

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.	CA0202	1	256	
				2 HWY. 425 - HAMBURG (WIDENING) (S)				

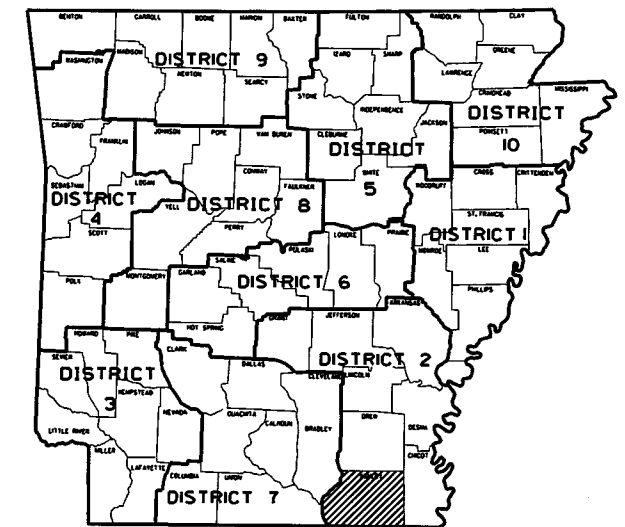
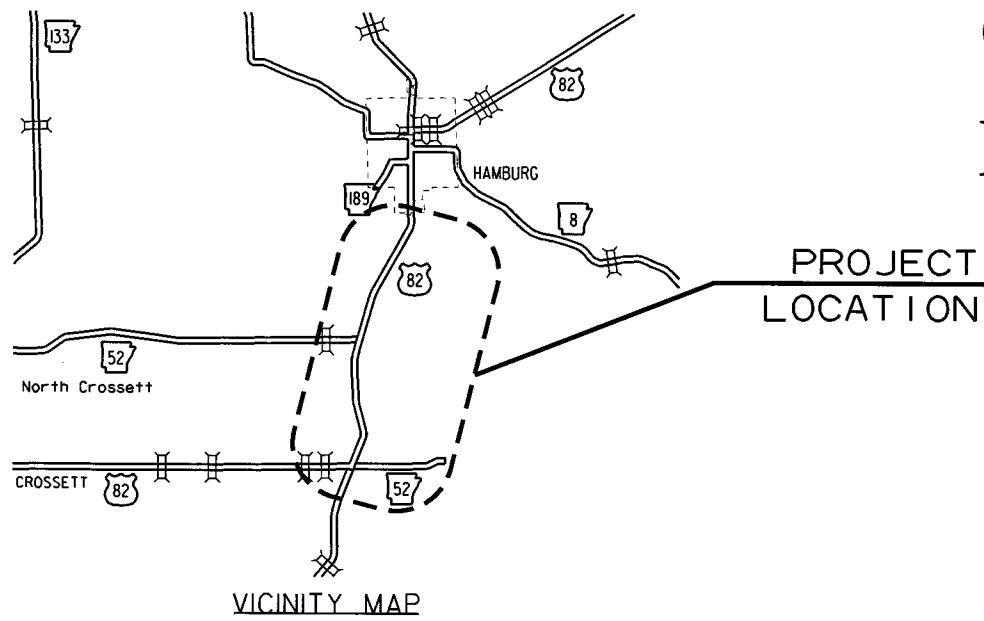
ARKANSAS DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION PLANS FOR STATE HIGHWAY

**HWY. 425 - HAMBURG  
(WIDENING) (S)**

ASHLEY COUNTY  
ROUTE 82 SECTION 8

FED. AID PROJ. 9991

**JOB CA0202**



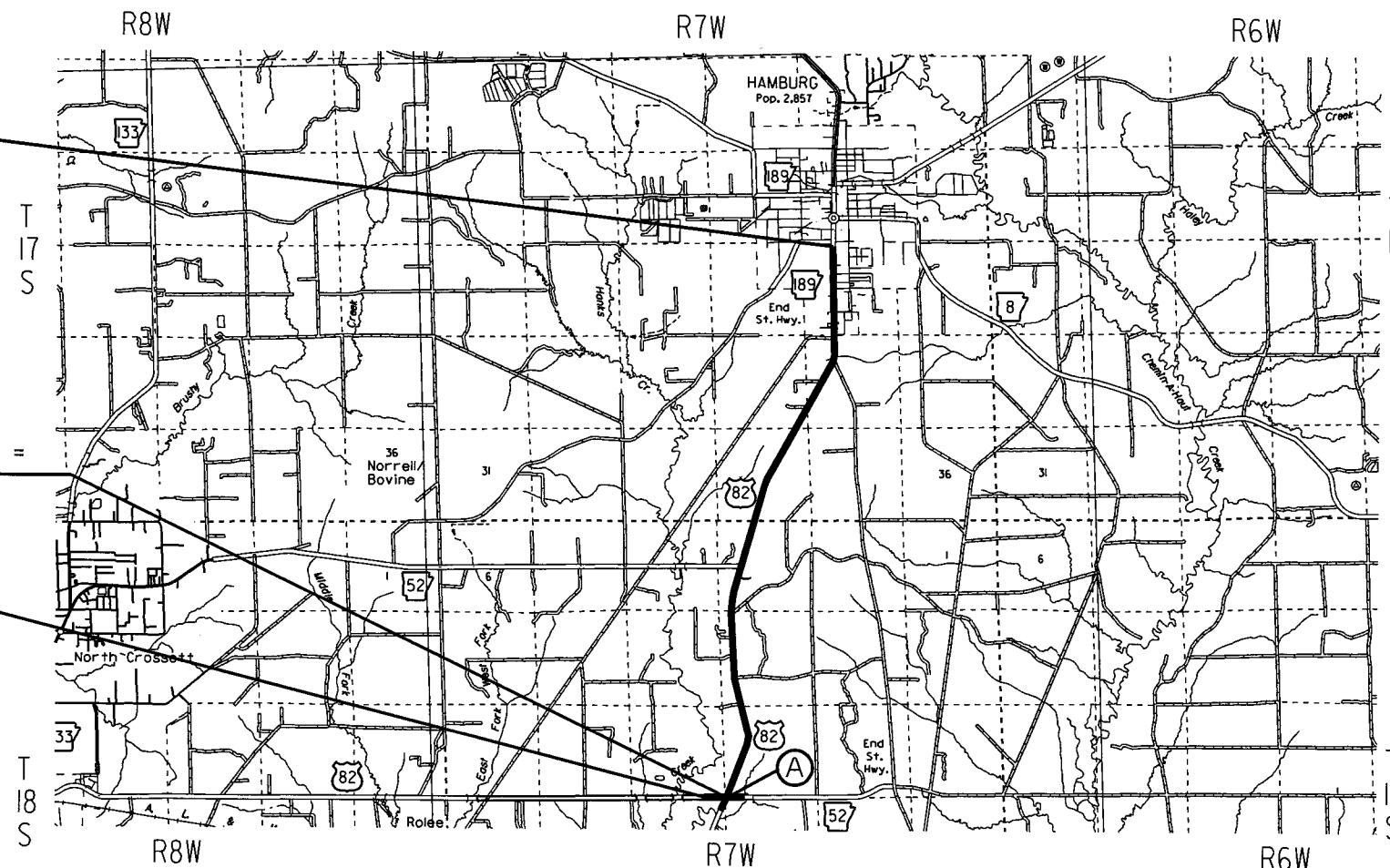
ARK. HWY. DIST. NO. 2

NOT TO SCALE

STA. 828+40.00  
END JOB CA0202  
LOG MILE 22.87

(A) EQUATION:  
STA. 405+99.04 BK. =  
STA. 546+96.79 AHD.

STA. 403+80.00  
BEGIN JOB CA0202  
LOG MILE 17.50



DESIGN TRAFFIC DATA

DESIGN YEAR	2037
2018 ADT	4,200
2038 ADT	5,000
2038 DHV	550
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	17%
DESIGN SPEED	60 MPH

BEGINNING OF PROJECT  
LAT. = N 33°08'02"  
LONG. = W 91°49'14"

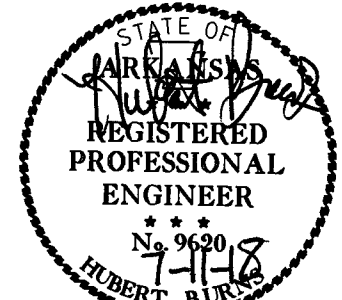
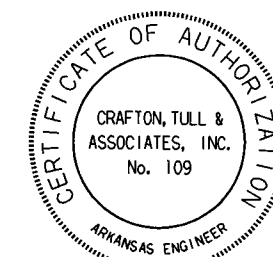
MID-POINT OF PROJECT  
LAT. = N 33°10'21"  
LONG. = W 91°48'56"

END OF PROJECT  
LAT. = N 33°12'23"  
LONG. = W 91°47'54"

LENGTH OF PROJECT CALCULATED ALONG C.L.

		FEET	OR	MILES
GROSS LENGTH OF PROJECT	28,362.25			5.372
NET " " ROADWAY	28,362.25			5.372
NET " " BRIDGES	0.00			0.000
NET " " PROJECT	28,362.25			5.372

P.E. CA0202



JOB CA0202

USER: f513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Misc\CA0202\_TL\_Hwy-82.dgn  
PLOTTED: 7/10/2018 10:21 SCALE: 200:1

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS, STANDARD DRAWINGS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES
3-6	TYPICAL SECTIONS OF IMPROVEMENT
7-13	SPECIAL DETAILS
14-46	TEMPORARY EROSION CONTROL DETAILS
47-70	MAINTENANCE OF TRAFFIC DETAILS
71-82	PERMANENT PAVEMENT MARKING DETAILS
83-90	QUANTITIES
91	SUMMARY OF QUANTITIES AND REVISIONS
92-103	SURVEY CONTROL DETAILS
104-128	PLAN AND PROFILE SHEETS
127-256	CROSS SECTIONS

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

ROADWAY STANDARD DRAWINGS

DRWG NO.	TITLE	DATE
GDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	02-27-14
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9D	DETAILS OF DROP INLETS	08-22-02
MB-1	MAILBOX DETAILS	11-18-04
PBC-1	PRECAST CONCRETE BOX CULVERTS	01-28-15
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PM-1	PAVEMENT MARKING DETAILS	06-01-17
RCB-1	REINFORCED CONCRETE BOX CULVERT DETAILS	07-26-12
RCB-2	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	11-20-03
RCB-3	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	10-12-95
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	10-18-96
SI-1	DETAILS OF SPECIAL ITEMS	09-12-13
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	02-27-14
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	10-15-09
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-18-17
TEC-2	TEMPORARY EROSION CONTROL DEVICES	06-02-94
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94
WF-2	WIRE FENCE WATER GAPS	04-20-79
WF-3	CHAIN LINK FENCE	11-17-10
WF-4	WIRE FENCE TYPE C AND D	08-22-02
R-100X-0	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	02-08-63
R-200X-0	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	02-15-63
W-X003-1	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	05-10-66

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.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
08-23-18				6	ARK.			
						JOB NO. CA0202	2	256

2 INDEX OF SHEETS, STANDARD DRAWINGS, GOV. SPECS., & GEN. NOTES



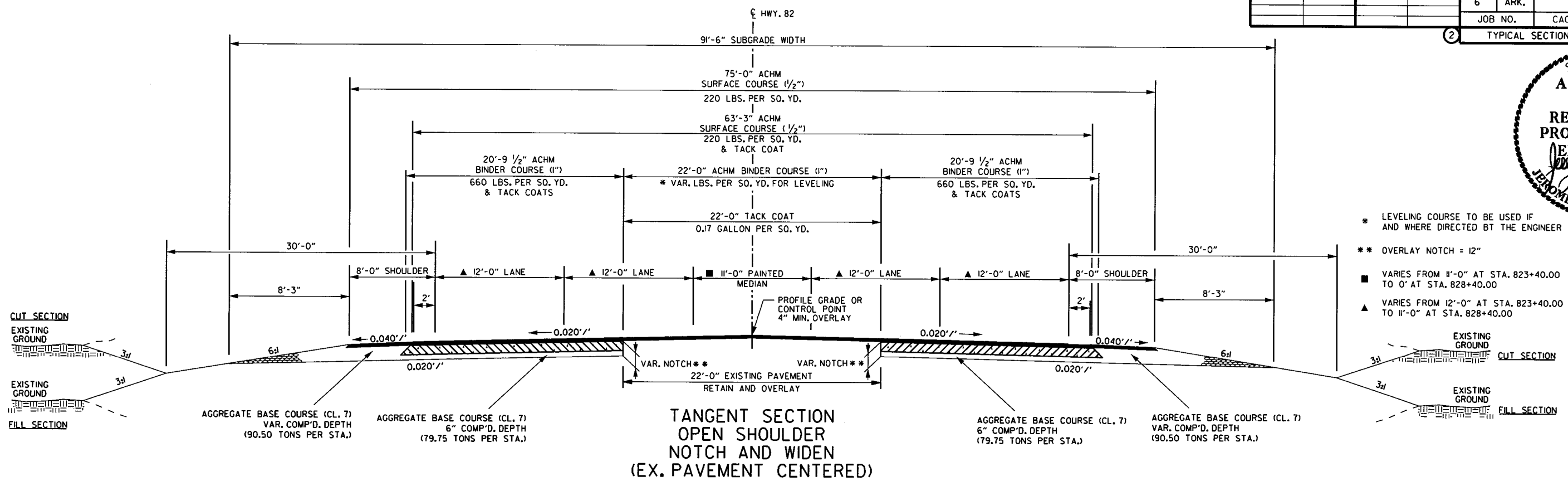
GOVERNING SPECIFICATIONS

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 CA0202
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
505-1	PORTLAND CEMENT CONCRETE DRIVEWAY
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
605-1	CONCRETE DITCH PAVING
806-1	PIPE CULVERTS FOR SIDE DRAINS
820-1	MULCH COVER
832-1	CONCRETE ISLAND
JOB CA0202	AIRPORT CLEARANCE REQUIREMENTS
JOB CA0202	BIDDING REQUIREMENTS AND CONDITIONS
JOB CA0202	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB CA0202	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB CA0202	CARGO PREFERENCE ACT REQUIREMENTS
JOB CA0202	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB CA0202	CONSTRUCTION PROJECT INFORMATION SIGN
JOB CA0202	COORDINATION OF WORK
JOB CA0202	CULVERT CLEAN OUT
JOB CA0202	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB CA0202	ELECTRONIC DOCUMENT MANAGEMENT - CONNECTING ARKANSAS PROGRAM
JOB CA0202	EMPLOYMENT REPORTING
JOB CA0202	EXTENSION FOR PIPE CULVERTS
JOB CA0202	FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT
JOB CA0202	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB CA0202	ISSUANCE OF PROPOSALS
JOB CA0202	LIQUID ANTI-STRIPPING ADDITIVE
JOB CA0202	MANDATORY ELECTRONIC CONTRACT
JOB CA0202	NESTING SITES OF MIGRATORY BIRDS
JOB CA0202	PARTNERING REQUIREMENTS
JOB CA0202	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB CA0202	PLASTIC PIPE
JOB CA0202	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB CA0202	PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB CA0202	PROTECTION OF WATER QUALITY AND WETLANDS
JOB CA0202	SHORING FOR CULVERTS
JOB CA0202	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB CA0202	SOIL STABILIZATION
JOB CA0202	STORM WATER POLLUTION PREVENTION PLAN
JOB CA0202	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB CA0202	UTILITY ADJUSTMENTS
JOB CA0202	VALUE ENGINEERING
JOB CA0202	WARM MIX ASPHALT
JOB CA0202	WELLHEAD PROTECTION

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.	CA0202	3	256	

2 TYPICAL SECTIONS OF IMPROVEMENT

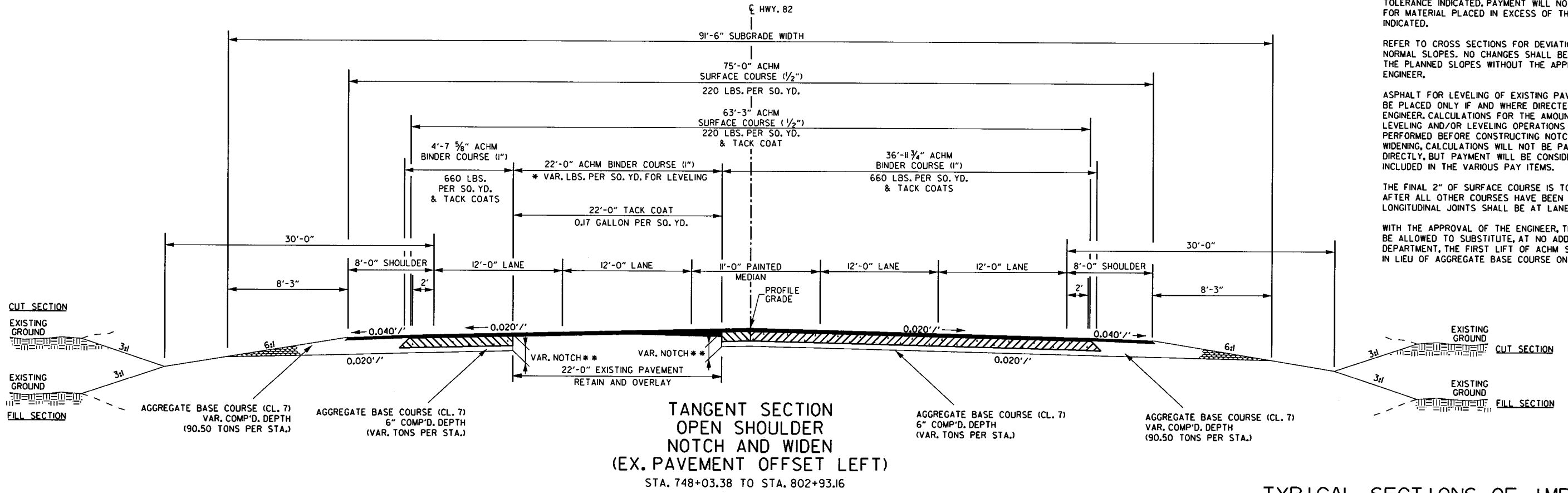


- \* LEVELING COURSE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- \*\* OVERLAY NOTCH = 12"
- VARIES FROM 11'-0" AT STA. 823+40.00 TO 0' AT STA. 828+40.00
- ▲ VARIES FROM 12'-0" AT STA. 823+40.00 TO 11'-0" AT STA. 828+40.00

**TANGENT SECTION  
OPEN SHOULDER  
NOTCH AND WIDEN  
(EX. PAVEMENT CENTERED)**

STA. 403+80.00 TO STA. 405+99.04 (PROFILE GRADE)    STA. 674+36.03 TO STA. 679+25.00 (PROFILE GRADE)  
 STA. 546+96.79 TO STA. 573+36.03 (OVERLAY)        STA. 679+25.00 TO STA. 713+02.74 (OVERLAY)  
 STA. 591+93.99 TO STA. 610+21.46 (PROFILE GRADE)    STA. 819+24.83 TO STA. 828+40.00 (OVERLAY)  
 STA. 625+19.69 TO STA. 647+73.69 (OVERLAY)

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



**TANGENT SECTION  
OPEN SHOULDER  
NOTCH AND WIDEN  
(EX. PAVEMENT OFFSET LEFT)**

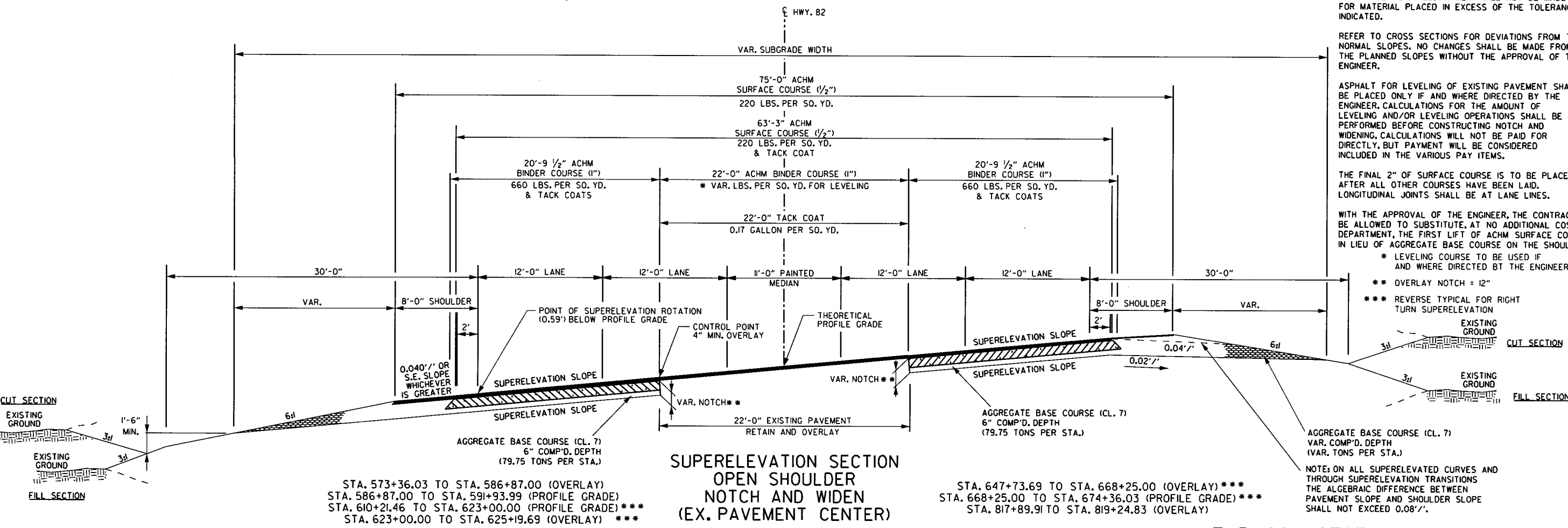
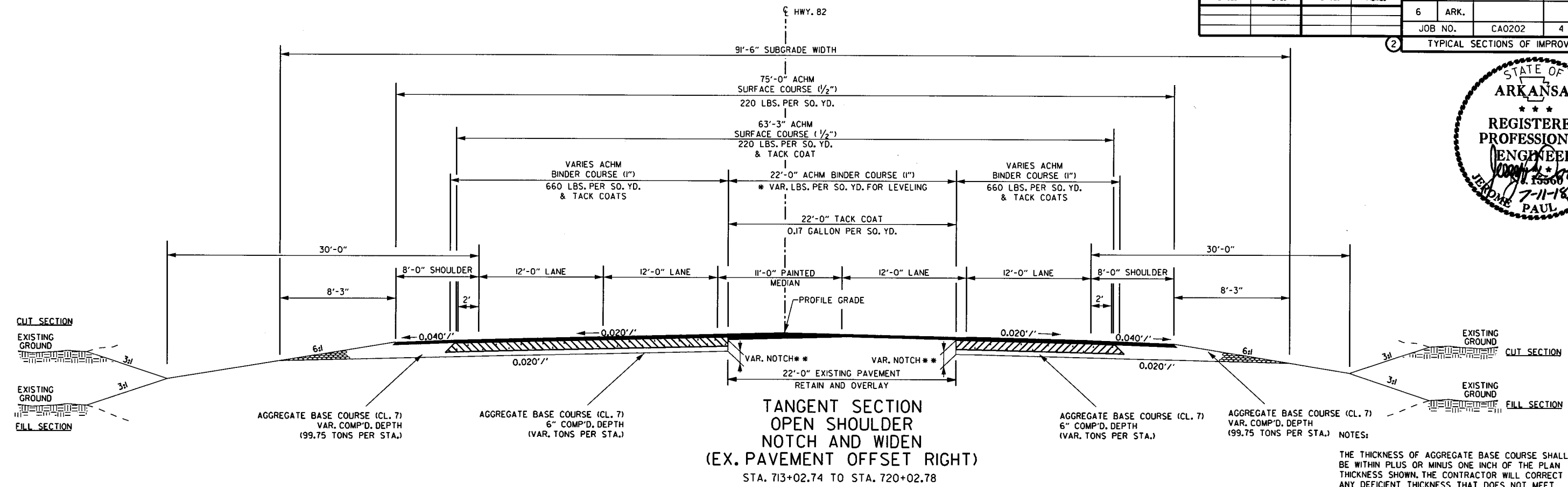
STA. 748+03.38 TO STA. 802+93.16

TYPICAL SECTIONS OF IMPROVEMENT

USER: f85j3  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Typical\CA0202.TS.HWY-82.01.dgn  
 PLOTTED: 7/10/2018 10:21

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.	CA0202		4	256

2 TYPICAL SECTIONS OF IMPROVEMENT



NOTES:  
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.

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

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.

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 THE 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.

\* LEVELING COURSE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

\*\* OVERLAY NOTCH = 12"

\*\*\* REVERSE TYPICAL FOR RIGHT TURN SUPERELEVATION

EXISTING GROUND CUT SECTION

EXISTING GROUND FILL SECTION

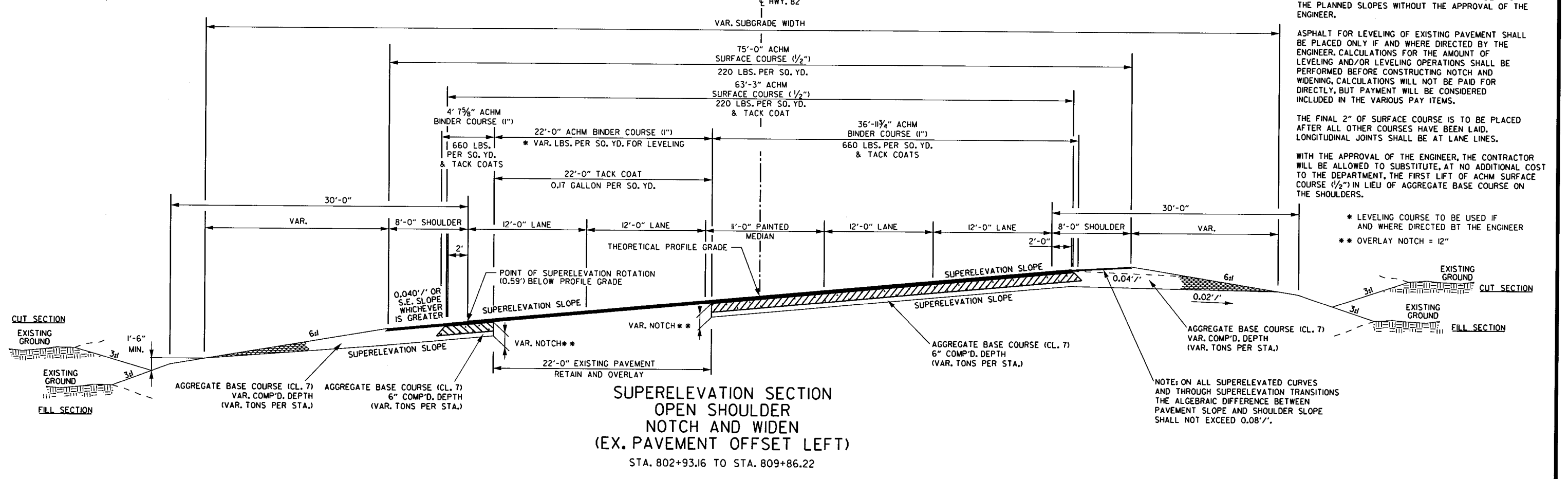
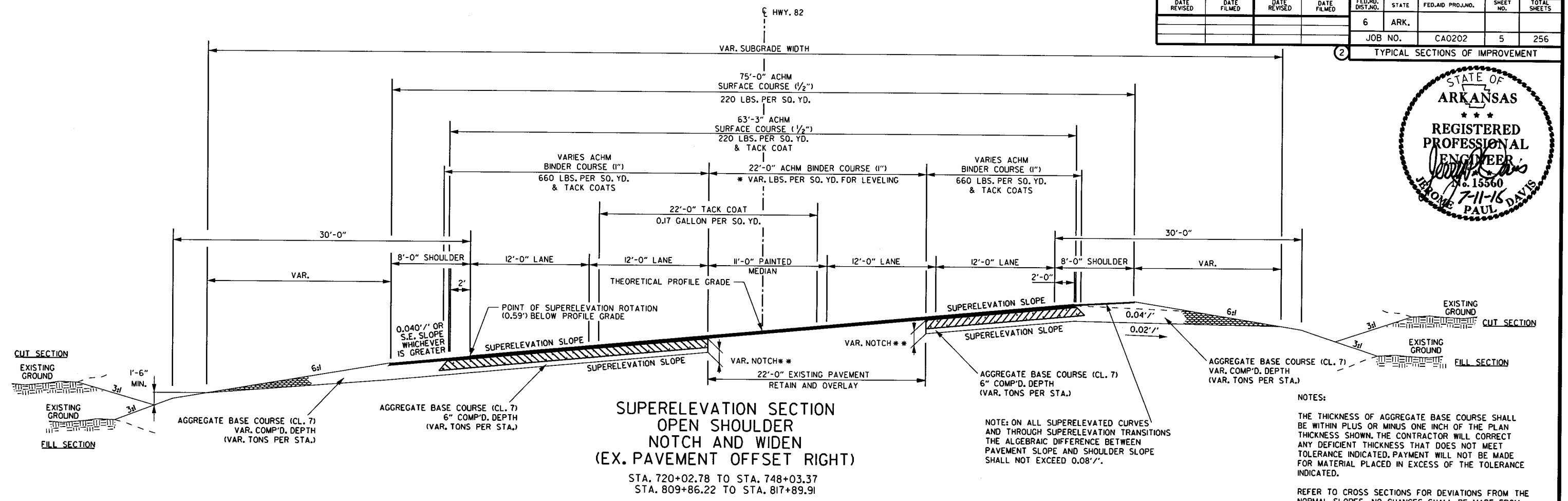
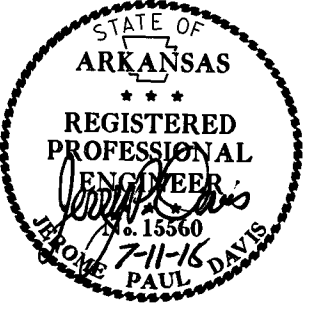
NOTE: ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

TYPICAL SECTIONS OF IMPROVEMENT

USER: f9513  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Typical\CA0202.TS.HWY-82.02.dgn  
 PLOTTED: 7/10/2018 10:21  
 SCALE: 10x

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.	CA0202	5	256	

2 TYPICAL SECTIONS OF IMPROVEMENT



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

NOTES:  
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.

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

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.

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 THE 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.

- \* LEVELING COURSE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- \*\* OVERLAY NOTCH = 12"

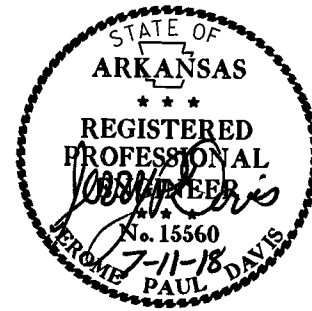
NOTE: ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

USER: f6513  
DESIGN FILE: G:\H09300\_HWY\_82\TRANSP\DCN\Typical\CA0202.TS\_HWY-82\_03.dgn  
PLOTTED: 7/10/2018 10:22  
SCALE: 10:1

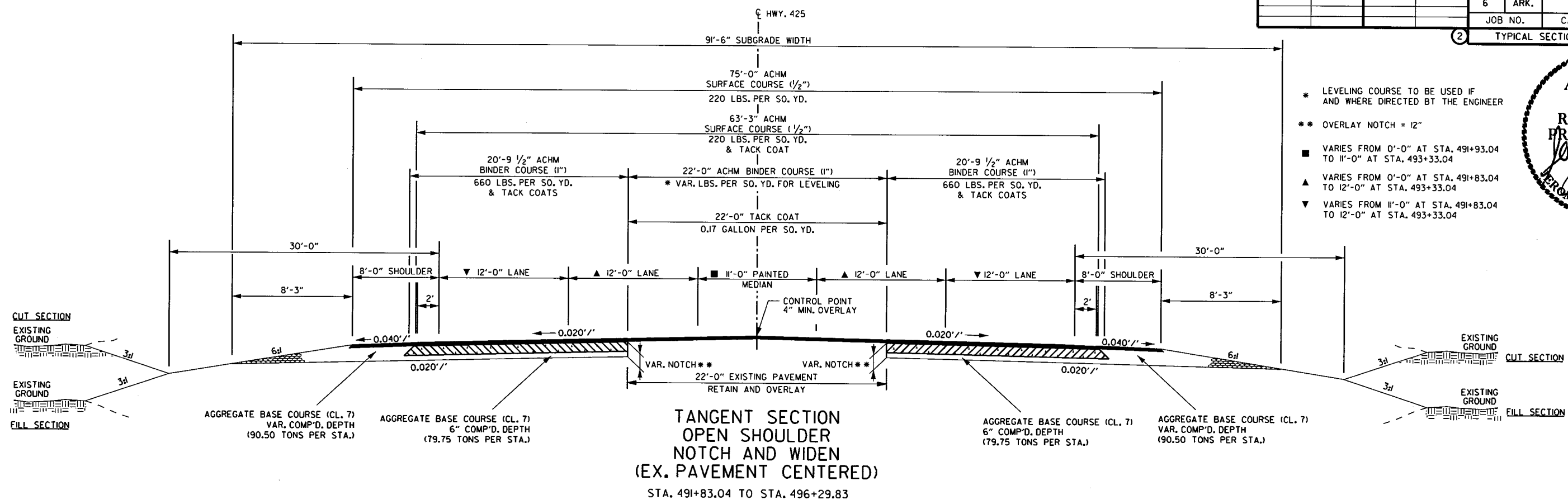
TYPICAL SECTIONS OF IMPROVEMENT

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.	CA0202	6	256	

2 TYPICAL SECTIONS OF IMPROVEMENT

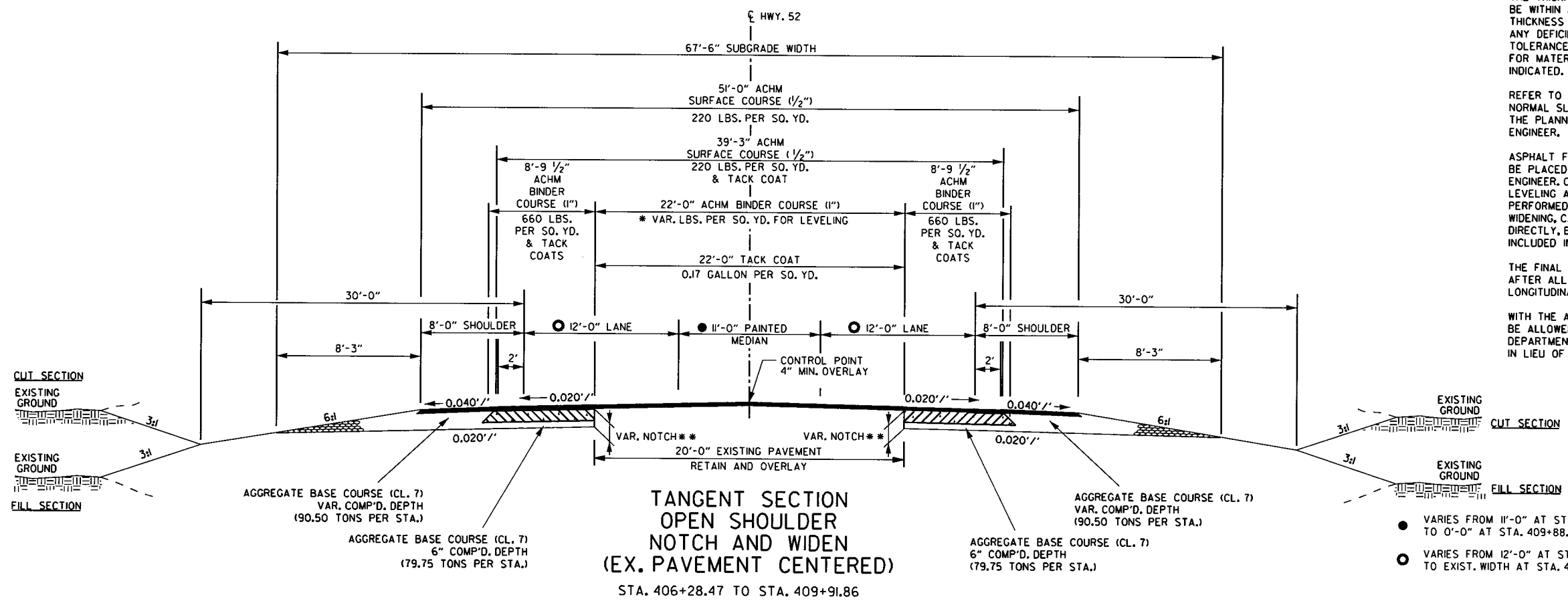


- \* LEVELING COURSE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- \*\* OVERLAY NOTCH = 12"
- VARIES FROM 0'-0" AT STA. 491+93.04 TO 11'-0" AT STA. 493+33.04
- ▲ VARIES FROM 0'-0" AT STA. 491+83.04 TO 12'-0" AT STA. 493+33.04
- ▼ VARIES FROM 11'-0" AT STA. 491+83.04 TO 12'-0" AT STA. 493+33.04



TANGENT SECTION  
OPEN SHOULDER  
NOTCH AND WIDEN  
(EX. PAVEMENT CENTERED)  
STA. 491+83.04 TO STA. 496+29.83

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



TANGENT SECTION  
OPEN SHOULDER  
NOTCH AND WIDEN  
(EX. PAVEMENT CENTERED)  
STA. 406+28.47 TO STA. 409+91.86

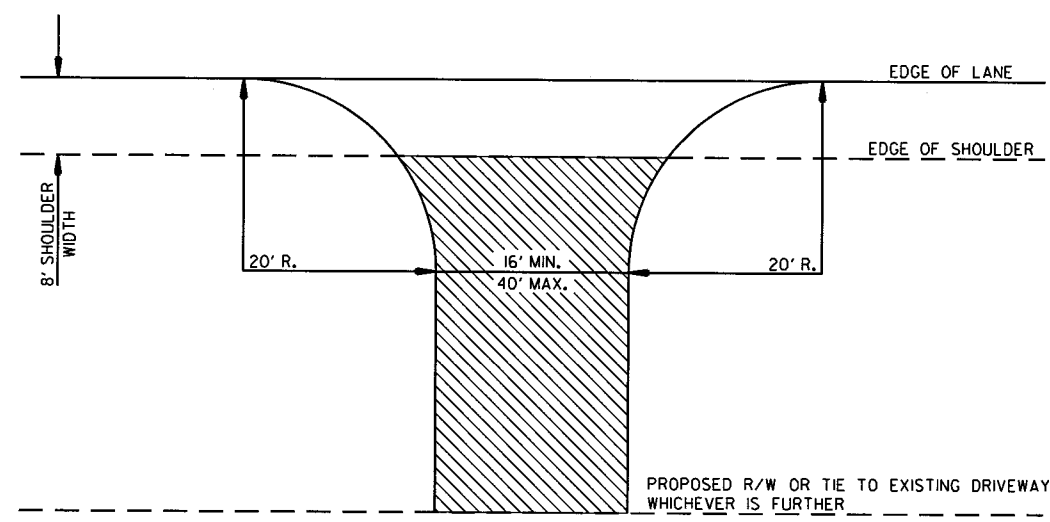
- VARIES FROM 11'-0" AT STA. 407+38.66 TO 0'-0" AT STA. 409+88.66
- VARIES FROM 12'-0" AT STA. 408+89 TO EXIST. WIDTH AT STA. 409+89

TYPICAL SECTIONS OF IMPROVEMENT

USER: f6513  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Typical\CA0202.TS.HWY-425 & 52.0.dgn  
PLOTTED: 7/10/2018 10:22 SCALE: 10:1

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.	CA0202	7	256	

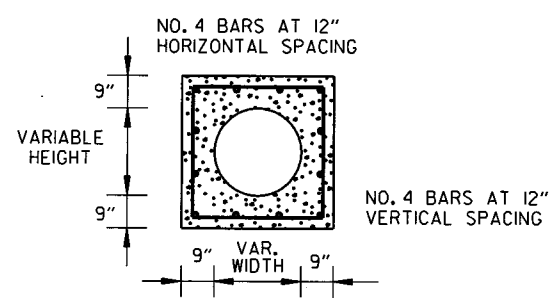
2 SPECIAL DETAILS



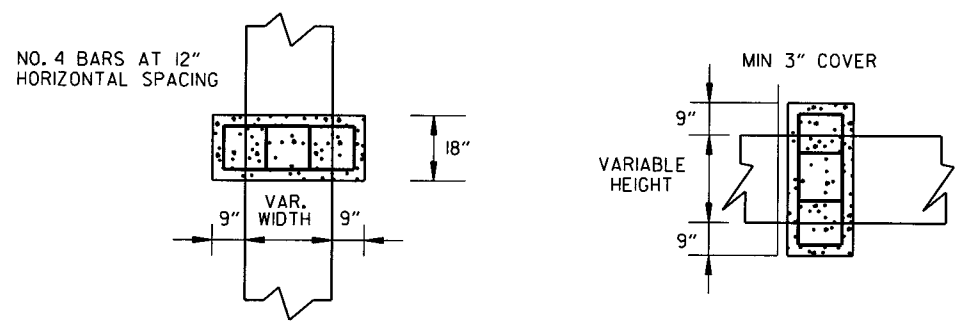
DETAIL FOR DRIVEWAY TURNOUTS  
OPEN SHOULDER SECTION

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

ACHM SURFACE COURSE (1/2") (220 LBS. PER SQ.YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT OR GRAVEL DRIVE EXISTING; OR 6" CONCRETE IF CONCRETE DRIVE EXISTING.



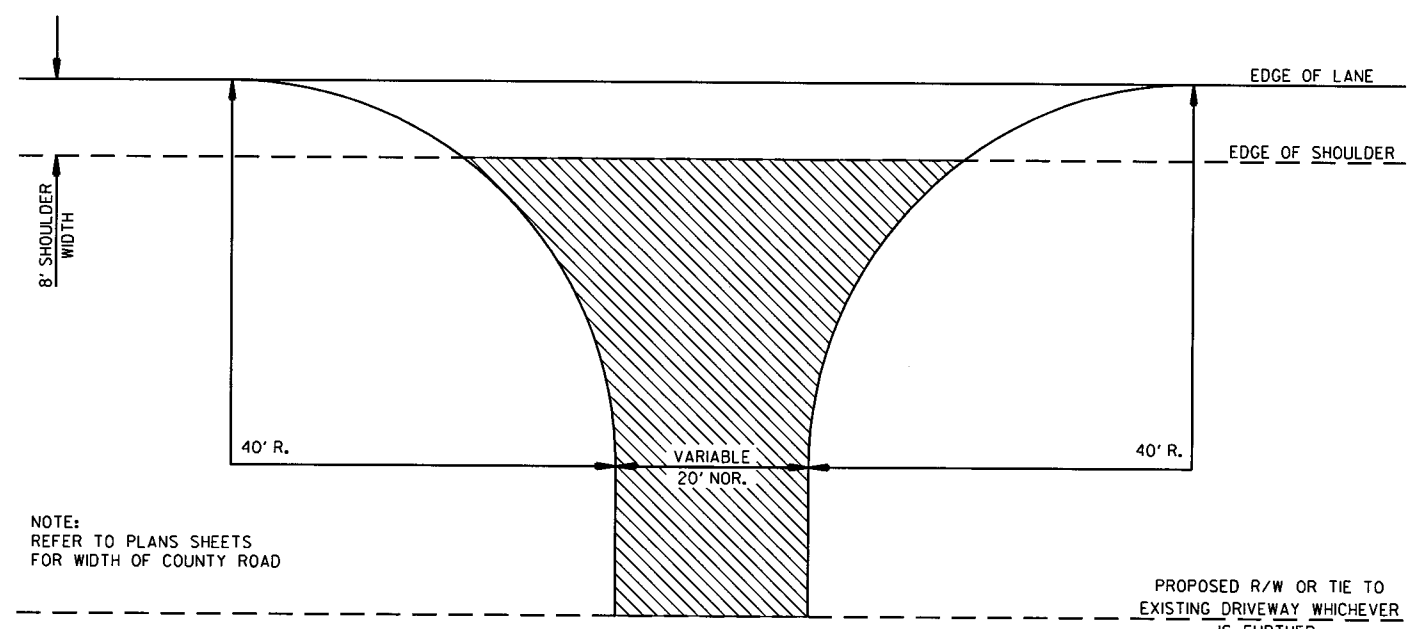
FRONT VIEW



TOP VIEW

SIDE VIEW

PIPE EXTENSION  
REINFORCED CONCRETE COLLAR DETAIL



DETAIL FOR COUNTY ROAD TURNOUTS  
OPEN SHOULDER SECTION

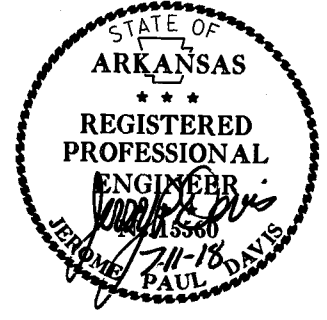
NOTE: REFER TO PLANS SHEETS FOR WIDTH OF COUNTY ROAD

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

USER: f8513  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Special\_Details\CA0202\_5D.HWY-82.dgn  
PLOTTED: 7/10/2018 10:22  
SCALE: 2x

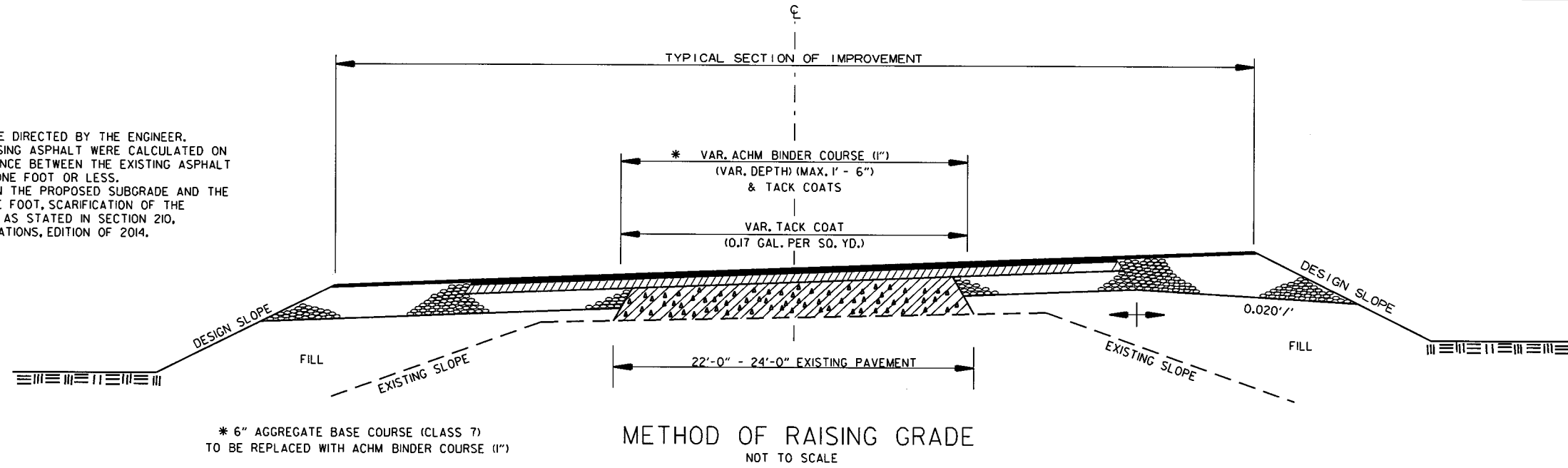
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						CA0202	8	256

2 SPECIAL DETAILS

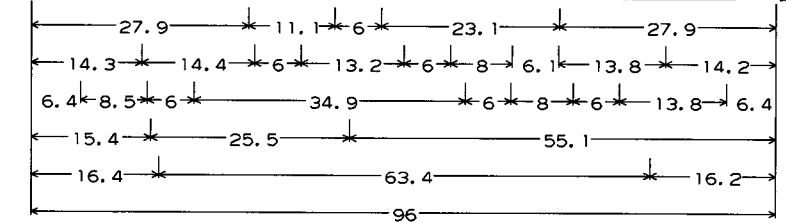


NOTES:

- (1) THIS DETAIL TO BE USED ONLY IF AND 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, EDITION OF 2014.

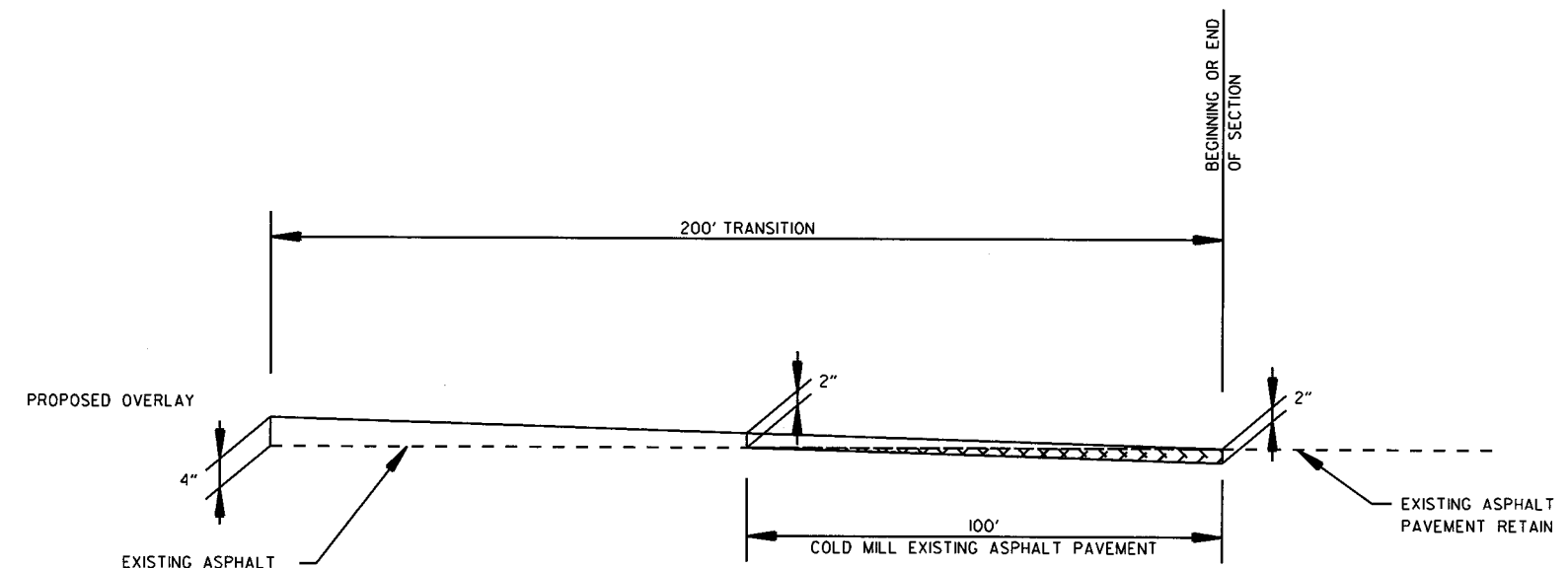


Job CA0202  
Start Date Mo Year  
Est Completion Mo Year  
**IDRIVE**  
**ARKANSAS.COM**



6.0' Radius, 1.3' Border, Black on Orange;  
 \*Job XXXXXX\* C 2K; \*Start Date Mo Year\* C 2K;  
 \*Est Completion Mo Year\* C 2K; \*IDRIVE\* Arial;  
 \*ARKANSAS.COM\* Arial;

CONSTRUCTION PROJECT INFORMATION SIGN



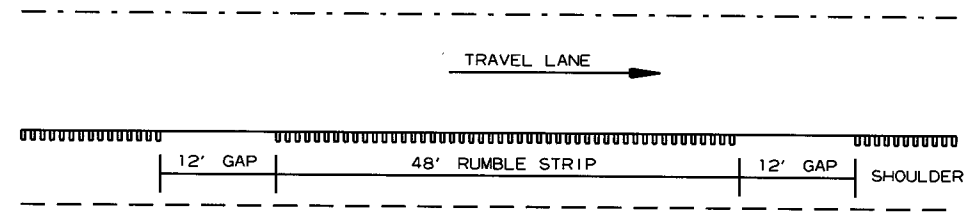
USER: f85j3  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCM\Special\_Details\CA0202\_SD.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 2:1

SPECIAL DETAILS



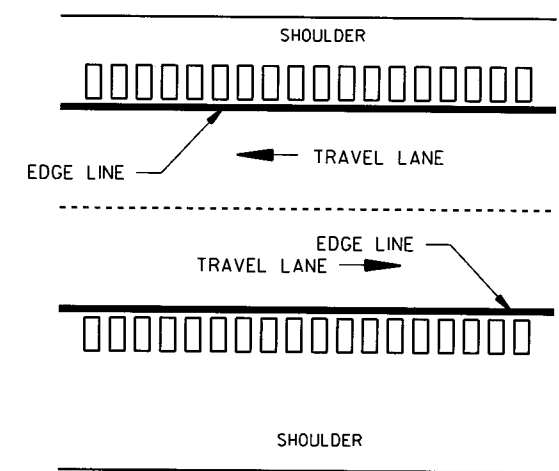
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		9	256

2 SPECIAL DETAILS

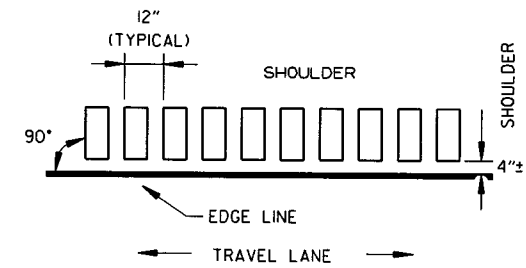
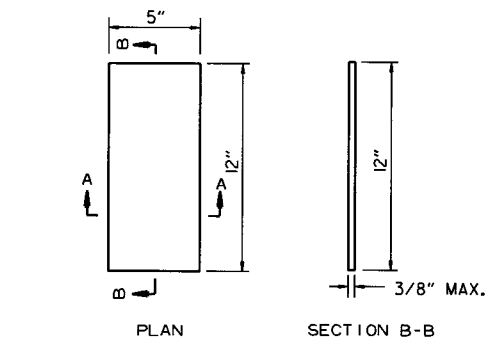


NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

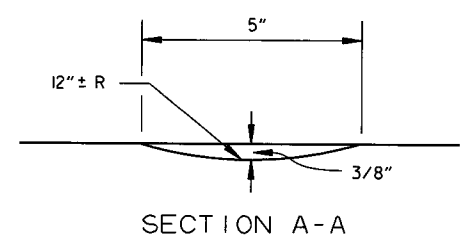
DETAIL FOR GAP PATTERN RUMBLE STRIP



PLAN VIEW



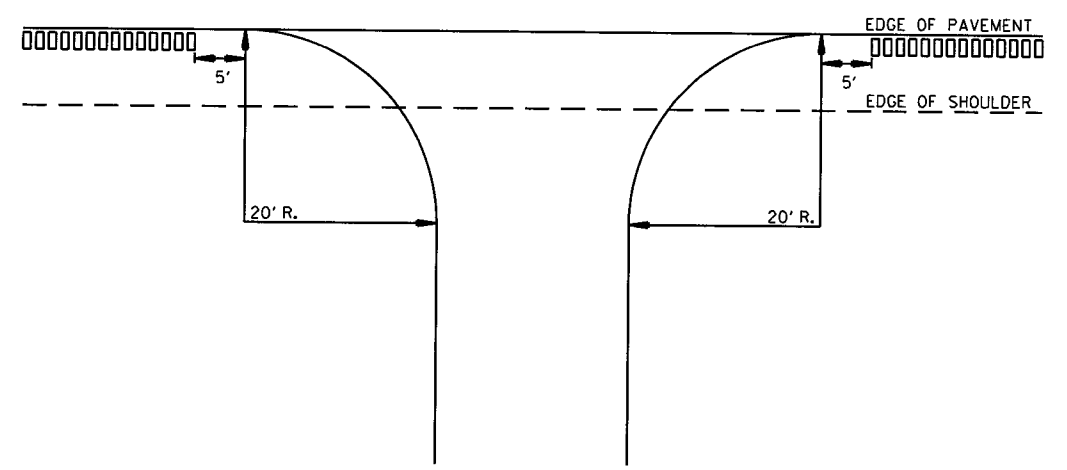
LOCATION PLAN OF RUMBLE STRIPS LEFT OR RIGHT SHOULDER



SECTION A-A

GENERAL NOTES

- 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.
- 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.
- 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.
- 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.
- THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12' LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



DETAIL FOR RUMBLE STRIP GAP AT DRIVEWAY TURNOUTS

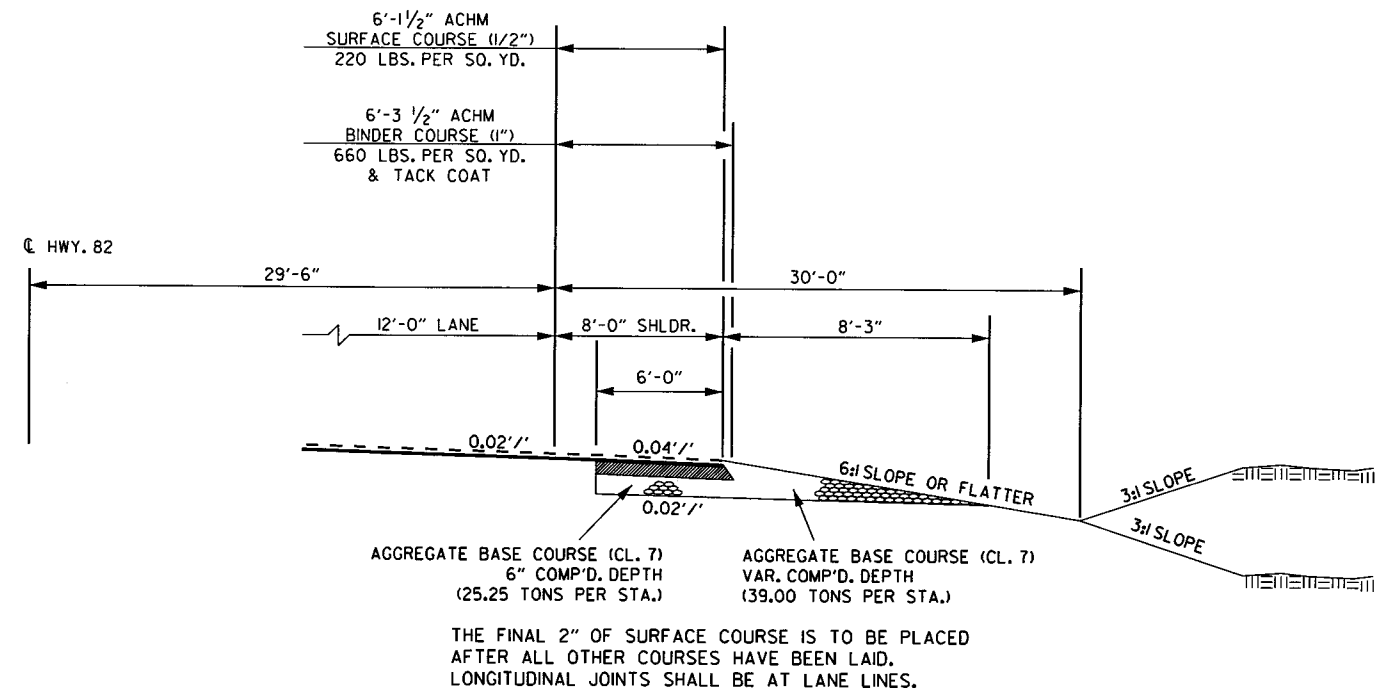
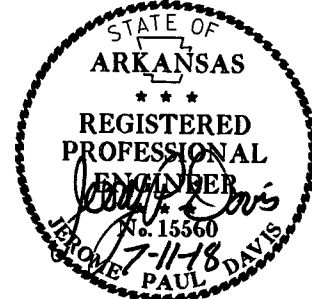
DETAILS OF RUMBLE STRIPS

SPECIAL DETAILS

USER: f6513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Special\_Details\CA0202\_SD.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:22 SCALE: 2:1

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.	CA0202	10	256	

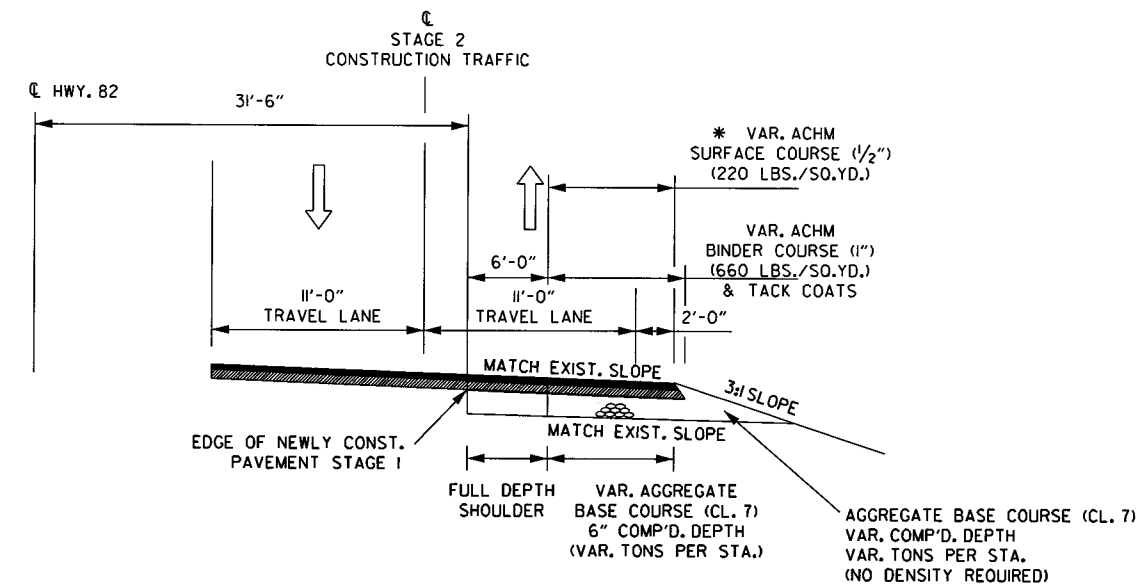
2 SPECIAL DETAILS



FULL DEPTH SHOULDER FOR MAINTENANCE OF TRAFFIC (SHOWN IN THE DIRECTION OF TRAFFIC)

STA. 607+20 TO STA. 617+80 RT.  
 STA. 636+70 TO STA. 647+30 RT.  
 STA. 675+40 TO STA. 686+00 RT.  
 STA. 705+20 TO STA. 715+80 RT.

STA. 731+00 TO STA. 742+80 RT.  
 STA. 804+15 TO STA. 809+25 RT.  
 STA. 817+89.83 TO STA. 822+75 RT.



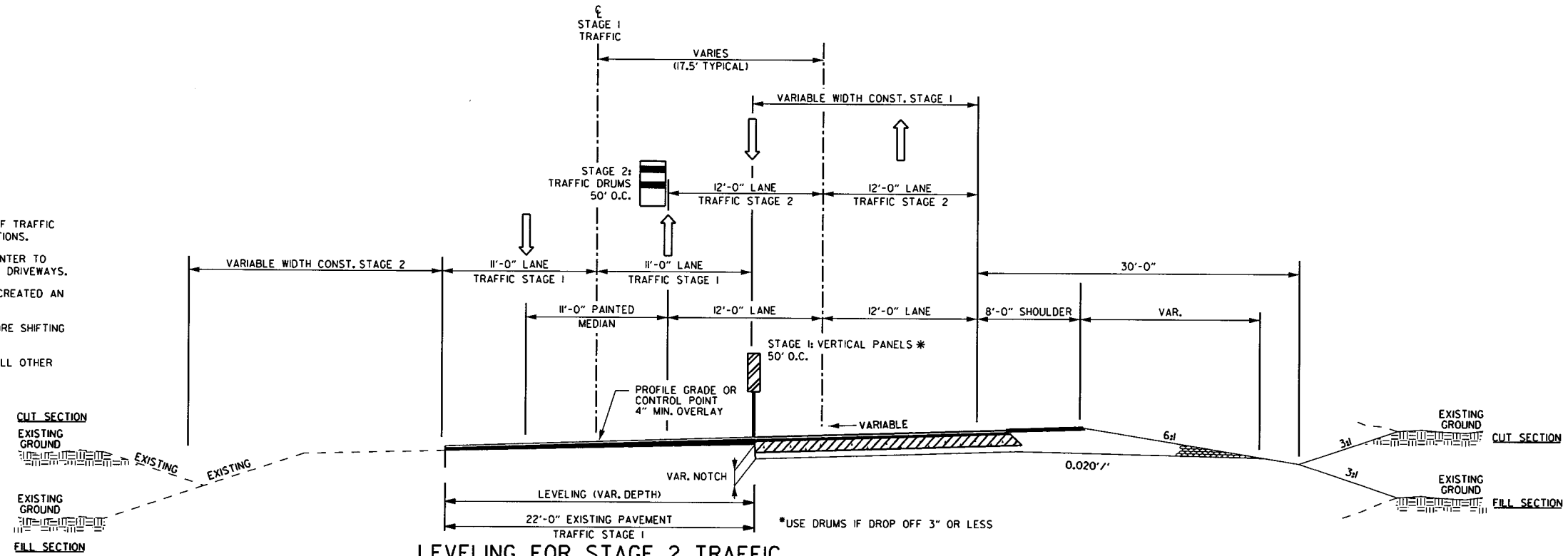
WIDENING FOR MAINTENANCE OF TRAFFIC (STAGE I)

STA. 809+25 TO STA. 817+89.83

\* WIDTH VARIES FROM 0'-0" AT STA. 809+25 TO 16'-0" AT STA. 813+24 AND 16'-0" AT STA. 814+33 TO 0'-0" AT STA. 817+89.93

NOTES:

- REFER TO MAINTENANCE OF TRAFFIC PLANS FOR PLACEMENT OF TRAFFIC DRUMS. SPACING WILL VARY AT DRIVEWAYS AND HWY. INTERSECTIONS.
- USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.
- LEVELING SHALL BE PLACED ANYWHERE STAGE I WIDENING HAS CREATED AN ELEVATION DIFFERENTIAL AT EXISTING PAVEMENT EDGE.
- LEVELING SHALL BE PERFORMED AS A MOVING OPERATION BEFORE SHIFTING TO STAGE 2 TRAFFIC.
- THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID.



LEVELING FOR STAGE 2 TRAFFIC

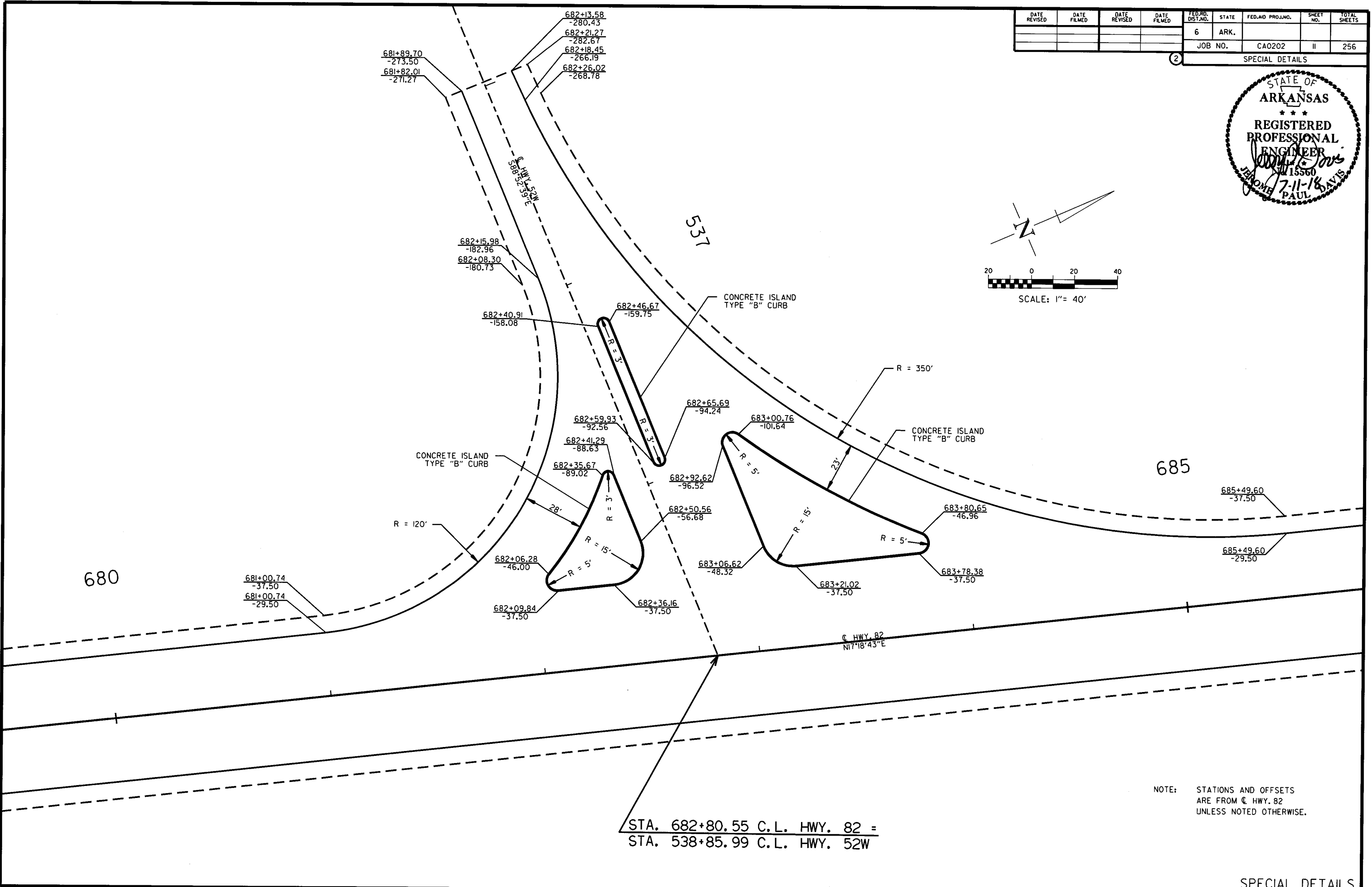
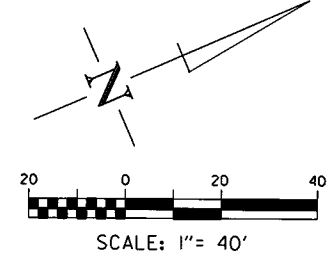
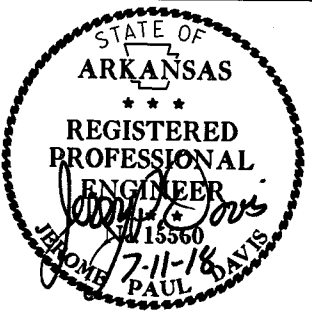
STA. 574+00.00 TO 591+00.00  
 STA. 546+95.00 TO 828+40.00

SPECIAL DETAILS

USER: f5513  
 DESIGN FILE: G:\4109300\_Hwy\_82\TRANSP\DCN\Special.Details\CA0202\_SD\_Hwy-82-2.dgn  
 PLOTTED: 7/10/2018 10:22 SCALE: 40x

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.	CA0202	II	256	

2 SPECIAL DETAILS



STA. 682+80.55 C.L. HWY. 82 =  
 STA. 538+85.99 C.L. HWY. 52W

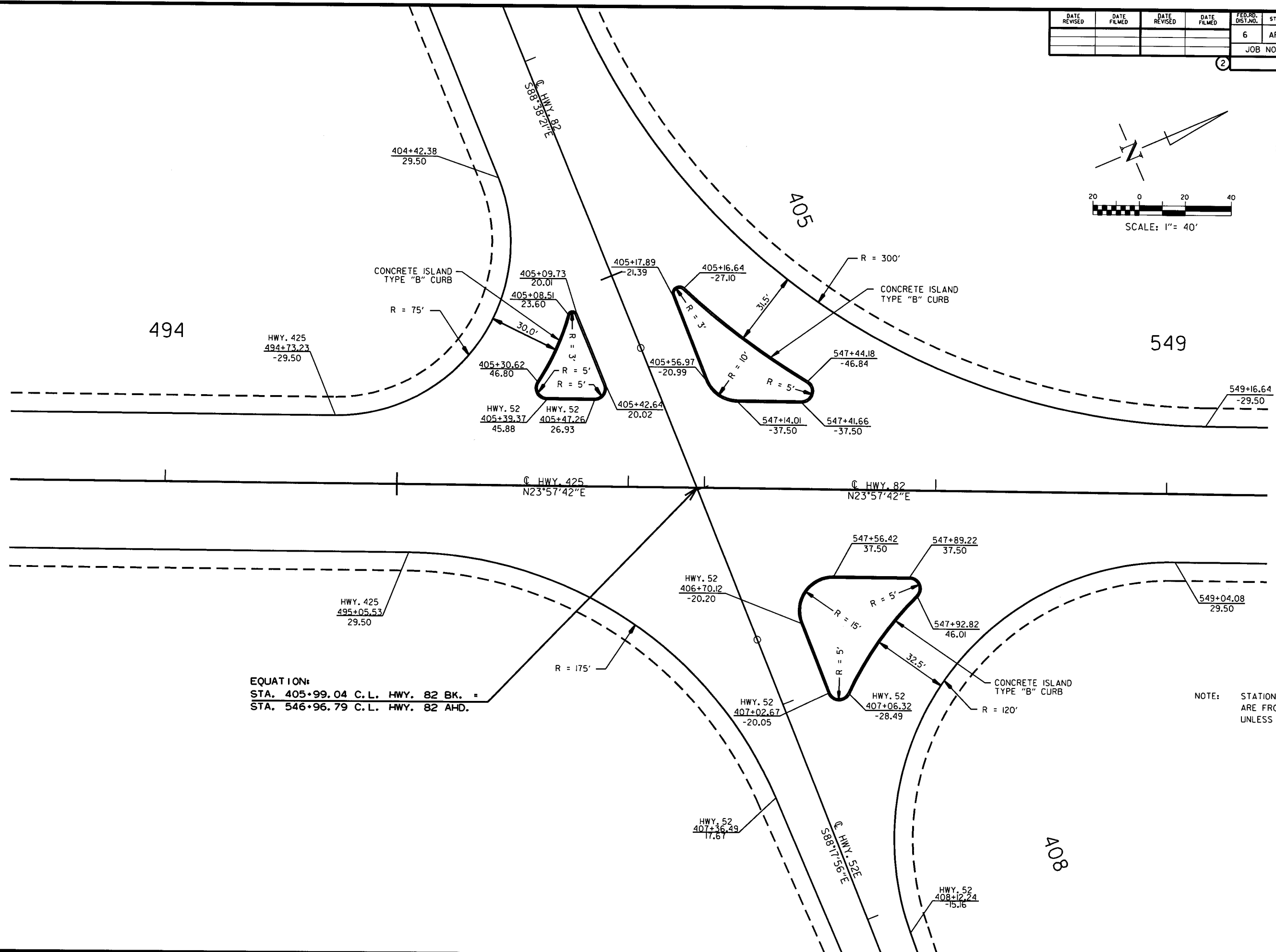
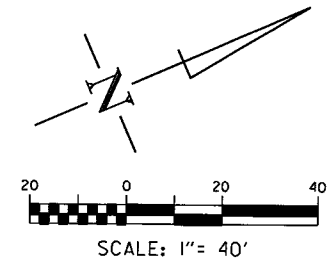
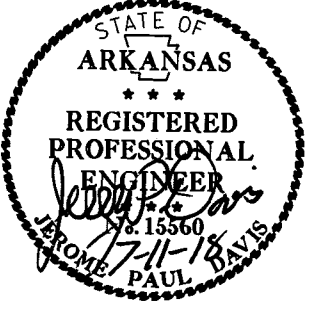
NOTE: STATIONS AND OFFSETS ARE FROM C. HWY. 82 UNLESS NOTED OTHERWISE.

SPECIAL DETAILS

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\_TRANSP\DCN\Special\_Details\CA0202\_SD\_Hwy\_82\_3.dgn  
 PLOTTED: 7/10/2018 10:22 SCALE: 40:1

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.	CA0202	12	256	

2 SPECIAL DETAILS



EQUATION:  
 STA. 405+99.04 C.L. HWY. 82 BK. =  
 STA. 546+96.79 C.L. HWY. 82 AHD.

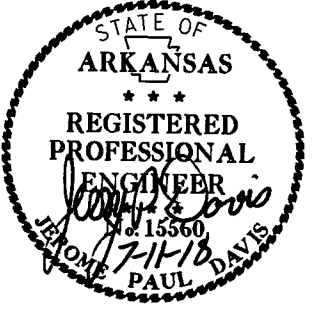
NOTE: STATIONS AND OFFSETS ARE FROM C. HWY. 82 UNLESS NOTED OTHERWISE.

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Special\_Details\CA0202\_SD\_Hwy-82\_4.dgn  
 PLOTTED: 7/10/2018 10:22 SCALE: 40:1

SPECIAL 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.	CA0202	13	256	

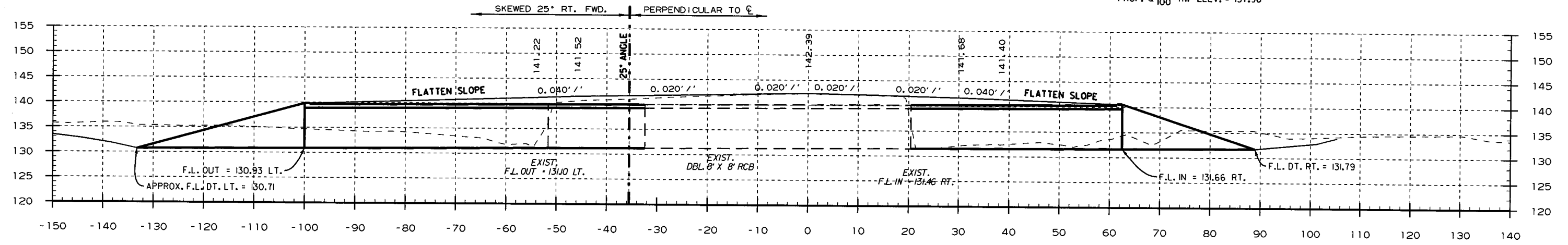
2 SPECIAL DETAILS



STA. 495+23 - IN PLACE  
 DOUBLE 8' x 8' x 72' R.C. BOX CULVERT  
 WITH 3:1 WINGS LT. AND RT.  
 REMOVE 19' EXIST. AND EXTEND 67' LT. AT 25 DEG. SKEW  
 RETAIN AND EXTEND 44' RT.  
 COMPLETED LENGTH 162 FT.  
 Q50 = 449.90 CFS; D.A. = 931.65 AC  
 CHANNEL CHANGE = 40 CU. YD.

THIS SECTION IS PROFILED ALONG THE EXISTING RCB  
 & ALONG THE SKEWED PORTION OF THE EXTENSION  
 ON THE LEFT.

WITHIN SPECIAL FLOOD  
 HAZARD AREA  
 EXIST. Q<sub>100</sub> HW ELEV. = 137.34  
 PROP. Q<sub>100</sub> HW ELEV. = 137.96



495+23 HWY. 425

USER: r6513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Special\_Details\CA0202\_SD\_HWY-82\_5.dgn  
 PLOTTED: 7/10/2018 10:22 SCALE: 20:1

SPECIAL DETAILS

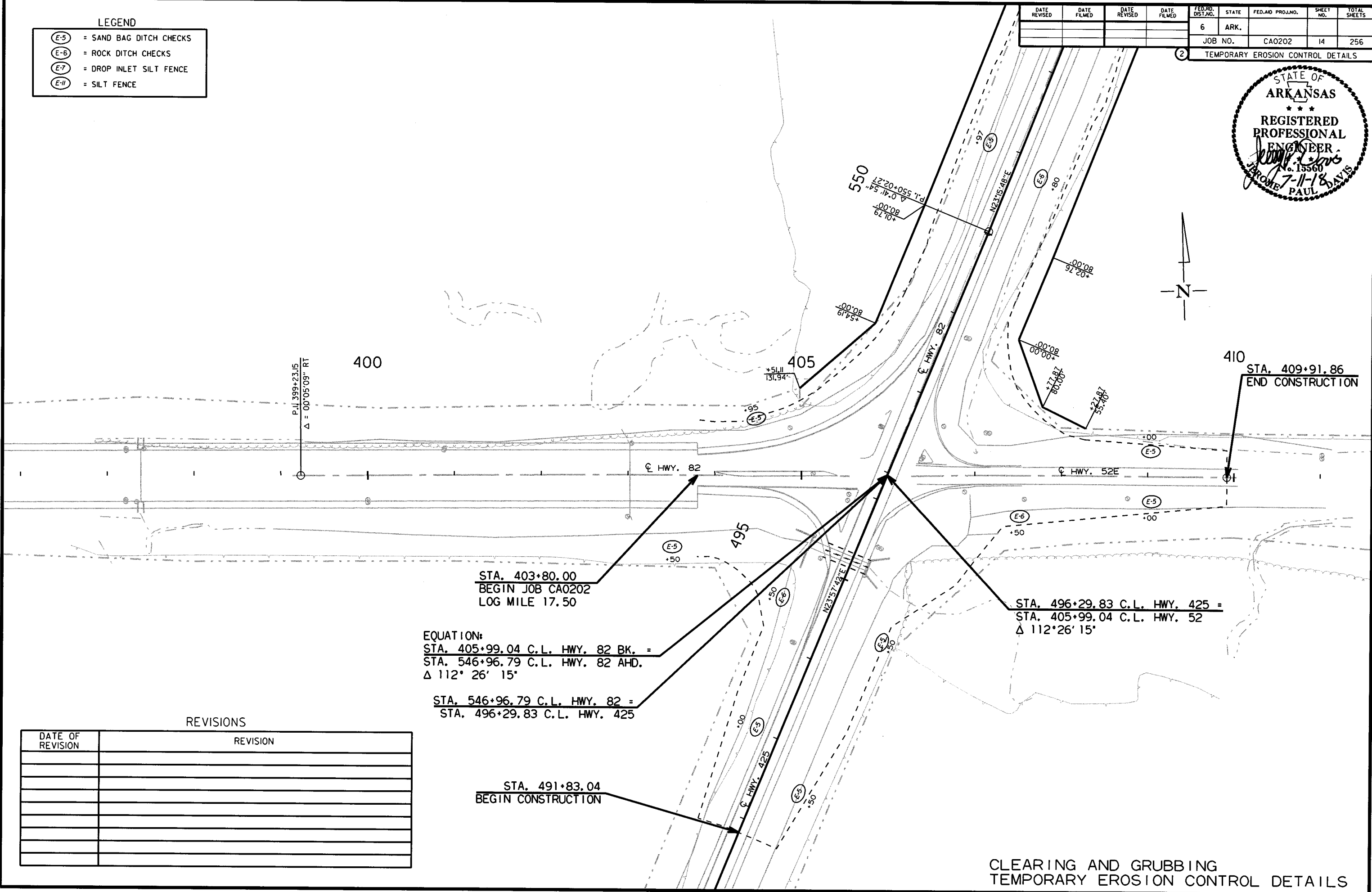
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	14	256	

2 TEMPORARY EROSION CONTROL DETAILS



**LEGEND**

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE



**REVISIONS**

DATE OF REVISION	REVISION

**CLEARING AND GRUBBING  
TEMPORARY EROSION CONTROL DETAILS**

USER: f5j13  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 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. CA0202		15		256

2 TEMPORARY EROSION CONTROL DETAILS

STA. 403+80.00  
BEGIN JOB CA0202  
LOG MILE 17.50

490

495

405

550

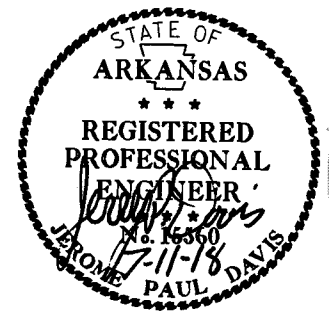
STA. 491+83.04  
BEGIN CONSTRUCTION

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

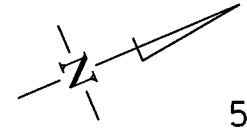


USER: fs513  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC\_HWY-82.dgn  
PLOTTED: 7/10/2018 10:22  
SCALE: 100H

CLEARING AND GRUBBING  
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. CA0202		16	256	

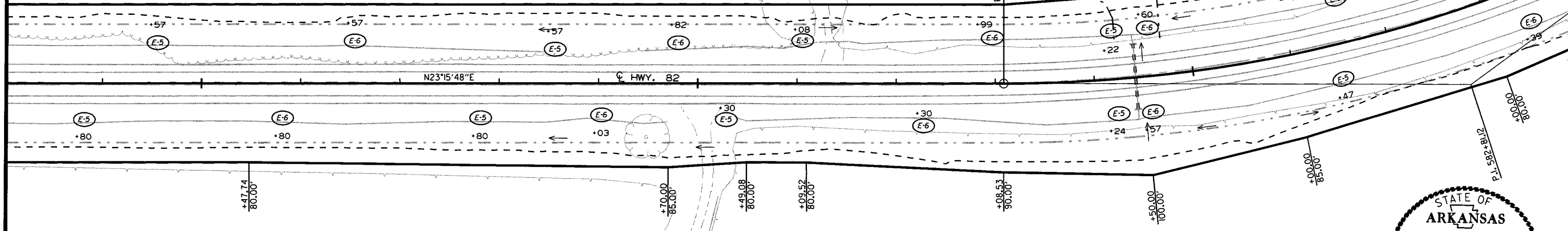
2 TEMPORARY EROSION CONTROL DETAILS



570

575

580

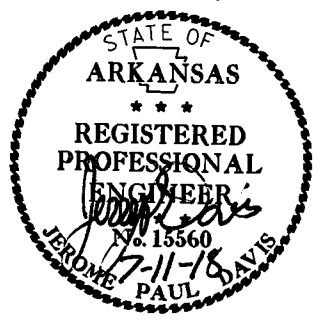


REVISIONS

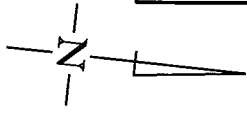
DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE



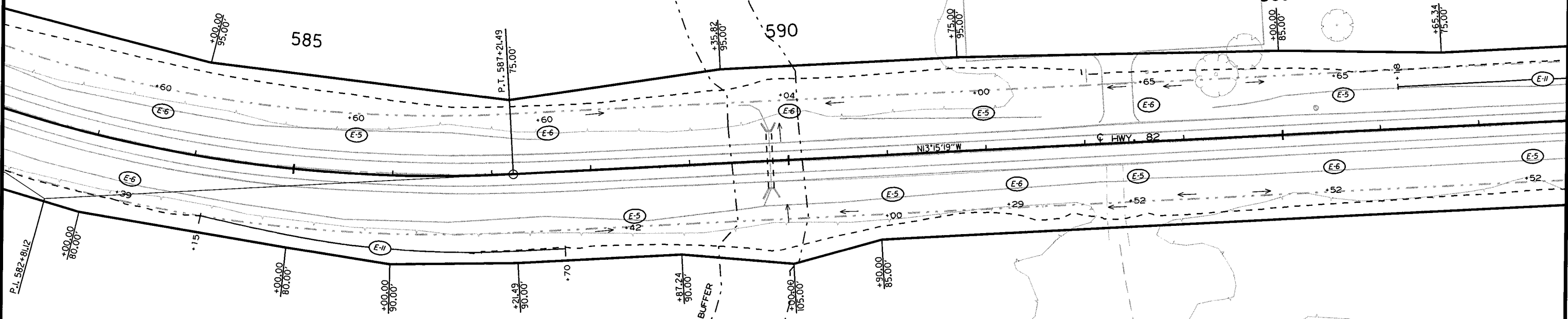
STA. 596+18 - STA. 599+10 LT.  
SILT FENCE = 292 LIN. FT.



585

590

595



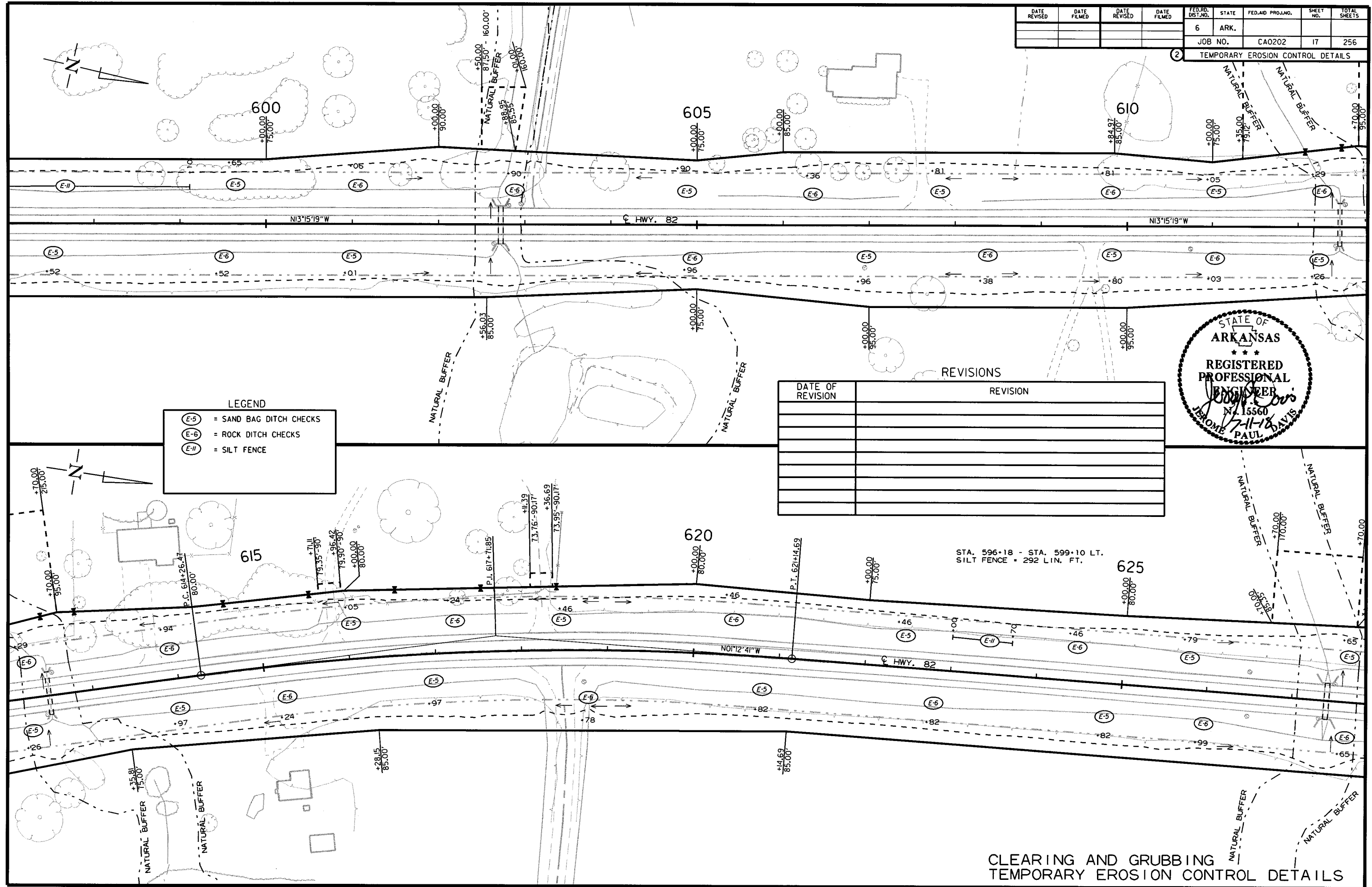
STA. 584+15 - STA. 587+70 RT.  
SILT FENCE = 355 LIN. FT.

CLEARING AND GRUBBING  
TEMPORARY EROSION CONTROL DETAILS

USER: fs513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\Erosion\CA0202.EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100H



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	256
				JOB NO. CA0202				
				TEMPORARY EROSION CONTROL DETAILS				

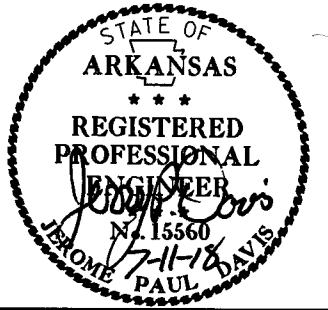


LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE

REVISIONS

DATE OF REVISION	REVISION



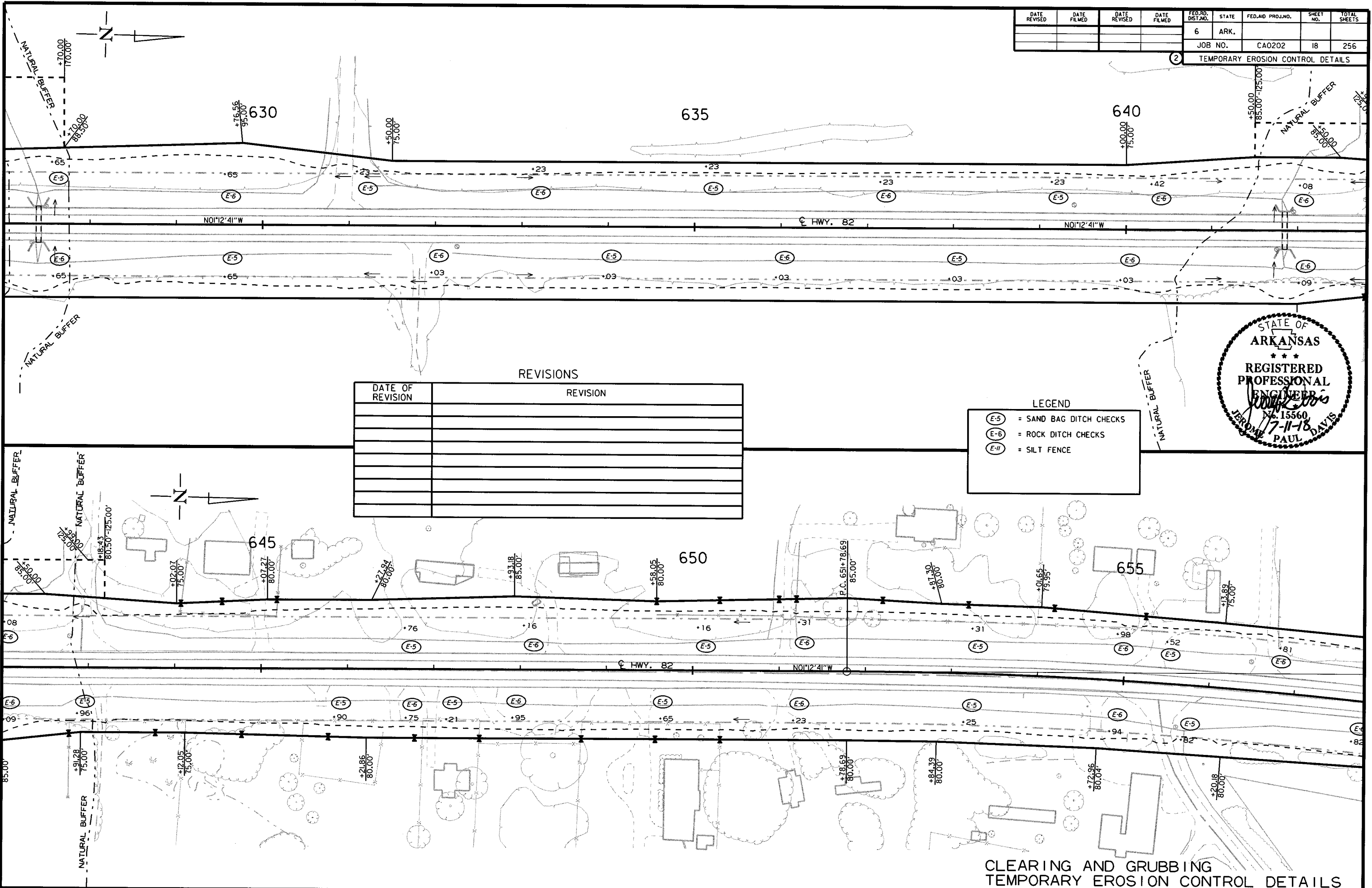
STA. 596+18 - STA. 599+10 LT.  
SILT FENCE = 292 LIN. FT.

USER: f8513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCM\Erosion\CA0202\_EC\_HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100H

CLEARING AND GRUBBING  
 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.	CA0202	18	256	

2 TEMPORARY EROSION CONTROL DETAILS

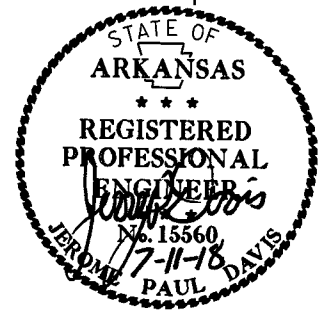


REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE

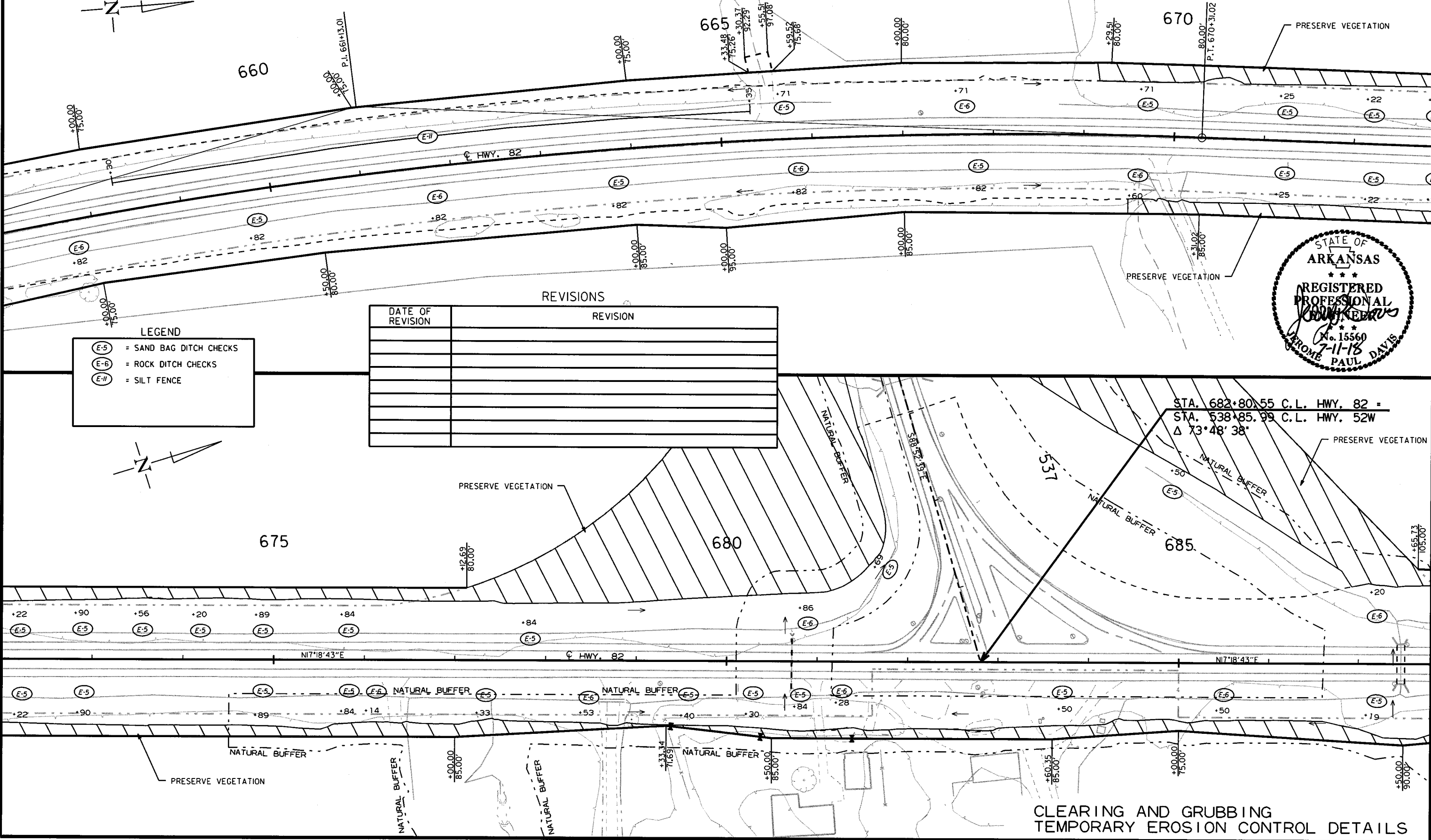
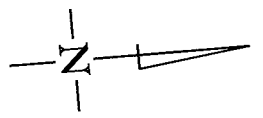


USER: 16513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100%

**CLEARING AND GRUBBING  
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.	CA0202	19	256
				(2) TEMPORARY EROSION CONTROL DETAILS				

STA. 658+30 - STA. 665+35 LT.  
SILT FENCE = 705 LIN. FT.

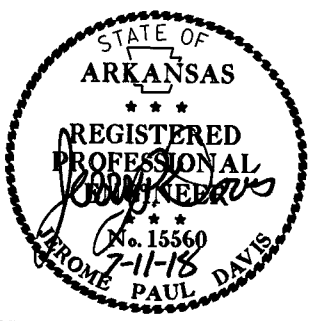


**LEGEND**

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = SILT FENCE

**REVISIONS**

DATE OF REVISION	REVISION



STA. 682+80.55 C.L. HWY. 82 =  
STA. 538+85.99 C.L. HWY. 52W  
Δ 73°48'38"

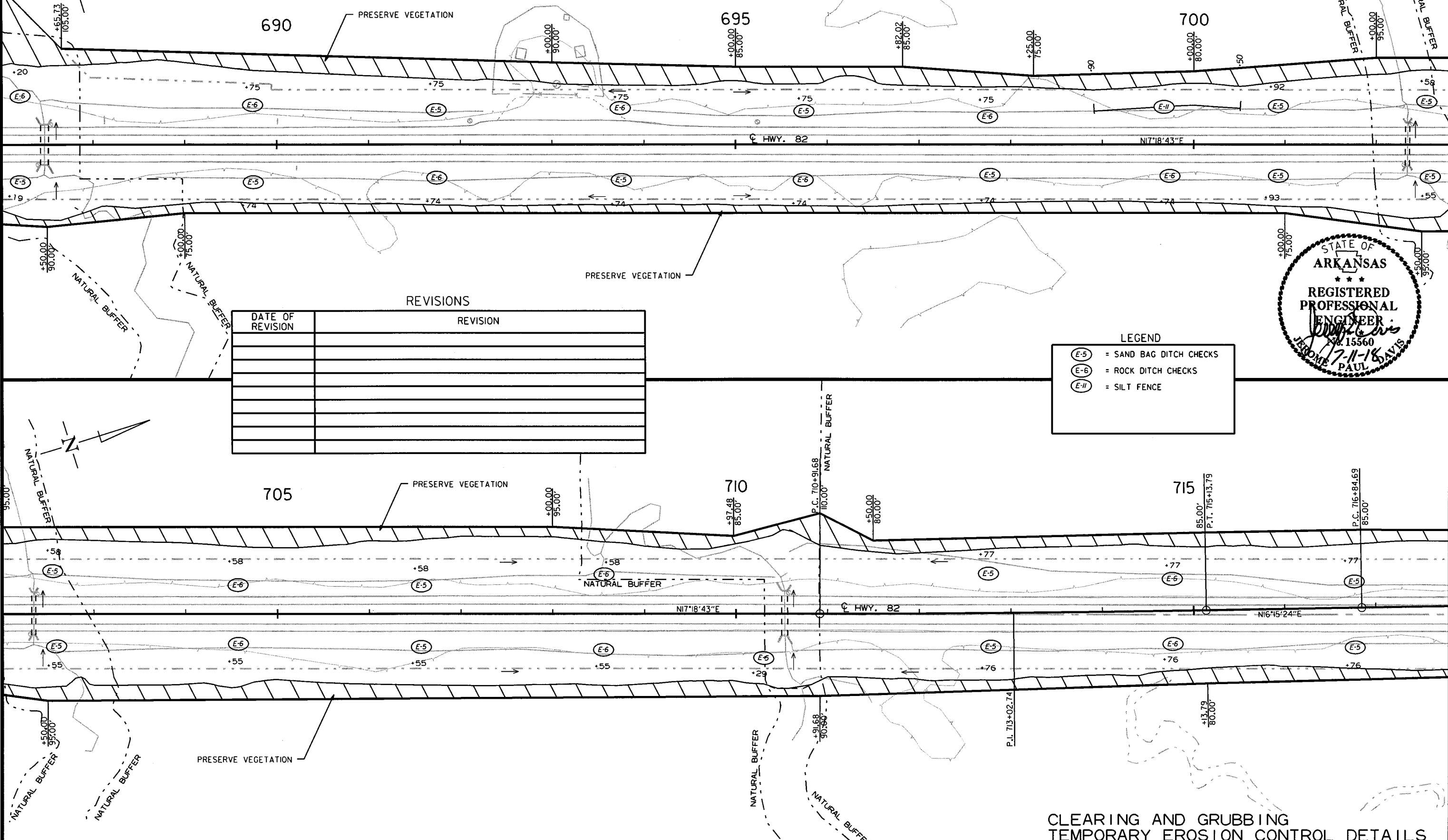
USER: f953  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Erosion\CA0202.EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100:1

**CLEARING AND GRUBBING  
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.		20	256
				JOB NO. CA0202				

2 TEMPORARY EROSION CONTROL DETAILS

STA. 698+90 - STA. 700+50 LT.  
SILT FENCE = 160 LIN. FT.

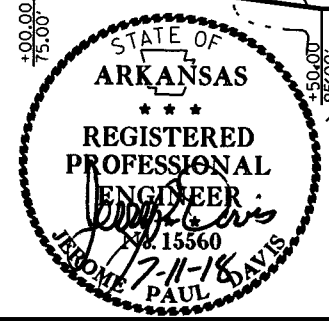


REVISIONS

DATE OF REVISION	REVISION

LEGEND

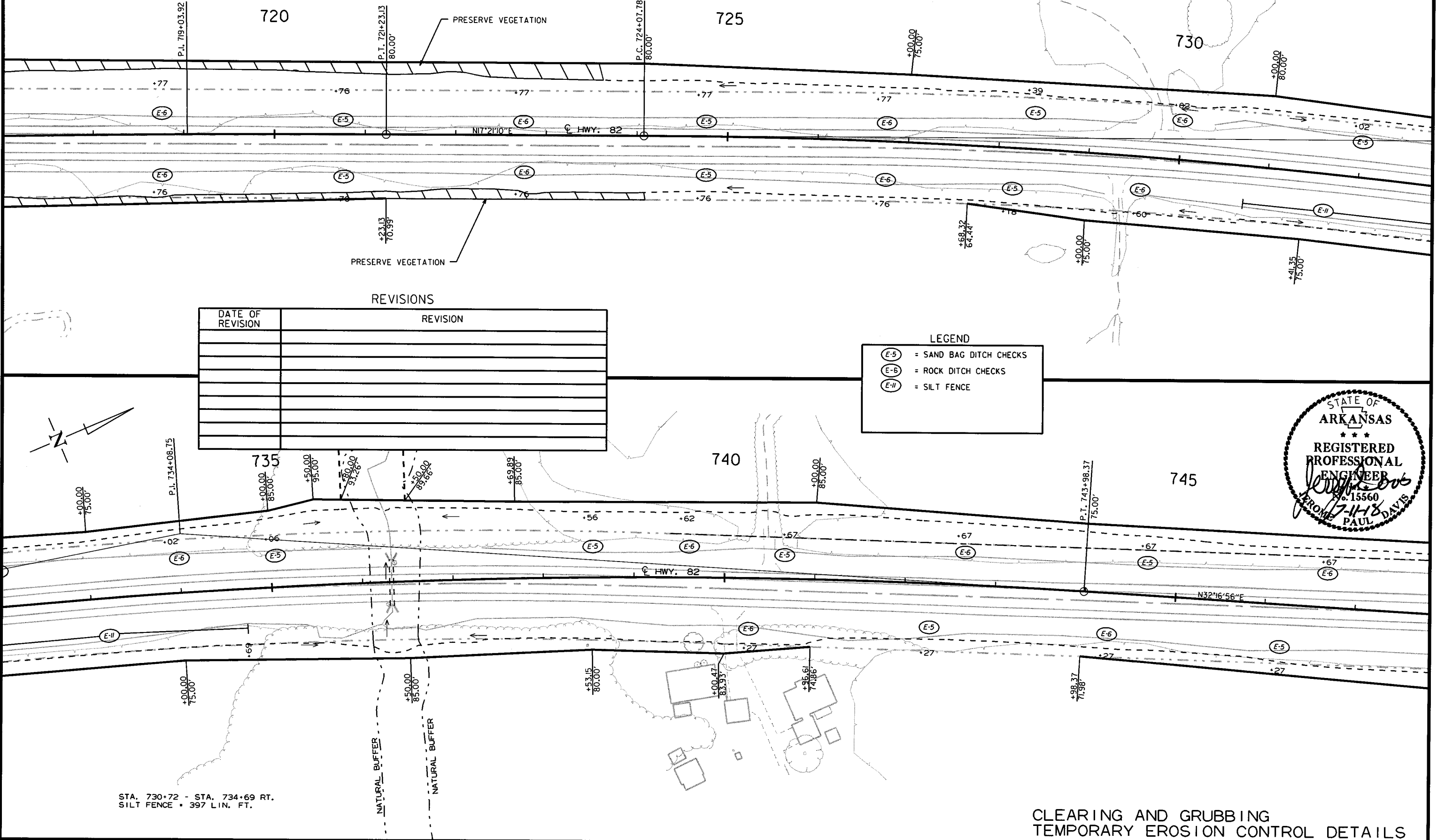
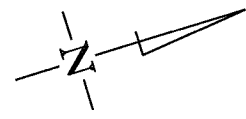
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE



USER: fs513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DN\EROSION\CA0202.EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100X

CLEARING AND GRUBBING  
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.		CA0202	21	256
(2) TEMPORARY EROSION CONTROL DETAILS								

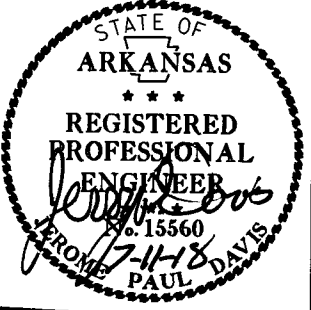


REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE



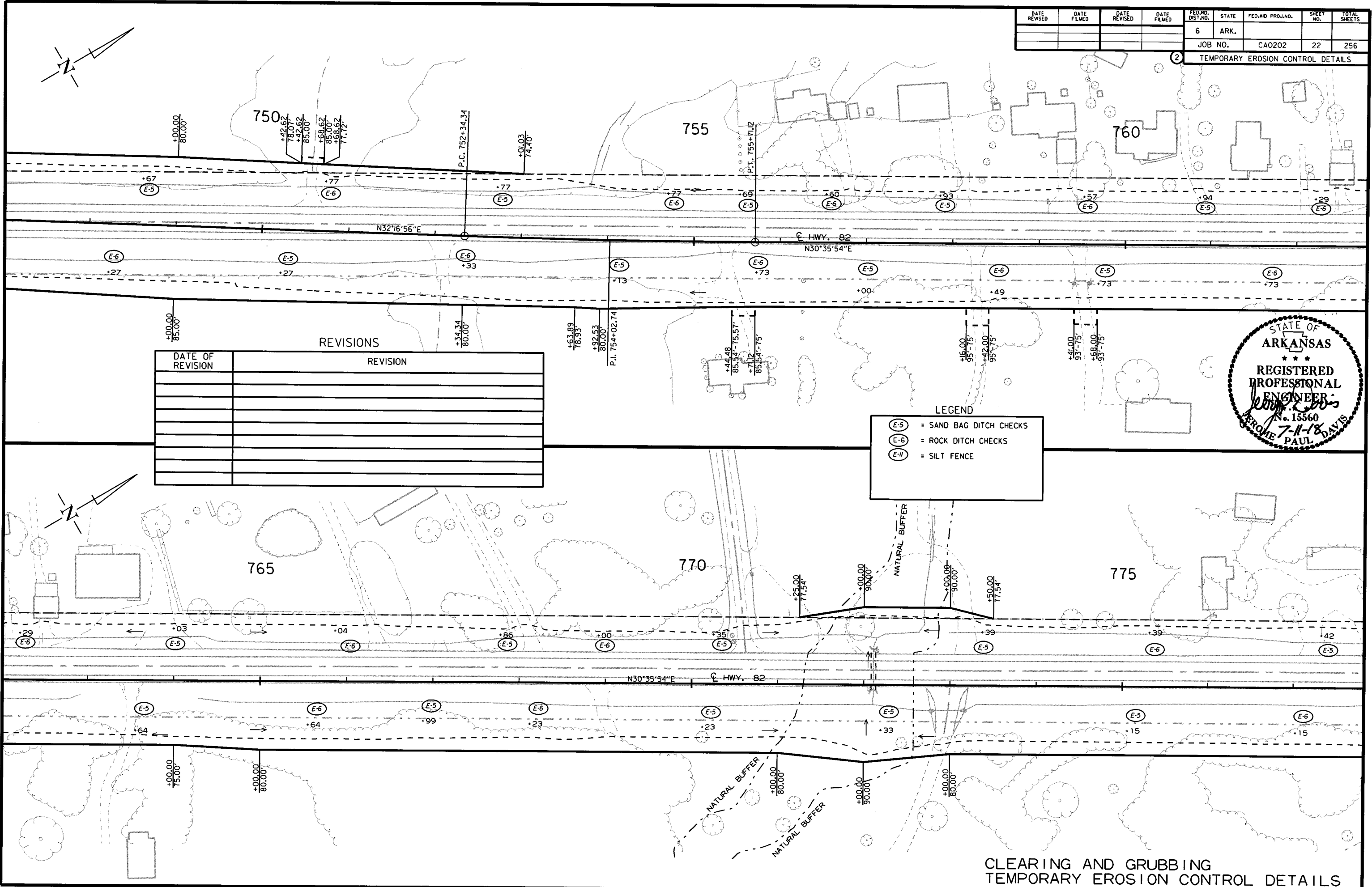
STA. 730+72 - STA. 734+69 RT.  
SILT FENCE = 397 LIN. FT.

CLEARING AND GRUBBING  
TEMPORARY EROSION CONTROL DETAILS

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100H

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.	CA0202	22	256	

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

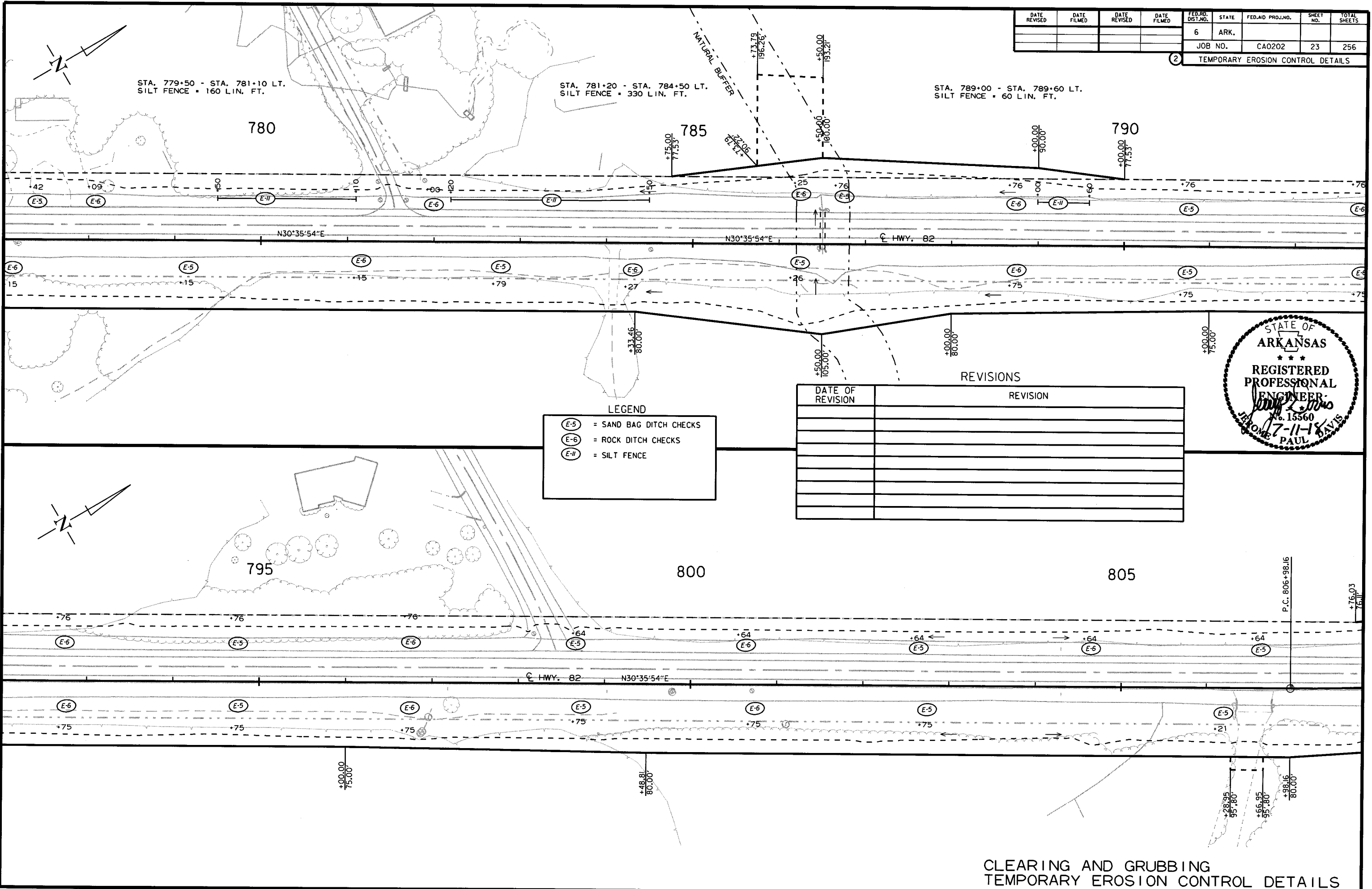


**CLEARING AND GRUBBING  
TEMPORARY EROSION CONTROL DETAILS**

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Erosion\CA0202.EC.Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:22 SCALE: 10:1

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.	CA0202	23	256	

2 TEMPORARY EROSION CONTROL DETAILS



STA. 779+50 - STA. 781+10 LT.  
SILT FENCE = 160 LIN. FT.

STA. 781+20 - STA. 784+50 LT.  
SILT FENCE = 330 LIN. FT.

STA. 789+00 - STA. 789+60 LT.  
SILT FENCE = 60 LIN. FT.

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = SILT FENCE

REVISIONS

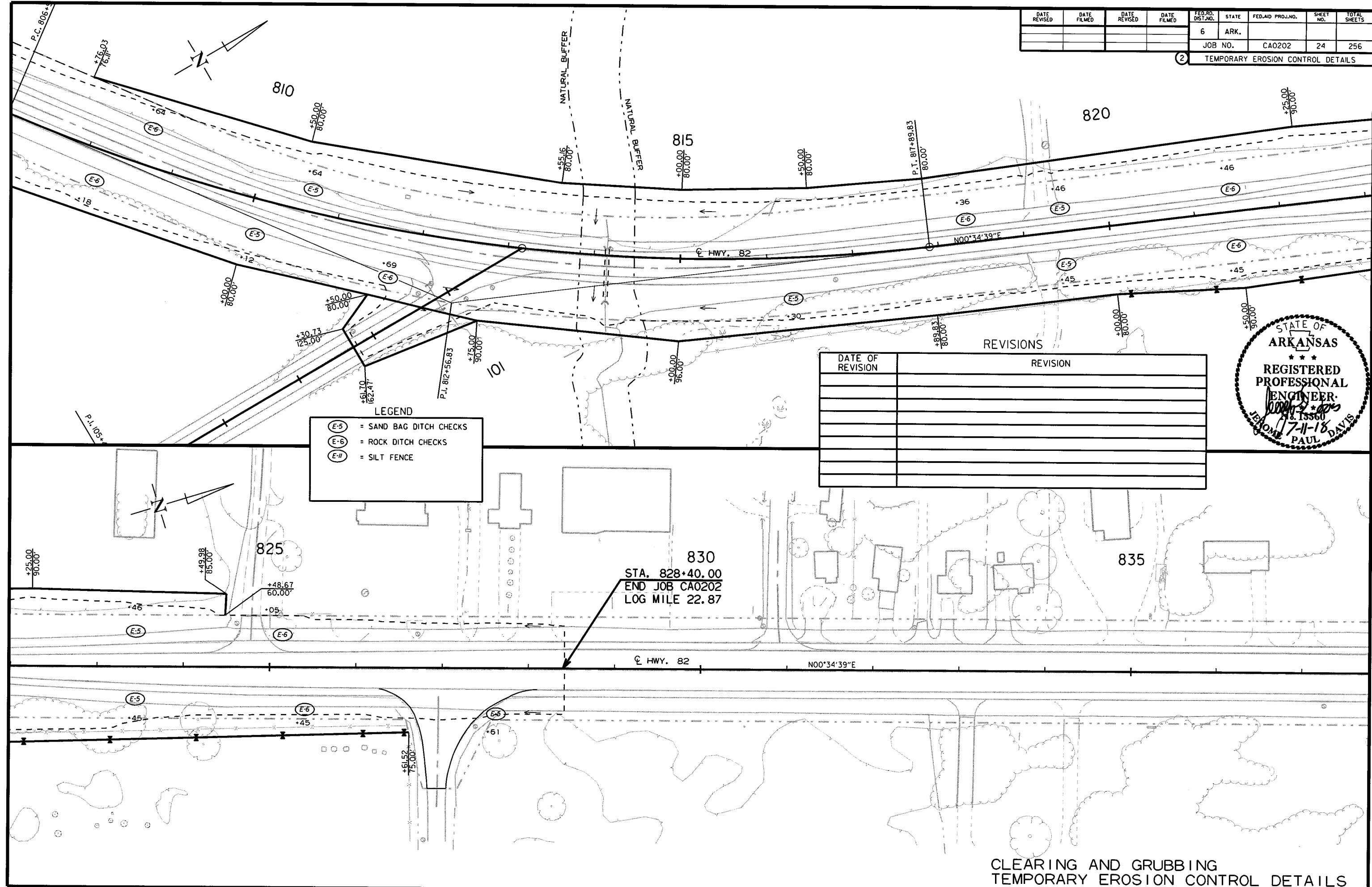
DATE OF REVISION	REVISION



USER: f5513  
 DESIGN FILE: G:\1409300\_Hwy\_82\TRANSP\DCN\Erosion\CA0202.EC.Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100%

CLEARING AND GRUBBING  
 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. CA0202		24		256
2 TEMPORARY EROSION CONTROL DETAILS								



**LEGEND**

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION



STA. 828+40.00  
 END JOB CA0202  
 LOG MILE 22.87

**CLEARING AND GRUBBING  
 TEMPORARY EROSION CONTROL DETAILS**

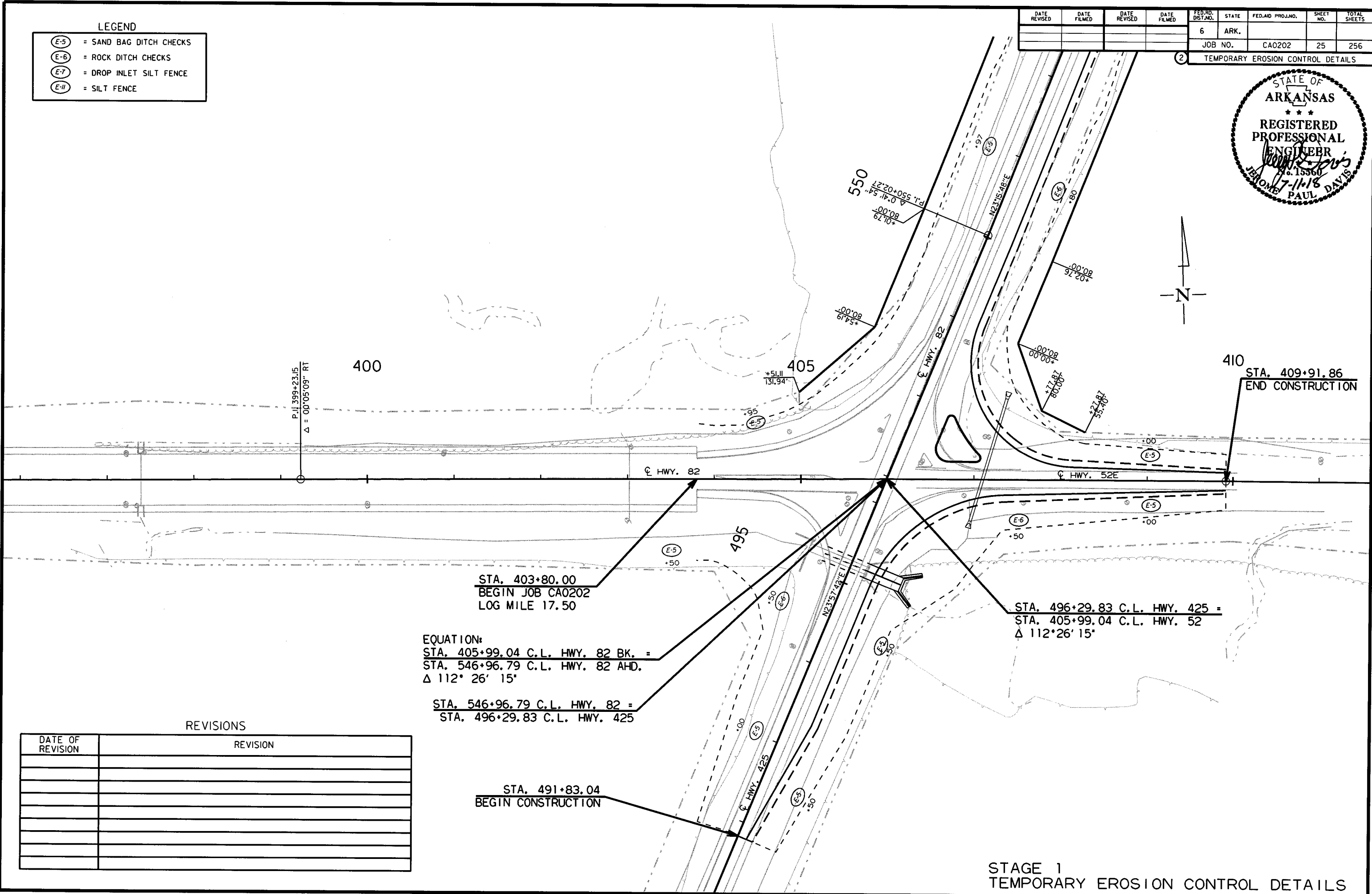
USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\_TRANSP\DCN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:22  
 SCALE: 100h



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.	CA0202	25	256	
				TEMPORARY EROSION CONTROL DETAILS				



- LEGEND**
- (E-5) = SAND BAG DITCH CHECKS
  - (E-6) = ROCK DITCH CHECKS
  - (E-7) = DROP INLET SILT FENCE
  - (E-11) = SILT FENCE



STA. 403+80.00  
 BEGIN JOB CA0202  
 LOG MILE 17.50

EQUATION:  
 STA. 405+99.04 C.L. HWY. 82 BK. =  
 STA. 546+96.79 C.L. HWY. 82 AHD.  
 $\Delta 112^\circ 26' 15''$

STA. 546+96.79 C.L. HWY. 82 =  
 STA. 496+29.83 C.L. HWY. 425

STA. 496+29.83 C.L. HWY. 425 =  
 STA. 405+99.04 C.L. HWY. 52  
 $\Delta 112^\circ 26' 15''$

STA. 491+83.04  
 BEGIN CONSTRUCTION

**REVISIONS**

DATE OF REVISION	REVISION

**STAGE 1  
 TEMPORARY EROSION CONTROL DETAILS**

USER: f5513  
 DESIGN FILE: G:\141093100.HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:23 SCALE: 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. CA0202		26		256
② TEMPORARY EROSION CONTROL DETAILS								

STA. 403+80.00  
 BEGIN JOB CA0202  
 LOG MILE 17.50

STA. 491+83.04  
 BEGIN CONSTRUCTION

REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE

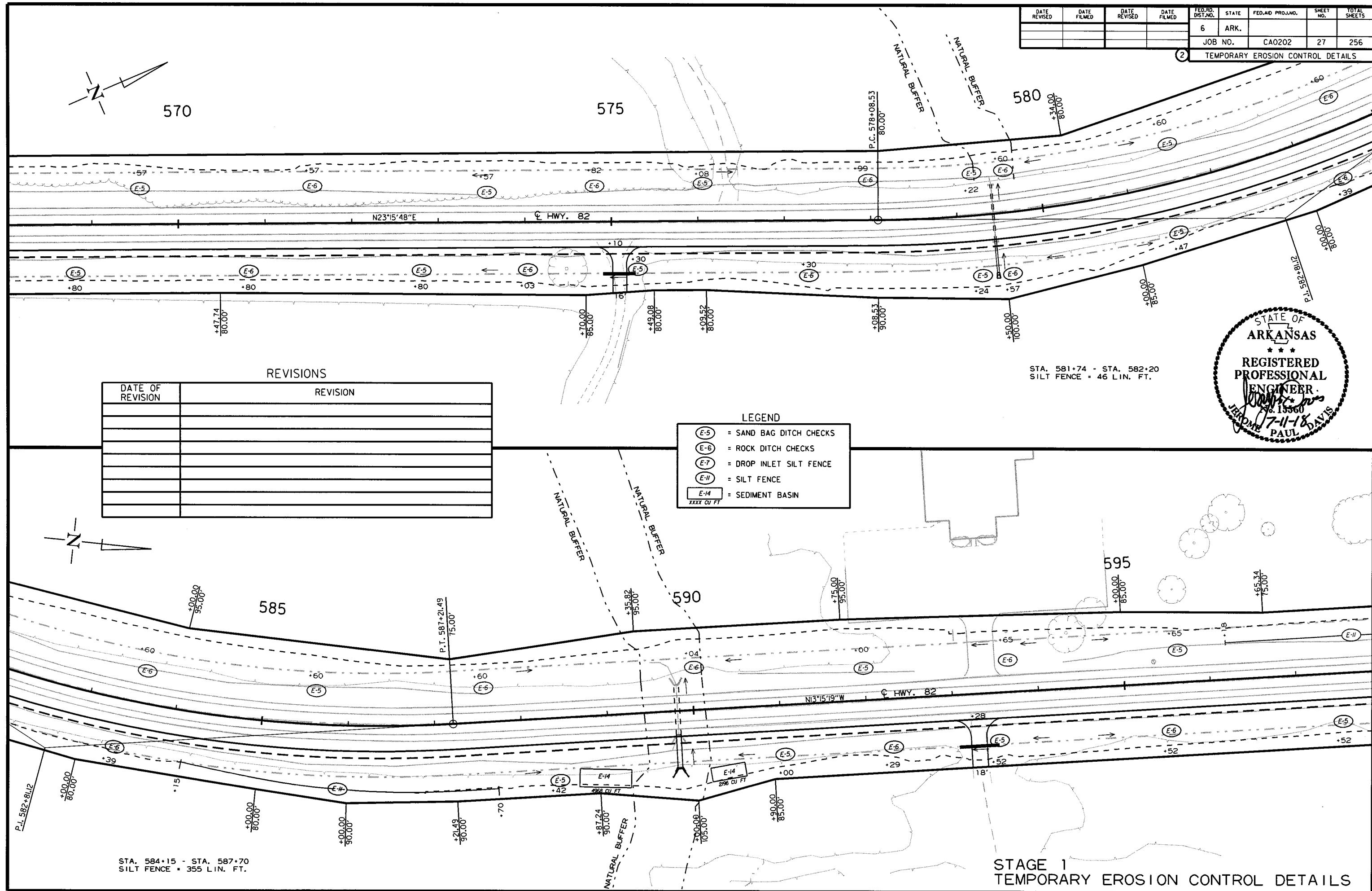


USER: f5513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC\_HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:23 SCALE: 100%

**STAGE 1**  
**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	256

JOB NO. CA0202 SHEET 27 OF 256  
TEMPORARY EROSION CONTROL DETAILS



**REVISIONS**

DATE OF REVISION	REVISION

**LEGEND**

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
E-14	= SEDIMENT BASIN
XXXX CU FT	



STA. 581+74 - STA. 582+20  
SILT FENCE = 46 LIN. FT.

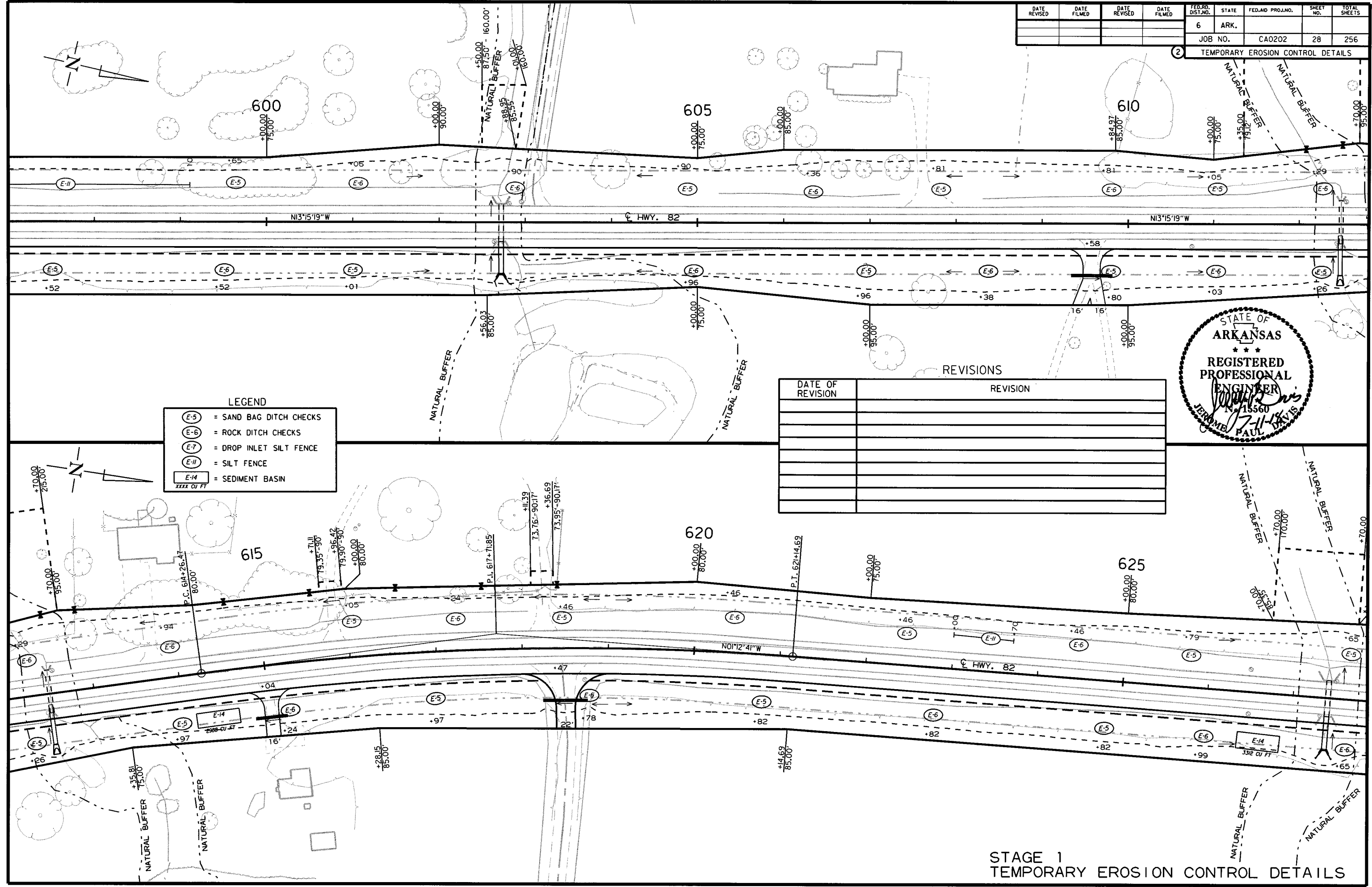
STA. 584+15 - STA. 587+70  
SILT FENCE = 355 LIN. FT.

**STAGE 1  
TEMPORARY EROSION CONTROL DETAILS**

USER: fs513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:23 SCALE: 100H

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		28	256

2 TEMPORARY EROSION CONTROL DETAILS



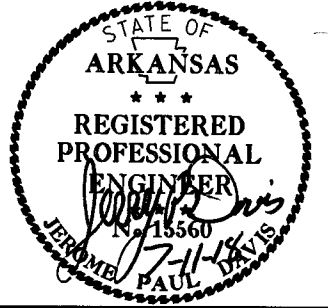
LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

XXXX CU FT

REVISIONS

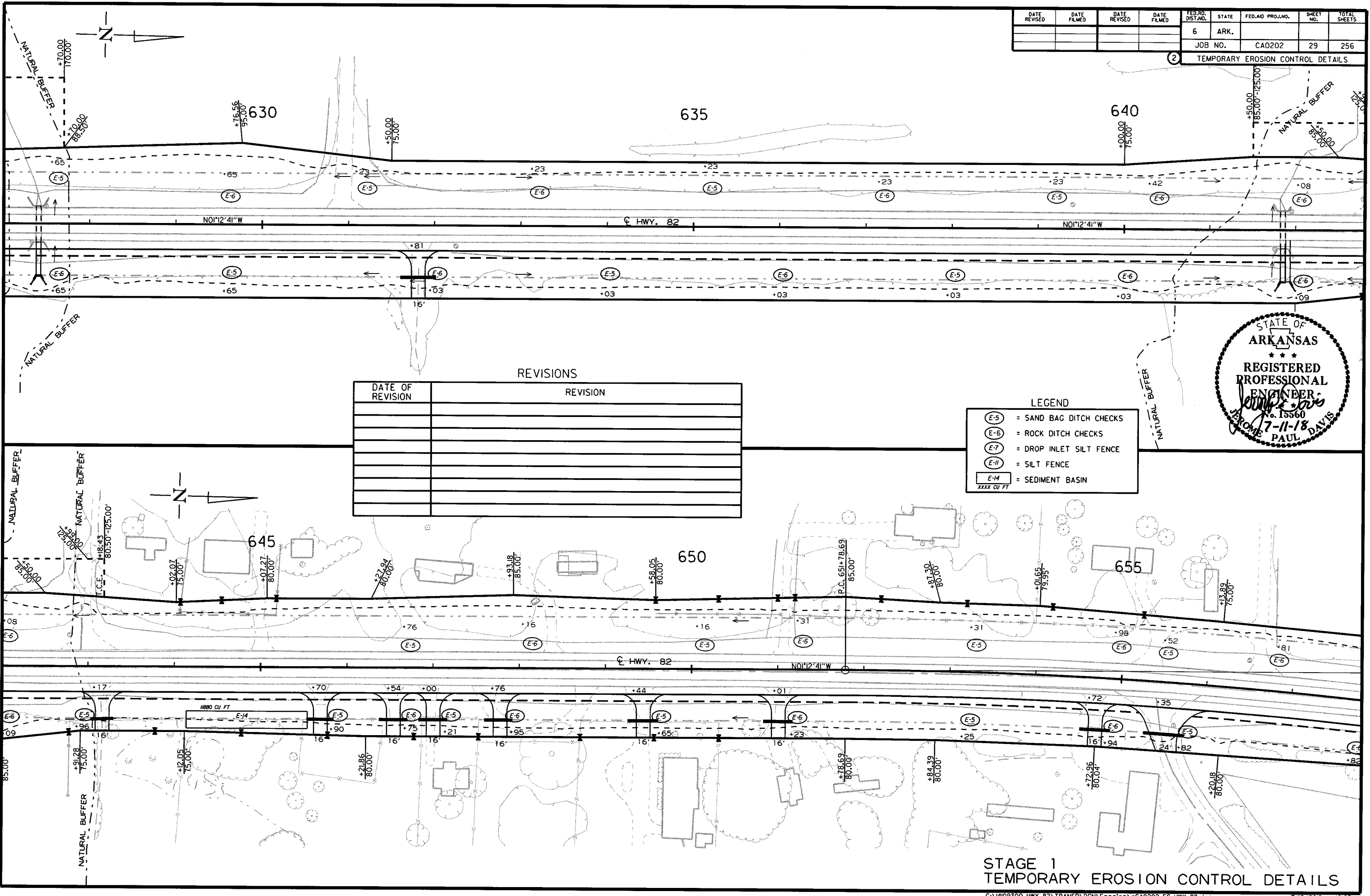
DATE OF REVISION	REVISION



USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 1/8"=1'-0"

STAGE 1  
 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.	CA0202	29	256
				JOB NO. CA0202 29 256				
				TEMPORARY EROSION CONTROL DETAILS				



REVISIONS

DATE OF REVISION	REVISION

LEGEND

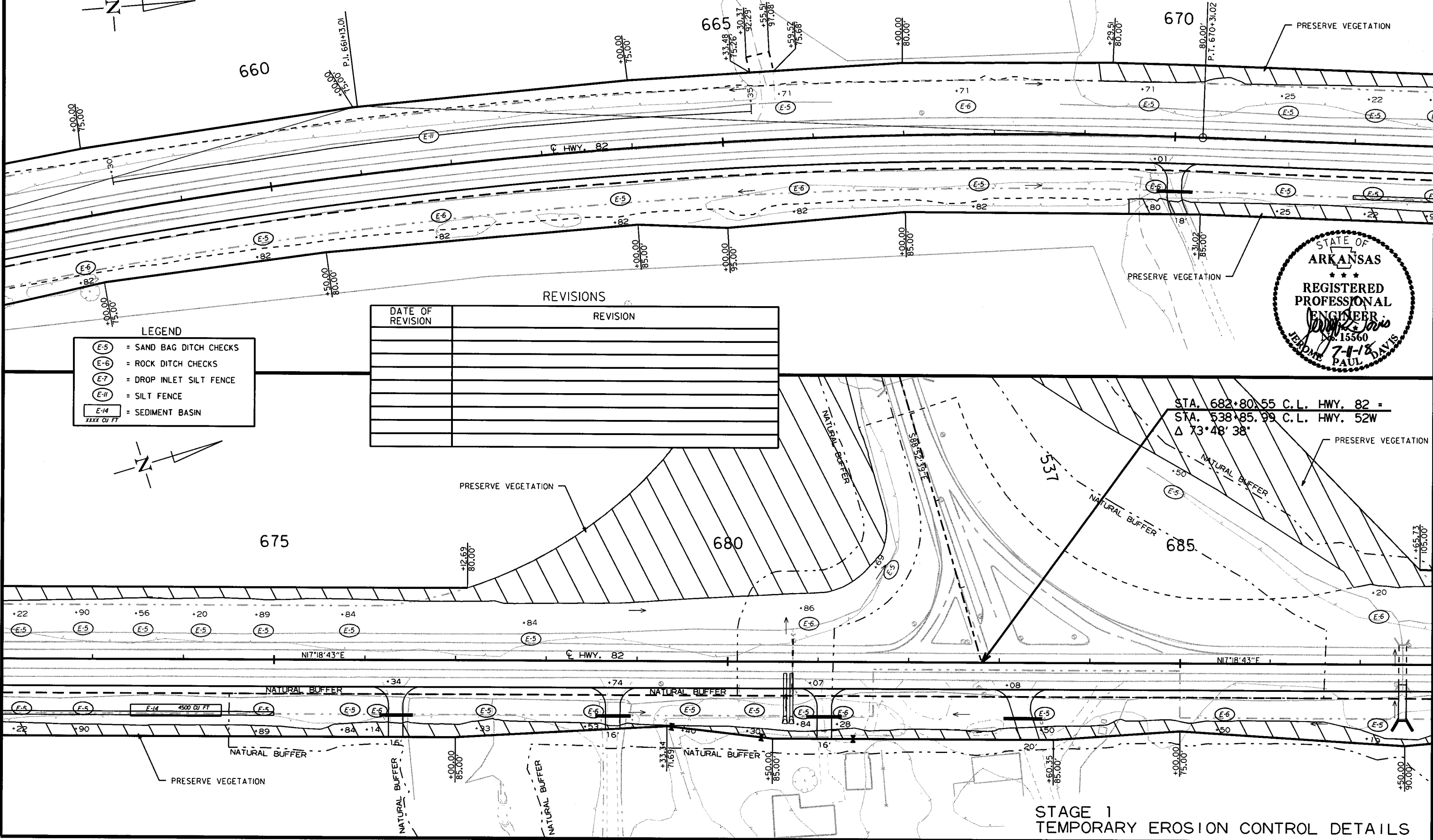
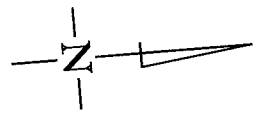
	= SAND BAG DITCH CHECKS
	= ROCK DITCH CHECKS
	= DROP INLET SILT FENCE
	= SILT FENCE
	= SEDIMENT BASIN
xxxx CU FT	



USER: f85j3  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100%

**STAGE 1**  
**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.	CA0202	30	256	
(2) TEMPORARY EROSION CONTROL DETAILS								



**LEGEND**

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN
XXXX CU FT	

**REVISIONS**

DATE OF REVISION	REVISION



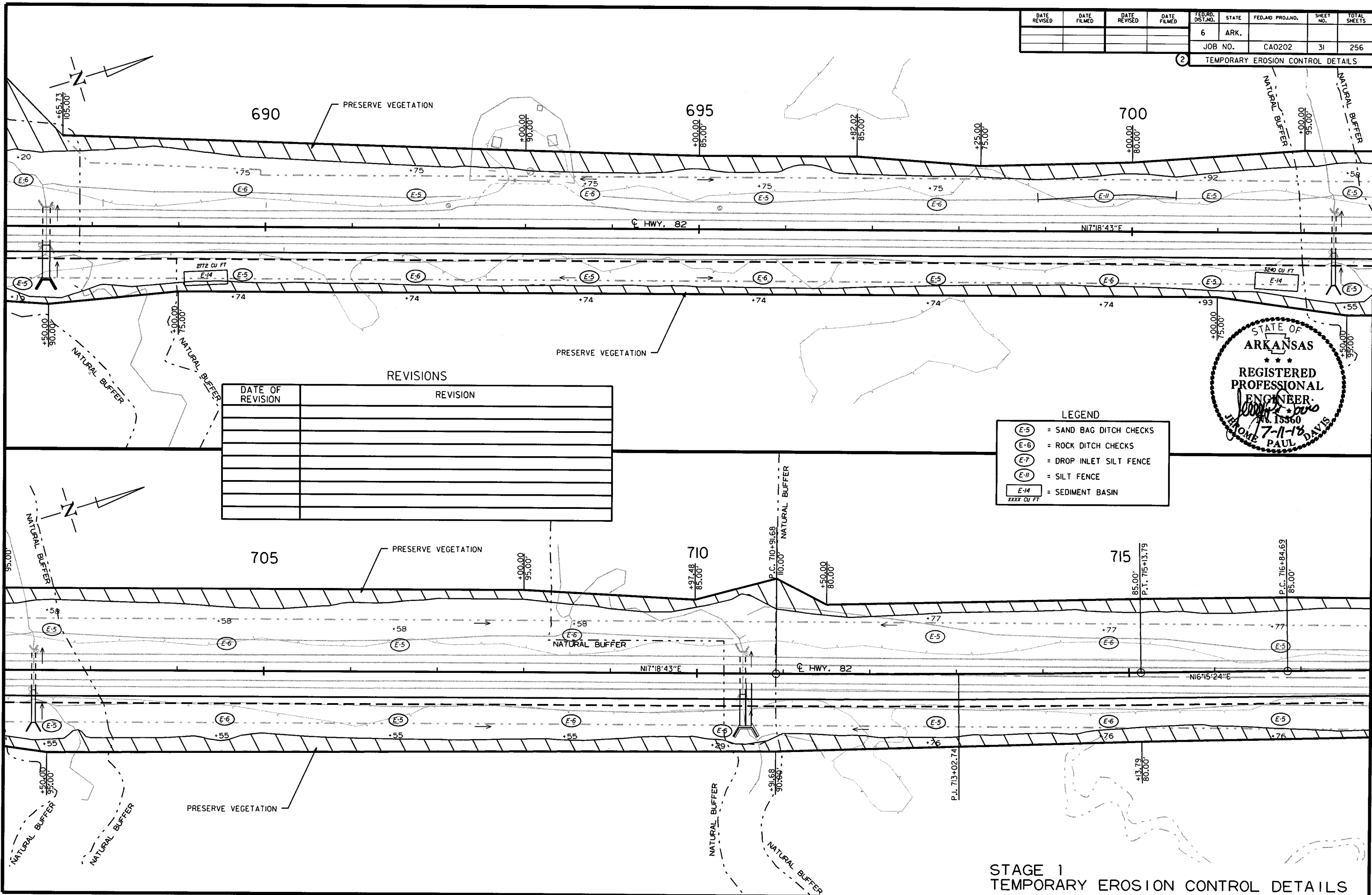
STA. 682+80.55 C.L. HWY. 82 =  
 STA. 538+85.99 C.L. HWY. 52W  
 Δ 73°48'38"

USER: f8513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Erosion\CA0202.EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100%

**STAGE 1  
 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.	CA0202	31	256	

2 TEMPORARY EROSION CONTROL DETAILS

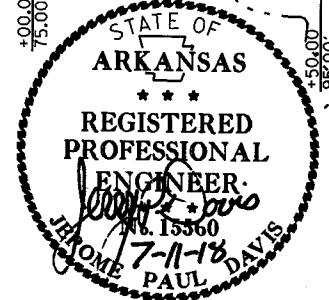


REVISIONS

DATE OF REVISION	REVISION

LEGEND

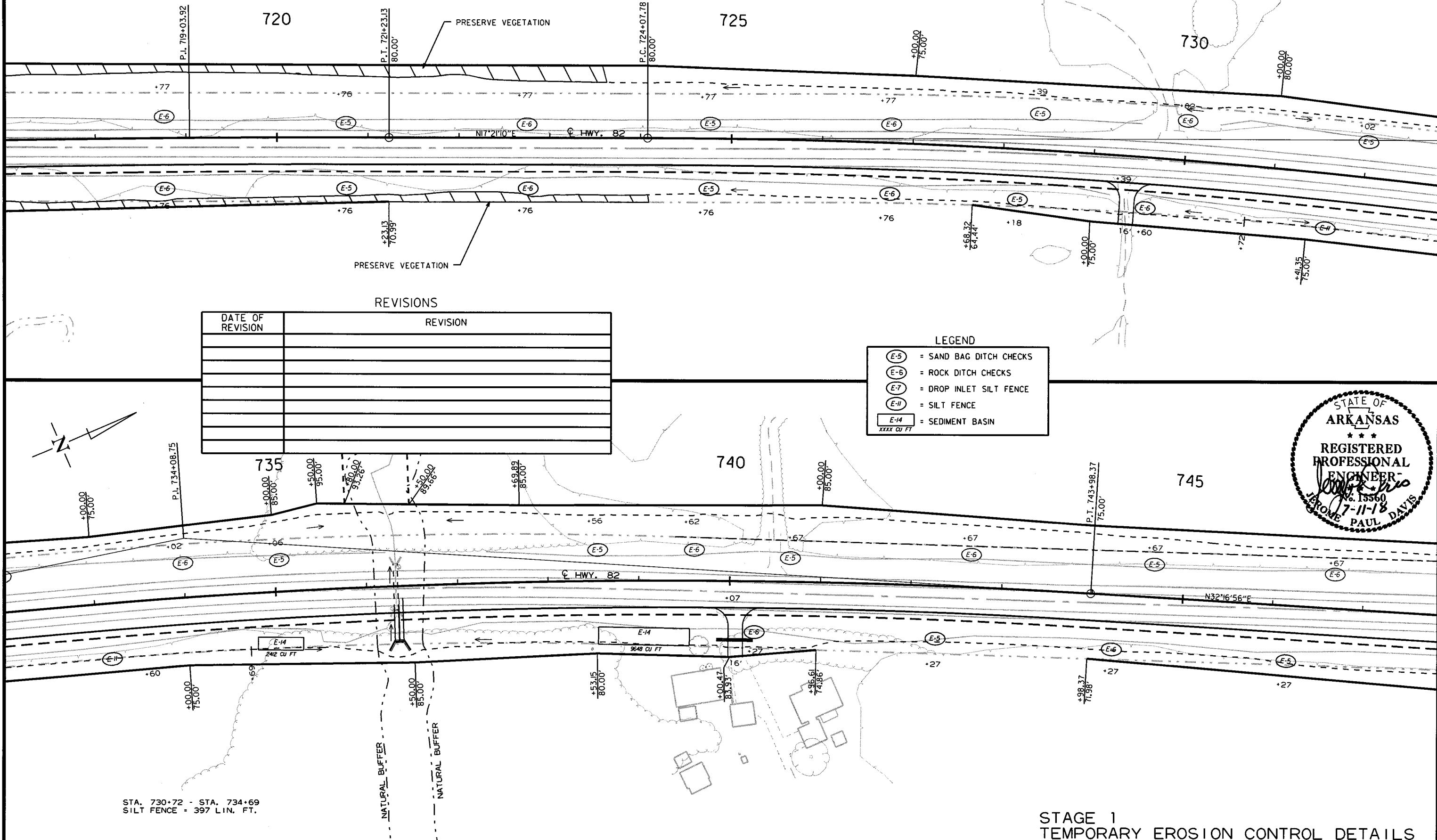
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN
XXXX CU FT	



USER: f8913  
 DESIGN FILE: G:\141093300.HWY\_82\TRANSP\DN\ER\Erosion\CA0202\_EC.HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100:1

STAGE 1  
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.		CA0202	32	256
				TEMPORARY EROSION CONTROL DETAILS				

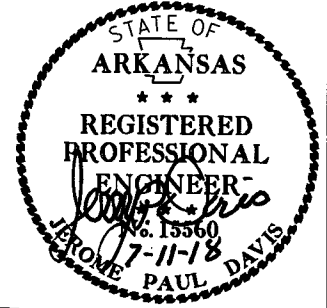


REVISIONS

DATE OF REVISION	REVISION

LEGEND

	= SAND BAG DITCH CHECKS
	= ROCK DITCH CHECKS
	= DROP INLET SILT FENCE
	= SILT FENCE
	= SEDIMENT BASIN XXXX CU FT



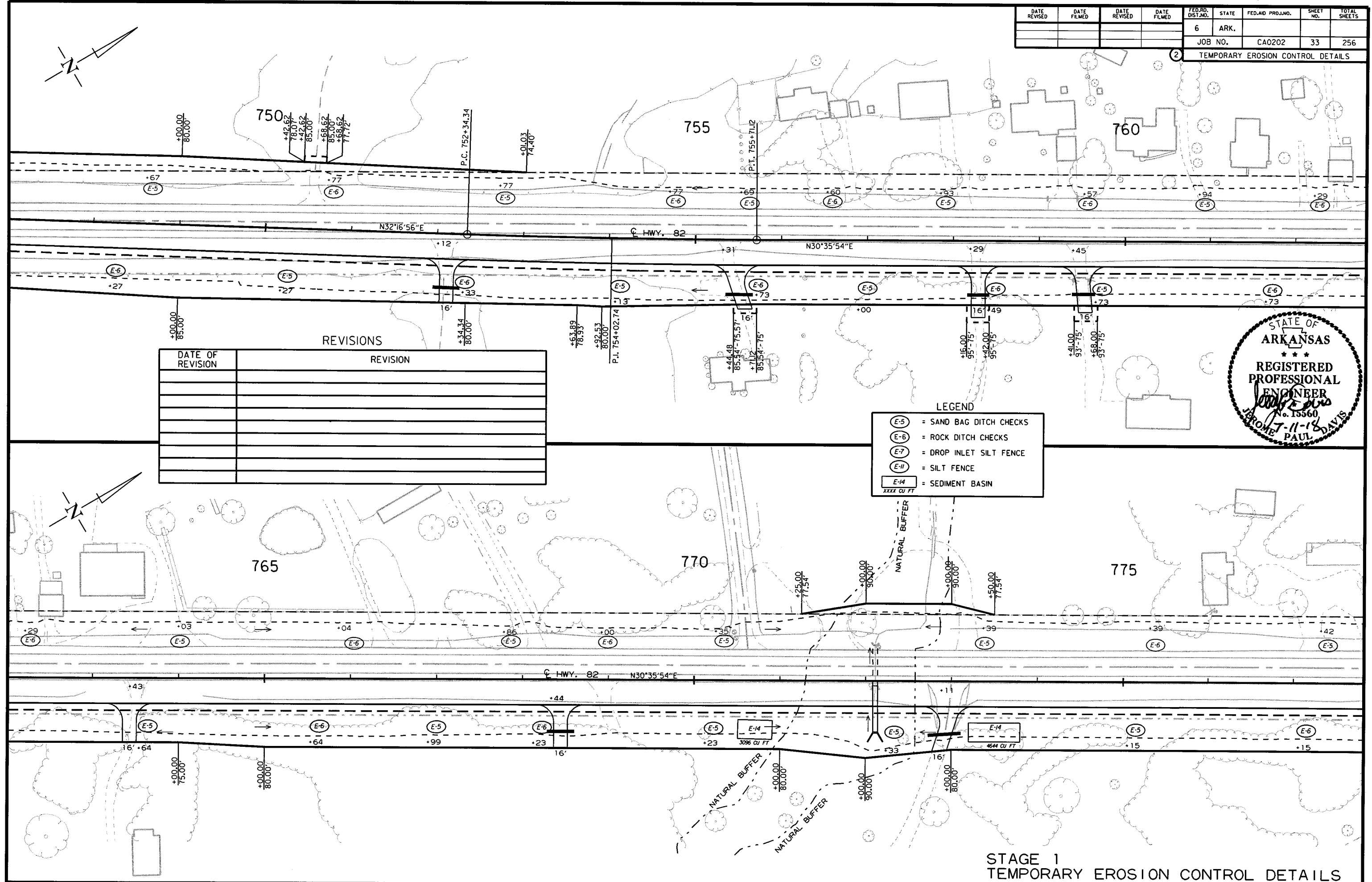
STA. 730+72 - STA. 734+69  
SILT FENCE = 397 LIN. FT.

STAGE 1  
TEMPORARY EROSION CONTROL DETAILS

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100%



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		33	256
				JOB NO.		CA0202		
				TEMPORARY EROSION CONTROL DETAILS				



REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN
XXXX CU FT	

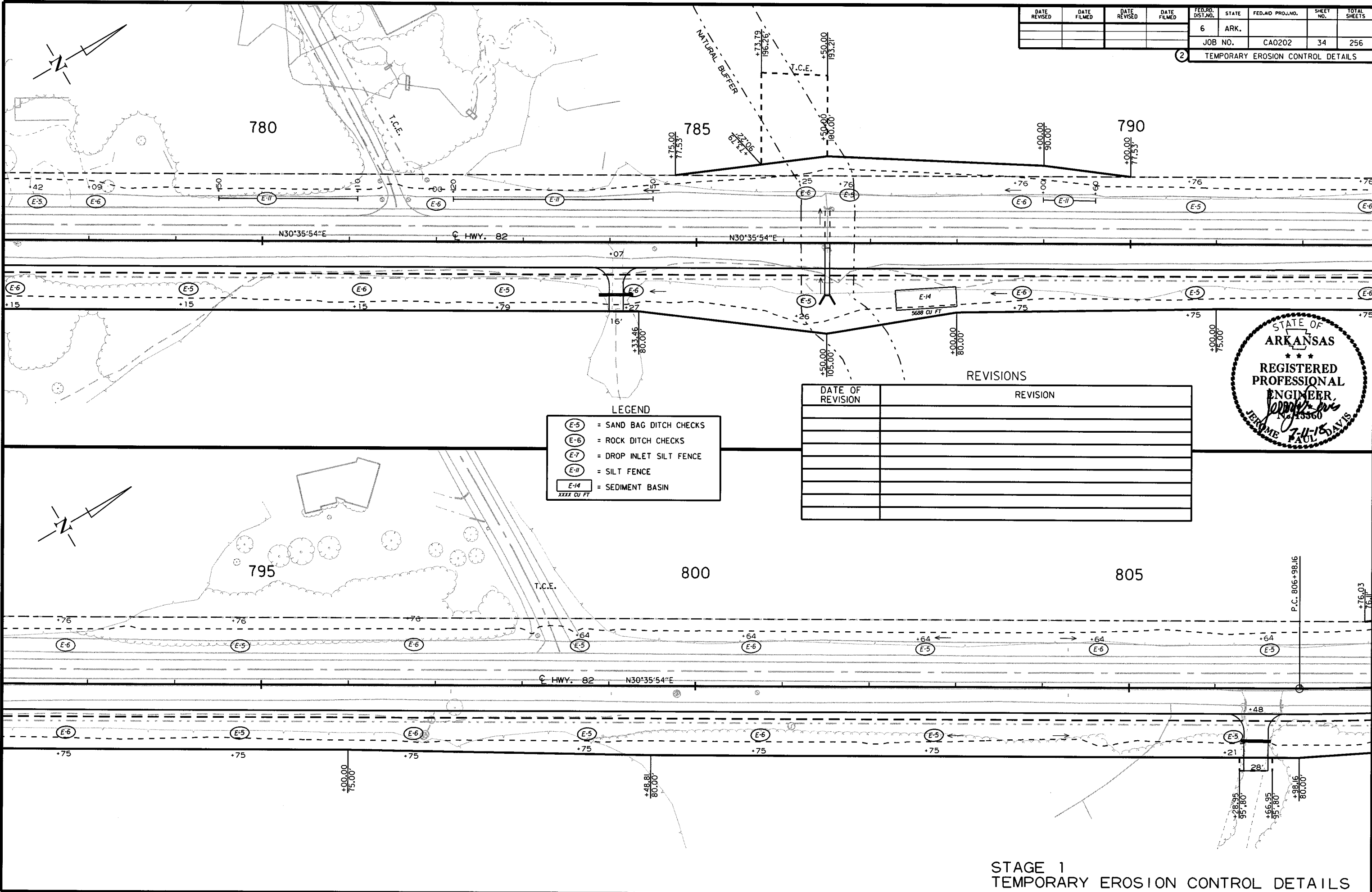


STAGE 1  
TEMPORARY EROSION CONTROL DETAILS

USER: f553  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DN\Erosion\CA0202.EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 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.		CA0202	34	256

2 TEMPORARY EROSION CONTROL DETAILS



- LEGEND**
- (E-5) = SAND BAG DITCH CHECKS
  - (E-6) = ROCK DITCH CHECKS
  - (E-7) = DROP INLET SILT FENCE
  - (E-11) = SILT FENCE
  - E-14 = SEDIMENT BASIN  
XXXX CU FT

REVISIONS

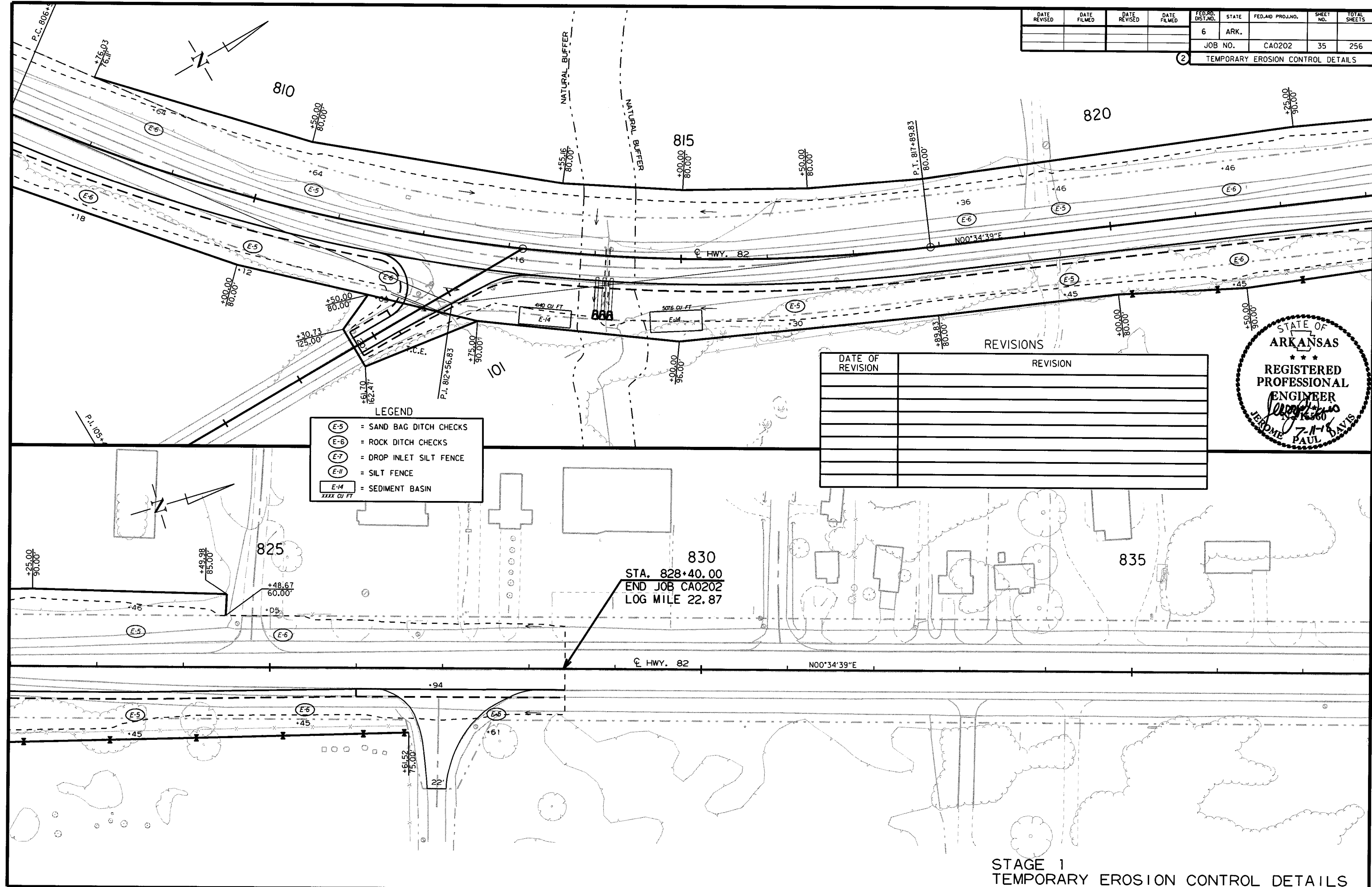
DATE OF REVISION	REVISION



USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100H

**STAGE 1  
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.	CA0202	35	256	
2 TEMPORARY EROSION CONTROL DETAILS								



**LEGEND**

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
E-14	= SEDIMENT BASIN
XXXX CU FT	

**REVISIONS**

DATE OF REVISION	REVISION



STA. 828+40.00  
 END JOB CA0202  
 LOG MILE 22.87

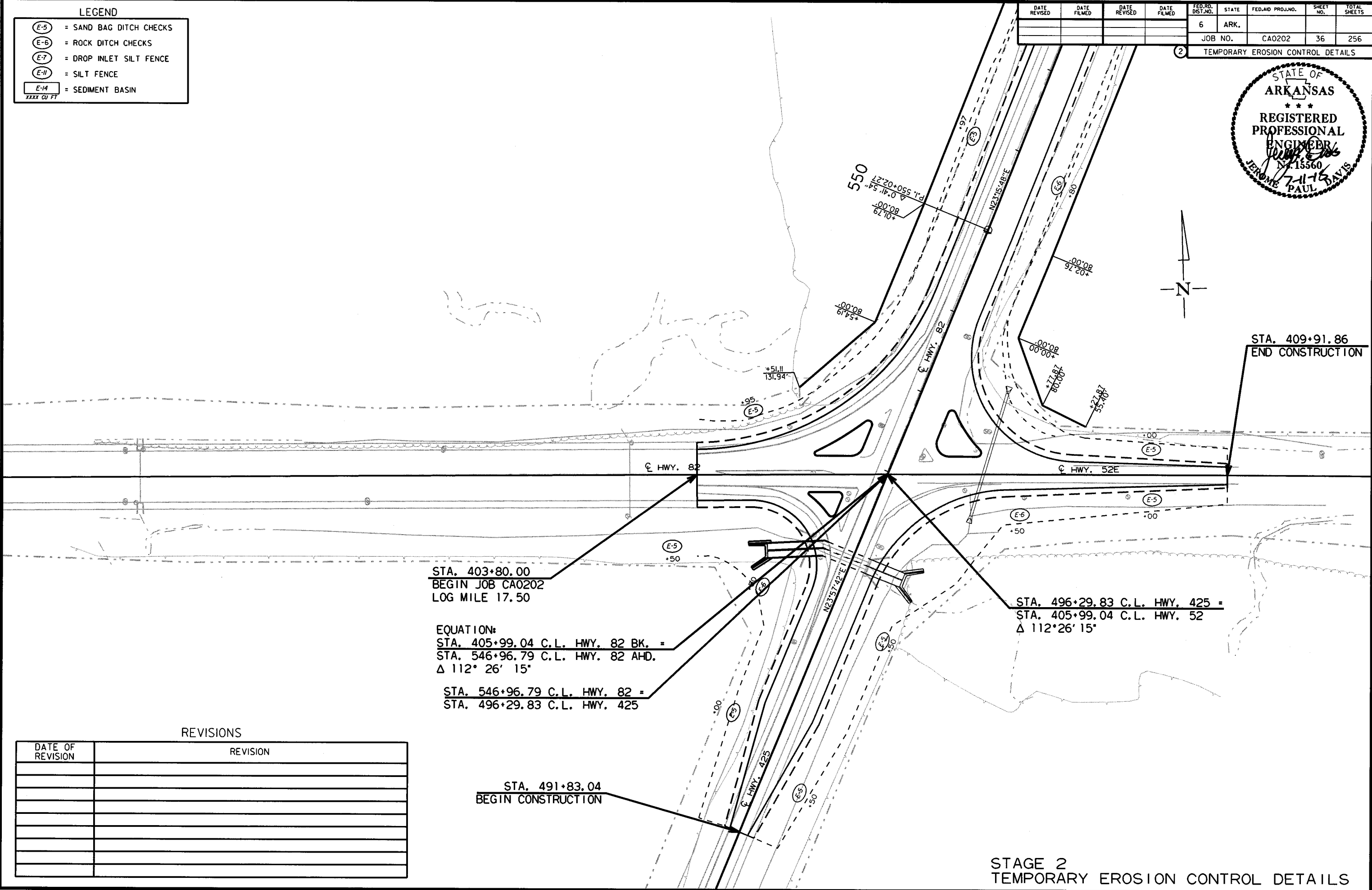
**STAGE 1  
 TEMPORARY EROSION CONTROL DETAILS**

USER: f8913  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100%

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-14) = SEDIMENT BASIN  
XXXX CU FT

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.	CA0202	36	256	
(2) TEMPORARY EROSION CONTROL DETAILS								



STA. 403+80.00  
BEGIN JOB CA0202  
LOG MILE 17.50

EQUATION:  
STA. 405+99.04 C.L. HWY. 82 BK. =  
STA. 546+96.79 C.L. HWY. 82 AHD.  
 $\Delta 112^\circ 26' 15''$

STA. 546+96.79 C.L. HWY. 82 =  
STA. 496+29.83 C.L. HWY. 425

STA. 496+29.83 C.L. HWY. 425 =  
STA. 405+99.04 C.L. HWY. 52  
 $\Delta 112^\circ 26' 15''$

STA. 491+83.04  
BEGIN CONSTRUCTION

STA. 409+91.86  
END CONSTRUCTION

REVISIONS

DATE OF REVISION	REVISION

STAGE 2  
TEMPORARY EROSION CONTROL DETAILS

USER: f853  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC\_HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100:1

STA. 403+80.00  
 BEGIN JOB CA0202  
 LOG MILE 17.50

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.	CA0202		37	256

2 TEMPORARY EROSION CONTROL DETAILS

490  
 STA. 491+83.04  
 BEGIN CONSTRUCTION

REVISIONS

DATE OF REVISION	REVISION

LEGEND

	= SAND BAG DITCH CHECKS
	= ROCK DITCH CHECKS
	= DROP INLET SILT FENCE
	= SILT FENCE
	= SEDIMENT BASIN
<small>XXXX CU FT</small>	

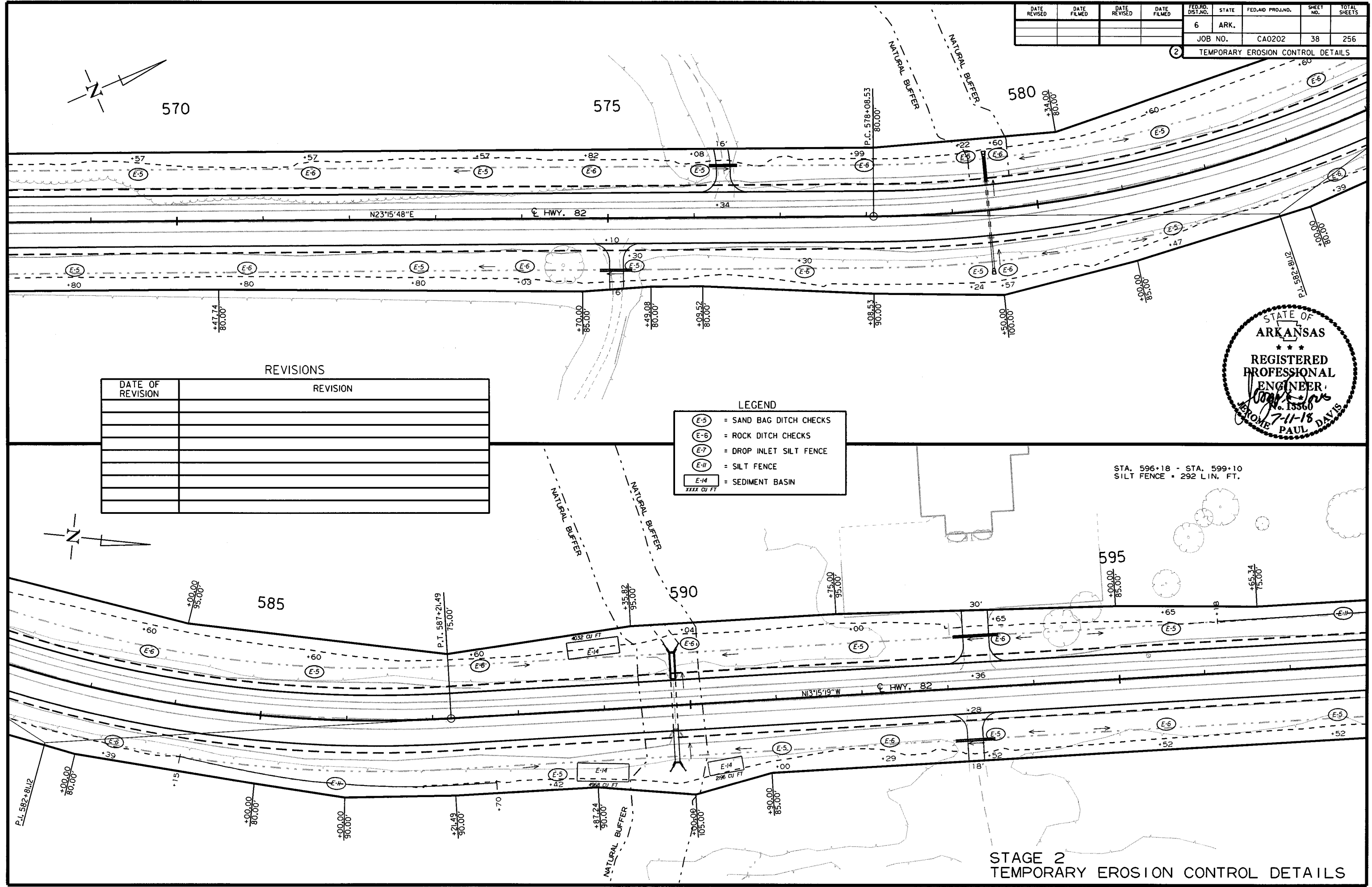


USER: fs513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DM\EROSION\CA0202\_EC\_HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:23  
 SCALE: 100%

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.		38	256
				JOB NO.		CA0202	38	256

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- E-14 = SEDIMENT BASIN  
XXXX CU FT



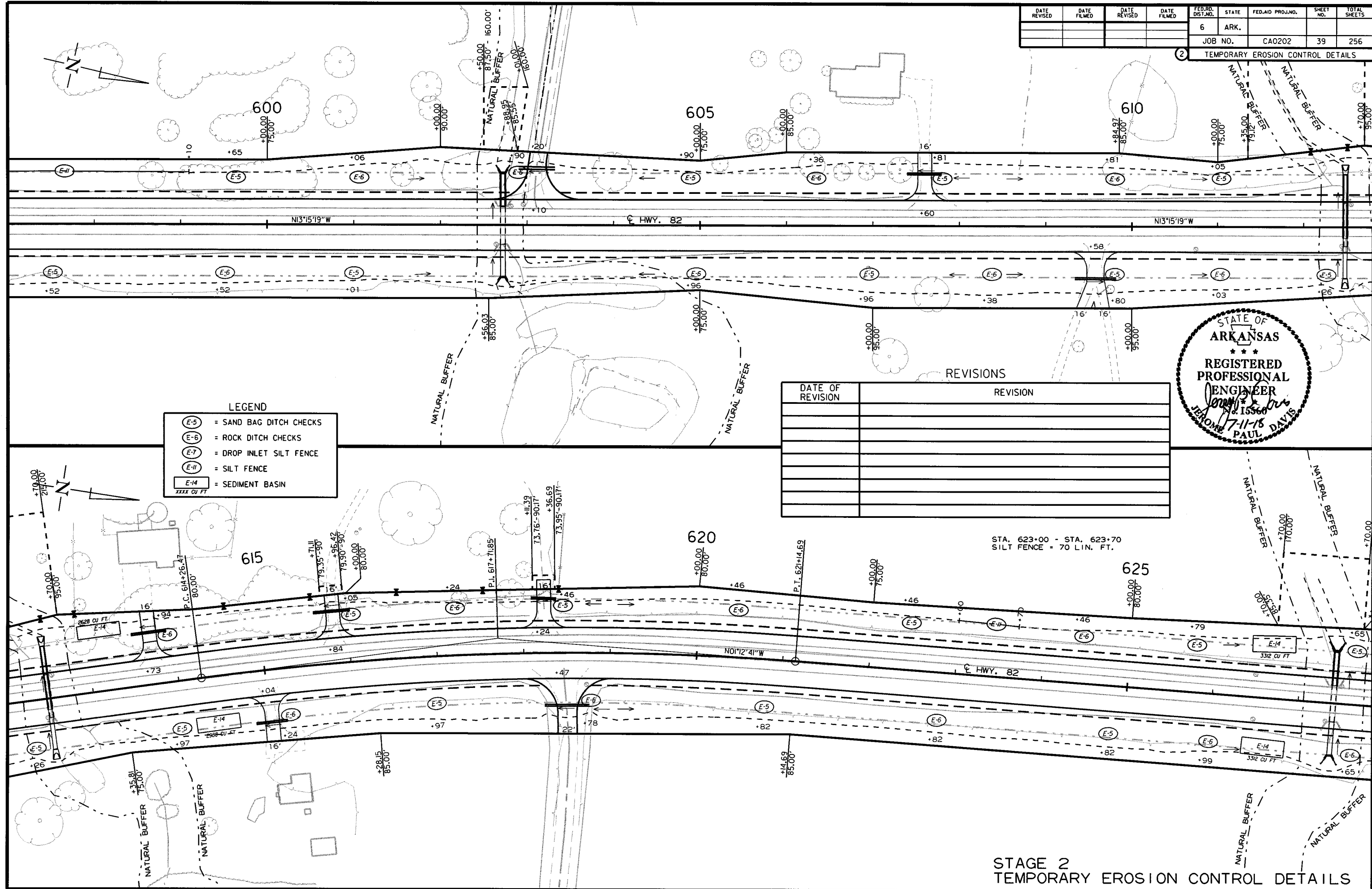
STA. 596+18 - STA. 599+10  
SILT FENCE = 292 LIN. FT.

