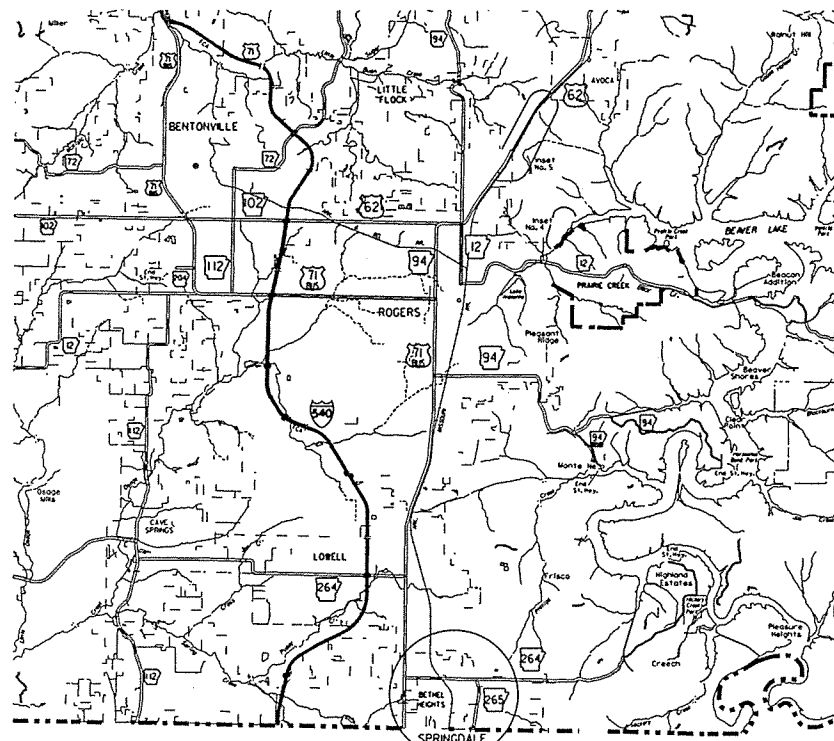


DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/9/2014				6	ARK.			
				JOB NO.	090284		1	174
				② HWY. 71B - HWY. 265 (SPRINGDALE) (S)				



VICINITY MAP PROJECT LOCATION

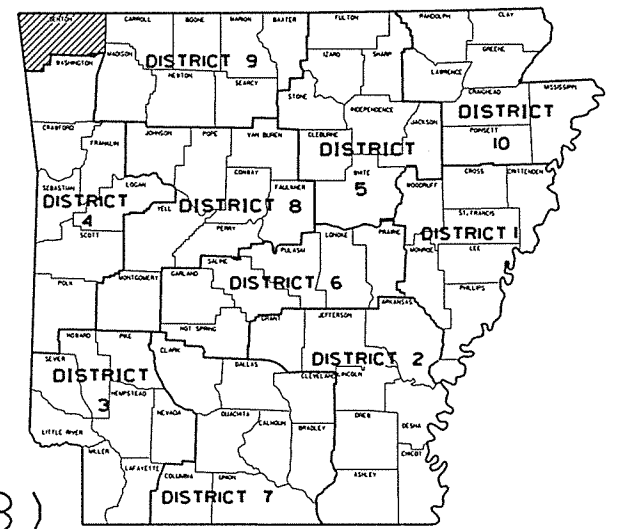
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 71B - HWY. 265  
(SPRINGDALE) (S)

BENTON COUNTY  
ROUTE 264 SECTION I

JOB 090284

FED. AID PROJ. STPC-STPU-9399(13)



ARK. HWY. DIST. NO. 9

NOT TO SCALE

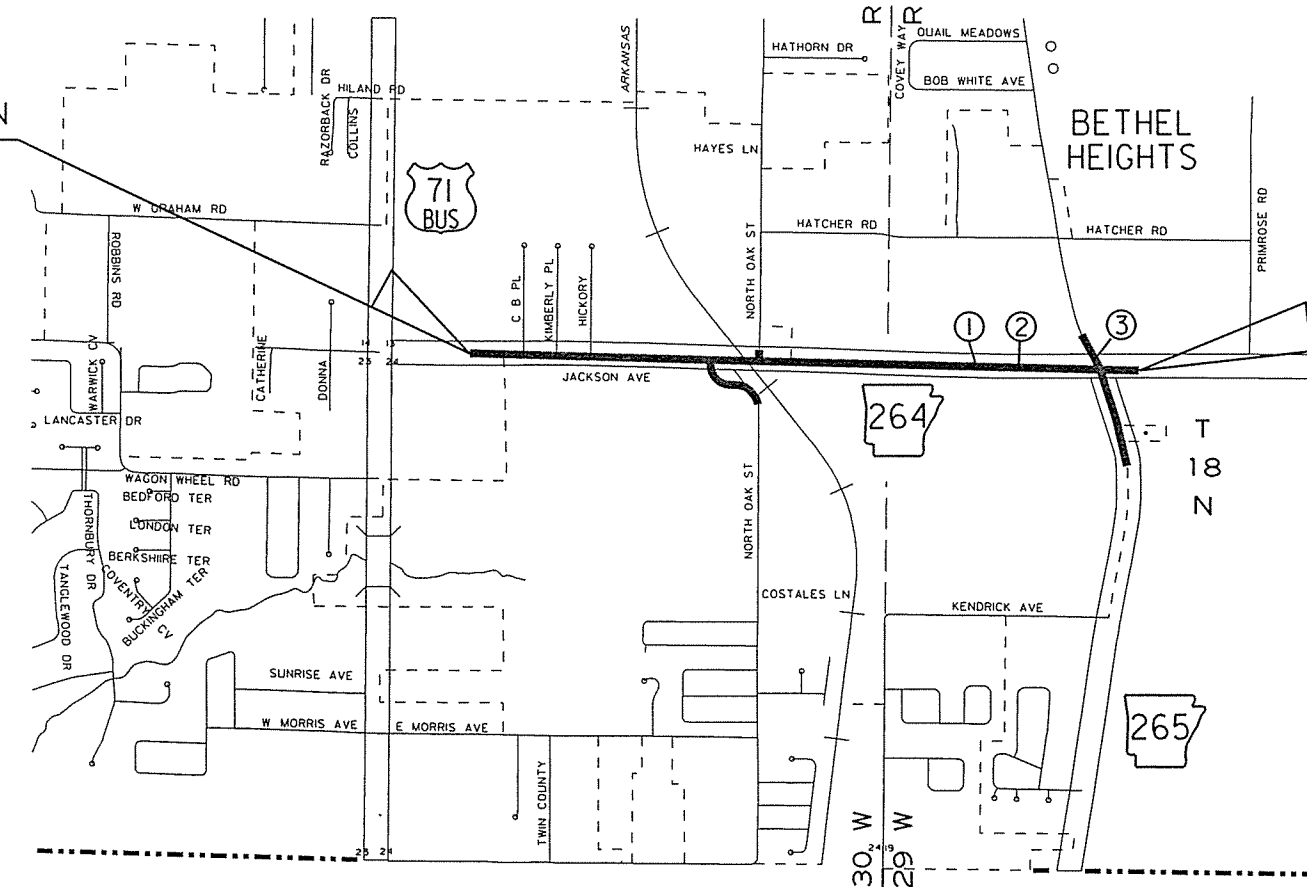
STA. 39+50.00 BEGIN  
JOB 090284  
LOG MILE 0.10

DESIGN TRAFFIC DATA

DESIGN YEAR	2034
2014 ADT	11,500
2034 ADT	16,000
2034 DHV	1,650
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	15%
DESIGN SPEED	40 MPH

STRUCTURES OVER 20'-0" SPAN

- ① HWY. 264  
STA. 96+20 - CONSTRUCT  
QUINT. 6'x 3' x 126' R.C. BOX CULVERT  
45° LT. FWD. SKEW  
WITH 3:1 WINGS LT. & RT.  
050 = 550 CFS D.A. = 260 ACRES  
SPAN = 47'-7"
- ② LT. OF HWY. 264  
STA. 98+60 - CONSTRUCT  
TRP. 6'x 3' x 27' R.C. BOX CULVERT  
WITH 3:1 WINGS LT. & RT.  
050 = 550 CFS D.A. = 260 ACRES  
SPAN = 20'-4"
- ③ HWY. 265/OLD WIRE ROAD  
STA. 308+62 - CONSTRUCT  
QUINT. 6'x 3' x 88' R.C. BOX CULVERT  
30° LT. FWD. SKEW  
WITH 3:1 WINGS LT. & RT.  
050 = 420 CFS D.A. = 115 ACRES  
SPAN = 38'-10 1/2"



STA. 111+97.00  
END JOB 090284  
LOG MILE 1.47

LENGTH COMPUTED ALONG HWY. 264 CENTERLINE

GROSS LENGTH OF PROJECT	7247.00 FEET	OR	1.373 MILES
NET LENGTH OF ROADWAY	7140.21 FEET	OR	1.353 MILES
NET LENGTH OF BRIDGES	106.79 FEET	OR	0.020 MILES
NET LENGTH OF PROJECT	7247.00 FEET	OR	1.373 MILES

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 36°13'30"	N 36°13'29"	N 36°13'28"
LONGITUDE	W 94°08'08"	W 94°07'27"	W 94°06'40"



APPROVED



*Ralph J. Hall*  
DEPUTY DIRECTOR  
AND CHIEF ENGINEER

P.E. 090284  
NON-PART.

4/28/2014  
R090284.DGN

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98	DETAILS OF DROP INLET (TYPE MO)	FPC-9M	8-22-02
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130 - 174	CROSS SECTIONS		

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

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.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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

GOVERNING SPECIFICATIONS

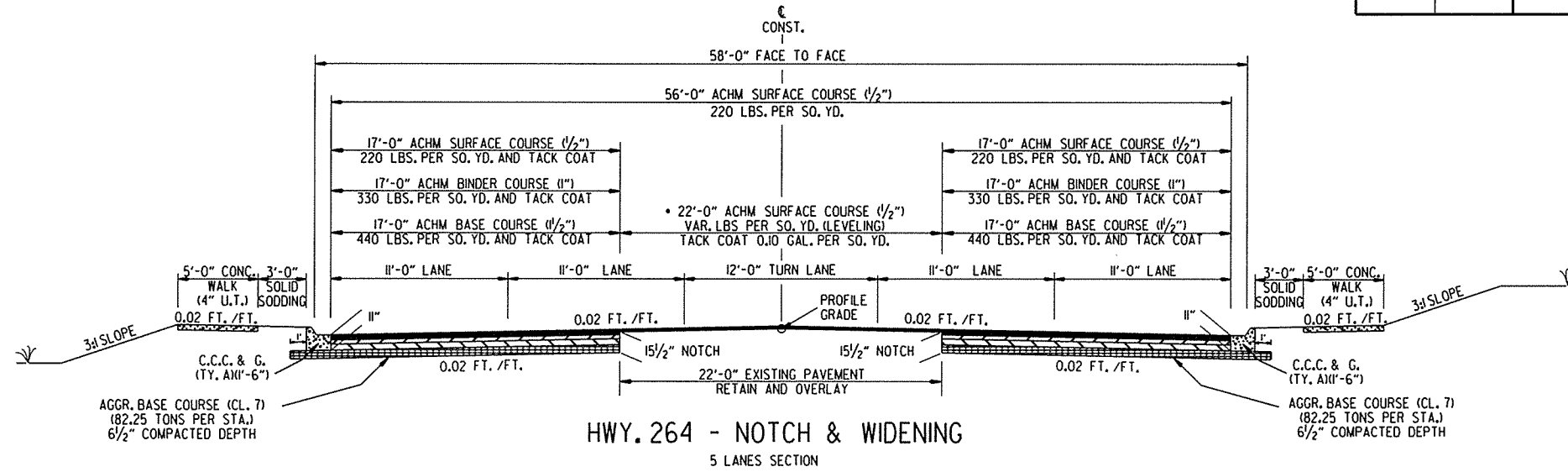
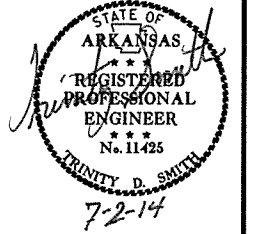
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:



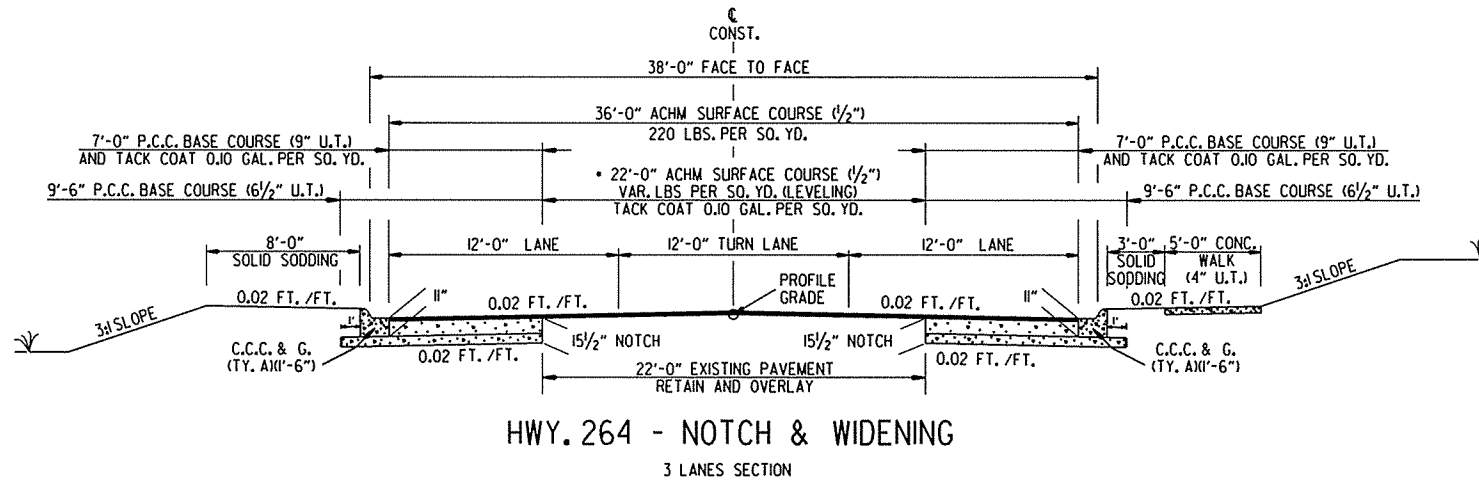
NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
108-1	LIQUIDATED DAMAGES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
620-1	MULCH COVER
JOB 090284	AIRPORT CLEARANCE REQUIREMENTS
JOB 090284	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 090284	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 090284	CABINET DRAWER ASSEMBLY
JOB 090284	COMPACTED EMBANKMENT
JOB 090284	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 090284	EDGE CARD VIDEO PROCESSOR
JOB 090284	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 090284	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 090284	ELECTRONIC SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 090284	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 090284	INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (A&M)
JOB 090284	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 090284	LED TRAFFIC SIGNAL HEAD
JOB 090284	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 090284	MAINTENANCE OF TRAFFIC
JOB 090284	MANDATORY USE OF INTERNET BIDDING
JOB 090284	NESTING SITES OF MIGRATORY BIRDS
JOB 090284	PARTNERING REQUIREMENTS
JOB 090284	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB 090284	REMOVAL AND DISPOSAL OF ASBESTOS-CEMENT WATER LINE
JOB 090284	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 090284	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 090284	SHORING
JOB 090284	SITE USE (A + C METHOD)
JOB 090284	SOIL STABILIZATION
JOB 090284	STORM WATER POLLUTION PREVENTION PLAN
JOB 090284	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 090284	SYSTEM LOCAL CONTROLLER
JOB 090284	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB 090284	UTILITY ADJUSTMENTS
JOB 090284	VALUE ENGINEERING
JOB 090284	VIDEO DETECTOR (COLOR)
JOB 090284	WARM MIX ASPHALT

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2 TYPICAL SECTIONS OF IMPROVEMENT



• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.



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.

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.

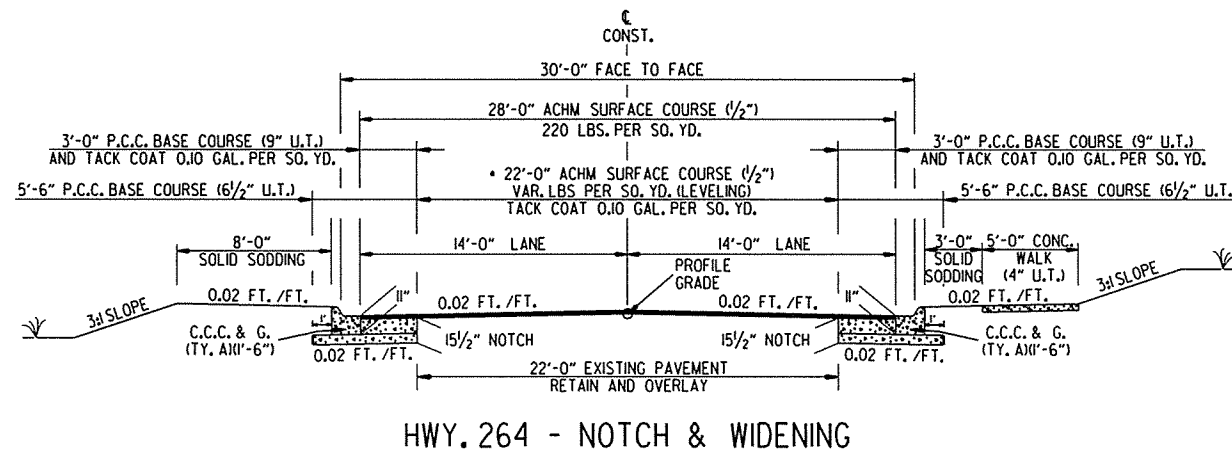
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

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

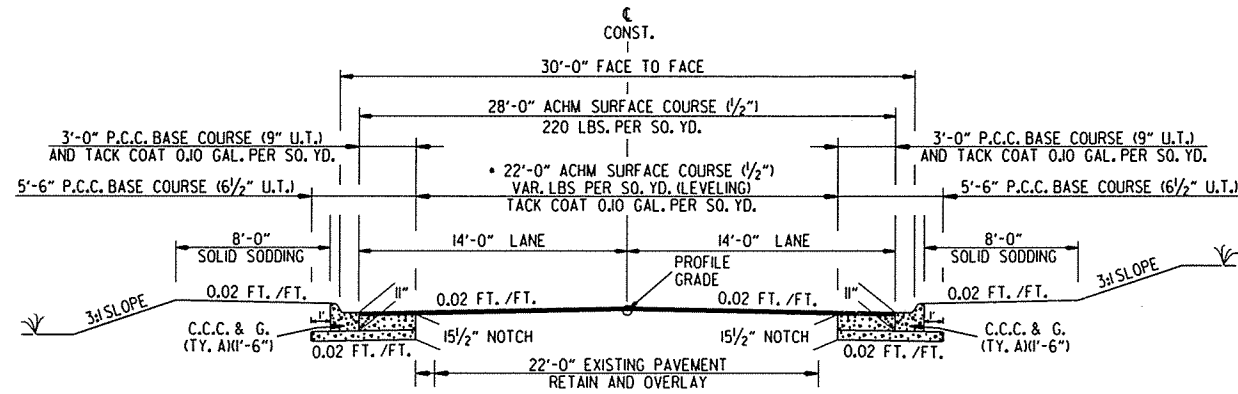
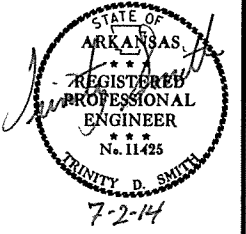
TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN THE CONCRETE WALKS AT 45' INTERVALS.

ANY WIDENING AREAS LESS THAN 8' IN WIDTH WILL BE DONE WITH P.C. CONCRETE BASE INSTEAD OF ACHM SURFACE, BINDER AND BASE.



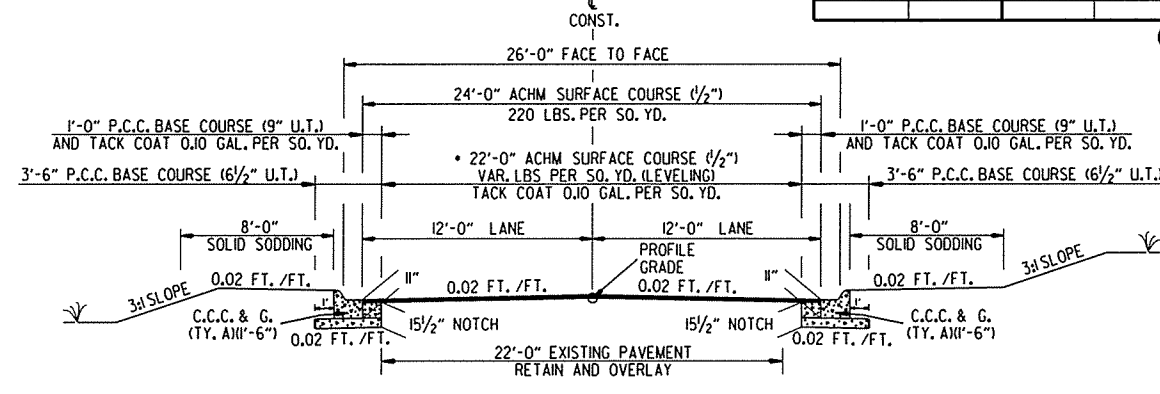
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2 TYPICAL SECTIONS OF IMPROVEMENT

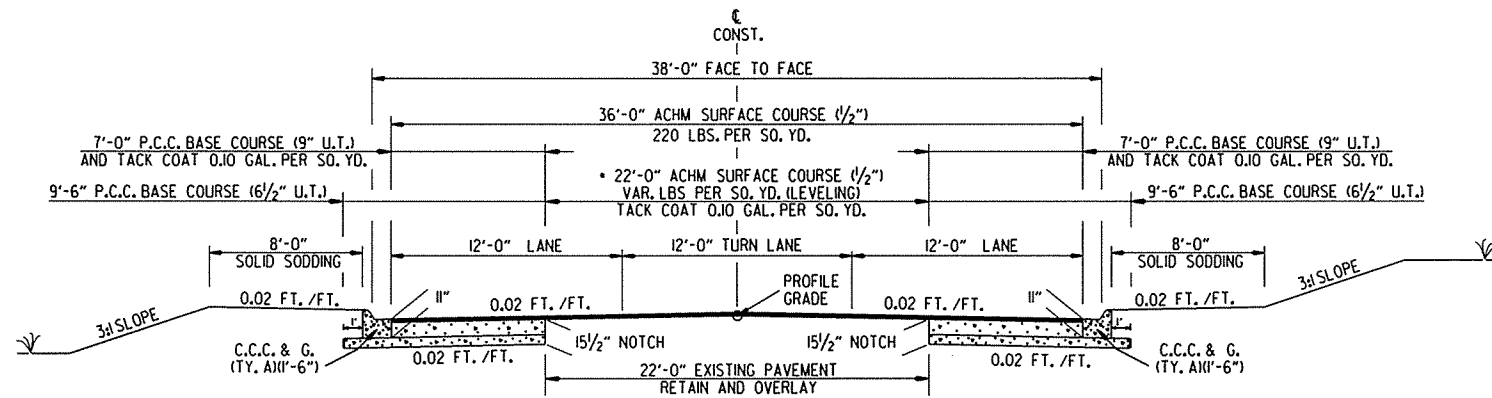


HWY. 265 - NOTCH & WIDENING

• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

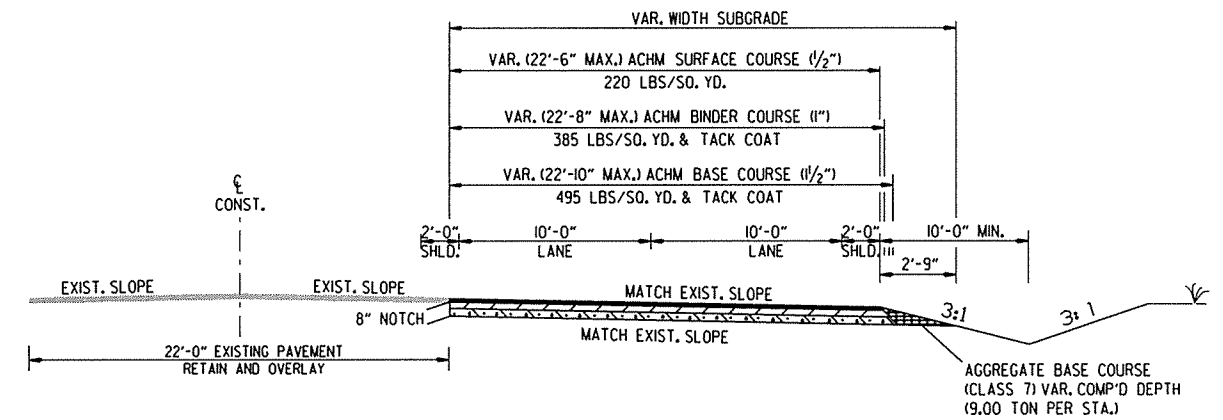


OLD WIRE RD. - NOTCH & WIDENING



HWY. 265/OLD WIRE RD. - NOTCH & WIDENING

3 LANES SECTION



TEMPORARY WIDENING FOR MAINTENANCE OF TRAFFIC

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.

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.

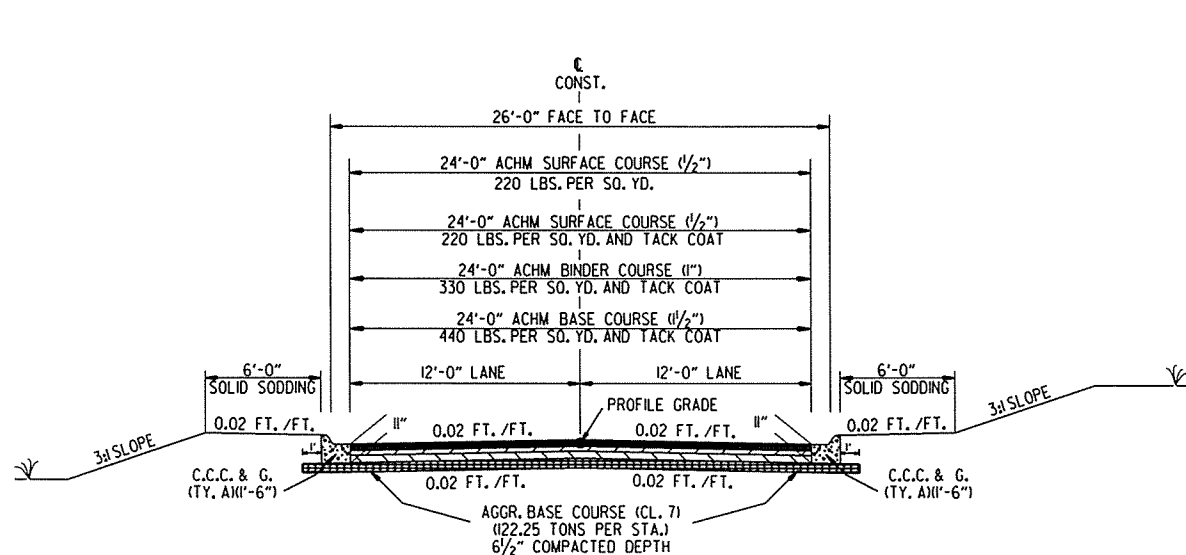
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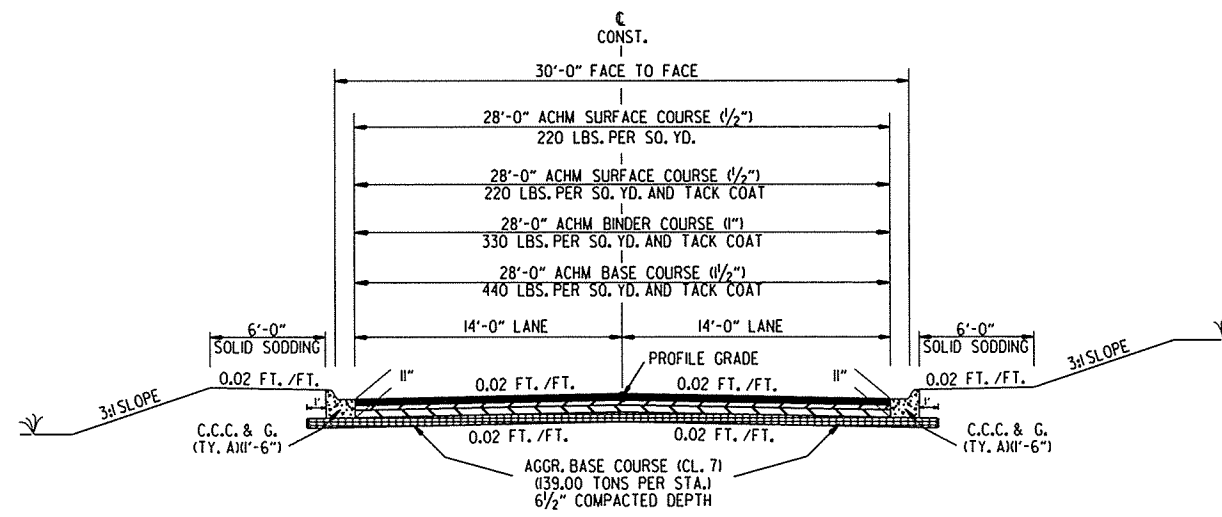
TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN THE CONCRETE WALKS AT 45' INTERVALS.

ANY WIDENING AREAS LESS THAN 8' IN WIDTH WILL BE DONE WITH P.C. CONCRETE BASE INSTEAD OF ACHM SURFACE, BINDER AND BASE.



N. OAK STREET - FULL DEPTH

STA. 404+90 TO STA. 406+48



N. OAK STREET - FULL DEPTH

STA. 406+78 TO STA. 408+52

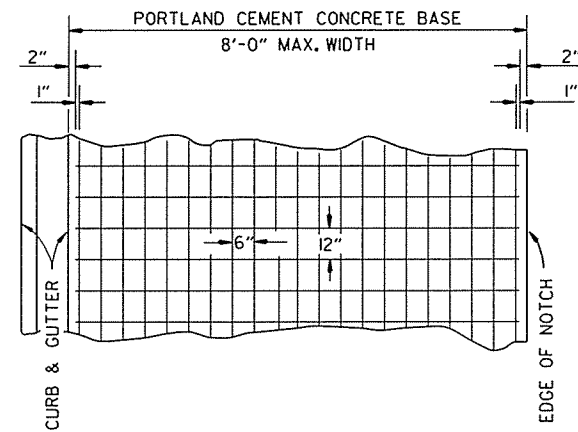
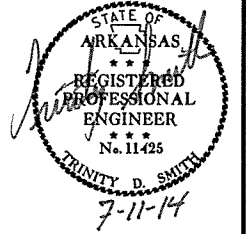
TYPICAL SECTIONS OF IMPROVEMENT

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② SPECIAL DETAILS

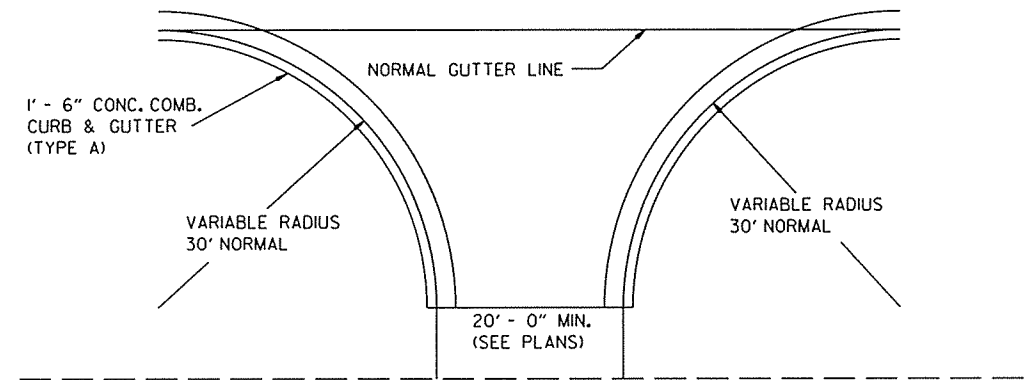


6" X 12" MESH FABRIC (TYPE 3) (W5.5 X W2.9) = 4.26 LBS./SQ.YD.

NOTES:

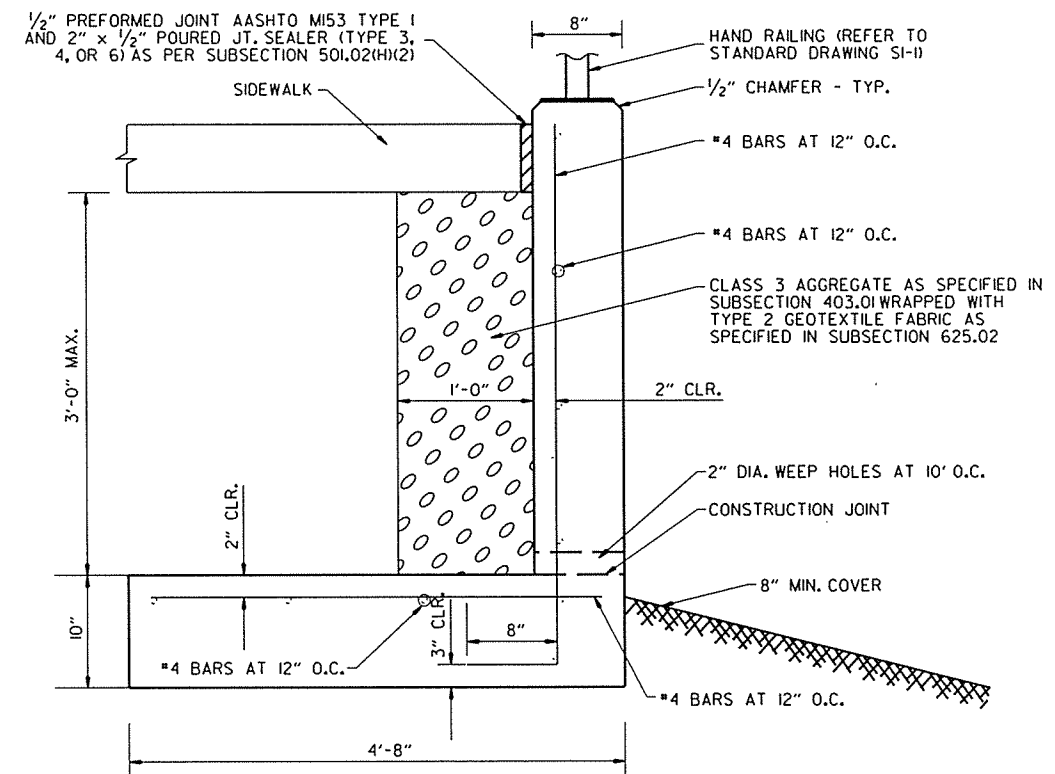
- LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
- MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
- MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (6 1/2" U.T.) AND PORTLAND CEMENT CONCRETE BASE (9" U.T.).

DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)



DETAIL OF TURNOUTS ASPHALT STREETS CURB & GUTTER SECTION

NOTE:  
PAVEMENT STRUCTURE TO BE SAME AS MAIN LANES

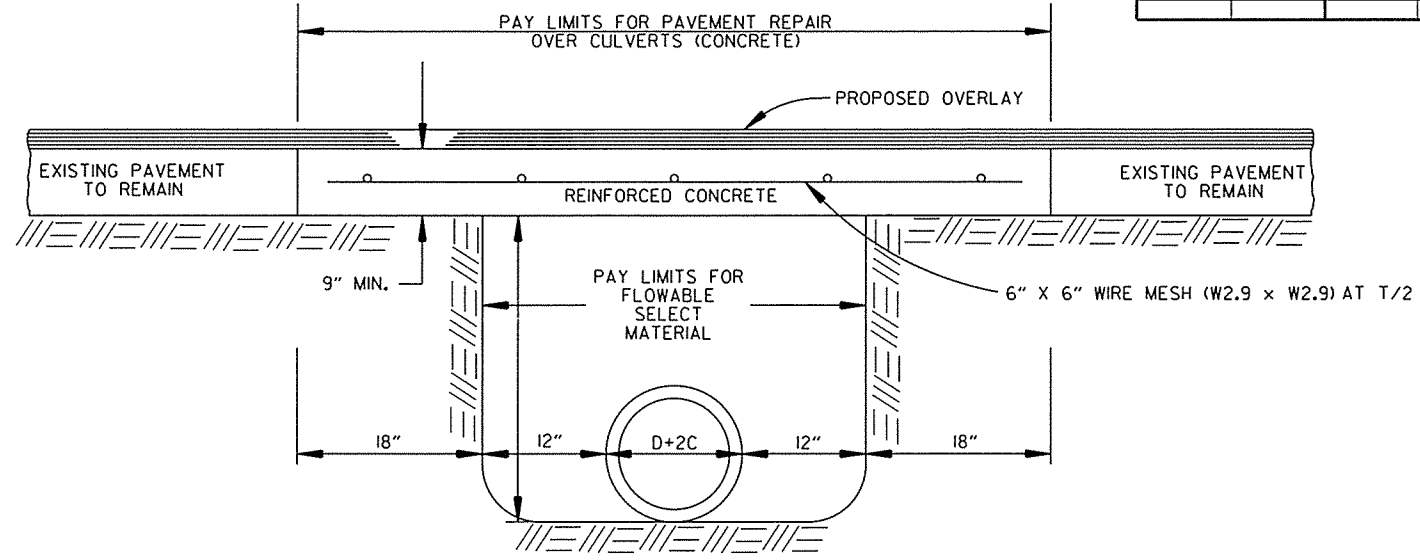


CONCRETE WALKS (TYPE SPECIAL)

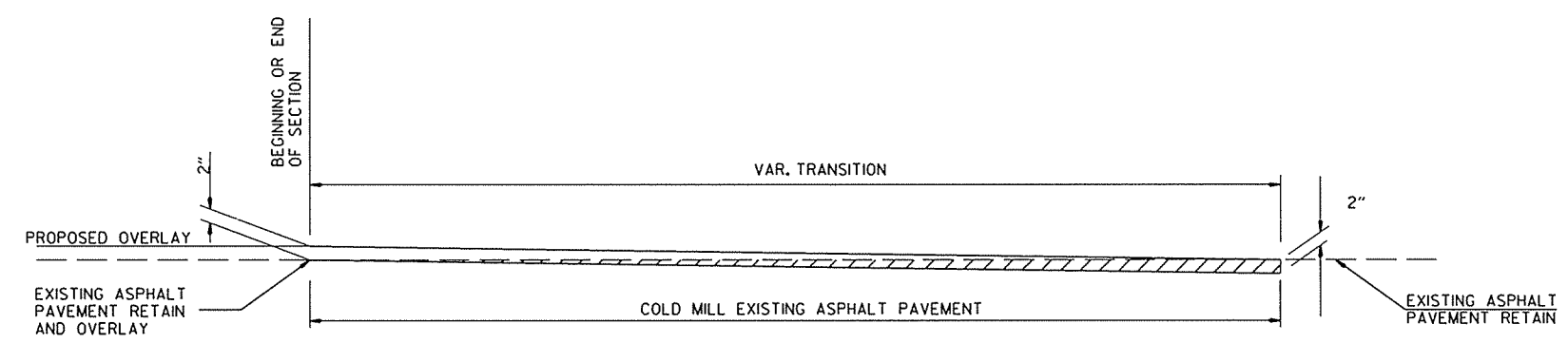
NOTES:  
JOINTS IN THE WALL SHALL MATCH THE TYPE AND SPACING OF THE JOINTS IN THE WALK.  
ALL CONCRETE SHALL BE CLASS S (f'c=3,500 psi) AND SHALL BE POURED IN THE DRY.  
REINFORCING STEEL SHALL BE AASHTO M31 OR M53, GRADE 60 (fy=60,000 psi).  
PAYMENT FOR THE WEEP HOLES, CLASS 3 AGGREGATE, TYPE 2 GEOTEXTILE FABRIC, PREFORMED JOINT FILLER, POURED JOINT SEALER, REINFORCING STEEL, AND CONCRETE SHALL BE INCLUDED IN THE UNIT BID PRICE PER SQ. YD. FOR CONCRETE WALKS (TYPE SPECIAL).

