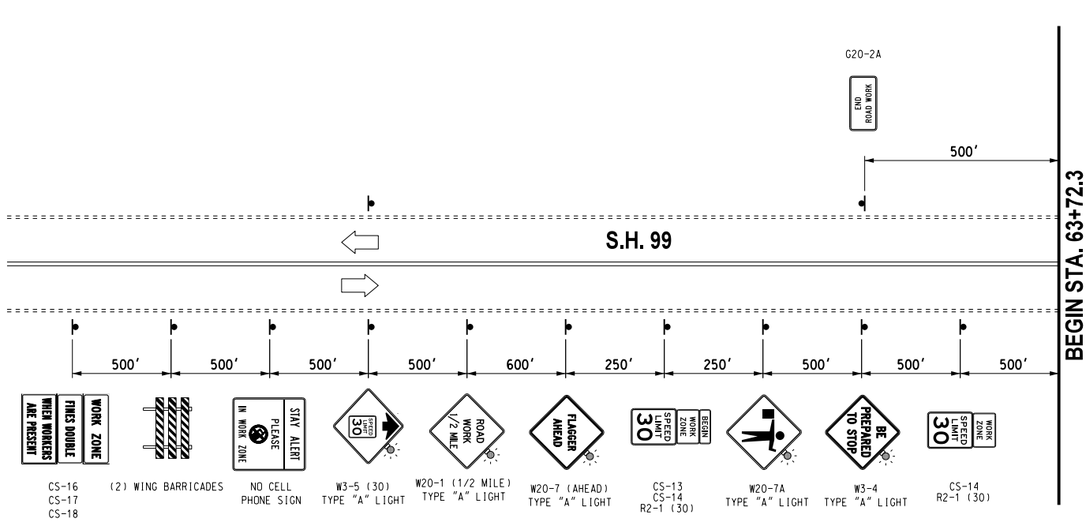
TYPICAL ADVANCE WARNING SIGNS PHASES 2A & C

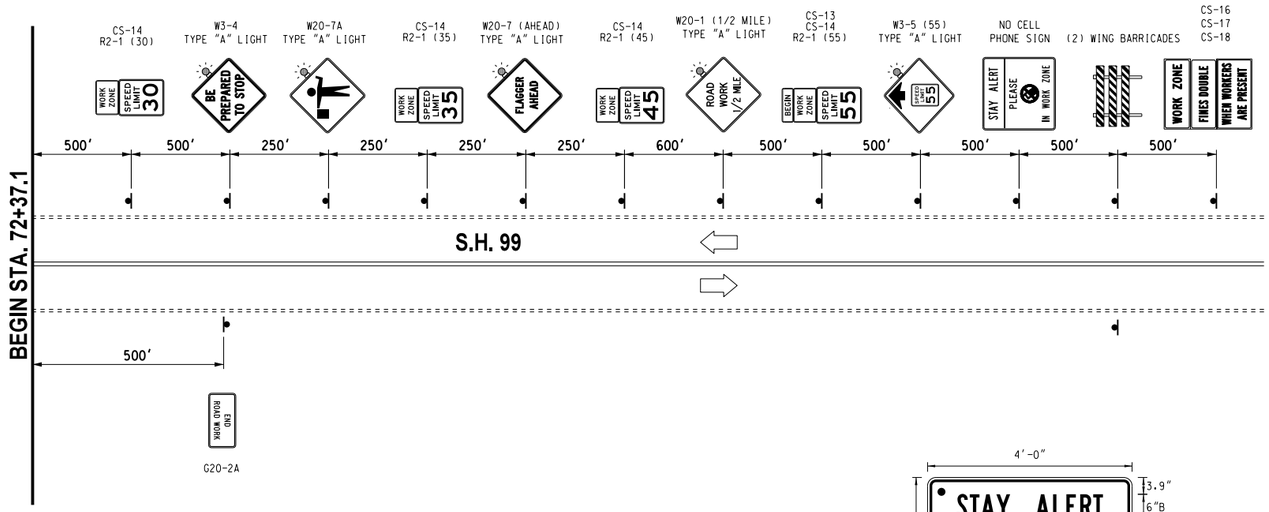
State Job No. 28768(04) Sheet No. 66

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

9/13/2016 G:\OPprojects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 2 ADVANCE SIGNING.dgn

REVISIONS		
NO.	DESCRIPTION	DATE





NO CELL PHONE SIGN

48″X48″

● LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - YELLOW REFELCTIVE

▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - ORANGE REFLECTIVE

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 2. SHIFT TRAFFIC WEST TO EDGE OF SH-30 (ONE LANE EACH DIRECTION)
- A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF EXISTING PAVEMENT
- B. CONSTRUCT TEMP. CROSS DRAINS USING FLAGMEN.
- C. CONSTRUCT TEMP. ASPHALT WIDENING (C.L. SURV. SH-30 STA. 553+07 TO STA. 581+82 AND STA. 594+28 TO STA. 623+73)

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TYPICAL ADVANCE WARNING SIGNS PHASE 2B

State Job No. 28768(04) Sheet No. 67

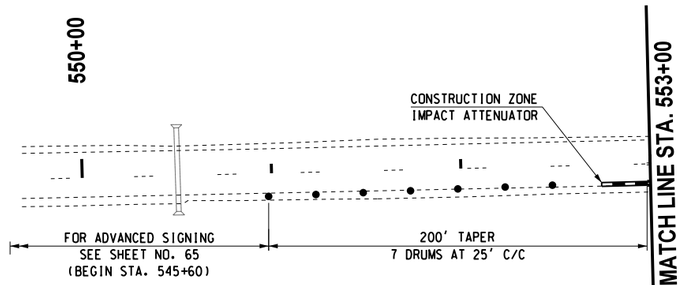
9/13/2016 G:\OiProjects\T-2356 SH 30 over Salt Fork of Red River\CAD\TIC PHASE 2B ADVANCE SIGNING.dgn

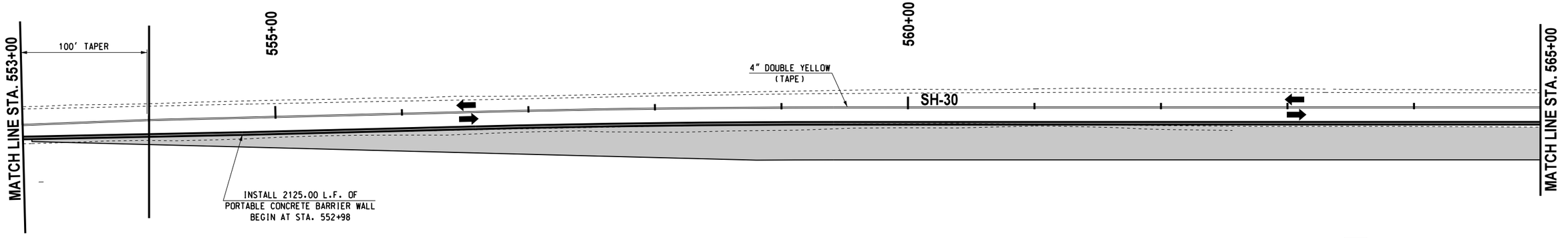
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

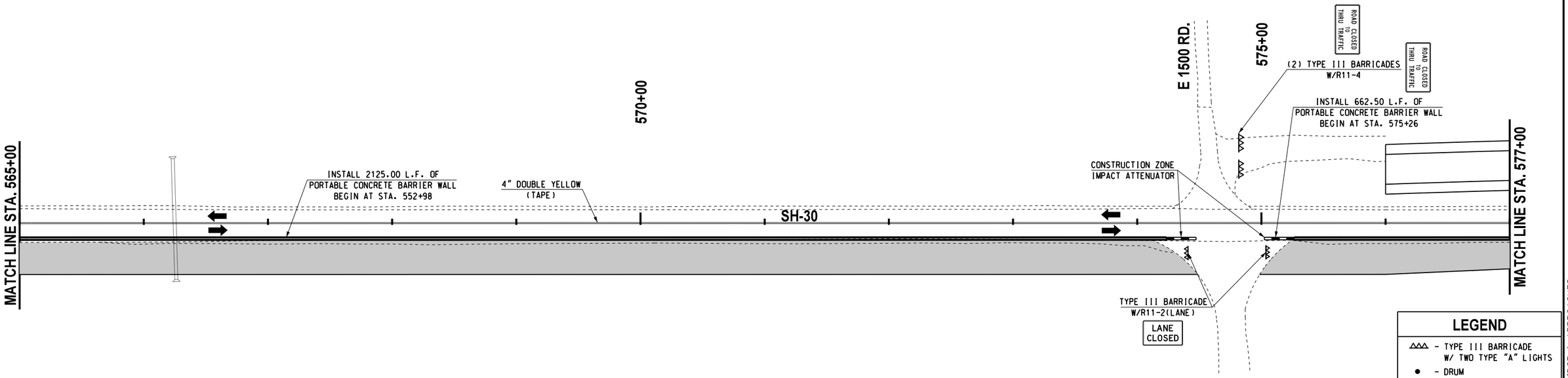
REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.

0 40' 80'







LEGEND

- △△△ - TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- ● - DRUM
- ○ - CHANNELIZER CONE
- ═══ - PORTABLE CONC. BARRIER WALL
- ═══ - CONSTRUCTION ZONE IMPACT ATTENUATOR
- ▭ - WORK AREA

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 2. SHIFT TRAFFIC WEST TO EDGE OF SH-30 (ONE LANE EACH DIRECTION)
- A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF EXISTING PAVEMENT
- B. CONSTRUCT TEMP. CROSS DRAINS USING FLAGMEN
- C. CONSTRUCT TEMP. ASPHALT WIDENING (C.L. SURV. SH-30 STA. 553+07 TO STA. 581+82 AND STA. 594+28 TO STA. 623+73)

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 2 (1 OF 3)

State Job No. 28768(04) Sheet No. 68

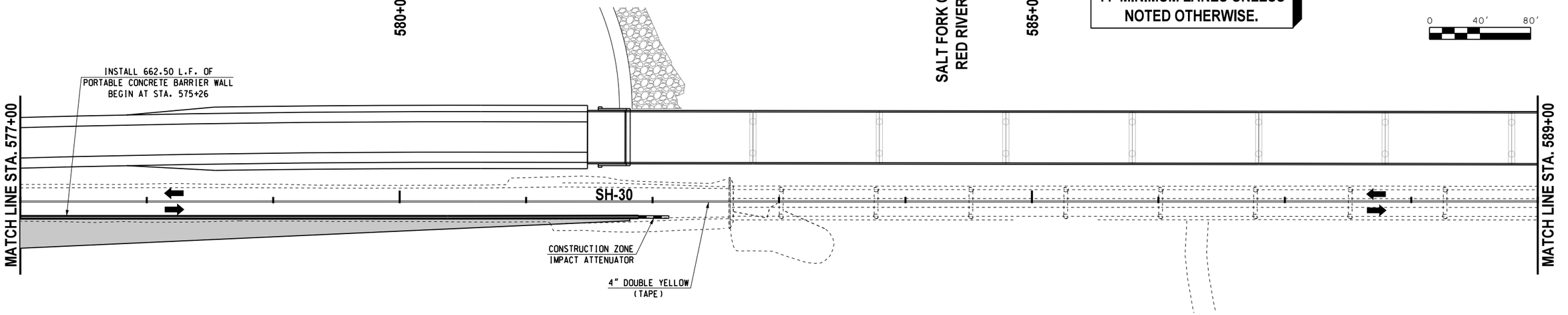
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

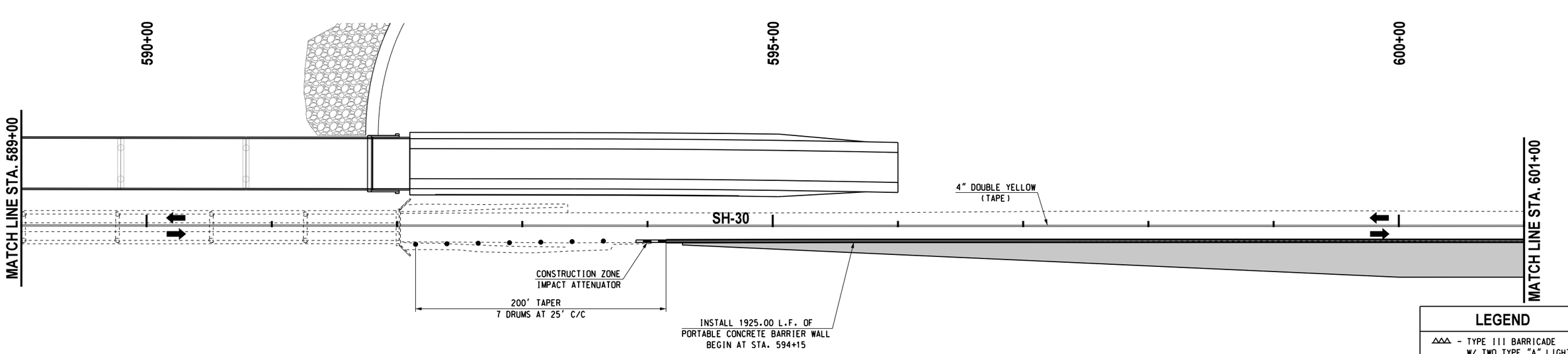
9/13/2016 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 2AC - 1.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.

0 40' 80'





LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 2. SHIFT TRAFFIC WEST TO EDGE OF SH-30 (ONE LANE EACH DIRECTION)

A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF EXISTING PAVEMENT

B. CONSTRUCT TEMP. CROSS DRAINS USING FLAGMEN

C. CONSTRUCT TEMP. ASPHALT WIDENING (C.L. SURV. SH-30 STA. 553+07 TO STA. 581+82 AND STA. 594+28 TO STA. 623+73)

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 2 (2 OF 3)

State Job No. 28768(04) Sheet No. 69

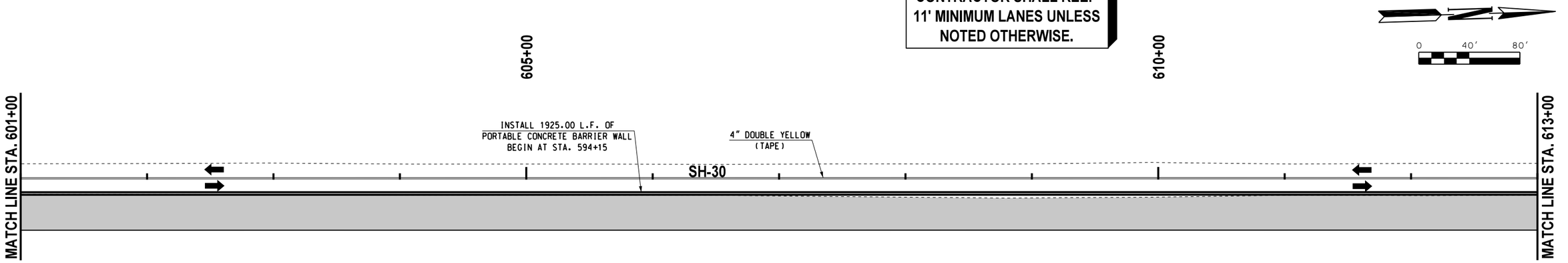
S.H. 30 BRIDGE & APPROACHES

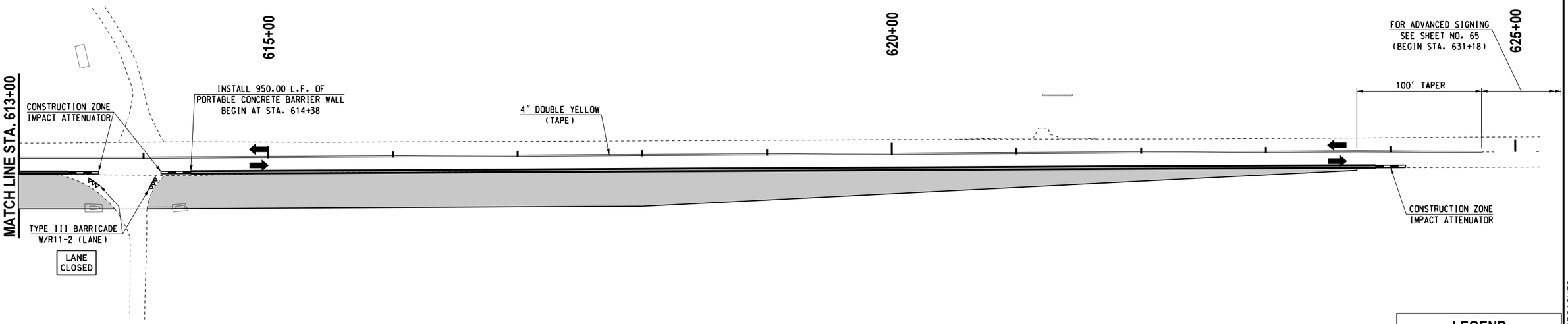
HARMON COUNTY

9/13/2016 G:\0Projects\17-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 2AC - 2.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.





SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 2. SHIFT TRAFFIC WEST TO EDGE OF SH-30 (ONE LANE EACH DIRECTION)
- A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF EXISTING PAVEMENT
- B. CONSTRUCT TEMP. CROSS DRAINS USING FLAGMEN
- C. CONSTRUCT TEMP. ASPHALT WIDENING (C.L. SURV. SH-30 STA. 553+07 TO STA. 581+82 AND STA. 594+28 TO STA. 623+73)

LEGEND

- △△△ - TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- ● - DRUM
- ○ - CHANNELIZER CONE
- ═══ - PORTABLE CONC. BARRIER WALL
- ═══ - CONSTRUCTION ZONE IMPACT ATTENUATOR
- ▭ - WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

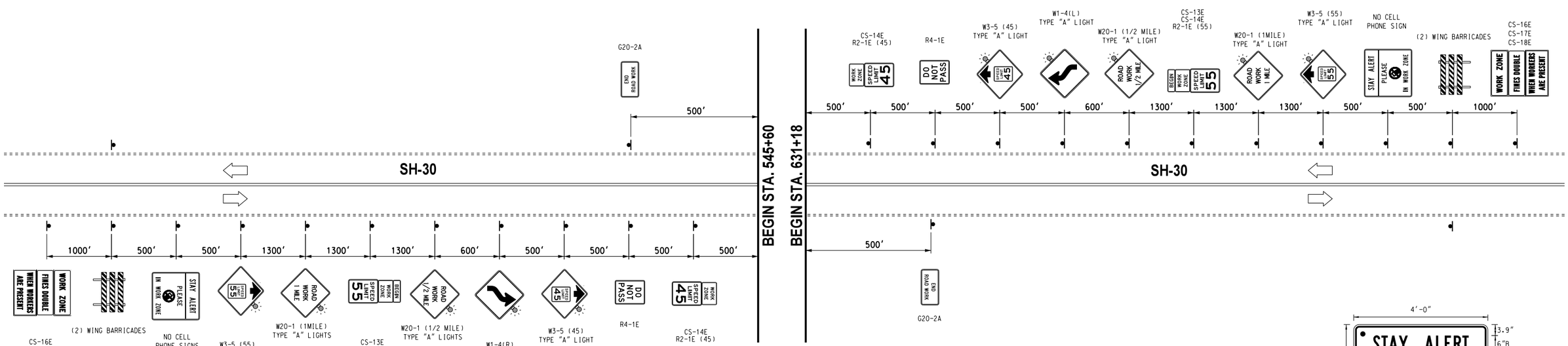
TRAFFIC CONTROL PLANS PHASE 2 (3 OF 3)

State Job No. 28768(04) Sheet No. 70

9/13/206 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 2AC - 3.dgn

S.H. 30 BRIDGE & APPROACHES HARMON COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



NO CELL PHONE SIGN

48″X48″

● LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - YELLOW REFELCTIVE

▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
BACKGROUND - ORANGE REFLECTIVE

DRAWING NOT TO SCALE

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TYPICAL ADVANCE WARNING SIGNS PHASE 3

State Job No. 28768(04) Sheet No. 71

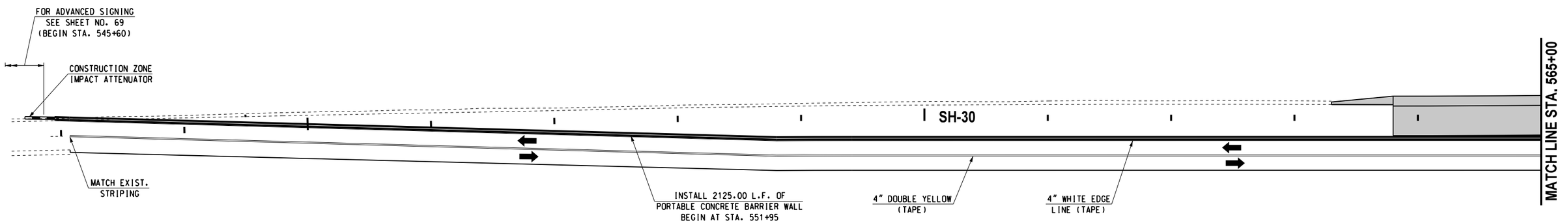
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

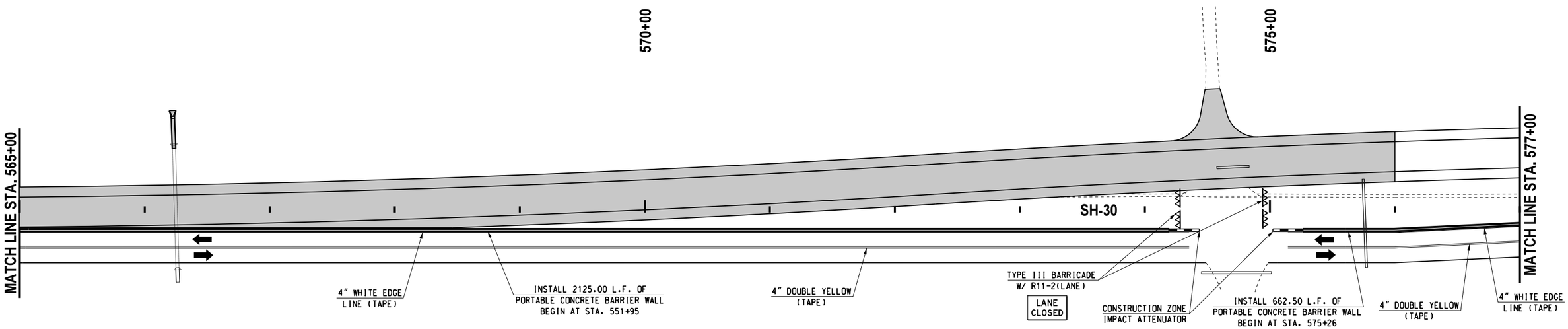
9/13/2016 G:\OPprojects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 3 ADVANCE SIGNING.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.

0 40' 80'





SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 3. SHIFT TRAFFIC EAST TO TEMP. ASPHALT WIDENING OF SH-30 (ONE LANE EACH DIRECTION)

A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG WEST EDGE OF DETOURED SOUTHBOUND LANE

B. CONSTRUCT WEST HALF OF NEW SH-30 PAVING AND DRAINAGE, TYING TO EXIST PAVEMENT (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00)

C. CONSTRUCT EW150 ROAD

LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 3 (1 OF 3)

State Job No. 28768(04) Sheet No. 72

S.H. 30 BRIDGE & APPROACHES

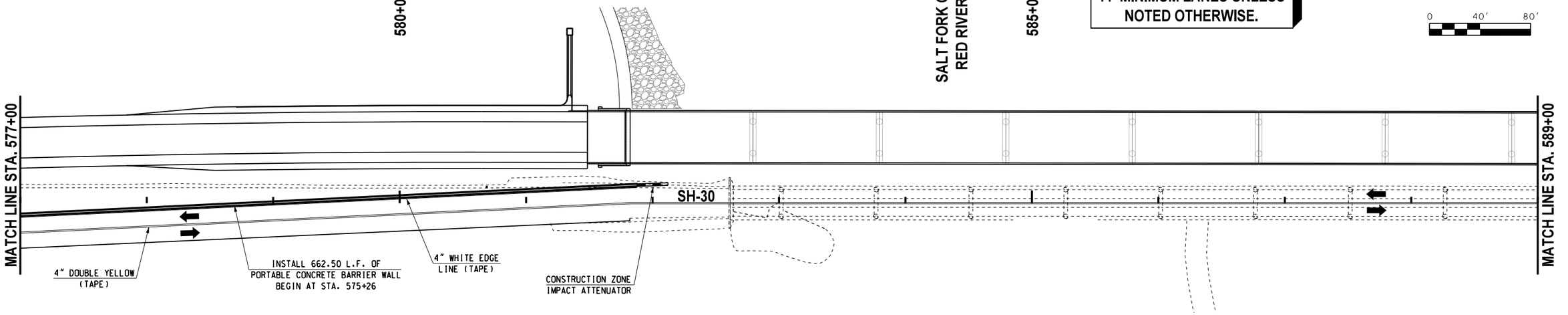
HARMON COUNTY

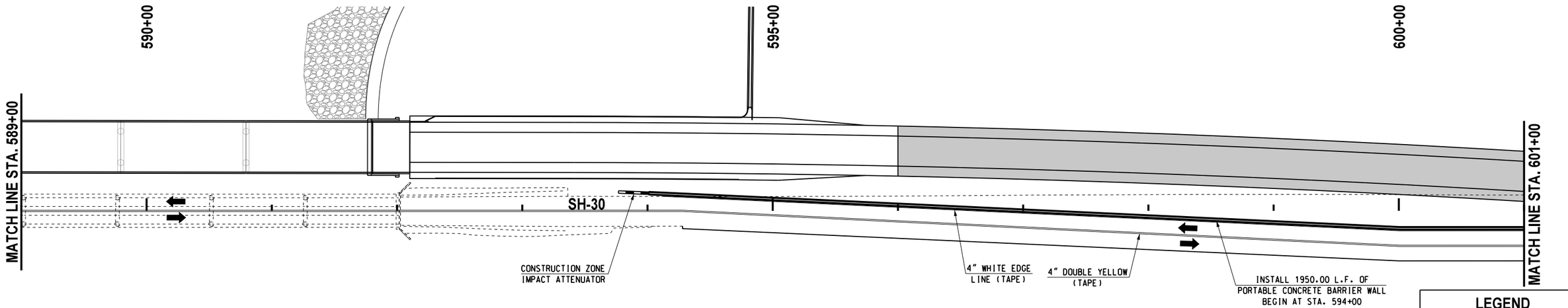
9/13/2016 G:\0Projects\T-2356 SH 30 over Sdt Fork of Red River\CAD\TC PHASE 3ABCD - i.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.

0 40' 80'





LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 3. SHIFT TRAFFIC EAST TO TEMP. ASPHALT WIDENING OF SH-30 (ONE LANE EACH DIRECTION)

A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG WEST EDGE OF DETOURED SOUTHBOUND LANE

B. CONSTRUCT WEST HALF OF NEW SH-30 PAVING AND DRAINAGE, TYING TO EXIST PAVEMENT (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00)

C. CONSTRUCT EW150 ROAD

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 3 (2 OF 3)

State Job No. 28768(04) Sheet No. 73

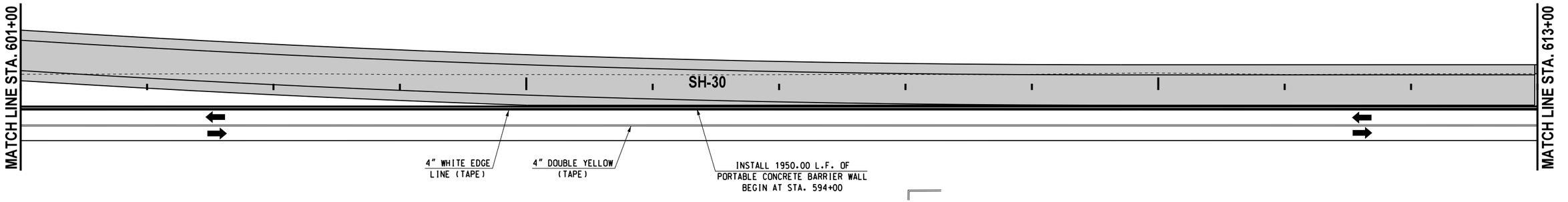
S.H. 30 BRIDGE & APPROACHES

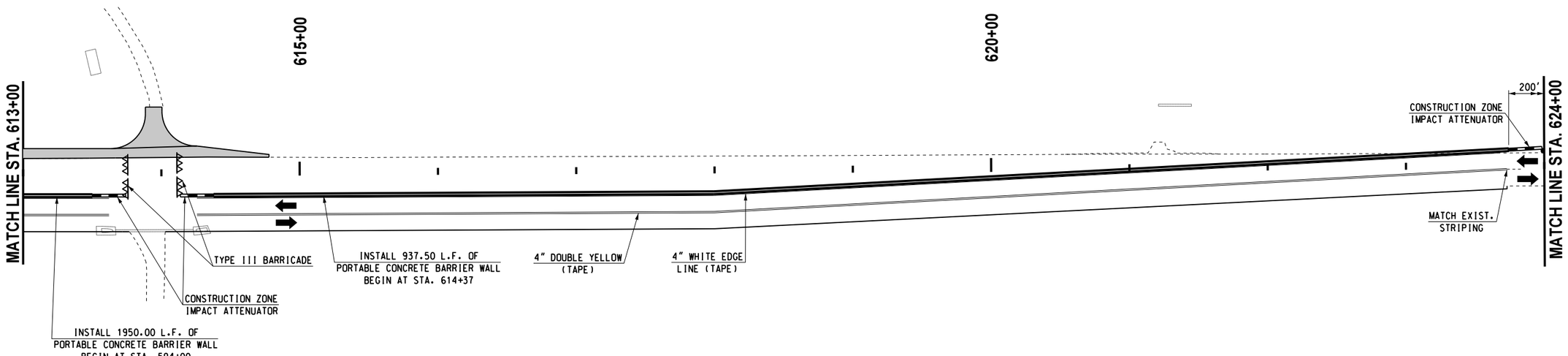
HARMON COUNTY

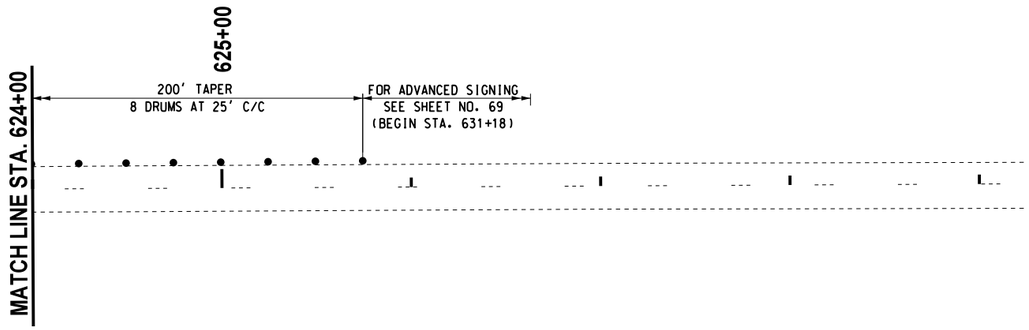
9/13/2016 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 3ABCD - 2.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.







SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 3. SHIFT TRAFFIC EAST TO TEMP. ASPHALT WIDENING OF SH-30 (ONE LANE EACH DIRECTION)

A. PLACE PORTABLE LONGITUDINAL BARRIER ALONG WEST EDGE OF DETOURED SOUTHBOUND LANE

B. CONSTRUCT WEST HALF OF NEW SH-30 PAVING AND DRAINAGE, TYING TO EXIST PAVEMENT (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00)

C. CONSTRUCT EW150 ROAD

LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 3 (3 OF 3)

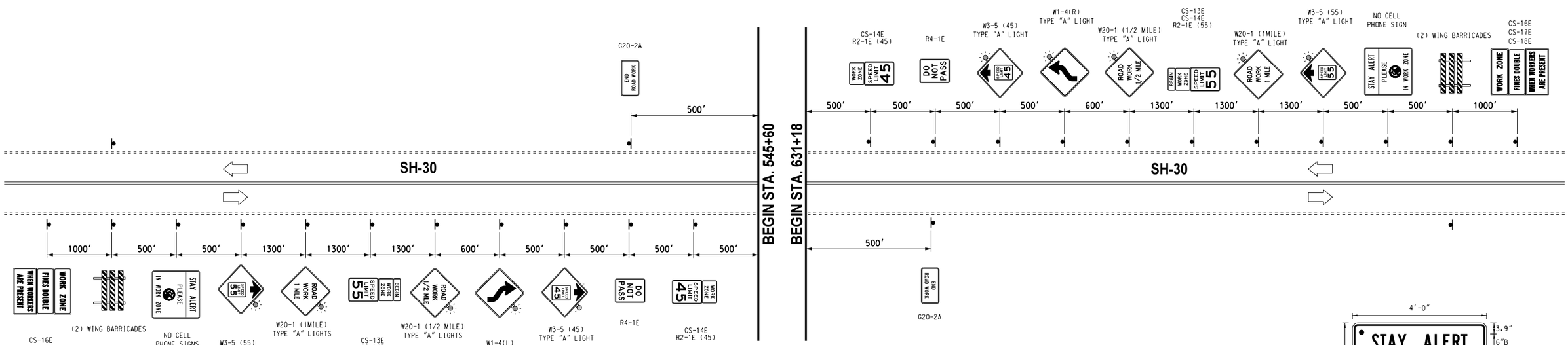
State Job No. 28768(04) Sheet No. 74

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

9/13/2016 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 3ABCD - 3.dgn

REVISIONS		
NO.	DESCRIPTION	DATE



NO CELL PHONE SIGN

48″X48″

● LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE BACKGROUND - YELLOW REFELCTIVE

▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE BACKGROUND - ORANGE REFLECTIVE

DRAWING NOT TO SCALE

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TYPICAL ADVANCE WARNING SIGNS PHASE 4

State Job No. 28768(04) Sheet No. 75

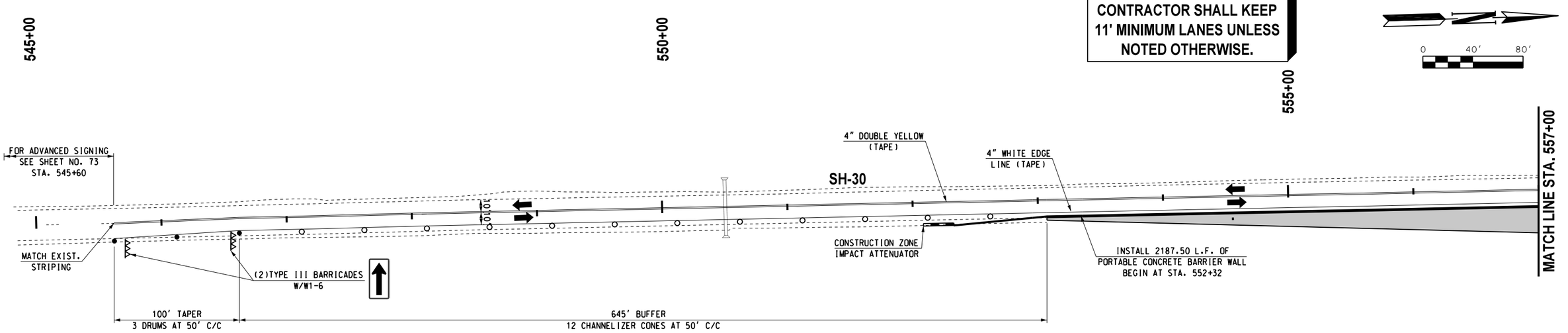
9/13/2016 G:\OPprojects\T-2356 SH 30 over Soft Fork of Red River\CAD\TC PHASE 4 ADVANCE SIGNING.dgn

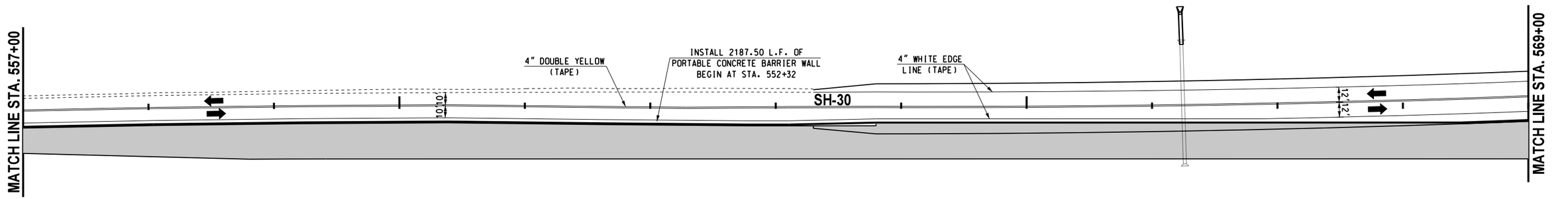
S.H. 30 BRIDGE & APPROACHES HARMON COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.

0 40' 80'





SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 4. SHIFT TRAFFIC WEST TO NEW BRIDGE AND PAVING OF SH-30 (ONE LANE EACH DIRECTION)

- A. RELOCATE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF MAINLINE
- B. REMOVE EXISTING BRIDGE
- C. REMOVE EXISTING ROADWAY AND WIDENING
- D. FINISH CONSTRUCTION OF REMAINDER OF SH-30 PAVING AND DRAINAGE (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00)

LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 4 (1 OF 3)

State Job No. 28768(04) Sheet No. 76

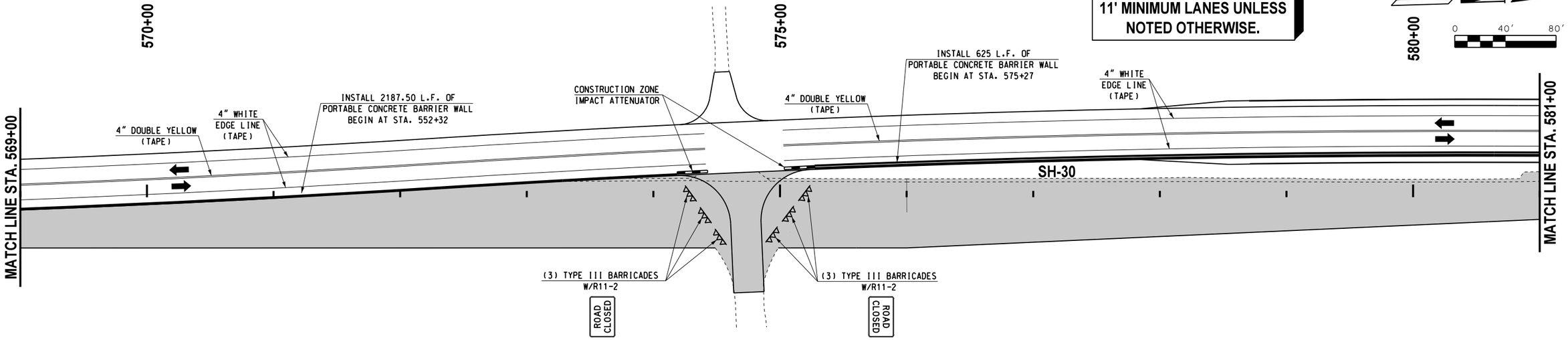
S.H. 30 BRIDGE & APPROACHES

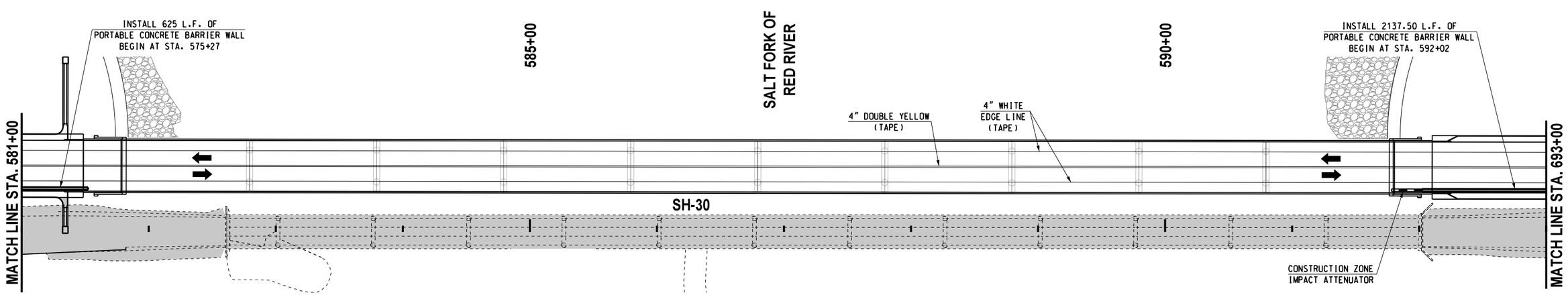
HARMON COUNTY

9/13/2016 G:\0Projects\T-2356 SH 30 over Sdt Fork of Red River\CAD\TC PHASE 4ABC - i.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.