USER: f65j3  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Errosion\CA0202.EC.Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100H

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.		39	256

TEMPORARY EROSION CONTROL DETAILS



**LEGEND**

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

XXXX CU FT

**REVISIONS**

DATE OF REVISION	REVISION

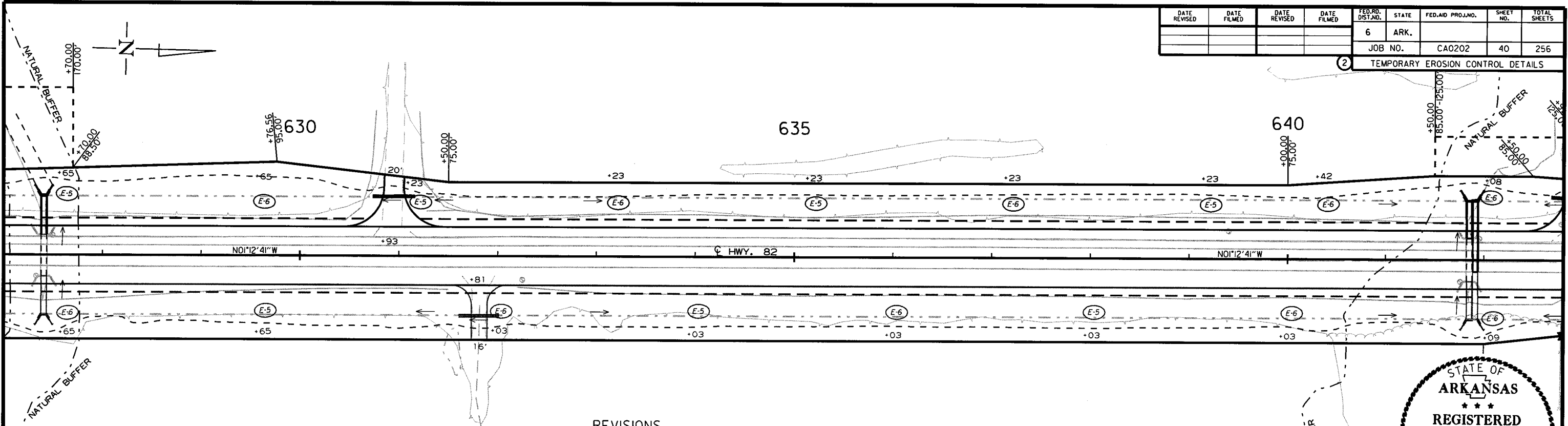


STA. 623+00 - STA. 623+70  
SILT FENCE = 70 LIN. FT.

USER: f9513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100H

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.	CA0202	40	256
				JOB NO. CA0202				
				2 TEMPORARY EROSION CONTROL DETAILS				

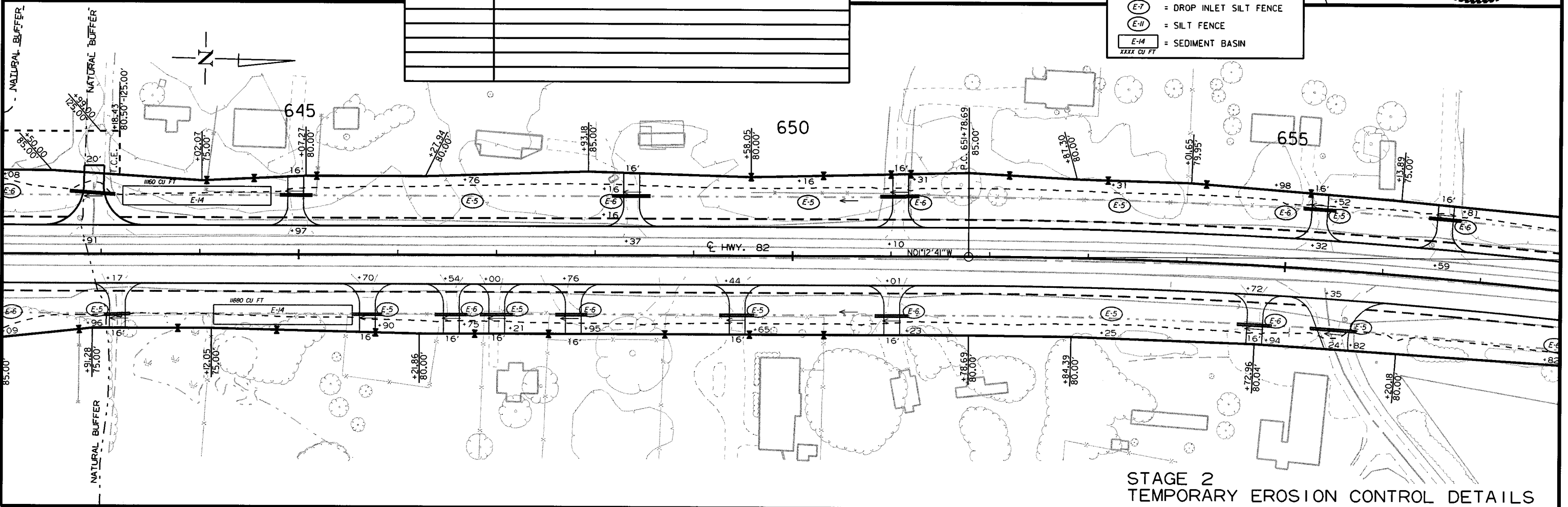


REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN
XXXX CU FT	



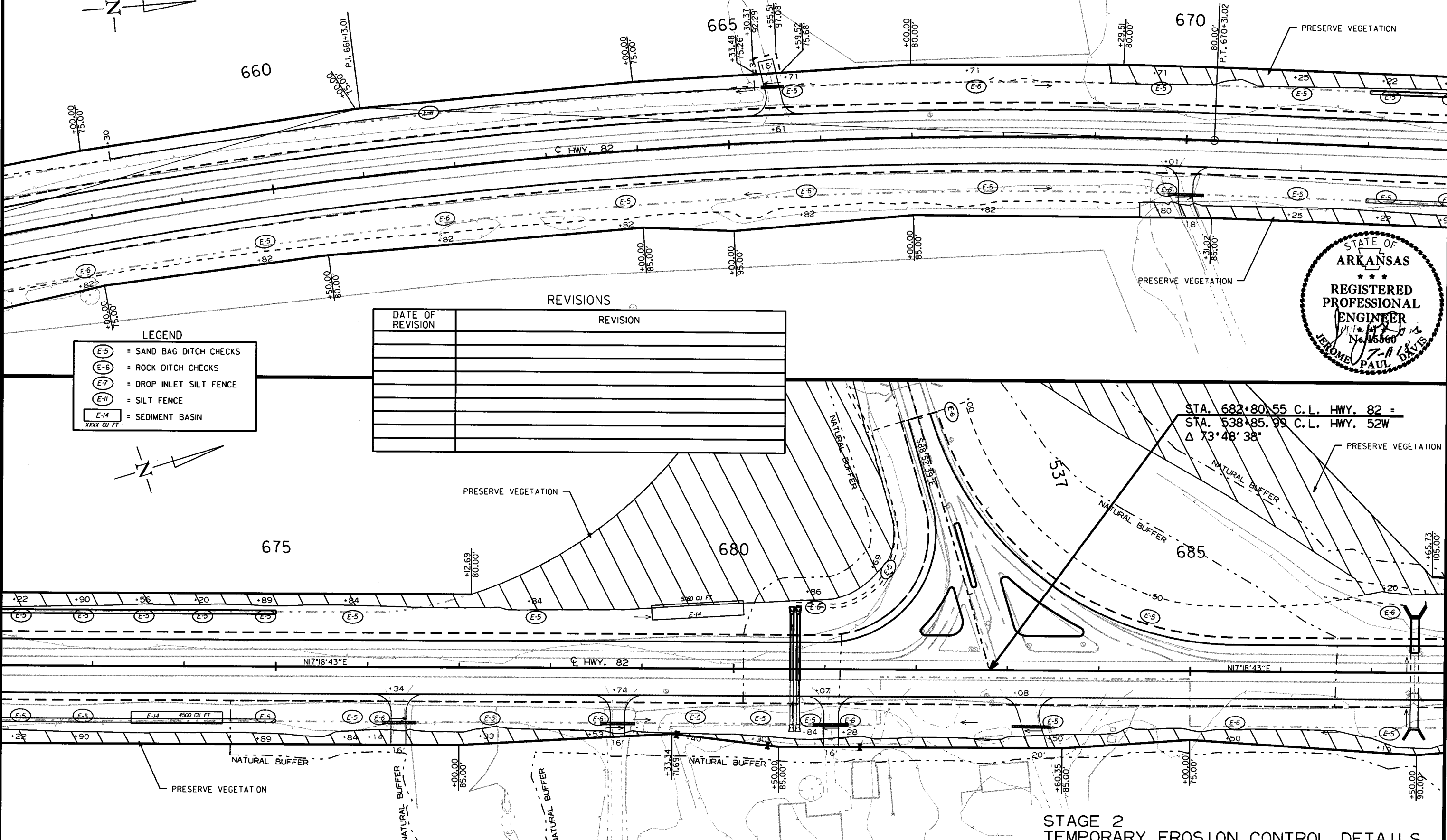
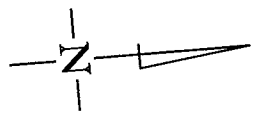
**STAGE 2  
TEMPORARY EROSION CONTROL DETAILS**

USER: 16513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100H



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.	CA0202	41	256	
(2) TEMPORARY EROSION CONTROL DETAILS								

STA. 658+30 - STA. 665+31  
SILT FENCE = 701 LIN. FT.



**LEGEND**

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-8) = SILT FENCE
- (E-14) = SEDIMENT BASIN  
XXXX CU FT

**REVISIONS**

DATE OF REVISION	REVISION



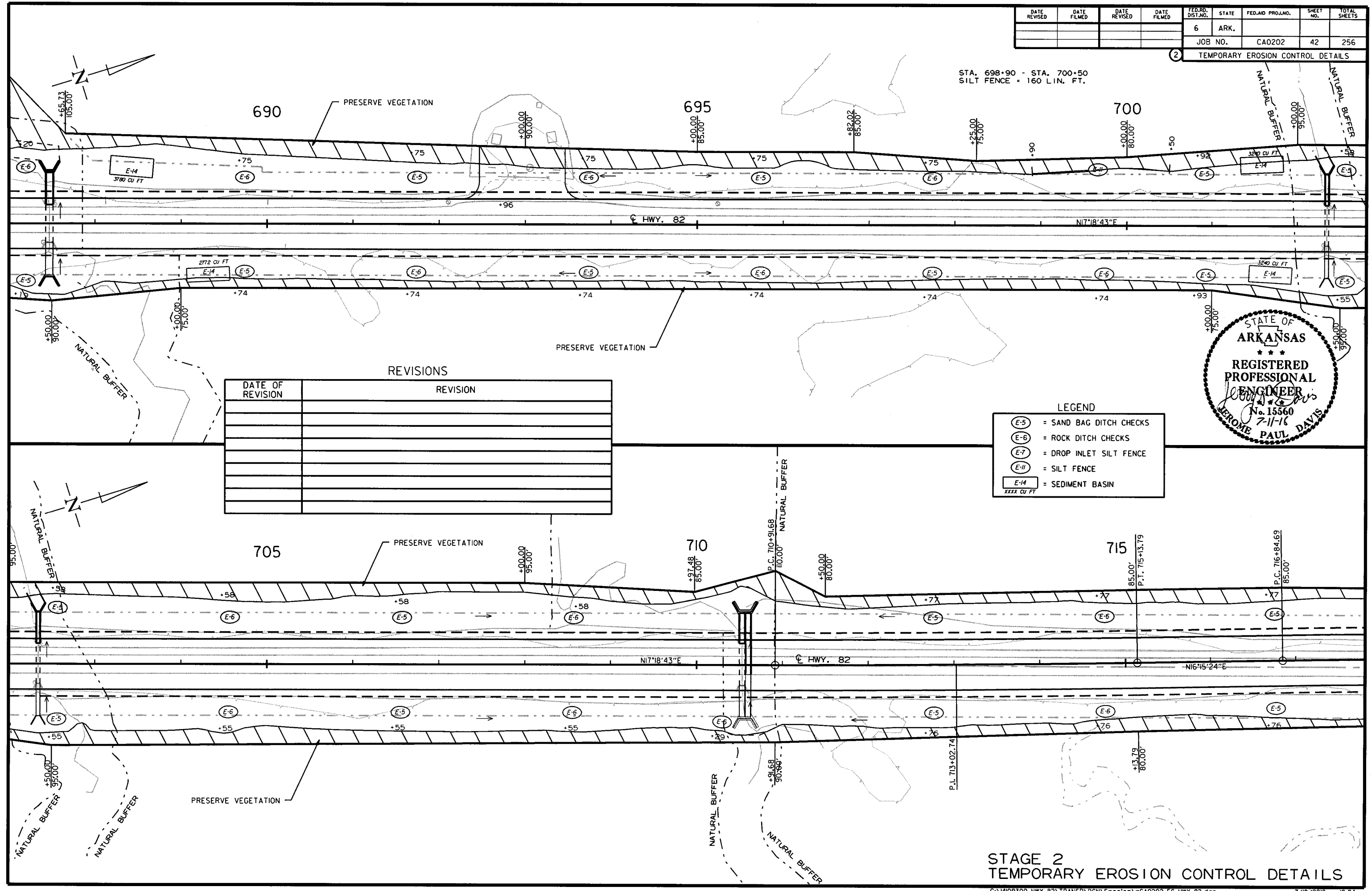
STA. 682+80.55 C.L. HWY. 82 =  
STA. 538+85.99 C.L. HWY. 52W  
Δ 73°48'38"

USER: f8513  
 DESIGN FILE: G:\14109300\_Hwy\_82\_TRANSP\DGN\Erosion\CA0202\_EC\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100%

**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.		42	256
				JOB NO. CA0202		42		256

2 TEMPORARY EROSION CONTROL DETAILS



STA. 698+90 - STA. 700+50  
SILT FENCE = 160 LIN. FT.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

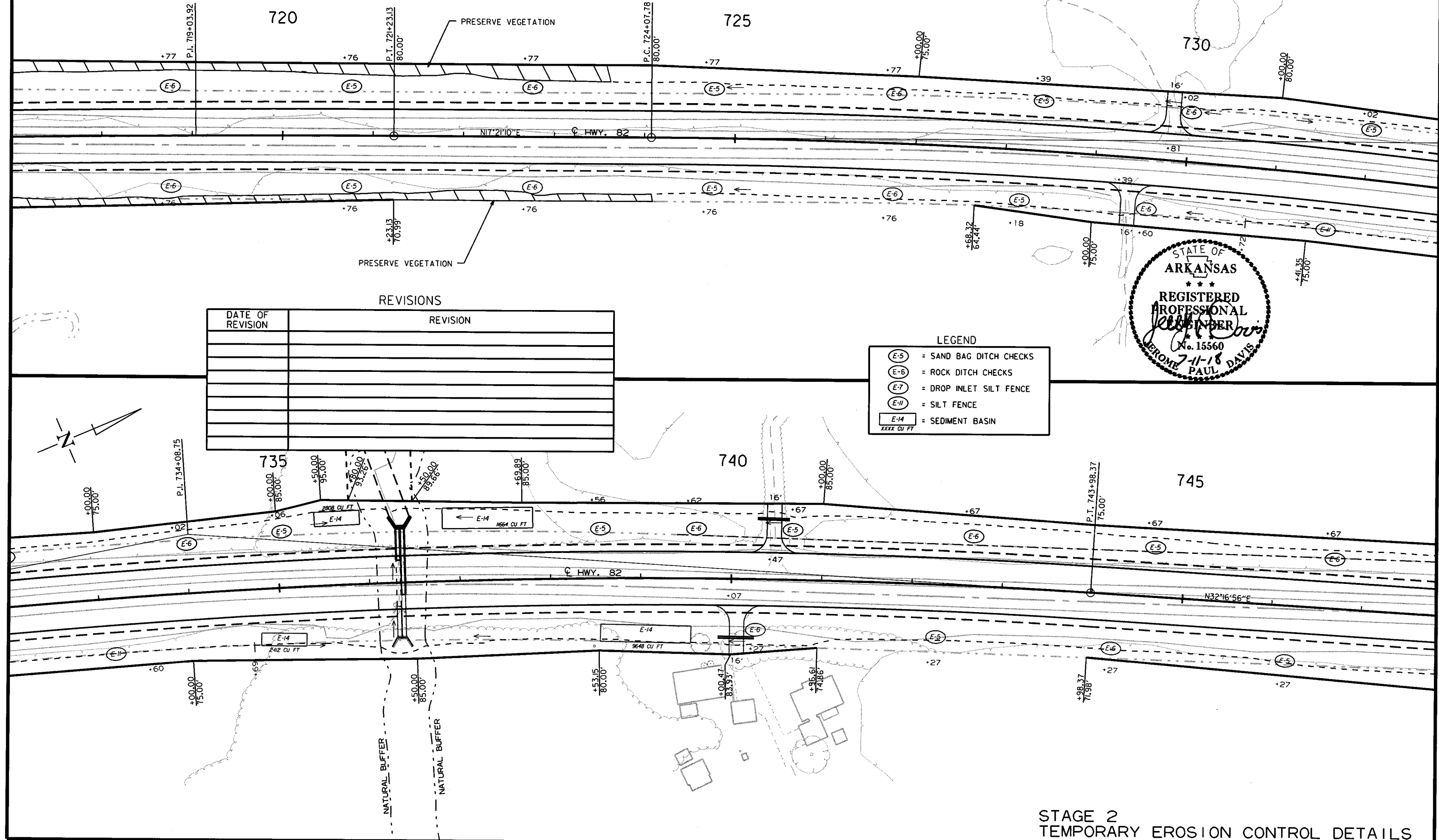
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
E-14	= SEDIMENT BASIN
XXXX CU FT	



USER: f853  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Erosion\CA0202.EC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100H

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.		CA0202	43	256
				2		TEMPORARY EROSION CONTROL DETAILS		

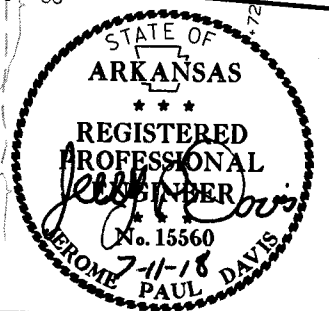


REVISIONS

DATE OF REVISION	REVISION

LEGEND

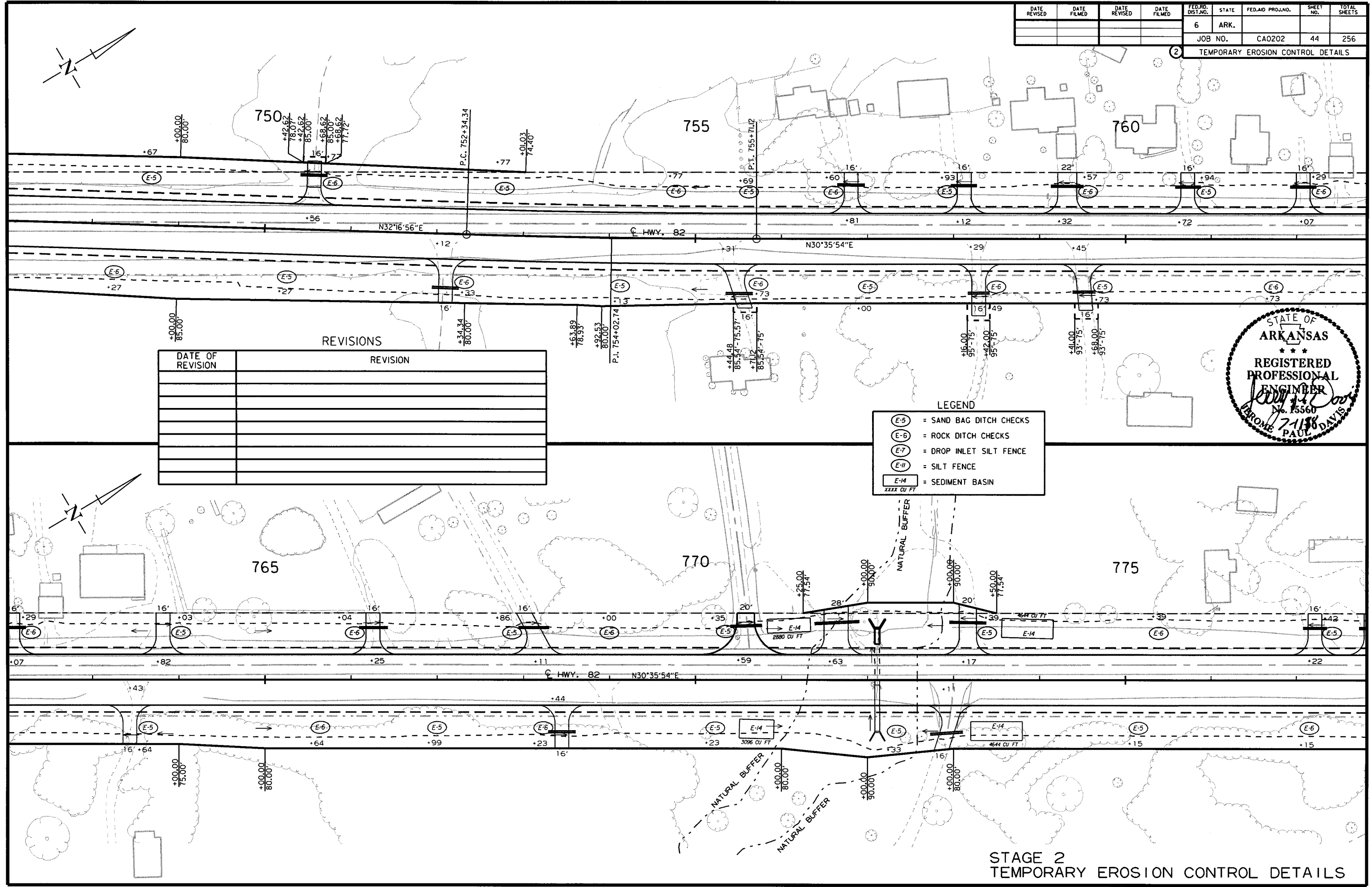
	= SAND BAG DITCH CHECKS
	= ROCK DITCH CHECKS
	= DROP INLET SILT FENCE
	= SILT FENCE
	= SEDIMENT BASIN
XXXX CU FT	



USER: f5513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC\_HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:24 SCALE: 100%

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		44	256
				JOB NO.		CA0202	44	256

2 TEMPORARY EROSION CONTROL DETAILS

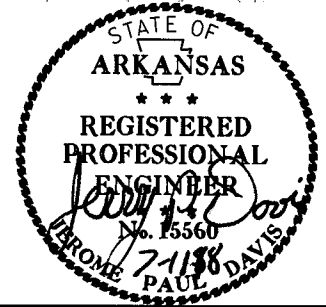


REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN
XXXX CU FT	

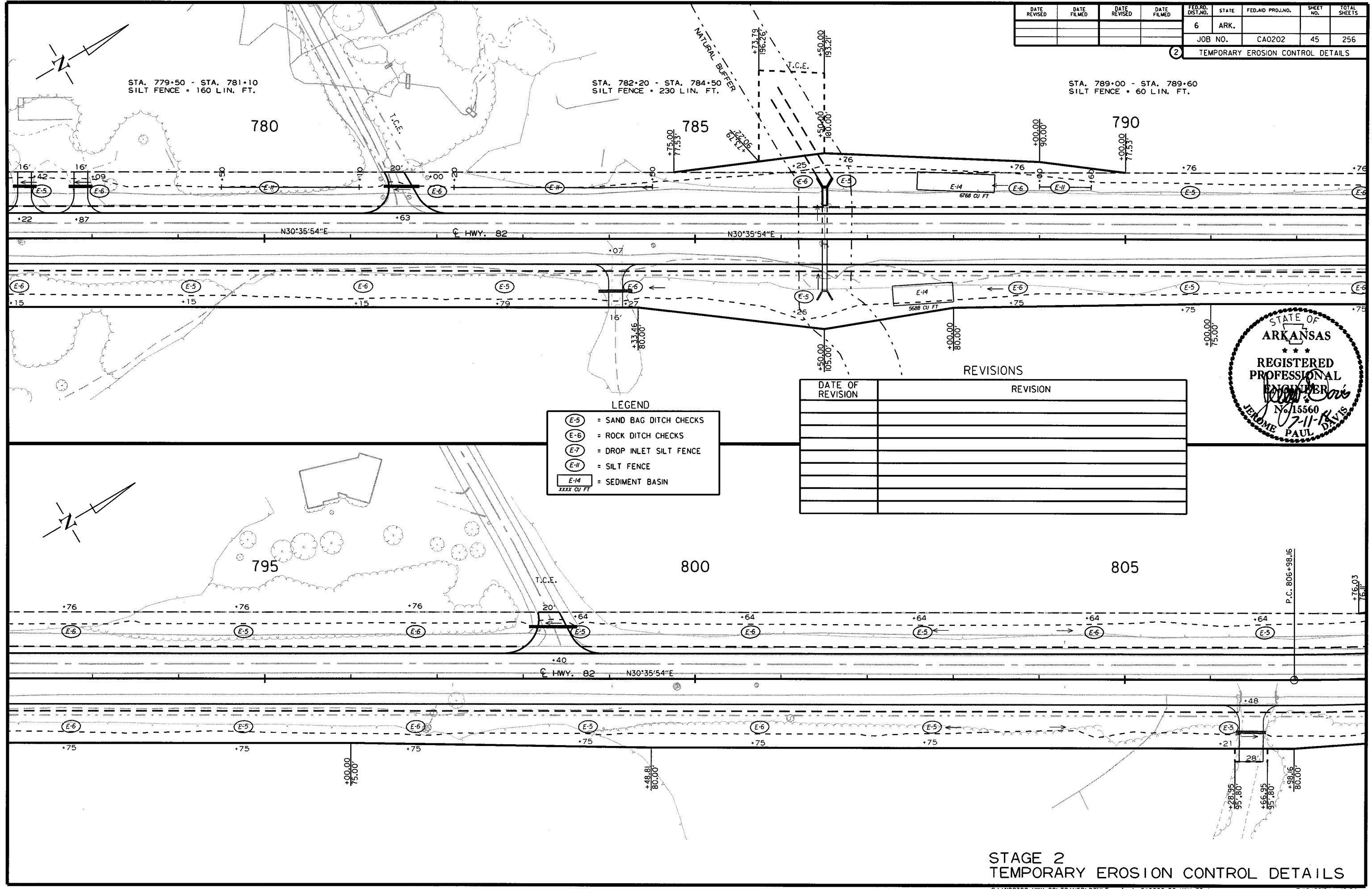


STAGE 2  
TEMPORARY EROSION CONTROL DETAILS

USER: 16513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\EROSION\CA0202\_EC\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100%

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		45	256
				JOB NO.		CA0202	45	256

2 TEMPORARY EROSION CONTROL DETAILS

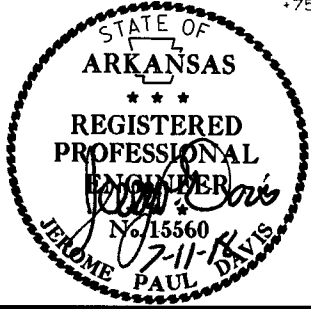


LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
E-14	= SEDIMENT BASIN XXXX CU FT

REVISIONS

DATE OF REVISION	REVISION

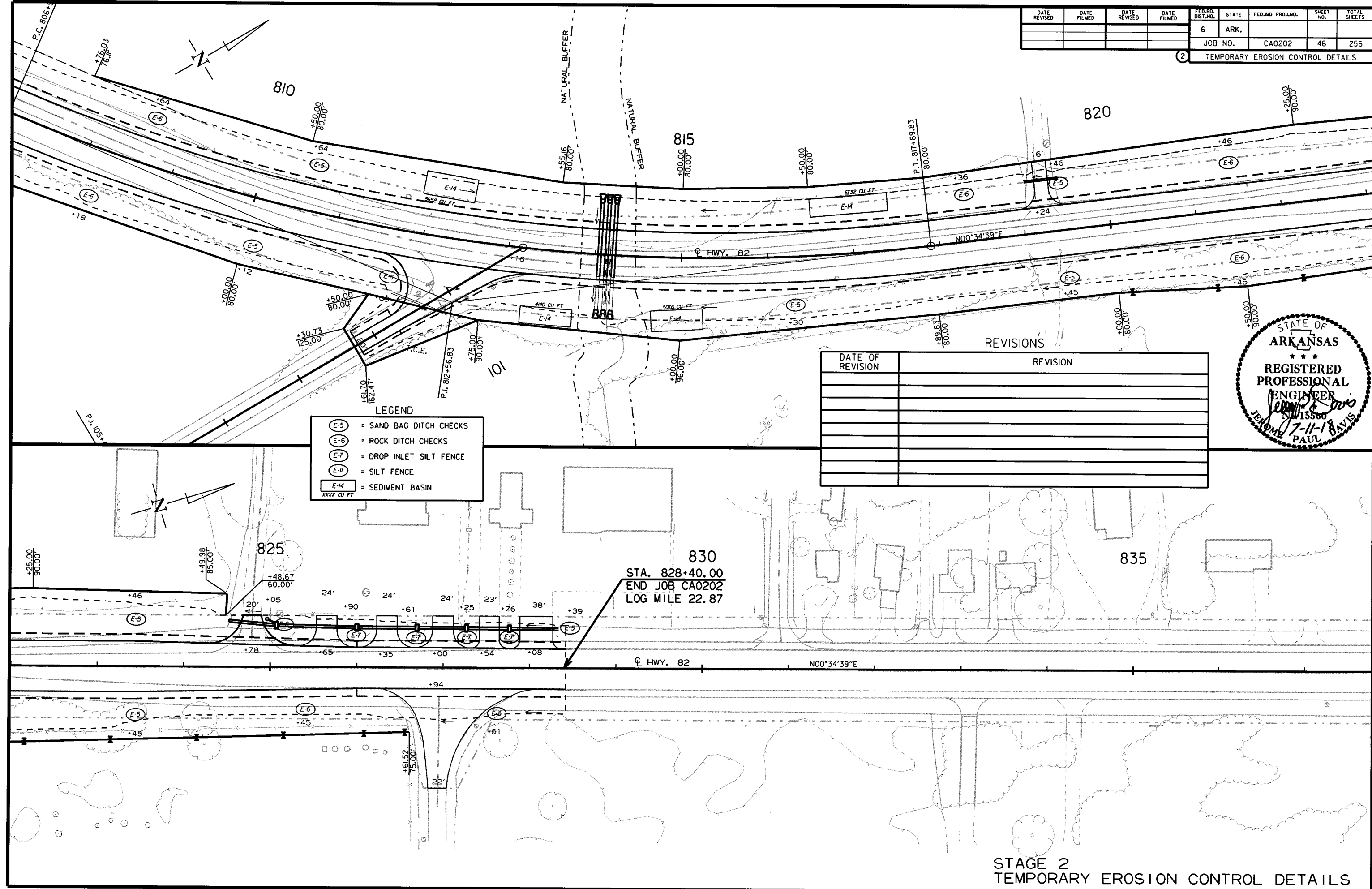


USER: fs513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Erosion\CA0202\_EC\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100%

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.	CA0202	46	256	

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-7)	= DROP INLET SILT FENCE
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN
XXXX CU FT	

REVISIONS

DATE OF REVISION	REVISION



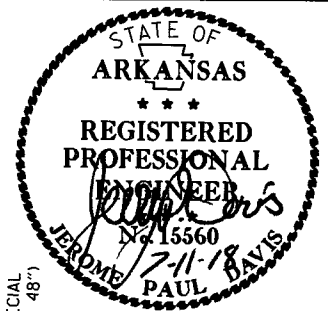
STA. 828+40.00  
END JOB CA0202  
LOG MILE 22.87

STAGE 2  
TEMPORARY EROSION CONTROL DETAILS

USER: f5513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Erosion\CA0202.EC\_Hwy-82.dgn  
PLOTTED: 7/10/2018 10:24  
SCALE: 100%

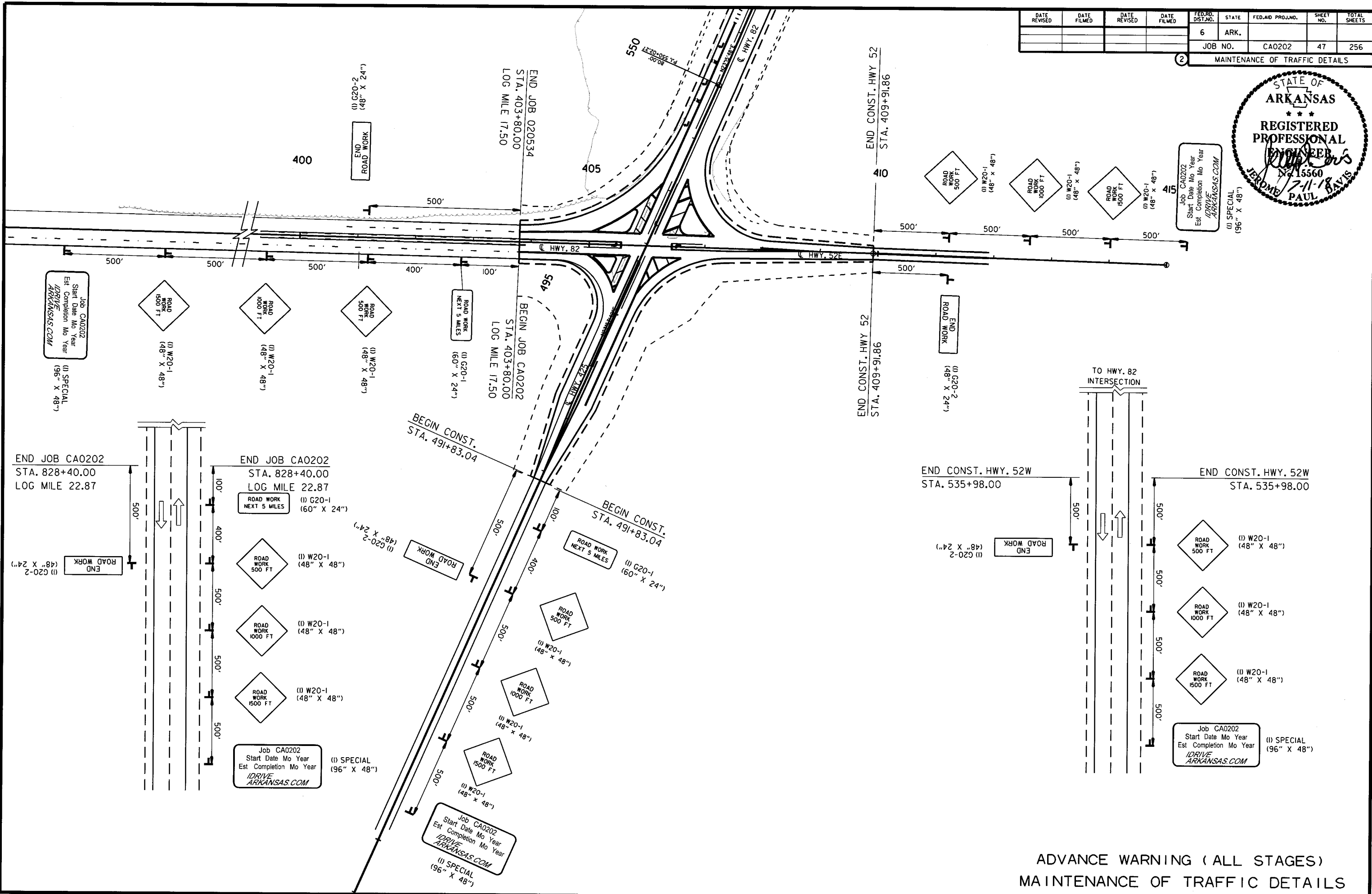
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		47	256

2 MAINTENANCE OF TRAFFIC DETAILS



Job CA0202  
Start Date Mo Year  
Est. Completion Mo Year  
IDRIVE  
ARKANSAS.COM

(1) SPECIAL  
(96" X 48")



END JOB CA0202  
STA. 828+40.00  
LOG MILE 22.87

END JOB CA0202  
STA. 828+40.00  
LOG MILE 22.87

BEGIN CONST.  
STA. 491+83.04

BEGIN CONST.  
STA. 491+83.04

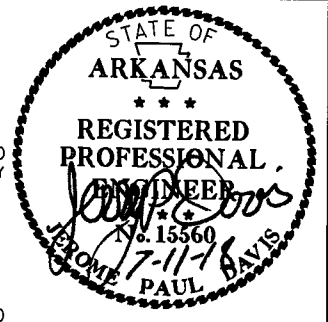
END CONST. HWY. 52W  
STA. 535+98.00

END CONST. HWY. 52W  
STA. 535+98.00

USER: f8513  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Maint.of.Traffic\CA0202.MOT\_HWY-82.dgn  
PLOTTED: 7/10/2018 10:24  
SCALE: 1/50'

ADVANCE WARNING ( ALL STAGES )  
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.	CA0202	48
						2 MAINTENANCE OF TRAFFIC DETAILS		



**STAGE 1 CONSTRUCTION SEQUENCE:**  
 INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AS SHOWN ON MAINTENANCE OF TRAFFIC ADVANCE WARNING SHEET.  
 APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC DETAILS.

USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT PORTIONS OF HWY. 82 AND CROSS DRAINS AS SHOWN: RT. OF C.L. FROM STA. 549+95 TO 828+40. PLACE LEVELING (AS DIRECTED BY THE ENGINEER) RT. OF C.L. UNDER TRAFFIC IN AREAS NEEDED TO MATCH STAGE 1 PAVING.

CONSTRUCT FULL DEPTH ASPHALT SHOULDERS AT LOCATIONS SHOWN IN SPECIAL DETAILS.

**STAGE 2 CONSTRUCTION SEQUENCE:**

MAINTAIN ADVANCE WARNING SIGNS & END ROAD WORK SIGNS FROM STAGE 1.

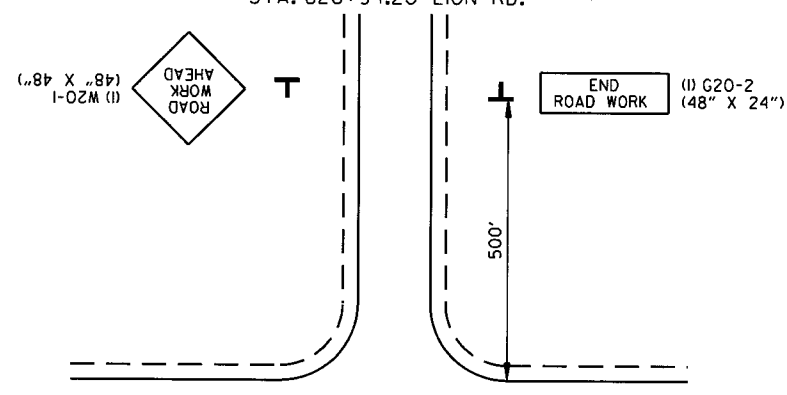
APPLY LEVEL COURSE TO EXISTING LANES IF AND WHERE DIRECTED BY THE ENGINEER IN ORDER TO MATCH STAGE 1 WIDENING CROSS SLOPE.

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT PORTION OF HWY. 82 AND CROSS DRAINS FROM LT. OF CL. FROM STA. 546+95 TO STA. 828+40.

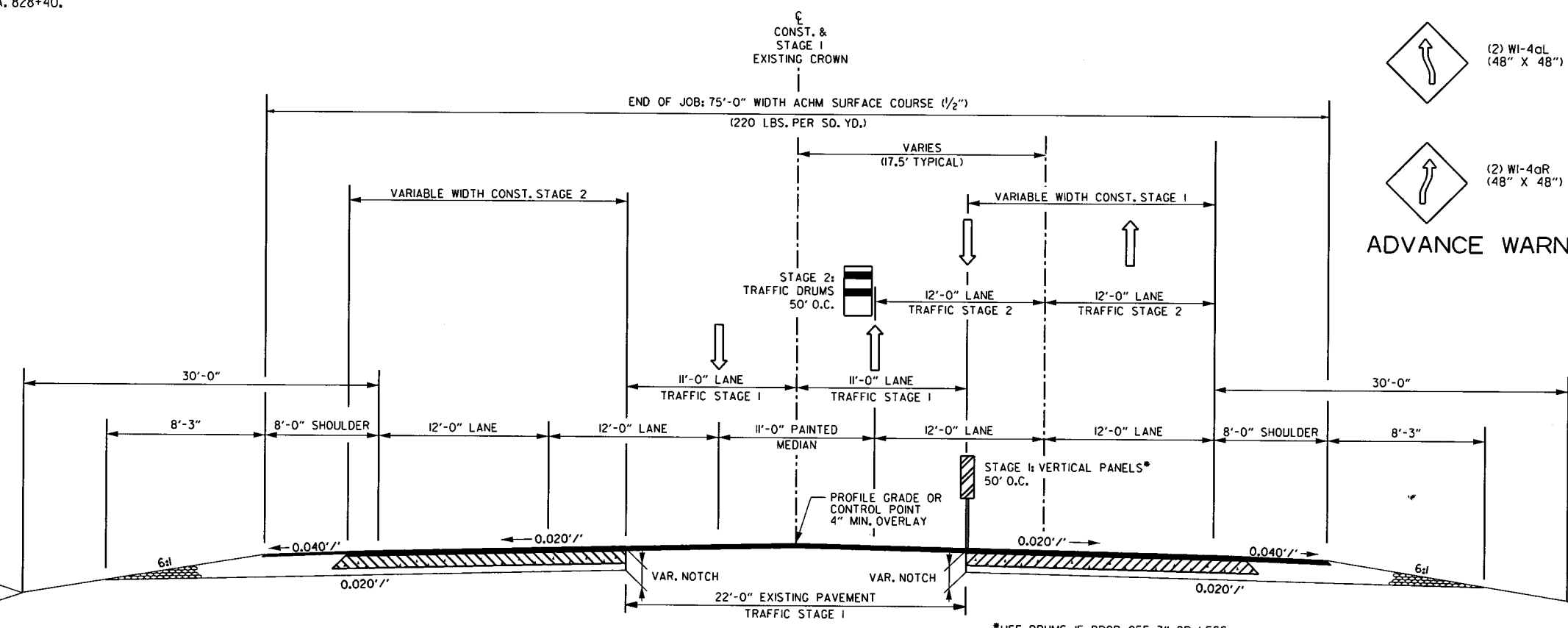
- STA. 603+09.86 STREETER LN.
- STA. 618+46.87 ASHLEY CO. 97
- STA. 630+92.97 LOCKED RD.
- STA. 642+90.59 SHAW TRAIL
- STA. 655+34.90 ASHLEY CO. 96
- STA. 770+58.52 ASHLEY CO. 433
- STA. 781+62.74 HONEYSUCKLE LN.
- STA. 798+40.49 GREENBRIER
- STA. 813+16.07 ASHLEY CO. 22
- STA. 824+78.04 ASHLEY CO. 416
- STA. 826+94.20 LION RD.



**ADVANCE WARNING - SIDE ROADS (ALL ROADS)**

- SHOULDER DROP-OFF** (10) W8-9A (36" X 36") ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- RIGHT SHOULDER CLOSED** (2) W21-5A (48" X 48") ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- DO NOT PASS** (20) R4-1 (24" X 30") ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- BUMP** (4) W8-1 (30" X 30") ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- Upward Arrow** (2) W1-4aL (48" X 48") STAGE 2 STA. 542+14 RT. STA. 833+21 LT.
- Downward Arrow** (2) W1-4aR (48" X 48") STAGE 2 STA. 546+15 LT. STA. 819+11 RT.

**ADVANCE WARNING SIGNS**



**STAGE CONSTRUCTION**  
 STA. 546+95.00 TO 828+40.00

- NOTES:**
- REFER TO MAINTENANCE OF TRAFFIC PLANS FOR PLACEMENT OF TRAFFIC DRUMS. SPACING WILL VARY AT DRIVEWAYS AND HWY. INTERSECTIONS.
  - USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

**MAINTENANCE OF TRAFFIC DETAILS**

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint.of.Traffic\CA0202\_MOT\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 1/50H



**STAGE I CONSTRUCTION SEQUENCE:**

INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AS SHOWN ON MAINTENANCE OF TRAFFIC ADVANCE WARNING SHEET.

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE I MAINTENANCE OF TRAFFIC DETAILS.

USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT PORTIONS OF HWY. 82 AND CROSS DRAINS AS SHOWN: RT. OF C.L. FROM STA. 549+95 TO 828+40. PLACE LEVELING (AS DIRECTED BY THE ENGINEER) RT. OF C.L. UNDER TRAFFIC IN AREAS NEEDED TO MATCH STAGE I PAVING.

CONSTRUCT FULL DEPTH ASPHALT SHOULDERS & WIDENING AT LOCATIONS SHOWN IN SPECIAL DETAILS.

**STAGE I QUANTITIES**

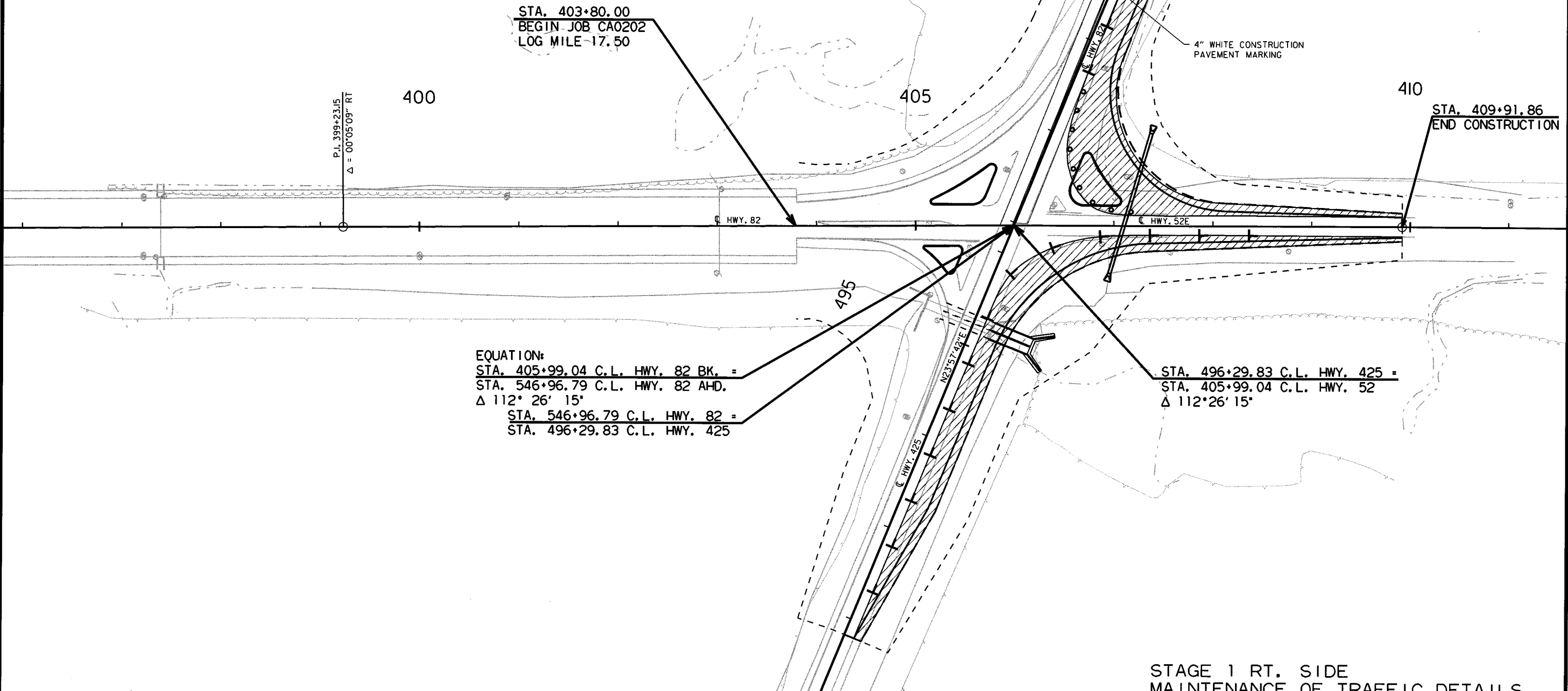
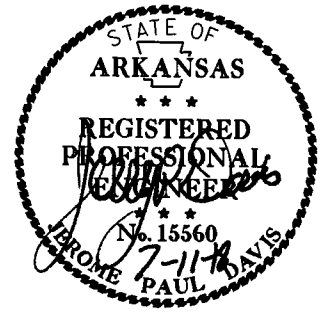
SIGNS = 889 SO. FT.  
 TRAFFIC DRUMS = 544 EACH  
 VERTICAL PANELS = 173 EACH  
 FURNISHING AND INSTALLING P.C.C.B. = 2540 LIN. FT.  
 CONSTRUCTION PAVEMENT MARKINGS = 86805 LIN. FT.

NOTE: 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 3" 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.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		49	256
				JOB NO.		CA0202		

② MAINTENANCE OF TRAFFIC DETAILS



STA. 403+80.00  
 BEGIN JOB CA0202  
 LOG MILE 17.50

STA. 409+91.86  
 END CONSTRUCTION

**EQUATION:**  
 STA. 405+99.04 C.L. HWY. 82 BK. =  
 STA. 546+96.79 C.L. HWY. 82 AHD.  
 $\Delta 112^\circ 26' 15''$   
 STA. 546+96.79 C.L. HWY. 82 =  
 STA. 496+29.83 C.L. HWY. 425

STA. 496+29.83 C.L. HWY. 425 =  
 STA. 405+99.04 C.L. HWY. 52  
 $\Delta 112^\circ 26' 15''$

**STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS**

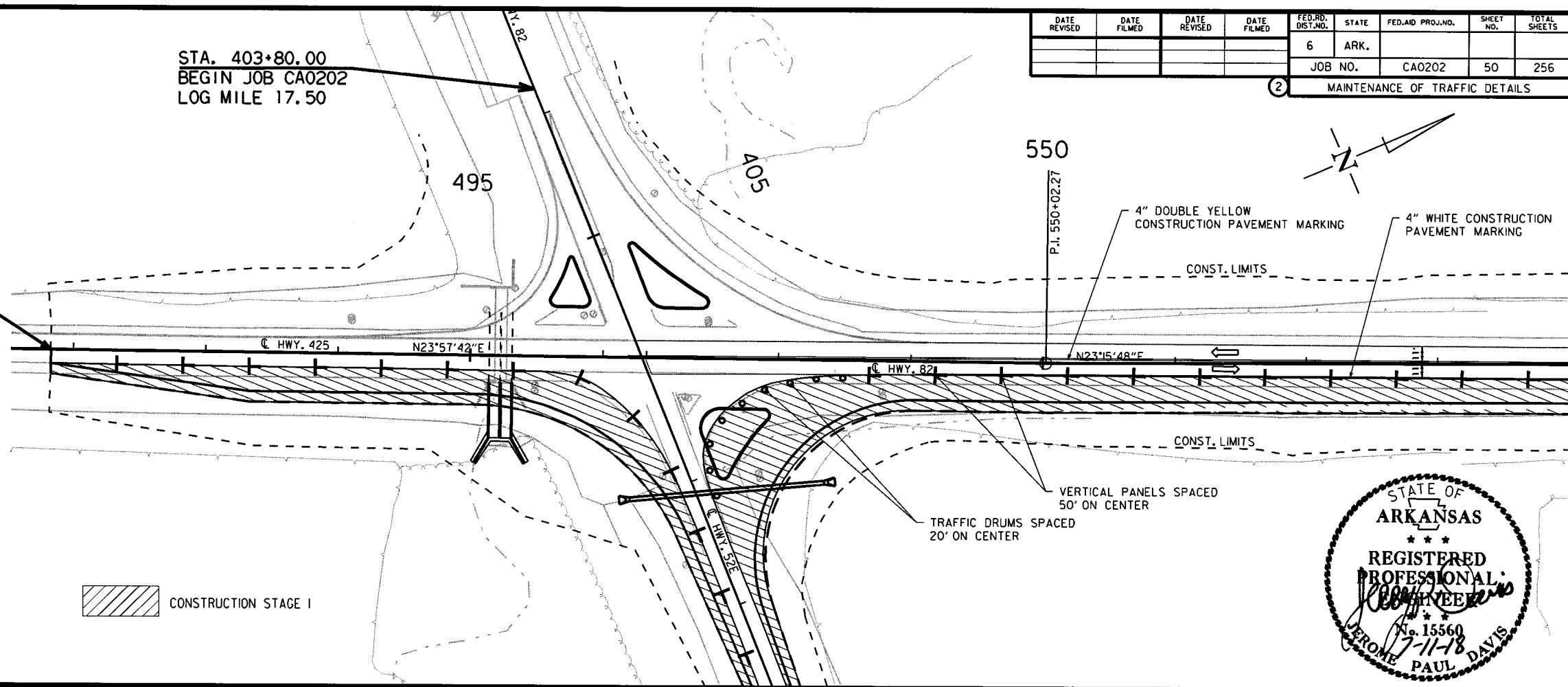
USER: f853  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Maint.of.Traffic\CA0202.MOT.HWY.82.dgn  
 PLOTTED: 7/10/2018 10:24  
 SCALE: 100%

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.	CA0202	50	256	

② MAINTENANCE OF TRAFFIC DETAILS

STA. 491+83.04  
BEGIN CONSTRUCTION

STA. 403+80.00  
BEGIN JOB CA0202  
LOG MILE 17.50



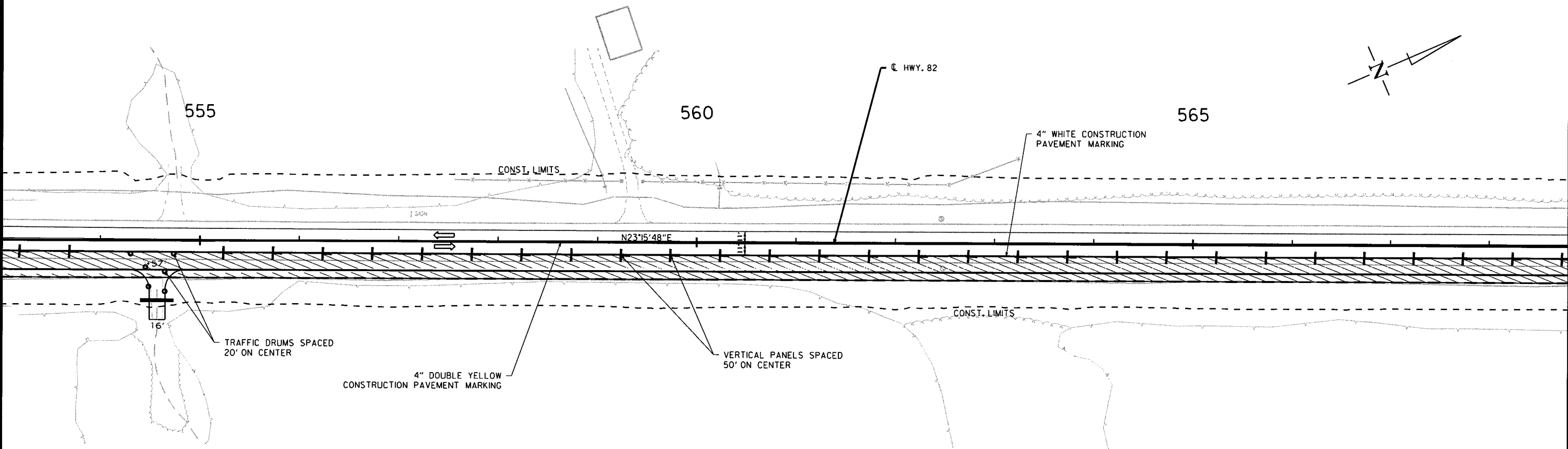
CONSTRUCTION STAGE I



555

560

565



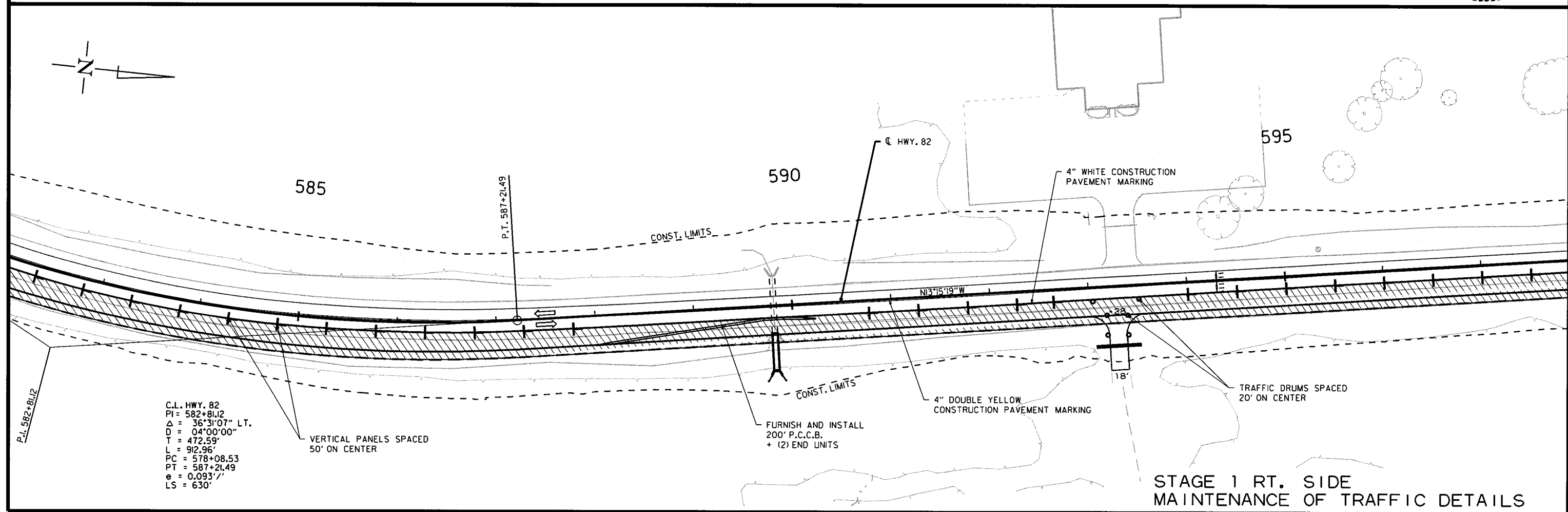
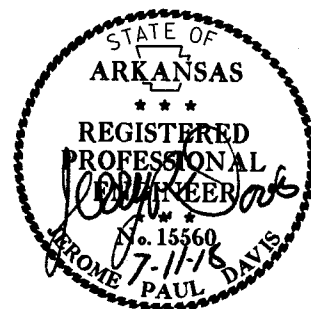
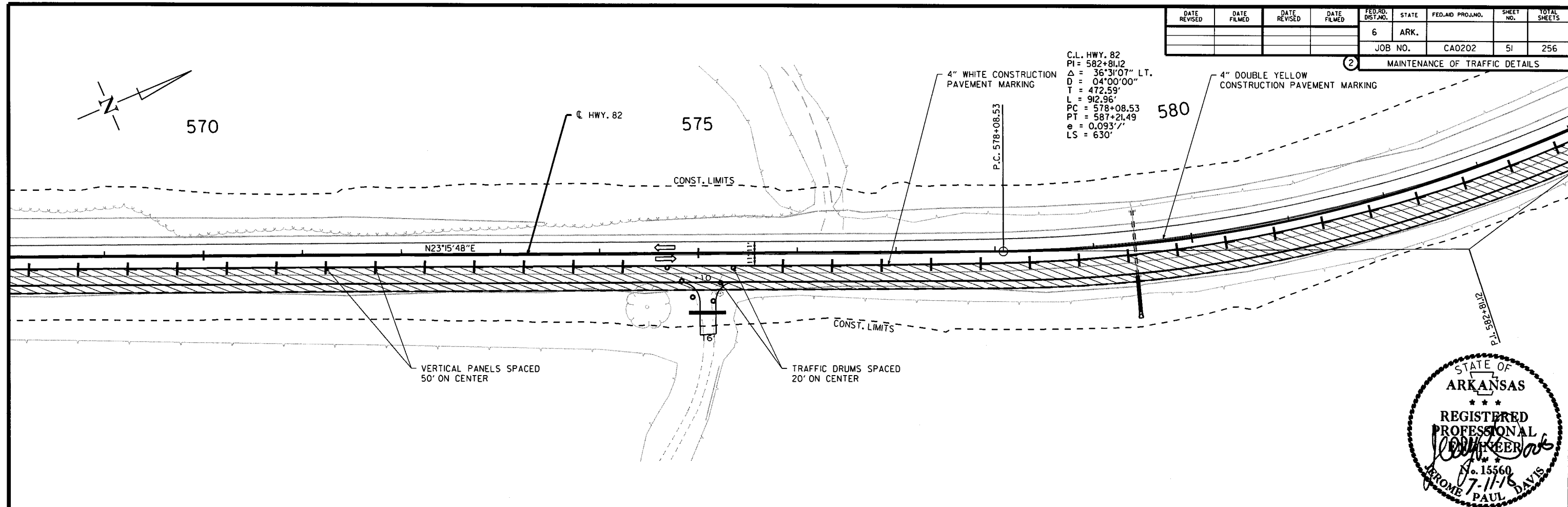
STAGE 1 RT. SIDE  
MAINTENANCE OF TRAFFIC DETAILS

USER: f6513  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\Maint\_of\_Traffic\CA0202.MOT.HWY-82.dgn  
PLOTTED: 7/10/2018 10:24  
SCALE: 100H

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.	CA0202	51	256	

② MAINTENANCE OF TRAFFIC DETAILS

C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta = 36^{\circ}31'07''$  LT.  
 D = 04'00'00"  
 T = 472.59'  
 L = 912.96'  
 PC = 578+08.53  
 PT = 587+21.49  
 e = 0.0937'  
 LS = 630'



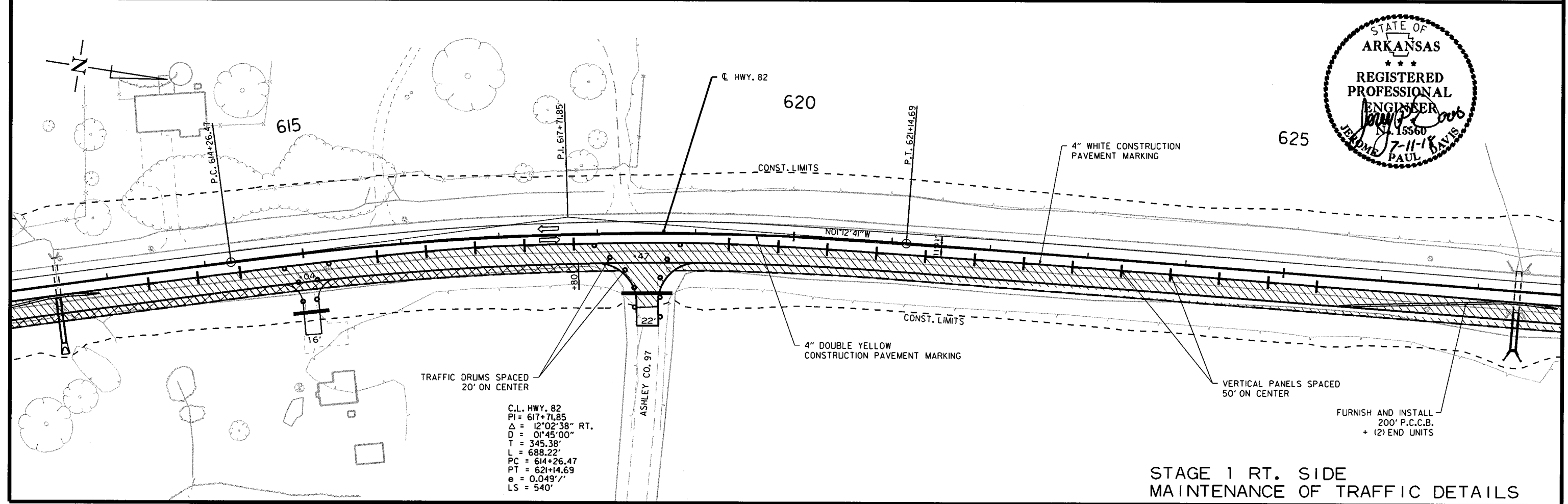
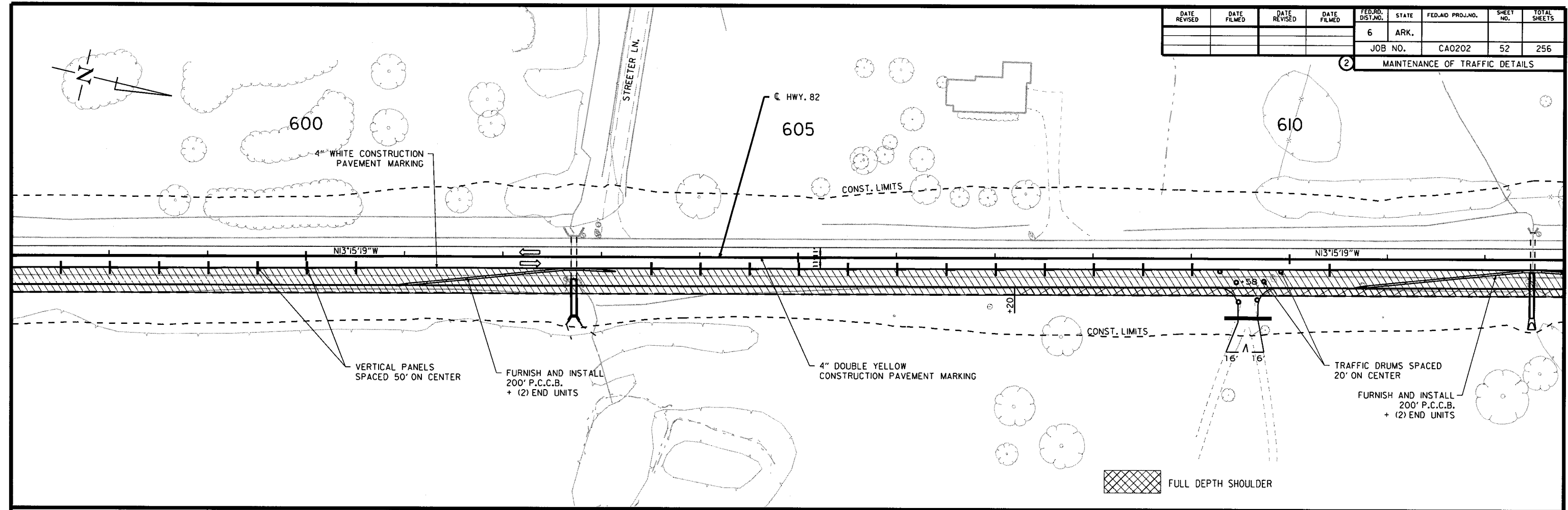
C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta = 36^{\circ}31'07''$  LT.  
 D = 04'00'00"  
 T = 472.59'  
 L = 912.96'  
 PC = 578+08.53  
 PT = 587+21.49  
 e = 0.0937'  
 LS = 630'

STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f5513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_MOT\_HWY\_82.dgn  
 PLOTTED: 7/10/2018 10:25 SCALE: 100:1

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.	CA0202	52	256	

2 MAINTENANCE OF TRAFFIC DETAILS



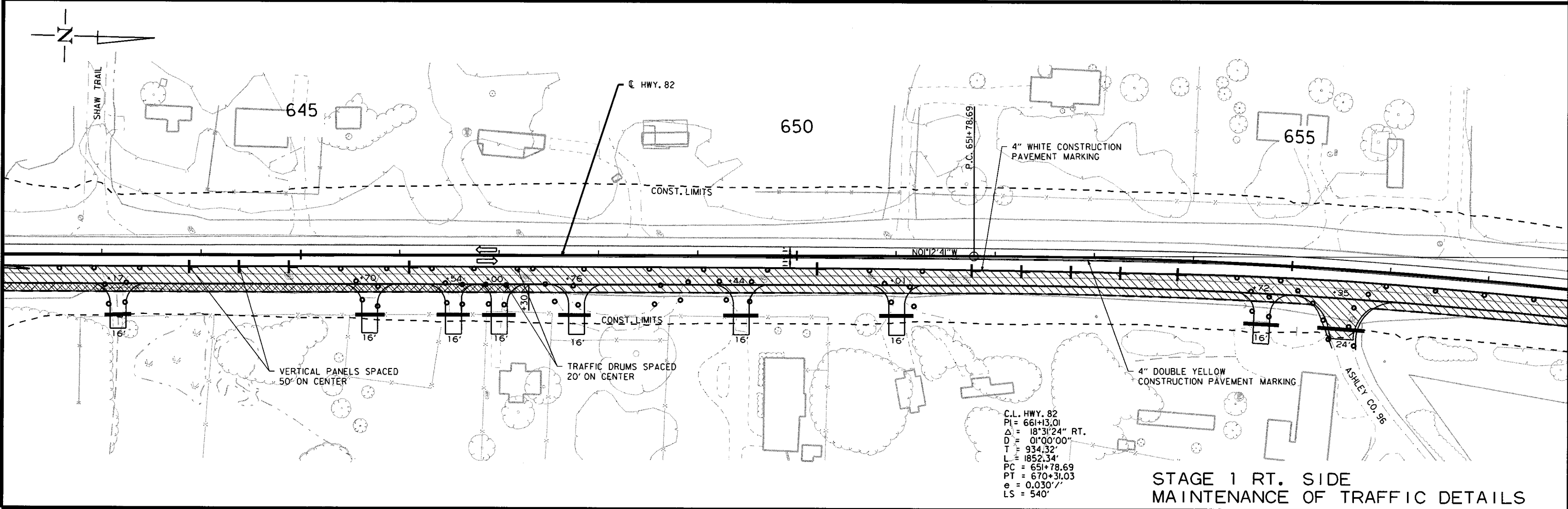
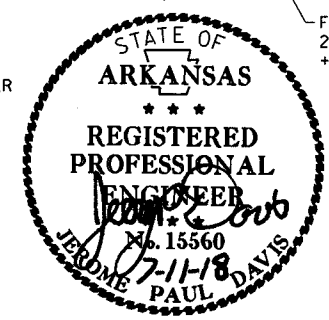
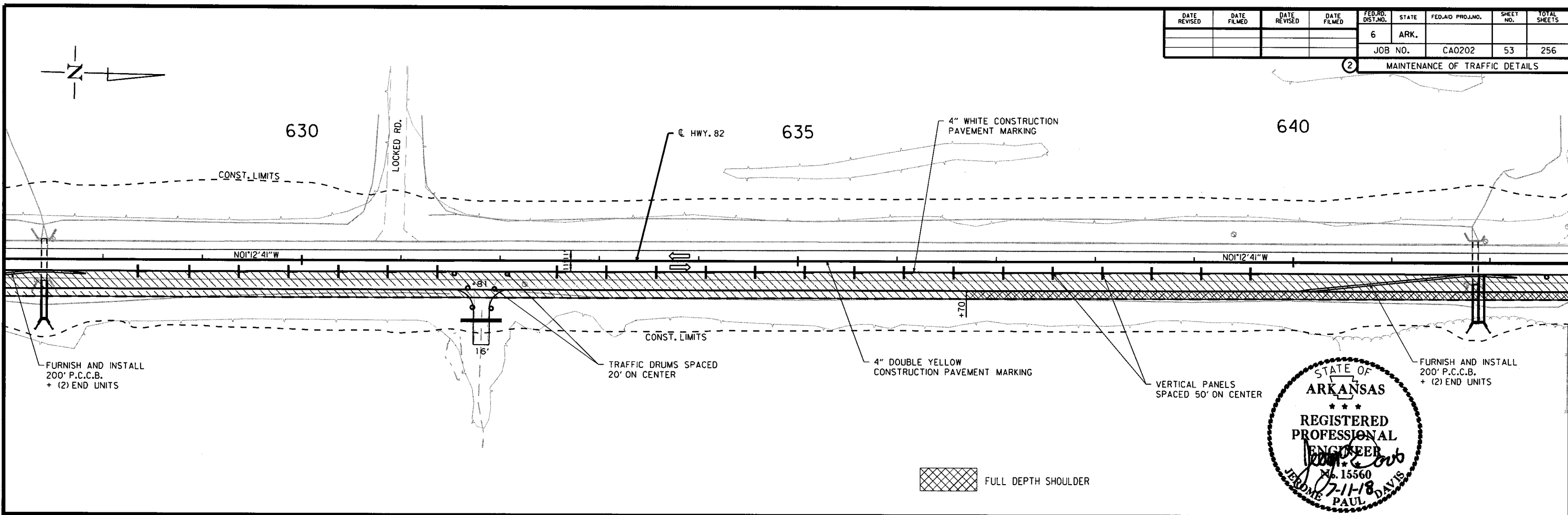
C.L. HWY. 82  
 PI = 617+71.85  
 $\Delta = 12^{\circ}02'38''$  RT.  
 D = 01'45'00"  
 T = 345.38'  
 L = 688.22'  
 PC = 614+26.47  
 PT = 621+14.69  
 $e = 0.049'/'$   
 LS = 540'

STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f653  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DN\Maint\_of\_Traffic\CA0202.MOT.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 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.	CA0202	53	256	

② MAINTENANCE OF TRAFFIC DETAILS



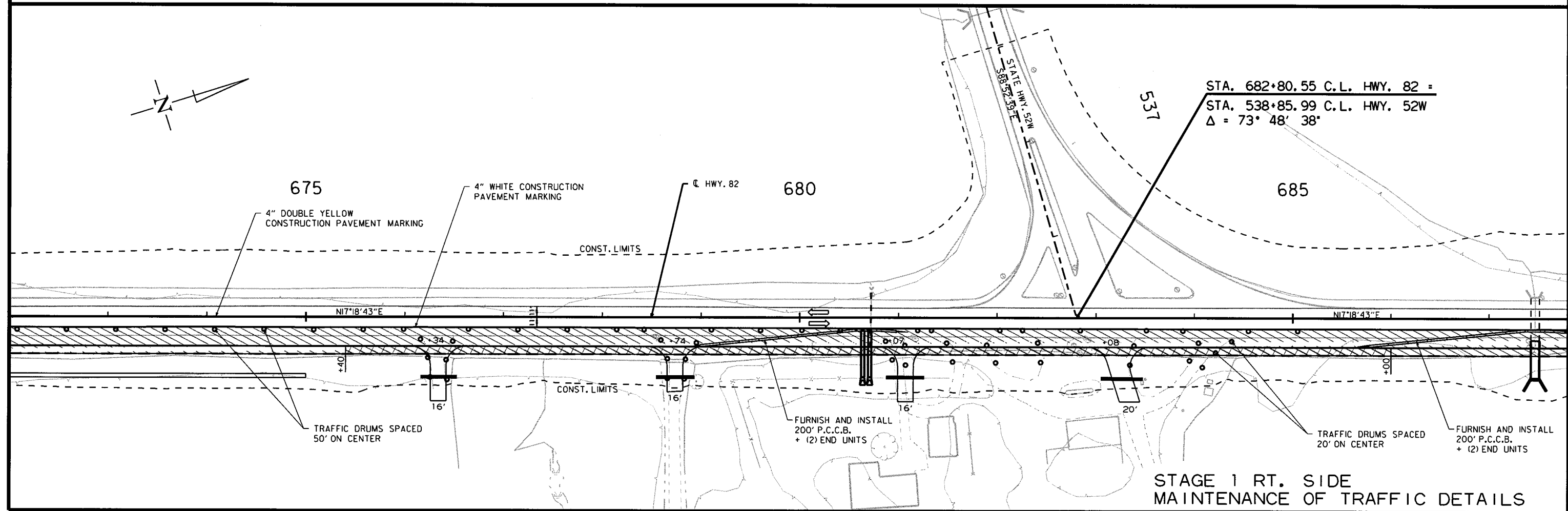
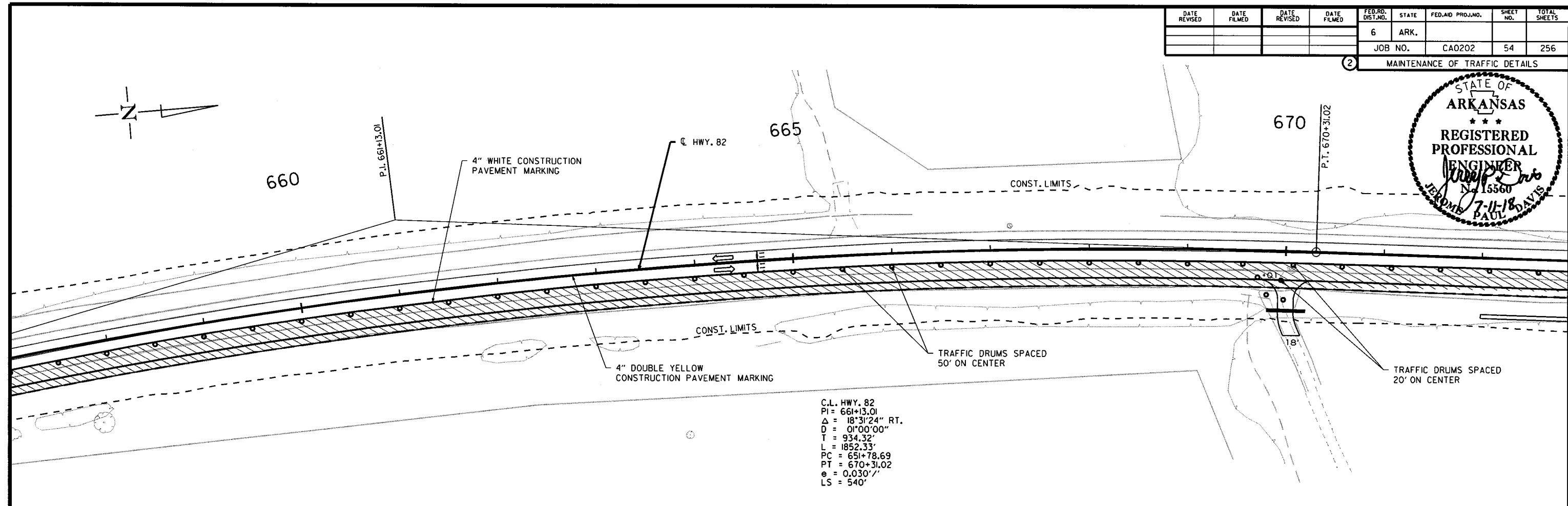
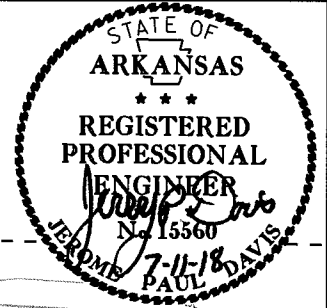
C.L. HWY. 82  
 PI = 661+13.01  
 $\Delta$  = 18°31'24" RT.  
 D = 01°00'00"  
 T = 934.32'  
 L = 1852.34'  
 PC = 651+78.69  
 PT = 670+31.03  
 e = 0.0307'  
 LS = 540'

STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f553  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 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.	CA0202	54	256	

② MAINTENANCE OF TRAFFIC DETAILS

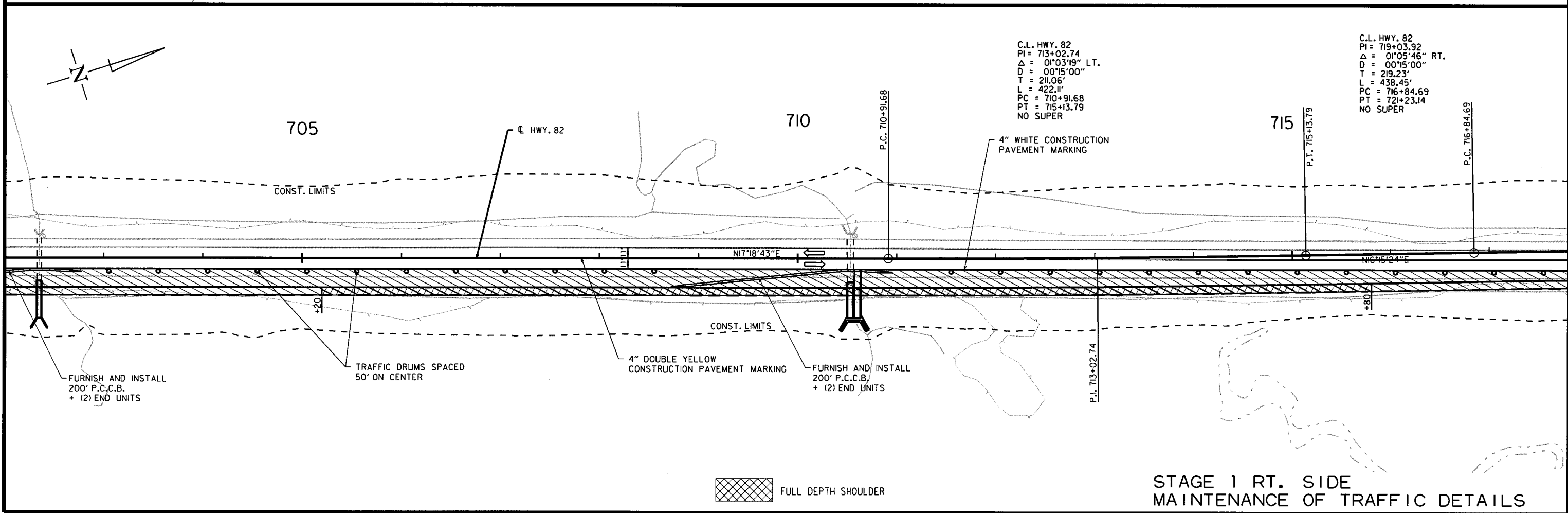
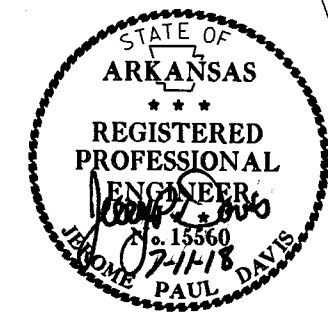
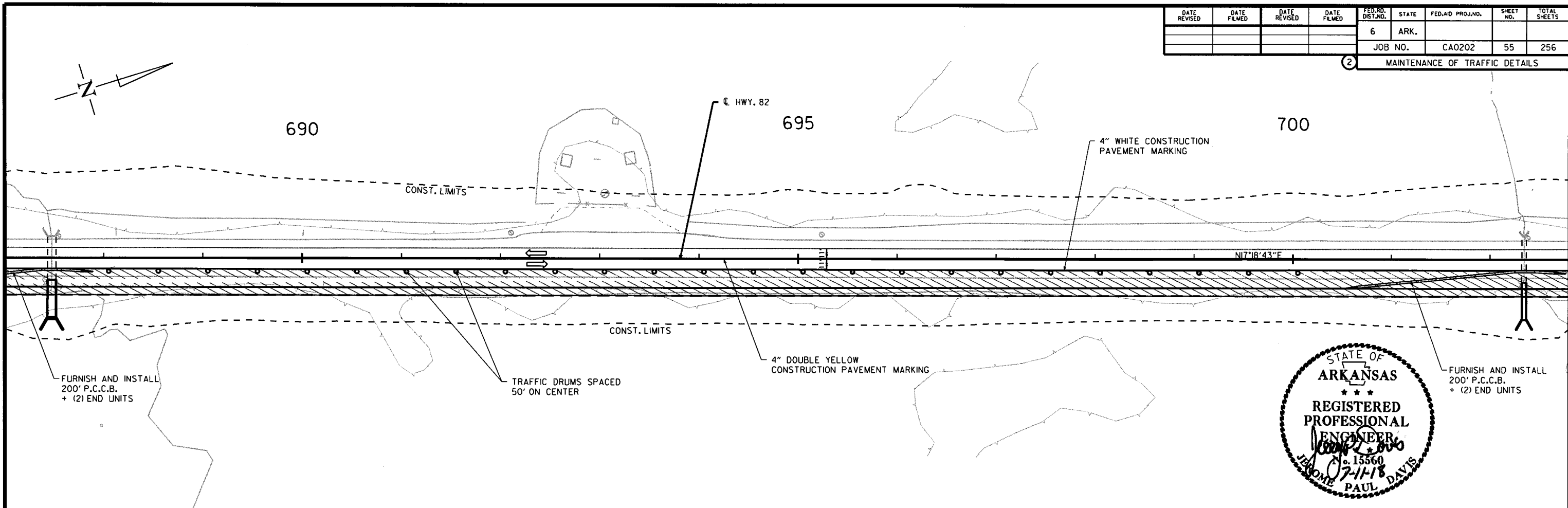


STAGE 1 RT. SIDE MAINTENANCE OF TRAFFIC DETAILS

USER: f5513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 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.	CA0202	55	256	

2 MAINTENANCE OF TRAFFIC DETAILS



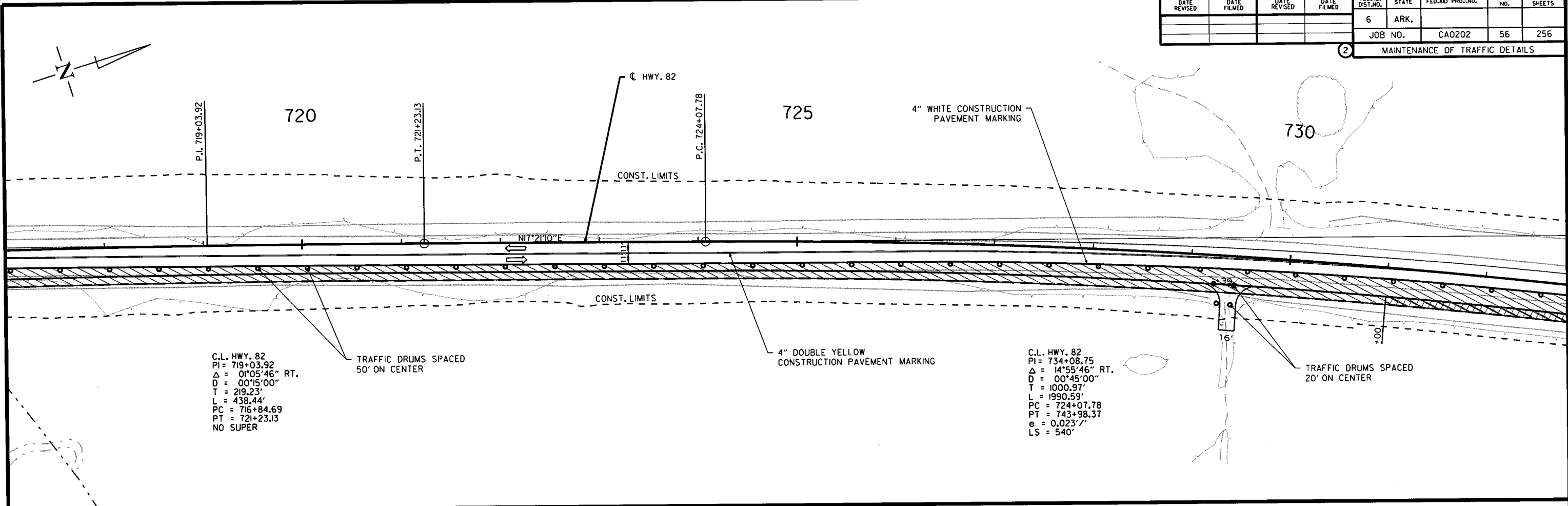
FULL DEPTH SHOULDER

STAGE 1 RT. SIDE MAINTENANCE OF TRAFFIC DETAILS

USER: f5513  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.MOT\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 100%

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		56	256
				JOB NO. CA0202				

2 MAINTENANCE OF TRAFFIC DETAILS

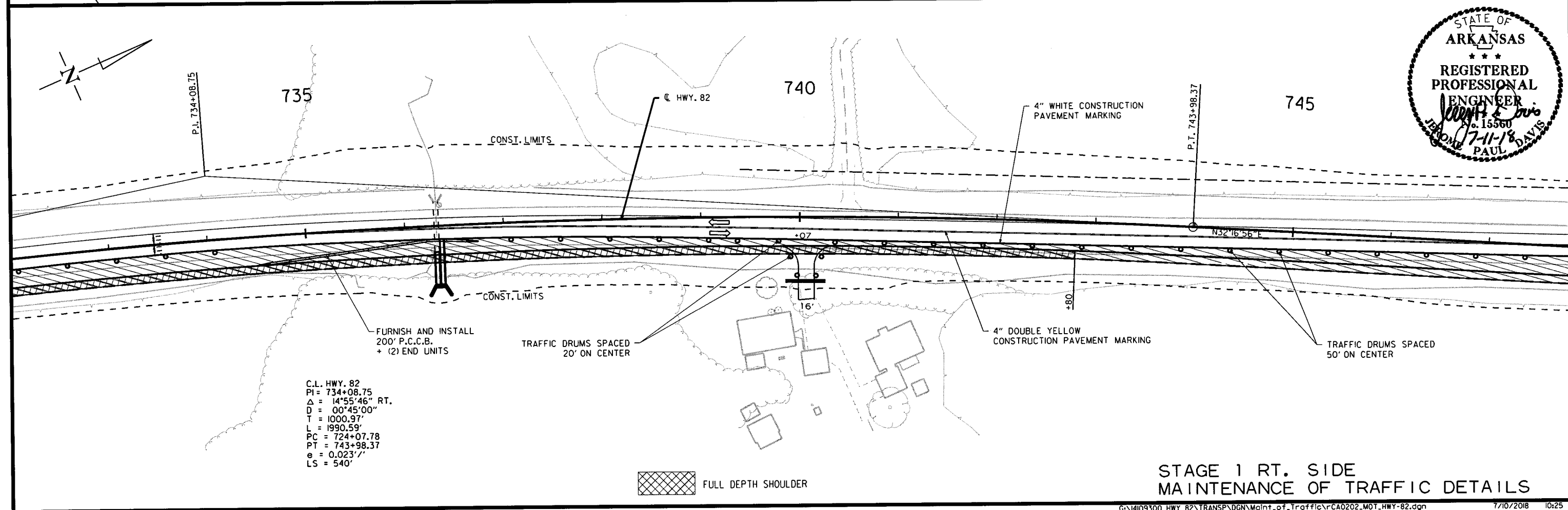


C.L. HWY. 82  
 PI = 719+03.92  
 $\Delta = 0^\circ 05' 46''$  RT.  
 $D = 00^\circ 15' 00''$   
 $T = 219.23'$   
 $L = 438.44'$   
 $PC = 716+84.69$   
 $PT = 721+23.13$   
 NO SUPER

TRAFFIC DRUMS SPACED  
 50' ON CENTER

C.L. HWY. 82  
 PI = 734+08.75  
 $\Delta = 14^\circ 55' 46''$  RT.  
 $D = 00^\circ 45' 00''$   
 $T = 1000.97'$   
 $L = 1990.59'$   
 $PC = 724+07.78$   
 $PT = 743+98.37$   
 $e = 0.023' /'$   
 $LS = 540'$

TRAFFIC DRUMS SPACED  
 20' ON CENTER



C.L. HWY. 82  
 PI = 734+08.75  
 $\Delta = 14^\circ 55' 46''$  RT.  
 $D = 00^\circ 45' 00''$   
 $T = 1000.97'$   
 $L = 1990.59'$   
 $PC = 724+07.78$   
 $PT = 743+98.37$   
 $e = 0.023' /'$   
 $LS = 540'$

FURNISH AND INSTALL  
 200' P.C.C.B.  
 + (2) END UNITS

TRAFFIC DRUMS SPACED  
 20' ON CENTER

4" DOUBLE YELLOW  
 CONSTRUCTION PAVEMENT MARKING

TRAFFIC DRUMS SPACED  
 50' ON CENTER

FULL DEPTH SHOULDER



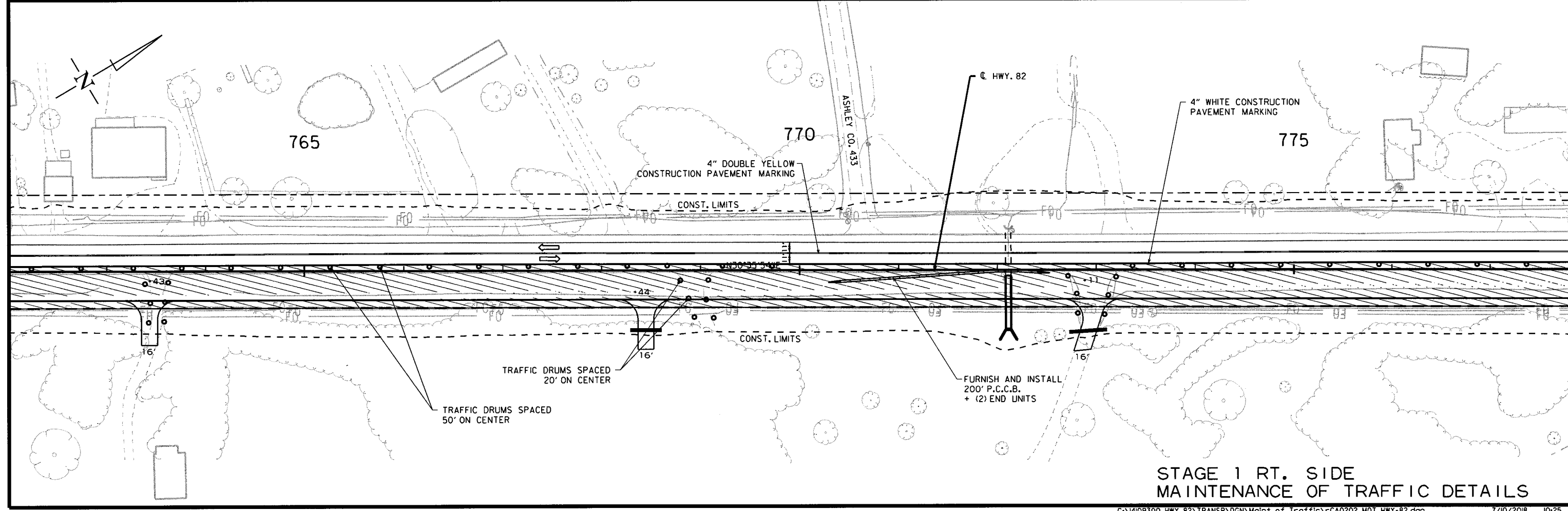
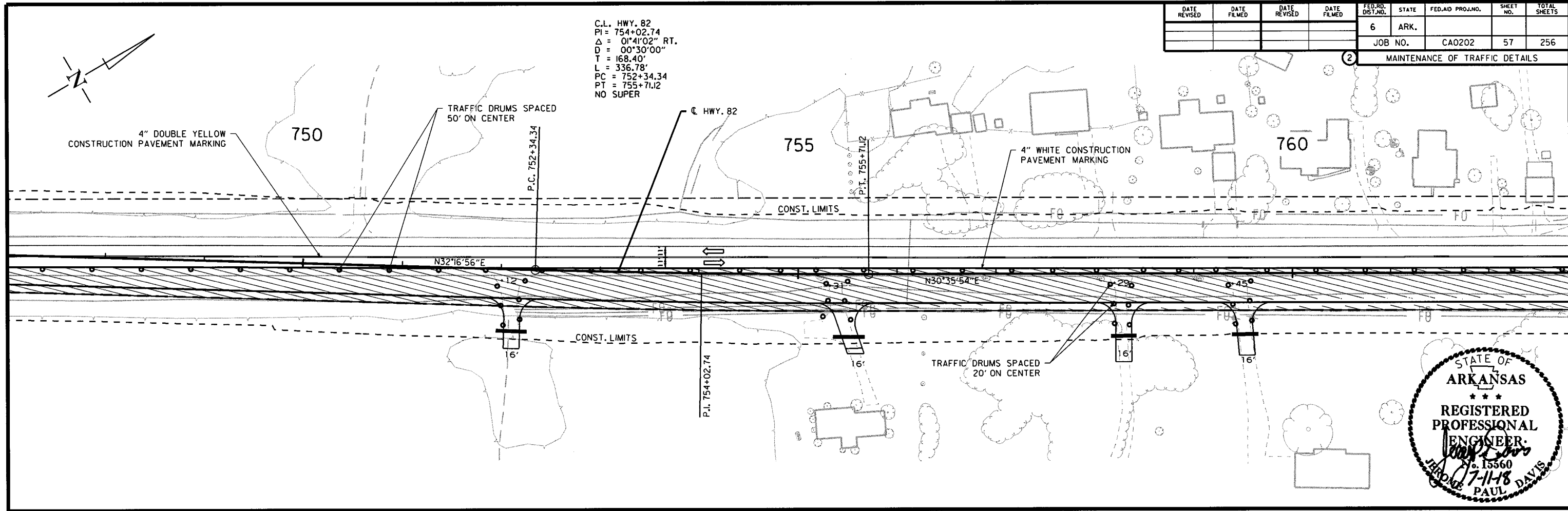
STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Main\of\_Traffic\CA0202\_MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:25



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	57	256	
2 MAINTENANCE OF TRAFFIC DETAILS								

C.L. HWY. 82  
 PI = 754+02.74  
 $\Delta = 01^{\circ}41'02''$  RT.  
 D = 00°30'00"  
 T = 168.40'  
 L = 336.78'  
 PC = 752+34.34  
 PT = 755+71.12  
 NO SUPER

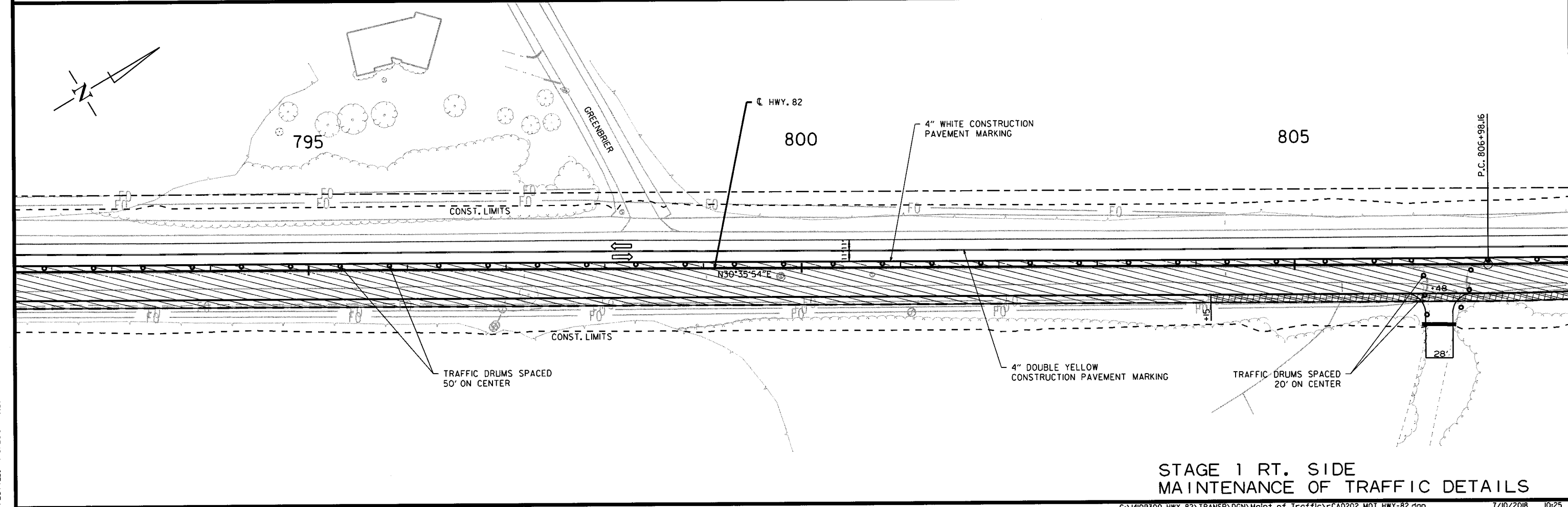
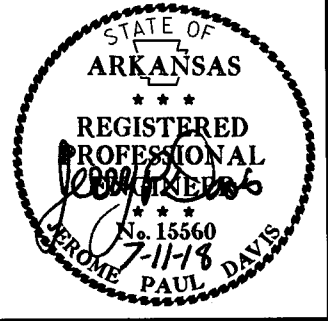
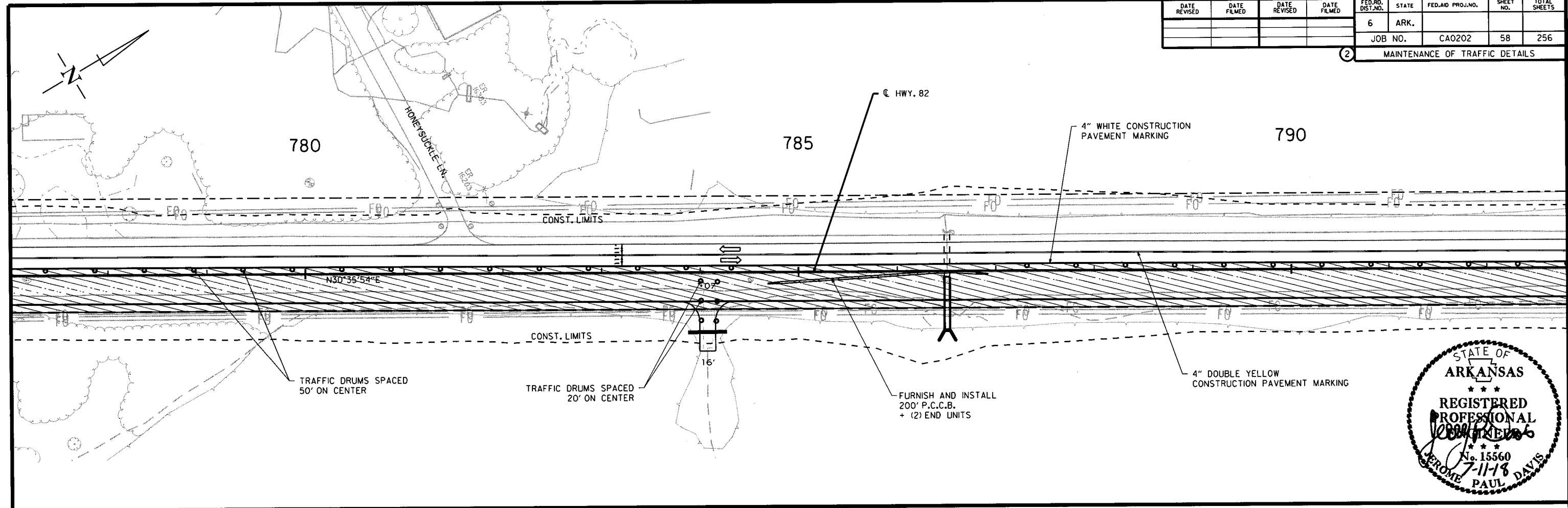


STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: r6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.MOT\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 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.	CA0202	58	256	

2 MAINTENANCE OF TRAFFIC DETAILS



STAGE 1 RT. SIDE  
MAINTENANCE OF TRAFFIC DETAILS

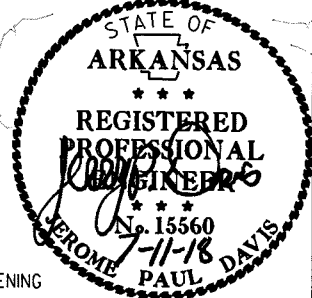
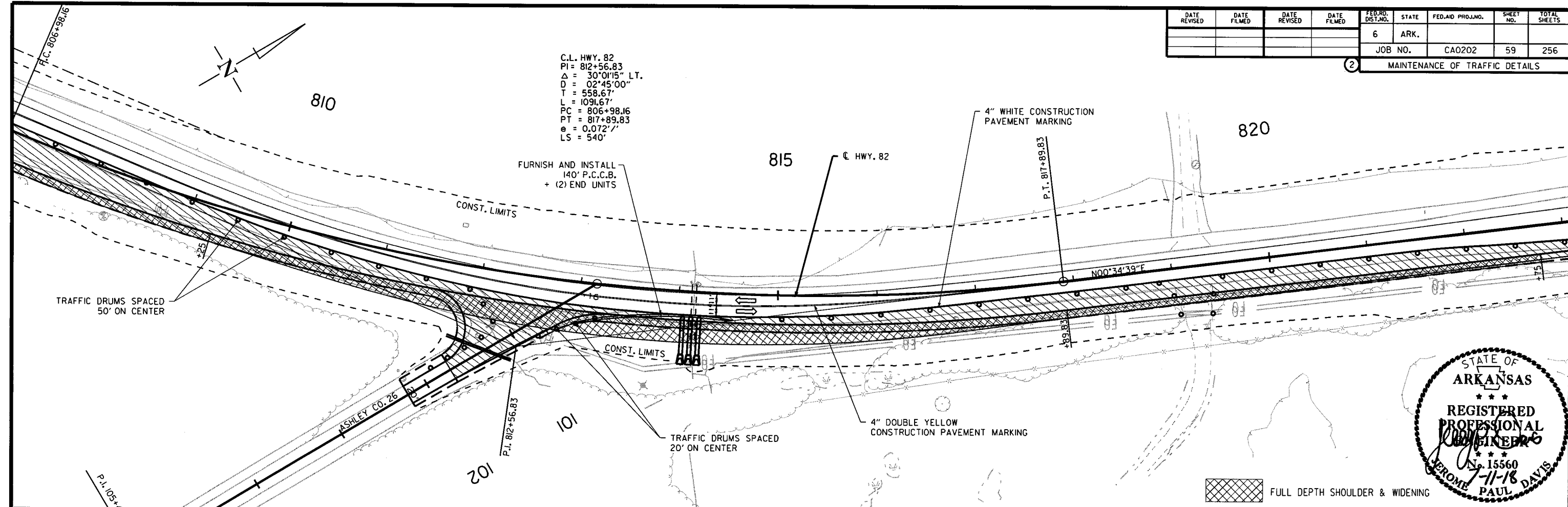
USER: fs53  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_MOT\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:25 SCALE: 100'

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.	CA0202	59	256	

② MAINTENANCE OF TRAFFIC DETAILS

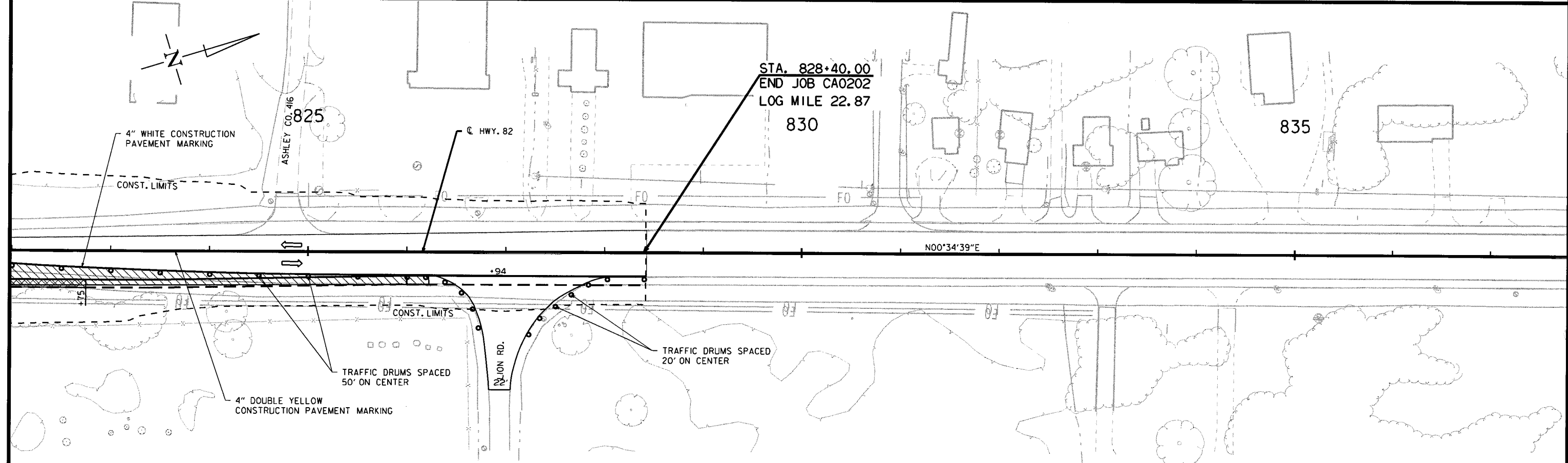
C.L. HWY. 82  
 PI = 812+56.83  
 $\Delta = 30^{\circ}01'15''$  LT.  
 $D = 02^{\circ}45'00''$   
 $T = 558.67'$   
 $L = 1091.67'$   
 PC = 806+98.16  
 PT = 817+89.83  
 $e = 0.072''$   
 LS = 540'

FURNISH AND INSTALL  
 140' P.C.C.B.  
 + (2) END UNITS



FULL DEPTH SHOULDER & WIDENING

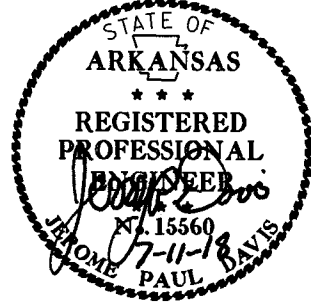
STA. 828+40.00  
 END JOB CA0202  
 LOG MILE 22.87  
 830



STAGE 1 RT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f8513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 100:1

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.	CA0202		60	256
				2 MAINTENANCE OF TRAFFIC DETAILS				



**STAGE 2 CONSTRUCTION SEQUENCE:**

MAINTAIN ADVANCE WARNING SIGNS & END ROAD WORK SIGNS FROM STAGE 1B.

APPLY LEVEL COURSE TO EXISTING LANES IF AND WHERE DIRECTED BY THE ENGINEER.

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

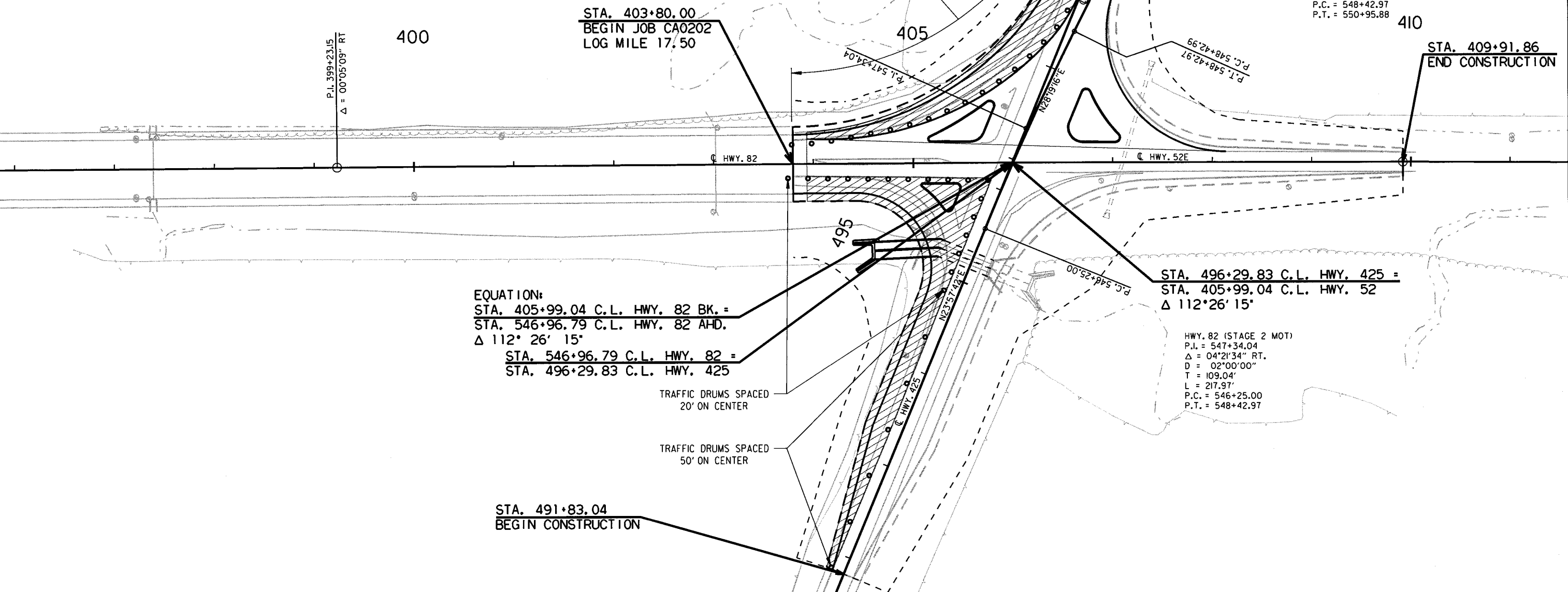
CONSTRUCT PORTION OF HWY. 82 AND CROSS DRAINS FROM LT. OF CL. FROM STA. 546+95 TO STA. 828+40.

NOTE: 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 3" 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.

**STAGE 2 QUANTITIES:**

SIGNS = 110150, FT.  
 TRAFFIC DRUMS = 931 EACH  
 VERTICAL PANELS = 0 EACH  
 RELOCATING P.C.C.B. = 2140 LIN. FT.  
 CONSTRUCTION PAVEMENT MARKINGS = 112925 LIN. FT.

APPLY FINAL 2" LIFT OF ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKING AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS AND REFER TO STANDARD DRAWING PM-1.



**EQUATION:**  
 STA. 405+99.04 C.L. HWY. 82 BK. =  
 STA. 546+96.79 C.L. HWY. 82 AHD.  
 Δ 112° 26' 15"  
 STA. 546+96.79 C.L. HWY. 82 =  
 STA. 496+29.83 C.L. HWY. 425

STA. 496+29.83 C.L. HWY. 425 =  
 STA. 405+99.04 C.L. HWY. 52  
 Δ 112° 26' 15"

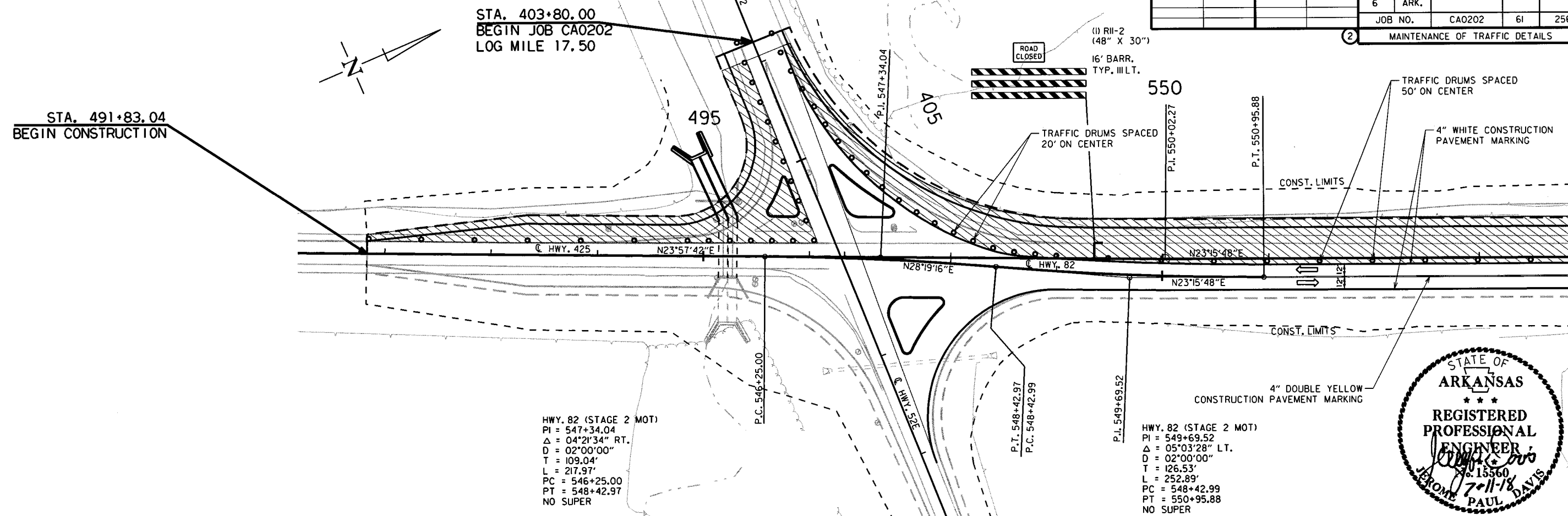


**STAGE 2 LT. SIDE MAINTENANCE OF TRAFFIC DETAILS**

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint.of.Traffic\CA0202.MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 100H

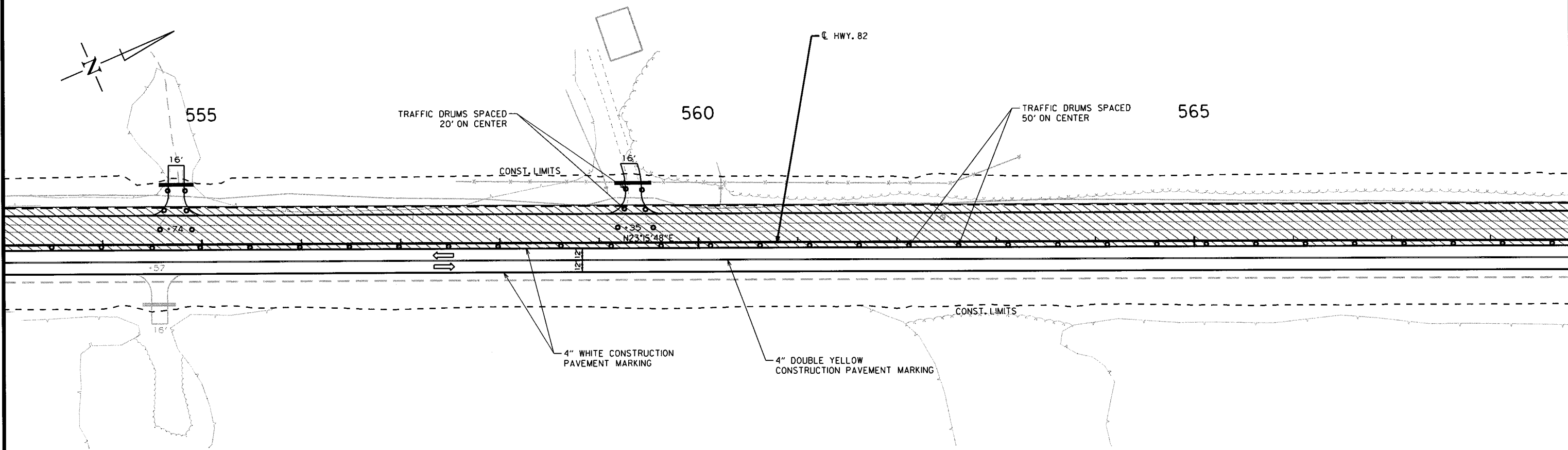
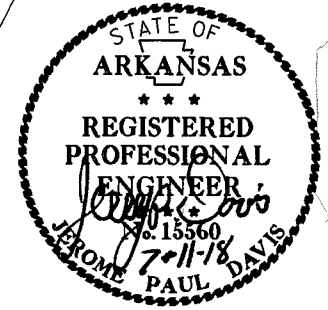
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		61	256

2 MAINTENANCE OF TRAFFIC DETAILS



HWY. 82 (STAGE 2 MOT)  
 PI = 547+34.04  
 $\Delta = 04^{\circ}21'34''$  RT.  
 D = 02'00'00"  
 T = 109.04'  
 L = 217.97'  
 PC = 546+25.00  
 PT = 548+42.97  
 NO SUPER

HWY. 82 (STAGE 2 MOT)  
 PI = 549+69.52  
 $\Delta = 05^{\circ}03'28''$  LT.  
 D = 02'00'00"  
 T = 126.53'  
 L = 252.89'  
 PC = 548+42.99  
 PT = 550+95.88  
 NO SUPER



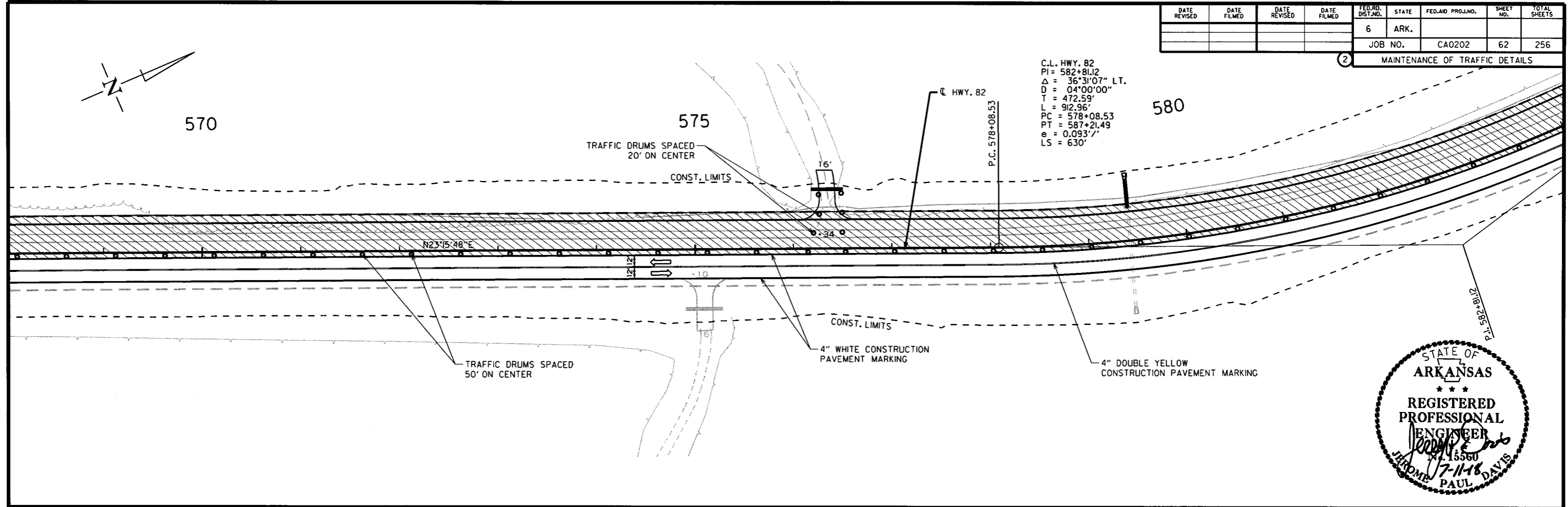
STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f5513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 100H

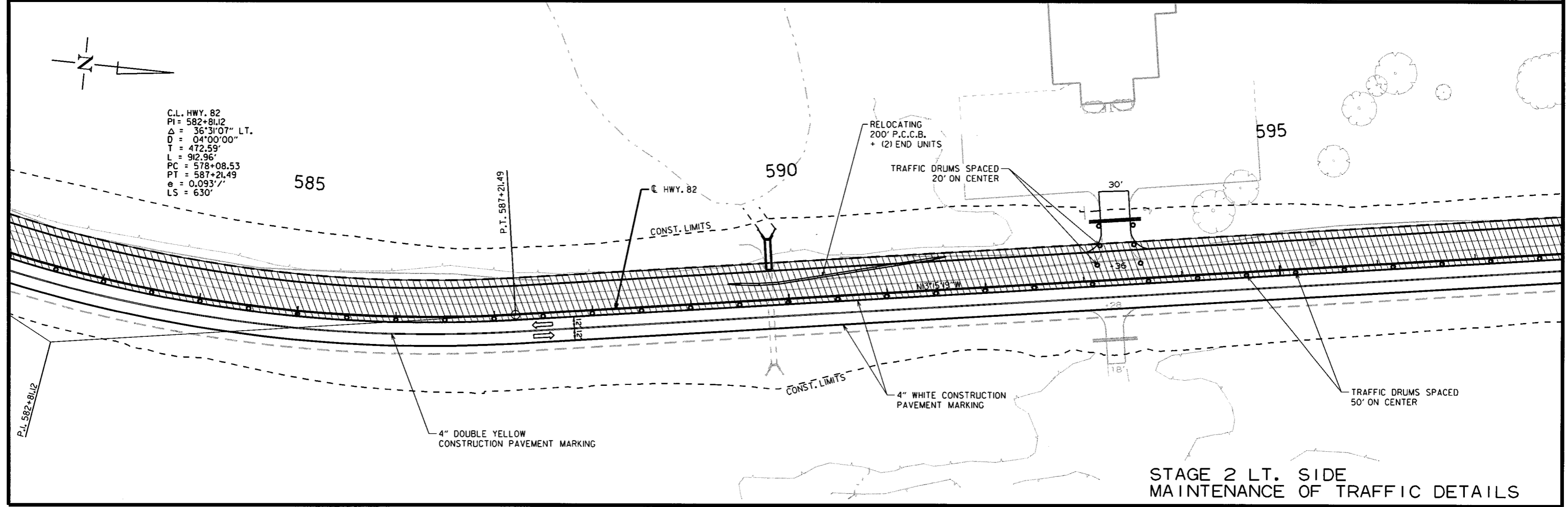
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	62	256	

2 MAINTENANCE OF TRAFFIC DETAILS

C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta = 36^{\circ}31'07''$  LT.  
 D = 04'00'00"  
 T = 472.59'  
 L = 912.96'  
 PC = 578+08.53  
 PT = 587+21.49  
 e = 0.0937'  
 LS = 630'



C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta = 36^{\circ}31'07''$  LT.  
 D = 04'00'00"  
 T = 472.59'  
 L = 912.96'  
 PC = 578+08.53  
 PT = 587+21.49  
 e = 0.0937'  
 LS = 630'

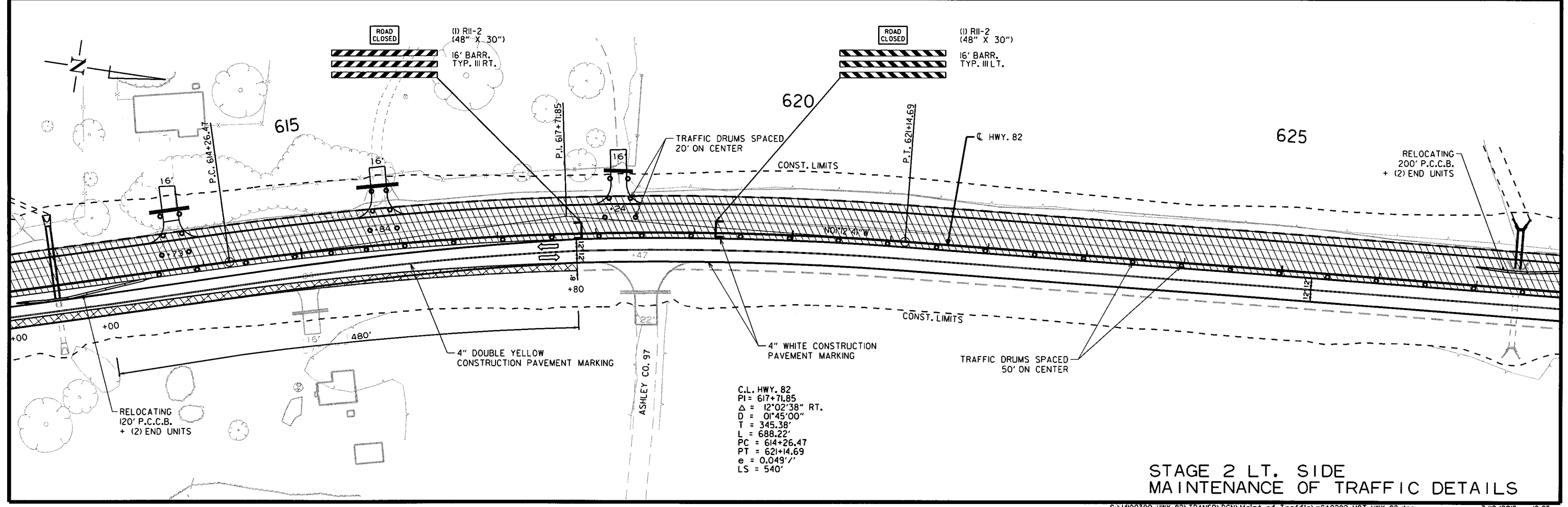
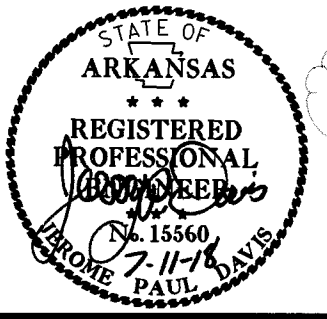
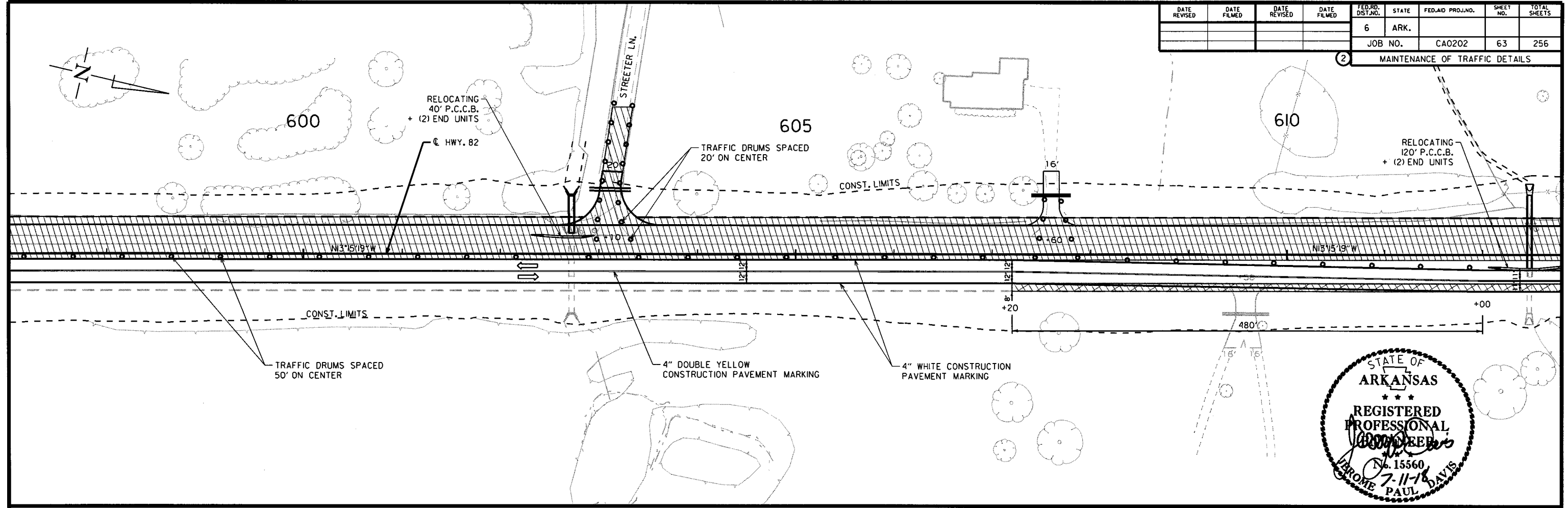


STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: fs933  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:25 SCALE: 100ft

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.	CA0202	63	256	

2 MAINTENANCE OF TRAFFIC DETAILS

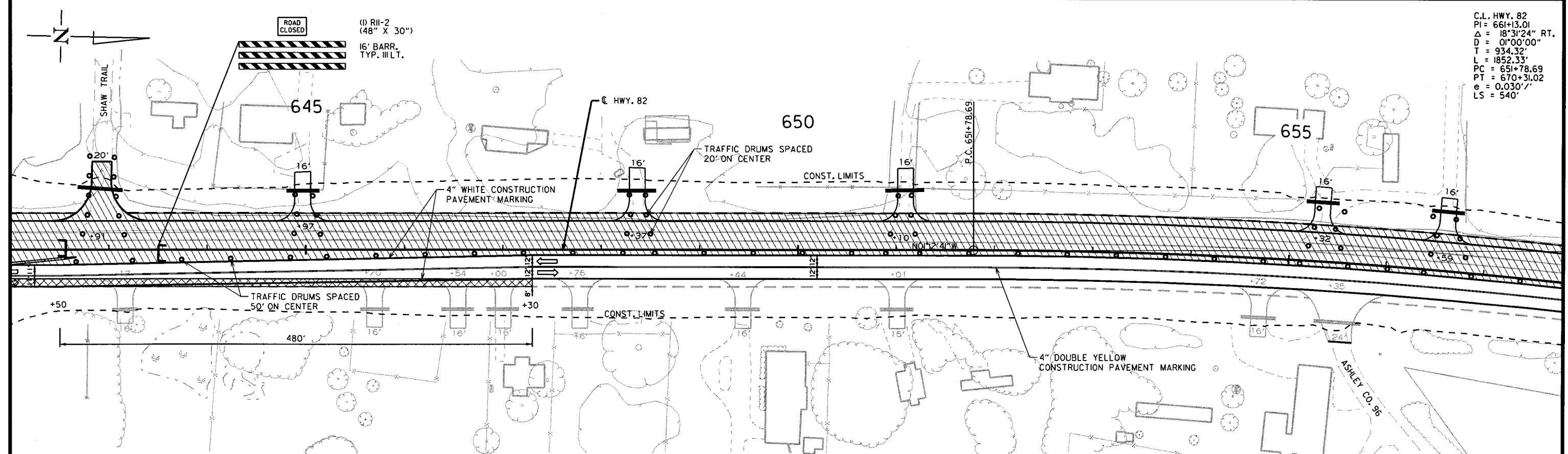
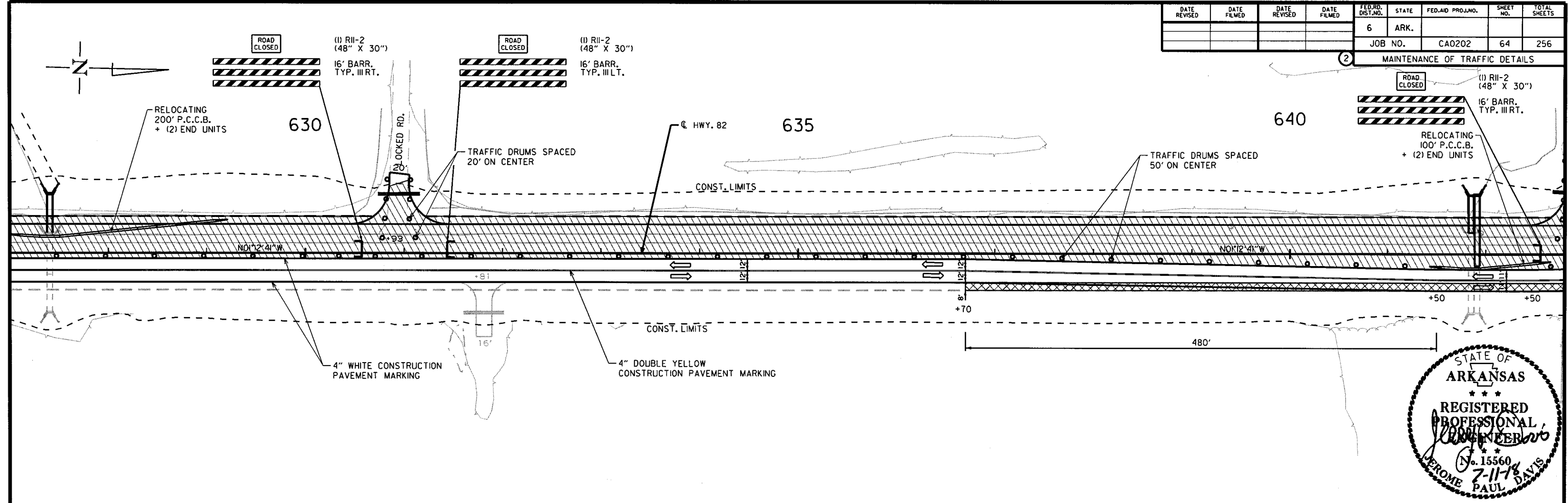


STAGE 2 LT. SIDE  
MAINTENANCE OF TRAFFIC DETAILS

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:25

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		64	256
				JOB NO. CA0202				

2 MAINTENANCE OF TRAFFIC DETAILS



C.L. HWY. 82  
 PI = 661+13.01  
 $\Delta = 18^{\circ}31'24''$  RT.  
 D = 01'00'00"  
 T = 934.32'  
 L = 1852.33'  
 PC = 651+78.69  
 PT = 670+31.02  
 e = 0.030'/'  
 LS = 540'

STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

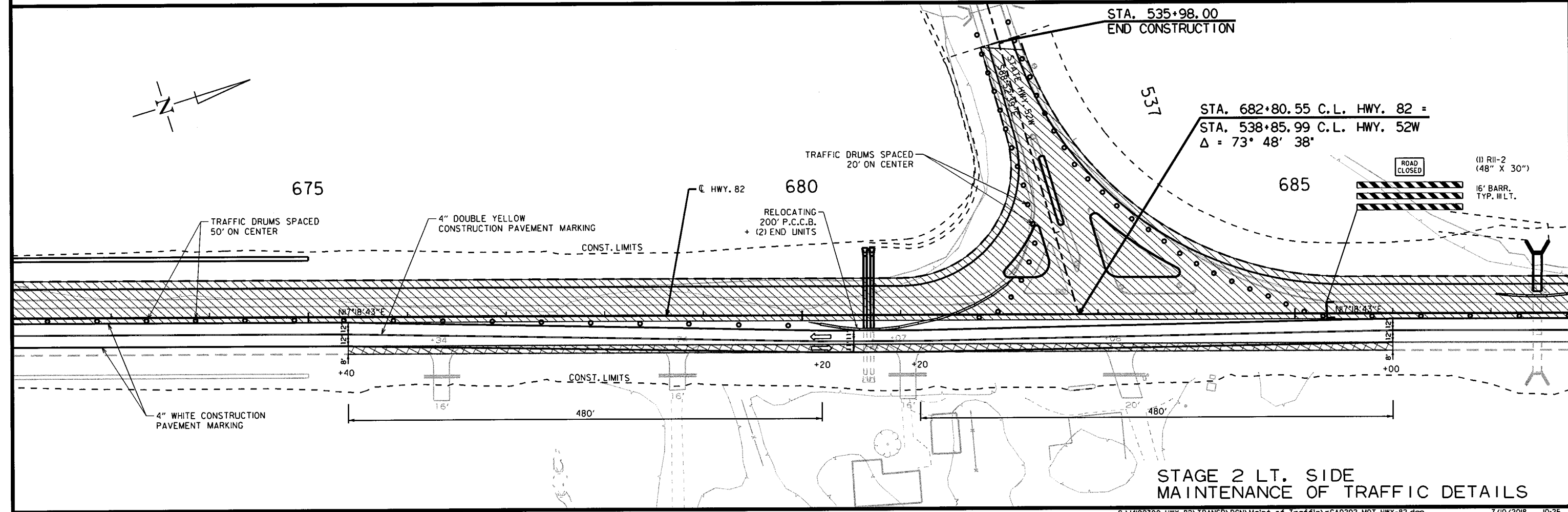
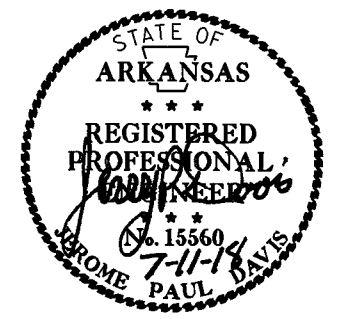
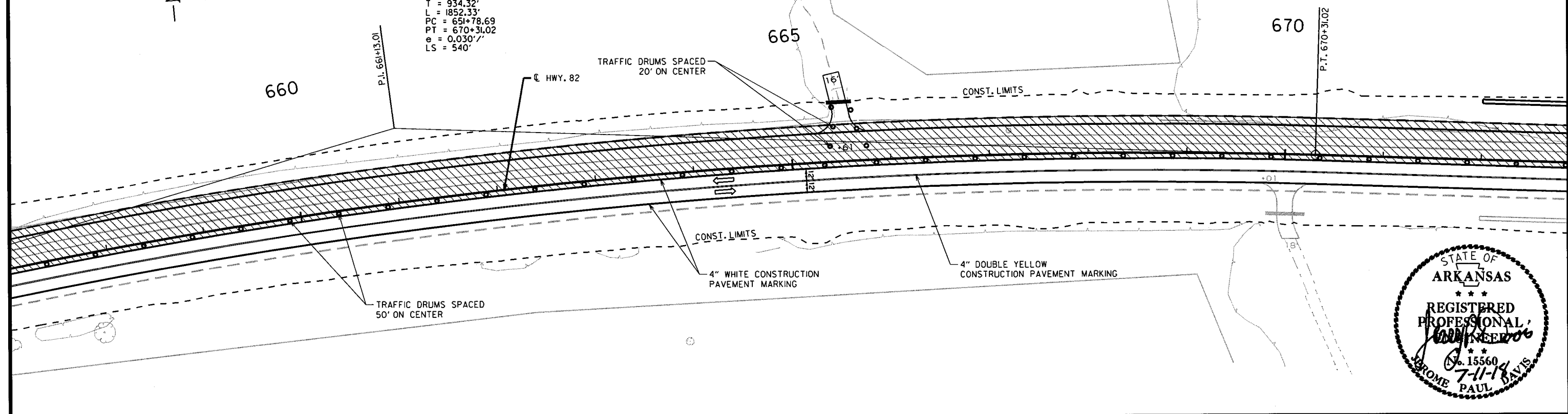
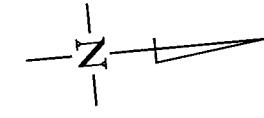
USER: f853  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.MOT.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:25  
 SCALE: 100%



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.	CA0202		65	256

2 MAINTENANCE OF TRAFFIC DETAILS

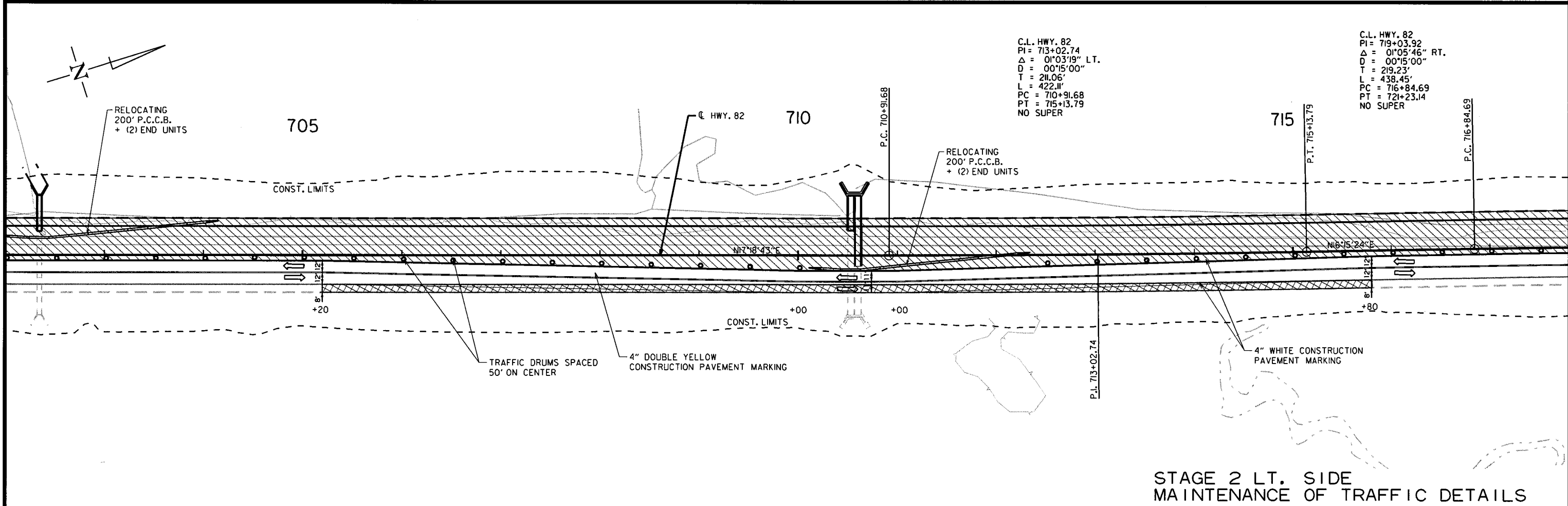
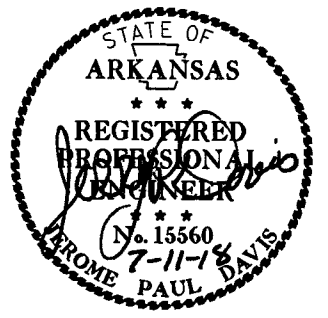
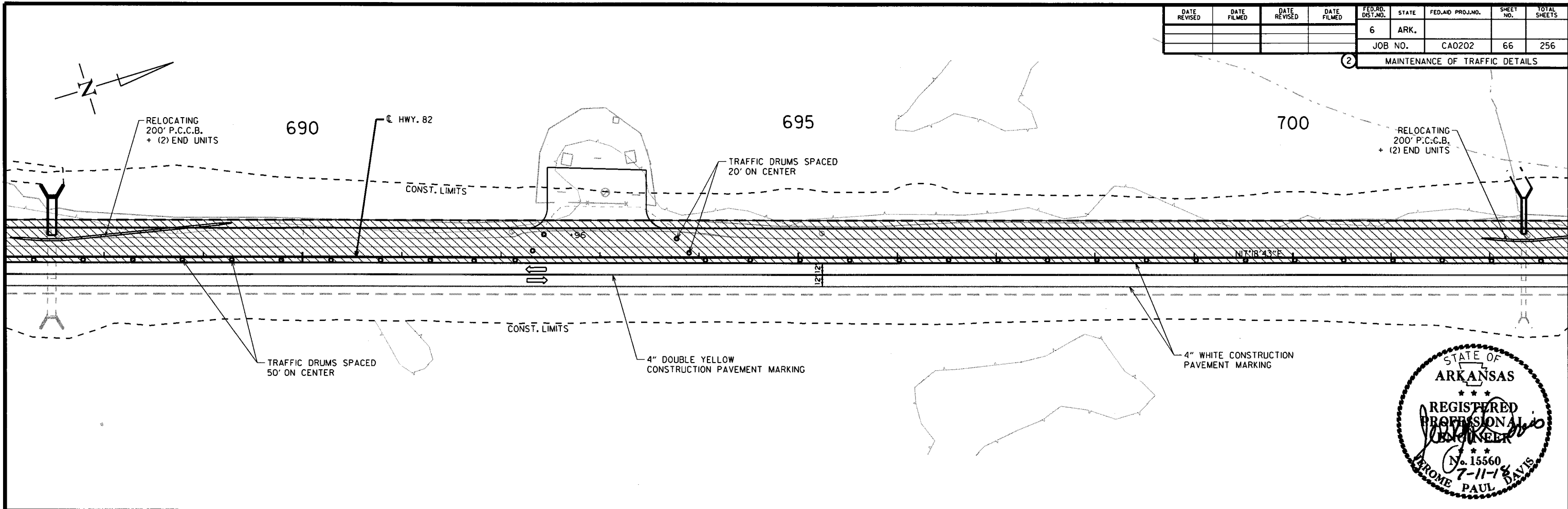
C.L. HWY. 82  
 PI = 661+13.01  
 $\Delta = 18^{\circ}31'24''$  RT.  
 D = 01'00'00"  
 T = 934.32'  
 L = 1852.33'  
 PC = 651+78.69  
 PT = 670+31.02  
 e = 0.0307'  
 LS = 540'



STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGNN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy\_82.dgn  
 PLOTTED: 7/10/2008 10:25  
 SCALE: 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.	CA0202	66	256	
				2 MAINTENANCE OF TRAFFIC DETAILS				



C.L. HWY. 82  
 PI = 713+02.74  
 $\Delta = 01^{\circ}03'19''$  LT.  
 D = 00'15'00"  
 T = 211.06'  
 L = 422.11'  
 PC = 710+91.68  
 PT = 715+13.79  
 NO SUPER

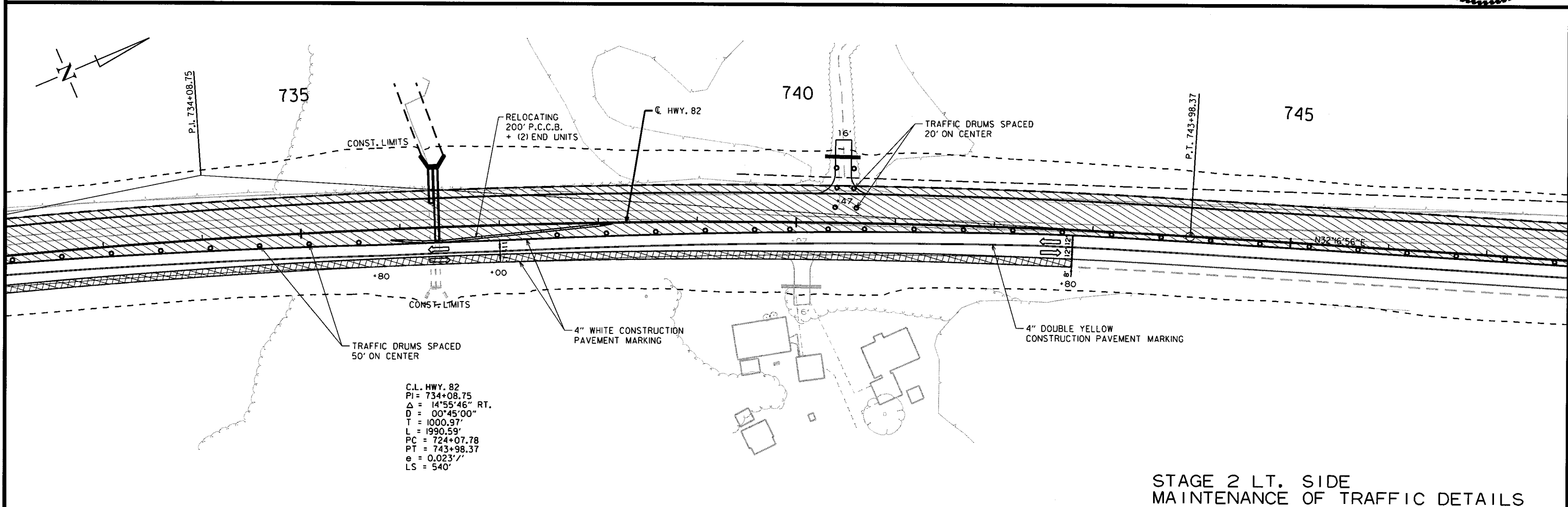
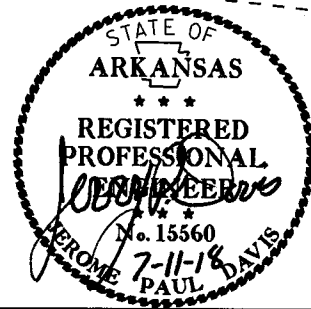
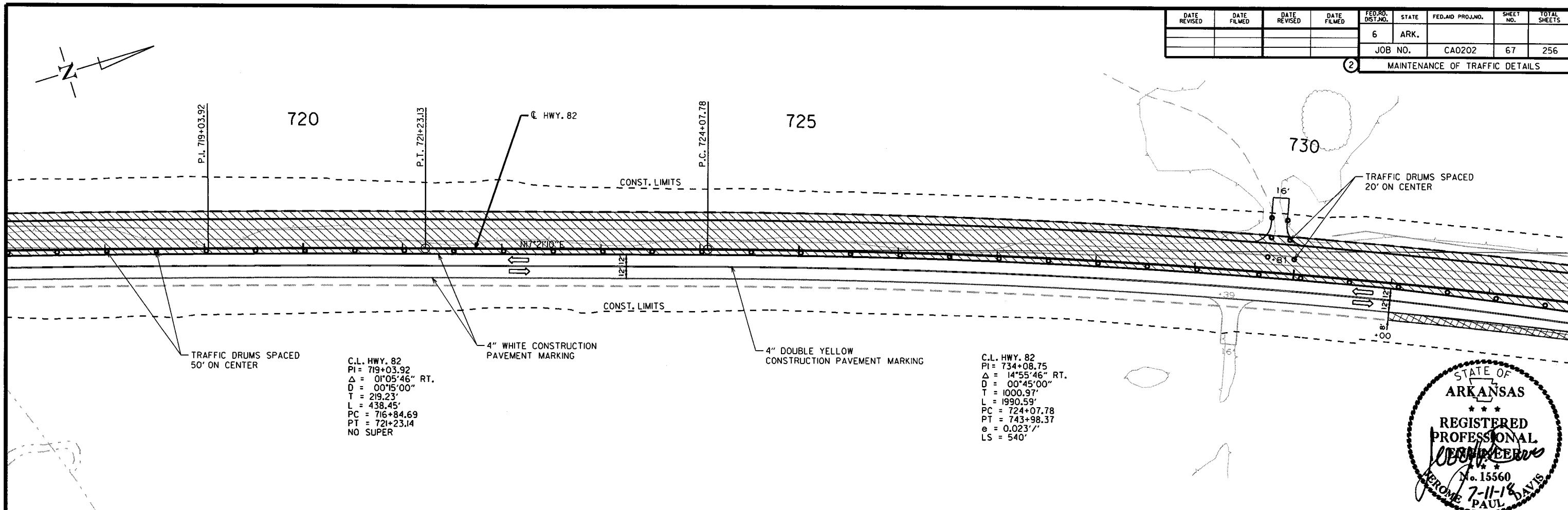
C.L. HWY. 82  
 PI = 719+03.92  
 $\Delta = 01^{\circ}05'46''$  RT.  
 D = 00'15'00"  
 T = 219.23'  
 L = 438.45'  
 PC = 716+84.69  
 PT = 721+23.14  
 NO SUPER

STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f553  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.MOT.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100:1

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.	CA0202	67	256	

2 MAINTENANCE OF TRAFFIC DETAILS



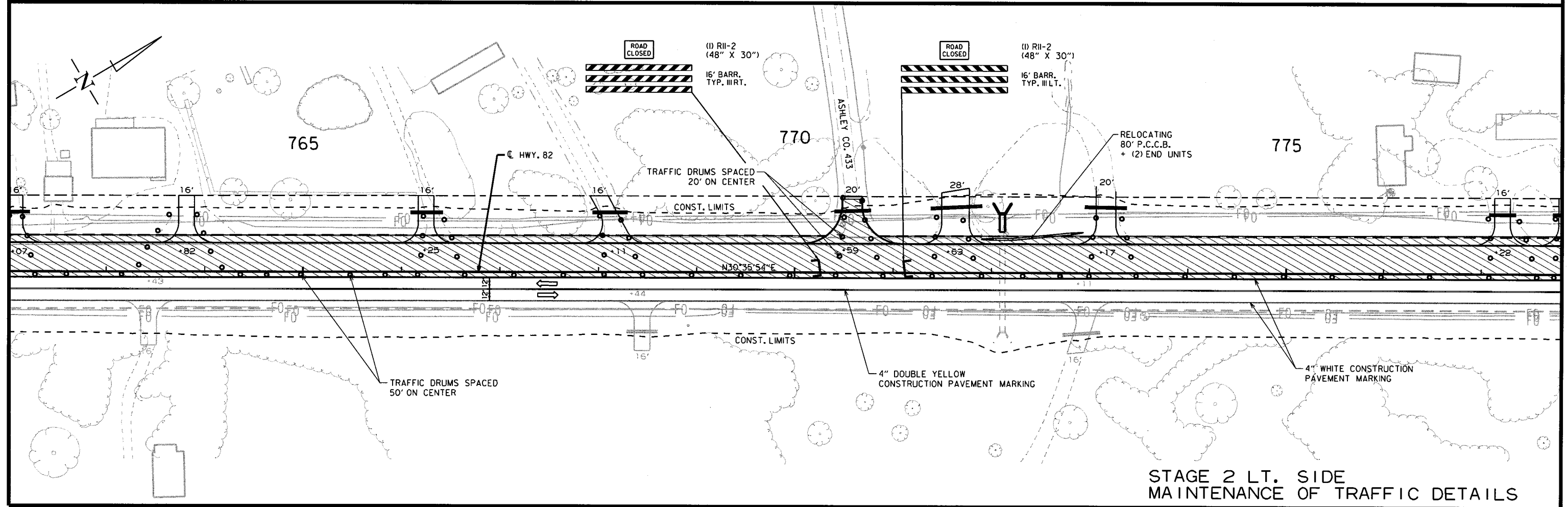
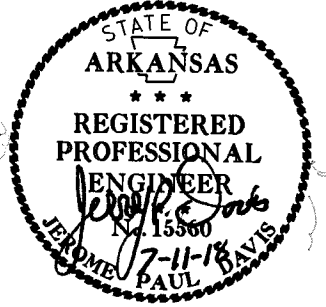
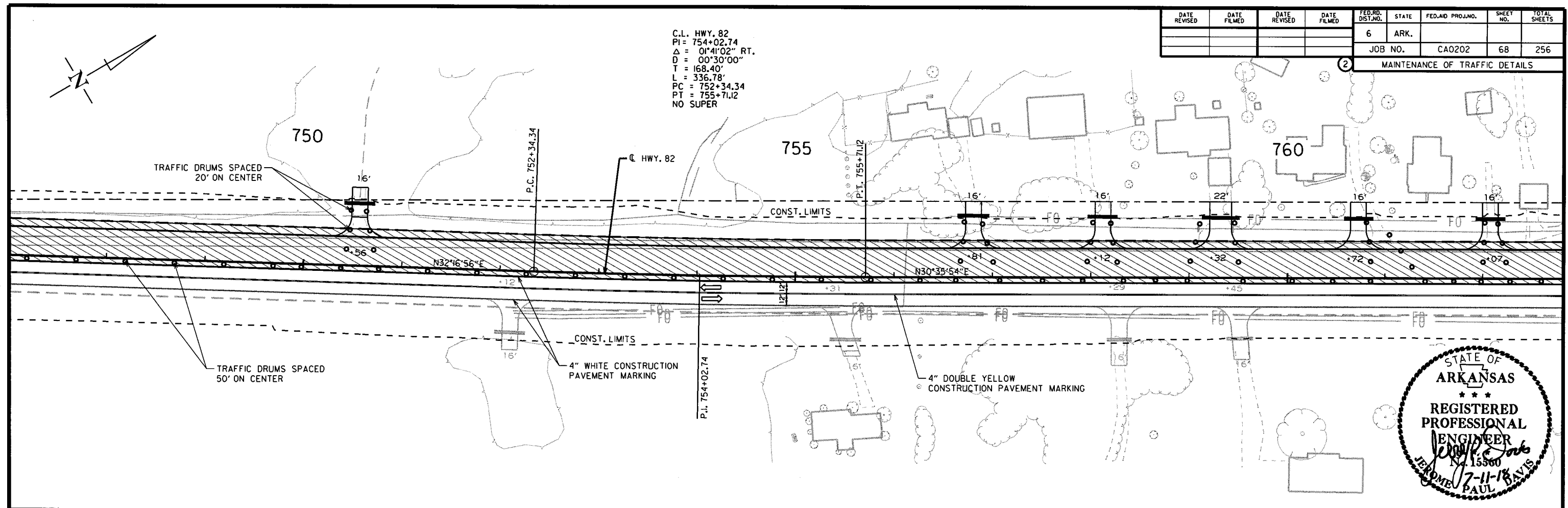
STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: fs53  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100H

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		68	256
				JOB NO.	CA0202			

C.L. HWY. 82  
 PI = 754+02.74  
 $\Delta = 01^{\circ}41'02''$  RT.  
 D = 00'30'00"  
 T = 168.40'  
 L = 336.78'  
 PC = 752+34.34  
 PT = 755+71.12  
 NO SUPER

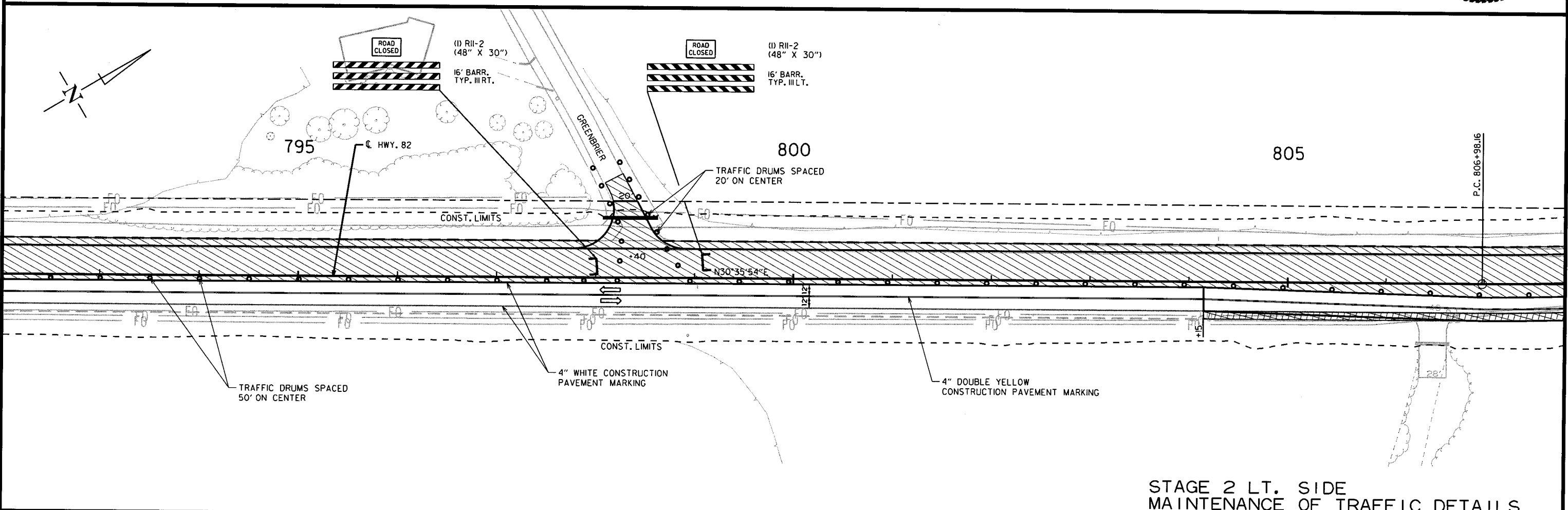
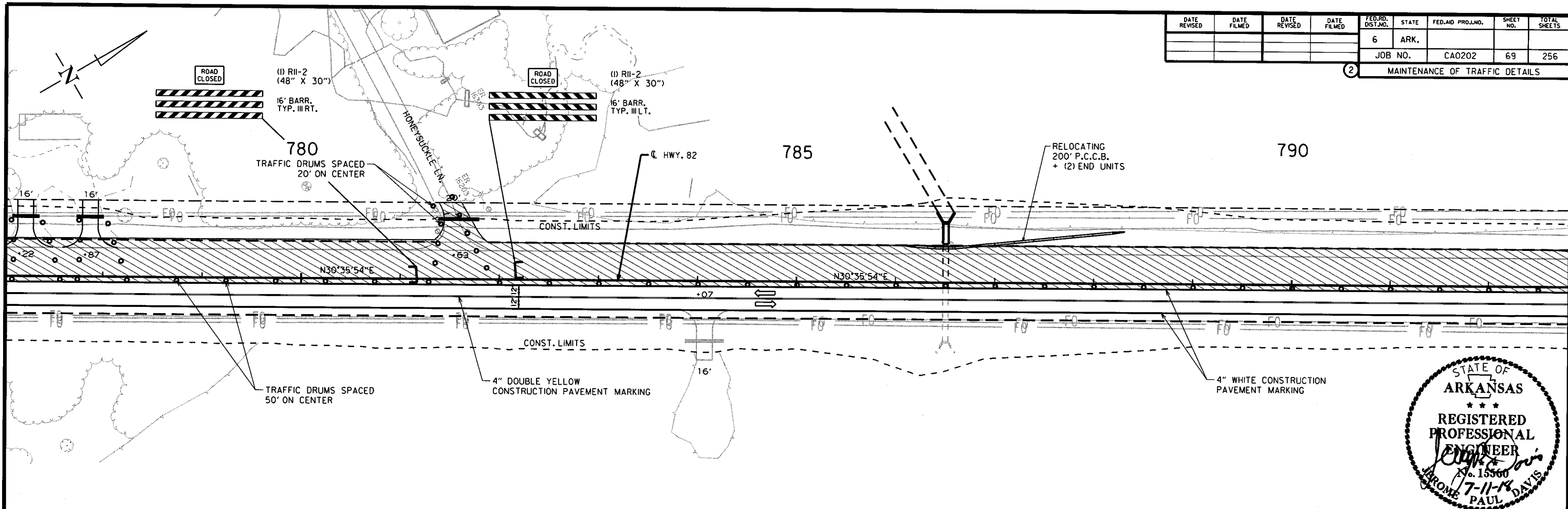
2 MAINTENANCE OF TRAFFIC DETAILS



STAGE 2 LT. SIDE  
 MAINTENANCE OF TRAFFIC DETAILS

USER: f5513  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.M01.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100:1

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. CA0202		69	256	
2 MAINTENANCE OF TRAFFIC DETAILS								

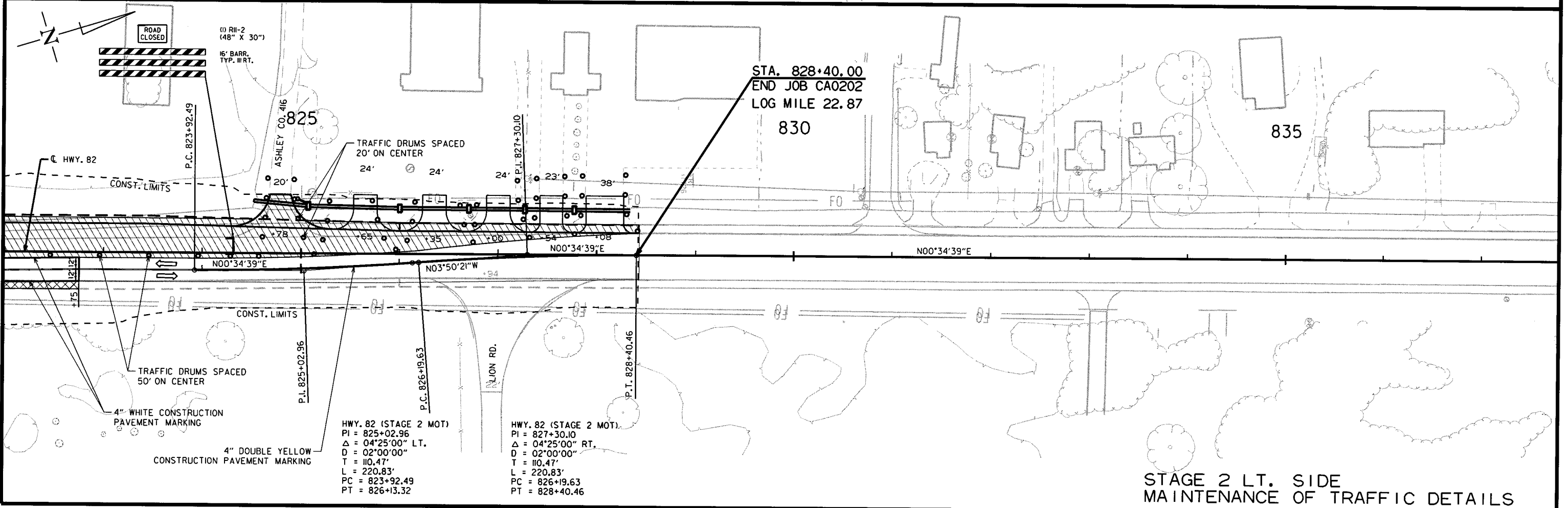
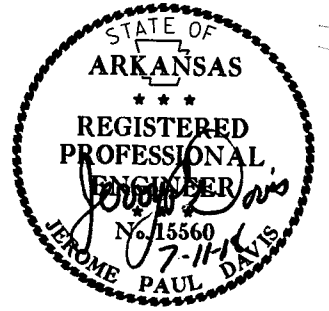
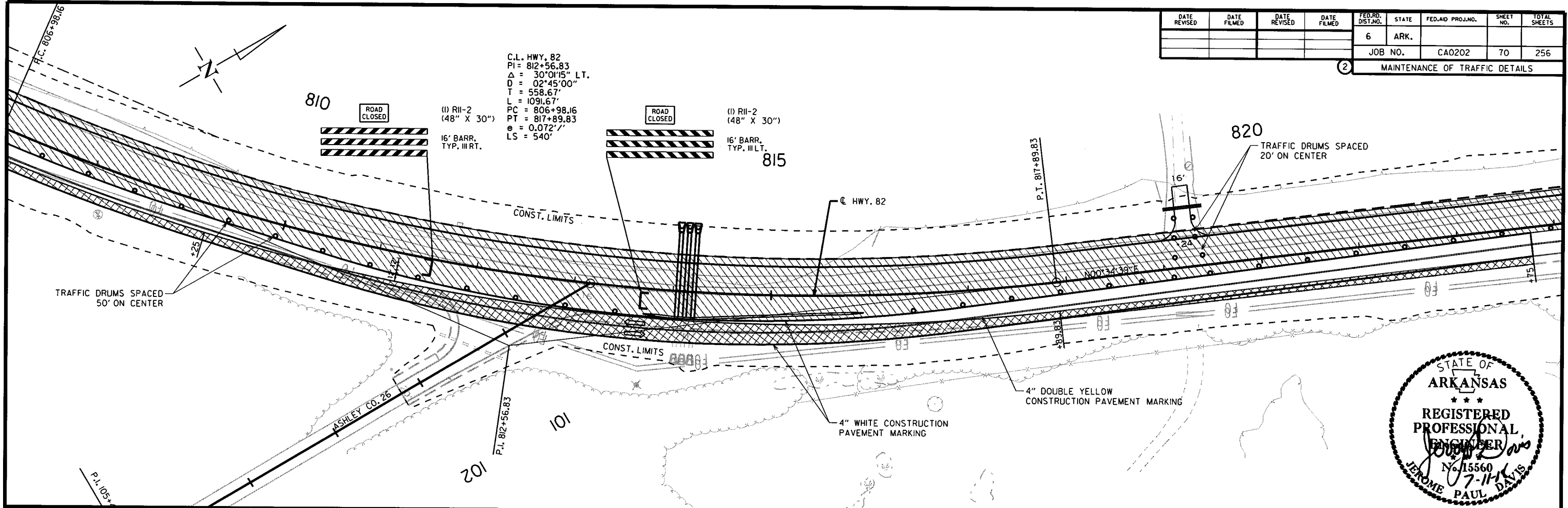


STAGE 2 LT. SIDE  
MAINTENANCE OF TRAFFIC DETAILS

USER: f5513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DN\Maint\_of\_Traffic\CA0202\_MOT\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 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.	CA0202	70	256	

2 MAINTENANCE OF TRAFFIC DETAILS



STAGE 2 LT. SIDE MAINTENANCE OF TRAFFIC DETAILS

USER: f8513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Maint.of.Traffic\CA0202.MOT.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100%

THERMOPLASTIC PAVEMENT MARKINGS:

- 6" YELLOW SKIP LINE = 13990 LIN. FT.
- 6" YELLOW SOLID LINE = 55958 LIN. FT.
- 6" WHITE SKIP LINE = 14632 LIN. FT.
- 6" WHITE SOLID LINE = 61383 LIN. FT.
- 6" DOUBLE YELLOW SOLID LINE = 3259 LIN. FT.
- 8" WHITE DOTTED LINE = 100 LIN. FT.
- 8" WHITE SOLID LINE = 2582 LIN. FT.
- 12" WHITE HASH = 267 LIN. FT.