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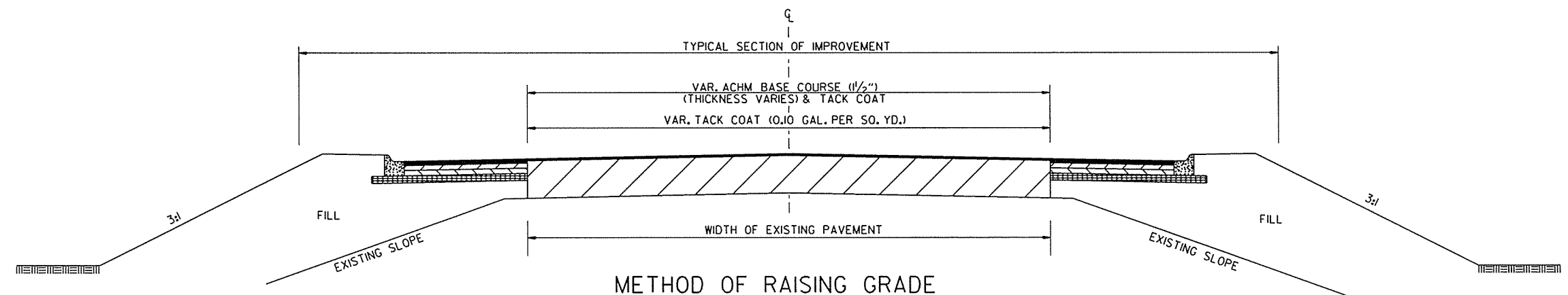
2 SPECIAL DETAILS



PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



DETAIL FOR TRANSITIONS  
SEE PLANS FOR TRANSITION LENGTHS

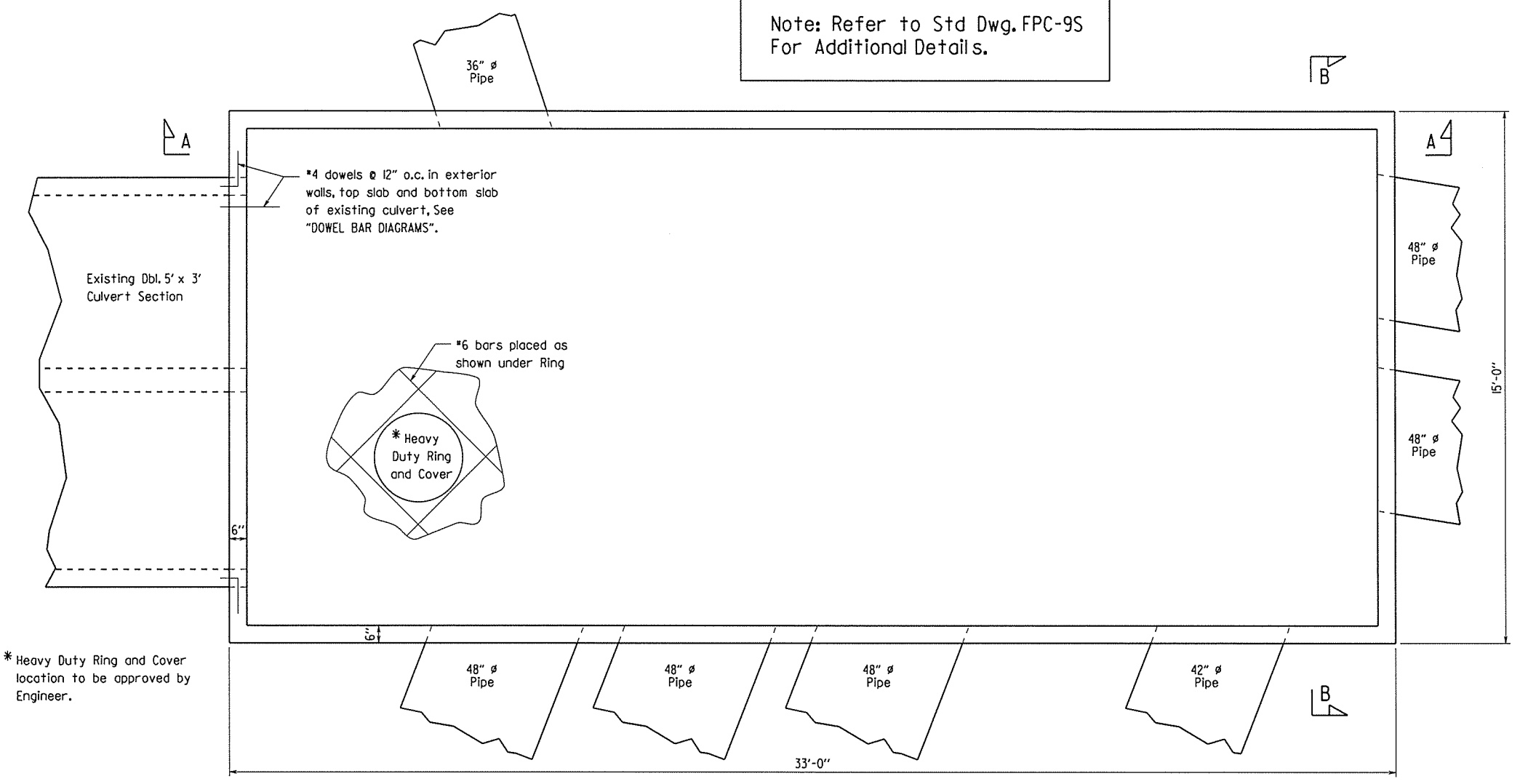


METHOD OF RAISING GRADE

NOTES:  
THIS DETAIL TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.  
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 TWELVE INCHES OR LESS.

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SPECIAL DETAILS								

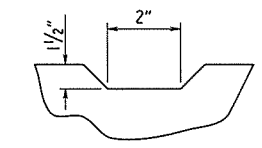
Note: Refer to Std Dwg. FPC-9S For Additional Details.



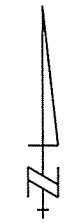
\* Heavy Duty Ring and Cover location to be approved by Engineer.

Note: Inflow and outflow pipes and culverts are shown for concept only, actual placement to be determined in the field.

PLAN VIEW  
N.T.S.

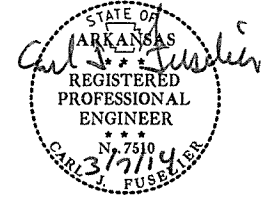


TYPICAL KEYWAY DETAIL  
N.T.S.



FOR INFORMATION ONLY  
QUANTITIES FOR ONE  
JUNCTION BOX

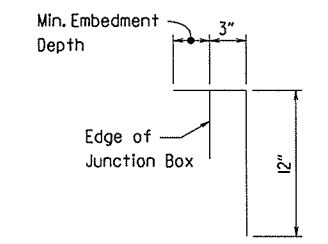
Concrete	Reinforcing Steel
42.53 cu.yd.	6,884 lb.



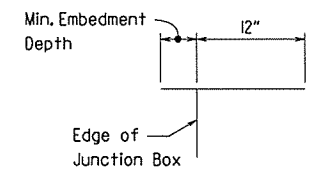
DRAWN BY: CMW DATE: 7/27/2012  
 CHECKED BY: CSL DATE: 3/6/14  
 DESIGNED BY: CMW DATE: 7/23/12

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
2. ALL CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY STRENGTH OF 3,500 PSI.
3. ALL REINFORCING STEEL SHALL BE GRADE 60 (YIELD STRENGTH = 60,000 psi) CONFORMING TO AASHTO M31 OR M322, TYPE A, WITH MILL TEST REPORTS.



Dowel Bars in Exterior Walls and Top Slab



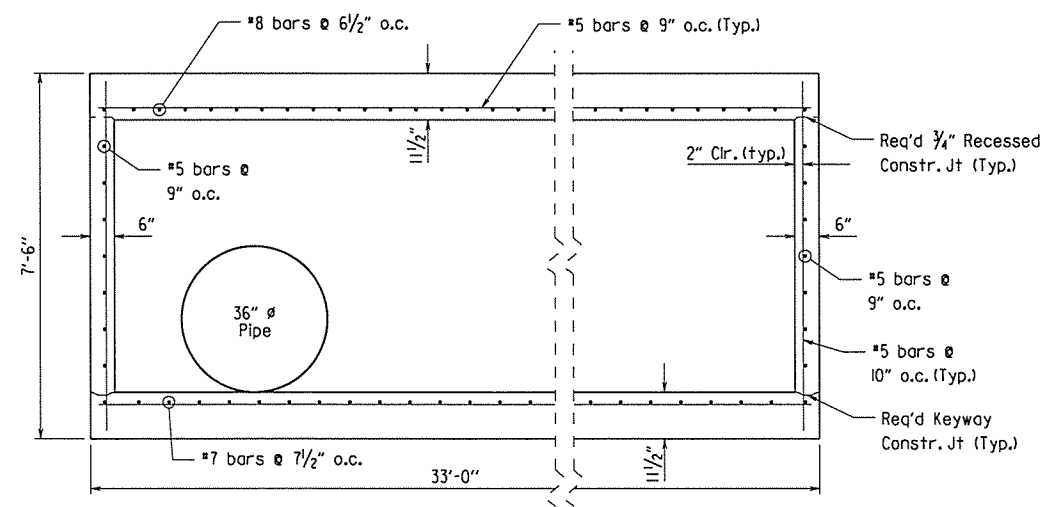
Dowel Bars in Bottom Slab

Dowel Bars shall be drilled and grouted using an approved Epoxy Resin System from the OPL. Installation shall be in accordance with Manufacturer's Recommendations.

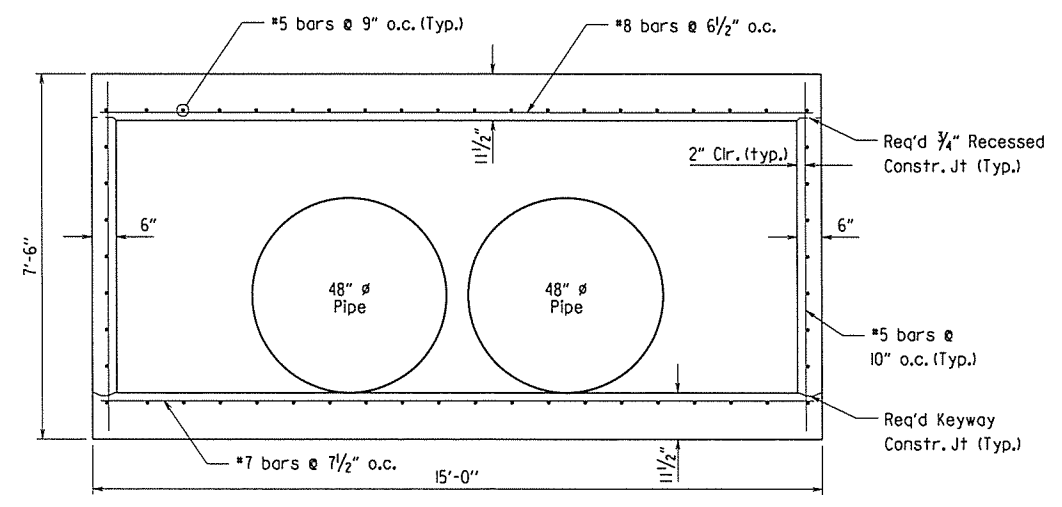
Embedment depth shall be adequate to develop 125% of the yield strength of the bar in tension and maintain 2" Min. Clr. distance.

Care shall be exercised in drilling to prevent damage to existing reinforcing.

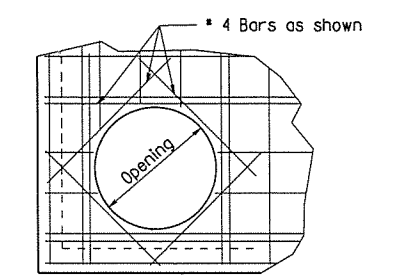
DOWEL BAR DIAGRAMS  
N.T.S.



SECTION A-A  
N.T.S.



SECTION B-B  
N.T.S.



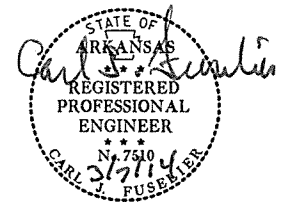
TYPICAL REINFORCING DETAIL AT OPENING  
N.T.S.

JUNCTION BOX (TYPE ST SPECIAL)  
STA. 49+04 LT.

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		8	174
				SPECIAL DETAILS				

Note: Refer to Std Dwg. FPC-9 For Additional Details.

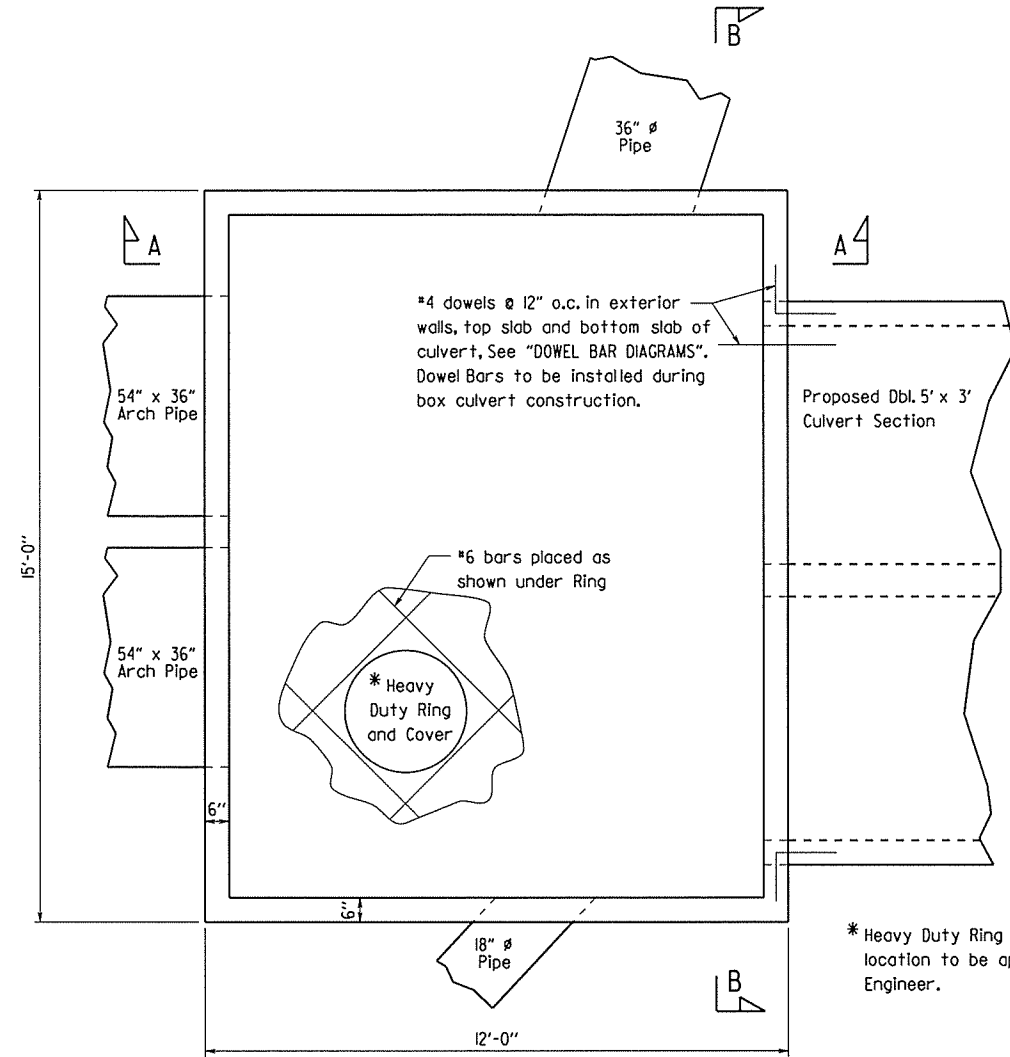


DRAWN BY: CMW DATE: 7/27/2012  
 CHECKED BY: CSL DATE: 3/6/14  
 DESIGNED BY: CMW DATE: 7/27/12

- GENERAL NOTES:
- ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
  - ALL CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY STRENGTH OF 3,500 PSI.
  - ALL REINFORCING STEEL SHALL BE GRADE 60 (YIELD STRENGTH = 60,000 psi) CONFORMING TO AASHTO M31 OR M322, TYPE A, WITH MILL TEST REPORTS.

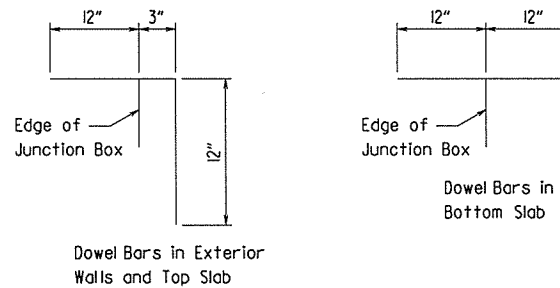
FOR INFORMATION ONLY  
 QUANTITIES FOR ONE  
 JUNCTION BOX

Concrete	Reinforcing Steel
15.54 cu.yd.	2,076 lb.

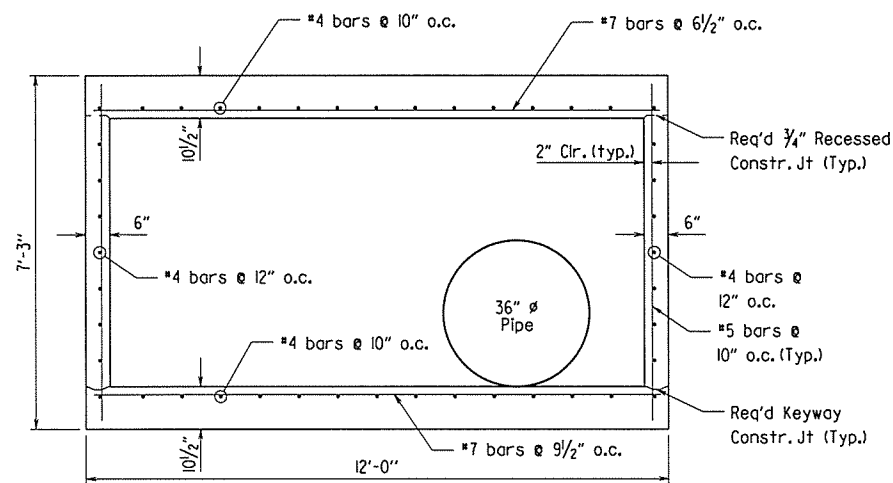


PLAN VIEW  
 N.T.S.

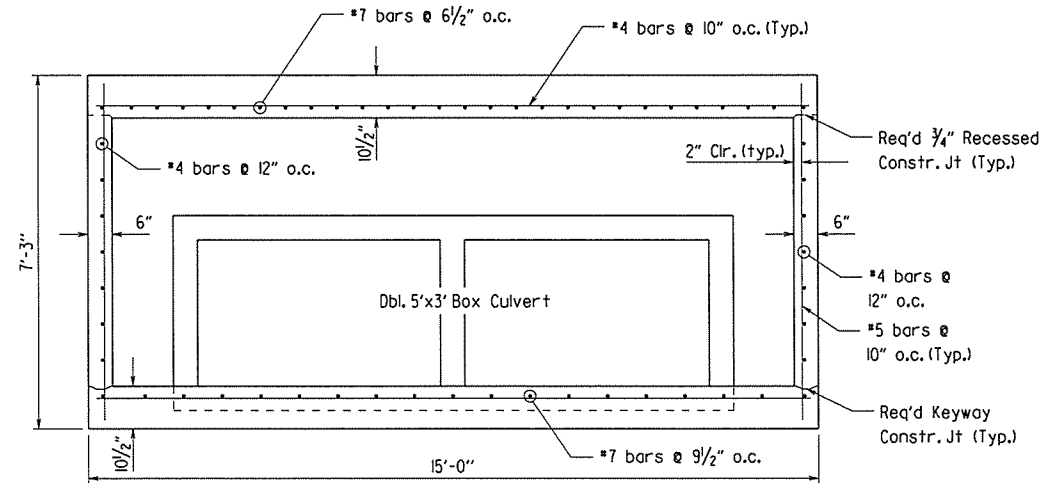
Note: Inflow and outflow pipes and culverts are shown for concept only, actual placement to be determined in the field.



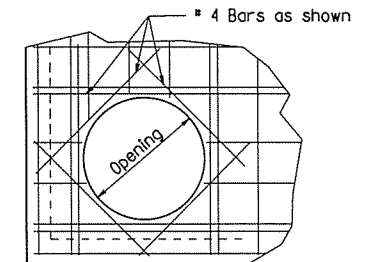
DOWEL BAR DIAGRAMS  
 N.T.S.



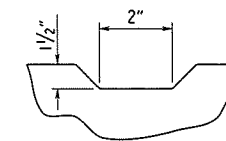
SECTION A-A  
 N.T.S.



SECTION B-B  
 N.T.S.



TYPICAL REINFORCING DETAIL AT OPENING  
 N.T.S.



TYPICAL KEYWAY DETAIL  
 N.T.S.

JUNCTION BOX (TYPE E SPECIAL)  
 STA. 48+41 LT.

SPECIAL DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284	9	174	

1 SPECIAL DETAILS

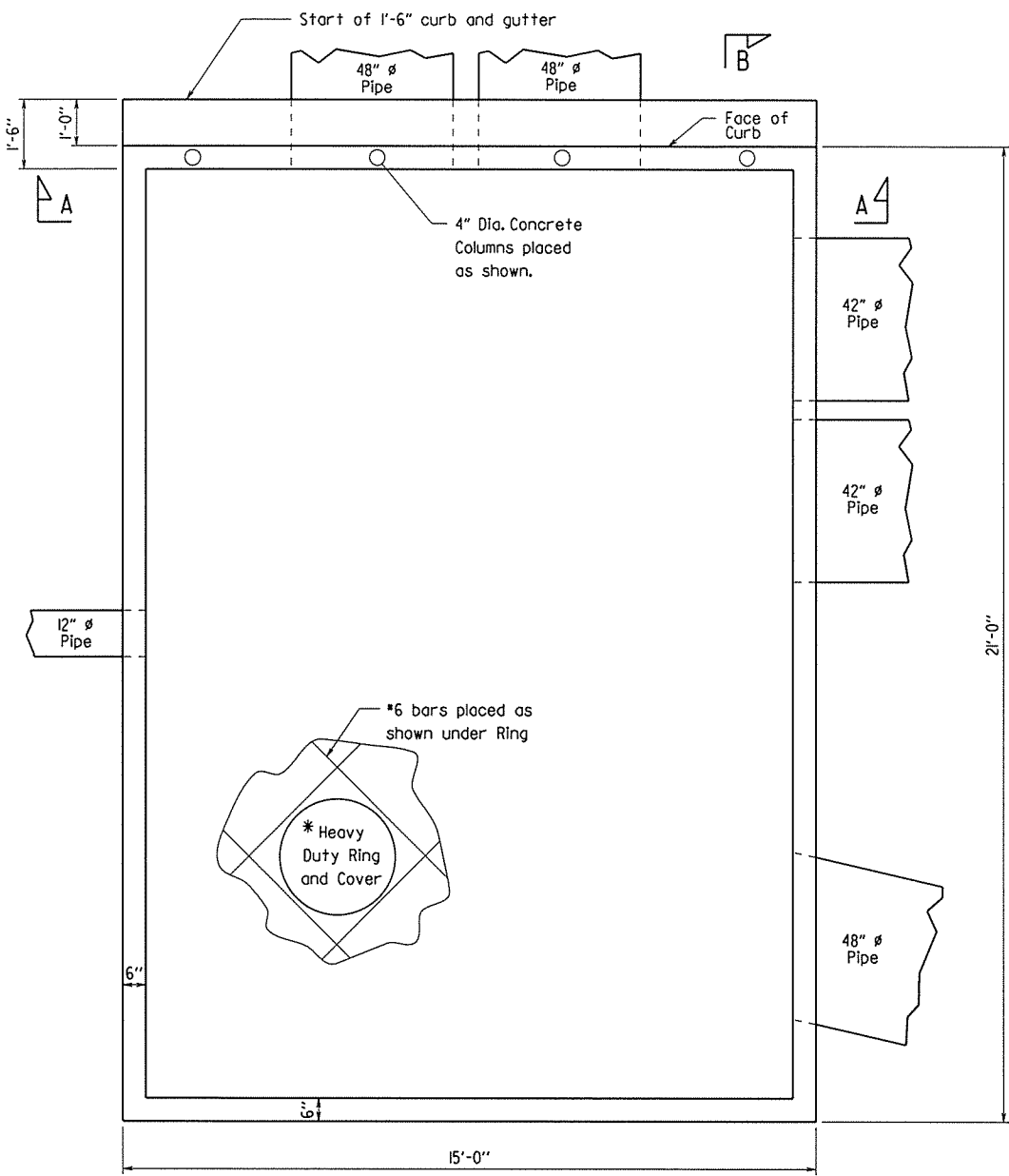


DRAWN BY: CMW DATE: 7/27/2012  
 CHECKED BY: CSL DATE: 3/6/14  
 DESIGNED BY: CMW DATE: 7/23/12

- GENERAL NOTES:
1. ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
  2. ALL CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY STRENGTH OF 3,500 PSI.
  3. ALL REINFORCING STEEL SHALL BE GRADE 60 (YIELD STRENGTH = 60,000 psi) CONFORMING TO AASHTO M31 OR M322, TYPE A, WITH MILL TEST REPORTS.

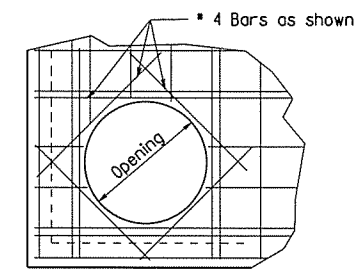
FOR INFORMATION ONLY  
 QUANTITIES FOR ONE  
 DROP INLET

Concrete	Reinforcing Steel
28.92 cu.yd.	4,656 lb.

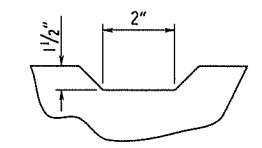


Note: Refer to Std Dwg. FPC-9E For Additional Details.

Note: Inflow and outflow pipes and culverts are shown for concept only, actual placement to be determined in the field.

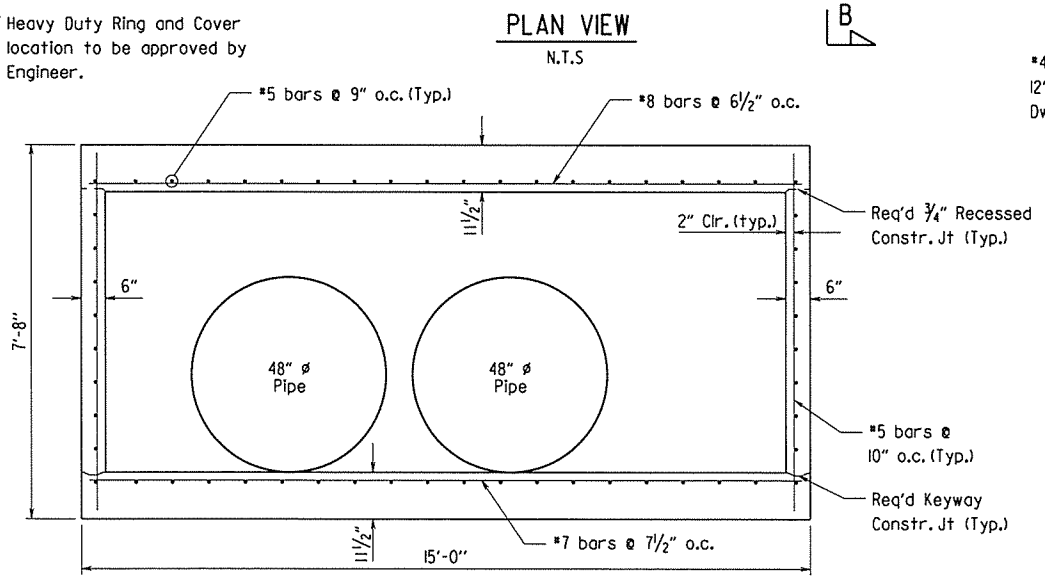


TYPICAL REINFORCING DETAIL AT OPENING  
 N.T.S.



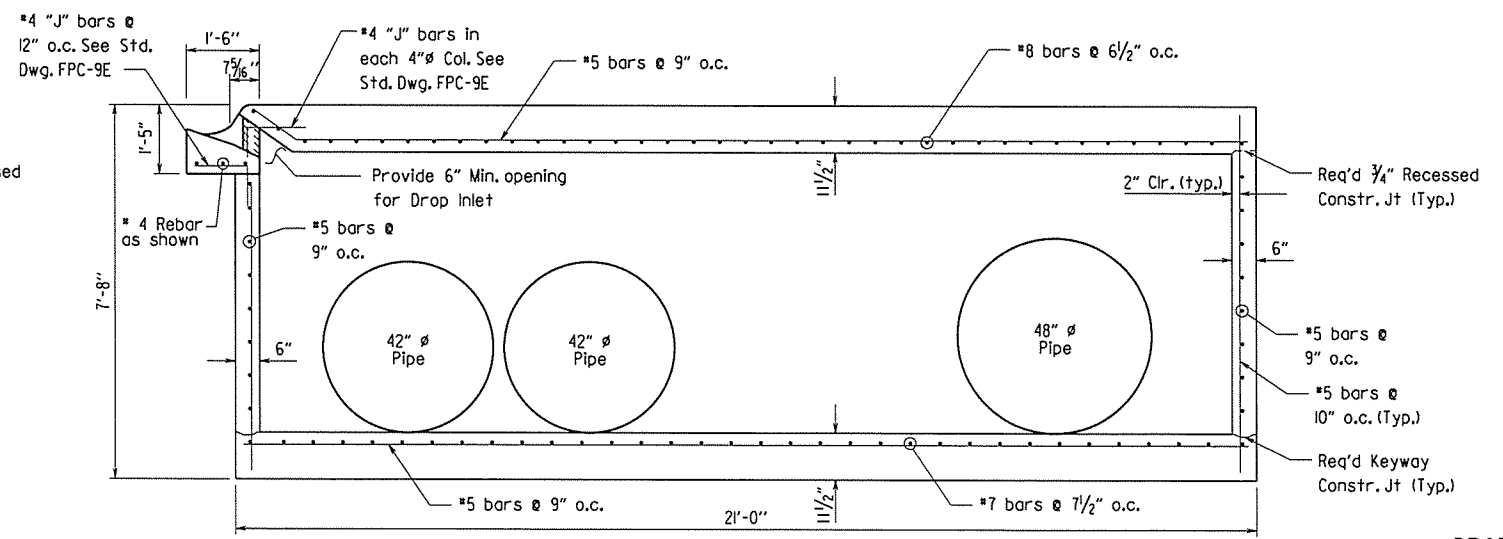
TYPICAL KEYWAY DETAIL  
 N.T.S.

\* Heavy Duty Ring and Cover location to be approved by Engineer.



SECTION A-A  
 N.T.S.

Note: Curb and Gutter Section not shown for clarity.



SECTION B-B  
 N.T.S.

DROP INLET (TYPE C SPECIAL)  
 STA. 107+75 RT.

SPECIAL DETAILS

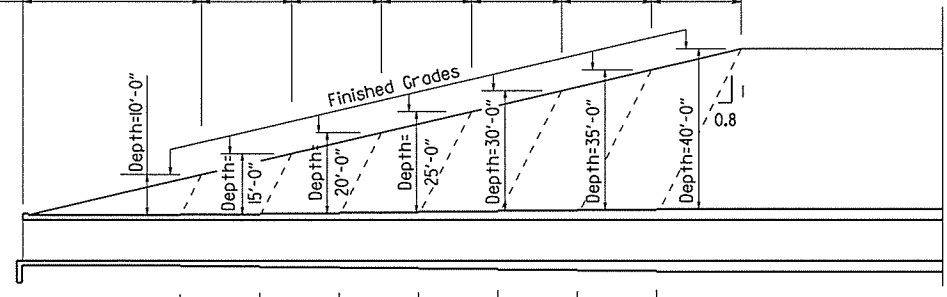
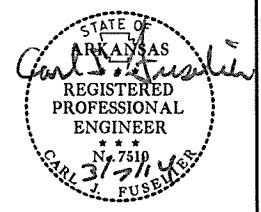
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284	10	174	

2:1 Slope	20'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
3:1 Slope	30'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
4:1 Slope	40'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"

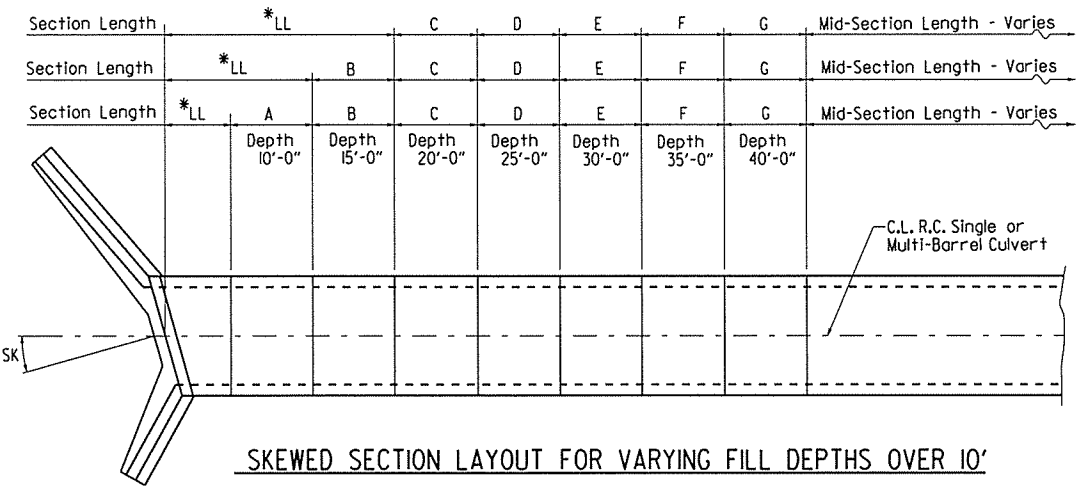
Note: For fill depths 10' and under, use Mid-Section full length of box culvert.

\* LL = Skewed End Section Length - See "Skewed End Section Details" Length LL varies with skew angle, overall box width and fill depth and may eliminate the need for some slope section lengths as shown.

SPECIAL DETAILS



Slope Section Length @ 2:1 Slope	A=12'-0"	B=6'-0"	C=6'-0"	D=6'-0"	E=6'-0"	F=6'-0"	G=6'-0"	Mid-Section Length - Varies
Slope Section Length @ 3:1 Slope	A=22'-0"	B=11'-0"	C=11'-0"	D=11'-0"	E=11'-0"	F=11'-0"	G=11'-0"	Mid-Section Length - Varies
Slope Section Length @ 4:1 Slope	A=32'-0"	B=16'-0"	C=16'-0"	D=16'-0"	E=16'-0"	F=16'-0"	G=16'-0"	Mid-Section Length - Varies



LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'  
Lengths for Non-Skewed Boxes

GENERAL NOTES:

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

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Fifth Edition (2010) with 2010 interim revisions.

LIVE LOADING: HL-93

All concrete shall be Class S with a minimum 28-day compressive strength of 3,500 psi and shall be poured in the dry. All exposed corners to have 3/4" chamfers.

Reinforcing Steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

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.

Excavation and backfilling shall be in accordance with the requirements of Section 801.

Membrane Waterproofing shall conform to the requirements of Section 815. Membrane Waterproofing shall be Type C and as directed by the Engineer applied to all construction joints in the top slab and the sidewalls of R.C. Box culverts and to the construction joint between wingwalls and R.C. Box culvert walls.

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.

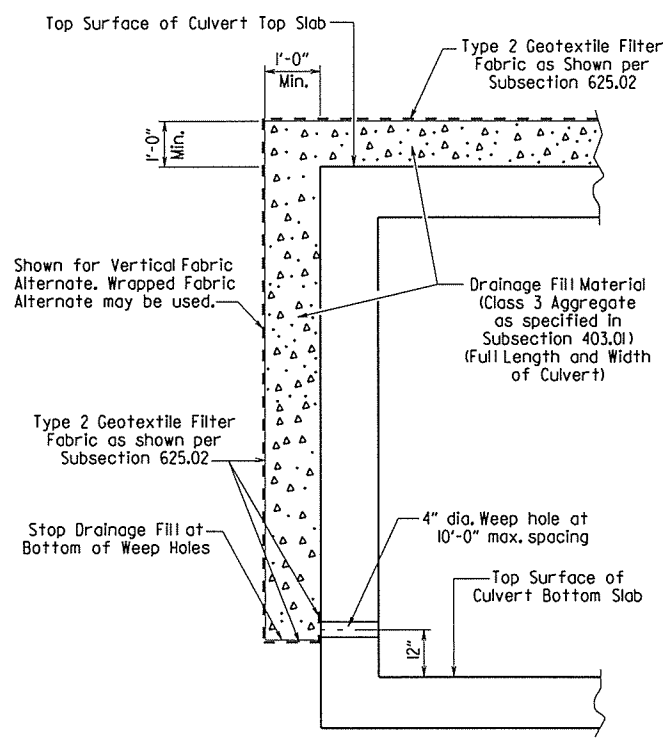
Weep Holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain opening shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The barrel components of the culvert may be constructed using continuous pours. For longer culvert construction, the Contractor may use multiple pours with transverse construction joints spaced a minimum of 50 feet apart unless superseded by stage construction or site constraints as approved by the Engineer. Construction joints between footings and walls shall be made only where shown in the Plans. Joints shall be normal to the centerline of barrel and shall be keyed. Longitudinal reinforcing shall be continuous through joints unless shown otherwise. All longitudinal construction joints shall be submitted to the Engineer for approval.

