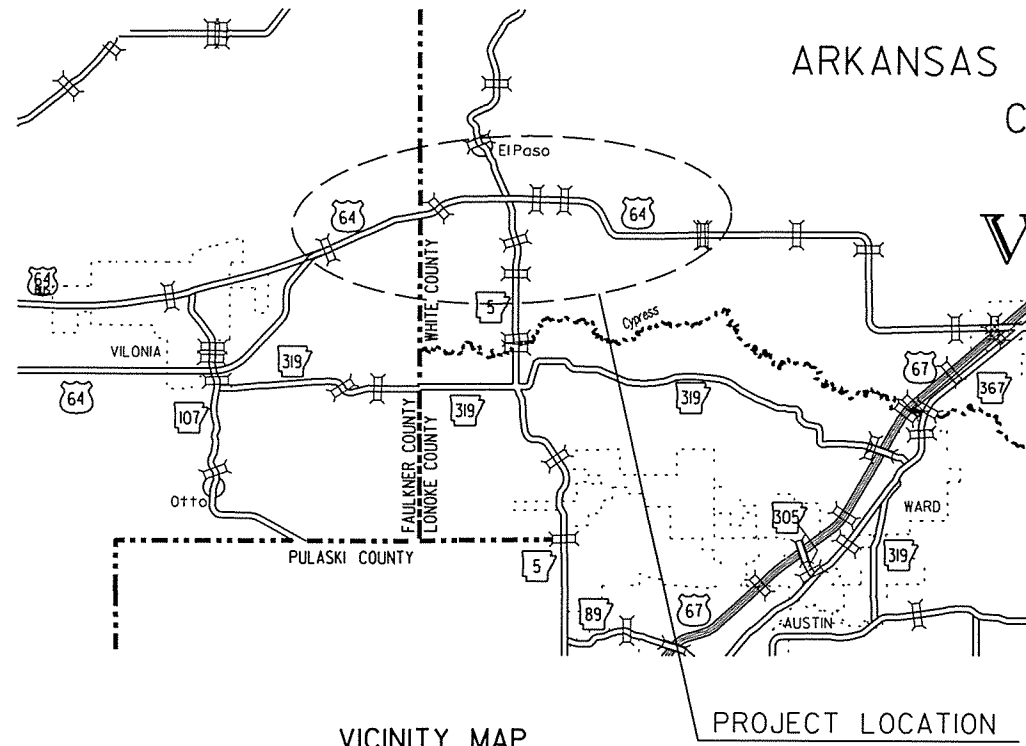


ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-12-15				6	ARK.			
				JOB NO.		012155	1	311
				② VILONIA BYPASS-EAST (F)				



VICINITY MAP

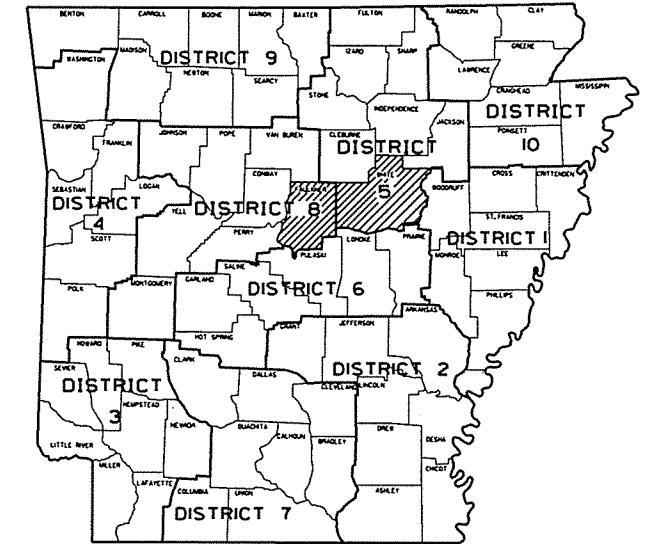
VILONIA BYPASS-EAST (F)

FAULKNER AND WHITE COUNTIES

ROUTE 64 SECTIONS 9 & 10

FED. AID PROJECT NHPP-2373(2)

JOB 012155



ARK. HWY. DIST. NOS. 5 & 8

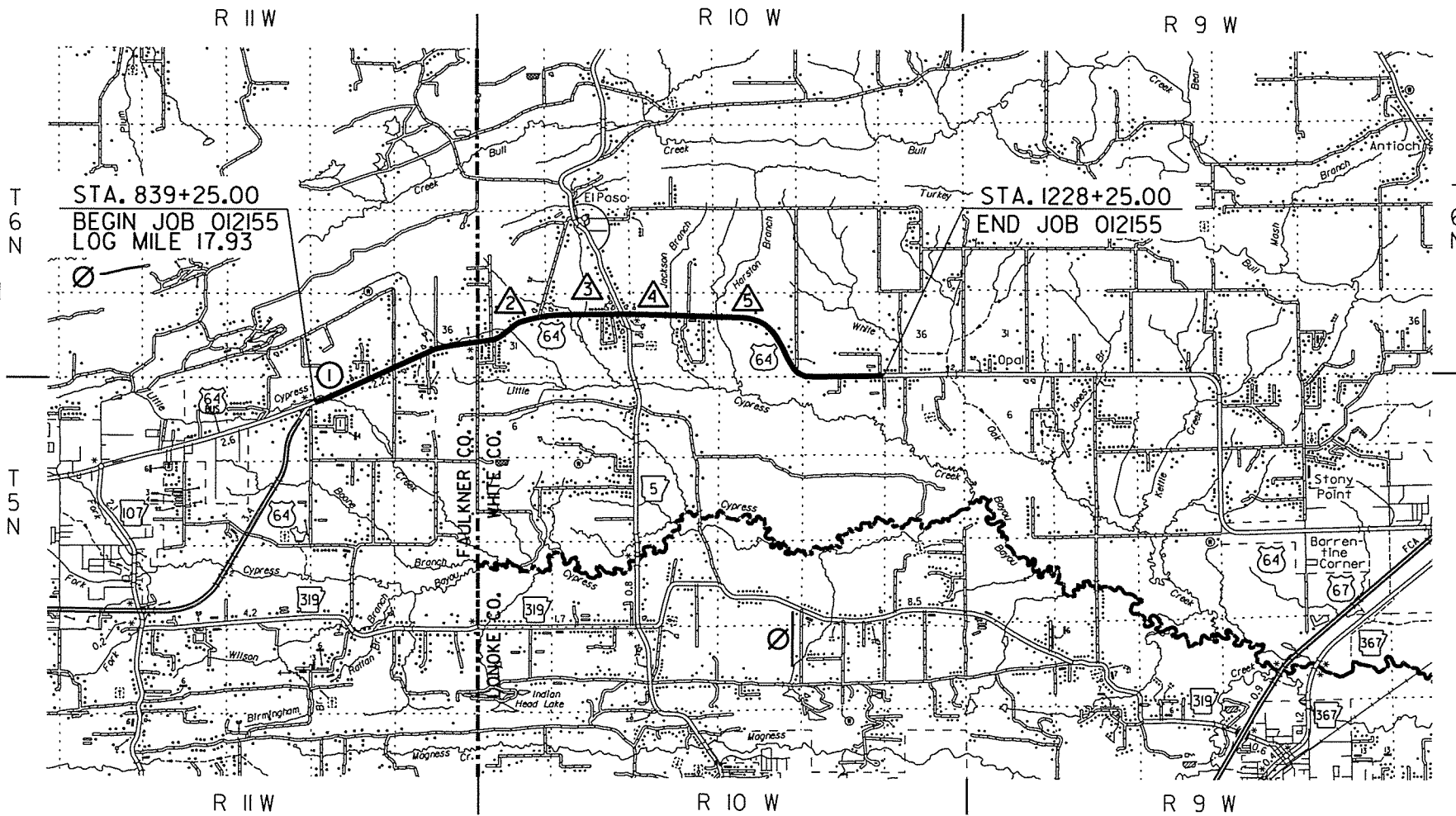
NOT TO SCALE

BRIDGE DATA

- ① BR. END. STA. 847+79.73
BRIDGE NO. 06387
75'-0" CLEAR ROADWAY
107'-3 1/16" TOTAL LENGTH
105'-2 3/8" CONT. COMP. PLATE
GIRDER (33'-3/4" - 39'-1/8" - 33'-3/4")
BR. END. STA. 848+87.03

STRUCTURES OVER 20'-0" SPAN

- ② STA. 971+51 IN PLACE
DBL. 10'X8'X48' R.C. BOX CULVERT
RETAIN AND EXTEND 36' LT. & 35' RT.
W/3:1 WINGS
SPAN - 22'-2"
- ③ STA. 1022+02 IN PLACE
DBL. 8'X5'X98' R.C. BOX CULVERT
& 8'X4'X98' R.C. BOX CULVERT
RETAIN AND EXTEND 7' LT. & 18' RT.
W/3:1 WINGS
SPAN - 26'-5"
- ④ STA. 1076+55 IN PLACE
DBL. 12'X6'X46' R.C. BOX CULVERT
RETAIN AND EXTEND 38' LT. & 38' RT.
W/3:1 WINGS
SPAN - 26'-2"
- ⑤ STA. 1105+86 IN PLACE
DBL. 10'X7'X48' R.C. BOX CULVERT
RETAIN AND EXTEND 37' LT. & 36' RT.
W/3:1 WINGS & CONSTRUCT
SPAN - 22'-1"



DESIGN TRAFFIC DATA

DESIGN YEAR	2035
2015 ADT	7,300
2035 ADT	10,000
2035 DHV	1100
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	17%
DESIGN SPEED (RURAL)	60 MPH
DESIGN SPEED (URBAN)	45 MPH



APPROVED



11-13-15

DEPUTY DIRECTOR
AND CHIEF ENGINEER

BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE 35° 5' 48" N	LATITUDE 35° 6' 34" N	LATITUDE 35° 5' 52" N
LONGITUDE 92° 8' 59" W	LONGITUDE 92° 5' 23" W	LONGITUDE 92° 1' 59" W

GROSS LENGTH OF PROJECT	38900.00	FEET OR	7.367	MILES
NET ROADWAY	38695.86		7.329	
NET BRIDGES	204.14		0.038	
NET PROJECT	38900.00		7.367	

P.E. 012154

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150	DETAILS OF CONTINUOUS W-BEAM UNIT (SHEET 2 OF 5)	06387		55618
151	DETAILS OF CONTINUOUS W-BEAM UNIT (SHEET 3 OF 5)	06387		55619
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205	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS			SD-4
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208	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS			9-02-15
209 - 311	CROSS SECTIONS			SD-6

NOTE: CROSS SECTIONS NOT NORMALLY INCLUDED IN PLANS SOLD TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

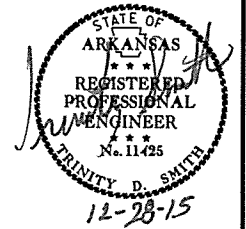
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12-2-15								
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2 GOVERNING SPECS. AND GENERAL NOTES



GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

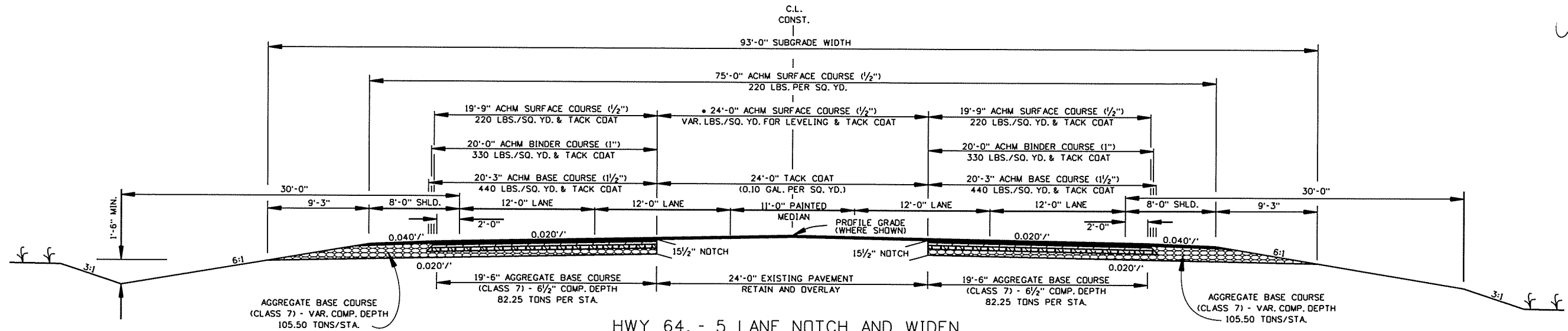
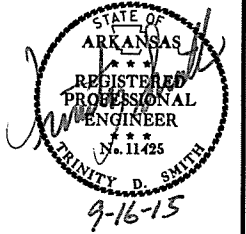
NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - TRAINING PROGRAM - JOB 012155
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
108-1	LIQUIDATED DAMAGES
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 012155	AIRPORT CLEARANCE REQUIREMENTS
JOB 012155	BIDDING REQUIREMENTS AND CONDITIONS
JOB 012155	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 012155	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 012155	CABINET DRAWER ASSEMBLY
JOB 012155	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 012155	COORDINATION OF WORK
JOB 012155	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 012155	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 012155	EDGE CARD VIDEO PROCESSOR
JOB 012155	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 012155	ELECTRICAL CONDUCTORS -IN-CONDUIT
JOB 012155	EXTENSION FOR PIPE CULVERTS
JOB 012155	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 012155	HIGH PERFORMANCE PAVEMENT MARKING
JOB 012155	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 012155	LED TRAFFIC SIGNAL HEAD
JOB 012155	LOOP WIRING REVISION 1.4
JOB 012155	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 012155	MANDATORY ELECTRONIC CONTRACT
JOB 012155	NESTING SITES OF MIGRATORY BIRDS
JOB 012155	PARTNERING REQUIREMENTS
JOB 012155	PLASTIC PIPE
JOB 012155	PROSECUTION AND PROGRESS
JOB 012155	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB 012155	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 012155	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 012155	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 012155	SHORING FOR CULVERTS
JOB 012155	SITE USE (A+C METHOD)
JOB 012155	SOIL STABILIZATION
JOB 012155	STORM WATER POLLUTION PREVENTION PLAN
JOB 012155	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 012155	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES LEFT IN PLACE
JOB 012155	UTILITY ADJUSTMENTS
JOB 012155	VALUE ENGINEERING
JOB 012155	VIDEO DETECTOR (COLOR)
JOB 012155	WARM MIX ASPHALT
JOB 012155	WATER GATES

GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY 64. - 5 LANE NOTCH AND WIDEN

• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 STA. 839+25.00 TO STA. 843+08.14
 STA. 853+90.79 TO STA. 918+18.52
 STA. 931+07.62 TO STA. 954+81.93
 STA. 1008+96.66 TO STA. 1118+48.02
 STA. 1155+19.09 TO STA. 1162+33.57
 STA. 1187+85.00 TO STA. 1228+25.00

NOTES:
 REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

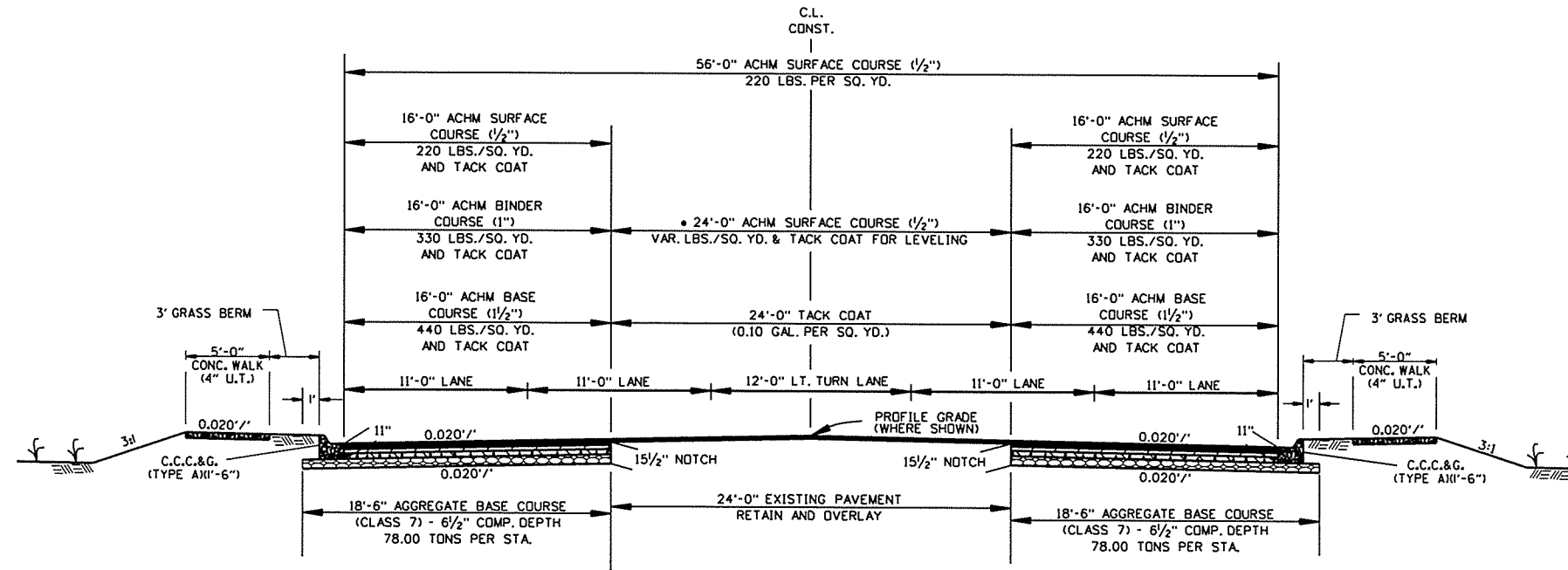
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

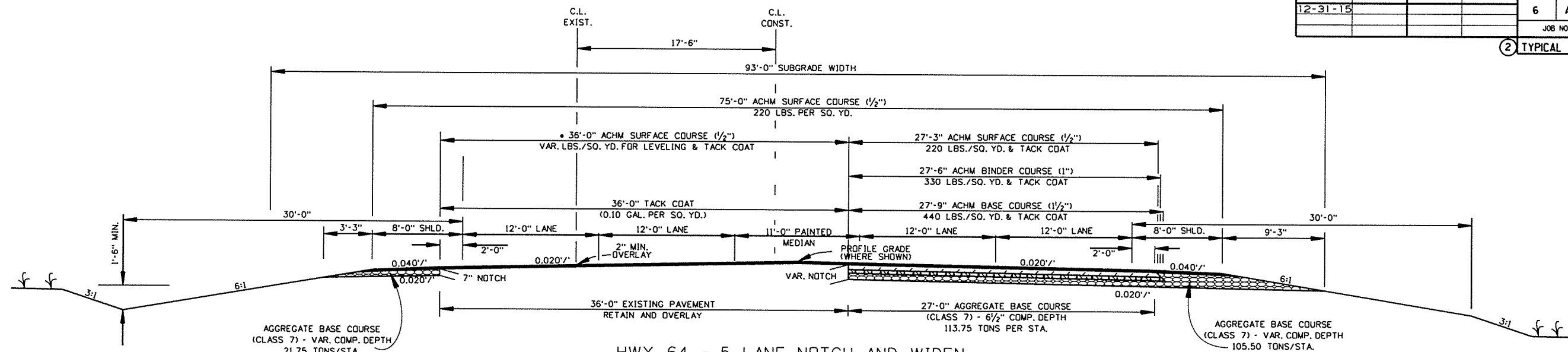
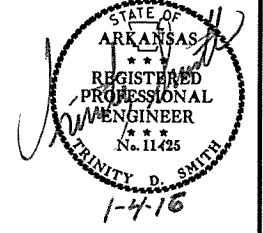


HWY. 64 - CURB & GUTTER

• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 STA. 1038+59.00 TO 1044+91.54
 STA. 1048+70.13 TO 1053+65.38

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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY 64 - 5 LANE NOTCH AND WIDEN
 • TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 STA. 991+75.00 TO STA. 1037+05.45

NOTES:
 REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

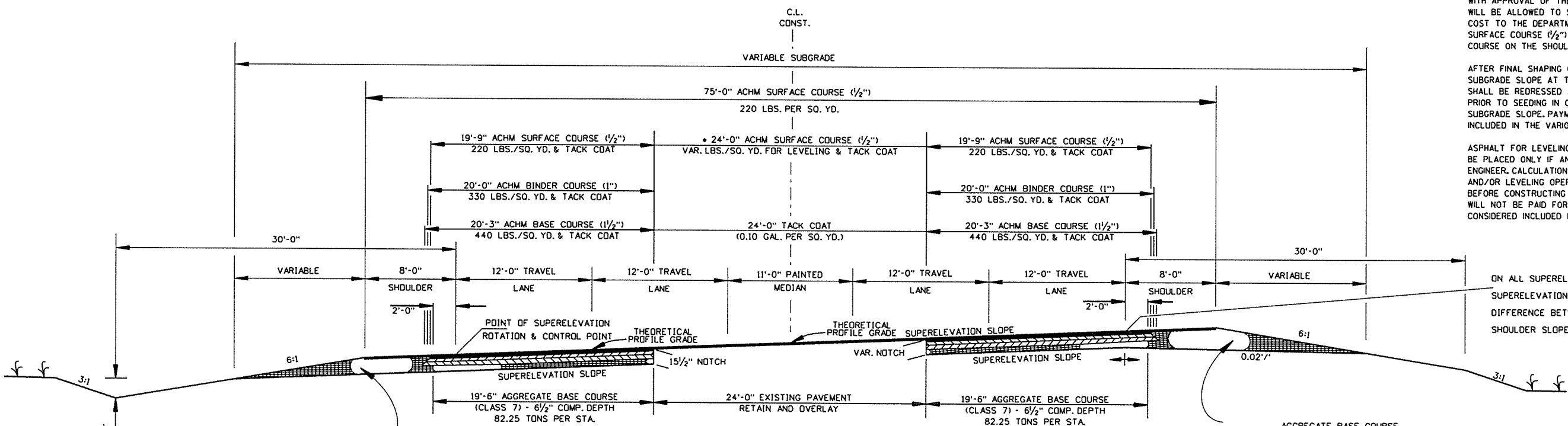
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

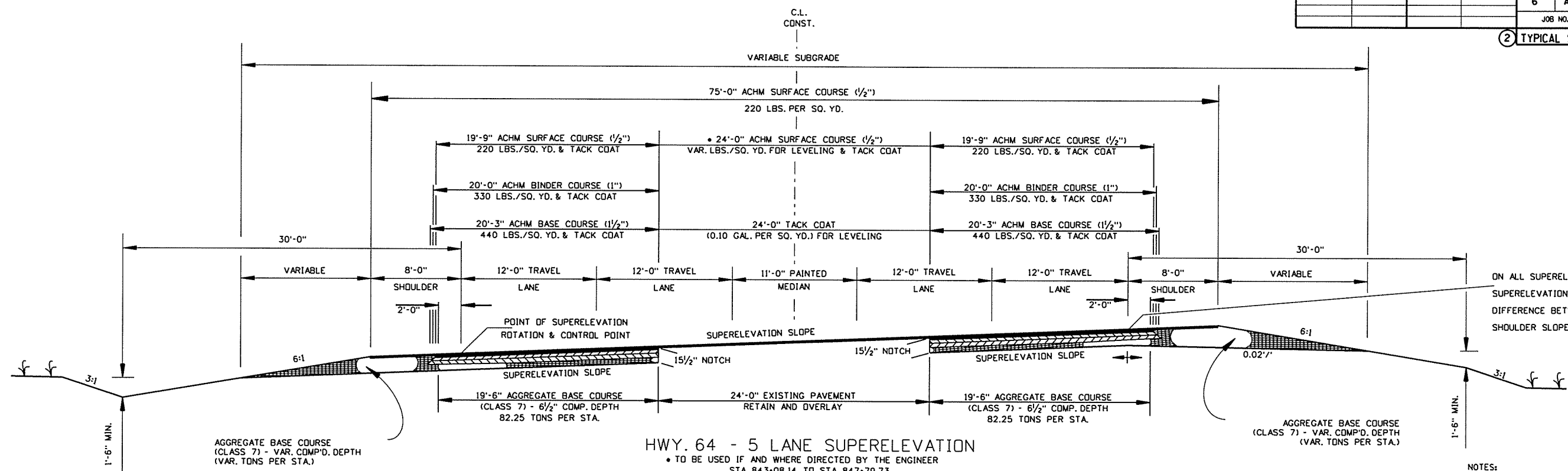
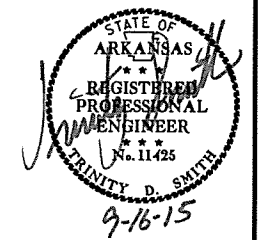


HWY. 64 - 5 LANE SUPERELEVATION
 • TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 STA. 843+08.14 TO STA. 847+79.73
 STA. 848+87.03 TO STA. 853+90.79
 STA. 918+18.52 TO STA. 931+07.62
 STA. 954+81.93 TO STA. 1008+96.66
 STA. 1118+48.02 TO STA. 1155+19.09
 STA. 1162+33.57 TO STA. 1187+85.00

12/31/2015
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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 64 - 5 LANE SUPERELEVATION

• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 STA. 843-08.14 TO STA. 847-79.73
 STA. 848-87.03 TO STA. 853-90.79
 STA. 918-18.52 TO STA. 931-07.62
 STA. 954-81.93 TO STA. 1008-96.66
 STA. 1118-48.02 TO STA. 1155-19.09
 STA. 1162-33.57 TO STA. 1187-85.00

ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS THE ALGABRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.
 6:1
 0.02'/'
 1'-6" MIN.

NOTES:
 REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

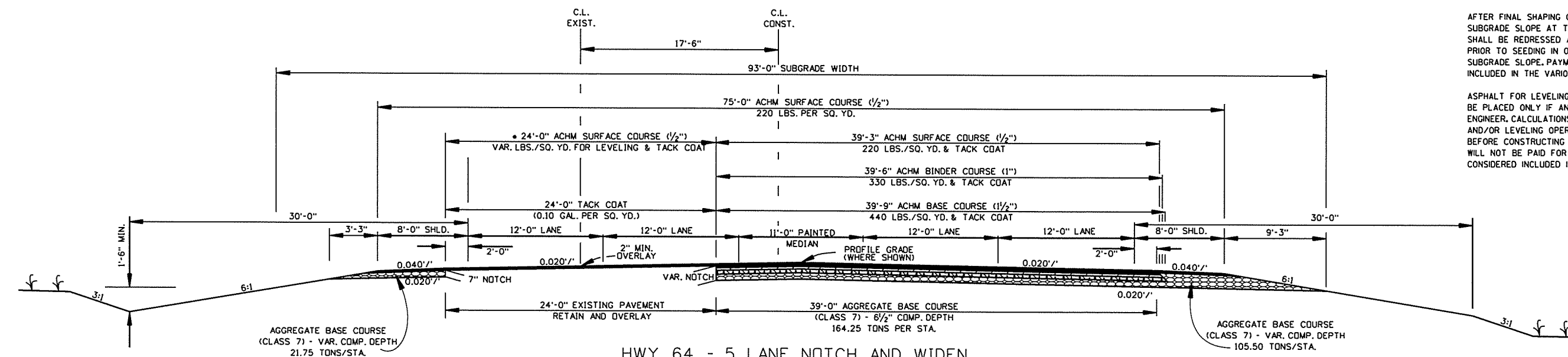
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.



HWY. 64 - 5 LANE NOTCH AND WIDEN

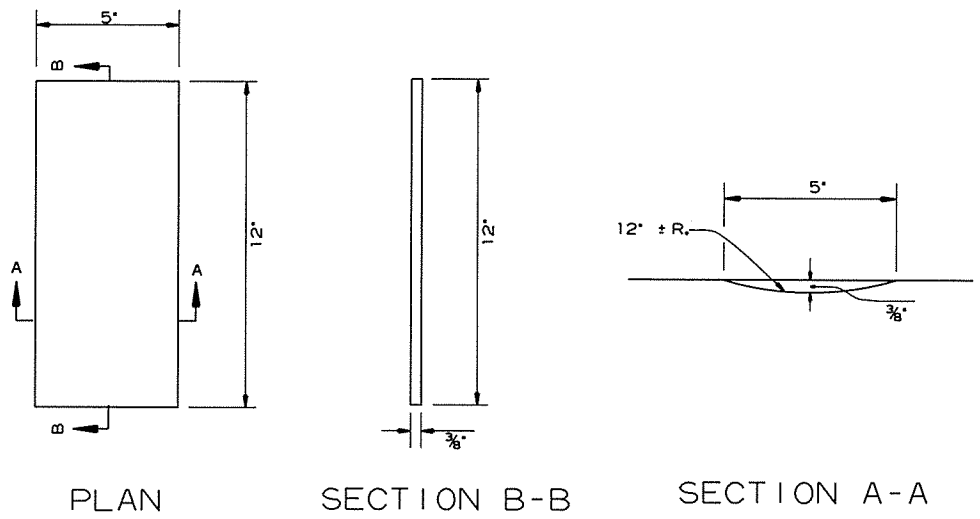
• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
 STA. 873-26.67 TO STA. 941-00.00

AGGREGATE BASE COURSE (CLASS 7) - VAR. COMP'D. DEPTH 21.75 TONS/STA.

AGGREGATE BASE COURSE (CLASS 7) - VAR. COMP'D. DEPTH 105.50 TONS/STA.

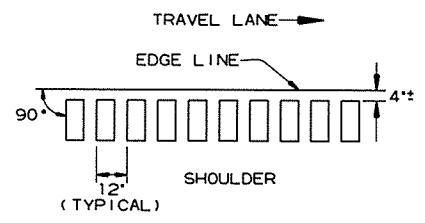
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				6	ARK.			
				JOB NO.	012155		7	311

2 SPECIAL DETAILS

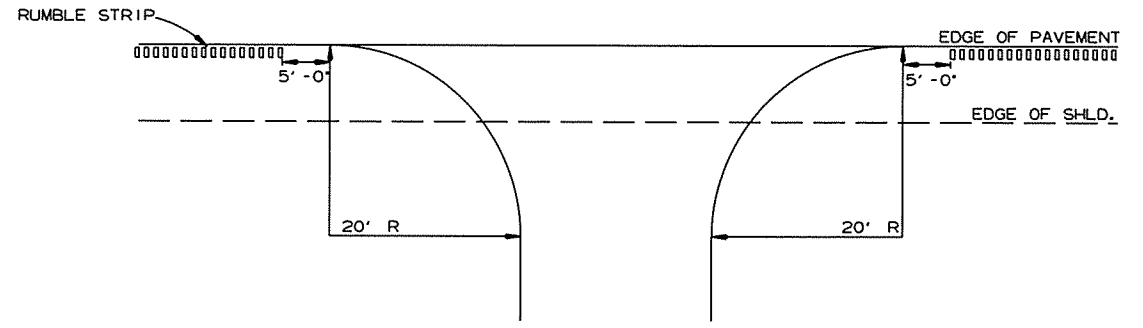


PLAN SECTION B-B SECTION A-A

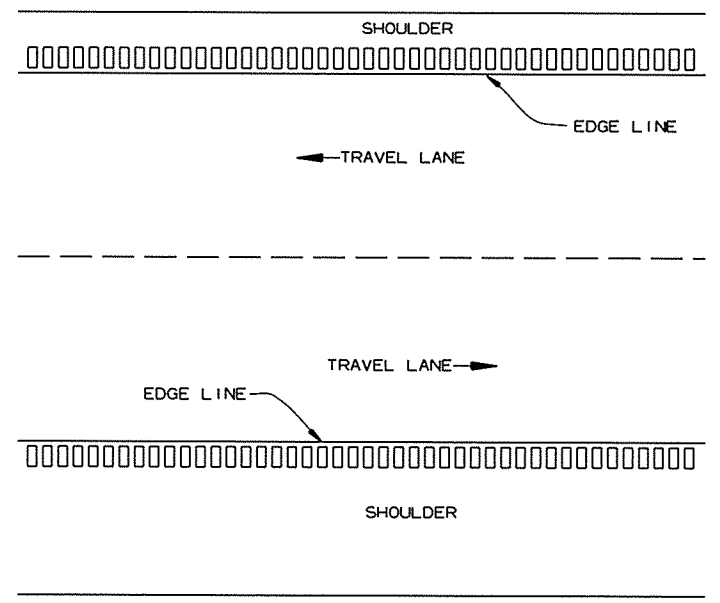
DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS LEFT OR RIGHT SHOULDER



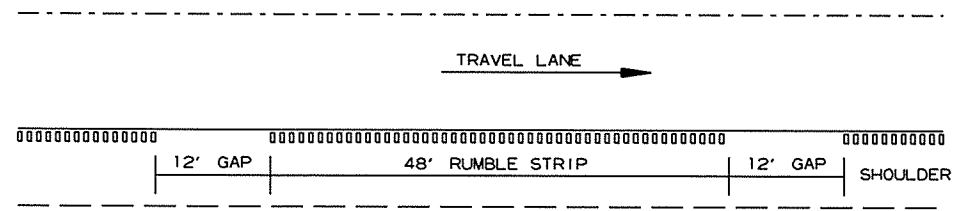
DETAIL FOR RUMBLE STRIP GAP AT DRIVEWAY TURNOUTS



PLAN VIEW

GENERAL NOTES

1. RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. THE 4' OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.
4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.
5. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12' LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



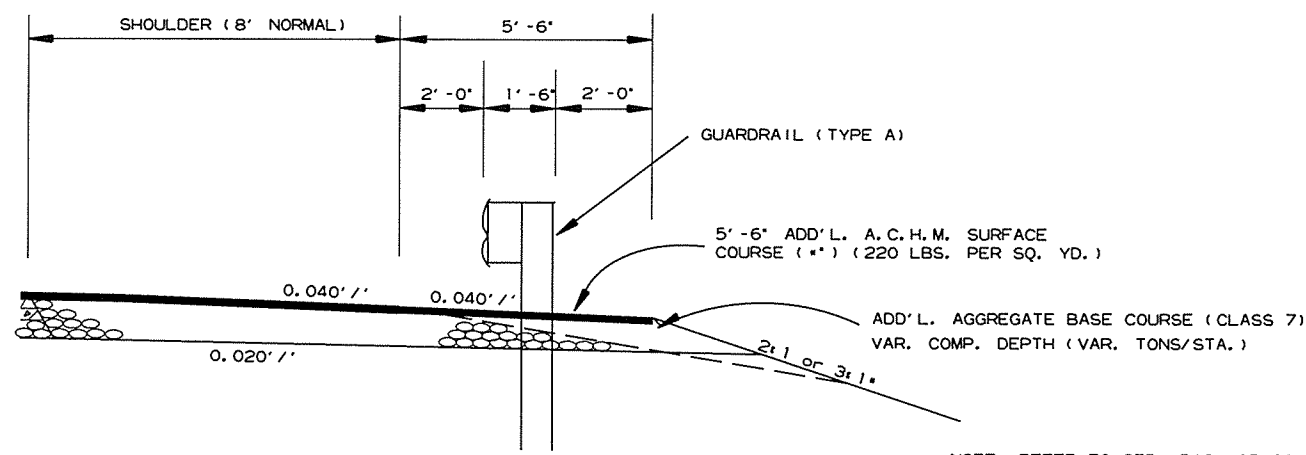
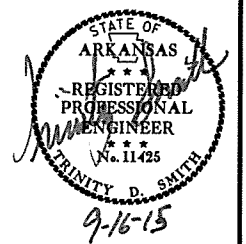
NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

DETAIL FOR GAP PATTERN RUMBLE STRIP

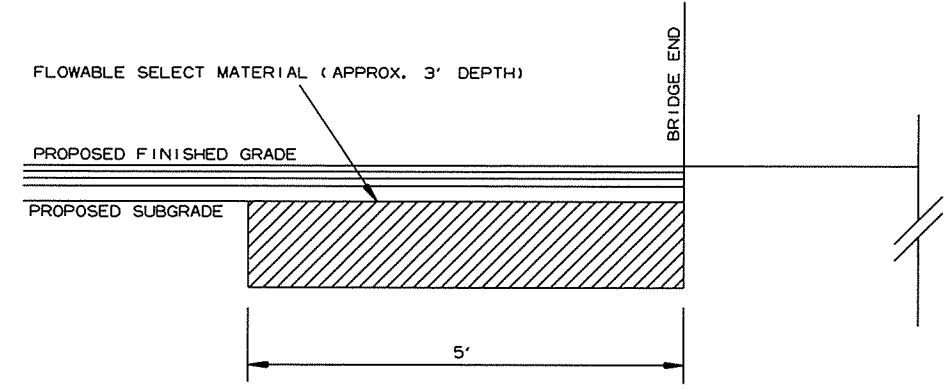
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				JOB NO.	012155		8	311

2 SPECIAL DETAILS

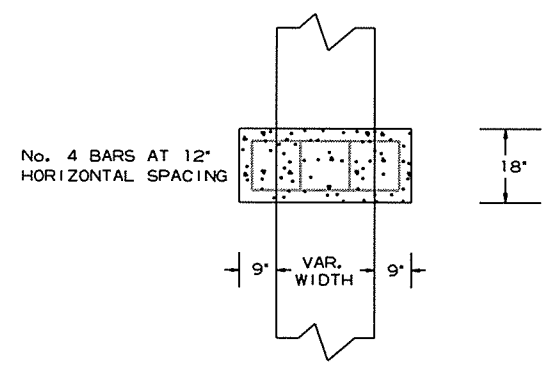


WIDENING FOR GUARDRAIL



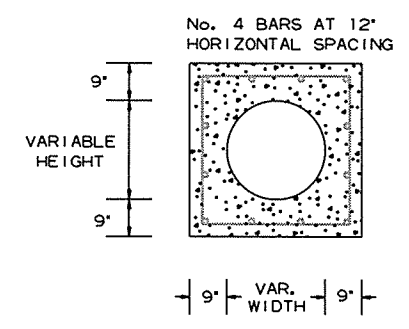
NOTE: EXCAVATION FOR PLACING FLOWABLE SELECT MATERIAL WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT SHALL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS BID ITEMS.

FLOWABLE SELECT MATERIAL AT BRIDGE ENDS



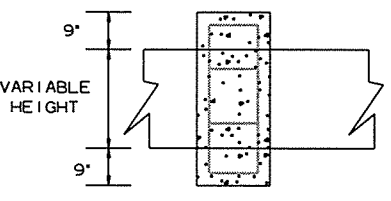
TOP VIEW

MIN 3" COVER



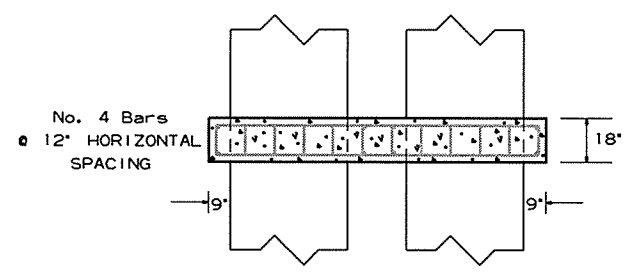
FRONT VIEW

No. 4 BARS AT 12" VERTICAL SPACING



SIDE VIEW

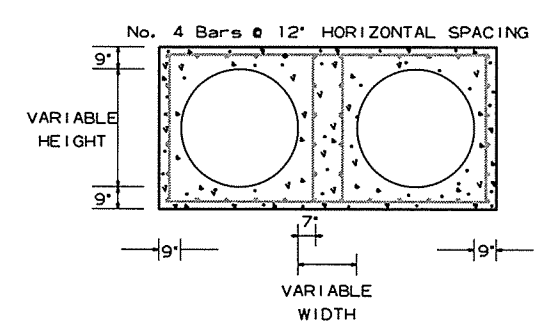
PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL



TOP VIEW

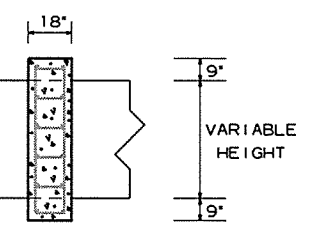
NOTE: PIPE COLLAR TO BE UTILIZED AS APPROVED BY THE ENGINEER.

MIN. 3" COVER



FRONT VIEW

No. 4 BARS @ 12" VERTICAL SPACING

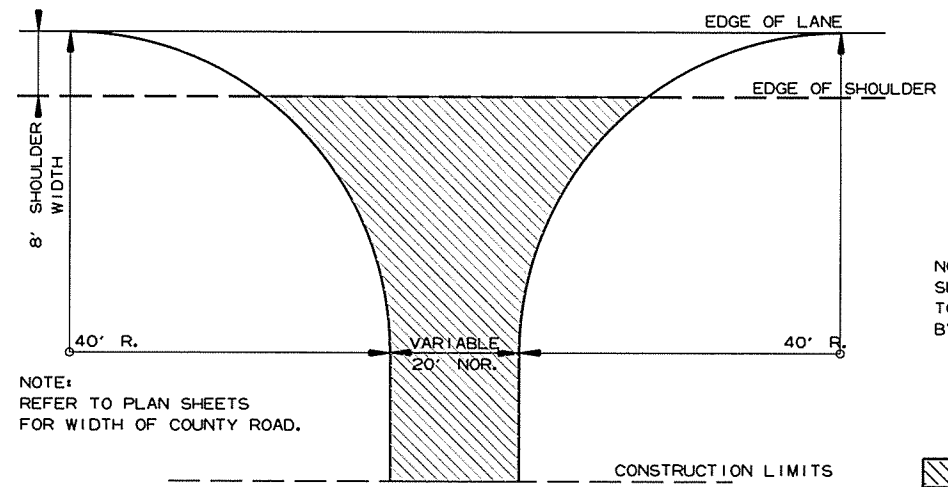
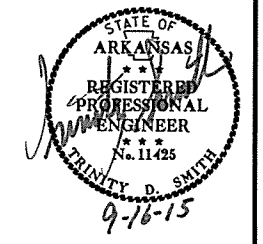


SIDE VIEW

PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

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				JOB NO. 012155				

2 SPECIAL DETAILS

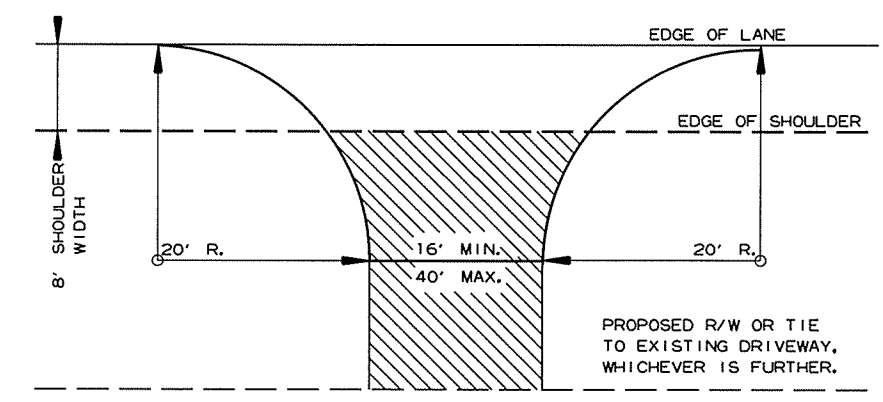


NOTE: REFER TO PLAN SHEETS FOR WIDTH OF COUNTY ROAD.

NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

A. C. H. M. SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH

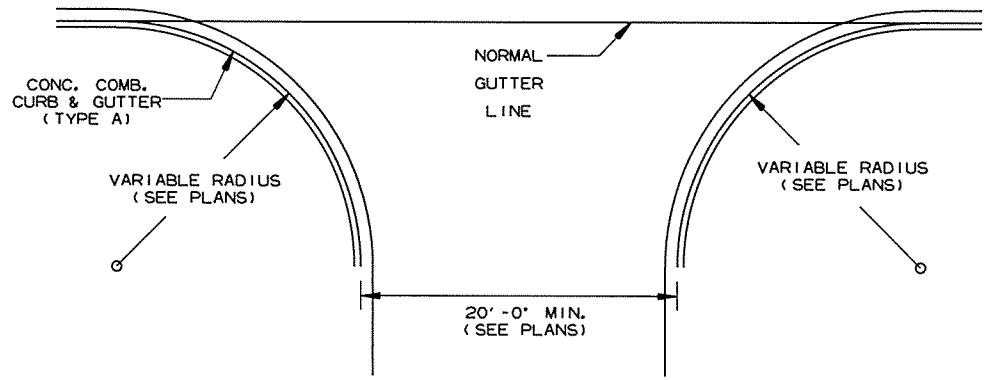
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



PROPOSED R/W OR TIE TO EXISTING DRIVEWAY, WHICHEVER IS FURTHER.

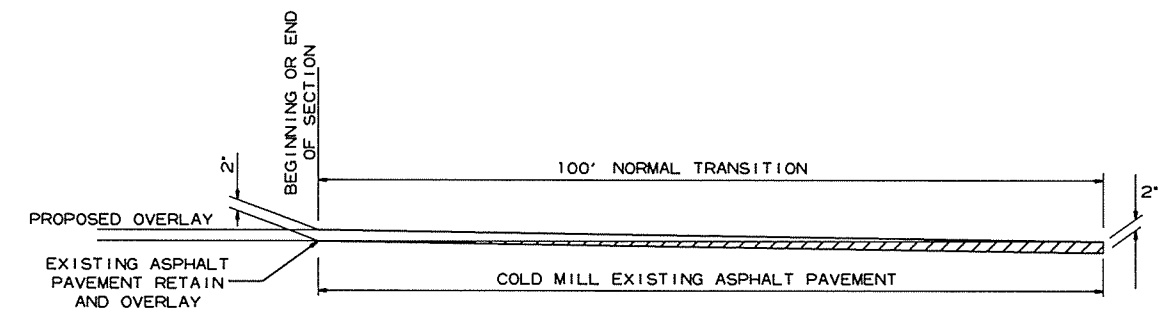
A. C. H. M. SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH

DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION



NOTE: PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS, & COUNTY ROADS TO BE SAME AS MAIN LANES.

DETAIL OF TURNOUTS, ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS CURB & GUTTER SECTION

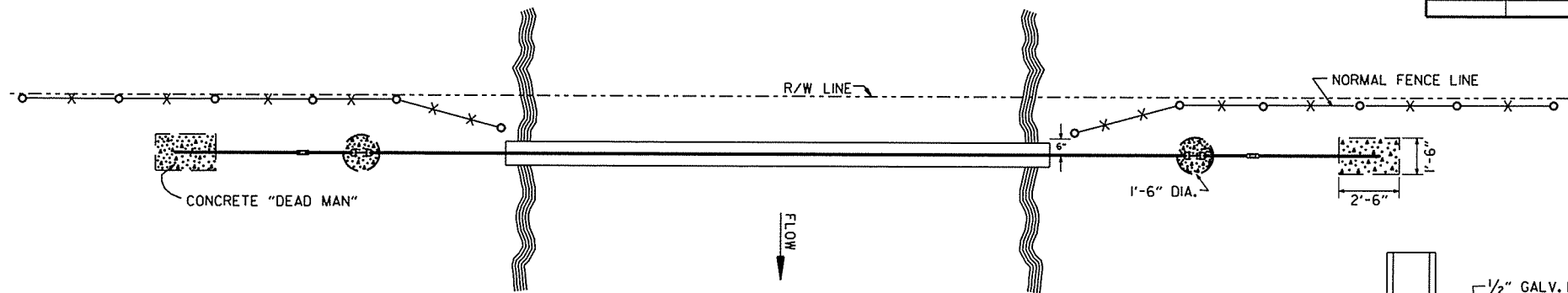
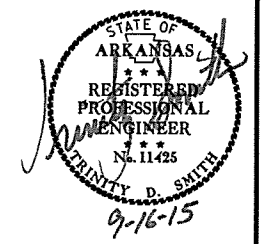


DETAIL FOR TRANSITIONS

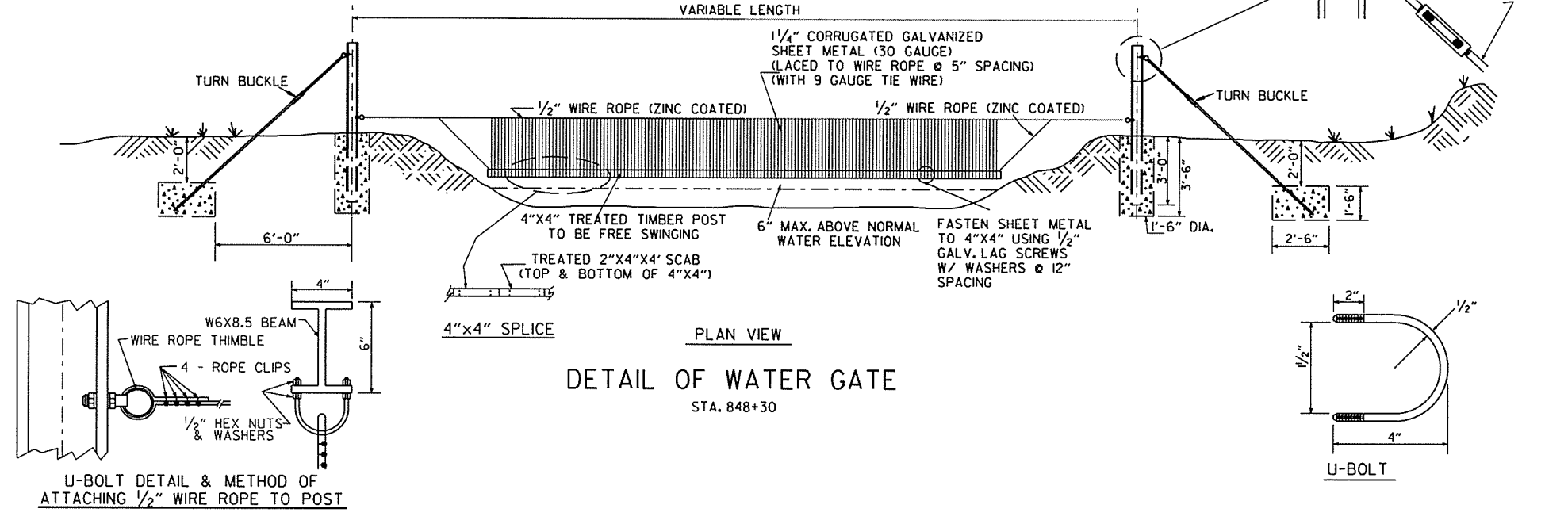
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				JOB NO.		012155		

2 SPECIAL DETAILS



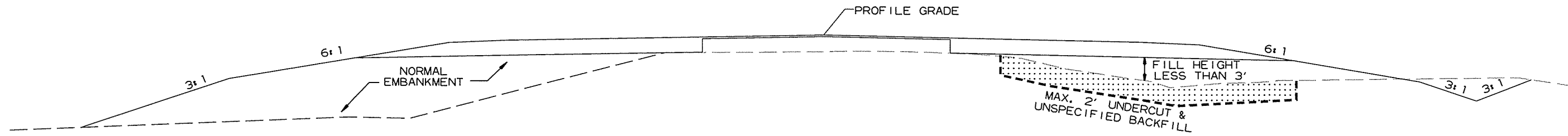
TOP VIEW



PLAN VIEW

DETAIL OF WATER GATE

STA. 848+30



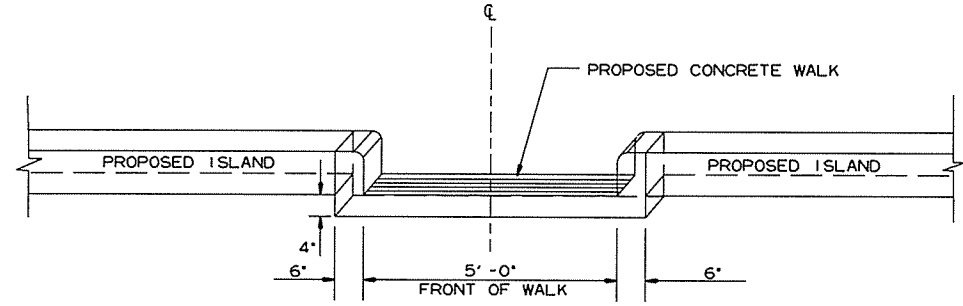
DETAIL OF EMBANKMENTS (3 FEET OR LESS)

NOTE: TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
NOTE: REFER TO CROSS SECTIONS FOR LOCATIONS

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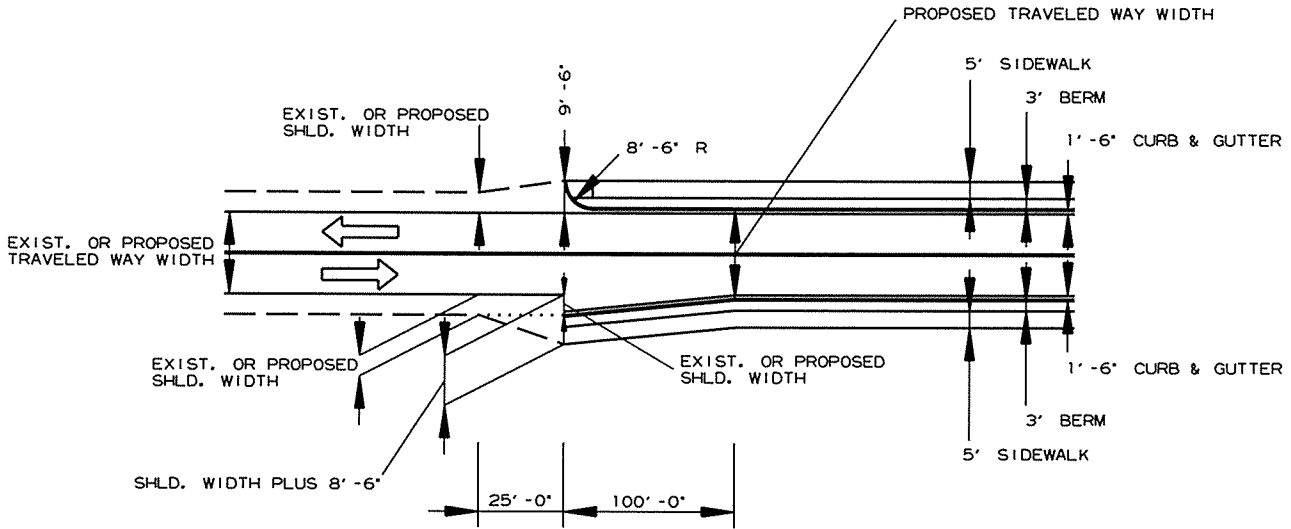
2 SPECIAL DETAILS



FACE SHALL MEET REQUIREMENTS OF TYPE B CURB

NOTE: CONCRETE WALK THROUGH ISLAND SHALL BE POURED MONOLITHICALLY. ALL MATERIALS REQUIRED TO CONSTRUCT CONCRETE WALK THRU ISLAND SHALL BE INCLUDED IN THE PRICE BID FOR CONCRETE ISLAND.

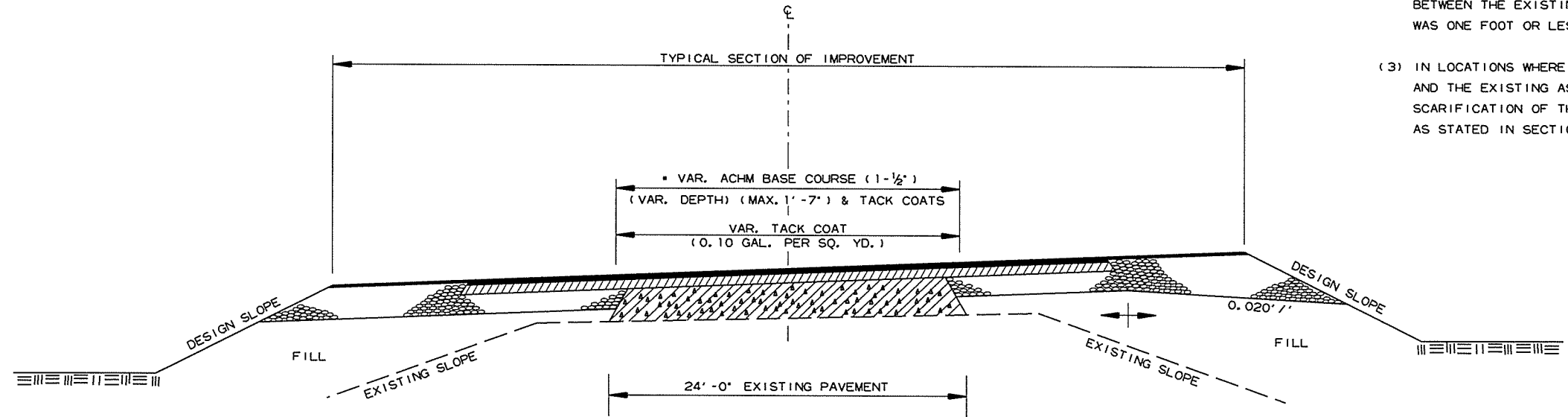
CONCRETE WALK THROUGH ISLAND



TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

NOTES:

- (1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
- (2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
- (3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09, OF THE STANDARD SPECIFICATIONS.



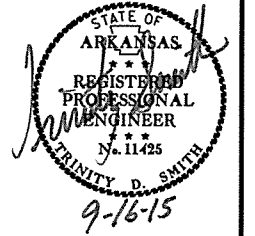
* 7" AGGREGATE BASE COURSE (CLASS 7) TO BE REPLACED WITH A.C.H.M. BASE COURSE (1-1/2")

METHOD OF RAISING GRADE

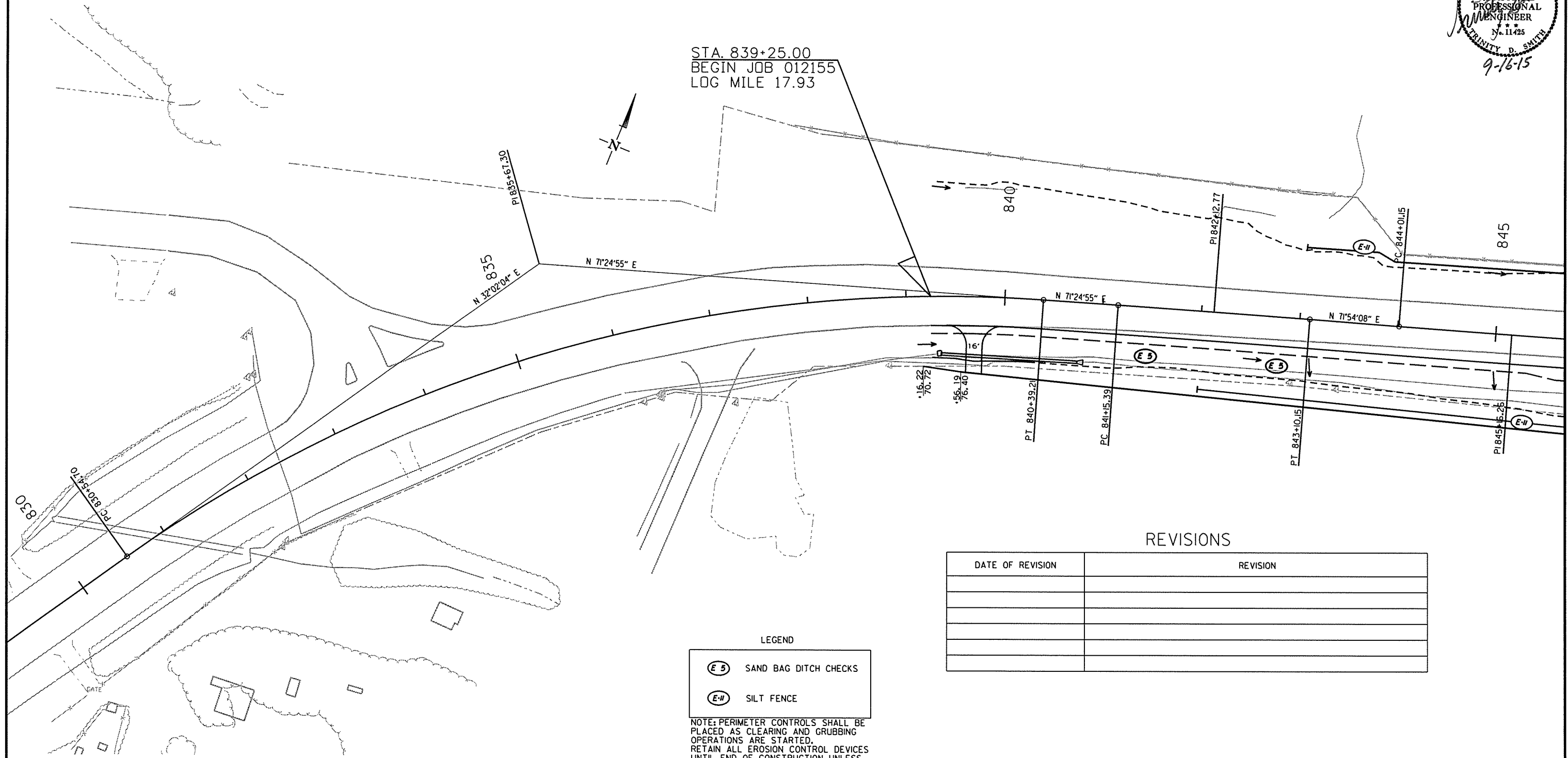
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② TEMPORARY EROSION CONTROL DETAILS



STA. 839+25.00
 BEGIN JOB 012155
 LOG MILE 17.93



LEGEND

- SAND BAG DITCH CHECKS
- SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

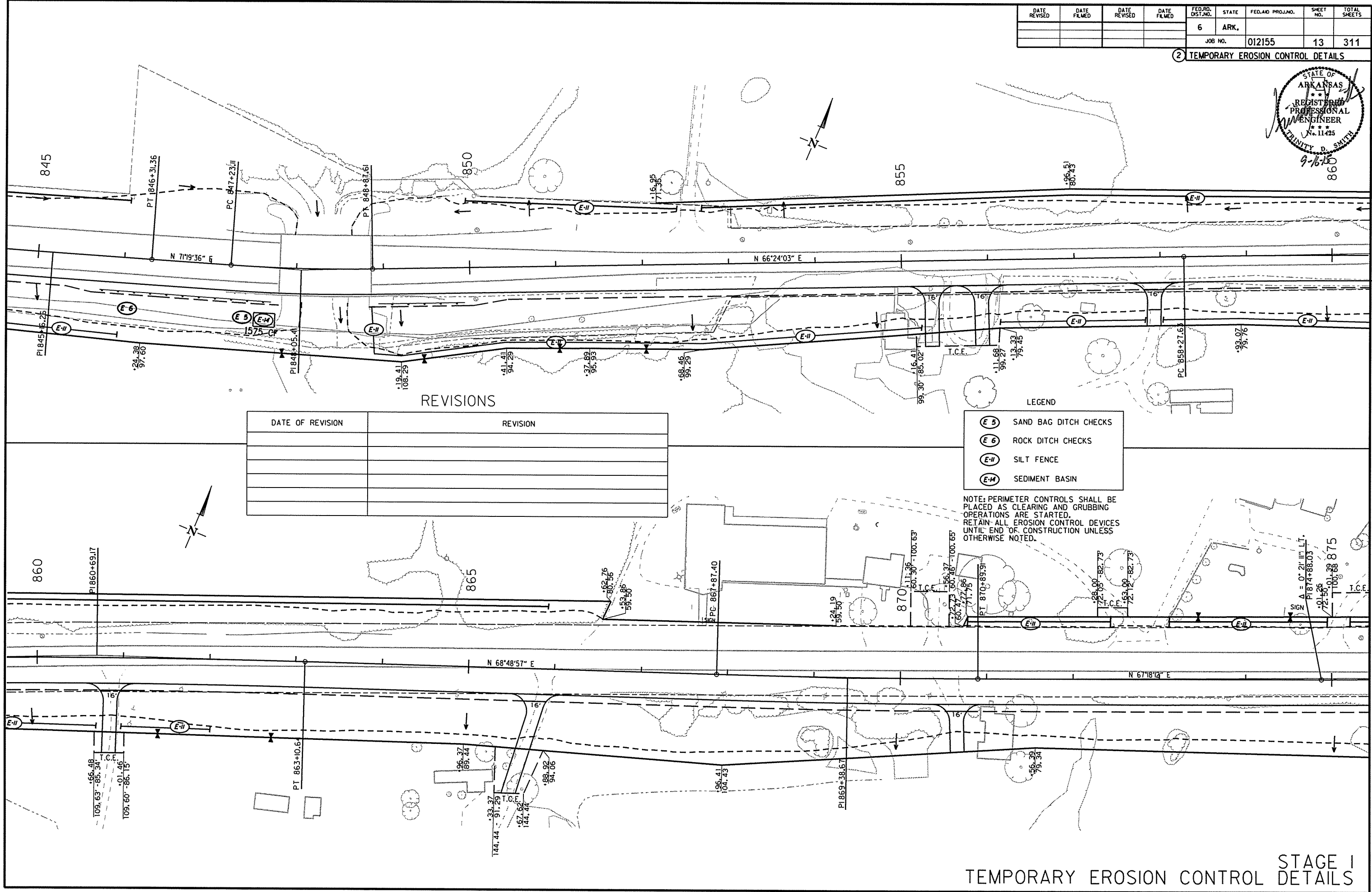
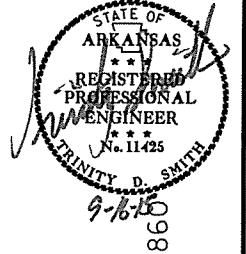
DATE OF REVISION	REVISION

9/4/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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							JOB NO. 012155	13 311

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

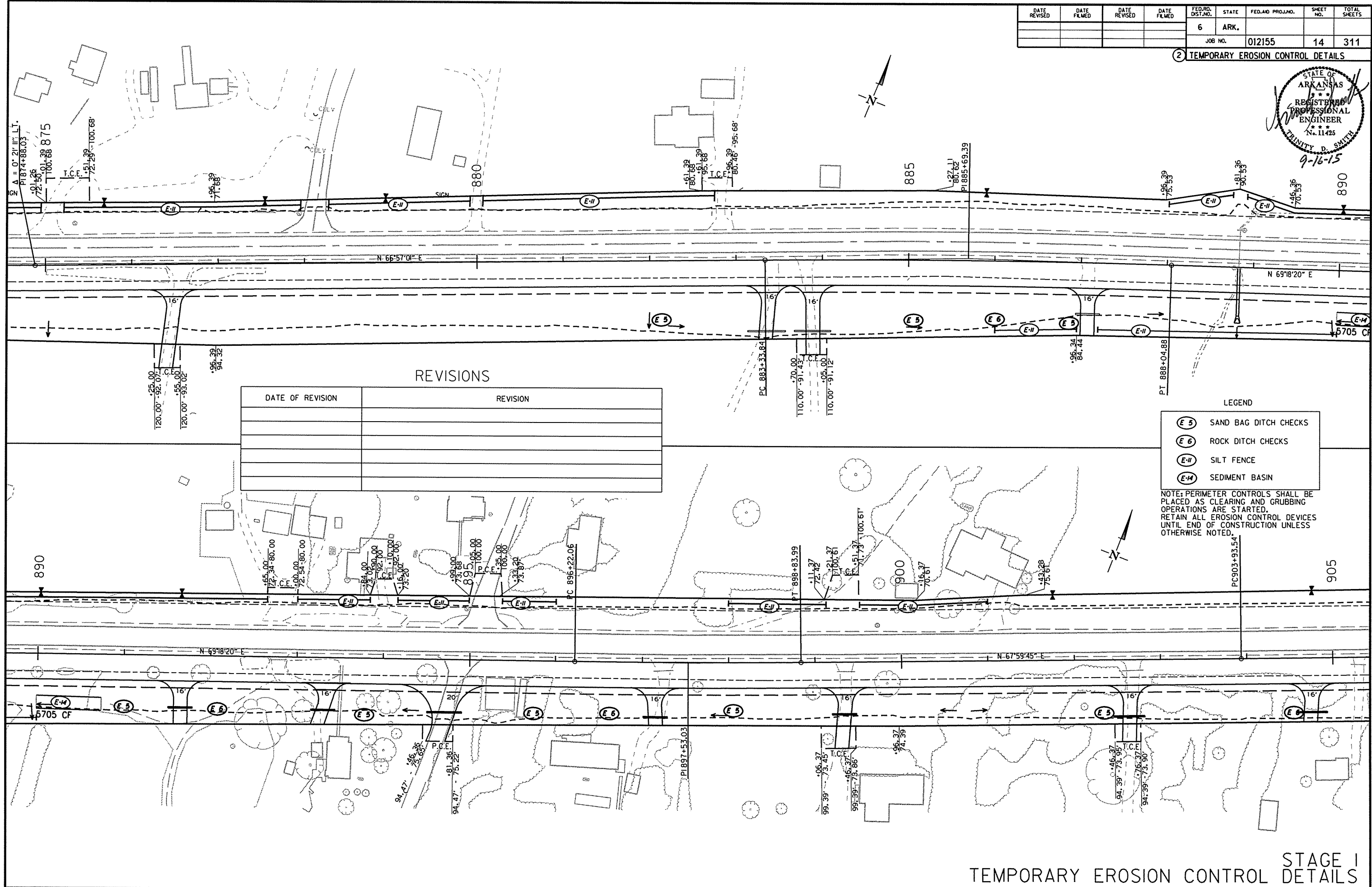
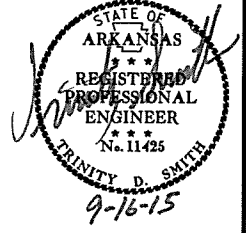
- LEGEND
- (E-5) SAND BAG DITCH CHECKS
 - (E-6) ROCK DITCH CHECKS
 - (E-II) SILT FENCE
 - (E-III) SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

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2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

	SAND BAG DITCH CHECKS
	ROCK DITCH CHECKS
	SILT FENCE
	SEDIMENT BASIN

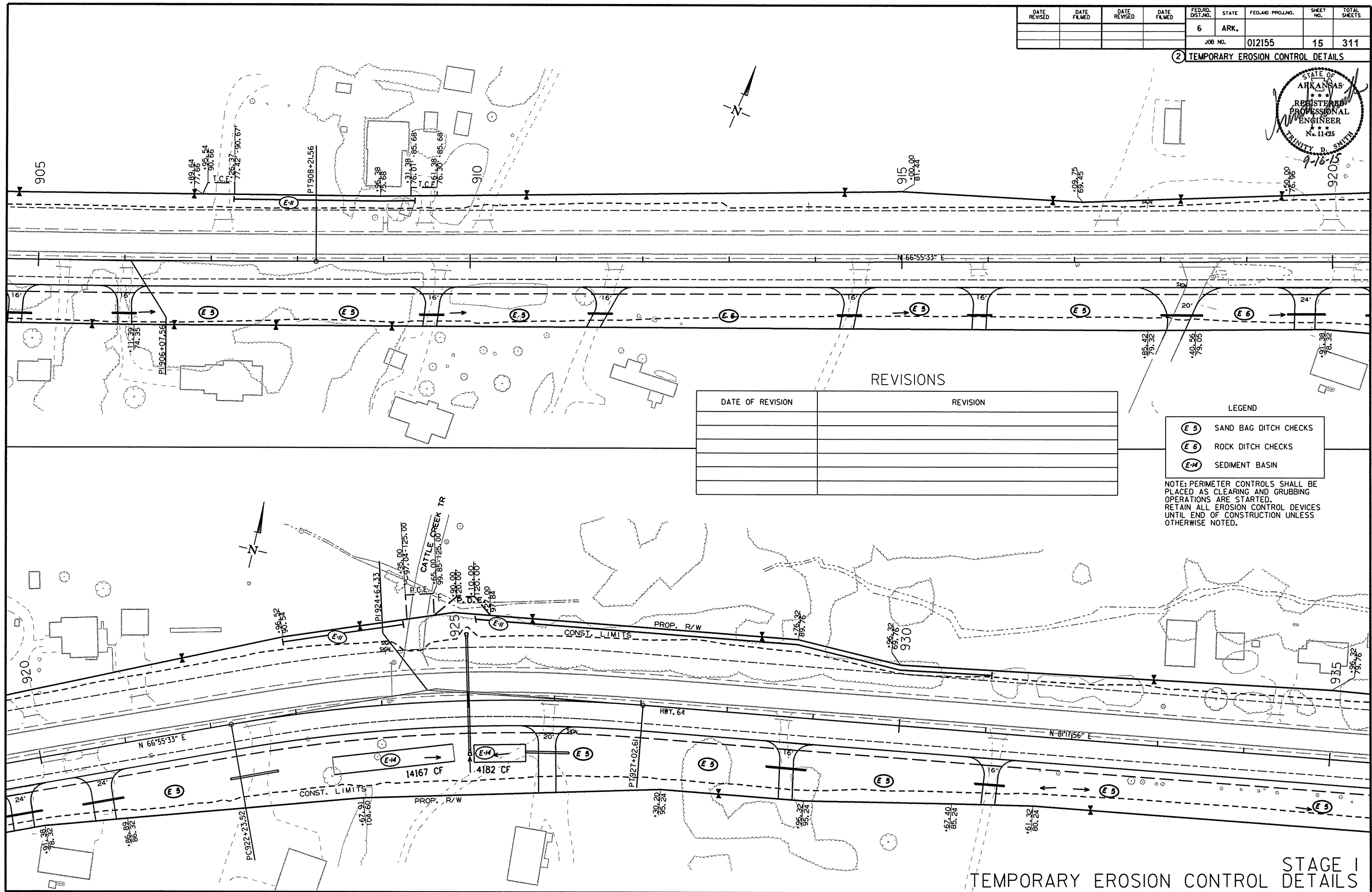
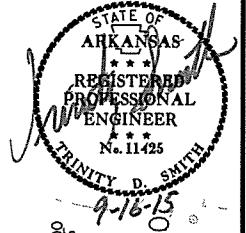
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

R012155.DGN 9/14/2015

STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	15	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-M)	SEDIMENT BASIN

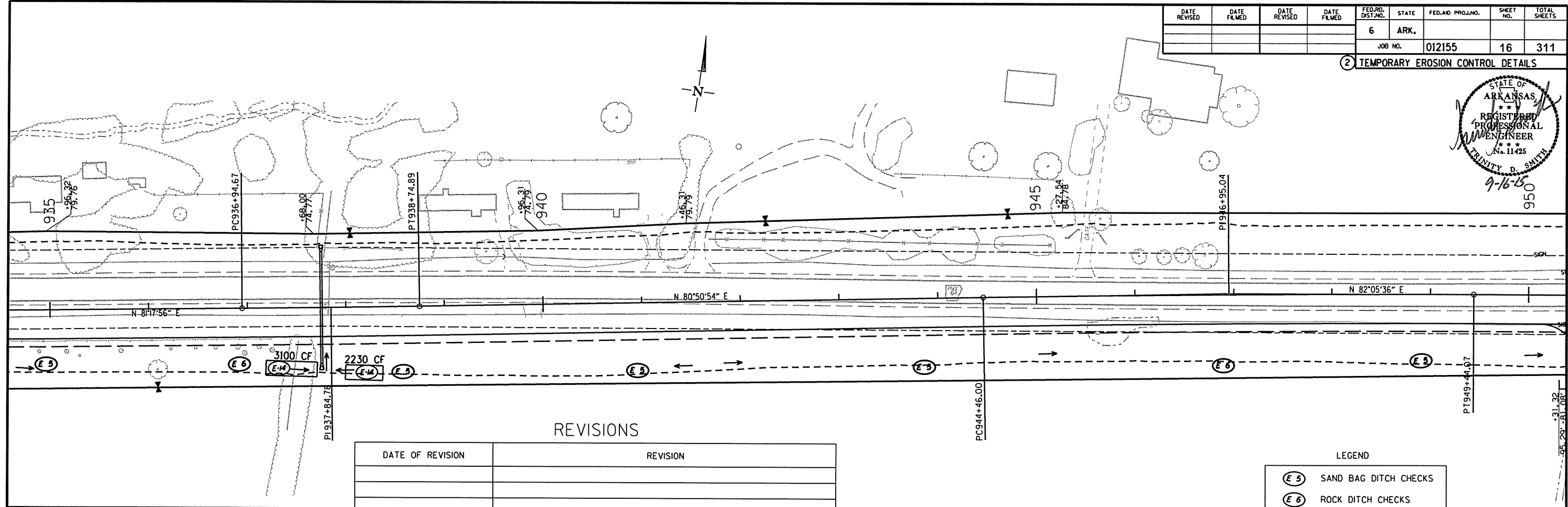
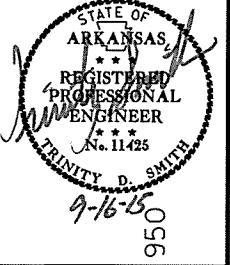
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

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STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 TEMPORARY EROSION CONTROL DETAILS



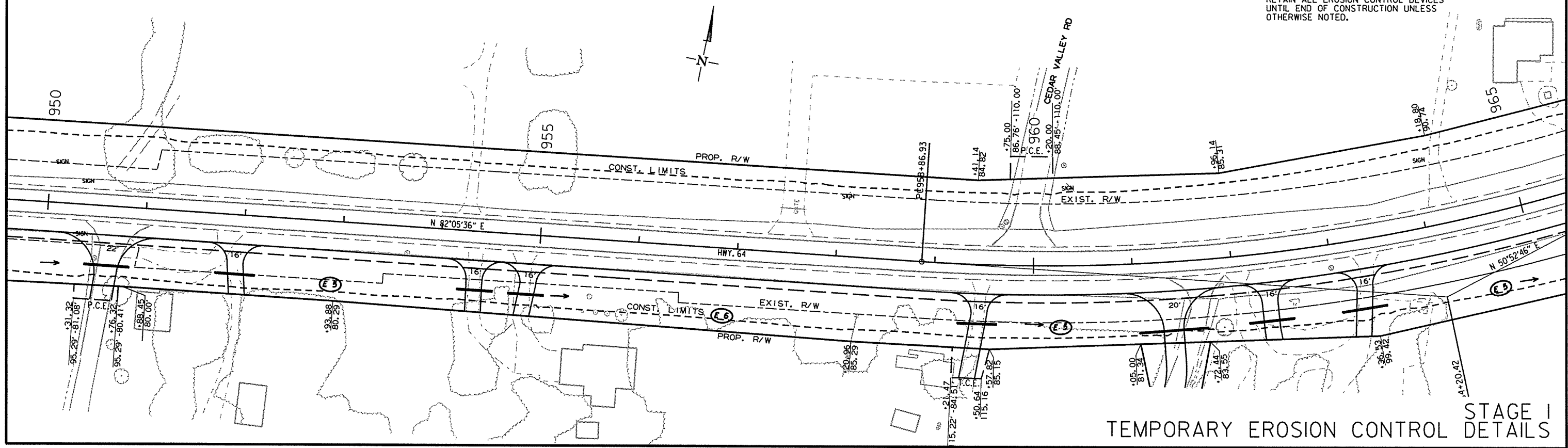
REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E 5)	SAND BAG DITCH CHECKS
(E 6)	ROCK DITCH CHECKS
(E-M)	SEDIMENT BASIN

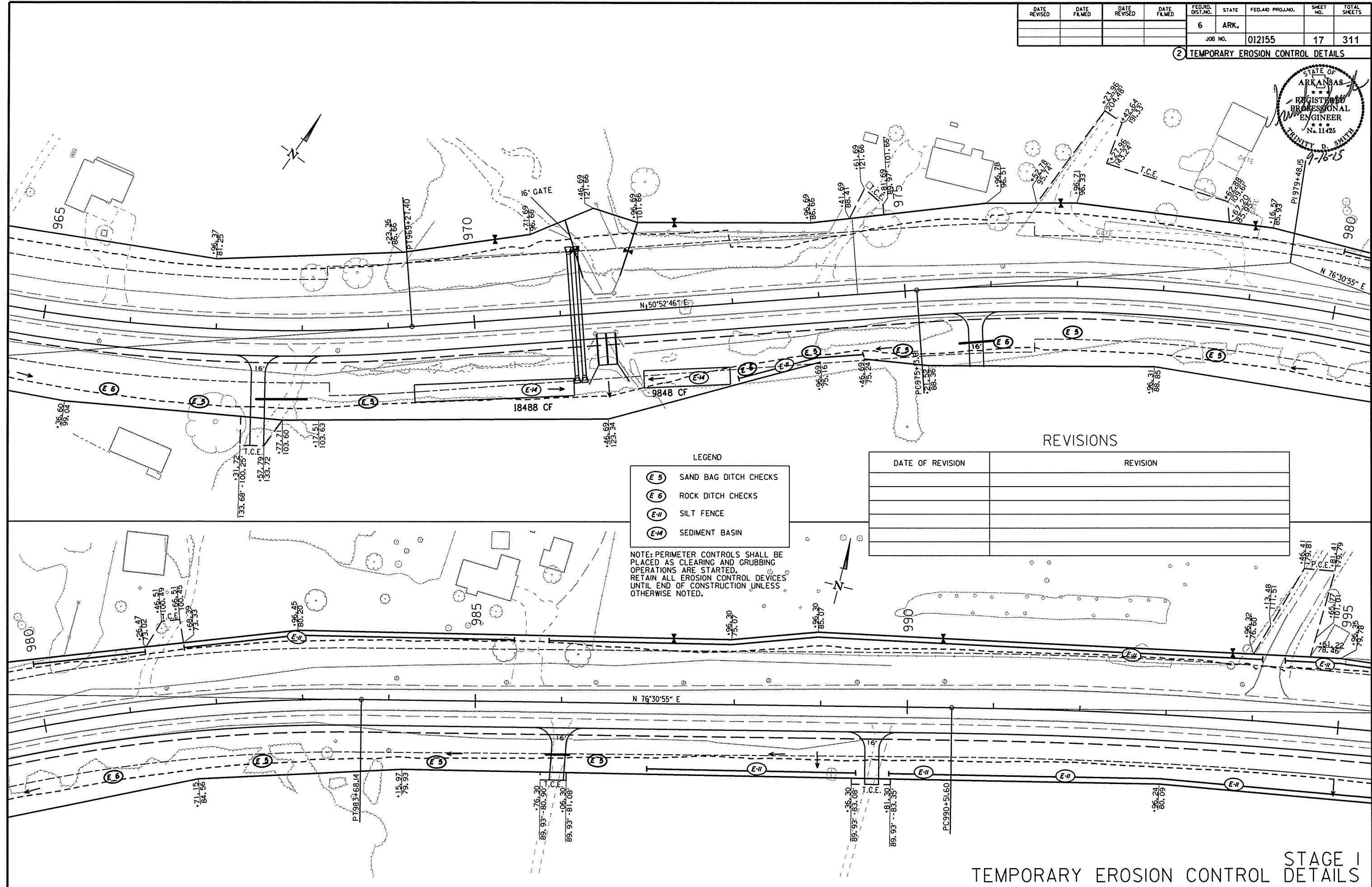
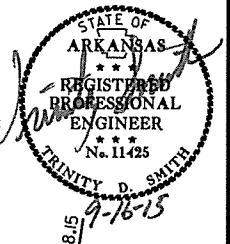
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



TEMPORARY EROSION CONTROL DETAILS STAGE I

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				JOB NO.		012155		

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-II)	SILT FENCE
(E-IV)	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

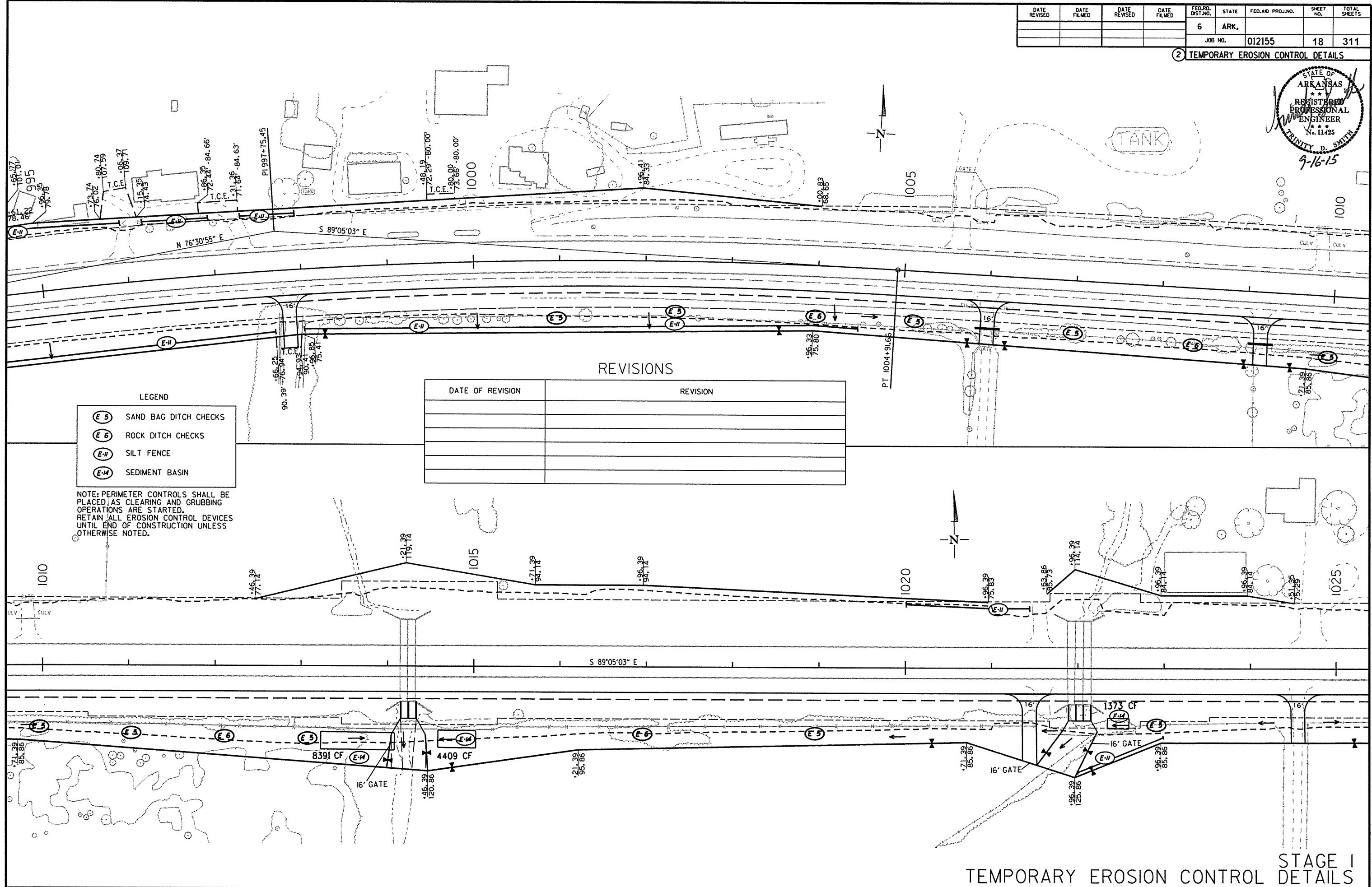
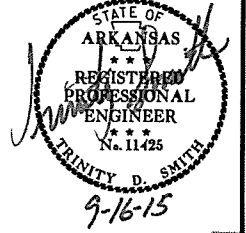
DATE OF REVISION	REVISION

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TEMPORARY EROSION CONTROL STAGE I DETAILS

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				6	ARK.		18	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-H) SILT FENCE
- (E-M) SEDIMENT BASIN

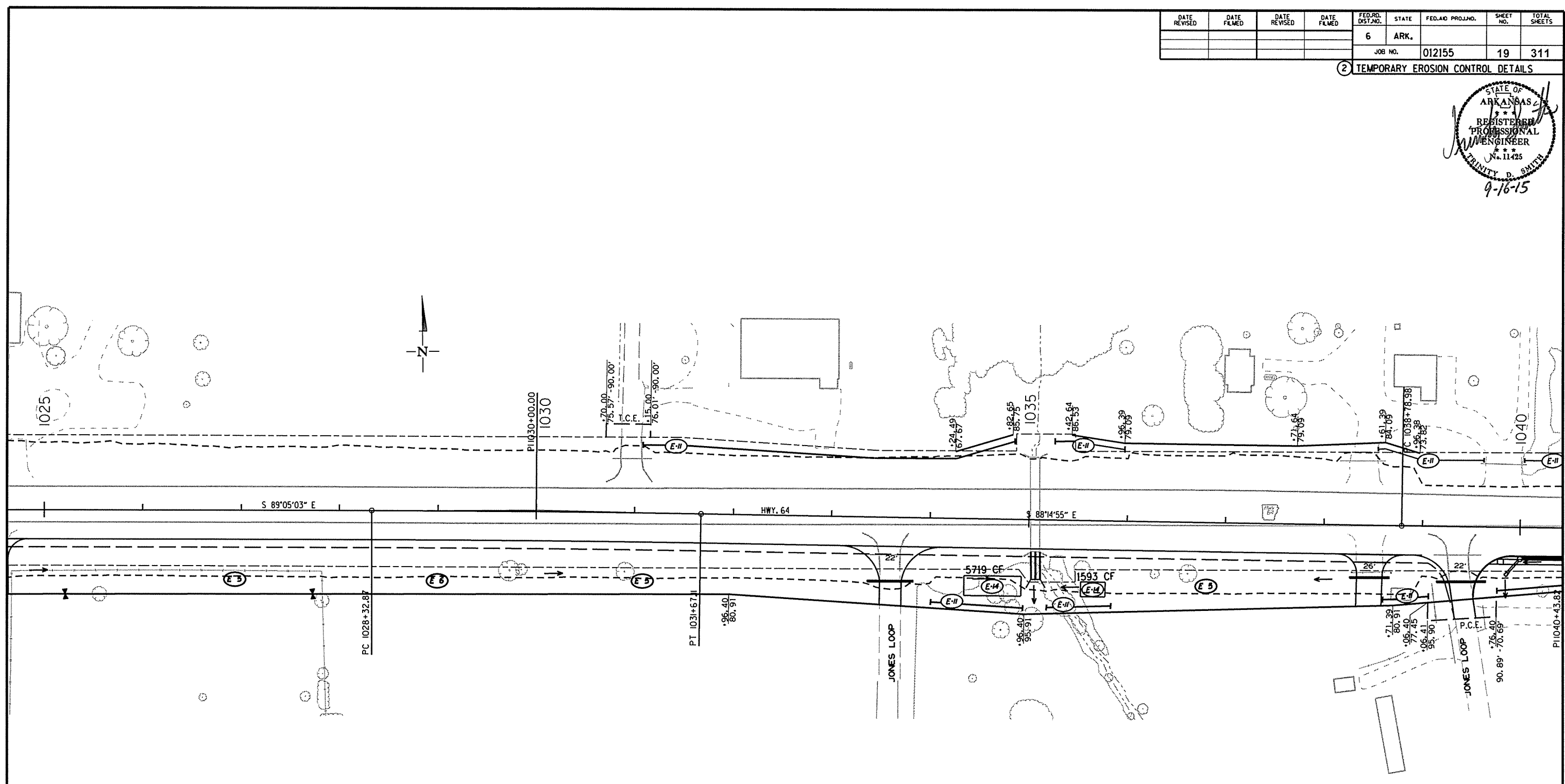
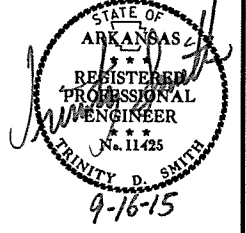
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

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TEMPORARY EROSION CONTROL STAGE I DETAILS

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② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-14)	SEDIMENT BASIN

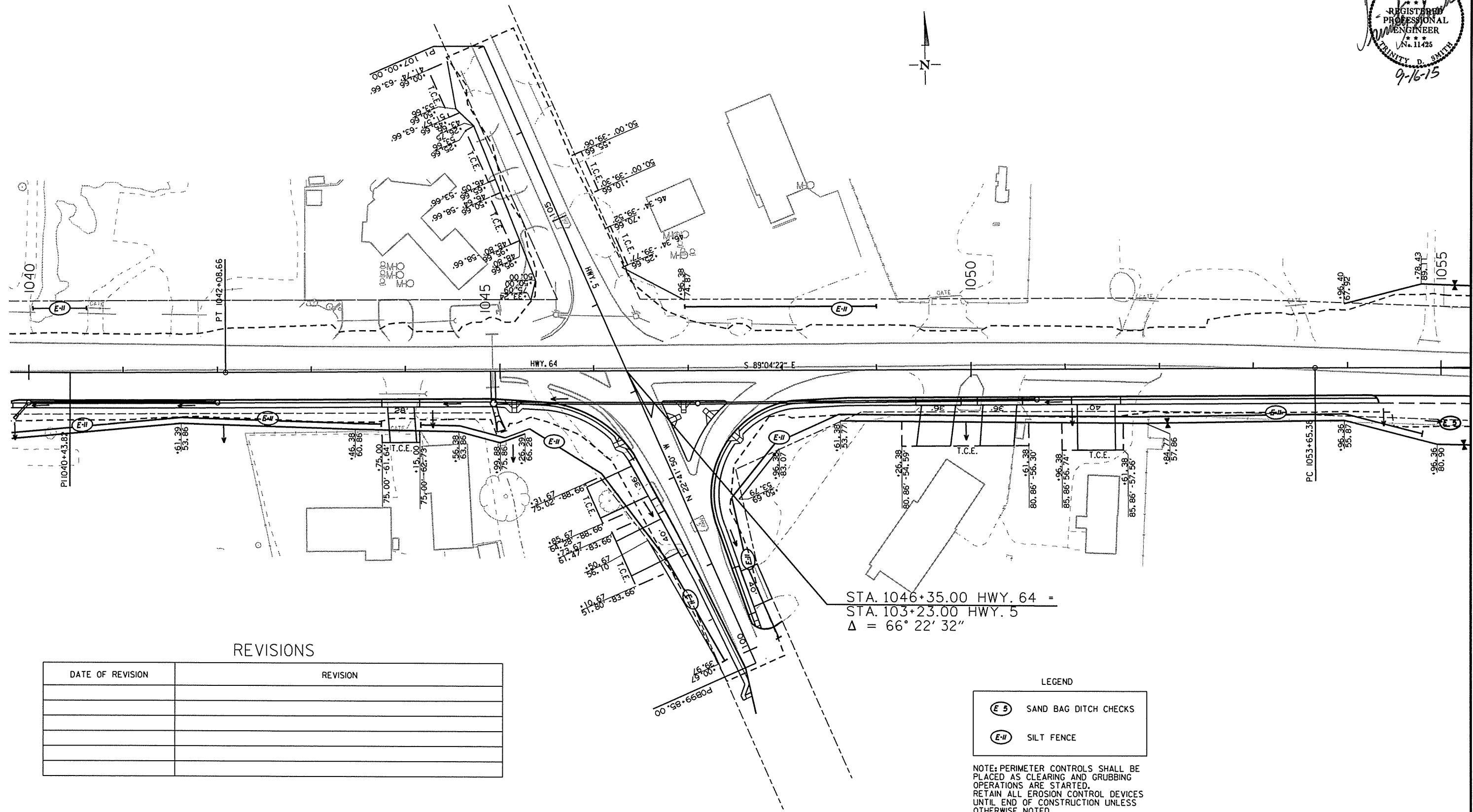
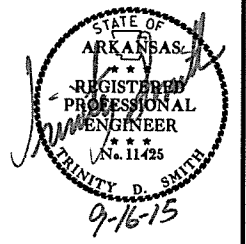
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

TEMPORARY EROSION CONTROL STAGE I DETAILS

9/4/2015 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							20	311

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

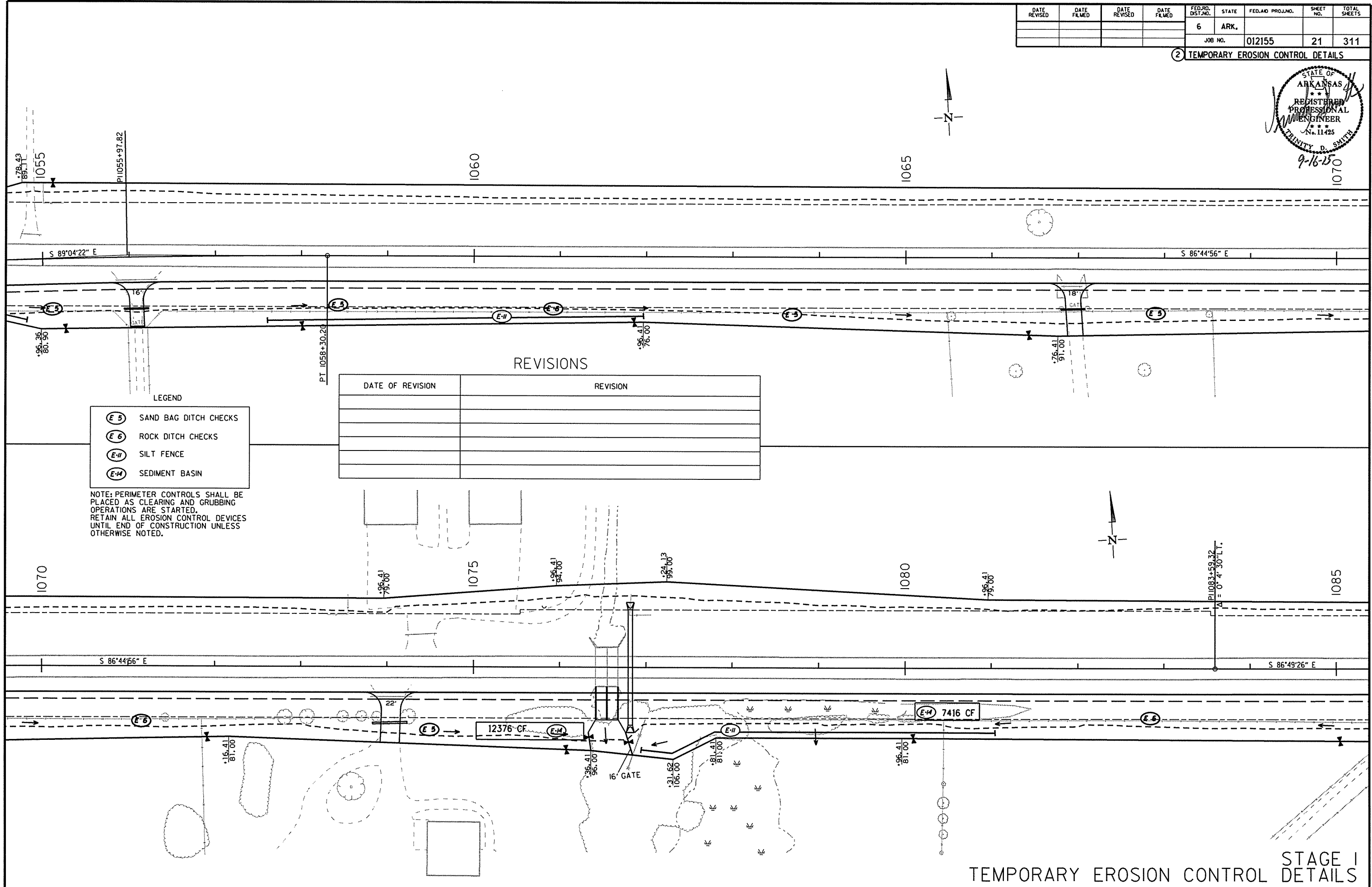
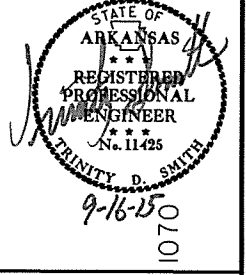
	SAND BAG DITCH CHECKS
	SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 012155			21	311

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

- LEGEND
- (E-5) SAND BAG DITCH CHECKS
 - (E-6) ROCK DITCH CHECKS
 - (E-II) SILT FENCE
 - (E-III) SEDIMENT BASIN

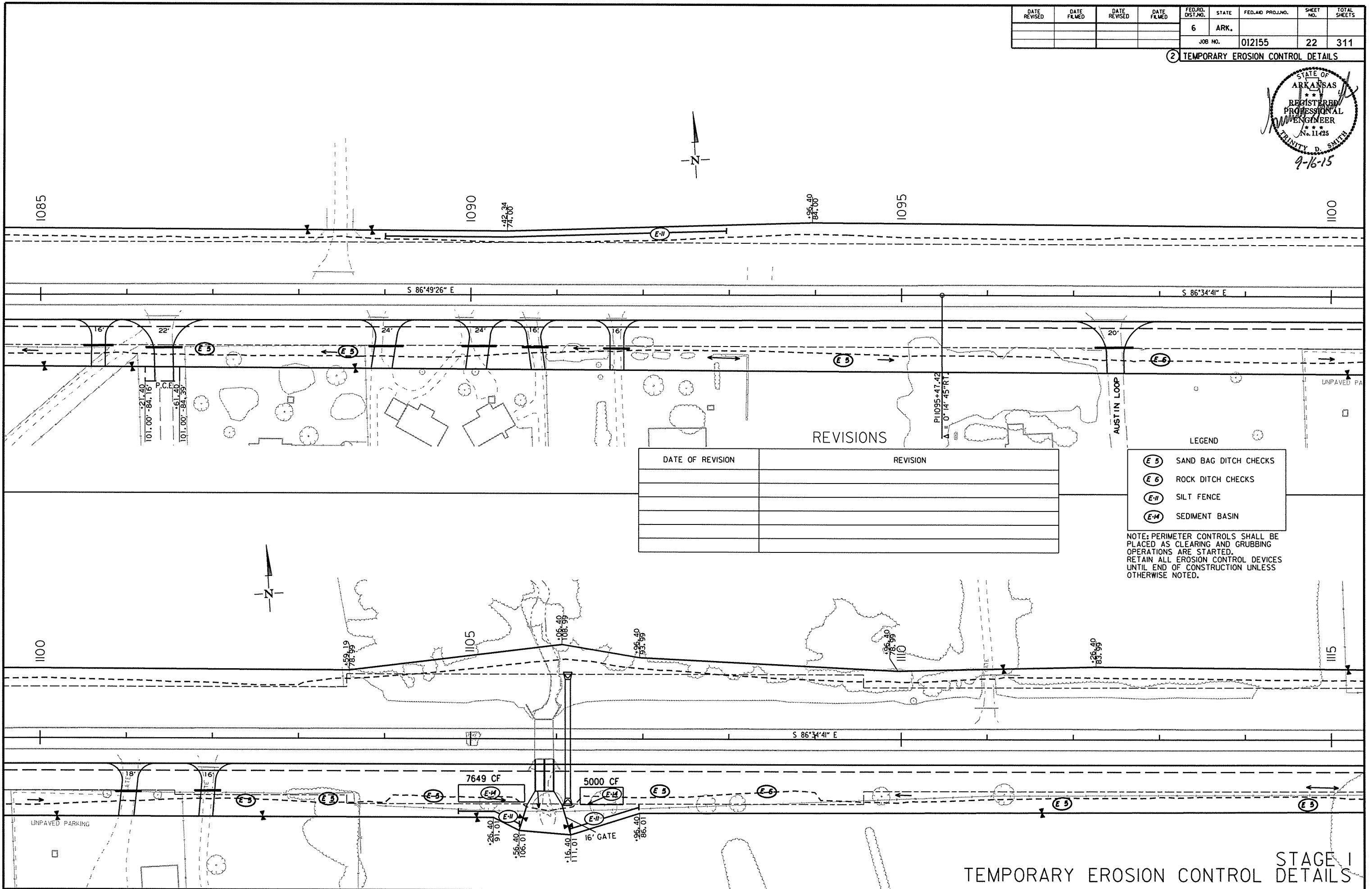
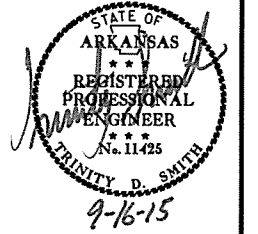
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STAGE I
TEMPORARY EROSION CONTROL DETAILS

9/4/2015
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	311
				JOB NO.		012155		

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-11) SILT FENCE
- (E-14) SEDIMENT BASIN

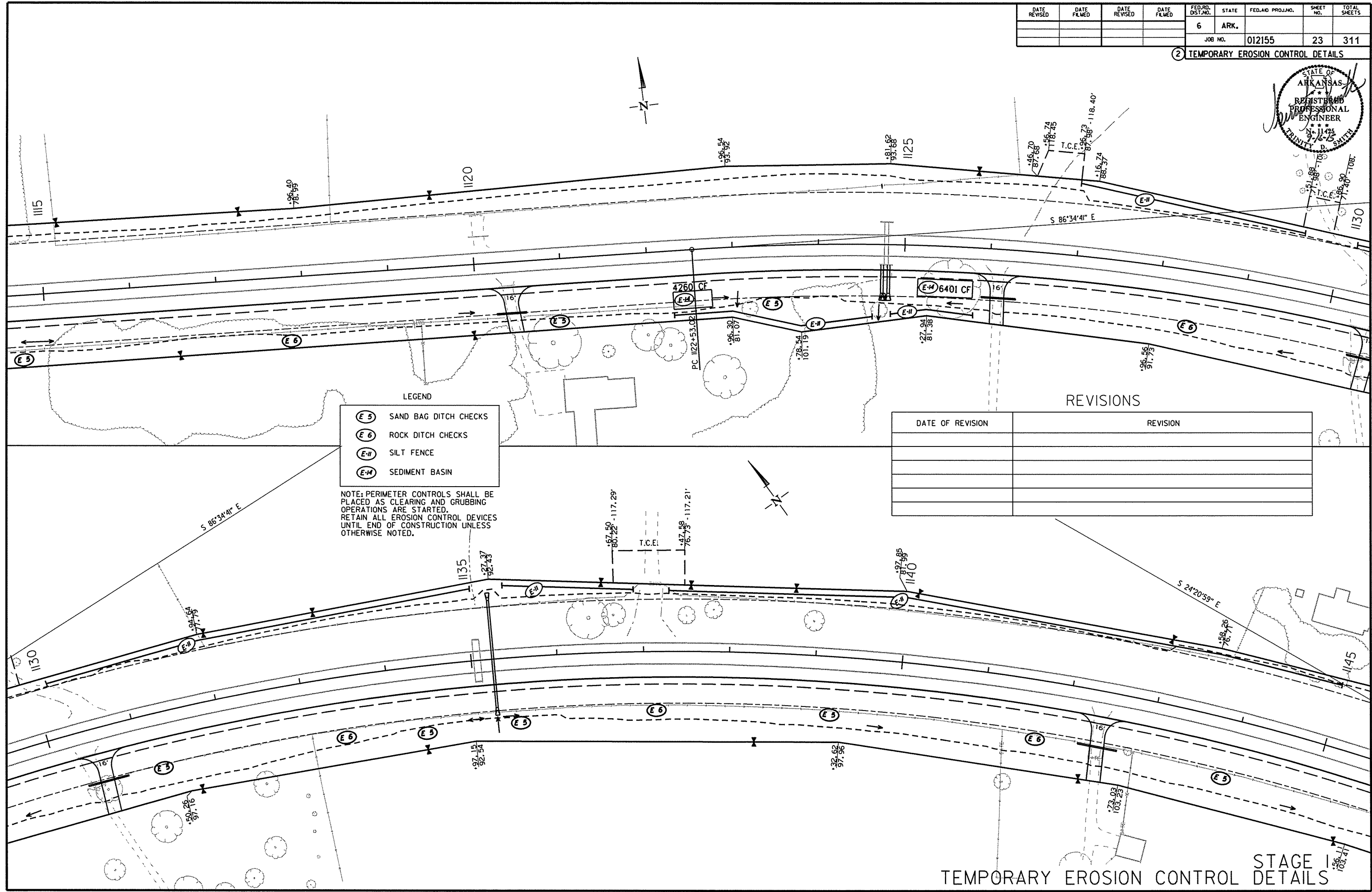
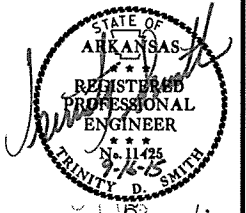
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R012155.DGN 9/4/2015

TEMPORARY EROSION CONTROL STAGE I DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		23	311
				JOB NO.		012155		

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-H)	SILT FENCE
(E-M)	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

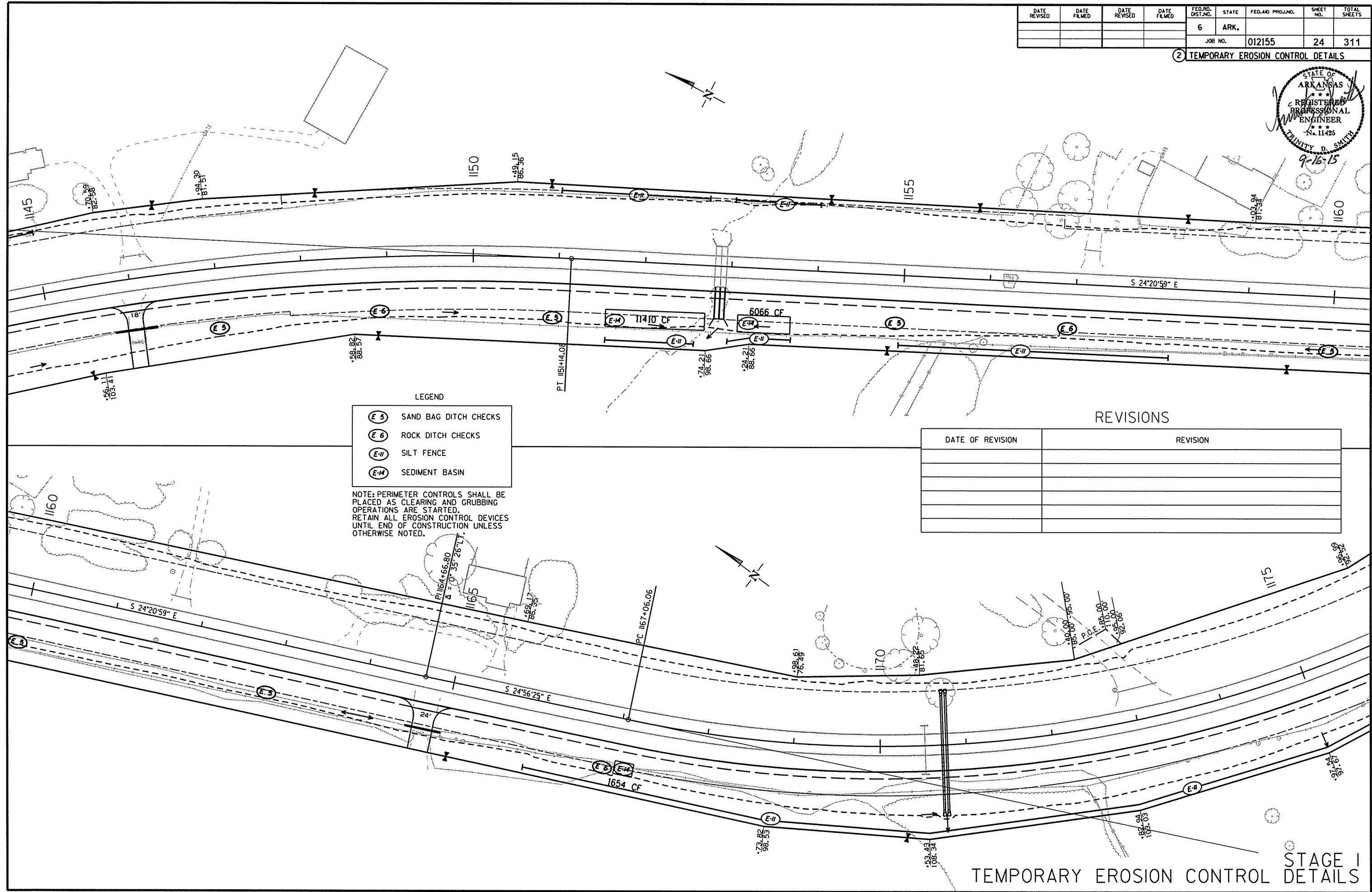
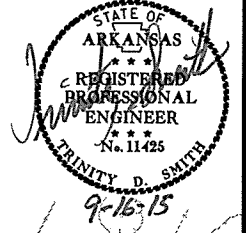
DATE OF REVISION	REVISION

9/4/2015
R012155.DGN

STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		24	311
				JOB NO.		012155		

② TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-H)	SILT FENCE
(E-H)	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

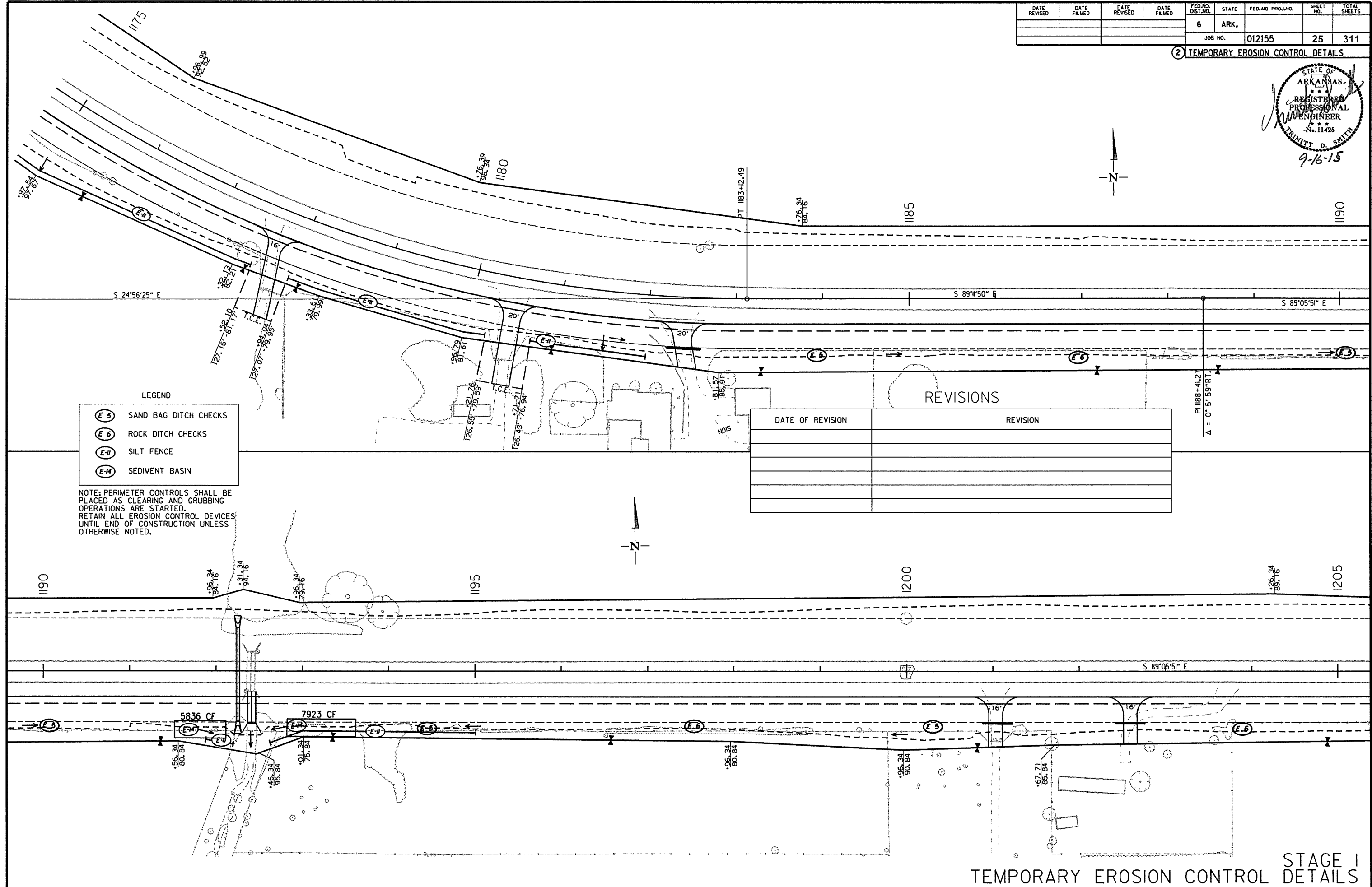
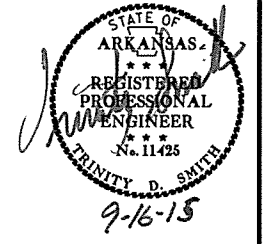
DATE OF REVISION	REVISION

9/4/2015
R012155.DGN

STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	311
				JOB NO.		012155	25	311

② TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-1)	SAND BAG DITCH CHECKS
(E-2)	ROCK DITCH CHECKS
(E-3)	SILT FENCE
(E-4)	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

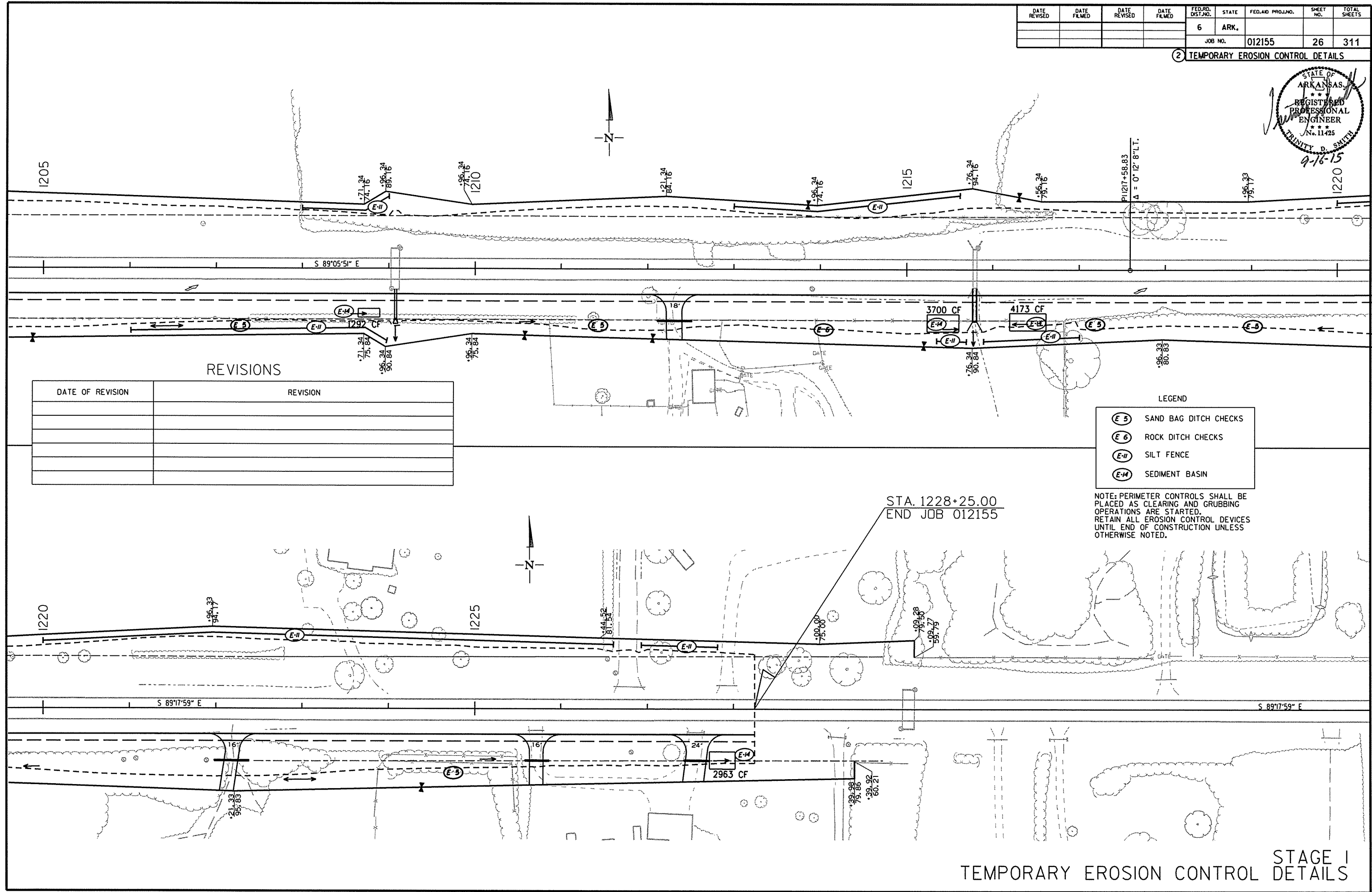
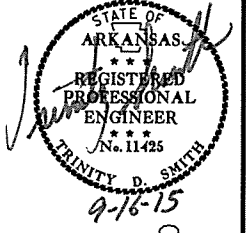
DATE OF REVISION	REVISION

9/4/2015
R012155.DGN

STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 012155	26	311

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-III) SEDIMENT BASIN

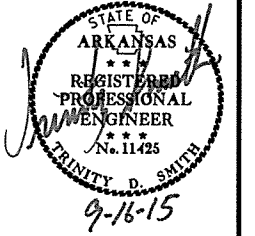
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STA. 1228+25.00
END JOB 012155

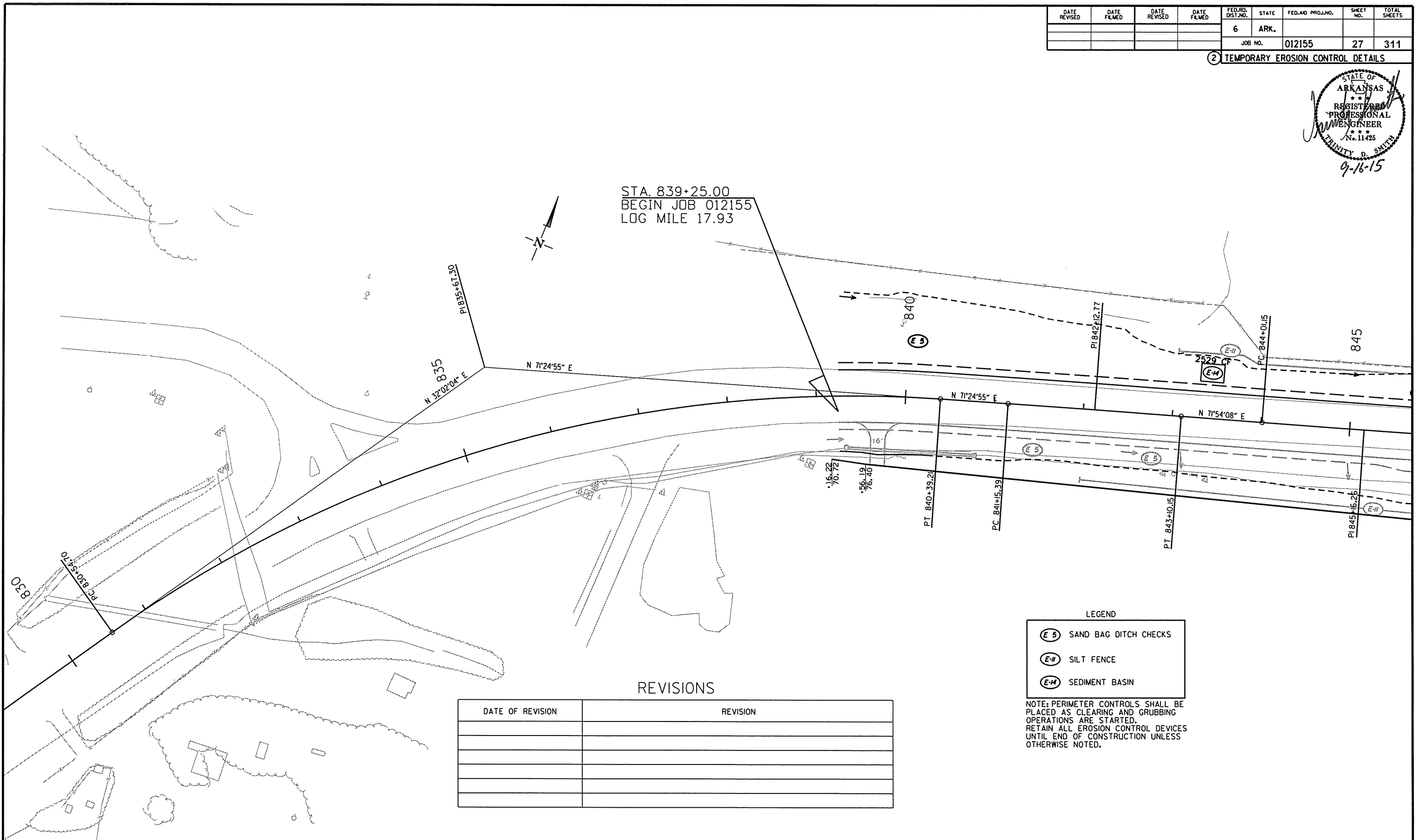
STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	311
				JOB NO.		012155		

2 TEMPORARY EROSION CONTROL DETAILS



STA. 839+25.00
 BEGIN JOB 012155
 LOG MILE 17.93



REVISIONS

DATE OF REVISION	REVISION

LEGEND

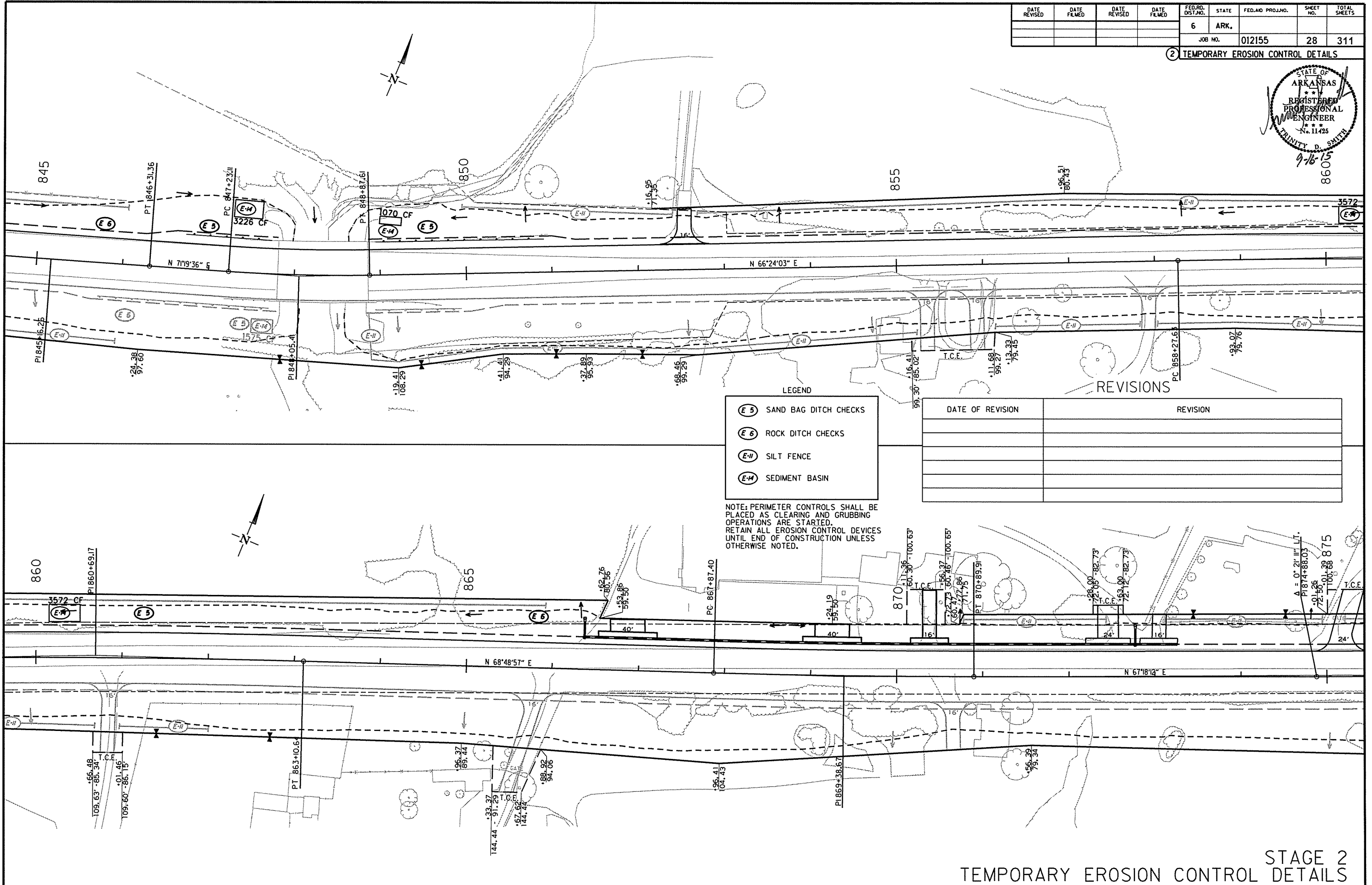
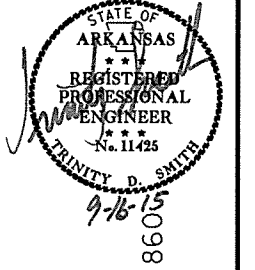
	SAND BAG DITCH CHECKS
	SILT FENCE
	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

9/4/2015
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		28	311

2 TEMPORARY EROSION CONTROL DETAILS



- LEGEND
- (E-5)** SAND BAG DITCH CHECKS
 - (E-6)** ROCK DITCH CHECKS
 - (E-H)** SILT FENCE
 - (E-M)** SEDIMENT BASIN

REVISIONS

DATE OF REVISION	REVISION

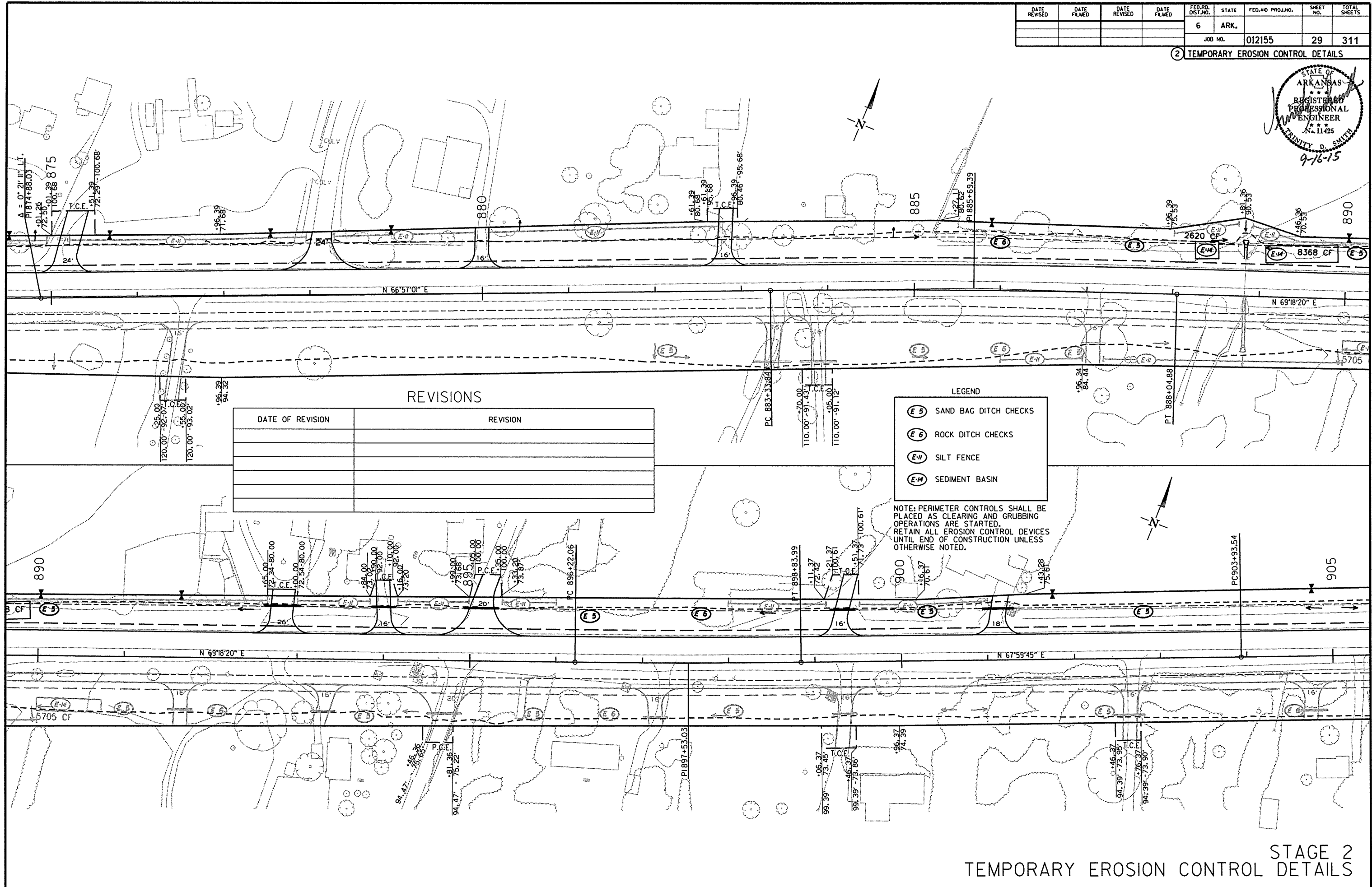
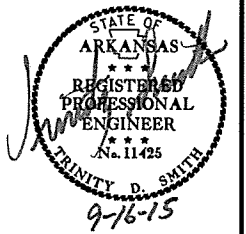
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R012155.DGN 9/4/2015

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		29	311
				JOB NO.		012155	29	311

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND	
(E5)	SAND BAG DITCH CHECKS
(E6)	ROCK DITCH CHECKS
(E4)	SILT FENCE
(E4M)	SEDIMENT BASIN

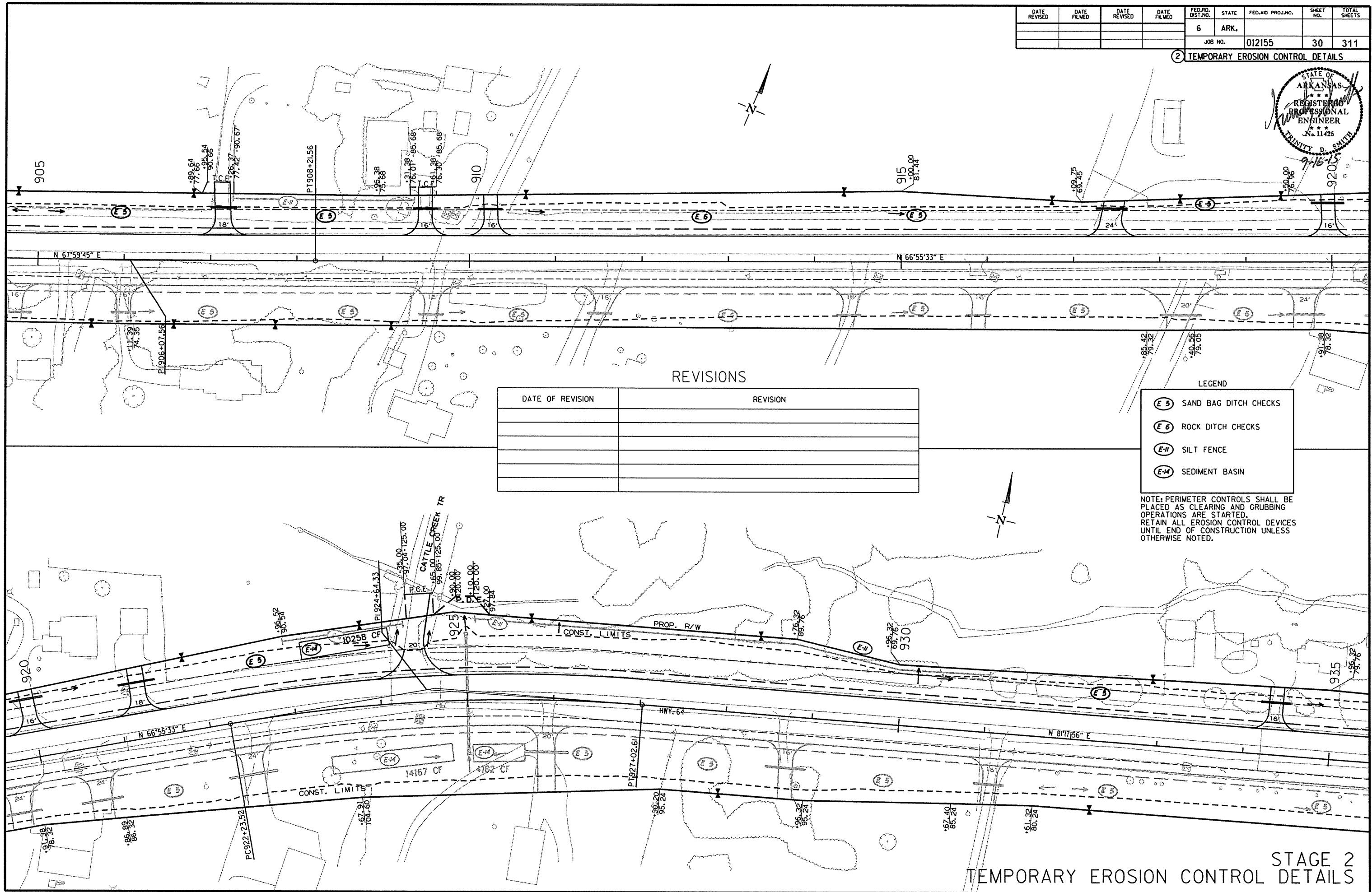
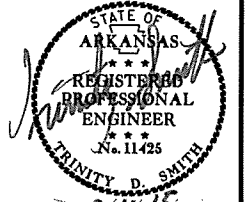
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R012155.DGN 9/4/2015

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	30	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

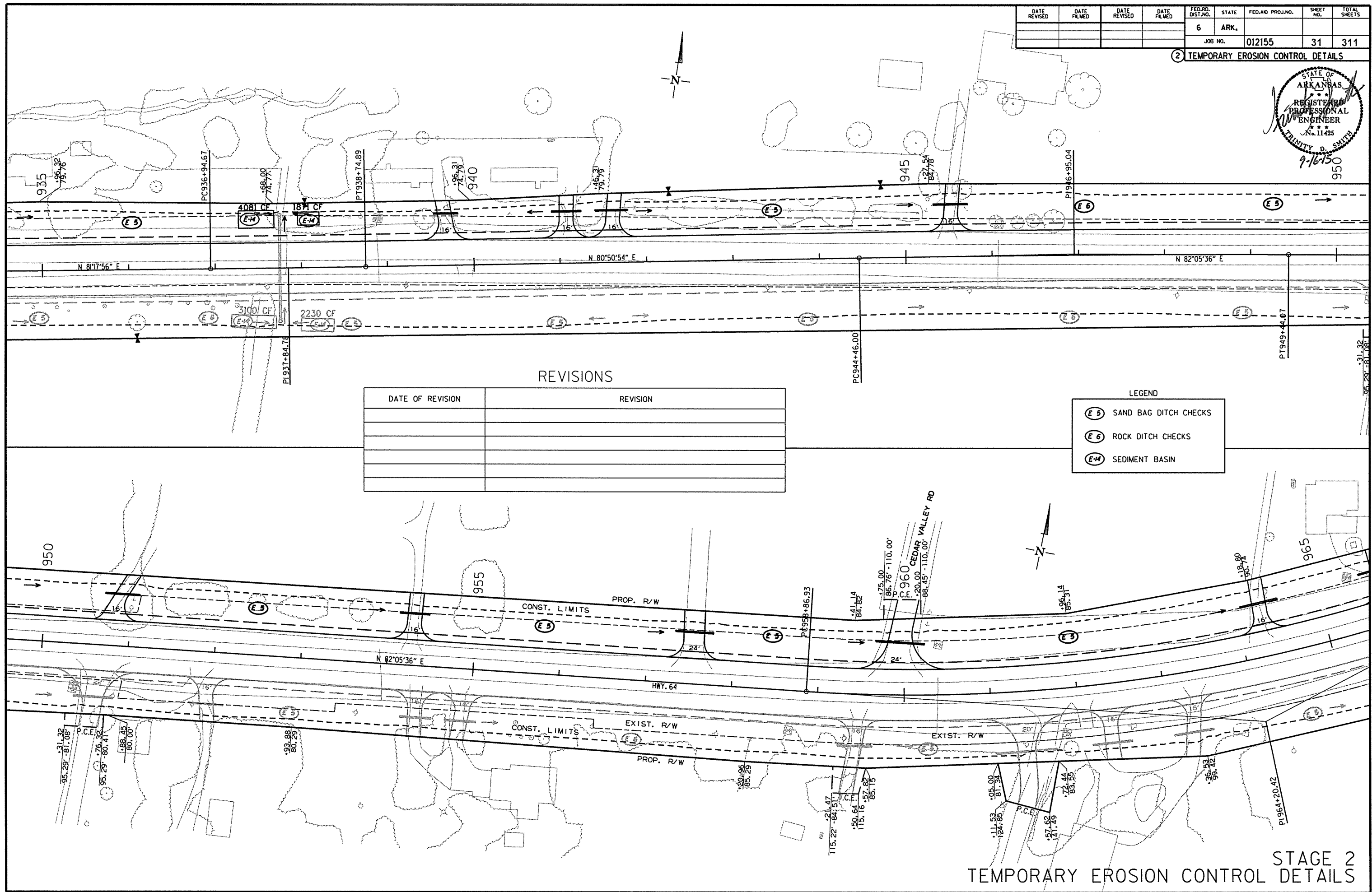
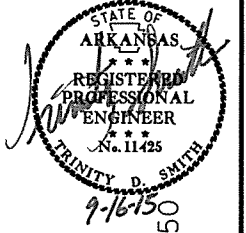
(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-11)	SILT FENCE
(E-14)	SEDIMENT BASIN

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9/4/2015
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							31	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-M)	SEDIMENT BASIN

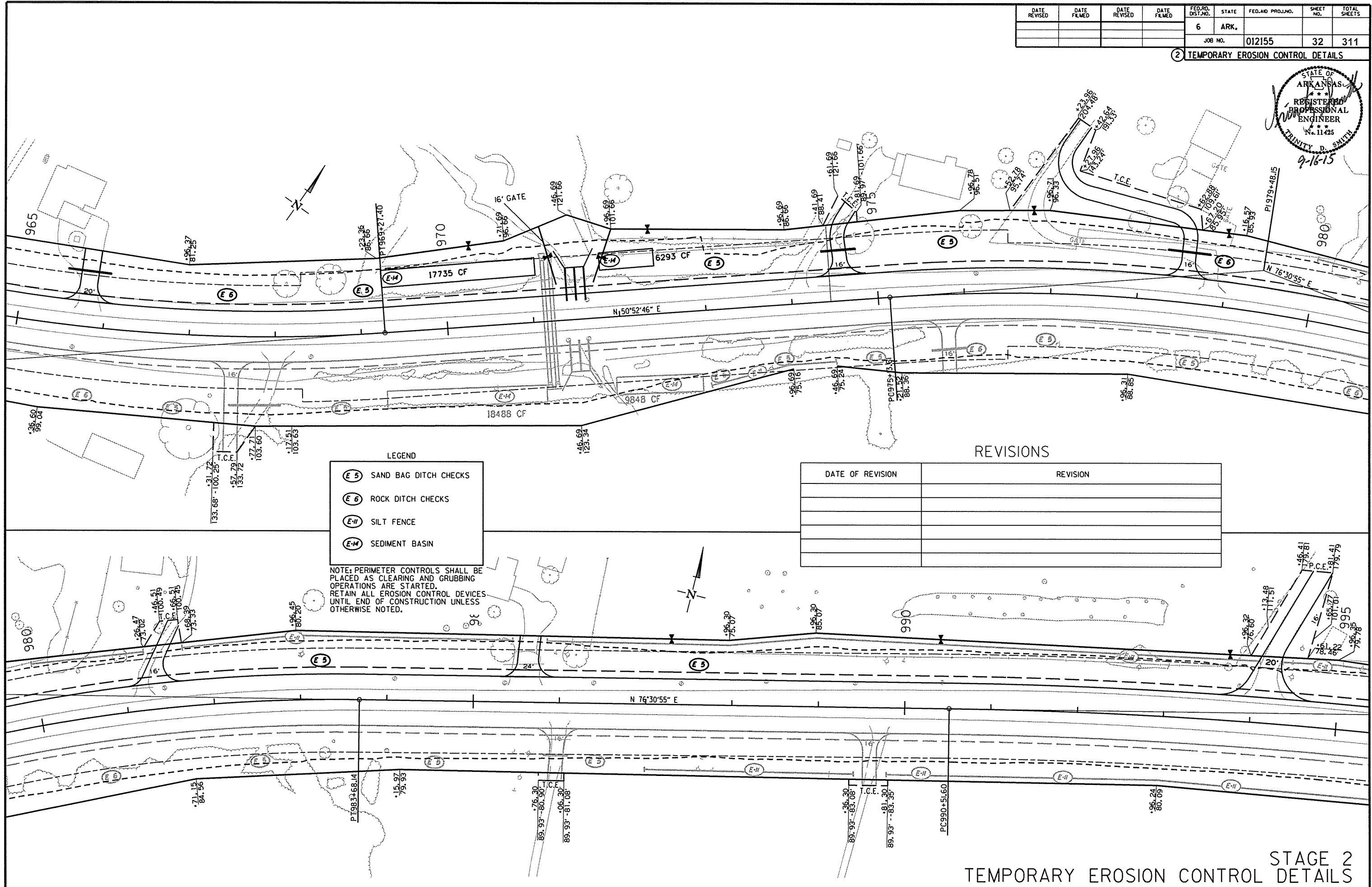
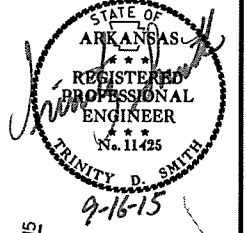
9/4/2015

R012155.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		32	311
				JOB NO.		012155		

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-11)	SILT FENCE
(E-14)	SEDIMENT BASIN

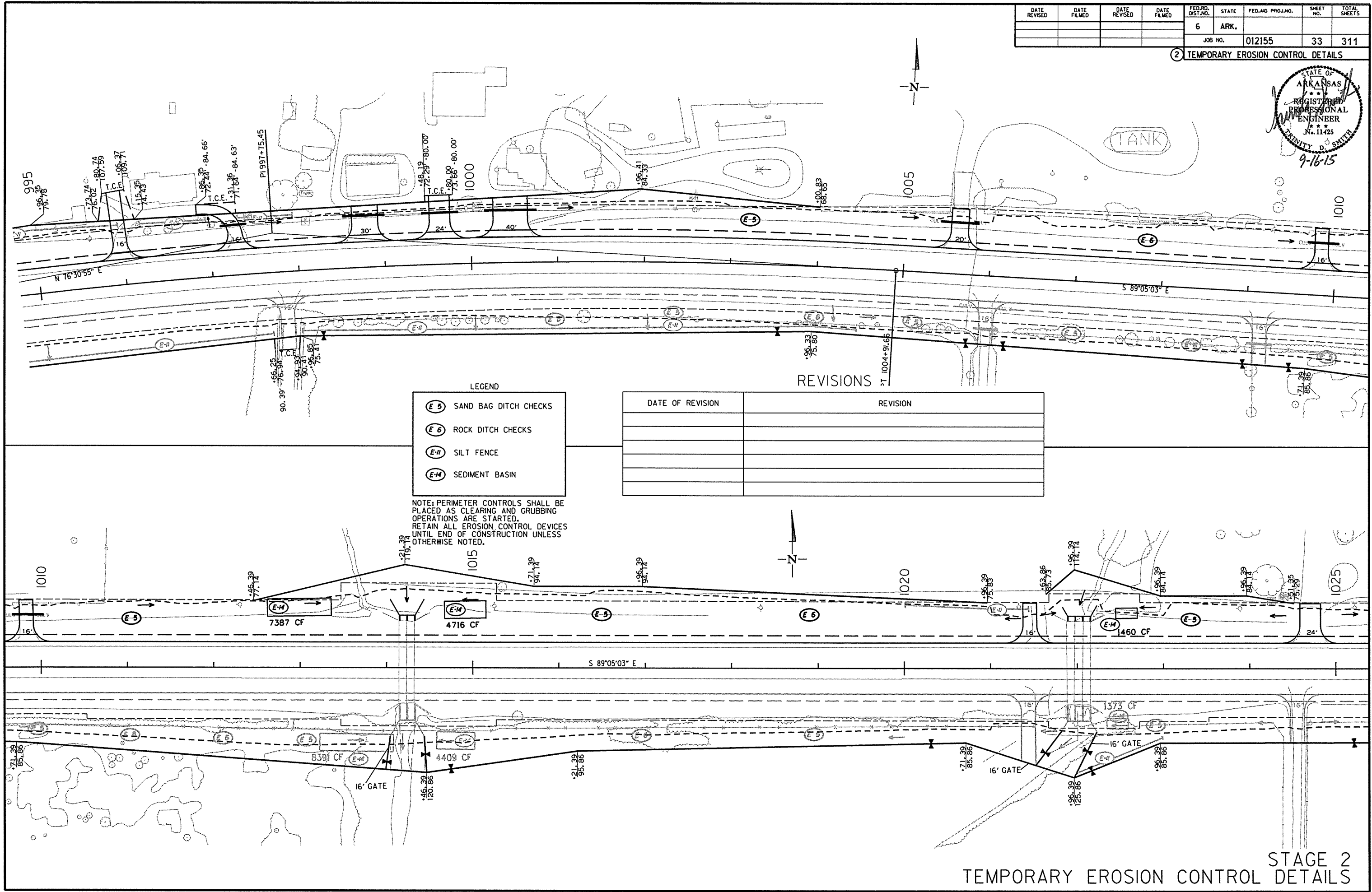
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REVISIONS

DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		33	311

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-11) SILT FENCE
- (E-14) SEDIMENT BASIN

DATE OF REVISION	REVISION

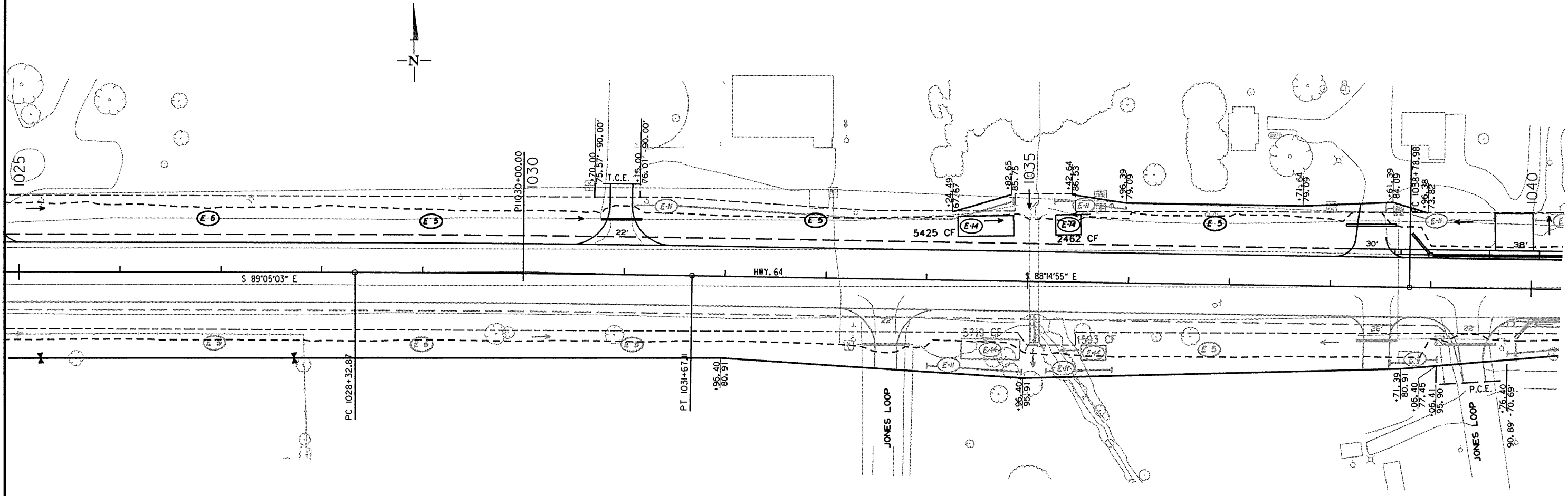
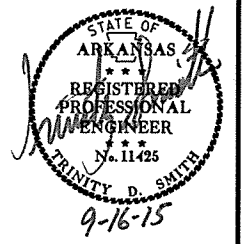
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9/4/2015
R012155.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		34	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

	SAND BAG DITCH CHECKS
	ROCK DITCH CHECKS
	SEDIMENT BASIN

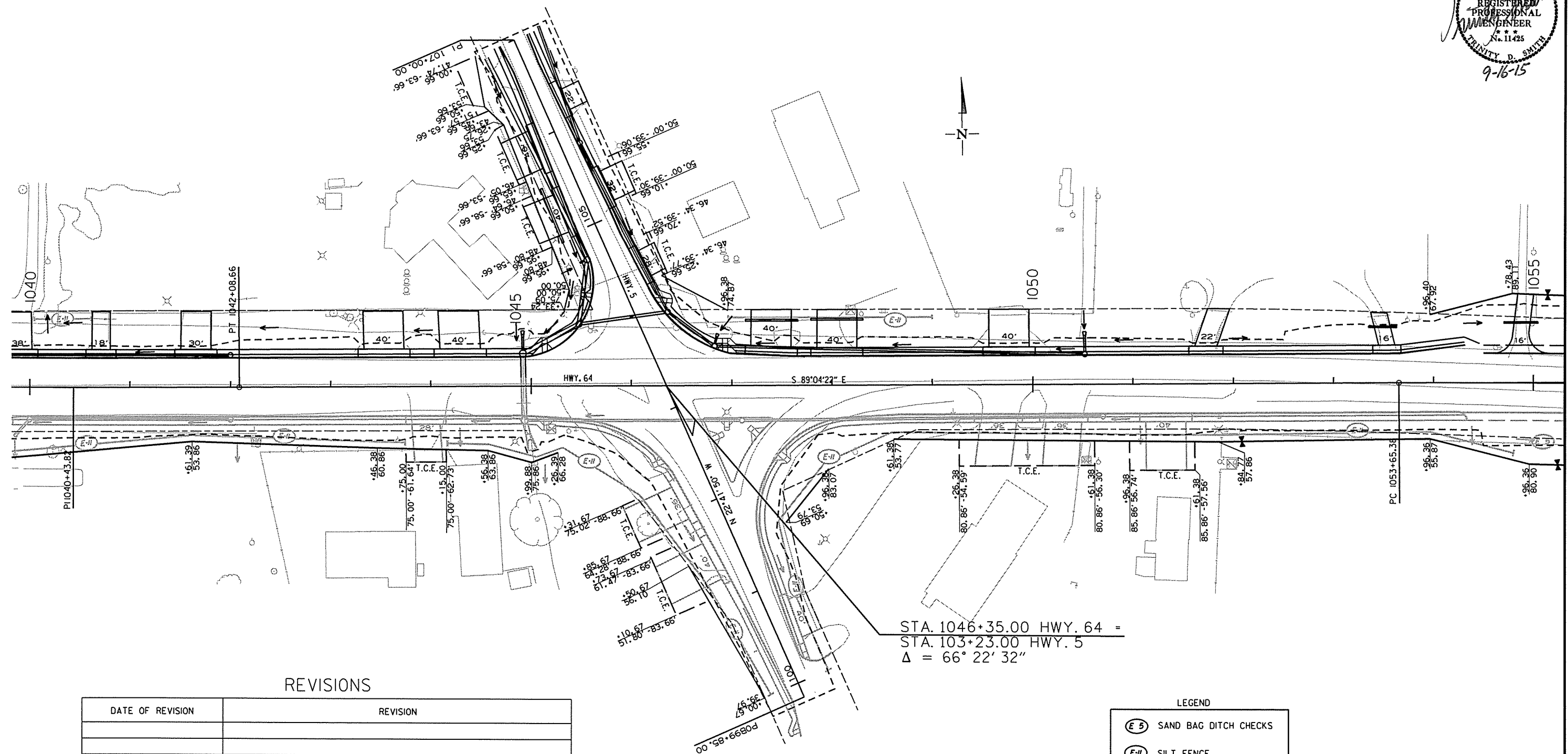
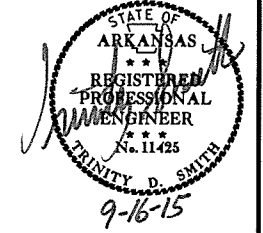
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9/4/2015

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		35	311

② TEMPORARY EROSION CONTROL DETAILS



STA. 1046+35.00 HWY. 64 =
 STA. 103+23.00 HWY. 5
 $\Delta = 66^\circ 22' 32''$

REVISIONS

DATE OF REVISION	REVISION

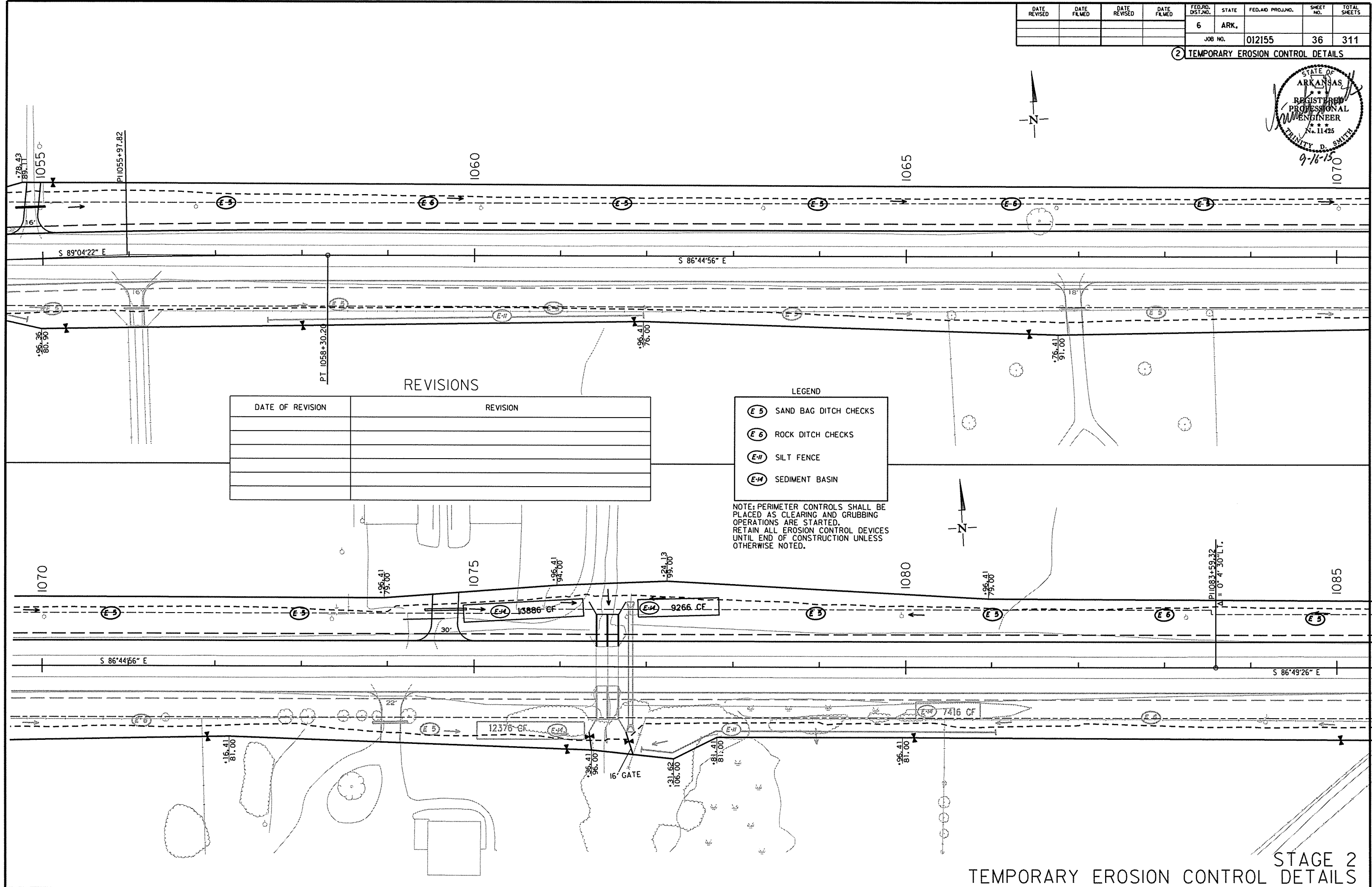
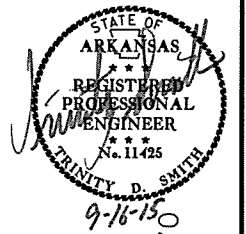
LEGEND

	SAND BAG DITCH CHECKS
	SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		36	311

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

	SAND BAG DITCH CHECKS
	ROCK DITCH CHECKS
	SILT FENCE
	SEDIMENT BASIN

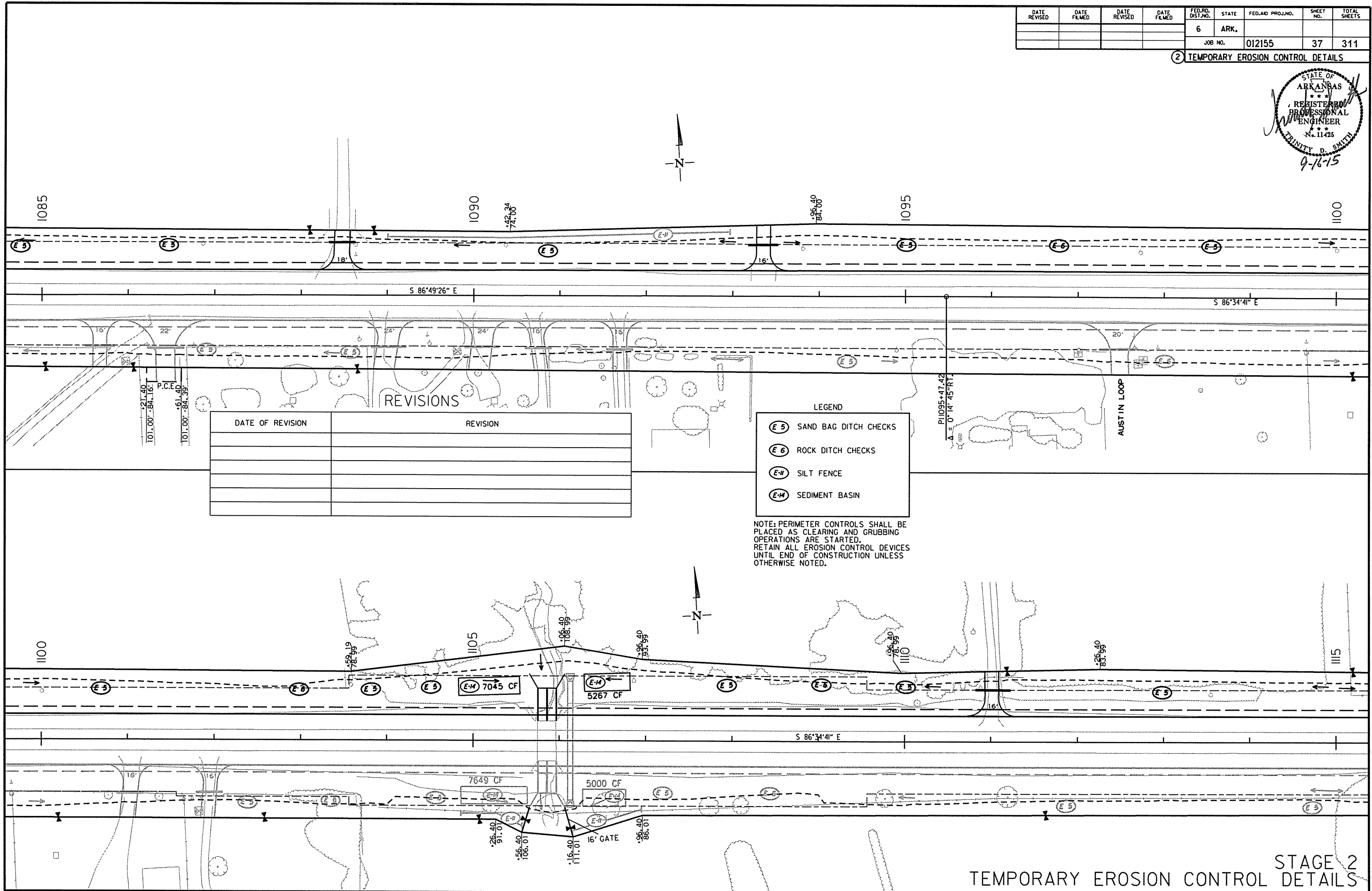
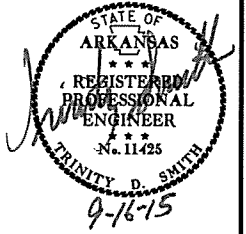
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R012155.DGN 9/4/2015

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		37	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

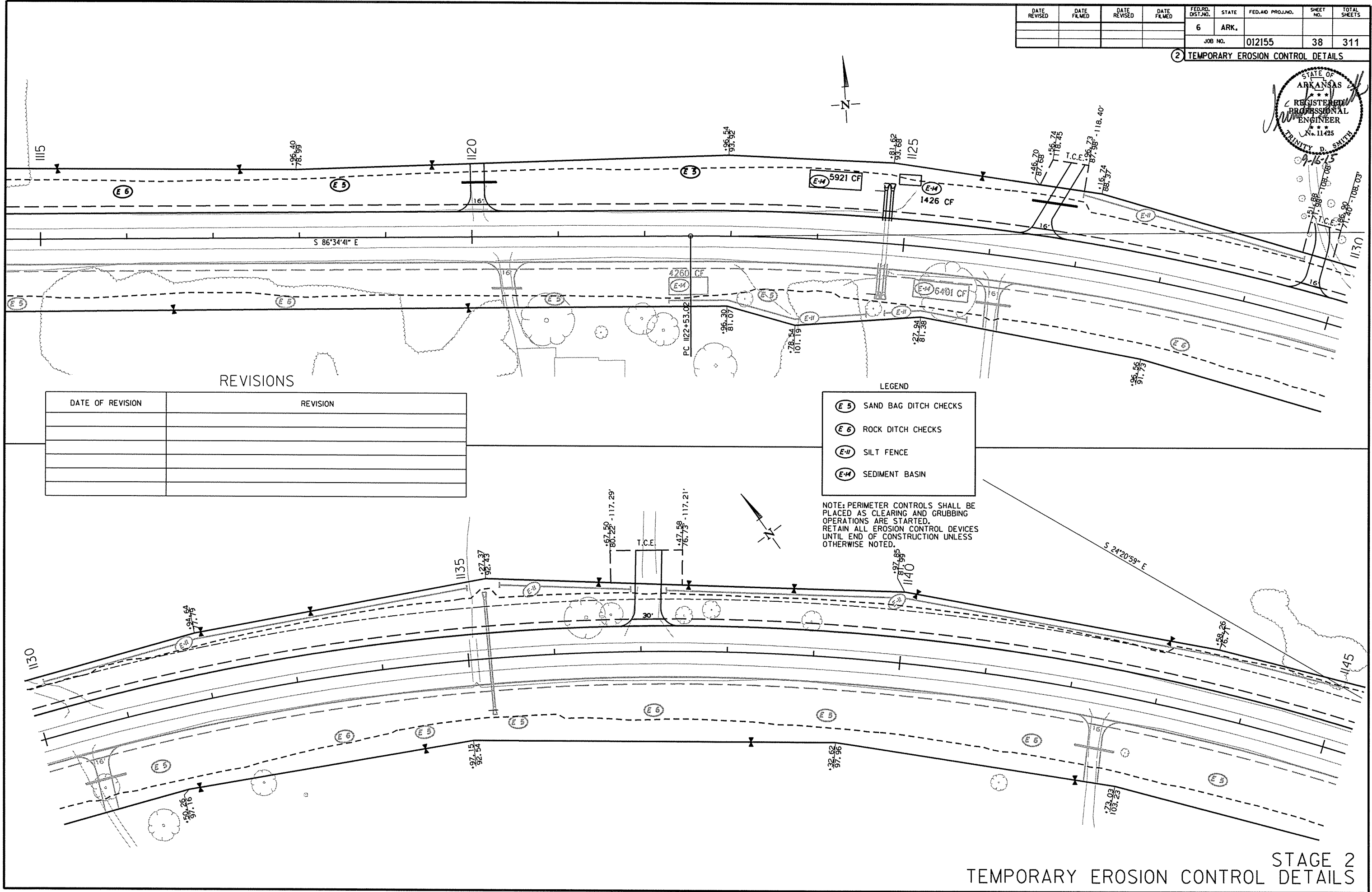
	SAND BAG DITCH CHECKS
	ROCK DITCH CHECKS
	SILT FENCE
	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

R012155.DGN 9/4/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							38	311

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-III) SEDIMENT BASIN

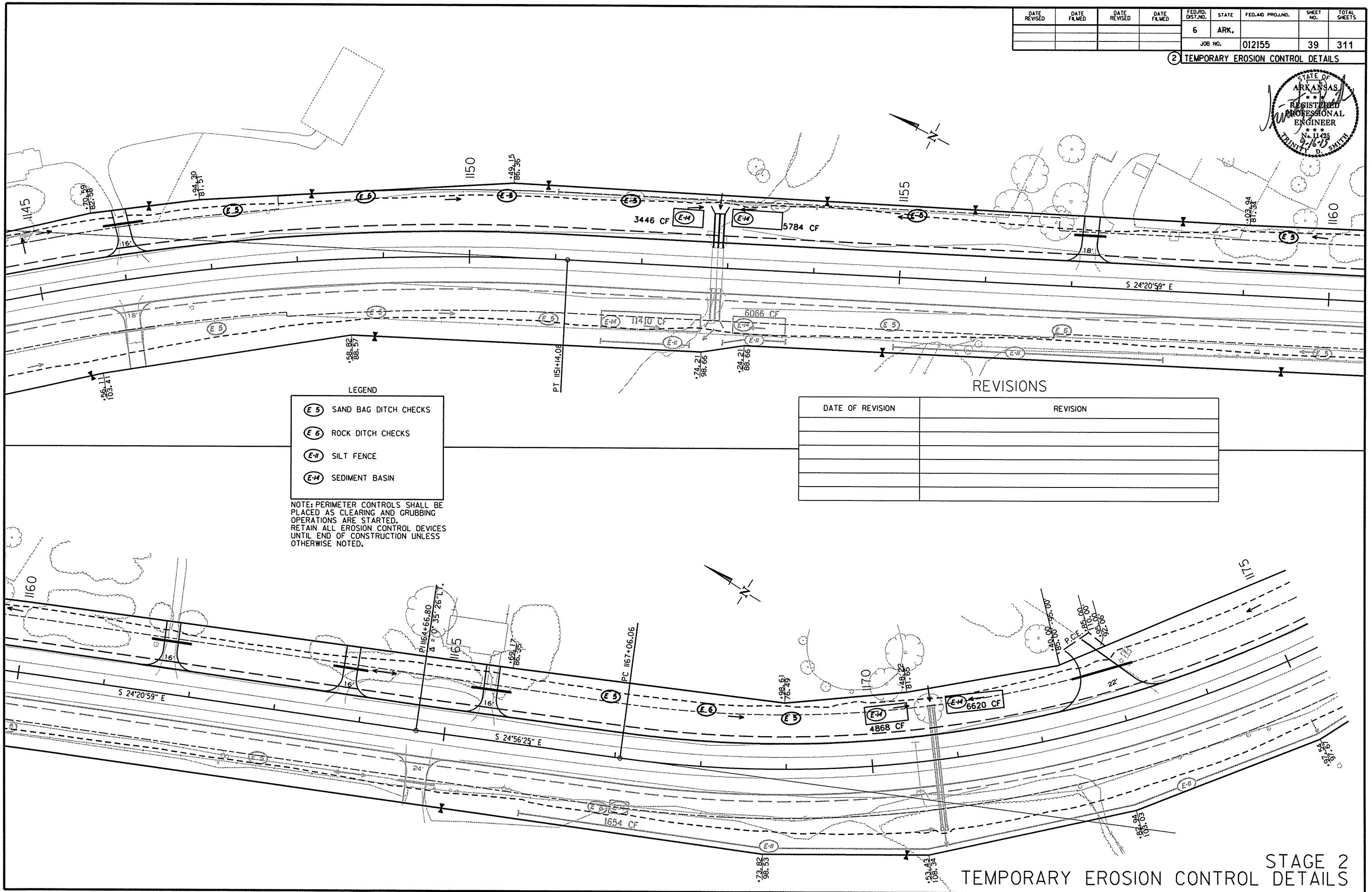
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

R012155.DGN 9/4/2015

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	39	311

2 TEMPORARY EROSION CONTROL DETAILS



- LEGEND
- (E-5) SAND BAG DITCH CHECKS
 - (E-6) ROCK DITCH CHECKS
 - (E-H) SILT FENCE
 - (E-M) SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

DATE OF REVISION	REVISION

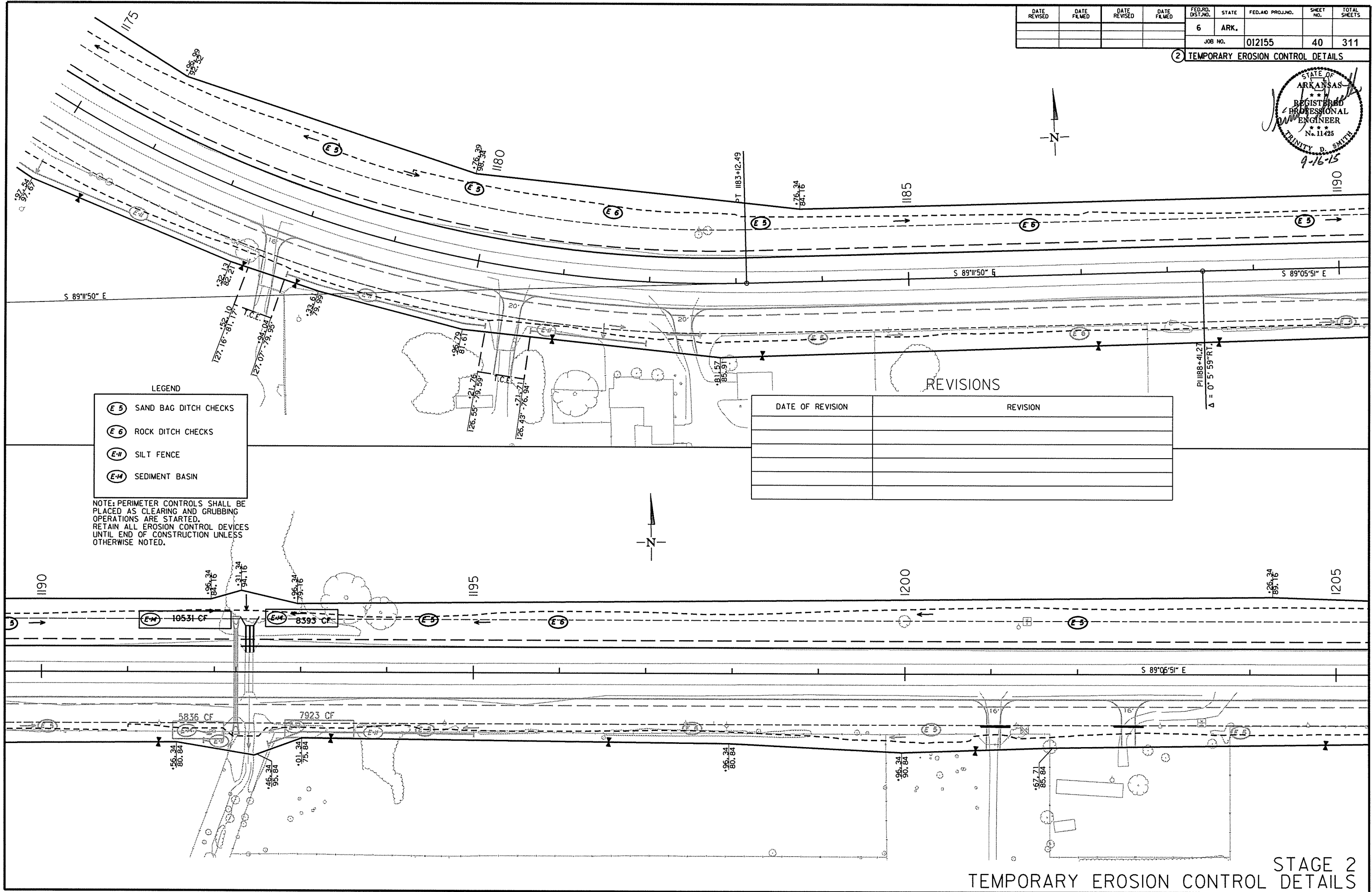
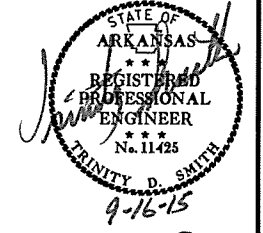
9/4/2015

R012155.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							40	311

② TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E 5)	SAND BAG DITCH CHECKS
(E 6)	ROCK DITCH CHECKS
(E-11)	SILT FENCE
(E-14)	SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

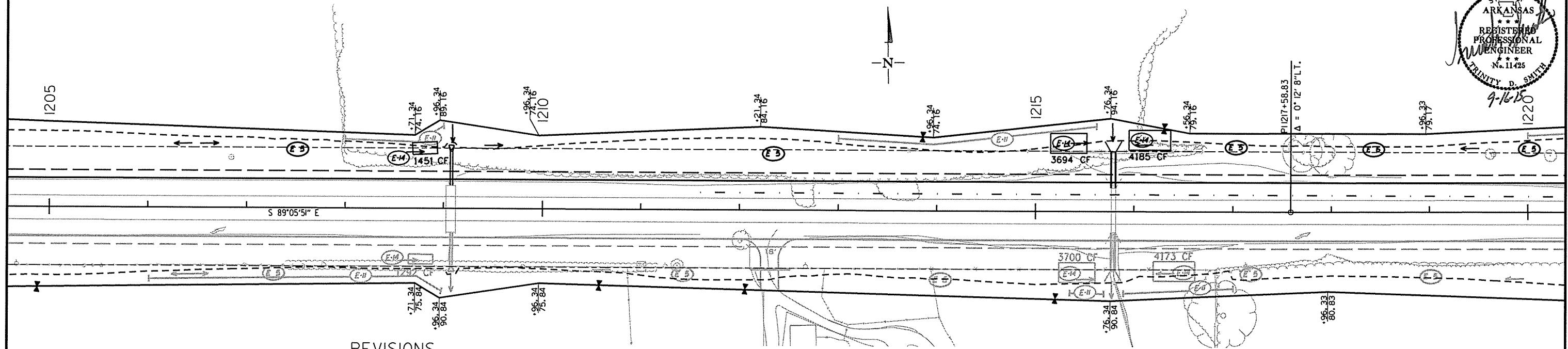
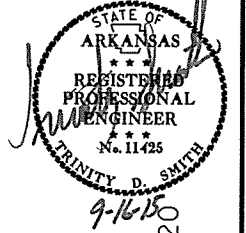
DATE OF REVISION	REVISION

9/4/2015 R012155.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	41	311

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

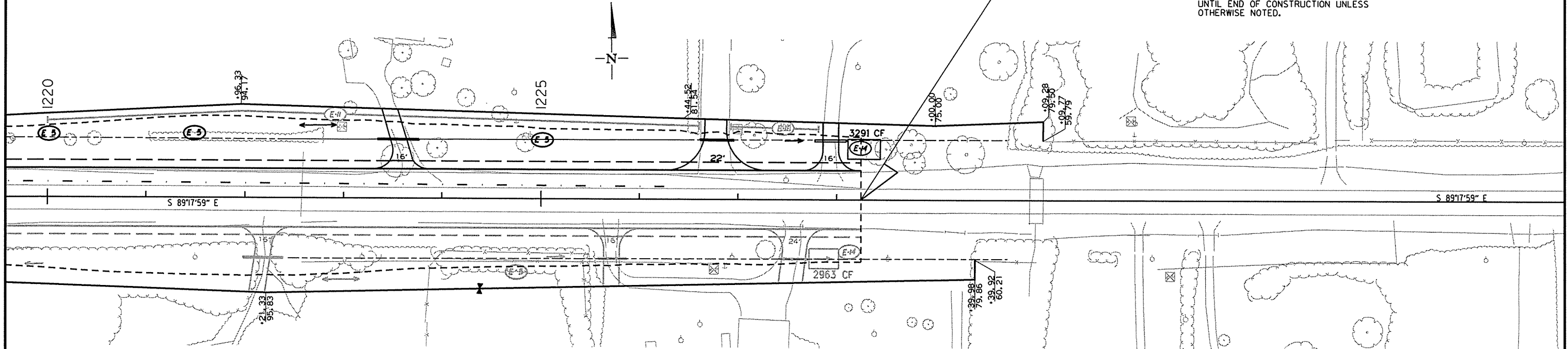
DATE OF REVISION	REVISION

LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-11) SILT FENCE
- (E-14) SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

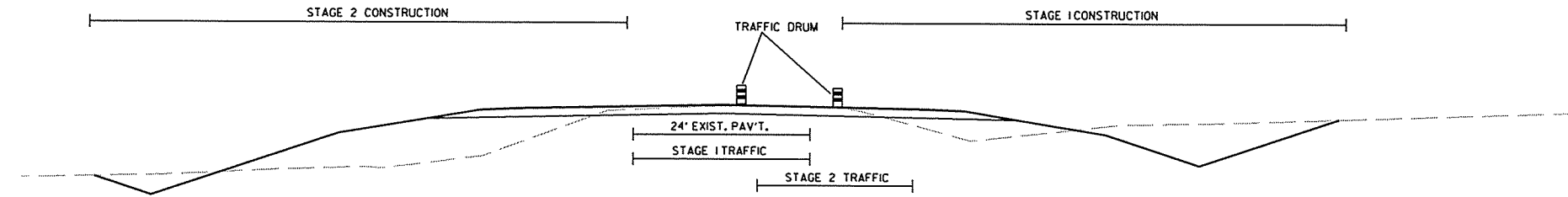
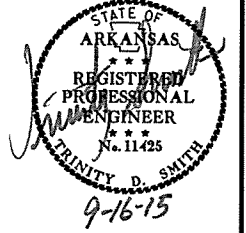
STA. 1228+25.00
END JOB 012155



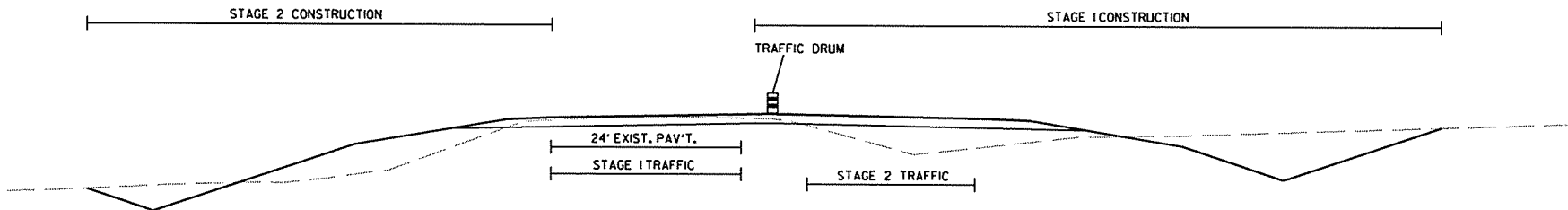
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						012155	42	311

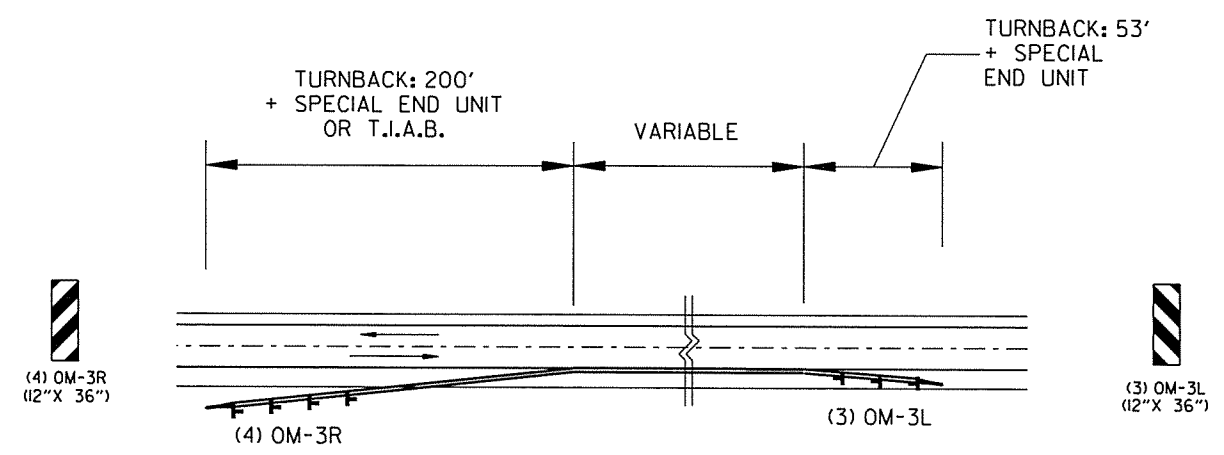
② MAINTENANCE OF TRAFFIC DETAILS



DETAIL FOR STAGE CONSTRUCTION
 STA. 839+25.00 TO STA. 873+26.67
 STA. 1053+65.38 TO STA. 1228+25.00



DETAIL FOR STAGE CONSTRUCTION
 STA. 873+26.67 TO STA. 1053+65.38

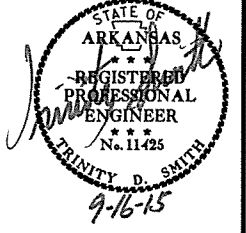


REFER ALSO TO STANDARD DRAWING TC-5 FOR DETAILS OF PLACEMENT OF P.C.C.B. TURNBACKS.
 NOTE: OM-3L & OM-3R SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

DETAIL OF OBJECT MARKERS
 AT PRECAST CONCRETE BARRIER TURNBACKS

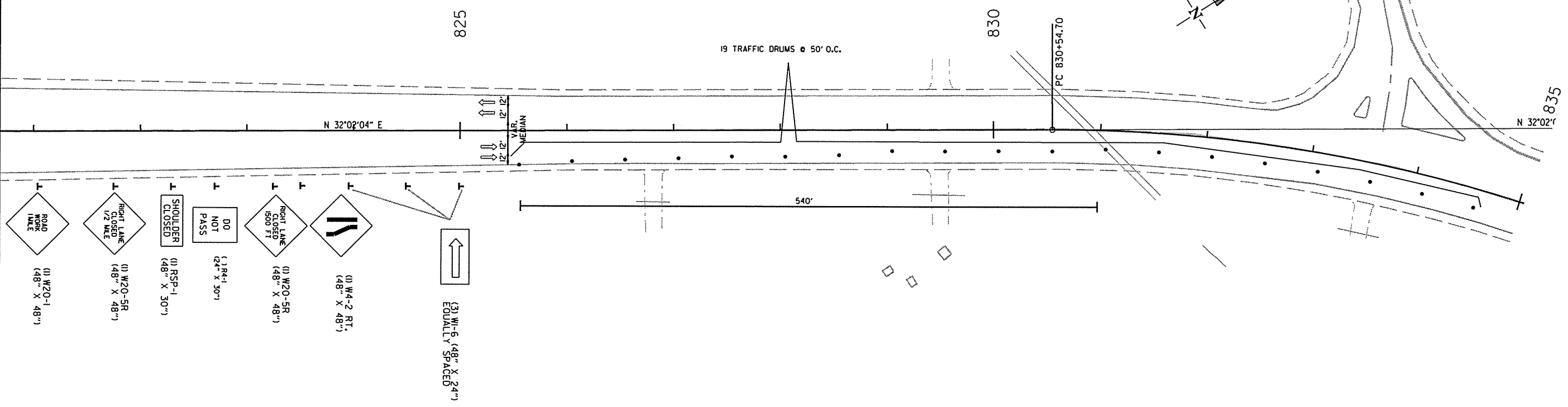
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		43	311

② MAINTENANCE OF TRAFFIC DETAILS



DO NOT PASS (2) R4-1 (24" X 30") IF AND WHERE DIRECTED BY THE ENGINEER

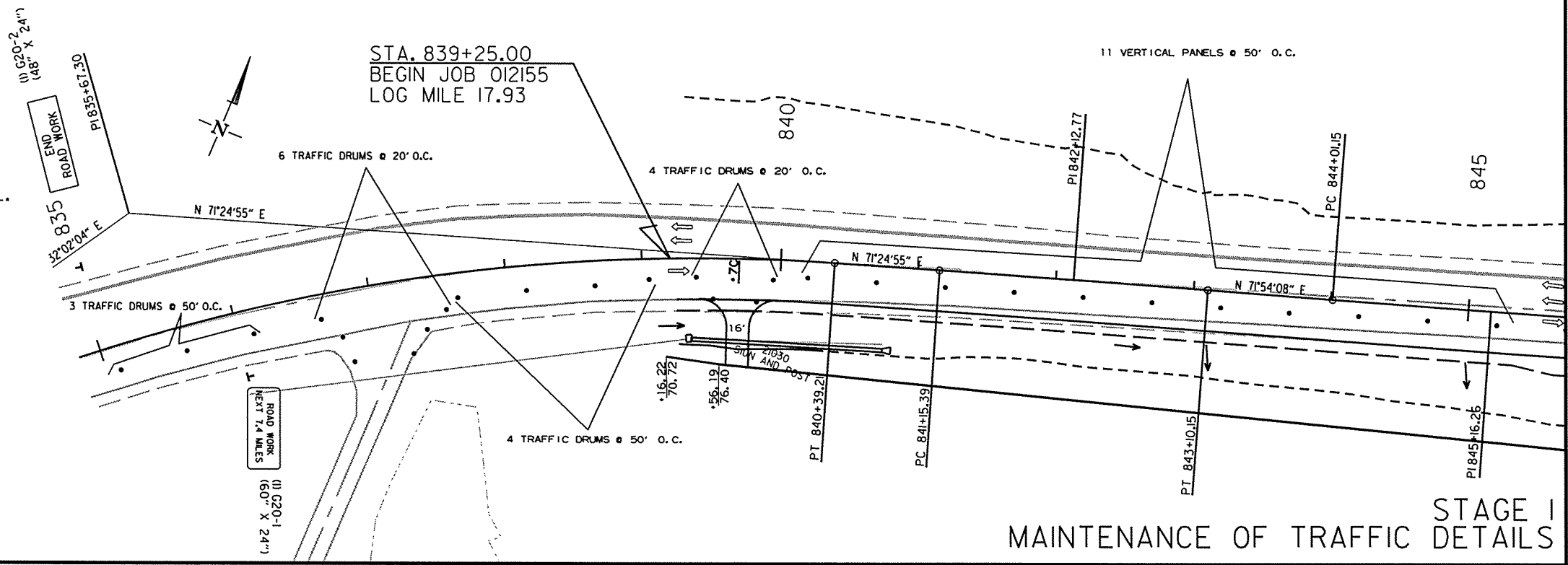
SHOULDER CLOSED (2) RSP-1 (48" X 30") IF AND WHERE DIRECTED BY THE ENGINEER



SEQUENCE OF CONSTRUCTION

STAGE 1
 MAINTAIN TRAFFIC ON EXISTING HWY. 64
 NOTCH AND WIDEN R.M.L.
 NOTCH AND WIDEN HWY. 5 SOUTH OF HWY. 64
 INSTALL TRAFFIC SIGNAL

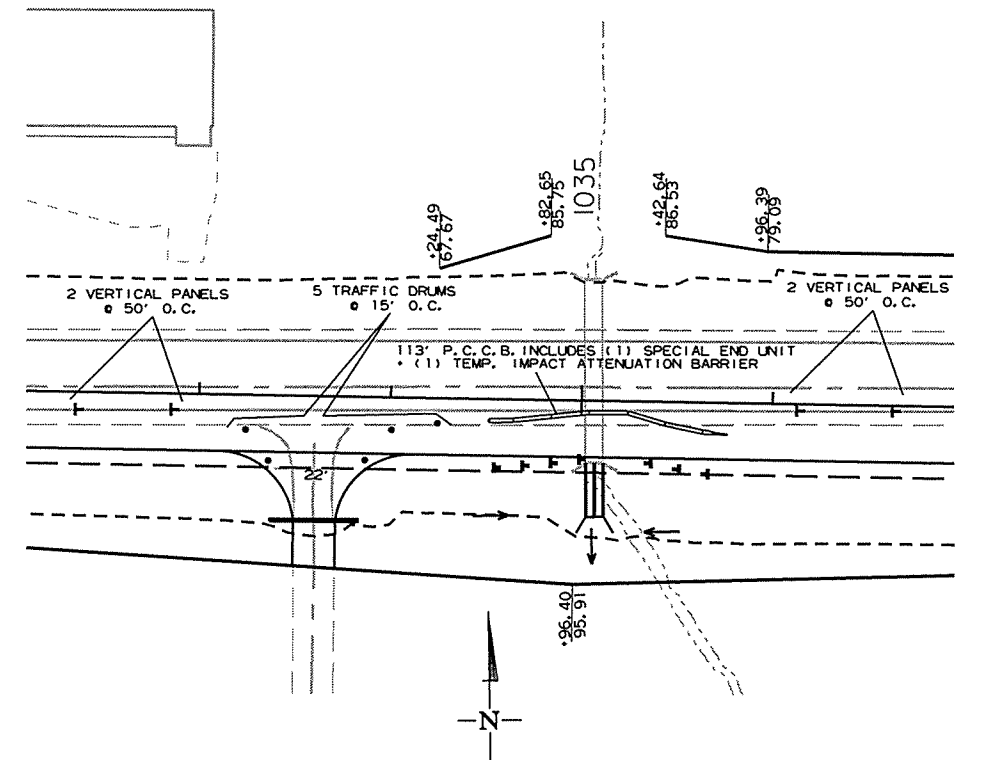
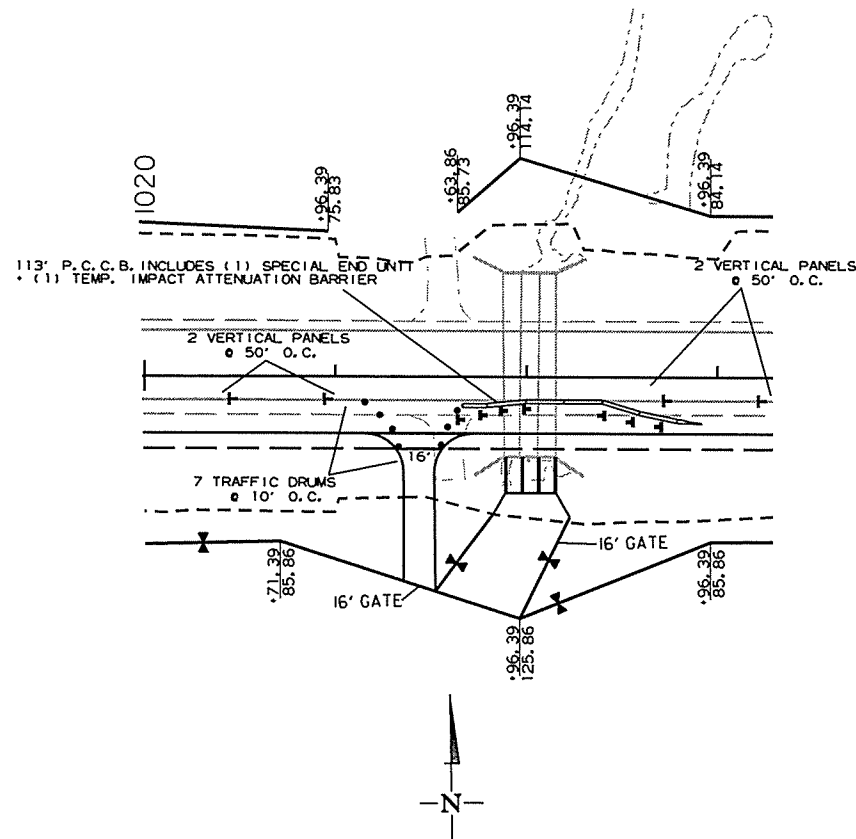
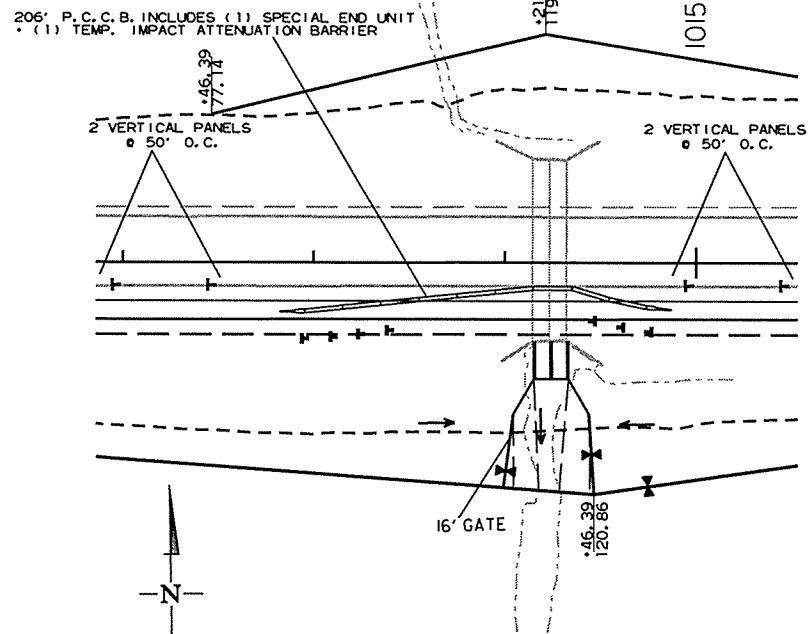
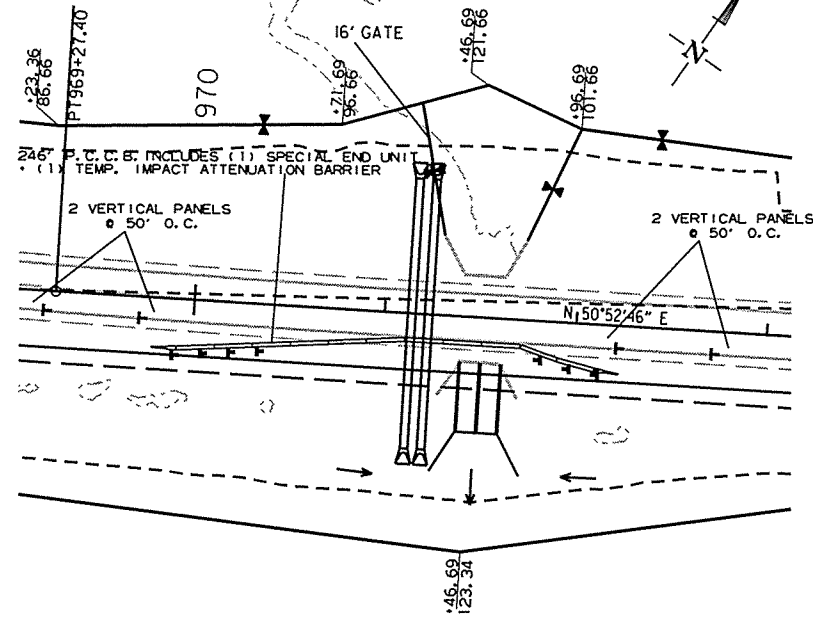
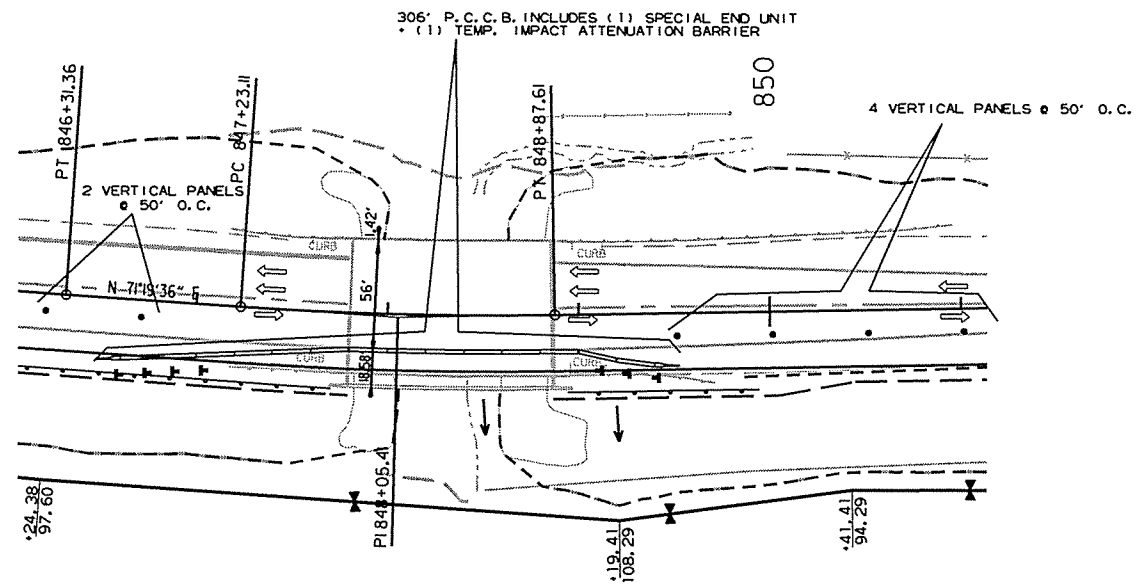
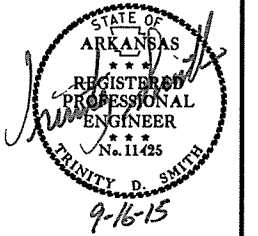
STAGE 2
 MAINTAIN TRAFFIC ON NEWLY CONSTRUCTED HWY. 64 R.M.L.
 NOTCH AND WIDEN L.M.L.
 NOTCH AND WIDEN HWY. 5 NORTH OF HWY. 64



STAGE I
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	44	311

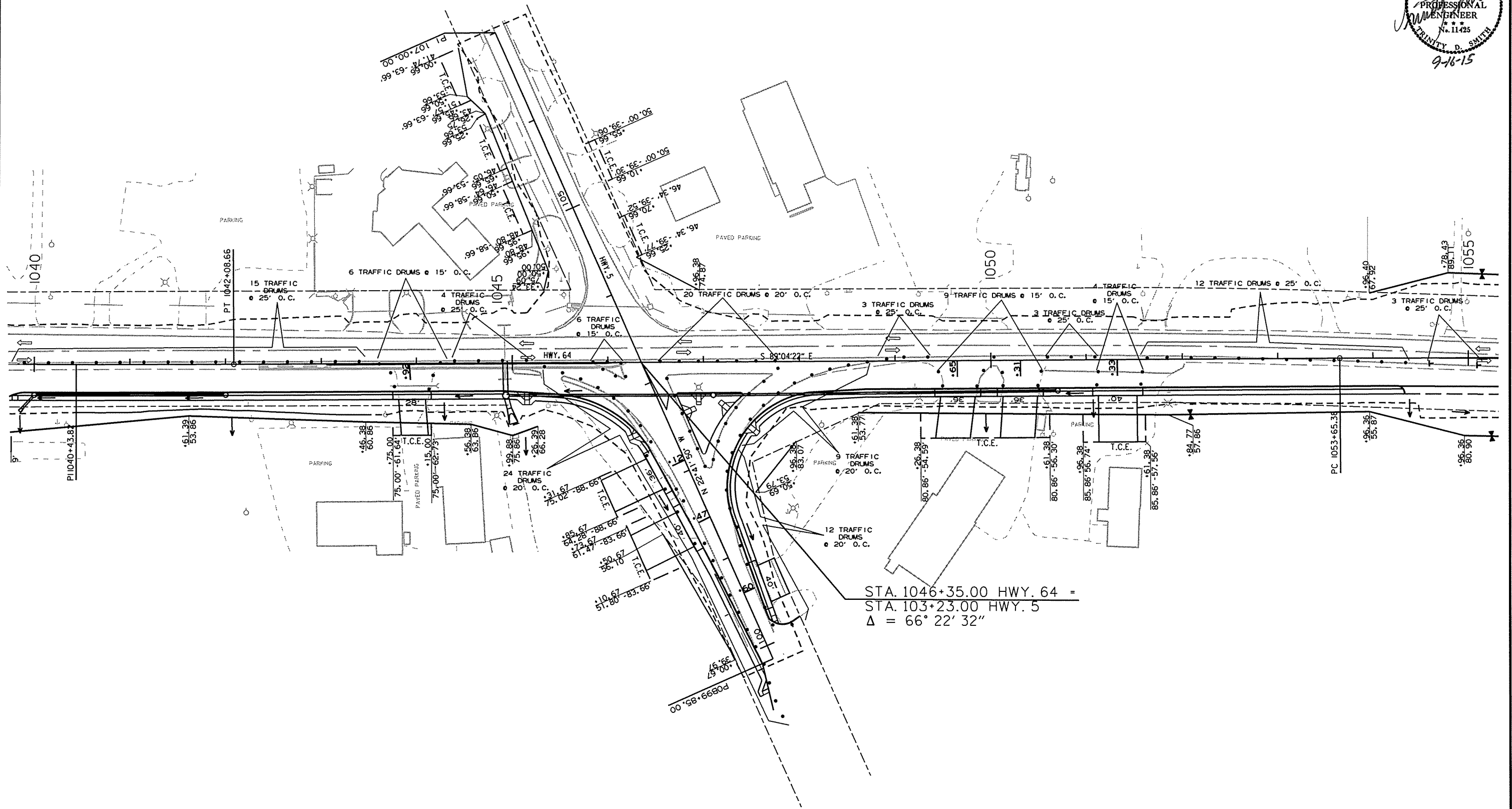
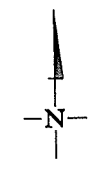
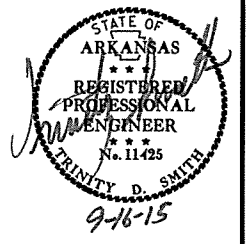
② MAINTENANCE OF TRAFFIC DETAILS



STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		45	311
				JOB NO.		012155		

② MAINTENANCE OF TRAFFIC DETAILS

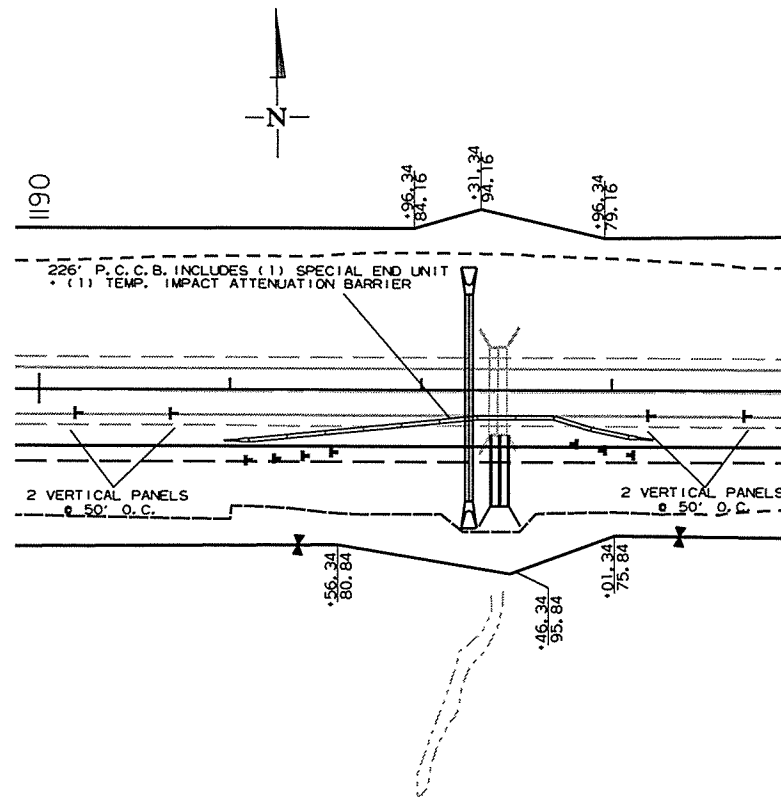
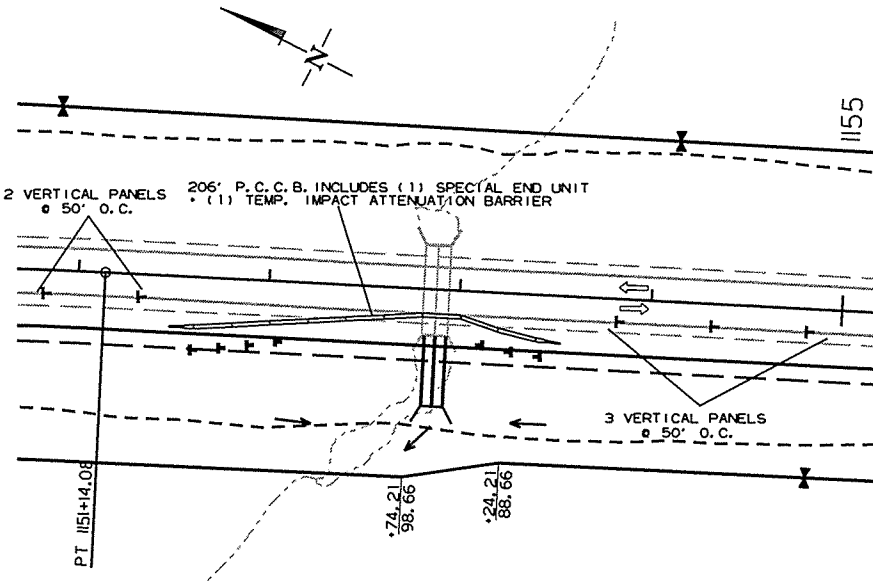
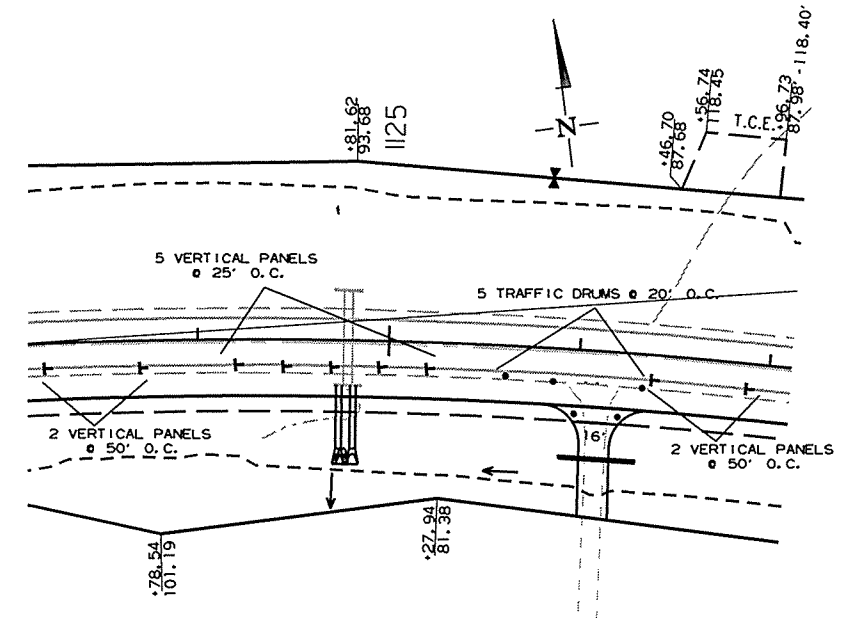
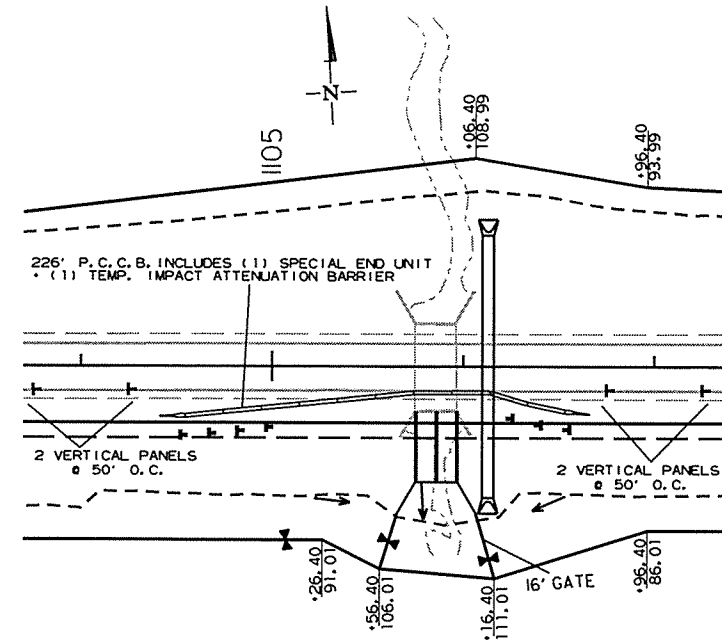
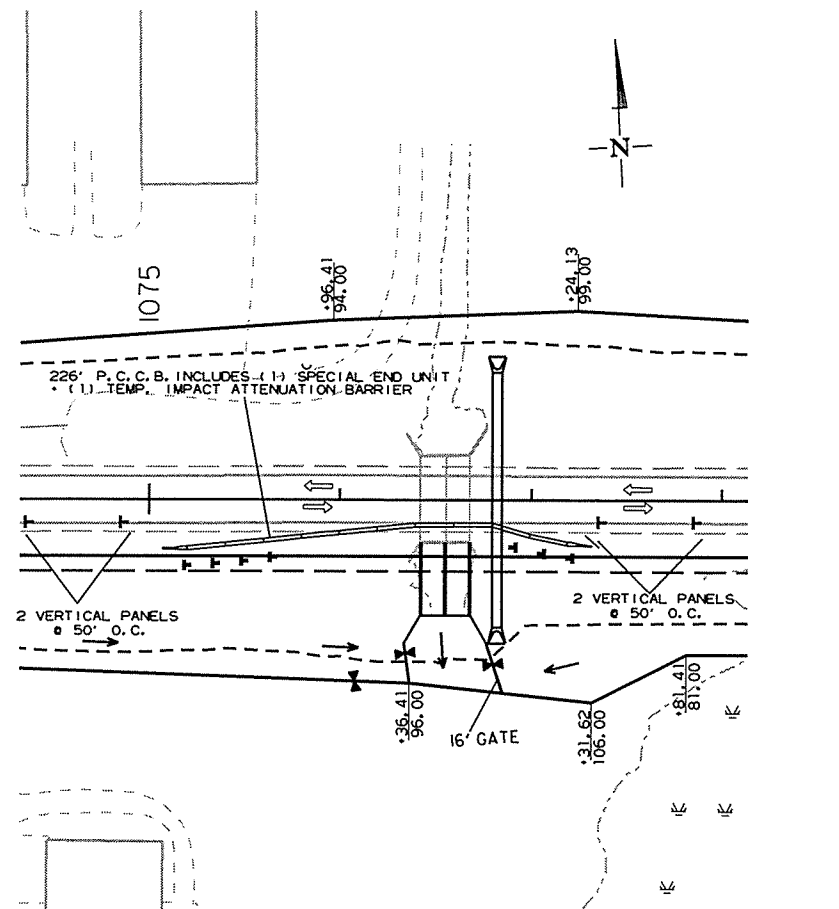
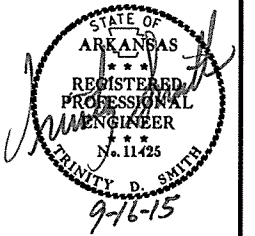


9/4/2015
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STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	46	311

② MAINTENANCE OF TRAFFIC DETAILS



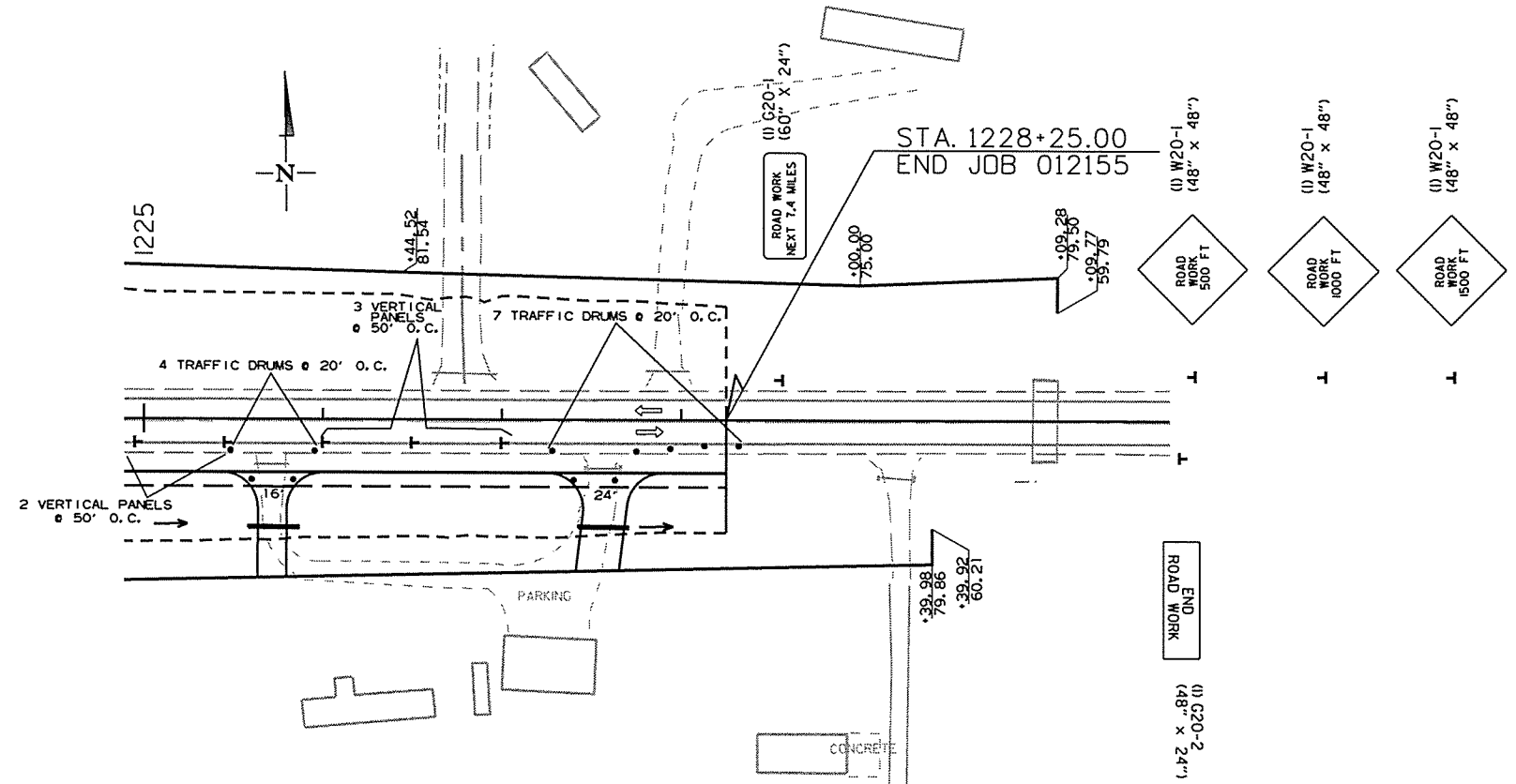
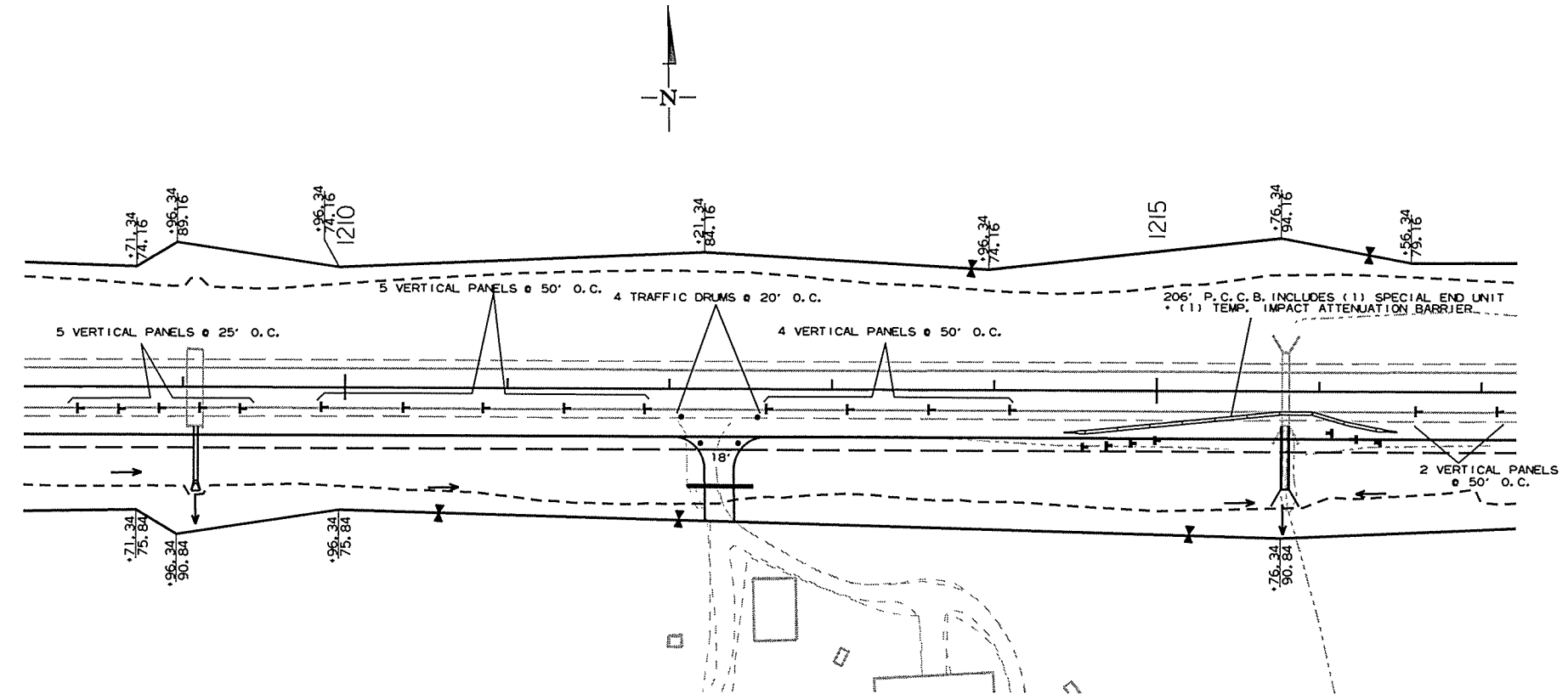
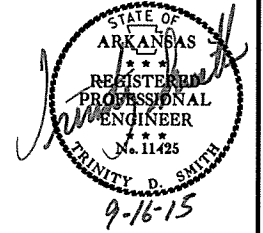
9/16/2015

R012155.DGN

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		47	311

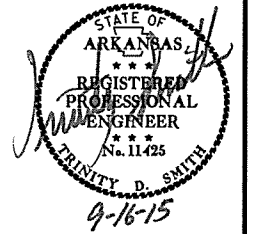
② MAINTENANCE OF TRAFFIC DETAILS



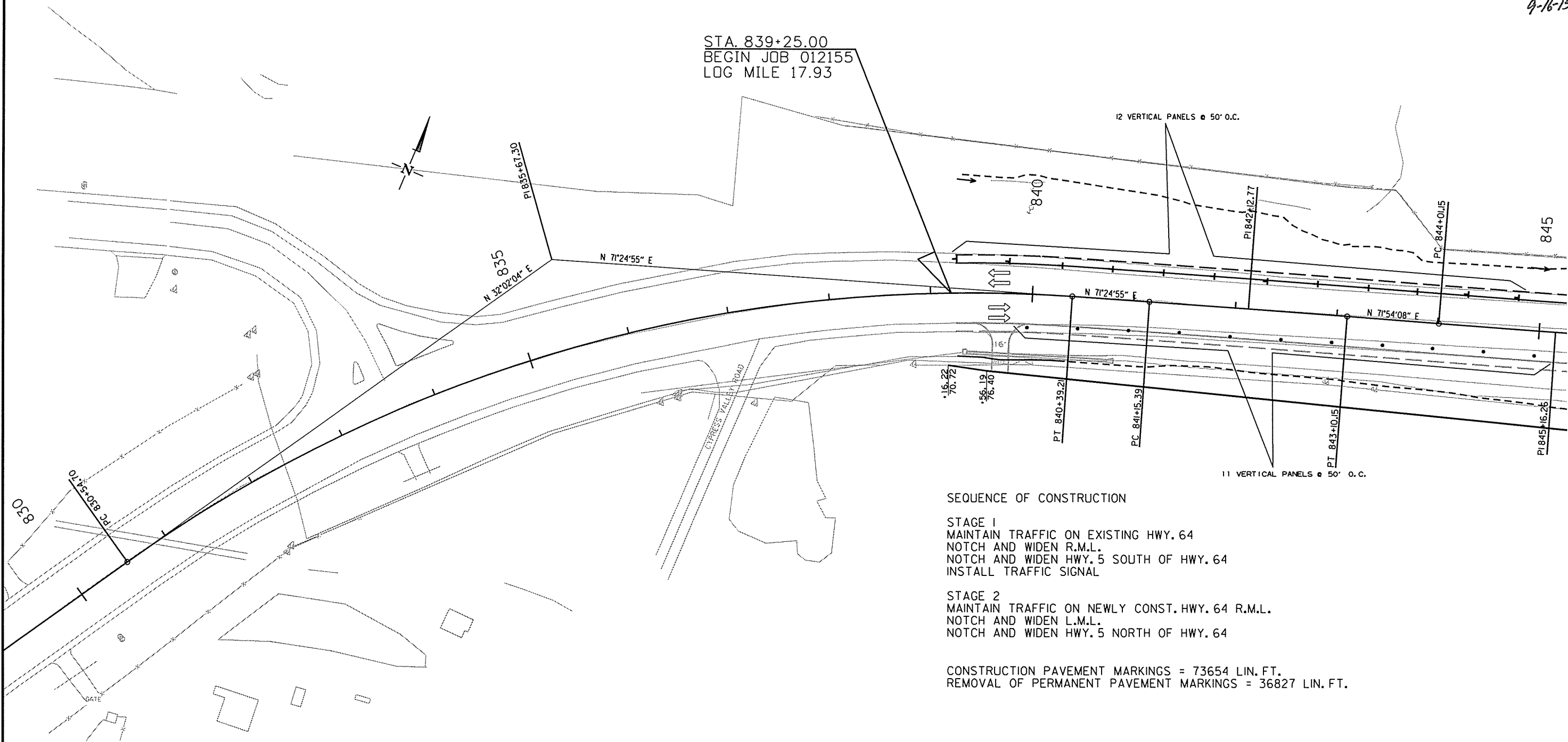
STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		48	311

② MAINTENANCE OF TRAFFIC DETAILS



STA. 839+25.00
 BEGIN JOB 012155
 LOG MILE 17.93



SEQUENCE OF CONSTRUCTION

STAGE 1
 MAINTAIN TRAFFIC ON EXISTING HWY. 64
 NOTCH AND WIDEN R.M.L.
 NOTCH AND WIDEN HWY. 5 SOUTH OF HWY. 64
 INSTALL TRAFFIC SIGNAL

STAGE 2
 MAINTAIN TRAFFIC ON NEWLY CONST. HWY. 64 R.M.L.
 NOTCH AND WIDEN L.M.L.
 NOTCH AND WIDEN HWY. 5 NORTH OF HWY. 64

CONSTRUCTION PAVEMENT MARKINGS = 73654 LIN. FT.
 REMOVAL OF PERMANENT PAVEMENT MARKINGS = 36827 LIN. FT.