LEGEND

- △△△ - TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- ● - DRUM
- ○ - CHANNELIZER CONE
- ═══ - PORTABLE CONC. BARRIER WALL
- ═══ - CONSTRUCTION ZONE IMPACT ATTENUATOR
- ▭ - WORK AREA

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 4. SHIFT TRAFFIC WEST TO NEW BRIDGE AND PAVING OF SH-30 (ONE LANE EACH DIRECTION)

A. RELOCATE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF DETOURED NORTHBOUND LANE

B. REMOVE EXISTING BRIDGE

C. REMOVE EXIST. ROADWAY. FINISH CONSTRUCTION OF REMAINDER OF SH-30 PAVING AND DRAINAGE (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00)

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 4 (2 OF 3)

State Job No. 28768(04) Sheet No. 77

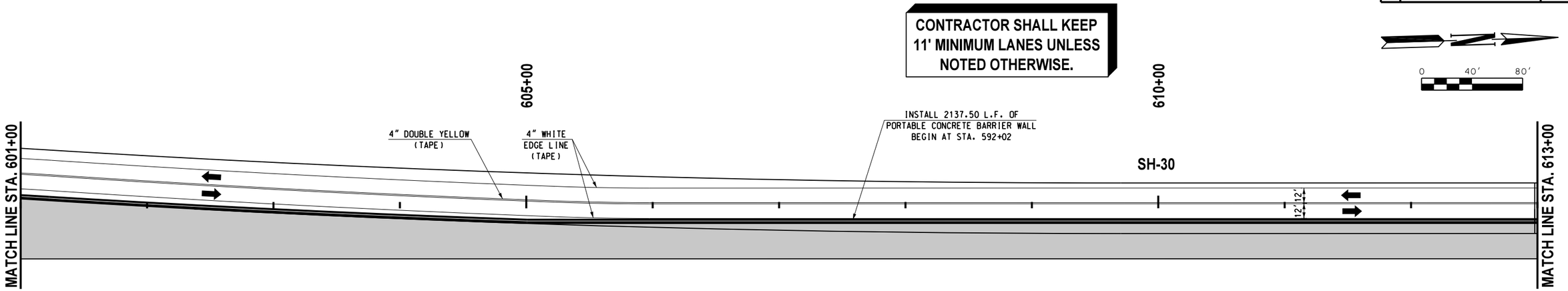
S.H. 30 BRIDGE & APPROACHES

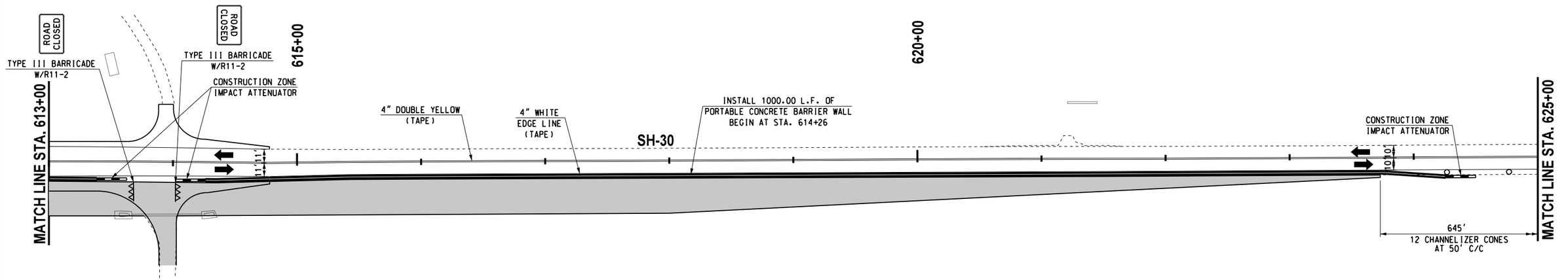
HARMON COUNTY

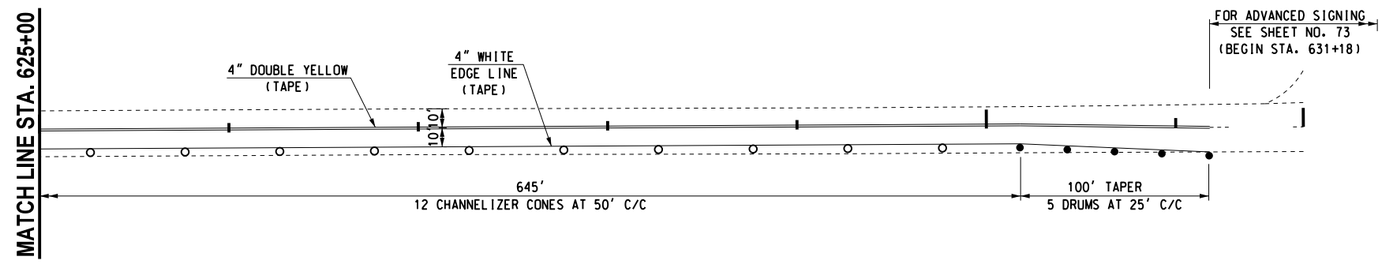
9/13/206 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 4ABC - 2.dgn

REVISIONS		
NO.	DESCRIPTION	DATE

CONTRACTOR SHALL KEEP 11' MINIMUM LANES UNLESS NOTED OTHERWISE.







SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 4. SHIFT TRAFFIC WEST TO NEW BRIDGE AND PAVING OF SH-30 (ONE LANE EACH DIRECTION)

A. RELOCATE PORTABLE LONGITUDINAL BARRIER ALONG EAST EDGE OF DETOURED NORTHBOUND LANE
B. REMOVE EXISTING BRIDGE
C. REMOVE EXIST. ROADWAY, FINISH CONSTRUCTION OF REMAINDER OF SH-30 PAVING AND DRAINAGE (C.R.L. SH-30 STA. 563+79.97 TO STA. 576+00 AND STA. 596+00 TO STA. 613+00)

LEGEND

- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
- DRUM
- CHANNELIZER CONE
- PORTABLE CONC. BARRIER WALL
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- WORK AREA

Design	RWR	9/13/2016
Drawn	CCC	9/13/2016

TEC A CLEAR DIRECTION

TRAFFIC CONTROL PLANS PHASE 4 (3 OF 3)

State Job No. 28768(04) Sheet No. 78

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

9/13/2016 G:\0Projects\T-2356 SH 30 over Salt Fork of Red River\CAD\TC PHASE 4ABC - 3.dgn

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SWO 5007(1) J/P 28768(04) ; EC1474 CO. HARMON

HORIZONTAL CONTROL:
( ) Oklahoma Coordinate System of 1927 _____ Zone.
(X) Oklahoma Coordinate System of 1983 SOUTH Zone.
( ) Oklahoma Dept. of Transportation Plane Coordinate System of 1927
( ) Oklahoma Dept. of Transportation Plane Coordinate System of 1983
( ) Arbitrary Coordinate System

HORIZONTAL PLANE DATUM DEFINITION:
Oklahoma Department of Transportation coordinates were derived by multiplying the Oklahoma Coordinate Systems of 1927 or 1983 by the combined adjustment factor of 1.00010. The ODOT Coordinate System is 2350 feet above sea level.

1. GPS NETWORK adjusted to NGS HARN
Stations MADGE AND FIRST ORDER STATIONS LEBOS AND GOULD
A.) Closure before adjustment X ____ Y ____ Angles
Trav. Length ____ s. Angles ____ ; 1:
B.) ____ ; is 1st Order before adjustment.
C.) Method of Distance Measurement:
( ) Electronic X GPS ( ) Triangulation ( )
D.) Instrument used for angles

2. ____ adjusted to ____ ( ) Order
Stations
A.) Closure before adjustment X ____ Y ____ Angles
B.) ____ ; is FIRST Order; Tied to
C.) d of Distance Measur
( ) Electronic X GPS ( ) Triangulation ( )
D.) Instrument used for angles

VERTICAL CONTROL IS (2nd) order. Level Line taken from NGS MADGE, E 96 & GOULD
(2nd) order and tied to ____ (2nd) order.
( ) NGVD 29 datum
X NAVD 88 datum

ACCURACY DEFINITION:
(1) HORIZONTAL: (3rd Order = Class I = 1 : 10,000')
(3rd Order = Class II = 1 : 5,000')
(2) VERTICAL: (1st Order = 0.017 Ft. x sqrt. of Mi.)
(3rd Order = 0.050 Ft. x sqrt. of Mi.)

Distribution:
Copy w/survey reports
Copy in each Alignment and level book

Edward R. Seaton
Professional Land Surveyor

10-Oct-14
Date

(FORM SD #20)
Rev. 11/03

REGISTERED PROFESSIONAL LAND SURVEYOR · EDWARD R. SEATON L.S. 1353 · OKLAHOMA

UTILITY CONTACT INFORMATION	
ELECTRIC	COMMUNICATIONS
HARMON ELECTRIC ASSOCIATION (580) 688-3342	PIONEER TELEPHONE COOPERATIVE (888) 782-2667

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYING AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS, MAY 17, 2010.

SPECIFICATIONS FOR SURVEYS FOR PRIMARY AND SECONDARY HIGHWAYS DATED JANUARY 2011 GOVERN.

SDS 1 OF 12

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SURVEY OF

S.H. 30

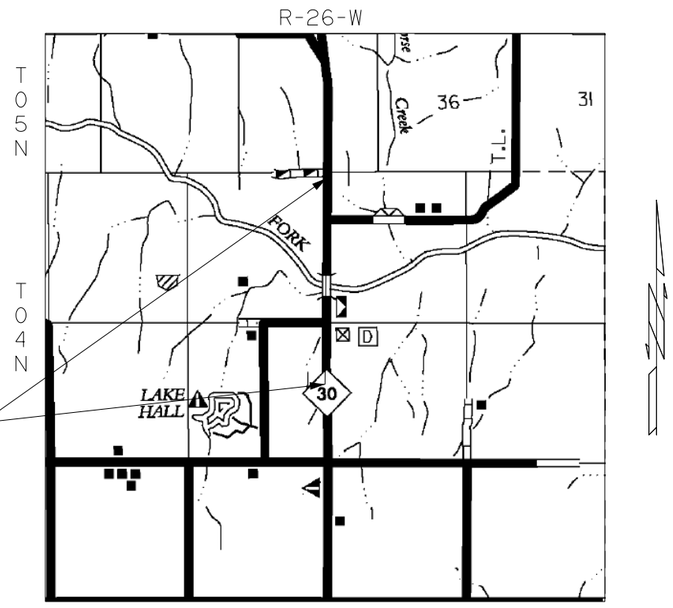
SWO 5007(1)

J P NO. 28768(04)

HARMON

S.H. 30, BRIDGE OVER SALT FORK OF THE RED RIVER, 11.2 MILES NORTH OF U.S. 62

PROJECT LOCATION



PROJECT LENGTH 6560 Ft. 1.24 MI.

BEGINNING STATION : 548+07.43
ENDING STATION : 613+67.39

Electronic File Transfer Disclaimer:

These Files, Drawings and/or Notes are provided for information only. The Oklahoma Department of Transportation (ODOT) and the Owner cannot be held responsible for the content or accuracy of these Files, Drawings and/or Notes due to conversions, software translations, or any other manipulation of said Files, Drawings and/or Notes. ODOT expressly disclaims any responsibility arising from any use of these Files, Drawings and/or Notes. To the full extent permitted by applicable law, the recipient of these Files, Drawings and/or Notes hereby agrees to defend, indemnify, and hold harmless ODOT and the Owner from and against any and all claims, suits, actions, damages, loss, liability or costs of every nature or description (including reasonable attorney's fees) arising from, or in any way attributable to or connected with any of these Files, Drawings and/or Notes.

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				

REVISIONS

DESCRIPTION	DATE

INDEX OF SHEETS

SURVEY BEGAN: 3/25/2014
SURVEY COMPLETED: 10/10/2014

PERSONNEL:	TITLE:
EDWARD R. SEATON	LICENSED LAND SURVEYOR
RON HUFFMAN	LICENSED LAND SURVEYOR
TONY ROBISON	LICENSED LAND SURVEYOR
BRANDON KAUFMAN	LICENSED LAND SURVEYOR
RYAN THOMSON	PARTY CHIEF
JASON APPLETON	INSTRUMENTMAN
RAY GIPSON	INSTRUMENTMAN
SUSAN MOBLEY	CERTIFIED PHOTOGRAMMETRIST

EQUIPMENT:
1 CESSNA 335 AIRCRAFT
1 LEICA ALS 50-2 LIDAR
1 MICRO-IRS IMU
5 TRIMBLE R8-3 GPS RECIEVER
1 TRIMBLE R8-2 GPS RECIEVER
1 TRIMBLE TSC3 DATA COLLECTOR
2 TRIMBLE TSC2 DATA COLLECTOR
1 TOPCON GPT-2003 TOTAL STATION
1 SOKKIA SDL-30 DIGITAL LEVEL

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SWO 5007(1) Job/Piece 28768(04) Engr. Contract No. EC1474

LAND SURVEYOR'S CERTIFICATION

I hereby certify that all land and property sub-division distances, angles, corners, and monumentation made or used in conjunction with this survey and depicted or recorded herein or hereon were recovered, established or re-established in substantial conformity with:

- Applicable instructions contained in the U.S. Government Bureau of Land Management publication **"Manual of Survey Instruction"**,
- Its supplement, **"Restoration of Lost or Obliterated Corners and Sub-division of Sections"**;
- **"Oklahoma Minimum Standards for the Practice of Land Surveying"** as adopted by the State Board of Licensure for Professional Engineers and Land Surveyors; **and**
- Sound land surveying practices;

including a thorough search, study, analysis and consideration of all existing records and field evidence.

I further certify that all survey monuments depicted exist and that all land survey work was done by me or under my direct supervision.

Dated this 10th day of October, 2014

Land Surveyor Edward R. Seaton (seal)
Signature

Edward R. Seaton
Printed Name

Oklahoma Licensed Land Surveyor No. 1353

Certificate of Authorization No. 4849

REGISTERED PROFESSIONAL LAND SURVEYOR · EDWARD R. SEATON L.S. 1353 · OKLAHOMA

BEFORE YOU DIG OKIE CALL 811

PLS	ERS		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	BDK		SURVEY DATA SHEET
CHECKED	ERS		
APPROVED	ERS		
CREW			SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S1

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE

Historical Letter & Written Report

1. GENERAL:
   Survey Began: March 25, 2014
   Survey Completed: October 10, 2014

   Personnel on this survey:

Edward R. Seaton	Licensed Land Surveyor
Ron Huffman	Licensed Land Surveyor
Tony Robison	Licensed Land Surveyor
Brandon Kaufman	Licensed Land Surveyor
Ryan Thomson	Party Chief
Jason Appleton	Instrument Operator
Ray Gipson	Instrument Operator
Susan Mobley	Certified Photogrammetrist

2. ASSIGNMENT:

   This Survey was assigned to me by Mr. Larry Reser, Chief of Surveys, Oklahoma Department Of Transportation, via email dated March 25, 2014. Heartland Surveying and Mapping, PLLC, under the direct supervision of Mr. Edward R. Seaton, began work on the project on April 2, 2014.

3. PURPOSE:

   The purpose of this survey is to furnish sufficient data to develop plans to construct a new bridge over Salt Fork of the Red River north of Hollis. The survey will include the Alignment, Topographic/Planimetric data, Surface Features/DTM data, Land Ties, Utilities, Drainage and all other pertinent information needed to aid in the design.

4. LIMITS:

   This survey will begin at EW-150.5 ¼ Section Line, as established under SWO 264 survey, and will extend north to EW-149 Section Line, as established under SWO 673 survey (approximate centerline length = 1.59 miles).

5. ALIGNMENT:

   The Centerline of Survey for this project will be along and identical to the centerline of present S.H. 30 as established under SWO 264 survey and SWO 673 survey and shown on SAP No. 673-B plans.

6. STATIONING:

   Stationing for this survey will be taken from SWO 673 survey at **P.O.T Sta. 574+46.2** (EW-150 Section Line). Stationing will decrease south to the BEGINNING OF SURVEY and increase north to the END OF SURVEY from this point, field measured distance, without equation, except with existing surveys and plans.

7. HORIZONTAL CONTROL:

   Horizontal control for this survey is NGS Oklahoma State Plane Coordinate System, NAD83(2011), Lambert Projection, South Zone, derived by Static GPS methods utilizing NGS HARN monument MADGE,and NGS First Order monuments LEBOS and GOULD.

7001	5/8"X18" rebar with Plastic Cap (Aerial Target)
7003	5/8"X18" rebar with Plastic Cap (Aerial Target)
7004	5/8"X18" rebar with Plastic Cap (Aerial Target)
7005	5/8"X18" rebar with Plastic Cap (Aerial Target)
7006	5/8"X18" rebar with Plastic Cap (Aerial Target)
7007	5/8"X18" rebar with Plastic Cap (Aerial Target)
7008	5/8"X18" rebar with Plastic Cap (Aerial Target)
7009	5/8"X18" rebar with Plastic Cap (Aerial Target)
7010	5/8"X18" rebar with Plastic Cap (Aerial Target)
7011	5/8"X18" rebar with Plastic Cap (Aerial Target)
7012	5/8"X18" rebar with Plastic Cap (Aerial Target)
7013	5/8"X18" rebar with Plastic Cap (Aerial Target)
7014	5/8"X18" rebar with Plastic Cap (Aerial Target)
7016	5/8"X18" rebar with Plastic Cap (Aerial Target)
7401	5/8"X36" rebar with 3" Aluminum Cap (ODOT No. H-29-126)
7402	5/8"X36" rebar with 3" Aluminum Cap (ODOT No. H-29-127)

   a.) Static GPS methods were used to establish the following Secondary Control Points:

   b.) Static GPS observations were made between 7401 and 7402 to verify control points.

8. VERTICAL CONTROL:

   a.) Vertical Control for this survey is NAVD88, derived from NGS HARN monuments.

   b.) Vertical Control Points:
   NGS Benchmarks MADGE, E 96 and GOULD.

   c.) Differential Leveling method was utilized throughout the project.

   d.) All leveling was conducted with a Sokkia SDL30 digital level. Elevations were established by double loop leveling between benchmarks. The NAVD 88 elevation was derived by using the elevation of 1852.1940 on Control Pt. 7401(H-29-126) and ending on GPS Control Pt. 7402 (H-29-127) with an elevation of 1828.7270.

   A Benchmark list depicting all established benchmarks, as well as results of the control leveling has been placed in the archived Microstation Design File. (See SUBMITTED DATA below).

9. MEASUREMENT UNITS:

   The distances, coordinates, and elevations shown on this survey are in US SURVEY FEET. All angles and bearings shown are in degrees, minutes, and seconds.

10. PHOTO CONTROLS:
    Sixteen aerial targets were placed prior to acquisition of aerial photography and LiDAR.
    Coordinates and Elevations are:

Pt. No.	Northing	Easting	Elevation
7001	551180.0280	1394076.2200	1828.9410
7003	551207.7750	1395150.1750	1839.7015
7004	552367.4790	1394654.1970	1826.3211
7005	553519.3400	1394172.3120	1767.1533
7006	553388.4470	1395092.8340	1797.7458
7007	554448.1160	1394733.0000	1754.6218
7008	555696.3410	1394304.7990	1722.4400
7009	555534.5840	1395191.9520	1716.2480
7010	556849.3510	1394807.8240	1726.6132
7011	558193.7410	1394346.7830	1755.9575
7012	558124.3790	1395371.7480	1751.6730
7013	559499.5490	1394793.3500	1794.3757
7014	560652.4680	1394379.4060	1822.7560
7016	560581.0800	1395365.1750	1806.5890
7401	551262.0240	1394578.1560	1852.1940
7402	560582.3430	1394906.8200	1828.7270

11. TOPOGRAPHY:

    All topography information was obtained during the course of this survey by field conventional and RTK GPS methods along the present Right of Way of S.H. 30. LiDAR technology was utilized for the DTM along with Aerial Photogrammetry for acquisition of planimetric features.

    Mapping limits are as follows:
    - 150 feet right and 250 feet left of Centerline of Survey from the Beginning of Survey to Sta. 580+00; thence,
    - 500 feet right and left of Centerline of Survey from Sta. 580+00 to Sta. 610+00; thence,
    - 150 feet right and 250 feet left of Centerline of Survey from Sta. 610+00 to the End of Survey.

12. CROSS SECTION/DTM:

    All surface feature information was obtained during the course of this survey by field conventional, LiDAR and RTK GPS methods. A DTM file was created and archived. (See: SUBMITTED DATA below).

13. ENVIRONMENTAL CONCERNS:

    No evidence was found of Hazardous waste sites during this survey.
    No evidence was found of underground storage tanks during this survey.
    No evidence was found of Cemeteries during this survey.

14. UTILITIES:

    All utility companies servicing the project extents were contacted, after first contacting OKIE. The locate was requested on 6-6-2014, Ticket No. 140606142917 27. Underground utilities were marked and tied to the survey. Depths of the utility lines were requested and approximate Depths and depths as provided are shown on topography. Not all companies furnished depths of utilities and some are approximate and some are unknown.
    -

15. LAND TIES:

    Complete Land Ties for this survey consisted of the following sections:

    Sections 2, 3, 10 and 11, Township 4 North, Range 26 West, I.M., Harmon County, State of Oklahoma. A search was made at all corner locations for any trace of the original monuments and/or Accessories. The Original Government Survey was performed in stages, as listed below:

Surveyor:	Description:	Date:	Organization:
Turner & Smith	Original Survey	1875	U.S. Geological Survey

    Original Survey notes and Plats were obtained from the Bureau of Land Management website for the Sections being surveyed and adjoining sections. Records were obtained of current filed Section and Quarter Section corners from Hub Tack. The following is our findings and actions at each Section and Quarter Section corner:

    Northwest Corner of Section 3, Township 4 North, Range 26 West, IBM: (H-29-128)
    Found and accepted 1" Iron Pipe set by unknown party. Referenced and filed corner.

SDS 2 OF 12

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S2

8-87

North Quarter Corner of Section 3, Township 4 North, Range 26 West, IBM: (H-29-129)
Found Nothing. Calculated position using single proportion and set a No.5 rebar with an orange plastic cap stamped "Heartland CA 4849." Referenced and filed corner.

Northwest Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-130)
Found and accepted a PK nail as described in OCCR by L.S. 1270 Dated 03/27/06. A No.4 rebar with cap as described by L.S. 1071 in OCCR dated 06/27/01 was also found but not accepted. Referenced and filed corner.

North Quarter Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-131)
Found Nothing. Calculated position using single proportion and set a No.5 rebar with an orange plastic cap stamped "Heartland CA 4849." Referenced and filed corner.

Northeast Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-132)
Found and accepted a ¾" iron pipe as described by L.S. 1270 in OCCR dated 03/27/06. Referenced and filed corner.

West Quarter Corner of Section 3, Township 4 North, Range 26 West, IBM: (H-29-133)
Found and accepted 1" iron pipe with cap stamped "OJD CA 1023." Referenced and filed the corner.

West Quarter Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-134)
Found and accepted mag nail as described by L.S. 1071 in OCCR dated 06/27/01. A PK nail as described by L.S. 1270 in OCCR dated 03/27/06 was also found but not accepted. Referenced and filed the corner.

East Quarter Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-135)
Found and accepted a ¾" iron pipe as described by L.S. 1270. Referenced and filed the corner.

Southwest Corner of Section 3, Township 4 North, Range 26 West, IBM: (H-29-136)
Found and accepted 1" iron pipe with cap approximately 0.5' above ground. Referenced and filed corner.

South Quarter Corner of Section 3, Township 4 North, Range 26 West, IBM: (H-29-137)
Found and ½" iron pipe approximately 2.0' below surface. Set No.5 rebar with orange plastic cap stamped "Heartland CA 4849" above the ½" iron pipe. Position agrees with existing improvements and with adjacent section corners. Referenced and filed the Corner.

Southwest Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-138)
Found and accepted a mag nail with washer as described by L.S. 1071 in OCCR dated 06/27/01. A PK nail as described by L.S. 1270 in OCCR dated 03/27/06 was also found but not accepted. Referenced and filed corner.

South Quarter Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-139)
Found and accepted ¾" iron pipe as described in OCCR by L.S. 1270 dated 03/27/06. Referenced and filed corner.

Southeast Corner of Section 2, Township 4 North, Range 26 West, IBM: (H-29-140)
Found and accepted ¾" iron pipe as described in OCCR by L.S. 1270 Dated 03/27/06. Referenced and filed corner.

West Quarter Corner of Section 10, Township 4 North, Range 26 West, IBM: (H-29-141)
Found nothing. Calculated position using single proportion and set a No.5 rebar with orange plastic cap stamped "Heartland CA 4849." Referenced and filed corner.

West Quarter Corner of Section 11, Township 4 North, Range 26 West, IBM: (H-29-142)
Found nothing. Calculated position using single proportion and set a No.5 rebar with orange plastic cap stamped "Heartland CA 4849." Referenced and filed corner.

East Quarter Corner of Section 11, Township 4 North, Range 26 West, IBM: (H-29-143)
Found nothing. Calculated position using single proportion and set a No.5 rebar with orange plastic cap stamped "Heartland CA 4849." Referenced and filed corner.

Southwest Corner of Section 10, Township 4 North, Range 26 West, IBM: (H-29-144)
Found nothing. Calculated position using double proportion. Set mag nail with washer stamped "Heartland CA 4849." Referenced and filed corner.

South Quarter Corner of Section 10, Township 4 North, Range 26 West, IBM: (H-29-145)
Found 5/8" bolt at calculated position of corner. Replaced bolt with No.5 rebar with orange plastic cap stamped "Heartland CA 4849." Referenced and filed corner.

Southwest Corner of Section 11, Township 4 North, Range 26 West, IBM: (H-29-146)
Found and accepted a 60D nail with washer as described in OCCR by L.S. 763 dated 06/28/2011. Referenced and filed corner.

South Quarter Corner of Section 11, Township 4 North, Range 26 West, IBM: (H-29-147)
Found and accepted No. 4 rebar as described by L.S. 763 in OCCR dated 06/28/2011. Referenced and filed corner.

Southeast Corner of Section 11, Township 4 North, Range 26 West, IBM: (H-29-148)
Found and accepted No. 4 rebar with yellow plastic cap as described by L.S. 763 in OCCR dated 06/28/2011. Referenced and filed corner.

16. PROPERTY OWNERS:

All information on property owners shown on this survey was obtained from records on file at the Harmon County Clerks Office in Hollis, Oklahoma and from Reconnaissance Data provided by ODOT.

17. DRAINAGE:

Drainage/Hydraulic information for this survey was calculated from field data and USGS Quadrangle maps and has been placed in the submitted Microstation Design File. All drainage Divides shown in the Microstation Design File have been field checked for their accuracy.
The Project is in Flood Zone A. according to FEMA Map Number 40057C0200D with an effective date of April 3, 2012.

18. DATA SUBMITTED:

REPORTS

1. ODOT form SD-1, Transmittal Letter.
2. ODOT form SD-20, Survey Control.
3. ODOT form SD-41, Surveyor's Certification.
4. Twenty One (21) Oklahoma Certified Corner Record Forms.
5. Two (2) ODOT form SD-11, for GPS Control Monuments.
6. ODOT form SD-7, Public & Privately owned Utilities List

Project Name: SWO5007_1_V1
Description: S.H. 30, Bridge over the Salt Fork of the Red River
Horizontal Alignment Name: A001
Description: Centerline of Survey
Style: Centerline

		STATION	EASTING	NORTHING
Element: Linear				
POB	(300)	548+07.43	1394624.7666	551579.4442
PC	(303)	556+58.02	1394629.2620	552430.0213
Tangent Direction:		N 0°18'10.13" E		
Tangent Length:		850.59		
Element: Circular				
PC	(303)	556+58.02	1394629.2620	552430.0213
PI	(301)	557+99.72	1394630.0109	552571.7188
CC	(304)		1406088.2579	552369.4590
PT	(305)	559+41.40	1394634.2634	552713.3545
Radius:		11459.16		
Delta:		1°25'00.92" Right		
Degree of Curvature(Arc):		0°30'00.00"		
Length:		283.38		
Tangent:		141.70		
Chord:		283.38		
Middle Ordinate:		0.88		
External:		0.88		
Tangent Direction:		N 0°18'10.13" E		
Radial Direction:		S 89°41'49.87" E		
Chord Direction:		N 1°00'40.59" E		
Radial Direction:		S 88°16'48.95" E		
Tangent Direction:		N 1°43'11.05" E		
Element: Linear				
PT	(305)	559+41.40	1394634.2634	552713.3545
PI	(312)	613+98.69	1394798.0396	558168.1864
Tangent Direction:		N 1°43'11.05" E		
Tangent Length:		5457.29		
Element: Linear				
PI	(312)	613+98.69	1394798.0396	558168.1864
POE	(302)	631+67.39	1394841.9710	559936.3370
Tangent Direction:		N 1°25'23.79" E		
Tangent Length:		1768.70		

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S3

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE

POINT NAME	EASTING	NORTHING	POINT NAME	EASTING	NORTHING
101	1394644.5080	551824.6500	7602	1394684.2409	552711.8539
102	1394704.8480	552900.0080	7603	1394685.9994	552770.4240
103	1394733.0000	554448.1160	7604	1394710.9881	552769.6738
104	1394722.7370	555031.3560	7605	1394753.2684	554177.8875
105	1394750.0390	555975.6520	7606	1394755.2492	554243.8608
106	1394807.8240	556849.3510	7607	1394789.0323	556068.8176
107	1394855.2140	558195.5120	7608	1395088.8972	556059.8145
108	1394880.9630	559308.1500	7609	1395111.3801	556842.1425
300	1394624.7666	551579.4442	7610	1394811.4704	556849.5010
301	1394630.0109	552571.7188	7611	1394821.0468	557268.3972
302	1394841.9710	559936.3370	7612	1394848.0171	558166.6859
303	1394629.2620	552430.0213	7613	1394891.1506	559902.6967
304	1406088.2579	552369.4590	7614	1394574.7716	551580.5242
305	1394634.2634	552713.3545	7615	1394588.5194	554181.7532
306	1394663.0314	553671.5192	7616	1394588.8683	554247.7662
307	1394679.2711	554212.4095	7617	1394590.3578	554529.5952
308	1394702.0451	554970.9336	7618	1394595.4825	554817.5785
309	1394735.0567	556070.4382	7619	1394624.3312	555769.3413
310	1394758.4861	556850.7946	7620	1394638.4463	555980.7678
311	1394786.0746	557769.6725	7621	1394696.8994	556546.1347
312	1394798.0396	558168.1864	7622	1394700.4021	556582.2936
313	1394822.9103	559169.1840	7623	1394748.0621	558169.6870
1000	1394524.7900	551581.6053	7624	1394791.1575	559904.2149
1001	1394424.8133	551583.7664	7625	1394790.2940	555411.0835
1002	1394324.8367	551585.9274	7626	1394771.3025	555411.6537
1003	1394729.2606	552429.4928	7627	1394644.6868	548977.6915
1004	1394829.2592	552428.9643	7628	1394669.0322	550494.3124
1005	1394929.2578	552428.4358	7629	1394519.7150	548980.4538
1006	1394530.0265	552573.4837	7630	1394525.4673	549338.7987
1007	1394430.0421	552575.2486	7631	1394550.4641	549338.3974
1008	1394330.0576	552577.0135	7632	1394569.0365	550495.3792
1009	1394734.2183	552710.3534	7633	1394756.2395	554276.8435
1010	1394834.1733	552707.3524	7634	1394774.5049	555530.3501
1011	1394934.1283	552704.3513	7635	1394617.2011	555534.1098
1012	1394762.9863	553668.5181	8000	1393440.6881	556881.5735
1013	1394862.9413	553665.5171	8001	1393402.8843	555563.9748
1014	1394962.8963	553662.5160	8002	1394993.1073	554271.9936
1015	1394610.7143	554285.2104	8003	1395032.3789	555524.5478
1016	1394542.1576	554358.0113	8004	1396639.0984	555488.3961
1017	1394473.6008	554430.8122	8005	1397369.8263	555471.9545
1018	1394602.0901	554973.9347	8006	1396680.3662	556803.6468
1019	1394502.1352	554976.9358	9501	1389552.9090	560028.2320
1020	1394402.1802	554979.9368	9502	1390875.1745	560005.2583

POINT NAME	EASTING	NORTHING	POINT NAME	EASTING	NORTHING
1021	1394835.0116	556067.4371	9503	1392197.4400	559982.2845
1022	1394934.9666	556064.4361	9504	1393519.7055	559959.3108
1023	1395034.9215	556061.4350	9505	1394841.9710	559936.3370
1024	1394689.9294	556923.5955	9506	1396164.4800	559919.1928
1025	1394621.3726	556996.3964	9507	1397486.9890	559902.0485
1026	1394552.8159	557069.1973	9508	1398809.4980	559884.9042
1027	1394886.0295	557766.6714	9509	1400132.0070	559867.7600
1028	1394985.9845	557763.6704	9510	1389508.4199	558282.9808
1029	1395085.9395	557760.6693	9511	1390830.0730	558254.2992
1030	1394866.5964	558095.3855	9512	1392151.7255	558225.6176
1031	1394935.1531	558022.5846	9513	1393474.4579	558196.9126
1032	1395003.7099	557949.7838	9514	1394797.1911	558168.2075
1033	1394753.9778	559241.6292	9515	1396118.2981	558135.3710
1034	1394685.0453	559314.0744	9516	1397439.3973	558102.5347
1035	1394616.1128	559386.5196	9517	1398762.0127	558069.6607
1036	1394910.9035	559863.8918	9518	1400084.6320	558036.7866
1037	1394979.8361	559791.4466	9519	1389475.0570	556974.1960
1038	1395048.7686	559719.0014	9520	1392117.5531	556912.4771
7001	1394076.2200	551180.0280	9521	1394763.8230	556850.6700
7003	1395150.1750	551207.7750	9522	1397404.5756	556785.8780
7004	1394654.1970	552367.4790	9523	1400050.5860	556720.9570
7005	1394172.3120	553519.3400	9524	1389407.8300	554334.9110
7006	1395092.8340	553388.4470	9525	1392049.0570	554280.3800
7007	1394733.0000	554448.1160	9526	1394681.1040	554212.3720
7008	1394304.7990	555696.3410	9527	1397335.0770	554158.0310
7009	1395191.9520	555534.5840	9528	1399981.9610	554089.4510
7010	1394807.8240	556849.3510	9529	1389361.6500	551693.1555
7011	1394346.7830	558193.7410	9530	1392001.8778	551636.1125
7012	1395371.7480	558124.3790	9531	1394637.6375	551579.1660
7013	1394793.3500	559499.5490	9532	1397290.4072	551514.6483
7014	1394379.4060	560652.4680	9533	1399939.2130	551450.2270
7016	1395365.1750	560581.0800	9534	1389315.4700	549051.4000
7401	1394578.1560	551262.0240	9535	1391954.8205	548998.6800
7402	1394906.8200	560582.3430	9536	1394594.1710	548945.9600
7600	1394674.7611	551578.2631	9537	1397245.8650	548878.8200
7601	1394679.2613	552429.7570	9538	1399896.4650	548811.0030

S.H. 30, BRIDGE OVER SALT
FORK OF THE RED RIVER
SWO 5007(1), J/P 28768(04)
HARMON COUNTY

BENCH MARK AND CHECK LEVEL LIST

STATION	DIFF. EL. 1ST RUN	DIFF. EL. 2ND RUN	MEAN DIFF. ELEVATION	ELEVATION	ADJUSTED ELEVATION	STATION	OFFSET	DESCRIPTION
7401					1852.1940	544+89.77	44.93L	5/8" IRON PIN WITH 3" ALUMINUM CAP
	-18.1790	18.1830	-18.1810					
BM1				1834.0130	1834.0143	550+52.74	18.45R	CHISELED SQUARE ON NE CORNER OF HEADWALL UNDER HWY 30
	-7.6980	7.6910	-7.6945					
7004				1826.3185	1826.3211	55+95.61	25.27R	AERIAL TARGET
	-31.1470	31.1310	-31.1390					
BM2				1795.1795	1795.1835	561+30.09	64.95R	5/8" IRON PIN WITH ORANGE PLASTIC CAP EAST SIDE OF HWY 30
	-40.5670	40.5590	40.5630					
7007				1754.6165	1754.6218	576+78.35	46.63	AERIAL TARGET
	-6.9860	6.9860	-6.9860					
BM4				1747.6305	1747.6371	582+61.02	18.87R	SQUARE BOLT ON SE ABUTMENT WALL
	-6.3260	6.3220	-6.3240					
BM5				1741.3065	1741.3144	592+05.71	17.82R	DOME TOP BOLT ON NE ABUTMENT WALL
	-14.7000	14.7050	-14.7025					
BM6				1726.6040	1726.6132	600+80.75	49.36R	5/8" IRON PIN WITH ORANGE PLASTIC CAP EAST SIDE OF HWY 30
	23.5290	-23.5340	23.5315					
BM7				1750.1355	1750.1460	614+27.43	56.48R	RAILROAD SPIKE IN BASE OF POWERPOLE
	37.4290	-37.4240	37.4265					
BM8				1787.5620	1787.5739	625+40.37	54.58R	RAILROAD SPIKE IN BASE OF POWERPOLE
	6.8010	-6.8000	6.8005					
7013				1794.3625	1794.3757	627+29.53	37.76L	AERIAL TARGET
	34.3480	-34.3520	34.3500					
7402				1828.7125	1828.7270	620+14.81	48.78R	5/8" IRON PIN WITH 3" ALUMINUM CAP

PLS	ERS	OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	BDK	SURVEY DATA SHEET
CHECKED	ERS	SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S4
APPROVED	ERS	
CREW		

SDS 4 OF 12

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE

7402-7016

7402					1828.7270	620+14.81	48.78R	5/8" IRON PIN WITH 3" ALUMINUM CAP
	-0.8350	0.8350	-0.8350					
TBM1					1827.8920			
	-21.3010	21.3050	-21.3030					
7016					1806.5890	620+24.93	507.03R	AERIAL TARGET

TBM1-7014

TBM1					1827.8920			
	-5.1380	5.1340	-5.1360					
7014					1822.7560	620+71.81	480.21L	AERIAL TARGET

BM7-7012

BM7					1750.1460	614+27.43	56.48R	RAILROAD SPIKE IN BASE OF POWERPOLE
	1.5290	-1.5250	1.5270					
7012					1751.6730	613+72.12	574.76R	AERIAL TARGET

BM7-7011

BM7					1750.1460	614+27.43	56.48R	RAILROAD SPIKE IN BASE OF POWERPOLE
	5.8110	-5.8120	5.8115					
7011					175.9575	614+13.03	451.75L	AERIAL TARGET

TP6-7005

TP6					1774.0053			
	-6.8510	6.8530	-6.8520					
7005					1767.1533	567.3316	485.93L	AERIAL TARGET

TP6-7006

TP6					1774.0053			
	23.7610	-23.7200	23.7405					
7006					1797.7458	566+29.95	438.10R	AERIAL TARGET

7401-7003

7401					1852.1940	544+89.77	44.93L	5/8" IRON PIN WITH 3" ALUMINUM CAP
	-12.4920	12.4930	-12.4925					
7003					1839.7015	544+38.54	527.37R	AERIAL TARGET

7401-7001

7401					1852.1940	544+89.77	44.93L	5/8" IRON PIN WITH 3" ALUMINUM CAP
	-23.2520	23.2540	-23.2530					
7001					1828.9410	544+06.02	546.53L	AERIAL TARGET

SDS 5 OF 12

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S5

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS

DESCRIPTION	DATE

EW-150.5

550+00

Station Comparison
Station 548+07.43 on this survey
Station 554+45 on NHS No.352-B Plans
(EW-162.5 1/4 Section Line)

BOP Sta. 548+07.43
Mag Nail on ℄

555+00

PC Sta. 556+58.02
Mag Nail on ℄

PI Sta. 557+99.72
Mag Nail

POT Sta. 559+41.40
Mag Nail on ℄

560+00

N.E. 1/4 Sec. 10
T-04-N, R-26-W

565+00

7005

POT Sta. 569+00.00
Mag Nail on ℄

570+00

POST Sta. 574+41.13
Mag Nail on ℄

EW-150

575+00

STAT. R/W 33' 33' STAT. R/W

S 88°31'11.62" E 2632.93'

ALL R.P.'S #4 REBAR

100.00' N 88°45'42.11" W

100.00' N 88°59'19.41" W

100.00' N 43°16'48.95" W

7614 7615 7616

PRES. R/W 50' 55' 89'

300 303 301 305 306 307

℄ SURVEY SH30

N 0°18'10.13" E

2602.08' N 0°18'10.13" E

2633.56' N 0°56'44.52" E

1408.85' N 1°43'11.05" E

851.51' N 0°18'10.13" E

50' NS-171

9531 9526

7600 101 7004 7601 7602 7603 7604 102 7605

R 11409.16' L 282.15'

75' PRES. R/W

100.00' S 89°41'49.87" E

100.00' S 88°16'48.95" E

56.60' N 1°43'11.05" E

25.00' S 88°16'48.95" E

33.00' N 1°43'11.05" E

S 88°49'37.25" E 2654.53'

CURVE DATA
P.I. Sta. 557+99.72
X= 1394630.0109
Y= 552571.7188
Δ= 01°25'00.92"
D=00°30'00.00"
T=141.699'
L=283.38'
R=11459.156'
E=0.88'

N.W. 1/4 Sec. 11
T-04-N, R-26-W

7006

SCALE: 1"=100'

SDS 6 OF 12

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S6

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS

DESCRIPTION	DATE

S.E. 1/4 S.E. 1/4 Sec. 3 T-04-N, R-26-W

N.E. 1/4 S.E. 1/4 Sec. 10 T-04-N, R-26-W

S.W. 1/4 S.W. 1/4 Sec. 2 T-04-N, R-26-W

N.W. 1/4 S.W. 1/4 Sec. 2 T-04-N, R-26-W

580+00 585+00 590+00 595+00 600+00

575+00 605+00

POT Sta. 582+00.00 Mag Nail on ℄

POT Sta. 592+00.00 Mag Nail on ℄

POT Sta. 600+80.71 Mag Nail on ℄

Station Comparison
Station 592+01.75 on this survey
Station 592+01.75 on SAP 673-B Plans (North End of Bridge)

℄ SURVEY SH30

NS-171

EW-149.5

ALL R.P.'S ●4 REBAR

PRES.R/W

7617 7618 7635 7619 7620 7621 7622 308 309 310 104 105 106 103 7007 7633 7625 7626 7634 7607 9521 7010 7610 7608 7609 8002 8003 7009

281.83' N 0°18'10.13" E
R 11509.16' L 288.04'
102'
100.00' N 88°16'48.95" W
716.86' N 1°44'10.13" E
N 1°44'10.13" E 952.20'
1214.68' S 88°35'28.14" E
235.34' N 1°44'10.13" E
R 2914.79' L 211.94'
568.38' N 5°54'10.13" E
R 2814.79' L 36.33'
1323.50' S 88°39'43.29" E
100.00' N 43°16'48.95" W
26.39.59' N 1°47'44.94" E
N 1°43'11.05" E
55'
118.74' N 1°32'43.53" E
538.66' N 1°32'43.53" E
50'
419.01' N 1°18'34.63" E
1134.75' N 1°43'11.05" E
75'
19.00' N 88°16'48.95" W
257.94' S 88°42'39.76" E
236.92' S 88°49'37.25" E
1253.17' N 1°47'44.94" E
100.00' S 88°16'48.95" E
300.00' S 88°16'48.95" E
354'
782.65' N 1°38'46.09" E
300.00' N 88°35'40.22" W

SCALE: 1"=100'

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S7

SDS 7 OF 12

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS

DESCRIPTION	DATE

S.E. 1/4 N.E. 1/4
Sec. 3 T-04-N, R-26-W

610+00

615+00

PI Sta. 613+98.69
Mag Nail on ℄

S 88°45'24.49" E
1323.04'