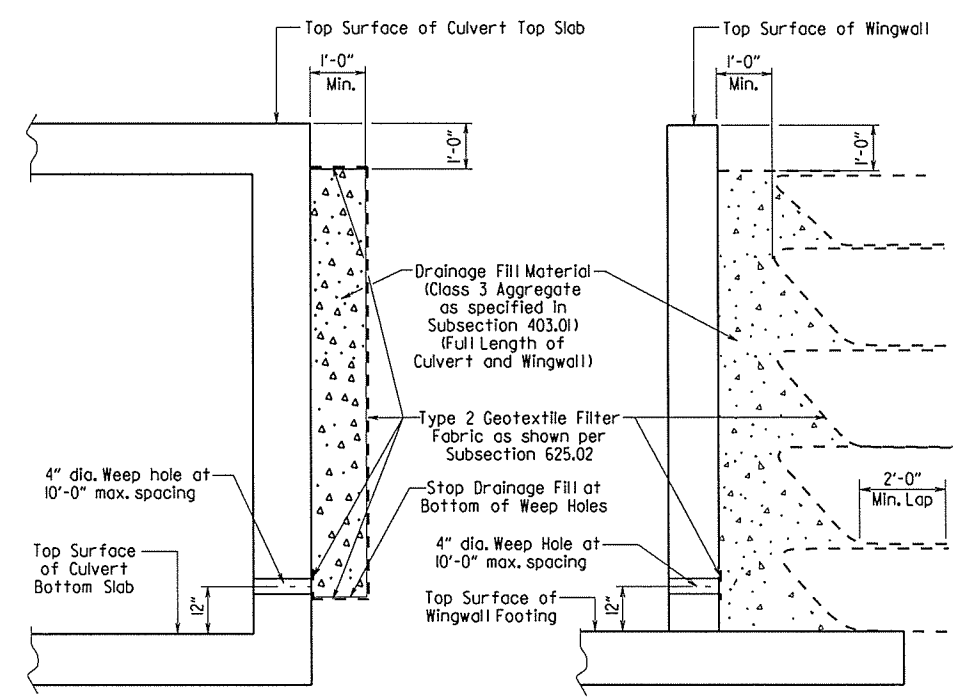
Membrane Waterproofing, Weep Holes, Geotextile Filter Fabric, and Drainage Fill Material will not be paid for directly but shall be considered subsidiary to Class S Concrete.

When the top slab of the box culvert serves as finished roadway surface, curing and finishing shall be in accordance with subsections 802.17 and 802.20 for bridge roadway surface and a tine finish shall be applied in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Curing and finishing shall not be paid for directly, but shall be considered incidental to the item "Class S Concrete-Roadway". Class 1 Protective Surface Treatment shall be applied to the roadway surface and this work shall be paid for under the unit price bid for "Class 1 Protective Surface Treatment".

When precast reinforced concrete box culverts are substituted for cast in place box culverts, they shall be manufactured according to ASTM C 1577 and meet the requirements of Section 607. When the top slab of the box culvert serves as the finished roadway surface, a precast reinforced concrete box culvert substitution is not allowed.



CULVERT DRAINAGE DETAIL FOR ROCK FILL  
This detail shall be used when rock fill is specified for embankment construction.



VERTICAL FABRIC ALTERNATE  
(Shown for Culvert, Similar for Wingwall)

WRAPPED FABRIC ALTERNATE  
(Shown for Wingwall, Similar for Culvert)

For Details of Excavation and Pay Limits, see Standard Drawing RCB-2.

WINGWALL & CULVERT DRAINAGE DETAIL

SHEET 1 OF 4  
GENERAL DETAILS OF R.C. BOX CULVERT  
GENERAL NOTES &  
LONGITUDINAL SECTION LENGTH SCHEDULE  
SPECIAL DETAILS

V L114 B090284\_culvert.dgn



MID-SECTION

Table with columns for R.C. BOX SECTION, DESIGN FILL DEPTH, CLEAR SPAN, CLEAR HEIGHT, TOP SLAB THK, BOTTOM SLAB THK, SIDE WALL THK, INTERIOR WALL THK, OVER ALL WIDTH, OVER ALL HEIGHT, SECTION LENGTH, TOP SLAB REINFORCING STEEL, BOTTOM SLAB REINFORCING STEEL, SIDE WALL REINFORCING STEEL, INTERIOR WALL REINFORCING STEEL, TOP SLAB DISTRIBUTION REINFORCING STEEL, BOTTOM SLAB DISTRIBUTION REINFORCING STEEL, SIDE WALL DISTRIBUTION REINFORCING STEEL, INTERIOR WALL DISTRIBUTION REINFORCING STEEL.

Table with columns: CLASS "S" CONCRETE, REINFORCING STEEL (GR. 60), ADTL. REINF. PER LONG LAP PER LONG LAP LOCATION (S), ADTL. REINF. FOR TRANS. LAP.

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
QUINTUPLE BARREL BOX CULVERT
STA. 96+20
SPECIAL DETAILS

SPECIAL DETAILS

INLET SLOPE SECTION(S)

Table with columns for R.C. BOX SECTION, DESIGN FILL DEPTH, CLEAR SPAN, CLEAR HEIGHT, TOP SLAB THK, BOTTOM SLAB THK, SIDE WALL THK, INTERIOR WALL THK, OVER ALL WIDTH, OVER ALL HEIGHT, SECTION LENGTH, TOP SLAB REINFORCING STEEL, BOTTOM SLAB REINFORCING STEEL, SIDE WALL REINFORCING STEEL, INTERIOR WALL REINFORCING STEEL, TOP SLAB DISTRIBUTION REINFORCING STEEL, BOTTOM SLAB DISTRIBUTION REINFORCING STEEL, SIDE WALL DISTRIBUTION REINFORCING STEEL, INTERIOR WALL DISTRIBUTION REINFORCING STEEL.

Table with columns: CLASS "S" CONCRETE, REINFORCING STEEL (GR. 60), ADTL. REINF. PER LONG LAP PER LONG LAP LOCATION, ADTL. REINF. FOR TRANS. LAP, ADDITIONAL CONCRETE FOR HDWL, TOTAL ADTL. REINF. FOR HDWL.

Bar Lap - Add one long lap for each Slope Section, and one additional long lap for Slope Sections greater than 40'-0" in length.

Table with columns: Design Fill Depth, Range of Actual Fill Depth.

Data shown for Mid-Section, Slope Section(s), and Skewed End Section is based on the design fill depth shown in the table, see PLAN AND PROFILE SHEETS for actual fill depth.

INLET SKEWED END SECTION

Table with columns for SKEW, SLOPE, DESIGN FILL DEPTH, CLEAR SPAN, CLEAR HEIGHT, SECTION LENGTH, TOP SLAB THK, HDWL THK, BOTTOM SLAB THK, SIDE WALL THK, INTERIOR WALL THK, OVERALL WIDTH, OVERALL HEIGHT, TOP SLAB REINFORCING STEEL, BOTTOM SLAB REINFORCING STEEL, SIDE WALL REINFORCING STEEL, INTERIOR WALL REINFORCING STEEL, TOP SLAB DISTRIBUTION REINFORCING STEEL, BOTTOM SLAB DISTRIBUTION REINFORCING STEEL, SIDE WALL DISTRIBUTION REINFORCING STEEL, INTERIOR WALL DISTRIBUTION REINFORCING STEEL.

Table with columns: CLASS "S" CONCRETE (includes HDWL), REINFORCING STEEL (GR. 60) (includes HDWL), CU. YDS., LBS.

Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

INLET WINGWALL TABLE

Large table with columns for OVER ALL WIDTH, CLEAR HEIGHT, FOOTING THK, WING WALL THK, BOX SKEW, SLOPE, HDWL LENGTH, HEEL, WALL HEIGHT, WINGWALL ANGLE, FOOTING WIDTH AT WALL END, WIDTH OF WING FOOTINGS AT HDWL, FOOTING DIMENSION PARALLEL WITH HDWL, LENGTH OF WINGWALLS, INSIDE FOOTING DIMENSIONS, CLASS "S" CONCRETE, REINFORCING STEEL.

MID-SECTION BAR LAP TABLE

Table with columns: # of Long Laps Req'd, Section Length.

Table with columns: Min. Bar Lap Length, Bar Size.

Table with columns: Bar Pin Dia. Table, Bar Size.

This drawing to be used in conjunction with SHEET 1 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "GENERAL NOTES & LONGITUDINAL SECTION LENGTH SCHEDULE", SHEET 3 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF MULTI-BARREL R.C. BOX CULVERT", SHEET 4 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF WINGWALLS", and STANDARD DRAWING RCB-2.

For additional information and outlet sections, see Sheet 2 of 2.

TABULAR DATA BY: CSJ DATE: 06/14/12
CHECKED BY: CWY DATE: 9/19/14

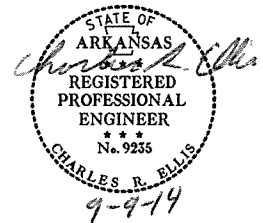
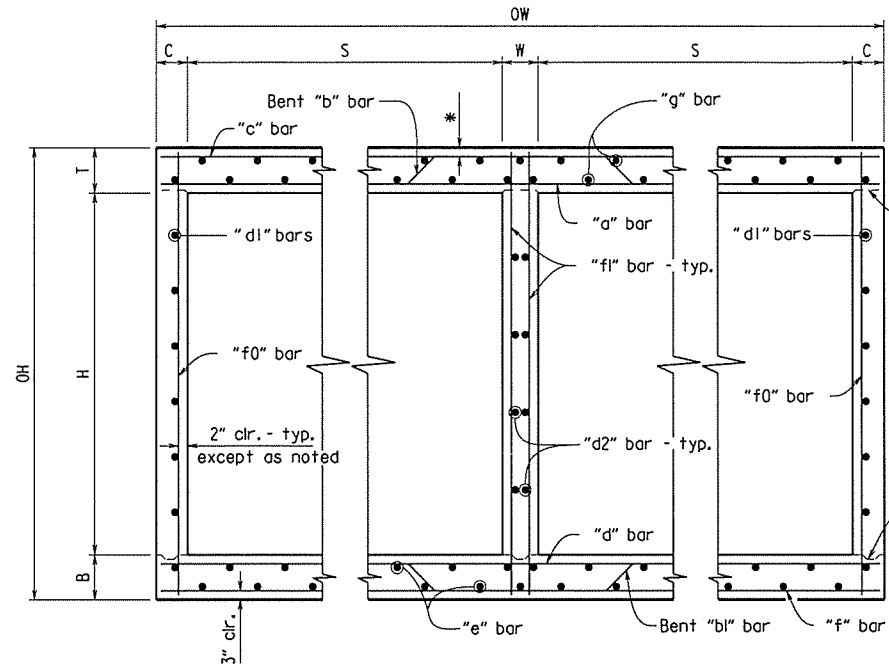


Table with columns: DATE REVISED, DATE FILMED, DATE REVISED, DATE FILMED, FED. ROAD DIST. NO., STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS.

SPECIAL DETAILS

\*2" clr. for fill depth (D) greater than 2 ft.  
 2 1/2" clr. for fill depth (D) equal to or less than 2 ft.

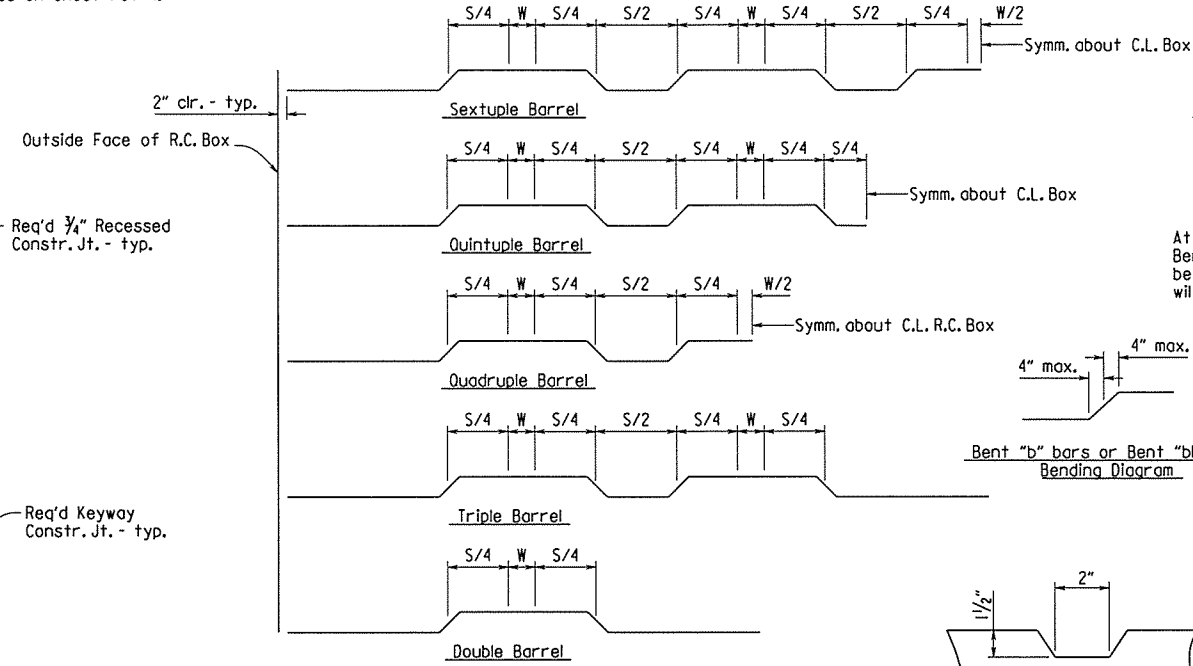
Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



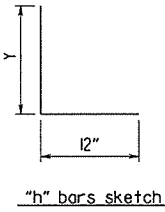
TYPICAL SECTION M-M

Top Slab  
 Straight "c" bars shall alternate with Bent "b" bars in top.  
 Straight "a" bars shall alternate with Bent "b" bars in bottom.

Bottom Slab  
 Straight "d" bars shall alternate with Bent "bl" bars in top.  
 Straight "f" bars shall alternate with Bent "bl" bars in bottom.



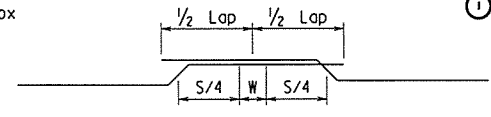
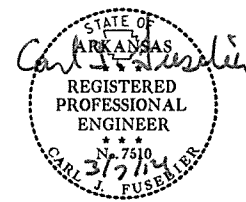
Bent "b" bars or Bent "bl" bars sketch



"h" bars sketch

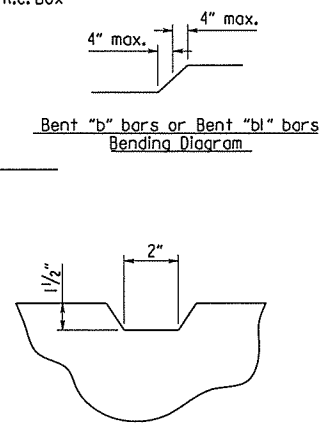
DATE REVISED	DATE FILMED	REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284	12	174	

SPECIAL DETAILS

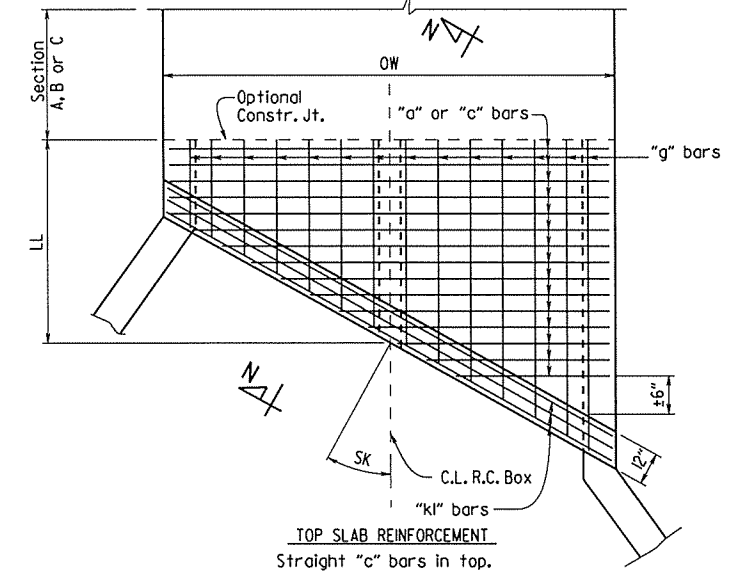


Lap Detail  
 For Bent "b" bars and Bent "bl" bars

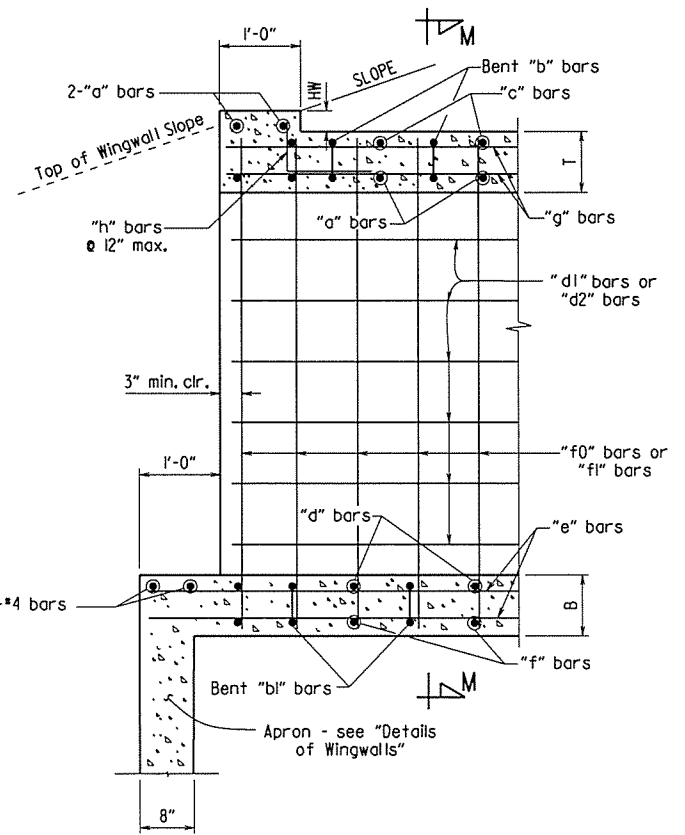
At the Contractor's option in lieu of providing Bent "b" or Bent "bl" bars, one bar top and bottom of equivalent size may be substituted for each bent bar. Payment for the reinforcing will be based on the weight of the "b" or "bl" bar.



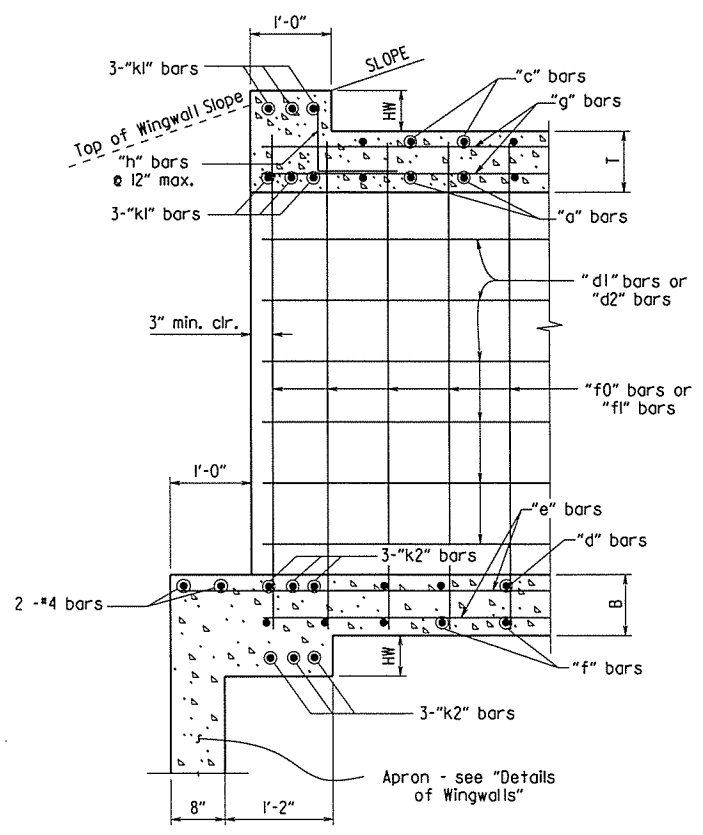
TYPICAL KEYWAY DETAIL  
 (All Construction Joints)



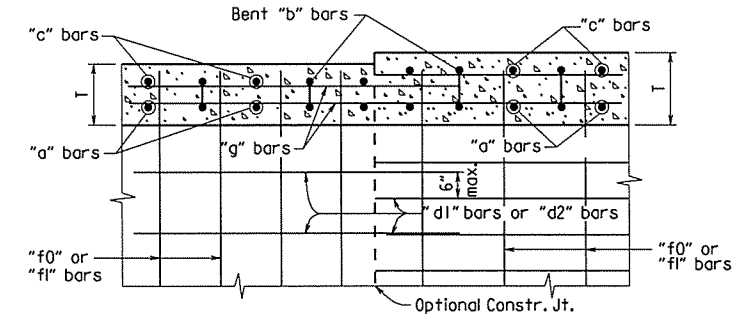
TOP SLAB REINFORCEMENT  
 Straight "c" bars in top.  
 Straight "a" bars in bottom.



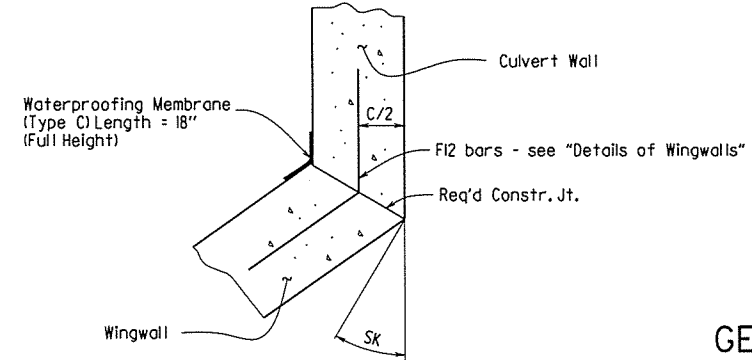
PART LONGITUDINAL SECTION  
 (Non-Skewed Ends)



PART LONGITUDINAL SECTION N-N  
 (Skewed Ends)

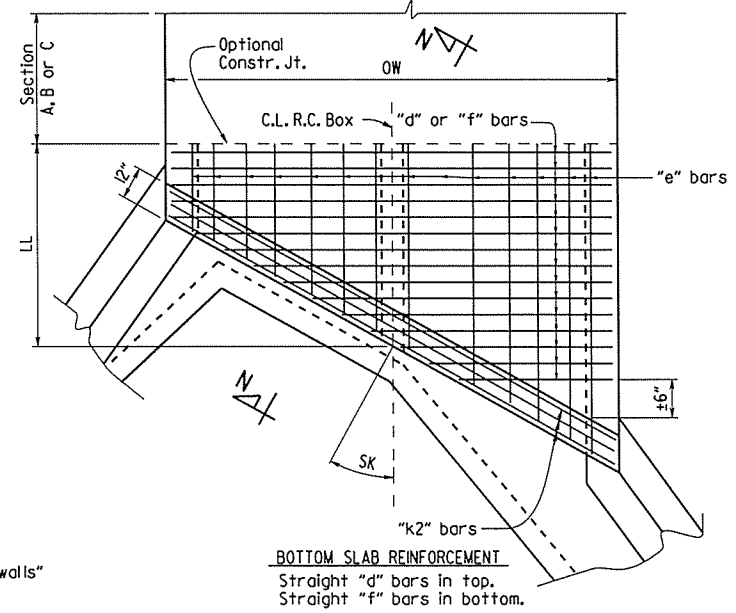


LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS  
 TOP SLAB SHOWN, BOTTOM SLAB SIMILAR



WINGWALL ATTACHMENT

See "Details of Wingwalls" for additional information and wingwall details.



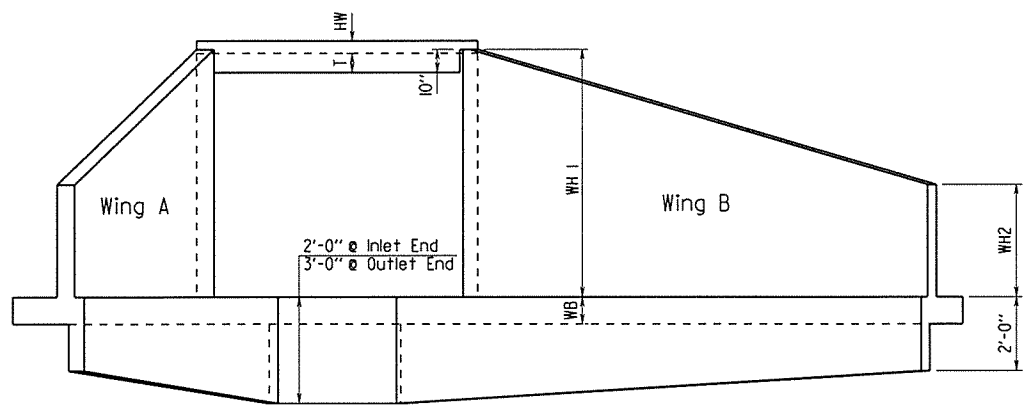
SKEWED END SECTION DETAILS

SHEET 3 OF 4  
 GENERAL DETAILS OF R.C. BOX CULVERT  
 DETAILS OF MULTI-BARREL R.C. BOX CULVERT  
 SPECIAL DETAILS

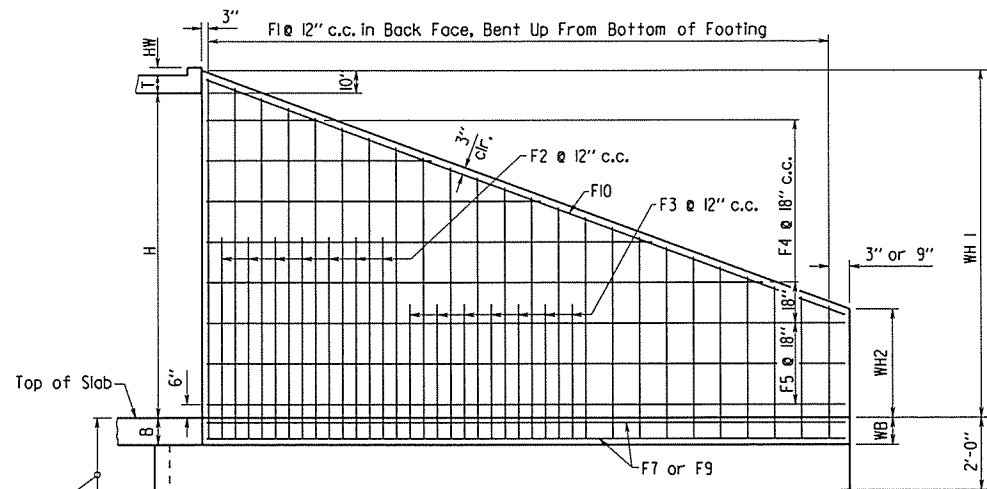
b090284\_culvert.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284	13	174	

1 SPECIAL DETAILS

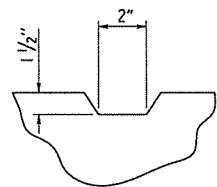


END ELEVATION  
Flared Wingwalls Shown

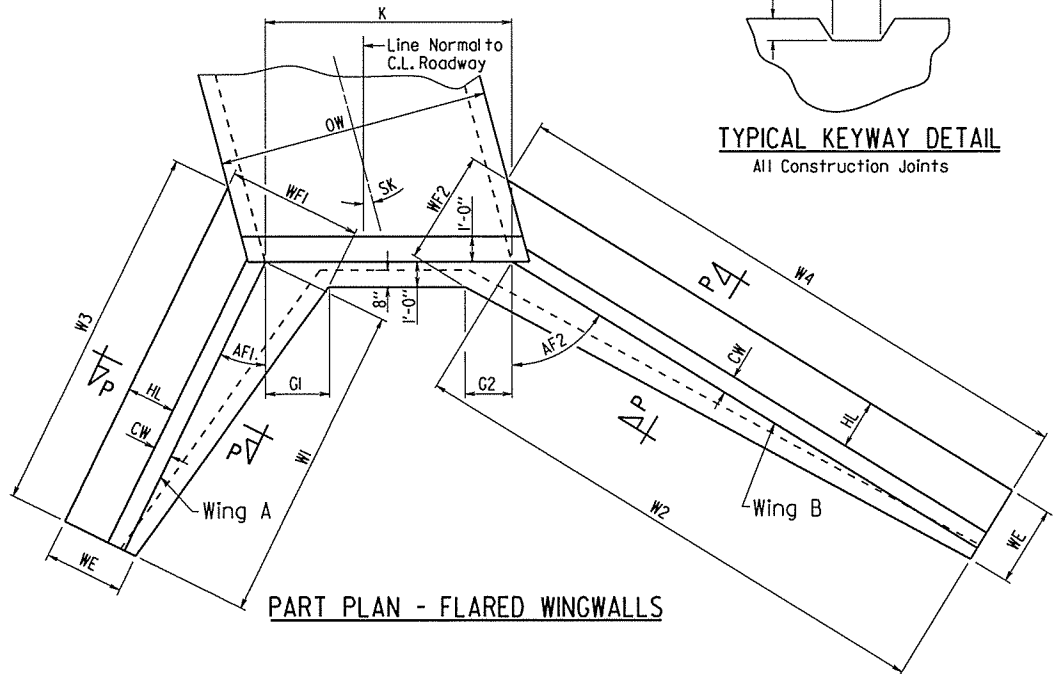


WINGWALL ELEVATION  
Showing Back Face Reinforcement

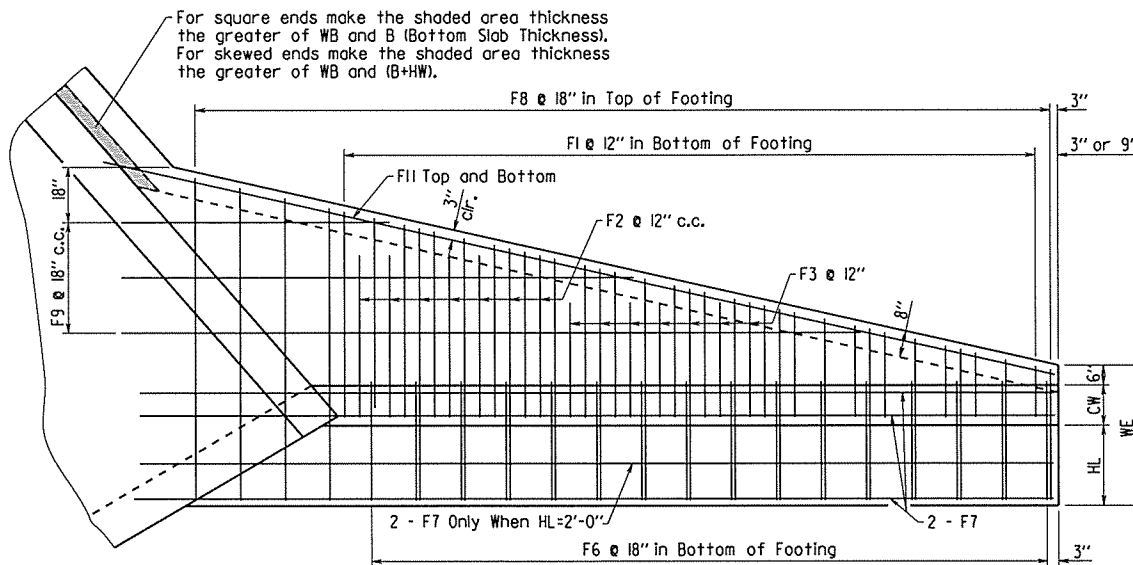
Note: See "Wingwall Cross-Section" for additional details and reinforcing



TYPICAL KEYWAY DETAIL  
All Construction Joints

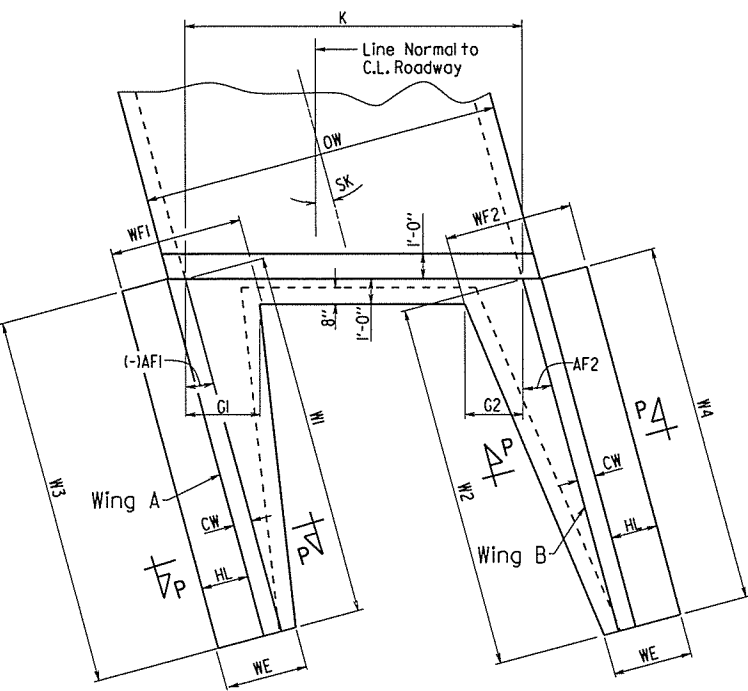


PART PLAN - FLARED WINGWALLS

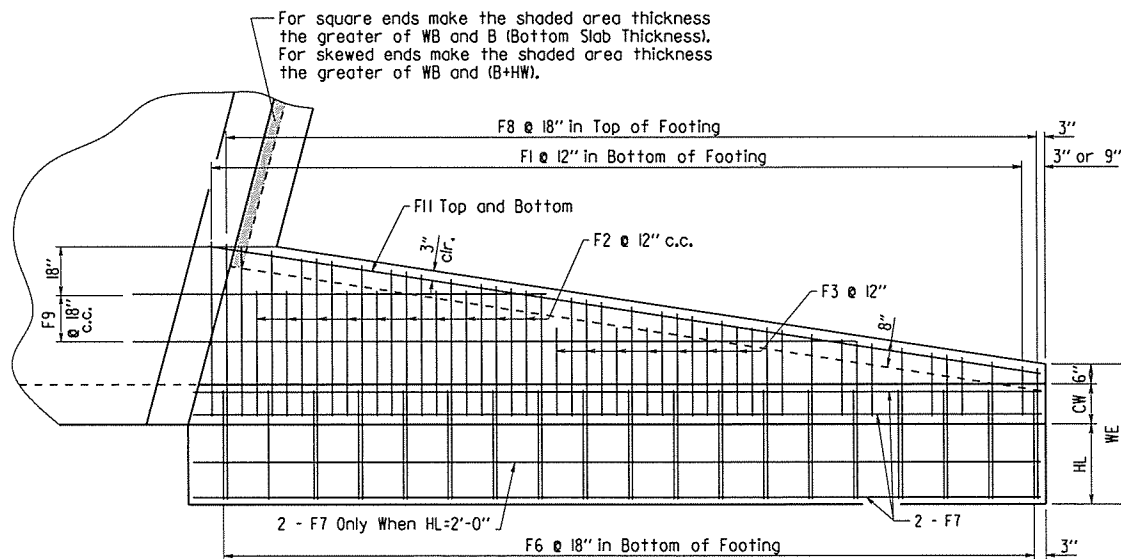


PLAN - FLARED WINGWALLS  
Showing Footing Reinforcement

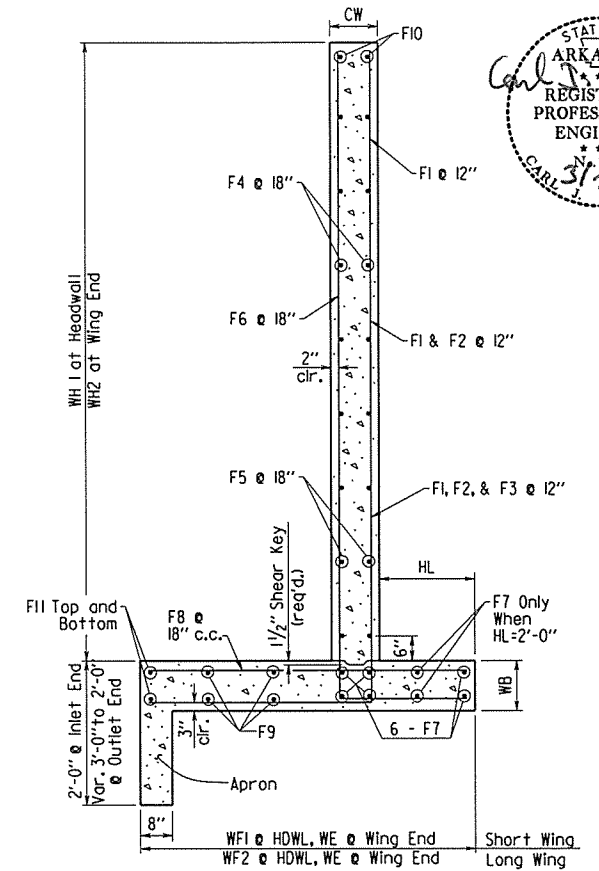
For square ends make the shaded area thickness the greater of WB and B (Bottom Slab Thickness).  
For skewed ends make the shaded area thickness the greater of WB and (B+HW).