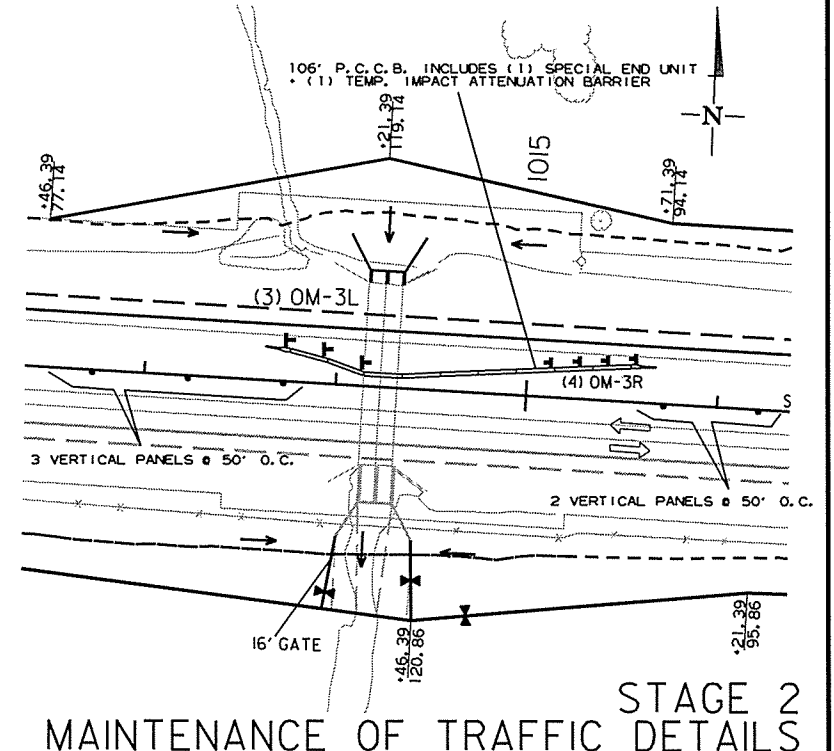
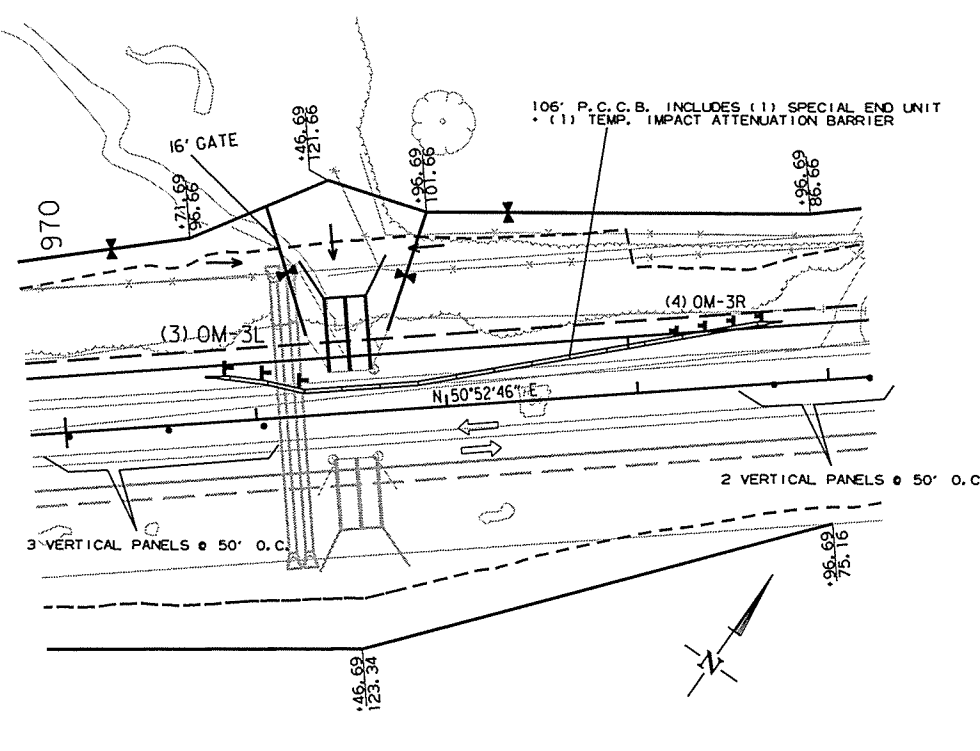
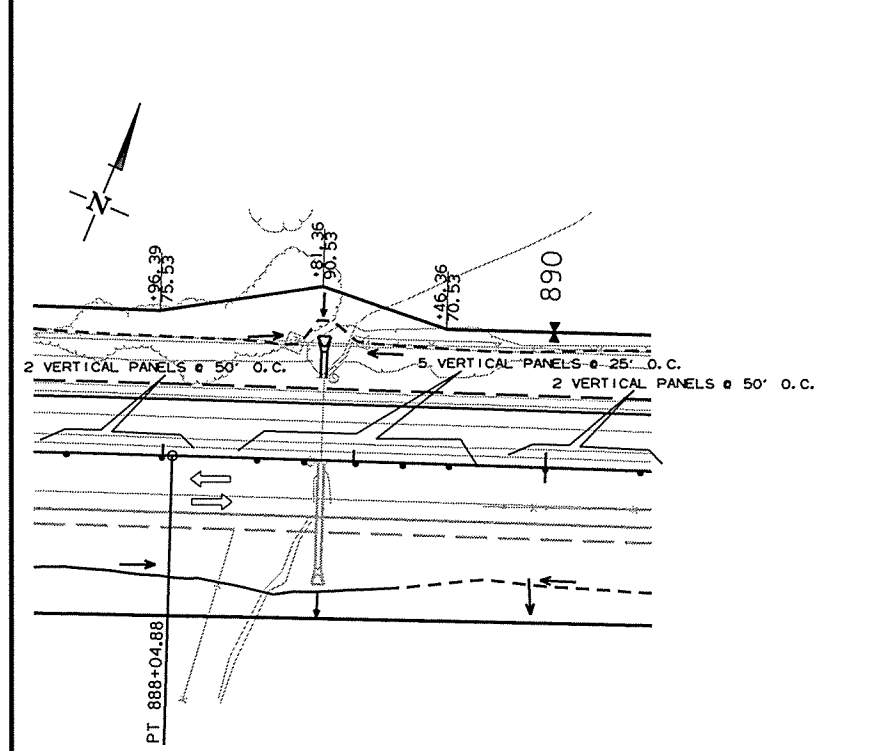
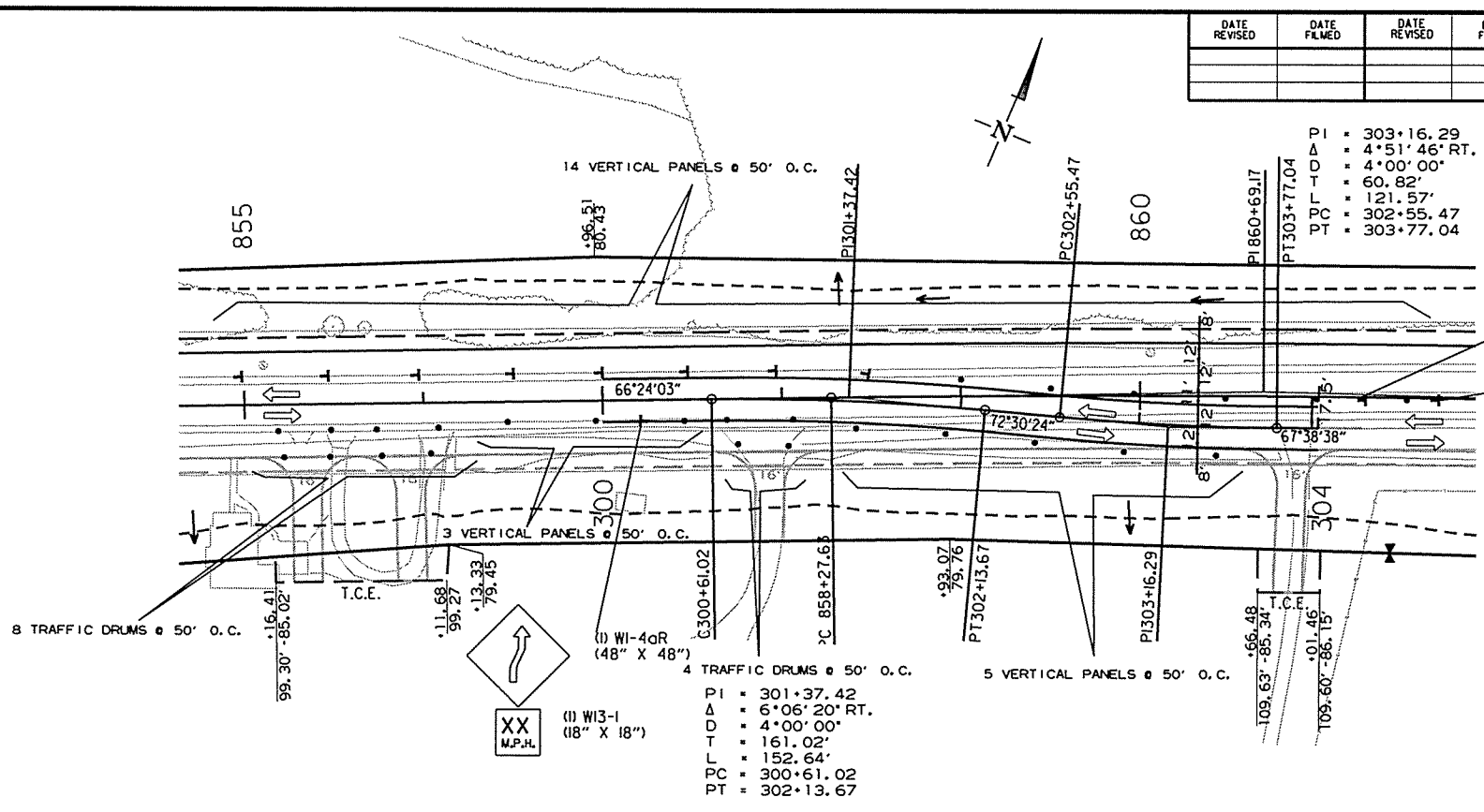
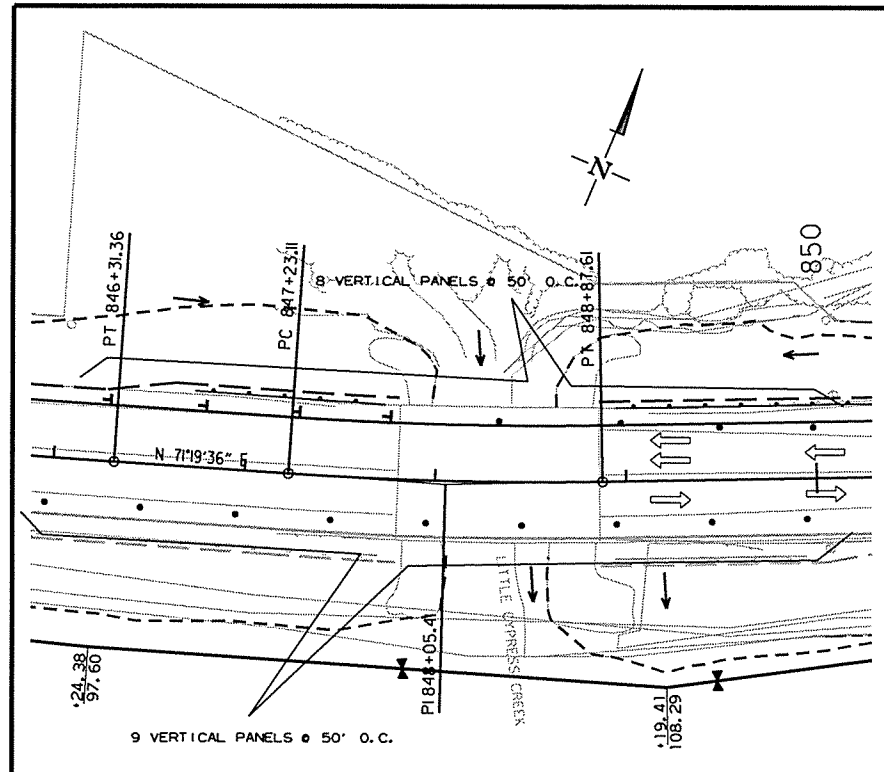
9/4/2015

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STAGE 2
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							49	311

2 MAINTENANCE OF TRAFFIC DETAILS

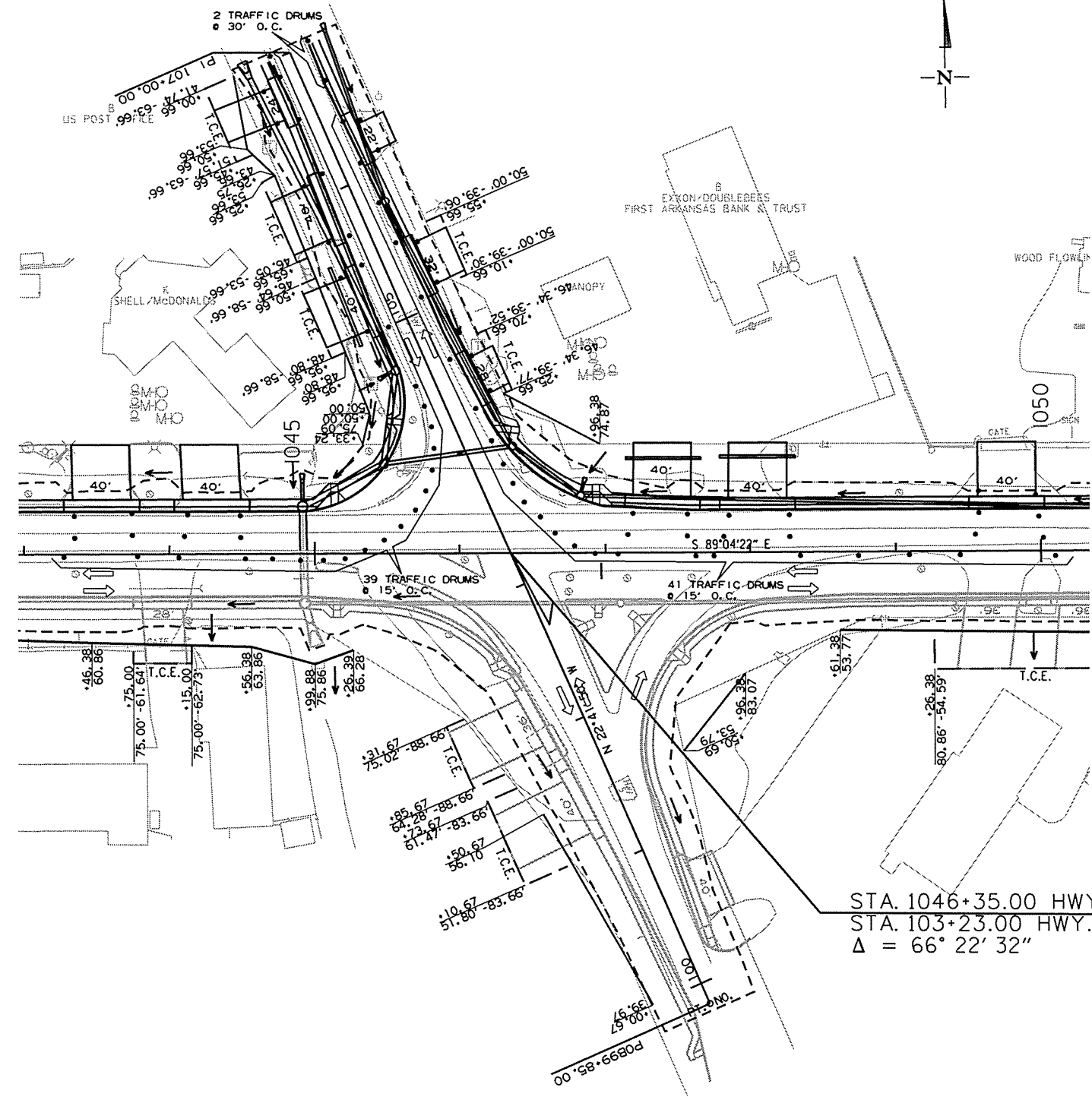
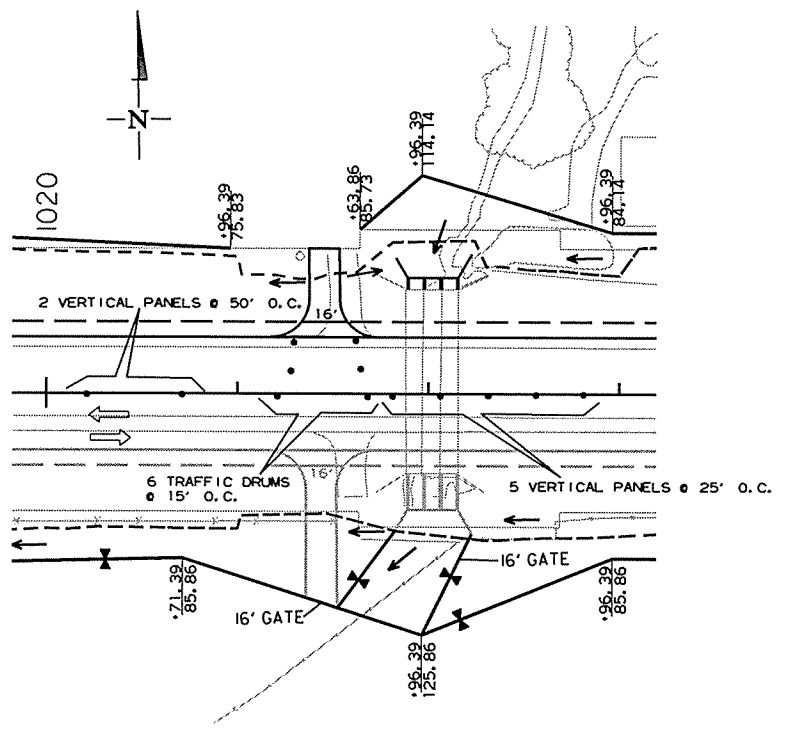
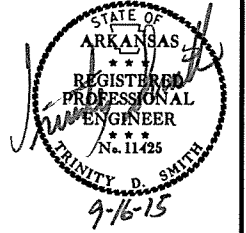


STAGE 2 MAINTENANCE OF TRAFFIC DETAILS

9/16/2015
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	50 311

② MAINTENANCE OF TRAFFIC DETAILS

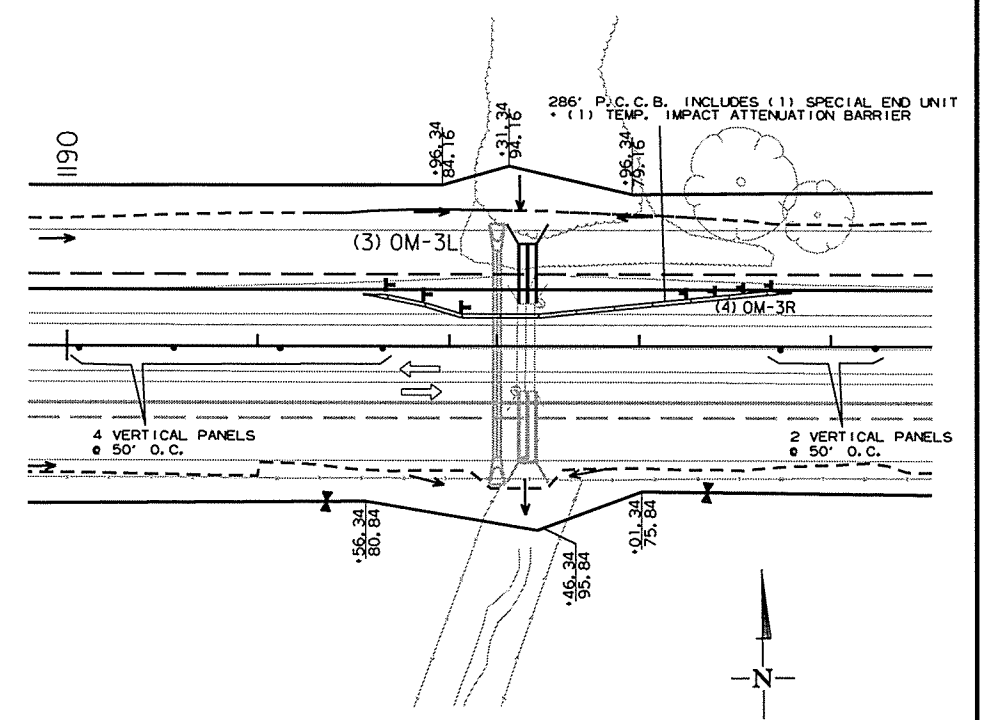
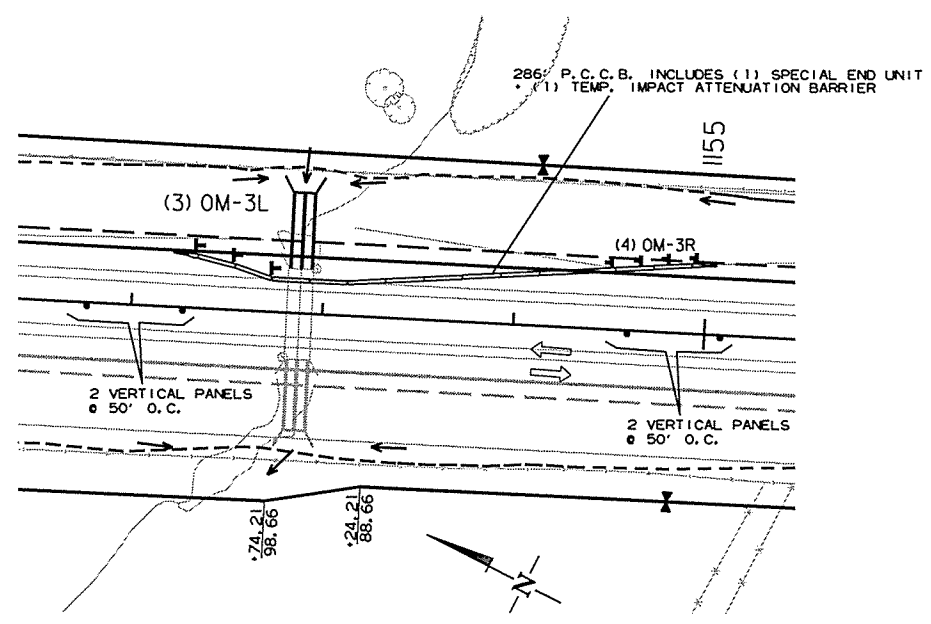
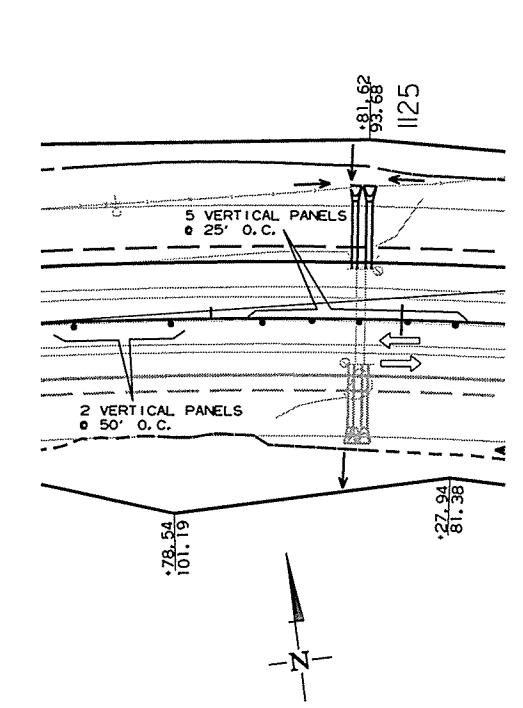
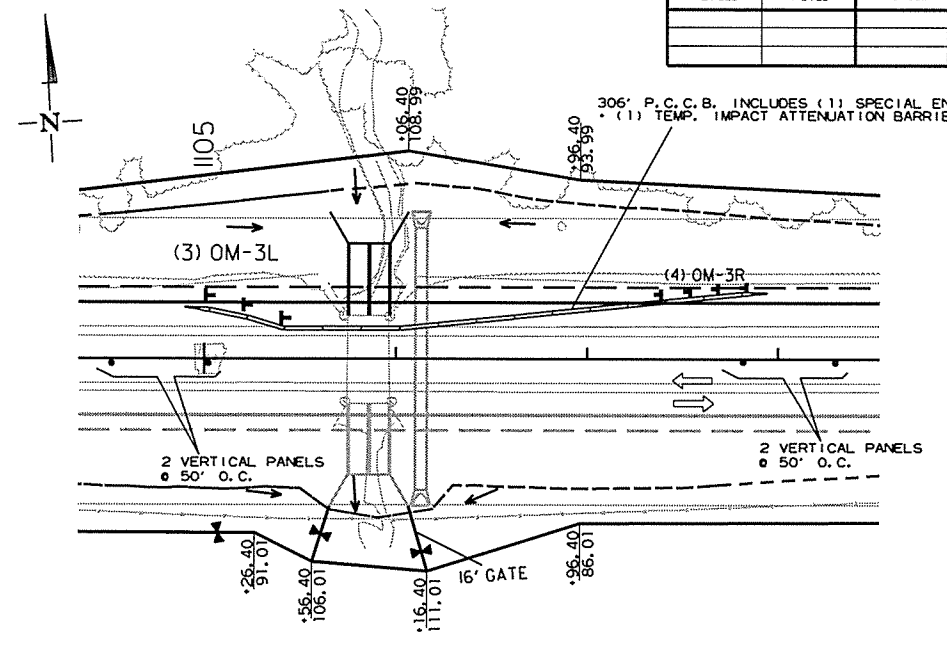
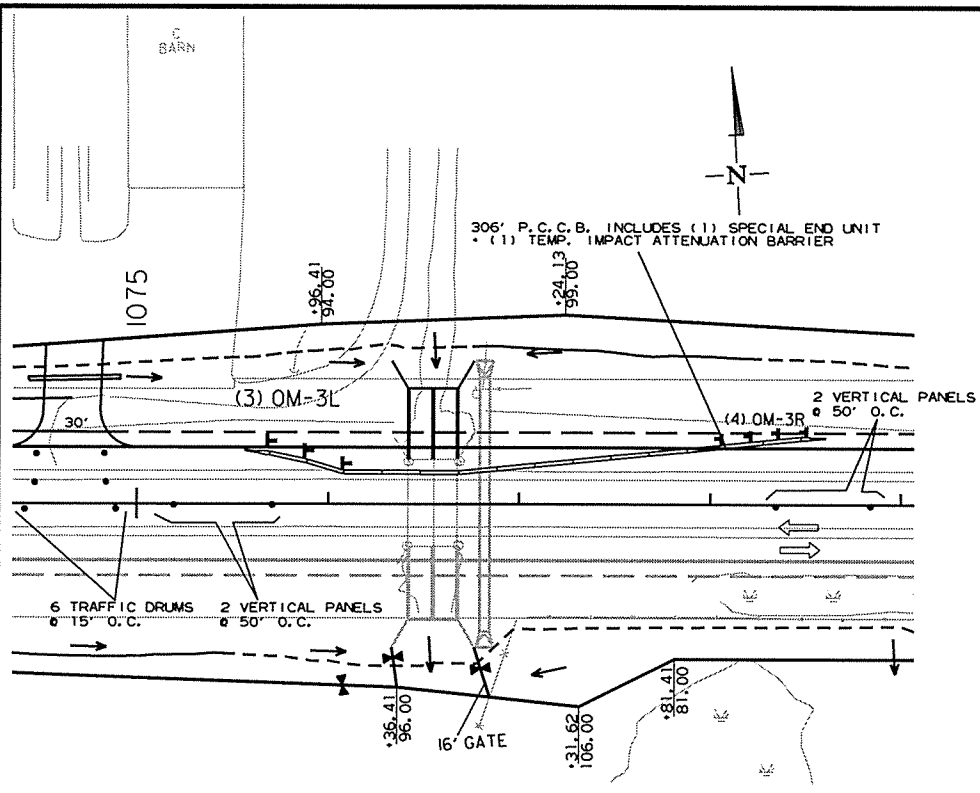


STA. 1046+35.00 HWY. 64 =
 STA. 103+23.00 HWY. 5
 $\Delta = 66^\circ 22' 32''$

9/4/2015
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							51	311

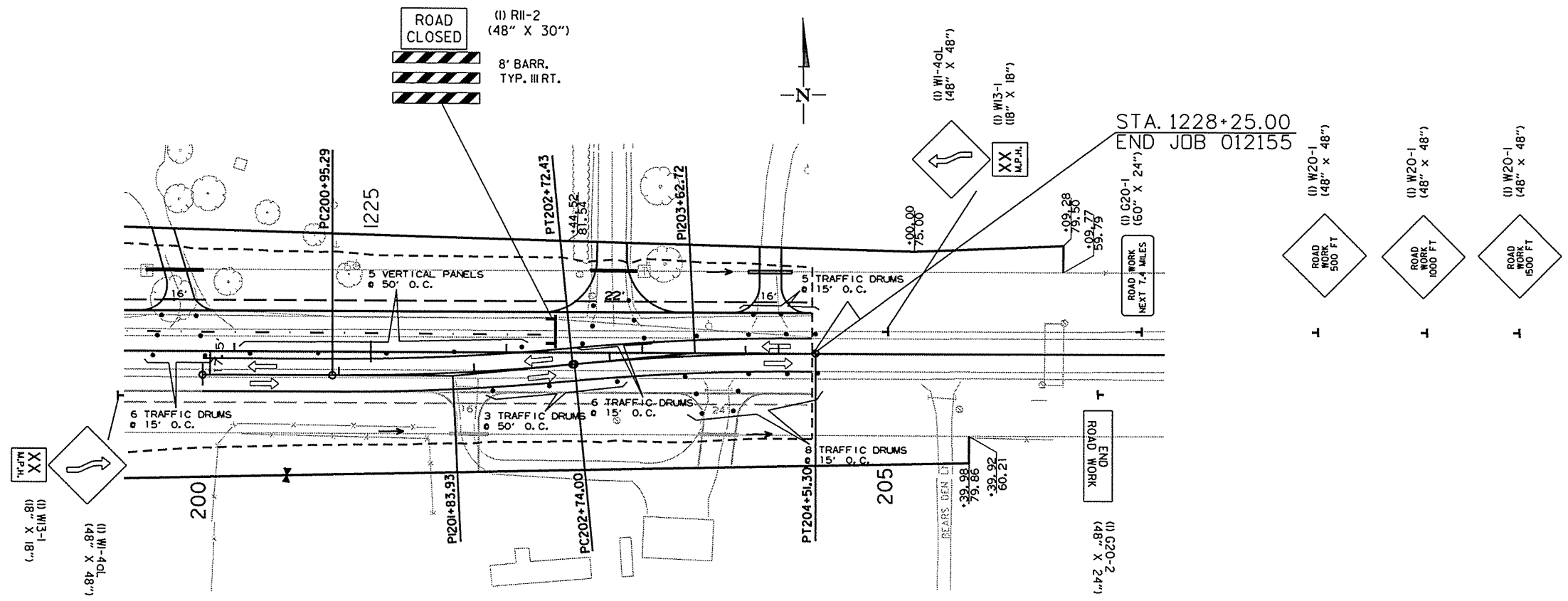
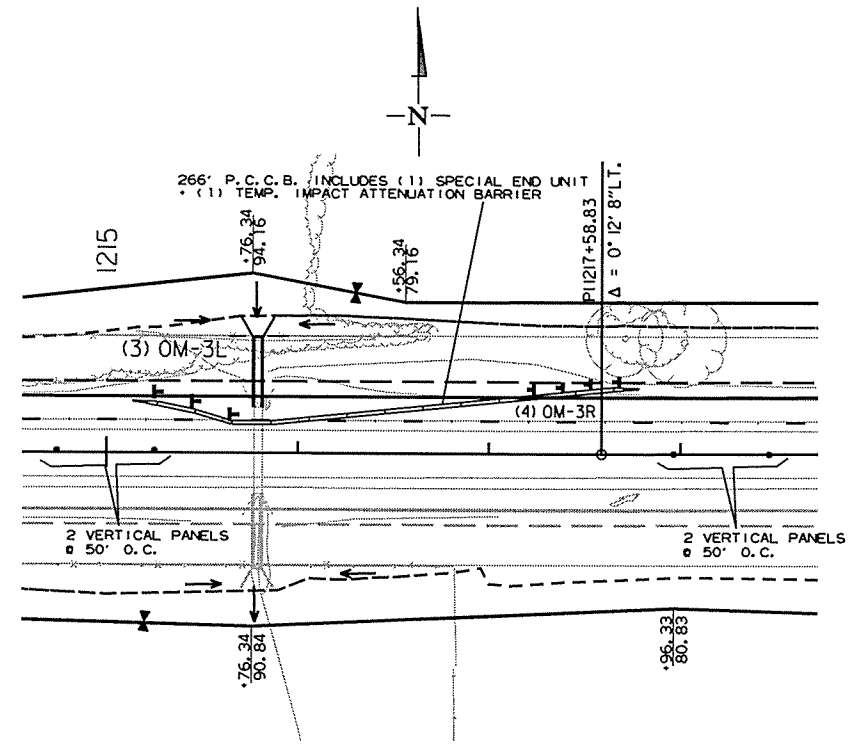
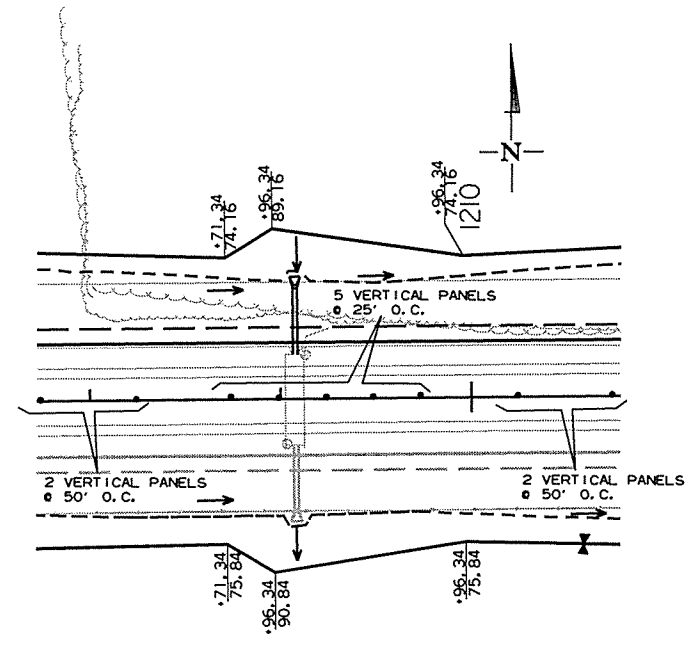
② MAINTENANCE OF TRAFFIC DETAILS



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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		52	311

② MAINTENANCE OF TRAFFIC DETAILS

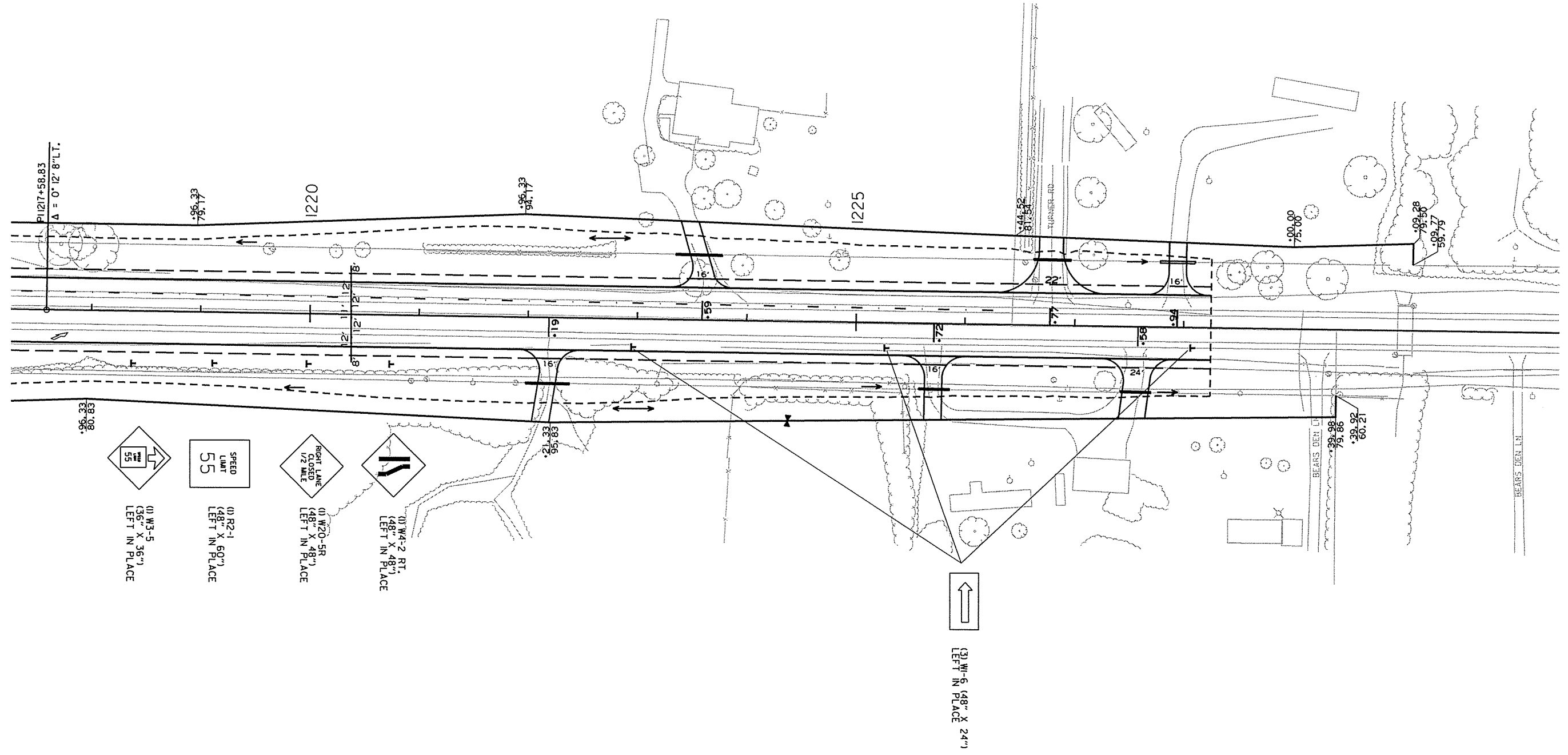
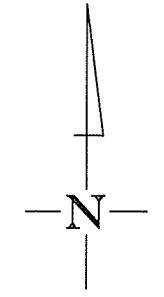


STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

9/16/2015
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	53	311

② MAINTENANCE OF TRAFFIC DETAILS



LEFT IN PLACE
MAINTENANCE OF TRAFFIC DETAILS

9/15/2015

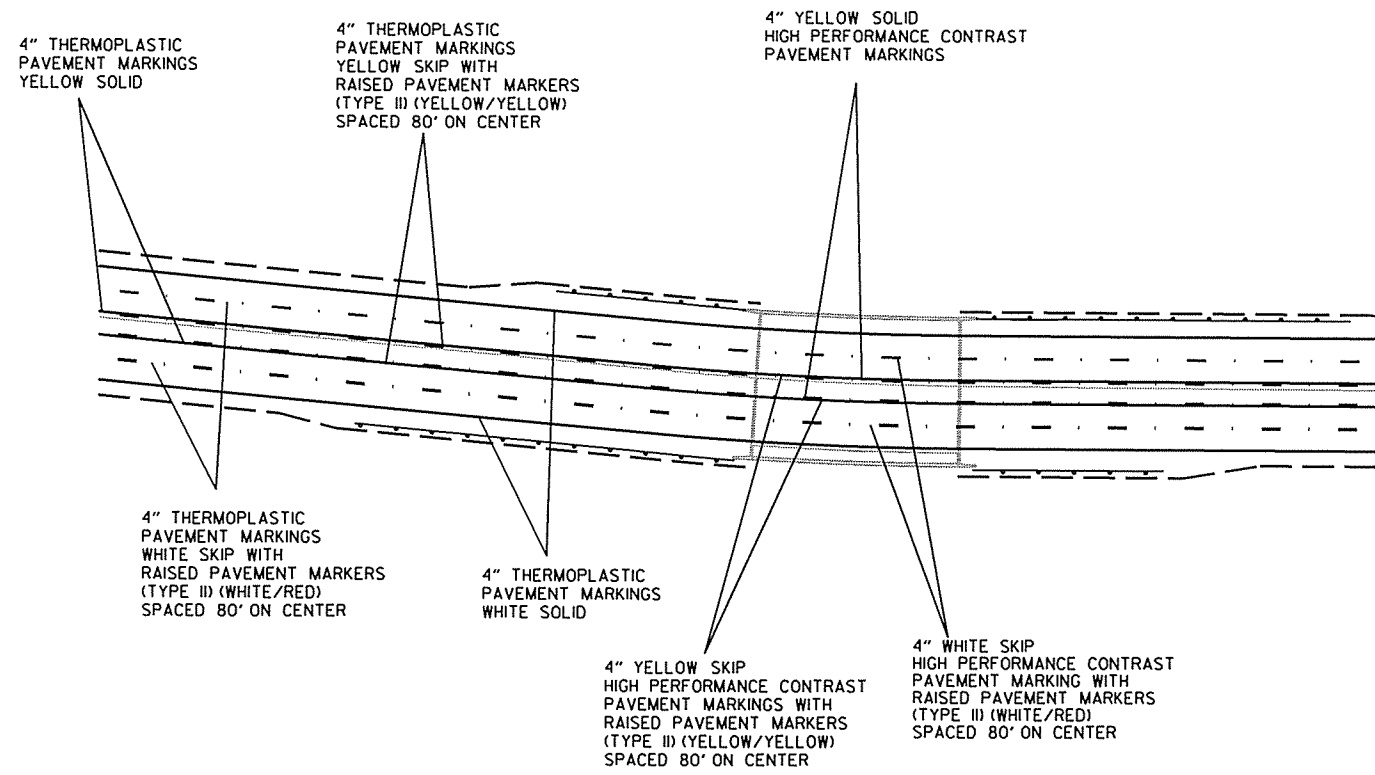
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		54	311

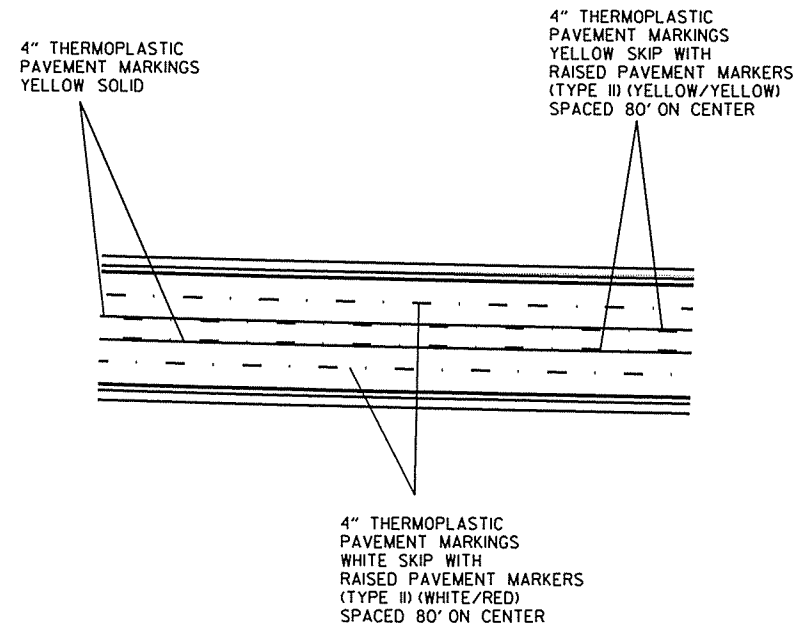
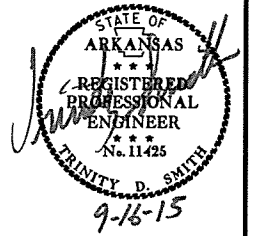
2 PERMANENT PAVEMENT MARKING DETAILS

PERMANENT PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKINGS WHITE SKIP (4") = 19296 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS WHITE SOLID (4") = 74890 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS YELLOW SKIP (4") = 18567 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS YELLOW SOLID (4") = 74670 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12") = 220 LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKINGS WHITE SKIP (4") = 54 LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKINGS YELLOW SKIP (4") = 54 LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKINGS YELLOW SOLID (4") = 215 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 953 EACH
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW) = 1210 EACH



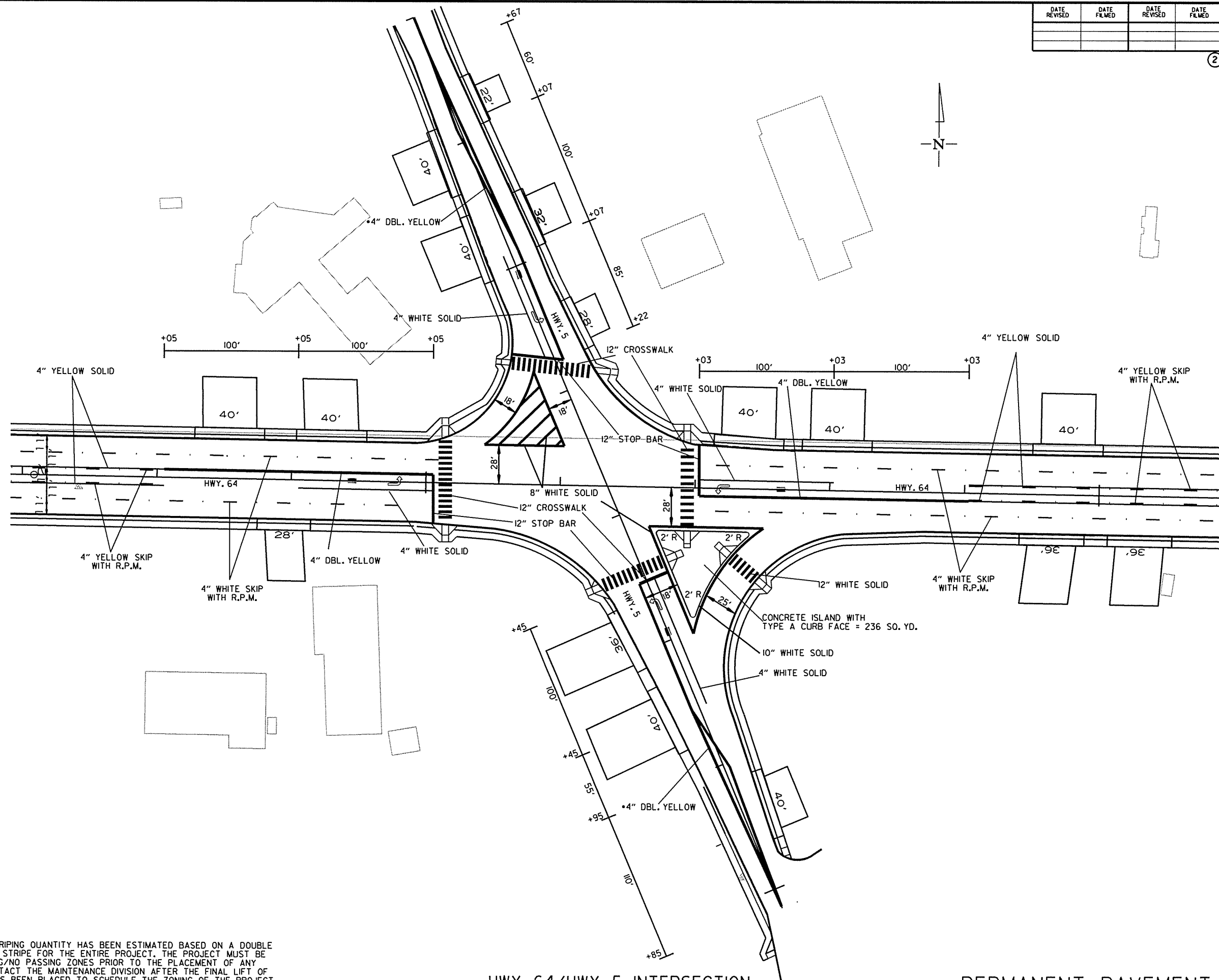
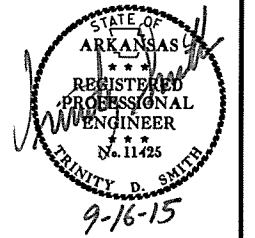
TYPICAL OPEN SHOULDER
PERMANENT PAVEMENT MARKING LAYOUT



TYPICAL CURB AND GUTTER
PERMANENT PAVEMENT MARKING LAYOUT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		55	311

2 PERMANENT PAVEMENT MARKING DETAILS



HWY. 64/HWY. 5 INTERSECTION

PERMANENT PAVEMENT MARKING DETAILS

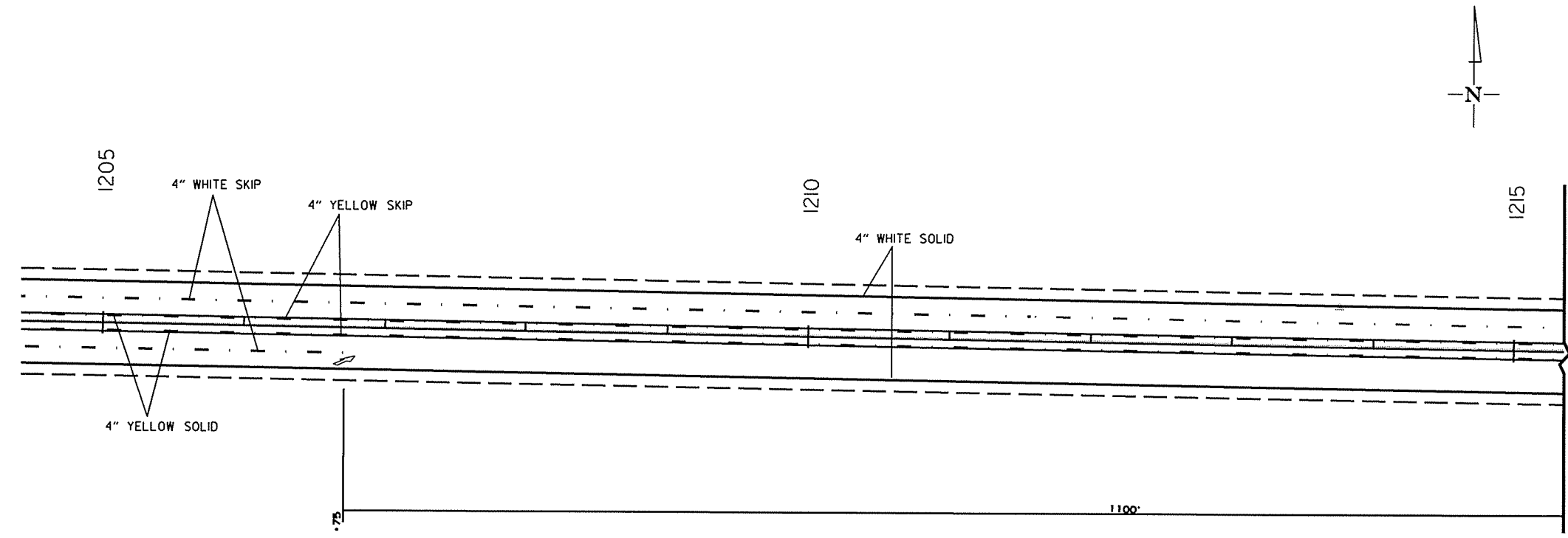
*THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

4/22/2015

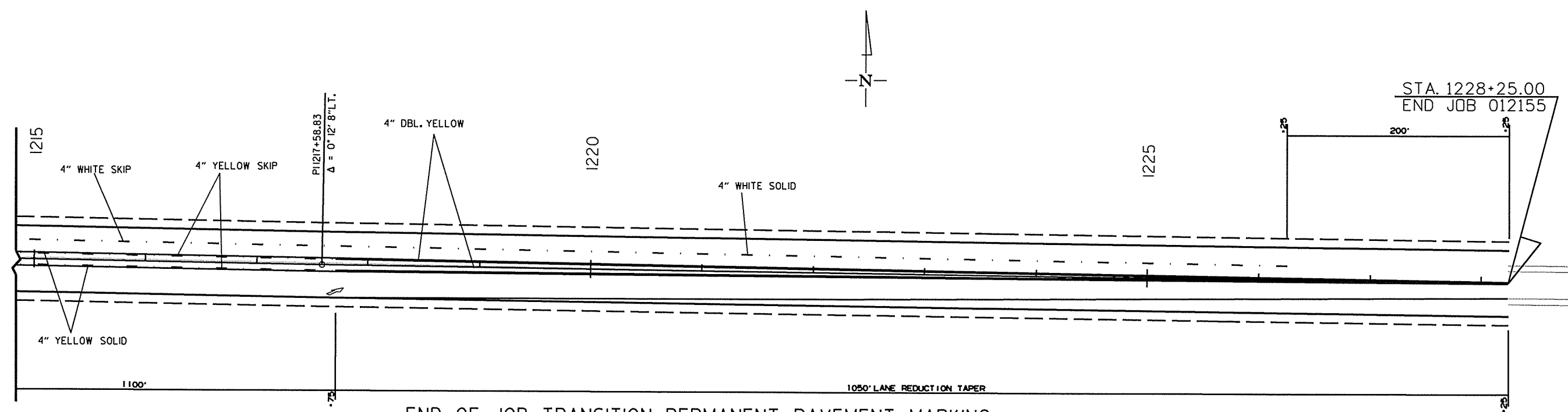
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							56	311

2 PERMANENT PAVEMENT MARKING DETAILS



END OF JOB TRANSITION PERMANENT PAVEMENT MARKING



END OF JOB TRANSITION PERMANENT PAVEMENT MARKING

PERMANENT PAVEMENT MARKING DETAILS

4/22/2015

R012155.DGN

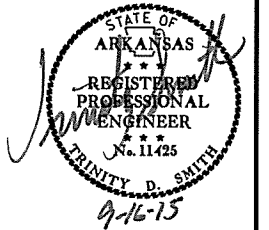
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	012155
							SHEET NO.	57
							TOTAL SHEETS	311

TRAFFIC CONTROL SIGNS LEFT IN PLACE

STATION	DESCRIPTION	SIGN SIZE	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS LEFT IN PLACE	
				NO.	SQ. FT.
W3-5	REDUCED SPEED AHEAD	36"x36"	1	1	9
R2-1	SPEED LIMIT	48"x60"	1	1	20
W20-5R	RIGHT LANE CLOSED 1/2 MILE	48"x48"	1	1	16
W4-2 RT.	RIGHT LANE ENDS GRAPHIC	48"x48"	1	1	16
W1-6	LARGE ARROW	48"x24"	3	3	24
TOTAL:					85

THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

② QUANTITIES



CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS				HIGH PERFORMANCE CONTRAST PAVEMENT MARKING		
						TYPE II (WHITE)	TYPE II (YEL/YEL)	4"		12" WHITE	WORDS	ARROWS	4"	
								WHITE	YELLOW				WHITE	YELLOW
LIN. FT. - EACH			LIN. FT.			EACH		LIN. FT.				LIN. FT.		
REMOVAL OF PERMANENT PAVEMENT MARKINGS			900	37727										
CONSTRUCTION PAVEMENT MARKINGS	146681	73654			220335									
RAISED PAVEMENT MARKERS TYPE II (WHITE)			953			953								
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)			1210				1210							
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")			93675					93675						
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")			93237						93237					
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12")			220							220				
THERMOPLASTIC PAVEMENT MARKINGS WORDS			4								4			
THERMOPLASTIC PAVEMENT MARKINGS ARROWS			4									4		
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")			54										54	
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")			268											268
TOTALS:				37727	220335	953	1210	93675	93237	220	4	4	54	268

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NOTE: THERMOPLASTIC PAVEMENT MARKINGS MAY BE SUBSTITUTED FOR INVERTED PROFILE PAVEMENT MARKINGS AT INTERSECTIONS, ISLANDS, TURNOUTS, AND OTHER SIMILAR LOCATIONS AS DIRECTED BY THE ENGINEER.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN. BARR. (REPAIR)
						NO.	SQ. FT.			RIGHT	LEFT				
LIN. FT. - EACH			LIN. FT.			EACH		LIN. FT.		EACH					
W20-1	ROAD WORK AHEAD	48"x48"	17	17	17	17	272.0								
W20-1	ROAD WORK 1 MILE	48"x48"	2	2	2	2	32.0								
W20-5R	RIGHT LANE CLOSED 1/2 MILE	48"x48"	2	2	2	2	32.0								
W20-5R	RIGHT LANE CLOSED 1500 FT.	48"x48"	2	2	2	2	32.0								
G20-2	END ROAD WORK	48"x24"	17	17	17	17	136.0								
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2	2	20.0								
W1-4AR	REVERSE CURVE RT.	48"x48"	2	2	2	2	32.0								
W1-4AL	REVERSE CURVE LT.	48"x48"	2	2	2	2	32.0								
W1-6	LARGE ARROW	48"x24"	1	1	1	1	8.0								
RSP-1	SHOULDER CLOSED	48"x30"	1	1	1	1	10.0								
	VERTICAL PANELS		212	212	212			212							
	TRAFFIC DRUMS		770	1230	1230				1230						
	TYPE III BARRICADE-RT. (8')		11	9	11					88					
	TYPE III BARRICADE-LT. (8')		9	8	9						72				
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		2120		2120						2120				
	RELOCATING PRECAST CONCRETE BARRIER			1902	1902							1902			
	TEMPORARY IMPACT ATTENUATION BARRIER		2		2								2		
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		2		2										2
TOTALS:							606.0	212	1230	88	72	2120	1902	2	2

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

QUANTITIES

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	STATION
839+25	873+00	HWY. 64	34	34
874+00	879+00	HWY. 64	5	5
881+00	912+00	HWY. 64	31	31
923+00	947+00	HWY. 64	24	24
950+00	964+00	HWY. 64	14	14
967+00	984+00	HWY. 64	17	17
985+00	987+00	HWY. 64	2	2
997+00	1002+00	HWY. 64	5	5
1004+00	1023+00	HWY. 64	19	19
1029+00	1031+00	HWY. 64	2	2
1034+00	1037+00	HWY. 64	3	3
1040+00	1041+00	HWY. 64	1	1
1051+00	1052+00	HWY. 64	1	1
1066+00	1067+00	HWY. 64	1	1
1072+00	1081+00	HWY. 64	9	9
1087+00	1089+00	HWY. 64	2	2
1090+00	1093+00	HWY. 64	3	3
1095+00	1098+00	HWY. 64	3	3
1102+00	1126+00	HWY. 64	24	24
1130+00	1131+00	HWY. 64	1	1
1136+00	1139+00	HWY. 64	3	3
1144+00	1146+00	HWY. 64	2	2
1155+00	1167+00	HWY. 64	12	12
1170+00	1173+00	HWY. 64	3	3
1177+00	1178+00	HWY. 64	1	1
1192+00	1195+00	HWY. 64	3	3
1201+00	1204+00	HWY. 64	3	3
1208+00	1228+00	HWY. 64	20	20
TOTALS:			248	248

**REMOVAL AND DISPOSAL OF SIGNS
(BOX 1 OF 2)**

STATION	LOCATION	SIGNS	SIGN FOUNDATIONS
		EACH	EACH
850+08	HWY. 64 LT. & RT.	2	
851+24	HWY. 64 LT.	1	
853+17	HWY. 64 LT.	1	
855+07	HWY. 64 LT.	1	
860+06	HWY. 64 LT.	1	
867+69	HWY. 64 LT.	1	1
875+34	HWY. 64 LT.	1	
877+95	HWY. 64 LT.	1	
884+99	HWY. 64 RT.	1	1
888+78	HWY. 64 RT.	1	
888+90	HWY. 64 LT.	1	
894+96	HWY. 64 LT.	1	
899+74	HWY. 64 LT.	1	
910+33	HWY. 64 LT.	1	2
913+92	HWY. 64 LT.	1	2
917+05	HWY. 64 RT.	1	
917+85	HWY. 64 LT.	1	
918+26	HWY. 64 RT.	1	2
918+62	HWY. 64 RT.	1	
919+54	HWY. 64 LT.	1	1
921+27	HWY. 64 RT.	1	
923+10	HWY. 64 RT.	1	
924+09	HWY. 64 LT. & RT.	2	1
924+10	HWY. 64 LT.	1	
924+16	HWY. 64 LT.	1	
924+25	HWY. 64 LT.	1	
926+23	HWY. 64 RT.	1	2
933+04	HWY. 64 LT.	1	
937+79	HWY. 64 RT.	1	
937+87	HWY. 64 LT.	1	
950+14	HWY. 64 LT.	1	1
950+33	HWY. 64 LT.	1	1
950+37	HWY. 64 RT.	1	1
950+43	HWY. 64 LT.	1	
950+48	HWY. 64 RT.	1	
953+68	HWY. 64 RT.	1	
958+11	HWY. 64 LT.	1	2
959+68	HWY. 64 LT.	1	
959+74	HWY. 64 LT.	1	
960+37	HWY. 64 LT.	1	
961+90	HWY. 64 RT.	1	
962+70	HWY. 64 RT.	1	2
962+97	HWY. 64 RT.	1	
964+10	HWY. 64 LT.	1	2
965+66	HWY. 64 RT.	1	
968+41	HWY. 64 RT.	1	
971+39	HWY. 64 RT.	1	
971+62	HWY. 64 LT. & RT.	1	
976+14	HWY. 64 LT.	1	
981+45	HWY. 64 LT.	1	
984+00	HWY. 64 RT.	1	
984+08	HWY. 64 LT.	1	
985+38	HWY. 64 LT.	1	
985+85	HWY. 64 LT.	1	2
986+43	HWY. 64 LT.	1	
987+43	HWY. 64 LT.	1	
988+41	HWY. 64 LT.	1	
989+13	HWY. 64 RT.	1	1
989+43	HWY. 64 LT.	1	
990+44	HWY. 64 LT.	1	
993+86	HWY. 64 LT.	1	
995+05	HWY. 64 LT.	1	1
999+93	HWY. 64 LT.	1	2
1001+40	HWY. 64 LT.	1	
1002+98	HWY. 64 LT.	1	2
1005+69	HWY. 64 RT.	1	
1008+24	HWY. 64 LT.	1	
1009+50	HWY. 64 LT.	1	2
1025+85	HWY. 64 RT.	1	
1027+88	HWY. 64 RT.	1	
1030+81	HWY. 64 LT.	1	
1031+82	HWY. 64 LT.	1	
1031+90	HWY. 64 LT.	1	
1032+39	HWY. 64 LT. & RT.	2	
1033+20	HWY. 64 RT.	1	2
1033+82	HWY. 64 RT.	1	
1034+37	HWY. 64 RT.	1	
TOTALS:		165	55

**REMOVAL AND DISPOSAL OF SIGNS
(BOX 2 OF 2)**

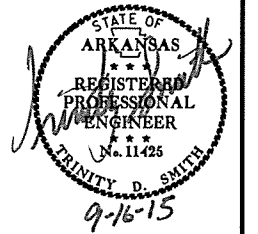
STATION	LOCATION	SIGNS	SIGN FOUNDATIONS
		EACH	EACH
1036+72	HWY. 64 LT. & RT.	2	
1038+07	HWY. 64 RT.	1	2
1039+58	HWY. 64 LT. & RT.	2	
1040+58	HWY. 64 LT.	1	
1040+72	HWY. 64 RT.	1	
1041+07	HWY. 64 LT.	1	
1041+86	HWY. 64 LT.	1	
1041+93	HWY. 64 LT.	1	
1042+02	HWY. 64 RT.	1	
1042+95	HWY. 64 RT.	1	2
1043+03	HWY. 64 LT.	1	
1043+31	HWY. 64 LT.	1	
1043+36	HWY. 64 RT.	2	2
1043+88	HWY. 64 LT.	1	
1044+13	HWY. 64 RT.	1	
1044+55	HWY. 64 RT.	1	
1045+39	HWY. 64 LT.	1	
1045+73	HWY. 64 LT.	1	
1045+92	HWY. 64 RT.	1	
1046+03	HWY. 64 RT.	1	
1046+35	HWY. 64 RT.	1	
1046+57	HWY. 64 LT.	2	2
1046+71	HWY. 64 LT. & RT.	2	
1043+75	HWY. 64 RT.	1	
1047+17	HWY. 64 RT.	1	
1047+59	HWY. 64 RT.	1	
1047+86	HWY. 64 RT.	1	
1048+15	HWY. 64 RT.	1	1
1048+90	HWY. 64 RT.	1	2
1049+03	HWY. 64 LT.	1	
1049+16	HWY. 64 RT.	1	
1049+41	HWY. 64 RT.	1	
1049+97	HWY. 64 RT.	1	
1052+81	HWY. 64 LT.	1	
1053+85	HWY. 64 RT.	1	
1058+41	HWY. 64 RT.	1	
1054+60	HWY. 64 RT.	1	
1056+63	HWY. 64 LT.	1	
1058+41	HWY. 64 LT.	1	
1065+55	HWY. 64 LT.	1	
1071+02	HWY. 64 LT.	1	2
1076+40	HWY. 64 LT.	1	
1076+70	HWY. 64 LT. & RT.	2	
1086+60	HWY. 64 RT.	2	
1090+30	HWY. 64 RT.	1	2
1097+60	HWY. 64 RT.	1	
1100+69	HWY. 64 RT.	1	1
1102+16	HWY. 64 RT.	1	
1105+73	HWY. 64 RT.	1	
1105+97	HWY. 64 RT.	1	
1124+71	HWY. 64 RT.	1	
1124+86	HWY. 64 LT.	1	
1130+01	HWY. 64 RT.	1	
1135+03	HWY. 64 RT.	1	
1135+14	HWY. 64 LT.	1	
1152+80	HWY. 64 RT.	1	
1152+96	HWY. 64 LT.	1	
1158+10	HWY. 64 LT.	1	2
1158+20	HWY. 64 LT.	1	2
1156+17	HWY. 64 LT.	1	
1161+52	HWY. 64 RT.	1	
1172+81	HWY. 64 LT.	1	
1173+29	HWY. 64 LT.	1	2
1192+35	HWY. 64 RT.	1	
1192+48	HWY. 64 LT.	1	
1209+04	HWY. 64 RT.	1	
1209+13	HWY. 64 LT.	2	
1213+90	HWY. 64 RT.	2	
1215+83	HWY. 64 LT.	2	
1220+92	HWY. 64 RT.	1	
1221+08	HWY. 64 RT.	1	
1221+90	HWY. 64 RT.	1	
1226+55	HWY. 64 LT.	1	
1226+64	HWY. 64 LT.	1	
1226+82	HWY. 64 RT.	1	
TOTALS:		165	55

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	58 311

2 QUANTITIES

REMOVAL AND DISPOSAL OF FENCE

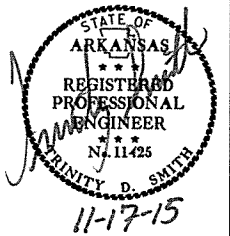
STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
839+20	852+81	RT. SIDE MAIN LANES	1387	1
843+54	844+02	LT. SIDE MAIN LANES	76	
854+00	866+65	LT. SIDE MAIN LANES	1295	
861+25	963+70	RT. SIDE MAIN LANES	312	
865+37	867+09	RT. SIDE MAIN LANES	263	
872+20	876+37	RT. SIDE MAIN LANES	457	2
872+88	879+77	LT. SIDE MAIN LANES	644	1
885+20	892+41	LT. SIDE MAIN LANES	774	
888+25	888+28	RT. SIDE MAIN LANES	50	
889+68	892+01	RT. SIDE MAIN LANES	233	
895+38	896+51	LT. SIDE MAIN LANES	120	
900+87	904+47	RT. SIDE MAIN LANES	367	
901+35	907+04	LT. SIDE MAIN LANES	612	
905+53	909+40	RT. SIDE MAIN LANES	482	1
910+45	919+60	LT. SIDE MAIN LANES	923	1
911+20	911+37	RT. SIDE MAIN LANES	41	
921+59	933+04	LT. SIDE MAIN LANES	1225	
927+31	928+84	RT. SIDE MAIN LANES	207	
931+18	937+52	RT. SIDE MAIN LANES	1187	1
937+71	938+59	LT. SIDE MAIN LANES	103	
941+68	945+16	LT. SIDE MAIN LANES	366	
945+53		LT. SIDE MAIN LANES		1
957+52		LT. SIDE MAIN LANES		1
958+20	958+25	RT. SIDE MAIN LANES	28	
964+14		LT. SIDE MAIN LANES		1
969+20	974+25	LT. SIDE MAIN LANES	847	
976+29	980+23	LT. SIDE MAIN LANES	489	1
986+34	993+96	LT. SIDE MAIN LANES	779	
998+01	1027+83	RT. SIDE MAIN LANES	3615	4
1004+03	1010+73	LT. SIDE MAIN LANES	650	1
1039+10	1039+12	RT. SIDE MAIN LANES	37	
1040+70	1041+65	LT. SIDE MAIN LANES		2
1049+21	1050+61	LT. SIDE MAIN LANES	116	3
1051+83	1053+46	LT. SIDE MAIN LANES		2
1051+88	1075+37	RT. SIDE MAIN LANES	2402	9
1055+03	1055+27	LT. SIDE MAIN LANES	50	
1073+30	1073+55	LT. SIDE MAIN LANES	60	
1076+81	1077+06	LT. SIDE MAIN LANES	60	
1076+86	1086+13	RT. SIDE MAIN LANES	1012	
1086+69	1088+79	RT. SIDE MAIN LANES	257	
1087+92	1089+03	LT. SIDE MAIN LANES	94	
1090+87	1090+89	RT. SIDE MAIN LANES	25	
1099+66	1122+63	RT. SIDE MAIN LANES	2372	8
1103+29	1103+53	LT. SIDE MAIN LANES	45	
1110+00	1120+00	LT. SIDE MAIN LANES	685	1
1115+18	1126+27	LT. SIDE MAIN LANES	1173	2
1130+32	1181+52	RT. SIDE MAIN LANES	5291	9
1131+95	1143+75	LT. SIDE MAIN LANES	1242	2
1146+23	1156+27	LT. SIDE MAIN LANES	1054	
1157+68	1159+01	LT. SIDE MAIN LANES	190	1
1182+70	1201+68	RT. SIDE MAIN LANES	2031	4
1203+77	1216+83	RT. SIDE MAIN LANES	1424	3
1223+86	1225+44	RT. SIDE MAIN LANES	221	
TOTALS:			37373	62



QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-17-15				6	ARK.		59	311
				JOB NO.		012155	59	311

② QUANTITIES



REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CONCRETE SLABS	CONCRETE PAVEMENT	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WALKS	BRICK COLUMNS	ROCK COLUMNS	GUARDRAIL	FLAG POLE	WELL	WELL HOUSE	BRICK WALLS	ROCK WALLS	STORM CELLAR	LUMINAIRE POLES	SEPTIC SYSTEM	POSTS	BUILDINGS	CATTLE GUARD	PLANTERS	
			LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	EACH	LIN. FT.	EACH	EACH	EACH	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH
845+73	850+96	HWY. 64 LT.									275													
853+46	853+51	HWY. 64 LT.			4																			
854+90	855+35	HWY. 64 RT.						29					1	1					1			1		
857+08		HWY. 64 RT.																						1
857+20		HWY. 64 RT.																						1
863+35		HWY. 64 LT.											1	1										
867+54	867+84	HWY. 64 LT.	62																					
871+03	871+08	HWY. 64 RT.						3						1	1				1			2		
871+20		HWY. 64 LT.																				1		
872+40		HWY. 64 RT.																						
893+47	893+54	HWY. 64 RT.						27														1		
894+10		HWY. 64 LT.																						
897+00		HWY. 64 LT.																1						
905+52		HWY. 64 RT.												1	1									
910+12		HWY. 64 LT.																						
912+40		HWY. 64 RT.																				1		
918+22	918+71	HWY. 64 RT.						99																1
928+40		HWY. 64 RT.											1	1										
945+40		HWY. 64 LT.							1															
945+65		HWY. 64 LT.							1															
950+10		HWY. 64 LT.																						
958+10		HWY. 64 LT.																						
958+20		HWY. 64 LT.											1											
958+30		HWY. 64 LT.										1												
960+30		HWY. 64 RT.																						
960+40		HWY. 64 RT.																						
966+10		HWY. 64 RT.																						
966+25		HWY. 64 RT.																				1		
989+15		HWY. 64 RT.											1											
995+40		HWY. 64 LT.			83																			1
999+02	1000+08	HWY. 64 LT.			67																			
1002+98		HWY. 64 RT.																						
1035+00	1035+12	HWY. 64 LT. & RT.																						
1035+75		HWY. 64 RT.																						
1038+25		HWY. 64 RT.																						
1038+65		HWY. 64 RT.																						
1040+50		HWY. 64 LT.																						
1040+55		HWY. 64 LT.																						
1041+45		HWY. 64 LT.																						
1041+85		HWY. 64 LT.																						
1042+94	1047+84	HWY. 64 - HWY. 5	890																					
1049+39	1050+18	HWY. 64 LT.																						
1050+65		HWY. 64 RT.																						
1065+60		HWY. 64 RT.																						
1066+75	1067+11	HWY. 64 RT.																						1
1068+55		HWY. 64 RT.																						4
1097+20		HWY. 64 RT.																						1
1097+60		HWY. 64 RT.																						
1141+30		HWY. 64 RT.																						
1130+28		HWY. 64 LT.																						
1130+50		HWY. 64 RT.																						
1165+80		HWY. 64 LT.																						
104+96	106+18	HWY. 5 LT.																						
TOTALS:			952	150	4	41	1128	59	6	7	275	6	5	5	6	50	3	2	2	13	3	1	10	

NOTE: REMOVAL AND DISPOSAL OF GUARDRAIL INCLUDES REMOVAL AND DISPOSAL OF TERMINAL ANCHOR POSTS.

6/9/2015

R012155.DGN

QUANTITIES

REMOVAL AND DISPOSAL OF PIPE CULVERTS
(BOX 1 OF 2)

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
839+34	29" X 18" X 138' ARCH PIPE	1
892+78	RT. SIDE DRAIN 12" X 21' R.C.P.	1
897+25	RT. SIDE DRAIN 18" X 23' C.M.P.	1
899+31	RT. SIDE DRAIN 18" X 20' R.C.P.	1
902+66	RT. SIDE DRAIN 18" X 24' PLASTIC	1
905+30	RT. SIDE DRAIN 24" X 17' R.C.P.	1
906+00	RT. SIDE DRAIN 18" X 18' R.C.P.	1
907+13	LT. SIDE DRAIN 18" X 23' C.M.P.	1
909+49	LT. SIDE DRAIN 18" X 21' R.C.P.	1
909+52	RT. SIDE DRAIN 18" X 24' C.M.P.	1
910+24	LT. SIDE DRAIN 18" X 24' C.M.P.	1
911+58	RT. SIDE DRAIN 18" X 24' C.M.P.	1
914+51	RT. SIDE DRAIN 18" X 24' C.M.P.	1
915+89	RT. SIDE DRAIN 18" X 19' C.M.P.	1
917+50	LT. SIDE DRAIN 18" X 30' C.M.P.	1
918+25	RT. SIDE DRAIN 18" X 30' C.M.P.	1
919+98	LT. SIDE DRAIN 18" X 19' C.M.P.	1
920+14	RT. SIDE DRAIN 18" X 27' C.M.P.	1
920+62	RT. SIDE DRAIN 18" X 20' R.C.P.	1
921+25	LT. SIDE DRAIN 18" X 23' C.M.P.	1
922+56	RT. SIDE DRAIN 18" X 40' C.M.P.	1
925+95	RT. SIDE DRAIN 18" X 21' R.C.P.	1
928+75	RT. SIDE DRAIN 18" X 21' R.C.P.	1
931+10	RT. SIDE DRAIN 18" X 24' C.M.P.	1
934+35	LT. SIDE DRAIN 18" X 21' R.C.P.	1
937+83	CROSS DRAIN 18" X 41' R.C.P.	1
939+64	LT. SIDE DRAIN 18" X 17' C.M.P.	1
941+08	LT. SIDE DRAIN 18" X 23' C.M.P.	1
945+55	LT. SIDE DRAIN 18" X 19' C.M.P.	1
950+60	RT. SIDE DRAIN 18" X 44' R.C.P.	1
950+83	LT. SIDE DRAIN 18" X 21' R.C.P.	1
951+96	RT. SIDE DRAIN 18" X 24' R.C.P.	1
954+30	LT. SIDE DRAIN 18" X 30' C.M.P.	1
954+36	RT. SIDE DRAIN 24" X 23' C.M.P.	1
954+85	RT. SIDE DRAIN 24" X 24' R.C.P.	1
957+55	LT. SIDE DRAIN 18" X 40' CORR. PLASTIC	1
959+40	LT. SIDE DRAIN 24" X 48' R.C.P.	1
960+03	RT. SIDE DRAIN 24" X 21' R.C.P.	1
961+56	RT. SIDE DRAIN 18" X 30' C.M.P.	1
962+35	RT. SIDE DRAIN 18" X 24' C.M.P.	1
963+30	RT. SIDE DRAIN 18" X 24' R.C.P.	1
964+30	LT. SIDE DRAIN 18" X 21' C.M.P.	1
965+80	LT. SIDE DRAIN 24" X 24' C.M.P.	1
967+93	RT. SIDE DRAIN 24" X 23' C.M.P.	1
974+10	LT. SIDE DRAIN 24" X 22' C.M.P.	1
978+84	LT. SIDE DRAIN 18" X 23' C.M.P.	1
981+35	LT. SIDE DRAIN 18" X 24' C.M.P.	1
985+65	LT. SIDE DRAIN 18" X 48' C.M.P.	1
985+95	RT. SIDE DRAIN 18" X 27' C.M.P.	1
1005+65	LT. SIDE DRAIN 18" X 40' C.M.P.	1
1006+00	RT. SIDE DRAIN 18" X 28' C.M.P.	1
1009+17	RT. SIDE DRAIN 24" X 40' C.M.P.	1
1009+82	LT. SIDE DRAIN 18" X 28' C.M.P.	1
1030+96	LT. SIDE DRAIN 18" X 40' C.M.P.	1
1033+60	RT. SIDE DRAIN 24" X 40' C.M.P.	1
1038+45	RT. SIDE DRAIN 18" X 40' C.M.P.	1
1038+45	LT. SIDE DRAIN 18" X 47' C.M.P.	1
1039+45	RT. SIDE DRAIN 24" X 50' C.M.P.	1
1044+00	RT. SIDE DRAIN 18" X 48' C.M.P.	1
1044+92	CROSS DRAIN 42" X 57' R.C.P.	1
1047+40	LT. SIDE DRAIN 18" X 47' C.M.P.	1
1048+00	LT. SIDE DRAIN 18" X 48' R.C.P.	1
1049+75	LT. SIDE DRAIN 18" X 71' C.M.P.	1
1051+75	LT. SIDE DRAIN 18" X 24' C.M.P.	1
1054+92	LT. SIDE DRAIN 18" X 23' C.M.P.	1
1066+93	RT. SIDE DRAIN 18" X 24' C.M.P.	1
1074+04	LT. SIDE DRAIN 18" X 28' C.M.P.	1
1074+40	LT. SIDE DRAIN 18" X 36' C.M.P.	1
1086+42	RT. SIDE DRAIN 18" X 38' C.M.P.	1
1088+48	LT. SIDE DRAIN 18" X 48' C.M.P.	1
1089+02	RT. SIDE DRAIN 18" X 23' C.M.P.	1
1090+10	RT. SIDE DRAIN 18" X 21' C.M.P.	1
1090+74	RT. SIDE DRAIN 18" X 24' C.M.P.	1

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.

REMOVAL AND DISPOSAL OF PIPE CULVERTS
(BOX 2 OF 2)

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
1091+70	RT. SIDE DRAIN 18" X 24' C.M.P.	1
1097+49	RT. SIDE DRAIN 18" X 39' C.M.P.	1
1101+05	RT. SIDE DRAIN 18" X 24' C.M.P.	1
1101+96	RT. SIDE DRAIN 18" X 24' C.M.P.	1
1111+02	LT. SIDE DRAIN 18" X 28' C.M.P.	1
1120+07	LT. SIDE DRAIN 18" X 24' C.M.P.	1
1120+41	RT. SIDE DRAIN 18" X 19' C.M.P.	1
1126+10	RT. SIDE DRAIN 18" X 24' C.M.P.	1
1130+56	RT. SIDE DRAIN 18" X 24' C.M.P.	1
1135+07	CROSS DRAIN 24" X 49' R.C.P.	1
1142+39	RT. SIDE DRAIN 18" X 20' R.C.P.	1
1146+00	RT. SIDE DRAIN 18" X 24' P.C.P.	1
1146+06	LT. SIDE DRAIN 18" X 31' P.C.P.	1
1157+18	LT. SIDE DRAIN 18" X 20' R.C.P.	1
1161+71	LT. SIDE DRAIN 18" X 24' R.C.P.	1
1165+44	LT. SIDE DRAIN 18" X 24' C.M.P.	1
1170+52	CROSS DRAIN 30" X 57' R.C.P.	1
1172+87	LT. SIDE DRAIN 18" X 47' C.P.P.	1
1177+70	RT. SIDE DRAIN 18" X 39' C.P.P.	1
1182+40	RT. SIDE DRAIN 18" X 65' C.M.P.	1
1225+71	RT. SIDE DRAIN 18" X 19' C.M.P.	1
1226+78	LT. SIDE DRAIN 18" X 36' C.M.P.	1
1227+51	RT. SIDE DRAIN 18" X 20' R.C.P.	1
1227+94	LT. SIDE DRAIN 18" X 24' C.M.P.	1
TOTAL:		97

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
845+00	848+00	LT. SIDE MAIN LANES	300.0	266.7
894+00	896+00	RT. SIDE MAIN LANES	200.0	177.8
896+00	898+00	RT. SIDE MAIN LANES	200.0	177.8
907+00	913+00	RT. SIDE MAIN LANES	600.0	533.3
910+00	913+00	LT. SIDE MAIN LANES	300.0	266.7
961+50	965+00	RT. SIDE MAIN LANES	350.0	311.1
965+00	971+50	RT. SIDE MAIN LANES	650.0	577.8
969+00	971+00	LT. SIDE MAIN LANES	200.0	177.8
971+51	973+00	LT. SIDE MAIN LANES	149.0	132.4
972+00	975+00	RT. SIDE MAIN LANES	300.0	266.7
975+00	980+00	RT. SIDE MAIN LANES	500.0	444.4
980+00	983+00	RT. SIDE MAIN LANES	300.0	266.7
1000+00	1009+50	RT. SIDE MAIN LANES	950.0	844.4
1009+50	1014+00	RT. SIDE MAIN LANES	450.0	400.0
1010+00	1014+24	LT. SIDE MAIN LANES	424.0	376.9
1023+00	1024+50	LT. SIDE MAIN LANES	150.0	133.3
1073+00	1076+25	RT. SIDE MAIN LANES	325.0	288.9
1074+00	1076+50	LT. SIDE MAIN LANES	250.0	222.2
1102+00	1104+00	RT. SIDE MAIN LANES	200.0	177.8
1103+00	1105+70	LT. SIDE MAIN LANES	270.0	240.0
1106+25	1110+00	LT. SIDE MAIN LANES	375.0	333.3
1109+00	1110+00	RT. SIDE MAIN LANES	100.0	88.9
1143+00	1148+00	LT. SIDE MAIN LANES	500.0	444.4
1145+00	1147+00	RT. SIDE MAIN LANES	200.0	177.8
1148+00	1153+00	LT. SIDE MAIN LANES	500.0	444.4
1166+00	1167+00	RT. SIDE MAIN LANES	100.0	88.9
1166+00	1169+00	LT. SIDE MAIN LANES	300.0	266.7
1192+50	1195+00	RT. SIDE MAIN LANES	250.0	222.2
1213+00	1215+00	RT. SIDE MAIN LANES	200.0	177.8
1215+80	1219+00	LT. SIDE MAIN LANES	320.0	284.4
1217+00	1218+00	RT. SIDE MAIN LANES	100.0	88.9
TOTAL:				8900.4

NOTE: AVERAGE WIDTH = 8'-0"

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
847+80	BRIDGE WIDENING ON RT.	1
971+51	DBL. R.C.B. EXTENSION	1
1014+24	DBL. R.C.B. EXTENSION	1
1022+02	DBL. R.C.B. EXTENSION	1
1076+55	DBL. R.C.B. EXTENSION	1
1105+86	DBL. R.C.B. EXTENSION	1
1152+88	DBL. R.C.B. EXTENSION	1
1192+41	DBL. R.C.B. EXTENSION	1
1215+79	SINGLE R.C.B. EXTENSION	1
TOTAL:		9

NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

APPROACH GUTTERS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE A)
			CU.YD.
847+79.73	848+87.03	SOUTH OF HWY. 64 MAIN LANES	7.55
847+79.73	848+87.03	SOUTH OF HWY. 64 MAIN LANES	7.55
TOTAL:			15.10

NOTE: USE T=17.5" FOR 8' SHOULDER.

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE 1)
			LIN. FT.	EACH		
845+81.12	846+74.87	LT. SIDE	75	1		1
844+56.38	846+75.13	RT. SIDE	150	1	1	
848+86.43	851+05.18	LT. SIDE	150	1	1	
848+86.43	849+80.18	RT. SIDE	75	1		1
TOTALS:			450	4	2	2

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	STONE BACKFILL	* SOIL STABILIZATION
			CU. YD.	CU. YD.	TON	TON
ENTIRE PROJECT		STAGE 1-MAIN LANES	69621	81840		
ENTIRE PROJECT		STAGE 1-HWY. 5		331		
ENTIRE PROJECT		STAGE 2-MAIN LANES	64791	42363		
ENTIRE PROJECT		STAGE 2 - HWY. 5	18	842		
ENTIRE PROJECT		APPROACHES	175	12300		
ENTIRE PROJECT		TEMPORARY APPROACHES		20		
ENTIRE PROJECT		UNDERCUT FOR UNSUITABLE EXISTING MATERIAL	86102	86102		
971+51		DBL. 10'X8' R.C.B. W/3:1 WINGS LT. & RT.			242	
1014+24		DBL. R.C.B. W/3:1 WINGS			92	
1022+02		DBL. 8'x5' R.C.B. & 8'x4' R.C.B. W/3:1 WINGS LT. & RT.			115	
1035+07		DBL. R.C.B. W/3:1 WINGS RT.			68	
1076+55		DBL. 12'x6' R.C.B. W/3:1 WINGS LT. & RT.			275	
1105+86		DBL. 10'x7' R.C.B. W/3:1 WINGS LT. & RT.			242	
1152+88		R.C.B. W/3:1 WINGS			170	
1192+41		DBL. R.C.B. W/ WINGS			140	
1215+79		R.C.B. W/3:1 WINGS			116	
924+13		HWY. 64 LT. CHANNEL		19		
1014+24		CHANNEL CHANGE	10			600
TOTALS:			220736	223798	1460	600

* QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

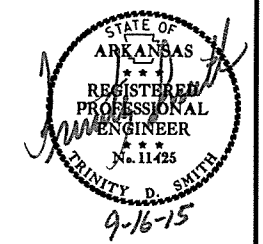
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
01-05-16				6	ARK.		60	311
						JOB NO.	012155	

2 QUANTITIES



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155	61	311	

② QUANTITIES



MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS	
		(SINGLE) EACH	(DOUBLE) EACH
ENTIRE PROJECT	70	54	8
TOTALS:	70	54	8

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
1047+06	HWY. 64 - HWY. 5 INTERSECTION	A	236
TOTAL:			236

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ.YD.
1039+00	1039+47	HIGHWAY 64 - LT.	47	26
1040+13	1040+47	HIGHWAY 64 - LT.	34	19
1040+93	1041+37	HIGHWAY 64 - LT.	44	24
1041+95	1043+16	HIGHWAY 64 - LT.	121	67
1039+77	1043+72	HIGHWAY 64 - RT.	395	219
1043+84	1043+96	HIGHWAY 64 - LT.	12	7
1044+64	1047+06	HIGHWAY 64 - LT.	242	134
1044+28	1049+31	HIGHWAY 64 - RT.	503	279
1048+34	1049+41	HIGHWAY 64 - LT.	107	59
1049+95	1049+96	HIGHWAY 64 - RT.	1	1
1050+09	1051+50	HIGHWAY 64 - LT.	141	78
1050+60	1050+96	HIGHWAY 64 - RT.	36	20
1052+00	1053+23	HIGHWAY 64 - LT.	123	68
1051+64	1054+33	HIGHWAY 64 - RT.	269	149
1053+67	1054+31	HIGHWAY 64 - LT.	64	36
99+54	101+11	HIGHWAY 5 - LT.	157	87
100+16	100+26	HIGHWAY 5 - RT.	10	6
100+94	102+07	HIGHWAY 5 - RT.	113	63
102+43	102+90	HIGHWAY 5 - LT.	47	26
103+68	104+17	HIGHWAY 5 - RT.	49	27
104+13	104+90	HIGHWAY 5 - LT.	77	43
105+60	105+99	HIGHWAY 5 - RT.	39	22
106+25	106+46	HIGHWAY 5 - LT.	21	12
106+53	107+00	HIGHWAY 5 - RT.	47	26
106+98	107+00	HIGHWAY 5 - LT.	2	1
TOTAL:			1499	1499

WATER GATE

STATION	LOCATION	WATER GATE EACH
848+30	HWY. 64 ON RT.	1
TOTAL:		1

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3 SQ.YD.
1038+85	HIGHWAY 64 - LT.	4.9
1039+77	HIGHWAY 64 - RT.	6.4
1045+14	HIGHWAY 64 - LT.	4.9
1045+15	HIGHWAY 64 - RT.	4.3
1046+94	HIGHWAY 64 - LT.	4.9
1046+95	HIGHWAY 64 - RT.	4.2
1047+26	HIGHWAY 64 - RT.	4.1
1047+47	HIGHWAY 64 - RT.	4.5
99+57	HIGHWAY 5 - LT.	3.1
100+18	HIGHWAY 5 - RT.	4.6
102+56	HIGHWAY 5 - LT.	3.8
102+56	HIGHWAY 5 - RT.	4.2
104+01	HIGHWAY 5 - RT.	4.7
104+34	HIGHWAY 5 - LT.	3.0
TOTAL:		61.6

FENCING

STATION	STATION	LOCATION	WIRE FENCE				* 16'-0" GATES EACH
			(TYPE C)	(TYPE D)	(TYPE D-1)	(TYPE D-2)	
			LIN. FT.				
839+20	852+81	HWY. 64 RT. MAIN LANES		1387			
861+25	963+70	HWY. 64 RT. MAIN LANES	312				
865+37	867+09	HWY. 64 RT. MAIN LANES	263				
872+20	876+37	HWY. 64 RT. MAIN LANES		457			
888+25	888+28	HWY. 64 RT. MAIN LANES	50				
889+68	892+01	HWY. 64 RT. MAIN LANES	233				
900+87	904+47	HWY. 64 RT. MAIN LANES	367				
905+53	909+40	HWY. 64 RT. MAIN LANES	482				1
911+20	911+37	HWY. 64 RT. MAIN LANES		41			
927+31	928+84	HWY. 64 RT. MAIN LANES	207				
958+20	958+25	HWY. 64 RT. MAIN LANES		28			
1076+86	1086+13	HWY. 64 RT. MAIN LANES		1012			
1086+69	1088+79	HWY. 64 RT. MAIN LANES	257				
1090+87	1090+89	HWY. 64 RT. MAIN LANES	25				
1099+87	1122+63	HWY. 64 RT. MAIN LANES		2372			4
1130+32	1181+52	HWY. 64 RT. MAIN LANES			5291		9
1182+70	1201+68	HWY. 64 RT. MAIN LANES			2031		2
1223+86	1225+44	HWY. 64 RT. MAIN LANES		221			
843+54	844+02	HWY. 64 LT. MAIN LANES		76			
872+88	879+77	HWY. 64 LT. MAIN LANES	644				1
885+20	892+41	HWY. 64 LT. MAIN LANES	774				
901+35	907+04	HWY. 64 LT. MAIN LANES				612	
910+45	919+60	HWY. 64 LT. MAIN LANES		923			
921+59	933+04	HWY. 64 LT. MAIN LANES			1225		
937+71	938+59	HWY. 64 LT. MAIN LANES		103			
941+68	945+16	HWY. 64 LT. MAIN LANES	366				
969+20	974+25	HWY. 64 LT. MAIN LANES		847			
976+29	980+23	HWY. 64 LT. MAIN LANES	489				1
986+34	993+96	HWY. 64 LT. MAIN LANES		779			
1004+03	1010+73	HWY. 64 LT. MAIN LANES	650				1
1115+18	1126+27	HWY. 64 LT. MAIN LANES				1173	2
1146+23	1156+27	HWY. 64 LT. MAIN LANES		1054			
1157+68	1159+01				190		1
TOTALS:			5119	9300	8737	1785	22

* DENOTES ALTERNATE BID ITEM.

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL										
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	WATTLE DITCH CHECKS 20"	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	(E-1) LIN. FT.	(E-5) BAG	(E-6) CU.YD.	(E-7) LIN. FT.	(E-11) LIN. FT.	(E-14) CU.YD.	CU.YD.	CU. YD.
ENTIRE PROJECT	STAGE 1		22.56	45.12	22.56	2314.8	22.56	1087	60.00	60.00	1224.0		1870	108	128	10106	6241	6256	6256
ENTIRE PROJECT	STAGE 2		22.56	45.12	22.56	2315.8	22.56	1167	60.00	60.00	1224.0		1628	72	108	9566	6598	6598	6598
*ENTIRE PROJECT IF AND WHERE DIRECTED BY THE ENGINEER.			11.28	22.56	11.28	1157.7	11.28	564	30.00	30.00	612.0	90	875	45	59	4918	3210	3214	3459
TOTALS:			56.40	112.80	56.40	5788.3	56.40	2818	150.00	150.00	3060.0	90	4373	225	295	24590	16049	16068	16313

BASIS OF ESTIMATE:
 LIME2 TONS / ACRE OF SEEDING
 WATER.....102.0 M.G. / ACRE OF SEEDING
 WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
 WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
 WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
 SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
 ROCK DITCH CHECKS.....3 CU.YD./LOCATION

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

*QUANTITIES ESTIMATED.
 SEE SECTION 104.03 OF THE STD. SPECS.

6/9/2015 RO12155.DGN

QUANTITIES

DRIVEWAYS & TURNOUTS (BOX 1 OF 2)

STATION	SIDE	LOCATION	WIDTH		**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2" 220 LBS. PER SQ. YD. (PG 64-22))		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS			STANDARD DRAWINGS	
			FEET	INCHES	STATION	STATION		SQ. YD.	TON		18"	24"	21"X15"X28"X20"		LIN. FT.
839+70	RT.	HWY. 64 DRIVE	16					110.5	12.2	45.1					
852+54	LT.	HWY. 64 DRIVE	16					87.3	9.6	35.6					
855+35	RT.	HWY. 64 DRIVE	16					127.4	14.0	52.0					
855+93	RT.	HWY. 64 DRIVE	16					129.5	14.2	52.9					
857+93	RT.	HWY. 64 DRIVE	16					100.6	11.1	41.1					
860+85	RT.	HWY. 64 DRIVE	16					149.9	16.5	61.2					
865+77	RT.	HWY. 64 DRIVE	16					221.3	24.3	90.4					
866+87	LT.	HWY. 64 DRIVE	40		866+53	867+21	137.40								
869+24	LT.	HWY. 64 DRIVE	40		868+90	869+58	139.60								
870+38	LT.	HWY. 64 DRIVE	16		870+16	870+60	132.40								
870+66	RT.	HWY. 64 DRIVE	16					109.5	12.0	44.7					
872+45	LT.	HWY. 64 DRIVE	24		872+19	872+71	153.20								
873+04	LT.	HWY. 64 DRIVE	16		872+82	873+26	86.60								
875+16	LT.	HWY. 64 DRIVE	24					199.1	21.9	81.3					
876+48	RT.	HWY. 64 DRIVE	16					169.5	18.6	69.2					
878+14	LT.	SHADOW OAKS	24					227.4	25.0	92.9					
880+00	LT.	HWY. 64 DRIVE	16					93.5	10.3	38.2					
882+81	LT.	HWY. 64 DRIVE	16					115.7	12.7	47.2					
883+37	RT.	HWY. 64 DRIVE	16					120.1	13.2	49.0	44			PCC-1, PCM-1, PCP-1, PCP-2	
883+89	RT.	HWY. 64 DRIVE	16					140.0	15.4	57.2	42			PCC-1, PCM-1, PCP-1, PCP-2	
887+08	RT.	HWY. 64 DRIVE	16					108.5	11.9	44.3					
891+65	RT.	HWY. 64 DRIVE	16					153.6	16.9	62.7	28			PCC-1, PCM-1	
892+80	LT.	HWY. 64 DRIVE	26					97.1	10.7	39.6	28			PCC-1, PCM-1	
893+34	RT.	HWY. 64 DRIVE	16					121.6	13.4	49.7	28			PCC-1, PCM-1	
894+00	LT.	HWY. 64 DRIVE	16					150.2	16.5	61.3	36			PCC-1, PCM-1	
894+87	RT.	CENTER POINT SCHOOL RD.	20					156.2	17.2	63.8	34			PCC-1, PCM-1	
894+70	LT.	CENTER POINT LOOP	20					96.0	9.9	36.8	28			PCC-1, PCM-1	
897+14	RT.	HWY. 64 DRIVE	16					103.8	11.4	42.4	28			PCC-1, PCM-1	
899+29	LT.	HWY. 64 DRIVE	16					125.3	13.8	51.2	28			PCC-1, PCM-1	
899+35	RT.	HWY. 64 DRIVE	16					100.2	11.0	40.9	32			PCC-1, PCM-1, PCP-1, PCP-2	
901+12	LT.	HWY. 64 DRIVE	18					120.6	13.3	49.2	30			PCC-1, PCM-1, PCP-1, PCP-2	
902+64	RT.	HWY. 64 DRIVE	16					89.4	9.8	36.5	28			PCC-1, PCM-1, PCP-1, PCP-2	
904+75	RT.	HWY. 64 DRIVE	16					103.3	11.4	42.2	36			PCC-1, PCM-1	
907+14	LT.	HWY. 64 DRIVE	18					126.6	13.9	51.7	28			PCC-1, PCM-1	
909+49	LT.	HWY. 64 DRIVE	16					103.0	11.3	42.1	28			PCC-1, PCM-1	
909+56	RT.	HWY. 64 DRIVE	16					100.5	11.1	41.0	34			PCC-1, PCM-1	
910+25	LT.	HWY. 64 DRIVE	16					94.9	10.4	38.8	30			PCC-1, PCM-1	
911+58	RT.	HWY. 64 DRIVE	16					100.5	11.1	41.0	32			PCC-1, PCM-1	
914+41	RT.	HWY. 64 DRIVE	16					100.5	11.1	41.0	28			PCC-1, PCM-1, PCP-1, PCP-2	
915+91	RT.	HWY. 64 DRIVE	16					100.5	11.1	41.0	28			PCC-1, PCM-1, PCP-1, PCP-2	
917+44	LT.	HWY. 64 DRIVE	24					123.0	13.5	50.2	34			PCC-1, PCM-1, PCP-1, PCP-2	
918+23	RT.	DEERFIELD RD	20					206.7	22.7	84.4	38			PCC-1, PCM-1, PCP-1, PCP-2	
919+68	RT.	HWY. 64 DRIVE	24					166.0	18.3	67.8	40			PCC-1, PCM-1, PCP-1, PCP-2	
919+96	LT.	HWY. 64 DRIVE	16					97.8	10.8	39.9	34			PCC-1, PCM-1, PCP-1, PCP-2	
920+63	RT.	HWY. 64 DRIVE	24					166.2	18.3	67.9	40			PCC-1, PCM-1, PCP-1, PCP-2	
921+24	LT.	HWY. 64 DRIVE	18					110.5	12.2	45.1	38			PCC-1, PCM-1, PCP-1, PCP-2	
922+42	RT.	HWY. 64 DRIVE	24					217.8	24.0	88.9	52			PCC-1, PCM-1, PCP-1, PCP-2	
924+41	LT.	CATTLE CREEK TR.	20					289.4	31.8	118.2					
925+93	RT.	HWY. 64 DRIVE	20					186.6	20.5	76.2	44			PCC-1, PCM-1, PCP-1, PCP-2	
928+74	RT.	HWY. 64 DRIVE	16					127.0	14.0	51.9	40			PCC-1, PCM-1, PCP-1, PCP-2	
931+10	RT.	HWY. 64 DRIVE	16					105.5	11.6	43.1	32			PCC-1, PCM-1, PCP-1, PCP-2	
934+35	LT.	HWY. 64 DRIVE	16					97.6	10.7	39.9	32			PCC-1, PCM-1, PCP-1, PCP-2	
939+68	LT.	HWY. 64 DRIVE	16					91.4	10.1	37.3	28			PCC-1, PCM-1	
941+08	LT.	HWY. 64 DRIVE	16					97.4	10.7	39.8	30			PCC-1, PCM-1, PCP-1, PCP-2	
941+61	LT.	HWY. 64 DRIVE	16					100.6	11.1	41.1	34			PCC-1, PCM-1, PCP-1, PCP-2	
945+53	LT.	HWY. 64 DRIVE	16					107.9	11.9	44.1	36			PCC-1, PCM-1, PCP-1, PCP-2	
950+64	RT.	COUNTY LINE RD.	22					254.2	28.0	103.8	44			PCC-1, PCM-1, PCP-1, PCP-2	
950+85	LT.	HWY. 64 DRIVE	16					113.4	12.5	46.3	34			PCC-1, PCM-1, PCP-1, PCP-2	
951+93	RT.	HWY. 64 DRIVE	16					100.9	11.1	41.2	36			PCC-1, PCM-1, PCP-1, PCP-2	
954+29	LT.	HWY. 64 DRIVE	16					106.8	11.7	43.6	34			PCC-1, PCM-1, PCP-1, PCP-2	
954+36	RT.	HWY. 64 DRIVE	16					103.1	11.3	42.1	32			PCC-1, PCM-1	
954+90	RT.	HWY. 64 DRIVE	16					104.7	11.5	42.8	32			PCC-1, PCM-1	
957+52	LT.	HWY. 64 DRIVE	24					160.8	17.7	65.7	42			PCC-1, PCM-1, PCP-1, PCP-2	
959+47	RT.	HWY. 64 DRIVE	16					231.0	25.4	94.3	32			PCC-1, PCM-1	
959+97	LT.	CEDAR VALLEY RD.	24					230.2	25.3	94.0	60			PCC-1, PCM-1	
961+38	RT.	KENNETH TAYLOR RD.	24					368.1	40.5	150.3	72			PCC-1, PCM-1	
962+35	RT.	HWY. 64 DRIVE	16					114.3	12.6	46.7	40			PCC-1, PCM-1	
963+30	RT.	HWY. 64 DRIVE	16					133.0	14.6	54.3	46			PCC-1, PCM-1	
964+27	LT.	HWY. 64 DRIVE	16					119.4	13.1	48.8	38			PCC-1, PCM-1	
965+78	LT.	HWY. 64 DRIVE	20					145.8	16.0	59.5	44			PCC-1, PCM-1	
967+93	RT.	HWY. 64 DRIVE	16					180.0	19.8	73.5	54			PCC-1, PCM-1	
974+59	LT.	HWY. 64 DRIVE	16					159.2	17.5	65.0	38			PCC-1, PCM-1, PCP-1, PCP-2	
975+80	RT.	HWY. 64 DRIVE	16					129.1	14.2	52.7	28			PCC-1, PCM-1	
978+55	LT.	HWY. 64 DRIVE	16					536.1	59.0	218.9	38			PCC-1, PCM-1, PCP-1, PCP-2	
981+34	LT.	HWY. 64 DRIVE	16					141.2	15.5	57.7	34			PCC-1, PCM-1, PCP-1, PCP-2	
985+63	LT.	HWY. 64 DRIVE	24					139.6	15.4	57.0	36			PCC-1, PCM-1, PCP-1, PCP-2	
985+98	RT.	HWY. 64 DRIVE	16					118.1	13.0	48.2	28			PCC-1, PCM-1, PCP-1, PCP-2	
989+60	RT.	HWY. 64 DRIVE	16					117.9	13.0	48.1					
994+16	LT.	BLAKEMORE RD.	20					447.4	49.2	182.7					
994+57	LT.	BLAKEMORE DRIVE	16					63.5	7.0	25.9					
995+97	LT.	HWY. 64 DRIVE	16					152.1	16.7	62.1				PCC-1, PCM-1, PCP-1, PCP-2	
997+29	LT.	HWY. 64 DRIVE	16					149.9	16.5	61.2	30			PCC-1, PCM-1, PCP-1, PCP-2	
997+84	RT.	HWY. 64 DRIVE	16					118.9	13.1	48.6					
998+79	LT.	HWY. 64 DRIVE	30					147.4	16.2	60.2	46			PCC-1, PCM-1, PCP-1, PCP-2	
999+64	LT.	HWY. 64 DRIVE	24					147.2	16.2	60.1	40			PCC-1, PCM-1, PCP-1, PCP-2	
SUBTOTALS (BOX 1 OF 2):								649.20	11772.7	1295.0	4807.3	1134	614	456	

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

* QUANTITY ESTIMATED
 SEE SECTION 104.03 OF THE STD. SPECS.
 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

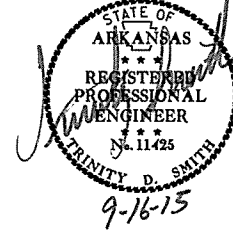
** FOR INFORMATION ONLY

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
 NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE
 A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR
 SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	63	311

2 QUANTITIES



DRIVEWAYS & TURNOUTS (BOX 2 OF 2)

STATION	SIDE	LOCATION	WIDTH		**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)		SIDE DRAINS		STANDARD DRAWINGS
			FEET	INCHES	STATION	STATION		SQ. YD.	TON	SQ. YD.	TON	18"	24" LIN. FT.	
1000+46	LT.	HWY. 64 DRIVE	40					227.2	25.0	92.8	58		PCC-1, PCM-1, PCP-1, PCP-2	
1005+64	LT.	HWY. 64 DRIVE	20					115.2	12.7	47.0	40		PCC-1, PCM-1, PCP-1, PCP-2	
1006+00	RT.	HWY. 64 DRIVE	16					100.2	11.0	40.9	28		PCC-1, PCM-1, PCP-1, PCP-2	
1009+16	RT.	HWY. 64 DRIVE	16					109.1	12.0	44.5		32	PCC-1, PCM-1	
1009+83	LT.	HWY. 64 DRIVE	16					95.9	10.5	39.2	34		PCC-1, PCM-1, PCP-1, PCP-2	
1021+45	LT.	HWY. 64 DRIVE	16					92.7	10.2	37.9			PCC-1, PCM-1, PCP-1, PCP-2	
1021+45	RT.	HWY. 64 DRIVE	16					151.6	16.7	61.9			PCC-1, PCM-1, PCP-1, PCP-2	
1024+55	RT.	HWY. 64 DRIVE	16					110.2	12.1	45.0			PCC-1, PCM-1, PCP-1, PCP-2	
1024+71	LT.	HWY. 64 DRIVE	24					134.6	14.8	55.0			PCC-1, PCM-1, PCP-1, PCP-2	
1030+97	LT.	JB LANE	22					240.7	26.5	98.3	42		PCC-1, PCM-1, PCP-1, PCP-2	
1033+61	RT.	HWY. 64 DRIVE	22					238.7	26.3	97.5	40		PCC-1, PCM-1, PCP-1, PCP-2	
1038+40	LT.	HWY. 64 DRIVE	30					186.2	20.5	76.0	48		PCC-1, PCM-1, PCP-1, PCP-2	
1038+47	RT.	HWY. 64 DRIVE	26					162.1	17.8	66.2	42		PCC-1, PCM-1, PCP-1, PCP-2	
1039+41	RT.	JONES LOOP	22					254.1	28.0	103.8	30		PCC-1, PCM-1, PCP-1, PCP-2	
1039+84	LT.	HWY. 64 DRIVE	38		1039+51	1040+17	200.70				34		PCC-1, PCM-1, PCP-1, PCP-2	
1040+71	LT.	HWY. 64 DRIVE	18		1040+48	1040+94	102.30				28		PCC-1, PCM-1, PCP-1, PCP-2	
1041+65	LT.	HWY. 64 DRIVE	30		1041+36	1041+94	163.20				28		PCC-1, PCM-1, PCP-1, PCP-2	
1043+55	LT.	HWY. 64 DRIVE	40		1043+21	1043+89	214.30				42		PCC-1, PCM-1, PCP-1, PCP-2	
1043+92	RT.	HWY. 64 DRIVE	28		1043+64	1044+20	152.80				42		PCC-1, PCM-1, PCP-1, PCP-2	
1044+31	LT.	HWY. 64 DRIVE	40		1043+97	1044+65	214.10				40	40	PCC-1, PCM-1, PCP-1, PCP-2	
1047+39	LT.	HWY. 64 DRIVE	40		1047+05	1047+73	206.50				42		PCC-1, PCM-1, PCP-1, PCP-2	
1048+05	LT.	HWY. 64 DRIVE	40		1047+71	1048+39	211.50				42		PCC-1, PCM-1, PCP-1, PCP-2	
1049+65	RT.	HWY. 64 DRIVE	36		1049+33	1049+97	133.90				40		PCC-1, PCM-1, PCP-1, PCP-2	
1049+76	LT.	HWY. 64 DRIVE	40		1049+42	1050+10	196.60				40		PCC-1, PCM-1, PCP-1, PCP-2	
1050+31	RT.	HWY. 64 DRIVE	36		1049+99	1050+63	189.40						PCC-1, PCM-1, PCP-1, PCP-2	
1051+33	RT.	HWY. 64 DRIVE	40		1050+99	1051+67	234.20						PCC-1, PCM-1, PCP-1, PCP-2	
1051+73	LT.	HWY. 64 DRIVE	22		1051+48	1051+98	124.10				28		PCC-1, PCM-1, PCP-1, PCP-2	
1053+53	LT.	HWY. 64 DRIVE	16		1053+31	1053+75	84.10				28		PCC-1, PCM-1, PCP-1, PCP-2	
1054+87	LT.	HWY. 64 DRIVE	16					121.8	13.4	49.7	40		PCC-1, PCM-1, PCP-1, PCP-2	
1056+08	RT.	HWY. 64 DRIVE	16					100.7	11.1	41.1	28		PCC-1, PCM-1, PCP-1, PCP-2	
1066+94	RT.	HWY. 64 DRIVE	18					133.9	14.7	54.7	40		PCC-1, PCM-1, PCP-1, PCP-2	
1074+05	RT.	HWY. 64 DRIVE	22					155.7	17.1	63.6	44		PCC-1, PCM-1, PCP-1, PCP-2	
1074+66	LT.	HWY. 64 DRIVE	30					183.6	20.2	75.0	48		PCC-1, PCM-1, PCP-1, PCP-2	
1085+67	RT.	HWY. 64 DRIVE	16					107.1	11.8	43.7	30		PCC-1, PCM-1, PCP-1, PCP-2	
1086+42	RT.	HWY. 64 DRIVE	22					267.5	29.4	109.2	38		PCC-1, PCM-1, PCP-1, PCP-2	
1088+47	LT.	HWY. 64 DRIVE	18					102.7	11.3	41.9	32		PCC-1, PCM-1, PCP-1, PCP-2	
1089+02	LT.	HWY. 64 DRIVE	24					163.9	18.0	66.9	40		PCC-1, PCM-1, PCP-1, PCP-2	
1090+10	RT.	HWY. 64 DRIVE	24					165.2	18.2	67.5	42		PCC-1, PCM-1, PCP-1, PCP-2	
1090+73	RT.	HWY. 64 DRIVE	16					112.8	12.4	46.1	30		PCC-1, PCM-1, PCP-1, PCP-2	
1091+70	RT.	HWY. 64 DRIVE	16					113.3	12.5	46.3	30		PCC-1, PCM-1, PCP-1, PCP-2	
1093+35	LT.	HWY. 64 DRIVE	16					104.4	11.5	42.8	32		PCC-1, PCM-1, PCP-1, PCP-2	
1097+49	RT.	AUSTIN LOOP	20					221.7	24.4	90.5	44		PCC-1, PCM-1, PCP-1, PCP-2	
1101+04	RT.	HWY. 64 DRIVE	18					133.7	14.7	54.6	38		PCC-1, PCM-1, PCP-1, PCP-2	
1101+96	RT.	HWY. 64 DRIVE	16					119.1	13.1	48.6	32		PCC-1, PCM-1, PCP-1, PCP-2	
1111+01	LT.	HWY. 64 DRIVE	16					102.6	11.3	41.9	34		PCC-1, PCM-1, PCP-1, PCP-2	
1120+07	LT.	HWY. 64 DRIVE	16					109.1	12.0	44.5	40		PCC-1, PCM-1, PCP-1, PCP-2	
1126+10	RT.	HWY. 64 DRIVE	16					113.1	12.4	46.2	36		PCC-1, PCM-1, PCP-1, PCP-2	
1126+56	LT.	HWY. 64 DRIVE	16					178.3	19.6	72.8	48		PCC-1, PCM-1, PCP-1, PCP-2	
1129+70	LT.	HWY. 64 DRIVE	16					151.2	16.6	61.7	48		PCC-1, PCM-1, PCP-1, PCP-2	
1130+55	RT.	HWY. 64 DRIVE	16					135.7	14.9	55.4	44		PCC-1, PCM-1, PCP-1, PCP-2	
1137+09	LT.	HWY. 64 DRIVE	30					299.1	32.9	122.1			PCC-1, PCM-1, PCP-1, PCP-2	
1142+38	RT.	HWY. 64 DRIVE	16					143.9	15.8	58.8	48		PCC-1, PCM-1, PCP-1, PCP-2	
1146+00	RT.	HWY. 64 DRIVE	18					158.7	17.5	64.8	46		PCC-1, PCM-1, PCP-1, PCP-2	
1146+05	LT.	HWY. 64 DRIVE	16					114.0	12.9	47.8	46		PCC-1, PCM-1, PCP-1, PCP-2	
1157+18	LT.	HWY. 64 DRIVE	18					107.1	11.8	43.7	32		PCC-1, PCM-1, PCP-1, PCP-2	
1161+71	LT.	HWY. 64 DRIVE	16					107.1	11.8	43.7	36		PCC-1, PCM-1, PCP-1, PCP-2	
1163+81	LT.	HWY. 64 DRIVE	16					110.1	12.1	45.0	36		PCC-1, PCM-1, PCP-1, PCP-2	
1164+74	RT.	HWY. 64 DRIVE	24					160.6	17.7	65.6	40		PCC-1, PCM-1, PCP-1, PCP-2	
1165+47	LT.	HWY. 64 DRIVE	16					111.8	12.3	45.7	40		PCC-1, PCM-1, PCP-1, PCP-2	
1173+91	LT.	ANDERSON FARM RD.	22					238.9	26.3	97.6	50		PCC-1, PCM-1, PCP-1, PCP-2	
1177+69	RT.	HWY. 64 DRIVE	16					185.6	20.4	75.8			PCC-1, PCM-1, PCP-1, PCP-2	
1180+47	RT.	HWY. 64 DRIVE	20					227.3	25.0	92.8			PCC-1, PCM-1, PCP-1, PCP-2	
1182+39	RT.	HWY. 64 DRIVE	20					129.9	14.3	53.0	38		PCC-1, PCM-1, PCP-1, PCP-2	
1201+04	RT.	HWY. 64 DRIVE	16					113.4	12.5	46.3	34		PCC-1, PCM-1, PCP-1, PCP-2	
1202+59	RT.	HWY. 64 DRIVE	16					107.0	11.8	43.7	32		PCC-1, PCM-1, PCP-1, PCP-2	
1212+30	RT.	HWY. 64 DRIVE	18					116.0	12.8	47.4	36		PCC-1, PCM-1, PCP-1, PCP-2	
1222+19	RT.	HWY. 64 DRIVE	16					128.9	14.2	52.6	38		PCC-1, PCM-1, PCP-1, PCP-2	
1223+59	LT.	HWY. 64 DRIVE	16					121.1	13.3	49.4	36		PCC-1, PCM-1, PCP-1, PCP-2	
1225+72	RT.	HWY. 64 DRIVE	16					114.3	12.6	46.7	30		PCC-1, PCM-1, PCP-1, PCP-2	
1226+77	LT.	TURNER RD.	22					217.8	24.0	88.9	42		PCC-1, PCM-1, PCP-1, PCP-2	
1227+58	RT.	HWY. 64 DRIVE	18					121.2	13.3	49.5	30		PCC-1, PCM-1, PCP-1, PCP-2	
1227+94	LT.	HWY. 64 DRIVE	16					95.5	10.5	39.0	28		PCC-1, PCM-1, PCP-1, PCP-2	
100+60	RT.	HWY. 5 DRIVE	40		100+26	100+94	135.30							
101+47	LT.	HWY. 5 DRIVE	40		101+13	101+81	241.40							
102+12	LT.	HWY. 5 DRIVE	36		101+60	102+44	205.80							
104+42	RT.	HWY. 5 DRIVE	28		104+14	104+70	84.30							
105+22	LT.	HWY. 5 DRIVE	40		104+88	105+56	159.40							
105+29	RT.	HWY. 5 DRIVE	32		104+99	105+59	110.90							
105+91	LT.	HWY. 5 DRIVE	40		105+57	106+25	148.80							
106+24	RT.	HWY. 5 DRIVE	26		105+97	106+51	89.20							
106+70	LT.	HWY. 5 DRIVE	24		106+44	106+96	119.80							
SUBTOTALS (BOX 1 OF 2):								11772.7	1295.0	4807.3	1134	614	456	
SUBTOTALS (BOX 2 OF 2):								8649.4	951.7	3531.9	2002	304	40	32
TOTALS:								20422.1	2246.7	8339.2	3136	918	496	32

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

* QUANTITY ESTIMATED
 SEE SECTION 104.03 OF THE STD. SPECS.
 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

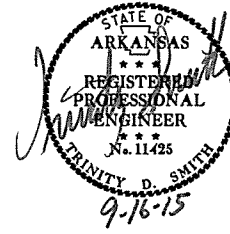
** FOR INFORMATION ONLY

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
 NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE
 A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR
 SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

2 QUANTITIES

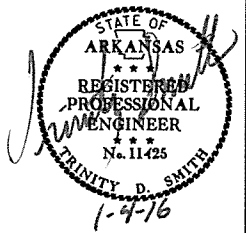
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		64	311



DATE REVISED	DATE FLAWED	DATE REVISED	DATE FLAWED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-22-15				6	ARK.			
12-28-15								
12-31-15								

JOB NO. 012155 65 311

2 QUANTITIES



4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			18500	74
TOTALS:			18500	74

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	185	370
TOTALS:	185	370

BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
TOTAL:	100

NOTE: QUANTITY IS ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)			TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")									
				TON / STATION	TON	TON	AVG. WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	PG 76-22 TON	TOTAL PG 70-22 TON	TOTAL PG 76-22 TON	
MAIN LANES																												
839+25.00	847+79.73	HWY. 64 MAIN LANES NOTCH AND WIDEN	854.73	VAR.	1239.53	48.00	37264.27	0.03	1117.93	VAR.	905.08	440.00	199.12	VAR.	881.38	330.00	145.43	VAR.	857.68	220.00	94.34	VAR.	75.00	7122.75	220.00	783.50	877.84	
848+87.03	852+15.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	327.97	257.25	843.70	38.00	1384.76	0.03	41.54	12.50	455.51	440.00	100.21	12.00	437.29	330.00	72.15	11.50	419.07	220.00	46.10	75.00	2733.08	220.00	300.64	346.74		
852+15.00	852+90.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	75.00	324.80	243.60	54.00	450.00	0.03	13.50	28.50	237.50	440.00	52.25	28.00	233.33	330.00	38.50	27.50	229.17	220.00	25.21	75.00	625.00	220.00	68.75	93.96		
852+90.00	866+34.98	HWY. 64 MAIN LANES NOTCH AND WIDEN	1344.98	375.50	5050.40	120.00	17933.07	0.03	537.99	40.50	6052.41	440.00	1331.53	40.00	5977.69	330.00	986.32	39.50	5902.97	220.00	649.33	75.00	11208.17	220.00	1232.90	1882.23		
866+34.98	873+26.67	HWY. 64 MAIN LANES NOTCH AND WIDEN	691.69	375.50	2597.30	120.00	9222.53	0.03	276.68	40.50	3112.61	440.00	684.77	40.00	3074.18	330.00	507.24	39.50	3035.75	220.00	333.93	75.00	5764.08	220.00	634.05	967.98		
873+26.67	941+00.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	6773.33	375.50	25433.85	120.00	90311.07	0.03	2709.33	40.50	30479.99	440.00	6705.60	40.00	30103.69	330.00	4967.11	39.50	29727.39	220.00	3270.01	75.00	56444.42	220.00	6208.89	9478.90		
941+00.00	1038+59.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	9759.00	VAR.	31391.64	VAR.	122131.44	0.03	3704.75	VAR.	41252.65	440.00	9075.58	VAR.	40710.48	330.00	6717.23	VAR.	40168.31	220.00	4418.51	75.00	81325.00	220.00	8945.75	13364.26		
1038+59.00	1044+91.54	HWY. 64 MAIN LANES CURB AND GUTTER	632.54	VAR.	271.42	VAR.	7459.65	0.03	18.42	VAR.	2328.41	440.00		512.25	VAR.	2486.55	330.00		410.28	VAR.	2644.69	220.00	290.92	56.00	3935.80	220.00	432.94	723.86
1044+91.54	1048+70.13	HWY. 64 - HWY. 5 INTERSECTION	378.59	VAR.	3283.84	VAR.	19798.35	0.03	593.95	VAR.	6599.45	440.00		1451.88	VAR.	6599.45	330.00		1088.91	VAR.	6599.45	220.00	725.94	56.00	5498.36	220.00	604.82	1330.76
1048+70.13	1053+65.38	HWY. 64 MAIN LANES CURB AND GUTTER	495.25	VAR.	843.73	VAR.	5692.26	0.03	508.81	VAR.	1883.66	440.00		414.41	VAR.	1897.42	330.00		313.07	VAR.	1911.18	220.00	210.23	56.00	3081.56	220.00	338.97	549.20
1053+65.38	1054+31.97	HWY. 64 MAIN LANES F&G TRANSITION	66.59	VAR.	2892.55	VAR.	7556.69	0.03	226.70	VAR.	2518.90	440.00	554.16	VAR.	2518.90	330.00	415.62	VAR.	2518.90	220.00	277.08	75.00	4138.80	220.00	455.27	732.35		
1054+31.97	1228+25.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	17393.03	375.50	65310.83	144.00	278288.48	0.03	8348.65	40.50	78268.64	440.00	17219.10	40.00	77302.36	330.00	12754.89	39.50	76336.08	220.00	8396.97	75.00	144941.92	220.00	15943.61	24340.58		
1228+25.00	107+00.00	HWY. 5 MAIN LANES NOTCH AND WIDEN	231.43	VAR.	135.03	VAR.	682.83	0.03	20.48	VAR.	227.61	440.00		50.07	VAR.	227.61	330.00			VAR.	227.61	220.00	25.04	VAR.	635.79	220.00	91.94	116.98
ADDITIONAL FOR LEVELING																												
839+25.00	919+50.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	8025.00			24.00	21400.00	0.10	2140.00										24.00	21400.00	220.00	2354.00					2354.00	
919+50.00	931+20.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	1170.00			24.00	3120.00	0.10	312.00										24.00	3120.00	220.00	343.20					343.20	
931+20.00	967+90.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	3670.00			24.00	9786.67	0.10	978.67										24.00	9786.67	220.00	1076.53					1076.53	
967+90.00	973+50.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	560.00			24.00	1493.33	0.10	149.33										24.00	1493.33	220.00	164.27					164.27	
973+50.00	1038+59.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	6509.00			24.00	17357.33	0.10	1735.73										24.00	17357.33	220.00	1909.31					1909.31	
1038+59.00	1053+65.38	HWY. 64 MAIN LANES NOTCH AND WIDEN	1506.38			24.00	4017.01	0.10	401.70										24.00	4017.01	220.00		441.87					441.87
1053+65.38	1056+90.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	324.62			24.00	865.65	0.10	86.57										24.00	865.65	220.00	95.22					95.22	
1056+90.00	1071+60.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	1470.00			24.00	3920.00	0.10	392.00										24.00	3920.00	220.00	431.20					431.20	
1071+60.00	1079+80.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	820.00			24.00	2186.67	0.10	218.67										24.00	2186.67	220.00	240.53					240.53	
1079+80.00	1102+50.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	2270.00			24.00	6053.33	0.10	605.33										24.00	6053.33	220.00	665.87					665.87	
1102+50.00	1110+00.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	750.00			24.00	2000.00	0.10	200.00										24.00	2000.00	220.00	220.00					220.00	
1110+00.00	1118+70.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	870.00			24.00	2320.00	0.10	232.00										24.00	2320.00	220.00	255.20					255.20	
1118+70.00	1127+10.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	840.00			24.00	2240.00	0.10	224.00										24.00	2240.00	220.00	246.40					246.40	
1127+10.00	1130+60.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	350.00			24.00	933.33	0.10	93.33										24.00	933.33	220.00	102.67					102.67	
1130+60.00	1138+40.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	780.00			24.00	2080.00	0.10	208.00										24.00	2080.00	220.00	228.80					228.80	
1138+40.00	1149+20.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	1080.00			24.00	2880.00	0.10	288.00										24.00	2880.00	220.00	316.80					316.80	
1149+20.00	1157+60.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	840.00			24.00	2240.00	0.10	224.00										24.00	2240.00	220.00	246.40					246.40	
1157+60.00	1165+60.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	800.00			24.00	2133.33	0.10	213.33										24.00	2133.33	220.00	234.67					234.67	
1165+60.00	1176+40.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	1080.00			24.00	2880.00	0.10	288.00										24.00	2880.00	220.00	316.80					316.80	
1176+40.00	1204+00.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	2760.00			24.00	7360.00	0.10	736.00										24.00	7360.00	220.00	809.60					809.60	
1204+00.00	1214+90.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	1090.00			24.00	2906.67	0.10	290.67										24.00	2906.67	220.00	319.73					319.73	
1214+90.00	1228+25.00	HWY. 64 MAIN LANES NOTCH AND WIDEN	1335.00			24.00	3560.00	0.10	356.00										24.00	3560.00	220.00	391.60					391.60	
1228+25.00	107+00.00	HWY. 5 MAIN LANES	715.00			24.00	1906.67	0.10	190.67										24.00	1906.67	220.00		209.73					209.73
ADDITIONAL FOR METHOD OF RAISING GRADE																												
919+50.																												

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		66311	
				06387 - QUANTITIES - 55611				

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 012155

BRIDGE NO. CODE NO. NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	801	802	802	803	804	804	805	807	809	812	816	816	821	
		ITEM	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S(AE) CONCRETE-BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	① STEEL PILING (HP 12X53)	STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50W)	PREFORMED JOINT SEAL	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. 06387)	
		UNIT	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LB.	LIN. FT.	LB.	LIN. FT.	EACH	SQ. YD.	CU. YD.	LUMP SUM	
06387 X071 LITTLE CYPRESS CREEK	BENT 1		6	7.04		5.2	958		17	176			59	31		
	BENT 2		17	9.61			1,452									
	BENT 3		15	9.61			1,452									
	BENT 4		7	7.04		5.2	958		16	180			91	47		
	CONT. COMP. W-BEAM UNIT					48.30	918.8 (2)	12,840			12,334	156	1			
TOTALS FOR JOB NO. 012155			45 (3)	33.30	48.30	929.2	4,820	12,840	33	12,690	156	1	150	78	1	

- ① THESE STEEL PILES SHALL BE GRADE 50 AND ARE REQUIRED TO HAVE SPECIAL PILE TIPS WHICH WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "STEEL PILING (HP 12X53)".
- ② INCLUDES ROADWAY SURFACE OF EXISTING DECK AREA TO BE RETAINED.
- ③ INCLUDES APPROXIMATELY 8 CU. YDS. OF ROCK EXCAVATION.

AILEEN SCHUBEL
DESIGN SECTION SUPERVISOR



BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
VILONIA BYPASS-EAST (F)
FAULKNER COUNTY

ROUTE 64 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: ACP DATE: 02-13-14 FILENAME: b012155_q1.dgn
CHECKED BY: JYP DATE: 3-24-14 SCALE: NONE
DESIGNED BY: DATE:
BRIDGE NO. 06387 DRAWING NO. 55611

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-17-15		01-05-16		6	ARK.			
12-28-15								
12-31-15								

2 SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES (BOX 1 OF 3)

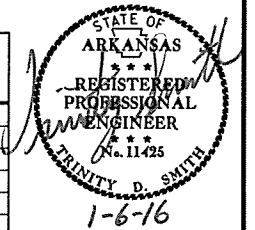
ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	248	STATION
201	GRUBBING	248	STATION
202	REMOVAL AND DISPOSAL OF CURB	952	LIN. FT.
202	REMOVAL AND DISPOSAL OF BRICK COLUMNS	6	EACH
202	REMOVAL AND DISPOSAL OF WELL	5	EACH
202	REMOVAL AND DISPOSAL OF FENCE	37373	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	62	EACH
202	REMOVAL AND DISPOSAL OF POSTS	13	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE SLABS	150	SQ. YD.
202	REMOVAL AND DISPOSAL OF BRICK WALLS	6	LIN. FT.
202	REMOVAL AND DISPOSAL OF ROCK WALLS	50	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT	4	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	41	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	1128	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS	59	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	55	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	97	EACH
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL	275	LIN. FT.
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLES	2	EACH
202	REMOVAL AND DISPOSAL OF WELL HOUSE	5	EACH
202	REMOVAL AND DISPOSAL OF BUILDINGS	3	EACH
202	REMOVAL AND DISPOSAL OF STORM CELLAR	3	EACH
202	REMOVAL AND DISPOSAL OF ROCK COLUMNS	7	EACH
202	REMOVAL AND DISPOSAL OF CATTLE GUARD	1	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	165	EACH
202	REMOVAL AND DISPOSAL OF PLANTERS	10	EACH
202	REMOVAL AND DISPOSAL OF FLAG POLE	6	EACH
202	REMOVAL AND DISPOSAL OF SEPTIC SYSTEM	2	EACH
207	STONE BACKFILL	1460	TON
210	UNCLASSIFIED EXCAVATION	220736	CU. YD.
210	COMPACTED EMBANKMENT	223798	CU. YD.
SP & 210	SOIL STABILIZATION	600	TON
303	AGGREGATE BASE COURSE (CLASS 7)	153630	TON
SS & 401	TACK COAT	30417	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	40231	TON
SP & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")	1620	TON
SP & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")	100	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	38618	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	1736	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")	83	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	65013	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	121	TON
SP, SS, & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")	3408	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	182	TON
412	COLD MILLING ASPHALT PAVEMENT	856	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	185	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	100	TON
504	APPROACH GUTTERS	15.10	CU. YD.
505	PORTLAND CEMENT CONCRETE DRIVEWAY	4369.80	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	606	SQ. FT.
SP, SS, & 604	SIGNS LEFT IN PLACE	85	SQ. FT.
SS & 604	BARRICADES	160	LIN. FT.
SS & 604	TRAFFIC DRUMS	1230	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	2120	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	1902	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	220335	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	37727	LIN. FT.
SS & 604	VERTICAL PANELS	212	EACH
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	584	LIN. FT.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	987	LIN. FT.
606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	987	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	394	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	74	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	264	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	520	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	59	LIN. FT.
606	60" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	124	LIN. FT.
606	72" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	124	LIN. FT.
606	29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	374	LIN. FT.

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES (BOX 2 OF 3)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP, SS, & 606	18" SIDE DRAIN	3136	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN	918	LIN. FT.
SS & 606	21" X 15" SIDE DRAIN	496	LIN. FT.
SS & 606	28" X 20" SIDE DRAIN	32	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	7	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	7	EACH
606	60" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	72" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	29" X 18" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	5	EACH
606	SELECTED PIPE BEDDING	640	CU. YD.
609	DROP INLETS (TYPE ST)	2	EACH
609	DROP INLETS (TYPE MO)	10	EACH
609	DROP INLET EXTENSIONS (4')	3	EACH
609	DROP INLET EXTENSIONS (8')	2	EACH
611	UNDERDRAIN OUTLET PROTECTORS	74	EACH
611	4" PIPE UNDERDRAINS	18500	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	1269	TON
617	GUARDRAIL (TYPE A)	450	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	2	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	2	EACH
617	THREE BEAM GUARDRAIL TERMINAL	4	EACH
619	WIRE FENCE (TYPE C)	5119	LIN. FT.
619	WIRE FENCE (TYPE D)	9300	LIN. FT.
619	WIRE FENCE (TYPE D-1)	8737	LIN. FT.
619	WIRE FENCE (TYPE D-2)	1785	LIN. FT.
SP	WATER GATE	1	EACH
619	16" STEEL GATES (ALTERNATE NO. 1)	22	EACH
619	16" ALUMINUM GATES (ALTERNATE NO. 2)	22	EACH
620	LIME	113	TON
620	SEEDING	56.40	ACRE
SS & 620	MULCH COVER	206.40	ACRE
620	WATER	8858.2	M.GAL.
621	TEMPORARY SEEDING	150.00	ACRE
621	SILT FENCE	24590	LIN. FT.
621	SAND BAG DITCH CHECKS	4373	BAG
621	DROP INLET SILT FENCE	295	LIN. FT.
621	SEDIMENT BASIN	16049	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	16068	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	16313	CU. YD.
621	ROCK DITCH CHECKS	225	CU. YD.
621	WATTLE (20")	90	LIN. FT.
623	SECOND SEEDING APPLICATION	56.40	ACRE
624	SOLID SODDING	3599	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	8900	SQ. YD.
632	CONCRETE ISLAND	236	SQ. YD.
633	CONCRETE WALKS	1499	SQ. YD.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	3905	LIN. FT.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE E-1) (2' 0")	692	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	70	EACH
637	MAILBOX SUPPORTS (SINGLE)	54	EACH
637	MAILBOX SUPPORTS (DOUBLE)	8	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	62	SQ. YD.
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	74759	LIN. FT.
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
703	FLASHING BEACON CONTROLLER	1	EACH
704	VEHICLE DETECTOR-RACK MOUNT	10	EACH
SP	LOOP WIRING CLASS III (1C/16 A.W.G.)	1336	LIN. FT.
704	FEEDER WIRE	3886	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (1 SECTION, 1 WAY)	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	12	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2848	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	268	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	763	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1265	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	740	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	488	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	40	LIN. FT.

* DENOTES ALTERNATE BID ITEMS.

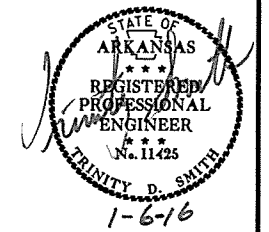


1/5/2016

R012155.DGN

DATE REVISED	FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-9-15		12-2-15		12-28-15		6	ARK.			
11-12-15		12-21-15		12-31-15						
11-17-15		12-22-15		01-05-16				JOB NO. 012155	68	311

② SUMMARY OF QUANTITIES AND REVISIONS



SUMMARY OF QUANTITIES (BOX 3 OF 3)

ITEM NUMBER	ITEM	QUANTITY	UNIT
709	GALVANIZED STEEL CONDUIT (1.25")	40	LIN. FT.
710	NON-METALLIC CONDUIT (1")	1510	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	150	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	811	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
711	CONCRETE PULL BOX (TYPE 2)	1	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	11	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	7	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	2	EACH
SP	LUMINAIRE ASSEMBLY	6	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	2	EACH
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	93675	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	220	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	93237	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	4	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4	EACH
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") (ALTERNATE NO. 1)	54	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") (ALTERNATE NO. 2)	54	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4") (ALTERNATE NO. 1)	268	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4") (ALTERNATE NO. 2)	268	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	2163	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER	2	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	2	EACH
SP & 733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	1043	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	2	EACH
SP & 733	VEHICLE DETECTOR RACK (20 CHANNEL)	1	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	92	CU. YD.
802	CLASS S CONCRETE-ROADWAY	253.85	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	34901	POUND
STRUCTURES OVER 20' SPAN			
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	121	CU. YD.
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	45	CU. YD.
802	CLASS S CONCRETE-ROADWAY	596.74	CU. YD.
802	CLASS S CONCRETE-BRIDGE	33.30	CU. YD.
802	CLASS S(AE) CONCRETE-BRIDGE	48.30	CU. YD.
803	CLASS 2 PROTECTIVE SURFACE TREATMENT	929.2	SQ. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	81984	POUND
804	REINFORCING STEEL-BRIDGE (GRADE 60)	4820	POUND
804	EPOXY COATED REINFORCING STEEL (GRADE 60)	12840	POUND
805	STEEL PILING (HP 12X53)	33	LIN. FT.
807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR50W)	12690	POUND
809	PREFORMED JOINT SEAL	156	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
816	FILTER BLANKET	150	SQ. YD.
816	DUMPED RIPRAP	78	CU. YD.
821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. 06387)	1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
11/9/2015	ADDED SUPPLEMENTAL SPECIFICATION "100-3 CONTRACTOR'S LICENSE"	3, 68
11/12/2015	REVISED THE FEDERAL AID PROJECT NUMBER	1, 68
11/17/2015	REVISED "REMOVAL AND DISPOSAL POSTS" QUANTITY	59, 67, 68
12/2/2015	ADDED SPECIAL PROVISION "DELAY IN RIGHT OF WAY OCCUPANCY"	3, 68
12/21/2015	REVISED "HIGH PERFORMANCE PAVEMENT MARKING" SPECIAL PROVISION	68
12/22/2015	REVISED "MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2") QUANTITY, "ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2") QUANTITY, "ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2") QUANTITY, "MINERAL AGGREGATE IN ACHM BINDER COURSE (1") QUANTITY, "ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1") QUANTITY, "MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2") QUANTITY, "ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2") QUANTITY, AND "TACK COAT" QUANTITY	65, 67, 68
12/28/2015	REMOVED "PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS" SPECIAL PROVISION. REVISED "MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2") QUANTITY AND "ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2") QUANTITY	3, 65, 67, 68
12/31/2015	REVISED TYPICAL SECTION. REVISED "TACK COAT" QUANTITY, "MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2") QUANTITY, "ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2") QUANTITY, "ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2") QUANTITY, "MINERAL AGGREGATE IN ACHM BINDER COURSE (1") QUANTITY, "ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1") QUANTITY, "ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1") QUANTITY, "MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2") QUANTITY, "ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2") QUANTITY, AND "ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2") QUANTITY	5, 65, 67, 68
1/5/2016	REVISED UNCLASSIFIED EXCAVATION QUANTITY, COMPACTED EMBANKMENT QUANTITY, VOLUME UNDERCUT AND VOLUME UNSPECIFIED MATERIAL ON CROSS SECTION 1127+00.	60, 67, 68, 284

SURVEY CONTROL COORDINATES

Project Name: 012154
 Date: 12/30/2014
 Coordinate System: Arkansas State Plane Coordinates
 Based on AHTD GPS PTS 230034, 730004 - 730004A, 730035 - 730035A, 730034 - 730034A, 730016 - 730016A, 730015
 Projected to Ground Coordinates
 Units: U.S. Survey Foot

COORDINATES LISTED BELOW ARE GROUND (Localized) COORDINATES !!!!

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		69	311

2 SURVEY CONTROL DETAILS

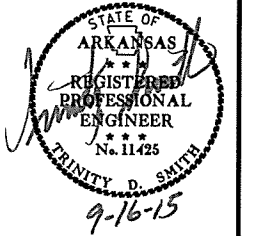


Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description
1	277773.5674	0.0195	1267429.1530	0.0167	301.02	0.009	CTL	AHTD STANDARD MONUMENT
2	278078.0961	0.0186	1268084.4092	0.0159	306.32	0.009	CTL	AHTD STANDARD MONUMENT
3	278364.3899	0.0181	1268758.0301	0.0156	317.59	0.009	CTL	AHTD STANDARD MONUMENT
4	278652.2050	0.0220	1269452.6697	0.0181	321.65	0.008	CTL	AHTD STANDARD MONUMENT
5	278944.9150	0.0208	1270146.7715	0.0177	321.04	0.008	CTL	AHTD STANDARD MONUMENT
6	279169.7161	0.0200	1270673.9456	0.0175	322.54	0.007	CTL	AHTD STANDARD MONUMENT
7	279456.6809	0.0195	1271427.3085	0.0178	321.91	0.007	CTL	AHTD STANDARD MONUMENT
8	279731.0812	0.0158	1272138.9397	0.0146	328.72	0.006	CTL	AHTD STANDARD MONUMENT
9	280121.5389	0.0189	1273075.4855	0.0174	324.52	0.006	CTL	AHTD STANDARD MONUMENT
10	280463.5007	0.0188	1273779.7646	0.0174	314.98	0.007	CTL	AHTD STANDARD MONUMENT
11	280708.1476	0.0200	1274671.2147	0.0184	311.27	0.007	CTL	AHTD STANDARD MONUMENT
12	280820.0069	0.0194	1275433.1430	0.0181	308.68	0.008	CTL	AHTD STANDARD MONUMENT
13	280915.0822	0.0202	1276180.5502	0.0190	307.05	0.008	CTL	AHTD STANDARD MONUMENT
14	281031.3853	0.0199	1276944.5097	0.0186	297.97	0.008	CTL	AHTD STANDARD MONUMENT
15	281189.1261	0.0161	1277740.5448	0.0146	294.52	0.008	CTL	AHTD STANDARD MONUMENT
16	281424.4980	0.0209	1278487.3660	0.0191	292.46	0.009	CTL	AHTD STANDARD MONUMENT
17	281938.8949	0.0200	1279075.2177	0.0202	293.32	0.009	CTL	AHTD STANDARD MONUMENT
18	282307.7927	0.0205	1279751.2273	0.0189	306.38	0.009	CTL	AHTD STANDARD MONUMENT
19	282447.5556	0.0192	1280525.3555	0.0183	306.90	0.009	CTL	AHTD STANDARD MONUMENT
20	282578.7416	0.0167	1281278.4918	0.0158	301.52	0.009	CTL	AHTD STANDARD MONUMENT
21	282604.6233	0.0187	1282050.2227	0.0181	292.46	0.009	CTL	AHTD STANDARD MONUMENT
22	282592.1833	0.0194	1282840.6750	0.0184	284.35	0.010	CTL	AHTD STANDARD MONUMENT
23	282582.9407	0.0188	1283611.8152	0.0181	285.21	0.010	CTL	AHTD STANDARD MONUMENT
24	282571.5710	0.0184	1284390.6404	0.0179	284.35	0.010	CTL	AHTD STANDARD MONUMENT
25	282553.4347	0.0184	1285181.1674	0.0180	282.30	0.010	CTL	AHTD STANDARD MONUMENT
26	282518.6212	0.0185	1286042.4175	0.0183	283.49	0.010	CTL	AHTD STANDARD MONUMENT
27	282514.3516	0.0190	1286820.4937	0.0187	288.34	0.010	CTL	AHTD STANDARD MONUMENT
28	282467.9032	0.0190	1287592.1496	0.0184	282.36	0.011	CTL	AHTD STANDARD MONUMENT
29	282420.8481	0.0195	1288384.5944	0.0185	276.61	0.011	CTL	AHTD STANDARD MONUMENT
30	282396.6752	0.0302	1289148.3054	0.0256	268.92	0.011	CTL	AHTD STANDARD MONUMENT
31	282337.7029	0.0199	1289909.1213	0.0187	271.44	0.011	CTL	AHTD STANDARD MONUMENT
32	282301.6603	0.0195	1290672.1947	0.0188	279.60	0.011	CTL	AHTD STANDARD MONUMENT
33	282248.3460	0.0191	1291426.6371	0.0184	274.30	0.011	CTL	AHTD STANDARD MONUMENT
34	282222.7048	0.0158	1292196.1758	0.0155	268.00	0.011	CTL	AHTD STANDARD MONUMENT
35	282176.2921	0.0172	1292967.4758	0.0169	272.36	0.011	CTL	AHTD STANDARD MONUMENT
36	282173.7560	0.0201	1293738.6553	0.0199	272.78	0.011	CTL	AHTD STANDARD MONUMENT
37	282005.8804	0.0198	1294518.4290	0.0196	277.18	0.011	CTL	AHTD STANDARD MONUMENT
38	281601.7799	0.0208	1295208.1214	0.0204	276.58	0.012	CTL	AHTD STANDARD MONUMENT
39	281044.0423	0.0215	1295749.1008	0.0213	270.24	0.012	CTL	AHTD STANDARD MONUMENT
40	280337.3226	0.0218	1296056.0551	0.0215	265.57	0.012	CTL	AHTD STANDARD MONUMENT
41	279628.3941	0.0217	1296371.0195	0.0213	268.25	0.012	CTL	AHTD STANDARD MONUMENT
42	278688.1801	0.0179	1296935.3838	0.0163	266.50	0.012	CTL	AHTD STANDARD MONUMENT
43	278339.1194	0.0248	1297591.0658	0.0213	268.91	0.012	CTL	AHTD STANDARD MONUMENT
44	278304.7733	0.0233	1298360.8656	0.0205	255.47	0.012	CTL	AHTD STANDARD MONUMENT
45	278291.0499	0.0239	1299139.5553	0.0207	254.97	0.012	CTL	AHTD STANDARD MONUMENT
46	278269.9125	0.0244	1299931.1993	0.0212	260.16	0.012	CTL	AHTD STANDARD MONUMENT
47	278259.6517	0.0224	1300724.4117	0.0216	259.87	0.012	CTL	AHTD STANDARD MONUMENT
48	278256.4833	0.0235	1301492.8975	0.0225	259.92	0.012	CTL	AHTD STANDARD MONUMENT
49	278237.2308	0.0240	1302246.4598	0.0228	258.74	0.012	CTL	AHTD STANDARD MONUMENT
50	278219.5397	0.0251	1303066.2404	0.0236	258.62	0.012	CTL	AHTD STANDARD MONUMENT
51	278221.7853	0.0190	1303847.4417	0.0181	257.36	0.012	CTL	AHTD STANDARD MONUMENT
52	278265.4238	0.0252	1304601.5477	0.0232	256.37	0.012	CTL	AHTD STANDARD MONUMENT
53	278258.8981	0.0253	1305388.6134	0.0241	251.84	0.012	CTL	AHTD STANDARD MONUMENT
54	278266.1562	0.0244	1306152.6720	0.0234	248.36	0.013	CTL	AHTD STANDARD MONUMENT
55	278265.4578	0.0234	1306933.4026	0.0229	247.88	0.013	CTL	AHTD STANDARD MONUMENT
56	278235.7740	0.0191	1307713.6653	0.0178	247.31	0.012	CTL	AHTD STANDARD MONUMENT

57	278208.1630	0.0186	1308483.8113	0.0174	249.23	0.013	CTL	AHTD STANDARD MONUMENT
58	278188.6024	0.0185	1309246.9955	0.0178	248.95	0.013	CTL	AHTD STANDARD MONUMENT
59	278166.9666	0.0216	1310018.3188	0.0208	248.91	0.013	CTL	AHTD STANDARD MONUMENT
60	278140.0682	0.0224	1310931.7734	0.0213	255.61	0.012	CTL	AHTD STANDARD MONUMENT
61	278059.5757	0.0232	1311737.5540	0.0218	257.17	0.013	CTL	AHTD STANDARD MONUMENT
62	278043.1316	0.0224	1312705.7551	0.0213	249.50	0.013	CTL	AHTD STANDARD MONUMENT
63	278019.5356	0.0191	1313482.4118	0.0179	248.52	0.013	CTL	AHTD STANDARD MONUMENT
64	277997.5609	0.0228	1314267.2031	0.0219	251.22	0.012	CTL	AHTD STANDARD MONUMENT
65	277980.0391	0.0225	1315026.9512	0.0217	251.20	0.013	CTL	AHTD STANDARD MONUMENT
66	277959.9959	0.0226	1315798.7173	0.0218	251.31	0.013	CTL	AHTD STANDARD MONUMENT
67	277937.7758	0.0167	1316587.9541	0.0158	252.03	0.012	CTL	AHTD STANDARD MONUMENT
68	277917.4684	0.0203	1317375.7721	0.0188	257.11	0.012	CTL	AHTD STANDARD MONUMENT
69	277899.1548	0.0254	1318100.1464	0.0238	258.34	0.012	CTL	AHTD STANDARD MONUMENT
74	277850.8787	0.0291	1321653.9722	0.0245	253.29	0.012	CTL	AHTD STANDARD MONUMENT
75	277828.9480	0.0175	1322451.8145	0.0151	255.97	0.012	CTL	AHTD STANDARD MONUMENT
77	276822.3721	0.0238	1323635.2560	0.0211	255.13	0.012	CTL	AHTD STANDARD MONUMENT
81	273192.1325	0.0210	1323571.1221	0.0203	263.10	0.012	CTL	AHTD STANDARD MONUMENT
82	272465.0427	0.0213	1323559.7468	0.0209	255.91	0.012	CTL	AHTD STANDARD MONUMENT
85	270171.2454	0.0215	1323497.3619	0.0195	250.58	0.012	CTL	AHTD STANDARD MONUMENT
88	268005.8689	0.0210	1323961.6029	0.0198	252.99	0.011	CTL	AHTD STANDARD MONUMENT
89	267773.7856	0.0211	1324690.0854	0.0202	271.70	0.011	CTL	AHTD STANDARD MONUMENT
90	267744.1387	0.0159	1325367.5488	0.0152	281.44	0.011	CTL	AHTD STANDARD MONUMENT
92	267844.5182	0.0214	1326950.7234	0.0202	285.43	0.011	CTL	AHTD STANDARD MONUMENT
93	267847.7164	0.0234	1327495.6824	0.0217	286.32	0.011	CTL	AHTD STANDARD MONUMENT
100	279881.2299	0.0001	1272363.5763	0.0001	327.87	0.005	GPS	PD:AHTD GPS #230034
102	280505.8536	0.0001	1274023.7306	0.0001	315.15	0.007	GPS	PD:AHTD GPS #230012A
103	288059.8397	0.0001	1283806.8507	0.0001	321.07	0.000	GPS	PD:AHTD GPS #730004
104	286881.6585	0.0001	1284453.6505	0.0001	309.69	0.017	GPS	PD:AHTD GPS #730004A
105	279326.8095	0.0001	1296482.2453	0.0001	272.11	0.012	GPS	PD:AHTD GPS #730035
106	280999.3861	0.0001	1295792.8595	0.0001	269.81	0.012	GPS	PD:AHTD GPS #730035A
107	278035.5734	0.0001	1311948.3018	0.0001	256.02	0.013	GPS	PD:AHTD GPS #730034
108	278188.9149	0.0001	1310345.3533	0.0001	250.76	0.013	GPS	PD:AHTD GPS #730034A
109	272981.4379	0.0001	1323501.6936	0.0001	263.53	0.005	GPS	PD:AHTD GPS #730016
111	268326.2822	0.0001	1338183.0651	0.0001	242.55	0.000	GPS	PD:AHTD GPS #730015
112	277924.4928	0.0320	1318908.3200	0.0260	261.02	0.005	CTL	AHTD STANDARD MONUMENT
113	277906.6605	0.0270	1319549.9134	0.0230	266.56	0.005	CTL	AHTD STANDARD MONUMENT
114	277550.7631	0.0300	1323224.8807	0.0250	260.53	0.006	CTL	AHTD STANDARD MONUMENT
115	276057.6255	0.0270	1323587.0793	0.0230	253.32	0.007	CTL	AHTD STANDARD MONUMENT
116	275277.4639	0.0250	1323610.1400	0.0220	258.25	0.008	CTL	AHTD STANDARD MONUMENT
117	273967.2235	0.0230	1323584.1912	0.0220	263.35	0.007	CTL	AHTD STANDARD MONUMENT
118	271693.7857	0.0360	1323552.6102	0.0270	246.52	0.004	CTL	AHTD STANDARD MONUMENT
119	270932.8650	0.0390	1323545.4180	0.0270	246.84	0.004	CTL	AHTD STANDARD MONUMENT
120	269411.3231	0.0350	1323493.1813	0.0260	248.49	0.005	CTL	AHTD STANDARD MONUMENT
121	268638.3736	0.0340	1323531.9885	0.0270	250.96	0.005	CTL	AHTD STANDARD MONUMENT
122	267756.0073	0.0330	1325367.5841	0.0280	283.12	0.005	CTL	AHTD STANDARD MONUMENT
123	267758.0851	0.0330	1326124.9853	0.0280	272.09	0.007	CTL	AHTD STANDARD MONUMENT
124	267846.7986	0.0290	1327486.1477	0.0290	286.38	0.009	CTL	AHTD STANDARD MONUMENT
125	274760.4664	0.0260	1323622.8964	0.0210	260.96	0.007	CTL	AHTD STANDARD MONUMENT
900	279292.4096	30.0000	1271077.9295	30.0000	312.23	0.007	TBM	PD:SQ CUT IN SO HEADWALL
901	281709.0577	30.0000	1278891.4388	30.0000	290.04	0.009	TBM	PD:CUT SQ IN N HEADWALL
902	282613.9346	30.0000	1283711.3286	30.0000	283.96	0.010	TBM	PD:AHTD CAP E END N HEADWALL
903	282612.6706	30.0000	1285040.6681	30.0000	282.10	0.010	TBM	PD:AHTD CAP E END N HEADWALL
904	282510.7293	30.0000	1285954.4982	30.0000	283.54	0.010	TBM	PD:CUT SQ CNT S HEADWALL
905	282305.7868	30.0000	1289194.6156	30.0000	269.23	0.011	TBM	PD:CUT SQ IN S HEADWALL
906	282202.5355	30.0000	1292102.					

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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2 SURVEY CONTROL DETAILS



908	278255.5035	30.0000	1298830.5682	30.0000	254.91	0.012	TBM	PD:CUT SQ CNT S HEADWALL
909	278254.7525	30.0000	1300575.5839	30.0000	259.33	0.012	TBM	PD:CUT SQ S HEADWALL
910	278254.5255	30.0000	1301157.2564	30.0000	258.98	0.012	TBM	PD:CUT SQ CNT S HEADWALL
911	278254.0215	30.0000	1302569.8885	30.0000	258.76	0.012	TBM	PD:CUT SQ CNT N HEADWALL
912	282614.7546	30.0000	1282880.4911	30.0000	284.34	0.000	TBM	PD:AHTD CAP W END N HEADWAL
913	278151.8402	30.0000	1306641.5735	30.0000	245.73	0.013	TBM	PD:CUT SQ CNT S HEADWALL
914	278151.7772	30.0000	1306973.9581	30.0000	245.77	0.013	TBM	PD:AHTD CAP W END S HAEDWALL
915	277748.3513	30.0000	1321765.2281	30.0000	253.03	0.012	TBM	PD:CUT SQ CNT S HEADWALL
916	276131.2817	30.0000	1323593.9885	30.0000	252.98	0.007	TBM	PD:CUT SQ CNT W HEADWALL
917	278050.4230	30.0000	1316197.6604	30.0000	250.18	0.013	TBM	PD:AHTD CAP E END N HEADWALL
918	271278.1208	30.0000	1323512.7209	30.0000	246.18	0.004	TBM	PD:CUT SQ CNT W HEADWALL
919	267743.2660	30.0000	1331161.6200	30.0000	251.69	0.010	TBM	PD:CUT SQ E END N DROP INLET
920	267745.6981	30.0000	1334652.8974	30.0000	237.07	0.009	TBM	PD:CUT SQ W END S DROP INLET
921	267548.3008	30.0000	1340305.6339	30.0000	237.99	0.007	TBM	PD:CUT SQ CNT N HEADWALL
922	267451.0667	30.0000	1344129.5479	30.0000	238.69	0.006	TBM	PD:CUT SQ CNT HEADWALL
923	267454.4438	30.0000	1347122.1014	30.0000	233.81	0.004	TBM	PD:CUT SQ CNT HEADWALL
999	269075.0925	30.0000	1349530.7293	30.0000	240.44	0.000	BM	PD:1ST ORDER NGS BM RV 122

*Standard Primary Control Monument - Rebar and Cap - Standard - 5/8" x 24" Rebar with 2" Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. AHTD monuments will be stamped "Arkansas Hwy & Trans Dept" with "PN:####" & "Job#####". Monuments that are set by Consultants will be stamped "Arkansas Hwy & Trans Dept" with "PN:####", "Job#####", & "PS#####". The consultant Professional Surveyor in charge will stamp his/her PS license number on the cap.

**Standard GPS Control Point Monument - 5/8" x 48" Rebar with 2.5" Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. These monuments will be stamped "Ark. State Hwy Trans. Dept.", "GPS Survey", & "Point No. #####".

SX, SY, SZ - Represents the standard error estimate of the coordinate values of each point at the 67% confidence level (one sigma) based on the least squares analysis of the control network. See the AASHTO SDMS Technical Data Guide data tag definition for SX, SY, and SZ: for additional information. These values shall be used when control points are added and the entire network is reprocessed using least square analysis. A value of 0.001 is defined as fixed (no adjustment) in the least square analysis process. A value of 30 is defined as location by handheld GPS device or scaled from USGS Quadmap.

Reference Control points (1500 series) shall be used to re-establish horizontal datum if the primary control has been destroyed. These reference control points shall not be used for vertical control unless the elevation has been established from the project datum with 3-wire level techniques.

All additional project control shall be occupied, measured, and adjusted with direct survey ties to at least two of the control points listed in the table above. New survey control shall not be independent of the survey control listed above. This includes horizontal coordinates and elevations.

Positional Accuracy: Horizontal - GPS (1.0 cm ± 1PPM)	PN: 100-111
Horizontal - Primary (2.0 cm ± 20PPM):	PN: 1-99, 112-125
Horizontal - Secondary (3 cm ± 50PPM):	PN: N/A
Vertical - NGS 1st Order (±4mm x vdist in km)	PN: 999
Vertical - NGS 2nd Order (±6mm x vdist in km)	PN: N/A
Vertical - NGS 3rd Order (±8mm x vdist in km)	PN: 900-923

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0301 - North Zone
The adjustment year is based on metadata in the SDMS Control file
 A project CAF of: 0.999968085 has been used to compute the above coordinates.
The project CAF shall have a minimum precision of 9 digits right of the decimal.
 This CAF is intended for use within the project limits only.
 Grid Distance = Ground Distance X CAF
 If Coordinates are listed as Ground:
 To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0
 If Coordinates are listed as Grid:
 To compute Ground Coordinates, divide the Grid Coordinates by CAF about the origin of X=0 & Y=0

Vertical Datum: NAVD 1988 based NGS BM:
 A project Elevation Factor of: 0.9999870000 has been computed and incorporated in the above CAF.
 This is based on the average elevation of the project: 271.78 Feet
 3-Wire Leveling techniques have been used to establish elevations on
 Points: 1-125 From NGS BM RV 122

Basis of Bearing: Grid Bearings based on AHTD GPS points: 230034, 730004 - 730004A, 730035 - 730035A, 730034 - 730034A, 730016 - 730016A, 730015
 Convergence Angle is: 00-01-38 LEFT at PN: 44
 LT: N 35-05-52.48 LG: W 092-02-48.65
 Grid Azimuth = Astronomical Azimuth - Convergence Angle

Note: Information in Italics is for clarification only. It is not to be part of the actual Control Table or Control Detail Sheets.