REFLECTORIZED PAINT PAVEMENT MARKINGS:

- 10" YELLOW SOLID LINE ON ISLANDS = 228 LIN. FT.
- 10" WHITE SOLID LINE ON ISLANDS = 863 LIN. FT.
- ARROWS = 8 EACH
- WORDS = 3 EACH

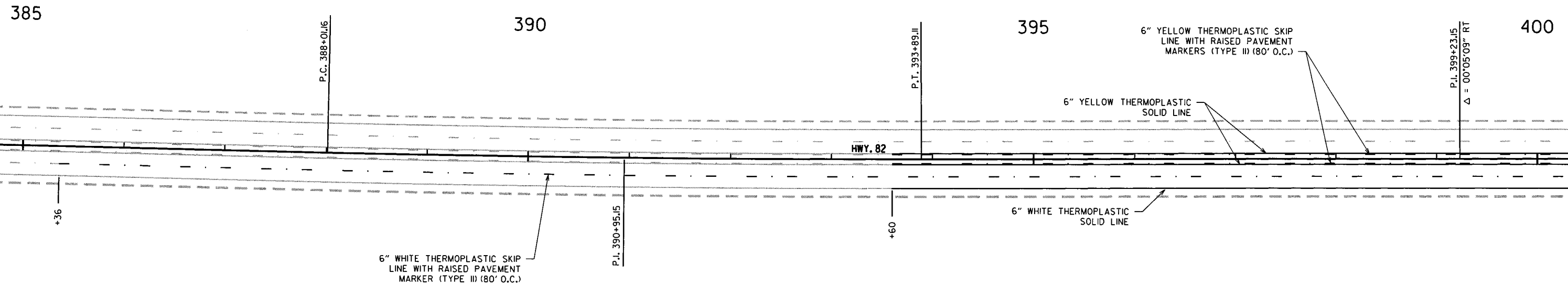
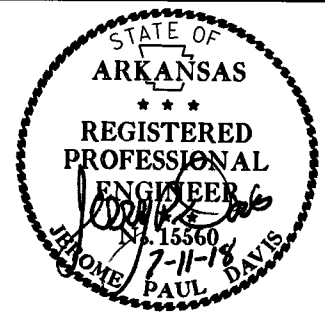
RAISED PAVEMENT MARKERS (80' O.C.):

- TYPE II (YELLOW/YELLOW) = 774 EACH
- TYPE II (WHITE/RED) = 735 EACH

NOTE:  
ALL CONFLICTING EXISTING PAVEMENT MARKINGS ARE TO BE REMOVED.

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.	CA0202	71	256	

2 PERMANENT PAVEMENT MARKING DETAILS

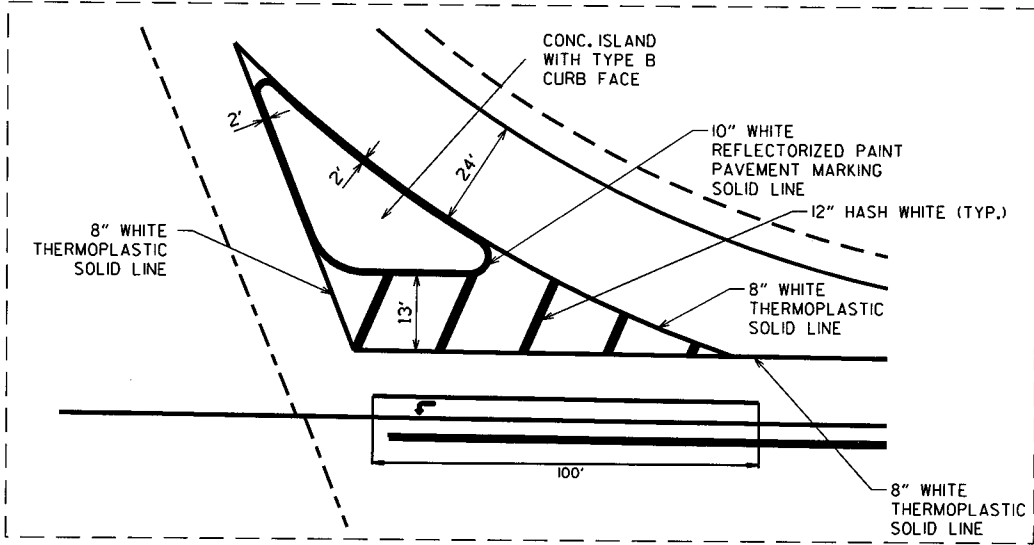


USER: f6513  
 DESIGN FILE: G:\4109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_PM\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:26 SCALE: 100H

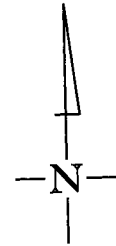
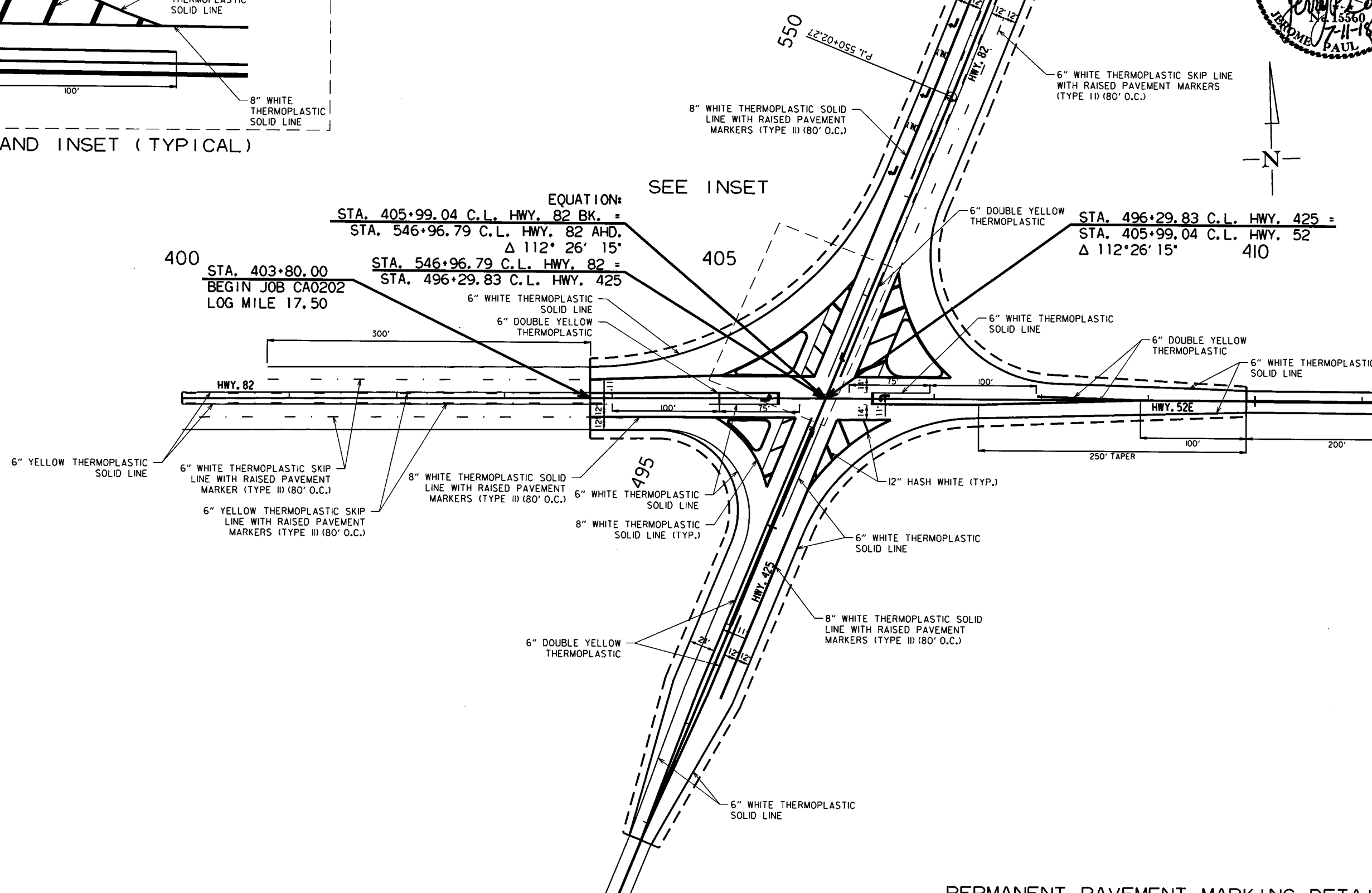
PERMANENT PAVEMENT MARKING DETAILS

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.	CA0202	72	256	

PERMANENT PAVEMENT MARKING DETAILS



CONCRETE ISLAND INSET (TYPICAL)



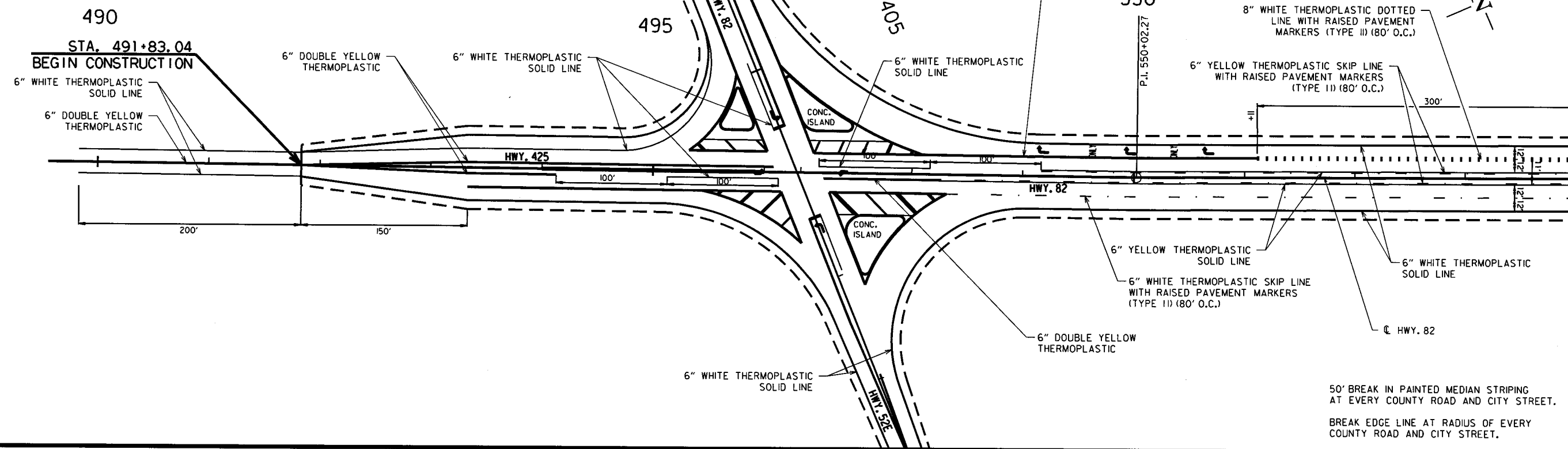
PERMANENT PAVEMENT MARKING DETAILS

USER: f6513  
 DESIGN FILE: G:\H09300\_Hwy\_82\TRANSP\DGN\Maint\_of\_Traffic\CA0202\_PM\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:26 SCALE: 100%

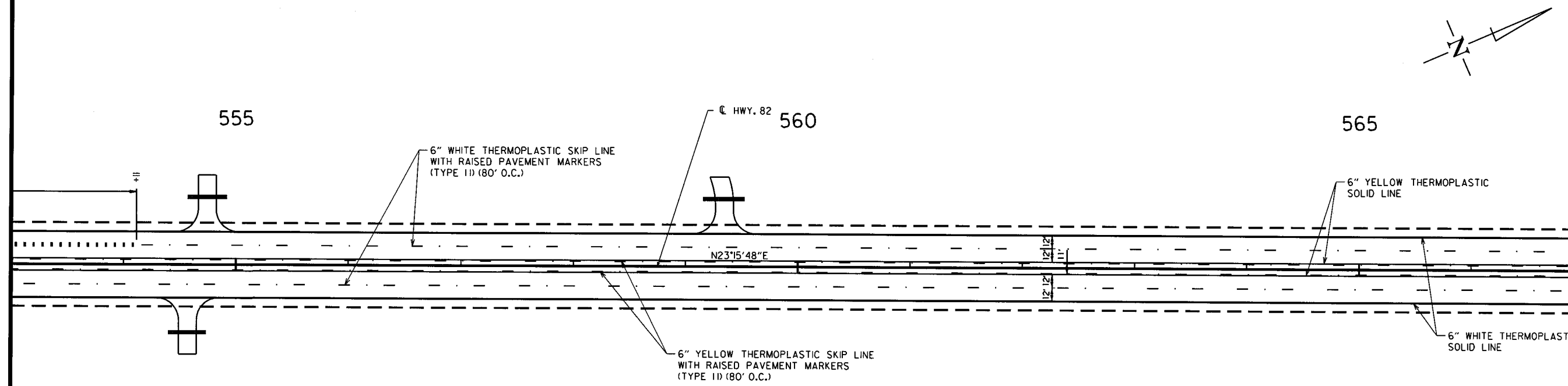


STA. 403+80.00  
 BEGIN JOB CA0202  
 LOG MILE 17.50

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.	CA0202	73 256
② PERMANENT PAVEMENT MARKING DETAILS								



50' BREAK IN PAINTED MEDIAN STRIPING  
 AT EVERY COUNTY ROAD AND CITY STREET.  
 BREAK EDGE LINE AT RADIUS OF EVERY  
 COUNTY ROAD AND CITY STREET.



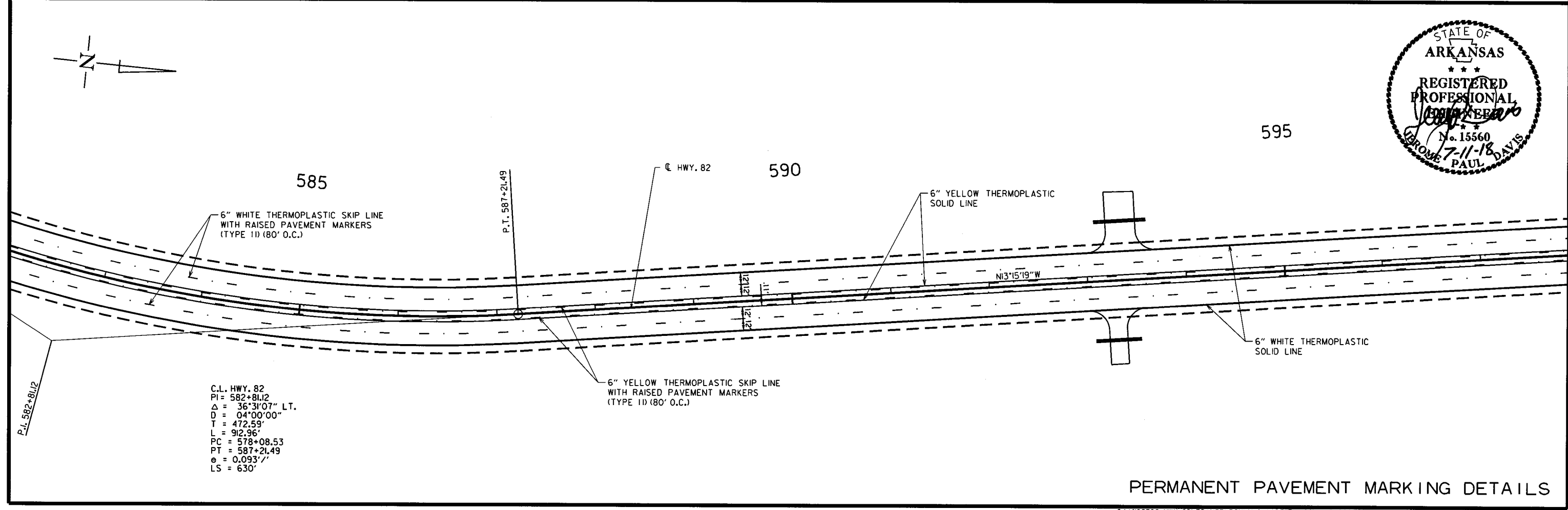
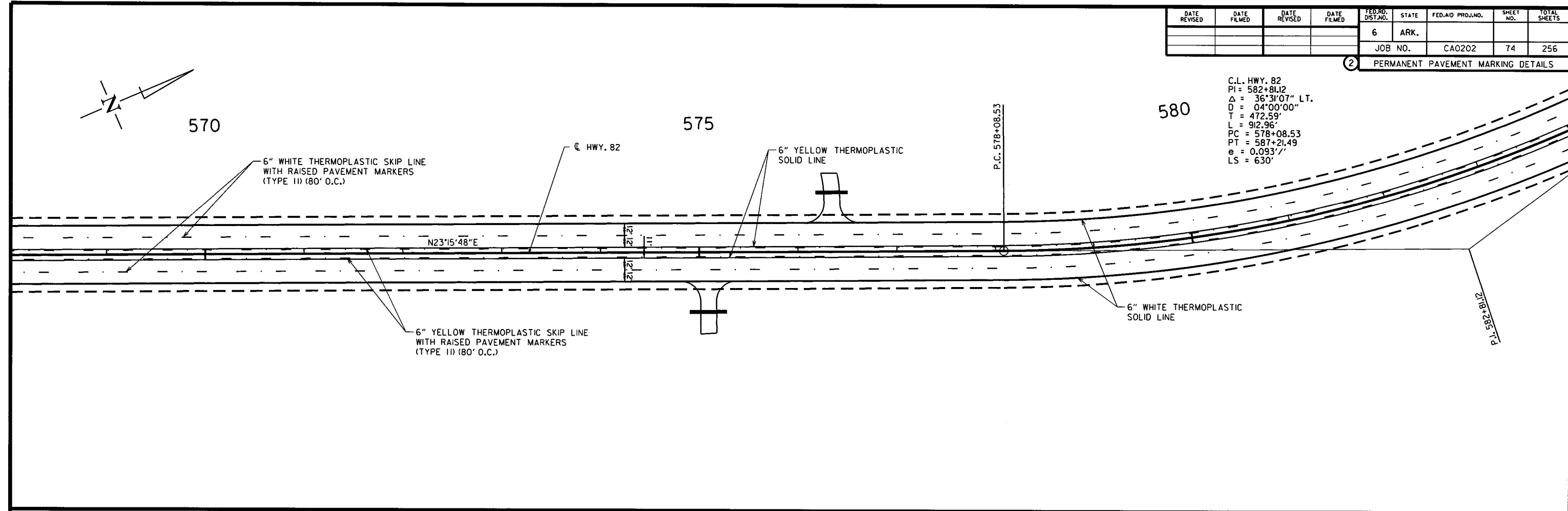
PERMANENT PAVEMENT MARKING DETAILS

USER: f8513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\OGN\Maint\_of\_Traffic\CA0202.PM\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:26 SCALE: 100:1

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.	CA0202	74	256	

② PERMANENT PAVEMENT MARKING DETAILS

C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta$  = 36°31'07" LT.  
 D = 04°00'00"  
 T = 472.59'  
 L = 912.96'  
 PC = 578+08.53  
 PT = 587+21.49  
 e = 0.0933'  
 LS = 630'



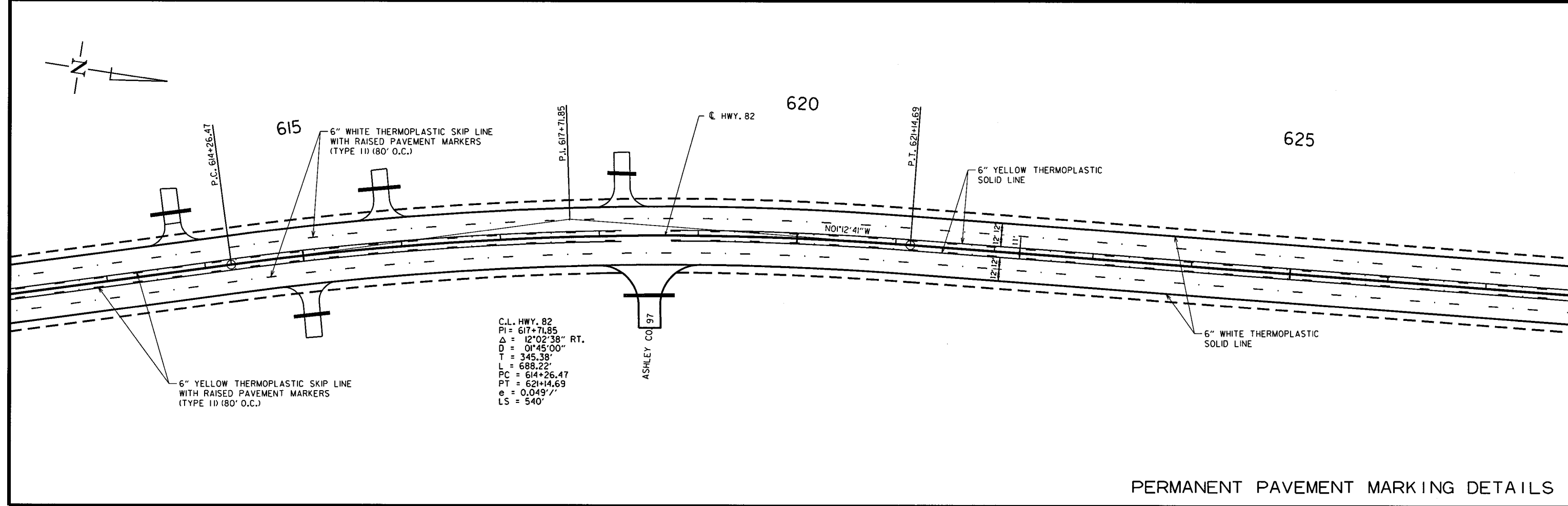
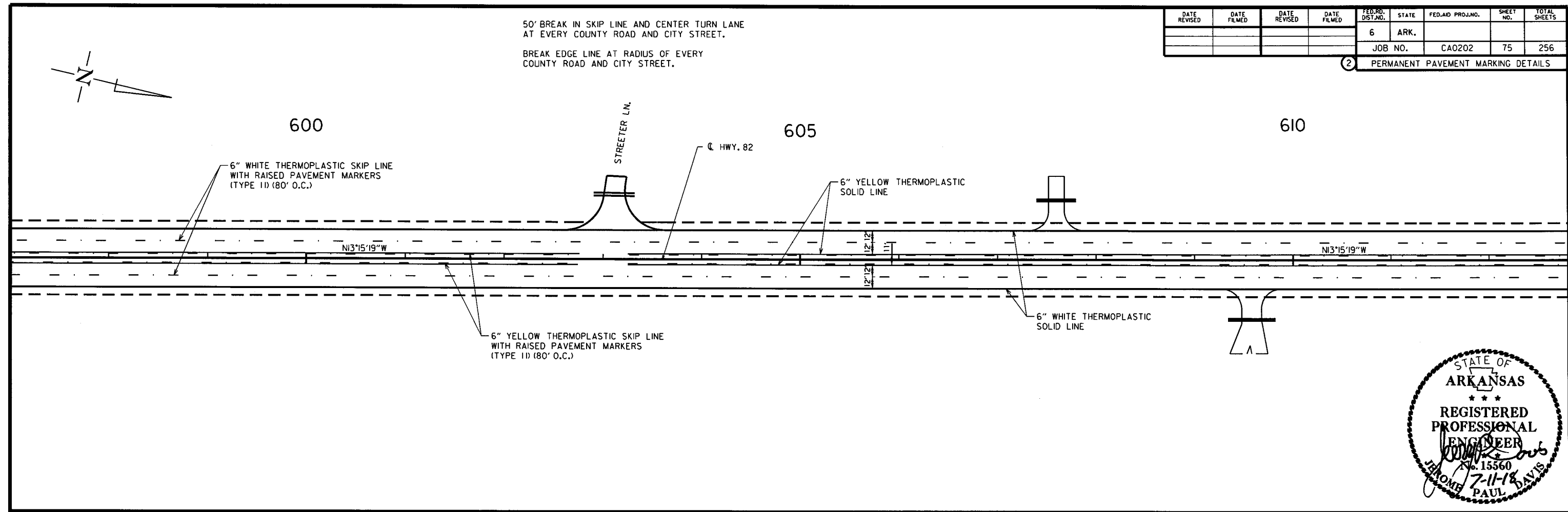
USER: f5513  
 DESIGN FILE: G:\1409300.HWY\_82\TRANSP\DGN\Maint\_of\_Traffic\CA0202.PM.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100h

PERMANENT PAVEMENT MARKING 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.	CA0202	75	256	

50' BREAK IN SKIP LINE AND CENTER TURN LANE AT EVERY COUNTY ROAD AND CITY STREET.  
 BREAK EDGE LINE AT RADIUS OF EVERY COUNTY ROAD AND CITY STREET.

2 PERMANENT PAVEMENT MARKING DETAILS



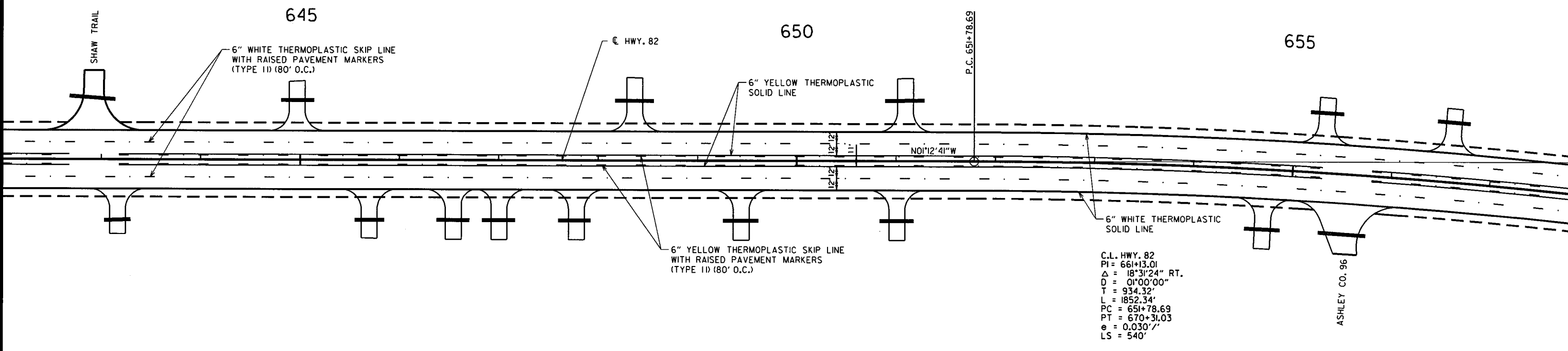
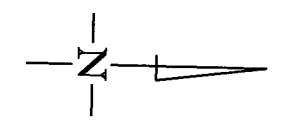
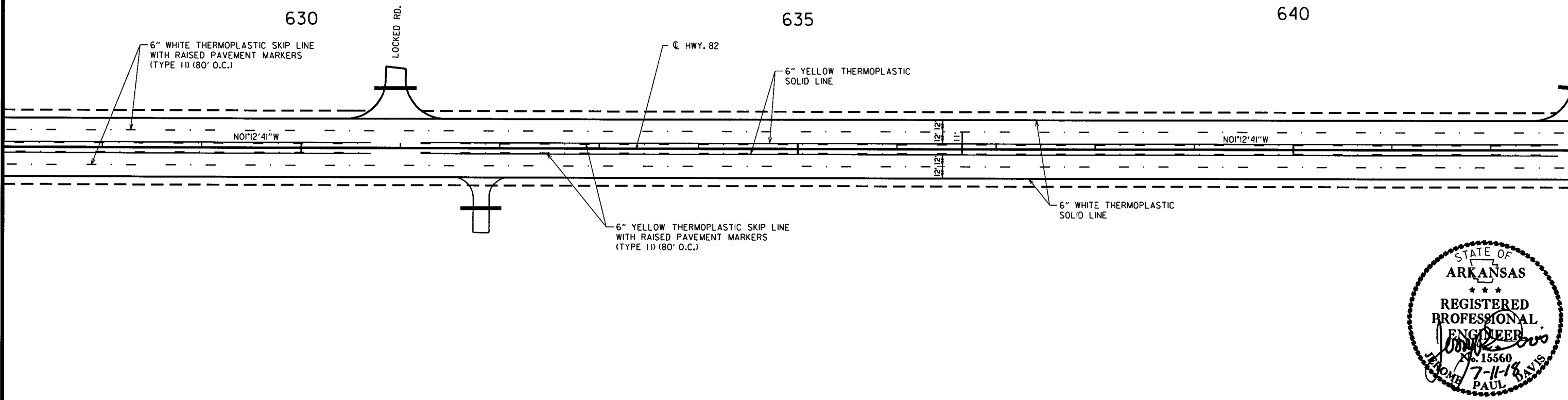
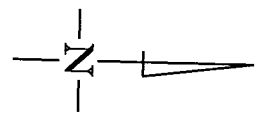
C.L. HWY. 82  
 PI = 617+71.85  
 $\Delta = 12^{\circ}02'38''$  RT.  
 D =  $01^{\circ}45'00''$   
 T = 345.38'  
 L = 688.22'  
 PC = 614+26.47  
 PT = 621+14.69  
 e = 0.049' /'  
 LS = 540'

PERMANENT PAVEMENT MARKING DETAILS

USER: f5513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.PM\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26 SCALE: 100H

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.	CA0202	76	256	

2 PERMANENT PAVEMENT MARKING DETAILS



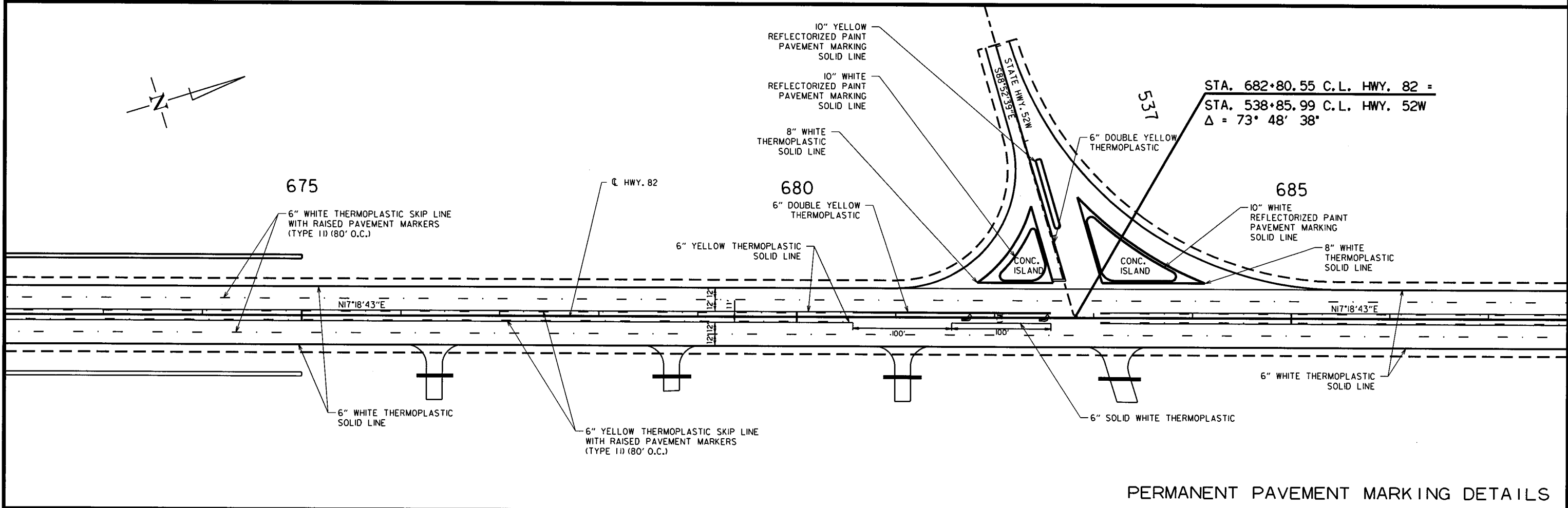
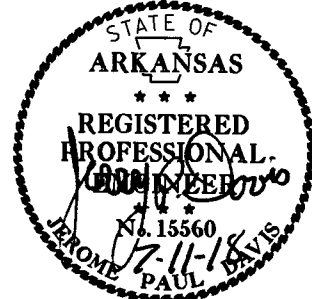
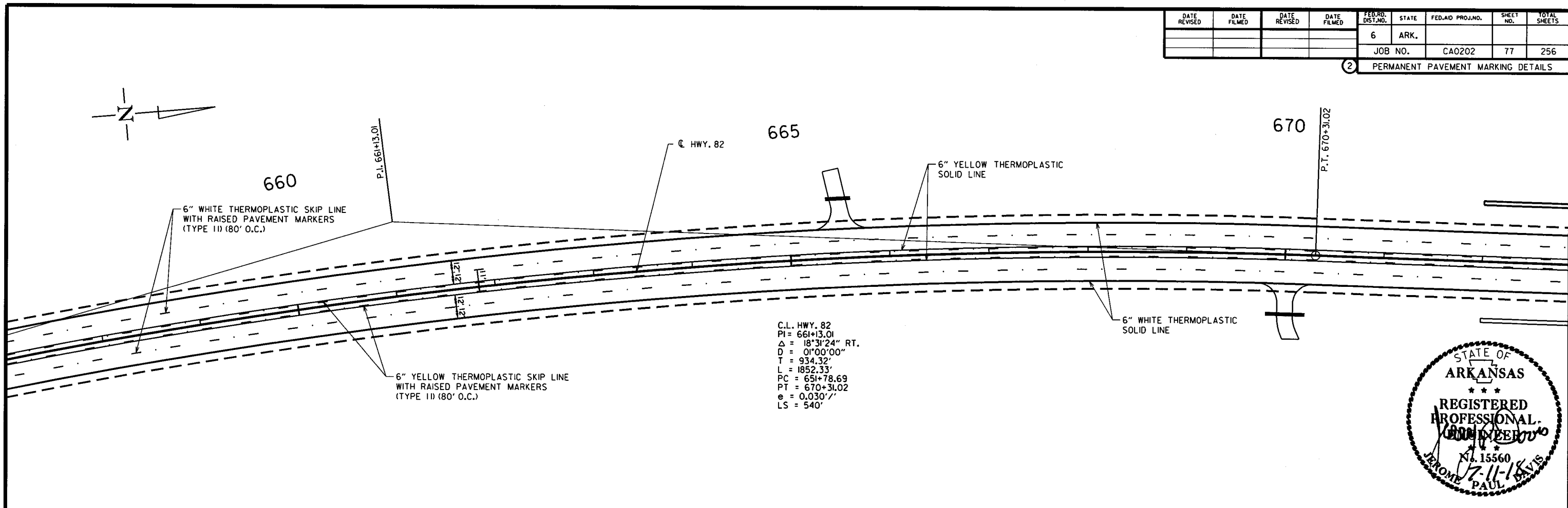
C.L. HWY. 82  
 PI = 661+13.01  
 $\Delta$  = 18°31'24" RT.  
 D = 01°00'00"  
 T = 934.32'  
 L = 1852.34'  
 PC = 651+78.69  
 PT = 670+31.03  
 $e$  = 0.030' /"  
 LS = 540'

PERMANENT PAVEMENT MARKING DETAILS

USER: f553  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_PM\_HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100ft

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.	CA0202	77	256	

2 PERMANENT PAVEMENT MARKING DETAILS

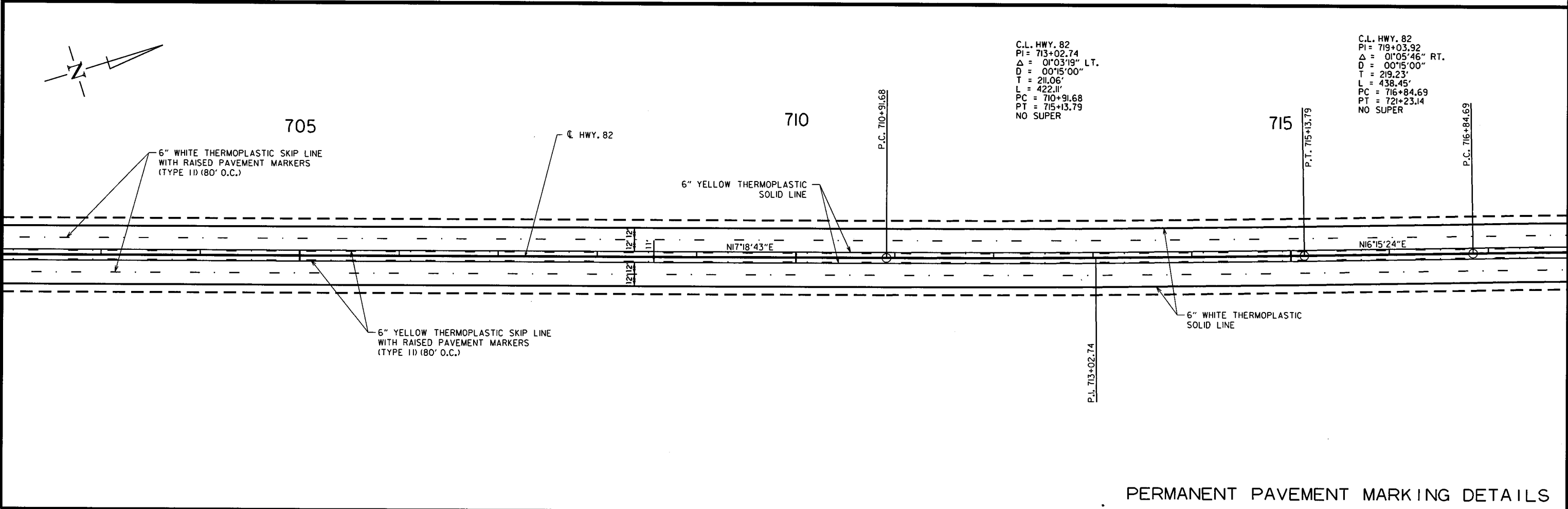
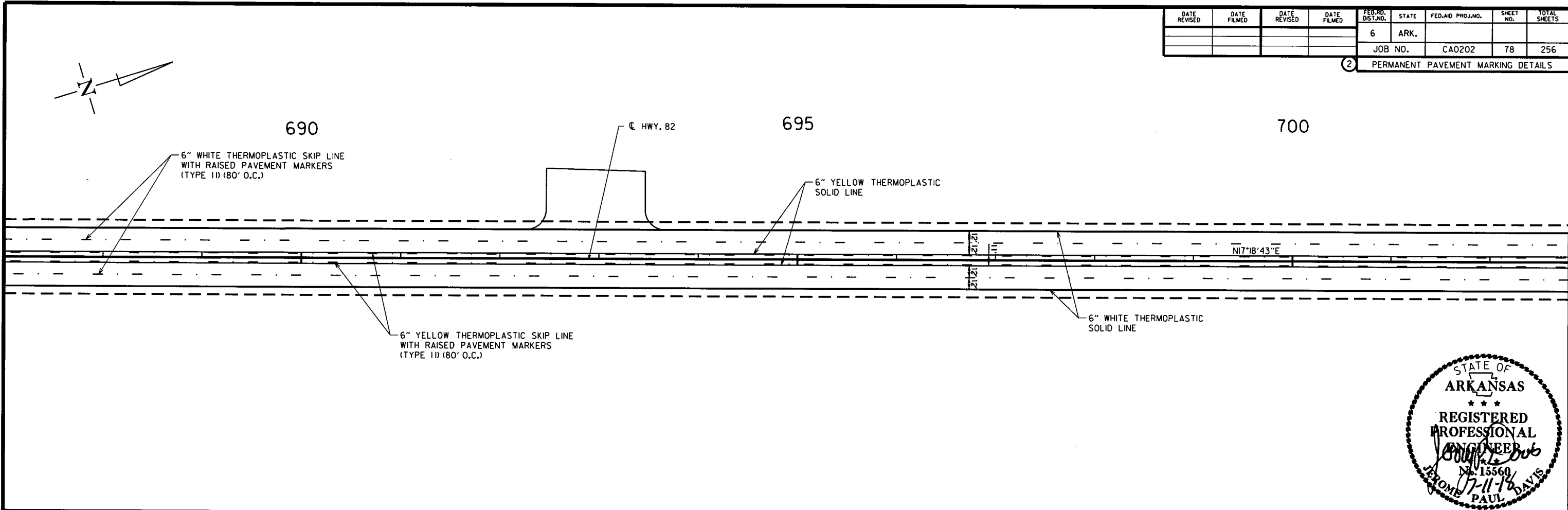


PERMANENT PAVEMENT MARKING DETAILS

USER: f65j3  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.PM.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100%

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						CA0202	78	256

② PERMANENT PAVEMENT MARKING DETAILS



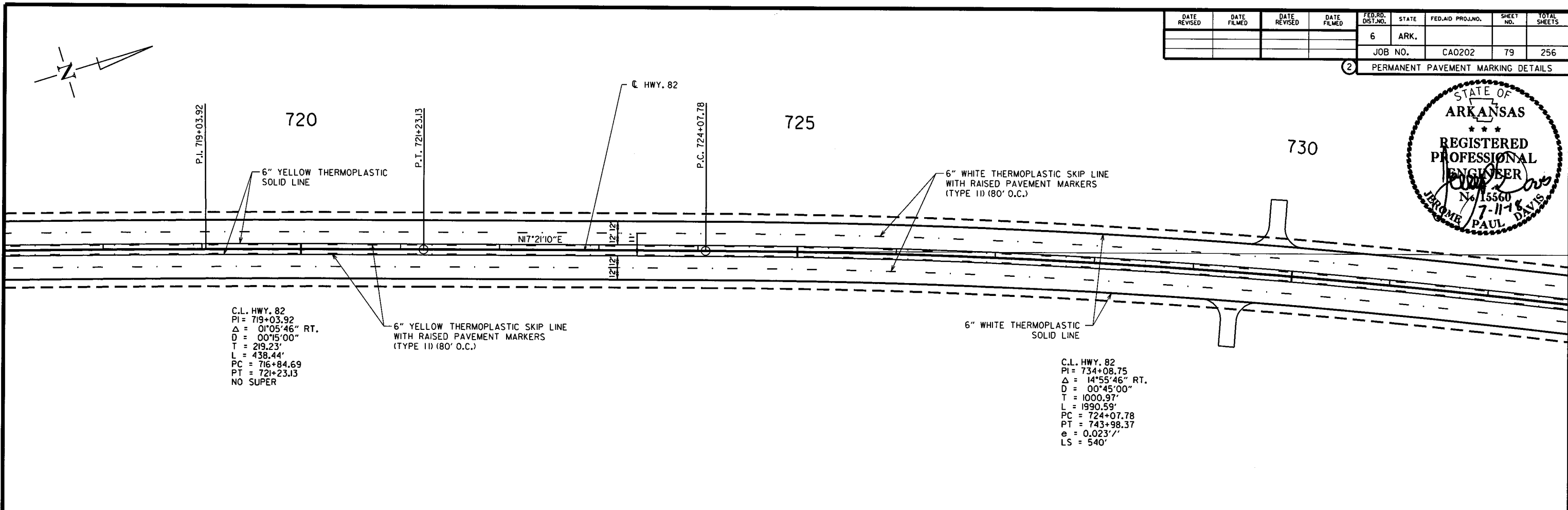
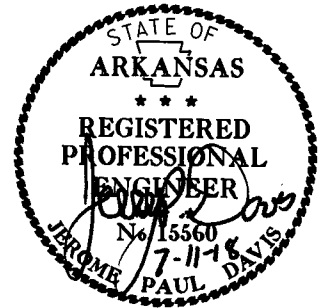
C.L. HWY. 82  
 PI = 713+02.74  
 $\Delta = 01^{\circ}03'19''$  LT.  
 D = 00'15'00"  
 T = 211.06'  
 L = 422.11'  
 PC = 710+91.68  
 PT = 715+13.79  
 NO SUPER

C.L. HWY. 82  
 PI = 719+03.92  
 $\Delta = 01^{\circ}05'46''$  RT.  
 D = 00'15'00"  
 T = 219.23'  
 L = 438.45'  
 PC = 716+84.69  
 PT = 721+23.14  
 NO SUPER

PERMANENT PAVEMENT MARKING DETAILS

USER: f65j3  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.PM.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100h

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.	CA0202	79	256	
② PERMANENT PAVEMENT MARKING DETAILS								

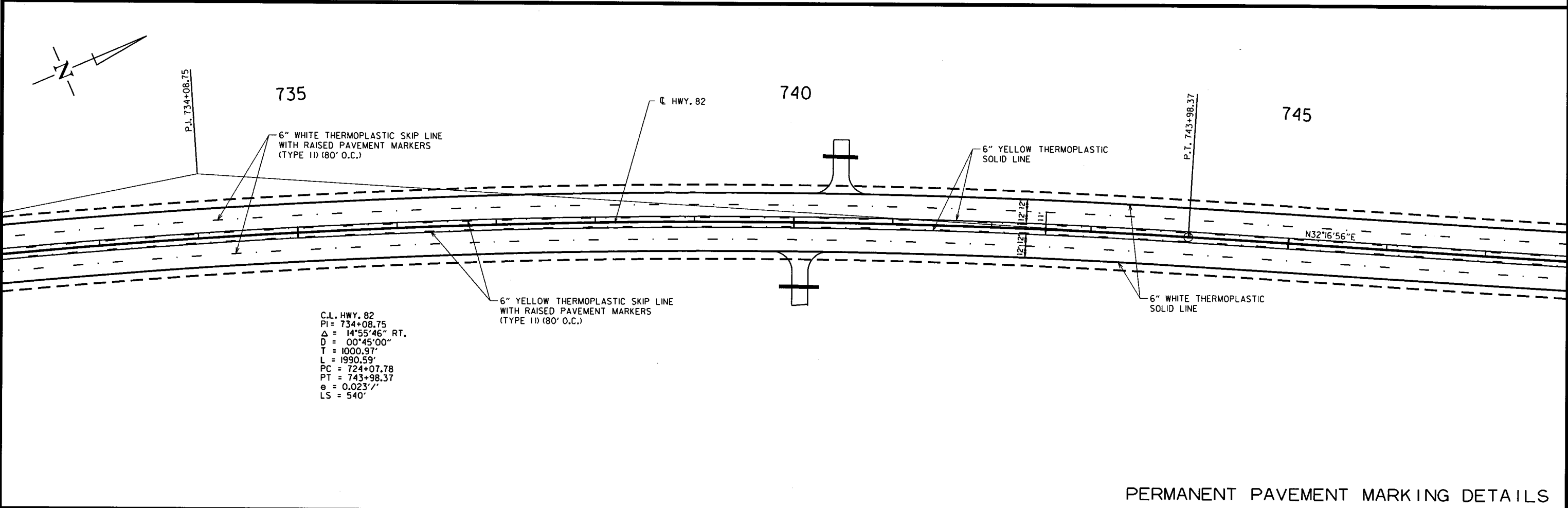


C.L. HWY. 82  
 PI = 719+03.92  
 $\Delta = 01^{\circ}05'46''$  RT.  
 D = 00°45'00"  
 T = 219.23'  
 L = 438.44'  
 PC = 716+84.69  
 PT = 721+23.13  
 NO SUPER

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE II) (80' O.C.)

6" WHITE THERMOPLASTIC SOLID LINE

C.L. HWY. 82  
 PI = 734+08.75  
 $\Delta = 14^{\circ}55'46''$  RT.  
 D = 00°45'00"  
 T = 1000.97'  
 L = 1990.59'  
 PC = 724+07.78  
 PT = 743+98.37  
 e = 0.023'/'  
 LS = 540'



C.L. HWY. 82  
 PI = 734+08.75  
 $\Delta = 14^{\circ}55'46''$  RT.  
 D = 00°45'00"  
 T = 1000.97'  
 L = 1990.59'  
 PC = 724+07.78  
 PT = 743+98.37  
 e = 0.023'/'  
 LS = 540'

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE II) (80' O.C.)

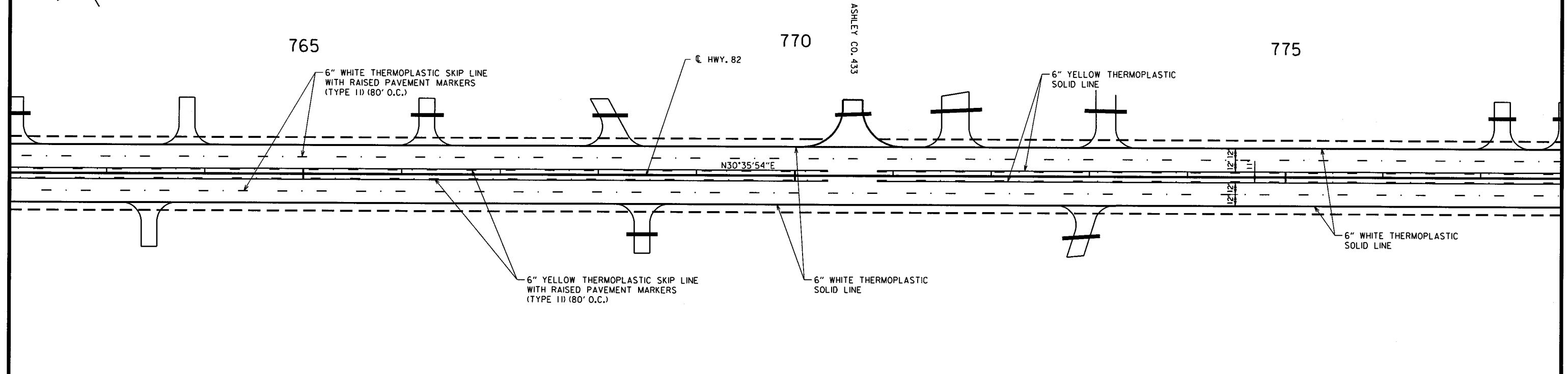
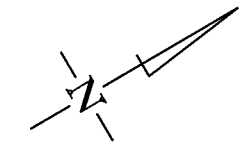
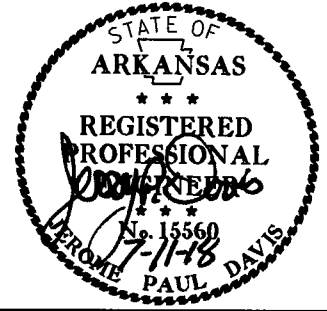
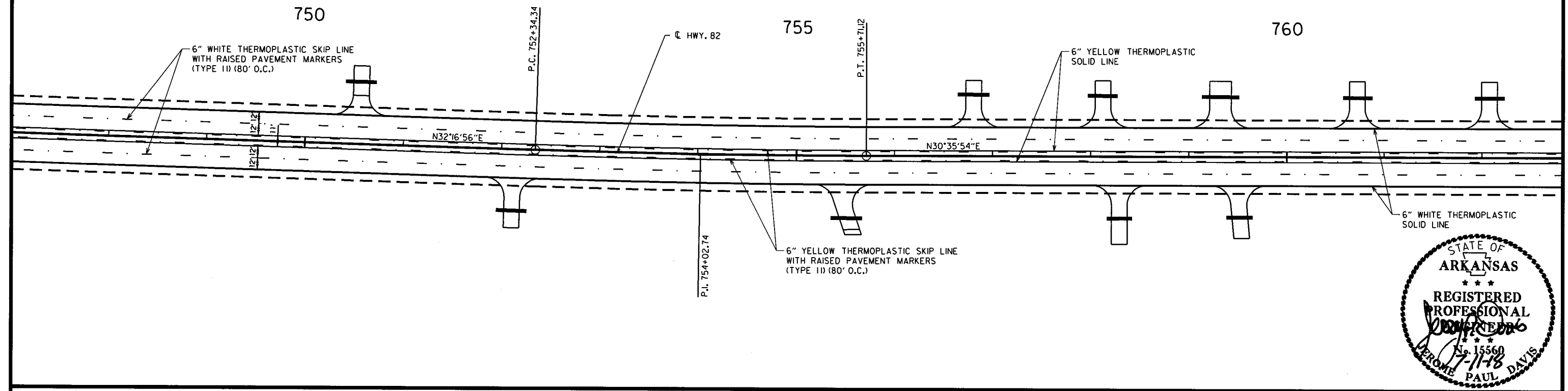
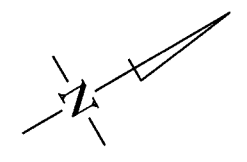
6" WHITE THERMOPLASTIC SOLID LINE

PERMANENT PAVEMENT MARKING 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.	CA0202	80	256	

2 PERMANENT PAVEMENT MARKING DETAILS

C.L. HWY. 82  
 PI = 754+02.74  
 $\Delta = 01^{\circ}41'02''$  RT.  
 $D = 00^{\circ}30'00''$   
 $T = 168.40'$   
 $L = 336.78'$   
 $PC = 752+34.34$   
 $PT = 755+71.12$   
 NO SUPER



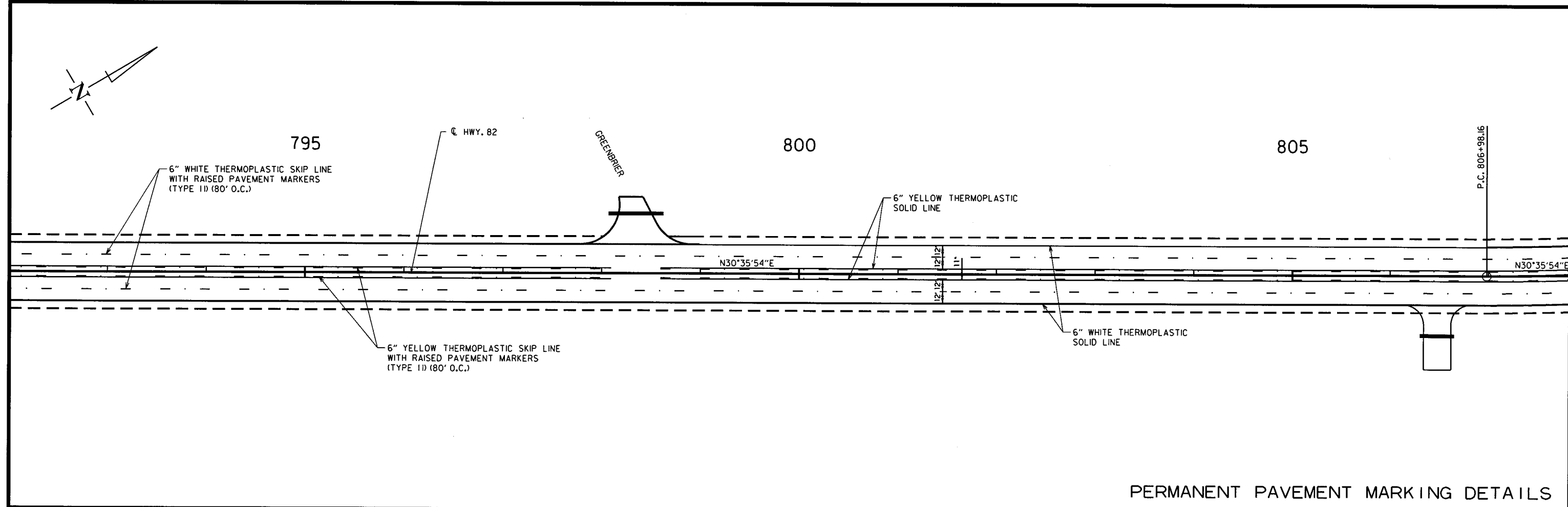
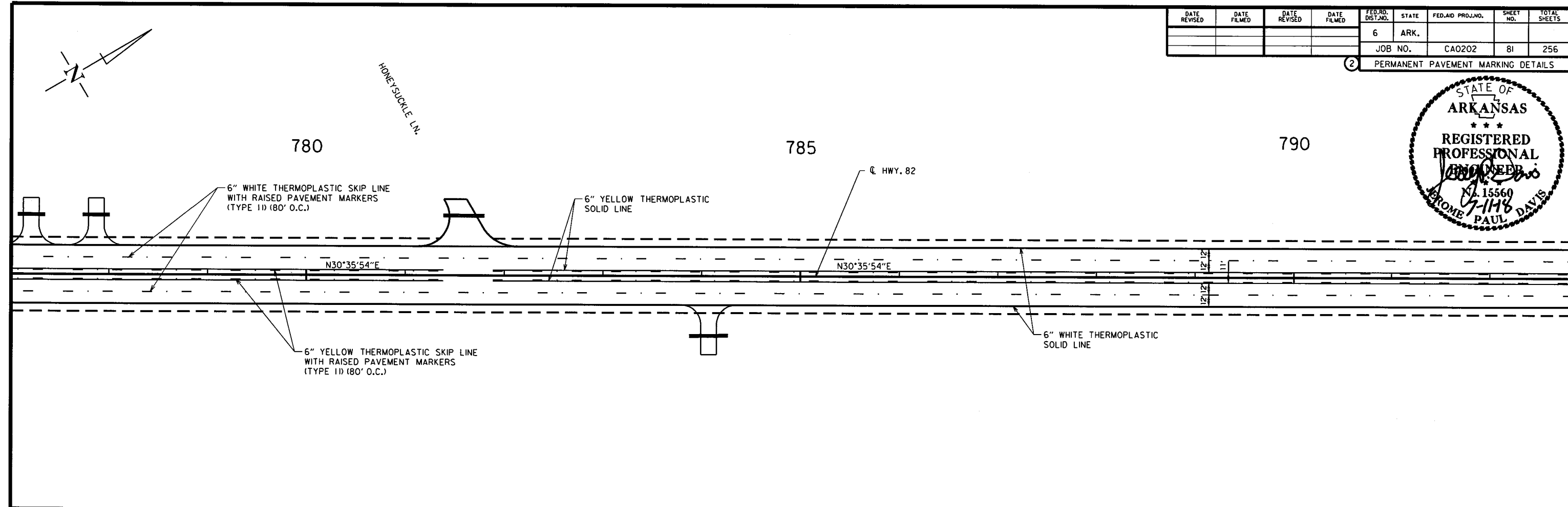
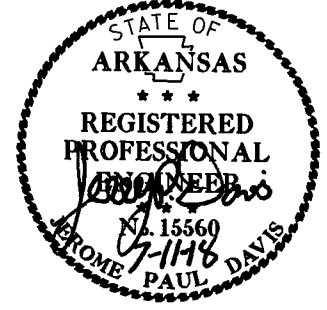
PERMANENT PAVEMENT MARKING DETAILS

USER: f8513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202.PM.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26 SCALE: 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.	CA0202	81	256	

2 PERMANENT PAVEMENT MARKING DETAILS



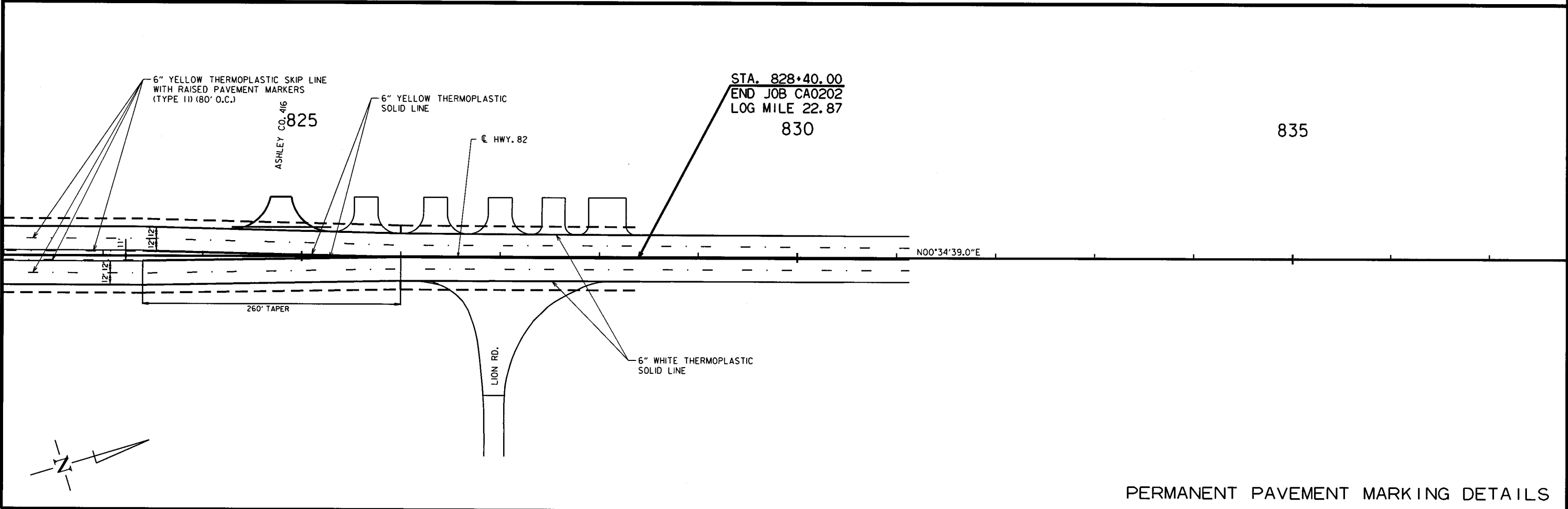
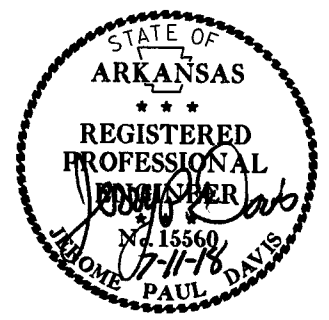
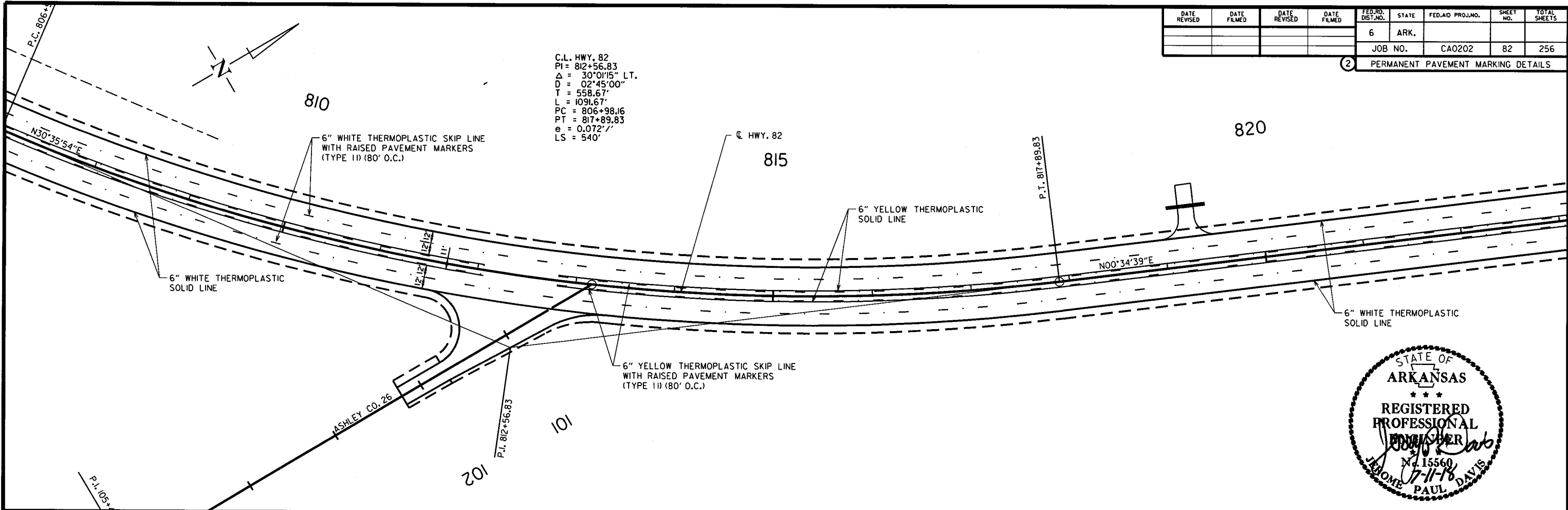
PERMANENT PAVEMENT MARKING DETAILS

USER: fsb3  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Maint.of.Traffic\CA0202.PM.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 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.	CA0202	82	256	

PERMANENT PAVEMENT MARKING DETAILS

C.L. HWY. 82  
 PI = 812+56.83  
 $\Delta = 30^{\circ}01'15''$  LT.  
 $D = 02^{\circ}45'00''$   
 $T = 558.67'$   
 $L = 1091.67'$   
 $PC = 806+98.16$   
 $PT = 817+89.83$   
 $e = 0.072'/'$   
 $LS = 540'$

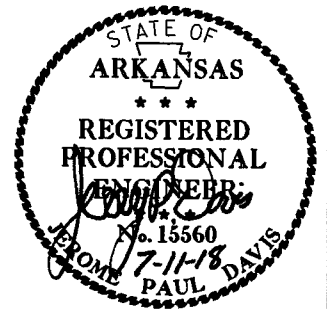


PERMANENT PAVEMENT MARKING DETAILS

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Maint\_of\_Traffic\CA0202\_PM\_Hwy\_82.dgn  
 PLOTTED: 7/10/2018 10:26  
 SCALE: 100h

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.	CA0202	83	256	

2 QUANTITIES



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	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE
						NO.	SQ. FT.			RIGHT	LEFT			
W20-1	ROAD WORK 1500 FT.	48"x48"	5	5	5	5	80.0							
W20-1	ROAD WORK 1000 FT.	48"x48"	5	5	5	5	80.0							
W20-1	ROAD WORK 500 FT.	48"x48"	5	5	5	5	80.0							
W20-1	ROAD WORK AHEAD	48"x48"	11	11	11	11	176.0							
G20-2	END ROAD WORK	48"x24"	16	16	16	16	128.0							
G20-1	ROAD WORK NEXT XX MILES	60"x24"	3	3	3	3	30.0							
R11-2	ROAD CLOSED	48"x30"		19	19	19	190.0							
W1-4AR	REVERSE CURVE RT.	48"x48"		2	2	2	32.0							
W1-4AL	REVERSE CURVE LT.	48"x48"		2	2	2	32.0							
R4-1	DO NOT PASS	24"x30"	20	20	20	20	100.0							
W21-5A	RIGHT SHOULDER CLOSED	48"x48"	10	10	10	10	160.0							
W8-1	BUMP	30"x30"	4	4	4	4	25.0							
W8-9A	SHOULDER DROP OFF	36"x36"	10	10	10	10	90.0							
SPECIAL	CONSTRUCTION PROJECT INFORMATION SIGN	96"x48"	5	5	5	5	160.0							
SPECIAL	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE		5	5	5	5								5
	VERTICAL PANELS		173		173			173						
	TRAFFIC DRUMS		544	919	919				919					
	TYPE III BARRICADE - RT. (16')			9	9					144				
	TYPE III BARRICADE - LT. (16')			8	8						128			
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		2540		2540						2540			
	RELOCATING PRECAST CONCRETE BARRIER			2140	2140							2140		
<b>TOTALS:</b>							<b>1363.0</b>	<b>173</b>	<b>919</b>	<b>144</b>	<b>128</b>	<b>2540</b>	<b>2140</b>	<b>5</b>

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

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.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	END OF JOB	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING						REFLECTORIZED PAINT PAVEMENT MARKING		
							TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	6"		8" WHITE	12" WHITE	WORDS	ARROWS	10"		
									WHITE	YELLOW					WHITE	YELLOW	
CONSTRUCTION PAVEMENT MARKINGS	86805	112935				199740											
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		2540		2540													
REMOVAL OF PERMANENT PAVEMENT MARKINGS	3200	25960	8300		37460												
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)			735				735										
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)			774					774									
THERMOPLASTIC PAVEMENT MARKING WHITE (6")			76015						76015								
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")			73207							73207							
THERMOPLASTIC PAVEMENT MARKING WHITE (8")			2682								2682						
THERMOPLASTIC PAVEMENT MARKING WHITE (12")			267									267					
THERMOPLASTIC PAVEMENT MARKING WORDS			3										3				
THERMOPLASTIC PAVEMENT MARKING ARROWS			8											8			
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")			863												863		
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")			228													228	
<b>TOTALS:</b>				<b>2540</b>	<b>37460</b>	<b>199740</b>	<b>735</b>	<b>774</b>	<b>76015</b>	<b>73207</b>	<b>2682</b>	<b>267</b>	<b>3</b>	<b>8</b>	<b>863</b>	<b>228</b>	

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

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.	CA0202	85	256	

QUANTITIES

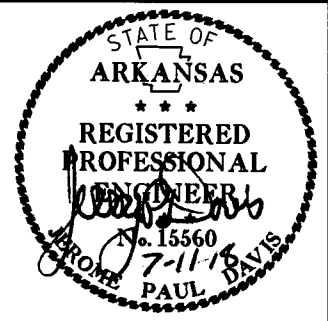
**EARTHWORK**

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT		* GEOTEXTILE FABRIC (TYPE 10) SQ. YD.	* SOIL STABILIZATION TON
				NORMAL CU. YD.	* SM-1		
ENTIRE PROJECT		STAGE 1-MAIN LANES	26908	74341			
ENTIRE PROJECT		STAGE 2-MAIN LANES	29210	60051			
ENTIRE PROJECT		APPROACHES	160	3777			
ENTIRE PROJECT		CHANNEL CHANGE	276				
		HWY. 425	268	2914			
		HWY. 52E	138	992			
		HWY. 82W	234	1577			
* ENTIRE PROJECT		TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	50000	50000	20000		3300
<b>TOTALS:</b>			<b>107194</b>	<b>143652</b>	<b>50000</b>	<b>20000</b>	<b>3300</b>

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

**MAILBOXES**

LOCATION	MAILBOXES	MAILBOX SUPPORTS (EACH)	
		(SINGLE)	(DOUBLE)
575+20 RT.	1	1	
602+95 LT.	1	1	
607+38 LT.	1	1	
609+83 RT.	1	1	
613+48 LT.	1	1	
615+22 RT.	1	1	
616+06 LT.	1	1	
643+89 LT.	1	1	
644+88 RT.	2		1
647+20 LT.	1	1	
647+27 RT.	1	1	
648+61 LT.	1	1	
649+65 RT.	1	1	
650+75 RT.	1	1	
650+91 LT.	1	1	
651+55 RT.	1	1	
651+71 RT.	1	1	
653+57 RT.	1	1	
656+38 RT.	1	1	
670+05 RT.	1	1	
678+56 RT.	2		1
681+16 RT.	1	1	
682+90 RT.	1	1	
740+37 RT.	2		1
755+22 RT.	1	1	
756+89 RT.	1	1	
758+05 RT.	1	1	
759+04 RT.	1	1	
759+66 RT.	1	1	
763+82 RT.	1	1	
763+90 RT.	2		1
764+26 LT.	1	1	
768+18 RT.	1	1	
771+62 RT.	1	1	
773+23 RT.	1	1	
777+18 RT.	1	1	
806+24 RT.	1	1	
<b>TOTALS:</b>	<b>41</b>	<b>33</b>	<b>4</b>



**CLEARING AND GRUBBING**

STATION	STATION	LOCATION	CLEARING	GRUBBING
491+83	496+30	HWY. 425	5	5
404+00	405+19	HWY. 82W	2	2
546+97	824+50	HWY. 82	278	278
406+79	409+89	HWY. 52E	4	4
<b>TOTALS:</b>			<b>289</b>	<b>289</b>

**FLOWABLE SELECT MATERIAL**

STATION	LOCATION	CU. YD.
406+95	HWY. 52 E.	13
<b>TOTAL:</b>		<b>13</b>

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

**SELECTED PIPE BEDDING**

LOCATION	SELECTED PIPE BEDDING
	CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	110
<b>TOTAL:</b>	<b>110</b>

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

**CULVERT CLEAN OUT**

STATION	LOCATION	EACH
579+42	HWY. 82	1
627+38	HWY. 82	1
786+48	HWY. 82	1
<b>TOTAL:</b>		<b>3</b>

**EROSION CONTROL**

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL								
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
ENTIRE PROJECT		CLEARING AND GRUBBING	48.45	96.90	48.45	4941.9	48.45	115.56	115.56	2357.4	3564	414		2529			94
ENTIRE PROJECT		STAGE 1	32.50	65.00	32.50	3315.0	32.50	65.00	1326.0	1804	246		798	2614	2614	2786	
ENTIRE PROJECT		STAGE 2	29.00	58.00	29.00	2958.0	29.00	58.00	1183.2	1760	210	72	1673	2780	2780	2951	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			28.00	56.00	28.00	2856.0	28.00			352	45	18	250			35	
<b>TOTALS:</b>			<b>137.95</b>	<b>275.90</b>	<b>137.95</b>	<b>14070.9</b>	<b>137.95</b>	<b>238.56</b>	<b>238.56</b>	<b>4866.6</b>	<b>7480</b>	<b>915</b>	<b>90</b>	<b>5250</b>	<b>5394</b>	<b>5394</b>	<b>5866</b>

BASIS OF ESTIMATE:  
 LIME .....2 TONS / ACRE OF SEEDING  
 WATER .....102.0 M.G. / ACRE OF SEEDING  
 WATER .....20.4 M.G. / ACRE OF TEMPORARY SEEDING  
 SAND BAG DITCH CHECKS .....22 BAGS / LOCATION  
 ROCK DITCH CHECKS .....3 CU.YD./LOCATION  
 DROP INLET SILT FENCE .....18 LIN. FT./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.

QUANTITIES

USER: f85j3  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\Quantities\CA0202\_Quant\_03.dgn  
 PLOTTED: 7/10/2018 10:27













DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
08-23-18				6	ARK.			
				JOB NO.	CA0202	91	256	

2 SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITIES	UNIT
201	CLEARING	289	STATION
201	GRUBBING	289	STATION
202	REMOVAL AND DISPOSAL OF FENCE	3736	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	9	EACH
202	REMOVAL AND DISPOSAL OF POSTS	4	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT	167	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	1076	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	1345	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	19	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	70	EACH
202	REMOVAL AND DISPOSAL OF BOX CULVERTS	2	EACH
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLE AND FOUNDATION	3	EACH
202	REMOVAL AND DISPOSAL OF DECORATIVE LIGHT POLE	2	EACH
202	REMOVAL AND DISPOSAL OF ROCK COLUMNS	2	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	18	EACH
202	REMOVAL AND DISPOSAL OF PLANTERS	1	EACH
202	REMOVAL AND DISPOSAL OF POLE AND FOUNDATION	1	EACH
206	FLOWABLE SELECT MATERIAL	13	CU. YD.
208	FENCE REMOVED AND RECONSTRUCTED	358	LIN. FT.
208	GATES REMOVED AND RECONSTRUCTED	2	EACH
210	UNCLASSIFIED EXCAVATION	107194	CU. YD.
210	COMPACTED EMBANKMENT	143652	CU. YD.
SP & 210	SOIL STABILIZATION	3300	TON
302	SELECTED MATERIAL (CLASS SM-1)	50000	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	106509	TON
SS & 401	TACK COAT	41396	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	54464	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	2388	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	56622	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	3106	TON
412	COLD MILLING ASPHALT PAVEMENT	1944	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	140	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	140	TON
SS & 505	PORTLAND CEMENT CONCRETE DRIVEWAY	1058.64	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	1363	SQ. FT.
SP, SS, & 604	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	5	EACH
SS & 604	BARRICADES	272	LIN. FT.
SS & 604	TRAFFIC DRUMS	919	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	2540	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	2140	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	199740	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	2540	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	37460	LIN. FT.
SS & 604	VERTICAL PANELS	173	EACH
SS & 605	CONCRETE DITCH PAVING (TYPE B)	700	SQ. YD.
SP	CULVERT CLEAN OUT	3	EACH
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	76	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	148	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	240	LIN. FT.
606	44" X 27" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	378	LIN. FT.
606	51" X 31" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	128	LIN. FT.
SS & 606	12" SIDE DRAIN	10	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	1462	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN	900	LIN. FT.
SP, SS, & 606	30" SIDE DRAIN	417	LIN. FT.
SS & 606	35" X 24" SIDE DRAIN	39	LIN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	44" X 27" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	6	EACH
606	51" X 31" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	2	EACH
606	SELECTED PIPE BEDDING	110	CU. YD.
609	DROP INLETS (TYPE RM)	5	EACH
609	YARD DRAINS	1	EACH
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	126	TON
619	WIRE FENCE (TYPE C)	1457	LIN. FT.
619	WIRE FENCE (TYPE D-1)	646	LIN. FT.
619	4' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	868	LIN. FT.
619	4' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	868	LIN. FT.

\* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITIES	UNIT
619	16' STEEL GATES (ALTERNATE NO. 1)	9	EACH
619	16' ALUMINUM GATES (ALTERNATE NO. 2)	9	EACH
620	LIME	276	TON
620	SEEDING	137.95	ACRE
SS & 620	MULCH COVER	376.51	ACRE
620	WATER	18947.0	M. GAL.
621	TEMPORARY SEEDING	238.56	ACRE
621	SILT FENCE	5250	LIN. FT.
621	SAND BAG DITCH CHECKS	7480	BAG
621	DROP INLET SILT FENCE	90	LIN. FT.
621	SEDIMENT BASIN	5394	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	5394	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	5866	CU. YD.
621	ROCK DITCH CHECKS	915	CU. YD.
623	SECOND SEEDING APPLICATION	137.95	ACRE
624	SOLID SODDING	754	SQ. YD.
625	GEOTEXTILE FABRIC (TYPE 10)	20000	SQ. YD.
SS & 632	CONCRETE ISLAND	917	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	41	EACH
637	MAILBOX SUPPORTS (SINGLE)	33	EACH
637	MAILBOX SUPPORTS (DOUBLE)	4	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	51213	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	863	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	228	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	76015	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	2682	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	267	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	73207	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	3	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	8	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	1509	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	372	CU. YD.
802	CLASS 5 CONCRETE-ROADWAY	822.61	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	106660	POUND
816	FILTER BLANKET	345	SQ. YD.
816	DUMPED RIPRAP	173	CU. YD.

\* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
8/23/2018	ADDED LIQUID ANTI-STRIPPING ADDITIVE SPECIAL PROVISION.	2,91





CA0202 CL - HIGHWAY 82W/52E

Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists survey points from 8200 to 8269.

CA0202 CL - HIGHWAY 82/425

Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists survey points from 8000 to 8026.

Metadata table with columns: DATE REVISED, DATE FILMED, DATE REVISION, DATE FILMED, FED.RD. DIST.NO., STATE, FED.AID PROJ.NO., SHEET NO., TOTAL SHEETS.

6 ARK. CA0202 93 256 SURVEY CONTROL DETAILS

CL M.O.T. STAGE 2

Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists points 8104-8109.

CL M.O.T. STAGE 2

Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists points 8110-8115.

CA0202 CL - HIGHWAY 52 WEST

Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists points 8063-8064.

CA0202 CL - STREETER LANE

Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists points 8100-8088.

CA0202 CL - CO. RD. 22

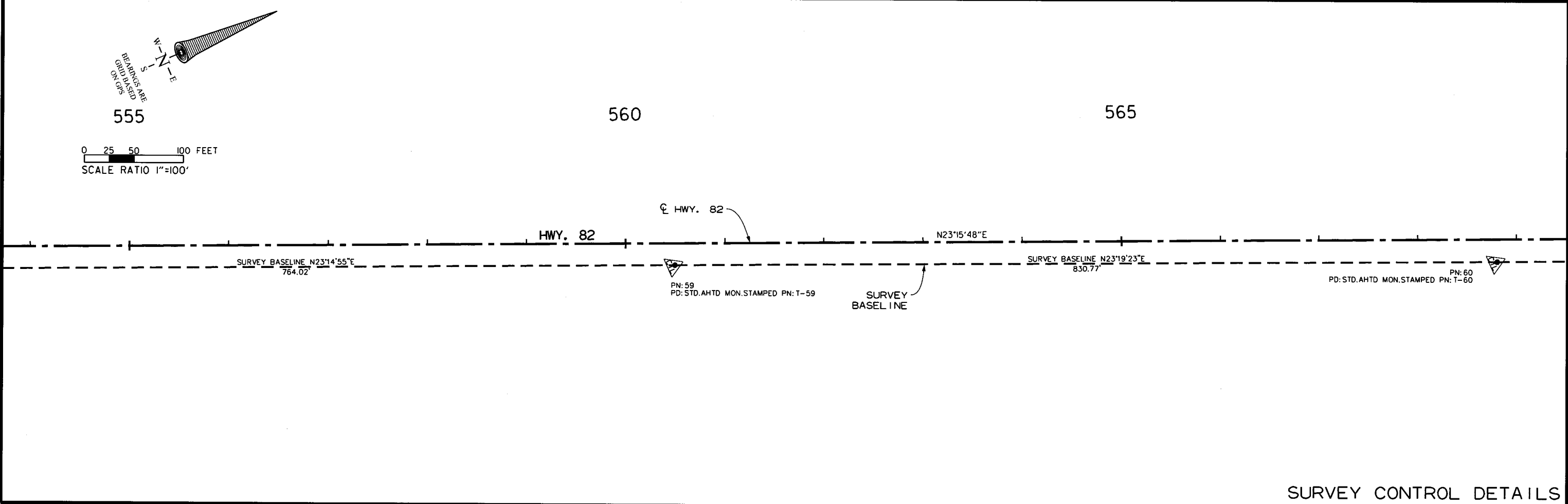
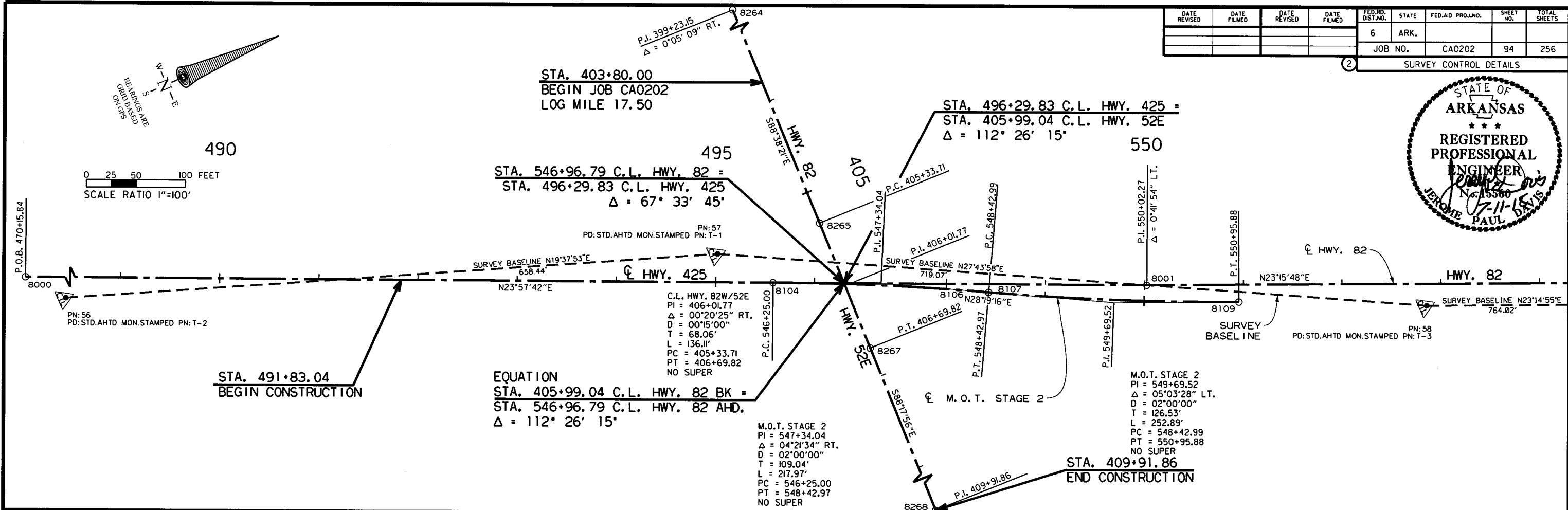
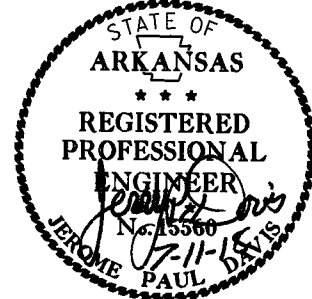
Table with 5 columns: Point No., Type, Station, Northing, Easting. Lists points 8047-8031.



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.	CA0202		94	256

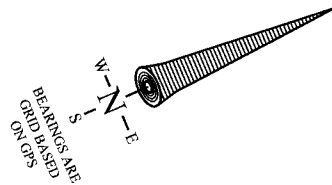
2 SURVEY CONTROL DETAILS



SURVEY CONTROL DETAILS

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\SURVEY.CHY\CA0202.SC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:31

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. CA0202	95	256
(2) SURVEY CONTROL DETAILS									



0 25 50 100 FEET  
SCALE RATIO 1"=100'

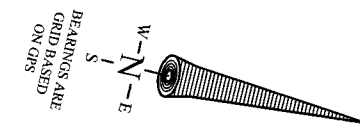
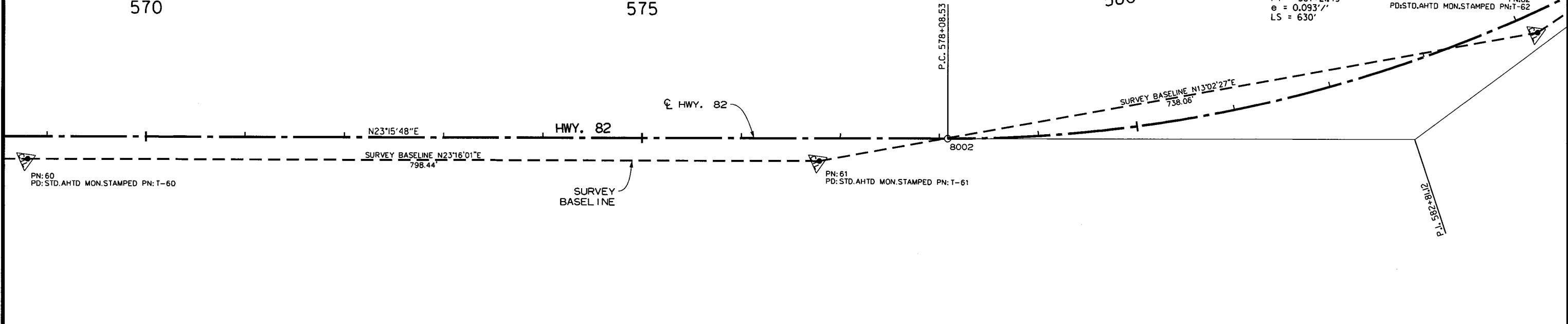
570

575

580

C.L. HWY. 82  
PI = 582+81.2  
 $\Delta = 36^{\circ}31'07''$  LT.  
D = 04'00'00"  
T = 472.59'  
L = 912.96'  
PC = 578+08.53  
PT = 587+21.49  
e = 0.0933'  
LS = 630'

PN:62  
PD:STD.AHTD MON.STAMPED PN:T-62

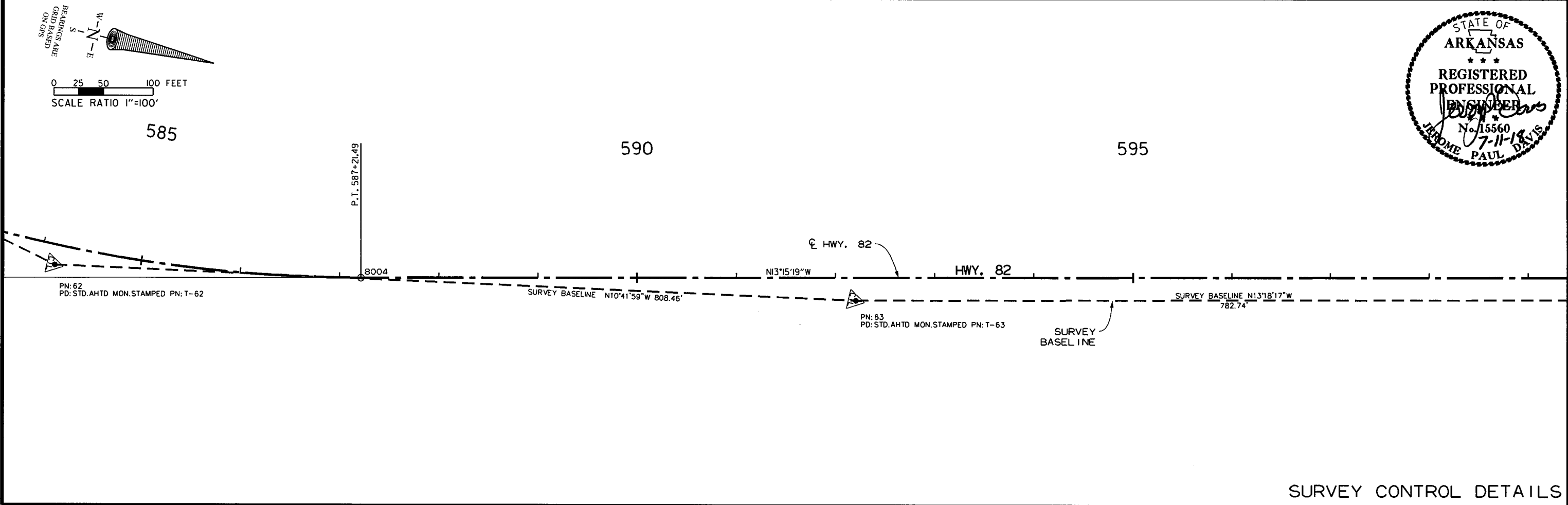
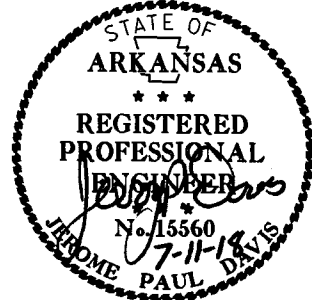


0 25 50 100 FEET  
SCALE RATIO 1"=100'

585

590

595

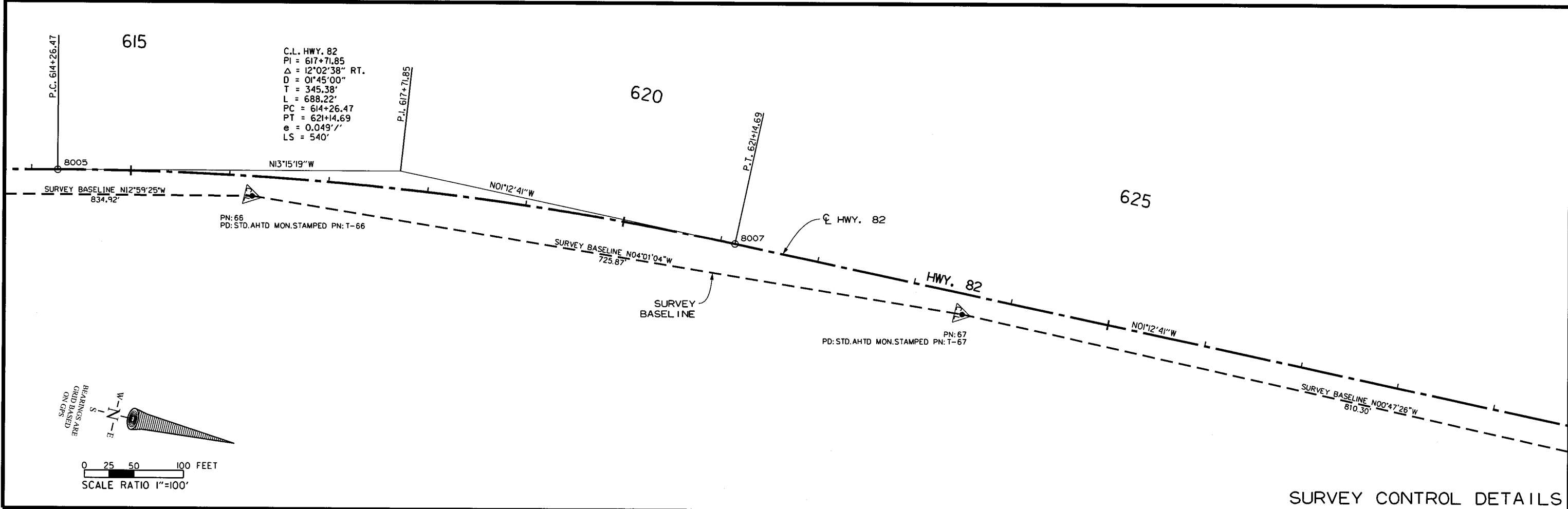
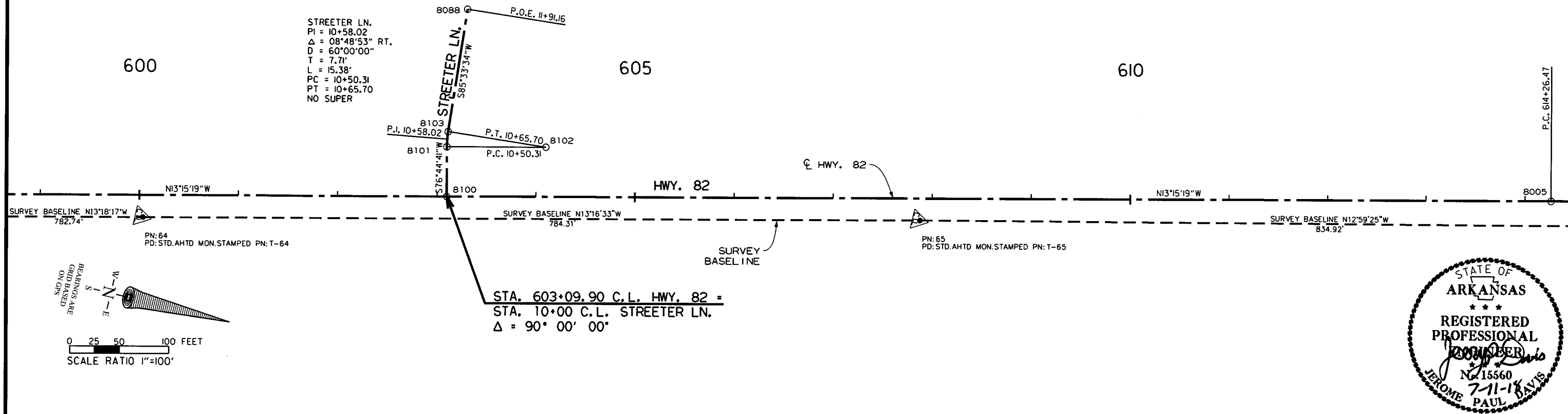


USER: f5513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Survey\_Ctl\CA0202.SC\_Hwy\_82.dgn  
PLOTTED: 7/10/2018 10:31  
SCALE: 100%

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.	CA0202	96	256	

2 SURVEY CONTROL DETAILS



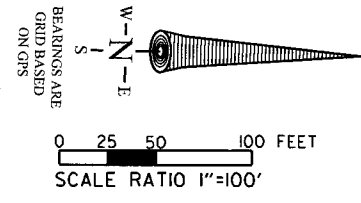
SURVEY CONTROL DETAILS

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Survey\_C11\CA0202.SC\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:31  
 SCALE: 100H



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.	CA0202	97	256	

2 SURVEY CONTROL DETAILS



630

635

640

☉ HWY. 82

HWY. 82

N01°12'41"W

N01°12'41"W

SURVEY BASELINE N00°47'26"W  
810.30'

SURVEY BASELINE N01°25'39"W  
788.76'

SURVEY BASELINE N00°57'19"W  
824.30'

PN: 68  
PD: STD. AHTD MON. STAMPED PN: T-68

SURVEY BASELINE

PN: 69  
PD: STD. AHTD MON. STAMPED PN: T-69

645

650

655

☉ HWY. 82

HWY. 82

SURVEY BASELINE N00°57'19"W  
824.30'

N01°12'41"W

SURVEY BASELINE N00°25'56"W  
804.14'

SURVEY BASELINE N06°40'08"E  
786.95'

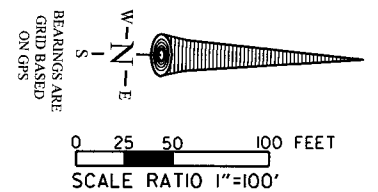
PN: 70  
PD: STD. AHTD MON. STAMPED PN: T-70

P.C. 651+78.69  
8008

SURVEY BASELINE

PD: STD. AHTD MON. STAMPED PN: T-71

PN: 71  
PD: STD. AHTD MON. STAMPED PN: T-71

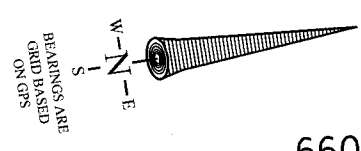
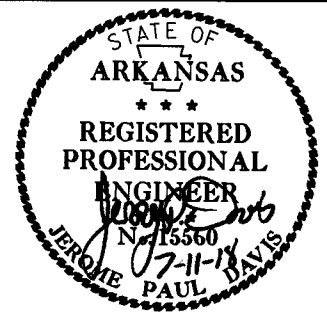


SURVEY CONTROL DETAILS

USER: f85j3  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Survey\_C1\CA0202.SC\_Hwy-82.dgn  
PLOTTED: 7/10/2018 10:31 SCALE: 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.	CA0202		98	256

2 SURVEY CONTROL DETAILS



0 25 50 100 FEET  
SCALE RATIO 1"=100'

660

665

670

P.I. 661+13.01

N01°12'41"W

N17°18'43"E

☉ HWY. 82

HWY. 82

SURVEY BASELINE N06°40'08"E  
786.95'

SURVEY BASELINE

PN: 72  
PD: STD. AHTD MON. STAMPED PN: T-72

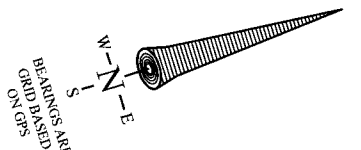
SURVEY BASELINE N14°39'06"E  
788.86'

8010

PN: 73  
PD: STD. AHTD MON. STAMPED PN: T-73

SURVEY BASELINE N17°03'40"E  
752.77'

C.L. HWY. 82  
PI = 661+13.01  
Δ = 18°31'24" RT.  
D = 01°00'00"  
T = 934.32'  
L = 1852.33'  
PC = 651+78.69  
PT = 670+31.02  
e = 0.030'/'  
LS = 540'



0 25 50 100 FEET  
SCALE RATIO 1"=100'

675

680

685

PN: 103  
PD: AHTD GPS MON. 020032A

☉ HWY. 52 W

537

STA. 682+80.55 C.L. HWY. 82 =  
STA. 538+85.99 C.L. HWY. 52W  
Δ = 73° 48' 38"

N17°18'43"E

SURVEY BASELINE N17°03'40"E  
752.77'

☉ HWY. 82

HWY. 82

N17°18'43"E

PN: 74  
PD: STD. AHTD MON. STAMPED PN: T-74

SURVEY BASELINE N24°39'55"E  
355.48'

SURVEY BASELINE

PN: 102  
PD: AHTD GPS MON. 020032

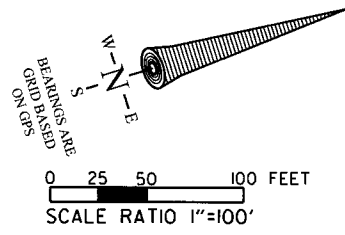
SURVEY BASELINE N10°46'43"E  
1017.01'

USER: f85j3  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\Survey\_C11\CA0202.SC\_Hwy-82.dgn  
PLOTTED: 7/10/2018 10:31  
SCALE: 100'

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.	CA0202	99	256	

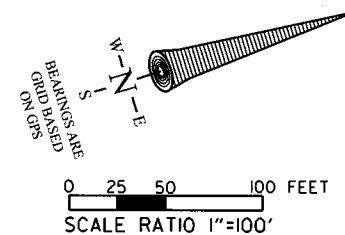
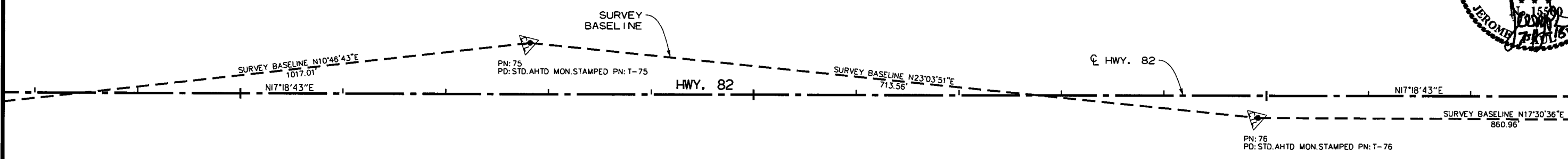
2 SURVEY CONTROL DETAILS



690

695

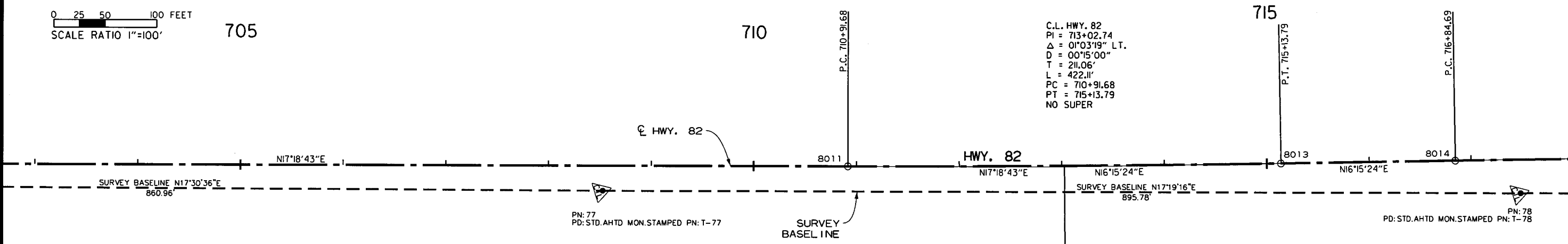
700



705

710

715

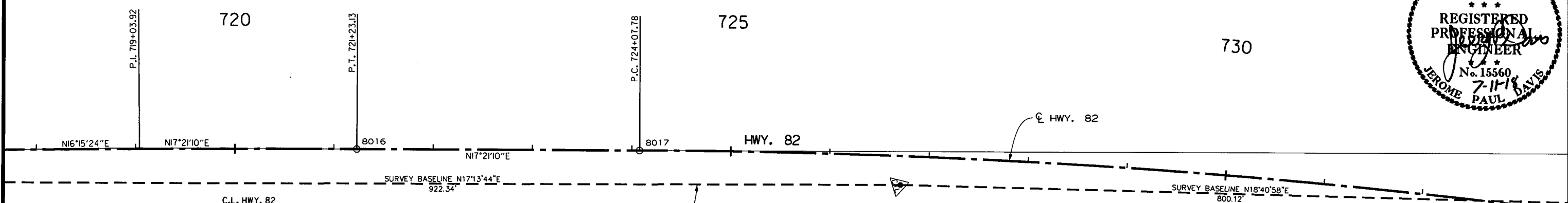
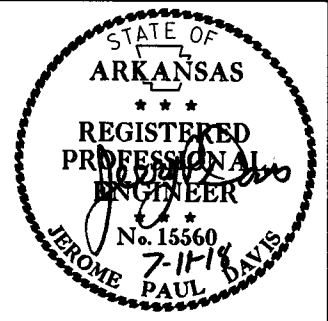


USER: fsj3  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCM\Survey\_C1\CA0202.SC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:31  
 SCALE: 100ft

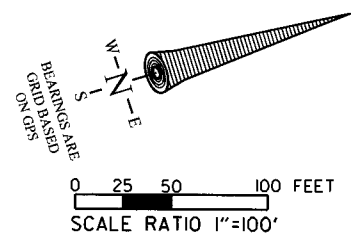
SURVEY CONTROL DETAILS

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.	CA0202	100	256	

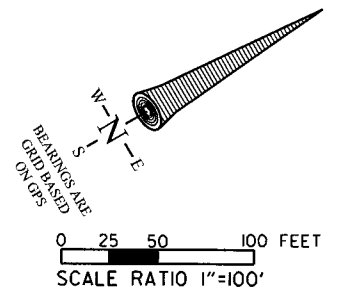
2 SURVEY CONTROL DETAILS



C.L. HWY. 82  
 PI = 719+03.92  
 $\Delta$  = 01°05'46" RT.  
 D = 00°15'00"  
 T = 219.23'  
 L = 438.44'  
 PC = 716+84.69  
 PT = 721+23.13  
 NO SUPER



C.L. HWY. 82  
 PI = 734+08.75  
 $\Delta$  = 14°55'46" RT.  
 D = 00°45'00"  
 T = 1000.97'  
 L = 1990.59'  
 PC = 724+07.78  
 PT = 743+98.37  
 e = 0.023'/'  
 LS = 540'

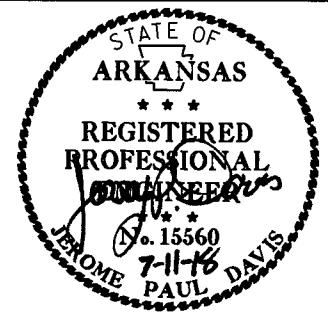


SURVEY CONTROL DETAILS

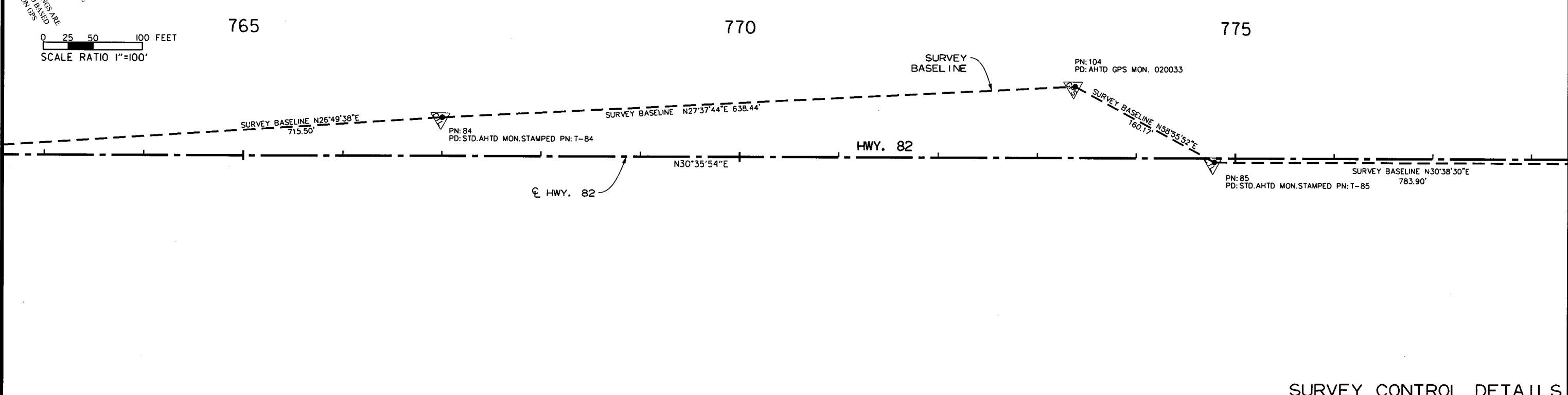
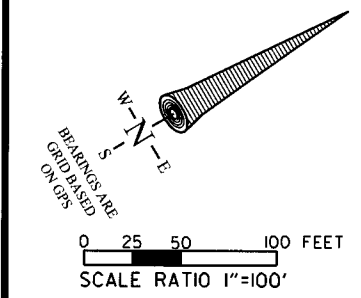
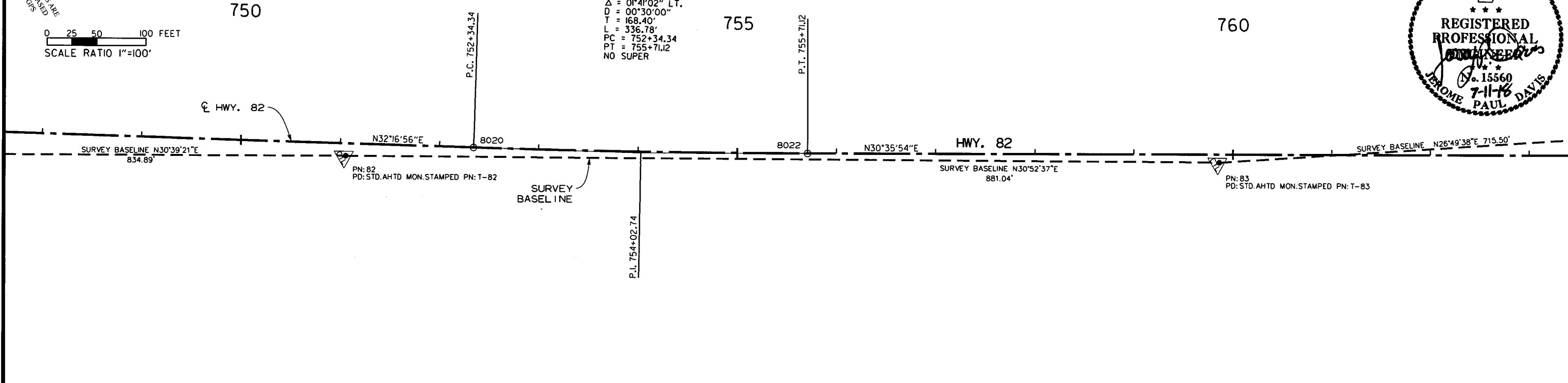
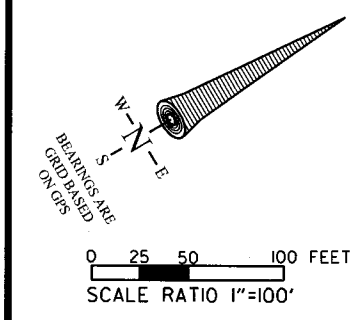
USER: f8513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Survey\_C11\CA0202.SC\_Hwy-82.dgn  
 PLOTTED: 7/10/2018 10:31 SCALE: 100H

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.	CA0202	101	256	

2 SURVEY CONTROL DETAILS



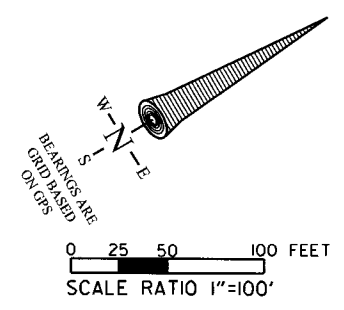
C.L. HWY. 82  
 PI = 754+02.74  
 $\Delta$  = 01'41"02" LT.  
 D = 00'30"00"  
 T = 168.40'  
 L = 336.78'  
 PC = 752+34.34  
 PT = 755+71.12  
 NO SUPER



USER: f5513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Survey\_Ctl\CA0202.SC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:31  
 SCALE: 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.	CA0202	102	256	

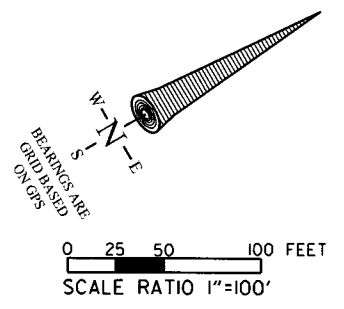
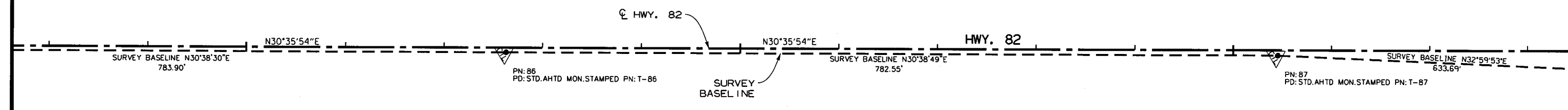
2 SURVEY CONTROL DETAILS



780

785

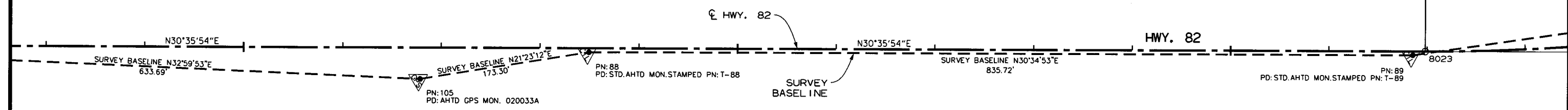
790



795

800

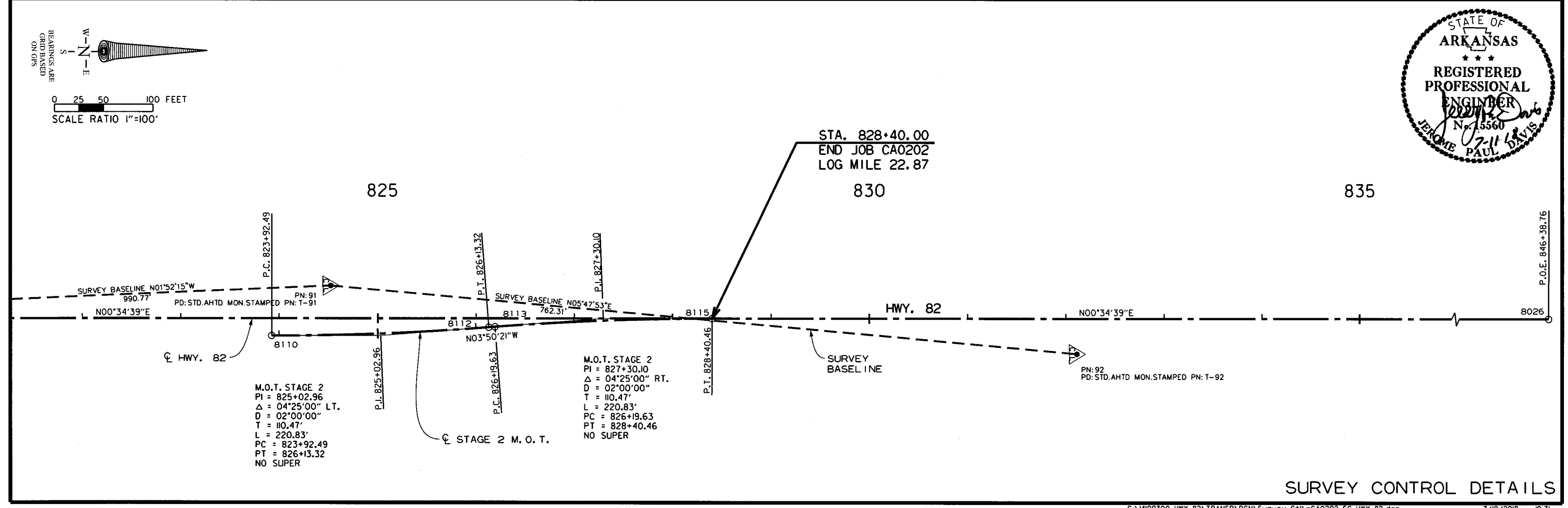
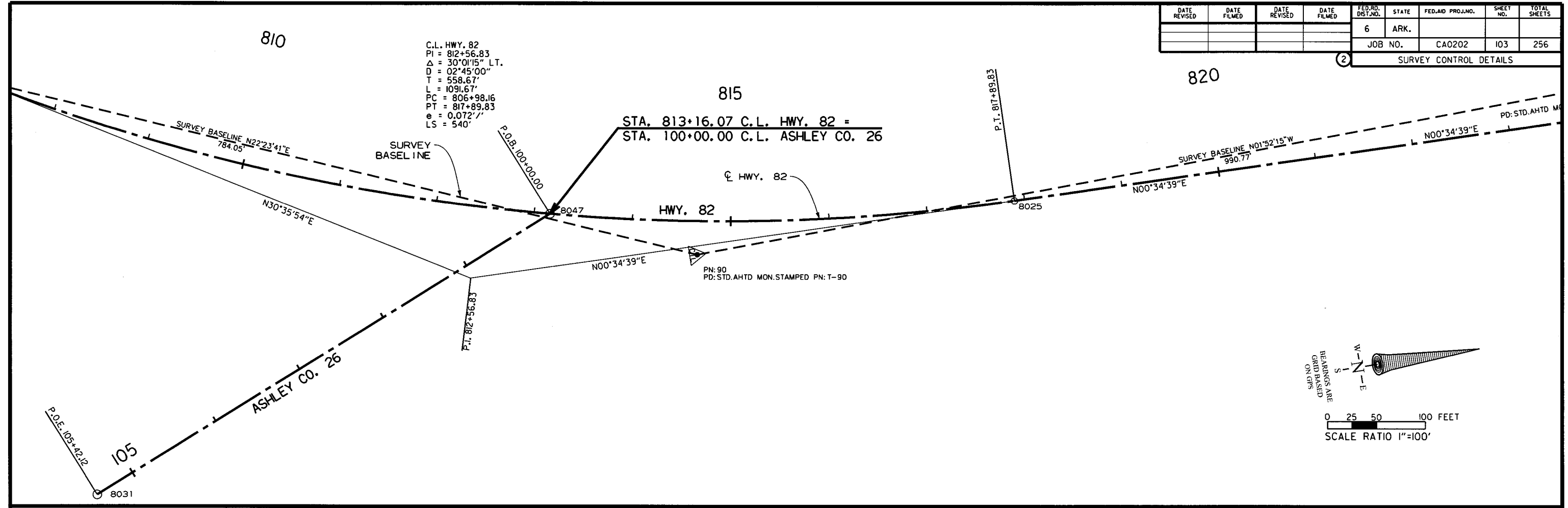
805



USER: f8513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Survey.C\1\CA0202.SC.HWY-82.dgn  
 PLOTTED: 7/10/2018 10:31  
 SCALE: 100:1

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.		103	256
				SURVEY CONTROL DETAILS				

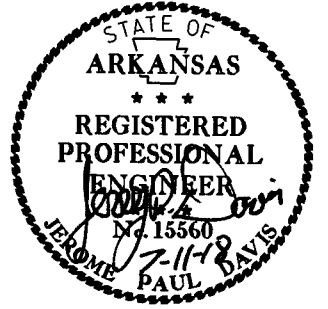
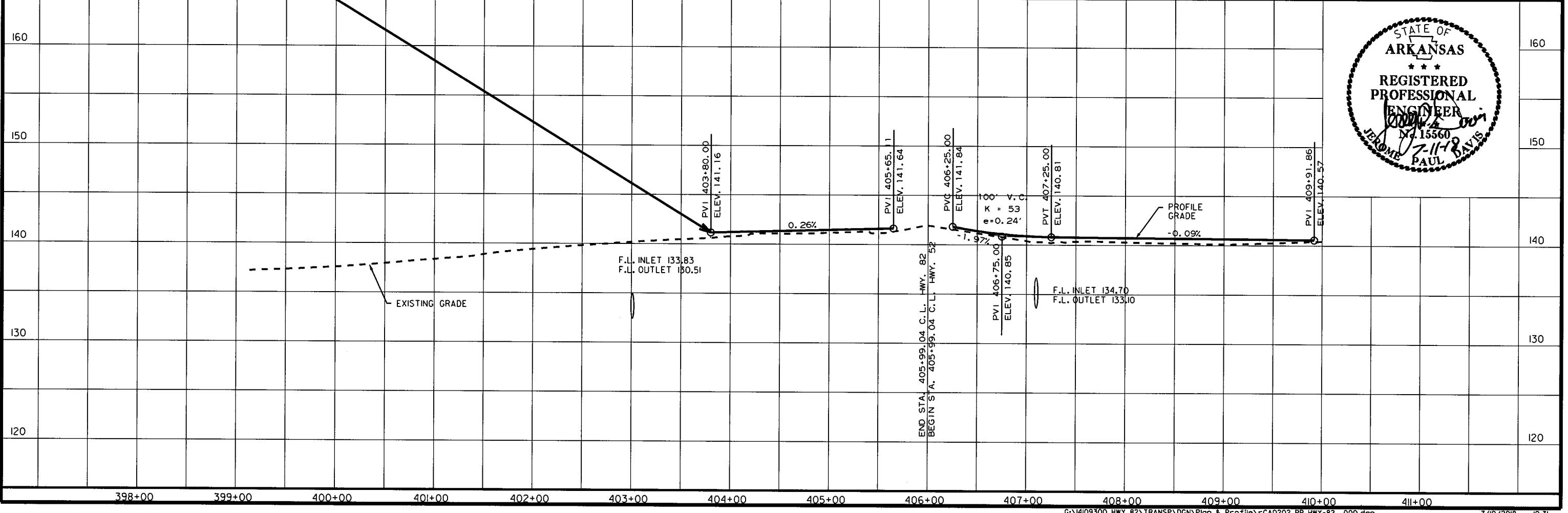
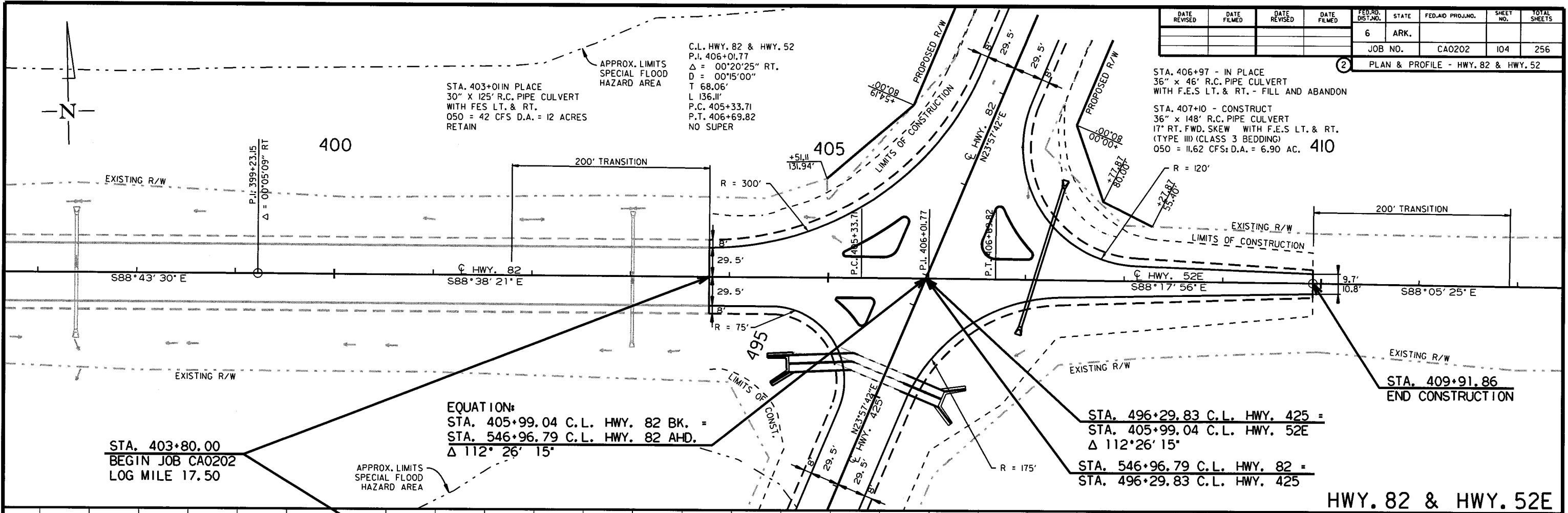


USER: f653  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Survey\_C11\CA0202.SC.HWY-82.dgn  
PLOTTED: 7/10/2018 10:31

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.	CA0202	104	256	

PLAN & PROFILE - HWY. 82 & HWY. 52



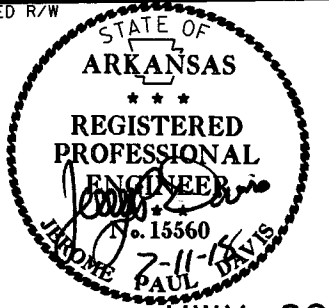
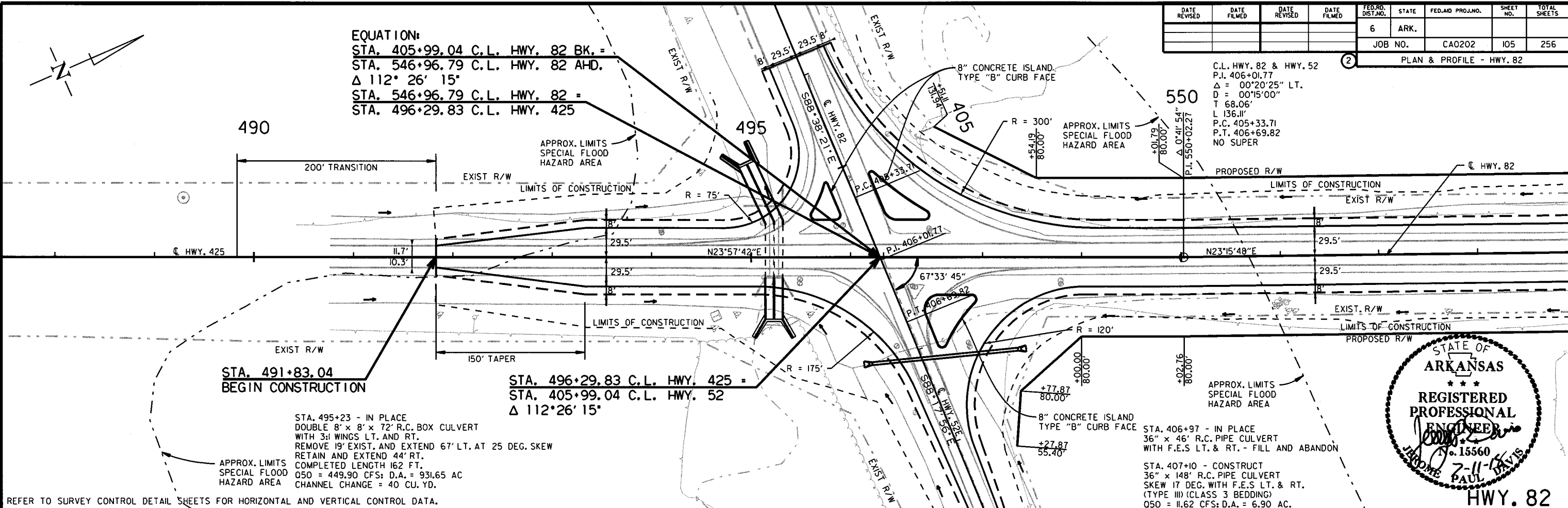
USER: f5513  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Plan.&Profile\CA0202.PP.HWY-82\_000.dgn  
 MODEL: Plan n Profile Sheets  
 SCALE: 100'  
 PLOTTED: 7/10/2018 10:31



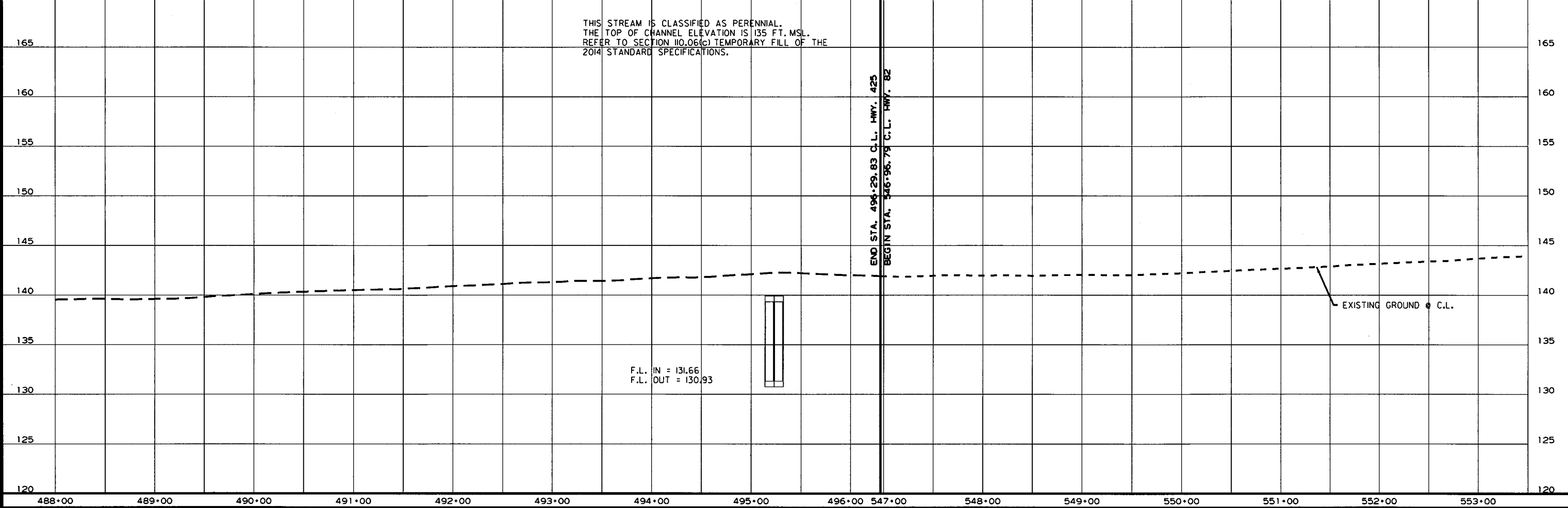
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		105	256
				PLAN & PROFILE - HWY. 82				

EQUATION:  
 STA. 405+99.04 C.L. HWY. 82 BK. =  
 STA. 546+96.79 C.L. HWY. 82 AHD.  
 $\Delta 112^\circ 26' 15''$   
 STA. 546+96.79 C.L. HWY. 82 =  
 STA. 496+29.83 C.L. HWY. 425

C.L. HWY. 82 & HWY. 52  
 P.I. 406+01.77  
 $\Delta = 00^\circ 20' 25''$  LT.  
 $D = 00^\circ 15' 00''$   
 $T = 68.06'$   
 $L = 136.11'$   
 P.C. 405+33.71  
 P.T. 406+69.82  
 NO SUPER



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



USER: f6513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Plan\_&\_Profile\CA0202\_PP\_HWY-82\_001.dgn  
 PLOTTED: 7/10/2018 10:31  
 MODEL: Plan n Profile Sheets  
 SCALE: 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.	CAO202	106	256	
								PLAN & PROFILE - HWY. 82



STA. 554+74 - IN PLACE  
 30" X 31' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 30" X 36' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 41 CU. YD.

STA. 559+06- IN PLACE  
 12" X 12' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE

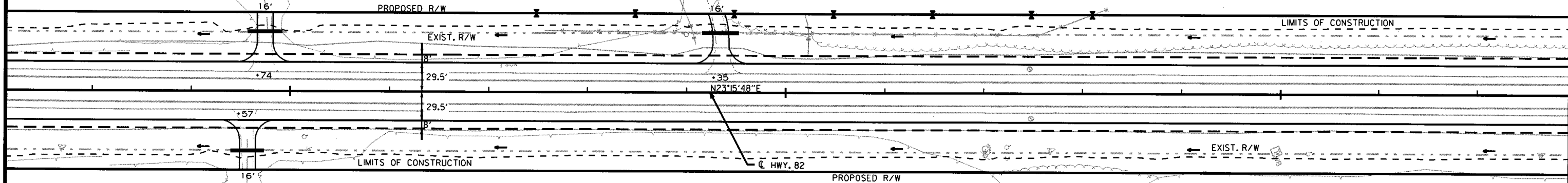
STA. 559+35 - IN PLACE  
 24" X 37' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 37' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 48 CU. YD.

STA. 560+23 - IN PLACE  
 12" X 12' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE

555

560

565

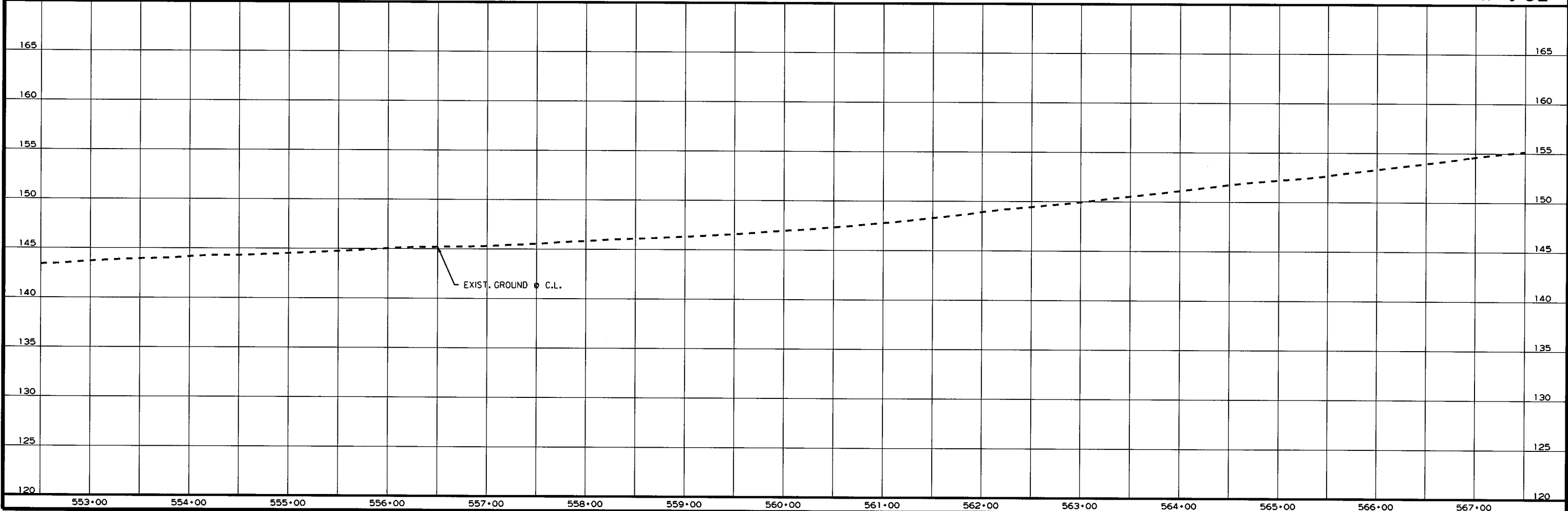


STA. 554+57 - IN PLACE  
 24" X 30' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 34' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 36 CU. YD.



FENCE	STA.	STA.	SIDE	TYPE	LIN. FT.	16' GATE
	557+48	563+10	LT.	C	542	1

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



HWY. 82

USER: fs513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\Plan\_&\_Profile\CAO202\_PP.HWY.82\_002.dgn  
 MODEL: Plan n Profile Sheets  
 PLOTTED: 7/10/2018 10:31  
 SCALE: 100:1

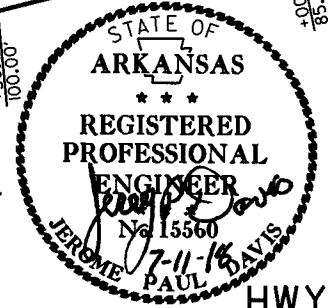
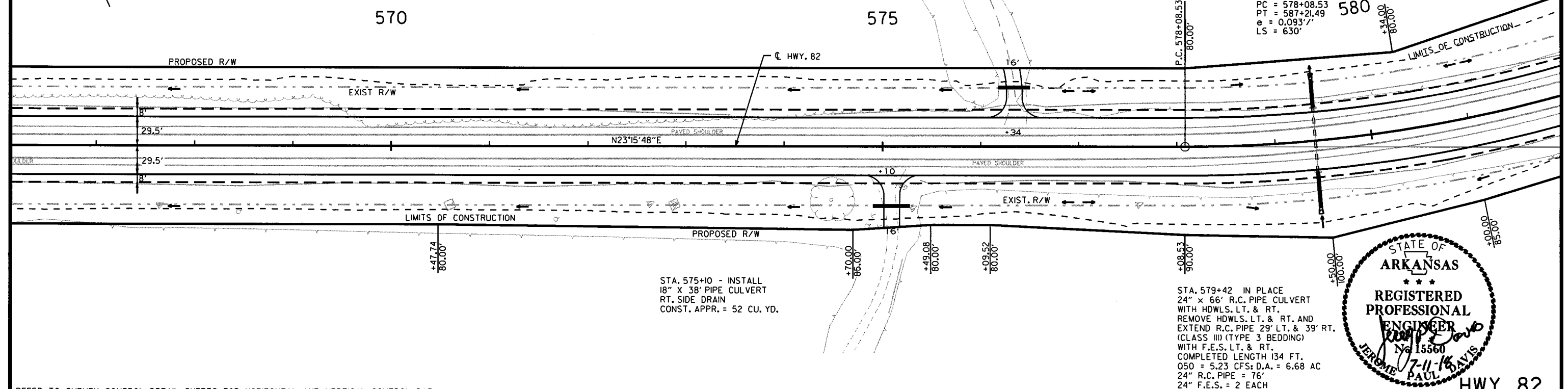
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	I07	256	



STA. 576+34 - IN PLACE  
 18" X 30' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 33' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 32 CU. YD.

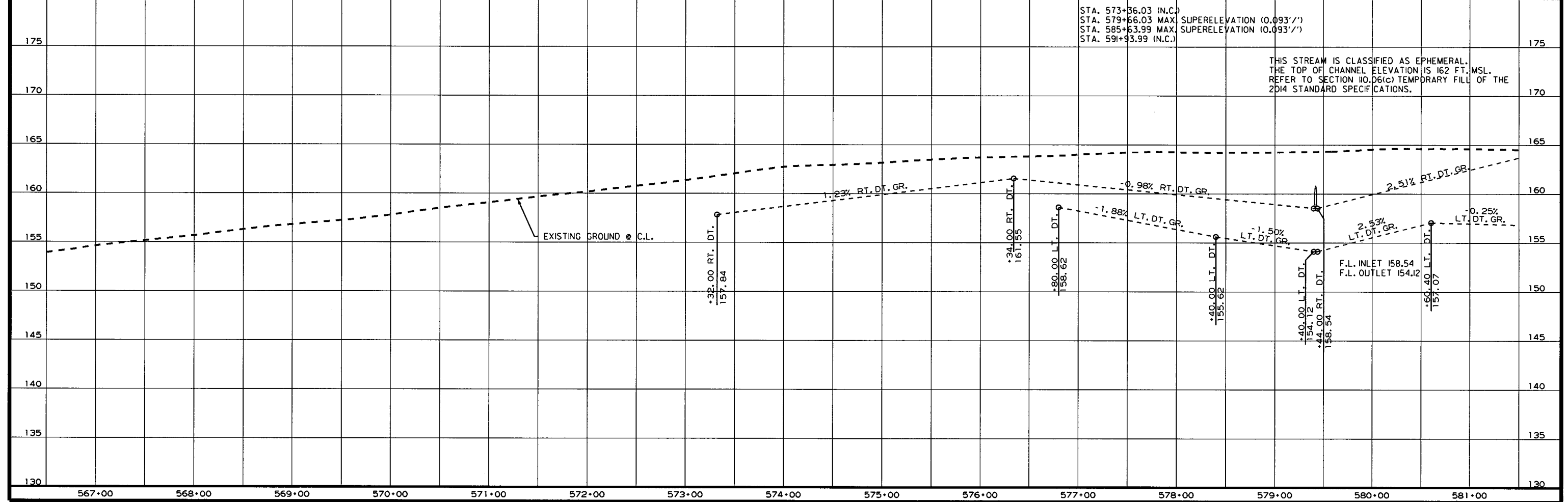
C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta = 36^{\circ}31'07''$  LT.  
 D = 04'00'00"  
 T = 472.59'  
 L = 912.96'  
 PC = 578+08.53  
 PT = 587+21.49  
 e = 0.093'/'  
 LS = 630'

PLAN & PROFILE - HWY. 82



HWY. 82

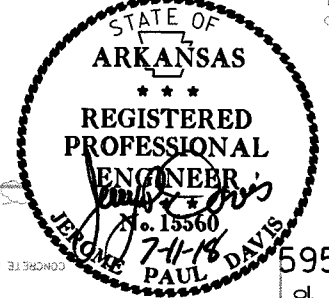
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



USER: f553  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Plan.&Profile\CA0202\_PP\_HWY-82\_003.dgn  
 PLOTTED: 7/10/2018 10:31  
 MODEL: Plan n Profile Sheets  
 SCALE: 100:1

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.	CA0202	108	256	

PLAN & PROFILE - HWY. 82

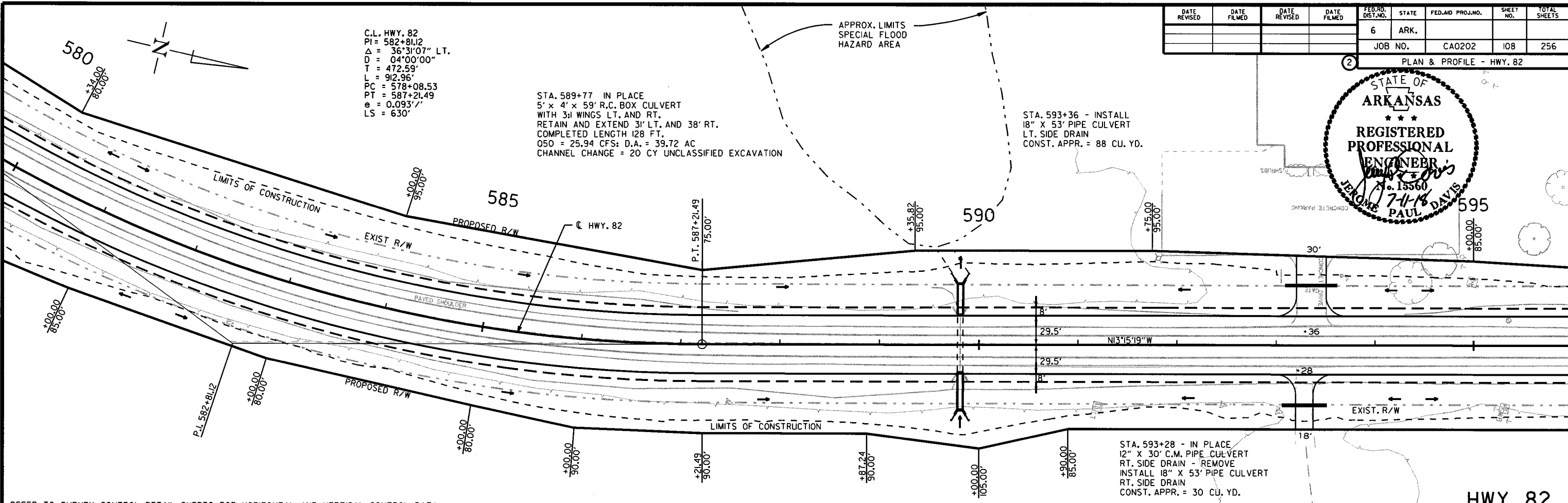


C.L. HWY. 82  
 PI = 582+81.12  
 $\Delta = 36^{\circ}31'07''$  LT.  
 $D = 04^{\circ}00'00''$   
 $T = 472.59'$   
 $L = 912.96'$   
 $PC = 578+08.53$   
 $PT = 587+21.49$   
 $e = 0.093'$   
 $LS = 630'$

STA. 589+77 IN PLACE  
 5' x 4' x 59' R.C. BOX CULVERT  
 WITH 3:1 WINGS LT. AND RT.  
 RETAIN AND EXTEND 3' LT. AND 38' RT.  
 COMPLETED LENGTH 128 FT.  
 $Q_{50} = 25.94$  CFS; D.A. = 39.72 AC  
 CHANNEL CHANGE = 20 CY UNCLASSIFIED EXCAVATION

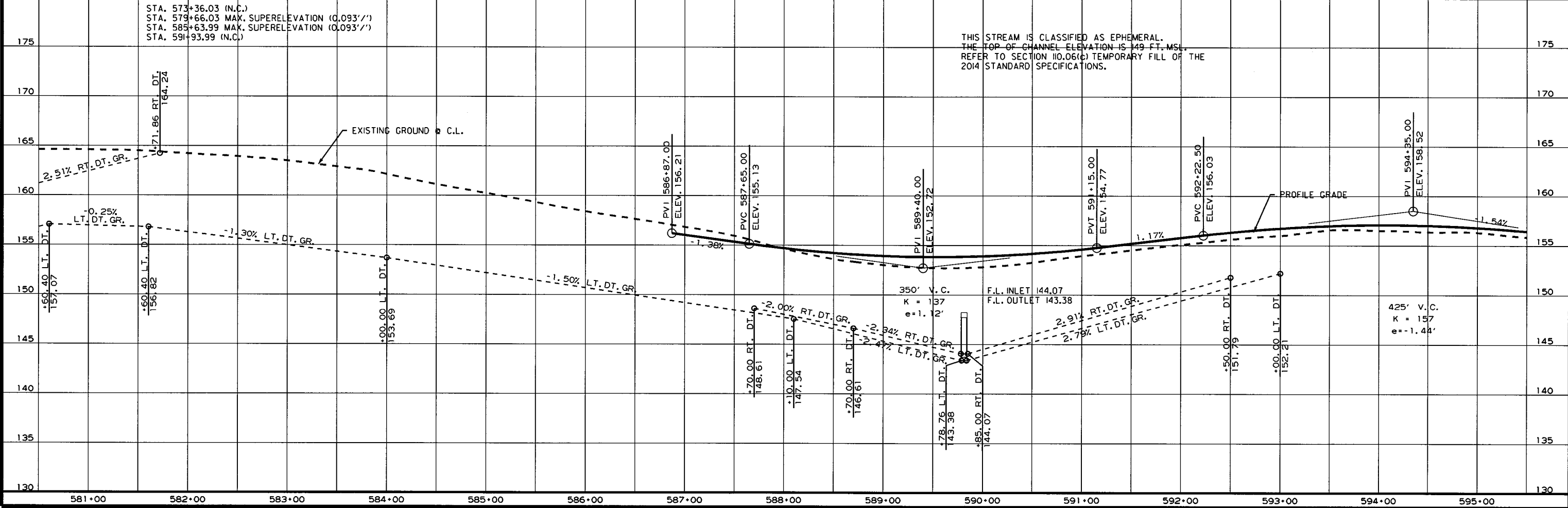
STA. 593+36 - INSTALL  
 18" X 53' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 88 CU. YD.

STA. 593+28 - IN PLACE  
 12" X 30' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 53' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 30 CU. YD.



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

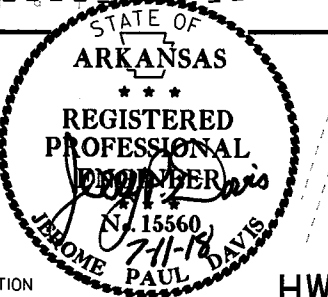
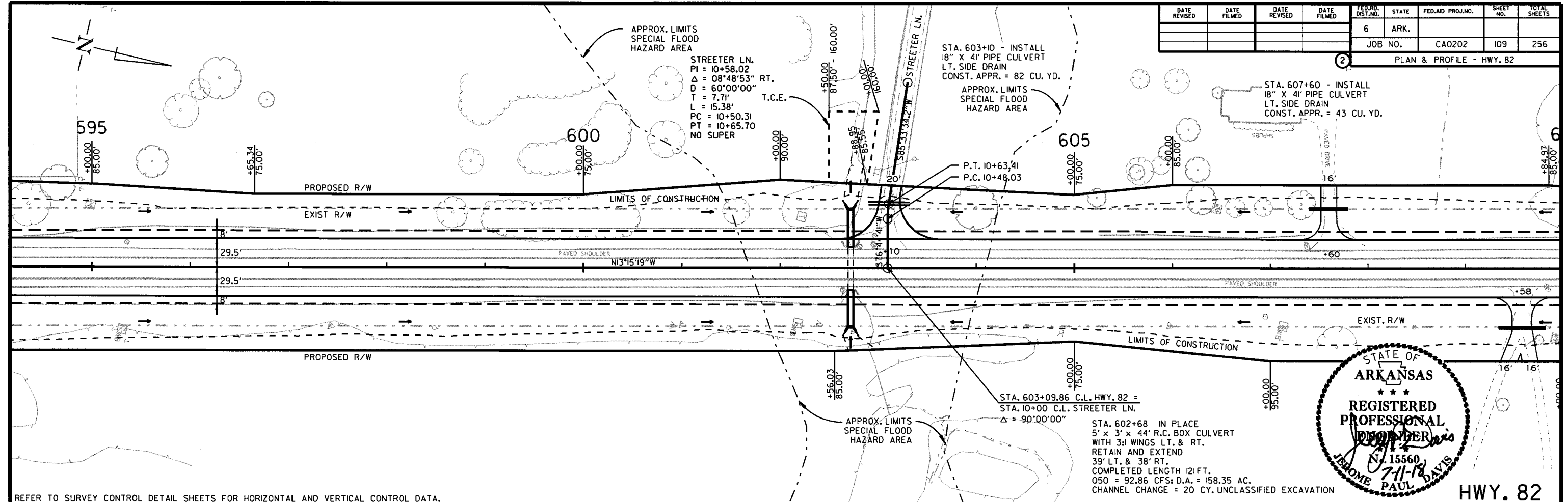
HWY. 82



USER: f553  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Plan.&Profile\CA0202.PP.HWY-82\_004.dgn  
 PLOTTED: 7/10/2018 10:31  
 MODEL: Plan n Profile Sheets  
 SCALE: 100H

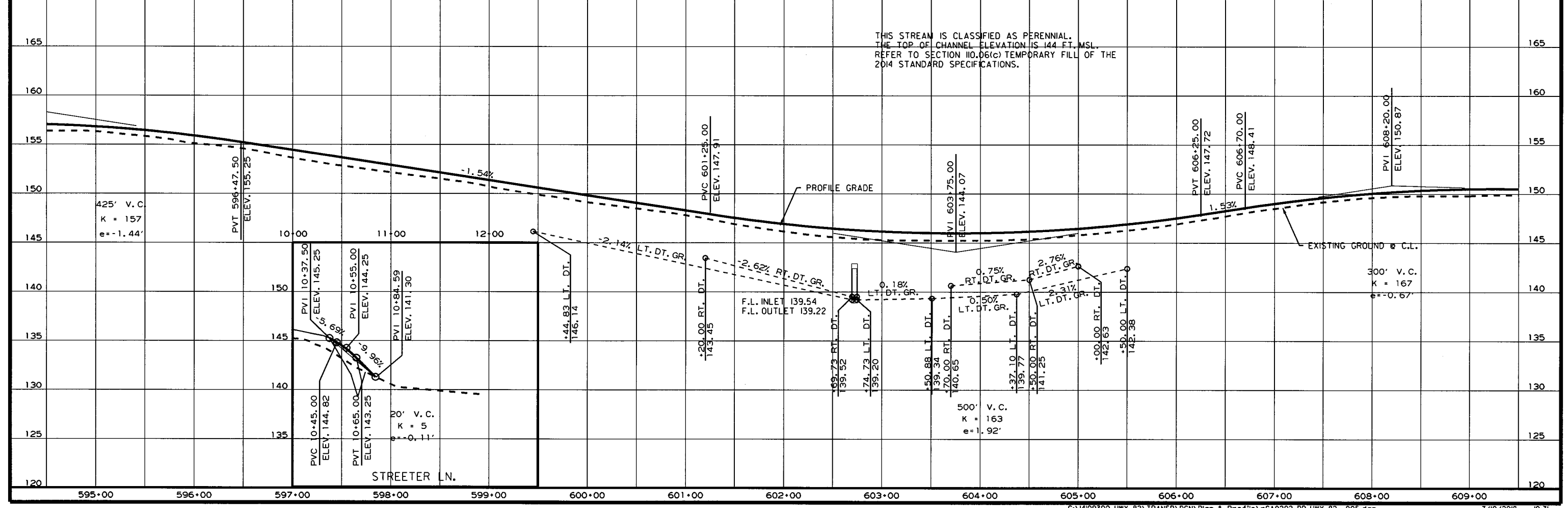
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	109	256	

PLAN & PROFILE - HWY. 82

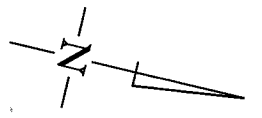


HWY. 82

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



USER: fgs53  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Plan\_&\_Profile\CA0202.PP\_HWY-82\_005.dgn  
 MODEL: Plan n Profile Sheets  
 PLOTTED: 7/10/2018 10:31



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.	CA0202	NO	256	



STA. 613+73 - IN PLACE  
18" X 37' R.C. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 42' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 25 CU. YD.

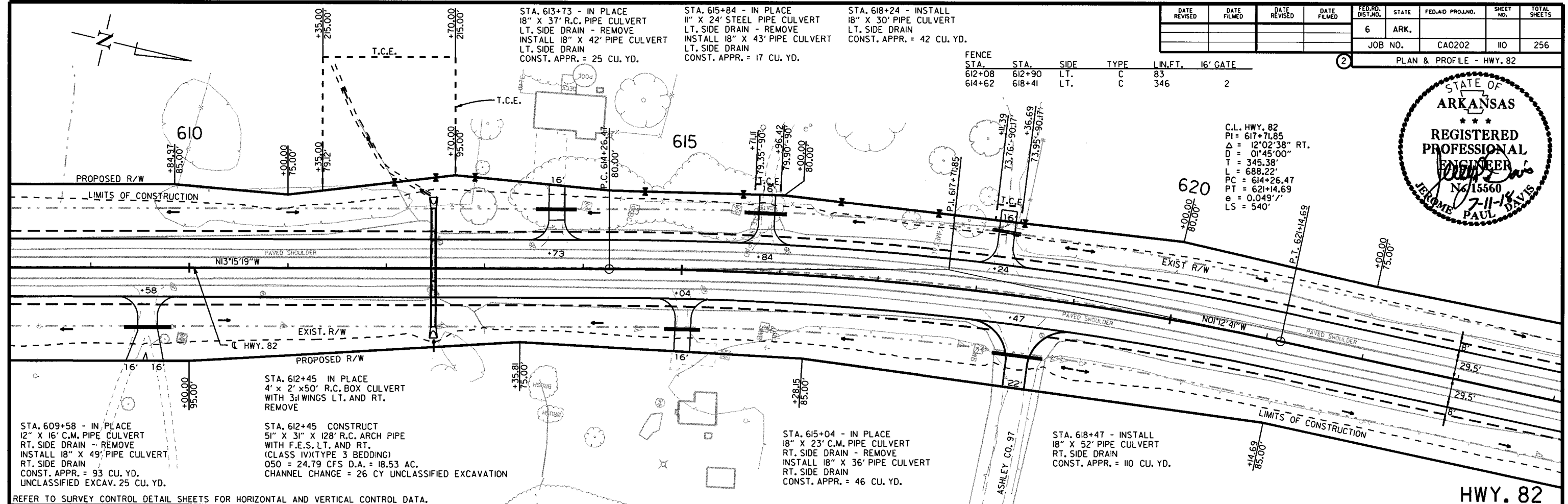
STA. 615+84 - IN PLACE  
11" X 24' STEEL PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 43' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 17 CU. YD.

STA. 618+24 - INSTALL  
18" X 30' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 42 CU. YD.

FENCE STA.	STA.	SIDE	TYPE	LINE FT.	16' GATE
612+08	612+90	LT.	C	83	
614+62	618+41	LT.	C	346	2

C.L. HWY. 82  
PI = 617+71.85  
 $\Delta = 12^{\circ}02'38''$  RT.  
D =  $01^{\circ}45'00''$   
T = 345.38'  
L = 688.22'  
PC = 614+26.47  
PT = 621+14.69  
e = 0.049'/'  
LS = 540'

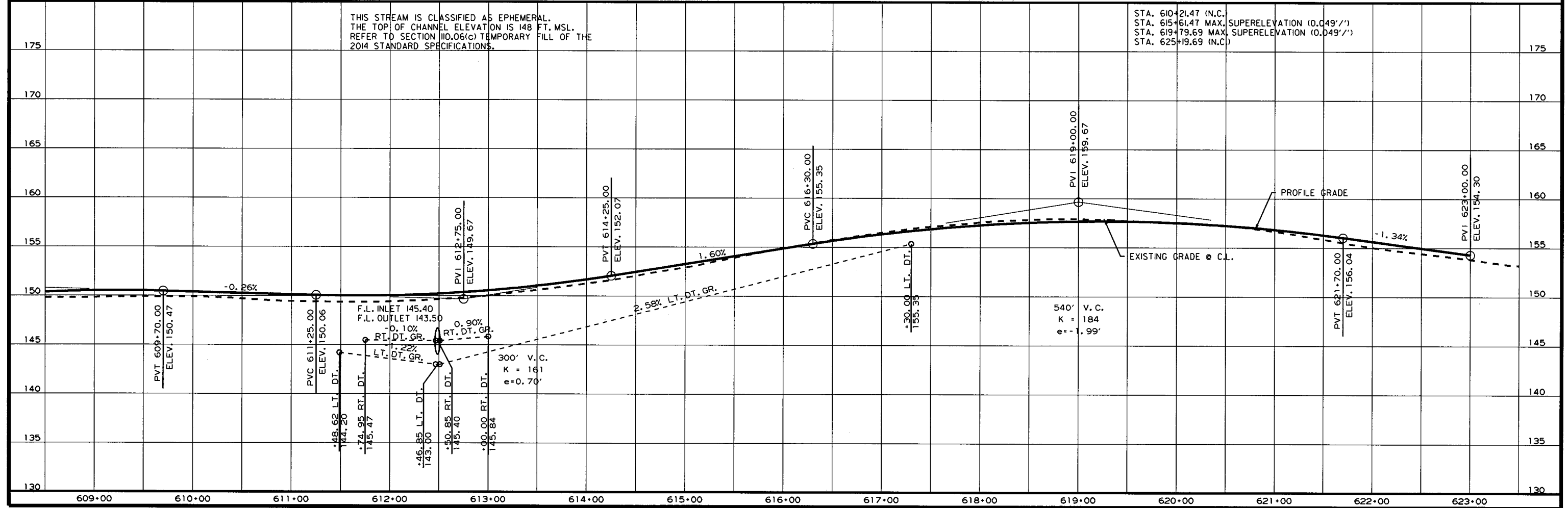
PLAN & PROFILE - HWY. 82



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

THIS STREAM IS CLASSIFIED AS EPHEMERAL.  
THE TOP OF CHANNEL ELEVATION IS 148 FT. MSL.  
REFER TO SECTION 110.06(C) TEMPORARY FILL OF THE  
2014 STANDARD SPECIFICATIONS.

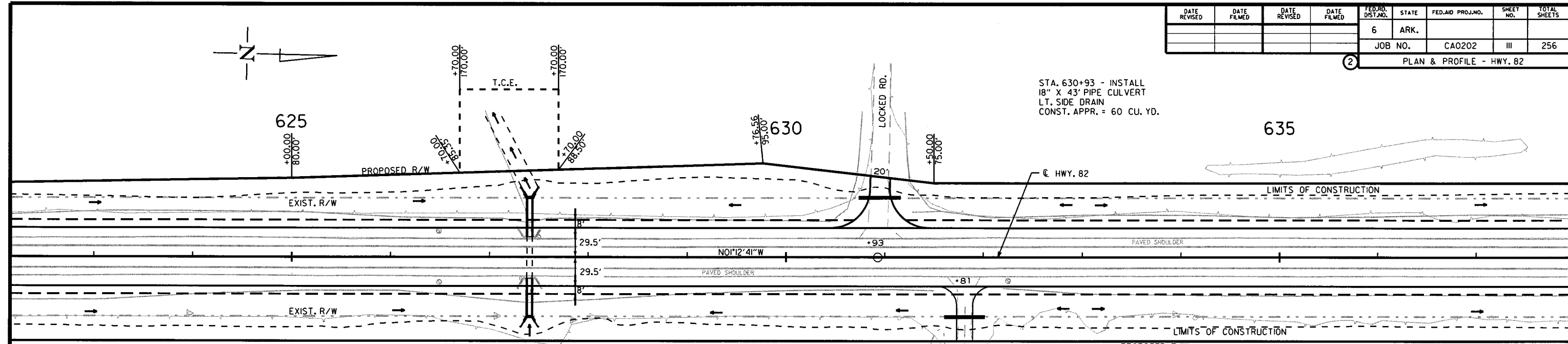
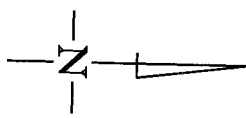
STA. 610+21.47 (N.C.)  
STA. 615+61.47 MAX. SUPERELEVATION (0.049'/')  
STA. 619+79.69 MAX. SUPERELEVATION (0.049'/')  
STA. 625+19.69 (N.C.)



USER: f8513  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Plan.&.Profile\CA0202.PP.HWY.82\_006.dgn  
 PLOTTED: 7/10/2018 10:31  
 MODEL: Plan n Profile Sheets  
 SCALE: 100H

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		III	256

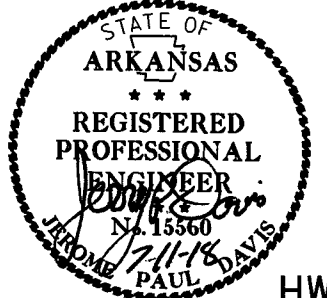
2 PLAN & PROFILE - HWY. 82



STA. 630+93 - INSTALL  
18" X 43' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 60 CU. YD.

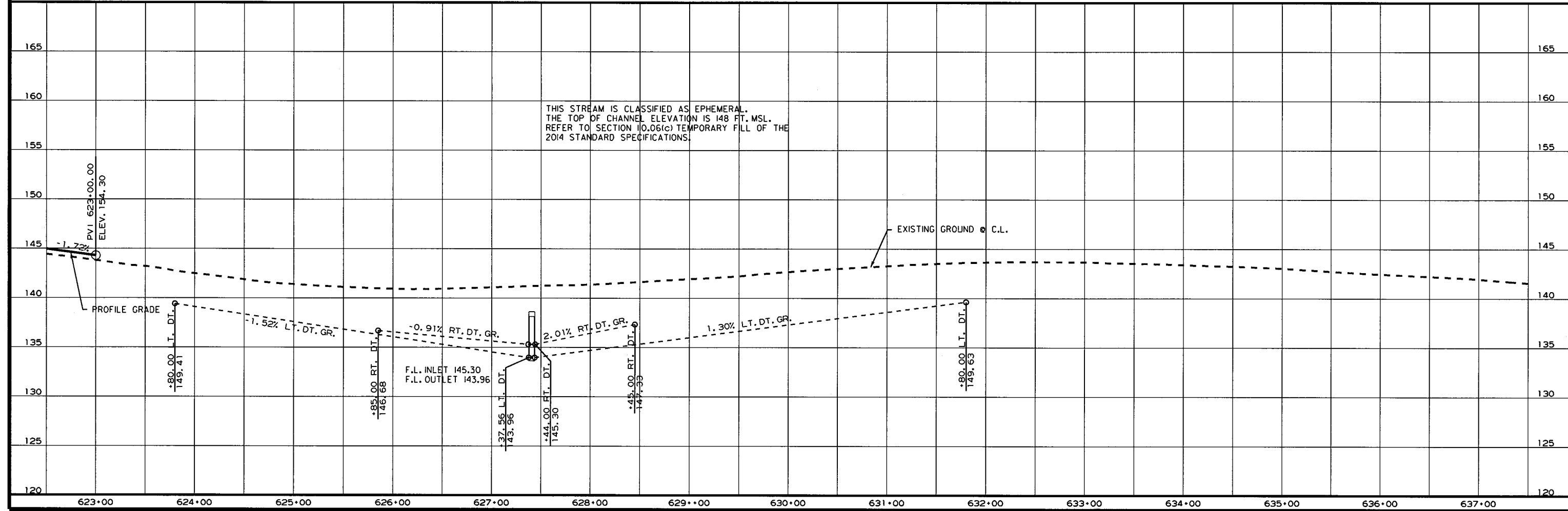
STA. 627+38 IN PLACE  
6' x 4' x 42' R.C. BOX CULVERT  
WITH 3' WINGS LT. & RT.  
RETAIN AND EXTEND  
40' LT. & 40' RT.  
COMPLETED LENGTH 122 FT.  
050 = 61.66 CFS; D.A. = 105.68 AC.  
CHANNEL CHANGE = 20 CY UNCLASSIFIED EXCAVATION

STA. 631+81 - INSTALL  
18" X 42' PIPE CULVERT  
RT. SIDE DRAIN  
CONST. APPR. = 67 CU. YD.  
UNCLASSIFIED EXCAVATION 10 CU. YD.



HWY. 82

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



USER: f553  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Plan\_& Profile\CA0202\_PP\_HWY-82\_007.dgn  
 PLOTTED: 7/10/2018 10:31  
 MODEL: Plan n Profile Sheets  
 SCALE: 100ft

STA. 641+83 - IN PLACE  
 6' x 4' x 44' R.C. BOX CULVERT  
 WITH 3:1 WINGS, LT. AND RT.  
 EXTEND 38' LT. & 39' RT.  
 COMPLETED LENGTH 121 FT.  
 CONSTRUCT 6' x 4' x 121' R.C. BOX CULVERT  
 QSO = 296.8 CFS; D.A. = 312.43 AC  
 CHANNEL CHANGE = 20 CY UNCLASSIFIED EXCAVATION

APPROX. LIMITS  
 SPECIAL FLOOD  
 HAZARD AREA

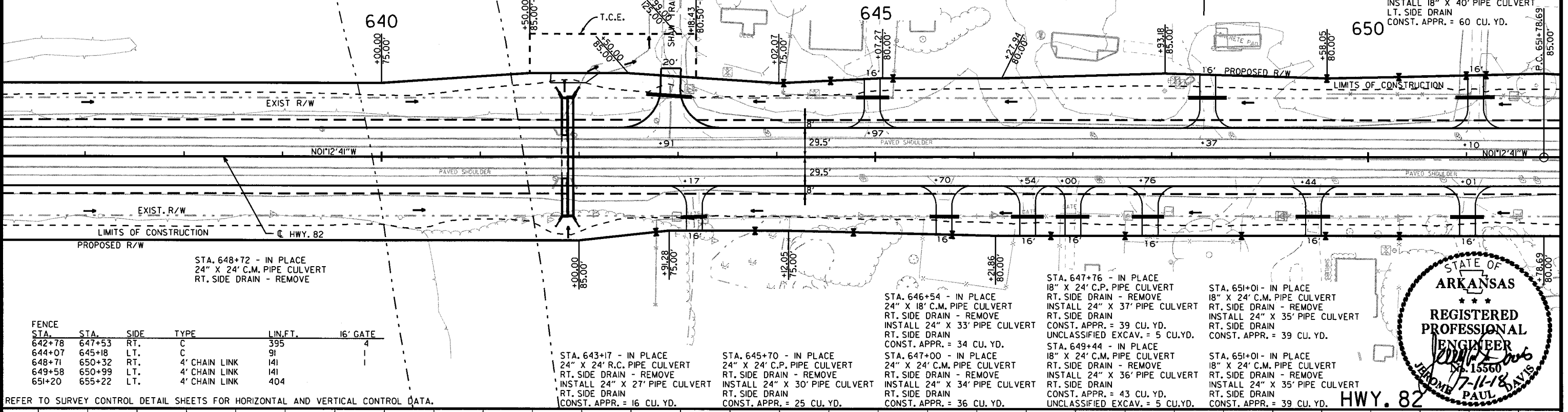
STA. 642+91 - INSTALL  
 24" X 47' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 78 CU. YD.  
 UNCLASSIFIED EXCAV. = 10 CU. YD.

STA. 644+97 - IN PLACE  
 24" X 24' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 34' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 34 CU. YD.

STA. 648+37 - IN PLACE  
 24" X 24' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 39' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 57 CU. YD.  
 UNCLASSIFIED EXCAV. = 5 CU. YD.

DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	112	256	

PLAN & PROFILE - HWY. 82  
 STA. 651+10 - IN PLACE  
 18" X 24' R.C. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 40' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 60 CU. YD.



FENCE STA.	STA.	SIDE	TYPE	LN. FT.	16' GATE
642+78	647+53	RT.	C	395	4
644+07	645+18	LT.	C	91	1
648+71	650+32	RT.	4' CHAIN LINK	141	
649+58	650+99	LT.	4' CHAIN LINK	141	
651+20	655+22	LT.	4' CHAIN LINK	404	

STA. 648+72 - IN PLACE  
 24" X 24' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE

STA. 643+17 - IN PLACE  
 24" X 24' R.C. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 27' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 16 CU. YD.

STA. 645+70 - IN PLACE  
 24" X 24' C.P. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 30' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 25 CU. YD.

STA. 646+54 - IN PLACE  
 24" X 18' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 33' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 34 CU. YD.

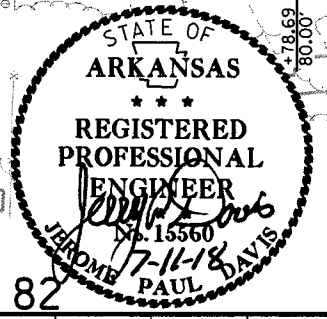
STA. 647+00 - IN PLACE  
 24" X 24' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 34' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 36 CU. YD.

STA. 647+76 - IN PLACE  
 18" X 24' C.P. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 37' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 39 CU. YD.  
 UNCLASSIFIED EXCAV. = 5 CU. YD.

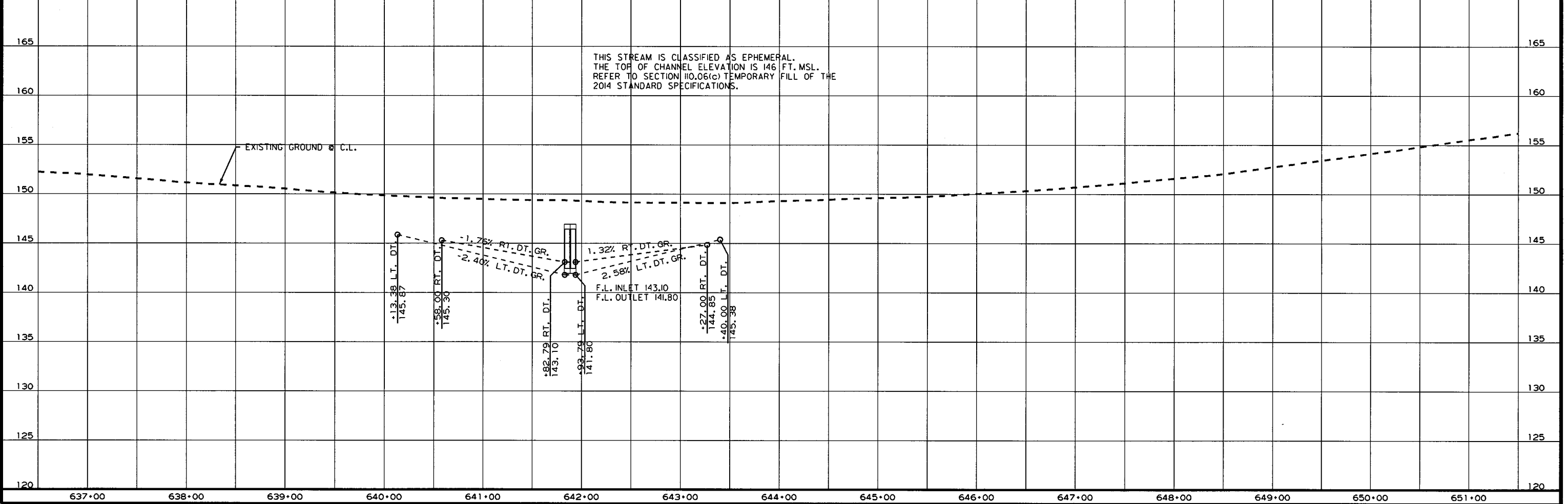
STA. 649+44 - IN PLACE  
 18" X 24' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 36' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 43 CU. YD.  
 UNCLASSIFIED EXCAV. = 5 CU. YD.

STA. 651+01 - IN PLACE  
 18" X 24' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 35' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 39 CU. YD.

STA. 651+01 - IN PLACE  
 18" X 24' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 35' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 39 CU. YD.



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



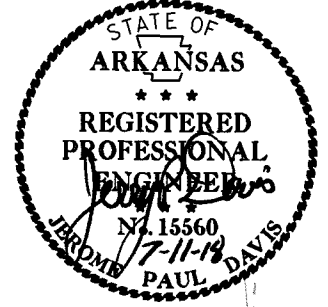
THIS STREAM IS CLASSIFIED AS EPHEMERAL.  
 THE TOP OF CHANNEL ELEVATION IS 146 FT. MSL.  
 REFER TO SECTION 110.06(c) TEMPORARY FILL OF THE  
 2014 STANDARD SPECIFICATIONS.