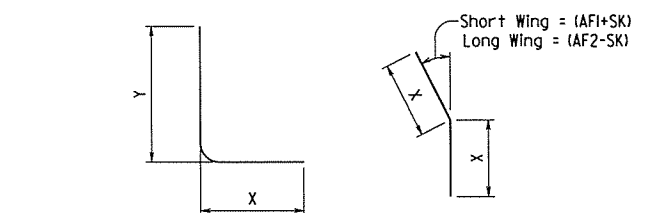
PART PLAN - PARALLEL WINGWALLS



PLAN - PARALLEL WINGWALLS  
Showing Footing Reinforcement

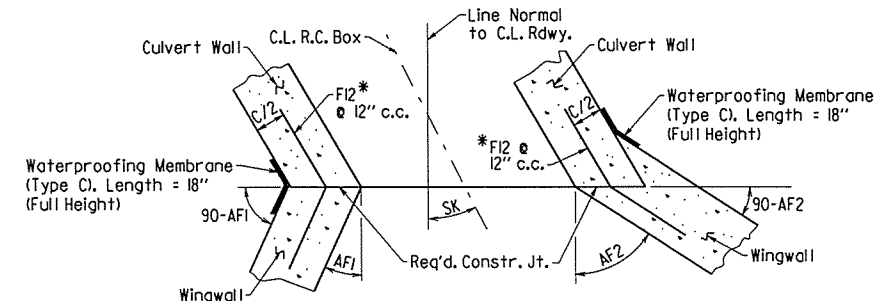


WINGWALL SECTION P-P



F1, F2, F3, & F6 BARS \*F12 BAR

\*F12 is a straight bar for parallel wingwalls



CONSTRUCTION JOINTS  
Flared Wingwalls Shown

MID-SECTION

R.C. BOX SECTION		DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		INTERIOR WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINF. STEEL		BOTTOM SLAB DISTRIBUTION REINF. STEEL		SIDE WALL DISTRIBUTION REINF. STEEL		INTERIOR WALL DISTRIBUTION REINF. STEEL						
D	S	H	T	B	C	W	OW	OH	SL	a	Bent b	c	SPACING	NO. REQ'D	d	Bent b1	f	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D				
A	2	6	3	10	10	6	8	33'-8"	4'-8"	68.3333	4	33'-4"	8	34'-4"	8	33'-4"	18	45	4	33'-4"	4	34'-3"	4	33'-4"	24	34	4	10	162	4'-4"	4	12	544	4'-4"	4	11	79	4	11	79	4	12	6	4	12	24

R.C. BOX SECTION		DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		INTERIOR WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINF. STEEL		BOTTOM SLAB DISTRIBUTION REINF. STEEL		SIDE WALL DISTRIBUTION REINF. STEEL		INTERIOR WALL DISTRIBUTION REINF. STEEL					
D	S	H	T	B	C	W	OW	OH	SL	a	Bent b	c	SPACING	NO. REQ'D	d	Bent b1	f	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D			

SK	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVERALL WIDTH	OVERALL HEIGHT	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL												
													a	c	d	f	IO	f1	g	e	d1	d2																					
45	3:1	2	6	3	18'-10"	8.5	3	9	6	8	33'-8"	4'-5 1/2"	5	7.5	5	5	4	8.5	4	11	4	9	51	4'-2"	4	12	160	4'-2"	4	12	69	4	12	69	4	12	6	12	12	6	12	6	12

OVERALL WIDTH		CLEAR HEIGHT		FOOTING THK.		WING WALL THK.		BOX SKEW (DEG.)		SLOPE		HDWL LENGTH		HEEL		WALL HEIGHT		WING WALL ANGLE (DEGREE)		FOOTING WIDTH AT WALL END		WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WING WALLS		LENGTH OF FOOTING HEEL		CLASS "S" CONCRETE (Includes apron)		REINFORCING STEEL (Includes apron and laps if required)	
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4	CU.YD	LBS.											
33'-8"	3'-0"	0'-9"	0'-8"	45	3:1	46'-2 3/8"	1'-0"	3'-10"	1'-0"	0	60	2'-2"	2'-2"	2'-3"	0'-6"	0'-6 - 7/8"	8'-6"	17'-0"	9'-5 1/2"	21'-3 1/2"	6.58	477											

INLET SKEWED END SECTION

INLET WINGWALL TABLE

MID-SECTION BAR LAP TABLE

# of Long. Laps Req'd	SL = Section Length
0	< 40.0 ft
1	>40.0 ft - 78.0 ft
2	>78.0 ft - 116.0 ft
3	>116.0 ft - 154.0 ft
4	>154.0 ft - 192.0 ft
5	>192.0 ft - 230.0 ft
6	>230.0 ft - 268.0 ft
7	>268.0 ft - 306.0 ft
8	>306.0 ft - 344.0 ft

Min. Bar Lap Length	
#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"

Bar Pin Dia. Table	
#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"



TABULAR DATA BY: CMW DATE: 02/28/14  
 CHECKED BY: RSL DATE: 3/6/14

This drawing to be used in conjunction with SHEET 1 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "GENERAL NOTES & LONGITUDINAL SECTION LENGTH SCHEDULE", SHEET 3 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF MULTI-BARREL R.C. BOX CULVERT", SHEET 4 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF WING WALLS", and STANDARD DRAWING RCB-2.  
 For additional information and outlet sections, see Sheet 2 of 2.

CLASS "S" CONCRETE (Includes HDWL)	REINFORCING STEEL (GR 60) (Includes HDWL)
CU. YDS.	LBS.
22.14	6892

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

② Bar Lap - Add one long lap for each Slope Section, and one additional long lap for Slope Sections greater than 40'-0" in length.

Design Fill Depth	Range of Actual Fill Depth
2	0.0 ft - 2.0 ft
5	>2.0 ft - 5.0 ft
10	>5.0 ft - 10.0 ft
15	>10.0 ft - 15.0 ft
20	>15.0 ft - 20.0 ft
25	>20.0 ft - 25.0 ft
30	>25.0 ft - 30.0 ft
35	>30.0 ft - 35.0 ft
40	>35.0 ft - 40.0 ft

Data shown for Mid-Section, Slope Section(s), and Skewed End Section is based on the design fill depth shown in the table, see PLAN AND PROFILE SHEETS for actual fill depth.

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)	ADTL. REINF. PER LONG. LAP LOCATION	ADTL. REINF. FOR TRANS. LAP	ADDITIONAL CONCRETE FOR HDWL	TOTAL ADTL. REINF. FOR HDWL
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.	LBS. PER LIN. FT.	CU. YDS.	LBS.

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)	ADTL. REINF. PER LONG. LAP LOCATION (S)	ADTL. REINF. FOR TRANS. LAP
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.	LBS. PER LIN. FT.
2.49	325	220	

SHEET 1 OF 2  
 DETAILS OF R.C. BOX CULVERT  
 QUINTUPLE BARREL BOX CULVERT  
 Sta. 96+20  
 SPECIAL DETAILS





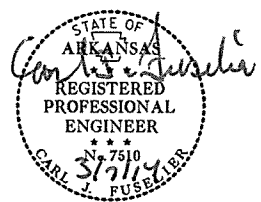




OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT		WING WALL ANGLE (DEGREE)	WING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		LENGTH OF FOOTING HEEL		CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)	
								AT HDWL	AT WING END			WING A	WING B	WING A	WING B	WING A	WING B	WING A	WING B			
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4	CU.YD	LBS.
20'-4"	3'-0"	0'-9"	0'-8"	0	3:1	19'-4"	1'-0"	3'-10"	1'-0"	30	30	2'-2"	2'-2"	0'-0"	0'-0"	9'-6"	9'-6"	11'-4 5/8"	11'-4 5/8"	4.68	342	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	176
				JOB NO.	090284		17 176	
SPECIAL DETAILS								



TABULAR DATA BY: CMW DATE: 02/28/14  
 CHECKED BY: CSL DATE: 3/6/14

Min. Bar Lap Length

#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"

Bar Pin Dia. Table

#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"

Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

OUTLET SKEWED END SECTION

SK	SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL		
														a	c	d	f	f0	f1	g	e	d1	d2											
SL	D	S	H	T	B	C	W	OW	OH	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	

CLASS "S" CONCRETE (Includes HDWL)	REINFORCING STEEL (GR 60) (Includes HDWL)
CU. YDS.	LBS.

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL				
											a	Bent b	c	SPACING	NO. REQ'D	d	Bent b1	f	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE
D	S	H	T	B	C	W	OW	OH	SL	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L	SIZE	L
2	6	3																															

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)	ADTL. REINF. PER LONG. LAP LOCATION	ADDITIONAL CONCRETE FOR HDWL	TOTAL ADTL. REINF. FOR HDWL
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.	CU. YDS.	LBS.
			0.19	52

Bar Lap - Add one long. lap for each Slope Section, and one additional long. lap for Slope Sections greater than 40'-0" in length.

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.





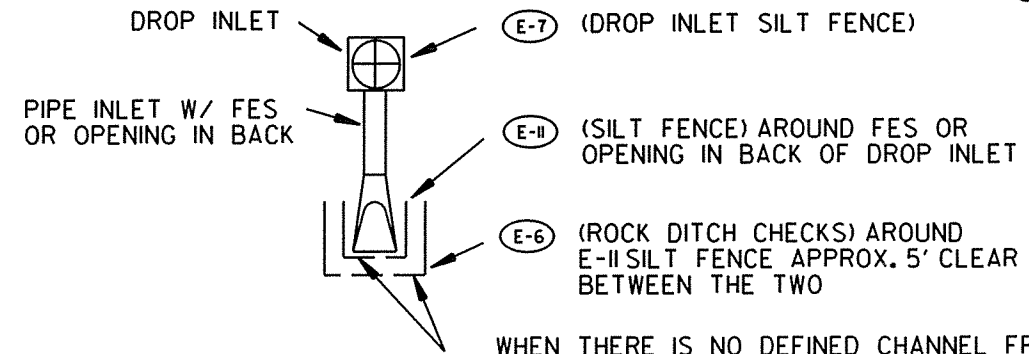


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		20	174

② TEMPORARY EROSION CONTROL DETAILS

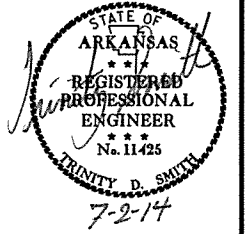
TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE TEMPORARY EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED, AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.



WHEN THERE IS NO DEFINED CHANNEL FROM OFFSITE, INSTALL DEVICES IN FRONT OF OPENING. IF OFFSITE DRAINAGE CHANNEL IS PRESENT, INSTALL DEVICES ON SIDES ONLY.

(E-14) SEDIMENT BASIN



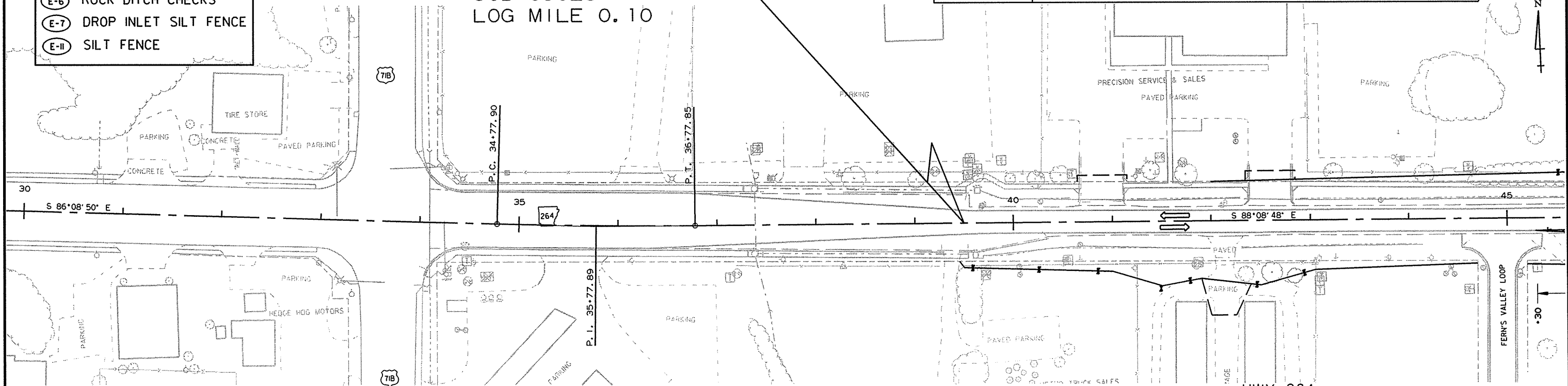
REVISIONS

DATE	REVISION

LEGEND

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

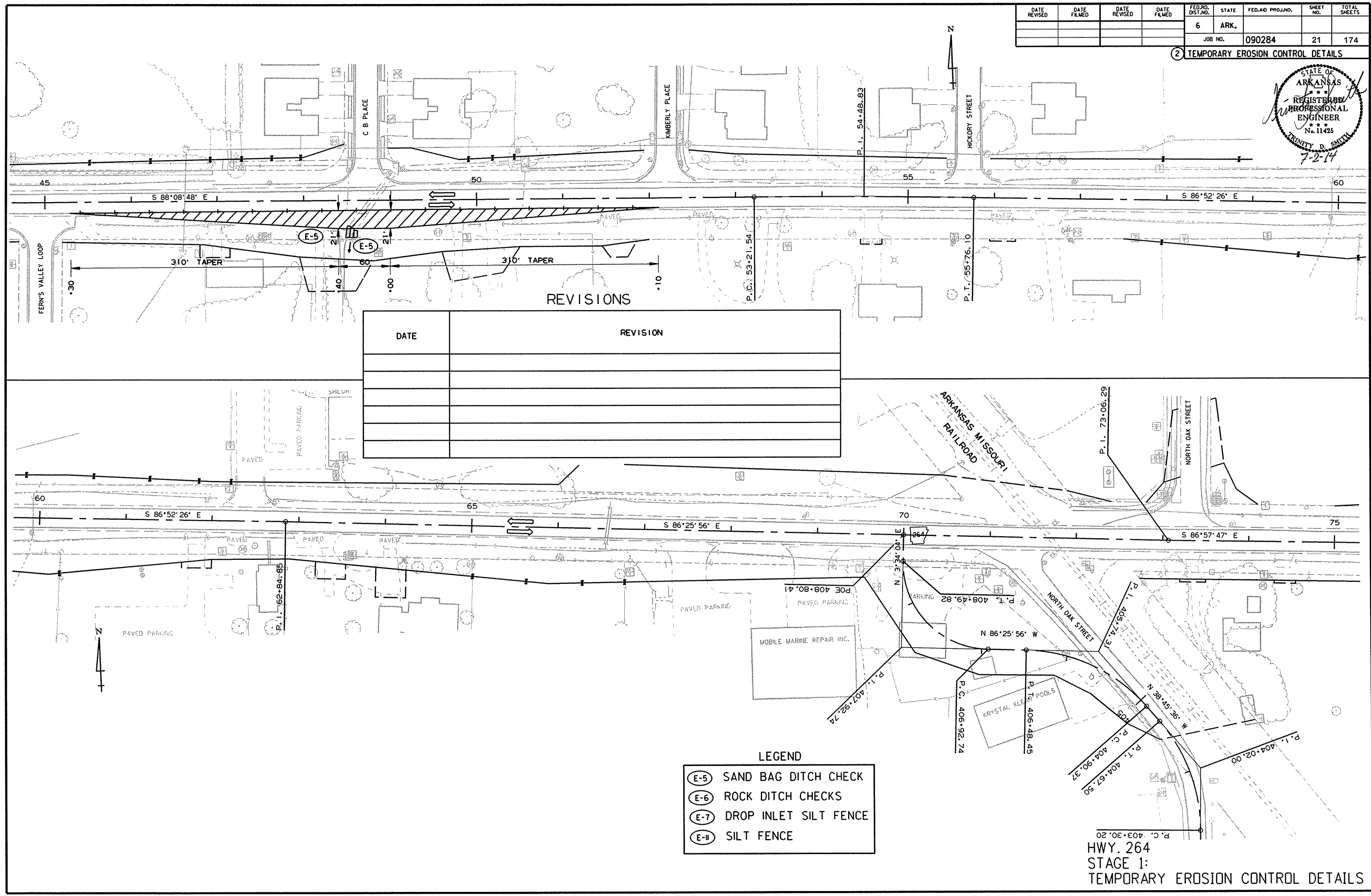
STA. 39+50.00 BEGIN  
JOB 090284  
LOG MILE 0.10



HWY. 264  
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.		21	174
				JOB NO. 090284				

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE	REVISION

LEGEND

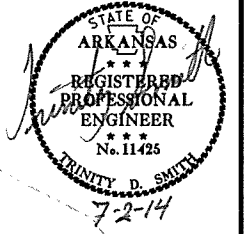
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(E-6)	ROCK DITCH CHECKS
(E-7)	DROP INLET SILT FENCE
(E-8)	SILT FENCE

HWY. 264  
 STAGE 1:  
 TEMPORARY EROSION CONTROL DETAILS

4/28/2014  
 R090284.DGN

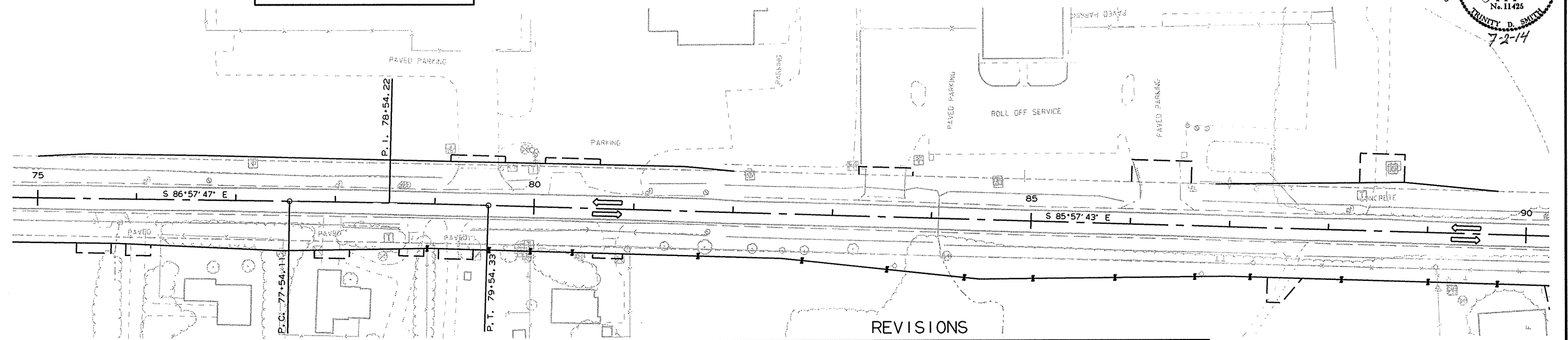
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	174
				JOB NO. 090284				

② TEMPORARY EROSION CONTROL DETAILS



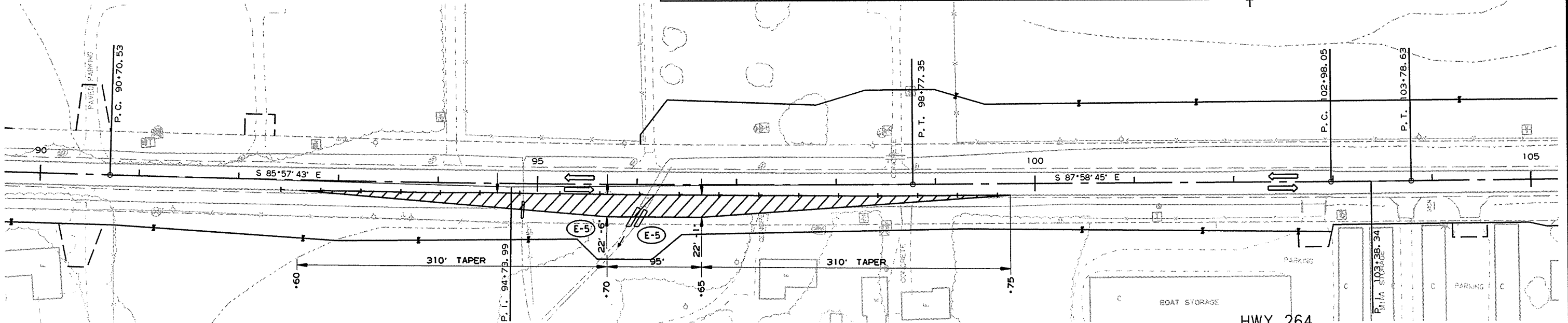
LEGEND

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



REVISIONS

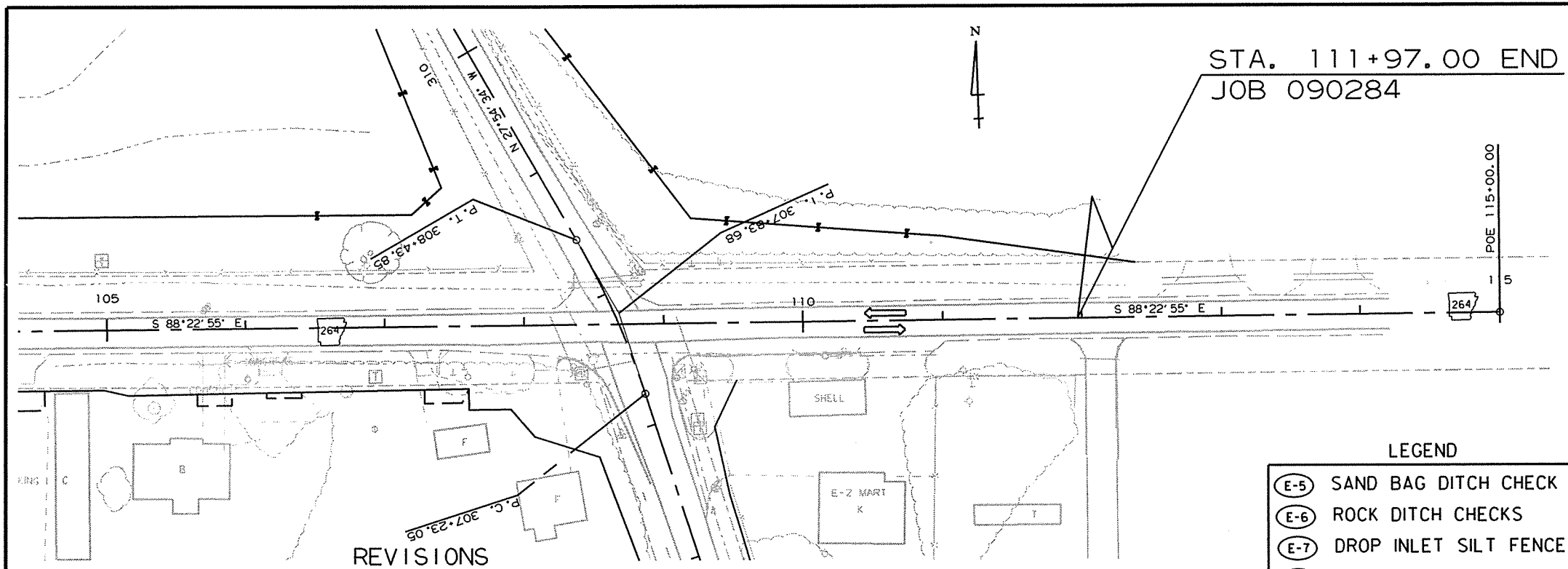
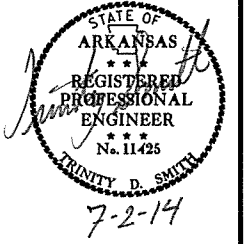
DATE	REVISION



HWY. 264  
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.		23	174
				JOB NO.	090284			

② TEMPORARY EROSION CONTROL DETAILS

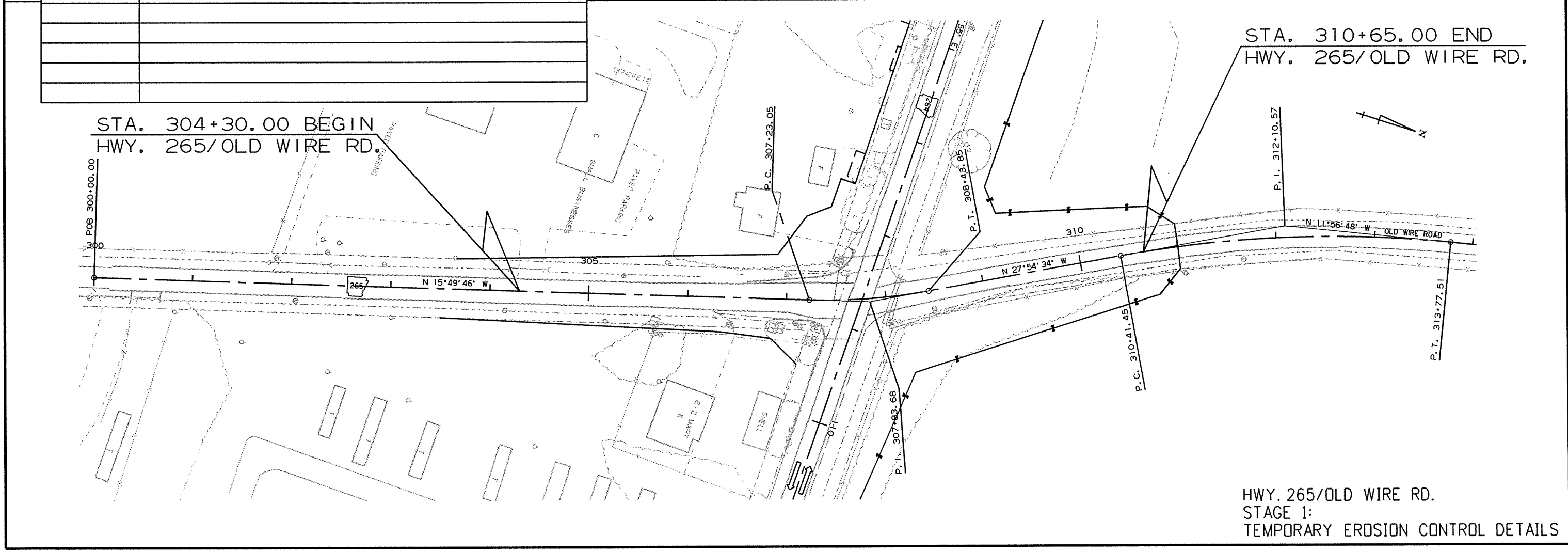


LEGEND

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

DATE	REVISION

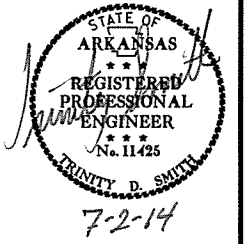
HWY. 264  
STAGE 1:  
TEMPORARY EROSION CONTROL DETAILS



HWY. 265/OLD WIRE RD.  
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.	090284		24	174

② TEMPORARY EROSION CONTROL DETAILS



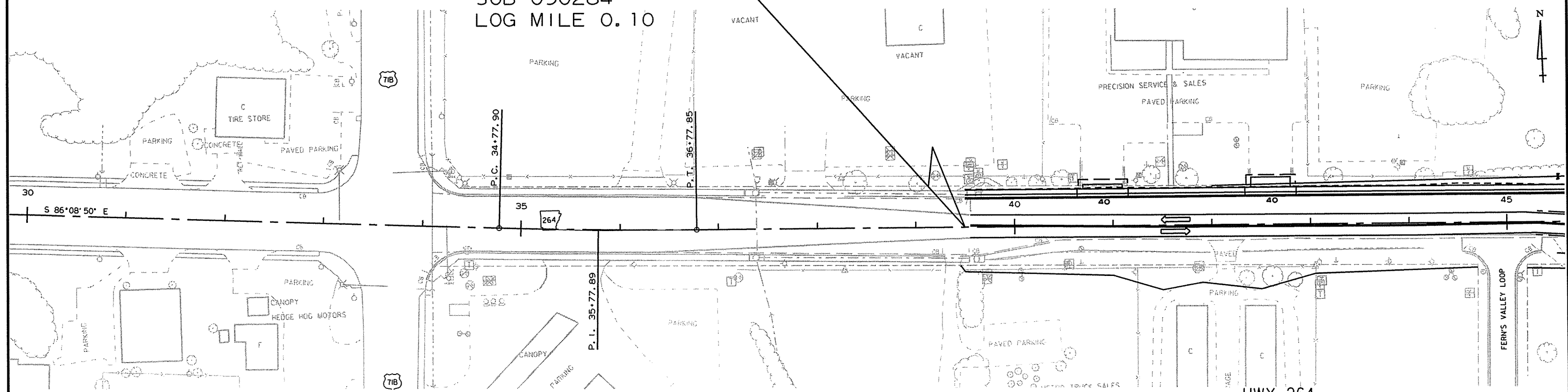
REVISIONS

LEGEND

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

DATE	REVISION

STA. 39+50.00 BEGIN  
 JOB 090284  
 LOG MILE 0.10



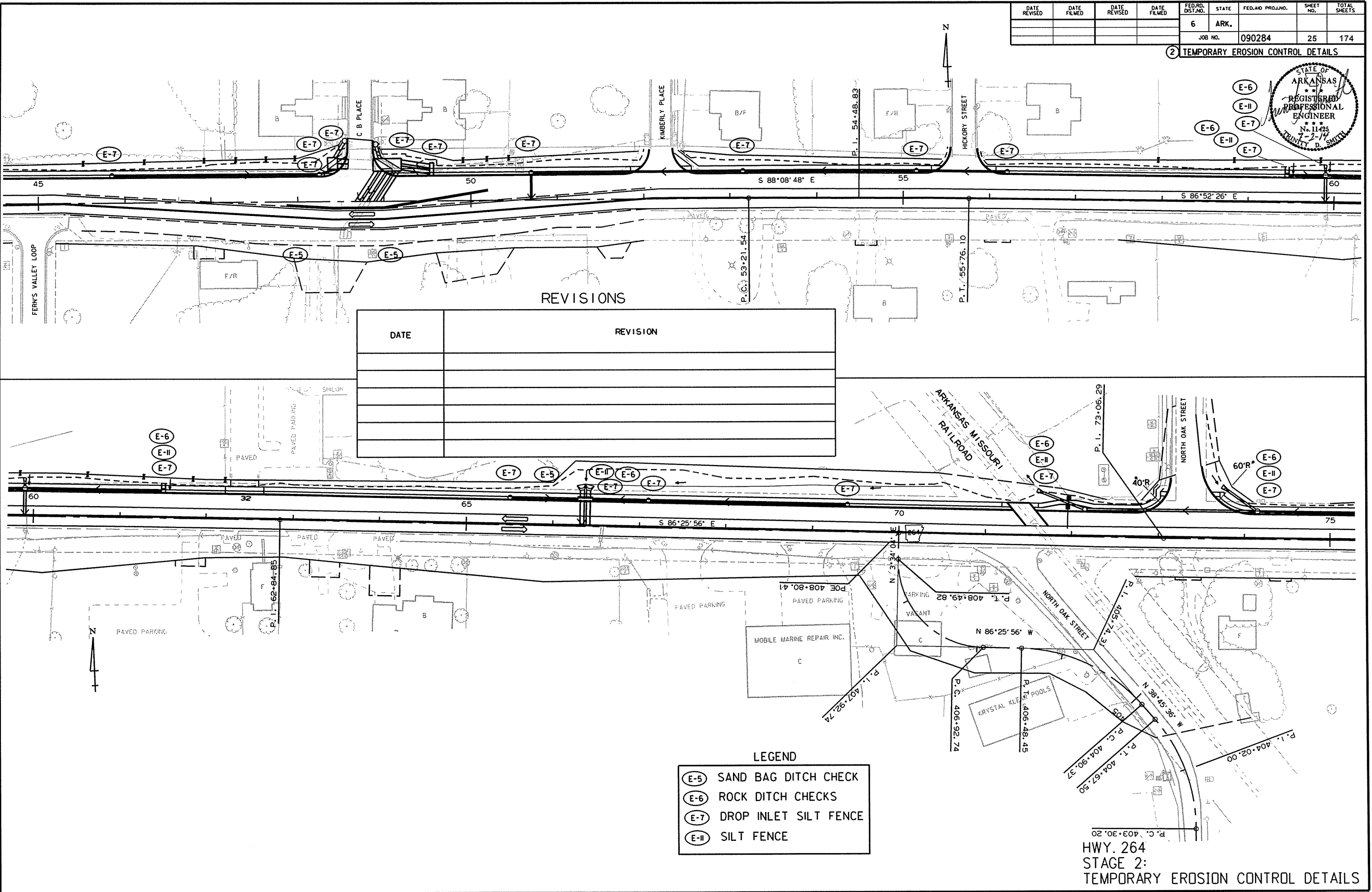
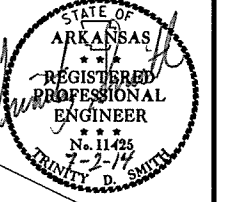
HWY. 264  
 STAGE 2:  
 TEMPORARY EROSION CONTROL DETAILS

4/28/2014  
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	174
				JOB NO.		090284		

2 TEMPORARY EROSION CONTROL DETAILS



DATE	REVISION

LEGEND

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

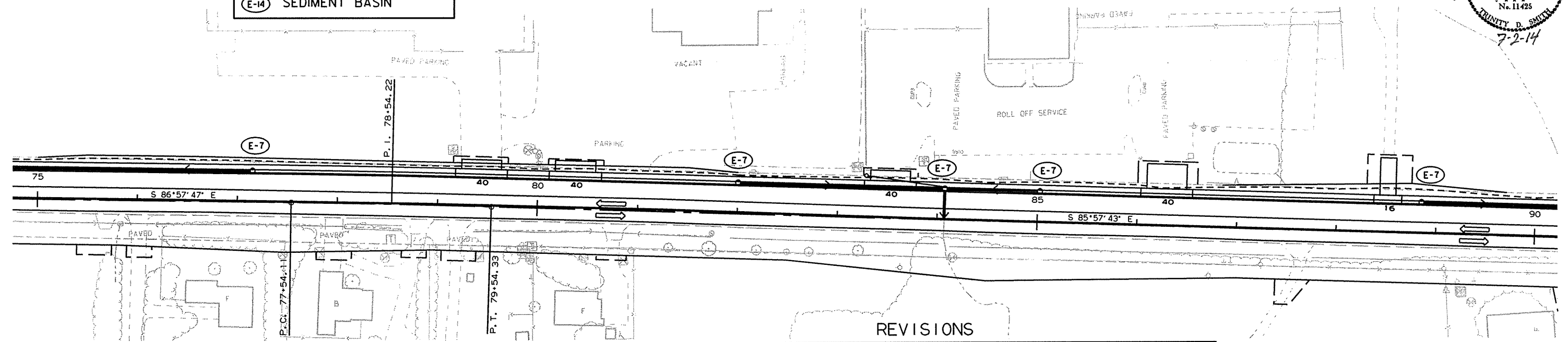
HWY. 264  
 STAGE 2:  
 TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		26	174
				JOB NO.	090284			

② TEMPORARY EROSION CONTROL DETAILS

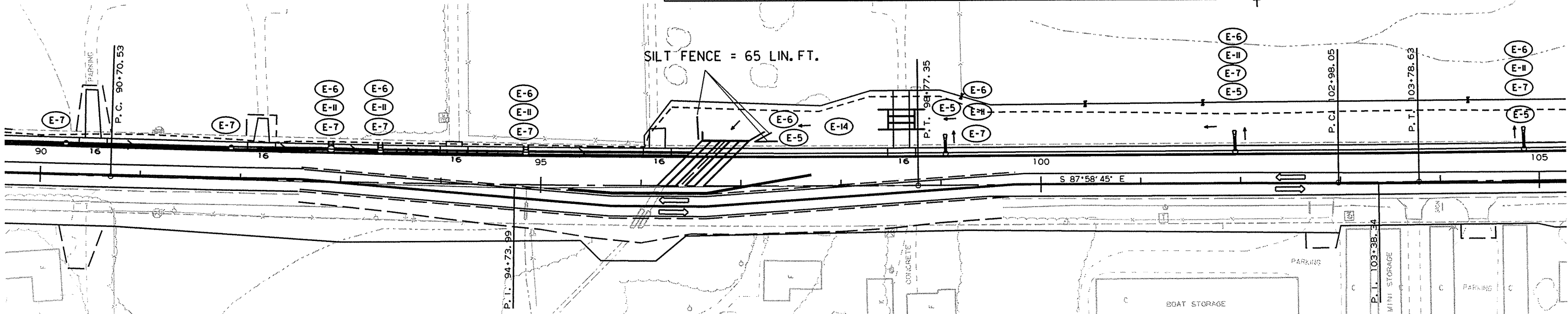


- LEGEND**
- (E-5) SAND BAG DITCH CHECK
  - (E-6) ROCK DITCH CHECKS
  - (E-7) DROP INLET SILT FENCE
  - (E-II) SILT FENCE
  - (E-14) SEDIMENT BASIN



**REVISIONS**

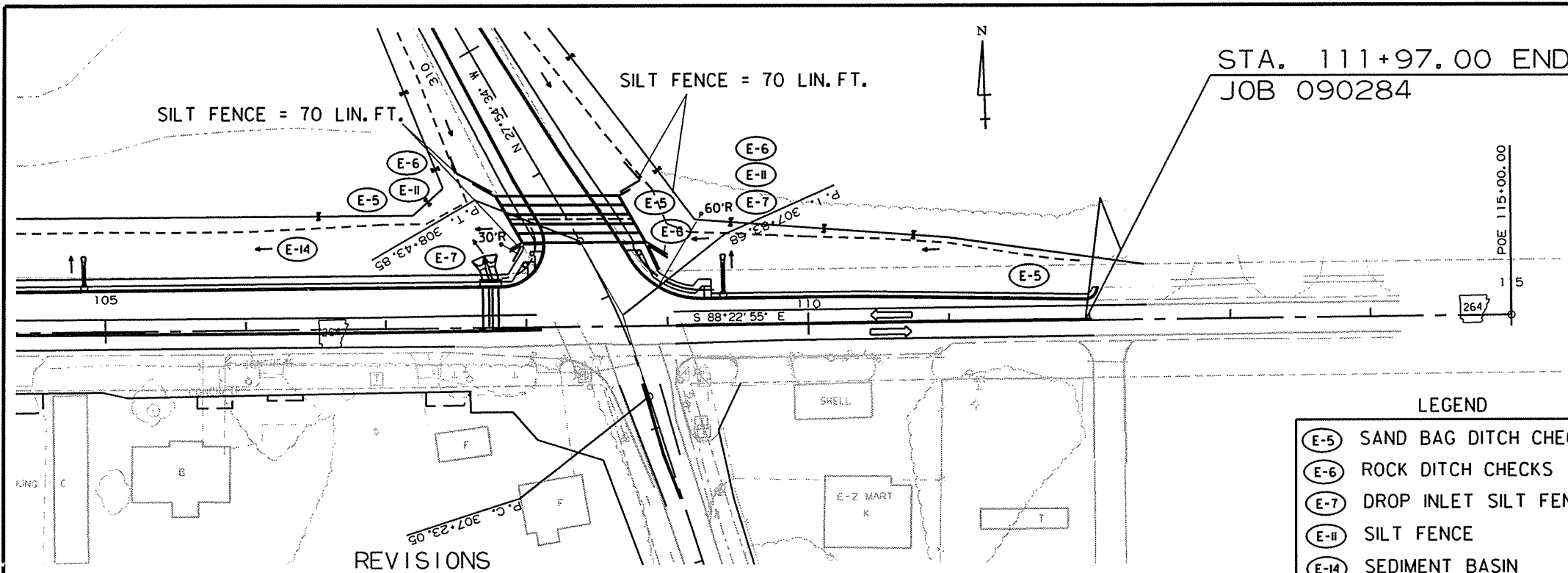
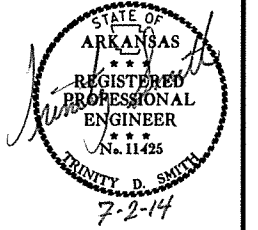
DATE	REVISION