7011

620+00

Lot 1 Sec. 3
T-04-N, R-26-W

625+00

POT Sta. 624+00.00
Mag Nail on ℄

630+00

Station Comparison
Station 631+67.39 on this survey =
Station 631+76.2 on NRS No.352-B Plans
(EW-149 Township Line)

S 89°00'16.61" E
1322.41'

EW-149

EOP Sta. 631+67.39
PK Nail on ℄

STAT. R/W
33'

7624

PRES. R/W
50'

302

9505

7613

605+00

NS-171

1588.11'
N 1°43'11.05" E

1317.96'
N 1°27'02.77" E

898.69'
N 1°43'11.05" E

7623

311

9514

312

107

7612

7611

℄ SURVEY SH30

N 1°25'23.79" E

1735.32'
N 1°25'23.79" E

313

1768.70'
N 1°27'02.77" E

7013

1736.29'
N 1°25'23.79" E

108

100.00'
N 43°54'36.21" W

ALL R.P.'S
#4 REBAR

100.00'
S 1°16'48.95" E

100.00'
S 88°16'48.95" E

100.00'
S 43°54'36.21" E

7012

S 88°34'34.28" E
1321.51'

S 89°15'26.25" E
1322.62'

SCALE:
1"=100'

S.W. 1/4 N.W. 1/4
Sec. 2 T-04-N, R-26-W

Lot 4 Sec. 2
T-04-N, R-26-W

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

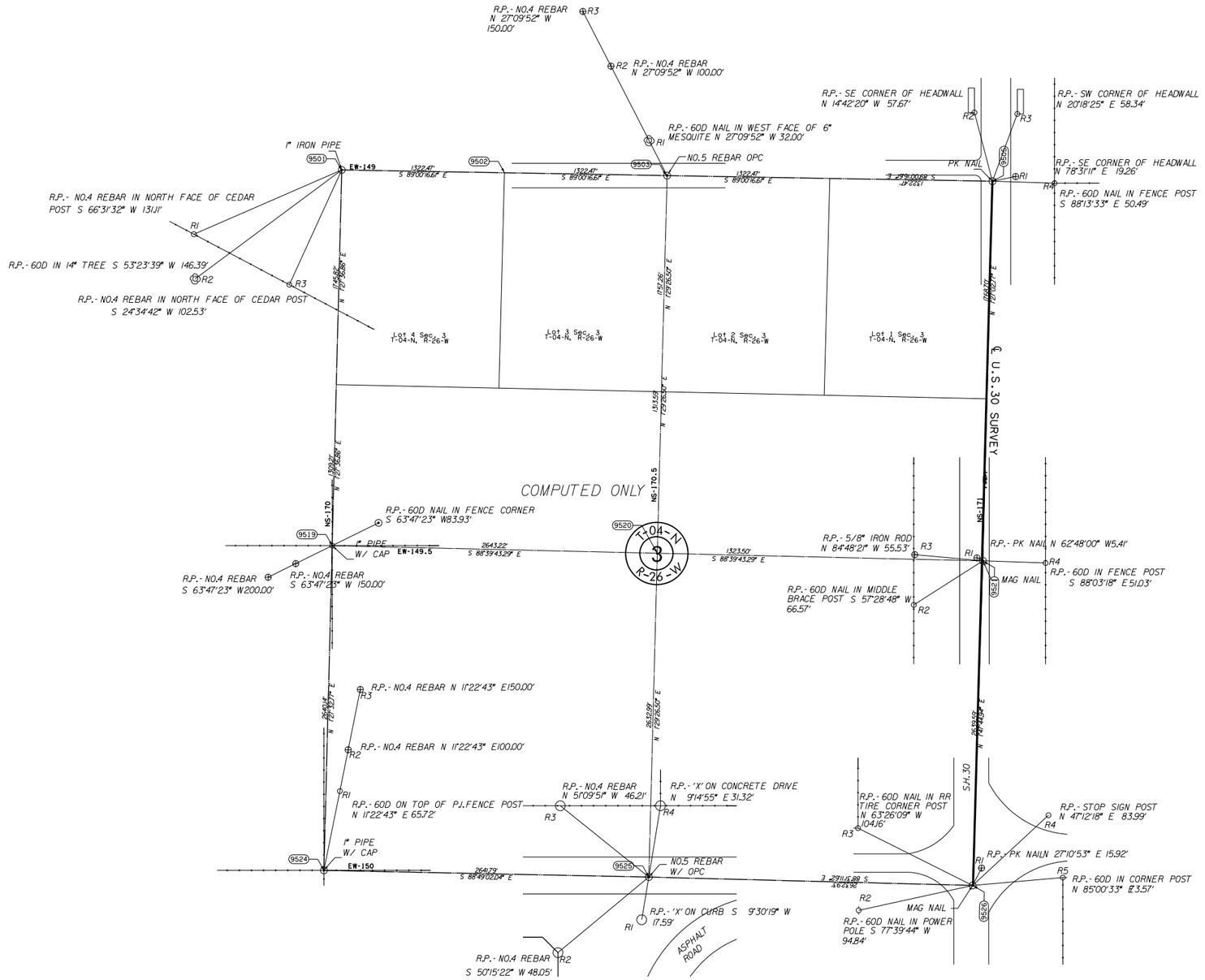
SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S8

SDS 8 OF 12

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

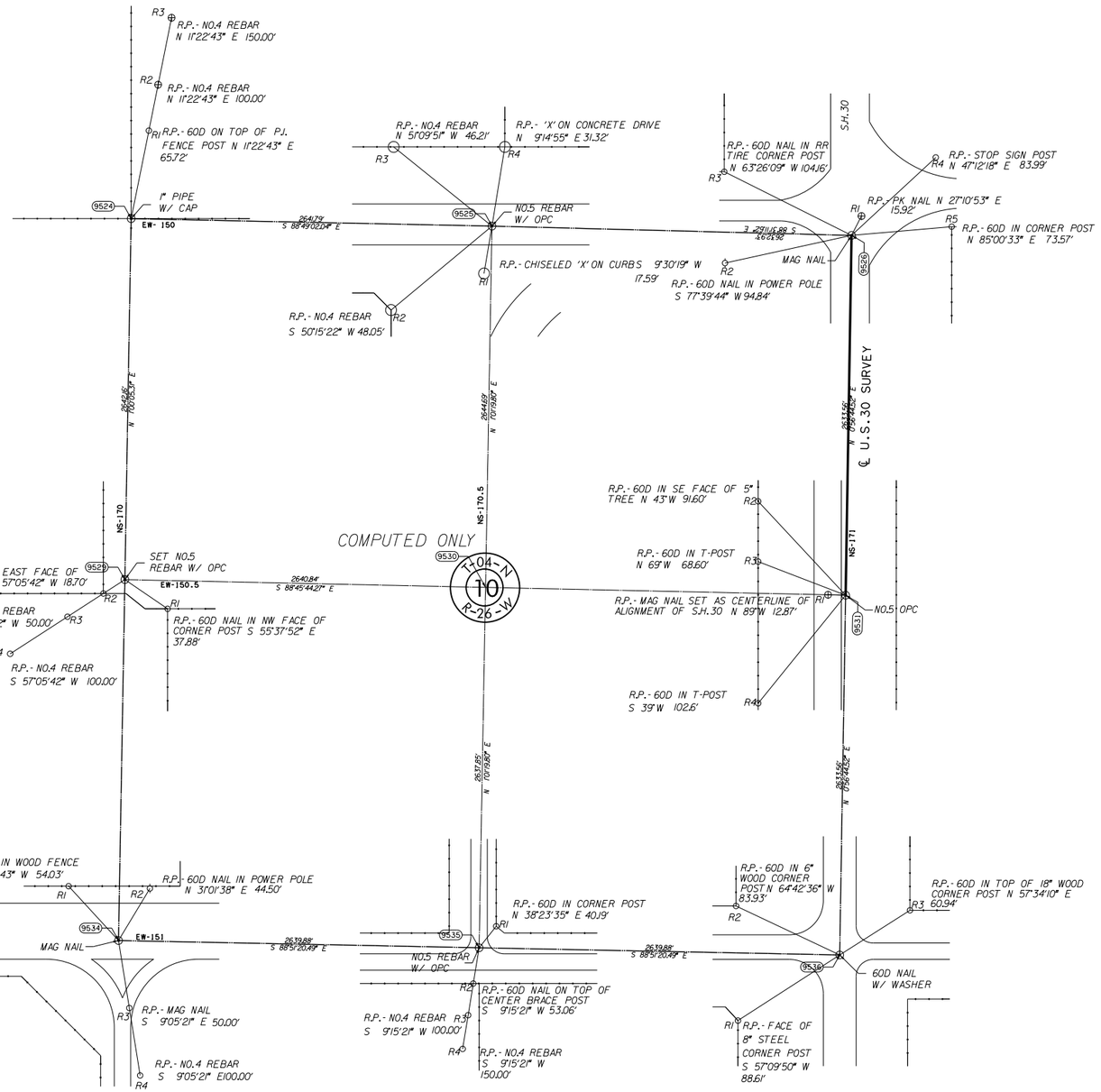
SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S9

SDS 9 OF 12

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

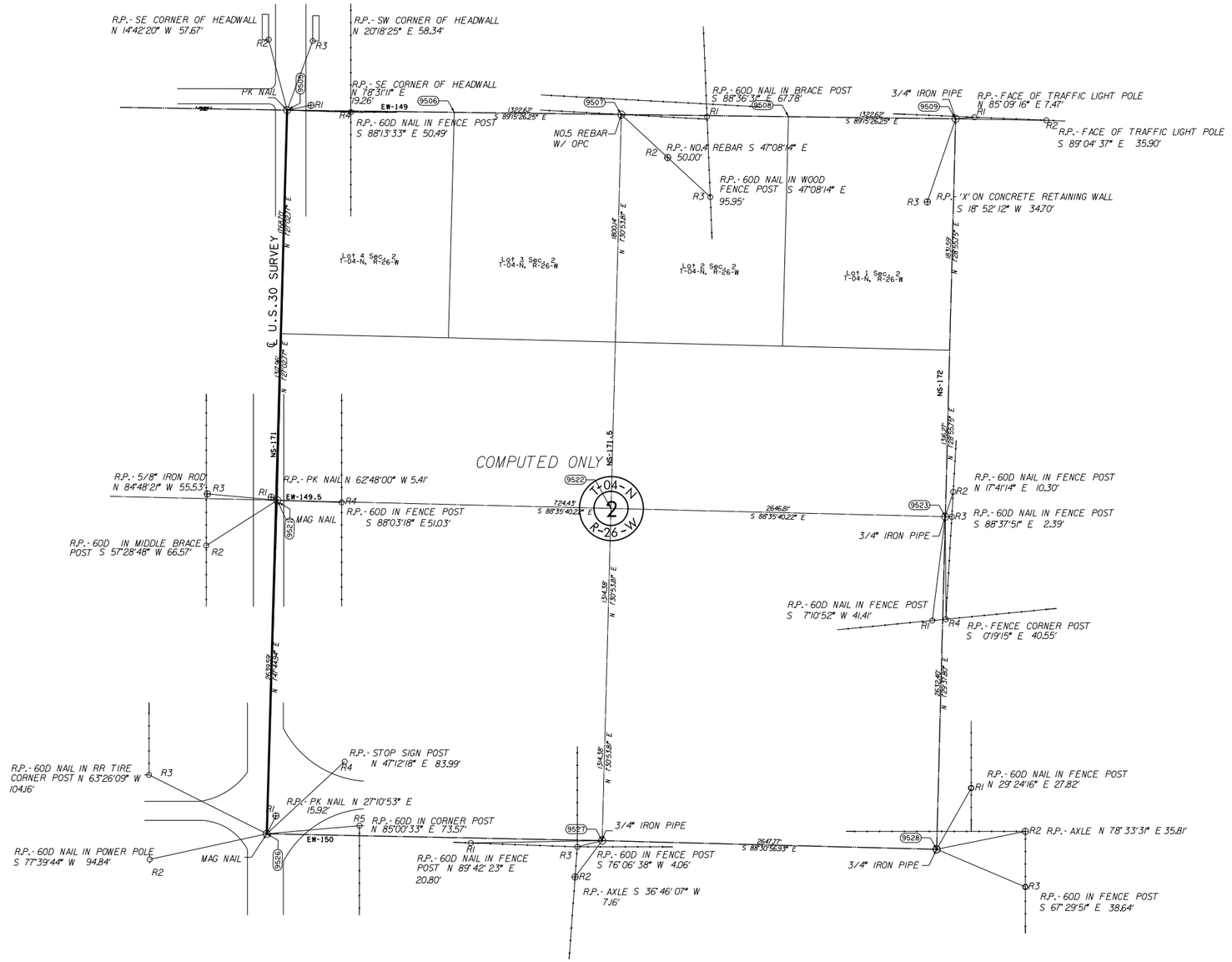
SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S10

SDS 10 OF 12

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

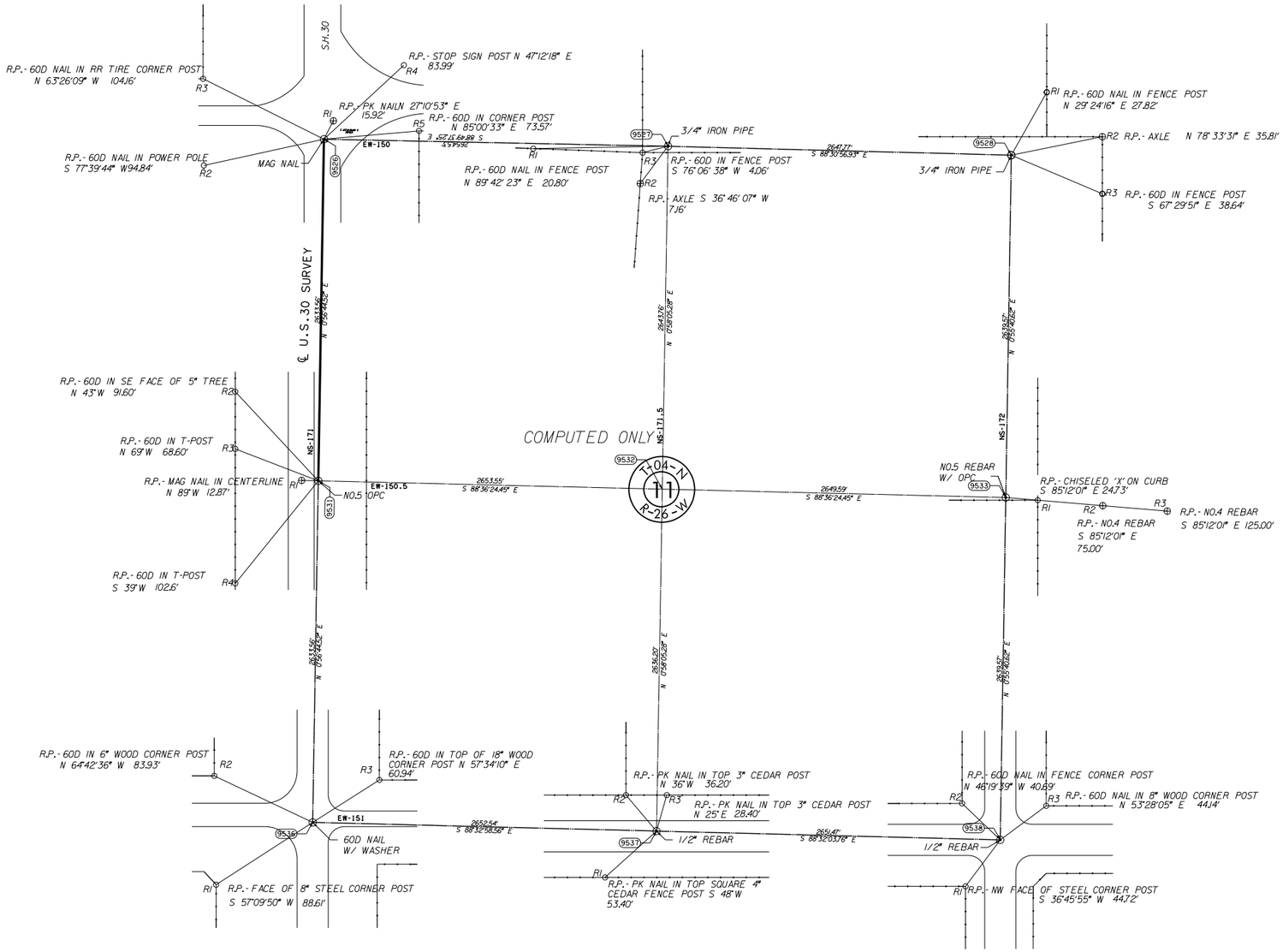
SURVEY DATA SHEET

SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S11

SDS 11 OF 12

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

REVISIONS	
DESCRIPTION	DATE



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS	ERS	
DRAWN	BDK	
CHECKED	ERS	
APPROVED	ERS	
CREW		

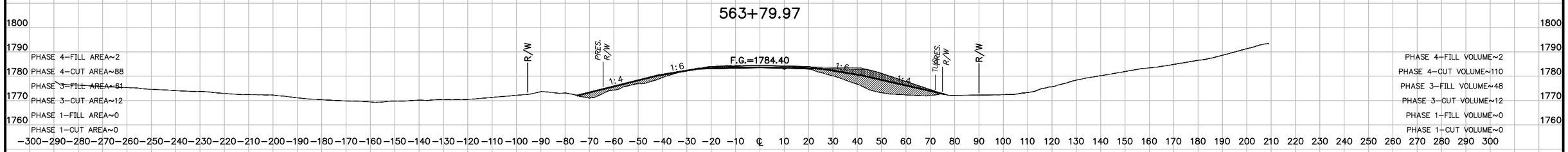
OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

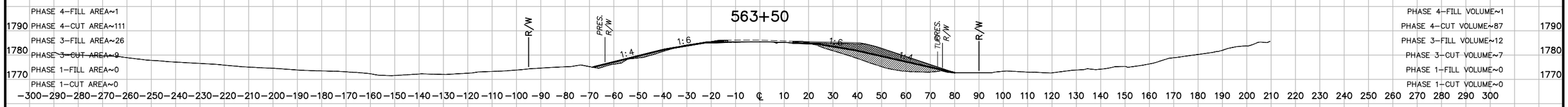
SWO 5007(1) STATE JOB NO. 28768(04) SHEET NO. S12

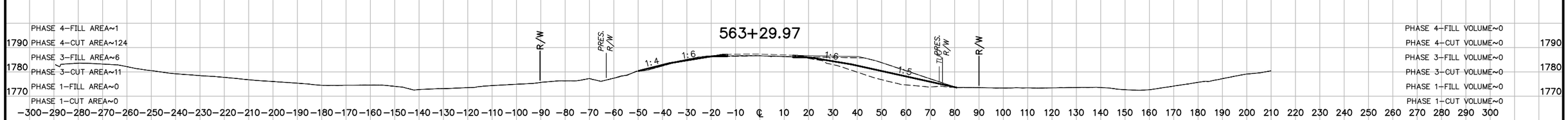
SDS 12 OF 12

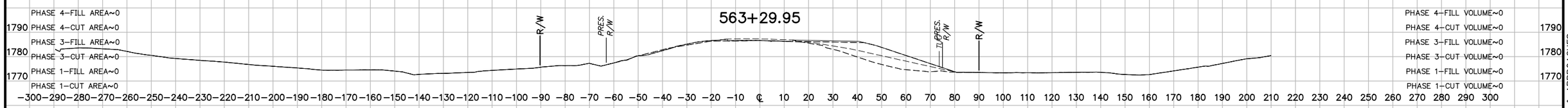
8-87



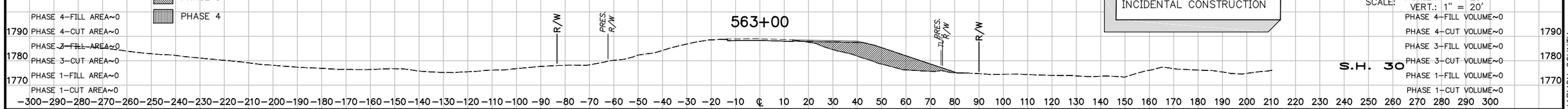
STA. 563+79.97 – BEGIN PROJECT







PHASE 1
PHASE 2
PHASE 3
PHASE 4



SEE SHEET X26 FOR BEGIN INCIDENTAL CONSTRUCTION

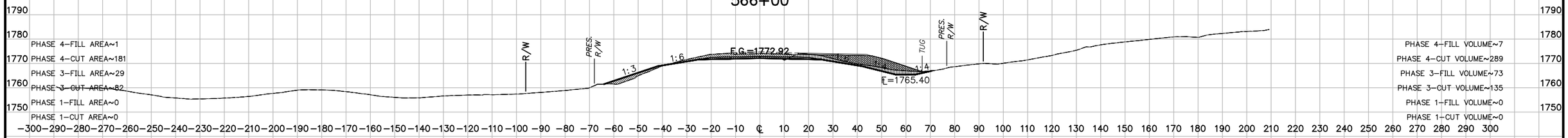
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

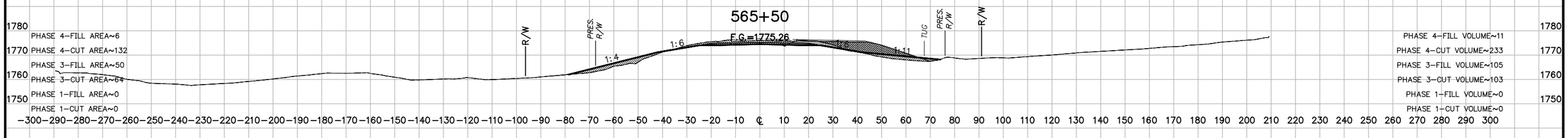
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X1

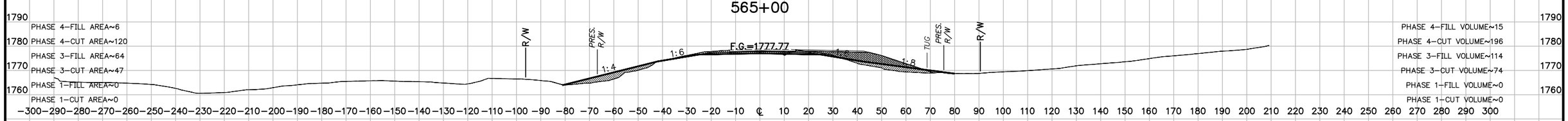
566+00



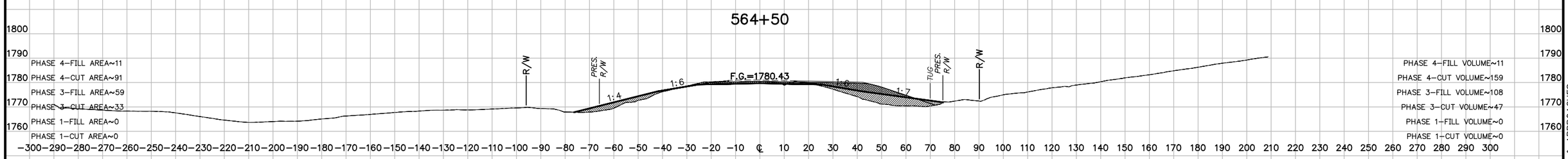
565+50



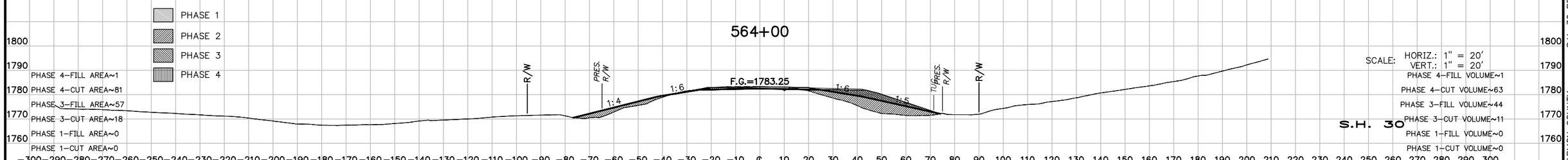
565+00



564+50



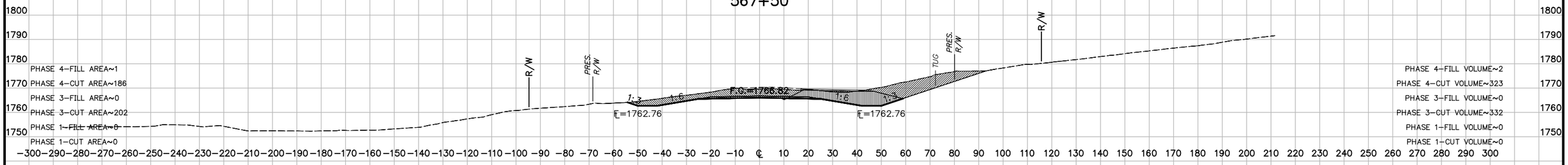
564+00



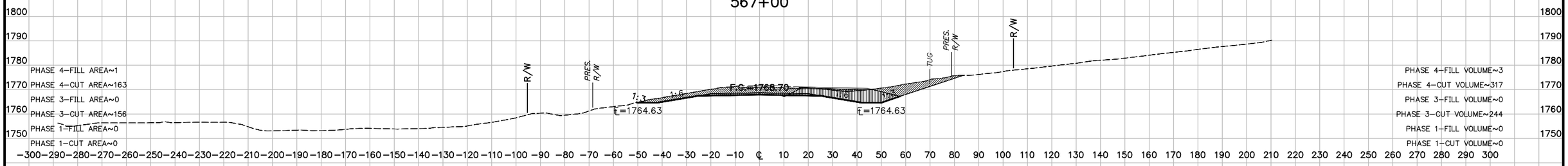
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X2

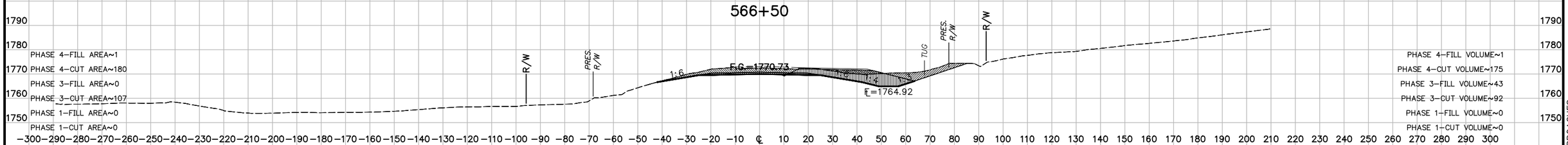
567+50



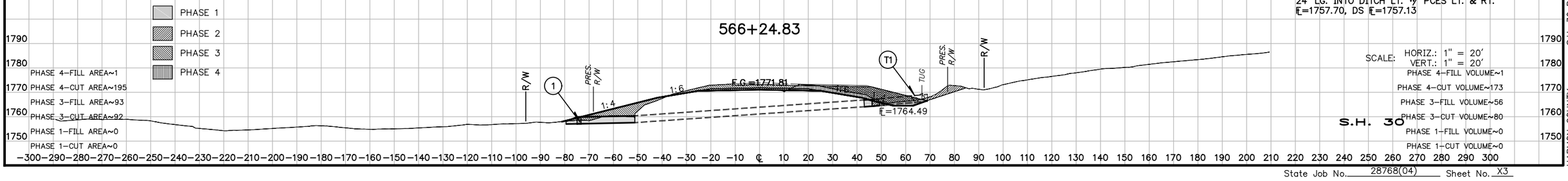
567+00



566+50



566+24.83



STR. NO. 1 ~ STA. 566+24.83
EXTEND EXIST. 30"x97' LG. RCP,
24' LG. INTO DITCH LT. W/ PCES LT. & RT.
℄=1757.70, DS ℄=1757.13

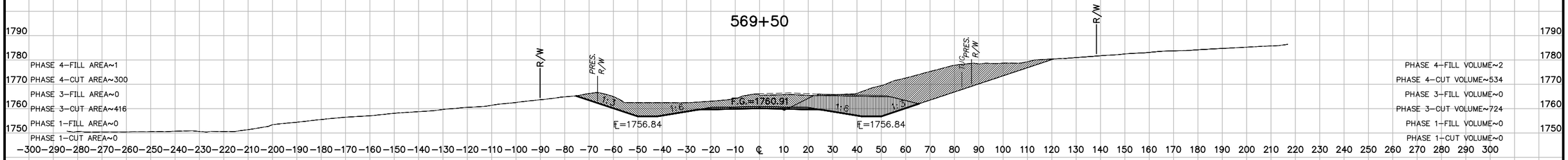
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

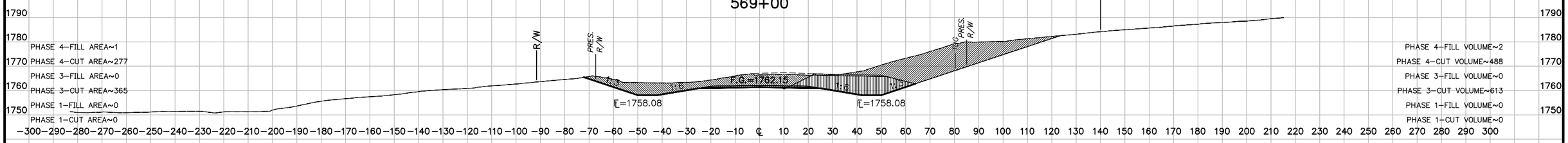
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X3

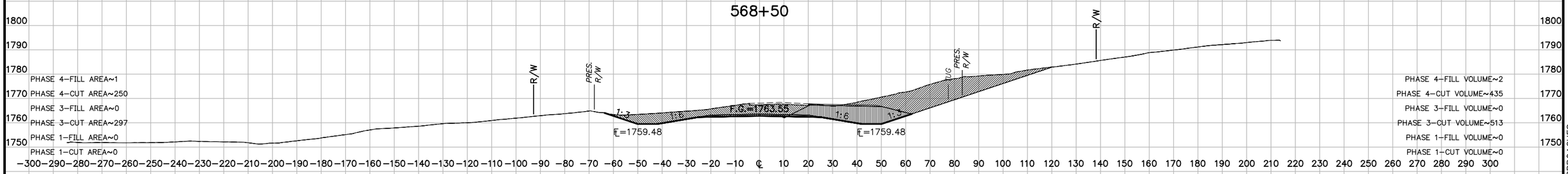
569+50



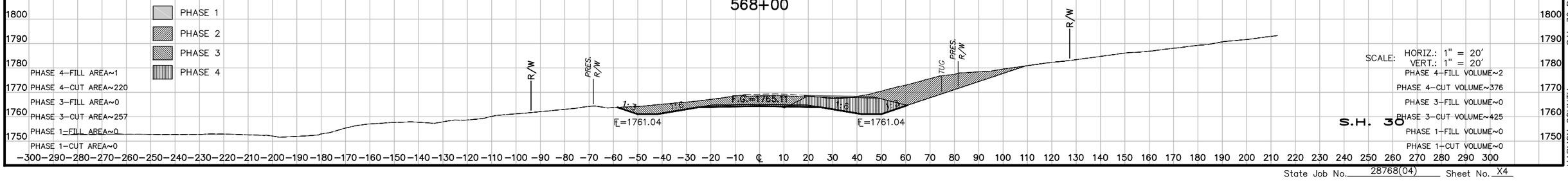
569+00



568+50



568+00



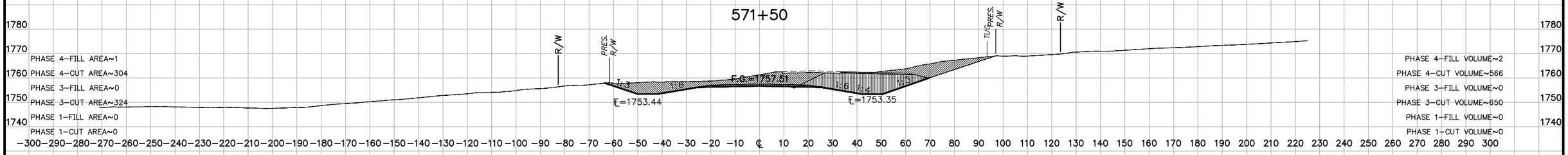
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

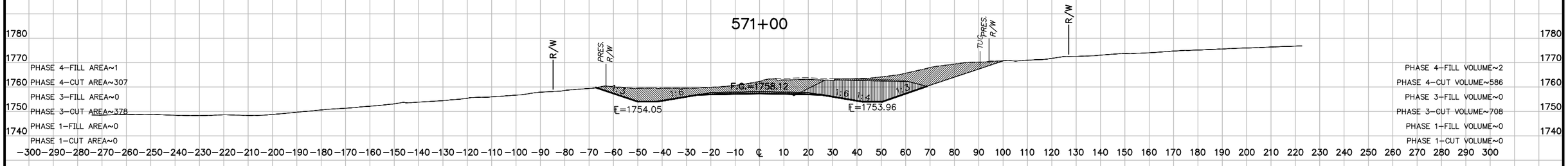
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X4

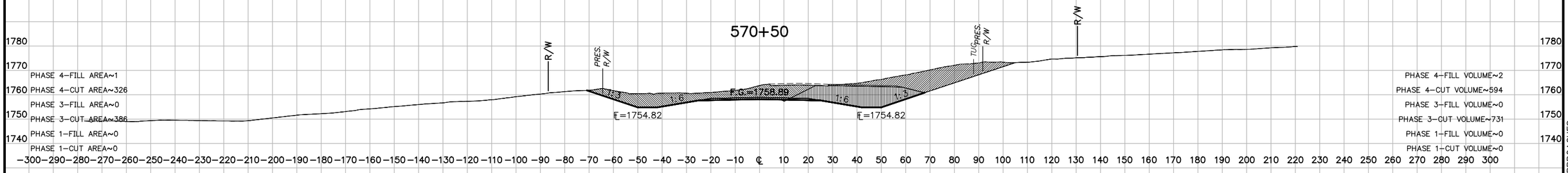
571+50



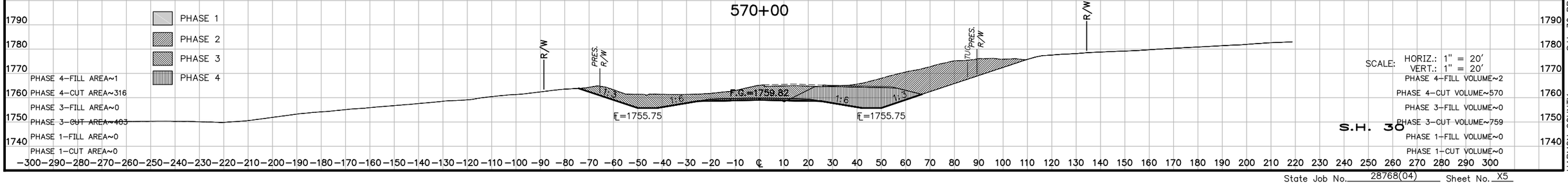
571+00



570+50



570+00



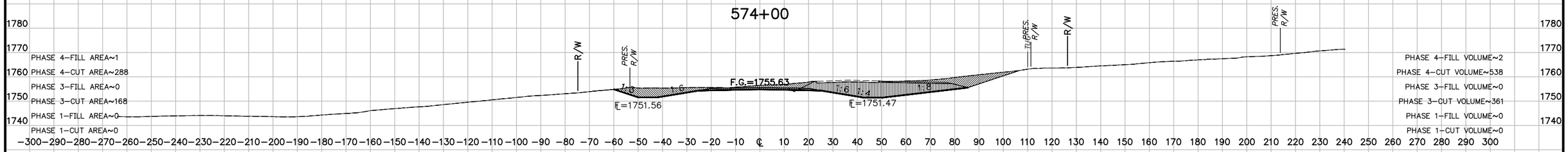
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

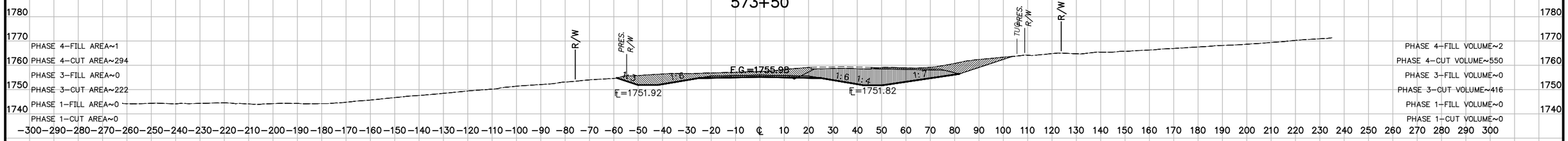
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X5

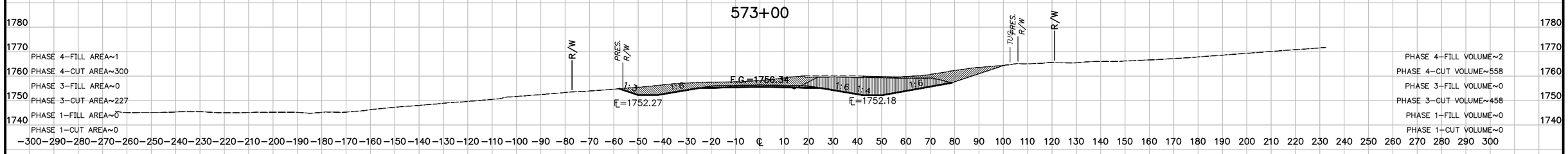
574+00



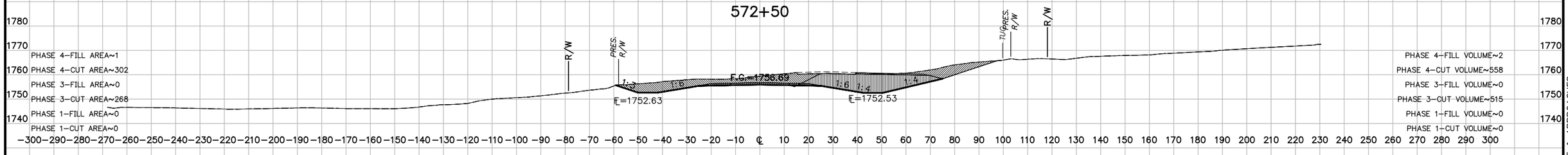
573+50



573+00

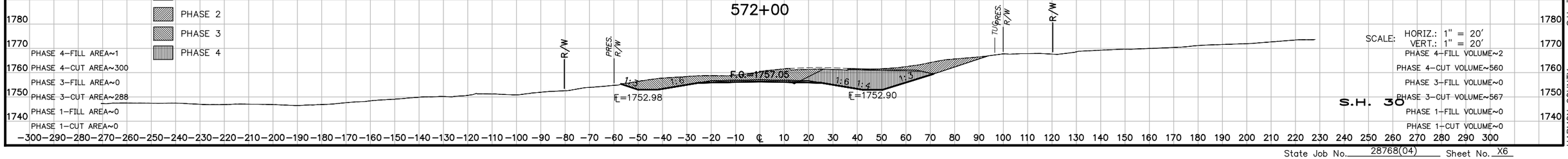


572+50



PHASE 1
PHASE 2
PHASE 3
PHASE 4

572+00



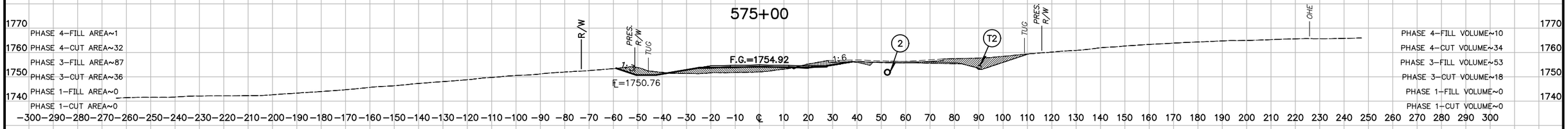
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

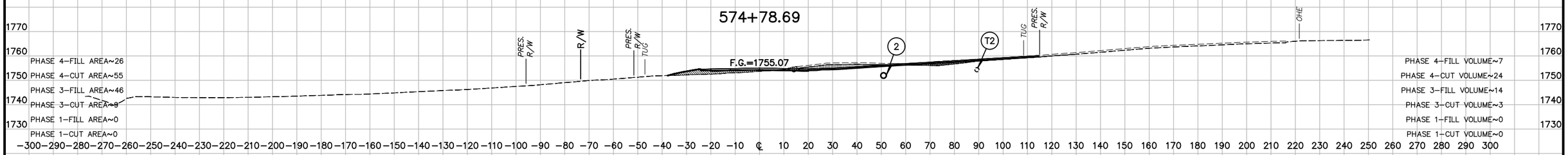
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X6

575+00



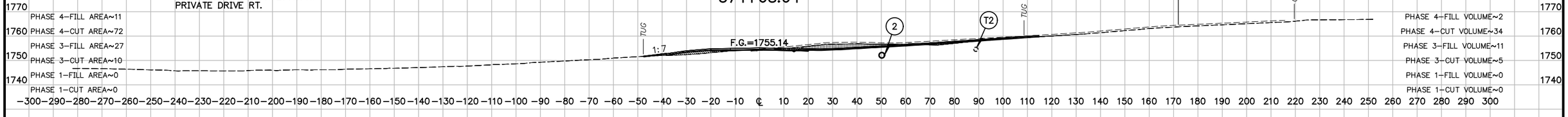
574+78.69



STR. NO. 2 ~ STA. 574+71.00
CONST. 24"x90' LG. RCP SIDE
DRAIN W/ B6 CET, 50' RT.
℄ IN=1751.27, ℄ OUT=1750.63

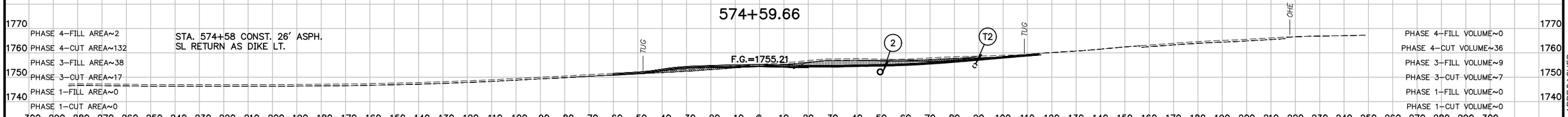
STA. 574+71 CONST. 21'ASPH.
PRIVATE DRIVE RT.