USER: f6513  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCN\Plan & Profile\CA0202.PP\_HWY-82\_008.dgn  
 MODEL: Plan n Profile Sheets  
 PLOTTED: 7/10/2018 10:31



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.	CA0202	113	256	

PLAN & PROFILE - HWY. 82



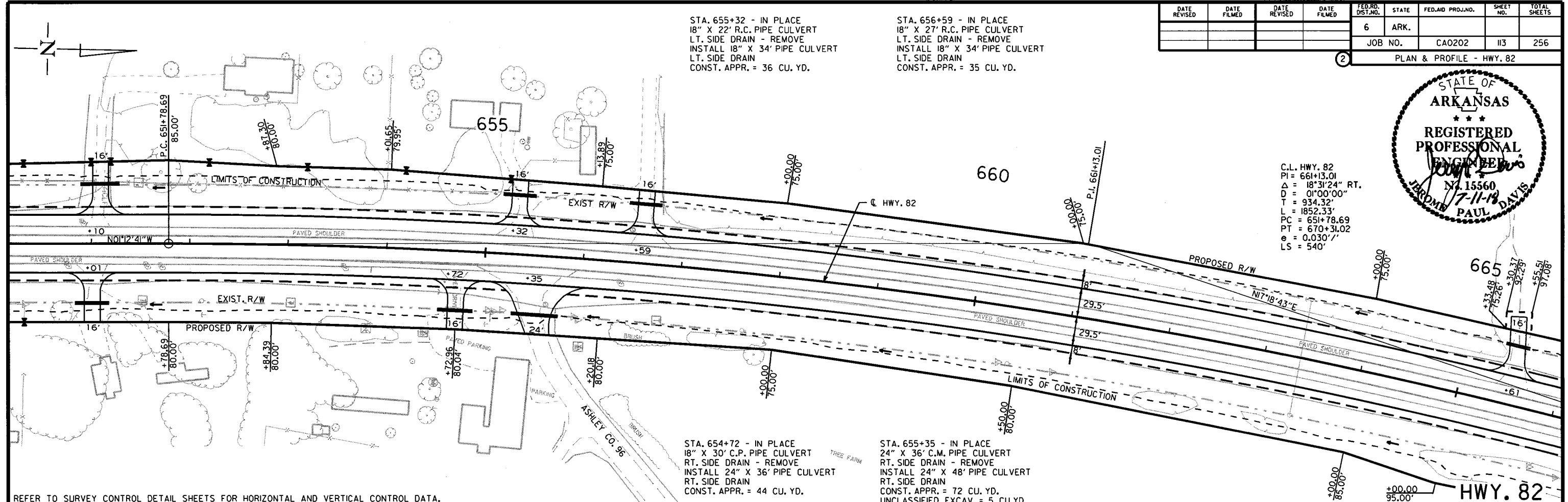
C.L. HWY. 82  
 PI = 661+13.01  
 $\Delta = 18^{\circ}31'24''$  RT.  
 $D = 01^{\circ}00'00''$   
 $T = 934.32'$   
 $L = 1852.33'$   
 $PC = 651+78.69$   
 $PT = 670+31.02$   
 $e = 0.030'/'$   
 $LS = 540'$

STA. 655+32 - IN PLACE  
 18" X 22' R.C. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 34' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 36 CU. YD.

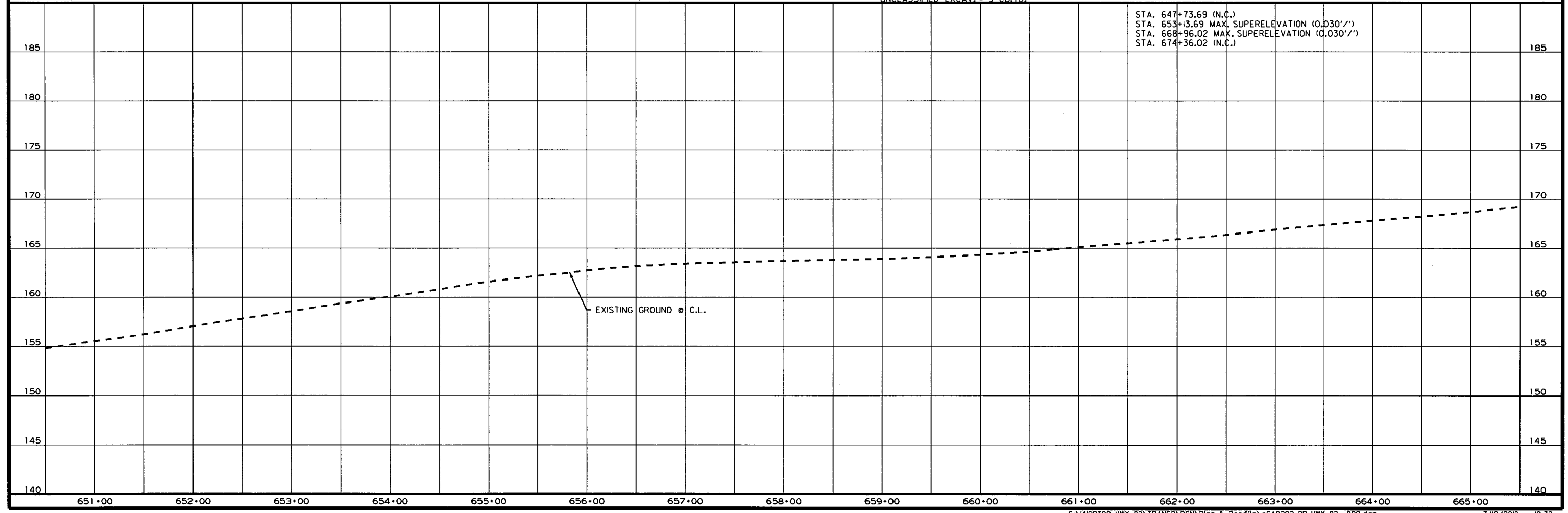
STA. 656+59 - IN PLACE  
 18" X 27' R.C. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 34' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 35 CU. YD.

STA. 654+72 - IN PLACE  
 18" X 30' C.P. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 36' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 44 CU. YD.

STA. 655+35 - IN PLACE  
 24" X 36' C.M. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 48' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 72 CU. YD.  
 UNCLASSIFIED EXCAV. = 5 CU. YD.

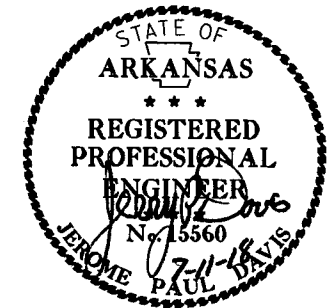


REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

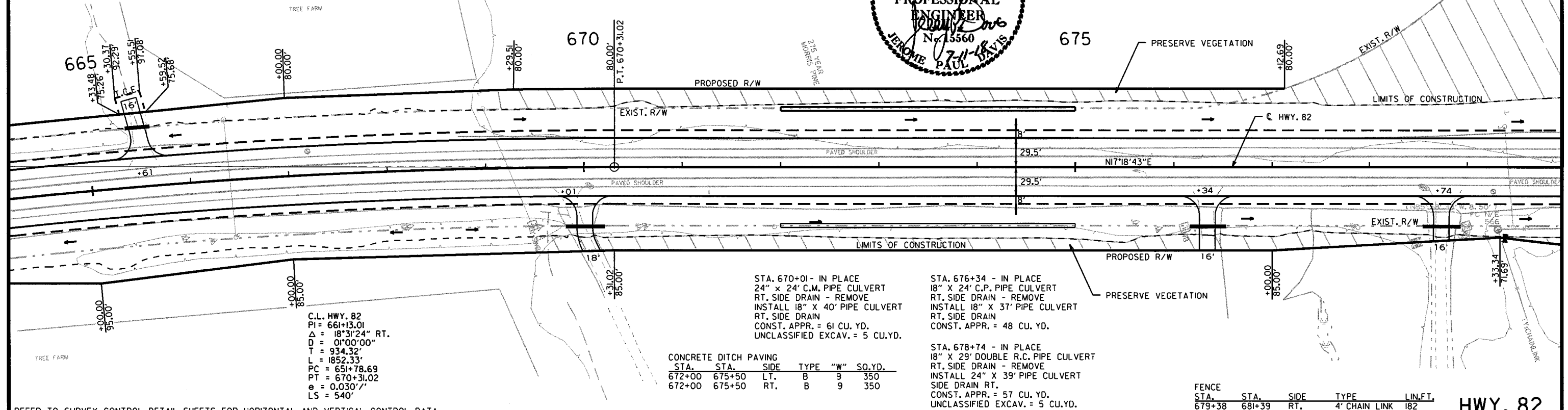


USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Plan\_&\_Profile\CA0202\_PP\_Hwy-82\_009.dgn  
 PLOTTED: 7/10/2008 10:32  
 MODEL: Plan n Profile Sheets  
 SCALE: 100'

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.	CA0202	II4	256	
				PLAN & PROFILE - HWY. 82				

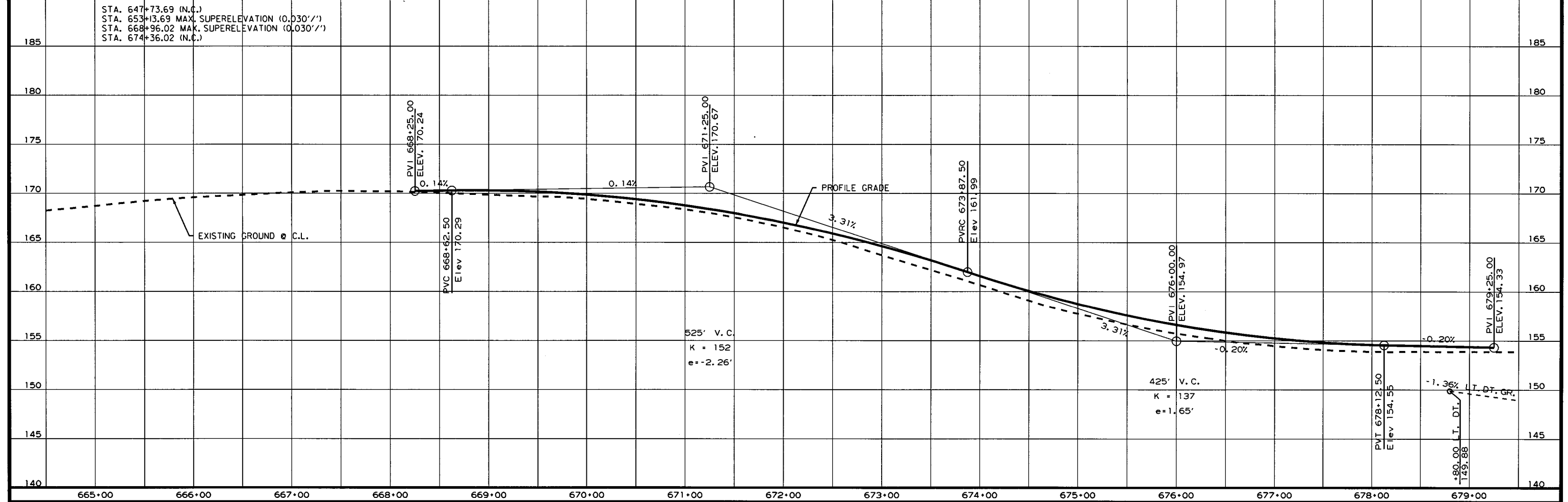


STA. 665+61 - IN PLACE  
 18" X 25' C.P. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 25' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 68 CU. YD.



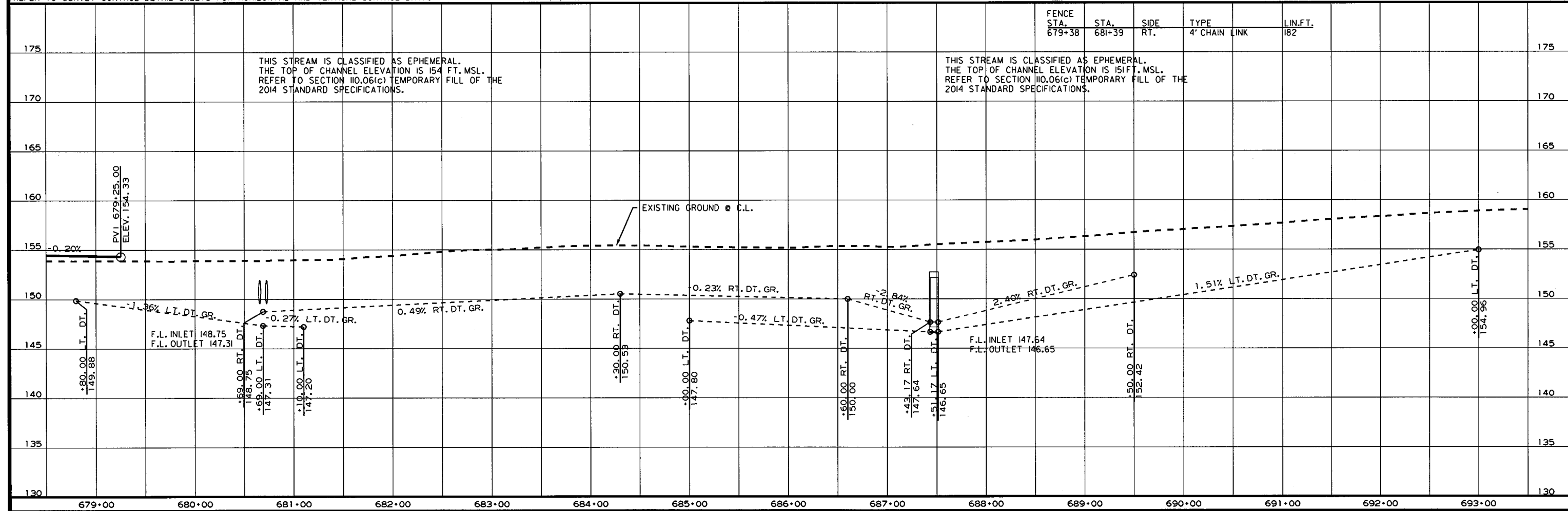
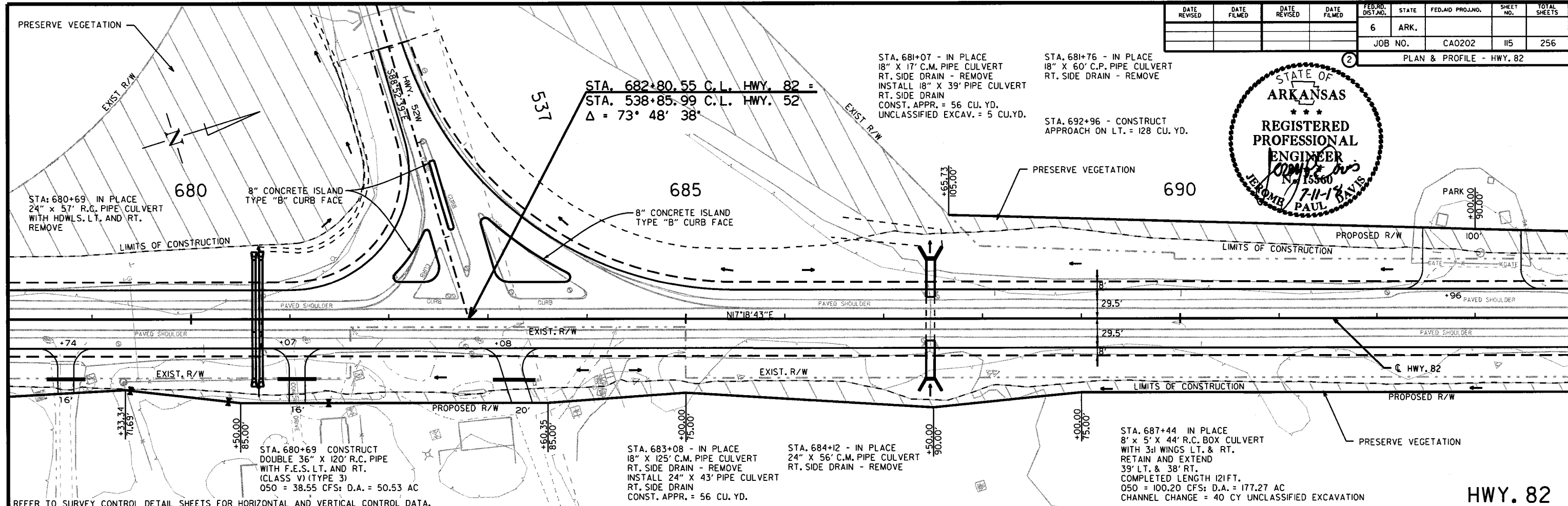
C.L. HWY. 82  
 PI = 661+13.01  
 $\Delta = 18'31'24''$  RT.  
 D = 01'00'00"  
 T = 934.32'  
 L = 1852.33'  
 PC = 651+78.69  
 PT = 670+31.02  
 $e = 0.030''$   
 LS = 540'

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



USER: fs513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Plan.&Profile\CA0202\_PP\_HWY-82\_010.dgn  
 PLOTTED: 7/10/2018 10:32  
 MODEL: Plan n Profile Sheets  
 SCALE: 100H

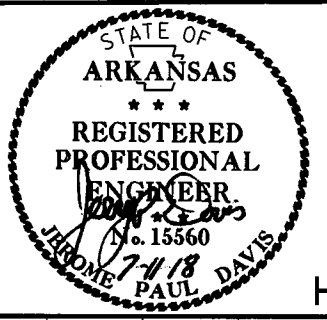
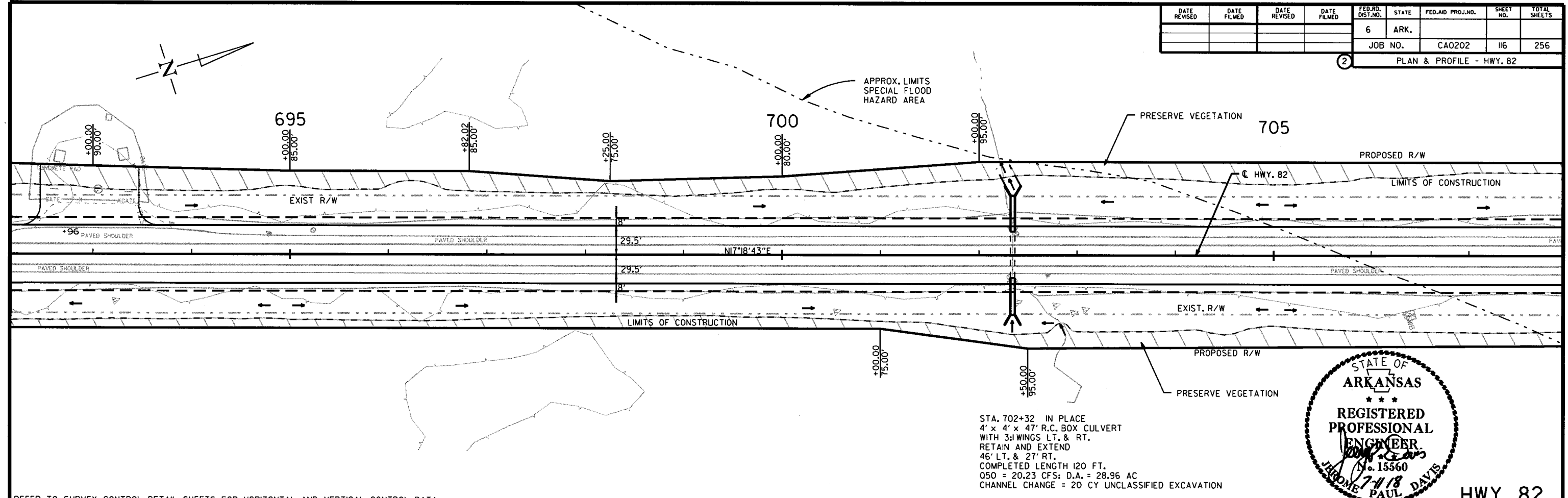
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	II5	256	
				PLAN & PROFILE - HWY. 82				



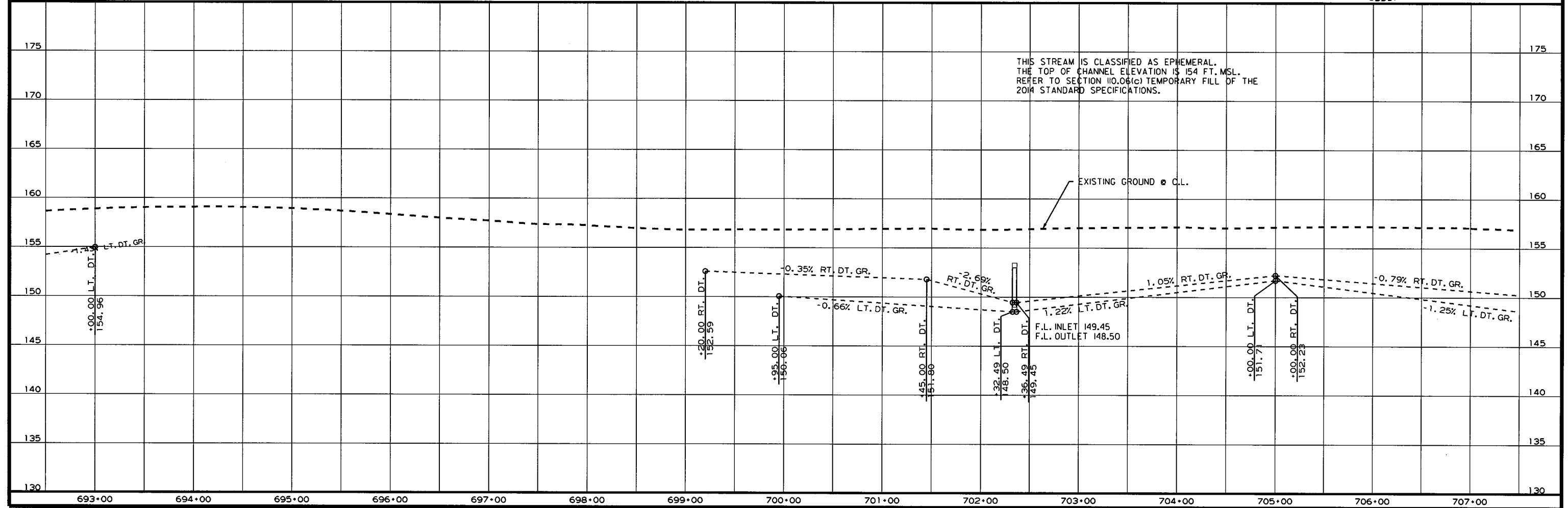
USER: f6513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCGN\Plan\_&\_Profile\CA0202\_PP\_HWY-82\_01.dgn  
 MODEL: Plan n Profile Sheets  
 PLOTTED: 7/10/2018 10:32

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.	CA0202		116	256

2 PLAN & PROFILE - HWY. 82



HWY. 82



USER: f8513  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Plan.&Profile\CA0202.PP.HWY-82\_002.dgn  
MODEL: Plan n Profile Sheets  
SCALE: 100:1  
PLOTTED: 7/10/2018 10:32

STA. 710+51 IN PLACE  
 6' x 5' x 49' R.C. BOX CULVERT  
 WITH 3:1 WINGS LT. & RT.  
 RETAIN AND EXTEND  
 35' LT. & 37' RT.  
 COMPLETED LENGTH 121 FT.  
 CONSTRUCT 6' x 5' x 120' R.C. BOX CULVERT  
 050 = 367.9 CFS; D.A. = 293.13 AC.

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.	CA0202		117	256

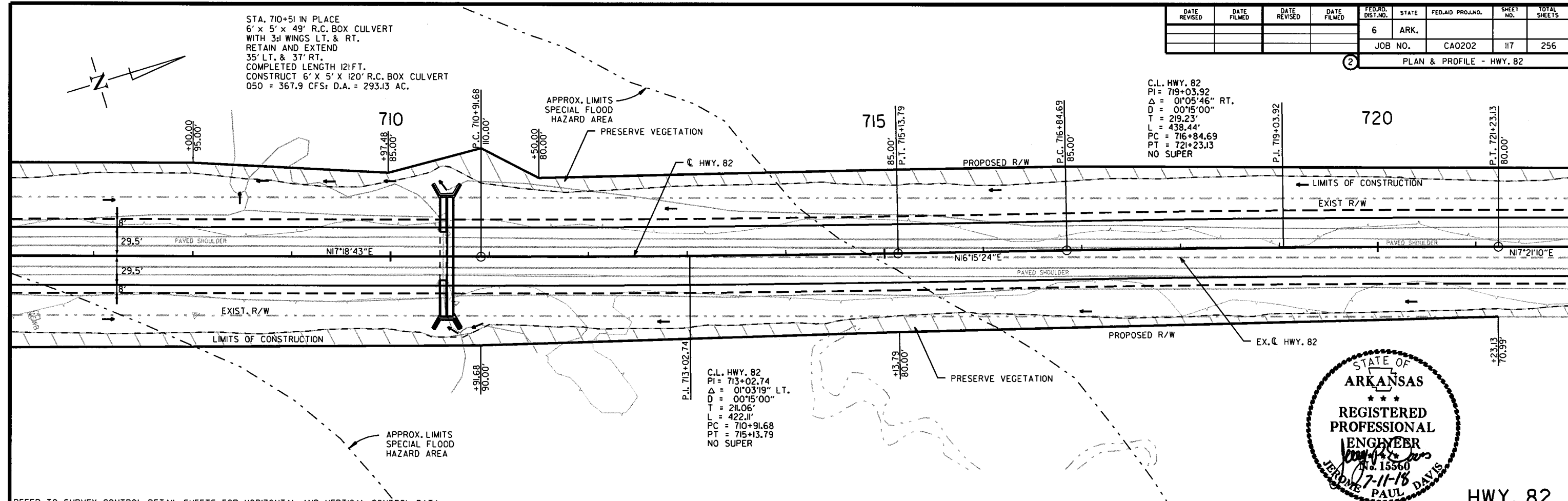
PLAN & PROFILE - HWY. 82

C.L. HWY. 82  
 PI = 719+03.92  
 $\Delta = 01^{\circ}05'46''$  RT.  
 $D = 00^{\circ}15'00''$   
 $T = 219.23'$   
 $L = 438.44'$   
 PC = 716+84.69  
 PT = 721+23.13  
 NO SUPER

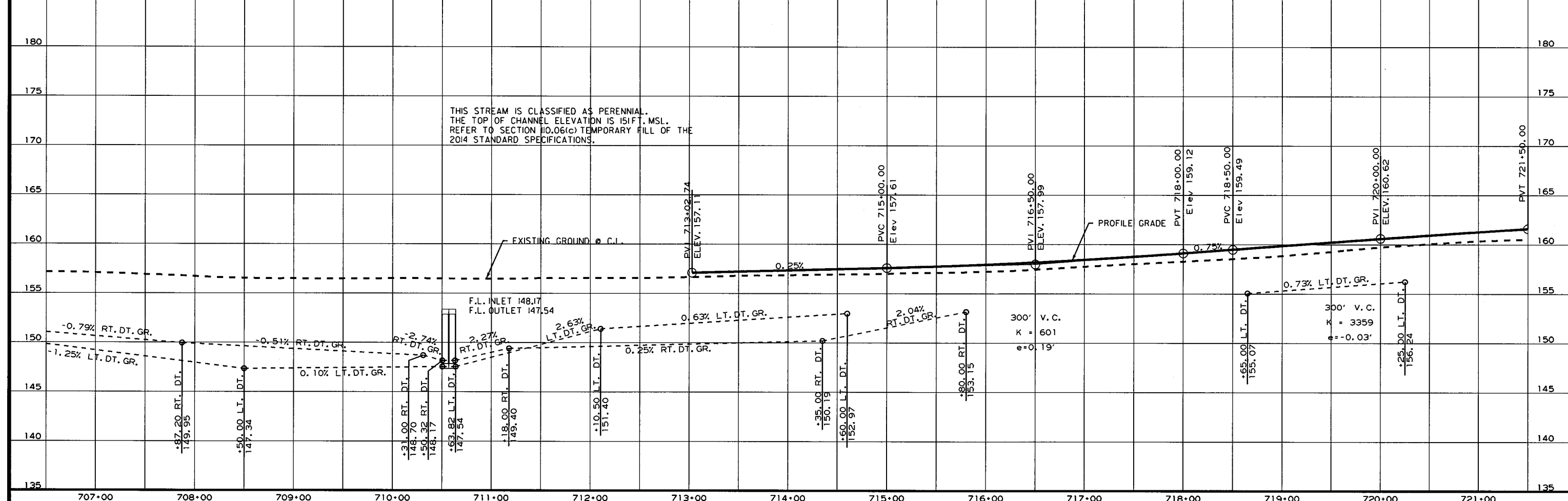
C.L. HWY. 82  
 PI = 713+02.74  
 $\Delta = 01^{\circ}03'19''$  LT.  
 $D = 00^{\circ}15'00''$   
 $T = 211.06'$   
 $L = 422.11'$   
 PC = 710+91.68  
 PT = 715+13.79  
 NO SUPER



HWY. 82



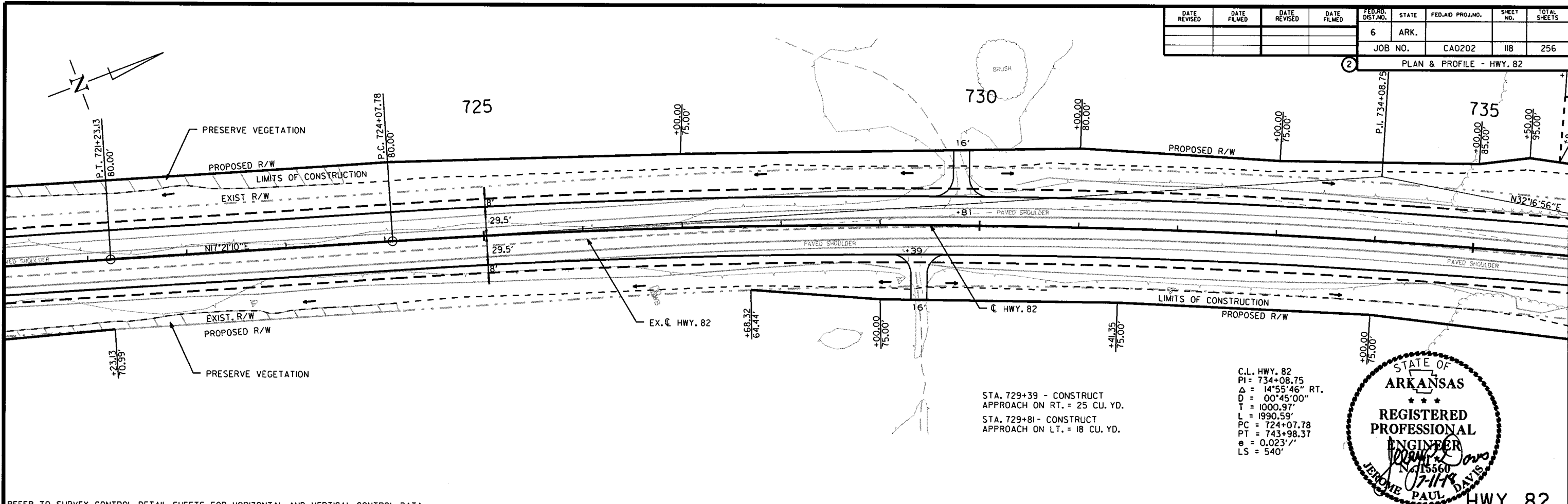
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



USER: f553  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DCGN\Plan.&Profile\CA0202\_PP\_HWY-82\_003.dgn  
 MODEL: Plan n Profile Sheets  
 PLOTTED: 7/10/2018 10:32  
 SCALE: 100%

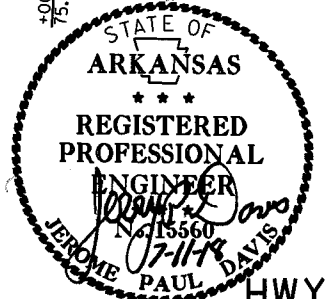
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	118	256	

PLAN & PROFILE - HWY. 82

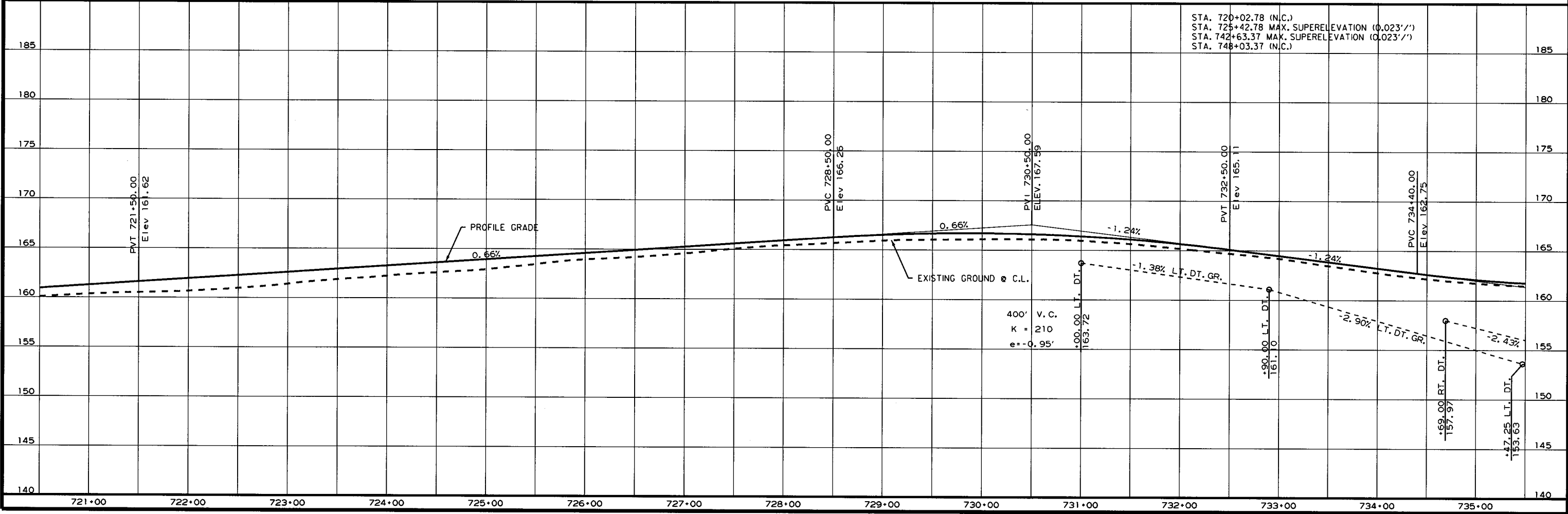


STA. 729+39 - CONSTRUCT  
APPROACH ON RT. = 25 CU. YD.  
STA. 729+81 - CONSTRUCT  
APPROACH ON LT. = 18 CU. YD.

C.L. HWY. 82  
PI = 734+08.75  
 $\Delta = 14^{\circ}55'46''$  RT.  
D = 00'45"00"  
T = 1000.97'  
L = 1990.59'  
PC = 724+07.78  
PT = 743+98.37  
e = 0.023'/'  
LS = 540'



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



STA. 720+02.78 (N.C.)  
STA. 725+42.78 MAX. SUPERELEVATION (0.023'/'')  
STA. 742+63.37 MAX. SUPERELEVATION (0.023'/'')  
STA. 748+03.37 (N.C.)

USER: f69j3  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\Plan\_&Profile\CA0202\_PP\_HWY\_82\_014.dgn  
MODEL: Plan n Profile Sheets  
SCALE: 100'  
PLOTTED: 7/10/2018 10:32

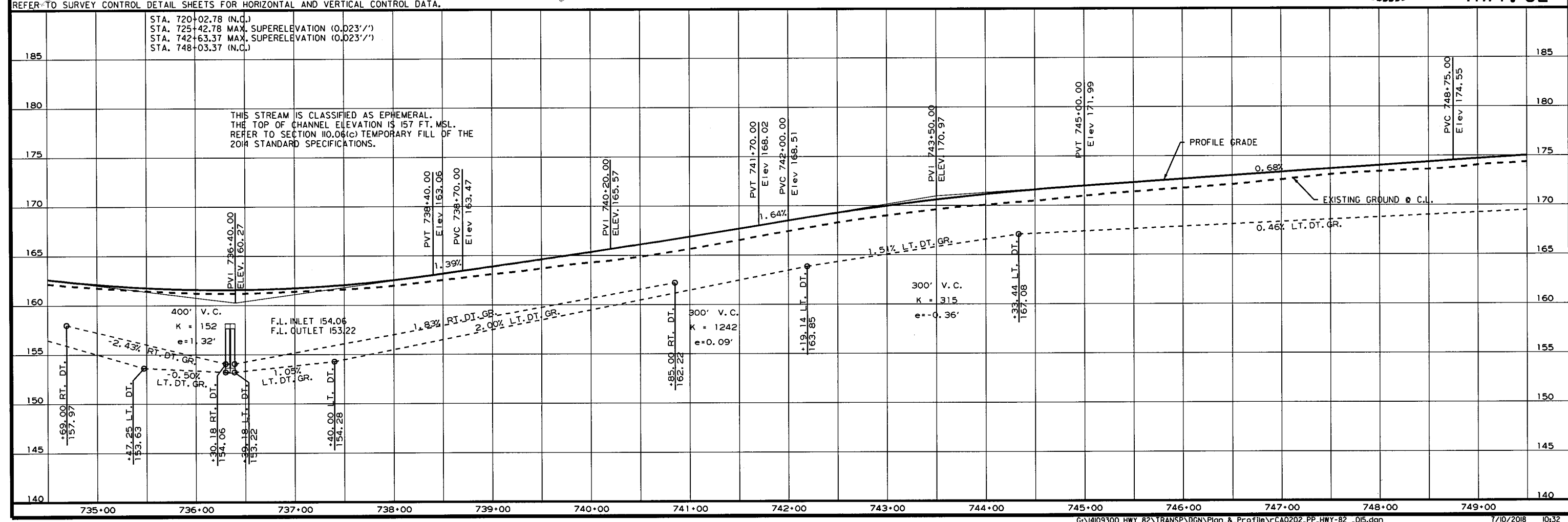
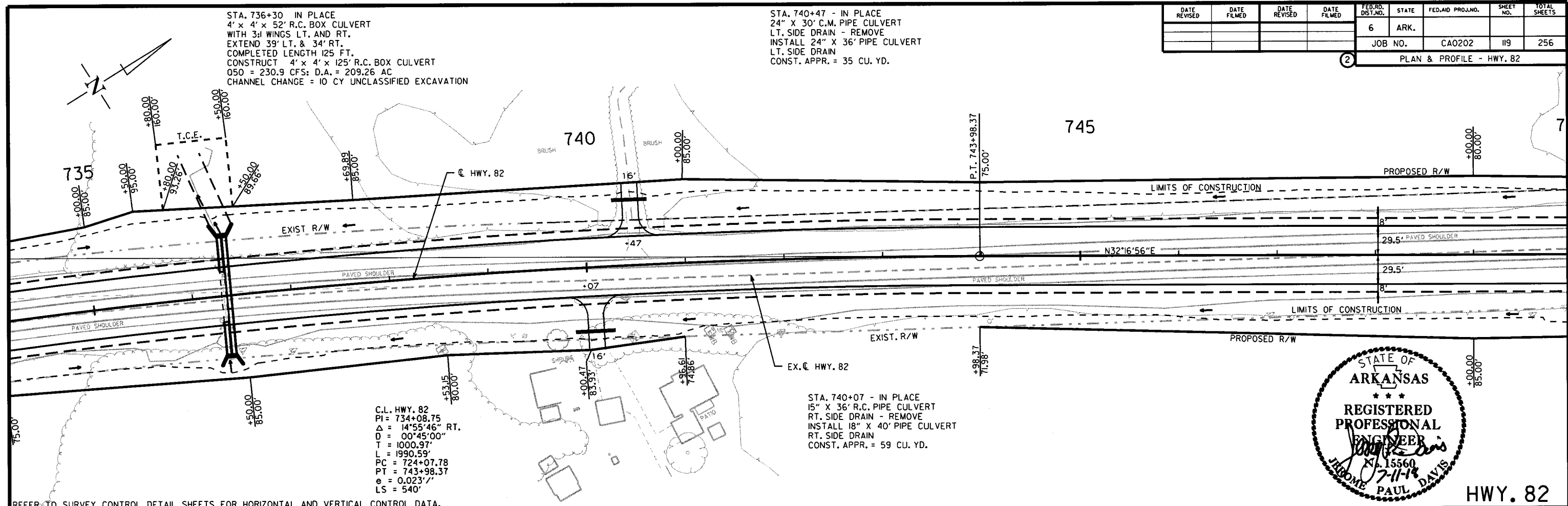
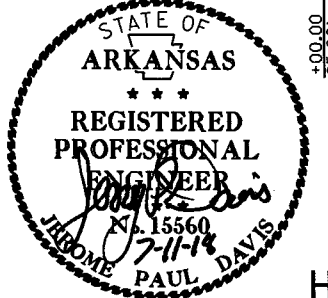
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		119	256
				PLAN & PROFILE - HWY. 82				

STA. 736+30 IN PLACE  
 4' x 4' x 52' R.C. BOX CULVERT  
 WITH 3½ WINGS LT. AND RT.  
 EXTEND 39' LT. & 34' RT.  
 COMPLETED LENGTH 125 FT.  
 CONSTRUCT 4' x 4' x 125' R.C. BOX CULVERT  
 Q50 = 230.9 CFS; D.A. = 209.26 AC  
 CHANNEL CHANGE = 10 CY UNCLASSIFIED EXCAVATION

STA. 740+47 - IN PLACE  
 24" x 30" C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 24" x 36" PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 35 CU. YD.

STA. 740+07 - IN PLACE  
 15" x 36" R.C. PIPE CULVERT  
 RT. SIDE DRAIN - REMOVE  
 INSTALL 18" x 40" PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 59 CU. YD.

C.L. HWY. 82  
 PI = 734+08.75  
 $\Delta = 14^{\circ}55'46''$  RT.  
 D = 00°45'00"  
 T = 1000.97'  
 L = 1990.59'  
 PC = 724+07.78  
 PT = 743+98.37  
 e = 0.023' /'  
 LS = 540'



USER: fs513  
 DESIGN FILE: G:\14109300\HWY.82\TRANSP\DCN\Plan\_&\_Profile\CA0202.PP\_Hwy-82\_015.dgn  
 PLOTTED: 7/10/2018 10:32  
 MODEL: Plan n Profile Sheets  
 SCALE: 100x

STA. 750+56 - IN PLACE  
 24" X 30' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 24" X 32' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 25 CU. YD.

C.L. HWY. 82  
 PI = 754+02.74  
 $\Delta = 01^{\circ}41'02''$  RT.  
 D = 00'30'00"  
 T = 168.40'  
 L = 336.78'  
 PC = 752+34.34  
 PT = 755+71.12  
 NO SUPER

STA. 756+81 - IN PLACE  
 18" X 25' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 33' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 20 CU. YD.

STA. 758+12 - IN PLACE  
 18" X 24' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 31' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 20 CU. YD.

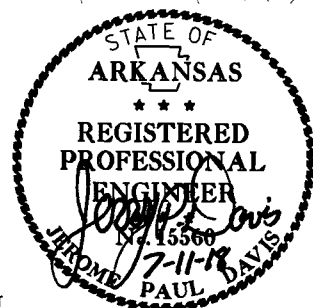
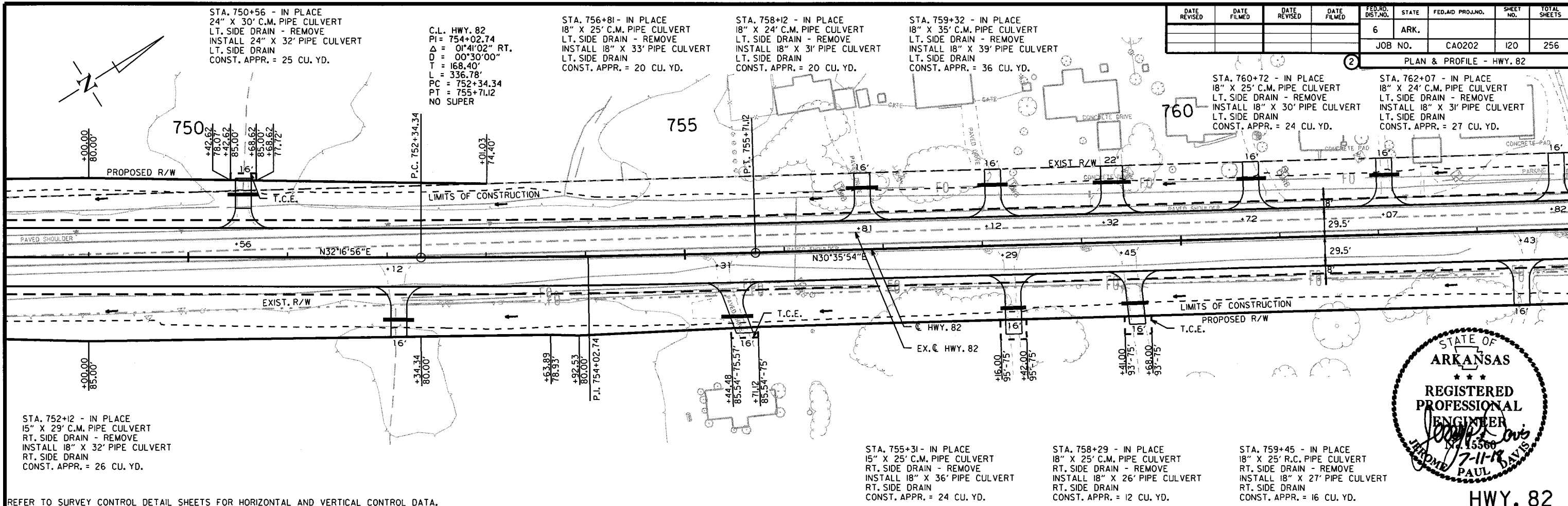
STA. 759+32 - IN PLACE  
 18" X 35' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 39' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 36 CU. YD.

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.	CA0202	I20	256	

PLAN & PROFILE - HWY. 82

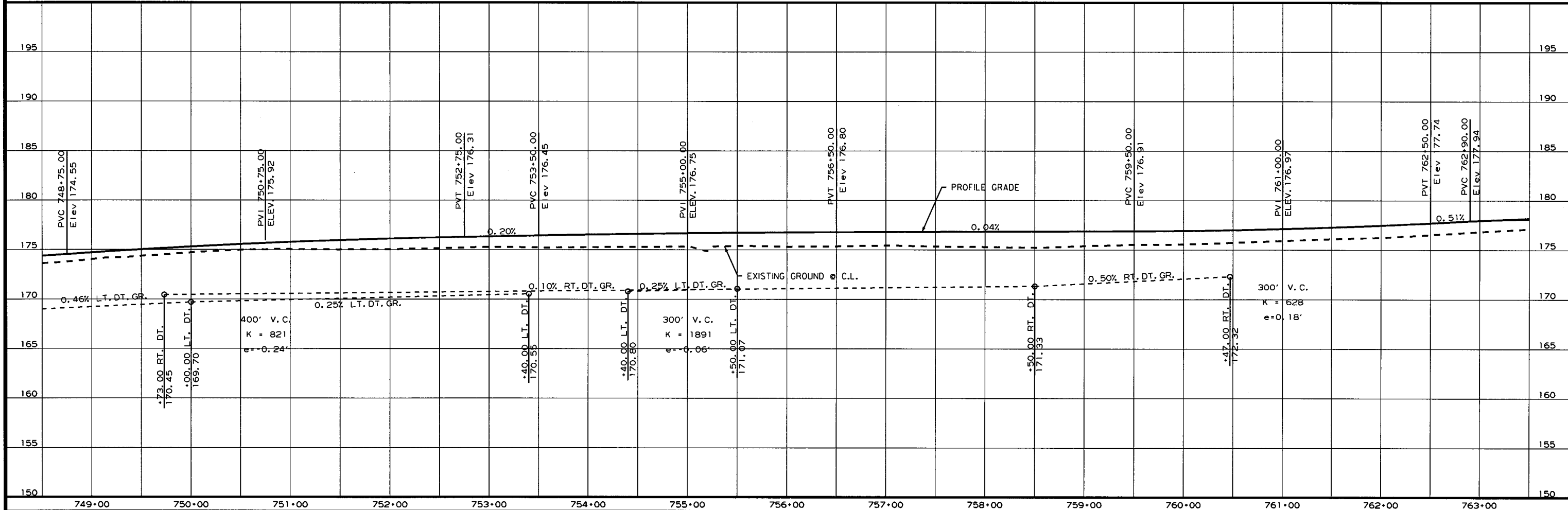
STA. 760+72 - IN PLACE  
 18" X 25' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 30' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 24 CU. YD.

STA. 762+07 - IN PLACE  
 18" X 24' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 31' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 27 CU. YD.



HWY. 82

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



USER: f6513  
 DESIGN FILE: G:\1409300.HWY.82\TRANSP\DCN\Plan. & Profile\CA0202.PP.HWY-82\_016.dgn  
 MODEL: Plan n Profile Sheets  
 PLOTTED: 7/10/2018 10:32



STA. 766+25 - IN PLACE  
18" X 41' R.C. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 34' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 35 CU. YD.

STA. 770+59 - IN PLACE  
24" X 30' C.M. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 24" X 37' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 26 CU. YD.

STA. 771+63 - IN PLACE  
24" X 48' C.M. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 24" X 53' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 86 CU. YD.

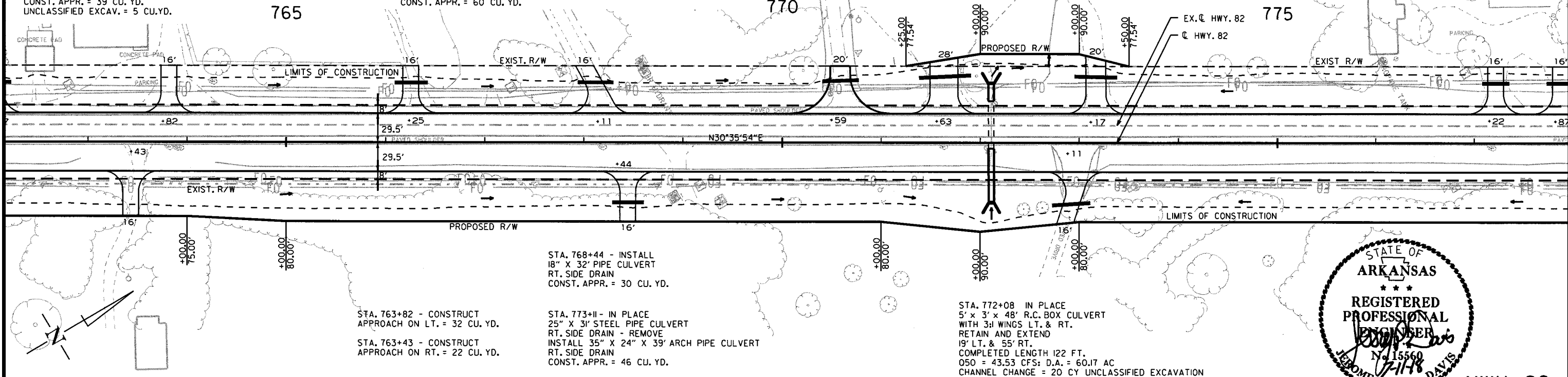
STA. 777+22 - IN PLACE  
18" X 38' C.M. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 28' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 19 CU. YD.

STA. 768+11 - IN PLACE  
15" X 20' C.M. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 36' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 39 CU. YD.  
UNCLASSIFIED EXCAV. = 5 CU. YD.

STA. 773+17 - IN PLACE  
24" X 36' C.M. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 24" X 43' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 60 CU. YD.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	121	256	

2 PLAN & PROFILE - HWY. 82



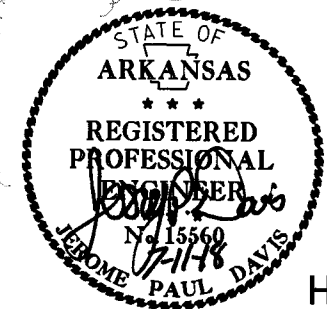
STA. 763+82 - CONSTRUCT  
APPROACH ON LT. = 32 CU. YD.

STA. 763+43 - CONSTRUCT  
APPROACH ON RT. = 22 CU. YD.

STA. 768+44 - INSTALL  
18" X 32' PIPE CULVERT  
RT. SIDE DRAIN  
CONST. APPR. = 30 CU. YD.

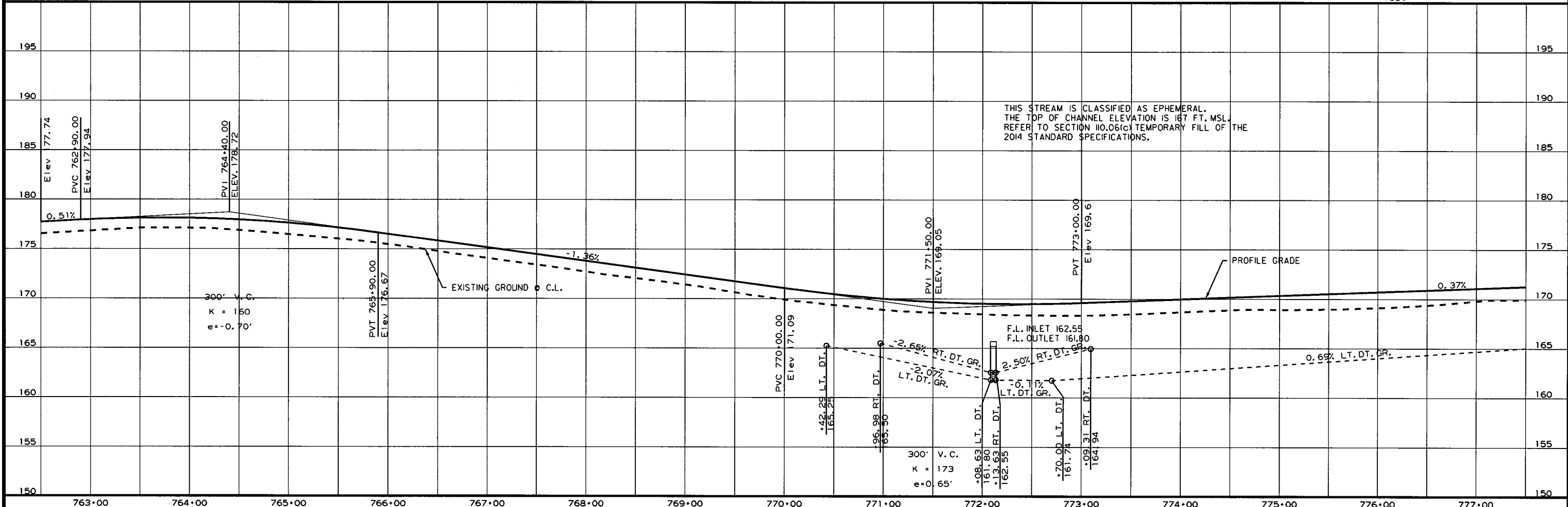
STA. 773+11 - IN PLACE  
25" X 31' STEEL PIPE CULVERT  
RT. SIDE DRAIN - REMOVE  
INSTALL 35" X 24" X 39' ARCH PIPE CULVERT  
RT. SIDE DRAIN  
CONST. APPR. = 46 CU. YD.

STA. 772+08 IN PLACE  
5' X 3' X 48' R.C. BOX CULVERT  
WITH 3/4 WINGS LT. & RT.  
RETAIN AND EXTEND  
19' LT. & 55' RT.  
COMPLETED LENGTH 122 FT.  
050 = 43.53 CFS; D.A. = 60.17 AC  
CHANNEL CHANGE = 20 CY UNCLASSIFIED EXCAVATION



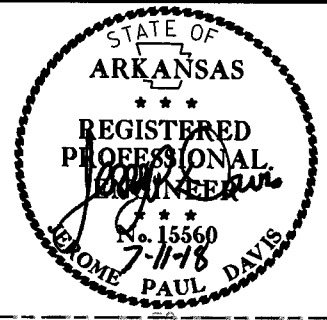
HWY. 82

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



USER: f853  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Plan\_& Profile\CA0202.PP\_HWY-82\_017.dgn  
PLOTTED: 7/10/2018 10:32  
MODEL: Plan n Profile Sheets  
SCALE: 100ft

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		122	256
				JOB NO. CA0202		PLAN & PROFILE - HWY. 82		

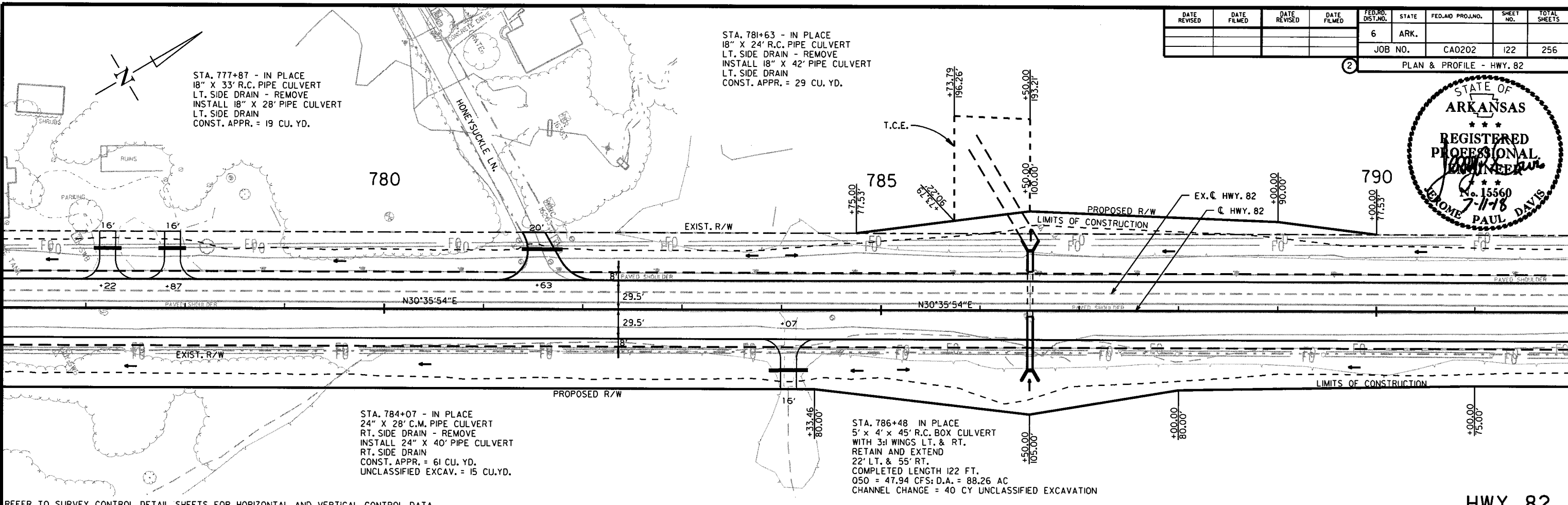


STA. 777+87 - IN PLACE  
18" X 33' R.C. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 28' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 19 CU. YD.

STA. 781+63 - IN PLACE  
18" X 24' R.C. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 18" X 42' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 29 CU. YD.

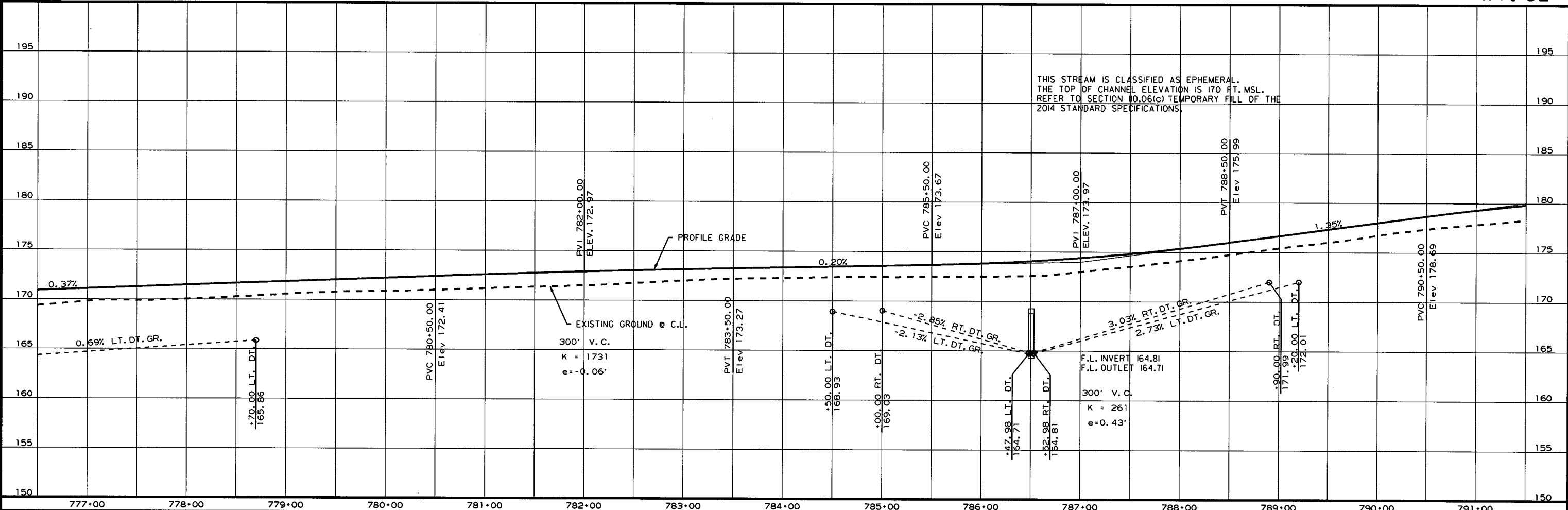
STA. 784+07 - IN PLACE  
24" X 28' C.M. PIPE CULVERT  
RT. SIDE DRAIN - REMOVE  
INSTALL 24" X 40' PIPE CULVERT  
RT. SIDE DRAIN  
CONST. APPR. = 61 CU. YD.  
UNCLASSIFIED EXCAV. = 15 CU. YD.

STA. 786+48 IN PLACE  
5' x 4' x 45' R.C. BOX CULVERT  
WITH 3:1 WINGS LT. & RT.  
RETAIN AND EXTEND  
22' LT. & 55' RT.  
COMPLETED LENGTH 122 FT.  
Q50 = 47.94 CFS; D.A. = 88.26 AC  
CHANNEL CHANGE = 40 CY UNCLASSIFIED EXCAVATION



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

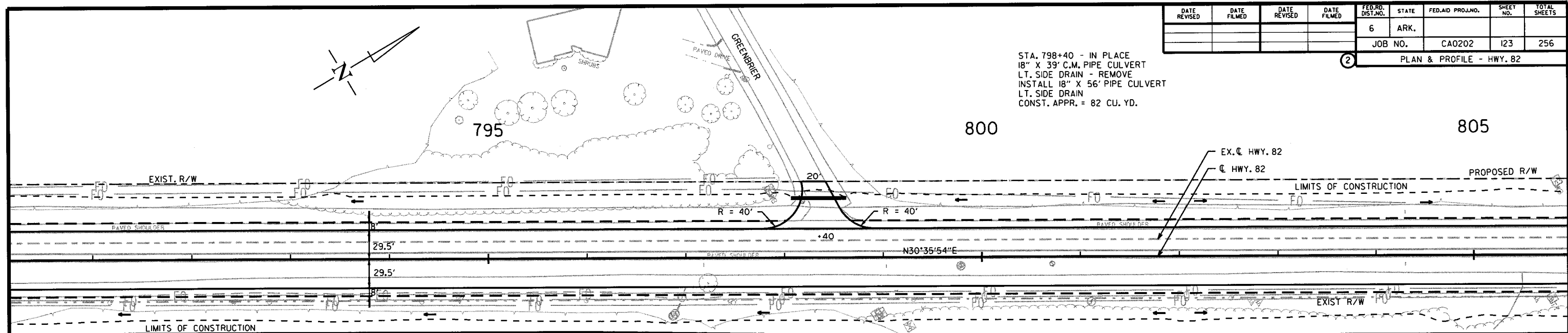
HWY. 82



USER: f853  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCM\Plan\_&.Profile\CA0202.PP\_HWY-82\_018.dgn  
MODEL: Plan n Profile Sheets  
PLOTTED: 7/10/2018 10:32  
SCALE: 100:1

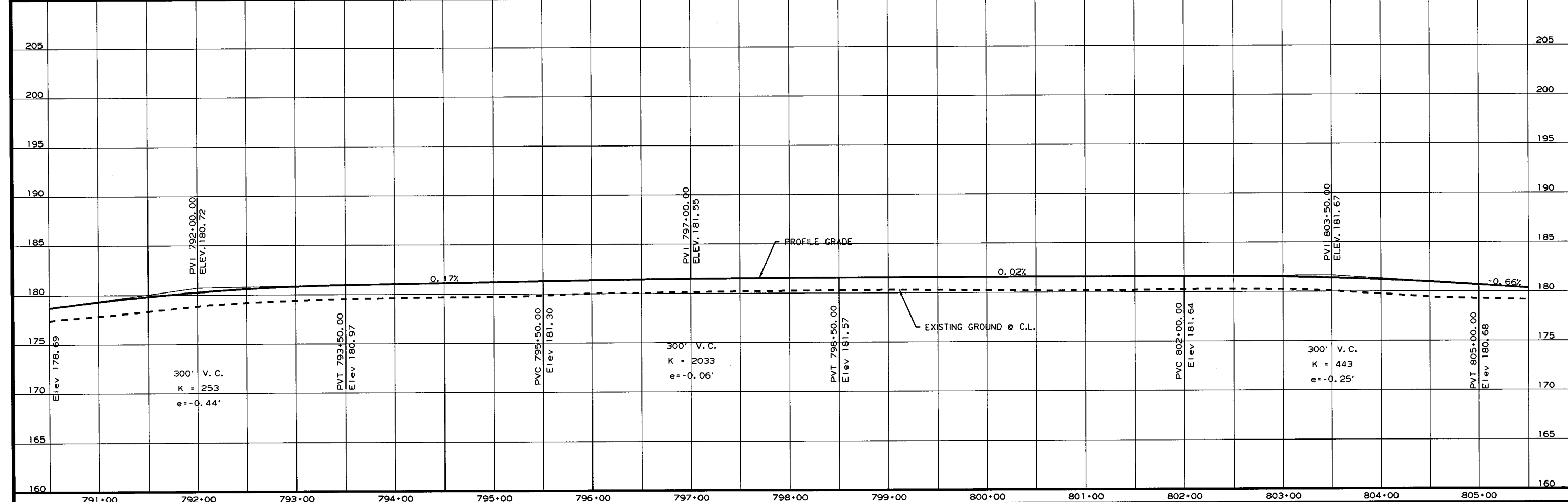
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. NO. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	I23	256	
PLAN & PROFILE - HWY. 82								

STA. 798+40 - IN PLACE  
 18" X 39' C.M. PIPE CULVERT  
 LT. SIDE DRAIN - REMOVE  
 INSTALL 18" X 56' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 82 CU. YD.



HWY. 82

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



USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Plan\_&\_Profile\CA0202\_PP\_Hwy-82\_019.dgn  
 PLOTTED: 7/10/2018 10:32  
 MODEL: Plan n Profile Sheets  
 SCALE: 10:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	124	256	

PLAN & PROFILE - HWY. 82

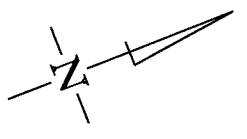
STA. 806+48 - IN PLACE  
18" X 41' C.M. PIPE CULVERT  
RT. SIDE DRAIN - REMOVE  
INSTALL 18" X 36' PIPE CULVERT  
RT. SIDE DRAIN  
CONST. APPR. = 85 CU. YD.

STA. 819+24 - IN PLACE  
30" X 40' R.C. PIPE CULVERT  
LT. SIDE DRAIN - REMOVE  
INSTALL 30" X 40' PIPE CULVERT  
LT. SIDE DRAIN  
CONST. APPR. = 59 CU. YD.  
UNCLASSIFIED EXCAV. = 10 CU. YD.

STA. 813+16 - IN PLACE  
24" X 35' R.C. PIPE CULVERT  
RT. SIDE DRAIN - REMOVE  
INSTALL 24" X 70' PIPE CULVERT  
RT. SIDE DRAIN  
CONST. APPR. = 114 CU. YD.

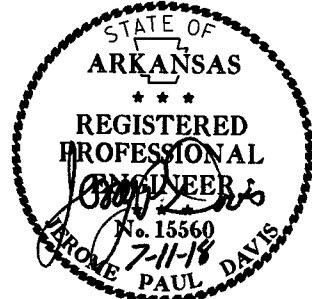
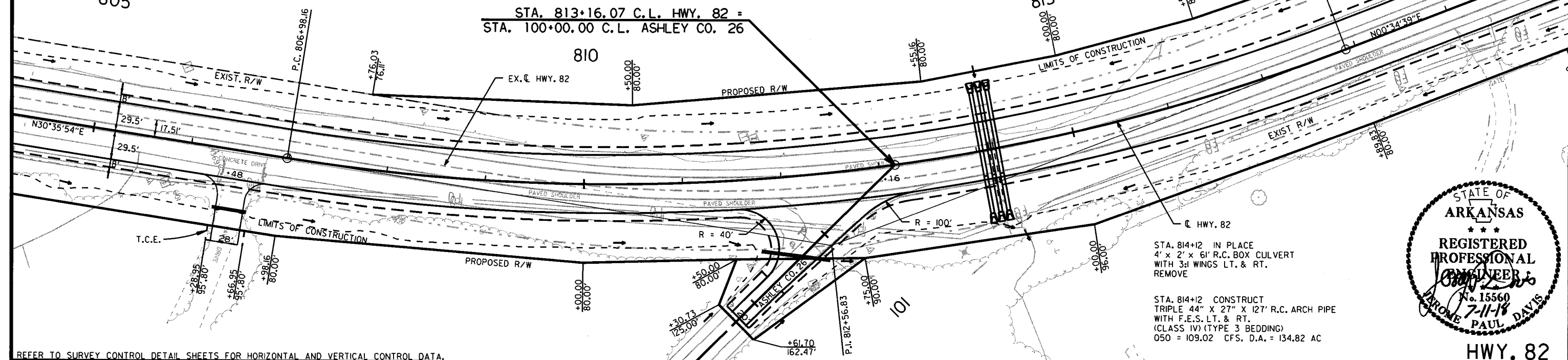
STA. 819+24 - IN PLACE  
24" X 29' C.M. PIPE CULVERT  
RT. SIDE DRAIN - REMOVE

C.L. HWY. 82  
PI = 812+56.83  
 $\Delta = 30^{\circ}01'15''$  LT.  
D = 02'45'00"  
T = 558.67  
L = 1091.67  
PC = 806+98.16  
PT = 817+89.83  
e = 0.072'/'  
LS = 540'



805

STA. 813+16.07 C.L. HWY. 82 =  
STA. 100+00.00 C.L. ASHLEY CO. 26

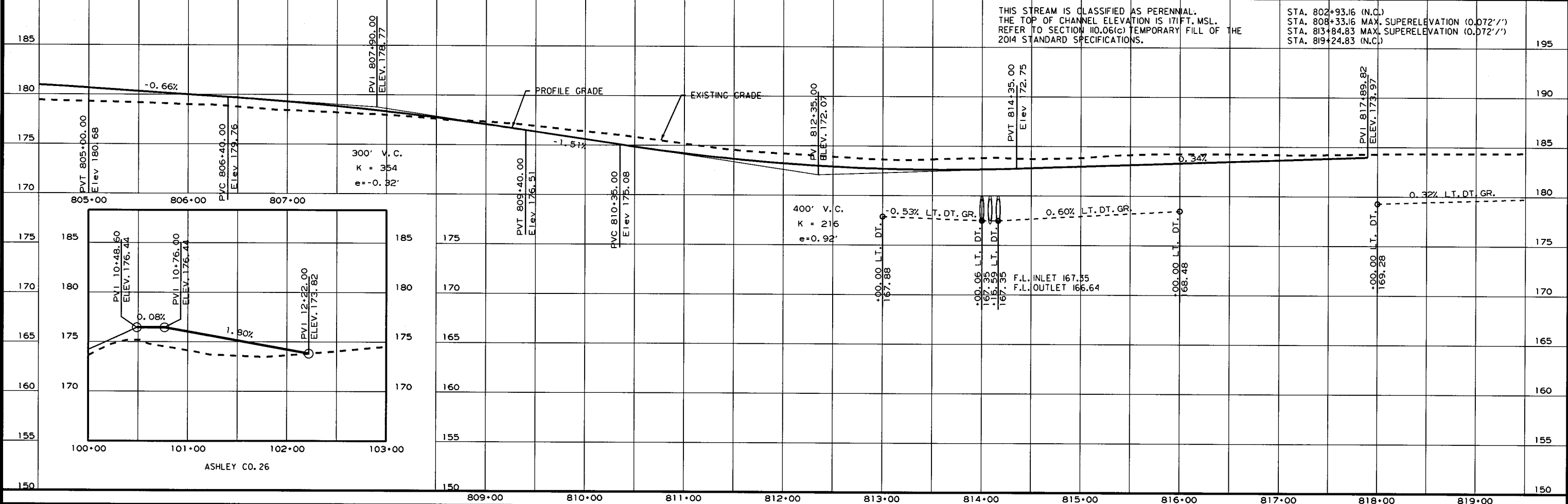


STA. 814+12 IN PLACE  
4' x 2' x 6' R.C. BOX CULVERT  
WITH 31 WINGS LT. & RT.  
REMOVE

STA. 814+12 CONSTRUCT  
TRIPLE 44" X 27" X 12' R.C. ARCH PIPE  
WITH F.E.S. LT. & RT.  
(CLASS IV) (TYPE 3 BEDDING)  
050 = 109.02 CFS. D.A. = 134.82 AC

HWY. 82

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



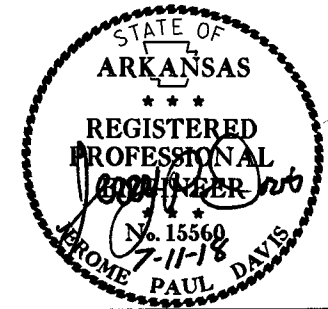
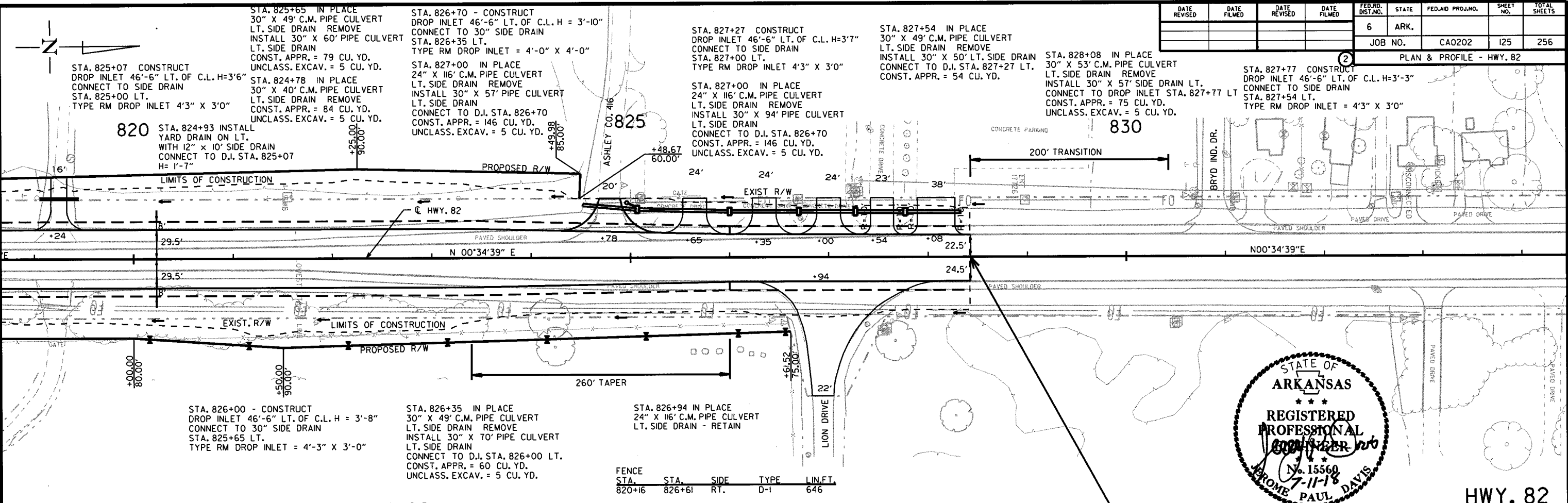
THIS STREAM IS CLASSIFIED AS PERENNIAL.  
THE TOP OF CHANNEL ELEVATION IS 171 FT. MSL.  
REFER TO SECTION 10.06(c) TEMPORARY FILL OF THE  
2014 STANDARD SPECIFICATIONS.

STA. 802+93.16 (N.C.)  
STA. 808+33.16 MAX. SUPERELEVATION (0.072'/' )  
STA. 813+84.83 MAX. SUPERELEVATION (0.072'/' )  
STA. 819+24.83 (N.C.)

USER: f8513  
DESIGN FILE: G:\4109300.HWY\_82\TRANSP\DCN\Plan\_&Profile\CA0202.PP\_HWY-82\_020.dgn  
MODEL: Plan n Profile Sheets  
SCALE: 10:1  
PLOTED: 7/10/2018 10:32

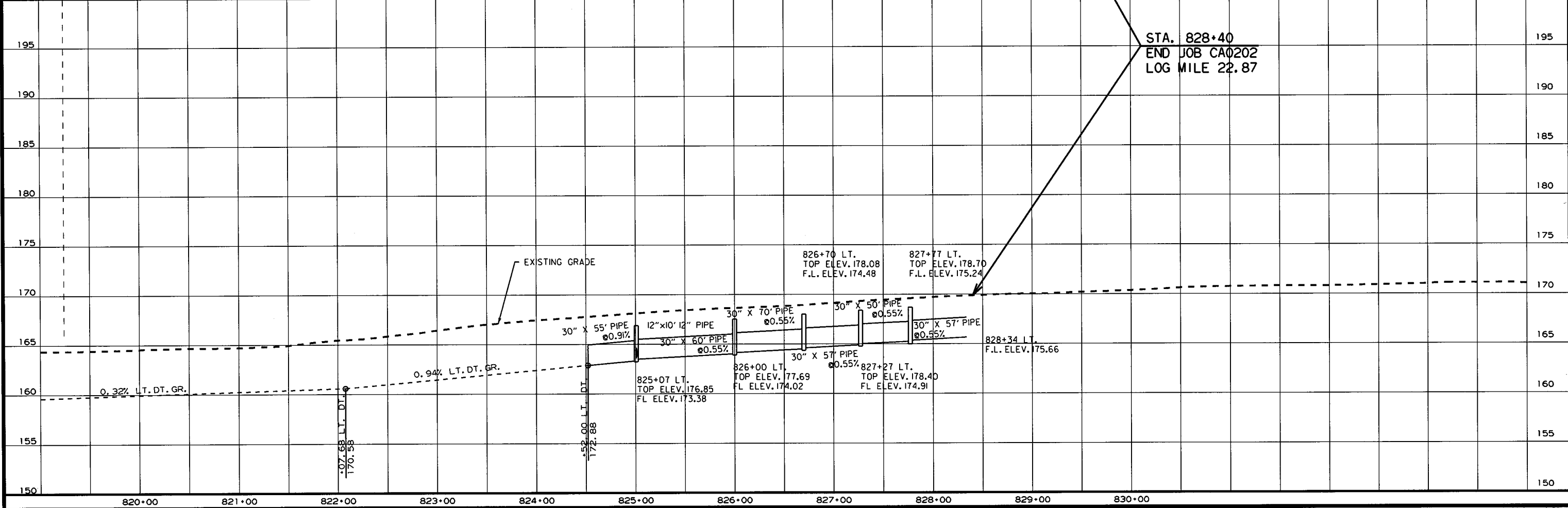
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	125	256	

PLAN & PROFILE - HWY. 82



FENCE STA.	STA.	SIDE	TYPE	LN. FT.
820+16	826+61	RT.	D-1	646

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



USER: f6513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\Plan.&.Profile\CA0202.PP.HWY-82 .021.dgn  
 PLOTTED: 7/10/2018 10:32  
 MODEL: Plan n Profile Sheets  
 SCALE: 100ft

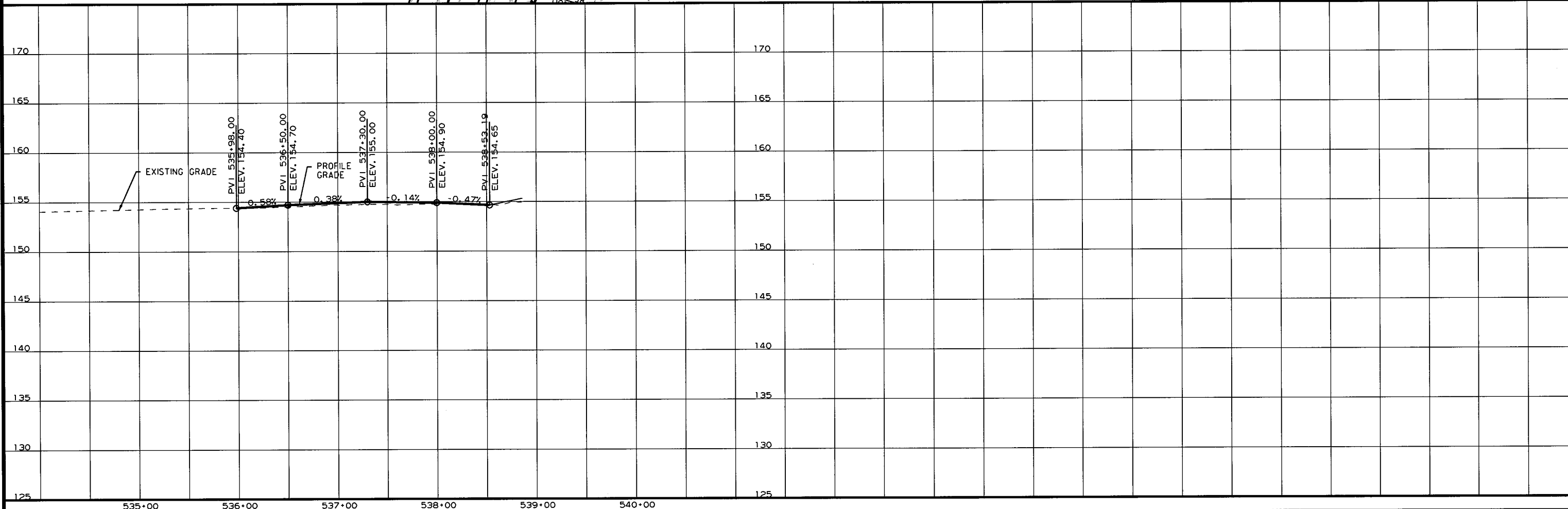
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	126	256	

2 PLAN & PROFILE - HWY. 52W



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

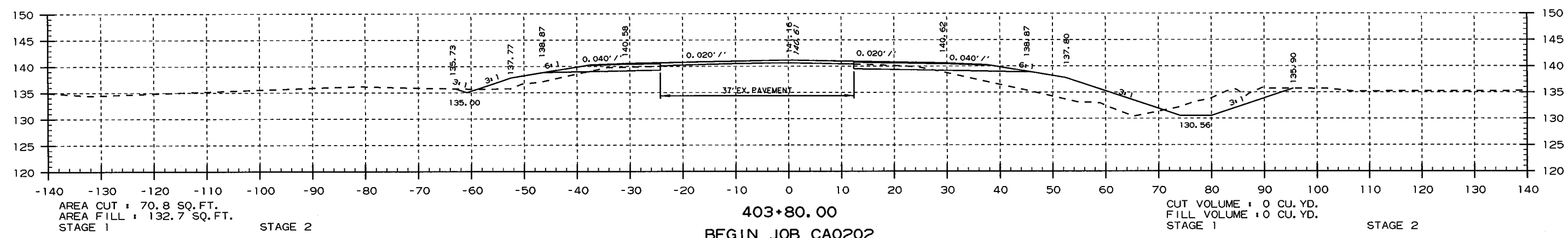
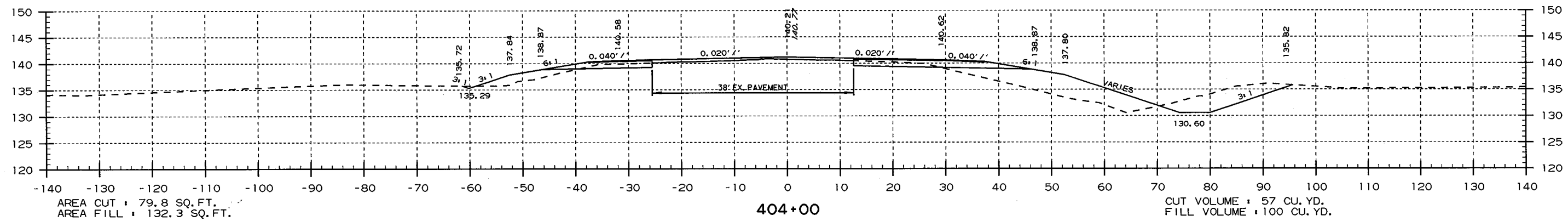
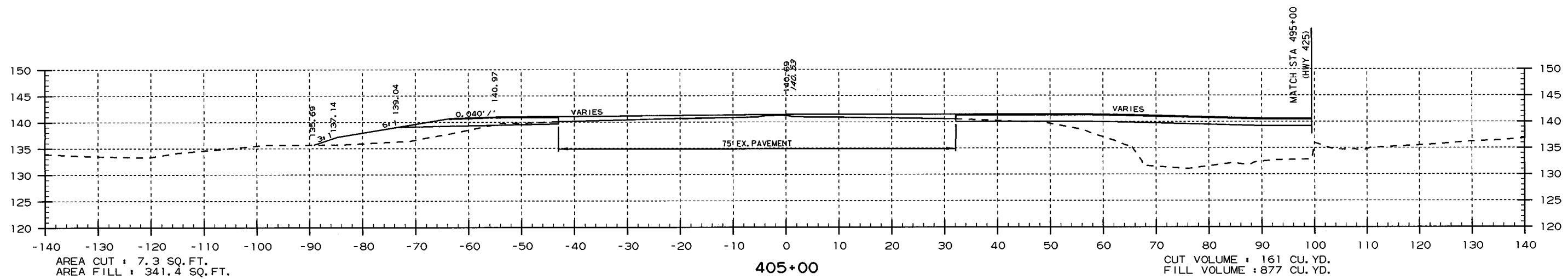
HWY. 52W



USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\Plan.&\_Profile\CA0202\_PP\_Hwy-82\_022.dgn  
 PLOTTED: 7/10/2018 10:32  
 MODEL: Plan n Profile Sheets  
 SCALE: 100ft

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.	CA0202	127	256	

2 CROSS SECTIONS



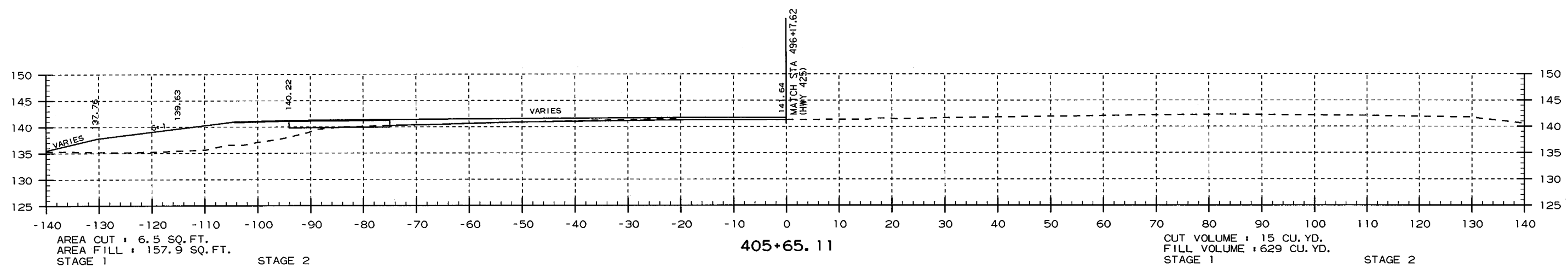
BEGIN JOB CA0202

CROSS SECTION STA. 403+80 TO STA. 405+00

USER: fs513  
DESIGN FILE: G:\4109300.HWY\_82\TRANSP\DGN\X\_Sect\Sections\CA0202.CX\_0300.dgn  
PLOTTED: 7/10/2018 10:36 SCALE: 20:1

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.	CA0202		128	256

② CROSS SECTIONS



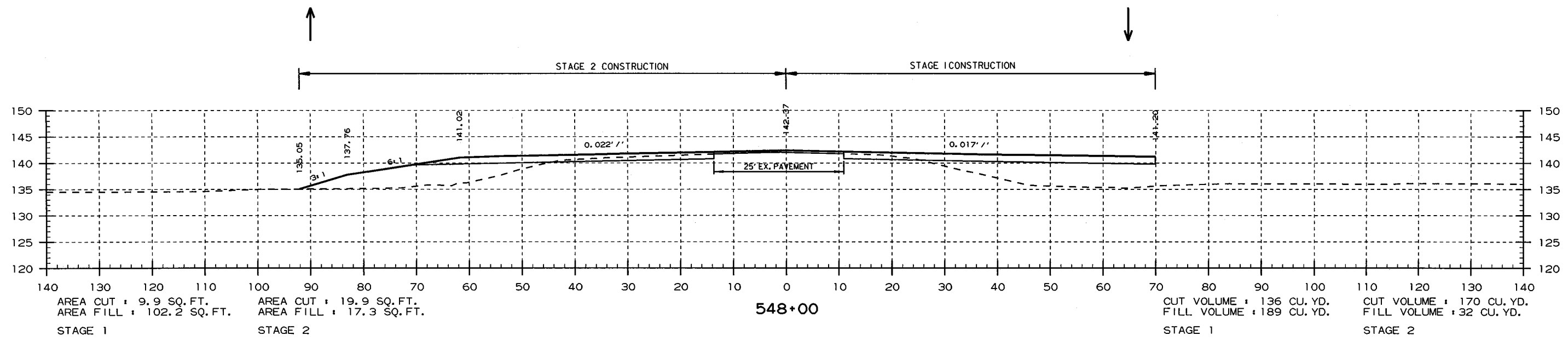
CROSS SECTION STA. 405+65.11 TO STA. 405+65.11

USER: f513  
DESIGN FILE: G:\4109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0301.dgn  
PLOTTED: 7/10/2018 10:36 SCALE: 20:1



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	129	256	

2 CROSS SECTIONS

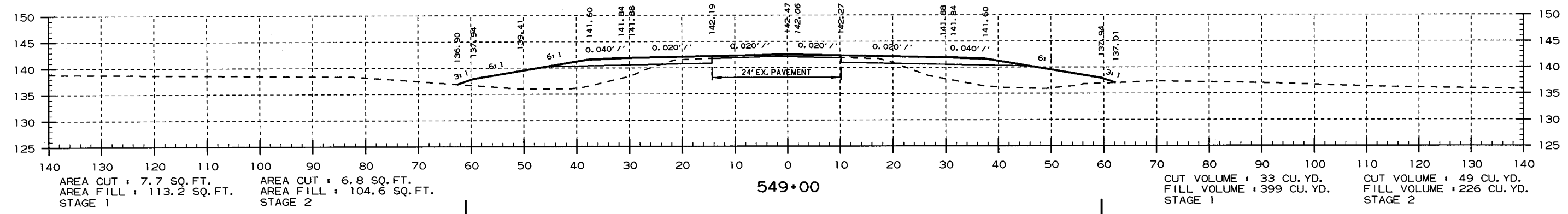
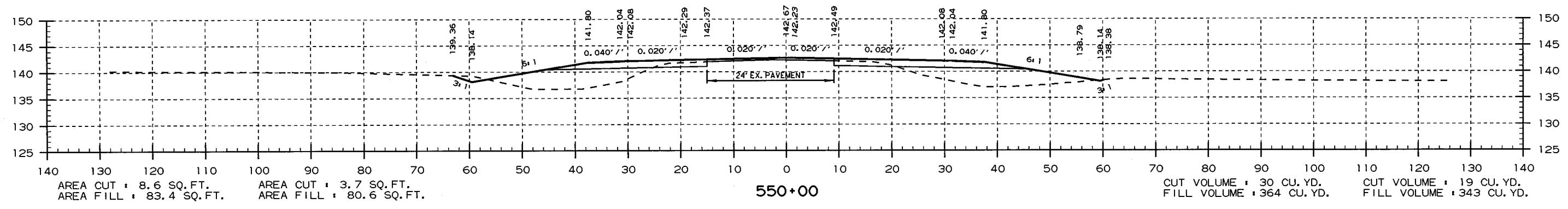
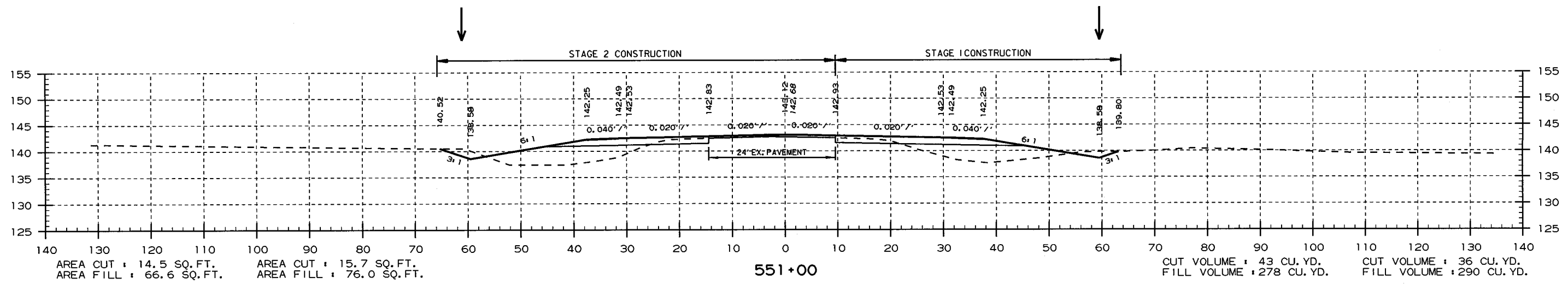


CROSS SECTION STA. 546+00 TO STA. 548+00

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0001.dgn  
 PLOTTED: 7/10/2018 10:36

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0202	130	256

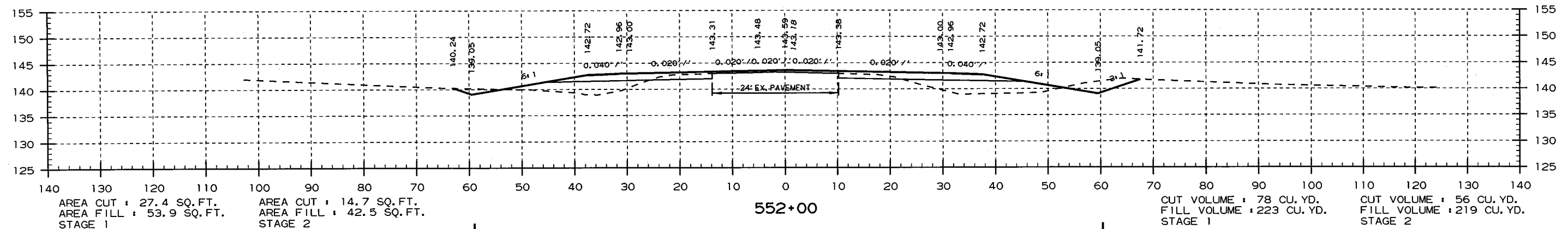
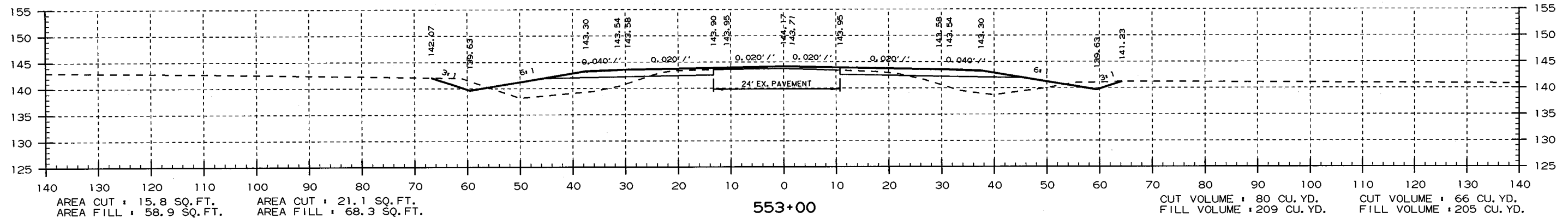
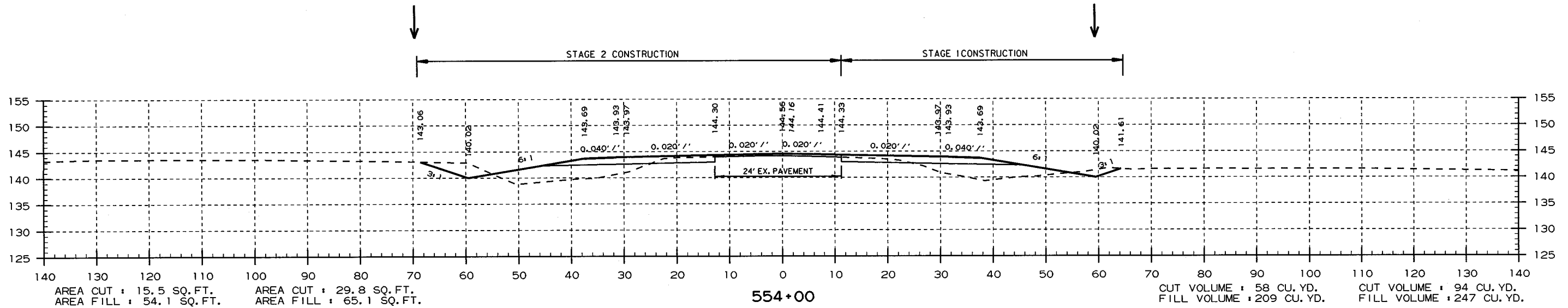
2 CROSS SECTIONS



CROSS SECTION STA. 549+00 TO STA. 551+00

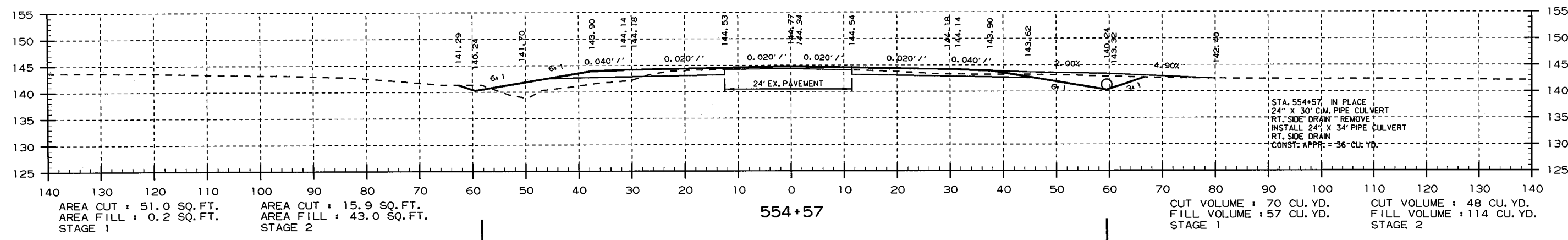
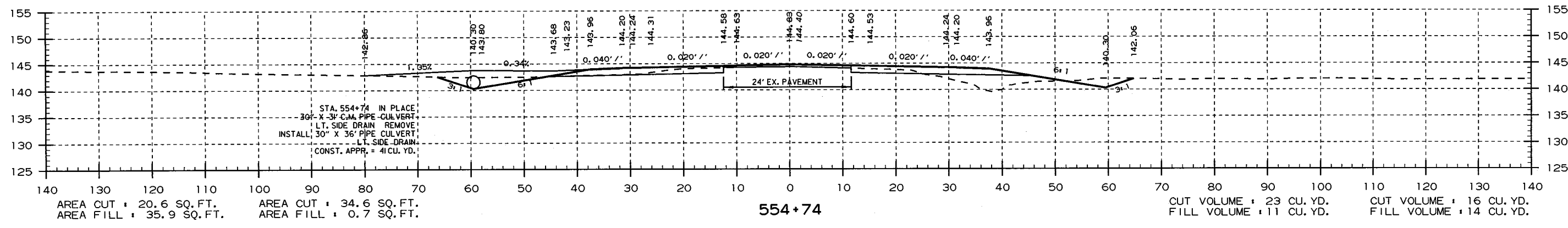
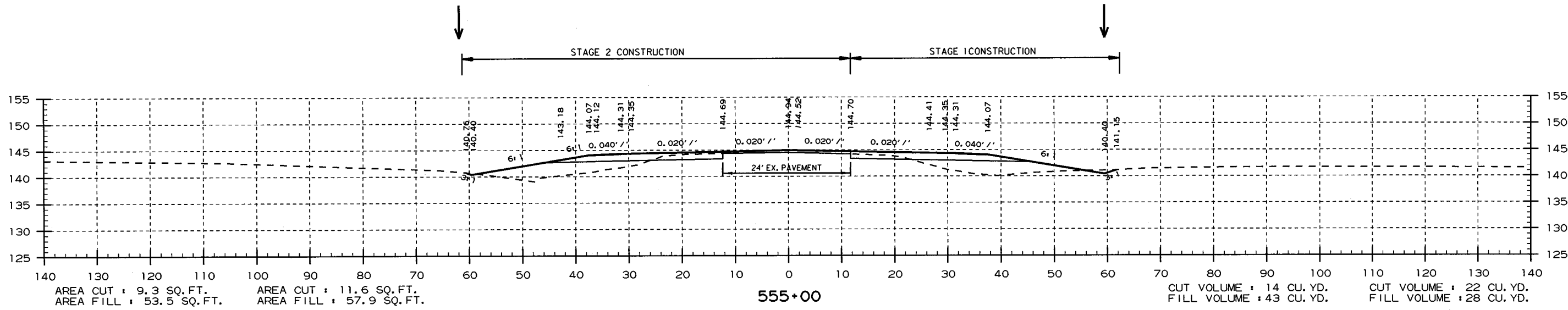
USER: fs513  
 DESIGN FILE: G:\1409300\_Hwy\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0002.dgn  
 PLOTTED: 7/10/2018 10:36 SCALE: 20'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	131	256	
				2 CROSS SECTIONS				



**CROSS SECTION STA. 552+00 TO STA. 554+00**

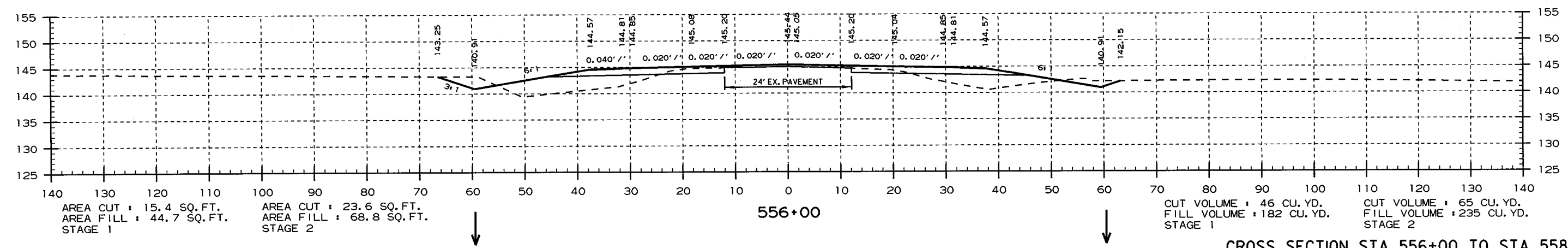
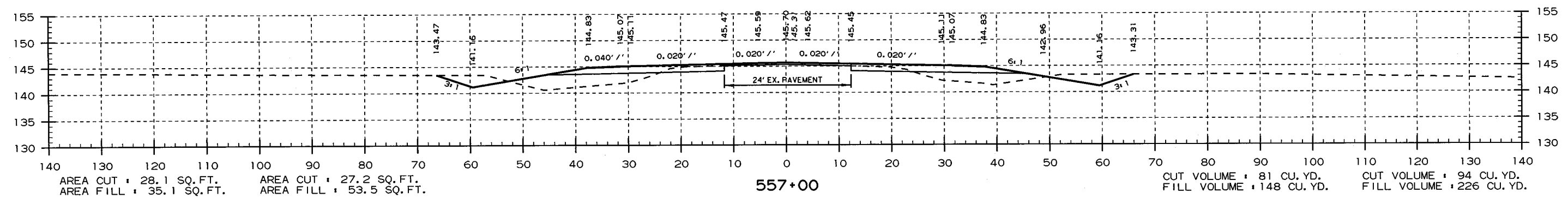
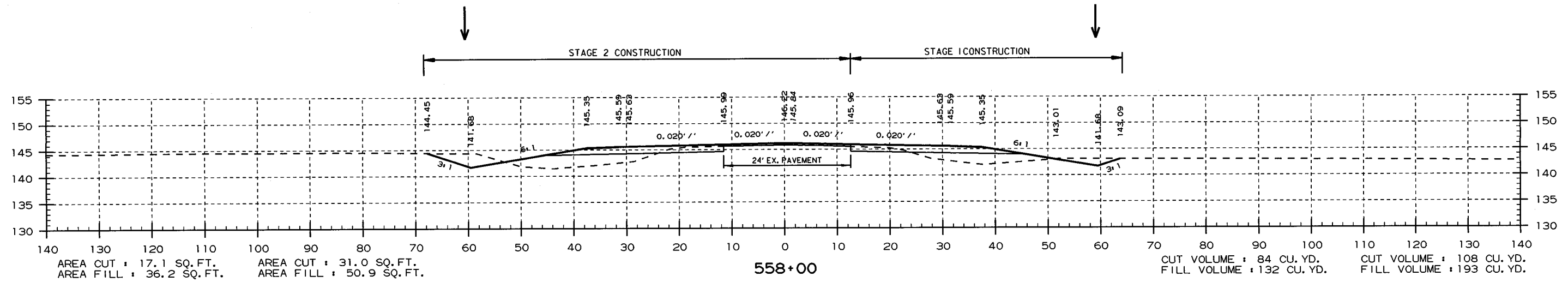
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	132	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 554+57 TO STA. 555+00

USER: f653  
 DESIGN FILE: G:\1409300\_Hwy\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0004.dgn  
 PLOTTED: 7/10/2018 10:36 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	133	256	
				2 CROSS SECTIONS				

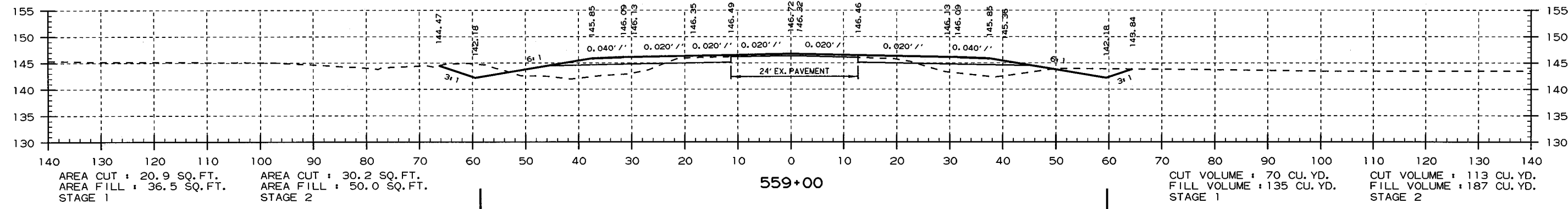
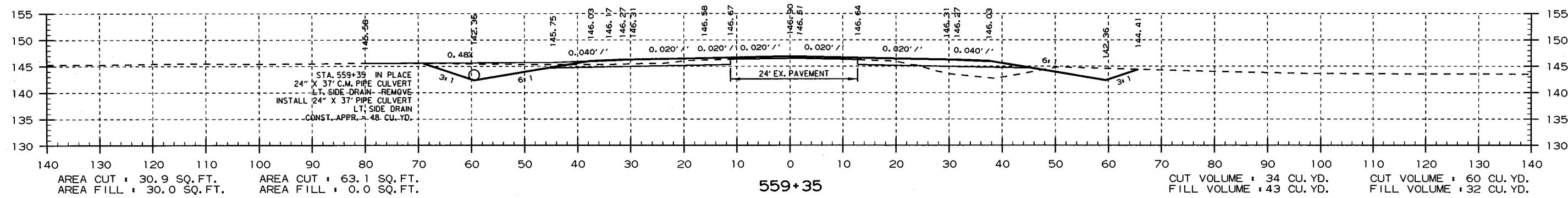
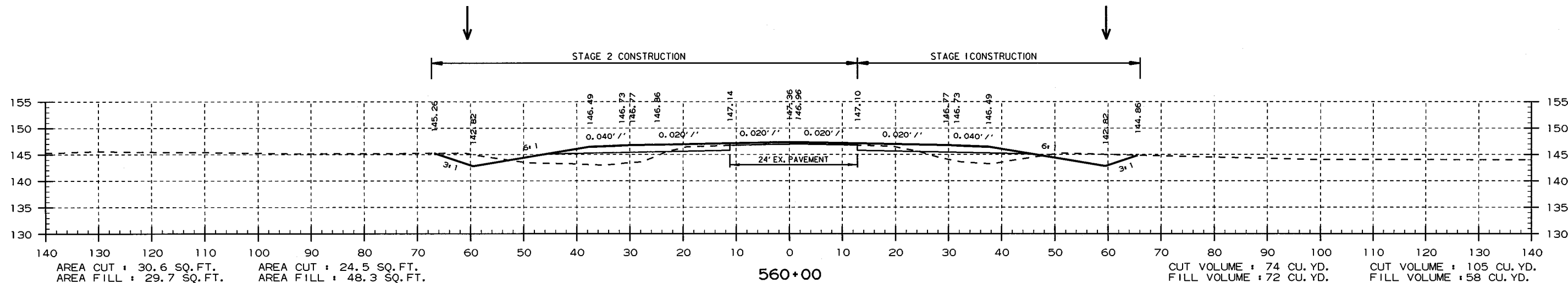


**CROSS SECTION STA. 556+00 TO STA. 558+00**

USER: f653  
 DESIGN FILE: G:\1409300\_HWY\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0005.dgn  
 PLOTTED: 7/10/2018 10:36 SCALE: 20:1

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.	CA0202	134	256	

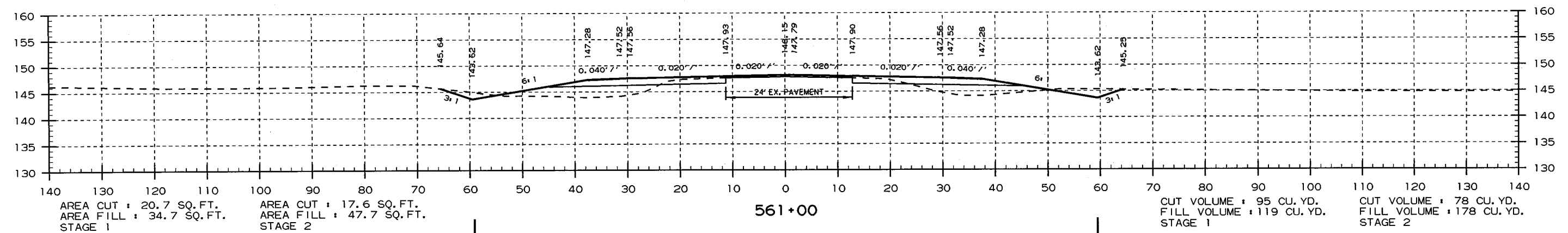
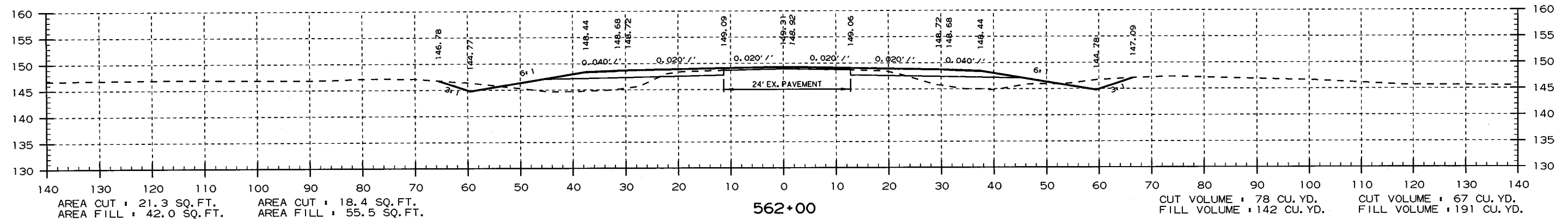
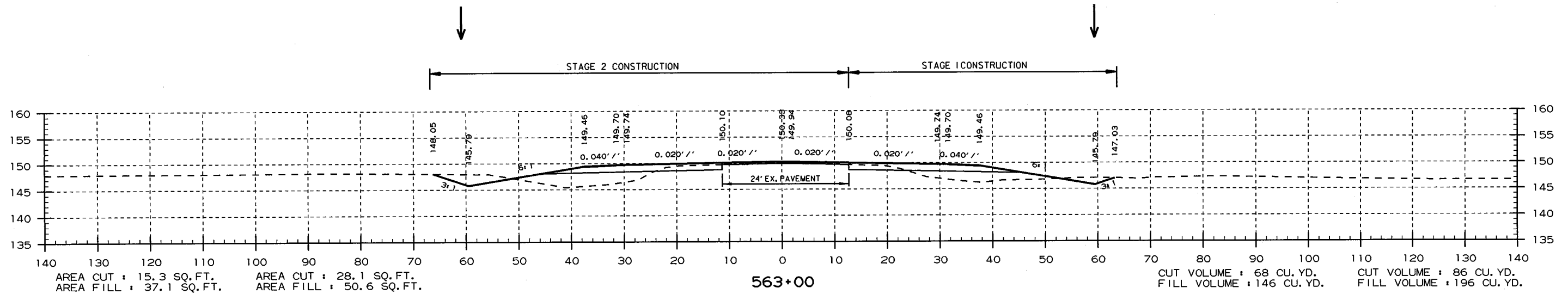
2 CROSS SECTIONS



CROSS SECTION STA. 559+00 TO STA. 560+00

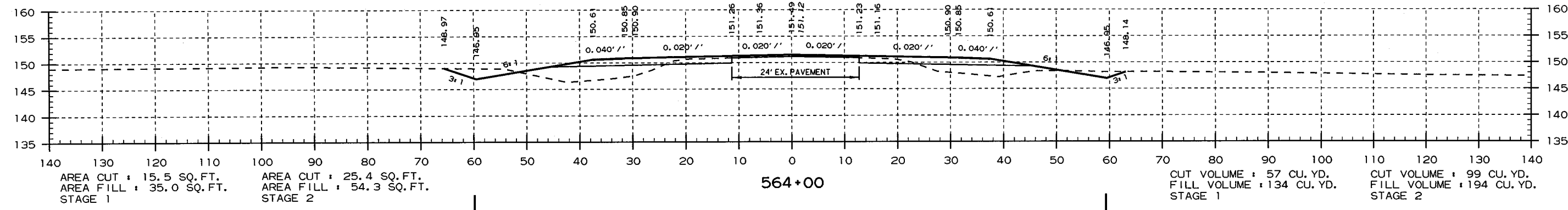
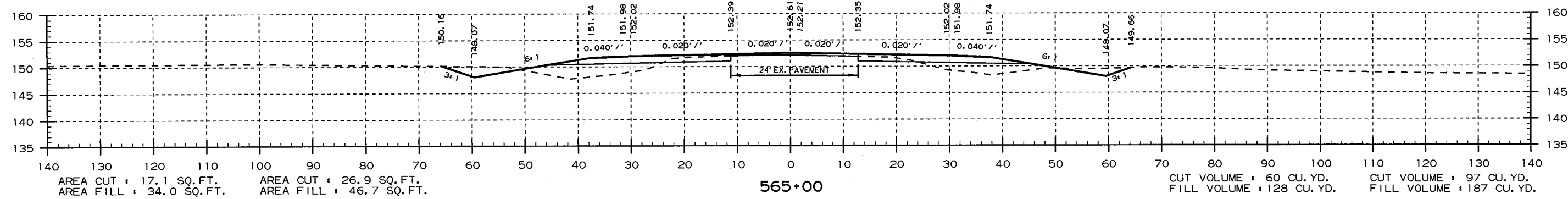
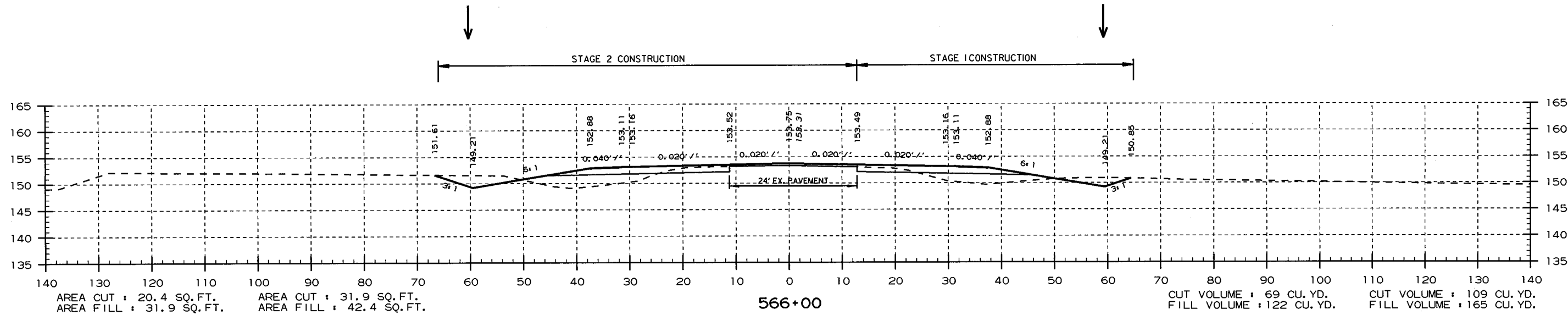
USER: fs513  
DESIGN FILE: G:\M09300.HWY.82\TRANSP\DGN\X\_Section\CA0202.CX.0006.dgn  
PLOTTED: 7/10/2018 10:36

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.	CA0202	135	256	
				② CROSS SECTIONS				



CROSS SECTION STA. 561+00 TO STA. 563+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.	CA0202	136	256	
				(2) CROSS SECTIONS				



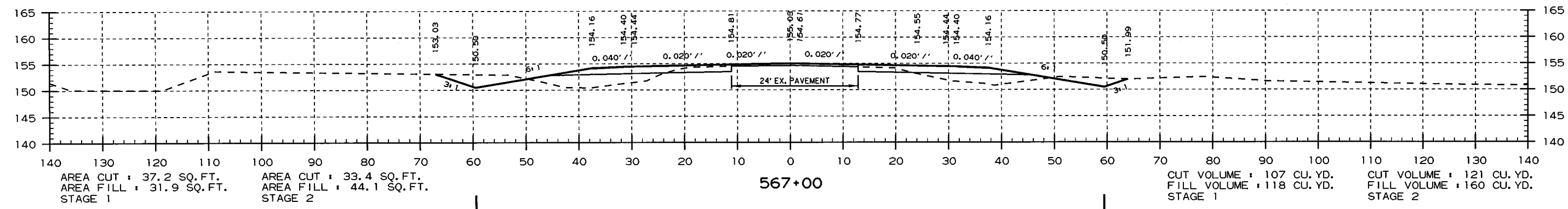
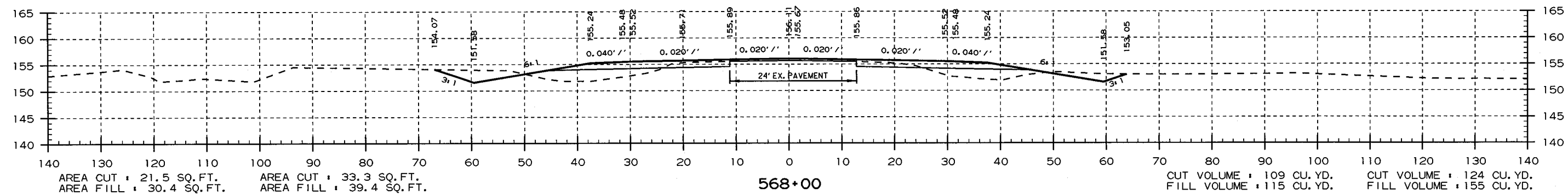
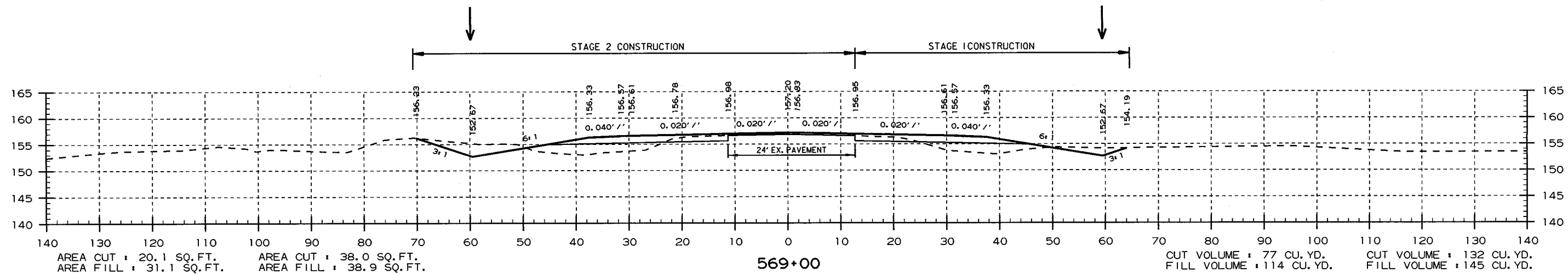
CROSS SECTION STA. 564+00 TO STA. 566+00

USER: fs513  
 DESIGN FILE: G:\H09300\_HHWY\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0008.dgn  
 PLOTTED: 7/10/2018 10:36 SCALE: 20x



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	137	256	

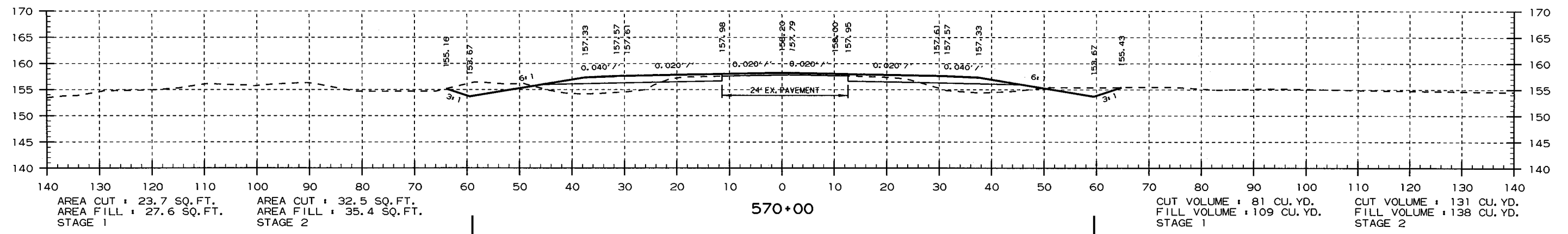
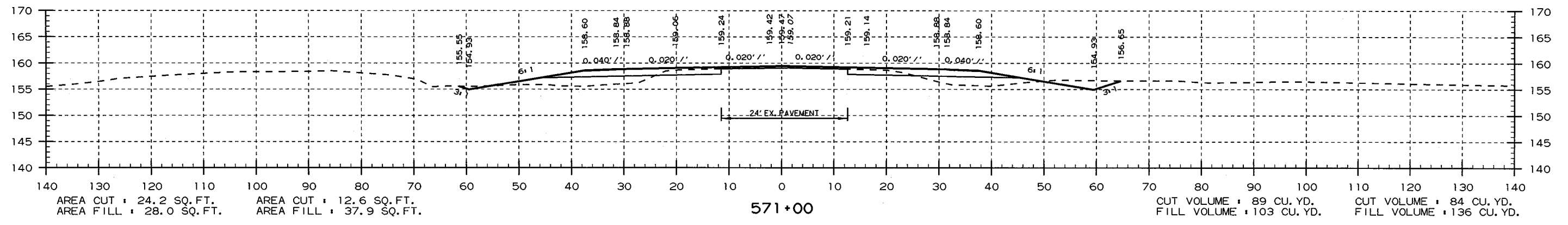
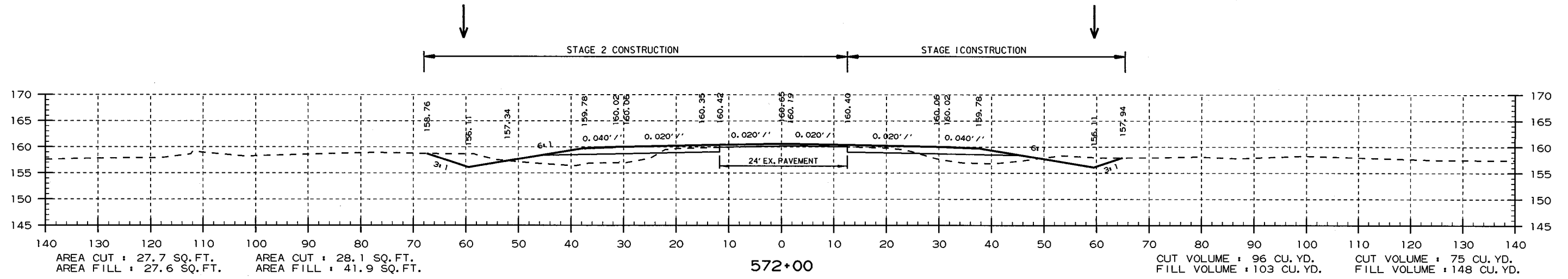
2 CROSS SECTIONS



CROSS SECTION STA. 567+00 TO STA. 569+00

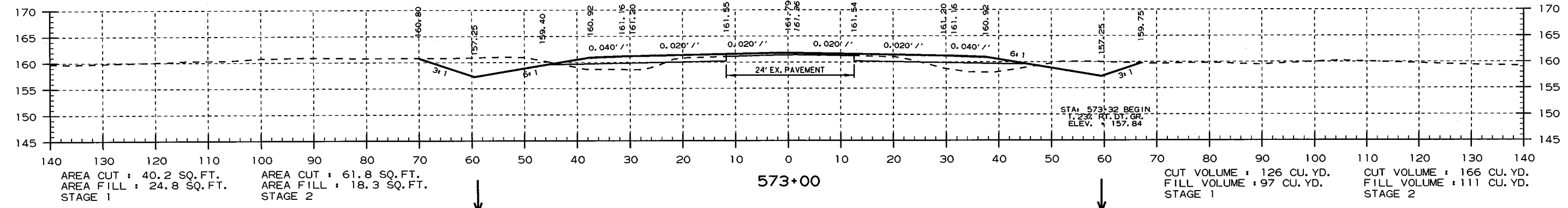
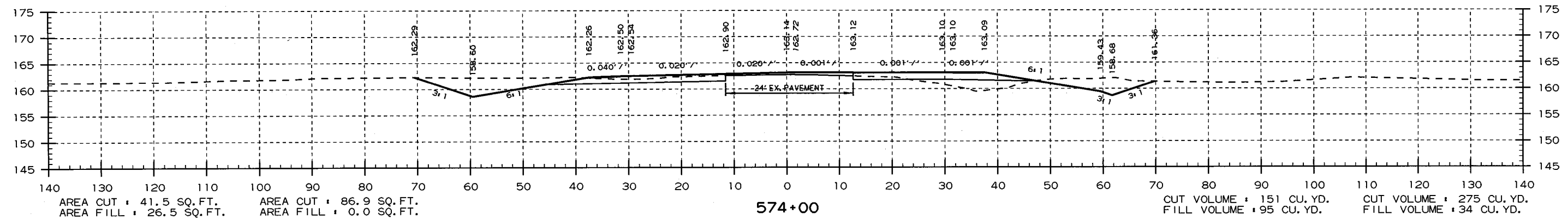
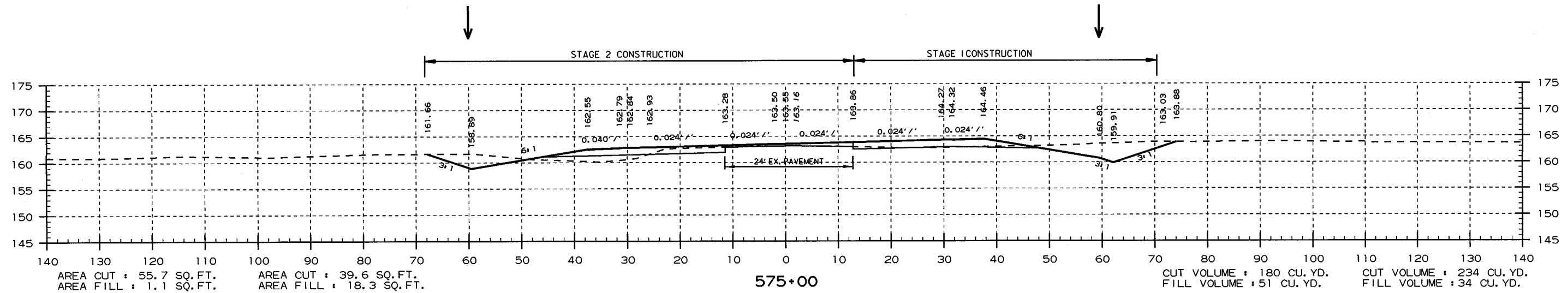
USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\06GN\X\_Sections\CA0202\_CX\_0009.dgn  
 PLOTTED: 7/10/2018 10:36 SCALE: 20H

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	CA0202	138	256		
2								CROSS SECTIONS	



CROSS SECTION STA. 570+00 TO STA. 572+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.	CA0202	139	256	
				2 CROSS SECTIONS				

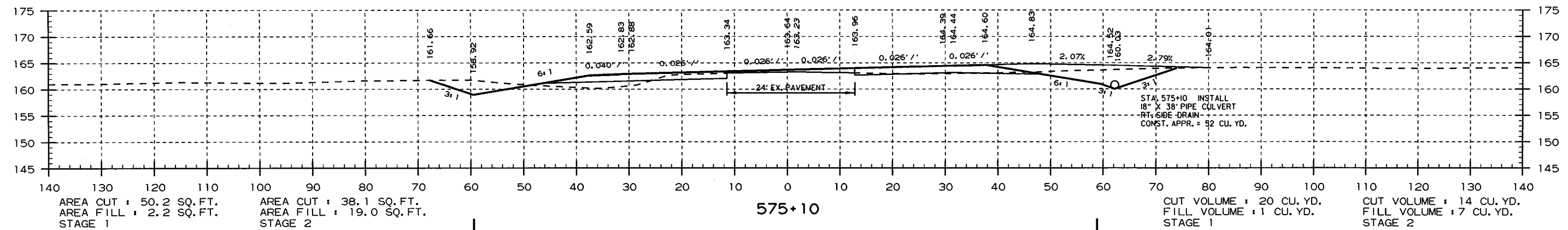
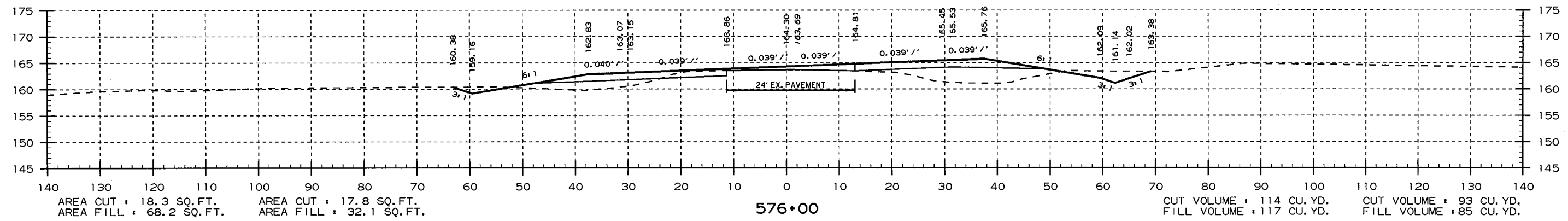
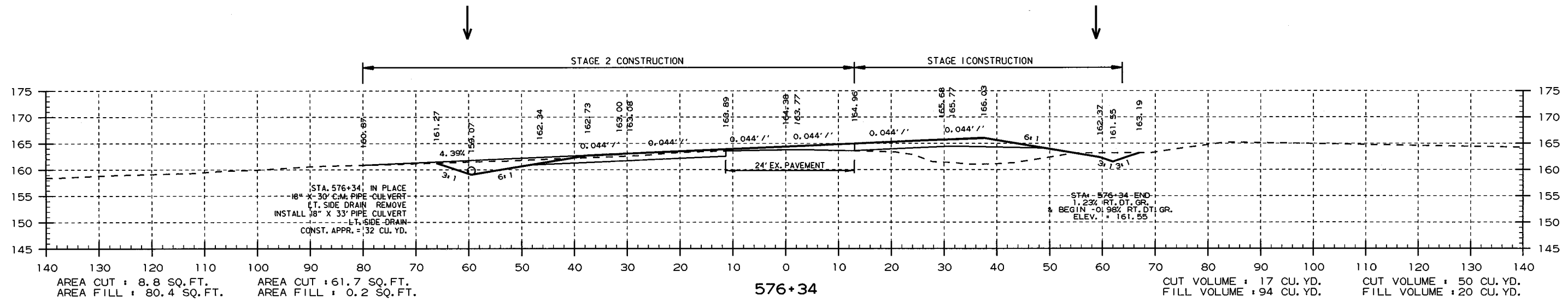


**CROSS SECTION STA. 573+00 TO STA. 575+00**

USER: f6513  
 DESIGN FILE: G:\I4109300\_HWY\_82\TRANSP\DNX\Sect\Sections\CA0202\_CX\_001.dgn  
 PLOTTED: 7/10/2018 10:36 SCALE: 20x

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	140	256	

2 CROSS SECTIONS

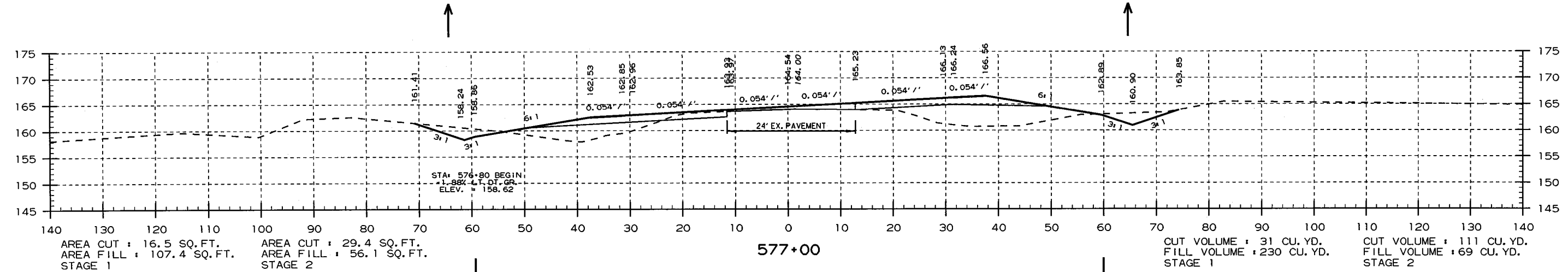
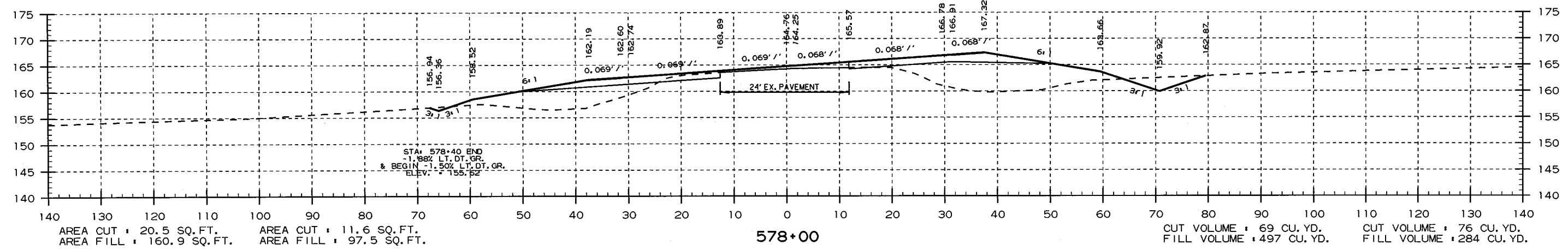
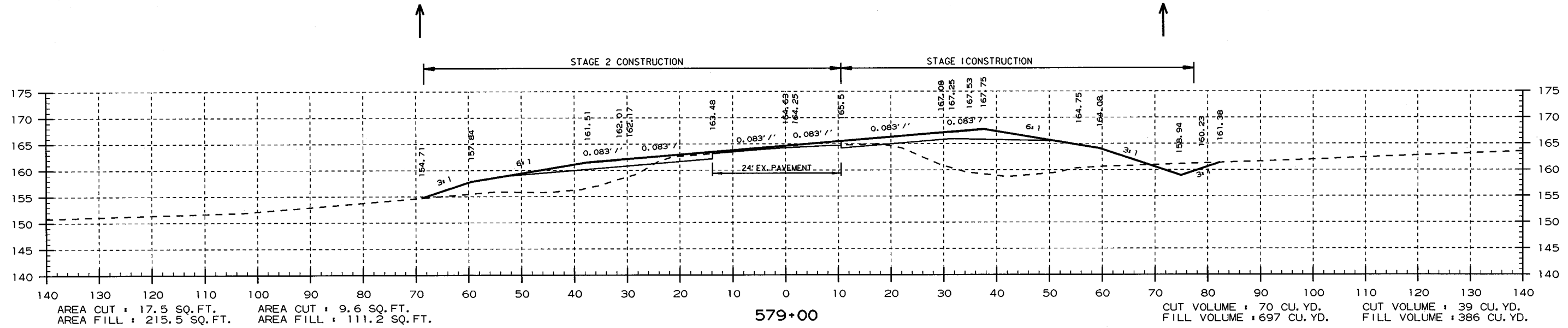


CROSS SECTION STA. 575+10 TO STA. 576+34

USER: f5513  
DESIGN FILE: G:\41093300.HWY\_82\TRANSP\DN\X\_Sections\CA0202.CX\_002.dgn  
PLOTTER: 7/10/2018 10:36

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.	CA0202	141	256	

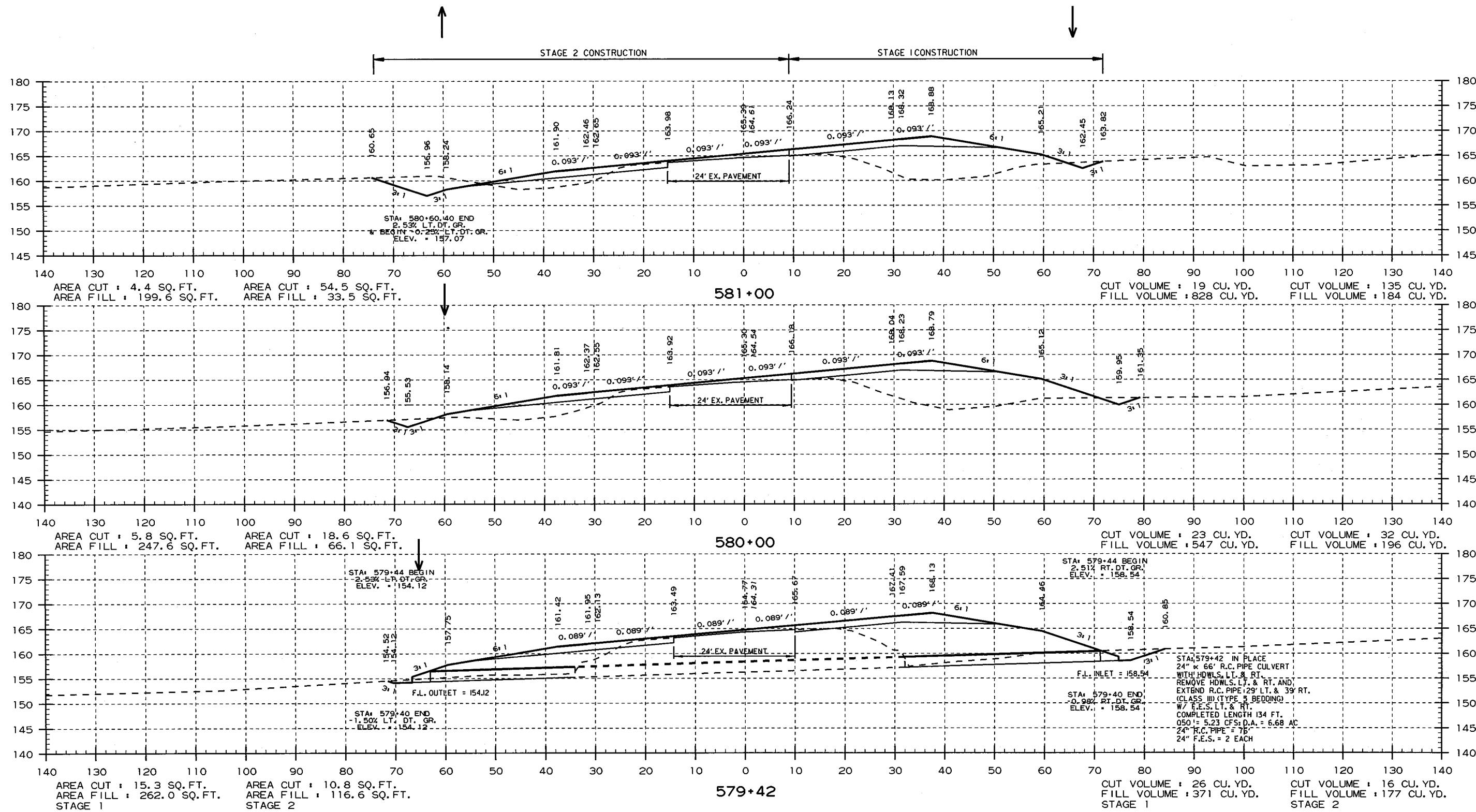
2 CROSS SECTIONS



CROSS SECTION STA. 577+00 TO STA. 579+00

USER: f553  
 DESIGN FILE: G:\1409300.HWY\_82\TRANSP\DN\X\_Sect\Sections\CA0202.CX\_0013.dgn  
 PLOTTED: 7/10/2018 10:36  
 SCALE: 20'

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.	CA0202	142
						2 CROSS SECTIONS		

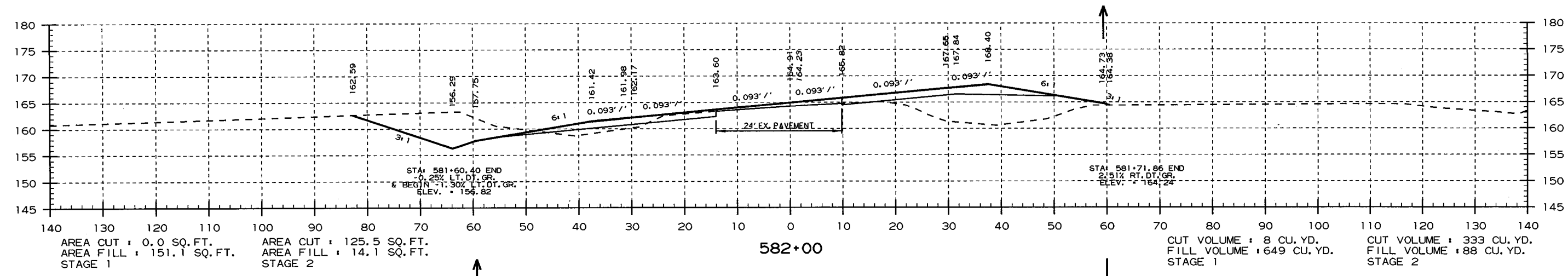
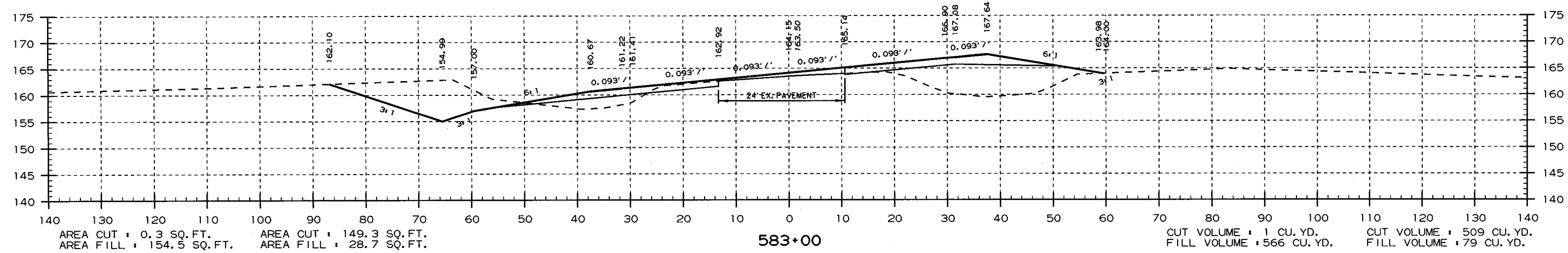
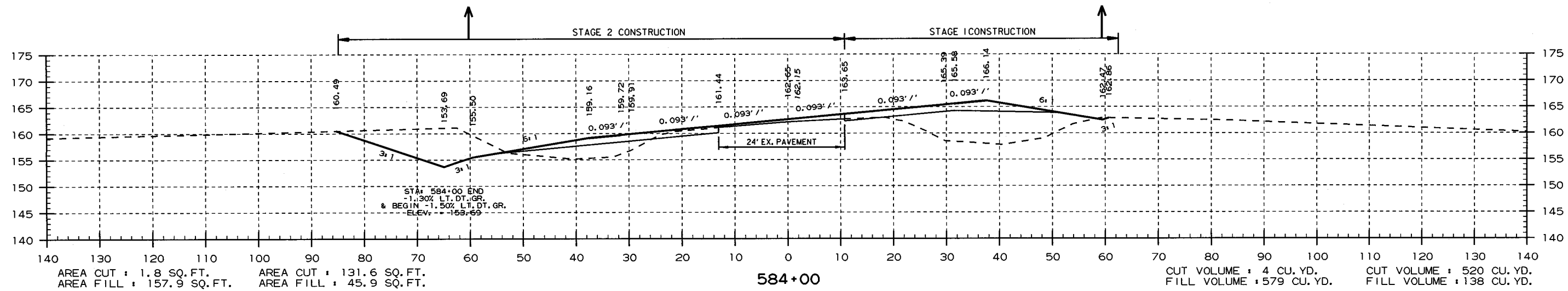


CROSS SECTION STA. 579+42 TO STA. 581+00

USER: f553  
 DESIGN FILE: G:\1409300.HWY\_82\TRANSP\DNV\Sections\CA0202.CX\_004.dgn  
 PLOTTED: 7/10/2018 10:36  
 SCALE: 20:1

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.	CA0202	143	256	

2 CROSS SECTIONS

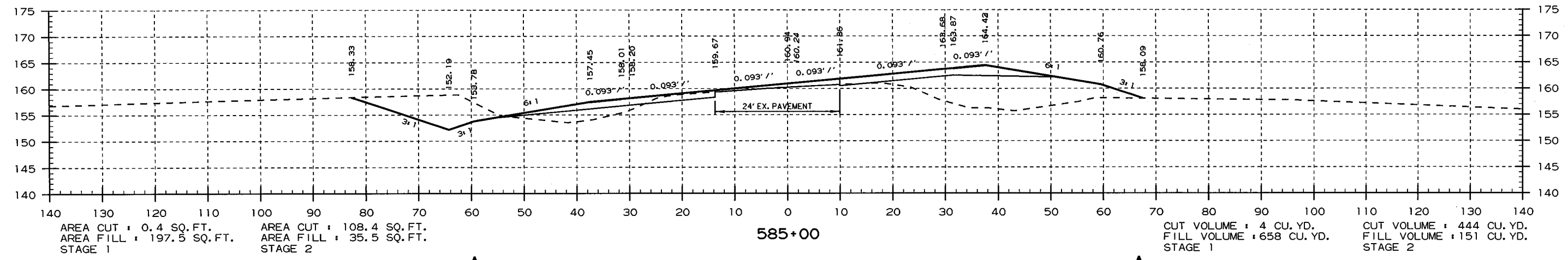
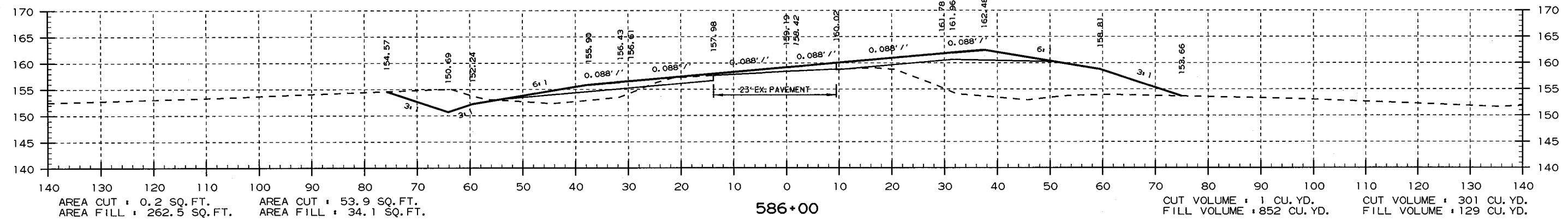
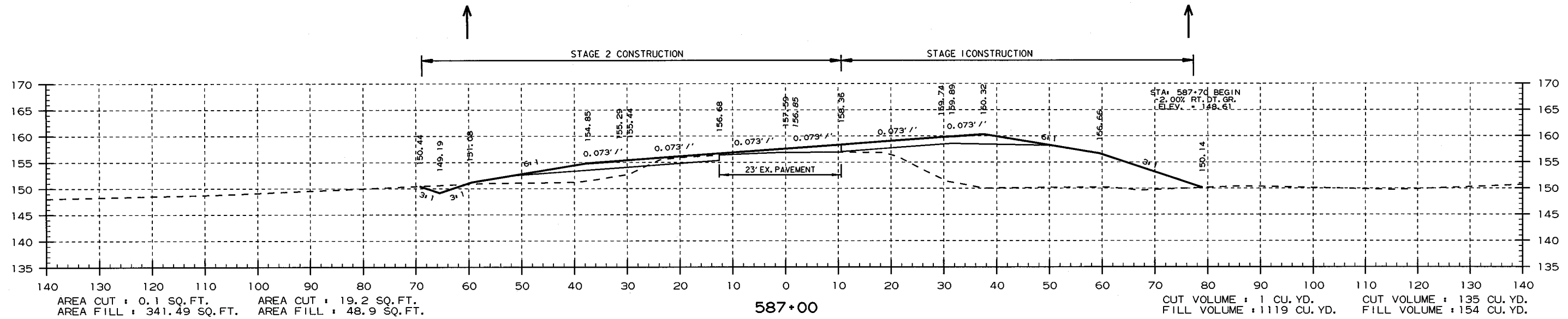


CROSS SECTION STA. 582+00 TO STA. 584+00

USER: f553  
DESIGN FILE: G:\4109300\_HWY\_82\TRANSP\DNX\_Sect\Sections\CA0202.CX\_0015.dgn  
PLOTTED: 7/10/2018 10:36 SCALE: 20:1

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.	CA0202	144	256	

2 CROSS SECTIONS

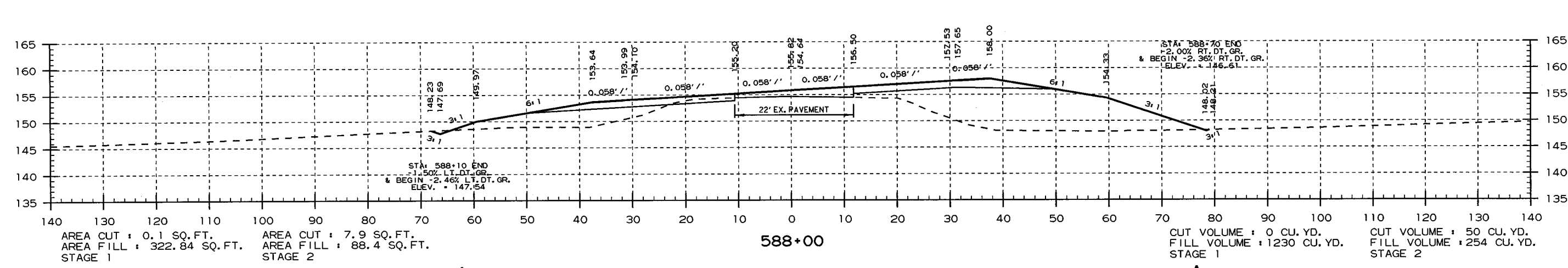
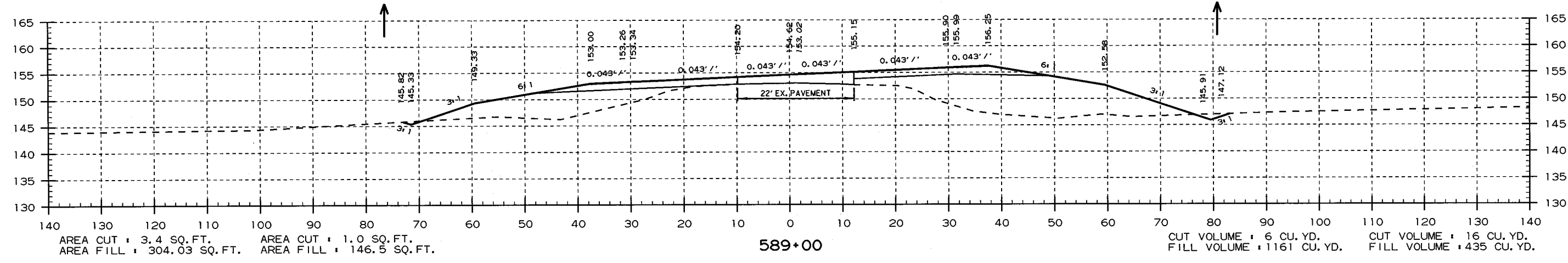
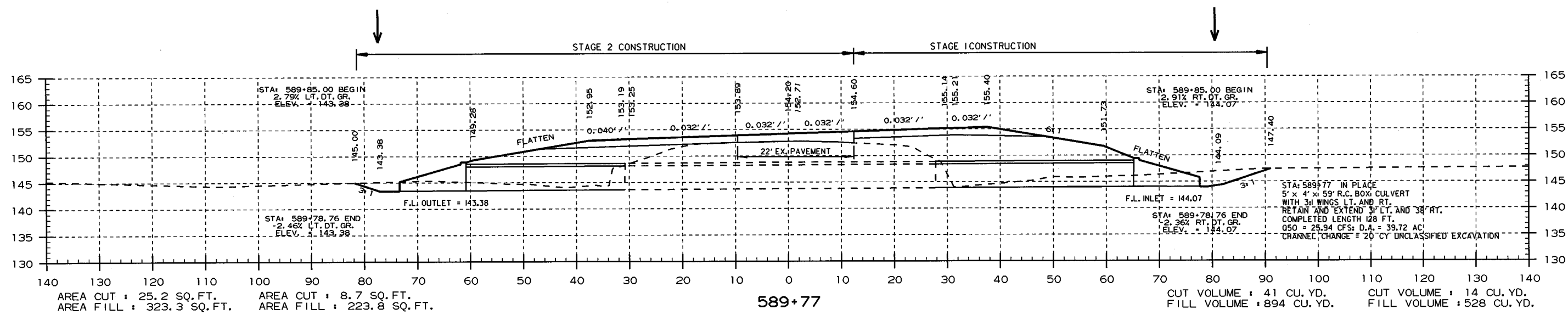


CROSS SECTION STA. 585+00 TO STA. 587+00

USER: f5513  
DESIGN FILE: G:\M09300\_HWY\_82\TRANSP\DN\X\_Sect\Sections\CA0202\_CX\_0016.dgn  
PLOTTED: 7/10/2018 10:36



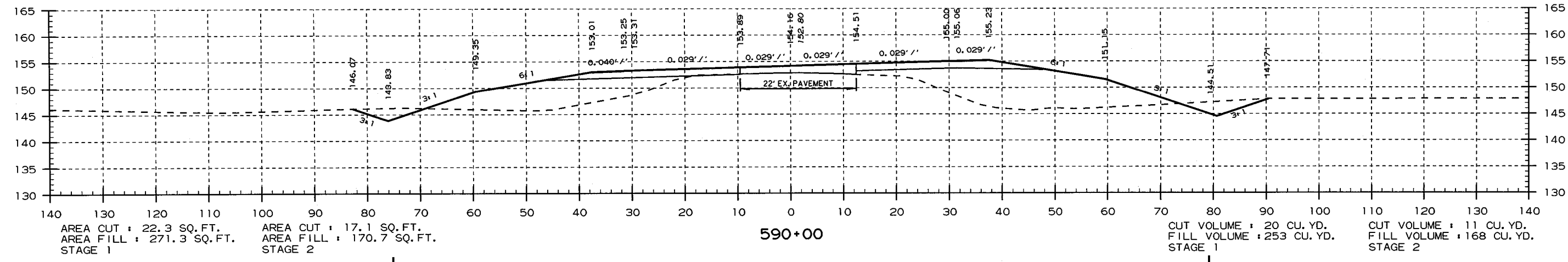
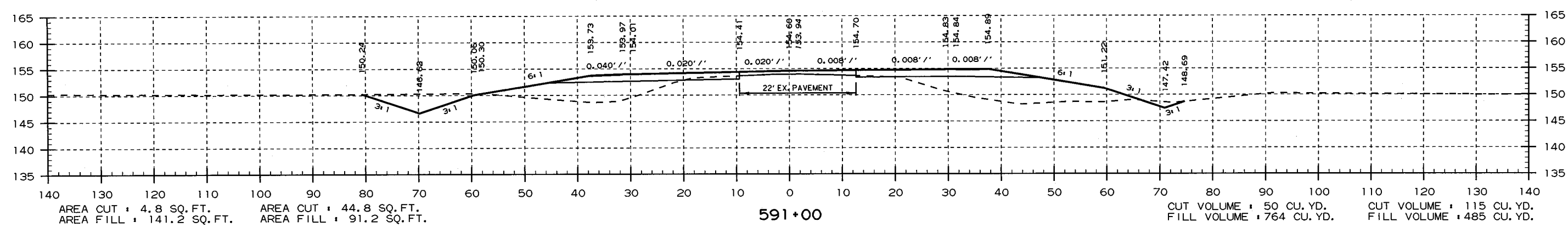
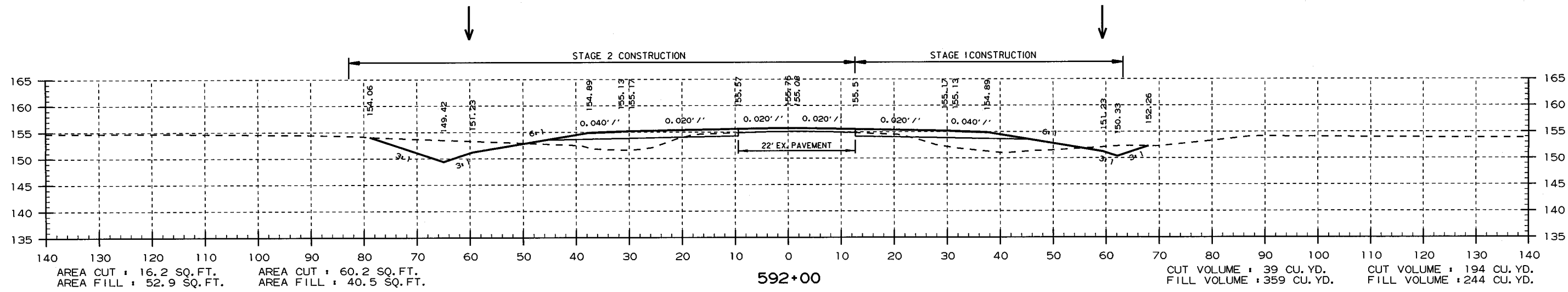
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	145	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 588+00 TO STA. 589+77

USER: f653  
DESIGN FILE: G:\MID9300\_HMY\_82\TRANSP\DNV.X\_Section\CA0202\_CX\_0017.dgn  
PLOTTED: 7/10/2018 10:36 SCALE: 20H

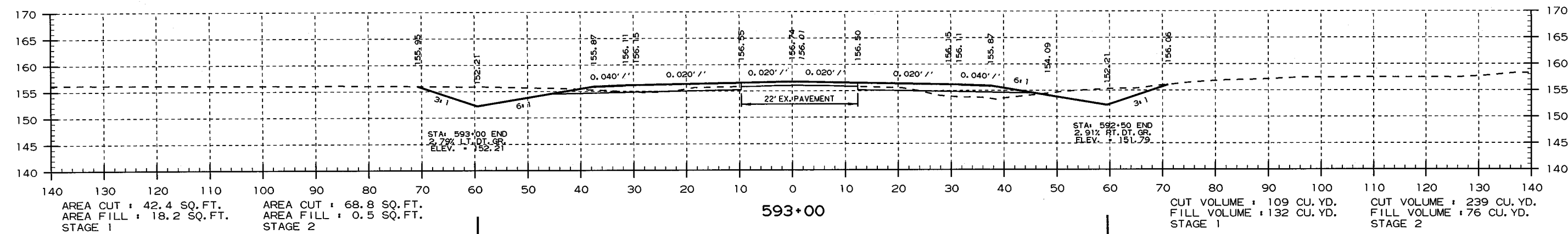
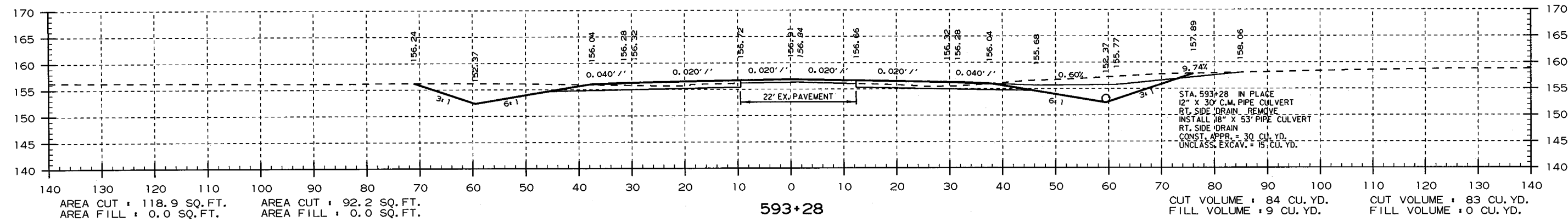
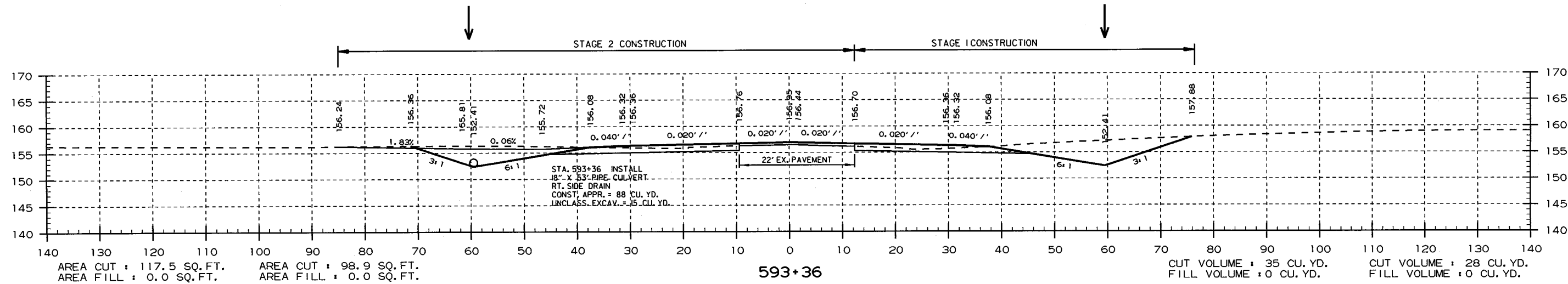
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	146	256	
2							CROSS SECTIONS	



CROSS SECTION STA. 590+00 TO STA. 592+00

USER: f553  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_008.dgn  
 PLOTTED: 7/10/2018 10:36

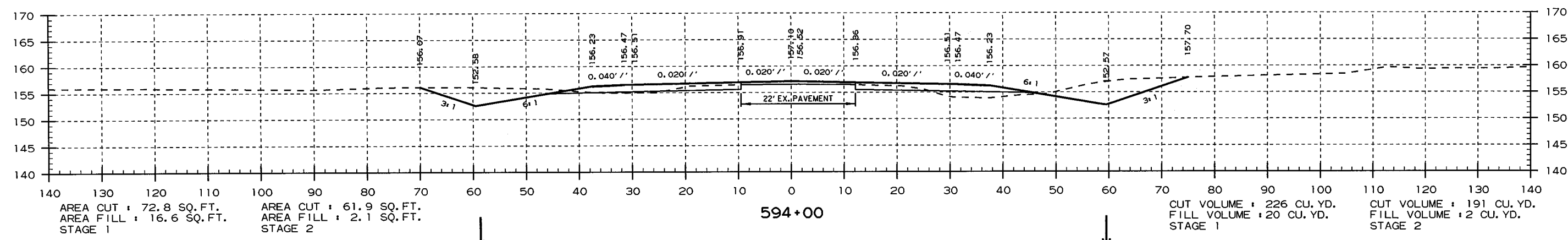
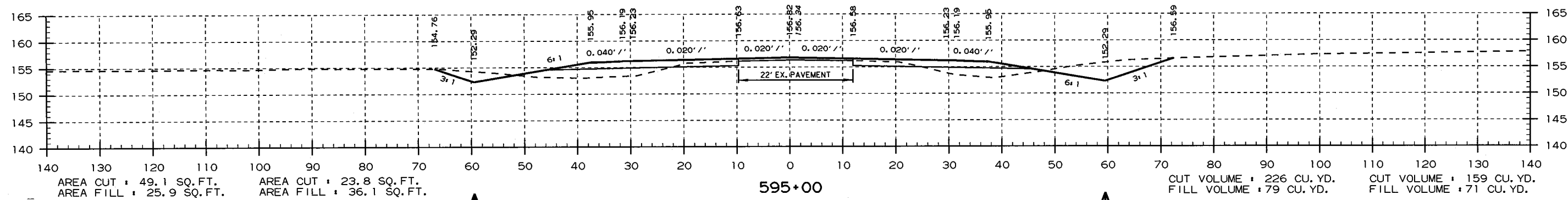
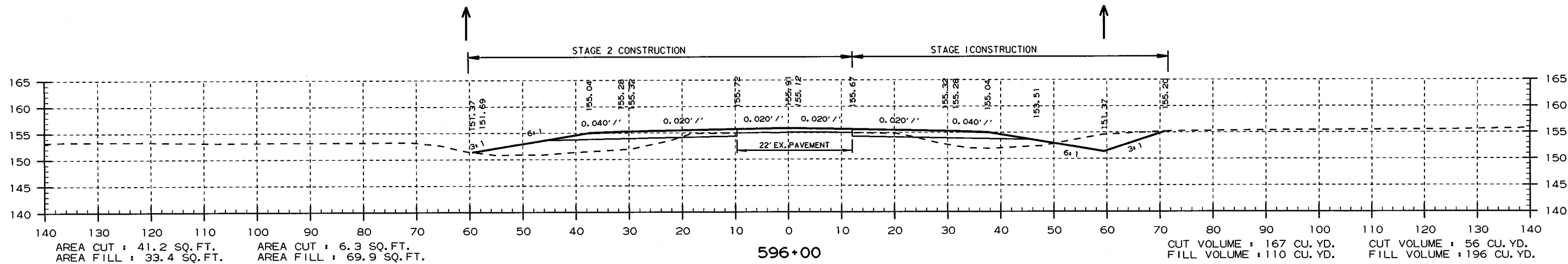
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		147	256
				2 CROSS SECTIONS				



**CROSS SECTION STA. 593+00 TO STA. 593+36**

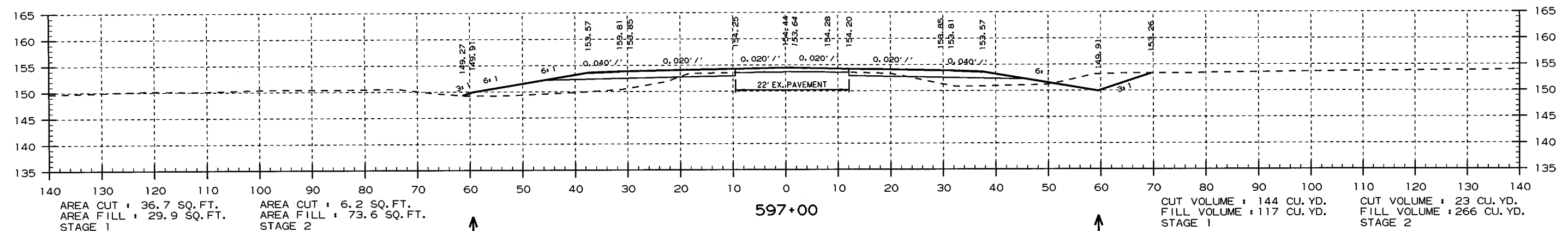
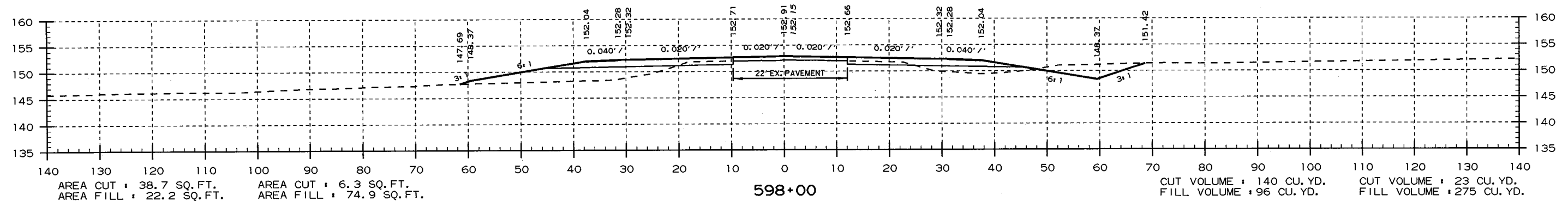
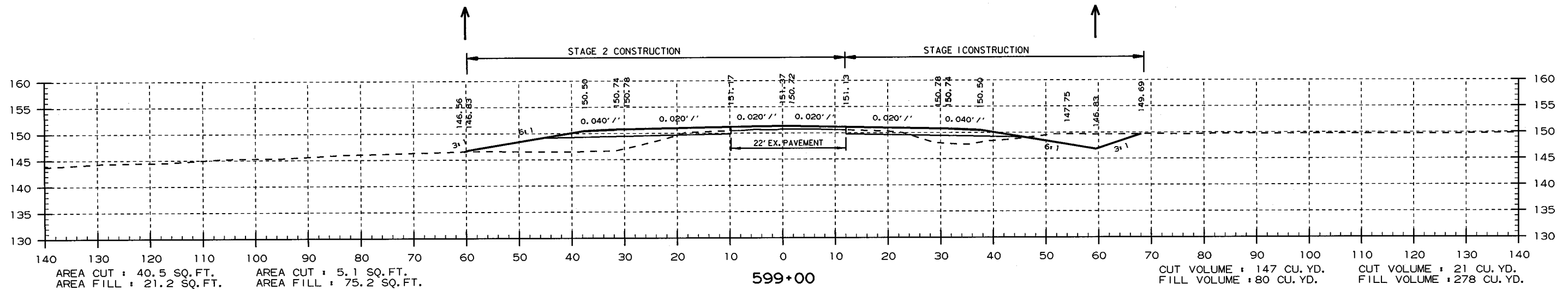
USER: f553  
 DESIGN FILE: G:\MID9300.HWY\_82\TRANSP\DNV\Sections\CA0202\_CX\_009.dgn  
 PLOTTED: 7/10/2018 10:36      SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	148	256	
				2 CROSS SECTIONS				



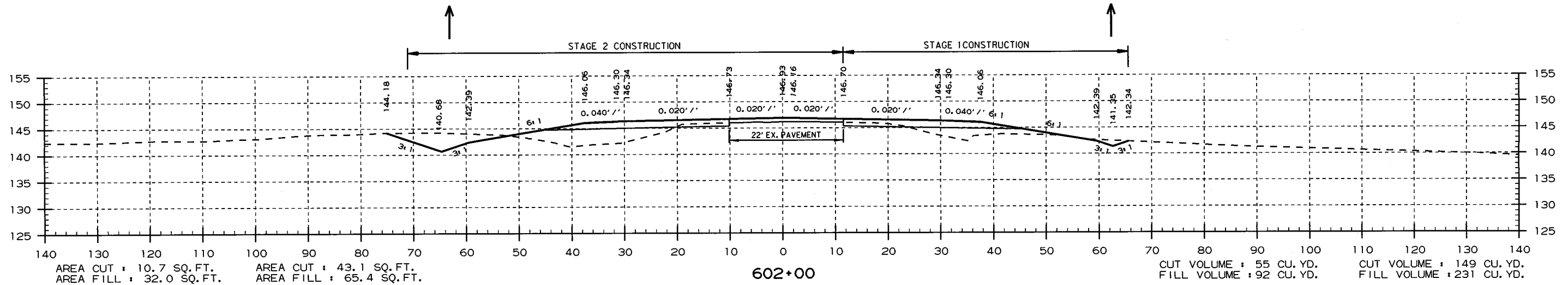
CROSS SECTION STA. 594+00 TO STA. 596+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	149	256	
				2 CROSS SECTIONS				