HWY. 264  
 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.		27	174

② TEMPORARY EROSION CONTROL DETAILS

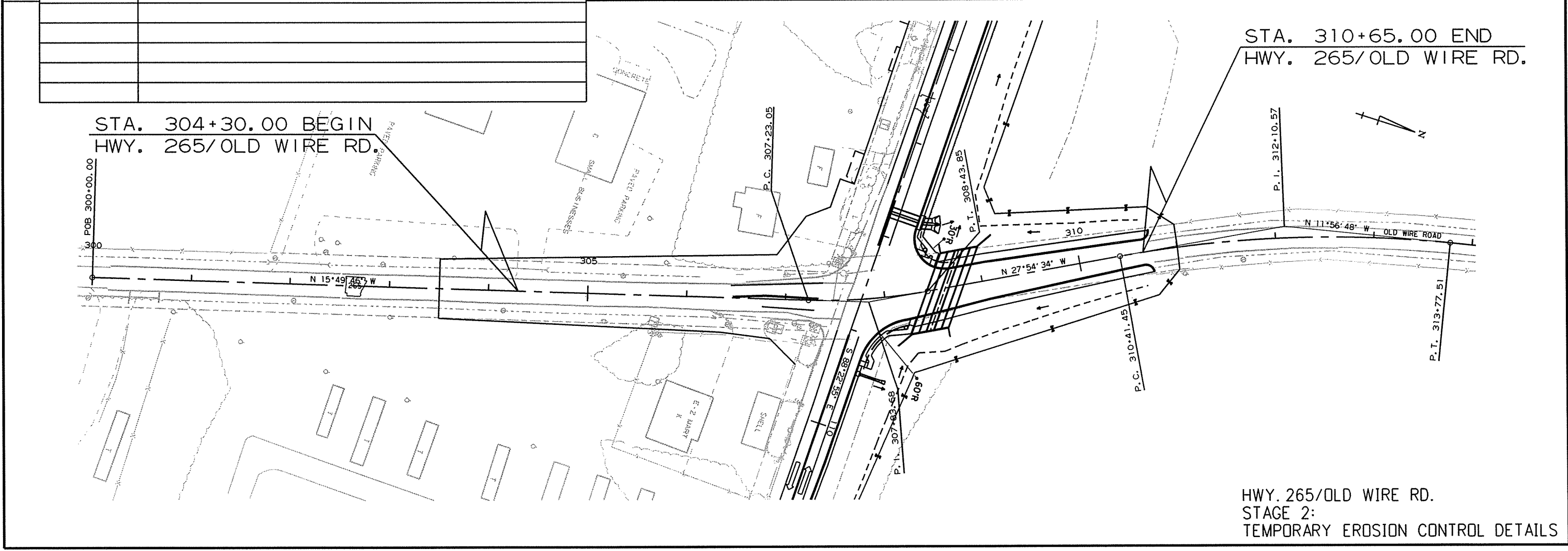


LEGEND

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

DATE	REVISION

HWY. 264  
STAGE 2:  
TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE	REVISION

HWY. 265/OLD WIRE RD.  
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.	090284		28	174

② TEMPORARY EROSION CONTROL DETAILS

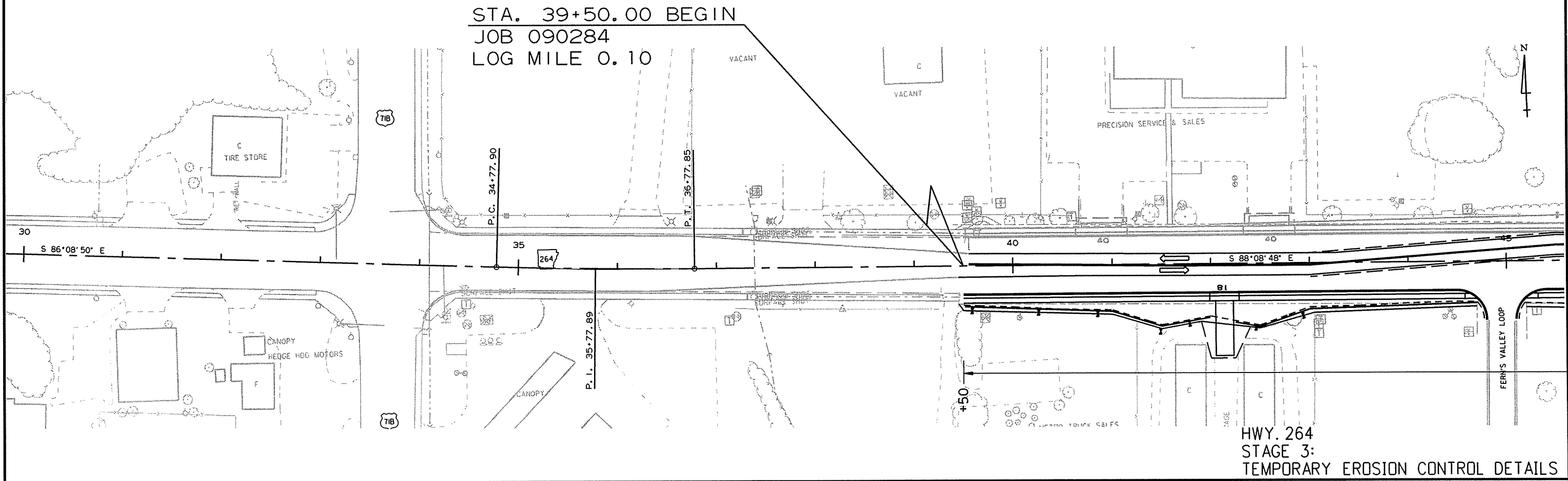


REVISIONS

DATE	REVISION

LEGEND

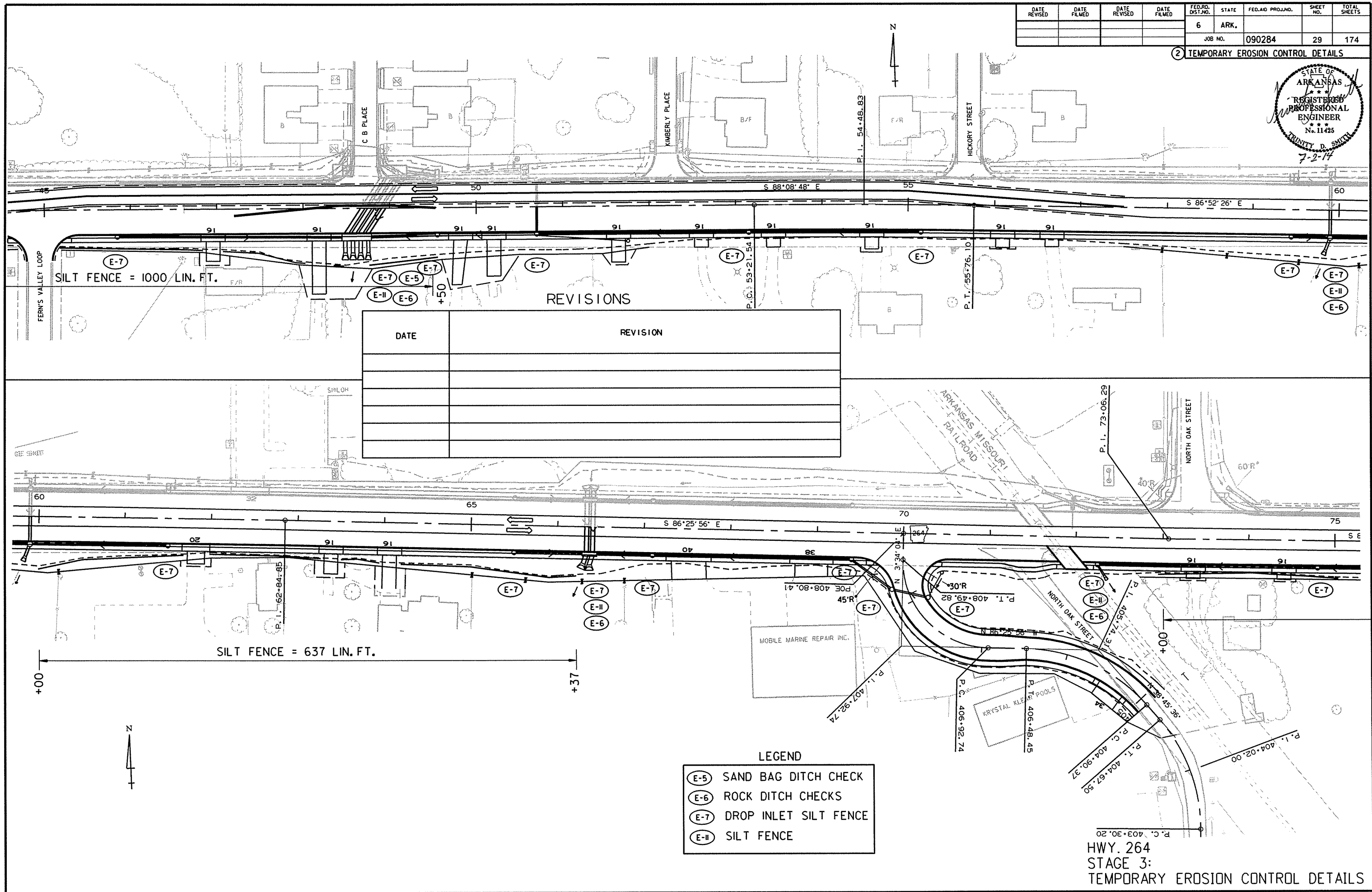
- (E-5) SAND BAG DITCH CHECK
- (E-6) ROCK DITCH CHECKS
- (E-7) DROP INLET SILT FENCE
- (E-11) SILT FENCE



R090284.DGN 4/28/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		29	174
				JOB NO. 090284				

2 TEMPORARY EROSION CONTROL DETAILS



DATE	REVISION

LEGEND

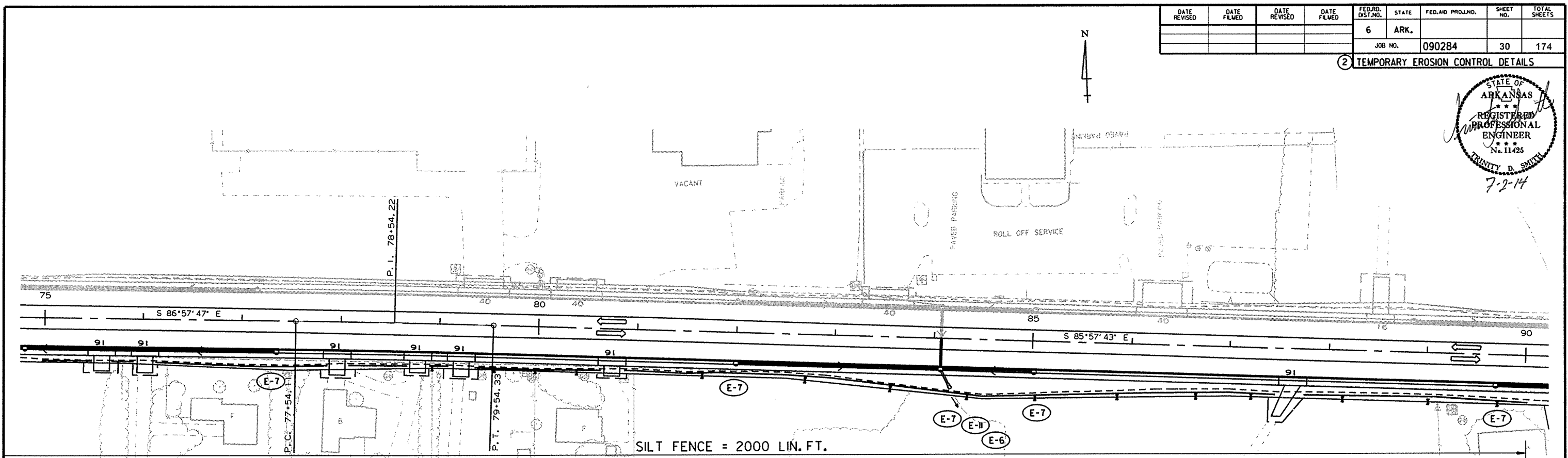
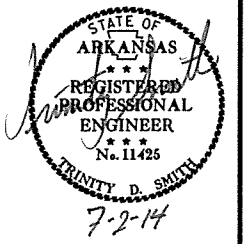
(E-5)	SAND BAG DITCH CHECK
(E-6)	ROCK DITCH CHECKS
(E-7)	DROP INLET SILT FENCE
(E-II)	SILT FENCE

HWY. 264  
 STAGE 3:  
 TEMPORARY EROSION CONTROL DETAILS

4/28/2014  
 R090284.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		30	174
				JOB NO.		090284		

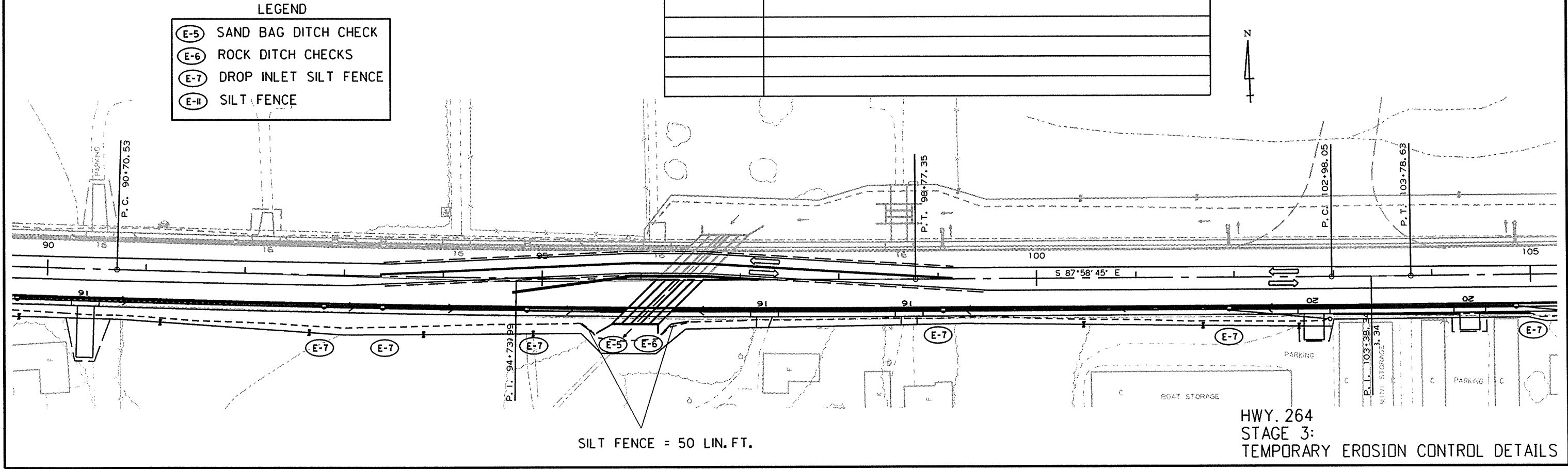
2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE	REVISION

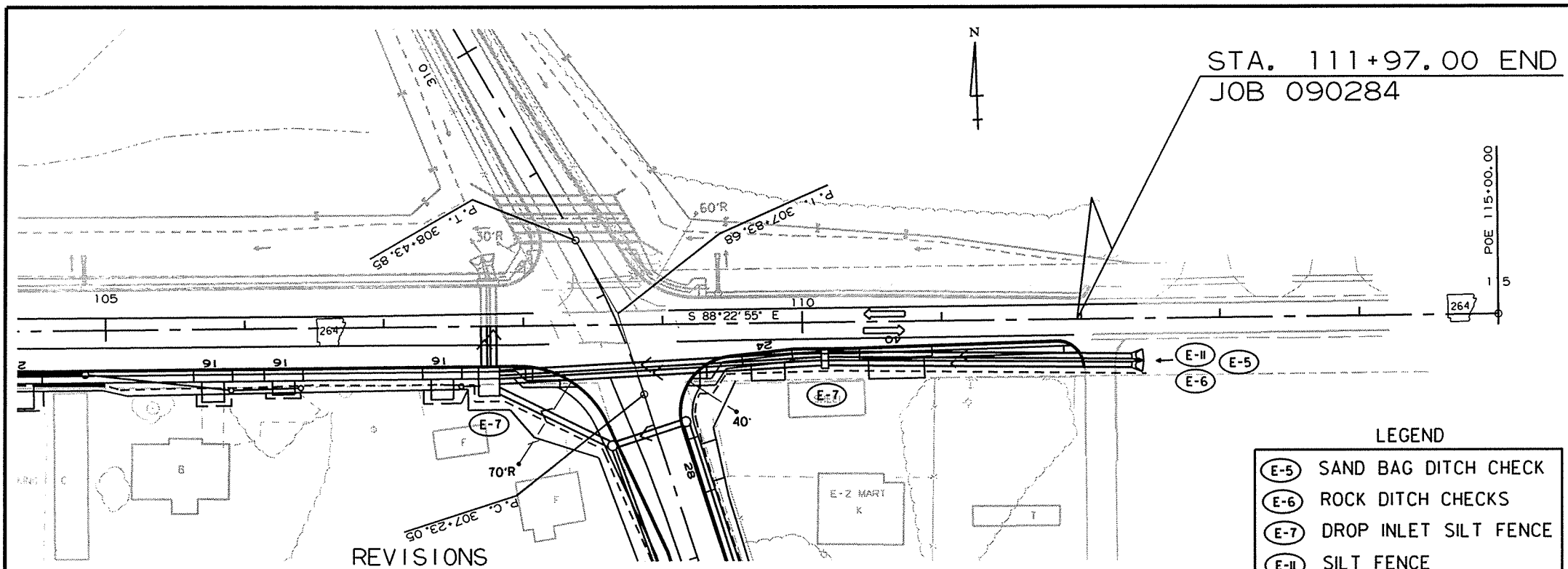
- LEGEND**
- (E-5) SAND BAG DITCH CHECK
  - (E-6) ROCK DITCH CHECKS
  - (E-7) DROP INLET SILT FENCE
  - (E-II) SILT FENCE



HWY. 264  
 STAGE 3:  
 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.		31	174
				JOB NO.	090284			

② TEMPORARY EROSION CONTROL DETAILS

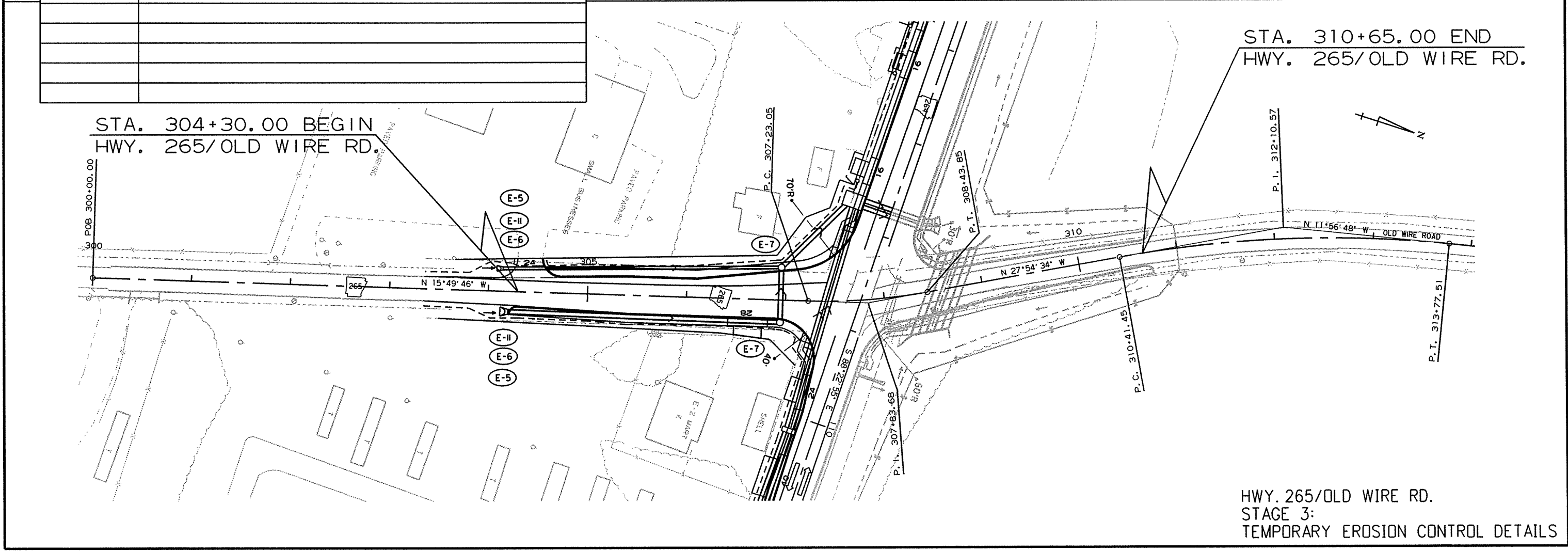


LEGEND

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

DATE	REVISION

HWY. 264  
STAGE 3:  
TEMPORARY EROSION CONTROL DETAILS

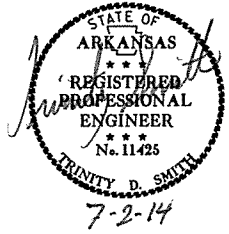


STA. 310+65.00 END  
HWY. 265/OLD WIRE RD.

HWY. 265/OLD WIRE RD.  
STAGE 3:  
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.	090284		32	174

② MAINTENANCE OF TRAFFIC DETAILS



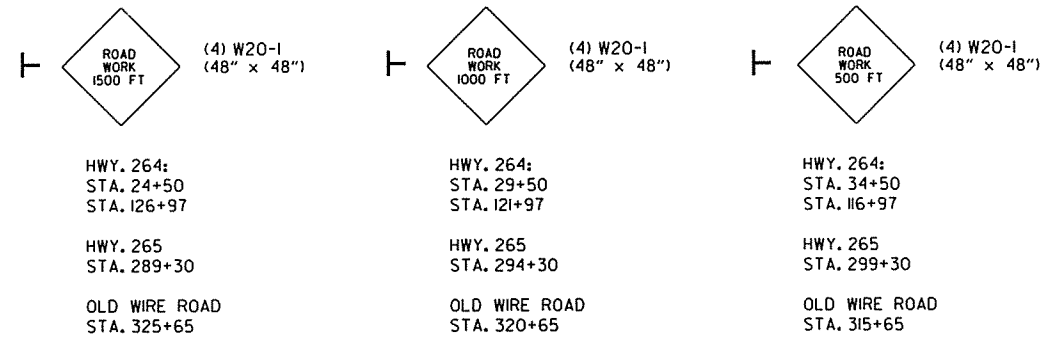
STAGE I:

INSTALL ADVANCE WARNING SIGNS

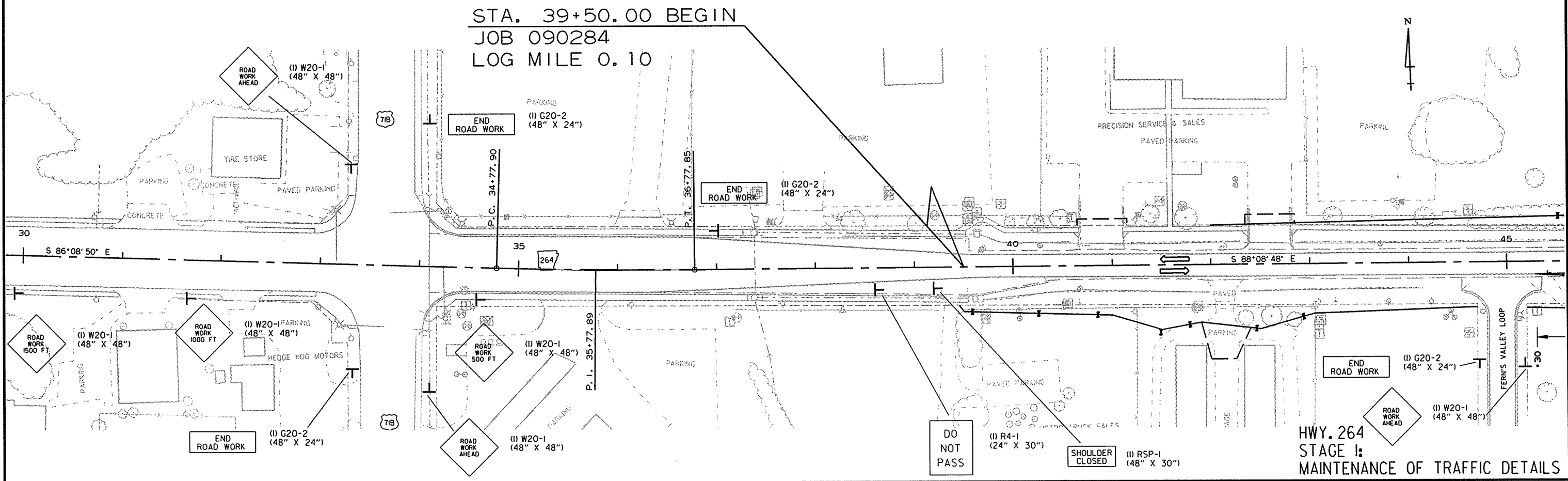
INSTALL TRP. 48" X 11' TEMPORARY CULVERT AT STA. 48+50 ON RT.  
 INSTALL 24" X 18" X 18' TEMPORARY CULVERT AT STA. 94+85 ON RT.  
 INSTALL DBL. 57" X 38" X 16' TEMPORARY CULVERT AT STA. 96+20 ON RT.

CONSTRUCT TEMPORARY WIDENING ON THE SOUTH SIDE OF HWY. 264  
 BETWEEN THE FOLLOWING STATIONS AS SHOWN BELOW.  
 STA. 45+30 TO STA. 52+10  
 STA. 92+60 TO STA. 99+75

DELINEATE THE WORK ZONE USING VERTICAL PANELS AT 40' O.C.  
 ON THE SIDE BEING WIDENED.



ADVANCE WARNING SIGNS



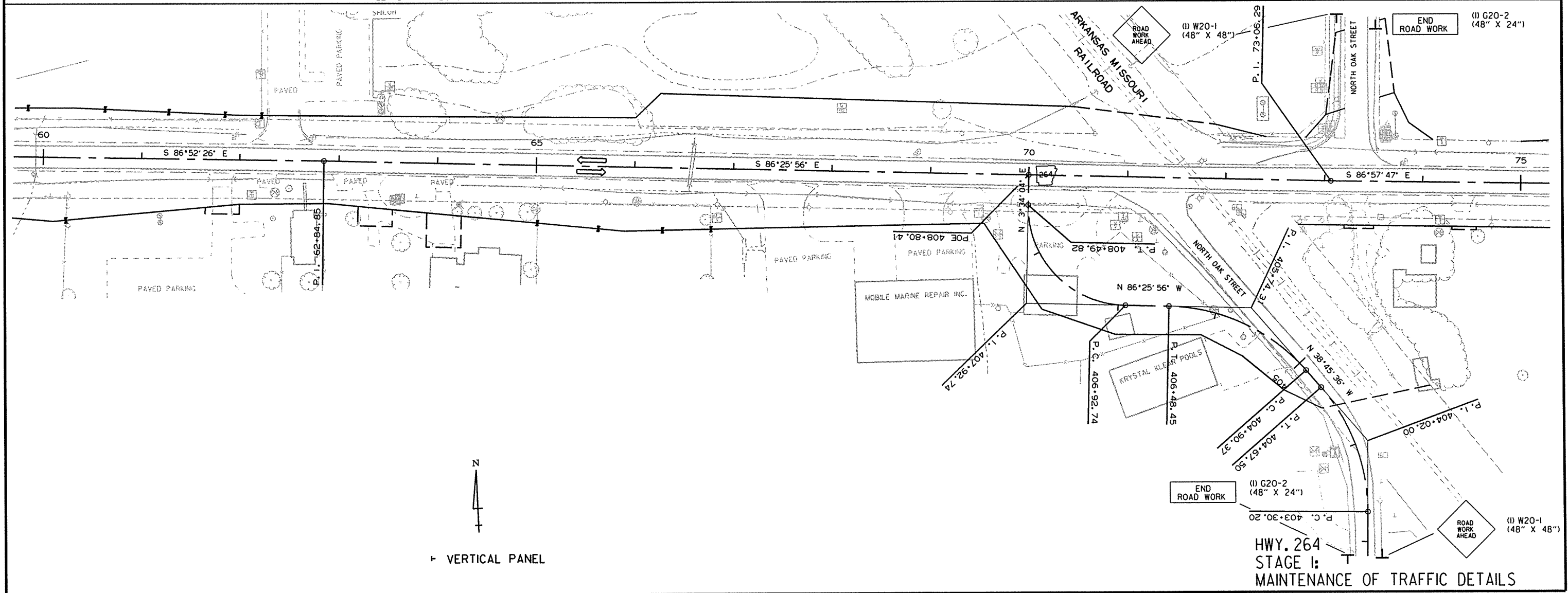
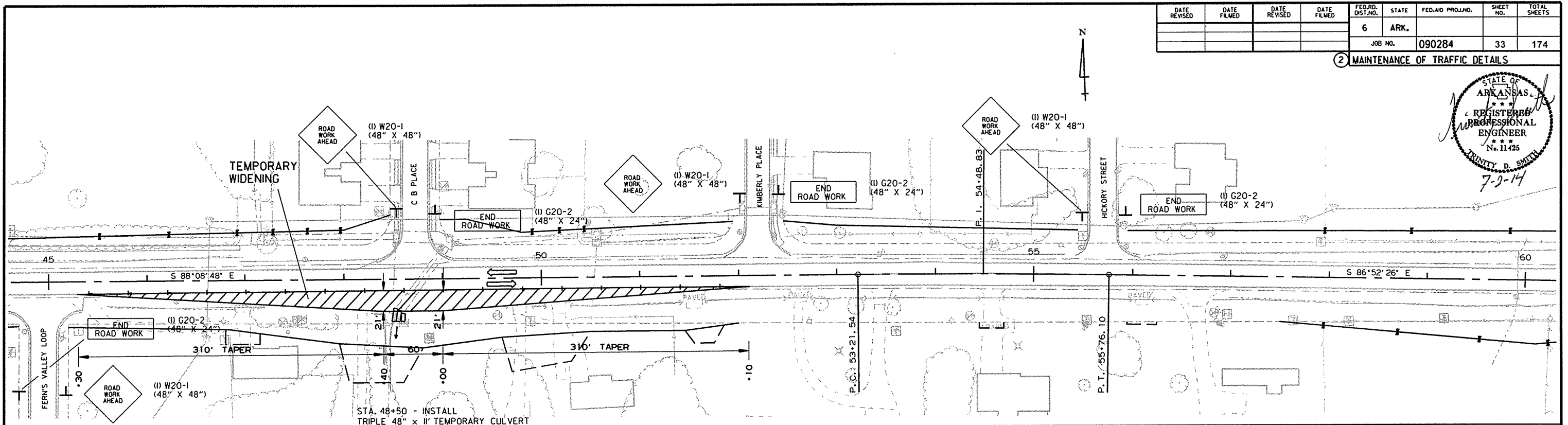
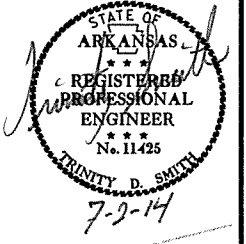
R090284.DGN 4/28/2014

HWY. 264  
 STAGE I:  
 MAINTENANCE OF TRAFFIC DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		33	174
				JOB NO.		090284		

2 MAINTENANCE OF TRAFFIC DETAILS

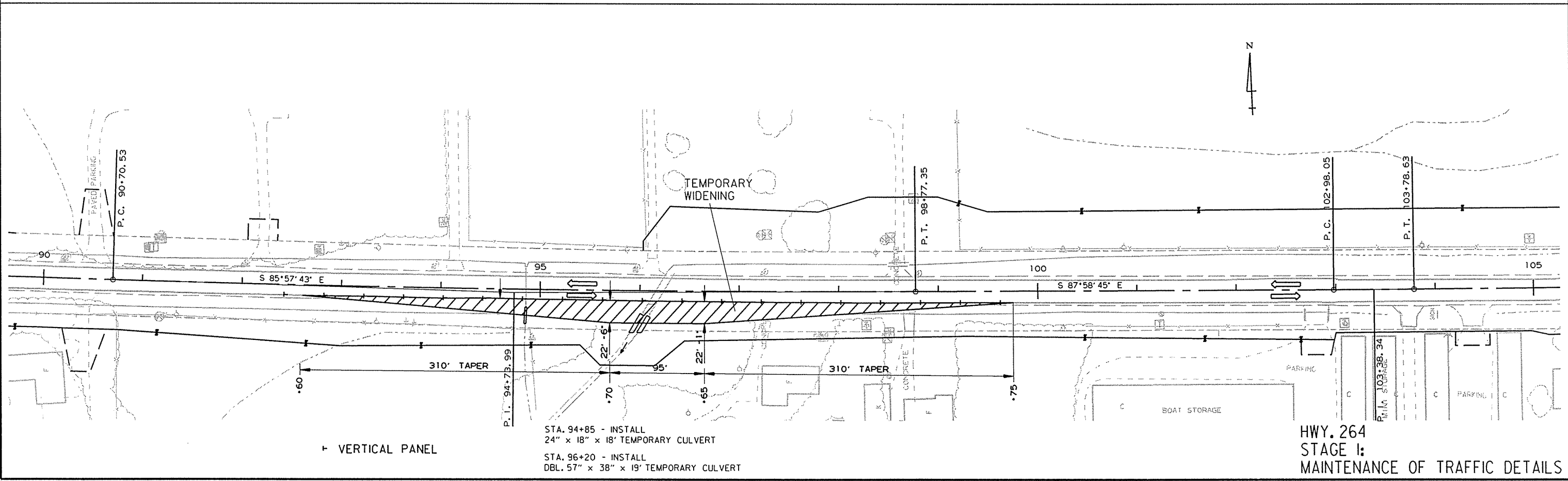
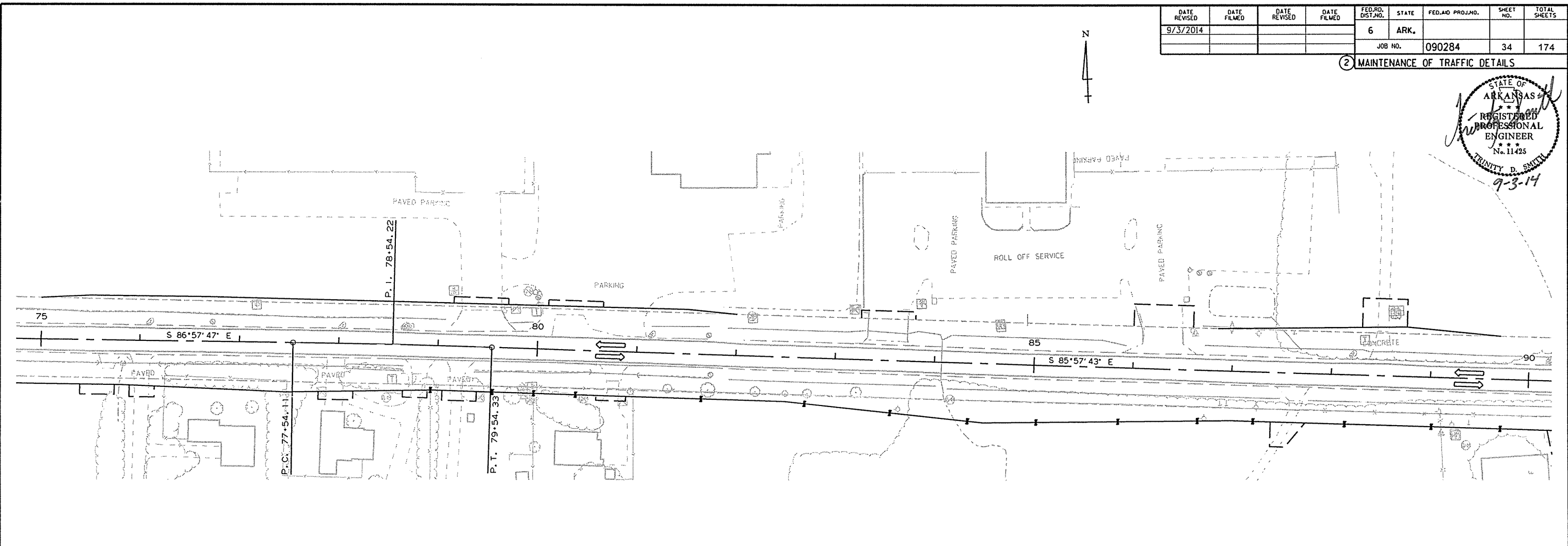
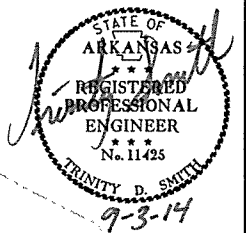


4/28/2014

R090284.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/3/2014				6	ARK.		34	174
JOB NO. 090284								

② MAINTENANCE OF TRAFFIC DETAILS



VERTICAL PANEL

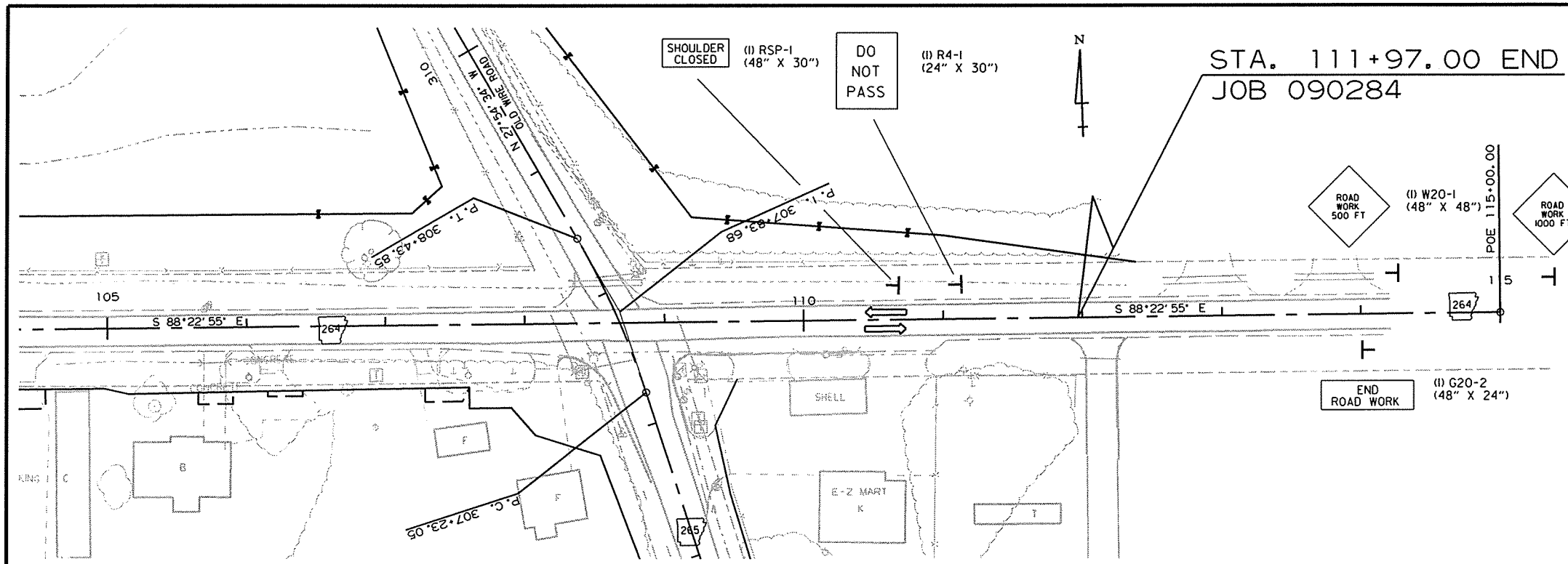
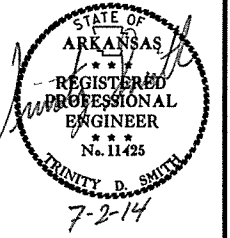
HWY. 264  
STAGE I:  
MAINTENANCE OF TRAFFIC DETAILS

4/28/2014

R090284.DGN

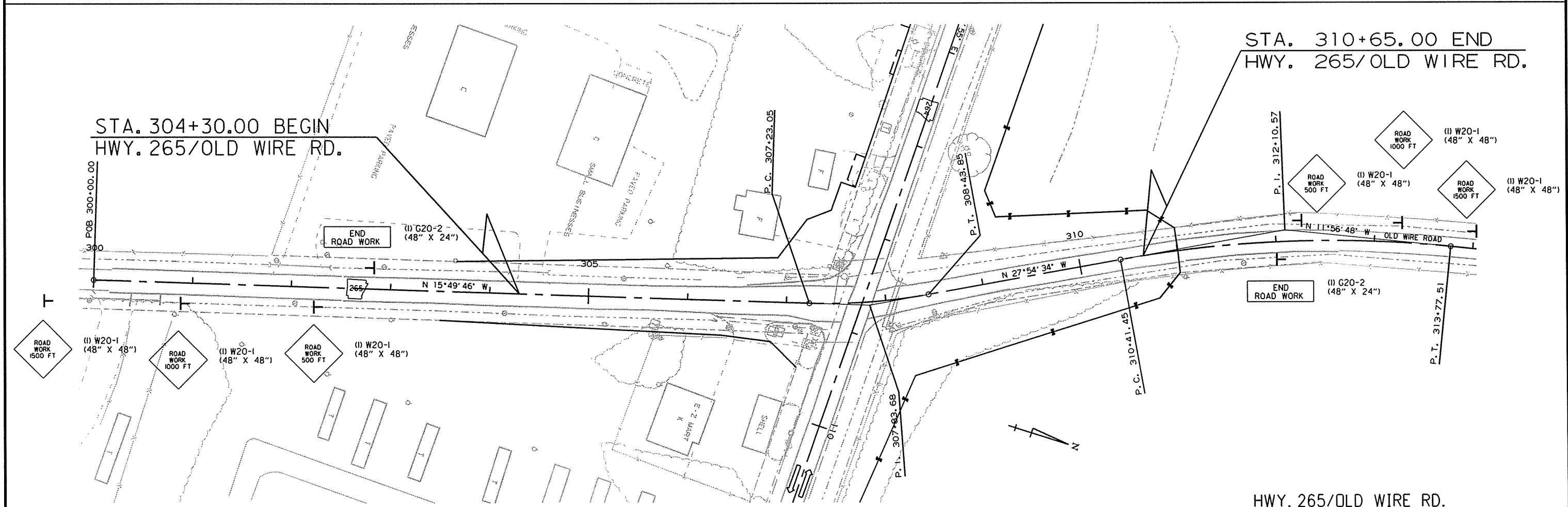
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							35	174

② MAINTENANCE OF TRAFFIC DETAILS



STA. 111+97.00 END  
JOB 090284

HWY. 264  
STAGE 1:  
MAINTENANCE OF TRAFFIC DETAILS



STA. 304+30.00 BEGIN  
HWY. 265/OLD WIRE RD.