HWY. 64

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	817+44.85	275781.7213	1265070.1757
8001	PC	830+54.70	276892.1140	1265764.9583
8003	PT	840+39.21	277490.0282	1266522.7276
8004	PC	841+15.39	277514.3054	1266594.9299
8006	PT	843+10.15	277575.5905	1266779.7930
8007	PC	844+01.15	277603.8610	1266866.2980
8009	PT	846+31.36	277676.4710	1267084.7562
8010	PC	847+23.11	277705.8459	1267171.6741
8012	PT	848+87.61	277765.1424	1267325.0560
8013	PC	858+27.63	278141.4656	1268186.4623
8015	PT	863+10.64	278325.4474	1268633.0215
8016	PC	867+87.40	278497.7334	1269077.5682
8018	PT	870+89.91	278610.7609	1269358.1621
8019	PI	874+88.03	278764.3738	1269725.4464
8020	PC	883+33.84	279095.5327	1270503.7329
8022	PT	888+04.88	279270.9994	1270940.8366
8023	PC	896+22.06	279559.7763	1271705.2878
8025	PT	898+83.99	279655.1327	1271949.2442
8026	PC	903+93.54	279846.0479	1272421.6786
8028	PT	908+21.56	280010.1108	1272816.9979
8029	PC	922+23.52	280559.5669	1274106.7921
8031	PT	927+02.61	280690.3777	1274566.3828
8032	PC	936+94.67	280840.4566	1275547.0193
8034	PT	938+74.89	280868.4205	1275725.0556
8035	PC	944+46.00	280959.2551	1276288.8961
8037	PT	949+44.07	281033.1231	1276781.4454
8038	PC	958+86.93	281162.8206	1277715.3422
8040	PT	969+27.40	281572.8190	1278657.6625
8041	PC	975+13.61	281942.6961	1279112.4613
8043	PT	983+68.14	282318.1984	1279872.1407
8044	PC	990+51.60	282477.5734	1280536.7596
8046	PT	1004+91.66	282634.7967	1281964.4008
8047	PC	1028+32.87	282597.3790	1284305.3152
8049	PT	1031+67.11	282589.6004	1284639.4603
8050	PC	1038+78.98	282567.8444	1285350.9914
8052	PT	1042+08.66	282560.1392	1285680.5778
8053	PC	1053+65.38	282541.4220	1286837.1535
8055	PT	1058+30.20	282524.4781	1287301.6318
8056	PI	1083+59.32	282381.0405	1289826.6781
8057	PI	1095+47.42	282315.2117	1291012.9576
8058	PC	1122+53.02	282153.7184	1293713.7268
8060	PT	1151+14.08	280610.2623	1295956.4450
8061	PI	1164+66.80	279377.8773	1296514.1793
8062	PC	1167+06.06	279160.9245	1296615.0704
8064	PT	1183+12.49	278332.6710	1297893.8242
8065	PI	1188+41.27	278325.2628	1298422.5470
8066	PI	1217+58.83	278279.3020	1301339.7436
8067	PC	1253+37.13	278235.5717	1304917.7785
8069	PT	1257+39.71	278234.1875	1305320.3502
8070	PC	1269+83.65	278240.8358	1306564.2728
8072	PT	1274+74.05	278232.9640	1307054.5791
8073	PC	1286+65.78	278188.3424	1308245.4725
8075	PT	1288+98.50	278180.8096	1308478.0673
8076	PI	1315+81.38	278107.5834	1311159.9460
8077	POE	1349+58.89	278019.8325	1314536.3140

HWY. 5

POINT NO.	TYPE	STATION	NORTHING	EASTING
8078	POB	99+85.00	282241.3122	1286237.2768
8079	POE	107+27.58	282926.3873	1285950.7442

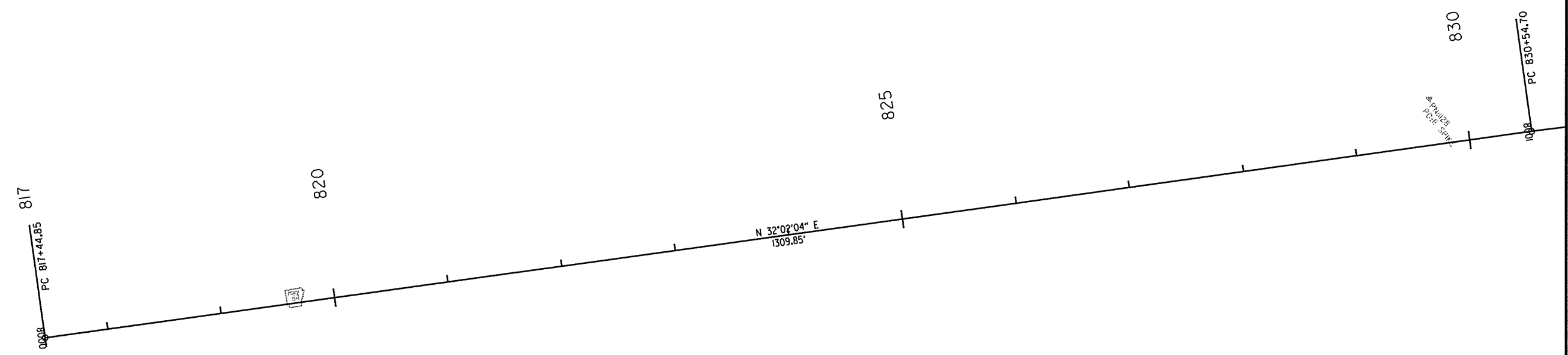
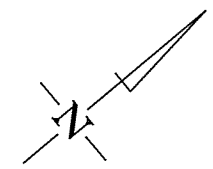
8/20/2015 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155	71	311	

② SURVEY CONTROL DETAILS



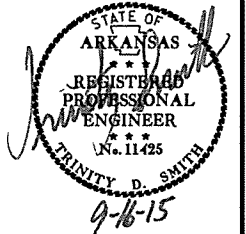
HWY. 64
 PI = 835+67.30
 Δ = 39°22'50.51" RT.
 D = 4'00'00"
 T = 512.60'
 L = 984.51'
 PC = 830+54.70
 PT = 840+39.21
 MATCH EXIST. SUPER



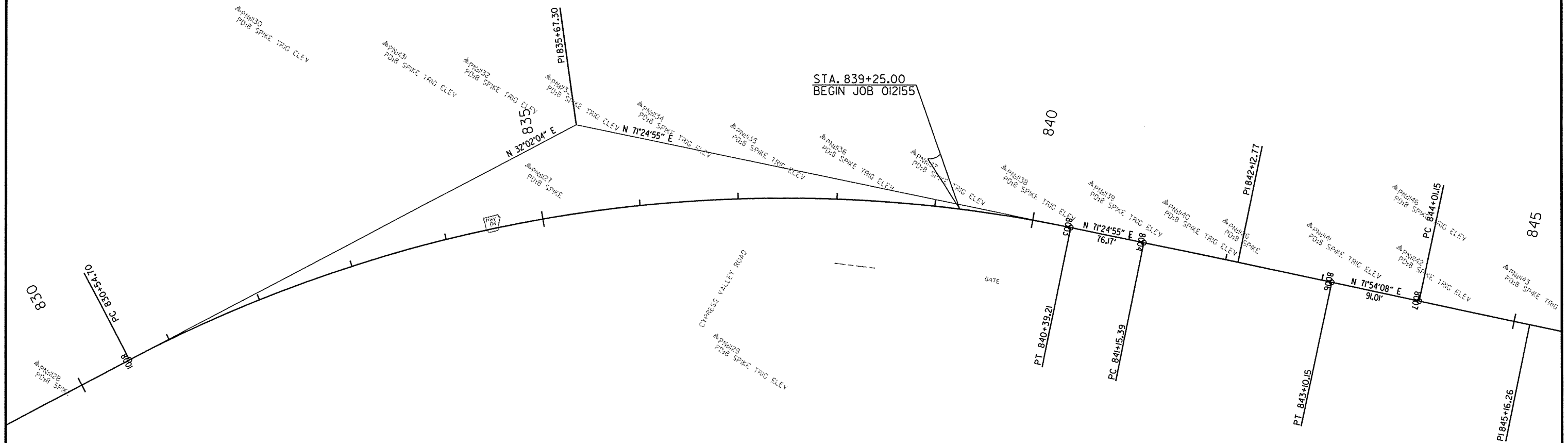
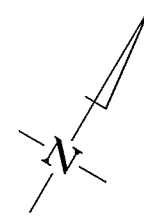
8/20/2015
 R012155.DGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							72	311

2 SURVEY CONTROL DETAILS



HWY. 64
 PI = 835+67.30
 Δ = 39°22'50.51" RT.
 D = 4°00'00"
 T = 512.60'
 L = 984.51'
 PC = 830+54.70
 PT = 840+39.21
 MATCH EXIST. SUPER



STA. 839+25.00
 BEGIN JOB 012155

HWY. 64
 PI = 842+12.77
 Δ = 0°29'13" RT.
 D = 0°15'00"
 T = 97.38'
 L = 194.76'
 PC = 841+15.39
 PT = 843+10.15
 MATCH EXIST. SUPER

HWY. 64
 PI = 845+16.26
 Δ = 0°34'32" LT.
 D = 0°15'00"
 T = 115.11'
 L = 230.21'
 PC = 844+01.15
 PT = 846+31.36
 MATCH EXIST. SUPER

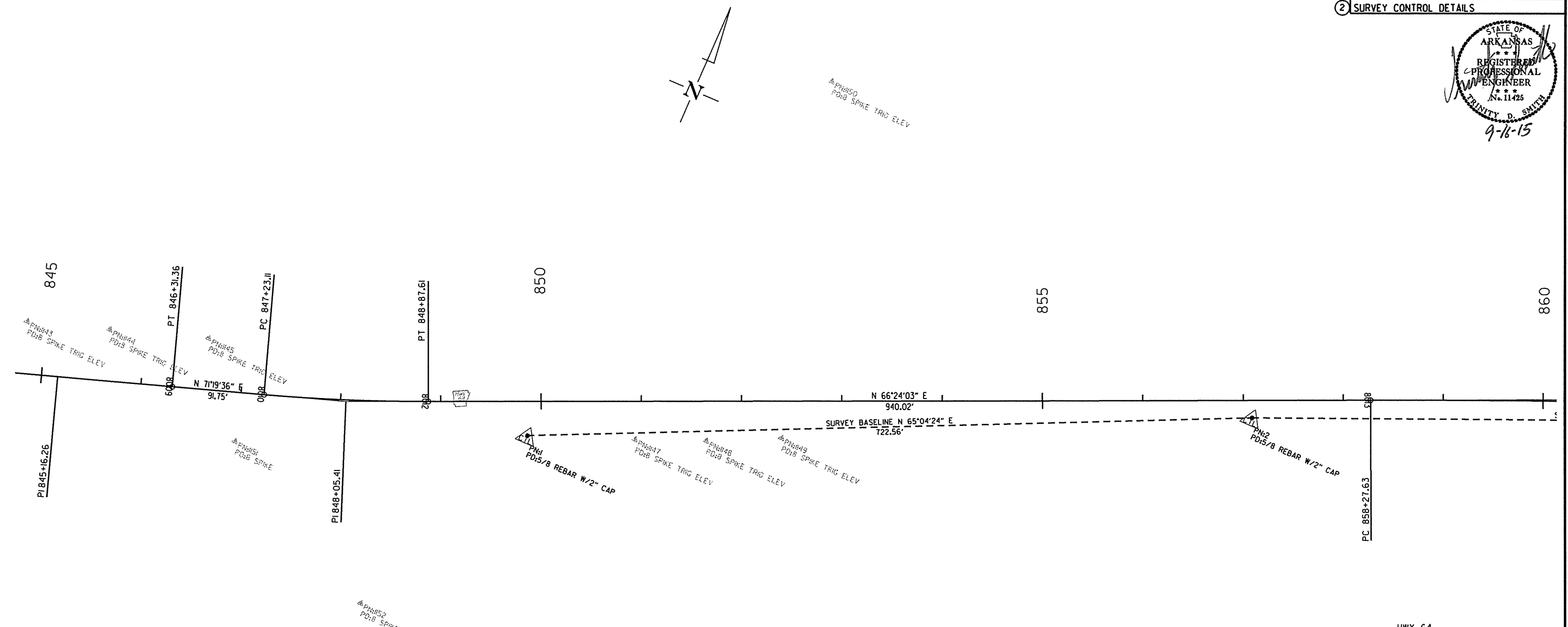
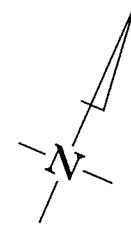
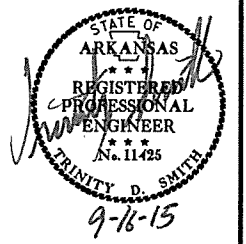
SURVEY CONTROL DETAILS

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				6	ARK.		73	311
				JOB NO.		012155		

2 SURVEY CONTROL DETAILS



HWY. 64
 PI = 845+16.26
 Δ = 0°34'32" L.T.
 D = 0°15'00"
 T = 115.11'
 L = 230.21'
 PC = 844+01.15
 PT = 846+31.36
 MATCH EXIST. SUPER

HWY. 64
 PI = 848+05.41
 Δ = 4°55'33" L.T.
 D = 2°59'40"
 T = 82.30'
 L = 164.50'
 PC = 847+23.11
 PT = 848+87.61
 e = 0.077' /'
 Ls = 540'

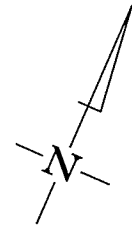
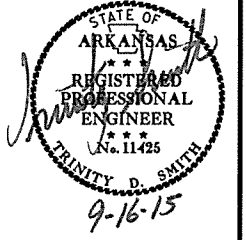
HWY. 64
 PI = 860+69.17
 Δ = 2°24'54" RT.
 D = 0°30'00"
 T = 241.54'
 L = 483.01'
 PC = 858+27.63
 PT = 863+10.64
 NO SUPER

8/20/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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② SURVEY CONTROL DETAILS



HWY. 64
 PI = 869+38.67
 Δ = 1°30'45" L.T.
 D = 0°30'00"
 T = 151.27'
 L = 302.51'
 PC = 867+87.40
 PT = 870+89.91
 NO SUPER



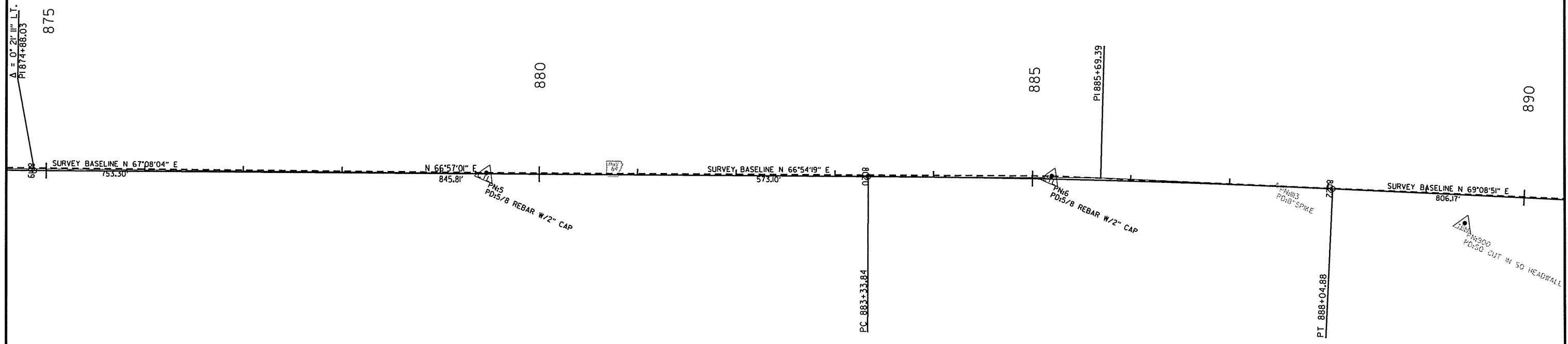
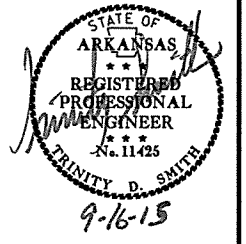
HWY. 64
 PI = 860+69.17
 Δ = 2°24'54" RT.
 D = 0°30'00"
 T = 241.54'
 L = 483.01'
 PC = 858+27.63
 PT = 863+10.64
 NO SUPER

8/20/2015

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		75	311

2 SURVEY CONTROL DETAILS

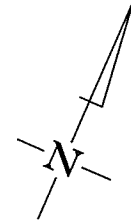
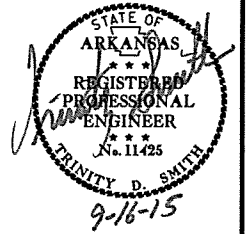


HWY. 64
 PI = 885+69.39
 Δ = 2°21'19" RT.
 D = 0°30'00"
 T = 235.55'
 L = 471.04'
 PC = 883+33.84
 PT = 888+04.88
 NO SUPER

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 R012155.DGN

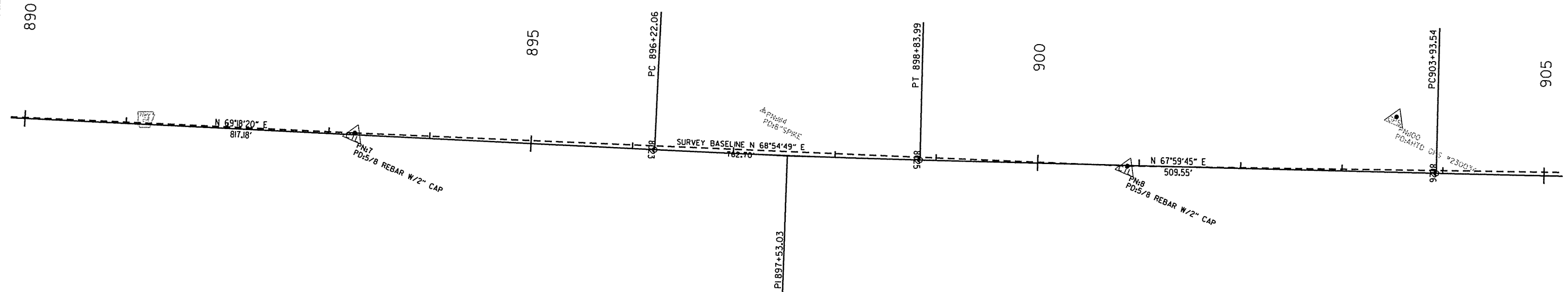
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		76	311

② SURVEY CONTROL DETAILS



HWY. 64
 PI = 897+53.03
 Δ = 1°18'35" L.T.
 D = 0°30'00"
 T = 130.97'
 L = 261.94'
 PC = 896+22.06
 PT = 898+83.99
 NO SUPER

HWY. 64
 PI = 906+07.56
 Δ = 1°04'12" L.T.
 D = 0°15'00"
 T = 214.02'
 L = 428.02'
 PC = 903+93.54
 PT = 908+21.56
 NO SUPER

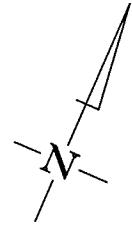
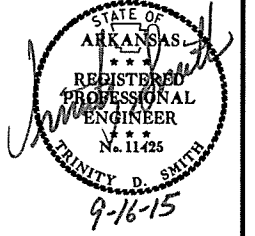


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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		77	311

② SURVEY CONTROL DETAILS



HWY. 64
 PI = 906+07.56
 Δ = 1°04'12" L.T.
 D = 0°15'00"
 T = 214.02'
 L = 428.02'
 PC = 903+93.54
 PT = 908+21.56
 NO SUPER

905

PT908+21.56

910

915

920

SURVEY BASELINE N 67°22'05" E

PI 906+07.56

PT 908+21.56

SURVEY BASELINE N 64°06'04" E

782.91'

N 66°55'33" E

1401.95'

PN9
 PD:5/8 REBAR W/2" CAP

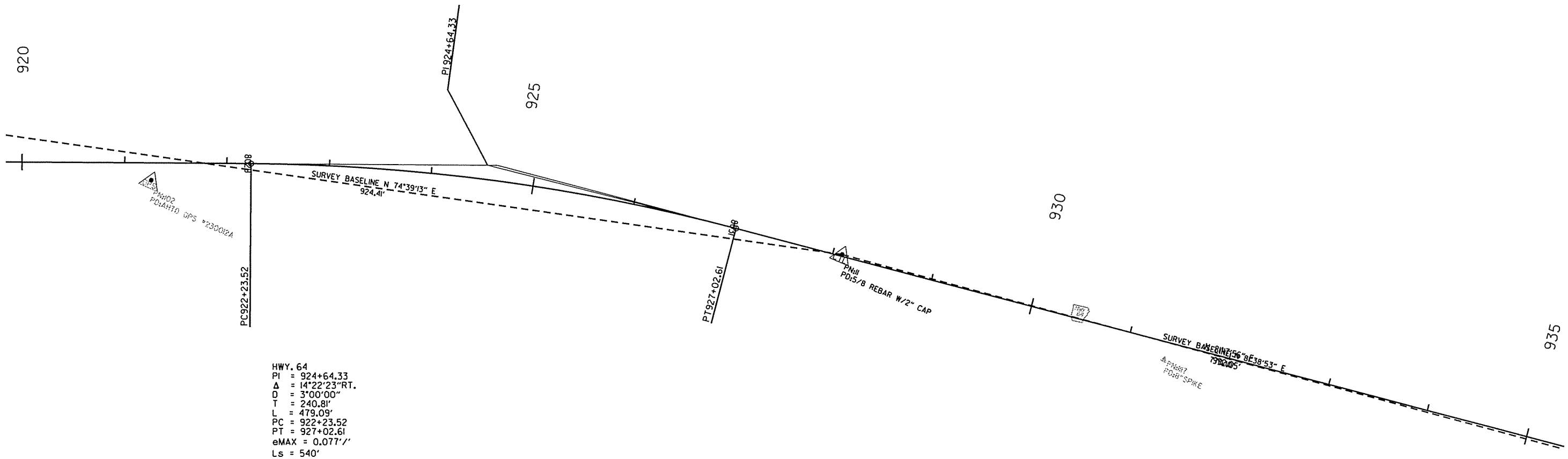
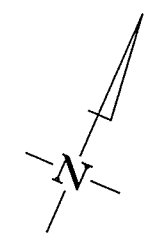
PN10
 PD:5/8 REBAR W/2" CAP

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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		78	311

② SURVEY CONTROL DETAILS

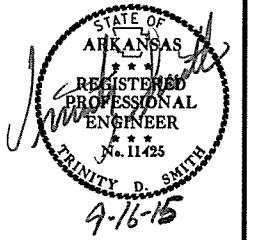


HWY. 64
 PI = 924+64.33
 Δ = 14°22'23" RT.
 D = 3'00"00"
 T = 240.81'
 L = 479.09'
 PC = 922+23.52
 PT = 927+02.61
 eMAX = 0.077'/'
 Ls = 540'

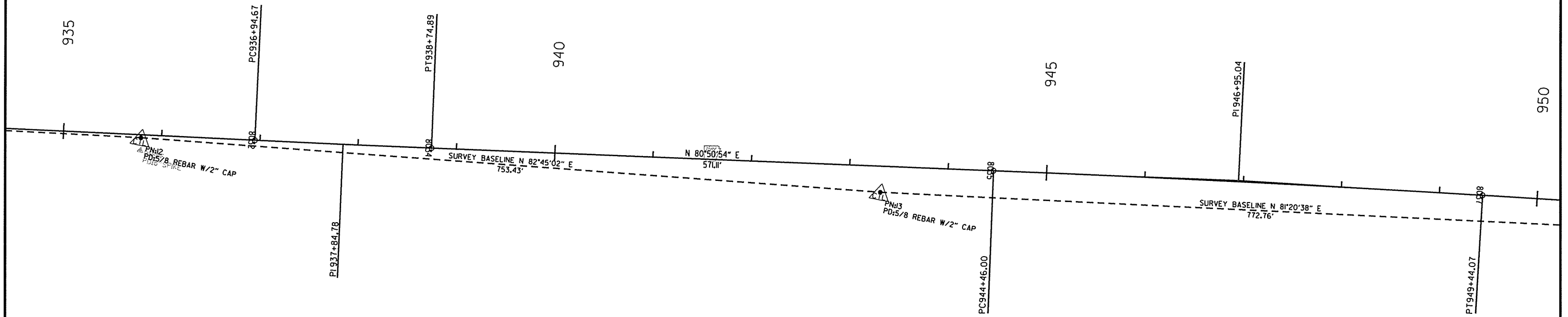
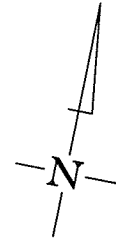
8/20/2015
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		79	311

2 SURVEY CONTROL DETAILS



HWY. 64
 PI = 937+84.78
 Δ = 0°27'02" L.T.
 D = 0°15'00"
 T = 90.11'
 L = 180.22'
 PC = 936+94.67
 PT = 938+74.89
 NO SUPER



HWY. 64
 PI = 946+95.04
 Δ = 1°14'42" RT.
 D = 0°15'00"
 T = 249.04'
 L = 498.07'
 PC = 944+46.00
 PT = 949+44.07
 NO SUPER

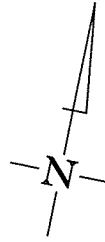
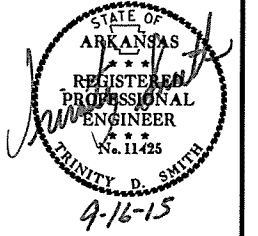
8/20/2015

R012155.DGN

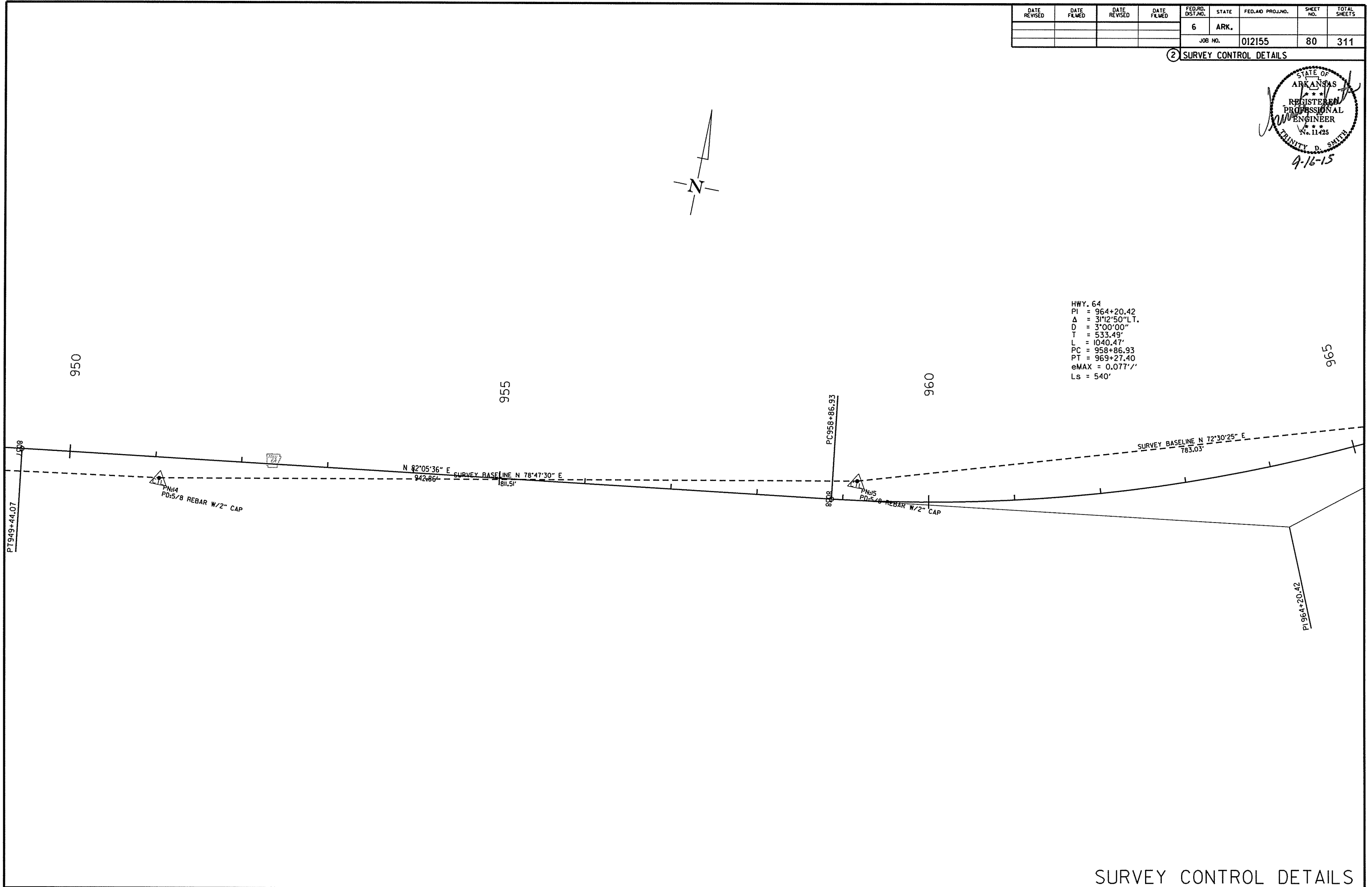
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		80	311

2 SURVEY CONTROL DETAILS



HWY. 64
 PI = 964+20.42
 Δ = 3°12'50" LT.
 D = 3°00'00"
 T = 533.49'
 L = 1040.47'
 PC = 958+86.93
 PT = 969+27.40
 eMAX = 0.0777'
 Ls = 540'

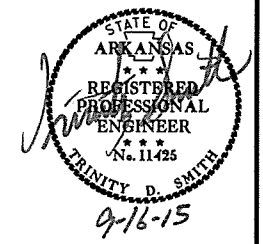


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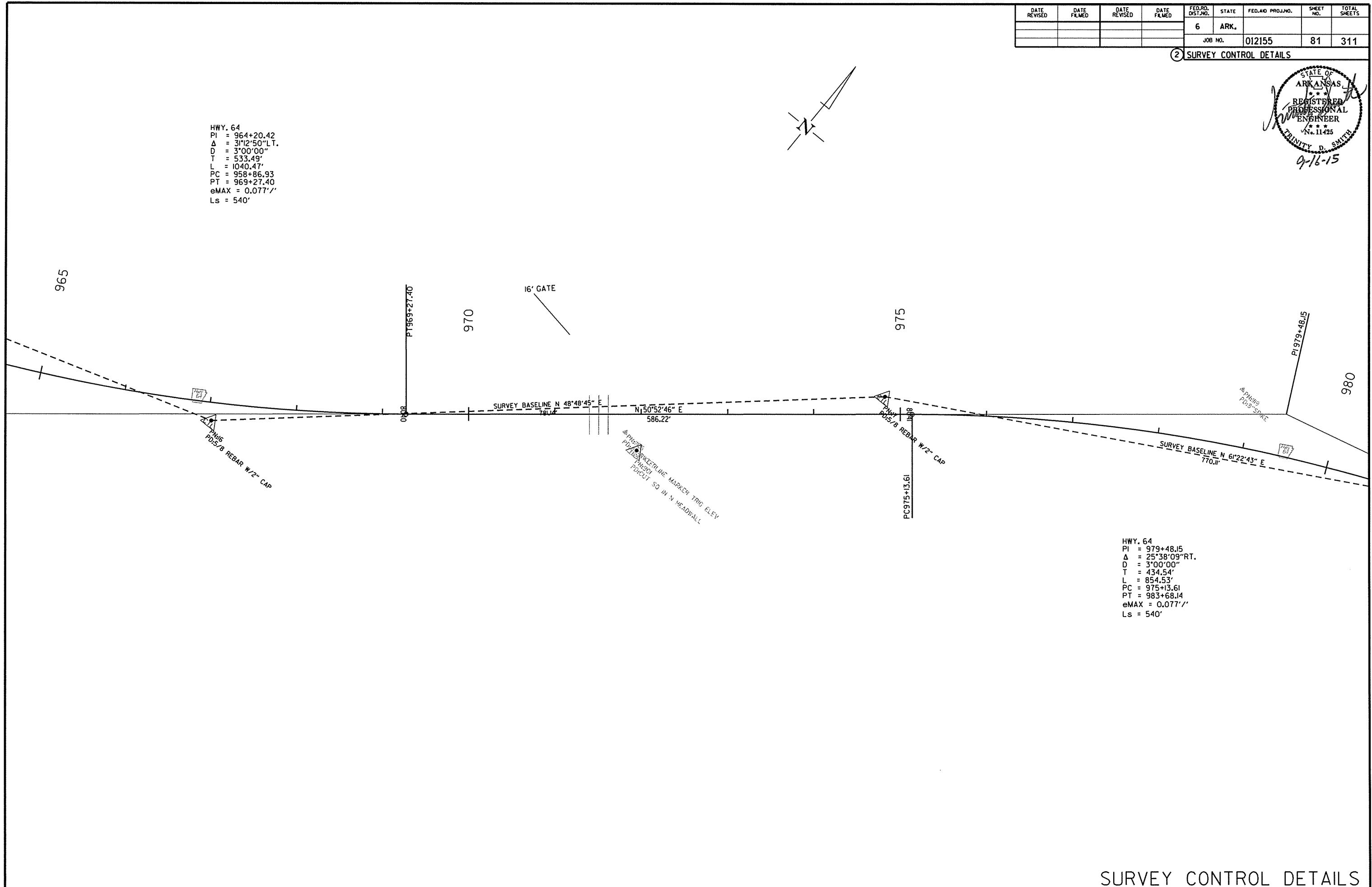
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	81	311

2 SURVEY CONTROL DETAILS



HWY. 64
 PI = 964+20.42
 Δ = 31°12'50" L.T.
 D = 3°00'00"
 T = 533.49'
 L = 1040.47'
 PC = 958+86.93
 PT = 969+27.40
 eMAX = 0.077'/'
 Ls = 540'

HWY. 64
 PI = 979+48.15
 Δ = 25°38'09" RT.
 D = 3°00'00"
 T = 434.54'
 L = 854.53'
 PC = 975+13.61
 PT = 983+68.14
 eMAX = 0.077'/'
 Ls = 540'

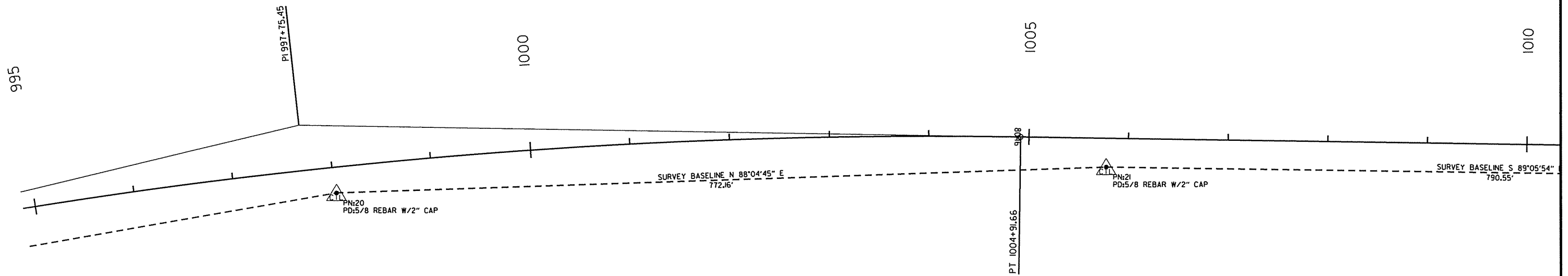
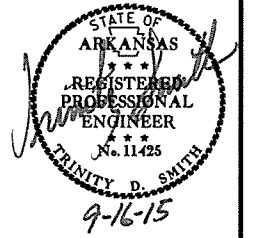


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		83	311

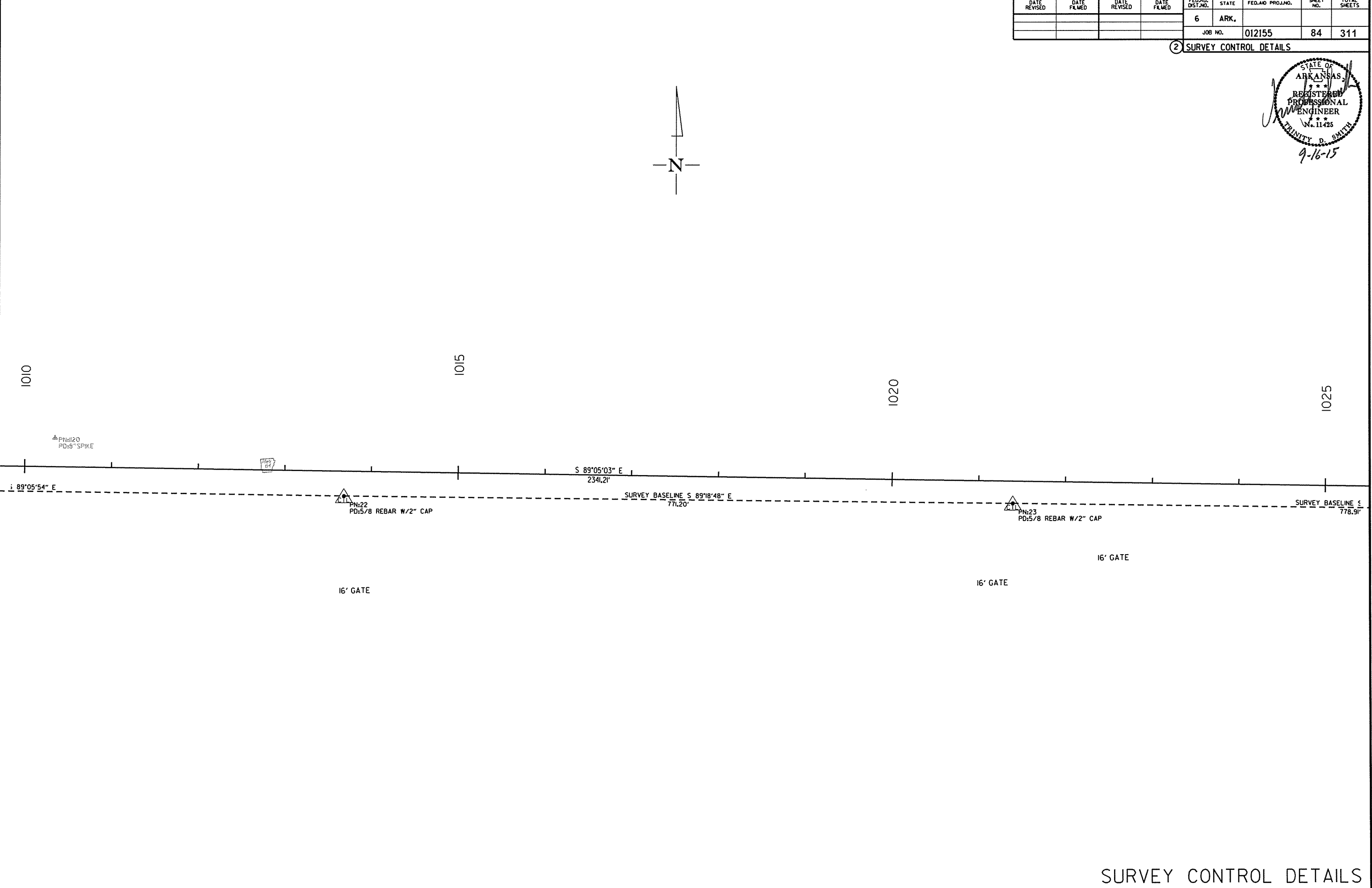
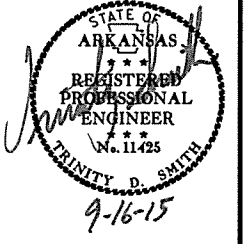
2 SURVEY CONTROL DETAILS



HWY. 64 CENTERLINE
 PI = 997+75.45
 Δ = 14°24'02" RT.
 D = 1°00'00"
 T = 723.85'
 L = 1440.06'
 PC = 990+51.60
 PT = 1004+91.66
 eMAX = 0.030'/'
 Ls = 540'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		84	311

② SURVEY CONTROL DETAILS



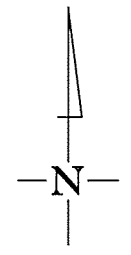
8/20/2015

R012155.DGN

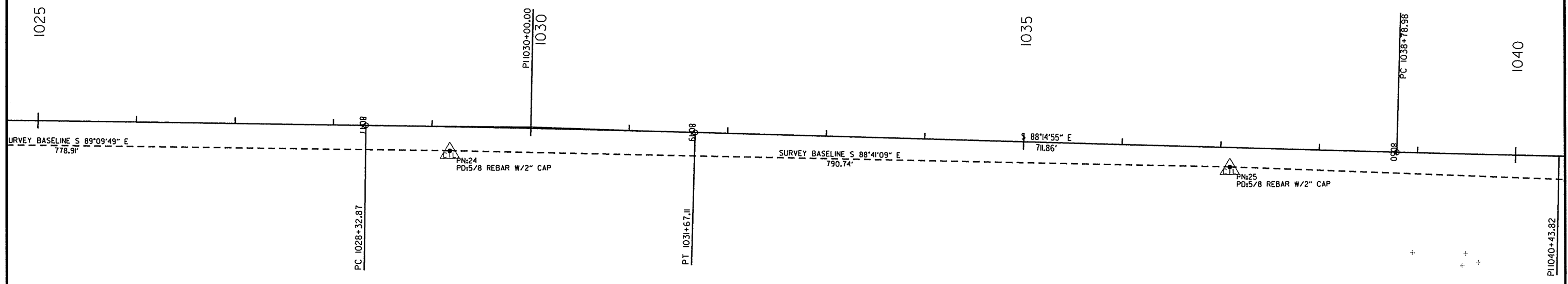
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							85	311

② SURVEY CONTROL DETAILS



HWY. 64 CENTERLINE
 PI = 1040+43.82
 Δ = 0°49'27" L.T.
 D = 0°15'00"
 T = 164.84'
 L = 329.68'
 PC = 1038+78.98
 PT = 1042+08.66
 NO SUPER

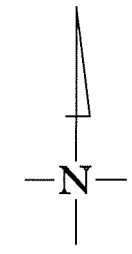
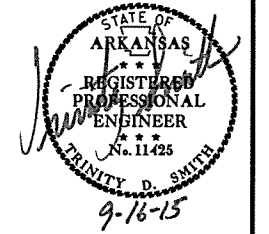


HWY. 64 CENTERLINE
 PI = 1030+00.00
 Δ = 0°50'08" RT.
 D = 0°15'00"
 T = 167.13'
 L = 334.24'
 PC = 1028+32.87
 PT = 1031+67.11
 NO SUPER

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 R012155.DGN

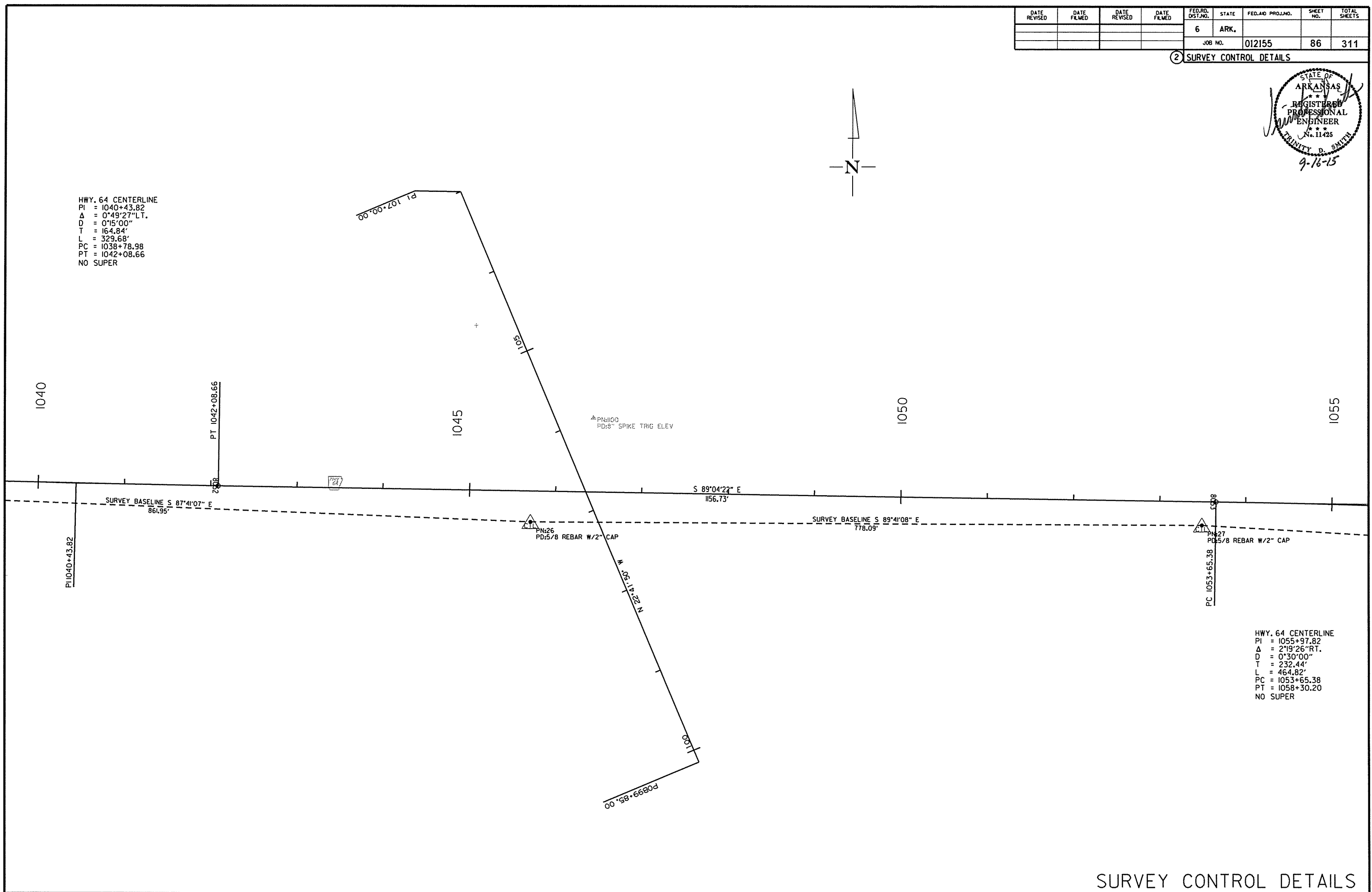
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	86	311

② SURVEY CONTROL DETAILS



HWY. 64 CENTERLINE
 PI = 1040+43.82
 Δ = 0°49'27" LT.
 D = 0°15'00"
 T = 164.84'
 L = 329.68'
 PC = 1038+78.98
 PT = 1042+08.66
 NO SUPER

HWY. 64 CENTERLINE
 PI = 1055+97.82
 Δ = 2°19'26" RT.
 D = 0°30'00"
 T = 232.44'
 L = 464.82'
 PC = 1053+65.38
 PT = 1058+30.20
 NO SUPER

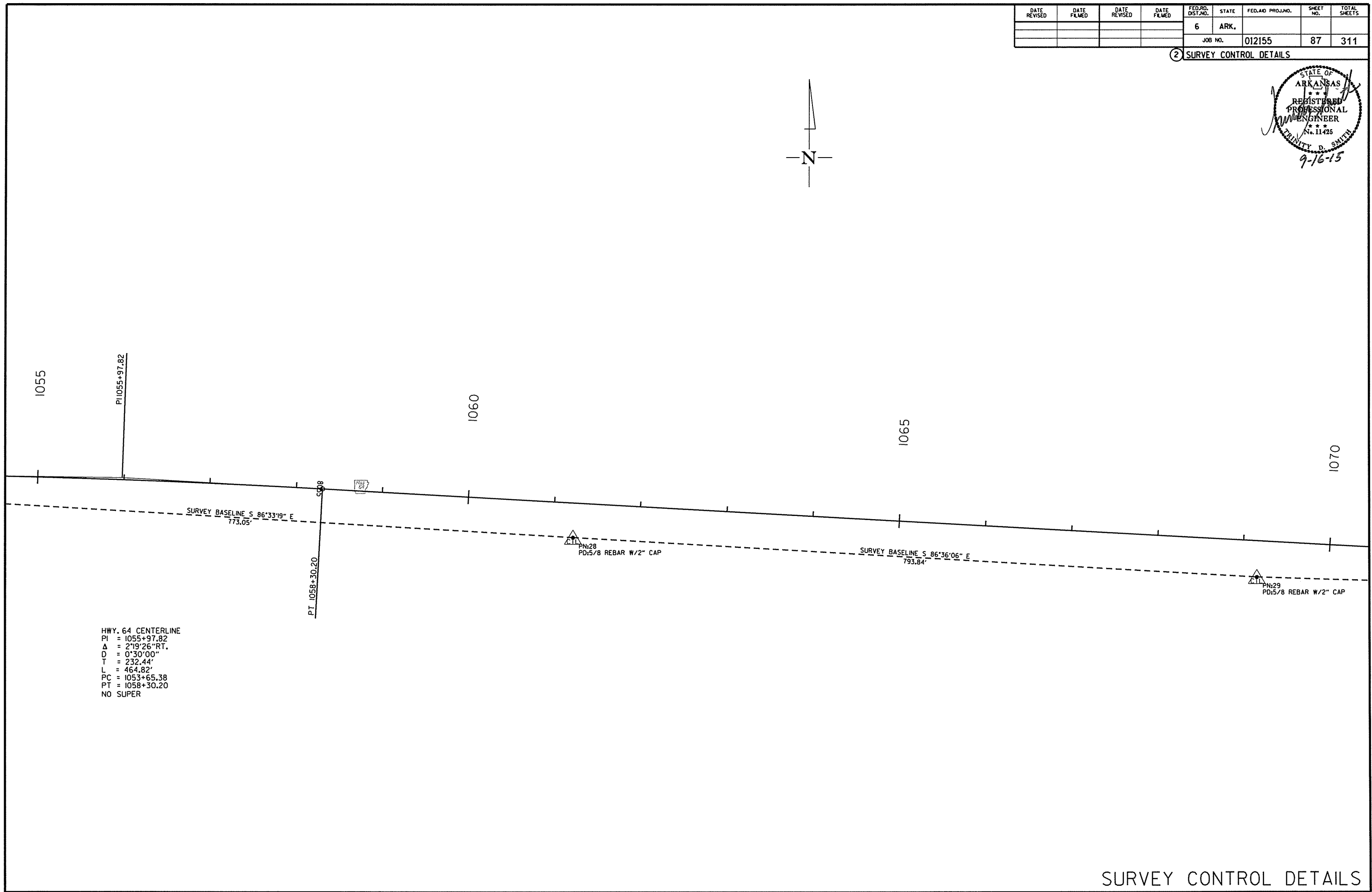
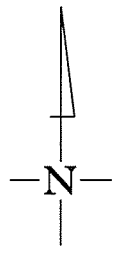
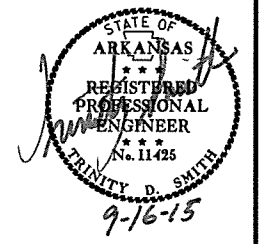


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		87	311

2 SURVEY CONTROL DETAILS



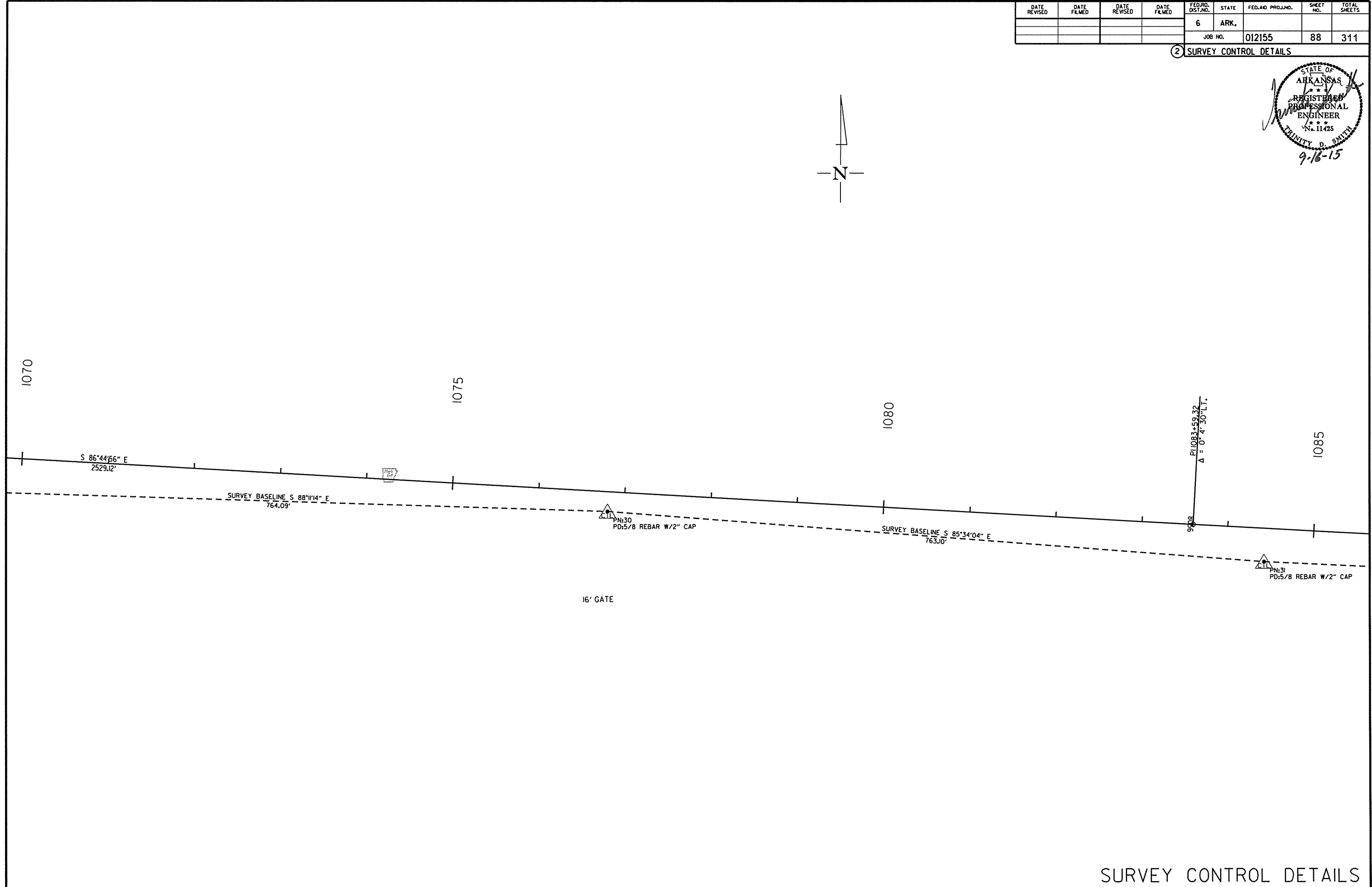
HWY. 64 CENTERLINE
 PI = 1055+97.82
 Δ = 2°19'26" RT.
 D = 0°30'00"
 T = 232.44'
 L = 464.82'
 PC = 1053+65.38
 PT = 1058+30.20
 NO SUPER

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	88	311

② SURVEY CONTROL DETAILS



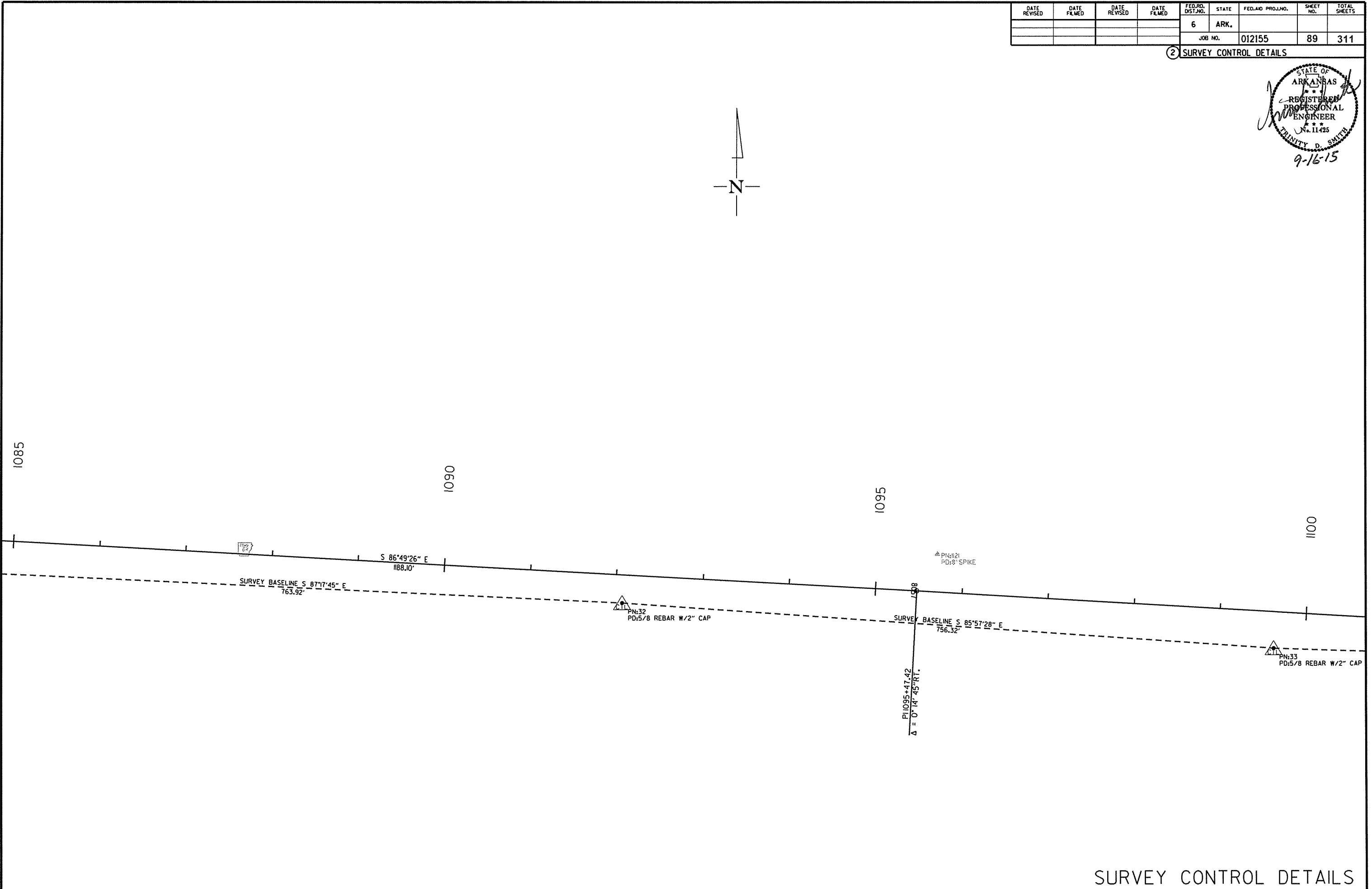
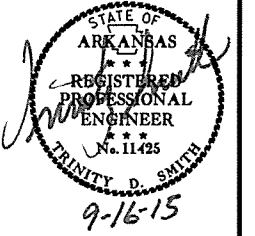
8/20/2015

R012155.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		89	311

② SURVEY CONTROL DETAILS



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	90	311

2 SURVEY CONTROL DETAILS

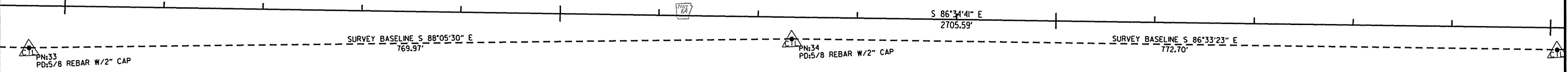


1100

1105

1110

1115

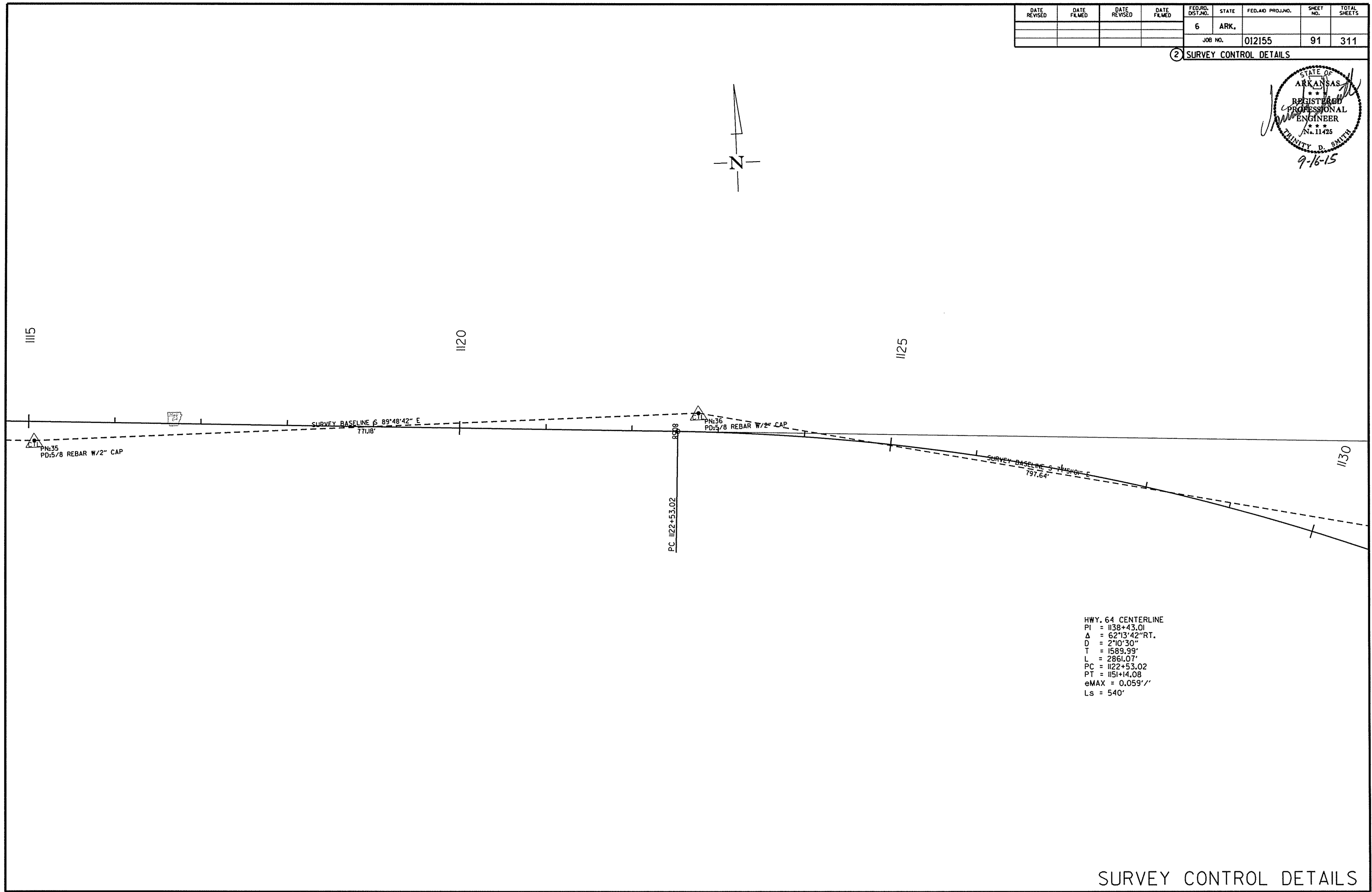
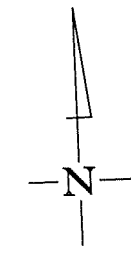
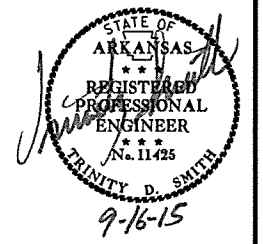


16' GATE

8/20/2015
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		91	311

2 SURVEY CONTROL DETAILS



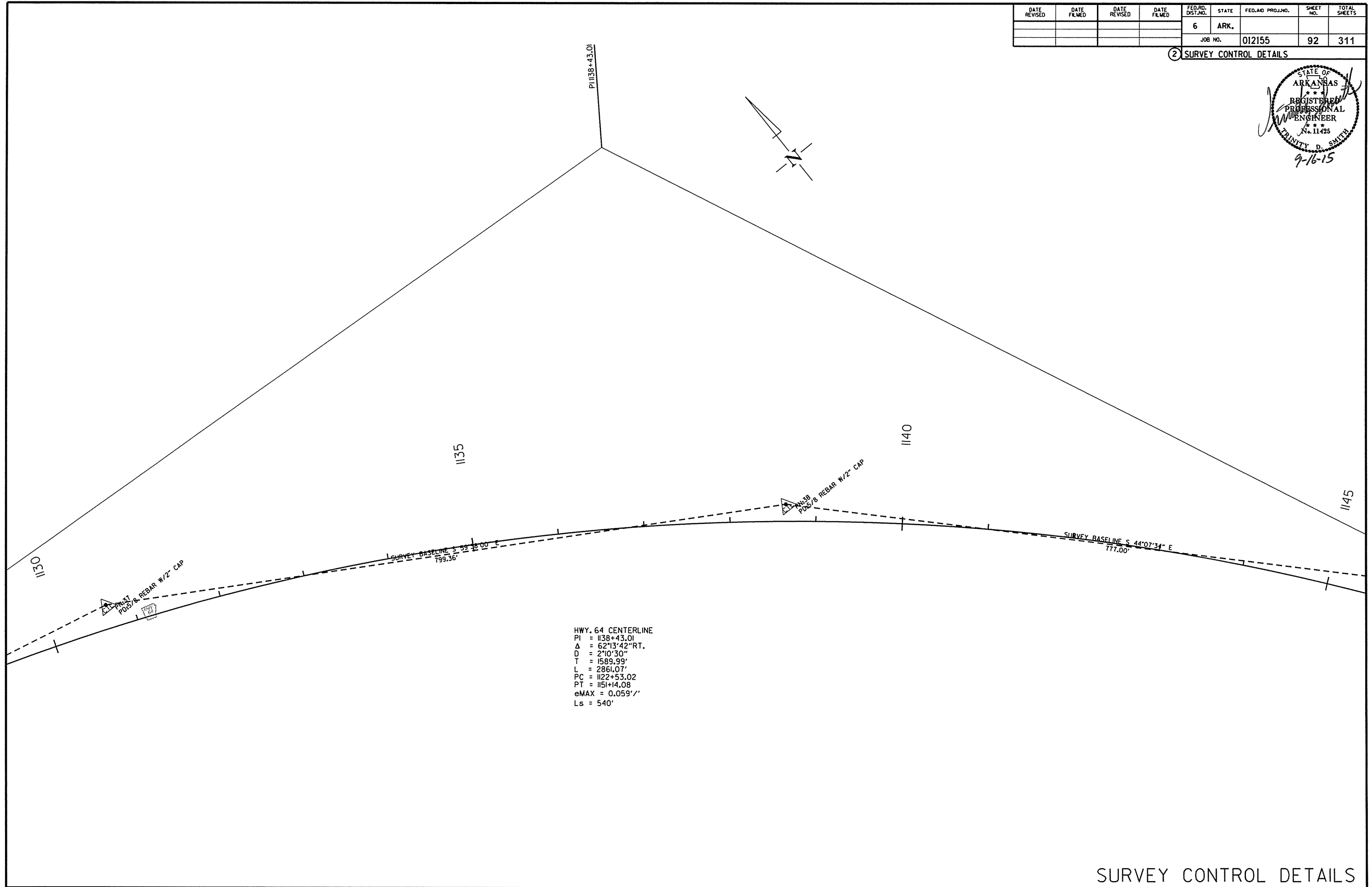
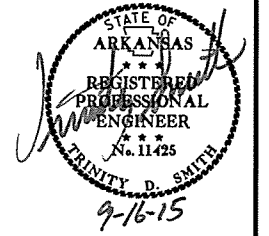
HWY. 64 CENTERLINE
 PI = 1138+43.01
 Δ = 62°13'42" RT.
 D = 2°10'30"
 T = 1589.99'
 L = 2861.07'
 PC = 1122+53.02
 PT = 1151+14.08
 eMAX = 0.059'/'
 Ls = 540'

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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		92	311

2 SURVEY CONTROL DETAILS



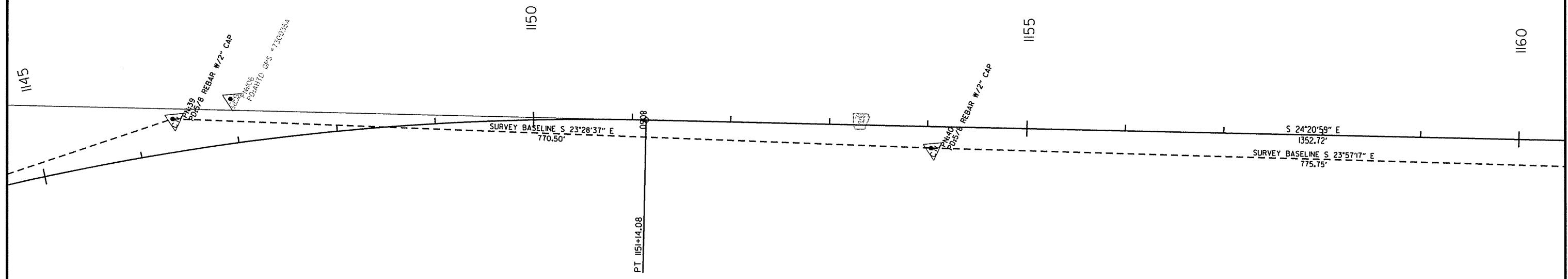
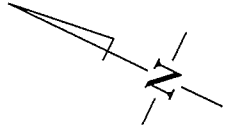
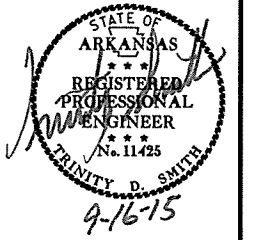
HWY. 64 CENTERLINE
 PI = 1138+43.01
 $\Delta = 62^{\circ}13'42''$ RT.
 D = $2^{\circ}10'30''$
 T = 1589.99'
 L = 2861.07'
 PC = 1122+53.02
 PT = 1151+14.08
 eMAX = 0.059'/'
 Ls = 540'

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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		93	311

2 SURVEY CONTROL DETAILS

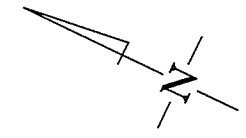
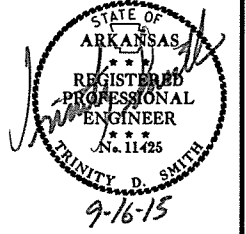


HWY. 64 CENTERLINE
 PI = 1138+43.01
 Δ = 62°13'42" RT.
 D = 2°10'30"
 T = 1589.99'
 L = 2861.07'
 PC = 1122+53.02
 PT = 1151+14.08
 eMAX = 0.059'/'
 Ls = 540'

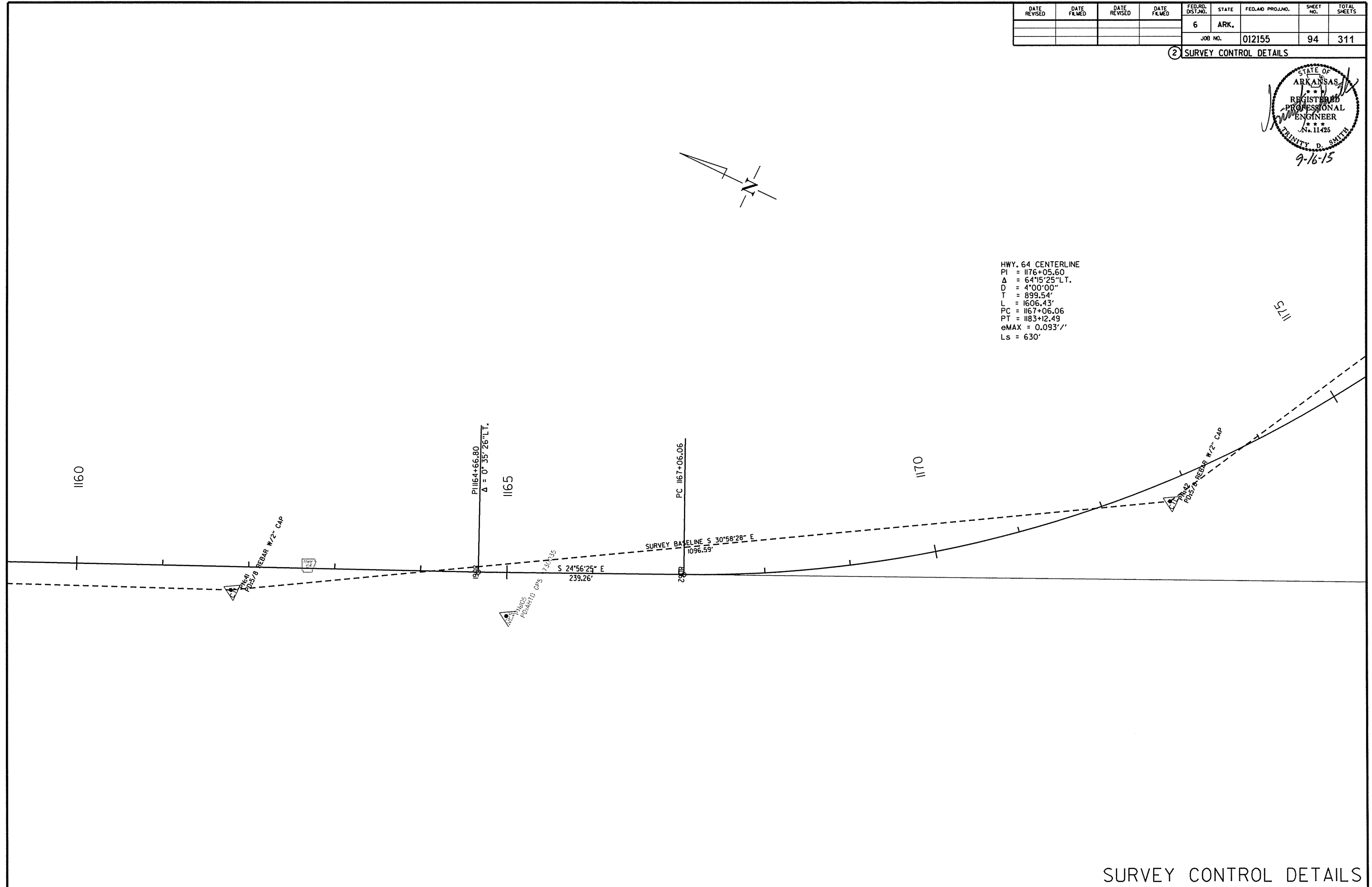
8/20/2015
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	94	311

2 SURVEY CONTROL DETAILS



HWY. 64 CENTERLINE
 PI = 1176+05.60
 Δ = 64°15'25" LT.
 D = 4°00'00"
 T = 899.54'
 L = 1606.43'
 PC = 1167+06.06
 PT = 1183+12.49
 eMAX = 0.093' /'
 Ls = 630'

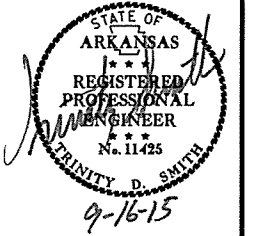


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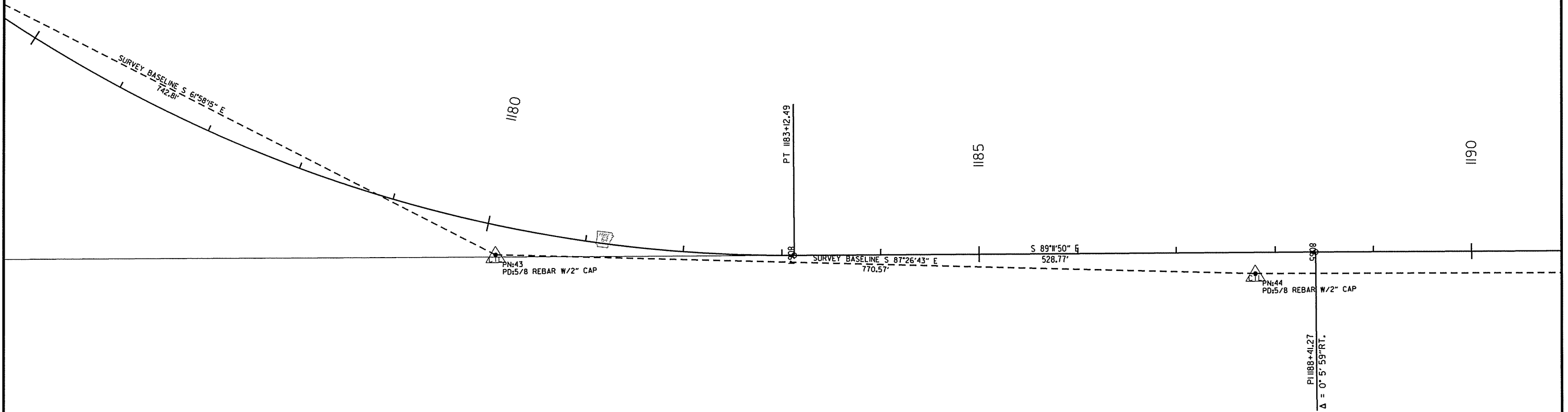
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. NO. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	95	311

2 SURVEY CONTROL DETAILS



HWY. 64 CENTERLINE
 PI = 1176+05.60
 $\Delta = 64^{\circ}15'25''$ LT.
 D = 4'00"00"
 T = 899.54'
 L = 1606.43'
 PC = 1167+06.06
 PT = 1183+12.49
 eMAX = 0.093'/'
 Ls = 630'

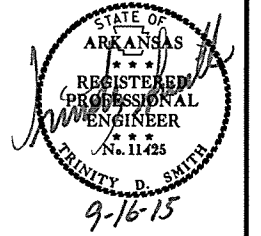


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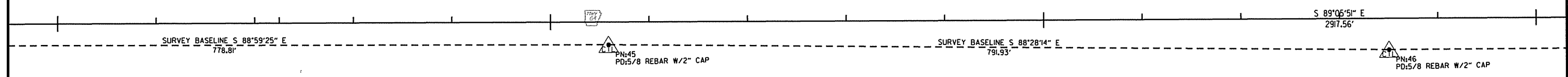
R012155.DGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	96	311

② SURVEY CONTROL DETAILS



1190 1195 1200 1205



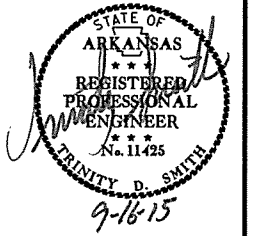
8/20/2015

R012155.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		97	311

2 SURVEY CONTROL DETAILS



1205

1210

1215

1220

PI1217+58.83
Δ = 0° 12' 8" L.T.

SURVEY BASELINE S 89°15'32" E
793.28'

PN:47
PD:5/8 REBAR W/2" CAP

SURVEY BASELINE S 89°45'50" E
768.49'

PN:46
PD:8" SPIKE TRIG ELEV

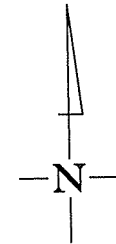
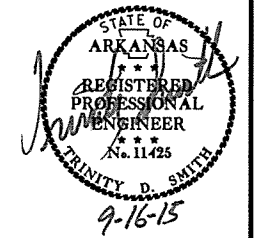
PN:48
PD:5/8 REBAR W/2" CAP

8/20/2015

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		98	311

② SURVEY CONTROL DETAILS



STA. 1228+25.00
END JOB 012155

1220

1225

S 89°17'59" E 3578.30'

SURVEY BASELINE S 88°32'11" E
753.81'

PN:49
PD:5/8 REBAR W/2" CAP

SURVEY BASELINE S 88°45'49" E SPIKE I.B.S. 819.97'

PN:50
PD:5/8 REBAR W/2"

BEARS DEN LN

8/20/2015

R012155.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	99	311

SOIL LOG

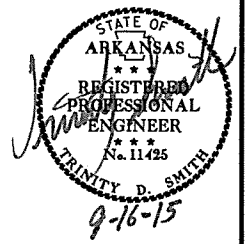
STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC						
853+00	35	5	48.40	92	8	57.70	5' RT.	0-5	23	4	A-4(0)	BR/GR
853+00	35	5	48.40	92	8	57.70	15' RT.	0-5	25	5	A-6(11)	BR/GR
861+00	35	5	51.80	92	8	48.60	6' LT.	0-5	23	5	A-4(1)	BR/GR
861+00	35	5	51.90	92	8	48.70	14' LT.	0-4Z	23	5	A-4(0)	BROWN
861+00	35	5	51.90	92	8	48.70	24' LT.	0-2.5Z	ND	NP	A-4(0)	BROWN
869+00	35	5	54.70	92	8	39.80	6' RT.	0-5	22	3	A-4(0)	BROWN
869+00	35	5	54.60	92	8	39.70	15' RT.	0-5	ND	NP	A-4(0)	BROWN
869+00	35	5	54.60	92	8	39.70	26' RT.	0-2.5Z	20	2	A-4(0)	BROWN
877+00	35	5	57.80	92	8	31.20	6' LT.	0-4Z	19	2	A-4(0)	BROWN
877+00	35	5	57.90	92	8	31.20	14' LT.	0-3.5Z	ND	NP	A-4(0)	BROWN
877+00	35	5	58.00	92	8	31.20	23' LT.	0-3Z	ND	NP	A-4(0)	BROWN
885+00	35	6	0.80	92	8	22.10	6' RT.	0-3.5Z	19	3	A-4(0)	BROWN
885+00	35	6	0.80	92	8	22.10	14' RT.	0-4.5Z	27	7	A-4(0)	BROWN
885+00	35	6	0.70	92	8	22.00	23' RT.	0-4Z	26	7	A-4(0)	BROWN
893+00	35	6	3.80	92	8	13.10	6' LT.	0-4Z	ND	NP	A-4(0)	BROWN
893+00	35	6	3.90	92	8	13.20	15' LT.	0-5	21	3	A-4(0)	BROWN
893+00	35	6	4.00	92	8	13.20	22' LT.	0-5	20	3	A-4(0)	BROWN
901+00	35	6	6.70	92	8	3.80	6' RT.	0-5	21	3	A-4(0)	BROWN
901+00	35	6	6.60	92	8	3.80	14' RT.	0-5	23	4	A-4(0)	BROWN
901+00	35	6	6.50	92	8	3.70	25' RT.	0-5	30	11	A-6(5)	BROWN
910+00	35	6	9.70	92	7	55.30	5' LT.	0-5	22	3	A-4(0)	BROWN
910+00	35	6	9.80	92	7	55.30	12' LT.	0-5	21	3	A-4(0)	BROWN
910+00	35	6	9.90	92	7	55.30	20' LT.	0-5	ND	NP	A-4(0)	BROWN
917+00	35	6	12.70	92	7	46.50	5' LT.	0-5	22	4	A-4(0)	BROWN
917+00	35	6	12.70	92	7	46.30	14' RT.	0-5	19	1	A-4(0)	BROWN
917+00	35	6	12.30	92	7	46.30	22' RT.	0-4Z	ND	NP	A-4(0)	BROWN
925+00	35	6	15.70	92	7	37.70	6' LT.	0-5	19	4	A-4(0)	BR/GR
925+00	35	6	15.80	92	7	37.70	15' LT.	0-5	21	6	A-4(1)	BROWN
925+00	35	6	15.90	92	7	37.80	23' LT.	0-5	21	5	A-4(1)	BROWN
933+00	35	6	17.00	92	7	27.90	6' RT.	0-5	28	11	A-6(6)	BROWN
933+00	35	6	16.90	92	7	27.90	14' RT.	0-5	34	16	A-6(11)	BROWN
933+00	35	6	16.80	92	7	27.90	22' RT.	0-5	32	13	A-6(7)	BROWN
941+00	35	6	18.30	92	7	18.60	6' LT.	0-5	29	11	A-6(7)	BROWN
941+00	35	6	18.30	92	7	18.50	14' LT.	0-5	31	12	A-6(8)	BROWN
941+00	35	6	18.40	92	7	18.60	23' LT.	0-5	32	13	A-6(8)	BROWN
949+00	35	6	19.20	92	7	8.90	6' RT.	0-5	26	8	A-4(5)	BROWN
949+00	35	6	19.10	92	7	8.90	14' RT.	0-5	29	11	A-6(7)	BROWN
949+00	35	6	19.00	92	7	8.90	21' RT.	0-5	30	11	A-6(7)	BROWN
957+00	35	6	20.00	92	6	59.30	6' LT.	0-5	25	10	A-4(5)	BR/GR
957+00	35	6	20.50	92	6	59.30	15' LT.	0-5	26	11	A-6(5)	BROWN
957+00	35	6	20.60	92	6	59.30	23' LT.	0-5	31	15	A-6(8)	BR/GR
965+00	35	6	22.30	92	6	50.30	5' RT.	0-5	22	6	A-4(2)	BR/GR
965+00	35	6	22.20	92	6	50.20	15' RT.	0-5	19	3	A-4(0)	BROWN
965+00	35	6	22.10	92	6	50.10	25' LT.	0-5	21	4	A-4(0)	BROWN
973+00	35	6	26.80	92	6	42.70	6' LT.	0-5	24	6	A-4(2)	BROWN
973+00	35	6	26.90	92	6	42.80	15' LT.	0-5	22	5	A-4(0)	BROWN
973+00	35	6	26.90	92	6	42.90	27' LT.	0-5	25	5	A-4(1)	BROWN
981+00	35	6	31.10	92	6	31.10	6' RT.	0-5	28	11	A-6(5)	BROWN
981+00	35	6	31.00	92	6	34.30	17' RT.	0-5	ND	NP	A-4(0)	BROWN
981+00	35	6	31.00	92	6	34.30	25' RT.	0-3Z	ND	NP	A-4(0)	BROWN
989+00	35	6	35.50	92	6	25.20	8' LT.	0-5	20	3	A-4(0)	BROWN
989+00	35	6	33.40	92	6	25.30	22' LT.	0-5	21	6	A-4(1)	BR/GR
989+00	35	6	33.50	92	6	25.30	30' LT.	0-5	21	5	A-4(0)	BR/GR
997+00	35	6	34.60	92	6	16.10	5' RT.	0-5	22	1	A-4(1)	BROWN
997+00	35	6	34.50	92	6	16.10	17' RT.	0-5	24	7	A-4(2)	BROWN
997+00	35	6	34.50	92	6	16.10	26' RT.	0-5	31	13	A-6(9)	BROWN
1005+00	35	6	35.40	92	6	6.10	18' LT.	0-5	28	11	A-6(6)	BR/GR
1005+00	35	6	35.50	92	6	6.10	27' LT.	0-5	24	9	A-4(3)	BR/GR
1005+00	35	6	35.60	92	6	6.10	36' LT.	0-5	36	15	A-6(11)	BROWN
1013+00	35	6	35.00	92	5	35.00	6' RT.	0-5	26	8	A-4(4)	BROWN
1013+00	35	6	34.90	92	5	56.20	17' RT.	0-5	25	7	A-4(3)	BROWN
1013+00	35	6	34.80	92	5	56.20	29' RT.	0-5	27	8	A-4(5)	BROWN
1021+00	35	6	35.20	92	5	46.80	18' LT.	0-5	22	6	A-4(1)	BROWN
1021+00	35	6	35.20	92	5	46.80	27' LT.	0-5	21	6	A-4(0)	BR/GR
1021+00	35	6	35.30	92	5	46.80	36' LT.	0-5	26	9	A-4(1)	BR/GR
1029+00	35	6	34.80	92	5	37.10	5' RT.	0-5	23	6	A-4(2)	BROWN
1029+00	35	6	34.70	92	5	37.10	17' RT.	0-5	20	4	A-4(0)	BROWN
1029+00	35	6	34.60	92	5	37.10	26' RT.	0-5	24	7	A-4(3)	BROWN
1037+00	35	6	35.00	92	5	27.40	27' LT.	0-2.5Z	19	3	A-1-B(0)	GRAY
1037+00	35	6	35.10	92	5	27.40	37' LT.	0-5	27	9	A-4(2)	BR/GR
1043+00	35	6	34.50	92	5	20.30	6' RT.	0-5	24	9	A-4(4)	BROWN
1043+00	35	6	34.40	92	5	20.30	16' RT.	0-5	21	5	A-4(1)	BROWN
1043+00	35	6	34.30	92	5	20.30	29' RT.	0-5	27	11	A-6(7)	BROWN
1053+00	35	6	34.50	92	5	8.60	6' LT.	0-5	35	15	A-6(12)	BROWN
1053+00	35	6	34.60	92	5	8.60	16' LT.	0-5	32	16	A-6(9)	BROWN
1053+00	35	6	34.70	92	5	8.60	23' LT.	0-5	32	14	A-6(7)	BROWN

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC						
1061+00	35	6	33.90	92	4	59.00	6' RT.	0-5	22	6	A-4(2)	BROWN
1061+00	35	6	33.90	92	4	59.10	15' RT.	0-5	20	4	A-4(0)	BROWN
1061+00	35	6	33.80	92	4	59.10	27' RT.	0-5	22	3	A-4(0)	BROWN
1069+00	35	6	33.60	92	4	49.50	7' LT.	0-5	36	16	A-6(9)	BROWN
1069+00	35	6	33.70	92	4	49.50	17' LT.	0-5	30	12	A-6(7)	BROWN
1069+00	35	6	32.80	92	4	49.50	27' LT.	0-5	30	11	A-6(8)	BROWN
1077+00	35	6	33.00	92	4	39.30	5' RT.	0-5	21	6	A-4(1)	BROWN
1077+00	35	6	33.00	92	4	39.30	15' RT.	0-5	20	5	A-4(0)	BROWN
1077+00	35	6	32.80	92	4	29.40	26' RT.	0-5	22	5	A-4(1)	BROWN
1085+00	35	6	32.70	92	4	20.10	6' LT.	0-5	24	8	A-4(4)	BROWN
1085+00	35	6	32.80	92	4	20.10	16' LT.	0-5	22	6	A-4(2)	BROWN
1085+00	35	6	32.90	92	4	20.10	26' LT.	0-5	30	10	A-4(6)	BROWN
1093+00	35	6	32.20	92	4	10.40	6' RT.	0-5	21	4	A-4(1)	BROWN
1093+00	35	6	32.10	92	4	10.40	16' RT.	0-5	21	4	A-4(0)	BROWN
1093+00	35	6	32.00	92	4	20.10	26' RT.	0-5	26	5	A-4(3)	BROWN
1101+00	35	6	31.80	92	4	10.40	5' LT.	0-5	31	12	A-6(9)	BROWN
1101+00	35	6	31.90	92	4	10.40	15' LT.	0-5	33	14	A-6(9)	BROWN
1101+00	35	6	32.00	92	4	10.40	25' LT.	0-5	32	13	A-6(9)	BROWN
1109+00	35	6	31.30	92	4	1.30	7' RT.	0-5	20	4	A-4(0)	BROWN
1109+00	35	6	31.20	92	4	1.30	17' RT.	0-5	20	4	A-4(0)	BROWN
1109+00	35	6	31.10	92	4	1.30	27' RT.	0-5	22	5	A-4(1)	BROWN
1118+00	35	6	31.00	92	3	51.60	5' LT.	0-5	21	6	A-4(2)	BR/GR
1118+00	35	6	31.10	92	3	51.60	15' LT.	0-5	21	5	A-4(1)	BROWN
1118+00	35	6	31.10	92	3	51.60	25' LT.	0-5	21	6	A-4(1)	BROWN
1125+00	35	6	30.20	92	3	41.60	6' RT.	0-5	20	4	A-4(0)	BROWN
1125+00	35	6	30.10	92	3	41.60	15' RT.	0-5	23	7	A-4(3)	BROWN
1125+00	35	6	30.00	92	3	41.60	25' RT.	0-5	20	6	A-4(1)	BROWN
1133+00	35	6	28.00	92	3	31.40	6' LT.	0-5	28	12	A-6(7)	BROWN
1133+00	35	6	28.00	92	3	32.30	16' LT.	0-5	21	4	A-4(0)	BROWN
1133+00	35	6	28.10	92	3	32.30	26' LT.	0-5	28	11	A-6(7)	BROWN
1141+00	35	6	23.20	92	3	34.50	6' RT.	0-5	24	8	A-4(4)	BROWN
1141+00	35	6	23.10	92	3	24.60	16' RT.	0-5	25	9	A-4(5	

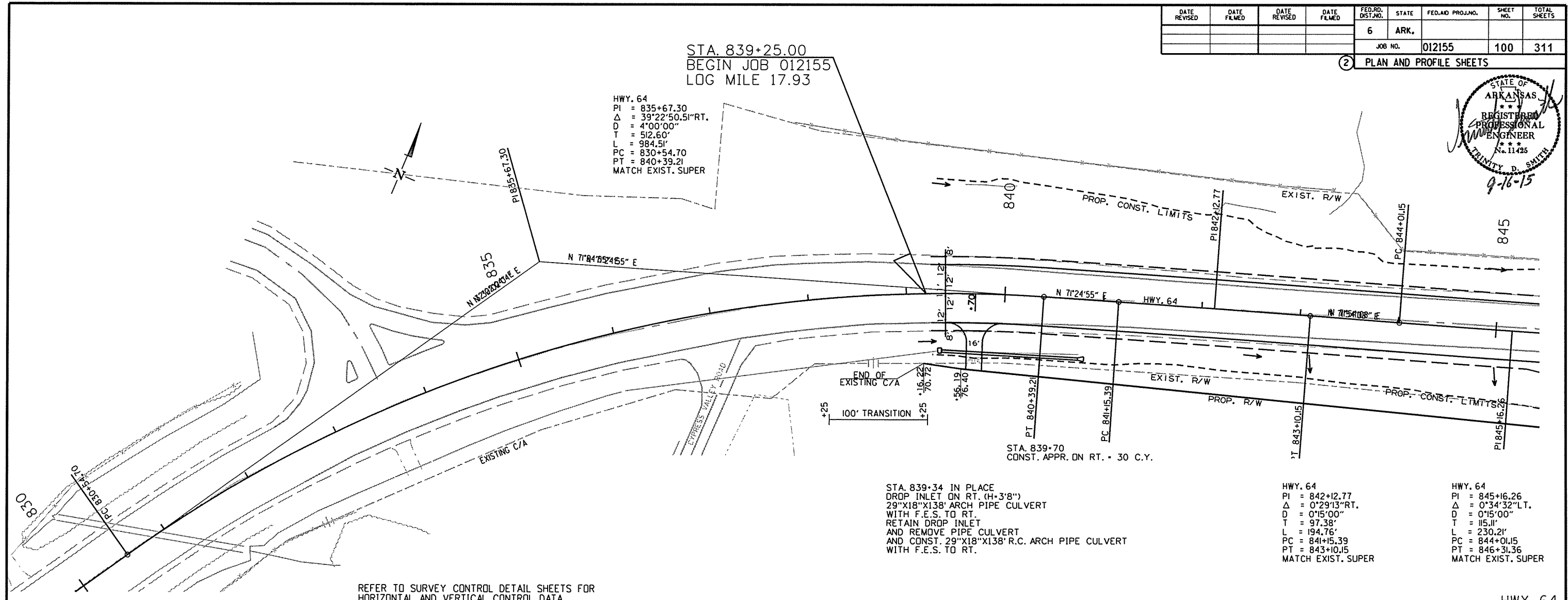
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		100	311

2 PLAN AND PROFILE SHEETS



STA. 839+25.00
BEGIN JOB 012155
LOG MILE 17.93

HWY. 64
PI = 835+67.30
Δ = 39°22'50.51" RT.
D = 4°00'00"
T = 512.60'
L = 984.51'
PC = 830+54.70
PT = 840+39.21
MATCH EXIST. SUPER

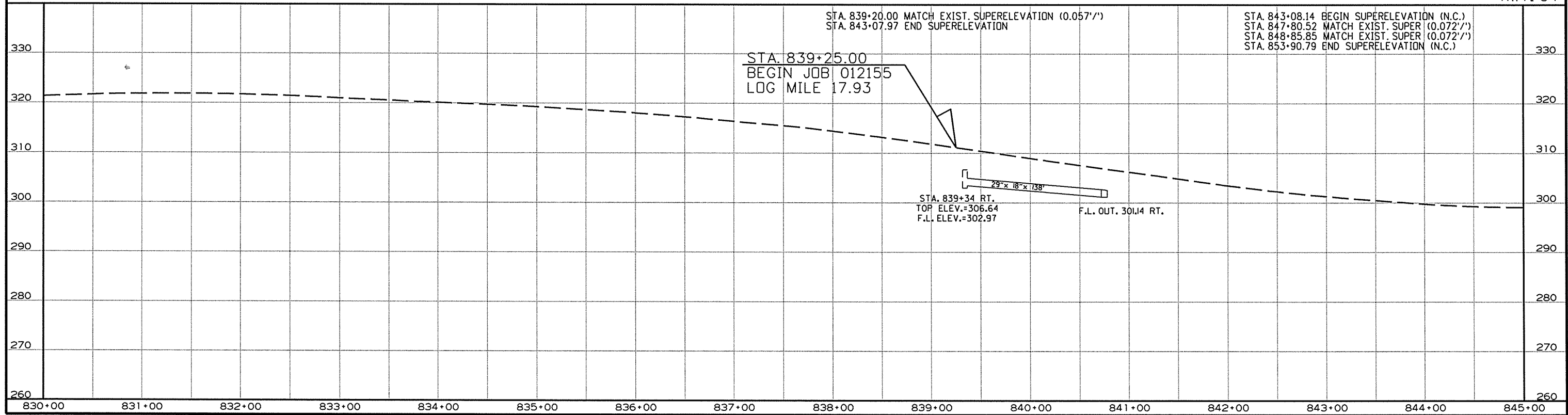


STA. 839+34 IN PLACE
DROP INLET ON RT. (H=3'8")
29"X18"X138' ARCH PIPE CULVERT
WITH F.E.S. TO RT.
RETAIN DROP INLET
AND REMOVE PIPE CULVERT
AND CONST. 29"X18"X138' R.C. ARCH PIPE CULVERT
WITH F.E.S. TO RT.

HWY. 64
PI = 842+12.77
Δ = 0°29'13" RT.
D = 0°15'00"
T = 97.38'
L = 194.76'
PC = 841+15.39
PT = 843+10.15
MATCH EXIST. SUPER

HWY. 64
PI = 845+16.26
Δ = 0°34'32" LT.
D = 0°15'00"
T = 115.11'
L = 230.21'
PC = 844+01.15
PT = 846+31.36
MATCH EXIST. SUPER

REFER TO SURVEY CONTROL DETAIL SHEETS FOR
HORIZONTAL AND VERTICAL CONTROL DATA



STA. 839+20.00 MATCH EXIST. SUPERELEVATION (0.057'/'')
STA. 843+07.97 END SUPERELEVATION

STA. 843+08.14 BEGIN SUPERELEVATION (N.C.)
STA. 847+80.52 MATCH EXIST. SUPER (0.072'/'')
STA. 848+85.85 MATCH EXIST. SUPER (0.072'/'')
STA. 853+90.79 END SUPERELEVATION (N.C.)

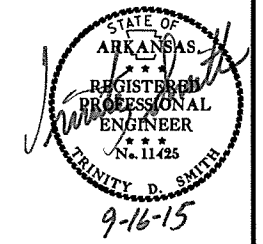
STA. 839+25.00
BEGIN JOB 012155
LOG MILE 17.93

STA. 839+34 RT.
TOP ELEV.=306.64
F.L. ELEV.=302.97

9/4/2015 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		101	311

2 PLAN AND PROFILE SHEETS



STA.	STA.	SIDE	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
844+56	846+75	R.M.L.	150 LIN. FT.		IEA.
845+81	846+75	L.M.L.	75 LIN. FT.	IEA.	
848+86	849+80	R.M.L.	75 LIN. FT.	IEA.	
848+86	849+05	L.M.L.	150 LIN. FT.		IEA.

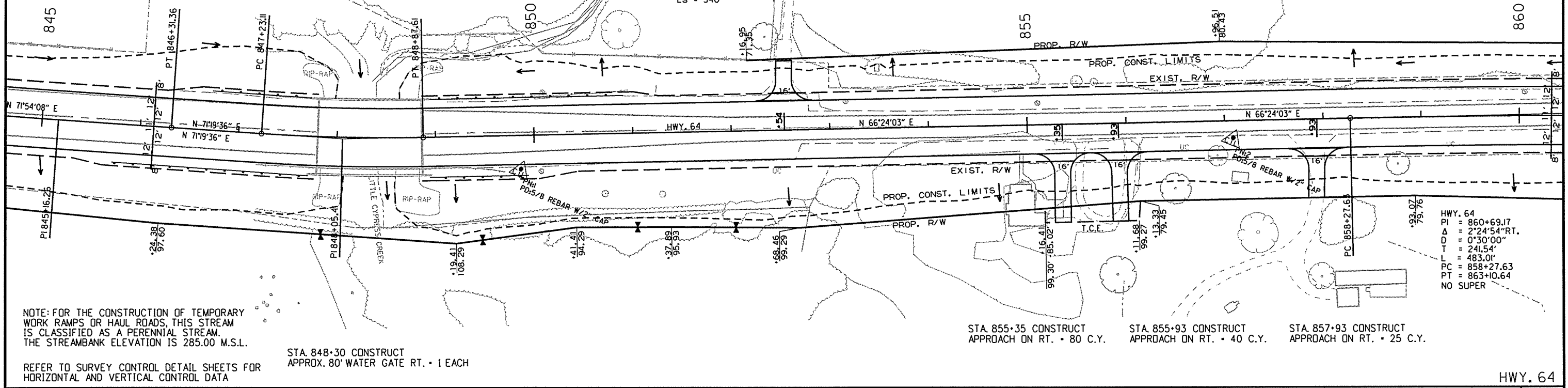
STA. 847+79.86 TO STA. 848+86.97 IN PLACE
 107' - 1 5/16" X 70' CLEAR ROADWAY BRIDGE
 105' - 0" CONT. COMP. PLATE GIRDER UNIT (33' - 39' - 33')
 RETAIN

STA. 847+79.73 TO STA. 848+87.03 CONSTRUCT
 107' - 3 1/16" X 75' CLEAR ROADWAY BRIDGE
 105' - 2 3/8" CONT. COMP. W-BEAM UNIT (33' 0 3/4" - 39' 0 7/8" - 33' 0 3/4")
 BRIDGE NO. 06387

HWY. 64
 PI = 848+05.41
 Δ = 4°55'33" LT.
 D = 2°59'40"
 T = 82.30'
 L = 164.50'
 PC = 847+23.11
 PT = 848+87.61
 e = 0.077' /'
 Ls = 540'

STA. 852+54 CONSTRUCT
 APPROACH ON LT. - 20 C.Y.

HWY. 64
 PI = 845+16.26
 Δ = 0°34'32" LT.
 D = 0°15'00"
 T = 115.11'
 L = 230.21'
 PC = 844+01.15
 PT = 846+31.36
 MATCH EXIST. SUPER



NOTE: FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAMBANK ELEVATION IS 285.00 M.S.L.

STA. 848+30 CONSTRUCT
 APPROX. 80' WATER GATE RT. - 1 EACH

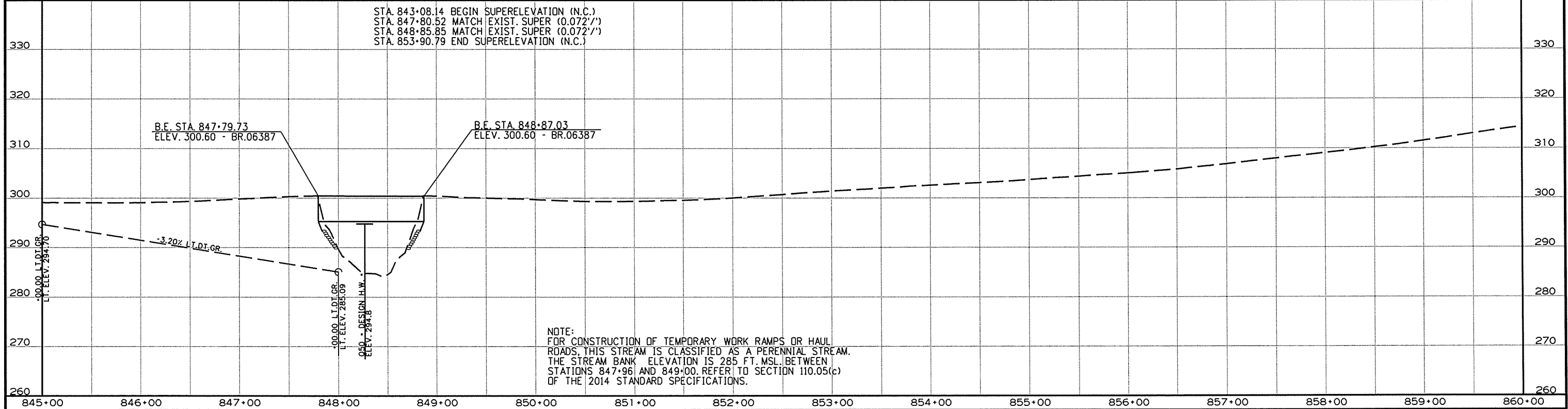
STA. 855+35 CONSTRUCT
 APPROACH ON RT. - 80 C.Y.

STA. 855+93 CONSTRUCT
 APPROACH ON RT. - 40 C.Y.

STA. 857+93 CONSTRUCT
 APPROACH ON RT. - 25 C.Y.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

STA. 843+08.14 BEGIN SUPERELEVATION (N.C.)
 STA. 847+80.52 MATCH EXIST. SUPER (0.072' /')
 STA. 848+85.85 MATCH EXIST. SUPER (0.072' /')
 STA. 853+90.79 END SUPERELEVATION (N.C.)



NOTE: FOR CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAMBANK ELEVATION IS 285 FT. MSL BETWEEN STATIONS 847+96 AND 849+00. REFER TO SECTION 110.05(c) OF THE 2014 STANDARD SPECIFICATIONS.

R012155.DGN 9/4/2015

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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PLAN AND PROFILE SHEETS



9-16-15

STA. 869+24 CONSTRUCT
APPROACH ON LT. • 10 C.Y.

STA. 870+38 CONSTRUCT
APPROACH ON LT. • 30 C.Y.

STA. 872+45 CONSTRUCT
APPROACH ON LT. • 35 C.Y.

STA. 873+04 CONSTRUCT
APPROACH ON LT. • 20 C.Y.

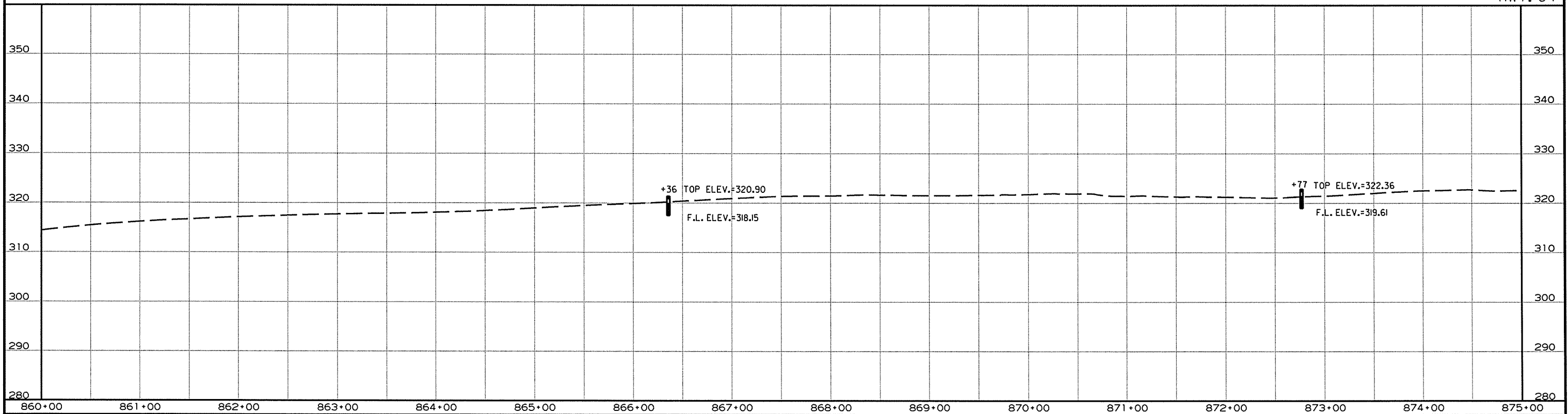
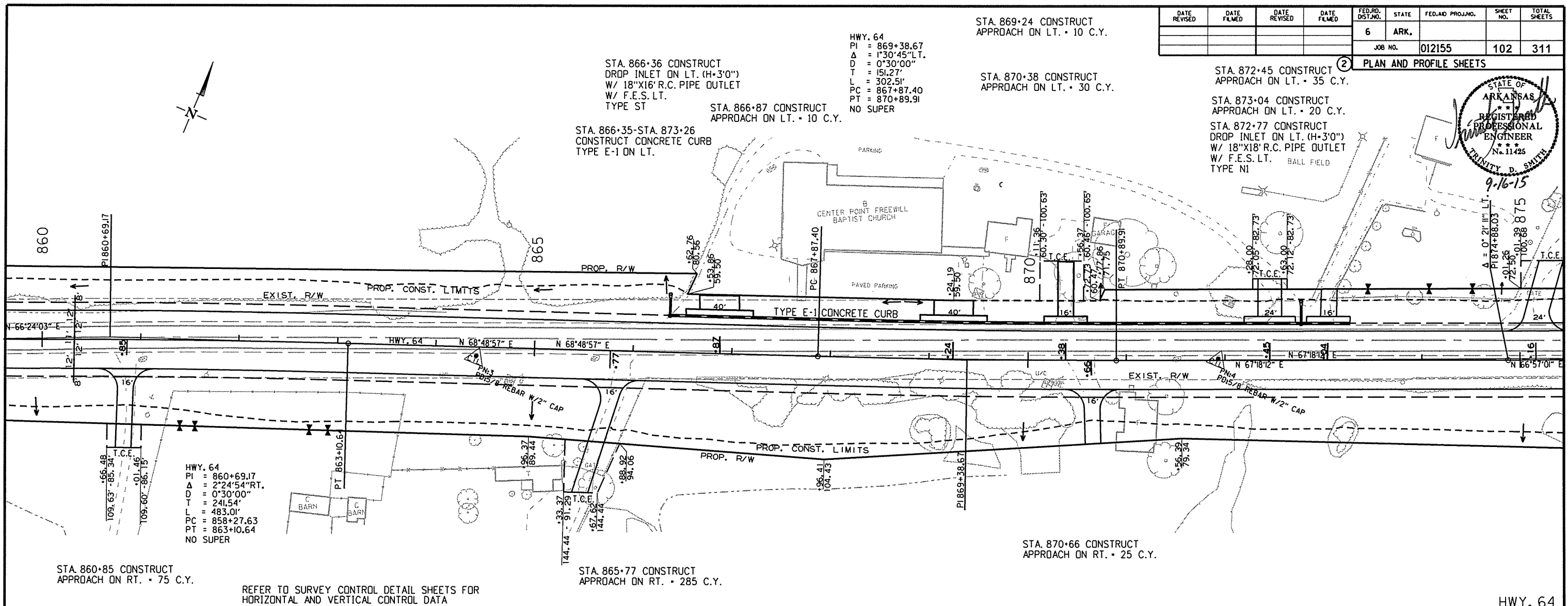
STA. 872+77 CONSTRUCT
DROP INLET ON LT. (H=3'0")
W/ 18"X18" R.C. PIPE OUTLET
W/ F.E.S. LT. BALL FIELD
TYPE NI

HWY. 64
PI = 869+38.67
Δ = 1°30'45" L.T.
D = 0°30'00"
T = 151.27'
L = 302.51'
PC = 867+87.40
PT = 870+89.91
NO SUPER

STA. 866+36 CONSTRUCT
DROP INLET ON LT. (H=3'0")
W/ 18"X16" R.C. PIPE OUTLET
W/ F.E.S. LT.
TYPE ST

STA. 866+87 CONSTRUCT
APPROACH ON LT. • 10 C.Y.

STA. 866+35-STA. 873+26
CONSTRUCT CONCRETE CURB
TYPE E-1 ON LT.



STA. 875+16 CONSTRUCT
APPROACH ON LT. - 45 C.Y.

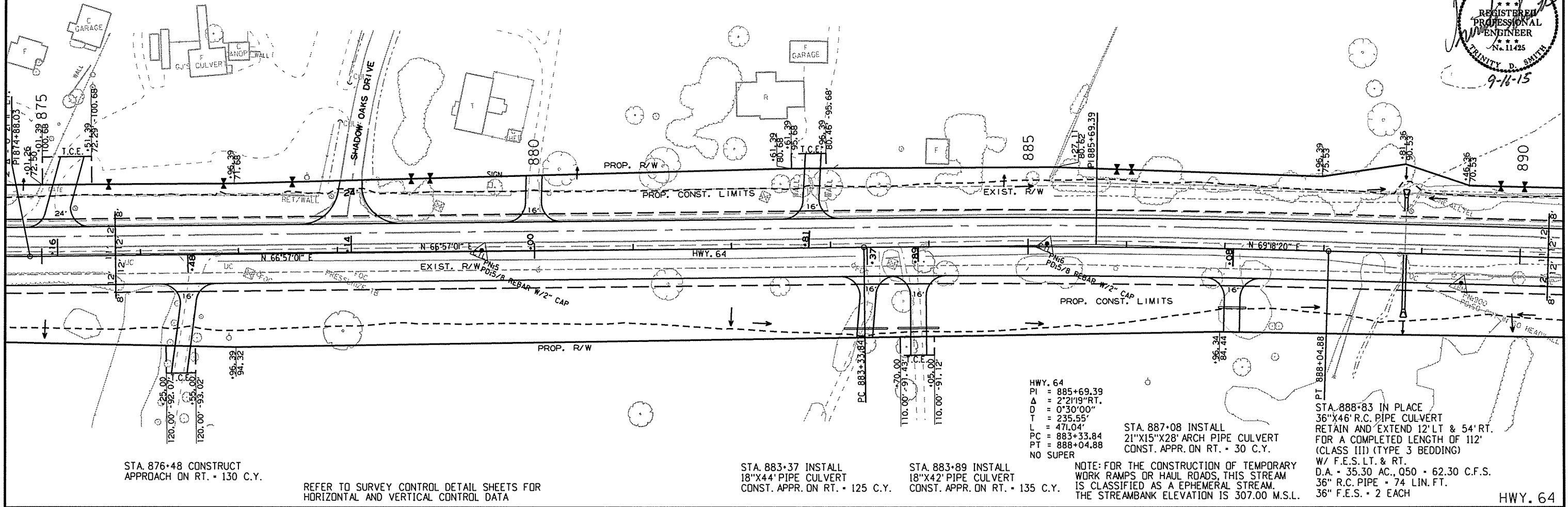
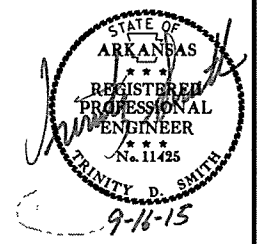
STA. 878+14 CONSTRUCT
APPROACH ON LT. - 30 C.Y.

STA. 880+00 CONSTRUCT
APPROACH ON LT. - 20 C.Y.

STA. 882+81 CONSTRUCT
APPROACH ON LT. - 25 C.Y.

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2 PLAN AND PROFILE SHEETS



STA. 876+48 CONSTRUCT
APPROACH ON RT. - 130 C.Y.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR
HORIZONTAL AND VERTICAL CONTROL DATA

STA. 883+37 INSTALL
18"X44' PIPE CULVERT
CONST. APPR. ON RT. - 125 C.Y.

STA. 883+89 INSTALL
18"X42' PIPE CULVERT
CONST. APPR. ON RT. - 135 C.Y.

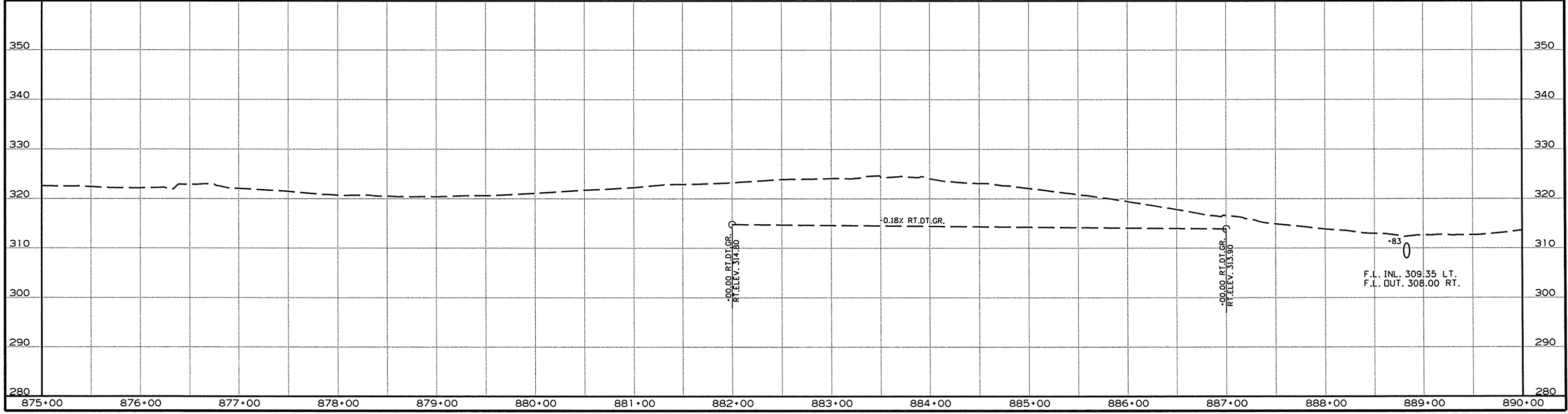
HWY. 64
PI = 885+69.39
Δ = 2°21'19" RT.
D = 0°30'00"
T = 235.55'
L = 471.04'
PC = 883+33.84
PT = 888+04.88
NO SUPER

STA. 887+08 INSTALL
21"X15'X28' ARCH PIPE CULVERT
CONST. APPR. ON RT. - 30 C.Y.

STA. 888+83 IN PLACE
36"X46' R.C. PIPE CULVERT
RETAIN AND EXTEND 12' LT & 54' RT.
FOR A COMPLETED LENGTH OF 112'
(CLASS III) (TYPE 3 BEDDING)
W/ F.E.S. LT. & RT.
D.A. = 35.30 AC., Q50 = 62.30 C.F.S.
36" R.C. PIPE = 74 LIN. FT.
36" F.E.S. = 2 EACH

NOTE: FOR THE CONSTRUCTION OF TEMPORARY
WORK RAMPS OR HAUL ROADS, THIS STREAM
IS CLASSIFIED AS A EPHEMERAL STREAM.
THE STREAMBANK ELEVATION IS 307.00 M.S.L.

HWY. 64



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STA. 892+80 INSTALL
21"X15"X42' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 50 C.Y.

STA. 894+00 INSTALL
21"X15"X28' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 45 C.Y.

STA. 894+87 INSTALL
21"X15"X40' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 60 C.Y.

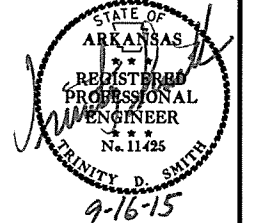
HWY. 64
PI = 897+53.03
Δ = 1'18"35"LT.
D = 0'30"00"
T = 130.97'
L = 261.94'
PC = 896+22.06
PT = 898+83.99
NO SUPER

STA. 899+29 INSTALL
21"X15"X28' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 35 C.Y.

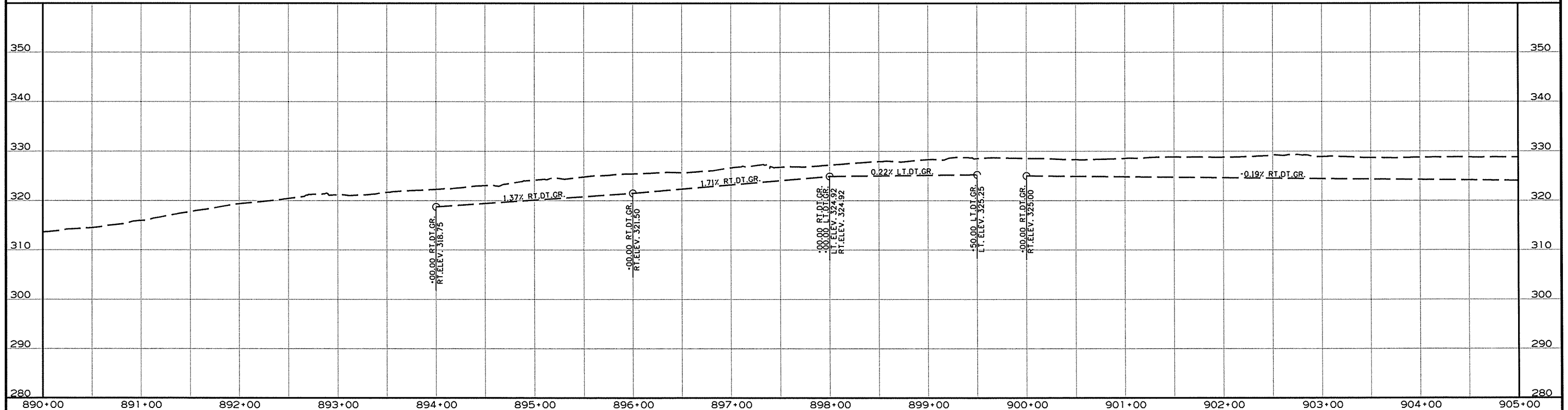
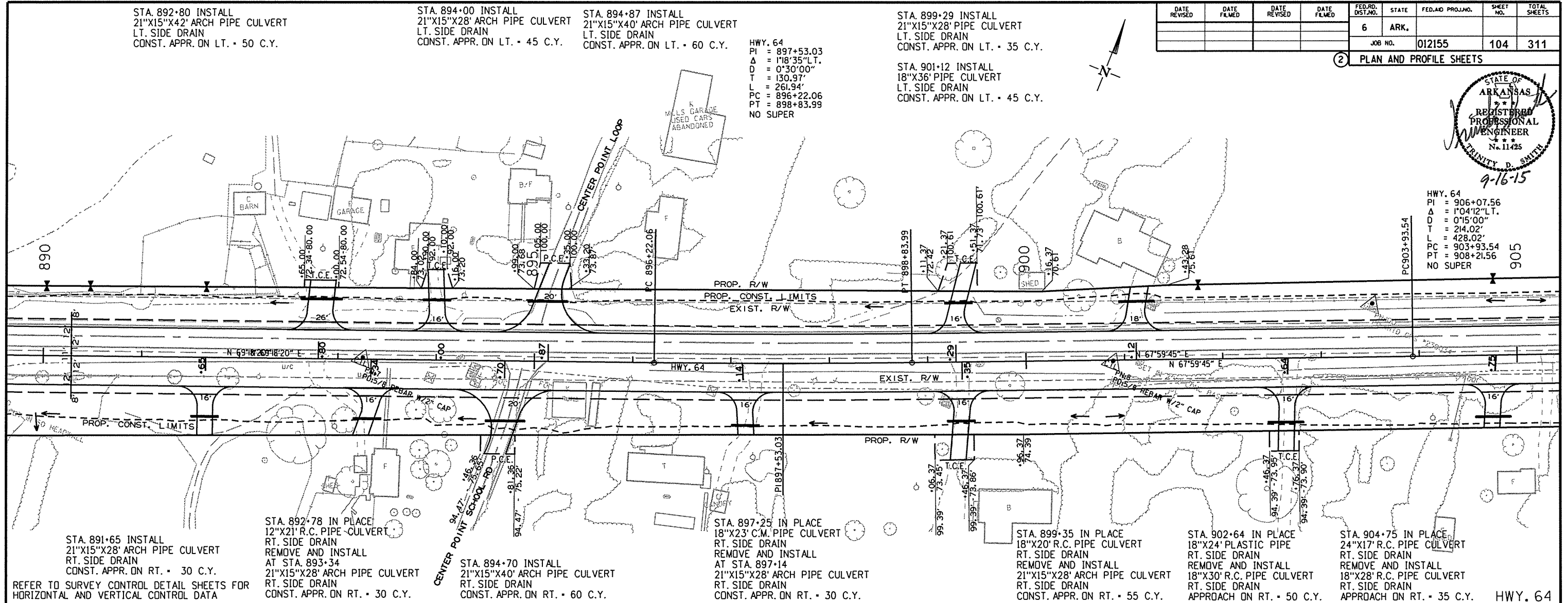
STA. 901+12 INSTALL
18"X36' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 45 C.Y.

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2 PLAN AND PROFILE SHEETS



HWY. 64
PI = 906+07.56
Δ = 1'04"12"LT.
D = 0'15"00"
T = 214.02'
L = 428.02'
PC = 903+93.54
PT = 908+21.56
NO SUPER



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2 PLAN AND PROFILE SHEETS



STA. 907+14 IN PLACE
18"X23' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
21"X15"X30' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 45 C.Y.

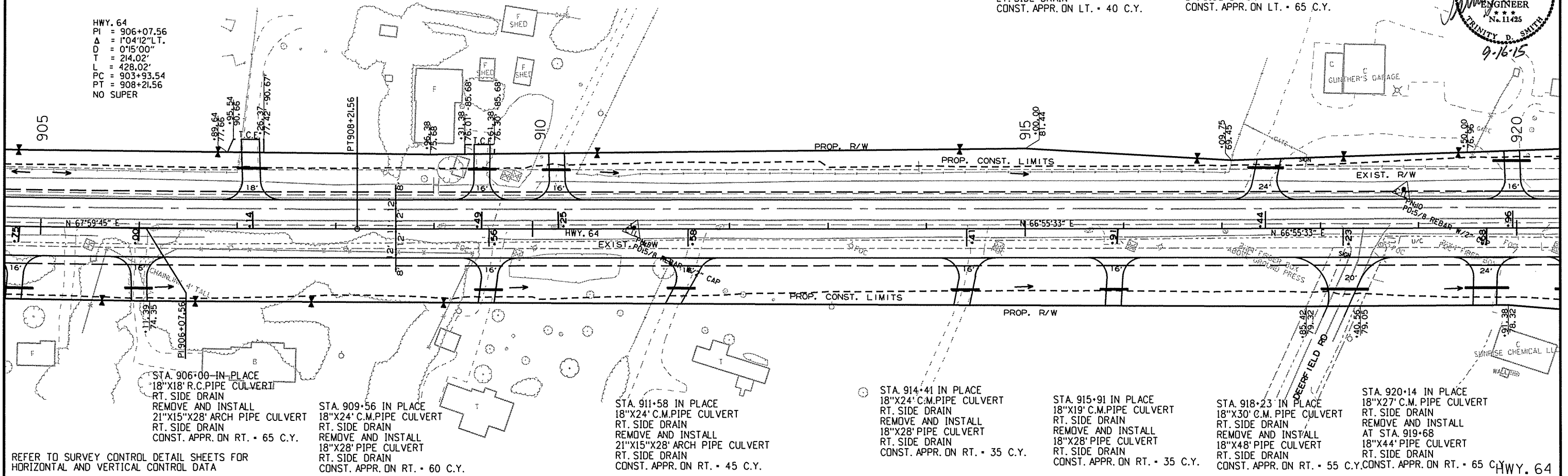
STA. 909+49 IN PLACE
18"X21' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
21"X15"X28' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 35 C.Y.

STA. 910+25 IN PLACE
18"X24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
21"X15"X28' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 35 C.Y.

STA. 917+44 IN PLACE
18"X30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X36' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 40 C.Y.

STA. 919+96 IN PLACE
18"X19' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X38' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 65 C.Y.

HWY. 64
PI = 906+07.56
Δ = 1'04"12" LT.
D = 0'15"00"
L = 214.02'
C = 428.02'
PC = 903+93.54
PT = 908+21.56
NO SUPER



STA. 906+00 IN-PLACE
18"X18' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21"X15"X28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 65 C.Y.

STA. 909+56 IN PLACE
18"X24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 60 C.Y.

STA. 911+58 IN PLACE
18"X24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21"X15"X28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 45 C.Y.

STA. 914+41 IN PLACE
18"X24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 35 C.Y.

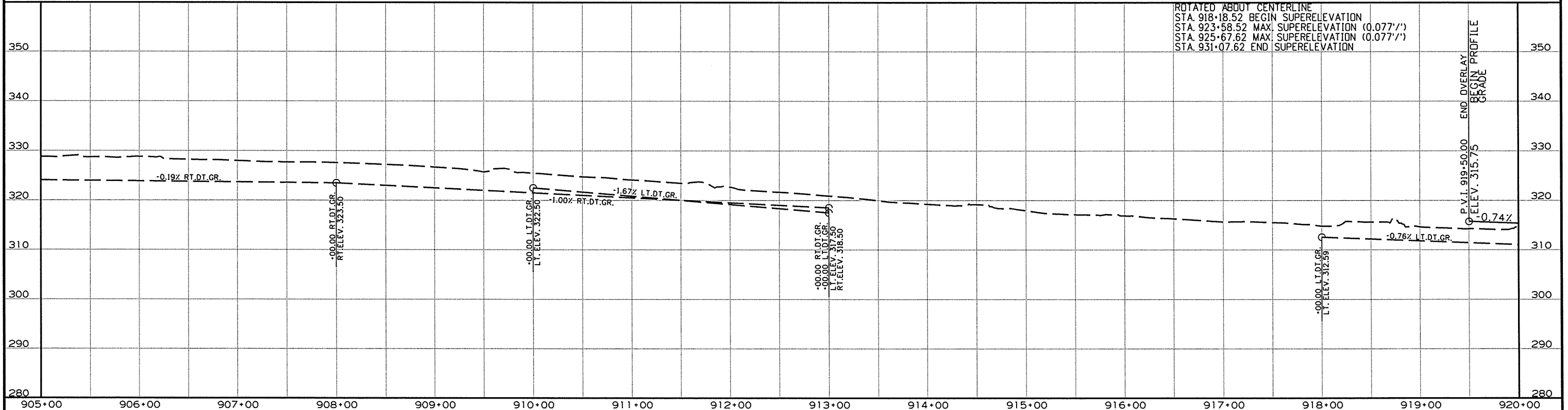
STA. 915+91 IN PLACE
18"X19' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 35 C.Y.

STA. 918+23 IN PLACE
18"X30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X48' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 55 C.Y.

STA. 920+14 IN PLACE
18"X27' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X44' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 65 C.Y.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

ROTATED ABOUT CENTERLINE
STA. 918+18.52 BEGIN SUPERELEVATION
STA. 923+58.52 MAX. SUPERELEVATION (0.077'/'')
STA. 925+67.62 MAX. SUPERELEVATION (0.077'/'')
STA. 931+07.62 END SUPERELEVATION

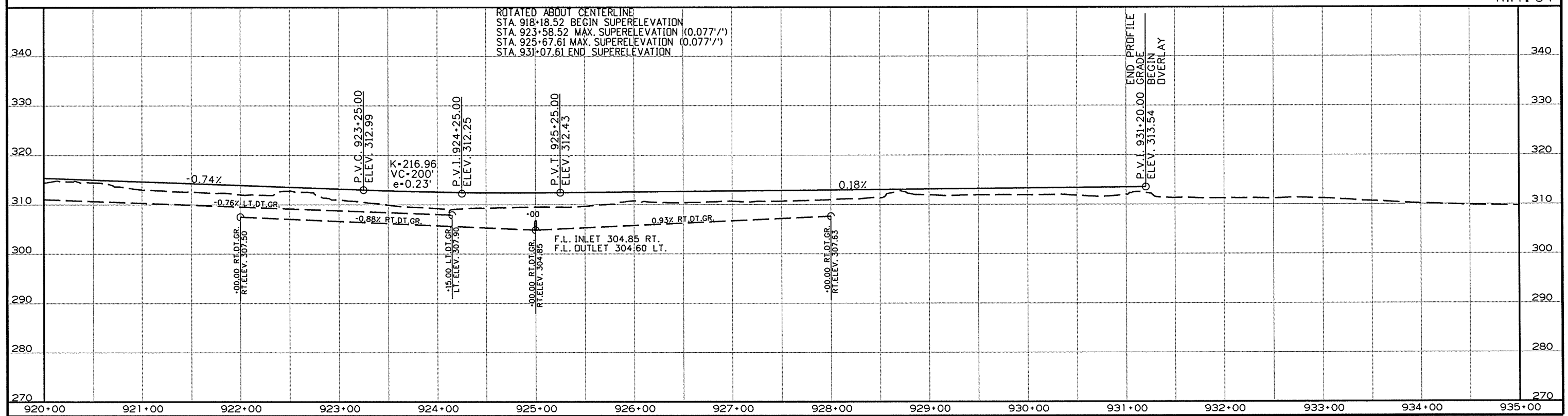
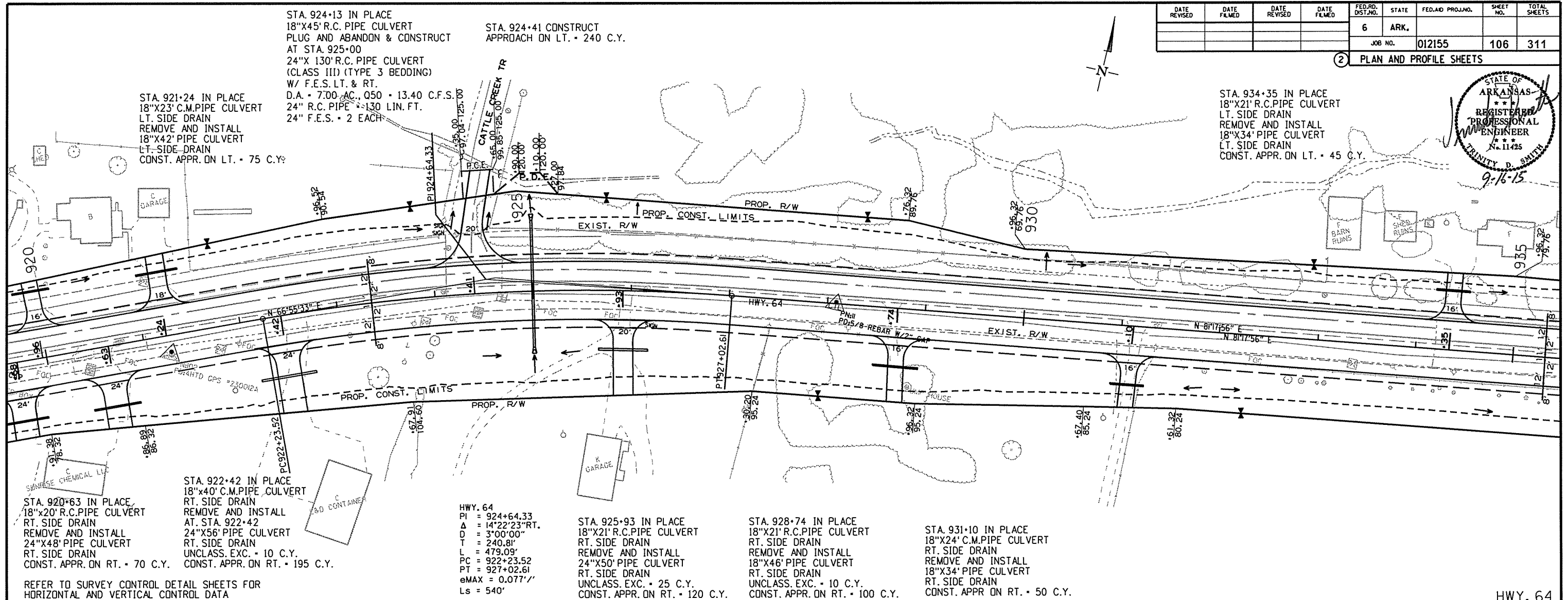
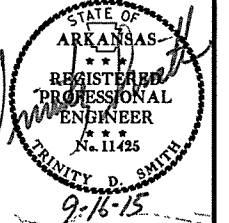


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2 PLAN AND PROFILE SHEETS



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HWY. 64
 PI = 937+84.78
 Δ = 0°27'02" LT.
 D = 0°15'00"
 T = 90.11'
 L = 180.22'
 PC = 936+94.67
 PT = 938+74.89
 NO SUPER

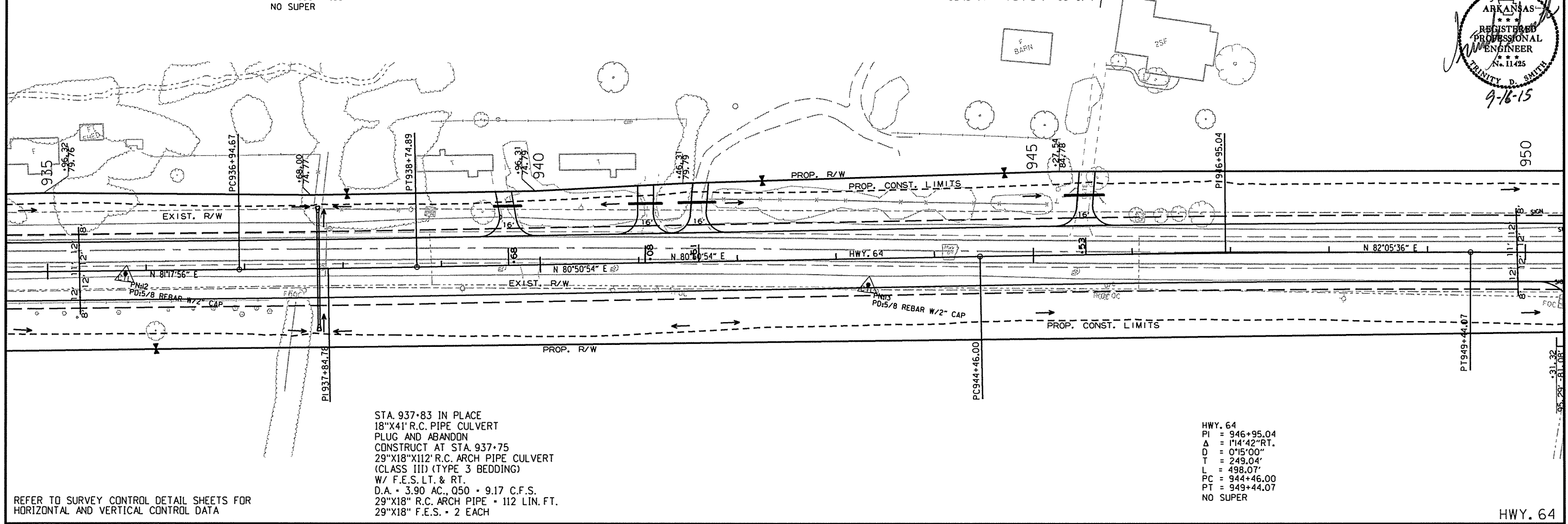
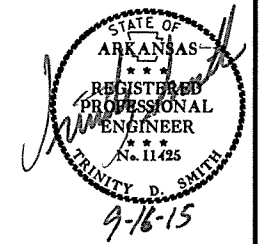
STA. 939+68 IN PLACE
 18"x17' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 21"x15"x28' ARCH PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. - 25 C.Y.

STA. 941+08 IN PLACE
 18"x23' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x34' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. - 45 C.Y.

STA. 941+61 IN PLACE
 18"x23' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x38' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. - 50 C.Y.

STA. 945+53 IN PLACE
 18"x19' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x40' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. - 65 C.Y.

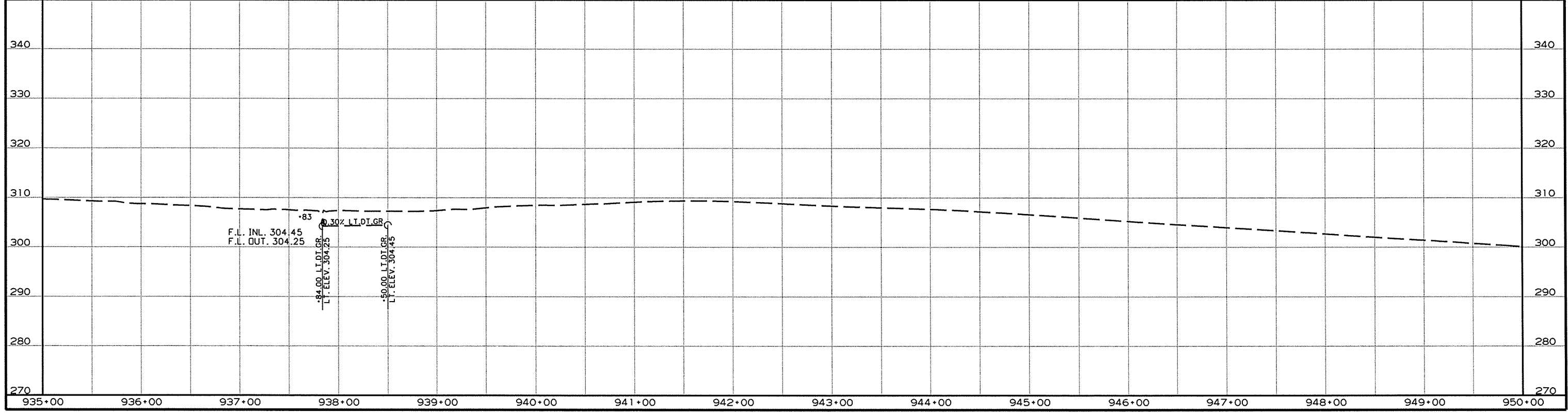
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO. 012155		PLAN AND PROFILE SHEETS		



STA. 937+83 IN PLACE
 18"x41' R.C. PIPE CULVERT
 PLUG AND ABANDON
 CONSTRUCT AT STA. 937+75
 29"x18"x112' R.C. ARCH PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 W/ F.E.S. LT. & RT.
 D.A. - 3.90 AC., Q50 - 9.17 C.F.S.
 29"x18" R.C. ARCH PIPE - 112 LIN. FT.
 29"x18" F.E.S. - 2 EACH

HWY. 64
 PI = 946+95.04
 Δ = 1°14'42" RT.
 D = 0°15'00"
 T = 249.04'
 L = 498.07'
 PC = 944+46.00
 PT = 949+44.07
 NO SUPER

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA



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STA. 950+57 IN PLACE
18"x21" R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
AT STA. 950+85
18"x40" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 55 C.Y.

STA. 954+29 IN PLACE
18"x30" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x34" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 50 C.Y.

STA. 957+52 IN PLACE
18"x40" CORR. PLASTIC PIPE
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x44" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 75 C.Y.

STA. 959+97 IN PLACE
24"x48" R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x56" PIPE CULVERT
LT. SIDE DRAIN
UNCL. EXC. - 35 C.Y.
CONST. APPR. ON LT. - 85 C.Y.

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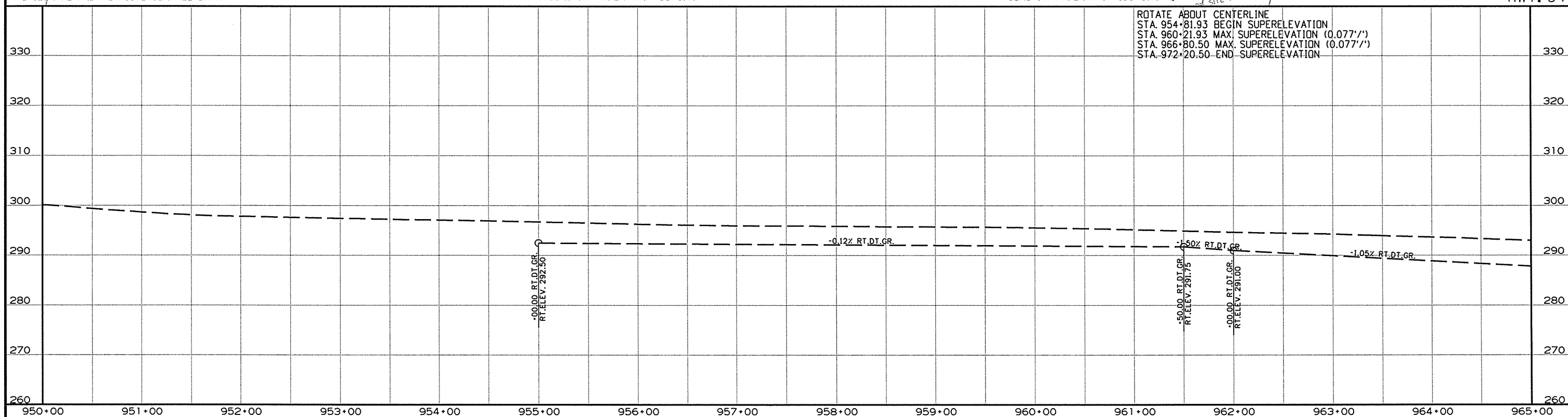
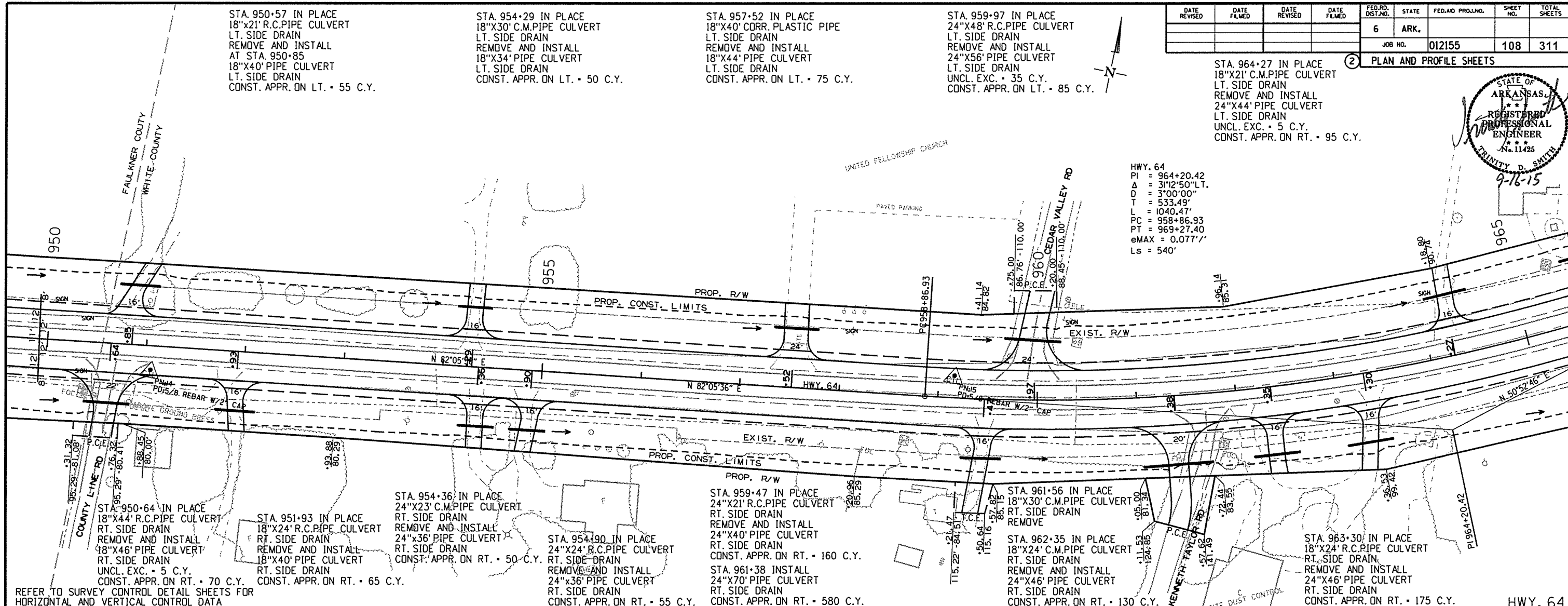
STA. 964+27 IN PLACE
18"x21" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x44" PIPE CULVERT
LT. SIDE DRAIN
UNCL. EXC. - 5 C.Y.
CONST. APPR. ON RT. - 95 C.Y.

PLAN AND PROFILE SHEETS



9-16-15

HWY. 64
PI = 964+20.42
Δ = 3°12'50" LT.
D = 3°00'00"
T = 533.49'
L = 1040.47'
PC = 958+86.93
PT = 969+27.40
eMAX = 0.077'/'
Ls = 540'



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STA. 965+78 IN PLACE
 24"X24' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 24"X50' PIPE CULVERT
 LT. SIDE DRAIN
 UNCL. EXC. = 5 C.Y.
 CONST. APPR. ON LT. = 115 C.Y.

HWY. 64
 PI = 964+20.42
 Δ = 31°2'51"LT.
 D = 3'00"00"
 T = 533.50'
 L = 1040.47'
 PC = 958+86.93
 PT = 969+27.40
 eMAX = 0.077'/'
 Ls = 540'

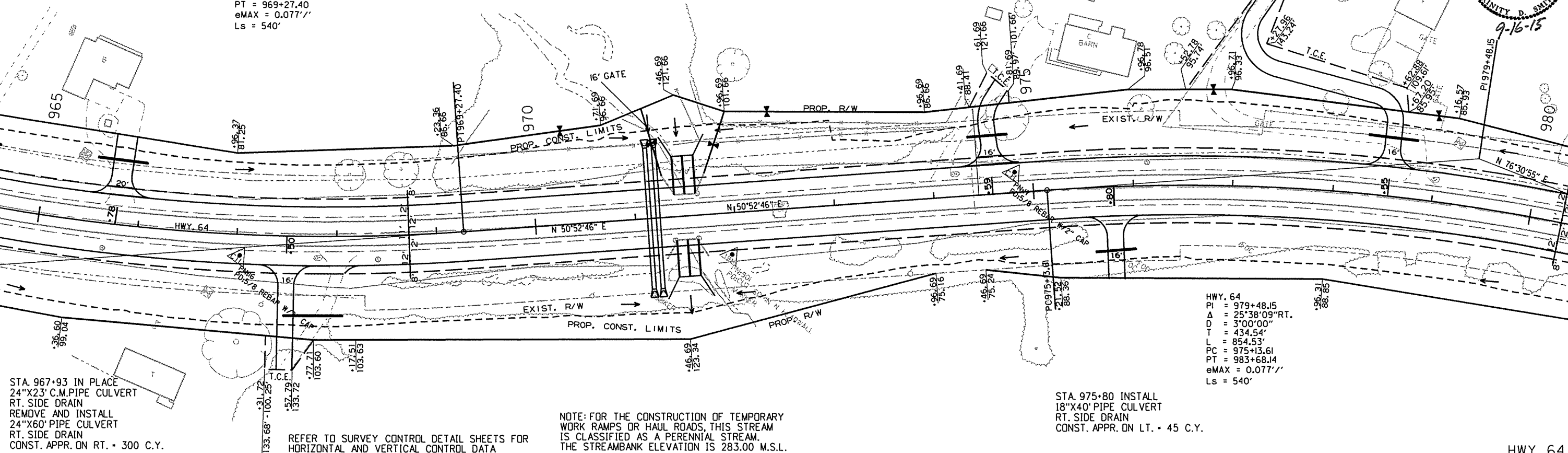
STA. 971+51 IN PLACE
 DBL. 10"X8'X48' R.C. BOX CULVERT
 RETAIN AND EXTEND 36' LT. & 35' RT.
 W/ 3:1 WINGS
 CONSTRUCT DBL. 48"X138' R.C. PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 W/ F.E.S. LT. & RT. TO THE WEST OF R.C.B.
 D.A. = 1.90 SQ.MI. Q50 = 1540 C.F.S.
 48" R.C. PIPE = 276 LIN. FT.
 48" F.E.S. = 4 EACH

STA. 974+10 IN PLACE
 24"X22' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 AT STA. 974+59
 24"X40' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. = 90 C.Y.

STA. 978+55 INSTALL
 18"X38' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. = 85 C.Y.

STA. 978+84 IN PLACE
 18"X23' C.M. PIPE CULVERT
 LT. SIDE DRAIN - REMOVE

STA. 975+80 INSTALL
 18"X40' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 45 C.Y.

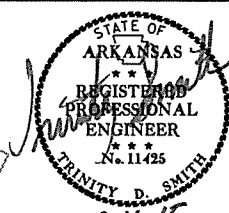


HWY. 64
 PI = 979+48.15
 Δ = 25°38'09"RT.
 D = 3'00"00"
 T = 434.54'
 L = 854.53'
 PC = 975+13.61
 PT = 983+68.14
 eMAX = 0.077'/'
 Ls = 540'

STA. 967+93 IN PLACE
 24"X23' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 24"X60' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 300 C.Y.

REFER TO SURVEY CONTROL SHEETS FOR
 HORIZONTAL AND VERTICAL CONTROL DATA

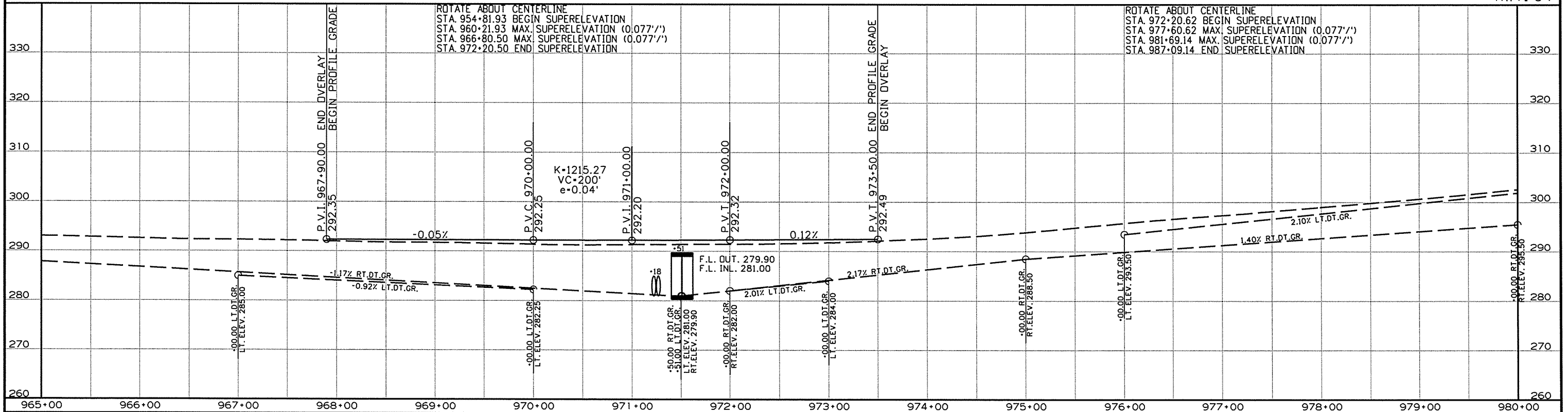
NOTE: FOR THE CONSTRUCTION OF TEMPORARY
 WORK RAMPS OR HAUL ROADS, THIS STREAM
 IS CLASSIFIED AS A PERENNIAL STREAM.
 THE STREAMBANK ELEVATION IS 283.00 M.S.L.



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ROTATE ABOUT CENTERLINE
 STA. 954+81.93 BEGIN SUPERELEVATION
 STA. 960+21.93 MAX. SUPERELEVATION (0.077'/'')
 STA. 966+80.50 MAX. SUPERELEVATION (0.077'/'')
 STA. 972+20.50 END SUPERELEVATION

ROTATE ABOUT CENTERLINE
 STA. 972+20.62 BEGIN SUPERELEVATION
 STA. 977+60.62 MAX. SUPERELEVATION (0.077'/'')
 STA. 981+69.14 MAX. SUPERELEVATION (0.077'/'')
 STA. 987+09.14 END SUPERELEVATION

STA. 981+34 IN PLACE
 18"X24' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"X34' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. - 90 C.Y.

STA. 985+63 IN PLACE
 18"X48' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"X36' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. - 55 C.Y.

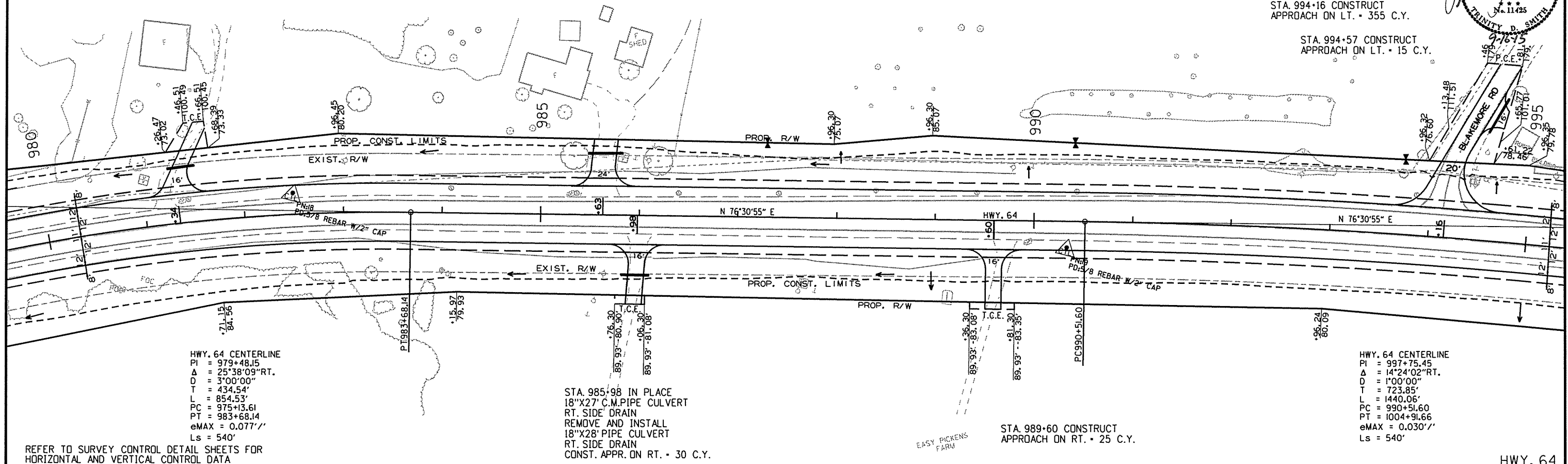
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AD PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 PLAN AND PROFILE SHEETS



STA. 994+16 CONSTRUCT
 APPROACH ON LT. - 355 C.Y.

STA. 994+57 CONSTRUCT
 APPROACH ON LT. - 15 C.Y.



HWY. 64 CENTERLINE
 PI = 979+48.15
 Δ = 25°38'09" RT.
 D = 3°00'00"
 T = 434.54'
 L = 854.53'
 PC = 975+13.61
 PT = 983+68.14
 eMAX = 0.077'/'
 Ls = 540'

STA. 985+98 IN PLACE
 18"X27' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 18"X28' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. ON RT. - 30 C.Y.

STA. 989+60 CONSTRUCT
 APPROACH ON RT. - 25 C.Y.

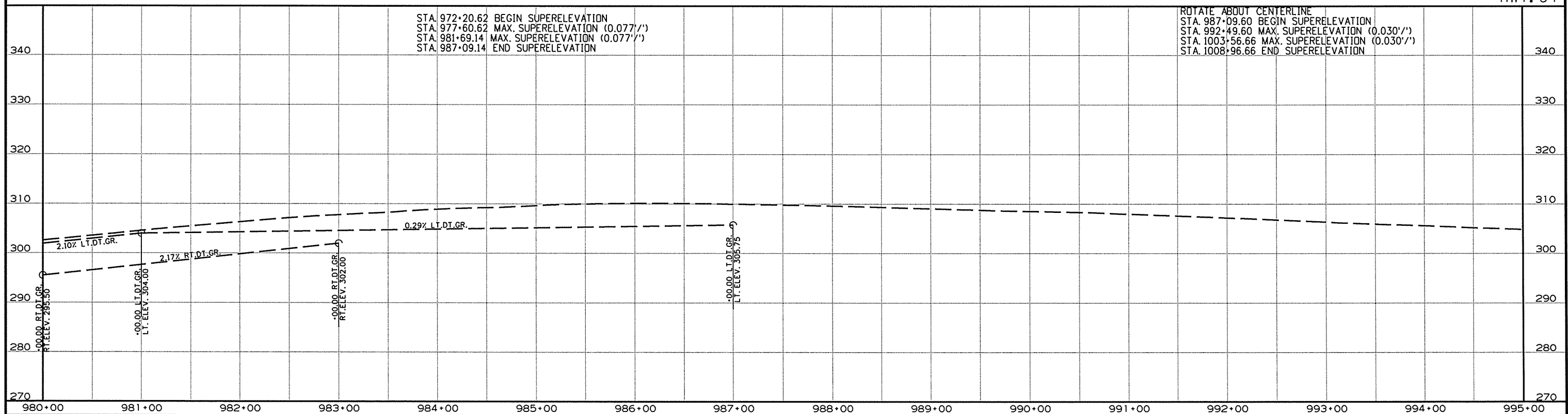
HWY. 64 CENTERLINE
 PI = 997+75.45
 Δ = 14°24'02" RT.
 D = 1°00'00"
 T = 723.85'
 L = 1440.06'
 PC = 990+51.60
 PT = 1004+91.66
 eMAX = 0.030'/'
 Ls = 540'

REFER TO SURVEY CONTROL DETAIL SHEETS FOR
 HORIZONTAL AND VERTICAL CONTROL DATA

HWY. 64

STA. 972+20.62 BEGIN SUPERELEVATION
 STA. 977+60.62 MAX. SUPERELEVATION (0.077'/')
 STA. 981+69.14 MAX. SUPERELEVATION (0.077'/')
 STA. 987+09.14 END SUPERELEVATION

ROTATE ABOUT CENTERLINE
 STA. 987+09.60 BEGIN SUPERELEVATION
 STA. 992+49.60 MAX. SUPERELEVATION (0.030'/')
 STA. 1003+56.66 MAX. SUPERELEVATION (0.030'/')
 STA. 1008+96.66 END SUPERELEVATION



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STA. 995+97 CONSTRUCT
APPROACH ON LT. - 95 C.Y.

STA. 997+29 INSTALL
18"X30' PIPE CULVERT
CONST. APPR. ON LT. - 70 C.Y.

STA. 998+79 INSTALL
18"X48' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 75 C.Y.

STA. 999+64 INSTALL
18"X42' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 70 C.Y.

STA. 1000+46 INSTALL
18"X60' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 110 C.Y.

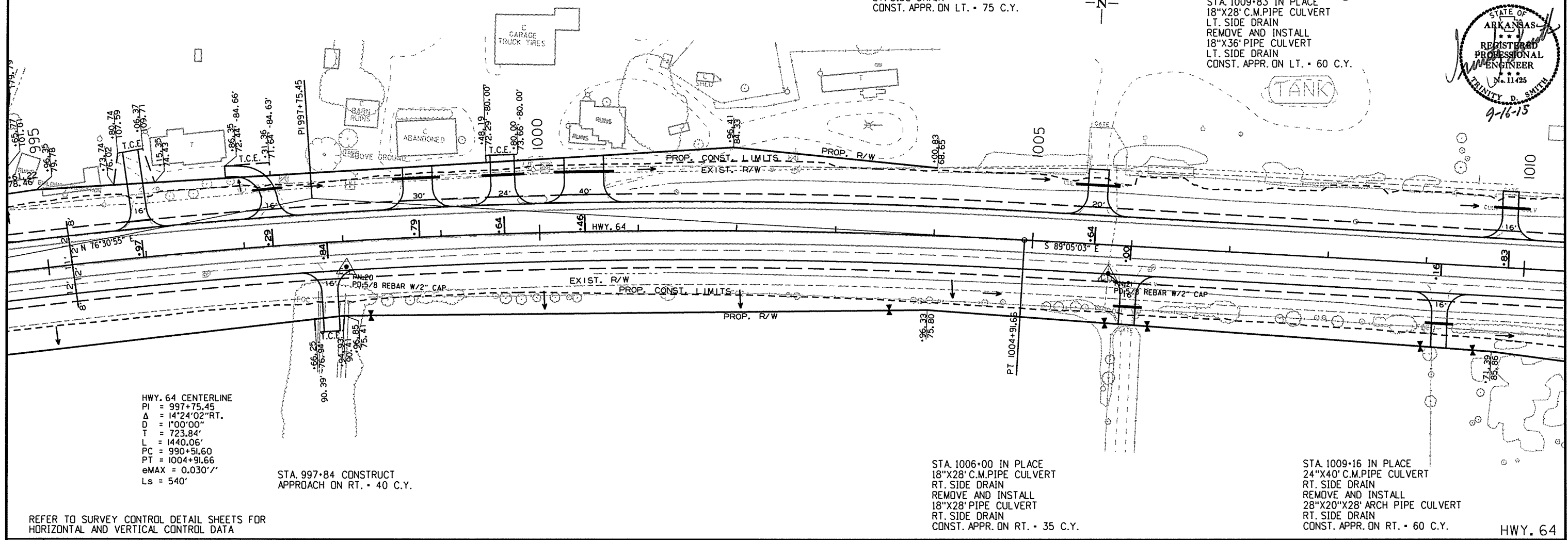
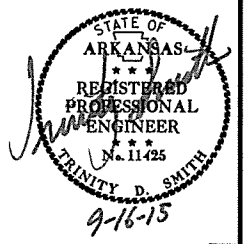
STA. 1005+64 IN PLACE
18"X40' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X44' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 75 C.Y.

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6	ARK.		111	311

2 PLAN AND PROFILE SHEETS

STA. 1009+83 IN PLACE
18"X28' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X36' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 60 C.Y.



HWY. 64 CENTERLINE
PI = 997+75.45
Δ = 14°24'02" RT.
D = 1°00'00"
T = 723.84'
L = 1440.06'
PC = 990+51.60
PT = 1004+91.66
eMAX = 0.030'/'
Ls = 540'

STA. 997+84 CONSTRUCT
APPROACH ON RT. - 40 C.Y.

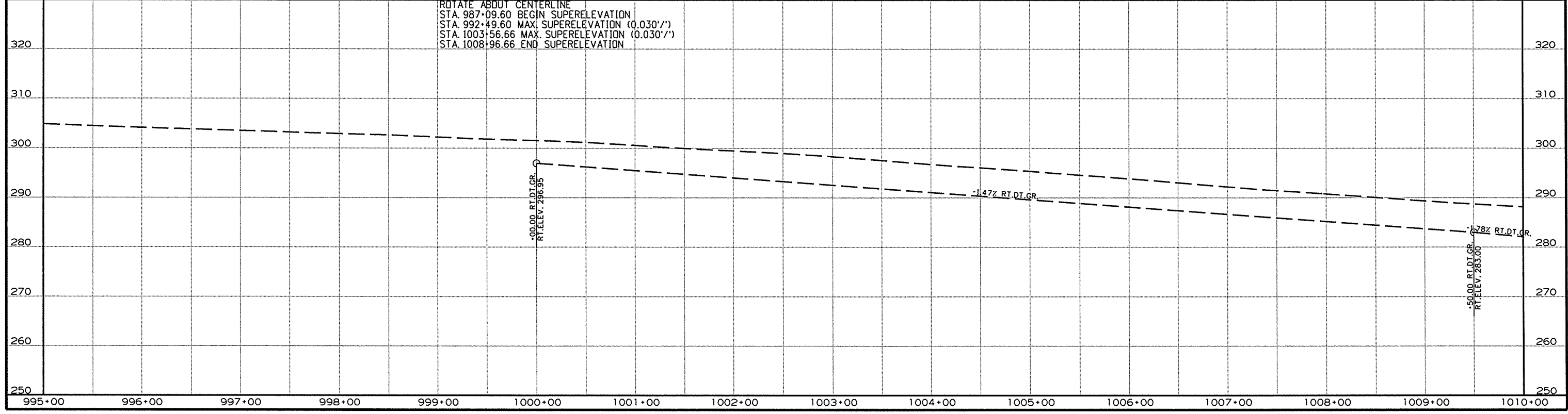
STA. 1006+00 IN PLACE
18"X28' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 35 C.Y.

STA. 1009+16 IN PLACE
24"X40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
28"X20'X28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 60 C.Y.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR
HORIZONTAL AND VERTICAL CONTROL DATA

HWY. 64

ROTATE ABOUT CENTERLINE
STA. 987+09.60 BEGIN SUPERELEVATION
STA. 992+49.60 MAX. SUPERELEVATION (0.030'/'')
STA. 1003+56.66 MAX. SUPERELEVATION (0.030'/'')
STA. 1008+96.66 END SUPERELEVATION



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STA. 1014+24 IN PLACE
 DBL. 8'X8'X96' R.C. BOX CULVERT
 RETAIN AND EXTEND 7' LT. & 19' RT
 W/ 3:1 WINGS
 D.A. • 712 AC., Q50 • 795 C.F.S.

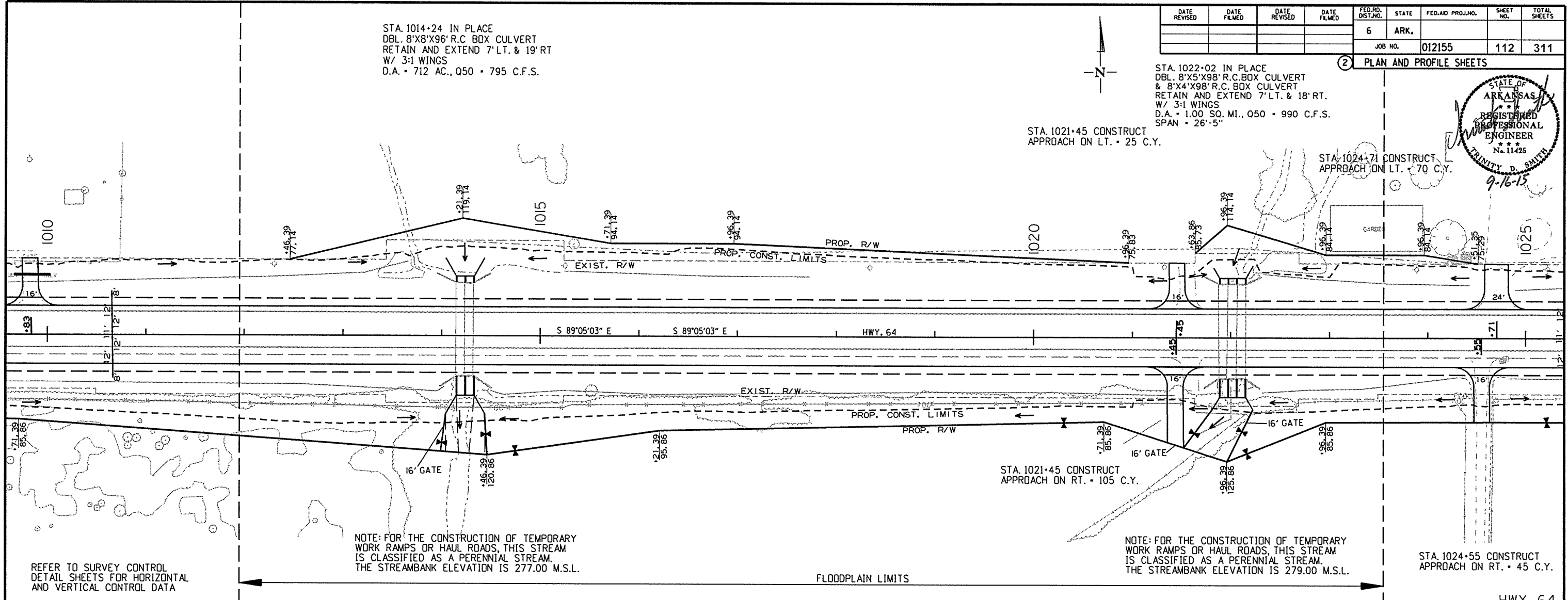
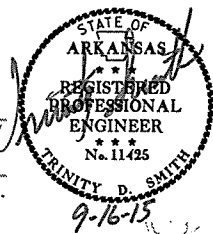
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		112	311

2 PLAN AND PROFILE SHEETS

STA. 1022+02 IN PLACE
 DBL. 8'X5'X98' R.C. BOX CULVERT
 & 8'X4'X98' R.C. BOX CULVERT
 RETAIN AND EXTEND 7' LT. & 18' RT.
 W/ 3:1 WINGS
 D.A. • 1.00 SQ. MI., Q50 • 990 C.F.S.
 SPAN • 26'-5"

STA. 1021+45 CONSTRUCT
 APPROACH ON LT. • 25 C.Y.

STA. 1024+71 CONSTRUCT
 APPROACH ON LT. • 70 C.Y.

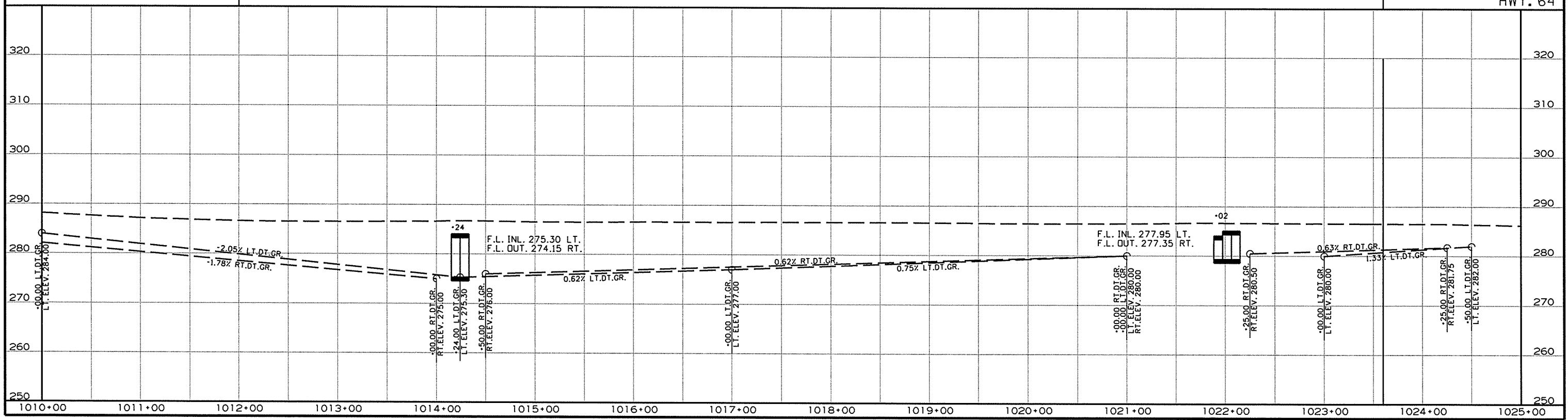


REFER TO SURVEY CONTROL
 DETAIL SHEETS FOR HORIZONTAL
 AND VERTICAL CONTROL DATA

NOTE: FOR THE CONSTRUCTION OF TEMPORARY
 WORK RAMPS OR HAUL ROADS, THIS STREAM
 IS CLASSIFIED AS A PERENNIAL STREAM.
 THE STREAMBANK ELEVATION IS 277.00 M.S.L.

NOTE: FOR THE CONSTRUCTION OF TEMPORARY
 WORK RAMPS OR HAUL ROADS, THIS STREAM
 IS CLASSIFIED AS A PERENNIAL STREAM.
 THE STREAMBANK ELEVATION IS 279.00 M.S.L.

STA. 1024+55 CONSTRUCT
 APPROACH ON RT. • 45 C.Y.



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				6	ARK.			
				JOB NO.	012155		113	311

2 PLAN SHEETS



STA. 1030+97 IN PLACE
18"X40' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X40' PIPE CULVERT
CONST. APPR. ON LT. = 55 C.Y.

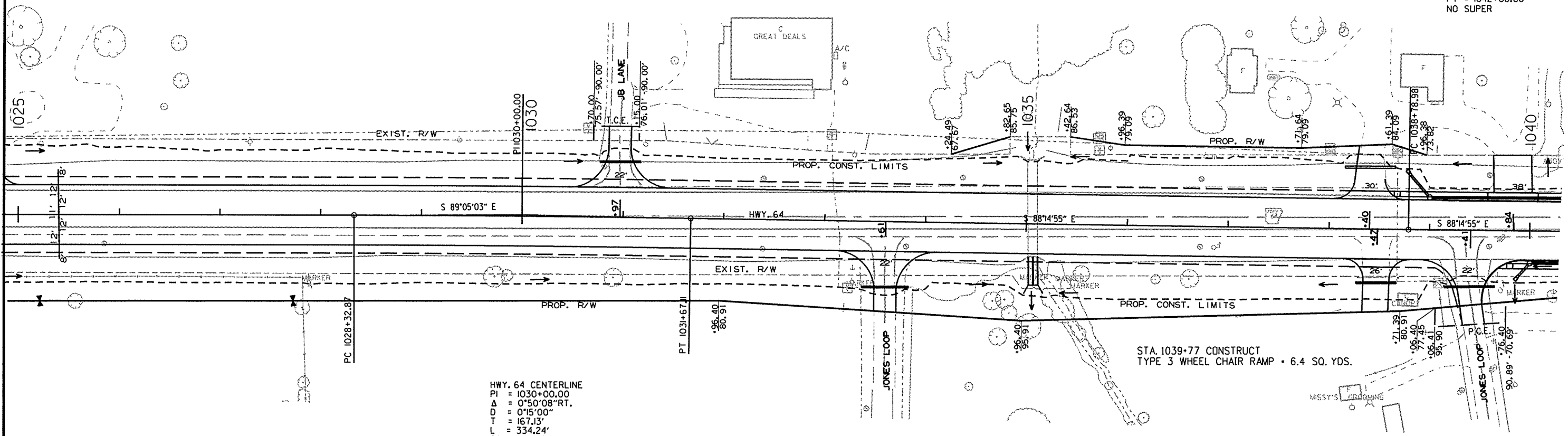
STA. 1038+40 IN PLACE
18"X47' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"X50' PIPE CULVERT
CONST. APPR. ON LT. = 100 C.Y.

STA. 1039+00 CONSTRUCT
DROP INLET ON LT. (H=4'10")
18"X23' ALT. PIPE OUTLET
W/ F.E.S. TO LT.
D.I. TYPE MO = 4' DIA.
D.I. TYPE C = 4'X3'

STA. 1039+84 IN PLACE
24"X47' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND CONSTRUCT
APPROACH ON LT. = 5 C.Y.

STA. 1038+85 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP = 4.9 SQ. YDS.

HWY. 64 CENTERLINE
PI = 1040+43.82
Δ = 0°49'27" L.
D = 0°15'00"
T = 164.84'
L = 329.68'
PC = 1038+78.98
PT = 1042+08.66
NO SUPER



HWY. 64 CENTERLINE
PI = 1030+00.00
Δ = 0°50'08" RT.
D = 0°15'00"
T = 167.13'
L = 334.24'
PC = 1028+32.87
PT = 1031+67.11
NO SUPER

NOTE: FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAMBANK ELEVATION IS 278.00 M.S.L.

STA. 1036+86 RT.
REMOVE AND DISPOSE OF
ADVANCE FLASHING BEACON

STA. 1039+32 IN PLACE
40' RT. SIDE DRAIN
RETAIN

STA. 1039+64 IN PLACE
24' RT. SIDE DRAIN
RETAIN

STA. 1033+61 IN PLACE
24"X40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24"X46' PIPE CULVERT
CONST. APPR. ON RT. = 80 C.Y.

STA. 1035+07 IN PLACE
DBL. 4'X3'X98' R.C. BOX CULVERT
RETAIN AND EXTEND 27' RT.
W/ 3:1 WINGS
D.A. = 84.70 AC., Q50 = 76.20 C.F.S.

STA. 1038+47 IN PLACE
18"X40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X40' PIPE CULVERT
CONST. APPR. ON RT. = 70 C.Y.

STA. 1039+41 IN PLACE
50' PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X50' PIPE CULVERT
CONST. APPR. ON RT. = 60 C.Y.

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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

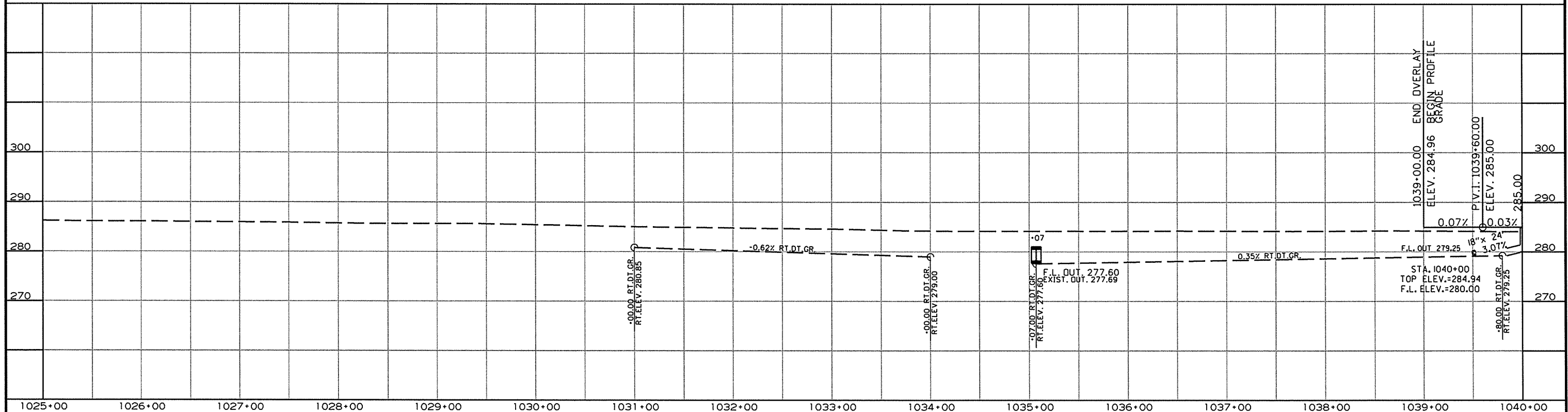
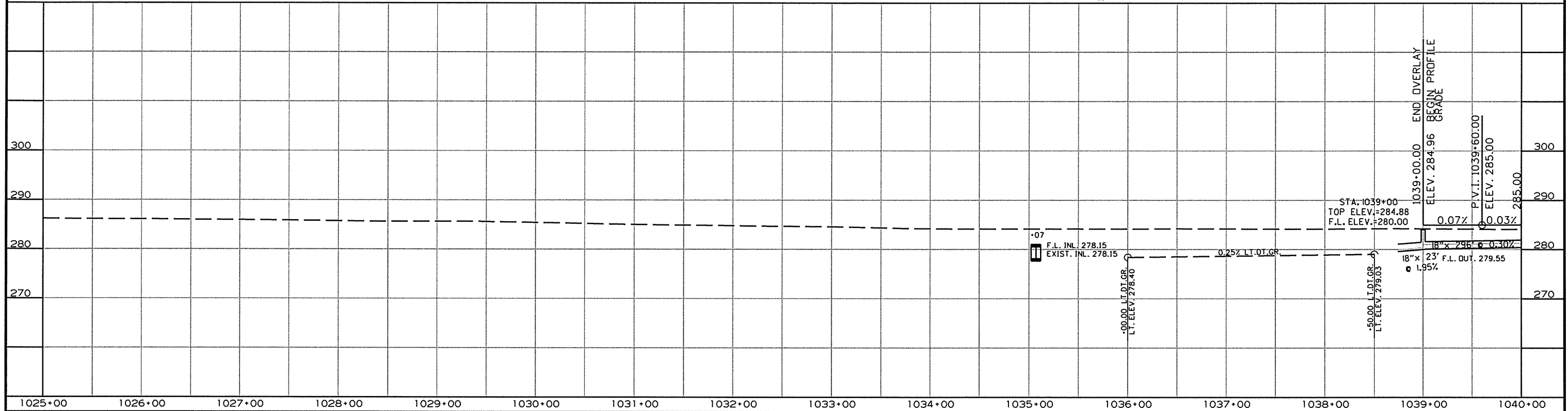
HWY. 64



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2 PROFILE SHEETS

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA



STA. 1040+71 IN PLACE
24"x40' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND CONSTRUCT
APPROACH ON LT. - 5 C.Y.

STA. 1041+65 IN PLACE
24"x40' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND CONSTRUCT
APPROACH ON LT. - 5 C.Y.

STA. 1042+00 CONSTRUCT
DROP INLET ON LT. (H-4'8")
18"x296' ALT. PIPE OUTLET
TO D.I. STA. 1039+00 LT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 1043+55 IN PLACE
24"x40' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND CONSTRUCT
APPROACH ON LT. - 35 C.Y.

STA. 1044+31 IN PLACE
24"x49' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND CONSTRUCT
APPROACH ON LT. - 25 C.Y.

STA. 1045+14 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.9 SQ. YDS.

STA. 1044+92 CONSTRUCT
DROP INLET ON LT. (H-6'9")
W/4' EXTENSION &
48"x59' R.C. PIPE OUTLET (CL. V)(TY. 3 BEDDING)
CONN. TO D.I. STA. 1044+92 RT.
18"x12' R.C. PIPE INLET W/F.E.S.
D.I. TYPE MD - 6' DIA.
D.I. TYPE C - 6'X3'

STA. 1046+80 CONSTRUCT
DROP INLET ON LT. (H-3'3")
W/ 8' EXTENSION &
18"x54' ALT. PIPE
TO D.I. STA. 103+90 RT. (HWY. 5)
18"x4' R.C. PIPE INLET W/F.E.S.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 1047+39 IN PLACE
18"x47' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
21"x15'X52' PIPE CULVERT
CONST. APPR. ON LT. - 15 C.Y.

STA. 1048+05 IN PLACE
18"x48' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
21"x15'X52' PIPE CULVERT
CONST. APPR. ON LT. - 20 C.Y.

STA. 1049+76 IN PLACE
18"x71' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. - 10 C.Y.

STA. 1050+50 CONSTRUCT
DROP INLET ON LT. (H-4'5")
W/ 4' EXTENSION &
18"x365' ALT. PIPE OUTLET
CONN. TO D.I. STA. 1046+80 LT.
18"x5' R.C. PIPE INLET W/ F.E.S.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

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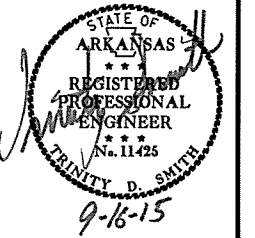
2 PLAN SHEETS

STA. 1051+73 IN PLACE
18"x24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. - 5 C.Y.

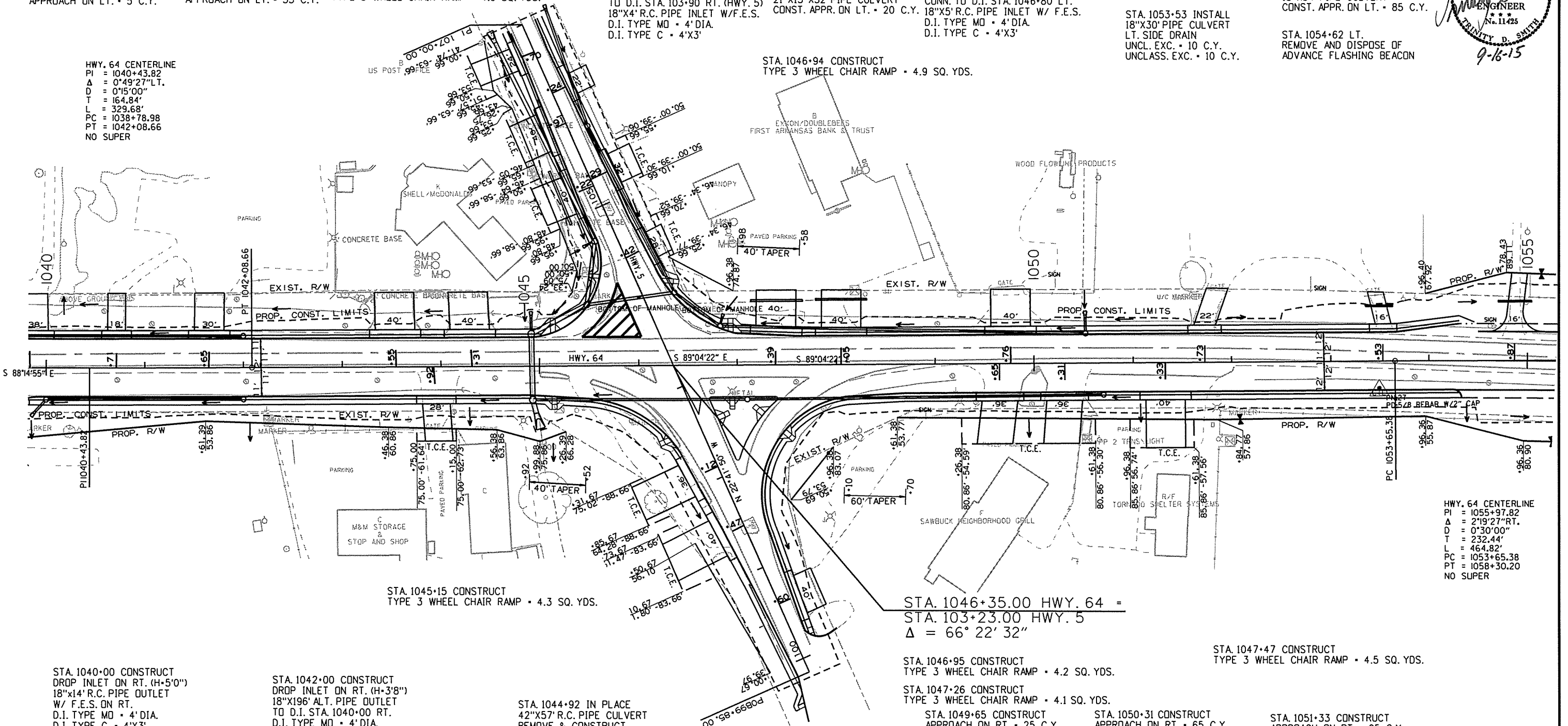
STA. 1053+53 INSTALL
18"x30' PIPE CULVERT
LT. SIDE DRAIN
UNCL. EXC. - 10 C.Y.
UNCL. EXC. - 10 C.Y.

STA. 1054+87 IN PLACE
18"x23' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x34' PIPE CULVERT
CONST. APPR. ON LT. - 85 C.Y.

STA. 1054+62 LT.
REMOVE AND DISPOSE OF
ADVANCE FLASHING BEACON



HWY. 64 CENTERLINE
PI = 1040+43.82
Δ = 0°49'27" LT.
D = 0'15'00"
T = 164.84'
L = 329.68'
PC = 1038+78.98
PT = 1042+08.66
NO SUPER



STA. 1045+15 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.3 SQ. YDS.

STA. 1046+35.00 HWY. 64 =
STA. 103+23.00 HWY. 5
Δ = 66° 22' 32"

STA. 1047+47 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.5 SQ. YDS.

STA. 1040+00 CONSTRUCT
DROP INLET ON RT. (H-5'0")
18"x14' R.C. PIPE OUTLET
W/ F.E.S. ON RT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 1042+00 CONSTRUCT
DROP INLET ON RT. (H-3'8")
18"x196' ALT. PIPE OUTLET
TO D.I. STA. 1040+00 RT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 1043+92 IN PLACE
18"x48' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. - 70 C.Y.

STA. 1044+92 IN PLACE
42"x57' R.C. PIPE CULVERT
REMOVE & CONSTRUCT
DROP INLET ON RT. (7'1")
W/4' EXTENSION &
48"x12' R.C. PIPE OUTLET
WITH F.E.S. TO RT.
D.A. = 51.00AC., Q50 - 69.80 C.F.S.
D.I. TYPE MD - 6' DIA.
D.I. TYPE C - 6'X3'

STA. 1047+10 CONSTRUCT
DROP INLET ON RT. (H-5'6")
W/ 8' EXTENSION &
18"x212' ALT. PIPE
CONN. TO D.I. STA. 1044+92 RT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 1046+95 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.2 SQ. YDS.

STA. 1047+26 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.1 SQ. YDS.

STA. 1049+65 CONSTRUCT
APPROACH ON RT. - 25 C.Y.

STA. 1050+31 CONSTRUCT
APPROACH ON RT. - 65 C.Y.

STA. 1051+33 CONSTRUCT
APPROACH ON RT. - 95 C.Y.

STA. 1050+70 CONSTRUCT
DROP INLET ON RT. (H-3'6")
W/ 4' EXTENSION &
18"x356' ALT. PIPE OUTLET
CONN. TO D.I. STA. 1047+10 RT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

UNLESS OTHERWISE NOTED, ALL CONCRETE
PIPE CULVERTS ARE TO BE CLASS III WITH A
TYPE 3 BEDDING. ALL METAL PIPES ARE TO
HAVE A TYPE 2 BEDDING.

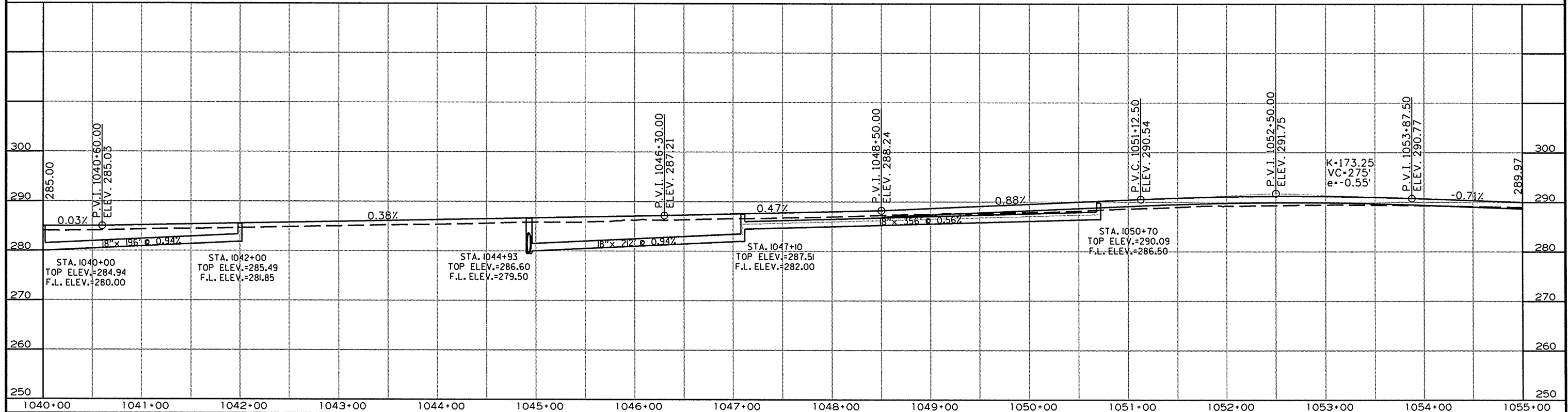
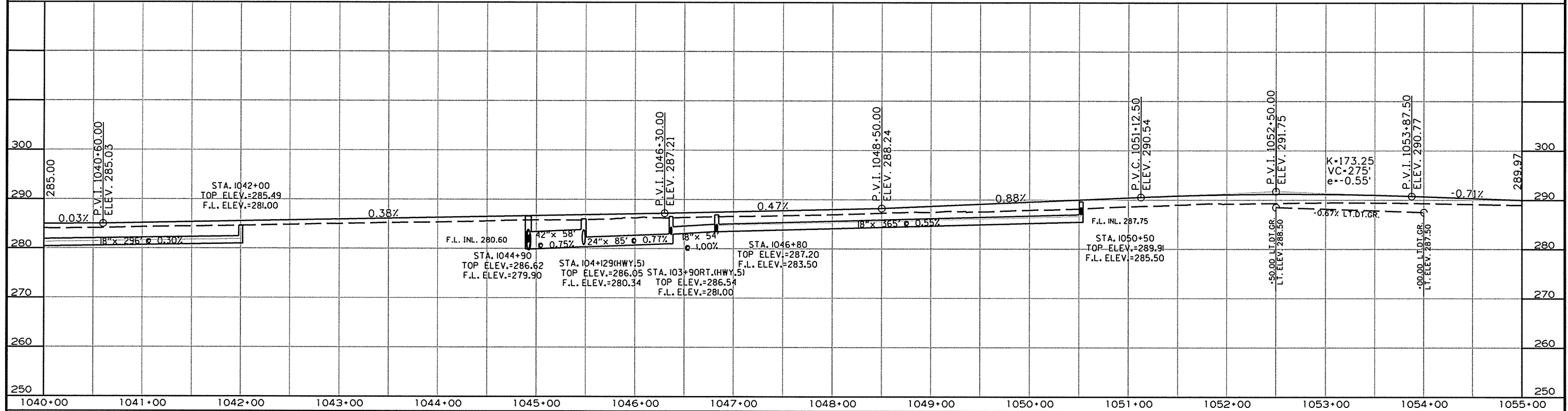
REFER TO SURVEY CONTROL DETAIL SHEETS FOR
HORIZONTAL AND VERTICAL CONTROL DATA

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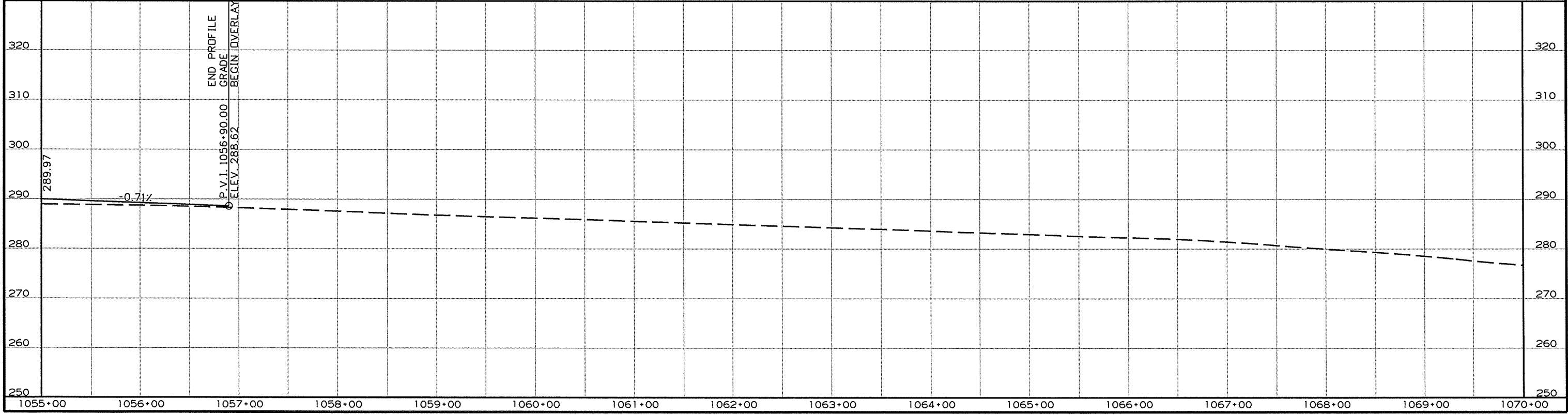
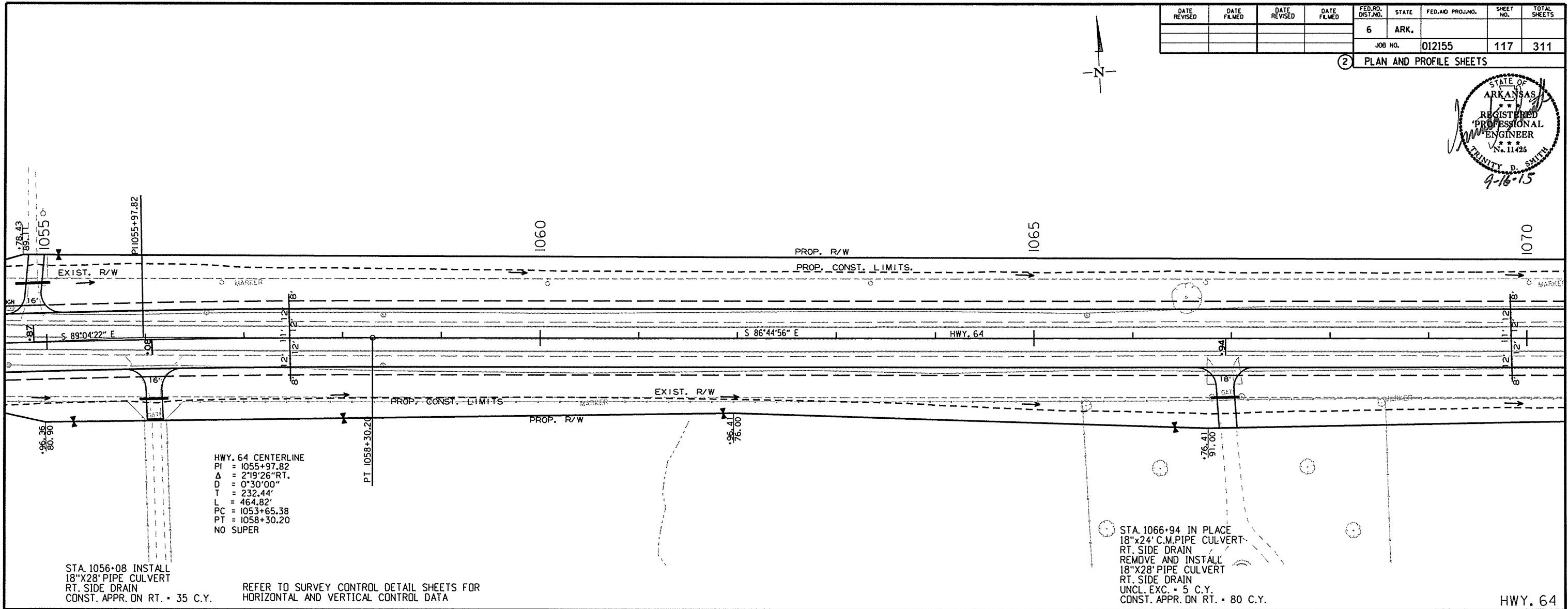
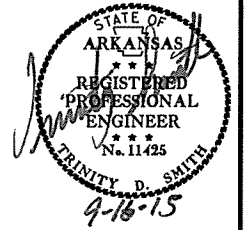
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2 PROFILE SHEETS



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JOB NO. 012155							117	311

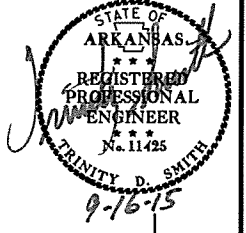
2 PLAN AND PROFILE SHEETS



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	012155		118	311

2 PLAN AND PROFILE SHEETS



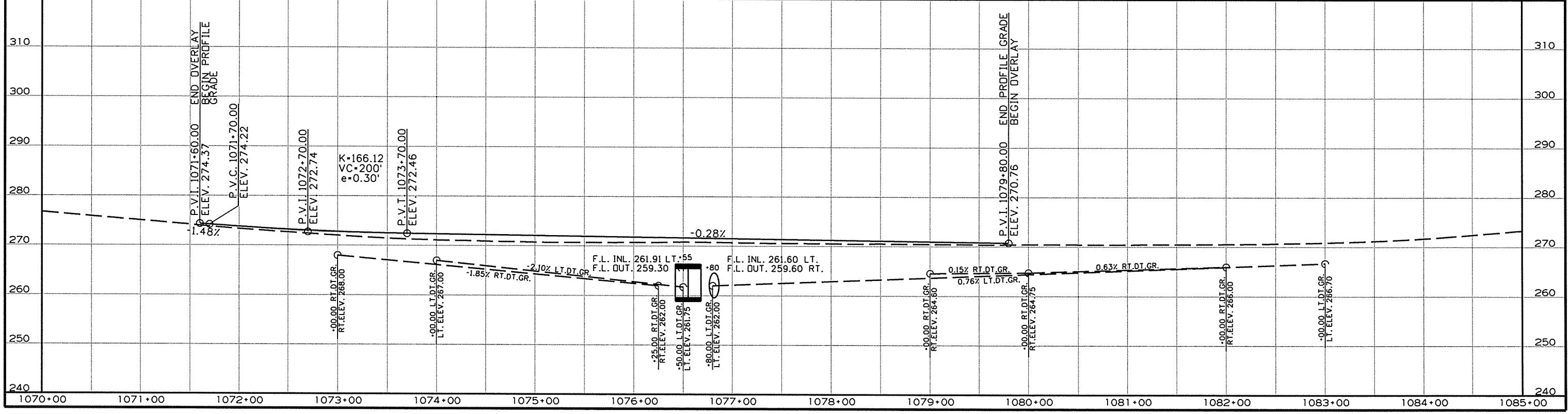
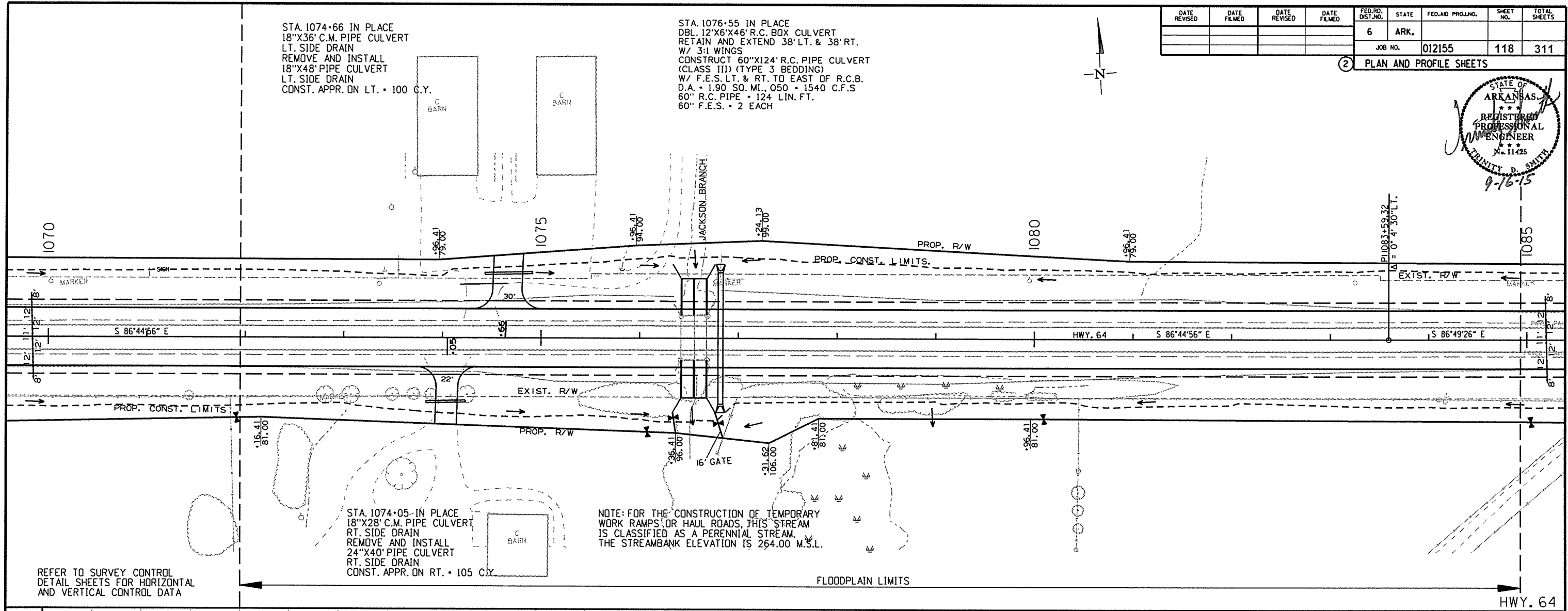
STA. 1074+66 IN PLACE
18"X36" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X48" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 100 C.Y.

STA. 1076+55 IN PLACE
DBL. 12"X6"X46" R.C. BOX CULVERT
RETAIN AND EXTEND 38' LT. & 38' RT.
W/ 3:1 WINGS
CONSTRUCT 60"X124" R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
W/ F.E.S. LT. & RT. TO EAST OF R.C.B.
D.A. - 1.90 SQ. MI., Q50 - 1540 C.F.S
60" R.C. PIPE - 124 LIN. FT.
60" F.E.S. - 2 EACH

STA. 1074+05 IN PLACE
18"X28" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24"X40" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. - 105 C.Y.

NOTE: FOR THE CONSTRUCTION OF TEMPORARY
WORK RAMPS OR HAUL ROADS, THIS STREAM
IS CLASSIFIED AS A PERENNIAL STREAM.
THE STREAMBANK ELEVATION IS 264.00 M.S.L.

REFER TO SURVEY CONTROL
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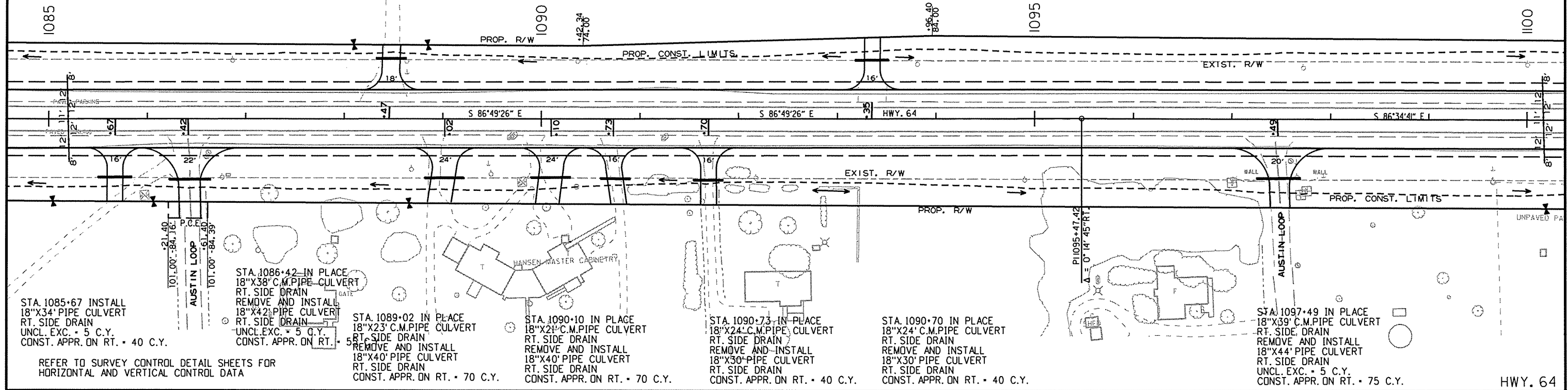
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2 PLAN AND PROFILE SHEETS



STA. 1088+47 IN PLACE
18"X48" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X30" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. • 45 C.Y.

STA. 1093+35 INSTALL
18"X34" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. • 50 C.Y.



STA. 1085+67 INSTALL
18"X34" PIPE CULVERT
RT. SIDE DRAIN
UNCL. EXC. • 5 C.Y.
CONST. APPR. ON RT. • 40 C.Y.

STA. 1086+42 IN PLACE
18"X38" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X42" PIPE CULVERT
RT. SIDE DRAIN
UNCL. EXC. • 5 C.Y.
CONST. APPR. ON RT. • 5

STA. 1089+02 IN PLACE
18"X23" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X40" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. • 70 C.Y.

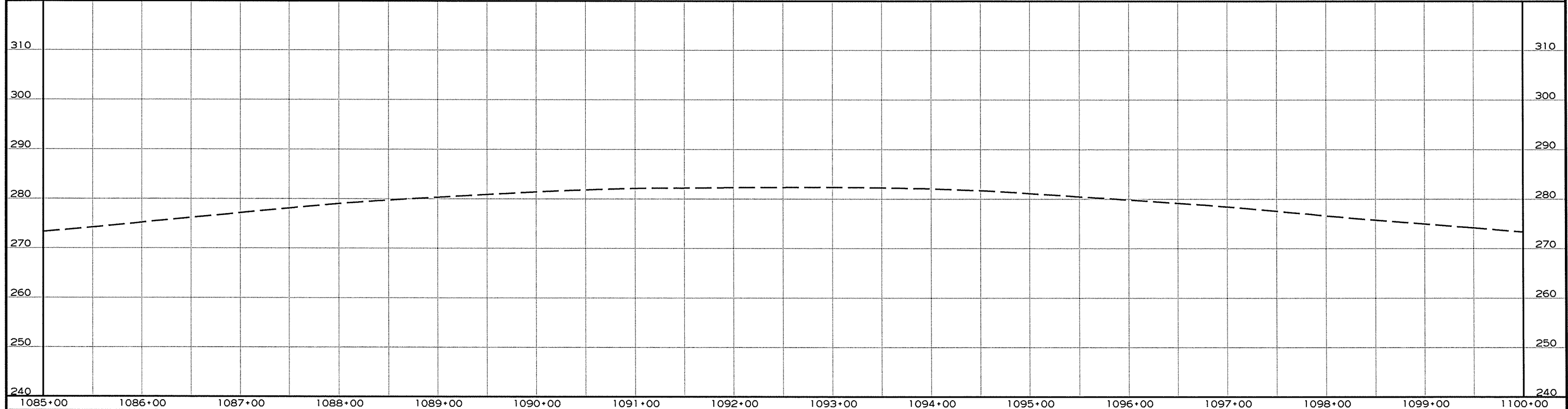
STA. 1090+10 IN PLACE
18"X21" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X40" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. • 70 C.Y.

STA. 1090+73 IN PLACE
18"X24" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X30" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. • 40 C.Y.

STA. 1090+70 IN PLACE
18"X24" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X30" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. • 40 C.Y.

STA. 1097+49 IN PLACE
18"X39" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X44" PIPE CULVERT
RT. SIDE DRAIN
UNCL. EXC. • 5 C.Y.
CONST. APPR. ON RT. • 75 C.Y.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR
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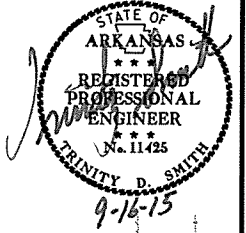


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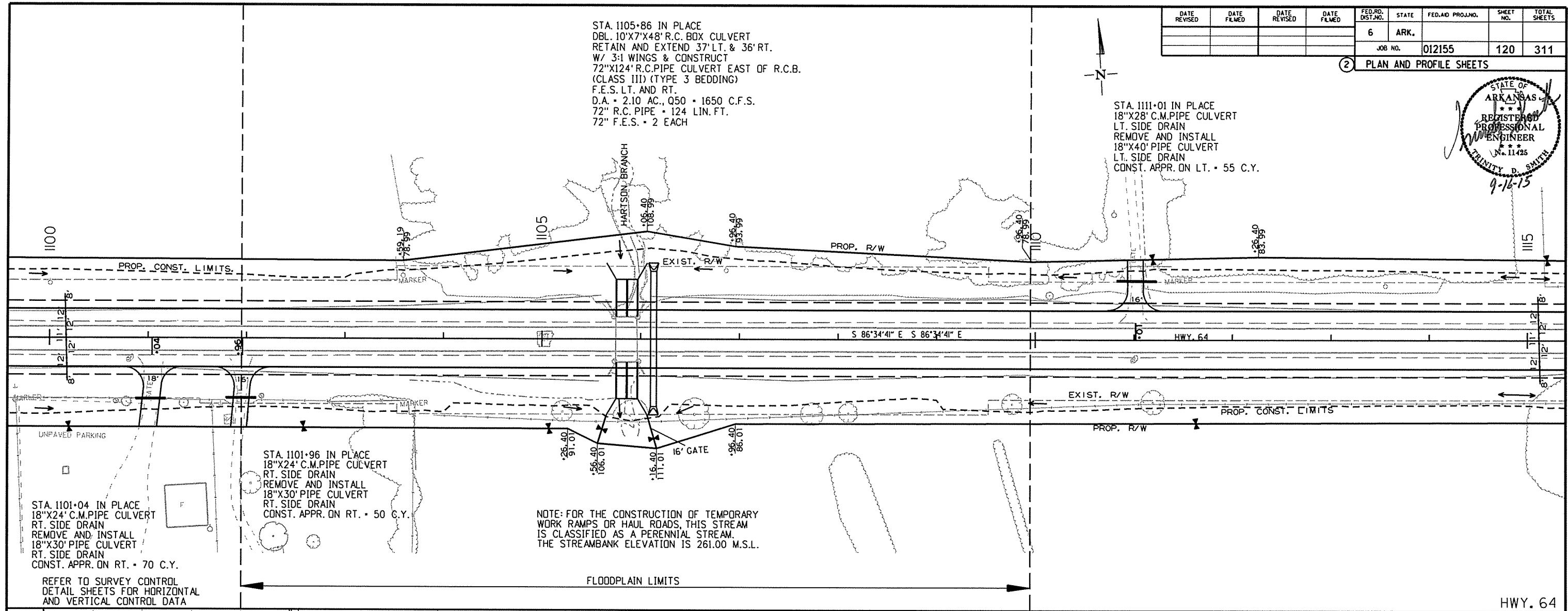
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				6	ARK.			
JOB NO. 012155							120	311

2 PLAN AND PROFILE SHEETS

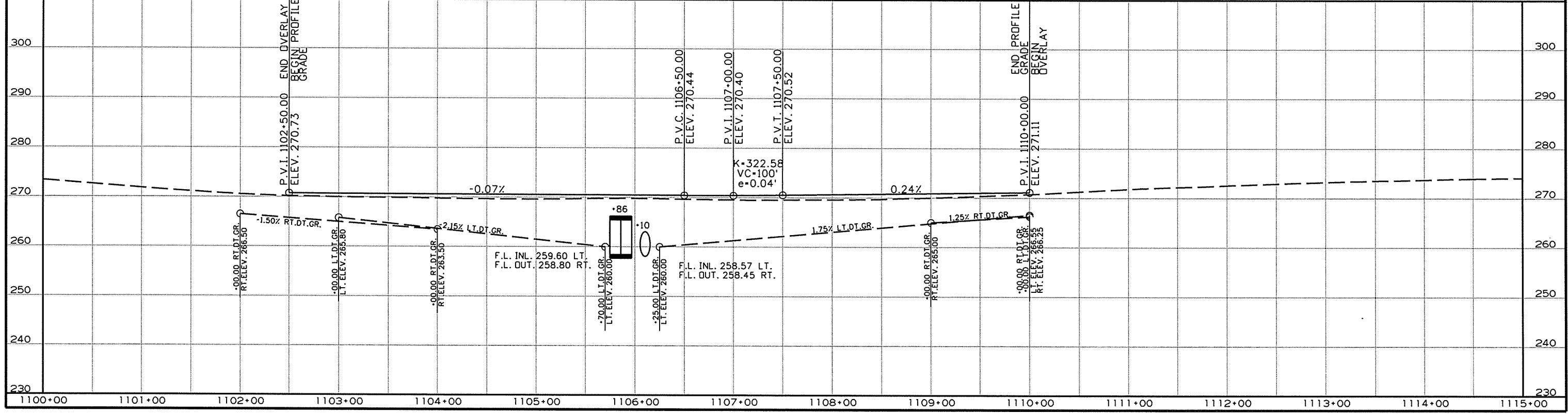


STA. 1105+86 IN PLACE
 DBL. 10'X7'X48' R.C. BOX CULVERT
 RETAIN AND EXTEND 37' LT. & 36' RT.
 W/ 3:1 WINGS & CONSTRUCT
 72"X124' R.C. PIPE CULVERT EAST OF R.C.B.
 (CLASS III) (TYPE 3 BEDDING)
 F.E.S. LT. AND RT.
 D.A. = 2.10 AC., Q50 = 1650 C.F.S.
 72" R.C. PIPE = 124 LIN. FT.
 72" F.E.S. = 2 EACH

STA. 1111+01 IN PLACE
 18"X28' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"X40' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. = 55 C.Y.



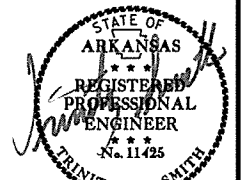
NOTE: FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAMBANK ELEVATION IS 261.00 M.S.L.



R012155.DGN 9/4/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							121	311

2 PLAN AND PROFILE SHEETS

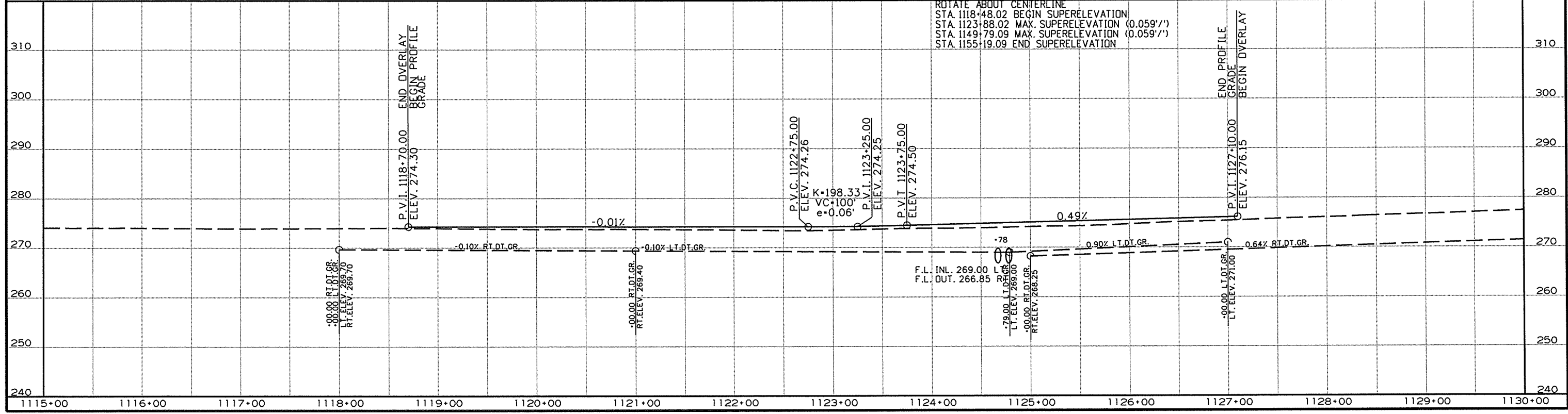
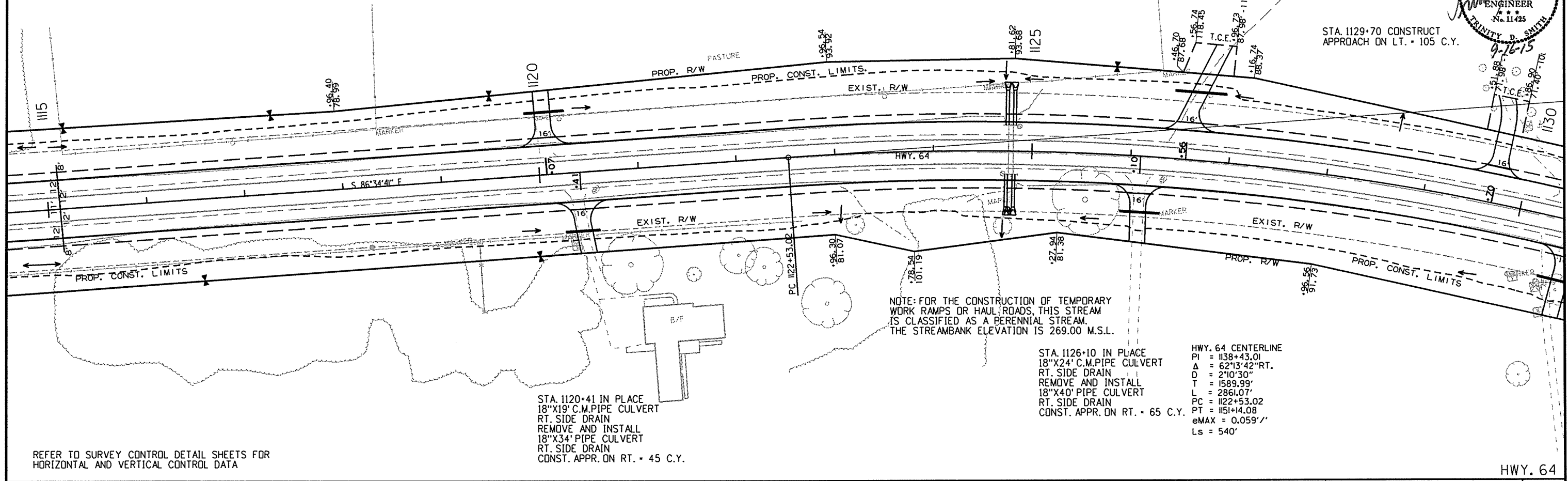


STA. 1120+07 IN PLACE
18"x24" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x40" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 95 C.Y.