574+68.64



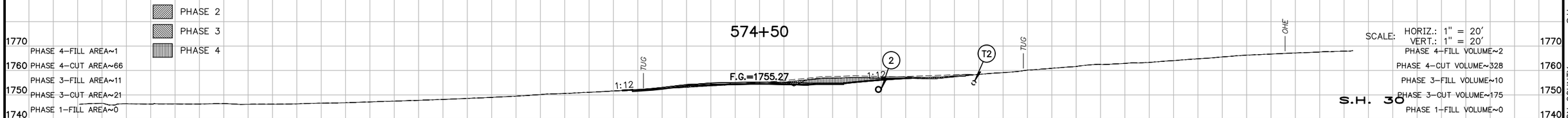
STA. 574+58 CONST. 26' ASPH.
SL RETURN AS DIKE LT.

574+59.66



PHASE 1
PHASE 2
PHASE 3
PHASE 4

574+50

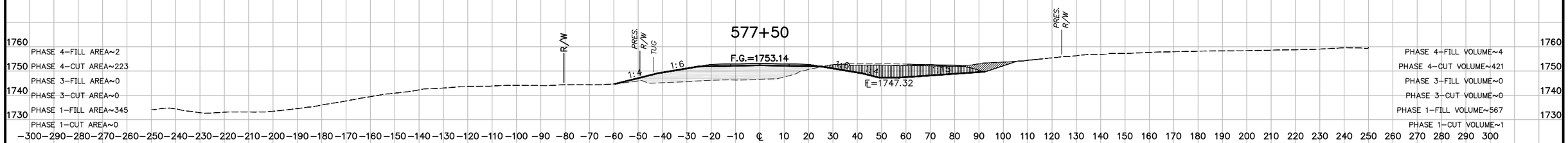


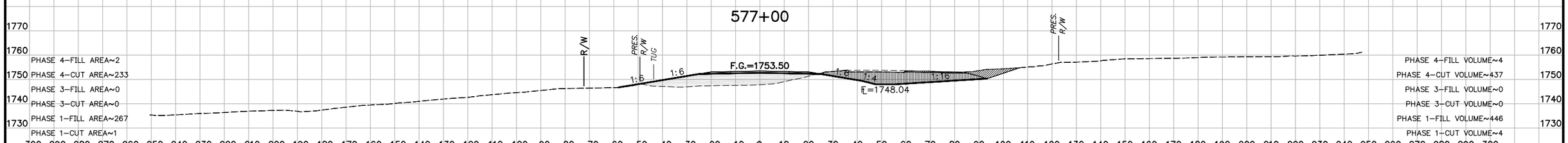
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

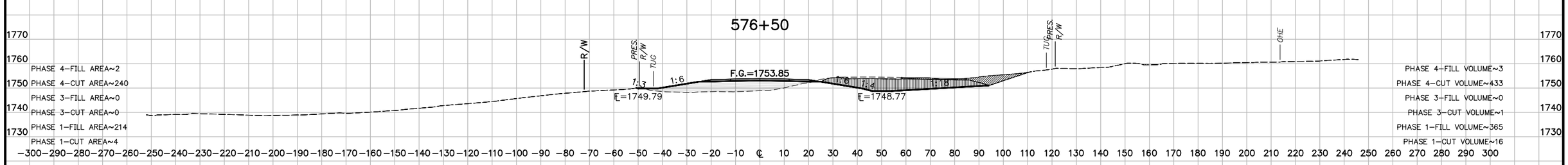
S.H. 30

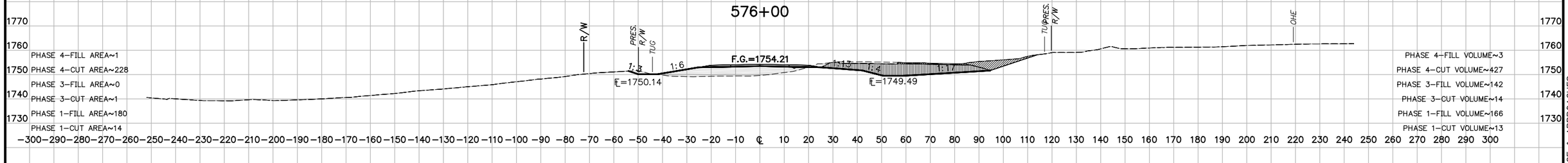
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

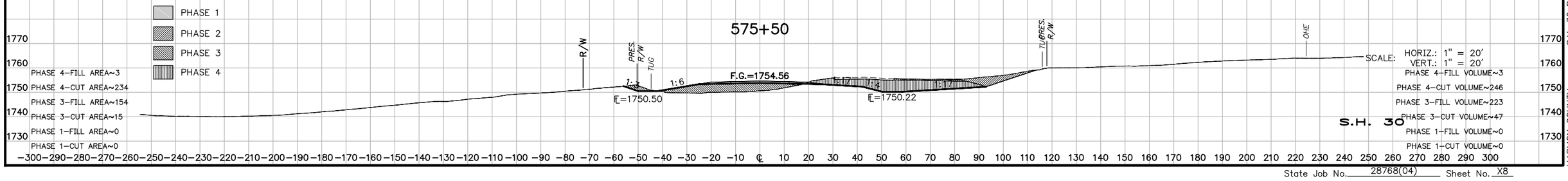
State Job No. 28768(04) Sheet No. X7





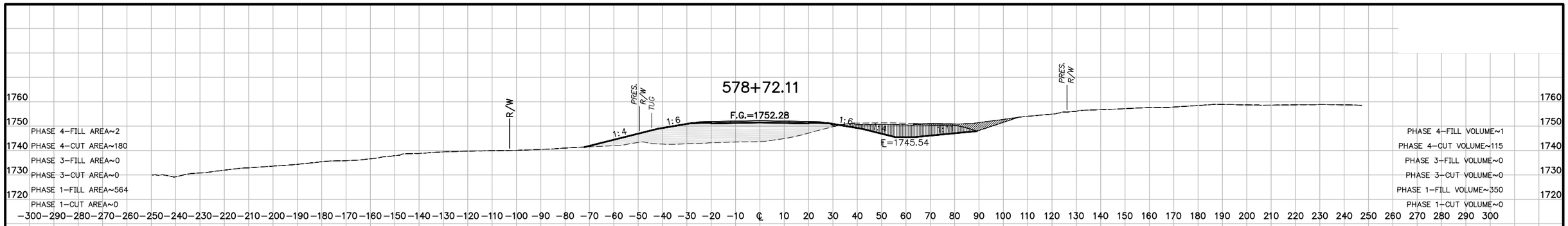


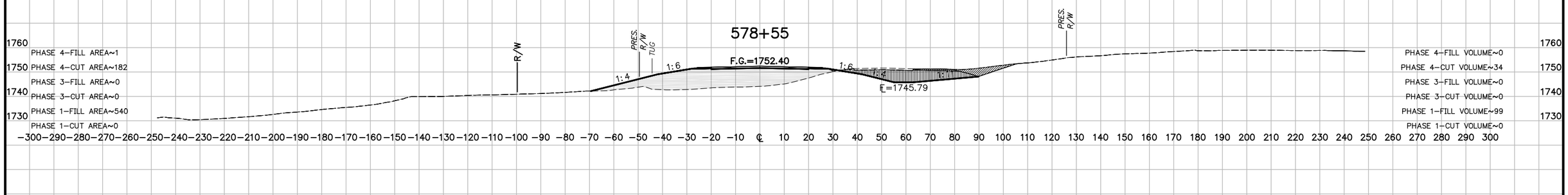


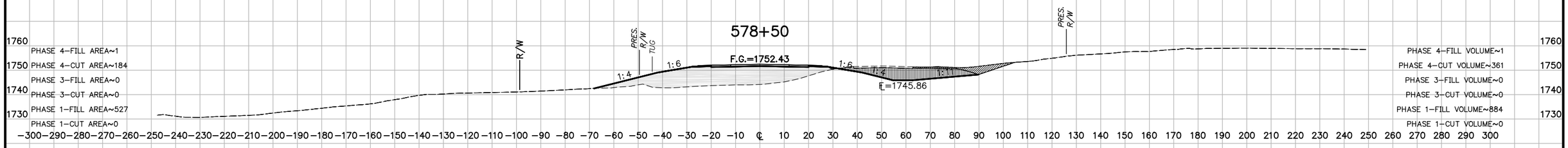


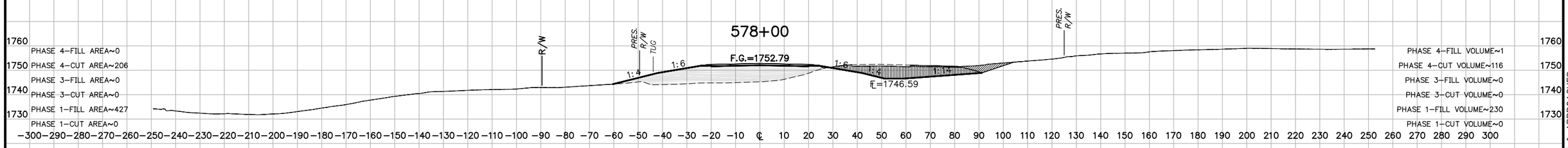
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

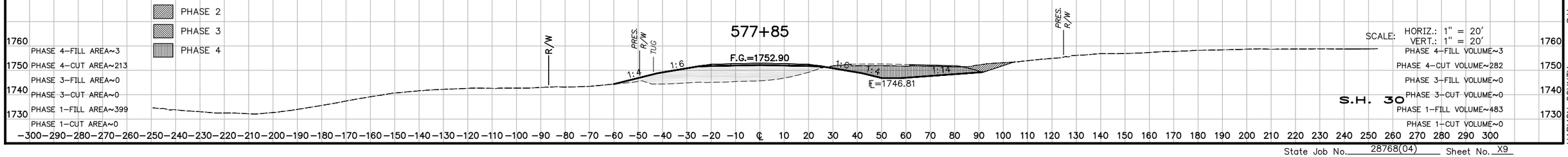
State Job No. 28768(04) Sheet No. X8





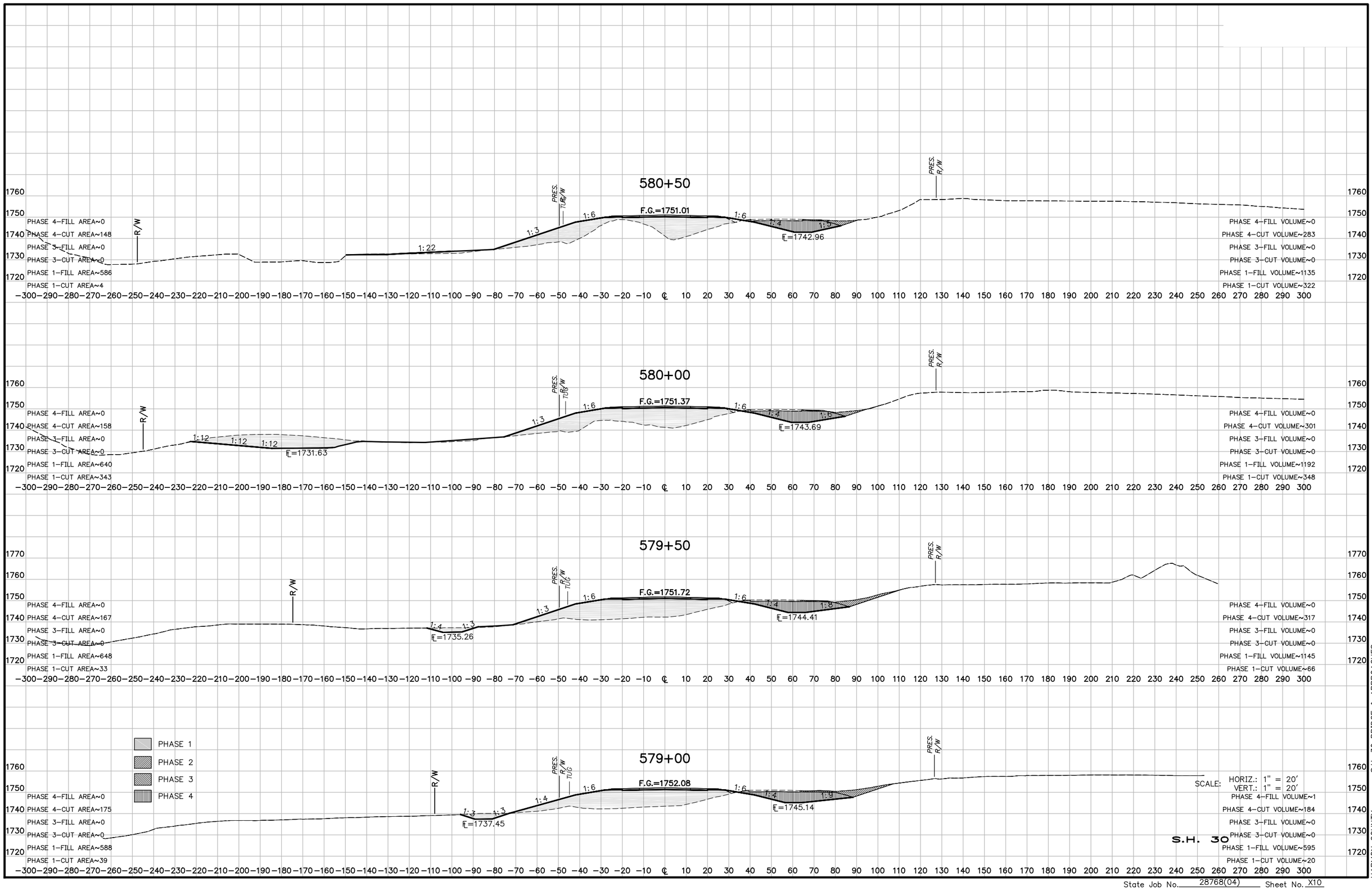






S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X9

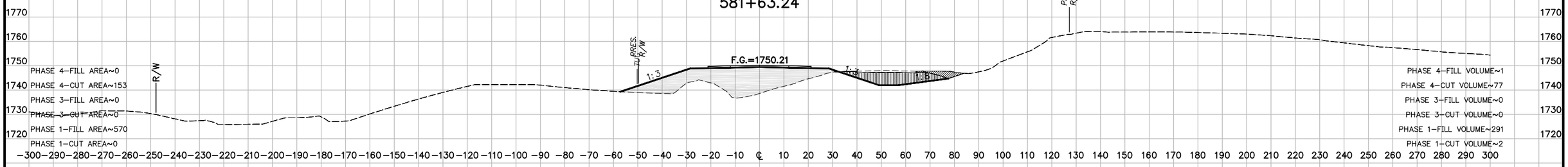


S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

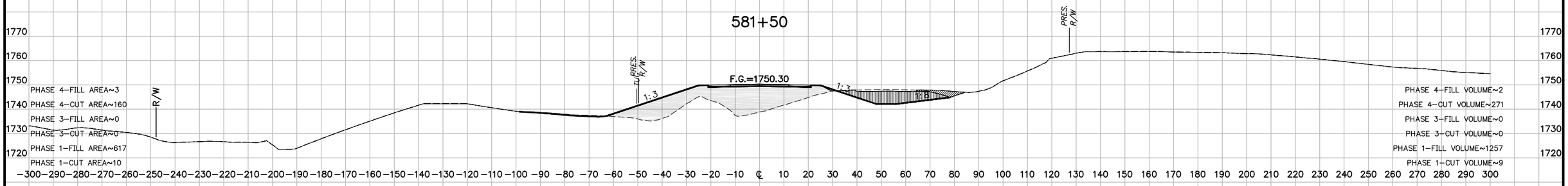
State Job No. 28768(04) Sheet No. X10

STA. 581+79.63 – BEGIN BRIDGE

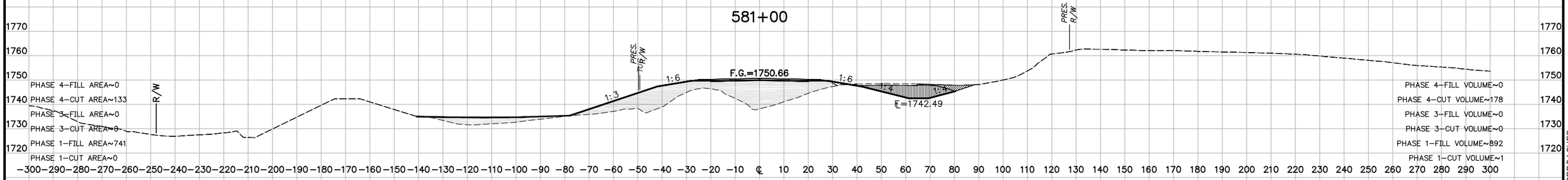
581+63.24



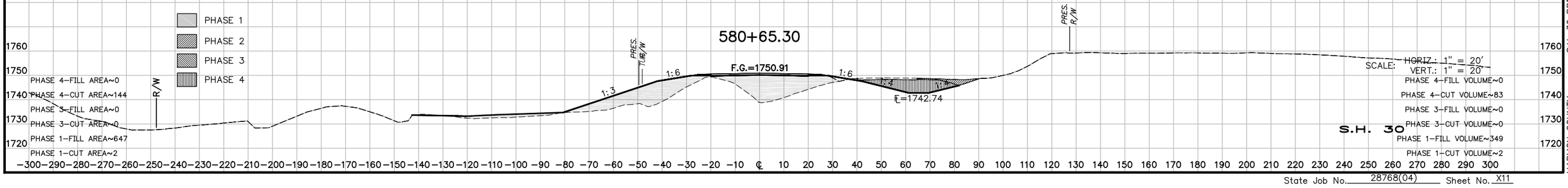
581+50



581+00



580+65.30



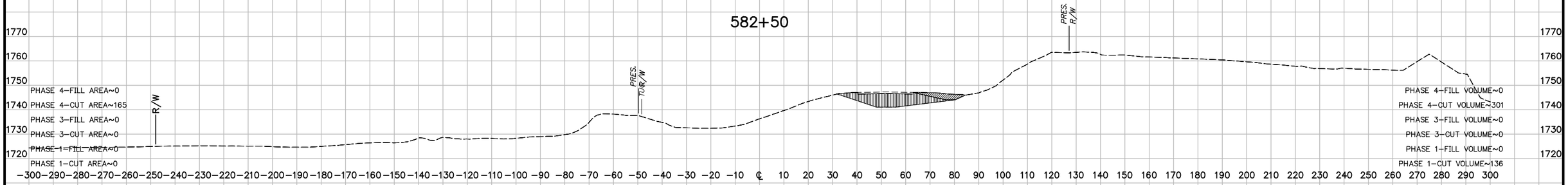
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

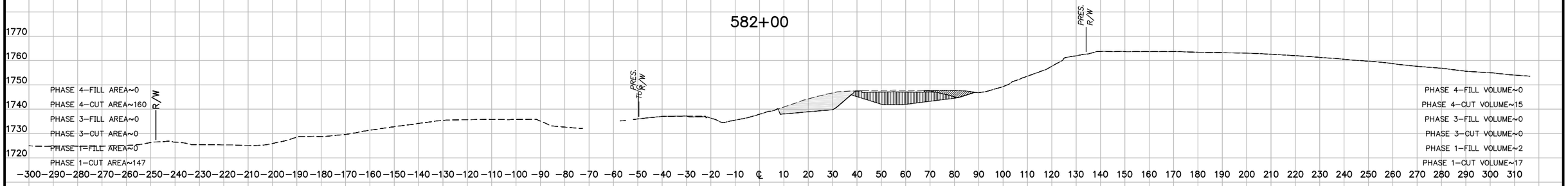
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X11

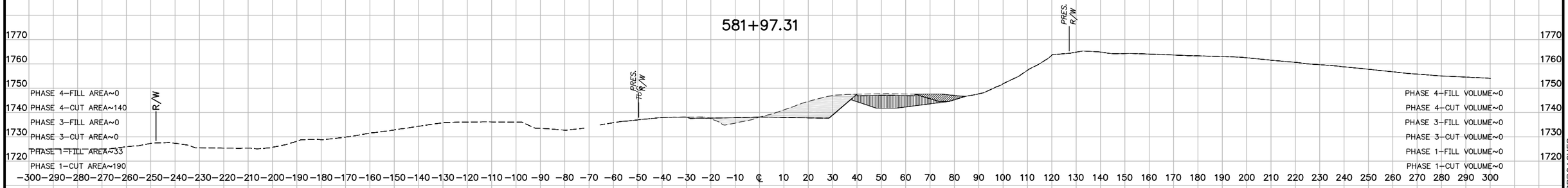
582+50



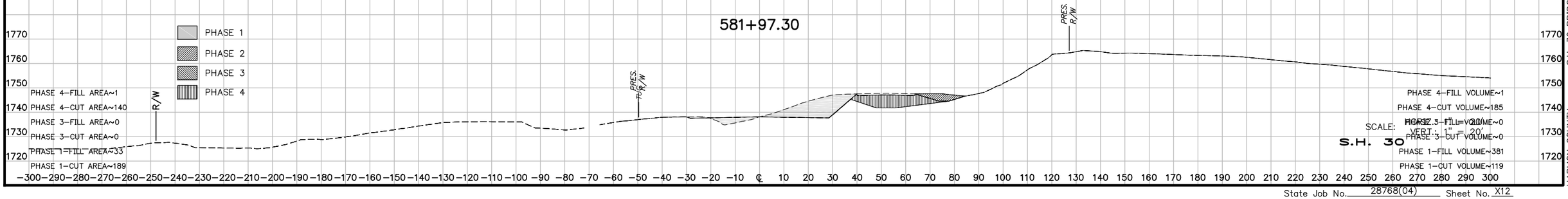
582+00



581+97.31



581+97.30

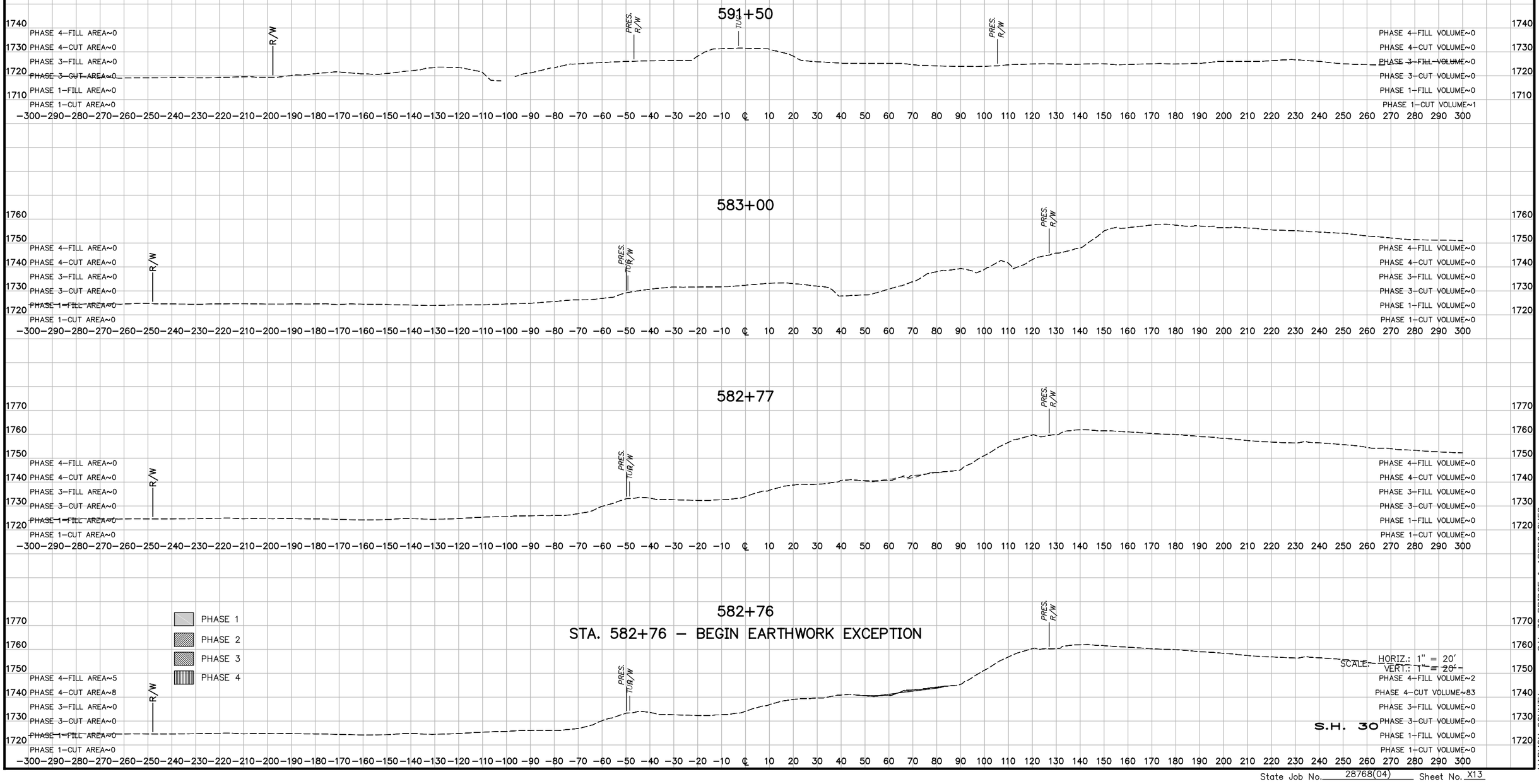


SCALE: HORIZ. 1" = 20'
VERT. 1" = 20'

S.H. 30

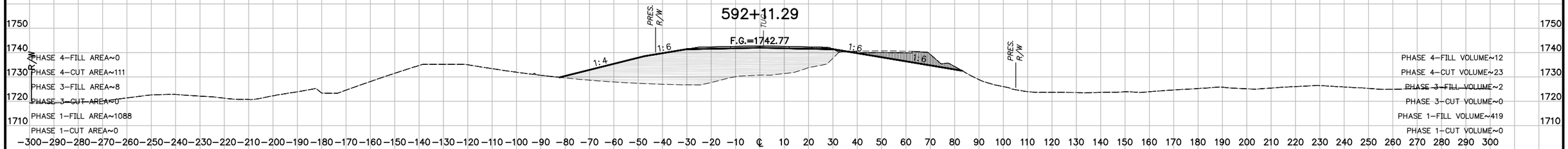
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

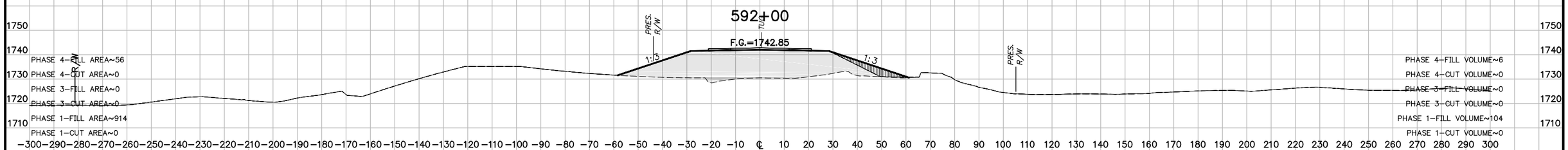
State Job No. 28768(04) Sheet No. X12

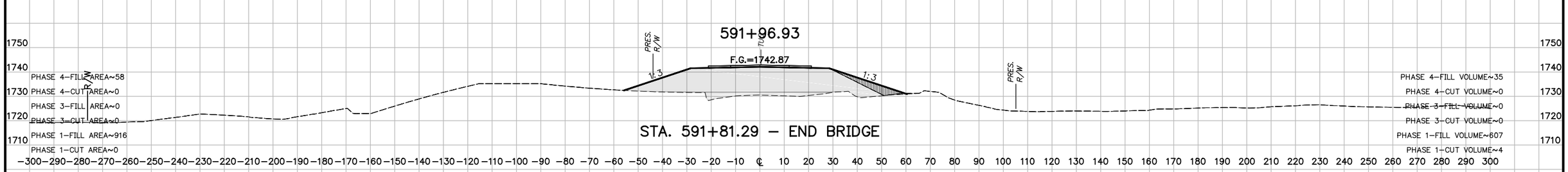


S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X13

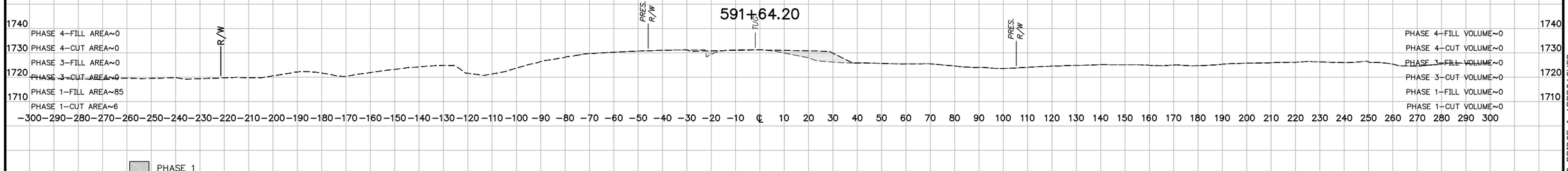


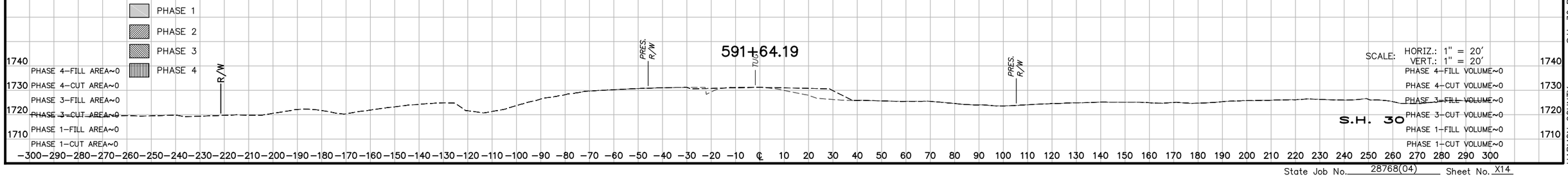




STA. 591+81.29 – END BRIDGE

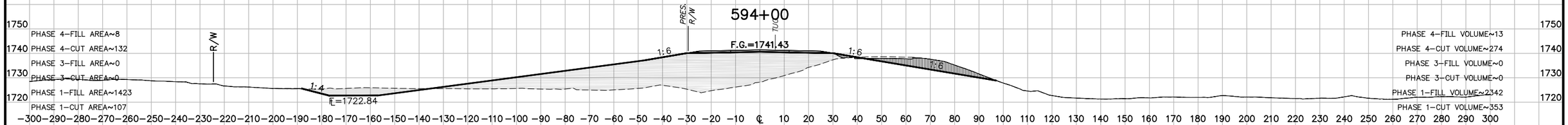
STA. 591+64.20 – END EARTHWORK EXCEPTION

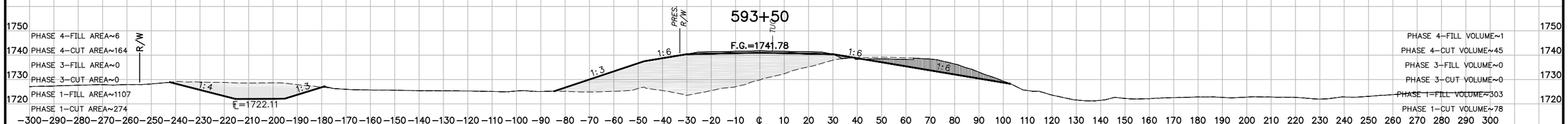




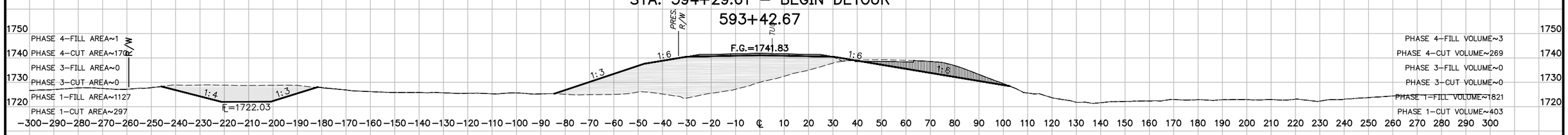
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

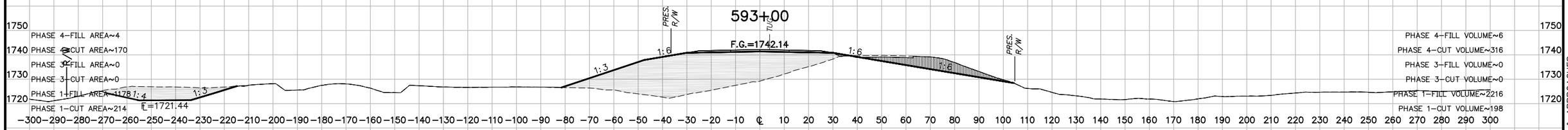
State Job No. 28768(04) Sheet No. X14

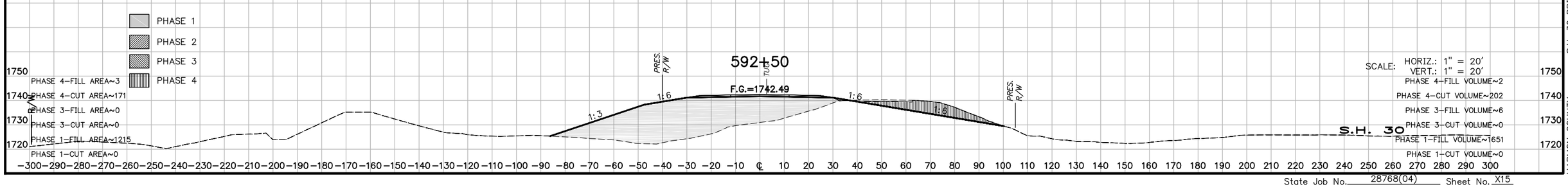




STA. 594+29.61 – BEGIN DETOUR





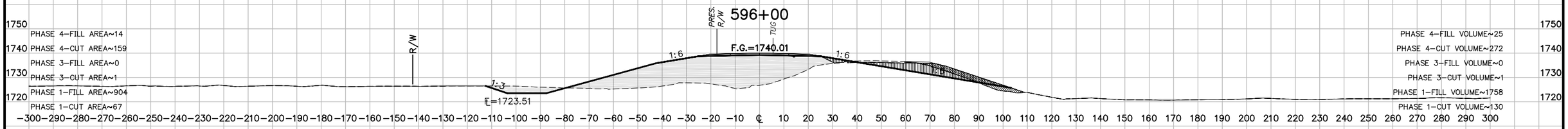


SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

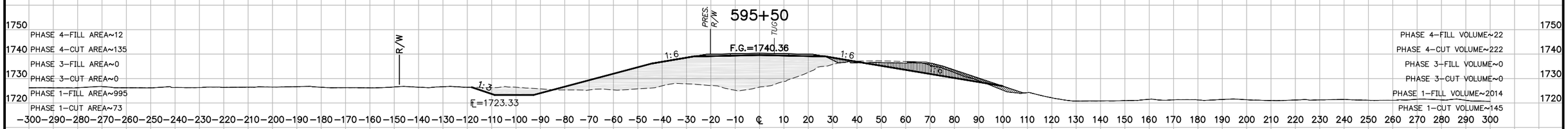
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X15