STA. 310+65.00 END  
HWY. 265/OLD WIRE RD.

HWY. 265/OLD WIRE RD.  
STAGE 1:  
MAINTENANCE OF TRAFFIC DETAILS

R090284.DGN 4/28/2014

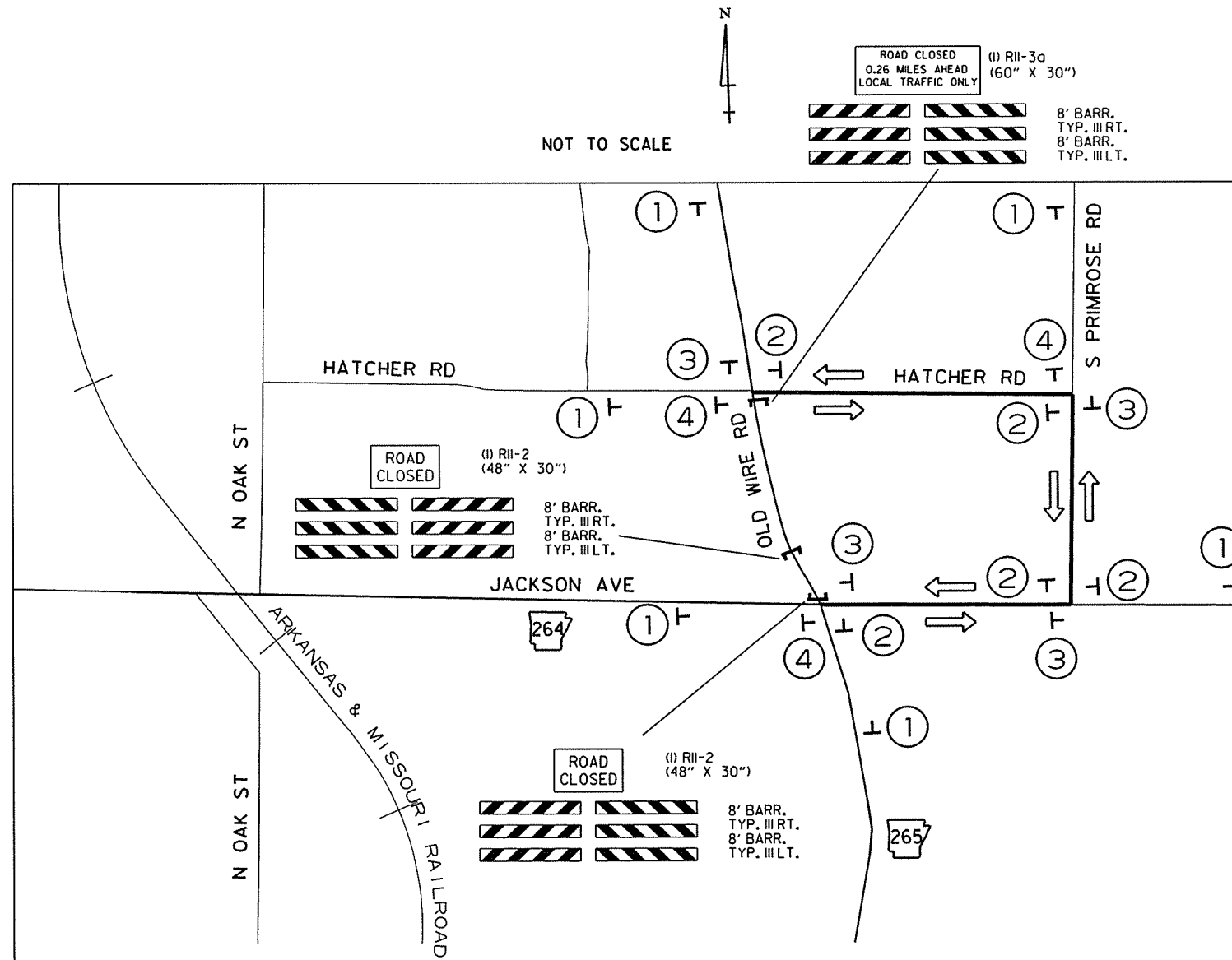
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		36	174

② MAINTENANCE OF TRAFFIC DETAILS



DETOUR ROUTE:

CLOSE OLD WIRE ROAD BETWEEN HWY. 264 AND HATCHER ROAD TO CONSTRUCT THE PROPOSED R.C. BOX CULVERT.  
USE HWY. 264, S. PRIMROSE ROAD AND HATCHER ROAD TO DETOUR TRAFFIC ON OLD WIRE ROAD AS SHOWN BELOW.



- ① (6) W20-2 (48" X 48")  
DETOUR AHEAD
- ② (5) M4-8 (24" X 12")  
 (5) W1-6 (48" X 24")
- ③ (4) M4-8 (24" X 12")  
 (4) W1-6 (48" X 24")
- ④ (3) M4-8 (24" X 12")  
 (3) W1-6 (48" X 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.	090284		37	174

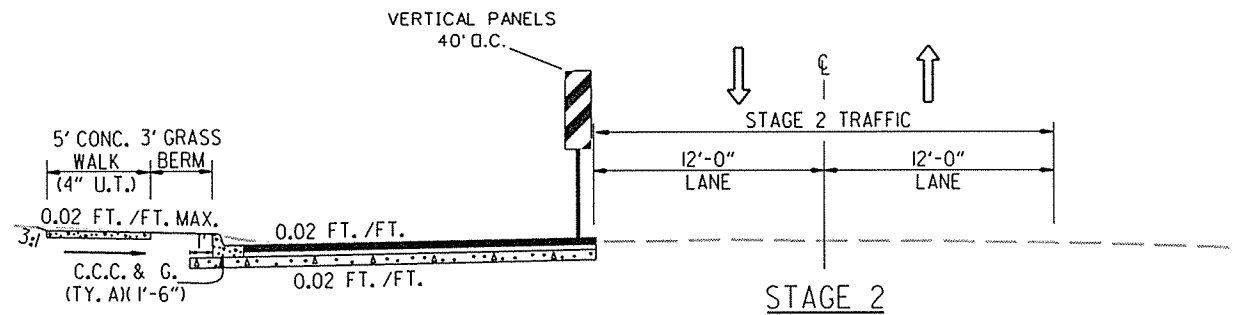
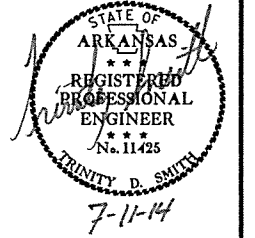
② MAINTENANCE OF TRAFFIC DETAILS

STAGE 2:

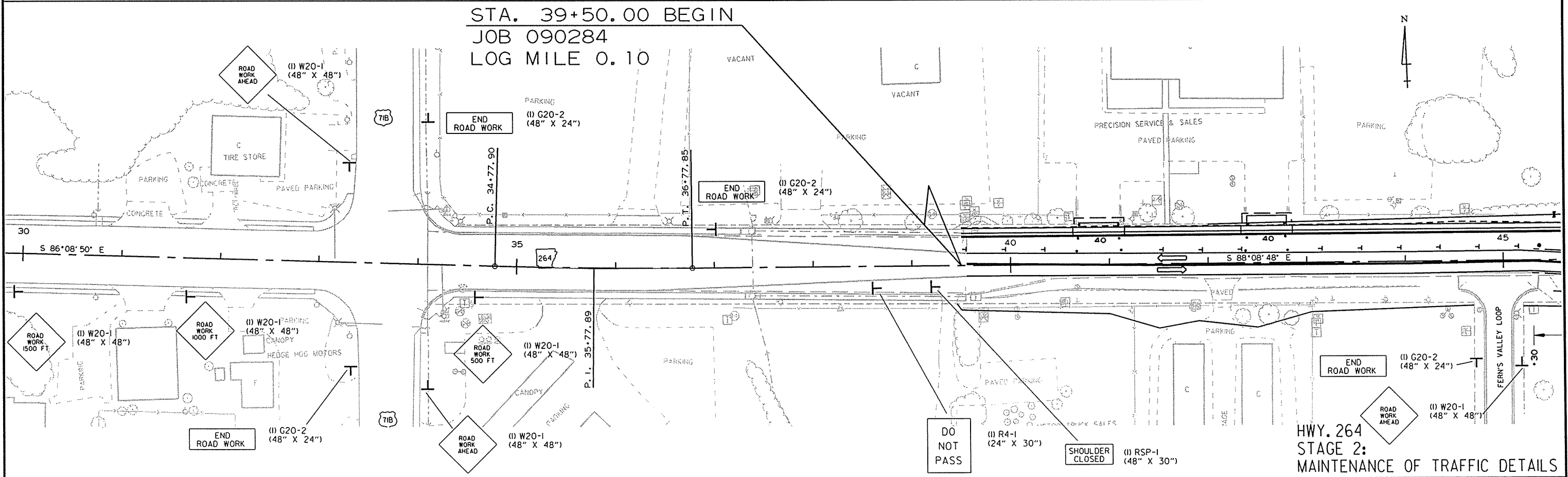
RESTRIPE THE EXISTING LANES (2 12'-0" LANES) AS SHOWN BELOW TO MAINTAIN TRAFFIC. INSTALL TEMPORARY PRECAST CONCRETE BARRIER. CONSTRUCT THE NORTH PORTION OF THE PROPOSED QUINT. 6' X 3' R.C. BOX CULVERT AT ST. 96+20 AND CURB AND GUTTER USING THE STAGE CONSTRUCTION DETAILS AS SHOWN. NOTCH AND WIDEN ON THE NORTH SIDE OF HWY. 264, DELINEATING THE WORK ZONE USING VERTICAL PANELS AT 40' O.C. ON THE SIDE BEING WIDENED.

CONSTRUCT QUINT. 6' X 3' R.C. BOX CULVERT AT ST. 108+62.

DELINEATE CITY STREETS AND DRIVEWAYS THROUGHOUT THE PROJECT USING TRAFFIC DRUMS (6 PER TURNOUT) ON THE SIDE BEING WIDENED.

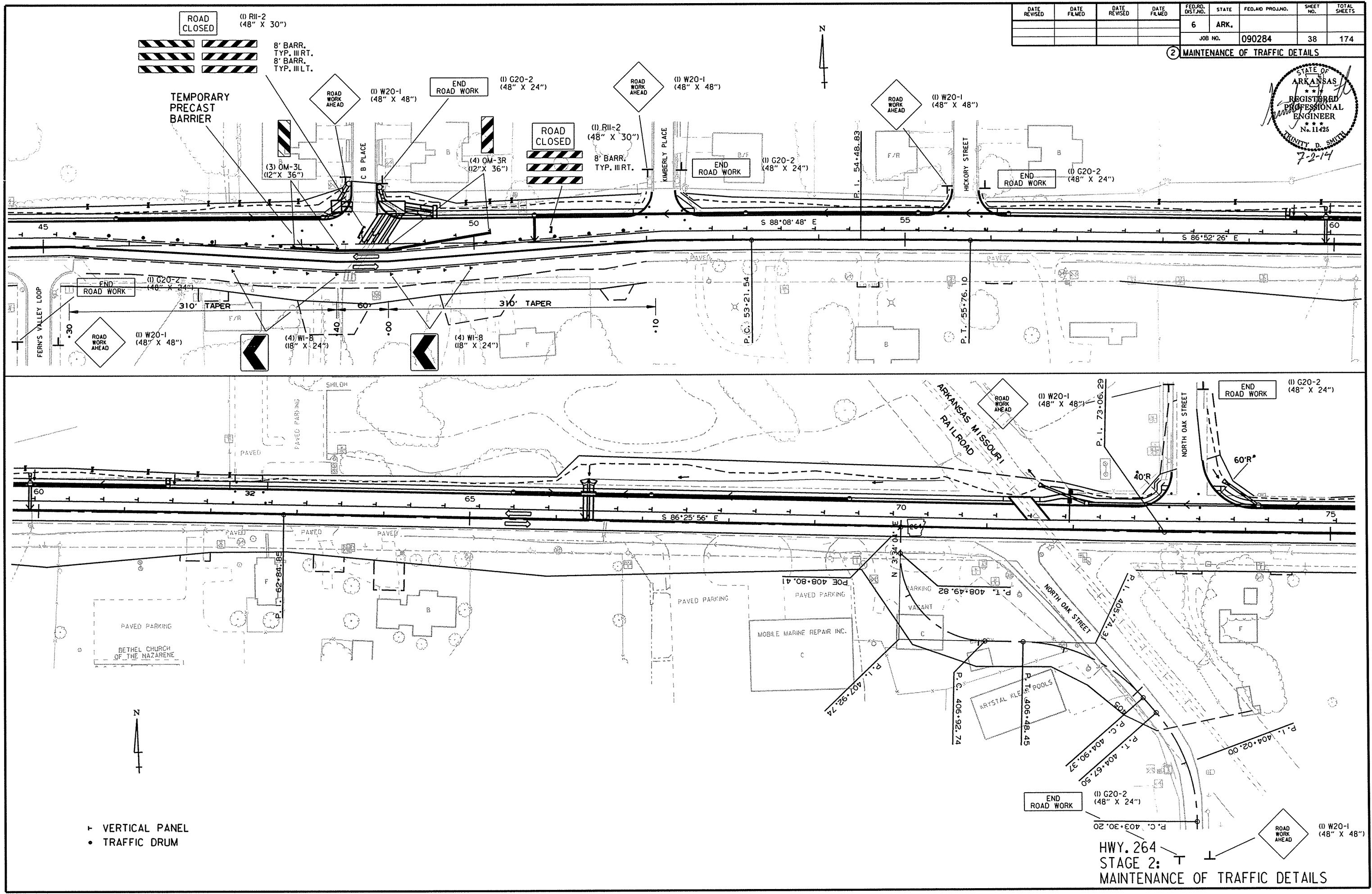
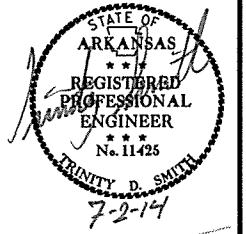


- ▬ VERTICAL PANEL
- TRAFFIC DRUM



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		38	174
				JOB NO. 090284				

2 MAINTENANCE OF TRAFFIC DETAILS

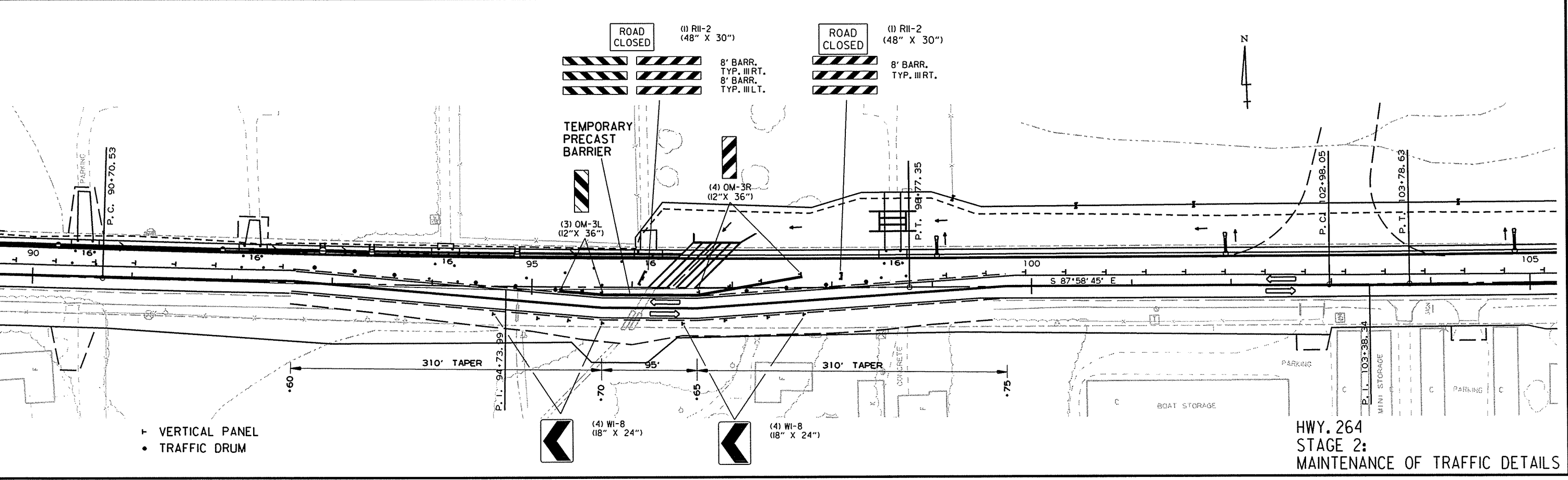
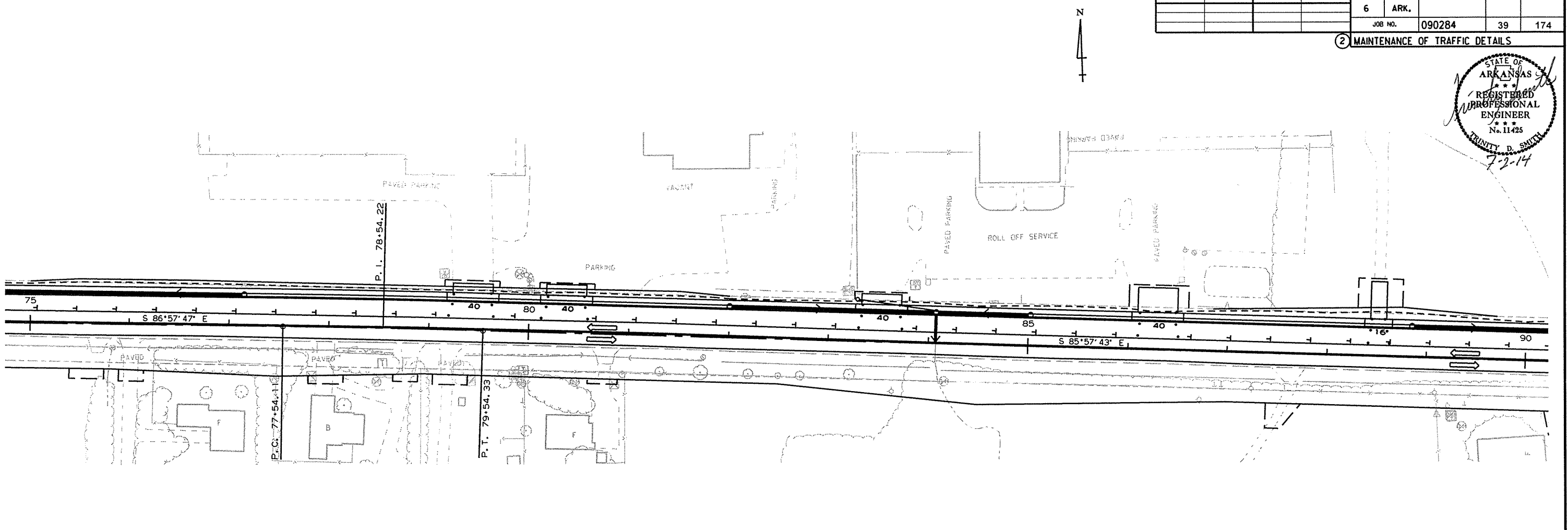
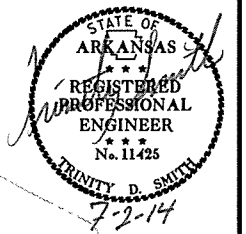


- ┆ VERTICAL PANEL
- TRAFFIC DRUM

HWY. 264  
STAGE 2:  
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		39	174

2 MAINTENANCE OF TRAFFIC DETAILS



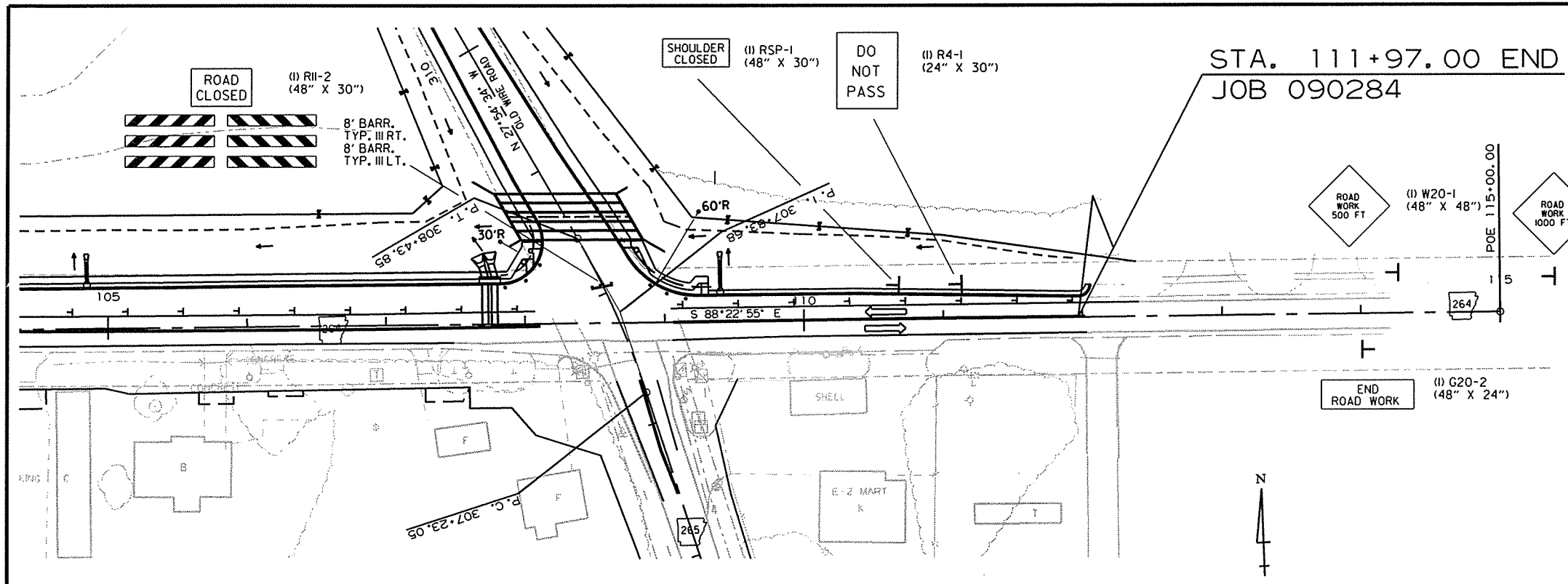
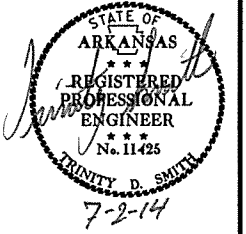
▬ VERTICAL PANEL  
• TRAFFIC DRUM

HWY. 264  
STAGE 2:  
MAINTENANCE OF TRAFFIC DETAILS

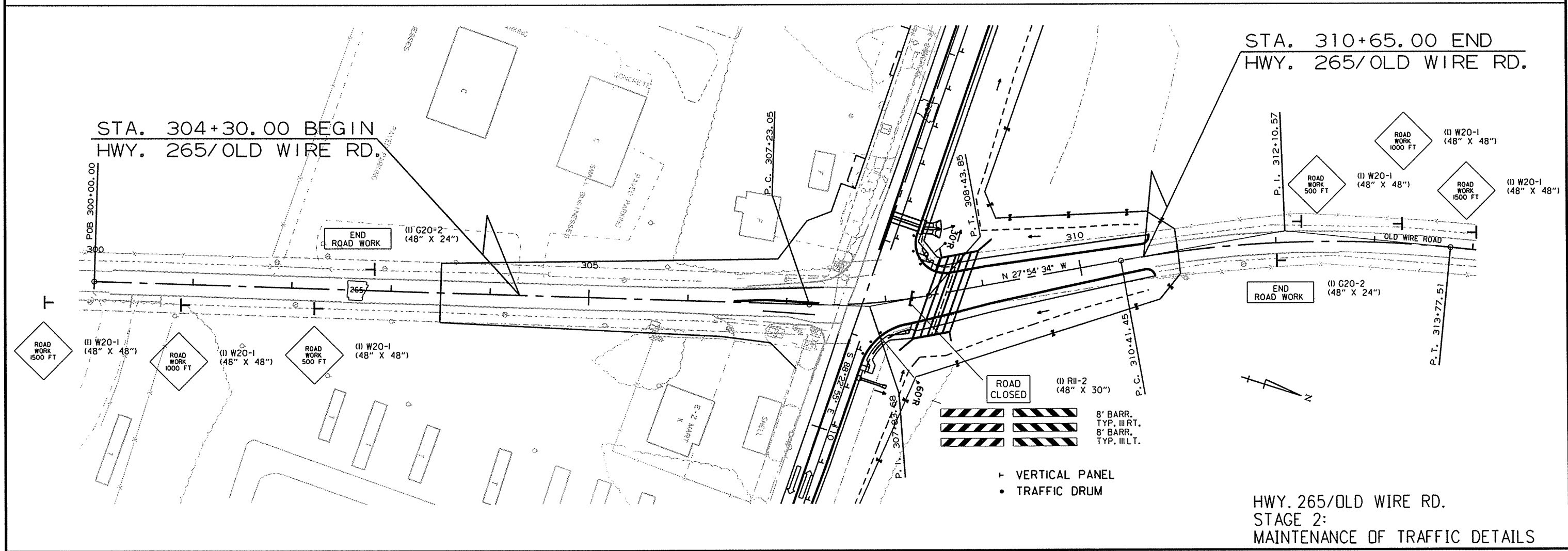
R090284.DGN 4/28/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		40	174

② MAINTENANCE OF TRAFFIC DETAILS



HWY. 264  
STAGE 2:  
MAINTENANCE OF TRAFFIC DETAILS



HWY. 265/OLD WIRE RD.  
STAGE 2:  
MAINTENANCE OF TRAFFIC DETAILS

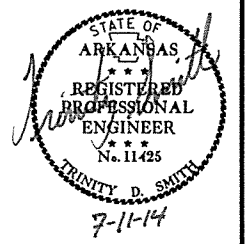
4/28/2014

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		41	174

② MAINTENANCE OF TRAFFIC DETAILS



STAGE 3:  
 REMOVE THE CONFLICTING PAVEMENT MARKINGS AND STRIPE THE STAGE 2 CONSTRUCTION USING A DBL. YELLOW LINE AND LEFT AND RIGHT EDGE LINES (2 12'-0" LANES).  
 RELOCATE THE TEMPORARY PRECAST CONCRETE BARRIER AS SHOWN AND SHIFT TRAFFIC ONTO THE STAGE 2 CONSTRUCTION.

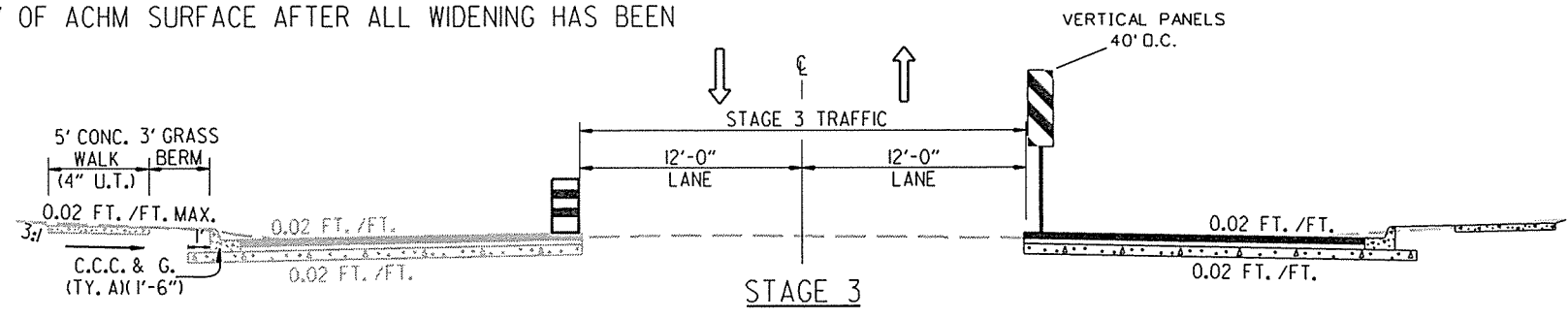
CONSTRUCT THE REMAINDER OF THE PROPOSED QUINT. 6' X 5' R.C. BOX CULVERT AND CURB AND GUTTER ON THE SOUTH SIDE.

NOTCH AND WIDEN ON THE SOUTH SIDE OF HWY. 264 DELINEATING THE WORK ZONE USING VERTICAL PANELS AT 40' O.C. ON THE SIDE BEING WIDENED.

DELINEATE CITY STREETS AND DRIVEWAYS THROUGHOUT THE PROJECT USING TRAFFIC DRUMS (6 PER TURNOUT) ON THE SIDE BEING WIDENED.

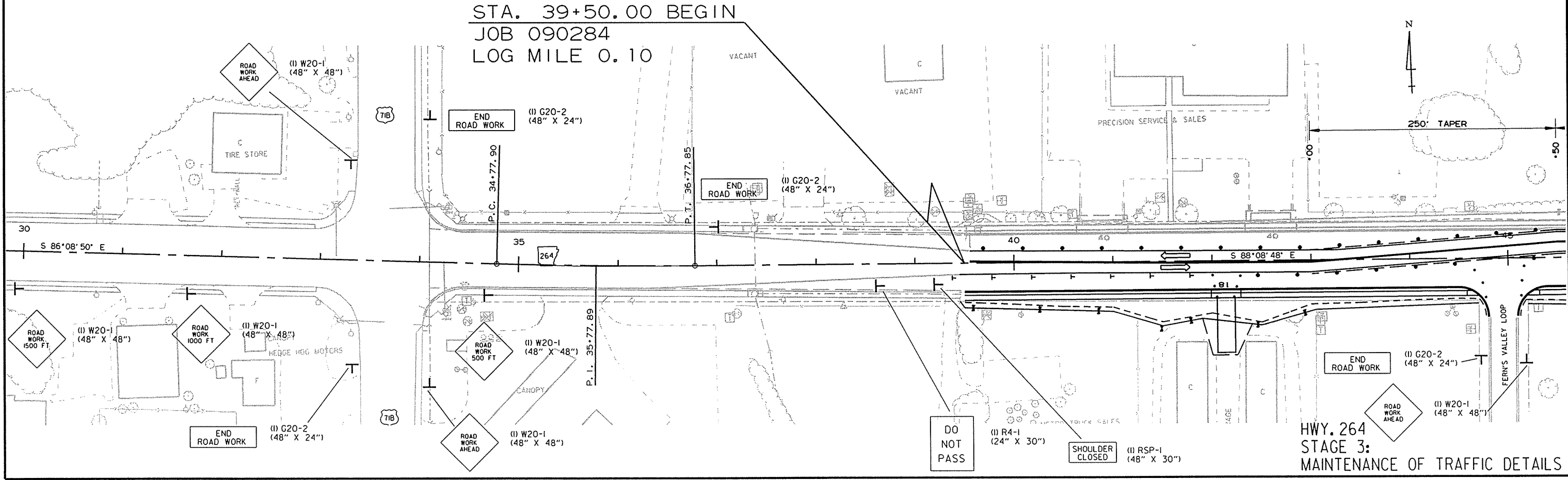
CONSTRUCT CONCRETE MEDIAN ISLAND BETWEEN THE FOLLOWING STATIONS AS SHOWN BELOW.  
 70+99 - 71+48  
 71+90 - 72+40

APPLY THE FINAL 2" OF ACHM SURFACE AFTER ALL WIDENING HAS BEEN COMPLETED.