STA. 1124+78 IN PLACE
DBL. 36"x50" R.C. PIPE CULVERT
RETAIN AND EXTEND 36' LT. & 34' RT.
(CLASS III) (TYPE 3 BEDDING)
W/ F.E.S. LT. & RT.
D.A. = 97.00 AC., Q50 = 119.00 C.F.S.
36" R.C. PIPE = 148 LIN. FT.
36" F.E.S. = 4 EACH

STA. 1126+56 INSTALL
18"x52" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 250 C.Y.

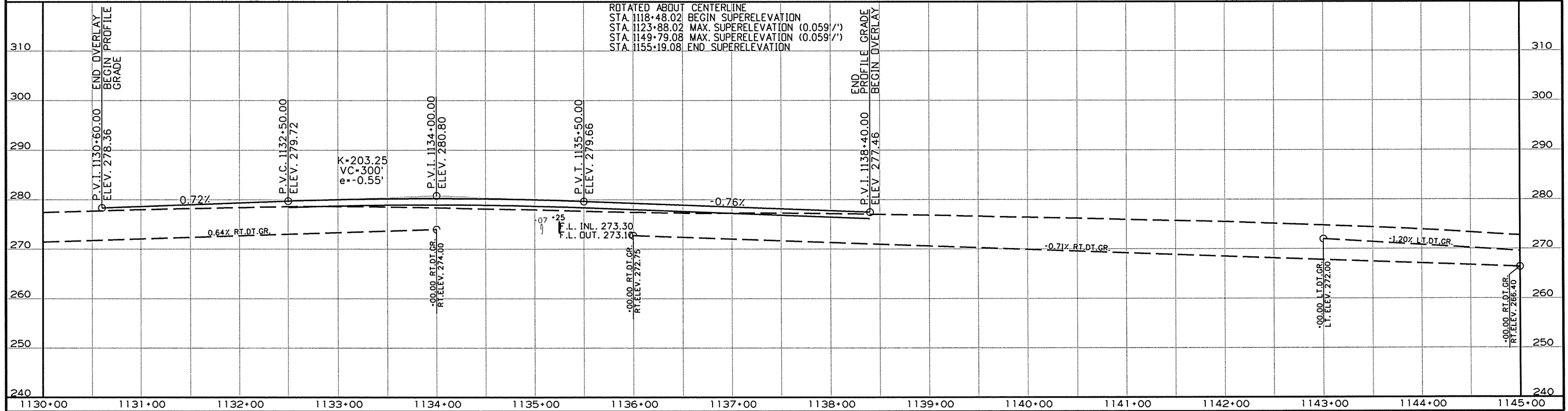
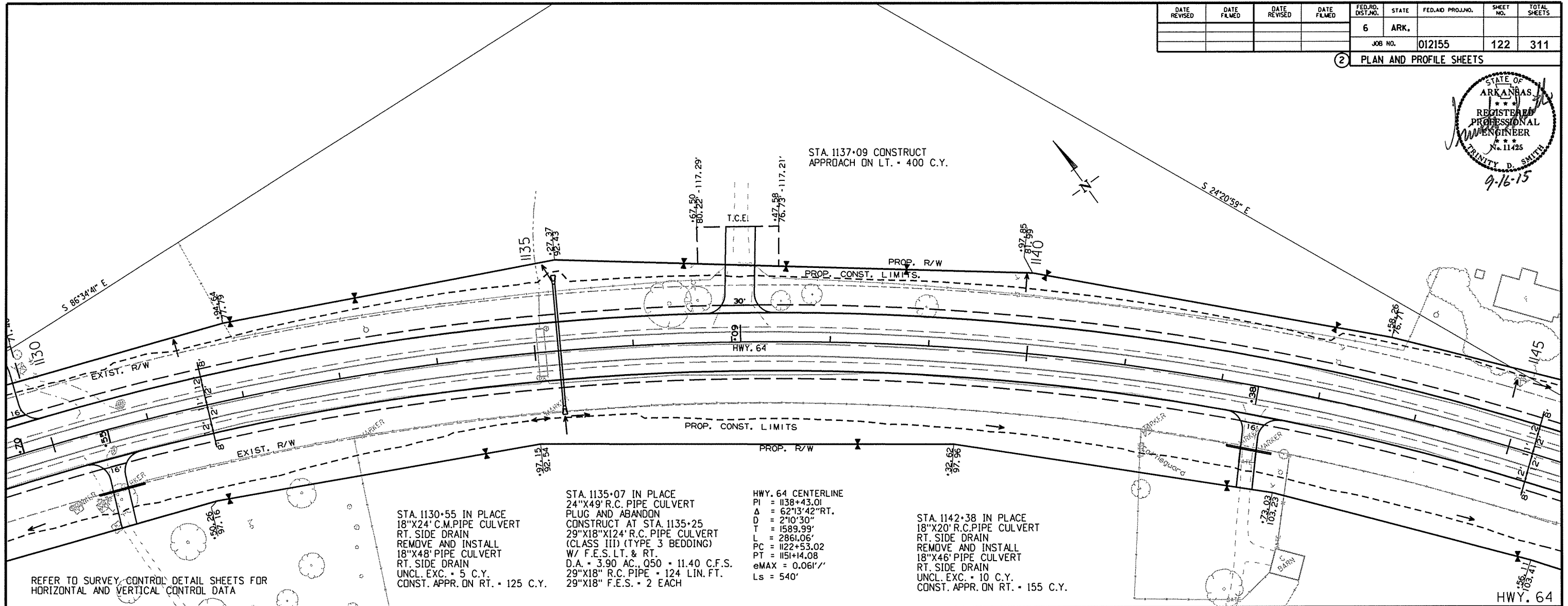
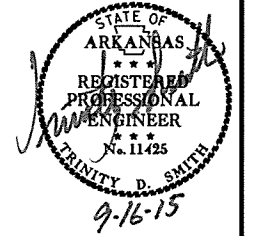
STA. 1129+70 CONSTRUCT
APPROACH ON LT. = 105 C.Y.



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				6	ARK.			
						JOB NO. 012155	122	311

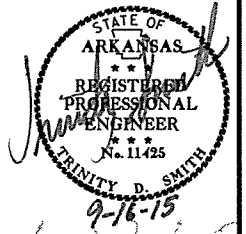
2 PLAN AND PROFILE SHEETS



R012155.DGN 9/4/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		123	311

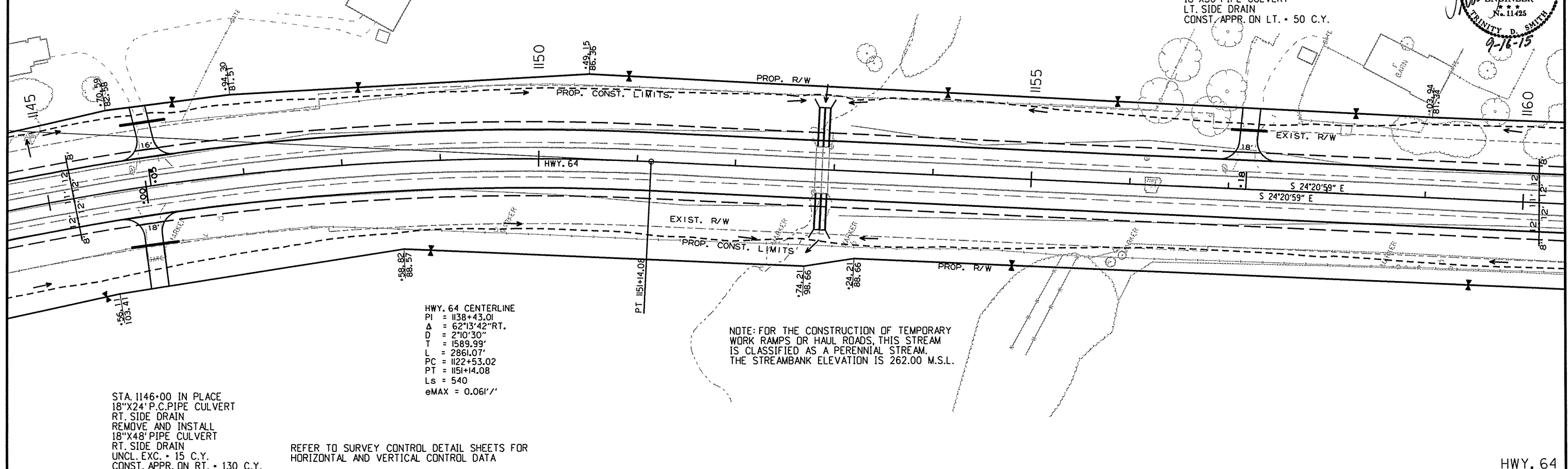
2 PLAN AND PROFILE SHEETS



STA. 1146+05 IN PLACE
18"X31" P.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X46" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 100 C.Y.

STA. 1152+88 IN PLACE
DBL. 5'X3'X47" R.C. BOX CULVERT
RETAIN AND EXTEND 41' LT. & 38' RT
W/ 3:1 WINGS
D.A. = 214 AC., Q50 = 208 C.F.S.

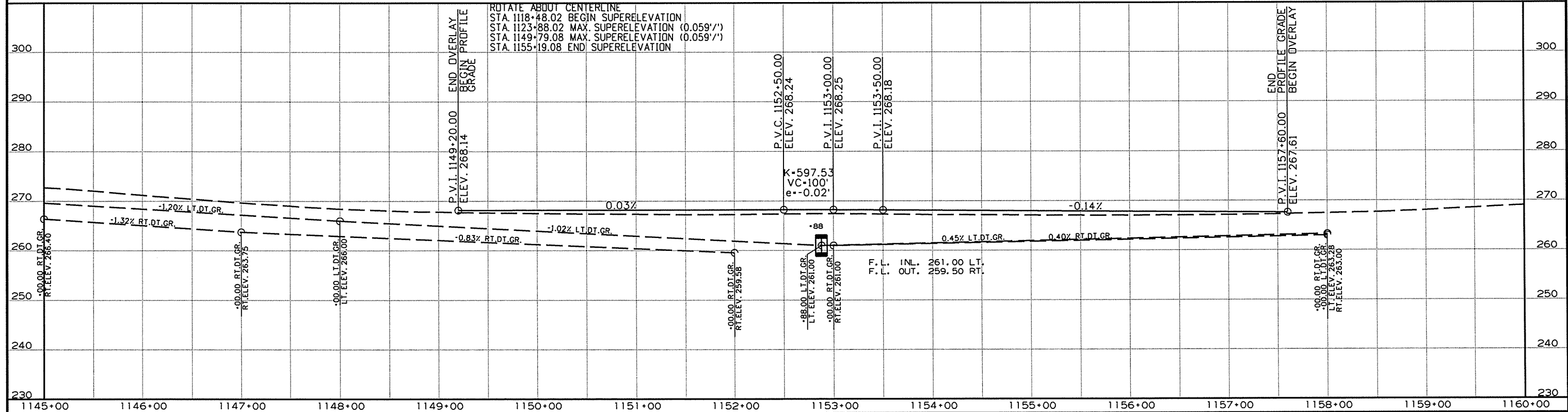
STA. 1157+18 IN PLACE
18"X20" R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X36" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 50 C.Y.



STA. 1146+00 IN PLACE
18"X24" P.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"X48" PIPE CULVERT
RT. SIDE DRAIN
UNCL. EXC. = 15 C.Y.
CONST. APPR. ON RT. = 130 C.Y.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

HWY. 64

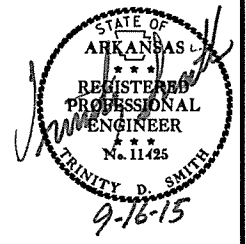


9/4/2015

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				6	ARK.		124	311

2 PLAN AND PROFILE SHEETS



STA. 1161+71 IN PLACE
18"X24' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X46' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 70 C.Y.

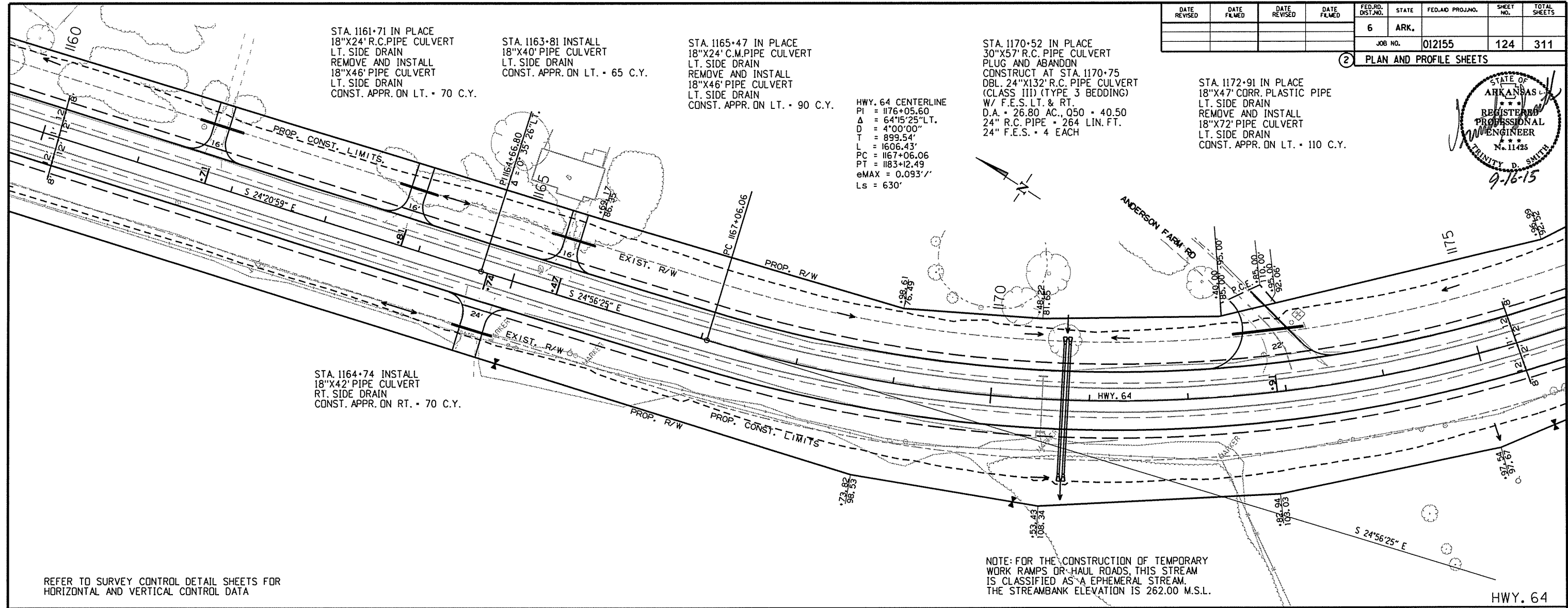
STA. 1163+81 INSTALL
18"X40' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 65 C.Y.

STA. 1165+47 IN PLACE
18"X24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X46' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 90 C.Y.

STA. 1170+52 IN PLACE
30"X57' R.C. PIPE CULVERT
PLUG AND ABANDON
CONSTRUCT AT STA. 1170+75
DBL. 24"X132' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
W/ F.E.S. LT. & RT.
D.A. - 26.80 AC. Q50 - 40.50
24" R.C. PIPE - 264 LIN. FT.
24" F.E.S. - 4 EACH

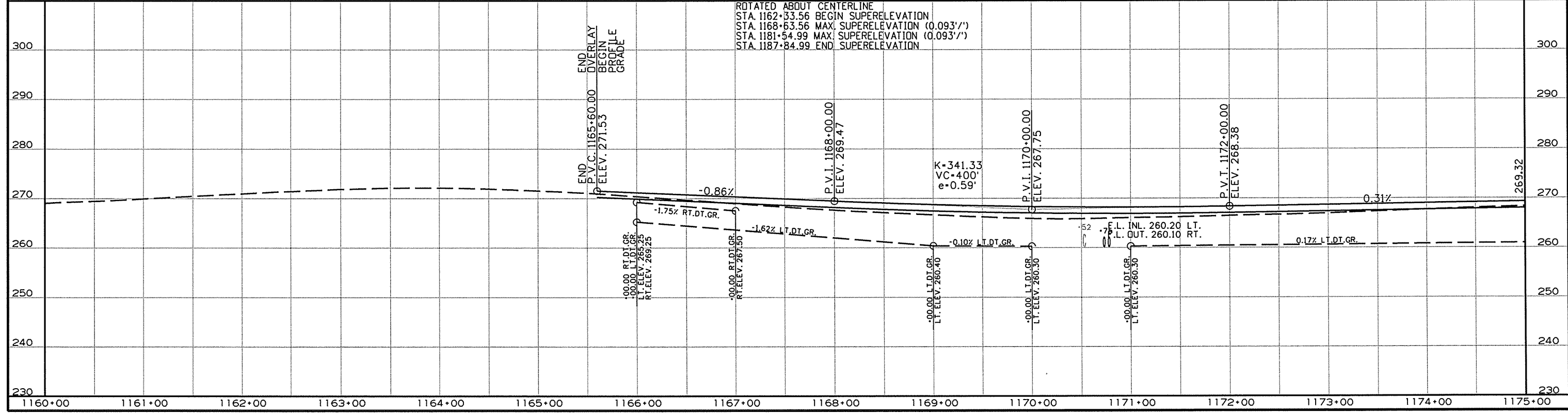
STA. 1172+91 IN PLACE
18"X47' CORR. PLASTIC PIPE
LT. SIDE DRAIN
REMOVE AND INSTALL
18"X72' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. - 110 C.Y.

HWY. 64 CENTERLINE
PI = 1176+05.60
Δ = 64°15'25" LT.
D = 4°00'00"
T = 899.54'
L = 1606.43'
PC = 1167+06.06
PT = 1183+12.49
eMAX = 0.093'/'
Ls = 630'



NOTE: FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS AN EPHEMERAL STREAM. THE STREAMBANK ELEVATION IS 262.00 M.S.L.

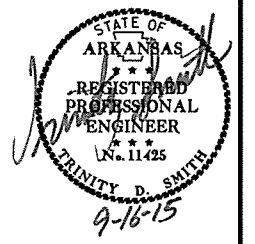
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA



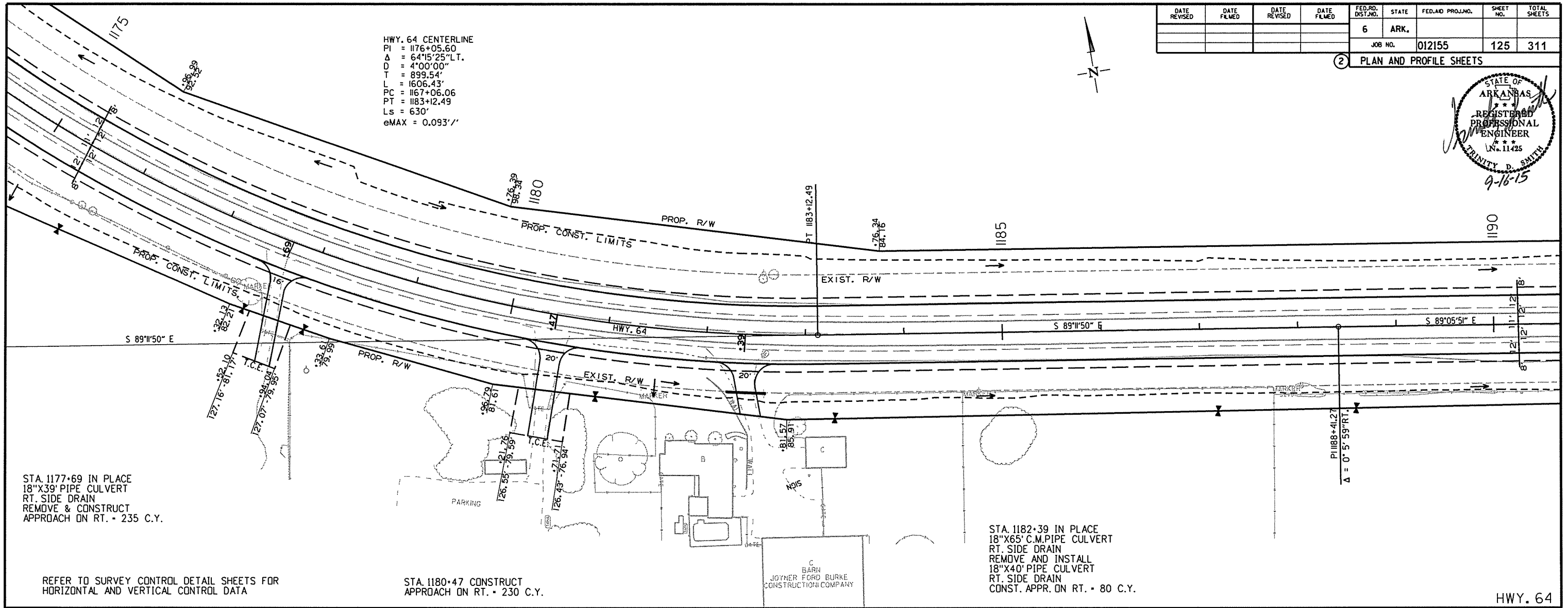
9/4/2015
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		125	311

2 PLAN AND PROFILE SHEETS



HWY. 64 CENTERLINE
 PI = 1176+05.60
 A = 64°15'25" LT.
 D = 4°00'00"
 T = 899.54'
 L = 1606.43'
 PC = 1167+06.06
 PT = 1183+12.49
 Ls = 630'
 eMAX = 0.093'/'



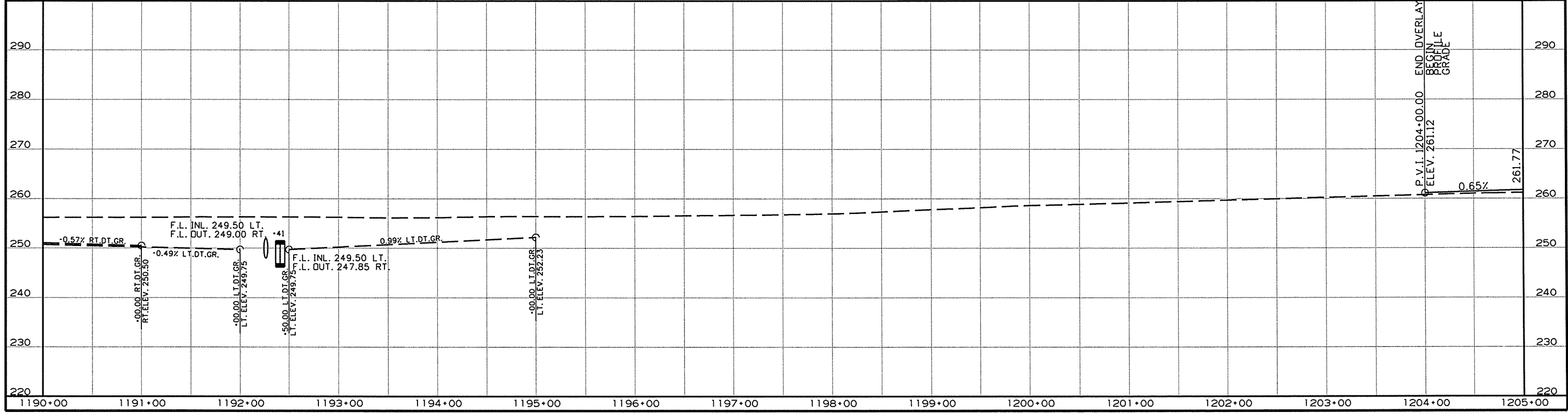
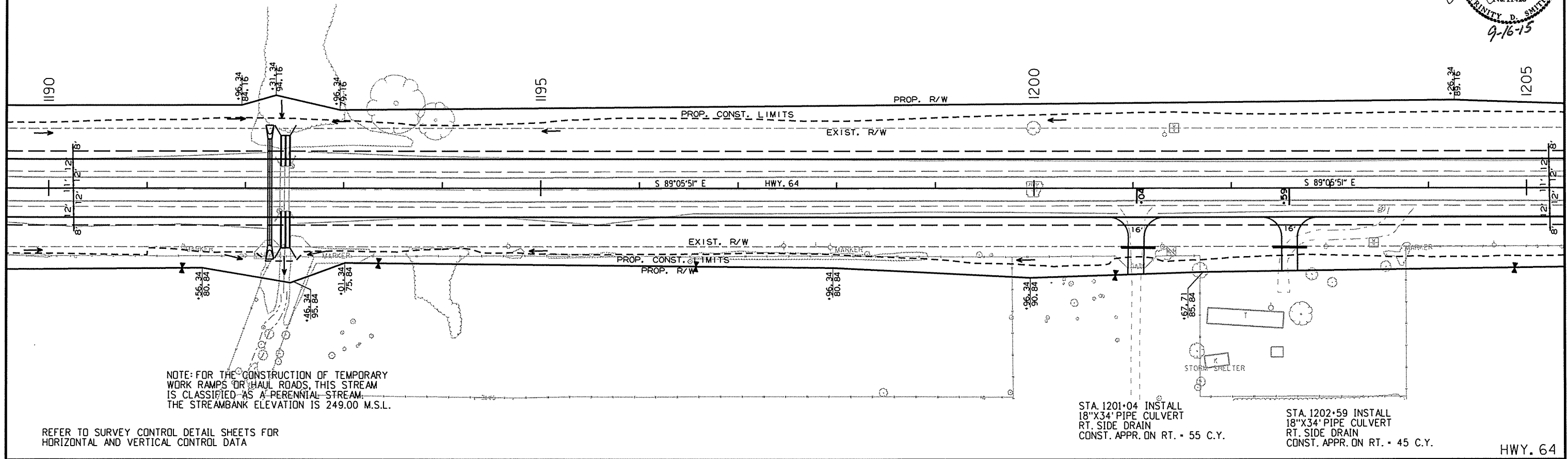
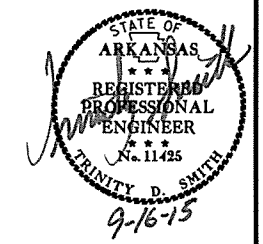
9/4/2015

R012155.DGN

STA. 1192+41 IN PLACE
 DBL. 4'X4'X47' R.C.BOX CULVERT
 RETAIN AND EXTEND 38' LT. & 36' RT.
 W/ 3:1 SLOPE AND CONSTRUCT
 48"X116' R.C. PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 W/ F.E.S. LT. & RT.
 WEST OF R.C.B.
 D.A. = 255.00 AC., Q50 = 321.00 C.F.S.
 48" R.C. PIPE = 116 LIN. FT.
 48" F.E.S. = 2 EACH

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				6	ARK.			
				JOB NO.	012155		126	311

2 PLAN AND PROFILE SHEETS



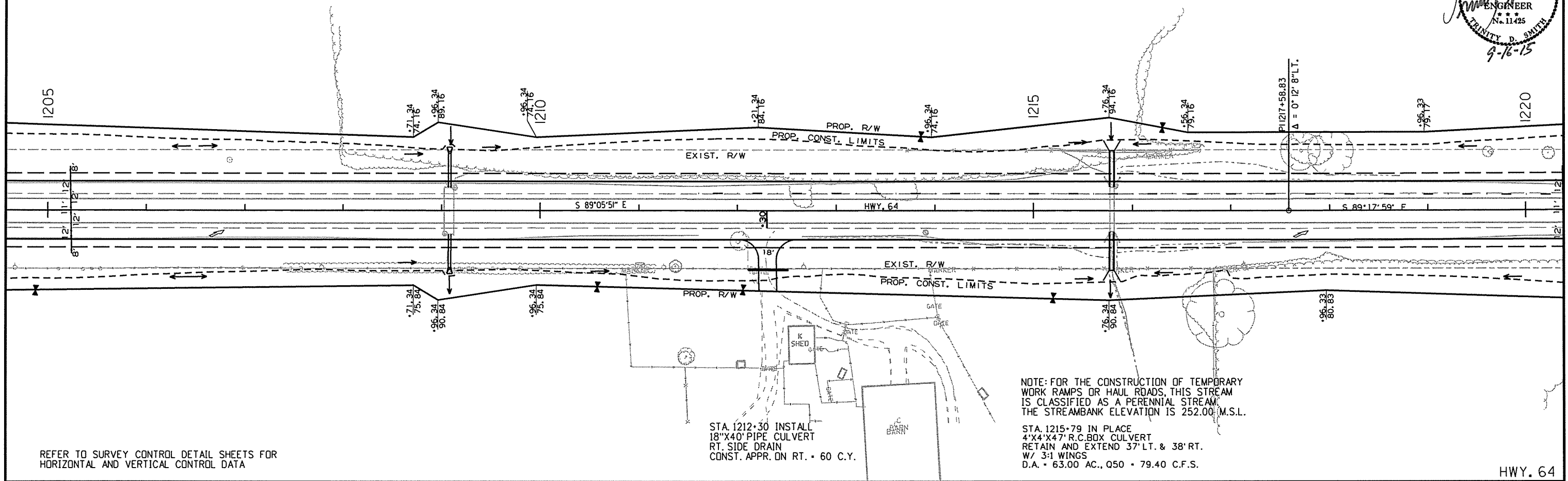
R012155.DGN 9/4/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		127	311

2 PLAN AND PROFILE SHEETS



STA 1209+08 IN PLACE
 30"X48" R.C. PIPE CULVERT
 RETAIN AND EXTEND 34' LT. & 32' RT.
 (CLASS III) (TYPE 3 BEDDING)
 W/ F.E.S. LT. & RT.
 D.A. = 30.80 AC., Q50 = 29.90
 30" R.C. PIPE = 74 LIN. FT.
 30" F.E.S. = 2 EACH



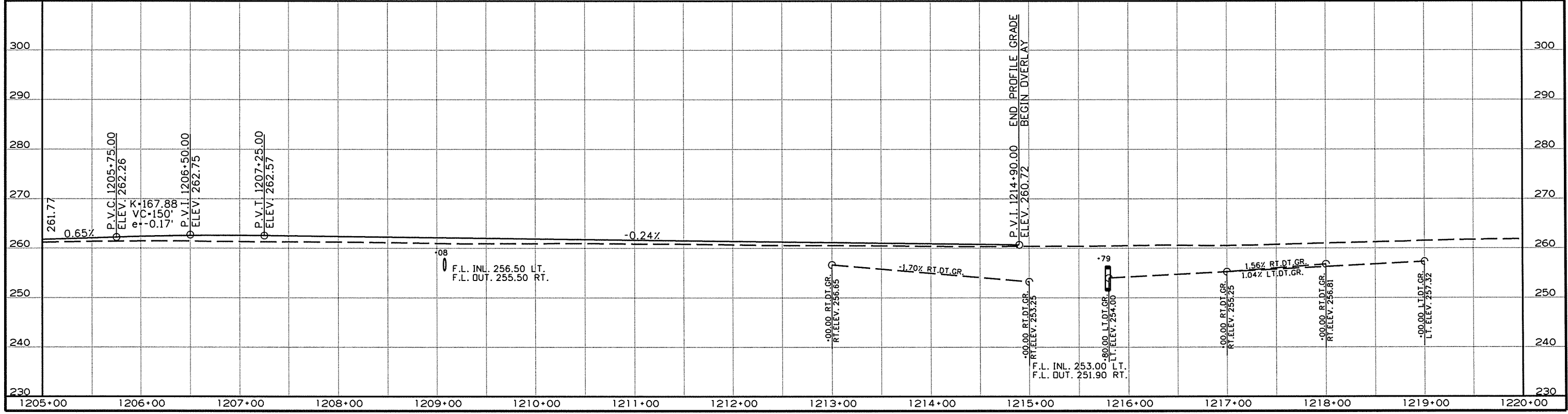
NOTE: FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAMBANK ELEVATION IS 252.00 M.S.L.

STA 1212+30 INSTALL
 18"X40" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. DN RT. = 60 C.Y.

STA 1215+79 IN PLACE
 4'X4'X47' R.C. BOX CULVERT
 RETAIN AND EXTEND 37' LT. & 38' RT.
 W/ 3:1 WINGS
 D.A. = 63.00 AC., Q50 = 79.40 C.F.S.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

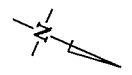
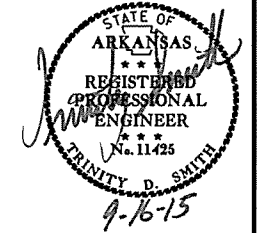
HWY. 64



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2 PLAN SHEETS



STA. 99+57 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 3.1 SQ. YDS.
STA. 102+56 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 3.8 SQ. YDS.

STA. 102+12 CONSTRUCT
APPROACH ON LT. - 85 C.Y.

STA. 101+47 CONSTRUCT
APPROACH ON LT. - 105 C.Y.

STA. 104+12 CONSTRUCT
DROP INLET ON LT. (H-5'9")
W/ 4' EXTENSION
42"X58" ALT. PIPE OUTLET
TO D.I. STA. 1044+92 LT.
D.I. TYPE MD - 5' DIA.
D.I. TYPE C - 5'X4'

STA. 104+70 CONSTRUCT
DROP INLET ON LT. (H-5'2")
36"X228' R.C. PIPE INLET TO LT.
WITH F.E.S.
36"X61' ALT. PIPE OUTLET
TO D.I. STA. 104+12 LT.
18"X5' R.C. PIPE INLET W/F.E.S.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 105+22 INSTALL
18"X58' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. - 45 C.Y.

STA. 105+91 CONSTRUCT
APPROACH ON LT. - 20 C.Y.

STA. 106+70 CONSTRUCT
APPROACH ON LT. - 20 C.Y.

STA. 104+34 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 3.0 SQ. YDS.

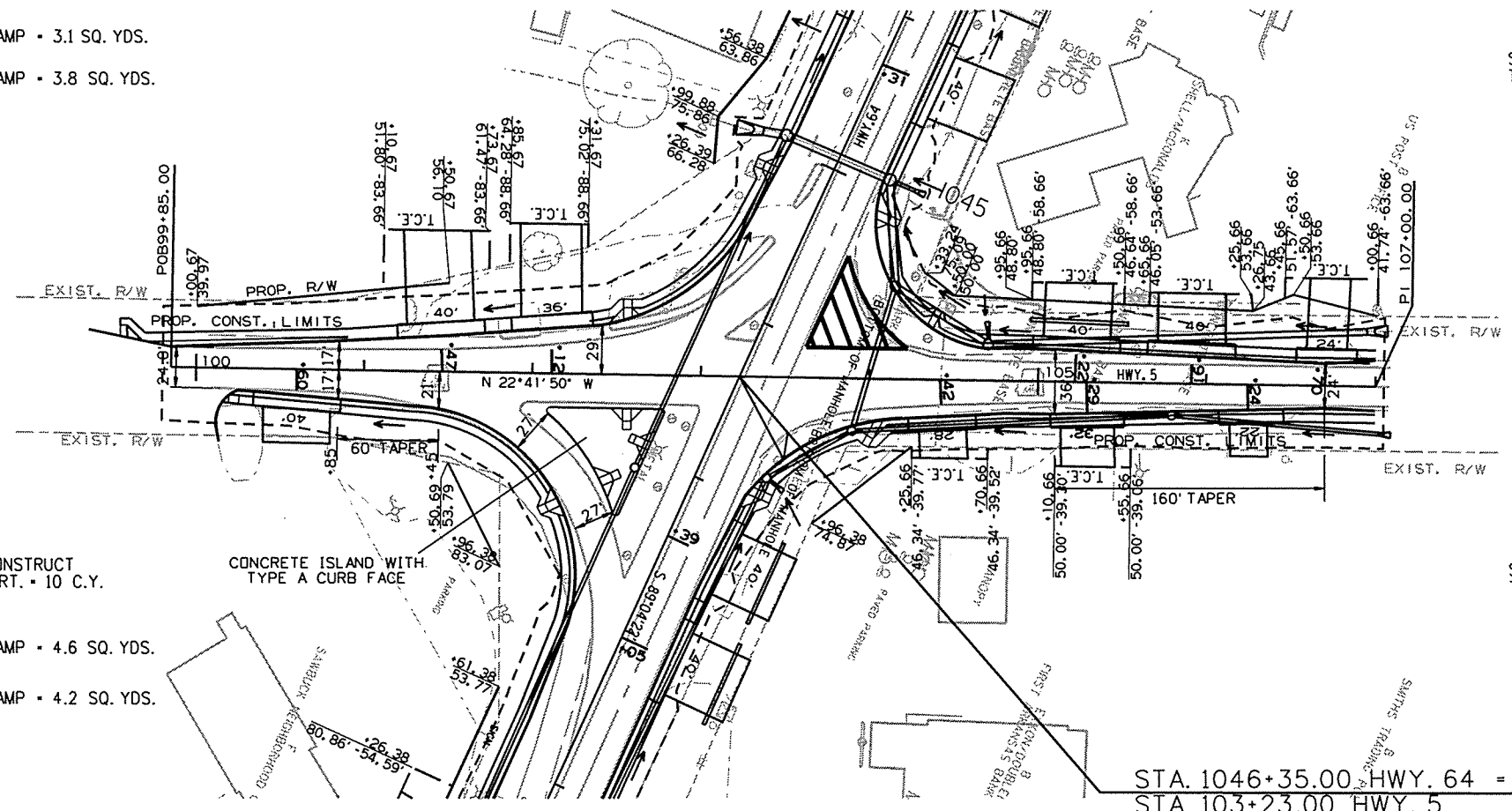
STA. 100+60 CONSTRUCT
APPROACH ON RT. - 10 C.Y.

STA. 100+18 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.6 SQ. YDS.

STA. 102+56 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.2 SQ. YDS.

CONCRETE ISLAND WITH
TYPE A CURB FACE

STA. 104+01 CONSTRUCT
TYPE 3 WHEEL CHAIR RAMP - 4.7 SQ. YDS.



STA. 1046+35.00 HWY. 64 =
STA. 103+23.00 HWY. 5
 $\Delta = 66^\circ 22' 32''$

STA. 103+90 CONSTRUCT
DROP INLET ON RT. (H-5'5")
24"X85' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
TO D.I. STA. 104+12 LT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 104+42 CONSTRUCT
APPROACH ON RT. - 15 C.Y.

STA. 105+29 CONSTRUCT
APPROACH ON RT. - 20 C.Y.

STA. 105+80 CONSTRUCT
DROP INLET ON RT. (H-3'11")
18"X125' R.C. PIPE INLET TO RT. W/F.E.S.
18"X5' R.C. PIPE STUB-IN W/F.E.S.
18"X186' ALT. PIPE OUTLET
TO D.I. STA. 103+90 RT.
D.I. TYPE MD - 4' DIA.
D.I. TYPE C - 4'X3'

STA. 106+24 CONSTRUCT
APPROACH ON RT. - 30 C.Y.

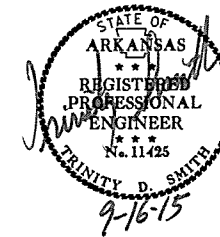
UNLESS OTHERWISE NOTED, ALL CONCRETE
PIPE CULVERTS ARE TO BE CLASS III WITH A
TYPE 3 BEDDING. ALL METAL PIPES ARE TO
HAVE A TYPE 2 BEDDING.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR
HORIZONTAL AND VERTICAL CONTROL DATA

HWY. 5

9/4/2015

RO12155.DGN

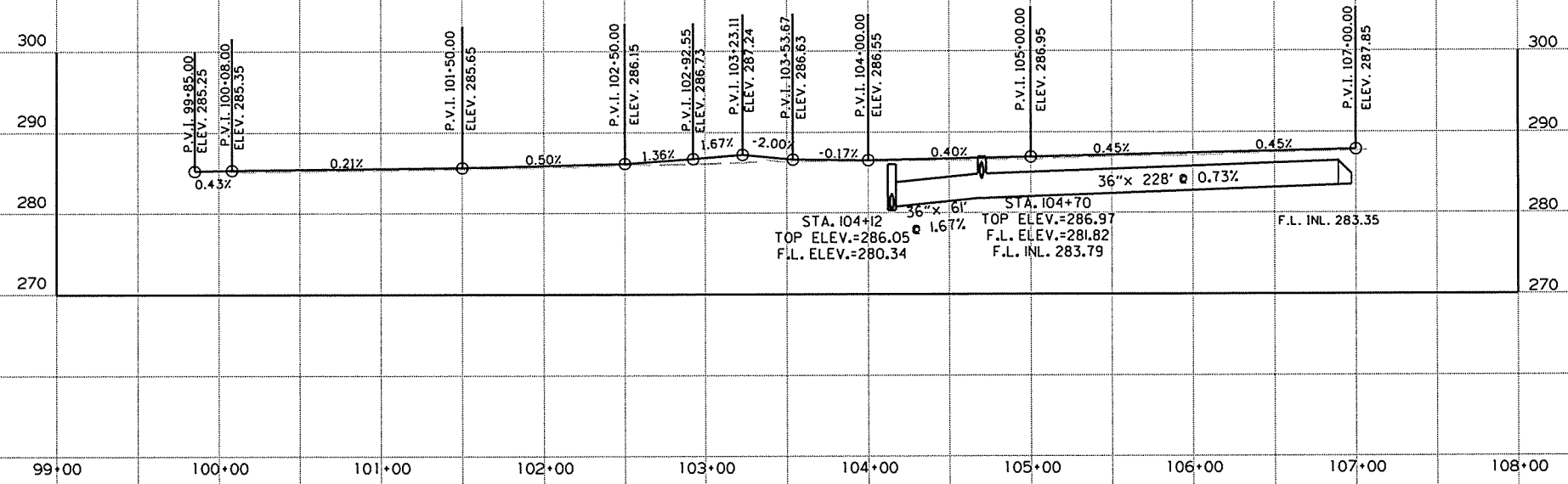


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				6	ARK.			
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2 PLAN AND PROFILE SHEETS

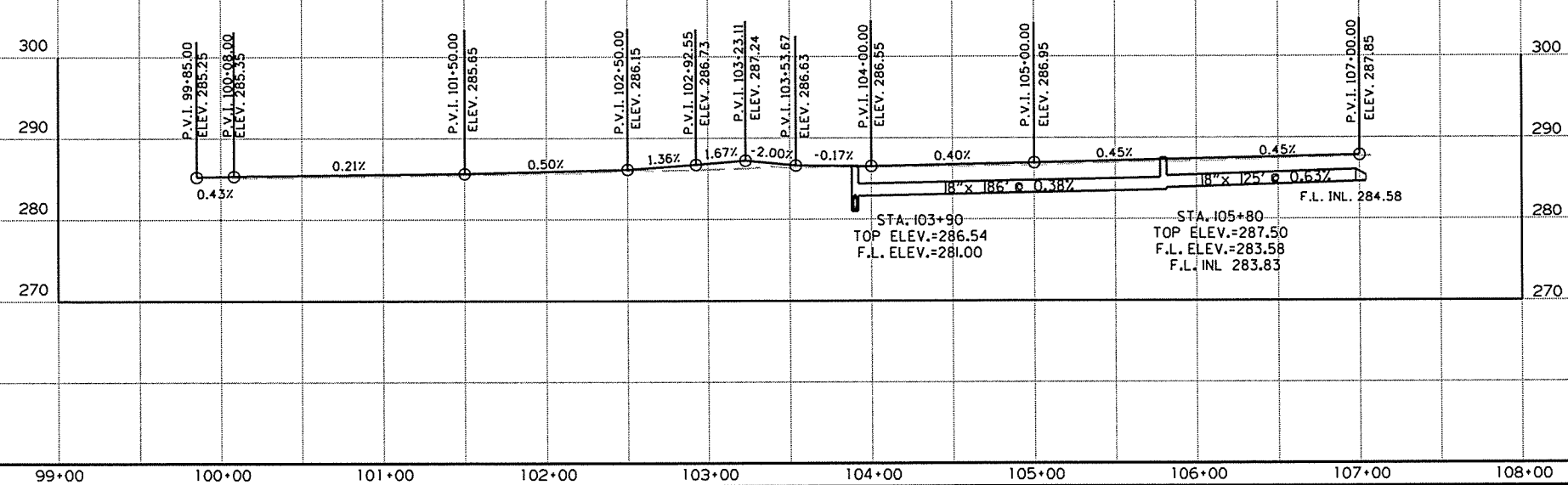
HWY. 5 - LT. MAIN LANES

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

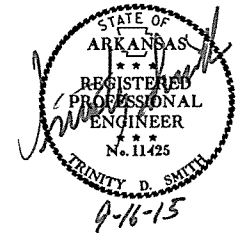
HWY. 5 - RT. MAIN LANES



9/15/2015
R012155.DCN

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						JOB NO. 012155	131	311

2 SUMMARY OF TRAFFIC SIGNAL QUANTITIES



SUMMARY OF TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
703	FLASHING BEACON CONTROLLER	1	EACH
704	VEHICLE DETECTOR-RACK MOUNT	10	EACH
704	FEEDER WIRE	3886	LIN. FT.
SP&706	TRAFFIC SIGNAL HEAD, LED, (1 SECTION, 1WAY)	8	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	12	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	4	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2848	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	268	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	763	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	150	LIN. FT.
710	NON-METALLIC CONDUIT (1")	1510	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	811	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
711	CONCRETE PULL BOX (TYPE 1HD)	11	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	7	EACH
711	CONCRETE PULL BOX (TYPE 2)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	2	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
716	TREATED WOOD POLE (CLASS 2, 40')	2	EACH
• SP&733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	1043	LIN. FT.
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
733	VIDEO MONITOR (CLR)	1	EACH
• SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP&733	VEHICLE DETECTOR RACK (20 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1265	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	740	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	488	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	40	LIN. FT.
SP	LOOP WIRING CLASS III (1C/16 A.W.G.)	1336	LIN. FT.
SP	LUMINAIRE ASSEMBLY	6	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	2	EACH

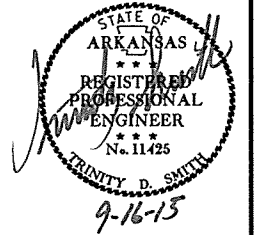
• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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TRAFFIC SIGNAL NOTES:

② TRAFFIC SIGNAL NOTES



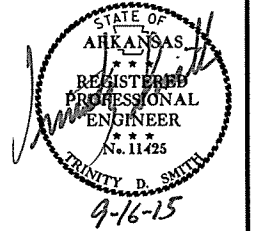
1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2002) NATIONAL ELECTRICAL CODE, NFPA 101(2000) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (EGC) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND EGC TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE COUNTY TO A SERVICE POLE WITH EXTERNAL RAIN-TIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. THE SERVICE POINT SHALL NOT BE MORE THAN 10 FEET FROM THE CONTROLLER. THE CONTRACTOR SHALL PROVIDE AND INSTALL A TWO CIRCUIT BREAKER ELECTRICAL SERVICE WIRE (2c/*6 USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/*12 AWG UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET SHALL HAVE 16 LOAD BAYS AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARDS AND DETAILS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN ON TRAFFIC SIGNAL PLAN SHEETS ARE FOR REFERENCE ONLY. SEE PAVEMENT MARKING PLAN SHEETS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON SPECIAL DETAILS). PAYMENT WILL BE INCLUDED IN SECTION 714, AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
12. ALL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, 38 FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF 21' SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL 6 FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
17. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS 6 FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
18. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
19. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714-TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION.
20. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO ISMA STANDARDS.
21. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
22. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
23. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	012155	133 311

② TEMPORARY FLASHING BEACON QUANTITIES



STAGE 1 TEMPORARY FLASHING BEACON QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
703	FLASHING BEACON CONTROLLER	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (1 SECTION, 1 WAY)	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	406	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 2, 40')	2	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	296	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	288	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	LUMINAIRE ASSEMBLY	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

STAGE 1
THE EXISTING FLASHING BEACON INSTALLATION AND THE EXISTING ADVANCE FLASHING BEACONS SHALL REMAIN IN OPERATION UNTIL THE ENTIRE STAGE 1 TEMPORARY FLASHING BEACON INSTALLATION CAN BE PLACED INTO OPERATION. MAINTAIN THIS TEMPORARY FLASHING BEACON CONFIGURATION AS SHOWN ON THE STAGE 1 TEMPORARY FLASHING BEACON PLAN. (REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 2 TEMPORARY FLASHING BEACON QUANTITIES

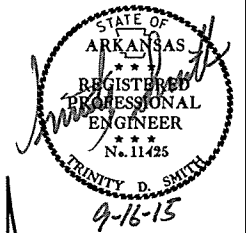
ITEM NO.	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH

STAGE 2
RELOCATE TRAFFIC SIGNAL HEADS AS SHOWN ON THE STAGE 2 TEMPORARY FLASHING BEACON PLAN. MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TEMPORARY FLASHING BEACON PLAN. (REFER TO MAINTENANCE OF TRAFFIC DETAILS).

LOCATION: HWY. 64/HWY. 5
CITY:
COUNTY: WHITE
DISTRICT: 5 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						012155	134	311

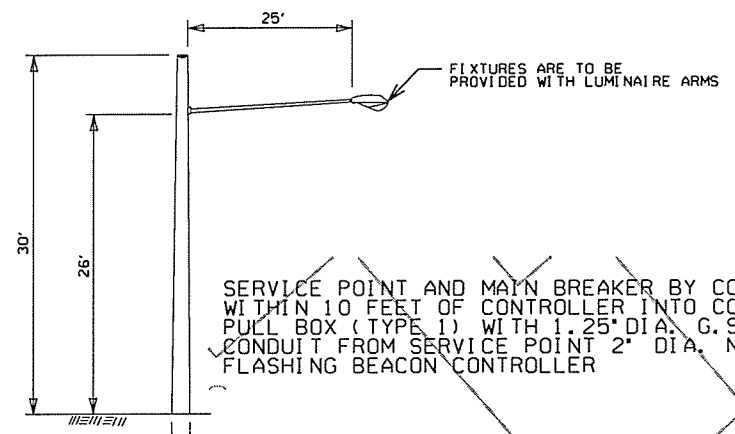
② TEMPORARY FLASHING BEACON PLAN SHEET



STAGE 1 FLASHING BEACON PLAN

NOTE TO CONTRACTOR:

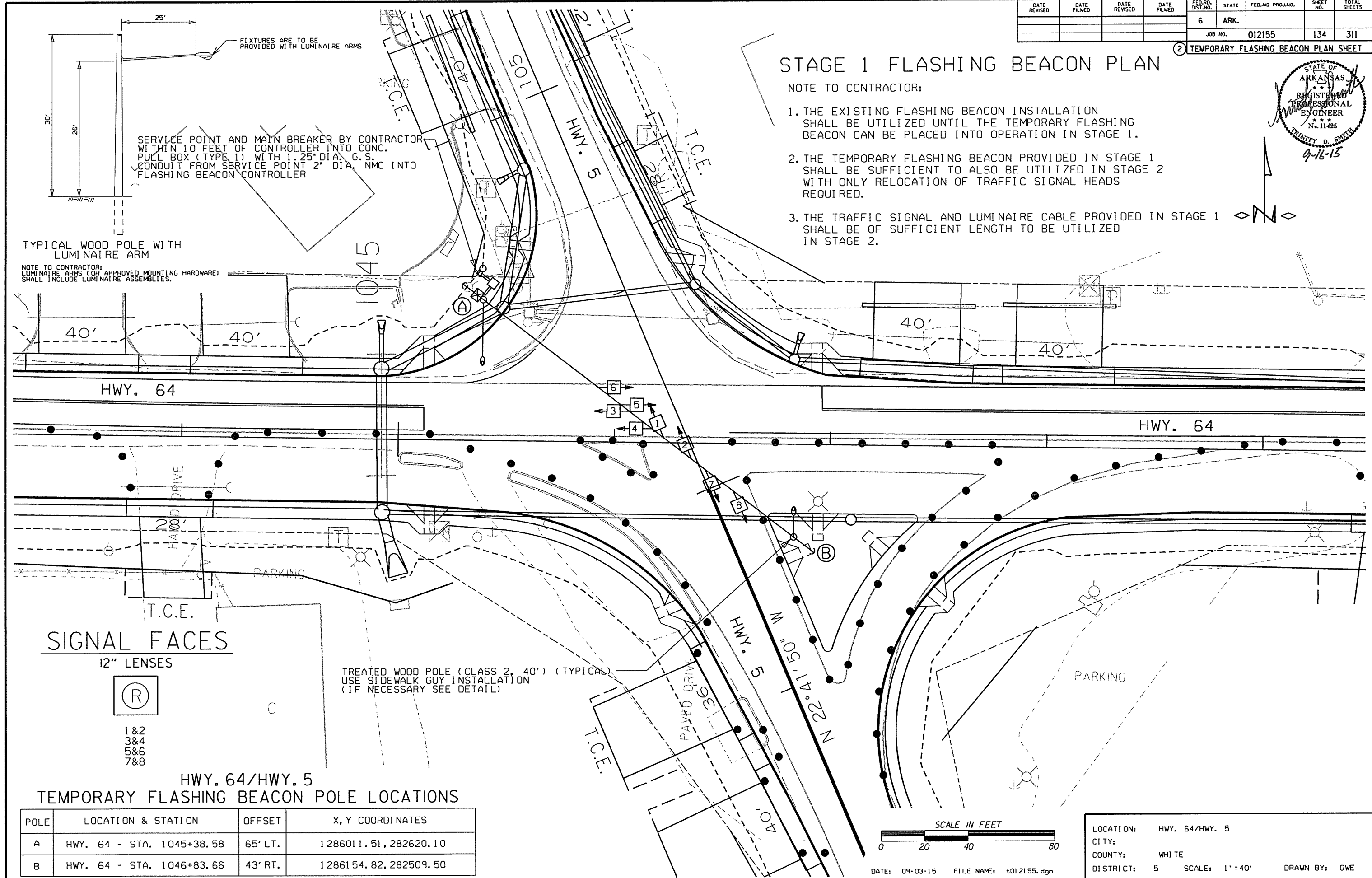
1. THE EXISTING FLASHING BEACON INSTALLATION SHALL BE UTILIZED UNTIL THE TEMPORARY FLASHING BEACON CAN BE PLACED INTO OPERATION IN STAGE 1.
2. THE TEMPORARY FLASHING BEACON PROVIDED IN STAGE 1 SHALL BE SUFFICIENT TO ALSO BE UTILIZED IN STAGE 2 WITH ONLY RELOCATION OF TRAFFIC SIGNAL HEADS REQUIRED.
3. THE TRAFFIC SIGNAL AND LUMINAIRE CABLE PROVIDED IN STAGE 1 SHALL BE OF SUFFICIENT LENGTH TO BE UTILIZED IN STAGE 2.



SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER INTO CONC. PULL BOX (TYPE 1) WITH 1.25" DIA. G.S. CONDUIT FROM SERVICE POINT 2" DIA. NMC INTO FLASHING BEACON CONTROLLER

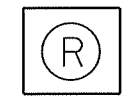
TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR: LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL INCLUDE LUMINAIRE ASSEMBLIES.



SIGNAL FACES

12" LENSES

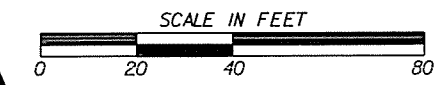


- 1&2
- 3&4
- 5&6
- 7&8

TREATED WOOD POLE (CLASS 2, 40') (TYPICAL) USE SIDEWALK GUY INSTALLATION (IF NECESSARY SEE DETAIL)

HWY. 64/HWY. 5 TEMPORARY FLASHING BEACON POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 64 - STA. 1045+38.58	65' LT.	1286011.51, 282620.10
B	HWY. 64 - STA. 1046+83.66	43' RT.	1286154.82, 282509.50

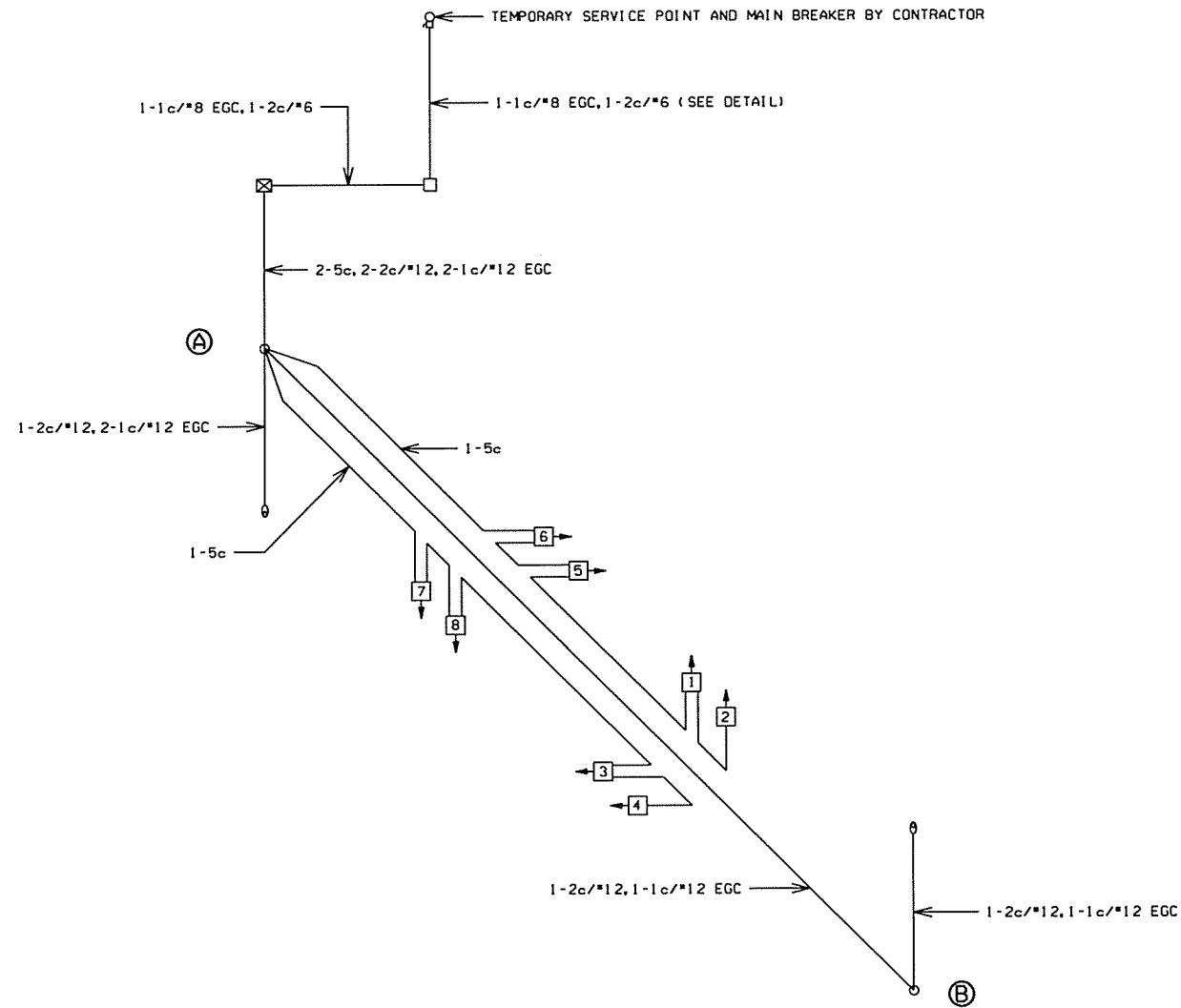


DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: 1" = 40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	135	311

② TEMPORARY FLASHING BEACON PLAN SHEET



TEMPORARY FLASHING BEACON WIRING DIAGRAM STAGES 1 AND 2

NOTE TO CONTRACTOR:

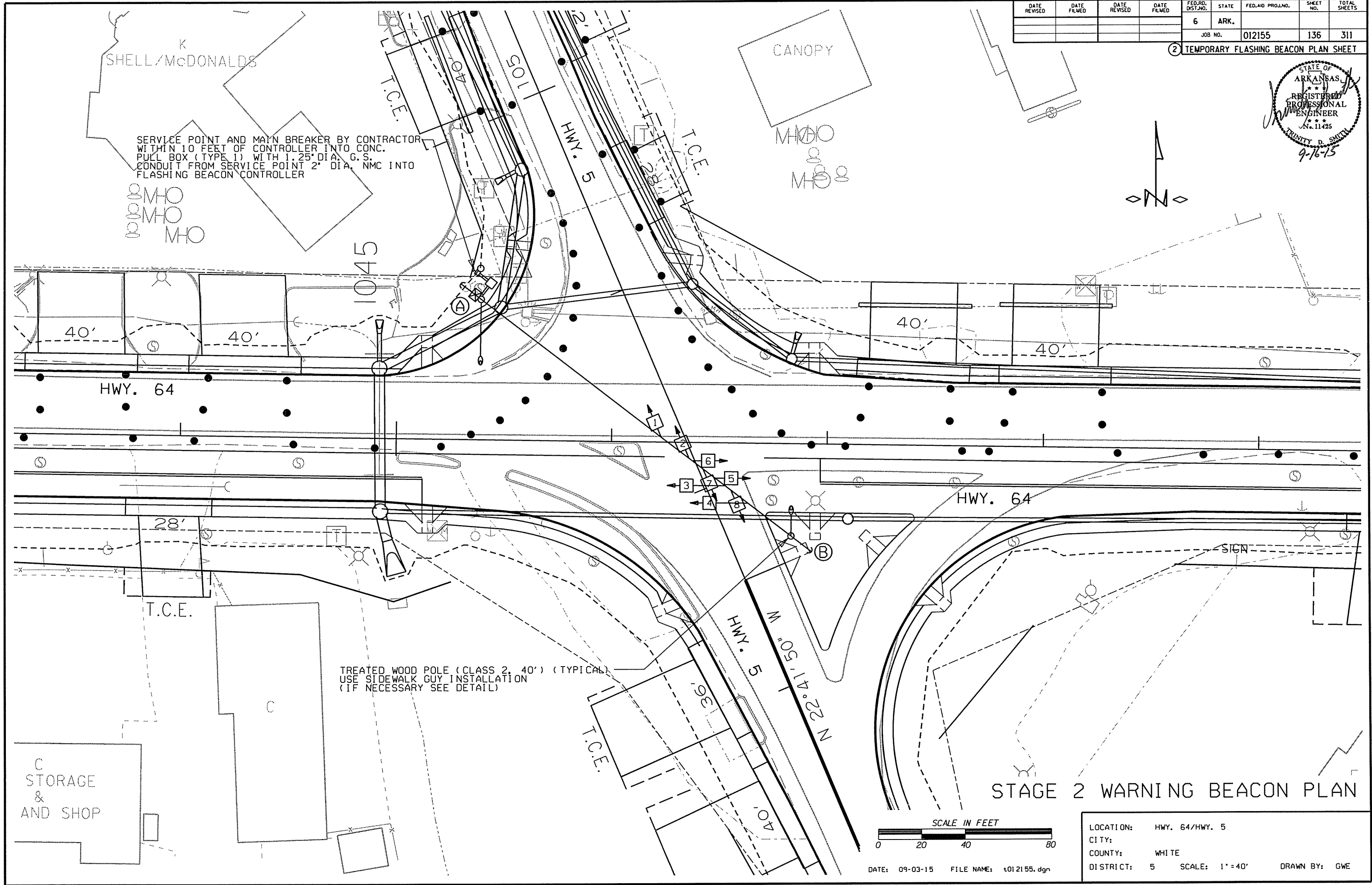
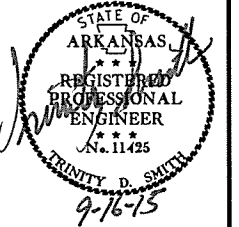
THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE TEMPORARY SERVICE POINT.

LOCATION: HWY. 64/HWY. 5
 CITY:
 WHITE
 DISTRICT: 5 SCALE: N/A DRAWN BY: GWE

DATE: 09-03-15 FILE NAME: t012155.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							136	311

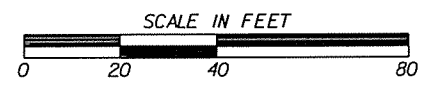
② TEMPORARY FLASHING BEACON PLAN SHEET



SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER INTO CONC. PULL BOX (TYPE 1) WITH 1.25" DIA. G. S. CONDUIT FROM SERVICE POINT 2" DIA. NMC INTO FLASHING BEACON CONTROLLER

TREATED WOOD POLE (CLASS 2, 40') (TYPICAL) USE SIDEWALK GUY INSTALLATION (IF NECESSARY SEE DETAIL)

STAGE 2 WARNING BEACON PLAN



DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: 1" = 40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		137	311

② TRAFFIC SIGNAL QUANTITIES



TRAFFIC SIGNAL QUANTITIES

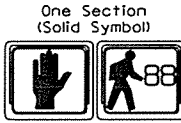
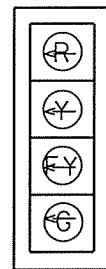
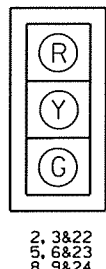
ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
704	VEHICLE DETECTOR-RACK MOUNT	10	EACH
704	FEEDER WIRE	3886	LIN. FT.
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	12	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	4	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2442	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	268	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	763	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	150	LIN. FT.
710	NON-METALLIC CONDUIT (1")	1510	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	811	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1HD)	11	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	7	EACH
711	CONCRETE PULL BOX (TYPE 2)	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	2	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
SP&733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	1043	LIN. FT.
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP&733	VEHICLE DETECTOR RACK (20 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	969	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	720	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	200	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	LOOP WIRING CLASS III (1C/16 A.W.G.)	1336	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: N/A DRAWN BY: GWE

SIGNAL FACES

12" LENSES



13&14
15&16
17&18
19&20

2, 3&22
5, 6&23
8, 9&24
11, 12&21

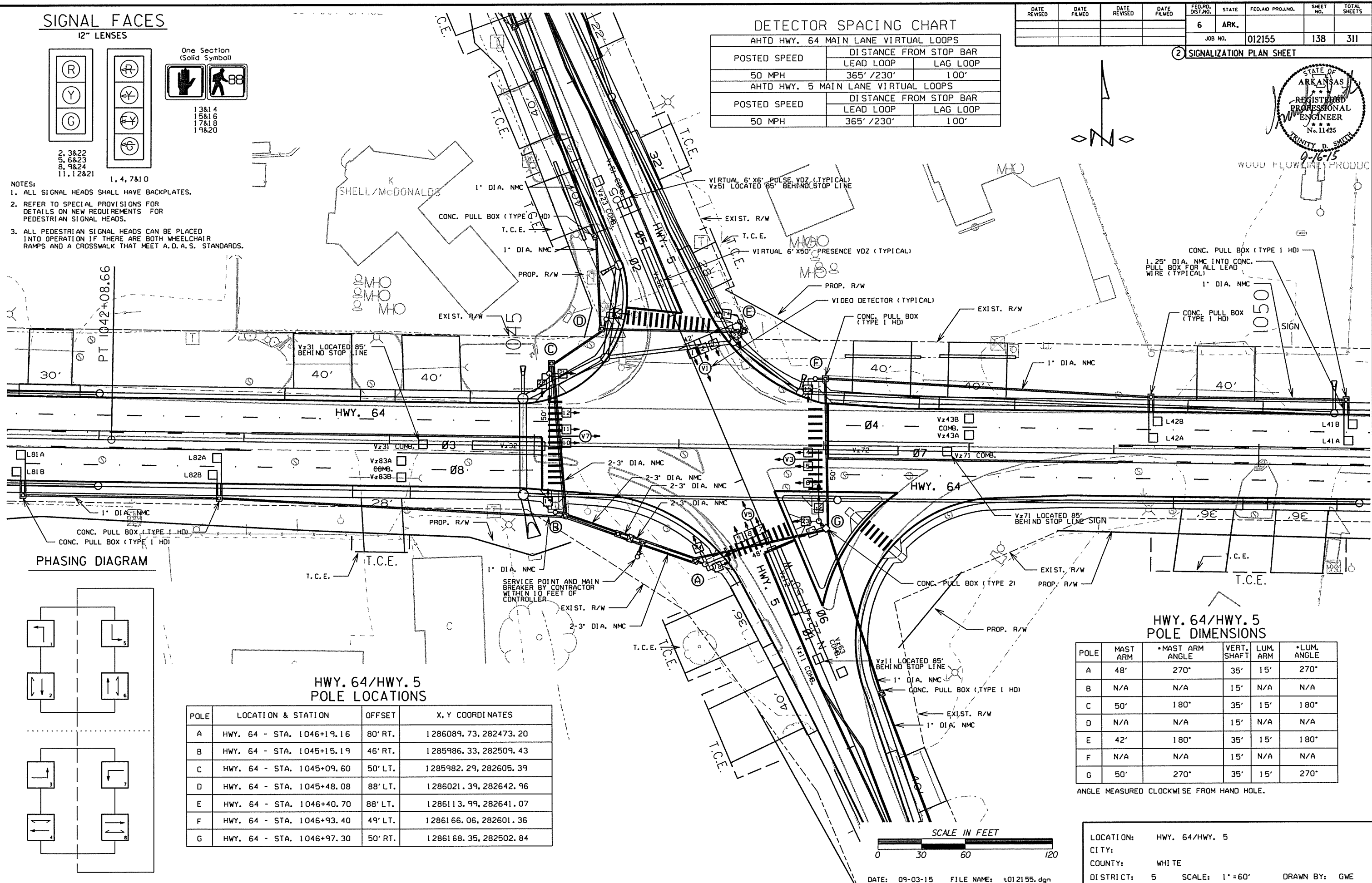
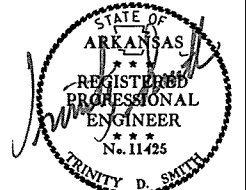
1, 4, 7&10

- NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

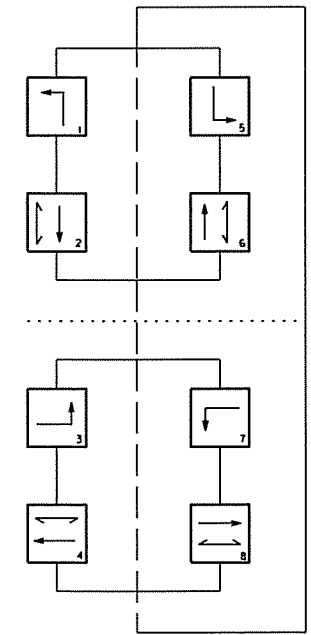
DETECTOR SPACING CHART

AHTD HWY. 64 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DI. STANCE FROM STOP BAR	
50 MPH	365' / 230'	100'
AHTD HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DI. STANCE FROM STOP BAR	
50 MPH	365' / 230'	100'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	012155	138
						2 SIGNALIZATION PLAN SHEET		



PHASING DIAGRAM



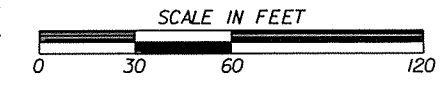
HWY. 64/HWY. 5 POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 64 - STA. 1046+19.16	80' RT.	1286089.73, 282473.20
B	HWY. 64 - STA. 1045+15.19	46' RT.	1285986.33, 282509.43
C	HWY. 64 - STA. 1045+09.60	50' LT.	1285982.29, 282605.39
D	HWY. 64 - STA. 1045+48.08	88' LT.	1286021.39, 282642.96
E	HWY. 64 - STA. 1046+40.70	88' LT.	1286113.99, 282641.07
F	HWY. 64 - STA. 1046+93.40	49' LT.	1286166.06, 282601.36
G	HWY. 64 - STA. 1046+97.30	50' RT.	1286168.35, 282502.84

HWY. 64/HWY. 5 POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	48'	270°	35' 15'	15'	270°
B	N/A	N/A	15'	N/A	N/A
C	50'	180°	35' 15'	15'	180°
D	N/A	N/A	15'	N/A	N/A
E	42'	180°	35' 15'	15'	180°
F	N/A	N/A	15'	N/A	N/A
G	50'	270°	35' 15'	15'	270°

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.



DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: 1"=60' DRAWN BY: GWE

DESIGN PARAMETERS

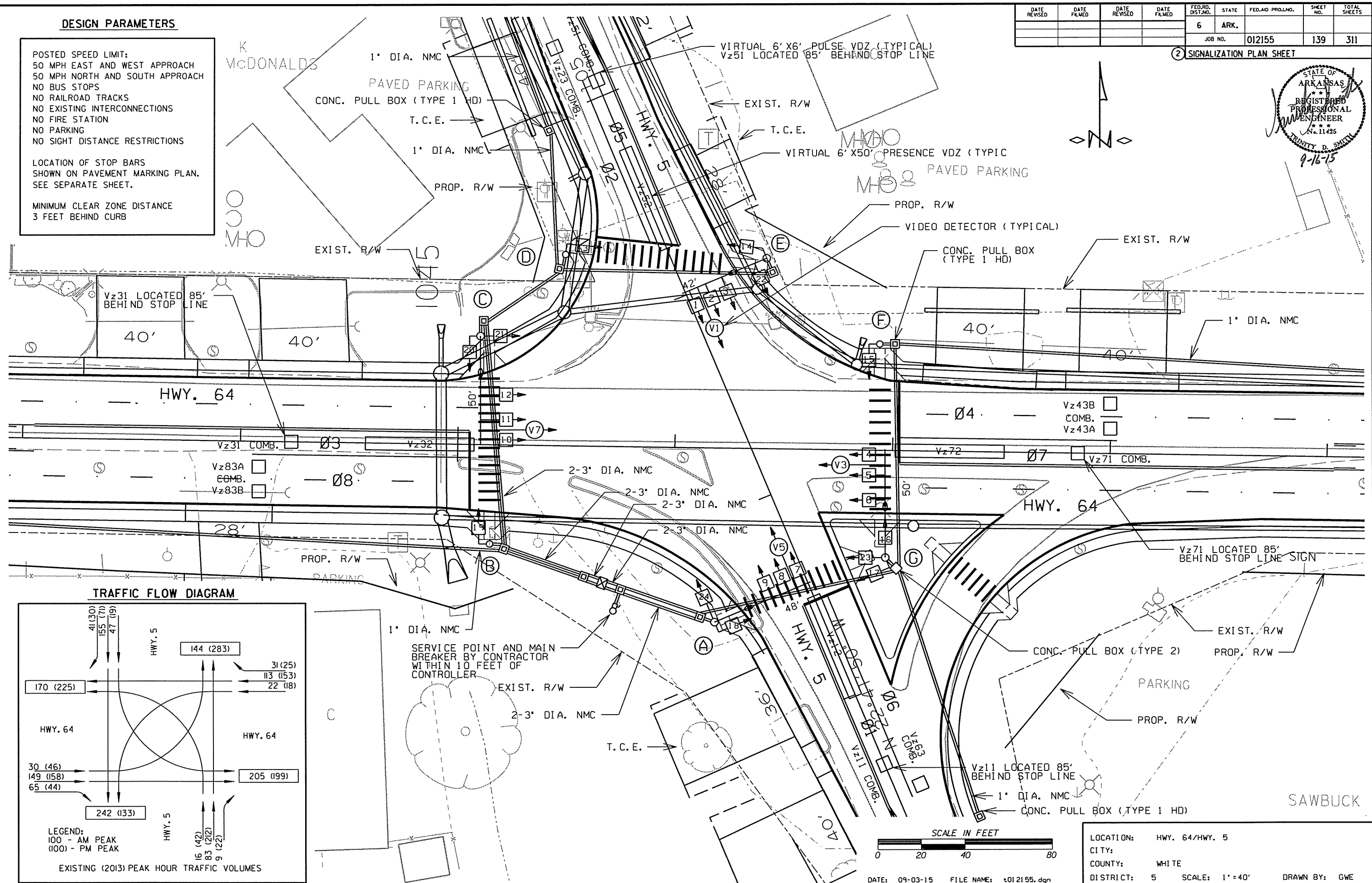
POSTED SPEED LIMIT:
 50 MPH EAST AND WEST APPROACH
 50 MPH NORTH AND SOUTH APPROACH
 NO BUS STOPS
 NO RAILROAD TRACKS
 NO EXISTING INTERCONNECTIONS
 NO FIRE STATION
 NO PARKING
 NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS
 SHOWN ON PAVEMENT MARKING PLAN.
 SEE SEPARATE SHEET.

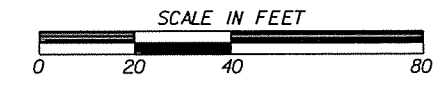
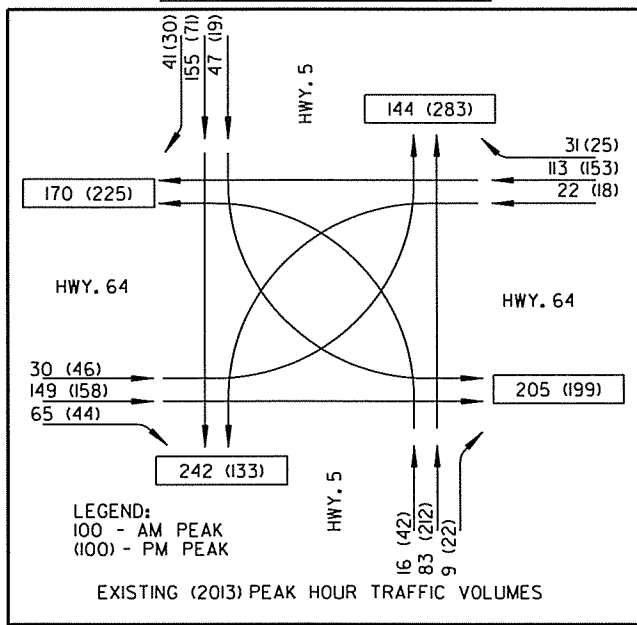
MINIMUM CLEAR ZONE DISTANCE
 3 FEET BEHIND CURB

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				6	ARK.			
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② SIGNALIZATION PLAN SHEET



TRAFFIC FLOW DIAGRAM



DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION: HWY. 64/HWY. 5
 CITY:
 COUNTY: WHITE
 DISTRICT: 5 SCALE: 1" = 40' DRAWN BY: GWE

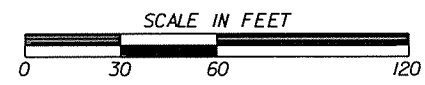
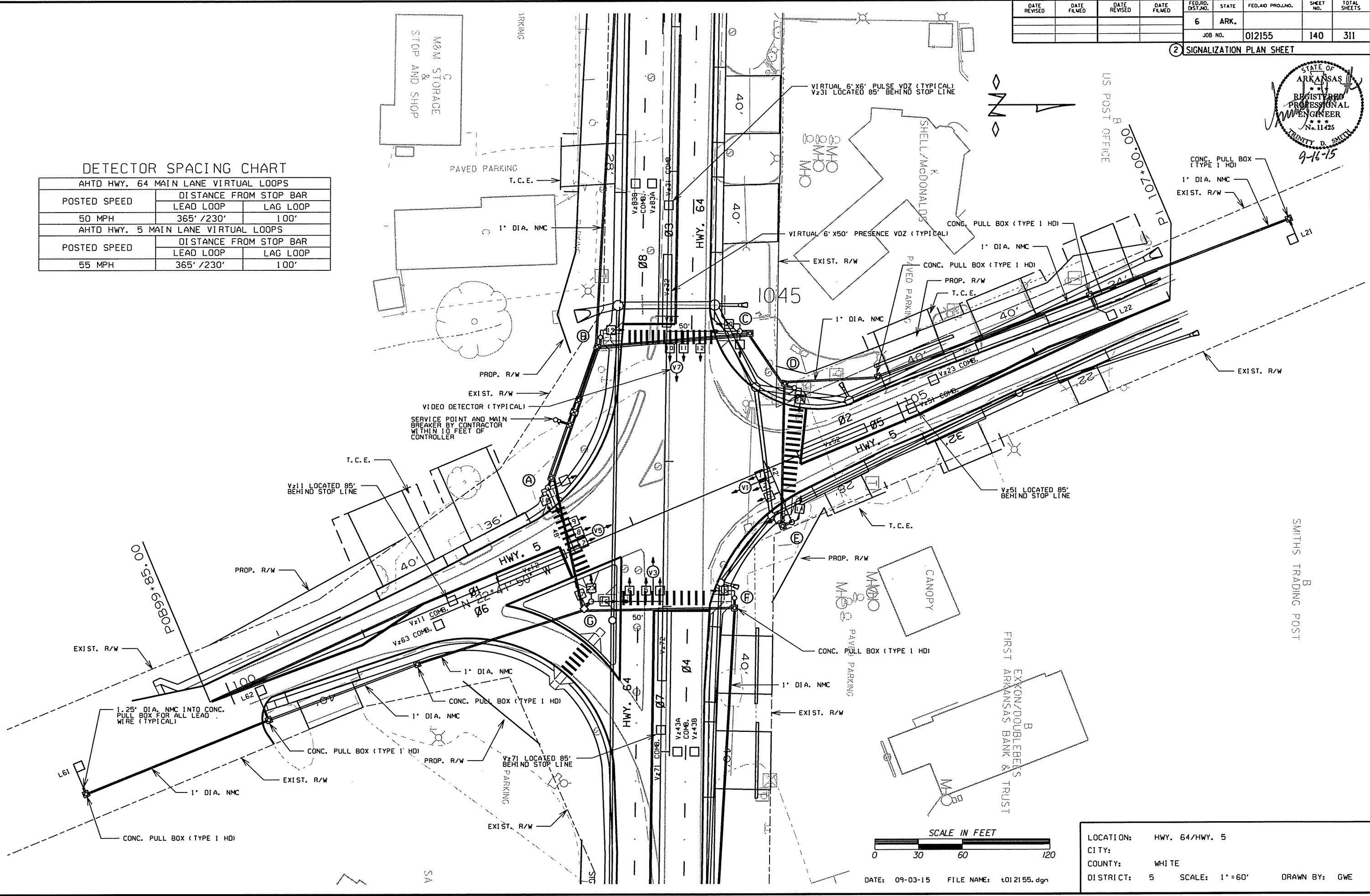
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						012155	140	311

2 SIGNALIZATION PLAN SHEET



DETECTOR SPACING CHART

AHTD HWY. 64 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
50 MPH	365' / 230'	100'
AHTD HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
55 MPH	365' / 230'	100'

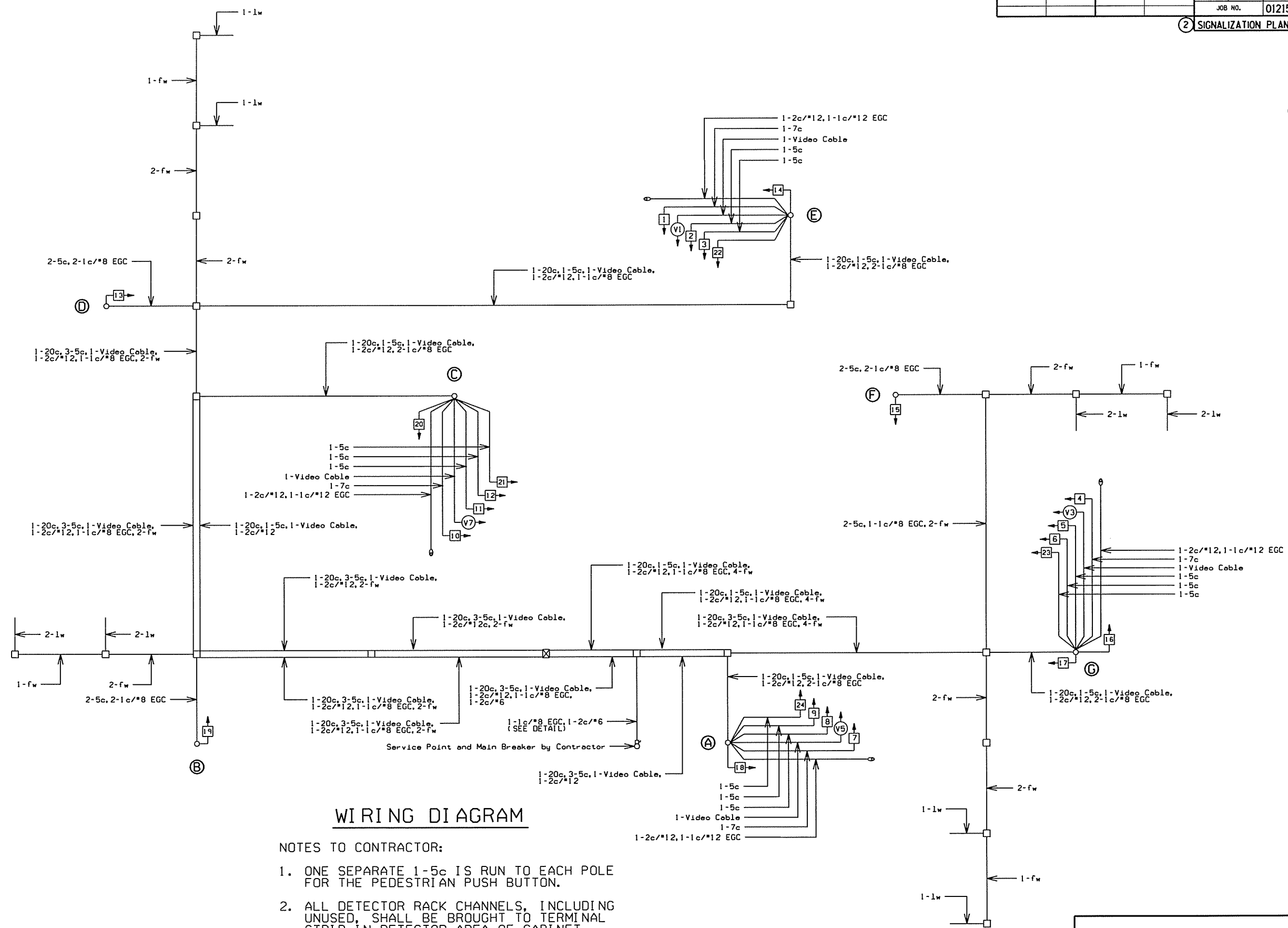


DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION: HWY. 64/HWY. 5
 CITY: WHITE
 COUNTY: WHITE
 DISTRICT: 5
 SCALE: 1" = 60'
 DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	141	311

2 SIGNALIZATION PLAN SHEET



WIRING DIAGRAM

NOTES TO CONTRACTOR:

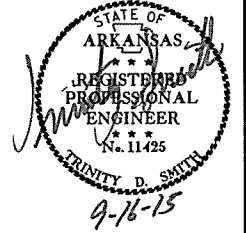
1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

DATE: 09-03-15 FILE NAME: t012155.dgn

LOCATION:	HWY. 64/HWY. 5
CITY:	WHITE
DISTRICT:	5
SCALE:	N/A
DRAWN BY:	GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		142	311

② SIGNALIZATION PLAN SHEET



INTERVAL CHART

DETECTOR SYSTEM DESCRIPTION: JOB 012155											
HWY. 64/HWY. 5 DETECTOR ASSIGNMENTS			HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS	
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #			MASTER SYSTEM DETECTOR NUMBERS
Vz11	NB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23'
Vz12	NB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23'
L21	SB ADVANCE	LOCAL	2			V2	2				
L22	SB INTERMEDIATE	LOCAL	2			P1	2				
Vz23	SB NEAR	COMB.	10		6	V10	2	2		CAMERA V5	23'
Vz31	EB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	23'
Vz32	EB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	23'
L41A&B	WB ADVANCE	LOCAL	4			V4	4				
L42A&B	WB INTERMEDIATE	LOCAL	4			P5	4				
Vz43A	WB NEAR	COMB.	12		14	V12	4	4		CAMERA V7	23'
Vz43B	WB NEAR	COMB.	12		14	V12	4	4		CAMERA V7	23'
Vz51	SB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23'
Vz52	SB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23'
L61	NB ADVANCE	LOCAL	6			V6	6				
L62	NB INTERMEDIATE	LOCAL	6			P3	6				
Vz63	NB NEAR	COMB.	14		4	V14	6	6		CAMERA V1	23'
Vz71	WB LEFT TURN FAR	COMB.			15	V15	7	7		CAMERA V7	23'
Vz72	WB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	23'
L81A&B	EB ADVANCE	LOCAL	8			V8	8				
L82A&B	EB INTERMEDIATE	LOCAL	8			P7	8				
Vz83A	EB NEAR	COMB.	16		12	V16	8	8		CAMERA V3	23'
Vz83B	EB NEAR	COMB.	16		12	V16	8	8		CAMERA V3	23'
PB2A&B	SPARKSFORD W. LEG	PED.				P2	2				
PB4A&B	HWY. 124 N. LEG	PED.				P4	4				
PB6A&B	CROW MTN. RD.	PED.				P6	6				
PB8A&B	HWY. 124 S. LEG	PED.				P8	8				
SPARE 3, 5, 11 & 13											

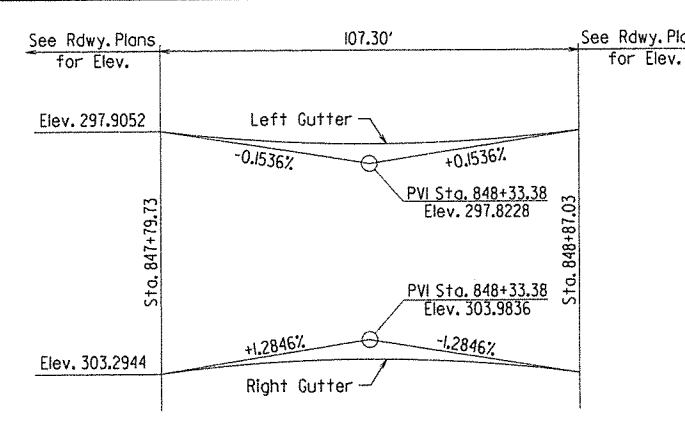
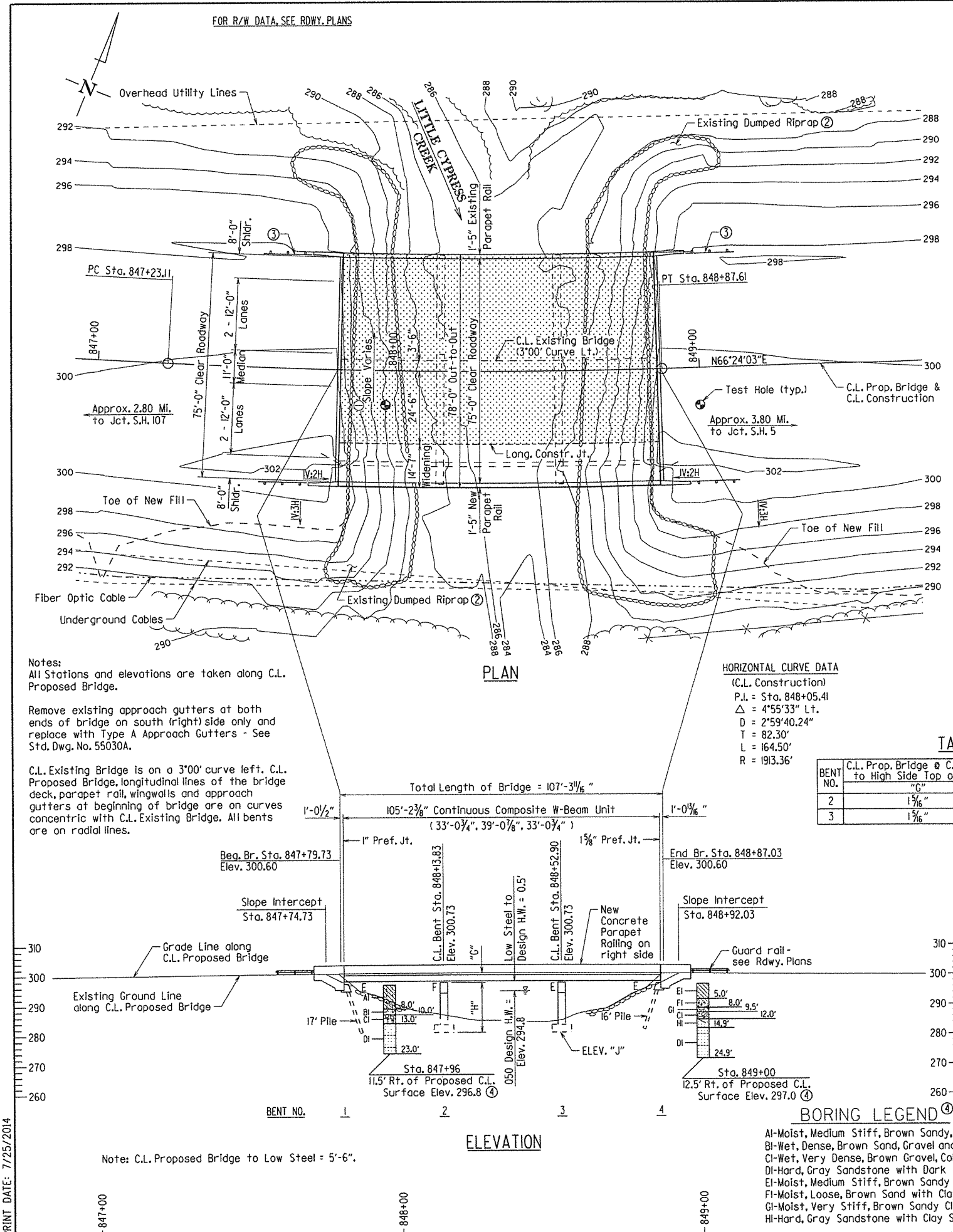
SIGNAL FACES	HWY. 64/HWY. 5														FLASH SEQ.		
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.		4+8	CLR.
1	←G	*	←G	*	←FY	***	←FY	***	←R	←R	←R	←R	←R	←R	←R	←R	←R
2,3&22	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	←R	←R	←R	←R	←R	←R	←R	←G	*	←G	*	←FY	***	←FY	***	←R	←R
5,6&23	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
7	←G	*	←FY	***	←G	*	←FY	***	←R	←R	←R	←R	←R	←R	←R	←R	←R
8,9&24	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
10	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	***	←G	*	←FY	***	←R	←R
11,12&21	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
19&20	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK

- * DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
- ** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
- *** DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE: *AMP CHN=* REFERS TO THE DETECTOR RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9=SYSTEM DETECTOR 1, V10=SYSTEM DETECTOR 2

LOCATION: HWY. 64/HWY. 5
CITY:
COUNTY: WHITE
DISTRICT: 5 SCALE: N/A DRAWN BY: GWE



LEFT GUTTER:
 847+79.73 < STA "P" < 848+87.03:
 ELEV "P" = 297.9052 - 0.1536 (STA "P" - 847.7973) + 0.1432 (STA "P" - 847.7973)²

RIGHT GUTTER:
 847+79.73 < STA "P" < 848+87.03:
 ELEV "P" = 303.2944 + 1.2846 (STA "P" - 847.7973) - 1.1972 (STA "P" - 847.7973)²

DETAILS OF SUPERELEVATION TRANSITION
 No Scale

- ① See Details of Superelevation Transition.
- ② Existing dumped riprap at end bents disturbed during construction or regrading of embankment slopes shall be replaced as directed by the Engineer. This work shall be paid for at the unit price bid for "Dumped Riprap". Filter blanket disturbed shall be replaced and paid for under the item "Filter Blanket". Quantities of dumped riprap and filter blanket are estimated. Actual quantities shall be determined in the field.
- ③ Existing guard rail shall be removed and replaced with three-beam guard rail on the north side of the bridge - See Roadway Plans and Std. Dwg. CR-10 for new bolt spacing and additional details. Existing holes in parapet rail shall be filled with a OPL approved non-shrink grout that completely fills holes. No direct payment will be made for filling existing holes in rail or for drilling new holes.
- ④ Surface elevations for test holes are based on ground elevations prior to construction of the existing bridge.

TABLE OF VARIABLES

BENT NO.	C.L. Prop. Bridge @ C.L. Bent to High Side Top of Cap	High Side Top of Cap Seat to Bot. of Fig.	Bottom of Ftg. Elevation
1	19'-9"	19'-9"	280.87
2	19'-9"	19'-9"	280.87
3	19'-9"	19'-9"	280.87

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	*NATURAL WATER SURFACE ELEVATION FEET	WATER SURFACE ELEV. WITH BACKWATER FEET
Design	50	2,690	291.6	294.8
Base	100	3,290	291.9	296.1
Extreme	500	3,920	292.3	296.8
Overtopping	>500	-	-	-

*Unconstricted water surface without structure or roadway approaches.
 0100 backwater elevation for existing structure = 296.1
 Proposed Low Bridge Chord Elev. = 295.25
 Drainage area = 3.4 square miles
 Historical H.W. Elev. = 295.0

"N" VALUES

Sta. 847+95.836 - 15' Lt. of C.L.
 5.5 - 6.5, N=7
 10.5 - 10.9, N=60 (5')
 Sta. 848+99.96 - 16' Rt. of C.L.
 5.5 - 6.5, N=9
 10.0 - 11.0, N=32 (5')

BORING LEGEND

- AI-Moist, Medium Stiff, Brown Sandy, Silty Clay
- BI-Wet, Dense, Brown Sand, Gravel and Cobbles
- CI-Wet, Very Dense, Brown Gravel, Cobbles and Boulders
- DI-Hard, Gray Sandstone with Dark Gray Shale Seams
- EI-Moist, Medium Stiff, Brown Sandy Clay
- FI-Moist, Loose, Brown Sand with Clay Seams and Gravel
- GI-Moist, Very Stiff, Brown Sandy Clay with Gravel and Cobbles
- HI-Hard, Gray Sandstone with Clay Seams

REVISED	DATE FILMED	DATE REVISION	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 06387 - LAYOUT							143	311
① 06387 - LAYOUT								55612

GENERAL NOTES
 CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (17th Edition - 2002).

LIVE LOADING: HS20
 SEISMIC PERFORMANCE CATEGORY: A
 DESIGN METHOD: LOAD FACTOR

MATERIALS AND STRENGTHS
 Class (SAC) Concrete (superstructure) f'c = 4,000 psi
 Class S Concrete (substructure) f'c = 3,500 psi
 Reinforcing Steel (Gr. 60, AASHTO M31 or M32, Type A) fy = 60,000 psi
 Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi
 Structural Steel (AASHTO M270, Gr. 50W) Fy = 50,000 psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL PILING: All piling shall be HP 12x53 (Grade 50) and shall be driven with an approved, air, steam or diesel hammer to a minimum safe bearing capacity of 95 tons per pile and into the material designated as hard, gray sandstone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Actual pile lengths to be determined in the field. Piling shall be driven after embankment to bottom of cap is in place. On all piles the Contractor shall use approved steel H-pile driving points.

FOOTINGS: Footings shall be set a minimum of 1'-6" into material designated as hard, gray sandstone on the boring legend and the top of the footings shall be set at or below the channel bottom and no higher than the adjacent existing footing. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Blasting will not be allowed. Concrete in footings shall be poured directly against excavated surfaces of rock.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface, including the existing deck surface to be retained, and to the face and top of the concrete parapet rail in the new construction.

DETAIL DRAWINGS:	DRAWING NO.
Bridge Widening	55613
End Bents	55614-55616
Int. Bents	55617
Continuous W-Beam Unit	55618-55622
Steel Piling	55020

EXISTING BRIDGE: Existing Bridge No. 06387 (L.M. 18.25) is 70.8' wide and 107' long and consists of a 105'-0" Continuous Composite W-Beam Unit supported by steel H-Pile freestone end bents and column intermediate bents with spread footings. Plans of the existing structure may be obtained upon request from the Programs and Contracts Division.

THE PROPOSED WORK CONSISTS OF: Partial removal and widening of the existing bridge superstructure and bents, replacement of the anchor bolts and bearings for Beam No. 9, and replacement of the joint seals. The partial removal and modification of the existing bridge superstructure and bents, including the temporary removal and replacement of Beam No. 9 and its diaphragms and connections, shall be paid for under the item "Modification of Existing Bridge Structure (Br. No. 06387)".

VERIFICATION: Except as noted, components of the existing bridge are to be retained and joined to the proposed work. Information and dimensions shown are based on existing bridge plans. The Contractor is to adhere strictly to the requirements for verification of the geometry of the existing bridge and its relationship to the proposed work described in Subsection 821.02 and make necessary adjustments to fit the proposed work to the existing structure. Payment for this work shall be considered subsidiary to the pay item "Modification of Existing Bridge Structure (Br. No. 06387)".

REMOVAL AND SALVAGE: All material removed from the existing bridge under Item 821 shall be disposed of according to Section 205. All material removed from the existing bridge shall become the property of the Contractor except for the approach guardrail which shall remain the property of the State.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

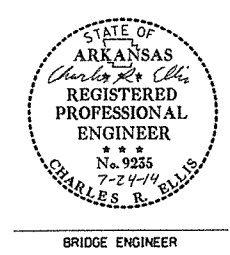
**LAYOUT OF BRIDGE OVER
 LITTLE CYPRESS CREEK
 VILONIA BYPASS-EAST (F)
 FAULKNER COUNTY**

ROUTE 64 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12-18-13 FILENAME: b012155_ll.dgn
 CHECKED BY: AMJ DATE: 3/12/14 SCALE: 1" = 20' or as shown
 DESIGNED BY: JNP DATE: 12-13

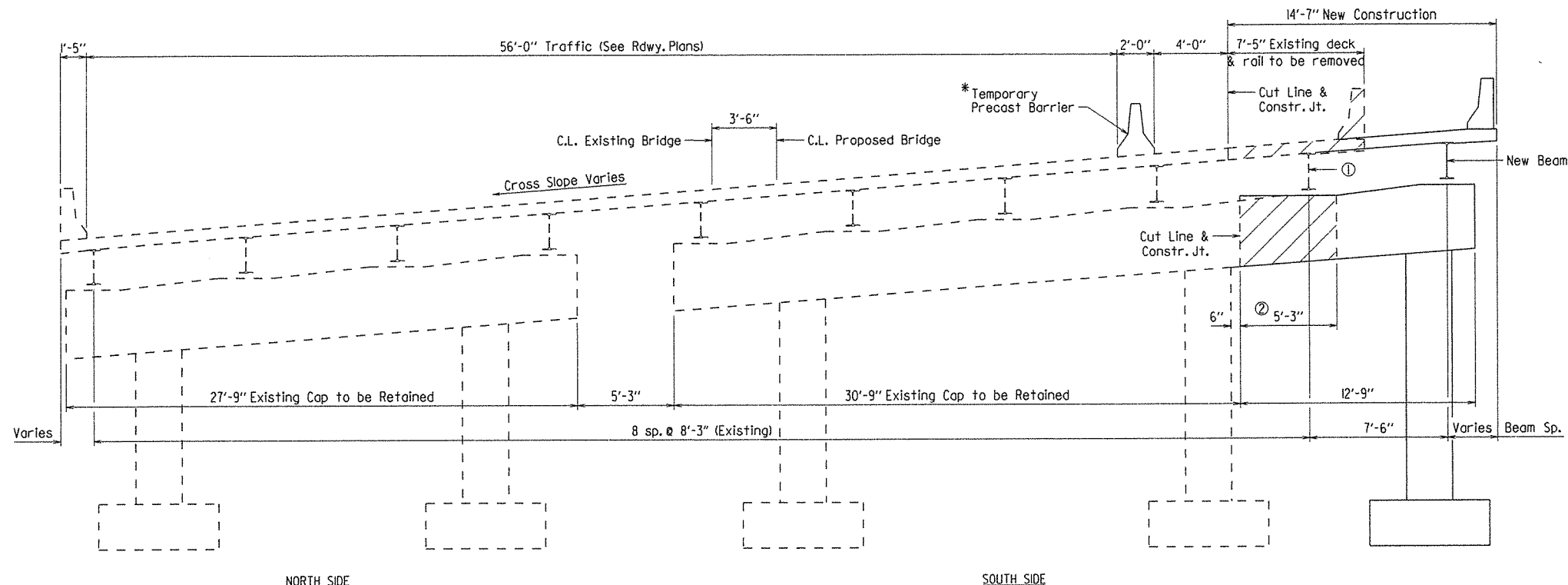
BRIDGE NO. 06387 DRAWING NO. 55612



PRINT DATE: 7/25/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	144	211
				①	06387 -	WIDENING	-	55613

* Temporary Precast Barrier shall not be attached to the bridge deck. For Details of Temporary Precast Barrier, see Std. Dwg. No. TC4.



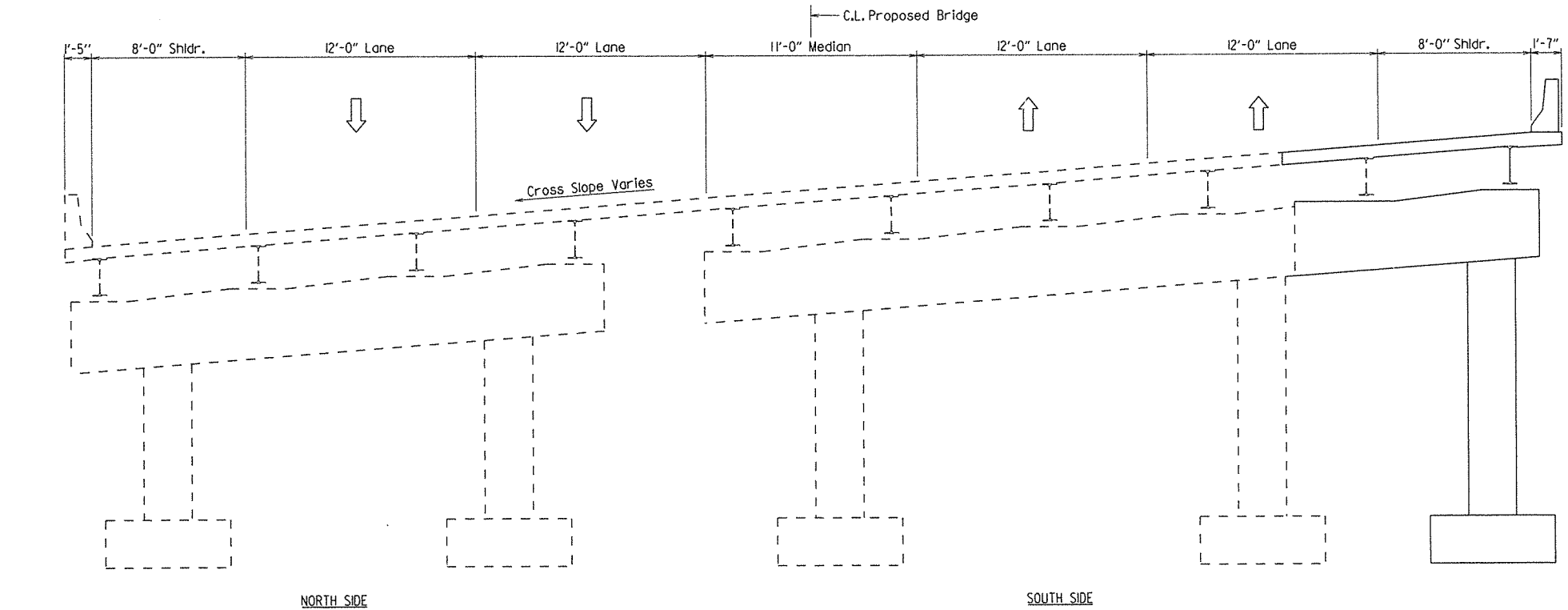
Notes:
 The C.L. Existing Bridge is on a 3'00' curve left. Longitudinal lines of the proposed widening shall be constructed on curves concentric with C.L. Existing Bridge.

① This beam shall be temporarily removed for modification of intermediate and end bents. After remodeling of intermediate and end bents is complete, this beam shall be re-erected with new anchor bolts and Type B shoes.

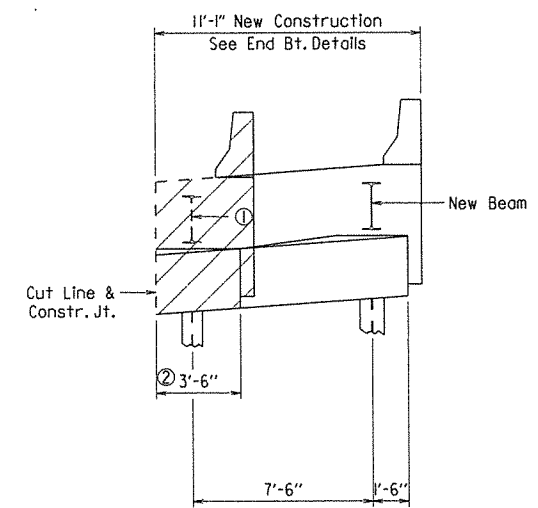
② Existing cap to be removed. Existing reinforcing steel extending from cap shall be retained and lapped with the new reinforcing steel. See Bent Details.

See Roadway Plans for Maintenance of Traffic.

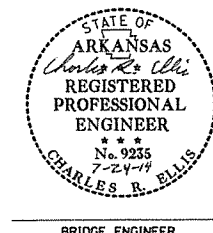
PROPOSED WIDENING
Looking Ahead



CONSTRUCTION COMPLETE
Looking Ahead



TYPICAL SKETCH FOR PARTIAL REMOVAL OF END BENTS
Looking Ahead



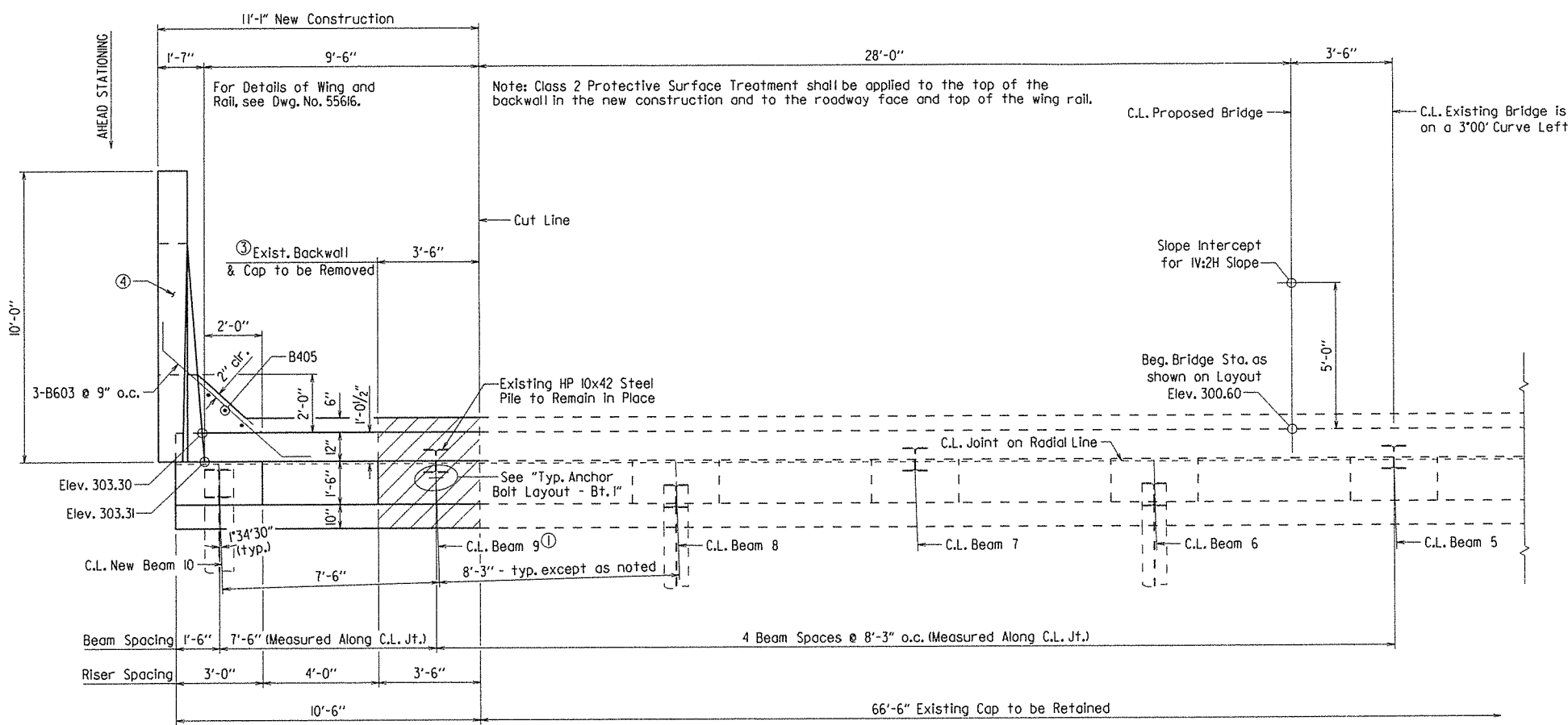
DETAILS OF BRIDGE WIDENING

ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12-19-13 FILENAME: b012155_sc.dgn
 CHECKED BY: AJS DATE: 3/7/14 SCALE: No Scale
 DESIGNED BY: DATE: BRIDGE NO. 06387 DRAWING NO. 55613

PRINT DATE: 7/23/2014

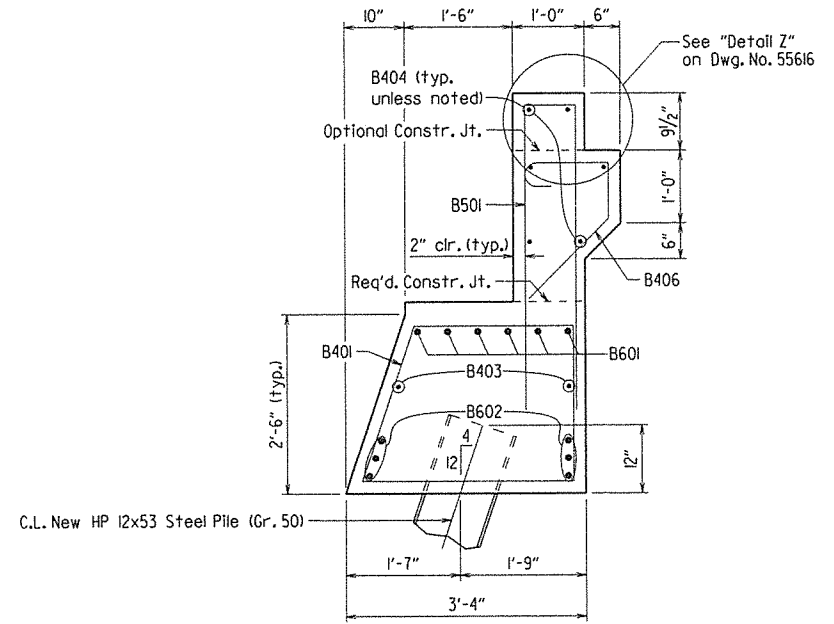
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	145	311
				①	06387 -	END BENTS	- 55614	



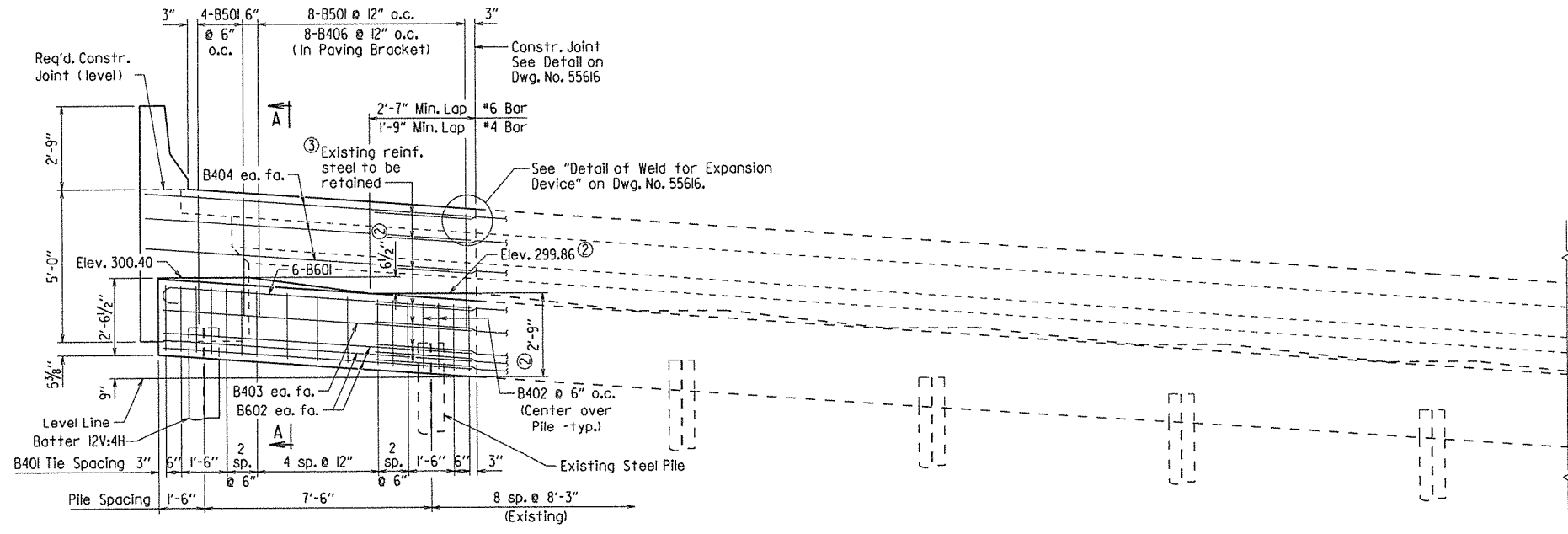
① Beam 9 is to be temporarily removed for New Construction of the End Bents. Beam 9 shall be re-erected with new anchor bolts and Type B2 shoe.

④ Wingwall and rail shall be constructed on curves concentric with C.L. Bridge.

PLAN - BENT I
3/8" = 1'-0"



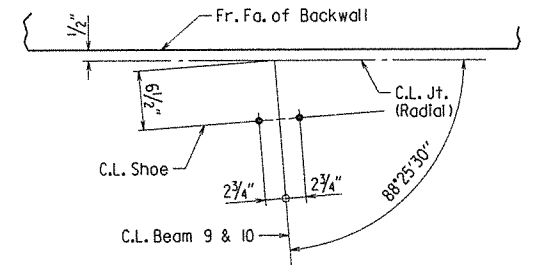
NOTE: The Backwall above the required construction joint shall not be poured until the beams are in place. Backwall may be placed prior to placing the adjacent concrete deck only if the optional backwall construction joint is used. See Dwg. No. 55622, "Expansion Device Installation at End Bents", for additional information.



② Dimensions and elevation are based on the original plans and shall be verified by the Contractor in accordance with Subsection 821.02.

③ Retain and clean existing reinforcing steel extending from existing cap and lap with new reinforcing steel as shown. Existing reinforcing which is to be incorporated in to new construction and is damaged by the Contractor shall be replaced at no expense to the Department to the satisfaction of the Engineer.

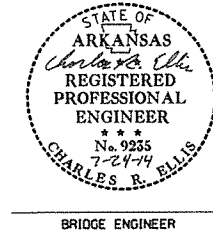
ELEVATION - BENT I
Looking Back
3/8" = 1'-0"



For details of Type B2 expansion shoe, see Dwg. No. 55622.

TYPICAL ANCHOR BOLT LAYOUT - BT. I
No Scale

For General Notes and Bar List, see Dwg. No. 55616.



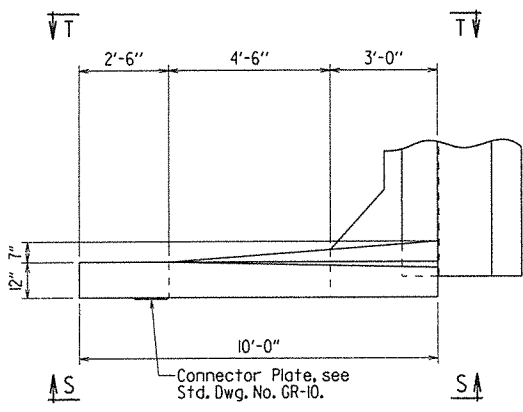
SHEET 1 OF 3
DETAILS OF END BENTS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

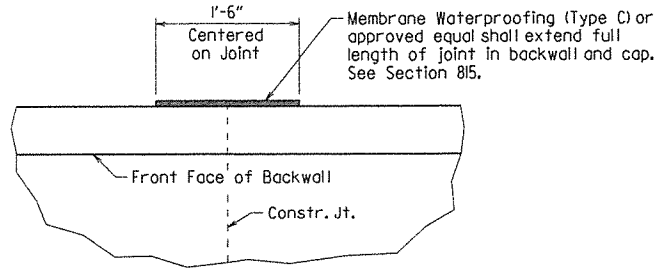
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DESIGNED BY: JYP DATE: 2-14
BRIDGE NO. 06387 DRAWING NO. 55614

PRINT DATE: 7/23/2014

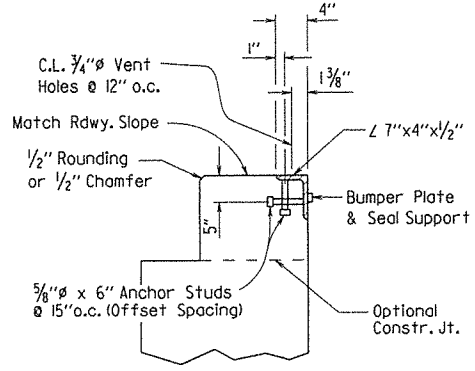
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	147	311
				06387 -	END BENTS			55616



PLAN OF WING
3/8" = 1'-0"



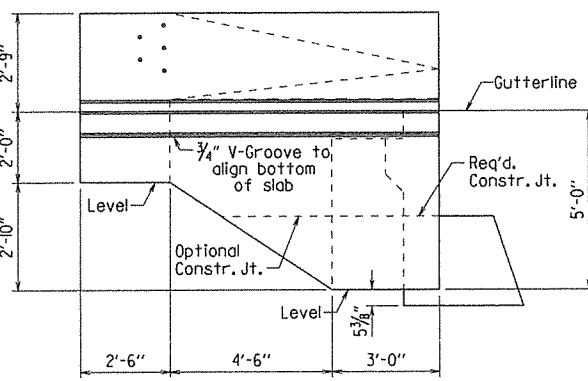
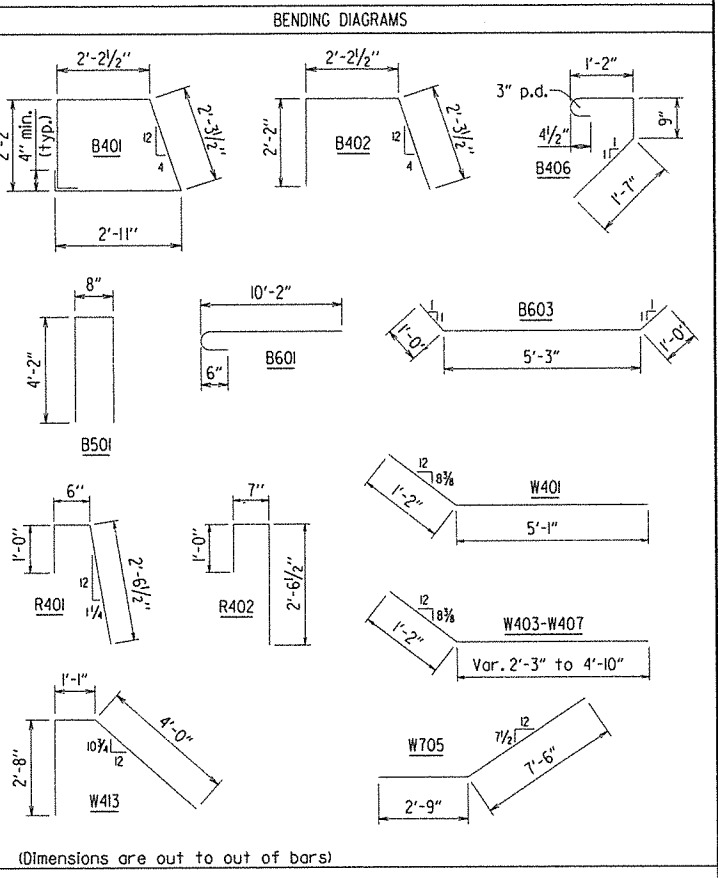
CONSTRUCTION JOINT DETAIL
No Scale



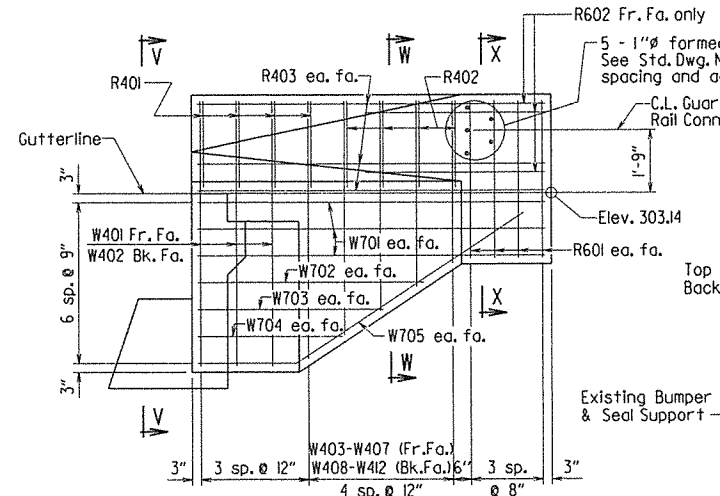
DETAIL Z
No Scale

BAR LIST - PER BENT

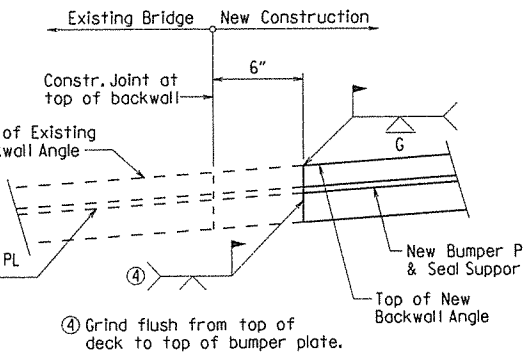
MARK	NO. REQ'D.	LENGTH	P.D.
B401	13	9'-11"	2"
B402	4	6'-7"	2"
B403	2	10'-2"	Str.
B404	6	10'-9"	Str.
B405	3	3'-10"	Str.
B406	8	3'-11"	2"
B501	12	8'-10"	2 1/2"
B601	6	10'-10"	4 1/2"
B602	6	10'-2"	Str.
B603	3	7'-3"	4 1/2"
R401	4	3'-11"	2"
R402	4	4'-0"	2"
R403	6	9'-8"	Str.
R601	8	4'-5"	Str.
R602	3	5'-0"	Str.
W401	3	6'-3"	2"
W402	3	7'-5"	Str.
W403-W407	1 each	Var. 3'-5" to 6'-0"	2"
W408-W412	1 each	Var. 4'-7" to 7'-2"	Str.
W413	3	7'-8"	2"
W701	6	9'-8"	Str.
W702	2	6'-3"	Str.
W703	2	5'-1"	Str.
W704	2	4'-0"	Str.
W705	2	10'-3"	5 1/4"



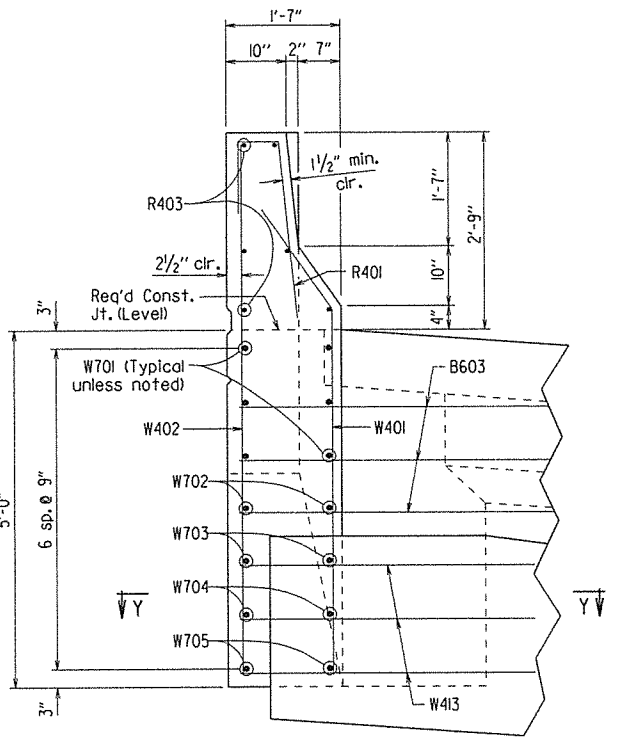
VIEW S-S
3/8" = 1'-0"



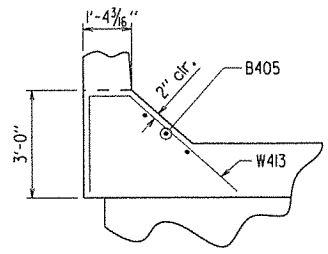
VIEW T-T
3/8" = 1'-0"



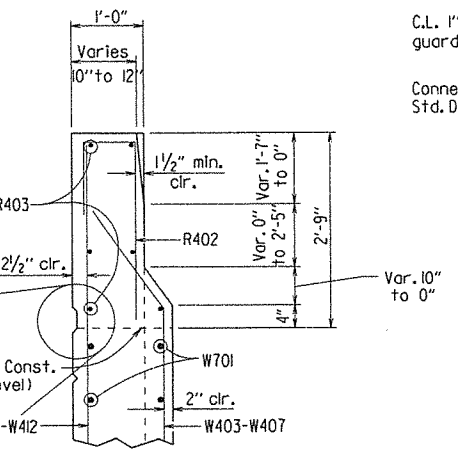
DETAIL OF WELD FOR EXPANSION DEVICE
Looking Ahead - Bent 4, Bent 1 Similar
No Scale



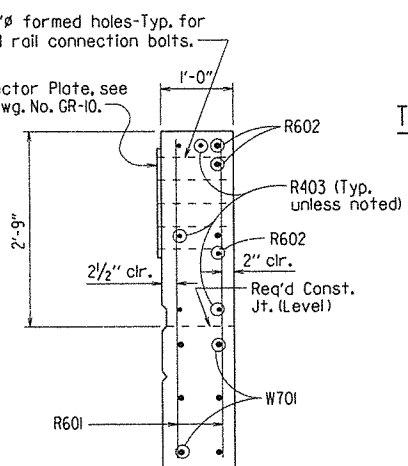
VIEW V-V
3/4" = 1'-0"



SECTION Y-Y
3/8" = 1'-0"

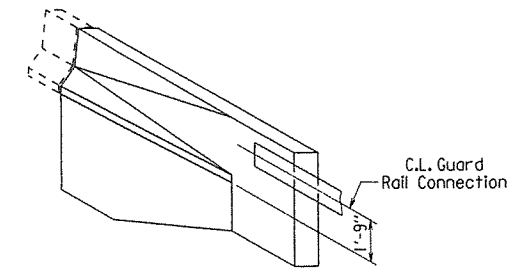


SECTION W-W
3/4" = 1'-0"



SECTION X-X
3/4" = 1'-0"

NOTE: Wing and rail at Bent 1 shall be constructed on curves concentric to C.L. Bridge.



THREE DIMENSIONAL VIEW OF RAIL
No Scale

GENERAL NOTES

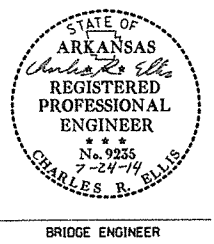
All concrete shall be Class "S" with a minimum 28 day compressive strength $f'_c = 3,500$ psi. Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports. A minimum cover of 2" shall be provided at ends of bars in cap.

Structural steel in end bents shall be M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)".

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts.

For additional information, see Layout.



SHEET 3 OF 3
DETAILS OF END BENTS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

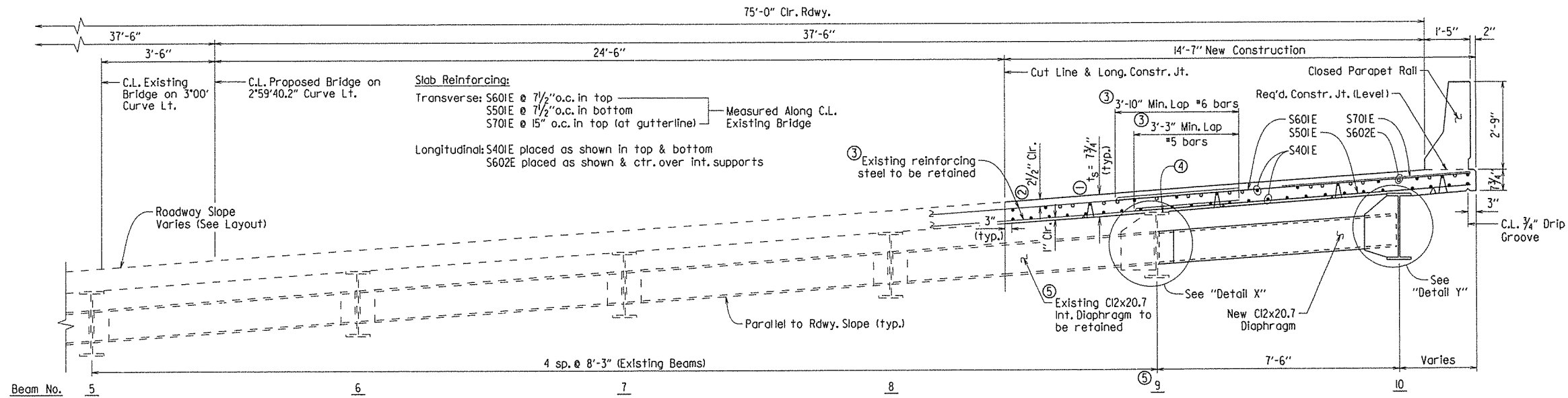
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 CHECKED BY: AMS DATE: 3/7/14 SCALE: AS NOTED
 DESIGNED BY: JYP DATE: 2-14
 BRIDGE NO. 06387 DRAWING NO. 55616

PRINT DATE: 7/23/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	149	311
				① 06387 - SUPERSTRUCTURE - 55618				

NOTE: Class 2 Protective Surface Treatment shall be applied to the Roadway Surface, including the existing deck to remain in place, and to the Face and Top of Concrete Parapet Rail in the New Construction.

NOTE: Bar positions or clearances from forms shall be maintained by means of stays, ties, hangers or other approved devices per Subsection 804.06.



TYPICAL ROADWAY SECTION

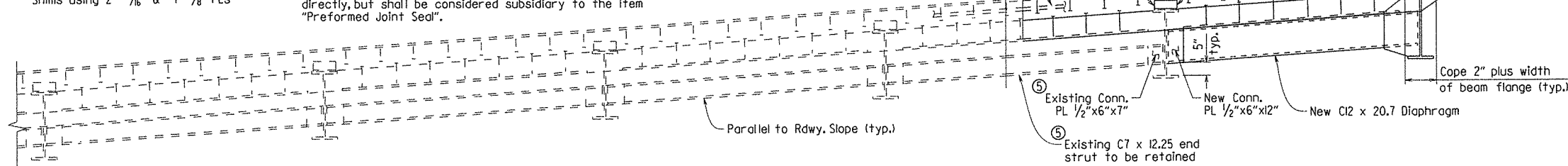
NOTE: Longitudinal lines of the bridge deck, deck reinforcing, and parapet rail are on curves concentric with C.L. Existing Bridge.

Expansion Device:

Rdwy. Conn. Channel - C 15 x 33.9
 Conn. Angle - 7"x4"x1/2"
 Detail Device 1/8" high & provide 1/4" Shims using 2 - 1/16" & 1 - 1/8" PLs

NOTE: Existing Preformed Joint Sealer shall be removed and replaced. For details, see Dwg. No. 55622. Cleaning of existing surfaces for application of new lubrication-adhesive shall be in accordance with manufacturer's recommendations. Payment for removal and cleaning will not be paid for directly, but shall be considered subsidiary to the item "Preformed Joint Seal".

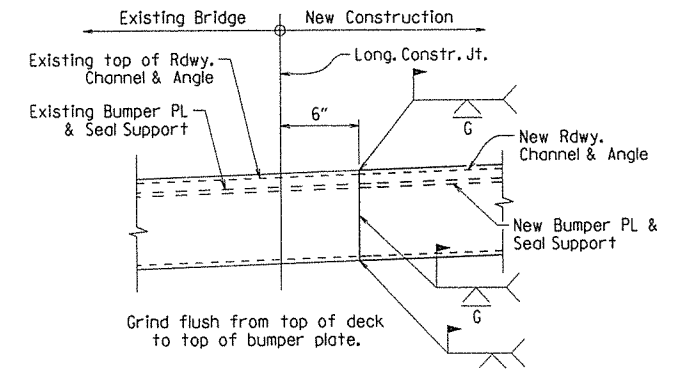
Cut existing Rdwy. Channel and Bumper Plate 6" from construction joint. See "Detail of Weld Location for Expansion Device".



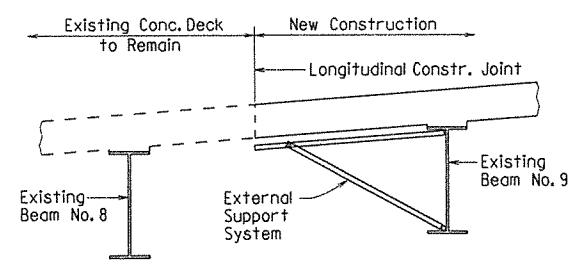
TYP. ROADWAY SECTION THRU JOINT

1/2" = 1'-0" Looking Ahead - Bent 4 Bent 1 Similar

- See "Adjustment for Slab Thickness Tolerance".
- Tolerance: Minus = 1/4"; Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".
- Retain and clean reinforcing steel extending from existing deck and lap with new reinforcing steel as shown. Existing reinforcing steel which is to be incorporated into new construction and is damaged by the Contractor shall be replaced at his expense to the satisfaction of the Engineer. Existing epoxy coating damaged during bridge modification shall be repaired in accordance with Subsection 804.05.
- After deck removal, the existing top of Beam No. 9 and shear studs shall be cleaned. Any damaged shear connectors shall be replaced as directed by the Engineer. This work will not be paid directly but shall be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. 6387)".
- Beam No. 9 and attached end struts and diaphragms shall be temporarily removed for widening the bents. After remodeling of bents is complete, Beam No. 9, end struts and diaphragms shall be re-erected. Any existing bolt that is loosened or removed shall be replaced with a new high-strength bolt.

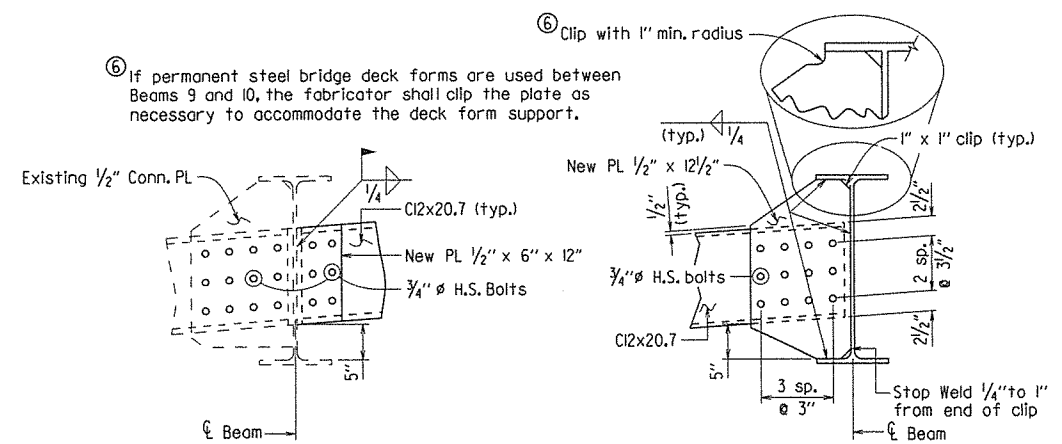


DETAIL OF WELD LOCATION FOR EXPANSION DEVICE
No Scale



External support system with removable deck forms shall be used in this bay. See Subsection 802.15 for additional information regarding their removal. Permanent steel deck forms may be used between Beams 9 and 10.

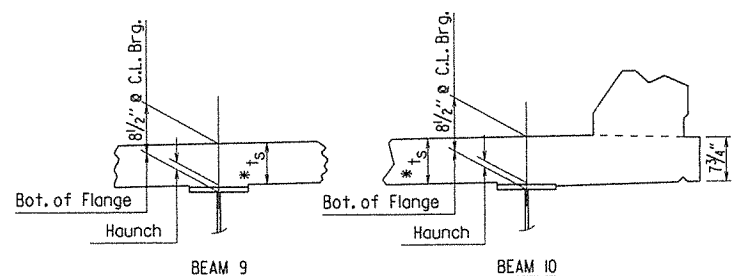
DECK SUPPORT AT LONGITUDINAL CONSTRUCTION JOINT
Looking Ahead
No Scale



DETAIL X
No Scale

Note: Bolts in connections shall be properly installed and tightened in accordance with Subsection 807.71.

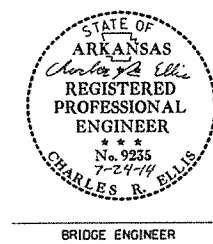
DETAIL Y
No Scale



t_s = slab thickness as shown in "Typical Roadway Section"
 *Tolerance when removable deck forming is used is + 1/2", - 1/4". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE
No Scale

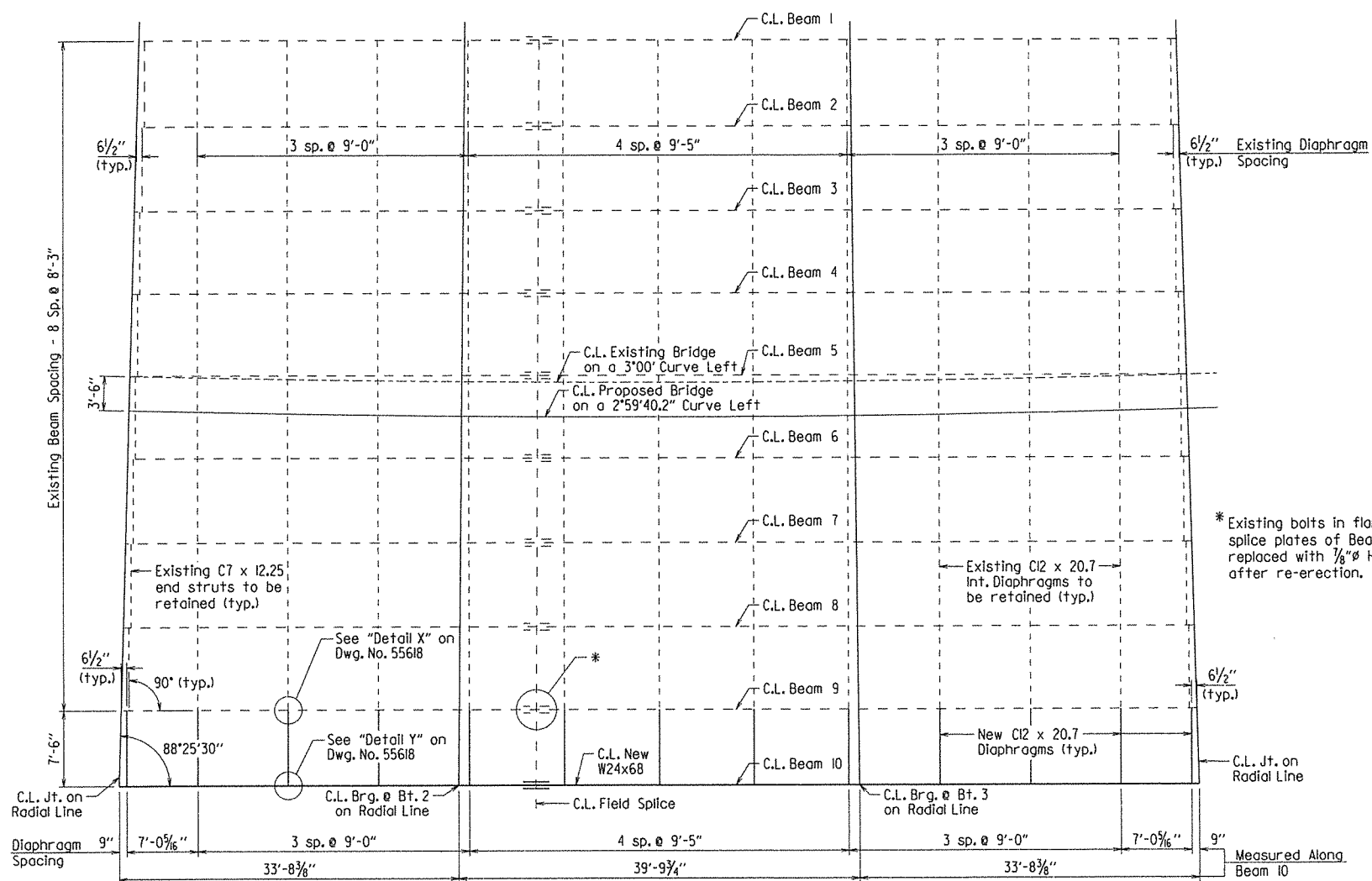
NOTES:
 Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus 1/2". No increase in concrete and structural steel quantities will be made to maintain tolerances.
 Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.



SHEET 1 OF 5
 DETAILS OF
 CONTINUOUS W-BEAM UNIT
 LITTLE CYPRESS CREEK
 ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: ACP DATE: 02-07-14 FILENAME: b012155_sl.dgn
 CHECKED BY: AJS DATE: 3/10/14 SCALE: As Noted
 DESIGNED BY: JYP DATE: 1-14
 BRIDGE NO. 06387 DRAWING NO. 55618

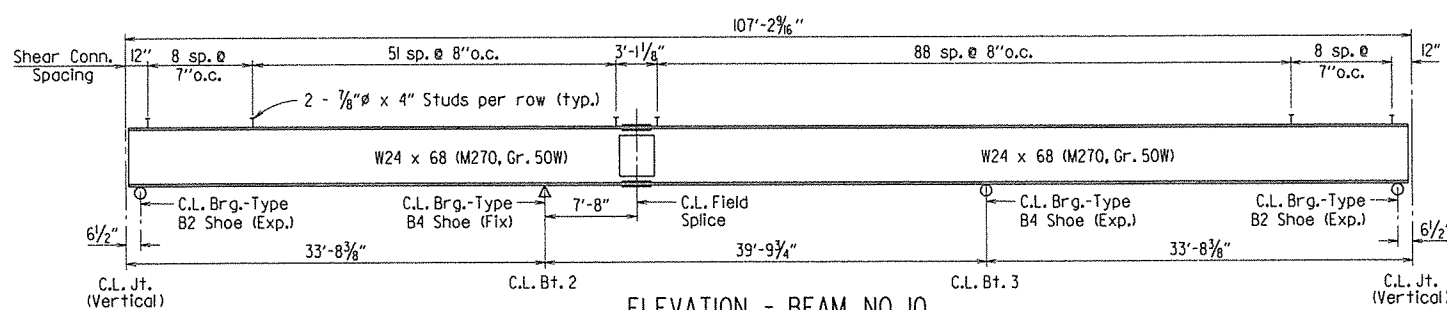
PRINT DATE: 7/24/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	150.311	
				06387 - SUPERSTRUCTURE - 55619				



FRAMING PLAN

NOTE: All Beams are Parallel to a Chord at C.L. Existing Bridge



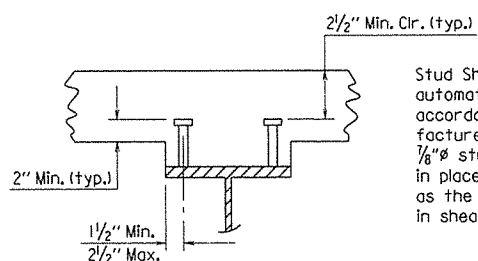
ELEVATION - BEAM NO. 10

N.T.S.

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" inclusive	1/4"	Be
Over 3/4"	5/16"	

Note: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



SHEAR CONNECTOR DETAIL

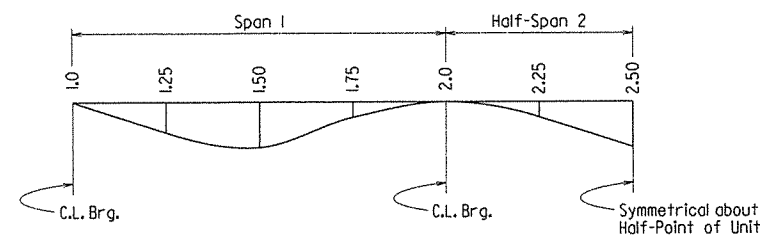
N.T.S.

Stud Shear Connectors shown shall be 3/8" x 4" automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4" studs may be used in place of the 3/8" studs shown at the ratio of 1.361-3/4" studs in place on one 3/8" stud. 3/8" studs will be used as the basis for measurement of structural steel in shear connectors.

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

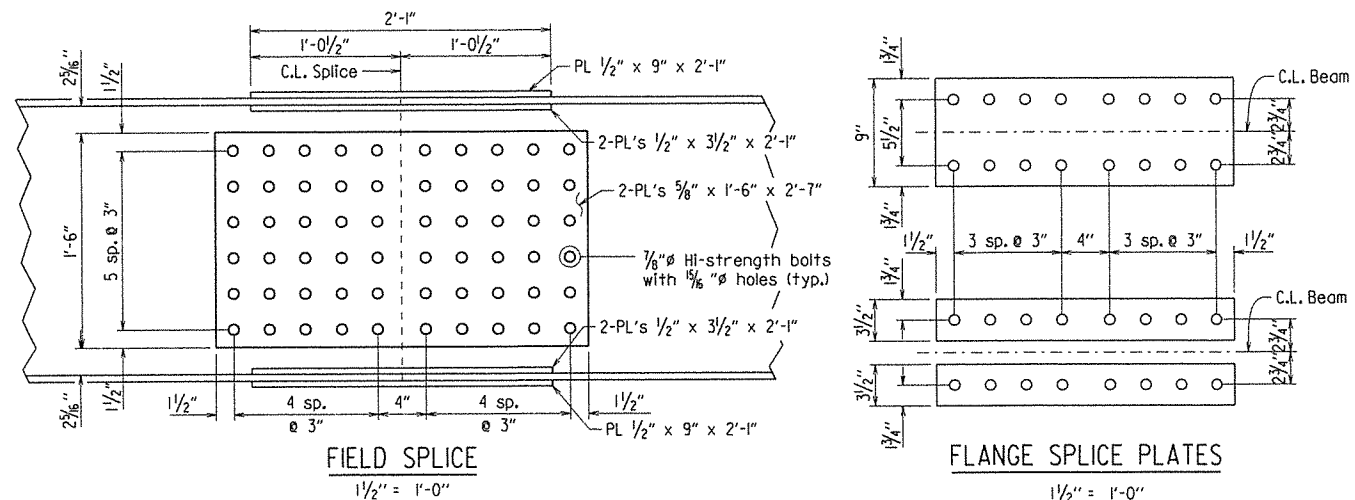
Span	Point of Deflection	New Beam No. 10		
		Structural Steel	Structural Steel + Slab	Str. Steel + Slab + Parapet
Span 1	1.0	0	0	0
	1.25	0	1/16	1/8
	1.50	0	1/8	3/16
	1.75	0	1/8	1/8
Half 2	2.0	0	0	0
	2.25	0	1/16	1/8
	2.50	0	1/8	3/16

Symmetrical about Half-Point of Unit



DEAD LOAD DEFLECTION DIAGRAM

NOTE: Camber for Dead Load Deflection +/- 1/4" tolerance. Deflections shown are along C.L. Beam from the plane perpendicular to the web extending from C.L. Bearing to C.L. Bearing. Vertical curve corrections are not included.



FIELD SPLICE

1/2" = 1'-0"

FLANGE SPLICE PLATES

1/2" = 1'-0"

Notes:
Bolted field splices shown may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of the plan quantities.

All field splice bolts shall be 7/8" HI-strength bolts.
All holes for splice bolts shall be 5/16" ϕ .
All field splice plates shall be AASHTO M270 Gr. 50W steel.



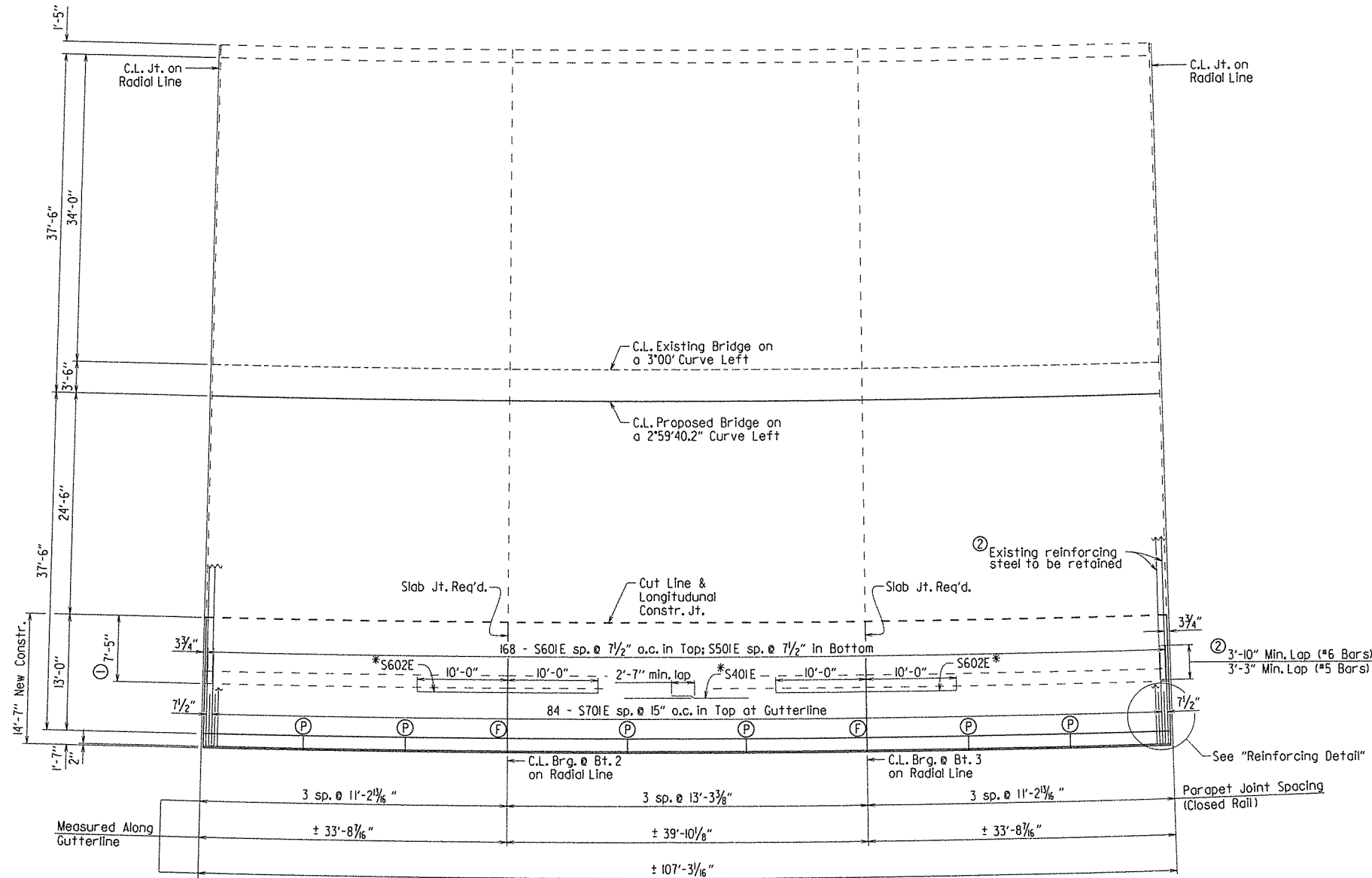
BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF
CONTINUOUS W-BEAM UNIT
LITTLE CYPRESS CREEK

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: ACP DATE: 02-05-14 FILENAME: b012155_sl.dgn
CHECKED BY: ACP DATE: 3/10/14 SCALE: As Shown
DESIGNED BY: JYP DATE: 1-14
BRIDGE NO. 06387 DRAWING NO. 55619

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155	151	311	
				① 06387 - SUPERSTRUCTURE - 55620				



REINFORCING PLAN

1/8" = 1'-0"

- (P) Partial depth parapet joint at this location
- (F) Full depth parapet joint at this location

POURING SEQUENCE NOTES:

The new concrete deck (New Construction) shall be placed in one continuous pour from C.L. Joint to C.L. Joint. The Contractor must obtain approval from the Engineer for any deviations from a continuous pour.

NOTES:

All transverse reinforcing shall be placed on radial lines to C.L. Existing Bridge. Spacing shown is measured along C.L. Existing Bridge.

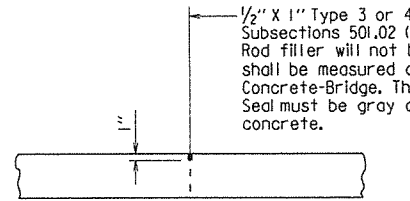
All longitudinal lines and longitudinal reinforcing steel shall be placed on curves concentric with C.L. Existing Bridge. Parapet open joint spacing is measured along the gutterline.

Req'd. slab joints shall align with open joints in parapet rail at the gutterline.

See Dwg. No. 55621 for parapet reinforcing details.

* Place as shown in "Typical Roadway Section" - See Dwg. No. 55618.

- ① Existing deck and rail to be removed in accordance with Section 821.
- ② Transverse reinforcing steel shall be retained and cleaned in accordance with Section 821. New reinforcing bars shall be lapped with existing reinforcing bars using the minimum lap lengths shown. Existing reinforcing which is to be incorporated into New Construction and is damaged by the Contractor shall be replaced at his expense to the satisfaction of the Engineer.



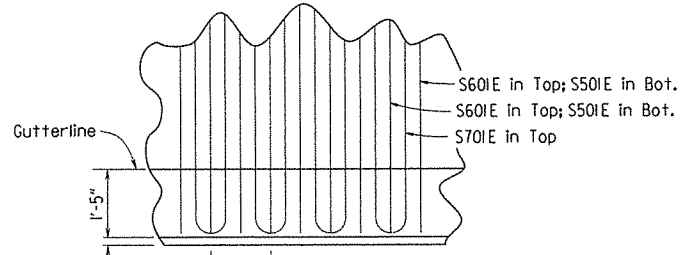
LONGITUDINAL CONSTRUCTION JOINT

No Scale

BAR LIST

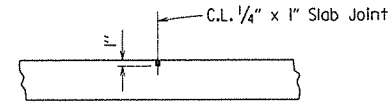
Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
S401E	111	37'-5"	Str.	
S501E	168	10'-5"	Str.	
S601E	168	11'-0"	Str.	
S602E	32	20'-0"	Str.	
S701E	84	11'-8"	6 1/2"	
P401E	219	5'-6"	3"	
P402E	24	5'-7"	Str.	
P403E	42	10'-10"	Str.	
P404E	21	12'-11"	Str.	
P501E	219	4'-11"	3 3/4"	

Note: All bars designated with an "E" are to be epoxy coated.



REINFORCING DETAIL

N.T.S.



SLAB JOINT DETAIL

No Scale

Use Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab Joints shall extend to the outside edge of the deck slab and shall align with open joints at the front face of the parapet. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at required slab joint locations. The joint sealer shall extend across the deck from cut line to the gutterline of the new construction.

SHEET 3 OF 5

DETAILS OF CONTINUOUS W-BEAM UNIT LITTLE CYPRESS CREEK

ROUTE SEC. ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

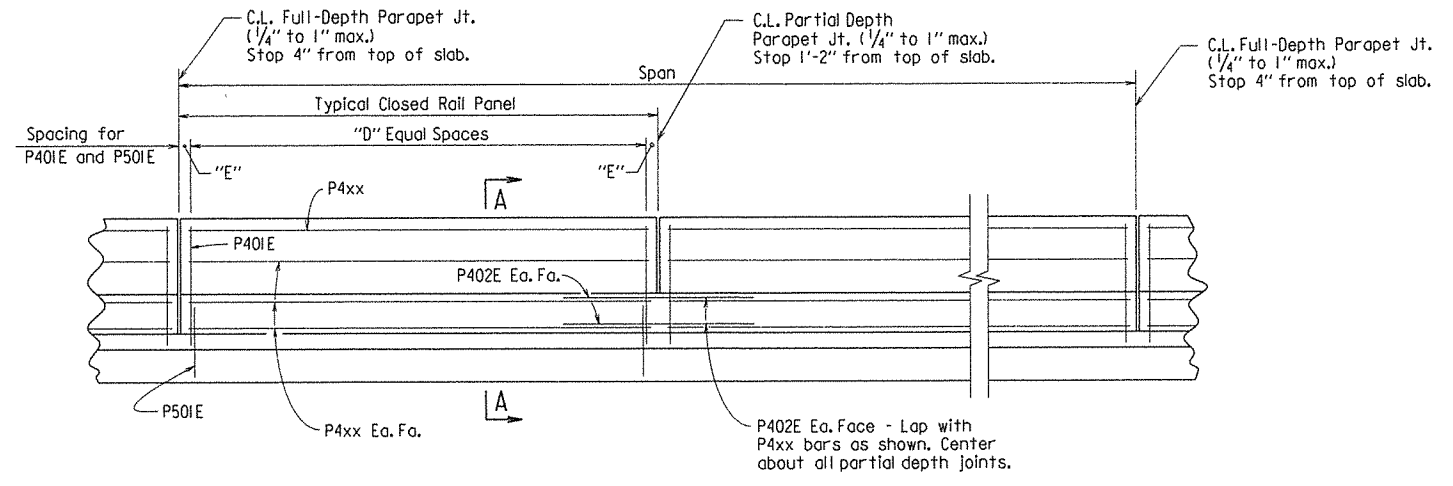


BRIDGE ENGINEER

DRAWN BY: ACP DATE: 02-06-14 FILENAME: b012155_sl.dgn
 CHECKED BY: AHS DATE: 3/10/14 SCALE: As Shown
 DESIGNED BY: JVP DATE: 1-14
 BRIDGE NO. 06387 DRAWING NO. 55620

PRINT DATE: 7/24/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	152	311
				06387 - SUPERSTRUCTURE - 55621				

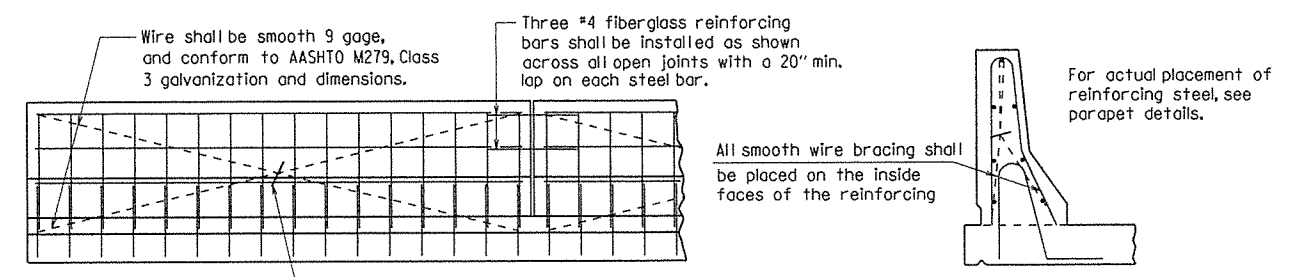
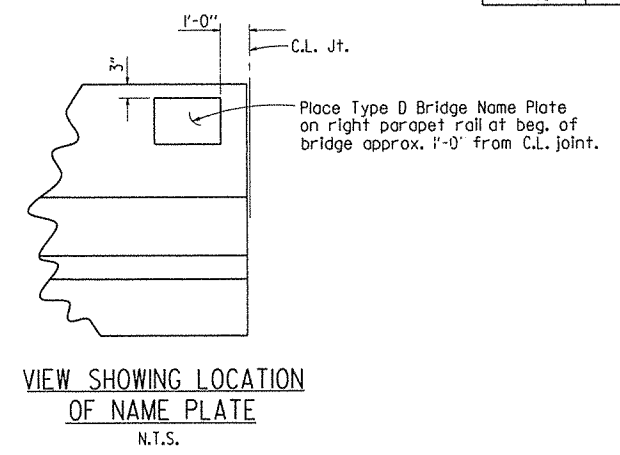
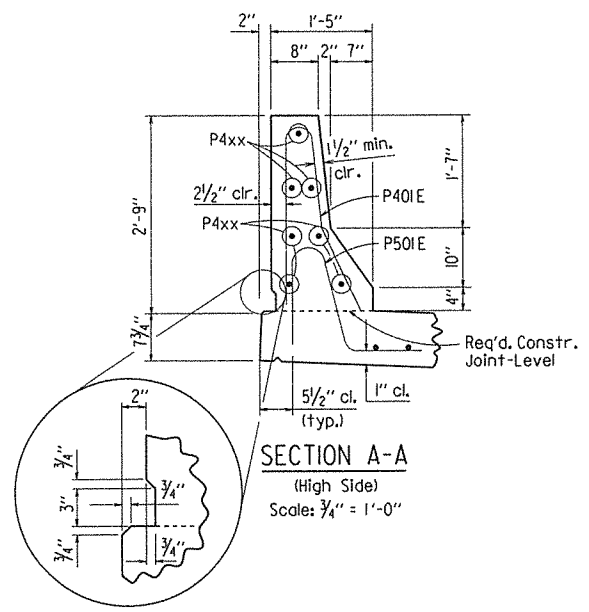


ELEVATION - CONCRETE PARAPET RAIL
Scale: 1/2" = 1'-0"

Note: For location of full and partial depth parapet joints, See Dwg. No. 55620.

TABLE OF VARIABLES

Closed Rail Panels			
Panel Length	"D"	"E"	P4xx Bar
11'-2 1/8"	22	3"	P403E
13'-3 3/8"	26	3"	P404E



All panels shall be braced as required to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

The extruded parapet shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Unless otherwise noted, exposed surfaces may be given a light brush finish or a Class 3 Textured Coating Finish in place of Class 2 Rubbed Finish.

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, Seventeenth Edition (2002).

MATERIALS AND STRENGTHS:
Class S(AE) Concrete $f'_c = 4,000$ psi
Reinforcing Steel (Gr. 60, AASHTO M31 or M322, Type A) $f_y = 60,000$ psi
Structural Steel (M 270, Gr. 50W) $F_y = 50,000$ psi
Structural Steel (M 270, Gr. 36) $F_y = 36,000$ psi

CONCRETE:
Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" unless otherwise noted. All concrete shall be Class S(AE) with a minimum 28 day compressive strength $f'_c = 4,000$ psi.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 55005 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

Concrete in the bridge deck widening shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The concrete deck widening shall be given a fine finish in accordance with Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. A minimum of 72 hours shall elapse between the completion of the slab and the pouring of the railing.

The use of a longitudinal screed is prohibited.

REINFORCING STEEL:
All new reinforcing steel shall be Grade 60 conforming to AASHTO M31 or M322, Type A, with mill test reports. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel (Grade 60)."

STRUCTURAL STEEL:
All new structural steel shall be AASHTO M 270, Grade 50W unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (M 270, Gr. 50W)". Grade 50W steel shall not be painted. All exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). Structural steel completely embedded in concrete may be AASHTO M 270, Grade 36 unless otherwise noted.

Drawings show general features of design only. Shop drawings shall be made in accordance with Subsection 807.04, submitted and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

The new beam and field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and materials will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr.50W)".

The new beam shall be assembled in the shop as specified in Subsection 807.54 and blocked in its true position. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60 degrees F. A tolerance of 1/4" +/- is allowed for camber.

Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

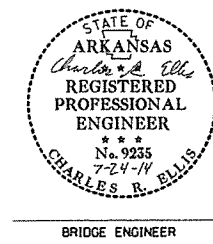
All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. All welding shall conform to Subsection 807.26.

Field connections shall be bolted with high-strength bolts and shall be 3/4" bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam webs and on the bottom of the beam flanges. Holes for 3/4" high-strength bolts may be 5/8" diameter if a washer is supplied for use under both the nut and head of the bolt.

Diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck unless otherwise noted.

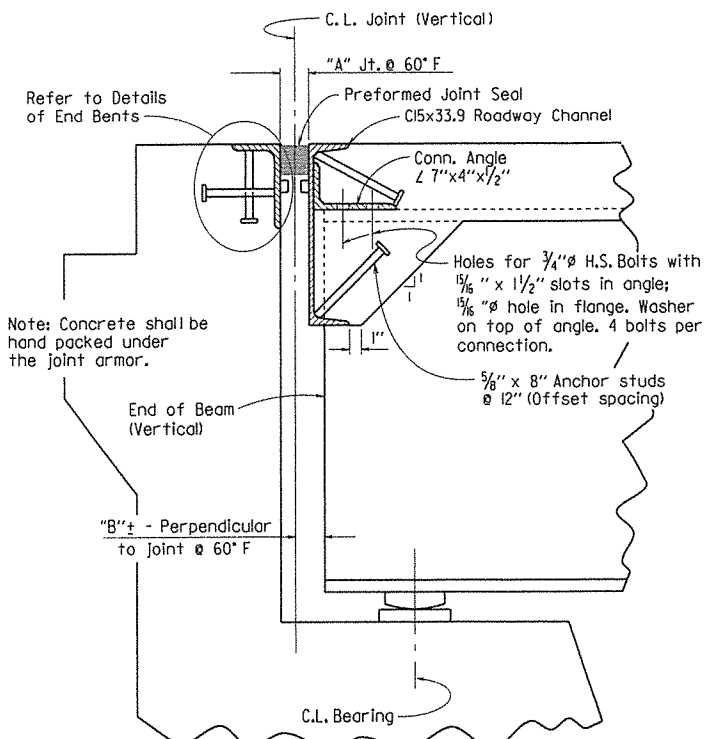
All stud shear connectors shall be granular flux-filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the Manufacturer.

Bearings shall be seated in accordance with Subsection 807.66. This work and material are to be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50W)" and will not be paid for directly.

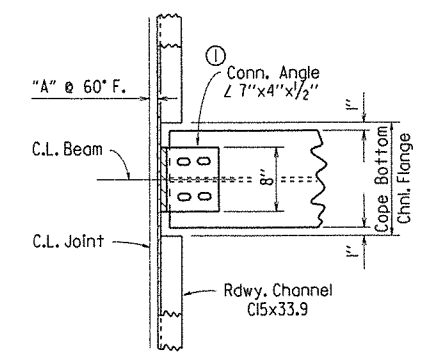


SHEET 4 OF 5
DETAILS OF
CONTINUOUS W-BEAM UNIT
LITTLE CYPRESS CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: ACP DATE: 02-11-14 FILENAME: b012155_sl.dgn
CHECKED BY: AJS DATE: 3/10/14 SCALE: As Noted
DESIGNED BY: JYP DATE: 1-14
BRIDGE NO. 06387 DRAWING NO. 55621

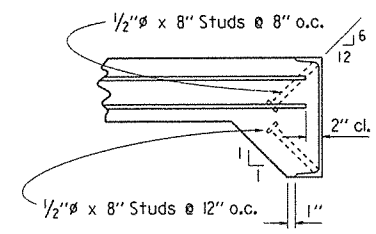
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	153	311
① 06387 - SUPERSTRUCTURE - 55622								



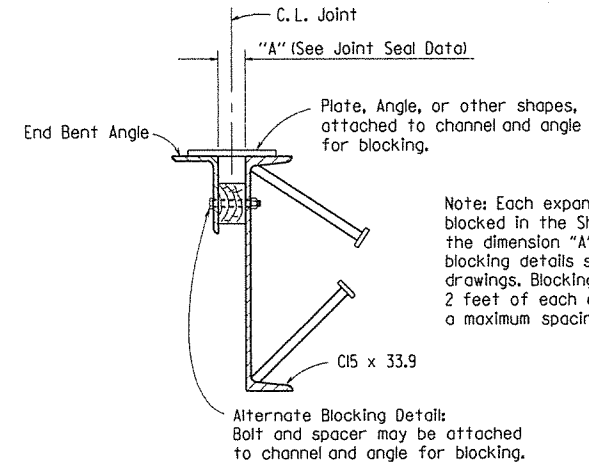
SECTION THRU JOINT AT END BENT
(BEAMS 9 AND 10)



CHANNEL CONNECTION DETAIL
① Before fabrication, the Contractor shall verify the locations of the holes in the flanges of existing Beam No. 9 so as to properly align with slots in the connection angles.



Note: As an alternate to 5/8'' studs, 1/2'' x 8'' studs spaced as shown may be used. Use weight of 5/8'' stud as basis of measurement of structural steel in anchors.
DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT



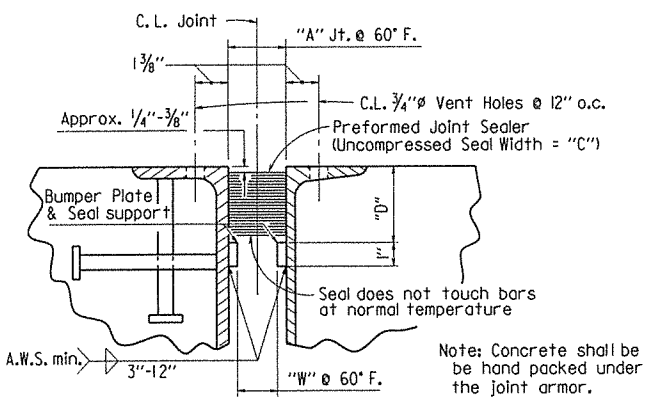
DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

EXPANSION DEVICE INSTALLATION AT END BENTS:
The Contractor may elect to install the expansion device using one of the following two alternatives:
1) The concrete deck shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete. Immediately prior to pouring the backwall concrete, the blocking shall be removed, and the opening adjusted to match the grade and existing joint width.
2) The backwall shall be poured to the optional construction joint after beams are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted to match the grade and existing joint width.

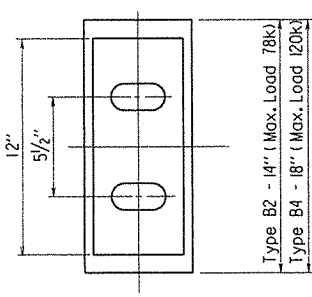
PREFORMED JOINT SEAL DATA

Bent No.	"A" Width Perpendicular to Joint at 60' F.*	"B" Perpendicular To Joint @ 60' F.	"C" Uncompressed Seal Width	"W" Width Between Plates @ 60' F.	*"D"	Bumper Plate Size
1	1"	1 3/4" ±	1 5/8"	1/4"	2 3/8"	1" x 3/8"
4	1 5/8"	2 1/8" ±	2 1/2"	5/8"	3 3/8"	1" x 1/2"

* The temperature limitations recommended by the lubricant - adhesive manufacturer shall be observed.
** Contractor shall verify dimension prior to fabrication of structural steel and joint seal.



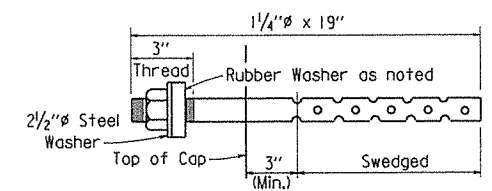
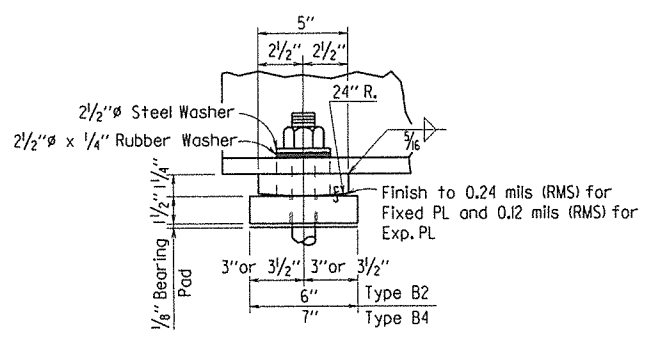
DETAIL OF PREFORMED JOINT SEAL & SUPPORT



FIXED SHOE: 1 1/2'' Holes in Sole Plate, Masonry Plate & Beam Flange.
EXPANSION SHOE: 3" x 1 1/2'' Slot in Sole Plate & Beam Flange; 1 1/2'' Holes in Masonry Plate.

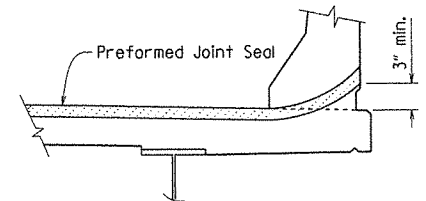
TYPE "B" FIXED OR EXP. SHOE

Type B Shoes shall conform to AASHTO M270, Gr. 50W.
New Type B Shoe and Anchor Bolts shall be provided for Existing Beam No. 9 at all bents.

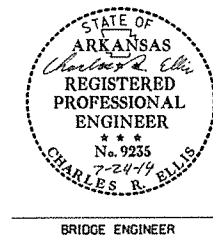


Notes: Anchor Bolt, Nut and Washer to be according to Subsection 807.07. Indentations shall be circular with rounded bottoms and staggered as shown above. Rubber Washer shall be closed cell expanded rubber, meeting the requirements of ASTM D1056-85 2B2 E2, and shall be considered subsidiary to the item of Structural Steel.
All anchor bolts shall be Grade 36.

ANCHOR BOLT DETAIL



JOINT SEAL PLACEMENT AT CURB

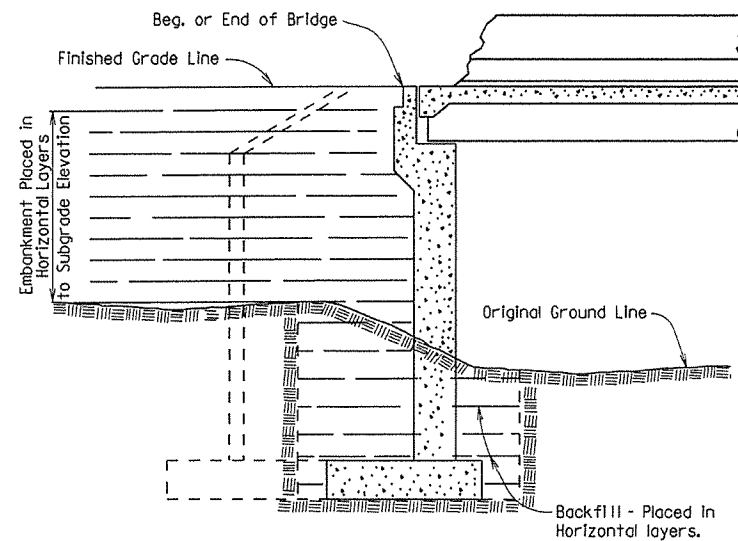


SHEET 5 OF 5
DETAILS OF
CONTINUOUS W-BEAM UNIT
LITTLE CYPRESS CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

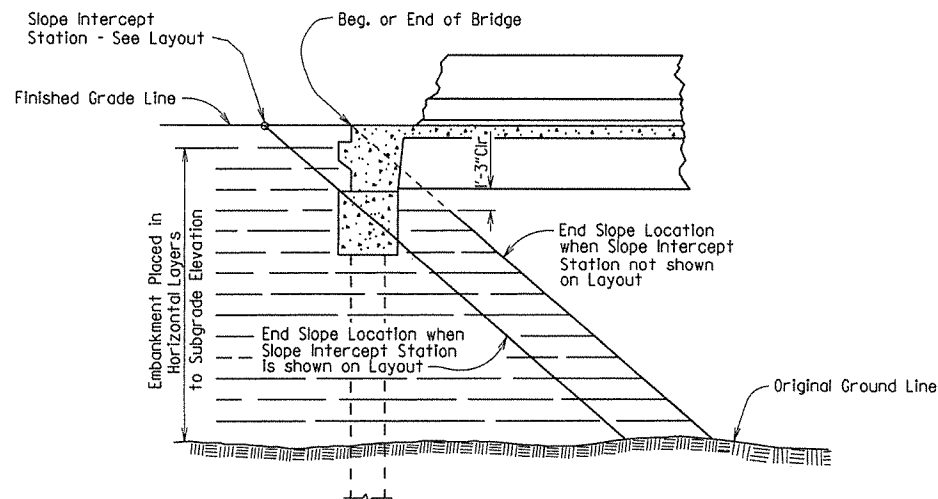
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CHECKED BY: JYS DATE: 3/10/14 SCALE: No Scale
DESIGNED BY: JYP DATE: 1-74
BRIDGE NO. 06387 DRAWING NO. 55622

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		154	
							JOB NO.	

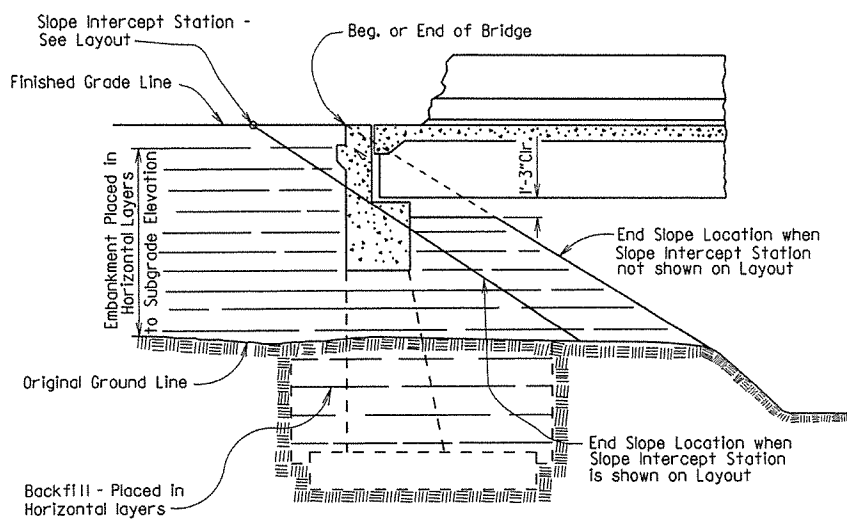
① EMBANKMENT & BACKFILL 55000



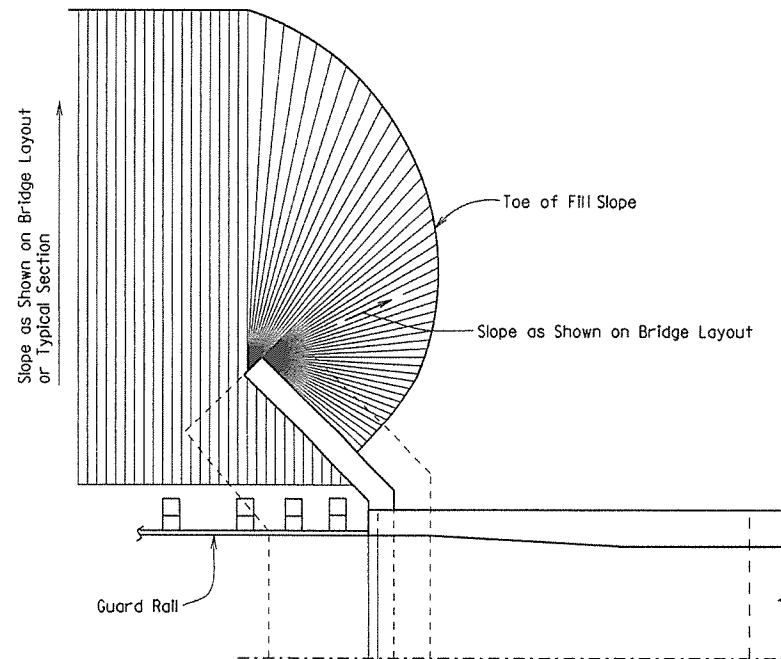
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



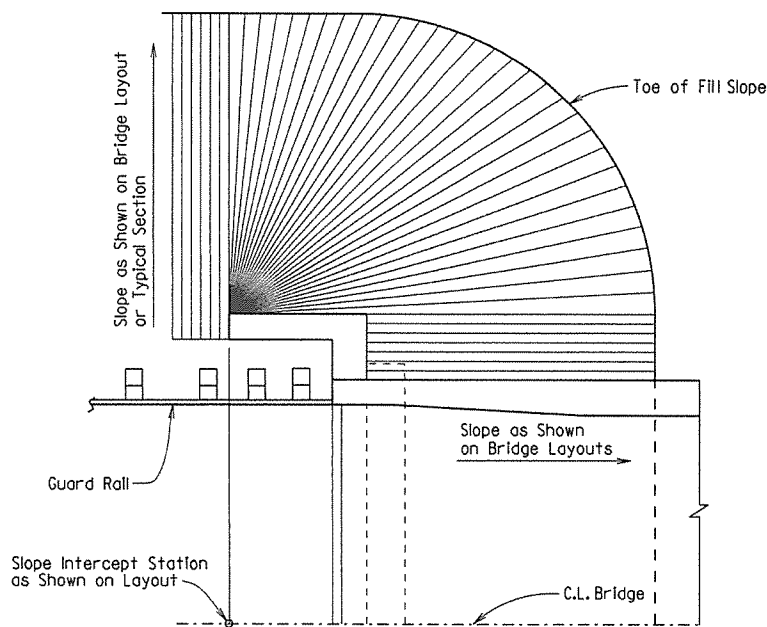
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



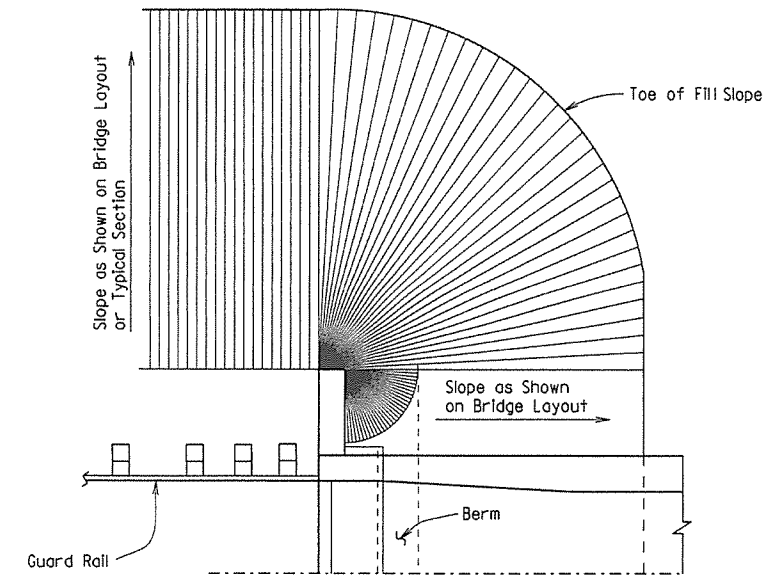
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



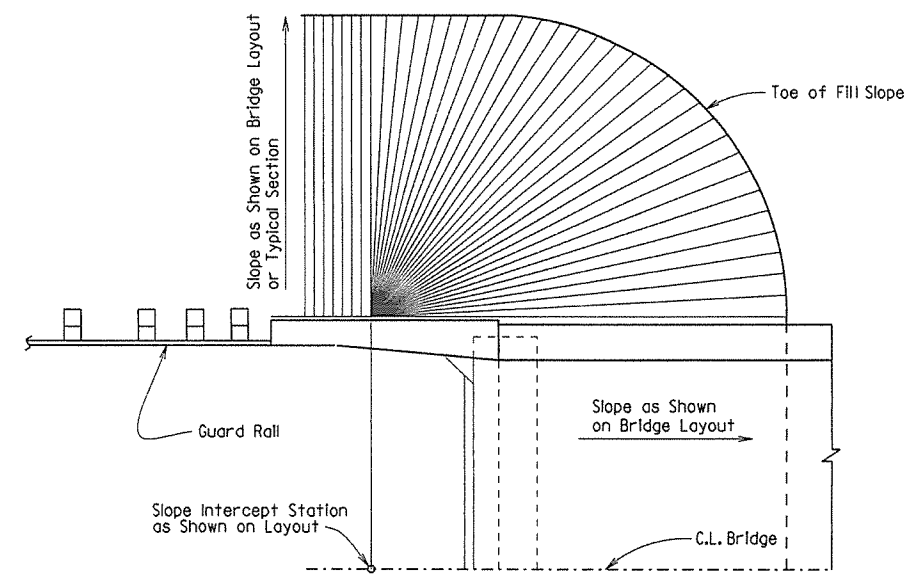
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

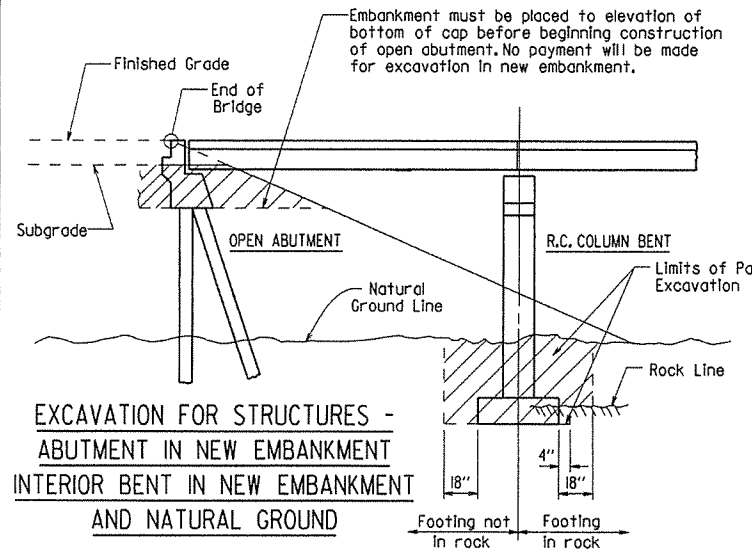
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

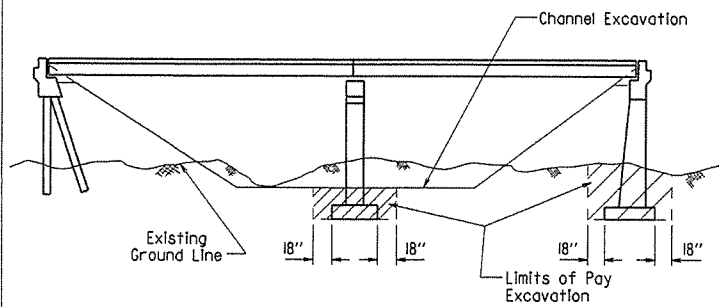
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 CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
 DESIGNED BY: STD. DATE: -

DRAWING NO. 55000

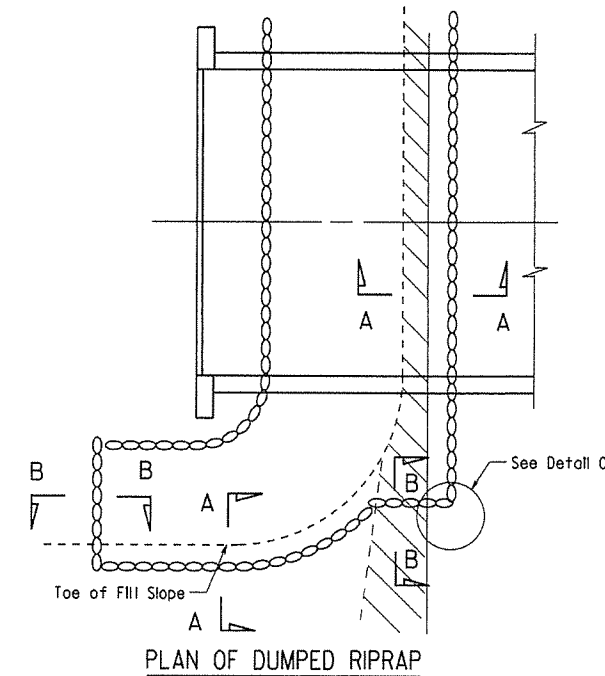
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		155	
				JOB NO.		RIPRAP & EXCAV. 55001		



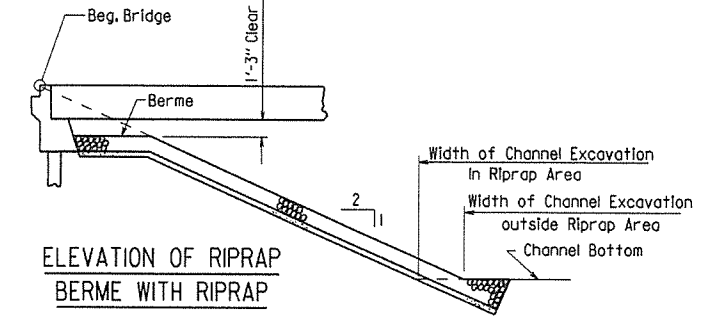
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



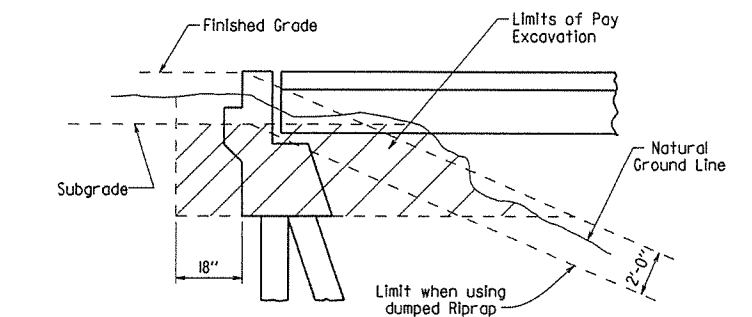
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



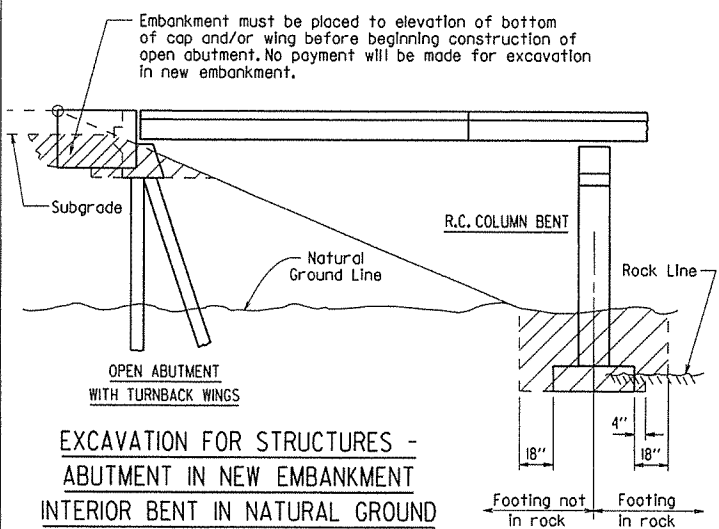
PLAN OF DUMPED RIPRAP



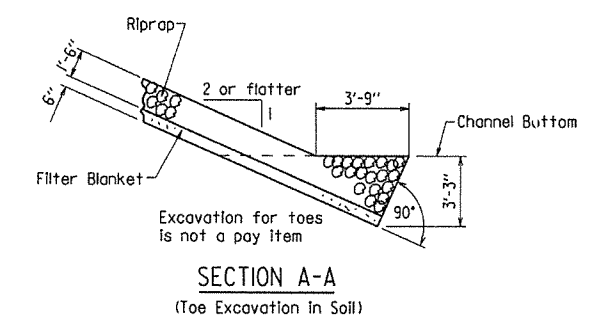
ELEVATION OF RIPRAP BERME WITH RIPRAP



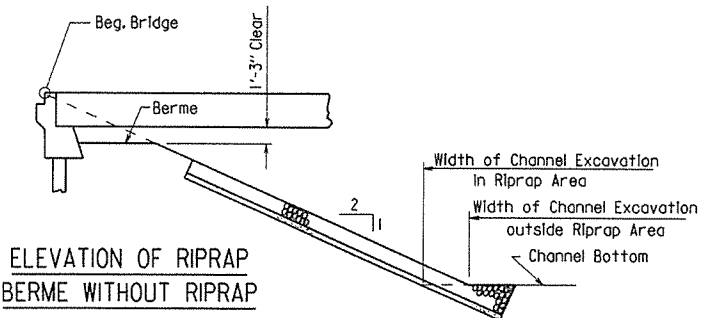
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



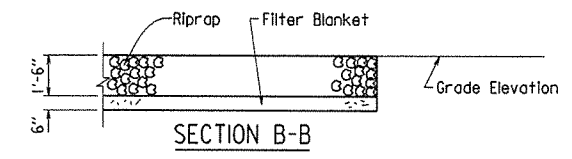
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT WITH TURNBACK WINGS INTERIOR BENT IN NATURAL GROUND



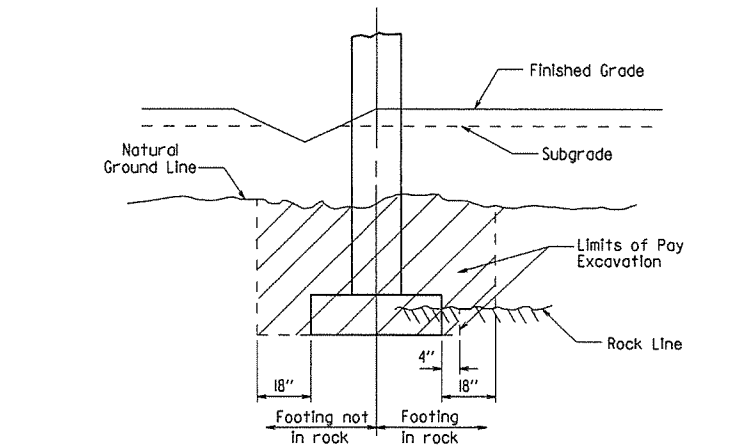
SECTION A-A (Toe Excavation in Soil)



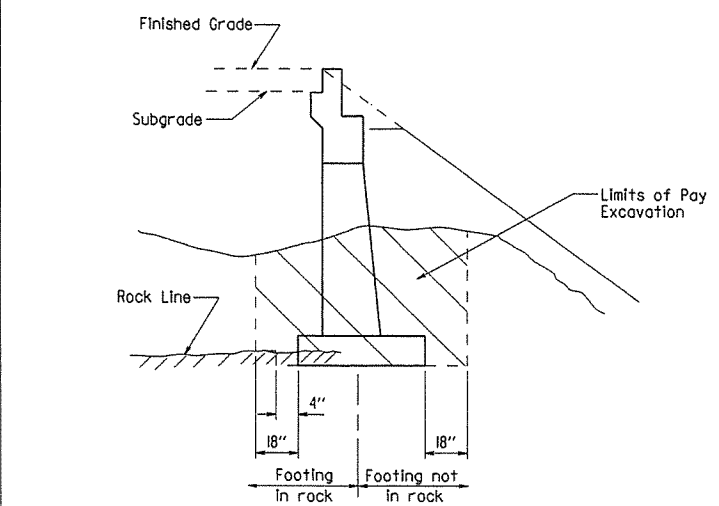
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



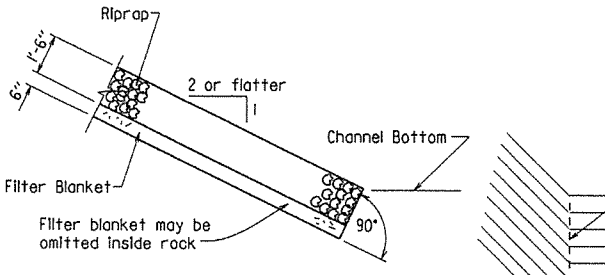
SECTION B-B



EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

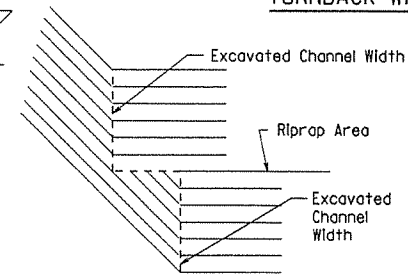


SECTION A-A (Toe Excavation in Rock)

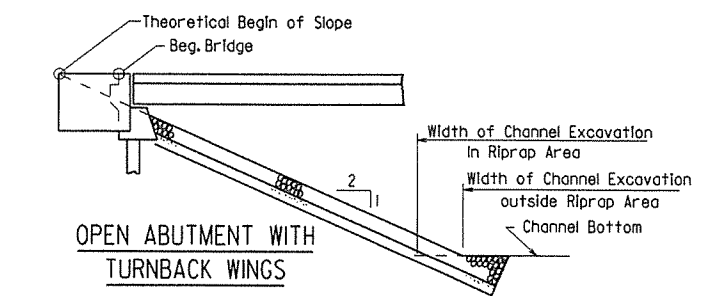
Note: Use this type of toe when rock is encountered which is in a stable condition.

Note: In lieu of an aggregate filter blanket, a synthetic fiber geotextile fabric complying with the requirements of Subsection 816.02(e) may be used.