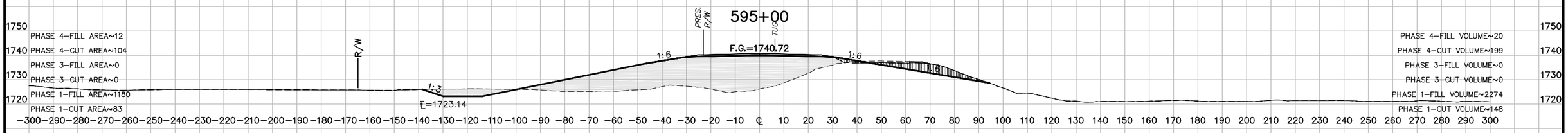
596+00



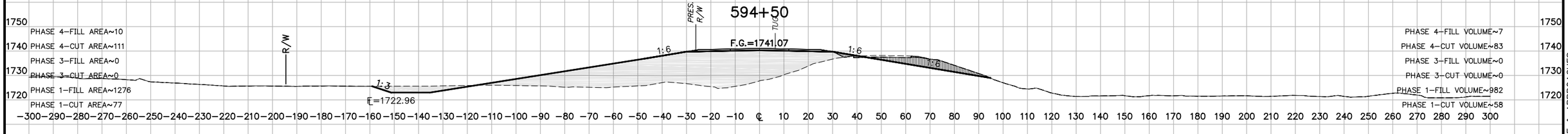
595+50



595+00

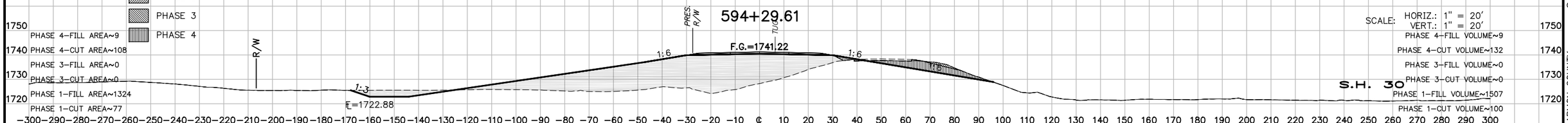


594+50



PHASE 1
PHASE 2
PHASE 3
PHASE 4

594+29.61

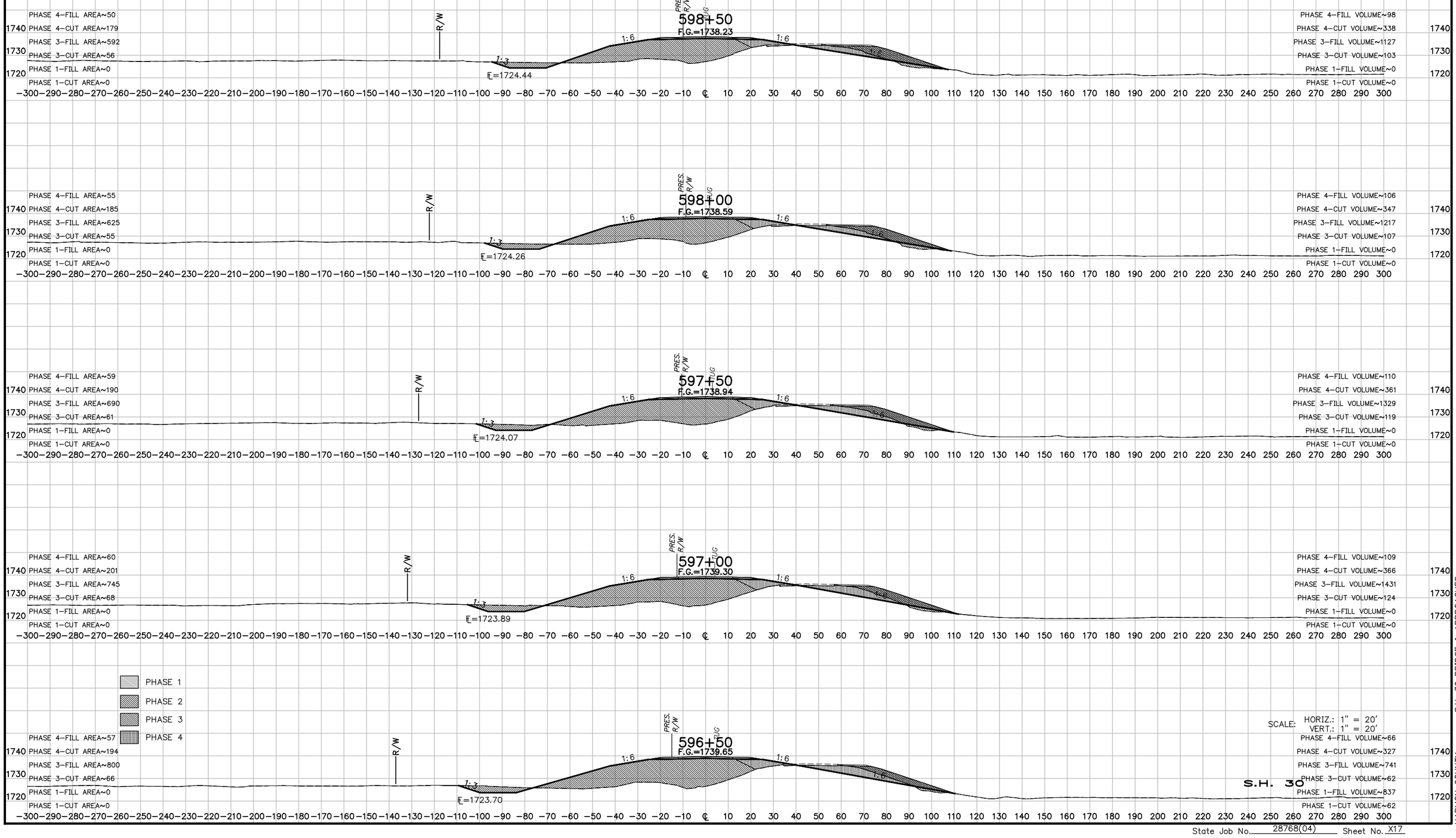


SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

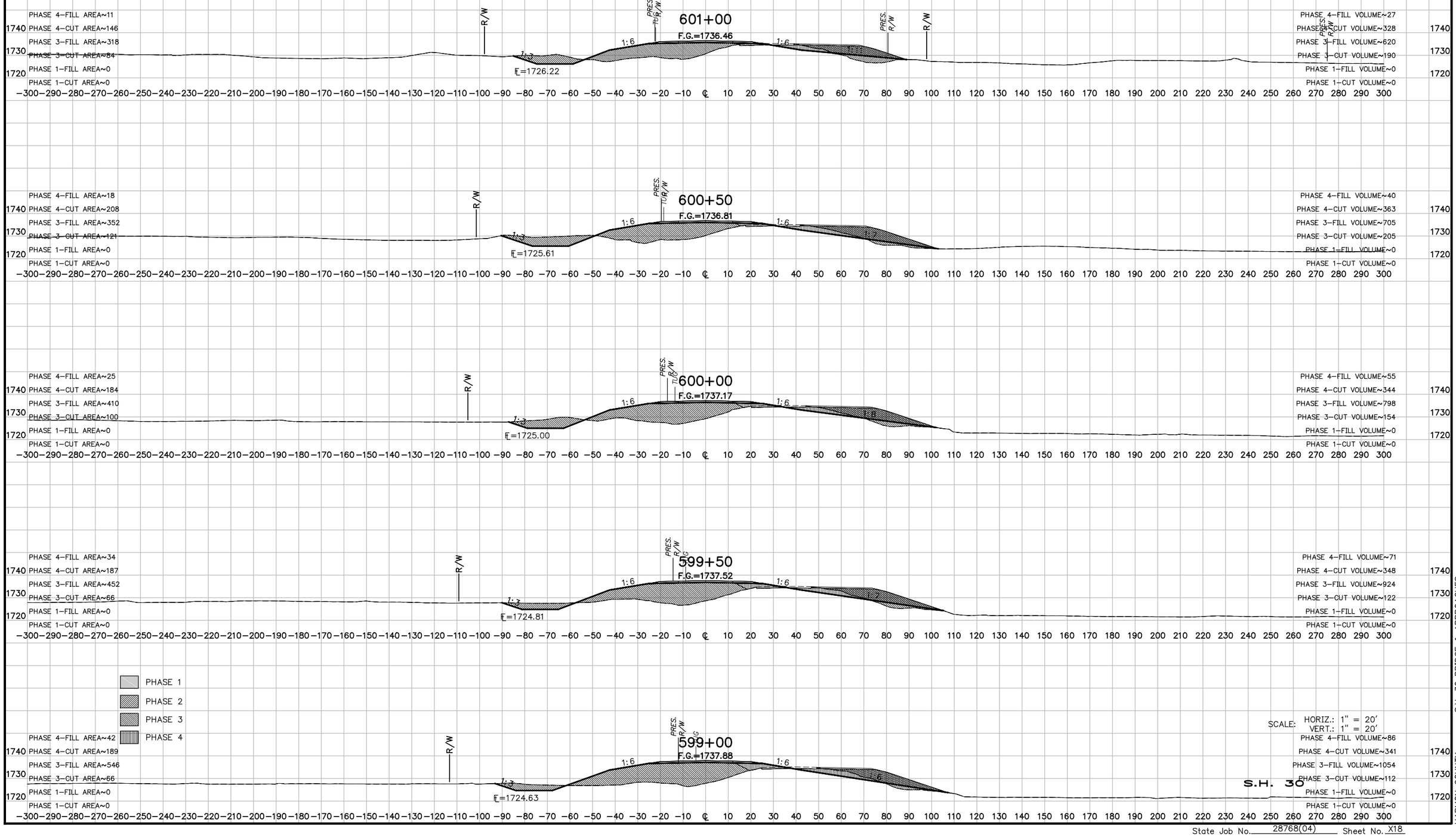
S.H. 30

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X16



State Job No. 28768(04) Sheet No. X17

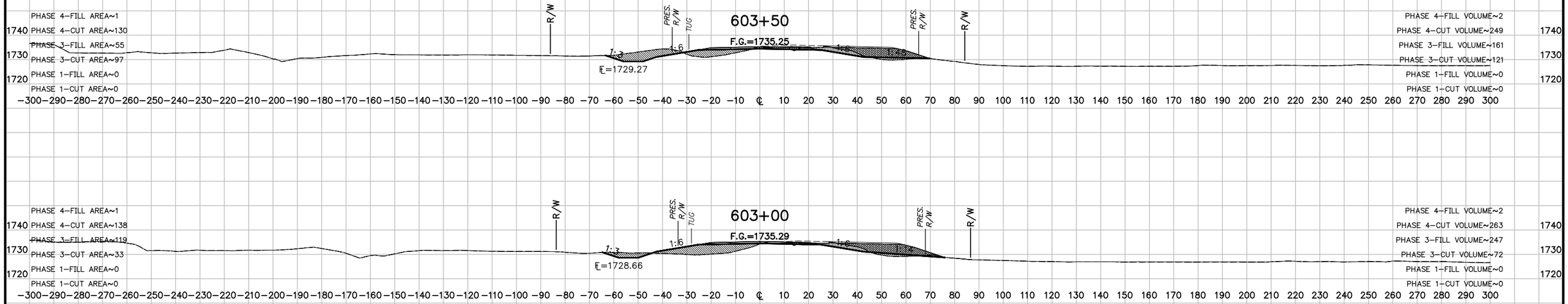


SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

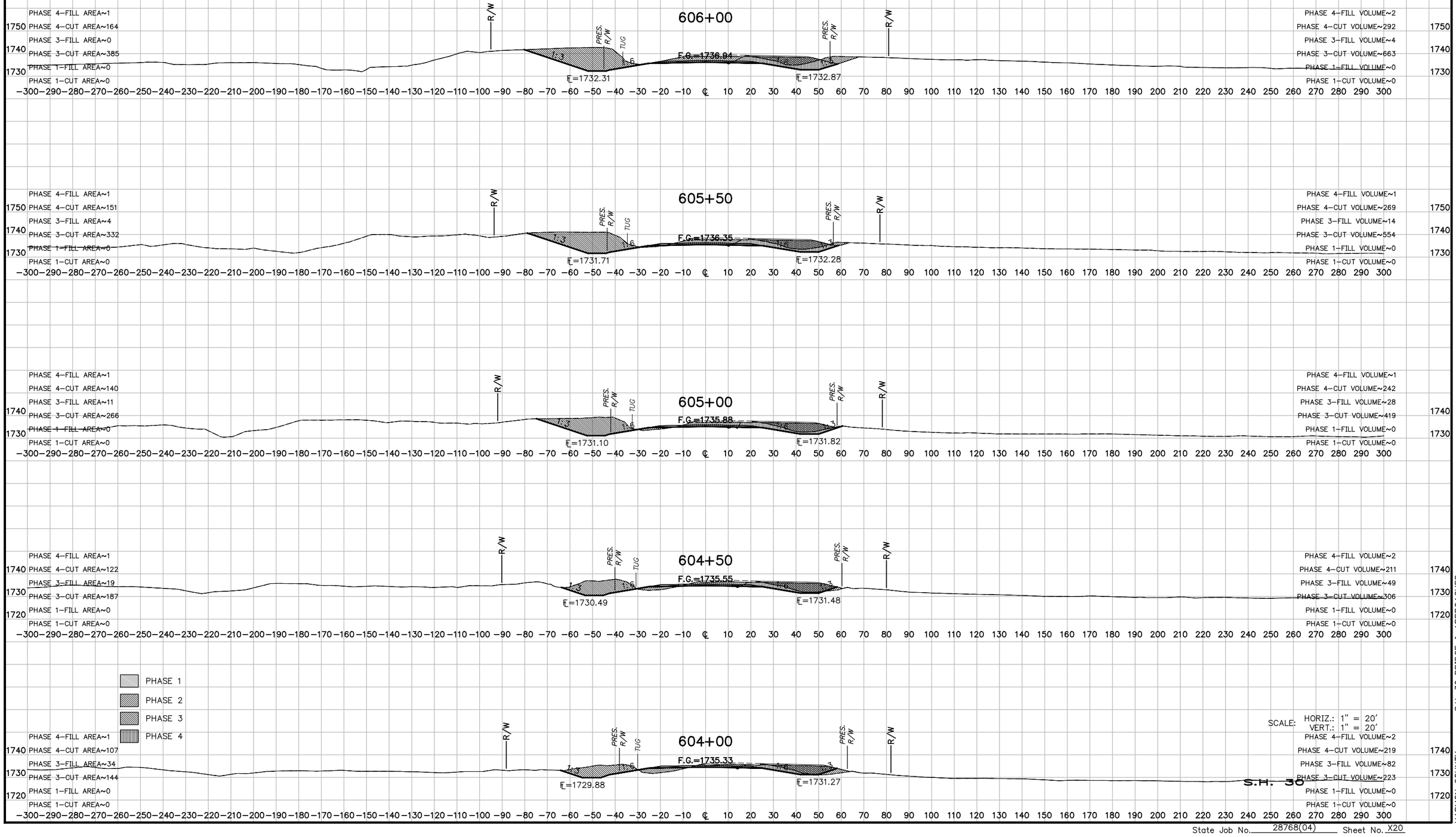
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X18



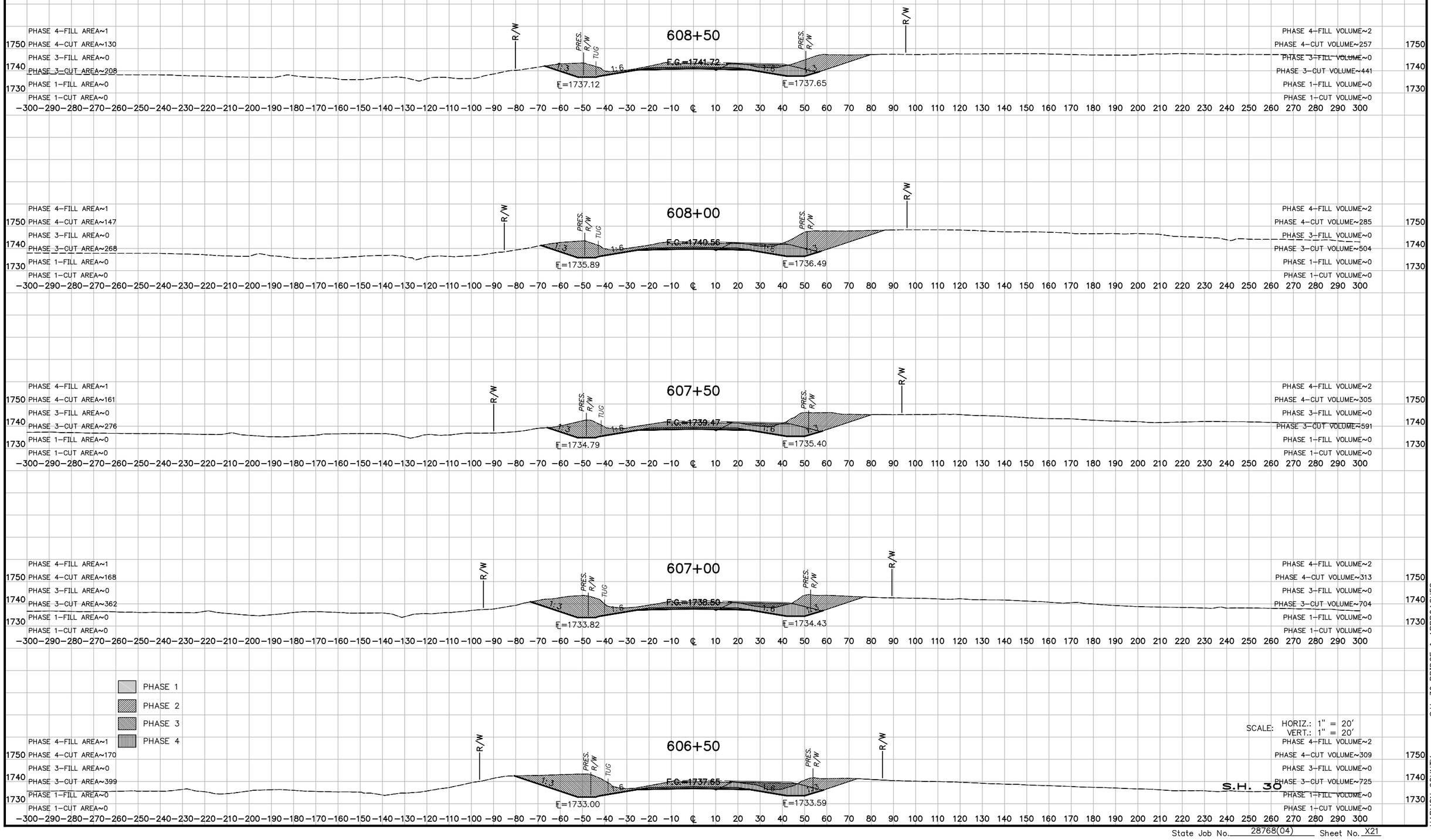
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X19

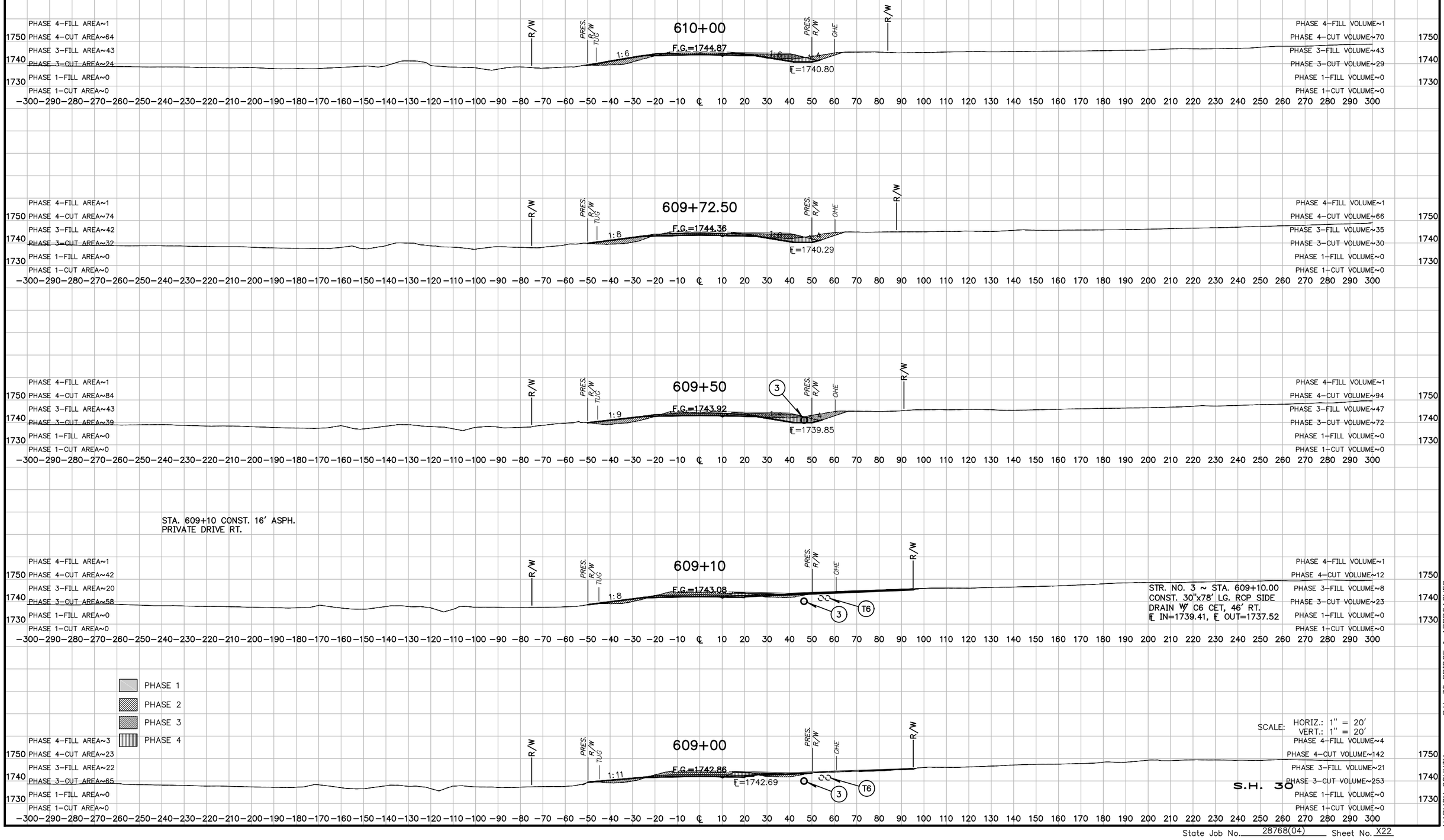


S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X20

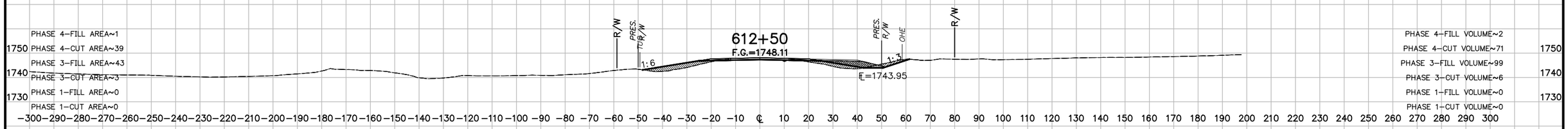


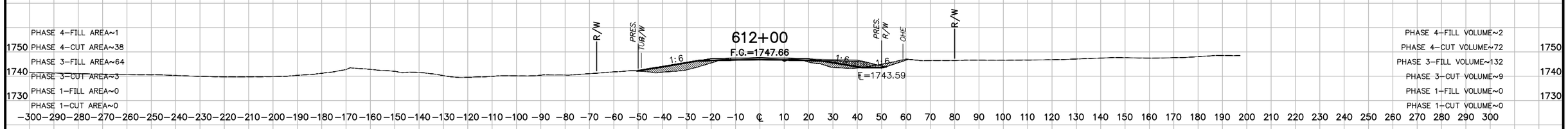
State Job No. 28768(04) Sheet No. X21

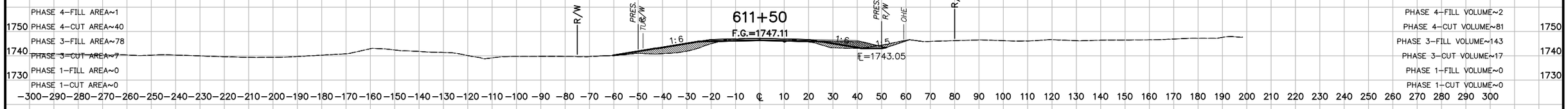


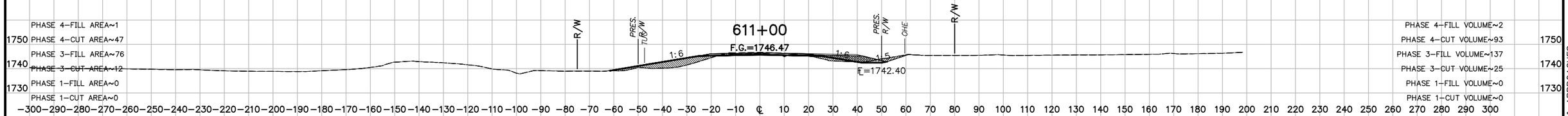
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

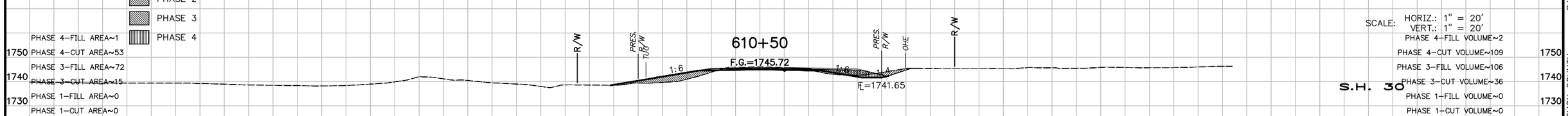
State Job No. 28768(04) Sheet No. X22











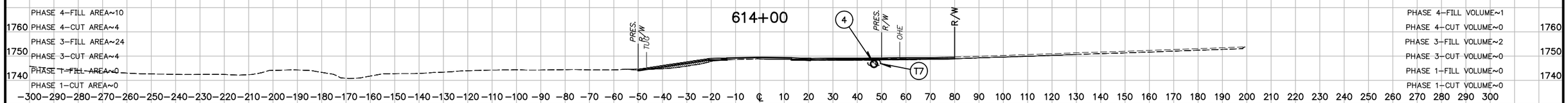
PHASE 1
PHASE 2
PHASE 3
PHASE 4

SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

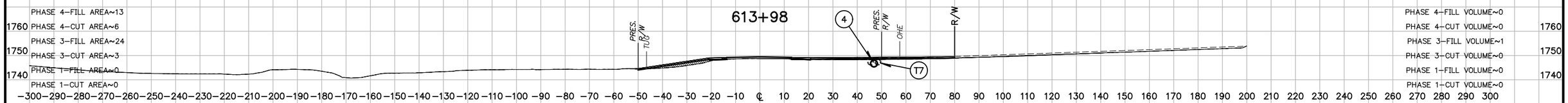
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X23

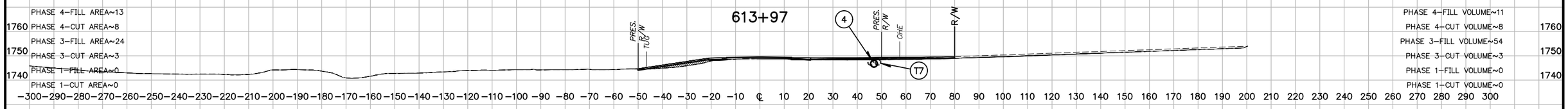


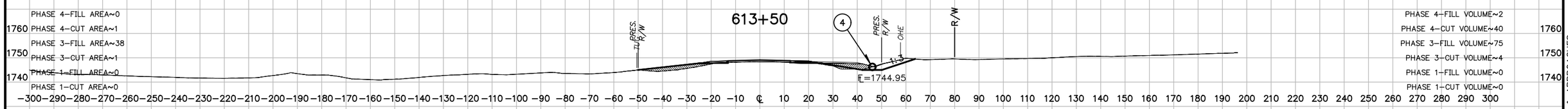
STA. 613+98 CONST. 14′
ASPH. SL RETURN RT.

STR. NO. 4 ~ STA. 613+98.00
CONST. 30"x74′ LG. RCP SIDE
DRAIN W/ C6 CET, 47′ RT.
℄ IN=1745.82, ℄ OUT=1745.05



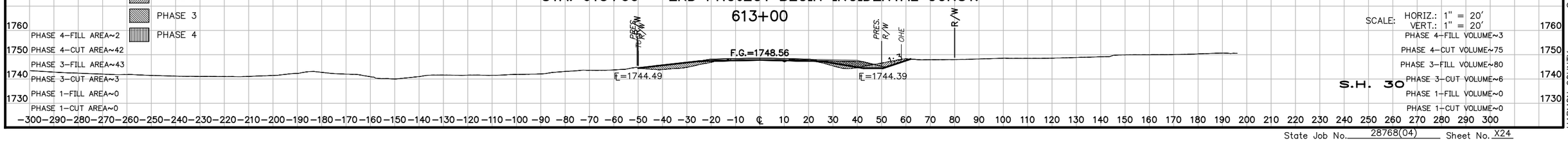
STA. 613+97 CONST. 12′ ASPH.
PRIVATE DRIVE LT.





PHASE 1
PHASE 2
PHASE 3
PHASE 4

STA. 613+00 – END PROJECT BEGIN INCIDENTAL CONST.



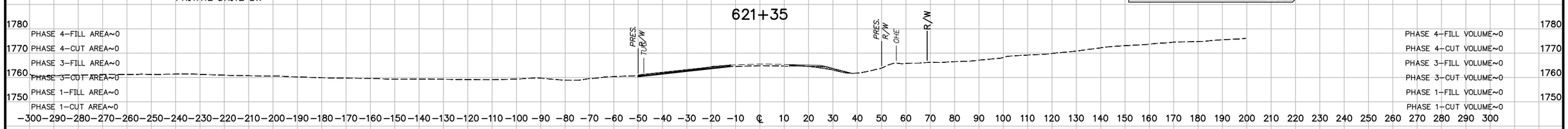
SCALE: HORIZ.: 1" = 20′
VERT.: 1" = 20′

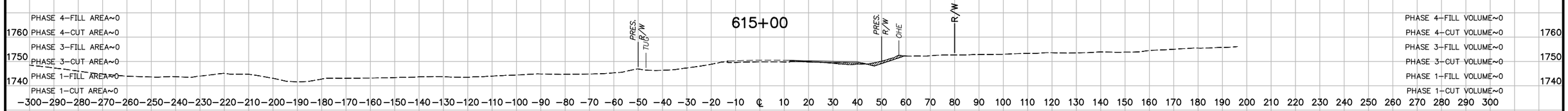
S.H. 30

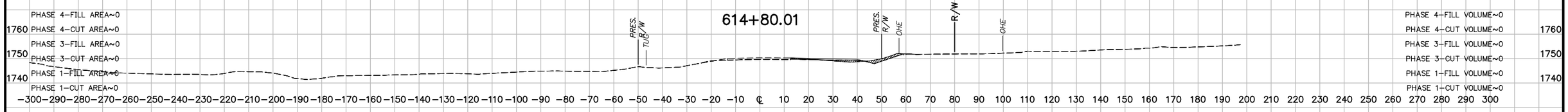
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

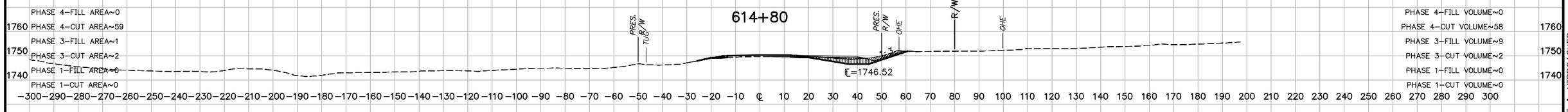
SEE SHEET X60 FOR END INCIDENTAL CONSTRUCTION

STA. 621+35 CONST. 12' ASPH.
PRIVATE DRIVE LT.

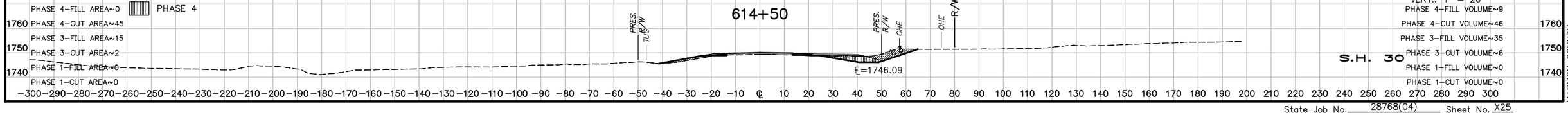








PHASE 1
PHASE 2
PHASE 3
PHASE 4



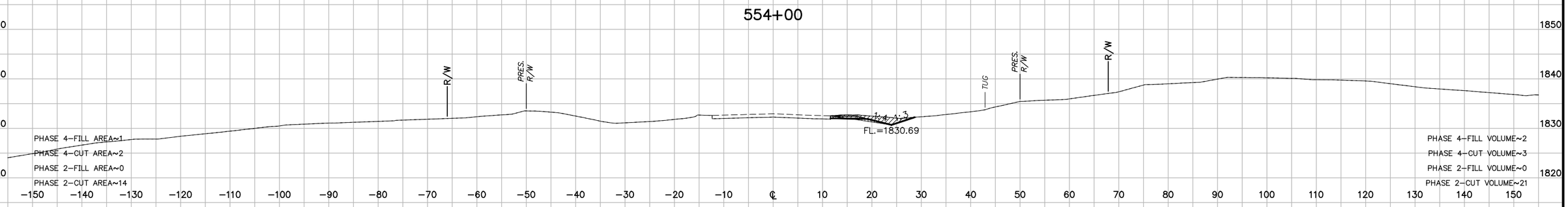
SCALE: HORIZ.: 1" = 20'
VERT.: 1" = 20'

S.H. 30

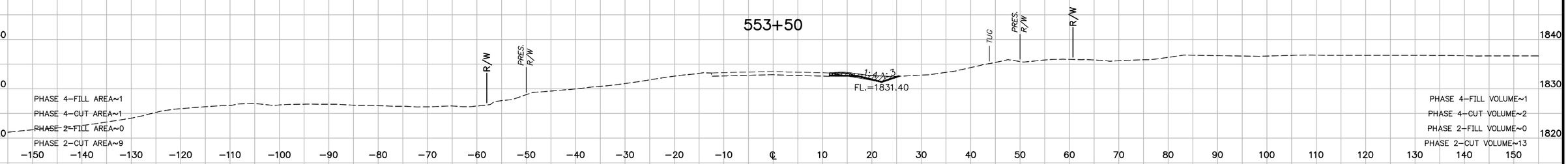
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X25

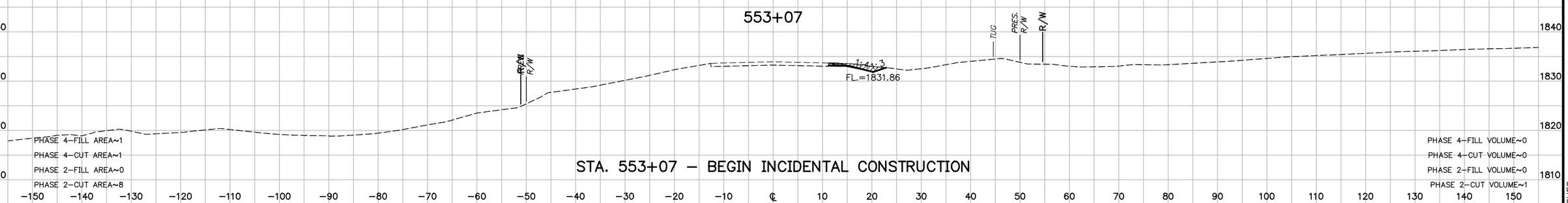
554+00



553+50

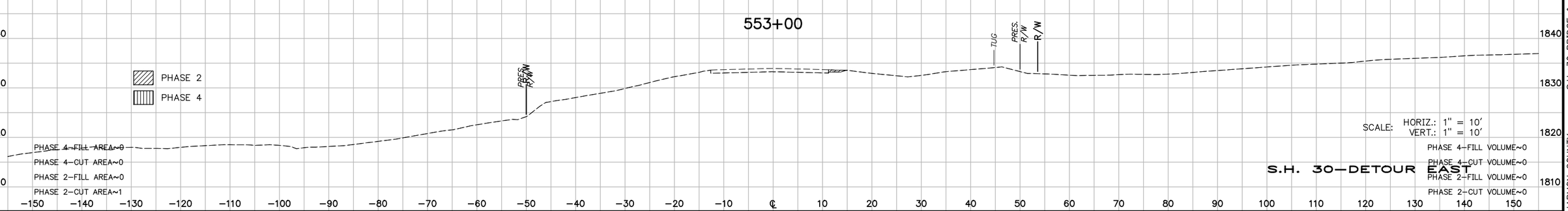


553+07



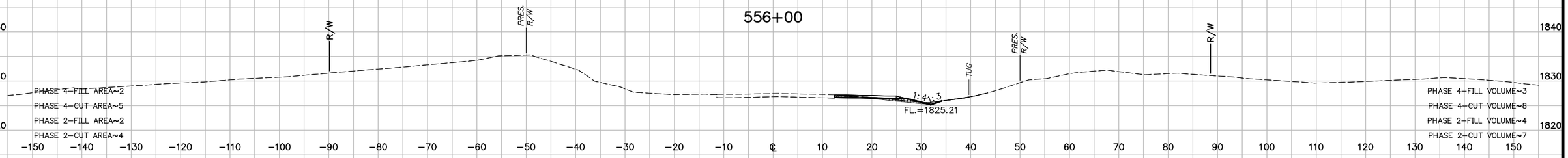
STA. 553+07 – BEGIN INCIDENTAL CONSTRUCTION

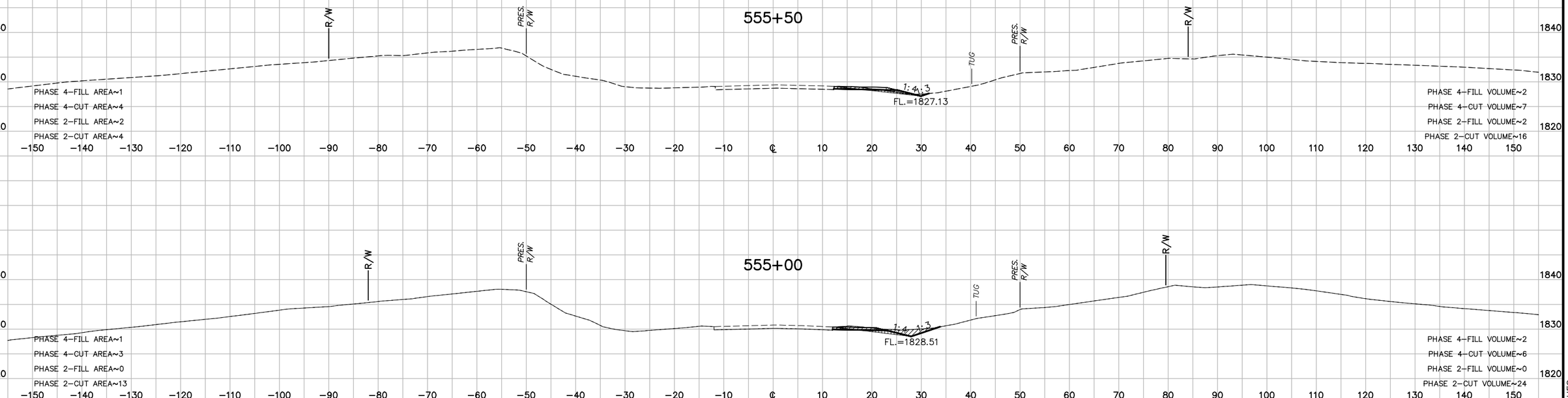
553+00



S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY



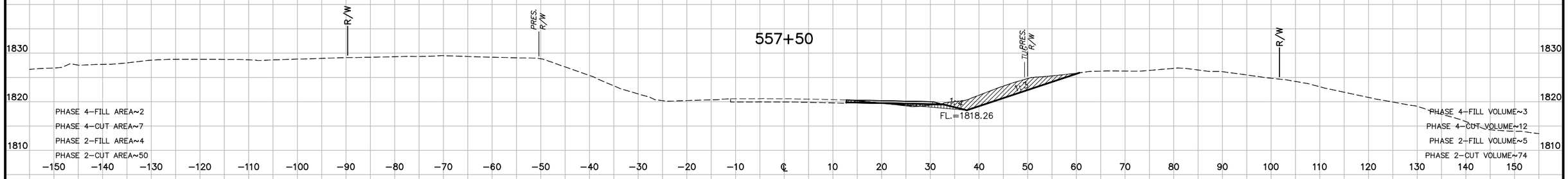


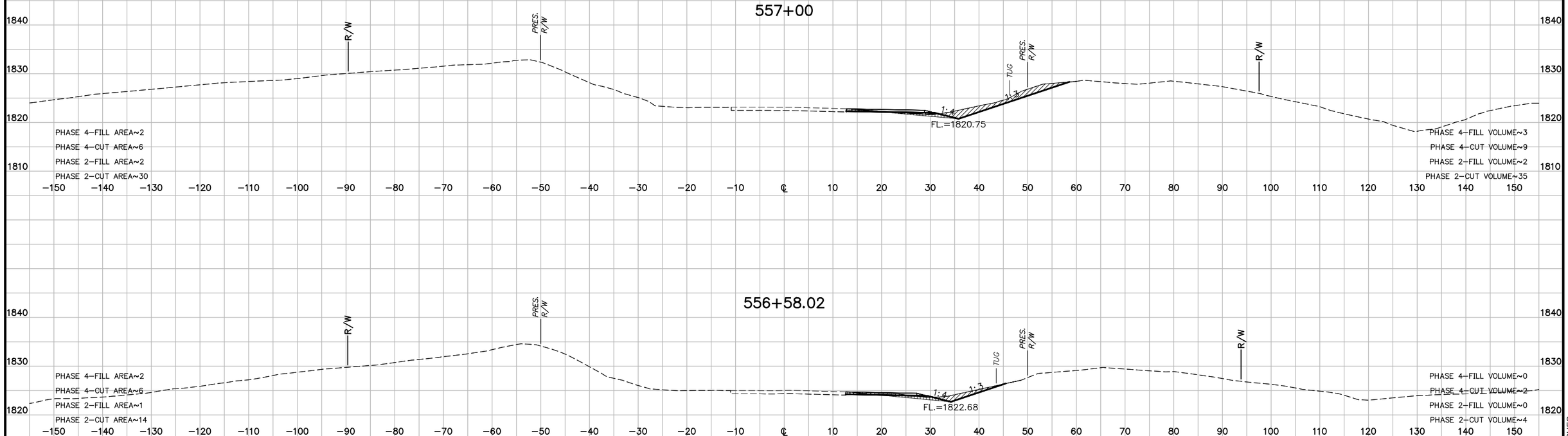
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X27





SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

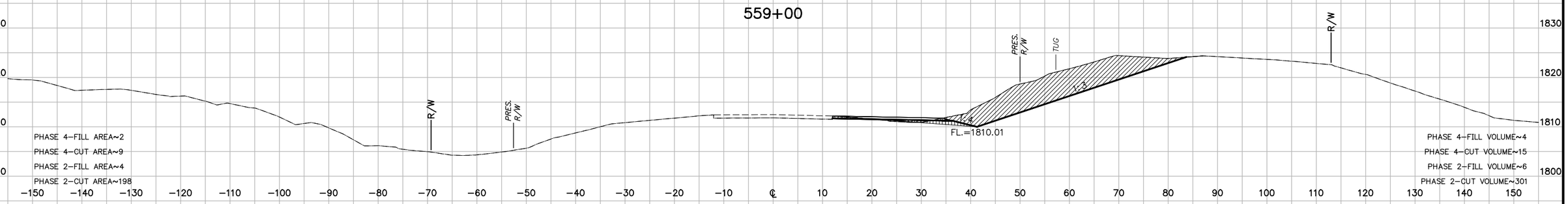
S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

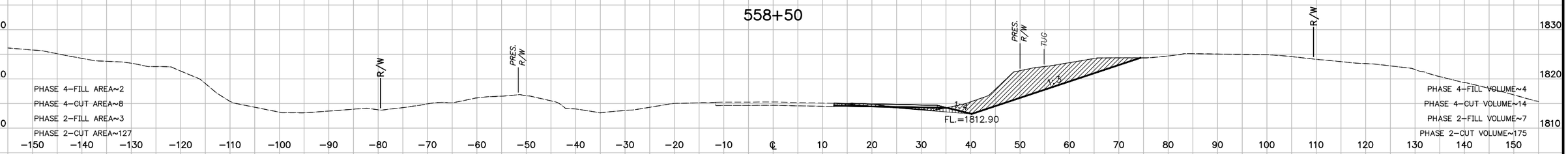
HARMON COUNTY

State Job No. 28768(04) Sheet No. X28

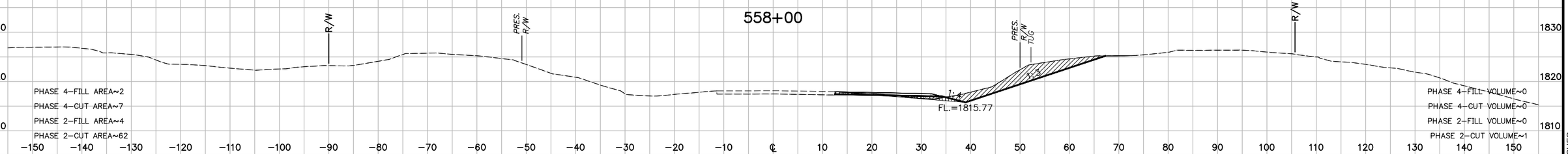
559+00



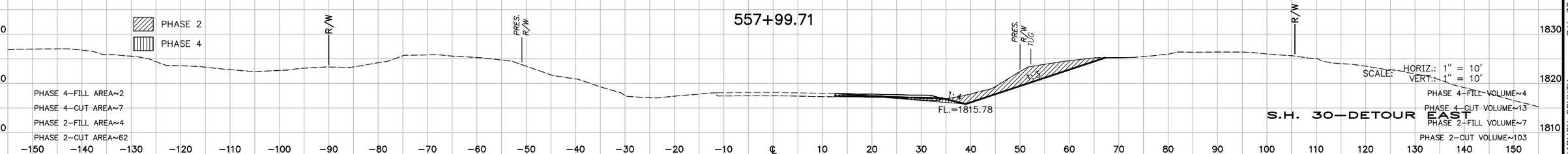
558+50



558+00



557+99.71

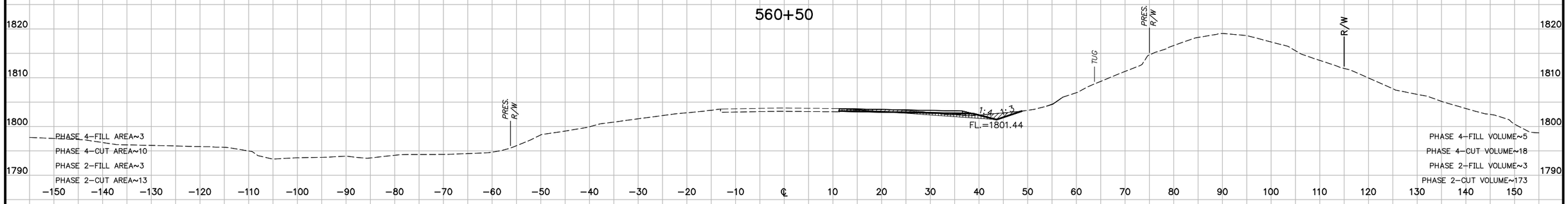


S.H. 30–DETOUR EAST

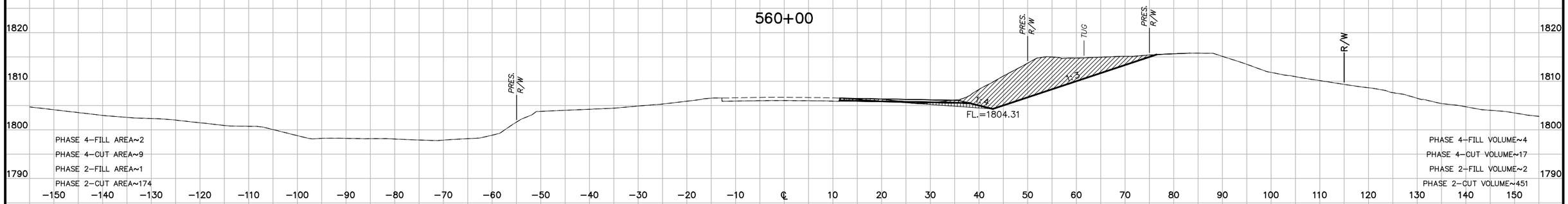
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X29