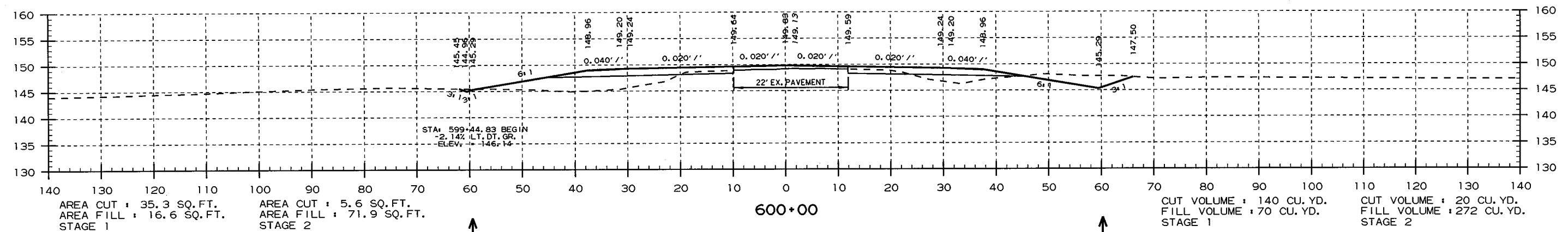
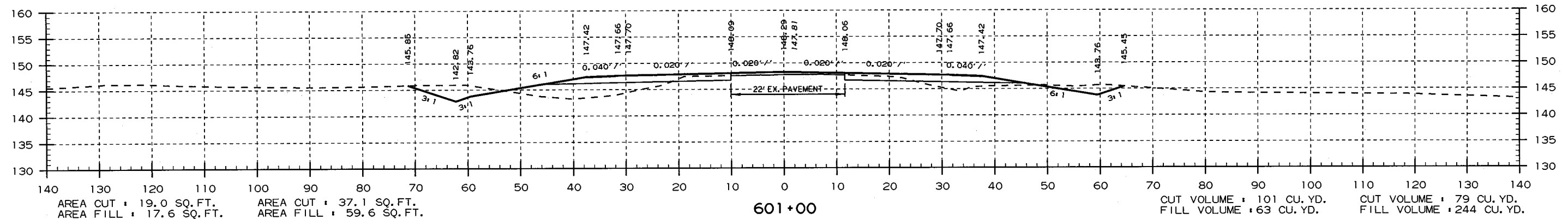


CROSS SECTION STA. 597+00 TO STA. 599+00

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.	CA0202	150	256	
				2 CROSS SECTIONS				



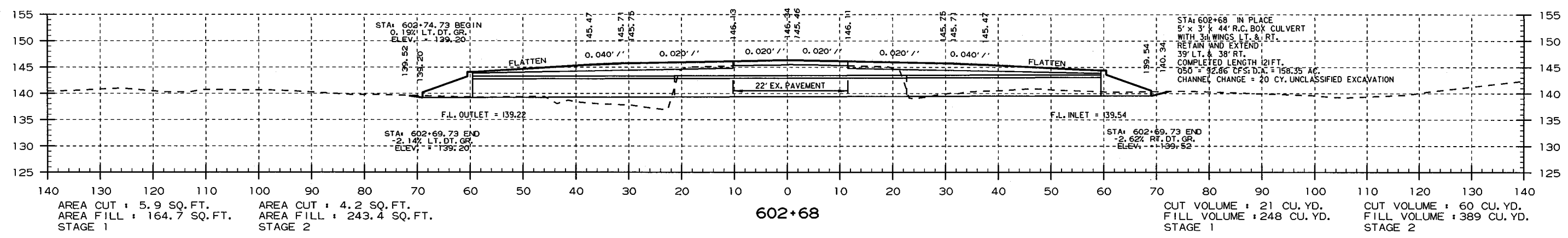
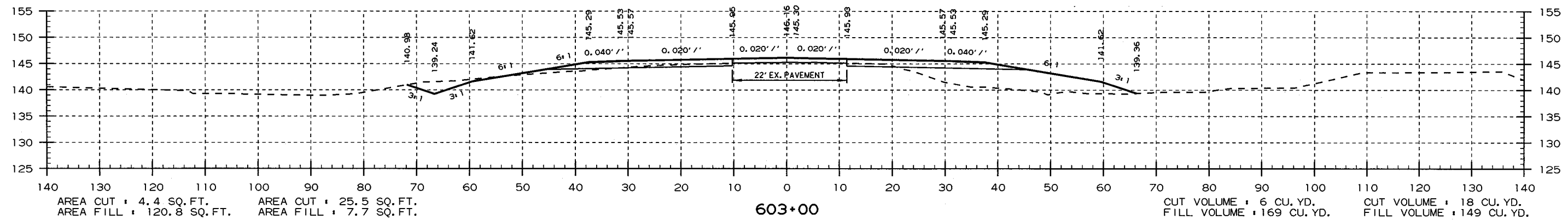
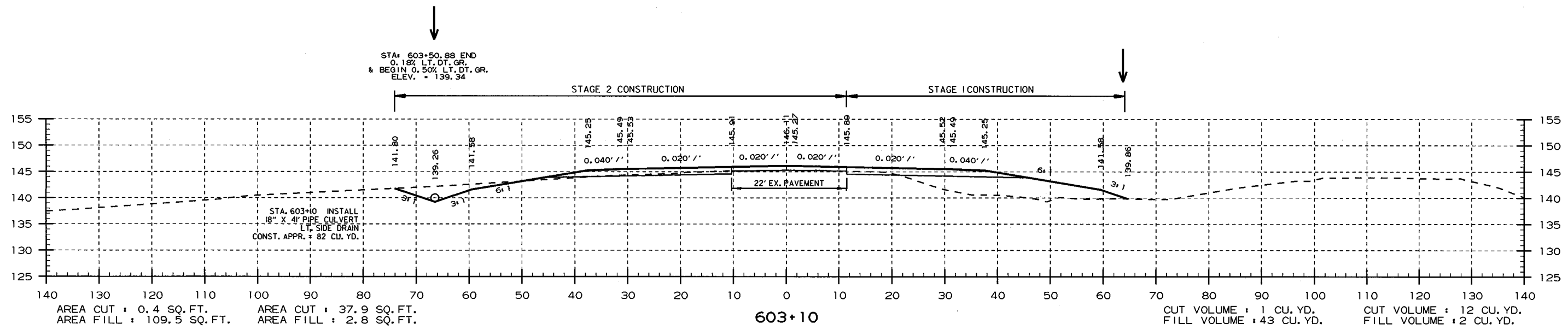
STA: 601+20 BEGIN  
 -2.62% RT. DT. GR.  
 ELEV. = 143.45



CROSS SECTION STA. 600+00 TO STA. 602+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.	CA0202	151	256	

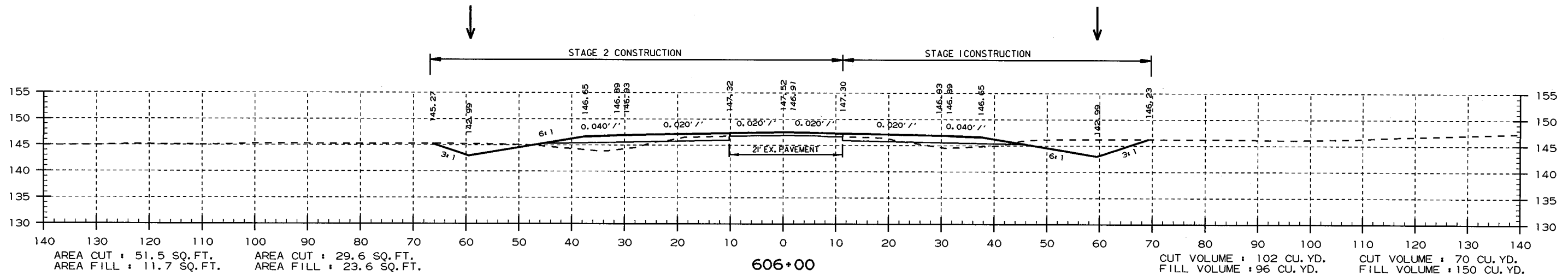
2 CROSS SECTIONS



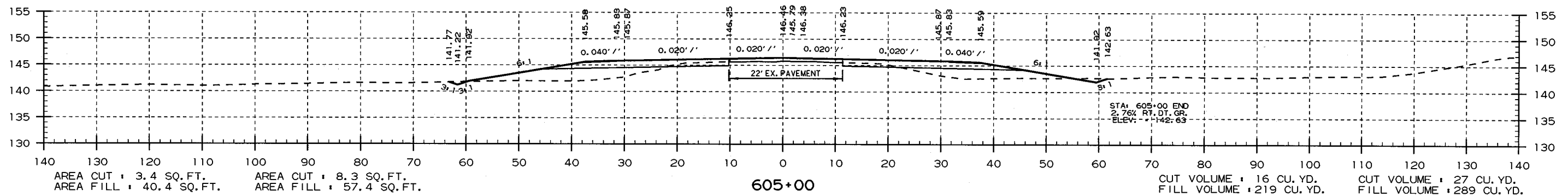
CROSS SECTION STA. 602+68 TO STA. 603+10

USER: f653  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DNV\Sections\CA0202.CX\_0023.dgn  
PLOTTED: 7/10/2018 10:36  
SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		152	256
				2 CROSS SECTIONS				

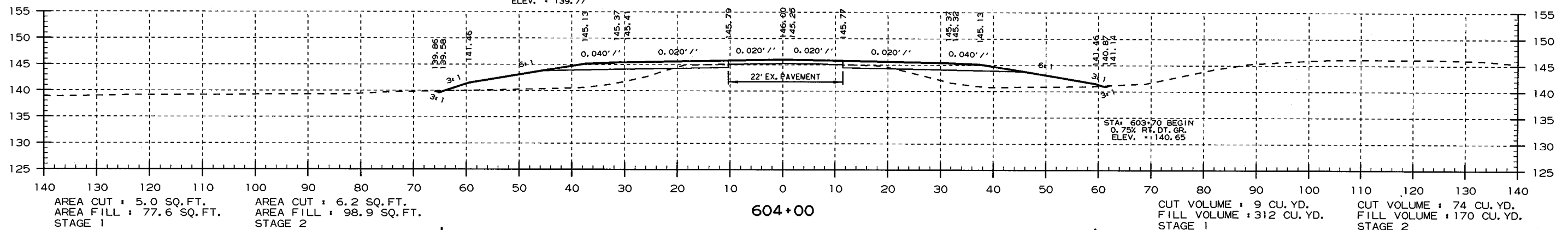


STA: 605+50 END  
2.31% LT. DT. GR.  
ELEV. = 142.38



STA: 604+37.10 END  
0.50% LT. DT. GR.  
& BEGIN 2.31% LT. DT. GR.  
ELEV. = 139.77

STA: 604+50 END  
0.75% RT. DT. GR.  
& BEGIN 2.76% RT. DT. GR.  
ELEV. = 141.25



STA: 603+70 BEGIN  
0.75% RT. DT. GR.  
ELEV. = 140.65

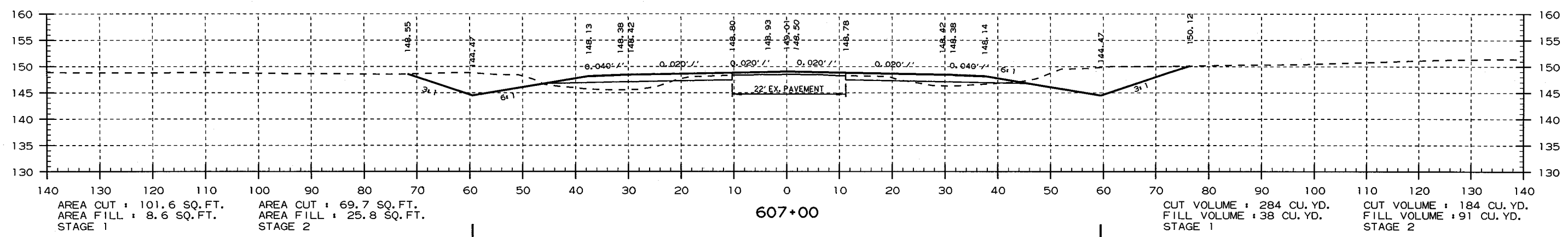
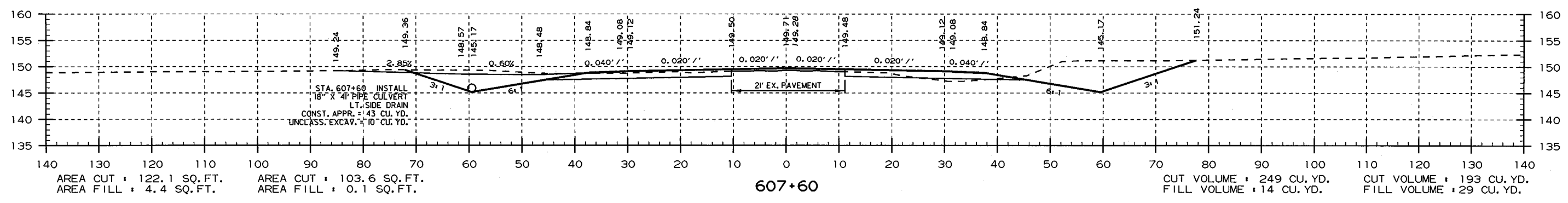
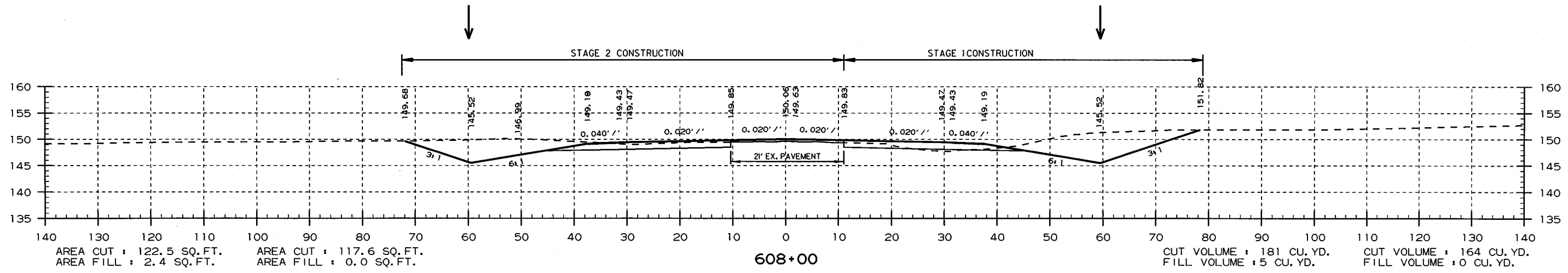
CROSS SECTION STA. 604+00 TO STA. 606+00

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCNVX\_Sections\CA0202\_CX\_0024.dgn  
 PLOTTED: 7/10/2018 10:37  
 SCALE: 20:1



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	153	256	

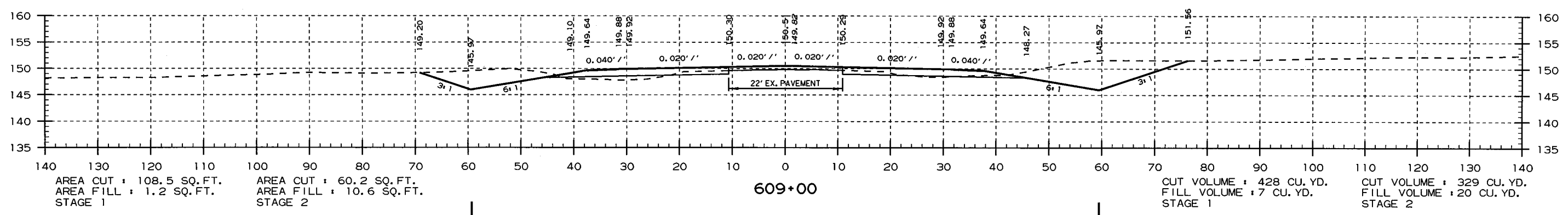
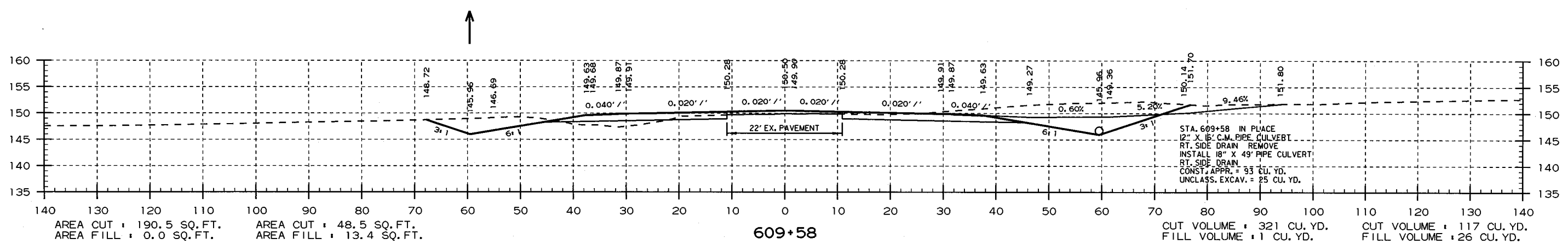
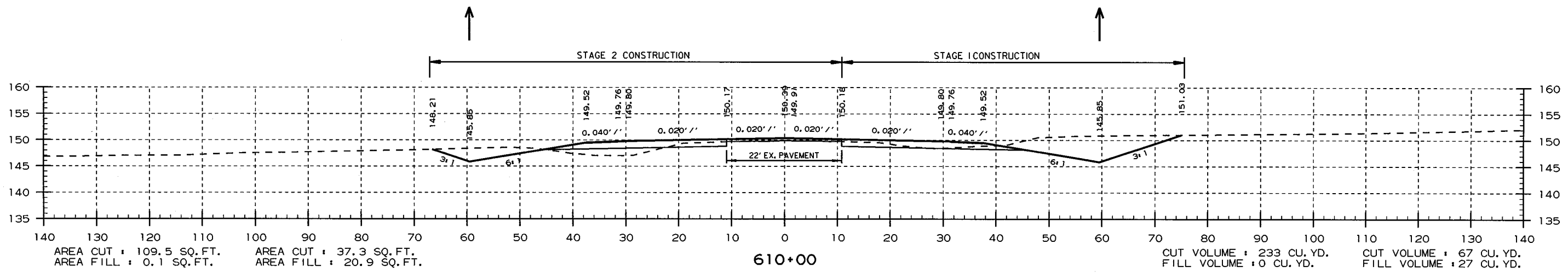
2 CROSS SECTIONS



CROSS SECTION STA. 607+00 TO STA. 608+00

USER: f653  
 DESIGN FILE: G:\V14109300\_Hwy\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0025.dgn  
 PLOTTED: 7/10/2018 10:37 SCALE: 20H

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.	CA0202		154	256
				2 CROSS SECTIONS				

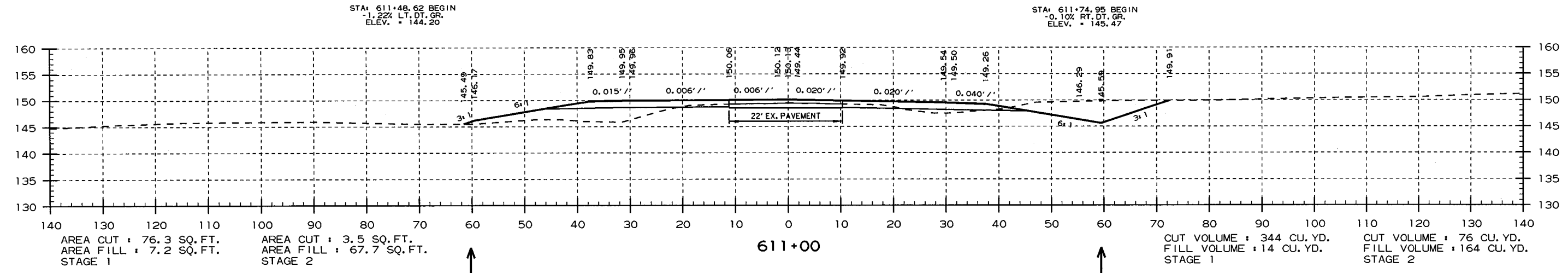
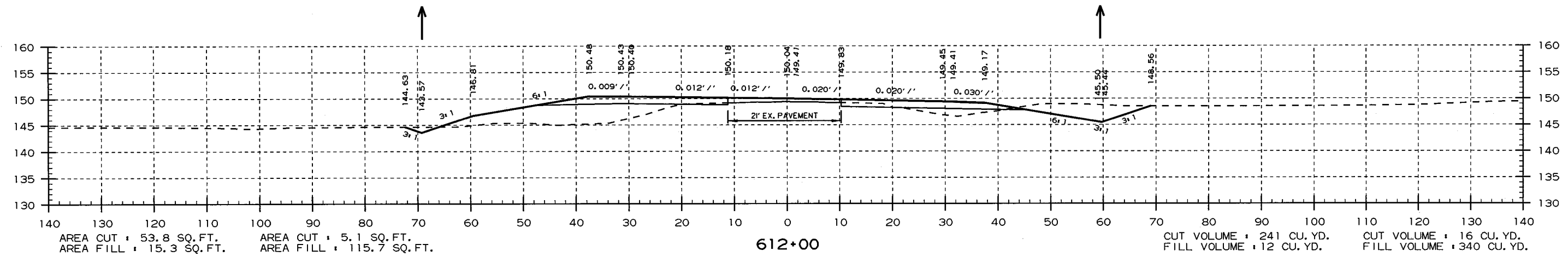
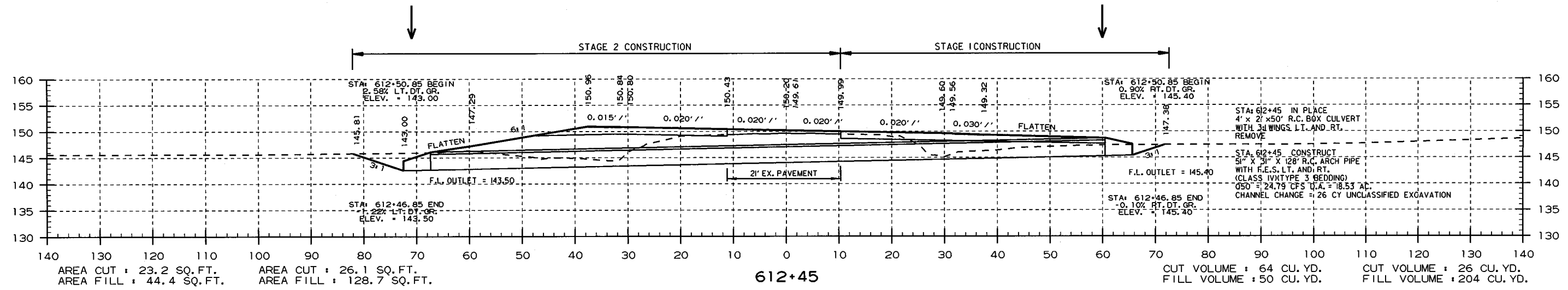


CROSS SECTION STA. 609+00 TO STA. 610+00

USER: f553  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0026.dgn  
 PLOTTED: 7/10/2018 10:37  
 SCALE: 20:1

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.	CA0202	155	256	

2 CROSS SECTIONS

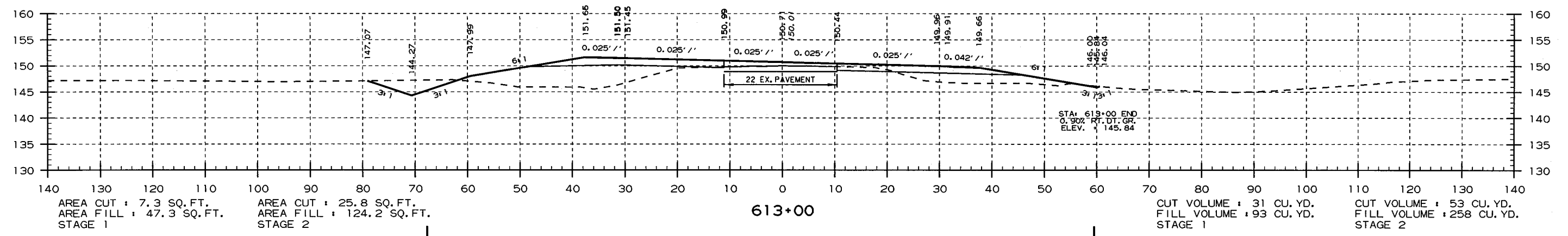
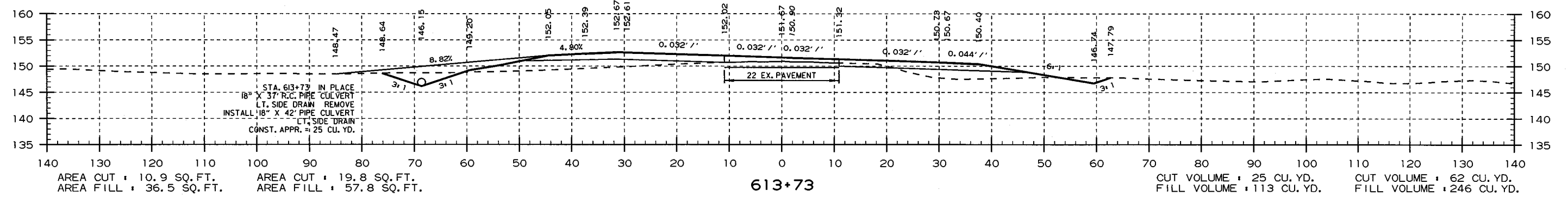
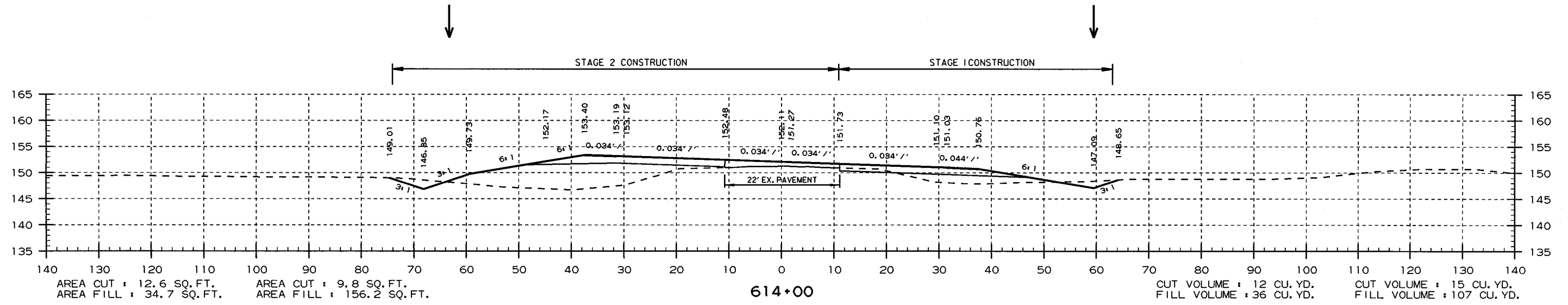


CROSS SECTION STA. 611+00 TO STA. 612+45

USER: f553  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DNX\_Sections\CA0202\_CX\_0027.dgn  
PLOTTED: 7/10/2018 10:37

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.	CA0202	156	256	

2 CROSS SECTIONS

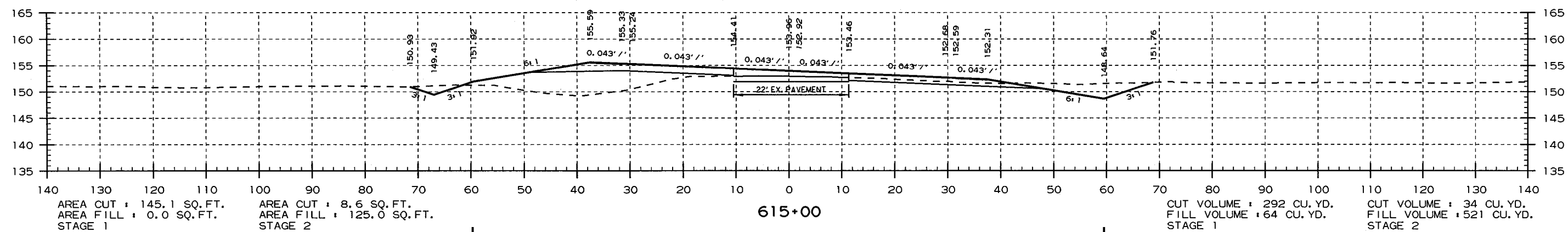
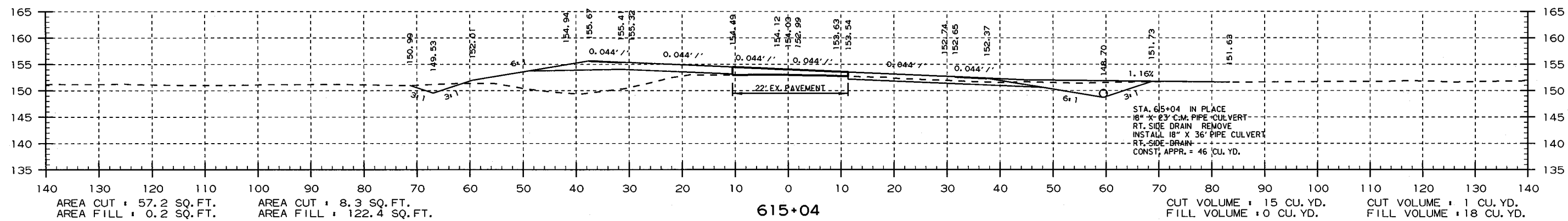
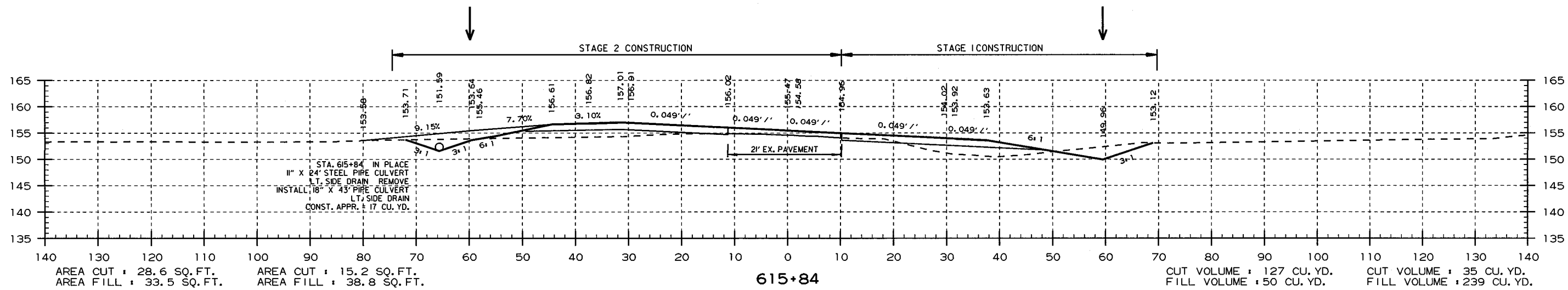


CROSS SECTION STA. 613+00 TO STA. 614+00

USER: f553  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\X\_Sections\CA0202.CX.0028.dgn  
PLOTTED: 7/10/2018 10:37  
SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	157	256	

2 CROSS SECTIONS

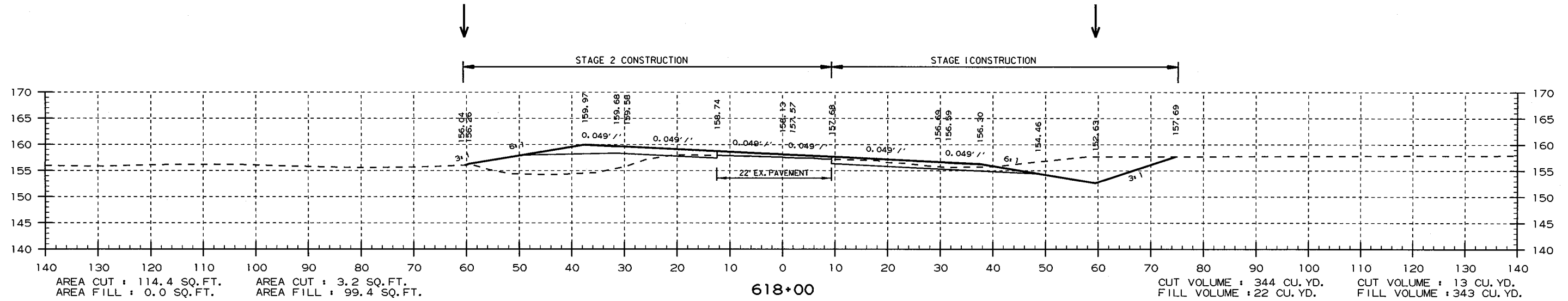


CROSS SECTION STA. 615+00 TO STA. 615+84

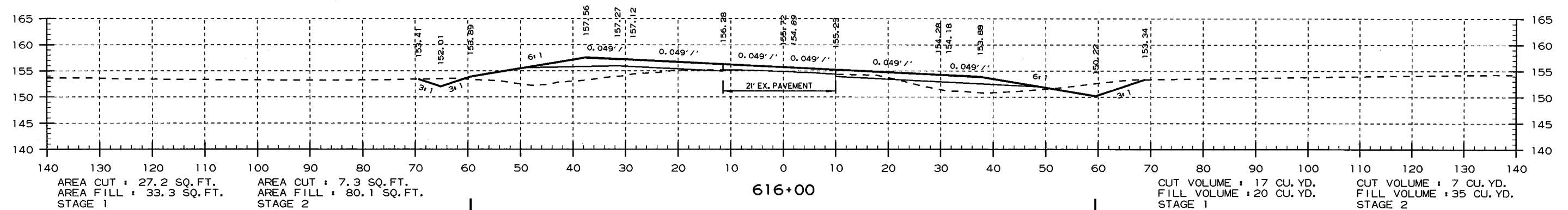
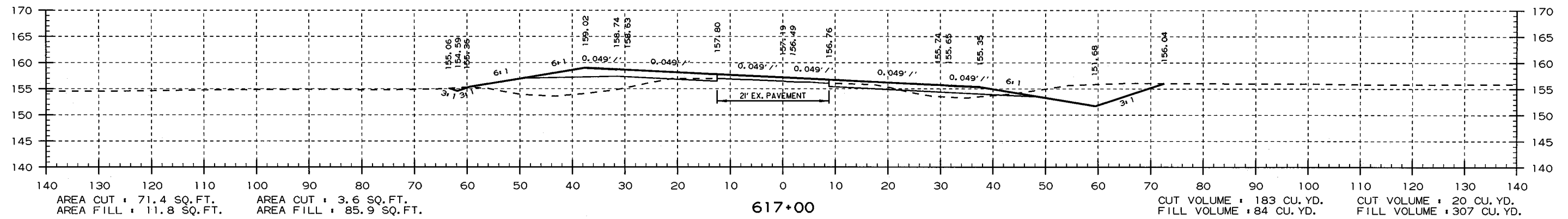
USER: fs513  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DCN\X\_Sections\CA0202.CX.0029.dgn  
 PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	158	256	

2 CROSS SECTIONS



STA: 617+30 END  
 2.58% LT. DT. GR.  
 ELEV. = 155.35

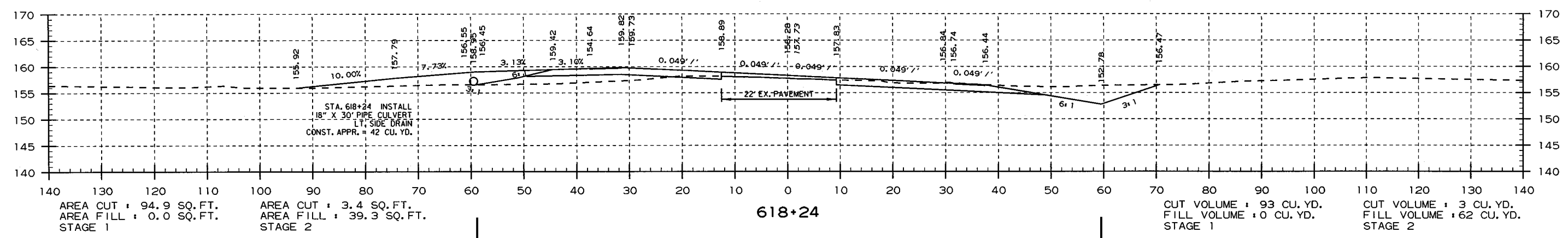
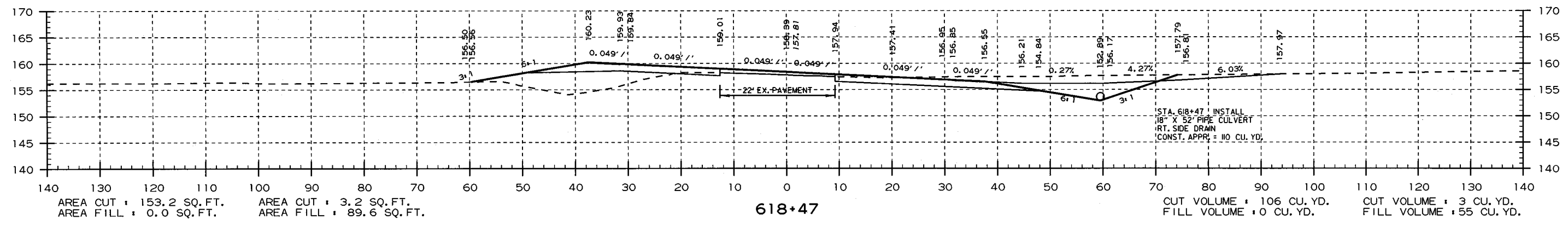
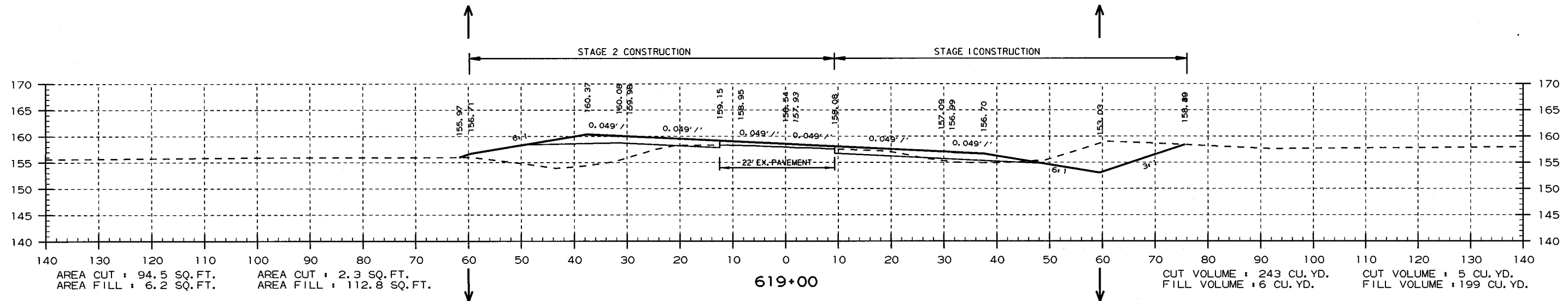


CROSS SECTION STA. 616+00 TO STA. 618+00

USER: f553  
 DESIGN FILE: G:\MID9300\_Hwy\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0030.dgn  
 PLOTTED: 7/10/2018 10:37

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.	CA0202	159	256	

2 CROSS SECTIONS

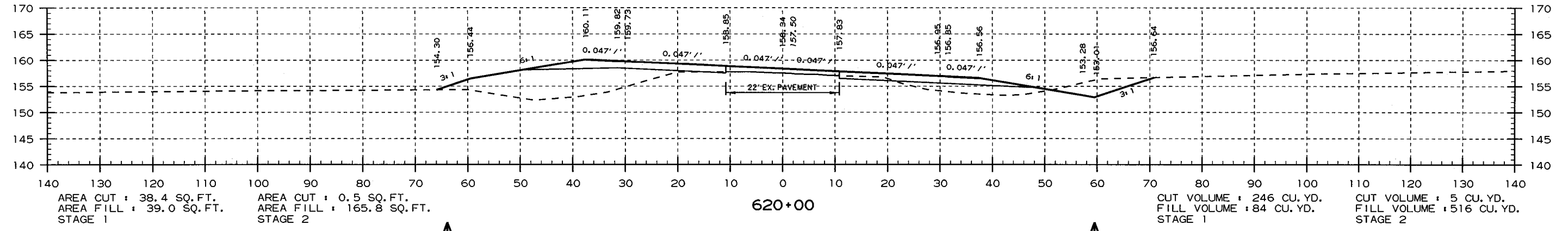
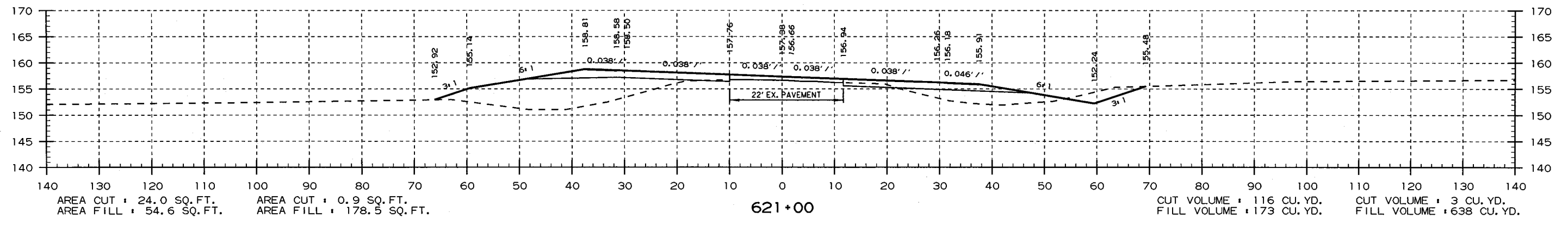
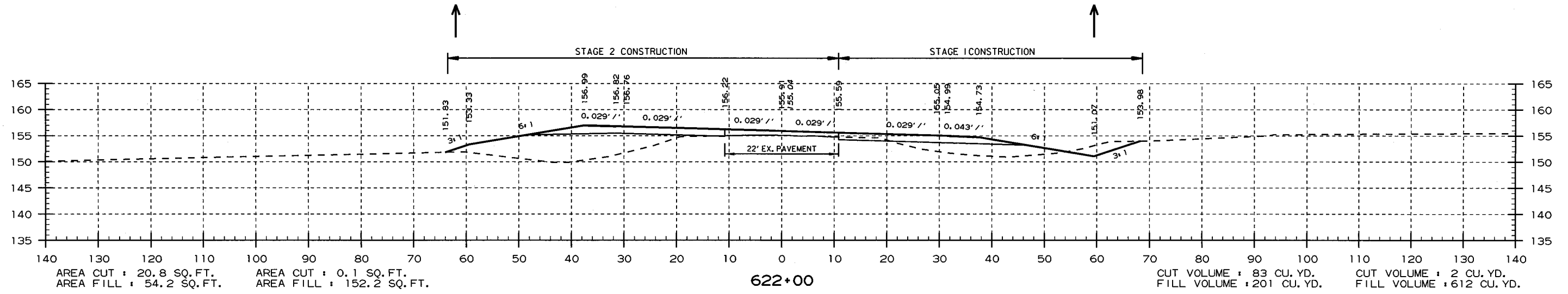


CROSS SECTION STA. 618+24 TO STA. 619+00

USER: fs513  
DESIGN FILE: G:\4109300.HWY\_82\TRANSP\DCN\X\_Sect\Sections\CA0202.CX\_0031.dgn  
PLOTTED: 7/10/2018 10:37  
SCALE: 20x

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	160	256	

2 CROSS SECTIONS



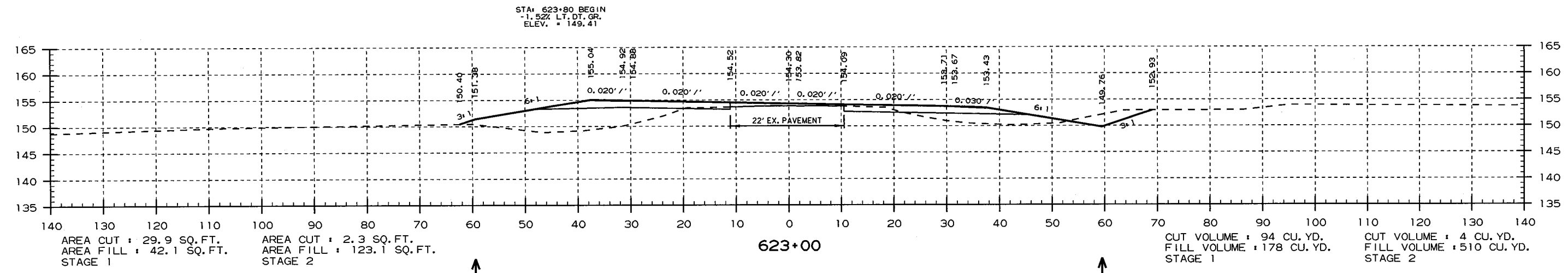
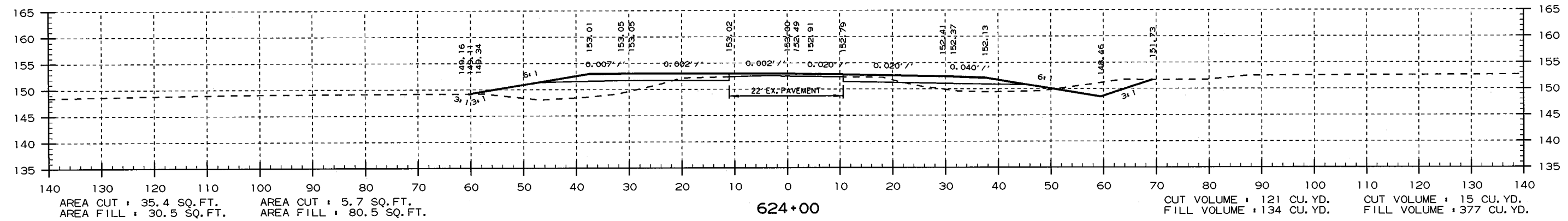
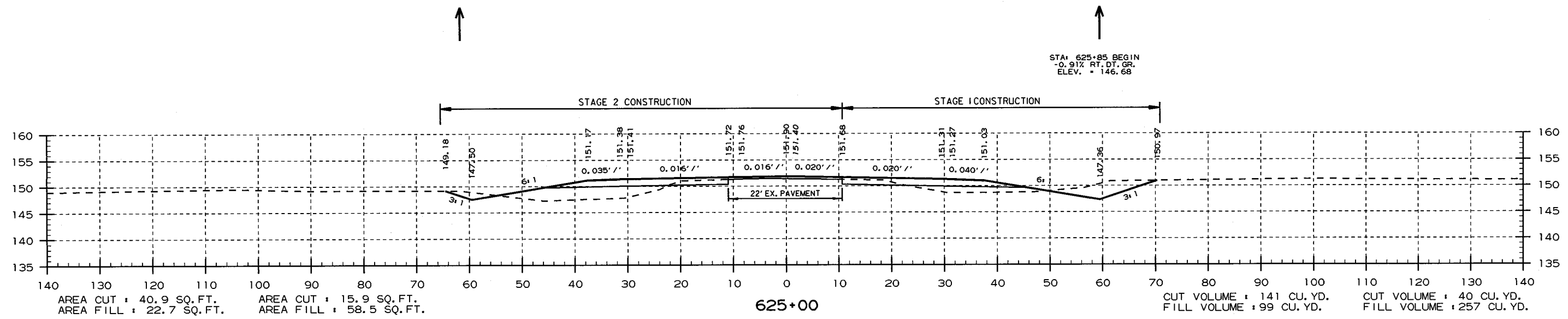
CROSS SECTION STA. 620+00 TO STA. 622+00

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNX\_Sections\CA0202\_CX\_0032.dgn  
 PLOTTED: 7/10/2018 10:37  
 SCALE: 20:1



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0202	161	256

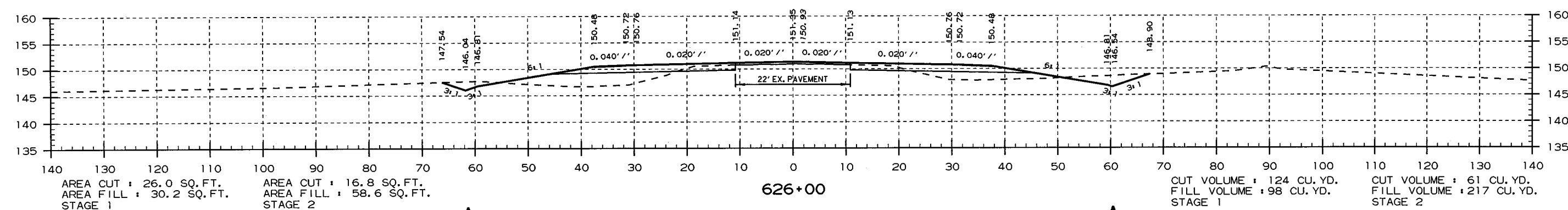
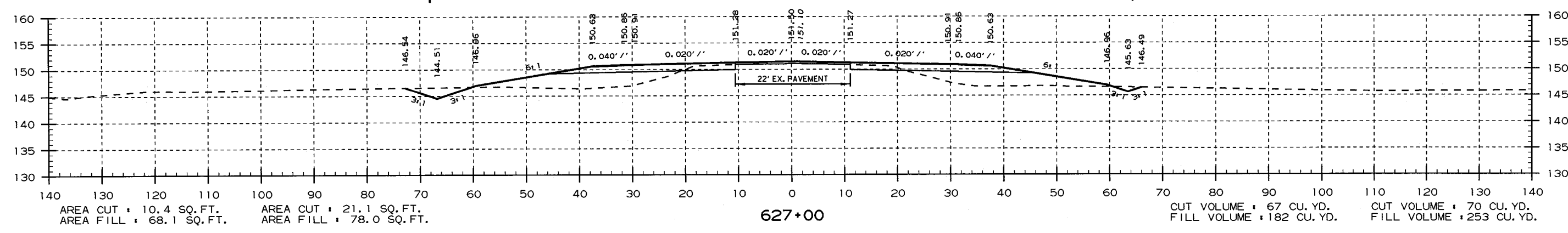
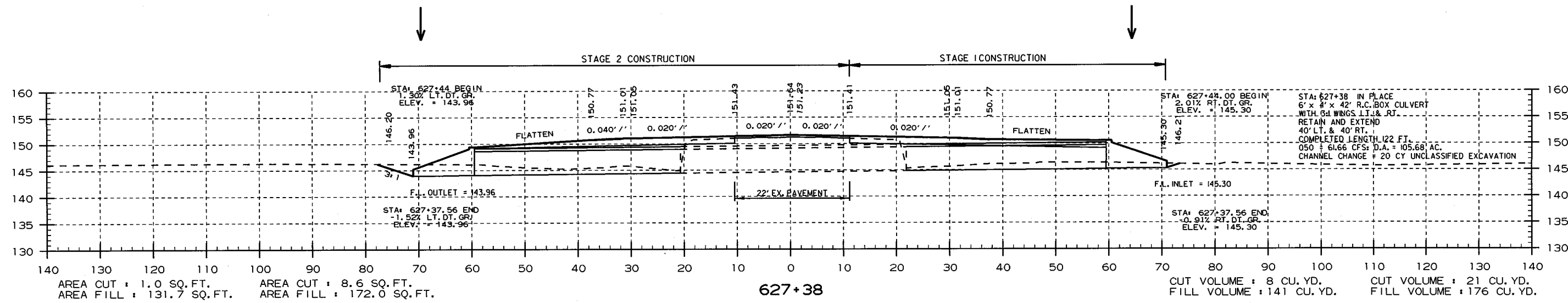
2 CROSS SECTIONS



CROSS SECTION STA. 623+00 TO STA. 625+00

USER: f453  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNV\Sections\CA0202\_CX\_0033.dgn  
PLOTTED: 7/10/2018 10:37 SCALE: 20:1

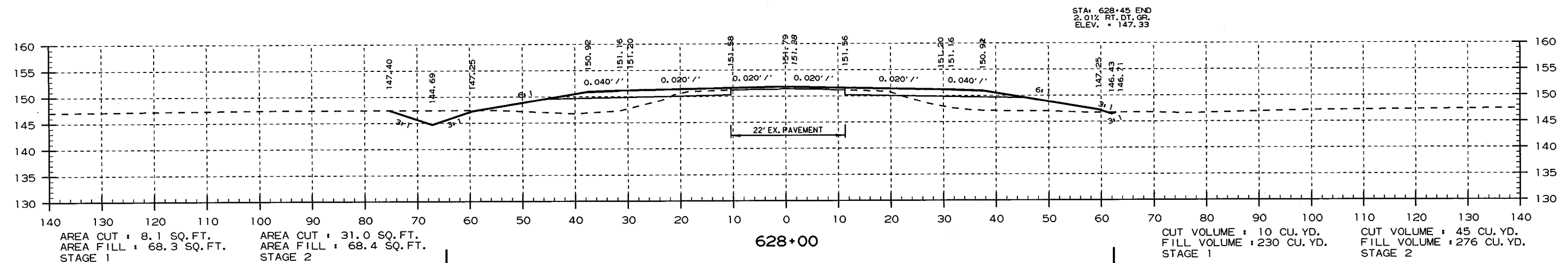
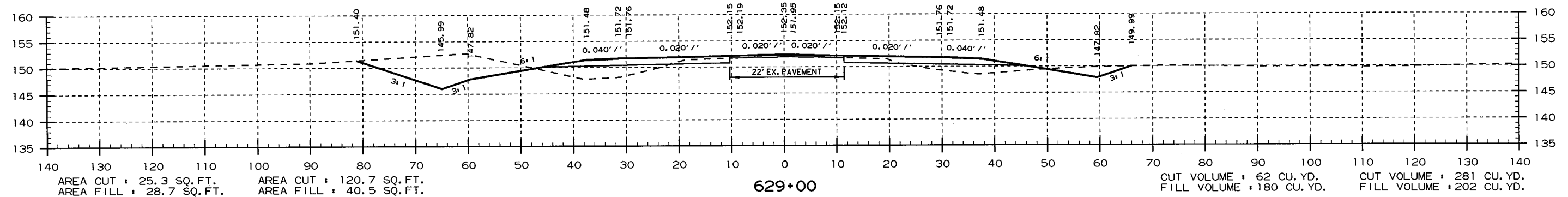
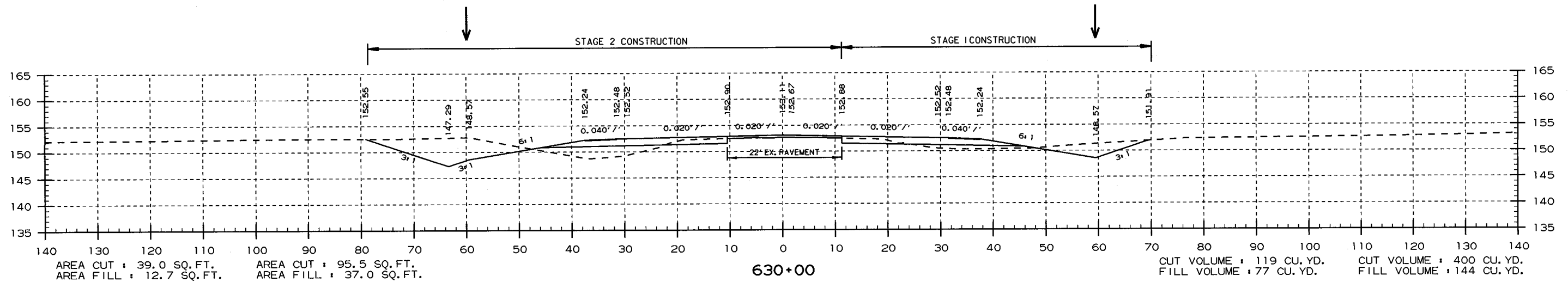
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0202	162	256
						2 CROSS SECTIONS		



CROSS SECTION STA. 626+00 TO STA. 627+38

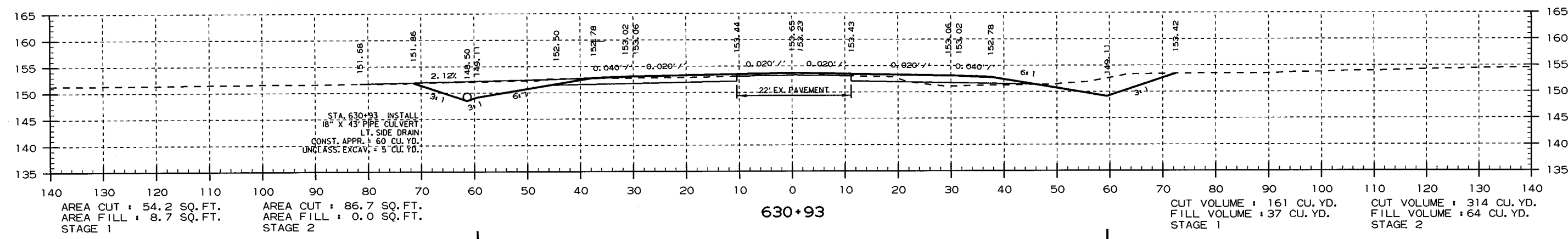
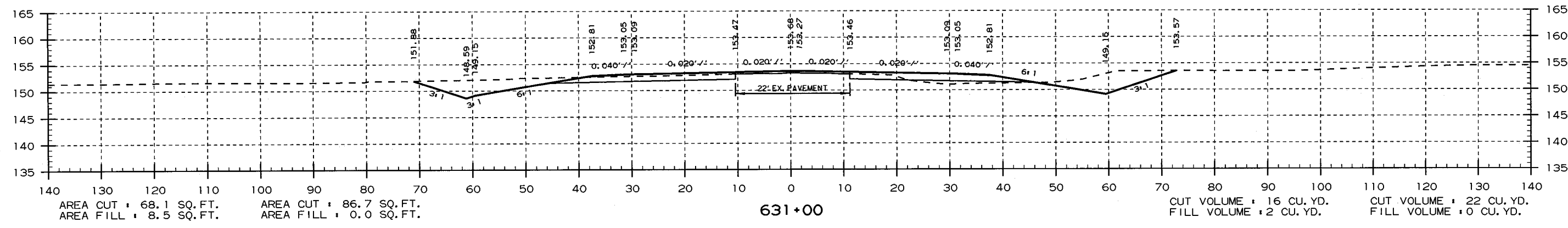
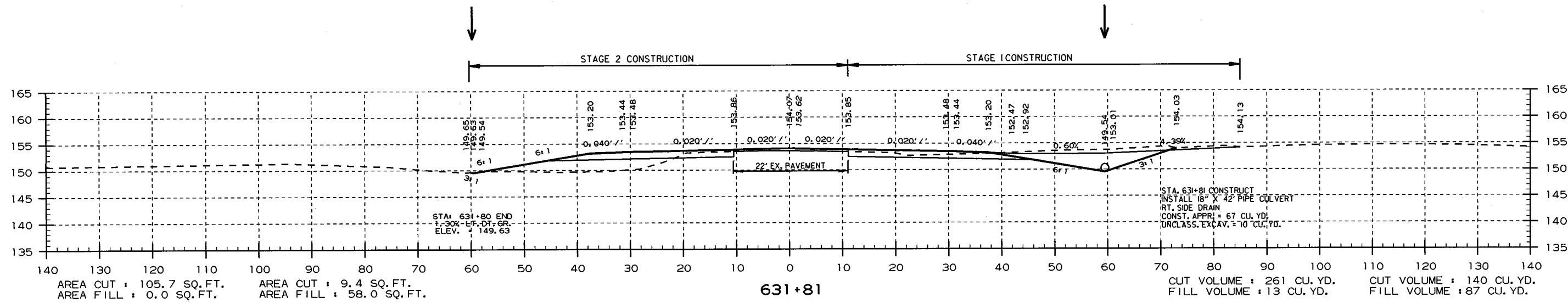
USER: fs513  
DESIGN FILE: G:\N1409300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0034.dgn  
PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	163	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 628+00 TO STA. 630+00

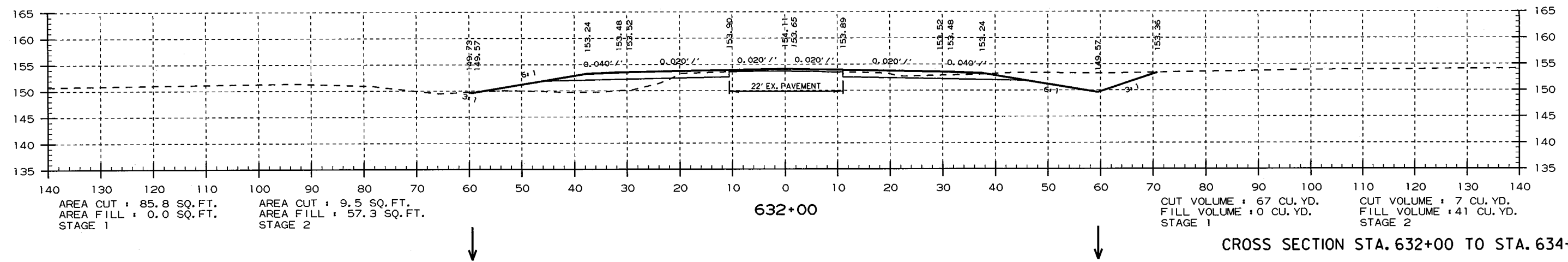
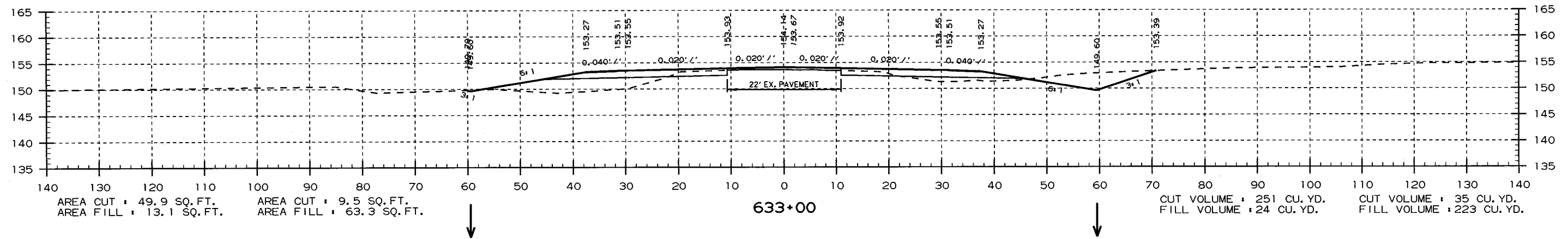
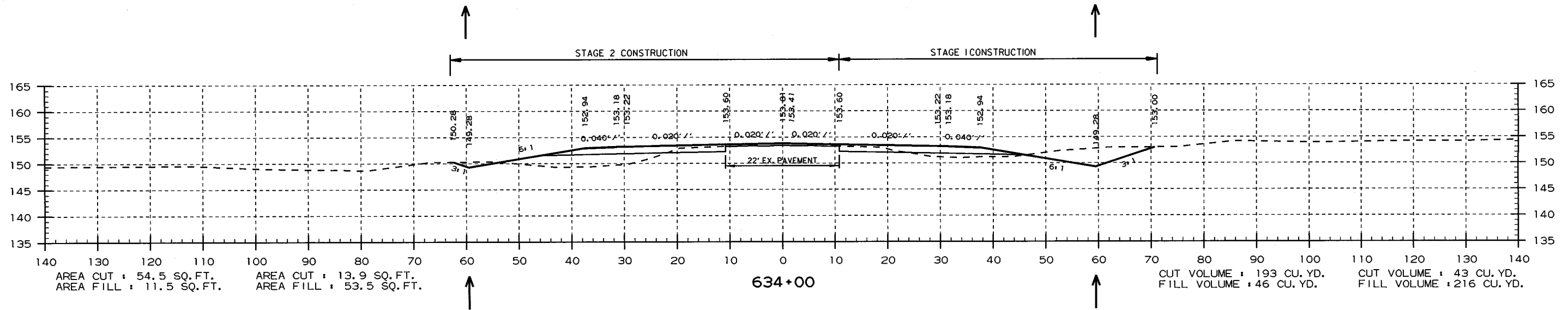
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	164	256	
				2 CROSS SECTIONS				



**CROSS SECTION STA. 630+93 TO STA. 631+81**

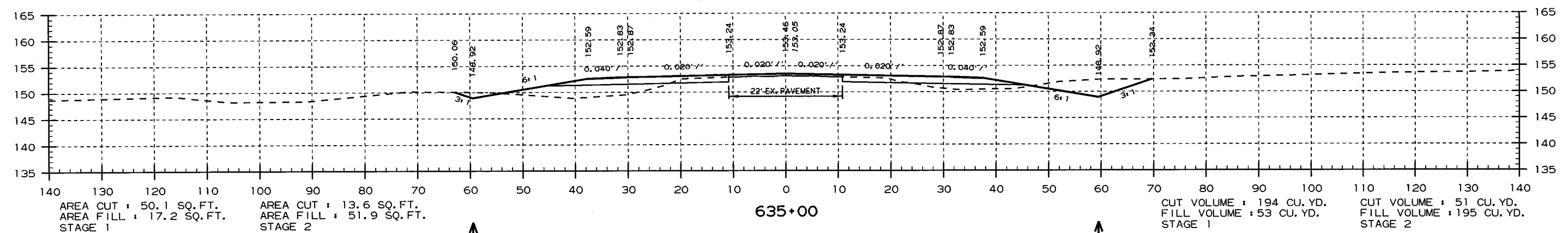
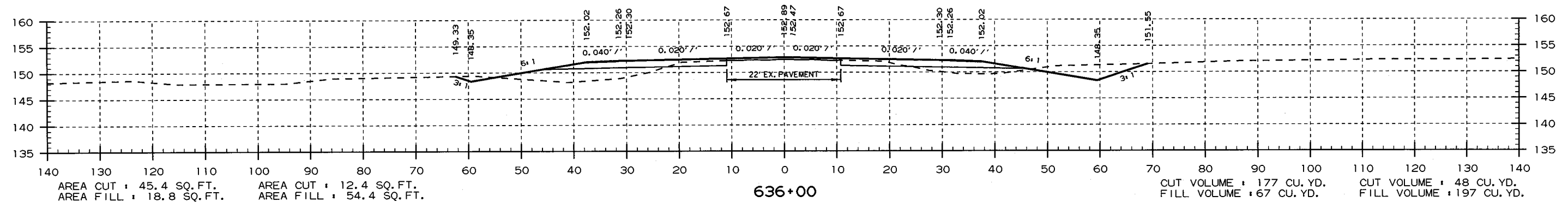
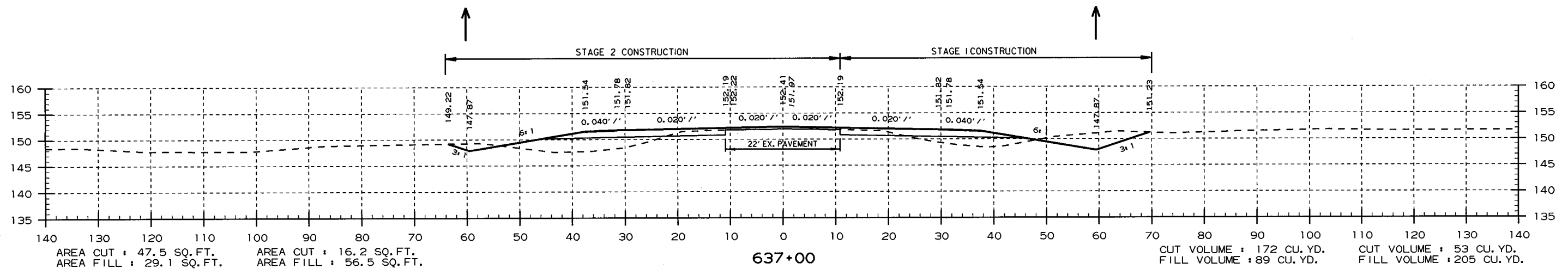
USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\X\_Section\CA0202\_CX\_0036.dgn  
 PLOTTED: 7/10/2018 10:37 SCALE: 20:1

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.	CA0202	165	256	
								(2) CROSS SECTIONS



USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0037.dgn  
 PLOTTED: 7/10/2018 10:37 SCALE: 20x

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	166	256	
				2 CROSS SECTIONS				

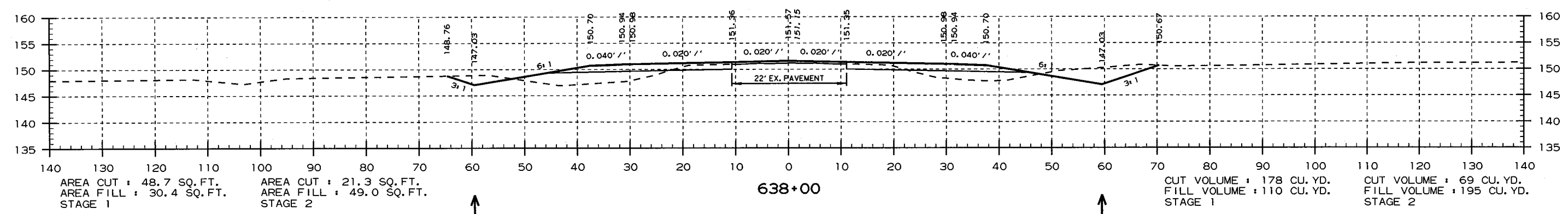
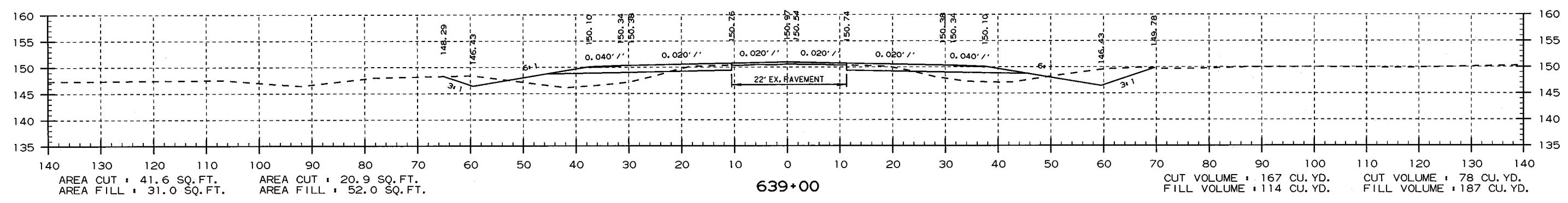
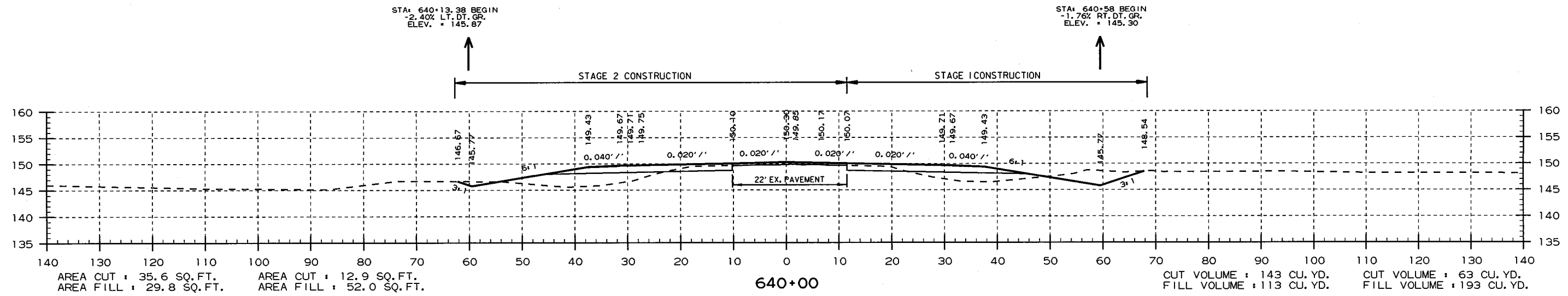


CROSS SECTION STA. 635+00 TO STA. 637+00

USER: fs513  
 DESIGN FILE: G:\MID9300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0038.dgn  
 PLOTTED: 7/10/2018 10:37 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	167	256	

2 CROSS SECTIONS

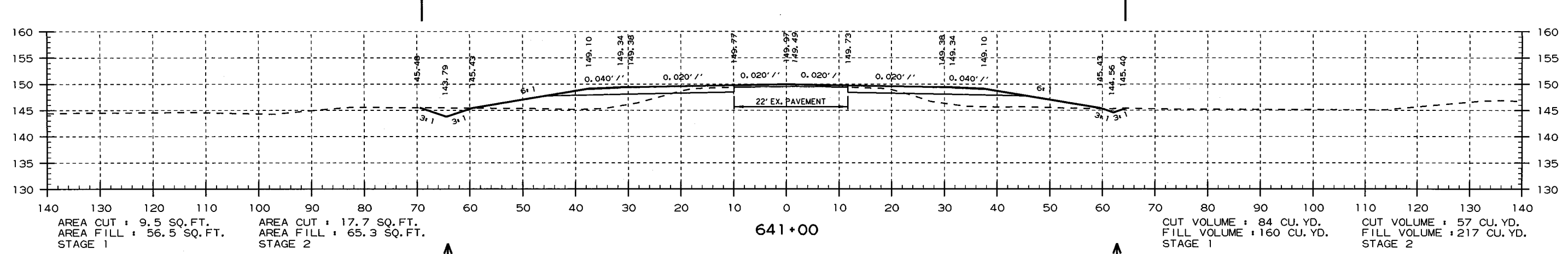
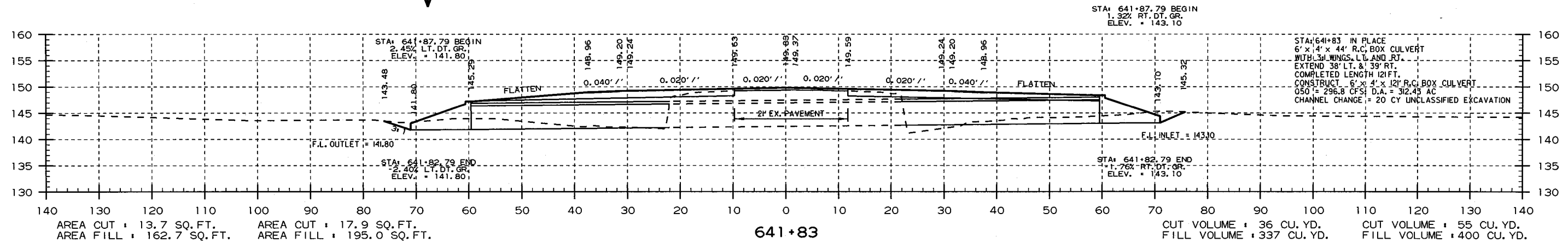
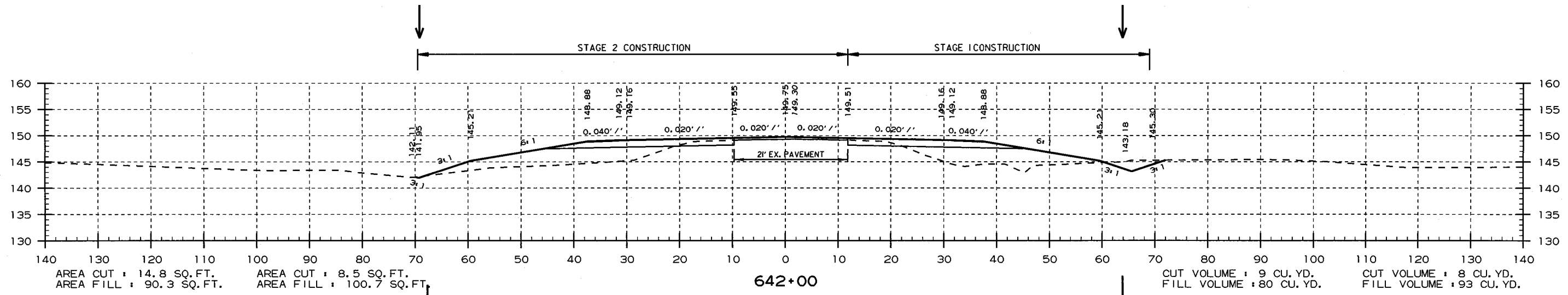


CROSS SECTION STA. 638+00 TO STA. 640+00

USER: fs513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANS\PDGN\X\_Section\CA0202\_CX\_0039.dgn  
PLOTTED: 7/10/2018 10:37

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.	CA0202	168	256	

2 CROSS SECTIONS

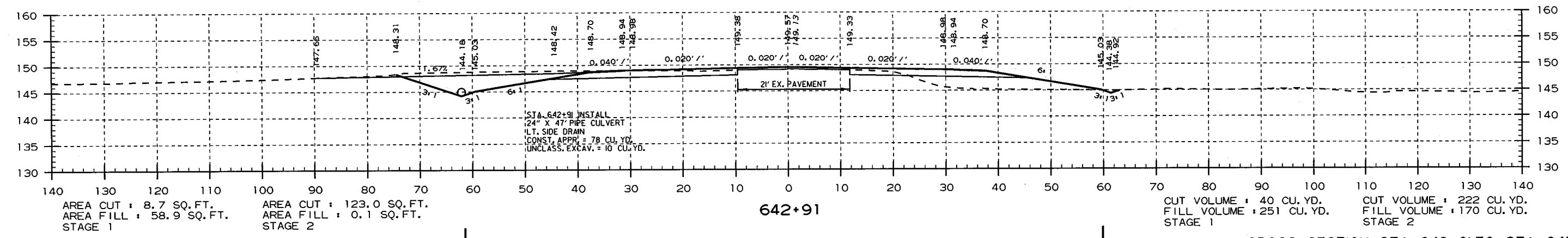
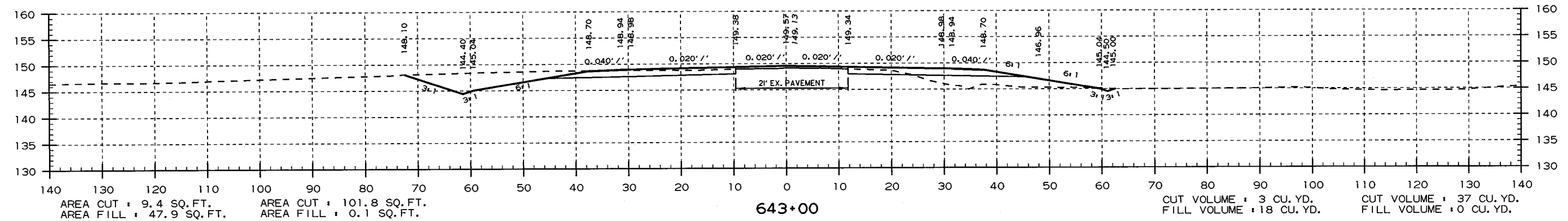
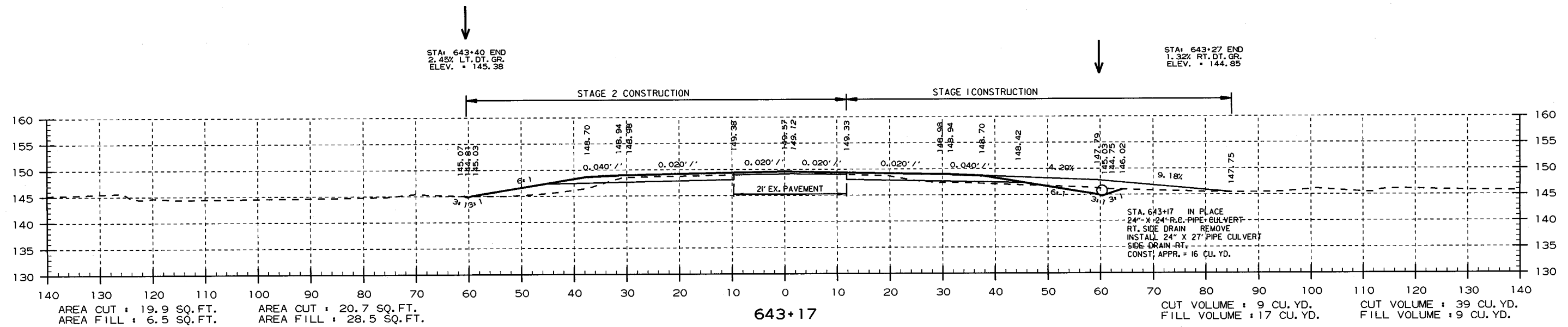


CROSS SECTION STA. 641+00 TO STA. 642+00

USER: fs53  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DN\X.Sections\CA0202.CX.0040.dgn  
 PLOTTED: 7/10/2018 10:37



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	169	256	
				2 CROSS SECTIONS				

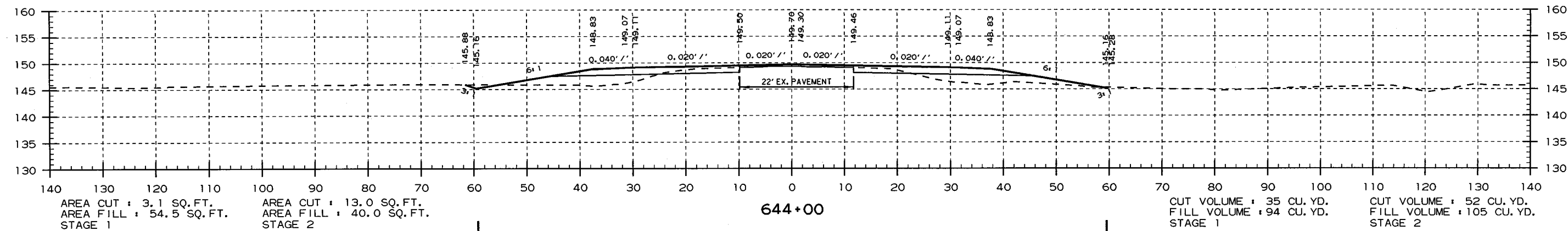
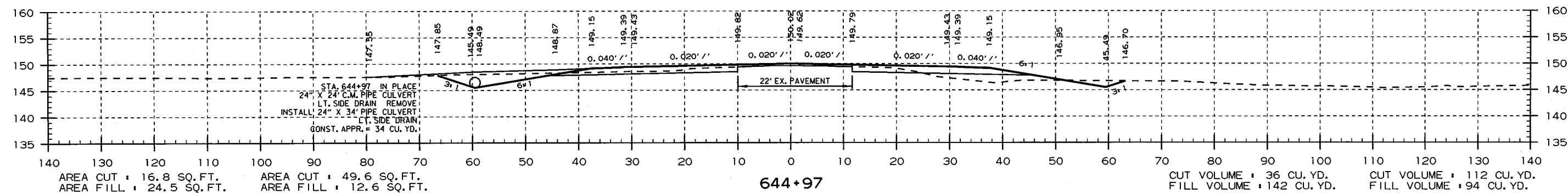
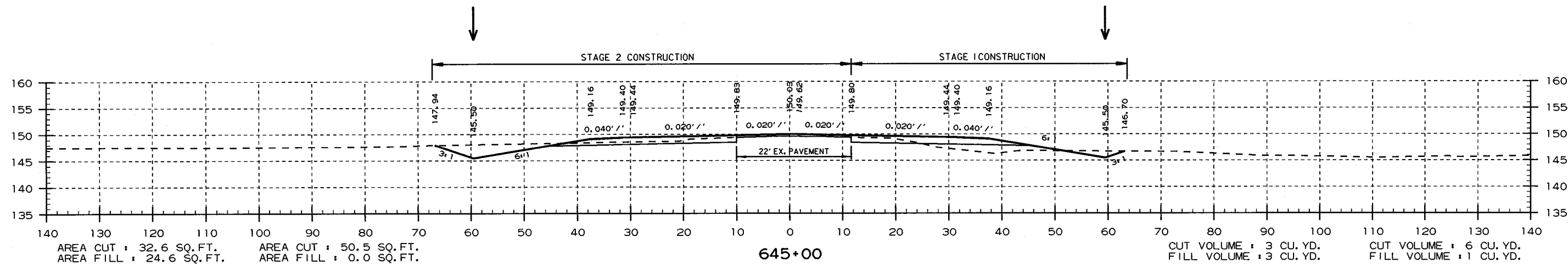


CROSS SECTION STA. 642+91 TO STA. 643+17

USER: f653  
DESIGN FILE: G:\H09300\_HWY\_82\TRANSP\DNV\_X\_Sections\CA0202\_CX\_0041.dgn  
PLOTTED: 7/10/2018 10:37 SCALE: 20H

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.	CA0202	170	256	

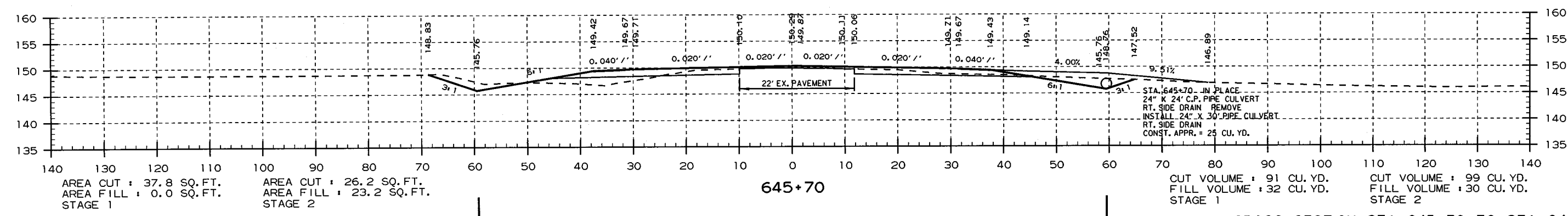
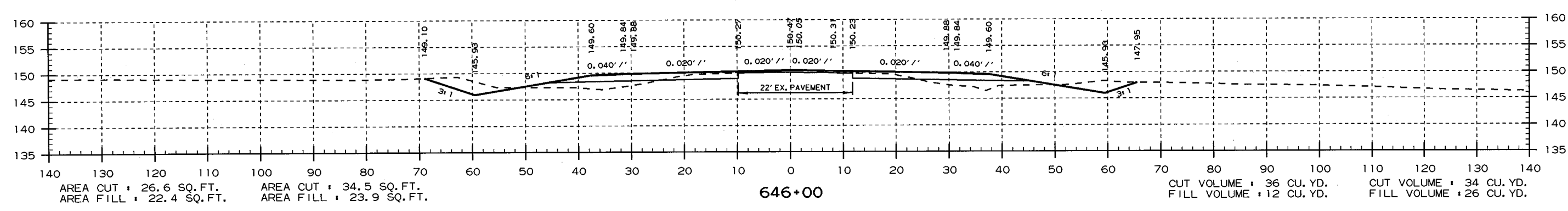
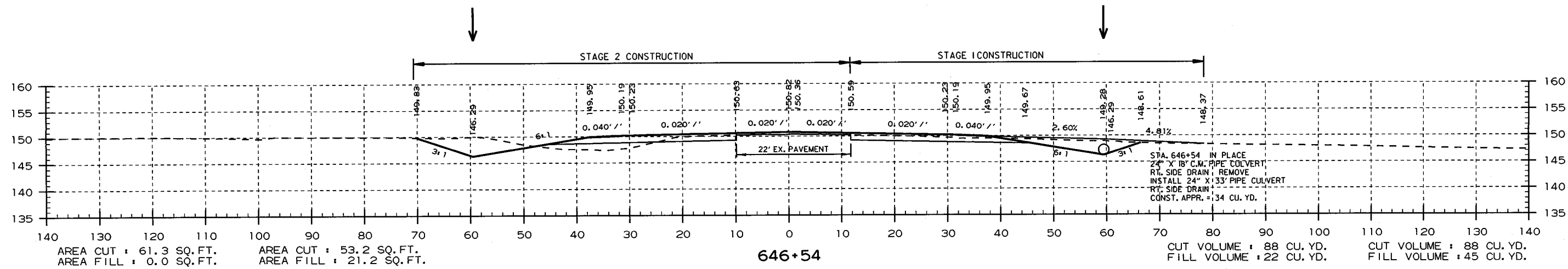
2 CROSS SECTIONS



CROSS SECTION STA. 644+00 TO STA. 645+00

USER: f5513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_0042.dgn  
 PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	171	256	
				2 CROSS SECTIONS				

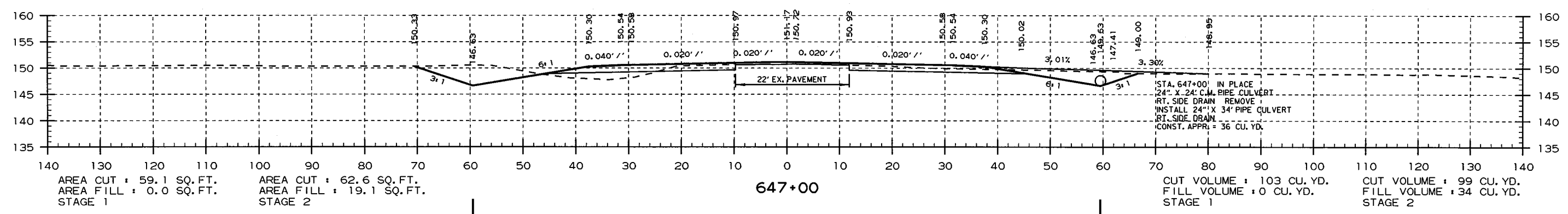
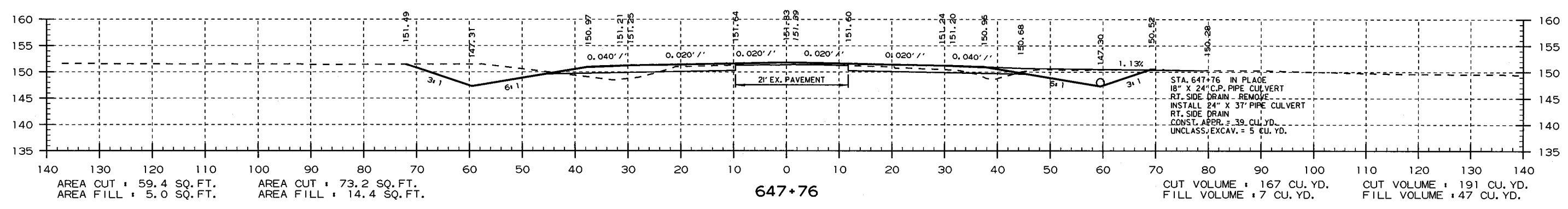
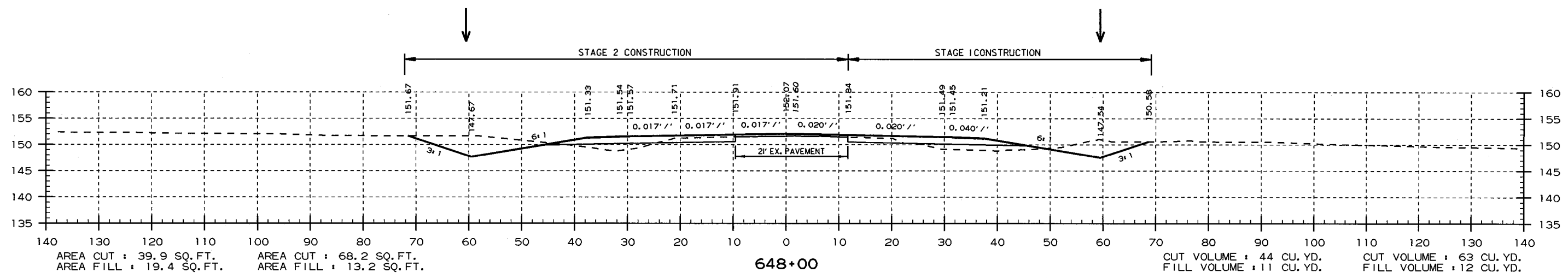


**CROSS SECTION STA. 645+70 TO STA. 646+54**

USER: f653  
 DESIGN FILE: G:\H09300\_HMY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0043.dgn  
 PLOTTED: 7/10/2018 10:37      SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	172	256	

2 CROSS SECTIONS

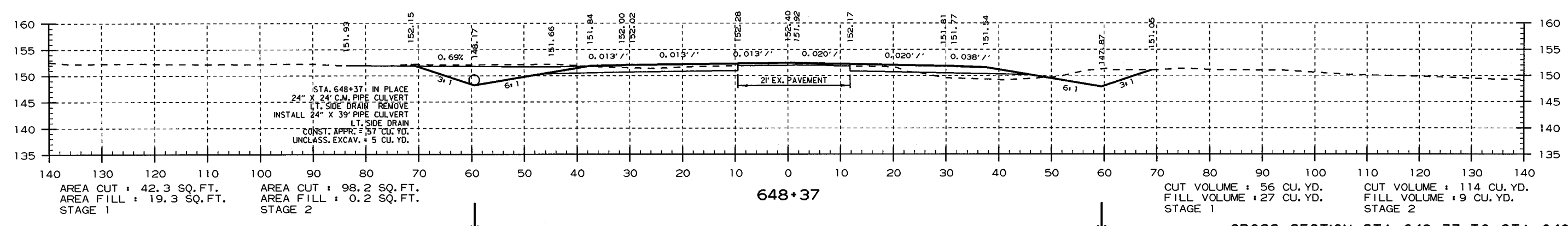
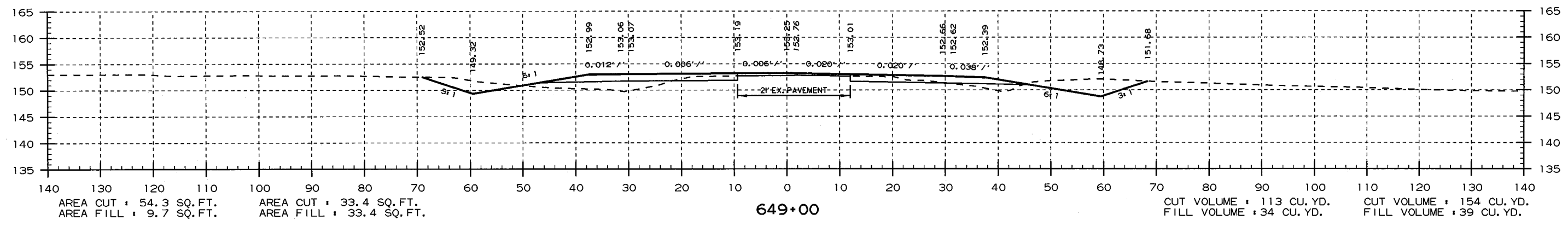
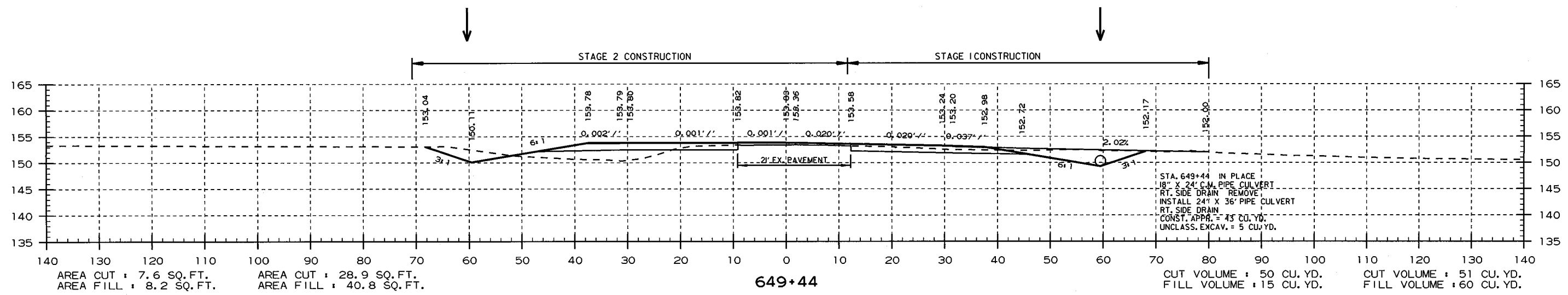


CROSS SECTION STA. 647+00 TO STA. 648+00

USER: fs53  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\X\_Sections\CA0202.CX.0044.dgn  
 PLOTTED: 7/10/2018 10:37  
 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	173	256	

2 CROSS SECTIONS

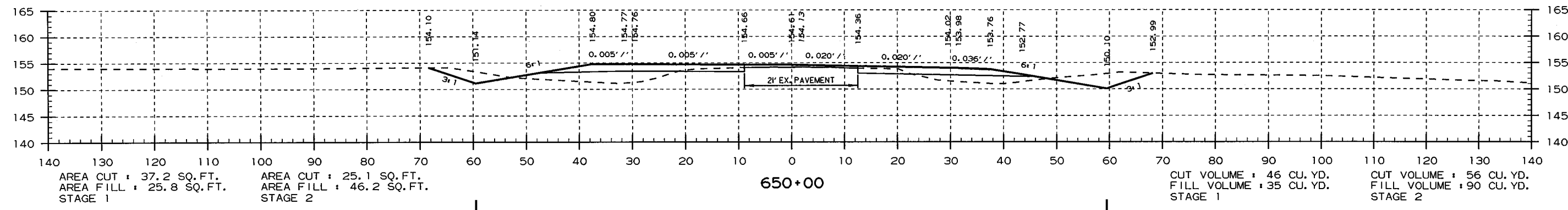
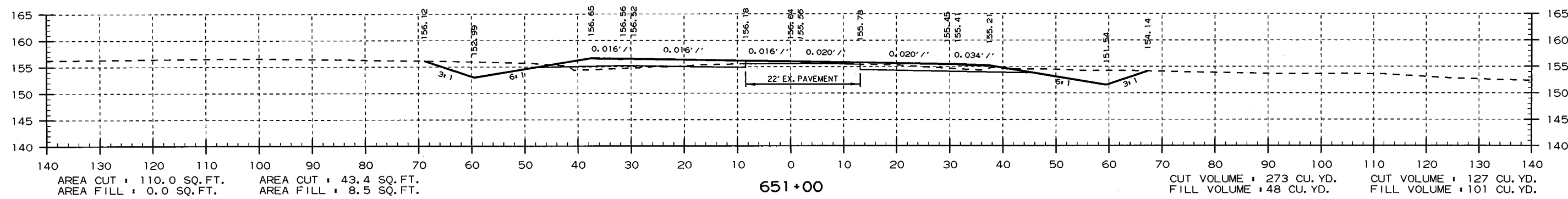
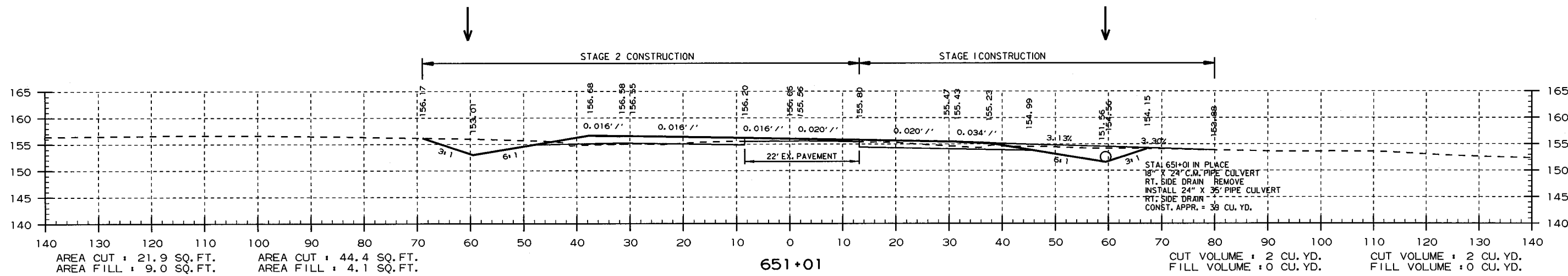


CROSS SECTION STA. 648+37 TO STA. 649+44

USER: fs513  
 DESIGN FILE: G:\MID9300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0045.dgn  
 PLOTTED: 7/10/2018 10:37 SCALE: 20x

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	174	256	

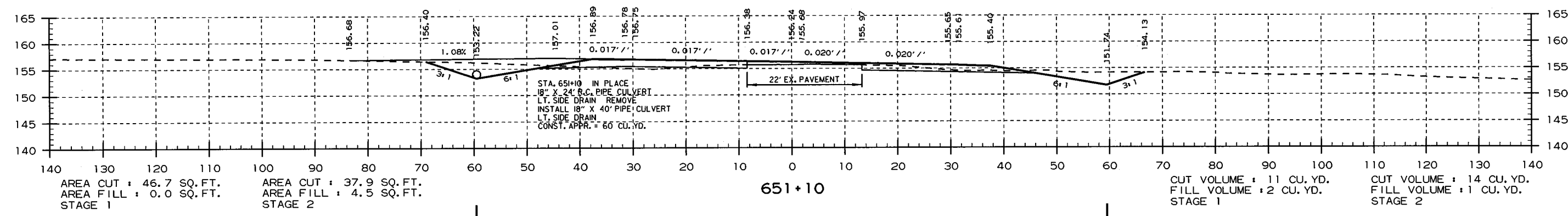
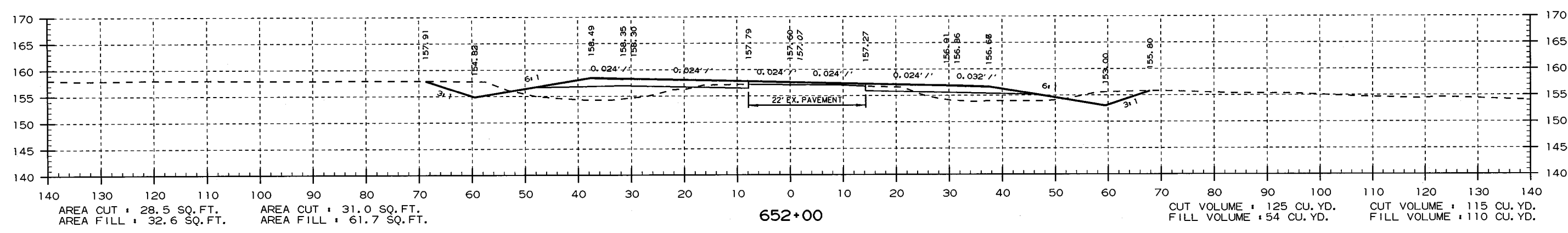
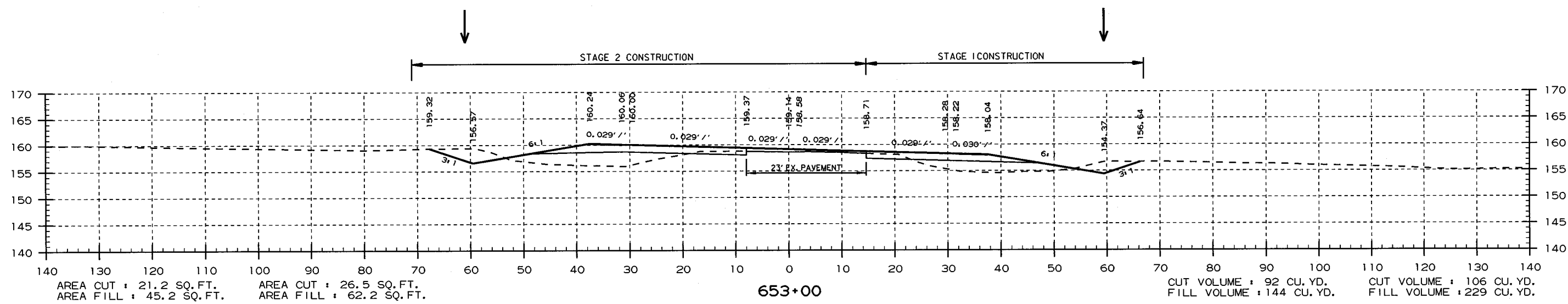
2 CROSS SECTIONS



CROSS SECTION STA. 650+00 TO STA. 651+01

USER: f513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0046.dgn  
PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
				JOB NO.	CA0202		175	256	
2								CROSS SECTIONS	

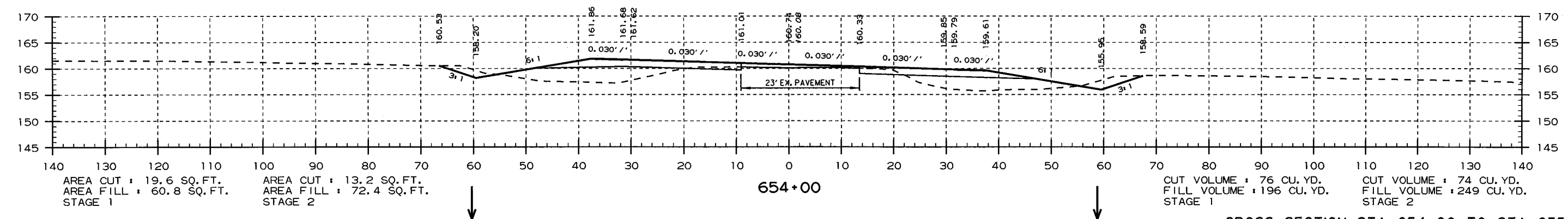
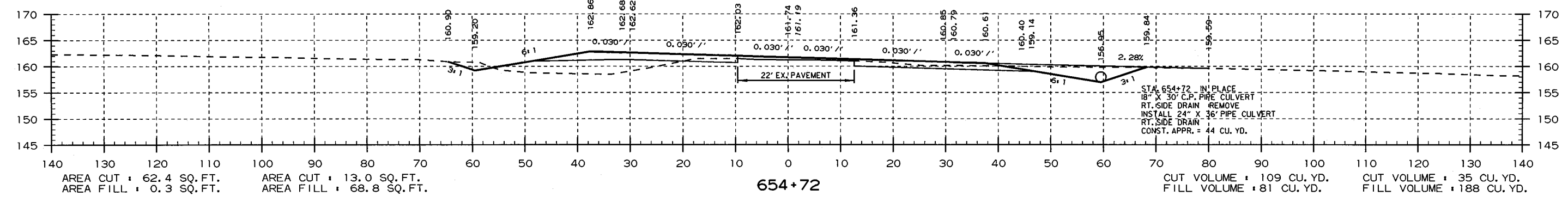
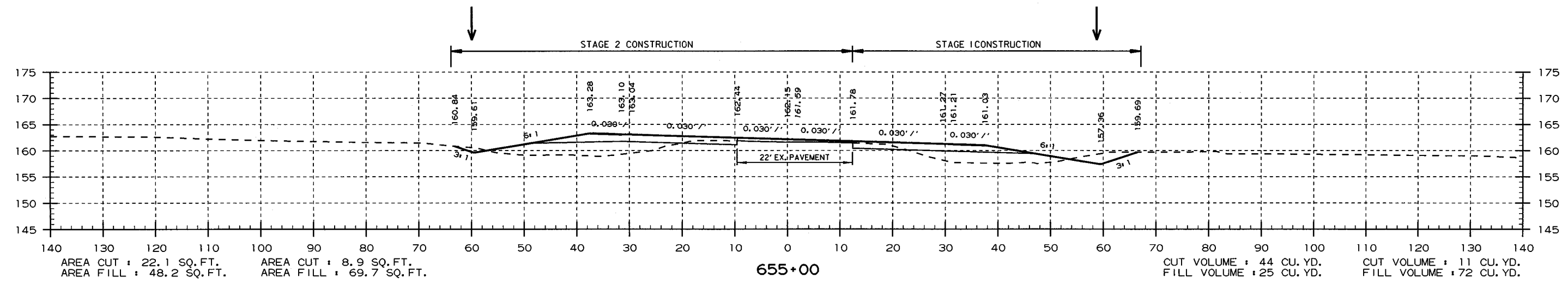


CROSS SECTION STA. 651+10 TO STA. 653+00

USER: f4513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0047.dgn  
 PLOTTED: 7/10/2018 10:37      SCALE: 20x

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	176	256	

2 CROSS SECTIONS



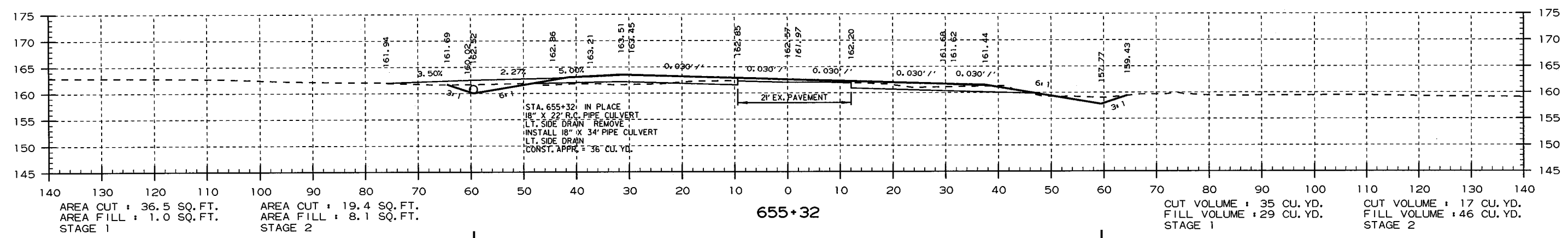
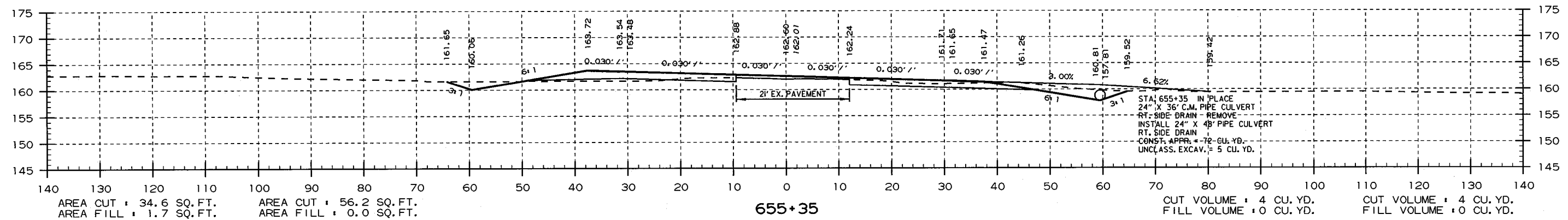
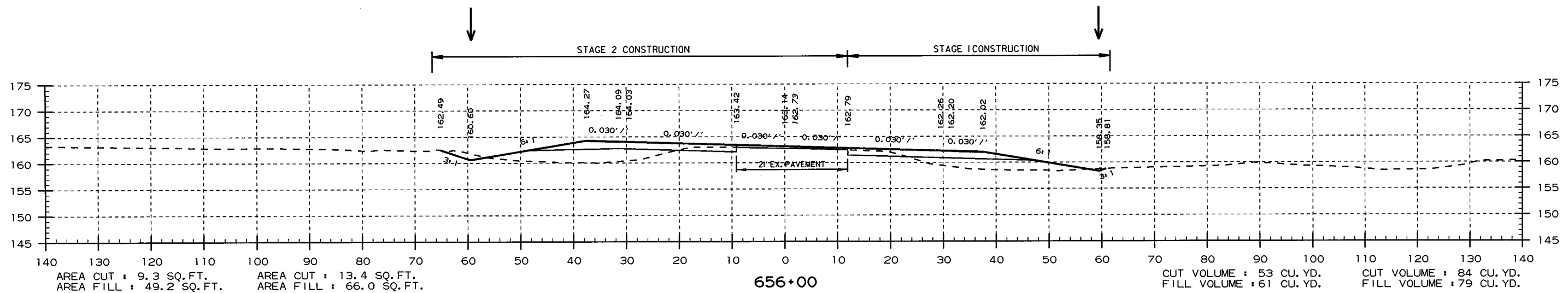
CROSS SECTION STA. 654+00 TO STA. 655+00

USER: f553  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\X\_Section\CA0202\_CX\_0048.dgn  
 PLOTTED: 7/10/2018 10:37



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0202	177	256

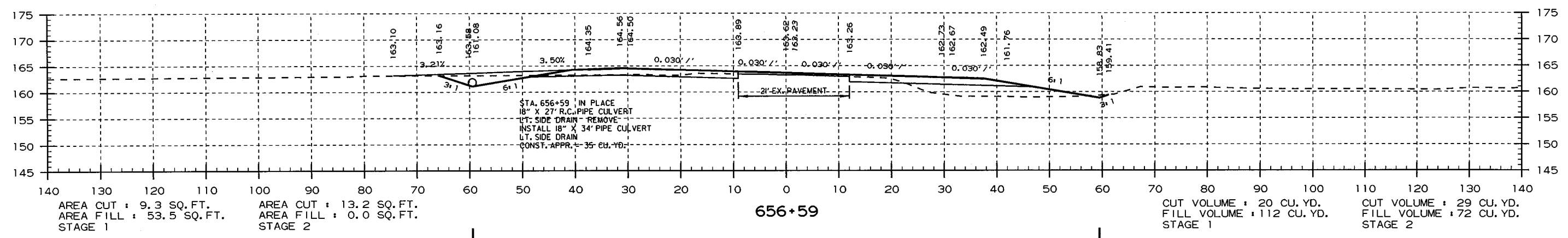
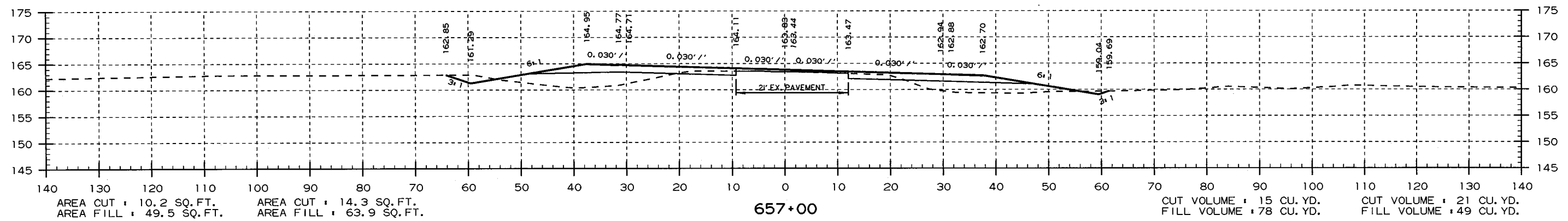
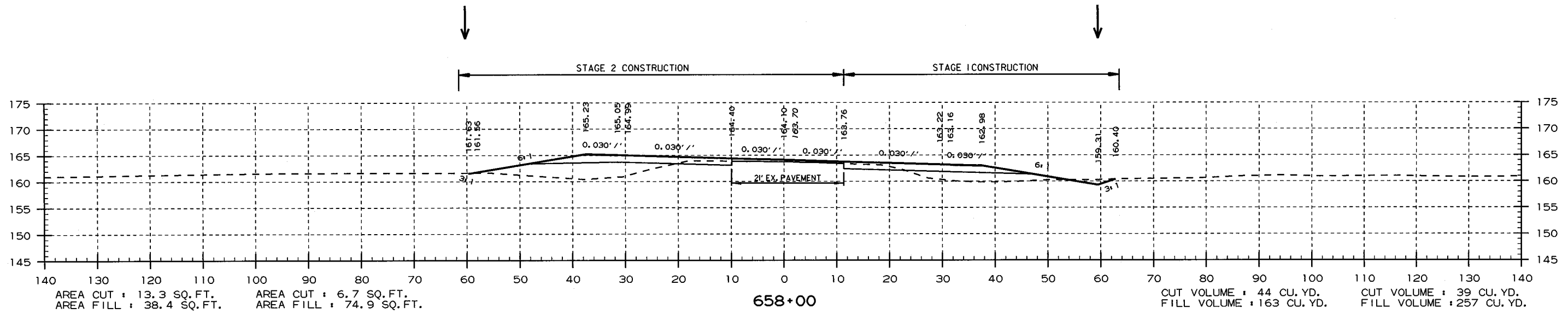
2 CROSS SECTIONS



CROSS SECTION STA. 655+32 TO STA. 656+00

USER: fs513  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\X\_Sect\ions\CA0202.CX\_0049.dgn  
PLOTTED: 7/10/2018 10:37

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.	CA0202		178	256
				2 CROSS SECTIONS				

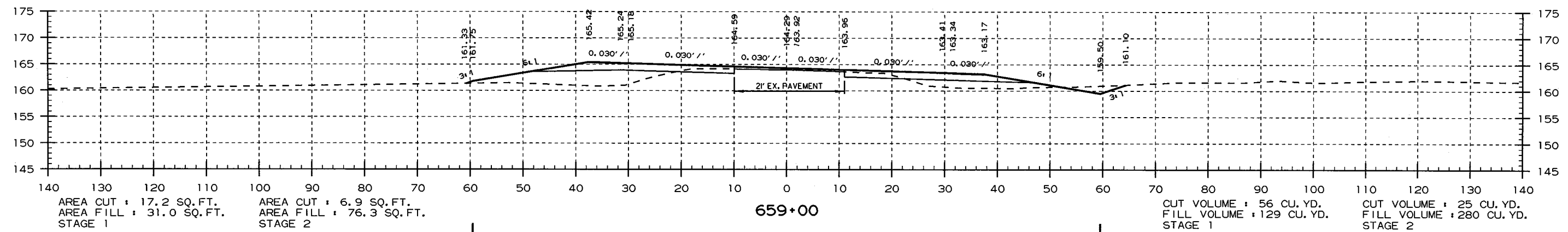
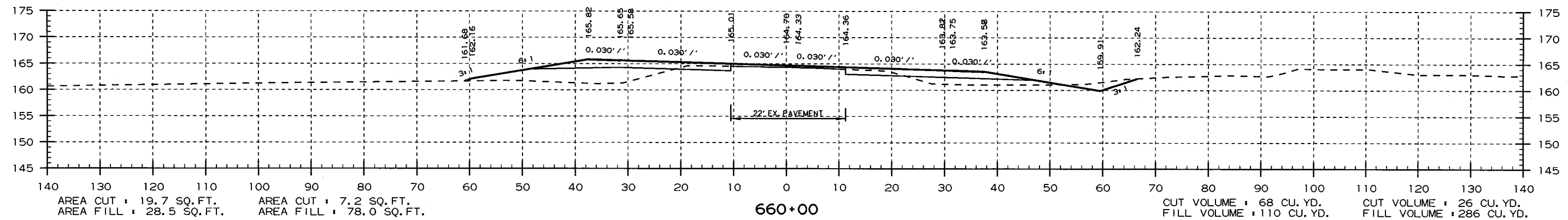
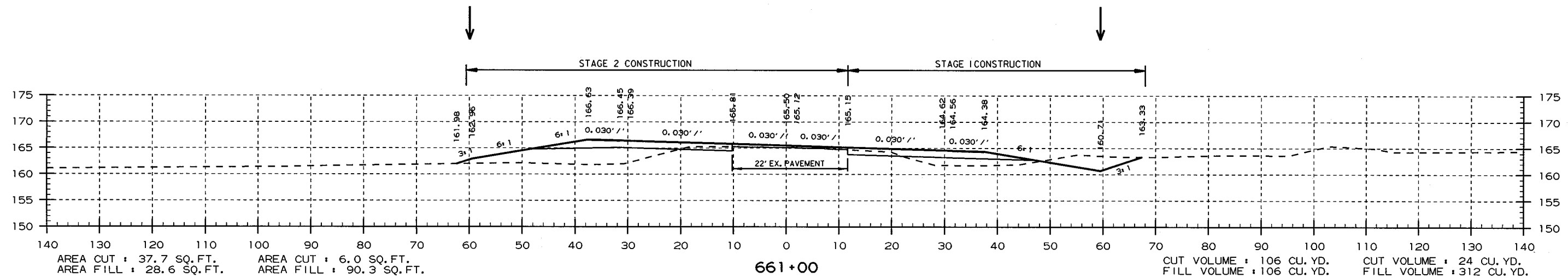


CROSS SECTION STA. 656+59 TO STA. 658+00

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DN\X\_Section\CA0202\_CX\_0050.dgn  
 PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		179	256

2 CROSS SECTIONS

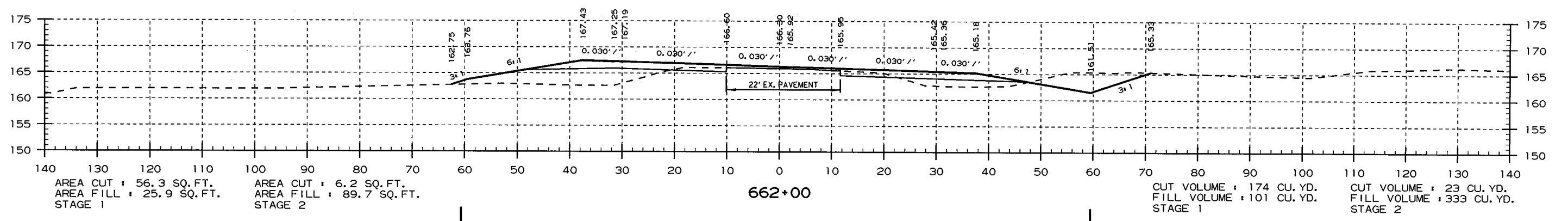
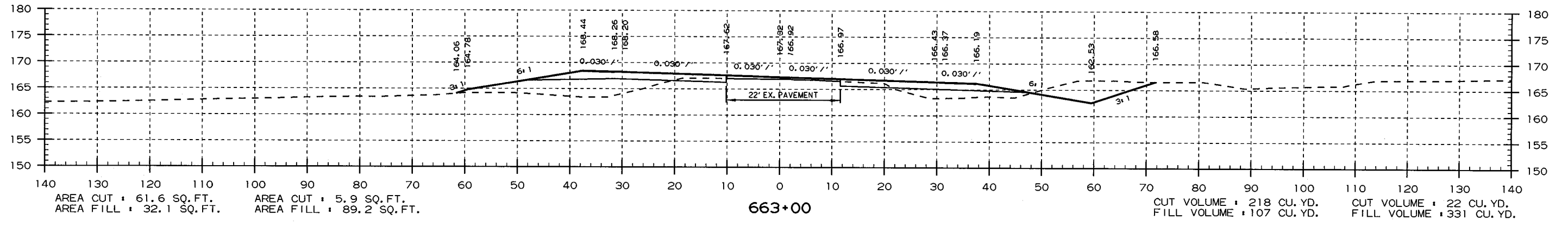
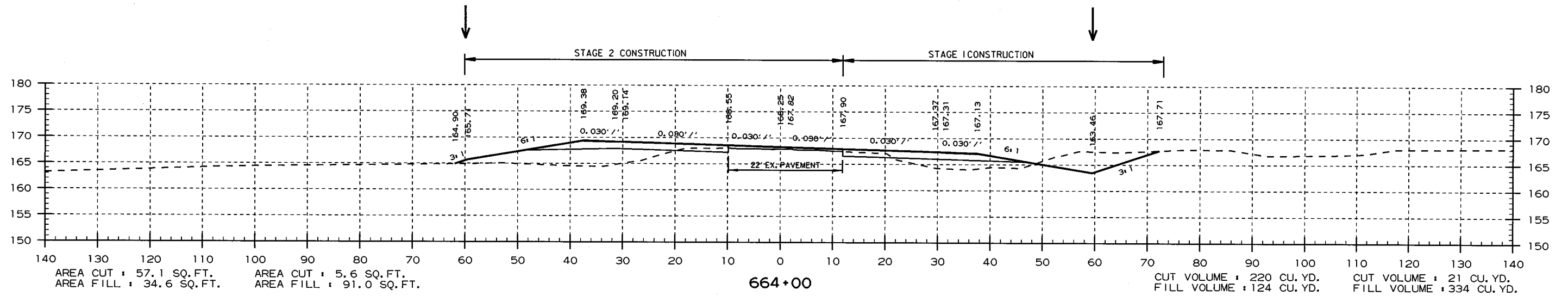


CROSS SECTION STA. 659+00 TO STA. 661+00

USER: f553  
 DESIGN FILE: G:\1409300.HWY\_82\TRANSP\DCN\X\_Sections\CA0202.CX\_0051.dgn  
 PLOTTED: 7/10/2018 10:37  
 SCALE: 20:1

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.	CA0202	180	256	

2 CROSS SECTIONS

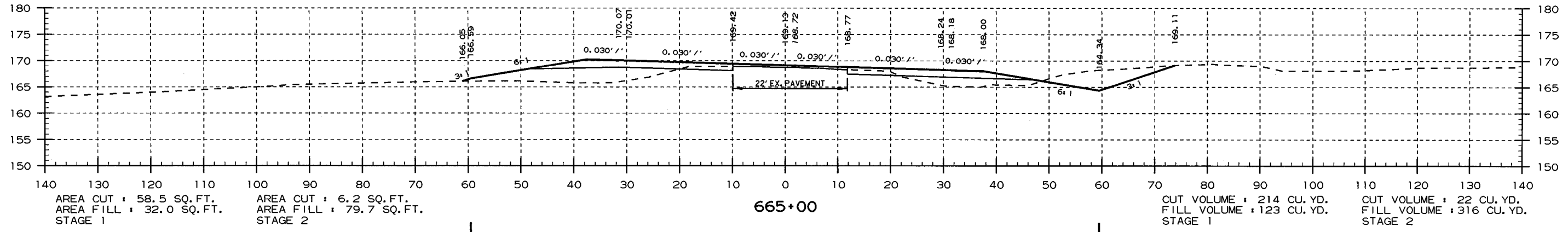
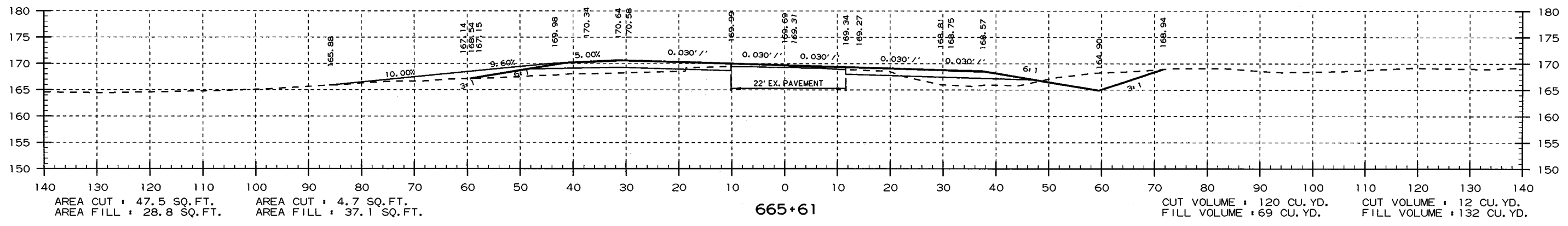
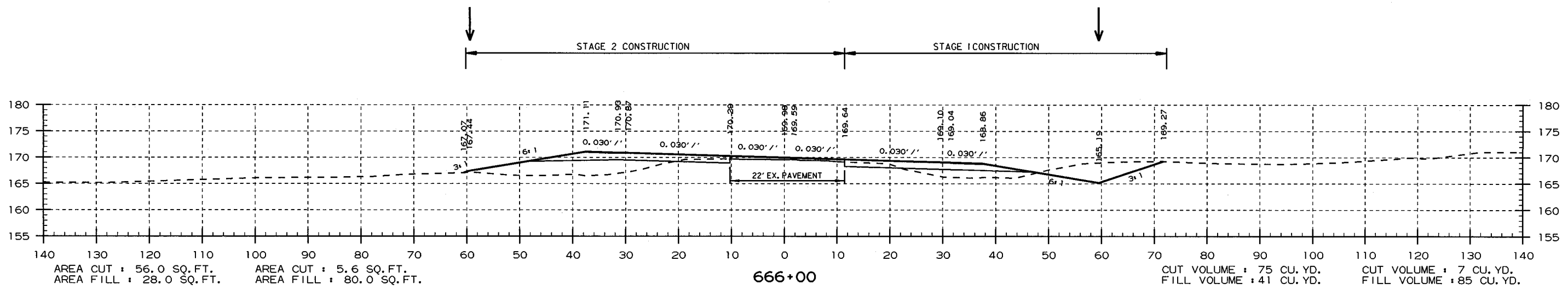


CROSS SECTION STA. 662+00 TO STA. 664+00

USER: f5513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\X\_Sections\CA0202.CX\_0052.dgn  
 PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		181	256

2 CROSS SECTIONS

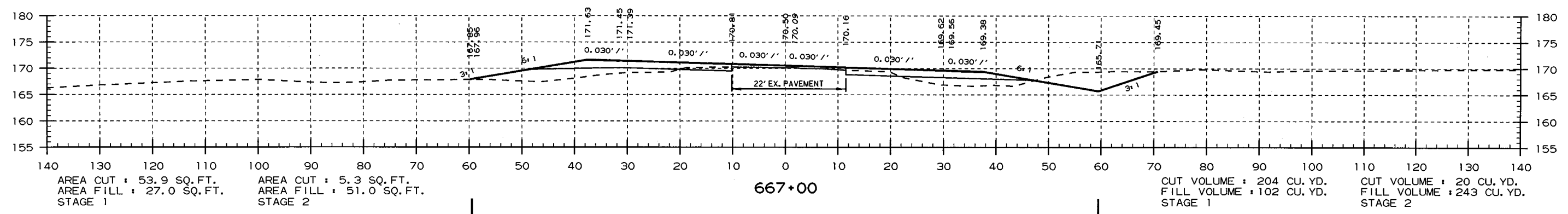
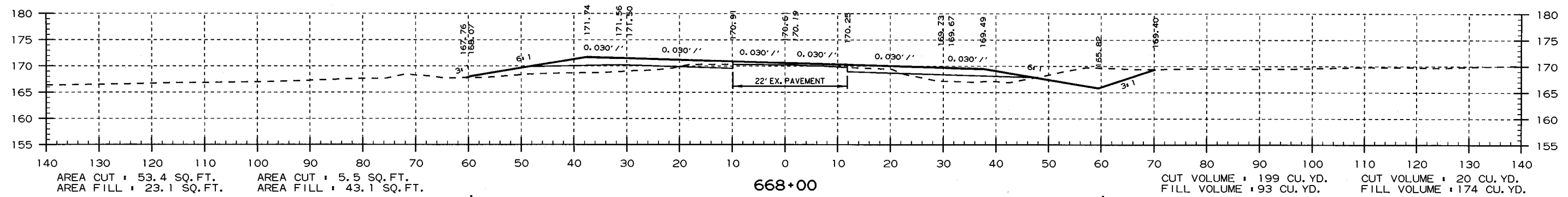
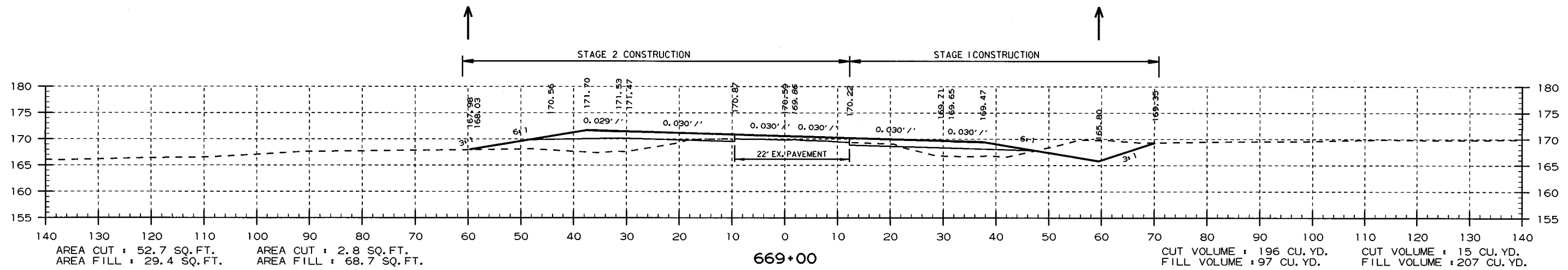


CROSS SECTION STA. 665+00 TO STA. 666+00

USER: f513  
 DESIGN FILE: G:\4109300.HWY\_82\TRANSP\DGN\X\_Section\CA0202.CX\_0053.dgn  
 PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		182	256

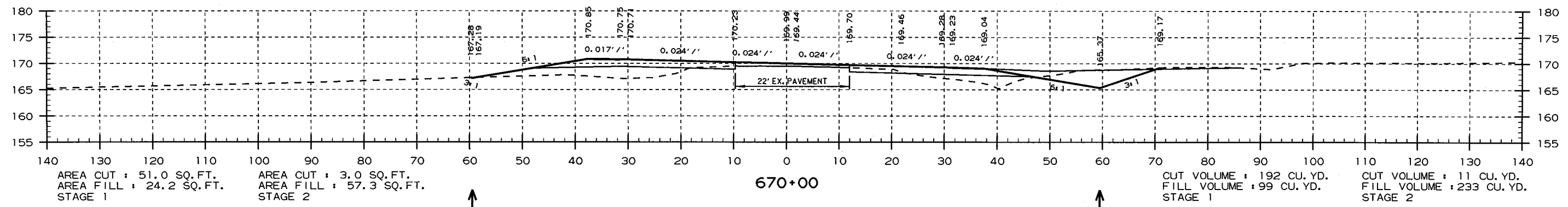
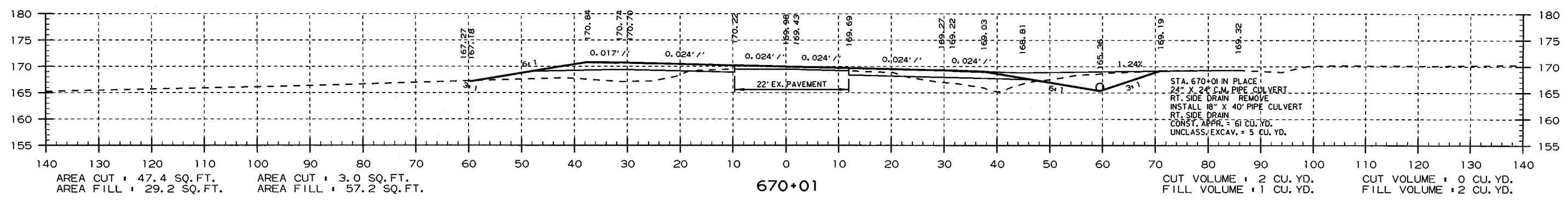
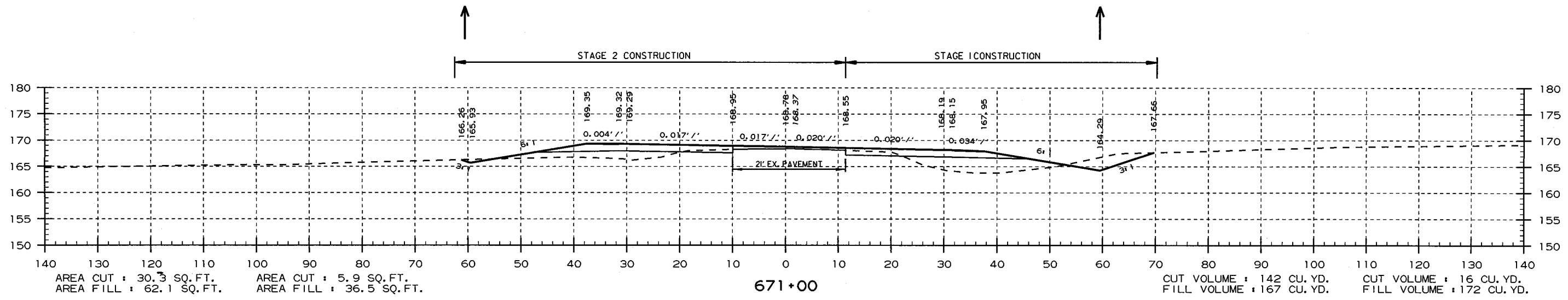
2 CROSS SECTIONS



CROSS SECTION STA. 667+00 TO STA. 669+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	183	256	

2 CROSS SECTIONS

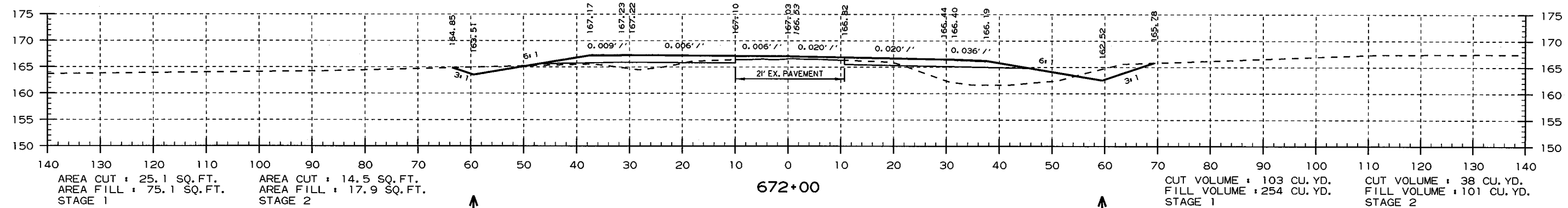
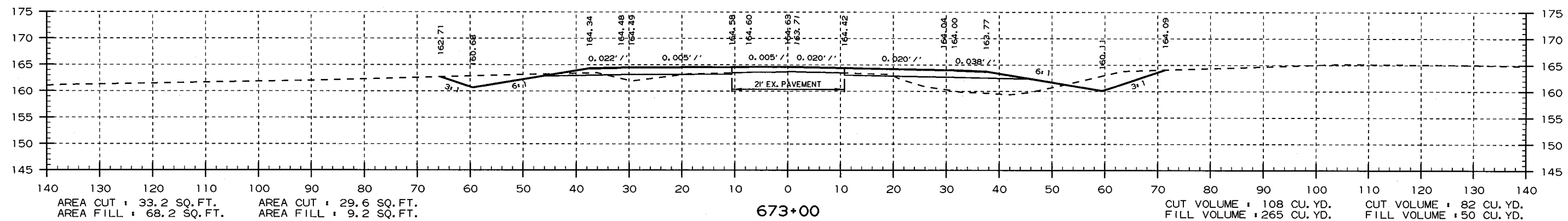
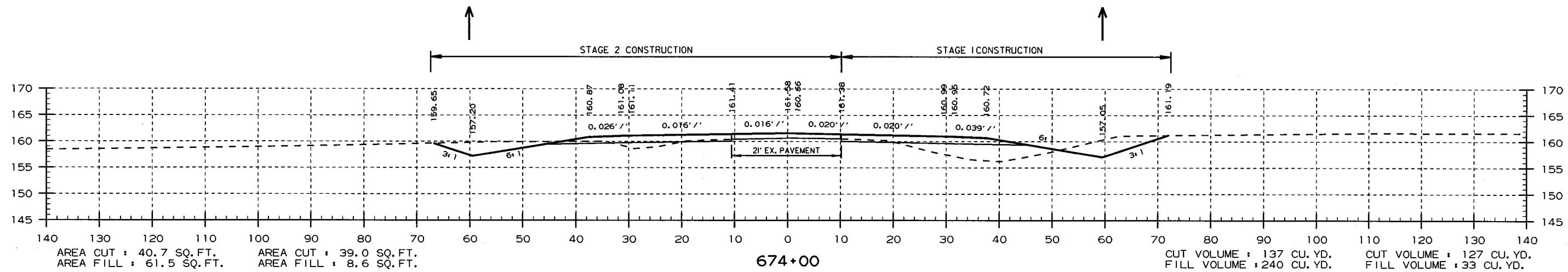


CROSS SECTION STA. 670+00 TO STA. 671+00

USER: fs53  
 DESIGN FILE: G:\M09300\_Hwy\_82\TRANSP\DN\X\_Sections\CA0202.CX.0055.dgn  
 PLOTTED: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	184	256	

2 CROSS SECTIONS

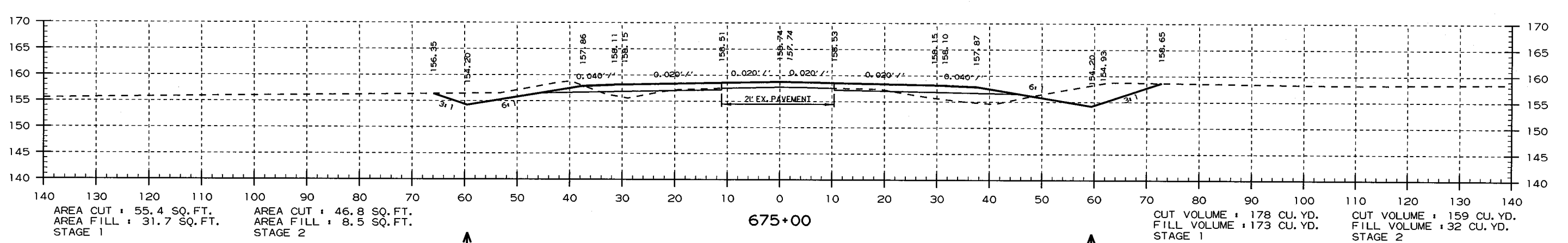
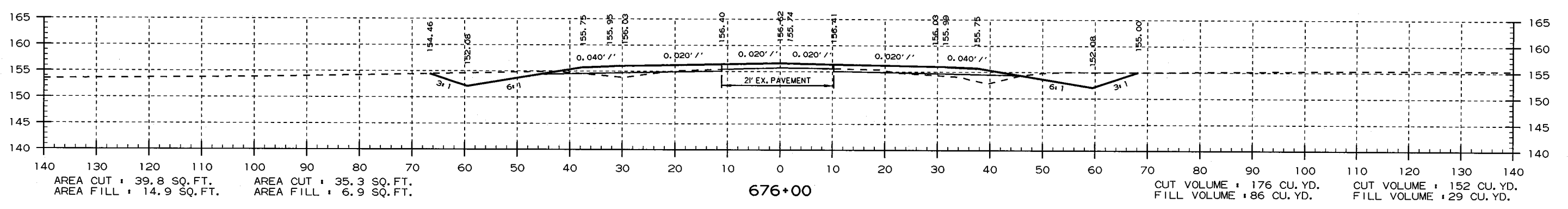
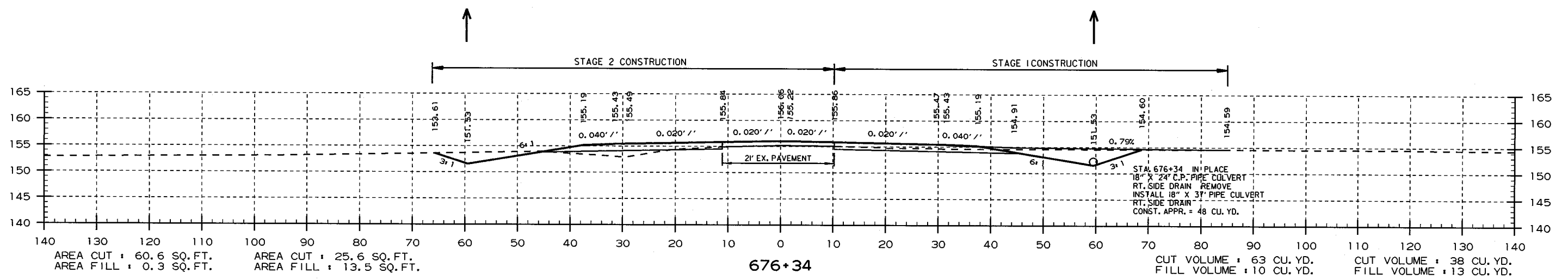


CROSS SECTION STA. 672+00 TO STA. 674+00



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.	CA0202	185	256	

2 CROSS SECTIONS

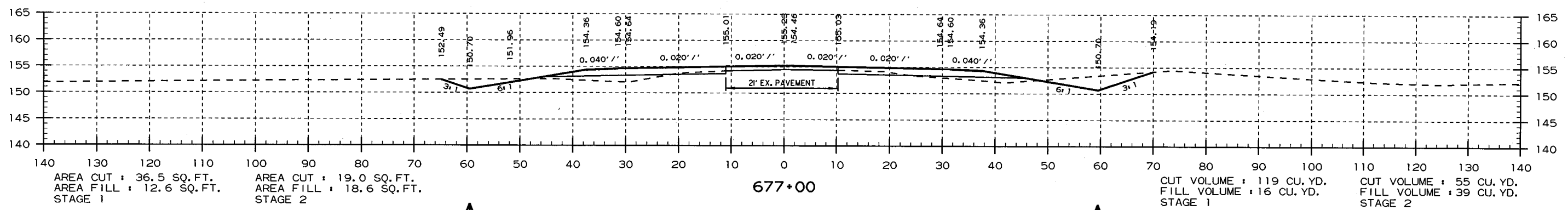
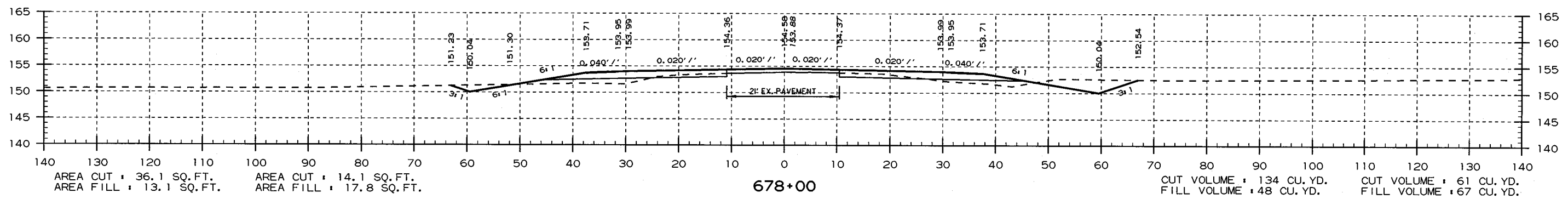
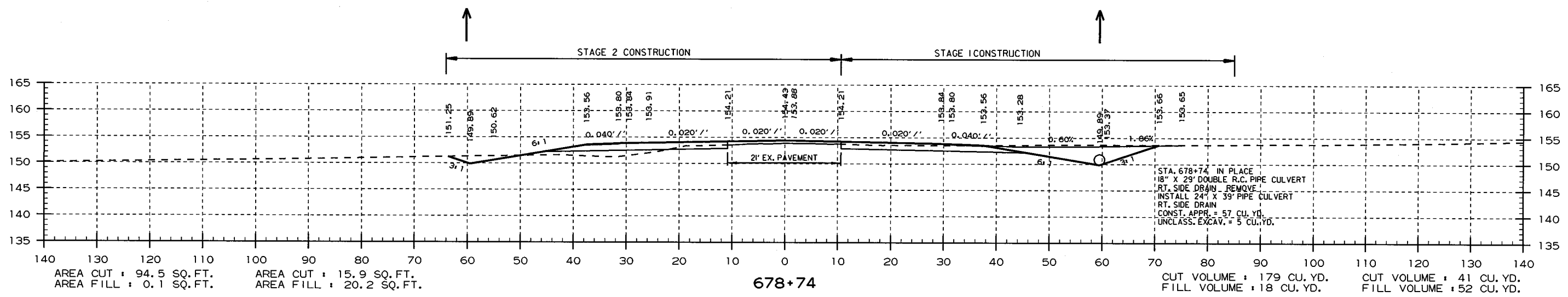


CROSS SECTION STA. 675+00 TO STA. 676+34

USER: f6513  
DESIGN FILE: G:\M09300\_HWY\_82\TRANSP\DNX\Sections\CA0202\_CX\_0057.dgn  
PLOTTER: 7/10/2018 10:37

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.	CA0202	186	256	

2 CROSS SECTIONS

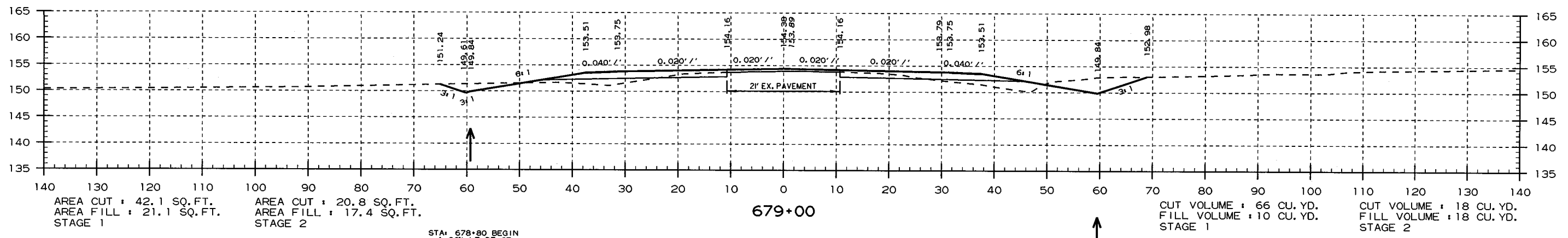
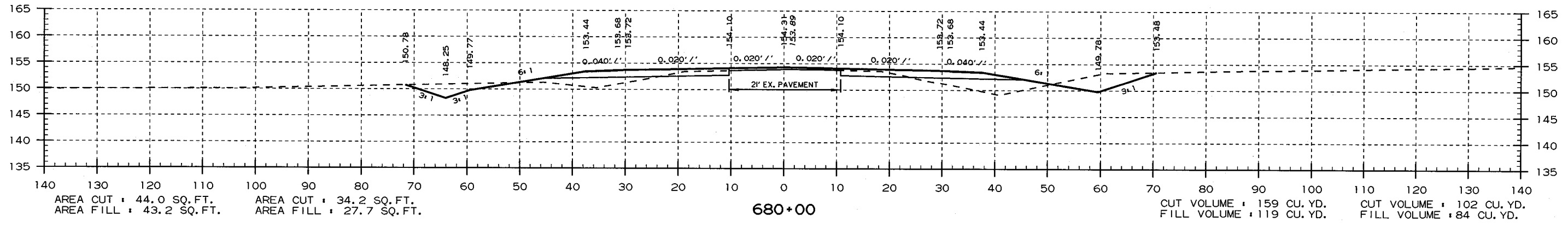
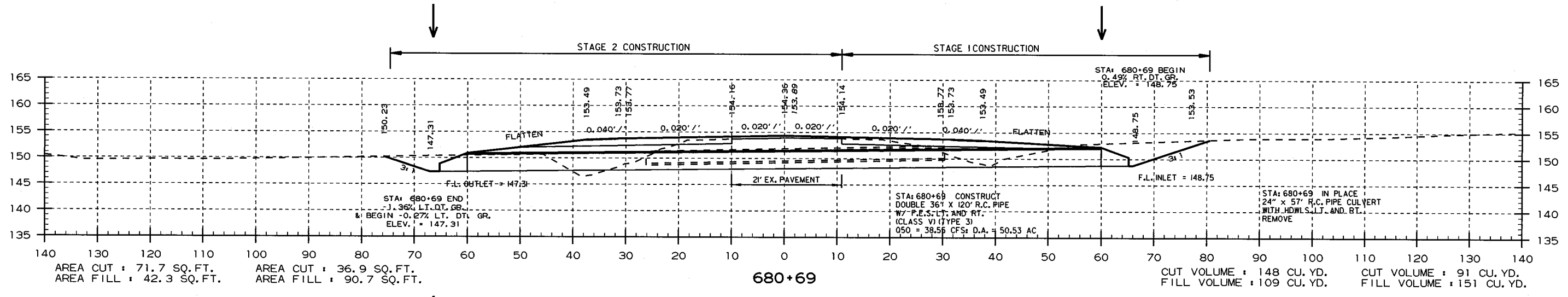


CROSS SECTION STA. 677+00 TO STA. 678+74

USER: f5513  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0058.dgn  
PLOTTED: 7/10/2018 10:37

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.	CA0202	187	256	

2 CROSS SECTIONS

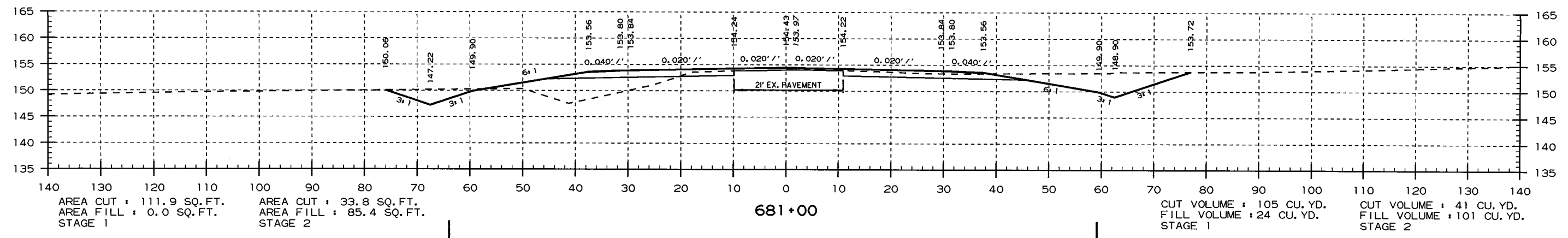
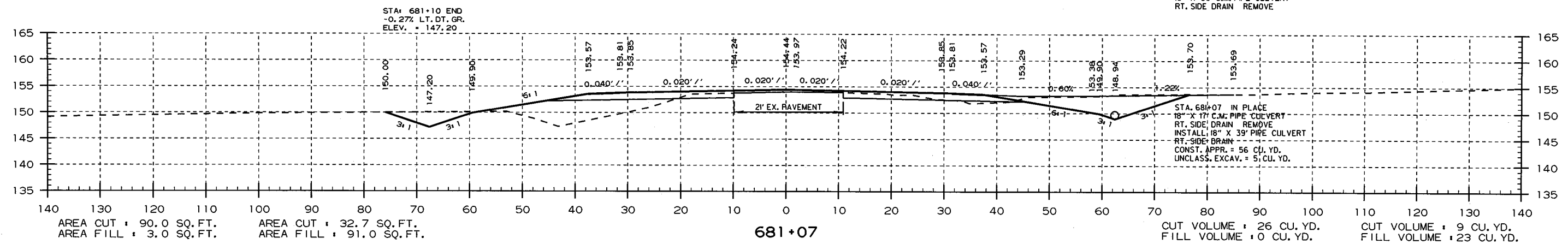
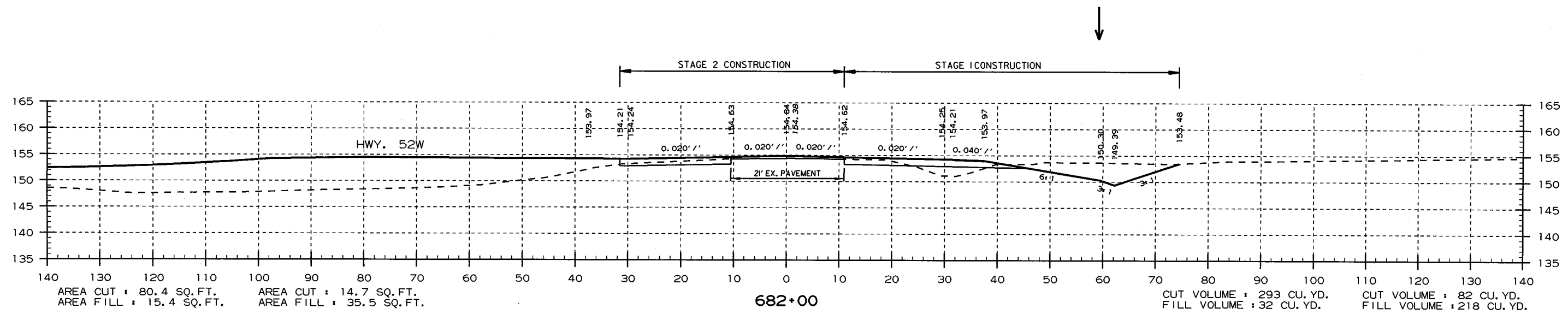


CROSS SECTION STA. 679+00 TO STA. 680+69

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNV\Sections\CA0202.CX\_0059.dgn  
 PLOTTED: 7/10/2018 10:37  
 SCALE: 20:1

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.	CA0202	188	256	

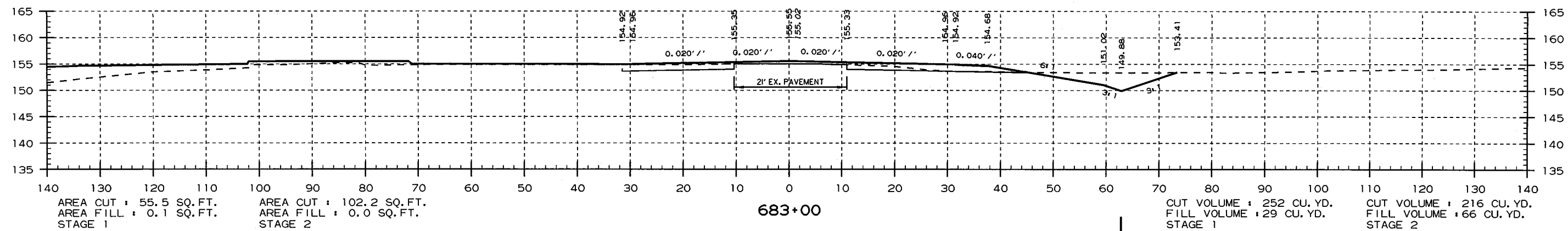
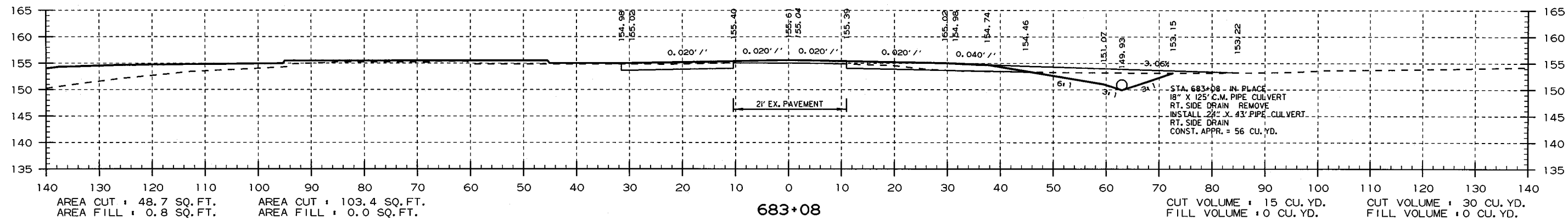
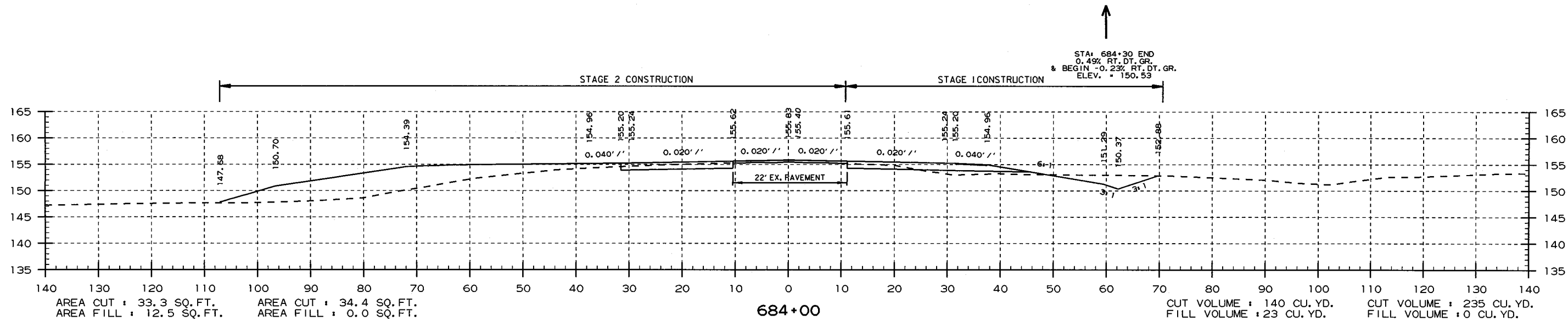
2 CROSS SECTIONS



CROSS SECTION STA. 681+00 TO STA. 682+00

USER: fs53  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCNVX\_Sections\CA0202\_CX\_0060.dgn  
 PLOTTED: 7/10/2018 10:37

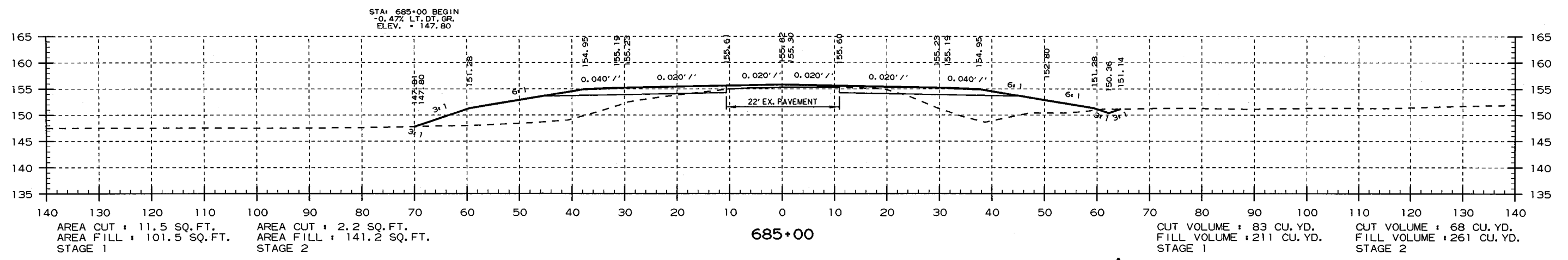
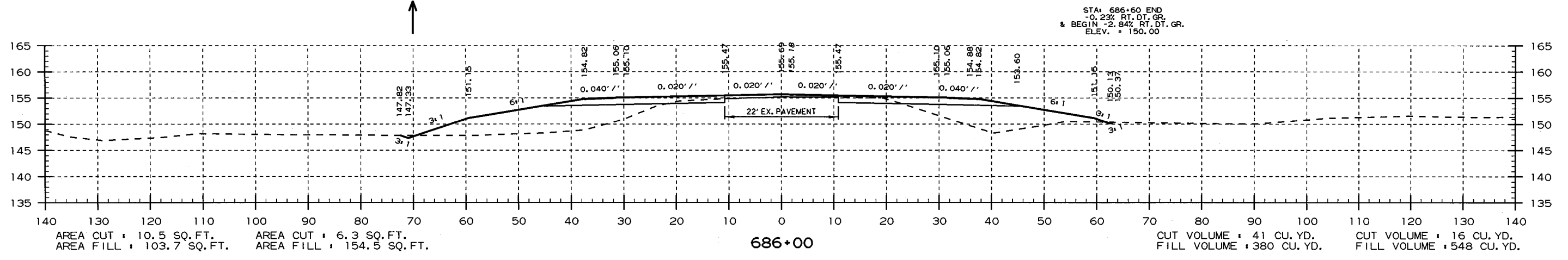
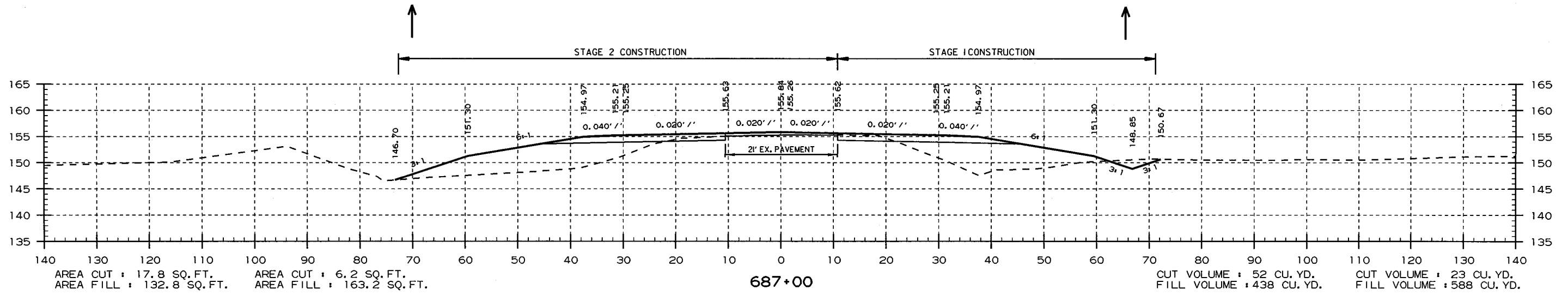
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	189	256	
				(2) CROSS SECTIONS				



CROSS SECTION STA. 683+00 TO STA. 684+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	190	256	

2 CROSS SECTIONS

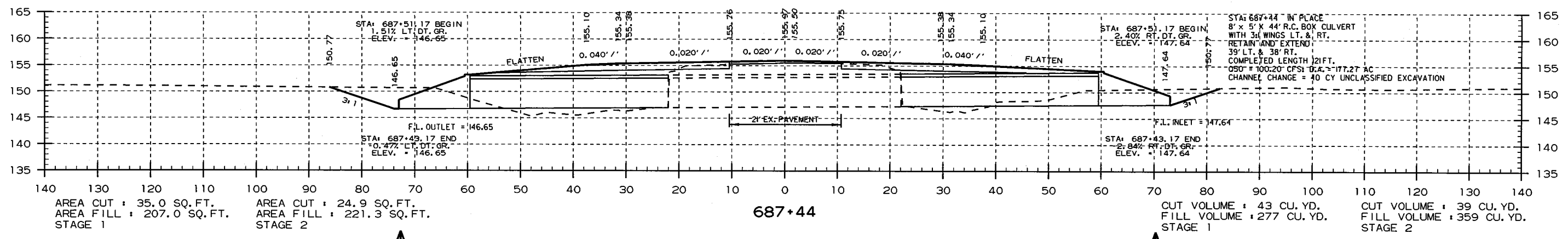
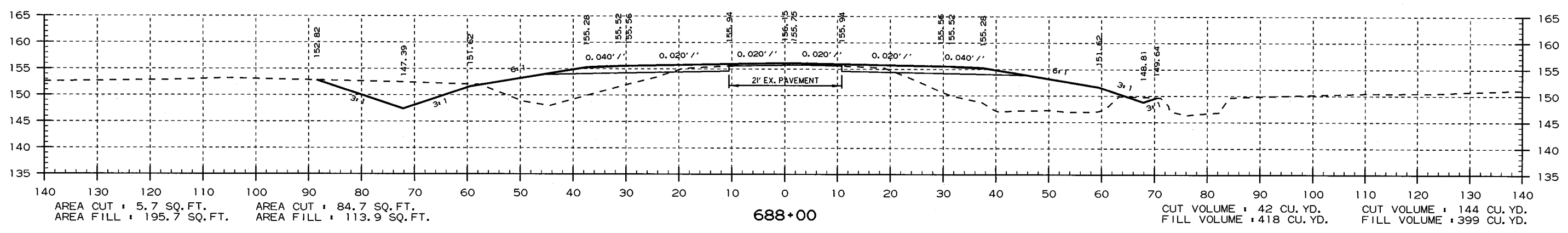
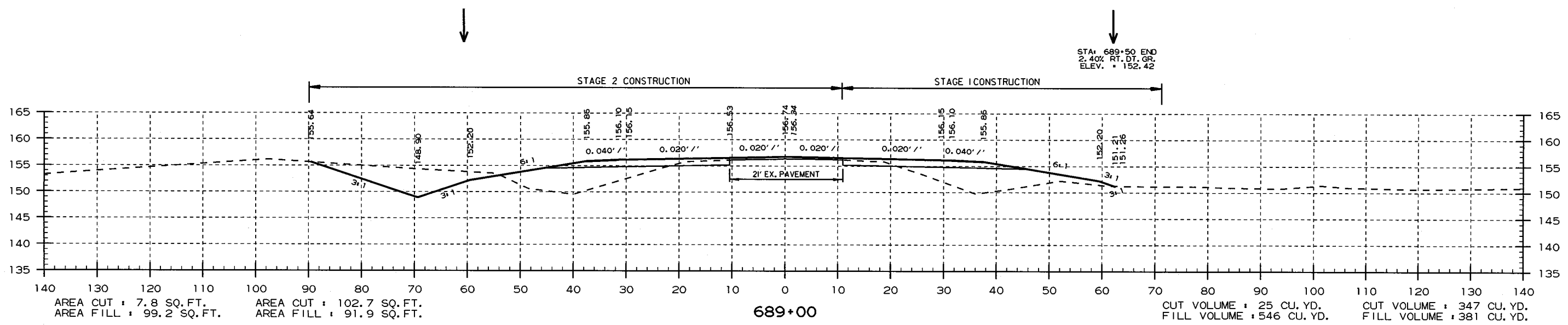


CROSS SECTION STA. 685+00 TO STA. 687+00

USER: f653  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\X\_Sections\CA0202.CX.0062.dgn  
 PLOTTED: 7/10/2018 10:37

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.	CA0202	191	256	

2 CROSS SECTIONS

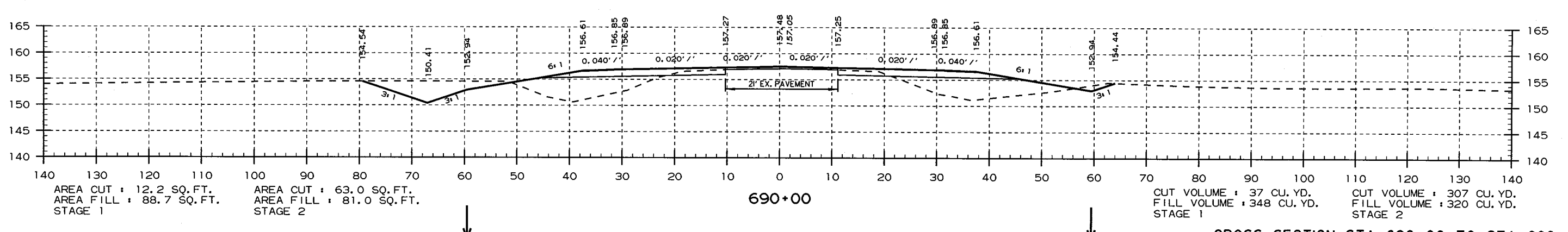
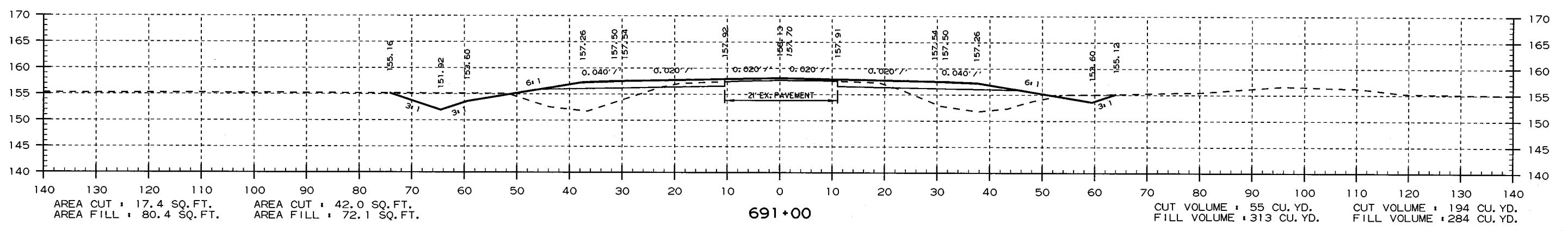
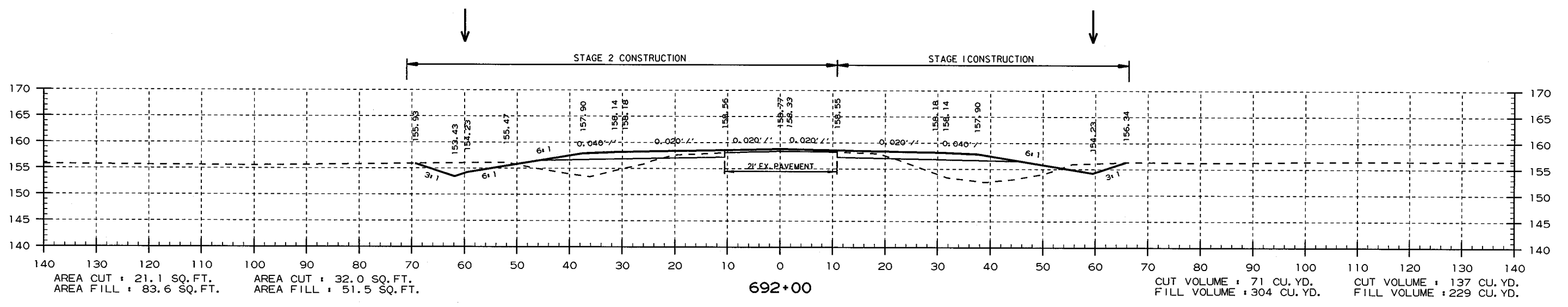


CROSS SECTION STA. 687+44 TO STA. 689+00

USER: f513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0063.dgn  
PLOTTED: 7/10/2018 10:37  
SCALE: 20:1

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.	CA0202	192	256	

2 CROSS SECTIONS



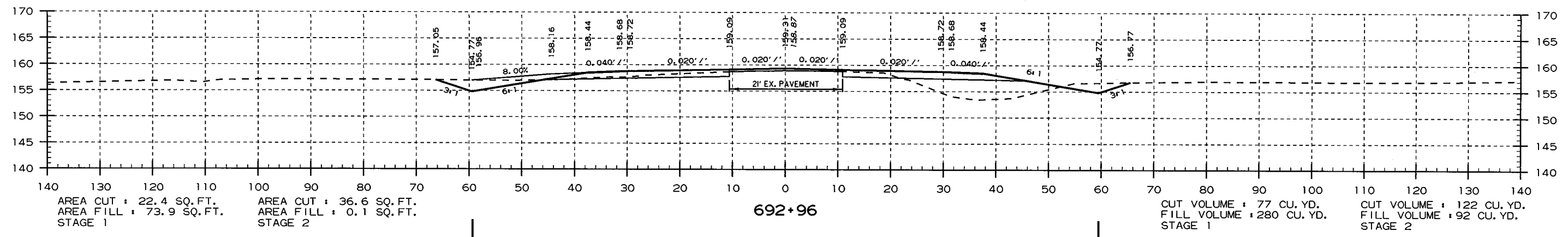
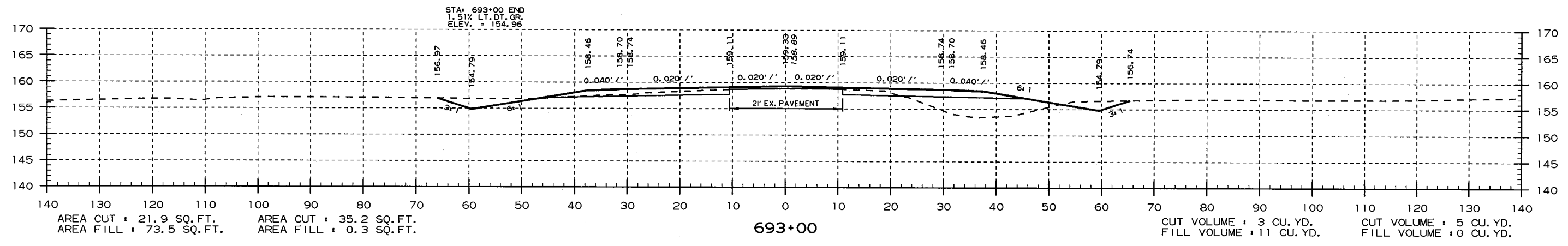
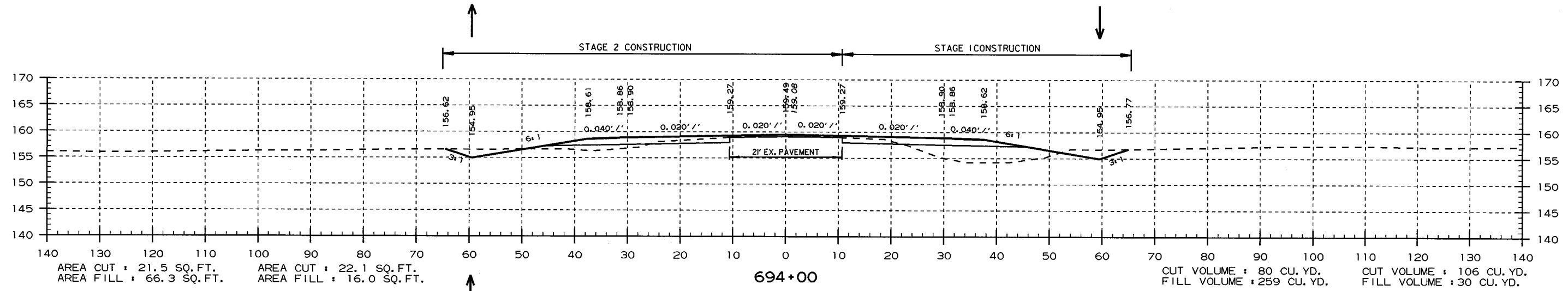
CROSS SECTION STA. 690+00 TO STA. 692+00