Note: Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



DETAIL C



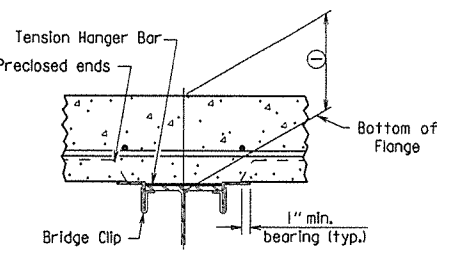
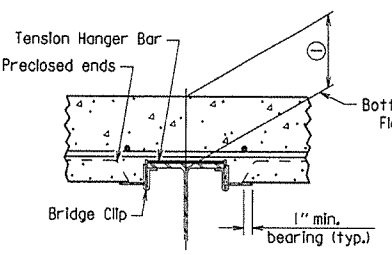
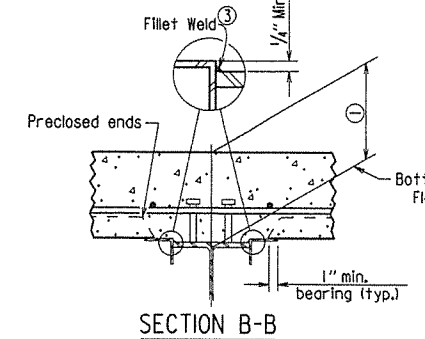
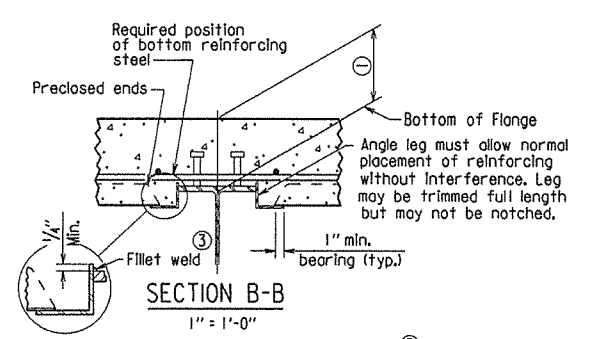
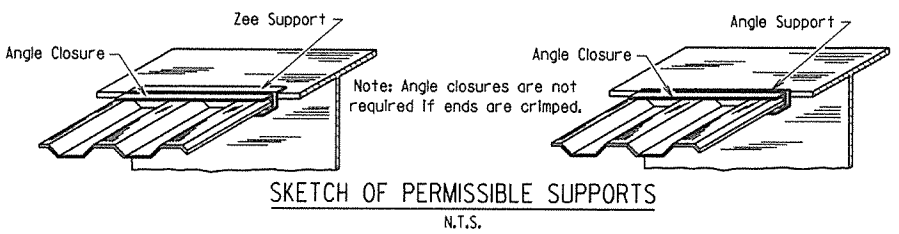
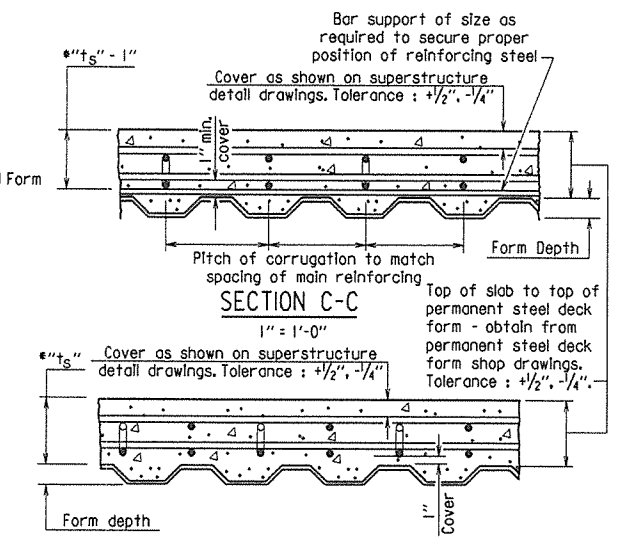
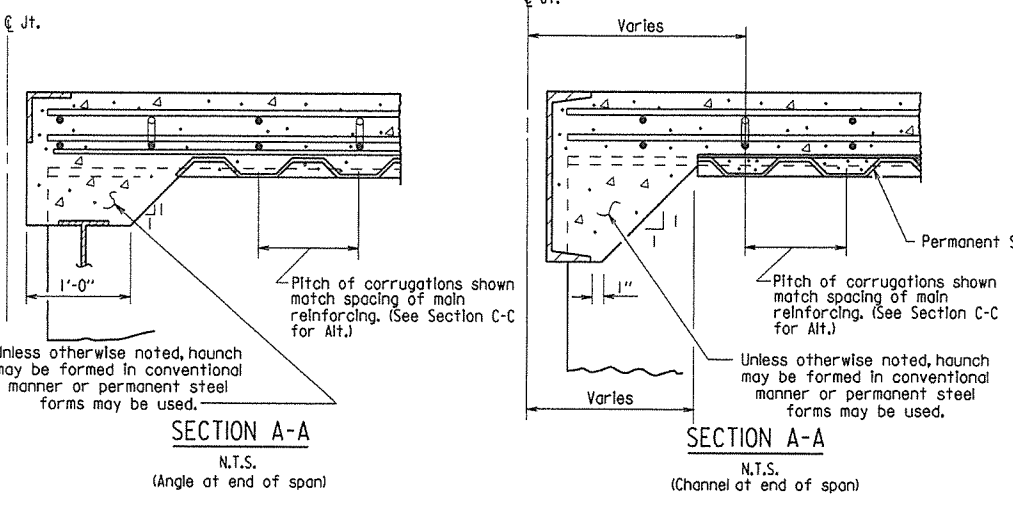
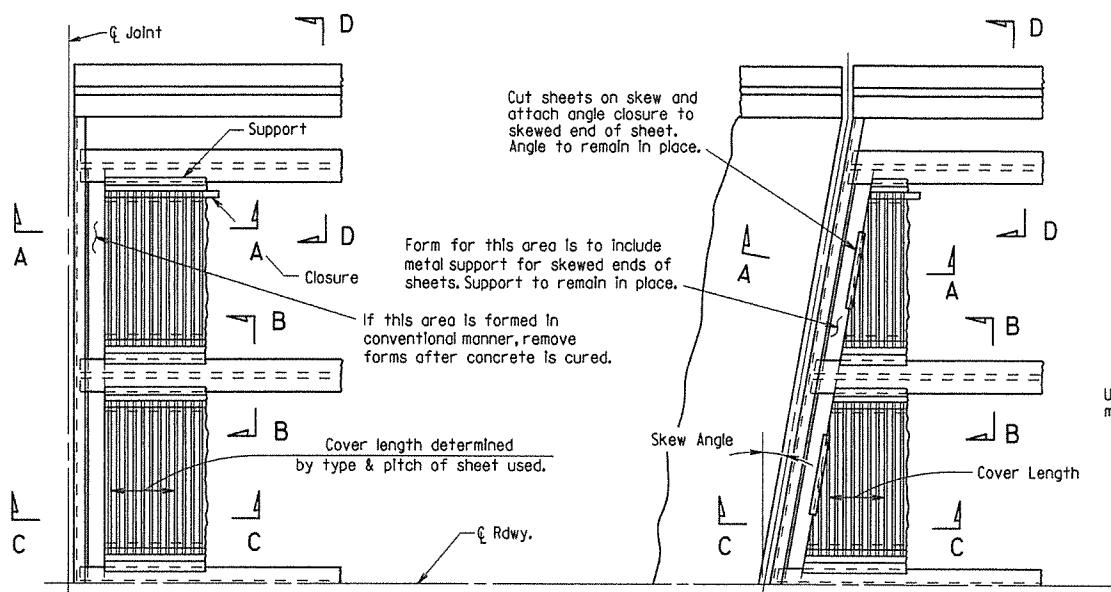
OPEN ABUTMENT WITH TURNBACK WINGS

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55001.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		156	
JOB NO.							BRIDGE DECK FORMS	55005



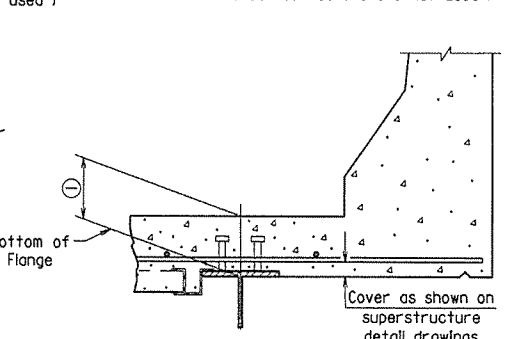
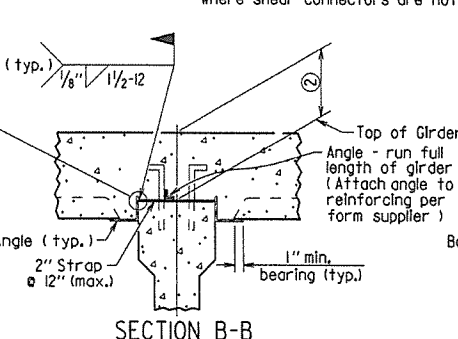
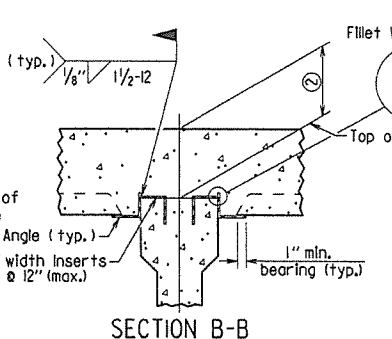
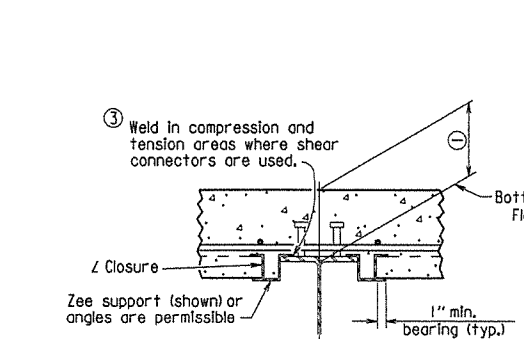
(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

③ Minimum weld: 1/8" x 1' @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)

(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)

(Showing permissible support for tension flange where shear connectors are not used)

(Showing permissible support for tension flange where shear connectors are not used)



(Showing Z Closure)

(Showing support by insert cast in girder)

(Showing support by Strap)

Note: Only Bottom Reinforcing is shown.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances: Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = $t_s + 1 1/4"$ + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances: Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

* t_s = slab thickness as shown on superstructure detail drawings.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.14(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or L supports to the flange must be approved by the Engineer.

Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.

STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

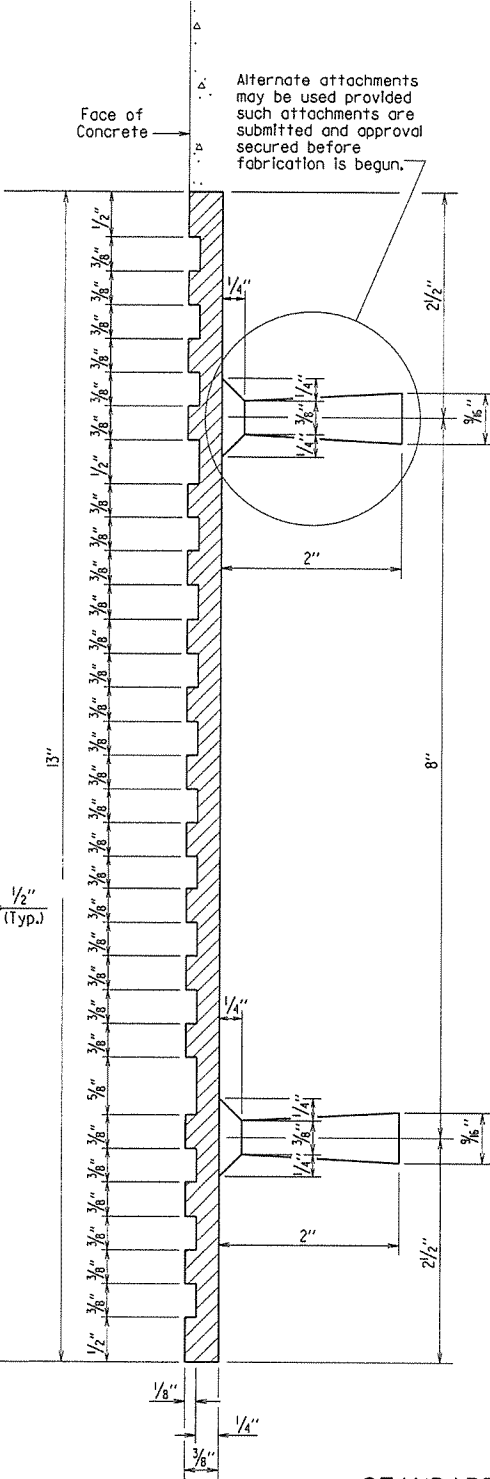
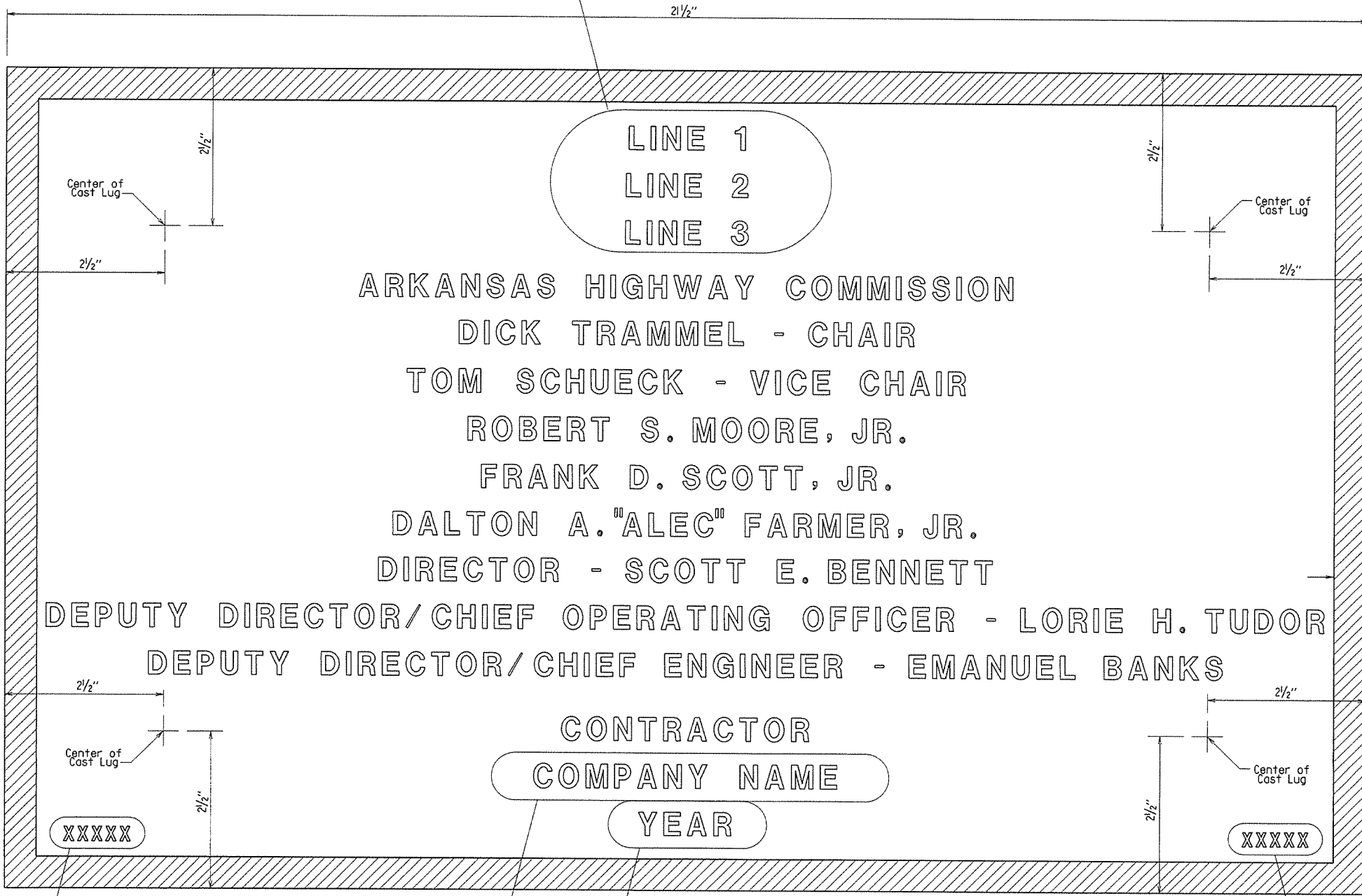
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55005.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NONE
DESIGNED BY: STD. DATE: _____

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-1-14				6	ARK.		157	
1-14-15								
JOB NO.							TYPE D NAME PLATE 55010	

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

Line	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern	Saline	
Line 2	Relief	Railroad	River	Highway 5
Line 3		Overpass	Relief	



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be 1/4" thick and shall include four tapering cone lugs 3/8" to 5/8" x 2" long. The border and all lettering shall be raised 1/8" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

Place the design live loading here using 1/8" raised letters and numerals 1/4" high. Examples: HS 20 HL-93

Place the Year in which Contract was awarded here using 1/8" raised numerals 3/8" high. Example: 2001

Place the name of the company awarded the construction contract here using 1/8" raised letters and numerals 3/8" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using 1/8" raised letters and numerals 1/4" high. Examples: A1234 05432

- ▲ Revised Chair and Vice Chair Added New Commissioner
1-14-15 KDH Checked By: CRE
- ▲ Revised Deputy Director/Chief Engineer Added Deputy Director/Chief Operating Officer
12-1-14 KDH Checked By: CRE

TYPICAL BRIDGE NAME PLATE

STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: _____
DRAWING NO. 55010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		158	
JOB NO.							STEEL H-PILES	55020

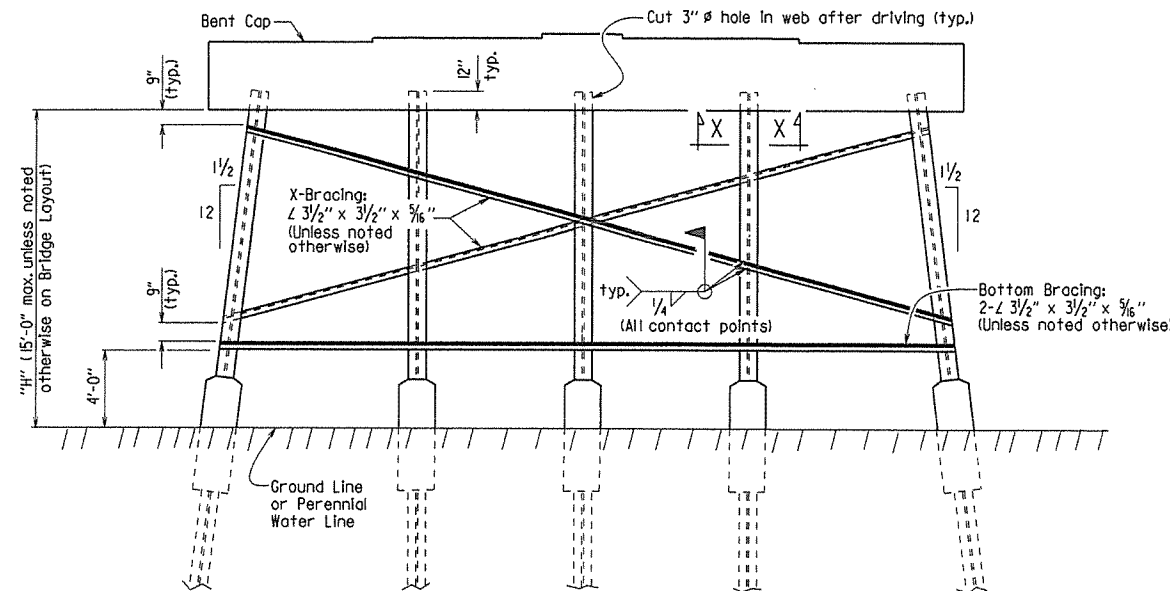
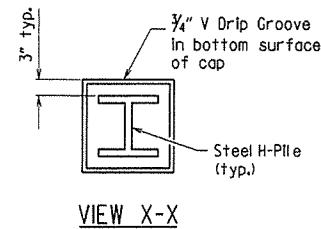
GENERAL NOTES FOR STEEL H-PILES:

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 805.02.

Brackets, lugs, cap plates, pile tips, driving points, pile painting, splicing and welding shall not be paid for directly, but shall be considered subsidiary to the Item "Steel Piling".



Notes:

All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under Item 807.

Unless noted otherwise, omit X-Bracing when "H" is less than 8 feet.

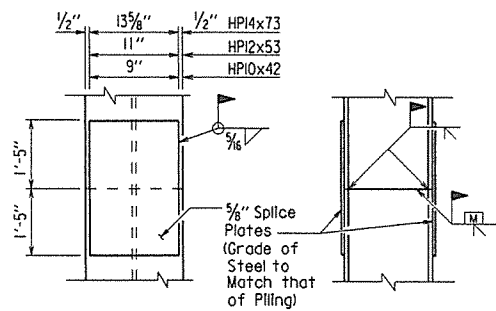
Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

When required on the Bridge Layout sheet, pile encasements shall be constructed. See Notes and Details for H-Pile Encasements.

Omit all bracing (and V-groove in cap) when pile encasement is extended to bottom of bent cap.

TYPICAL DETAILS OF H-PILE TRESTLE INTERMEDIATE BENT

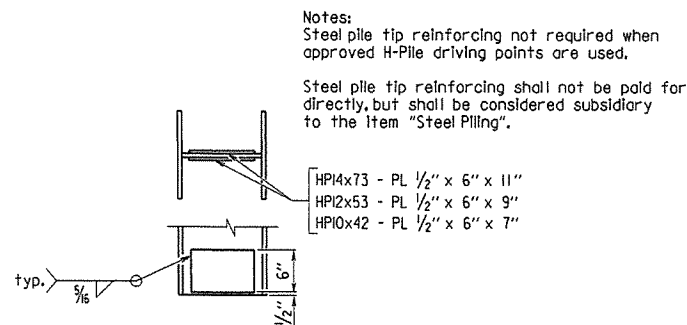
(Shown with Partial Height Encasement)



Note:

The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

TYPICAL SPLICE DETAILS



Notes:

Steel pile tip reinforcing not required when approved H-Pile driving points are used.

Steel pile tip reinforcing shall not be paid for directly, but shall be considered subsidiary to the Item "Steel Piling".

- HPI4x73 - PL 1/2" x 6" x 11"
- HPI2x53 - PL 1/2" x 6" x 9"
- HPI0x42 - PL 1/2" x 6" x 7"

REINFORCING DETAIL FOR STEEL H-PILE TIP

GENERAL NOTES FOR H-PILE ENCASEMENTS:

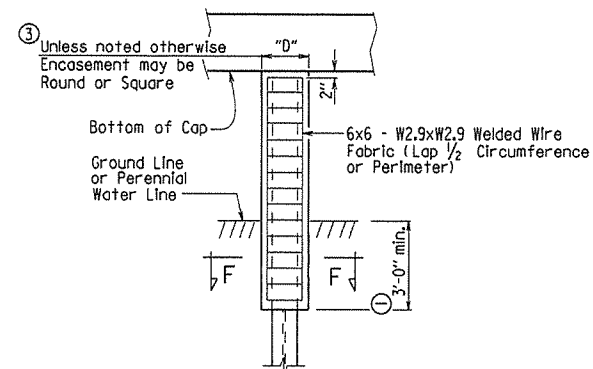
See Bridge Layout for additional notes and required location of pile encasements.

All concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

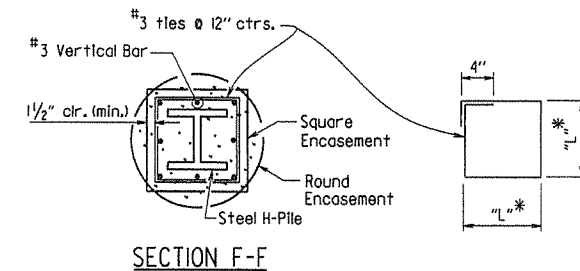
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

Concrete, welded wire fabric or reinforcing steel and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the Item "Pile Encasement".



PILE ENCASEMENT DETAIL FOR STEEL H-PILES

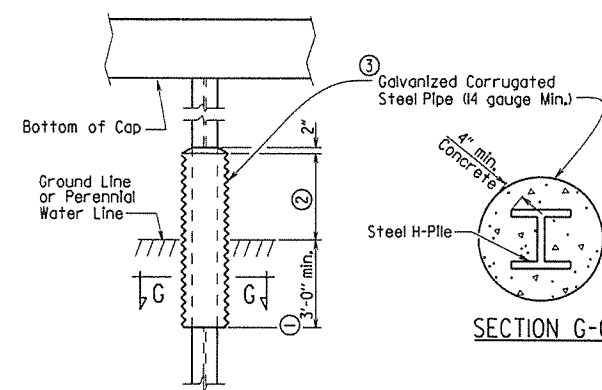
(Shown with Encasement to Bottom of Cap)



* Measured out-to-out of bar.

TABLE OF VARIABLES FOR PILE ENCASEMENT

Pile Size	"D"		"L"*
	Square Encsmt.	Round Encsmt.	
HPI0x42	1'-7"	2'-0"	1'-4"
HPI2x53	1'-8"	2'-2"	1'-5"
HPI4x73	1'-11"	2'-6"	1'-8"



ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL H-PILES

(Shown with Partial Height Encasement)

① Unless otherwise noted on Bridge Layout.

② 3'-0" minimum or as shown on Bridge Layout.

③ Encasement dimensions shall be sized to maintain a minimum concrete cover of 4" from the H-Pile. Reinforcement shall be sized to provide a minimum concrete cover of 1 1/2" and a minimum clearance of 1 1/4" from the pile.

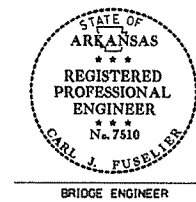
④ Alternate pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the Partial Height Encasement detail.

⑤ Alternate pile encasement may not be allowed. See Bridge Layout.

STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55020.dgn
CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: --

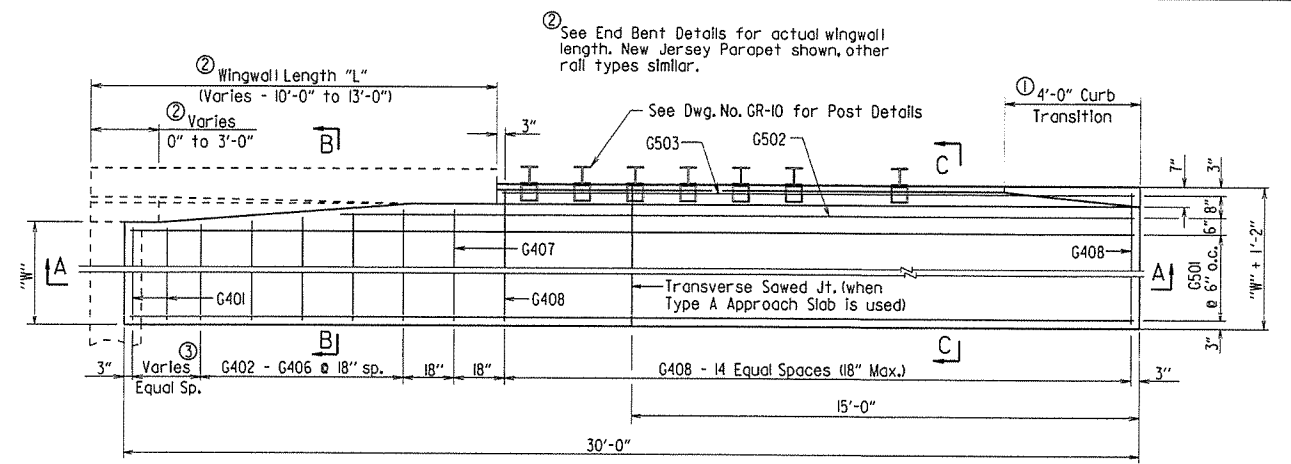


This document was originally issued and sealed by Carl J. Fuseller, PE No. 7510, on February 27, 2014. This copy is not a signed and sealed document.

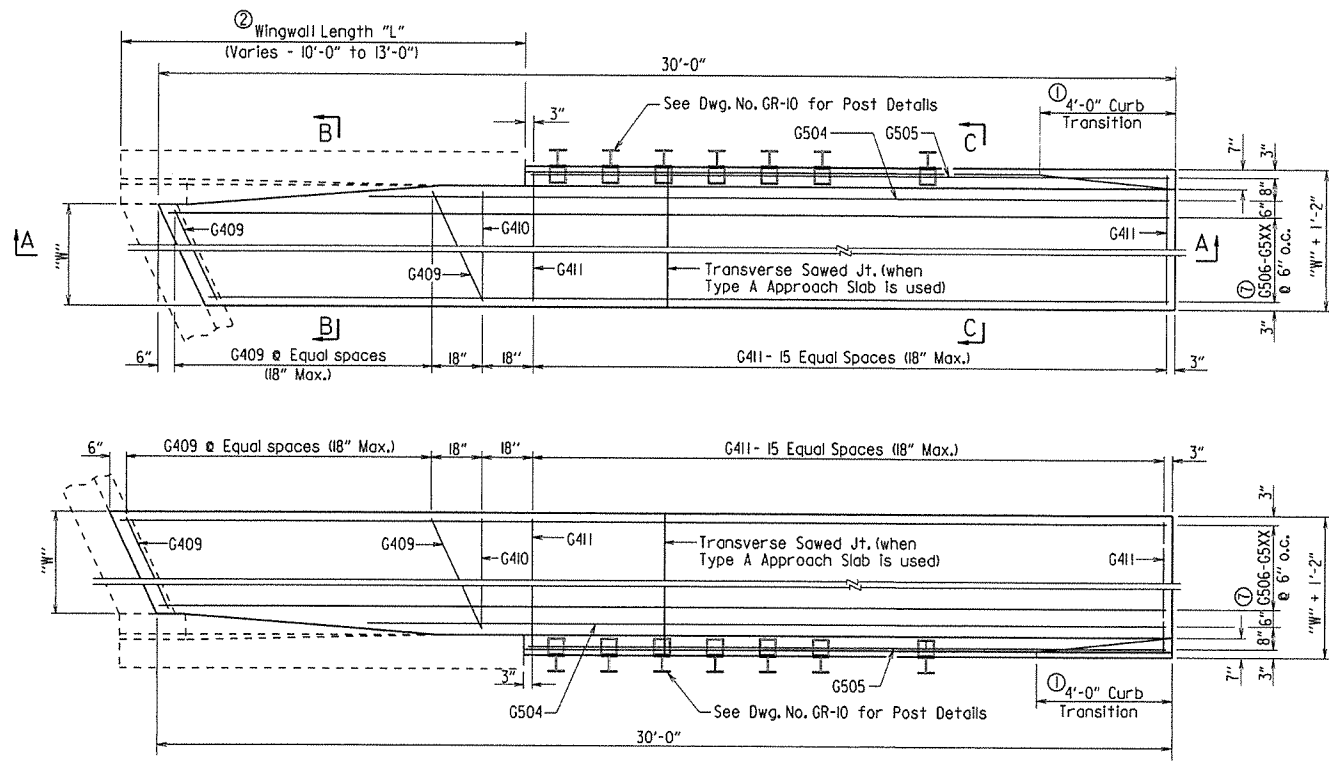
BRIDGE ENGINEER

DRAWING NO. 55020

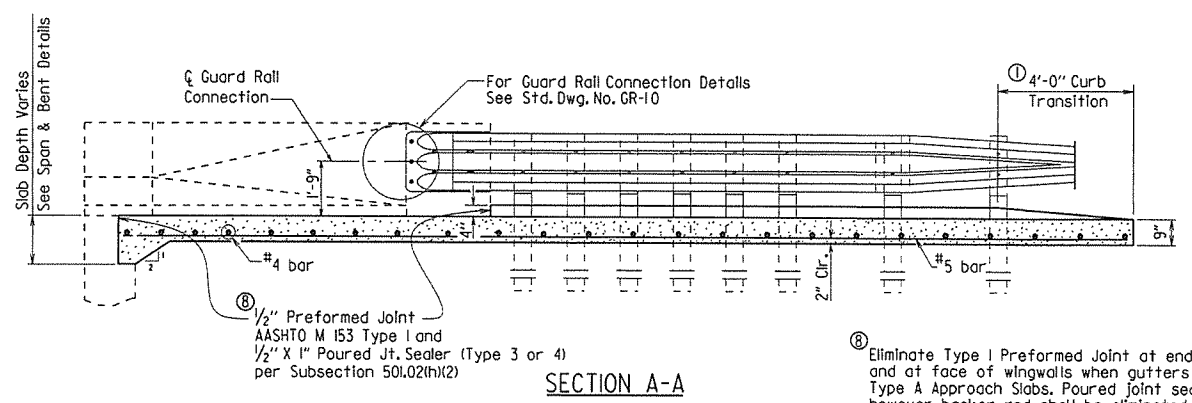
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/2/15				6	ARK.		159	
JOB NO.							TYPE A GUTTERS	55030A



③ Number of G401 bars vary with wingwall length - See Bar List
HALF PLAN OF APPROACH GUTTERS FOR SQUARE BRIDGE

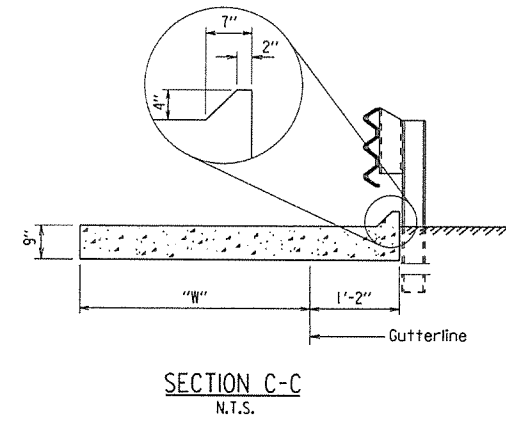
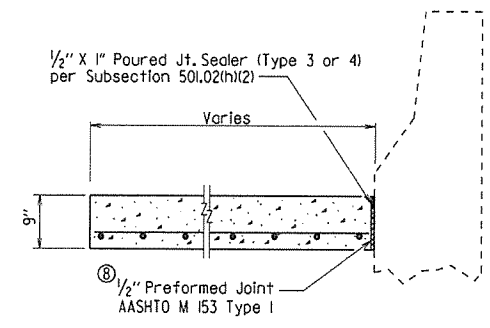


PLAN OF APPROACH GUTTERS FOR SKEWED BRIDGE



⑧ Eliminate Type I Preformed Joint at end bent backwall and at face of wingwalls when gutters used with Type A Approach Slabs. Poured joint sealer is required, however backer rod shall be eliminated.

① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.
 Construct gutter curb full height (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



Note:
 All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

△ Revised to add "W" = 2'-0"; By LJB
 Checked By: K.W.Y. 9/2/15

BAR LIST FOR ONE TYPE A GUTTER

Mark	No. Req'd. for Width "W"					Length
	2'-0"	3'-0"	4'-0"	6'-0"	8'-0"	
G401	④	④	④	④	④	"W" - 4"
G402-G406	1 each	1 each	1 each	1 each	1 each	"W" - 3" to "W" + 2"
G407	1	1	1	1	1	"W" + 3"
G408	15	15	15	15	15	"W" + 10"
G501	4	6	8	12	16	29'-8"
G502	1	1	1	1	1	(35'-5") - "L"
G503	1	1	1	1	1	30'-8" - "L"
G409	⑥	⑥	⑥	⑥	⑥	⑤
G410	1	1	1	1	1	"W" + 3"
G411	16	16	16	16	16	"W" + 10"
G504	1	1	1	1	1	⑤
G505	1	1	1	1	1	⑤
G506-G5XX	1 each	1 each	1 each	1 each	1 each	⑤

- ④ 0 for "L" = 10'
1 for "L" = 11'
2 for "L" = 12'
2 for "L" = 13'
- ⑤ Bar Lengths vary with Skew and Wingwall Length.
- ⑥ No. Req'd. varies with Skew and Wingwall length.
- ⑦ G509 for "W" = 2' △
G511 for "W" = 3'
G513 for "W" = 4'
G517 for "W" = 6'
G521 for "W" = 8'

QUANTITIES FOR ONE SQUARE APPROACH GUTTER
 (FOR INFORMATION ONLY)

"W" Width (ft.)	Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
2	210	2.55
3	285	3.40
4	360	4.25
6	515	5.90
8	665	7.55

Quantities are based on "L" = 10'-0".

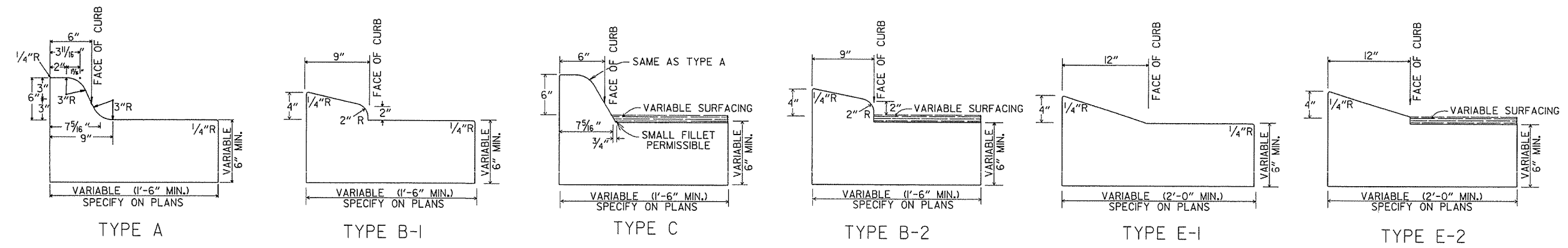
GENERAL NOTES

All concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement and shall be poured in the dry.
 All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.
 Approach Gutters will be measured and paid for in accordance with Section 504.

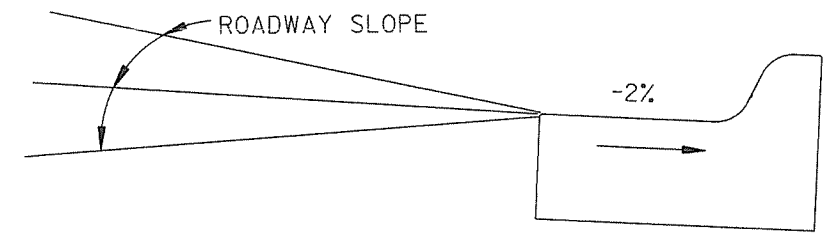
STANDARD DETAILS FOR TYPE A APPROACH GUTTERS

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

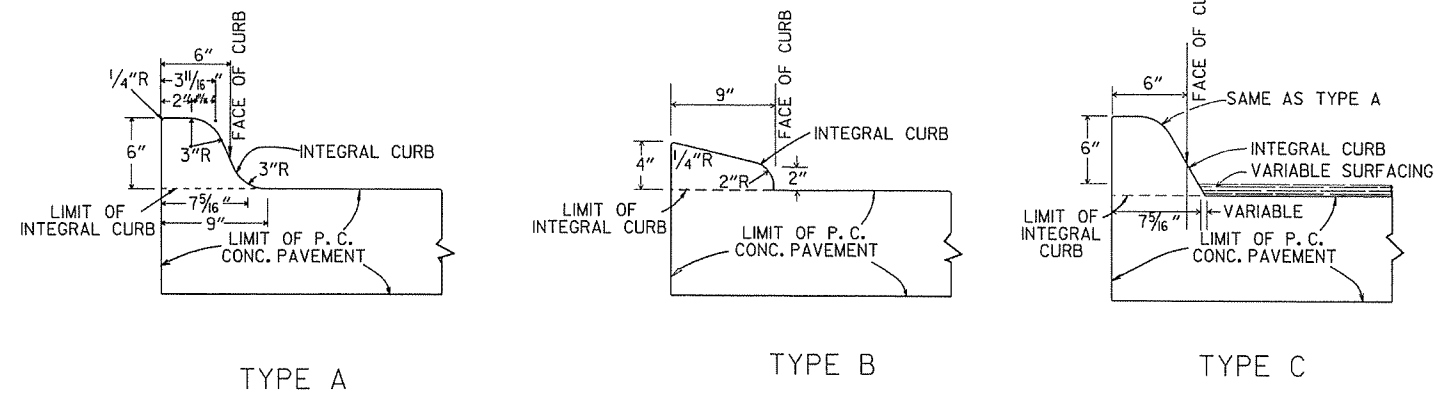
DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55030a.dgn
 CHECKED BY: K.W.Y. DATE: 2/27/2014 SCALE: 3/8" = 1'-0"
 DESIGNED BY: STD. DATE: _____ or As Shown
 DRAWING NO. 55030A



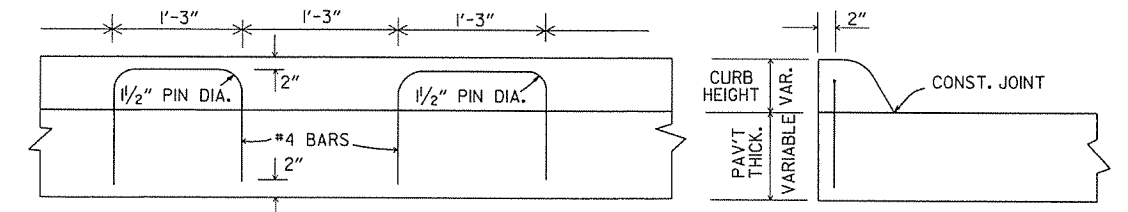
CONCRETE COMBINATION CURB AND GUTTER



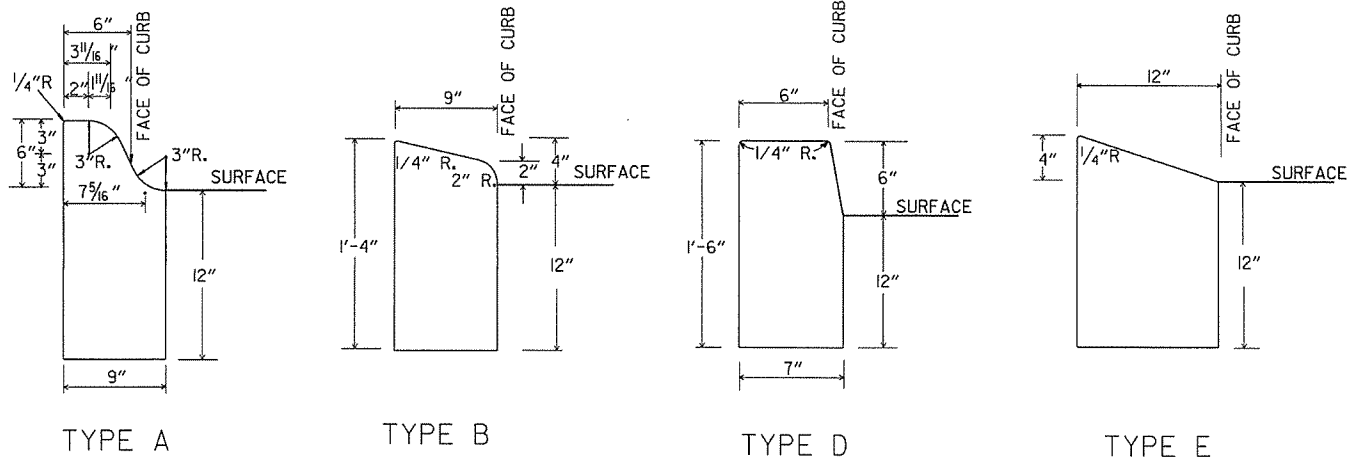
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



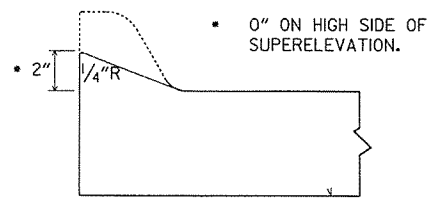
INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

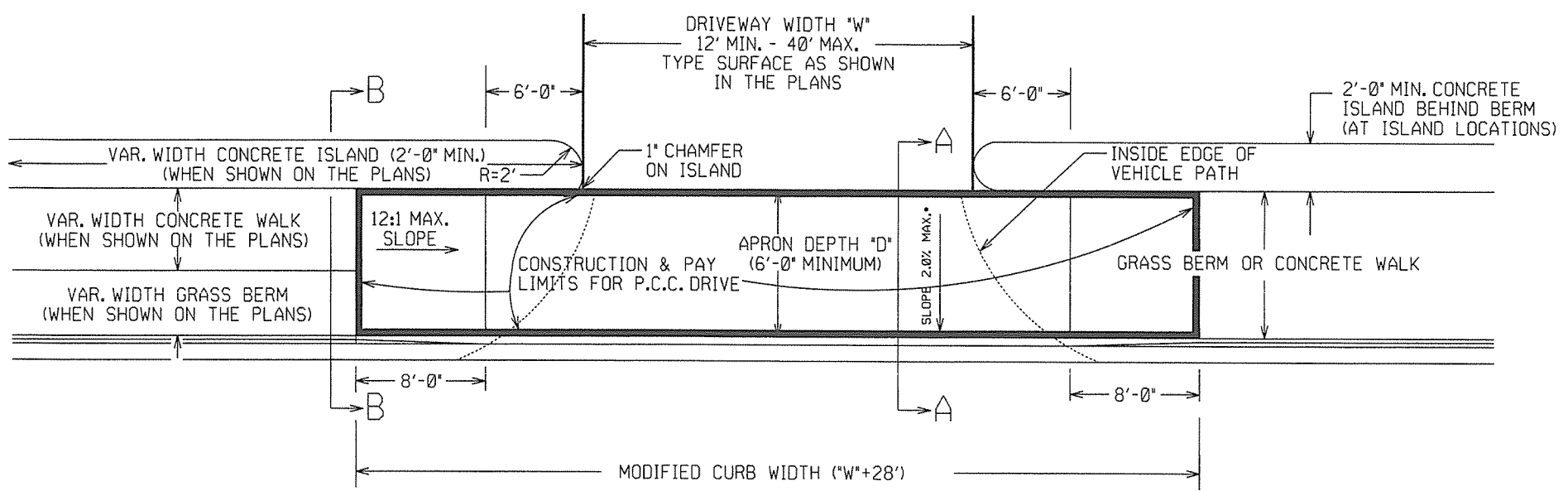
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
8-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIABLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-83	REVISED MODIFIED CURB	500-11-1-83
10-2-72	REVISED AND REDRAWN	512-10-2-72

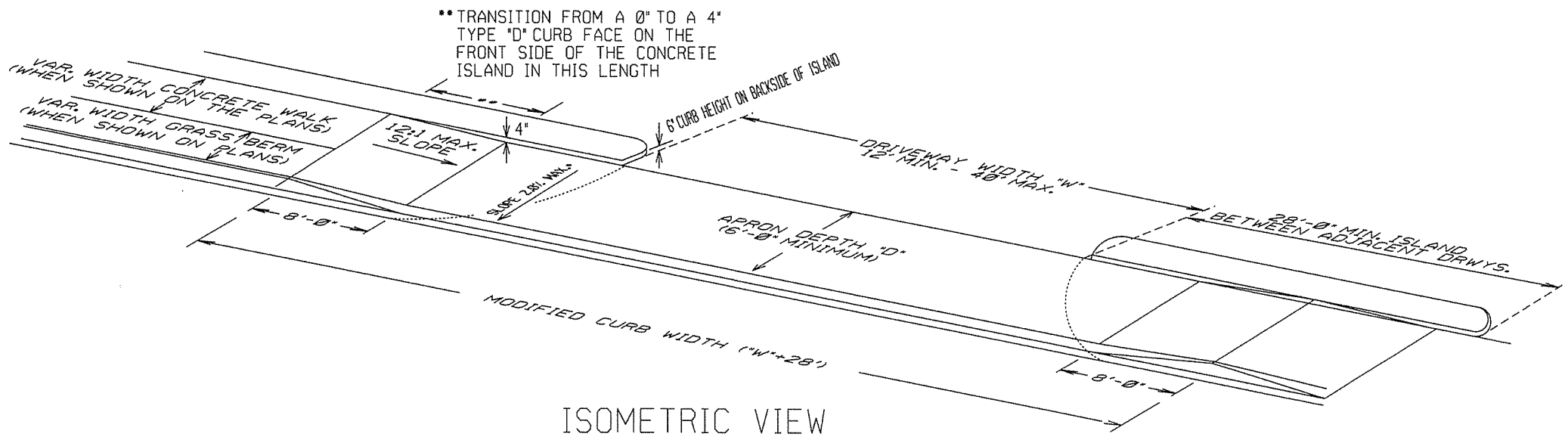
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

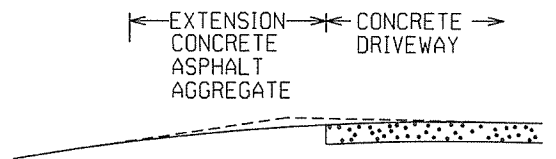
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

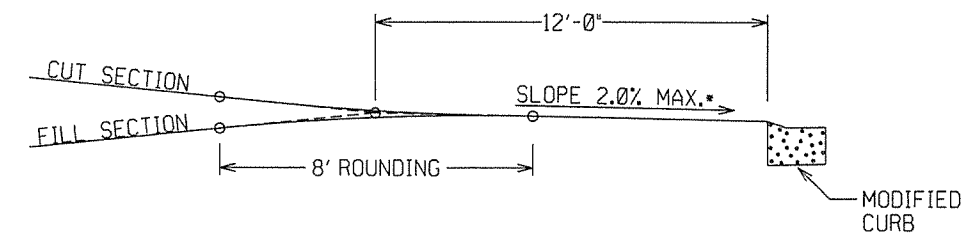


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

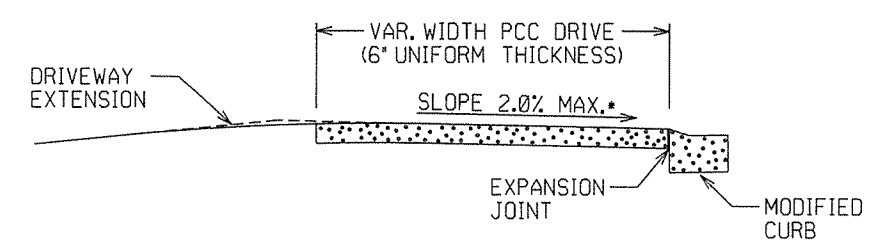
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

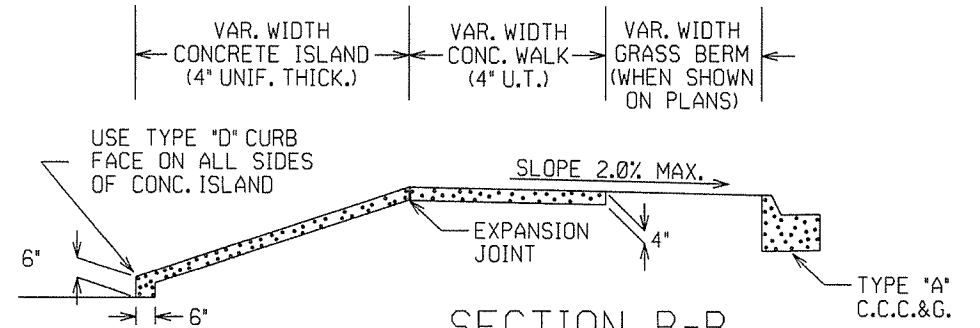


DRIVEWAY VERTICAL ALIGNMENT DETAILS

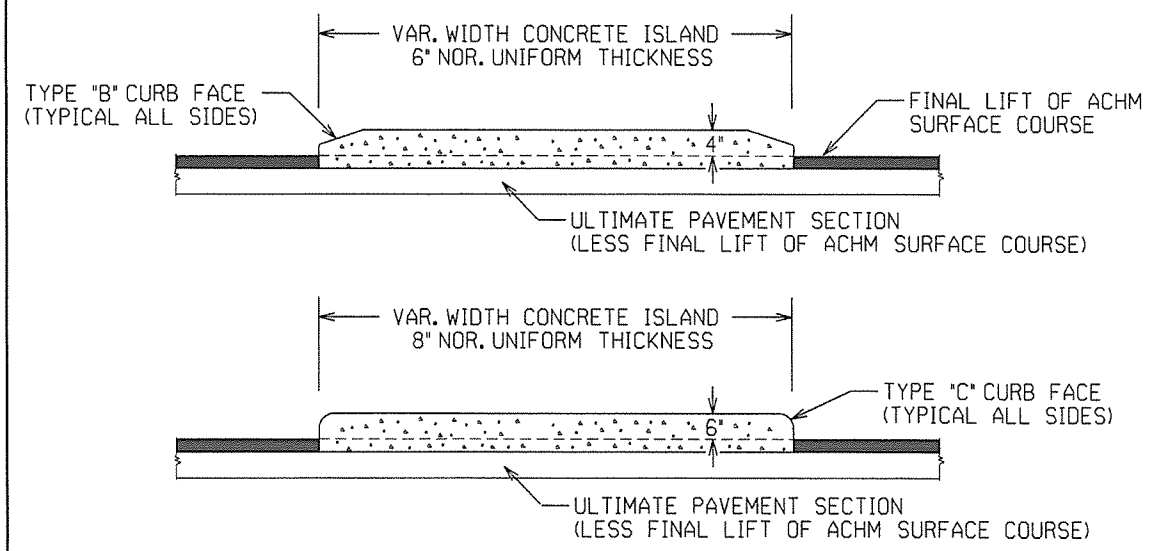
* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



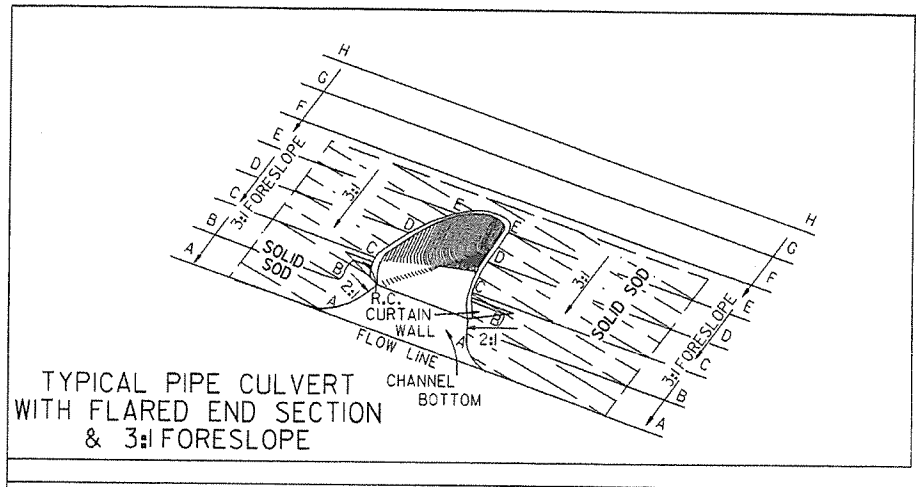
SECTION B-B
CURBED ISLAND BEHIND WALK



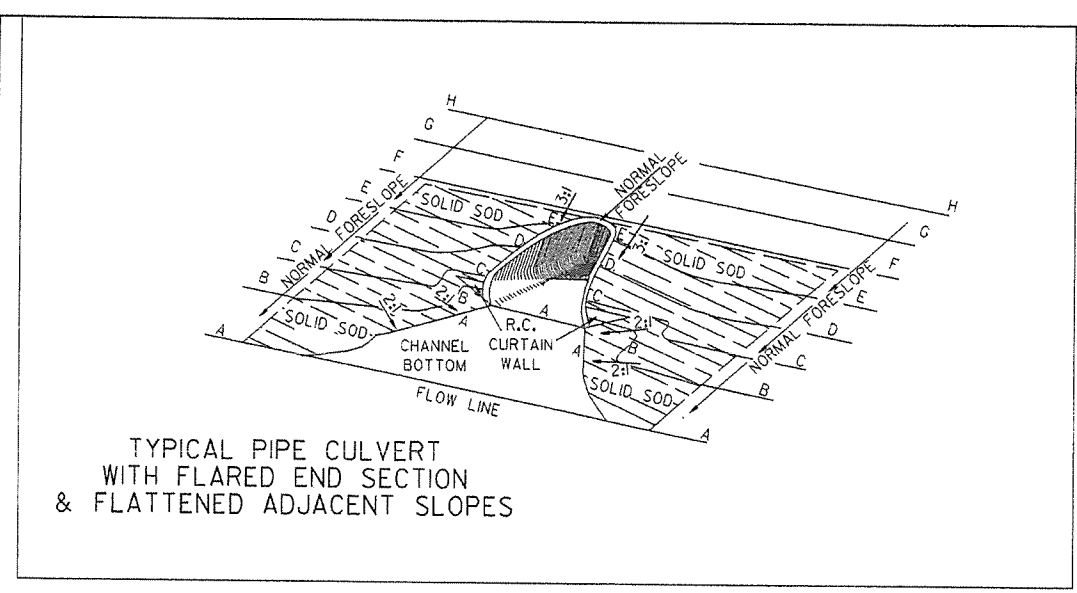
CURBED ISLANDS FOR CHANNELIZATION

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 'CONCRETE ISLAND'.

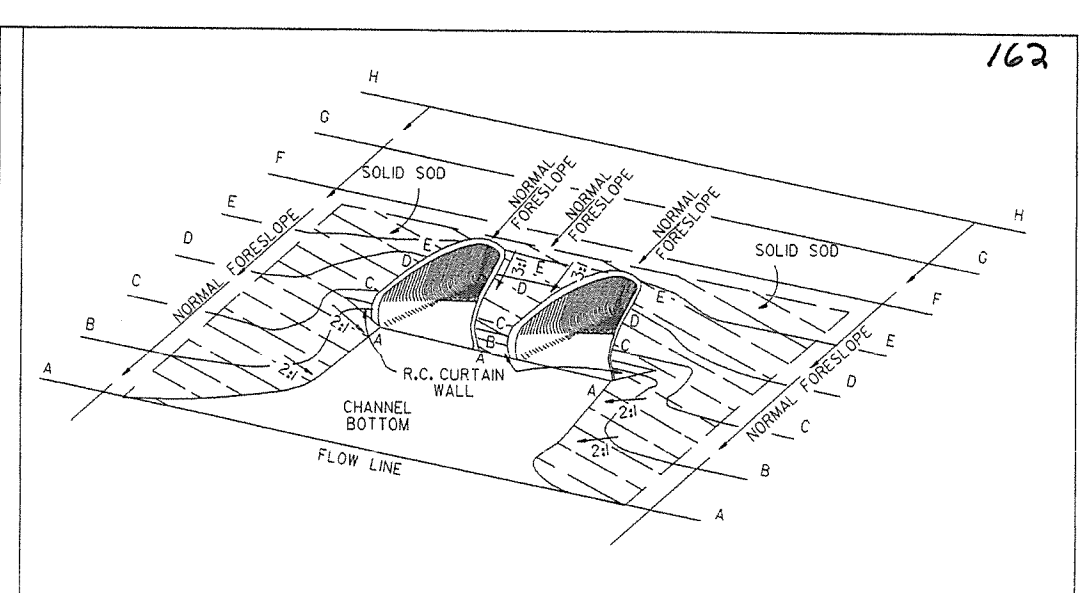
DATE	REV	DATE FILMED	DESCRIPTION
2-27-14			REVISED PLAN & ISOMETRIC VIEW
11-29-07			ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05			REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02			ADDED ISLAND DETAILS & NOTES
3-30-00			REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98			REVISED NOTES
11-18-98			REDRAWN AND REISSUED
			DATE REV DATE FILMED DESCRIPTION



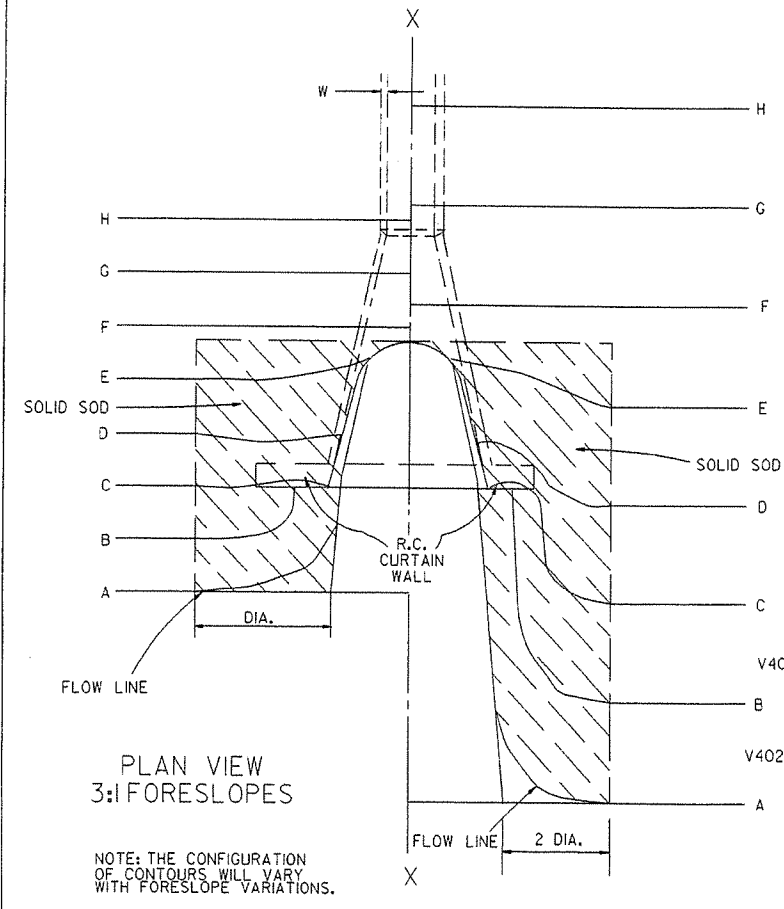
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES

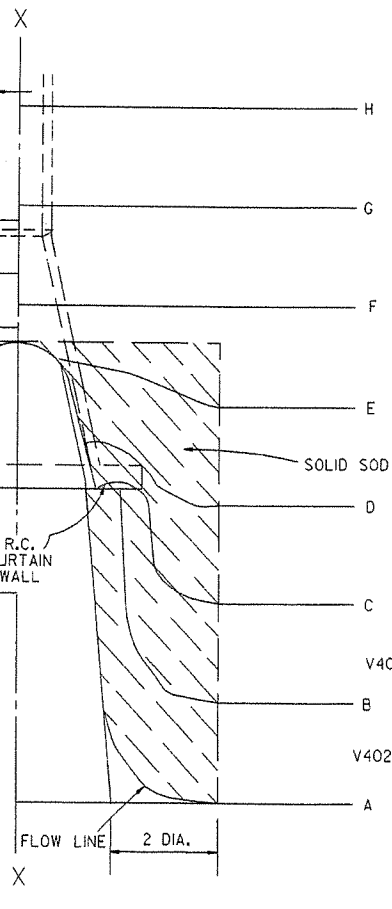


TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

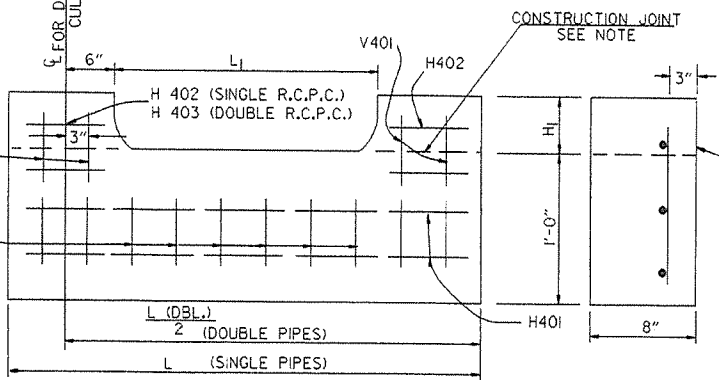


PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

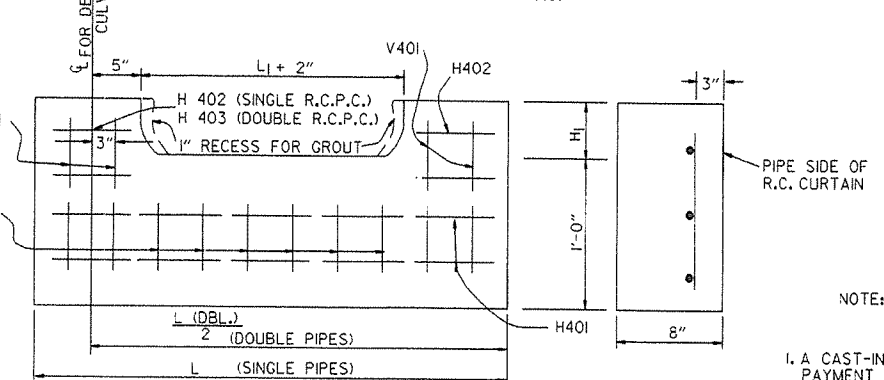
PIPE DIA.	H ₁	L ₁	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

R.C. CURTAIN WALL DETAILS

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

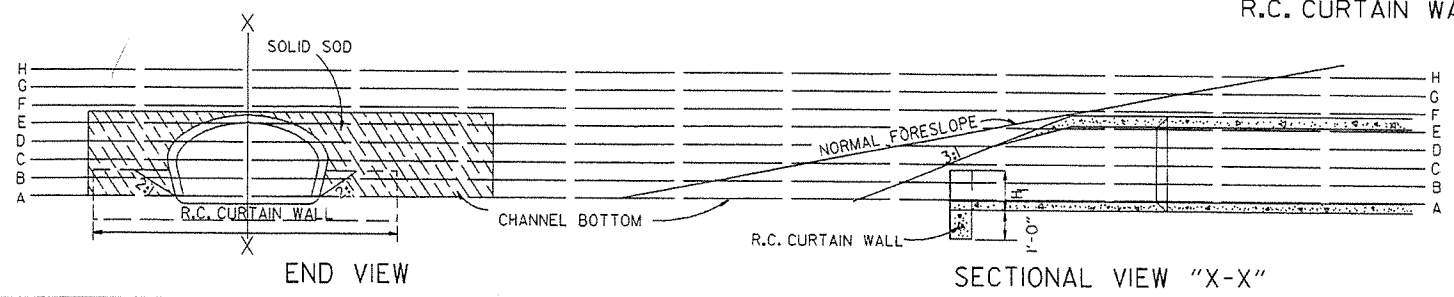
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
	SO. YDS.			SO. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

- GENERAL NOTES
- A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 - CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
 - WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

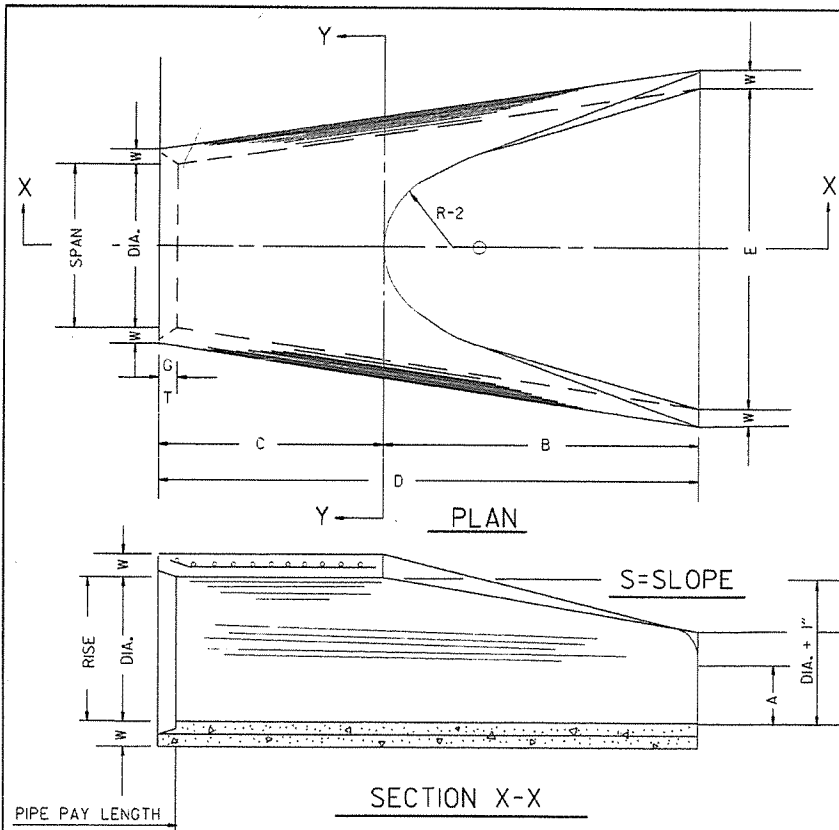
SECTIONAL VIEW "X-X"

10-18-96 ADDED NOTE TO SOLID SODDING					
10-12-95 CORRECTED SPELLING					
11-3-94 ADDED GENERAL NOTE NO. 4					
8-15-91 REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.					
3-2-81 ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES					
5-15-80 ADDED PRECAST WALL & GENERAL NOTES					
10-2-72 REVISED AND REDRAWN					
DATE	REVISION	FILMED			

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

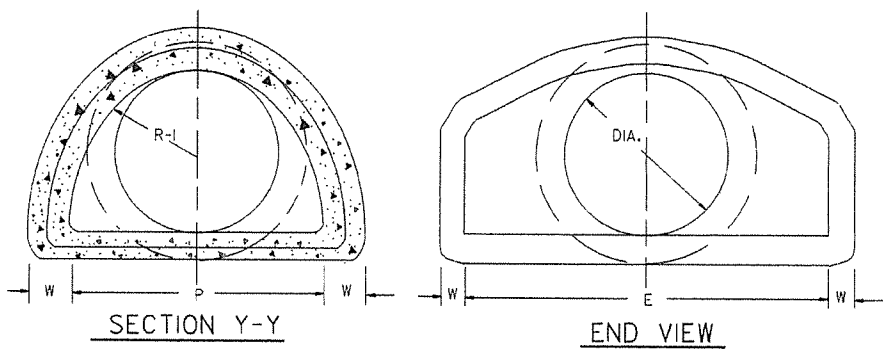
STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. - 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/2"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 1/4"	6'-0"	3:1	37"	47 1/8"	24 3/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 5/8"	27 1/2"	22"	3 3/4"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 1/4"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 1/8"	24"	5"	13250	4'-6"

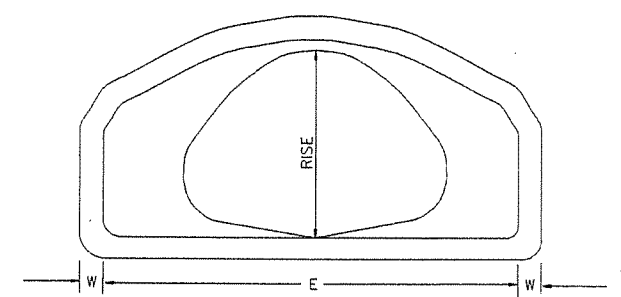


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

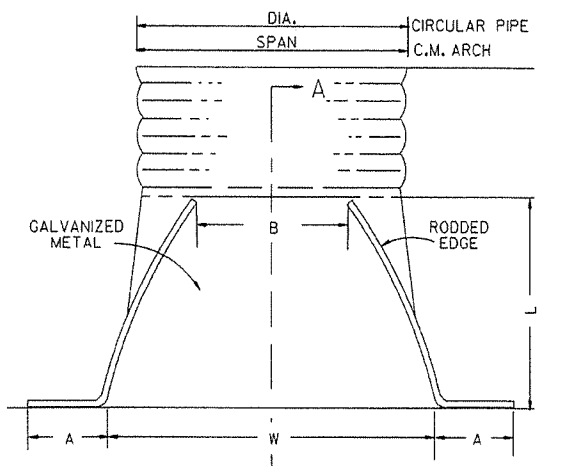
ARCH PIPE

EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/8"	14"	2 1/2"	2 1/2:1
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/8"	15"	2 1/2"	2 1/2:1
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/8"	20"	3"	2 1/2:1
36	43 3/4	44	26 3/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 3/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 5/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 3/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 3/8"	24"	5"	2 1/2:1

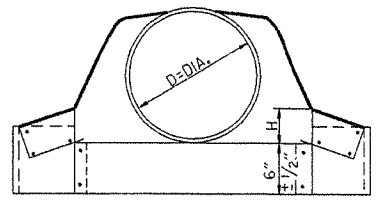
* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW CONCRETE ARCH PIPE



PLAN



CIRCULAR PIPE

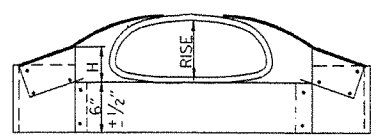
CIRCULAR PIPE

D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1 1/2:1
66	12	18	36	12	87	120	1 1/2:1
72	12	18	39	12	87	126	1 1/3:1

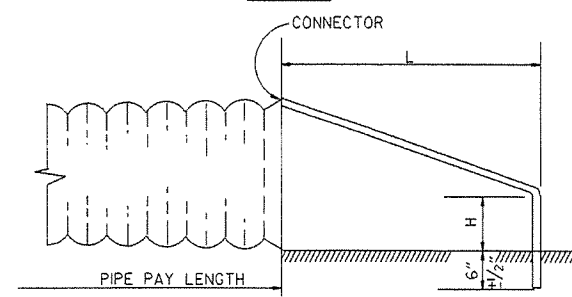
C.M. ARCH PIPE

C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/4:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



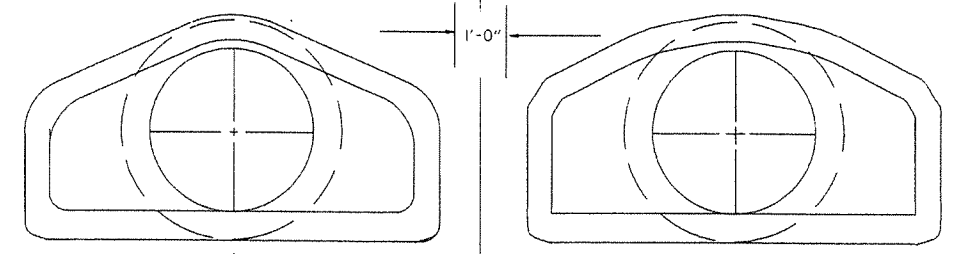
C.M. ARCH PIPE



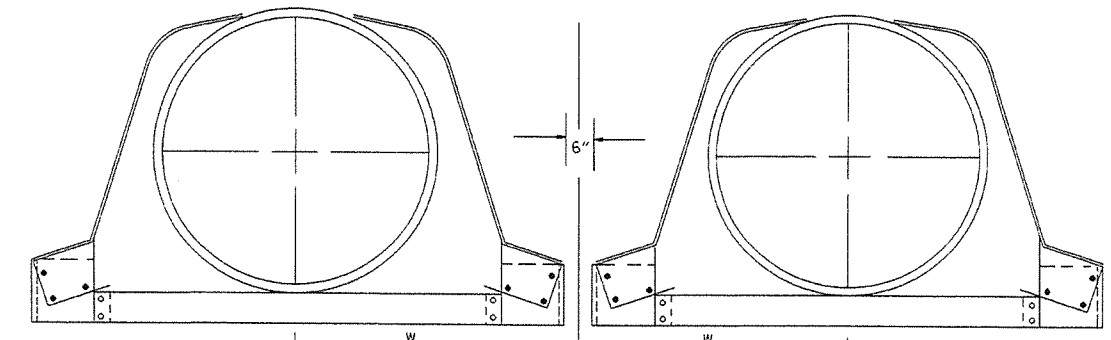
SECTION A-A

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



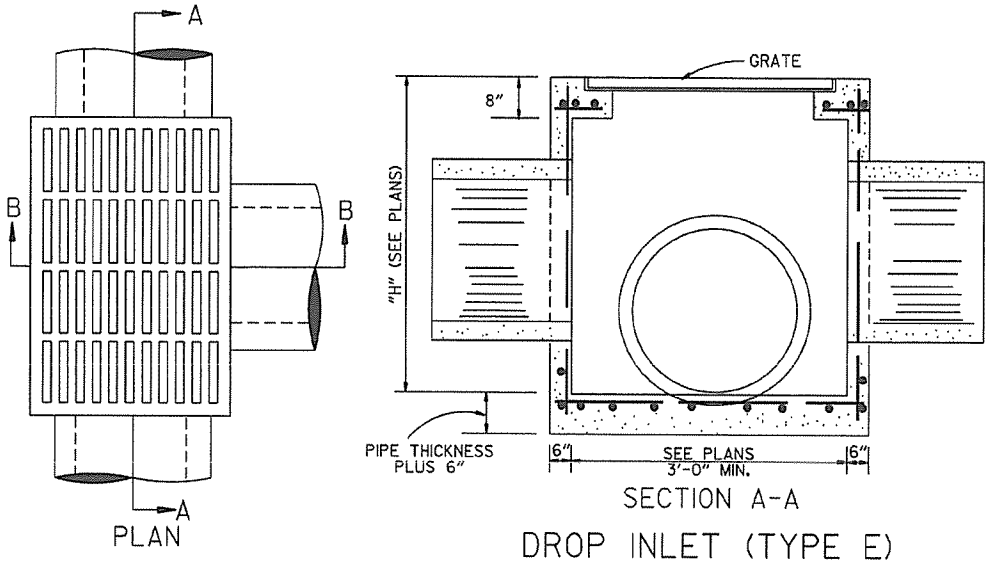
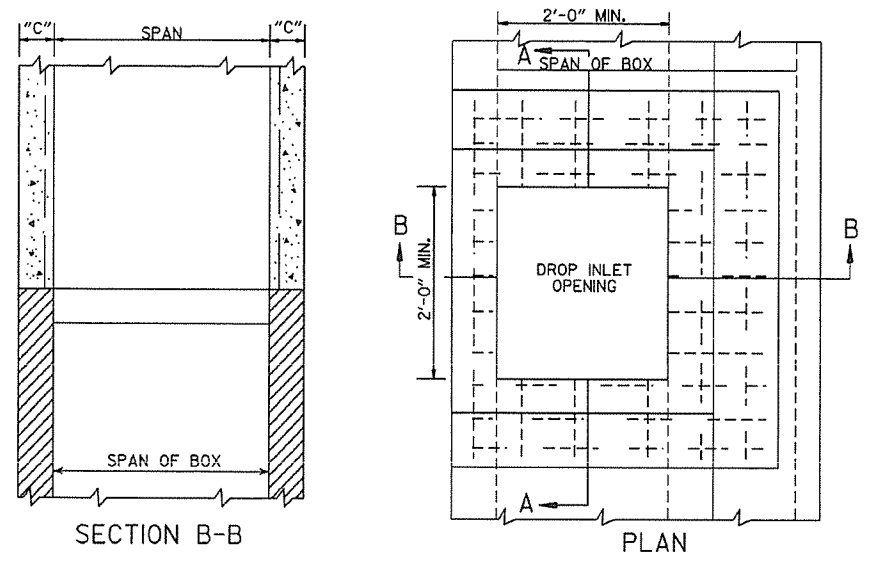
MULTIPLE R.C. PIPE CULVERTS



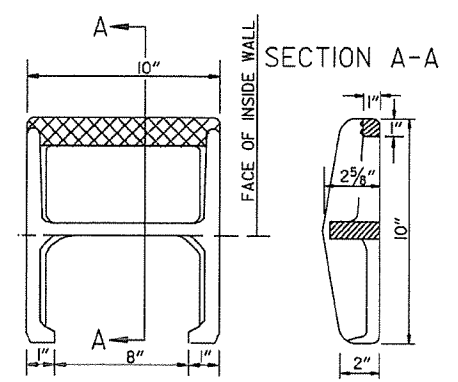
MULTIPLE C.M. PIPE CULVERTS

10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74	
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73	
10-2-72	REVISED AND REDRAWN	760-10-2-72	
DATE	REVISION	FILE NO.	

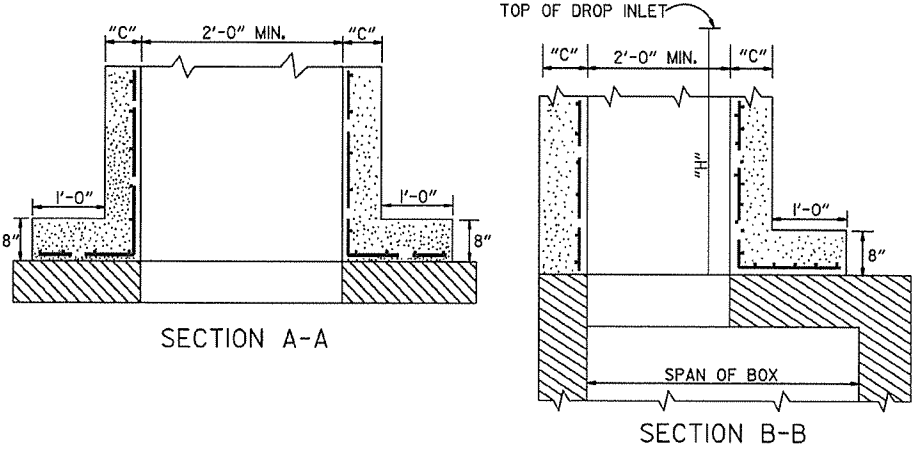
FLARED END SECTION
STANDARD DRAWING FES-2



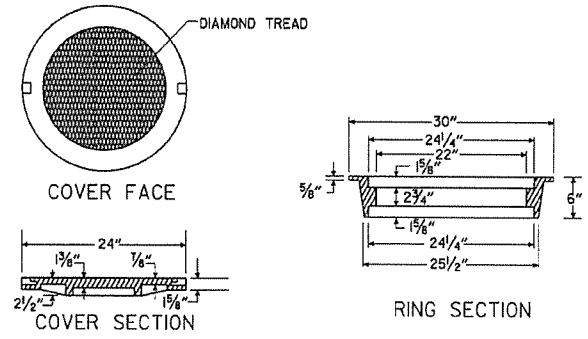
NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



APPROX. WEIGHT = 11 LBS. (CAST IRON)
 PLAN
 NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

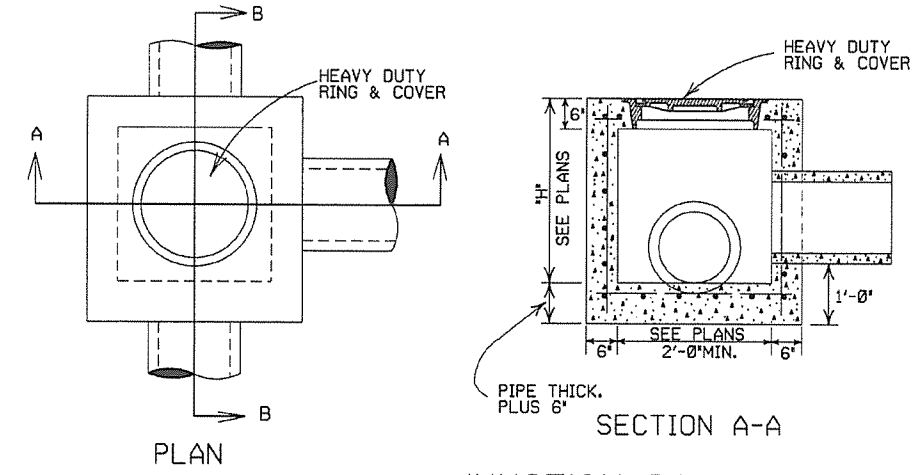


METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



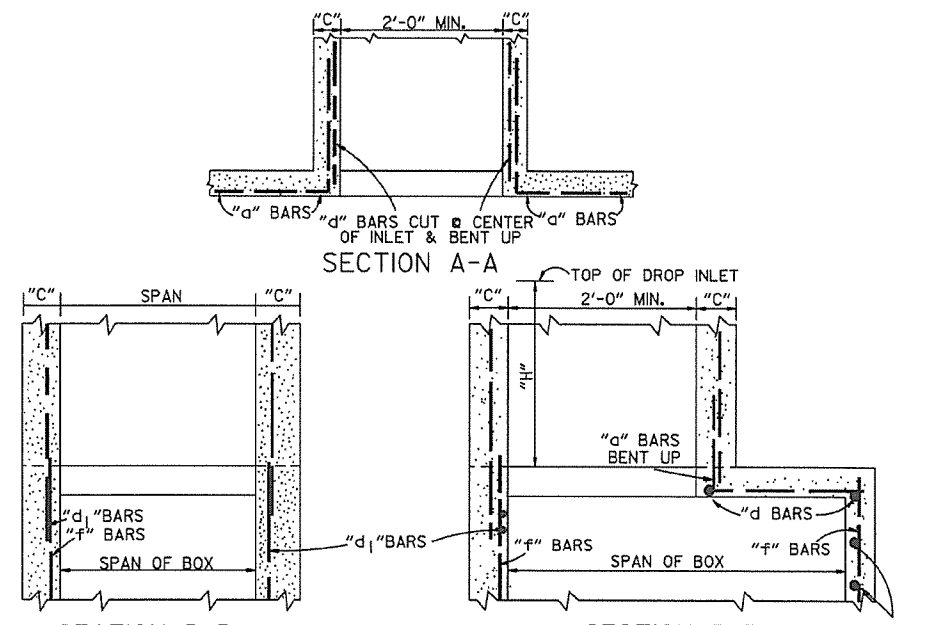
HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.



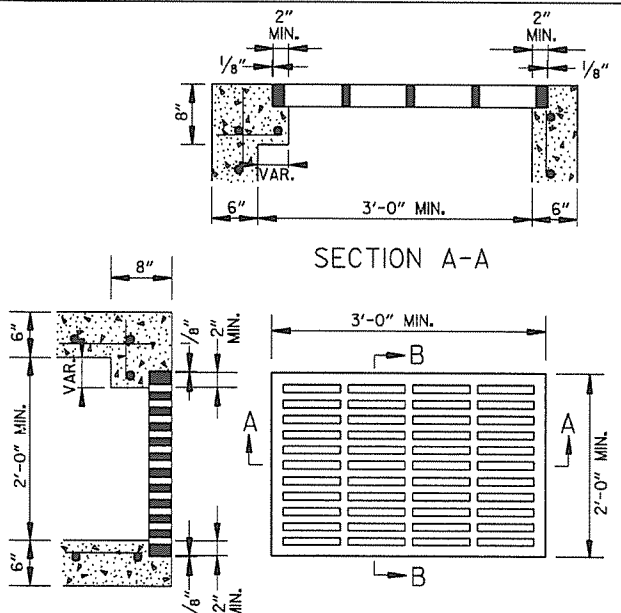
JUNCTION BOX (TYPE E)

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



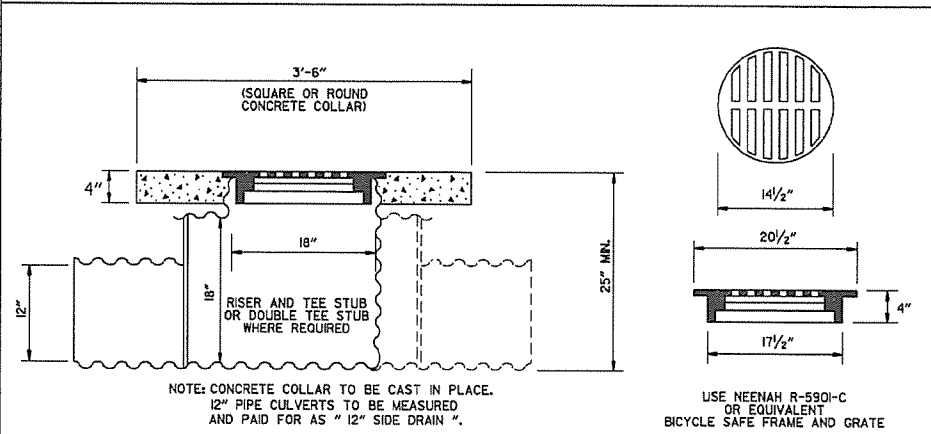
METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.



GRATE FOR TYPE E DROP INLET

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.



DETAIL OF YARD DRAIN

NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS "12" SIDE DRAIN".

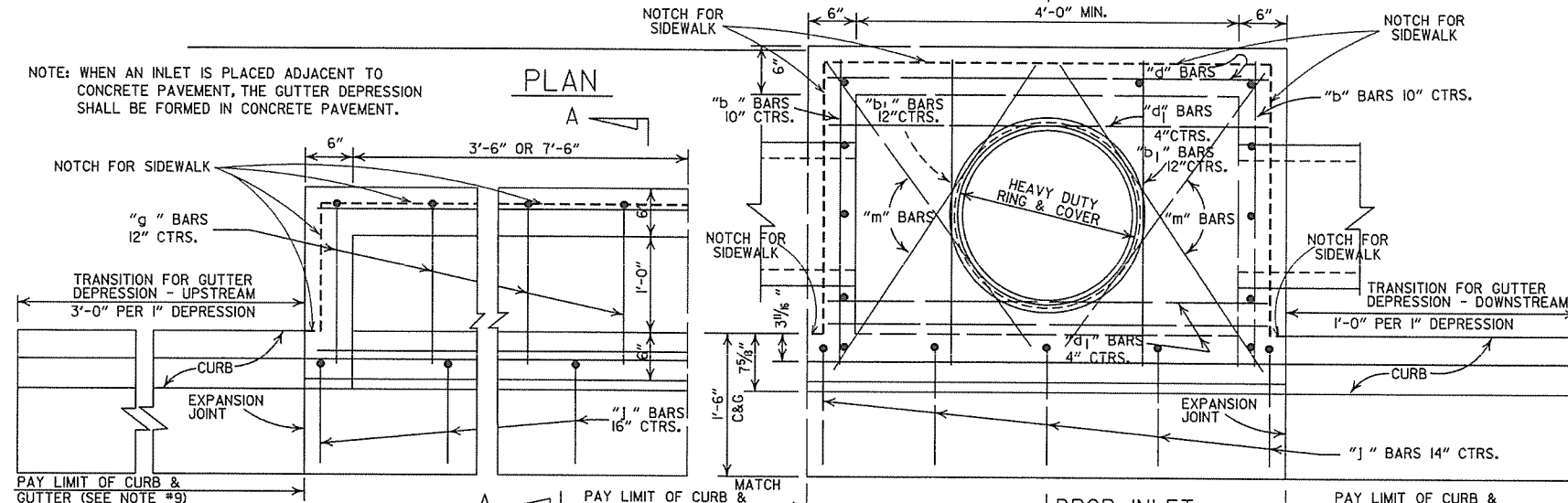
USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

- GENERAL NOTES:
1. ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
 2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
 3. EXPANSION JOINT MATERIAL SHALL BE 3/4" PREFORMED FIBER.
 4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
 5. GRATE AND FRAME SHALL NOT BE PAINTED.
 6. GRATE SHALL BE BICYCLE SAFE.
 7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
 9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE	REV.	REVISION	DATE FILMED
11-16-01		ADDED NOTE 10	
1-12-00		REVISED HEAVY DUTY RING & COVER	
7-02-98		CHANGED GRATE DETAIL, DELETED DI (TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97		ADDED DIMENSION TO TYPE IV-A	
10-18-96		ADDED DETAIL OF YARD DRAIN	
8-15-91		DELETE TYPE IV GRATE	
7-15-88		REVISED STEP DETAIL	
5-20-83		REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83		ADDED GENERAL NOTE NO. 4	
3-2-81		ADDED TYPE IV-A GRATE	
5-22-74		DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72		REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF DROP INLETS
 & JUNCTION BOXES
 STANDARD DRAWING FPC-9

NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.



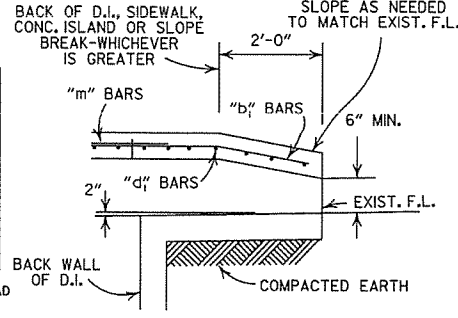
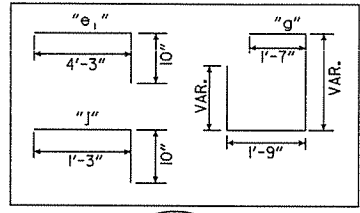
PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22				
24"	2'-6"	1.79	156	0.28	22				
30"	3'-2"	2.39	205	0.30	26				
36"	3'-8"	2.63	236	0.32	28				
42"	4'-4"	2.95	250	0.34	30				
48"	4'-10"	3.21	265	0.36	32				
						DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
						0.04	3		

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

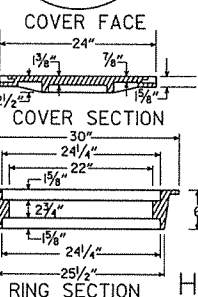
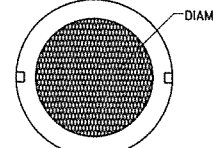
INSIDE DIA. PIPE INCHES	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

BAR DIAGRAM



BACK OPENING

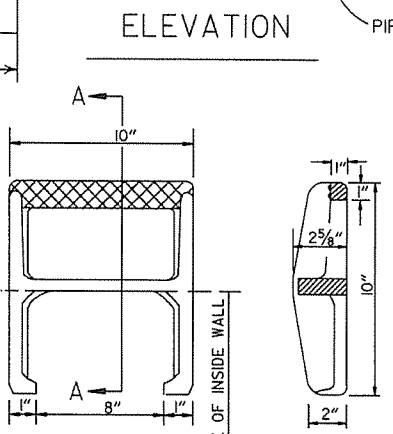
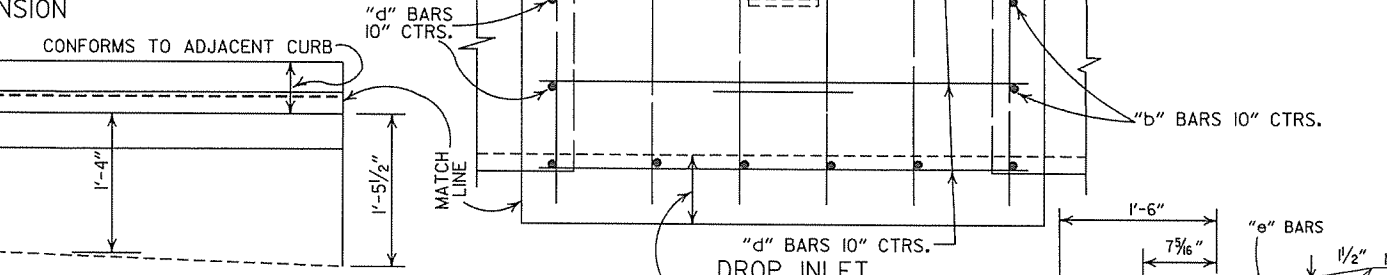
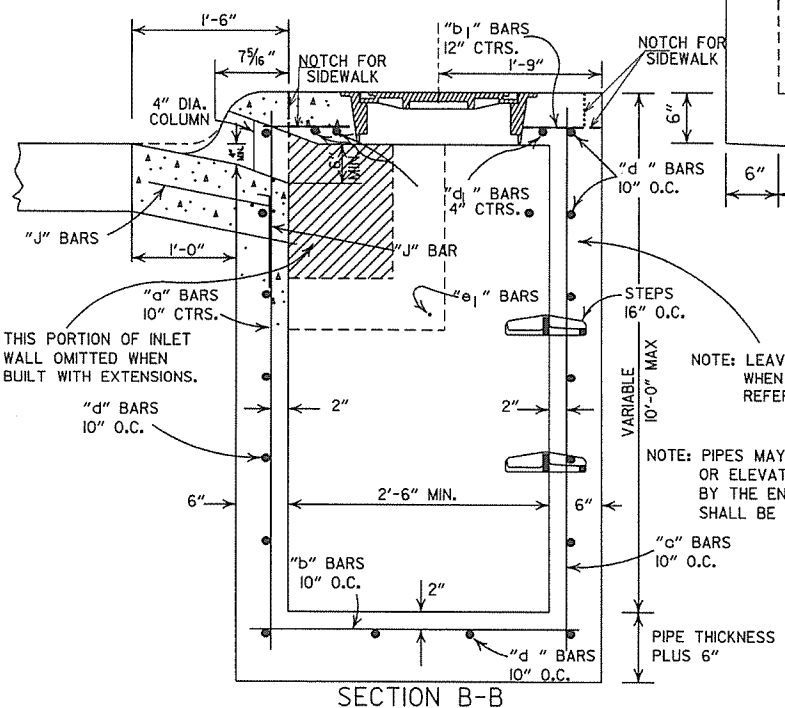
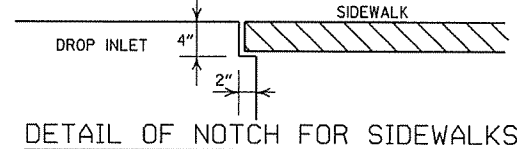
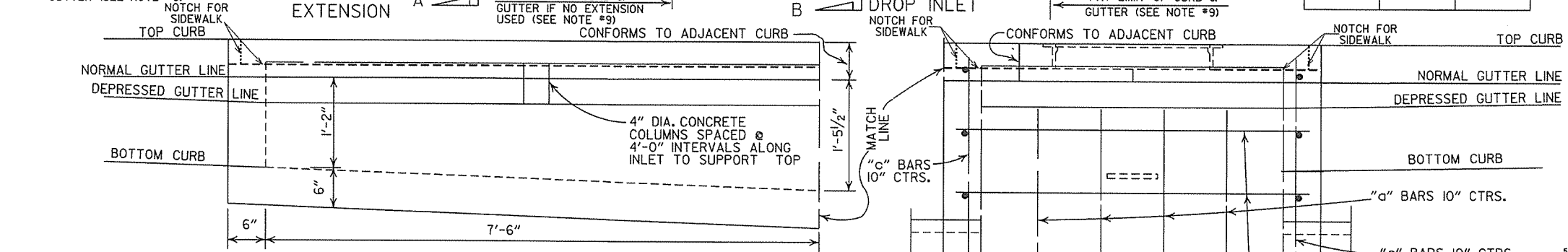
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
 - ALL REINF. BARS SHALL BE #4 AND HAVE 1/2" COVER.
 - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
 - WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 - PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 - HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 - DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



PLAN DETAIL OF STEP FOR DROP INLET

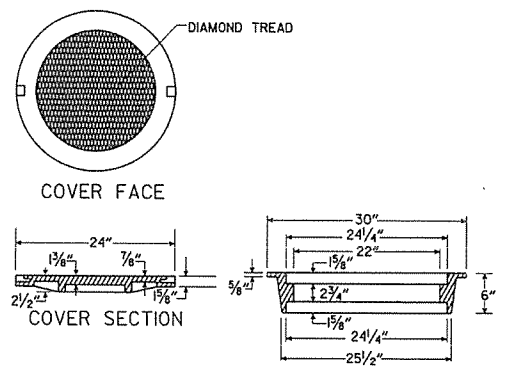
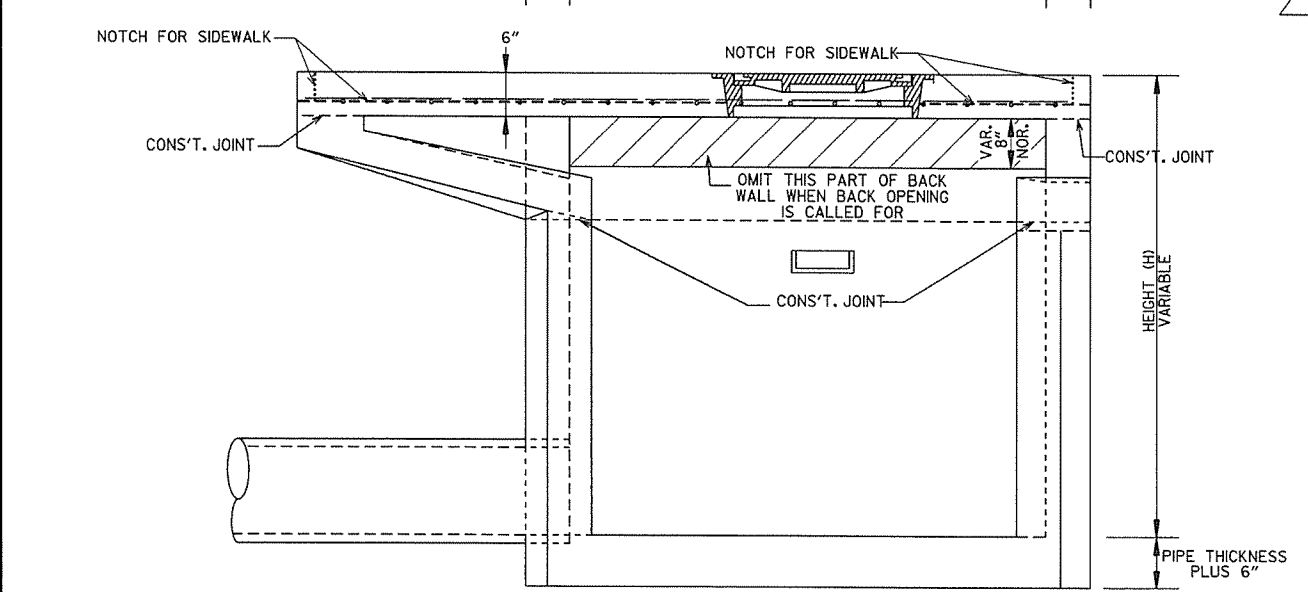
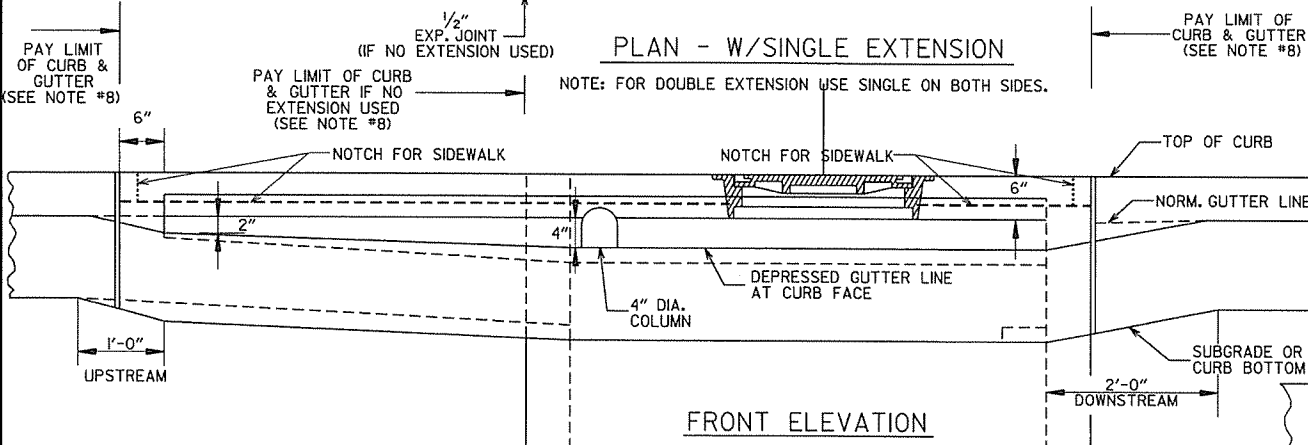
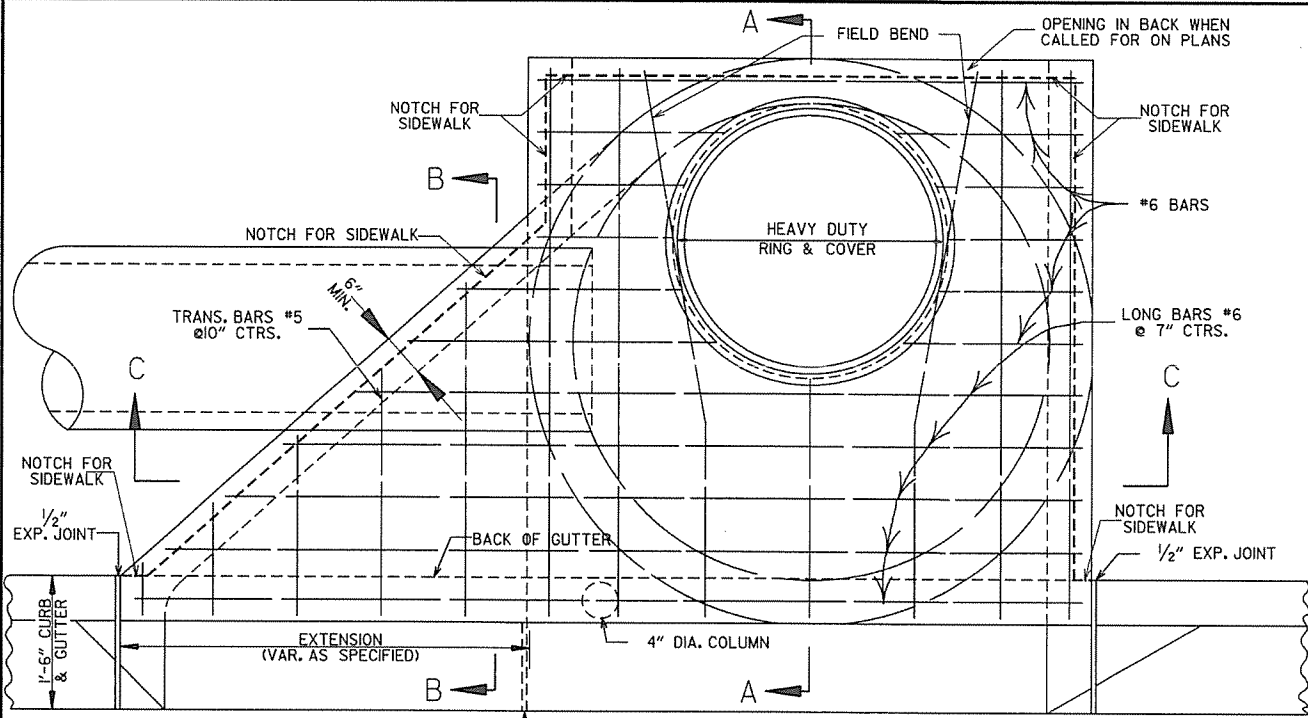
APPROX. WEIGHT = 11 LBS. (CAST IRON)
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DATE	REV.	DESCRIPTION	DATE FILED
8-22-02		ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01		ADDED NOTE 13; REVISED SECTION B-B	
1-12-00		CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99		ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98		REPLACED RING & COVER W/HEAVY DUTY RING & COVER	
		ADDED NOTES 9,10, & 11	
10-18-96		CORRECTED SPELLING	
4-26-96		ADDED NOTE 8 & REVISED (4'x8') EXTENSION TITLES	10-18-96
4-1-93		REVISED BACK OPENING & NOTE	
8-15-91		DELETE TYPE IV GRATE	
7-15-88		REVISED STEP DETAIL	
5-20-83		REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83		ADDED GENERAL NOTE NO. 4	
3-2-81		ADDED TYPE IV-A GRATE	
5-22-74		DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72		REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

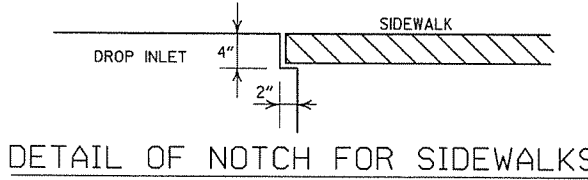
DETAILS OF DROP INLETS (TYPE C)

STANDARD DRAWING FPC-9E

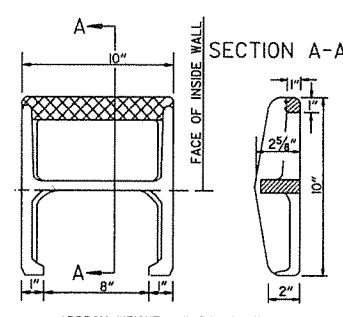


HEAVY DUTY RING & COVER
APPROXIMATE TOTAL WEIGHT = 333 LBS.

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



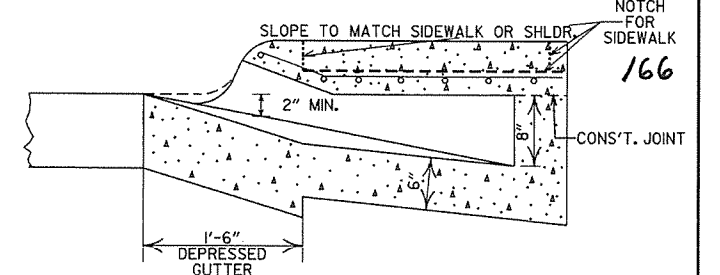
DETAIL OF NOTCH FOR SIDEWALKS



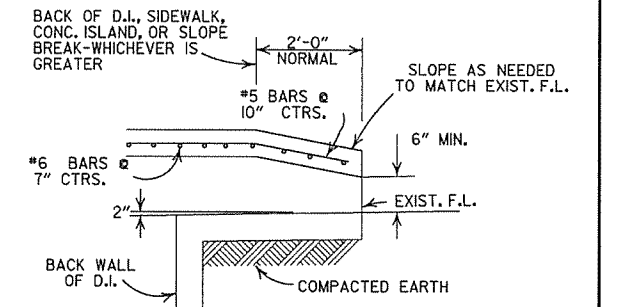
SECTION A-A
APPROX. WEIGHT = 11 LBS. (CAST IRON)
PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET



SECTION B-B



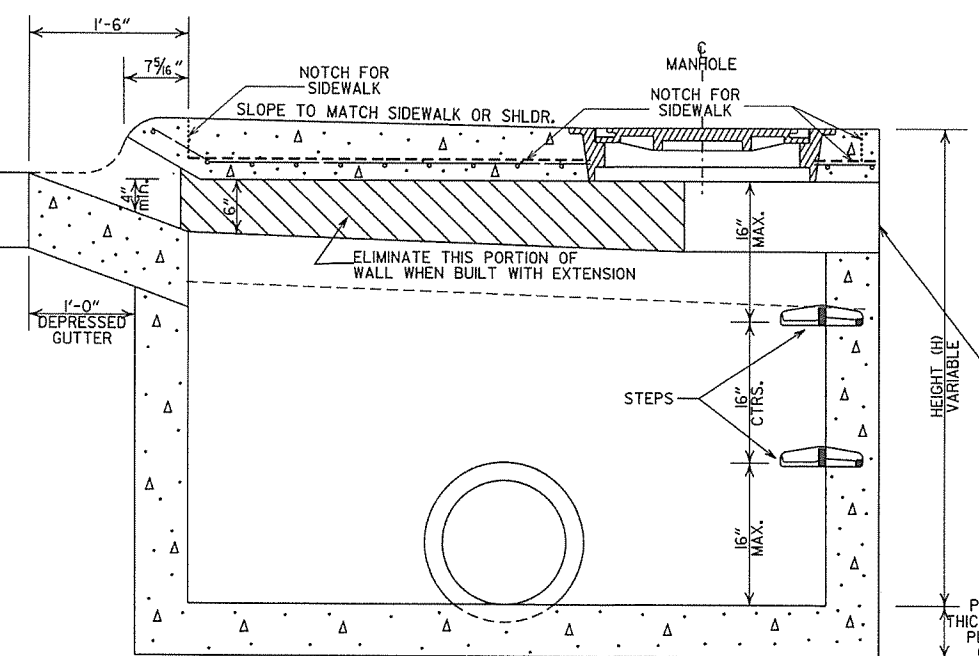
BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).

- GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
 3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1/2" COVER.
 4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
 6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
 7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
 8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
 10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
 11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

MINIMUM WALL THICKNESS			
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"



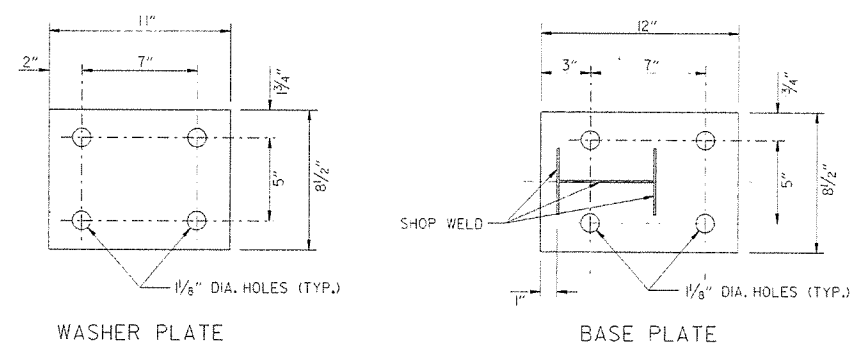
SECTION A-A

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-28-96	ADDED NOTE 11 (D.I. OPENING DIMENSION)	
10-12-95	CORRECTED #6 BAR SPACING	
1-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-4-94	REVISED GENERAL NOTES	1-4-94
4-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 11, 12 & ADDED BK. OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	1-30-89
3-24-89	ADDED NOTE & MINIMUM WALL THICKNESS	5-13-89
1-19-88	ADDED EXTEND NOTE TO SECTION A-A	6-30-88
11-28-87	MODIFIED WALL THICKNESS	1-28-88
8-12-87	ISSUED	8-12-87

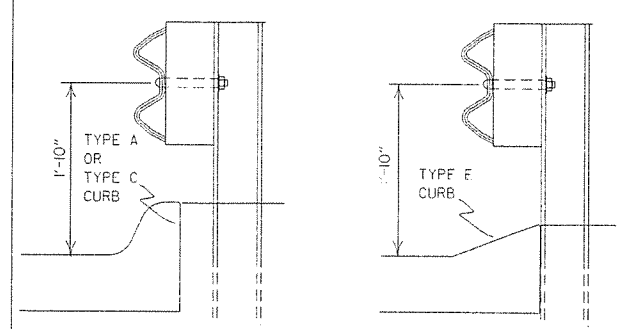
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 801 of the Standard Specifications.

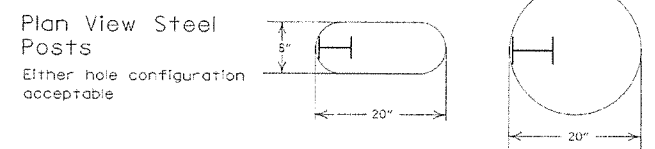
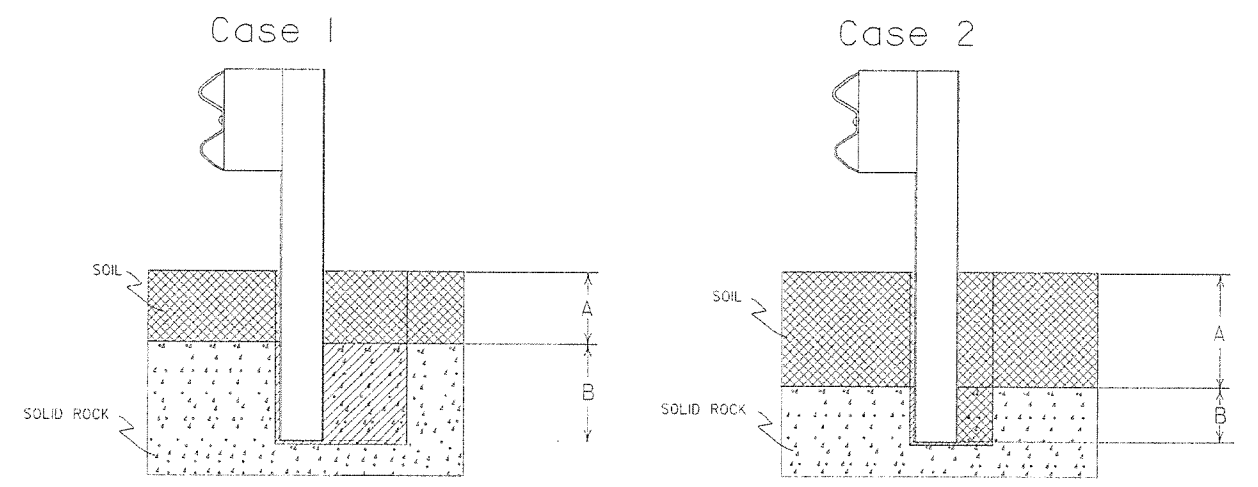


FOR DESIGN SPEEDS OF 50 MPH OR LESS
ALIGN FACE OF GUARD RAIL WITH FACE OF CURB.

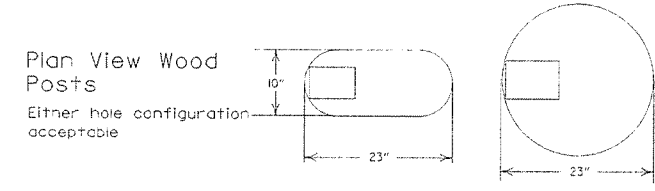
FOR DESIGN SPEEDS OF 55 MPH OR MORE
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.

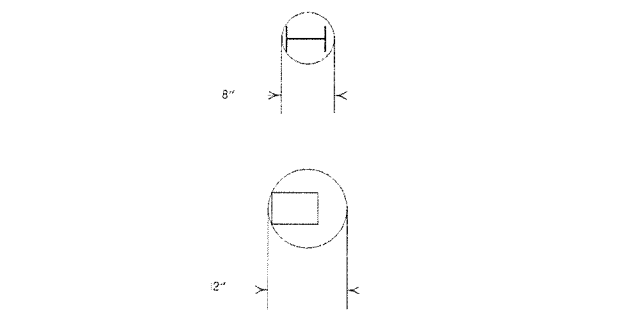


Plan View Steel Posts
Either hole configuration acceptable



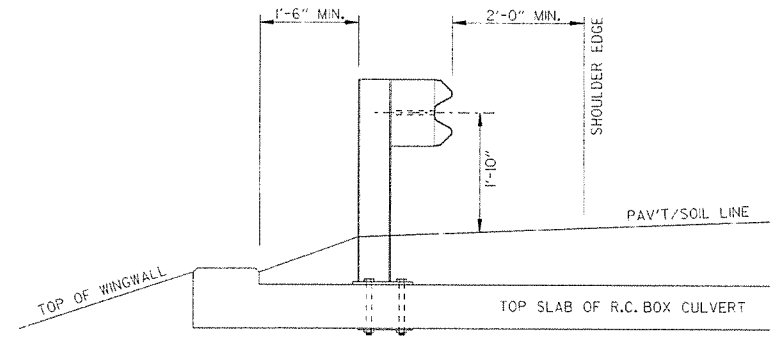
Plan View Wood Posts
Either hole configuration acceptable

Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".
Zone A: Backfill according to Section 617.03(a).
Zone B: Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(a) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

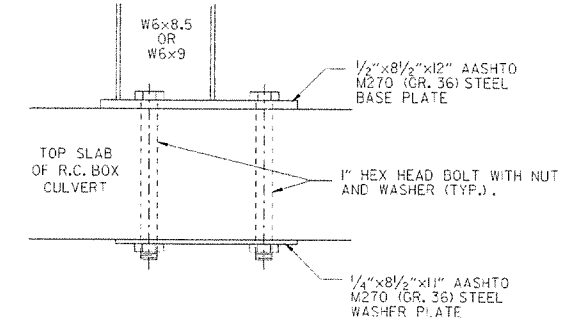


Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.
Zone A & B: Backfill according to Section 617.03(a).

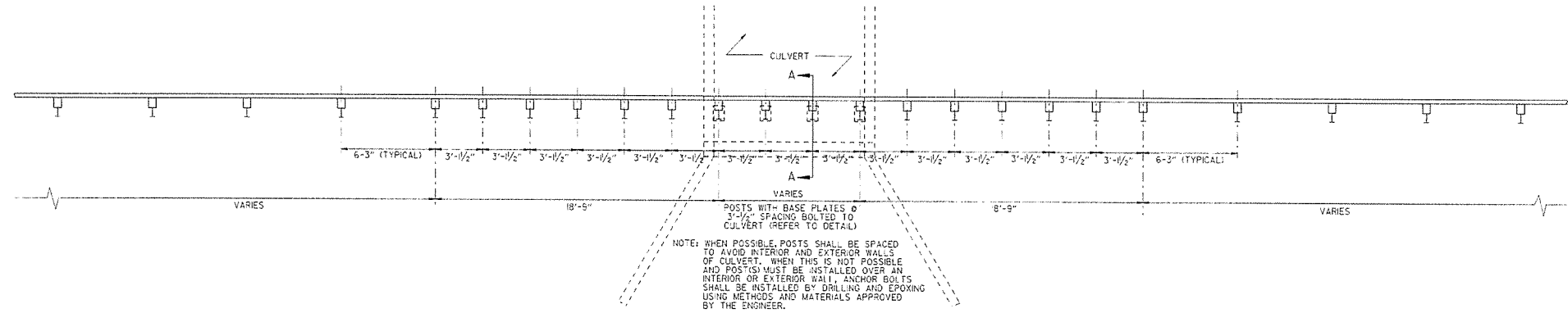
DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)



SECTION A-A



DETAIL OF CONNECTION



PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

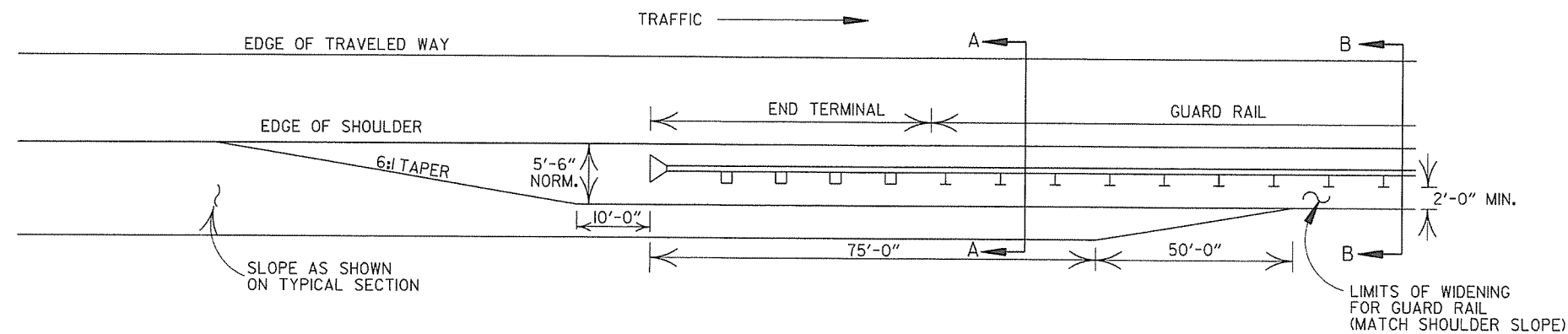
NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DRWG. GR-8.

7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
8-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT, ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULVERT. DELETED DET. OF STEEL LINE POST CONN. & DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
6-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-2-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87
DATE	REVISION	DATE FILM

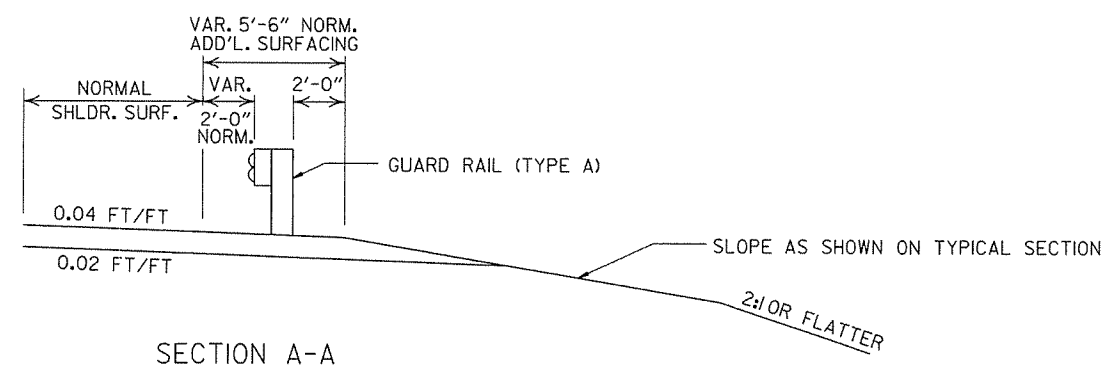
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

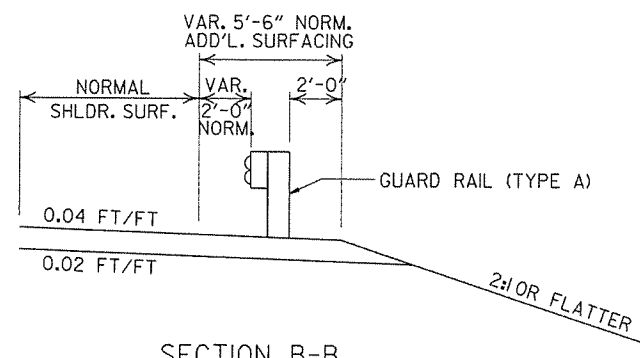
STANDARD DRAWING GR-8A



NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

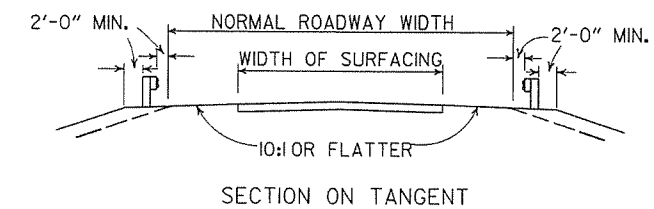


SECTION A-A

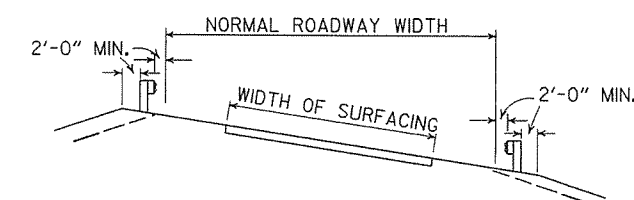


SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

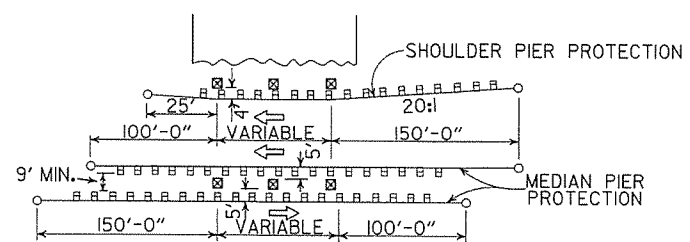


SECTION ON TANGENT



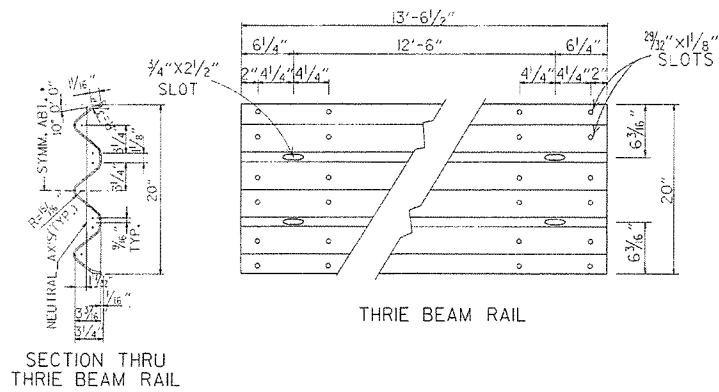
SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

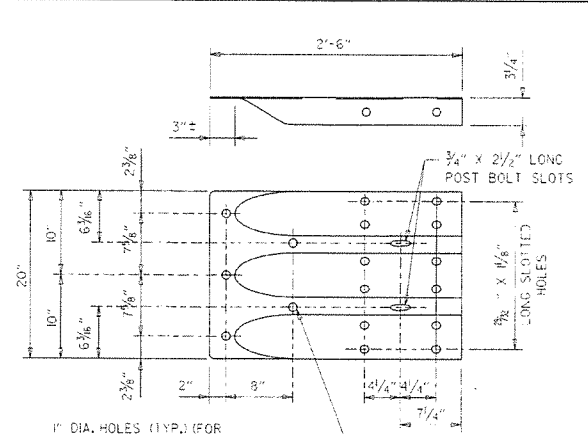


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

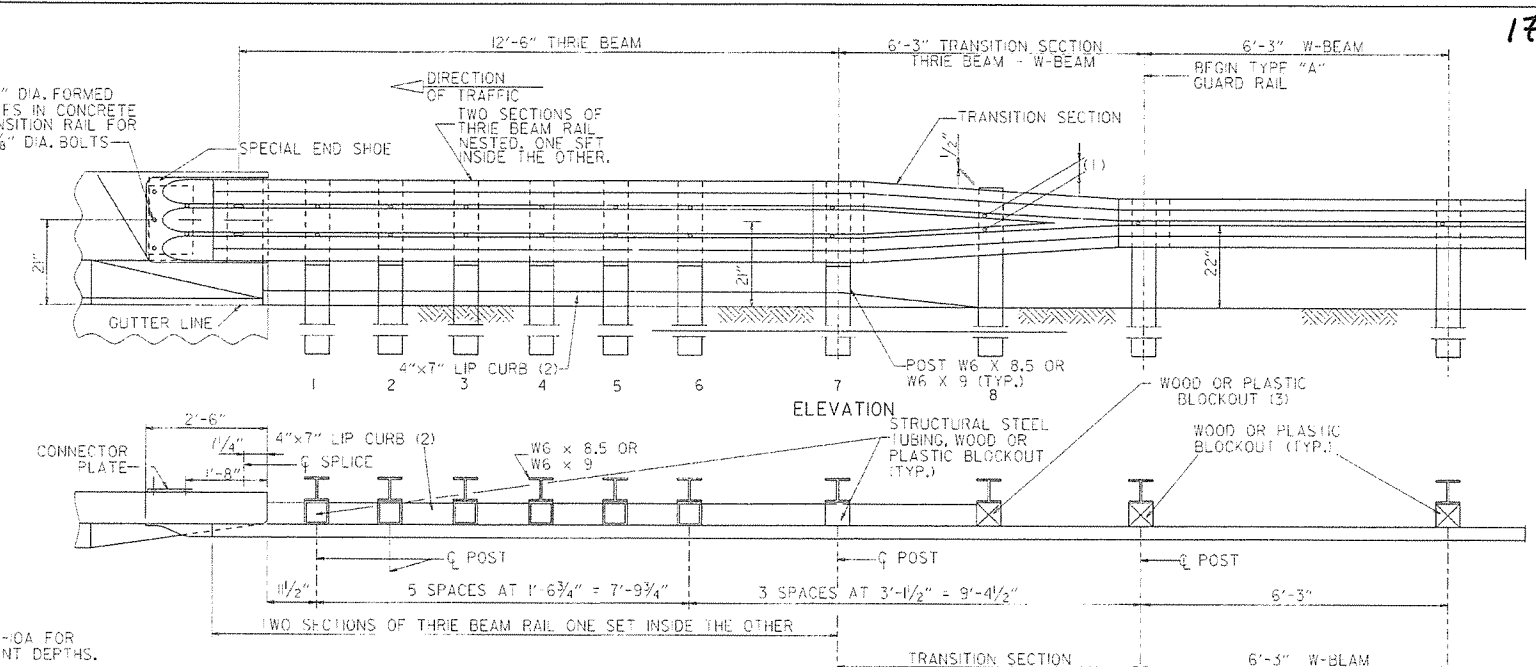
				ARKANSAS STATE HIGHWAY COMMISSION
				GUARD RAIL DETAILS
4-17-08	MINOR REVISION			STANDARD DRAWING GR-9A
11-10-05	DRAWN			
DATE	REVISION	DATE	FILM	



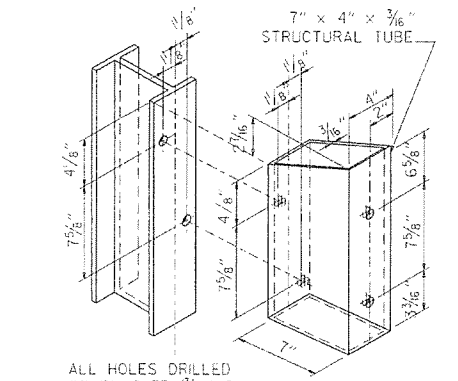
THRIE BEAM RAIL



SPECIAL END SHOE

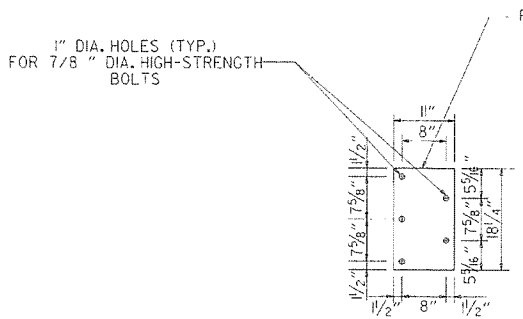


ELEVATION



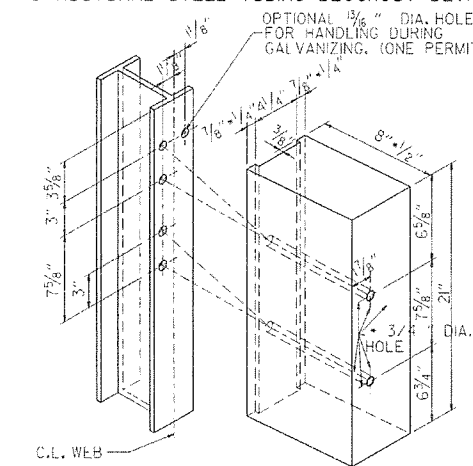
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL

ATTACH BLOCKOUT TO POST USING 5/8" DIA. HEX HEAD BOLTS WITH 1/2" O.D. CUT STEEL WASHERS AND NUT.



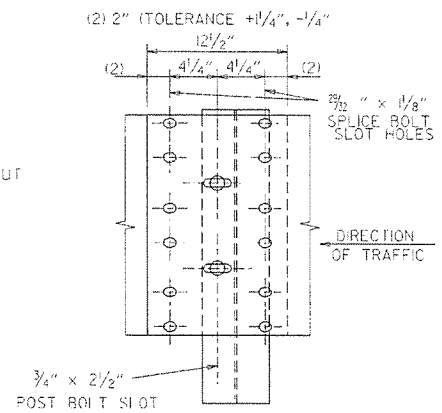
CONNECTOR PLATE

CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING 5/8" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.

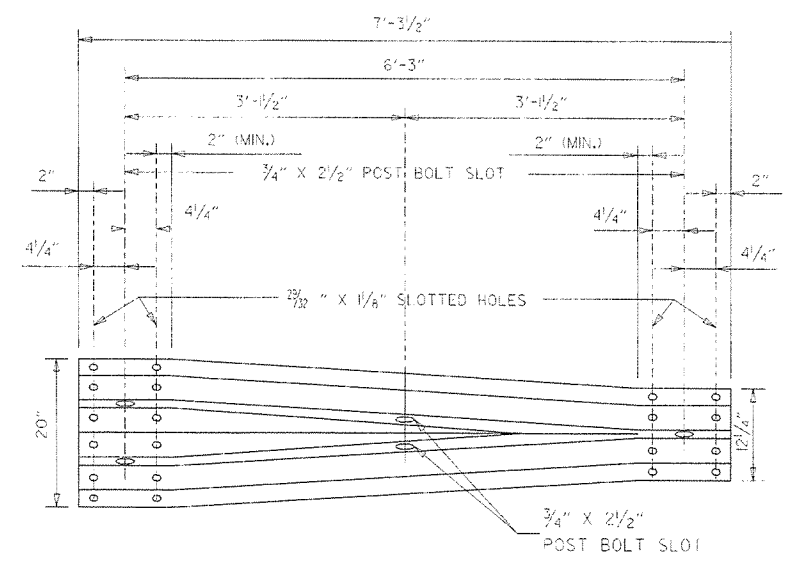


HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

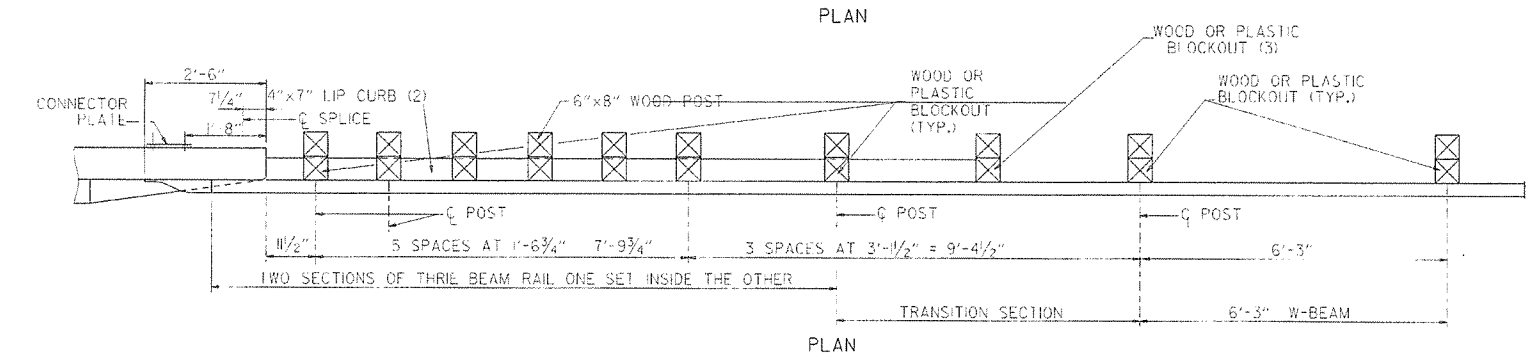
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



THRIE BEAM RAIL SPLICE AT POST



TRANSITION SECTION



PLAN

- (1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
- (2) REFER TO APPROACH GUTTER DETAILS.
- (3) LENGTH OF BLOCKOUT ON POST B TO BE MODIFIED TO FIT RAIL WIDTH.

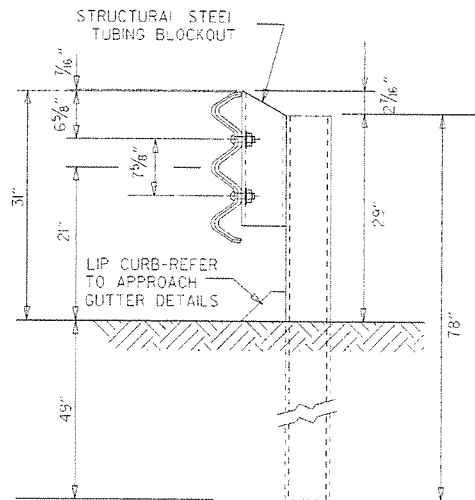
THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

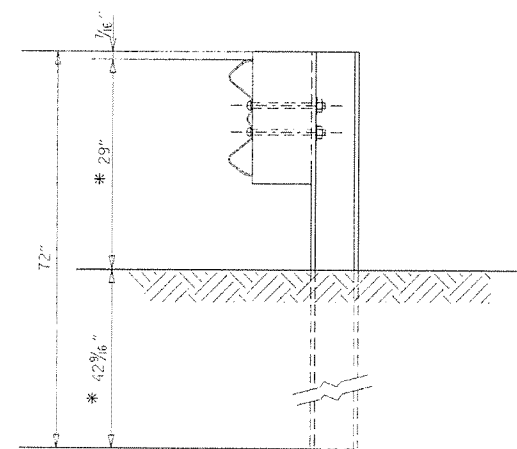
- THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.
- RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
- ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
- ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.
- WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7F (1400 F) OR NO. 1 (350 F) SOUTHERN PINE.
- REFER TO STD. DRWG. GR-10A FOR POST DETAILS.
- USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.
- THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W BEAM POSTS FOR ENTIRE JOB.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION	
GUARD RAIL DETAILS	
STANDARD DRAWING GR-10	

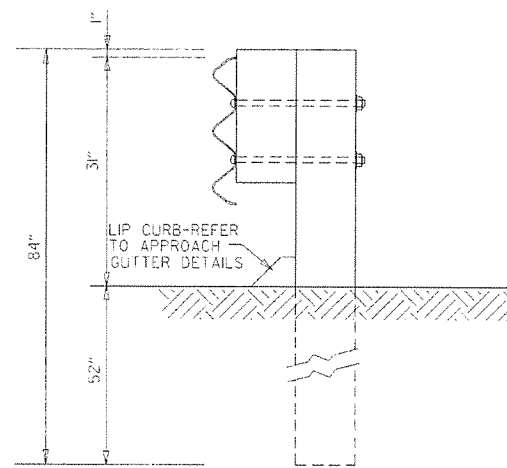


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POST
POSTS 1-7

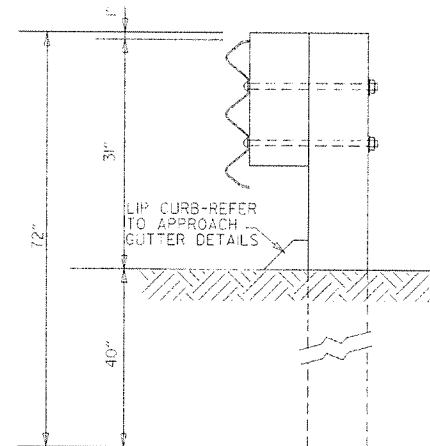


W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

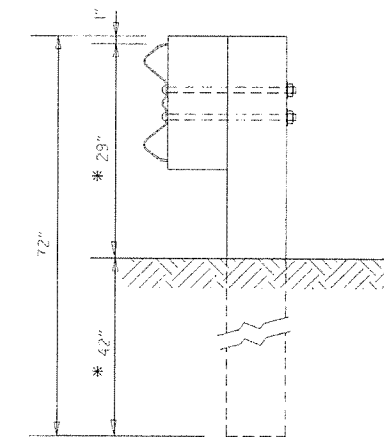
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



THRIE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST
POST 7



W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

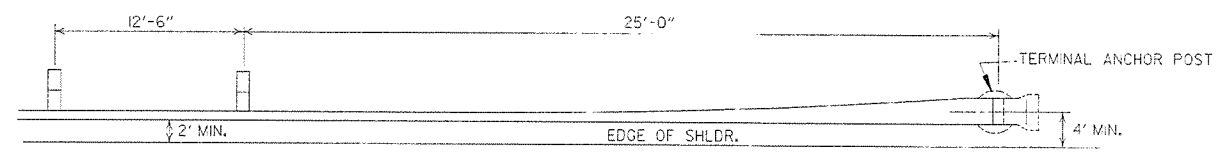
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7F (1400 F) OR NO. 1 1350 F SOUTHERN PINE.

ARKANSAS STATE HIGHWAY COMMISSION

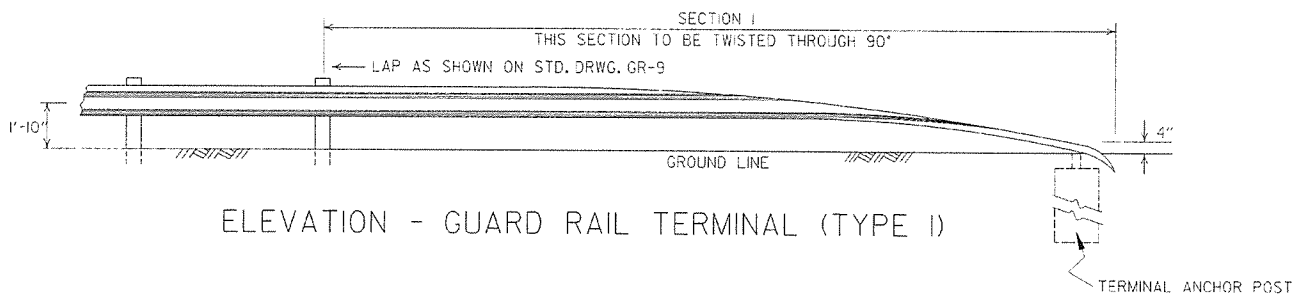
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A

DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

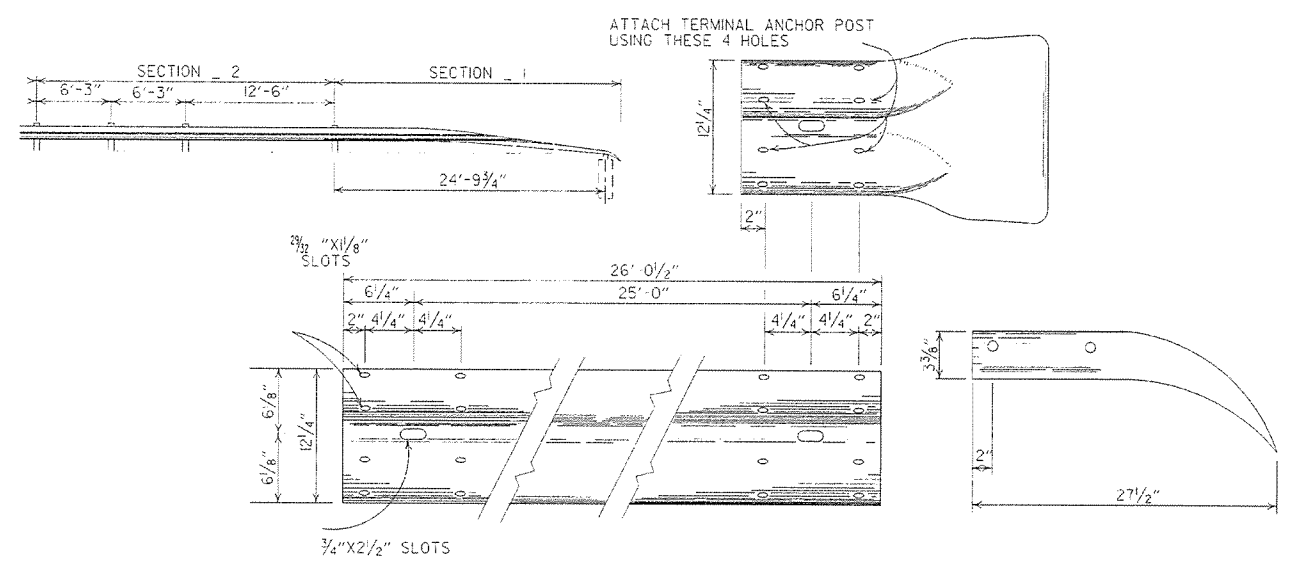


PLAN - GUARD RAIL TERMINAL (TYPE I)



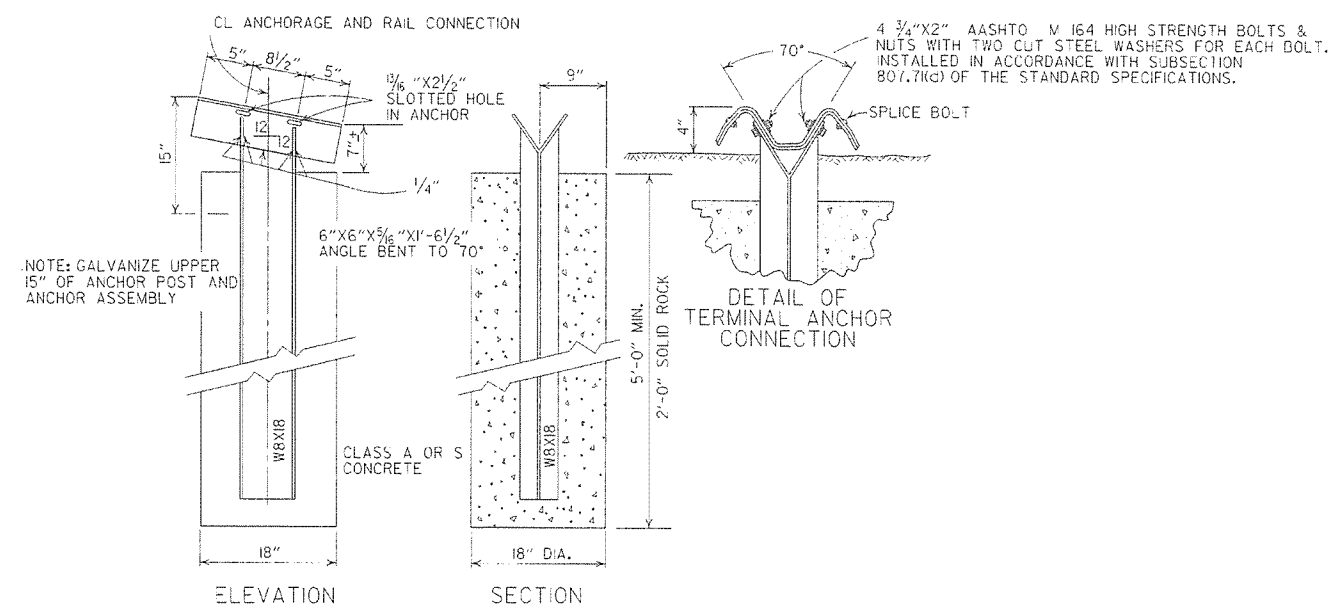
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:
SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL
SHALL BE PAID FOR AT THE PRICE BID PER
LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.



SECTION 1

TERMINAL SECTION



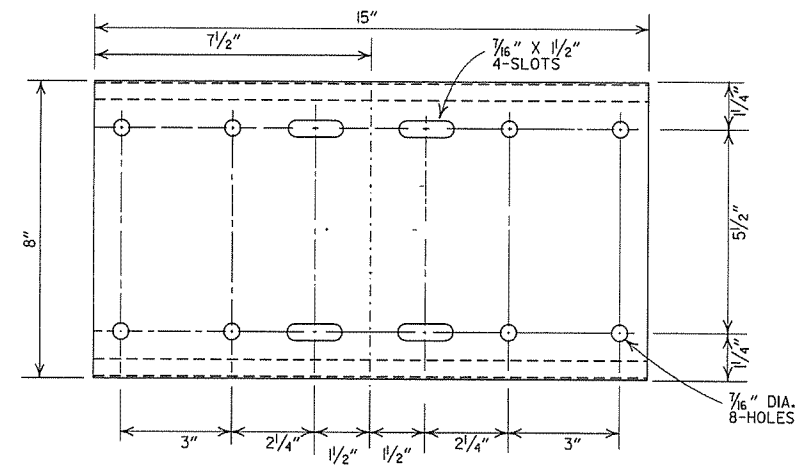
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

NOTE: GALVANIZE UPPER 15" OF ANCHOR POST AND ANCHOR ASSEMBLY

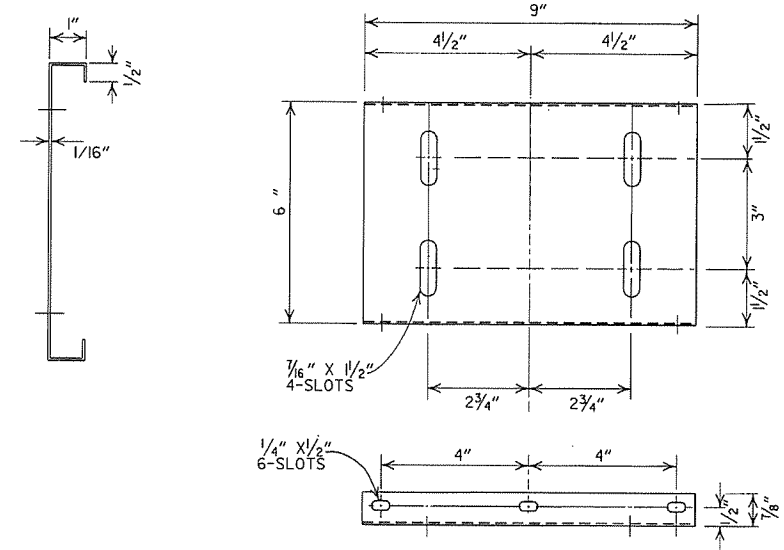
4 3/4" X 2" AASHTO V 164 HIGH STRENGTH BOLTS & NUTS WITH TWO CUT STEEL WASHERS FOR EACH BOLT. INSTALLED IN ACCORDANCE WITH SUBSECTION 807.7(K) OF THE STANDARD SPECIFICATIONS.

NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 W/ 17 POST IF CONTRACTOR SO DESIRES.

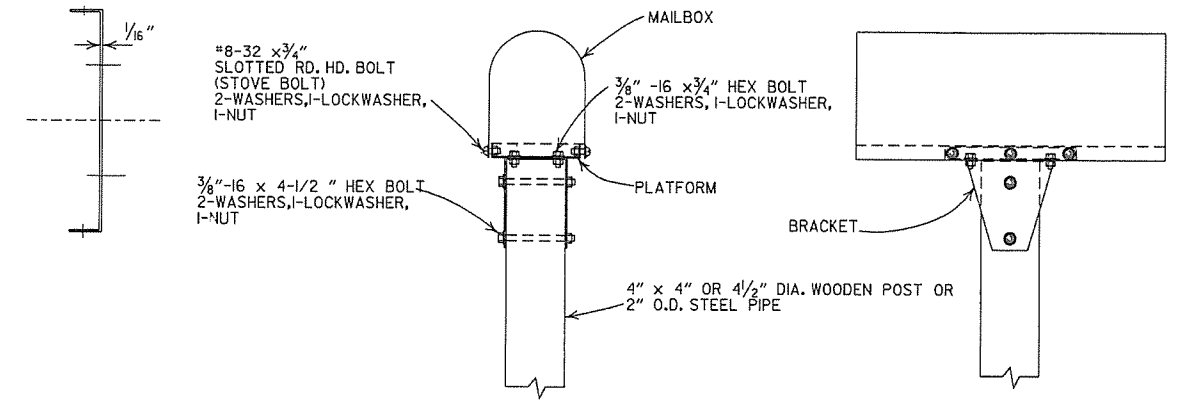
		ARKANSAS STATE HIGHWAY COMMISSION	
		GUARD RAIL DETAILS	
		STANDARD DRAWING GRT-1	
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"		
6-26-97	REVISED LAP NOTE		
10-18-96	REVISED ASTM REF. TO AASHTO		
11-3-94	DIMENSION TERMINAL DETAIL		
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92	
10-1-92	DRAWN & ISSUED	10-1-92	
DATE	REVISION	DATE	FILM



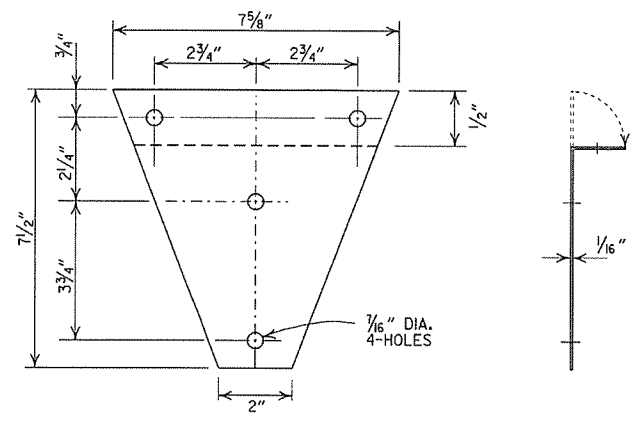
SHELF



PLATFORM

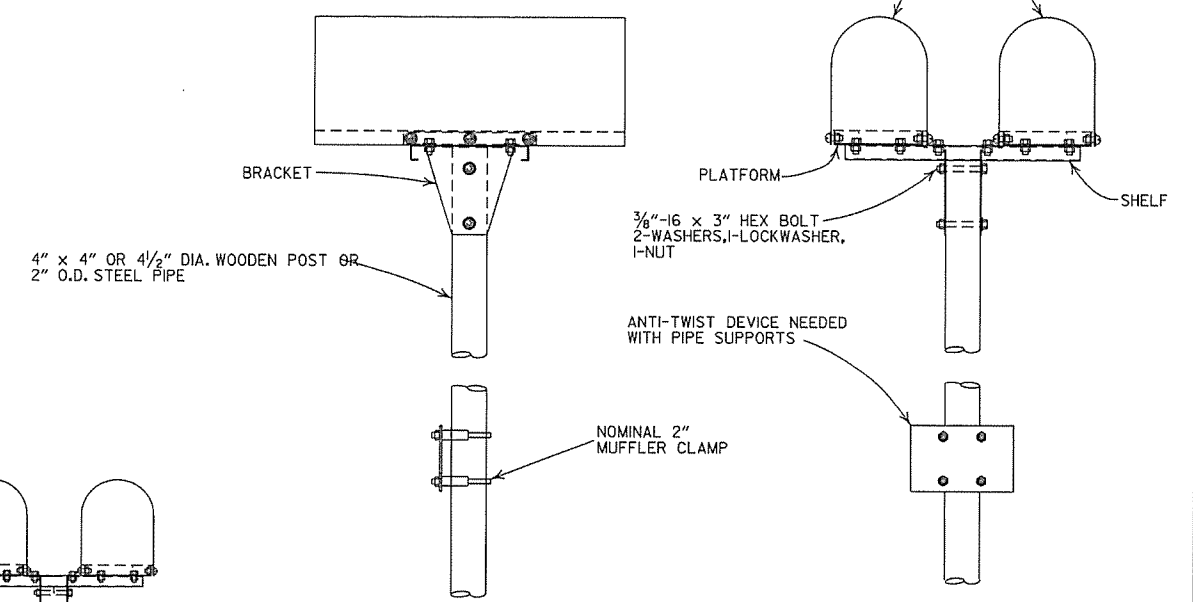


SINGLE INSTALLATION

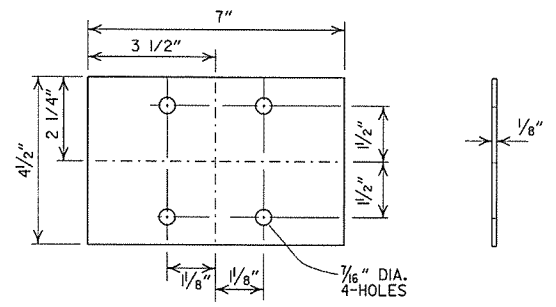


BRACKET

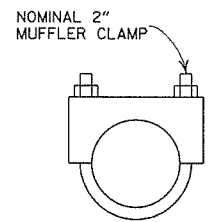
- GENERAL NOTES**
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 3/4" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X 3/4" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
 4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
 5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
 6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



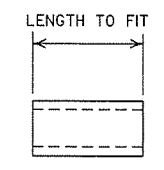
DOUBLE INSTALLATION



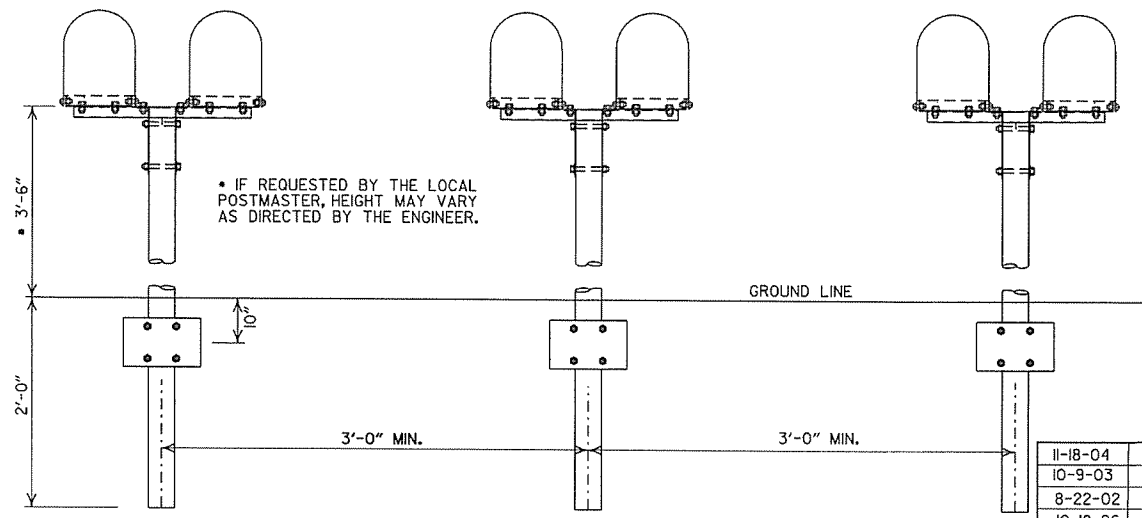
ANTI-TWIST PLATE



CLAMP



SPACER



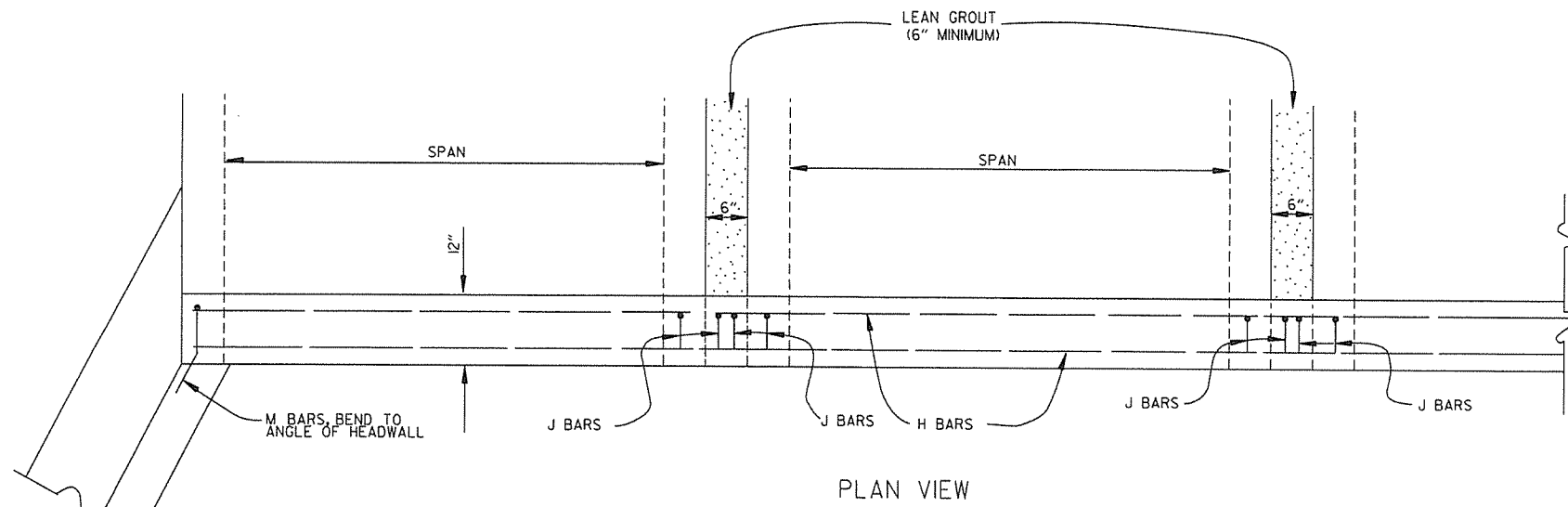
SPACING FOR MULTIPLE POST INSTALLATION

11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED
DATE	FILMED	REVISION

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1



BAR LIST

BAR	NO.	SIZE	LENGTH	BAR BENDING DIAGRAM
H	2	#4	.	
I	.	#4	.	
J	.	#4	1'-5"	
L	.	#4	3'-2"	
M	.	#4	1'-8"	

• NOTE: LENGTH AND NUMBER OF BARS VARIES WITH SIZE OF CULVERT

GENERAL NOTES

WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

WINGS, FOOTINGS, APRONS AND CURTAIN WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE WING DRAWING. STEEL AND CONCRETE QUANTITIES WILL BE ADJUSTED TO FIT THE IN-PLACE WIDTH & HEIGHT OF THE PRECAST CONCRETE BOX CULVERTS.

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

WINGWALLS AND FOOTINGS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

ALL CONCRETE, REINFORCING STEEL, LEAN GROUT, MEMBRANE WATERPROOFING, DRAINAGE FILL MATERIAL, GEOTEXTILE FILTER FABRIC, LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLING PRECAST BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR THE ITEMS AS SPECIFIED IN SECTION 607 OF THE STANDARD SPECIFICATIONS.

LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:
 PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.
 SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS. THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE. THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF SECTION B15 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

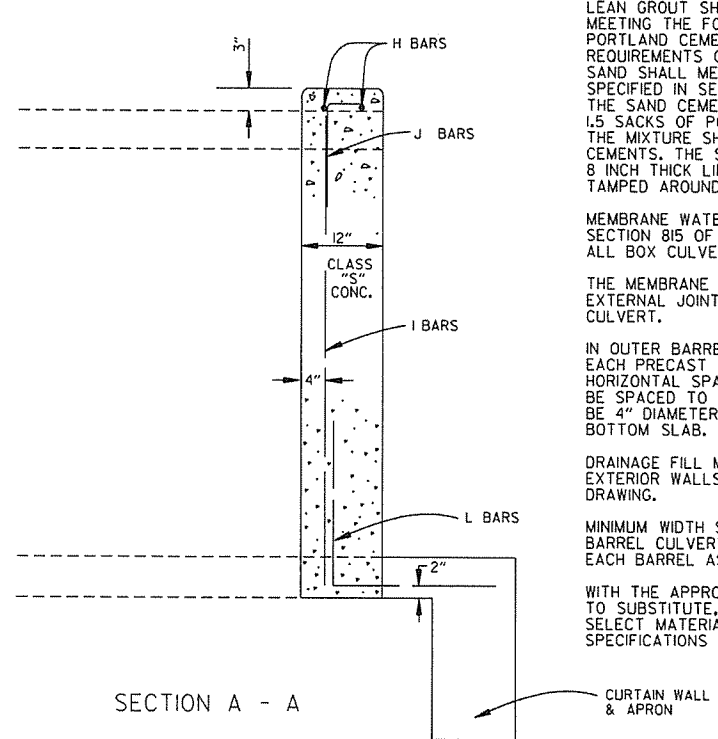
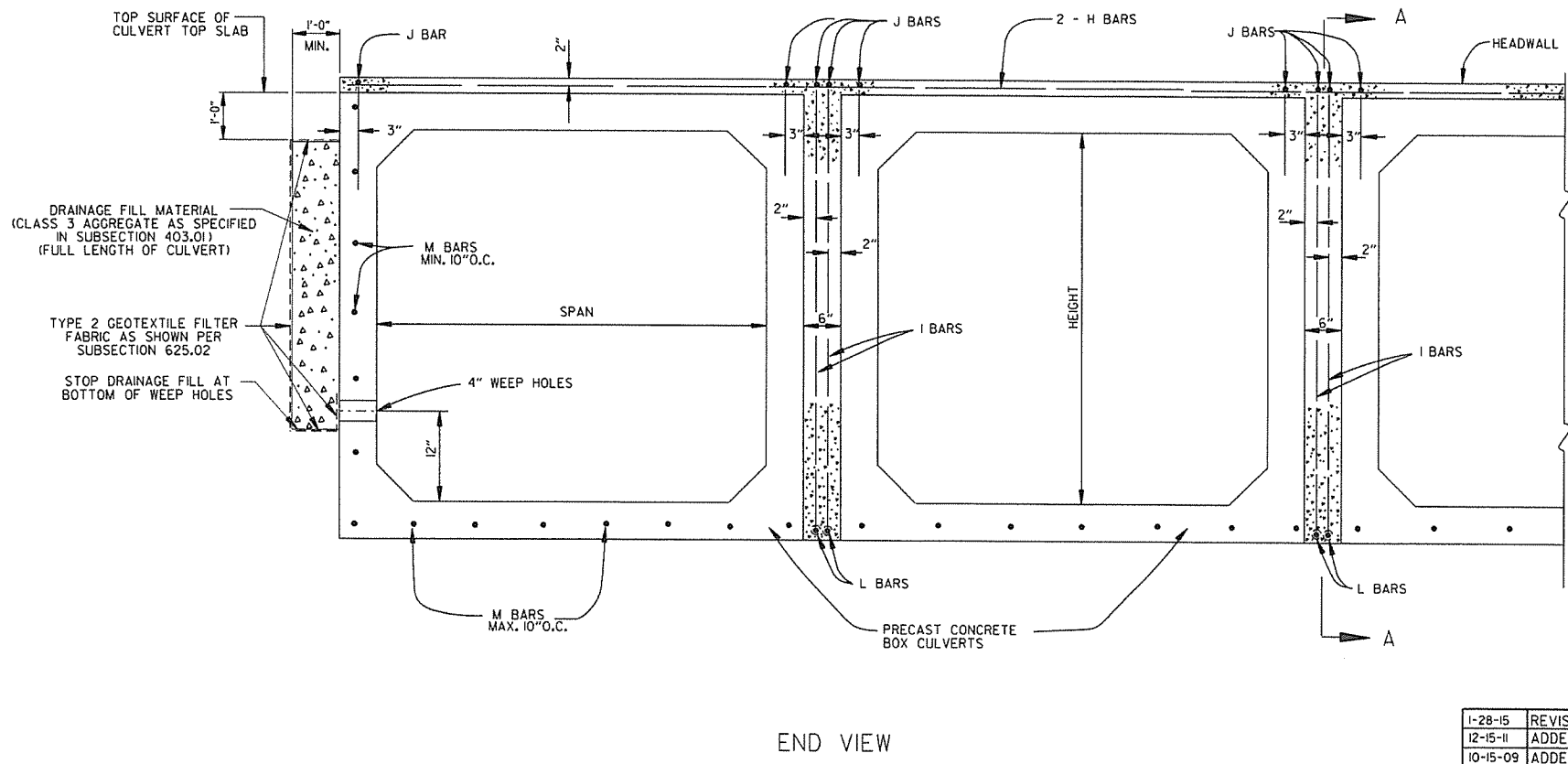
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.



1-28-15	REVISED GEOTEXTILE FABRIC PLACEMENT	
12-15-11	ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL	
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11-8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED: JABE	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43¾	44	26¾	27
42	51½	51	31¾	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87½	87
120	154	154	96¾	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(F)(1).

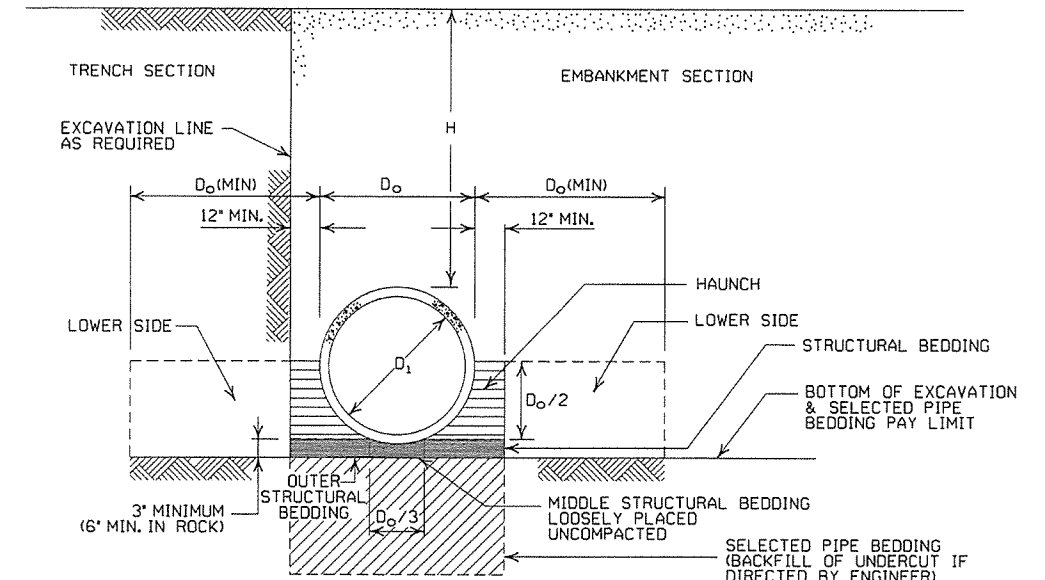
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

- * SM-3 WILL NOT BE ALLOWED.
- ** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH, IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE			
	CLASS III	CLASS IV	CLASS V	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	36	36	47		
36	2	34	30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45	52		
18	2	30	30	39	41	
24	2	22	22	31	32	34
30	2		18	26	27	28
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

CORRUGATED METAL PIPE ARCHES

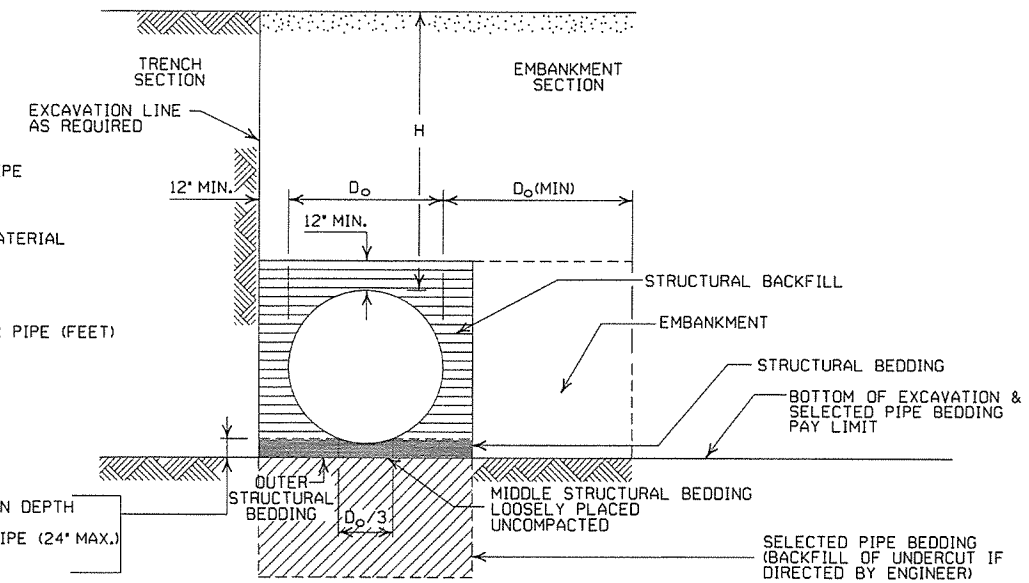
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)			
				INSTALLATION			INSTALLATION			
				TYPE 1	TYPE 1		TYPE 1	TYPE 1		
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2,25	15	0.060	2,25	15		
24	28x20	3	0.064	2,5	15	0.075	2,5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3 1/2	0.079	3	12	0.105	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.109	3	13	0.135	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.164	3	15		
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
			INSTALLATION		INSTALLATION					
			TYPE 2		TYPE 1		TYPE 2		TYPE 1	
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	126x83	18	0.138	3	2	15	15			

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3" x 1/2" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Symbol] = STRUCTURAL BACKFILL MATERIAL
- [Symbol] = UNDISTURBED SOIL
- EQUIV. DIA. = EQUIVALENT DIAMETER
- H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" x 1/2" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" x 1" OR 5" x 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1



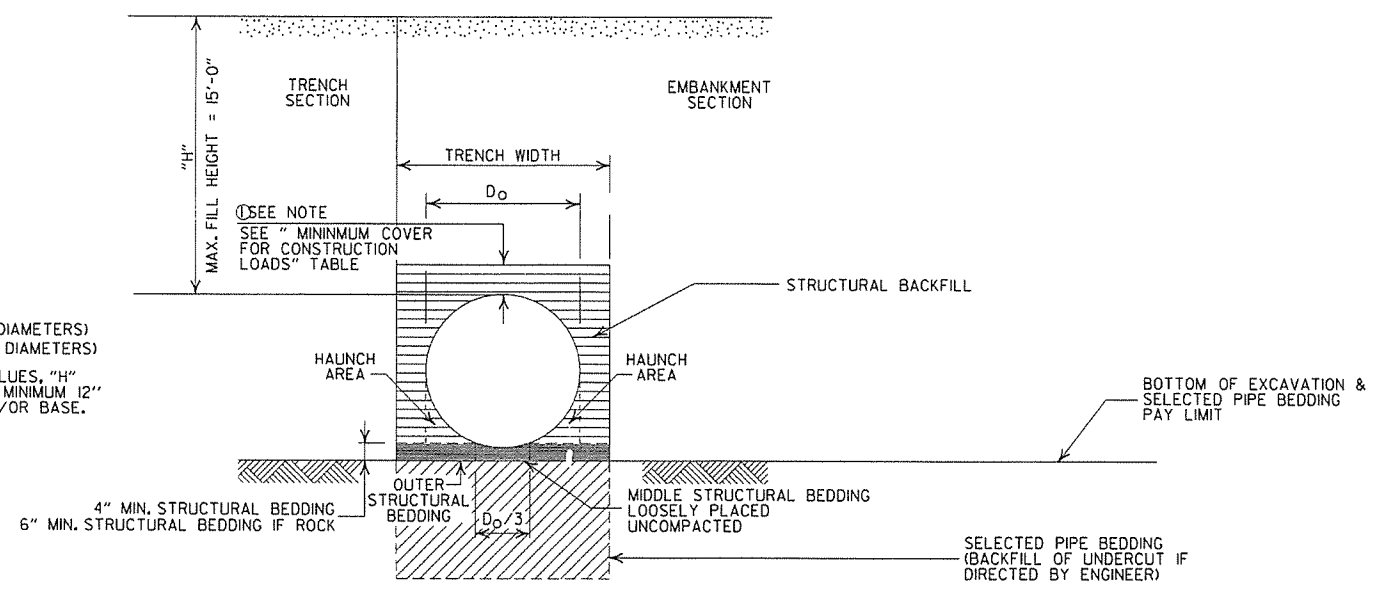
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
- SM3 WILL NOT BE ALLOWED.
- STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" > OR = 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

- STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

CONSTRUCTION SEQUENCE

- PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
- INSTALL PIPE TO GRADE.
- COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
- THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
- PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

- H = FILL HEIGHT (FT.)
- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Hatched Pattern] = STRUCTURAL BACKFILL MATERIAL
- [Dotted Pattern] = UNDISTURBED SOIL

GENERAL NOTES

- PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
- IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
- WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
- WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE, IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
- FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
- HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT
(HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL. SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/8 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

- ① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H"
SHALL INCLUDE A MINIMUM 12"
OF PAVEMENT AND/OR BASE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" ≥ 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

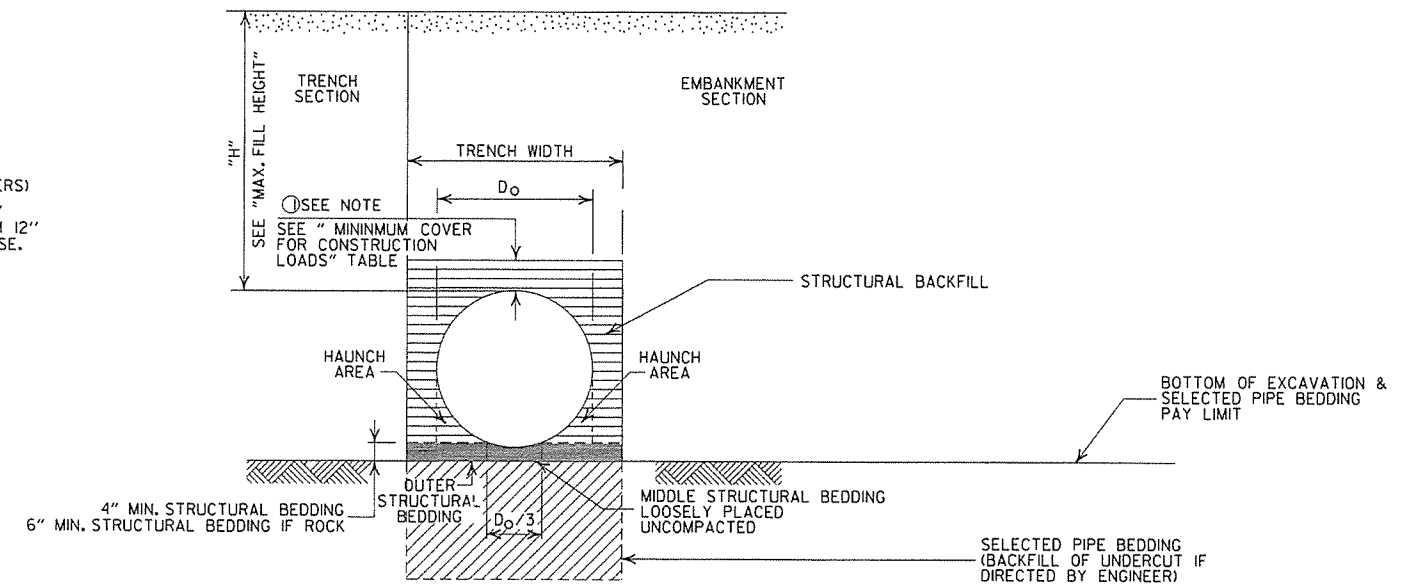
MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

- ② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

- I. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

- PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
- INSTALL PIPE TO GRADE.
- COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
- THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
- PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

- PIPE SHALL CONFORM TO ASTM F949, CELL CLASS I2454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
- IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
- WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
- WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
- FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
- PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

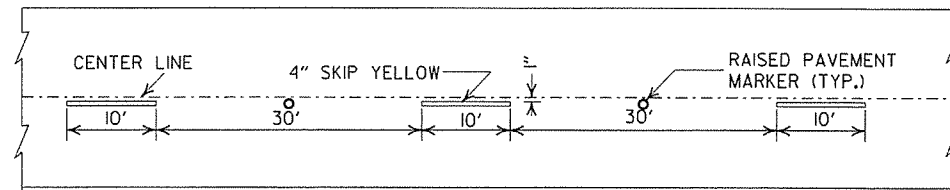
PLASTIC PIPE CULVERT
(PVC F949)

STANDARD DRAWING PCP-2

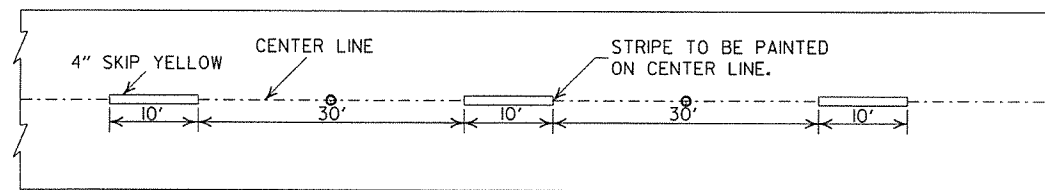


NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

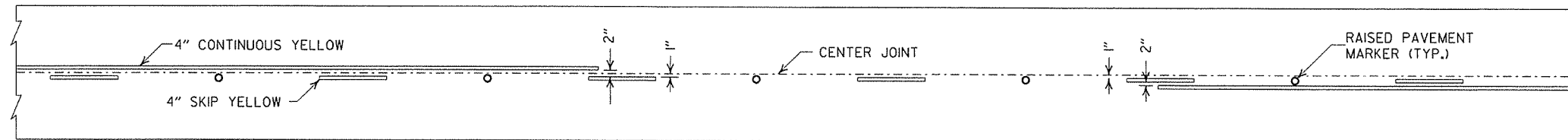


CONCRETE PAVEMENT

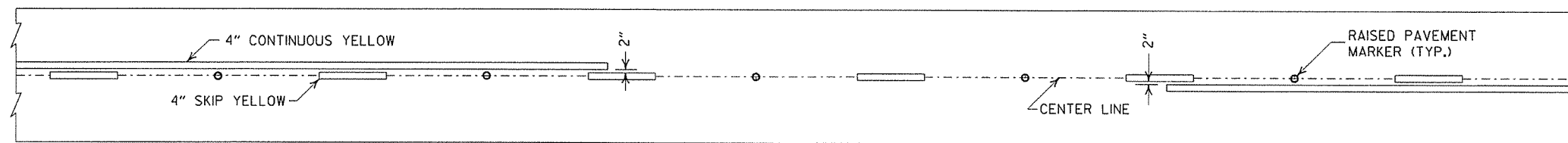


ASPHALT PAVEMENT

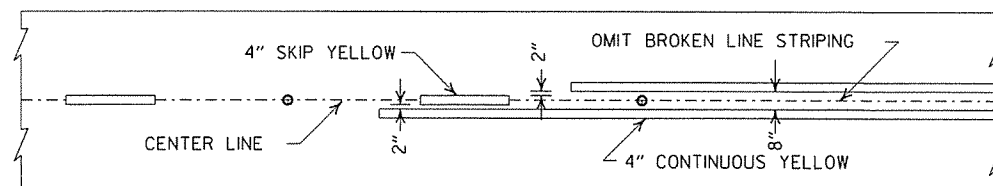
BROKEN LINE STRIPING



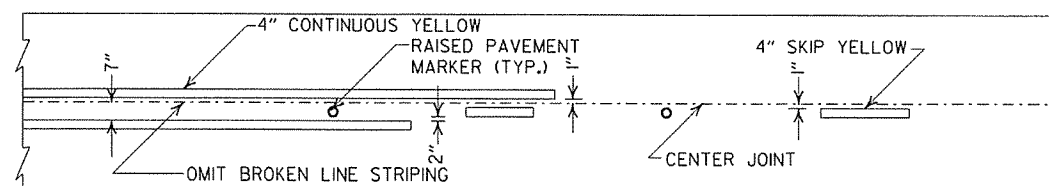
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

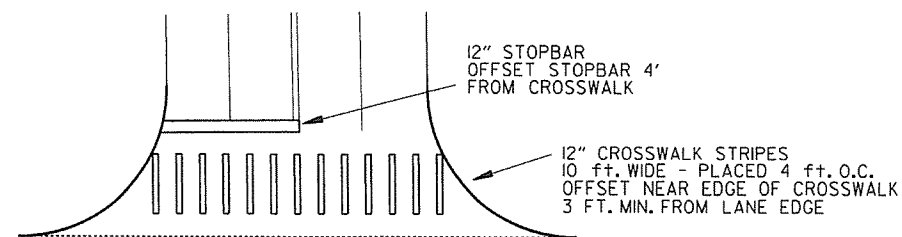


ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



CROSSWALK AND STOPBAR DETAILS

GENERAL NOTES:

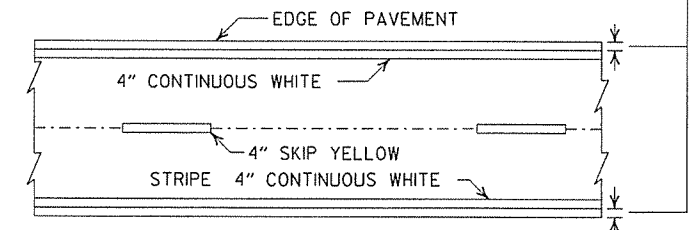
THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

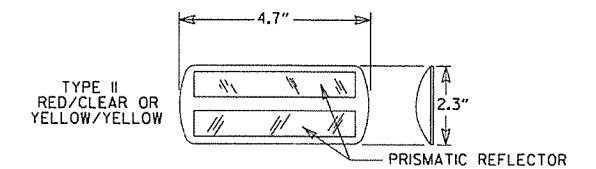
NOTE:

DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

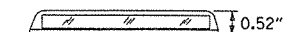
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING



NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

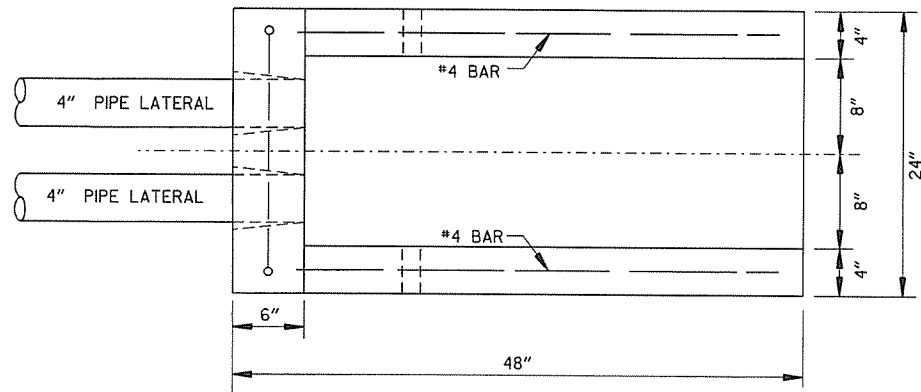
DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

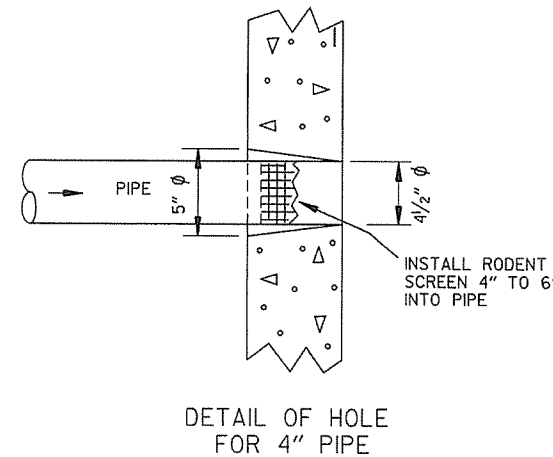
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

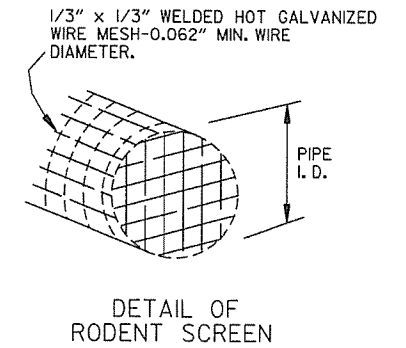
NOTE:
 1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



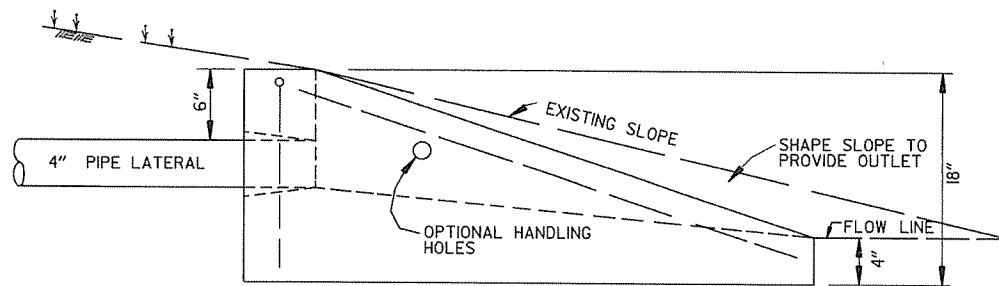
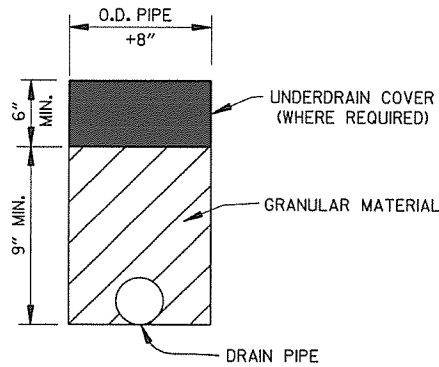
PLAN VIEW



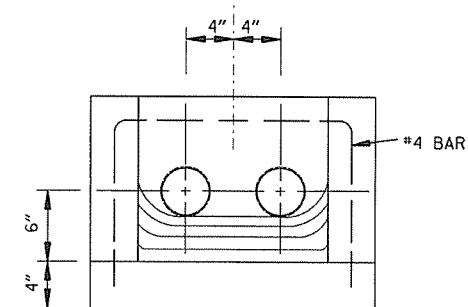
DETAIL OF HOLE FOR 4" PIPE



DETAIL OF RODENT SCREEN

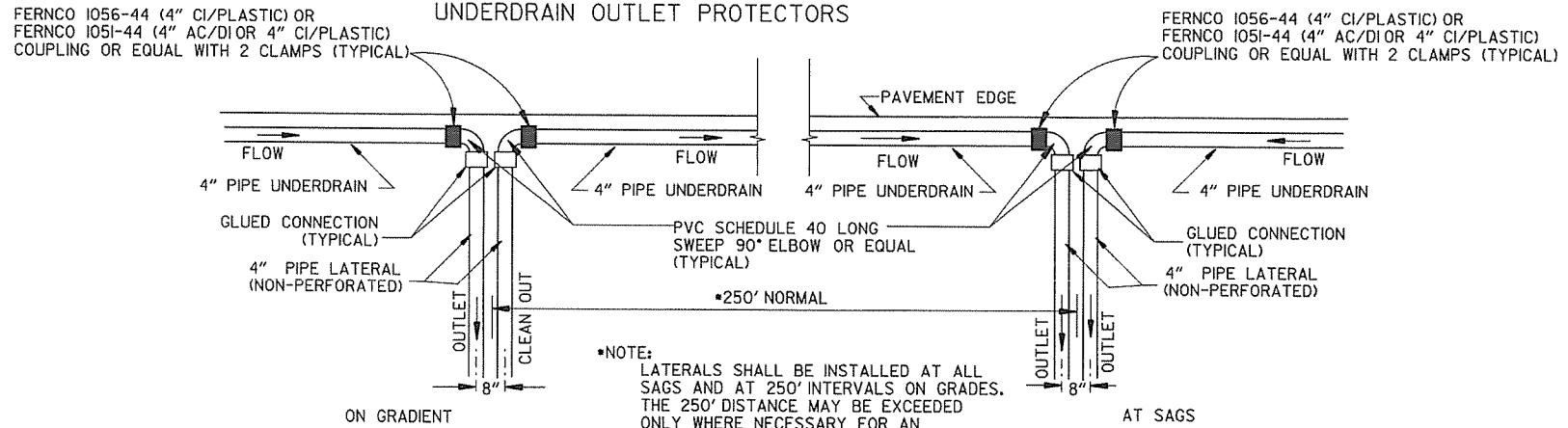


SIDE VIEW



FRONT VIEW

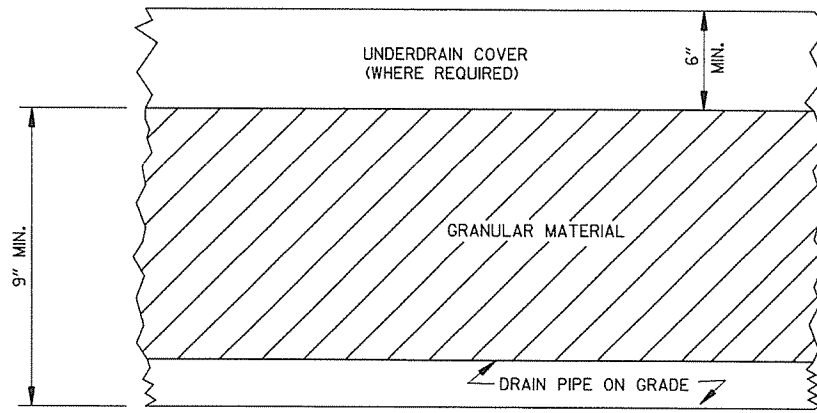
UNDERDRAIN OUTLET PROTECTORS



*NOTE:
 LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.



DETAILS OF PIPE UNDERDRAIN

4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5 1/2" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11-3-94	REVISED FOR DUAL LATERALS	11-3-94
10-1-92	SUBSTITUTED GEOTEXTILE	10-1-92
8-15-91	ADDED POLYETHYLENE PIPE	8-15-91
11-8-90	DELETED ALTERNATE NOTE	11-8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

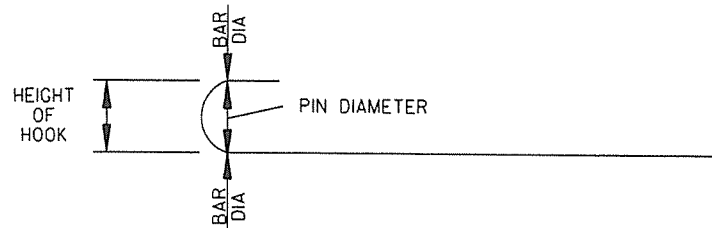
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 1/4"	4"
4	3"	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2 3/4 INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

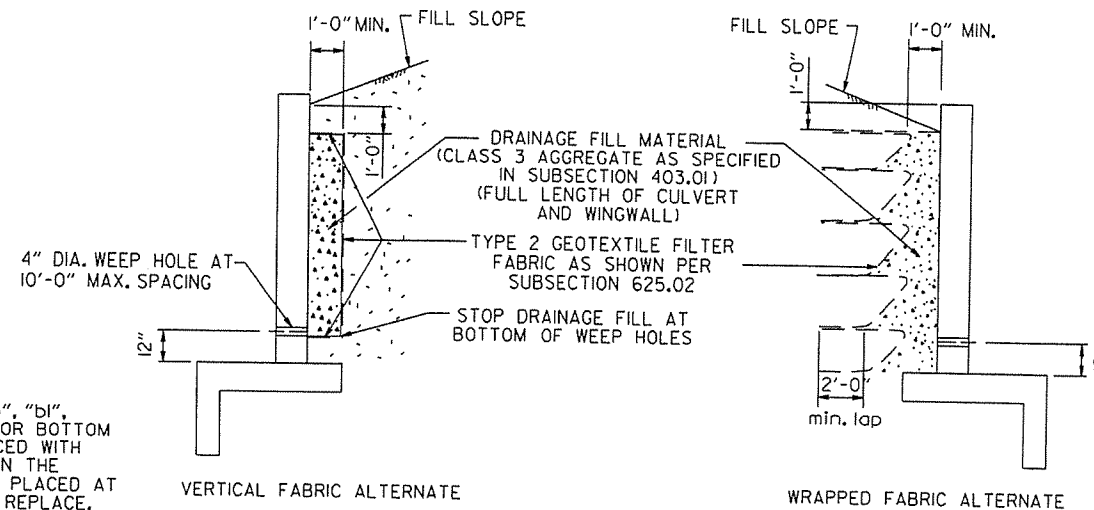
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. REINFORCING STEEL SHALL BE AASHTO M 31OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

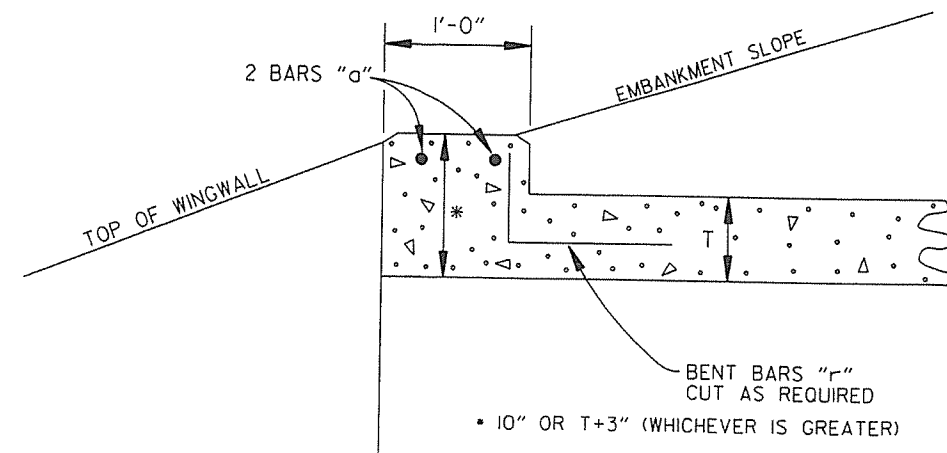
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSIMANUAL SHALL BE MINUS ZERO TO PLUS 1/2 INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

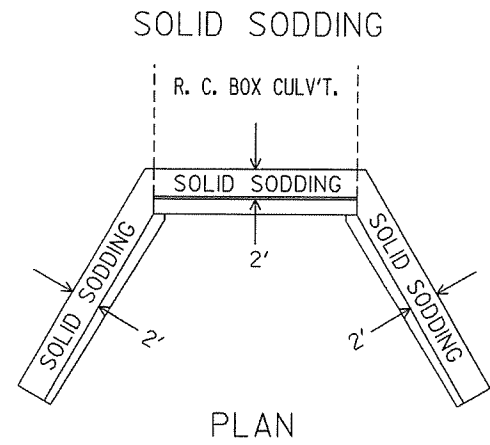
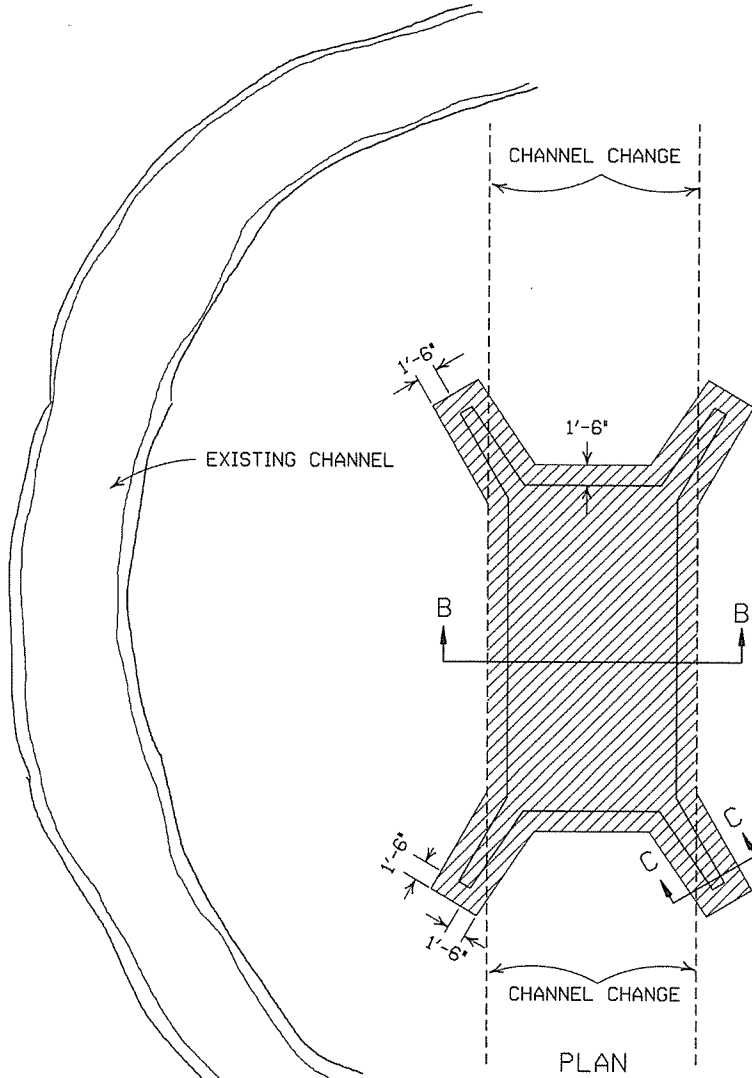
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

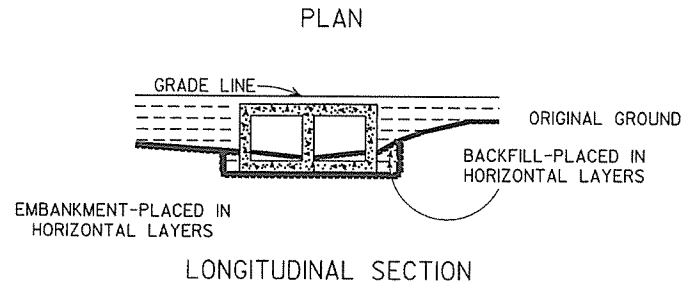
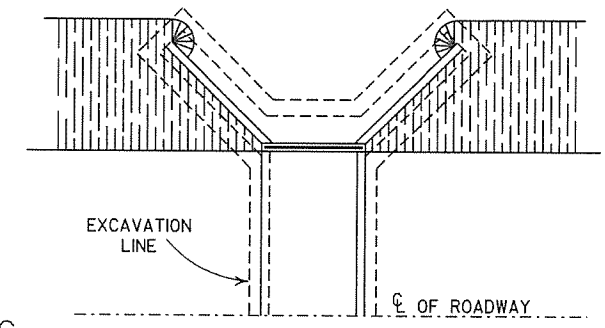
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1

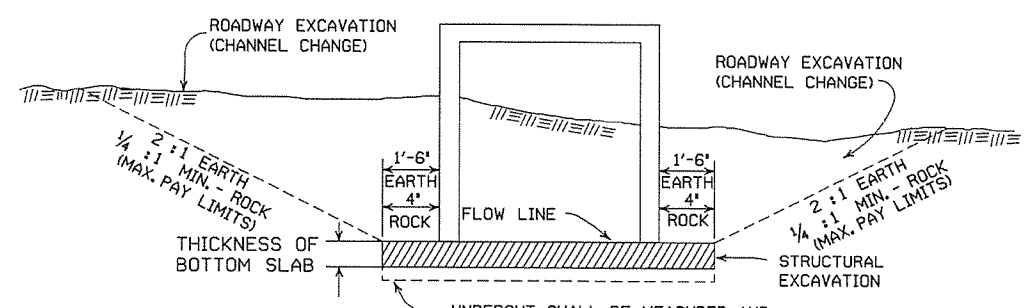
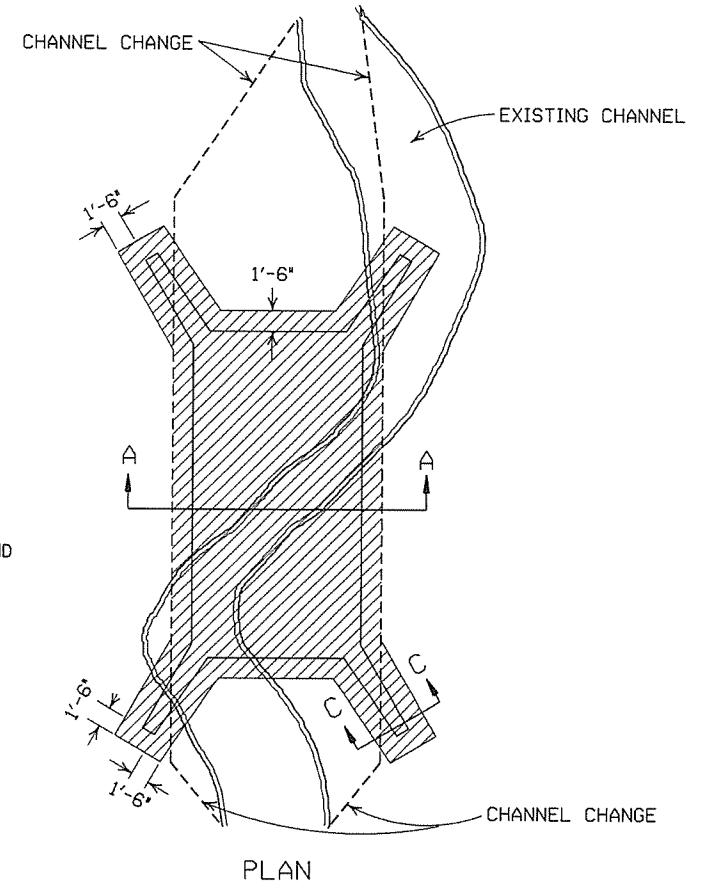


PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

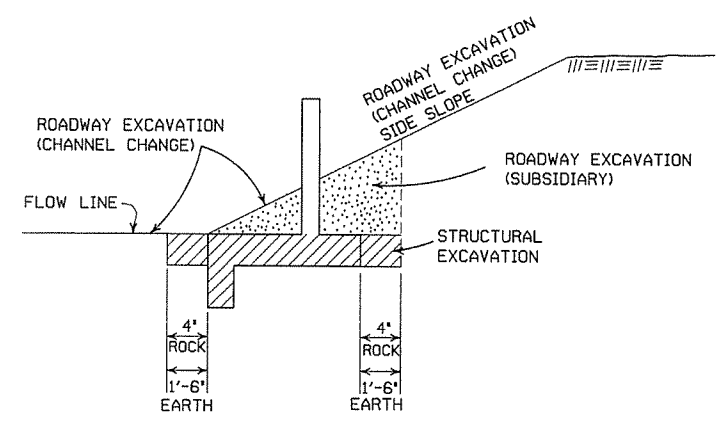


LONGITUDINAL SECTION
BACKFILL DETAILS FOR BOX CULVERT

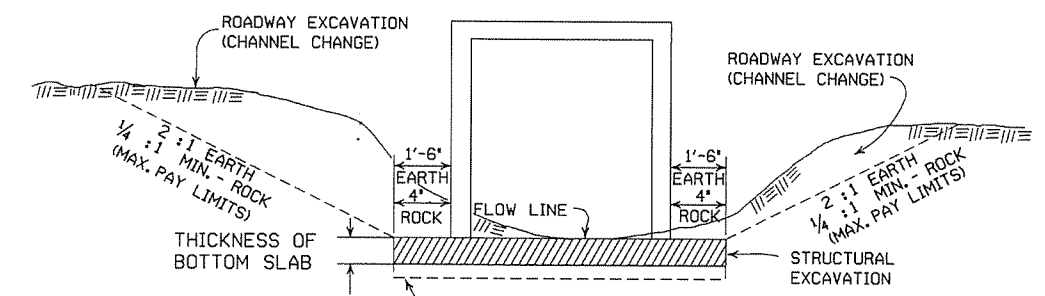


SECTION B-B
DETAILS FOR NEW CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.