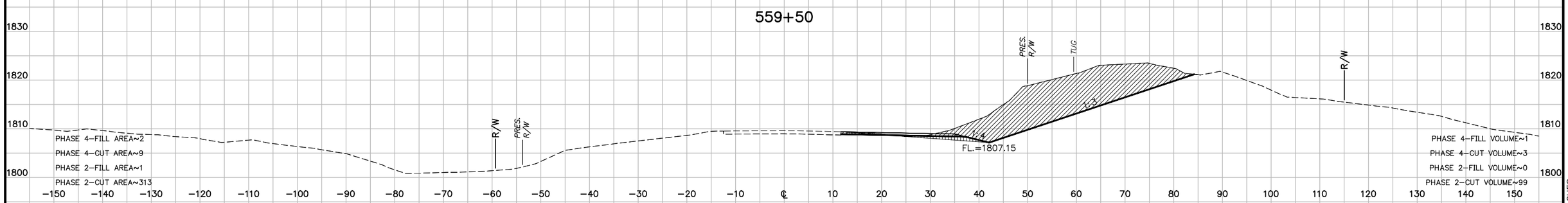
560+50



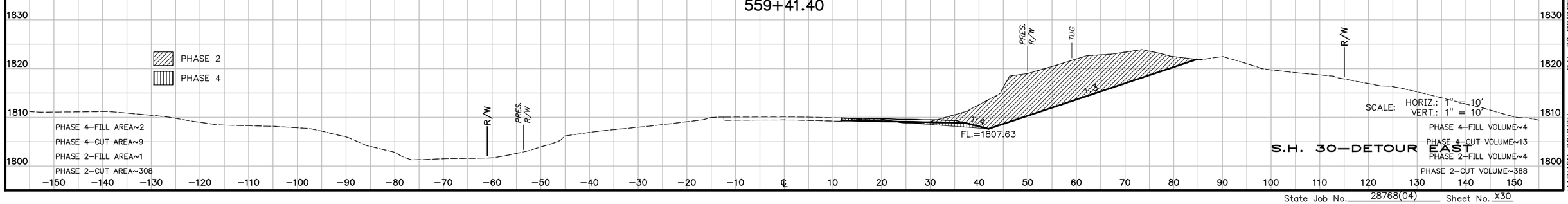
560+00



559+50



559+41.40



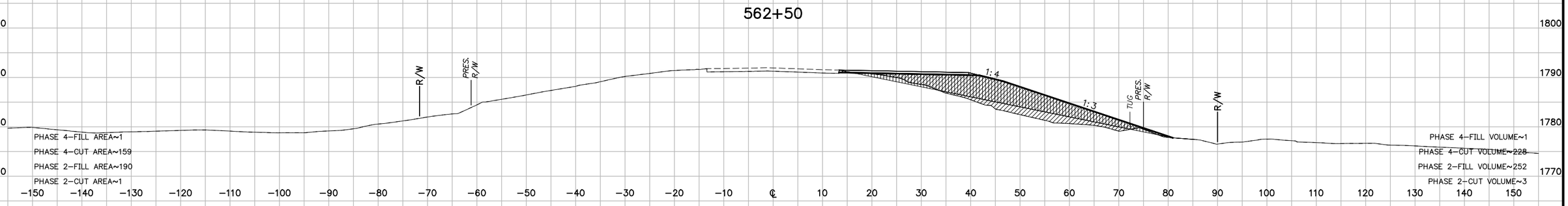
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

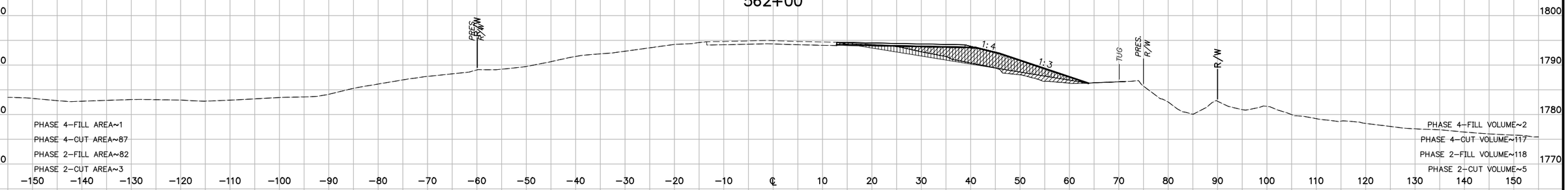
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X30

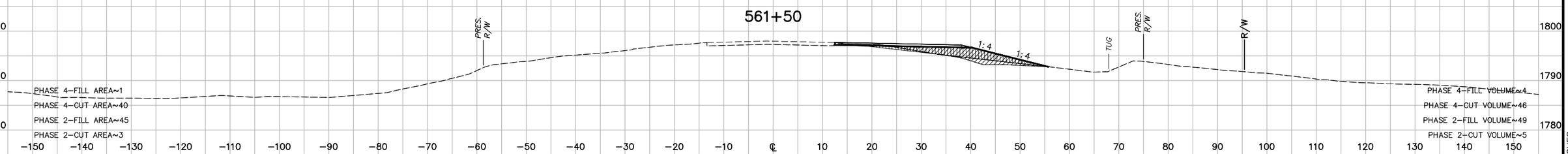
562+50



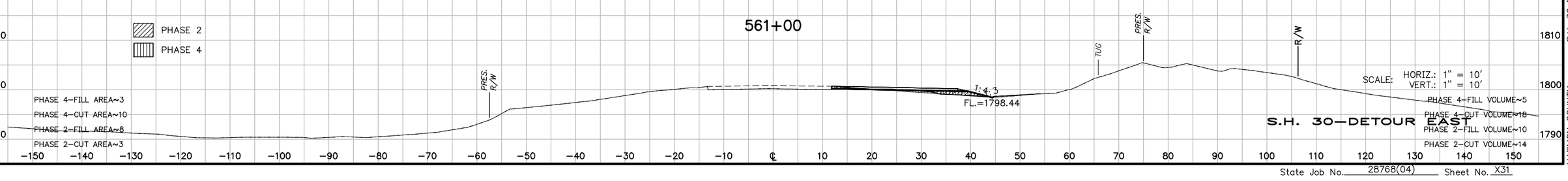
562+00



561+50



561+00



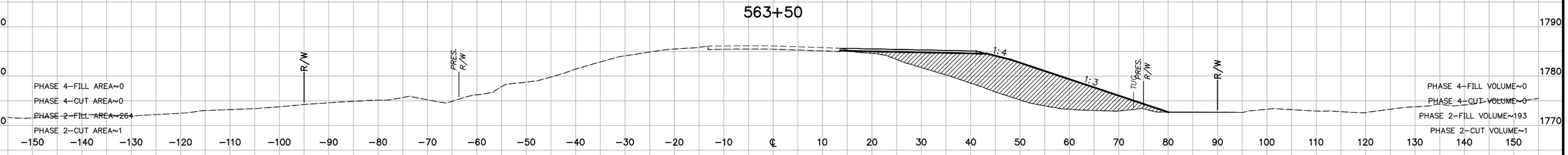
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

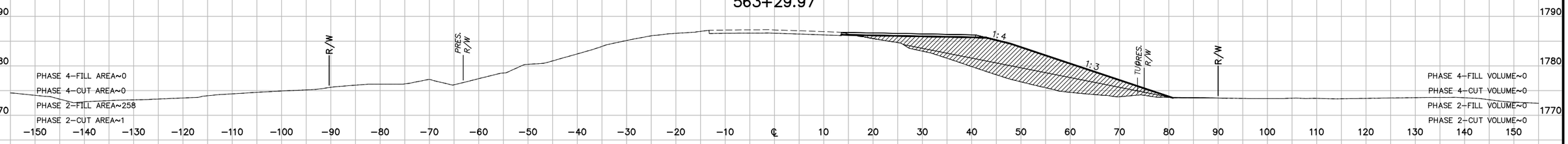
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X31

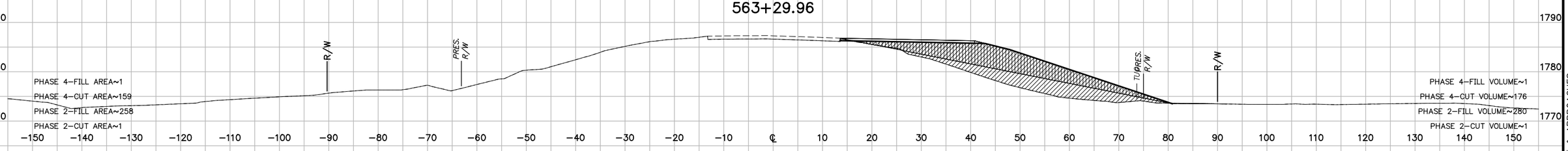
563+50



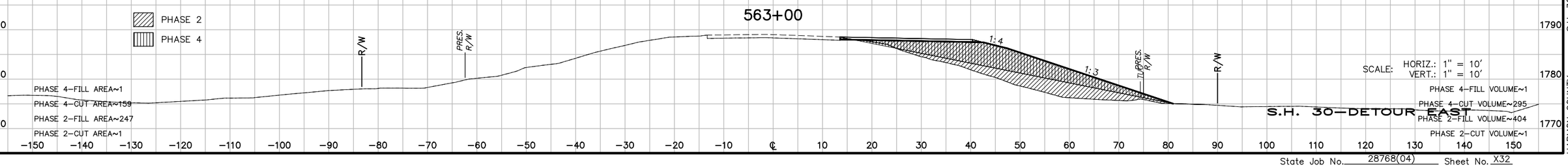
563+29.97



563+29.96



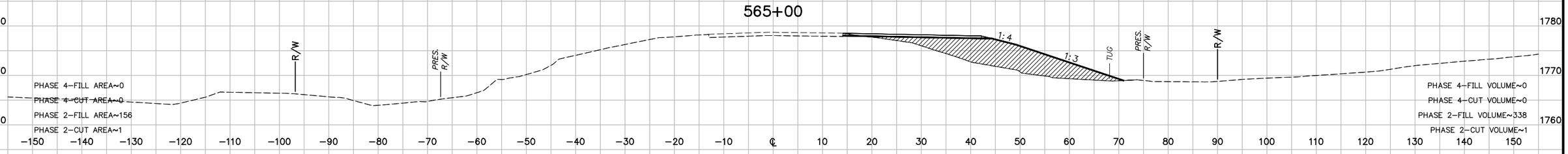
563+00



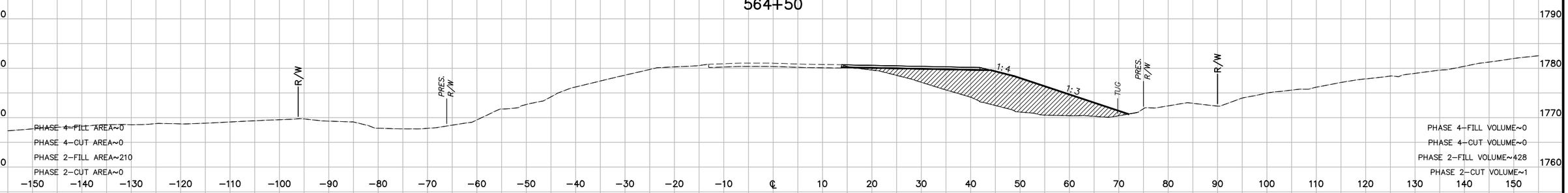
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X32

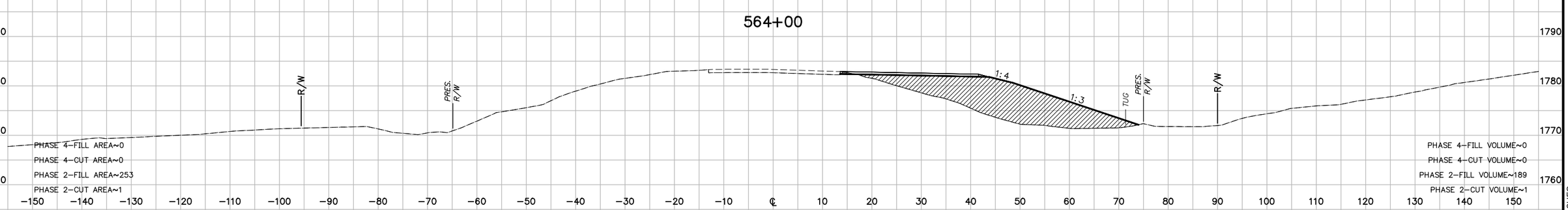
565+00



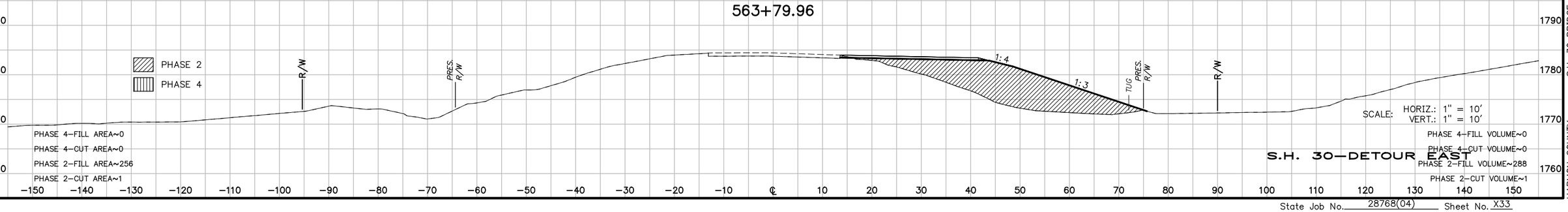
564+50



564+00



563+79.96

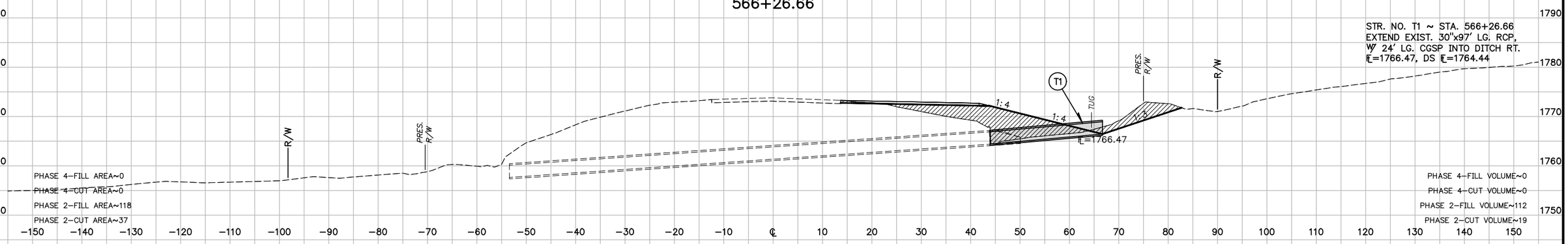


S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X33

566+26.66

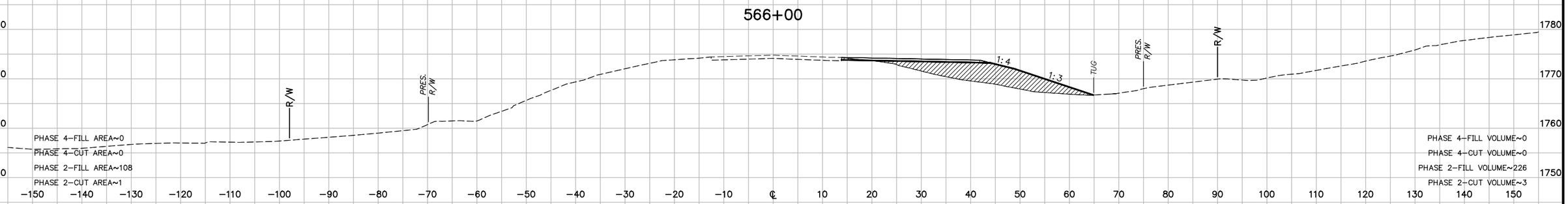


STR. NO. T1 ~ STA. 566+26.66
EXTEND EXIST. 30"x97' LG. RCP,
W/ 24' LG. CGSP INTO DITCH RT.
℄=1766.47, DS ℄=1764.44

PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~118
PHASE 2–CUT AREA~37

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~112
PHASE 2–CUT VOLUME~19

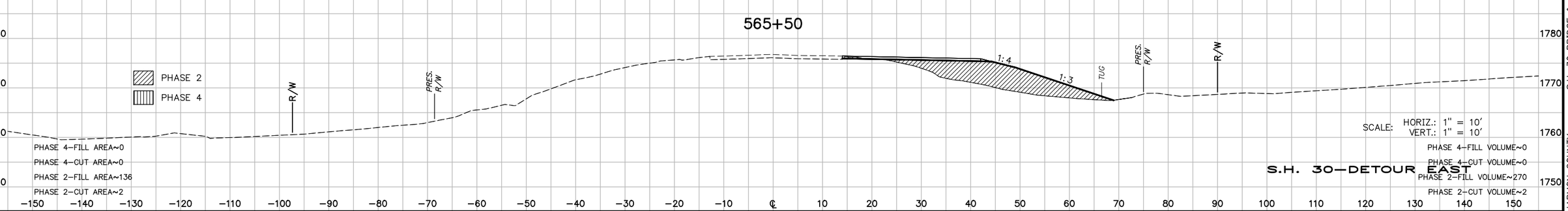
566+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~108
PHASE 2–CUT AREA~1

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~226
PHASE 2–CUT VOLUME~3

565+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~136
PHASE 2–CUT AREA~2

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

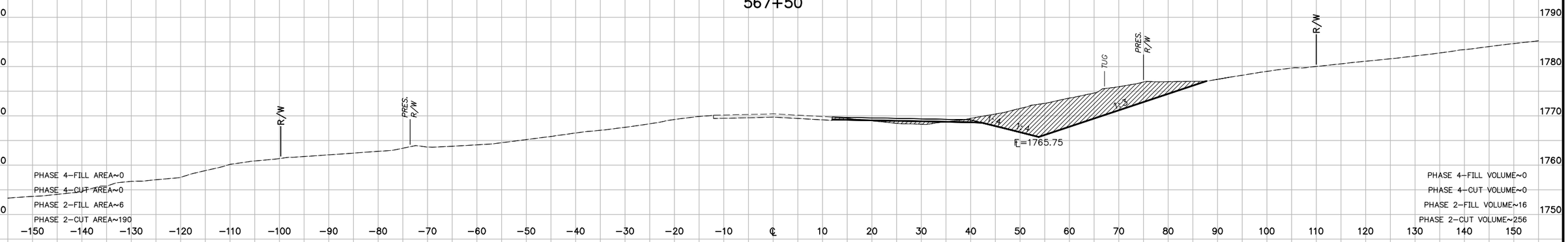
PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~270
PHASE 2–CUT VOLUME~2

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X34

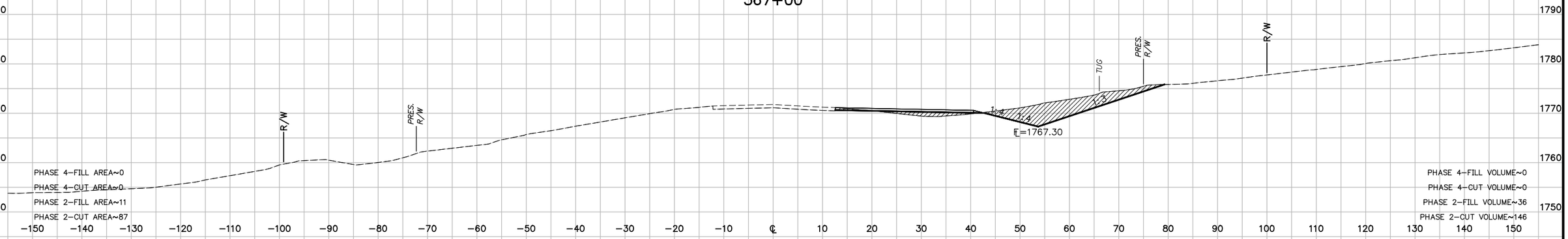
567+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~6
PHASE 2–CUT AREA~190

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~16
PHASE 2–CUT VOLUME~256

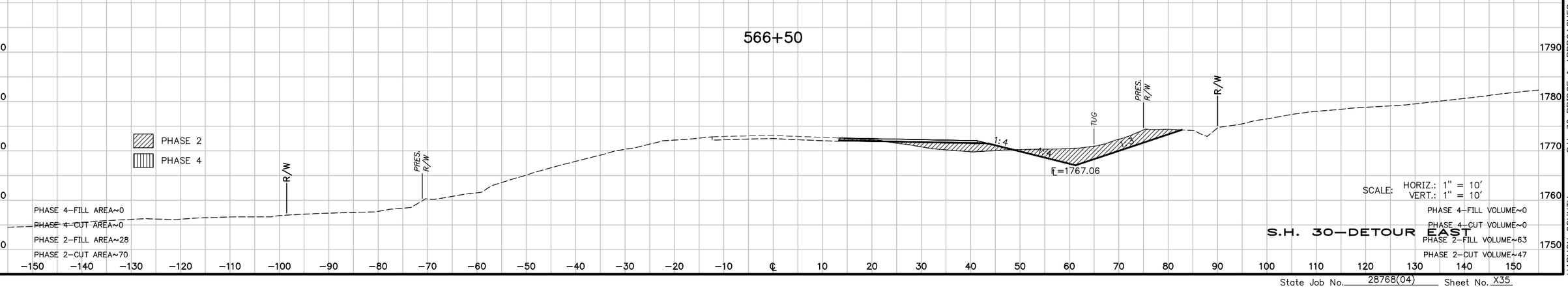
567+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~11
PHASE 2–CUT AREA~87

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~36
PHASE 2–CUT VOLUME~146

566+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~28
PHASE 2–CUT AREA~70

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

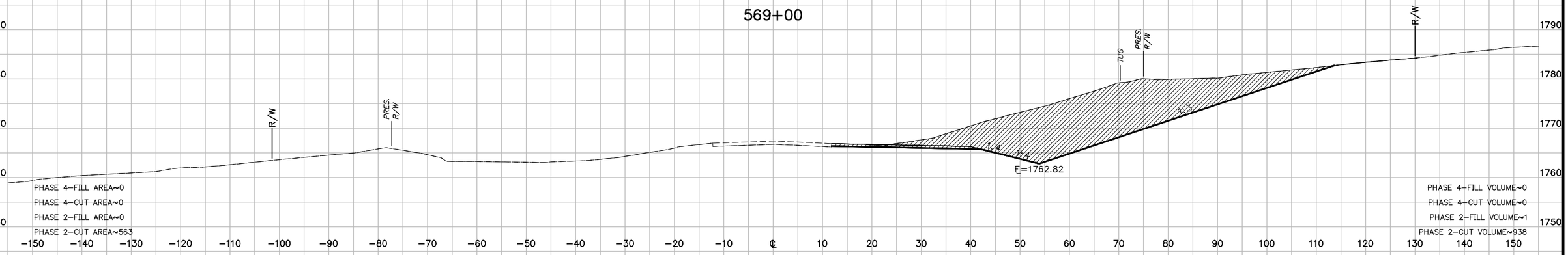
PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~63
PHASE 2–CUT VOLUME~47

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X35

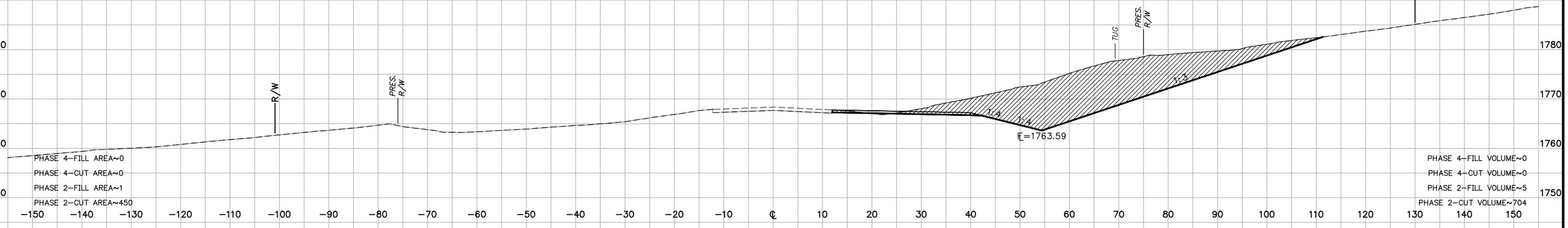
569+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~0
PHASE 2–CUT AREA~563

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~1
PHASE 2–CUT VOLUME~938

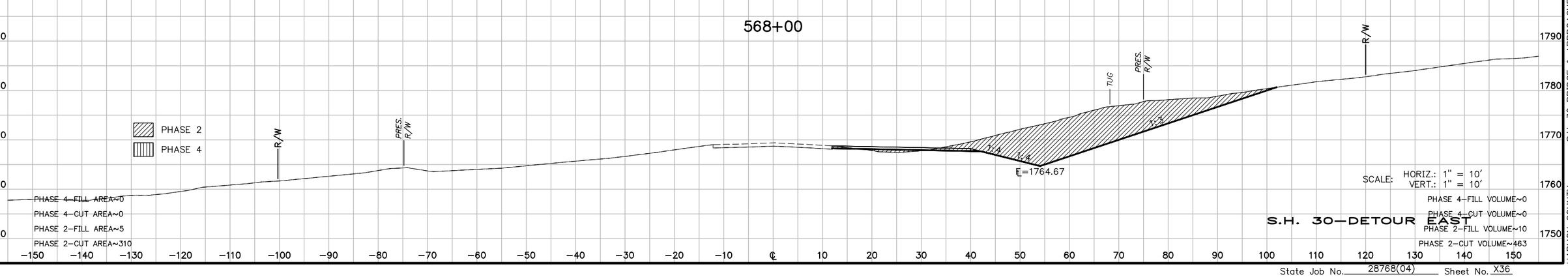
568+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~1
PHASE 2–CUT AREA~450

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~5
PHASE 2–CUT VOLUME~704

568+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~5
PHASE 2–CUT AREA~310

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

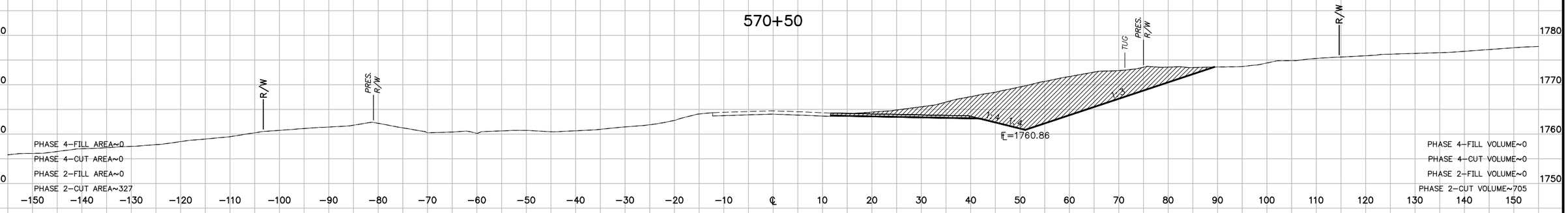
PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~10
PHASE 2–CUT VOLUME~463

S.H. 30–DETOUR EAST

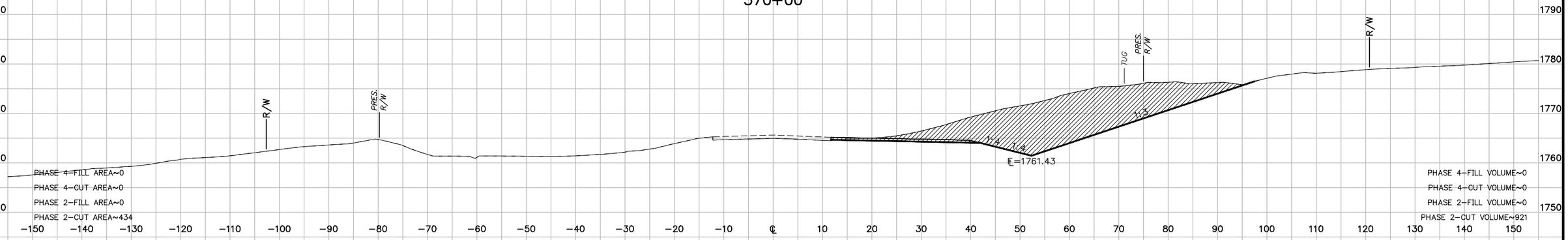
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X36

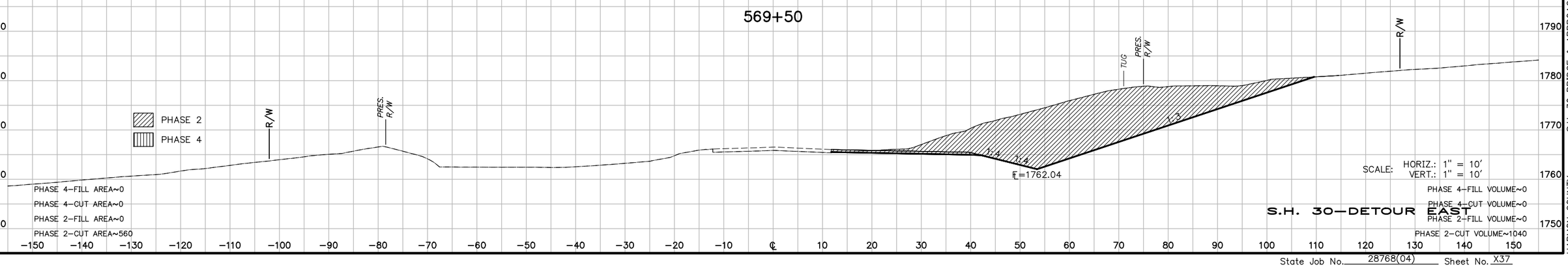
570+50



570+00



569+50



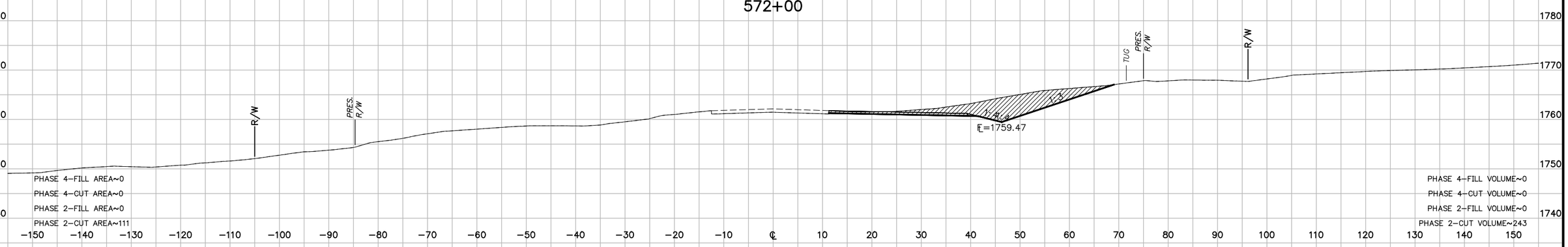
S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

State Job No. 28768(04) Sheet No. X37

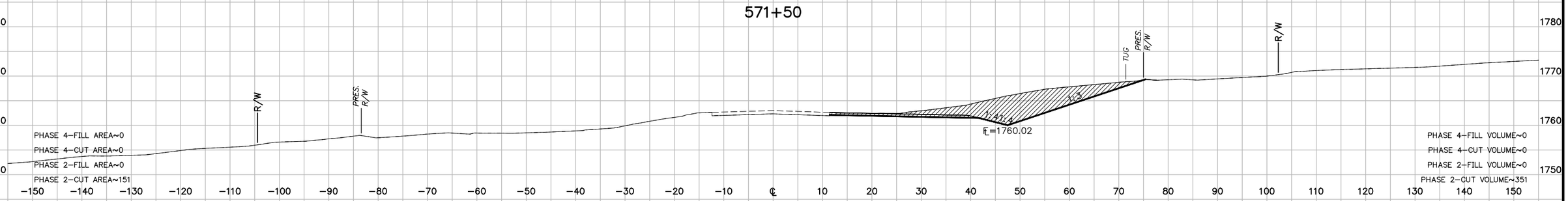
572+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~0
PHASE 2–CUT AREA~111

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~0
PHASE 2–CUT VOLUME~243

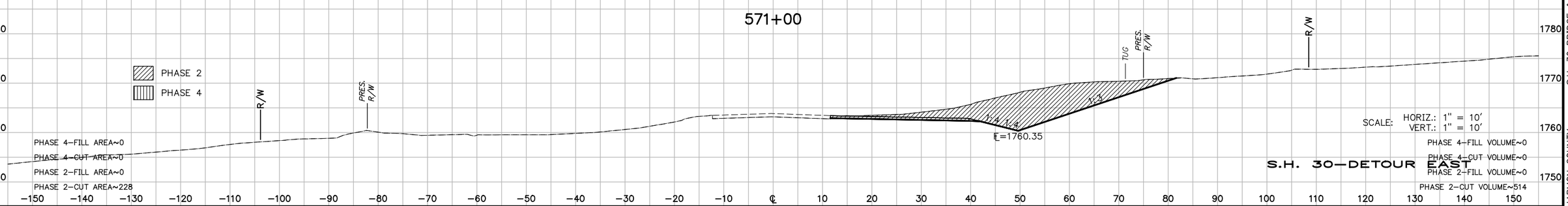
571+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~0
PHASE 2–CUT AREA~151

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~0
PHASE 2–CUT VOLUME~351

571+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~0
PHASE 2–CUT AREA~228

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

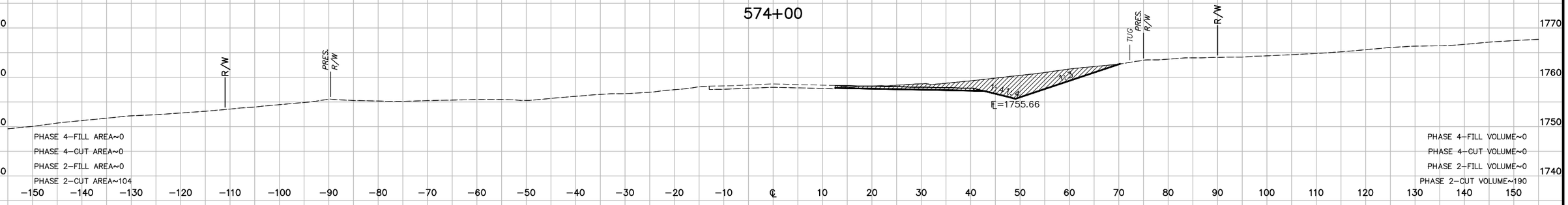
PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~0
PHASE 2–CUT VOLUME~514

S.H. 30–DETOUR EAST

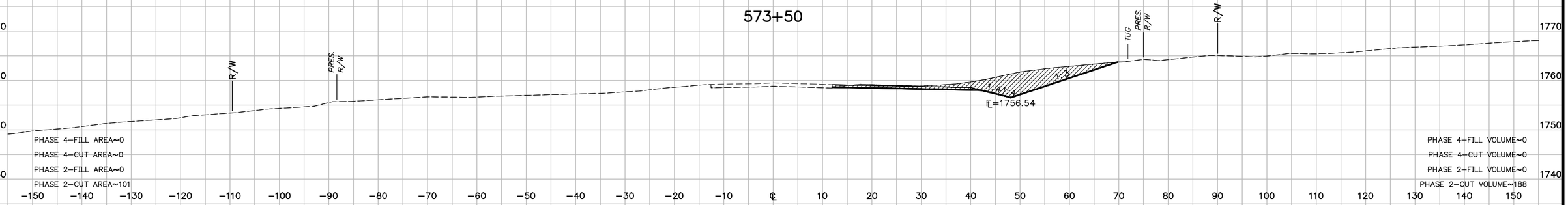
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X38

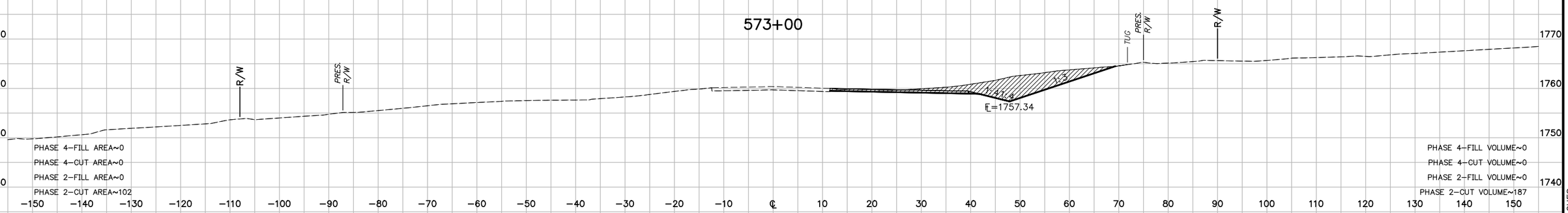
574+00



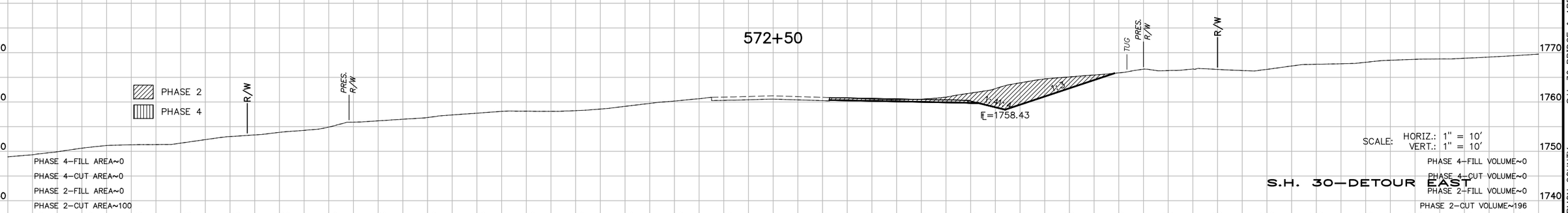
573+50



573+00



572+50



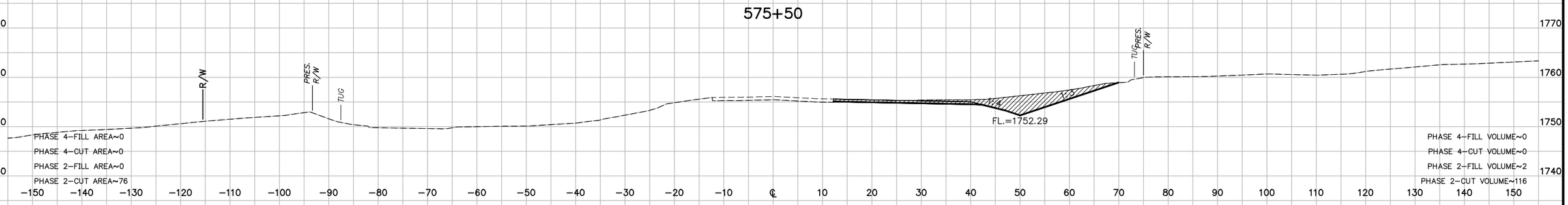
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

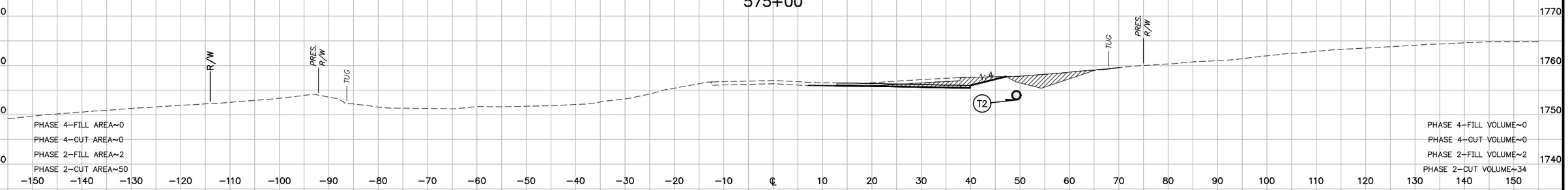
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X39

575+50

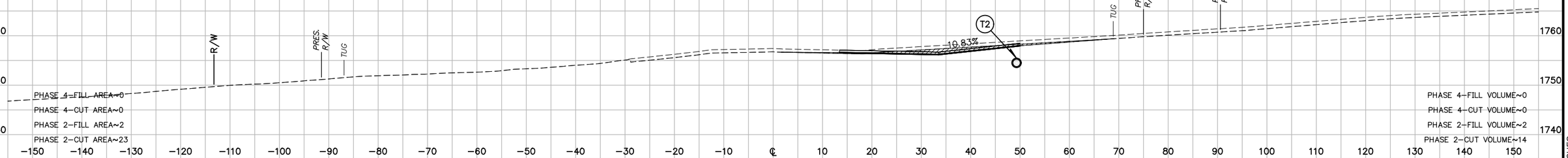


575+00

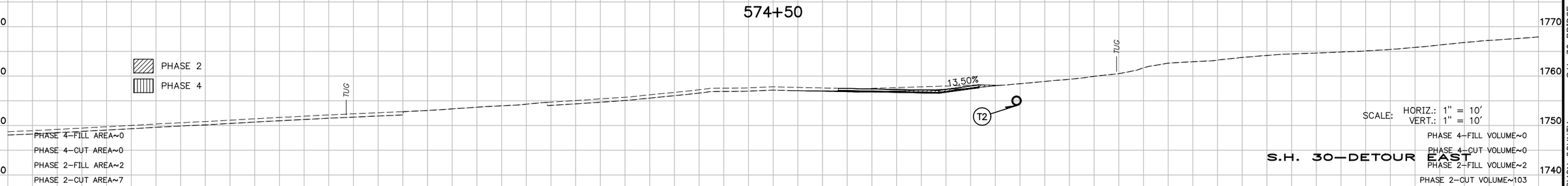


574+75

STR. NO. T2 ~ STA. 574+75.00
CONST. 18"x62' LG. CGSP SIDE DRAIN, 49' RT.
℄=1754.38, DS ℄=1753.15



574+50



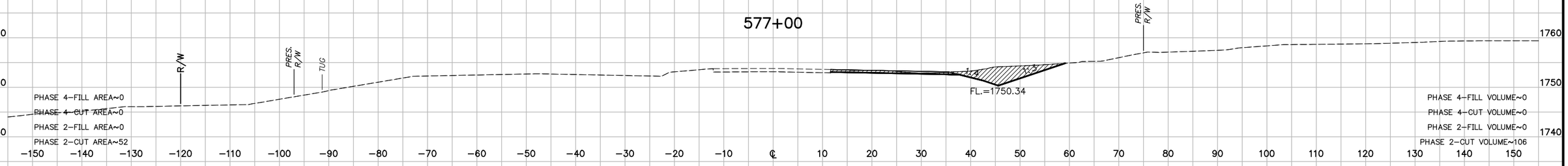
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