USER: f6513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNVX\_Sections\CA0202\_CX\_0064.dgn  
 PLOTTED: 7/10/2018 10:37



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.	CA0202	193	256	

2 CROSS SECTIONS

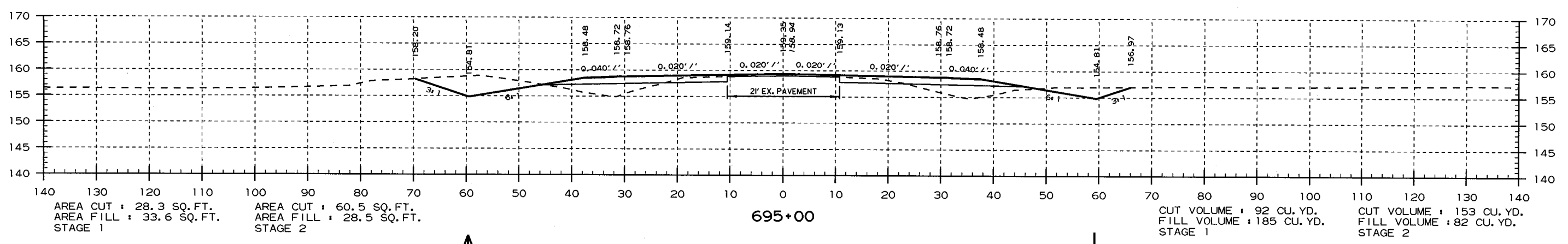
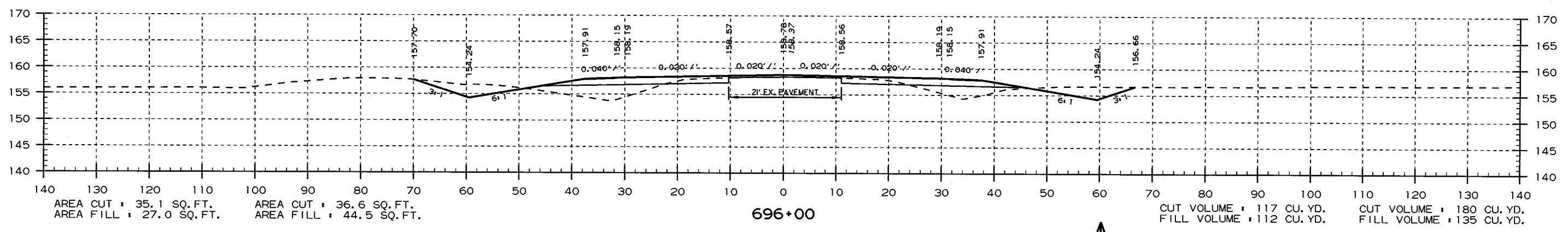
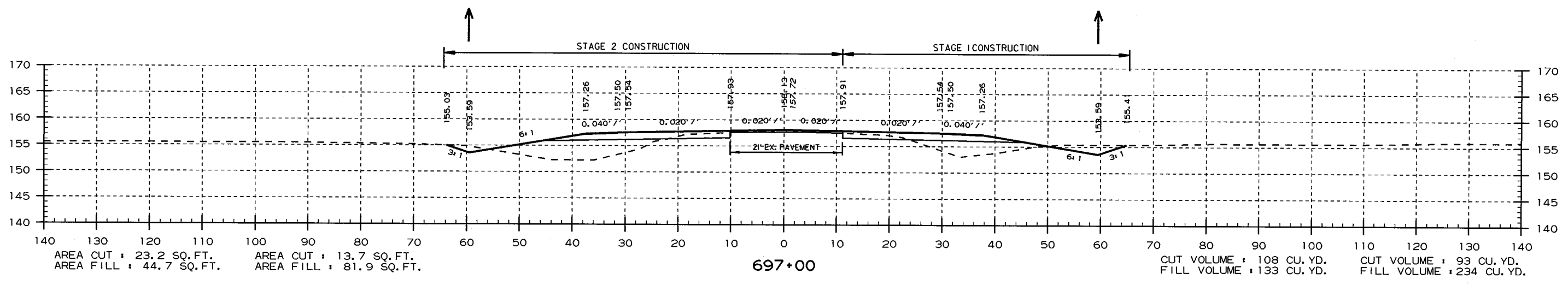


CROSS SECTION STA. 692+96 TO STA. 694+00

USER: fs513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0065.dgn  
PLOTTER: 7/10/2018 10:37

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		194	256
				JOB NO.		CA0202		

2 CROSS SECTIONS

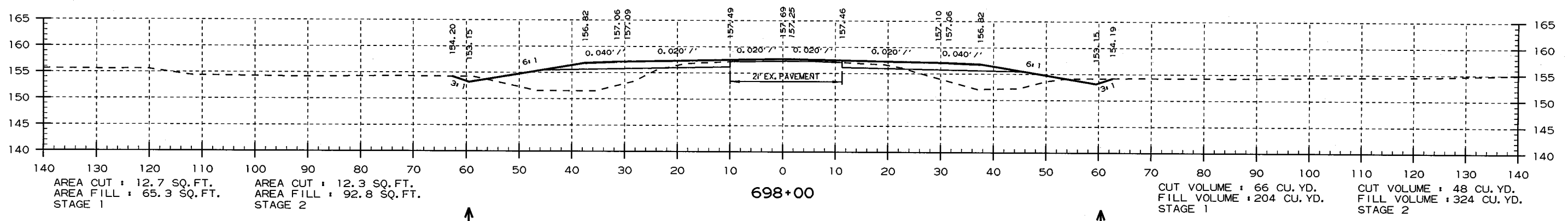
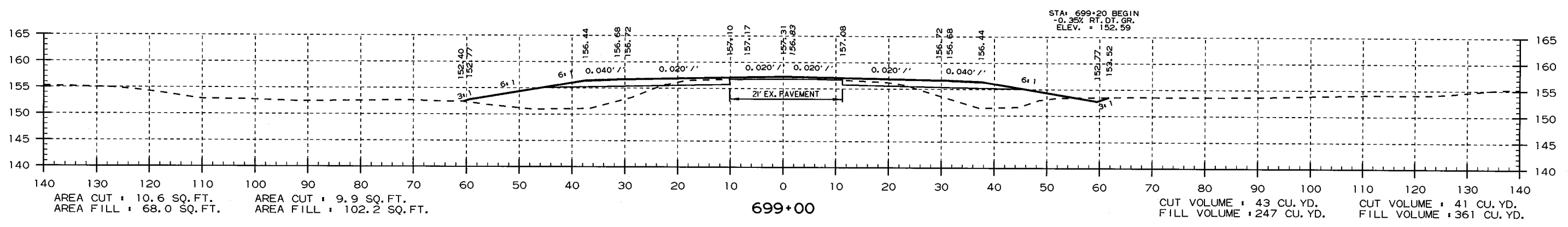
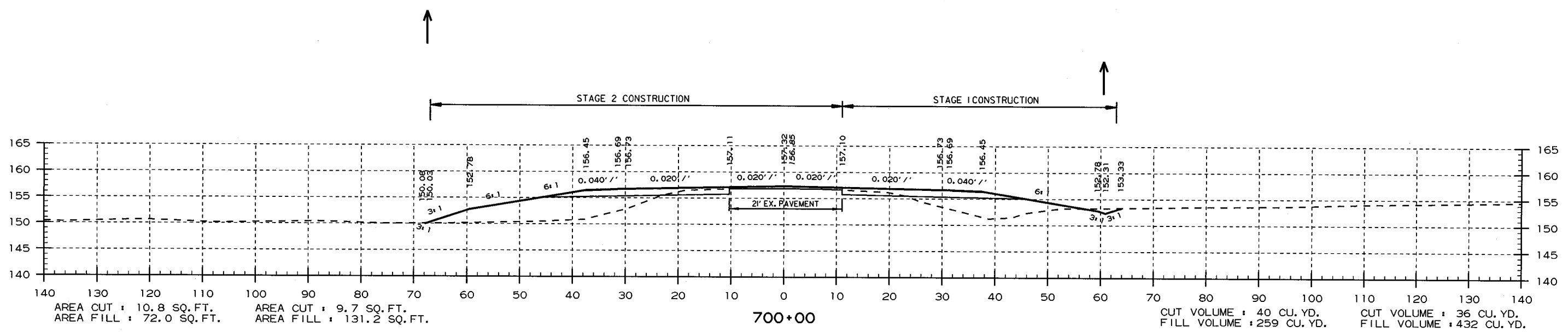


CROSS SECTION STA. 695+00 TO STA. 697+00

USER: f6513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\X\_Sections\CA0202.CX\_0066.dgn  
 PLOTTED: 7/10/2018 10:38

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.	CA0202	195	256	

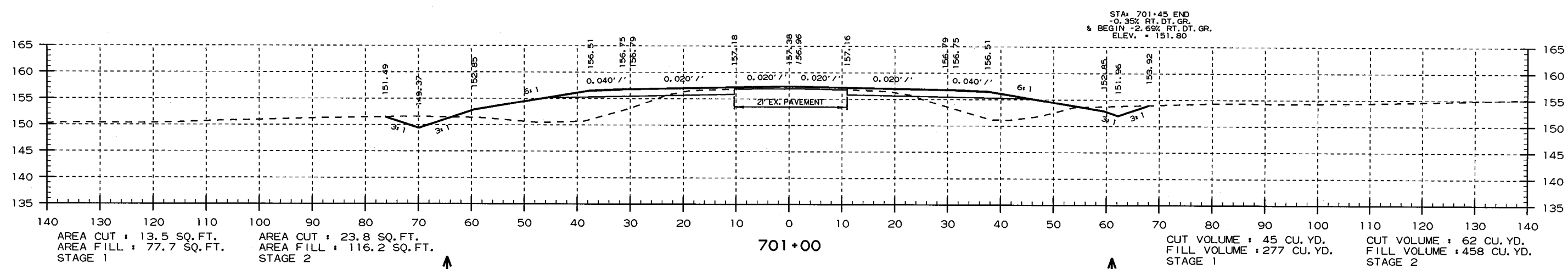
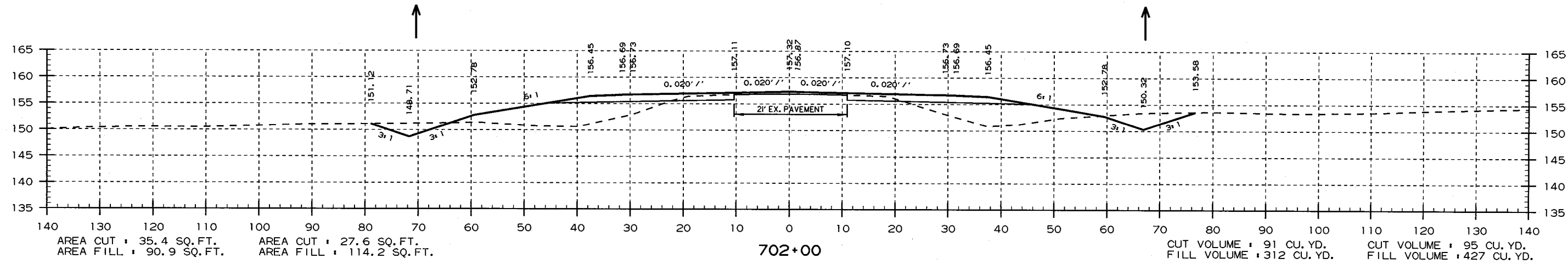
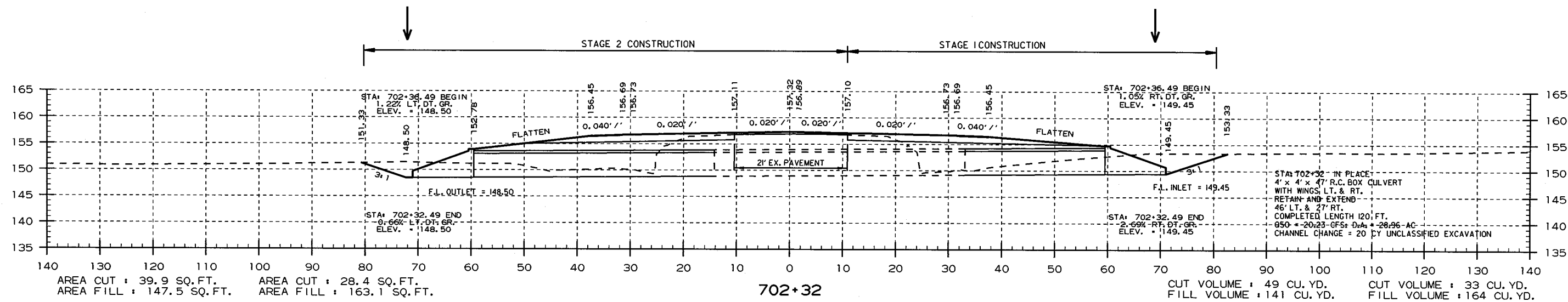
2 CROSS SECTIONS



CROSS SECTION STA. 698+00 TO STA. 700+00

USER: f5513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\X\_Section\CA0202.CX\_0067.dgn  
 PLOTTED: 7/10/2018 10:38

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.	CA0202	196
						2 CROSS SECTIONS		

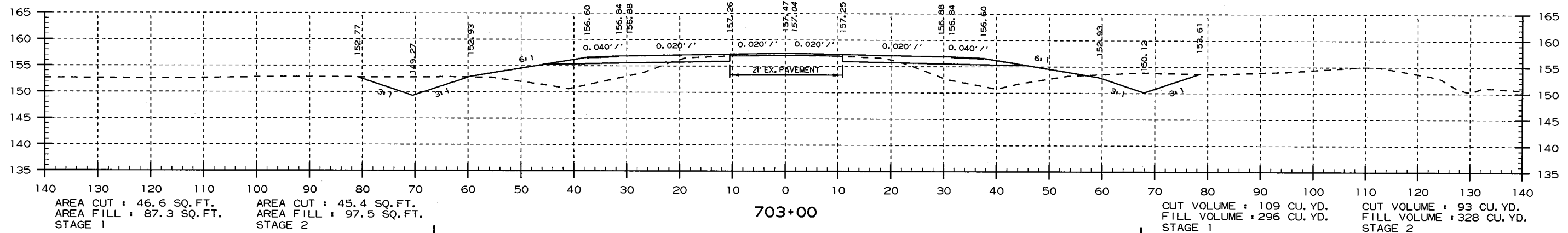
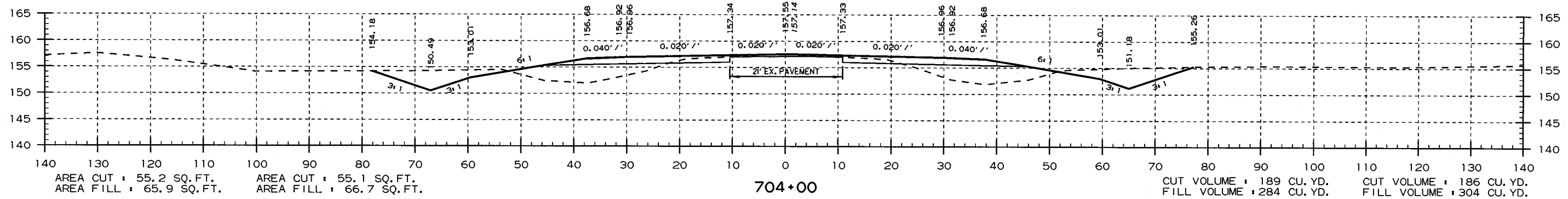
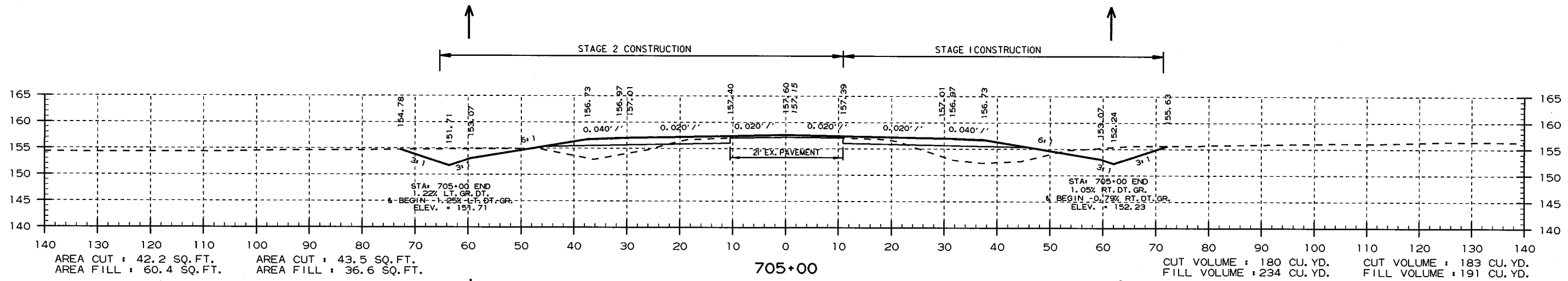


CROSS SECTION STA. 701+00 TO STA. 702+32

USER: f5513  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\X\_Sect\stns\CA0202\_CX\_0068.dgn  
PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						CA0202	197	256

2 CROSS SECTIONS

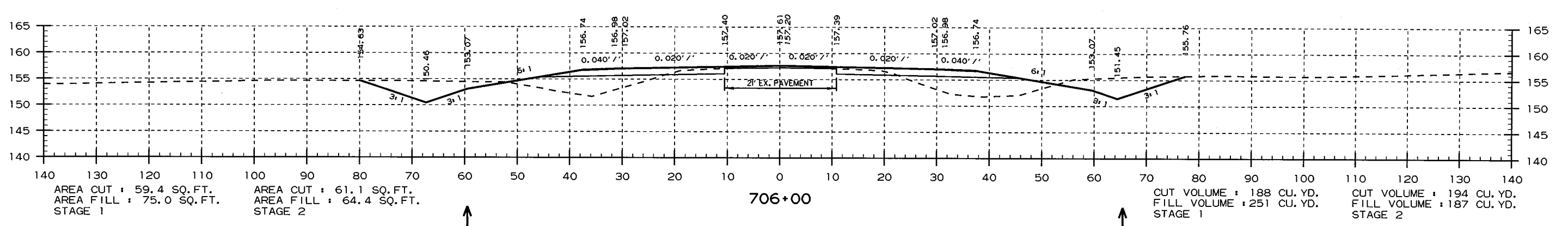
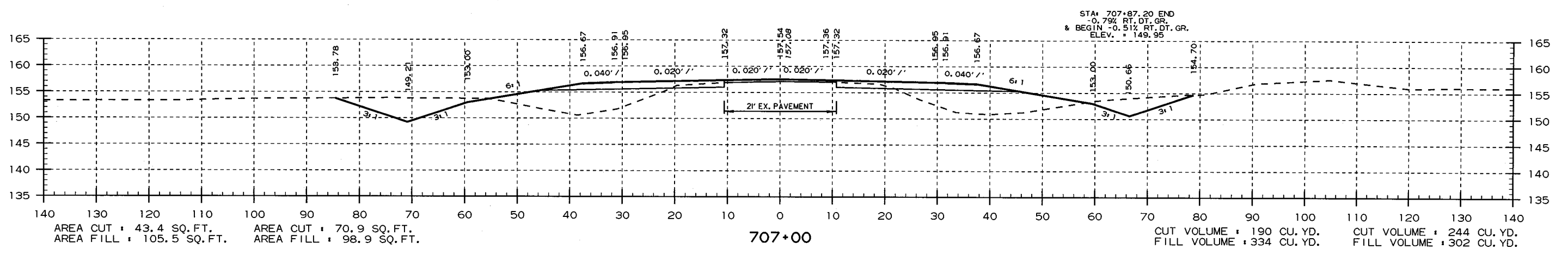
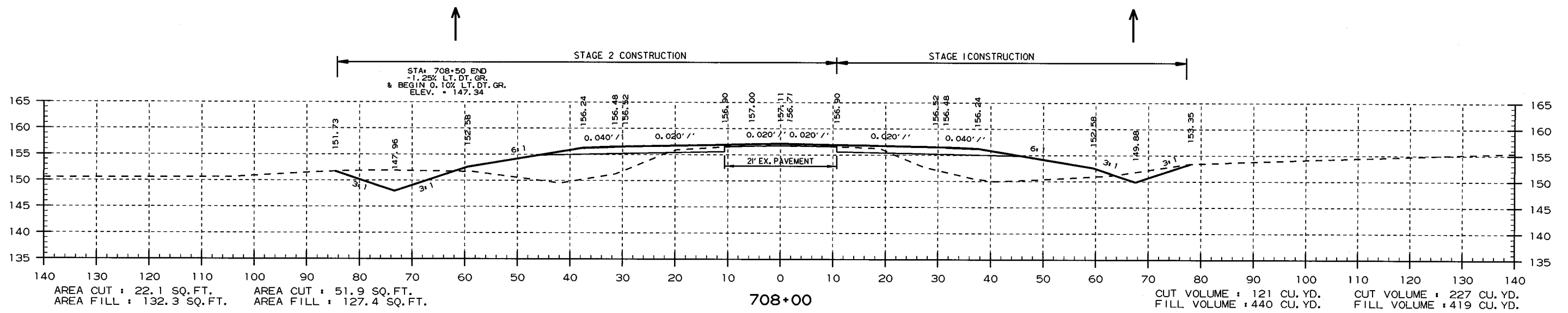


CROSS SECTION STA. 703+00 TO STA. 705+00

USER: fs513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0069.dgn  
PLOTTED: 7/10/2018 10:38

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.	CA0202	198	256	

(2) CROSS SECTIONS

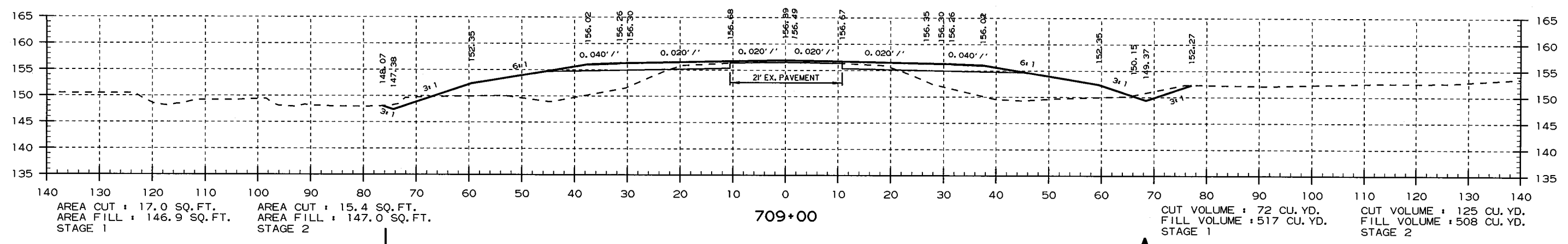
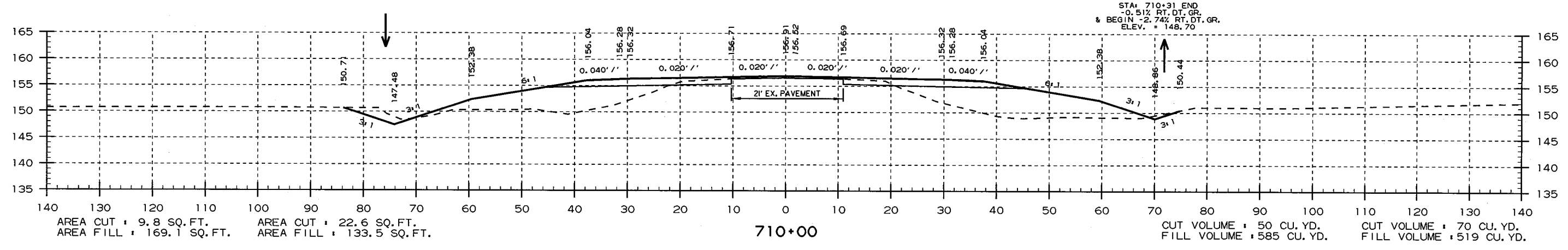
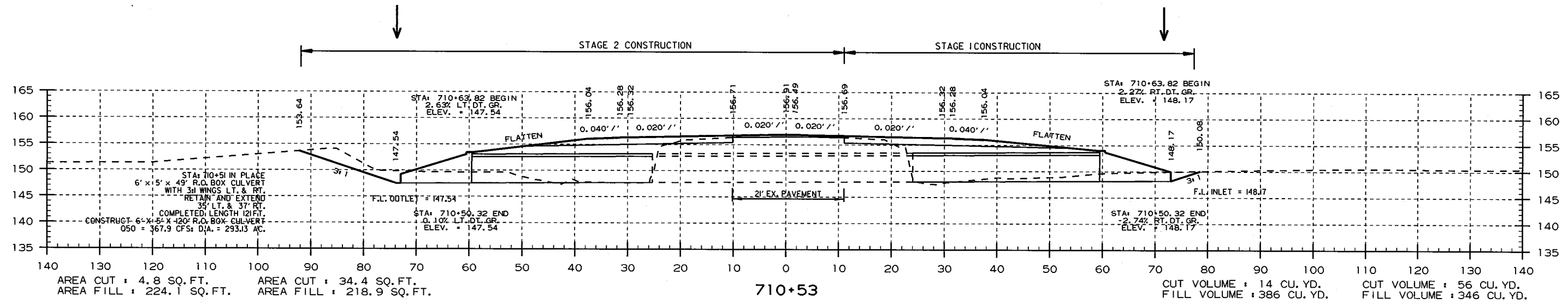


CROSS SECTION STA. 706+00 TO STA. 708+00

USER: f6513  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0070.dgn  
PLOTTED: 7/10/2018 10:38

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.	CA0202	199	256	

2 CROSS SECTIONS

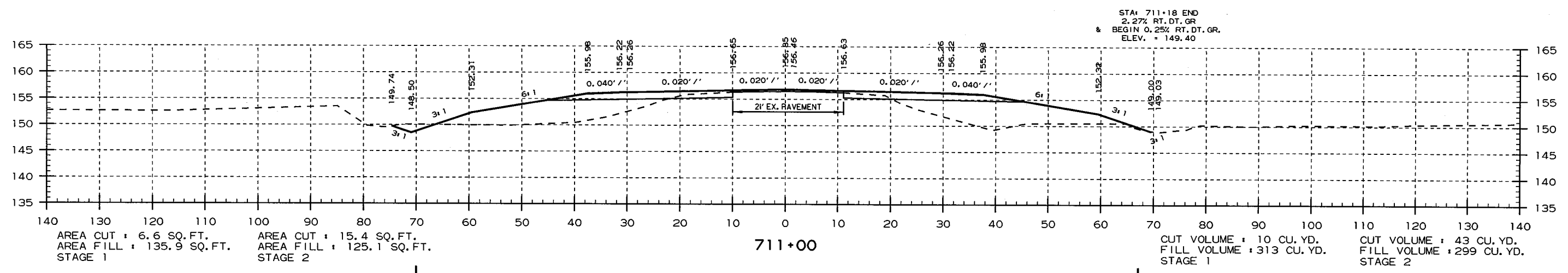
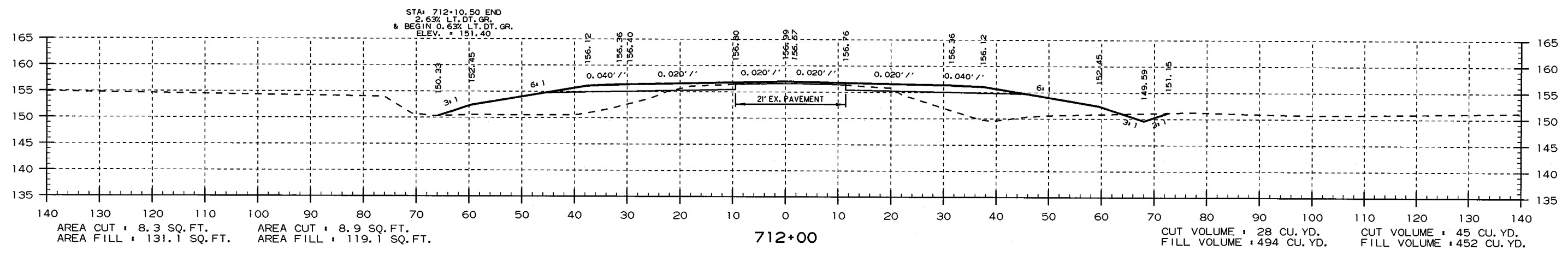
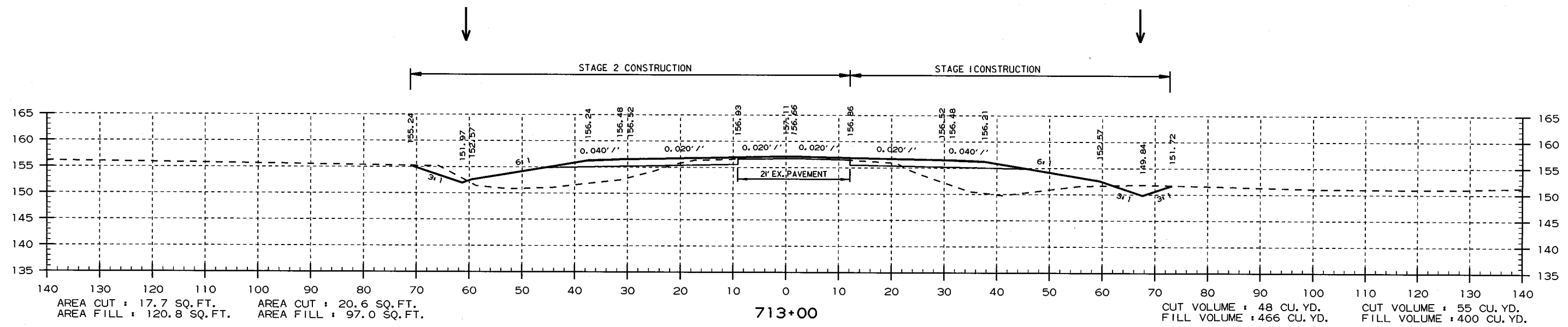


CROSS SECTION STA. 709+00 TO STA. 710+53

USER: f6513  
DESIGN FILE: G:\4109300\_HWY\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0071.dgn  
PLOTTED: 7/10/2018 10:38  
SCALE: 20:1

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.	CA0202	200	256	

2 CROSS SECTIONS



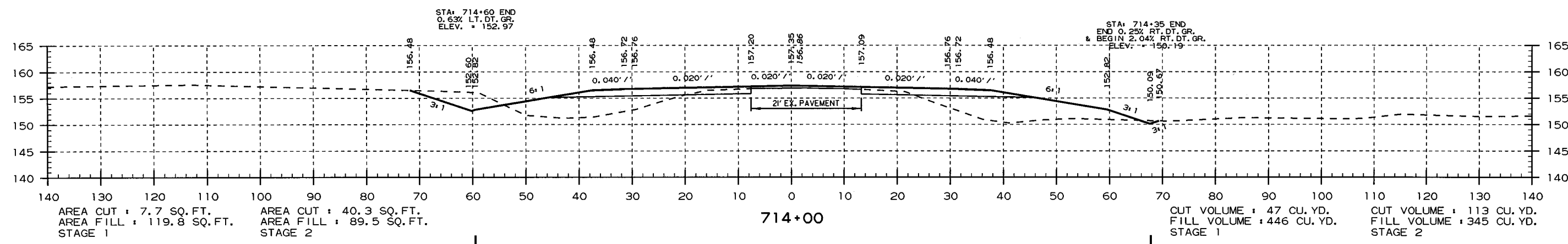
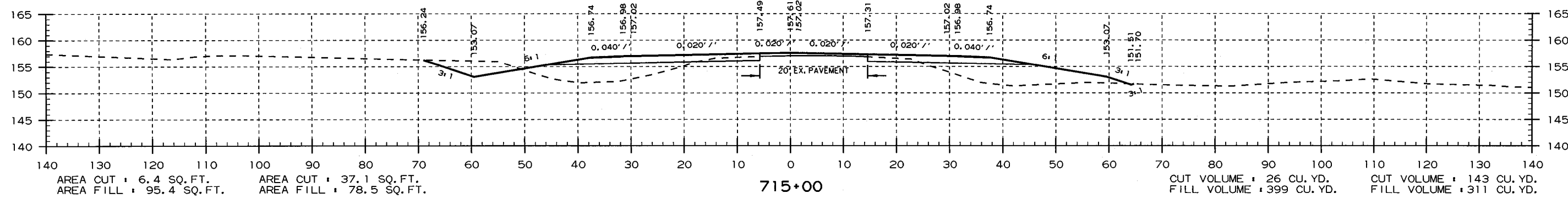
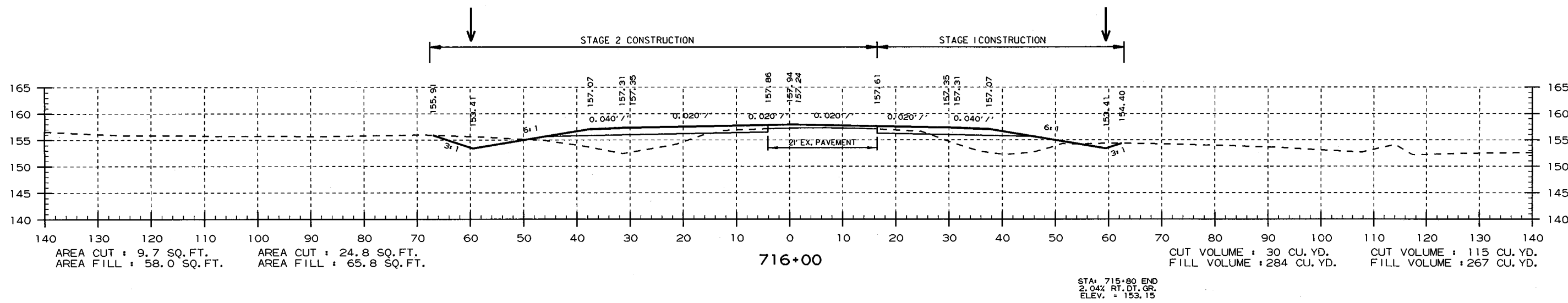
CROSS SECTION STA. 711+00 TO STA. 713+00

USER: f6513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DNVX\_Sections\CA0202\_CX\_0072.dgn  
 PLOTTED: 7/10/2018 10:38



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.	CA0202	201	256	

2 CROSS SECTIONS

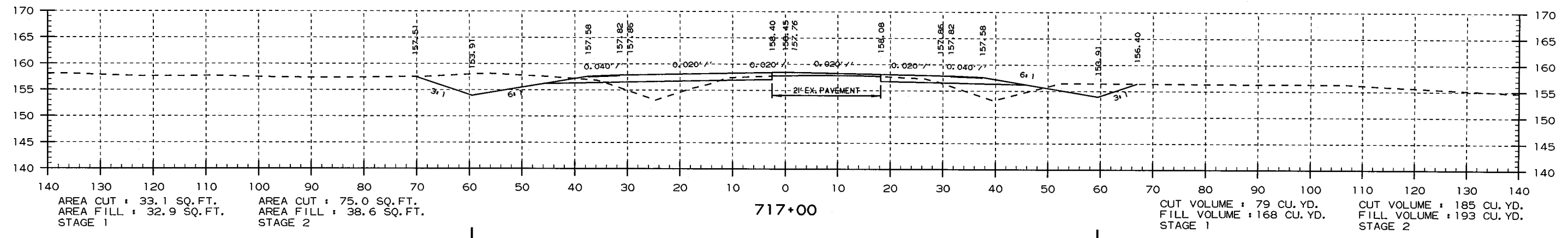
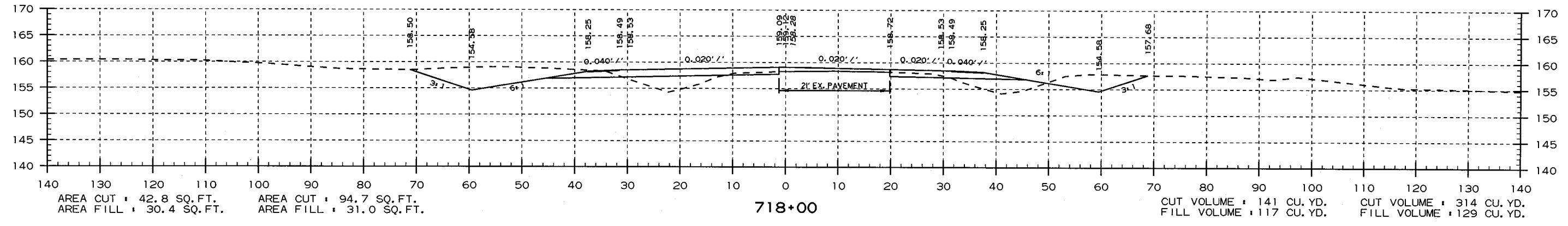
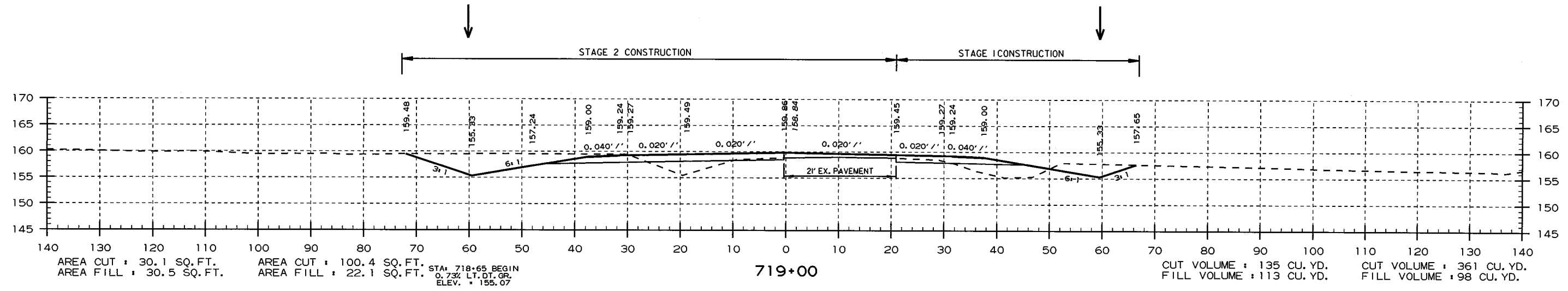


CROSS SECTION STA. 714+00 TO STA. 716+00

USER: f553  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0073.dgn  
 PLOTTED: 7/10/2018 10:38

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.	CA0202	202	256	

2 CROSS SECTIONS

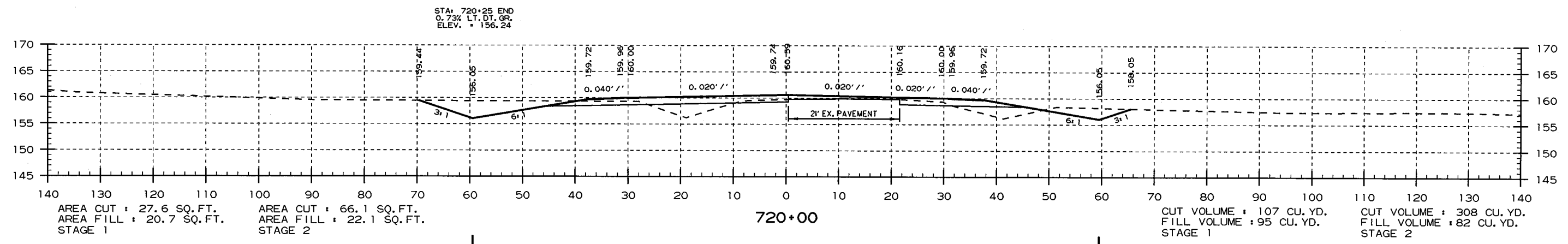
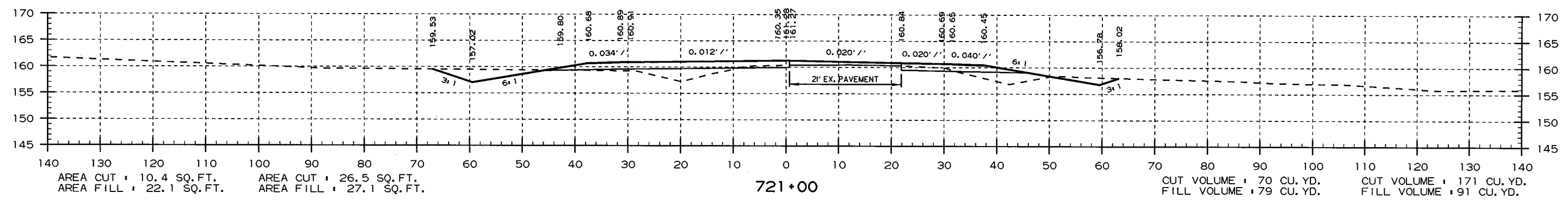
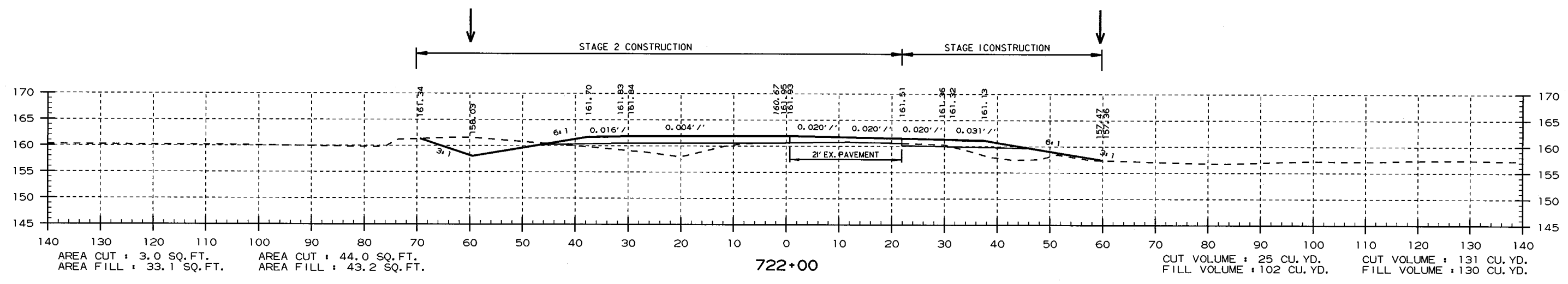


CROSS SECTION STA. 717+00 TO STA. 719+00

USER: f6513  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0074.dgn  
PLOTTED: 7/10/2018 10:38

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.	CA0202	203	256	

2 CROSS SECTIONS

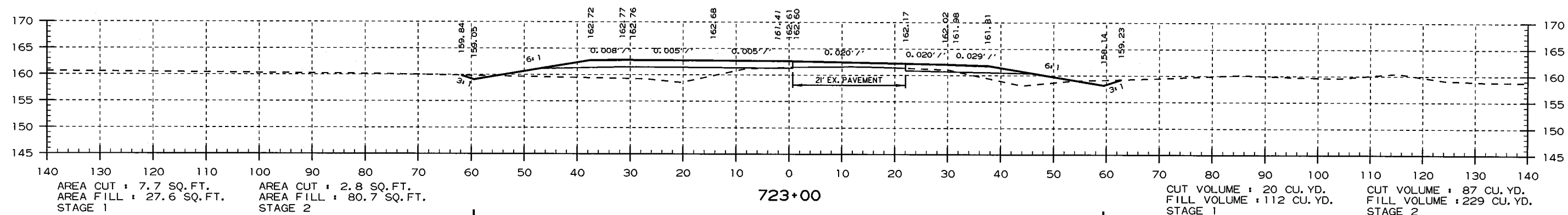
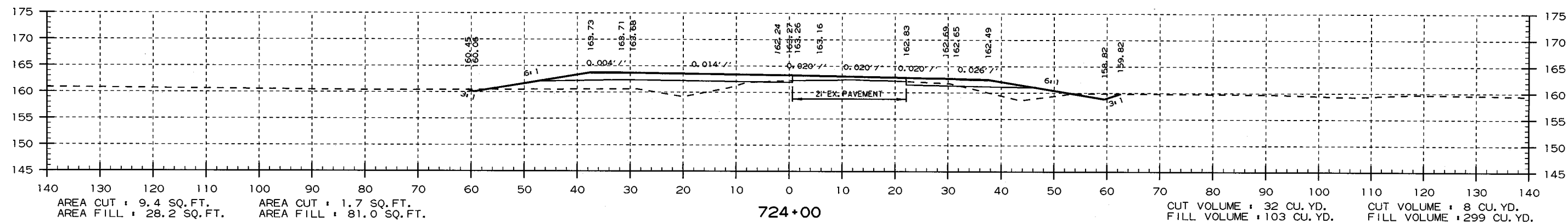
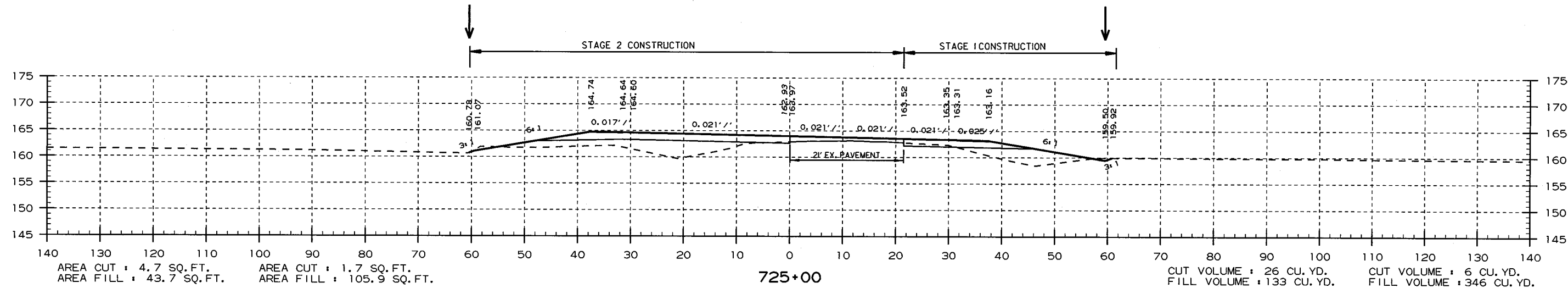


CROSS SECTION STA. 720+00 TO STA. 722+00

USER: fs513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\X\_Sections\CA0202.CX\_0075.dgn  
 PLOTTED: 7/10/2018 10:38 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		204	256

2 CROSS SECTIONS

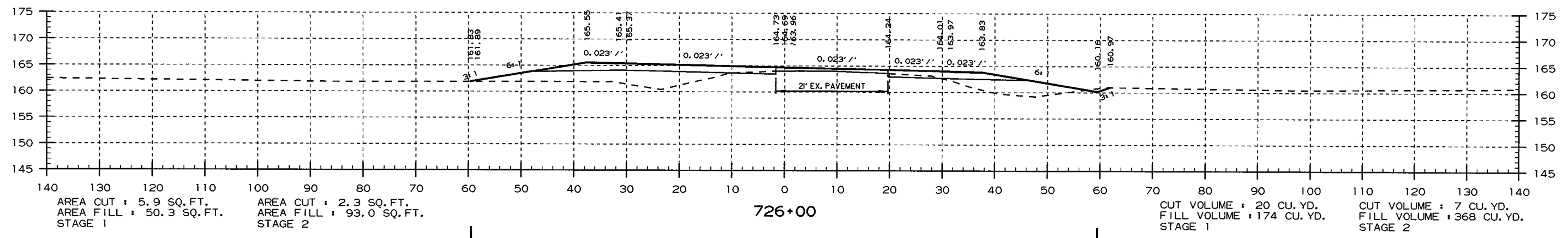
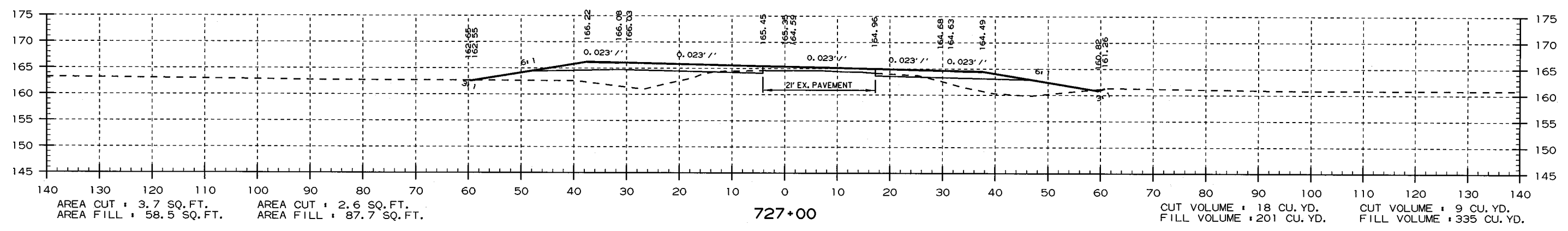
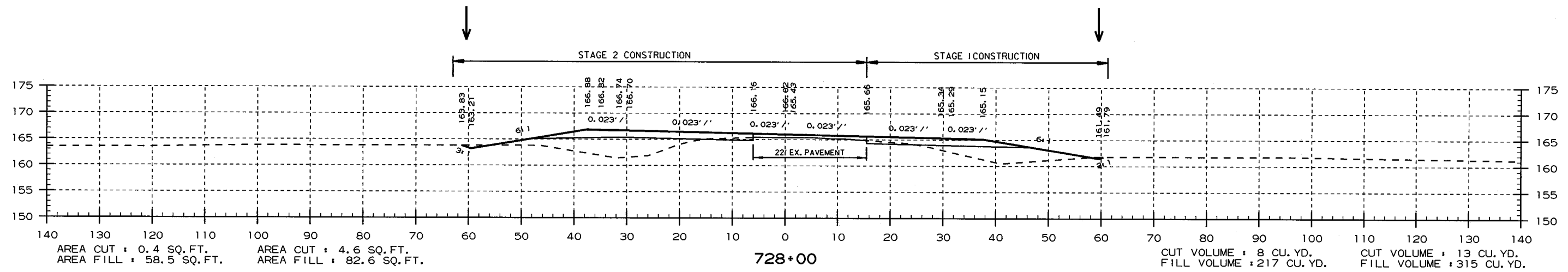


CROSS SECTION STA. 723+00 TO STA. 725+00

USER: f5513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\06N\X\_Sections\7rCA0202\_CX\_0076.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0202	205	256

2 CROSS SECTIONS

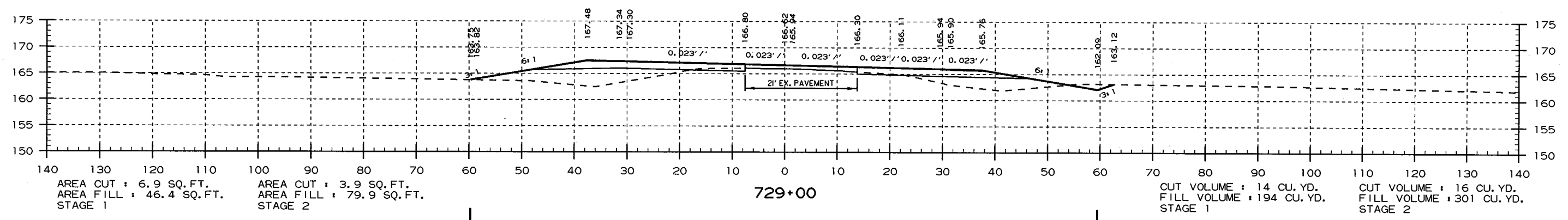
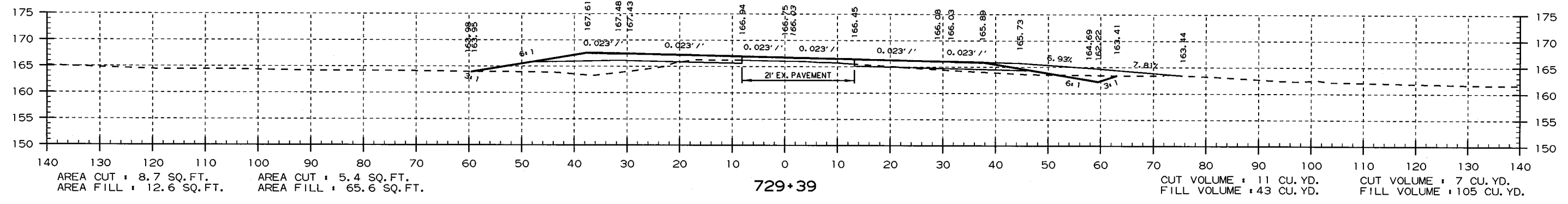
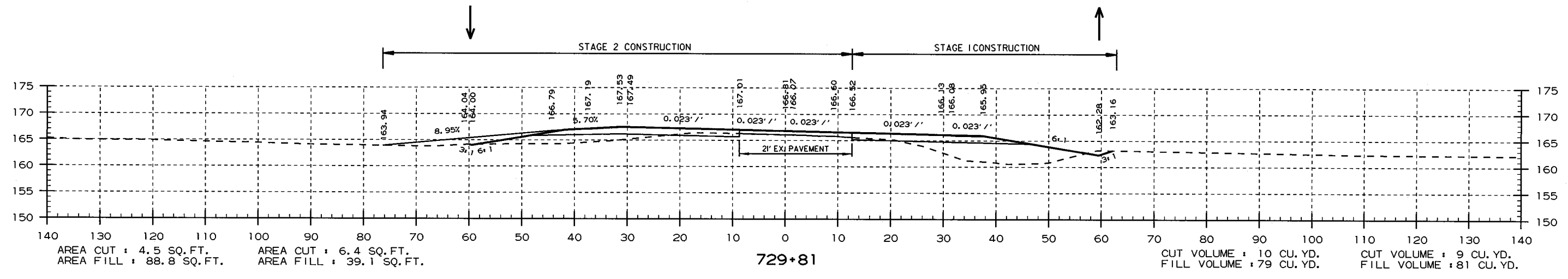


CROSS SECTION STA. 726+00 TO STA. 728+00

USER: f5513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCNV.X\_Sections\CA0202.CX\_0077.dgn  
 PLOTTED: 7/10/2018 10:38 SCALE: 20:1

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.	CA0202	206	256	

2 CROSS SECTIONS

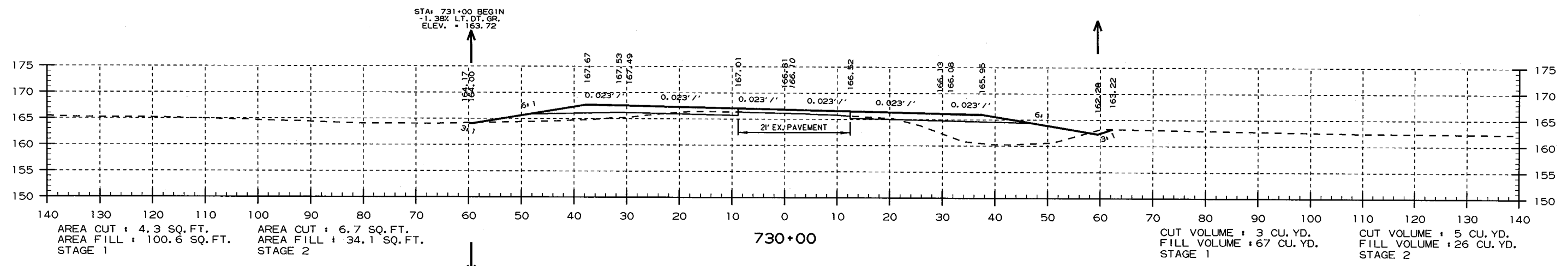
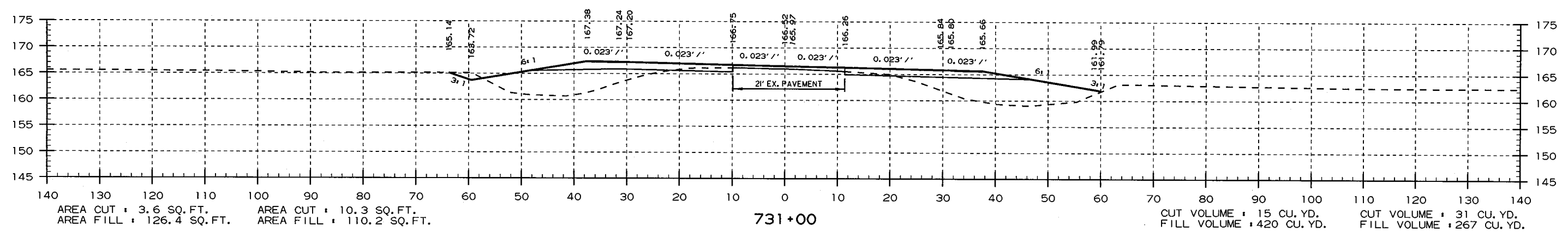
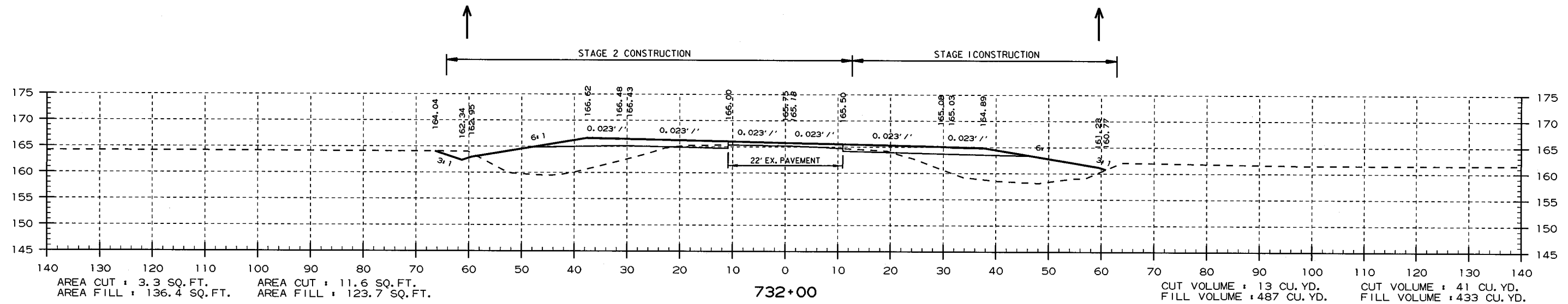


CROSS SECTION STA. 729+00 TO STA. 729+81

USER: f8513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNVX\_Sections\CA0202.CX\_0078.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0202	207	256

2 CROSS SECTIONS

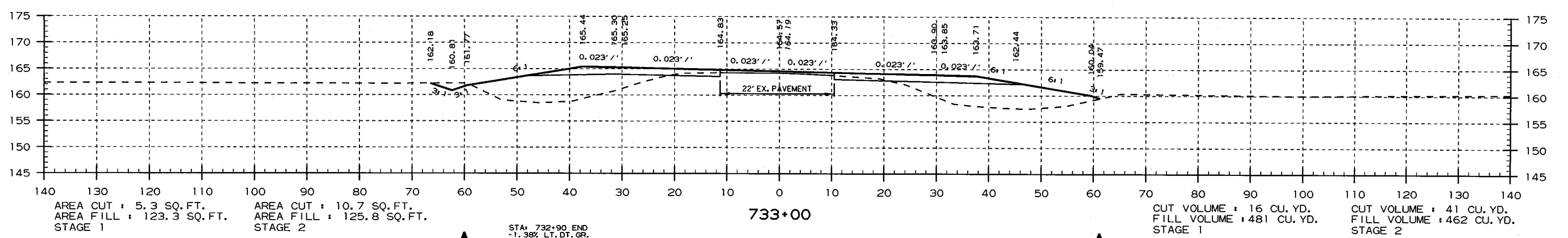
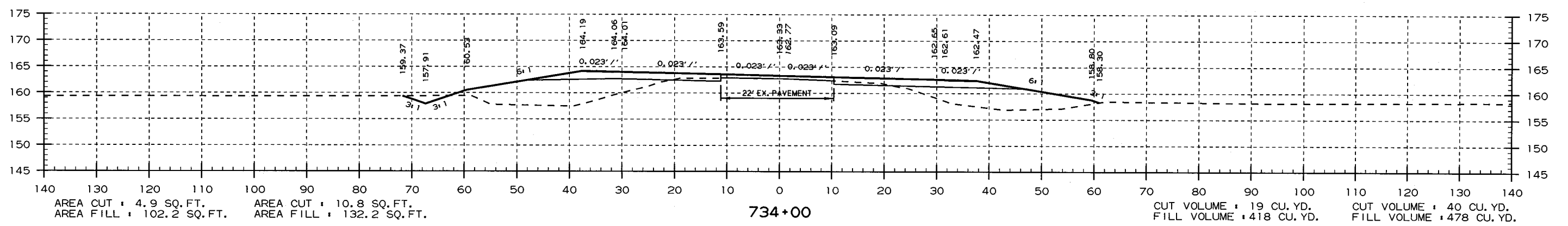
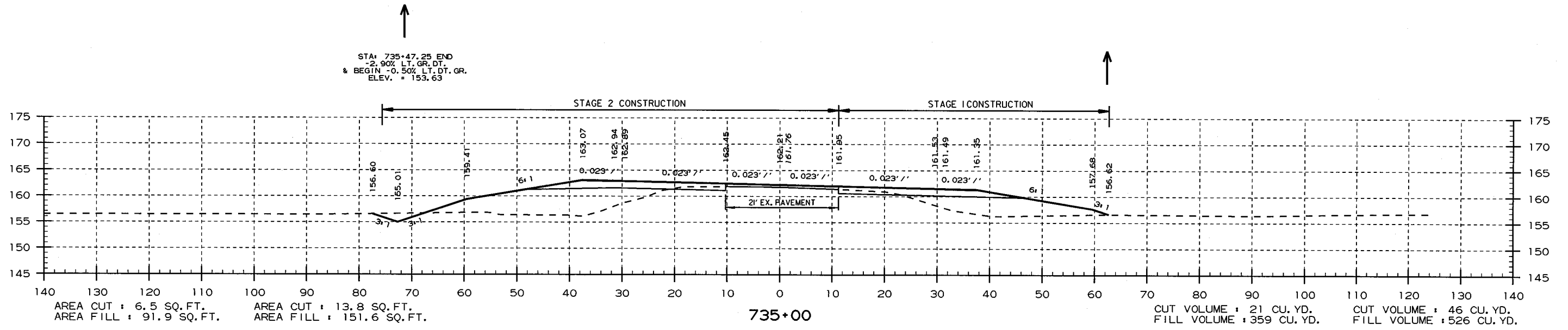


CROSS SECTION STA. 730+00 TO STA. 732+00

USER: f5513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_0079.dgn  
 PLOTTED: 7/10/2018 10:38 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		208	256
				JOB NO.		CA0202	208	256

2 CROSS SECTIONS



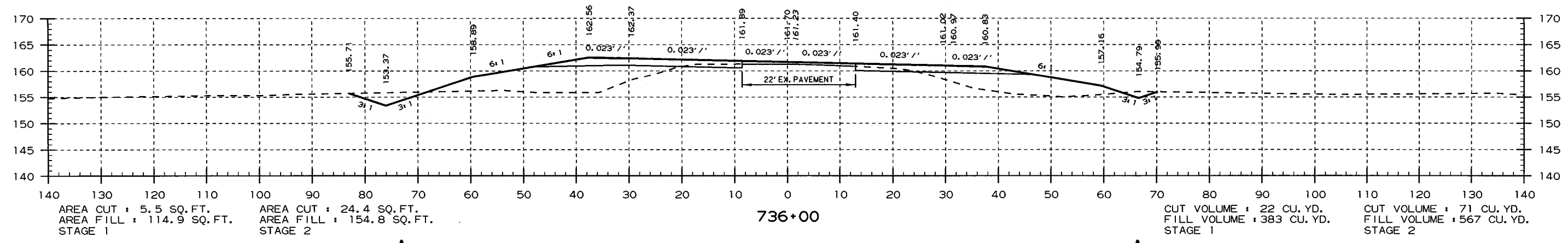
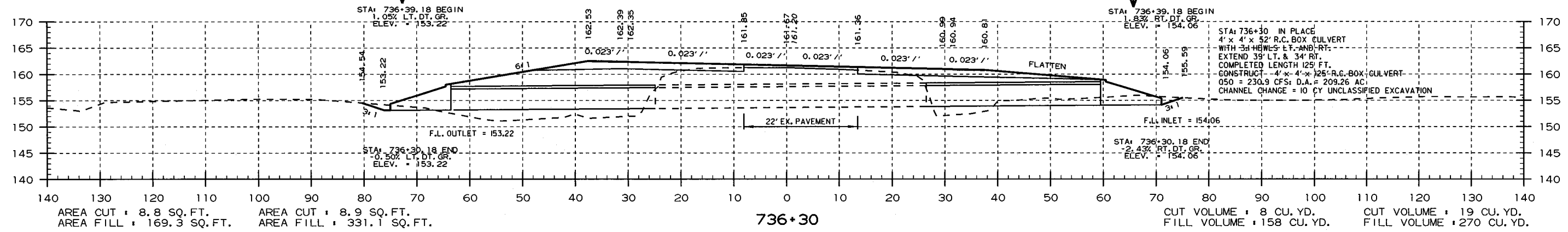
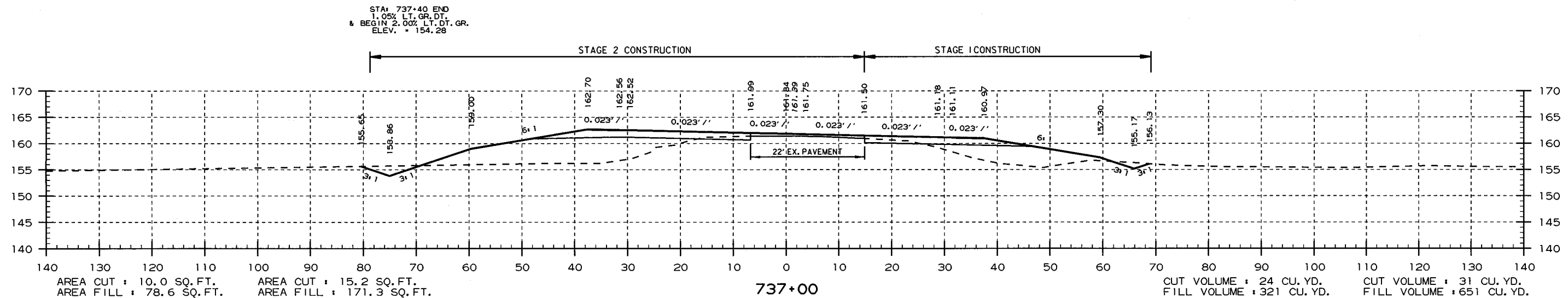
CROSS SECTION STA. 733+00 TO STA. 735+00

USER: fss513  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0080.dgn  
PLOTTED: 7/10/2018 10:38



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.	CA0202	209	256	

2 CROSS SECTIONS

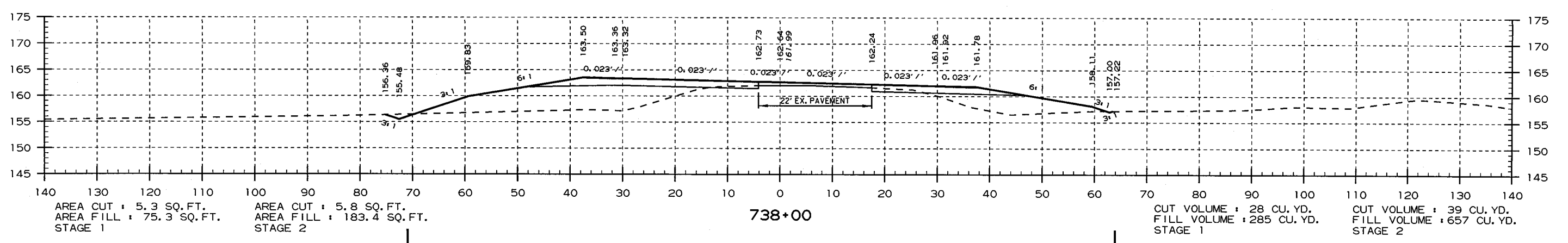
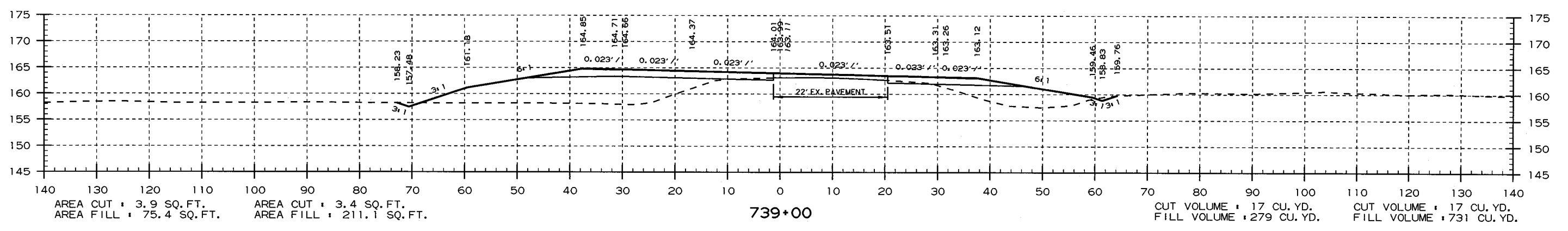
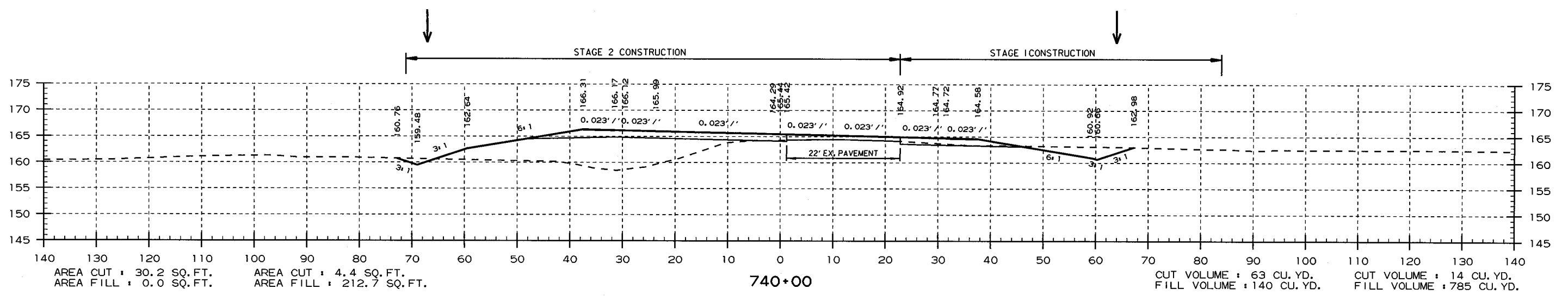


CROSS SECTION STA. 736+00 TO STA. 737+00

USER: f553  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DNV.X\_Sect\Sections\CA0202.CX\_0081.dgn  
 PLOTTED: 7/10/2018 10:38  
 SCALE: 20:1

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.	CA0202	210	256	

2 CROSS SECTIONS

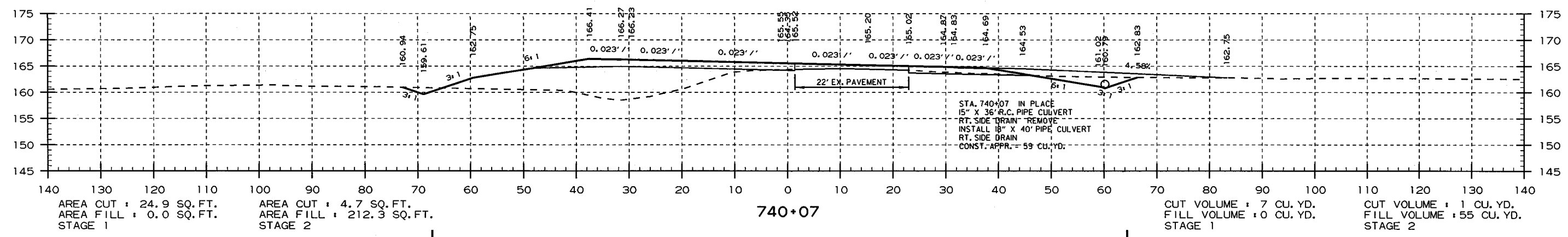
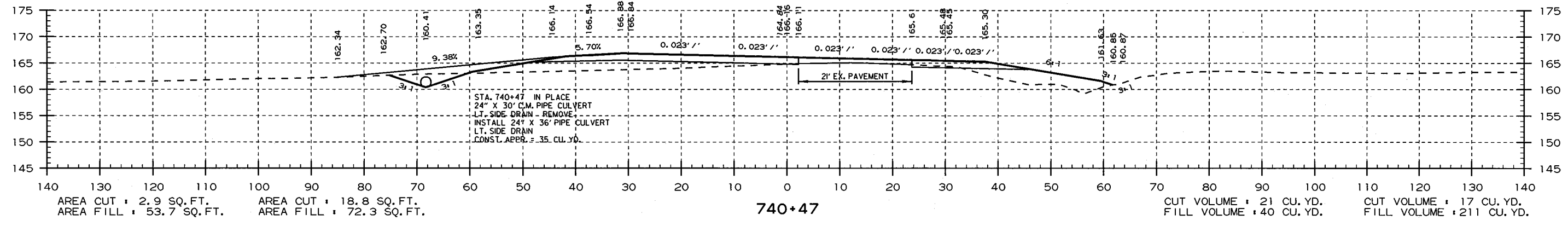
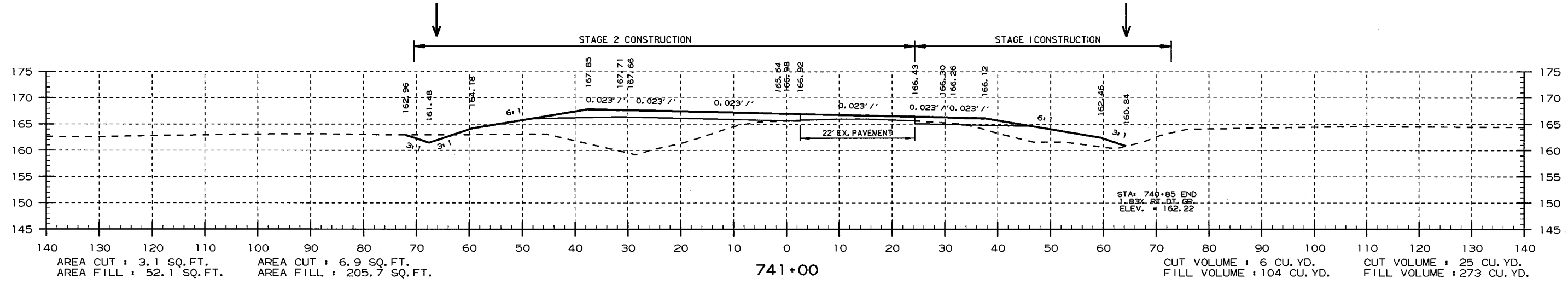


CROSS SECTION STA. 738+00 TO STA. 740+00

USER: f553  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNV.X\_Section\CA0202\_CX\_0082.dgn  
 PLOTTED: 7/10/2018 10:38 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		211	256

2 CROSS SECTIONS

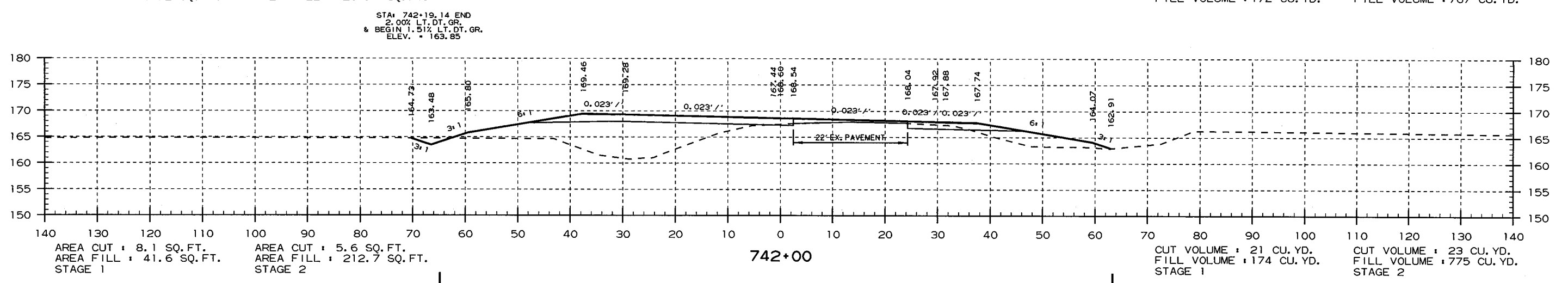
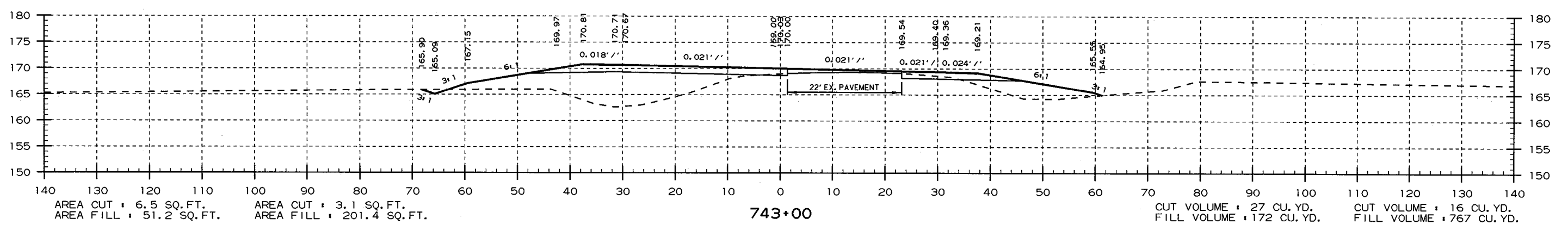
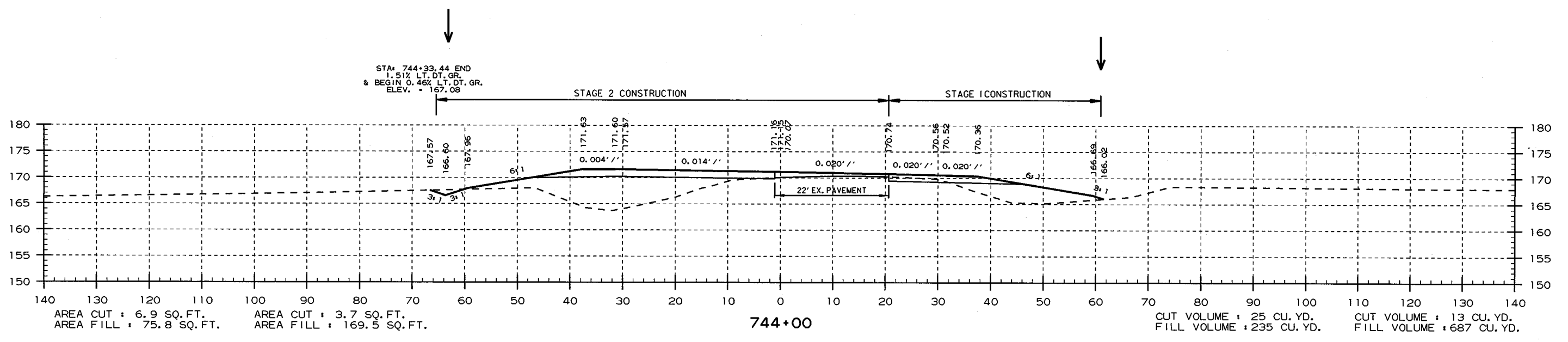


CROSS SECTION STA. 740+07 TO STA. 741+00

USER: f4513  
DESIGN FILE: G:\M09300.HWY.82\TRANSP\DN\X\_Sections\CA0202.CX\_0083.dgn  
PLOTTED: 7/10/2018 10:38  
SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		212	256
				JOB NO.		CA0202	212	256

2 CROSS SECTIONS

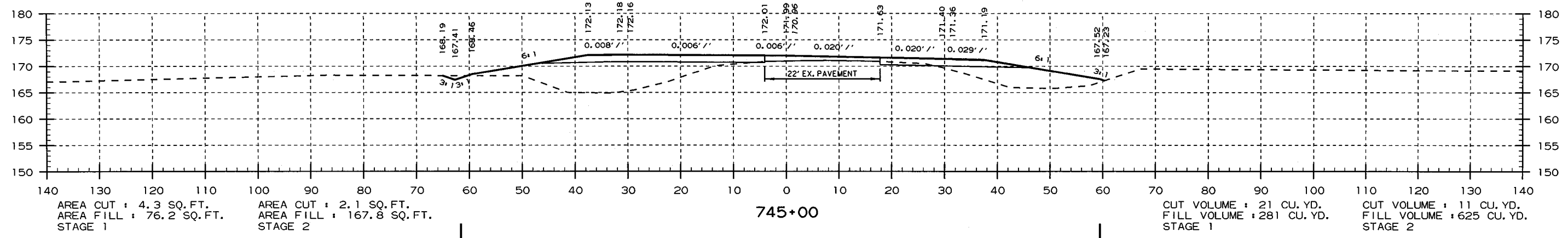
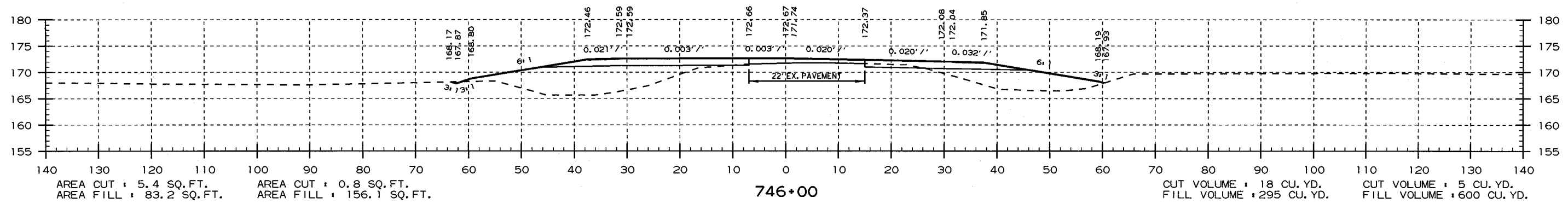
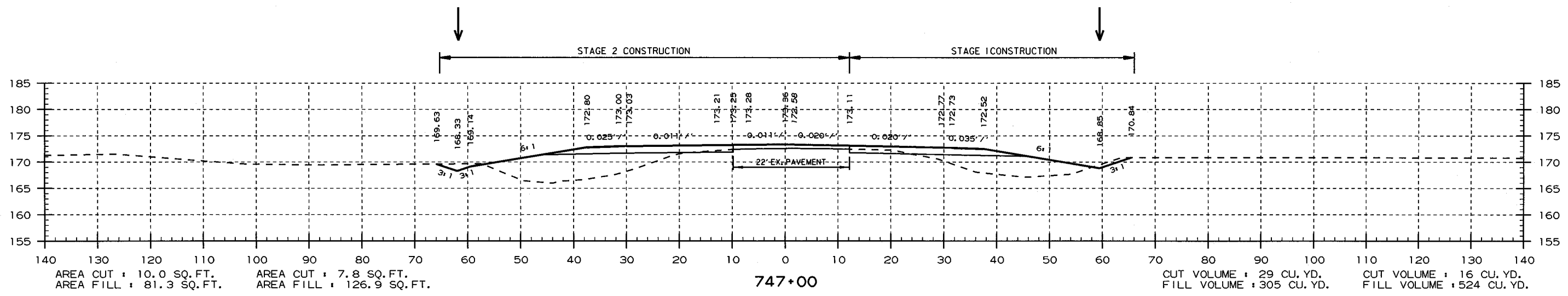


CROSS SECTION STA. 742+00 TO STA. 744+00

USER: f593  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_0084.dgn  
PLOTTED: 7/10/2018 10:38  
SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	213	256	

2 CROSS SECTIONS

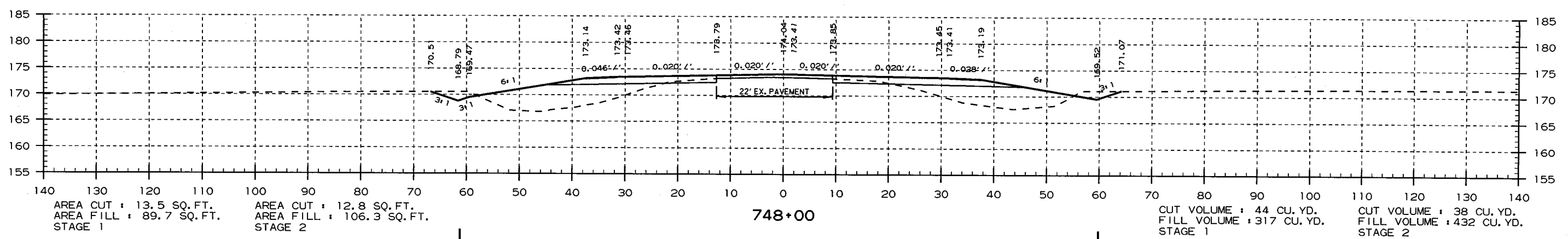
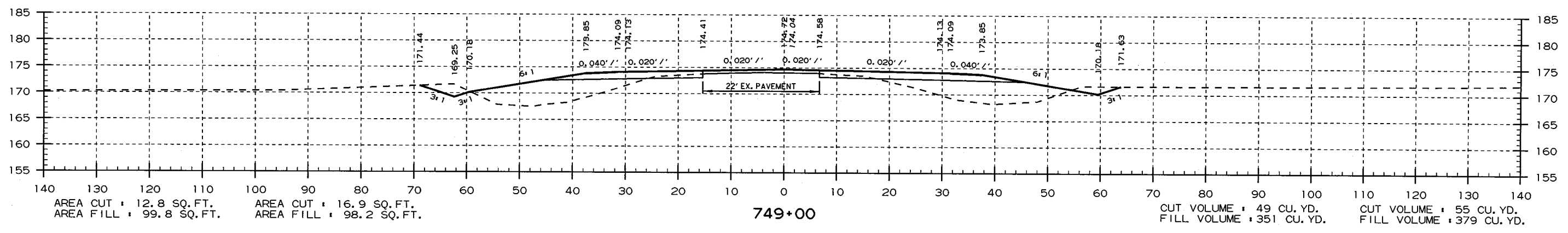
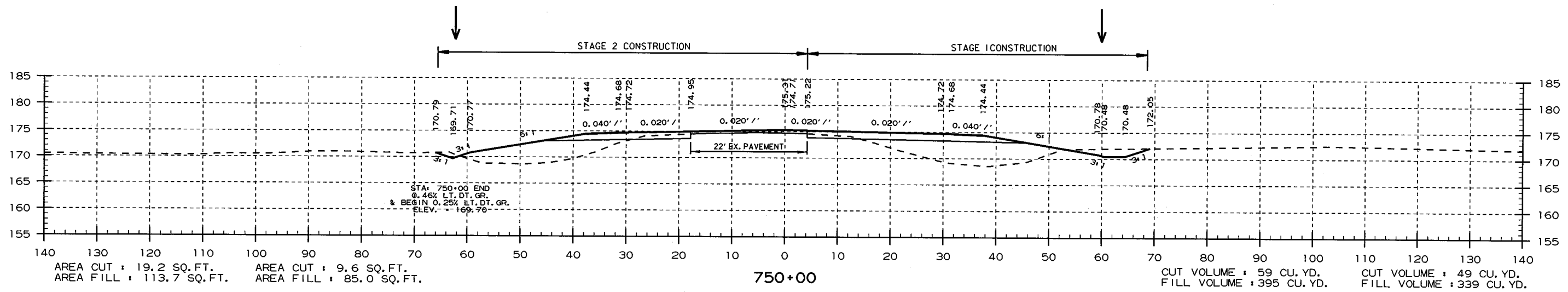


CROSS SECTION STA. 745+00 TO STA. 747+00

USER: f653  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\X\_Sections\CA0202.CX.0085.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		214	256
				JOB NO.		CA0202	214	256

2 CROSS SECTIONS

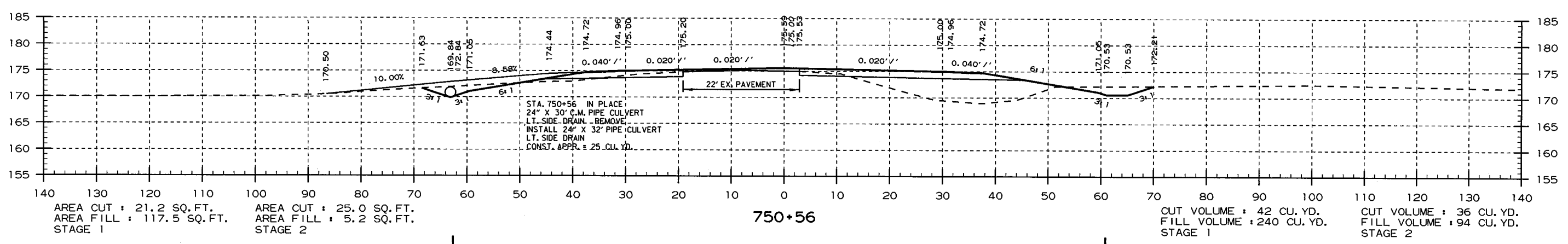
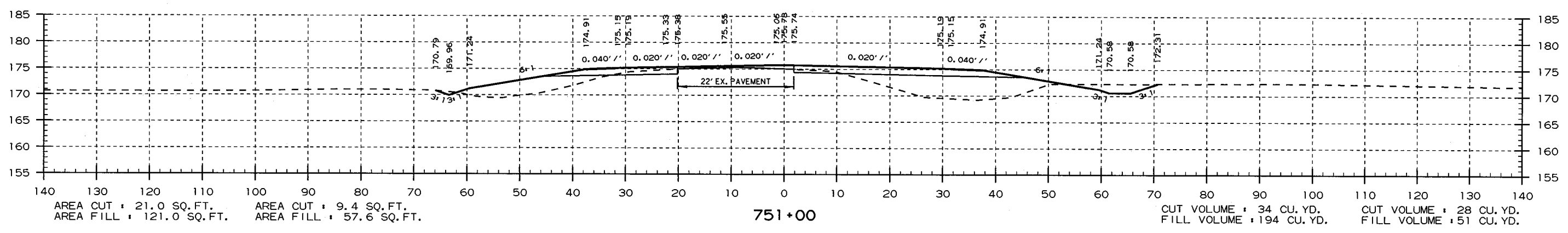
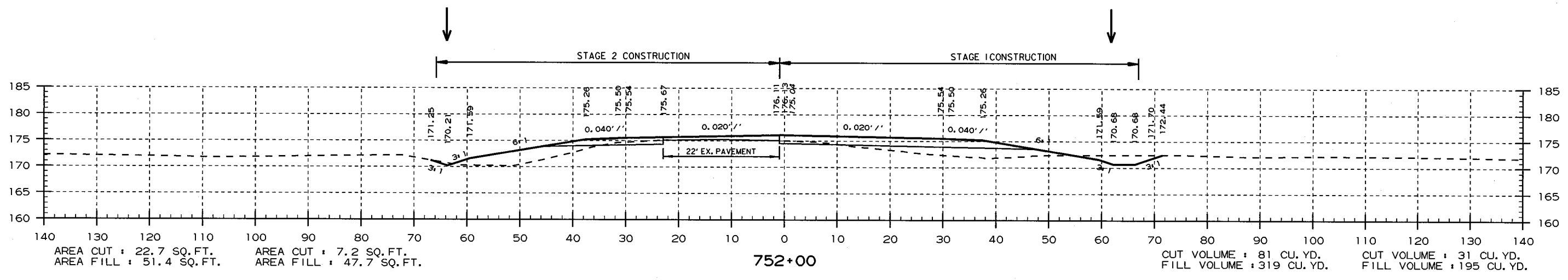


CROSS SECTION STA. 748+00 TO STA. 750+00

USER: f553  
DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\X\_Section\CA0202\_CX\_0086.dgn  
PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	215	256	

2 CROSS SECTIONS

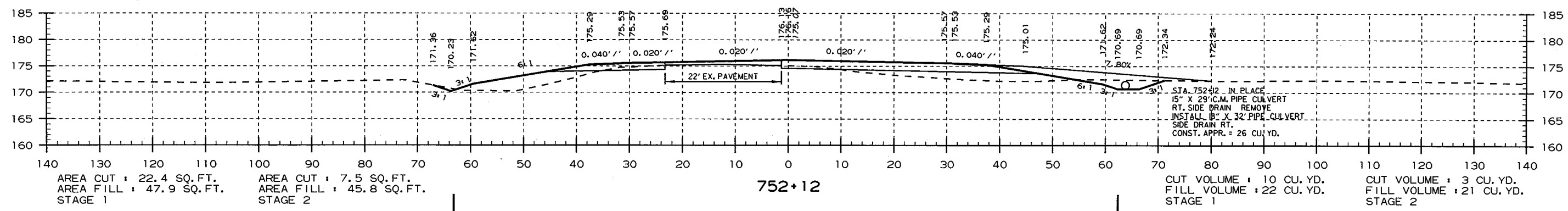
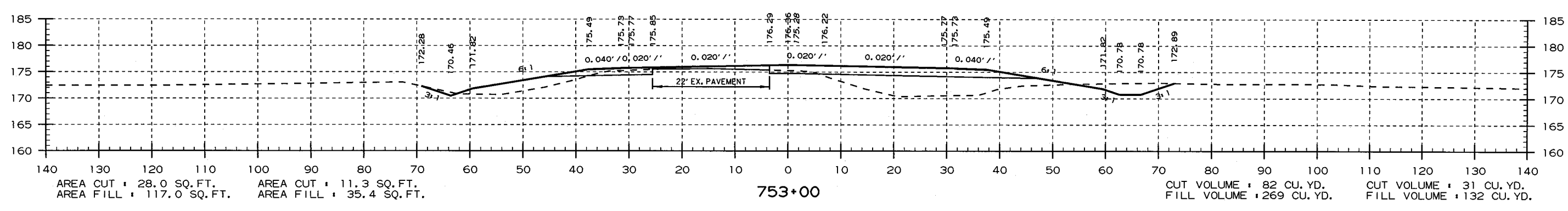
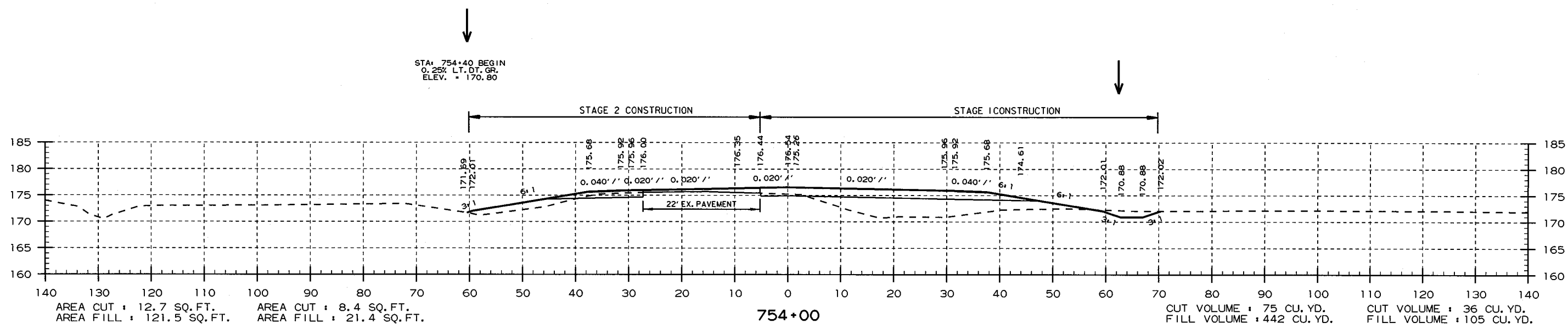


CROSS SECTION STA. 750+56 TO STA. 752+00

USER: f6513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_0087.dgn  
 PLOTTED: 7/10/2018 10:38

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.		CA0202	216	256

2 CROSS SECTIONS

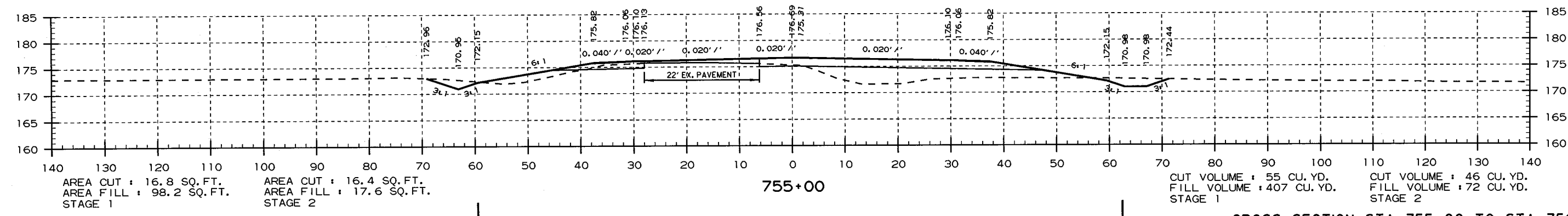
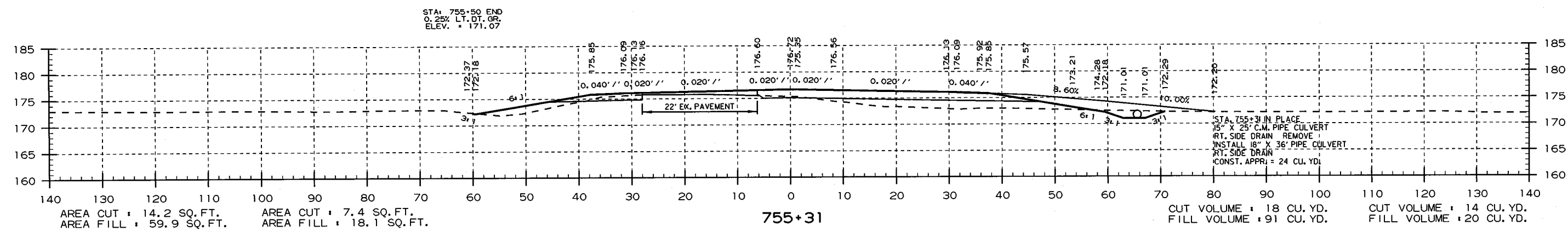
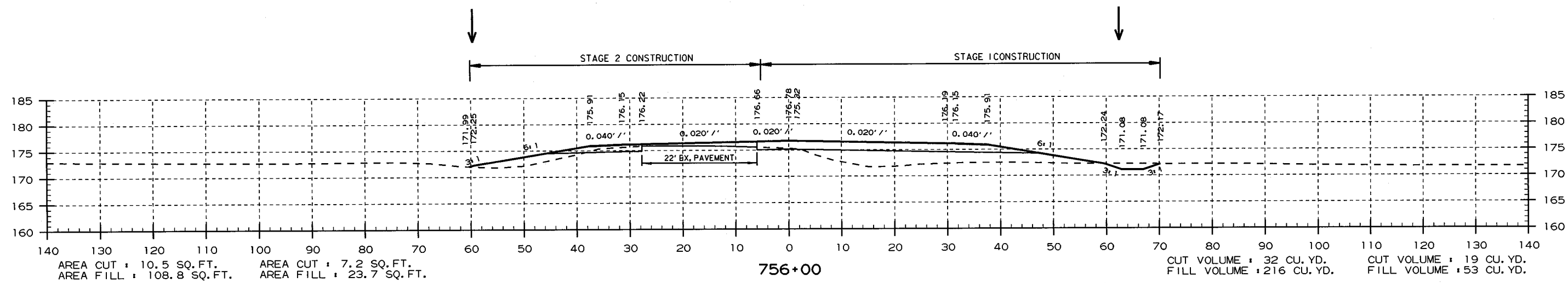


CROSS SECTION STA. 752+12 TO STA. 754+00

USER: f8553  
DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNV\_X\_Sections\CA0202\_CX\_0088.dgn  
PLOTTED: 7/10/2018 10:38



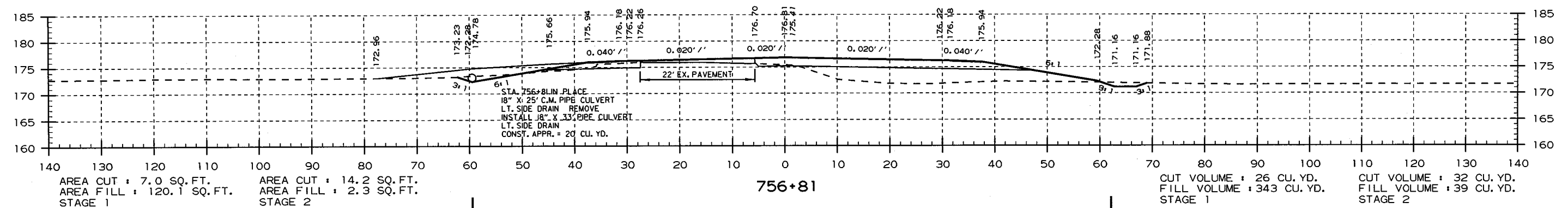
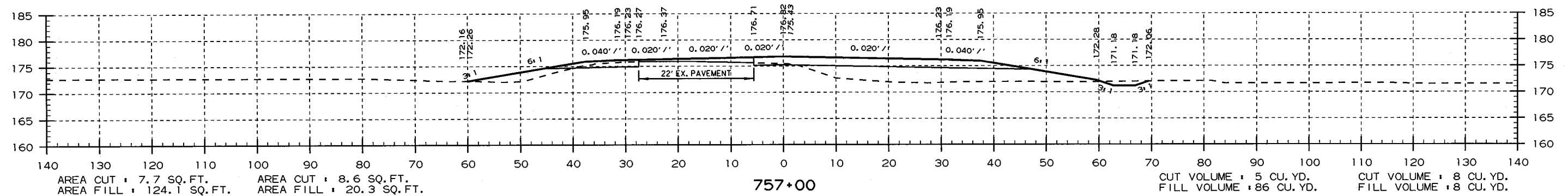
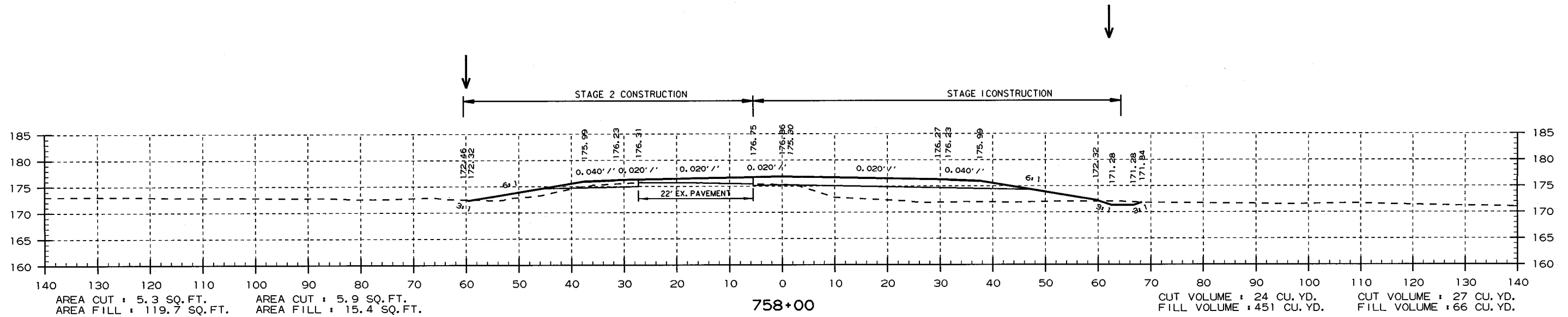
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	217	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 755+00 TO STA. 756+00

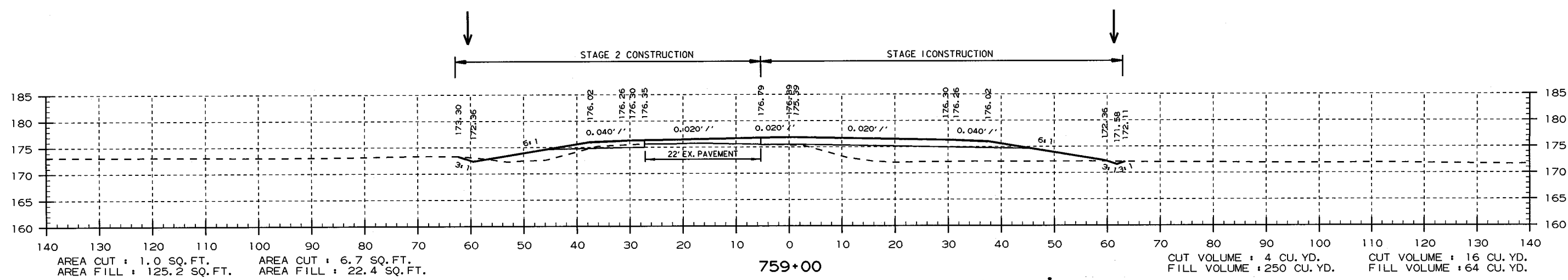
USER: f653  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0089.dgn  
 PLOTTED: 7/10/2018 10:38      SCALE: 20:1

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.	CA0202		218	256
				2 CROSS SECTIONS				

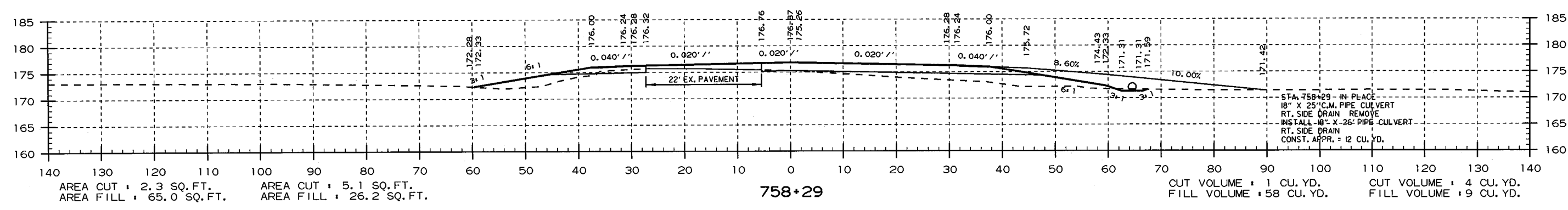


**CROSS SECTION STA. 756+81 TO STA. 758+00**

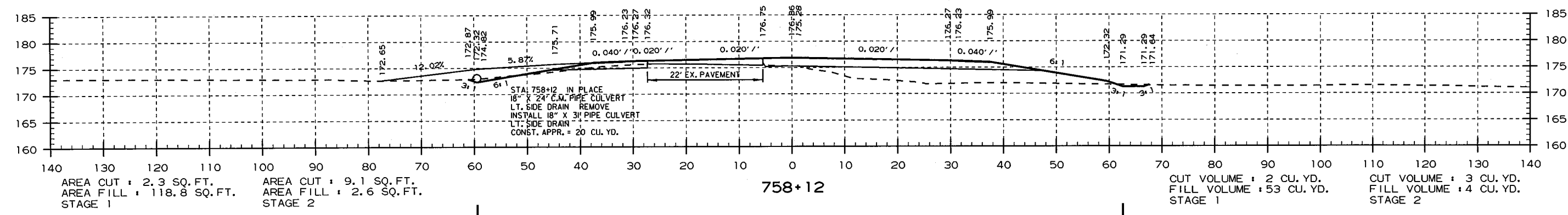
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		219	256
				2 CROSS SECTIONS				



STA: 758+50 END  
 0.10% RT. DT. GR.  
 & BEGIN 0.50% RT. DT. GR.  
 ELEV. = 171.33



STA: 758+29 - IN PLACE  
 18" X 25" C.M. PIPE CULVERT  
 RT. SIDE DRAIN REMOVE  
 INSTALL 18" X 26" PIPE CULVERT  
 RT. SIDE DRAIN  
 CONST. APPR. = 12 CU. YD.



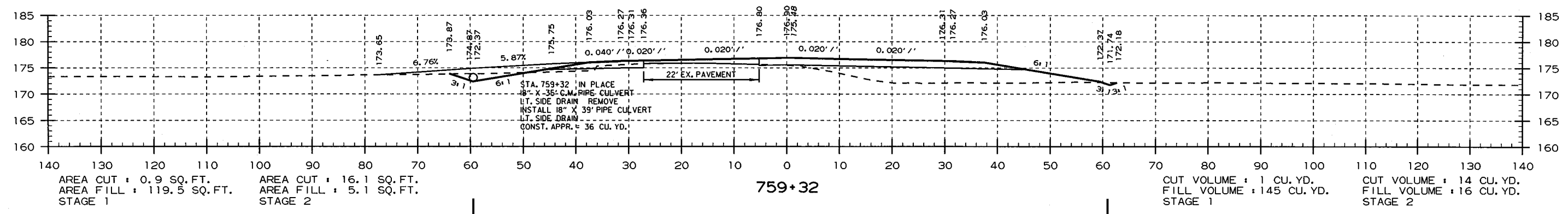
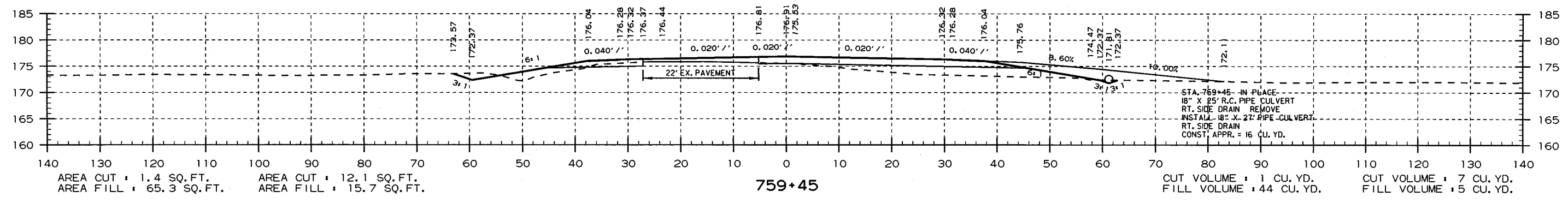
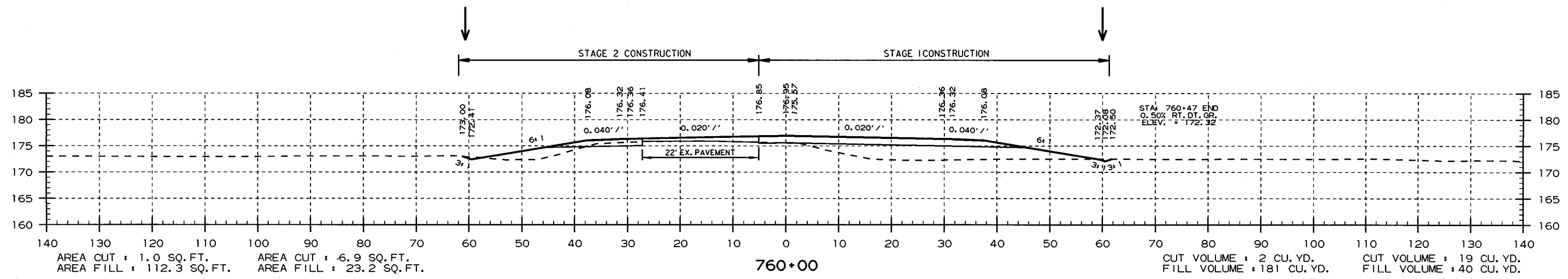
STA: 758+12 IN PLACE  
 18" X 24" C.M. PIPE CULVERT  
 LT. SIDE DRAIN REMOVE  
 INSTALL 18" X 31" PIPE CULVERT  
 LT. SIDE DRAIN  
 CONST. APPR. = 20 CU. YD.

**CROSS SECTION STA. 758+12 TO STA. 759+00**

USER: f653  
 DESIGN FILE: G:\MID9300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0091.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	220	256	

2 CROSS SECTIONS

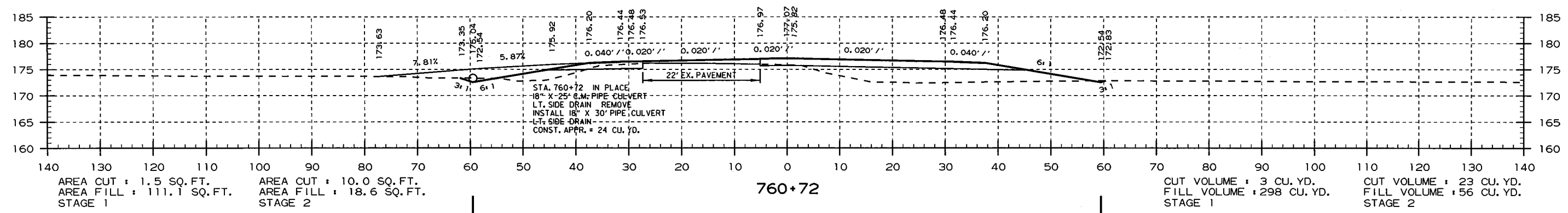
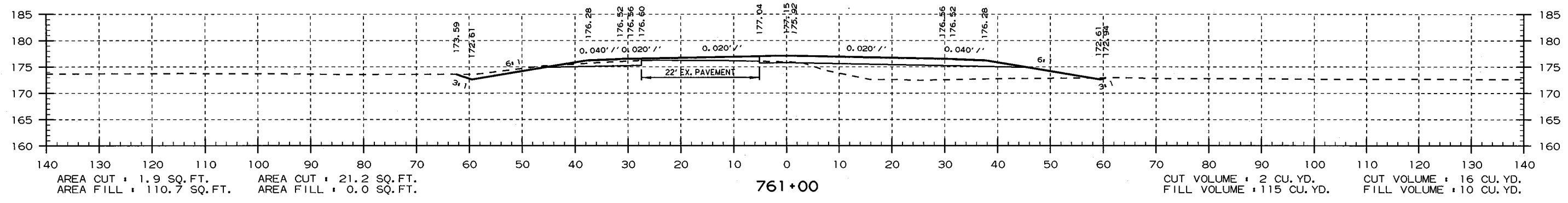
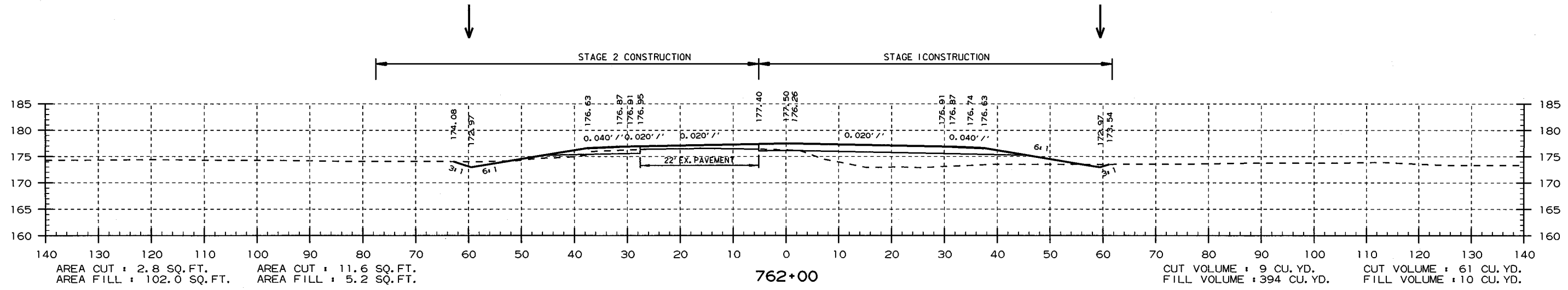


CROSS SECTION STA. 759+32 TO STA. 760+00

USER: f553  
 DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\X\_Sections\CA0202.CX\_0092.dgn  
 PLOTTED: 7/10/2018 10:38  
 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	221	256	

2 CROSS SECTIONS

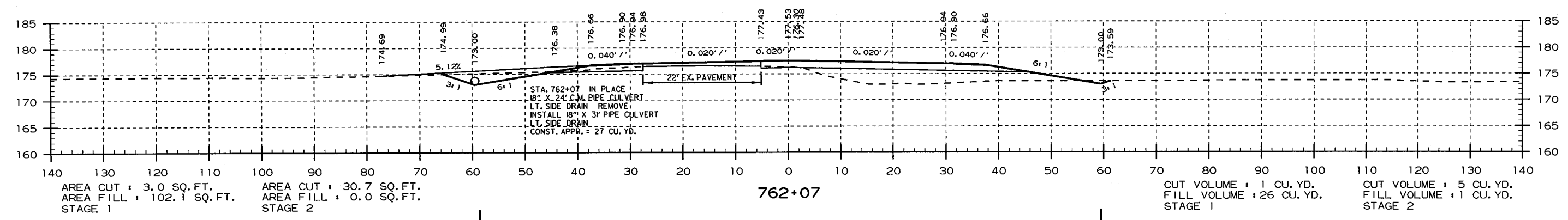
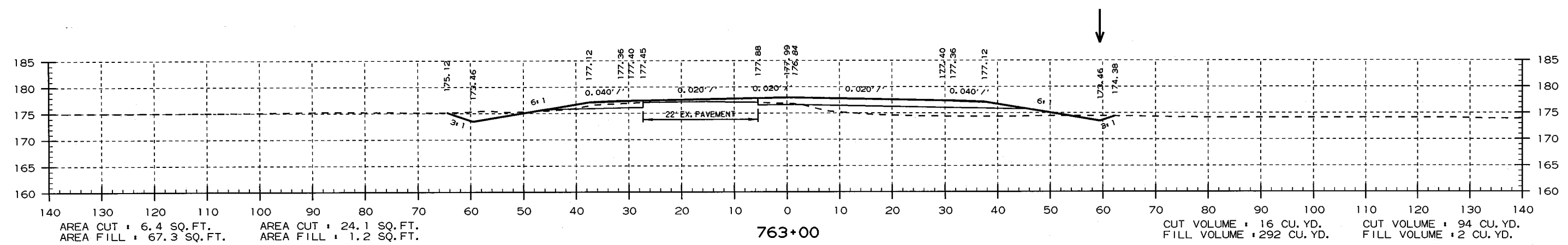
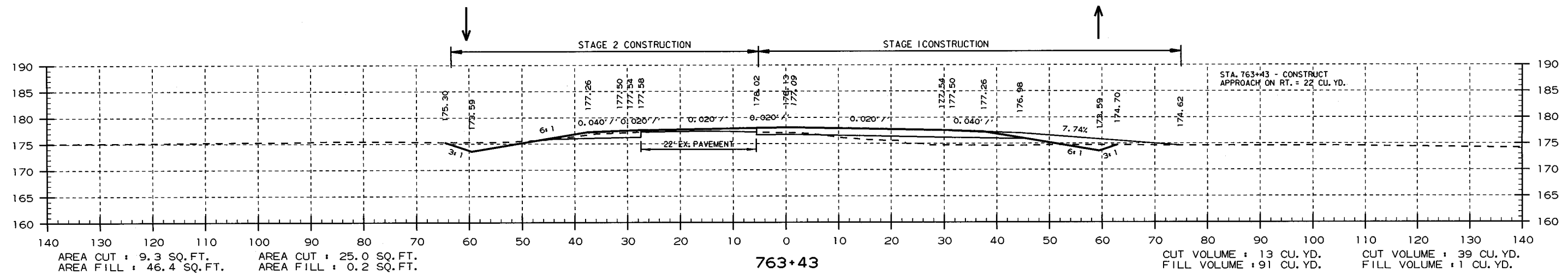


CROSS SECTION STA. 760+72 TO STA. 762+00

USER: fs53  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DNX\_Sections\CA0202.CX\_0093.dgn  
 PLOTTED: 7/10/2018 10:38

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. CA0202	222	256

2 CROSS SECTIONS

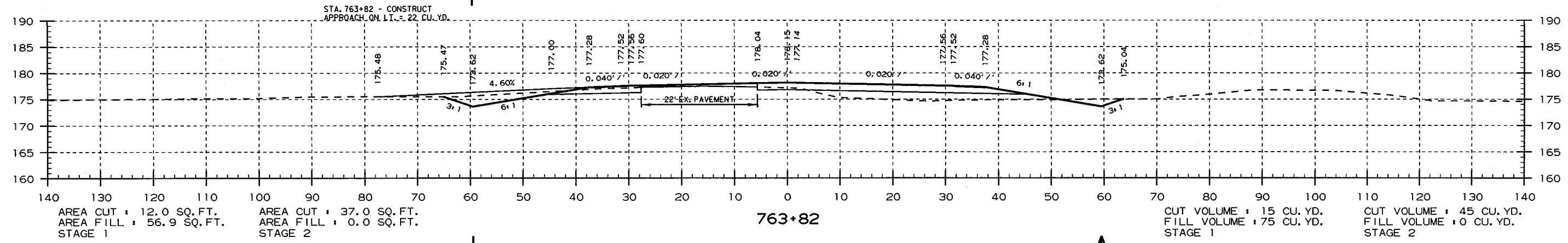
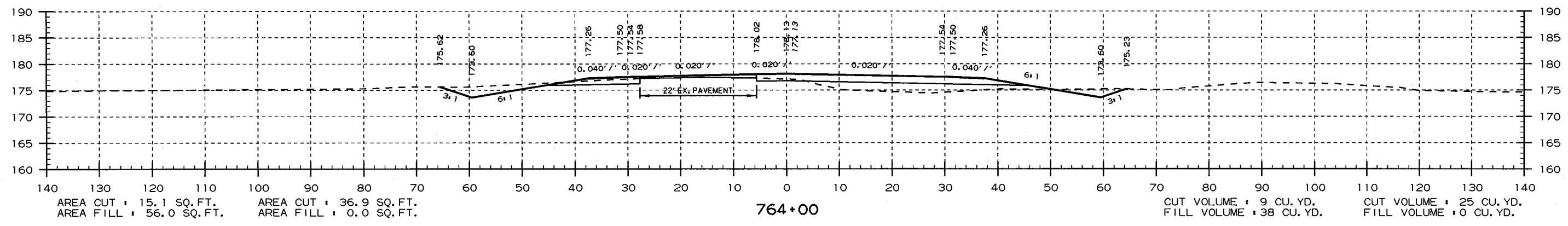
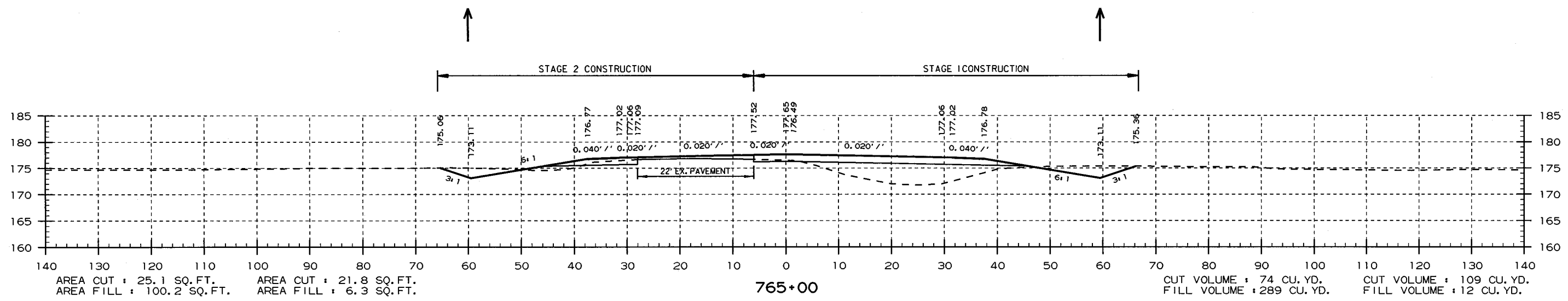


CROSS SECTION STA. 762+07 TO STA. 763+43

USER: f553  
 DESIGN FILE: G:\MID9300\_HWY\_82\TRANSP\DN\X\_Sections\CA0202\_CX\_0094.dgn  
 PLOTTED: 7/10/2018 10:38 SCALE: 20'

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.	CA0202	223	256	

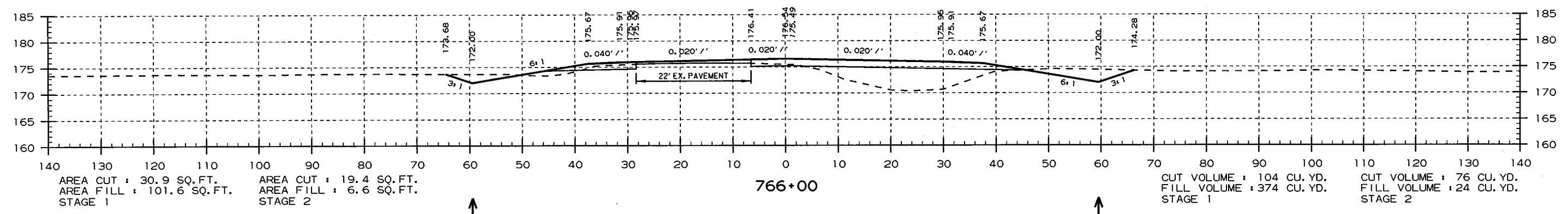
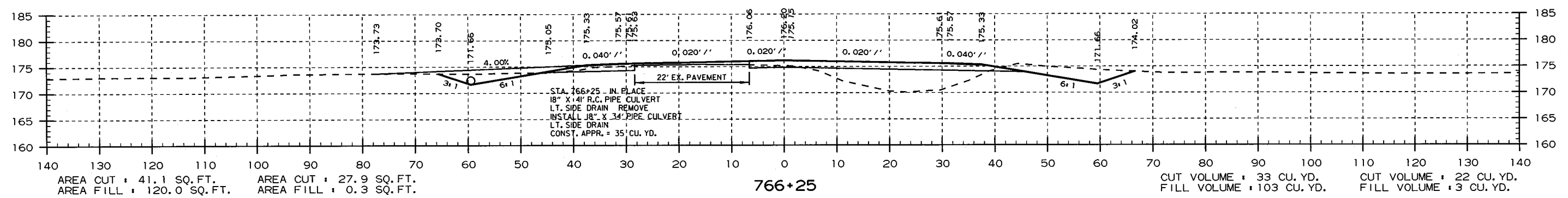
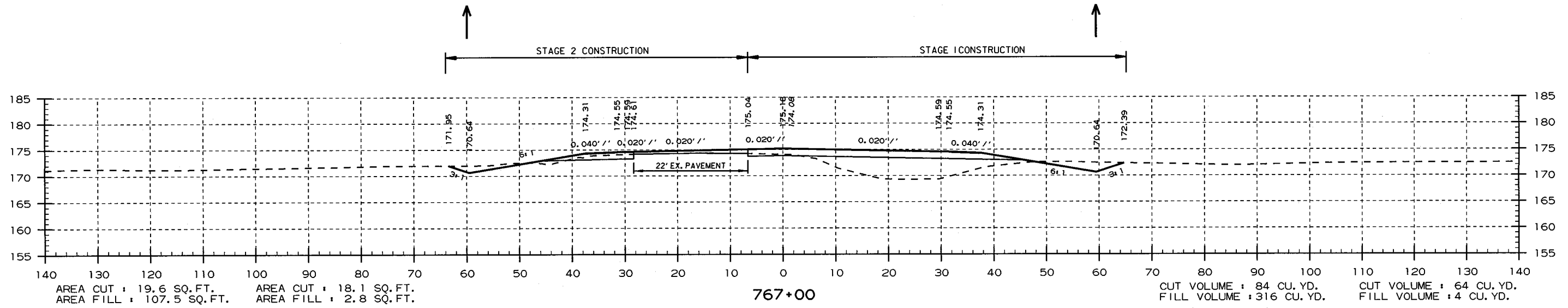
2 CROSS SECTIONS



CROSS SECTION STA. 763+82 TO STA. 765+00

USER: fs513  
 DESIGN FILE: G:\MID9300\_HWY\_82\TRANSP\DNX\_Sections\CA0202\_CX\_0095.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	224	256	
				2 CROSS SECTIONS				

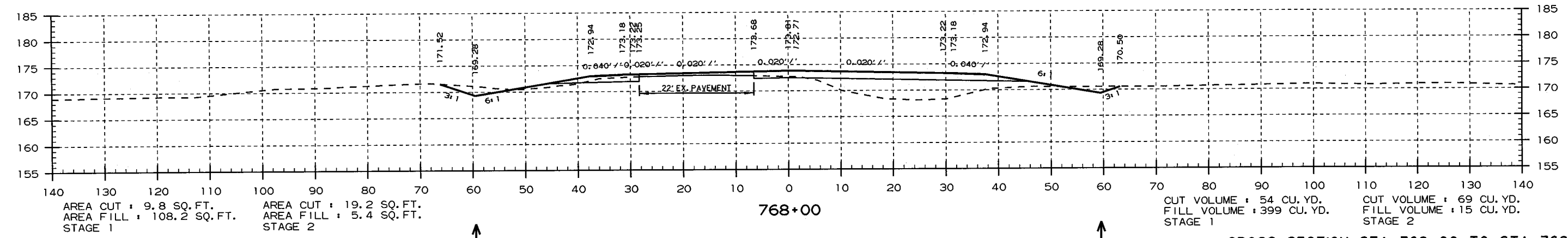
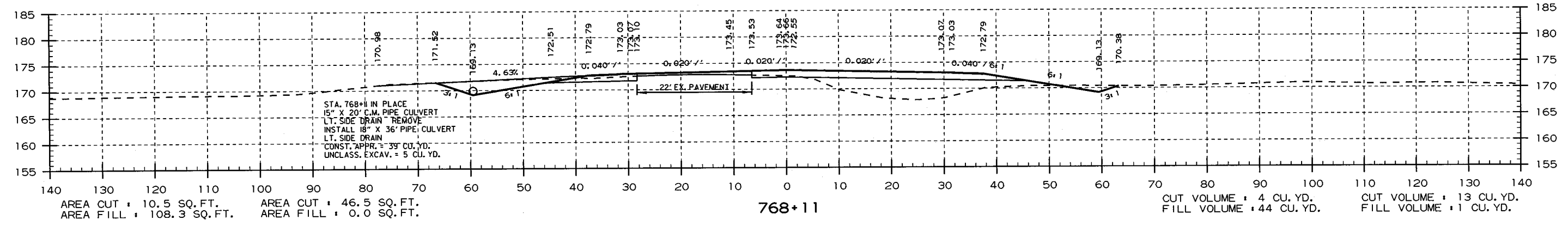
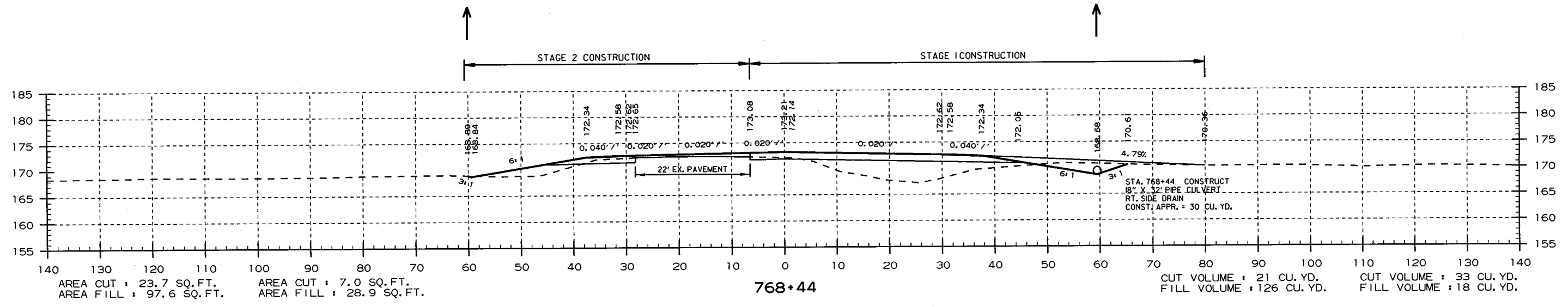


CROSS SECTION STA. 766+00 TO STA. 767+00

USER: fs513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_0096.dgn  
 PLOTTED: 7/10/2018 10:38  
 SCALE: 20:1



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.	CA0202	225	256	
				2 CROSS SECTIONS				

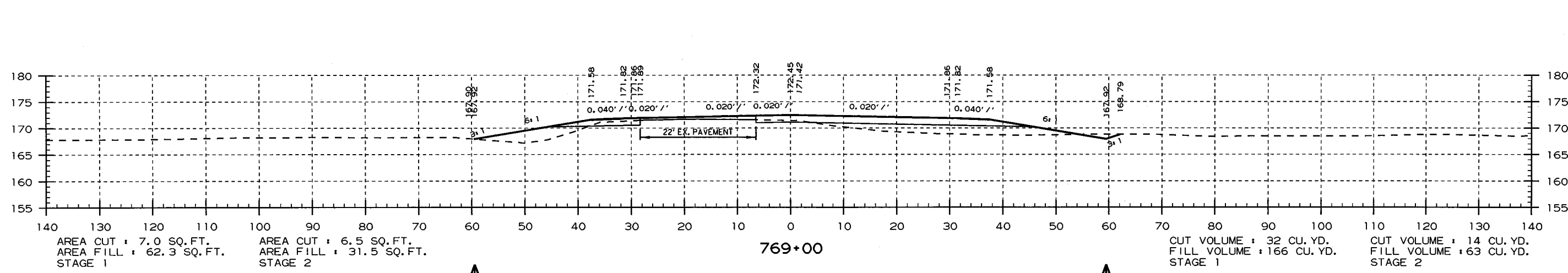
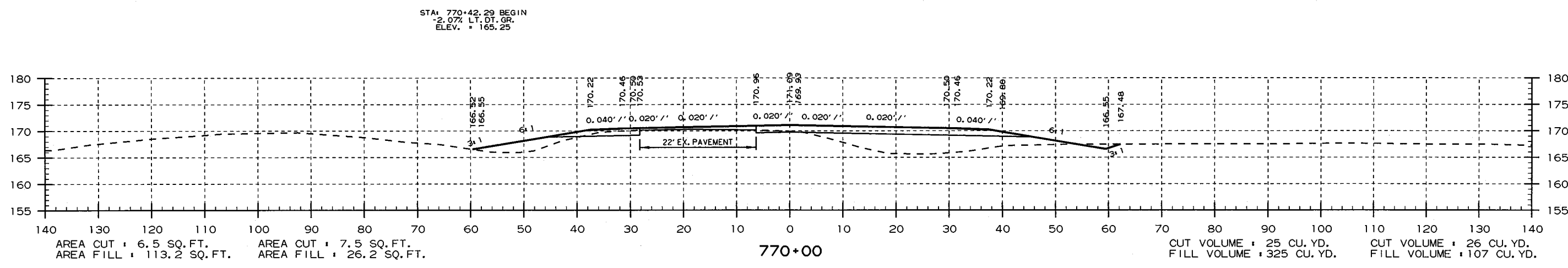
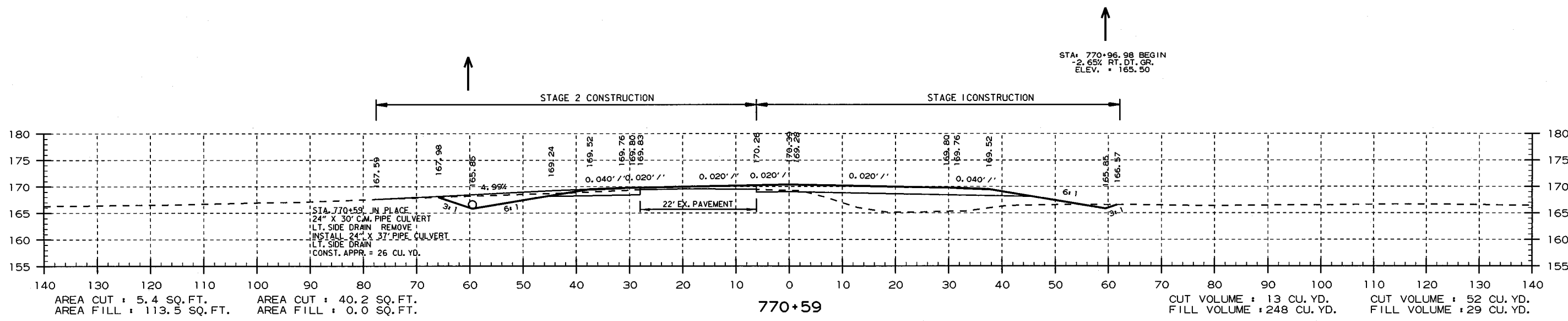


**CROSS SECTION STA. 768+00 TO STA. 768+44**

USER: fs53  
 DESIGN FILE: G:\H09300\_HWY\_82\TRANSP\DNV.X\_Sections\CA0202\_CX\_0097.dgn  
 PLOTTED: 7/10/2008 10:38

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.	CA0202	226	256	

2 CROSS SECTIONS

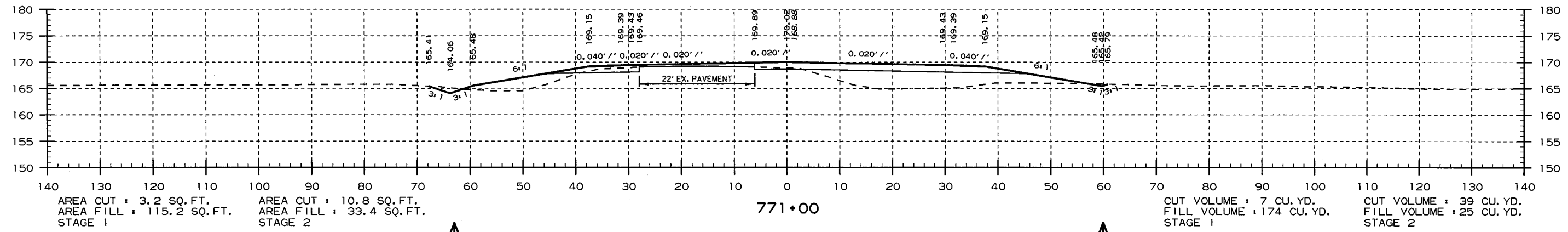
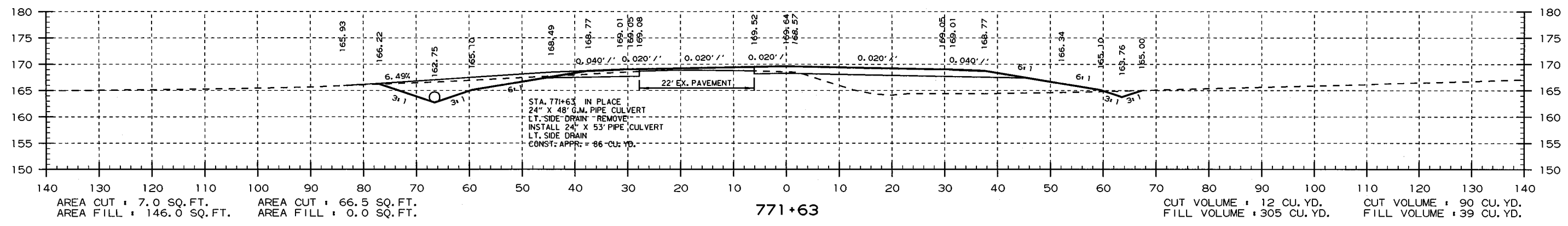
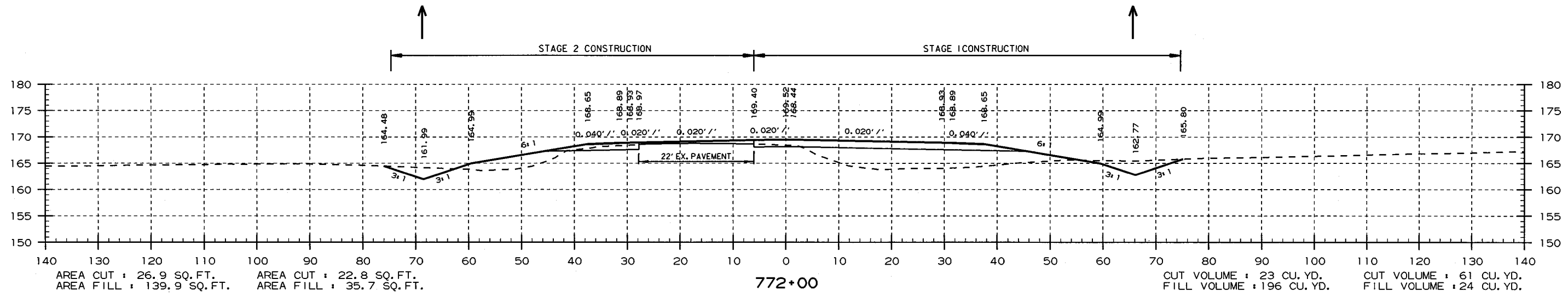


CROSS SECTION STA. 769+00 TO STA. 770+59

USER: r553  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNX\_Sections\CA0202\_CX\_0098.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	227	256	

2 CROSS SECTIONS

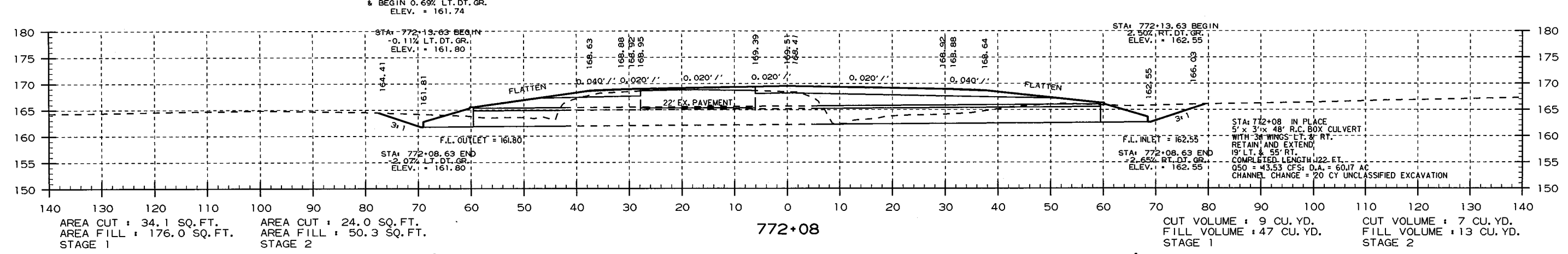
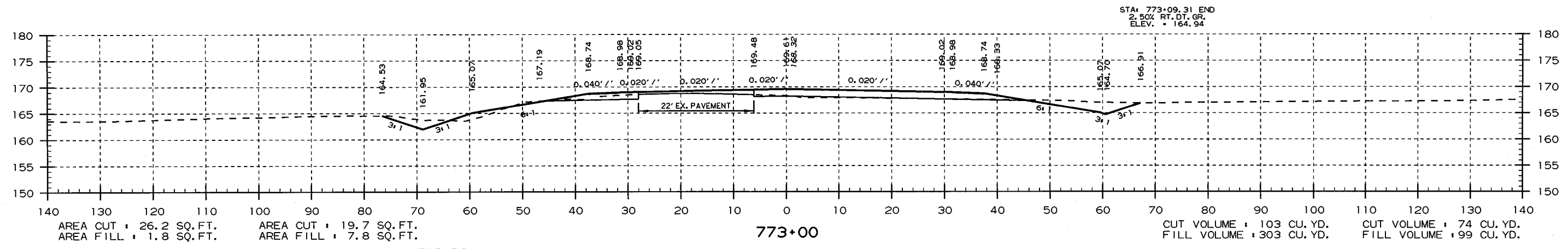
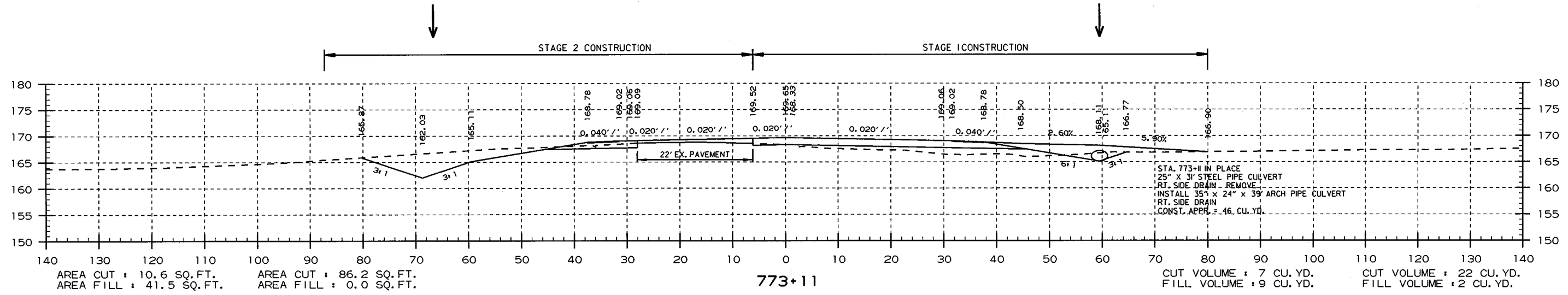


CROSS SECTION STA. 771+00 TO STA. 772+00

USER: fs53  
 DESIGN FILE: G:\1409300\_Hwy\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0099.dgn  
 PLOTTED: 7/10/2018 10:38

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.	CA0202	228	256	

2 CROSS SECTIONS

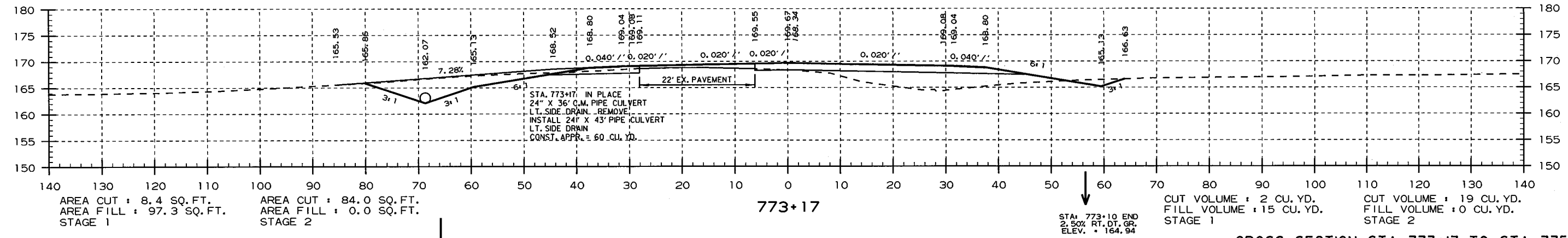
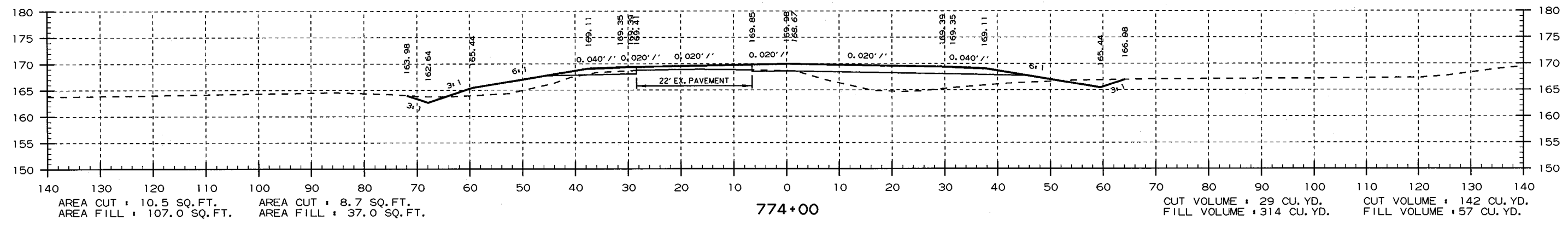
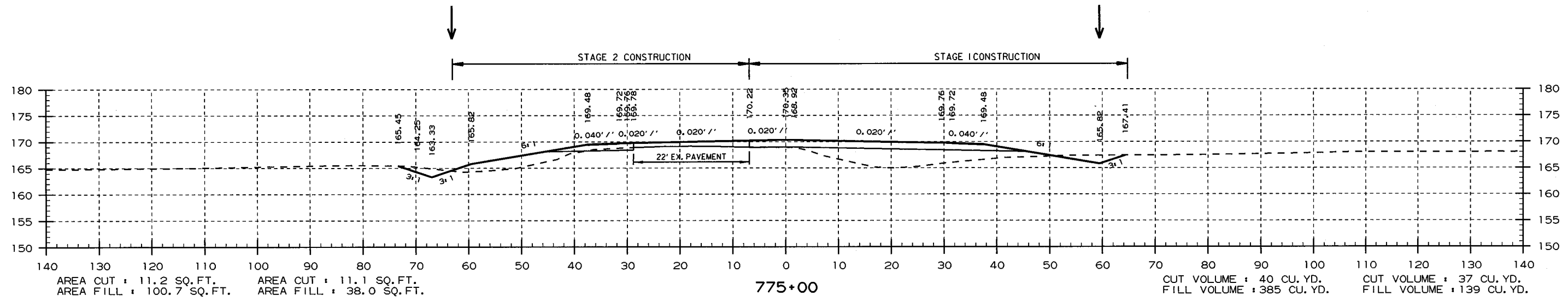


CROSS SECTION STA. 772+08 TO STA. 773+11

USER: fs513  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DNV\Sections\CA0202.CX\_0100.dgn  
PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	229	256	

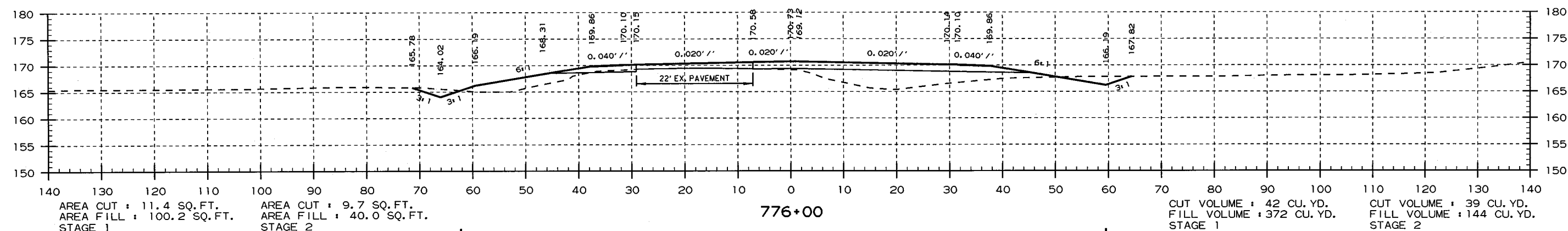
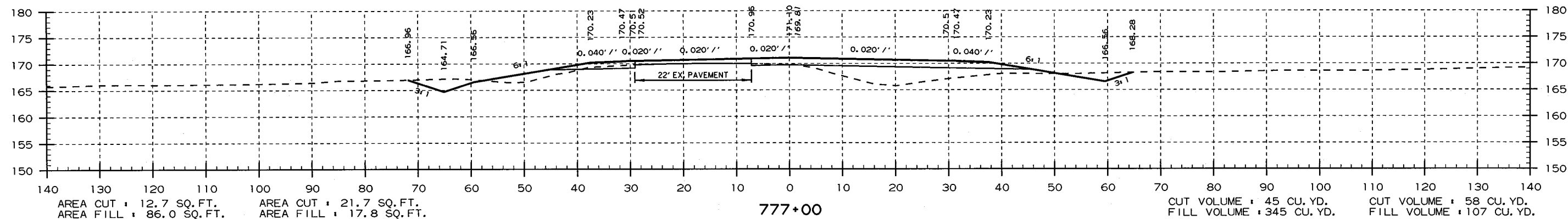
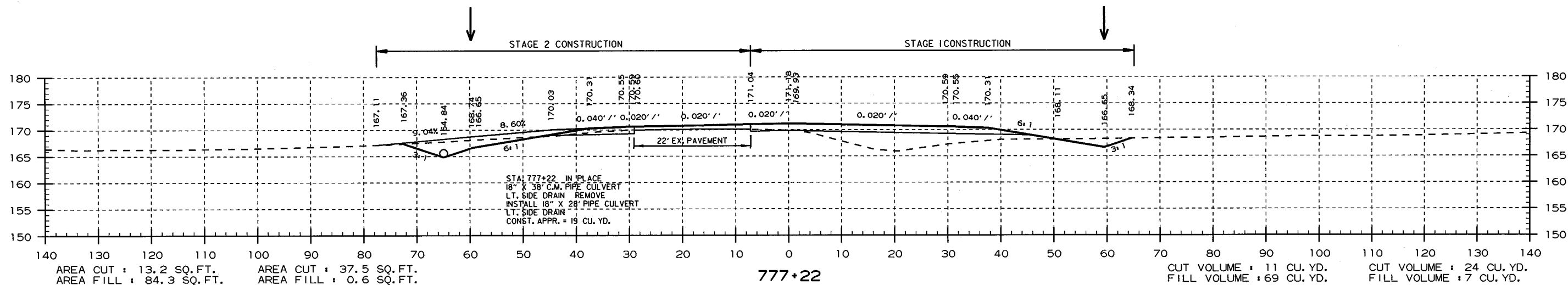
2 CROSS SECTIONS



CROSS SECTION STA. 773+17 TO STA. 775+00

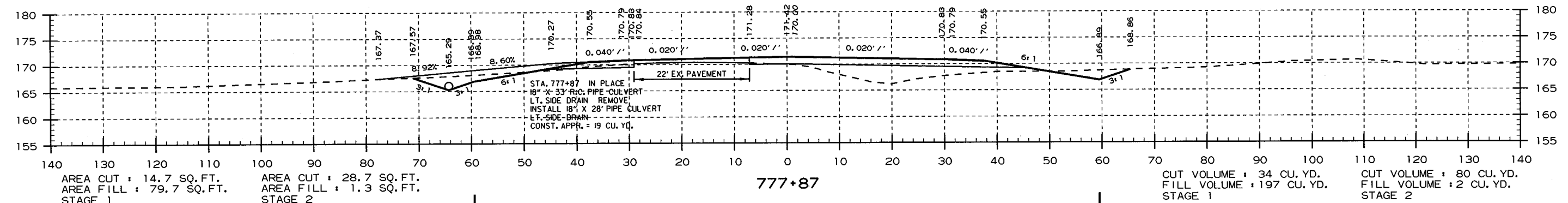
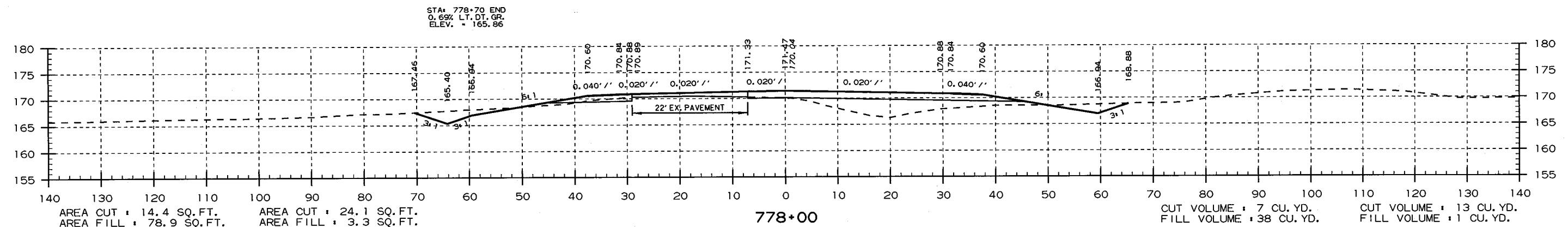
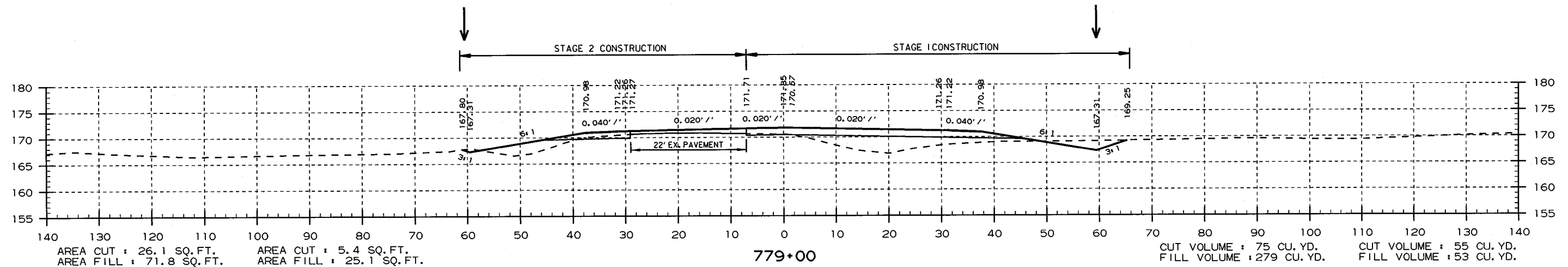
USER: f6513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\X\_Sect\ions\CA0202\_CX\_0101.dgn  
 PLOTTED: 7/10/2018 10:38

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202		230	256
				2 CROSS SECTIONS				



**CROSS SECTION STA. 776+00 TO STA. 777+22**

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.	CA0202	231	256	
				2 CROSS SECTIONS				

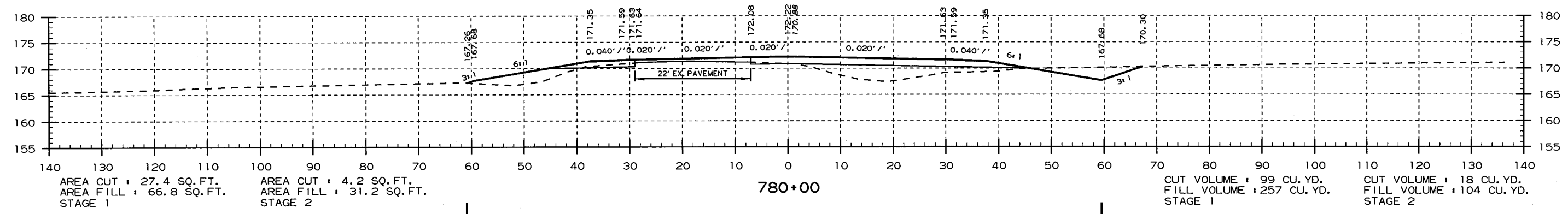
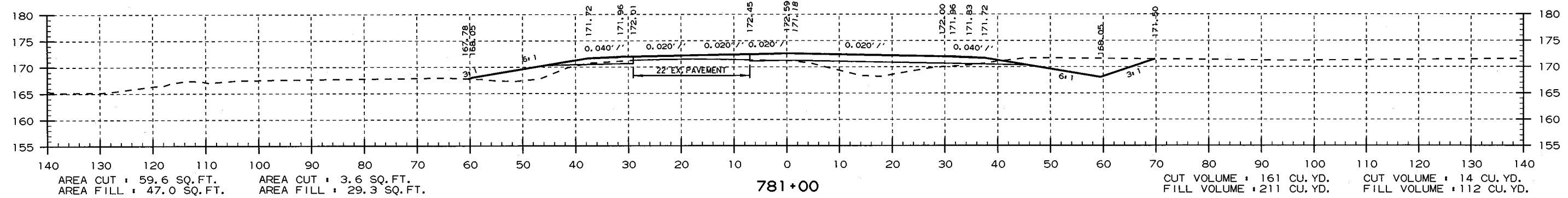
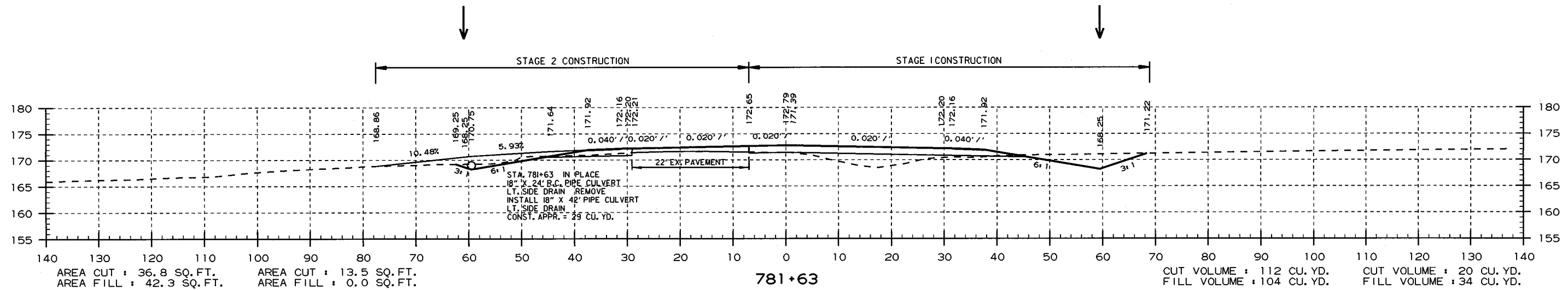


CROSS SECTION STA. 777+87 TO STA. 779+00

USER: f4513  
 DESIGN FILE: G:\I4109300.HWY\_82\TRANSP\DNVX\_Sect\Sections\CA0202\_CX\_0103.dgn  
 PLOTTED: 7/10/2018 10:39 SCALE: 20H

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	232	256	

2 CROSS SECTIONS

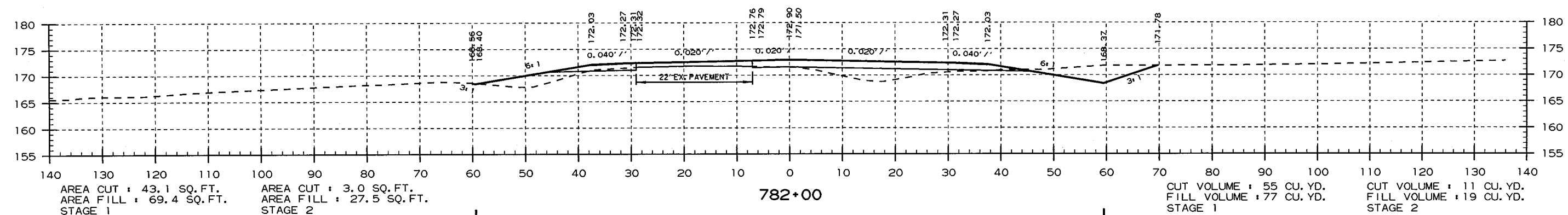
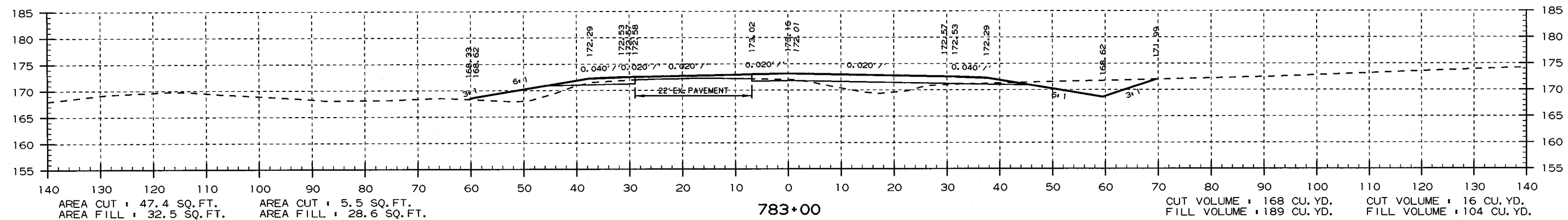
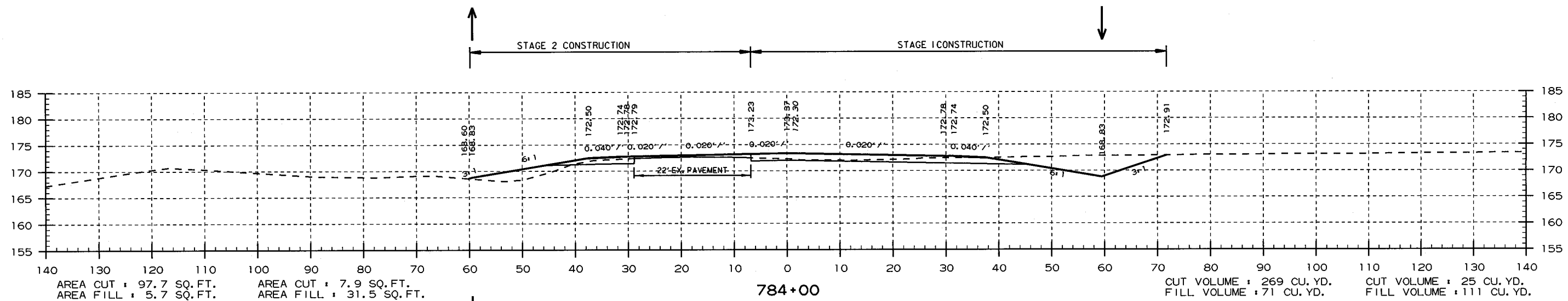


CROSS SECTION STA. 780+00 TO STA. 781+63

USER: fs513  
 DESIGN FILE: G:\4109300\_Hwy\_82\TRANSP\DCN\X\_Sect\Sections\CA0202.CX\_0104.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20x

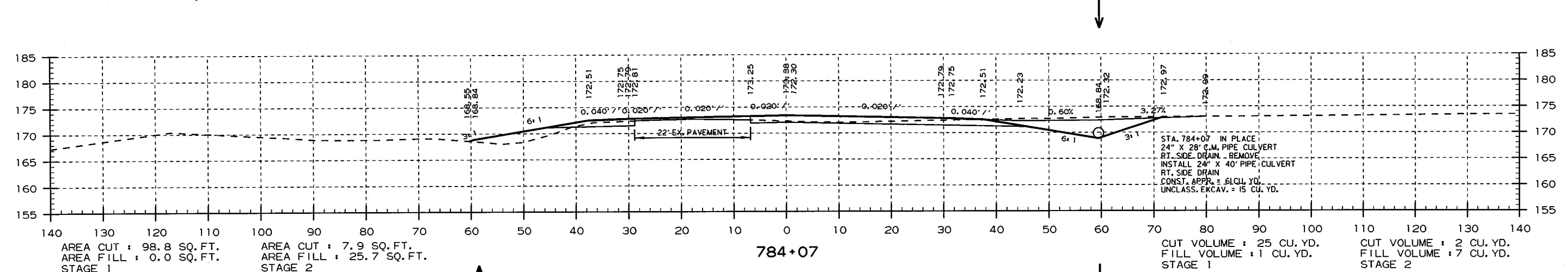
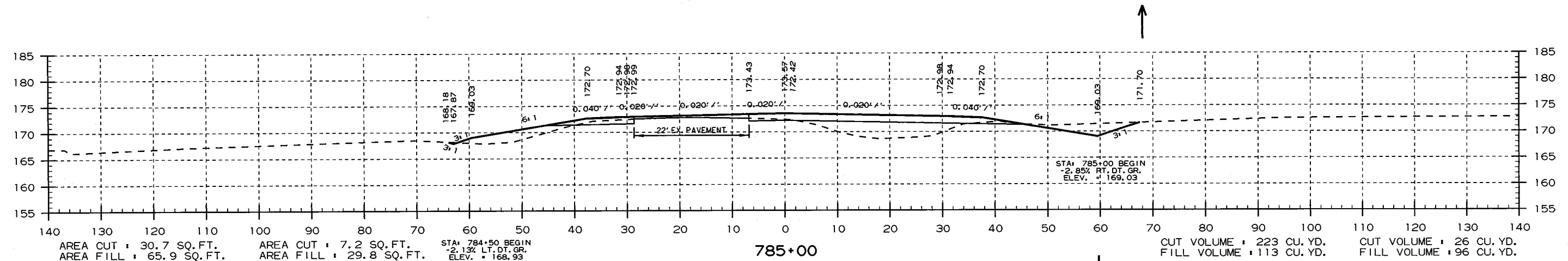
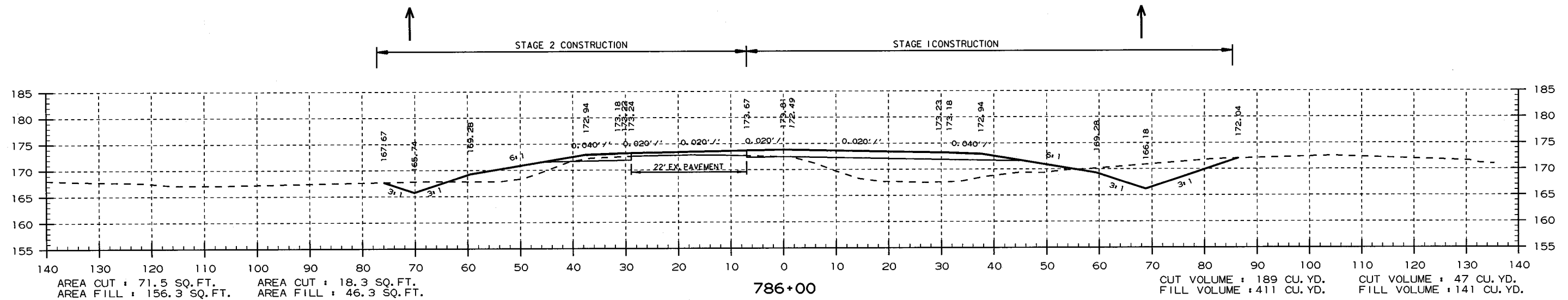


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0202	233	256
2								CROSS SECTIONS



CROSS SECTION STA. 782+00 TO STA. 784+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.	CA0202	234	256	
				2 CROSS SECTIONS				

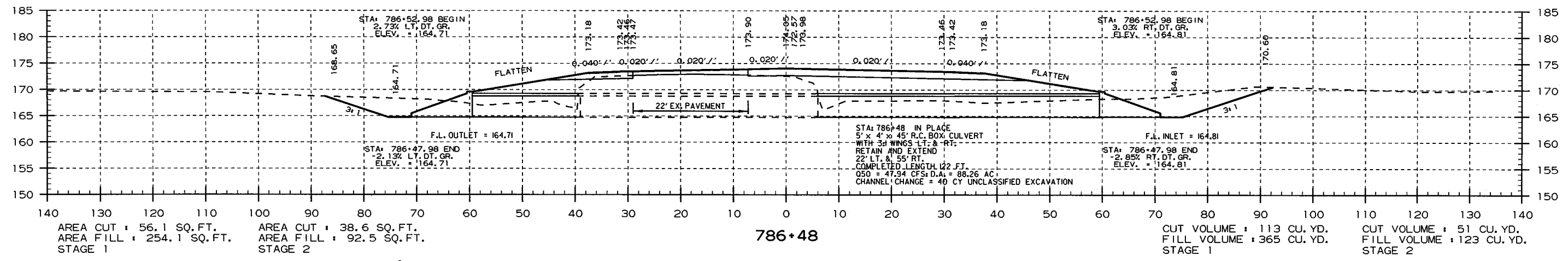
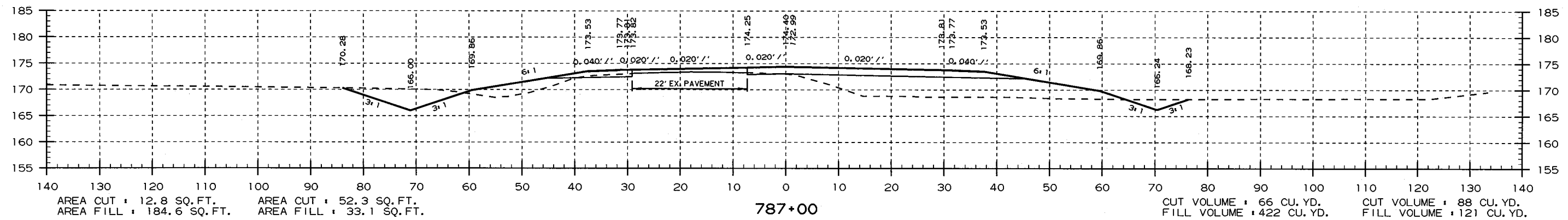
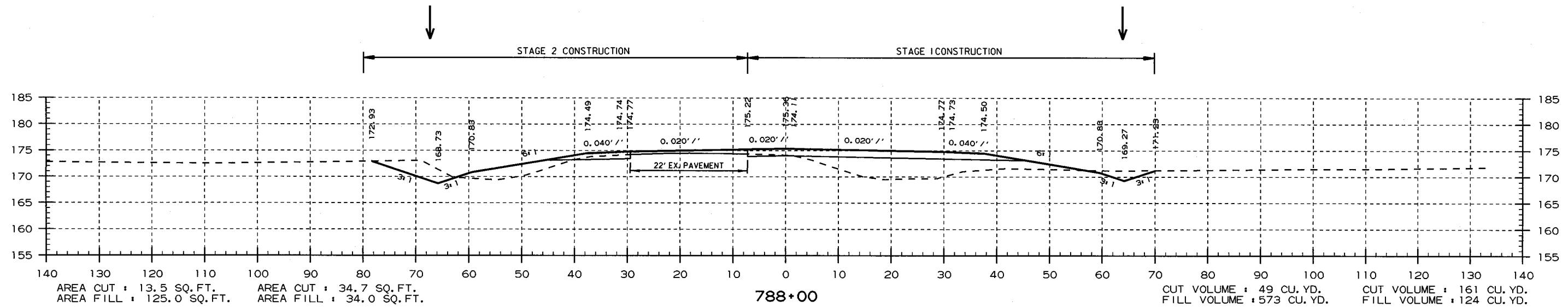


**CROSS SECTION STA. 784+07 TO STA. 786+00**

USER: f6513  
 DESIGN FILE: G:\MID9300\_HWY\_82\TRANSP\DNVX\_Sect\ions\CA0202\_CX\_0106.dgn  
 PLOTTED: 7/10/2018 10:39      SCALE: 20x