SECTION C-C



SECTION A-A
DETAILS THROUGH EXISTING CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

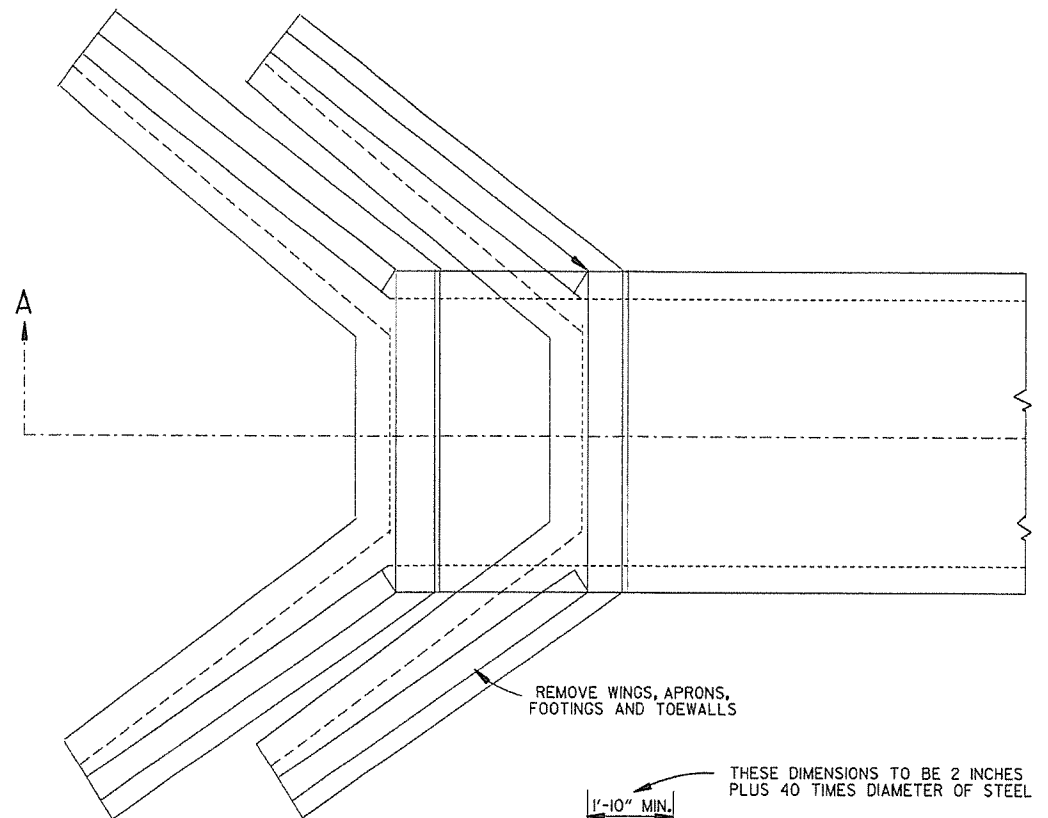
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72
DATE	REVISION	FILMED

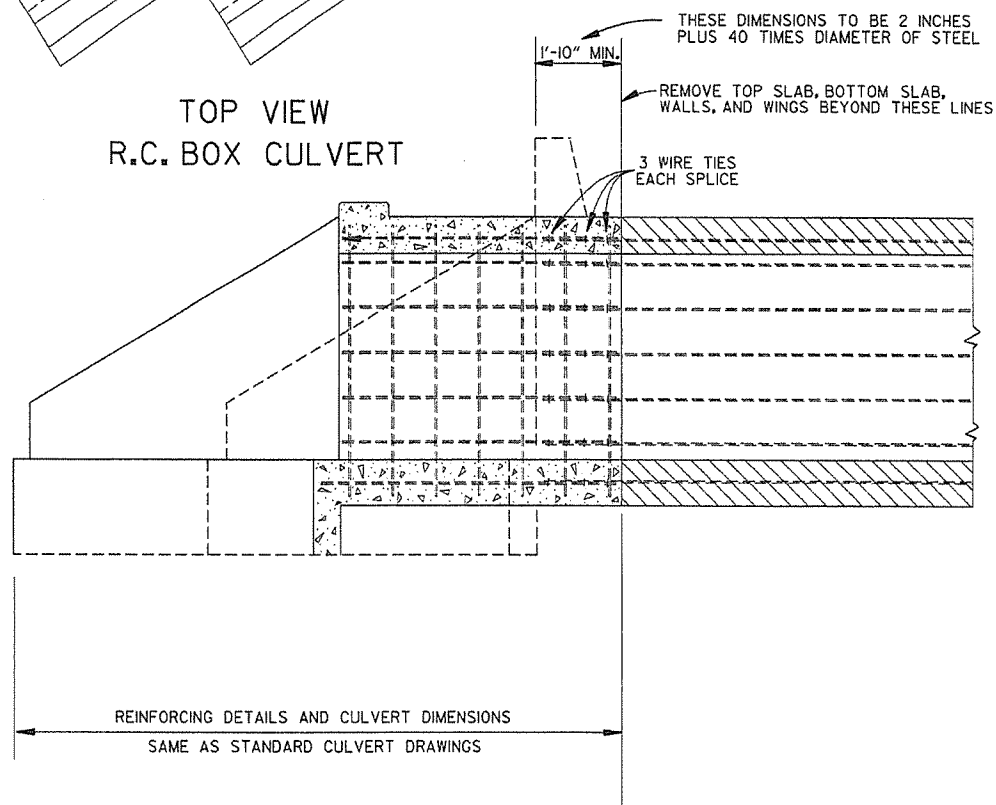
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

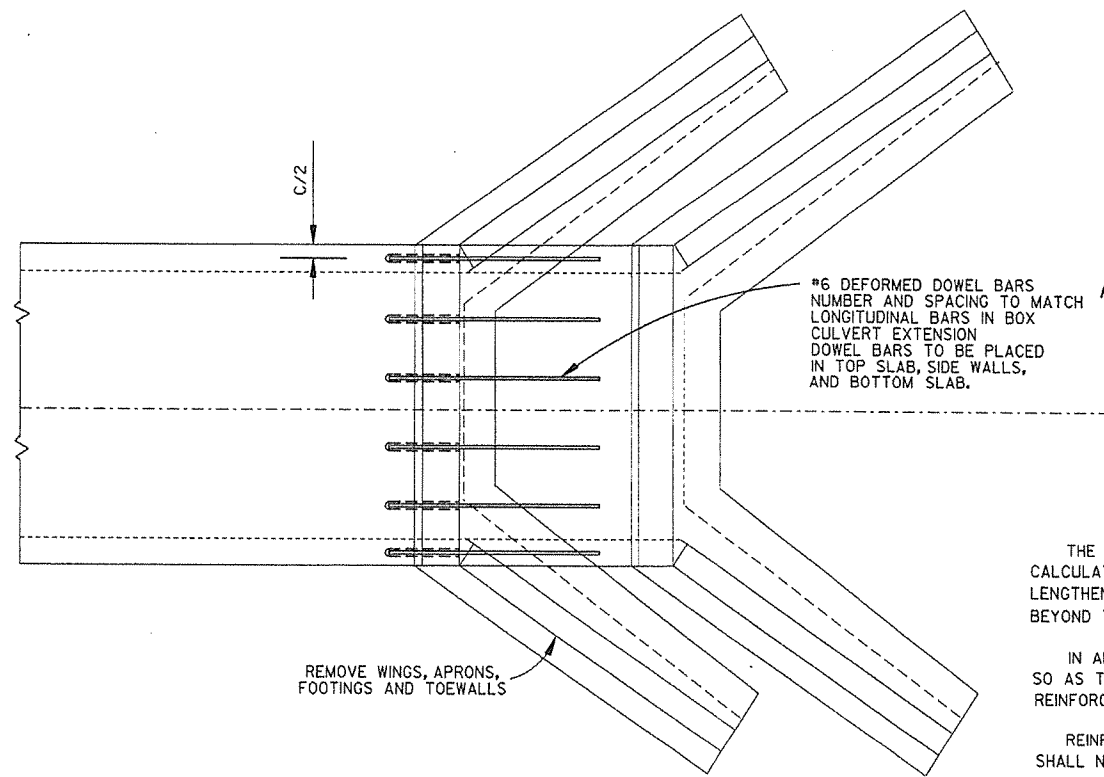


TOP VIEW
R.C. BOX CULVERT

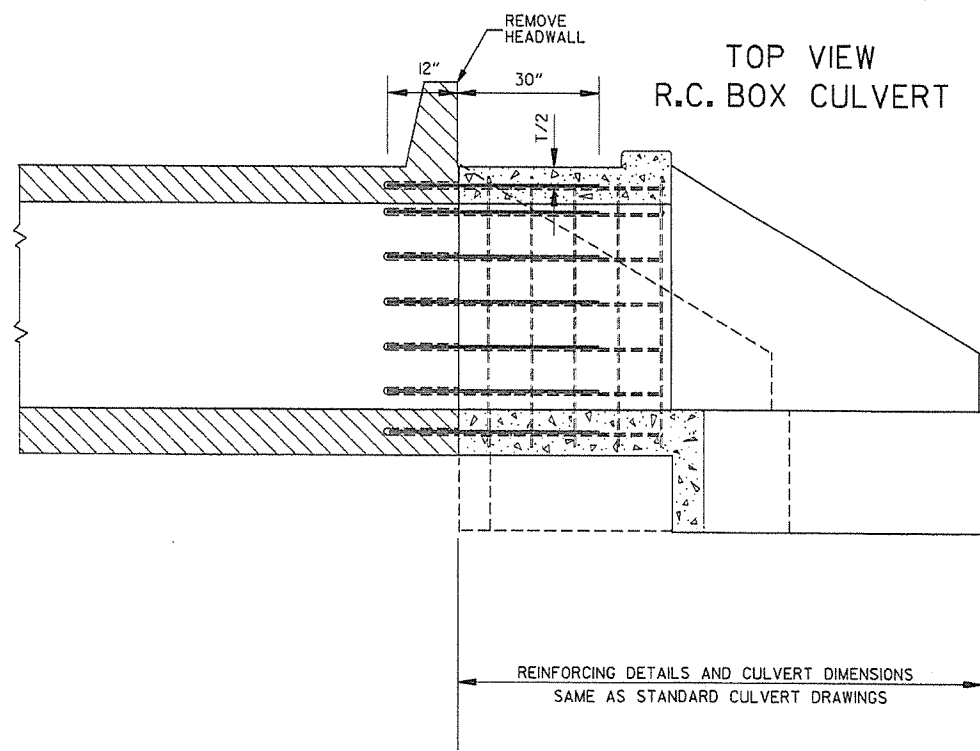


SECTION A-A
METHOD 1

REINFORCING DETAILS AND CULVERT DIMENSIONS
SAME AS STANDARD CULVERT DRAWINGS



TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 2

REINFORCING DETAILS AND CULVERT DIMENSIONS
SAME AS STANDARD CULVERT DRAWINGS

#6 DEFORMED DOWEL BARS
NUMBER AND SPACING TO MATCH
LONGITUDINAL BARS IN BOX
CULVERT EXTENSION
DOWEL BARS TO BE PLACED
IN TOP SLAB, SIDE WALLS,
AND BOTTOM SLAB.

GENERAL NOTES

THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.

IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.

REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.

ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.

DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.

THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.
SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

USE FOR METHOD

1

1

1&2

1&2

2

2

1&2

			ARKANSAS STATE HIGHWAY COMMISSION
			METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS
			STANDARD DRAWING RCB-3
10-12-95	CHANGED DRAWING # FROM 144-A		
4-1-93	ADDED GENERAL NOTE		
10-1-92	ADDED ALT. METHOD OF EXTENSION		
11-30-89	REDRAWN		
1-4-83	ELIMINATED CONCRETE CLASS		
12-20-56	RETRACED		
DATE	REVISION	DATE	FILM

LOOP DETECTOR INSTALLATION AND TESTING

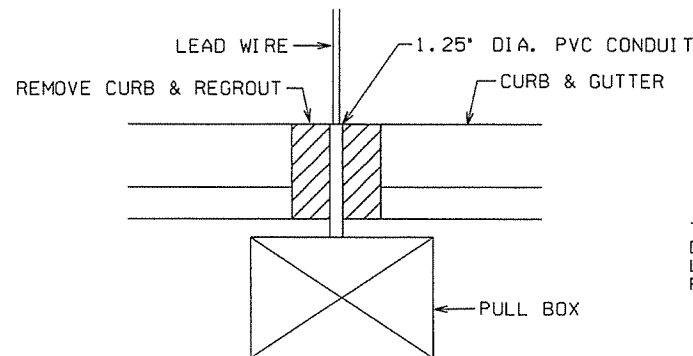
NOTES:

1. LOOPS WITH A PERIMETER GREATER THAN 40' SHALL HAVE TWO TURNS. LOOPS WITH A PERIMETER LESS THAN OR EQUAL TO 40' SHALL HAVE THREE TURNS, UNLESS OTHERWISE NOTED ON THE PLANS. QUADRUPOLE LOOPS SHALL BE TWO TURNS (2-4-2 CONFIGURATION) UNLESS OTHERWISE NOTED.
2. LOOP AND FEEDER WIRE SHALL BE CONTINUOUS WITHOUT SPLICES EXCEPT AT THE LOOP/FEEDER WIRE SPLICE AS SHOWN. SPLICE SHALL BE ROSIN SOLDERED AND WATERPROOFED WITH AN ACCEPTED SPLICE KIT. DRAIN WIRE SHALL BE GROUNDED IN CABINET AND INSULATED AT LOOP TO FEEDER SPLICE.
3. THE LOOP TO FEEDER SPLICE, FEEDER JACKET AND JACKET OF LOOP WIRE IN DUCT SHALL BE COMPLETELY SEALED AND WATERPROOFED.
4. CONTRACTOR MAY MAKE CONNECTIONS TO SIGNAL CABLE AND LOOP TO FEEDER CONNECTION AT TERMINAL STRIPS MOUNTED TO POLE INSIDE HAND HOLD COVER AS SHOWN IN DETAIL. TERMINALS MUST BE EASILY ACCESSIBLE, BUT PROTECTED AGAINST ACCIDENTAL CONTACT. CONNECTION OF POWER CARRYING CIRCUITS MUST BE SEPARATED FROM LOOP OR LOGIC CIRCUITS. ALL CONNECTIONS TO TERMINAL STRIPS SHALL UTILIZE SPADE LUGS OR AS APPROVED BY THE ENGINEER.
5. EACH LOOP SHALL HAVE A SEPARATE "FEEDER WIRE" UNLESS OTHERWISE NOTED. ALL FEEDER WIRES SHALL BE LABELED AS TO LOOP NUMBER AS DESIGNATED ON THE PLANS.
6. ALL LOOP WIRE ENTERING PULL BOXES SHALL BE ENCLOSED IN CONDUIT. EACH LOOP WIRE SHALL ENTER PULL BOX OR POLE BASE THROUGH A SEPARATE PIECE OF ONE INCH (1") CONDUIT.
7. LOOP WIRE FROM LOOP TO CONDUIT IS NOT TWISTED. LOOP WIRE IN THE CONDUIT MUST BE TWISTED TWO TO FIVE TURNS PER FOOT.
8. WARRANTY PERIOD FOR LOOPS SHALL NOT COMMENCE UNTIL TESTED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER. CONTRACTOR SHALL PERFORM TEST AND PROVIDE A RECORD TO THE ENGINEER AS LISTED IN THE DETECTOR LOOP TESTING PROCEDURE.
9. UNLESS OTHERWISE APPROVED BY THE ENGINEER, BACKER ROD SHALL BE INSTALLED IN SHORT SECTIONS SPACED NOT MORE THAN 18" APART AND WEDGED INTO SLOT TO HOLD CABLE IN PLACE. CABLE SHALL BE TOTALLY ENCAPSULATED IN SEALER.
10. "HOT POUR" SEALER SHALL NOT BE ALLOWED WITH 705-LOOP WIRING IN DUCT.
11. WHERE UNDERGROUND SPLICES OF SIGNAL CABLE ARE REQUIRED, CONNECTIONS SHALL BE SOLDERED AND COMPLETELY WATERPROOFED TO THE SATISFACTION OF THE ENGINEER. WATERPROOFING SHALL EXTEND A MINIMUM OF TWO INCHES PAST THE SIGNAL CABLE JACKET AND SHALL COMPLETELY COVER ALL INDIVIDUAL CONDUCTORS OF THE SIGNAL CABLE. WATERPROOFING DOES NOT APPLY TO CONNECTIONS MADE IN POLE BASES.
12. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE. ONLY ONE NEUTRAL IS REQUIRED FOR PEDESTRIAN SIGNALS. A SEPARATE 5C (TYPICAL) IS PROVIDED FOR PEDESTRIAN PUSH BUTTONS.
13. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO CONTROLLER. CONTROLLER CABINET SHALL BE WIRED SUCH POWER TO LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS DURING FLASH OPERATION.

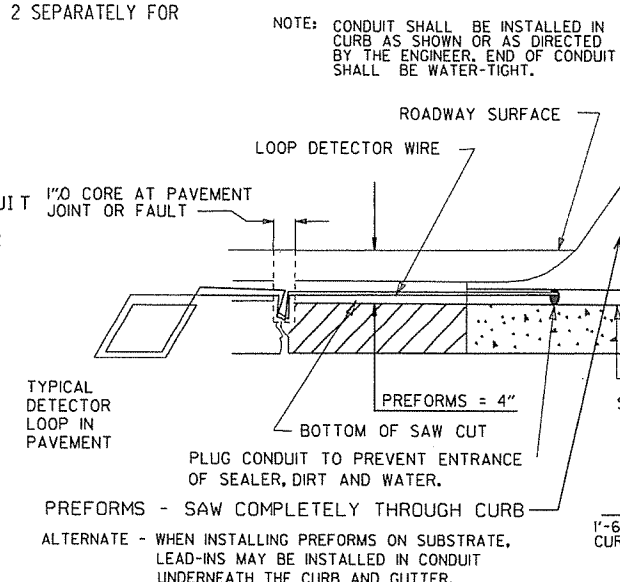
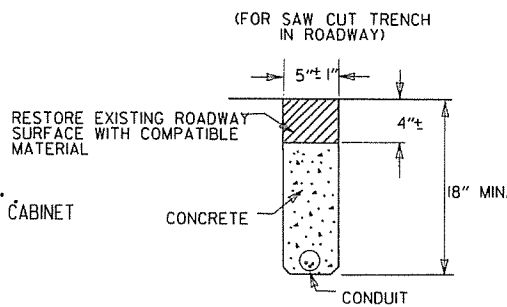
TYPICAL PROCEDURE FOR DETECTOR LOOP TESTING

- 1 DISCONNECT AND TEST CONTINUITY (< 10 OHMS) IF CONTINUITY IS BAD, GO TO TEST 3
- 2 TEST INSULATION (@ 500 VOLT TEST > 10 MEG-OHM) IF TESTS 1 & 2 ARE GOOD, NO FURTHER TESTING IS NECESSARY. RECORDED RESULTS CONSIST OF TESTS 1 & 2 FROM CONTROL CABINET WITH FEEDER WIRE CONNECTED TO LOOP.
- 3 OPEN SPLICE (DO NOT BREAK CONNECTION) REPEAT TEST 1 & 2 IF TEST 3 IS BAD, GO TO TEST 4
- 4 BREAK SPLICE, INSTALL JUMPER IN CABINET, REPEAT TESTS 1 & 2 SEPARATELY FOR FEEDER AND FOR LOOP

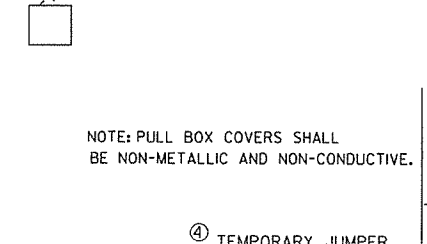
FAILURES TYPICALLY RESULT FROM BROKEN WIRE IN PAVEMENT, FAULTY INSULATION OF LOOP OR FEEDER WIRE, OR POORLY INSULATED SPLICE CONNECTION.



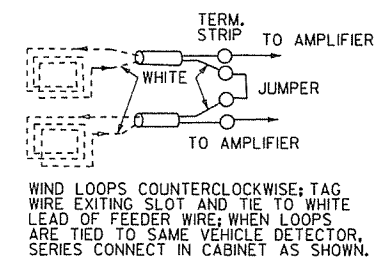
TRENCHING DETAIL
(FOR SAW CUT TRENCH IN ROADWAY)



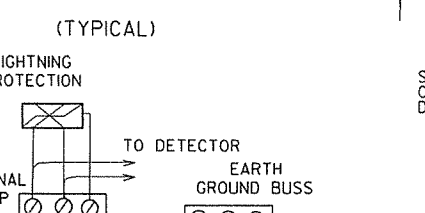
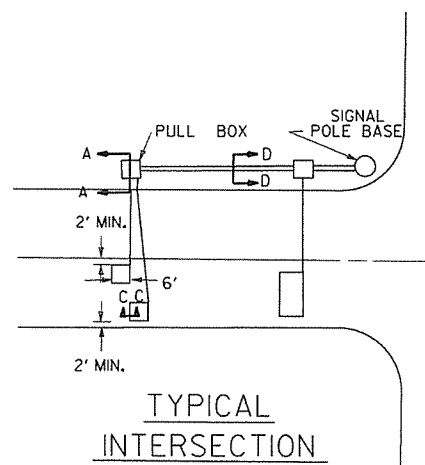
HANDHOLE TERMINAL
QUADRUPOLE LOOP



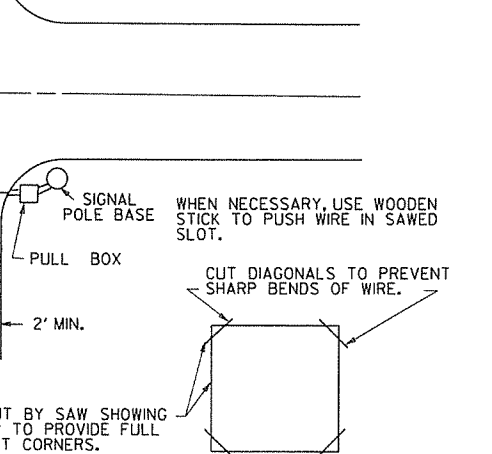
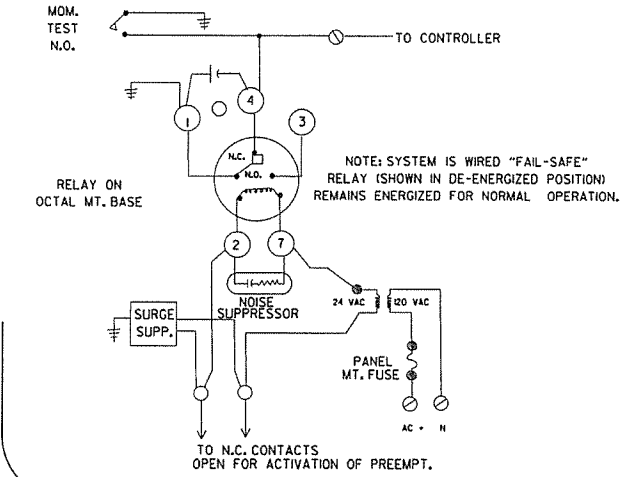
SERIES CONNECTED LOOPS



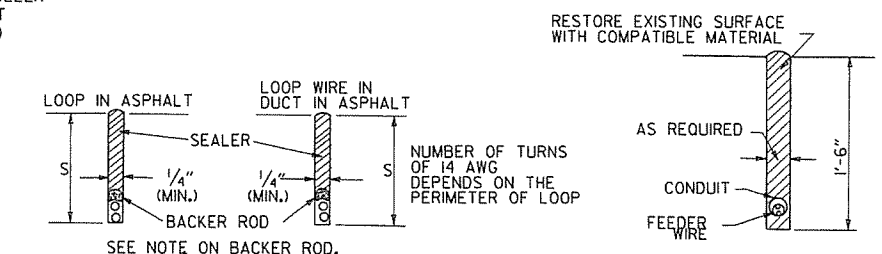
WIND LOOPS COUNTERCLOCKWISE; TAG WIRE EXITING SLOT AND TIE TO WHITE LEAD OF FEEDER WIRE; WHEN LOOPS ARE TIED TO SAME VEHICLE DETECTOR, SERIES CONNECT IN CABINET AS SHOWN.



TRAFFIC SIGNAL PRE-EMPTION INTERFACE WIRING DIAGRAM



TYPICAL SECTIONS FOR PULSE AND PRESENCE LOOP DETECTORS



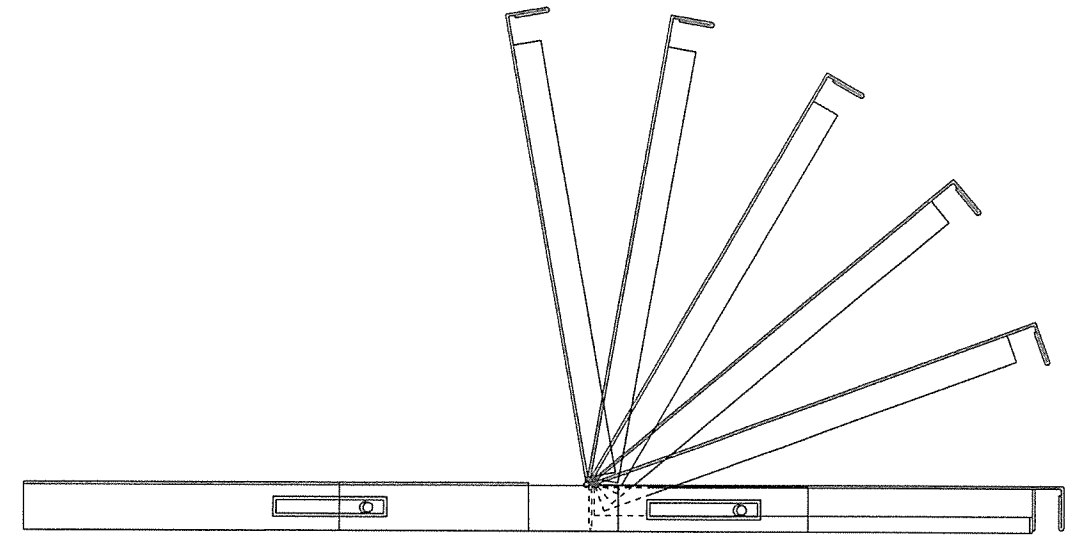
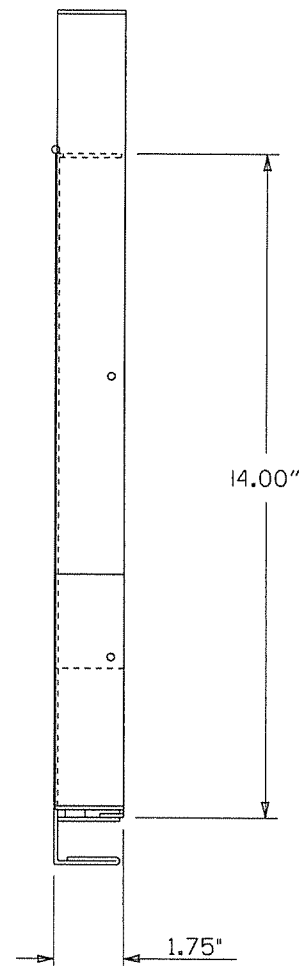
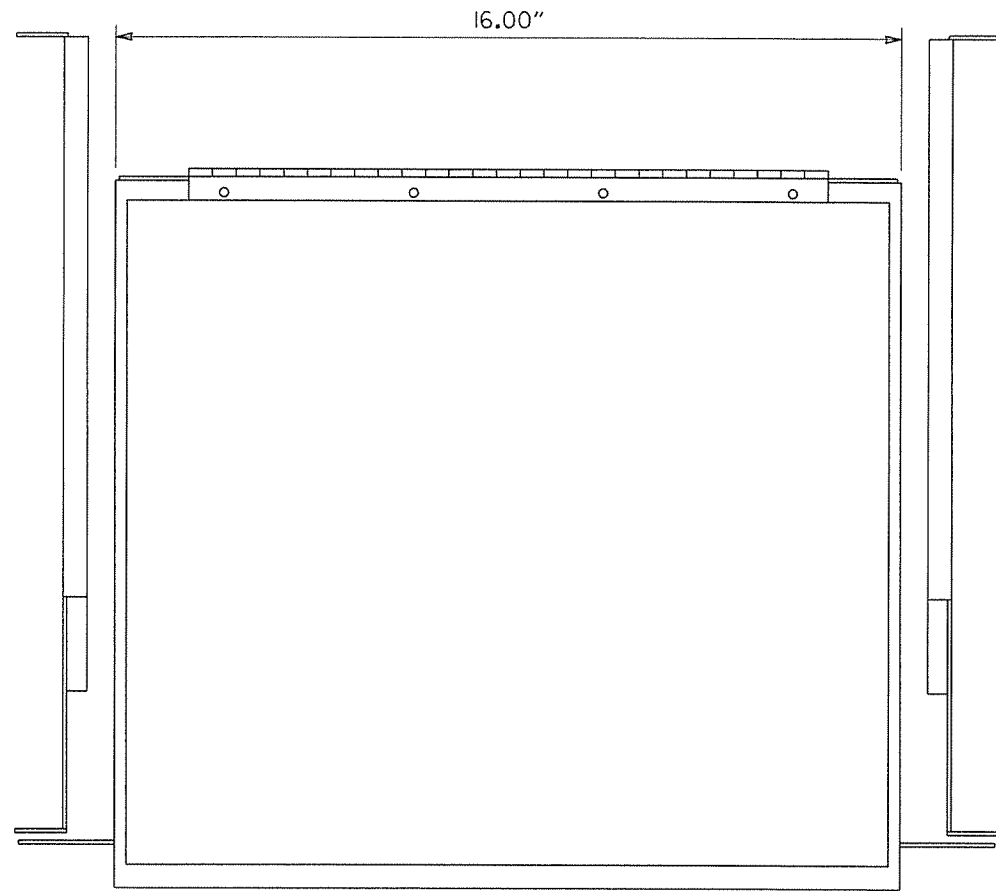
SECTION C-C
S=2 1/2" IN ASPHALT
S=1 1/2" IN CONCRETE

SPECIAL NOTE
IF FEEDER WIRE JACKET IS LEFT UNSEALED AND WATER IS ALLOWED TO ENTER JACKET, CONTRACTOR WILL BE REQUIRED TO REPLACE FEEDER AT NO COST TO THE DEPARTMENT.

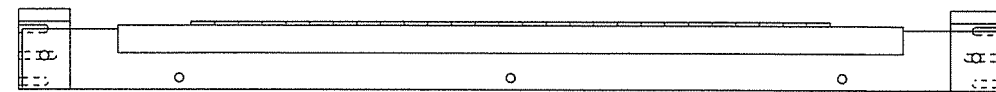
DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
5-17-01	REVISED	
4-11-01	REVISED	
2-4-00	REVISED PRE-EMPTION TEST SWITCH	
11-18-98	REVISED NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION
LOOP DETECTOR INSTALLATION
STANDARD DRAWING SD-4

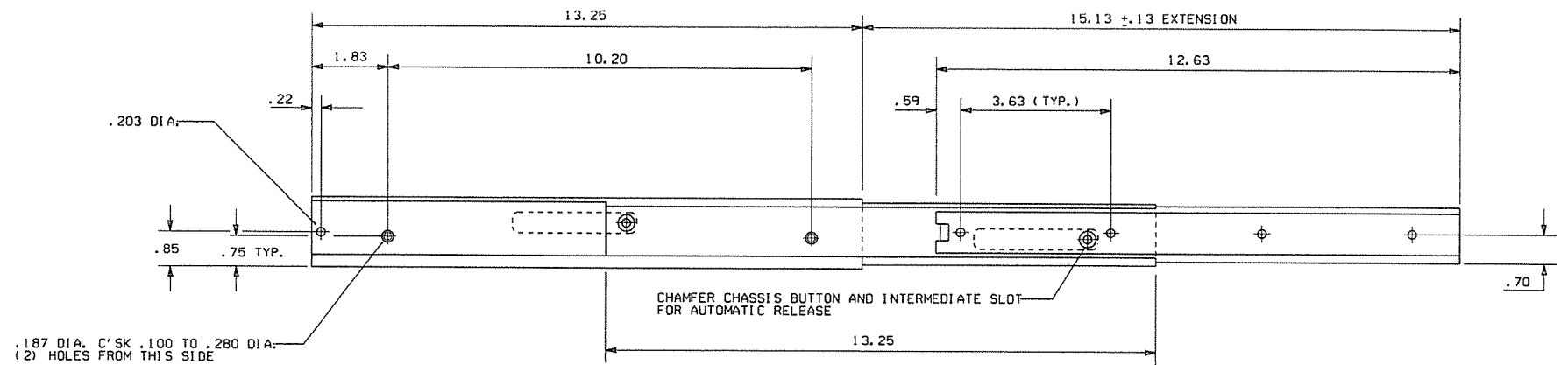
DRAWER PLAN VIEW



- NOTES:
 1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
 2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
 3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



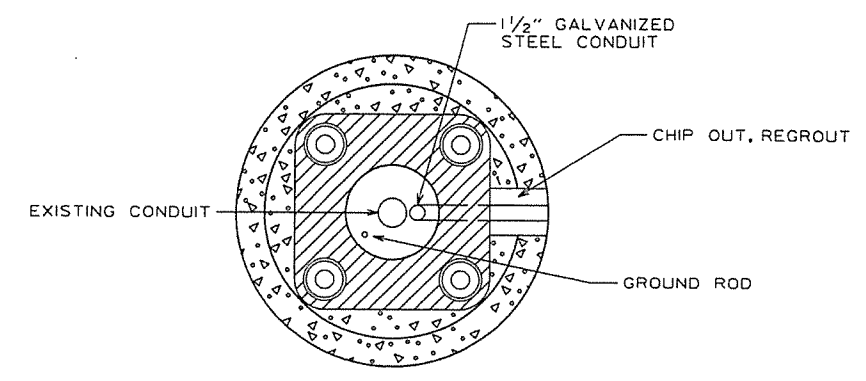
FRONT VIEW



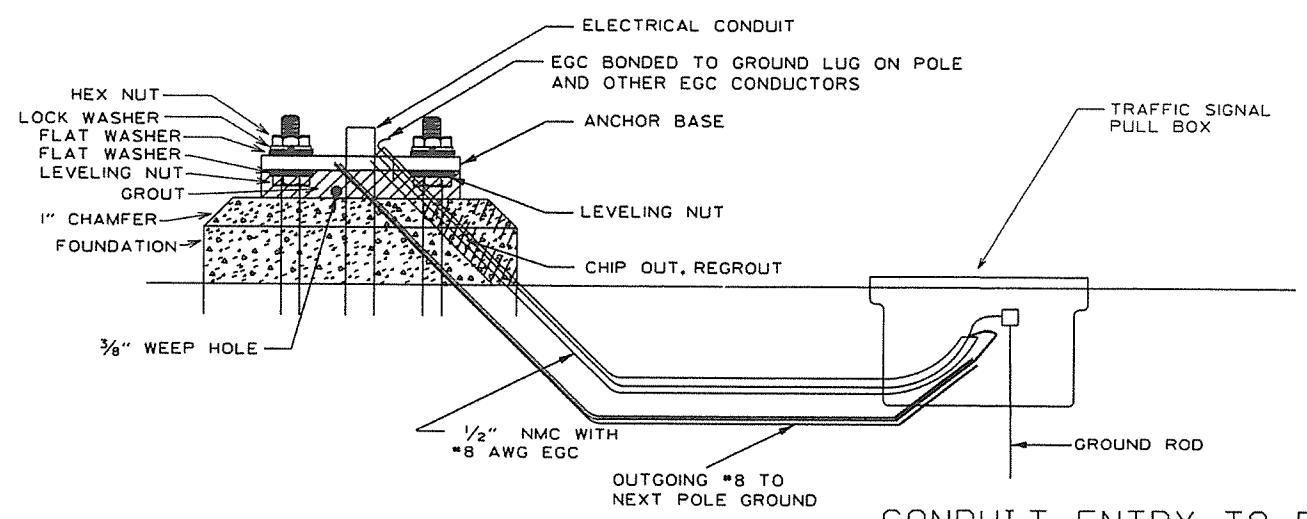
RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			CONTROLLER CABINET UTILITY DRAWER
9-12-13	ISSUED AS STANDARD DRAWING		
6-15-05	ISSUED		
DATE	REVISION	DATE	FILM
			STANDARD DRAWING SD-5

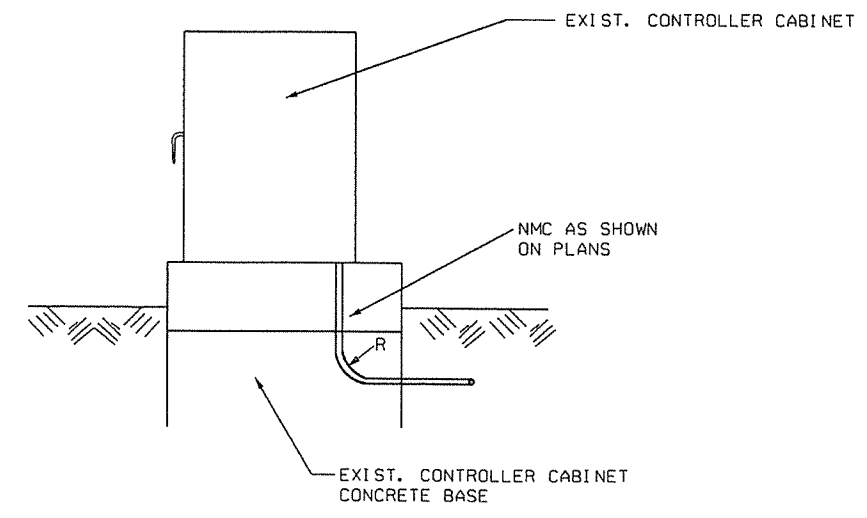
CONDUIT ENTRY TO EXISTING POLE BASE



ANCHOR BASE

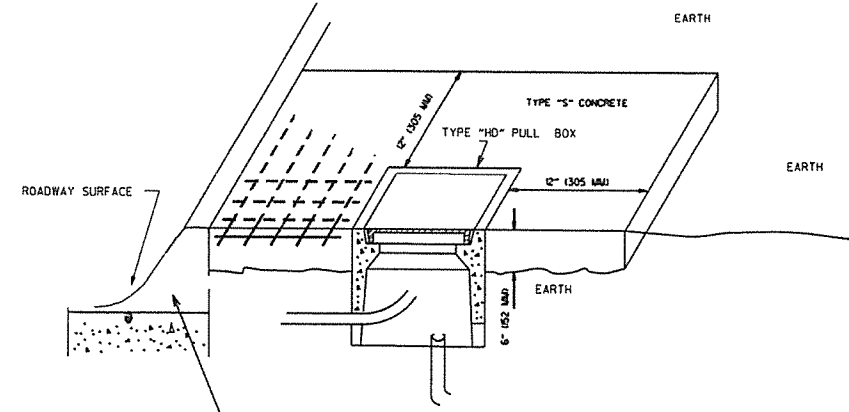


CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



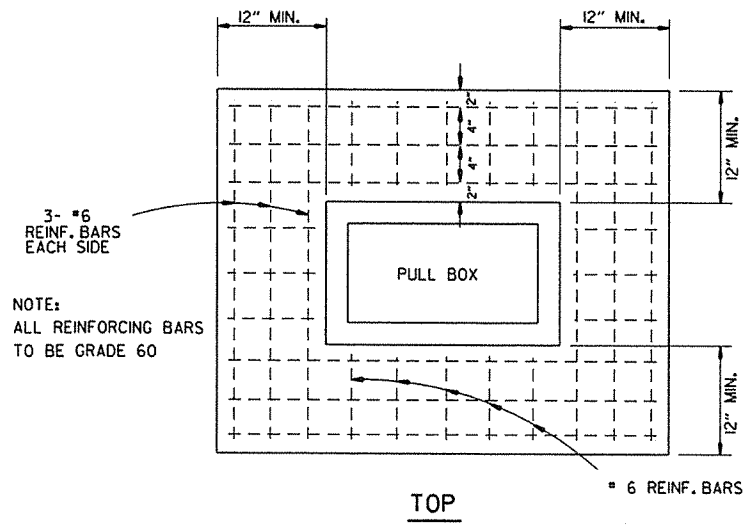
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

TYPE "HD" CONCRETE PULL BOX DETAIL

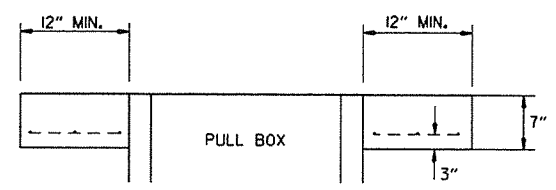


2" CLEAR FROM TOP (TOLERANCE +/- 0.5")

NOTE: ALL TYPE 1 AND TYPE 2 HD PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" (305 MM) WIDE AND 7" (178 MM) IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD PULL BOX. PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S." THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE PULL BOX IS REQUIRED IN CONCRETE.



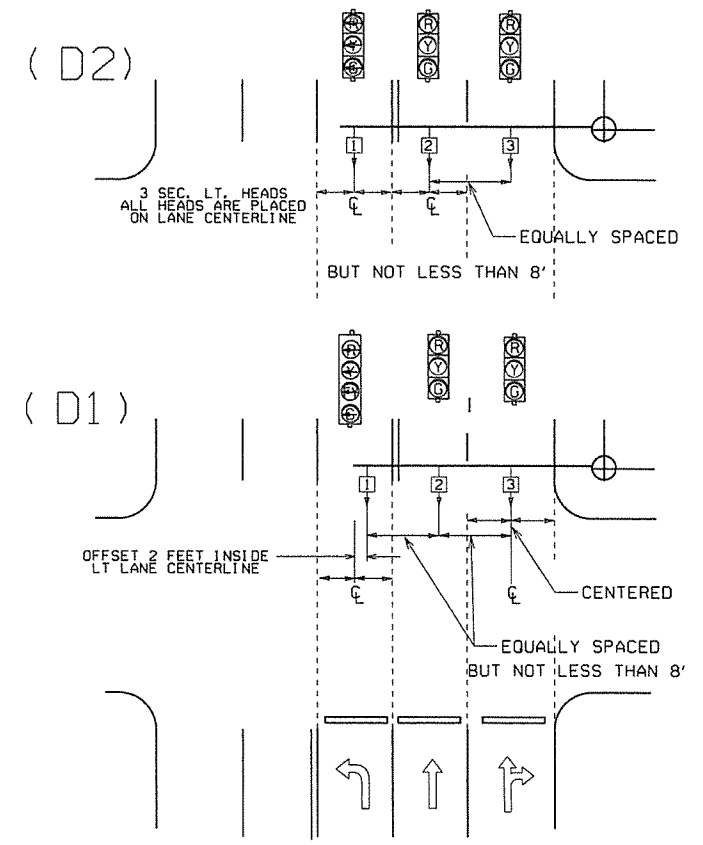
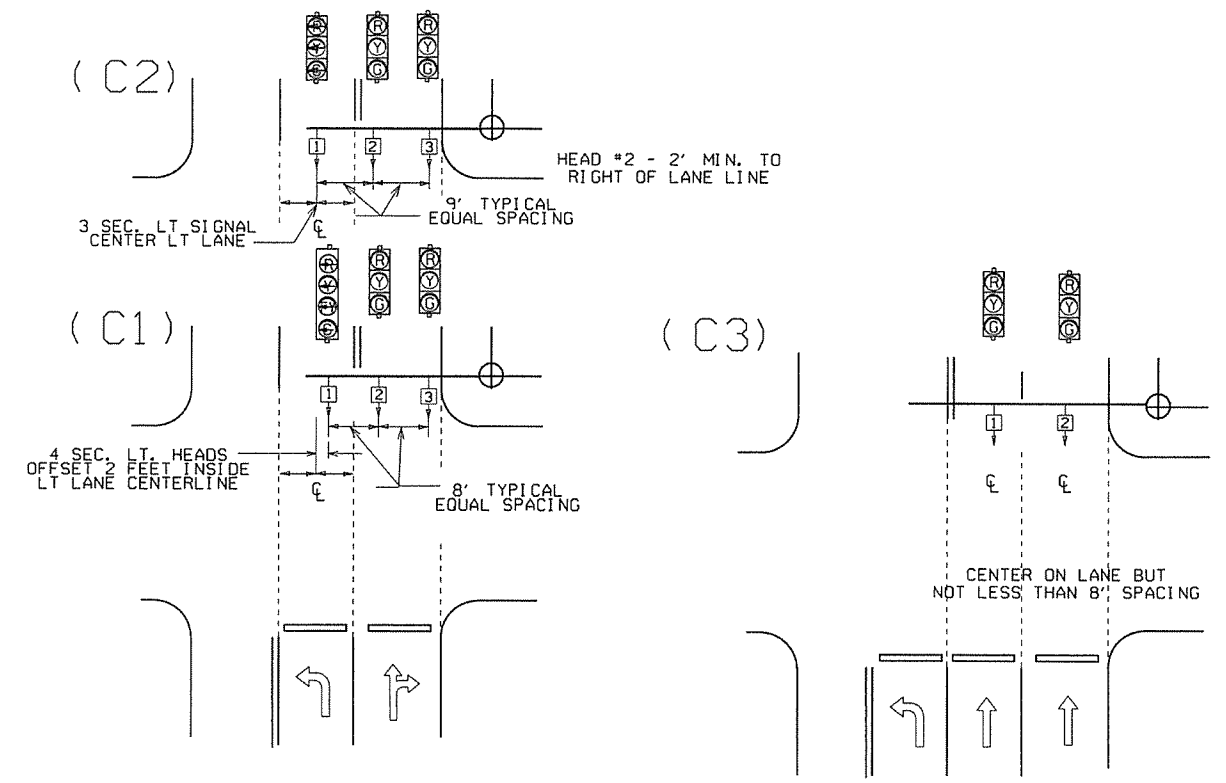
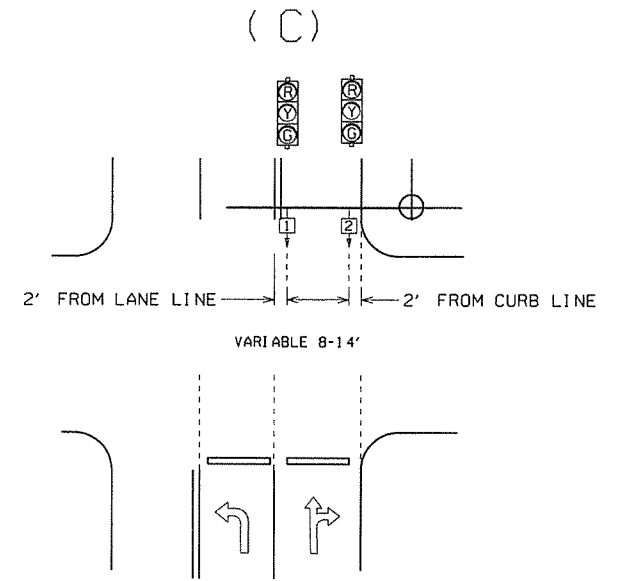
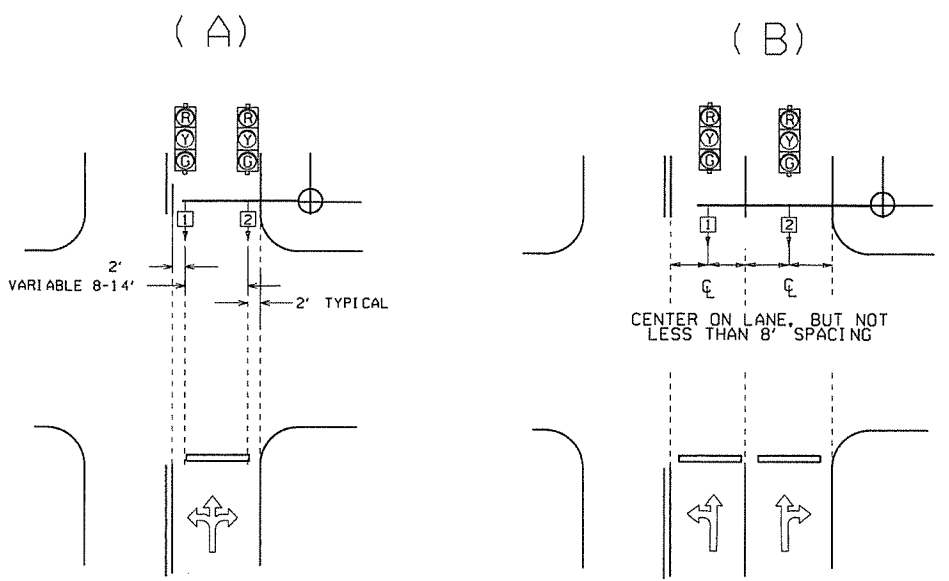
NOTE: ALL REINFORCING BARS TO BE GRADE 60



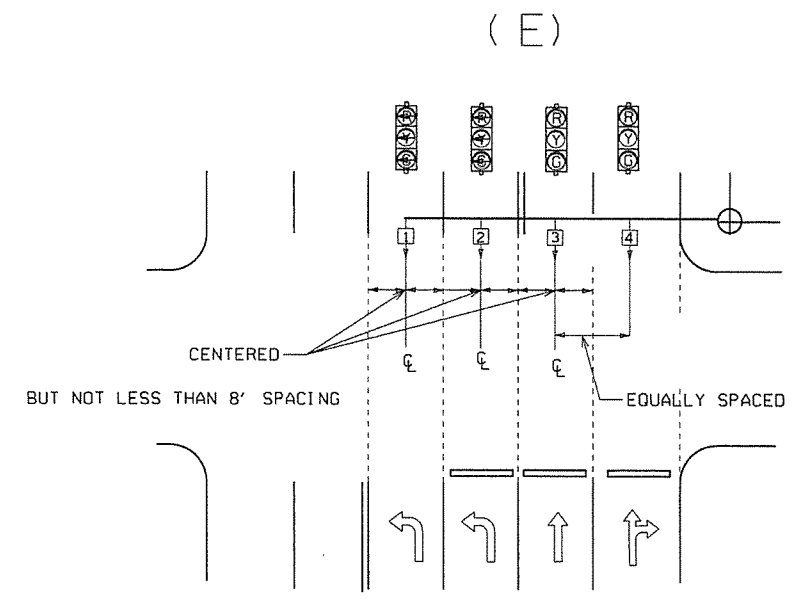
ELEVATION

9-2-15	REVISED PULL BOX DEPTH	
9-12-13	ISSUED AS STANDARD DRAWING	
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION
HEAVY DUTY PULL BOX
 STANDARD DRAWING SD-6



NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.



GENERAL NOTES:

- FOUR SECTION 'PROTECTED/PERMISSIVE' LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- THREE SECTION 'PROTECTED' LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.
- SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.
- ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.
- MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-1 OF 2009 MUTCD.

℄ = CENTER OF LANE FROM APPROACH SIDE

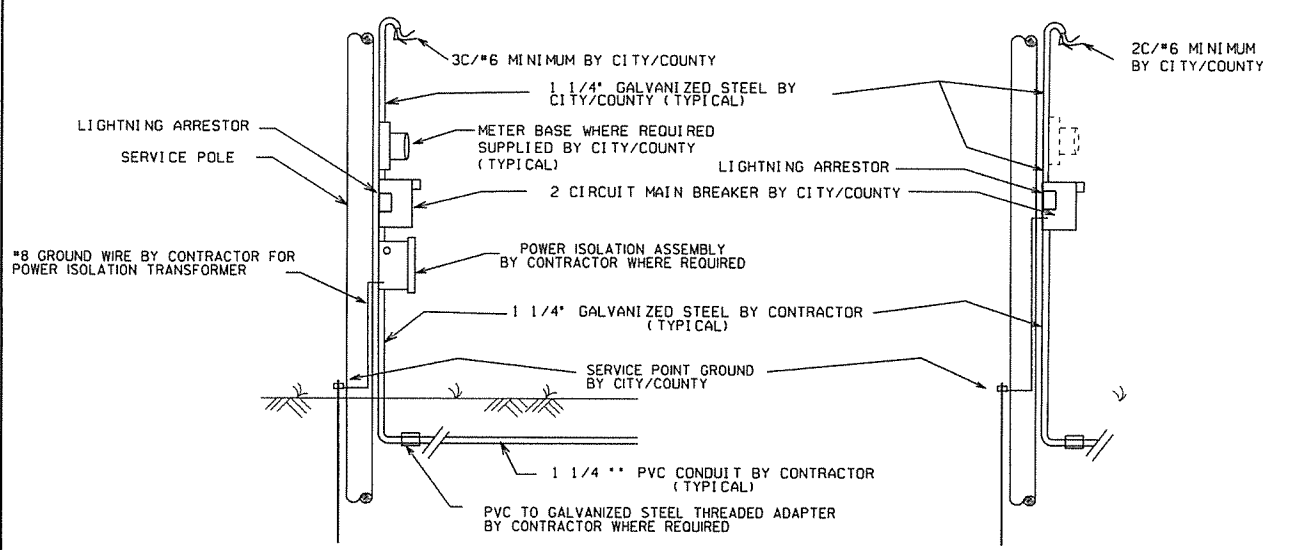
			ARKANSAS STATE HIGHWAY COMMISSION
9-12-13	ISSUED AS STANDARD DRAWING		SIGNAL HEAD PLACEMENT
3-11-10	2009 MUTCD		
12-9-99	ISSUED		
DATE	REVISION	DATE FILM	STANDARD DRAWING SD-8

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

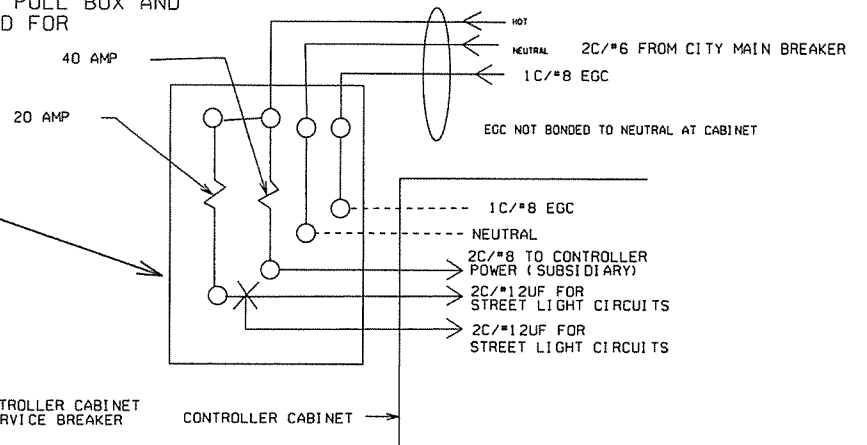
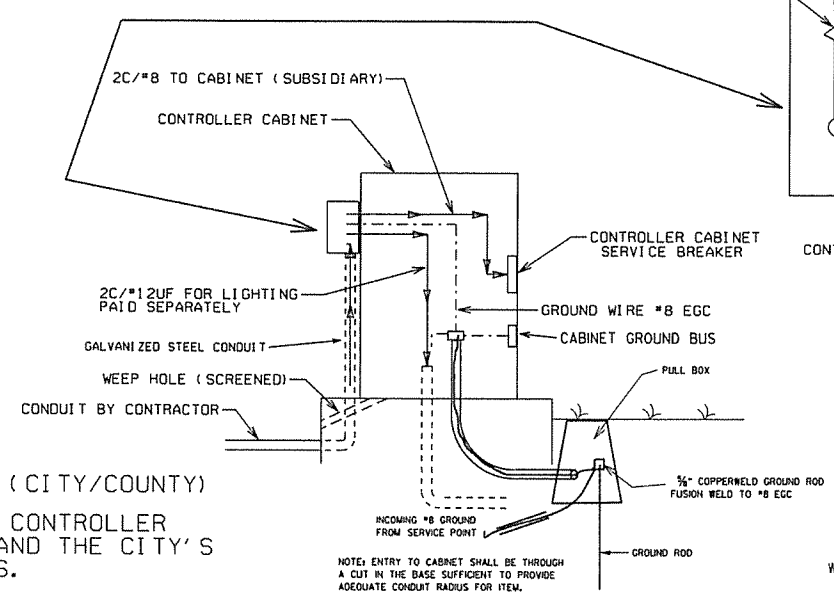
GROUND ROD-A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

WITH POWER ISOLATION ASSEMBLY

WITHOUT POWER ISOLATION ASSEMBLY



SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)



MAIN BREAKER WIRING (TYPICAL)

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

ELECTRICAL SERVICE TYPICALLY FALLS INTO TWO CATEGORIES: MAIN BREAKER NEAR CONTROLLER CABINET; AND MAIN BREAKER NOT NEAR CONTROLLER CABINET. THE CONTRACTOR'S AND THE CITY'S OR COUNTY'S RESPONSIBILITY VARIES ACCORDINGLY AS INDICATED ON THESE DETAILS.

1. ALL SITUATIONS: ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAIN-TIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2C/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

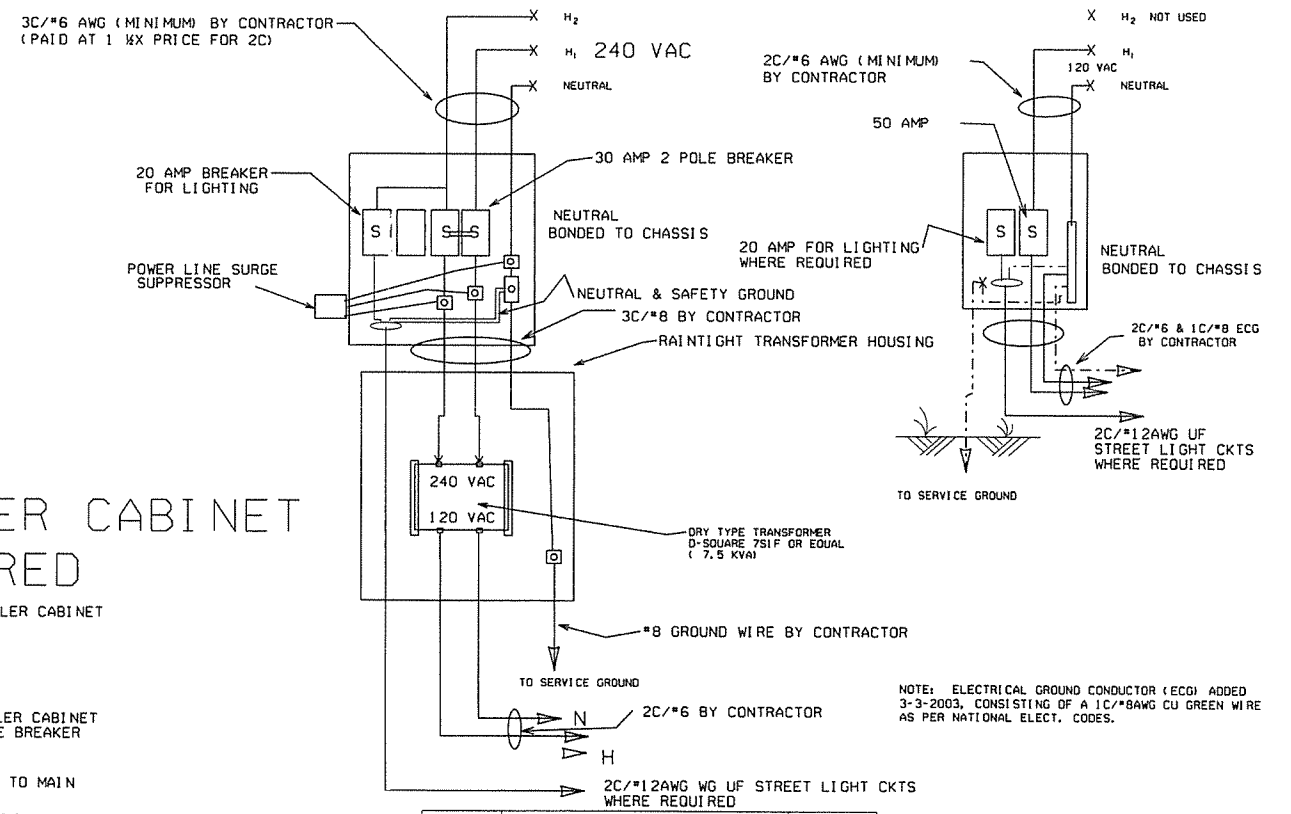
2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

3. MAIN BREAKER NEAR CONTROLLER CABINET: ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

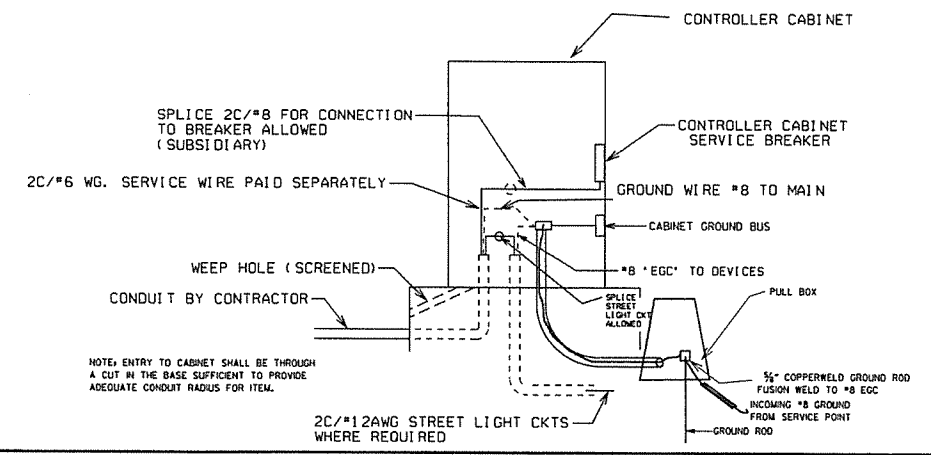
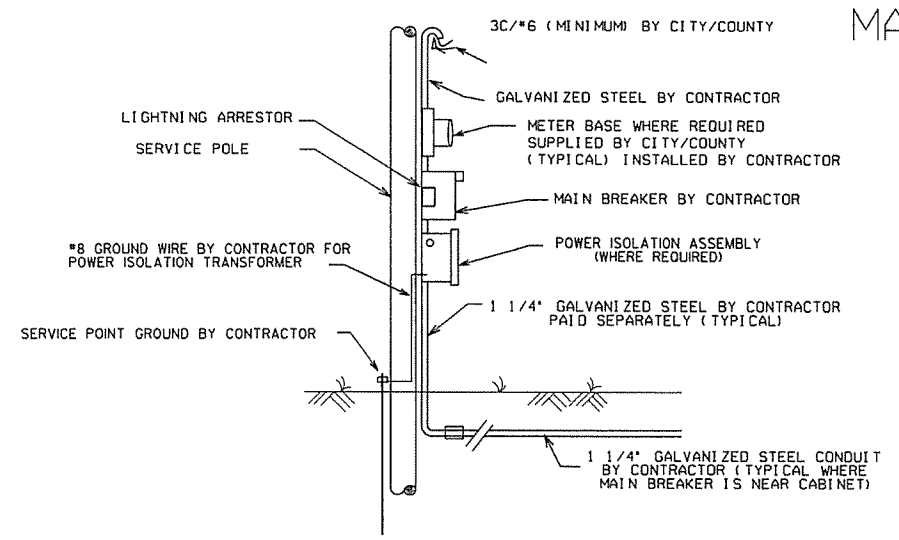
SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER

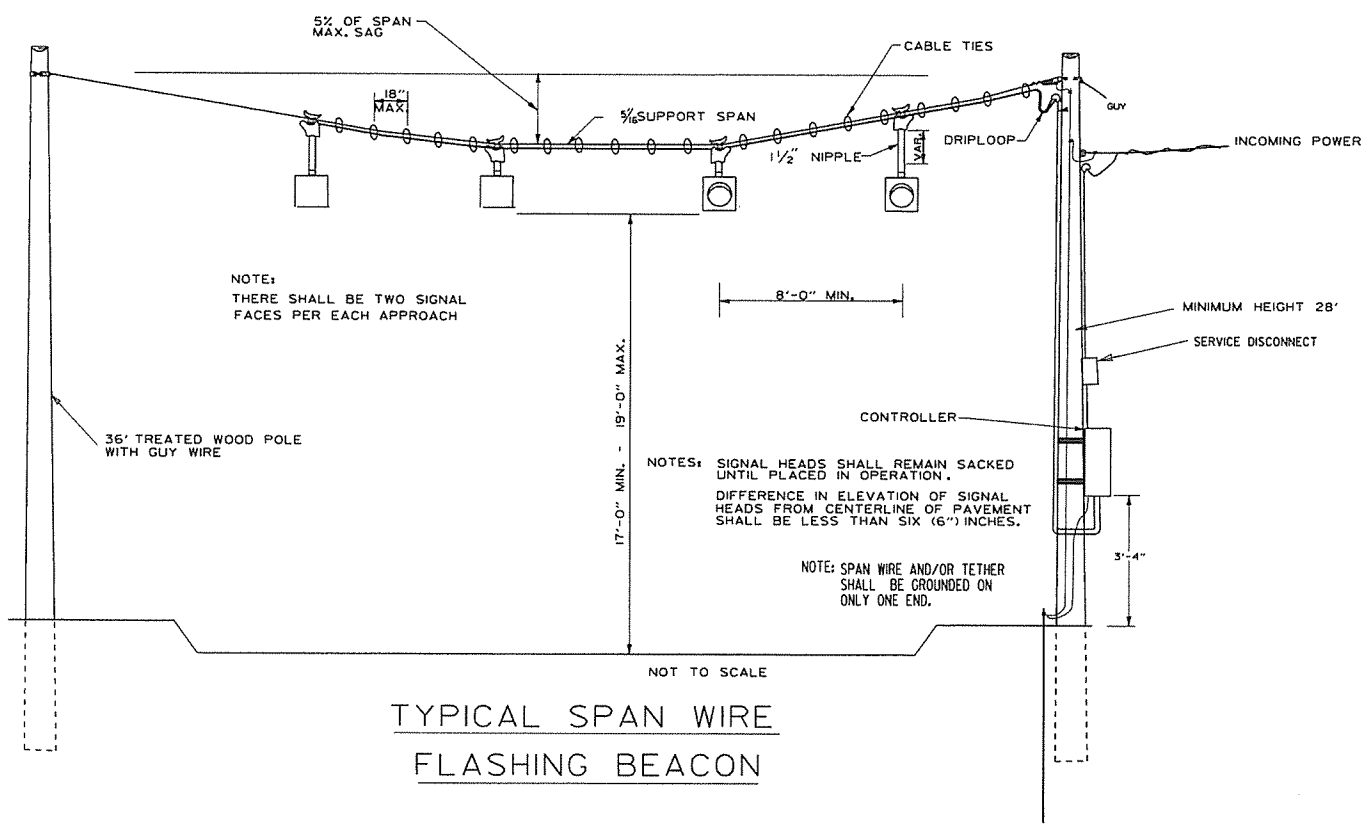
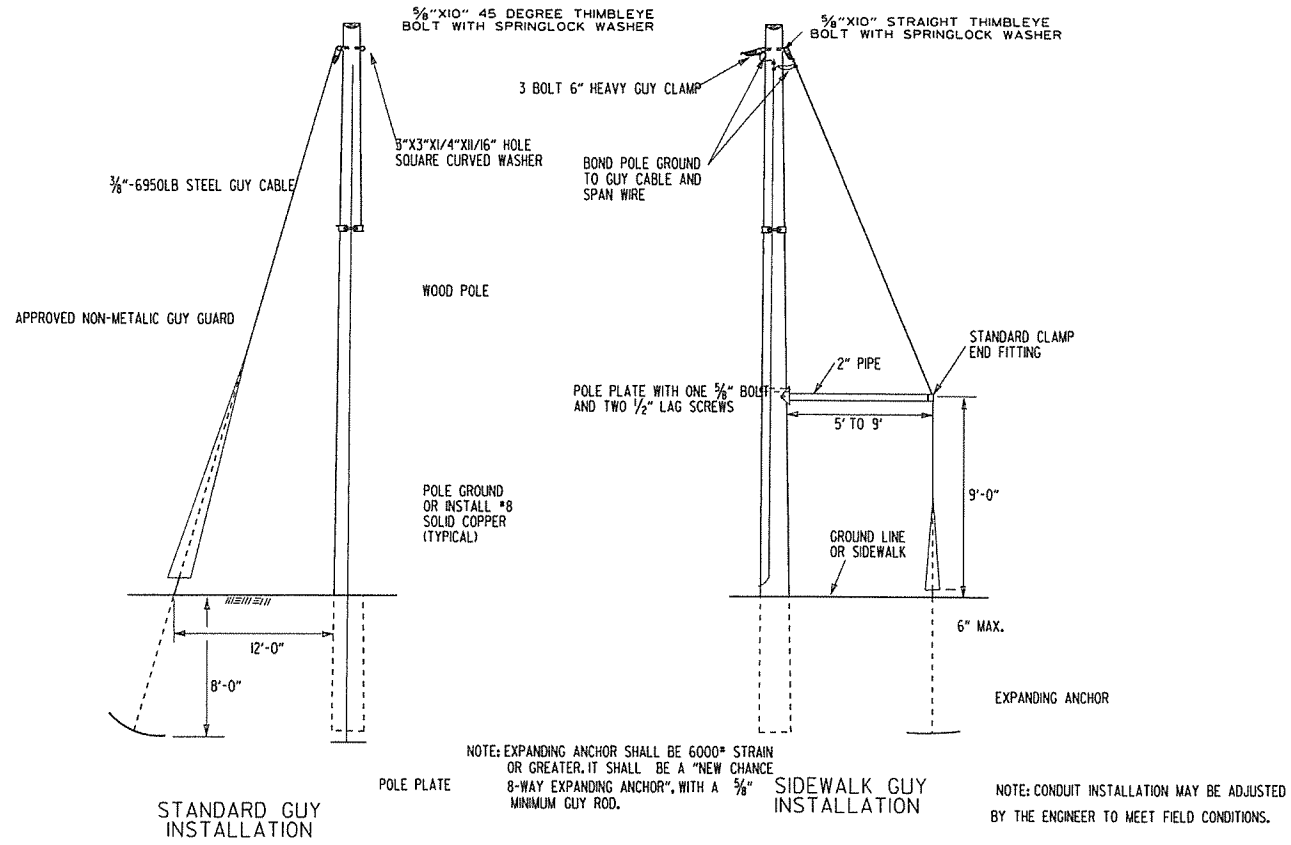


MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED



DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
4-18-13	ADDED LIGHTNING ARRESTOR	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED EGC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION		
SERVICE POINT		
STANDARD DRAWING SD-9		



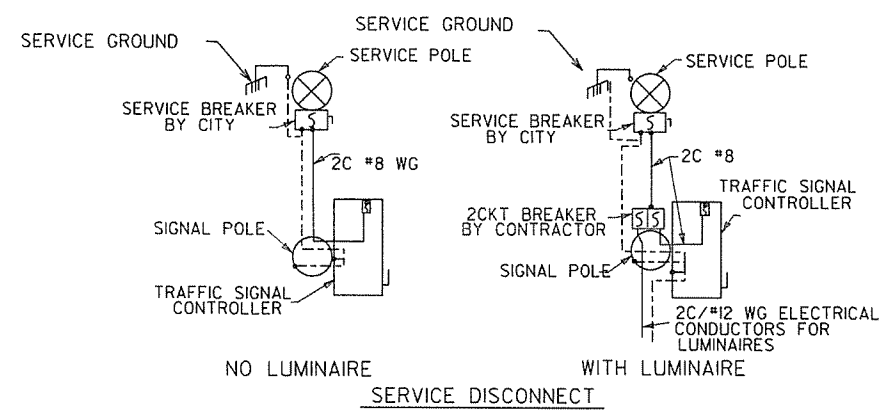
NOTES: SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF 4' BEHIND CURB OR SHOULDER. SPAN WIRE ASSEMBLIES DO NOT REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS. CABLE TIES SHALL BE SUITABLE FOR OUTSIDE USE (BLACK).

THE CONTROLLER POWER SUPPLY GROUND BUSS SHALL BE BONDED TO THE GROUND ROD WITH A #8 AWG SOLID COPPER WIRE. ON EXISTING INSTALLATIONS WITH NO GROUND ROD, CONTRACTOR SHALL INSTALL A 10' X 5/8" COPPERWELD GROUND ROD.

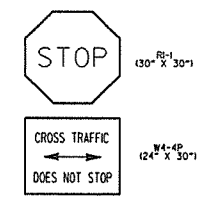
TRAFFIC SIGNAL LEGEND

SYMBOL	DEFINITION
[Symbol]	LOOP DETECTOR
[Symbol]	LOOP WIRING
[Symbol]	CONDUIT
∅ A	PHASE A IN PHASING DIAGRAM
2" ∅	2" DIAMETER
[Symbol]	SIGNAL NO. 1
[Symbol]	ARROW ON MAST ARM OR SPANWIRE SHOWS DIRECTION OF SIGNAL FACE
[Symbol]	ARROW IN ROADWAY LANE INDICATES DIRECTION OF TRAFFIC IN THAT LANE
[Symbol]	SPANWIRE SUPPORT POLES & SPAN WIRE SUPPORTING 2 SIGNALS
[Symbol]	MAST ARM & POLE WITH FOUNDATION SUPPORTING 2 SIGNALS
[Symbol]	CONTROLLER MOUNTED ON SUPPORT POLE
[Symbol]	CONTROLLER MOUNTED ON CONCRETE BASE
[Symbol]	PRECAST CONCRETE PULL BOX

SIGNAL OPERATION NOTES:
FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED YELLOW FOR A PERIOD OF 5 WORK DAYS.



NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES

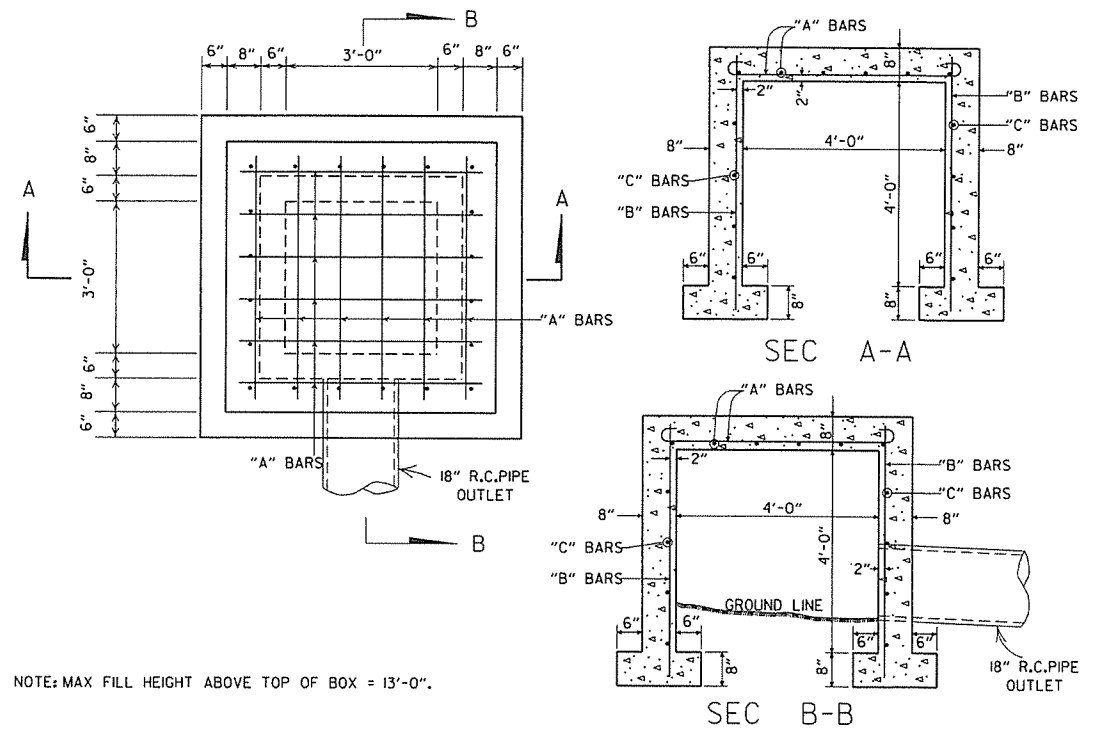


AT INTERSECTIONS WITH FLASHING RED ON ONE APPROACH AND FLASHING YELLOW ON OTHER, SUPPLEMENTAL "CROSS TRAFFIC DOES NOT STOP" SHALL BE INSTALLED ON THE SUPPORT FOR THE STOP SIGN PRIOR TO ACTIVATION OF BEACON.

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO LATEST ADOPTED ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION,
- THE FLASHING BEACON ASSEMBLY SHALL INCLUDE LIGHTNING AND R.F.I. SUPPRESSORS, GALVANIZED STEEL CONDUIT, TRAFFIC SIGNAL CABLE, 12" TRAFFIC SIGNAL HEAD (1 SEC., 1 WAY) WITH YELLOW LENSES ON MAJOR APPROACH AND RED LENSES ON MINOR APPROACH, FLASHING BEACON CONTROLLER AND A SOLID STATE CALANDER DATE TIME CLOCK WITH DAYLIGHT SAVINGS TIME PROGRAMMING AND 48 HOUR POWER FAIL PROTECTION.
- THE CITY OR COUNTY SHALL BE RESPONSIBLE FOR PROVIDING, THROUGH A LOCAL UTILITY COMPANY, A SERVICE POINT AND UNDERGROUND/AERIAL POWER TO THE FLASHING BEACON CONTROLLER.

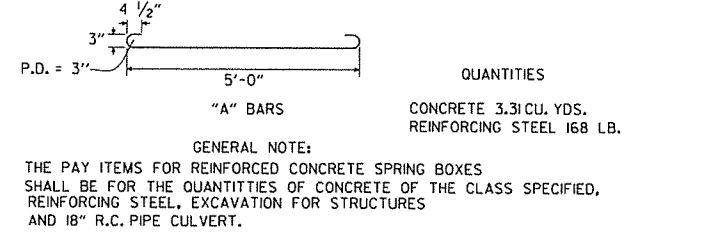
9-12-13	ISSUED AS STANDARD DRAWING		ARKANSAS STATE HIGHWAY COMMISSION
5-11-04	REV. GROUND CONDUCTORS & SIGNING		
12-27-99	REVISED NOTES		
11-17-98	REVISED NOTES		
11-21-95	ISSUED		
DATE	REVISION	DATE FILM	WOOD POLE SPAN WIRE INSTALLATION
			STANDARD DRAWING SD-10



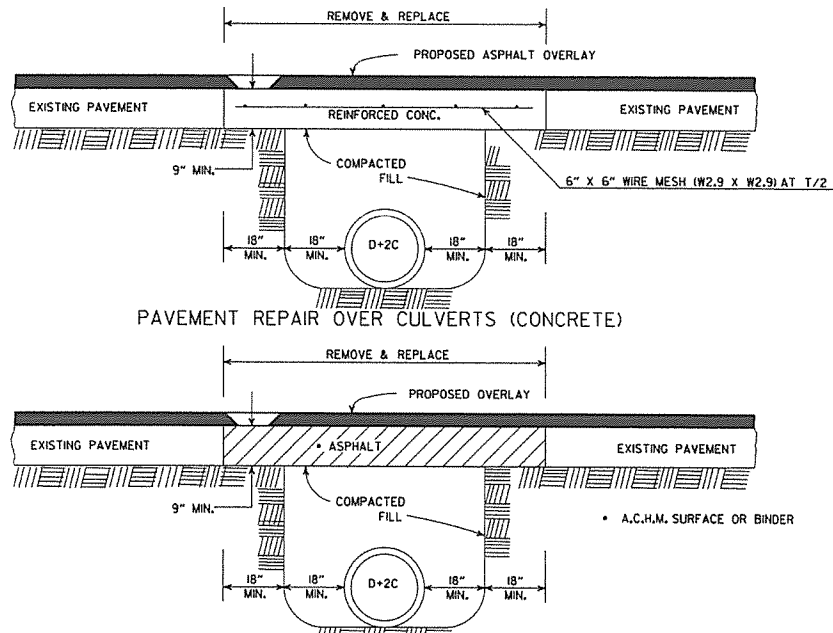
STEEL SCHEDULE

BAR	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"

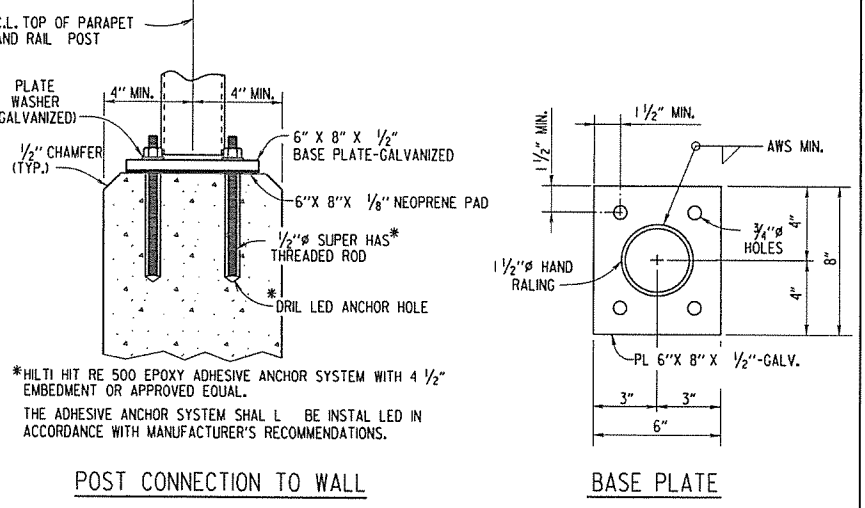
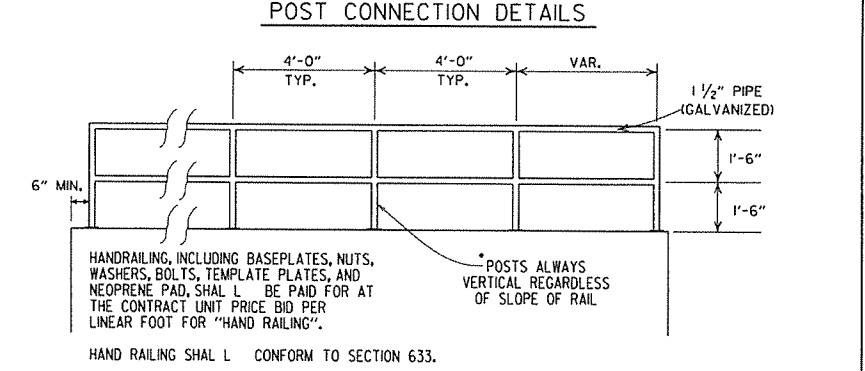
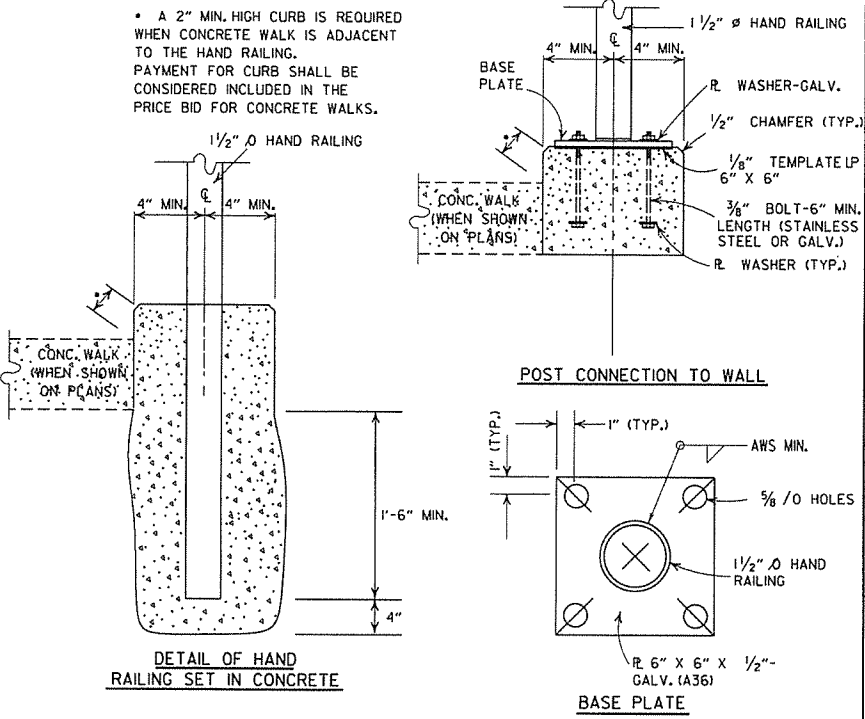
ALL STEEL TO BE #4 BARS



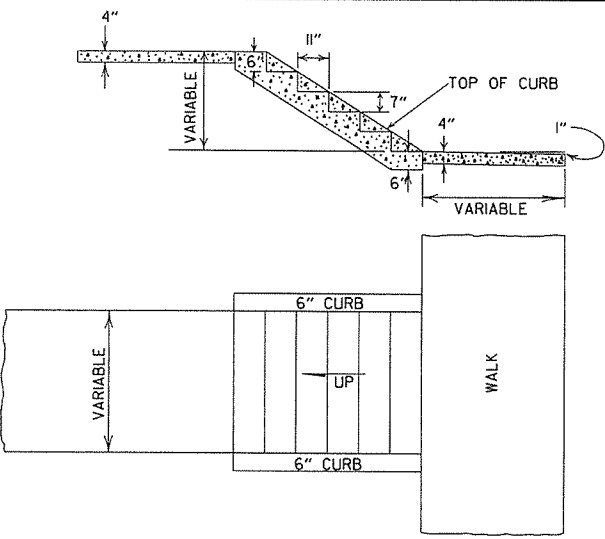
REINFORCED CONCRETE SPRING BOX



PAVEMENT REPAIR OVER CULVERTS (CONCRETE)
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)
DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS



DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)
HAND RAILING DETAILS



DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PYMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PYMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS REV. TRENCH FOR PIPE UNDERDRAIN	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET & PAVEMENT REPAIR	674-4-20-79
2-2-76	12" MIN. GRAN. MAT'L OVER PIPE	919-2-2-76
4-10-75	REV. SPECS. FOR GRAN. MAT'L	568-4-10-75-853
5-22-74	GRANULAR MAT'L TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF SPECIAL ITEMS
STANDARD DRAWING SI-1

ADVANCE DISTANCES (XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD


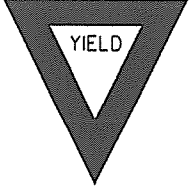
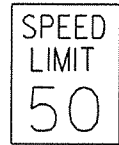



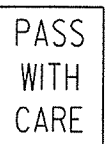


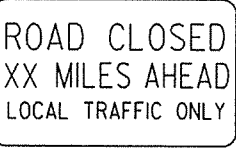
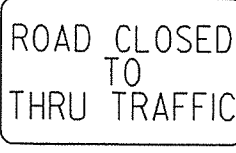
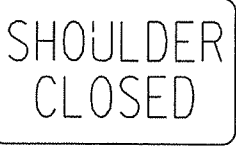

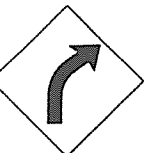
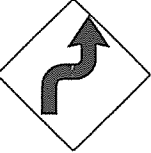
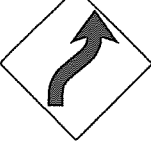
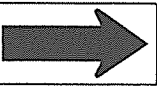

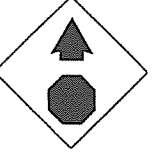
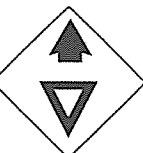
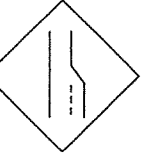






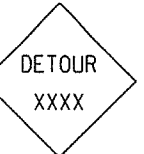



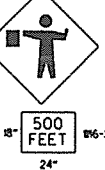

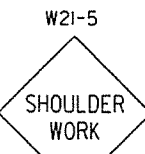
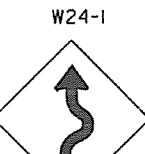
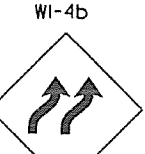


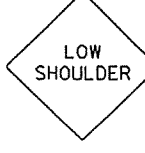
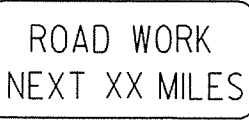
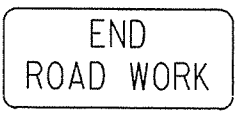
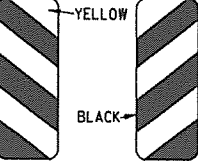


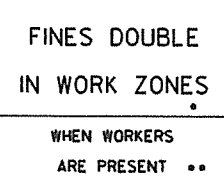
GENERAL NOTES:

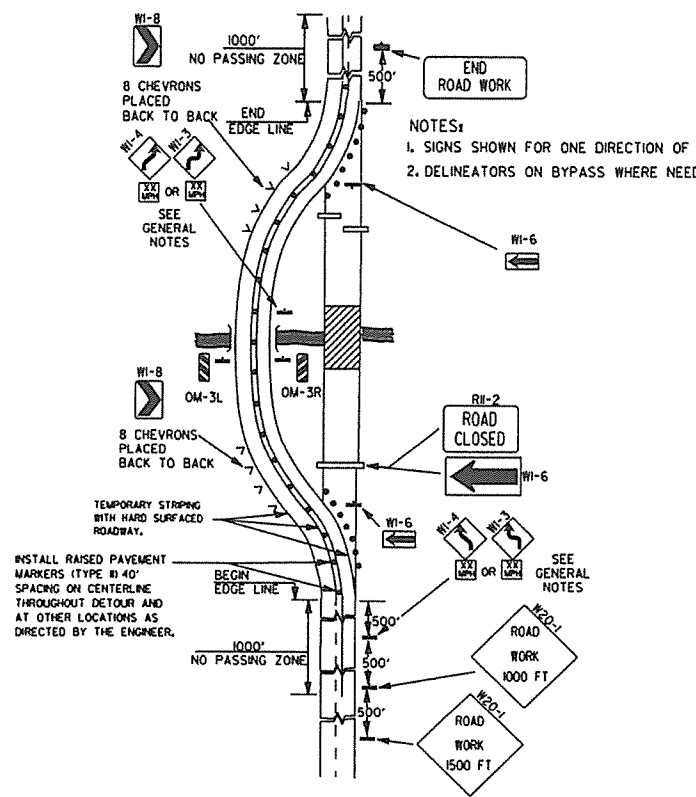
- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
- EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
- POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
- ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
- R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

* NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

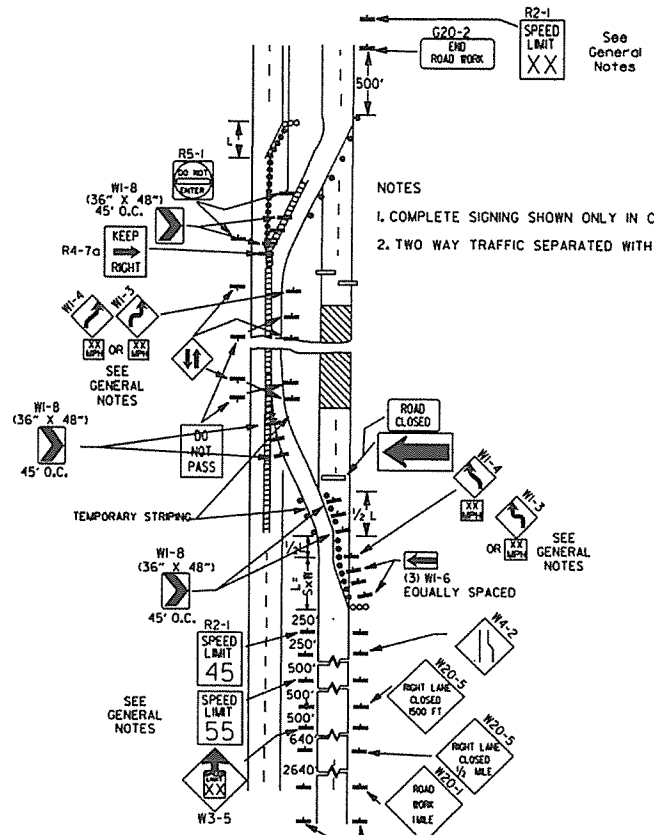
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-1	REVISED W24-1	
1-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
1-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-18-96	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1

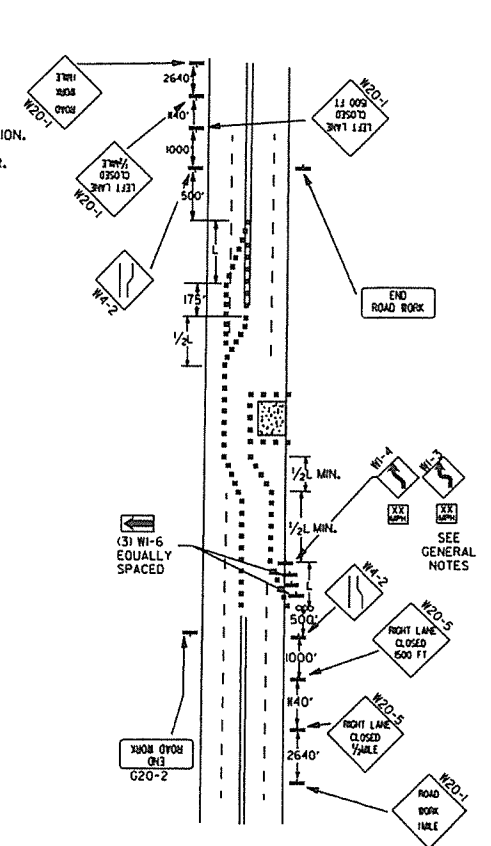
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60" • USE 6" C LETTERS •• USE 4" D LETTERS</p>



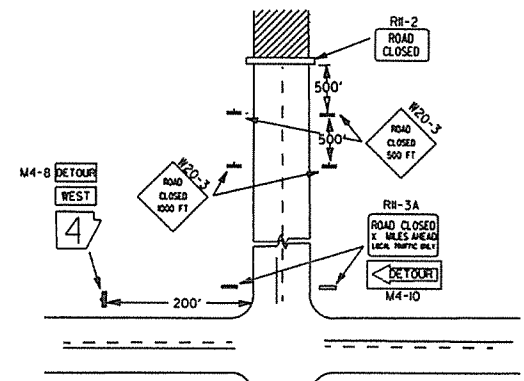
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



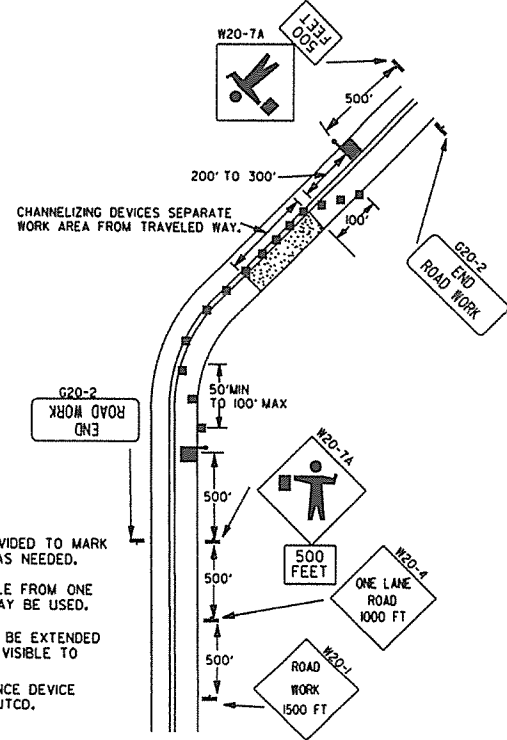
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



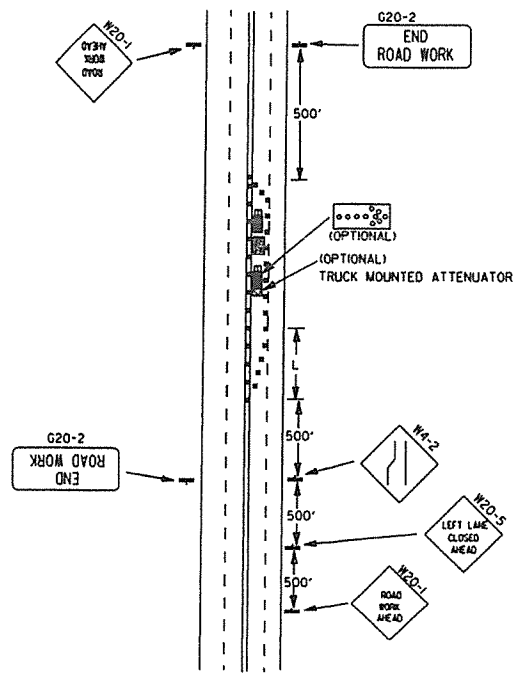
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.

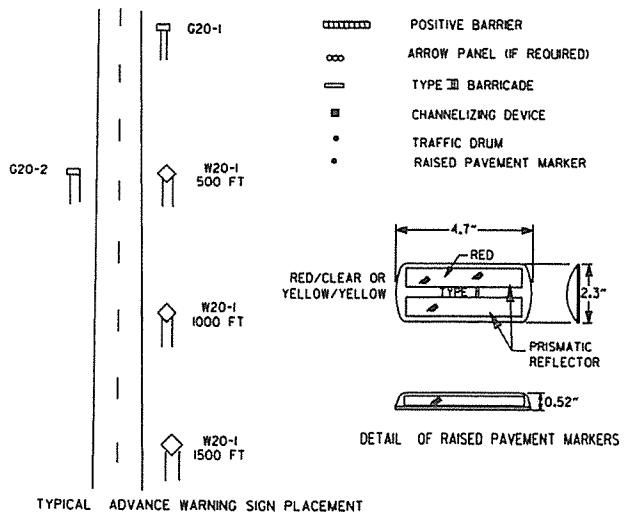


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

- KEY:
- FLAGGER
 - POSITIVE BARRIER
 - ARROW PANEL (IF REQUIRED)
 - TYPE III BARRICADE
 - CHANNELIZING DEVICE
 - TRAFFIC DRUM
 - RAISED PAVEMENT MARKER

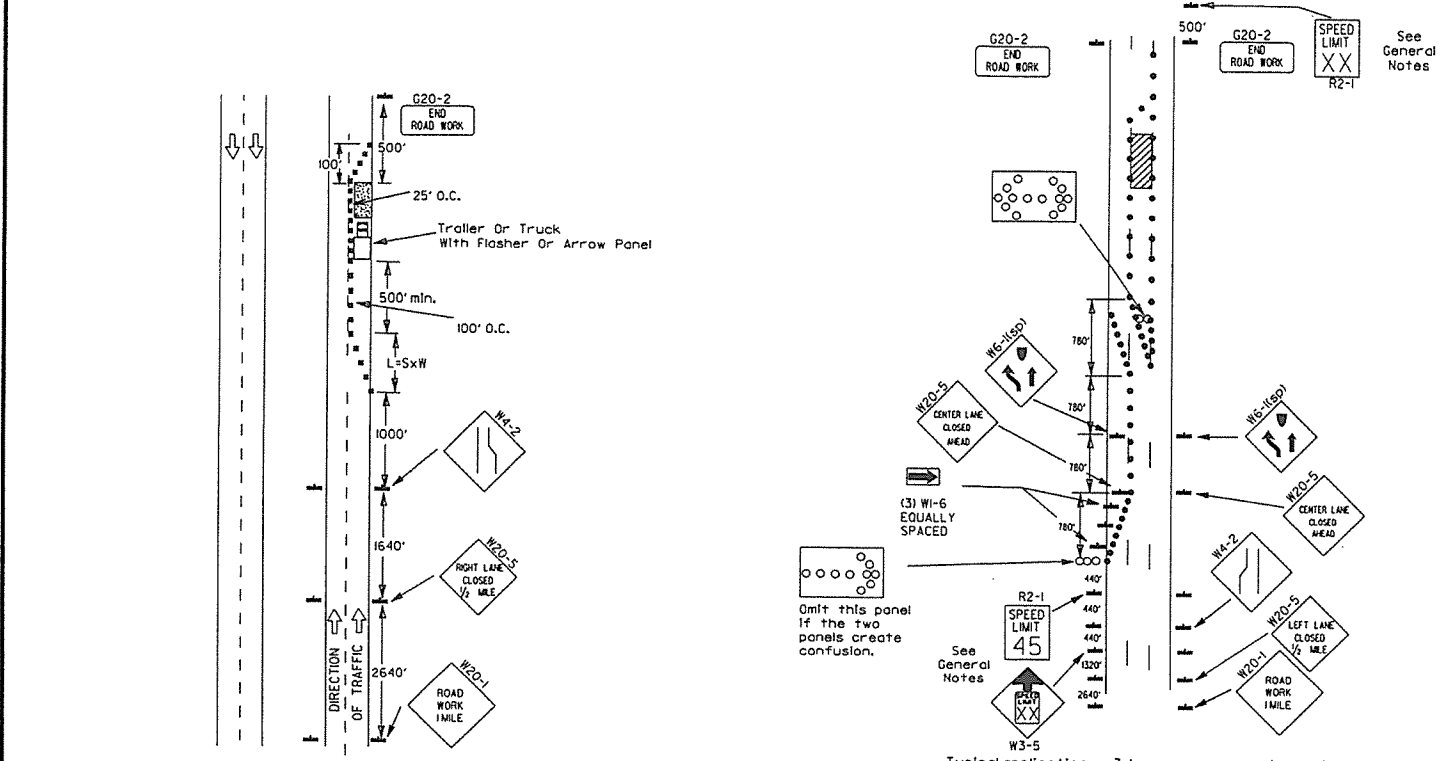


TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

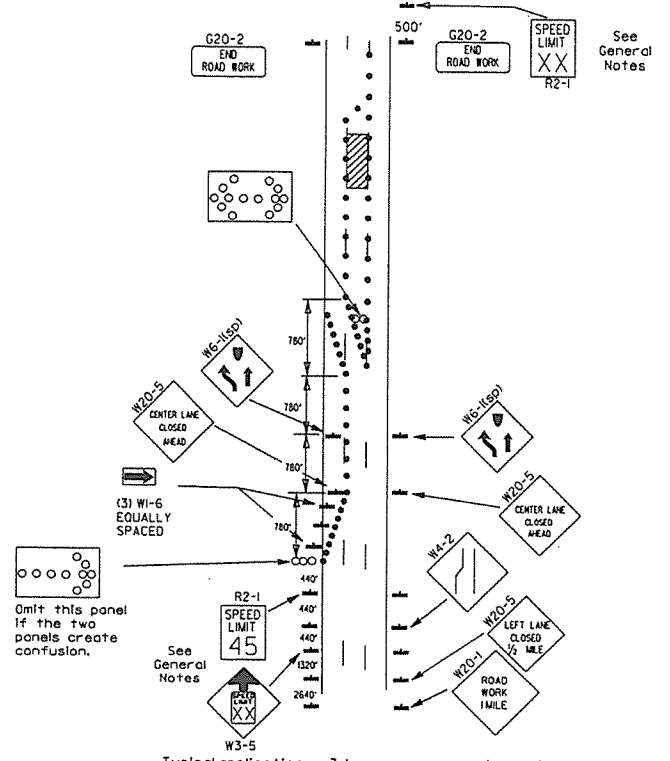
- GENERAL NOTES:
- ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 - WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(45) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45MPH) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1(55MPH) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 - TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 - DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH R3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-1-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILED

Channelizing devices



(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.



(B) Typical application - 3-lane oneway roadway where center lane is closed.

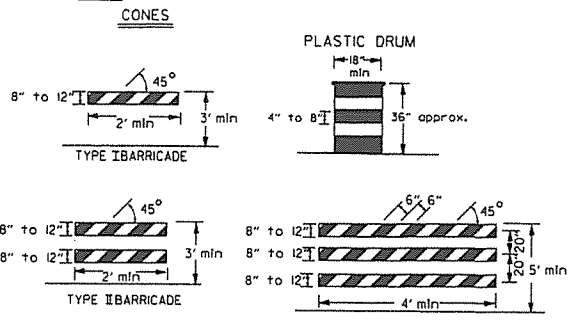
- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

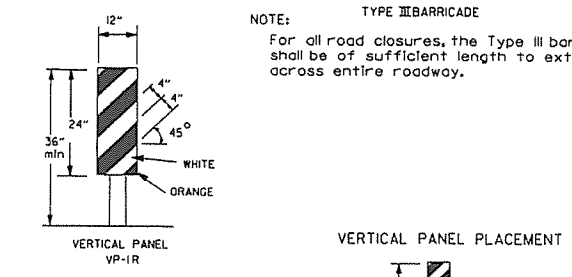
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(45) shall be omitted and the W3-5 shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 45mph, the R2-1(45) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 1/2 mile in advance of the job limit. Additional W20-1(1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

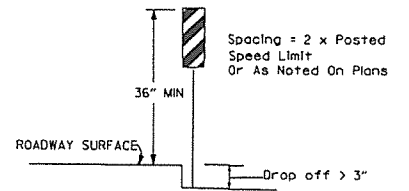
When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.



NOTE: For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.



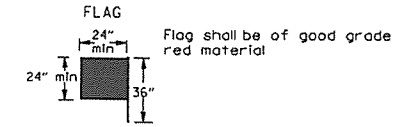
VERTICAL PANEL PLACEMENT



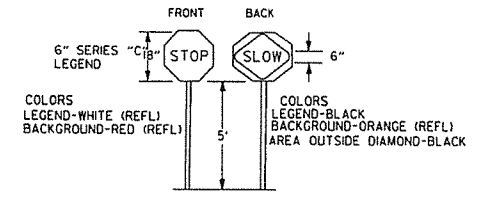
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	WB-11
1" to 3"	Edge of shoulder	WB-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

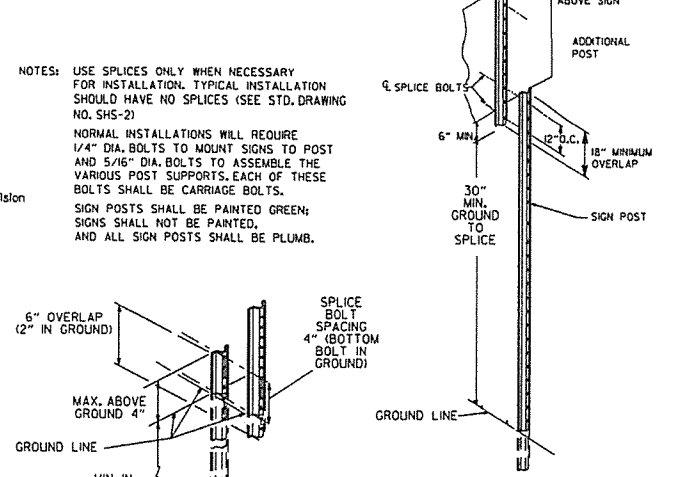
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



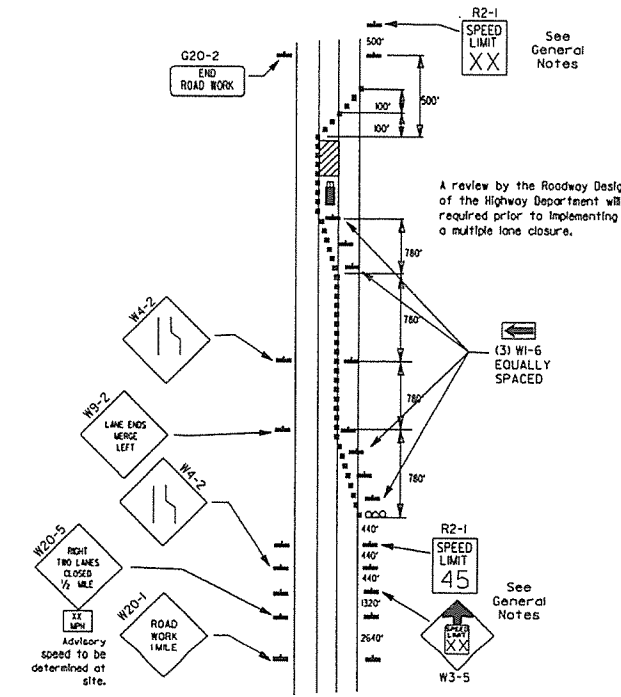
STOP SLOW PADDLE



DETAIL OF SPLICES



NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2) NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS, EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS. SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED. AND ALL SIGN POSTS SHALL BE PLUMB.

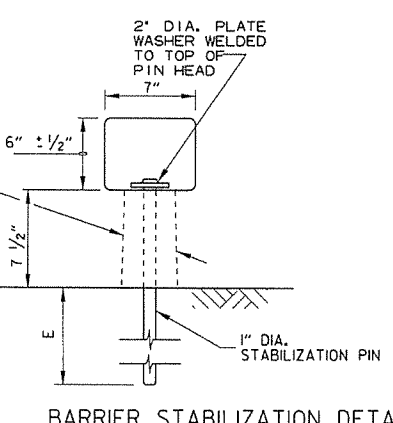
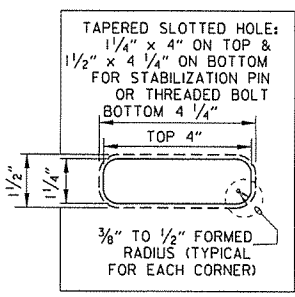
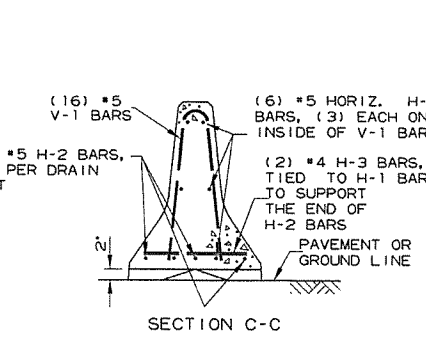
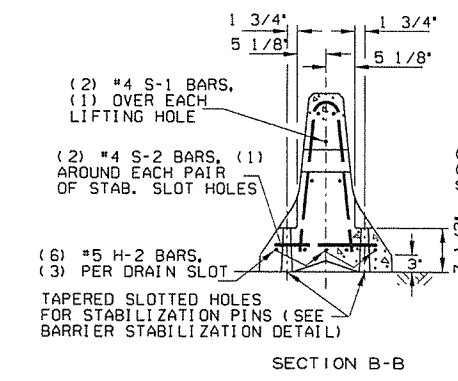
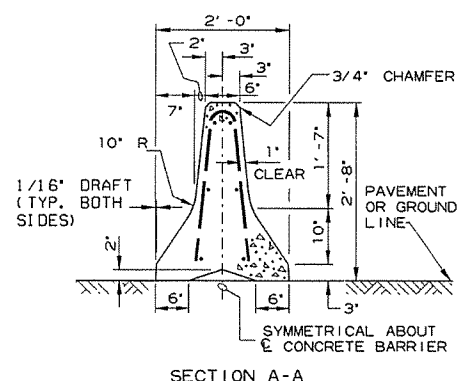
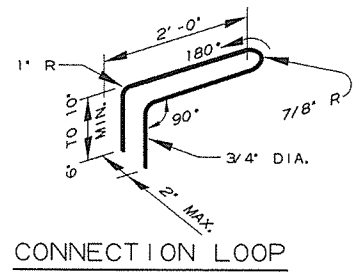
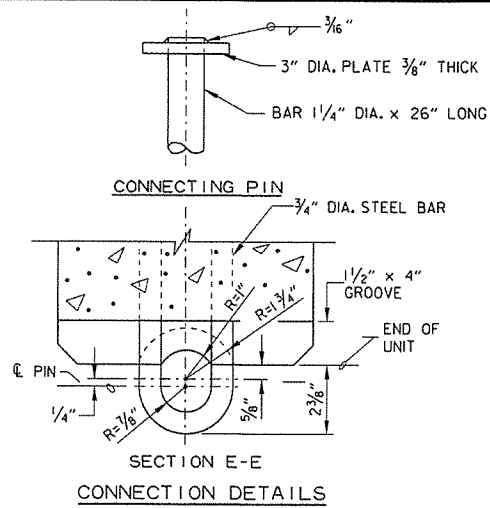


(D) Typical application - closing multiple lanes of a multilane highway.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
8-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED ISPI TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-3

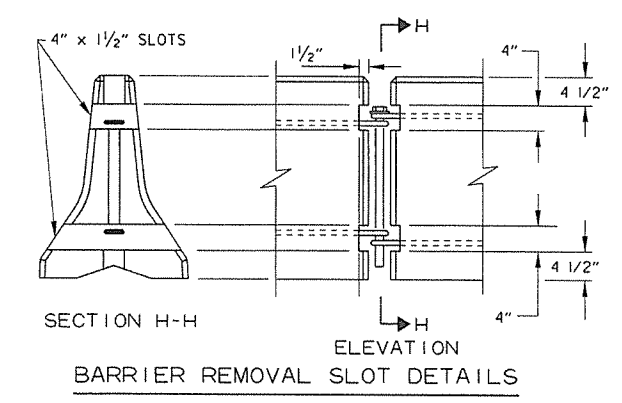
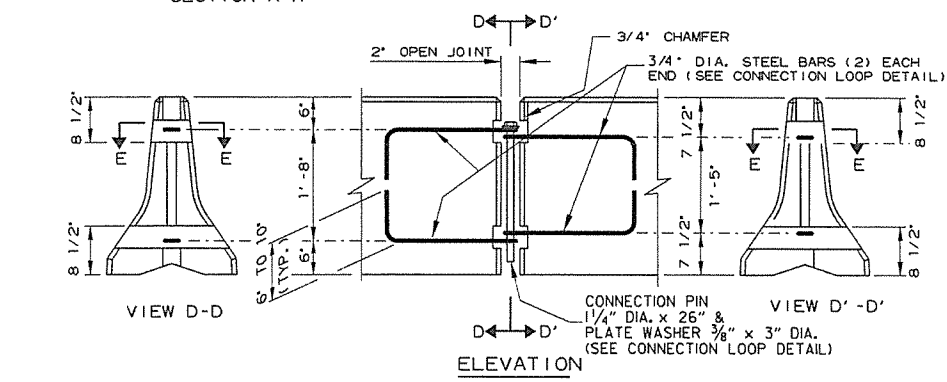
REINFORCING BAR TABLE PER BARRIER UNIT			
MARK	LOCATION	BAR SIZE	(NO. BARS)
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)
S-1	OVER LIFT HOLES	#4	(2)
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S & DRAIN SLOTS	#4	(2)
V-1	VERTICAL IN BARRIER (3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)



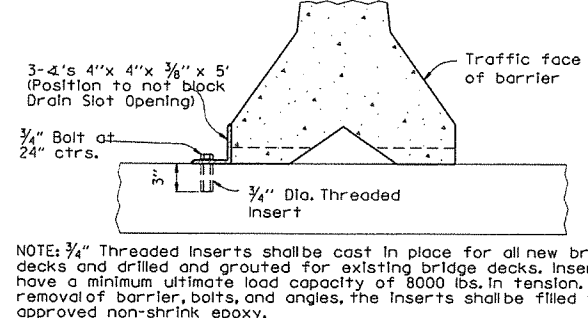
BARRIER STABILIZATION DETAIL
ROADWAY SECTION
E 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas

- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following minimum requirements:
Concrete: 2500 psi compressive strength at 28 days.
Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

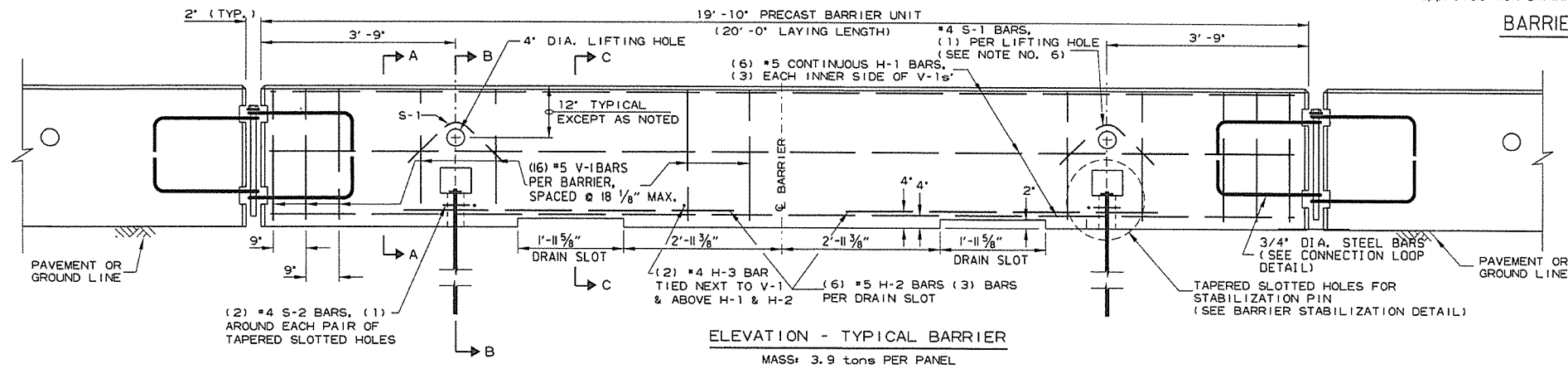
In applications where barrier walls within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers. Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices. Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.
 - Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.
 - Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.
 - Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
 - A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.



BARRIER REMOVAL SLOT DETAILS



BARRIER STABILIZATION DETAIL
BRIDGE DECKS



ELEVATION - TYPICAL BARRIER
MASS: 3.9 tons PER PANEL

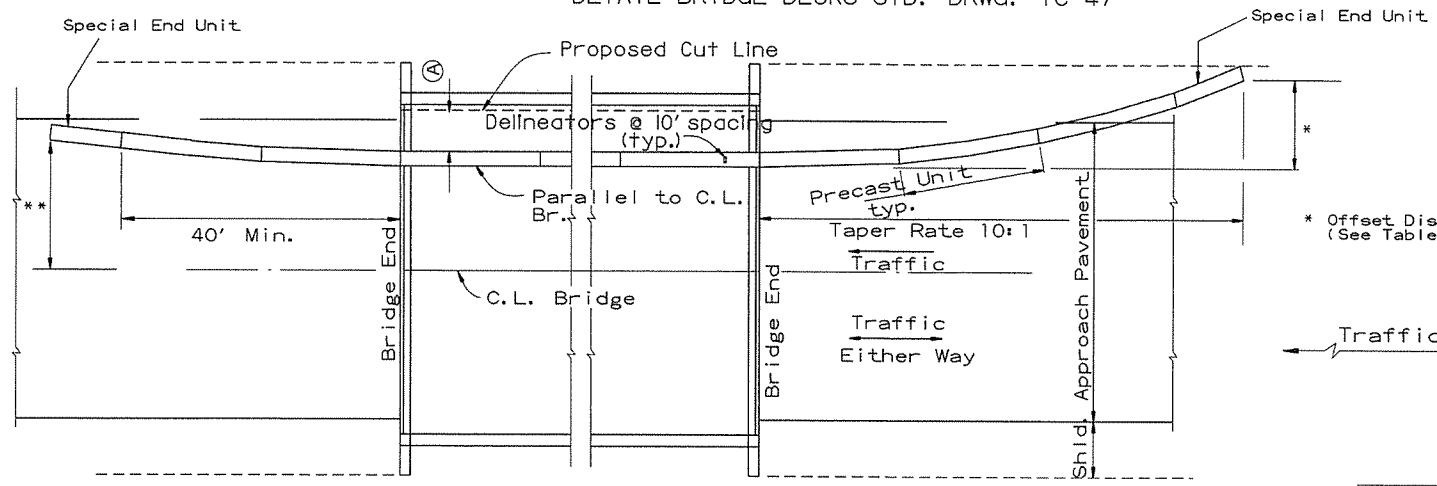
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

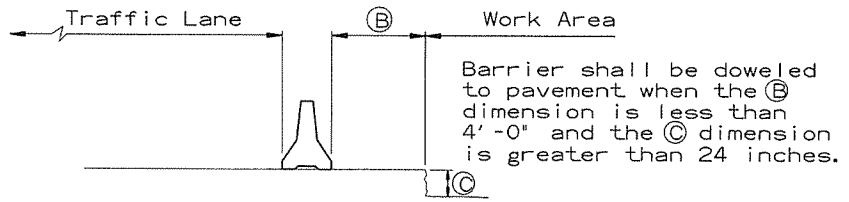
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

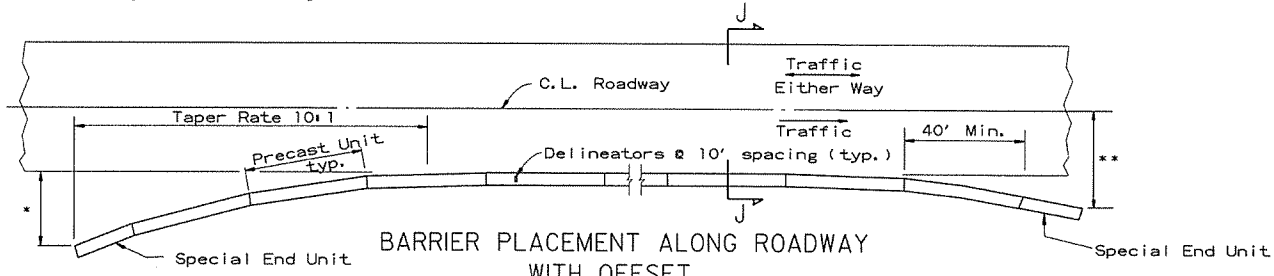
No Scale

** Offset Distance for Two Way Traffic Only



SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

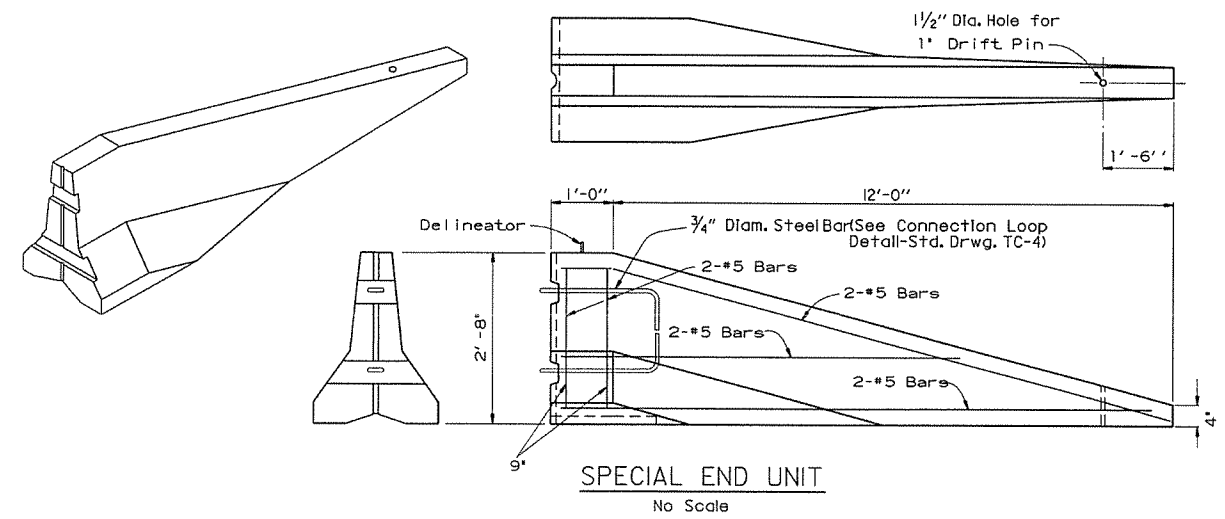
No Scale

* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table	
Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

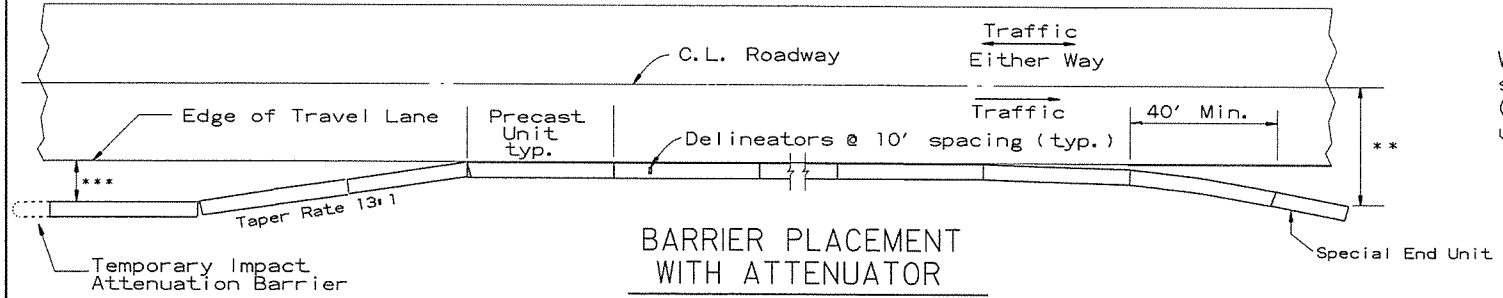


SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."



BARRIER PLACEMENT WITH ATTENUATOR

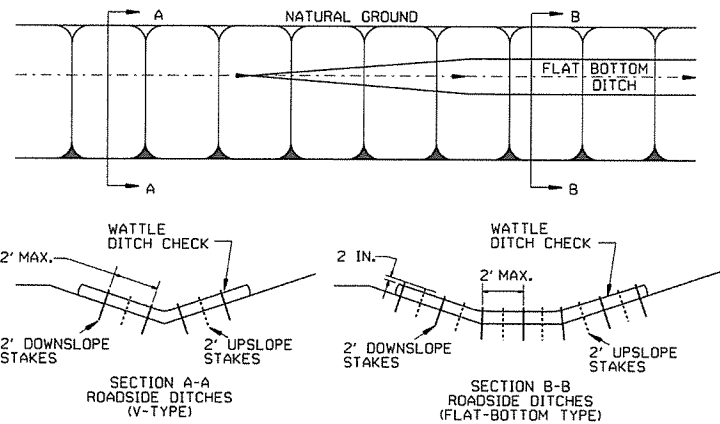
No Scale

***Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

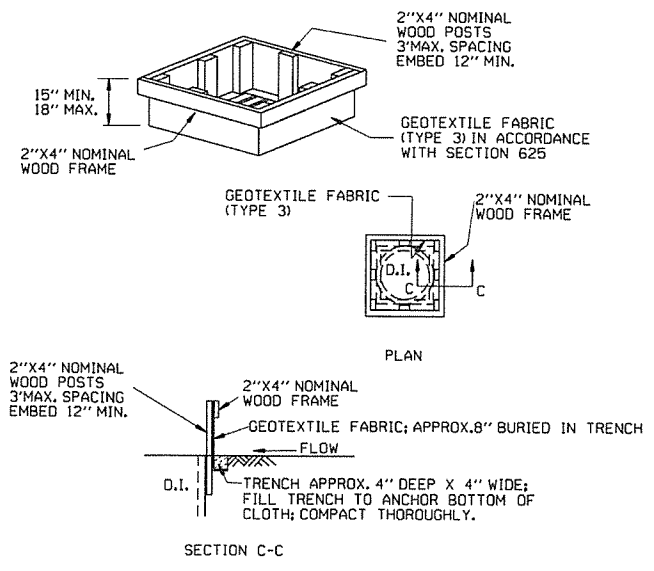
** Offset Distance For Two Way Traffic Only

			ARKANSAS STATE HIGHWAY COMMISSION
			STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER
10-15-09	ADDED REFERENCE TO MASH		STANDARD DRAWING TC-5
5-25-06	REVISED BARRIER PLACEMENT		
8-22-02	ISSUED NEW DRAWING		
DATE	REVISION	FILMED	

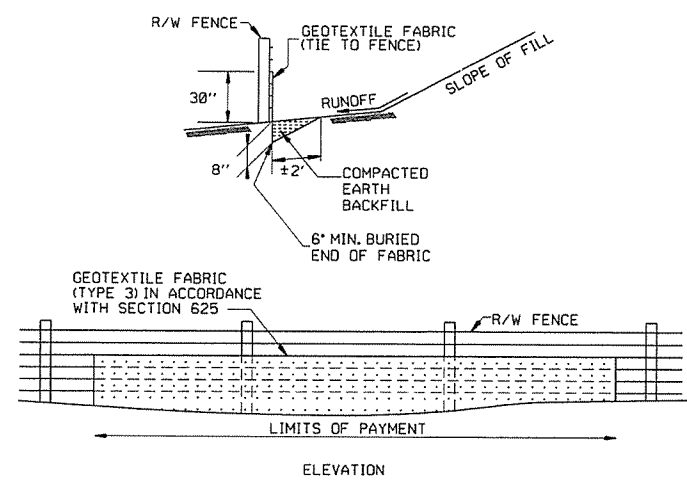
GENERAL NOTES
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



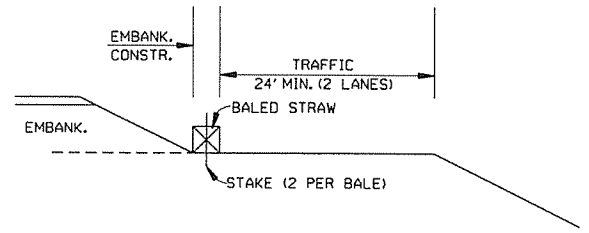
DROP INLET SILT FENCE (E-7)



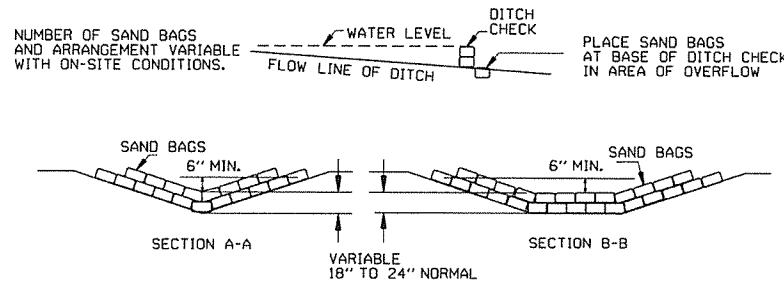
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

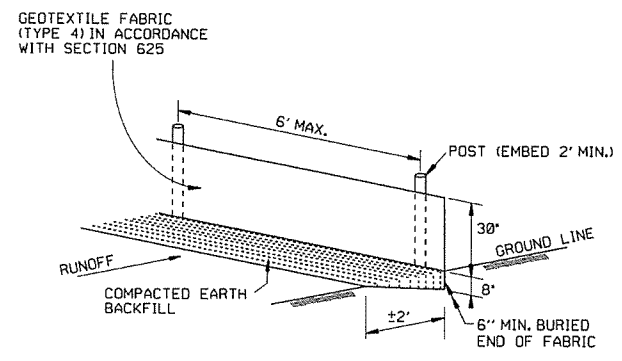
GENERAL NOTES
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)

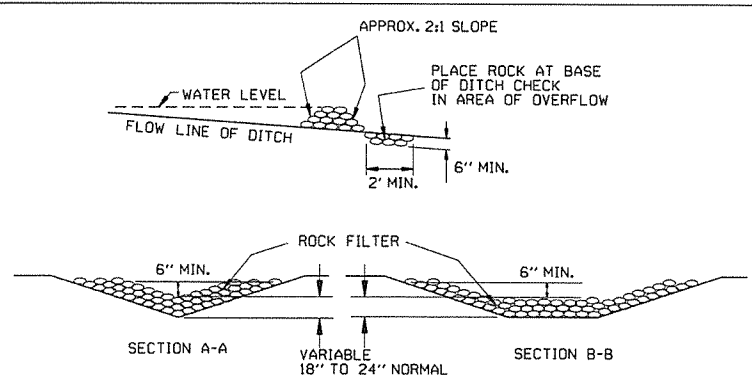


SAND BAG DITCH CHECK (E-5)



SILT FENCE (E-11)

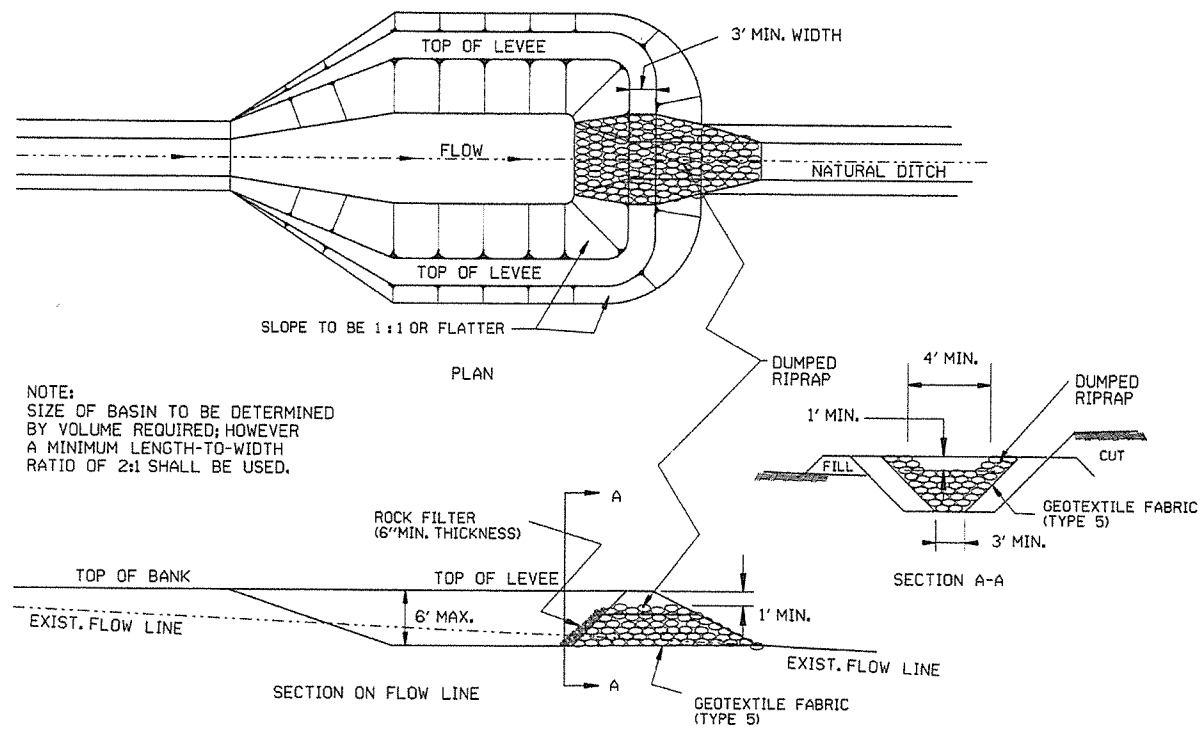
GENERAL NOTES
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



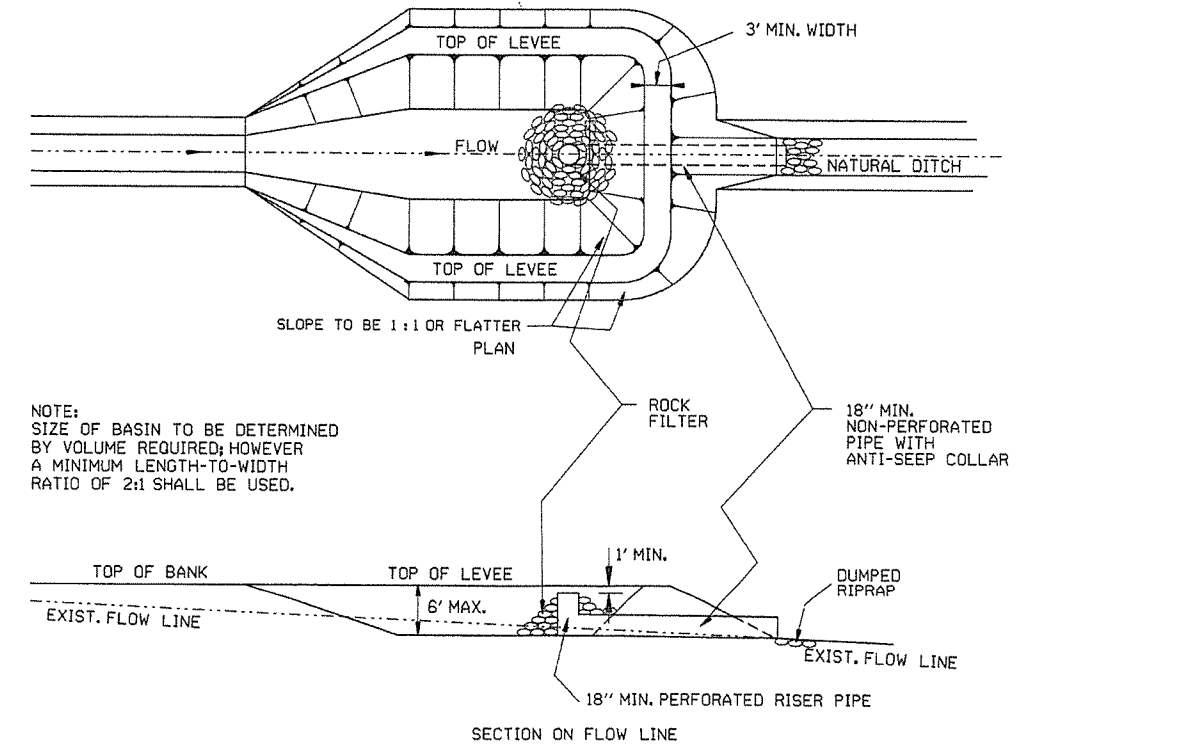
ROCK DITCH CHECK (E-6)

12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76
DATE	REVISION	FILMED

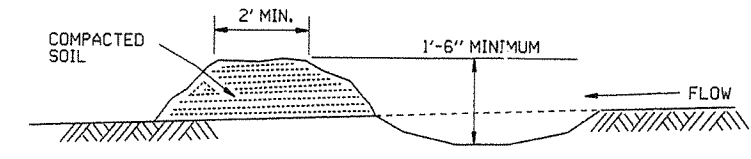
ARKANSAS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES
STANDARD DRAWING TEC-1



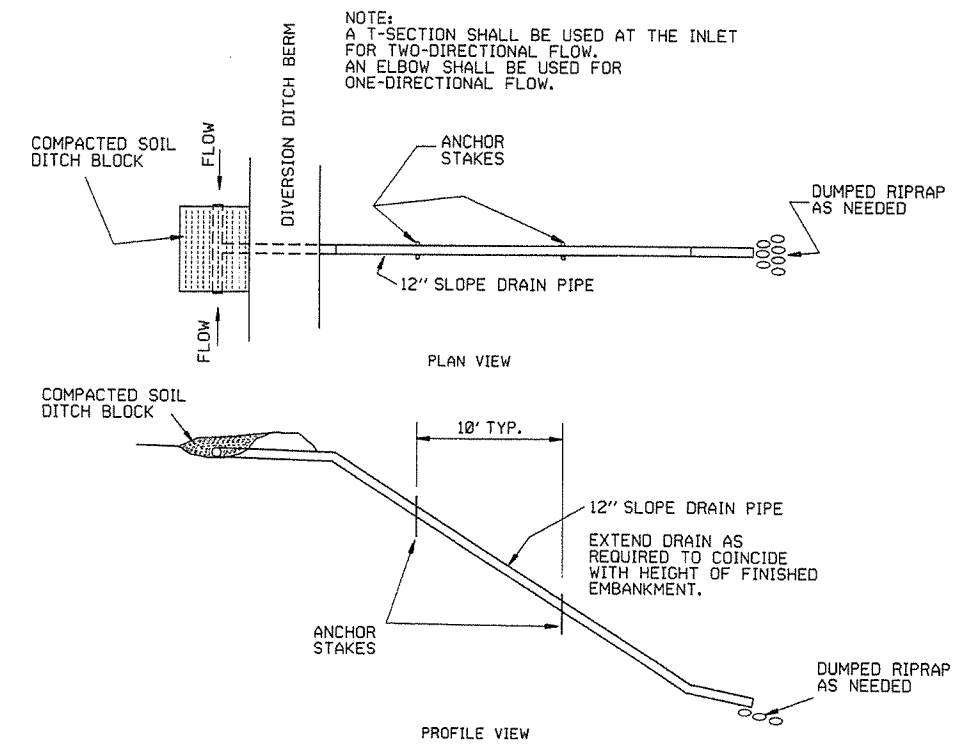
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



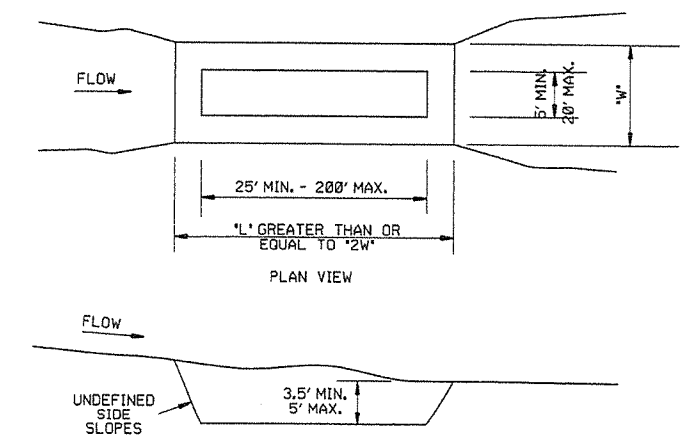
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

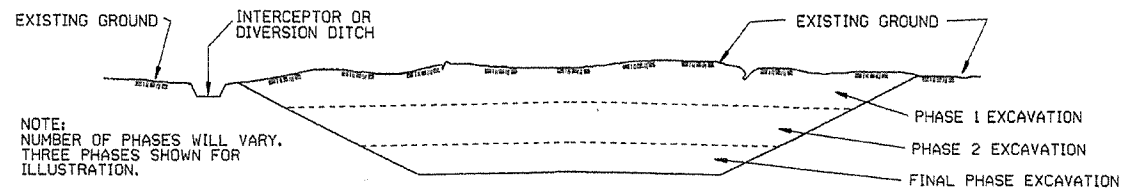
ARKANSAS STATE HIGHWAY COMMISSION			
TEMPORARY EROSION CONTROL DEVICES			
STANDARD DRAWING TEC-2			
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

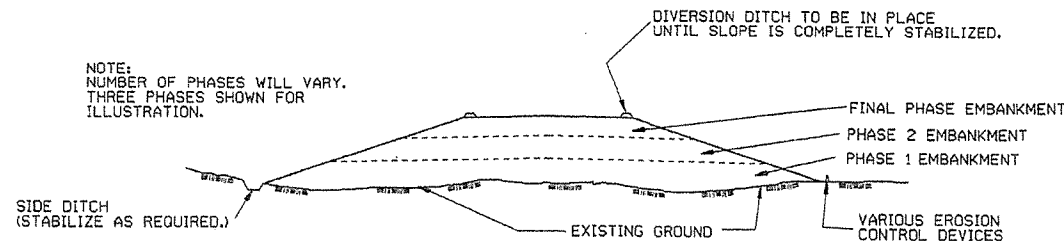
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

GENERAL NOTE

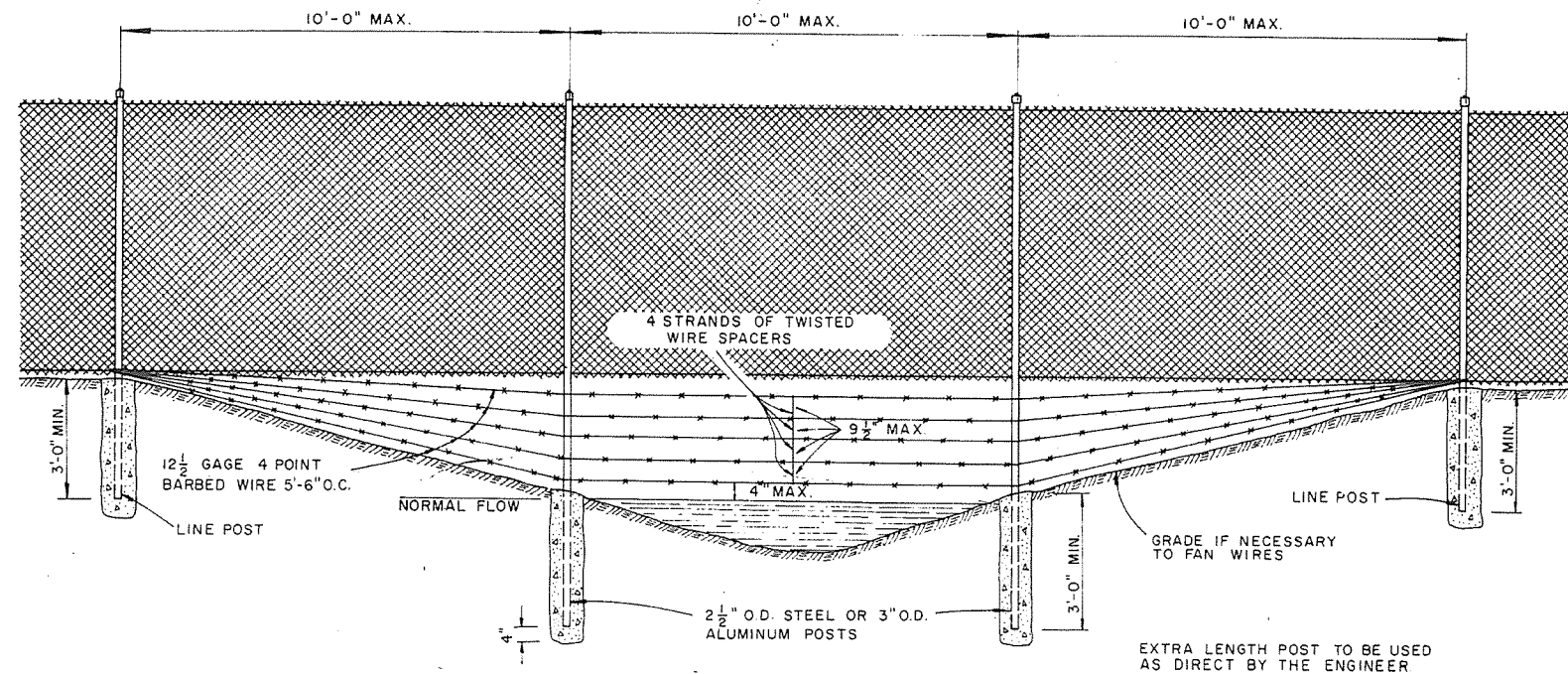
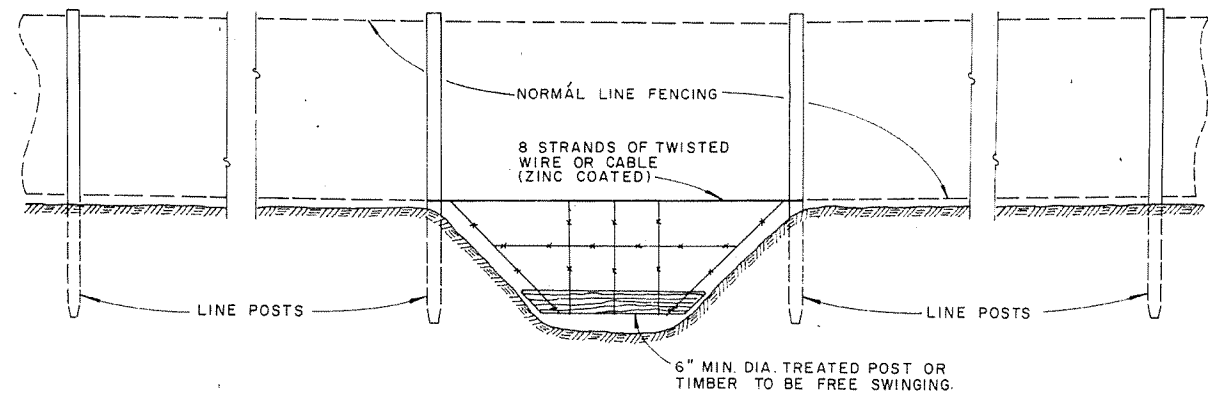
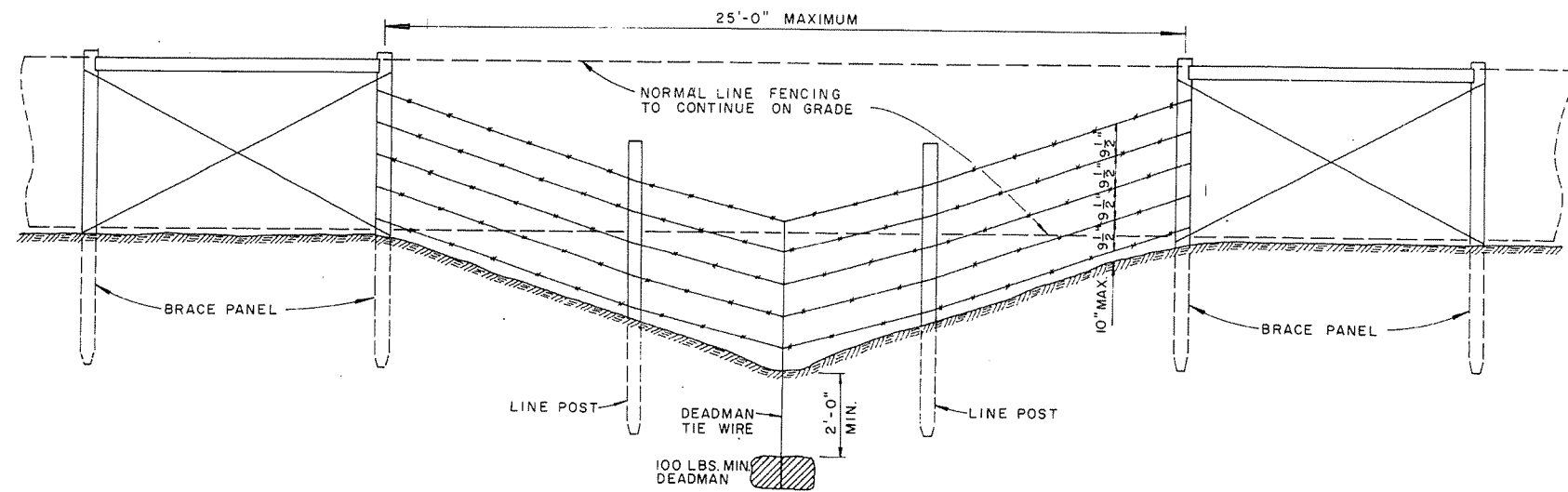
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

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		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
11-03-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED
		STANDARD DRAWING TEC-3	



GENERAL NOTES:
 THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.
 WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.
 IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.
 PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

ARKANSAS STATE HIGHWAY COMMISSION		
WIRE FENCE WATER GAPS		
STANDARD DRAWING		
4-20-79	REVISED TOP RAIL & TENSION WIRE	676-4-20-79
10-2-72	REVISED & REDRAWN	529 10-2-72
DATE	REVISION	DATE FILMD

WF-2

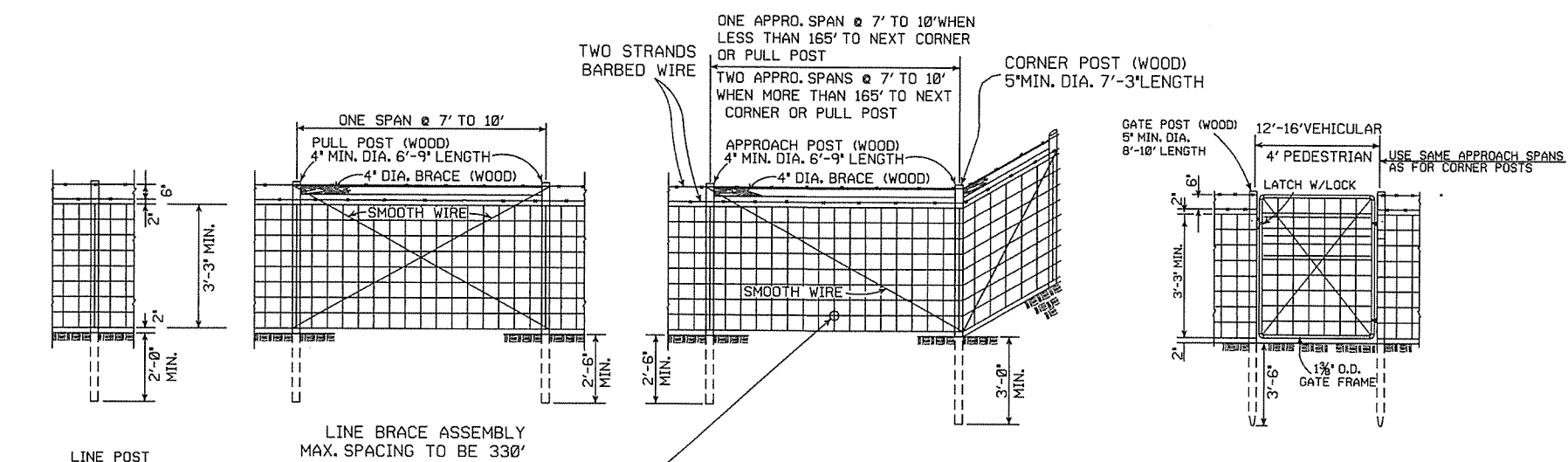
GENERAL NOTES:

STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE. AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE -1" TO +2". TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

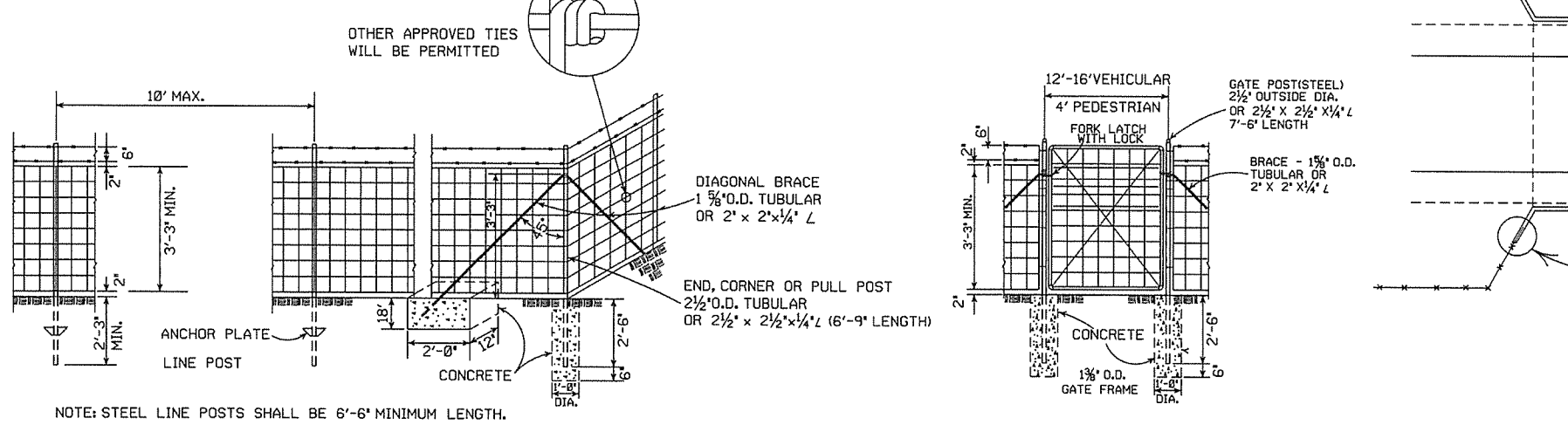
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

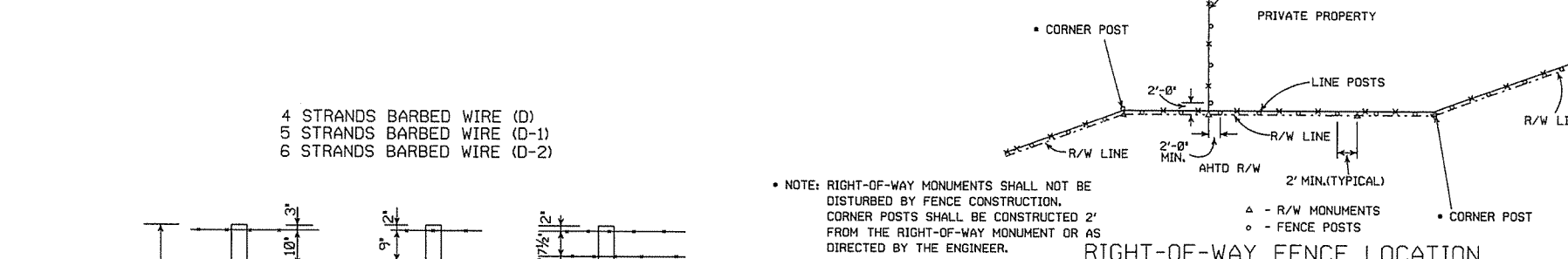
AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.



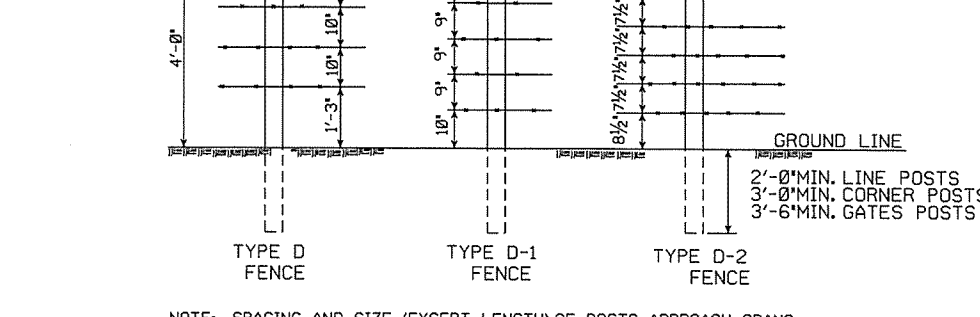
TYPE C FENCE (WOOD POSTS)



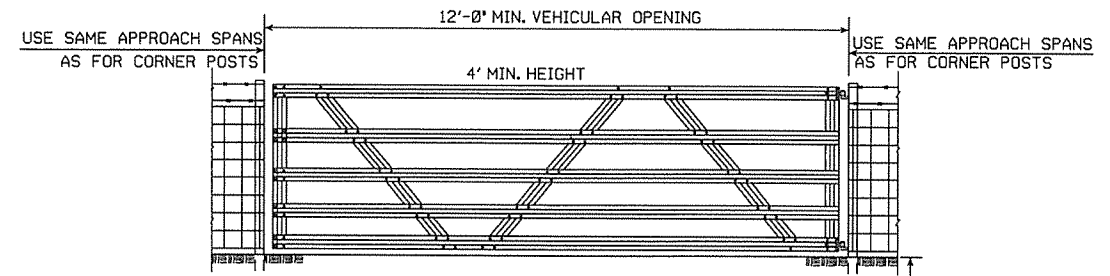
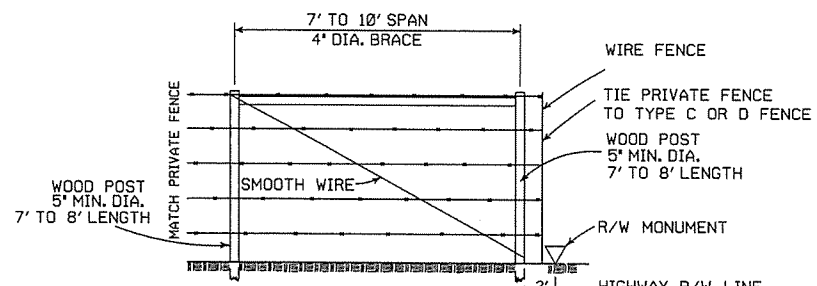
TYPE C FENCE (STEEL POSTS)



RIGHT-OF-WAY FENCE LOCATION



NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



TYPICAL VEHICULAR GATES (ALTERNATE TYPE)

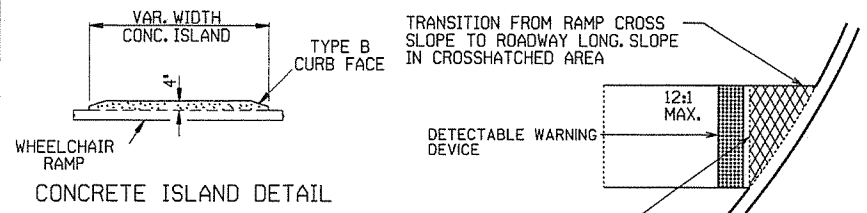
OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER. THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

DATE	REVISION	REVISION	DATE
8-22-02	REVISED GENERAL NOTES		
10-18-96	REVISED AASHTO		
11-22-95	REVISED R-O-W LOCATION DETAIL		
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94	
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93	
10-1-92	ADDED STAPLE NOTE	10-1-92	
8-15-91	ADDED TYPE D-2 FENCE	8-15-91	
11-30-89	DELETED CLASS CONCRETE	11-30-89	
7-15-88	ADDED SPLICE NOTE	700-7-15-88	
10-30-87	GENERAL REVISIONS	549-10-30-87	
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84	
1-4-83	MIN. DIA. LINE POST	648-1-4-83	
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81	
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72	
10-2-72	REVISED AND REDRAWN	540-10-2-72	
		FILMED	

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
 TYPE C AND D

STANDARD DRAWING WF-4



TRANSITION FROM RAMP CROSS SLOPE TO ROADWAY LONG. SLOPE IN CROSSHATCHED AREA
BEGIN RAMP SLOPE ON A LINE PERPENDICULAR TO TRAVEL DIRECTION

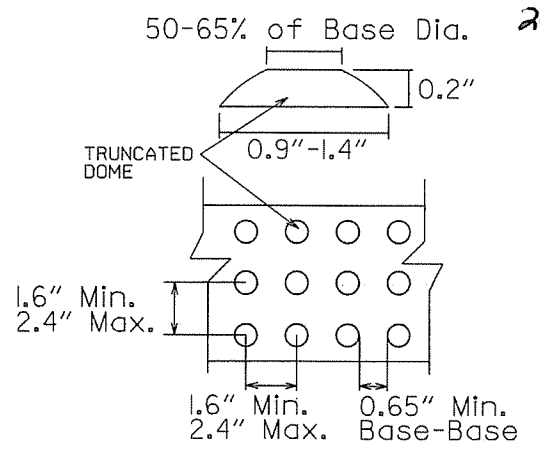
SLOPE TRANSITION DETAILS

TYPE 1 RAMP DIMENSIONS AND QUANTITIES

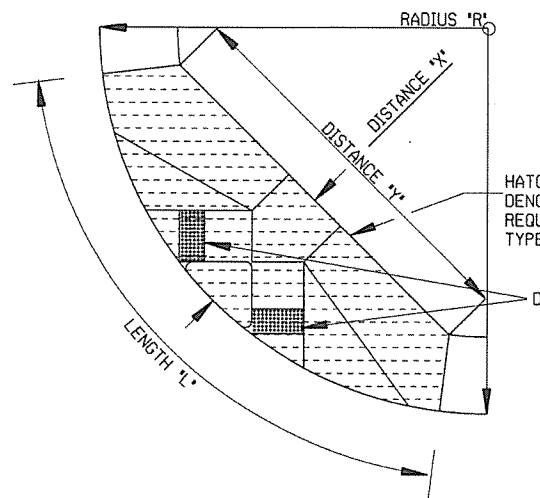
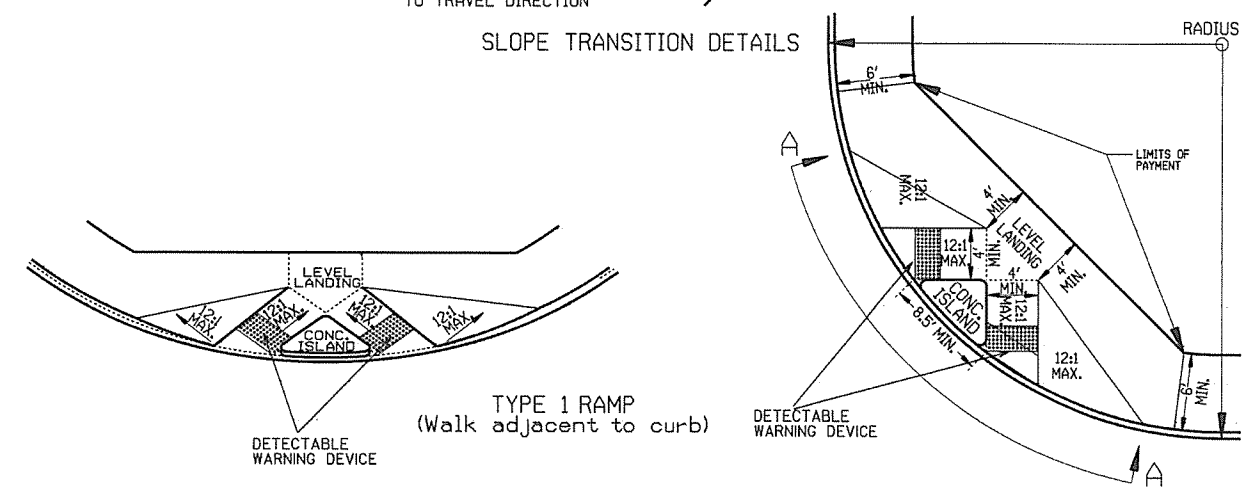
RADIUS 'R'	DISTANCE 'X'	DISTANCE 'Y'	LENGTH 'L'	RAMP AREA 'A'
FEET	FEET	FEET	FEET	SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB. TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



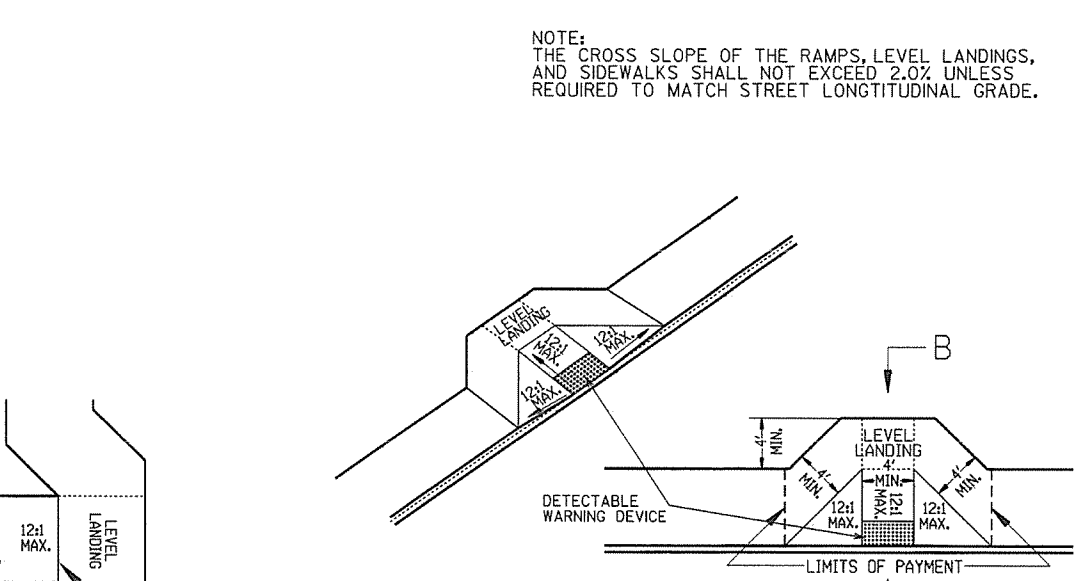
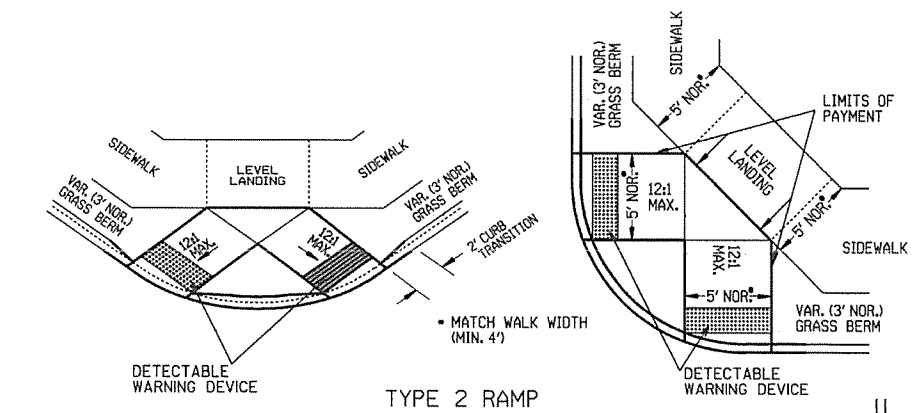
DETECTABLE WARNING DEVICE DETAIL



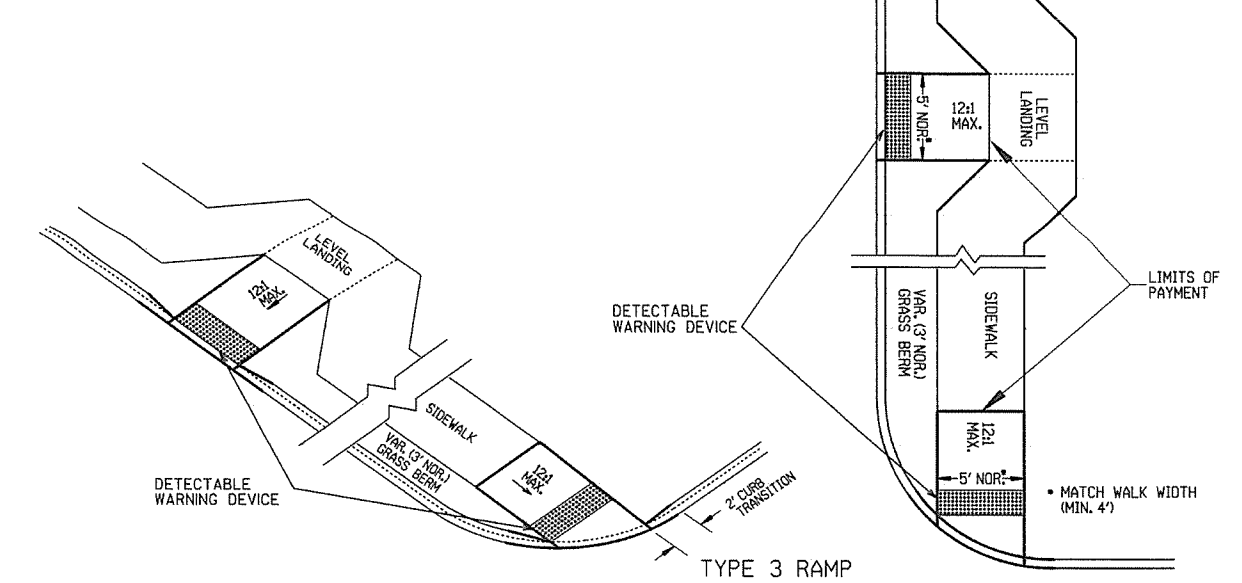
NOTE: THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



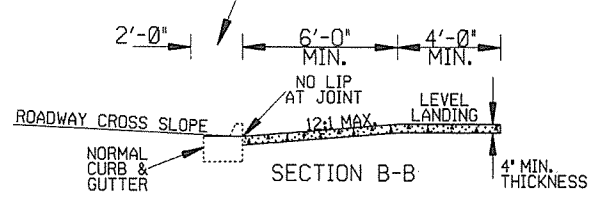
SECTION A-A



TYPE 4 RAMP (Walk adjacent to curb)



THE MAX. ROADWAY CROSS SLOPE ALLOWED IN THE 2' AREA IN FRONT OF THE RAMP SHALL BE 5.0%.



RAMP SELECTION CRITERIA

CHOICE	TYPE	DESCRIPTION
FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED. AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

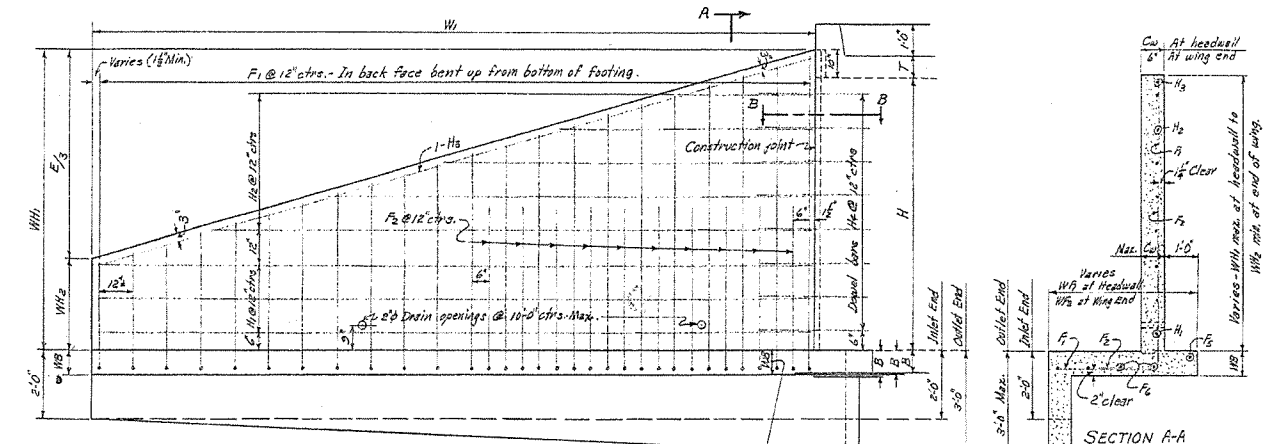
DATE	ISSUED-P.H.D.	REVISION	DATE FILM
11-10-05		REVISED TO NEW SIDEWALK POLICY	
10-9-03		REVISED GEN. NOTES & ADDED NOTE	
4-10-03		REV. DETECTABLE WARNING DEVICES	
8-22-02		ADD DETECTABLE WARNING DEVICES	
3-30-00		ADD SLOPE TRANS. & REV. ISL. DIMS.	
1-18-98		REVISED NOTES	
8-12-98		REVISED TEXTURE	
7-02-98		REDRAWN & REISSUED	
10-18-96		CORRECTED DIMENSIONS	10-18-96
5-24-90		FROM 8:1 TO 12:1 MAX. SLOPES	5-24-90
7-15-88		ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88		INCL. CONC. ISLAND IN PAY ITEM	
6-02-76		ISSUED-P.H.D.	299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

STANDARD DRAWING WR-1

PREP. BY	DATE	REV. NO.	REV. DATE	REV. BY	REV. DESCRIPTION
JCB					



WING DIMENSIONS

CLEAR HEIGHT OF BOX OF WING FOOTING	THICKNESS OF WING AT HEADWALL = C	WING WALL HEIGHTS		WIDTHS OF WING FOOTINGS		PERPENDICULAR FOOTING DIMENSION	PERPENDICULAR DIST. FROM HEAD TO END OF WING	LENGTH OF WING WALLS	INSIDE FOOTING DIMENSION	* QUANTITY PER WING CONCRETE	
		AT HEADWALL	AT END OF WING	AT END OF WING	AT END OF WING					INLET END	OUTLET END
H	WB	Cu	WH	WH	WF	W	F	E	W	W2	CUYD. CUYD.
2' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	0.889	0.996
3' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	1.338	1.466
4' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	1.868	2.027
5' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	2.478	2.668
6' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	3.111	3.382
7' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	3.766	4.051
8' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	4.441	4.736
9' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	5.136	5.421
10' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	5.851	6.136
11' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	6.586	6.871
12' 0"	6"	3' 10"	1' 0"	2' 0"	2' 0"	0' 11 1/2"	6' 6"	7' 6"	7' 1/2"	7.341	7.616

APRON DIMENSION W2

W2 = (OW - 2F)

CLEAR SPAN	CLEAR HEIGHT	FOOTING DIMENSION	CLASS S CONCRETE									
			SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT					
4'	2'	1' 11 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
4'	3'	2' 8 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
4'	4'	3' 6"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
4'	5'	4' 3 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
4'	6'	5' 0 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
4'	7'	5' 7 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	2'	2' 0"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	3'	2' 7 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	4'	3' 4 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	5'	4' 1 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	6'	4' 8 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	7'	5' 5 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	8'	6' 2 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	9'	6' 9 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	10'	7' 6 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	11'	8' 3 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
5'	12'	9' 0 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	2'	2' 7 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	3'	3' 4 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	4'	4' 1 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	5'	4' 8 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	6'	5' 5 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	7'	6' 2 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	8'	6' 9 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	9'	7' 6 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	10'	8' 3 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	11'	9' 0 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
6'	12'	9' 7 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	2'	2' 14 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	3'	3' 11 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	4'	4' 8 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	5'	5' 5 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	6'	6' 2 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	7'	6' 9 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	8'	7' 6 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	9'	8' 3 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	10'	9' 0 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	11'	9' 7 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
7'	12'	10' 4 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	2'	2' 28 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	3'	3' 25 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	4'	4' 22 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	5'	5' 19 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	6'	6' 16 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	7'	7' 13 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	8'	8' 10 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	9'	9' 7 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	10'	10' 4 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	11'	11' 1 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
8'	12'	11' 11 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	2'	2' 37 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	3'	3' 34 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	4'	4' 31 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	5'	5' 28 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	6'	6' 25 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	7'	7' 22 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	8'	8' 19 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	9'	9' 16 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	10'	10' 13 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'	11'	11' 10 1/2"	5' 0"	3' 0 1/2"	9' 8"	7' 8 1/2"	14' 4"	12' 4 1/2"	19' 0"	17' 0"	23' 0"	21' 0"
9'												

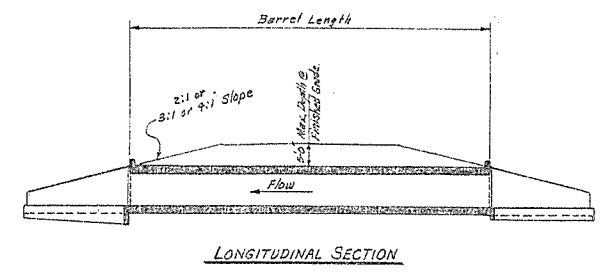
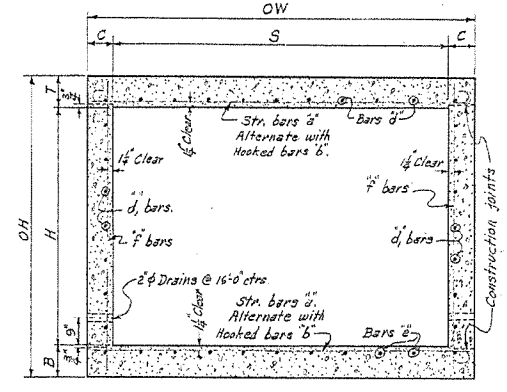
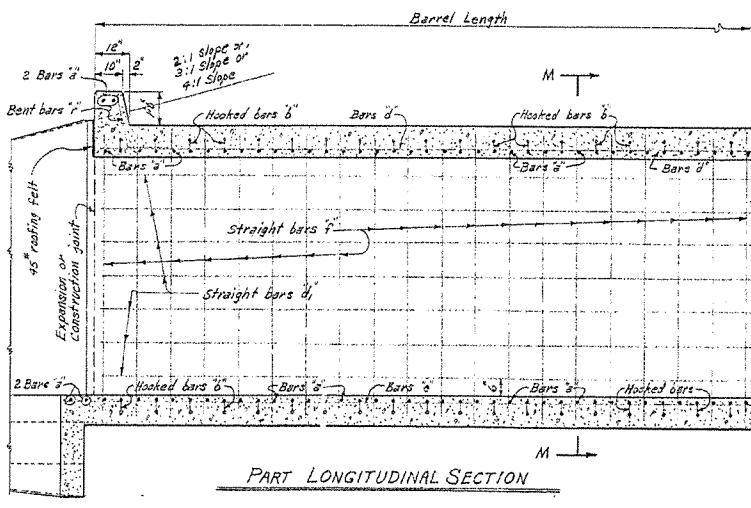
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			207	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	a bars		b bars		c bars		d bars		e bars		f bars					
			STRAIGHT		BENT - See Diagram below		STRAIGHT		STRAIGHT		STRAIGHT		STRAIGHT					
			In Top and Bottom Slabs of Barrel. 2 add'l in Apron and Headwall - Each.	LENGTH	In Top and Bottom Slabs of Barrel. Alternate with 'a' bars.	LENGTH	Longitudinal in Top Slab of Barrel	LENGTH	Longitudinal in Sidewalls	LENGTH	Longitudinal in Bottom Slab of Barrel	LENGTH	Verticals in Sidewalls	LENGTH	LENGTH			
D	S	H	SIZE	NO. REQ'D	SIZE	NO. REQ'D	SIZE	NO. REQ'D	SIZE	NO. REQ'D	SIZE	NO. REQ'D	SIZE	NO. REQ'D				
0'-0" TO 5'-0" MAXIMUM	1'-0"	2'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	3'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	4'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	5'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
5'-0" TO 9'-0" MAXIMUM	1'-0"	6'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	7'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	8'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	9'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
9'-0" TO 12'-0" MAXIMUM	1'-0"	10'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	11'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	12'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"
	1'-0"	13'	#5	120	120	4'-9"	#6	110	110	5'-10"	4'-8"	#5	10	6	#4	120	120	2'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	3'-11"
				120	120	4'-9"		110	110	5'-10"	4'-8"		10	6		120	120	4'-11"

MAX. DESIGN DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	DIMENSIONS						QUANTITIES						
			BARREL DIMENSIONS			UNIT QUANTITIES			REINFORCING STEEL			ADDITIONAL			
			D	S	H	A	OW	T	C	B	OH	CLASS S CONC. PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	PER LAP	THIS DRAWING
5'-0"	1'-0"	2'	2'	8	5'-0"	6"	6"	3'-11"	0.282	41.99	17.95	66.35			
			3'	12	5'-0"	6"	6"	4'-11"	0.319	44.16	19.62	66.35			
			4'	16	5'-0"	6"	6"	5'-11"	0.356	46.33	21.29	66.35			
	1'-0"	3'	3'	15	6'-0"	6"	6"	4'-2"	0.380	55.55	22.19	101.27			
			4'	20	6'-0"	6"	6"	5'-2"	0.417	58.23	23.86	101.27			
			5'	25	6'-0"	6"	6"	6'-2"	0.454	60.90	25.53	101.27			
	1'-0"	4'	4'	30	6'-0"	6"	6"	5'-3"	0.535	64.99	27.20	103.27			
			5'	35	6'-0"	6"	6"	6'-3"	0.605	67.63	28.87	103.27			
			6'	40	6'-0"	6"	6"	7'-3"	0.674	70.27	30.54	103.27			
	1'-0"	5'	5'	45	6'-0"	6"	6"	6'-4"	0.754	74.36	32.21	118.94			
			6'	50	6'-0"	6"	6"	7'-4"	0.823	76.94	33.88	118.94			
			7'	55	6'-0"	6"	6"	8'-4"	0.892	79.52	35.55	118.94			
1'-0"	6'	6'	60	6'-0"	6"	6"	7'-5"	0.971	83.61	37.22	134.61				
		7'	65	6'-0"	6"	6"	8'-5"	1.040	86.19	38.89	134.61				
		8'	70	6'-0"	6"	6"	9'-5"	1.109	88.77	40.56	134.61				
1'-0"	7'	7'	75	6'-0"	6"	6"	8'-6"	1.188	92.86	42.23	150.28				
		8'	80	6'-0"	6"	6"	9'-6"	1.257	95.44	43.90	150.28				
		9'	85	6'-0"	6"	6"	10'-6"	1.326	98.02	45.57	150.28				
1'-0"	8'	8'	90	6'-0"	6"	6"	9'-7"	1.405	102.11	47.24	165.95				
		9'	95	6'-0"	6"	6"	10'-7"	1.474	104.69	48.91	165.95				
		10'	100	6'-0"	6"	6"	11'-7"	1.543	107.27	50.58	165.95				
1'-0"	9'	9'	105	6'-0"	6"	6"	10'-8"	1.622	111.36	52.25	181.62				
		10'	110	6'-0"	6"	6"	11'-8"	1.691	113.94	53.92	181.62				
		11'	115	6'-0"	6"	6"	12'-8"	1.760	116.52	55.59	181.62				
1'-0"	10'	10'	120	6'-0"	6"	6"	11'-9"	1.839	120.61	57.26	203.29				
		11'	125	6'-0"	6"	6"	12'-9"	1.908	123.19	58.93	203.29				
		12'	130	6'-0"	6"	6"	13'-9"	1.977	125.77	60.60	203.29				
1'-0"	11'	11'	135	6'-0"	6"	6"	12'-0"	2.056	130.86	62.27	218.96				
		12'	140	6'-0"	6"	6"	13'-0"	2.125	133.44	63.94	218.96				
		13'	145	6'-0"	6"	6"	14'-0"	2.194	136.02	65.61	218.96				
1'-0"	12'	12'	150	6'-0"	6"	6"	13'-1"	2.273	140.11	67.28	234.63				
		13'	155	6'-0"	6"	6"	14'-1"	2.342	142.69	68.95	234.63				
		14'	160	6'-0"	6"	6"	15'-1"	2.411	145.27	70.62	234.63				

Notes for details of wings and bar laps, see Drawing Nos. W-X002-1 or W-X003-1 or W-X004-1 or W-X004-2.



GENERAL NOTES:
 CONCRETE: All concrete to be Class S, and shall be poured in the dry. All exposed corners to have 3/8" chamfers.
 REINFORCING STEEL: Reinforcing to be deformed bars of intermediate or hard grade.
 BAR LAP: In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 33'-0". Lap longitudinal bars 50 diameters.
 CONSTRUCTION JOINTS: Construction joints between wingwalls, sidewalls and slabs shall be willy where shown on plans.
 SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

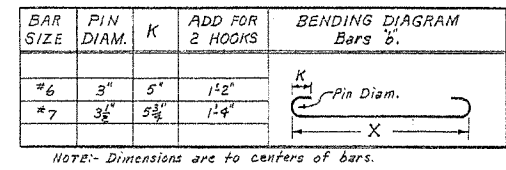
DESIGN LIVE LOAD
 H20-S16 LOADING A.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 28,000 Lb. Axles @ 9'-0" c/c

UNIT STRESSES:
 Class S Concrete (n=10) 1200 psi
 Reinforcing Steel 20,000 psi

Note: This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing Nos. W-X002-1 or W-X002-2.

CLASS S CONCRETE
 ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF STANDARD BARREL SECTIONS
 FOR
 REINFORCED CONCRETE BOX CULVERTS
 4.5, 6, 7.8, 9, 10, 11 & 12' SPANS 3:1 OR 4:1 SLOPES
 SINGLES UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-100X-0

Designed By: W.C.H. 1-23-63
 Drawn By: W.C.H. 2-8-63
 Checked By: W.C.H. 1-23-63
 Checked By: R.B.S. 5-24-63
 Quantities By: W.C.H. 2-12-63



DOWEL BARS FOR TWO HEADWALLS

SPAN	SIZE	SPACING	NO. REQ'D	LENGTH	X
4'	#4	11"	12	2'-6"	1'-3"
5'	#4	11"	14	2'-7"	1'-3 1/2"
6'	#4	11"	16	2'-8"	1'-4"
7'	#4	11"	18	2'-9"	1'-4 1/2"
8'	#4	11 1/2"	20	2'-11"	1'-5 1/2"
9'	#4	11 1/2"	22	3'-0"	1'-6"
10'	#4	11 1/2"	24	3'-1"	1'-6 1/2"
11'	#4	12"	26	3'-2"	1'-7"
12'	#4	12"	28	3'-3"	1'-7 1/2"

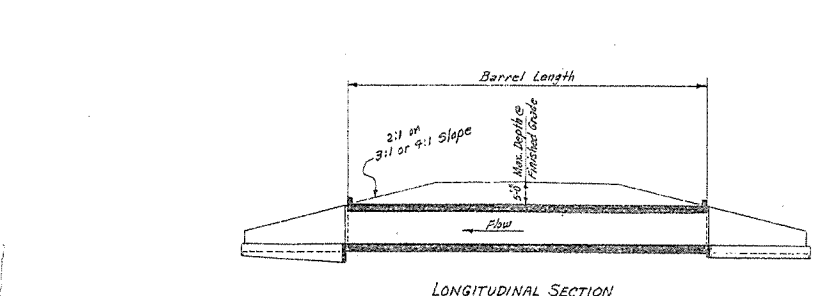
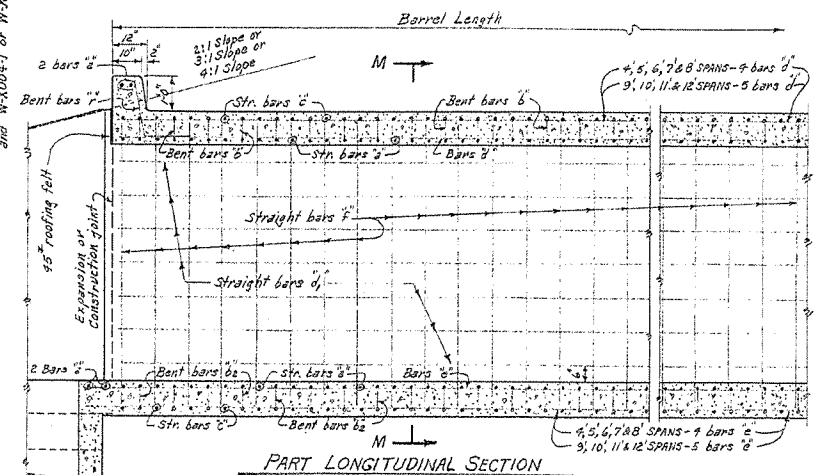
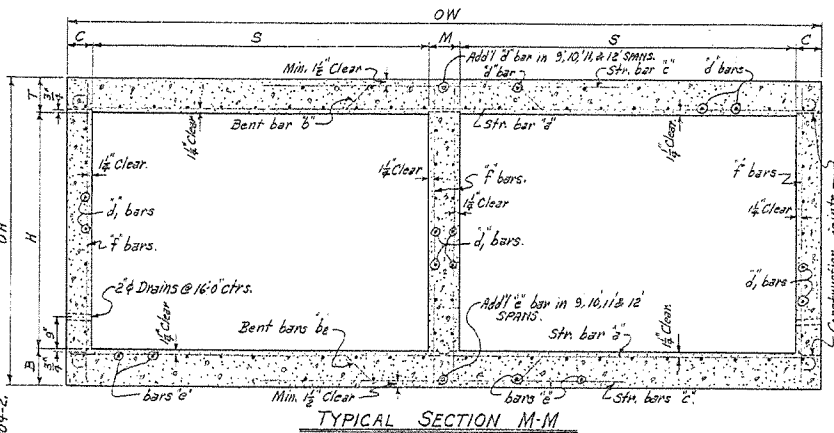
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			269	
JOB No.					

BAR LIST FOR BARREL SECTION 60'0 IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	BAR LIST FOR BARREL SECTION 60'0 IN LENGTH																								
			"a" bars			"b" bars			"c" bars			"d" bars															
			STRAIGHT	BENT - See Diagram below.	BENT - See Diagram below.	STRAIGHT	"d" bars	"d" bars	"e" bars	"f" bars																	
D	S	H	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D				
			1/2	12	128	128	9'5"	59	59	10'6"	0'3"	2'2 1/2"	3'4"	59	59	10'6"	0'3"	2'2 1/2"	3'4"	120	120	4'8"	14	14	290	290	2'10"

DIMENSIONS QUANTITIES

MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS										UNIT QUANTITIES		
	CLEAR SPAN	CLEAR HEIGHT	SQ. FT. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF DIVISION WALL	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	CLASS S CONC PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	REINFORCING STEEL	
												PER LAP	7/16 HEADWALLS & APPROX
D	S	H	A	OW	T	C	M	B	OH	CLYD.	LB.	LB.	LB.
4'0"	5'	12'	16	9'5"	6"	8"	6"	8"	3'0"	0.496	88.15	42.71	129.56



NOTE: For details of wings and bar laps, see Drawing No. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
 All exposed corners to have 3/8 chamfers.
 REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
 BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33' length of barrel over 22'. Lap longitudinal bars 50 diameters.
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls, division walls and slabs shall be only where shown on plans.
 SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

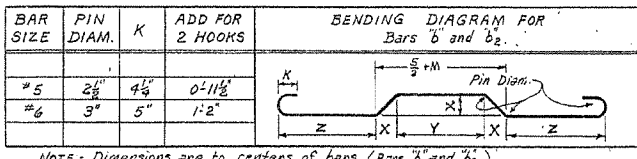
DESIGN LIVE LOAD

H20-S16 LOADING A.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 24,000 lb. Axles @ 4'-0" ctrs.
 UNIT STRESSES:-
 Class S Concrete (n=10) 1200 3/4
 Reinforcing Steel 20,000 7/4

CLASS S CONCRETE

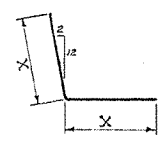
ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF STANDARD BARREL SECTIONS
 FOR
 REINFORCED CONCRETE BOX CULVERTS
 4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS
 3:1 OR 4:1 SLOPES
 UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-200X-0.

Checked by: TMS - 5-14-63
 Checked by: TMS - 5-24-63
 Checked by: EME - 5-24-63
 Designed by: W.C.H. 1-17-63.
 Drawn by: W.C.H. 2-15-63.
 Quantities by: W.C.H. 2-19-63.