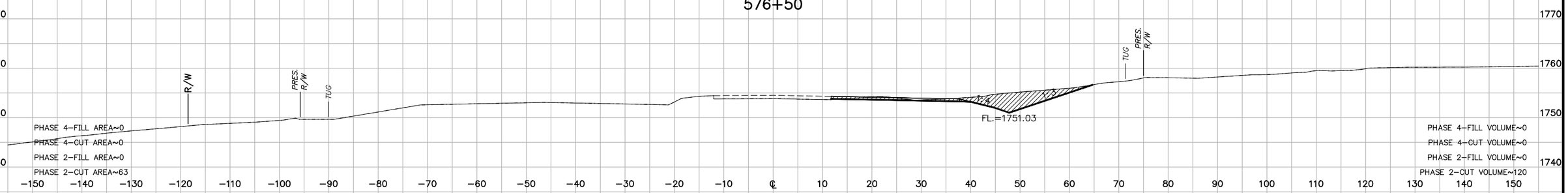
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X40

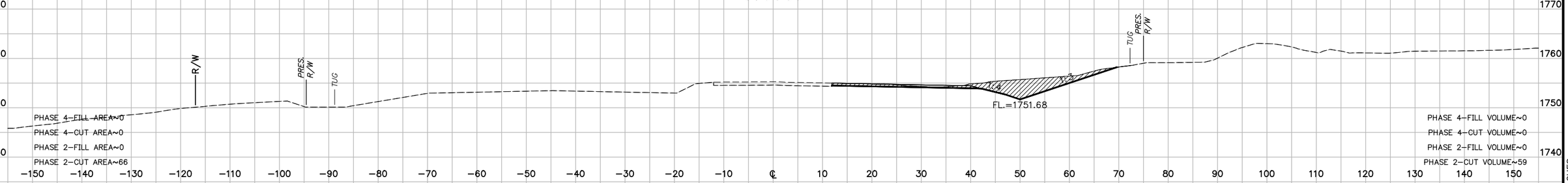
577+00



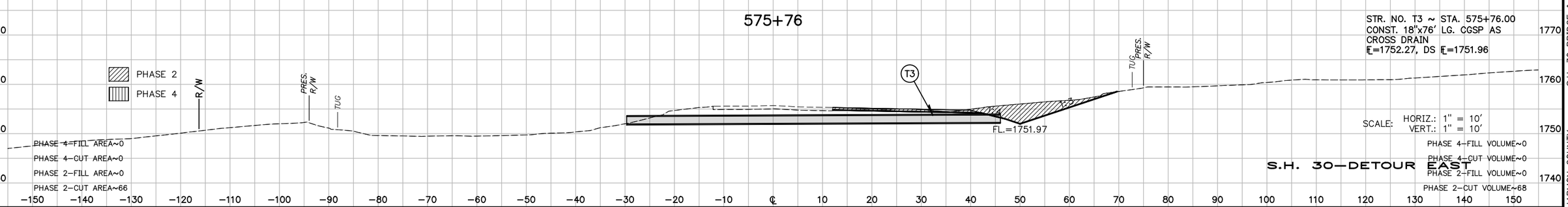
576+50



576+00



575+76



STR. NO. T3 ~ STA. 575+76.00
CONST. 18"x76' LG. CGSP AS CROSS DRAIN
℄=1752.27, DS ℄=1751.96

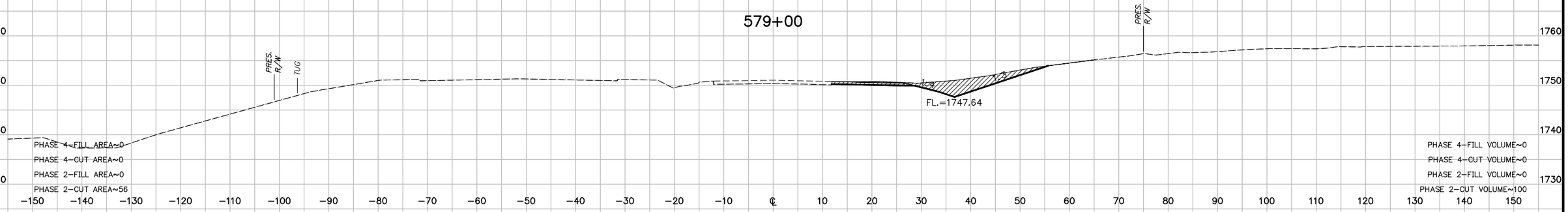
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

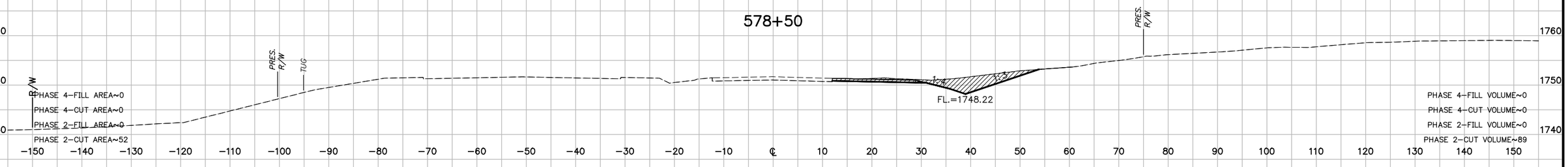
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X41

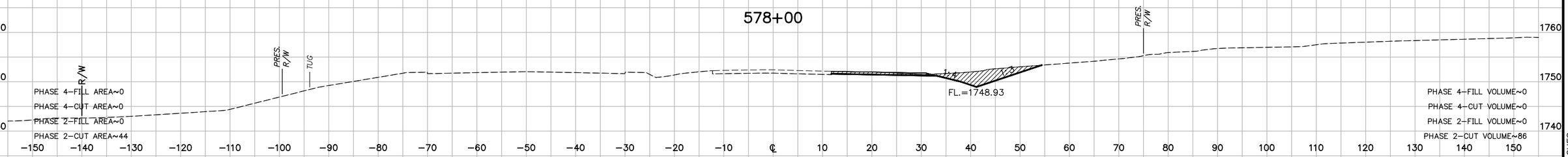
579+00



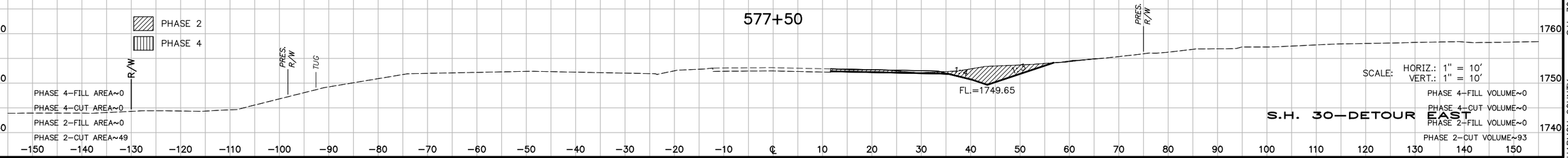
578+50



578+00



577+50



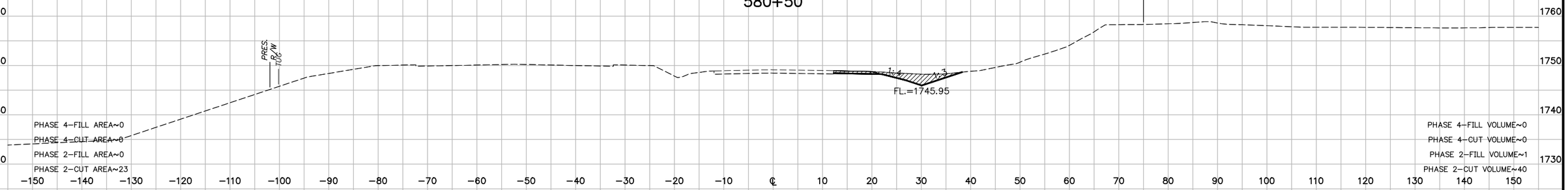
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

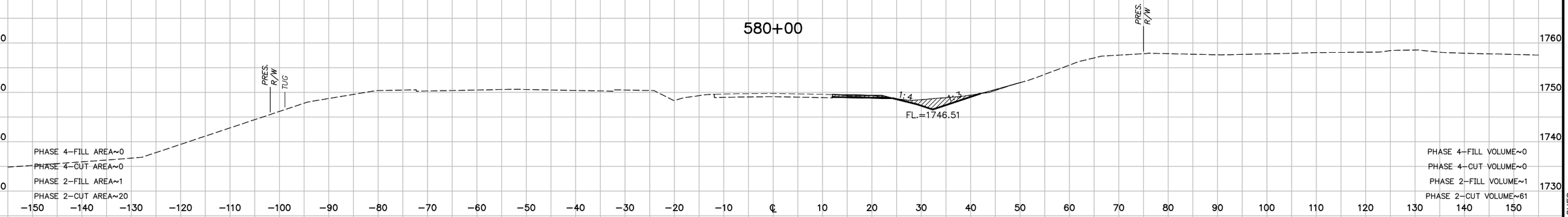
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X42

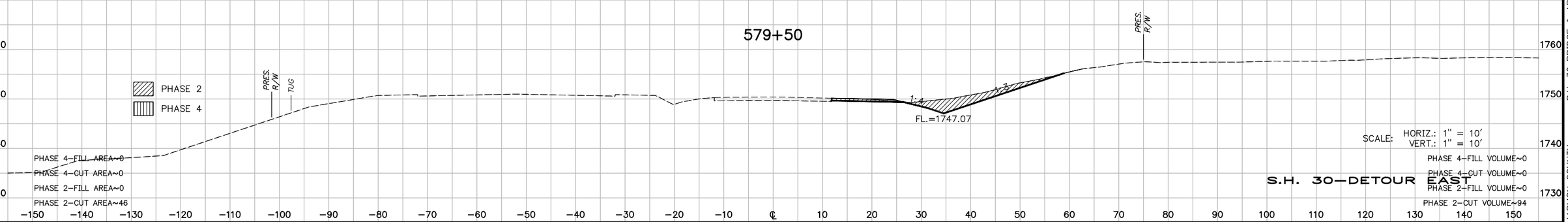
580+50



580+00



579+50



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

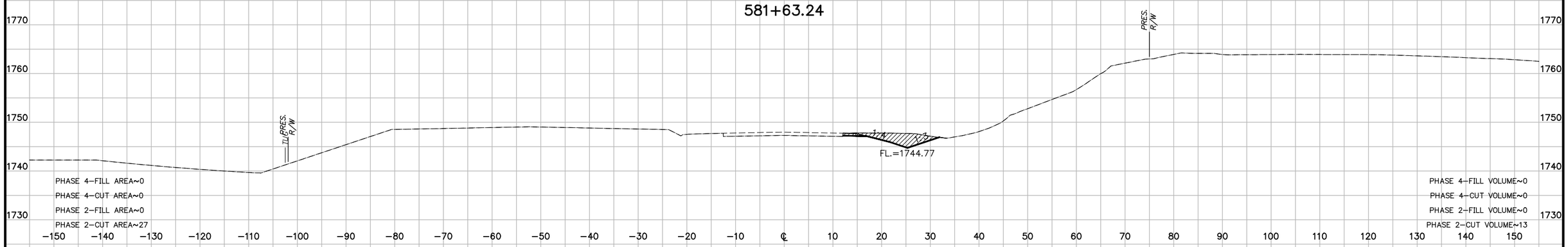
S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

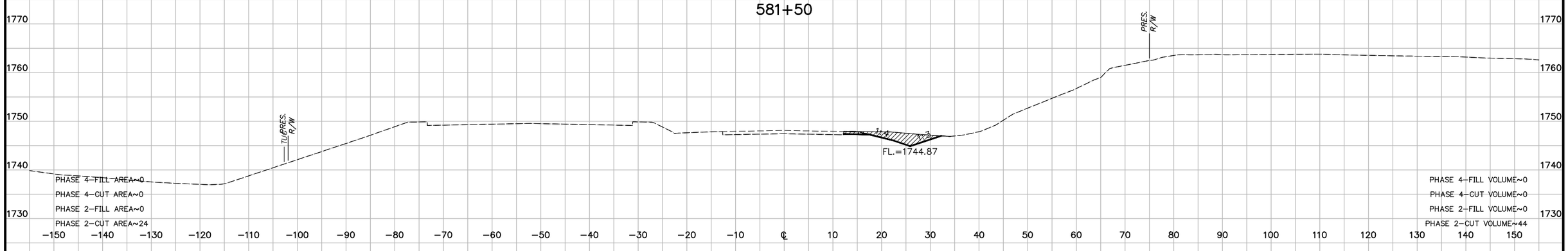
HARMON COUNTY

State Job No. 28768(04) Sheet No. X43

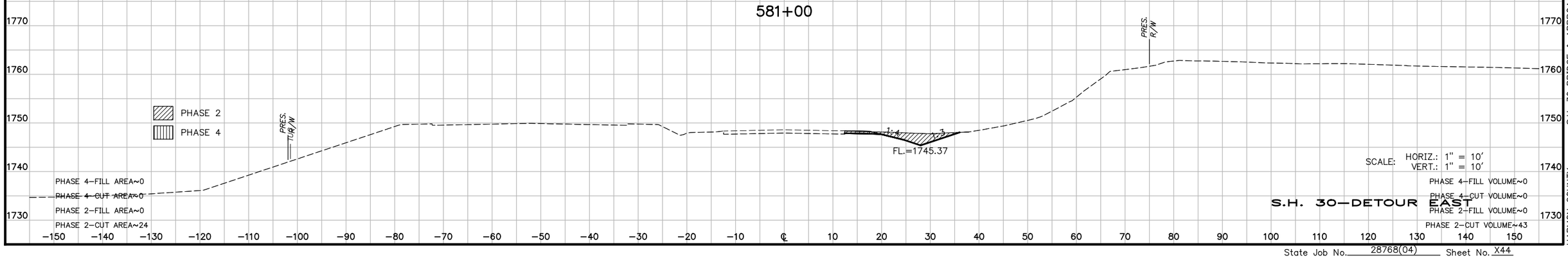
581+63.24



581+50



581+00



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

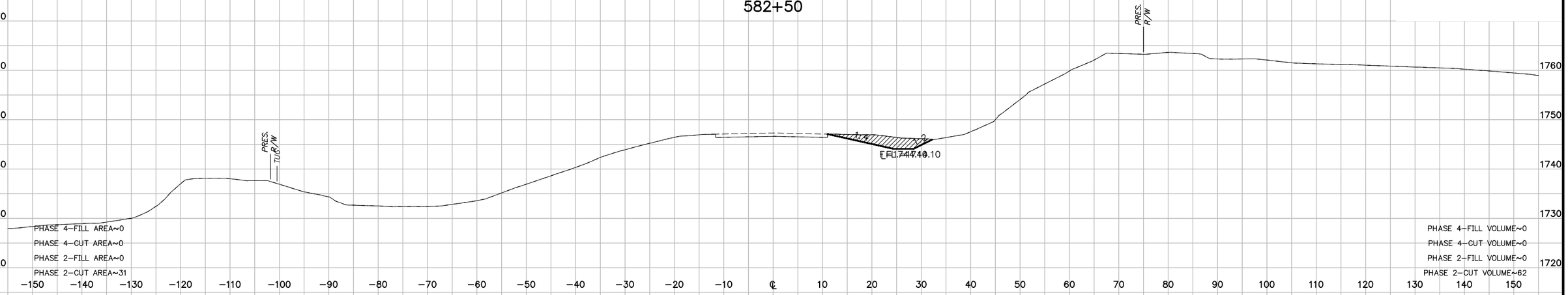
S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

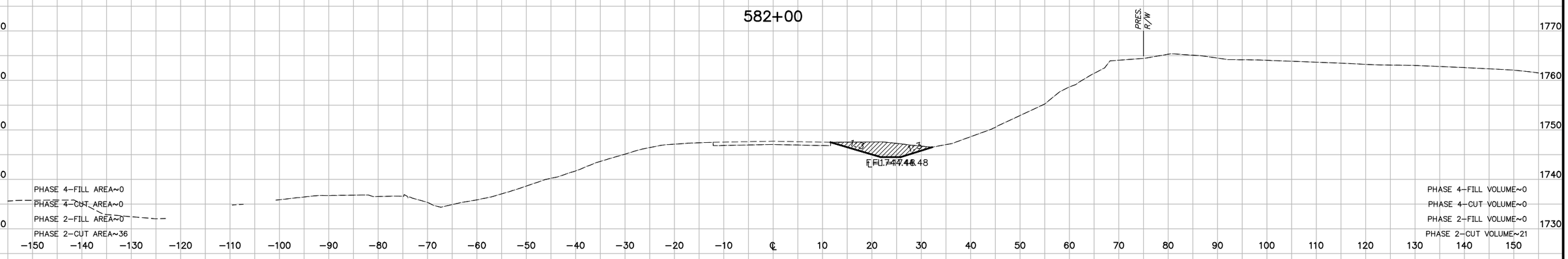
HARMON COUNTY

State Job No. 28768(04) Sheet No. X44

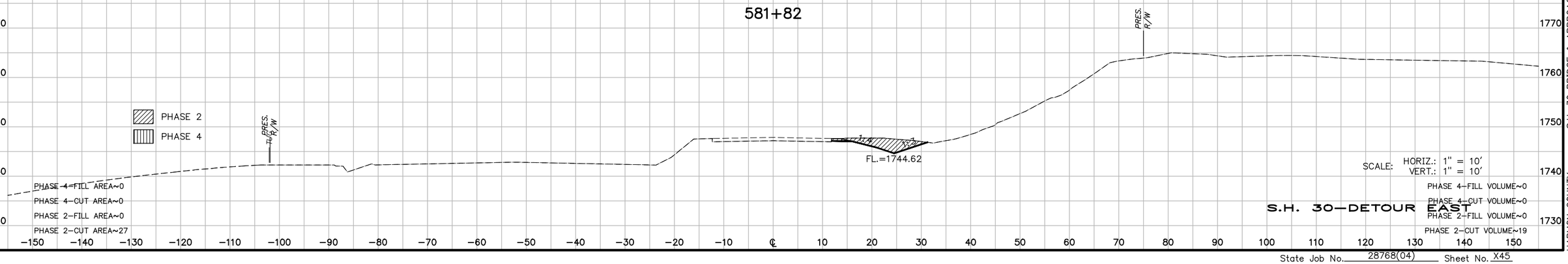
582+50



582+00



581+82



SCALE: HORIZ.: 1" = 10′
VERT.: 1" = 10′

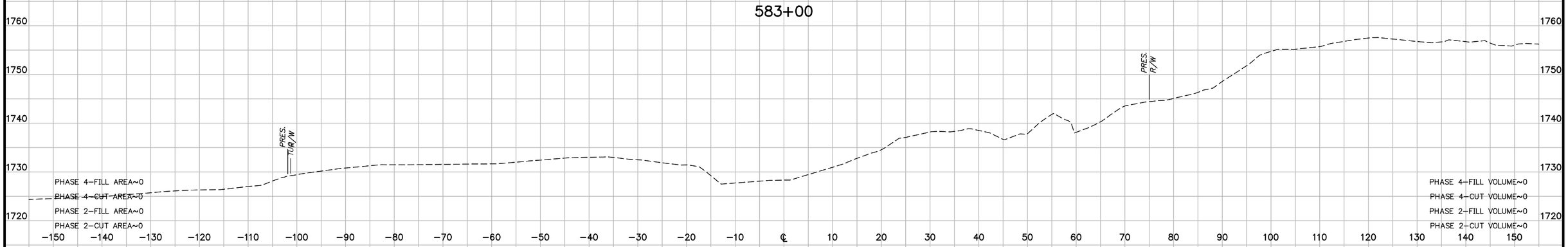
S.H. 30—DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

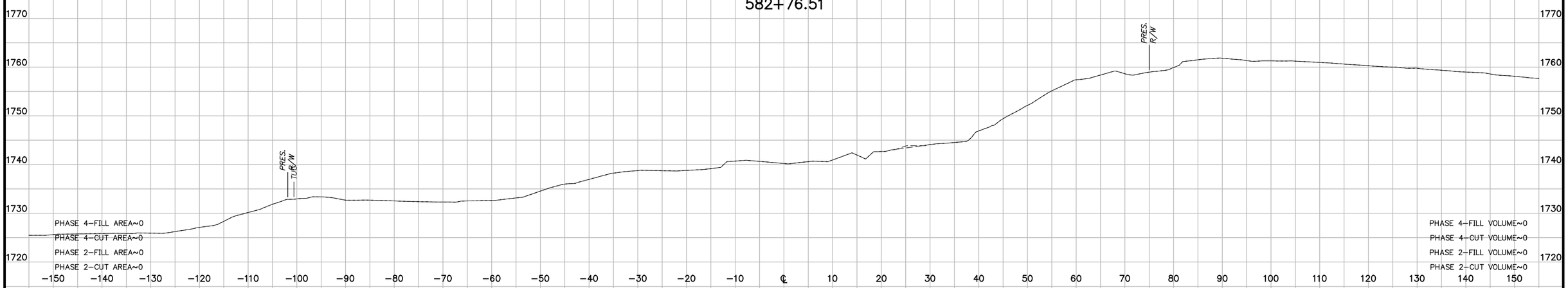
HARMON COUNTY

State Job No. 28768(04) Sheet No. X45

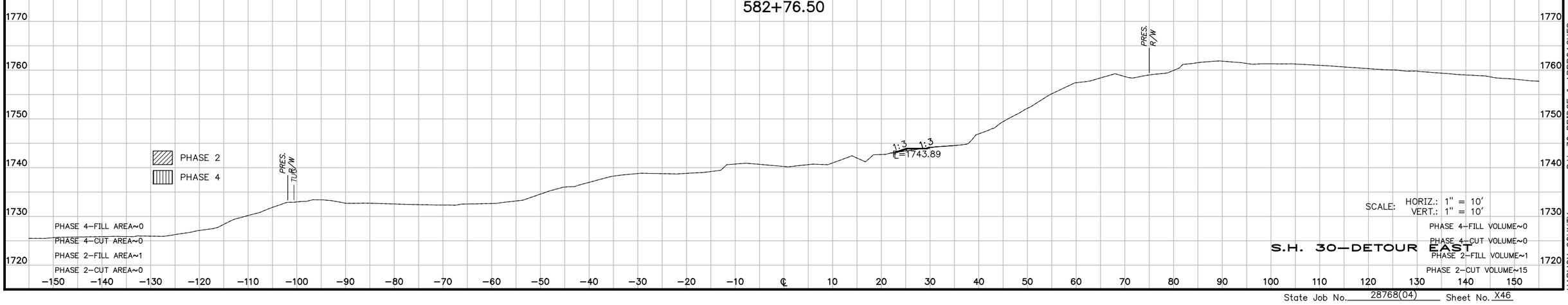
583+00



582+76.51



582+76.50



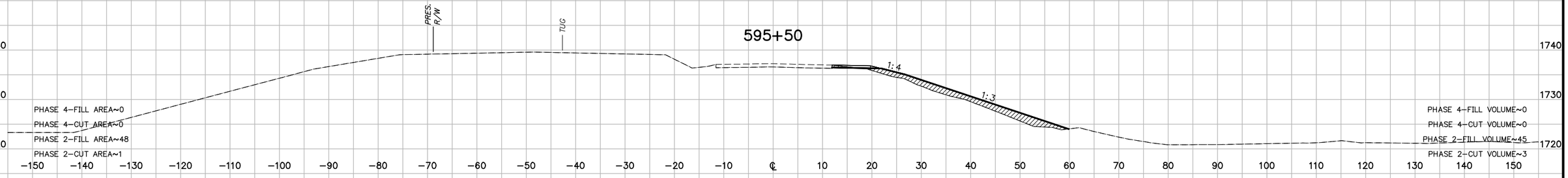
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

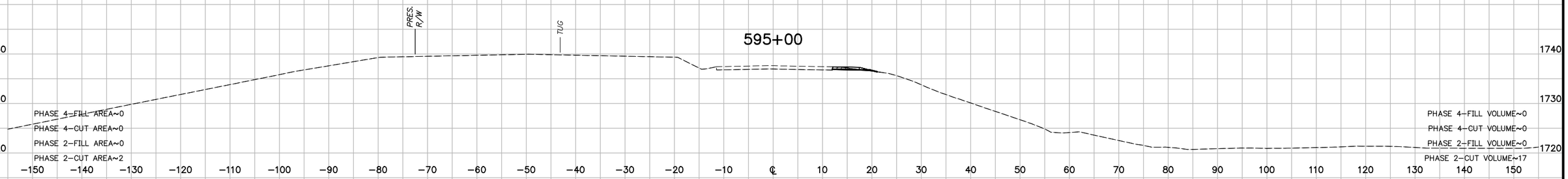
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X46

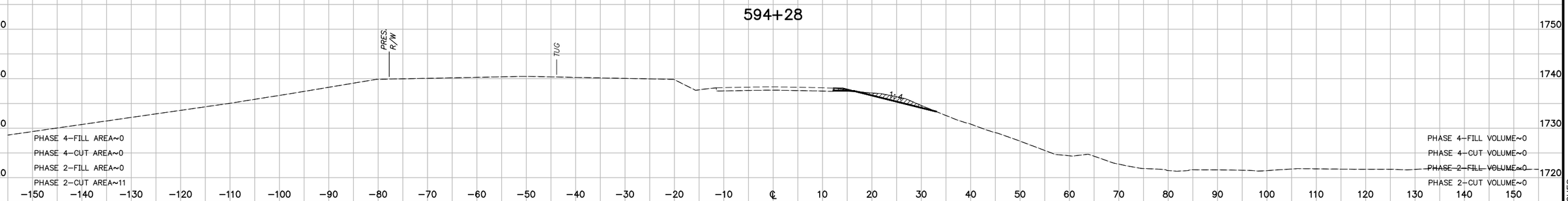
595+50



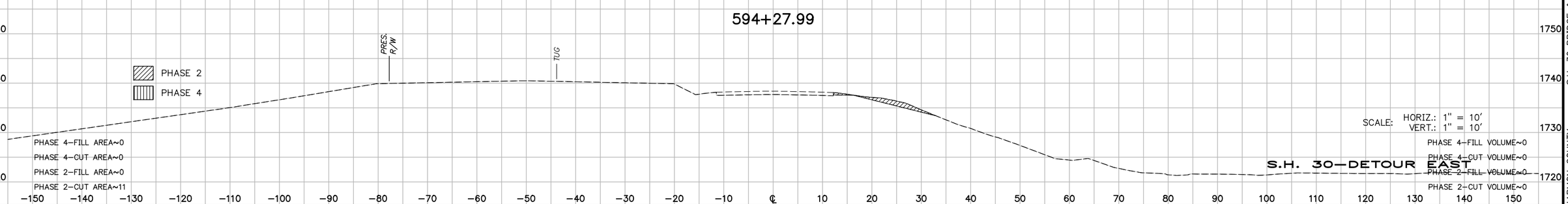
595+00



594+28



594+27.99



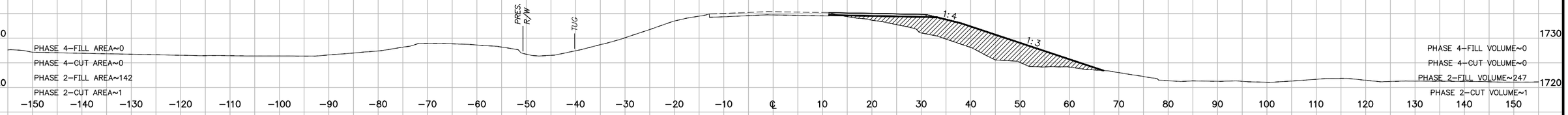
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

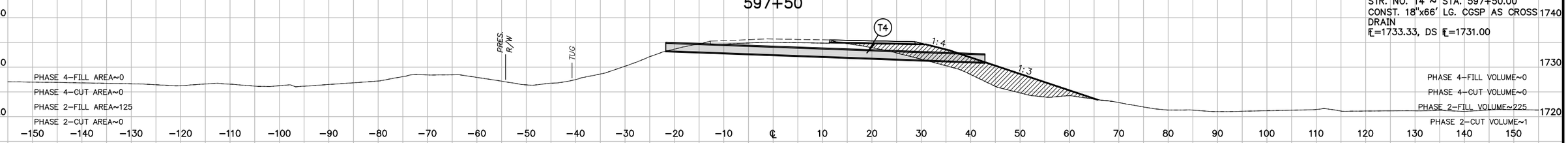
State Job No. 28768(04) Sheet No. X47

598+00

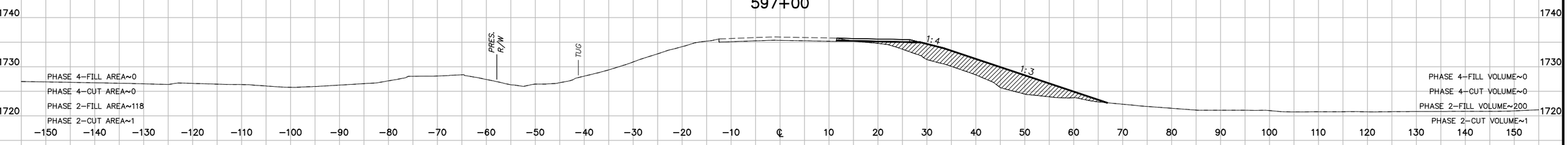


597+50

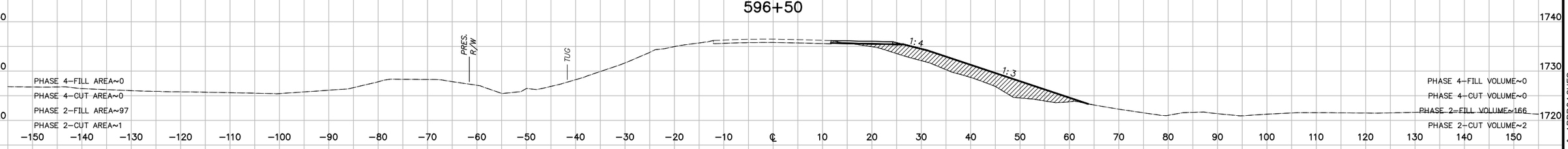
STR. NO. T4 ~ STA. 597+50.00
CONST. 18"x66' LG. CGSP AS CROSS DRAIN
℄=1733.33, DS ℄=1731.00



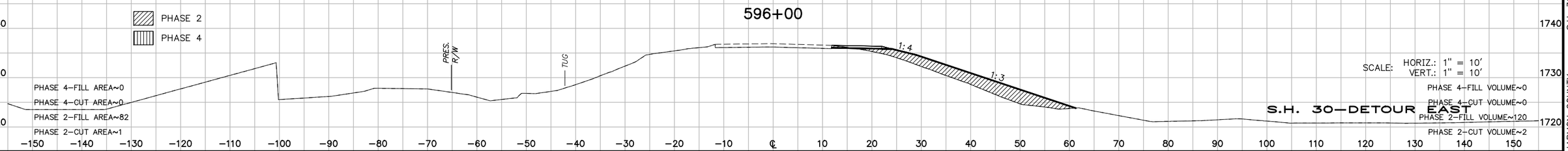
597+00



596+50



596+00



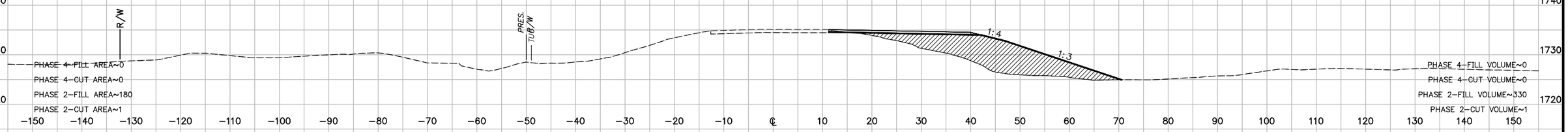
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

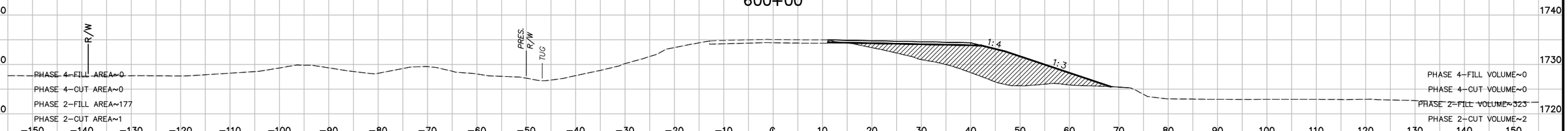
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X48

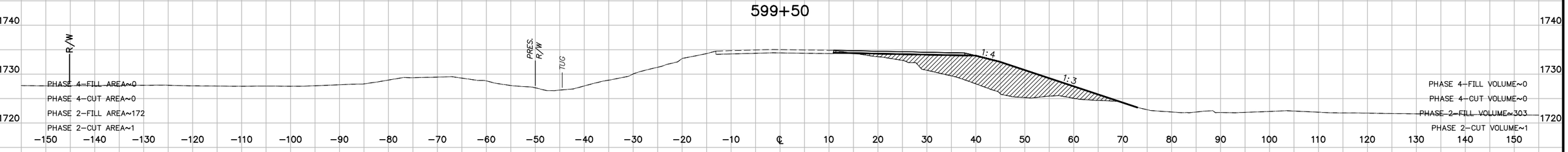
600+50



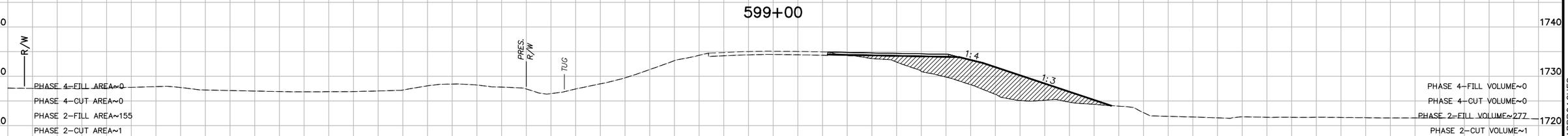
600+00



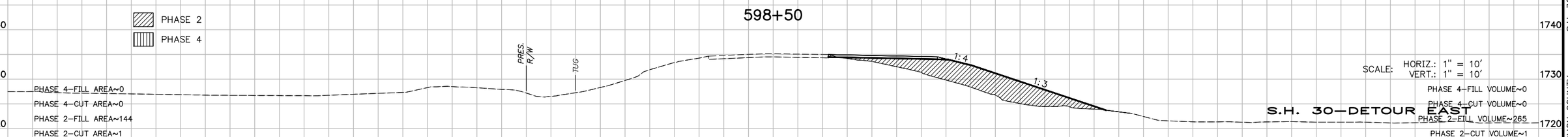
599+50



599+00



598+50



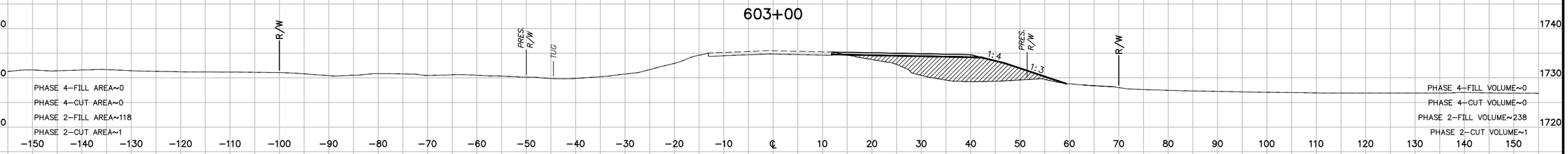
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

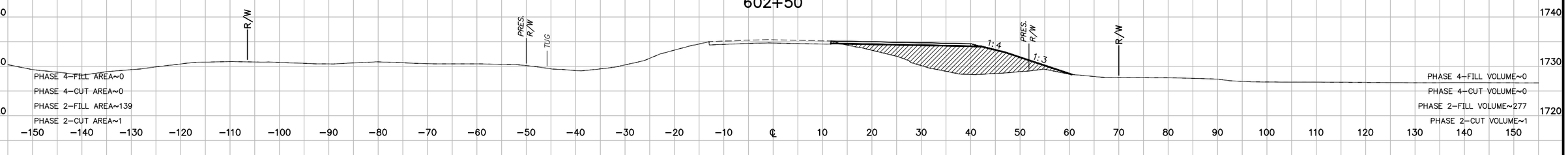
S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X49

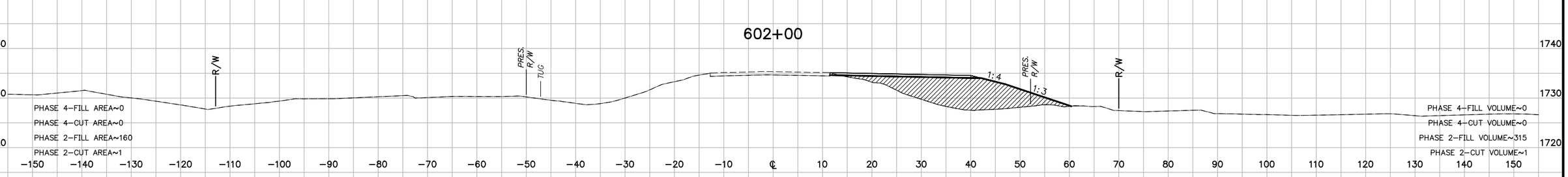
603+00



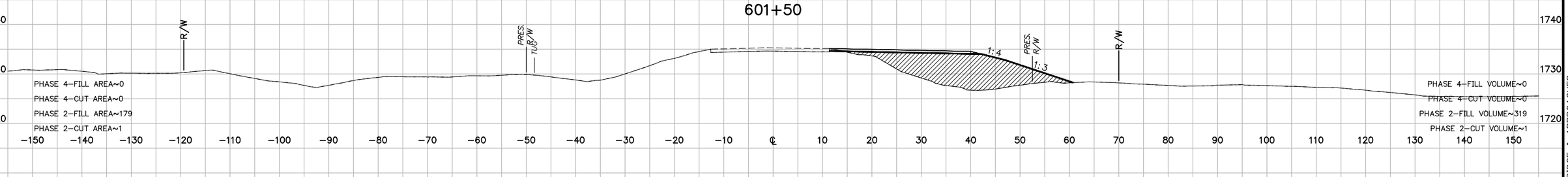
602+50



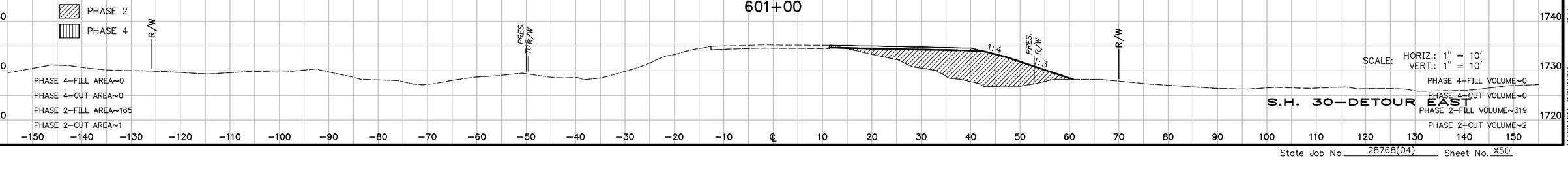
602+00



601+50



601+00



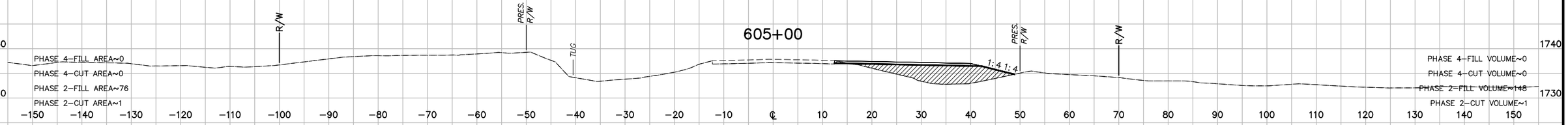
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

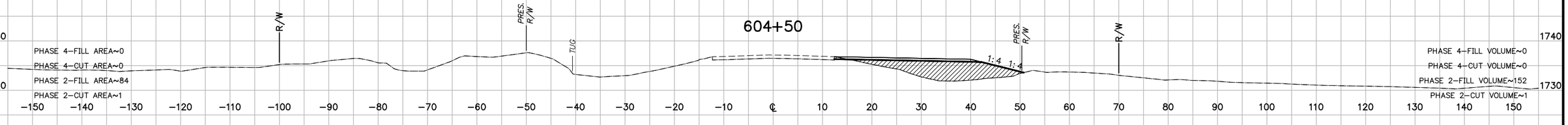
S.H. 30—DETOUR EAST

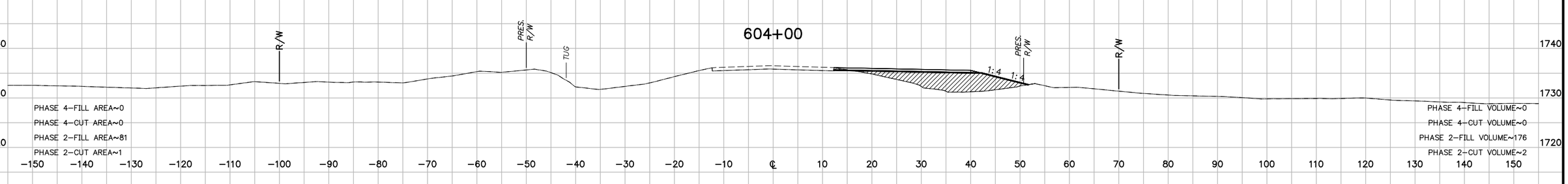
S.H. 30 BRIDGE & APPROACHES

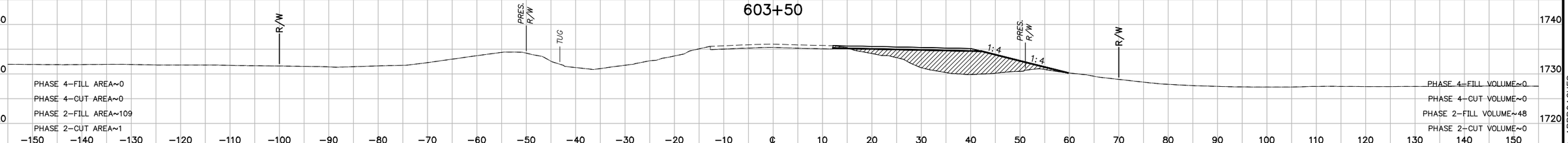
HARMON COUNTY

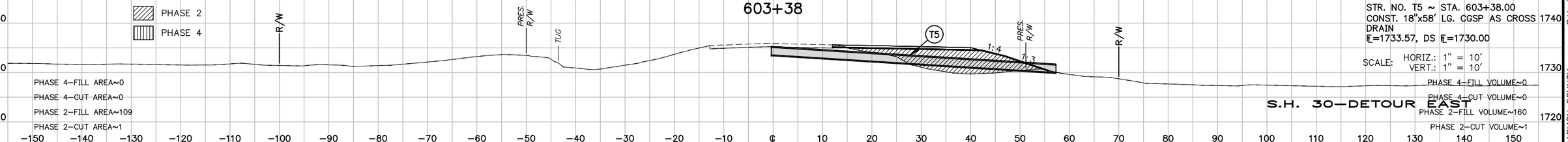
State Job No. 28768(04) Sheet No. X50











STR. NO. T5 ~ STA. 603+38.00
CONST. 18"x58' LG. CGSP AS CROSS DRAIN
℄=1733.57, DS ℄=1730.00

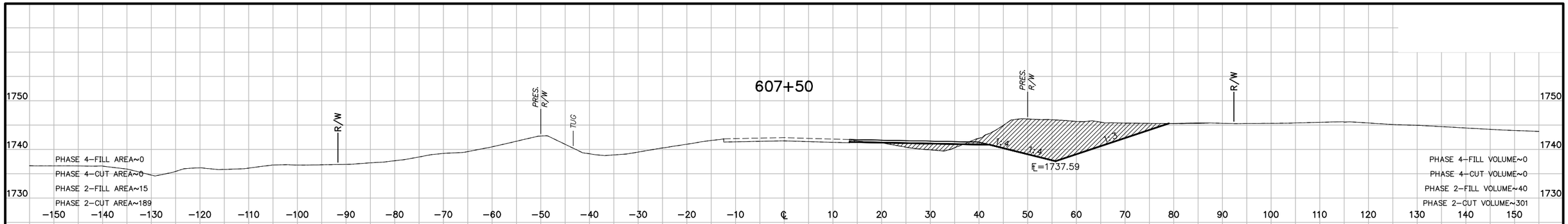
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