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.	CA0202	235	256	

2 CROSS SECTIONS

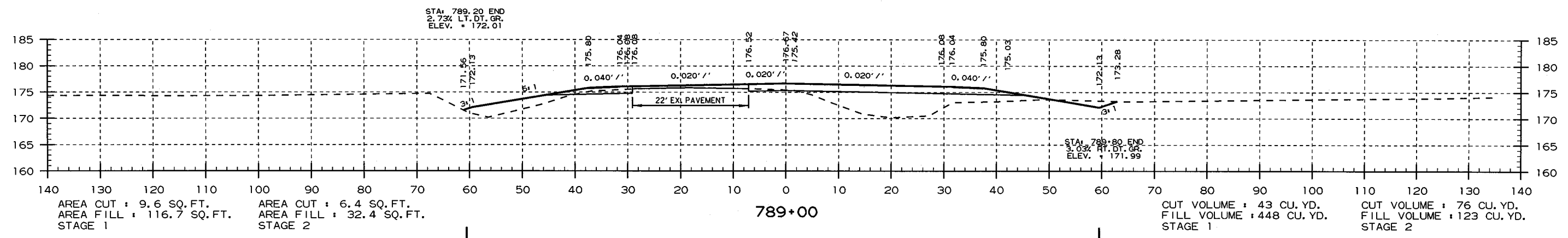
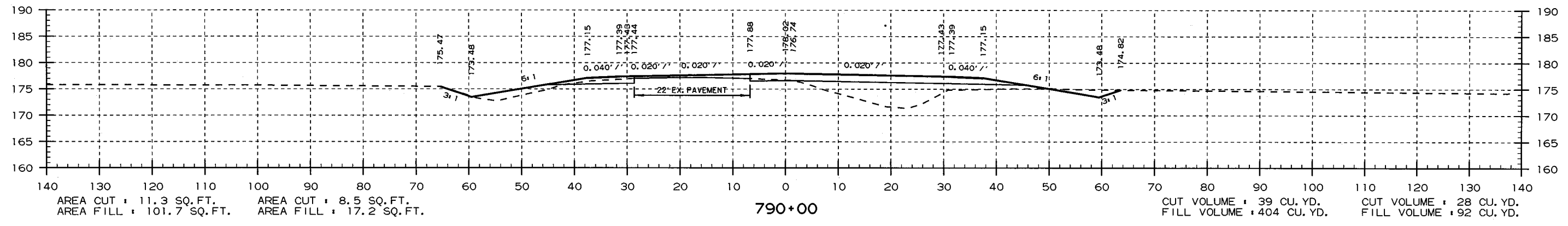
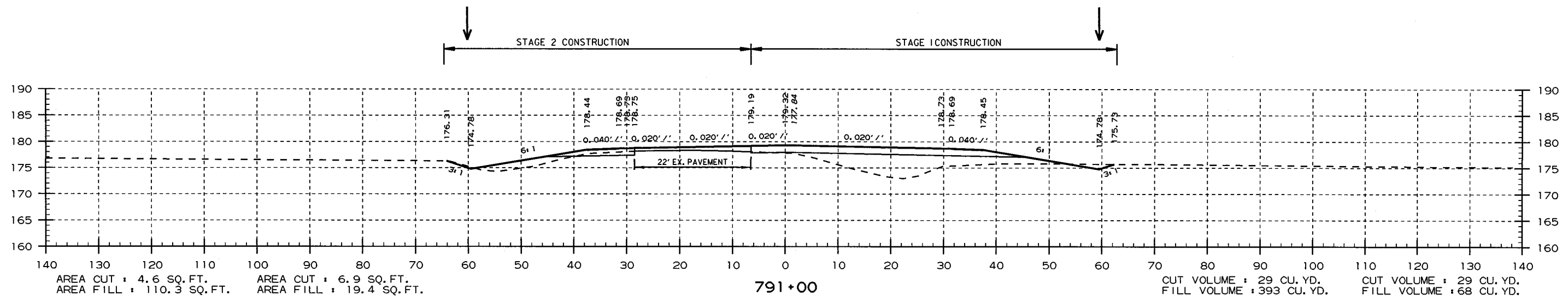


CROSS SECTION STA. 786+48 TO STA. 788+00

USER: f553  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_0107.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	236	256	

2 CROSS SECTIONS

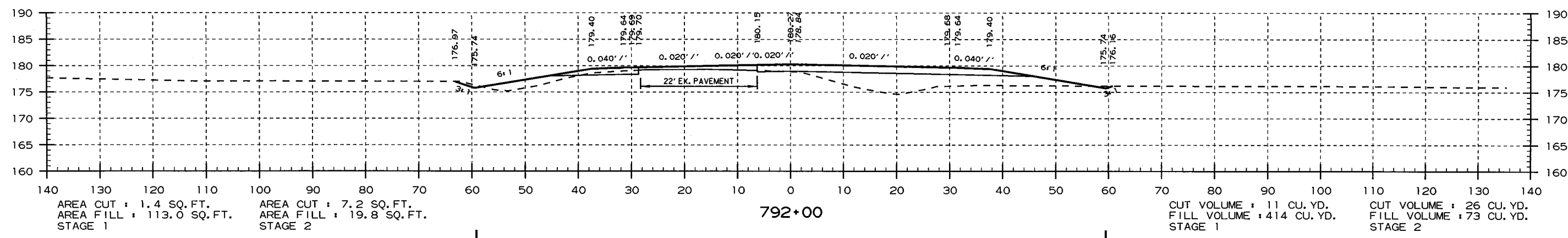
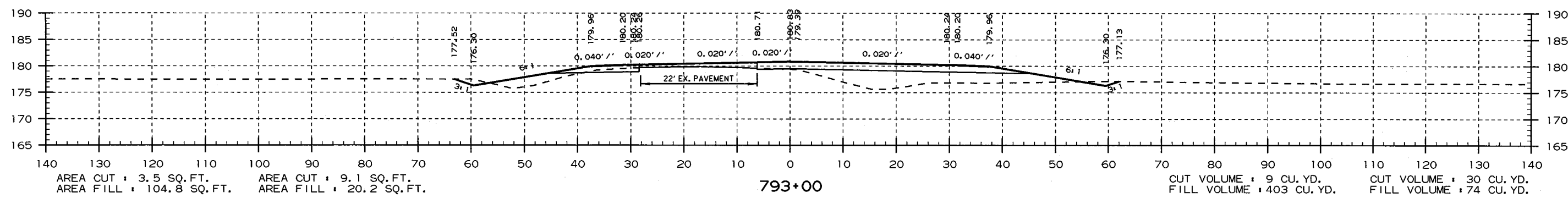
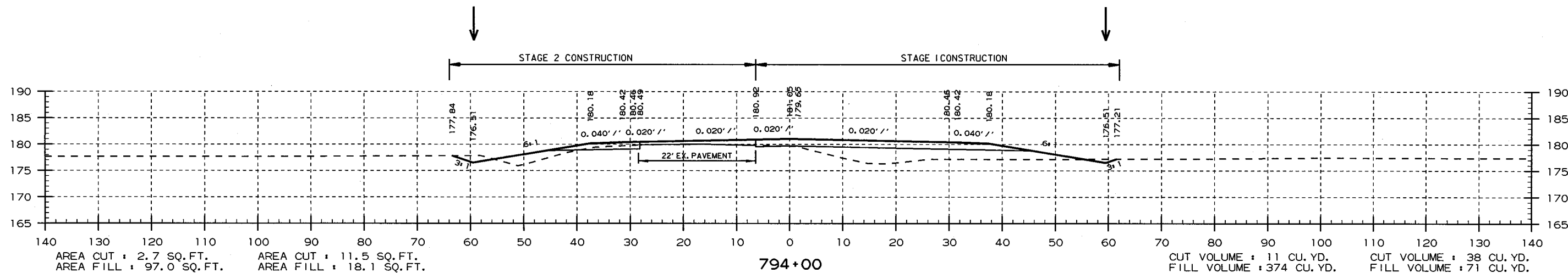


CROSS SECTION STA. 789+00 TO STA. 791+00

USER: f553  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_0108.dgn  
 PLOTTED: 7/10/2018 10:39

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.	CA0202	237	256	

2 CROSS SECTIONS

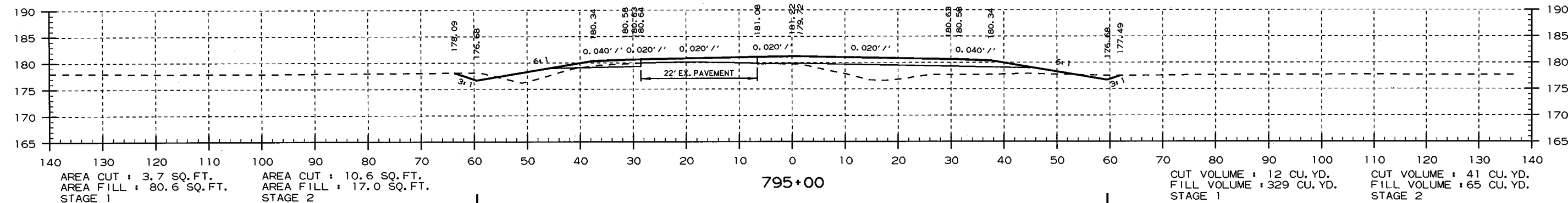
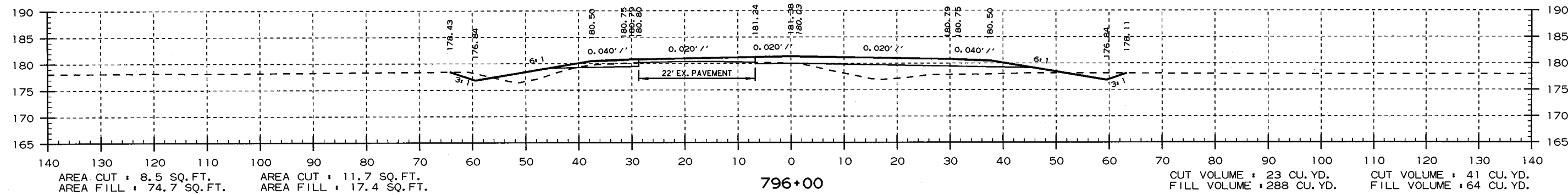
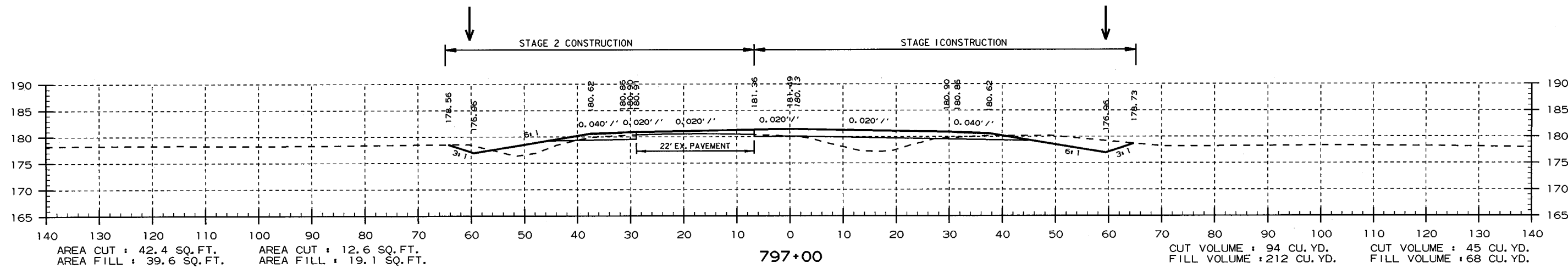


CROSS SECTION STA. 792+00 TO STA. 794+00

USER: f553  
 DESIGN FILE: G:\4109300.HWY.82\TRANSP\DG\X\_Sections\CA0202.CX.009.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0202	238	256

2 CROSS SECTIONS

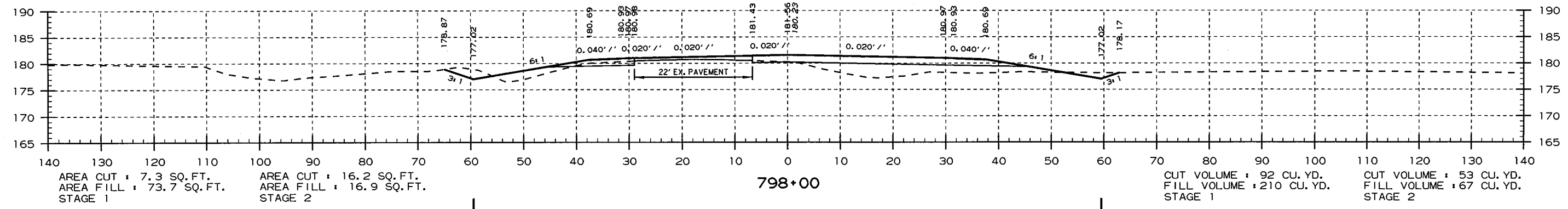
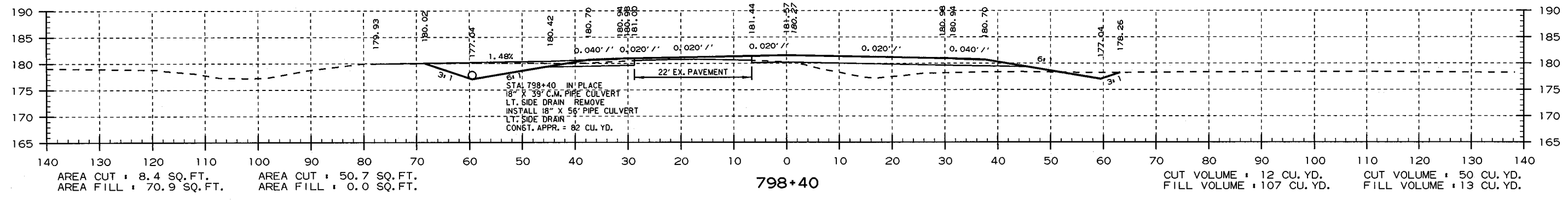
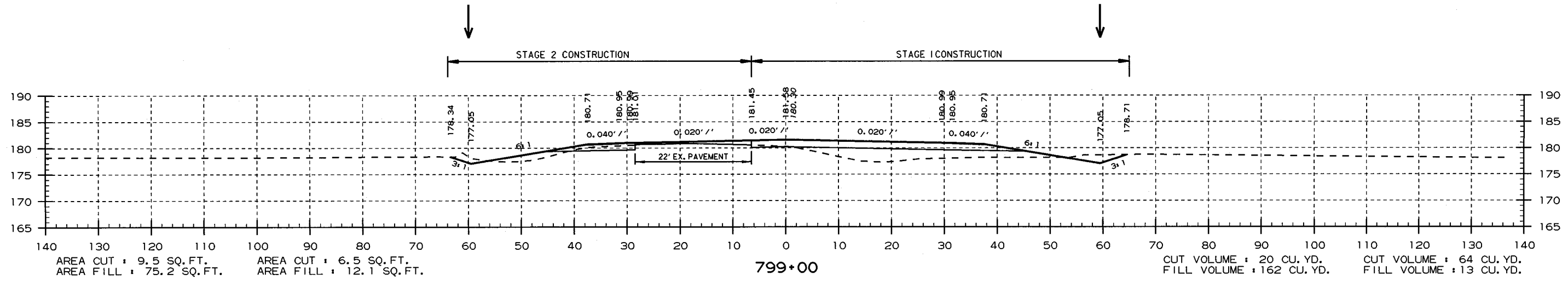


CROSS SECTION STA. 795+00 TO STA. 797+00

USER: fs513  
 DESIGN FILE: G:\4109300\_HWY\_82\TRANSP\DNVX\_Sect\ons\CA0202.CX\_010.dgn  
 PLOTTED: 7/10/2018 10:39 SCALE: 20'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	239	256	

2 CROSS SECTIONS

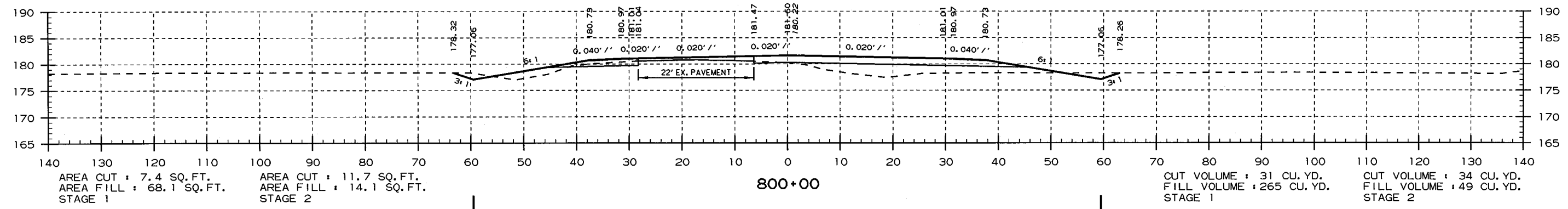
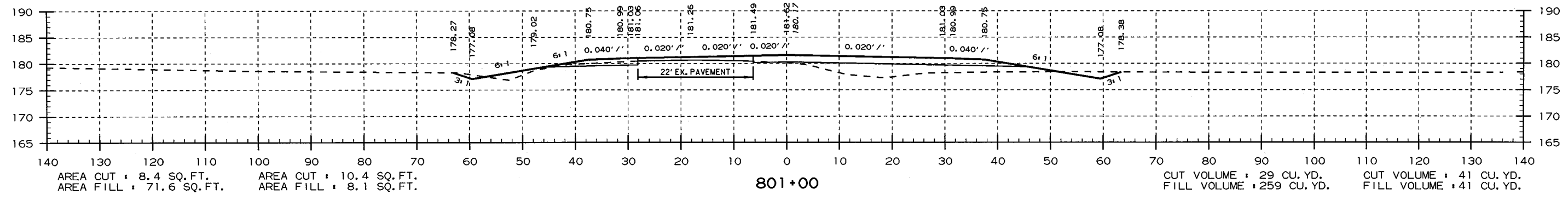
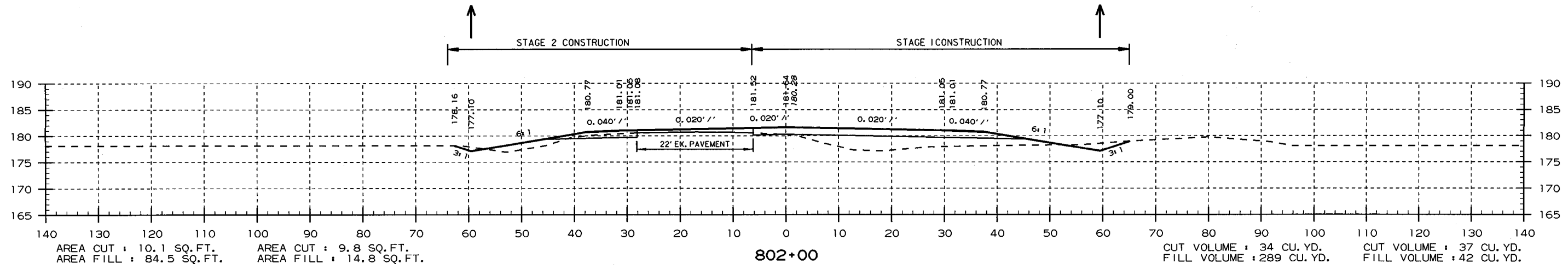


CROSS SECTION STA. 798+00 TO STA. 799+00

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DNVX\_Sections\CA0202\_CX\_011.dgn  
 PLOTTED: 7/10/2018 10:39 SCALE: 20'

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.	CA0202	240	256	

2 CROSS SECTIONS



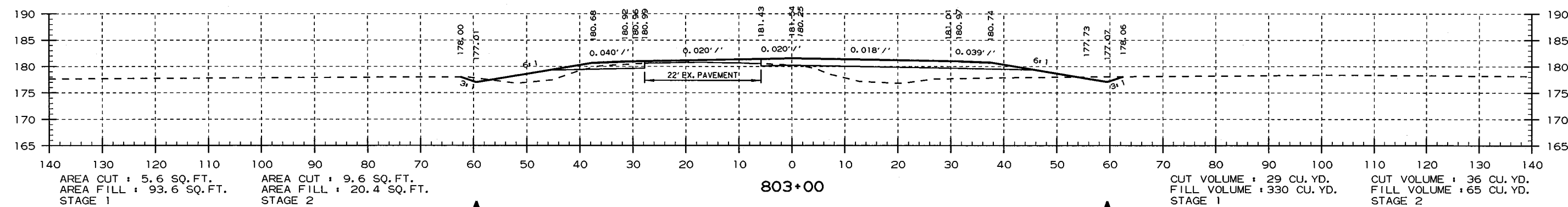
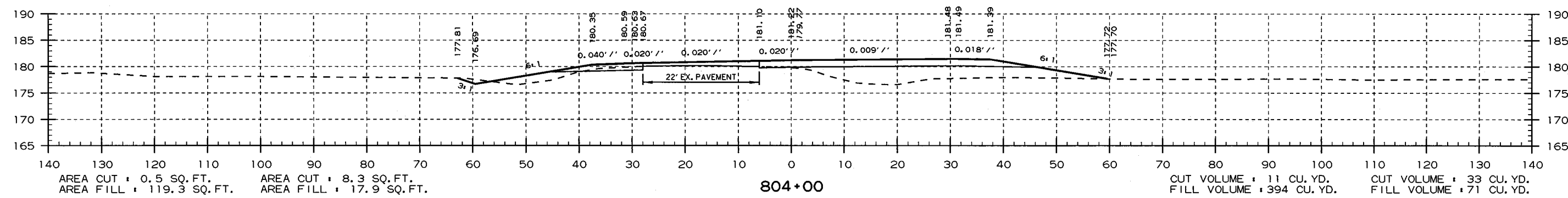
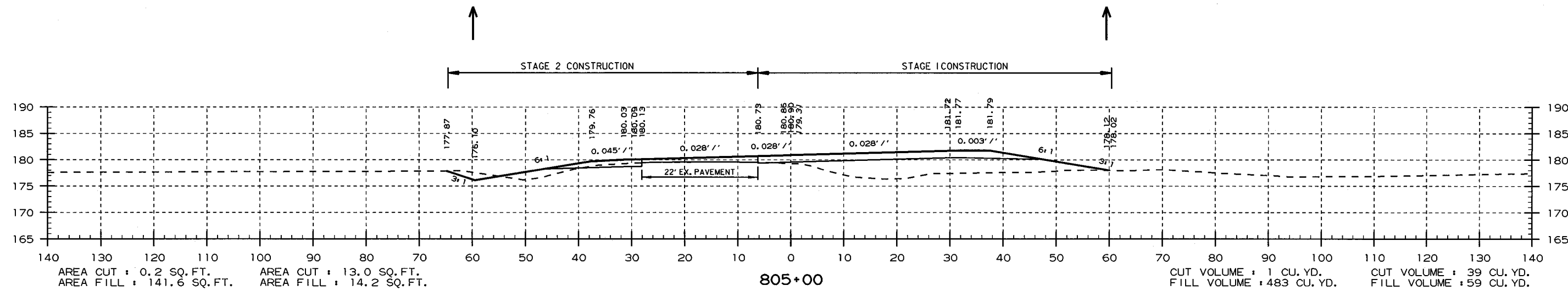
CROSS SECTION STA. 800+00 TO STA. 802+00

USER: fs513  
 DESIGN FILE: G:\14109300\_Hwy\_82\TRANSP\DGNX\_Section\CA0202.CX\_012.dgn  
 PLOTTED: 7/10/2008 10:39 SCALE: 20x



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	241	256	

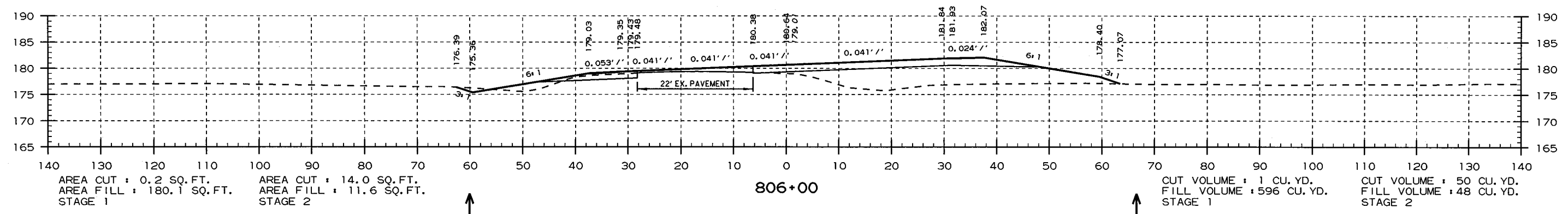
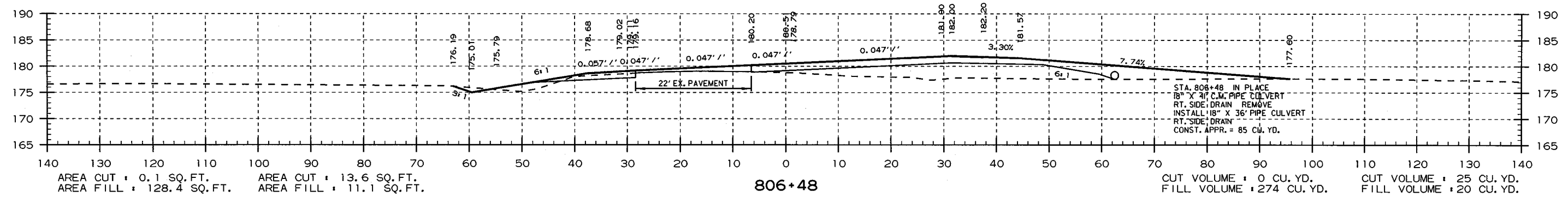
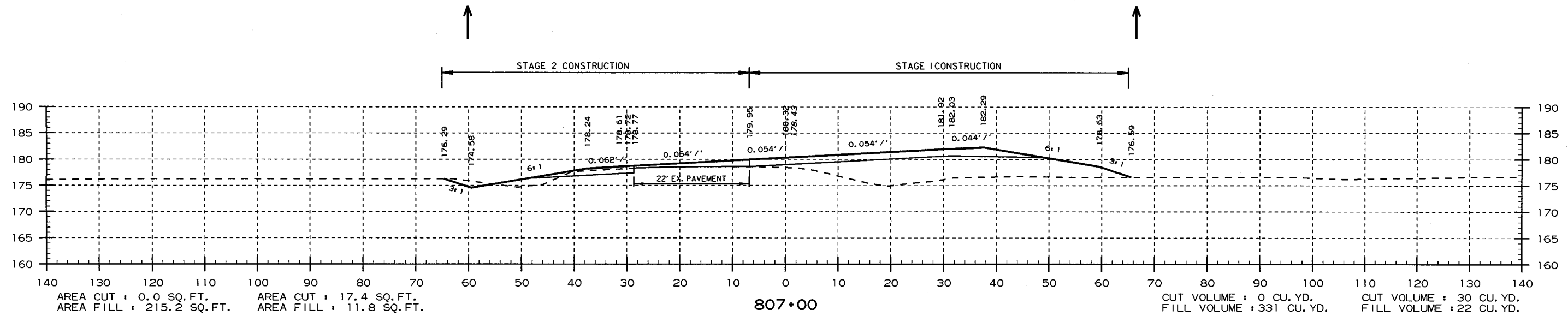
2 CROSS SECTIONS



CROSS SECTION STA. 803+00 TO STA. 805+00

USER: f5513  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DGN\X\_Sect\Sections\CA0202.CX\_013.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

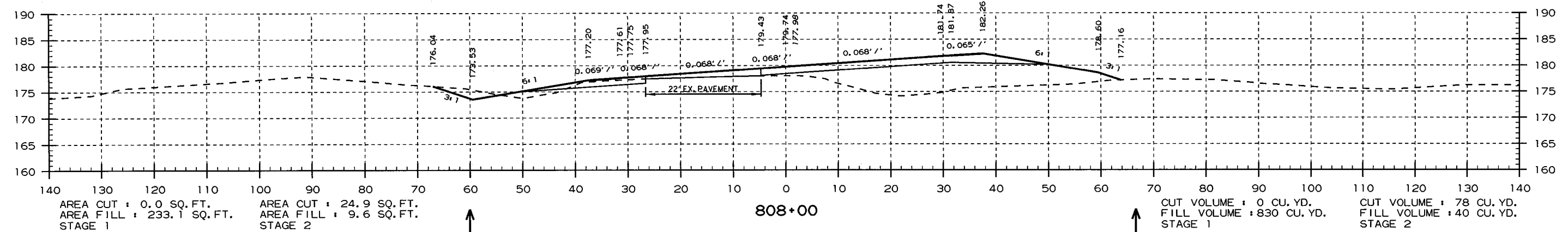
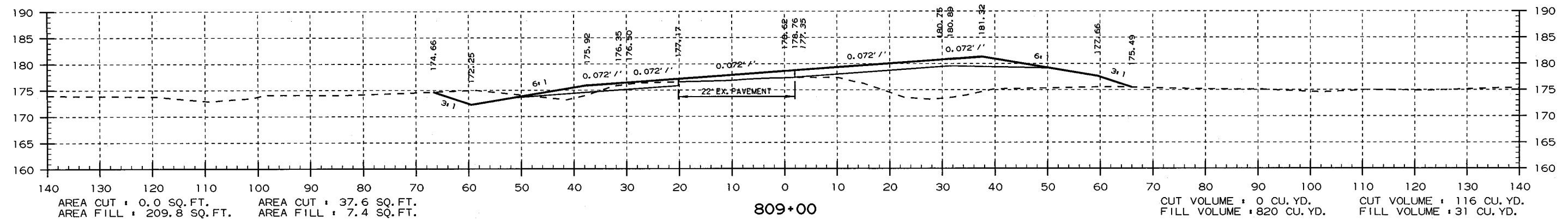
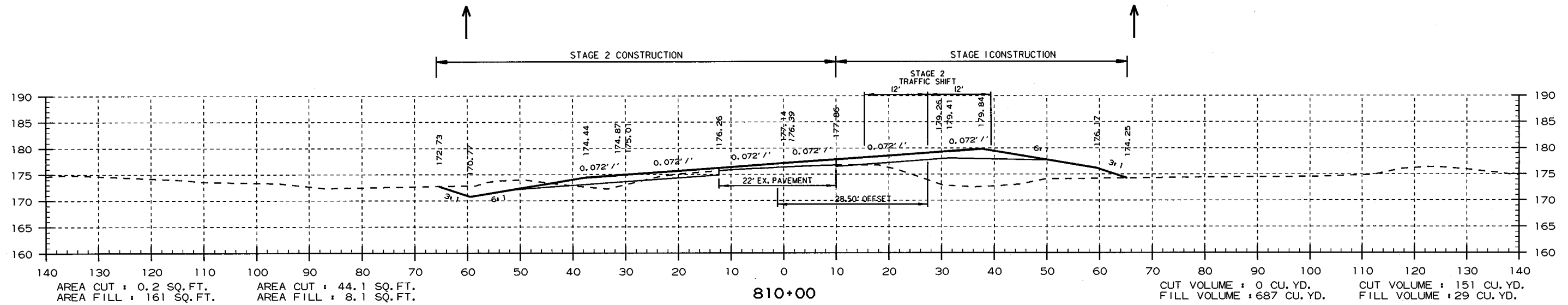
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0202	242	256
						2 CROSS SECTIONS		



**CROSS SECTION STA. 806+00 TO STA. 807+00**

USER: f553  
 DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DCN\X\_Sections\CA0202.CX\_014.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

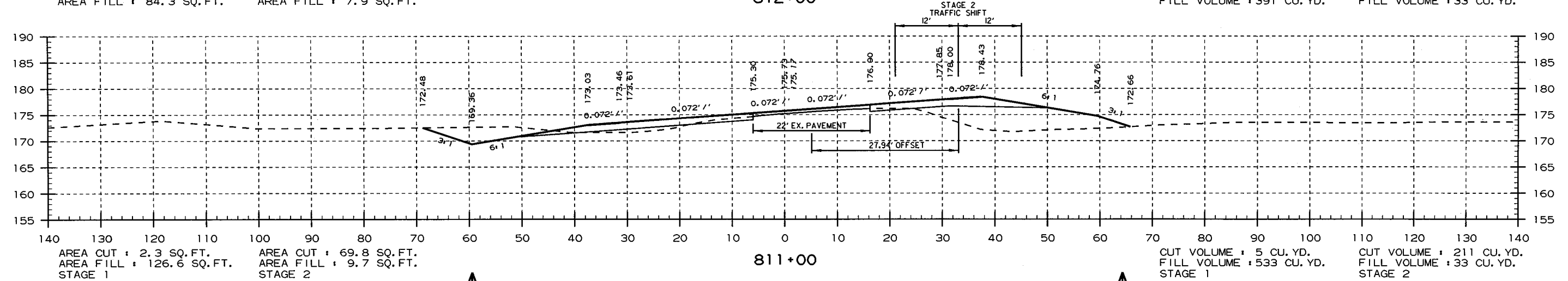
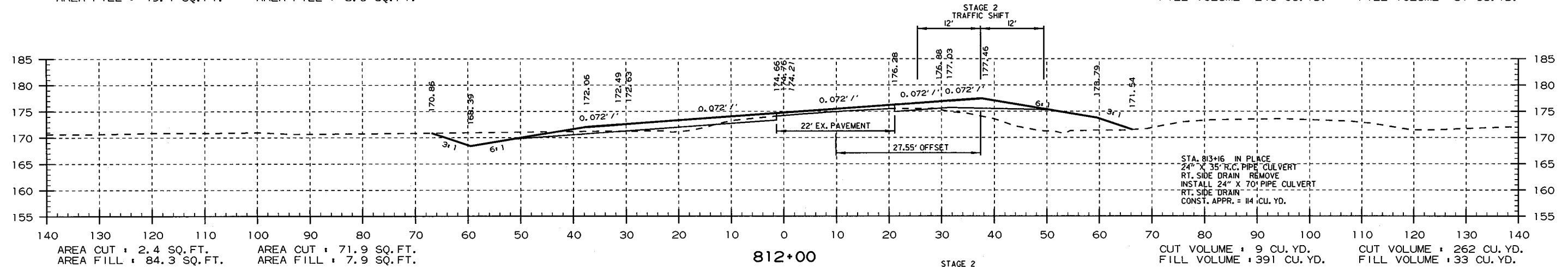
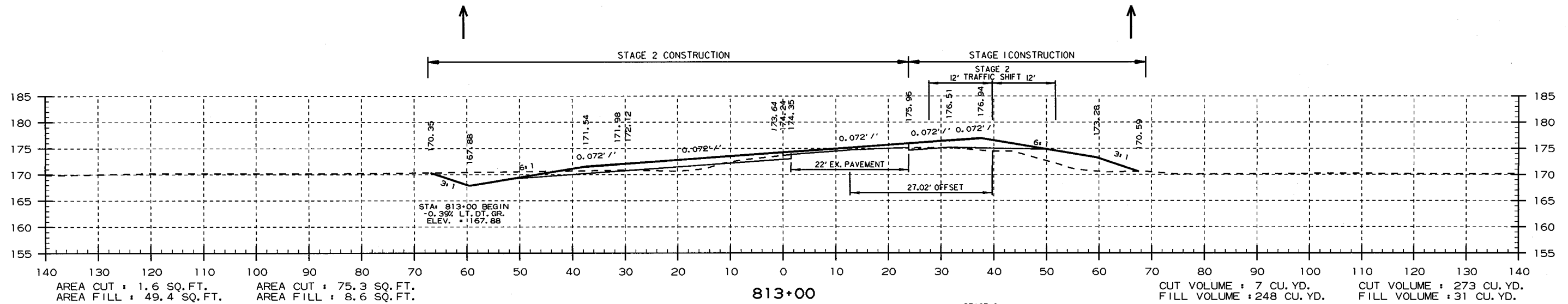
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0202	243	256
② CROSS SECTIONS								



CROSS SECTION STA. 808+00 TO STA. 810+00

USER: fs513  
DESIGN FILE: G:\I4109300\_HWY\_82\TRANSP\DGN\X\_Sect\Sections\CA0202.CX\_015.dgn  
PLOTTED: 7/10/2018 10:39 SCALE: 20H

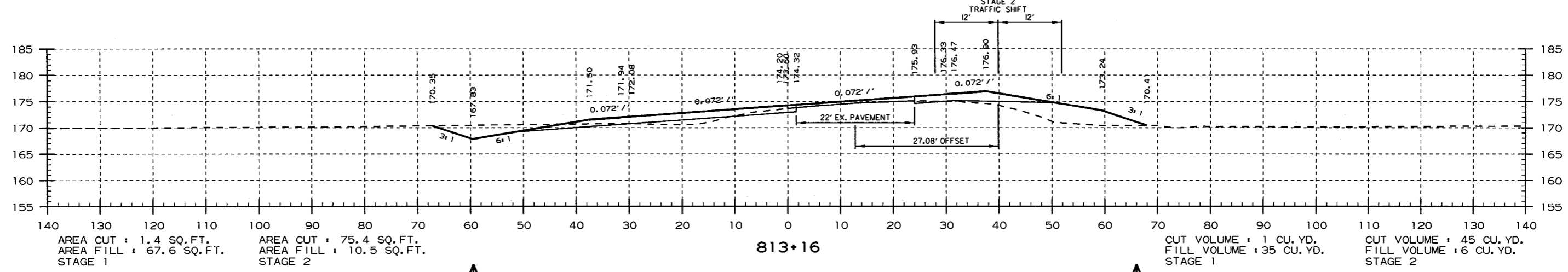
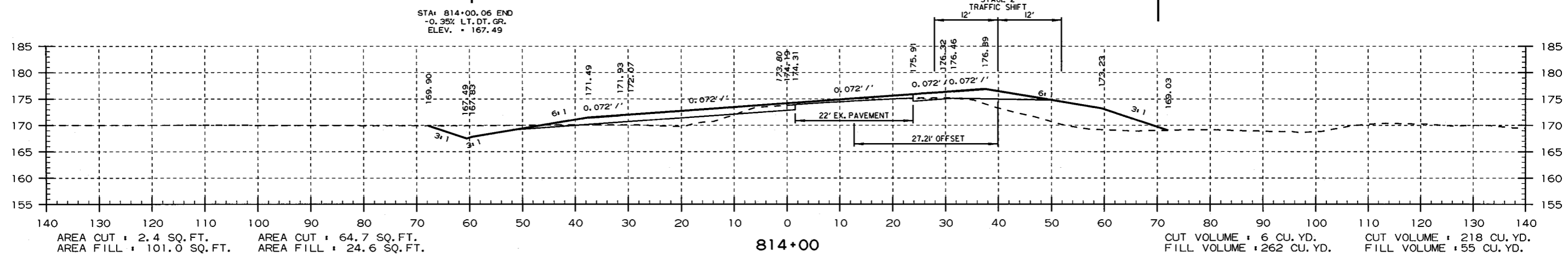
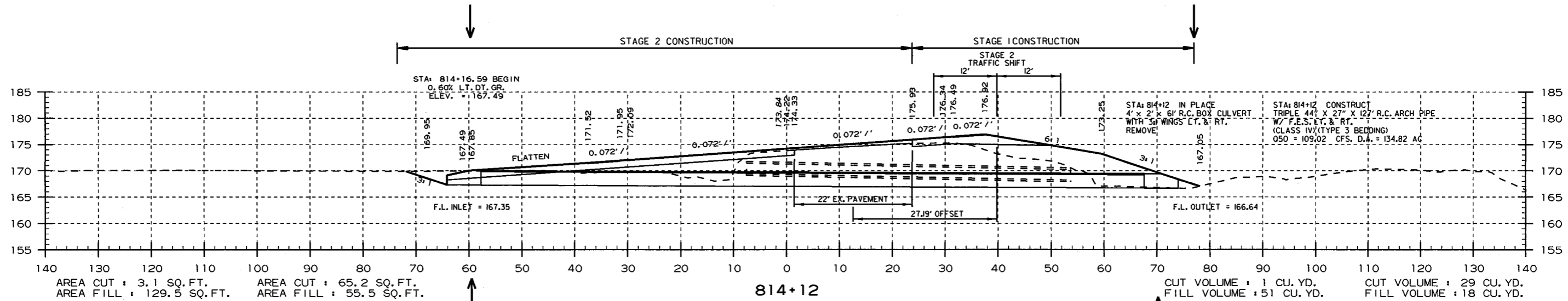
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0202	244	256
						2 CROSS SECTIONS		



**CROSS SECTION STA. 811+00 TO STA. 813+00**

USER: f553  
 DESIGN FILE: G:\4109300.HWY.B2\TRANSP\DGN\X\_Sections\CA0202.CX\_0116.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

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.	CA0202	245	256	
				2 CROSS SECTIONS				

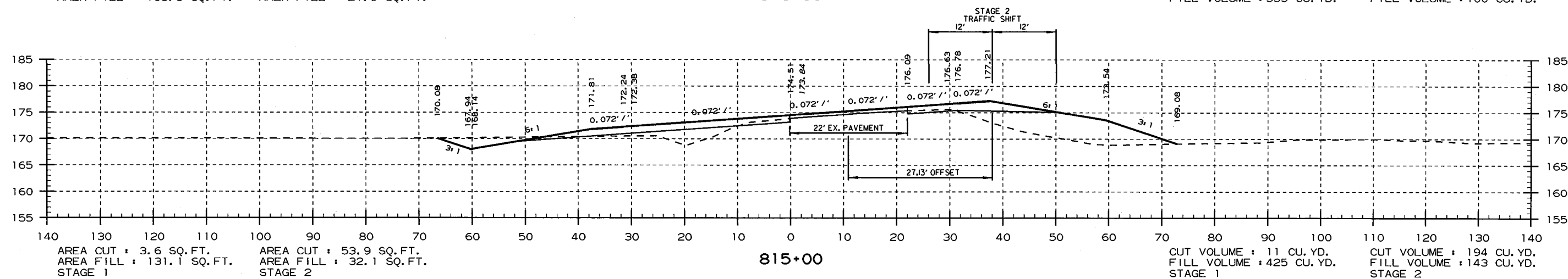
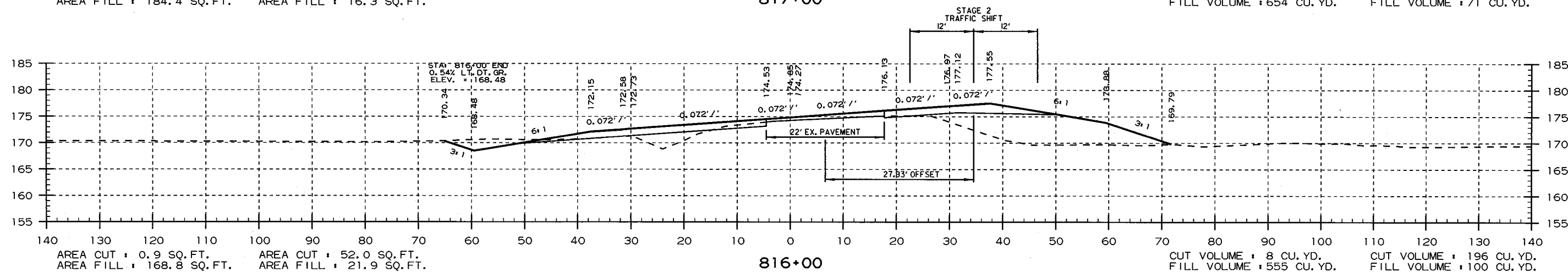
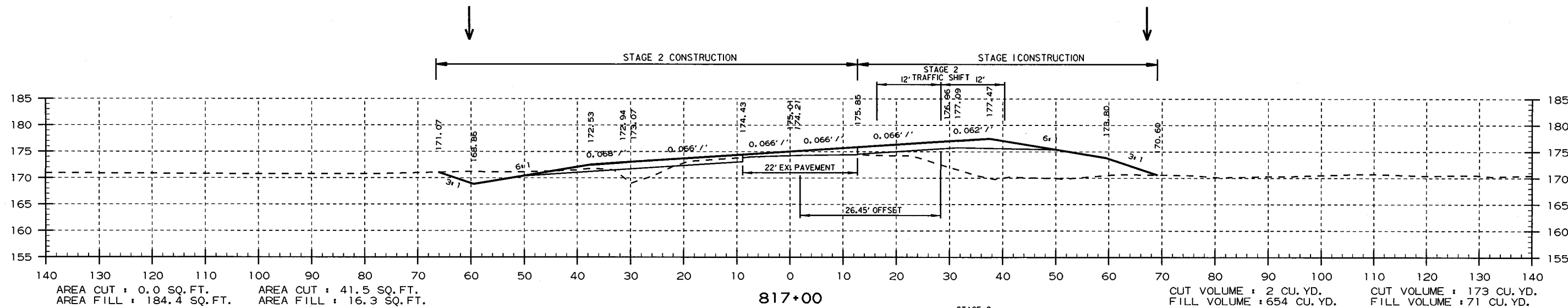


CROSS SECTION STA. 813+16 TO STA. 814+12

USER: fs513  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DNX\_Sections\CA0202.CX\_0117.dgn  
PLOTTED: 7/10/2018 10:39

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0202	246

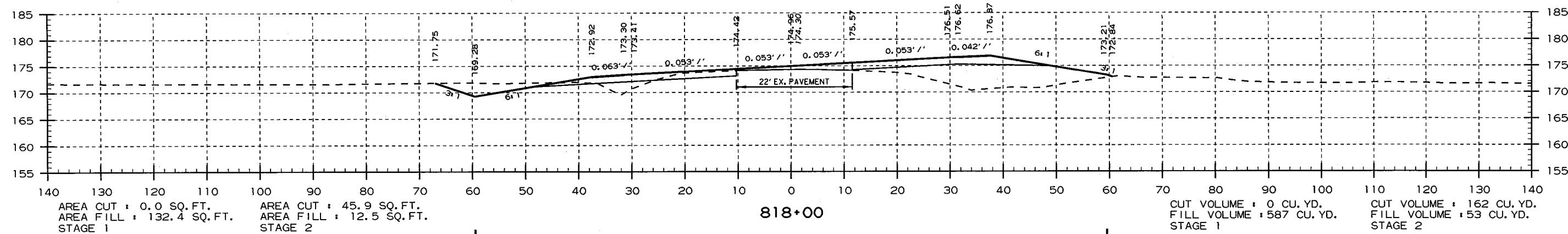
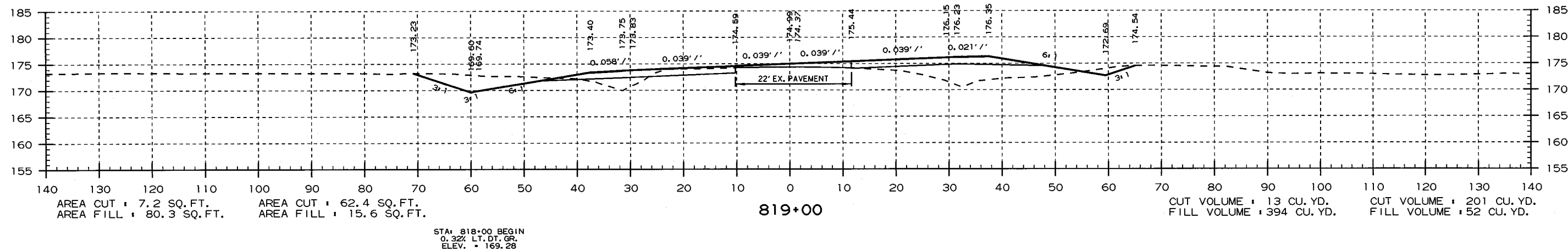
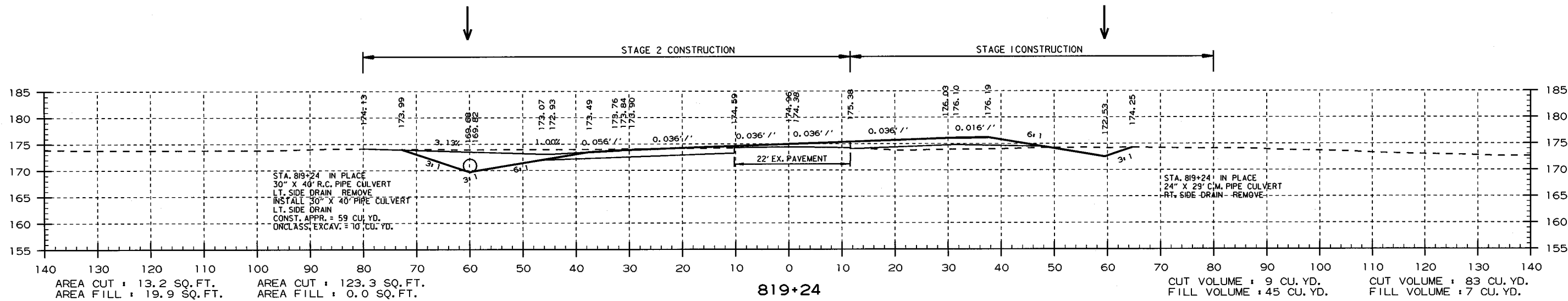
2 CROSS SECTIONS



CROSS SECTION STA. 815+00 TO STA. 817+00

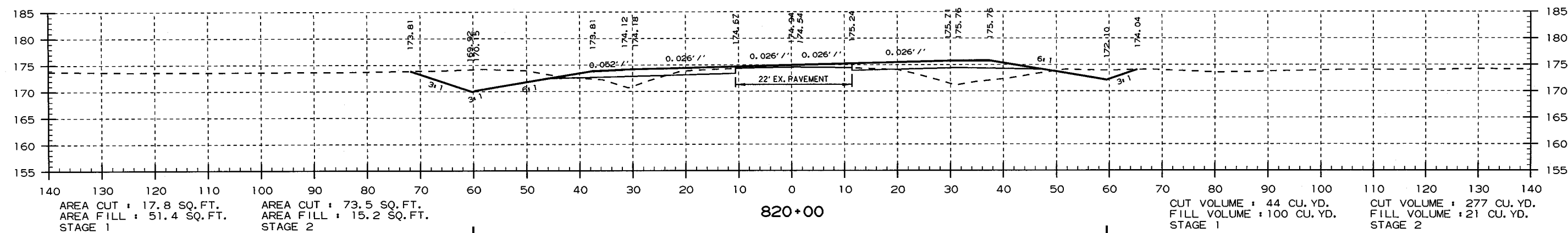
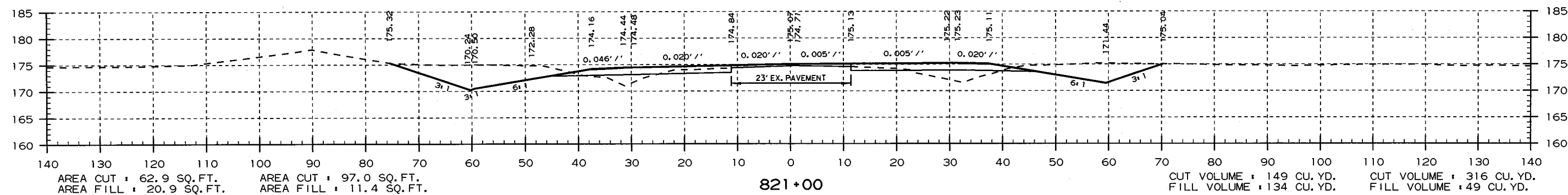
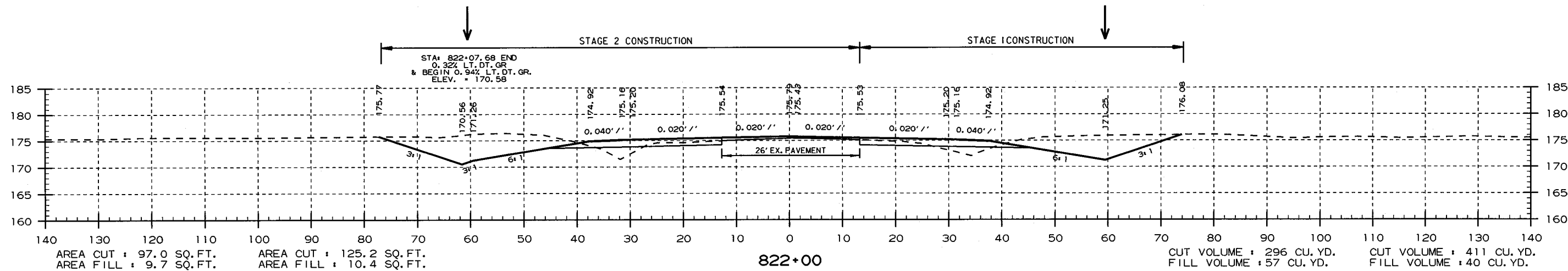
USER: f553  
 DESIGN FILE: G:\4109300.HWY\_82\TRANSP\DGN\X\_Sections\CA0202.CX\_01B.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

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. CA0202	247	256
						2 CROSS SECTIONS		



CROSS SECTION STA. 818+00 TO STA. 819+24

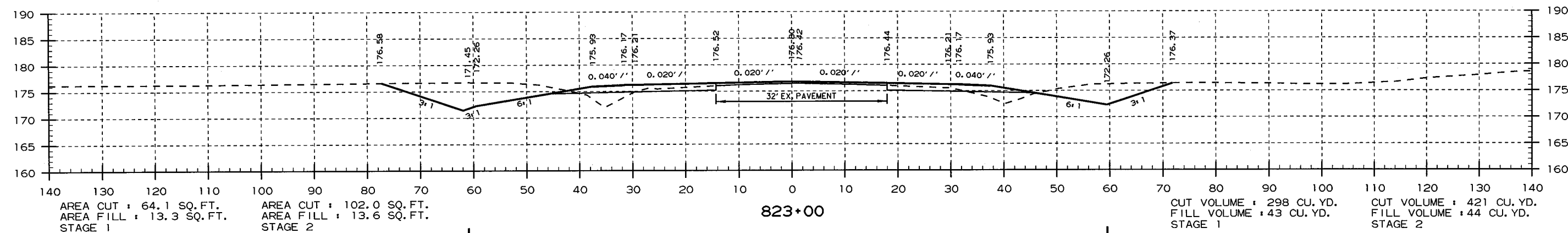
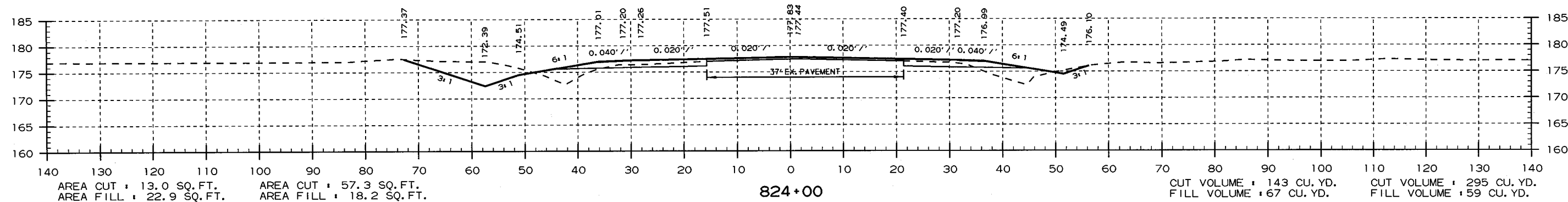
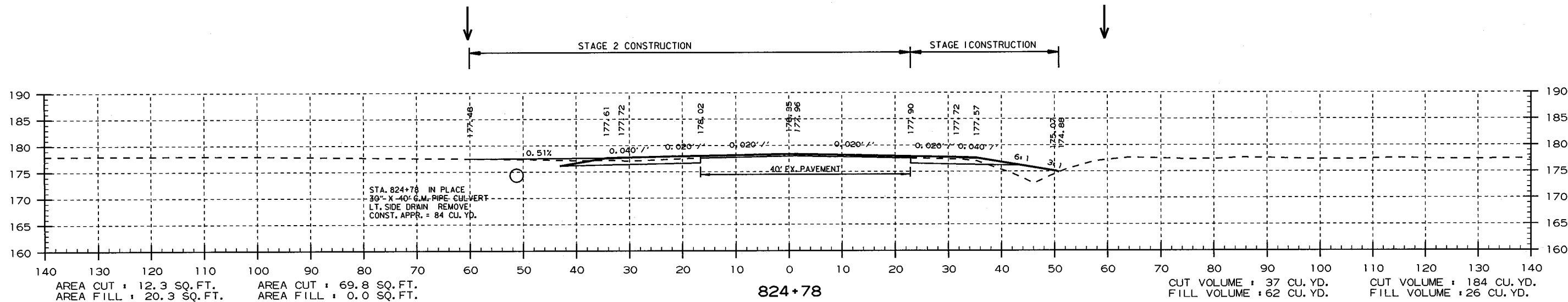
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	248	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 820+00 TO STA. 822+00

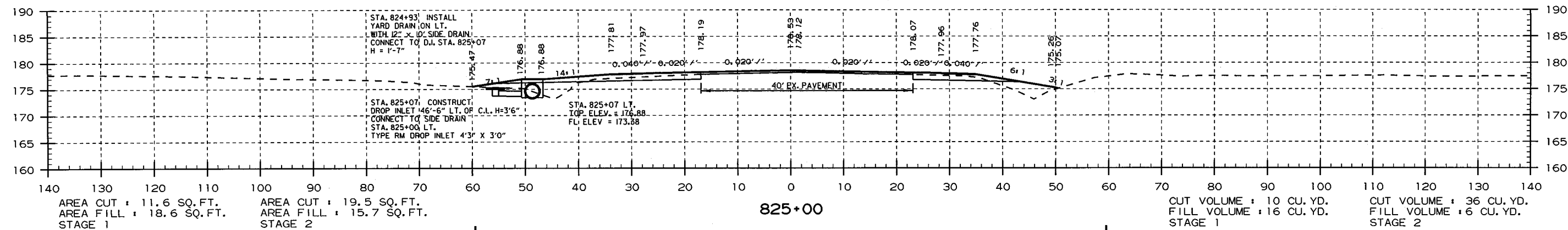
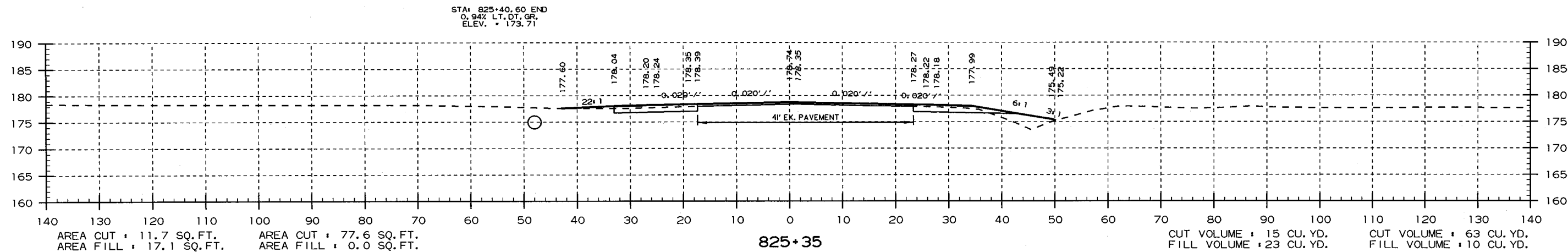
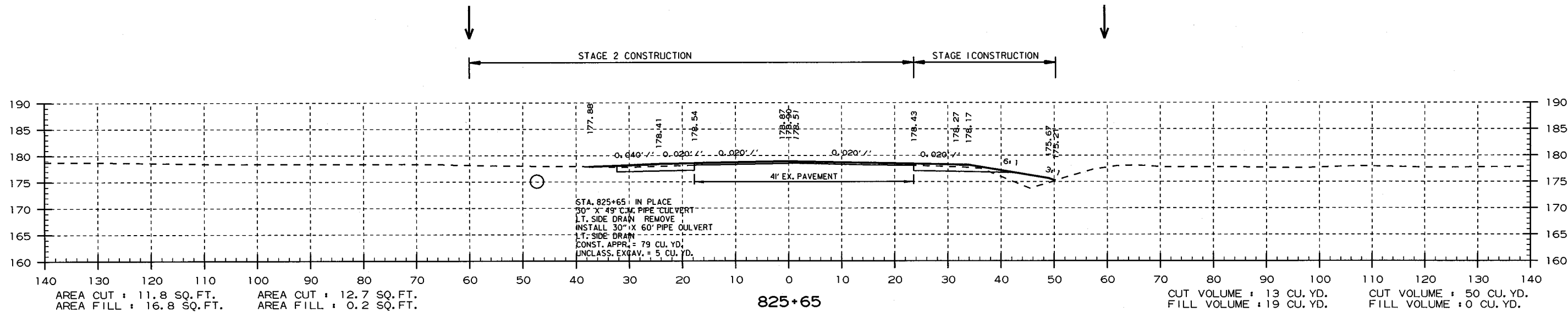


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	249	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 823+00 TO STA. 824+78

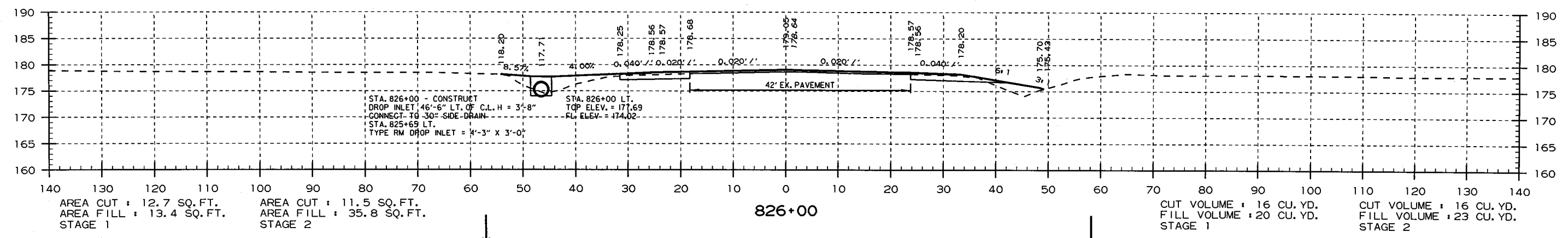
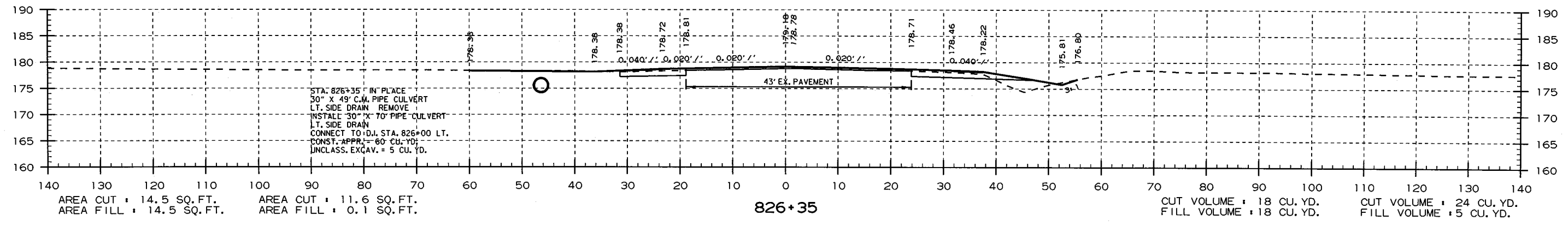
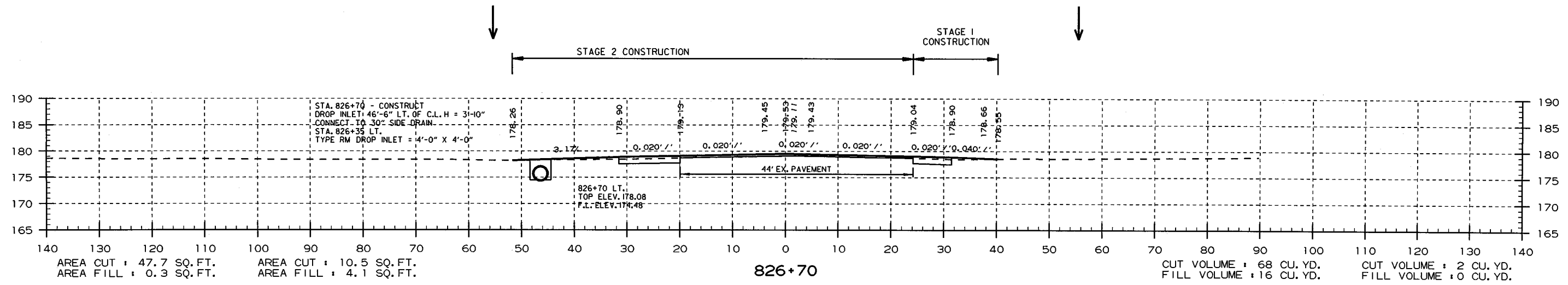
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	250	256	
				2 CROSS SECTIONS				



CROSS SECTION STA. 825+00 TO STA. 825+65

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.	CA0202	251	256	

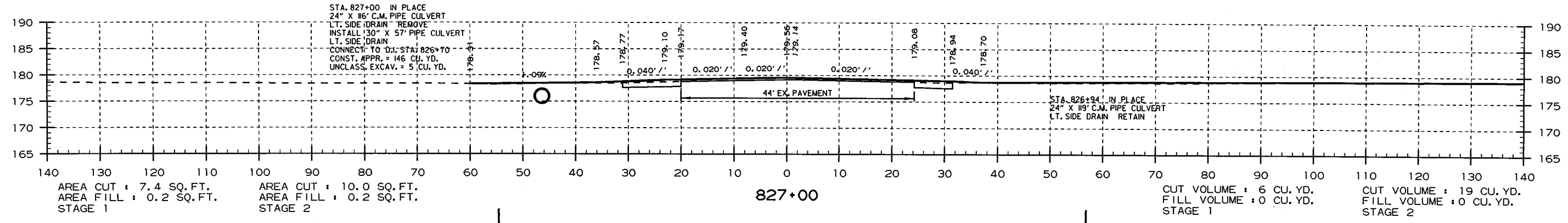
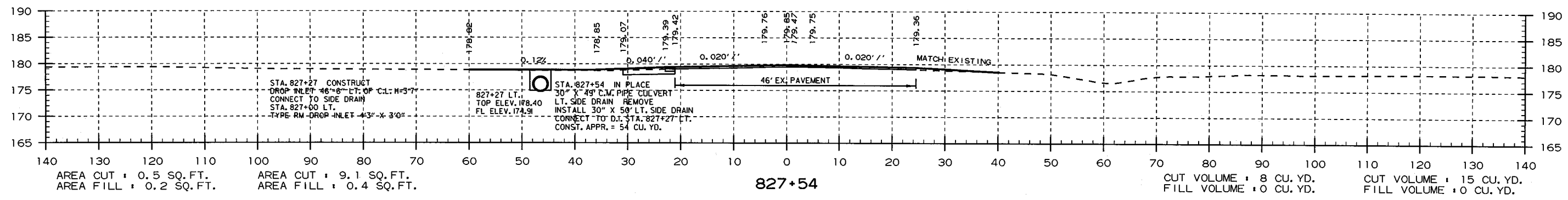
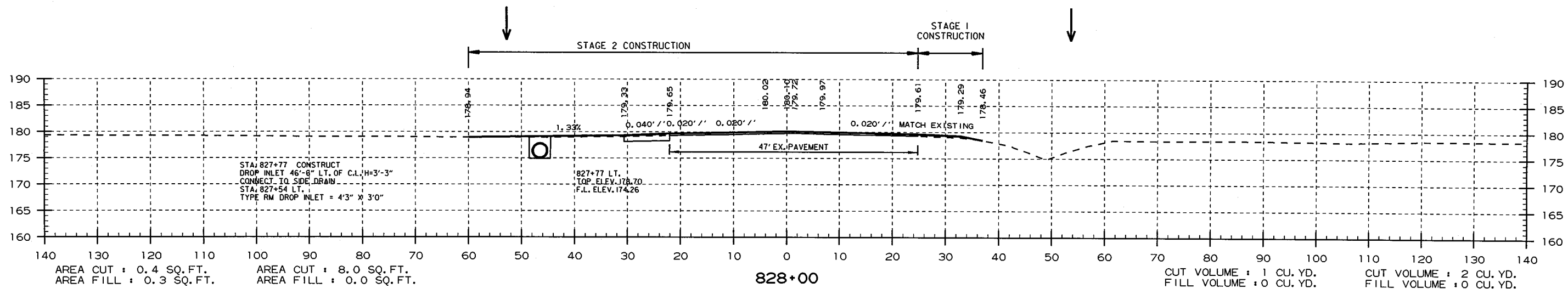
2 CROSS SECTIONS



CROSS SECTION STA. 826+00 TO STA. 826+94

USER: f5513  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DGN\X\_Sections\CA0202\_CX\_023.dgn  
 PLOTTED: 7/10/2018 10:39 SCALE: 20'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0202	252	256	
				2 CROSS SECTIONS				

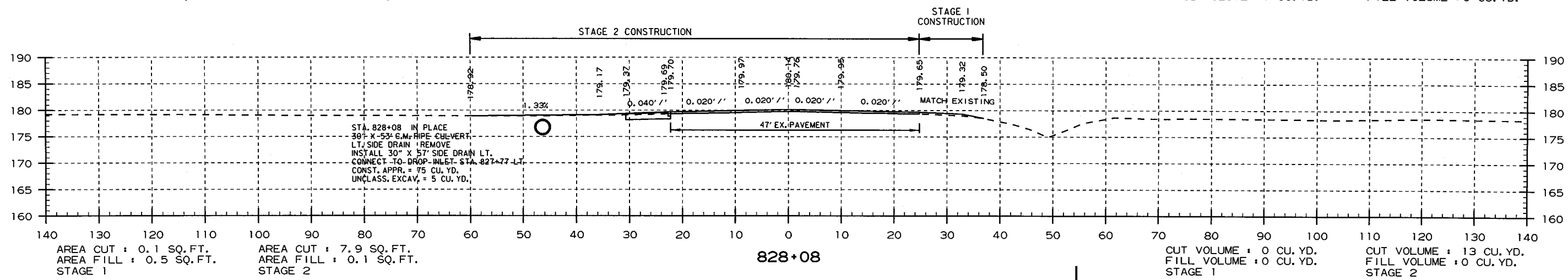
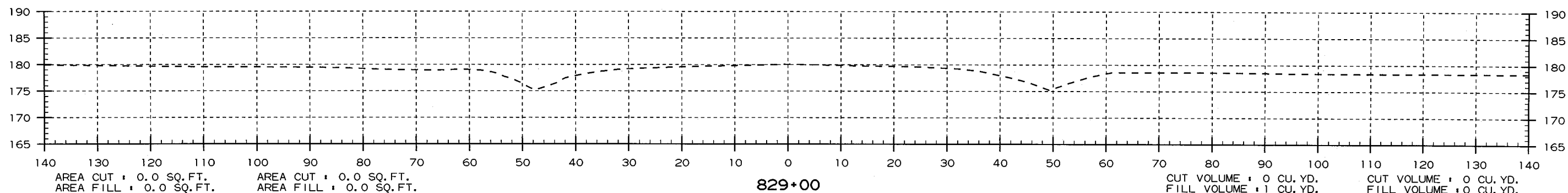


CROSS SECTION STA. 827+00 TO STA. 828+00

USER: f6513  
 DESIGN FILE: G:\H09300.HWY\_82\TRANSP\DNVX\_Sect\Sections\CA0202.CX\_0124.dgn  
 PLOTTED: 7/10/2018 10:39      SCALE: 20:1

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.	CA0202	253	256	

2 CROSS SECTIONS

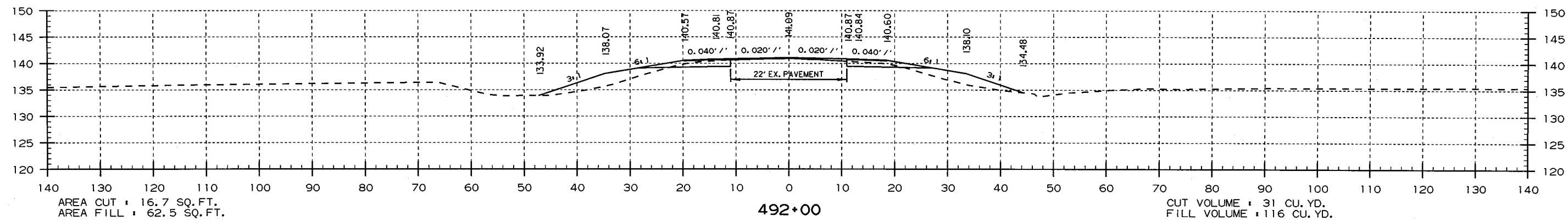
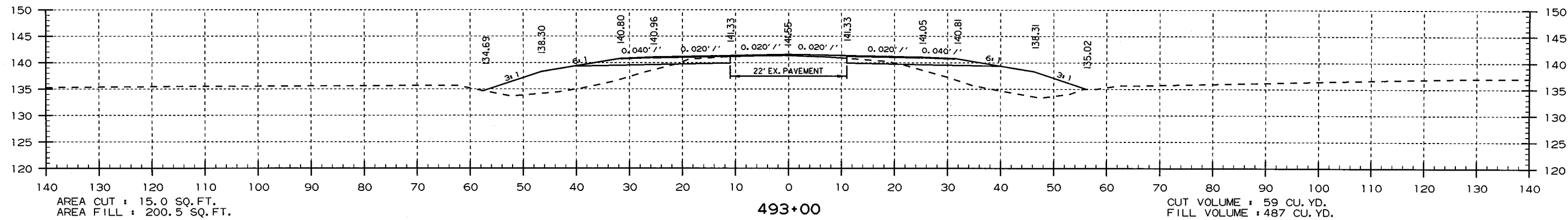


CROSS SECTION STA. 828+08 TO STA. 829+00

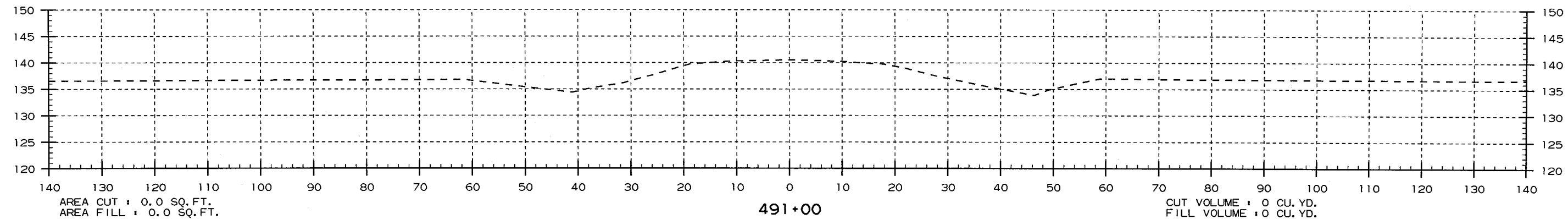
USER: f553  
 DESIGN FILE: G:\14109300\_HWY\_82\TRANSP\DCN\X\_Sections\CA0202\_CX\_0125.dgn  
 PLOTTED: 7/10/2018 10:39 SCALE: 20:1

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.	CA0202	254	256	

2 CROSS SECTIONS



BEGIN CONSTRUCTION



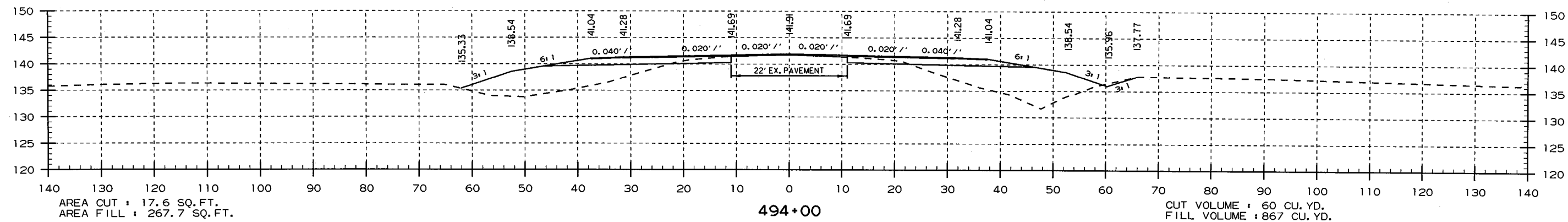
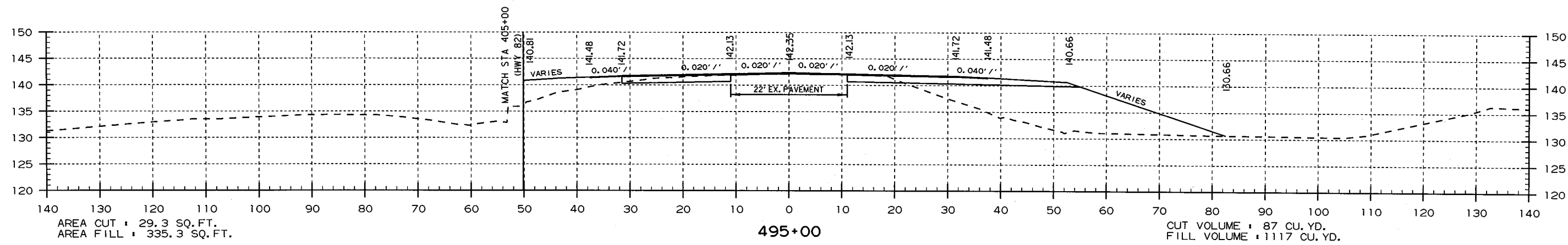
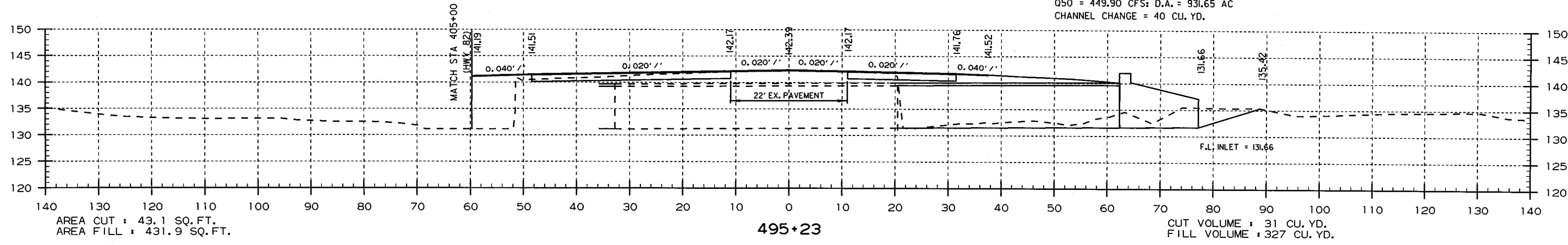
HWY 425  
CROSS SECTION STA. 491+00 TO STA. 493+00

USER: f5513  
DESIGN FILE: G:\14109300.HWY.82\TRANSP\DGN\X\_Sect\Sections\CA0202.CX\_0200.dgn  
PLOTTED: 7/10/2018 10:39  
SCALE: 20:1

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.	CA0202	255

2 CROSS SECTIONS

STA: 495+23 IN PLACE  
 DOUBLE 8' x 8' x 72' R.C. BOX CULVERT  
 WITH 3:1 WINGS LT. AND RT.  
 REMOVE 19' EXIST. AND EXTEND 67' LT. AT 25 DEG. SKEW  
 RETAIN AND EXTEND 44' RT.  
 COMPLETED LENGTH 162 FT.  
 Q50 = 449.90 CFS; D.A. = 931.65 AC  
 CHANNEL CHANGE = 40 CU. YD.

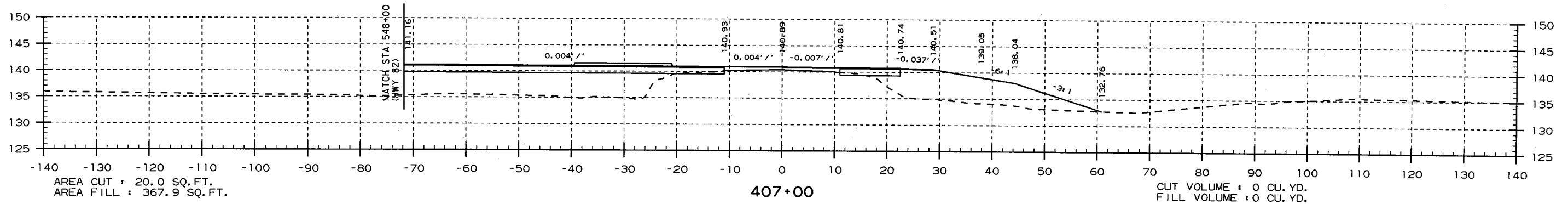
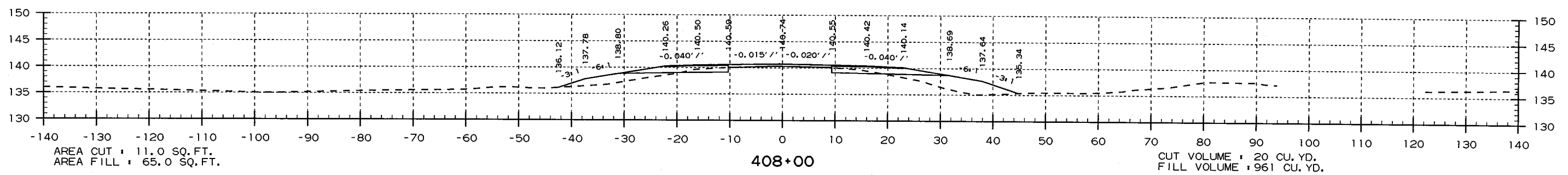
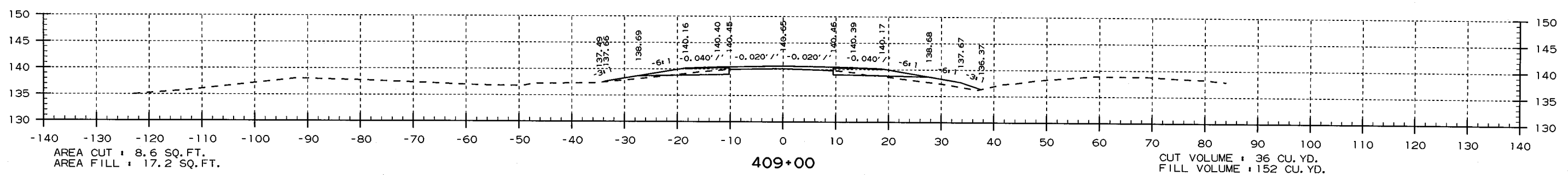
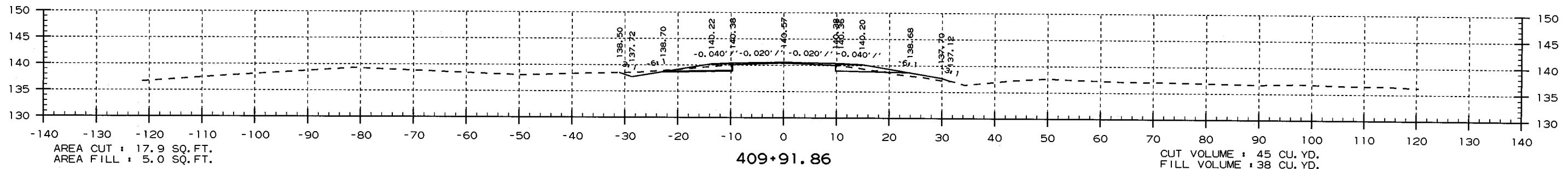


HWY 425  
 CROSS SECTION STA. 494+00 TO STA. 495+23

USER: fs53  
 DESIGN FILE: G:\M09300.HWY.82\TRANSP\DNX.Sections\CA0202.CX\_0201.dgn  
 PLOTTED: 7/10/2018 10:39  
 SCALE: 20:1

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.	CA0202	256	256	
				② CROSS SECTIONS				

END CONSTRUCTION



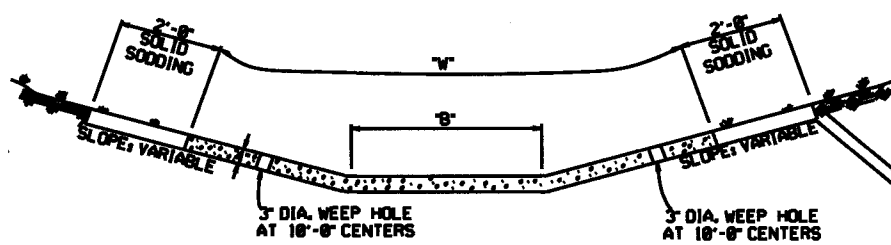
HWY. 52  
CROSS SECTION STA. 407+00 TO STA. 409+92

USER: f8513  
DESIGN FILE: G:\14109300.HWY\_82\TRANSP\DNVX\_Sect\ions\CA0202\_CX\_0400.dgn  
PLOTTED: 7/10/2018 10:39  
SCALE: 20:1

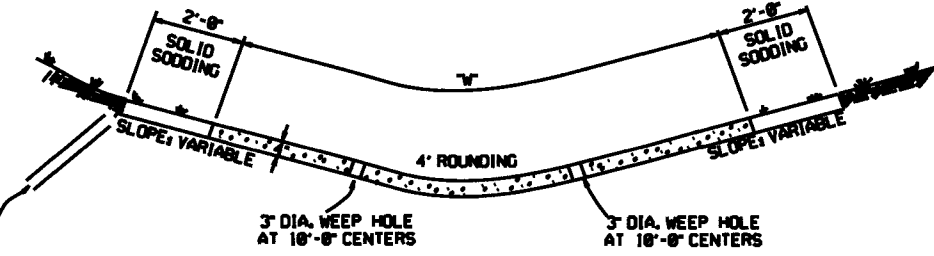


REFER TO TABULATION OF QUANTITIES FOR 'W' & 'S' DIMENSIONS

REFER TO TABULATION OF QUANTITIES FOR 'W' DIMENSIONS

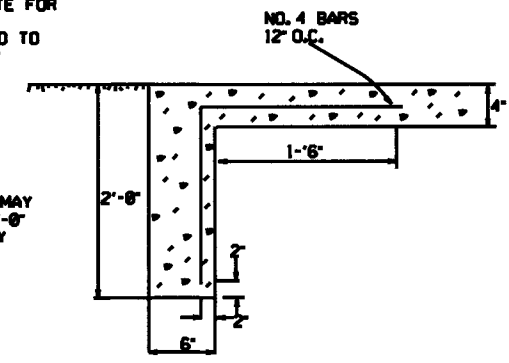


TYPE A



TYPE B

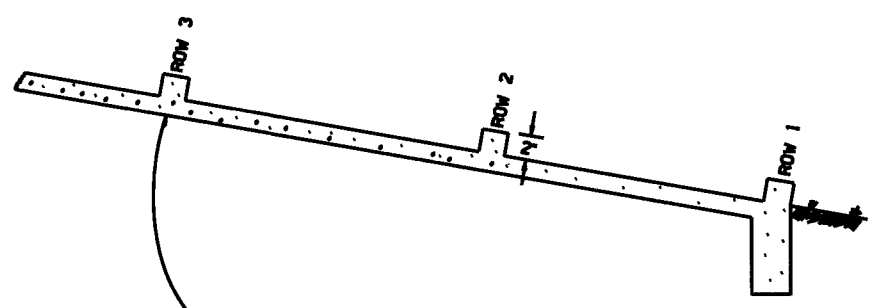
THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."



TOE WALL DETAIL FOR CONCRETE DITCH PAVING

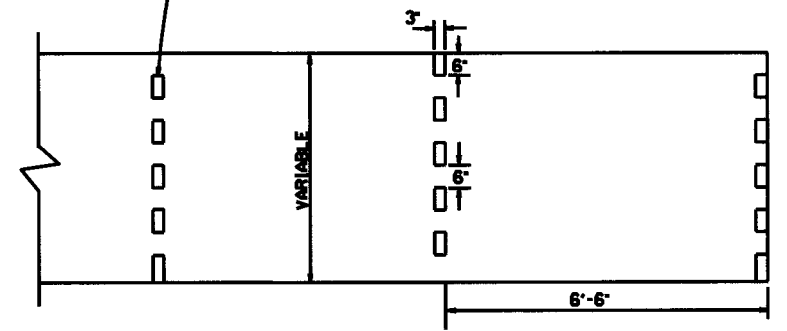
GENERAL NOTES:

- THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.
- TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.
- SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.
- 1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



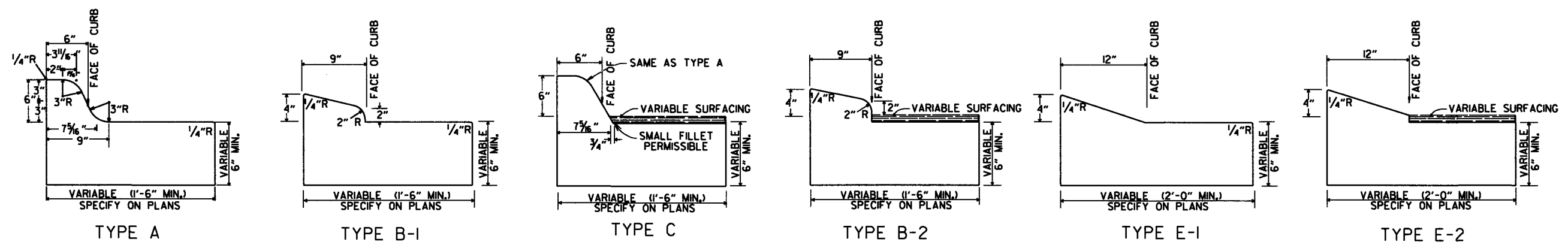
ENERGY DISSIPATORS  
(NO SCALE)

12-8-16	CORRECTED ENERGY DISSIPATOR DRAWING AND NOTE	
10-7-10	ADDED GENERAL NOTE	
6-2-84	ADDED GENERAL NOTE ABOUT SOLID SOODING	
10-20-88	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-16-88	REVISED DISSIPATOR NOTE	849-2-15-88
4-10-87	REVISED ENERGY DISSIPATOR	871-2-14-87
11-10-87	ADDED NOTE ON ENERGY DISS.	898-12-1-87
10-1-86	ADDED NOTE TO ENERGY DISS.	898-12-1-86
10-1-84	ADDED ENERGY DISSIPATOR DETAILS	808-11-1-84
11-1-84	EXCAVATION DETAILS ADDED	
	TYPED A & B	
10-2-72	REVISED AND REDRAWN	808-10-2-72
	DATE REVISION	DATE FILM'D

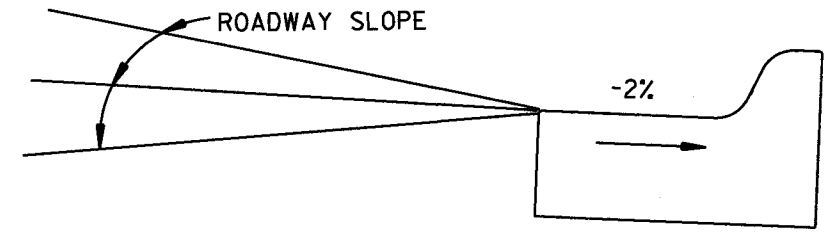
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

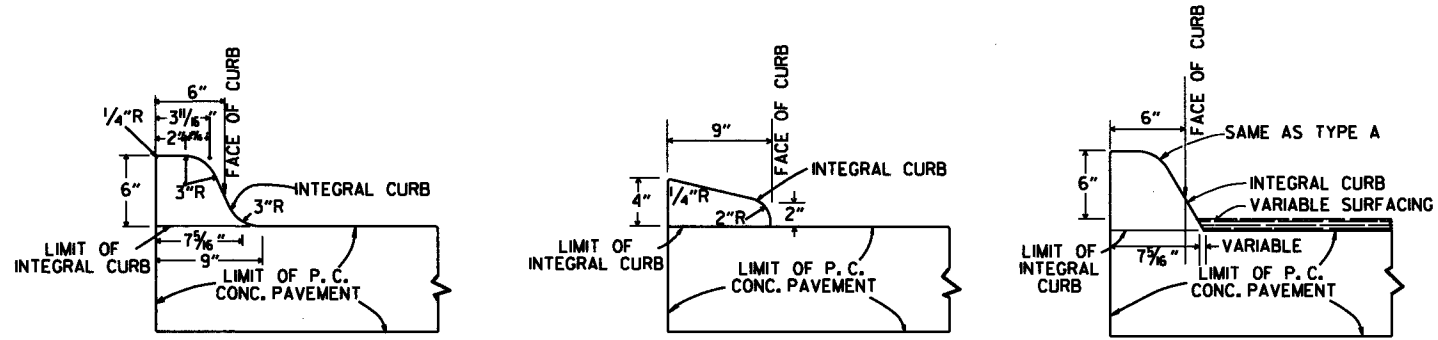
STANDARD DRAWING CDP-1



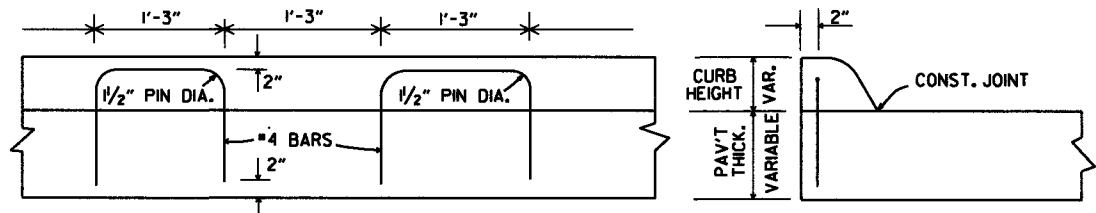
CONCRETE COMBINATION CURB AND GUTTER



DETAIL OF GUTTER SLOPE  
 GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.

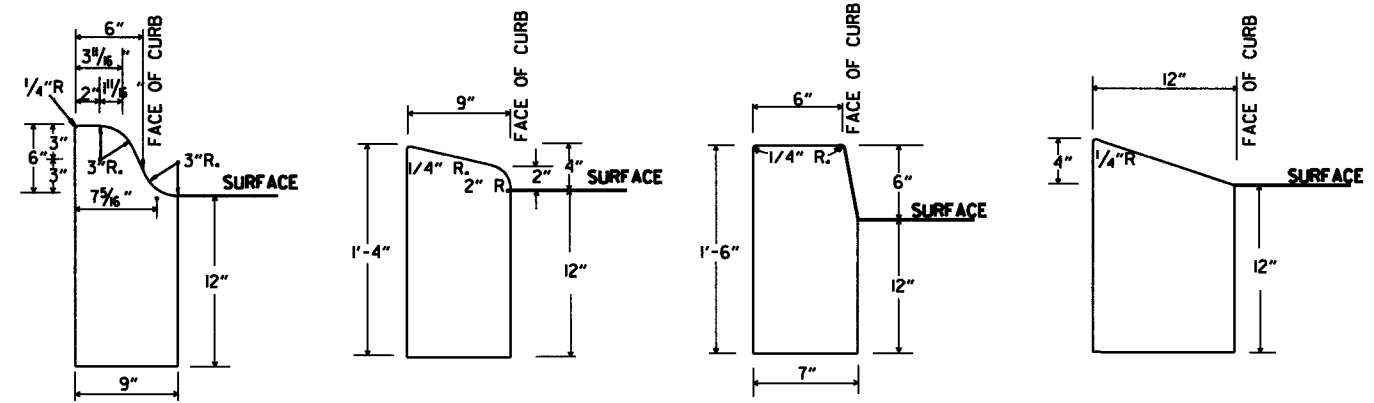


INTEGRAL CURB

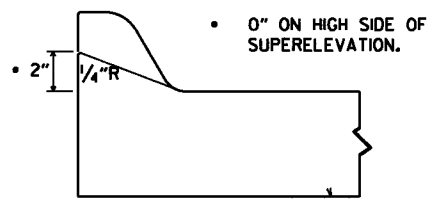


LONGITUDINAL SECTION ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



CONCRETE CURB



DETAILS OF MODIFIED CURB

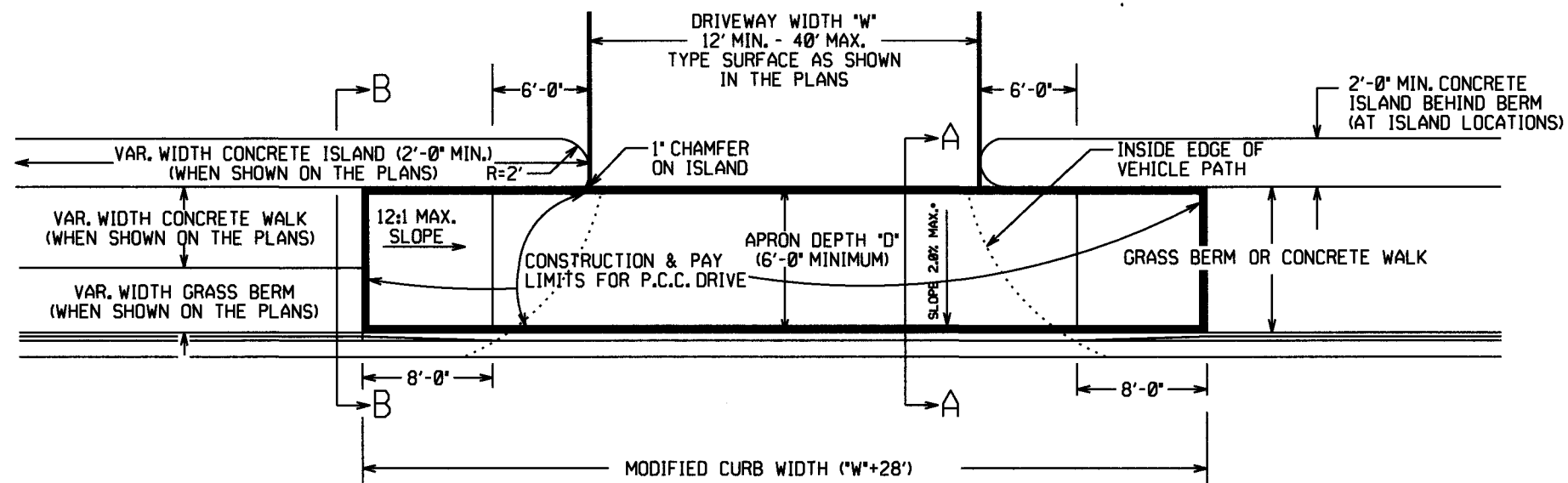
NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

DATE	REVISION	DATE FILMED
1-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
1-10-06	ADDED DETAILS OF TYPE E CURBS	
1-16-01	REVISED CONCRETE CURB TYPE B	
1-18-98	REVISED MODIFIED CURB	
6-2-94	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
1-30-89	VARIABLE DEPTH TYPE A & B 1	1-30-89
7-8-88	REVISED MODIFIED CURB	6-30-7-8-88
1-1-73	REVISED MODIFIED CURB	500-1-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

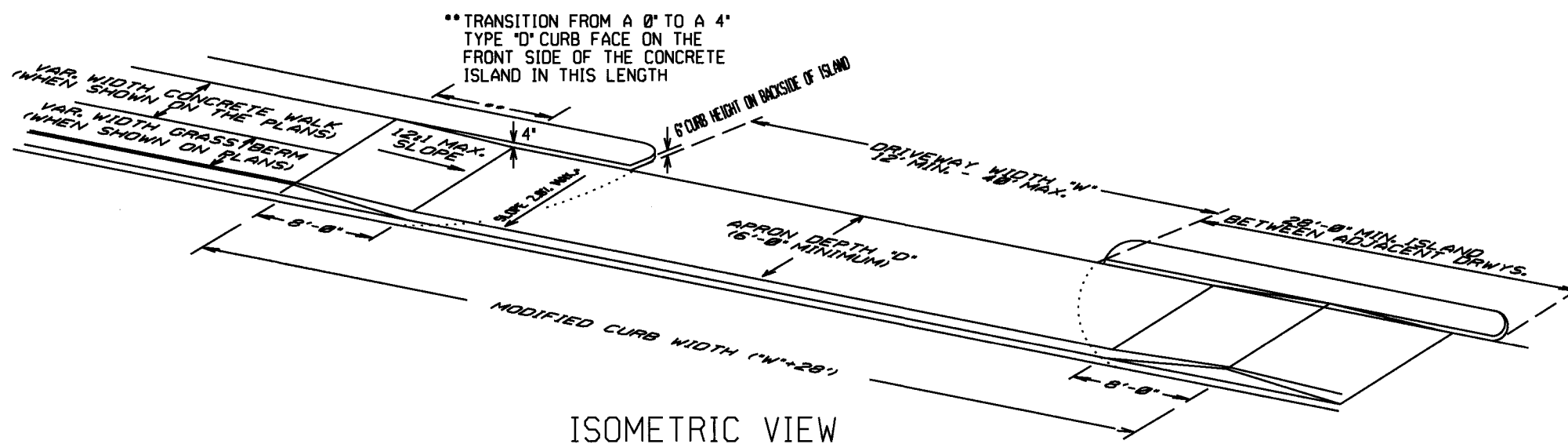
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

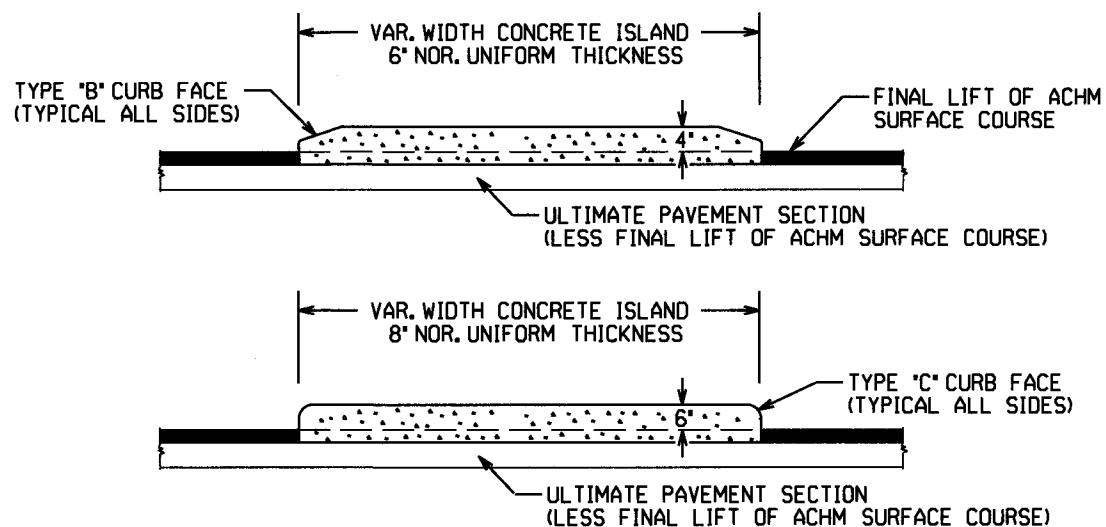
STANDARD DRAWING CG-1



PLAN VIEW

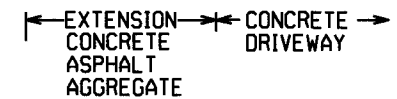


ISOMETRIC VIEW



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".

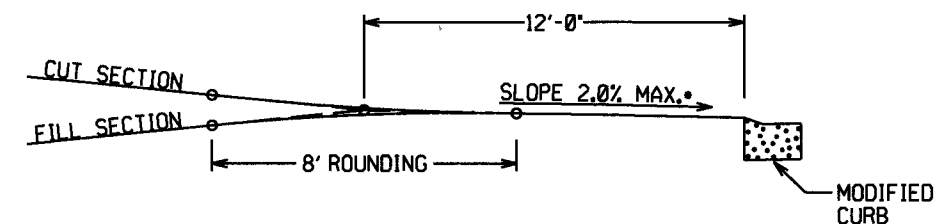


EXTENSION TYPICAL SECTIONS

- 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

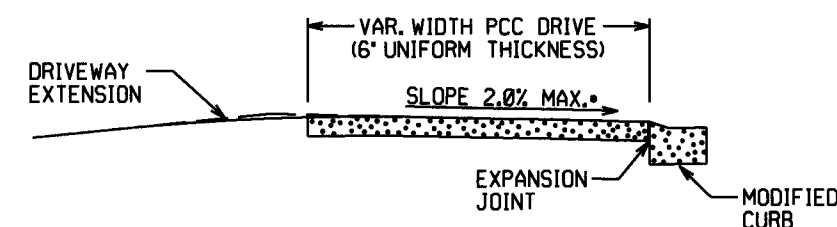
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

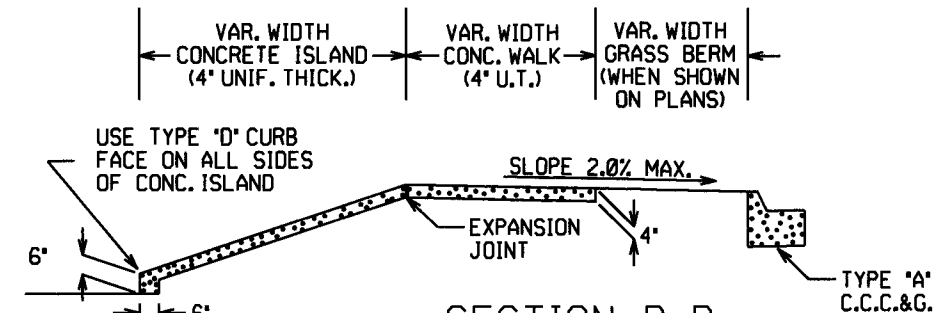


DRIVEWAY VERTICAL ALIGNMENT DETAILS

NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



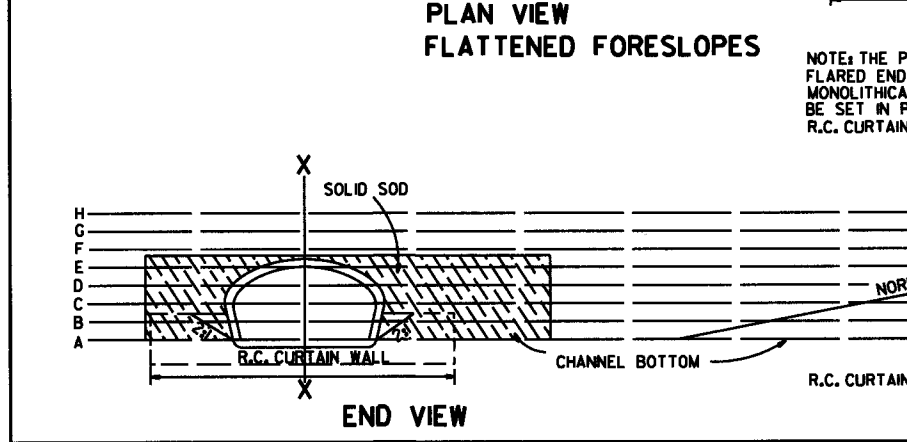
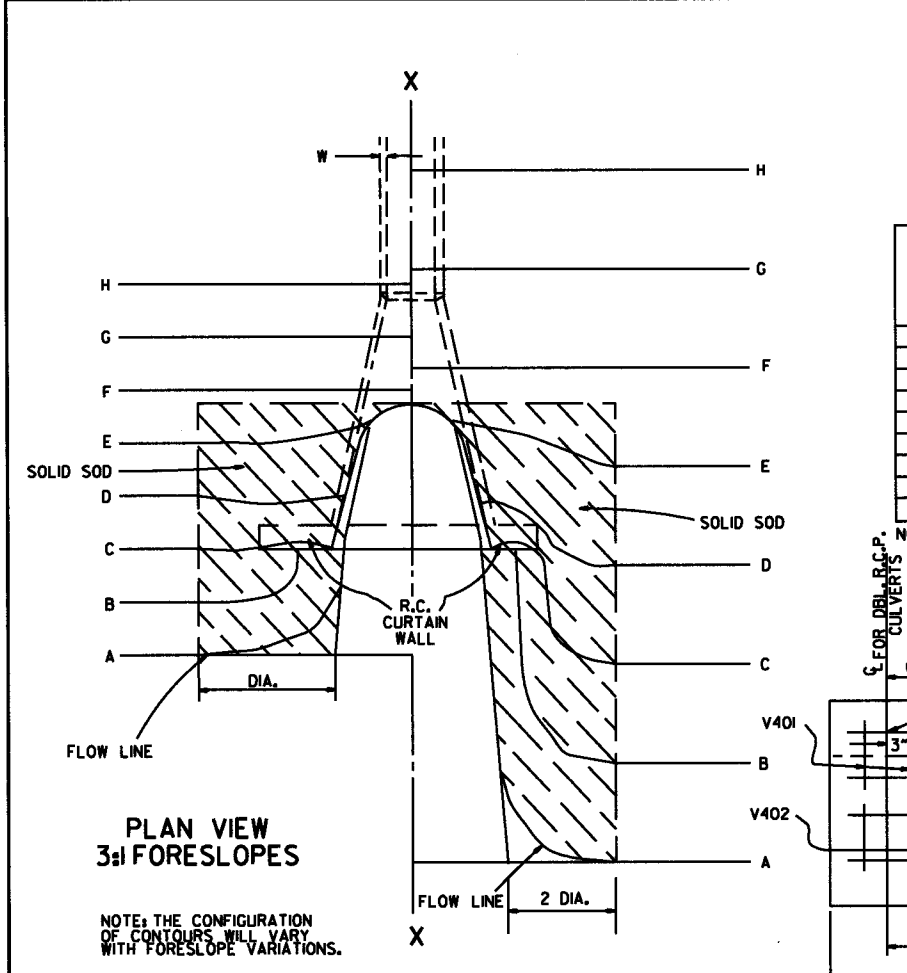
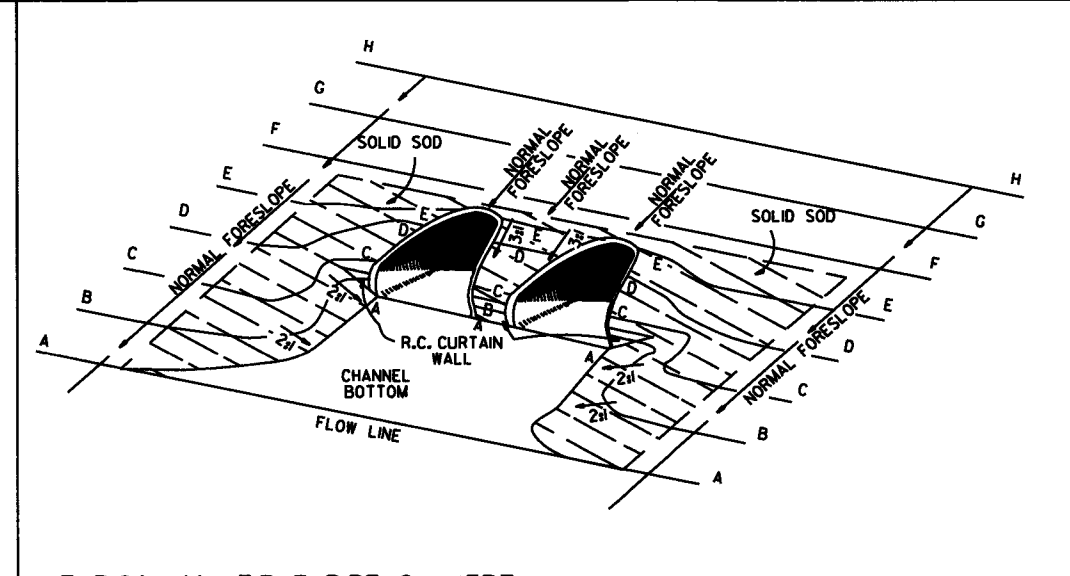
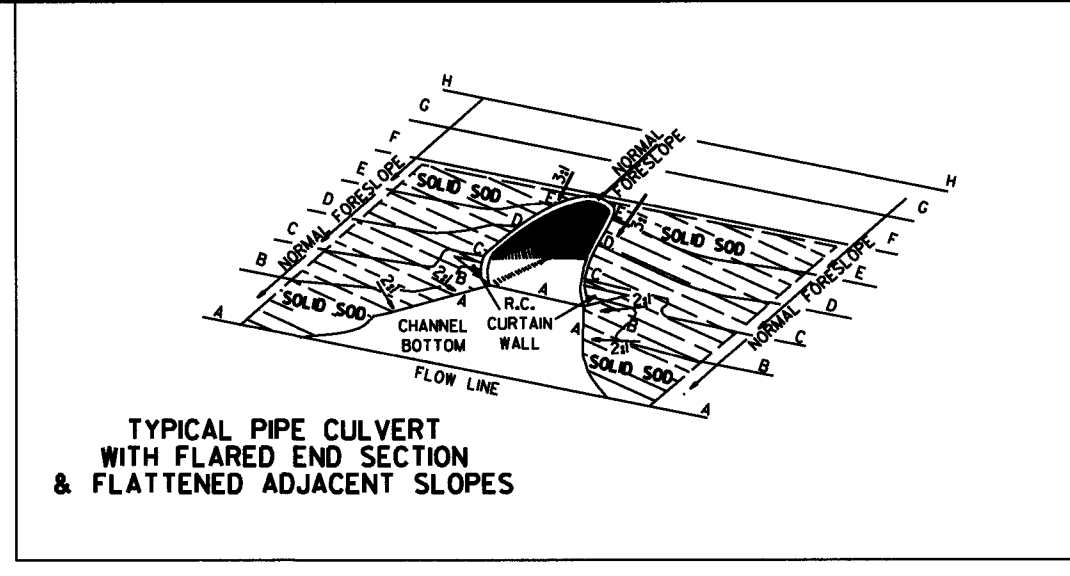
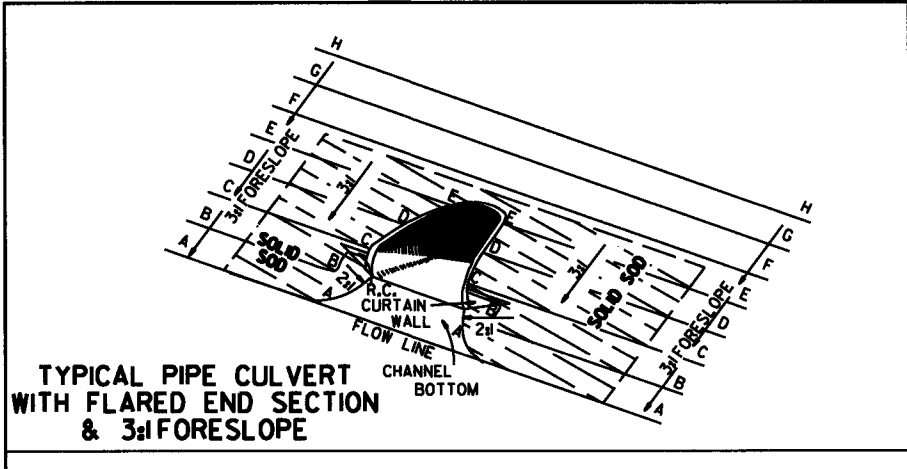
SECTION A-A



SECTION B-B  
CURBED ISLAND BEHIND WALK

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 RETISSUED

ARKANSAS STATE HIGHWAY COMMISSION  
DETAILS OF DRIVEWAYS & ISLANDS  
STANDARD DRAWING DR-1



**R.C. CURTAIN WALL DIMENSIONS & QUANTITIES**

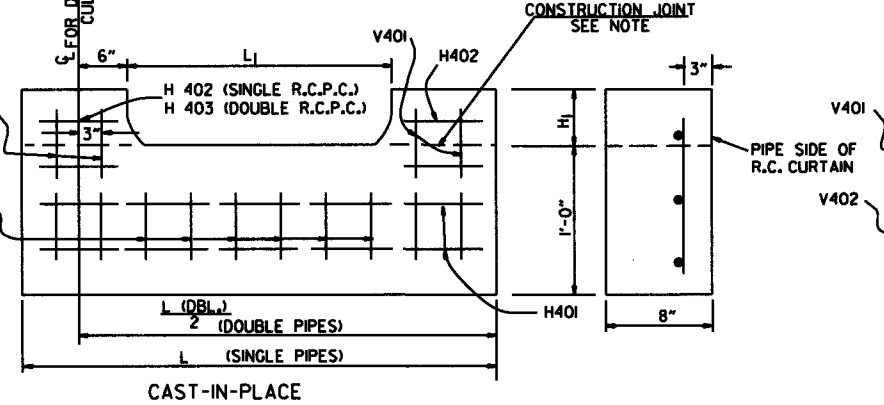
PIPE DIA.	H <sub>1</sub>	L <sub>1</sub>	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC. CU. YDS.	REINF. STEEL LBS.	CONC. CU. YDS.	REINF. STEEL LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	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.

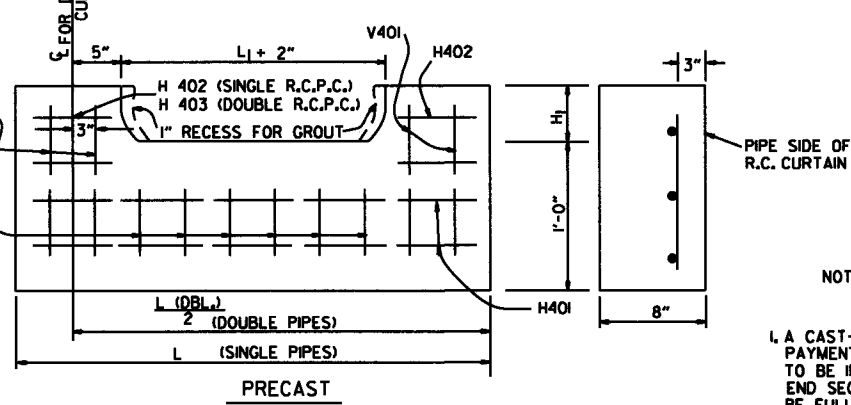
**REINFORCING STEEL SCHEDULE**

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.



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.



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**

**SOLID SODDING**

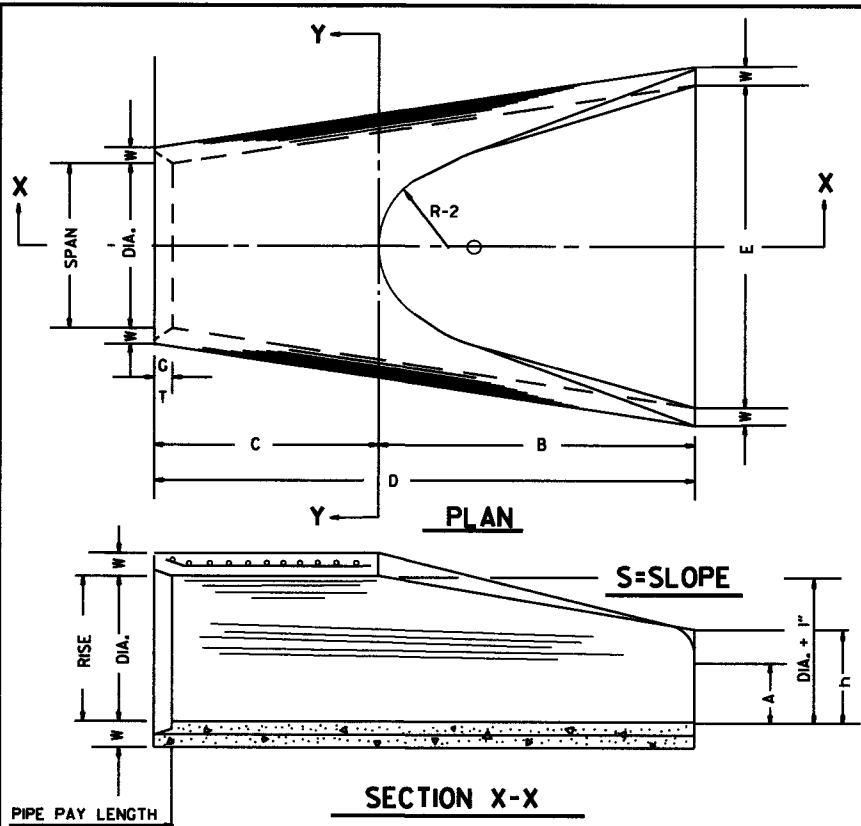
PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

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 PAYING 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.

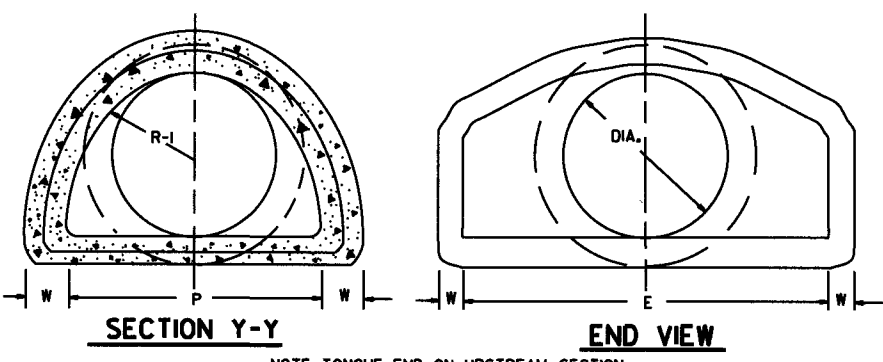
10-18-98 ADDED NOTE TO SOLID SODDING				
10-12-95 CORRECTED SPELLING				
11-3-94 ADDED GENERAL NOTE NO. 4				
8-15-91 REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.				
3-2-81 ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES				
5-15-80 ADDED PRECAST WALL & GENERAL NOTES				
10-2-72 REVISED AND REDRAWN				
DATE	REVISION	FILMED		

ARKANSAS STATE HIGHWAY COMMISSION  
**FLARED END SECTION**  
STANDARD DRAWING FES-1



**TABLE OF DIMENSIONS**

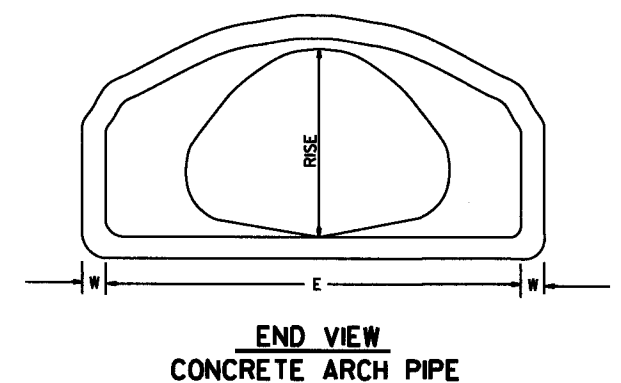
DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/4"	16 3/4"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 3/4"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 3/4"	24 3/4"	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 1/2"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-11"	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 3/4"	38 3/8"	24"	5"	13250	4'-6"



**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										
INCHES														
15	18	18	II	II	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 1/4"	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 1/4"	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 3/4"	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 3/4"	20"	3"	2 1/2:1
36	43 3/4	44	26 3/4	27	4"	10 1/2"	4'-0"	2'-1 1/4"	6'-1 1/2"	6'-6"	54 3/4"	22"	3 1/2"	2 1/2:1
42	51 3/4	51	31 3/4	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"	18'-1 1/4"	7'-10"	70 3/4"	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 3/4"	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 3/4"	24"	5"	2 1/2:1

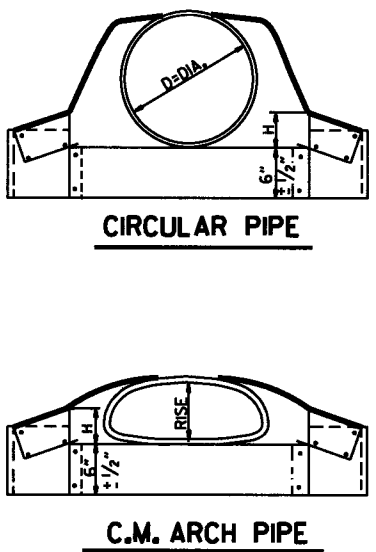
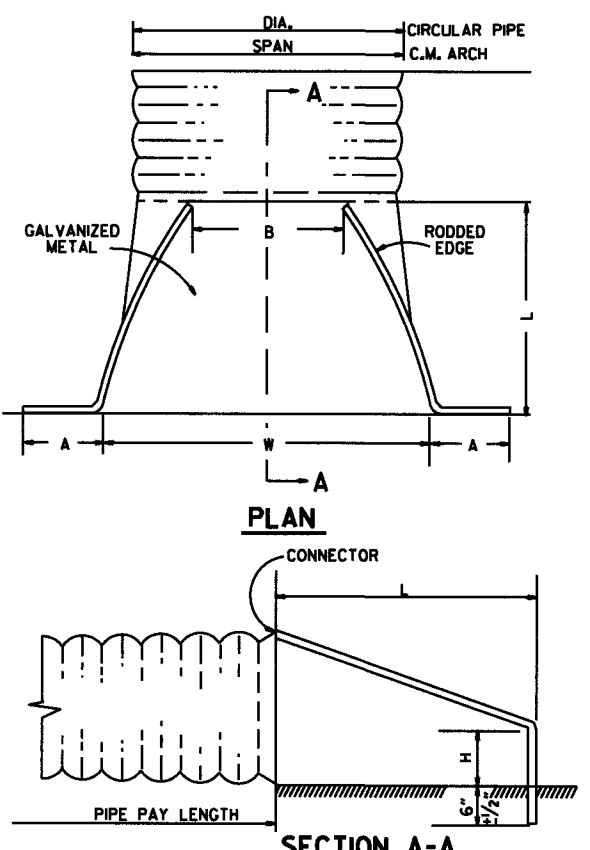
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



**END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS**

NOTE: TONGUE END ON UPSTREAM SECTION GROOVE END ON DOWNSTREAM SECTION

**END VIEW CONCRETE ARCH PIPE**

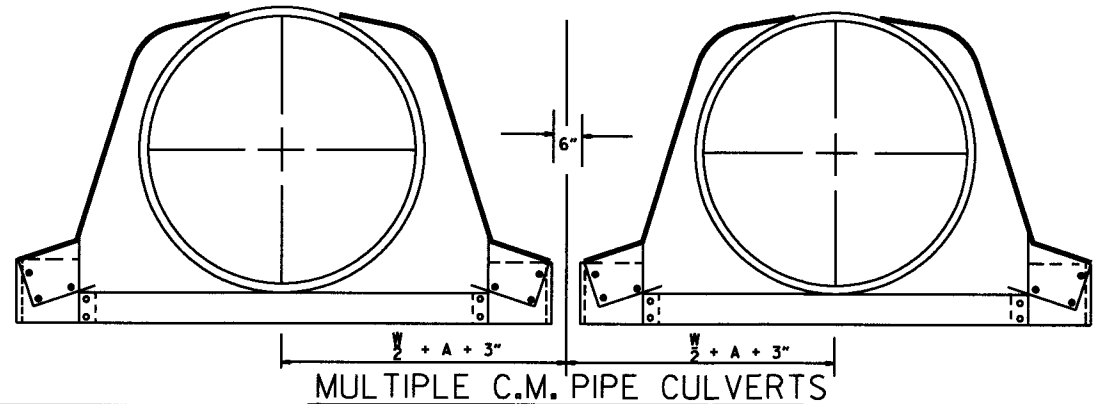
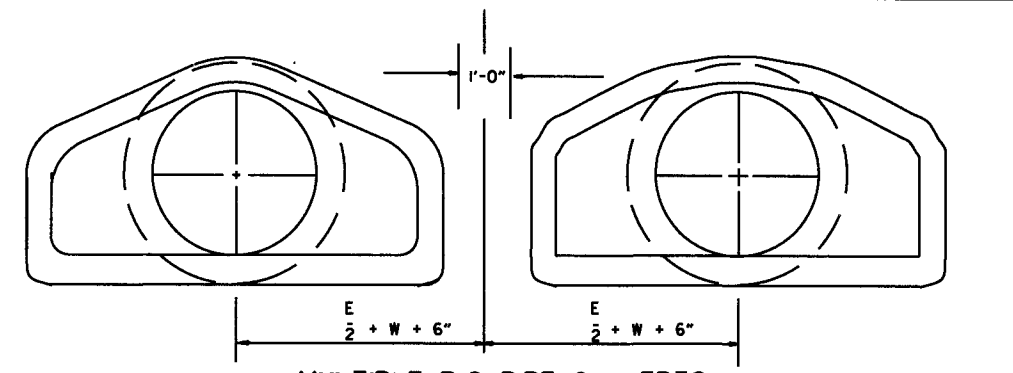


**CIRCULAR PIPE**

D. DIA.	GAUGE	A	B. MAX.	H	L	W	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**

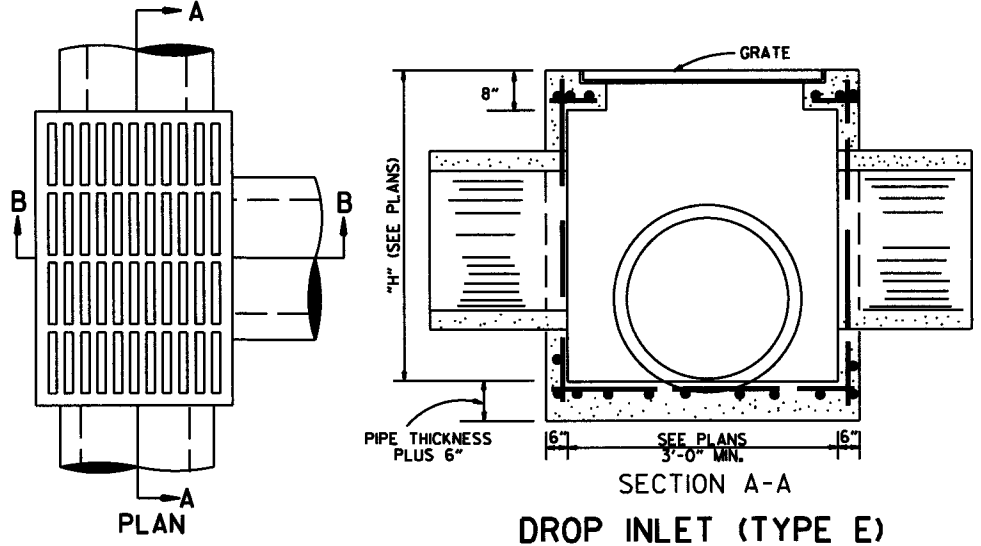
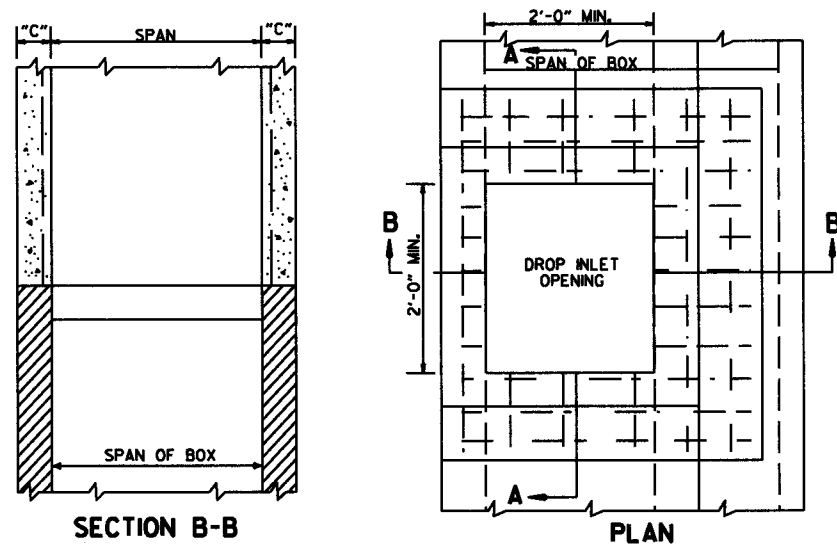
EQUIV. DIA.	SPAN	RISE	A	B. MAX.	H	L	W	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/2:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



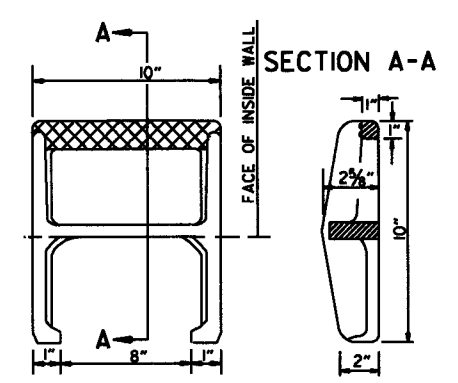
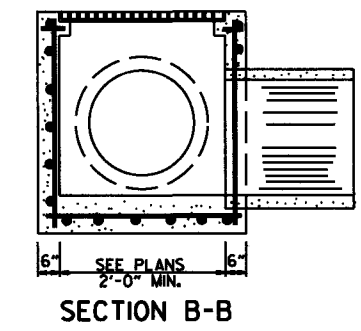
NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

**END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS**

10-18-96	REVISED ASTM REF. TO AASHTO	664-5-15-80	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	752-7-14-78	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	517-8-22-75	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	500-12-5-74	FLARED END SECTION
12-5-74	REMOVED NOTE RE RENE. FOR R.C. F.E.S.	627-5-24-73	
5-24-73	CMP END SECTION SHOW PIPE PAY LENGTH	760-10-2-72	STANDARD DRAWING FES-2
10-2-72	REVISED AND REDRAWN		

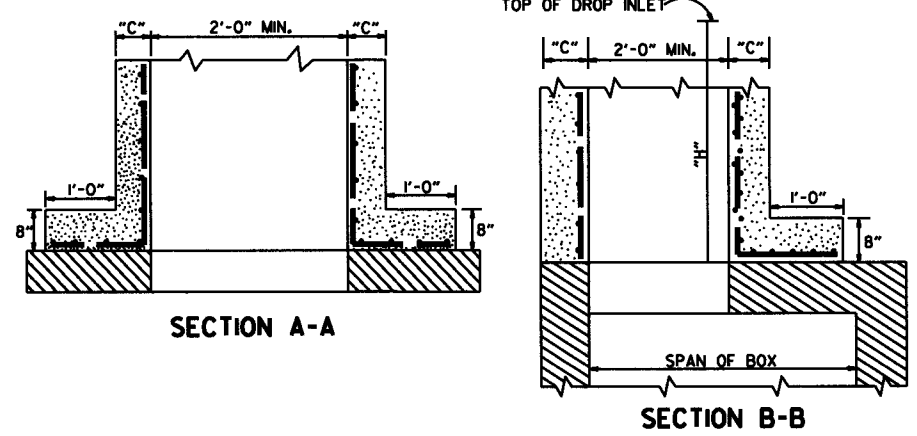


NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

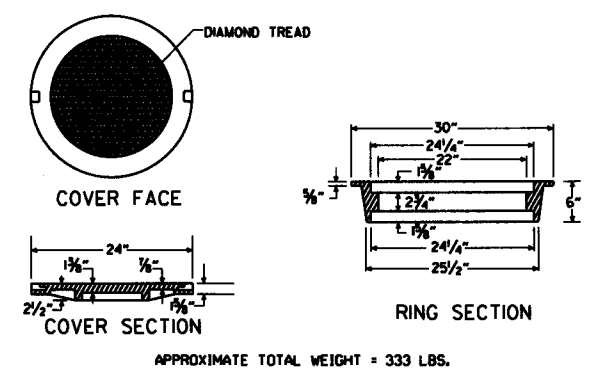


APPROX. WEIGHT = 11 LBS. (CAST IRON)  
 PLAN  
 NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

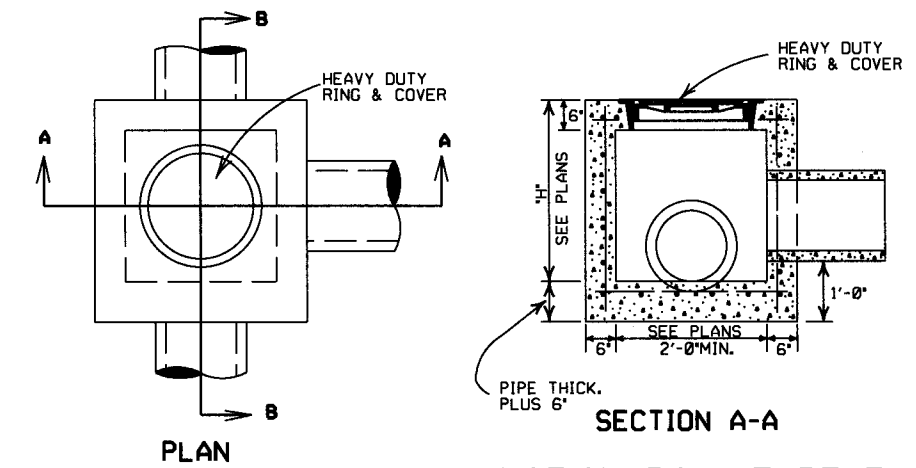
**DETAIL OF STEP FOR DROP INLET**



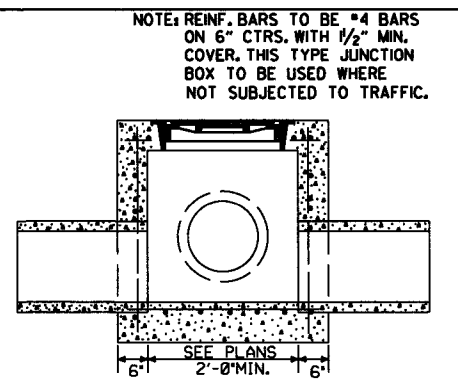
**METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT**



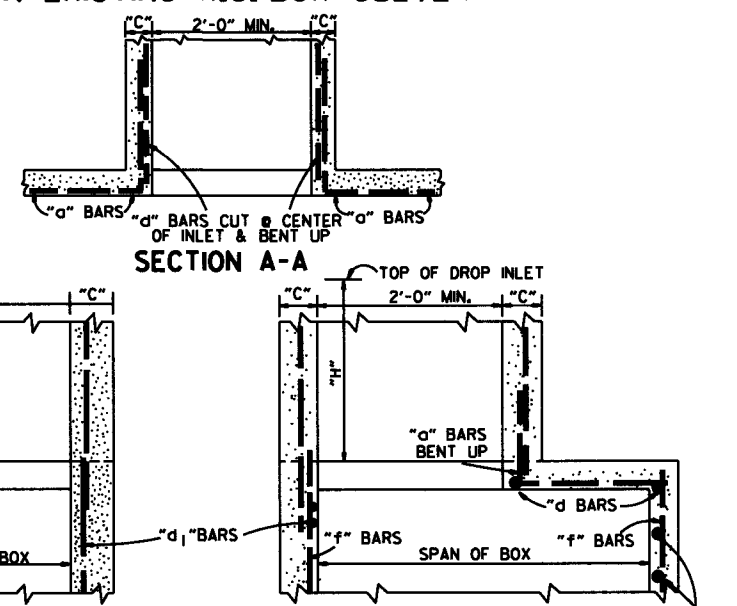
APPROXIMATE TOTAL WEIGHT = 333 LBS.  
**HEAVY DUTY RING & COVER**



**JUNCTION BOX (TYPE E)**

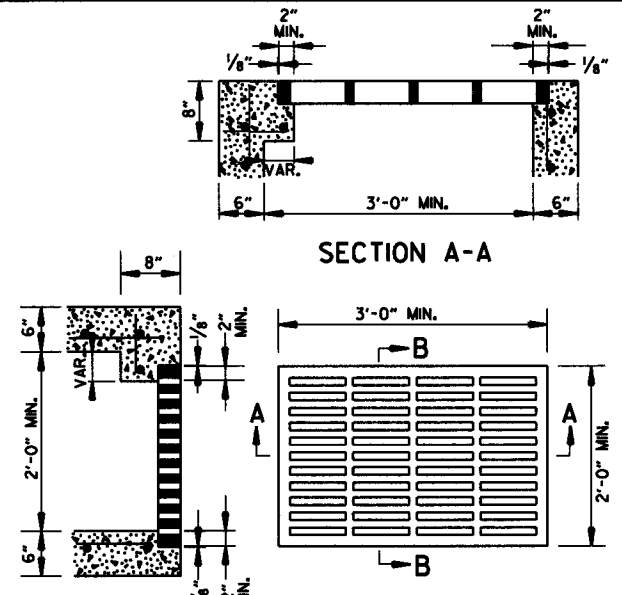


NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



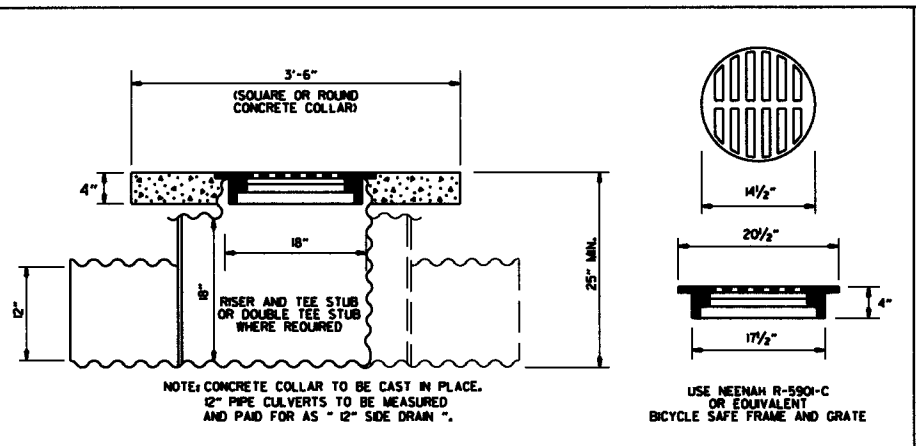
**METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT**

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.

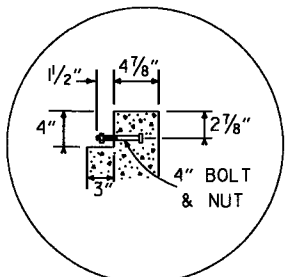
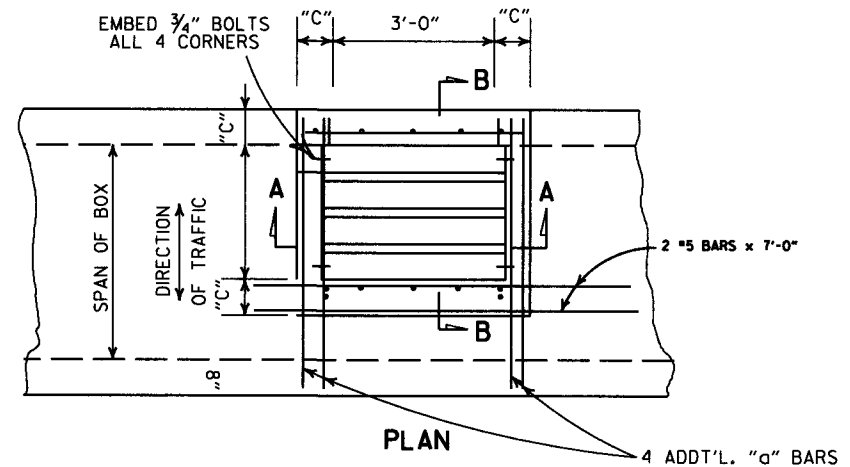


**DETAIL OF YARD DRAIN**

- GENERAL NOTES:
- ALL EXPOSED CORNERS SHALL BE 1/4" CHAMFERED.
  - STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
  - EXPANSION JOINT MATERIAL SHALL BE 1/4" PREFORMED FIBER.
  - 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.
  - GRATE AND FRAME SHALL NOT BE PAINTED.
  - GRATE SHALL BE BICYCLE SAFE.
  - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
  - 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 M 105 CLASS 35B & AASHTO M 306.
  - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
  - 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 D (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

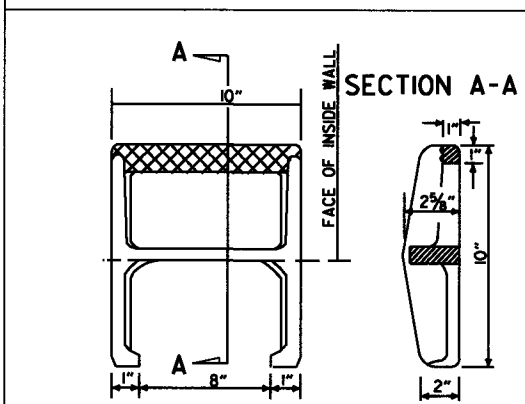
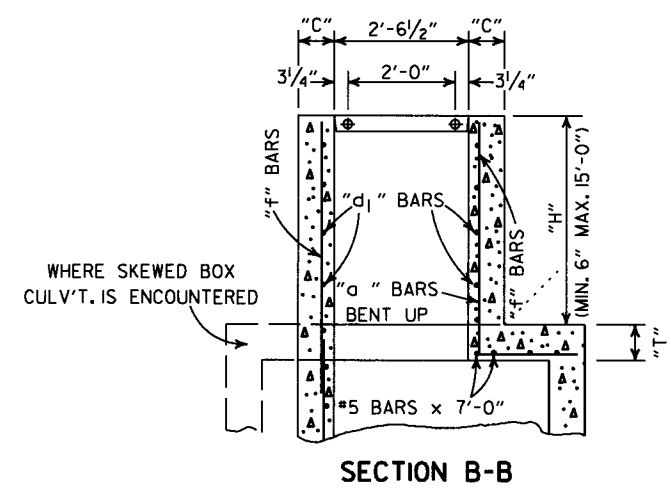
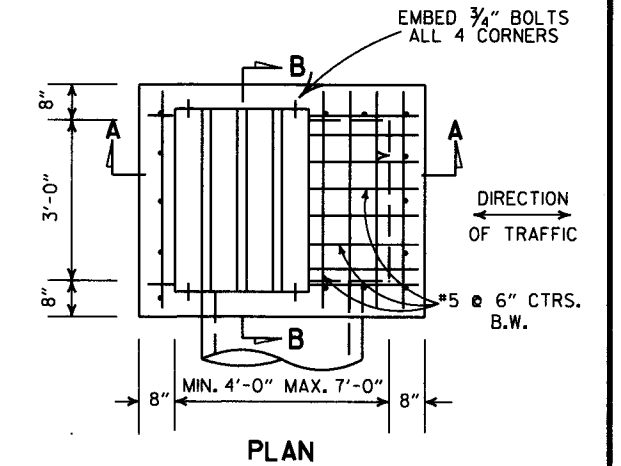
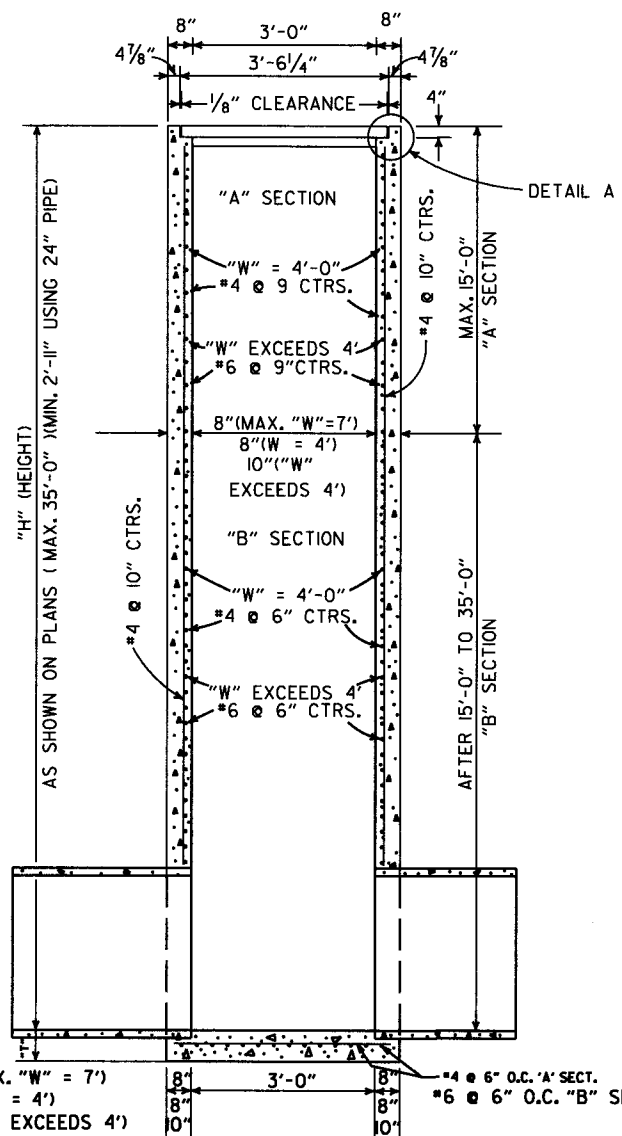
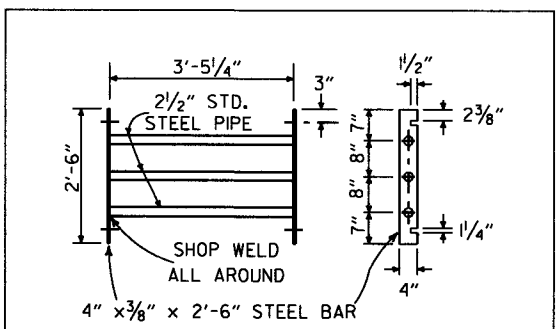
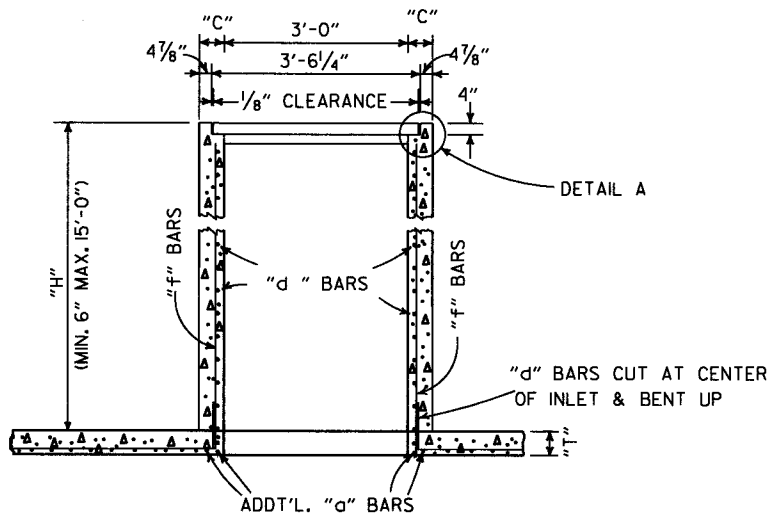


- GENERAL NOTES:
1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 10R 2, ASTM A307 OR AASHTO M 164.
  2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
  3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
  4. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
  5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1/2" COVER. LARGER SIZES TO HAVE 2" COVER.
  6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-5"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-8"	6'-1"
48"	4'-10"	5'-7"	6'-11"

NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



DROP INLET (TYPE RM)

8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL, TM & RM D.I. & GRATE DETAIL	7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72
REVISED		DATE FILMED

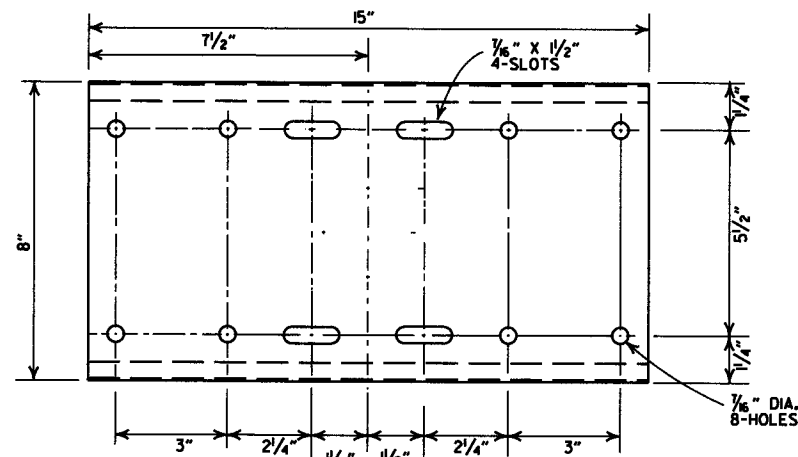
ARKANSAS STATE HIGHWAY COMMISSION  
 DETAILS OF DROP INLETS  
 STANDARD DRAWING FPC-9D

NOTE: ADDT'L. REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

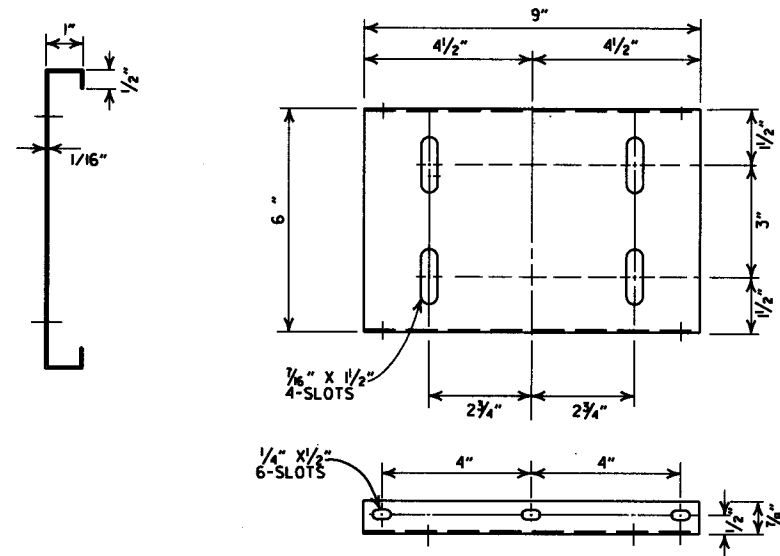
DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DROP INLET TYPE "TM"  
 FOR REINFORCED CONC. BOX CULVERTS

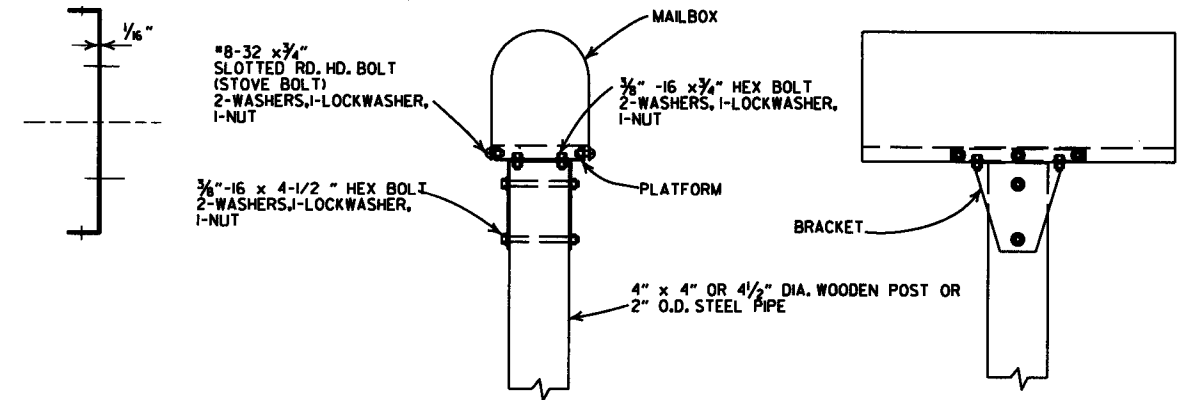
DETAIL OF STEP FOR DROP INLET



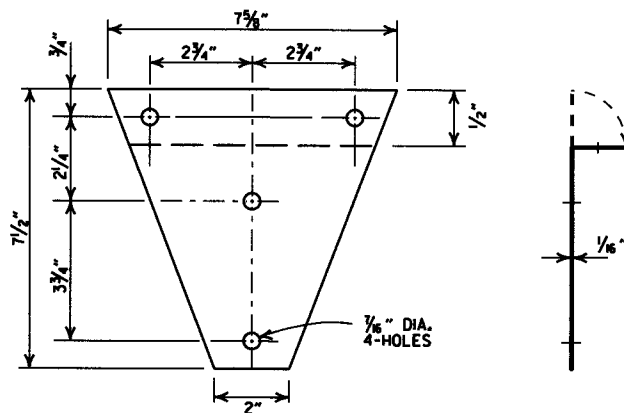
SHELF



PLATFORM



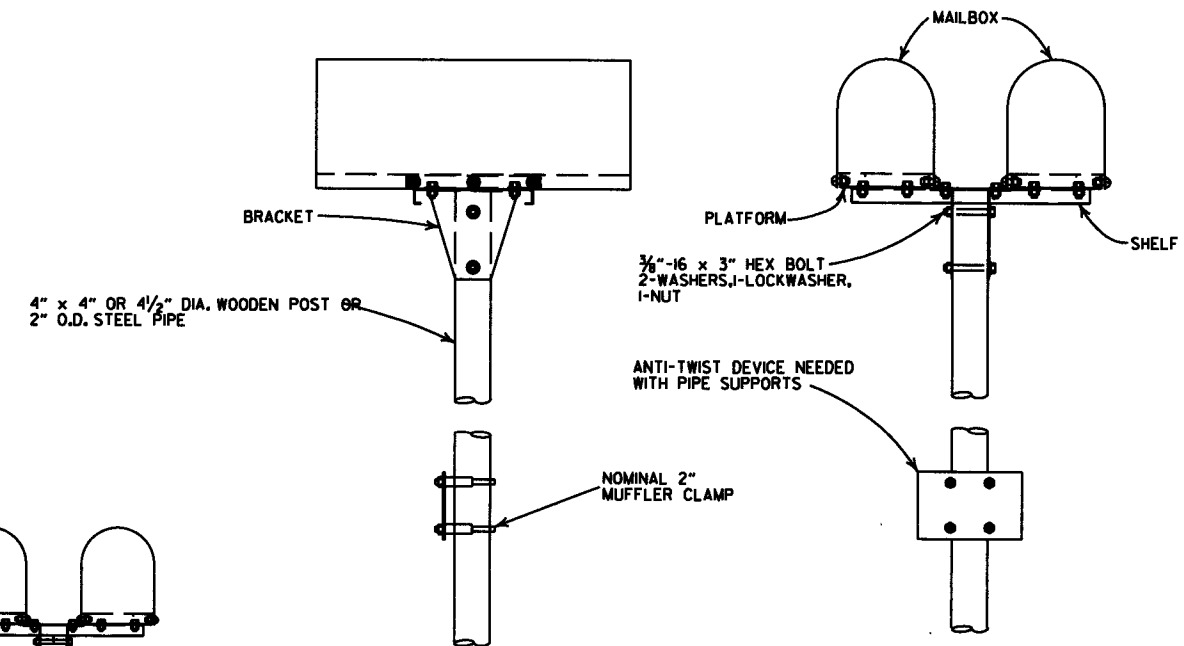
SINGLE INSTALLATION



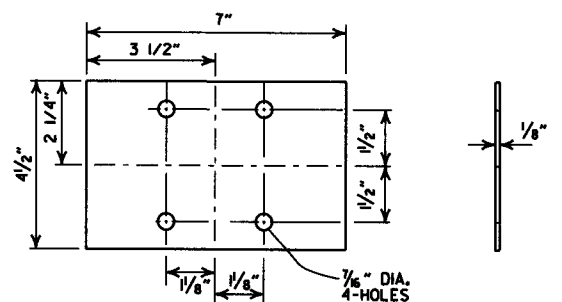
BRACKET

GENERAL NOTES

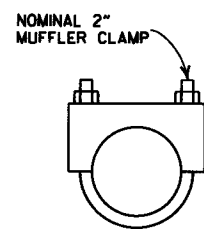
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 1/4" 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.



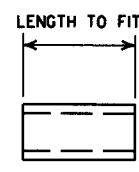
DOUBLE INSTALLATION



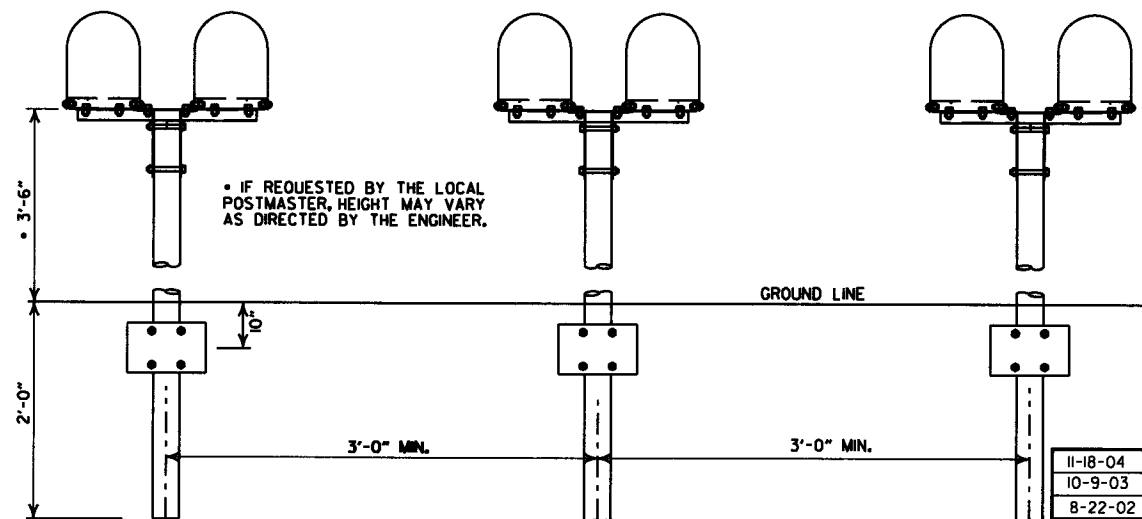
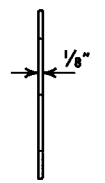
ANTI-TWIST PLATE



CLAMP



SPACER



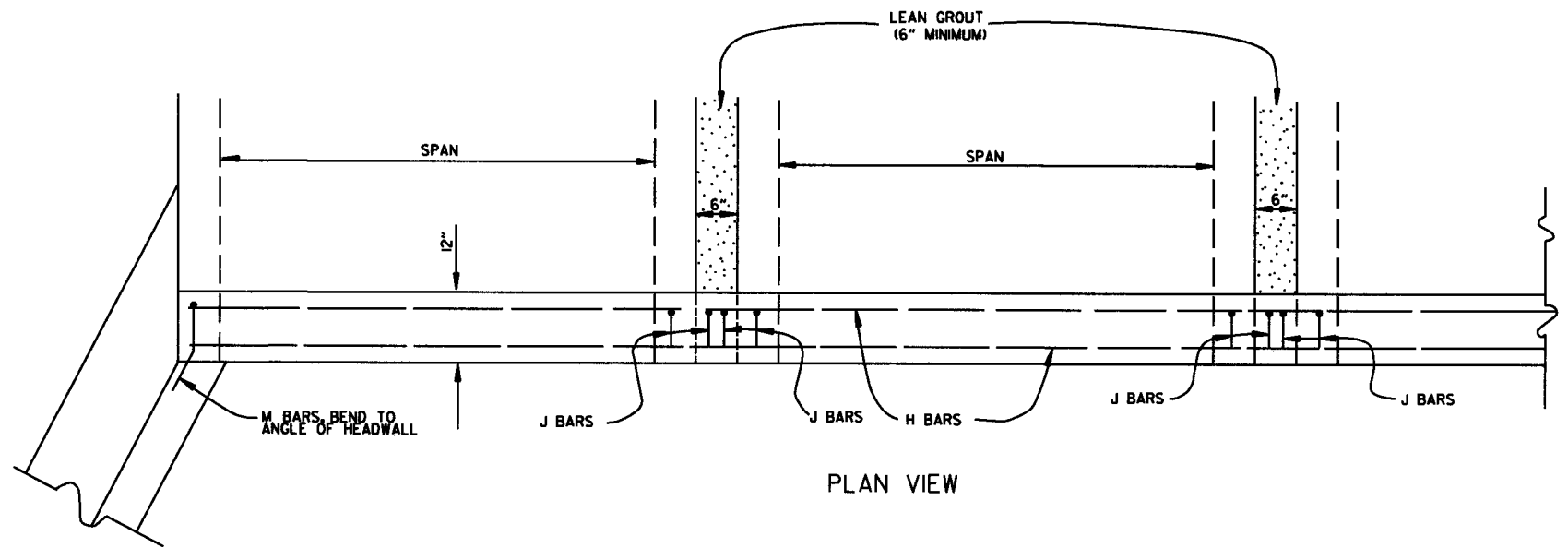
SPACING FOR MULTIPLE POST INSTALLATION

DATE	FILMED	ISSUED	REVISION
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

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 815 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

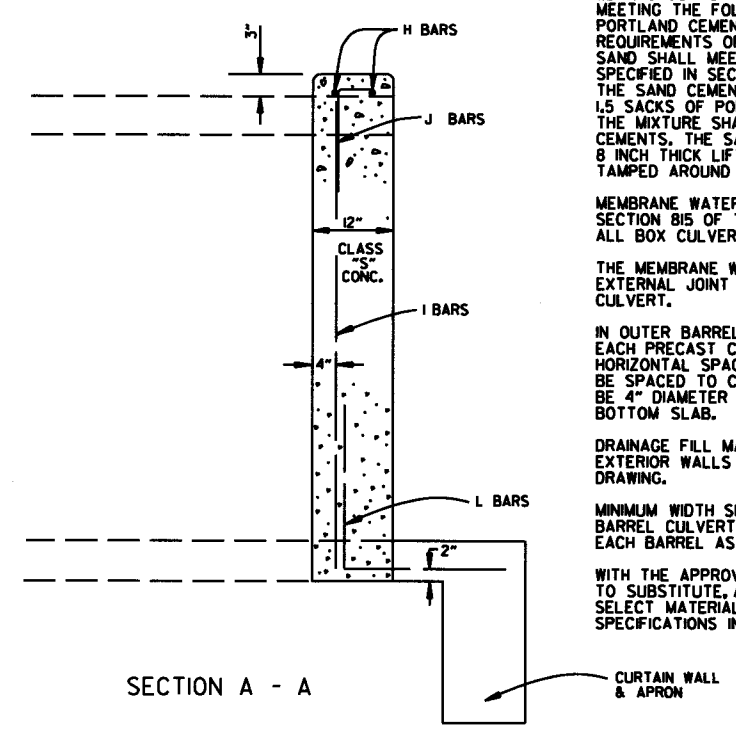
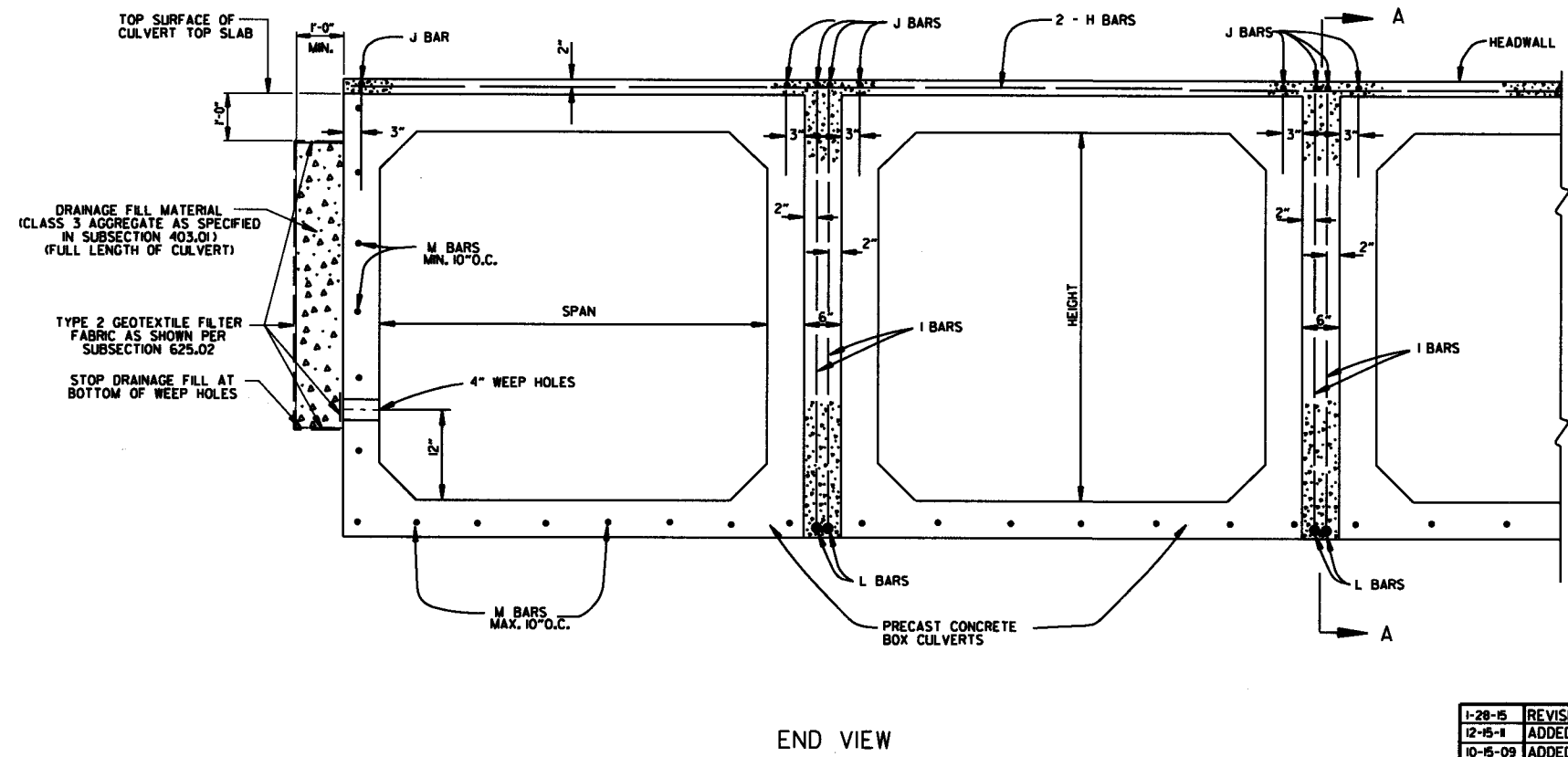
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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.



DATE	REVISION	DATE FILMED
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	

**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	13 1/2	14
21	26	26	15 1/2	16
24	28 1/2	29	18	18
30	36 1/4	36	22 1/2	23
36	43 3/8	44	26 3/8	27
42	51 1/8	51	31 1/8	31
48	58 1/2	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	77 1/2	77
108	138	138	87 1/8	87
120	154	154	96 3/8	97
132	168 3/4	169	106 1/2	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).

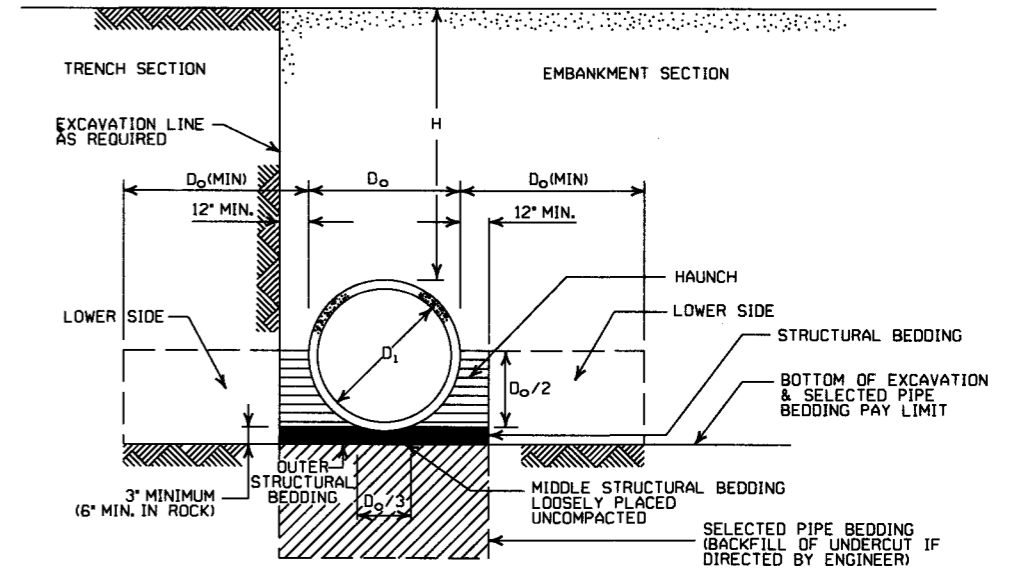
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

**- LEGEND -**

- D<sub>i</sub> = NORMAL INSIDE DIAMETER OF PIPE
- D<sub>o</sub> = 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 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
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	FEET	
	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)				
2 3/4 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	34	36	47		
36	2		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.

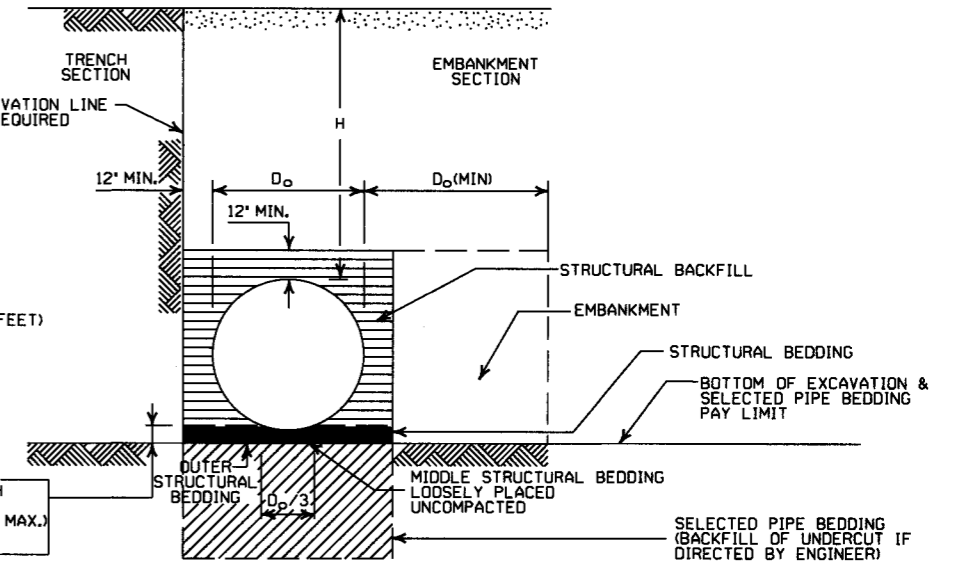
INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

**- LEGEND -**

- D<sub>o</sub> = 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)

IN SOIL - MIN. EQUALS TWICE CORRUGATION DEPTH  
IN ROCK - MIN. EQUALS GREATER OF:  
1/2" PER FOOT OF FILL OVER PIPE (24" MAX.)  
TWICE CORRUGATION DEPTH



**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 3/4" 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.

**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				
2 3/4 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45	52	41	
18	2	30	30	39		34
24	2	22	22	31	32	
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	

**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."

**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 TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	INSTALLATION TYPE 1		
2 3/4 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	128x83	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.