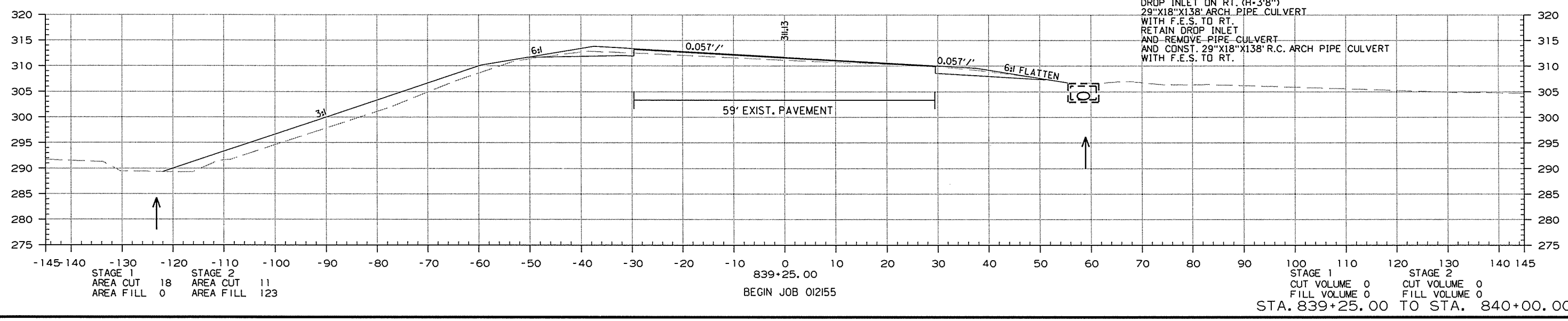
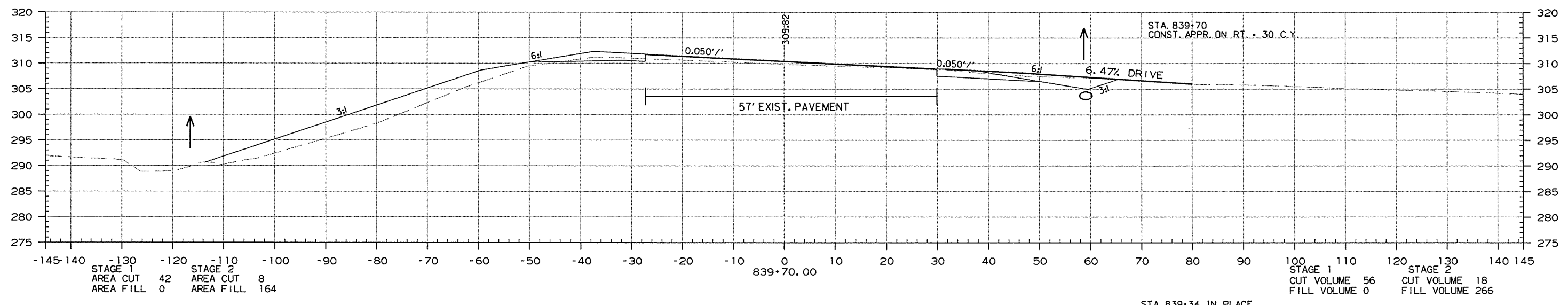
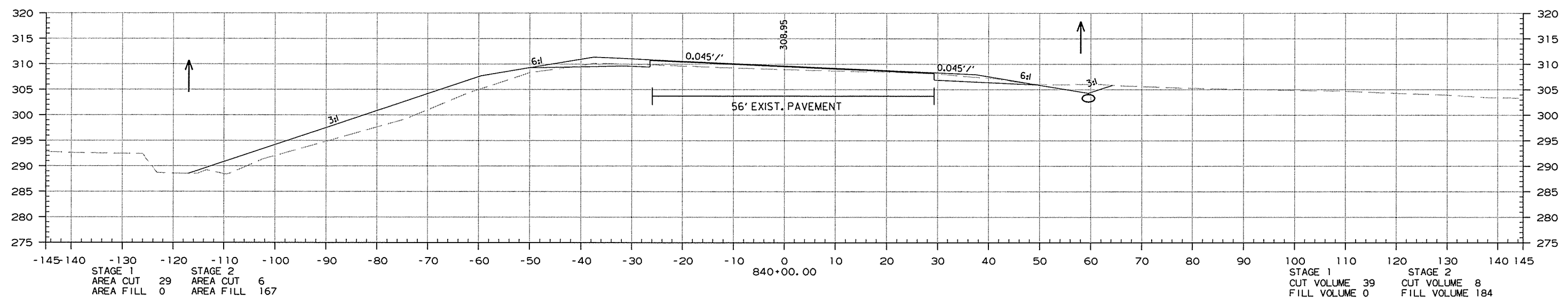
DOWEL BARS FOR TWO HEADWALLS

SPANS @	SIZE	SPACING	NO. REQ'D	LENGTH	X
4'	#4	12"	20	2'5"	1'-2 1/2"
5'	#4	12"	24	2'6"	1'-3"
6'	#4	12"	28	2'7"	1'-3 1/2"
7'	#4	12"	32	2'8"	1'-4"
8'	#4	12"	36	2'9"	1'-4 1/2"
9'	#4	12"	40	2'10"	1'-5"
10'	#4	12"	46	2'11"	1'-5 1/2"
11'	#4	12"	50	3'0"	1'-6"
12'	#4	12"	54	3'1"	1'-6 1/2"



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		209	311

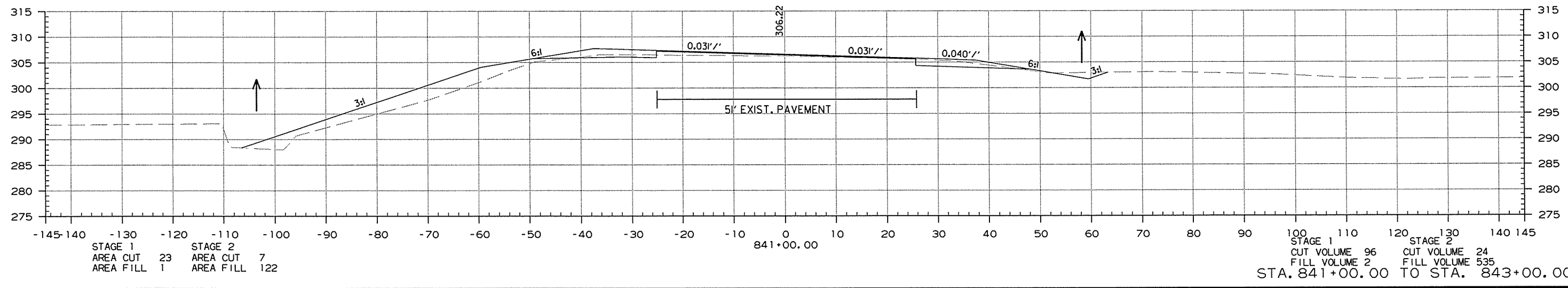
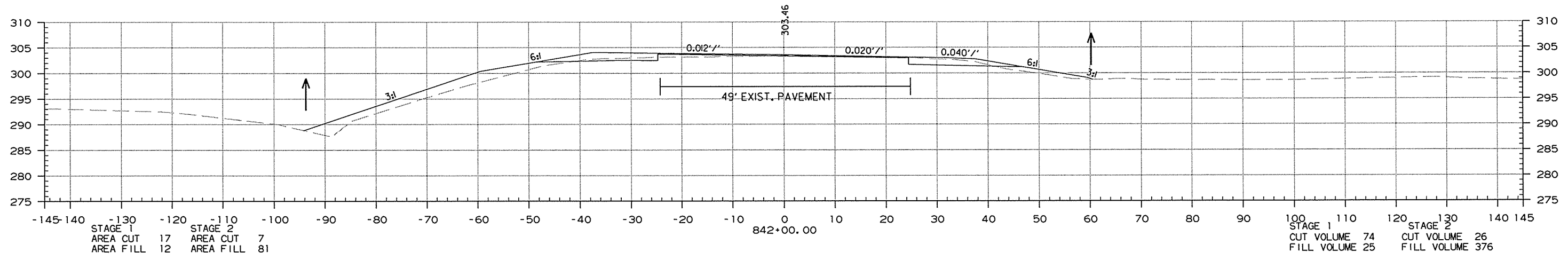
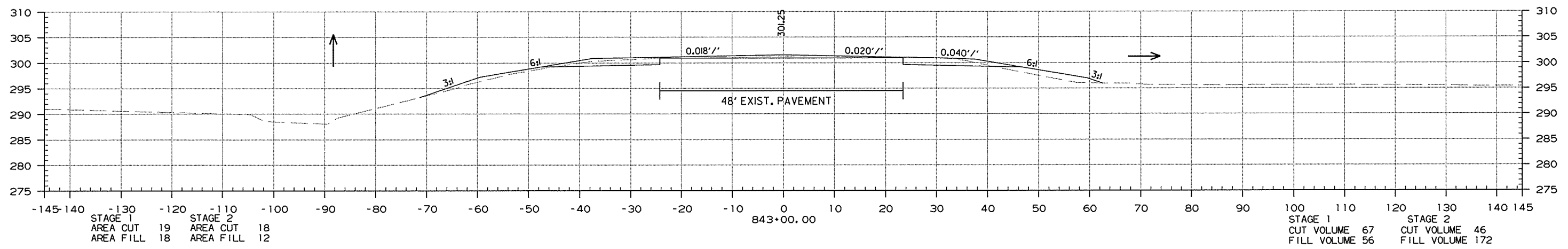
2 CROSS SECTIONS



11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		210	311

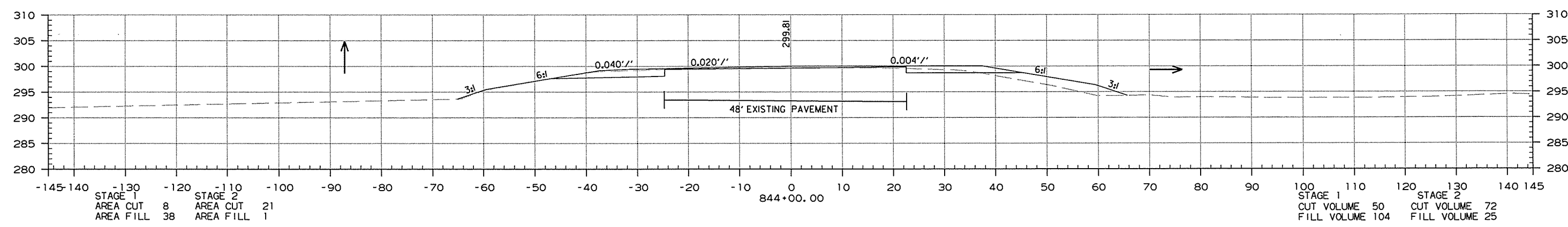
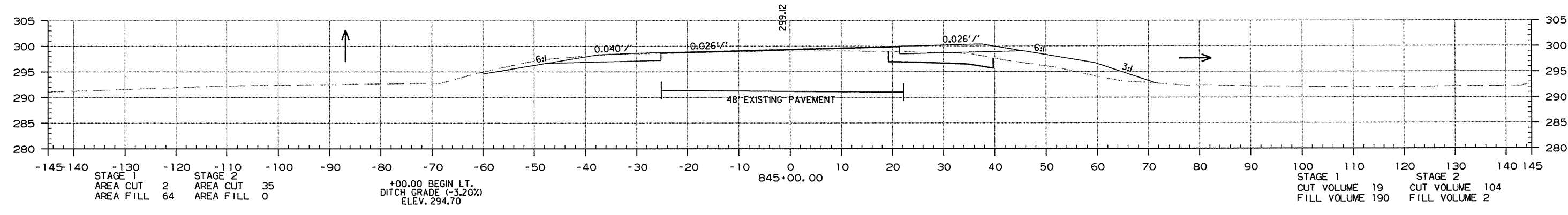
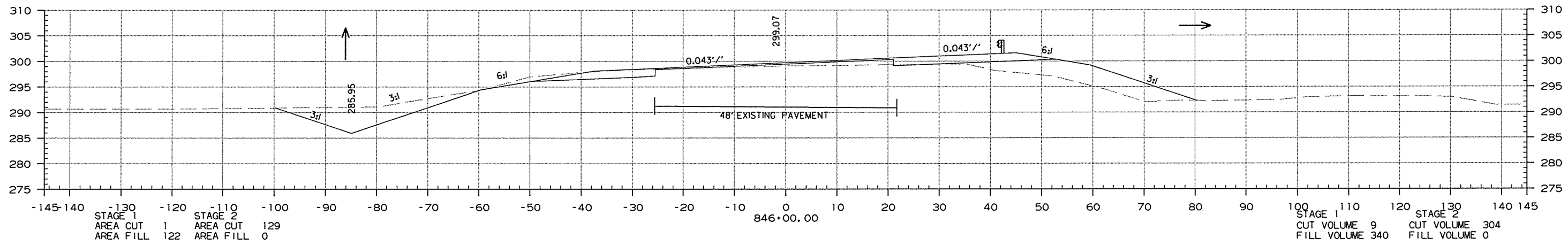
2 CROSS SECTIONS



11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		211	311

2 CROSS SECTIONS

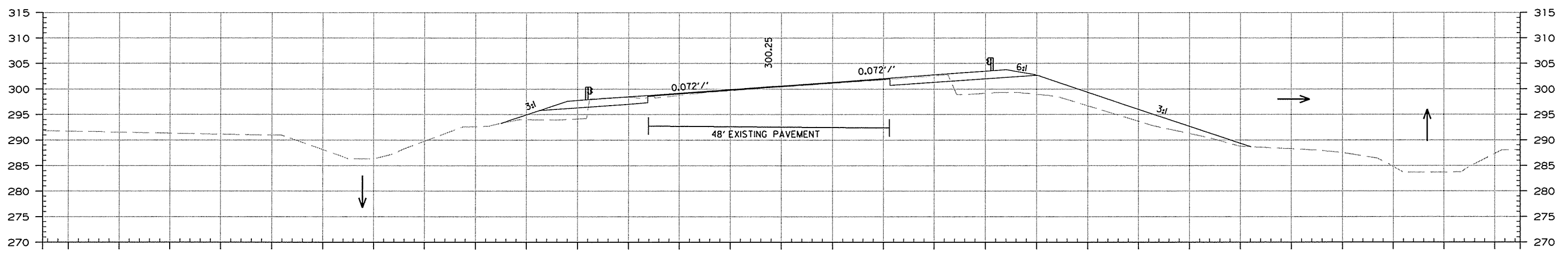


STA. 844+00.00 TO STA. 846+00.00

11/6/2013
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		212	311

2 CROSS SECTIONS

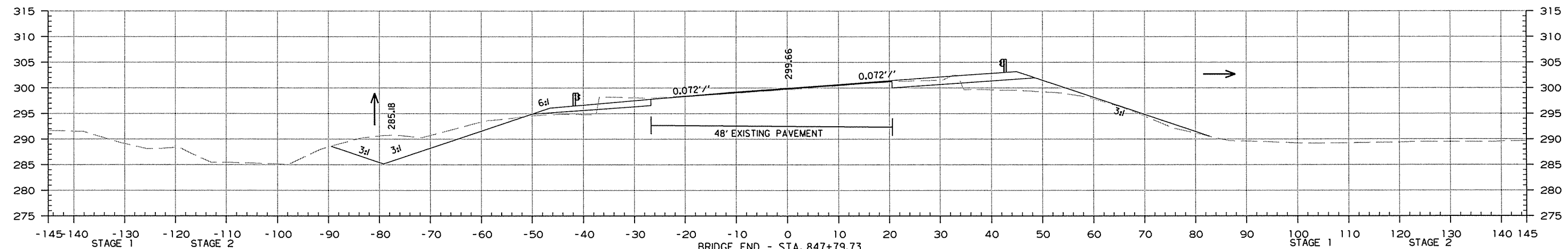


STAGE 1 AREA CUT 14 AREA FILL 135	STAGE 2 AREA CUT 15 AREA FILL 25
STAGE 1 AREA CUT 0 AREA FILL 0	STAGE 2 AREA CUT 0 AREA FILL 0
STAGE 1 AREA CUT 0 AREA FILL 0	STAGE 2 AREA CUT 0 AREA FILL 0

BRIDGE END - STA. 848+87.03
TOE OF SLOPE - STA. 848+83.03
TOE OF SLOPE - STA. 847+84.73

STAGE 1 CUT VOLUME 79 FILL VOLUME 367	STAGE 2 CUT VOLUME 258 FILL VOLUME 65
STAGE 1 CUT VOLUME 0 FILL VOLUME 0	STAGE 2 CUT VOLUME 0 FILL VOLUME 0
STAGE 1 CUT VOLUME 1 FILL VOLUME 5	STAGE 2 CUT VOLUME 2 FILL VOLUME 1

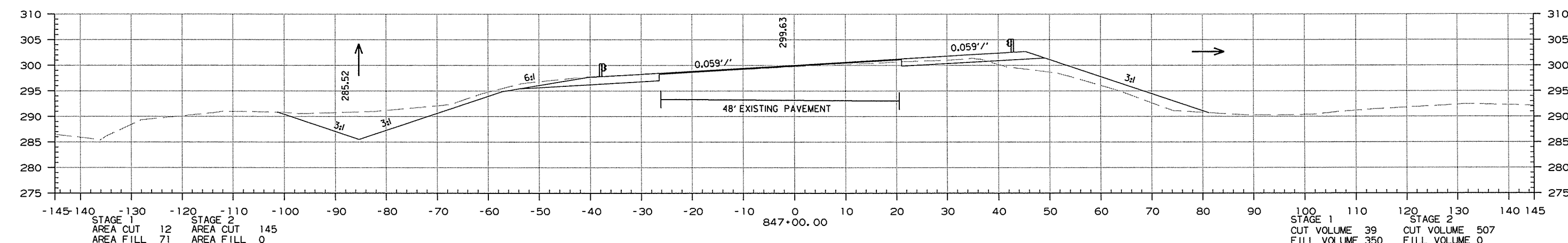
+00.00 END LT.
DITCH GRADE (-3.20%)
ELEV. 285.09



STAGE 1 AREA CUT 15 AREA FILL 50	STAGE 2 AREA CUT 20 AREA FILL 8
----------------------------------------	---------------------------------------

BRIDGE END - STA. 847+79.73

STAGE 1 CUT VOLUME 41 FILL VOLUME 241	STAGE 2 CUT VOLUME 491 FILL VOLUME 0
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STAGE 1 AREA CUT 12 AREA FILL 71	STAGE 2 AREA CUT 145 AREA FILL 0
----------------------------------------	----------------------------------------

847+00.00

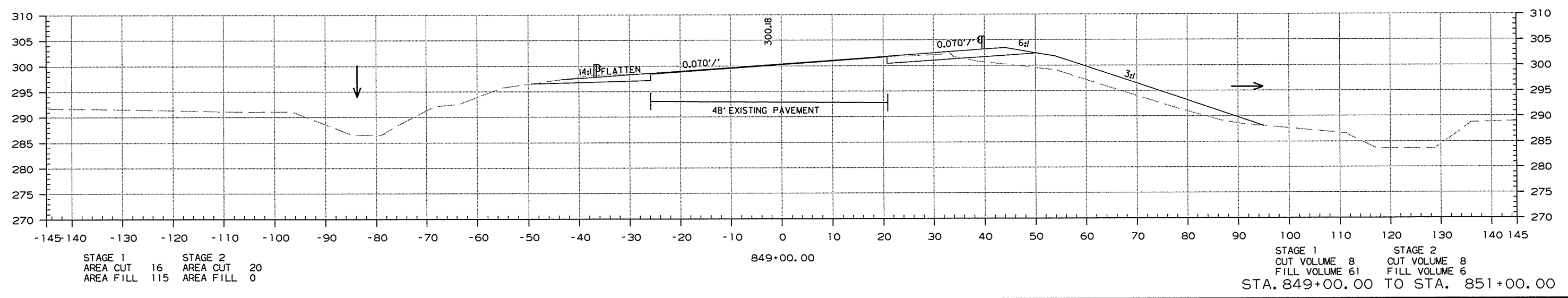
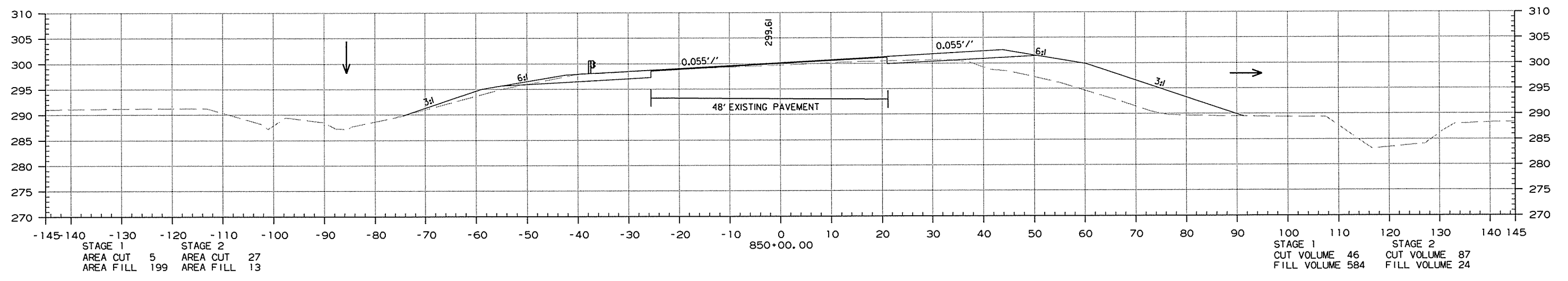
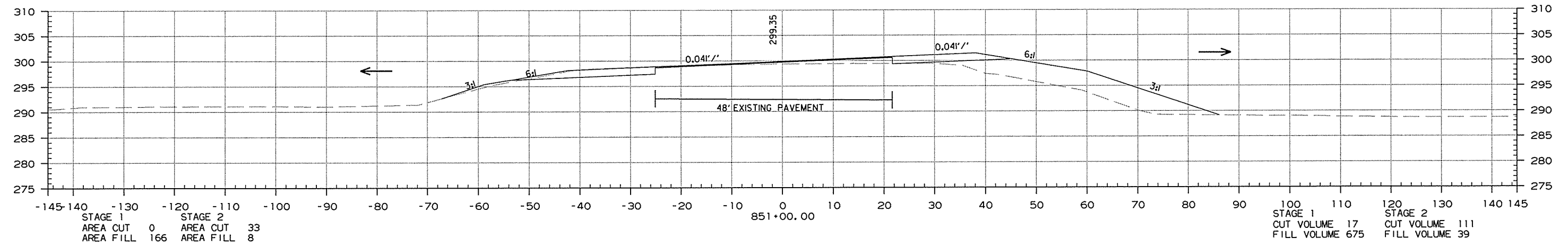
STAGE 1 CUT VOLUME 39 FILL VOLUME 350	STAGE 2 CUT VOLUME 507 FILL VOLUME 0
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STA. 847+00.00 TO STA. 848+87.03

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		213	311

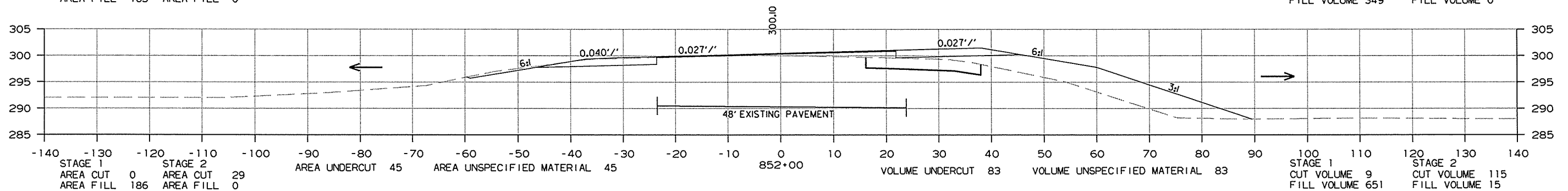
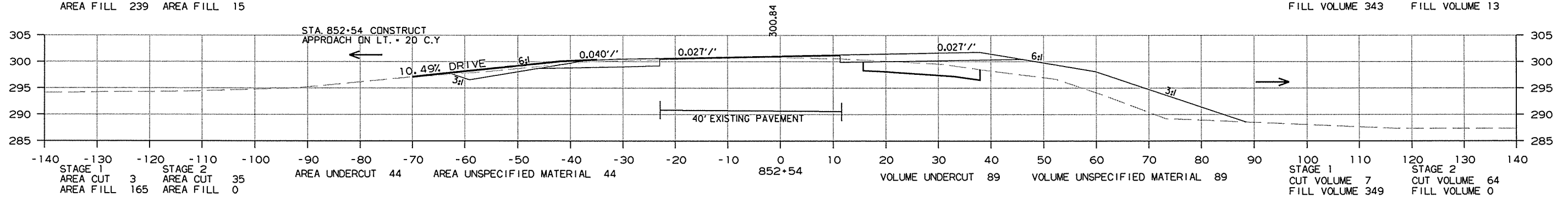
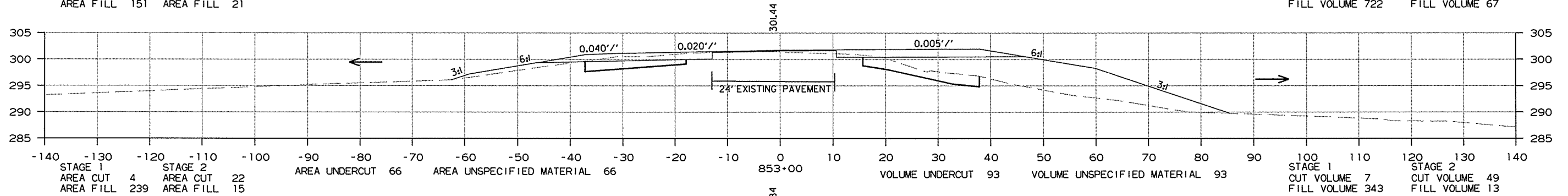
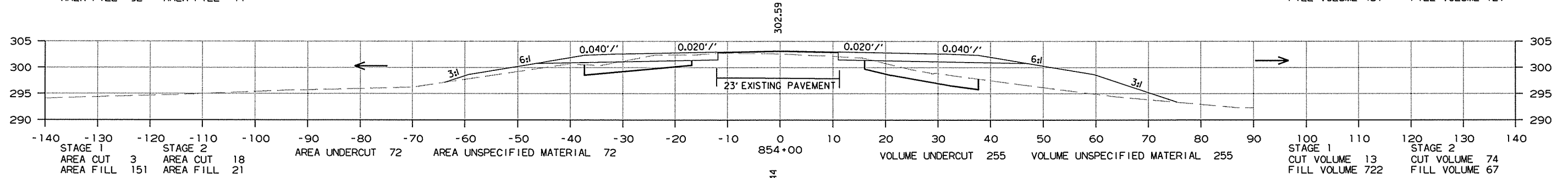
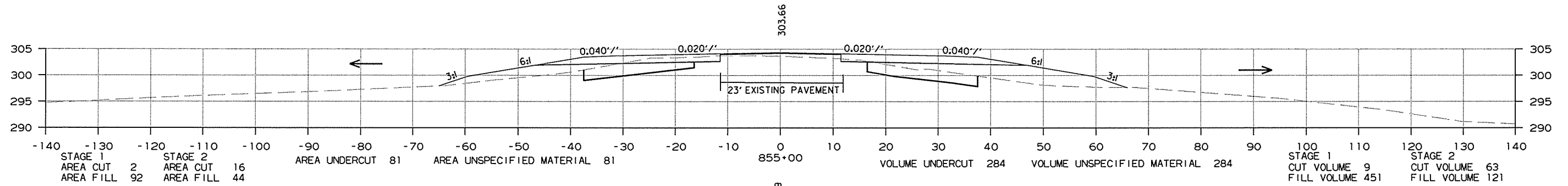
2 CROSS SECTIONS



11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							214	311

② CROSS SECTIONS



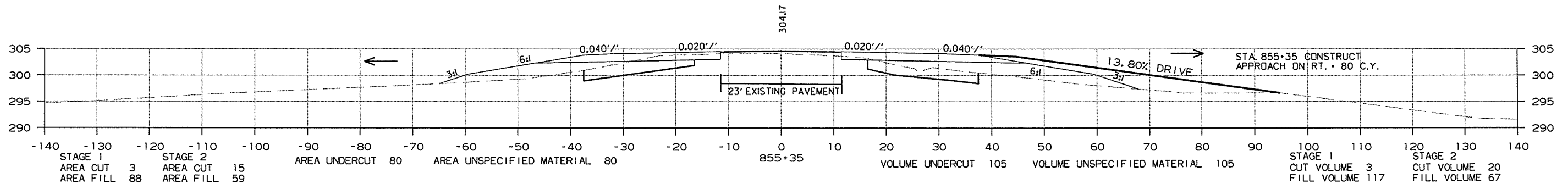
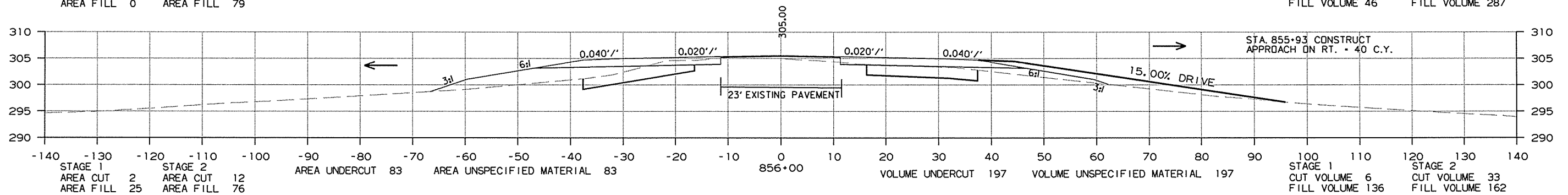
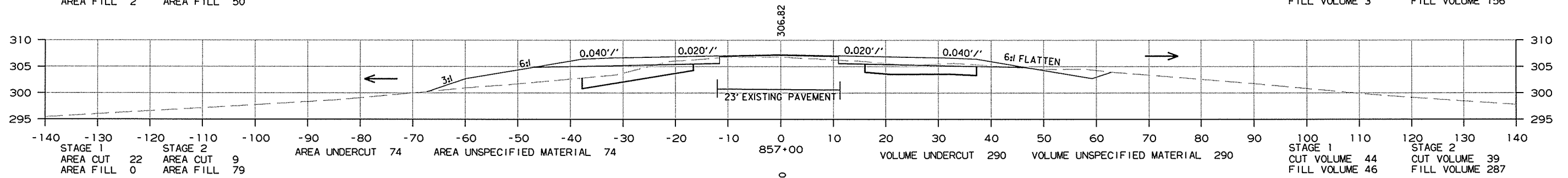
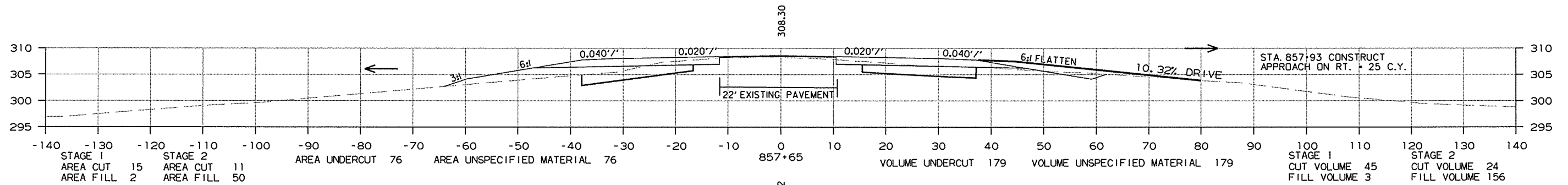
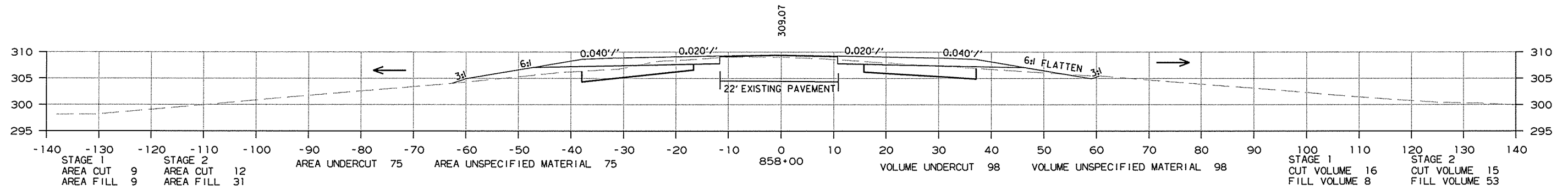
CROSS SECTION STA. 852+00 TO STA. 855+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							215	311

② CROSS SECTIONS



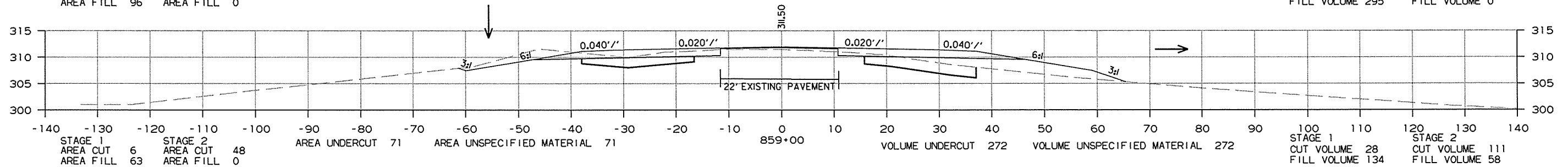
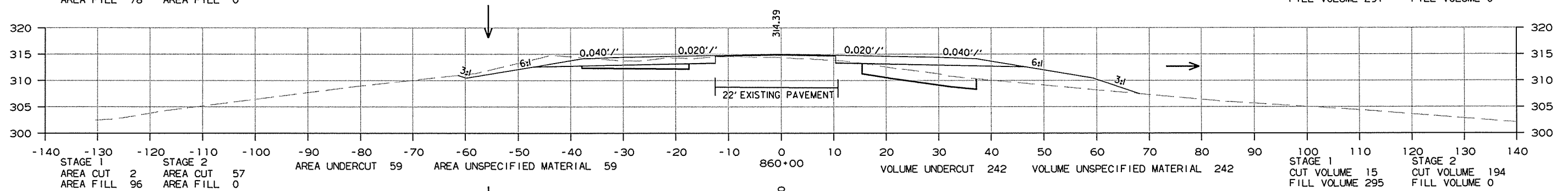
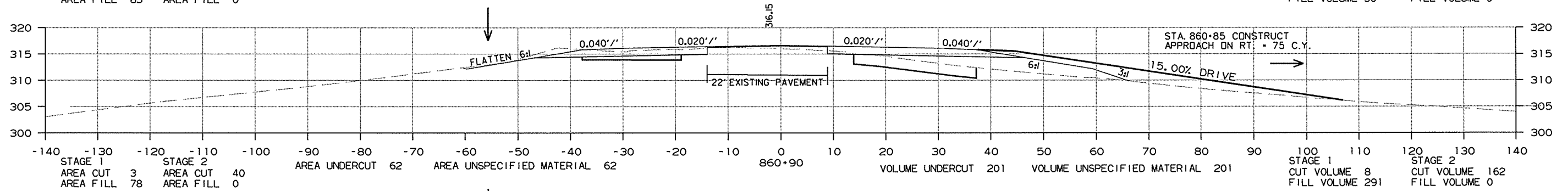
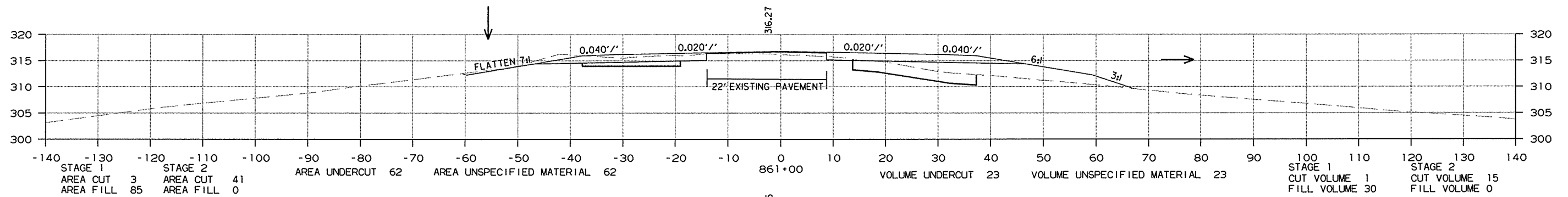
CROSS SECTION STA. 855+35 TO STA. 858+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	216	311

2 CROSS SECTIONS



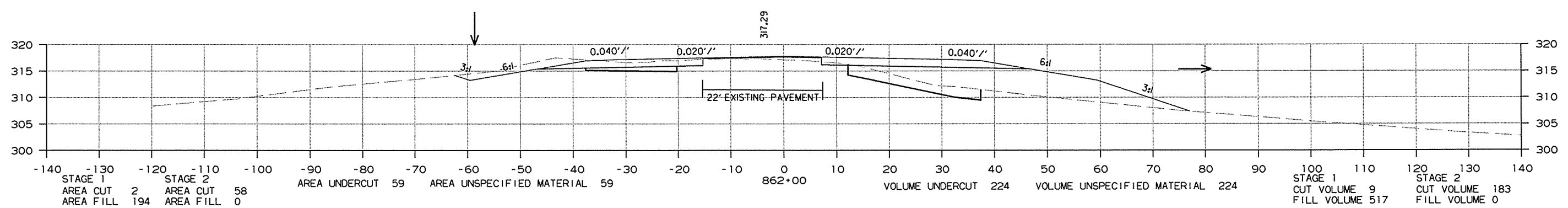
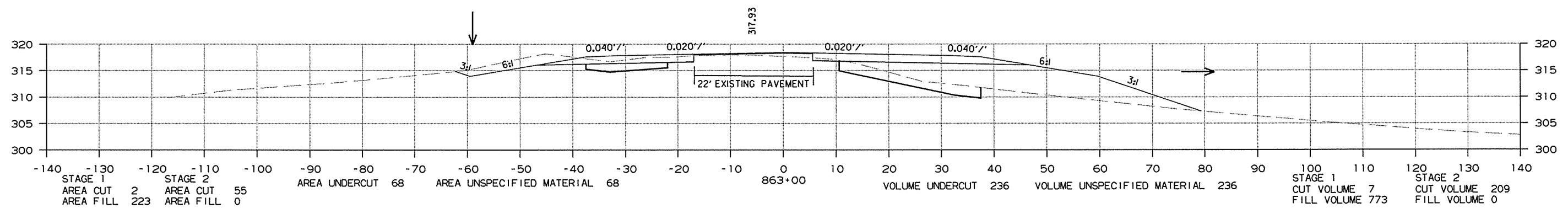
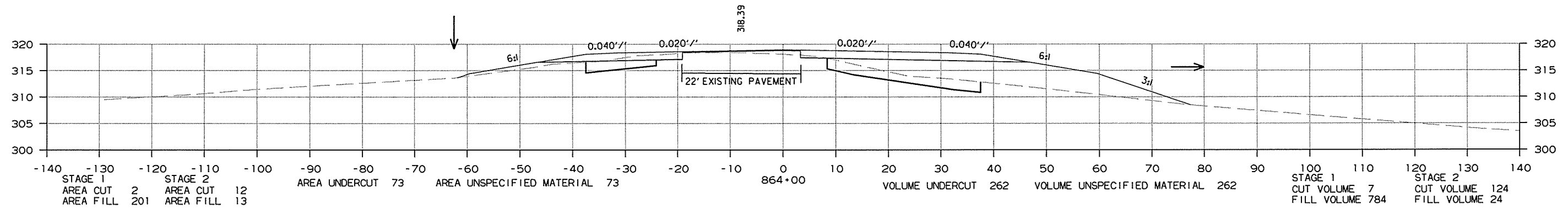
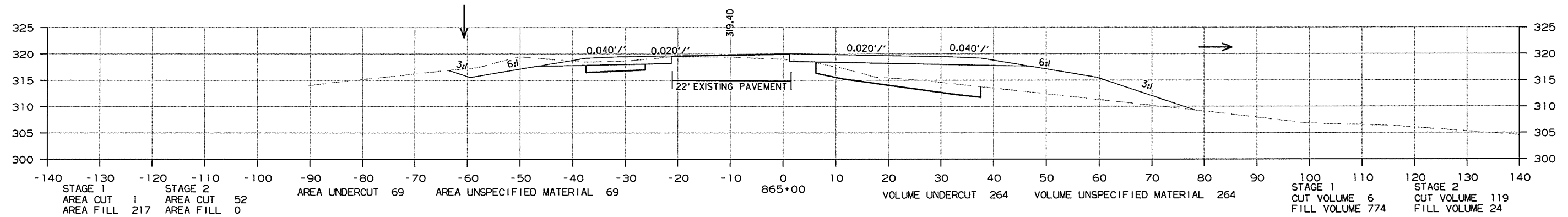
CROSS SECTION STA. 859+00 TO STA. 861+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		217	311

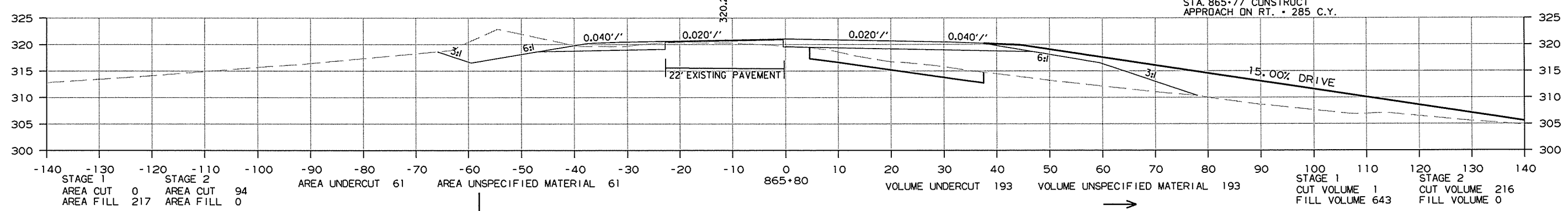
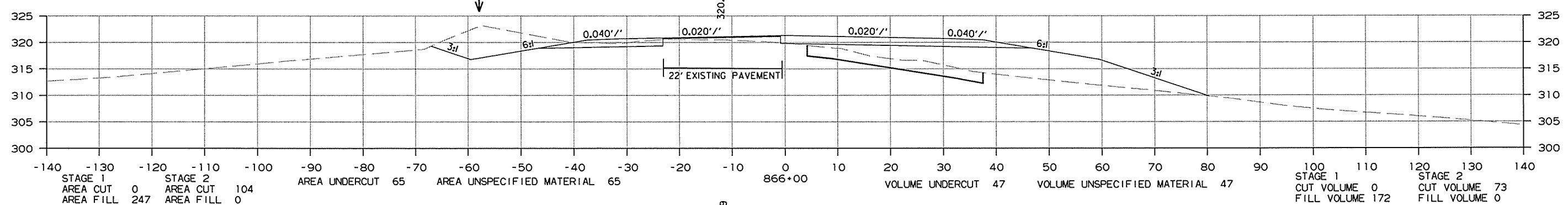
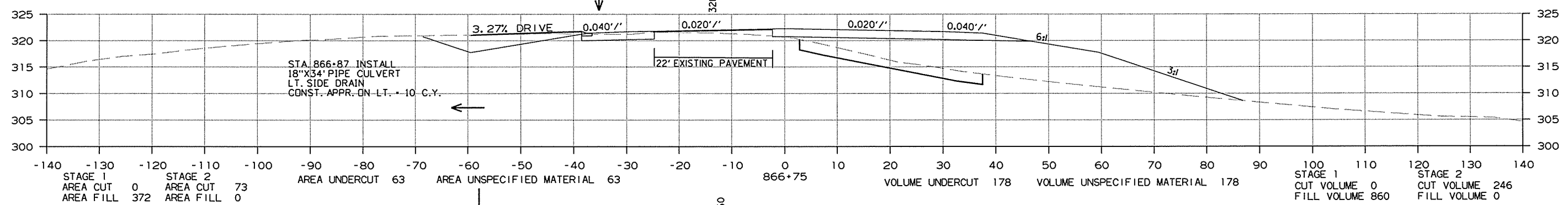
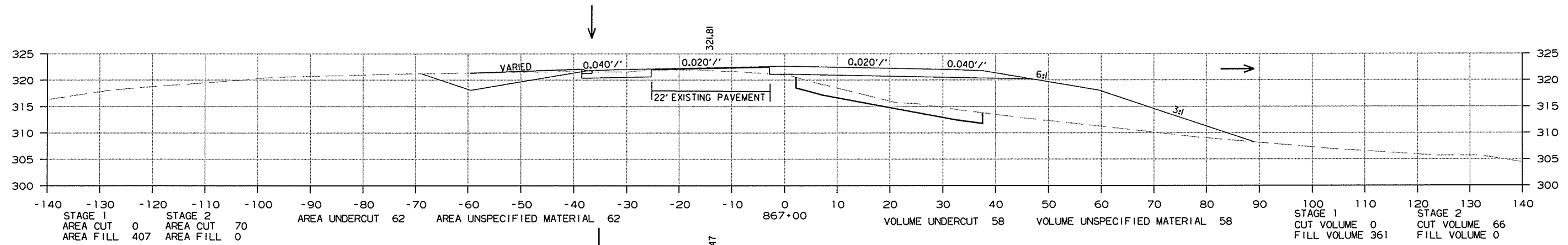
2 CROSS SECTIONS



CROSS SECTION STA. 862+00 TO STA. 865+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	218	311

2 CROSS SECTIONS

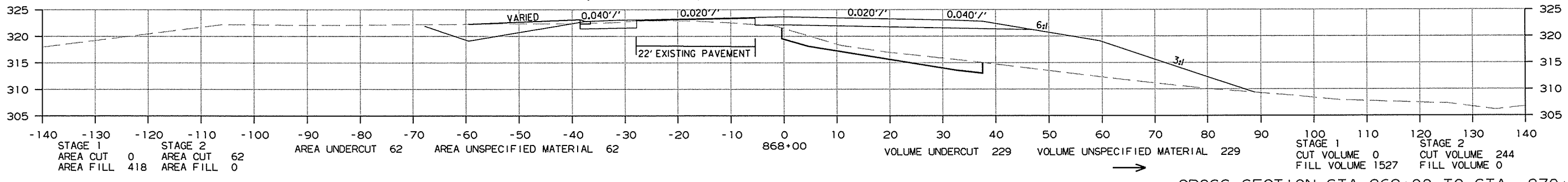
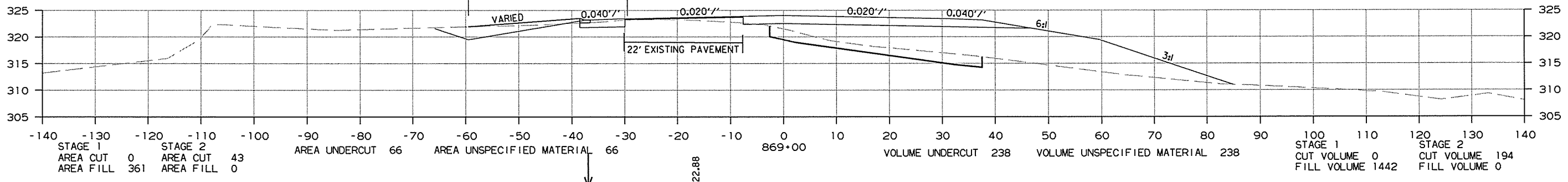
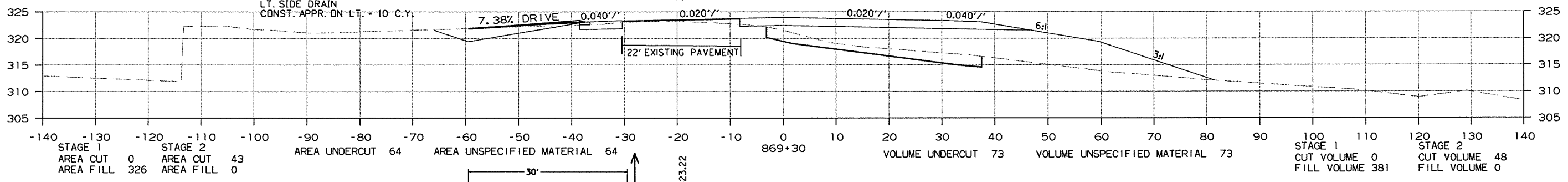
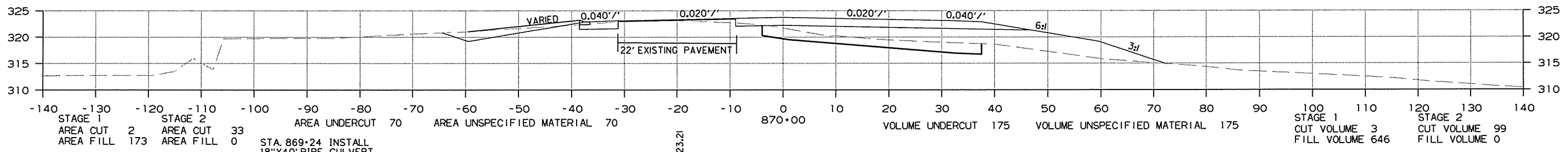
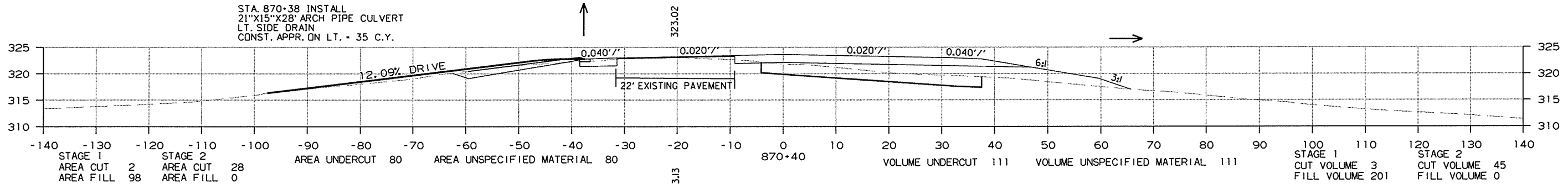


CROSS SECTION STA. 865+80 TO STA. 867+00

11/6/2013 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		219	311
				JOB NO.	012155			

2 CROSS SECTIONS

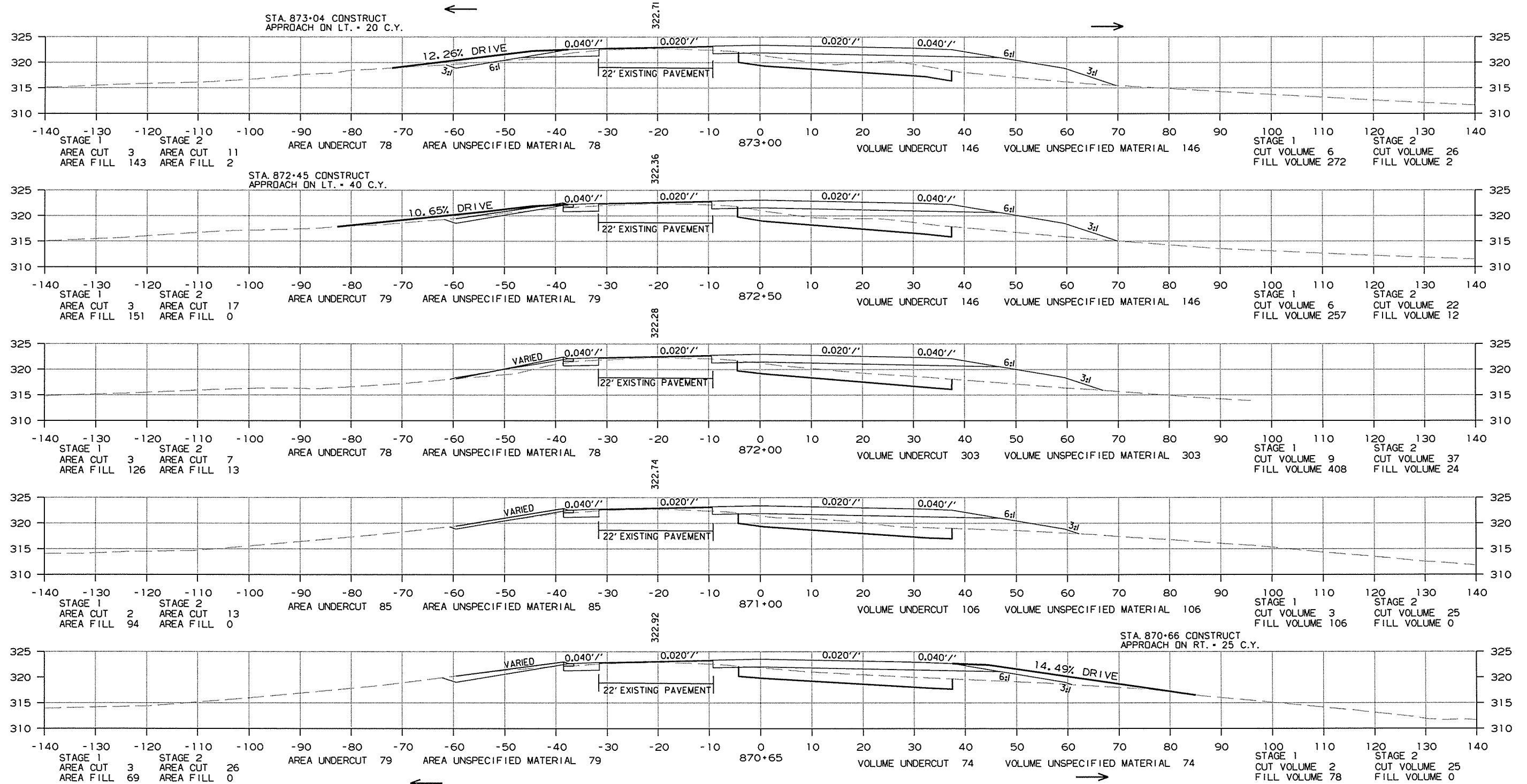


CROSS SECTION STA. 868+00 TO STA. 870+40

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		220	311
				JOB NO.	012155			

2 CROSS SECTIONS



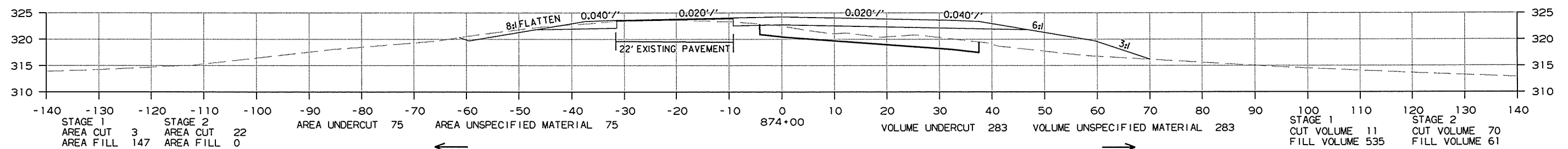
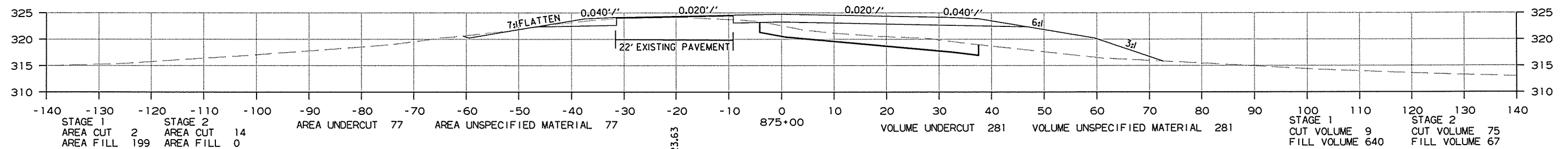
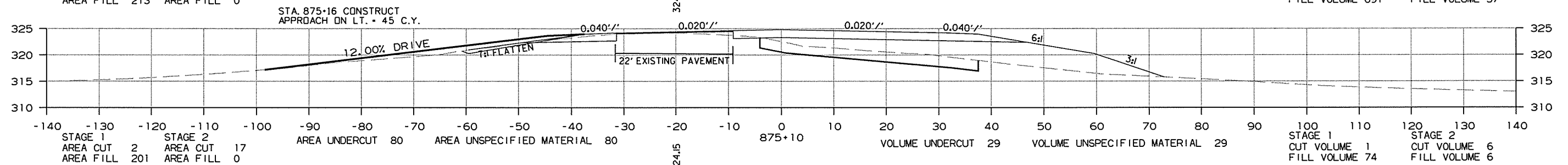
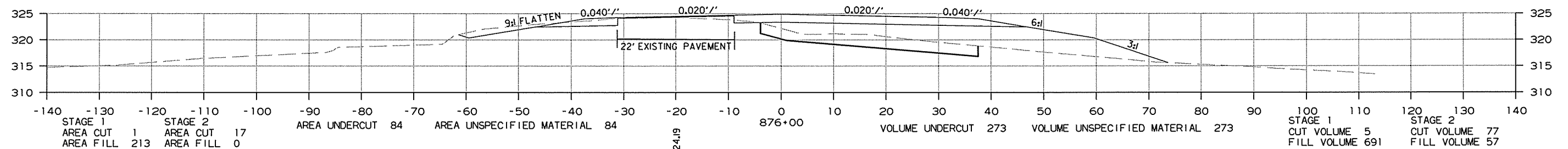
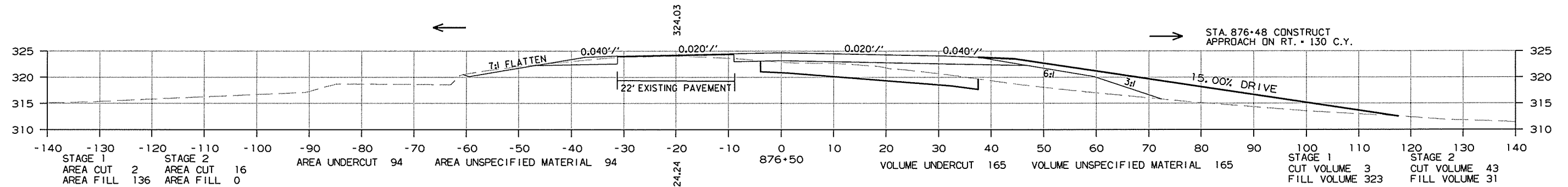
CROSS SECTION STA. 870+65 TO STA. 873+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		221	311

② CROSS SECTIONS



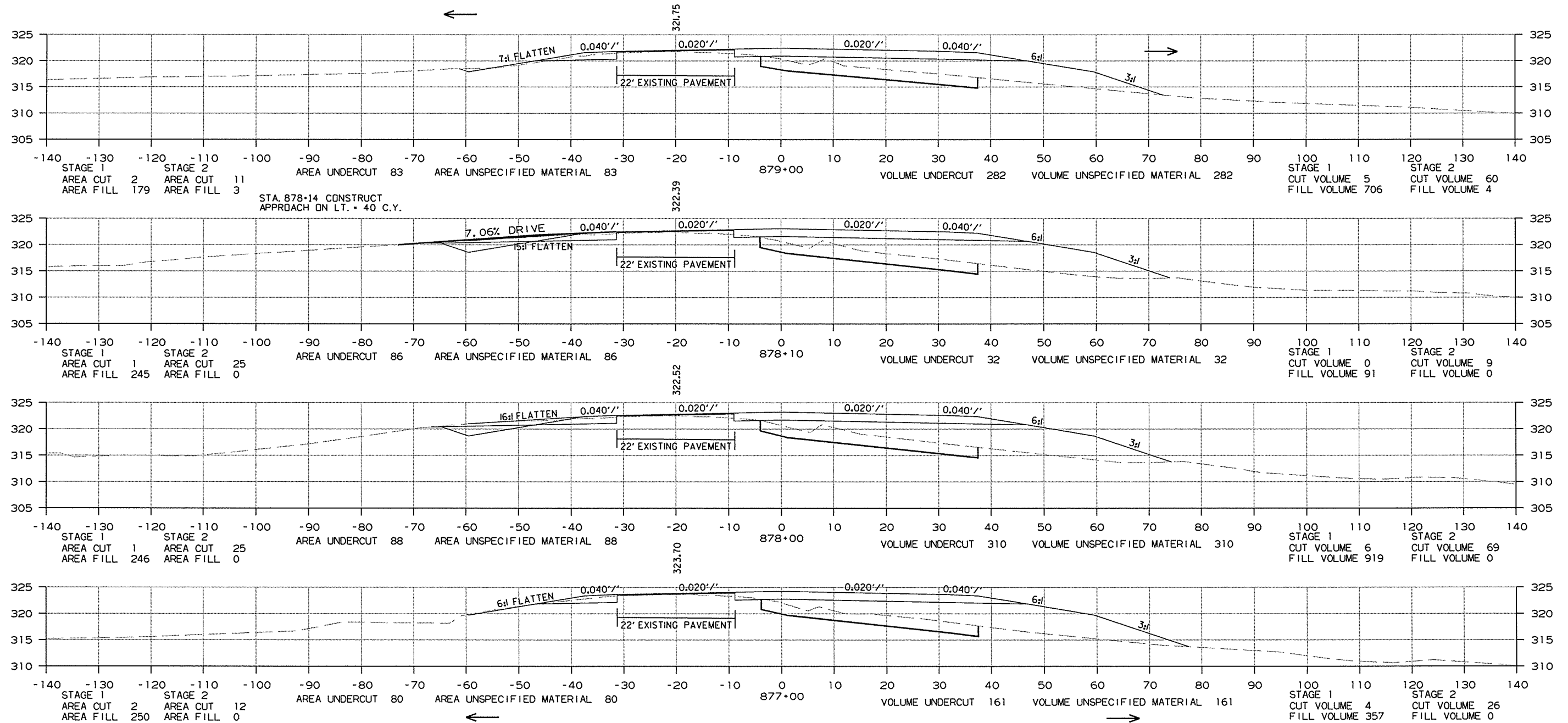
CROSS SECTION STA. 874+00 TO STA. 876+50

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		222	311

② CROSS SECTIONS



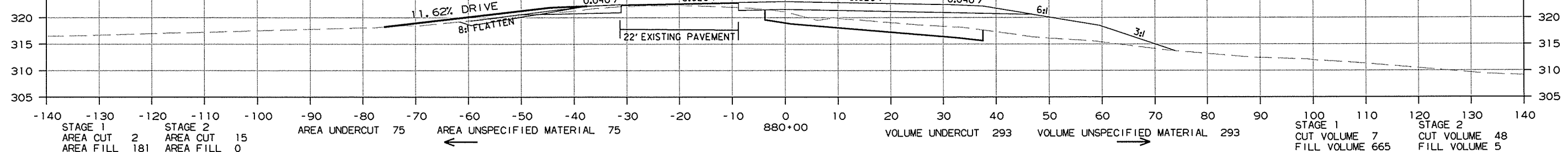
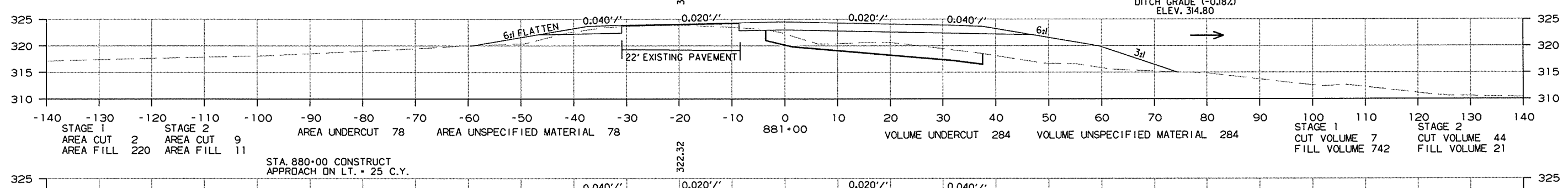
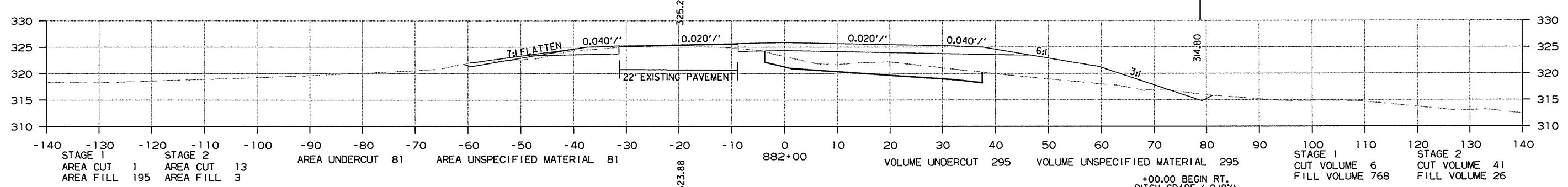
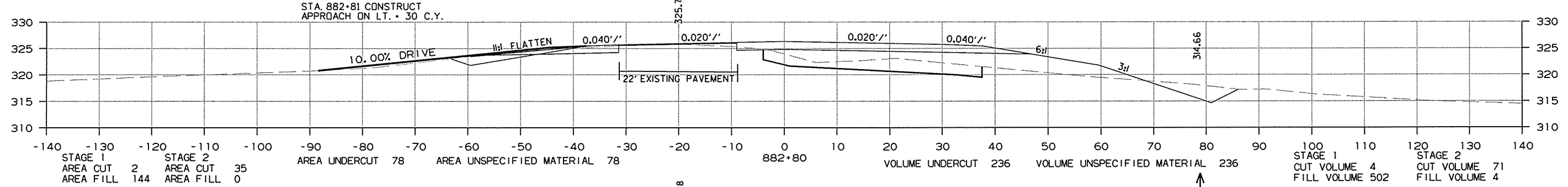
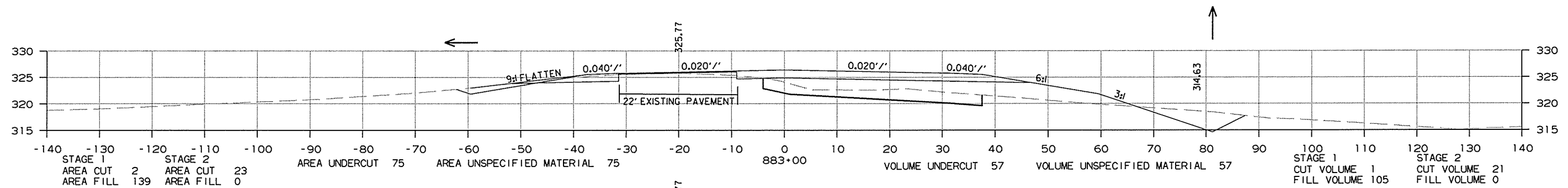
CROSS SECTION STA. 877+00 TO STA. 879+00

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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	223	311

2 CROSS SECTIONS

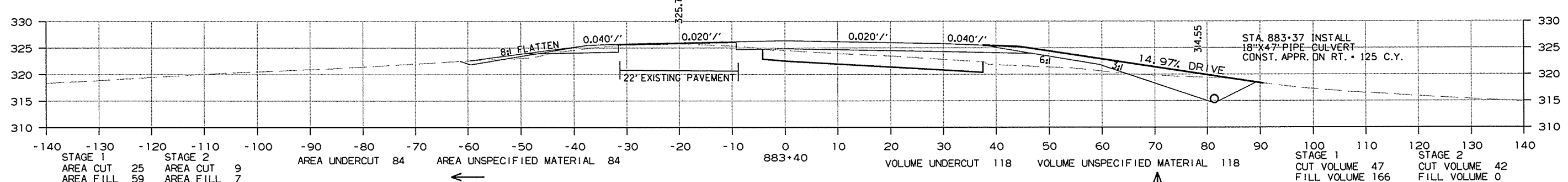
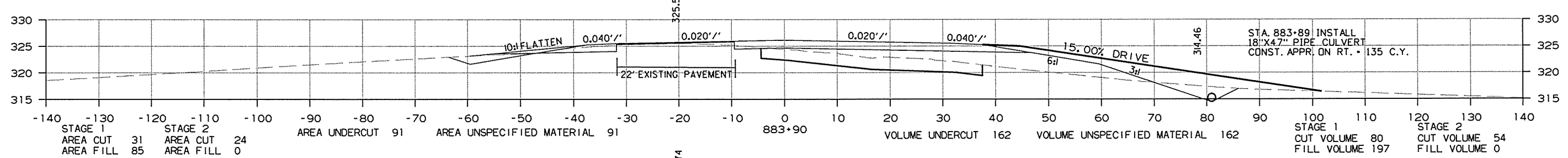
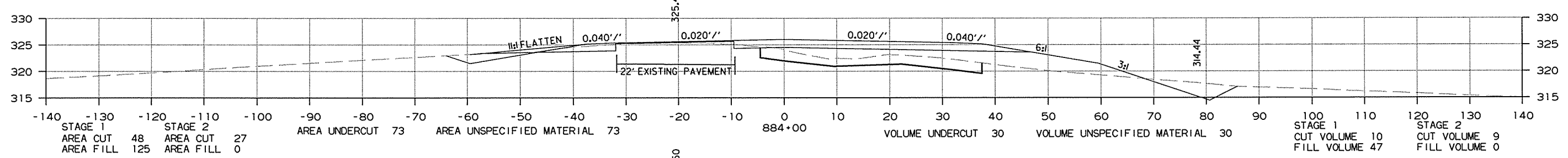
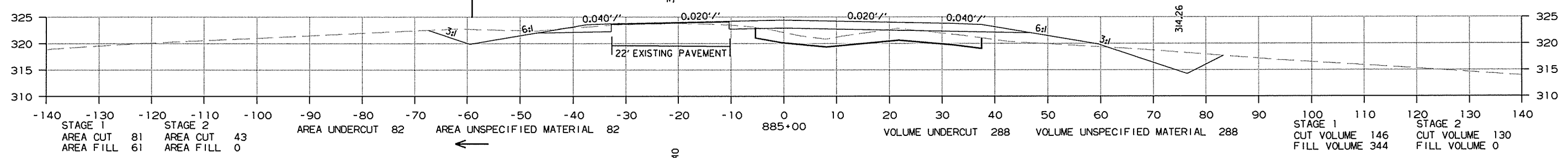
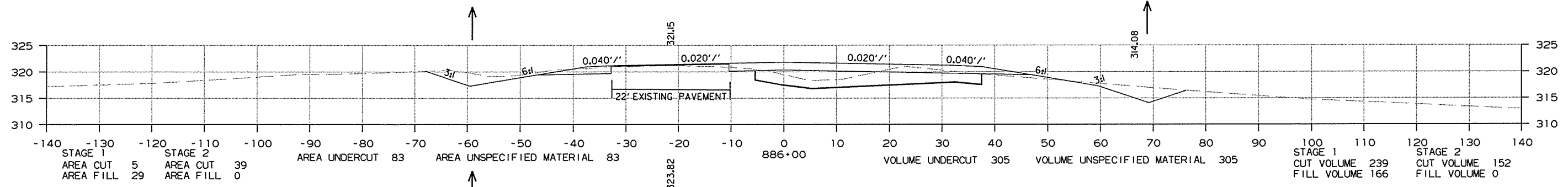


CROSS SECTION STA. 880+00 TO STA. 883+00

11/6/2013
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		224	311

2 CROSS SECTIONS

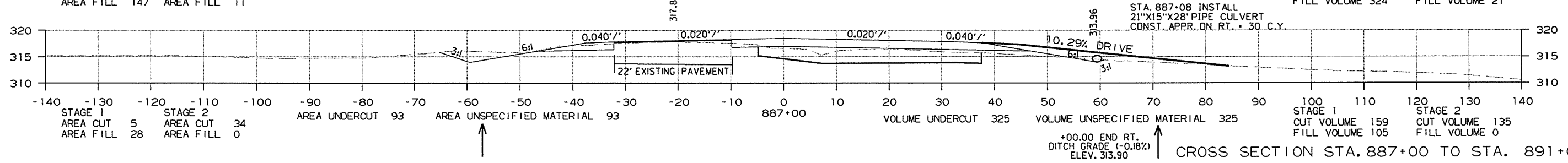
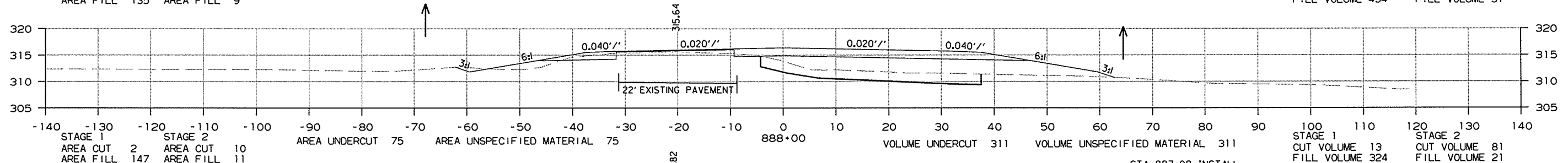
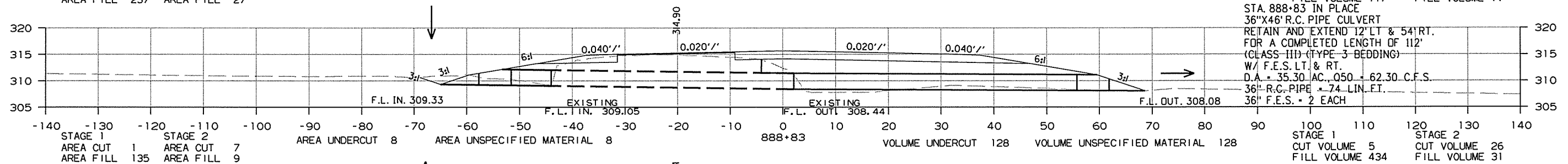
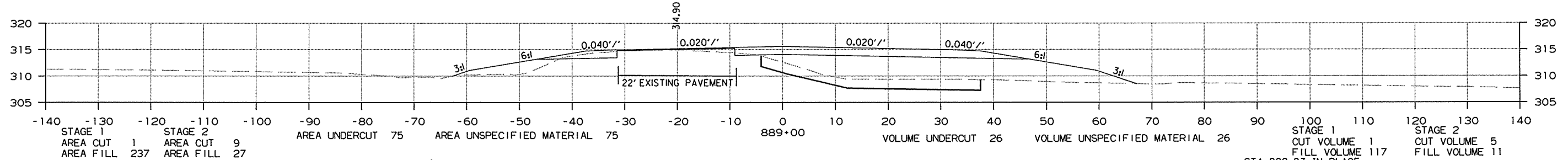
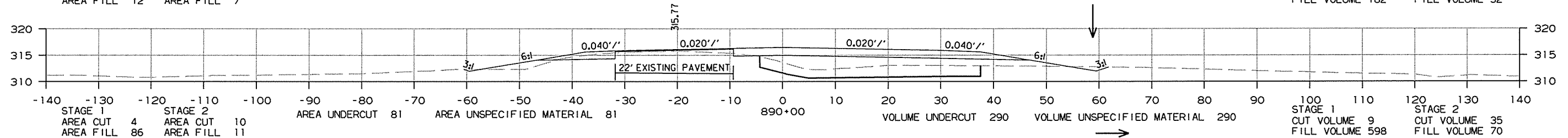
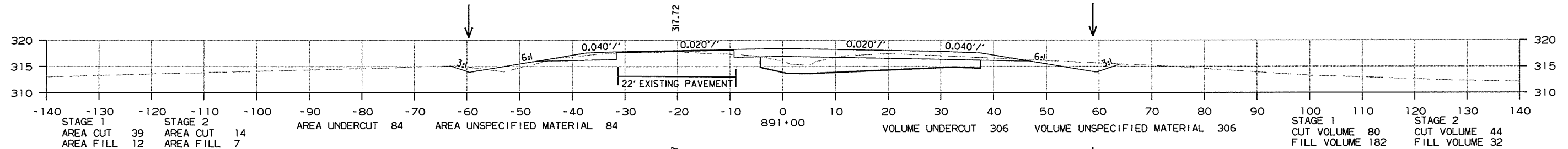


CROSS SECTION STA. 883+40 TO STA. 886+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		225	311
				JOB NO.	012155			

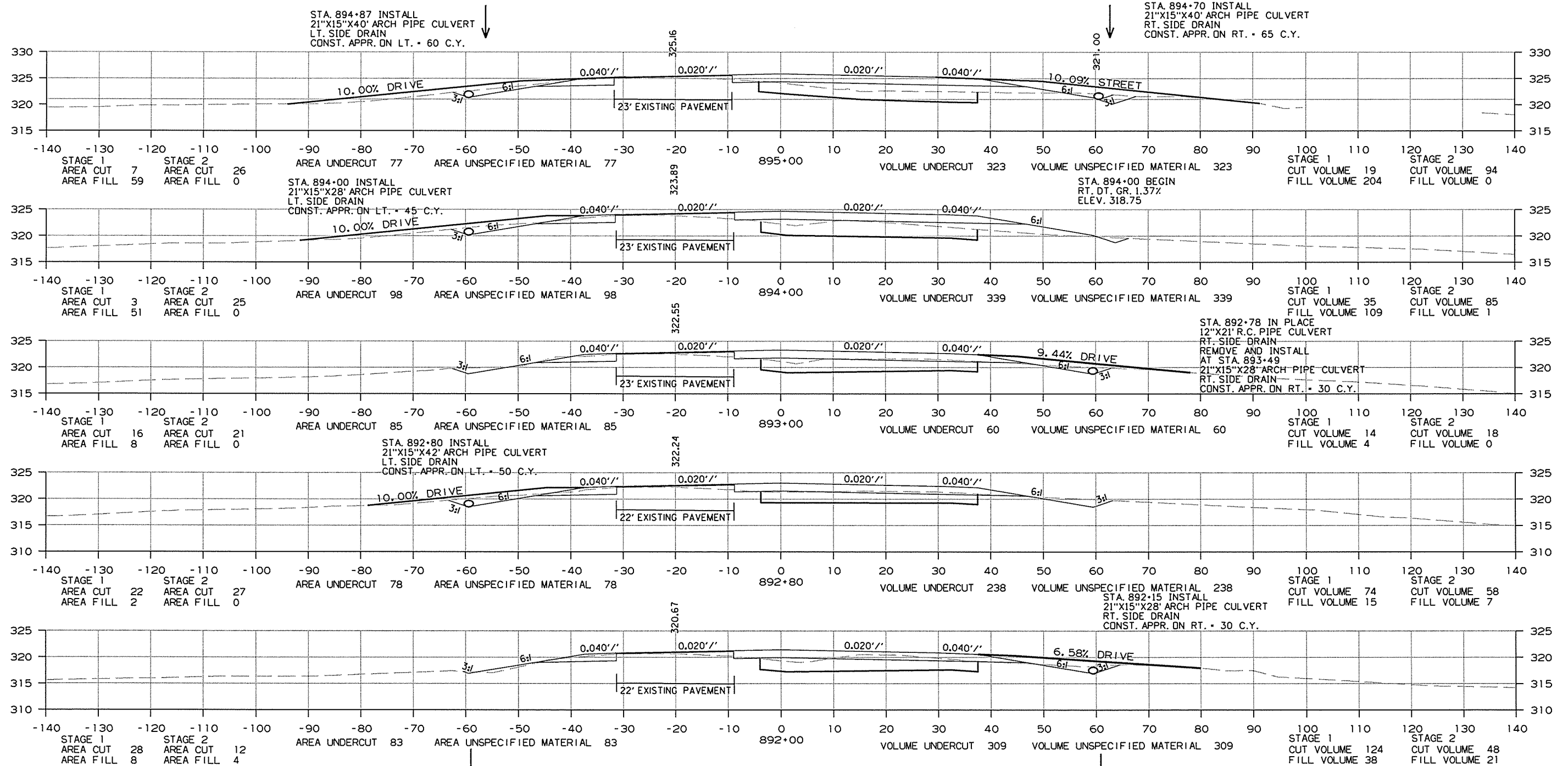
2 CROSS SECTIONS



CROSS SECTION STA. 887+00 TO STA. 891+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	226 311

2 CROSS SECTIONS



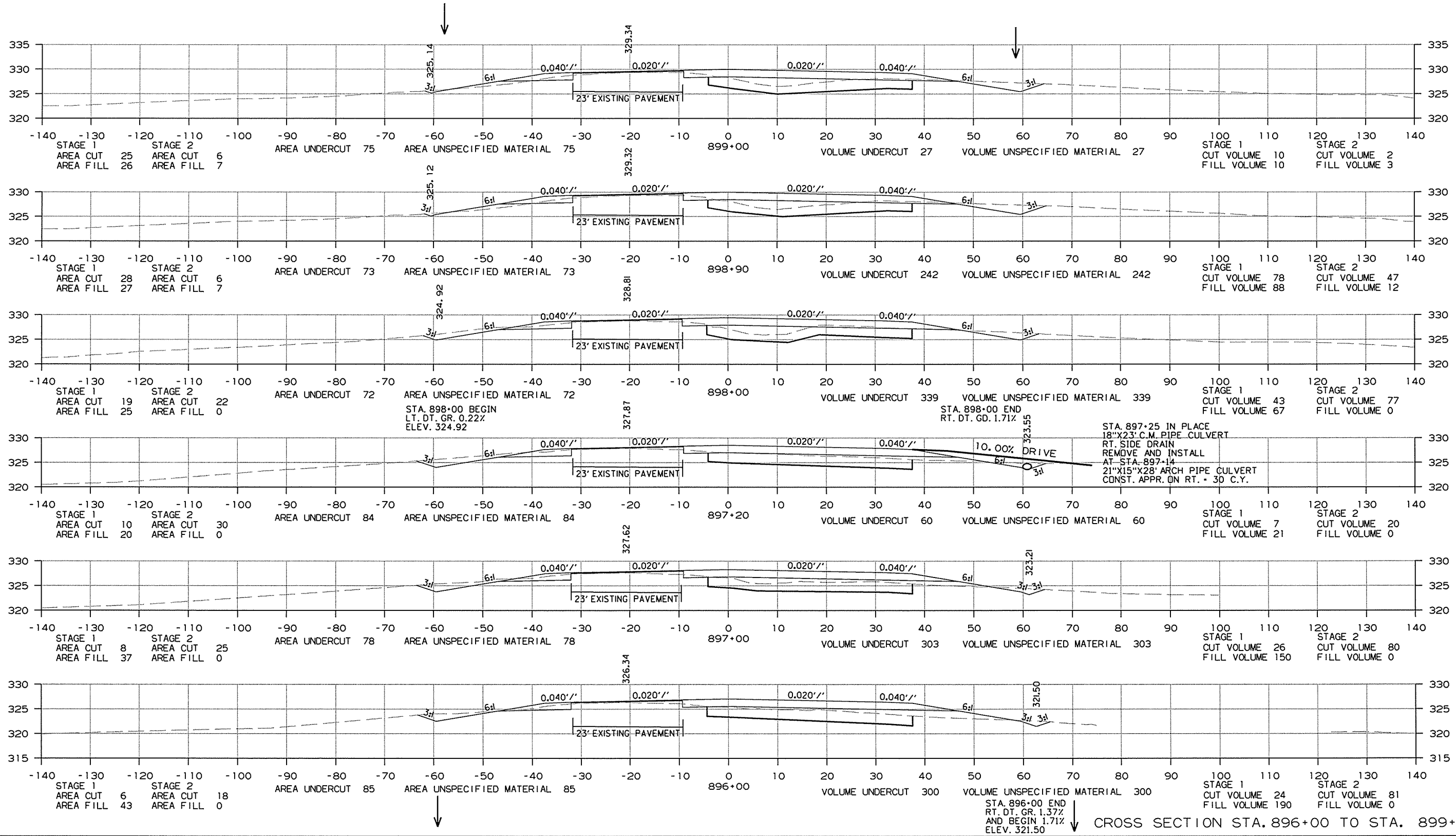
CROSS SECTION STA. 892+00 TO STA. 895+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		227	311
				JOB NO.		012155	227	311

2 CROSS SECTIONS



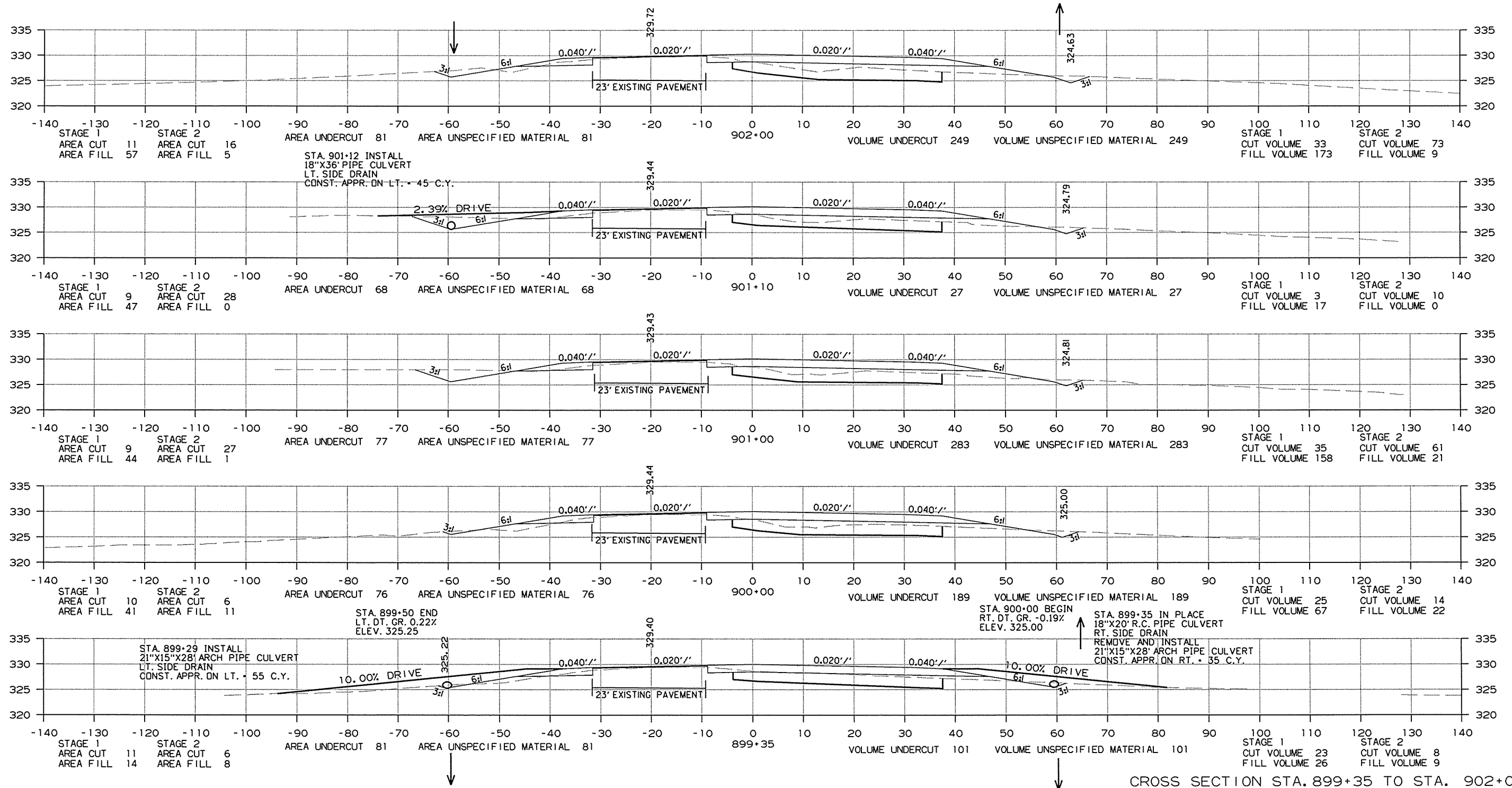
11/6/2013

R012155.DGN

CROSS SECTION STA. 896+00 TO STA. 899+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		228	311

2 CROSS SECTIONS



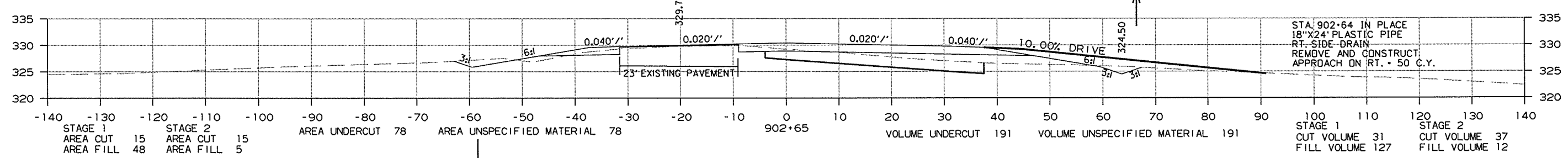
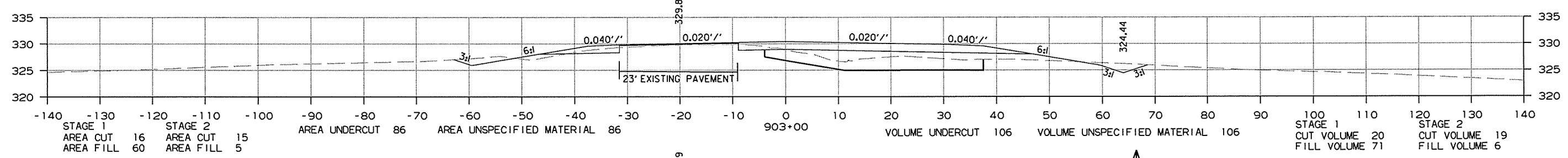
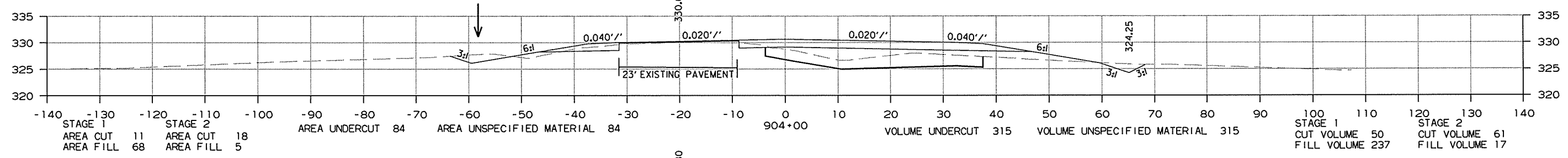
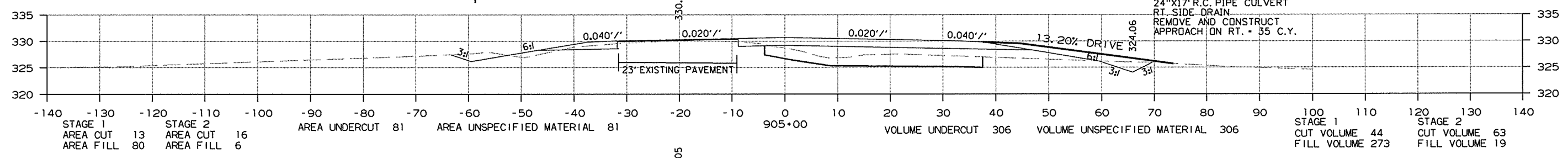
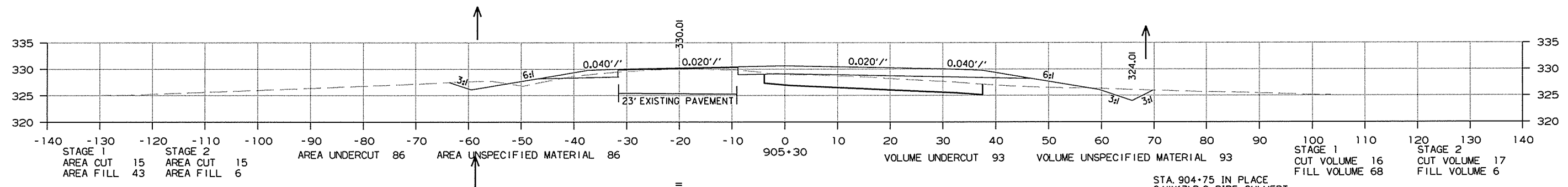
CROSS SECTION STA. 899+35 TO STA. 902+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							229	311

2 CROSS SECTIONS

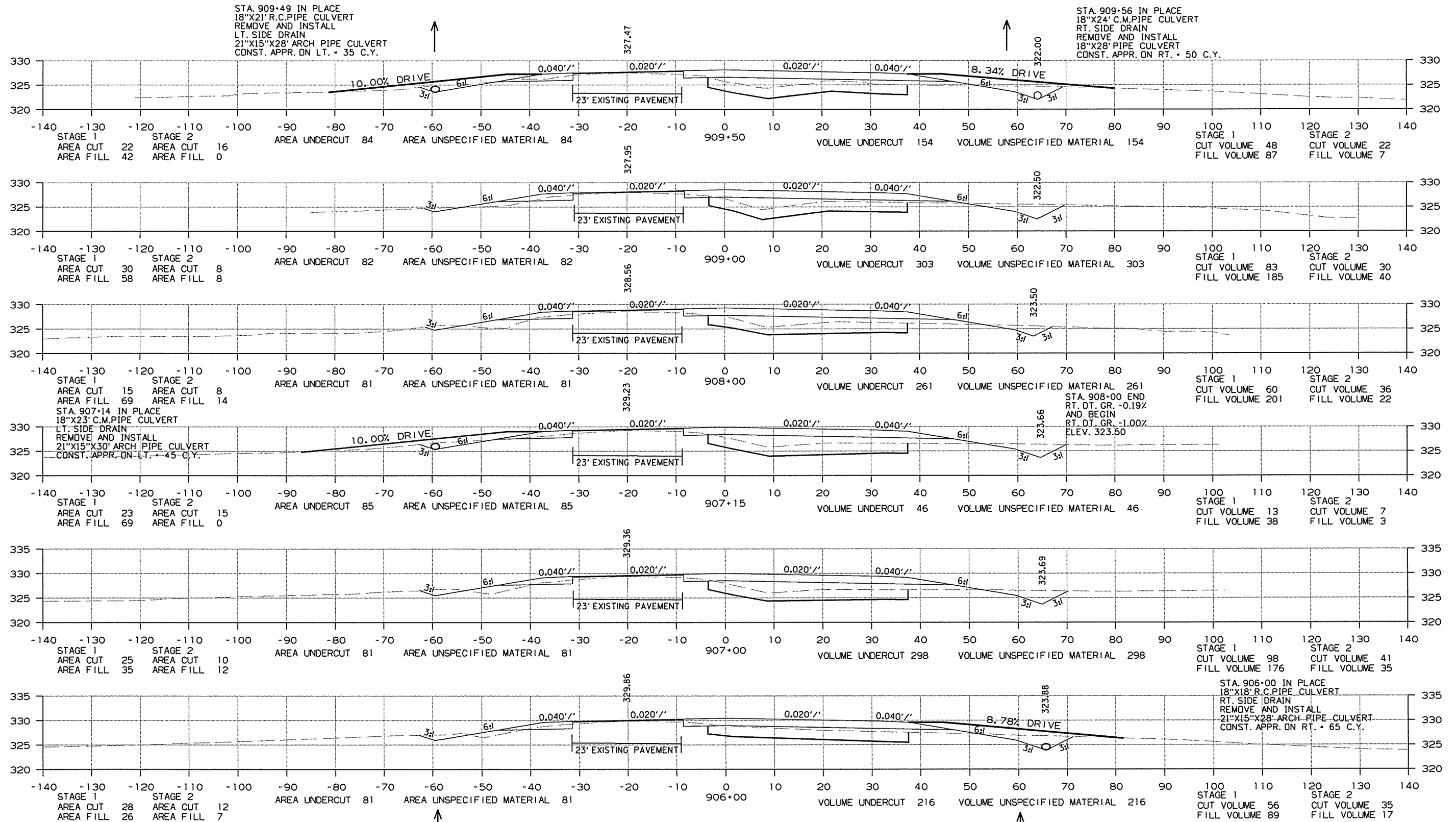


CROSS SECTION STA. 902+65 TO STA. 905+30

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		230	311
				JOB NO.	012155			

2 CROSS SECTIONS



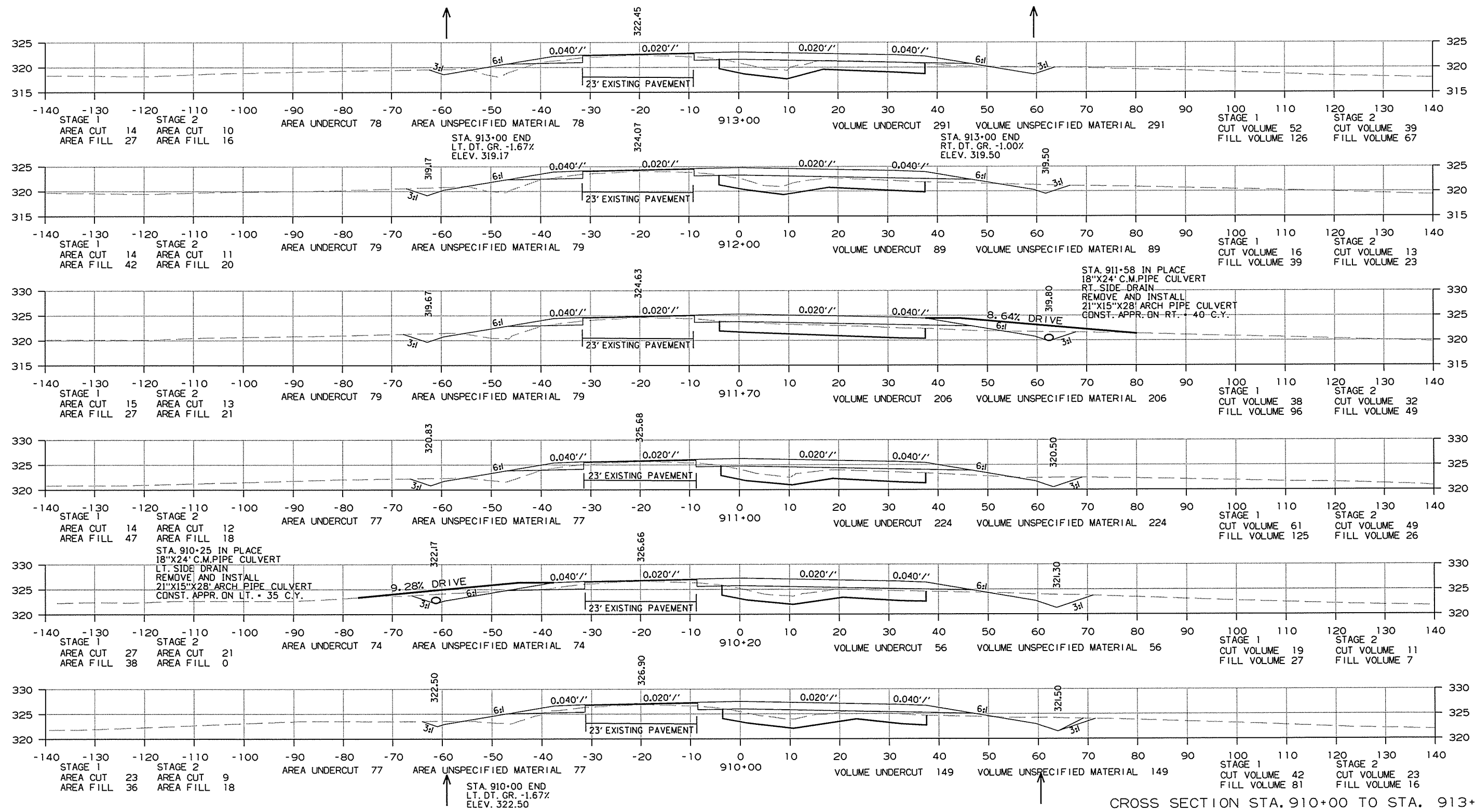
CROSS SECTION STA. 906+00 TO STA. 909+50

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		231	311

2 CROSS SECTIONS

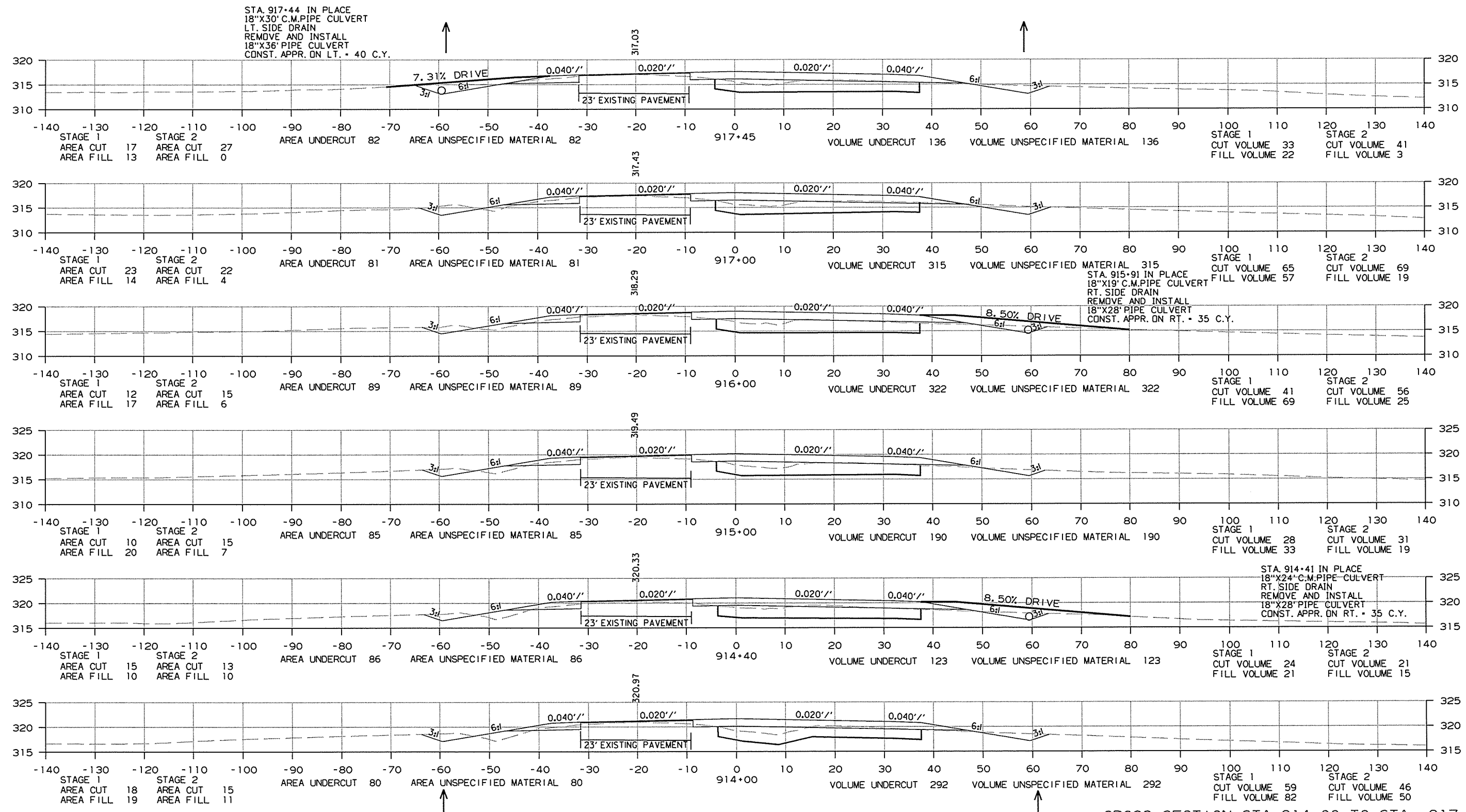


CROSS SECTION STA. 910+00 TO STA. 913+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		232	311

2 CROSS SECTIONS

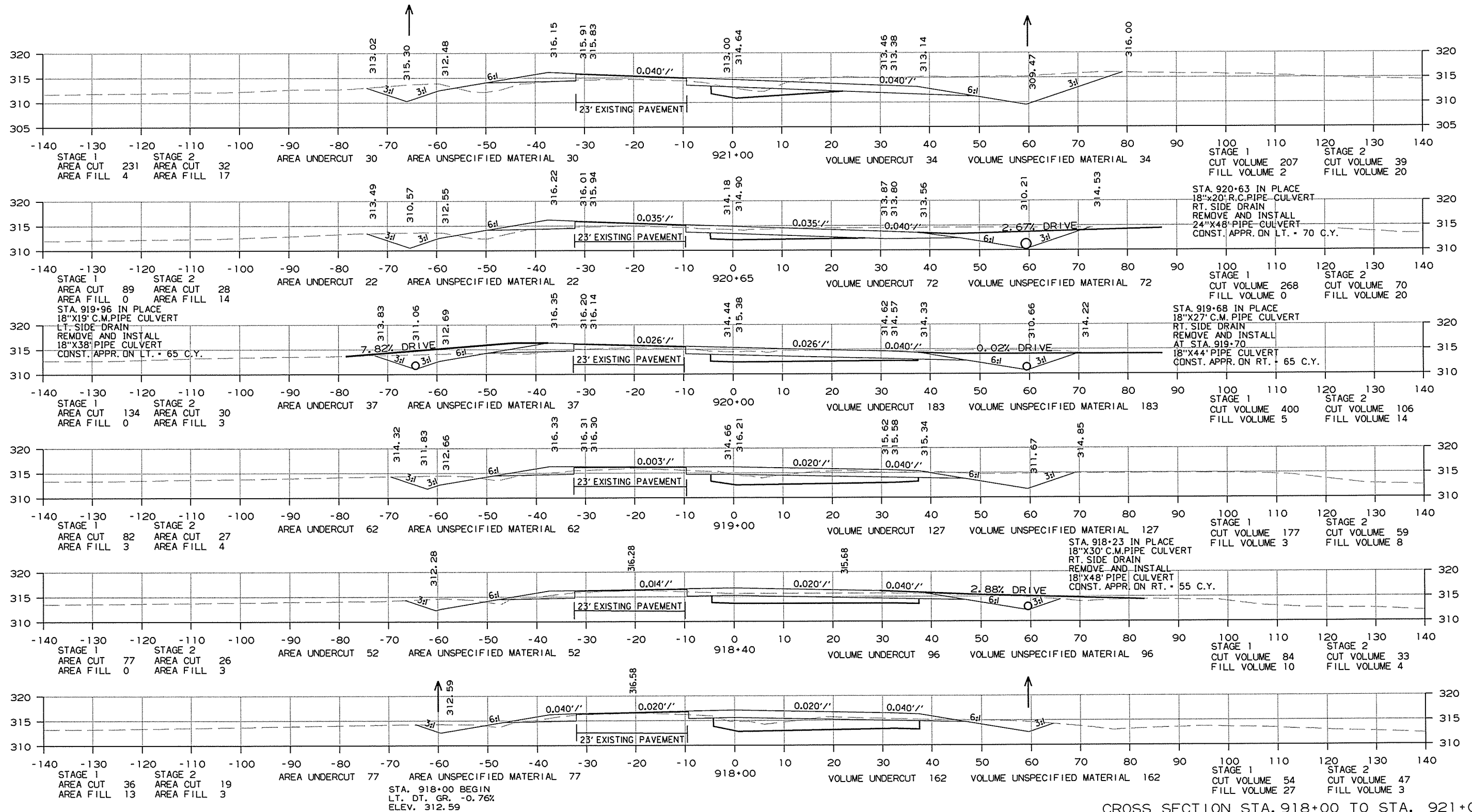


CROSS SECTION STA. 914+00 TO STA. 917+45

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		233	311
				JOB NO. 012155				

2 CROSS SECTIONS



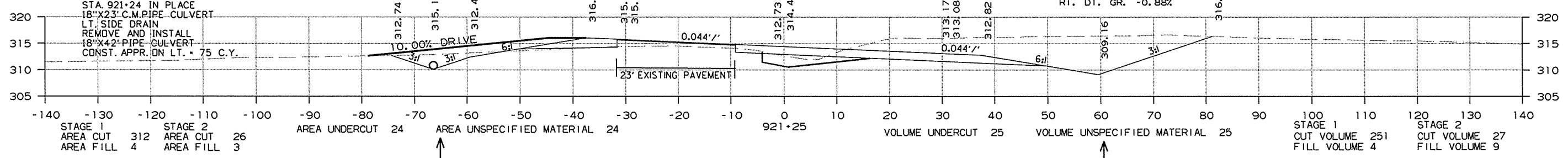
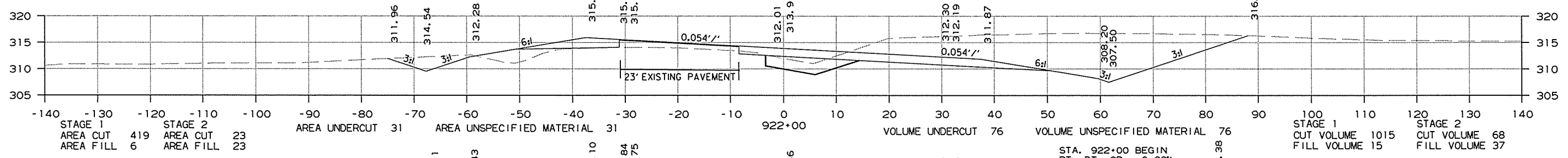
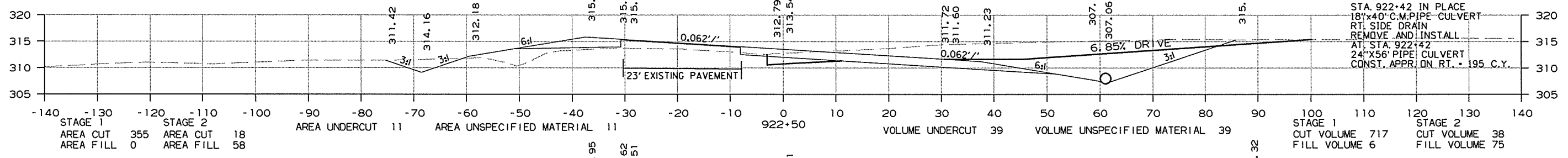
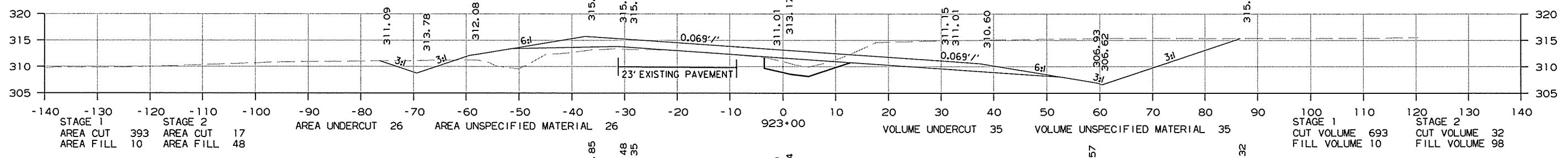
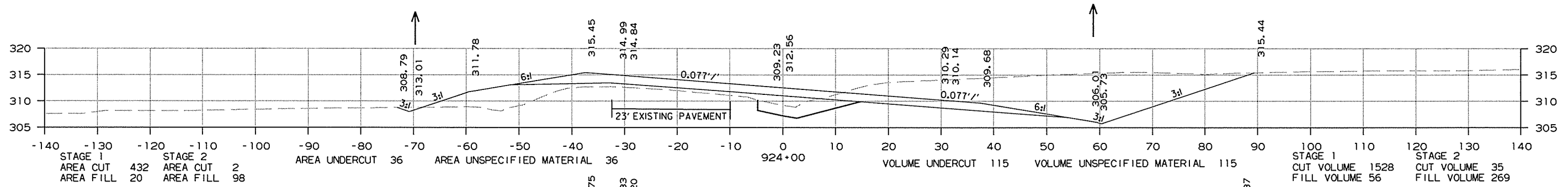
CROSS SECTION STA. 918+00 TO STA. 921+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		234	311

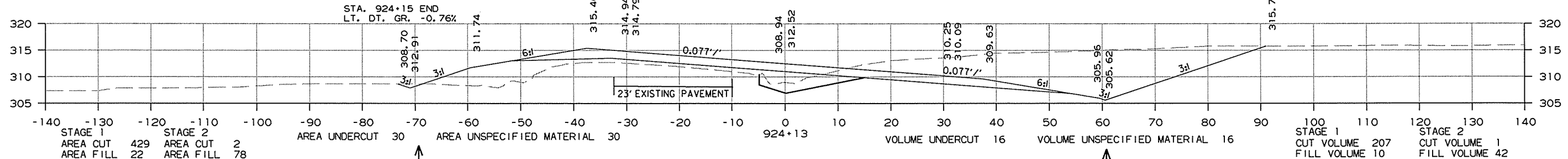
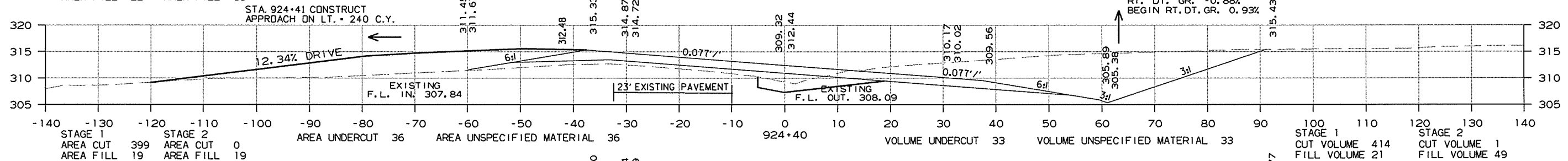
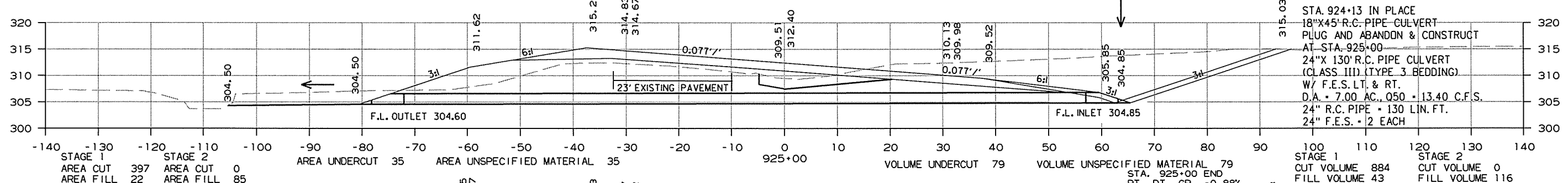
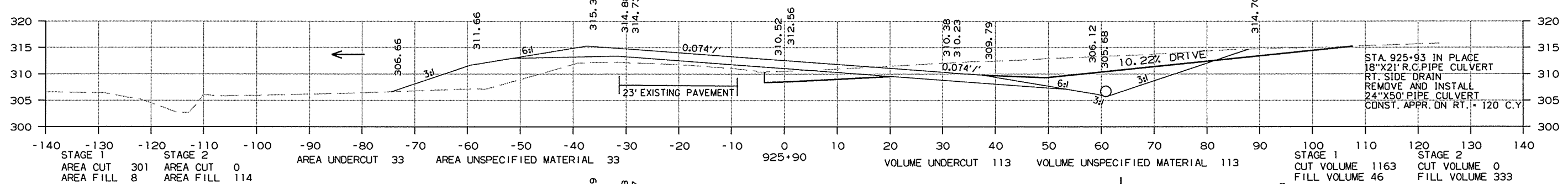
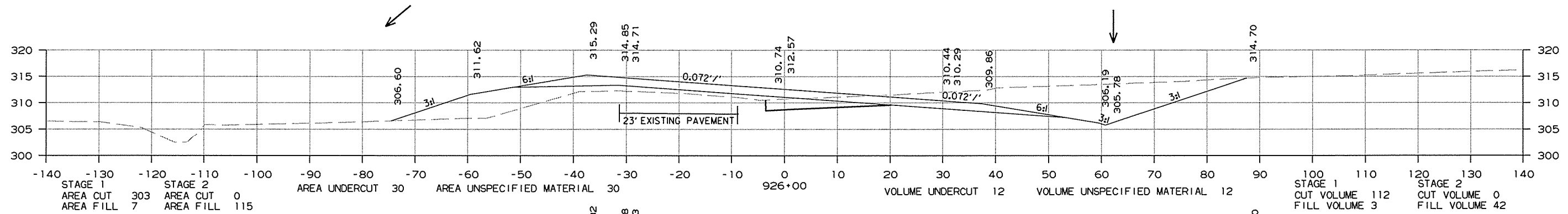
2 CROSS SECTIONS



CROSS SECTION STA. 921+25 TO STA. 924+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		235	311
				JOB NO.		012155	235	311

2 CROSS SECTIONS



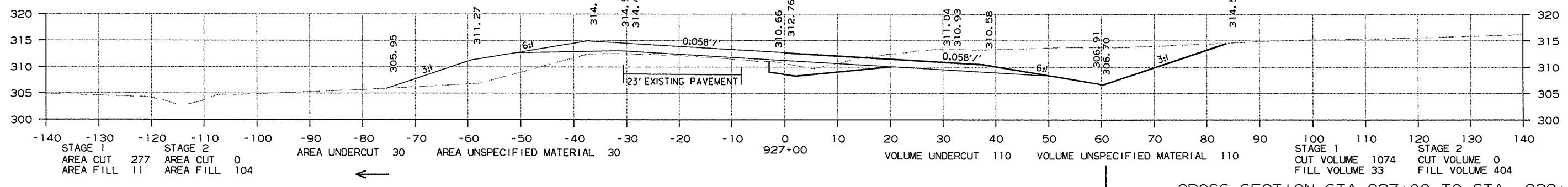
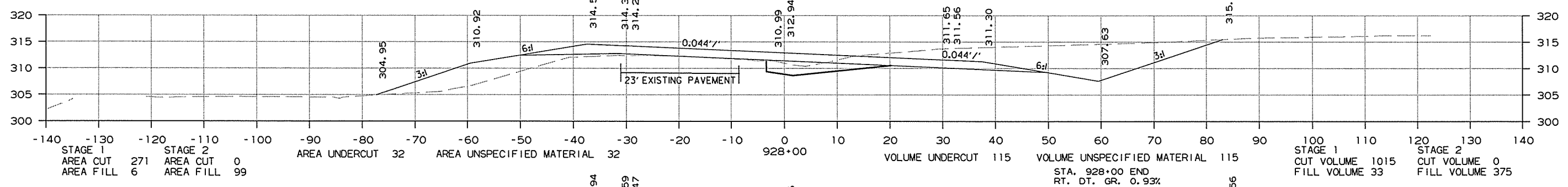
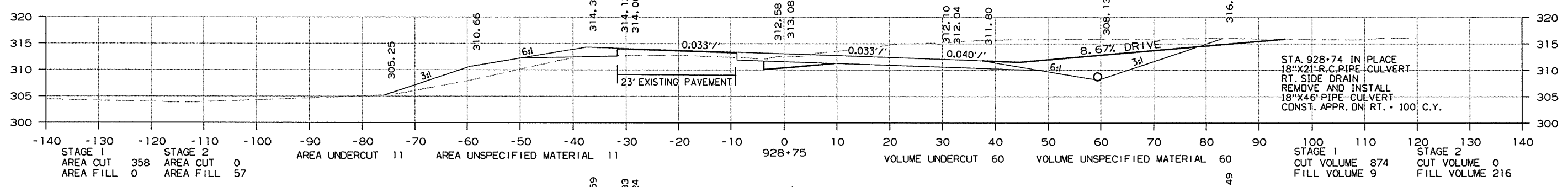
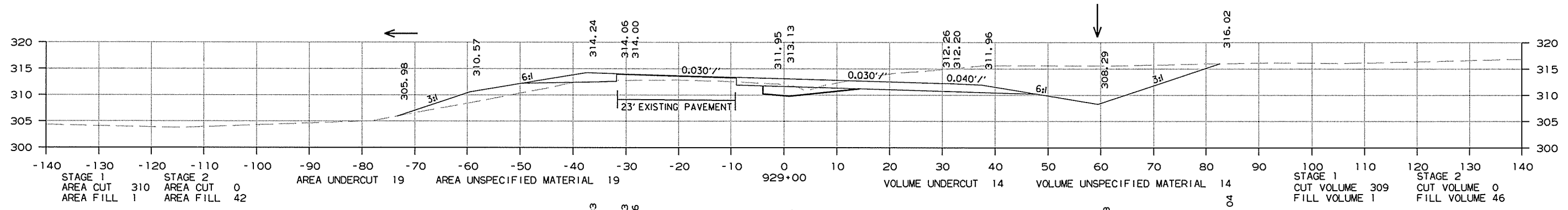
CROSS SECTION STA. 924+13 TO STA. 926+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							236	311

2 CROSS SECTIONS

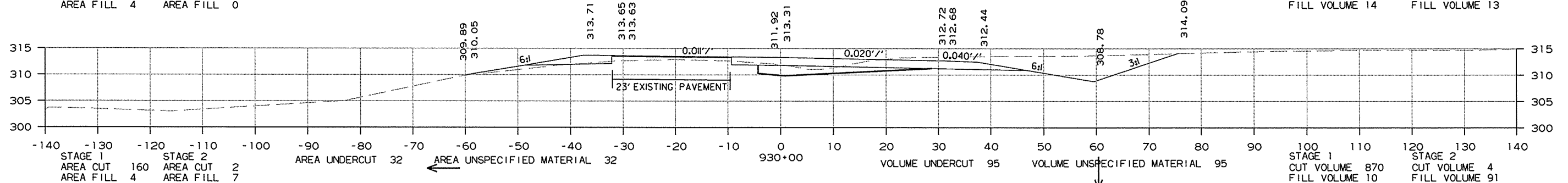
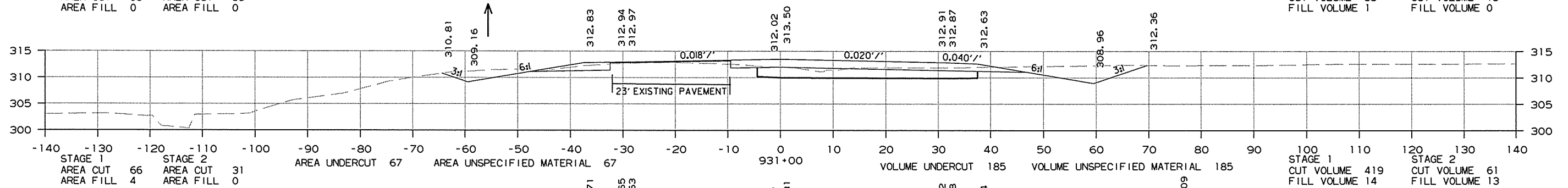
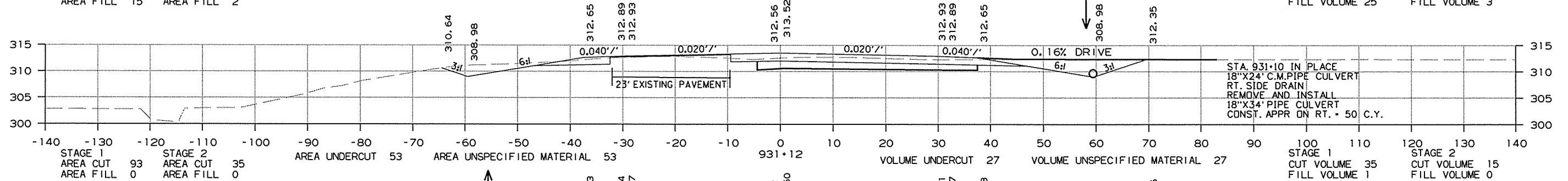
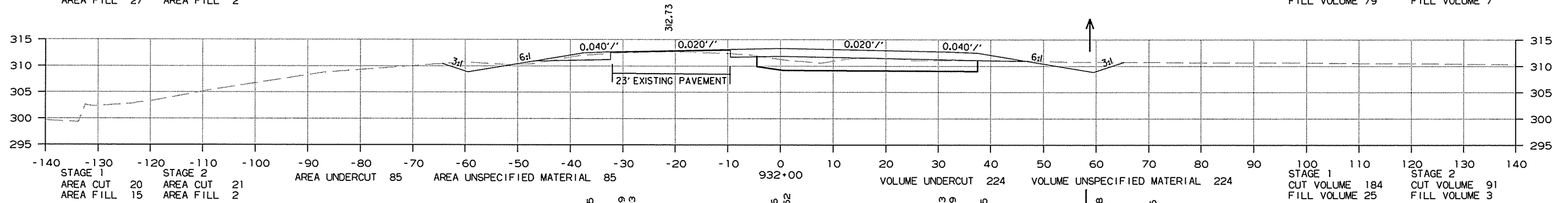
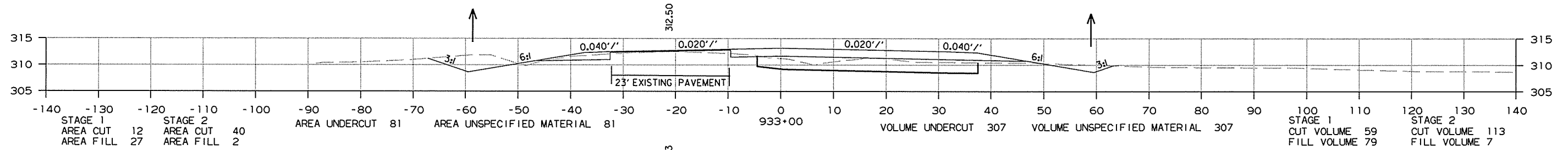


CROSS SECTION STA. 927+00 TO STA. 929+00

11/6/2013 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	237 311

2 CROSS SECTIONS



CROSS SECTION STA. 930+00 TO STA. 933+00

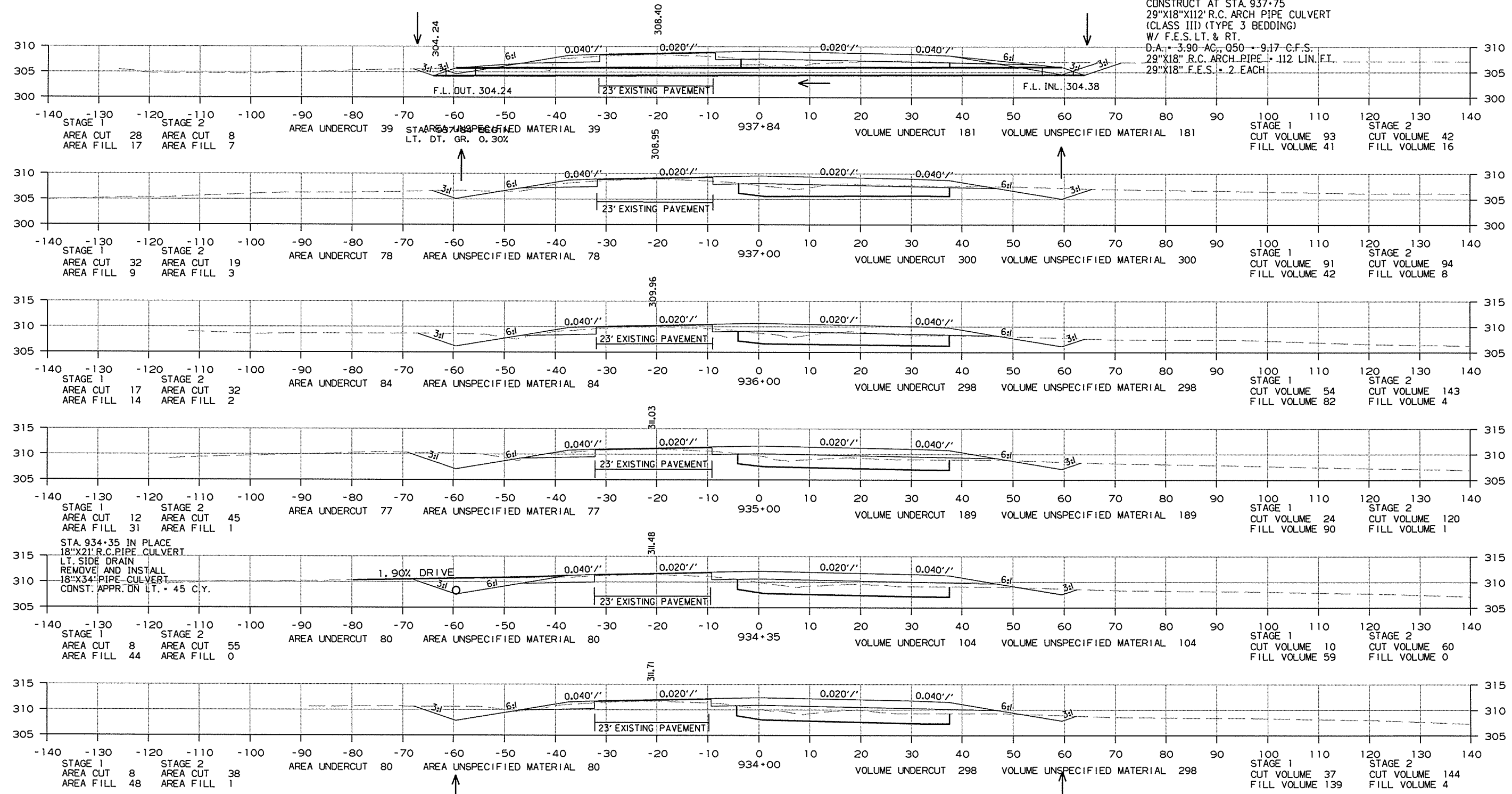
11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	238 311

2 CROSS SECTIONS

STA. 937+83 IN PLACE
 18"X41' R.C. PIPE CULVERT
 PLUG AND ABANDON
 CONSTRUCT AT STA. 937+75
 29"X18"X112' R.C. ARCH PIPE CULVERT
 (CLASS I) (TYPE 3 BEDDING)
 W/ F.E.S. LT. & RT.
 D.A. = 3.90 AC., Q50 -- 9.17 C.F.S.
 29"X18" R.C. ARCH PIPE - 112 LIN. FT.
 29"X18" F.E.S. - 2 EACH

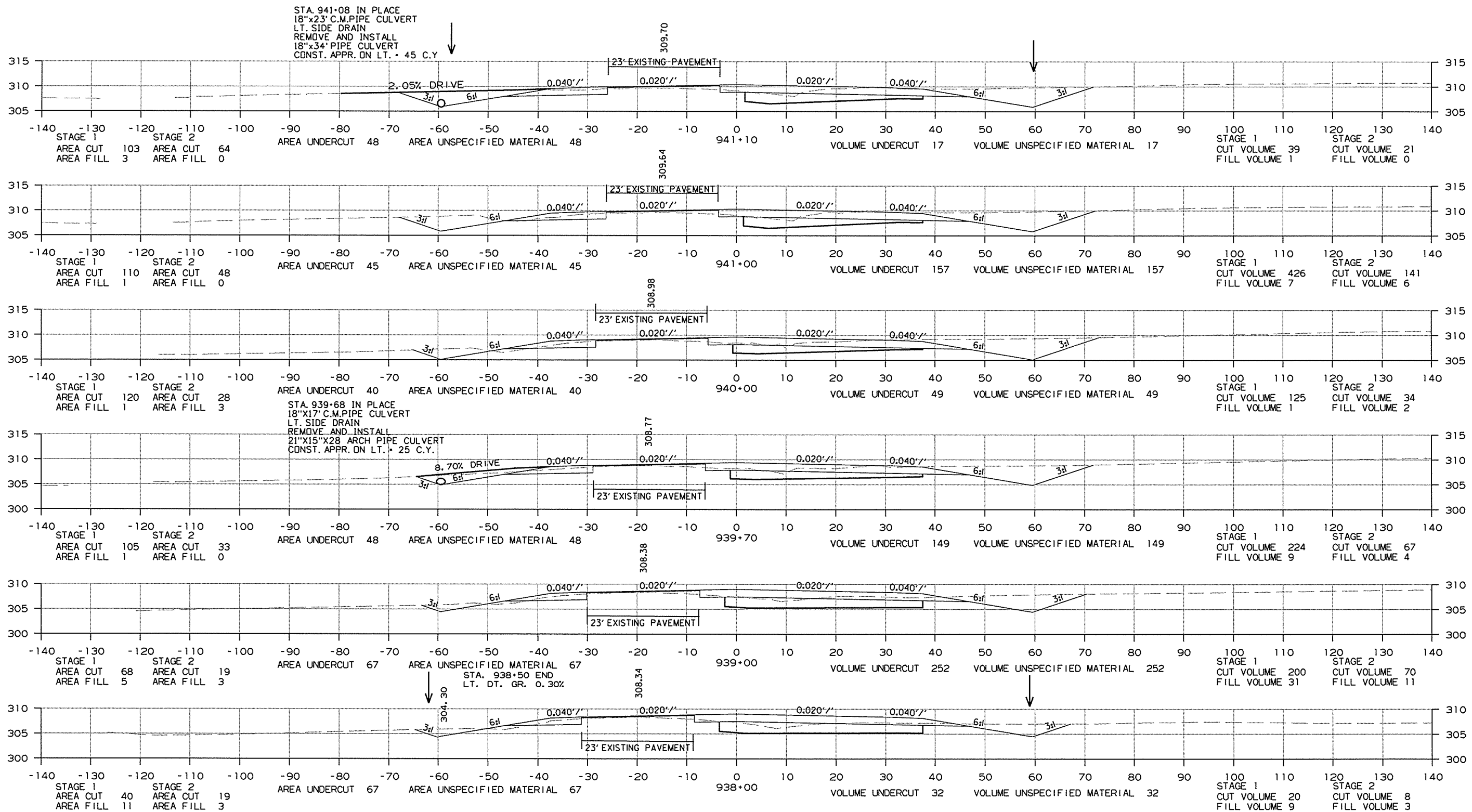


CROSS SECTION STA. 934+00 TO STA. 937+84

11/6/2013
 R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	239	311

② CROSS SECTIONS

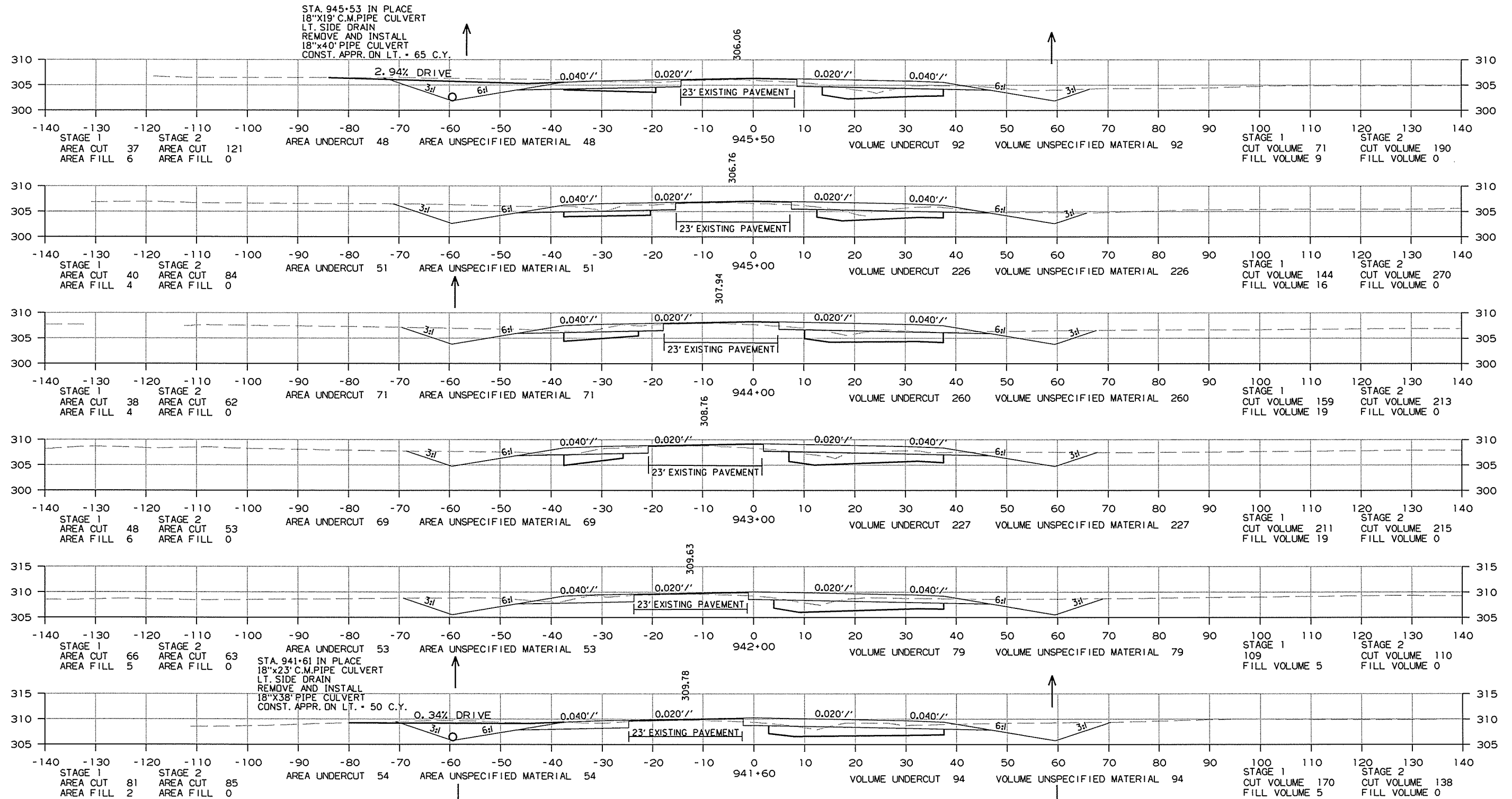


CROSS SECTION STA. 938+00 TO STA. 941+10

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	012155	240	311

2 CROSS SECTIONS



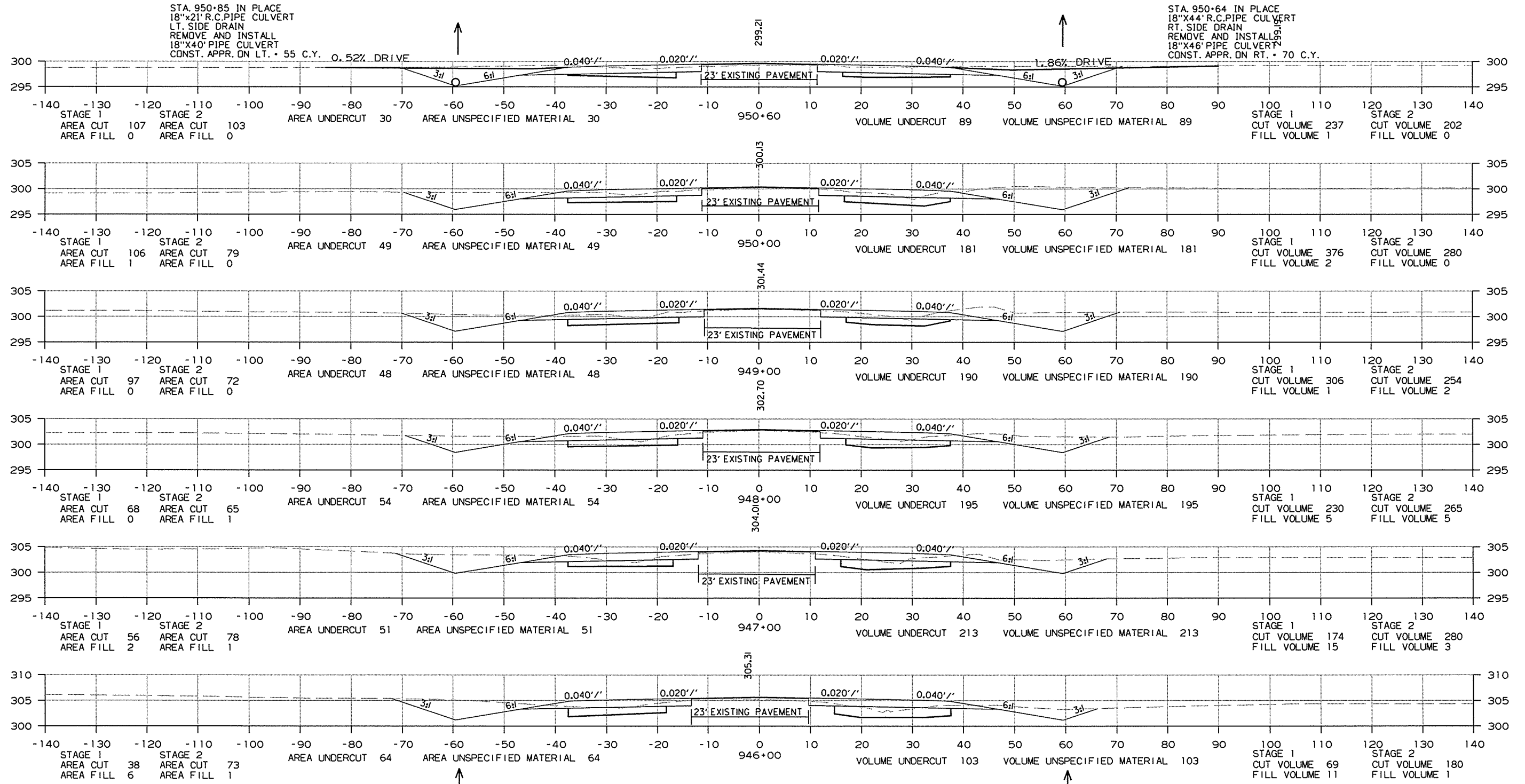
CROSS SECTION STA. 941+60 TO STA. 945+50

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		241	311

2 CROSS SECTIONS



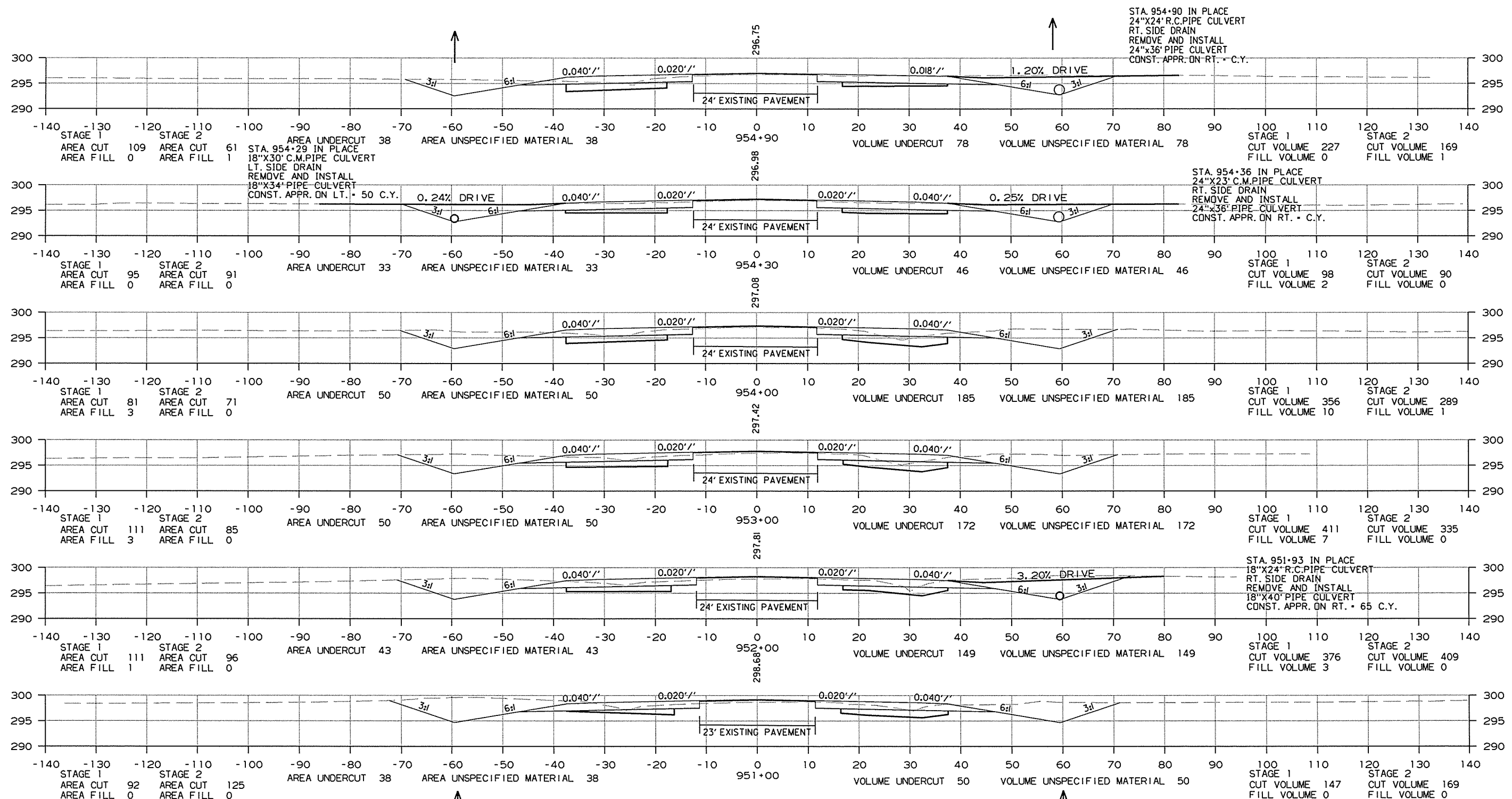
CROSS SECTION STA. 946+00 TO STA. 950+60

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							242	311

2 CROSS SECTIONS



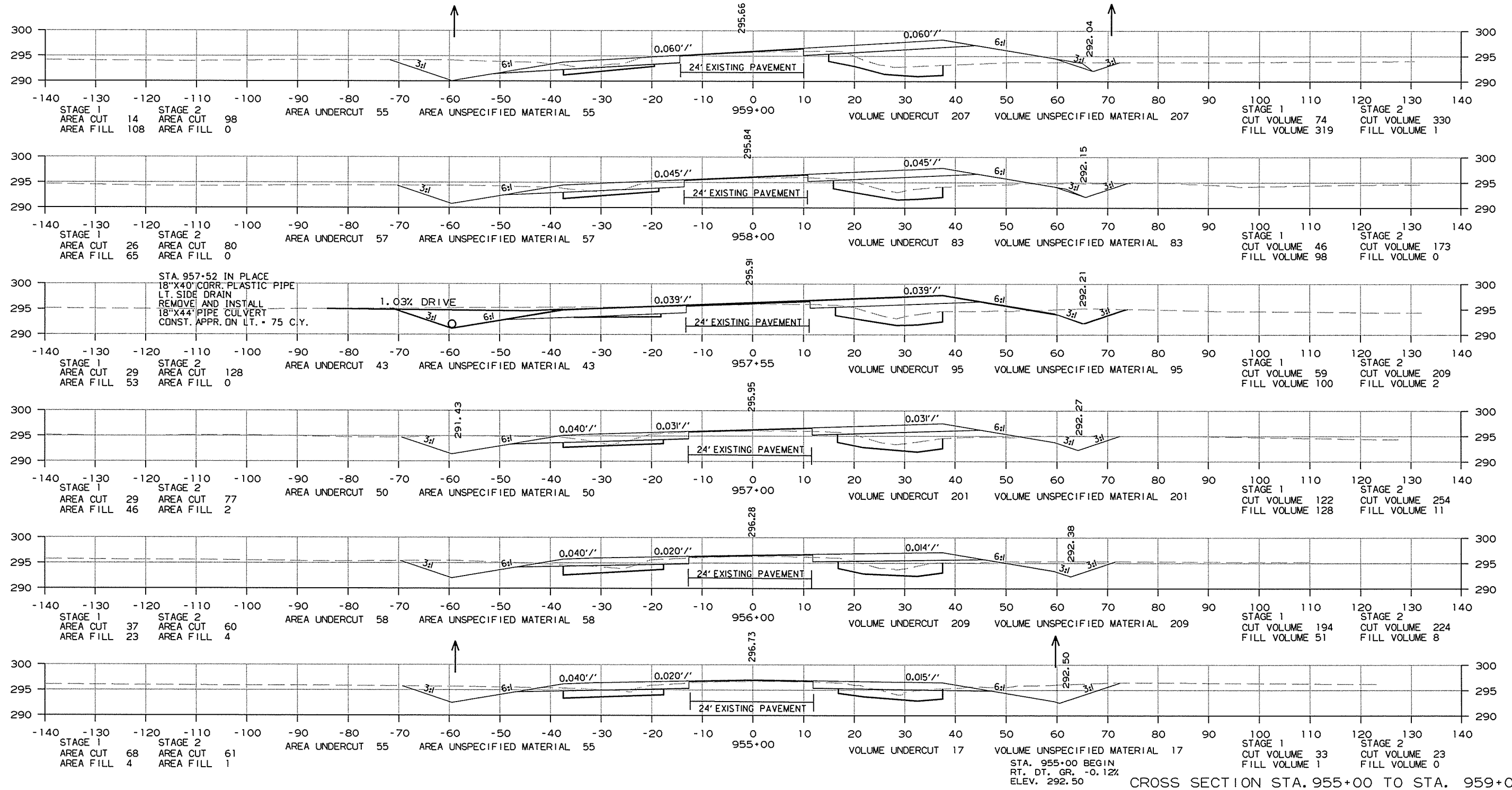
CROSS SECTION STA. 951+00 TO STA. 954+90

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							243	311

2 CROSS SECTIONS



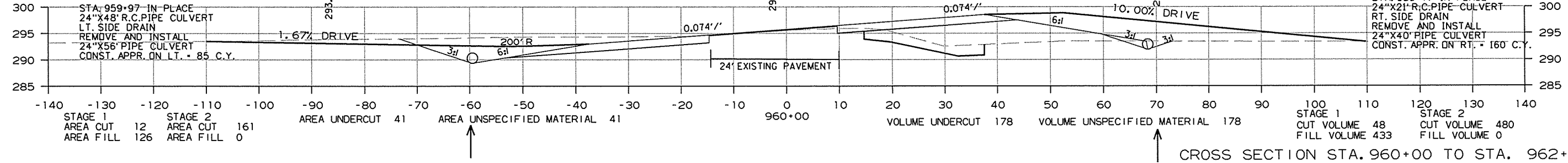
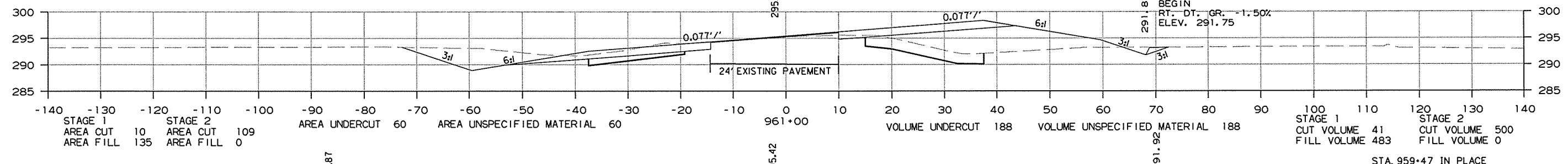
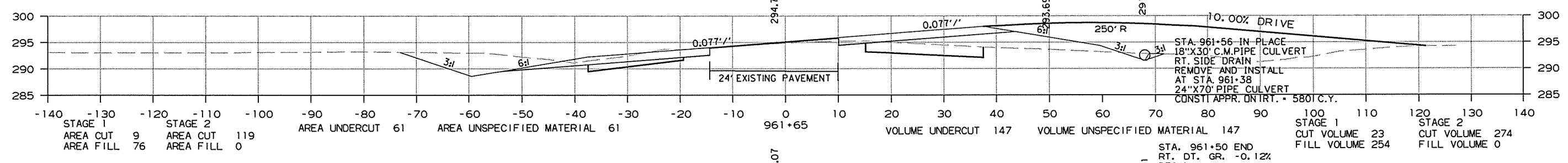
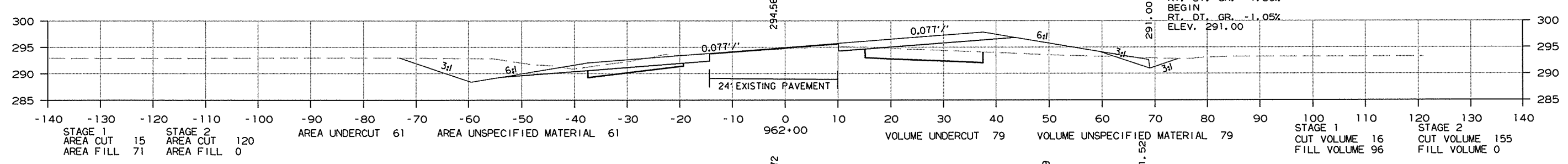
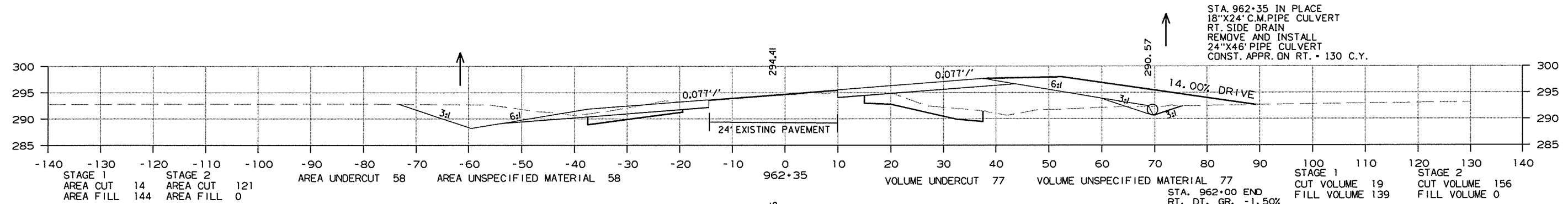
CROSS SECTION STA. 955+00 TO STA. 959+00

11/6/2013

RO12155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		244	311
				JOB NO.		012155	244	311

2 CROSS SECTIONS

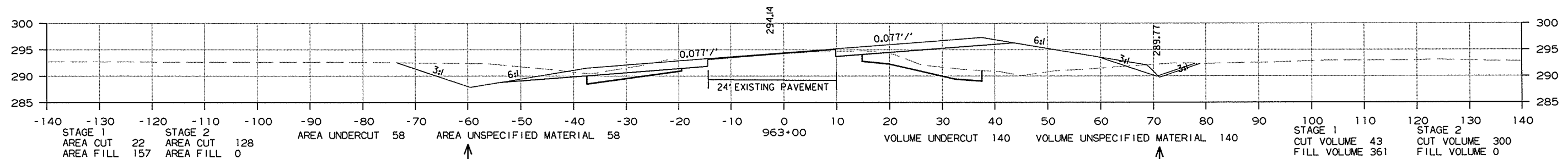
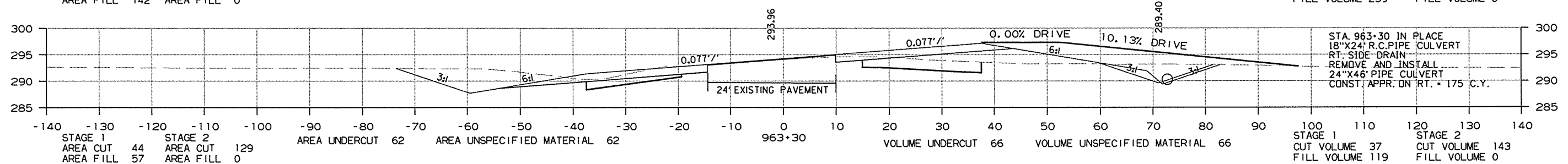
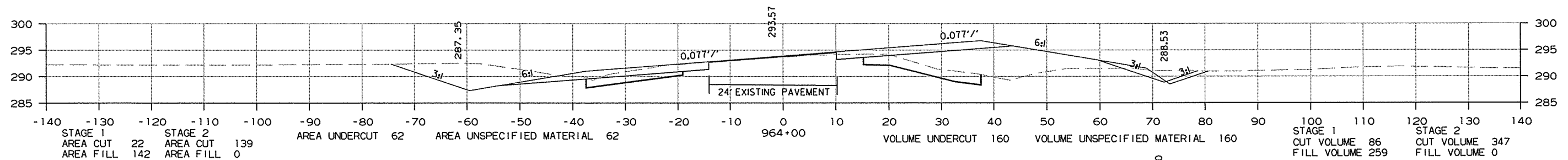
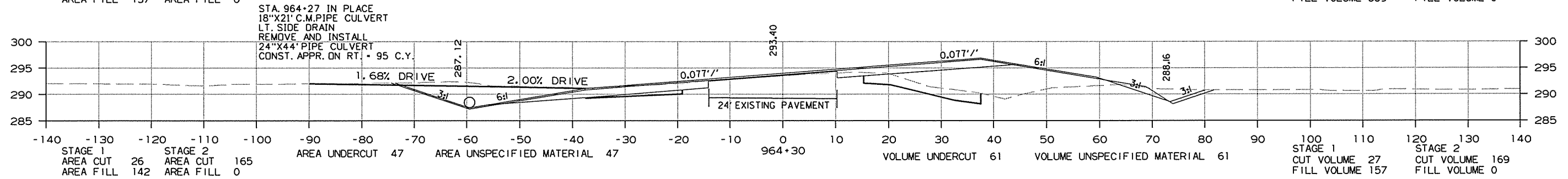
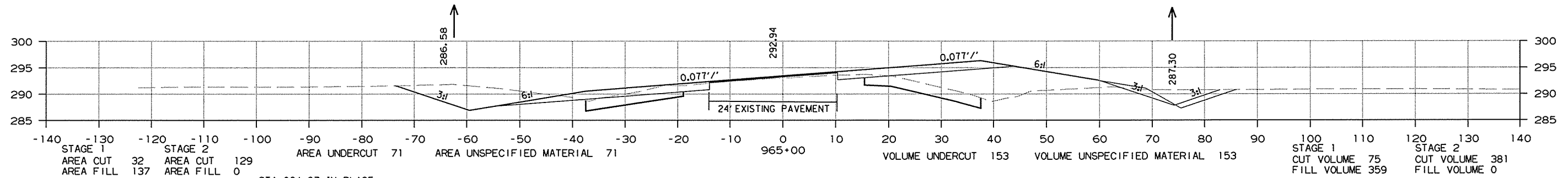


CROSS SECTION STA. 960+00 TO STA. 962+35

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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		245	311
				JOB NO.	012155			

2 CROSS SECTIONS



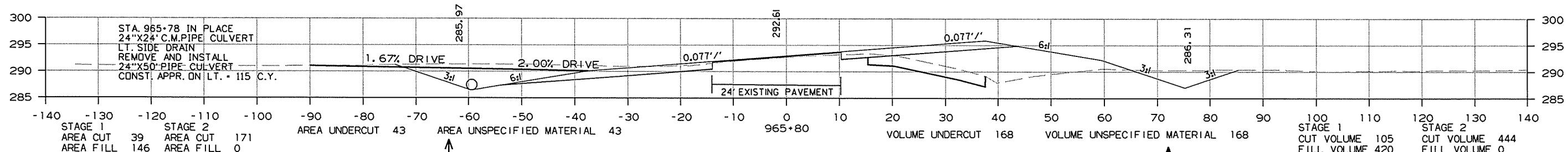
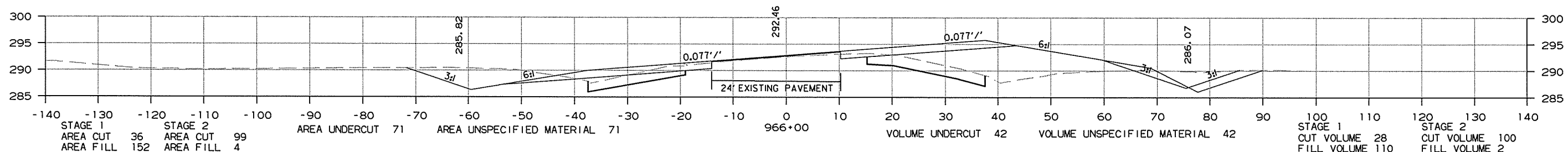
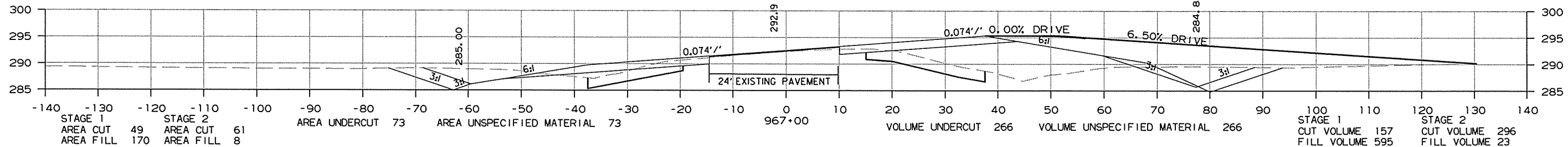
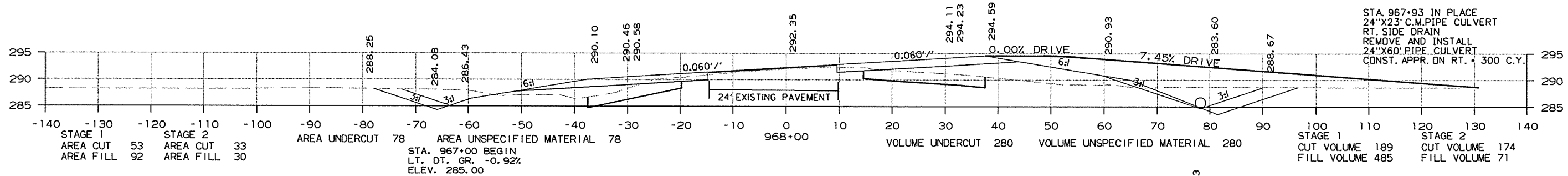
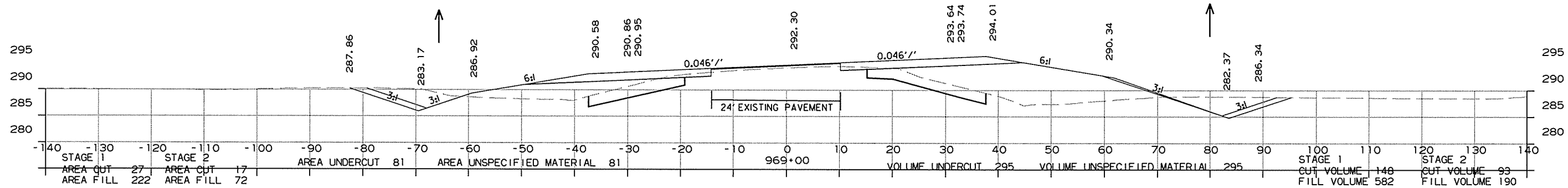
CROSS SECTION STA. 963+00 TO STA. 965+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							246	311

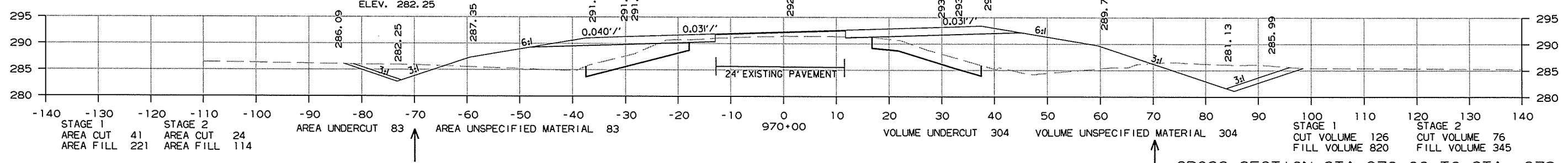
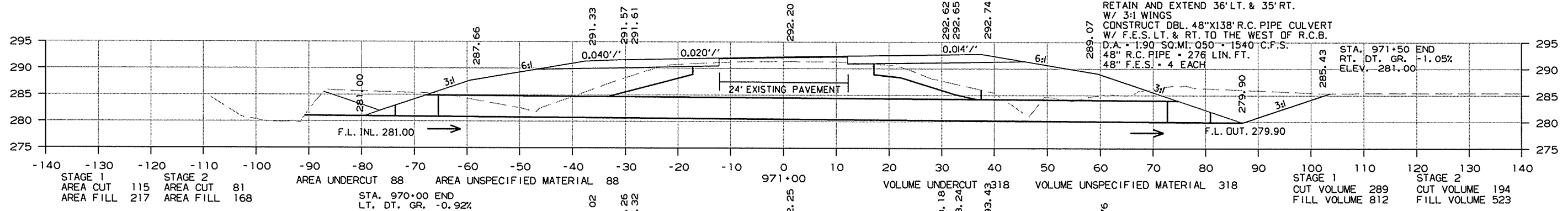
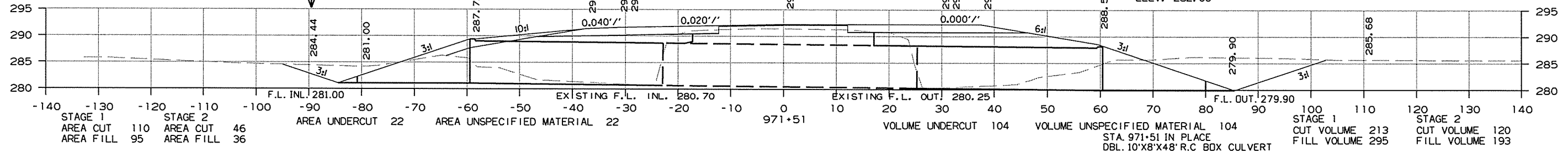
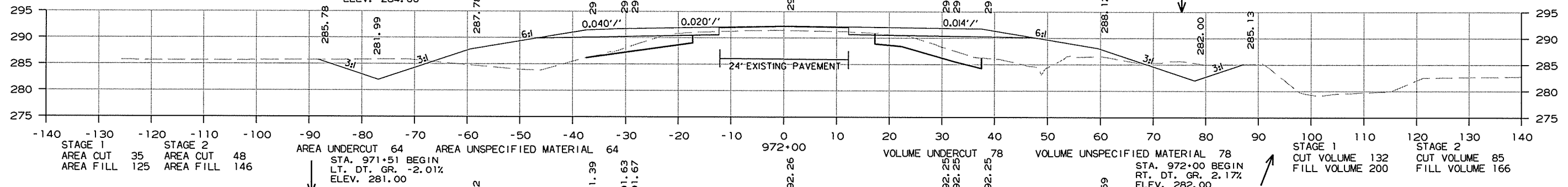
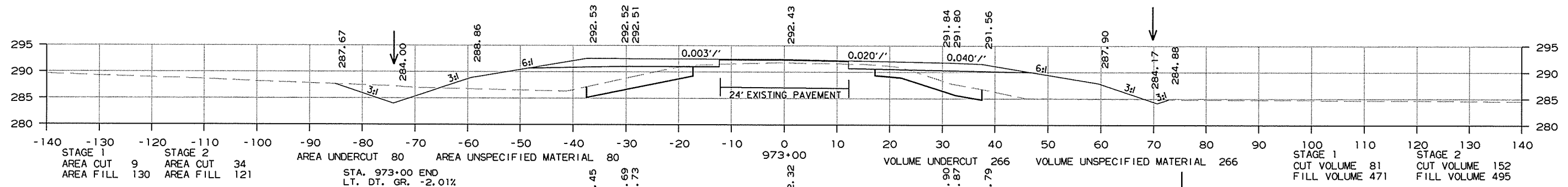
2 CROSS SECTIONS



CROSS SECTION STA. 965+80 TO STA. 969+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		247	311

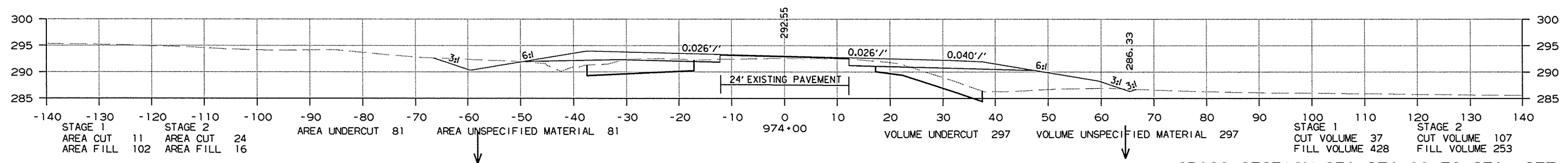
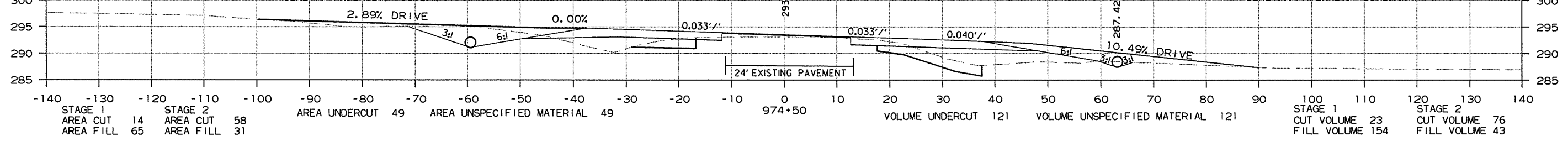
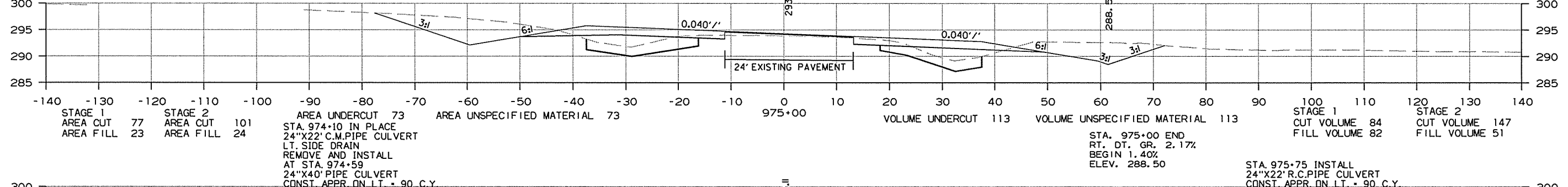
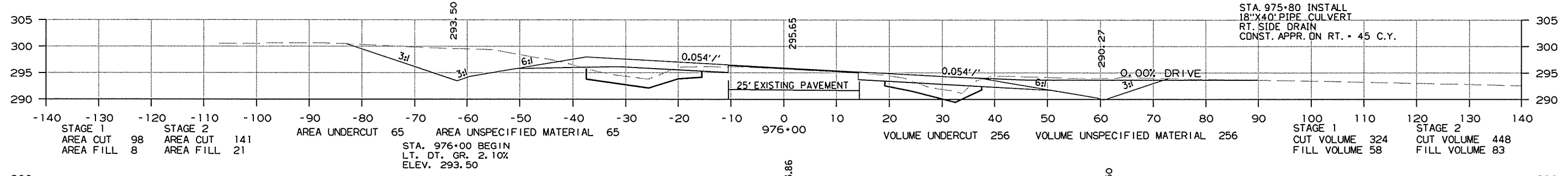
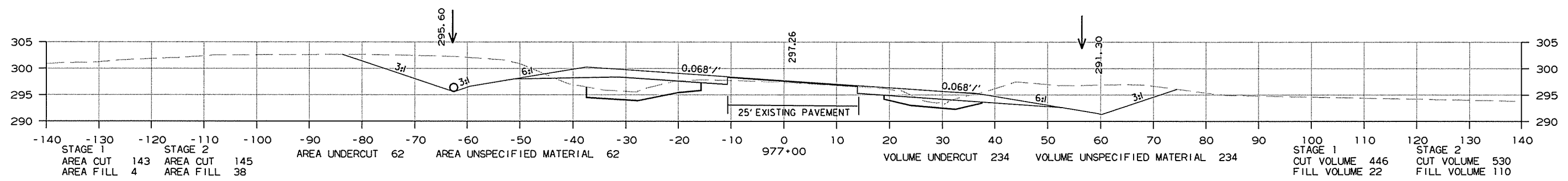
2 CROSS SECTIONS



CROSS SECTION STA. 970+00 TO STA. 973+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	248 311

2 CROSS SECTIONS

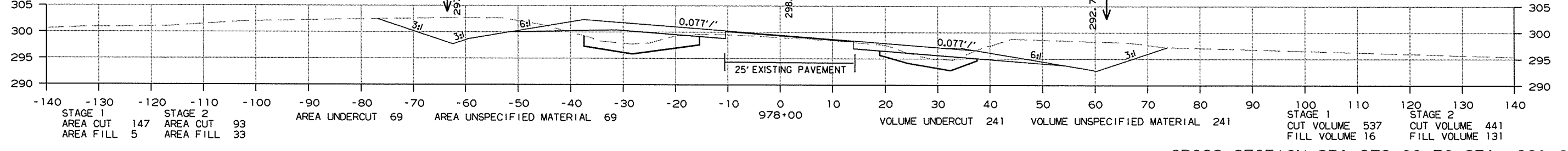
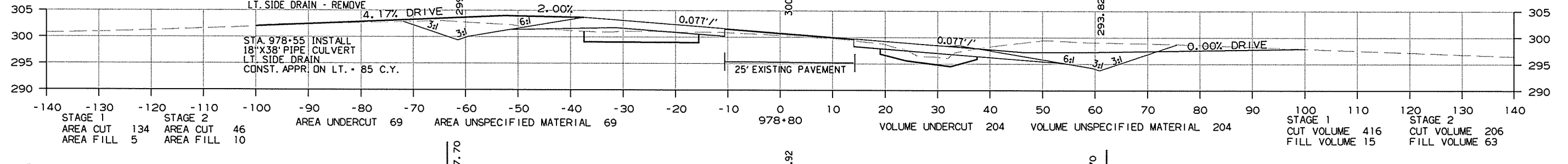
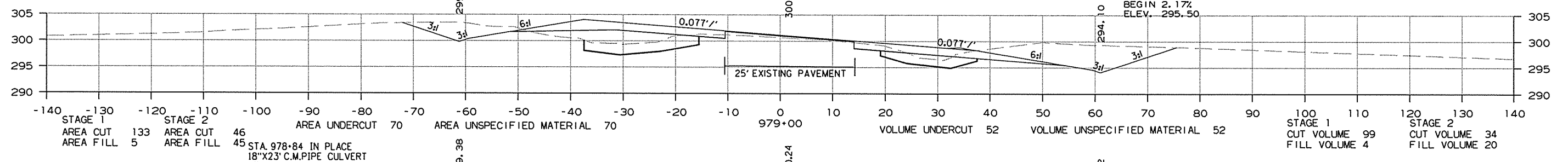
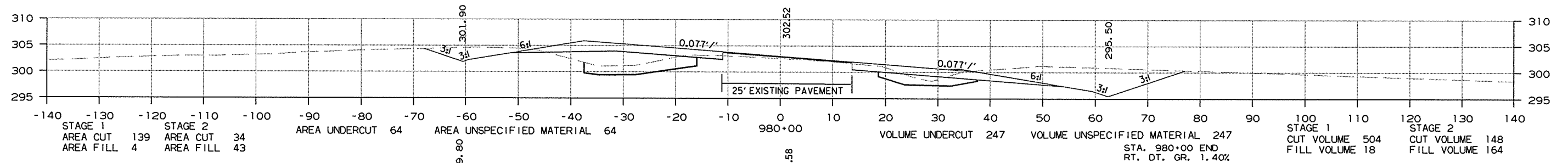
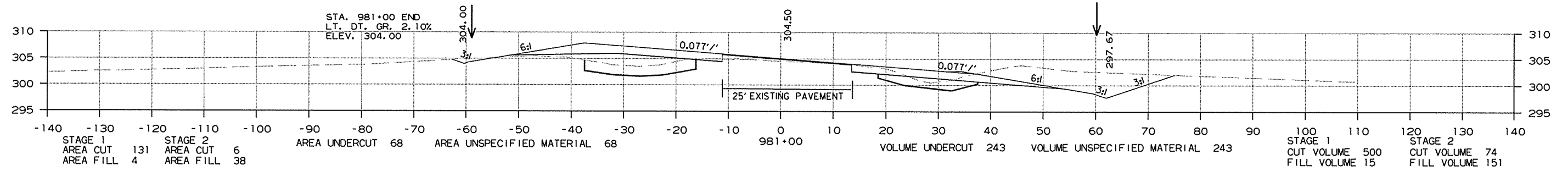


CROSS SECTION STA. 974+00 TO STA. 977+00

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R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	249 311

2 CROSS SECTIONS



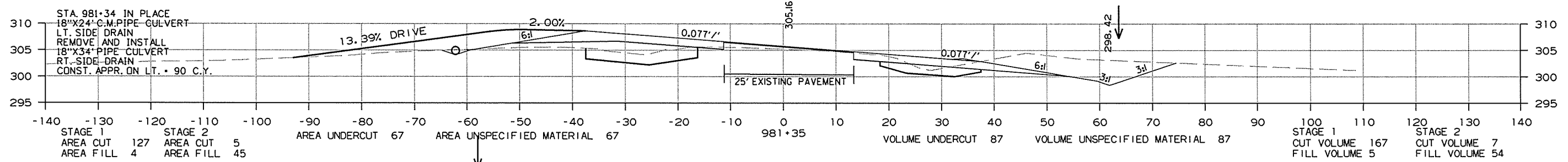
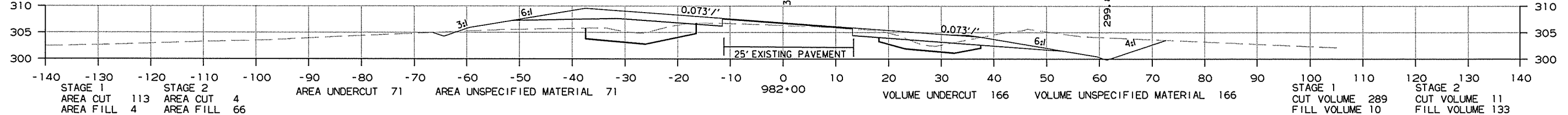
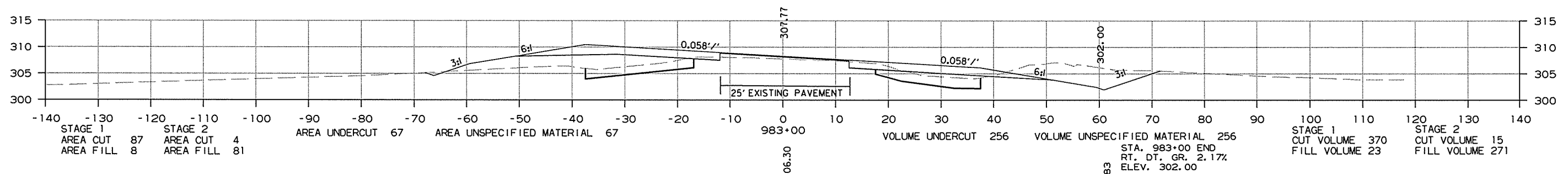
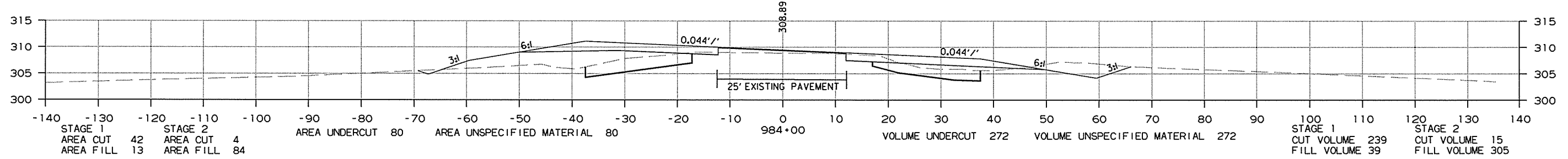
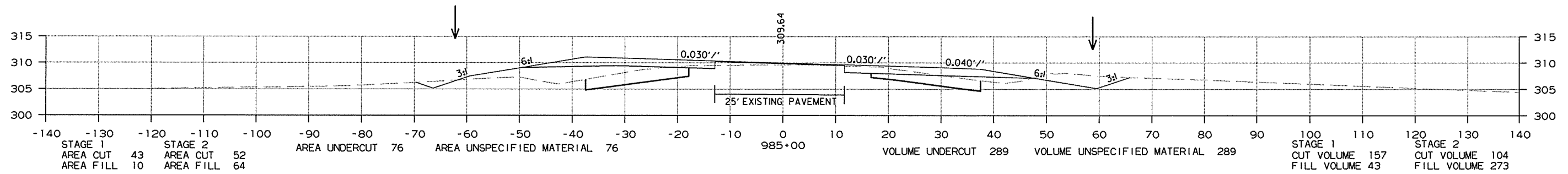
CROSS SECTION STA. 978+00 TO STA. 981+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							250	311

2 CROSS SECTIONS



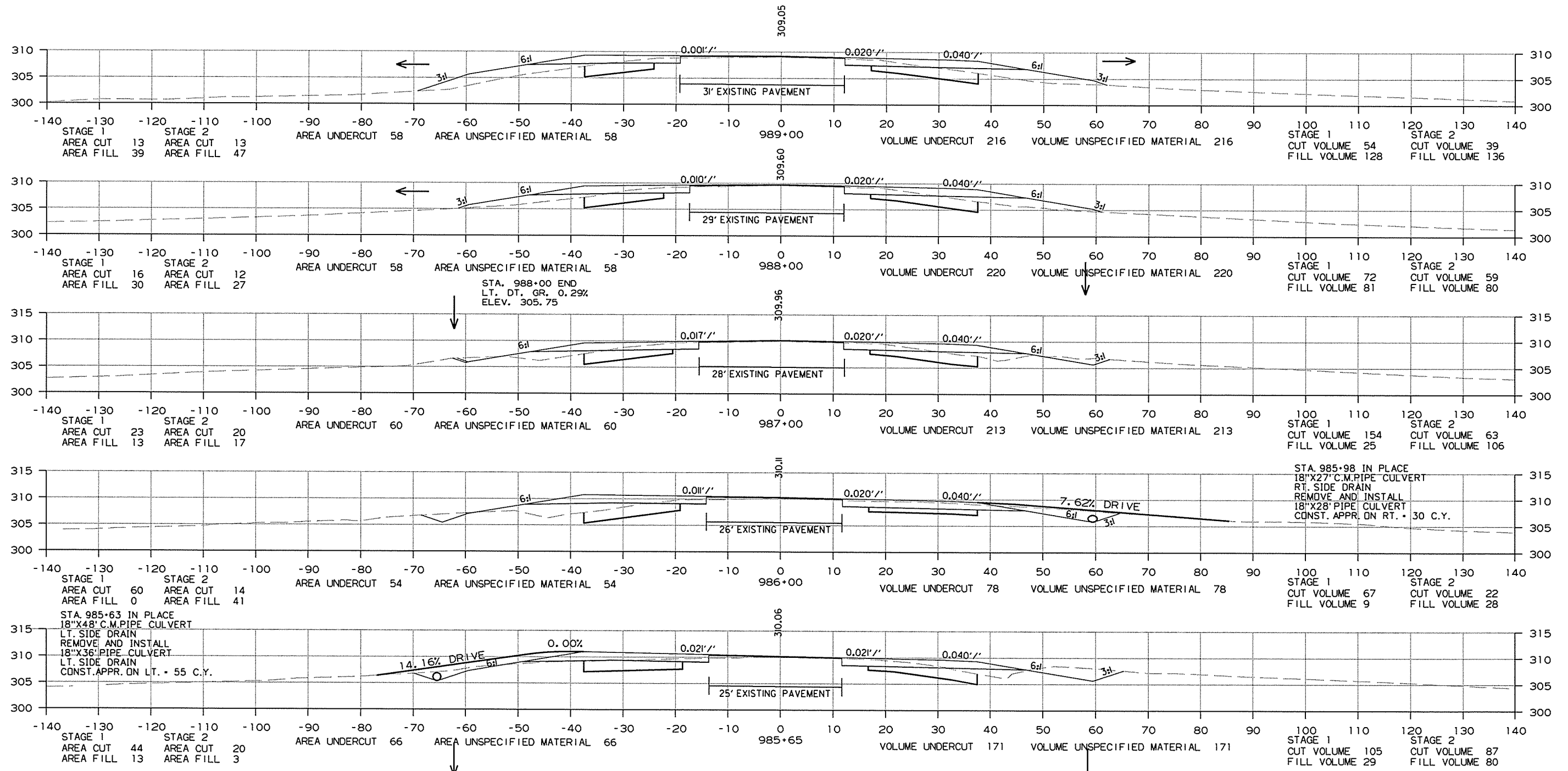
CROSS SECTION STA. 981+35 TO STA. 985+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							251	311

② CROSS SECTIONS



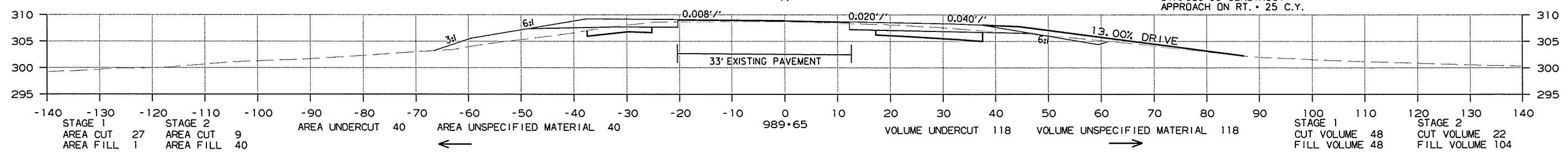
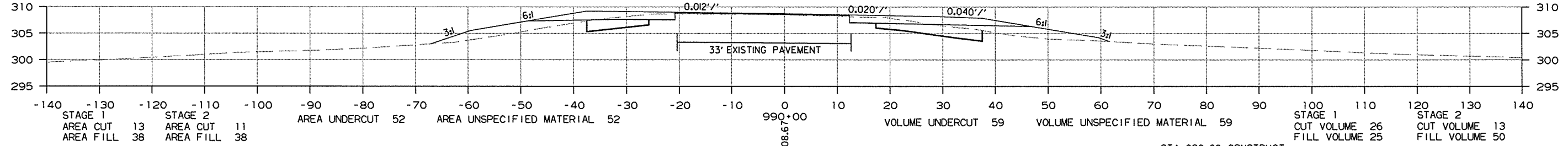
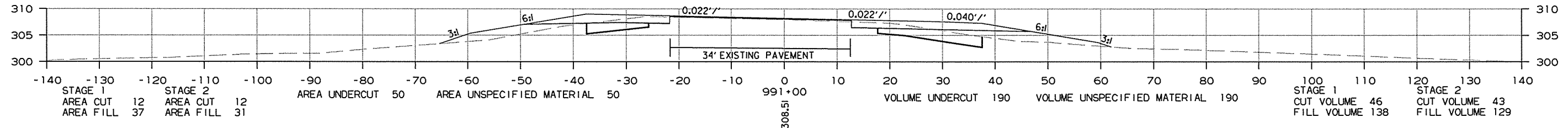
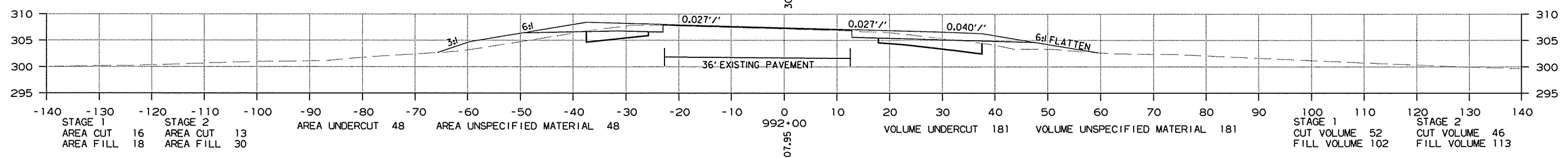
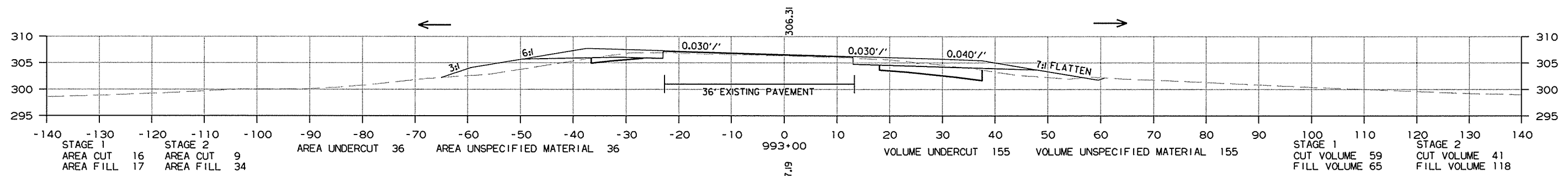
CROSS SECTION STA. 985+65 TO STA. 989+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							252	311

2 CROSS SECTIONS



STA. 989+60 CONSTRUCT APPROACH ON RT. - 25 C.Y.