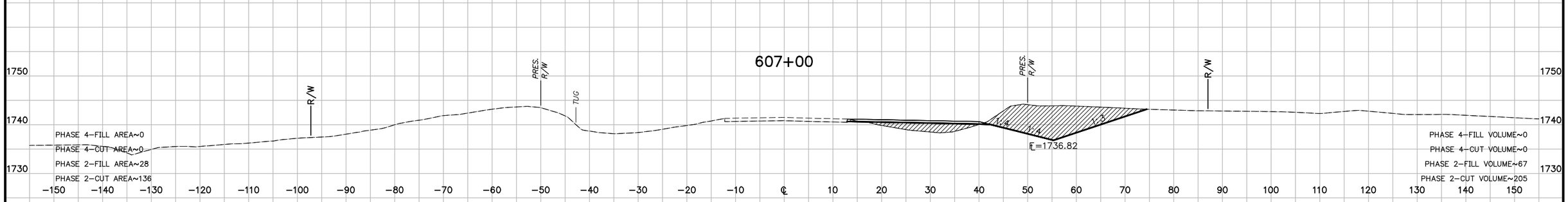
S.H. 30—DETOUR EAST

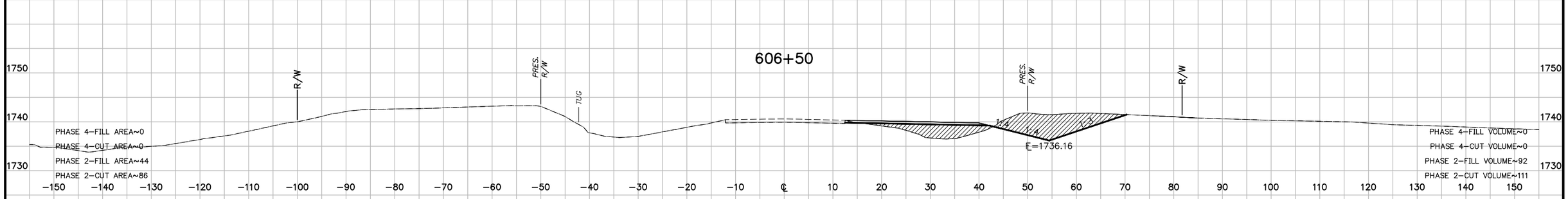
S.H. 30 BRIDGE & APPROACHES

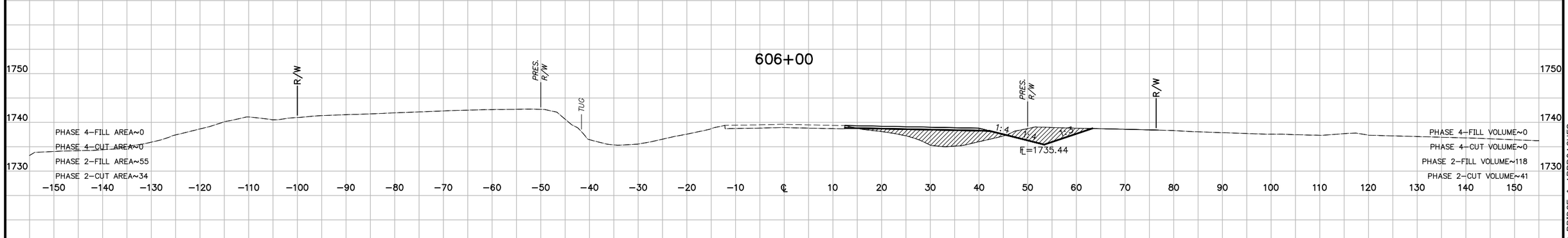
HARMON COUNTY

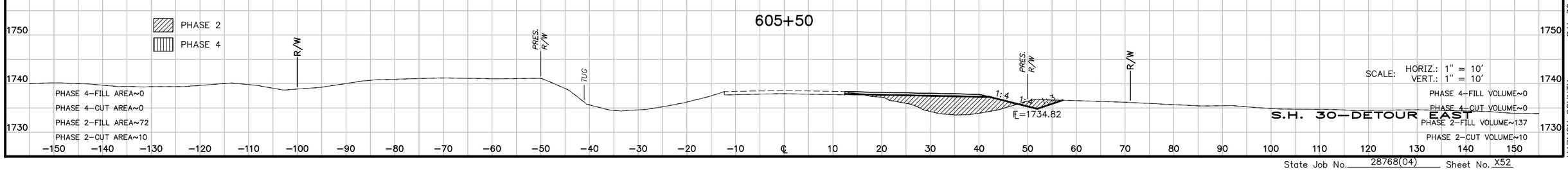
State Job No. 28768(04) Sheet No. X51





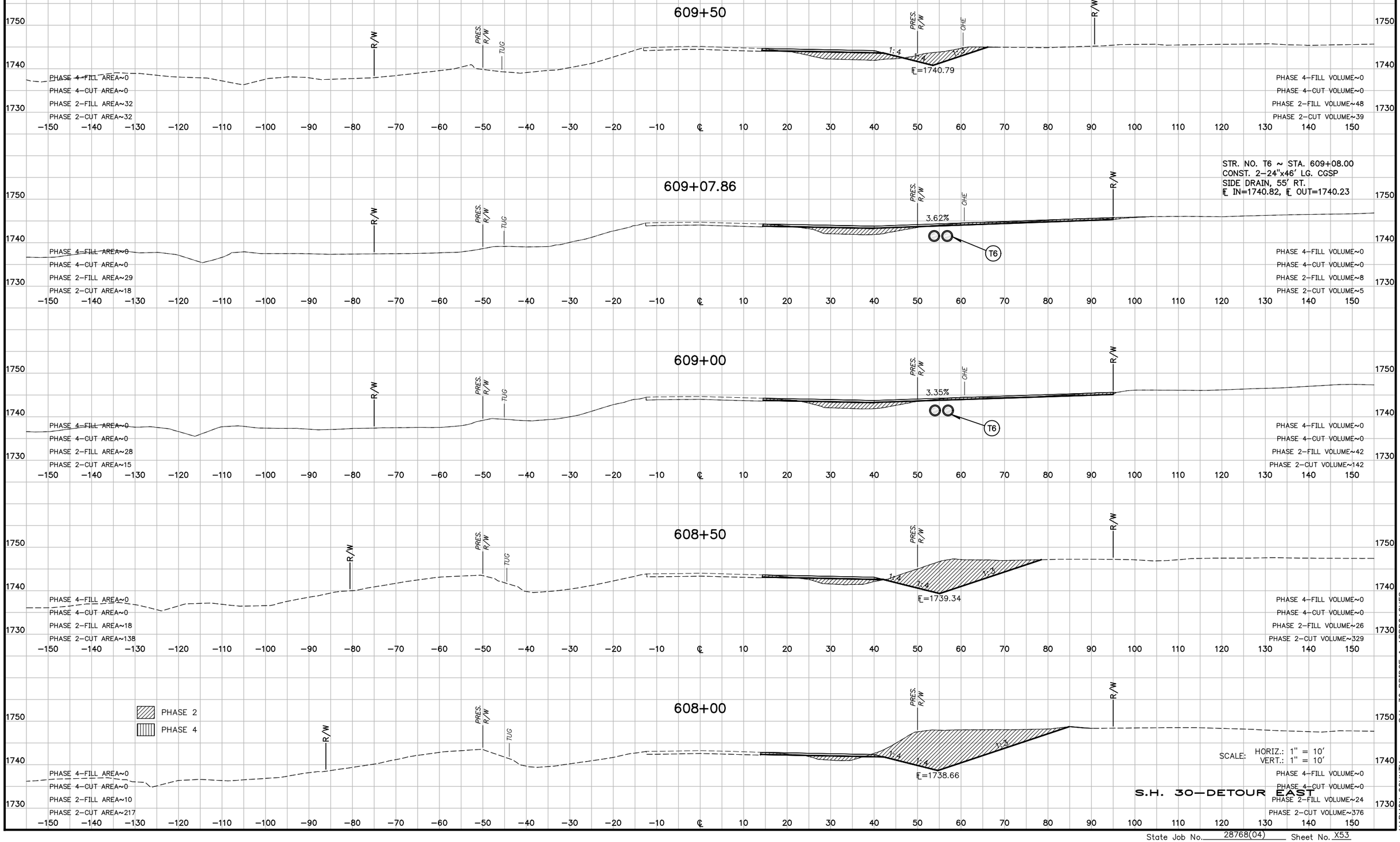






S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

State Job No. 28768(04) Sheet No. X52



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

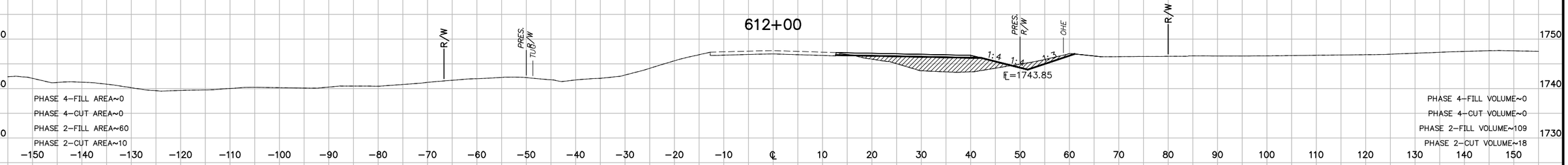
S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

State Job No. 28768(04) Sheet No. X53

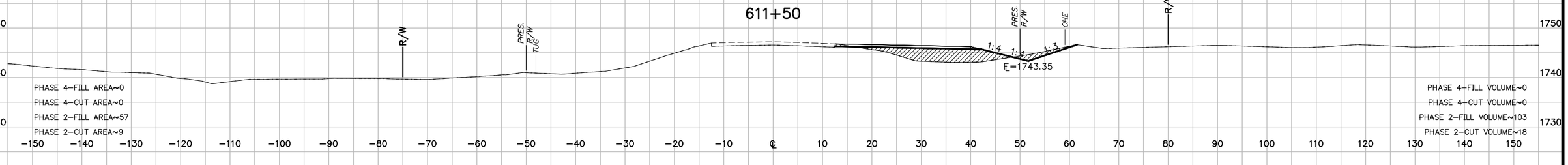
612+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~60
PHASE 2–CUT AREA~10

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~109
PHASE 2–CUT VOLUME~18

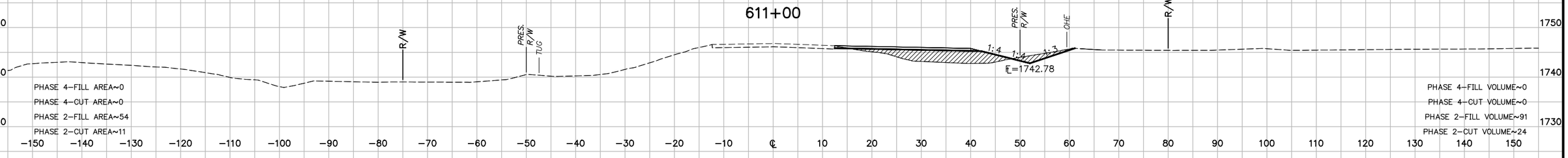
611+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~57
PHASE 2–CUT AREA~9

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~103
PHASE 2–CUT VOLUME~18

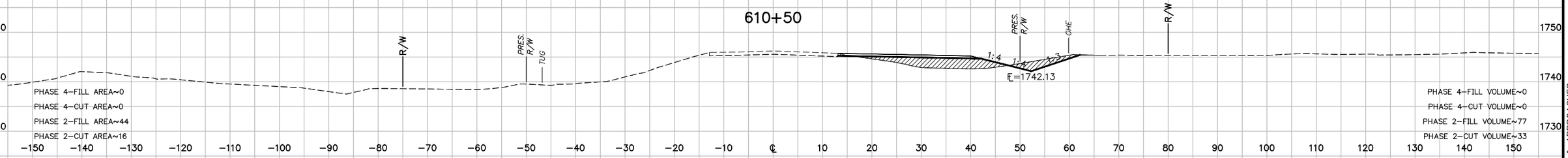
611+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~54
PHASE 2–CUT AREA~11

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~91
PHASE 2–CUT VOLUME~24

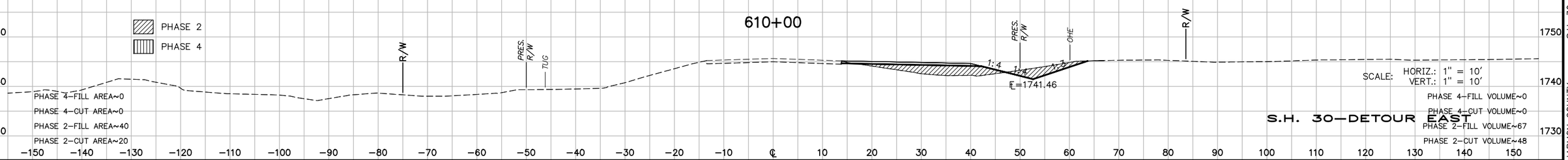
610+50



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~44
PHASE 2–CUT AREA~16

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~77
PHASE 2–CUT VOLUME~33

610+00



PHASE 4–FILL AREA~0
PHASE 4–CUT AREA~0
PHASE 2–FILL AREA~40
PHASE 2–CUT AREA~20

PHASE 4–FILL VOLUME~0
PHASE 4–CUT VOLUME~0
PHASE 2–FILL VOLUME~67
PHASE 2–CUT VOLUME~48

PHASE 2
PHASE 4

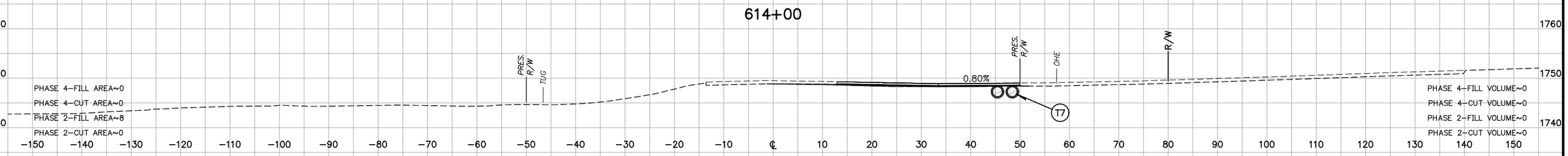
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

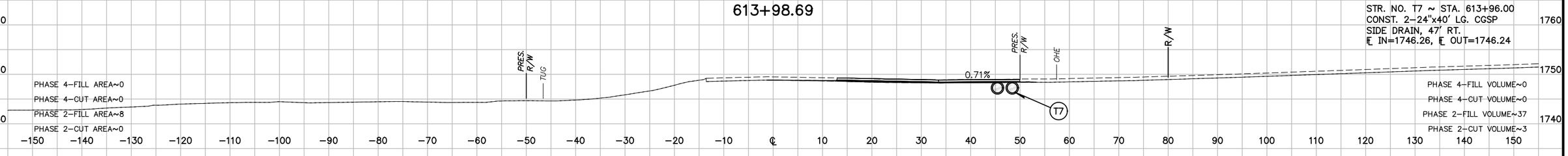
State Job No. 28768(04) Sheet No. X54

614+00

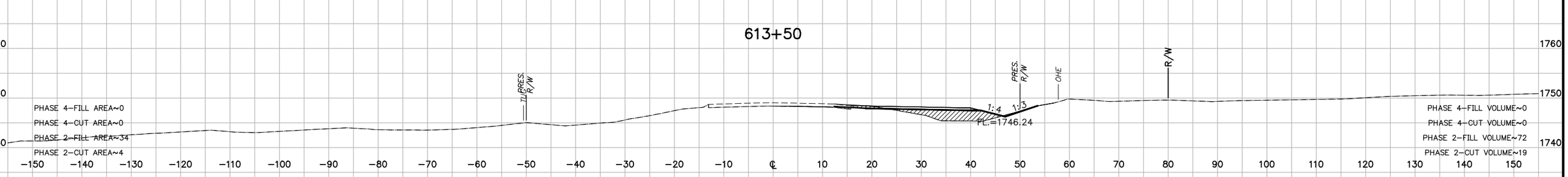


613+98.69

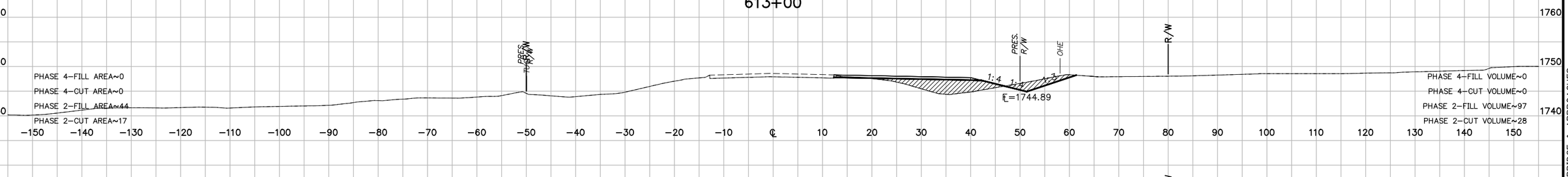
STR. NO. T7 ~ STA. 613+96.00
CONST. 2–24"x40' LG. CGSP
SIDE DRAIN, 47' RT.
℄ IN=1746.26, ℄ OUT=1746.24



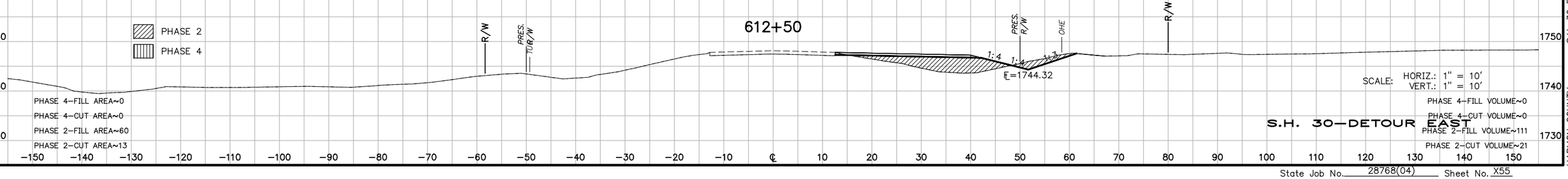
613+50



613+00



612+50



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

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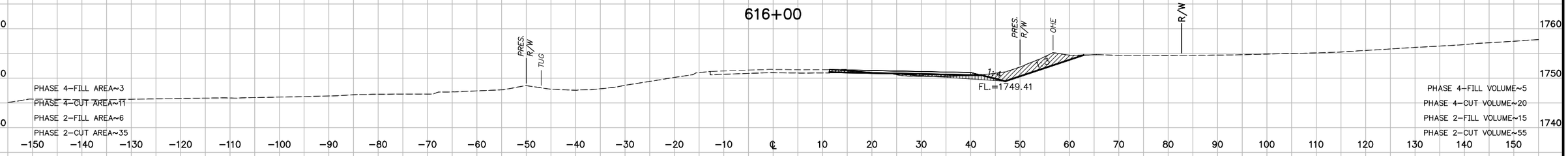
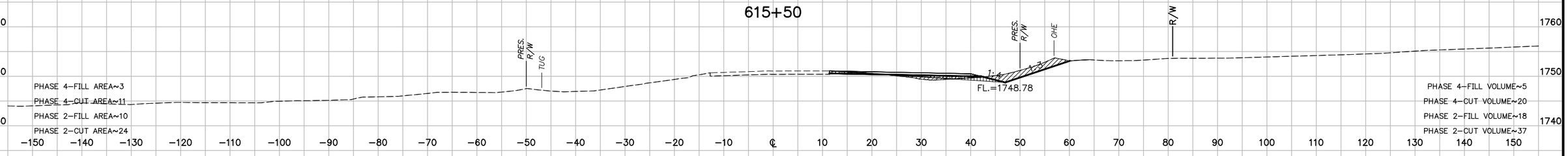
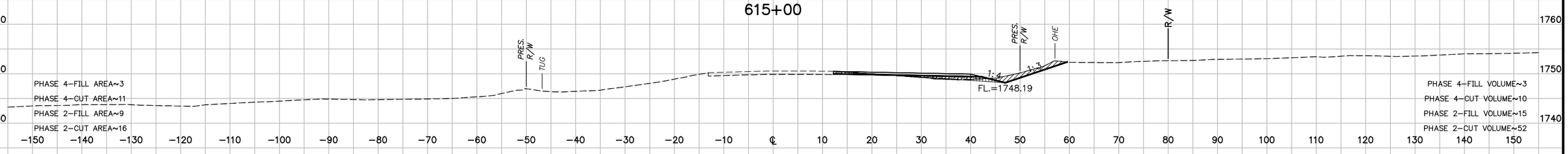
616+00



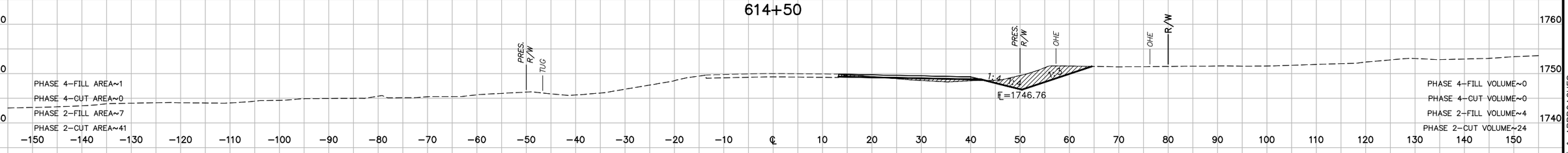
615+50



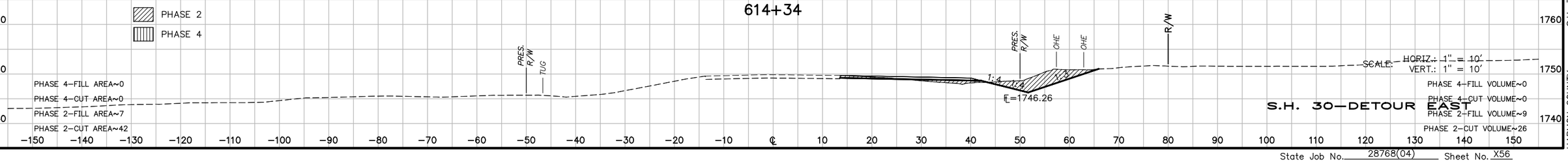
615+00



614+50



614+34



S.H. 30—DETOUR EAST

S.H. 30 BRIDGE & APPROACHES

HARMON COUNTY

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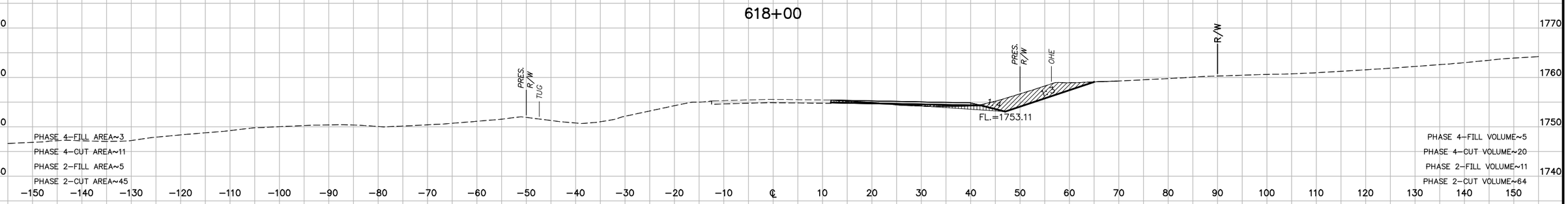
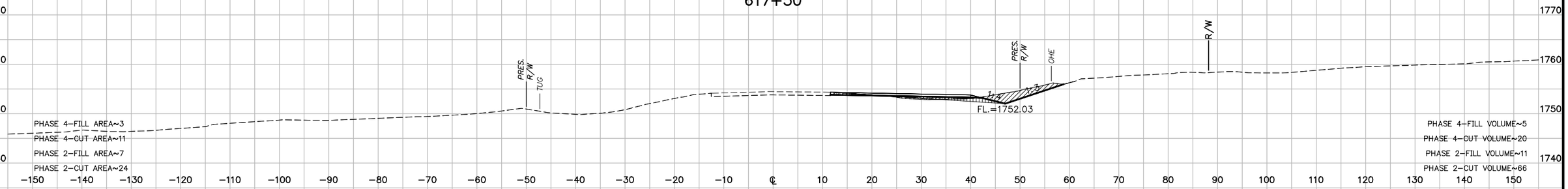
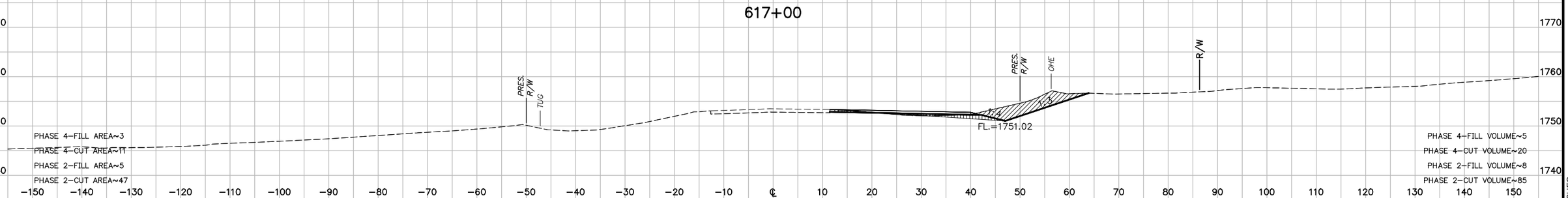
618+00



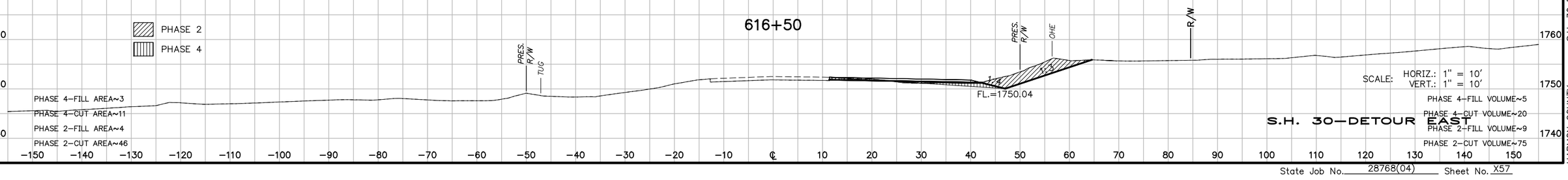
617+50



617+00



616+50



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

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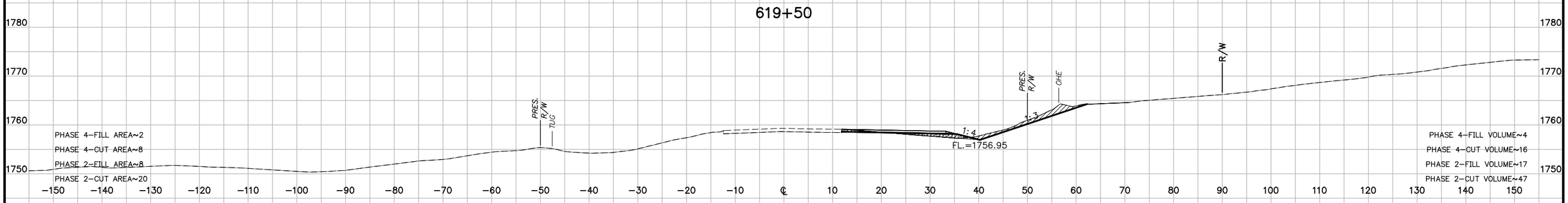
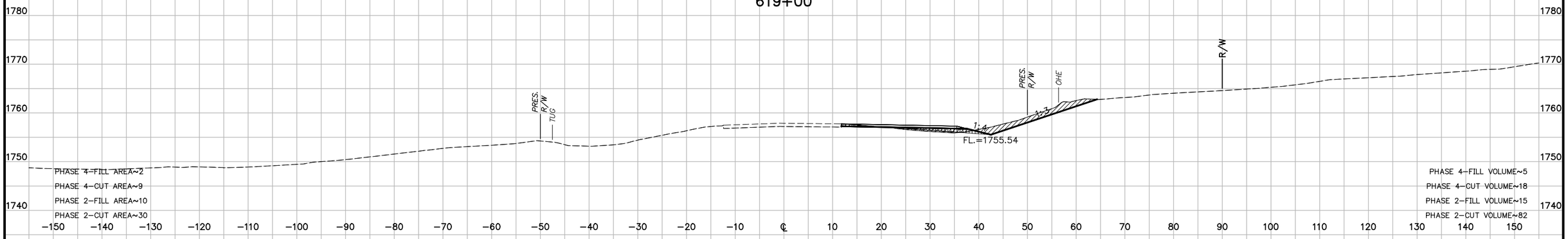
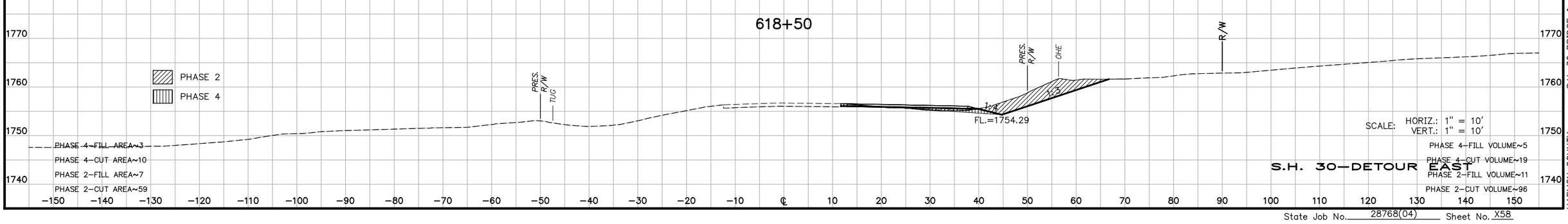
619+50



619+00



618+50



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HARMON COUNTY

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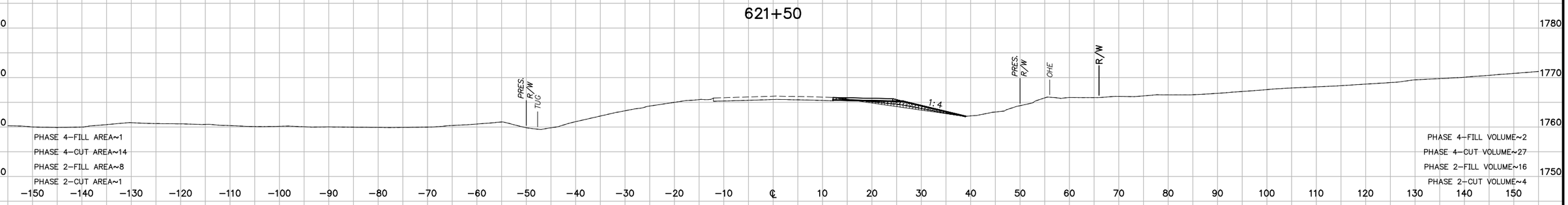
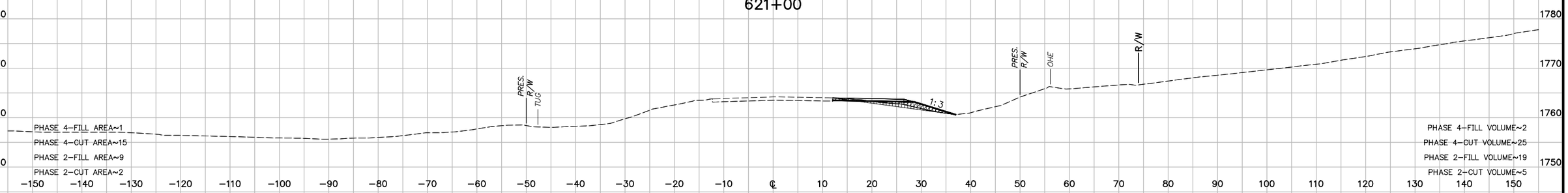
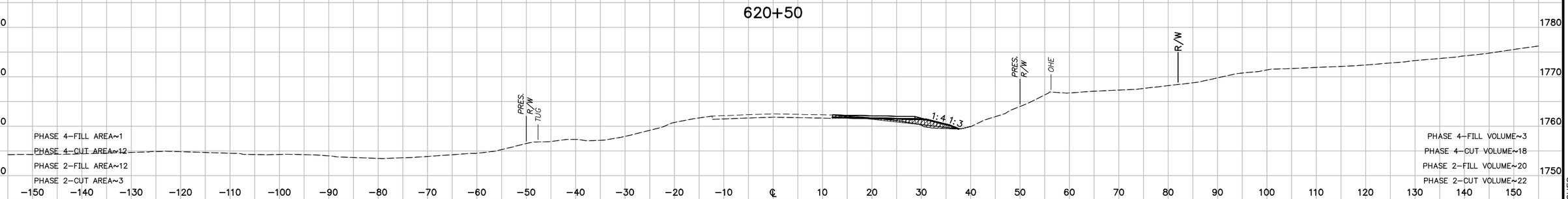
621+50



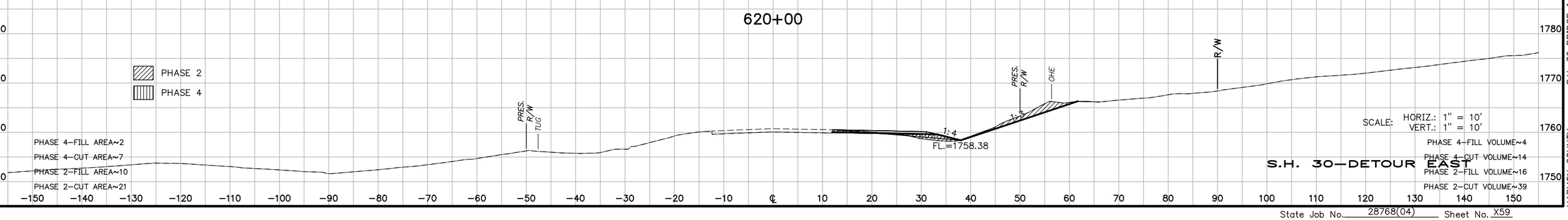
621+00



620+50



620+00



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

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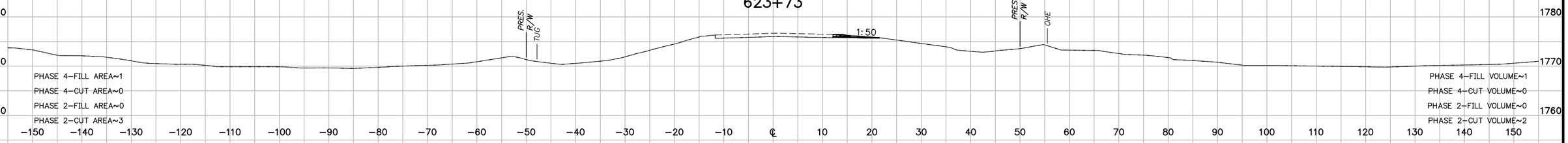
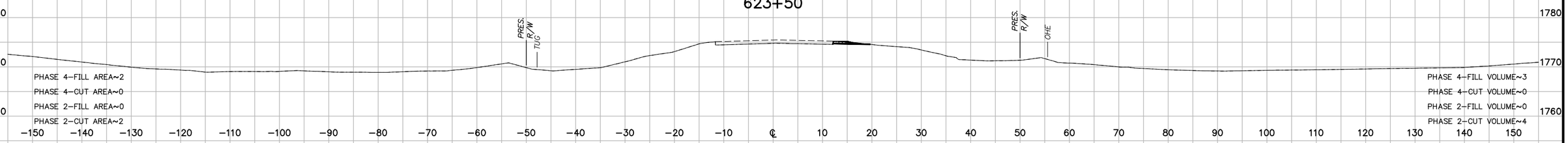
STA. 623+73 – END INCIDENTAL CONSTRUCTION

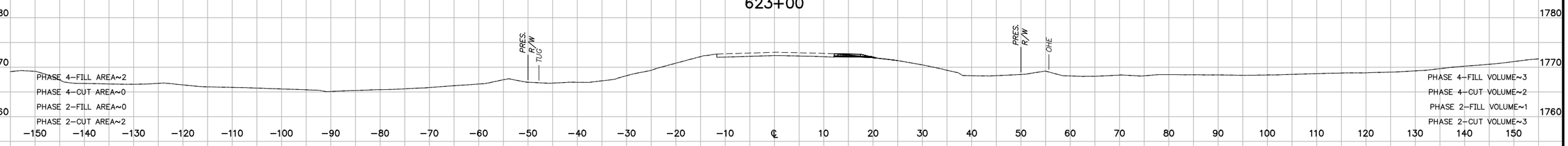
623+73



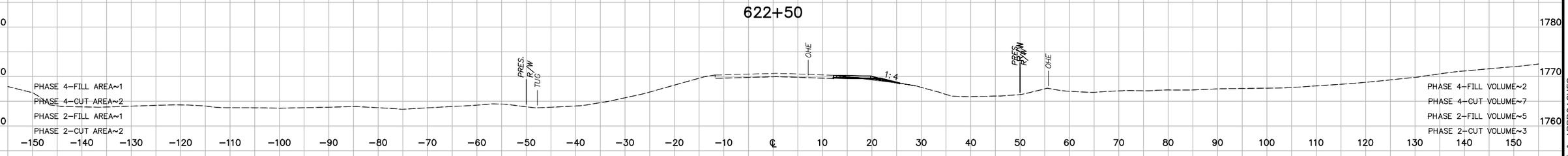
623+50



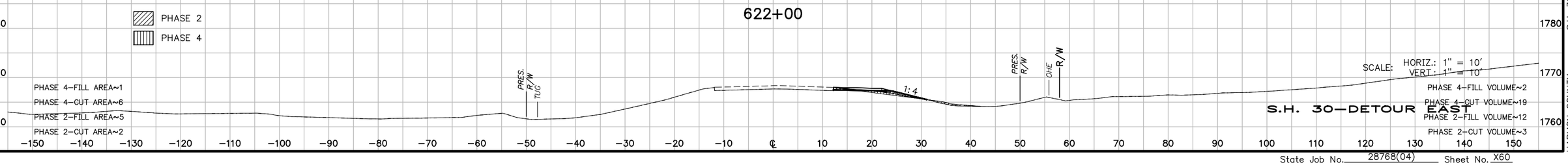
623+00



622+50



622+00



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30–DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

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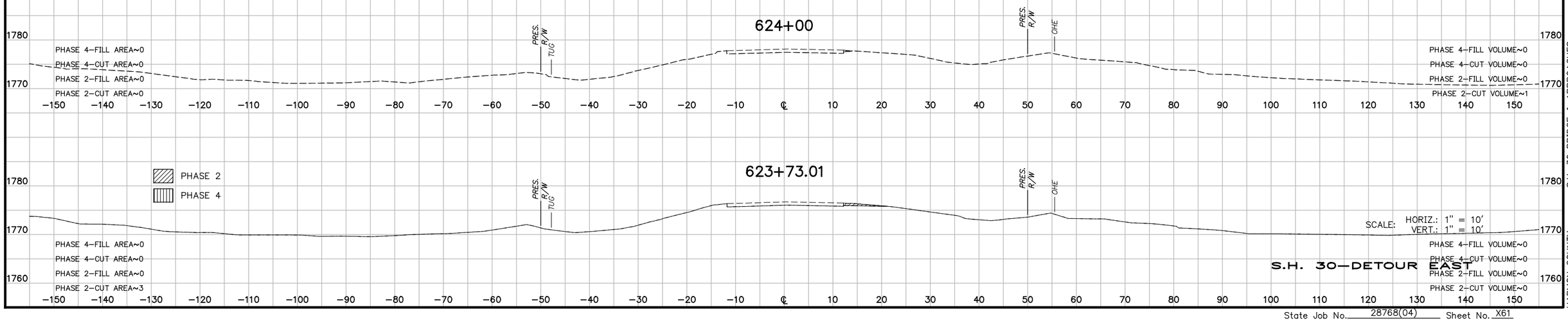

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

S.H. 30—DETOUR EAST

S.H. 30 BRIDGE & APPROACHES
HARMON COUNTY

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