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 1/2 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"

NOTE:  
18" MIN. (18" - 30" DIAMETERS)  
24" MIN. (36" - 48" DIAMETERS)  
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

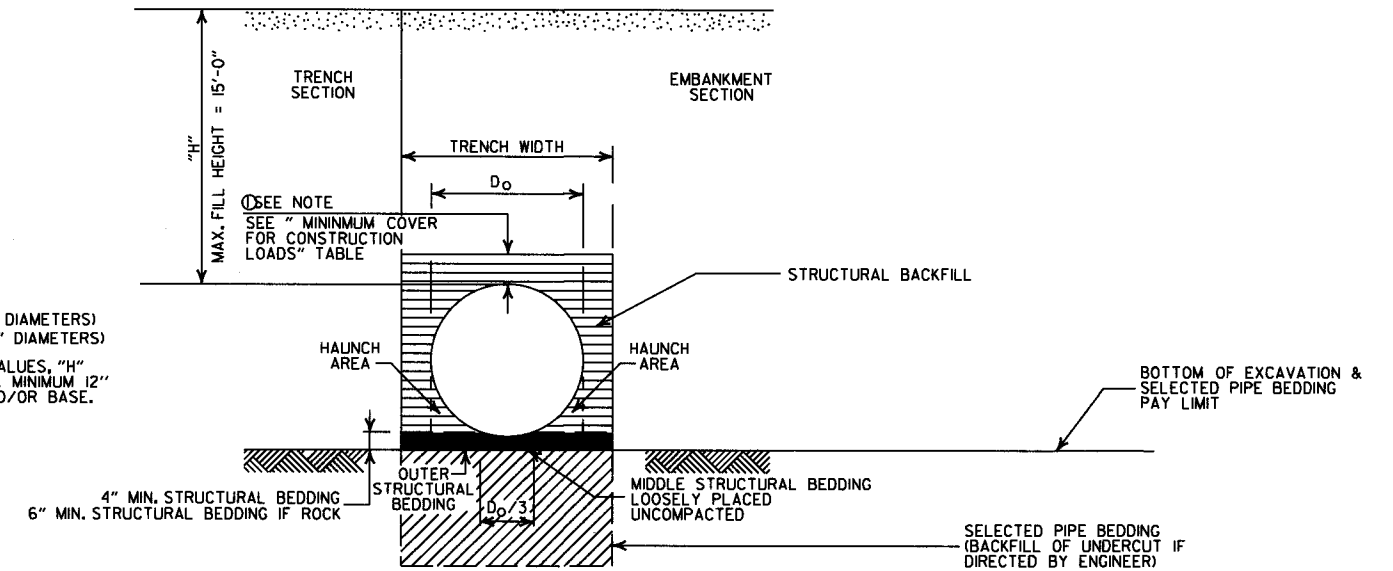
### MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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	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"

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

- 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<sub>o</sub> = OUTSIDE DIAMETER OF PIPE  
MAX. = MAXIMUM  
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL  
===== = 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 1/2 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.

**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"

**MULTIPLE INSTALLATION OF PVC PIPES**

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

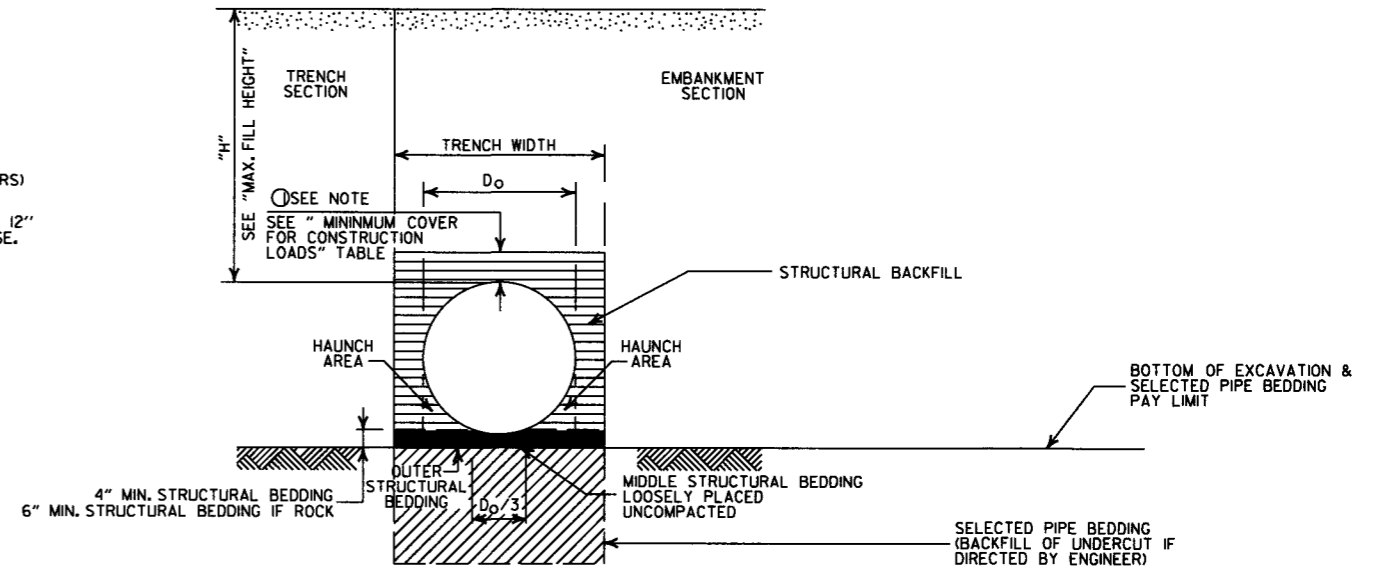
**GENERAL NOTES**

- PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. 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 PLACE 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.

**MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL**

PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

- NOTE:  
 1. MIN. (18" - 36" DIAMETERS) MINIMUM COVER VALUE, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



**TYPE 2 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.

**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<sub>o</sub> = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Hatched pattern] = STRUCTURAL BACKFILL MATERIAL
- [Dotted pattern] = UNDISTURBED SOIL

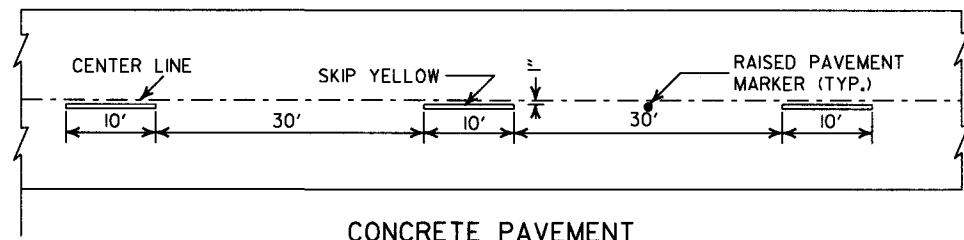
DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

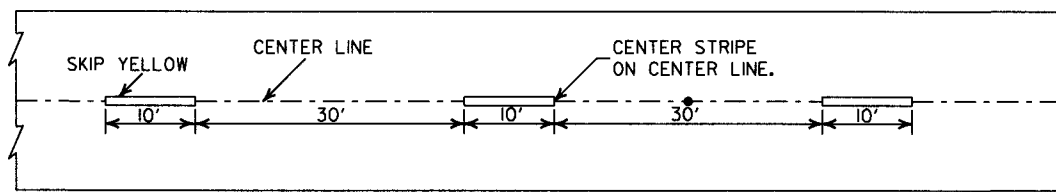
PLASTIC PIPE CULVERT  
(PVC F949)

STANDARD DRAWING PCP-2



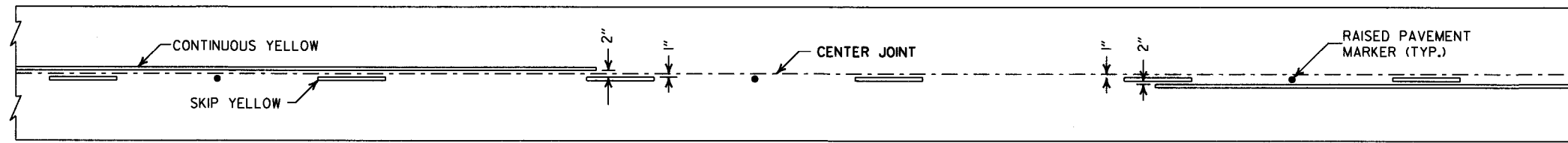


CONCRETE PAVEMENT

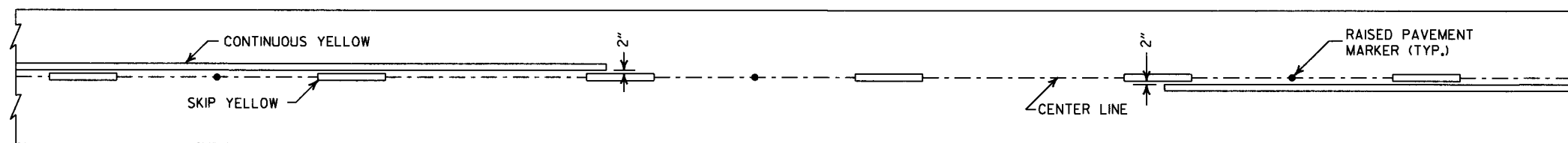


ASPHALT PAVEMENT

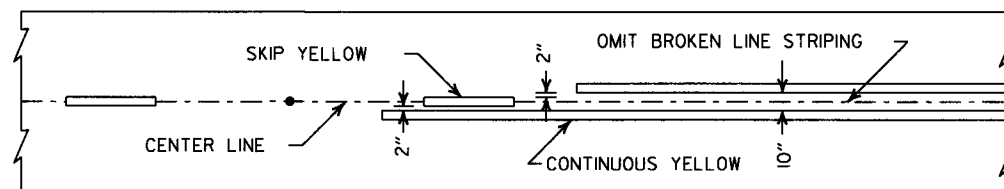
**BROKEN LINE STRIPING**



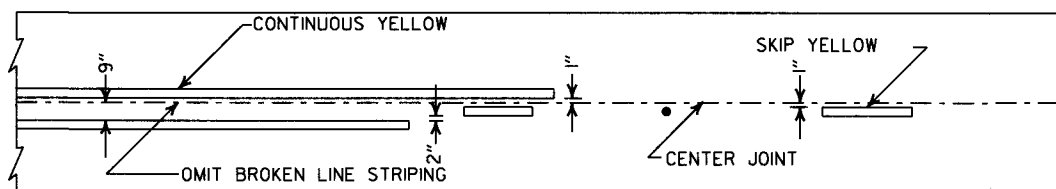
**SOLID LINE STRIPING ON CONCRETE PAVEMENT**



**SOLID LINE STRIPING ON ASPHALT PAVEMENT**

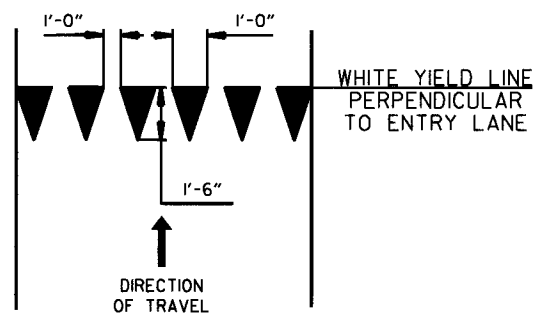


ASPHALT PAVEMENT

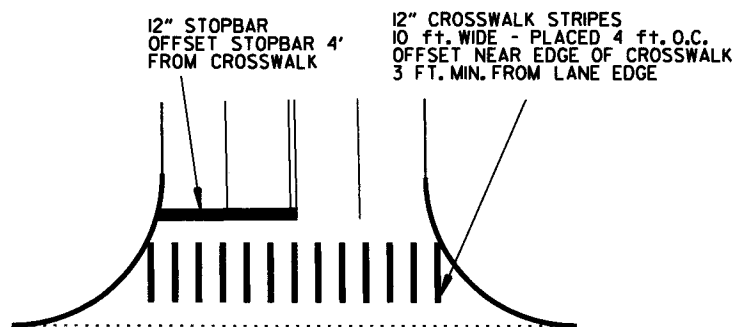


CONCRETE PAVEMENT

**STRIPING AT ADJACENT NO PASSING LANES**



**YIELD LINE DETAIL**

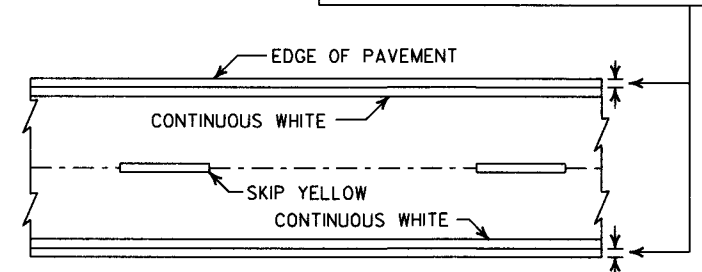


**CROSSWALK AND STOPBAR DETAILS**

NOTES:

1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

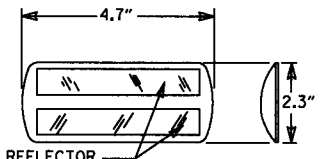
2" FOR ASPHALT OR CONCRETE PAVEMENT  
6" FOR BITUMINOUS SURFACE TREATMENT



**PAVEMENT EDGE LINE MARKING**

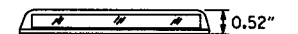
NOTE:  
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II  
RED/CLEAR OR  
YELLOW/YELLOW



PRISMATIC REFLECTOR

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.



**DETAIL OF STANDARD RAISED PAVEMENT MARKERS**

6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAV'T. 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
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

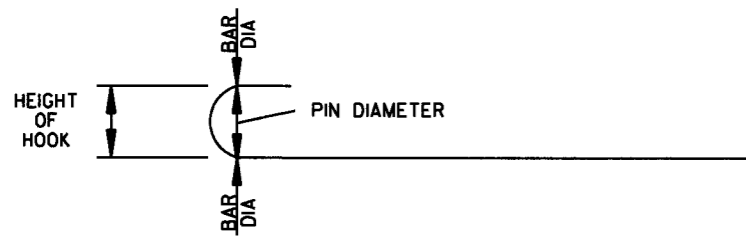
**PAVEMENT MARKING DETAILS**

STANDARD DRAWING PM-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", "bl", "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", "bl", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

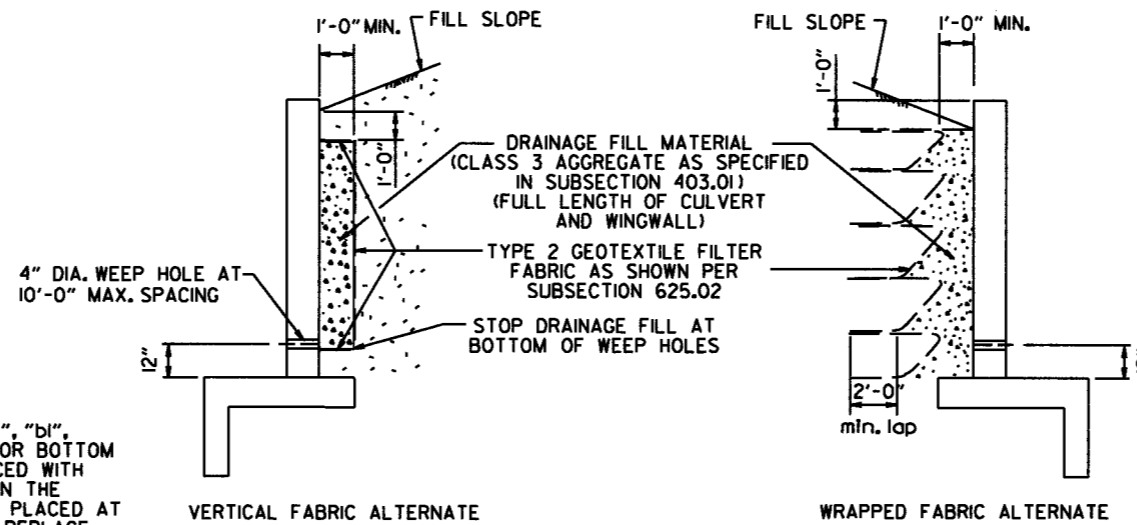
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "bl", "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 31 OR 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.

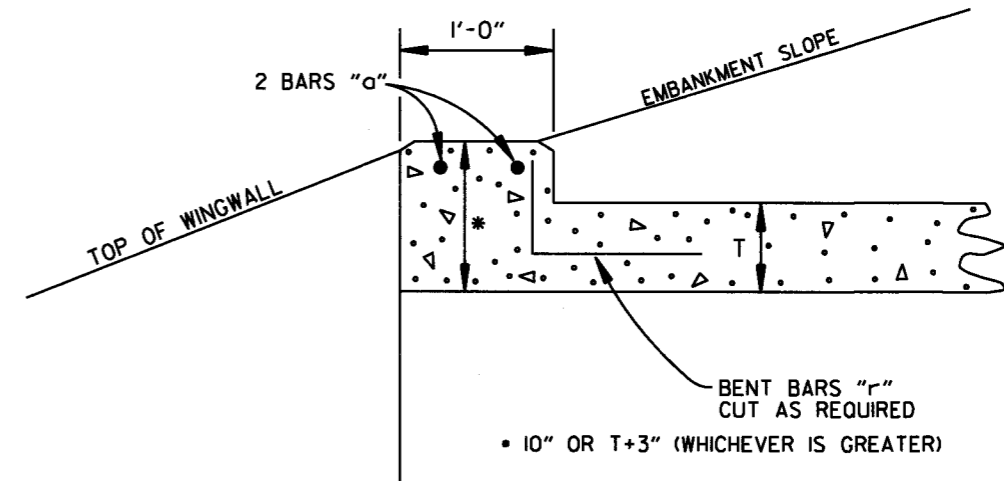
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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 CRSI MANUAL 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.

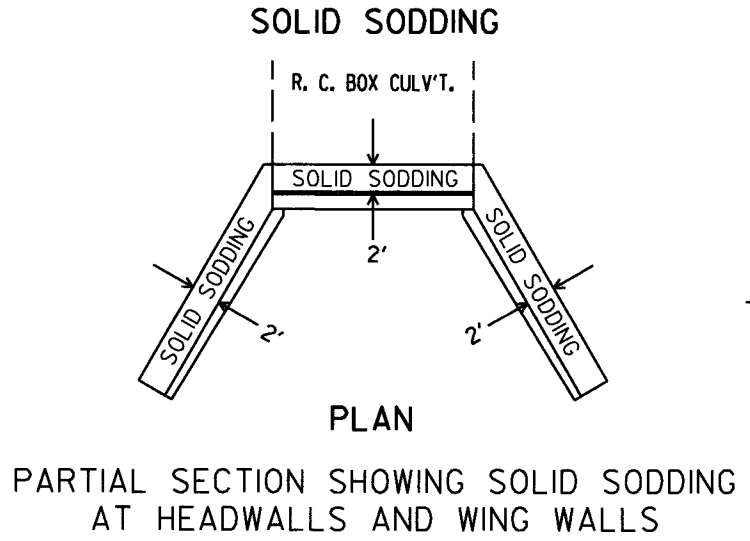
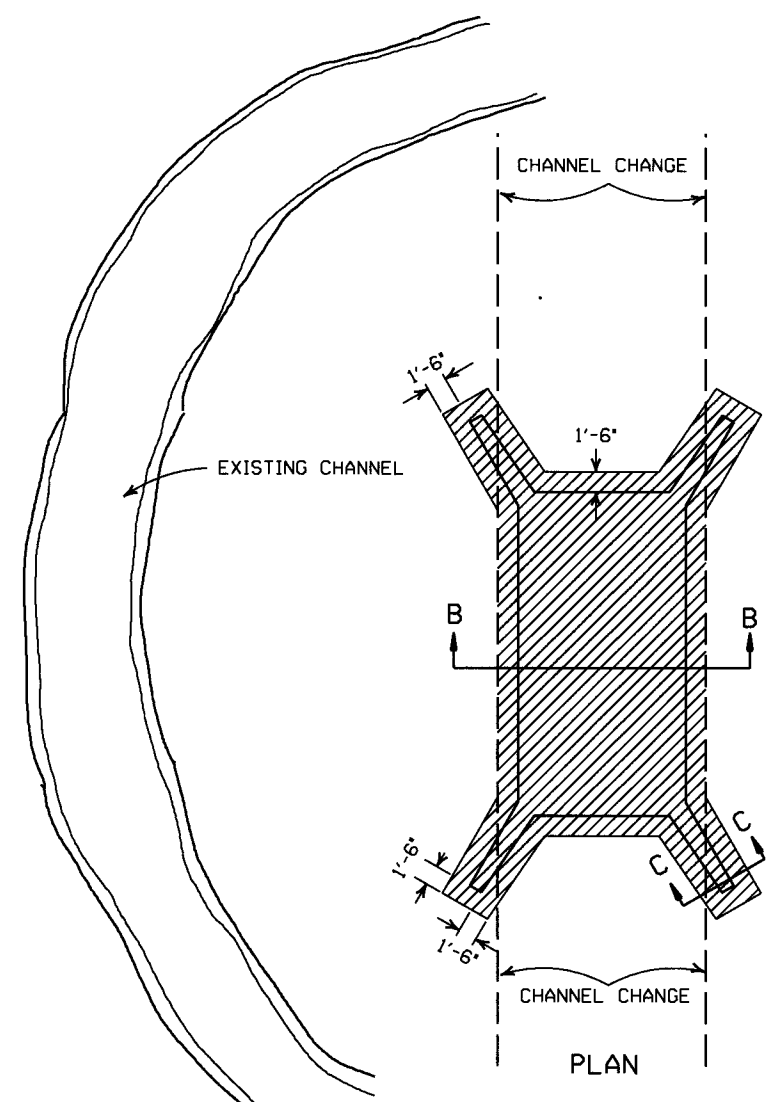
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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	

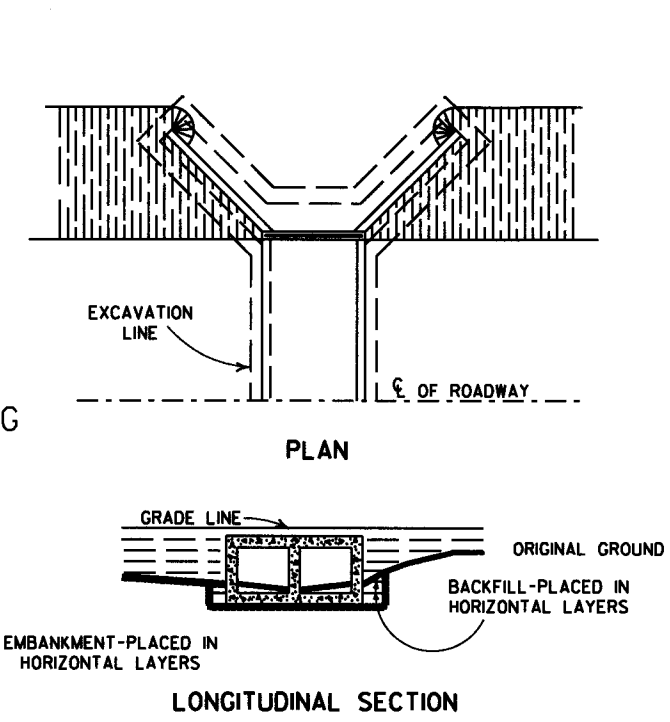
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

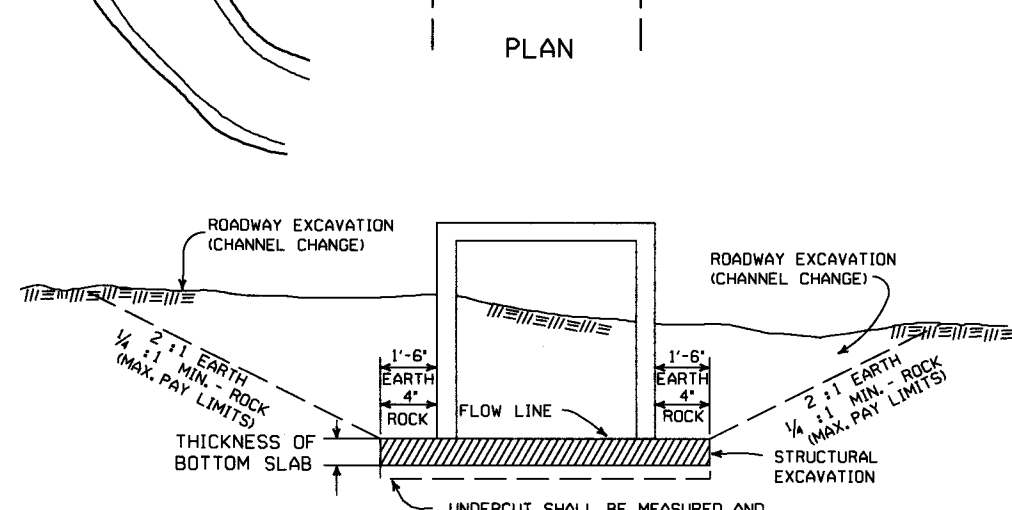
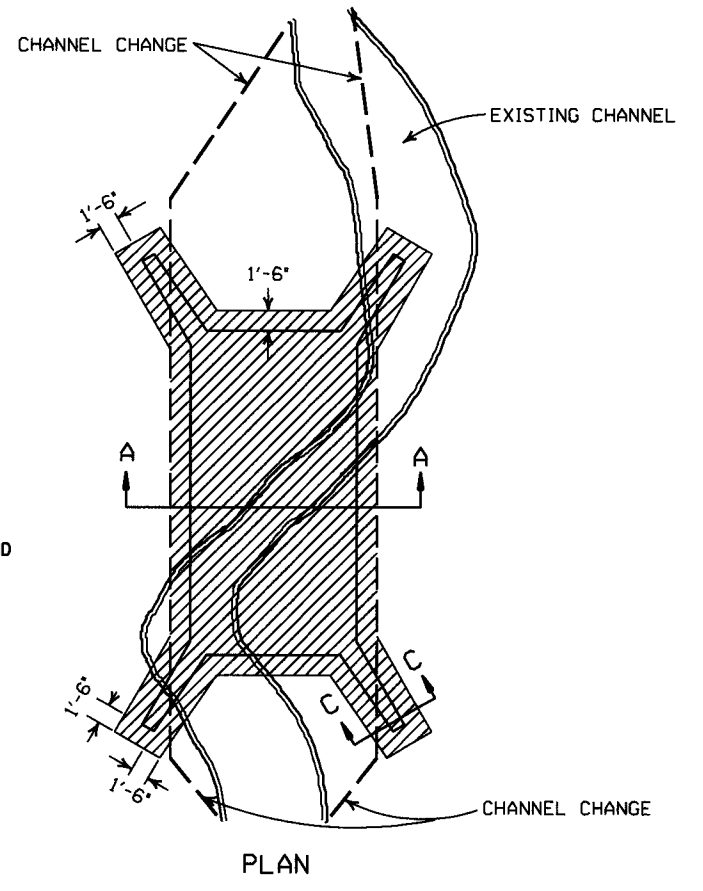
STANDARD DRAWING RCB-1



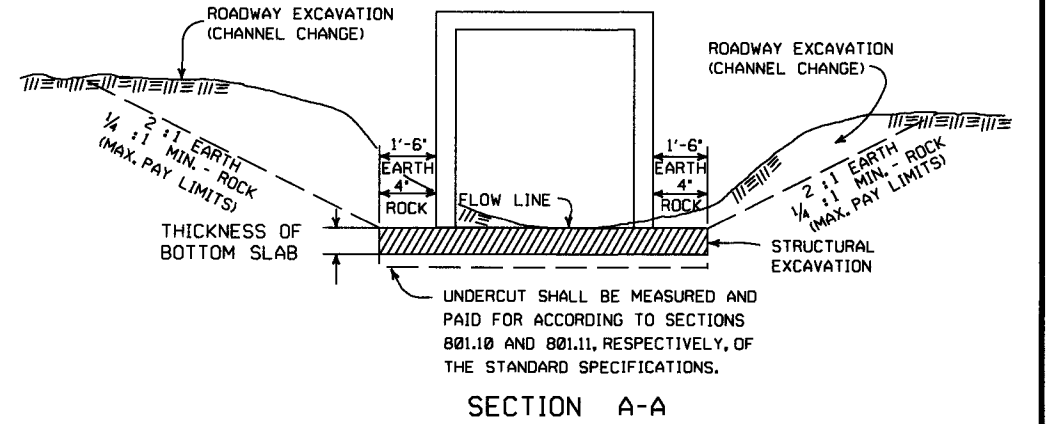
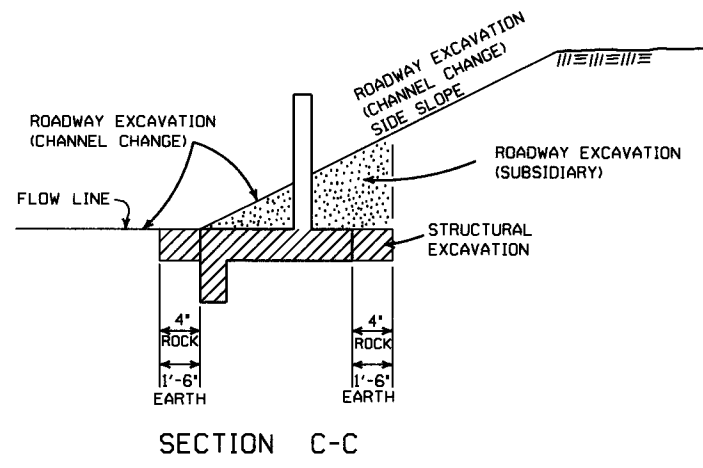
NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



BACKFILL DETAILS FOR BOX CULVERT



UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.



DETAILS THROUGH EXISTING CHANNELS

**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.

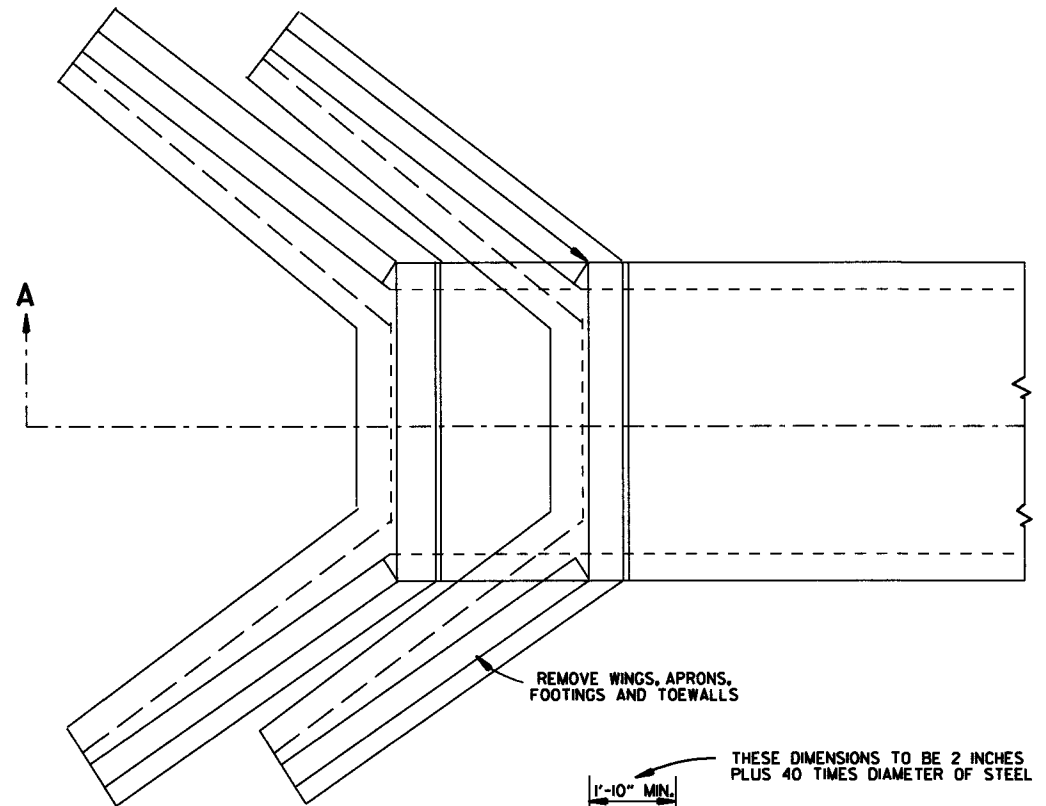
DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

**ARKANSAS STATE HIGHWAY COMMISSION**

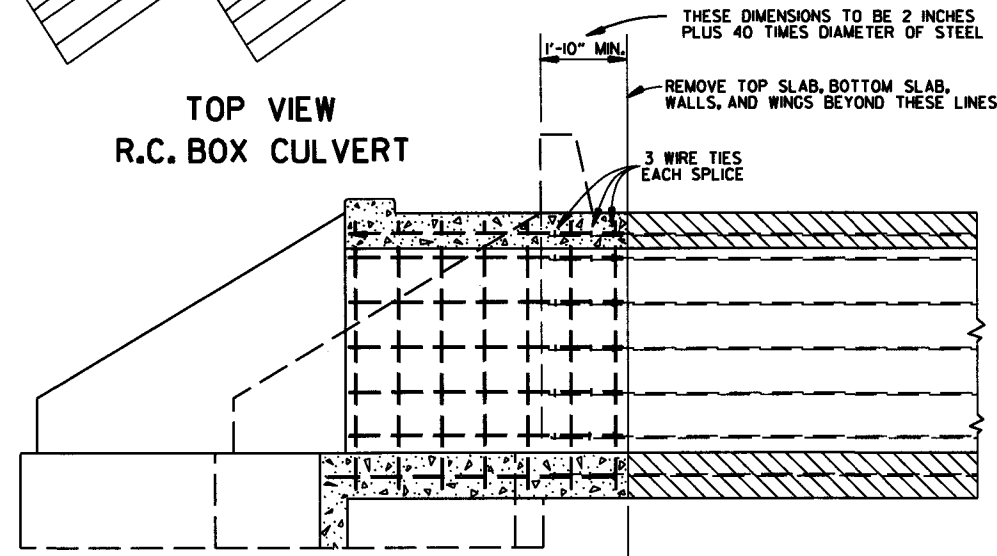
**EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS**

**STANDARD DRAWING RCB-2**



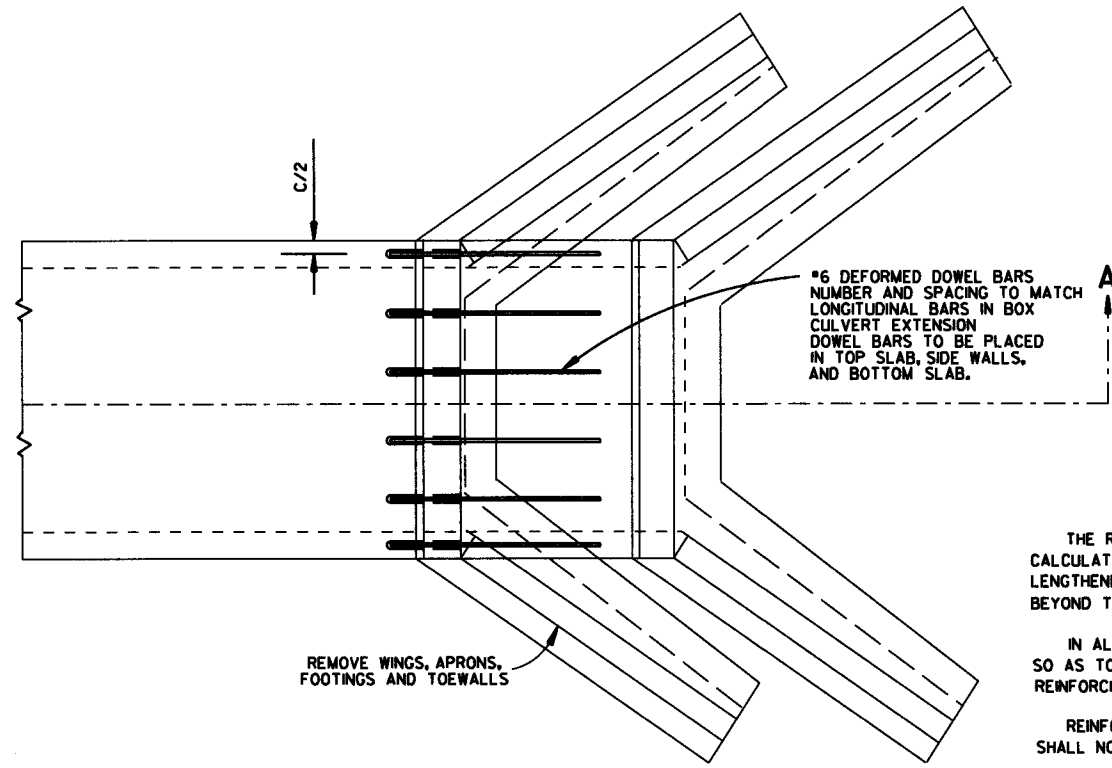


TOP VIEW  
R.C. BOX CULVERT

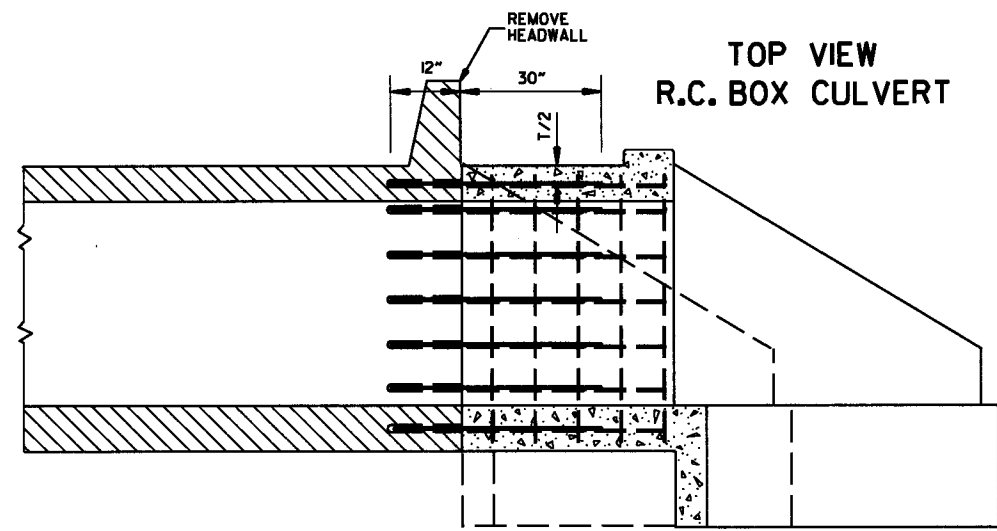


REINFORCING DETAILS AND CULVERT DIMENSIONS  
SAME AS STANDARD CULVERT DRAWINGS

SECTION A-A  
METHOD 1



TOP VIEW  
R.C. BOX CULVERT



REINFORCING DETAILS AND CULVERT DIMENSIONS  
SAME AS STANDARD CULVERT DRAWINGS

SECTION A-A  
METHOD 2

#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

DATE	REVISION	DATE FILED
10-12-95	CHANGED DRAWING FROM #44-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
8-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	

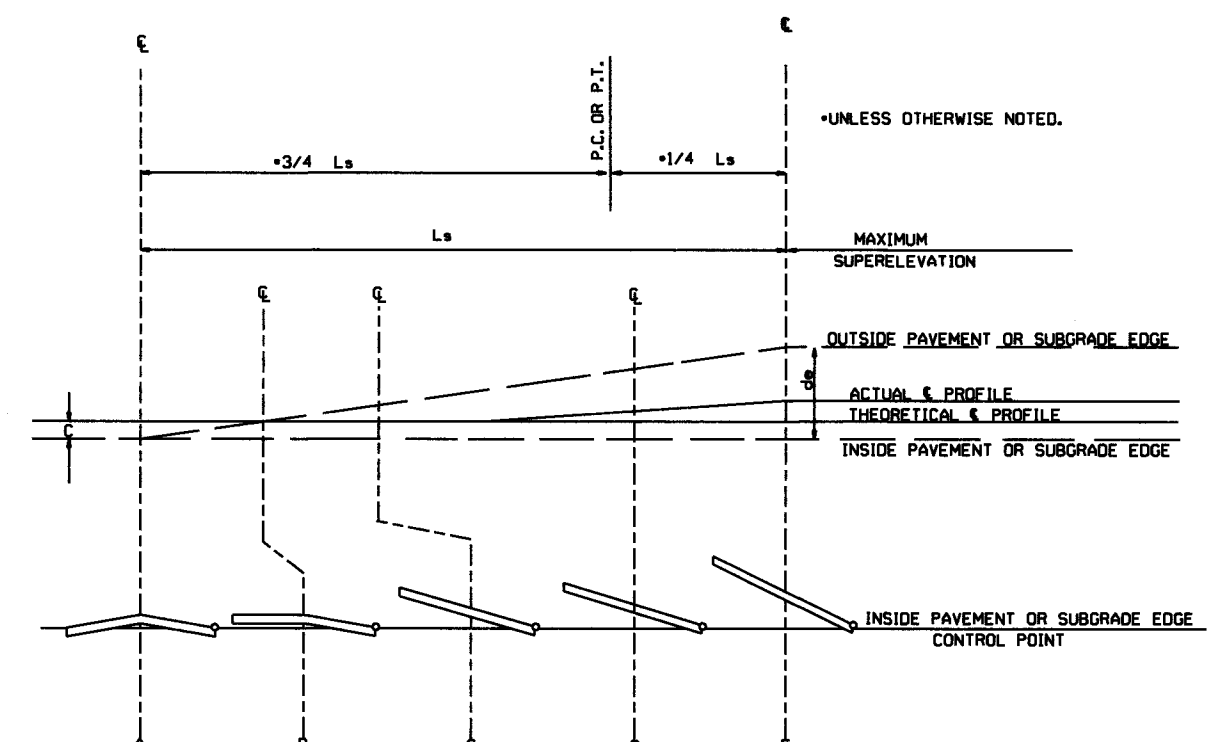
ARKANSAS STATE HIGHWAY COMMISSION

METHOD OF EXTENDING  
EXISTING R.C. BOX CULVERTS

STANDARD DRAWING RCB-3

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		70 MPH	
	Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)	
	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
24° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2%.

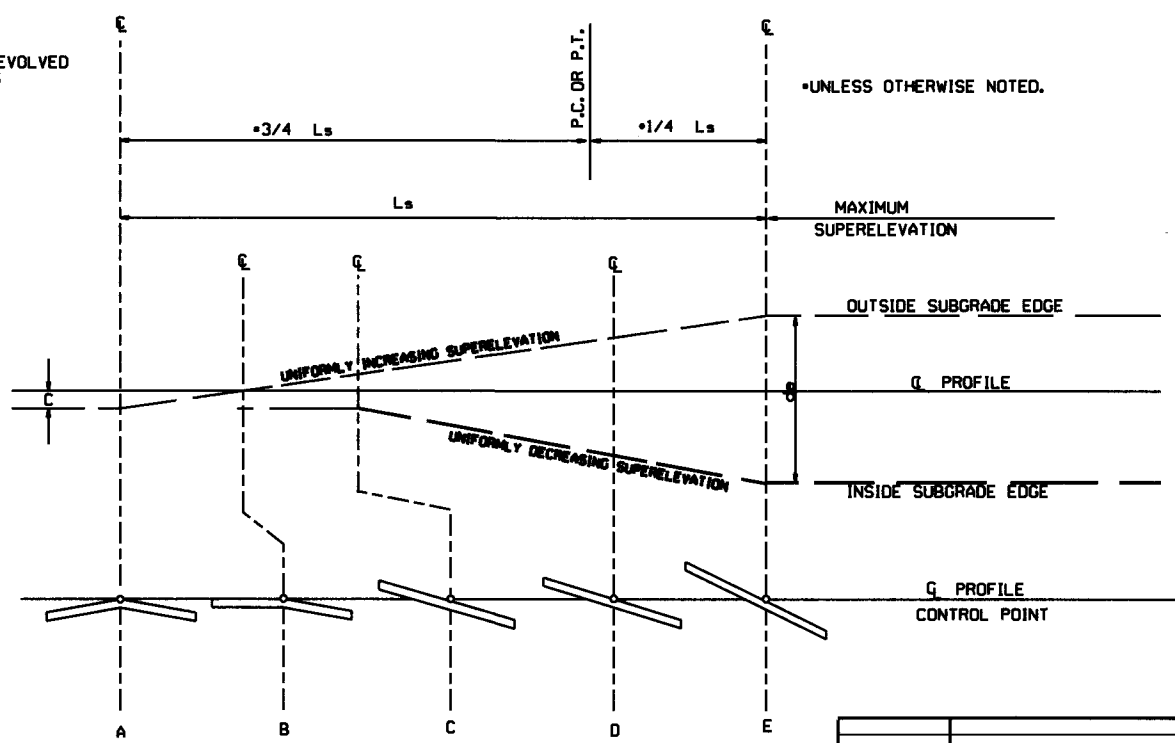
ABBREVIATIONS

- NC - NORMAL CROWN
- RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
- e - RATE OF SUPERELEVATION (FT. PER FT.)
- Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
- L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
- d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)
- C - NORMAL CROWN (FT.)

GENERAL NOTES

1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:
  - 3 LANE UNDIVIDED - - - - +20%
  - 4 LANE UNDIVIDED - - - - +50%
  - 5 LANE UNDIVIDED - - - - +80%
  - 6 LANE UNDIVIDED - - - - +100%

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2%. RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

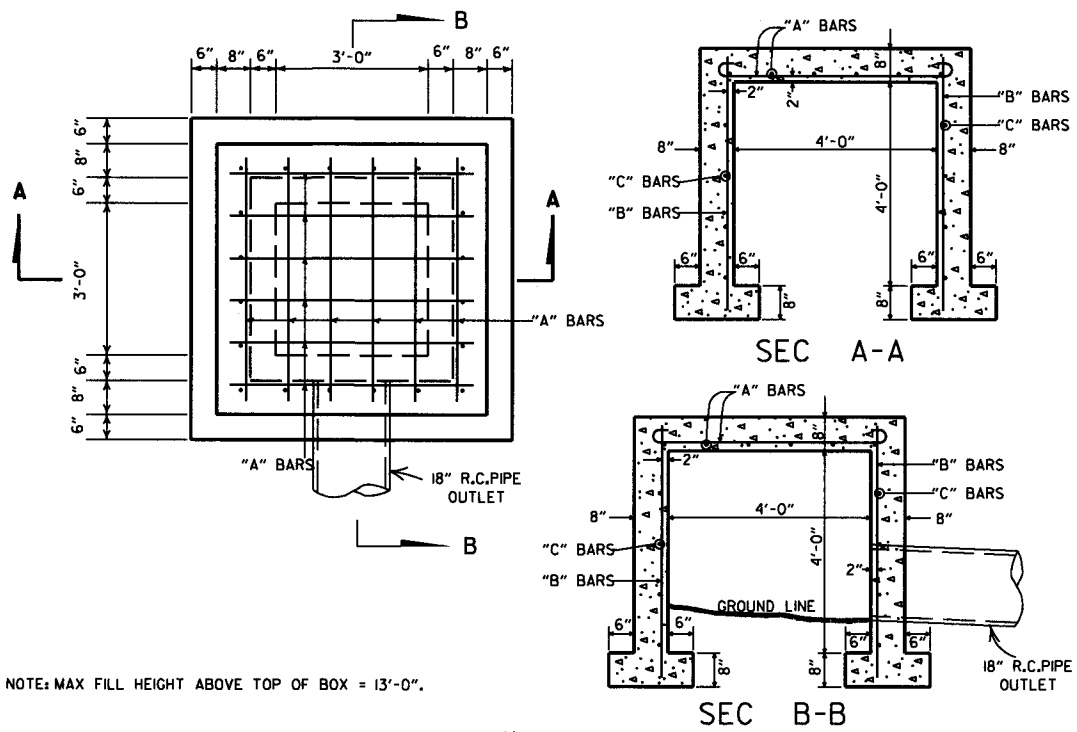
SUPERELEVATION FORMULA =  $\frac{Lde}{Ls}$

10-18-96	ADDED FORMULA	
01-09-87	ISSUED	534-1-9-87
DATE	REVISION	DATE FILLED

ARKANSAS STATE HIGHWAY COMMISSION

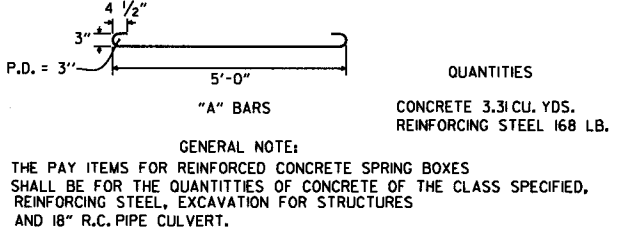
TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

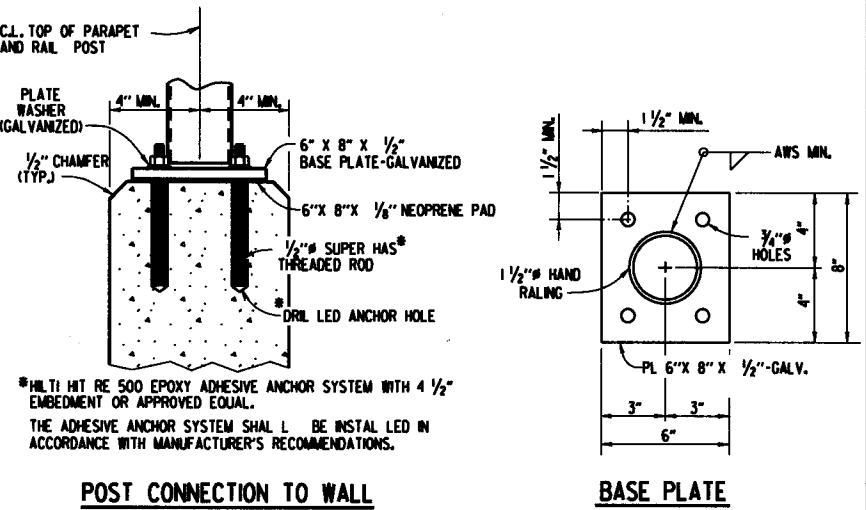
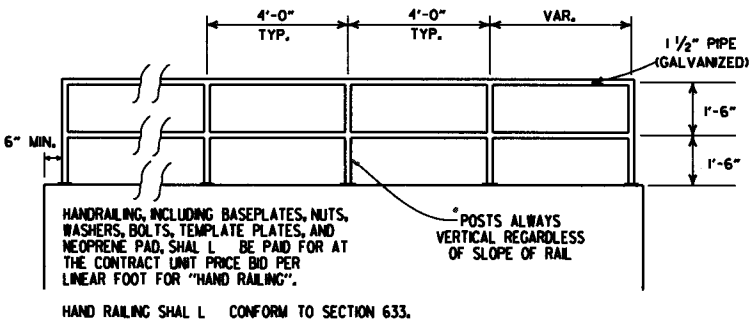
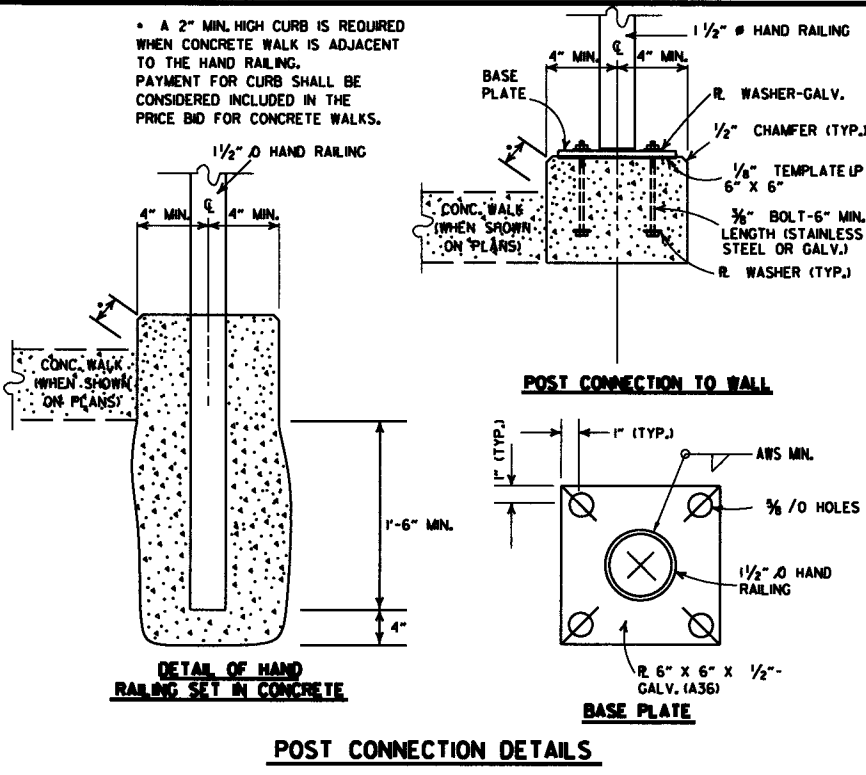
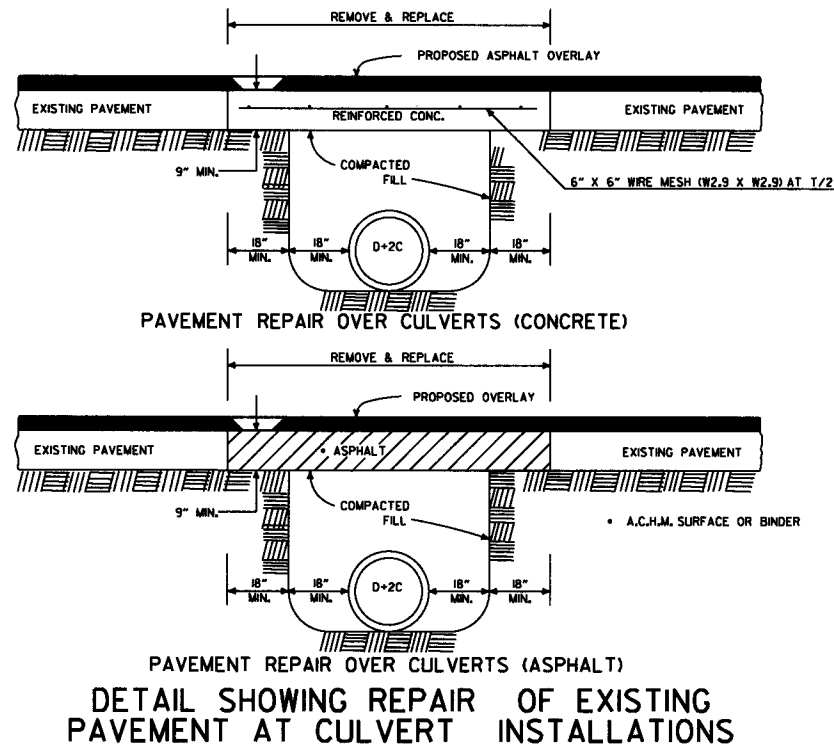


STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"

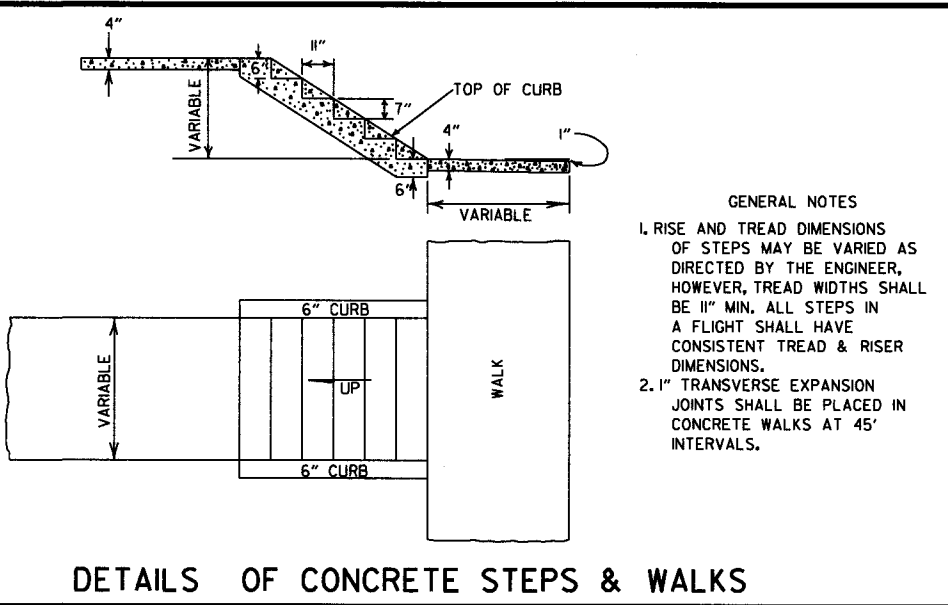


**REINFORCED CONCRETE SPRING BOX**


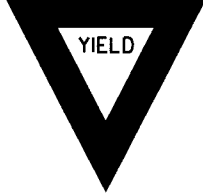







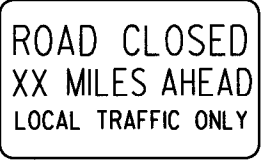
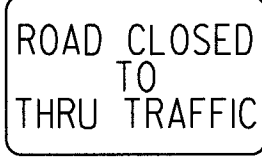

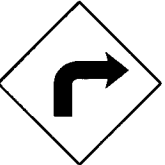

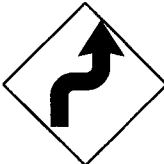

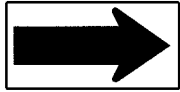
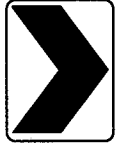
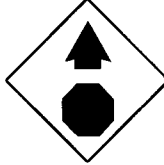

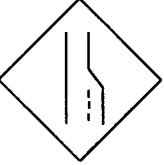









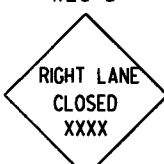








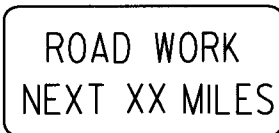
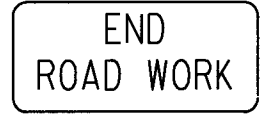
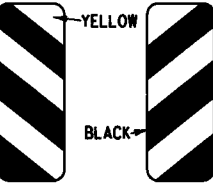


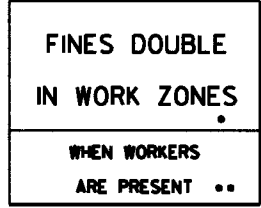


**DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)**

**HAND RAILING DETAILS**



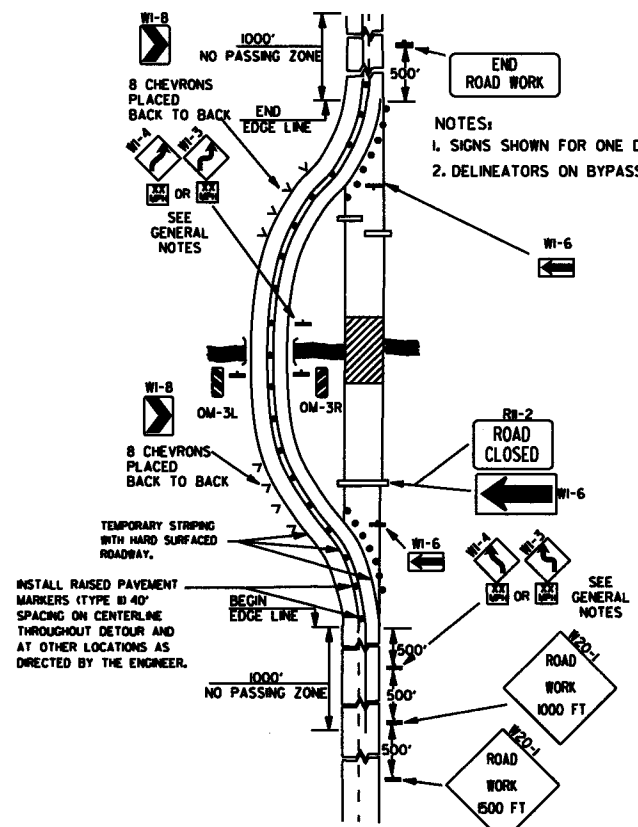
DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC 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 PVMT 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	649-7-15-88
11-1-84	ADDED HDWL. MODS. DEL. PIPE UNDERDRAINS	
1-4-83	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
	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	REM. 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

<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>W21-5a</p>  <p>STD. 36"x36" FWY. 48"x48"</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>500 FEET 24" 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>

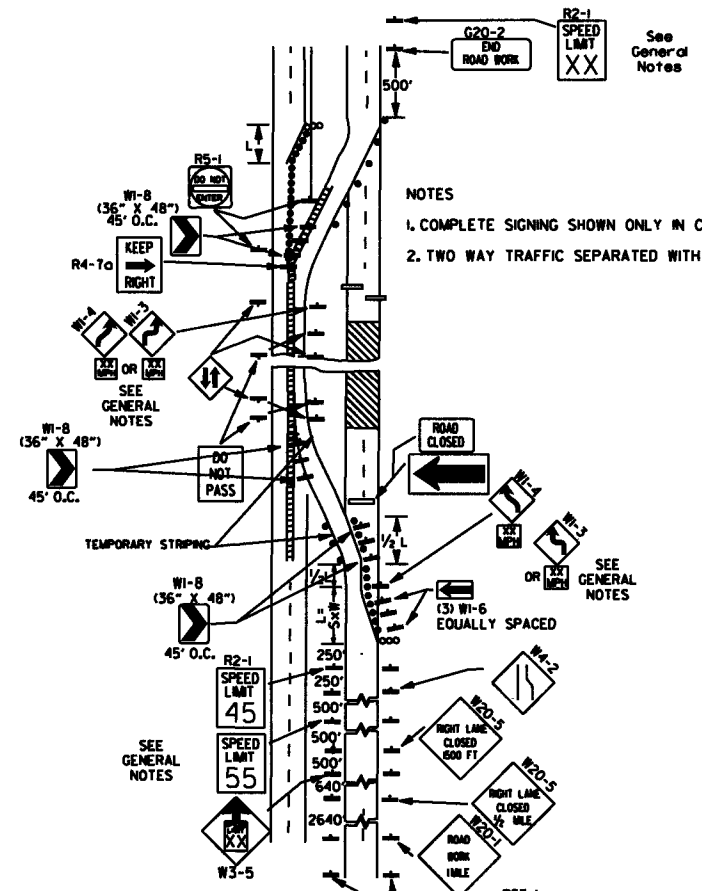
ADVANCE DISTANCES (XXXX)  
500 FT 1/2 MILE  
1000 FT 3/4 MILE  
1500 FT 1 MILE  
AHEAD

- 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.

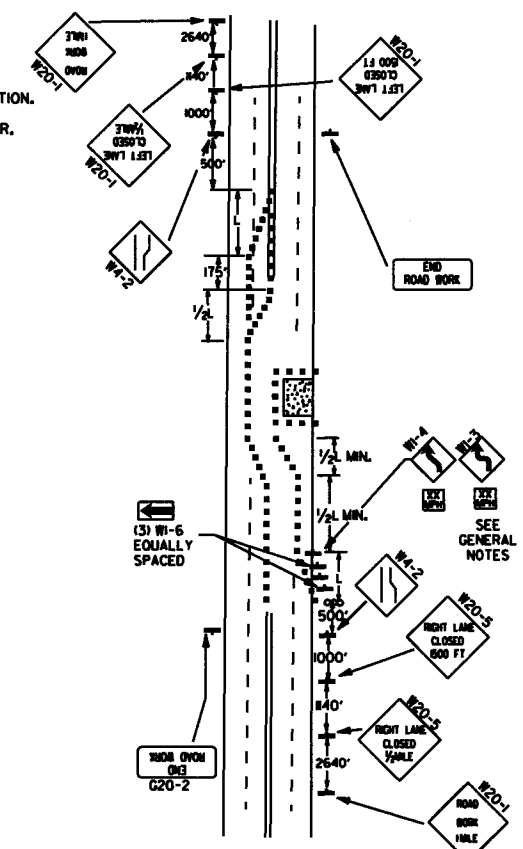
4-13-77	DELETED R5P-1 & ADDED W21-5a	
9-2-75	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-71	REVISED W24-1	
1-17-70	DELETED W8-3a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
1-18-04	REVISED NOTES	
10-9-03	REVISED 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	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VL MITCD SEPT. 3, 1993	
8-15-9	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED



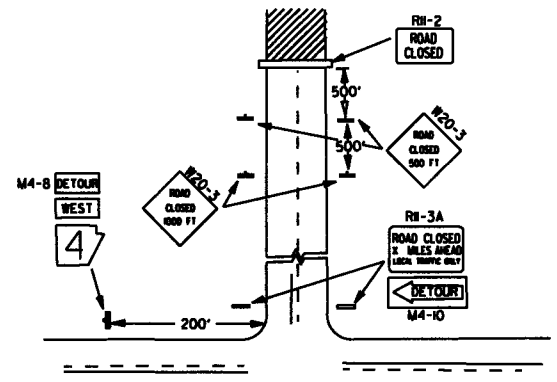
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.

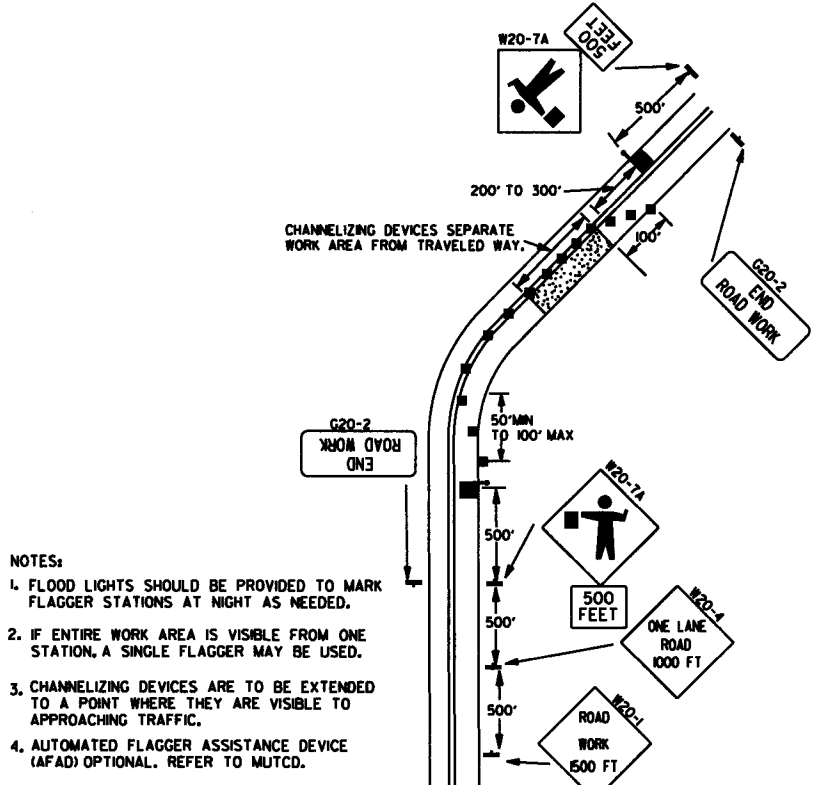


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



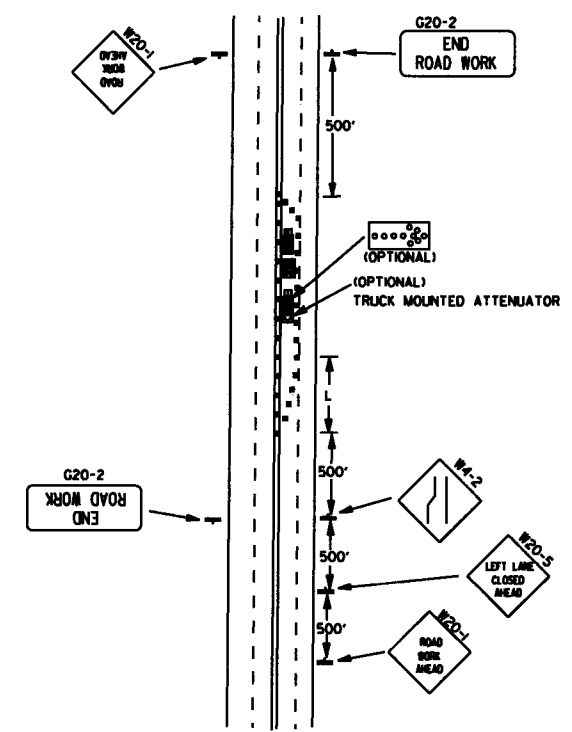
NOTES:  
 1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.  
 2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.

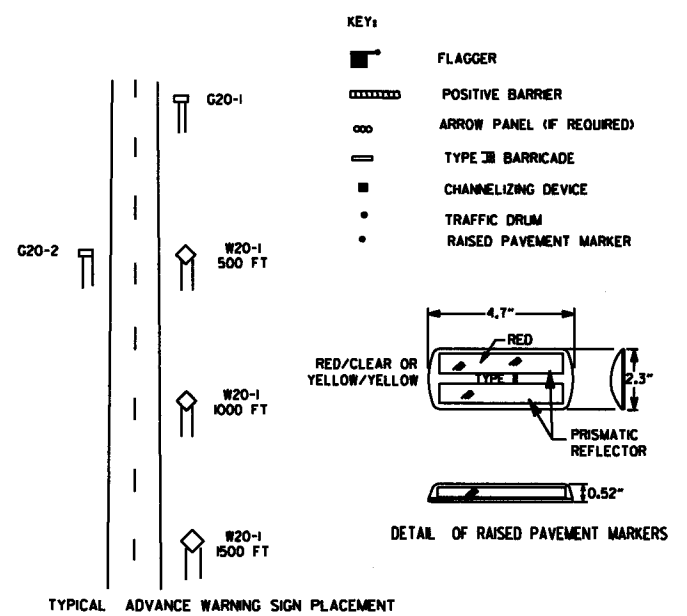


NOTES:  
 1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.  
 2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.  
 3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.  
 4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(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.

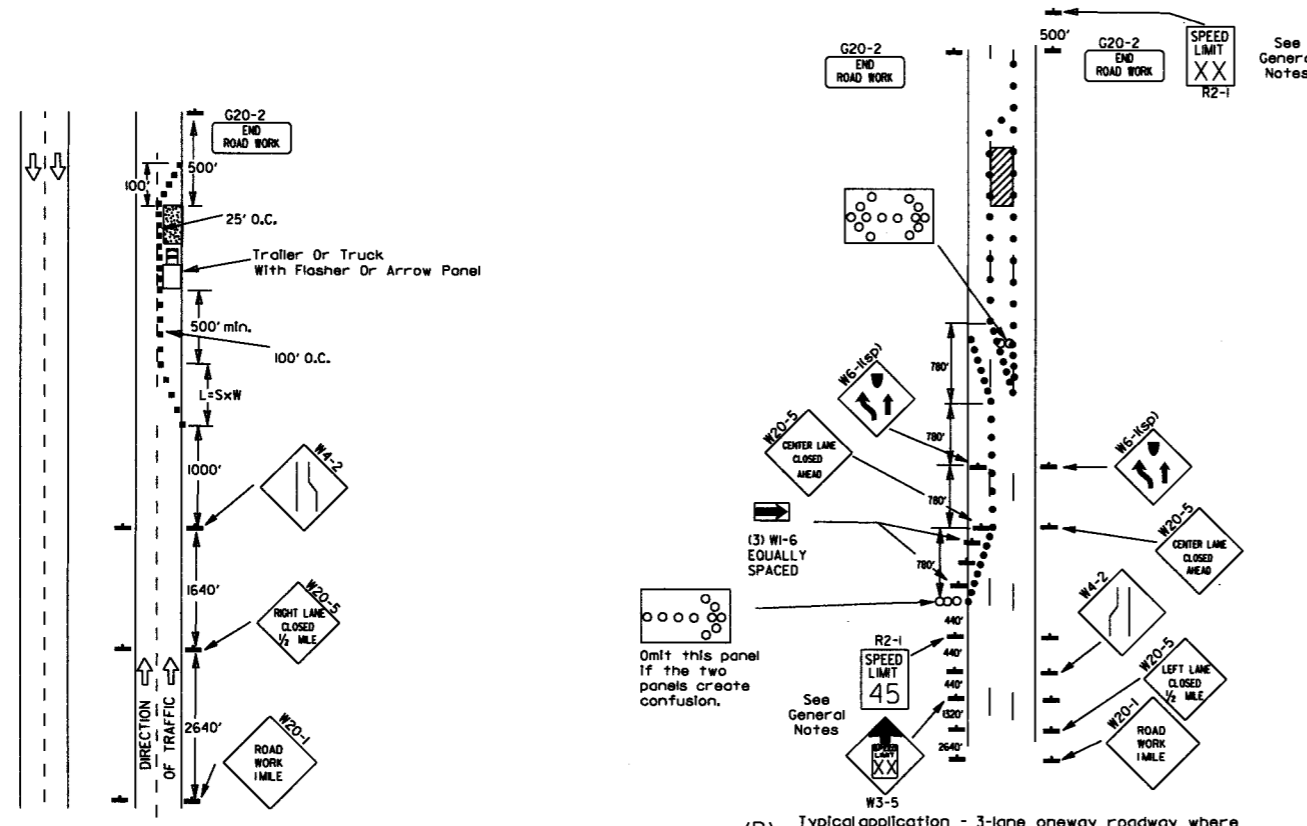


TAPER FORMULAE:  
 $L = SXW$  FOR SPEEDS OF 45MPH OR MORE.  
 $L = \frac{WS^2}{60}$  FOR SPEEDS OF 40MPH OR LESS.  
 WHERE:  
 L = MINIMUM LENGTH OF TAPER.  
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.  
 W = WIDTH OF OFFSET.

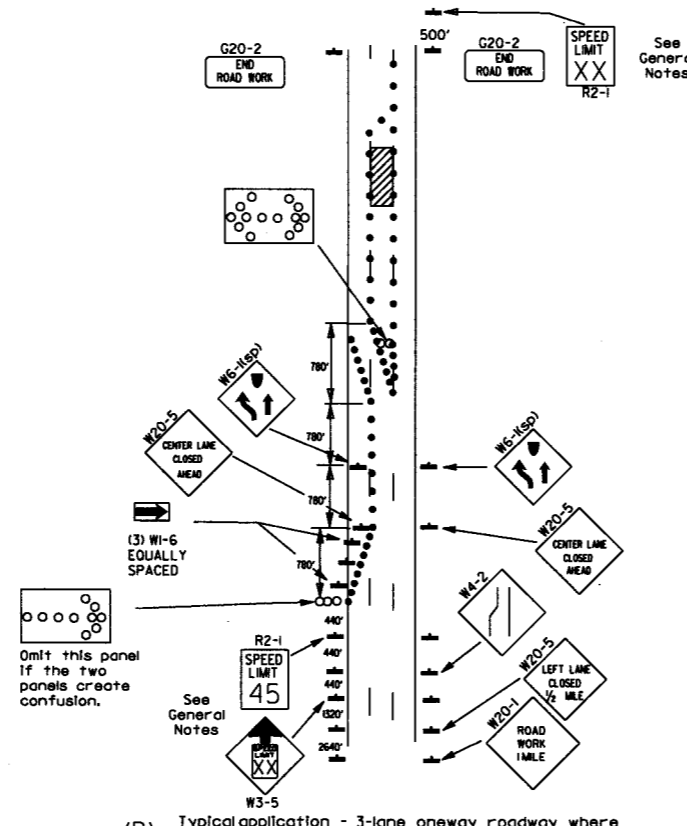
- GENERAL NOTES:  
 1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.  
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(K55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(KXX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.  
 3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-(K65) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(KXX) 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. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTIGUOUS 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.  
 8. 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.

9-2-85	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-1-10	ADDED (AFAD)	
1-20-08	REVISED SIGN DESIGNATIONS	
1-18-04	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.

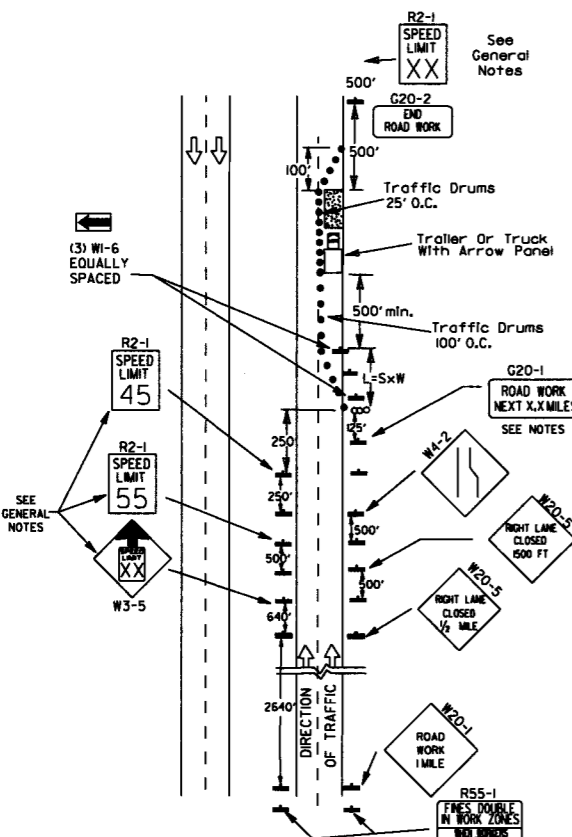


(B) Typical application - 3-lane one-way roadway where center lane is closed.

- KEY:
- Arrow Panel (if Required)
  - Channelizing Device
  - Traffic drum

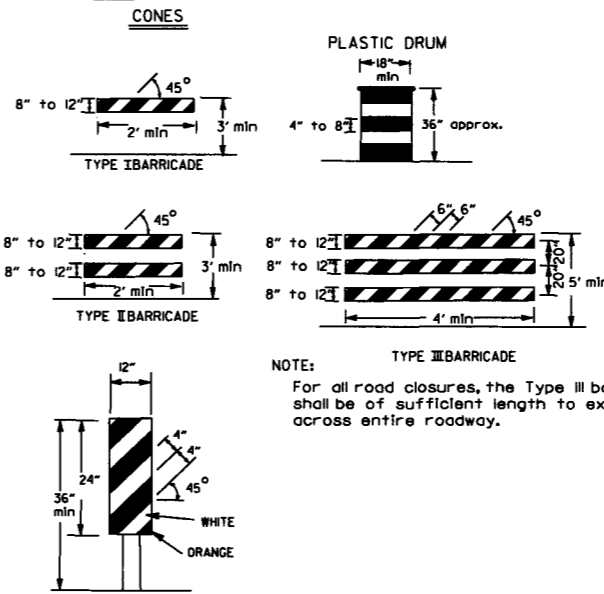
GENERAL NOTES:

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(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1(45) 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 55mph, the R2-1(65) shall be omitted. Additional R2-1(55) 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 125' 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.



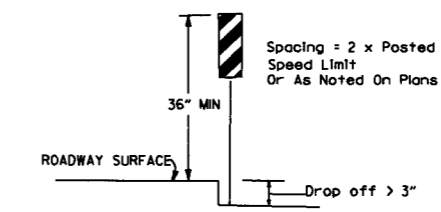
(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

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.

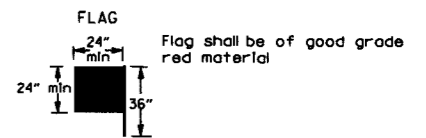
VERTICAL PANEL PLACEMENT



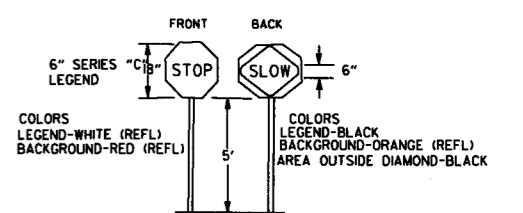
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
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

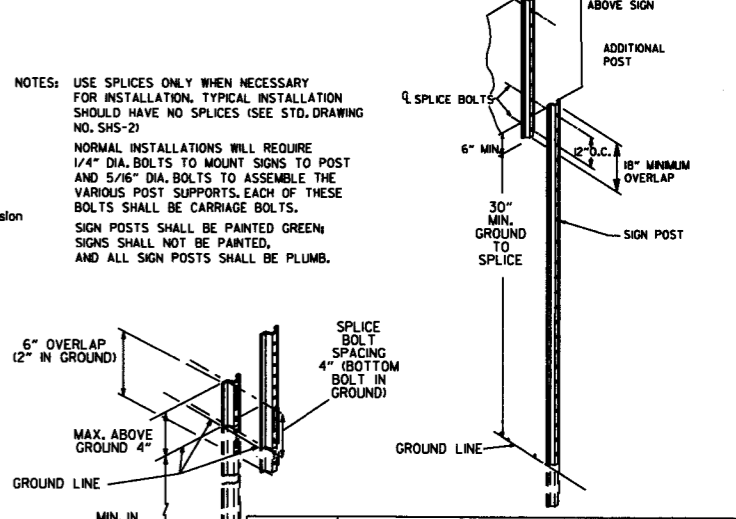
\* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



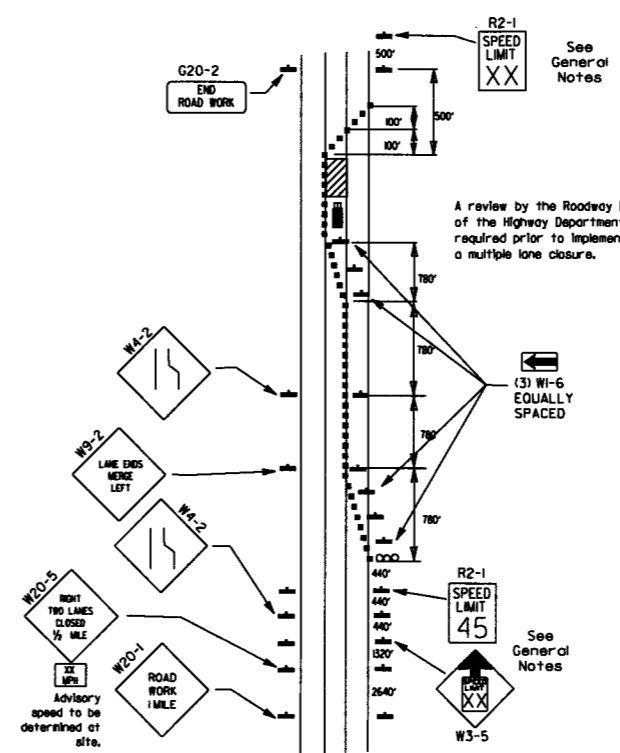
STOP SLOW PADDLE



DETAIL OF SPLICES



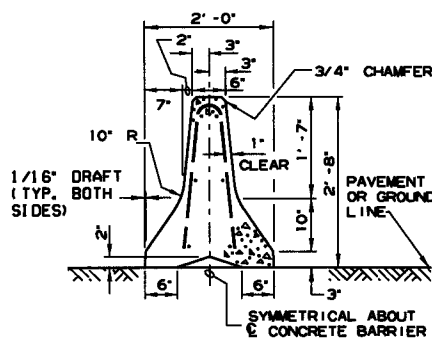
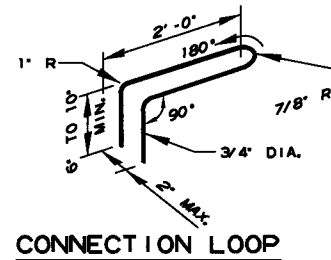
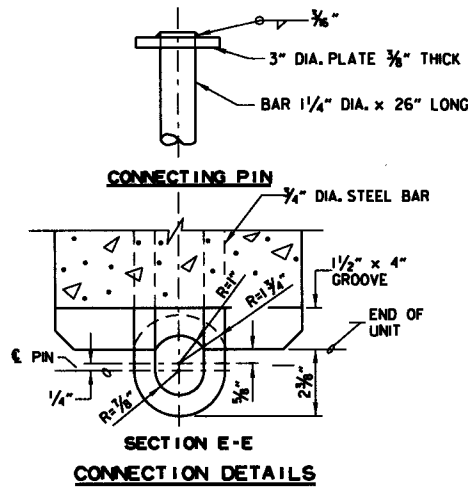
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2). NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS, EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS. SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



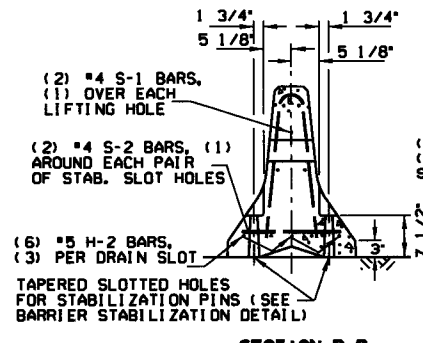
(D) Typical application - closing multiple lanes of a multi-lane highway.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
1-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) 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	

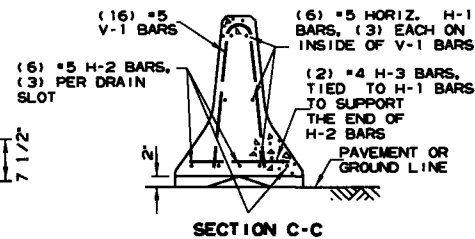
REINFORCING BAR TABLE PER BARRIER UNIT			
MARK	LOCATION	BAR SIZE	(NO. BARS)
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)
S-1	OVER LIFT HOLES	#4	(2)
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S & DRAIN SLOTS	#4	(2)
V-1	VERTICAL IN BARRIER @ EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)



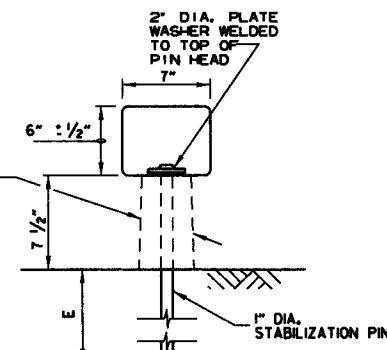
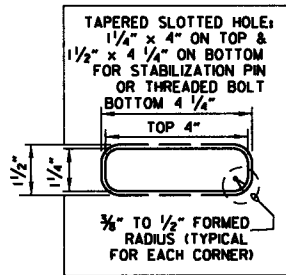
SECTION A-A



SECTION B-B



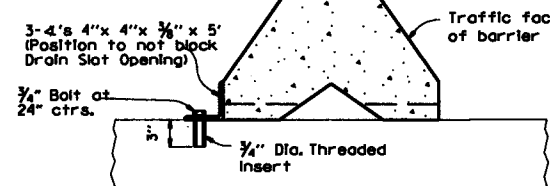
SECTION C-C



BARRIER STABILIZATION DETAIL

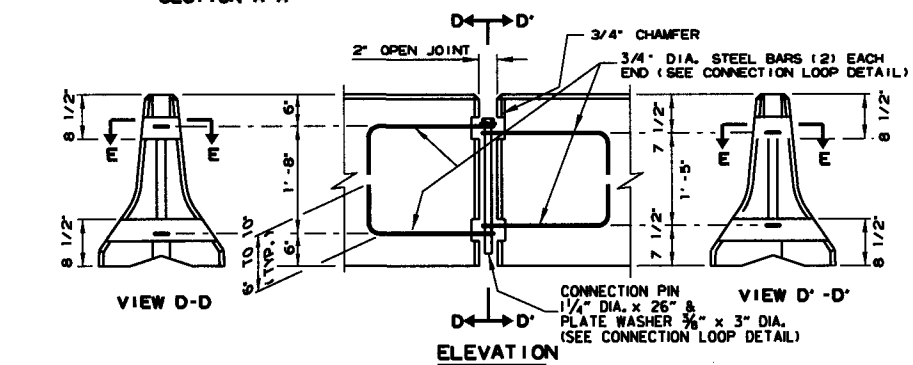
ROADWAY SECTION

- 4" - Concrete Pavement
- 8" - Asphalt Pavement
- 12" - Shoulder Areas

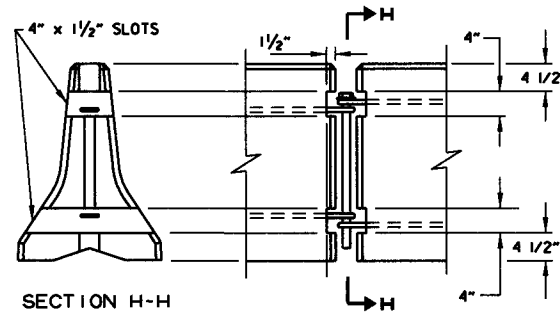


NOTE: 3/4" Threaded inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL  
BRIDGE DECKS

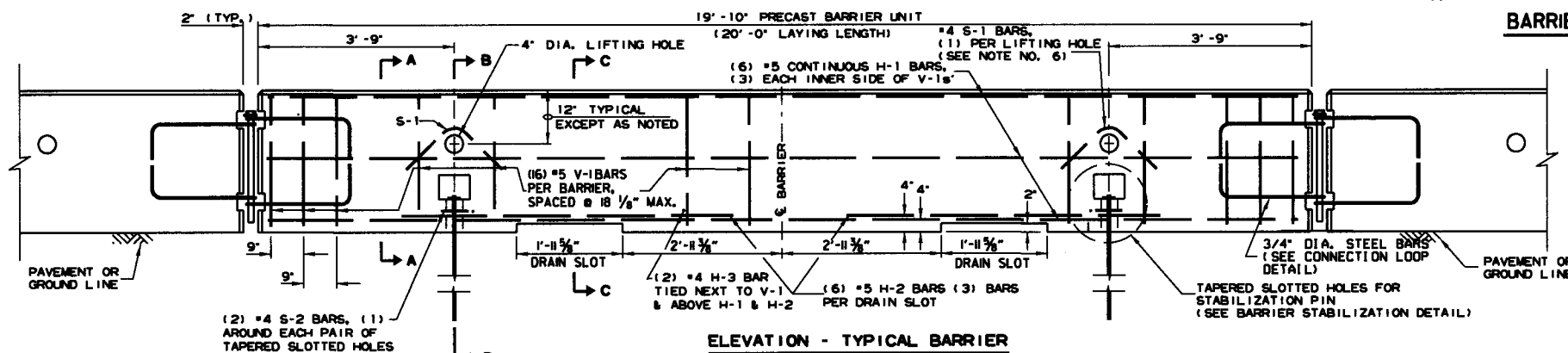


ELEVATION



SECTION H-H

BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

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 Steels AASHTO M 31 or M 53, Grade 60  
Structural Steels 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.

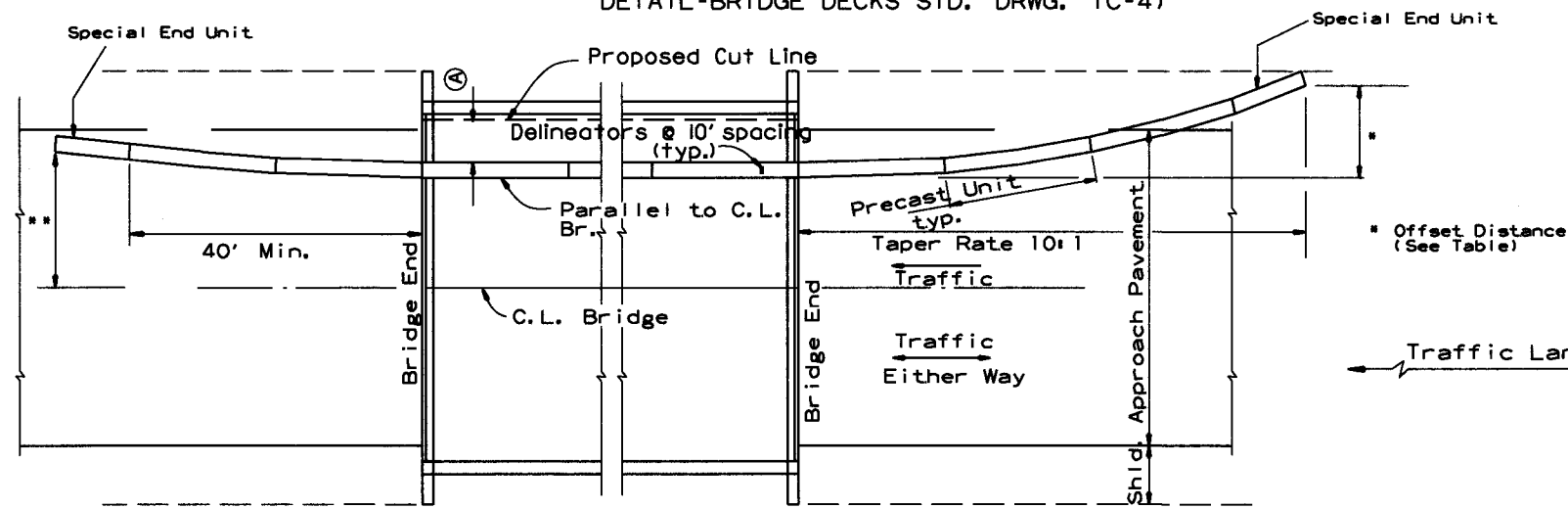
DATE	REVISION	FILED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
8-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
1-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS  
FOR HIGHWAY CONSTRUCTION -  
TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

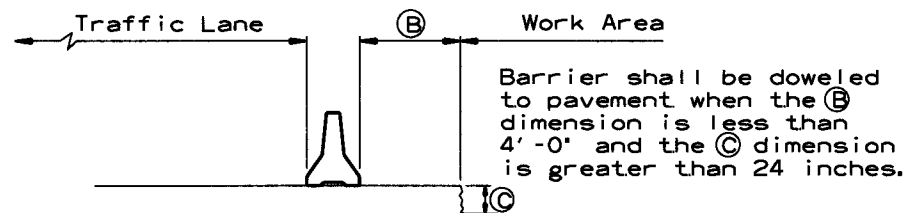
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



**BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET**

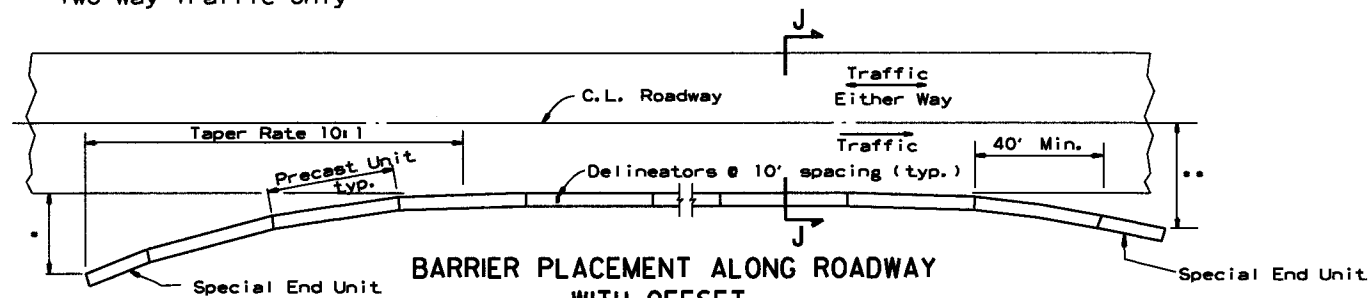
No Scale

\*\* Offset Distance for Two Way Traffic Only



**SECTION J-J**

No Scale



**BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET**

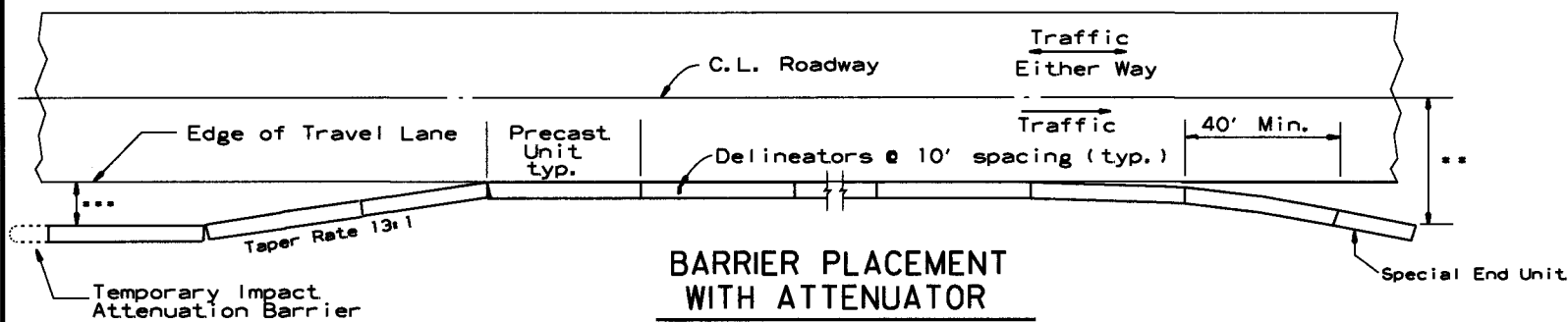
No Scale

\* Offset Distance (See Table)

\*\* Offset Distance For Two Way Traffic Only

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

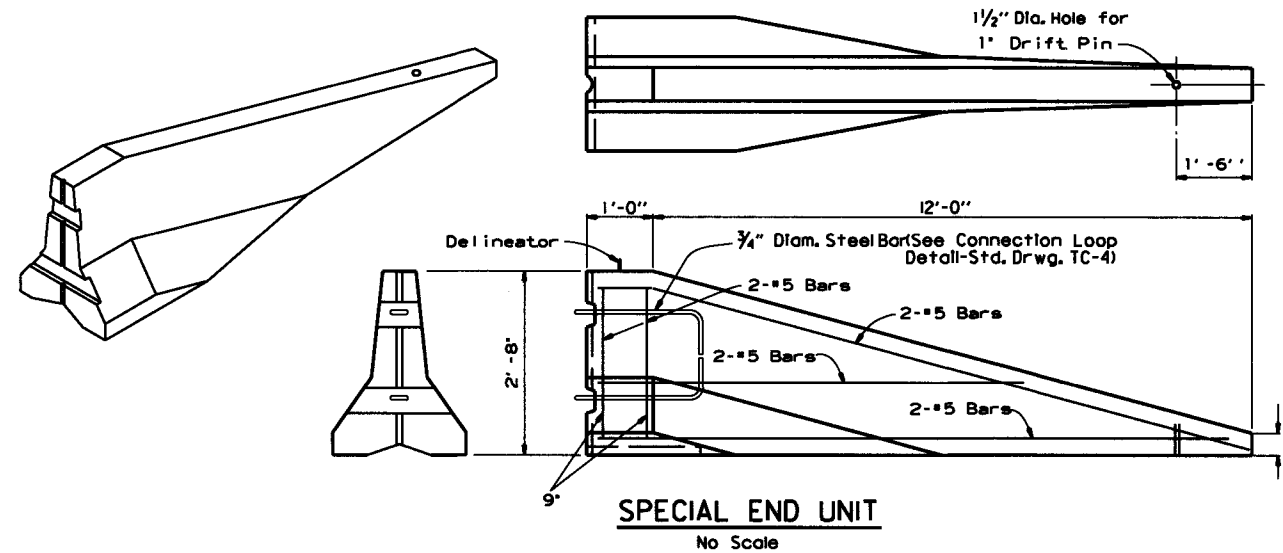


**BARRIER PLACEMENT WITH ATTENUATOR**

No Scale

\*\* Offset Distance For Two Way Traffic Only

\*\*\* Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator



**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."

DATE	REVISION	FILED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

**ARKANSAS STATE HIGHWAY COMMISSION**

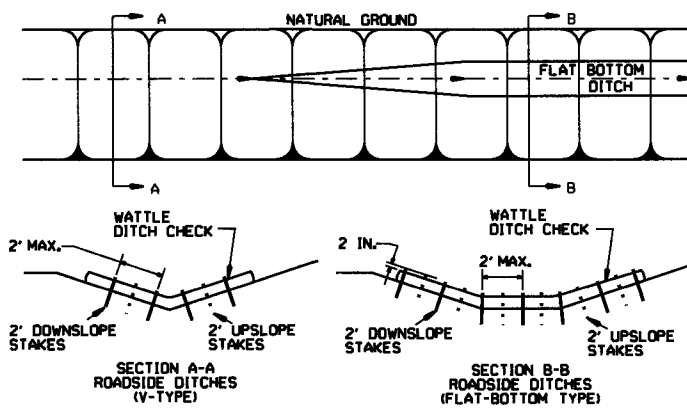
**STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER**

**STANDARD DRAWING TC-5**



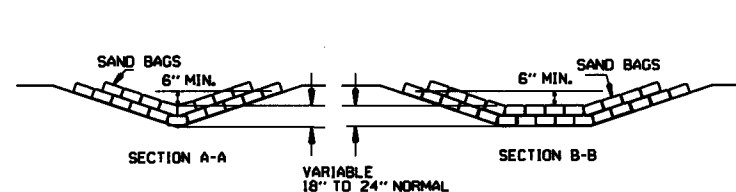
**GENERAL NOTES**

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

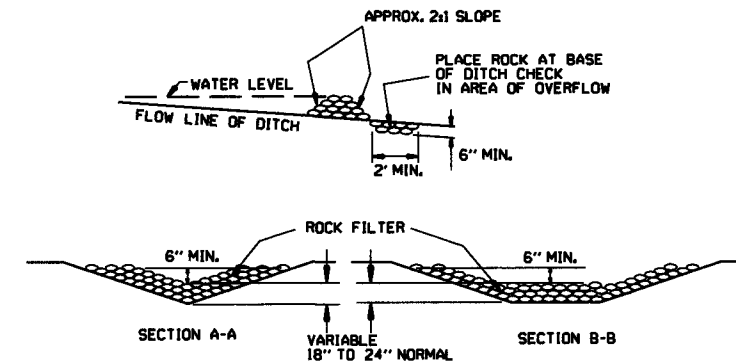


**WATTLE DITCH CHECK (E-1)**

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW.

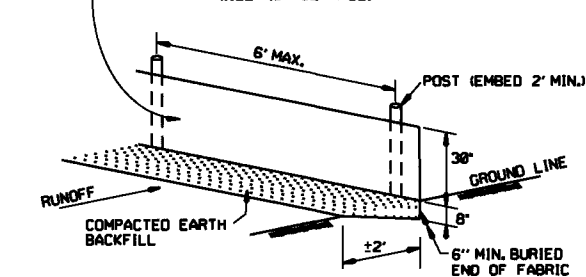


**SAND BAG DITCH CHECK (E-5)**

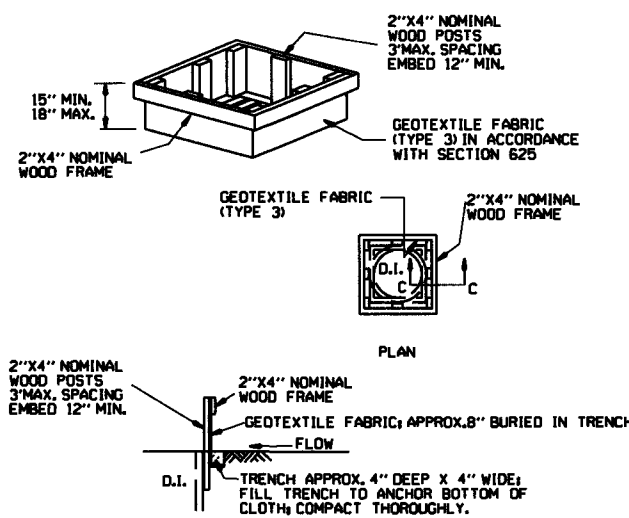


**ROCK DITCH CHECK (E-6)**

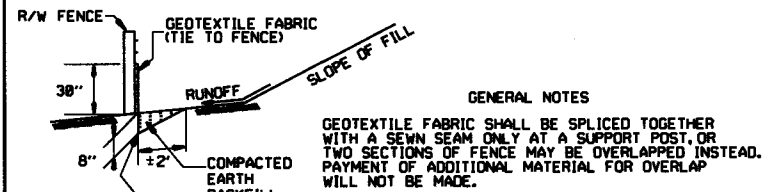
**GENERAL NOTES**  
 GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625  
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



**SILT FENCE (E-11)**

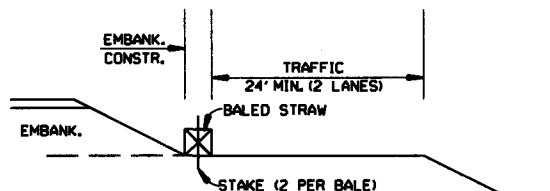


**DROP INLET SILT FENCE (E-7)**

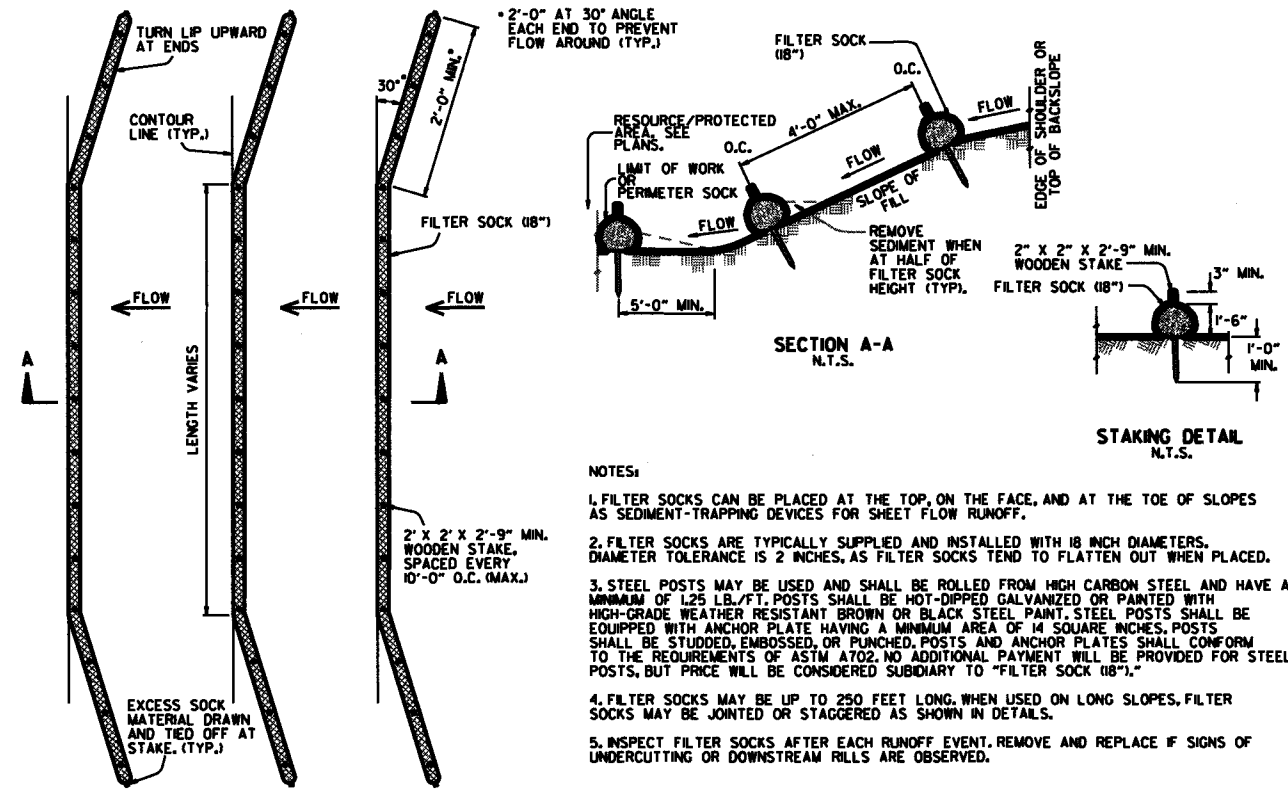


**SILT FENCE ON R/W FENCE (E-4)**

**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.

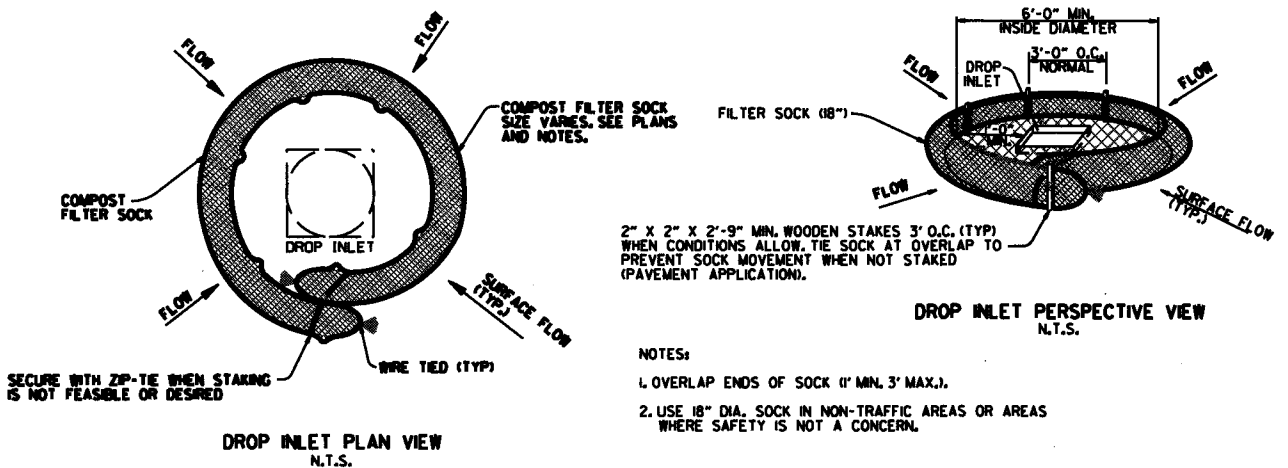


**BALED STRAW FILTER BARRIER (E-2)**



**FILTER SOCK ALONG SLOPE (E-3)**

**NOTES:**  
 1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.  
 2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.  
 3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18")".  
 4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.  
 5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

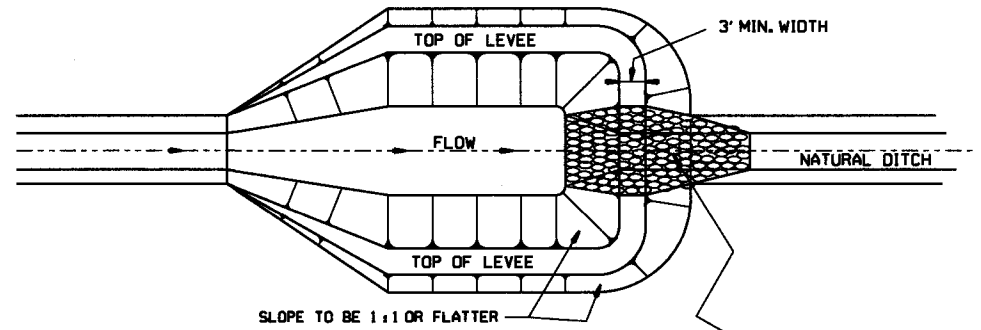


**COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)**

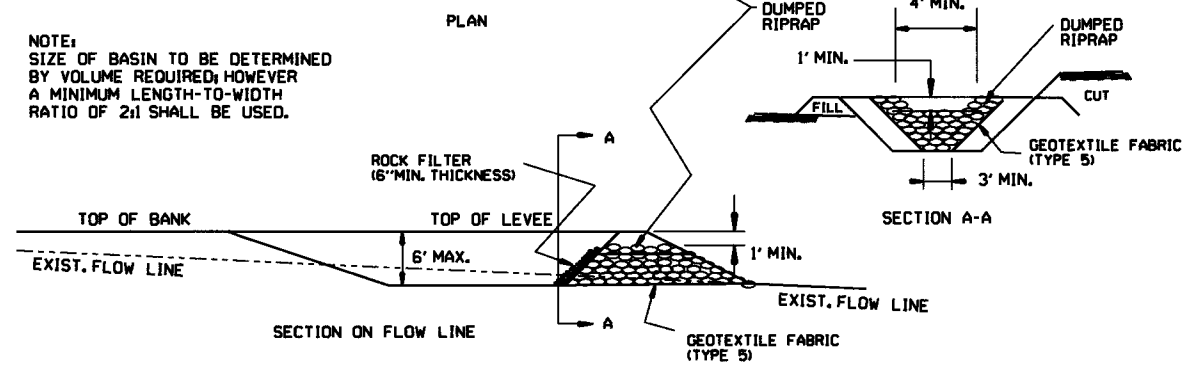
**NOTES:**  
 1. OVERLAP ENDS OF SOCK (1" MIN. 3" MAX.).  
 2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-25-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1, 4, 7 & 11 DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76
DATE	REVISION	FILMED

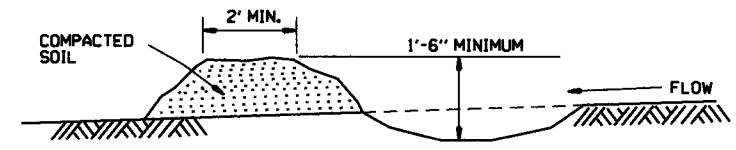
ARKANSAS STATE HIGHWAY COMMISSION  
 TEMPORARY EROSION CONTROL DEVICES  
 STANDARD DRAWING TEC-1



NOTE:  
SIZE OF BASIN TO BE DETERMINED  
BY VOLUME REQUIRED; HOWEVER  
A MINIMUM LENGTH-TO-WIDTH  
RATIO OF 2:1 SHALL BE USED.

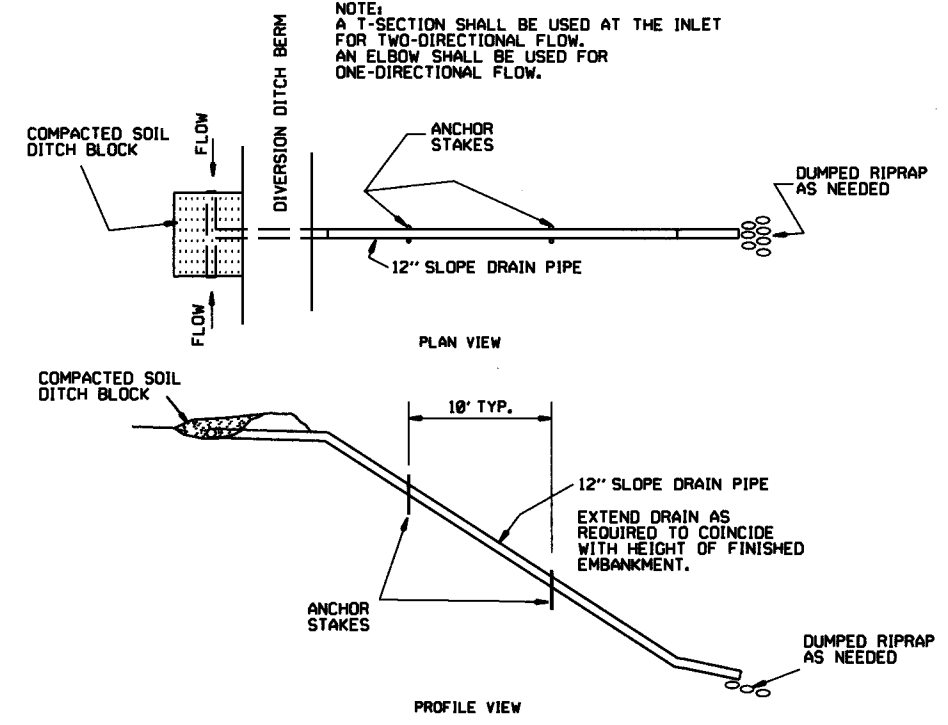


SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)

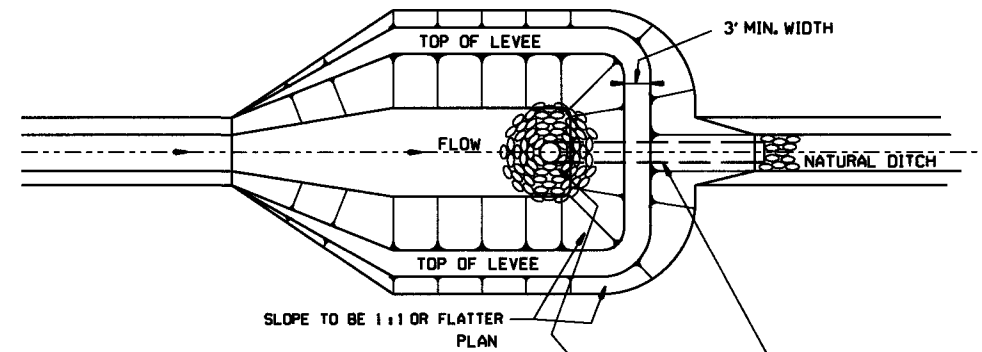


DIVERSION DITCH (E-8)

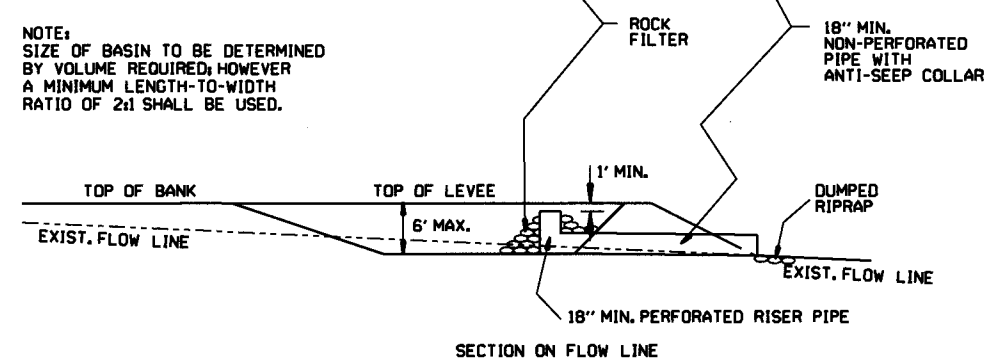
NOTE:  
A T-SECTION SHALL BE USED AT THE INLET  
FOR TWO-DIRECTIONAL FLOW.  
AN ELBOW SHALL BE USED FOR  
ONE-DIRECTIONAL FLOW.



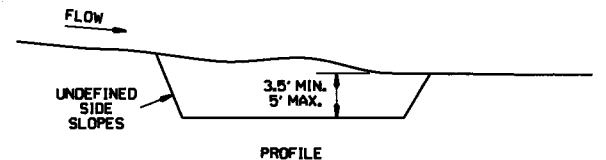
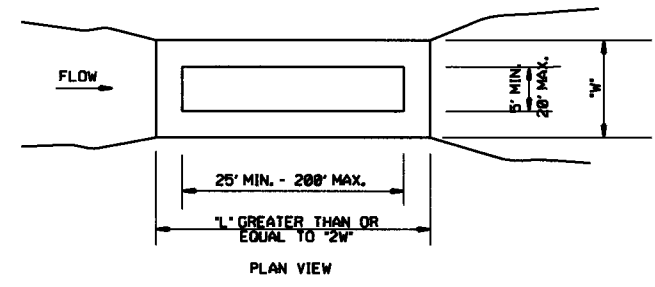
SLOPE DRAIN (E-12)



NOTE:  
SIZE OF BASIN TO BE DETERMINED  
BY VOLUME REQUIRED; HOWEVER  
A MINIMUM LENGTH-TO-WIDTH  
RATIO OF 2:1 SHALL BE USED.



SEDIMENT BASIN WITH PIPE OUTLET (E-10)



SEDIMENT BASIN (E-14)

6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

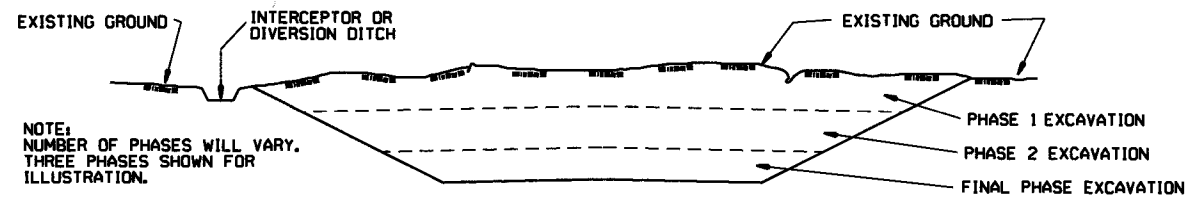
ARKANSAS STATE HIGHWAY COMMISSION  
TEMPORARY EROSION  
CONTROL DEVICES  
STANDARD DRAWING TEC-2

## 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.

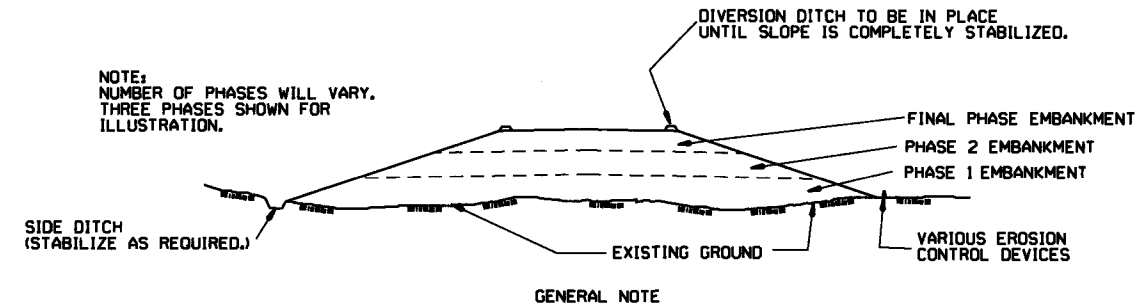
### GENERAL NOTE

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.

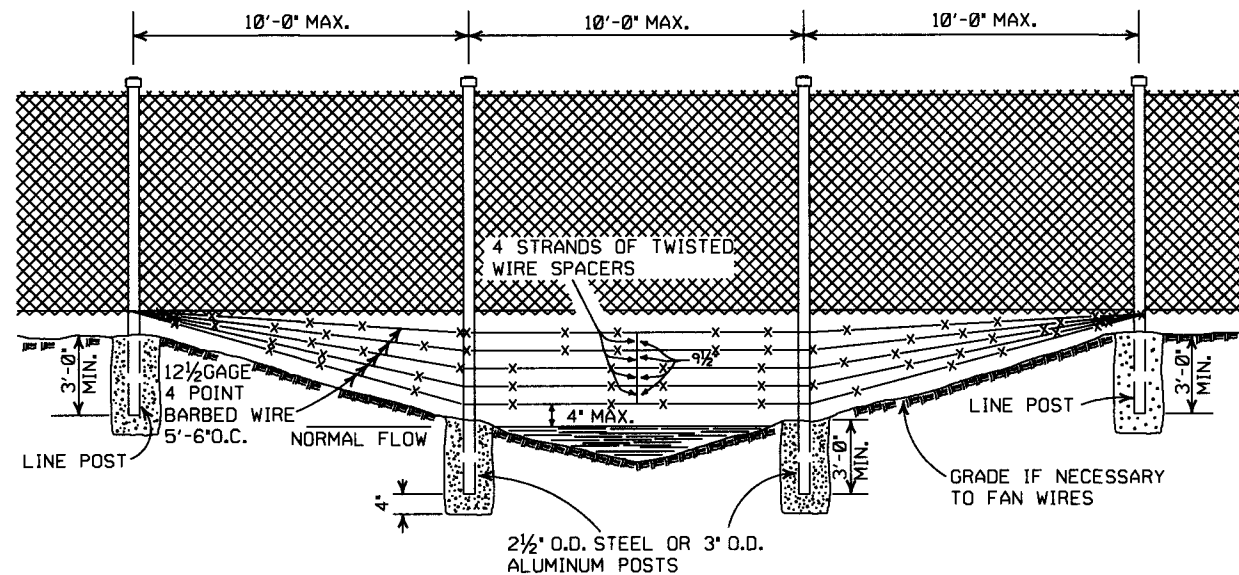
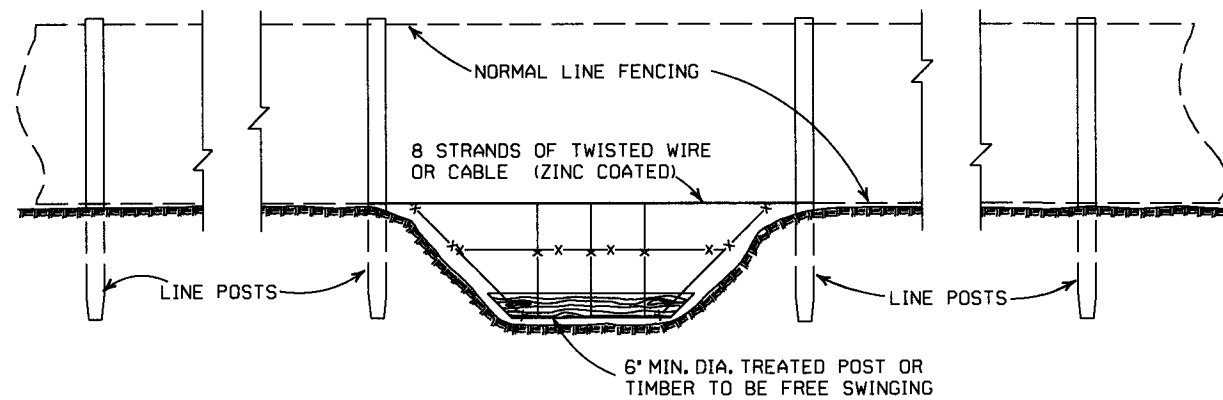
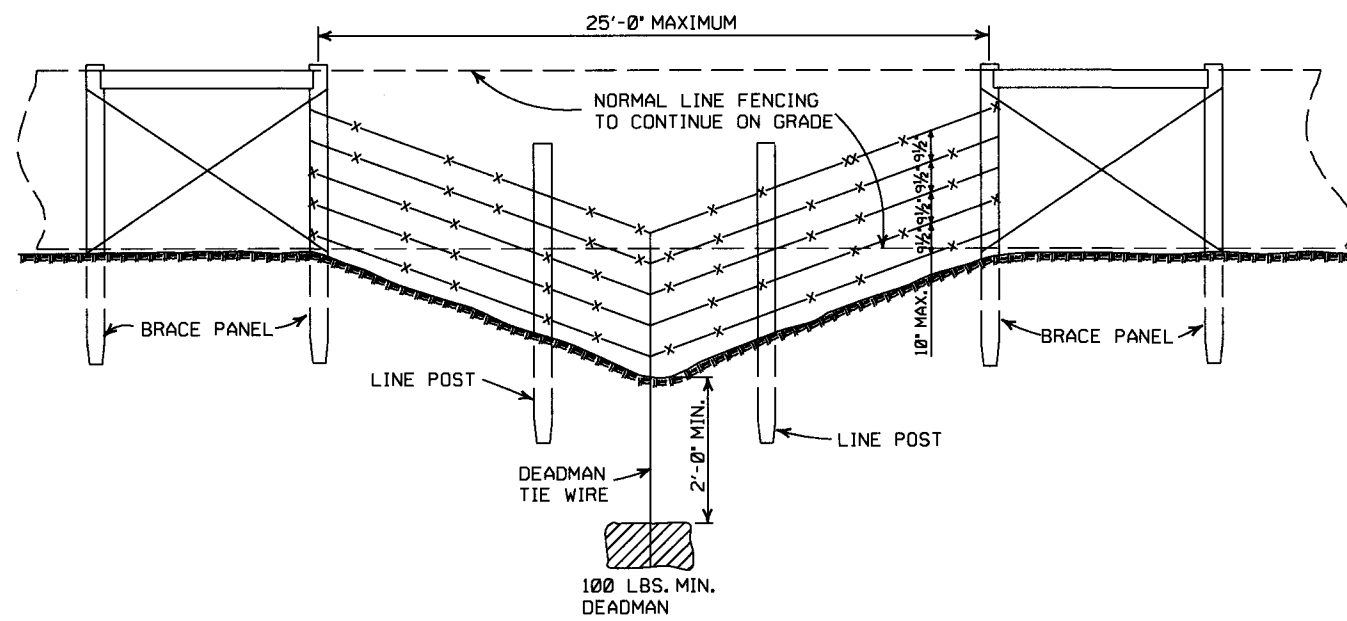
### GENERAL NOTE

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.

ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
STANDARD DRAWING TEC-3		
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94
DATE	REVISION	FILMED



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.

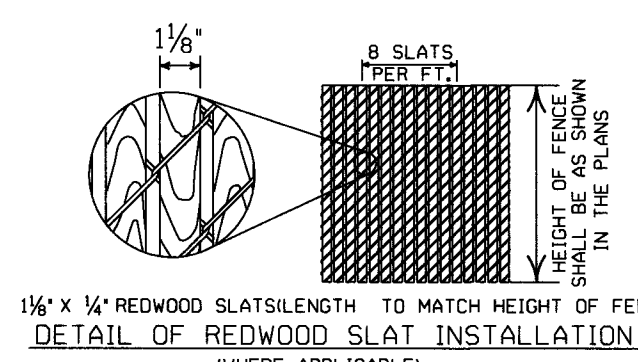
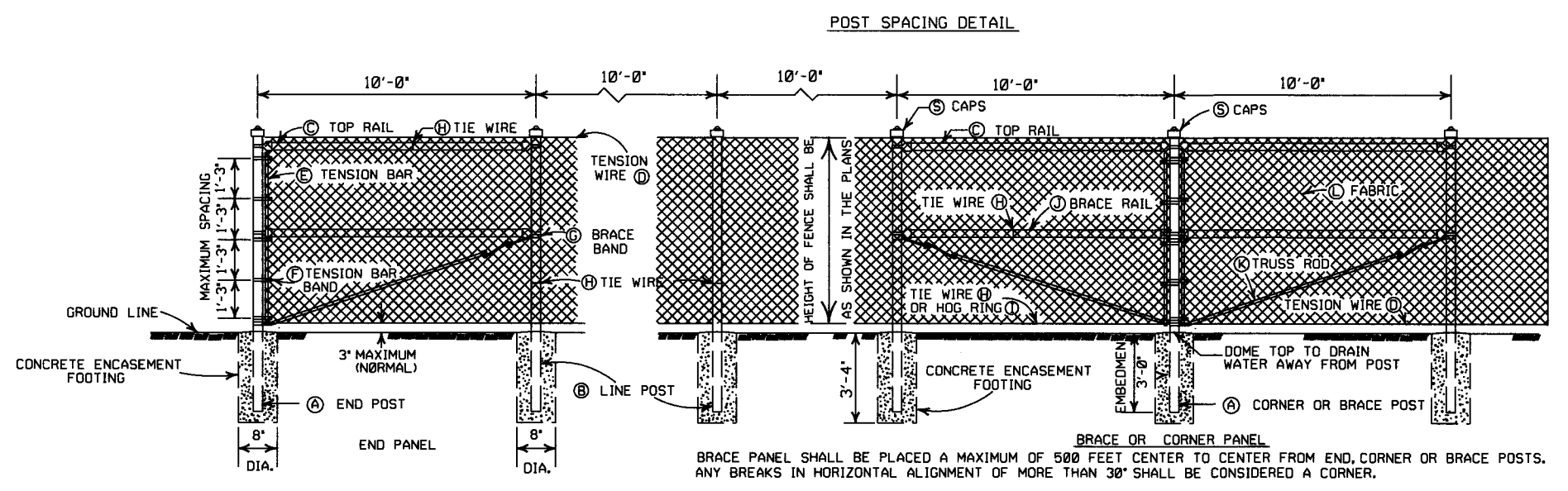
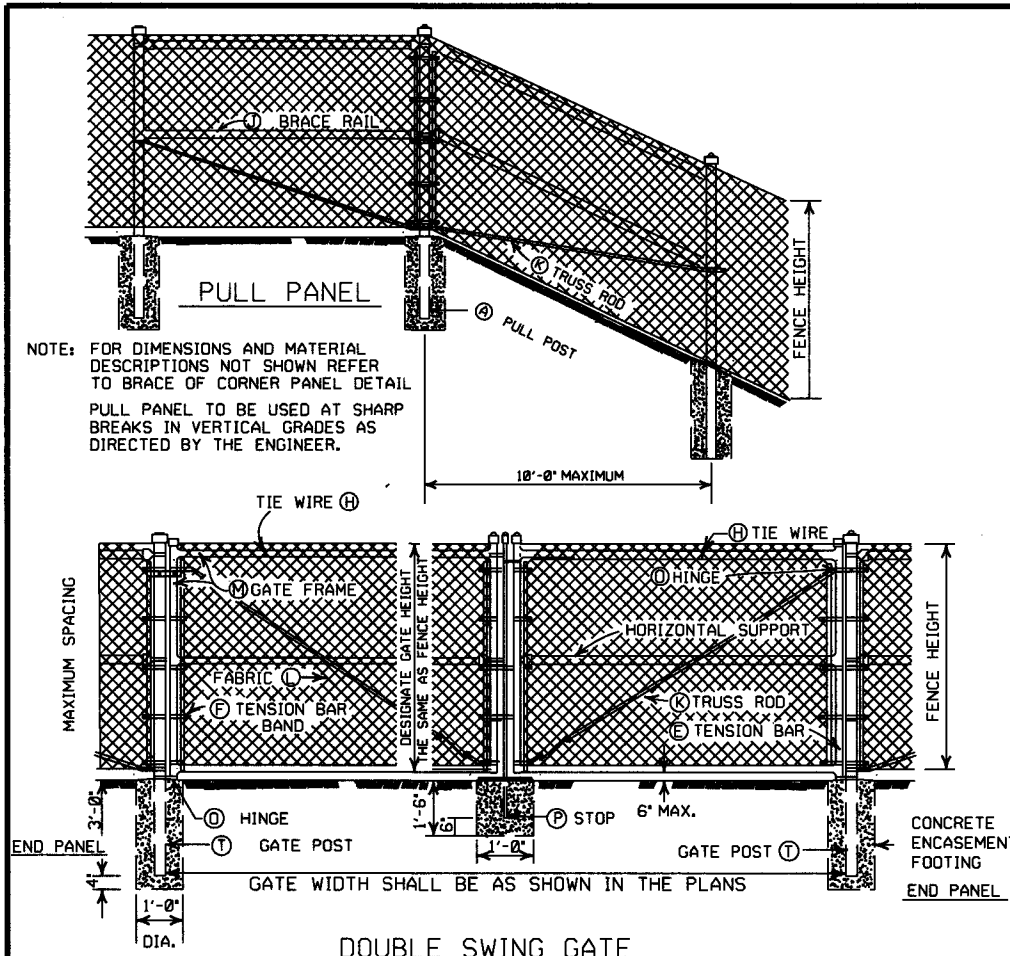
WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

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.

4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED AND REDRAWN	529-10-2-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION  
**WIRE FENCE WATER GAPS**  
 STANDARD DRAWING WF-2



- GENERAL NOTES:**
- (C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.
  - (D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.
  - (J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.
  - (L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.
  - (M) GATE FRAMES: SHALL BE CONSTRUCTED OF TUBULAR MEMBERS ASSEMBLED BY USE OF HEAVY PRESSED STEEL, MALLEABLE FITTINGS OR BY WELDING. ALL GATES SHALL HAVE ONE HORIZONTAL SUPPORT EXTENDING THE WIDTH OF THE GATE AT THE MIDPOINTS OF VERTICAL FRAME MEMBERS. THE COMPLETE FRAME SHALL BE RIGID AND HAVE AMPLE STRENGTH TO BE FREE FROM SAG AND TWIST.
  - (O) HINGES: SHALL BE OF HEAVY PATTERN, OF ADEQUATE STRENGTH FOR GATE, AND WITH LARGE BEARING SURFACES FOR CLAMPING IN POSITION. THE HINGE SHALL BE OF THE PROPER TYPE TO ALLOW FOR THE DESIGNATED DEGREE OF SWING. THE HINGE SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATES SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON.
  - (P) LATCHES AND STOPS: SHALL BE PROVIDED FOR ALL GATES. GATES SHALL HAVE A DROP BAR LATCH. LATCHES SHALL BE ARRANGED FOR LOCKING. THE STOP FOR DROP BAR LATCHES SHALL BE SET IN CONCRETE AND ENGAGE THE PLUNGER OF THE BAR LATCH.
  - (S) CAPS: ALL POSTS, EXCEPT ROLL FORMED POSTS AND 'T' POSTS SHALL BE CAPPED OVER THE EXTERIOR OF THE POST, AND SHALL CONFORM TO ASTM F626.

HEIGHT OF FENCE FABRIC	(A)		(B)		(C)			(D)		(E)		(F)		(G)		
	END, PULL CORNER OR BRACE POST	LINE POSTS	SIZE	TIE SPACING	SIZE	TIE SPACING	MIN. LENGTH	SIZE	TIE SPACING	SIZE	LENGTH	SIZE	BOLT SIZE	SPACING	SIZE	BOLT SIZE
6' AND LESS	2 1/2" O.D.	2" O.D.	2" O.D.	1 TIE EVERY 1'-2" OF FENCE HEIGHT	1 1/2" O.D.	1 TIE EVERY 2'-0"	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	MIN. OF 3/8" x 3/4"	MIN. OF 2" LESS THAN FABRIC HEIGHT	3/4" x 0.074	3/8" x 1 1/4"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	3/4" x 0.105	3/8" x 1 1/4"
OVER 6' TO 12' INCL.	3" O.D.	2 1/2" O.D.	2 1/2" O.D.	1 TIE EVERY 2'-0"	1 1/2" O.D.	1 TIE EVERY 2'-0"			1 TIE EVERY 1'-0"	3/8" x 3/4"	2" LESS THAN FABRIC HEIGHT	3/4" x 0.074	3/8" x 1 1/4"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	3/4" x 0.105	3/8" x 1 1/4"

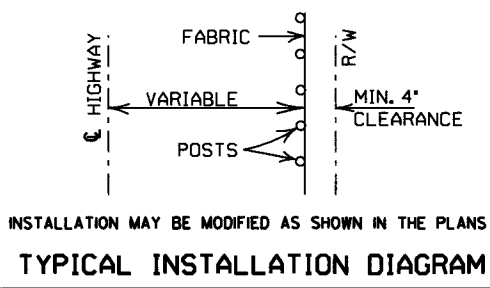
  

HEIGHT OF FENCE FABRIC	(H)	(I)	(J)		(K)	(L)			(M)	(N)		(O)		(P)	
	TIE WIRE	HOG RING	BRACE RAIL SIZE	TIE SPACING	TRUSS ROD MIN. OF 3/8" ROUND WITH TIGHTENERS AND FITTINGS	FABRIC SIZE	MESH	SELVAGE	KNUCKLING AND/OR TWISTING	GATE FRAME SIZE	TIE SPACING	HORIZONTAL SUPPORT SIZE	TIE SPACING	HINGE TYPE 180° SWING	GATE POST GATE WIDTH GATE WIDTH OVER 12' AND LESS 12' TO 24' INCL.
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1 1/2" O.D.	1 TIE EVERY 2'-0"	MIN. OF 3/8" ROUND WITH TIGHTENERS AND FITTINGS	9 GA.	2"		2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.
OVER 6' TO 12' INCL.	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1 1/2" O.D.	1 TIE EVERY 2'-0"	MIN. OF 3/8" ROUND WITH TIGHTENERS AND FITTINGS	9 GA.	2"		2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 2 1/2" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3 1/2" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3 1/2" FOR FENCE HEIGHT OF 6' AND LESS, ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER. MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS. 9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.



**POSTS AND RAILS**

SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY				GRADE 2		
	O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.		O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
			STEEL	ALUMINUM			
1 1/2	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.120	2.28
2 1/2	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.160	4.64
3 1/2	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

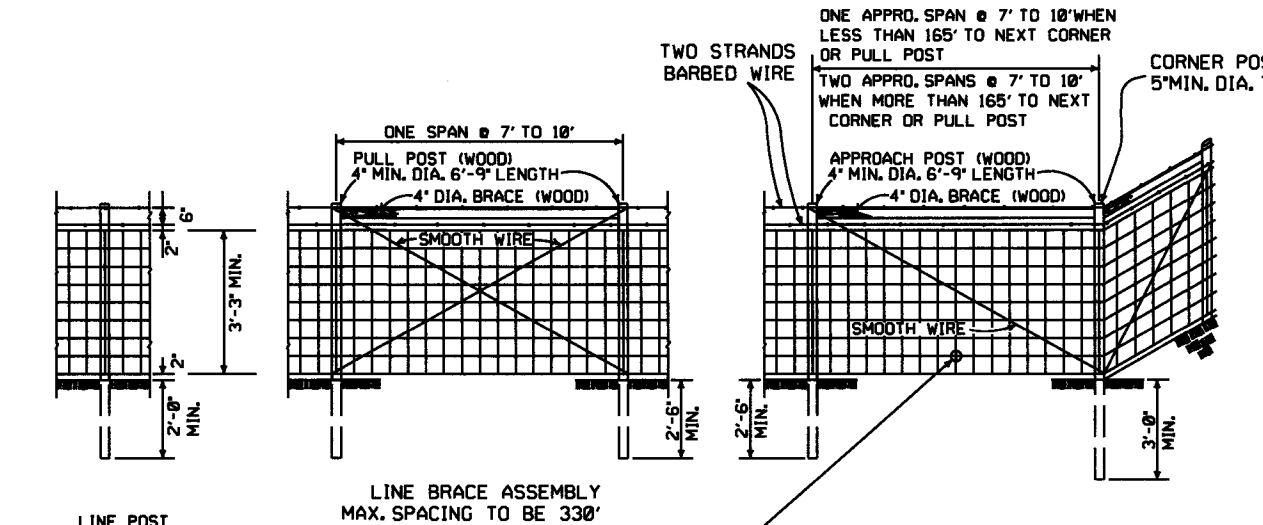
TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-09	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES, REMOVED TABLE, & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST DETAIL & ADDED NOTE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

**ARKANSAS STATE HIGHWAY COMMISSION**

**CHAIN LINK FENCE**

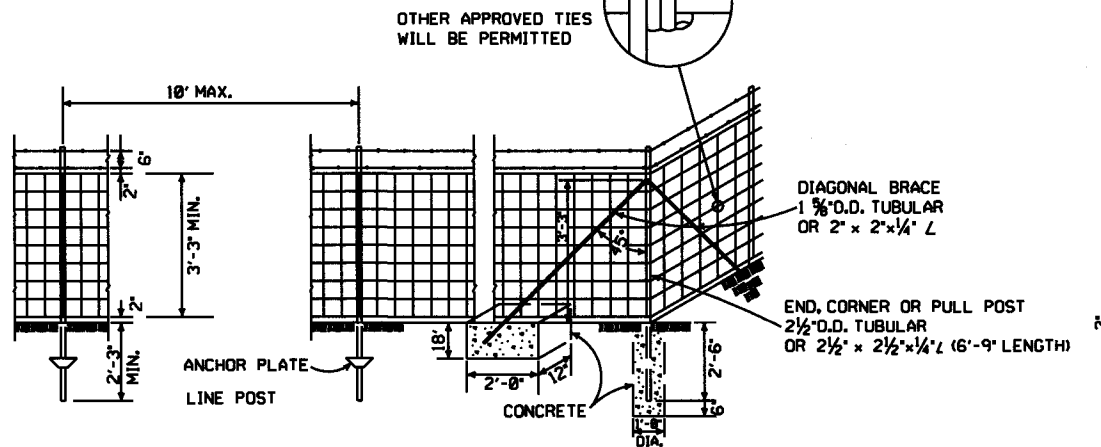
**STANDARD DRAWING WF-3**



LINE POST  
3" MIN. DIA. 6'-3" LENGTH  
MAX. SPACING TO BE 10'-0"

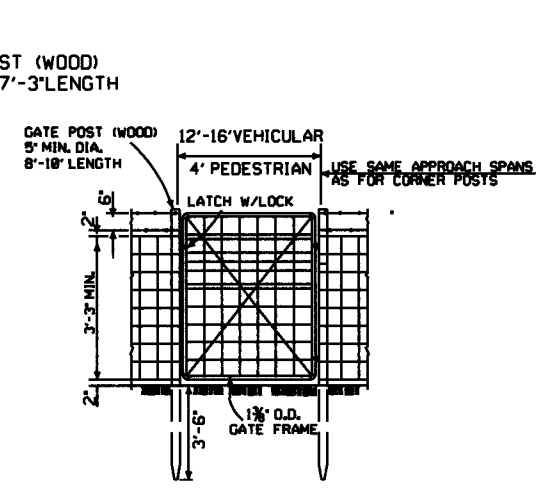
LINE BRACE ASSEMBLY  
MAX. SPACING TO BE 330"

TYPE C FENCE (WOOD POSTS)



NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.

TYPE C FENCE (STEEL POSTS)



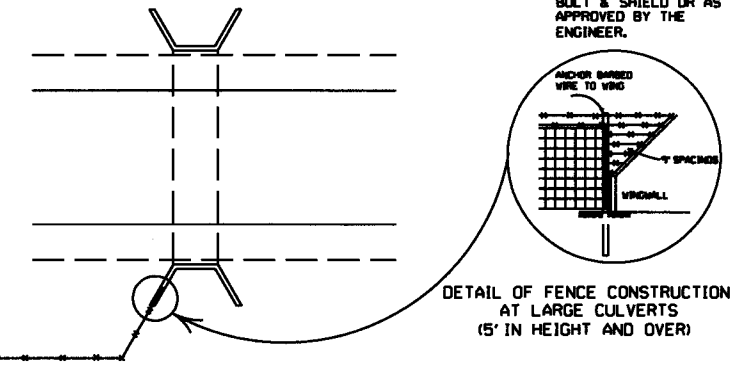
**GENERAL NOTES:**  
STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE.  
AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN 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.

NOTE: USE 3/4" X 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.

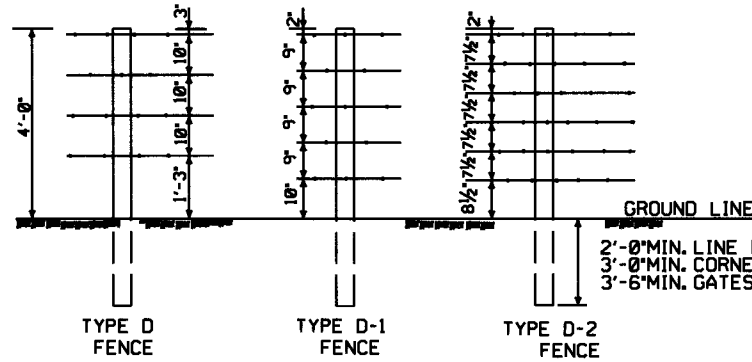


SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE 'EYE METHOD' AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

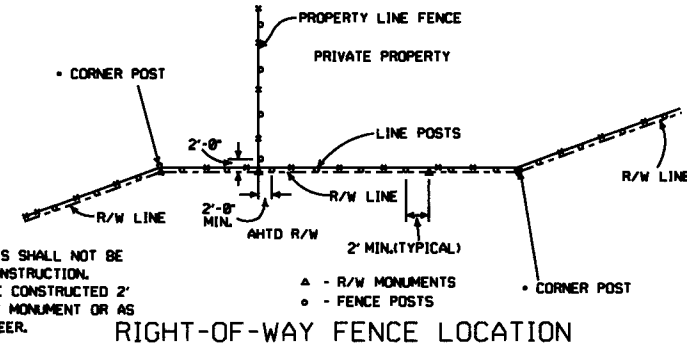
SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE 'WESTERN UNION METHOD' AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

- 4 STRANDS BARBED WIRE (D)
- 5 STRANDS BARBED WIRE (D-1)
- 6 STRANDS BARBED WIRE (D-2)

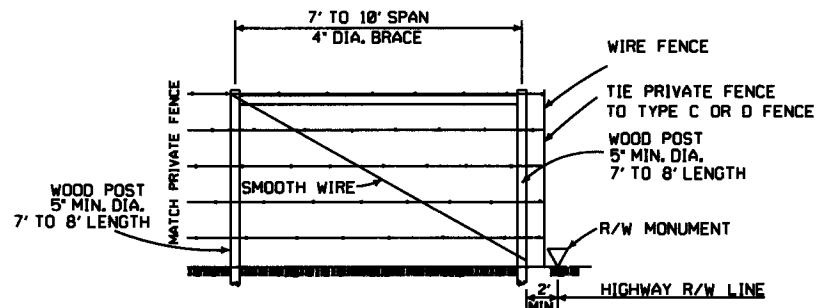


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.

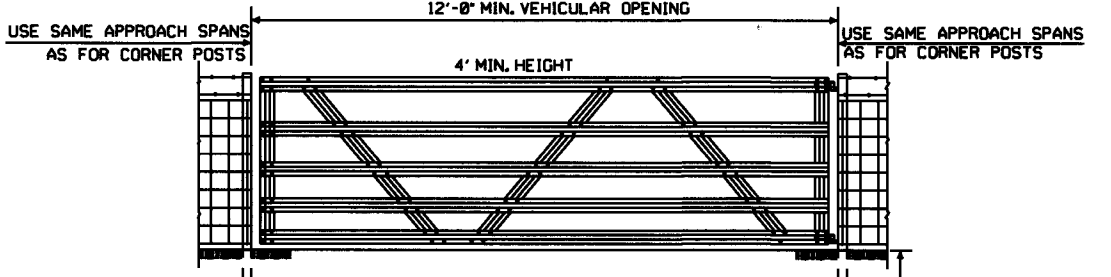


NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



PRIVATE FENCE TERMINAL INSTALLATION  
WHERE EXISTING FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN IN TYPE C FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.



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	FILMED
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

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE  
TYPE C AND D

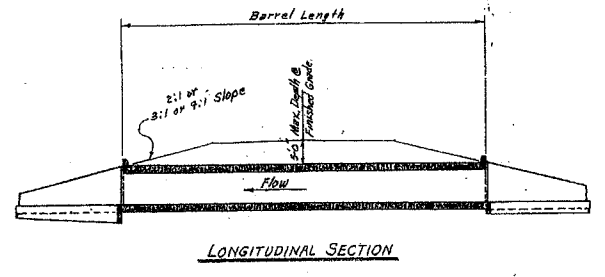
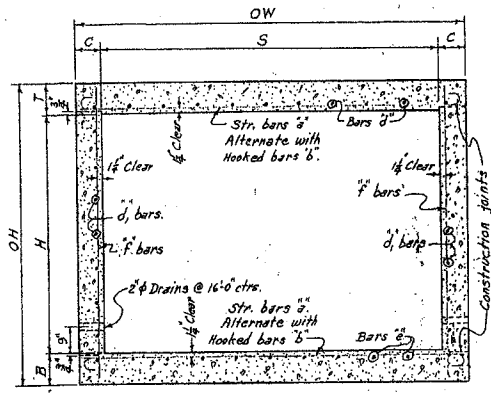
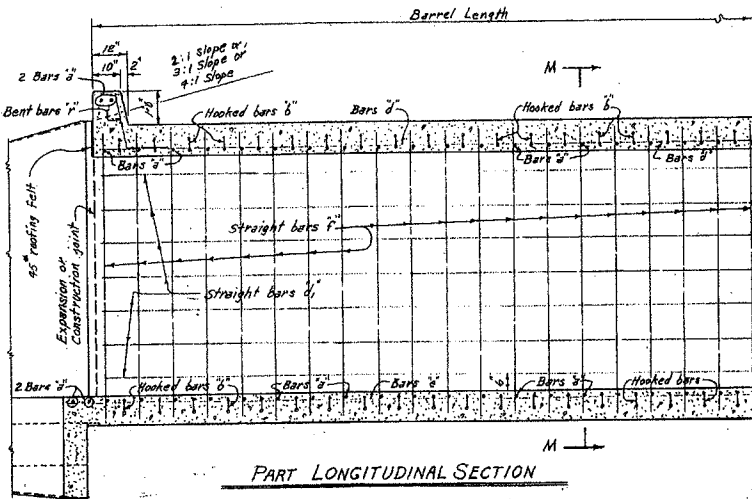
STANDARD DRAWING WF-4

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	DIMENSIONS										QUANTITIES																						
			a bars					b bars					c bars					d bars					e bars					f bars							
			STRAIGHT					BENT - See Diagram below.					STRAIGHT					STRAIGHT					STRAIGHT												
D	S	H	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH
<p>0'-0" TO 5'-0" MAXIMUM</p> <p>1 @ 10' 1 @ 12' 1 @ 14' 1 @ 16' 1 @ 18' 1 @ 20' 1 @ 22' 1 @ 24' 1 @ 26' 1 @ 28' 1 @ 30' 1 @ 32' 1 @ 34' 1 @ 36' 1 @ 38' 1 @ 40' 1 @ 42' 1 @ 44' 1 @ 46' 1 @ 48' 1 @ 50' 1 @ 52' 1 @ 54' 1 @ 56' 1 @ 58' 1 @ 60'</p>																																			

MAX. DESIGN DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	DIMENSIONS										QUANTITIES																		
			BARREL DIMENSIONS					UNIT QUANTITIES					REINFORCING STEEL					ADDITIONAL													
			D <th>S <th>H <th>A <th>OW <th>T <th>C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th></th></th></th></th></th></th>	S <th>H <th>A <th>OW <th>T <th>C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th></th></th></th></th></th>	H <th>A <th>OW <th>T <th>C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th></th></th></th></th>	A <th>OW <th>T <th>C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th></th></th></th>	OW <th>T <th>C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th></th></th>	T <th>C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th></th>	C <th>B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th></th>	B <th>OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th></th>	OH <th>CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th></th>	CUIVD <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th></th>	PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th></th>	PER LAP <th>PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th></th>	PER TWO HEADWALLS APPROX. <th>PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th></th>	PER LIN. FT. OF BARREL <th>PER LAP <th>PER TWO HEADWALLS APPROX. </th></th>	PER LAP <th>PER TWO HEADWALLS APPROX. </th>	PER TWO HEADWALLS APPROX.													
<p>5'-0"</p>																															

Note: For details of wings and bar lags, see Drawing Nos. W-X002-1, W-X003-1, W-X004-1 or W-X005-1 or W-X006-1.



**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 32'-0". Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS- Construction joints between wingwalls, sidewalls and slabs shall be only where shown on plans.

SPECIFICATIONS- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

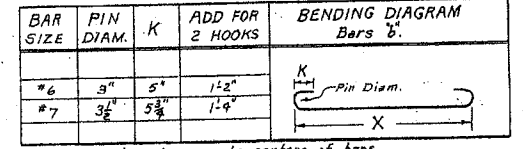
**DESIGN LIVE LOAD**  
 H20-S16 LOADING A.A.S.H.O. 1961  
 AND  
**SPECIAL MILITARY LOADING**  
 Two 25,000 Lb. Axles @ 9'-0" ctrs.

**UNIT STRESSES:-**  
 Class S Concrete (n=10) 1800 psi  
 Reinforcing Steel 24,000 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'-6" 7'-0" 9'-0" 11'-0" 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. Checked By: B.H.S. 5-28-63  
 Drawn By: W.C.H. 2-8-63. Checked By: B.H.S. 5-29-63  
 Quantities By: W.C.H. 2-12-63. Checked By: B.H.S. 5-29-63

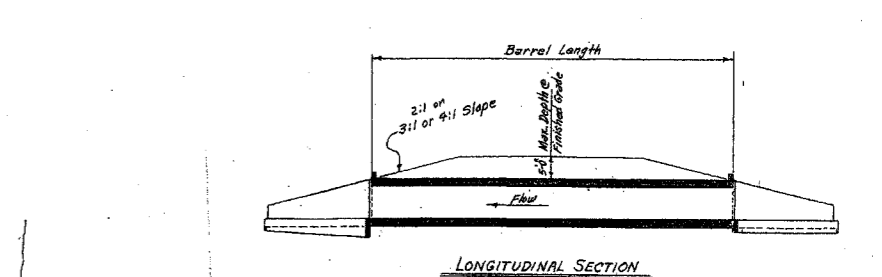
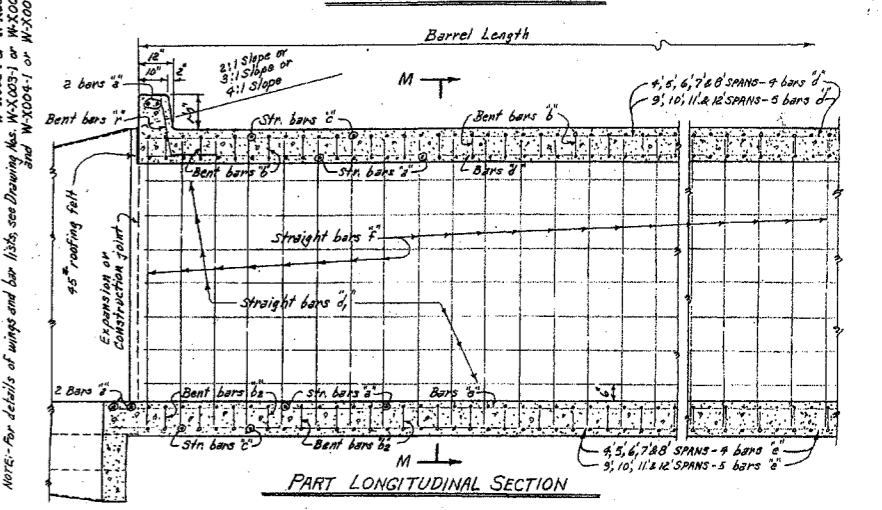
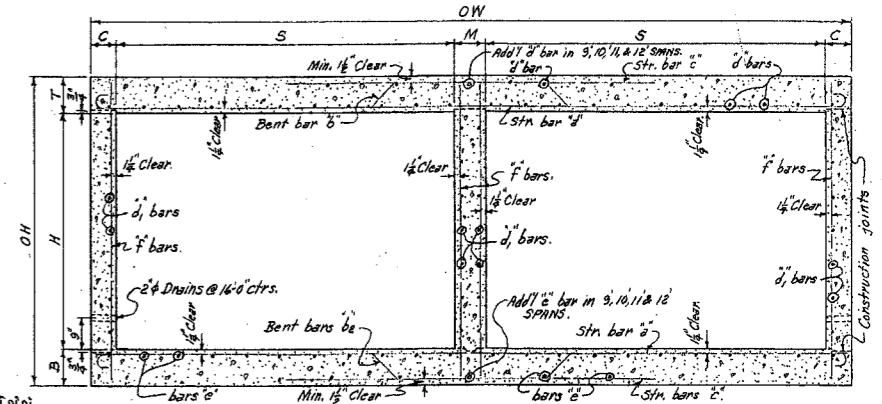


SPAN	SIZE	SPACING	NO. REQ'D	LENGTH	X
4'	#4	11"	12	2'-6"	1'-3"
5'	#4	11"	14	2'-7"	1'-3 1/2"
6'	#4	11"	16	2'-8"	1'-4"
7'	#4	11"	18	2'-9"	1'-4 1/2"
8'	#4	11 1/2"	20	2'-11"	1'-5 1/2"
9'	#4	11 1/2"	22	3'-0"	1'-6"
10'	#4	11 1/2"	24	3'-1"	1'-6 1/2"
11'	#4	12"	26	3'-2"	1'-7"
12'	#4	12"	28	3'-3"	1'-7 1/2"

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEARSPAN	CLEAR HEIGHT	BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH															
			1/2 bars				2/3 bars				3/4 bars				4/5 bars			
			SIZE	SPACING	NUMBER REQ'D	LENGTH	SIZE	SPACING	NUMBER REQ'D	LENGTH	SIZE	SPACING	NUMBER REQ'D	LENGTH	SIZE	SPACING	NUMBER REQ'D	LENGTH
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	

MAX. DESIGN DEPTH OF COVER	CLEARSPAN	CLEAR HEIGHT	DIMENSIONS												QUANTITIES											
			BARREL DIMENSIONS						UNIT QUANTITIES						REINFORCING STEEL						ADDITIONAL					
			D	S	H	OW	T	C	M	B	OH	CLYD.	LB.	LB.	LB.	LB.	LB.	LB.	LB.							
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12								



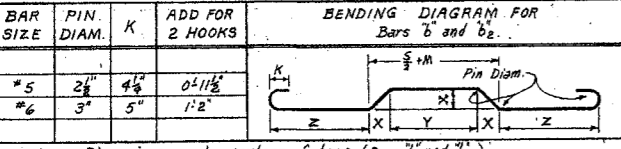
**GENERAL NOTES:**  
 CONCRETE: All concrete to be Class S, and shall be poured in the dry.  
 All exposed corners to have 3/4 chamfers.  
 REINFORCING STEEL: Reinforcing to be deformed bars of intermediate or hard grade.  
 BAR LAP: In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 50 diameters.  
 CONSTRUCTION JOINTS: Construction joints between longitudinal bars, 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%  
 Reinforcing Steel 20000%

**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  
 DOUBLES UNDER 5'-0" COVER  
 STANDARD DRAWING NO. R-200X-O.

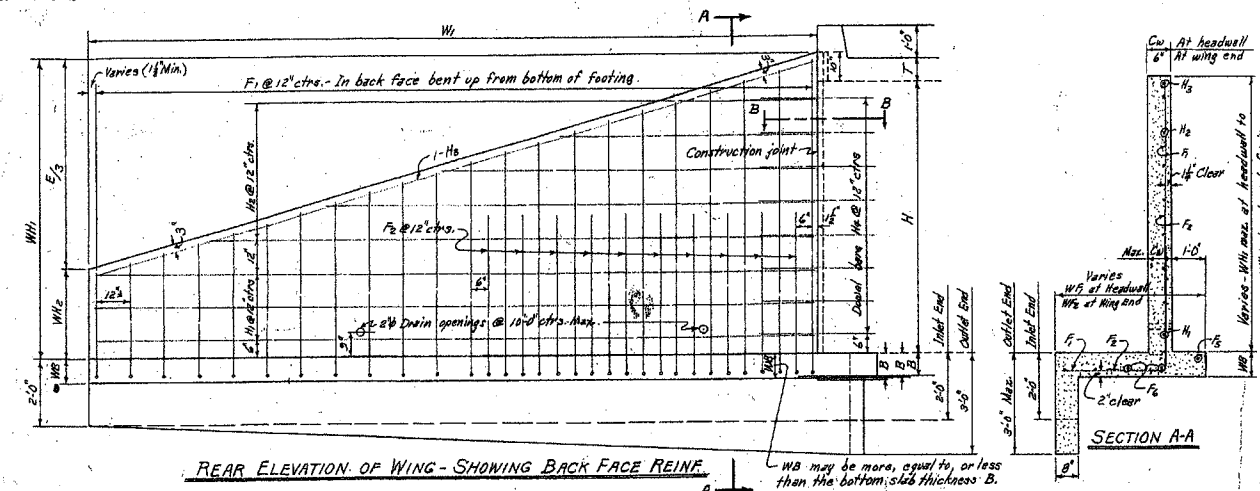


2 SPANS @	SIZE	SPACING	NO. REQ'D	LENGTH	X
4	1/2	20	2-5"	1'-2 1/2"	
5	1/2	24	2-6"	1-3"	
7	1/2	32	2-8"	1-4"	
8	1/2	36	2-9"	1-4 1/2"	
9	1/2	40	2-10"	1-5"	
10	1/2	46	2-11"	1-5 1/2"	
11	1/2	50	3-0"	1-6"	
12	1/2	54	3-1"	1-6 1/2"	

Checked by: R.M.S. 5-14-63  
 Checked by: R.M.S. 5-24-63  
 Checked by: R.M.S. 5-28-63  
 Designed by: W.C.H. 1-17-63.  
 Drawn by: W.C.H. 2-15-63.  
 Quantities by: W.C.H. 2-19-63.



FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.				
JOB No.					



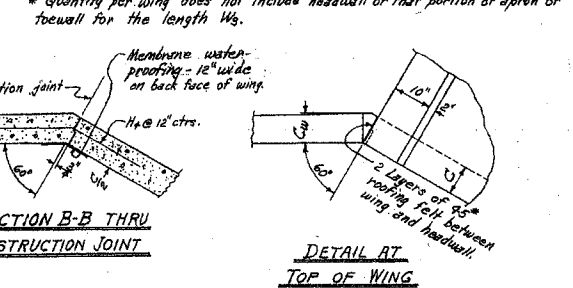
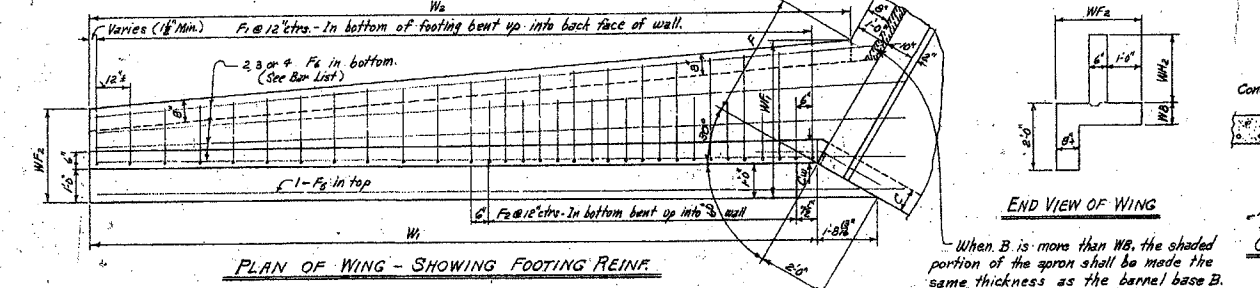
WING DIMENSIONS

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING AT HEADWALL = C	WING WALL HEIGHTS		WIDTHS OF WING FOOTINGS		PERPENDICULAR FOOTING DIMENSION	PERPENDICULAR DIST. FROM HEADWALL TO END OF WING	LENGTH OF WING WALLS	INSIDE FOOTING DIMENSION	* QUANTITY PER WING CLASS S CONCRETE	
		AT HEADWALL	AT END OF WING	AT HEADWALL	AT END OF WING					INLET END	OUTLET END
H	WB	Cw	WH	WB	WF	F	E	W	W2	CUYD.	CUYD.
2' 7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986
3' 7"	6"	3'-0"	1'-0"	3'-4"	2'-4"	1'-4"	8'-6"	9'-6"	9'-2 1/2"	1.338	1.464
4' 7"	6"	4'-0"	1'-2"	4'-4"	2'-8"	1'-9"	10'-6"	12'-6"	12'-1 1/2"	1.868	2.027
5' 7"	6"	5'-0"	1'-4"	5'-4"	3'-2"	2'-4"	12'-6"	14'-6"	14'-2 1/2"	2.478	2.648
6' 7"	6"	6'-0"	1'-6"	6'-4"	3'-6"	2'-9"	14'-6"	16'-6"	16'-2 1/2"	3.148	3.338
7' 7"	6"	7'-0"	1'-8"	7'-4"	4'-0"	3'-4"	16'-6"	18'-6"	18'-2 1/2"	3.898	4.108
8' 7"	6"	8'-0"	2'-0"	8'-4"	4'-4"	3'-9"	18'-6"	20'-6"	20'-2 1/2"	4.728	4.958
9' 7"	6"	9'-0"	2'-2"	9'-4"	4'-8"	4'-4"	20'-6"	22'-6"	22'-2 1/2"	5.638	5.888

APRON DIMENSION W3

W3 = (OW - 2F)

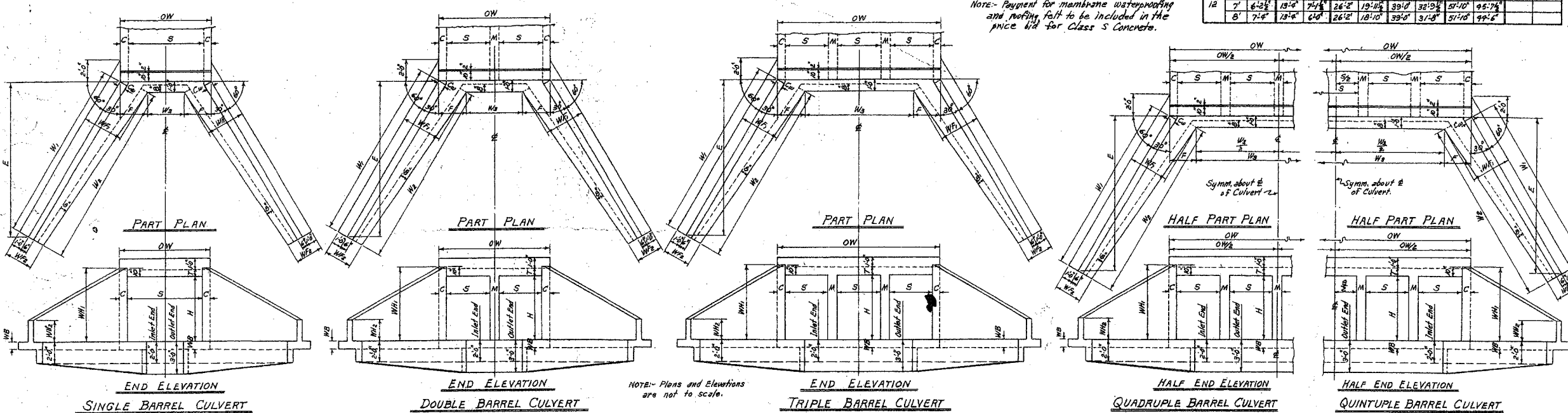
CLEAR SPAN	CLEAR HEIGHT	SINGLE BARREL CULVERT		DOUBLE BARREL CULVERT		TRIPLE BARREL CULVERT		QUADRUPLE BARREL CULVERT		QUINTUPLE BARREL CULVERT	
		OW	W3	OW	W3	OW	W3	OW	W3	OW	W3
5'	7'	5'-0"	3'-0"	9'-8"	7'-8"	14'-4"	12'-4"	19'-0"	17'-0"	23'-8"	21'-8"
6'	7'	6'-0"	3'-0"	10'-8"	8'-8"	15'-4"	13'-4"	20'-0"	18'-0"	24'-8"	22'-8"
7'	7'	7'-0"	3'-0"	11'-8"	9'-8"	16'-4"	14'-4"	21'-0"	19'-0"	25'-8"	23'-8"
8'	7'	8'-0"	3'-0"	12'-8"	10'-8"	17'-4"	15'-4"	22'-0"	20'-0"	26'-8"	24'-8"
9'	7'	9'-0"	3'-0"	13'-8"	11'-8"	18'-4"	16'-4"	23'-0"	21'-0"	27'-8"	25'-8"
10'	7'	10'-0"	3'-0"	14'-8"	12'-8"	19'-4"	17'-4"	24'-0"	22'-0"	28'-8"	26'-8"
11'	7'	11'-0"	3'-0"	15'-8"	13'-8"	20'-4"	18'-4"	25'-0"	23'-0"	29'-8"	27'-8"
12'	7'	12'-0"	3'-0"	16'-8"	14'-8"	21'-4"	19'-4"	26'-0"	24'-0"	30'-8"	28'-8"



QUANTITIES

CLASS S CONCRETE - 4 WINGS

CLEAR SPAN	CLEAR HEIGHT	REINFORCING STEEL FOR 4 WINGS					CLASS S CONCRETE - 4 WINGS				
		SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT	HEADWALLS, WING WALLS, FOOTINGS, SIDEWALLS AND APRONS	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
5'	7'	108.0	9.50	5.84	6.92	7.36	8.34	10.24	12.16	14.08	16.00
6'	7'	169.4	6.24	7.21	8.17	9.13	10.09	12.08	14.08	16.08	18.08
7'	7'	259.6	8.33	9.28	10.24	11.20	12.16	14.16	16.16	18.16	20.16
8'	7'	357.8	10.72	11.68	12.64	13.60	14.56	16.56	18.56	20.56	22.56
9'	7'	464.9	13.53	14.49	15.45	16.41	17.37	19.37	21.37	23.37	25.37
10'	7'	581.1	16.68	17.64	18.60	19.56	20.52	22.52	24.52	26.52	28.52
11'	7'	707.4	20.16	21.12	22.08	23.04	24.00	26.00	28.00	30.00	32.00
12'	7'	843.8	24.00	24.96	25.92	26.88	27.84	29.84	31.84	33.84	35.84



BAR LIST FOR ONE WING - 9 REQUIRED

CLEAR HEIGHT	H	SIZE	F1		F2		F3		F4		H1		H2		H3		H4		BAR BENDING DIAGRAMS											
			SPACING	No. Reqd.	SPACING	No. Reqd.	SPACING	No. Reqd.	SPACING	No. Reqd.	SPACING	No. Reqd.	SPACING	No. Reqd.	SPACING	No. Reqd.	SPACING	No. Reqd.		SPACING	No. Reqd.									
2'	3'	12"	8	1'-6"	3'-0"	0'-8"	1'-0"	0'-11"	2'-11"	3	1	9'-8"	3	2	8'-6"	3	12	1	7'-2"	3	12	1	7'-2"	3	12	2	2'-8"	1'-4"	27.0	
3'	3'	12"	10	2'-2"	5'-2"	0'-10"	1'-3"	1'-5"	4'-0"	3	1	12'-0"	3	16	1	9'-6"	3	16	2	7'-6"	3	16	2	9'-6"	3	16	3	2'-8"	1'-4"	41.1
4'	3'	12"	13	2'-4"	6'-4"	0'-11"	1'-7"	1'-6"	5'-0"	3	1	14'-4"	3	19'-6"	3	18	1	11'-10"	3	10'-11"	3	18	3	12'-2"	3	18	4	2'-8"	1'-4"	63.7
5'	3'	12"	15	2'-11"	7'-10"	1'-11"	1'-11"	1'-11"	6'-0"	3	12	4	3'-6"	1'-1"	2'-6"	3	1	16'-8"	3	10'-11"	3	18	3	14'-2"	3	18	5	2'-8"	1'-4"	89.5
6'	4'	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	2'-5"	7'-1"	3	18	4	4'-6"	1'-4"	3'-3"	3	1	19'-0"	3	14'-4"	3	18	4	14'-4"	3	18	6	2'-8"	1'-4"	145.8
7'	4'	12"	20	3'-9"	10'-9"	1'-3"	2'-9"	2'-7"	8'-4"	4	18	7	5'-6"	1'-7"	4'-0"	4	1	21'-4"	4	17'-9"	4	18	5	15'-9"	4	18	7	3'-6"	1'-9"	283.7
8'	4'	12"	22	4'-4"	12'-5"	1'-5"	3'-2"	3'-0"	9'-2"	4	18	10	6'-6"	1'-10"	4'-9"	4	1	23'-8"	4	17'-9"	4	18	5	17'-9"	4	18	8	3'-6"	1'-9"	356.4

GENERAL NOTES:

CONCRETE: All concrete to be Class S, and shall be poured in the dry. All exposed corners to have 3/4" chamfers.

REINFORCING STEEL: Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS: Construction joints between wingwall, footings and side walls shall be only where shown on plans.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES: Class S Concrete (n=10) 1200%  
Reinforcing Steel 20000%  
NOTE: This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS

FOR

REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS      3:1 SLOPES

SINGLES, DOUBLES, TRIPLES,      ALL DEPTHS OF COVER

QUADRUPLES & QUINTUPLES.      FOR H=8'-0" OR LESS

STANDARD DRAWING NO. W-X003-1

Designed By: W.C.H. 8-20-62. Checked By: R.M.S. 1-9-63  
Drawn By: W.C.H. 12-9-62. Checked By: R.M.S. 1-31-63  
Quaranteed By: W.C.H. 12-14-62. Checked By: R.M.S. 3-29-63

REVISIONS: Membrane added 1-5-66 W.C.H.