▬ VERTICAL PANEL  
 • TRAFFIC DRUM

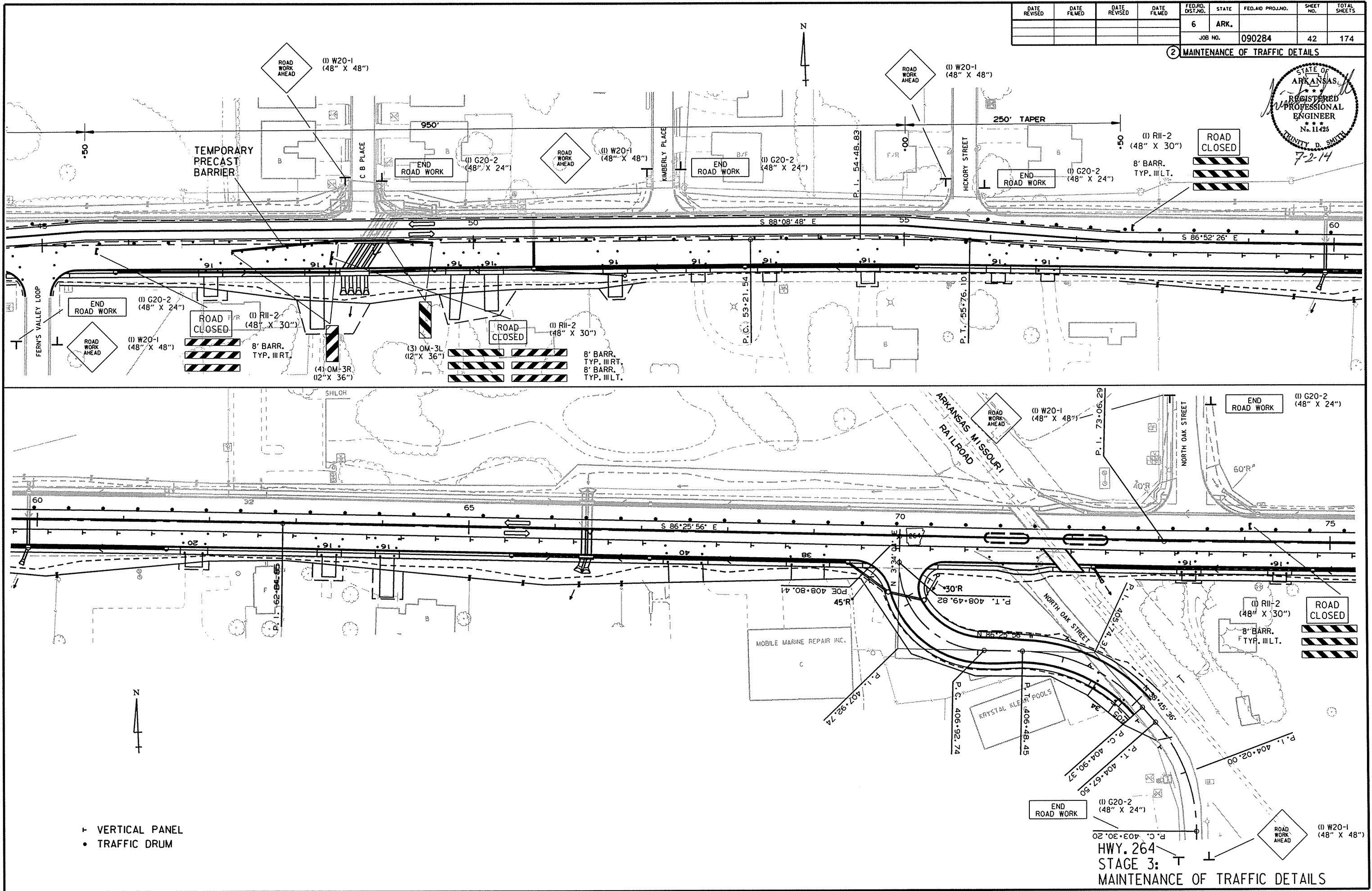
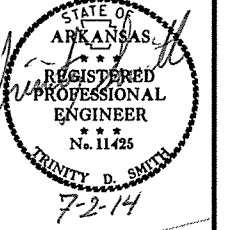
STA. 39+50.00 BEGIN  
 JOB 090284  
 LOG MILE 0.10



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		42	174
				JOB NO.		090284		

2 MAINTENANCE OF TRAFFIC DETAILS

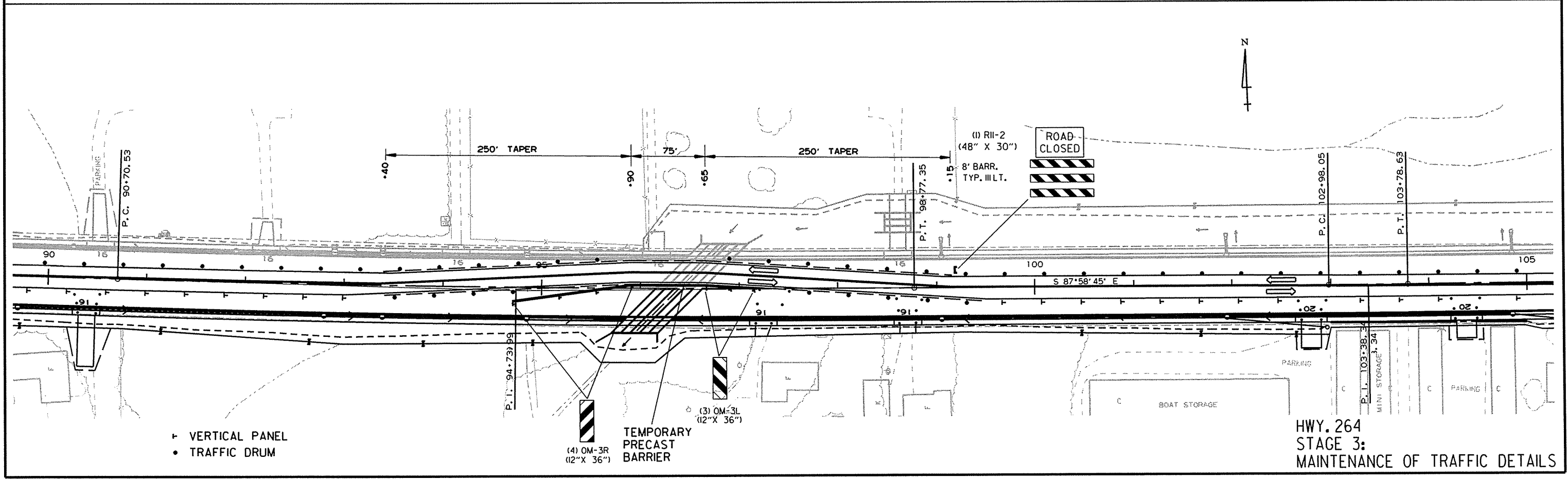
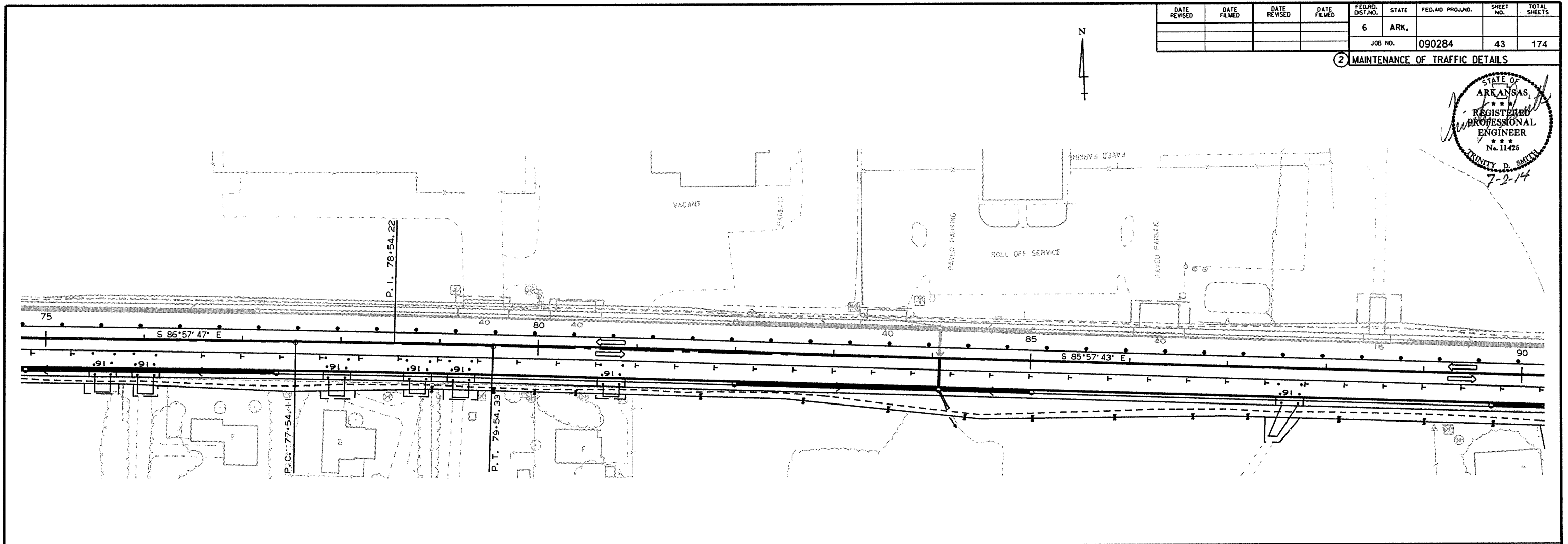
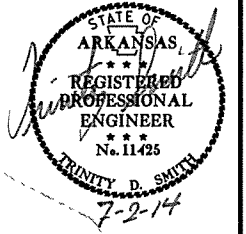


- ┆ VERTICAL PANEL
- TRAFFIC DRUM

R090284.DGN 4/28/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		43	174
				JOB NO. 090284				

② MAINTENANCE OF TRAFFIC DETAILS



- ┆ VERTICAL PANEL
- TRAFFIC DRUM

(1) OM-3R  
(12" X 36")

TEMPORARY  
PRECAST  
BARRIER

(3) OM-3L  
(12" X 36")

ROAD-CLOSED

(1) RII-2  
(48" X 30")

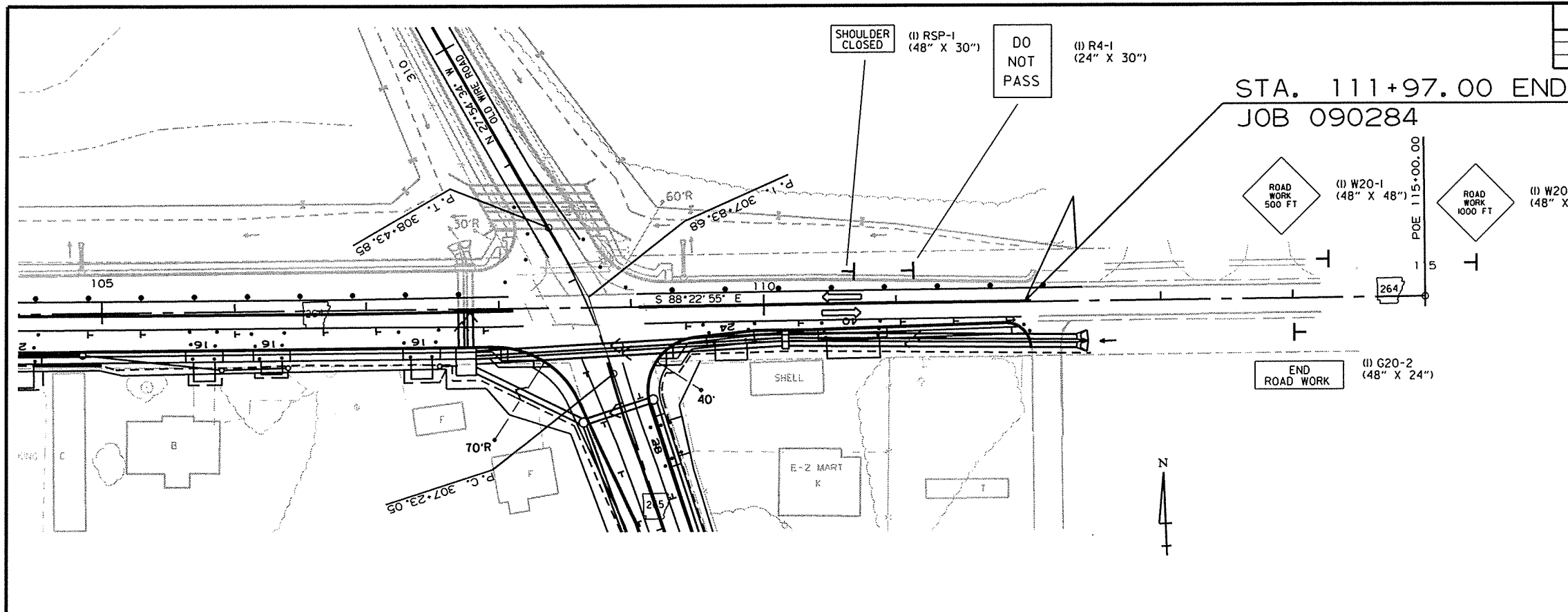
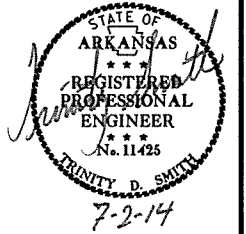
8' BARR.  
TYP. III LT.

HWY. 264  
STAGE 3:  
MAINTENANCE OF TRAFFIC DETAILS

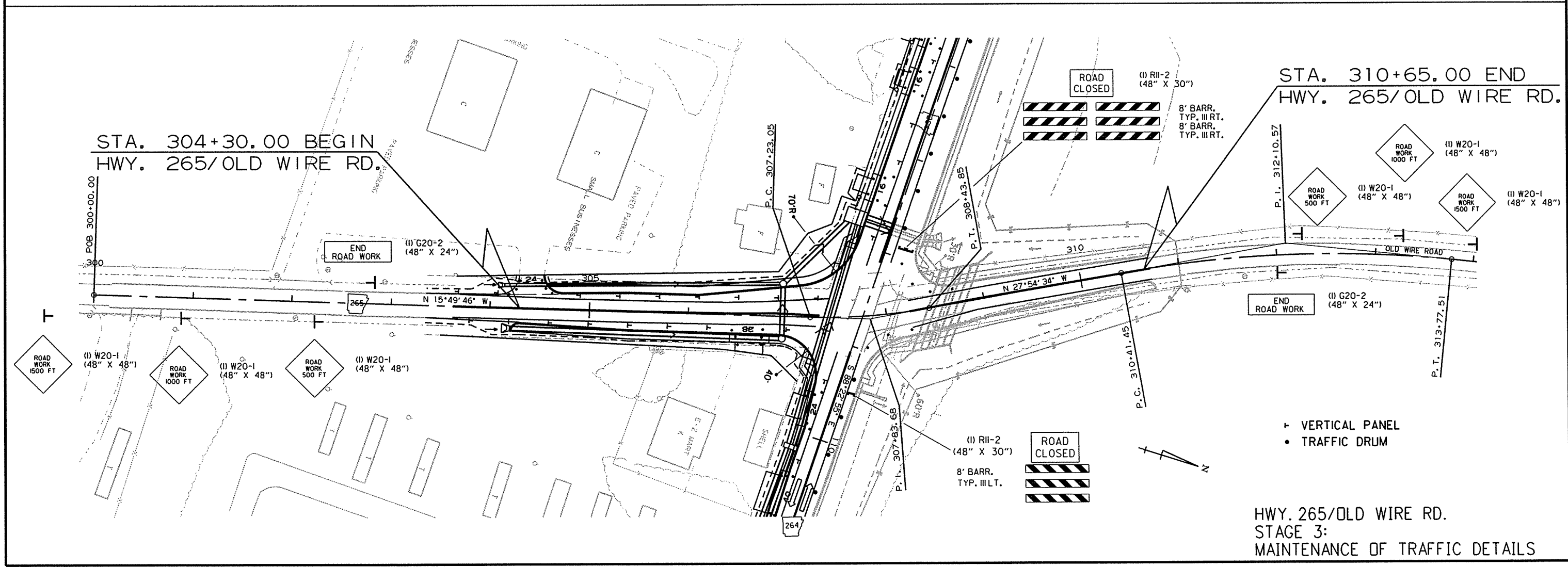
R090284.DGN 4/28/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		44	174
				JOB NO. 090284				

② MAINTENANCE OF TRAFFIC DETAILS



HWY. 264  
STAGE 3:  
MAINTENANCE OF TRAFFIC DETAILS



HWY. 265/OLD WIRE RD.  
STAGE 3:  
MAINTENANCE OF TRAFFIC DETAILS

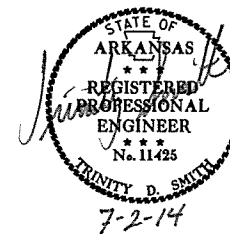
R090284.DGN 4/28/2014

PERMANENT PAVEMENT MARKING DETAILS QUANTITIES

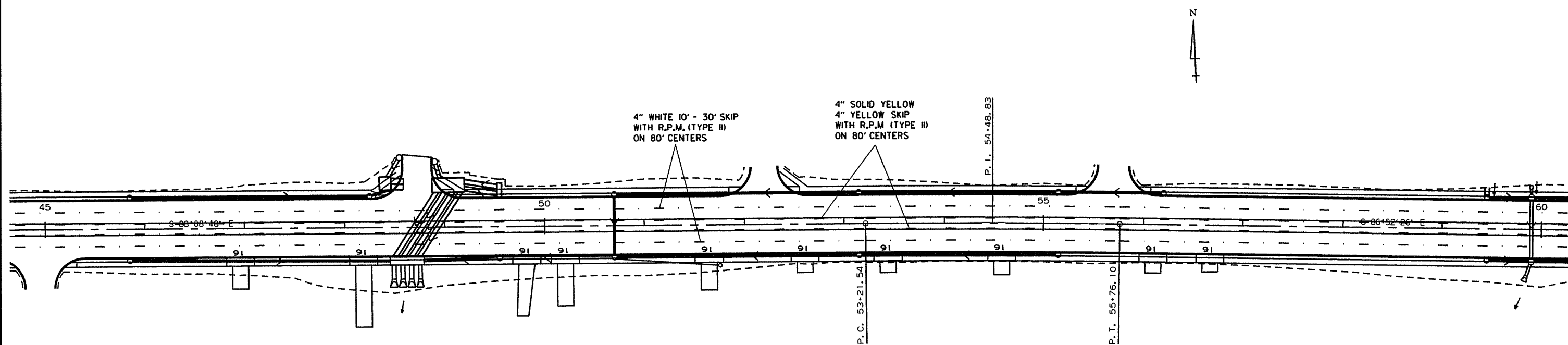
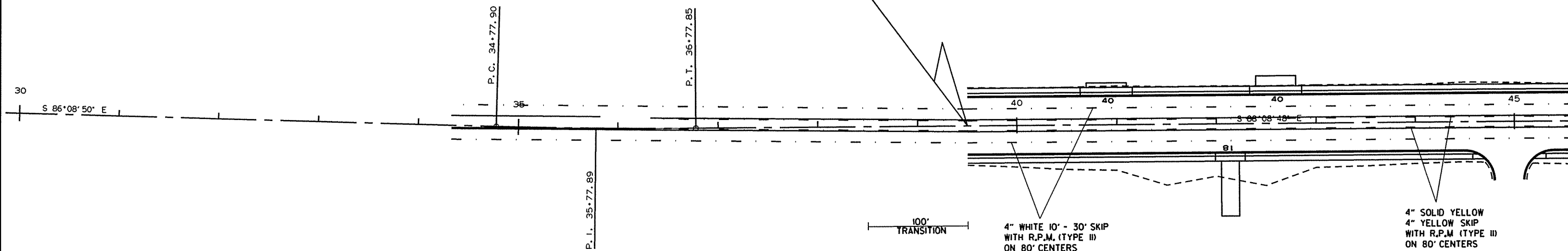
- THERMOPLASTIC PAVEMENT MARKING WHITE (4") = 2,775 LIN. FT.
- THERMOPLASTIC PAVEMENT MARKING YELLOW (4") = 21,686 LIN. FT.
- THERMOPLASTIC PAVEMENT MARKING WHITE (8") = 300 LIN. FT.
- THERMOPLASTIC PAVEMENT MARKING WHITE (12") = 66 LIN. FT.
- THERMOPLASTIC PAVEMENT MARKING (WORDS) = 6 EACH
- THERMOPLASTIC PAVEMENT MARKING (ARROW) = 6 EACH
- THERMOPLASTIC PAVEMENT MARKING (RAILROAD EMBLEMS) = 4 EACH
- RAISED PAVEMENT MARKERS TYPE II(WH/RED) = 207 EACH
- RAISED PAVEMENT MARKERS TYPE II(YEL/YEL) = 199 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		45	174
				JOB NO. 090284				

② PERMANENT PAVEMENT MARKING DETAILS



STA. 39+50.00 BEGIN  
JOB 090284  
LOG MILE 0.10



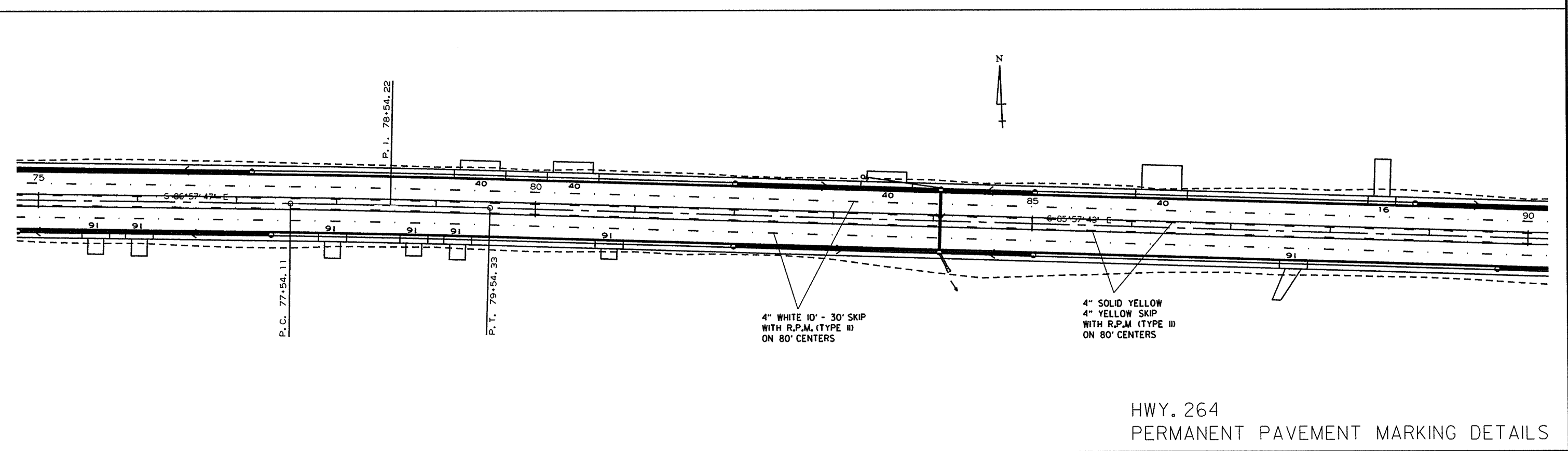
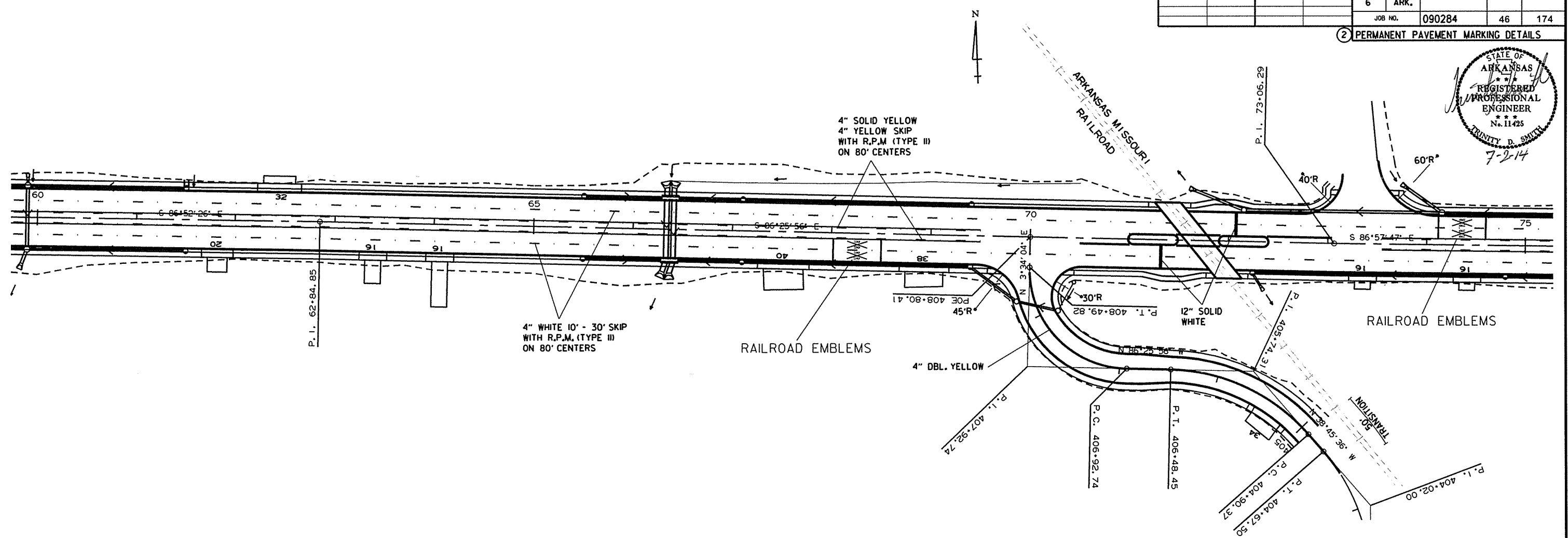
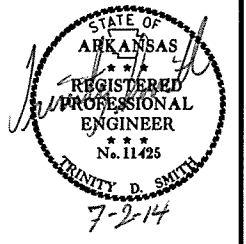
HWY. 264  
PERMANENT PAVEMENT MARKING DETAILS

4/28/2014

R090284.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		46	174
				JOB NO. 090284				

2 PERMANENT PAVEMENT MARKING DETAILS



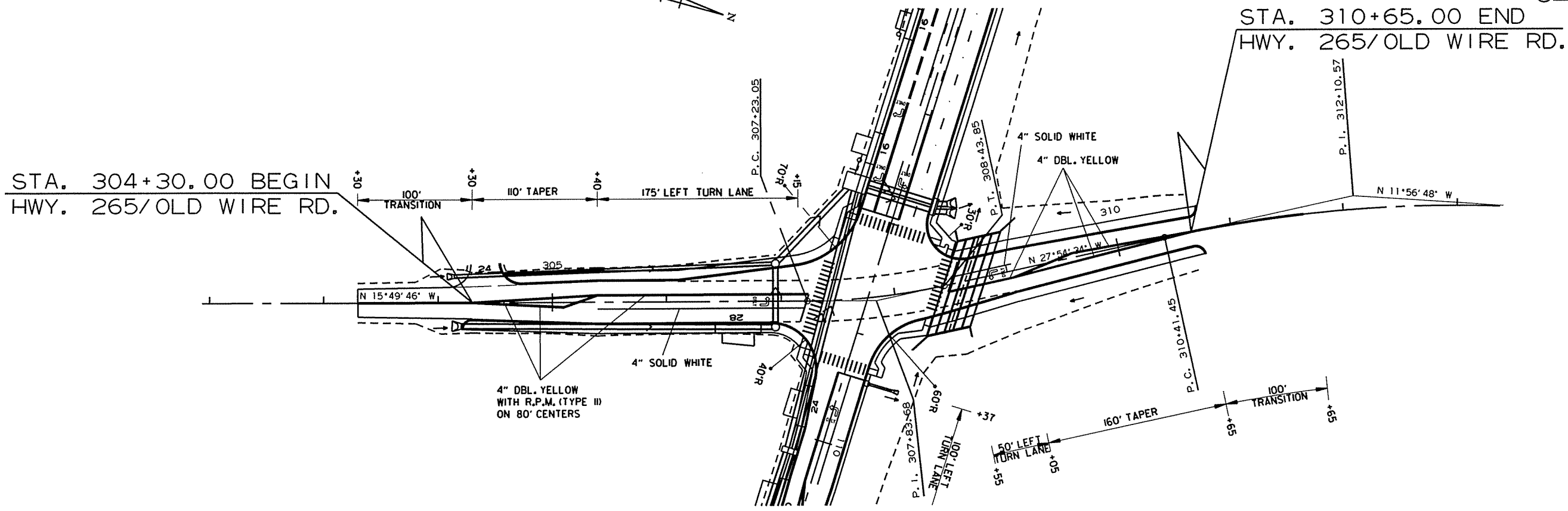
HWY. 264  
PERMANENT PAVEMENT MARKING DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							48	174

② PERMANENT PAVEMENT MARKING DETAILS



STA. 304+30.00 BEGIN  
HWY. 265/OLD WIRE RD.

STA. 310+65.00 END  
HWY. 265/OLD WIRE RD.

HWY. 265/OLD WIRE RD.  
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.	090284		49	174

② QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER		
			LIN. FT. - EACH				NO.	SQ. FT.			EACH	RIGHT			LEFT	LIN. FT.
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	64.0								
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	4	64.0								
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	4	64.0								
W20-1	ROAD WORK AHEAD	48"x48"	8	8	8	8	8	128.0								
W20-2	DETOUR AHEAD	48"x48"		6		6	6	96.0								
G20-2	END ROAD WORK	48"x24"	12	12	12	12	12	96.0								
M4-8	DETOUR	24"x12"		12		12	12	24.0								
R11-2	ROAD CLOSED	48"x30"		6	7	7	7	70.0								
R11-3A	ROAD CLOSED 0.26 MILES AHEAD LOCAL TRAFFIC ONLY	60"x30"		1		1	1	12.5								
OM-3L	OBJECT MARKER	12"x36"		6	6	6	6	18.0								
OM-3R	OBJECT MARKER	12"x36"		8	8	8	8	24.0								
W1-6	LARGE ARROW	48"x24"		12		12	12	96.0								
W1-8	CHEVRONS	18"x24"		16		16	16	48.0								
R4-1	DO NOT PASS	24"x30"	2	2	2	2	2	10.0								
RSP-1	SHOULDER CLOSED	48"x30"	2	2	2	2	2	20.0								
	VERTICAL PANELS		37	149	140	149	149		149							
	TRAFFIC DRUMS			130	448	448	448		448							
	TYPE III BARRICADE-RT. (8')			7	4	7	7			56						
	TYPE III BARRICADE-LT. (8')			5	5	5	5				40					
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER			480		480						480				
	RELOCATING PRECAST CONCRETE BARRIER				480	480							480			
<b>TOTALS:</b>								834.5	149	448	56	40	480	480		

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 THE FULL LENGTH OF THE JOB. 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 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS (TYPE II)		THERMOPLASTIC PAVEMENT MARKINGS							
	LIN. FT. - EACH						LIN. FT.	EACH	LIN. FT.							
									(WH/RED)	(YEL/YEL)	4" WHITE	4" YELLOW	8" WHITE	12" WHITE	WORDS	ARROWS
REMOVAL OF PERMANENT PAVEMENT MARKINGS	2115			2115												
CONSTRUCTION PAVEMENT MARKINGS	33076	8128			41204											
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		4595				4595										
RAISED PAVEMENT MARKERS TYPE II (WH/RED)			207				207									
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)			199				199									
THERMOPLASTIC PAVEMENT MARKING WHITE (4")			2775						2775							
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")			21686							21686						
THERMOPLASTIC PAVEMENT MARKING WHITE (8")			300								300					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")			661									661				
THERMOPLASTIC PAVEMENT MARKING WORDS			6										6			
THERMOPLASTIC PAVEMENT MARKING ARROWS			6											6		
THERMOPLASTIC PAVEMENT MARKING (RAILROAD EMBLEMS)			4													4
<b>TOTALS:</b>				2115	41204	4595	207	199	2775	21686	300	661	6	6		4

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



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QUANTITIES

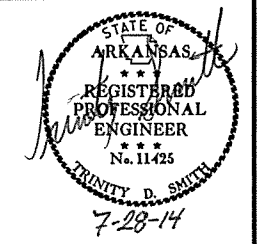
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		50	174

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CONCRETE DRIVEWAYS	WALKS	SIGN FOUNDATIONS	POSTS	BUILDINGS	SIGNS	ASBESTOS-CEMENT WATER LINE
			LIN. FT.	SQ. YD.	EACH					LIN. FT.
39+45	39+59	HWY. 264 - RT.	14							
39+64	40+36	HWY. 264 - RT.	73						1	
44+56	44+80	HWY. 264 - RT.	42							
45+10	45+34	HWY. 264 - RT.	41							
67+24	67+32	HWY. 264 - RT.	18			1			1	
67+72	67+83	HWY. 264 - RT.	25							
68+64	68+74	HWY. 264 - RT.	28							
69+13	69+23	HWY. 264 - RT.	26							
69+63	69+82	HWY. 264 - RT.					2			
70+60	70+73	HWY. 264 - RT.					2			
70+88	98+52	HWY. 264 - RT.								2847
101+84		HWY. 264 - RT.							1	
108+24	108+64	HWY. 264 - RT.	57							
109+26		HWY. 264 - RT.							1	
109+10		HWY. 264 - RT.								85
40+66	40+67	HWY. 264 - LT.	14							
41+12	41+13	HWY. 264 - LT.	14							
42+37	42+38	HWY. 264 - LT.	8							
43+00	43+00	HWY. 264 - LT.	8							
46+95	48+58	HWY. 264 - LT.	176							
48+88	52+07	HWY. 264 - LT.	354							346
52+03	73+05	HWY. 264 - LT.								2406
52+34	55+32	HWY. 264 - LT.	325							
55+85	56+07	HWY. 264 - LT.	10							
62+19	62+27	HWY. 264 - LT.	20							
62+61	62+69	HWY. 264 - LT.	17							
72+75	73+13	HWY. 264 - LT.	56							
73+70		HWY. 264 - LT.							2	
79+12	79+23	HWY. 264 - LT.	16							
79+64	79+78	HWY. 264 - LT.	19							
83+29	83+33	HWY. 264 - LT.	20							
83+72	83+74	HWY. 264 - LT.	19							
84+84		HWY. 264 - LT.							1	
86+09	86+10	HWY. 264 - LT.	12							
86+49	86+50	HWY. 264 - LT.	12							
97+28	108+74	HWY. 264 - LT.								1236
61+72	61+92	HWY. 264 - RT.		280						
77+88	77+06	HWY. 264 - RT.		437						
83+31	83+73	HWY. 264 - LT.		1023						
86+09	86+49	HWY. 264 - LT.		505						
88+37	88+64	HWY. 264 - LT.		480						
90+38	90+68	HWY. 264 - LT.		547						
92+03	92+35	HWY. 264 - LT.		483						
94+05	94+23	HWY. 264 - LT.		310						
98+65	98+76	HWY. 264 - RT.		178						
105+68	105+87	HWY. 264 - RT.		398						
108+03	108+27	HWY. 264 - RT.		191						
40+25	40+69	HWY. 264 - LT.			243					
41+11	42+37	HWY. 264 - LT.			687					
42+81	46+95	HWY. 264 - LT.			1911					
308+25	311+10	OLD WIRE RD. - RT.								285
406+95		OAK ST. - LT.						1		
407+60		OAK ST. - LT.						1		
TOTALS:			1424	4832	2841	1	4	2	7	7205

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

2 QUANTITIES



STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	
HWY. 264			
40+87	12" X 55' CMP - LT.	1	
42+59	12" X 50' CMP - LT.	1	
46+99	18" X 12" X 21' ACMP - RT.	1	
48+19	18" X 21' CMP - RT.	1	
48+42	54" X 36" X 16' ARCP - LT.	2	
48+51	30" X 63' RCP - C.L.	1	
48+53	D.I. - LT.		1
48+80	42" X 80' CMP - C.L.	3	
49+00	D.I. - LT.		1
49+35	48" X 47' CMP - LT.	2	
49+77	SIDE DRAIN - RT.	1	
50+17	SIDE DRAIN - RT.	1	
50+54	30" X 58' RCP - C.L.	1	
51+54	SIDE DRAIN - RT.	1	
52+60	SIDE DRAIN - RT.	1	
53+43	SIDE DRAIN - RT.	1	
54+57	18" CMP - RT.	1	
56+10	12" CMP - RT.	1	
59+92	24" X 18" X 40' ACMP - C.L.	1	
61+82	18" CMP - RT.	1	
65+17	18" CMP - RT.	1	
66+56	18"x24" RCP - C.L.	2	
67+50	18" CMP - RT.	1	
68+91	18" CMP - RT.	1	
69+71	18" CMP - RT.	1	
70+67	18" CMP - RT.	1	
72+72	18" RCP - LT.	1	
73+35	15" CMP - RT.	1	
74+41	15" CMP - RT.	1	
75+69	15" CMP - RT.	1	
76+03	15" CMP - RT.	1	
77+97	18" CMP - RT.	1	
80+78	15" CMP - RT.	1	
83+52	18" RCP - LT.	1	
84+07	18"x24" CMP - C.L.	1	
88+52	18"x24" ACMP	1	
90+41	15" CMP - RT.	1	
90+52	18" CMP - LT.	1	
92+19	12"x18" ACMP - LT.	1	
94+14	18" CMP - LT.	1	
94+86	18"x24" ACMP - C.L.	1	
95+15	36"x66" ACMP - C.L.	1	
96+22	36"x66" ACMP - C.L.	1	
97+28	15"x24" ACMP - RT.	1	
98+60	36" CMP - LT.	2	
98+72	12"x18" ACMP - RT.	1	
102+81	18"x24" ACMP - RT.	1	
105+77	SIDE DRAIN - RT.	1	
106+17	SIDE DRAIN - RT.	1	
107+31	SIDE DRAIN - RT.	1	
108+37	30" X 49' RCP - C.L.	1	
SUBTOTALS:		55	2

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

QUANTITIES

4/28/2014

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	090284
							51	174

**REMOVAL AND DISPOSAL OF PIPE CULVERTS AND DROP INLETS (BOX 2 OF 2)**

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	
<b>HWY. 264</b>			
108+49	D.I. - RT.		1
109+06	D.I. - RT.		1
109+61	36" X 106' CMP - RT.	1	
110+16	D.I. - RT.		1
110+57	36" X 79' CMP - RT.	1	
112+13	24" X 30' CMP - RT.	1	
<b>HWY. 265/OLD WIRE RD.</b>			
304+39	30" X 40' CMP - LT.	1	
306+53	24" X 8' RCP - LT.	1	
306+86	36" X 112' CMP - RT.	1	
307+54	24" X 55' RCP - C.L.	1	
308+05	36" X 52' CMP - C.L.	2	
<b>SUBTOTALS:</b>		9	3
<b>TOTALS:</b>		64	5

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

**CLEARING AND GRUBBING**

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
42+35	42+85	HWY. 264	1	1
44+60	48+50	HWY. 264	4	4
49+60	50+70	HWY. 264	2	2
52+60	56+65	HWY. 264	5	5
62+47	66+76	HWY. 264	5	5
69+00	69+20	HWY. 264	1	1
73+00	74+28	HWY. 264	2	2
76+20	93+10	HWY. 264	17	17
95+45	100+57	HWY. 264	6	6
105+20	112+05	HWY. 264	7	7
<b>TOTALS:</b>			54	54

**MAILBOXES**

LOCATION	MAILBOXES	MAILBOX SUPPORTS	
		(SINGLE)	(DOUBLE)
EACH			
ENTIRE PROJECT	34	30	2
<b>TOTALS:</b>		34	2

**REMOVAL AND DISPOSAL OF FENCE**

STATION	STATION	LOCATION	FENCE
			LIN. FT.
39+50	43+04	HWY. 264 - RT.	355
45+34	46+94	HWY. 264 - LT.	160
47+26	47+94	HWY. 264 - LT.	87
49+91	50+44	HWY. 264 - LT.	65
52+46	54+94	HWY. 264 - LT.	251
57+94	60+24	HWY. 264 - RT.	256
57+95	62+22	HWY. 264 - LT.	442
65+01	66+76	HWY. 264 - RT.	216
71+40	72+00	HWY. 264 - RT.	60
76+25	77+49	HWY. 264 - RT.	146
78+93	94+92	HWY. 264 - RT.	1663
99+24	108+06	HWY. 264 - LT.	951
100+47	102+66	HWY. 264 - RT.	219
109+80	110+75	HWY. 264 - LT.	196
308+42	311+00	OLD WIRE RD. - LT.	259
309+20	311+00	OLD WIRE RD. - RT.	284
<b>TOTAL:</b>			5610



**EARTHWORK**

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
39+50	111+97	HWY. 264 - MAIN LANES	10321	17027	
304+30	310+65	HWY. 265/OLD WIRE RD.	770	828	
404+90	408+52	N. OAK ST.	648	142	
ENTIRE PROJECT	PROJECT	APPROACHES	325	1455	
ENTIRE PROJECT	PROJECT	TEMPORARY APPROACHES	80	470	
ENTIRE PROJECT	PROJECT	ADDITIONAL FOR CHANNEL CHANGE	1531	364	
44+95		FERN'S VALLEY LOOP		15	
48+74		CB PLACE		110	
52+21		KIMBERLY PLACE		45	
55+70		HICKORY ST.	15		
73+30		N. OAK ST.	118	59	
* ENTIRE PROJECT. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			200	200	200
<b>TOTALS:</b>			14008	20715	200

\* NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS  
NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

**COLD MILLING ASPHALT PAVEMENT**

STATION	STATION	LOCATION	AVERAGE WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
38+50	39+50	HWY. 264	56	622.22
111+97	112+97	HWY. 264	22	244.44
107+83	109+40	HWY. 264	VAR.	703.33
303+30	304+30	HWY. 265	22	244.44
310+65	311+65	OLD WIRE RD.	22	244.44
404+40	404+90	OAK ST.	20	111.11
<b>TOTAL:</b>				2169.98

NOTE: AVERAGE MILLING DEPTH 1".