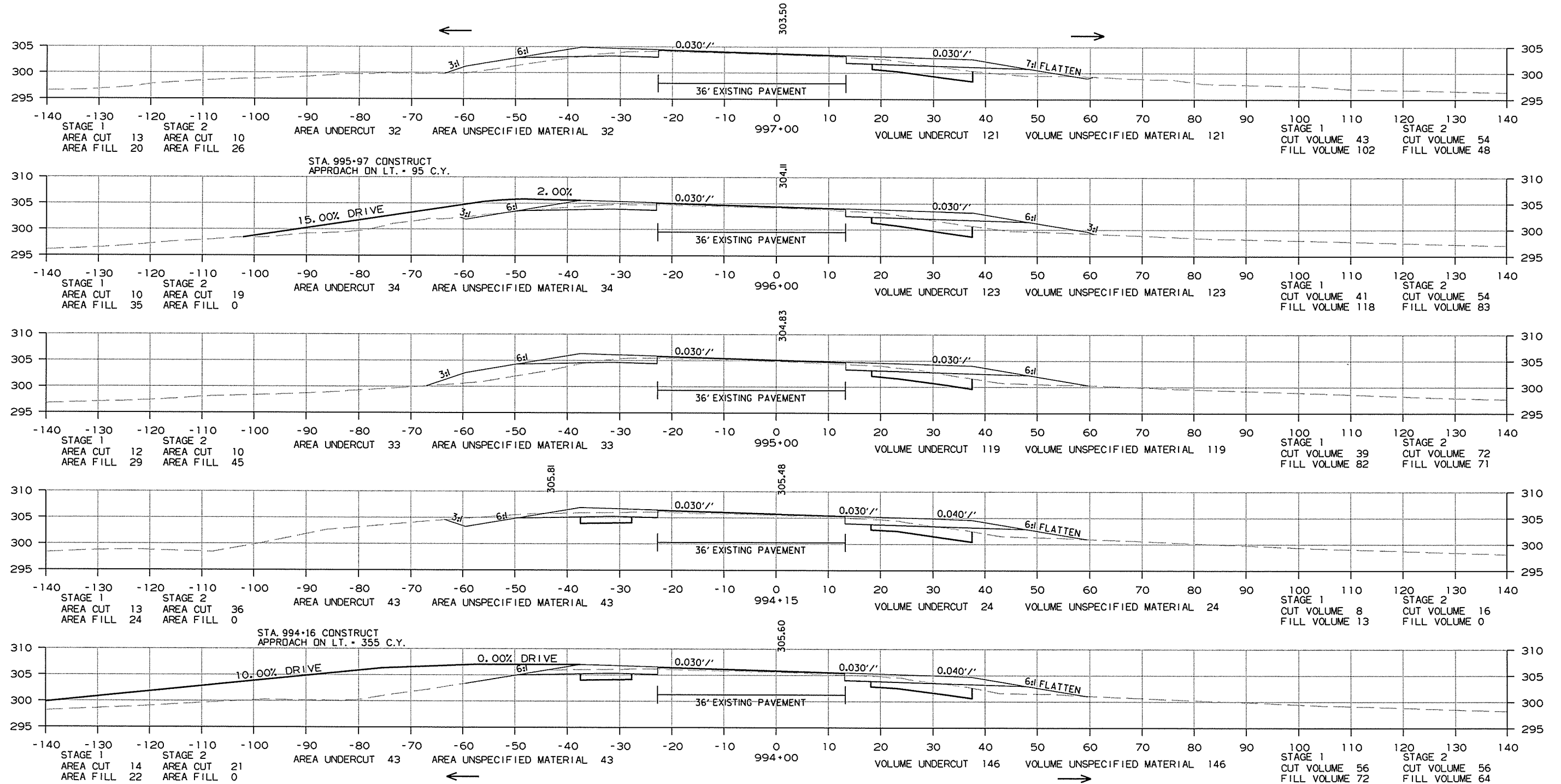
CROSS SECTION STA. 989+65 TO STA. 993+00

11/6/2013

R012155.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							253	311

2 CROSS SECTIONS



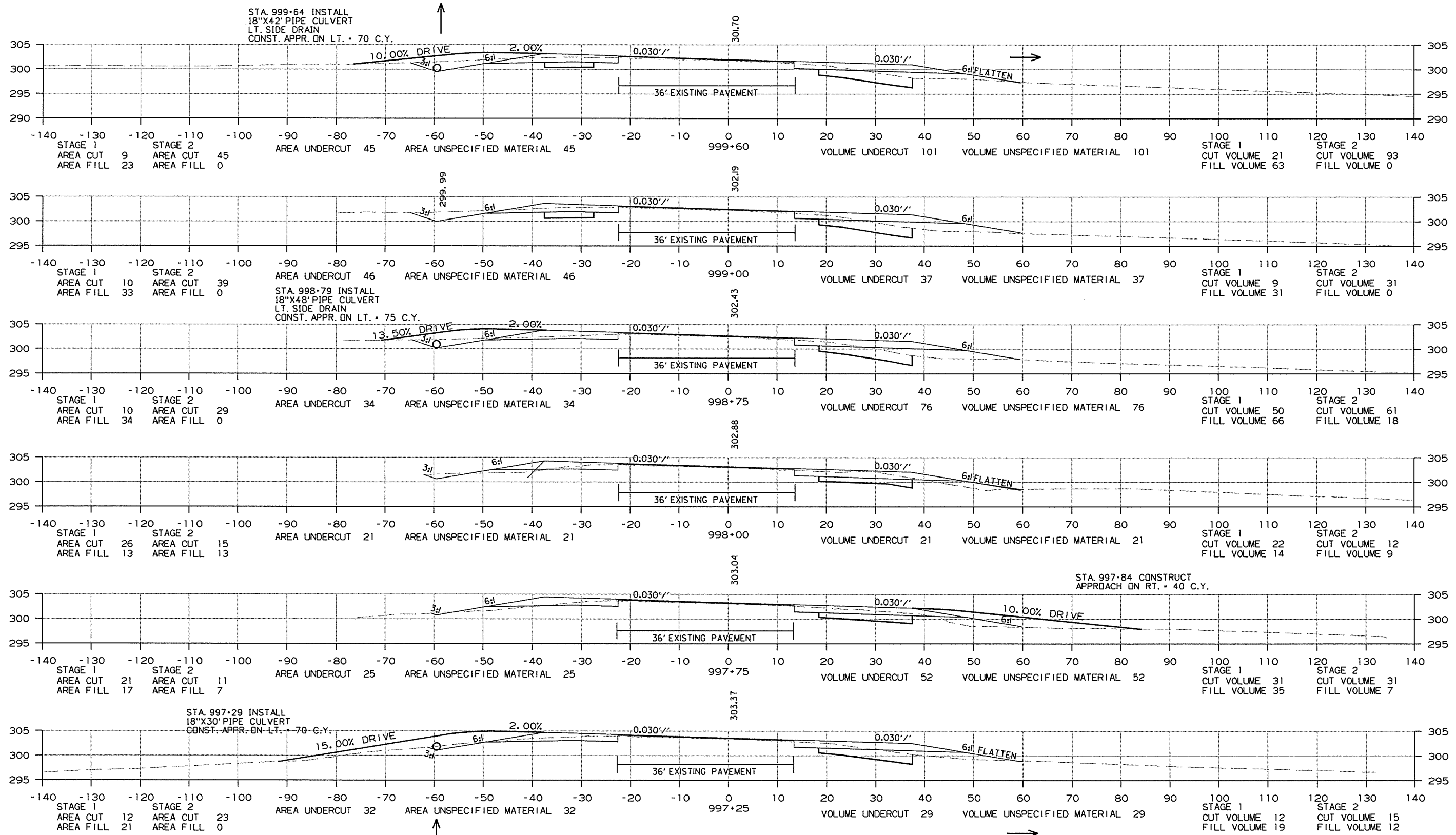
CROSS SECTION STA. 994+00 TO STA. 997+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							254	311

2 CROSS SECTIONS



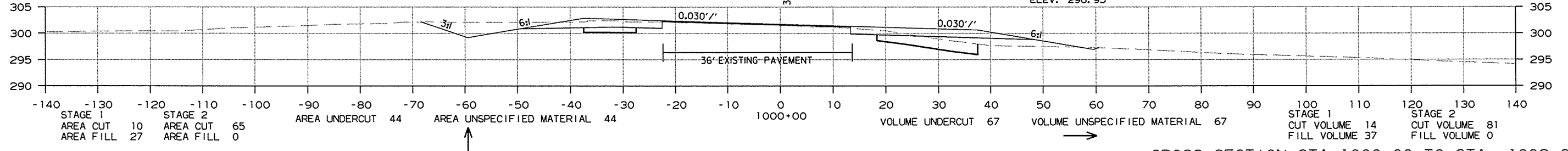
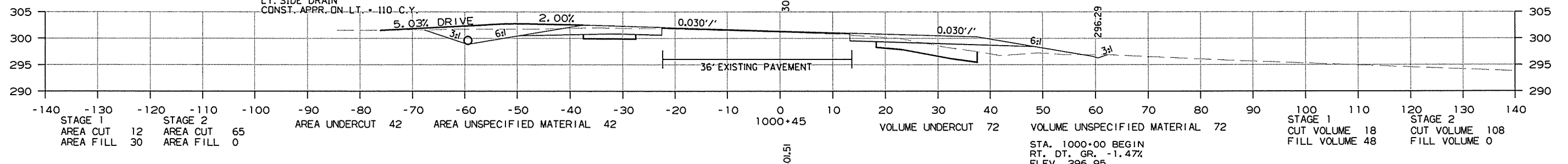
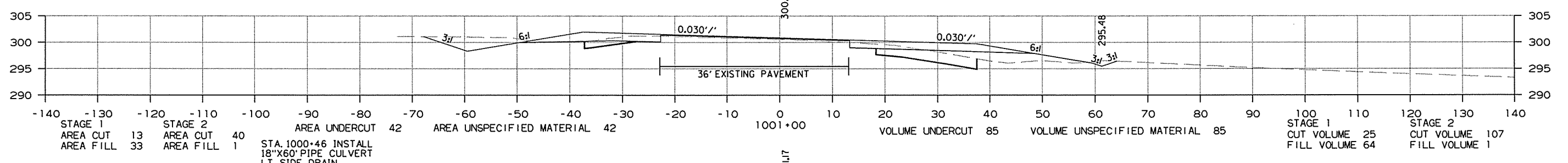
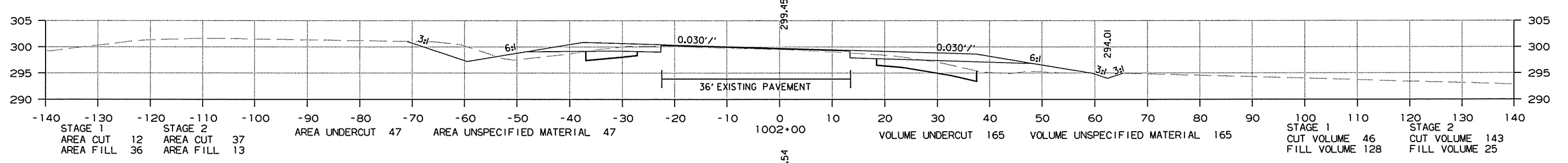
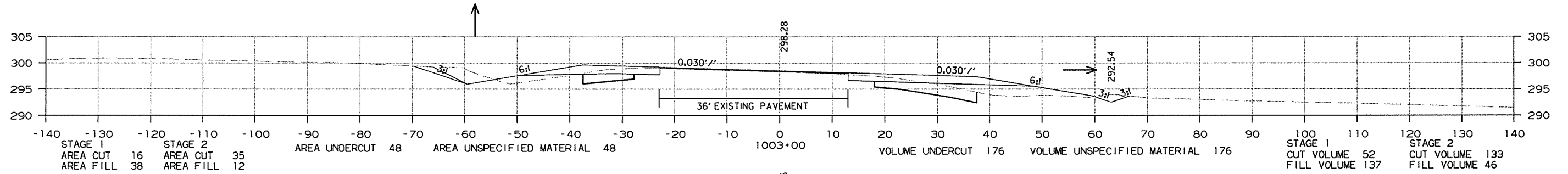
CROSS SECTION STA. 997+25 TO STA. 999+60

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							255	311

2 CROSS SECTIONS



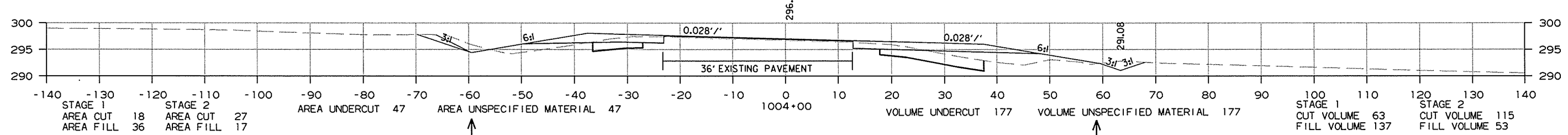
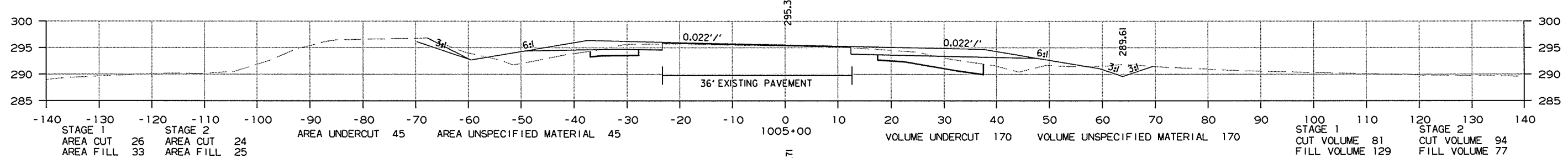
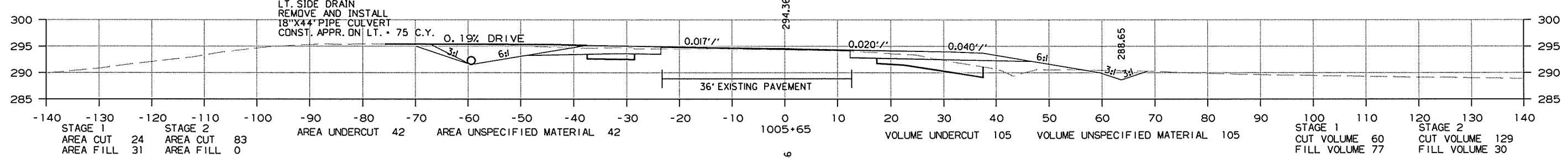
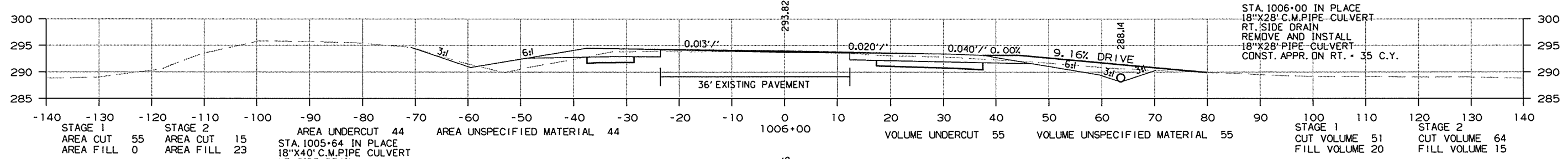
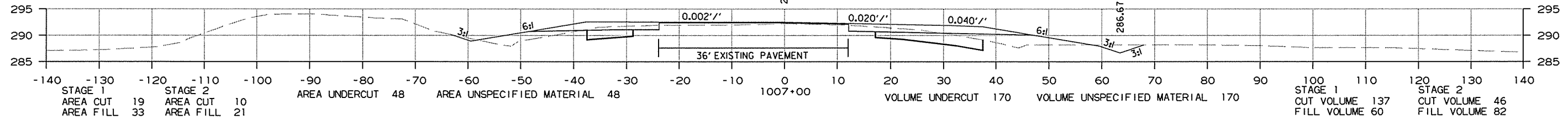
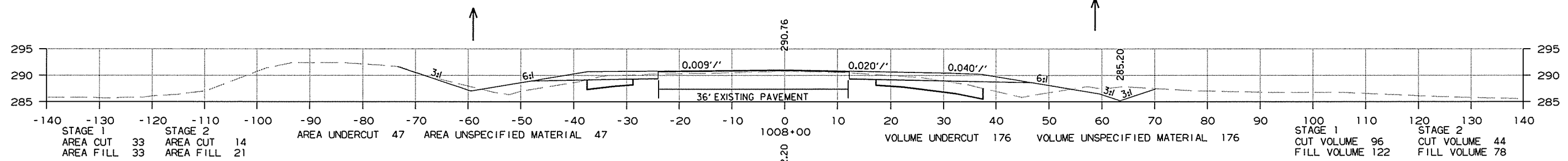
CROSS SECTION STA. 1000+00 TO STA. 1003+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							256	311

2 CROSS SECTIONS



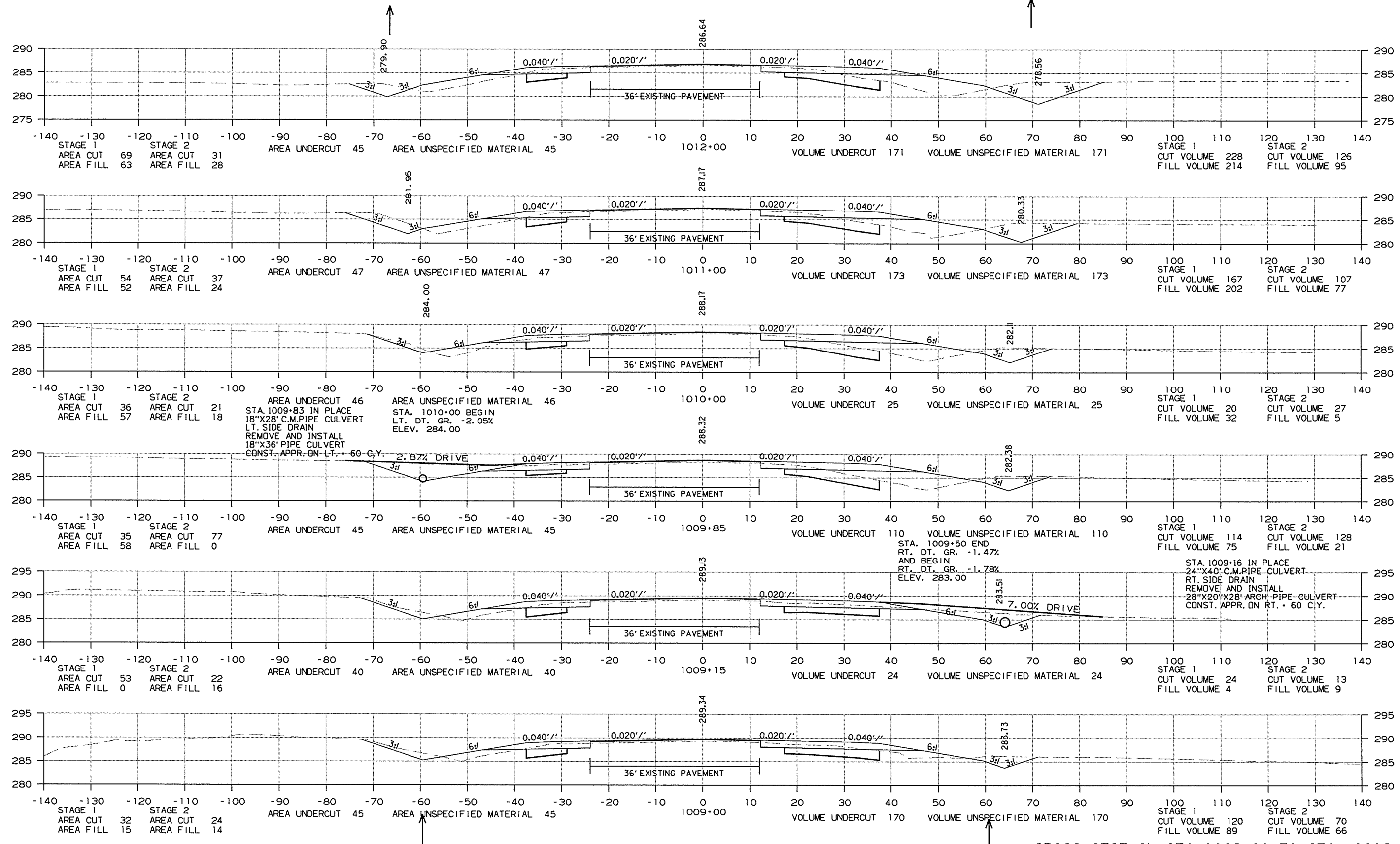
CROSS SECTION STA. 1004+00 TO STA. 1008+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							257	311

② CROSS SECTIONS



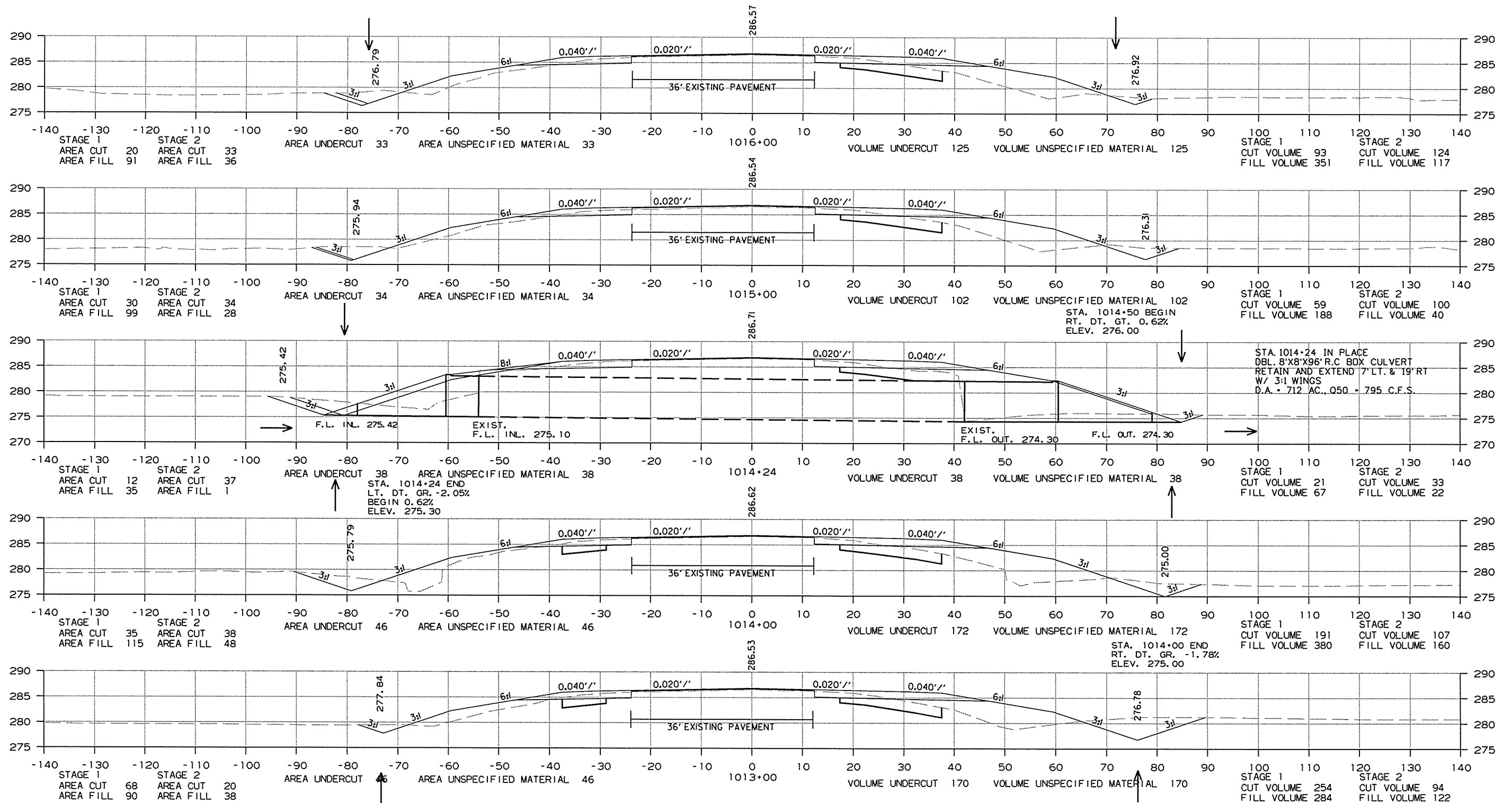
CROSS SECTION STA. 1009+00 TO STA. 1012+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							258	311

2 CROSS SECTIONS



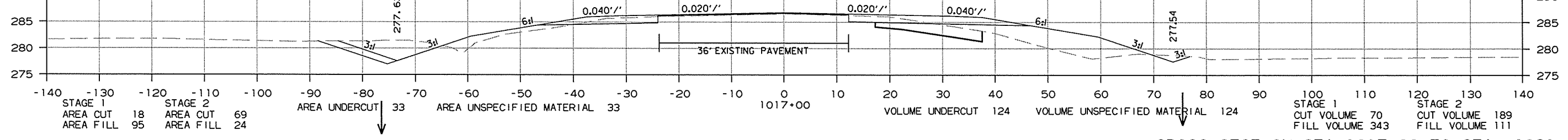
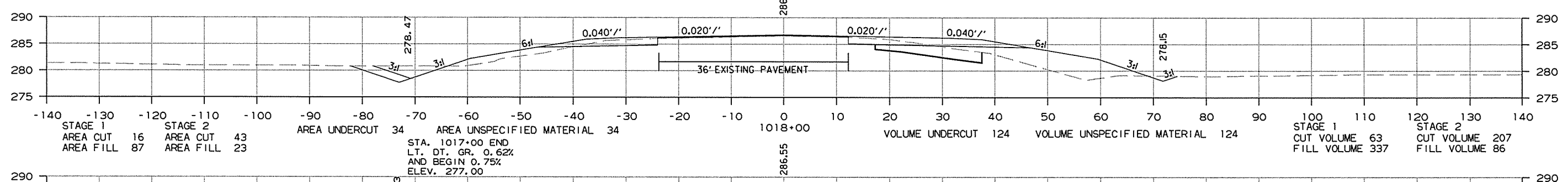
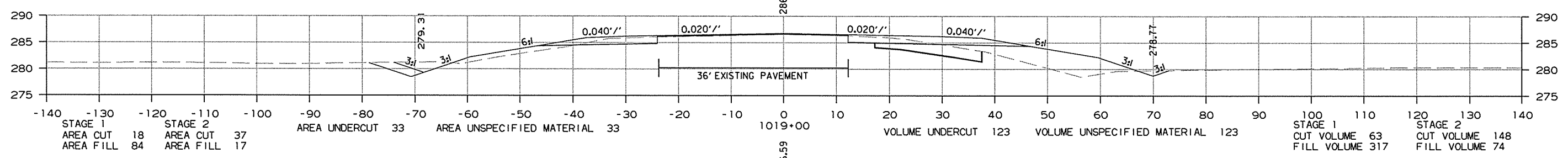
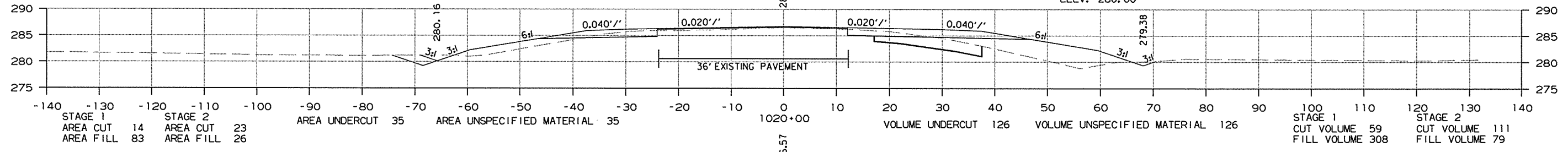
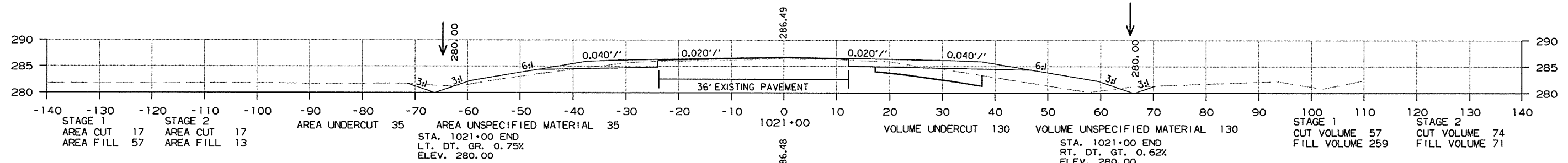
CROSS SECTION STA. 1013+00 TO STA. 1016+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	259 311

2 CROSS SECTIONS

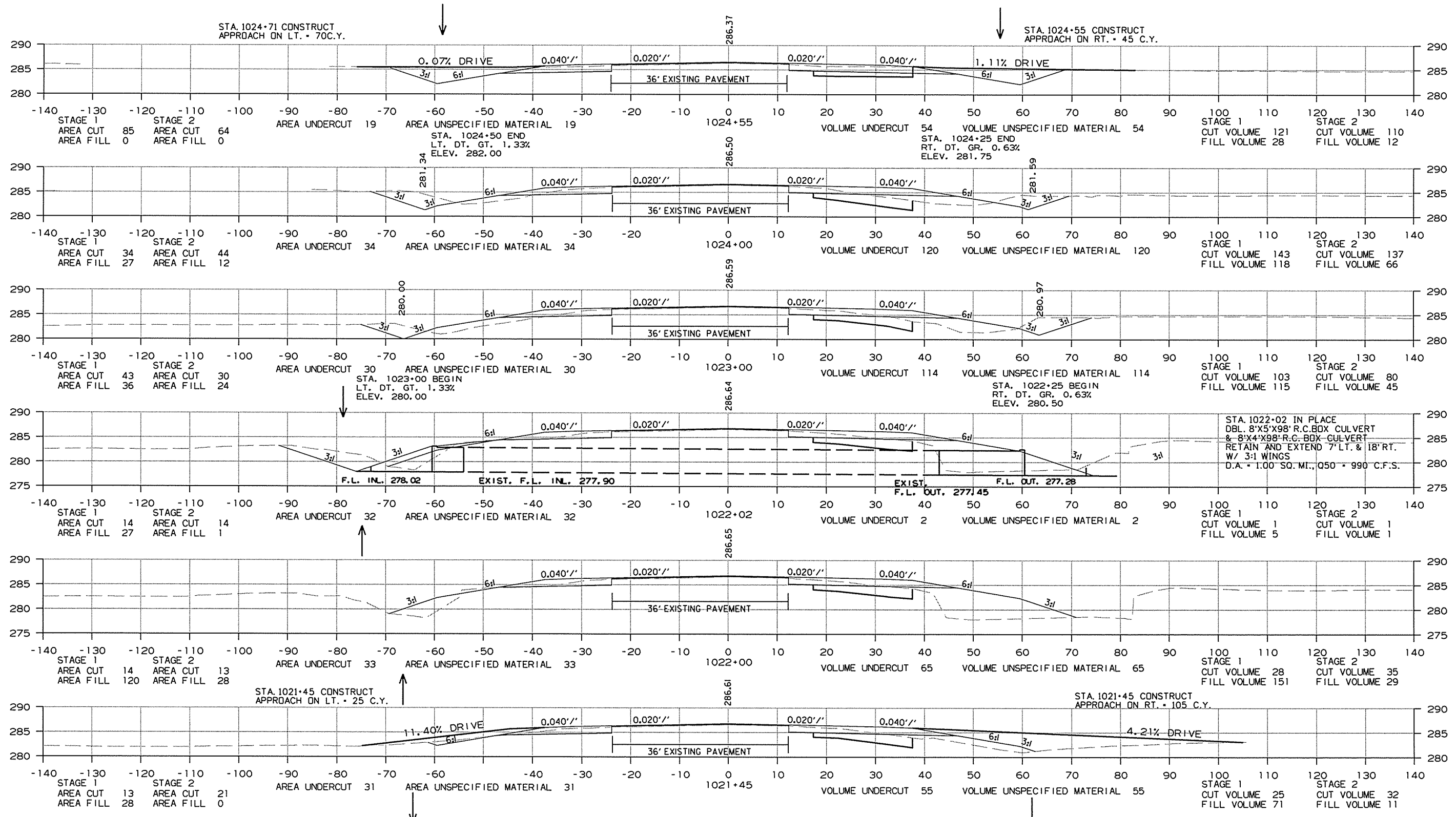


CROSS SECTION STA. 1017+00 TO STA. 1021+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							260	311

2 CROSS SECTIONS

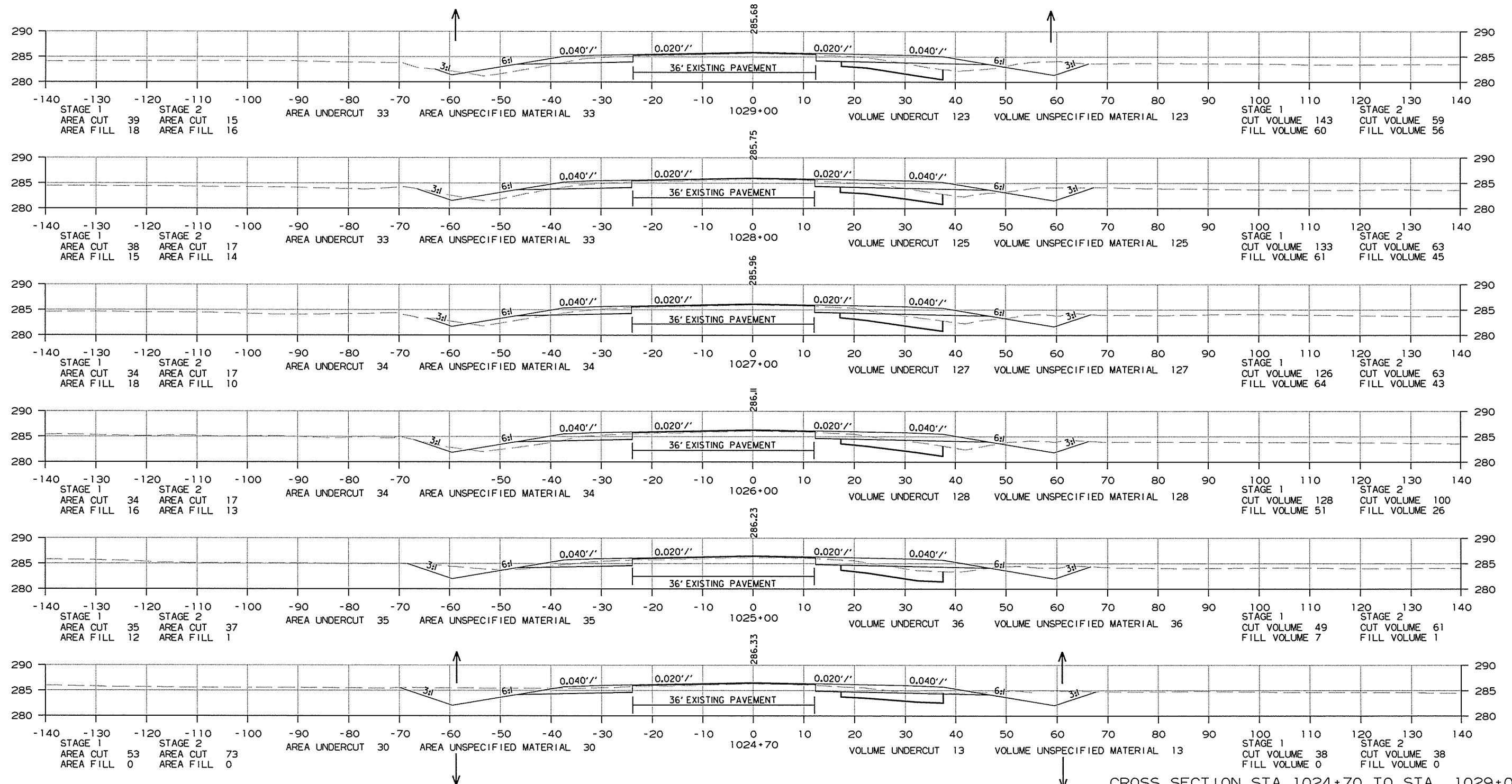


11/6/2013
R012155.DGN

CROSS SECTION STA. 1021+45 TO STA. 1024+55

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							261	311

2 CROSS SECTIONS



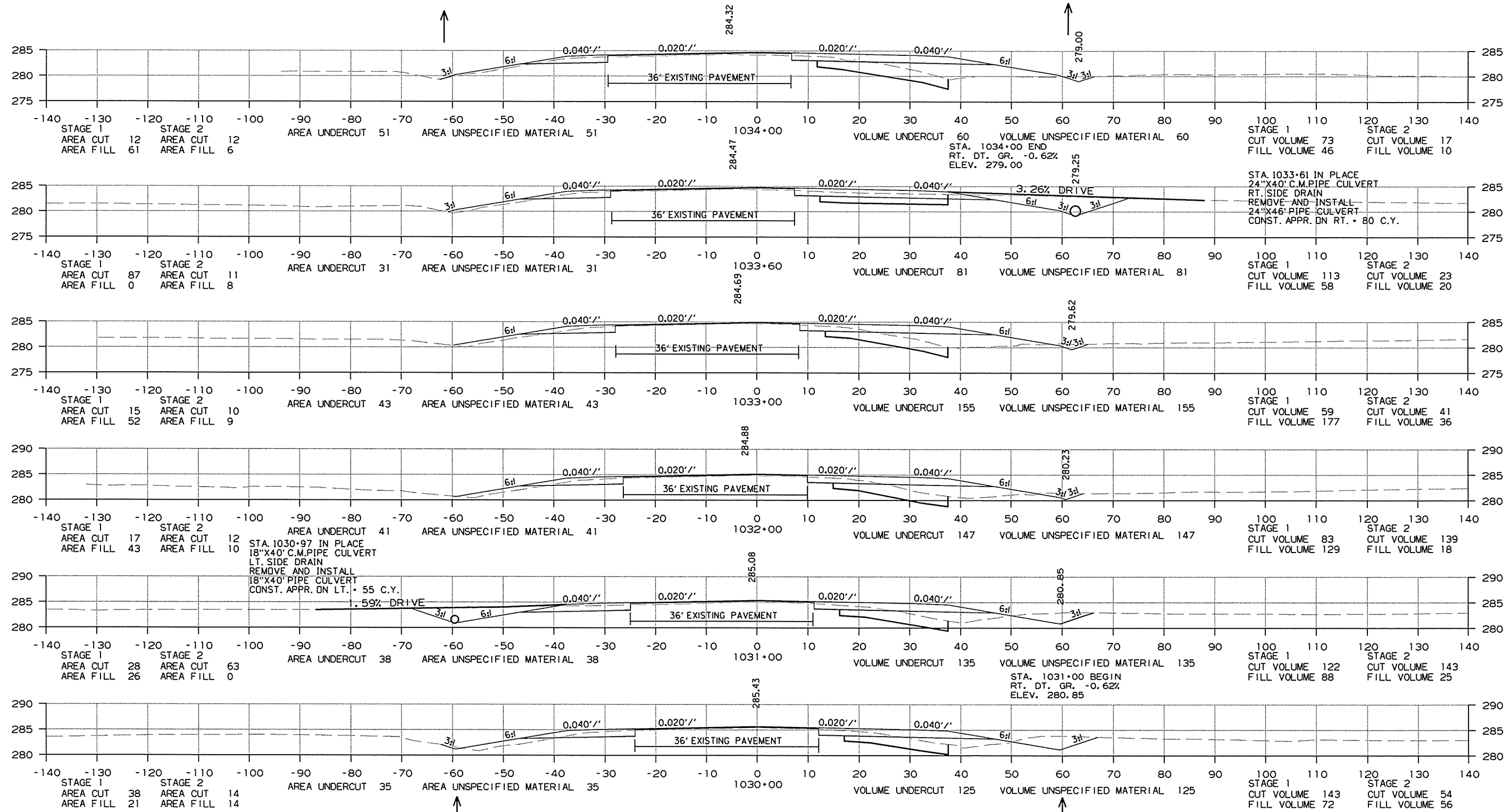
CROSS SECTION STA. 1024+70 TO STA. 1029+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	012155
							SHEET NO.	262
							TOTAL SHEETS	311

2 CROSS SECTIONS



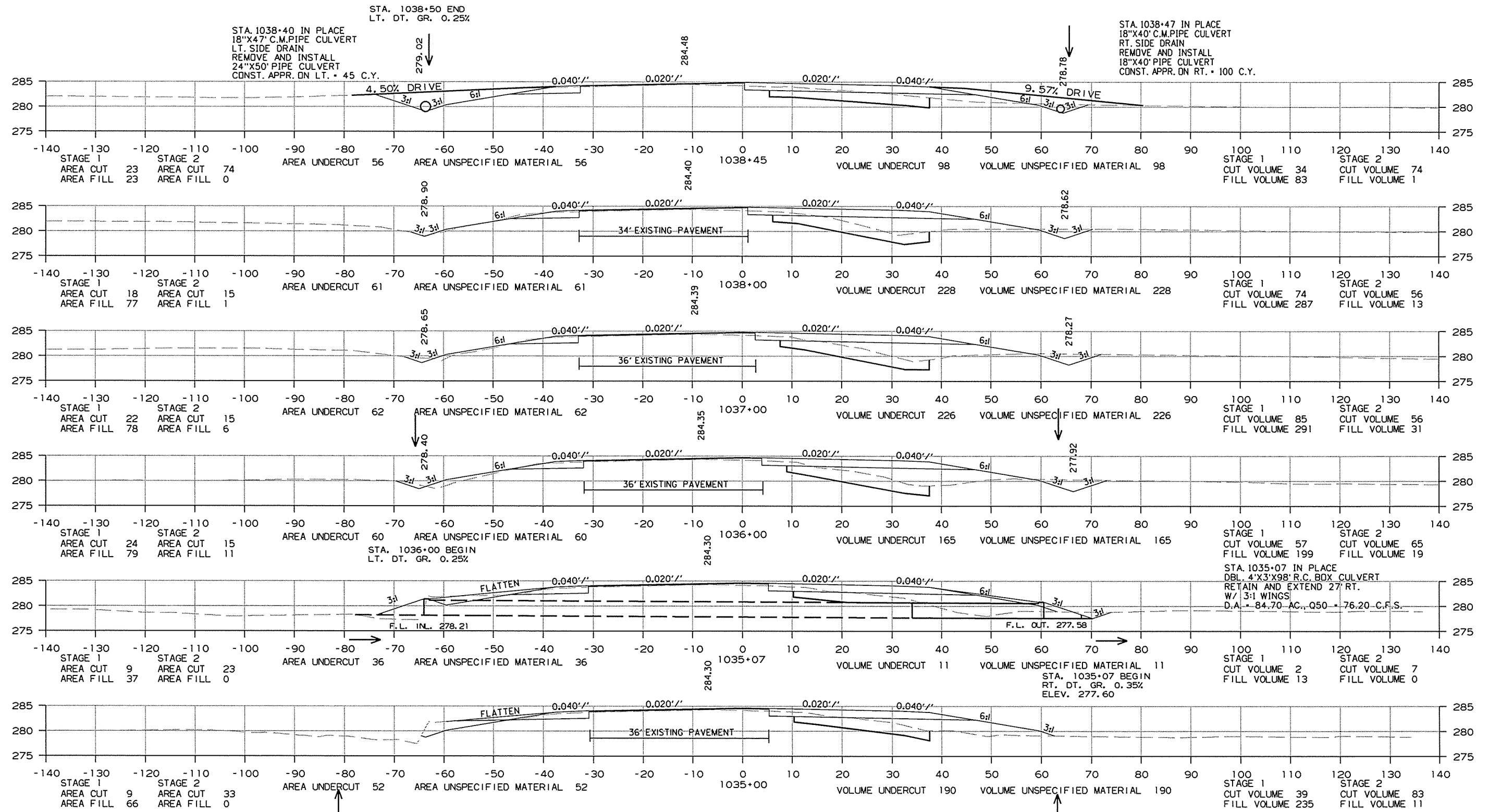
CROSS SECTION STA. 1030+00 TO STA. 1034+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							263	311

2 CROSS SECTIONS



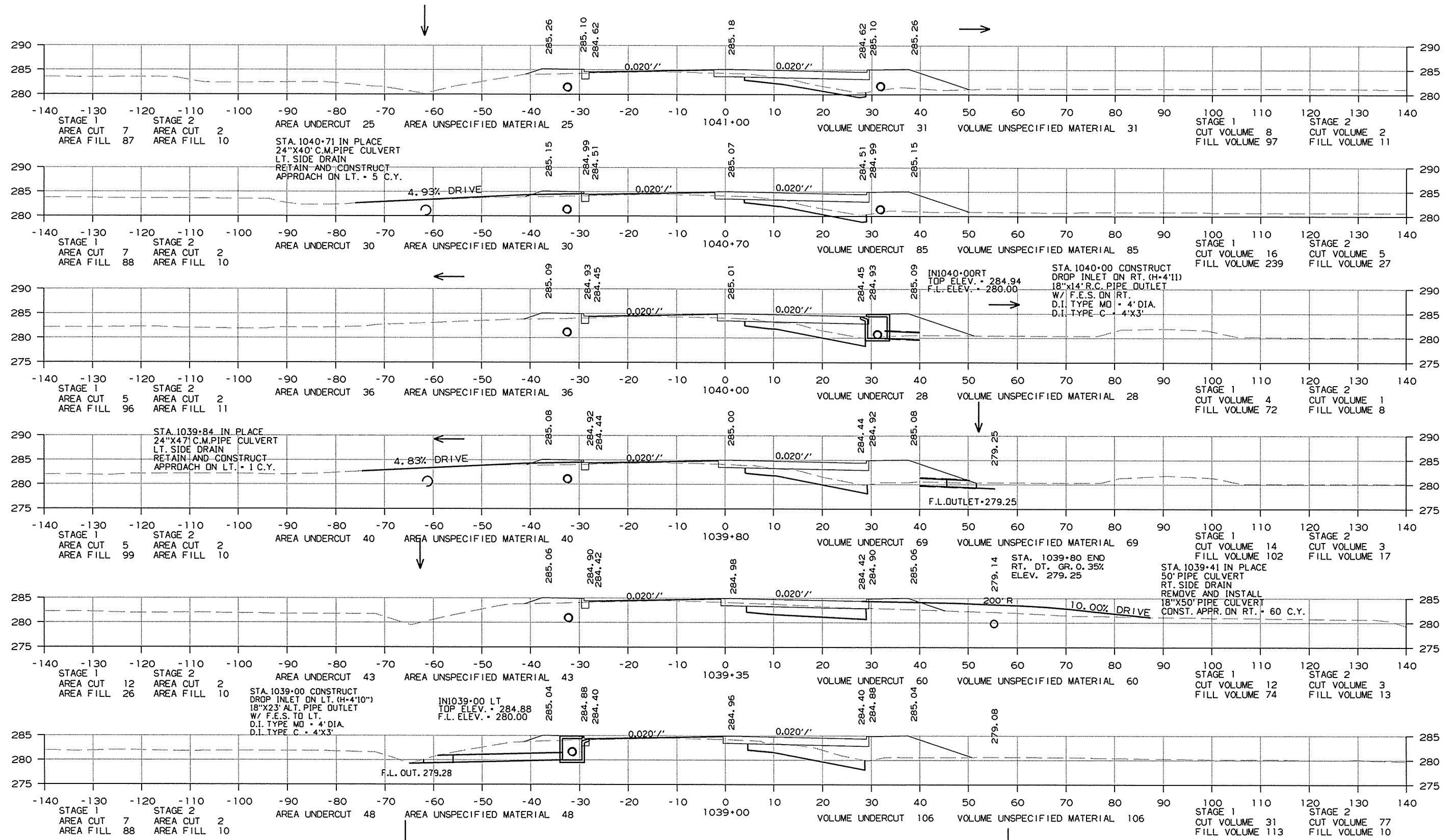
CROSS SECTION STA. 1035+00 TO STA. 1038+45

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							264	311

2 CROSS SECTIONS



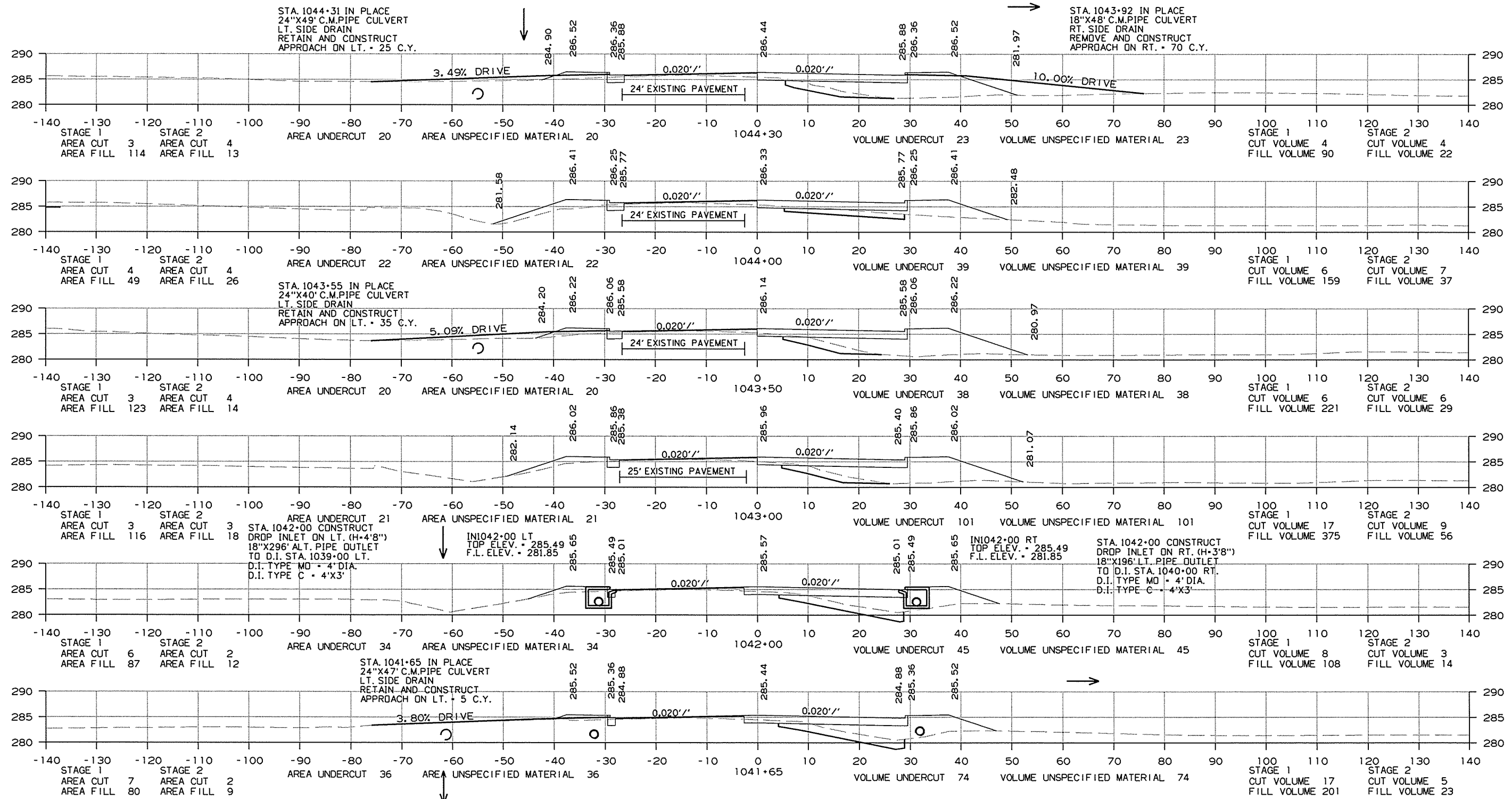
CROSS SECTION STA. 1039+00 TO STA. 1041+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							265	311

2 CROSS SECTIONS



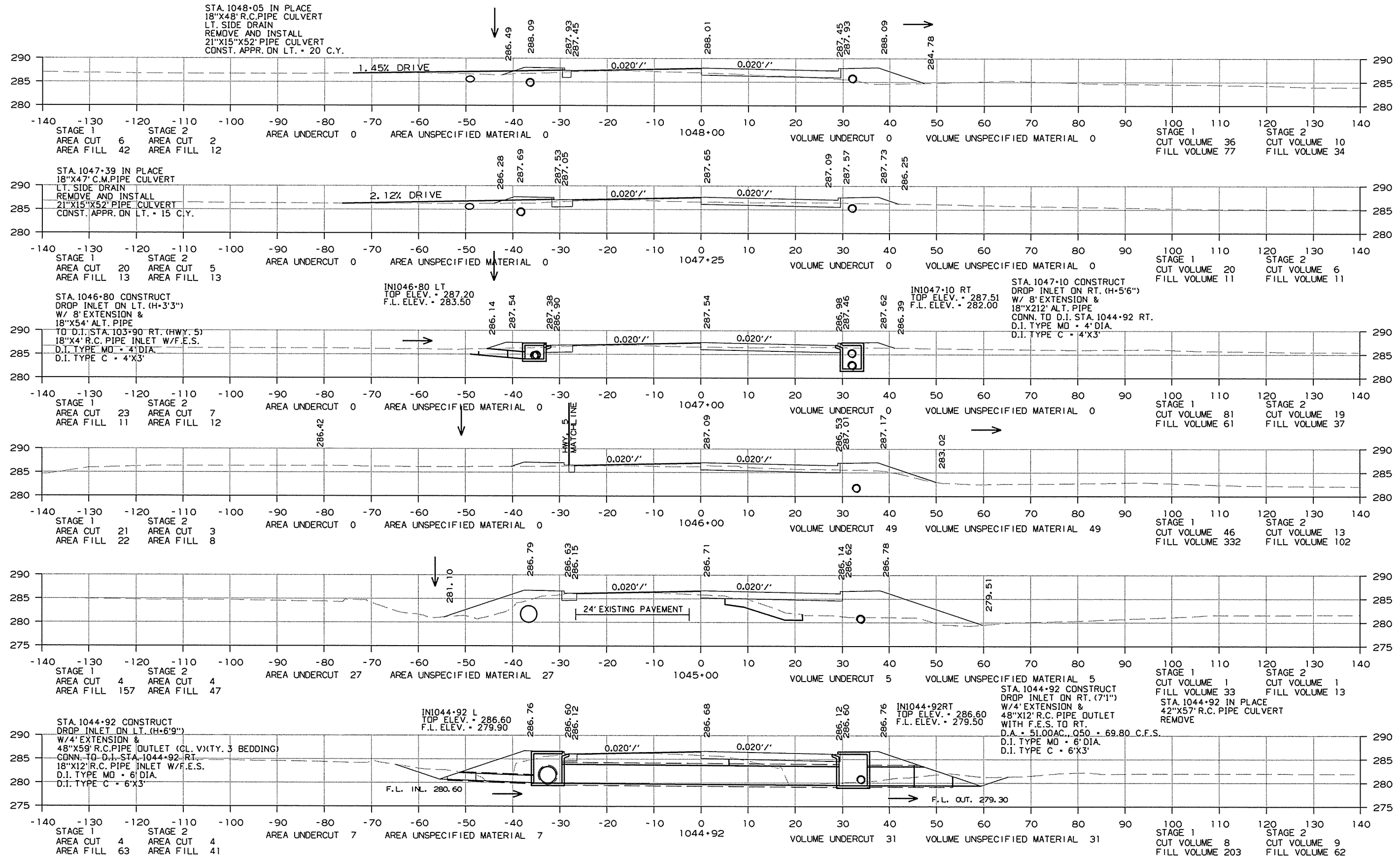
CROSS SECTION STA. 1041+65 TO STA. 1044+30

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 012155	266	311

2 CROSS SECTIONS



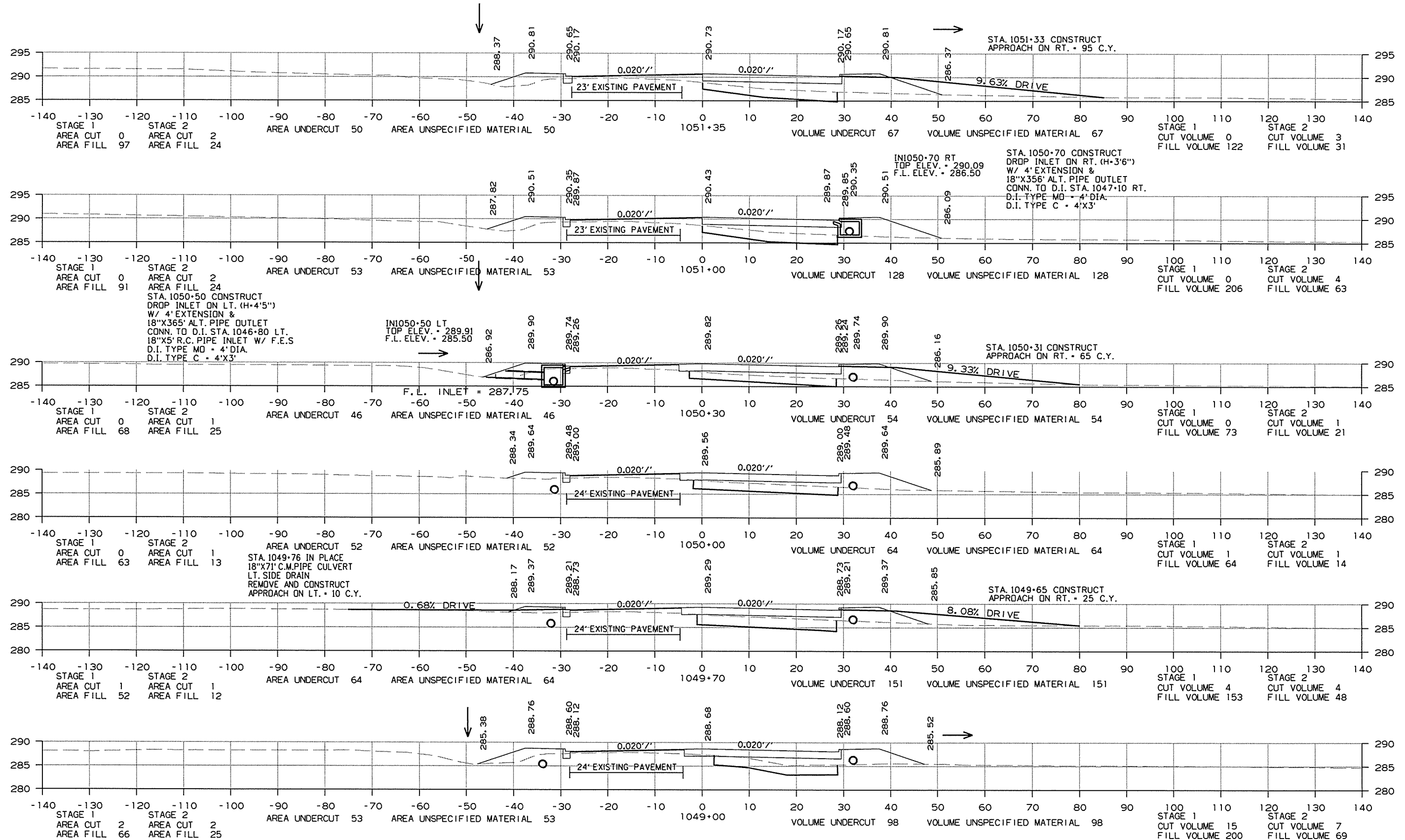
CROSS SECTION STA. 1044+92 TO STA. 1048+00

11/6/2013

RO12155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	012155
							SHEET NO.	267
							TOTAL SHEETS	311

2 CROSS SECTIONS



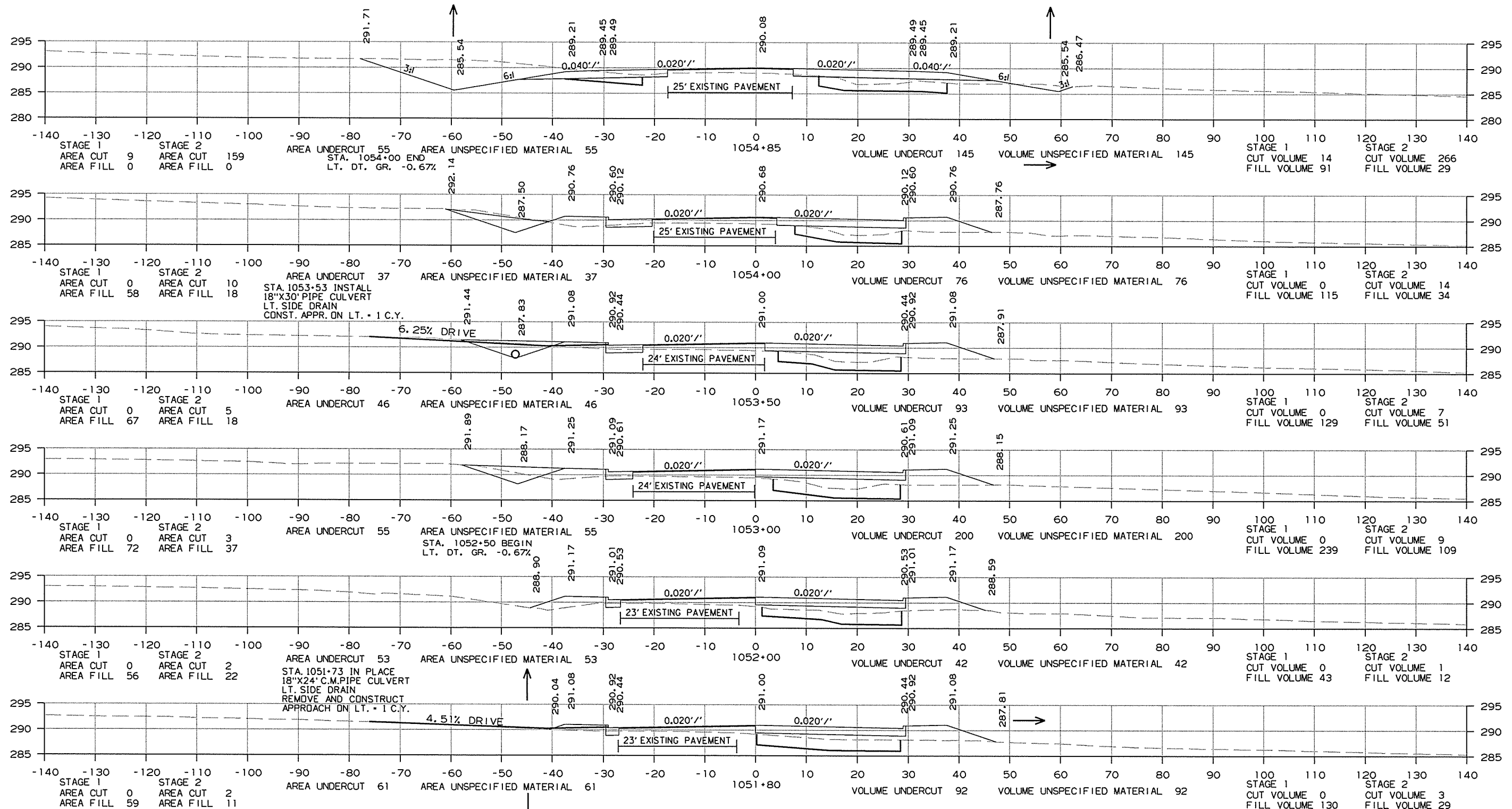
CROSS SECTION STA. 1049+00 TO STA. 1051+35

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	268	311

2 CROSS SECTIONS



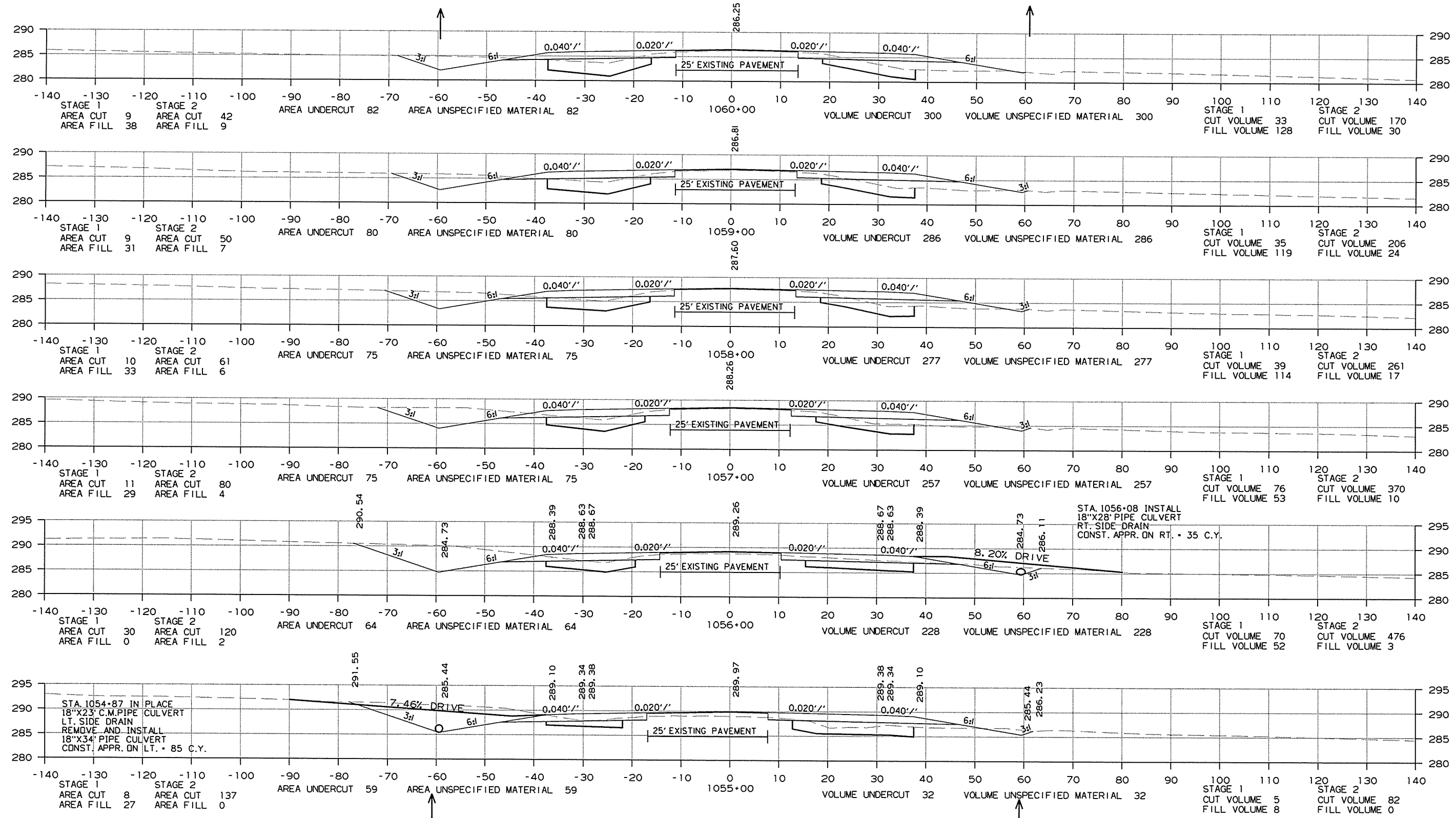
CROSS SECTION STA. 1051+80 TO STA. 1054+85

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						012155	269	311

② CROSS SECTIONS

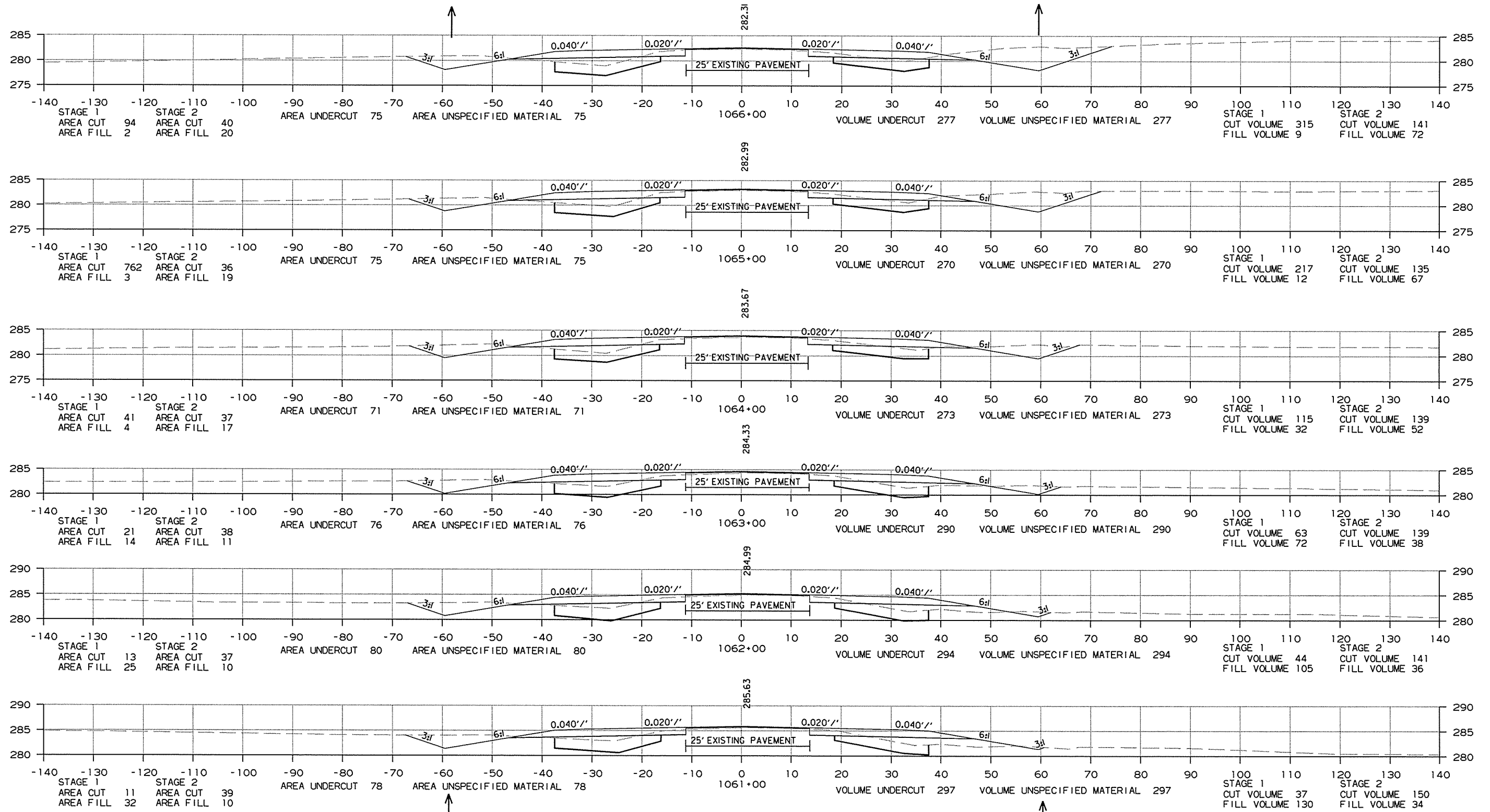


CROSS SECTION STA. 1055+00 TO STA. 1060+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		270	311

2 CROSS SECTIONS



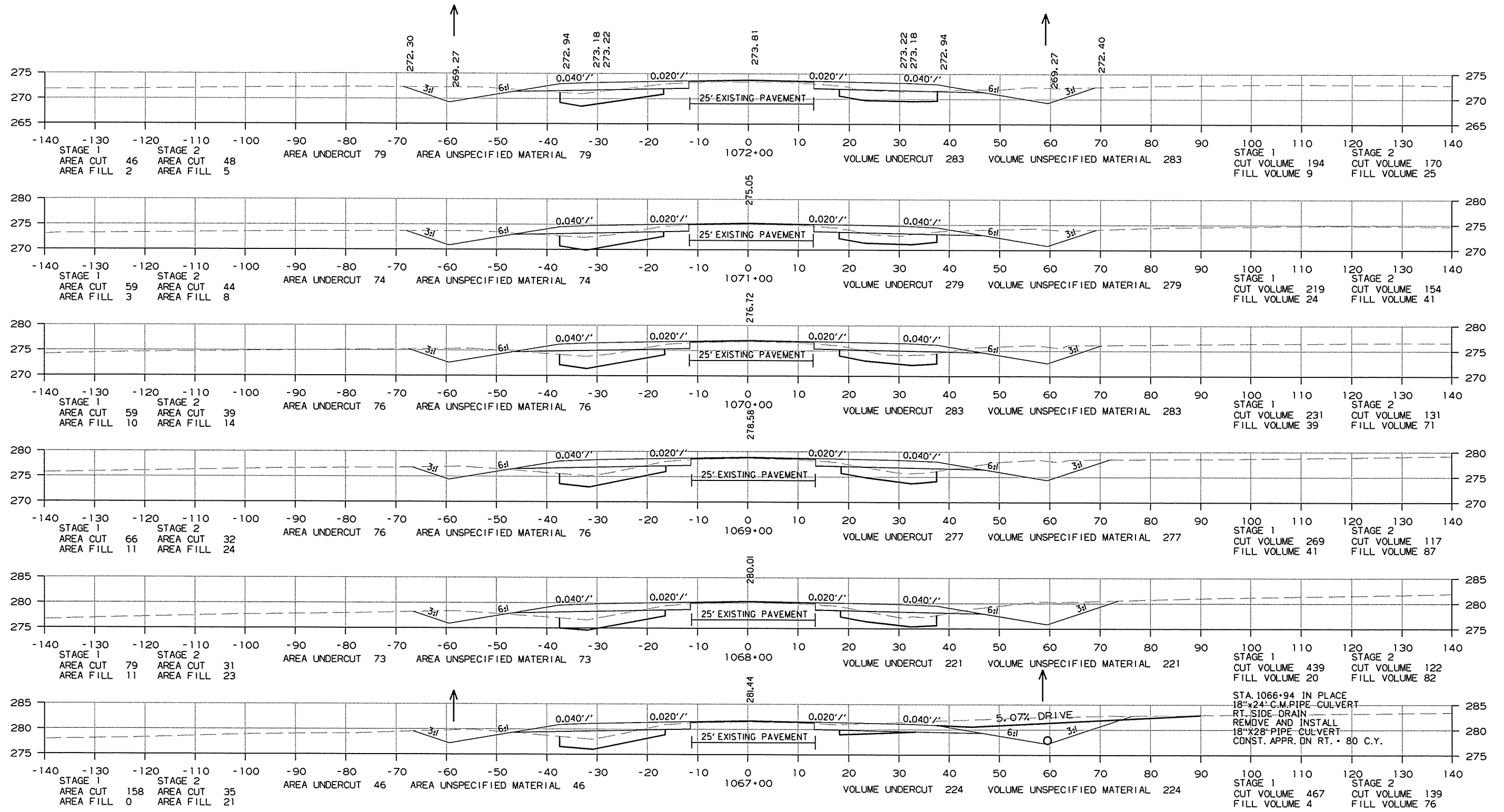
CROSS SECTION STA. 1061+00 TO STA. 1066+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							271	311

2 CROSS SECTIONS



STA. 1066+94 IN PLACE
18"x24" C.M. PIPE-CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18"x28" PIPE-CULVERT
CONST. APPR. ON RT. - 80 C.Y.

CROSS SECTION STA. 1067+00 TO STA. 1072+00

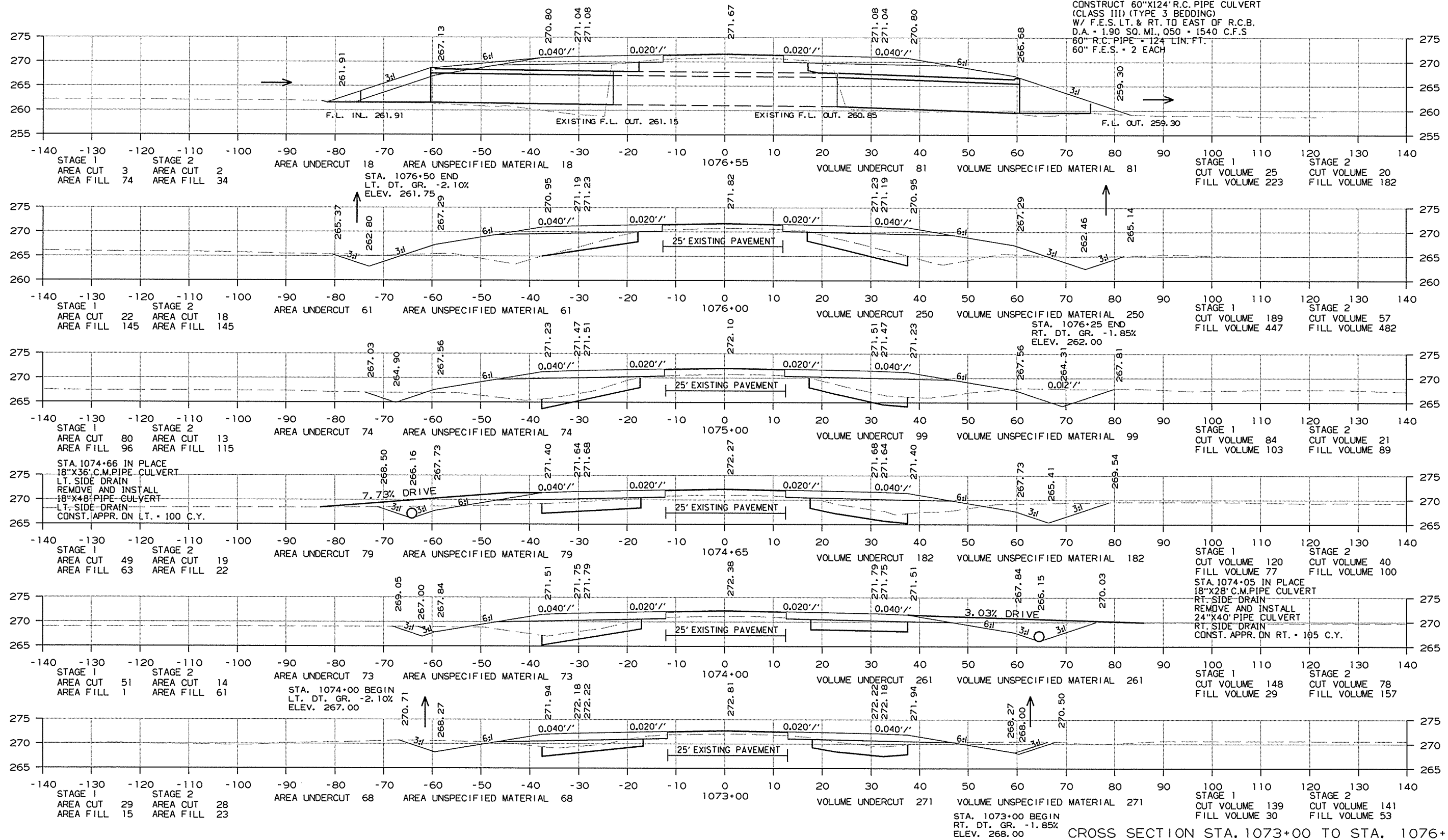
11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	272 311

2 CROSS SECTIONS

STA. 1076+55 IN PLACE
 DBL. 12'X6'X46' R.C. BOX CULVERT
 RETAIN AND EXTEND 38' LT. & 38' RT.
 W/ 3:1 WINGS
 CONSTRUCT 60"X124' R.C. PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 W/ F.E.S. LT. & RT. TO EAST OF R.C.B.
 D.A. = 1.90 SO. MI., 050 = 1540 C.F.S
 60" R.C. PIPE = 124' LIN. FT.
 60" F.E.S. = 2 EACH

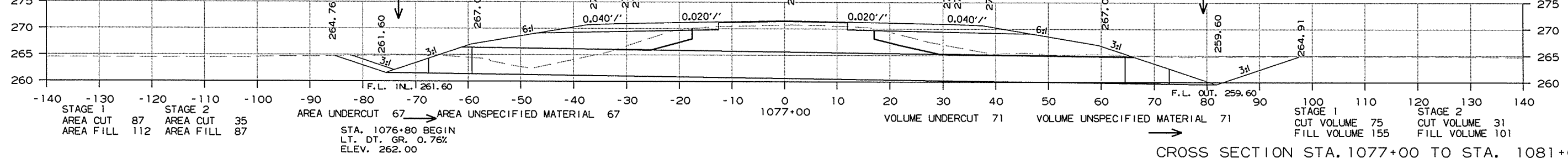
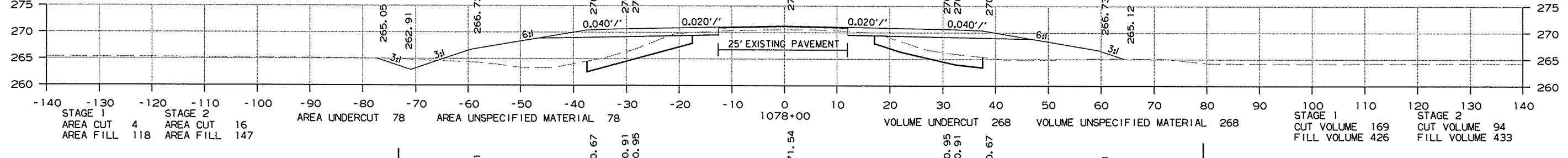
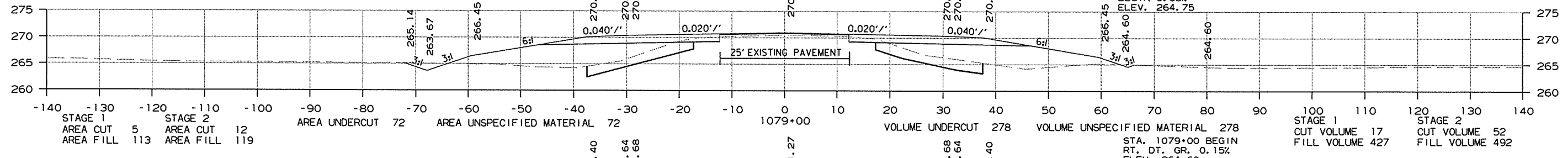
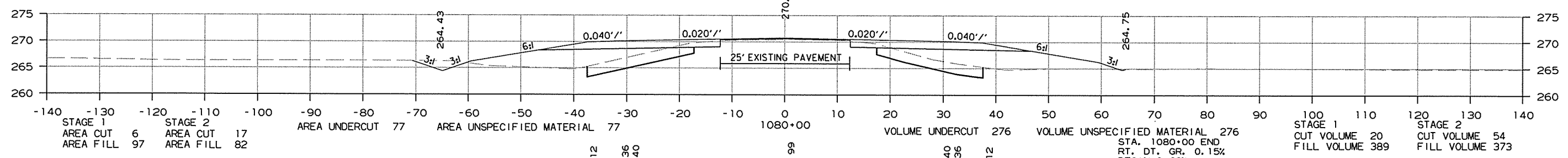
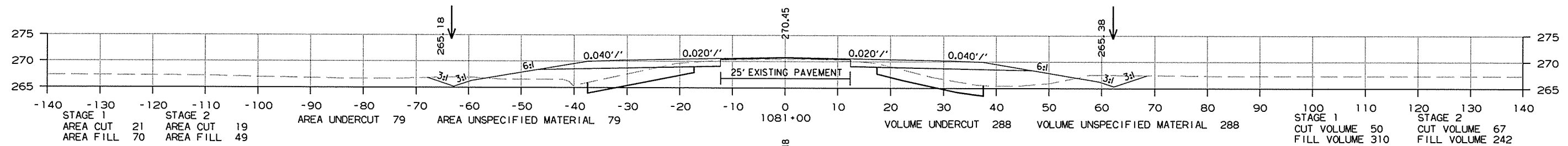


11/6/2013
 R012155.DGN

CROSS SECTION STA. 1073+00 TO STA. 1076+55

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	273	311

2 CROSS SECTIONS



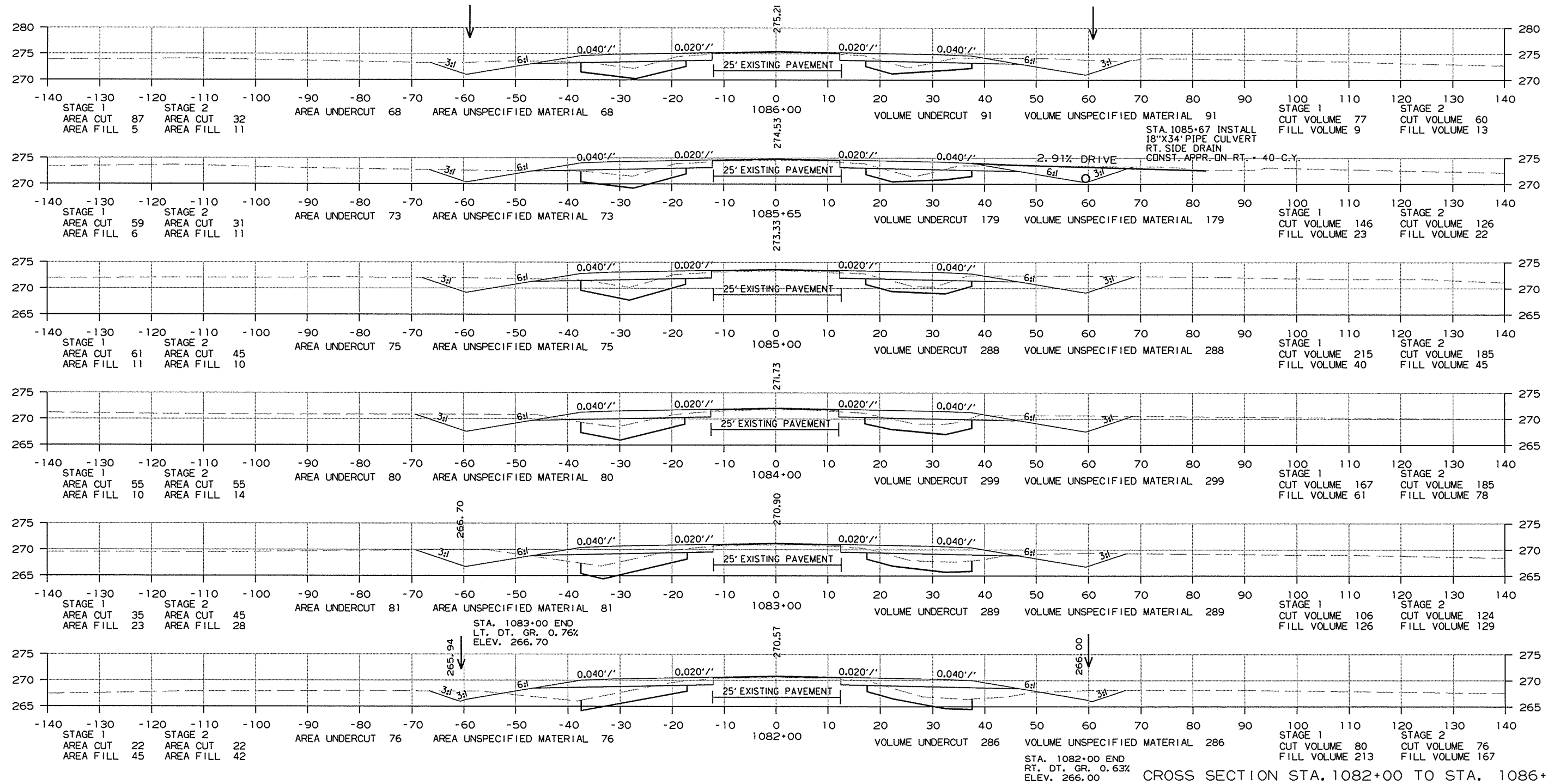
CROSS SECTION STA. 1077+00 TO STA. 1081+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	012155
							SHEET NO.	274
							TOTAL SHEETS	311

2 CROSS SECTIONS



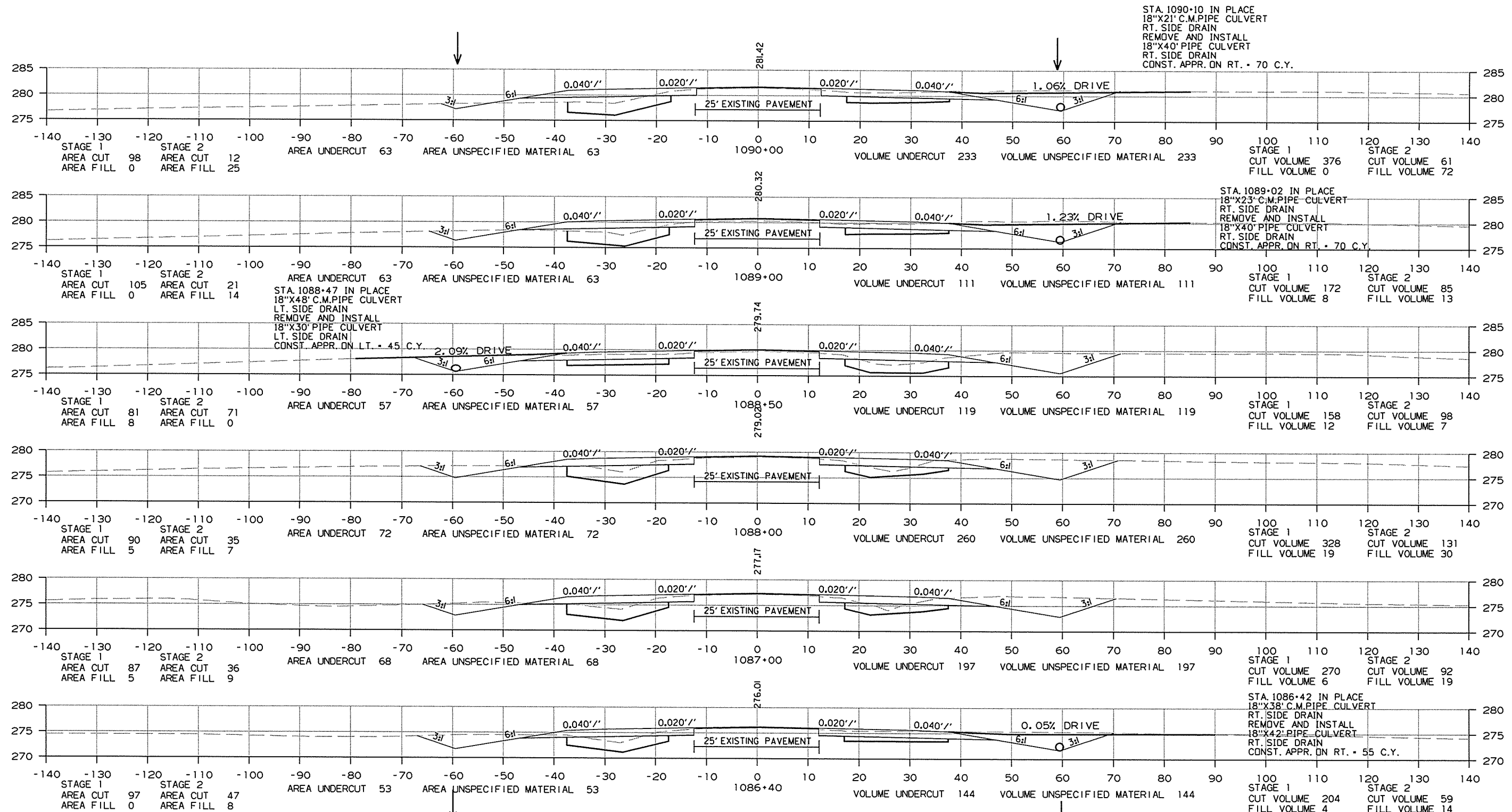
CROSS SECTION STA. 1082+00 TO STA. 1086+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	275 311

2 CROSS SECTIONS



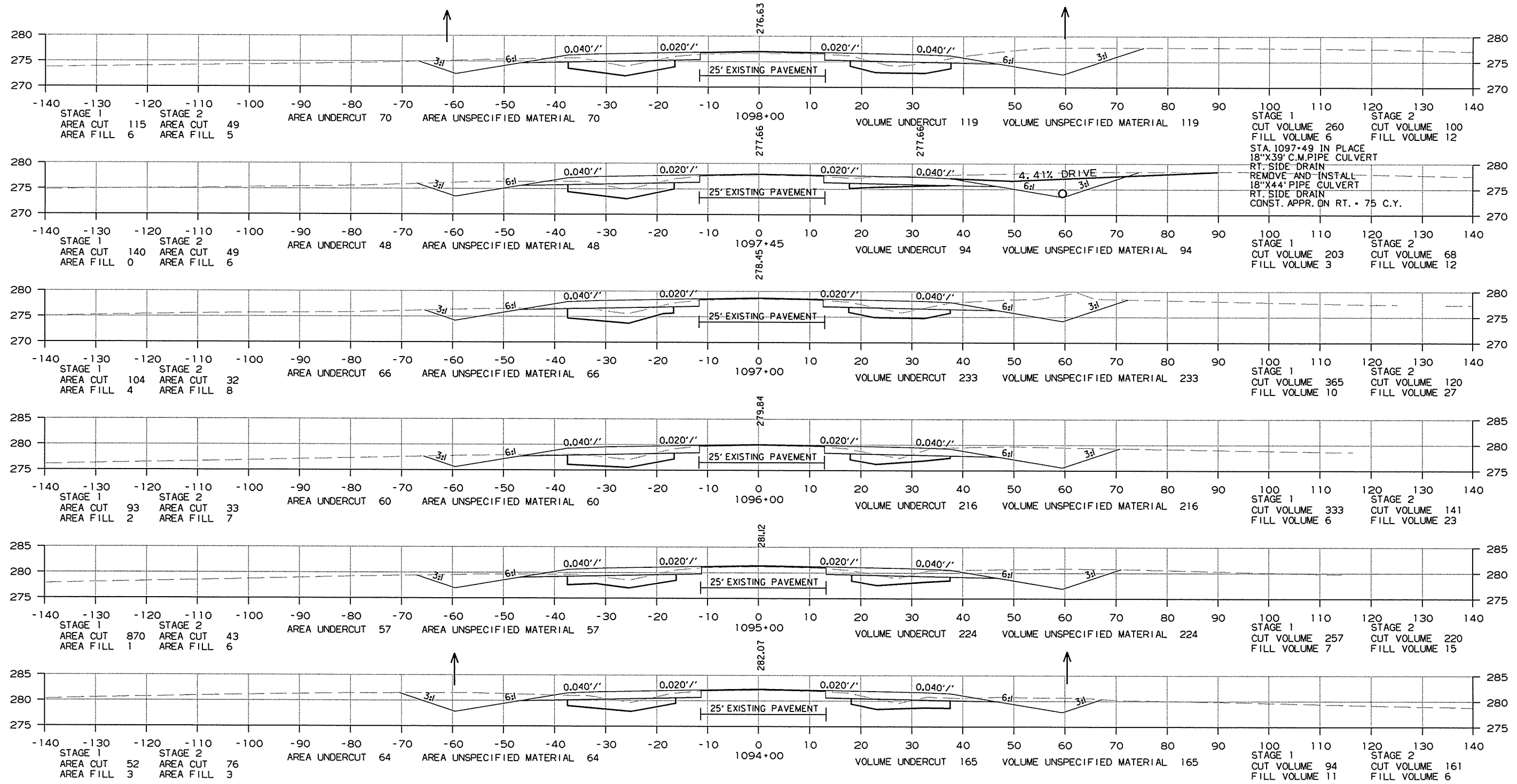
CROSS SECTION STA. 1086+40 TO STA. 1090+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		277	311

2 CROSS SECTIONS



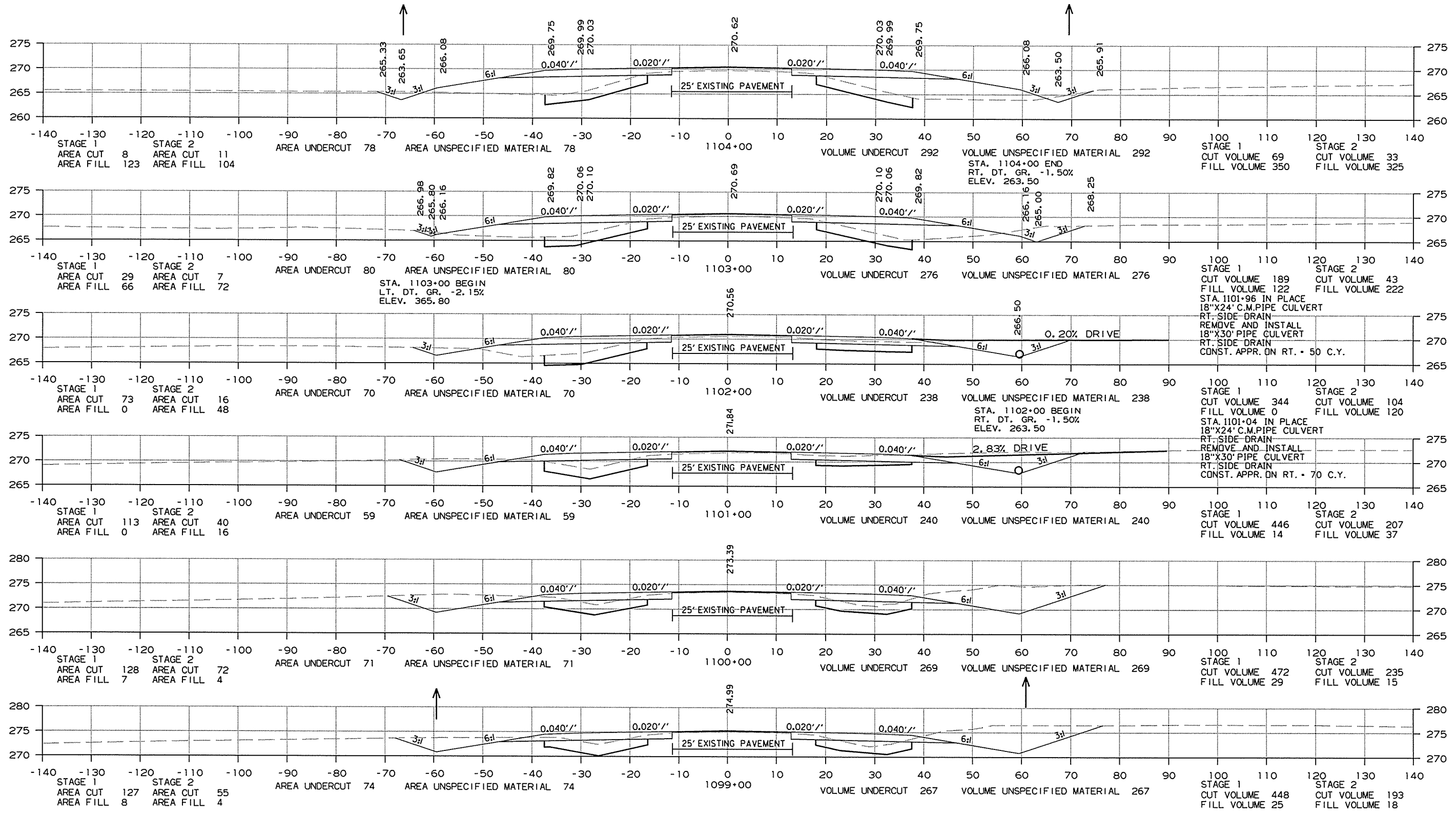
CROSS SECTION STA. 1094+00 TO STA. 1098+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	278 311

2 CROSS SECTIONS

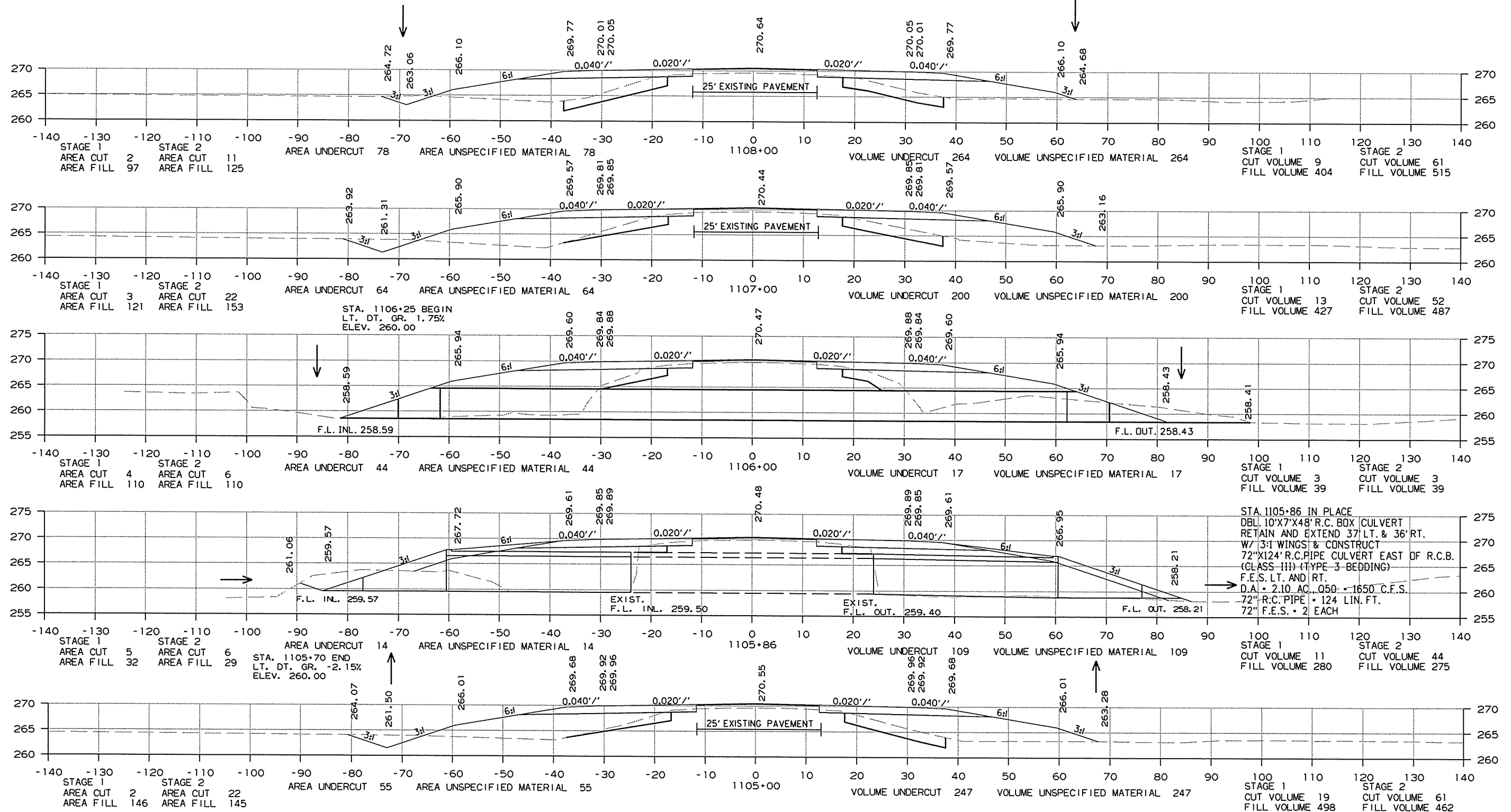


CROSS SECTION STA. 1099+00 TO STA. 1104+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	279 311

2 CROSS SECTIONS



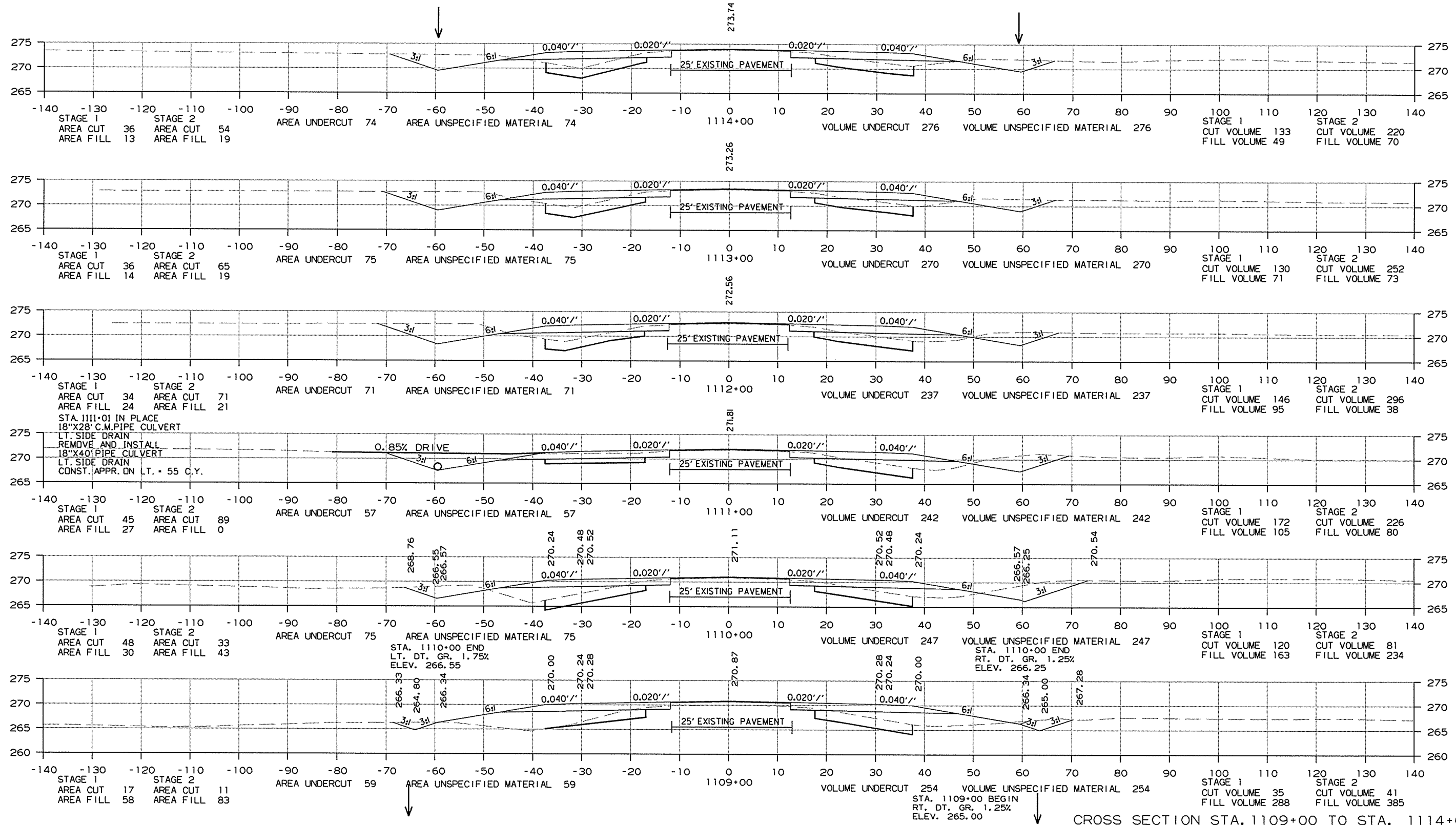
CROSS SECTION STA. 1105+00 TO STA. 1108+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	280	311

2 CROSS SECTIONS



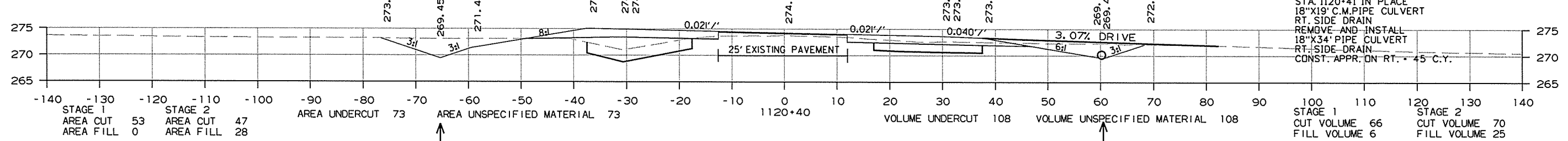
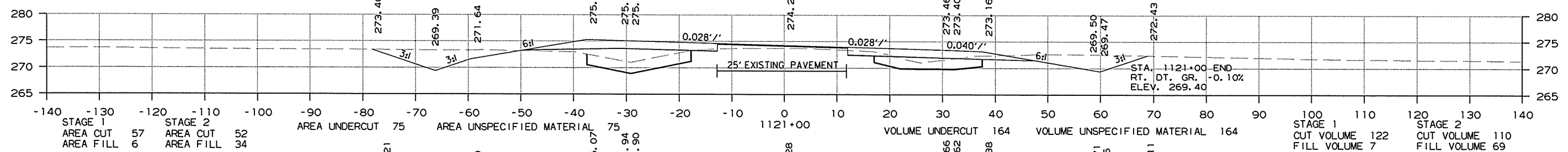
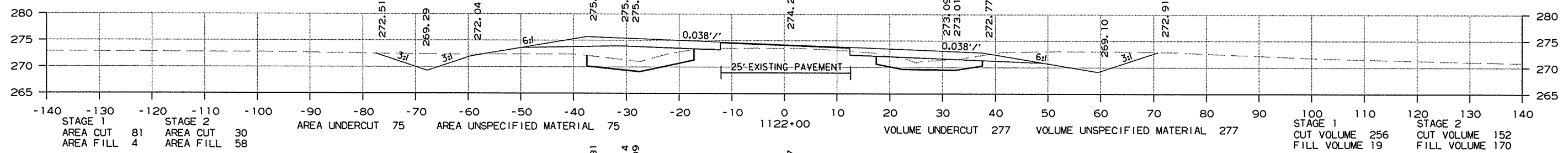
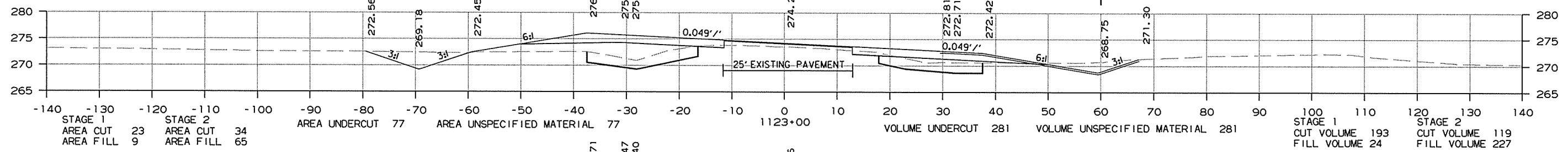
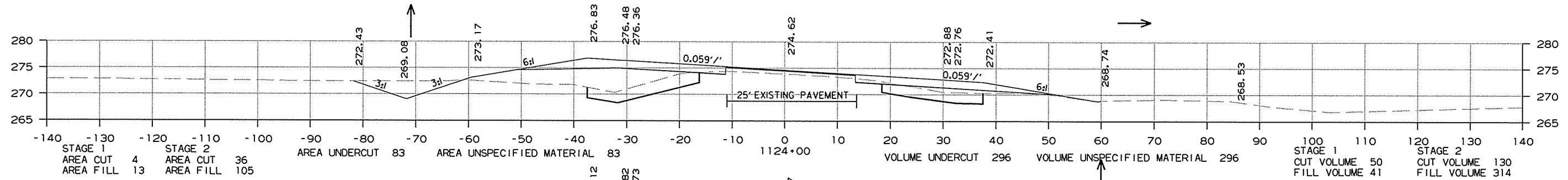
CROSS SECTION STA. 1109+00 TO STA. 1114+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		012155	282	311

2 CROSS SECTIONS



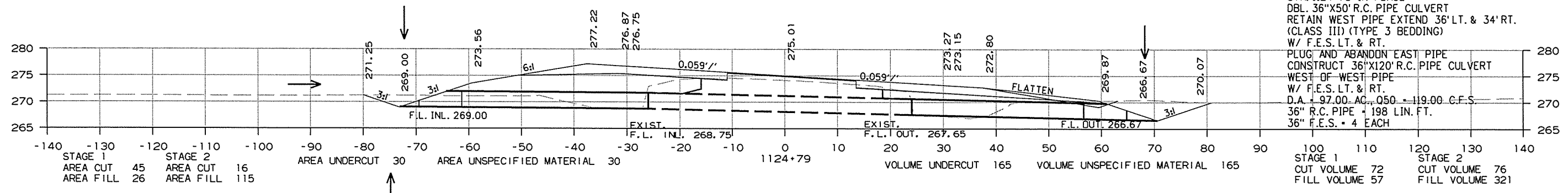
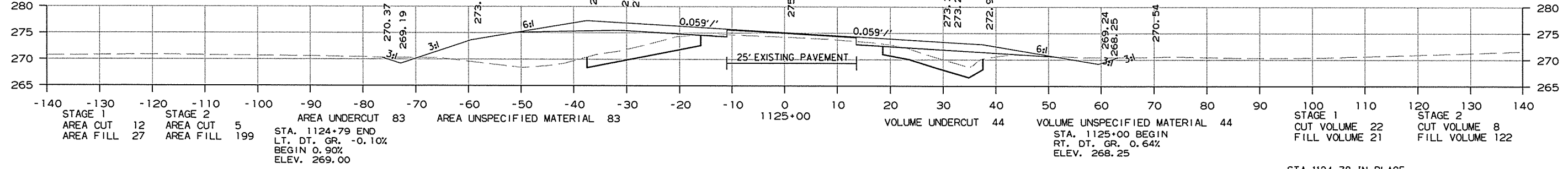
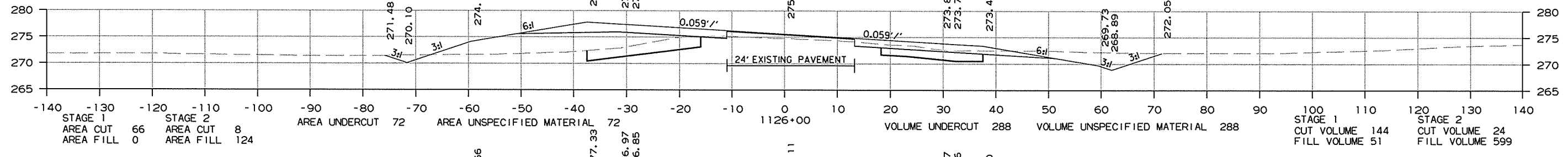
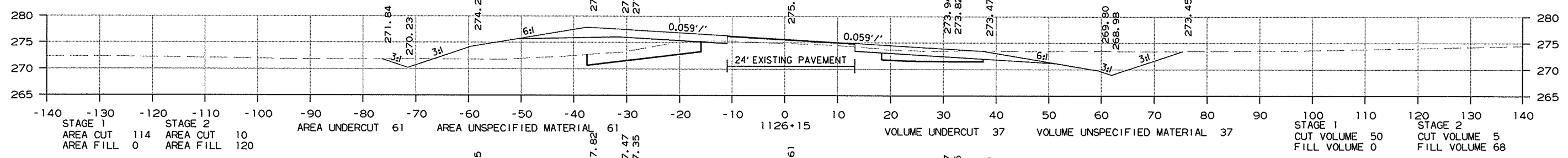
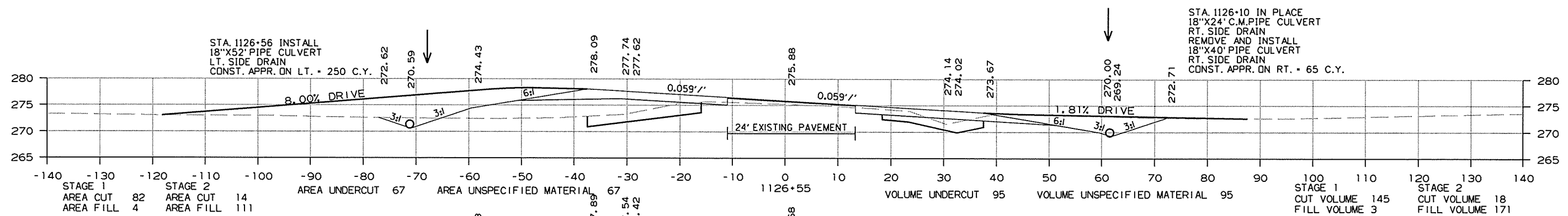
CROSS SECTION STA. 1120+40 TO STA. 1124+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	283 311

2 CROSS SECTIONS

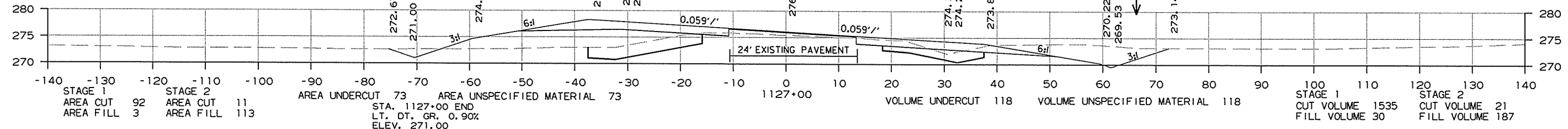
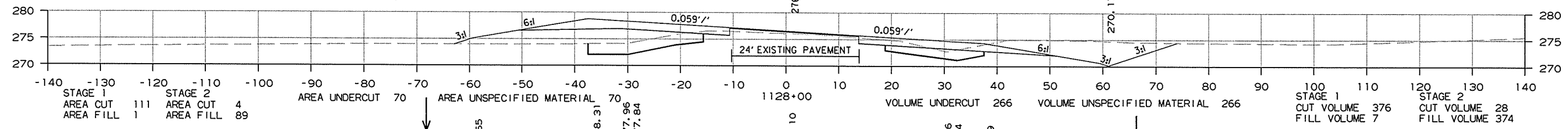
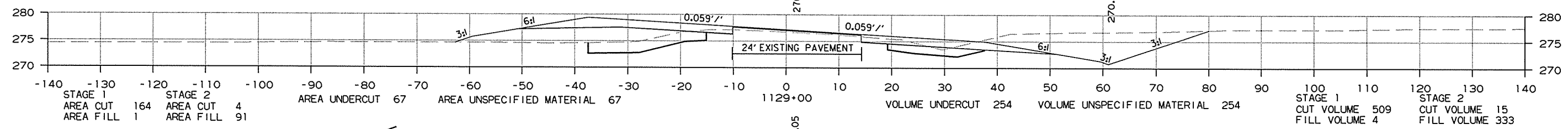
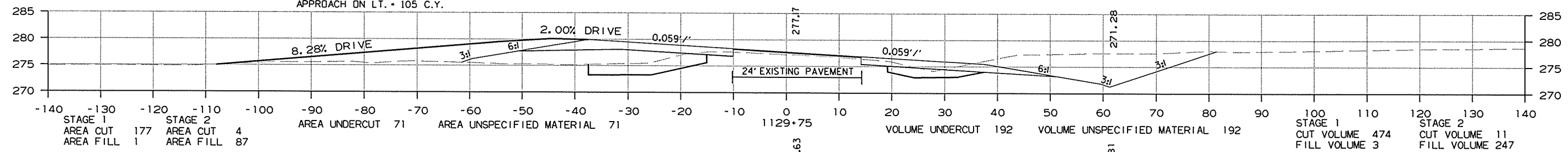
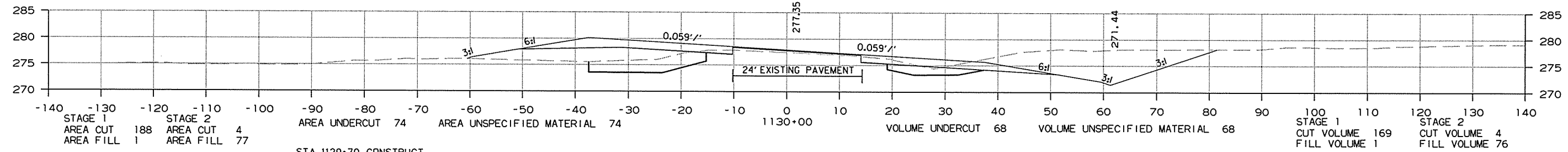
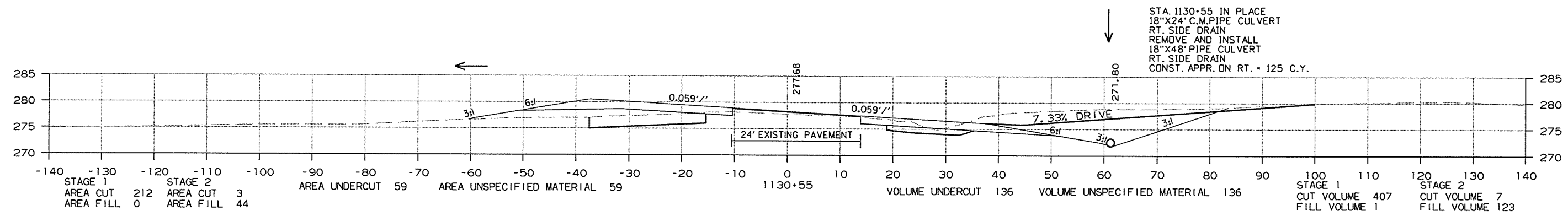


CROSS SECTION STA. 1124+79 TO STA. 1126+55

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
01/05/2016				6	ARK.			
						JOB NO. 012155	284	311

2 CROSS SECTIONS



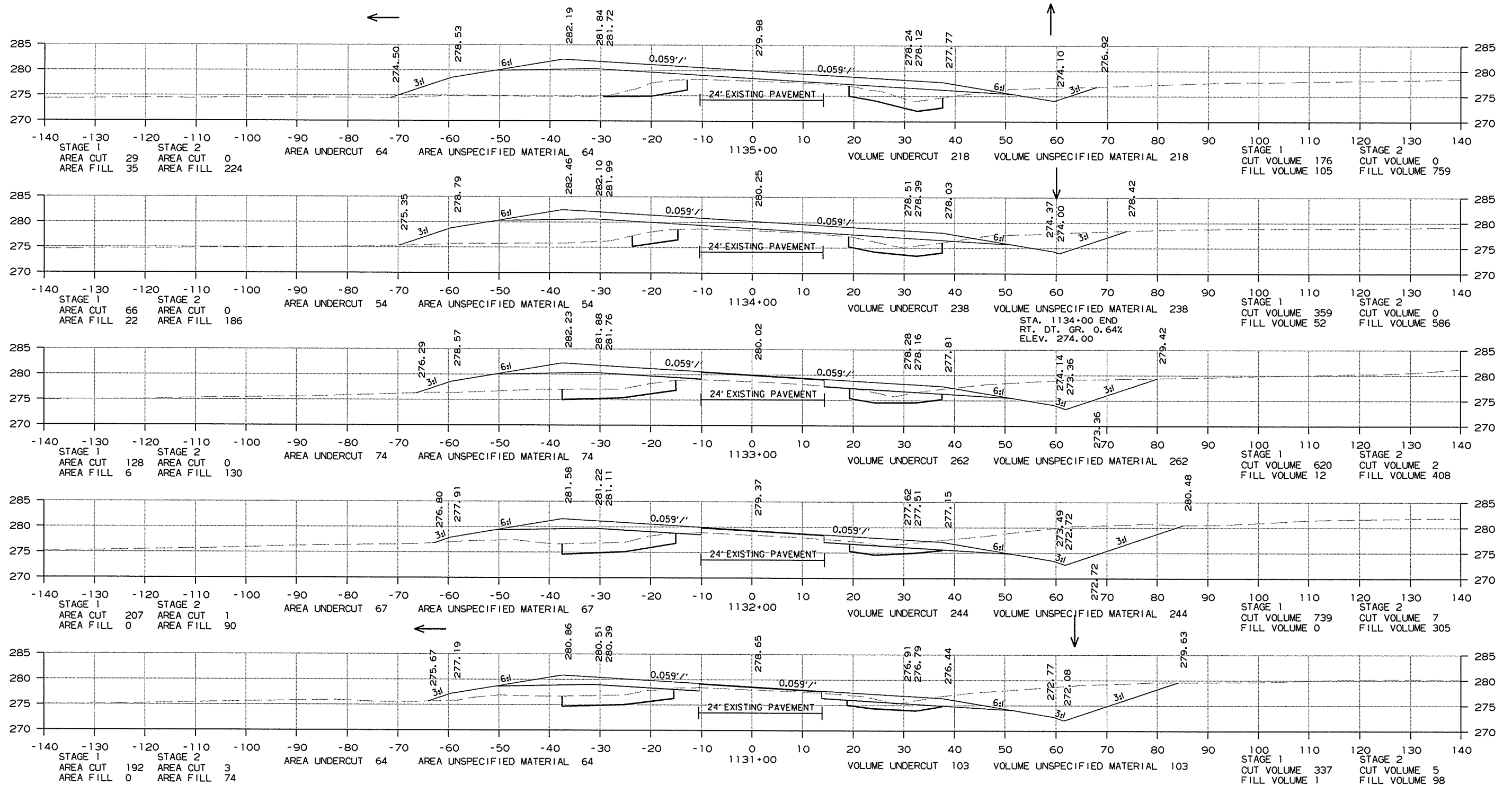
CROSS SECTION STA. 1127+00 TO STA. 1130+55

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							285	311

2 CROSS SECTIONS



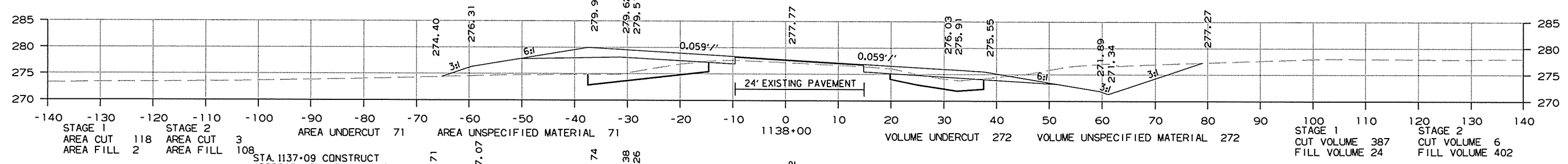
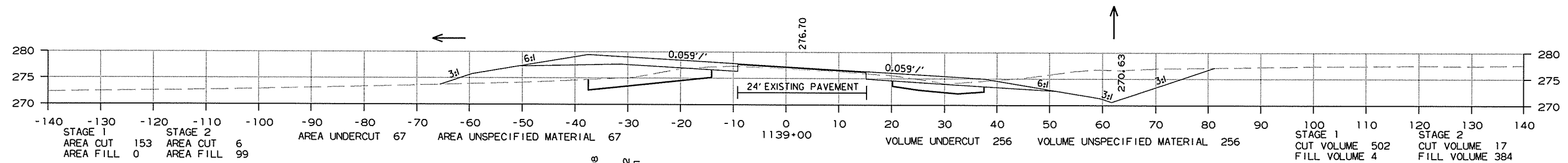
CROSS SECTION STA. 1131+00 TO STA. 1135+00

11/6/2013

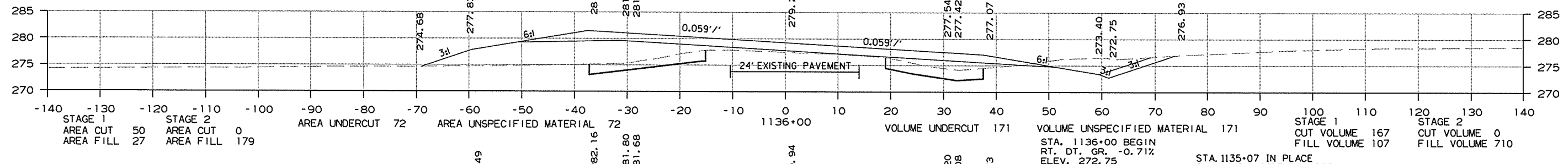
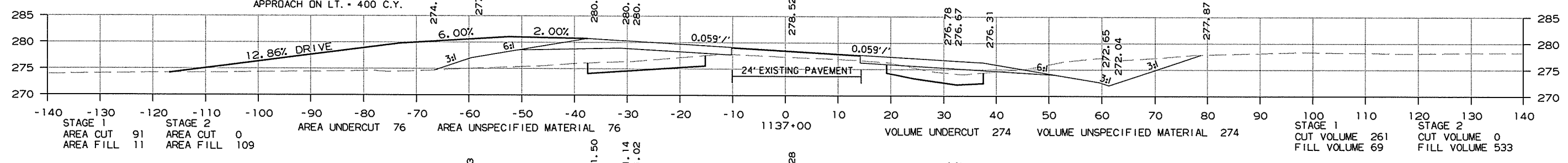
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	286 311

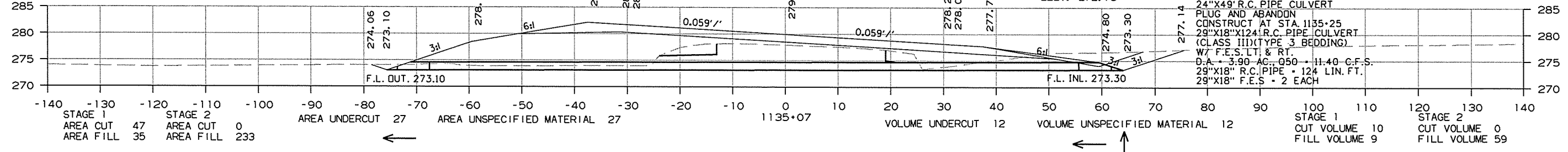
2 CROSS SECTIONS



STA. 1137+09 CONSTRUCT APPROACH ON LT. - 400 C.Y.



STA. 1136+00 BEGIN RT. DT. GR. -0.71% ELEV. 272.75



STA. 1135+07 IN PLACE 24"X49' R.C. PIPE CULVERT PLUG AND ABANDON CONSTRUCT AT STA. 1135+25 29"X18"X124' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) W/ F.E.S. LT. & RT. D.A. - 3.90 AC., Q50 - 11.40 C.F.S. 29"X18" R.C. PIPE - 124 LIN. FT. 29"X18" F.E.S. - 2 EACH

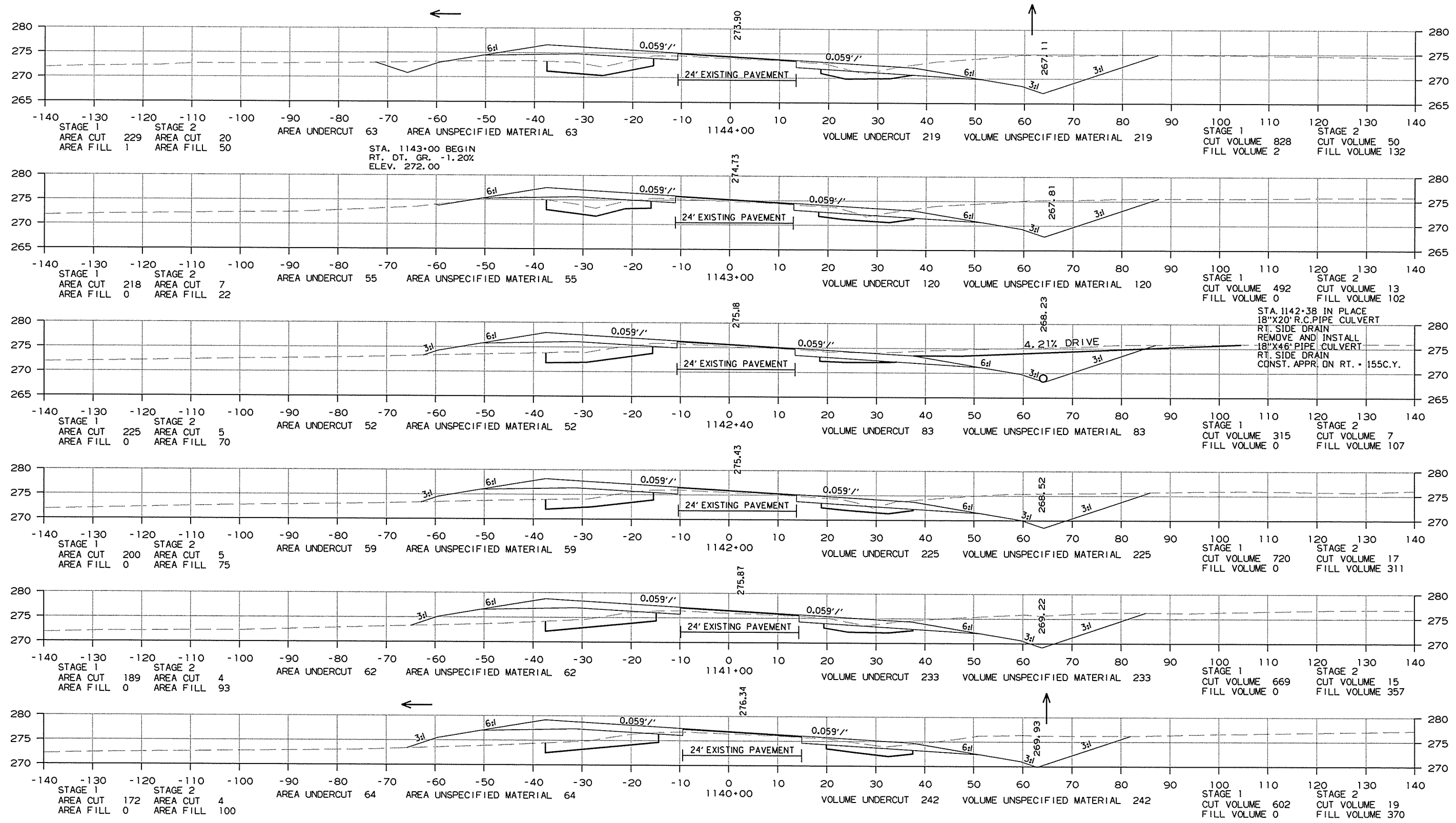
CROSS SECTION STA. 1135+07 TO STA. 1139+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							287	311

2 CROSS SECTIONS

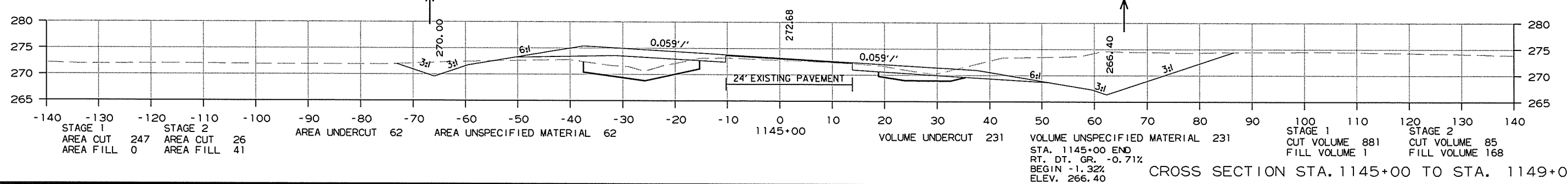
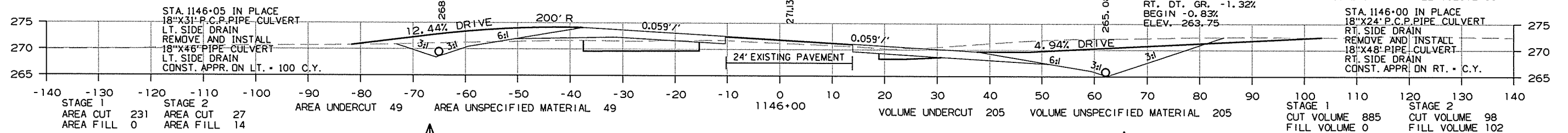
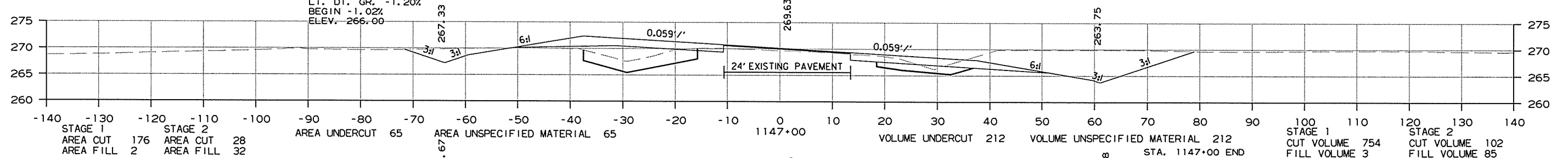
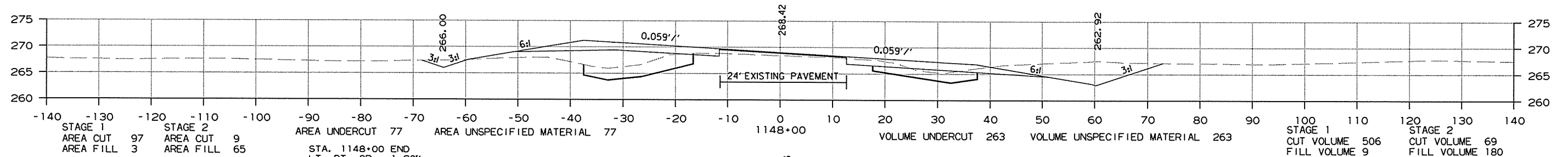
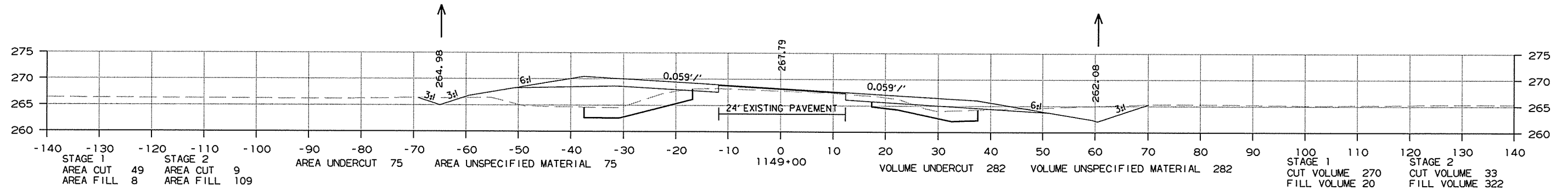


CROSS SECTION STA. 1140+00 TO STA. 1144+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							288	311

2 CROSS SECTIONS



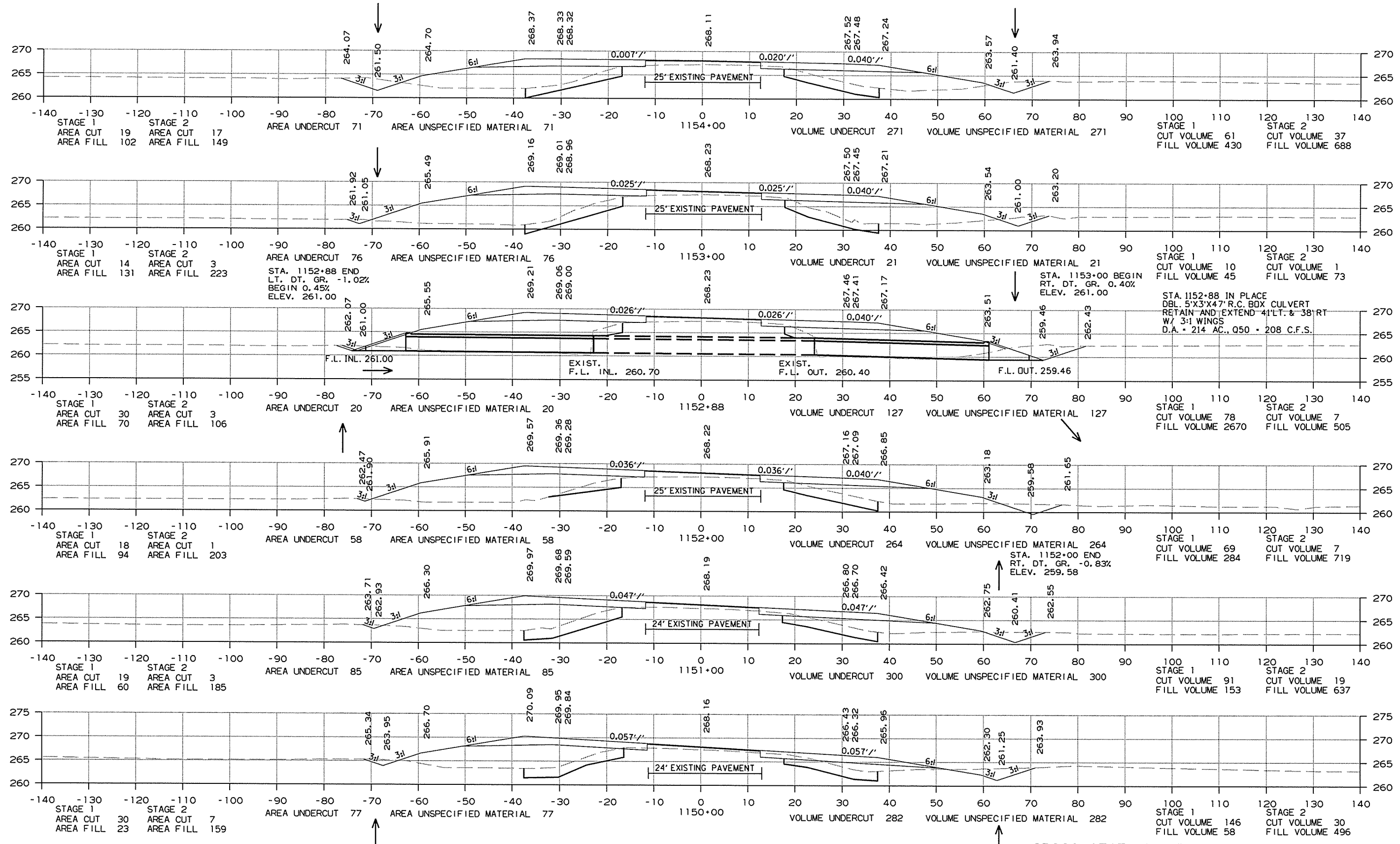
CROSS SECTION STA. 1145+00 TO STA. 1149+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							289	311

2 CROSS SECTIONS

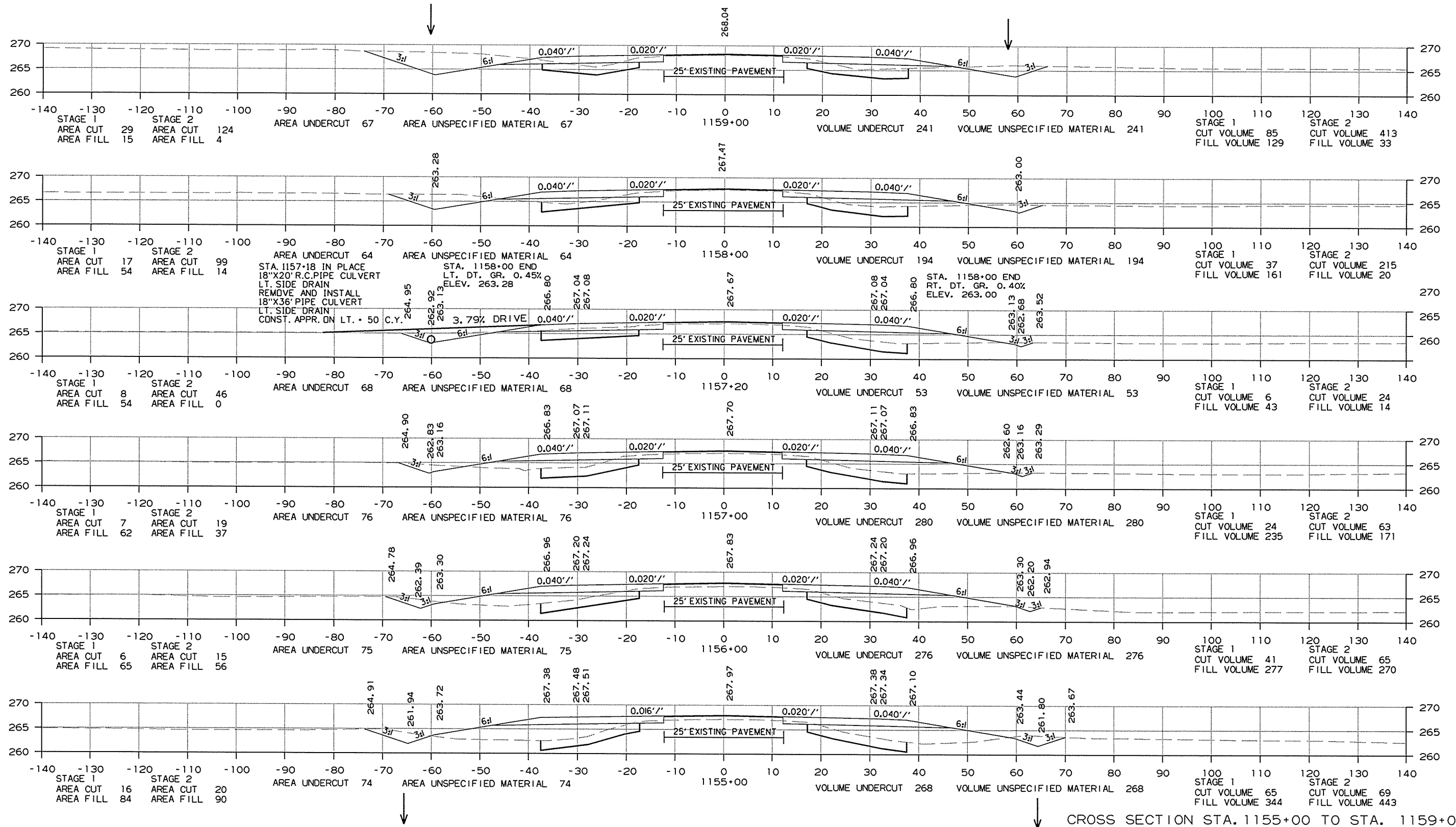


CROSS SECTION STA. 1150+00 TO STA. 1154+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		290	311

2 CROSS SECTIONS



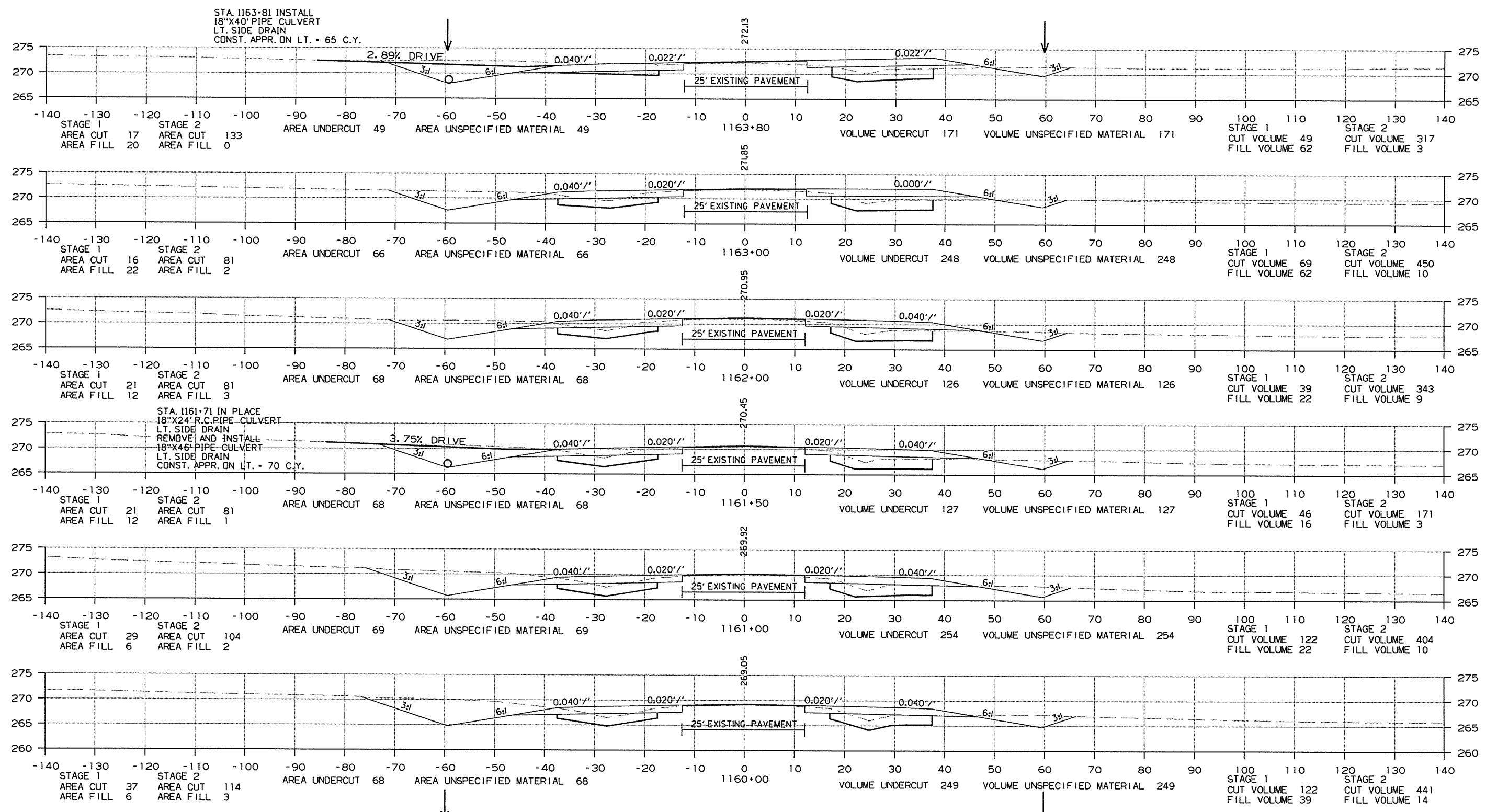
CROSS SECTION STA. 1155+00 TO STA. 1159+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	291	311

2 CROSS SECTIONS

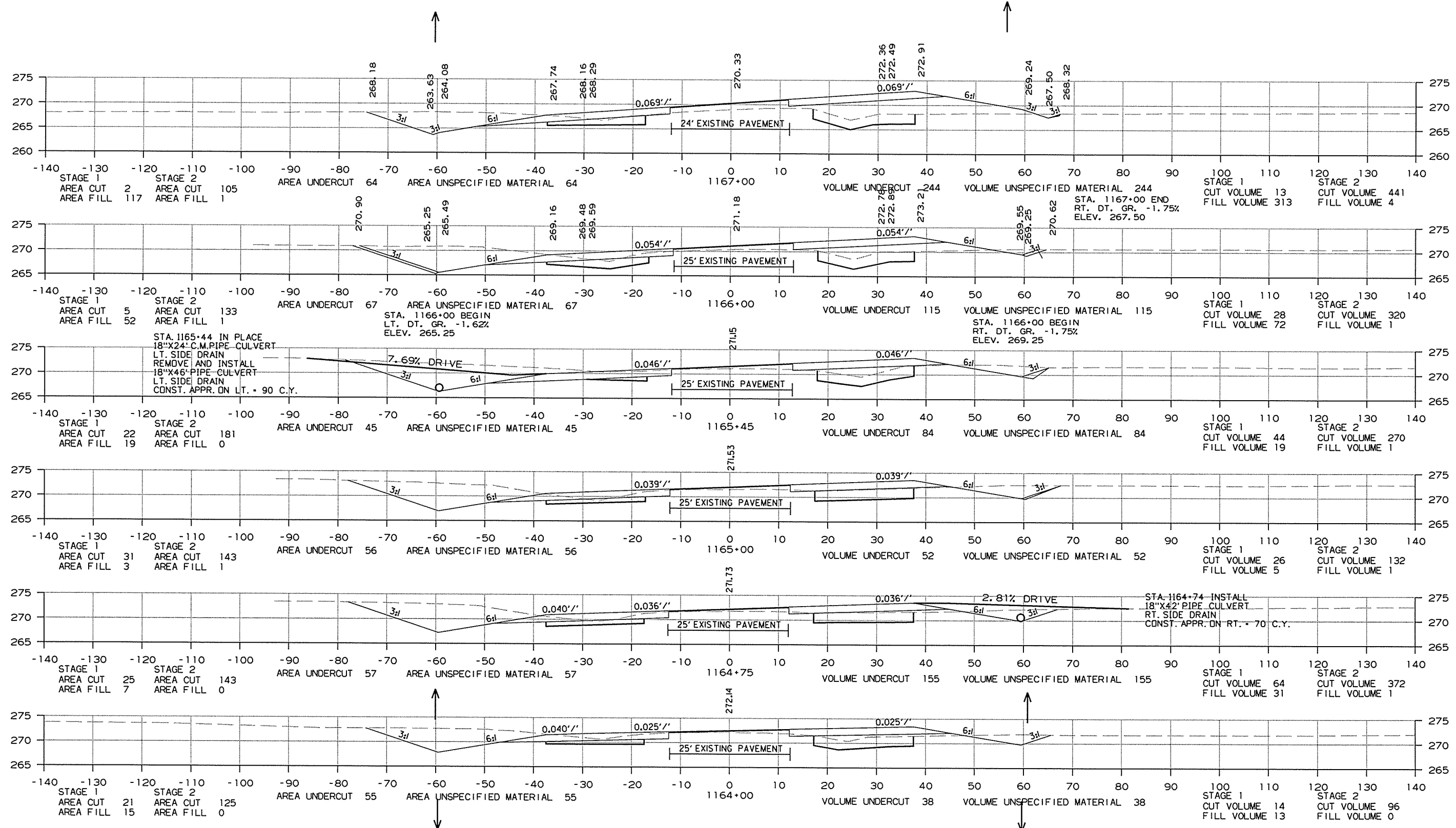


CROSS SECTION STA. 1160+00 TO STA. 1163+80

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	292	311

2 CROSS SECTIONS

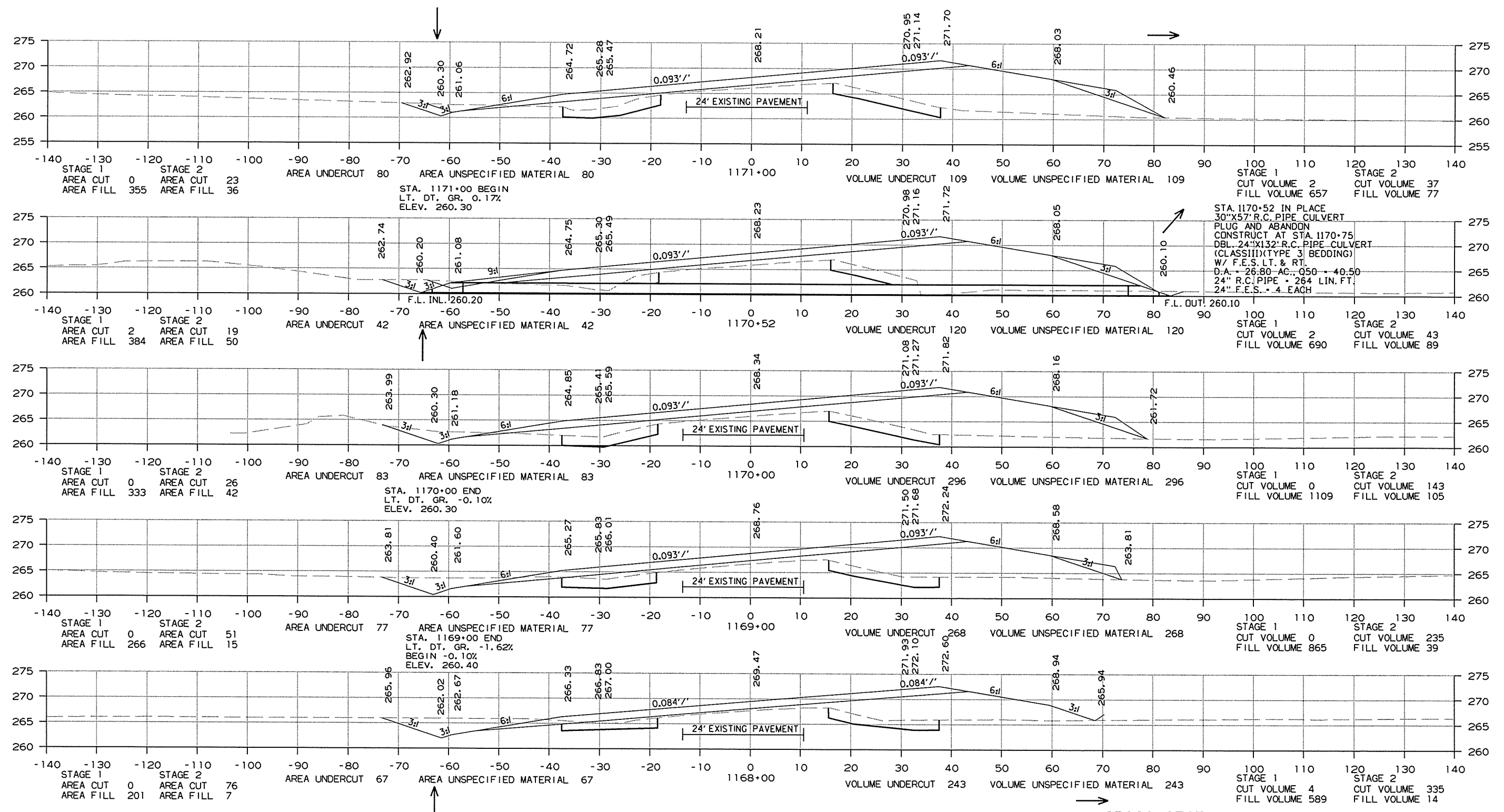


CROSS SECTION STA. 1164+00 TO STA. 1167+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155	293	311	

2 CROSS SECTIONS

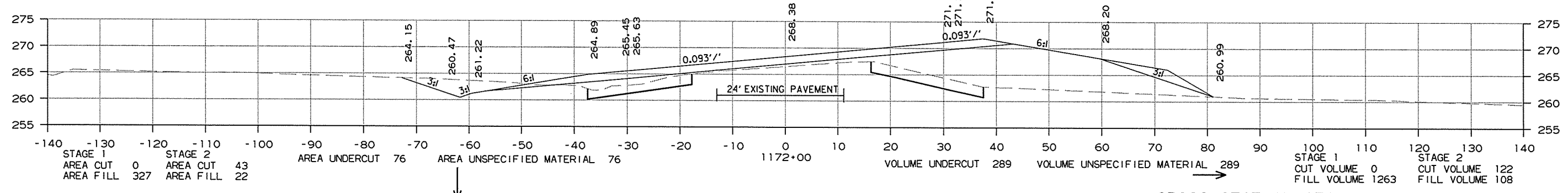
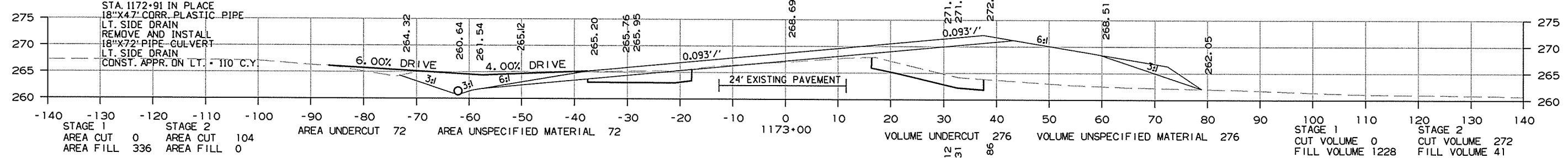
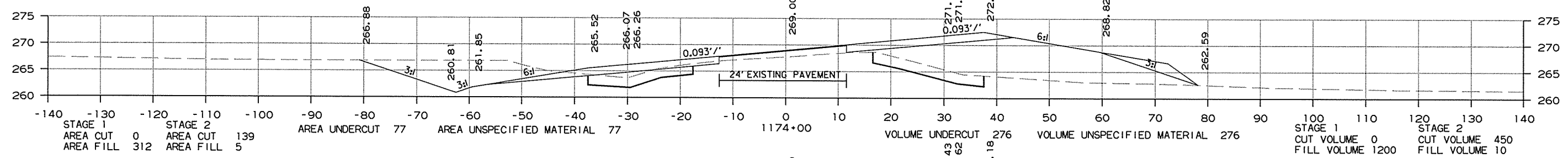
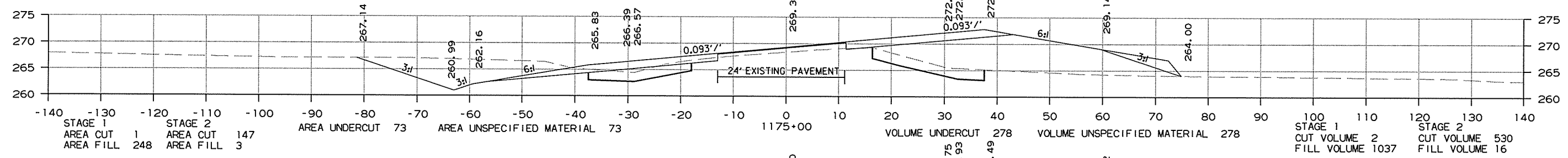
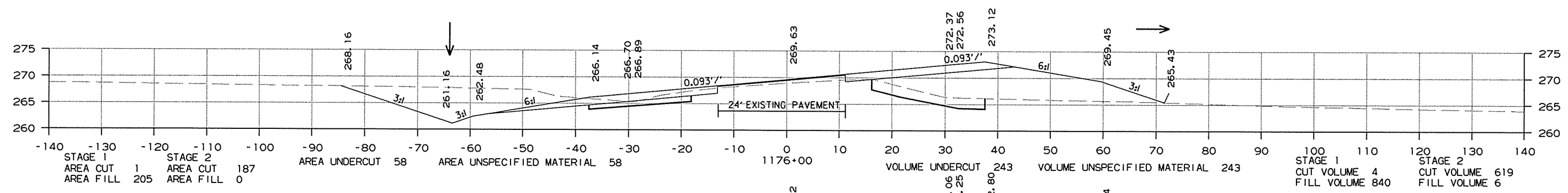


CROSS SECTION STA. 1168+00 TO STA. 1171+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	294	311

2 CROSS SECTIONS

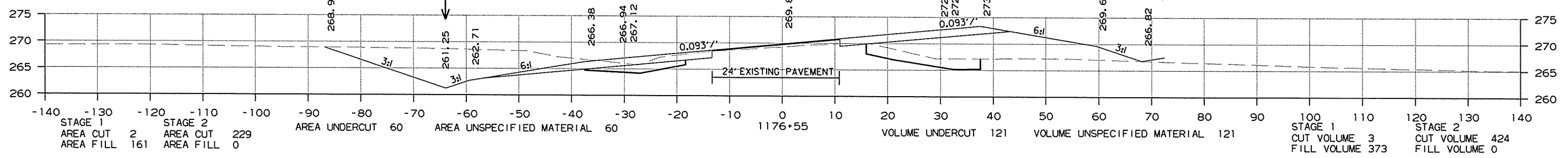
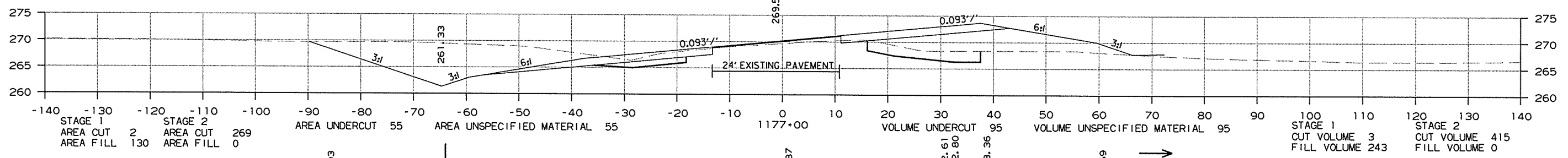
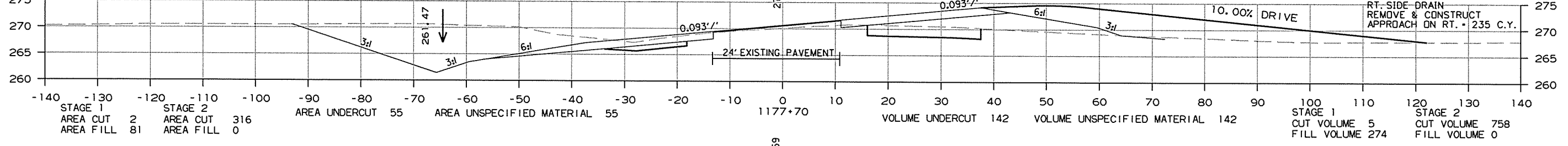
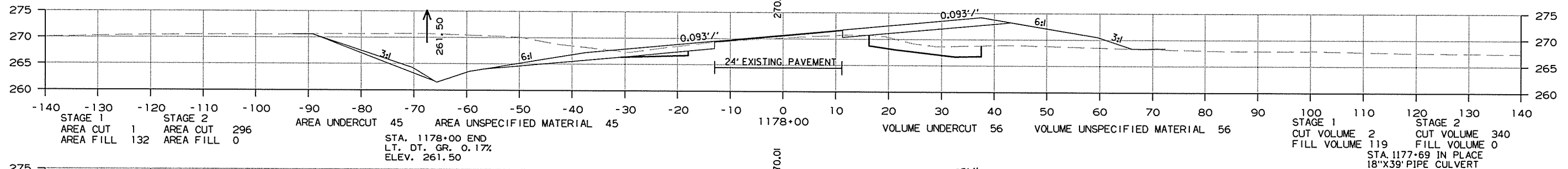
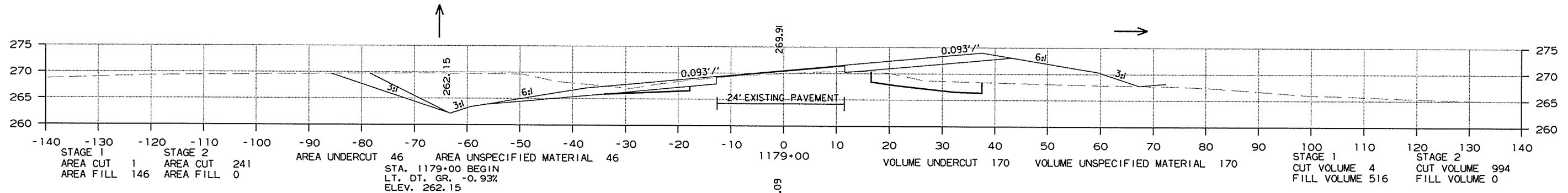


CROSS SECTION STA. 1172+00 TO STA. 1176+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	295 311

2 CROSS SECTIONS

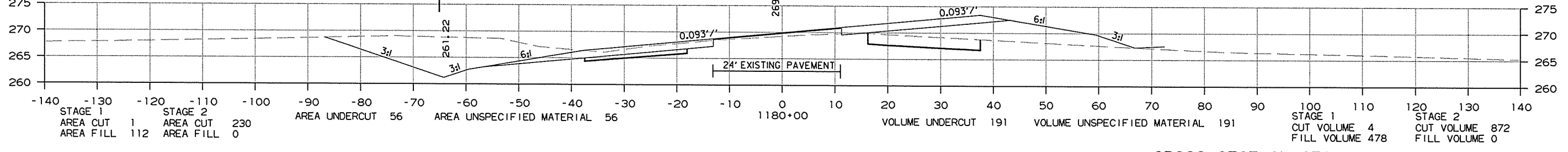
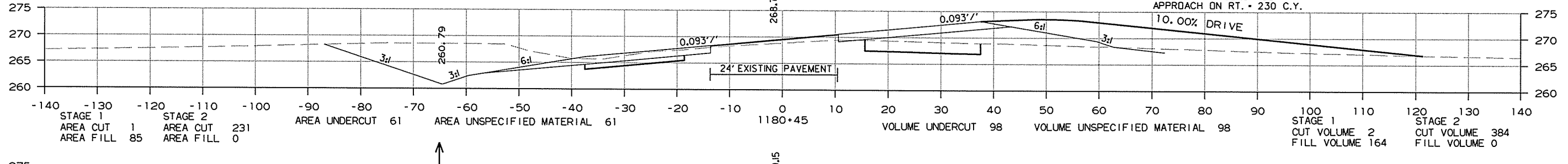
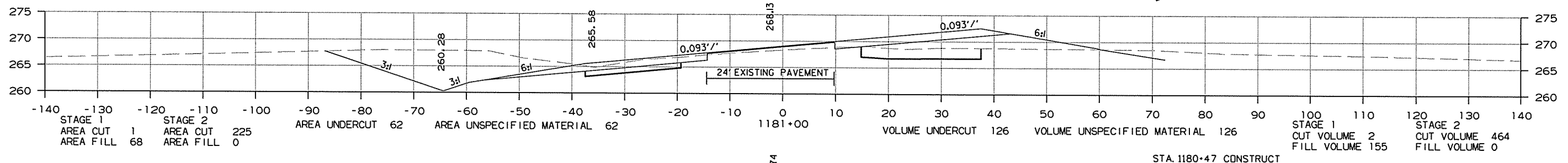
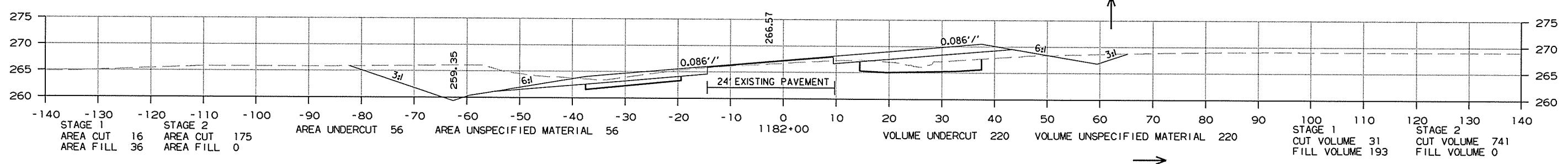
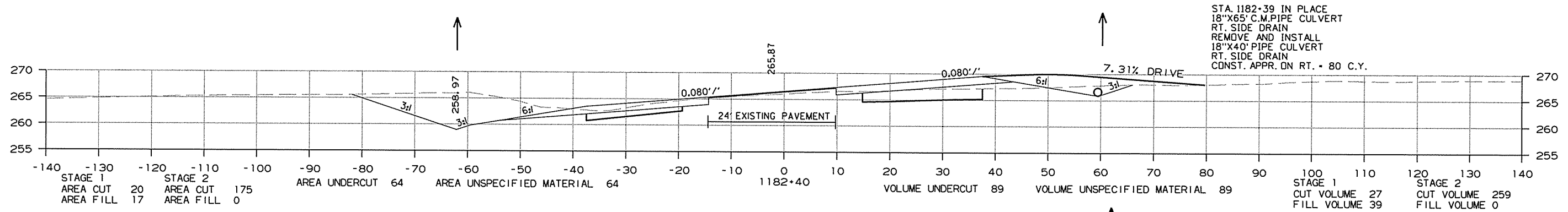


CROSS SECTION STA. 1176+55 TO STA. 1179+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	296 311

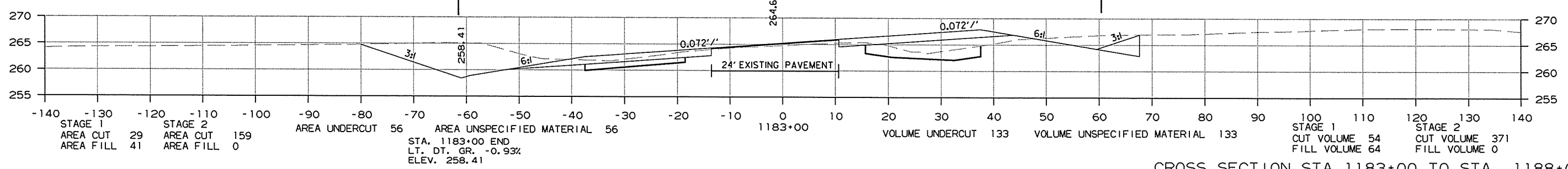
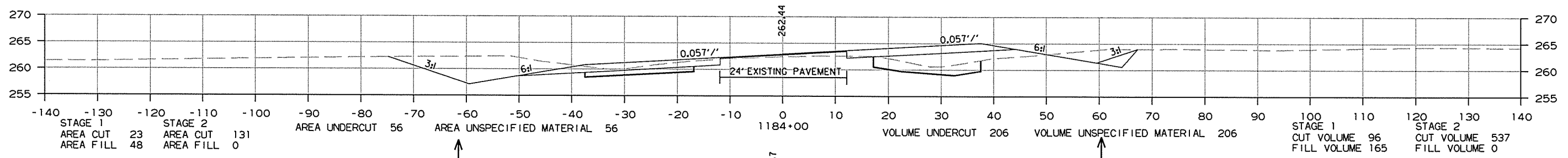
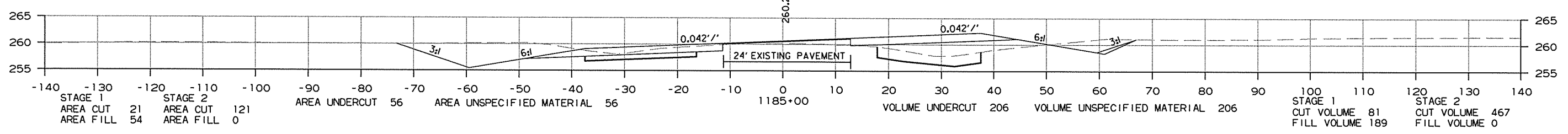
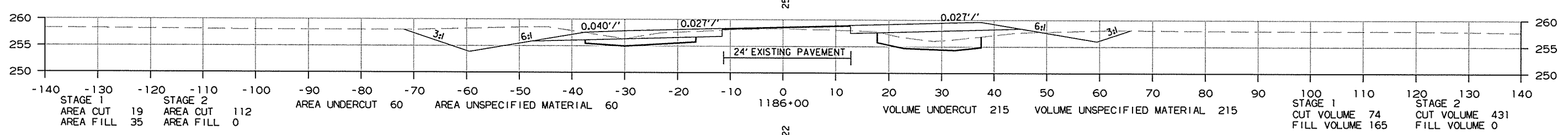
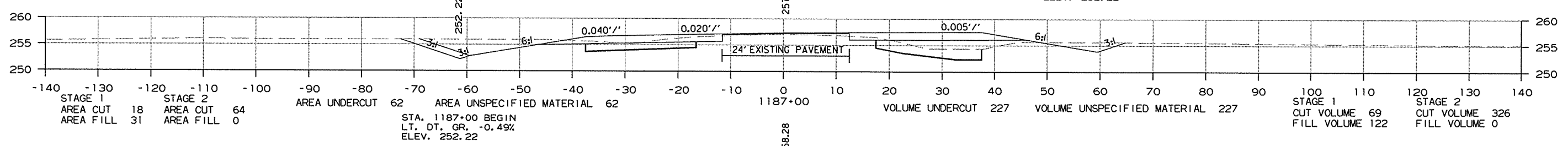
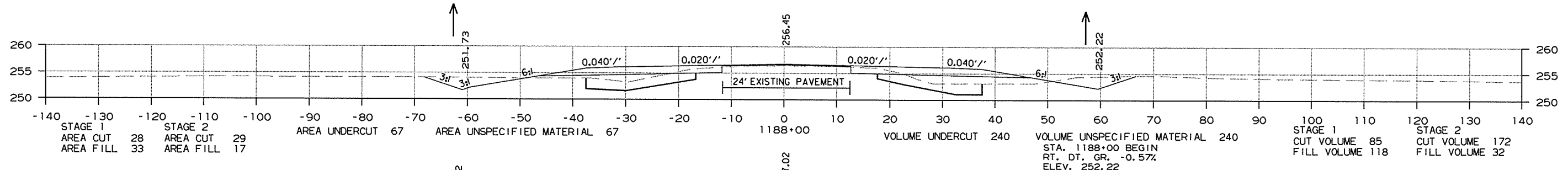
2 CROSS SECTIONS



CROSS SECTION STA. 1180+00 TO STA. 1182+40

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 012155	297 311

2 CROSS SECTIONS

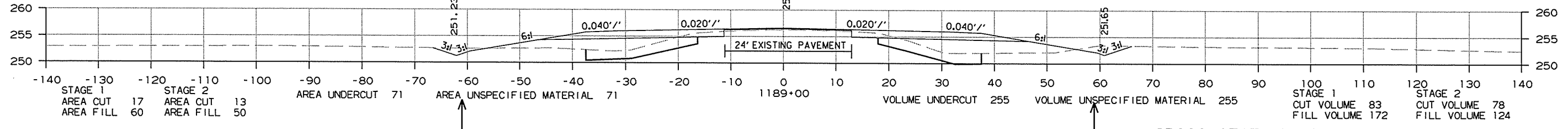
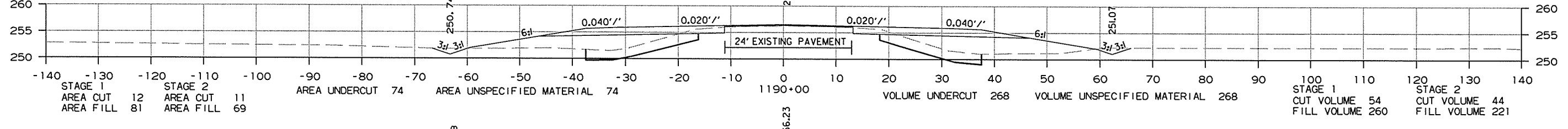
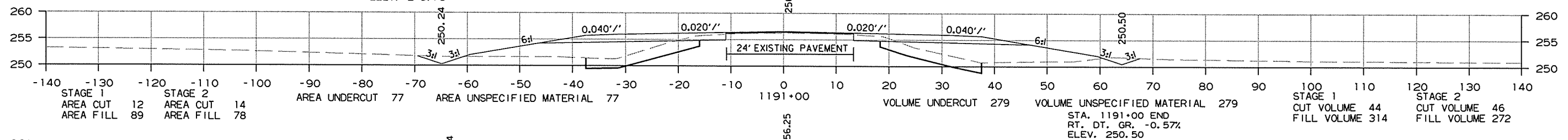
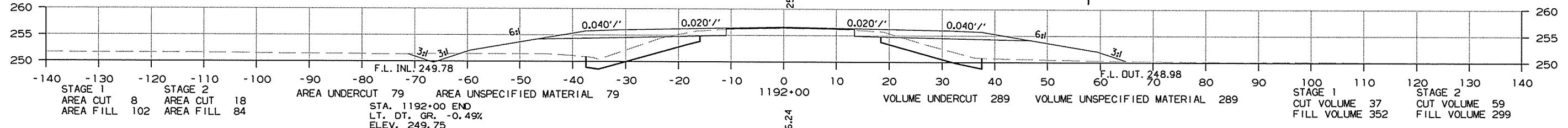
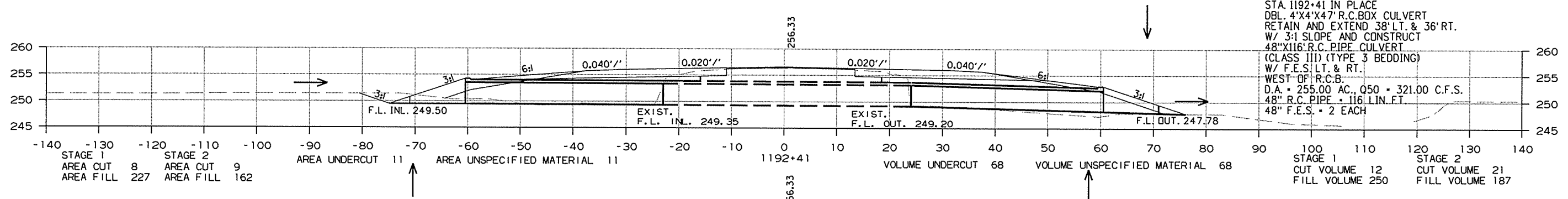
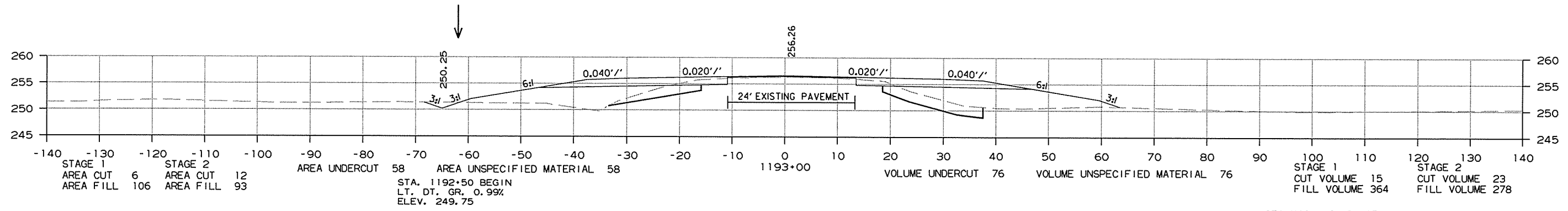


CROSS SECTION STA. 1183+00 TO STA. 1188+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							012155	298	311

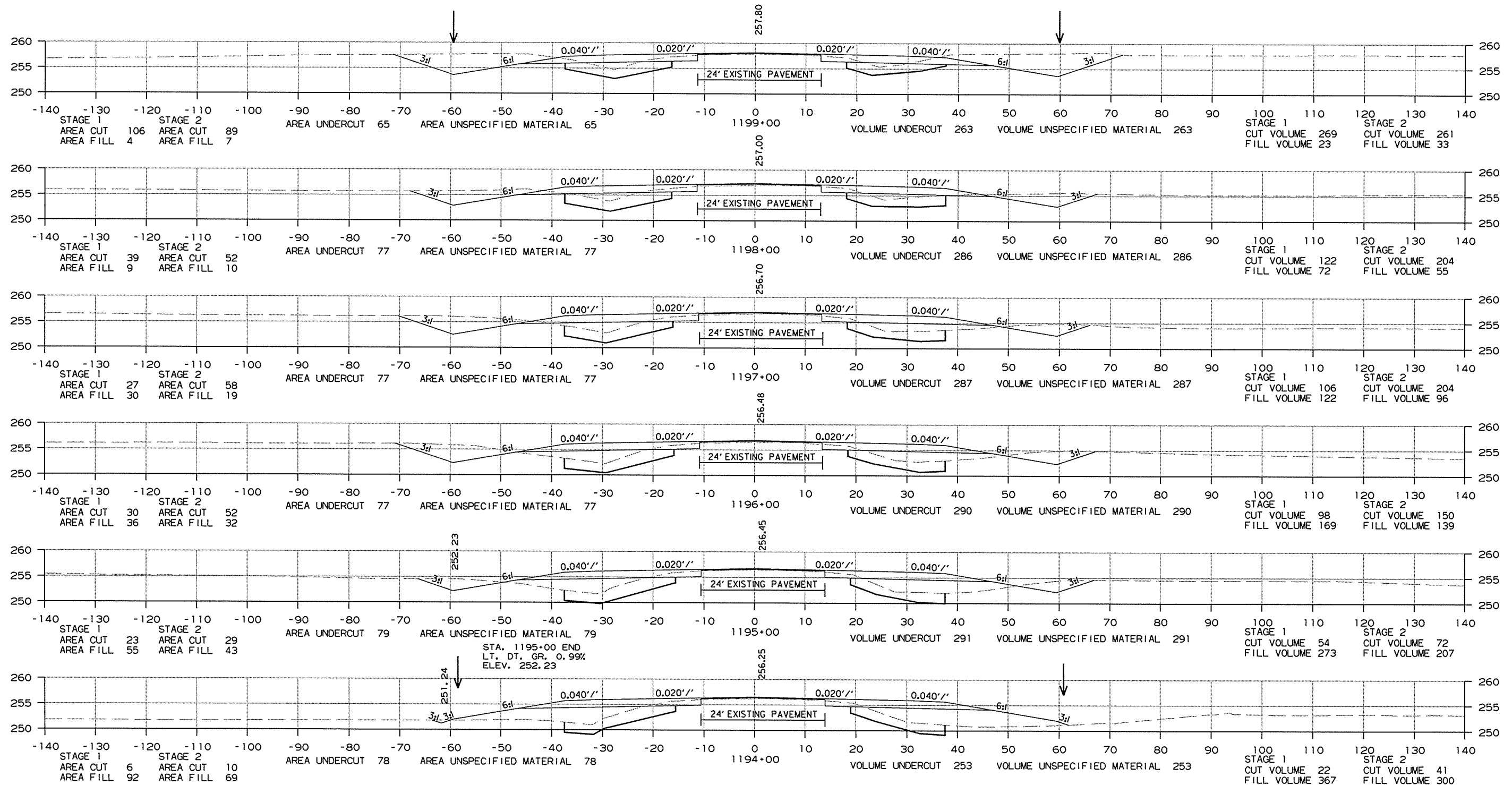
2 CROSS SECTIONS



CROSS SECTION STA. 1189+00 TO STA. 1193+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							299	311

2 CROSS SECTIONS



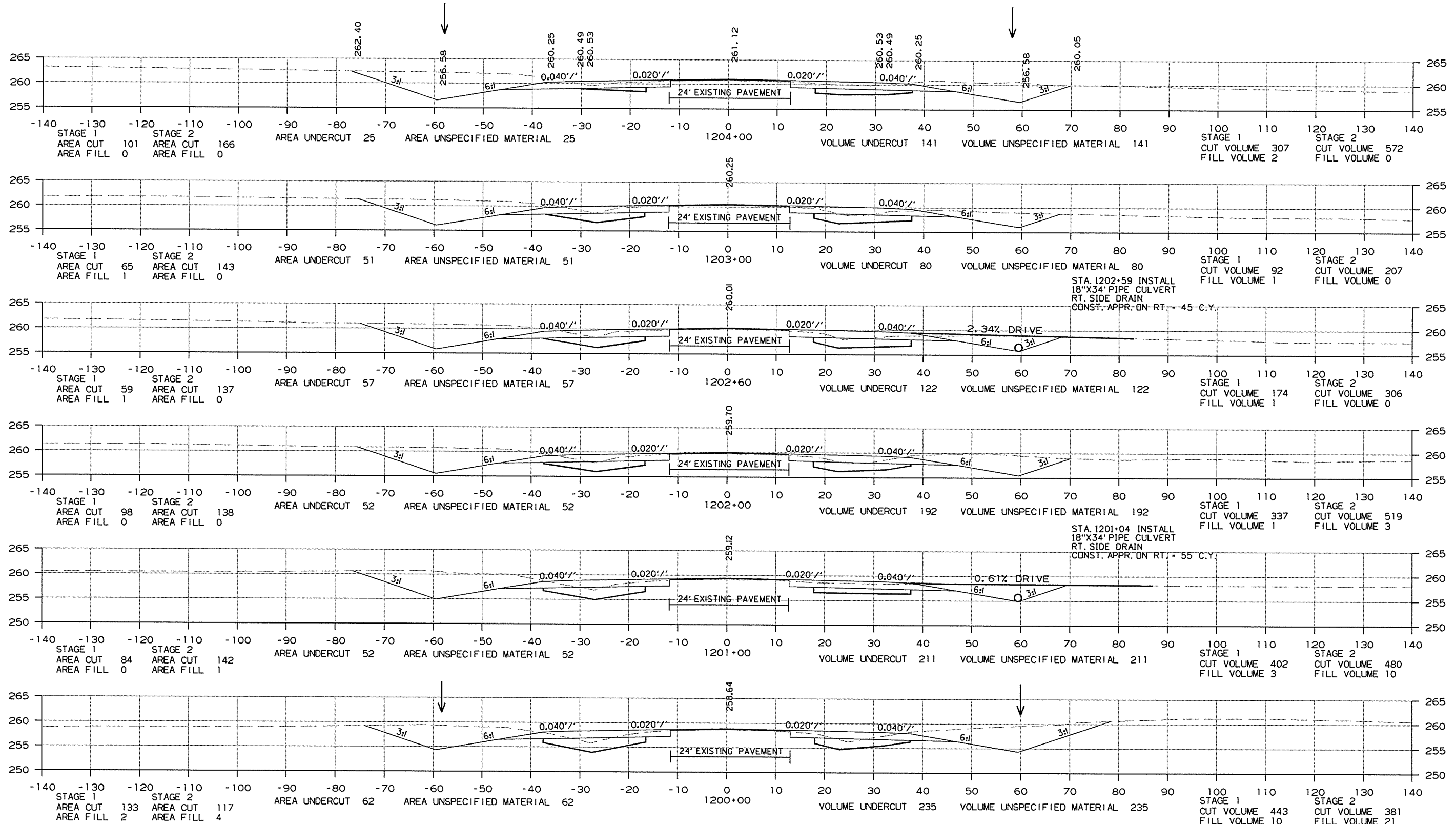
CROSS SECTION STA. 1194+00 TO STA. 1199+00

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							300	311

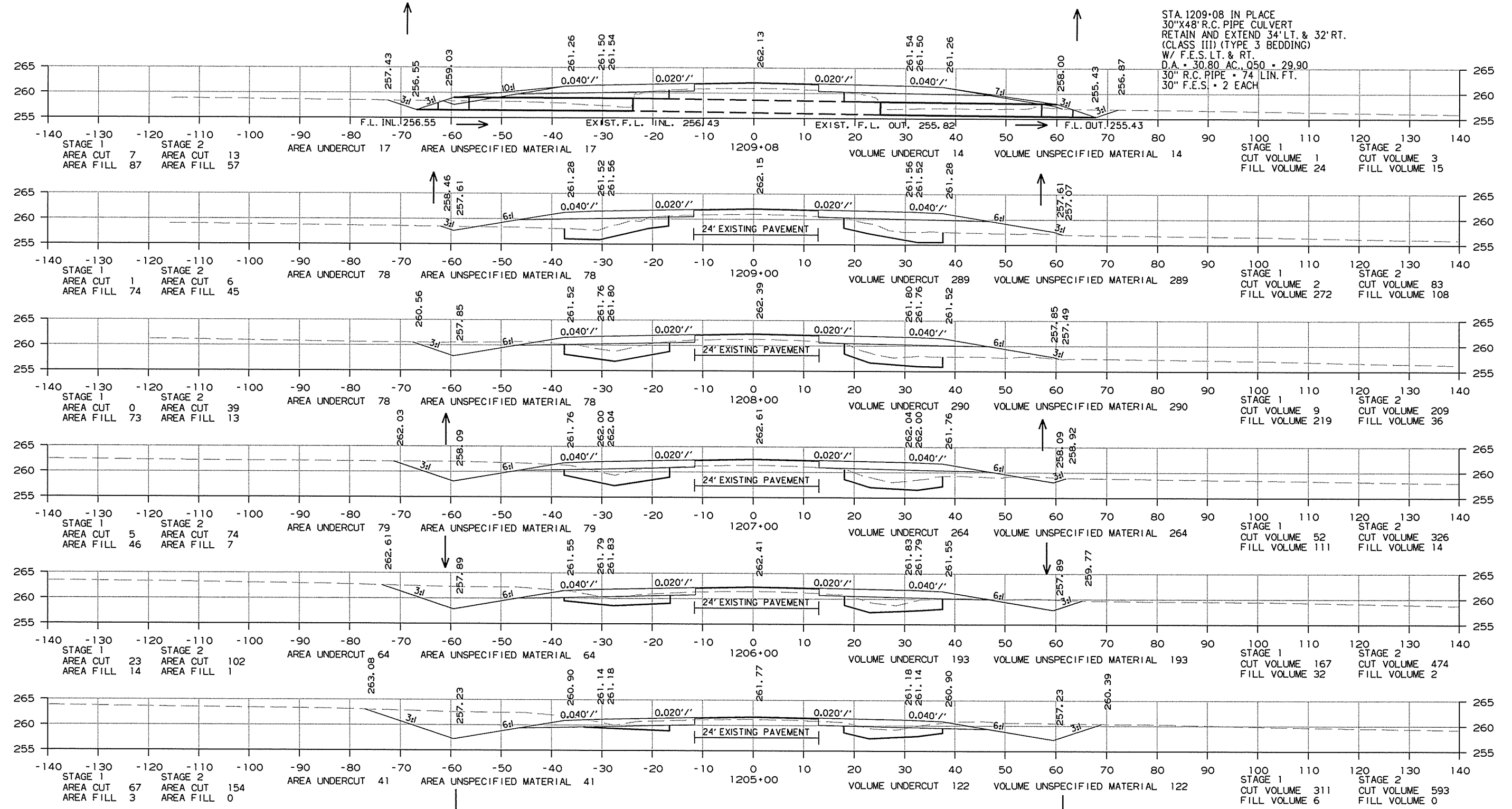
2 CROSS SECTIONS



CROSS SECTION STA. 1200+00 TO STA. 1204+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	012155		301	311

2 CROSS SECTIONS



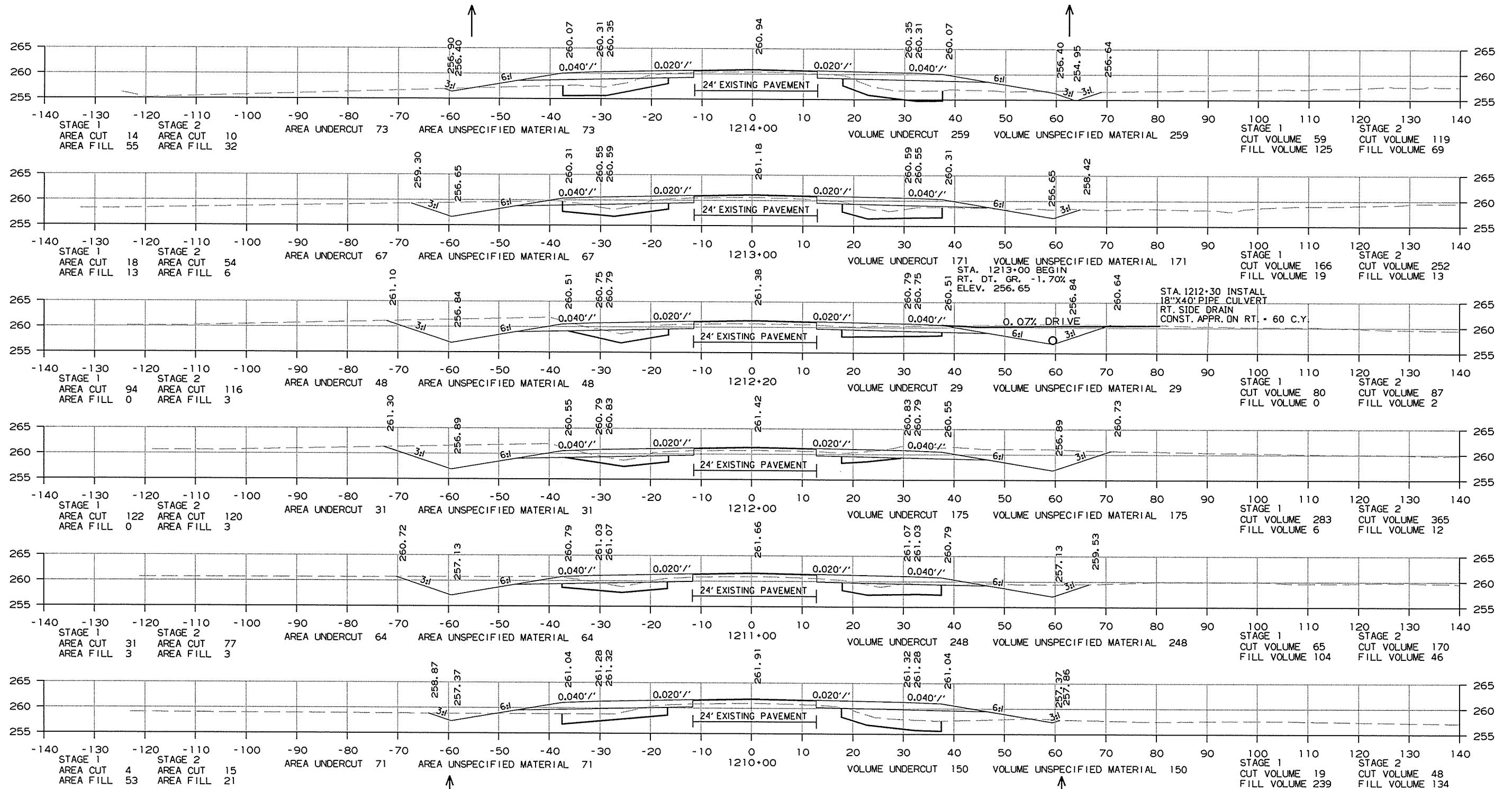
CROSS SECTION STA. 1205+00 TO STA. 1209+08

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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JOB NO. 012155							302	311

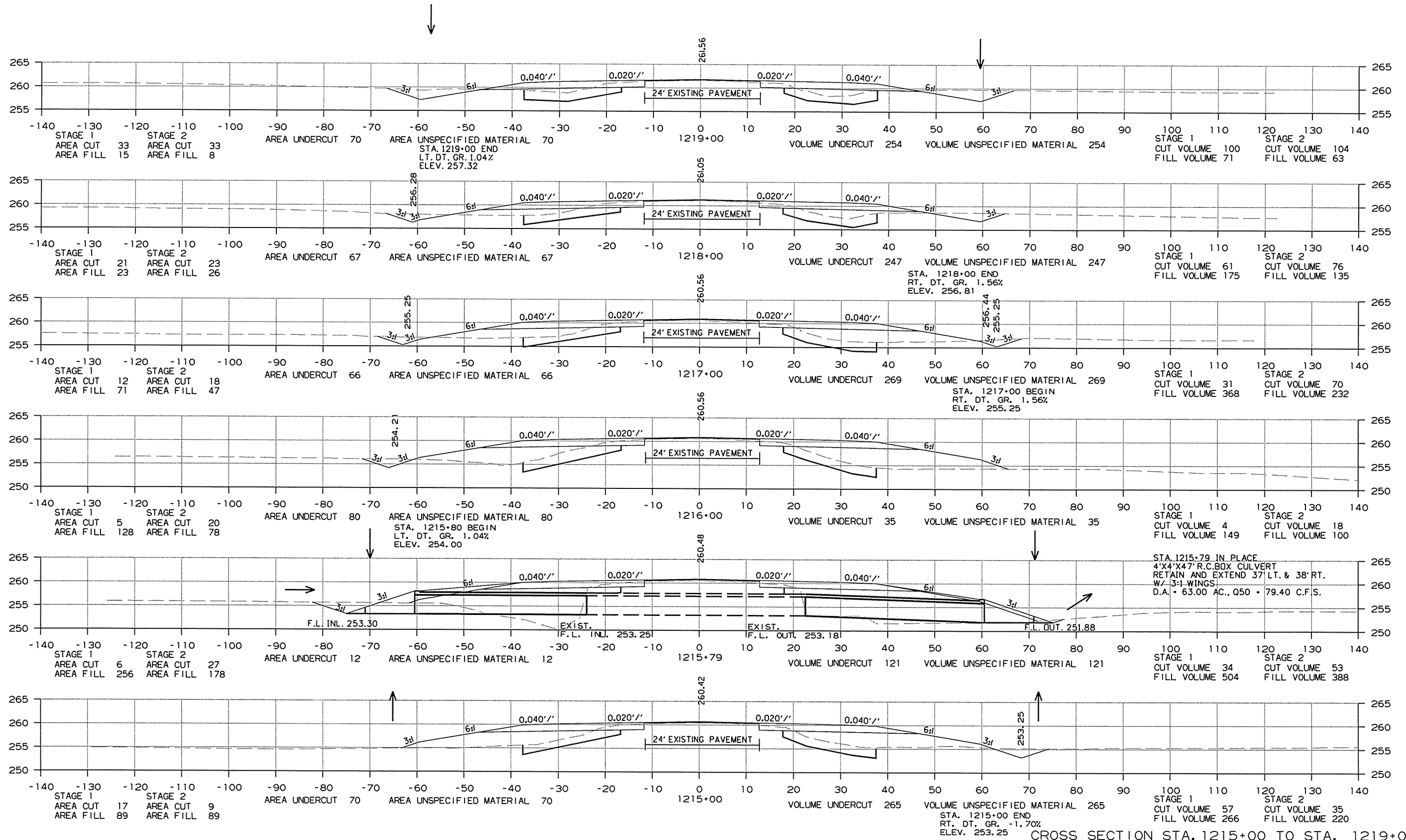
2 CROSS SECTIONS



CROSS SECTION STA. 1210+00 TO STA. 1214+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							303	311

2 CROSS SECTIONS

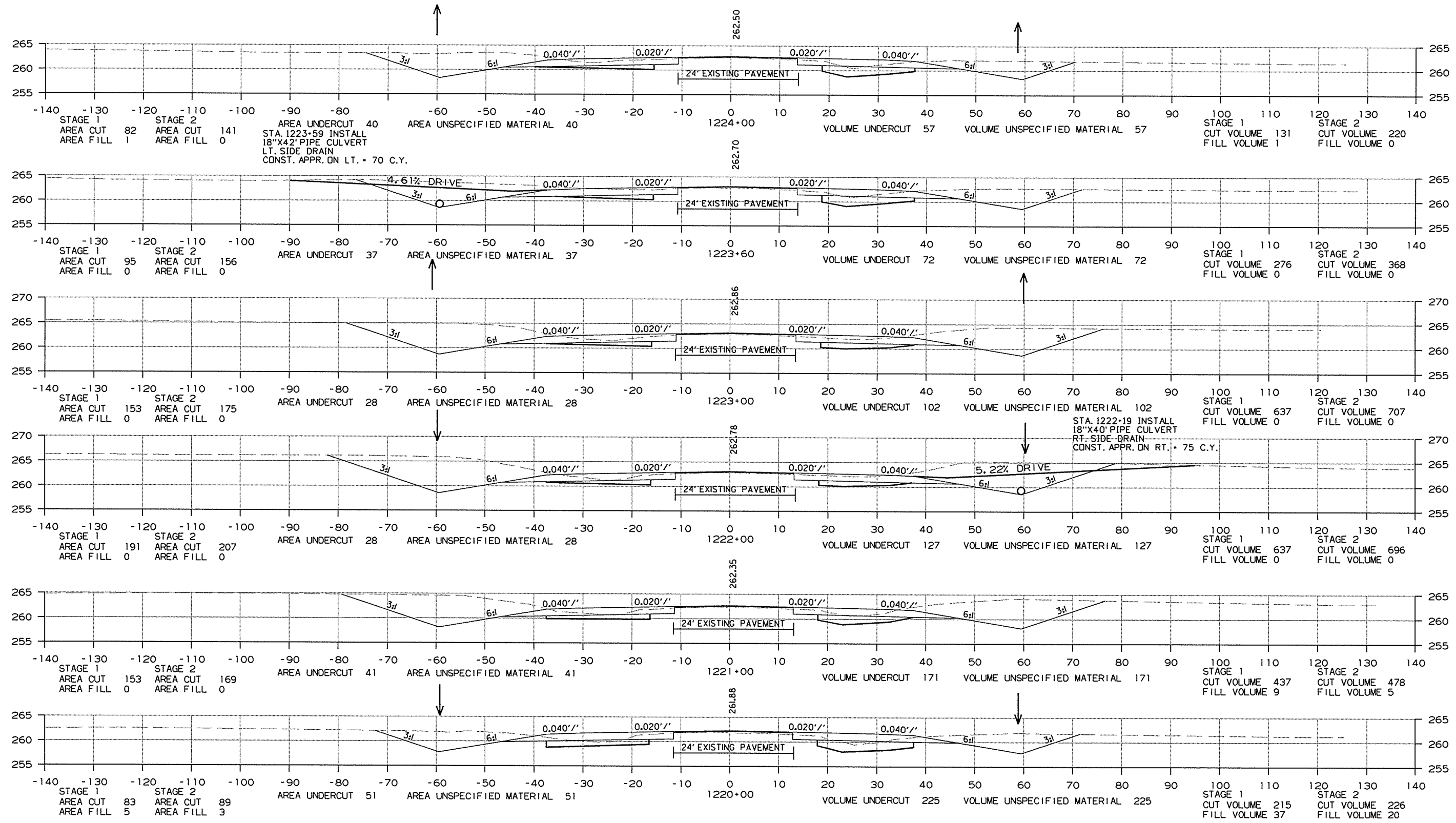


11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	304	311

② CROSS SECTIONS

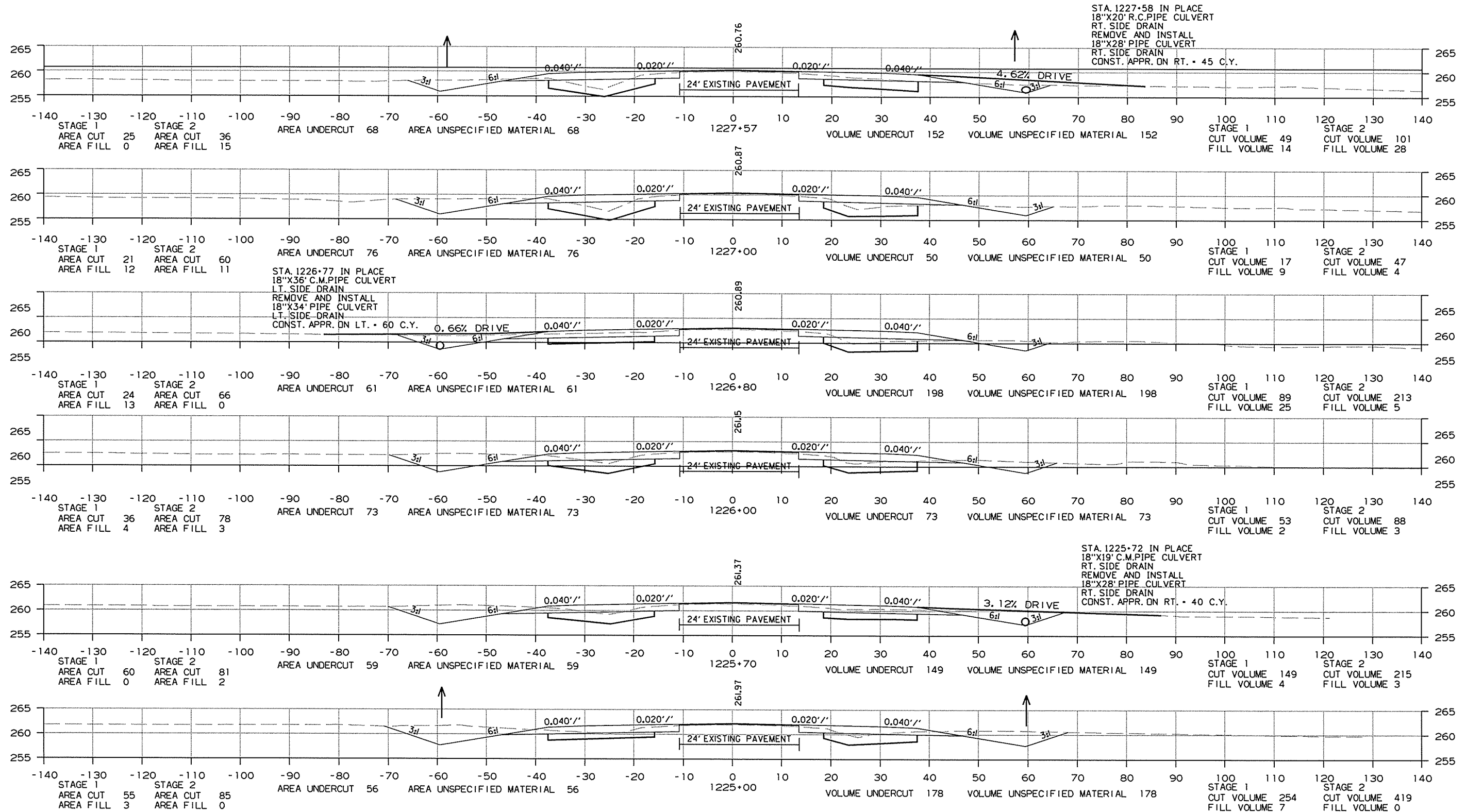


CROSS SECTION STA. 1220+00 TO STA. 1224+00

11/6/2013
R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							305	311

2 CROSS SECTIONS



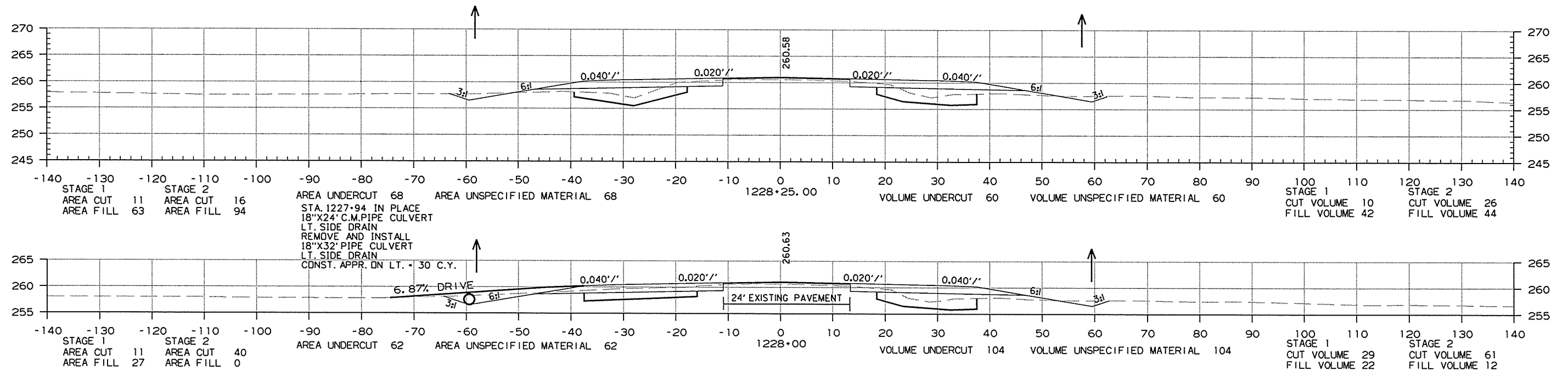
CROSS SECTION STA. 1225+00 TO STA. 1227+57

11/6/2013

RO12155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							306	311

② CROSS SECTIONS



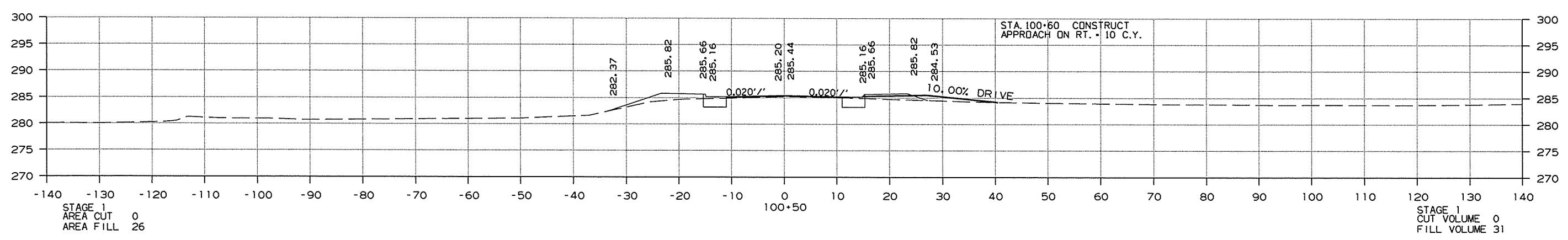
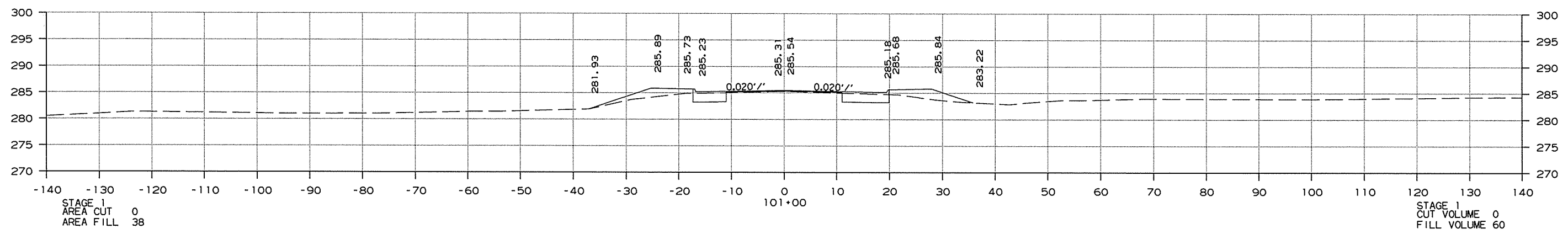
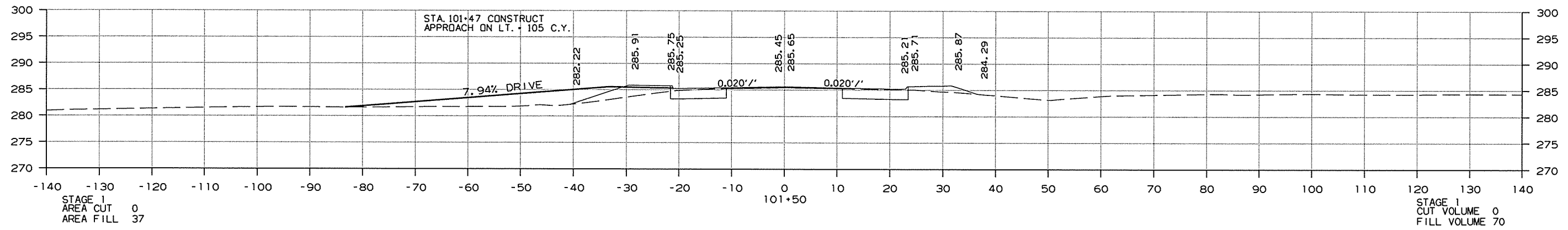
CROSS SECTION STA. 1228+00 TO STA. 1228+25

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							307	311

2 CROSS SECTIONS



STA. 99+85
HWY. 5 CONST.

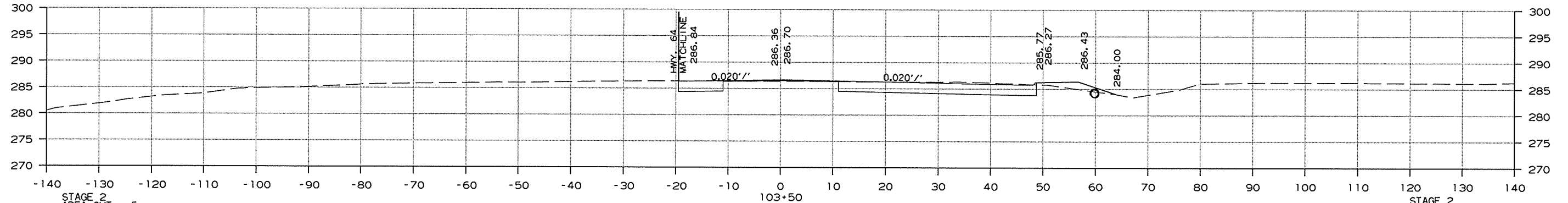
HWY. 5
CROSS SECTION STA. 100+50 TO STA. 101+50

11/6/2013

R012155.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							308	311

2 CROSS SECTIONS

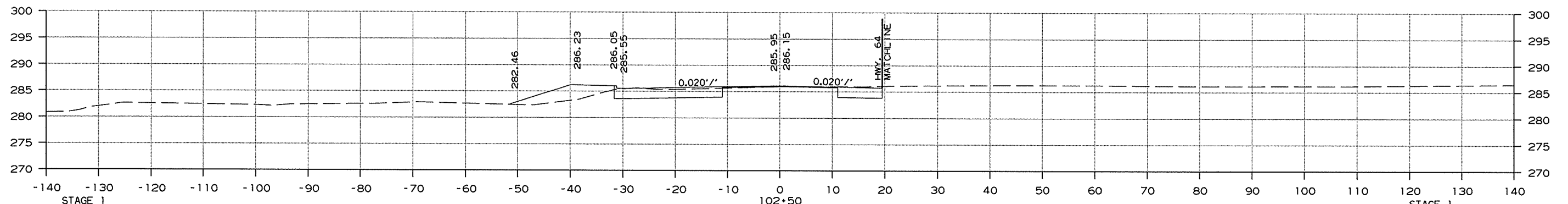


STAGE 2
AREA CUT 5
AREA FILL 12

STAGE 2
CUT VOLUME 0
FILL VOLUME 11

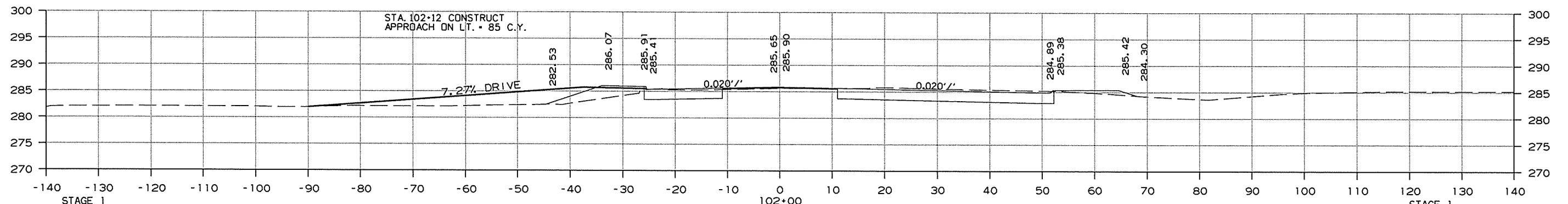
STAGE 1
AREA CUT 0
AREA FILL 0

STAGE 1
CUT VOLUME 0
FILL VOLUME 34



STAGE 1
AREA CUT 1
AREA FILL 37

STAGE 1
CUT VOLUME 0
FILL VOLUME 68

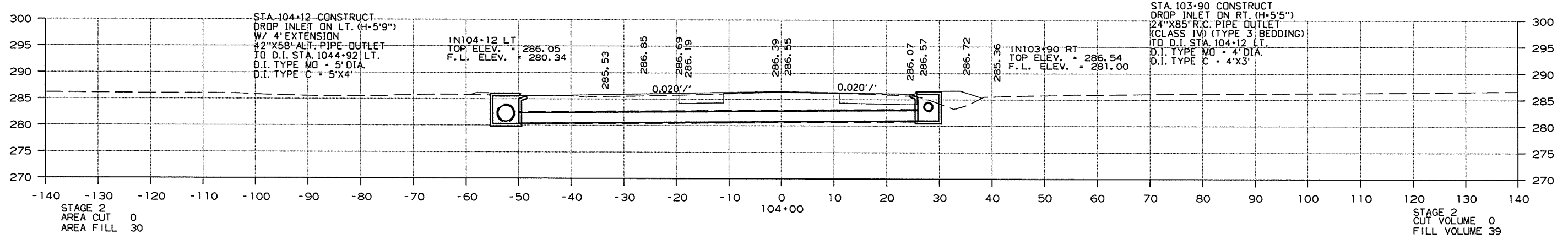
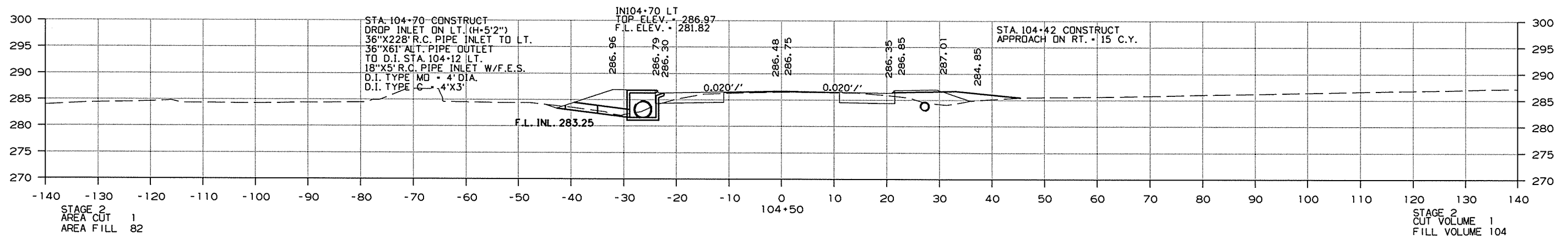
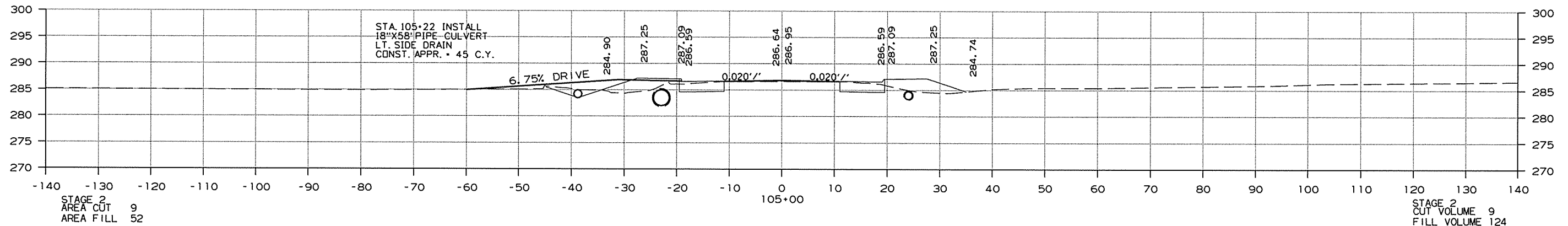


STAGE 1
AREA CUT 12
AREA FILL 36

STAGE 1
CUT VOLUME 0
FILL VOLUME 68

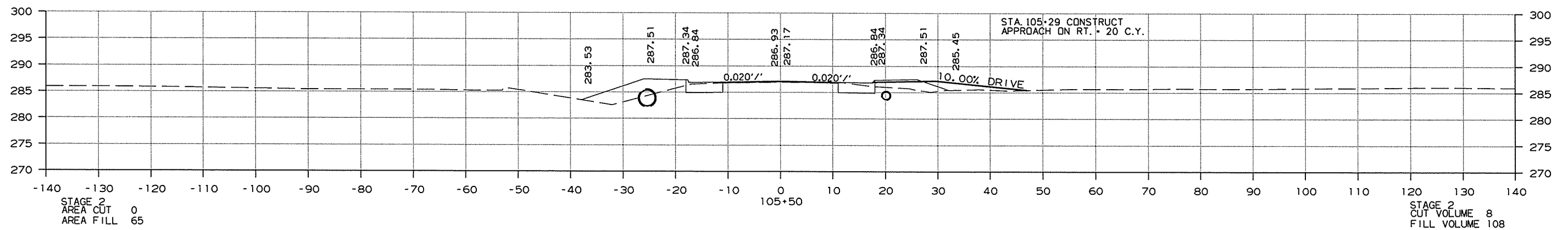
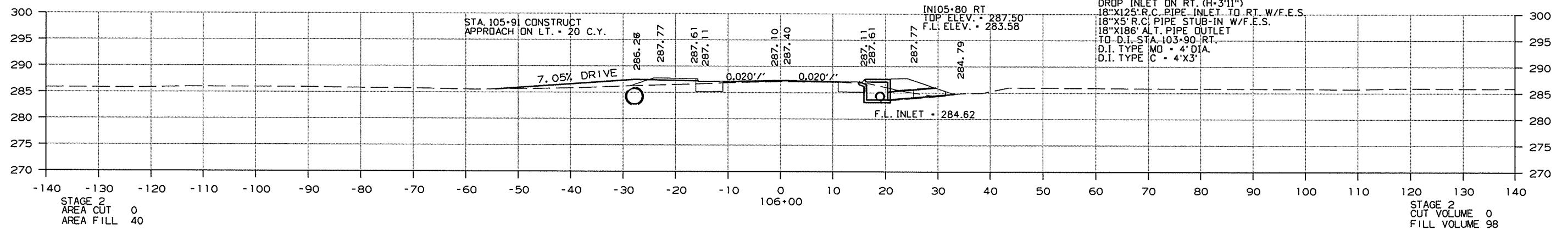
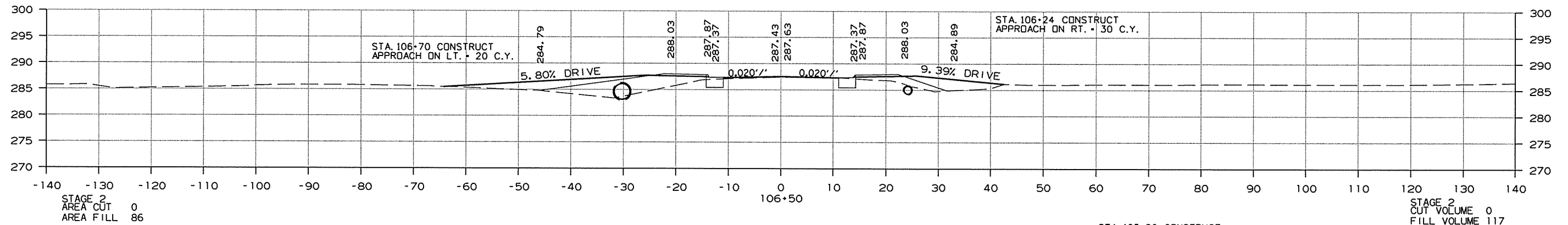
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 012155							309	311

2 CROSS SECTIONS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 012155	310	311

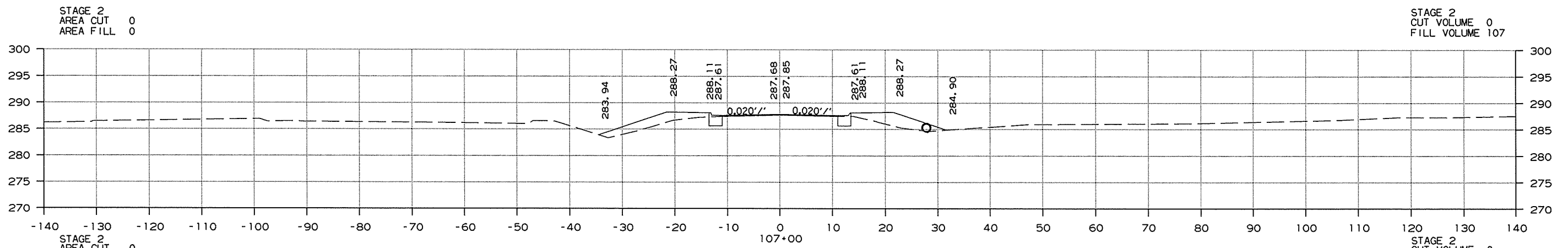
2 CROSS SECTIONS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.							012155	311

② CROSS SECTIONS

STA. 108+00
END 100' TRANSITION



END JOB 012155
BEGIN 100' TRANSITION

HWY. 5
CROSS SECTION STA. 107+00

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R012155.DGN