**BENCH MARK CAPS**

STATION	LOCATION	EACH
95+95	HWY. 264 - HEADWALL ON RT.	1
308+83	OLD WIRE RD. - HEADWALL ON LT.	1
<b>TOTAL:</b>		2

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

QUANTITIES

**ASPHALT CONCRETE PATCHING FOR  
MAINTENANCE OF TRAFFIC**

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/9/2014				6	ARK.			
				JOB NO.	090284		52	174

② QUANTITIES

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	37	74
<b>TOTALS:</b>	<b>37</b>	<b>74</b>

NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS BASIS OF ESTIMATE:  
 ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC.....25 TON/MILE  
 TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

**SELECTED PIPE BEDDING**

LOCATION	CU. YD.
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
<b>TOTAL:</b>	<b>100</b>

NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.



**EROSION CONTROL**

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL		TEMPORARY EROSION CONTROL																	
			SOLID SODDING **	WATER	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	SEDIMENT REMOVAL & DISPOSAL								
															SQ. YD.	M. GAL.	ACRE	M. GAL.	BAG	CU. YD.	LIN. FT.	CU. YD.
39+50	111+90	HWY. 264 - MAIN LANES	18587	234.2	12.11	12.11	247.0	418	75	1650	4312	266	266	531								
304+30	310+65	HWY. 265/OLD WIRE RD.	1326	16.7	0.48	0.48	9.8															
404+90	408+52	N. OAK. ST.	169	2.1	0.37	0.37	7.5															
* ENTIRE PROJECT. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			5000	63.0	3.25	3.25	66.3	110	24	400	1100	133	133	189								
<b>TOTALS:</b>			<b>25082</b>	<b>316.0</b>	<b>16.21</b>	<b>16.21</b>	<b>330.6</b>	<b>528</b>	<b>99</b>	<b>2050</b>	<b>5412</b>	<b>399</b>	<b>399</b>	<b>720</b>								

BASIS OF ESTIMATE:  
 WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.  
 WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.  
 SAND BAG DITCH CHECKS.....22 BAGS / LOCATION  
 ROCK DITCH CHECKS.....3 CU.YD./LOCATION  
 NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.  
 \* NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.  
 \*\* SOLID SODDING IS TO BE USED IN THE 3' WIDTH BETWEEN THE SIDEWALK AND CURB AND FOR PERMANENT EROSION CONTROL.

**STRUCTURES**

STATION	LOCATION	DESCRIPTION	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE - ROADWAY	REINFORCING STEEL- ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	SOLID SODDING	WATER	STANDARD DRAWING
						CU. YD.	POUND	CU. YD.	SQ. YD.	M. GAL.	
48+73	HWY. 264 - LT.	DBL 5' X 3' X 34' R.C. BOX CULVERT RETAIN & EXTEND 13' LT.	5	3	34	8.72	1603	4			RCB-3, R-200X-0
<b>SUBTOTALS:</b>						<b>8.72</b>	<b>1603</b>	<b>4</b>			
<b>STRUCTURES OVER 20' - 0" SPAN</b>											
96+20	HWY. 264	QUINT. 6' X 3' X 126' R.C. BOX CULVERT	6	3	126	277.88	42345	135	49	0.62	RCB-1, RCB-2, SHEETS 10-15
98+60	HWY. 264 - LT.	TRP. 6' X 3' X 27' R.C. BOX CULVERT	6	3	27	49.82	6107	37	26	0.33	RCB-1, RCB-2, SHEETS 10-13, 16, & 17
308+62	OLD WIRE ROAD	QUINT. 6' X 3' X 88' R.C. BOX CULVERT	6	3	88	201.94	30813	102	43	0.54	RCB-1, RCB-2, SHEETS 10-13, 18, & 19
<b>SUBTOTALS:</b>						<b>529.64</b>	<b>79265</b>	<b>274</b>	<b>118</b>	<b>1.49</b>	
<b>TOTALS:</b>						<b>538.36</b>	<b>80868</b>	<b>278</b>	<b>118</b>	<b>1.49</b>	

BASIS OF ESTIMATE:  
 WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.  
 REFER TO SPECIAL DETAILS ON SHEETS 7 - 19.

QUANTITIES

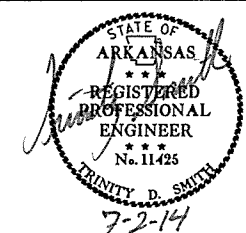
DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	** MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)			AGGREGATE BASE COURSE (CLASS 7)
				FEET	STATION		STATION	SQ. YD.	SQ. YD.	
40+90	LT.	HWY. 264	40	40+56	41+24	60.40	29.3	3.2	11.96	
42+15	RT.	HWY. 264	18	41+92	42+38	40.90	112.4	12.4	45.90	
42+60	LT.	HWY. 264	40	42+26	42+94	60.40	38.7	4.3	15.80	
46+96	RT.	HWY. 264	16	46+74	47+18	39.10	40.6	4.5	16.58	
48+19	RT.	HWY. 264	16	47+97	48+41	39.10	109.5	12.0	44.71	
49+83	RT.	HWY. 264	16	49+61	50+05	39.10	92.4	10.2	37.73	
50+21	RT.	HWY. 264	16	49+99	50+43	39.10	75.2	8.3	30.71	
51+65	RT.	HWY. 264	16	51+43	51+87	39.10	48.5	5.3	19.80	
52+61	RT.	HWY. 264	16	52+39	52+83	39.10	19.3	2.1	7.88	
53+44	RT.	HWY. 264	16	53+22	53+66	39.10	20.4	2.2	8.33	
54+58	RT.	HWY. 264	16	54+36	54+80	39.10	25.1	2.8	10.25	
56+10	RT.	HWY. 264	16	55+88	56+32	39.10	19.6	2.2	8.00	
56+68	RT.	HWY. 264	16	56+46	56+90	39.10	16.5	1.8	6.74	
61+82	RT.	HWY. 264	20	61+58	62+06	74.90				
62+45	LT.	HWY. 264	32	62+15	62+75	77.50				
63+39	RT.	HWY. 264	16	63+17	63+61	39.10	41.4	4.6	16.91	
64+07	RT.	HWY. 264	16	63+85	64+29	39.10	80.9	8.9	33.03	
67+53	RT.	HWY. 264	40	67+19	67+87	60.40	71.6	7.9	29.24	
68+94	RT.	HWY. 264	38	68+61	69+27	58.70	52.8	5.8	21.56	
73+36	RT.	HWY. 264	16	73+14	73+58	39.10	14.2	1.6	5.80	
74+42	RT.	HWY. 264	16	74+20	74+64	39.10	13.9	1.5	5.68	
75+59	RT.	HWY. 264	16	75+37	75+81	39.10	27.9	3.1	11.39	
76+03	RT.	HWY. 264	16	75+81	76+25	39.10	30.0	3.3	12.25	
77+97	RT.	HWY. 264	16	77+75	78+19	39.10	29.3	3.2	11.96	
78+79	RT.	HWY. 264	16	78+57	79+01	39.10	22.2	2.4	9.07	
79+23	RT.	HWY. 264	16	79+01	79+45	39.10	27.4	3.0	11.19	
79+44	LT.	HWY. 264	40	79+10	79+78	102.60				
80+39	LT.	HWY. 264	40	80+05	80+73	60.40	48.4	5.3	19.76	
80+75	RT.	HWY. 264	16	80+53	80+97	39.10	18.5	2.0	7.55	
83+54	LT.	HWY. 264	40	83+20	83+88	107.10				
86+31	LT.	HWY. 264	40	85+97	86+65	60.40	110.2	12.1	45.00	
87+65	RT.	HWY. 264	16	87+43	87+87	39.10	62.8	6.9	25.64	
88+52	LT.	HWY. 264	16	88+30	88+74	105.60				
90+40	RT.	HWY. 264	16	90+18	90+62	39.10	91.9	10.1	37.53	
90+53	LT.	HWY. 264	16	90+31	90+75	124.70				
92+21	LT.	HWY. 264	16	91+99	92+43	82.10				
94+14	LT.	HWY. 264	16	93+92	94+36	47.50				
96+16	LT.	HWY. 264	16	95+94	96+38	39.10	35.2	3.9	14.37	
97+25	RT.	HWY. 264	16	97+03	97+47	39.10	19.2	2.1	7.84	
98+62	LT.	HWY. 264	16	98+40	98+84	39.10	103.1	11.3	42.10	
98+72	RT.	HWY. 264	16	98+50	98+94	53.90				
102+81	RT.	HWY. 264	20	102+57	103+05	42.70	57.9	6.4	23.64	
104+40	RT.	HWY. 264	20	104+16	104+64	42.70	39.6	4.4	16.17	
105+78	RT.	HWY. 264	16	105+56	106+00	64.90				
106+29	RT.	HWY. 264	16	106+07	106+51	56.60				
107+42	RT.	HWY. 264	16	107+20	107+64	39.10	25.8	2.8	10.54	
109+75	RT.	HWY. 264	24	109+49	110+01	77.70				
110+68	RT.	HWY. 264	40	110+34	111+02	126.20				
304+40	LT.	HWY. 265	24	304+14	304+66	46.20	25.9	2.8	10.58	
306+62	RT.	HWY. 265	28	306+34	306+90	81.90				
405+35	LT.	OAK ST.	24	405+09	405+61	46.20	34.1	3.8	13.92	
* ENTIRE PROJECT TEMPORARY DRIVES									795.00	
<b>TOTALS:</b>						<b>2779.20</b>	<b>1731.7</b>	<b>190.5</b>	<b>1502.11</b>	

BASIS OF ESTIMATE:  
 ACHM SURFACE COURSE (1/2").....94.5% MIN. AGGR.....5.5% ASPHALT BINDER  
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22  
 \* QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.  
 \*\* FOR INFORMATION ONLY.  
 THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		53	174
				JOB NO.	090284			

② QUANTITIES



4/28/2014 R090284.DGN

QUANTITIES

**CONCRETE DITCH PAVING**

STATION	STATION	LOCATION	LENGTH	"W"	"B"	CONC. DITCH PAVING	SOLID SODDING	WATER
			LIN. FT.	FEET	FEET	(TYPE A) SQ. YD.	SQ. YD.	M. GAL.
ENTIRE	PROJECT	HWY. 264 - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	VAR.	VAR.	VAR.	100	50	0.6
<b>TOTALS:</b>						<b>100</b>	<b>50</b>	<b>0.6</b>

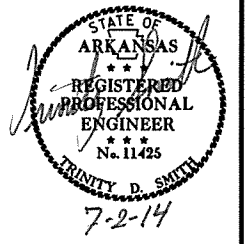
BASIS OF ESTIMATE:

WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		54	174

② QUANTITIES



**PAVEMENT REPAIR OVER CULVERTS (CONCRETE)**

STATION	LOCATION	WIDTH	LENGTH	CU. YD.	FLOWABLE SELECT MATERIAL
		FEET			CU. YD.
48+82	HWY. 264	31.62	27.10	31.7	158
50+70	HWY. 264	7.92	22.75	6.7	4
59+90	HWY. 264	9.08	22.50	7.6	17
66+37	HWY. 264	19.67	22.63	16.5	39
84+07	HWY. 264	7.92	22.50	6.6	12
107+75	HWY. 264	19.67	22.50	16.4	54
306+95	HWY. 265	10.83	29.70	11.9	39
307+42	HWY. 265	18.50	37.30	25.6	91
<b>TOTAL:</b>				<b>123.0</b>	<b>414</b>

AVG. DEPTH = 1'-0"

**CONCRETE COMBINATION CURB AND GUTTER**

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
39+50	48+59	HWY. 264 - LT.	889
39+50	44+81	HWY. 264 - RT.	549
45+08	69+46	HWY. 264 - RT.	2280
48+86	52+08	HWY. 264 - LT.	316
52+32	55+55	HWY. 264 - LT.	334
55+84	71+32	HWY. 264 - LT.	1489
70+53	71+81	HWY. 264 - RT.	128
71+55	73+15	HWY. 264 - LT.	174
72+07	107+96	HWY. 264 - RT.	3460
73+49	107+83	HWY. 264 - LT.	3315
109+25	112+07	HWY. 264 - LT.	278
109+48	112+03	HWY. 264 - RT.	262
304+20	307+30	HWY. 265 - RT.	346
304+53	307+78	HWY. 265 - LT.	349
307+71	310+75	OLD WIRE RD. - RT.	327
308+38	310+75	OLD WIRE RD. - LT.	276
404+90	408+52	N. OAK ST. - LT.	392
404+90	408+52	N. OAK ST. - RT.	371
<b>TOTAL:</b>			<b>15535</b>

**WHEELCHAIR RAMPS**

STATION	LOCATION	TYPE 3
		SQ. YD.
44+64	HWY. 264 - RT.	5.4
45+25	HWY. 264 - RT.	5.4
48+42	HWY. 264 - LT.	5.4
49+03	HWY. 264 - LT.	5.4
51+90	HWY. 264 - LT.	5.4
52+50	HWY. 264 - LT.	5.4
55+38	HWY. 264 - LT.	5.4
56+00	HWY. 264 - LT.	5.4
69+64	HWY. 264 - RT.	6.1
70+39	HWY. 264 - RT.	5.4
71+25	HWY. 264 - LT.	4.6
71+55	HWY. 264 - LT.	4.6
71+84	HWY. 264 - RT.	4.6
72+15	HWY. 264 - RT.	4.6
73+08	HWY. 264 - LT.	4.1
73+65	HWY. 264 - LT.	4.5
108+04	HWY. 264 - LT.	4.8
108+04	HWY. 264 - RT.	5.4
108+10	HWY. 264 - LT.	3.5
108+32	HWY. 264 - RT.	5.5
108+72	HWY. 264 - LT.	4.2
109+29	HWY. 264 - LT.	4.8
109+29	HWY. 264 - RT.	4.6
111+93	HWY. 264 - RT.	4.9
<b>TOTAL:</b>		<b>119.4</b>

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.		090284	55	174

**FENCING**

STATION	STATION	LOCATION	WIRE FENCE	* 4' CHAIN LINK FENCE	* 6' CHAIN LINK FENCE	* 16'-0" GATES
			(TYPE D-2)	LIN. FT.		
39+50	43+05	HWY. 264 - RT.			355	1
45+34	46+94	HWY. 264 - LT.			160	
47+26	47+94	HWY. 264 - LT.		87		
49+91	50+44	HWY. 264 - LT.		53		
52+46	54+94	HWY. 264 - LT.		251		
57+94	60+24	HWY. 264 - RT.	230			
57+95	62+22	HWY. 264 - LT.			427	
65+01	66+76	HWY. 264 - RT.	216			
78+93	80+98	HWY. 264 - RT.		205		1
80+98	94+92	HWY. 264 - RT.	1396			2
99+24	108+06	HWY. 264 - LT.	951			
100+47	102+66	HWY. 264 - RT.	219			
109+80	110+75	HWY. 264 - LT.	196			
309+20	311+00	OLD WIRE RD. - RT.	284			
309+25	311+00	OLD WIRE RD. - LT.	187			
<b>TOTALS:</b>			<b>3679</b>	<b>596</b>	<b>942</b>	<b>4</b>

\* DENOTES ALTERNATE BID ITEM.

**CONCRETE WALKS AND HAND RAILING**

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	CONCRETE WALKS (TYPE SPECIAL)	HAND RAILING
			LIN. FT.	SQ. YD.		LIN. FT.
39+50	44+58	HWY. 264 - RT.	478	266		
39+50	48+52	HWY. 264 - LT.	800	444		
45+31	69+58	HWY. 264 - RT.	1909	1061		
48+93	51+85	HWY. 264 - LT.	302	168		
52+35	55+32	HWY. 264 - LT.	305	169		
56+07	71+18	HWY. 264 - LT.	1467	815		
70+45	71+78	HWY. 264 - RT.	134	74		
71+60	73+06	HWY. 264 - LT.	157	87		
72+20	108+26	HWY. 264 - RT.	2946	1637		
73+71	108+06	HWY. 264 - LT.	3090	1717		
108+76	109+31	HWY. 264 - LT.	73	41		
109+26	111+87	HWY. 264 - RT.	181	101		
103+00	104+28	HWY. 264 - RT.	128		71	128
104+48	105+00	HWY. 264 - RT.	52		29	52
<b>TOTALS:</b>				<b>6580</b>	<b>100</b>	<b>180</b>

**CONCRETE ISLAND**

STATION	LOCATION	CURB FACE TYPE	SQ. YD.
71+24	HWY. 264	C	53
72+15	HWY. 264	C	53
<b>TOTAL:</b>			<b>106</b>

**4" PIPE UNDERDRAIN**

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			2000	8
<b>TOTALS:</b>			<b>2000</b>	<b>8</b>

\* NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

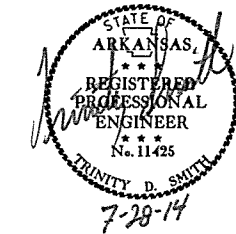
**DUMPED RIPRAP AND FILTER BLANKET**

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
48+62	OUTLET OF R.C. PIPE CULVERT	100	200
66+37	INLET OF R.C. PIPE CULVERT	17	33
66+37	OUTLET OF R.C. PIPE CULVERT	9	17
96+20	INLET OF R.C. BOX CULVERT	125	250
96+20	OUTLET OF R.C. BOX CULVERT	49	97
98+60	INLET OF R.C. BOX CULVERT	13	26
98+60	OUTLET OF R.C. BOX CULVERT	13	26
308+62	INLET OF R.C. BOX CULVERT	52	103
308+62	OUTLET OF R.C. BOX CULVERT	34	67
* ENTIRE PROJECT. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER		100	200
<b>TOTALS:</b>		<b>512</b>	<b>1019</b>

\* NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

② QUANTITIES







DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/5/2014				6	ARK.			
				JOB NO.		090284	57	174

2 QUANTITIES



BASE AND SURFACING - MAIN LANES

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		PORTLAND CEMENT CONCRETE BASE				TACK COAT			ACHM BASE COURSE (1 1/2") 440 LBS. PER SQ. YD.			ACHM BINDER COURSE (1") 330 LBS. PER SQ. YD.			ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD.										
				TON PER STATION	TON	AVG. WID. FEET	6.5" U.T. SQ. YD.	AVG. WID. FEET	9" U.T. SQ. YD.	TOTAL WID. FEET	SQ. YD.	GAL. PER SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	PG 64-22 TON	PG 76-22 TON	AVG. WID. FEET	SQ. YD.	PG 76-22 TON	PG 76-22 TOTAL TONS		
																												TON	TON
39+50.00	107+83.00	HWY. 264	6833.00	164.50	11240.29					124.00	94143.56	0.03	2824.31	34.00	25813.56	5678.98	34.00	25813.56	4259.24	34.00	25813.56		2839.49	56.00	42516.44	4676.81	7516.30		
107+83.00	108+52.00	HWY. 264 - LT.	69.00	VAR.	93.50					VAR.	695.01	0.03	20.85	VAR.	231.67	50.97	VAR.	231.67	38.23	VAR.	231.67		25.48	VAR.	399.56	43.95	69.43		
108+92.00	109+78.00	HWY. 264 - RT.	86.00	VAR.	8.85					VAR.	505.68	0.03	15.17	VAR.	168.56	37.08	VAR.	168.56	27.81	VAR.	168.56		18.54	VAR.	413.45	45.48	64.02		
109+22.00	112+07.00	HWY. 264 - LT.	290.00			VAR.	281.00	VAR.	200.44	VAR.	200.44	0.03	6.01												VAR.	534.33	58.78	58.78	
109+78.00	112+02.00	HWY. 264 - RT.	236.00			VAR.	205.56	VAR.	140.00	VAR.	140.00	0.03	4.20												VAR.	423.00	46.53	46.53	
304+30.00	306+43.00	HWY. 265 - LT.	213.00			VAR.	166.95	VAR.	107.78	VAR.	107.78	0.03	3.23												VAR.	514.22	56.56	56.56	
304+30.00	307+10.00	HWY. 265 - RT.	280.00			VAR.	222.22	VAR.	144.44	VAR.	144.44	0.03	4.33												VAR.	451.88	49.71	49.71	
306+43.00	307+70.00	HWY. 265 - LT.	127.00	VAR.	131.00					VAR.	966.66	0.03	29.00	VAR.	322.22	70.89	VAR.	322.22	53.17	VAR.	322.22			35.44	VAR.	669.66	73.66	109.10	
307+65.00	309+02.00	OLD WIRE RD. - RT.	137.00	VAR.	84.30					VAR.	597.00	0.03	17.91	VAR.	199.00	43.78	VAR.	199.00	32.84	VAR.	199.00			21.89	VAR.	415.67	45.72	67.61	
308+59.00	310+65.00	OLD WIRE RD. - LT.	206.00			VAR.	159.33	VAR.	102.11	VAR.	102.11	0.03	3.06												VAR.	376.33	41.40	41.40	
309+02.00	310+65.00	OLD WIRE RD. - RT.	163.00			VAR.	125.72	VAR.	80.44	VAR.	80.44	0.03	2.41												VAR.	272.00	29.92	29.92	
404+90.00	406+48.00	N. OAK ST.	158.00	122.25	193.16					72.00	1264.00	0.03	37.92	24.00	421.33	92.69	24.00	421.33	69.52	48.00	842.67	92.69							
406+48.00	406+78.00	N. OAK ST.	30.00	130.75	39.23					78.00	260.00	0.03	7.80	26.00	86.67	19.07	26.00	86.67	14.30	52.00	173.33	19.07							
406+78.00	408+52.00	N. OAK ST.	174.00	139.00	241.86					84.00	1624.00	0.03	48.72	28.00	541.33	119.09	28.00	541.33	89.32	56.00	1082.67	119.09							
44+95.00		FERN'S VALLEY LOOP		VAR.	64.30					VAR.	426.66	0.03	12.80	VAR.	142.22	31.29	VAR.	142.22	23.47	VAR.	284.44	31.29							
48+73.00		C B PLACE		VAR.	81.00					VAR.	538.68	0.03	16.16	VAR.	179.56	39.50	VAR.	179.56	29.63	VAR.	359.12	39.50							
52+20.00		KIMBERLY PLACE		VAR.	59.00					VAR.	387.33	0.03	11.62	VAR.	129.11	28.40	VAR.	129.11	21.30	VAR.	258.22	28.40							
55+70.00		HICKORY STREET		VAR.	65.20					VAR.	434.67	0.03	13.04	VAR.	144.89	31.88	VAR.	144.89	23.91	VAR.	289.78	31.88							
73+30.00		N. OAK ST.		VAR.	226.90					VAR.	1614.33	0.03	48.43	VAR.	538.11	118.38	VAR.	538.11	88.79	VAR.	1076.22	118.38							
ADDITIONAL FOR LEVELING																													
3950.00	4600.00	HWY. 264	650.00							22.00	1588.89	0.10	158.89																572.40
4600.00	5350.00	HWY. 264	750.00							22.00	1833.33	0.10	183.33			1899.20													
5350.00	11197.00	HWY. 264	5847.00							22.00	14292.67	0.10	1429.27																4371.40
30430.00	31065.00	HWY. 265/OLD WIRE RD.	635.00							22.00	1552.22	0.10	155.22																400.20
<b>TOTALS:</b>					12528.59		1160.78		775.21		123499.90		5053.68		28918.23	8261.20		28918.23	4771.53		31101.46	480.30	8284.84		46986.54	5168.52	13453.36		

BASIS OF ESTIMATE:  
 ACHM SURFACE COURSE (1/2").....94.5% MIN. AGGR.....5.5% ASPHALT BINDER  
 ACHM BINDER COURSE (1").....95.2% MIN. AGGR.....4.8% ASPHALT BINDER  
 ACHM BASE COURSE (1 1/2").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER  
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22  
 MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22  
 MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

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

BASE AND SURFACING - TEMPORARY WIDENING FOR MAINTENANCE OF TRAFFIC

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2") 495 LBS. PER SQ. YD.			ACHM BINDER COURSE (1") 385 LBS. PER SQ. YD.			ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD.		
				TON PER STATION	TON	TOTAL WID. FEET	SQ. YD.	GAL. PER SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	PG 64-22 TON
45+30.00	48+40.00	HWY. 264 - RT.	310.00	4.50	13.95	21.26	732.29	0.03	21.97	10.67	367.52	90.96	10.59	364.77	70.22	10.50	361.67	39.78
48+40.00	49+00.00	HWY. 264 - RT.	60.00	9.00	5.40	42.50	283.33	0.03	8.50	21.33	142.20	35.19	21.17	141.13	27.17	21.00	140.00	15.40
49+00.00	52+10.00	HWY. 264 - RT.	310.00	4.50	13.95	21.26	732.29	0.03	21.97	10.67	367.52	90.96	10.59	364.77	70.22	10.50	361.67	39.78
92+60.00	95+70.00	HWY. 264 - RT.	310.00	4.50	13.95	22.76	783.96	0.03	23.52	11.42	367.52	90.96	11.34	390.60	75.19	11.25	387.50	42.63
95+70.00	96+50.00	HWY. 264 - RT.	80.00	9.00	7.20	45.50	404.44	0.03	12.13	22.83	202.93	50.23	22.67	201.51	38.79	22.50	200.00	22.00
96+50.00	99+60.00	HWY. 264 - RT.	310.00	4.50	13.95	22.76	783.96	0.03	23.52	11.42	367.52	90.96	11.34	390.60	75.19	11.25	387.50	42.63
<b>TOTALS:</b>					68.40		3720.27		111.61		1815.21	449.26		1853.38	356.78		1838.34	202.22

BASIS OF ESTIMATE:  
 ACHM SURFACE COURSE (1/2").....94.5% MIN. AGGR.....5.5% ASPHALT BINDER  
 ACHM BINDER COURSE (1").....95.2% MIN. AGGR.....4.8% ASPHALT BINDER  
 ACHM BASE COURSE (1 1/2").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER  
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

NOTE:  
 THE CONTRACTOR, WITH APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR TEMPORARY WIDENING CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

4/28/2014 R090284.DGN

QUANTITIES

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	54	STATION
201	GRUBBING	54	STATION
202	REMOVAL AND DISPOSAL OF CURB	1424	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE	5610	LIN. FT.
202	REMOVAL AND DISPOSAL OF POSTS	4	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	4832	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS	2841	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	1	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS	5	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	64	EACH
202	REMOVAL AND DISPOSAL OF BUILDINGS	2	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	7	EACH
SP	REMOVAL AND DISPOSAL OF ASBESTOS-CEMENT WATER LINE	7205	LIN. FT.
206	FLOWABLE SELECT MATERIAL	414	CU. YD.
210	UNCLASSIFIED EXCAVATION	14008	CU. YD.
SP & 210	COMPACTED EMBANKMENT	20715	CU. YD.
SP & 210	SOIL STABILIZATION	200	TON
303	AGGREGATE BASE COURSE (CLASS 7)	14099	TON
309	PORTLAND CEMENT CONCRETE BASE (6 1/2" UNIFORM THICKNESS)	1161	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (9" UNIFORM THICKNESS)	775	SQ. YD.
401	TACK COAT	5239	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	8327	TON
SP & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")	383	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	4882	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	246	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	13538	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	48	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	740	TON
412	COLD MILLING ASPHALT PAVEMENT	2170	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	37	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY	2779.20	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SP & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
603	48" TEMPORARY CULVERT	33	LIN. FT.
603	24" X 18" TEMPORARY CULVERT	18	LIN. FT.
603	57" X 38" TEMPORARY CULVERT	38	LIN. FT.
604	SIGNS	835	SQ. FT.
604	BARRICADES	96	LIN. FT.
604	TRAFFIC DRUMS	448	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	480	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	480	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	41204	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	4595	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	2115	LIN. FT.
604	VERTICAL PANELS	149	EACH
605	CONCRETE DITCH PAVING (TYPE A)	100	SQ. YD.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	272	LIN. FT.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	5393	LIN. FT.
606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	5393	LIN. FT.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	59	LIN. FT.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	300	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	45	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	421	LIN. FT.
606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	421	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	195	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	291	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	141	LIN. FT.
606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	141	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	59	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	171	LIN. FT.
606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	171	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	450	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	544	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	424	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	68	LIN. FT.
606	48" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	68	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	240	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	169	LIN. FT.
606	51" X 31" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	34	LIN. FT.
606	51" X 31" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	118	LIN. FT.
606	12" SIDE DRAIN	475	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	7	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	3	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	51" X 31" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	4	EACH
606	SELECTED PIPE BEDDING	100	CU. YD.
609	DROP INLETS (TYPE C)	6	EACH
609	DROP INLETS (TYPE C SPECIAL)	1	EACH
609	DROP INLETS (TYPE MO)	58	EACH
609	JUNCTION BOXES (TYPE E SPECIAL)	1	EACH
609	JUNCTION BOXES (TYPE ST SPECIAL)	1	EACH
609	DROP INLET EXTENSIONS (4')	30	EACH
609	DROP INLET EXTENSIONS (8')	28	EACH
609	YARD DRAINS	7	EACH
611	UNDERDRAIN OUTLET PROTECTORS	8	EACH
611	4" PIPE UNDERDRAINS	2000	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)	123	CU. YD.
619	WIRE FENCE (TYPE D-2)	3679	LIN. FT.
619	4' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	596	LIN. FT.
619	4' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	596	LIN. FT.
619	6' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	942	LIN. FT.
619	6' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	942	LIN. FT.
619	16" STEEL GATES (ALTERNATE NO. 1)	4	EACH
619	16" ALUMINUM GATES (ALTERNATE NO. 2)	4	EACH

\* DENOTES ALTERNATE BID ITEMS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/3/2014				6	ARK.			
9/5/2014								
9/9/2014						JOB NO. 090284	58	174

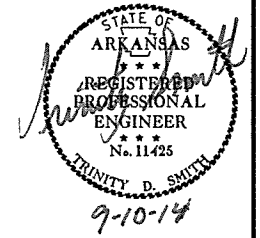
2 SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SS & 620	MULCH COVER	16.21	ACRE
620	WATER	652.2	M.GAL.
621	TEMPORARY SEEDING	16.21	ACRE
621	SILT FENCE	5412	LIN. FT.
621	SAND BAG DITCH CHECKS	528	BAG
621	DROP INLET SILT FENCE	2050	LIN. FT.
621	SEDIMENT BASIN	399	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	399	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	720	CU. YD.
621	ROCK DITCH CHECKS	99	CU. YD.
624	SOLID SODDING	25530	SQ. YD.
632	CONCRETE ISLAND	106	SQ. YD.
633	CONCRETE WALKS	6580	SQ. YD.
633	CONCRETE WALKS (TYPE SPECIAL)	100	SQ. YD.
633	HAND RAILING	180	LIN. FT.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	15535	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	34	EACH
637	MAILBOX SUPPORTS (SINGLE)	30	EACH
637	MAILBOX SUPPORTS (DOUBLE)	2	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	119	SQ. YD.
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2, E-NET (8 PHASES)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	3805	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	2358	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	595	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	614	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
716	TREATED WOOD POLE (CLASS 2, 40')	4	EACH
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	2775	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	300	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	861	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	21686	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	6	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	6	EACH
719	THERMOPLASTIC PAVEMENT MARKING (RAILROAD EMBLEMS)	4	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	406	EACH
SP & 733	VIDEO DETECTOR (CLR)	13	EACH
733	VIDEO CABLE	2550	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	7	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	4	CU. YD.
802	CLASS S CONCRETE-ROADWAY	8.72	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	1603	POUND
816	FILTER BLANKET	1019	SQ. YD.
816	DUMPED RIPRAP	512	CU. YD.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	795	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	538	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	200	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	E-NET CABLE (EXTERIOR CAT 5)	75	LIN. FT.
SP	ETHERNET SWITCH, T100 HARDENED (4 PORT)	1	EACH
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	3	EACH
SP	18" STREET NAME SIGN	4	EACH
STRUCTURES OVER 20' SPAN			
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	274	CU. YD.
802	CLASS S CONCRETE-ROADWAY	529.64	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	79265	POUND

REVISIONS

DATE	REVISION	SHEET NUMBER
9/3/2014	ADDED 24" X 18" AND 57" X 38" TEMPORARY CULVERT. REMOVED 21" X 15" AND 49" X 33" TEMPORARY CULVERT.	34, 56, 58, 73, AND 159
9/5/2014	ADDED A NOTE UNDER THE BASE AND SURFACING - TEMPORARY WIDENING FOR MAINTENANCE OF TRAFFIC QUANTITY BOX.	57 AND 58
9/9/2014	REVISED PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS SPECIAL PROVISION. REVISED SPECIAL DETAILS AND QUANTITIES FOR R.C. BOX CULVERT AT STA. 96+20.	1, 11, 52, 58, 73, AND 159



SUMMARY OF QUANTITIES AND REVISIONS

4/28/2014

R090284.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		59	174

2 SURVEY CONTROL DETAILS



Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,  
PROJECTED TO GROUND.  
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	695049.8474	690017.5364	1385.963	CTL	5/8" REBAR W/2" CAP
2	694982.3867	689395.8419	1383.082	CTL	5/8" REBAR W/2" CAP
3	695078.8534	688552.7906	1369.183	CTL	5/8" REBAR W/2" CAP
4	695086.7606	687609.3701	1368.423	CTL	5/8" REBAR W/2" CAP
5	695199.6305	686545.6935	1382.993	CTL	5/8" REBAR W/2" CAP
6	695250.5521	685796.5090	1374.856	CTL	5/8" REBAR W/2" CAP
7	695257.0375	684750.3035	1360.022	CTL	5/8" REBAR W/2" CAP
8	695351.7409	684165.3056	1355.414	CTL	5/8" REBAR W/2" CAP
9	695372.5705	683387.3809	1330.247	CTL	5/8" REBAR W/2" CAP
10	695334.3991	682891.6574	1344.448	CTL	5/8" REBAR W/2" CAP
11	695439.7095	682017.6209	1344.022	CTL	5/8" REBAR W/2" CAP
100	697165.1198	688896.2073	1389.103	GPS	AHTD GPS 040054
102	695764.7251	681987.8282	1345.862	GPS	AHTD GPS 040053A
900	694996.2052	689466.2270	1384.127	TBM	CHISELED SQUARE SET IN BASE AT SE CORNER OF HWY. 265
901	695144.8496	687952.1956	1370.496	TBM	TOP BOLT OF YELLOW FH
902	695211.0729	686938.4777	1381.578	TBM	TOP OF YELLOW FH
903	695186.7893	685397.1533	1365.130	TBM	TOP OF YELLOW FH
904	695402.3909	683791.0780	1334.066	TBM	CHISELED SQUARE IN TOP OF CA
905	695406.9697	682522.5917	1343.629	TBM	CHISELED SQUARE TOP OF CA
1500	695640.6550	685883.8399	1379.967	CTL	REBAR/CAP SW 2' W OF BACK OF CB
1501	696044.9646	685902.0713	1386.339	CTL	REBAR/CAP 7' S OF TB#2131 9' S OF CONC.DW

\*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped  
\*(standard markings common to all caps), or as indicated  
(other markings indicated in the point description of the individual point).  
ALL DISTANCES ARE GROUND.  
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.  
A PROJECT CAF OF 0.9999386648 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.  
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.  
GRID DISTANCE = GROUND DISTANCE X CAF.  
GRID COORDINATES ARE STORED UNDER FILE NAME, S090284G1.CTL  
HORIZONTAL DATUM: NAD 83 (1997)  
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE  
AT A SPECIFIC POINT.

REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL  
IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.  
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL.

BASIS OF BEARING:  
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE  
DETERMINED FROM GPS CONTROL POINTS: 040054-040053A  
CONVERGENCE ANGLE: 01 14 10.22 LEFT AT LT: 36-13-28.96 LG: 94-07-27.75  
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

MID JOB LAT. 36-13-29  
LON. 94-07-27

CONST. C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	25+00.00	695459.3358	681058.2306
8001	PC	34+77.90	695393.6266	682033.9197
8003	PT	36+77.85	695383.6743	682233.6167
8004	PC	53+21.54	695330.5166	683876.4412
8006	PT	55+76.10	695319.4585	684130.7610
8007	PI	62+84.85	695280.8077	684838.4500
8008	PI	73+06.29	695217.2459	685857.9090
8009	PC	77+54.11	695193.5212	686305.1004
8011	PT	79+54.33	695181.1673	686504.9434
8012	PC	90+70.53	695102.5670	687618.3727
8014	PT	98+77.35	695059.9294	688424.0233
8016	PC	102+98.05	695045.0938	688844.4553
8018	PT	103+78.63	695042.5352	688925.0002
8019	POE	115+00.00	695010.8726	690045.9208

HWY. 265/OLD WIRE RD. C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8100	POB	300+00.00	694282.5905	689628.2205
8101	PC	307+23.05	694978.2217	689430.9922
8103	PT	308+43.85	695090.1217	689386.0782
8104	PC	310+41.45	695264.7345	689293.5888
8106	PT	313+77.51	695579.6502	689179.4168
8107	POE	316+99.07	695894.2540	689112.8521

OAK ST. C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8200	POB	400+00.00	694550.9175	685865.1709
8201	PC	403+30.20	694880.7697	685880.3885
8203	PT	404+67.50	695008.4775	685838.7475
8204	PC	404+90.37	695026.3121	685824.4286
8206	PT	406+48.45	695096.9924	685688.0947
8207	PC	406+92.74	695099.7480	685643.8965
8209	PT	408+49.82	695205.7770	685550.3131
8210	POE	408+80.41	695236.3054	685552.2165

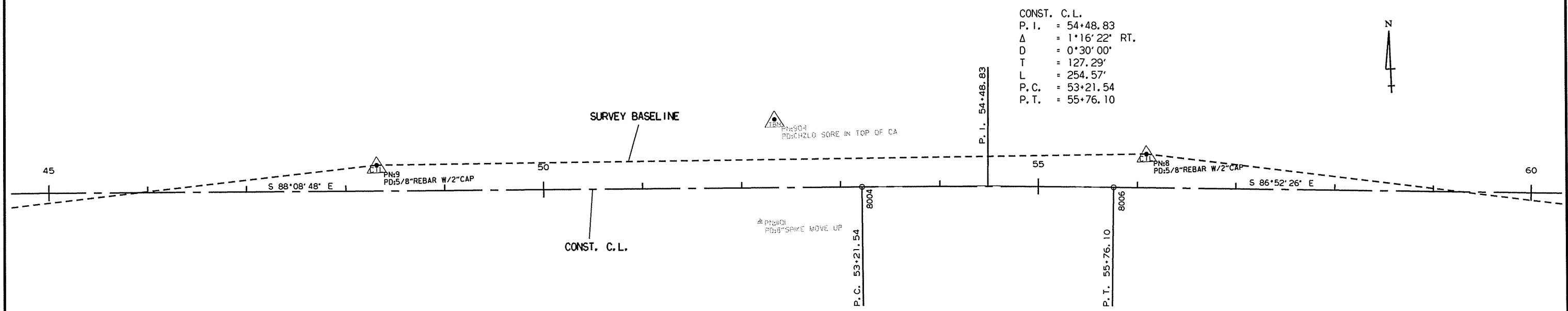
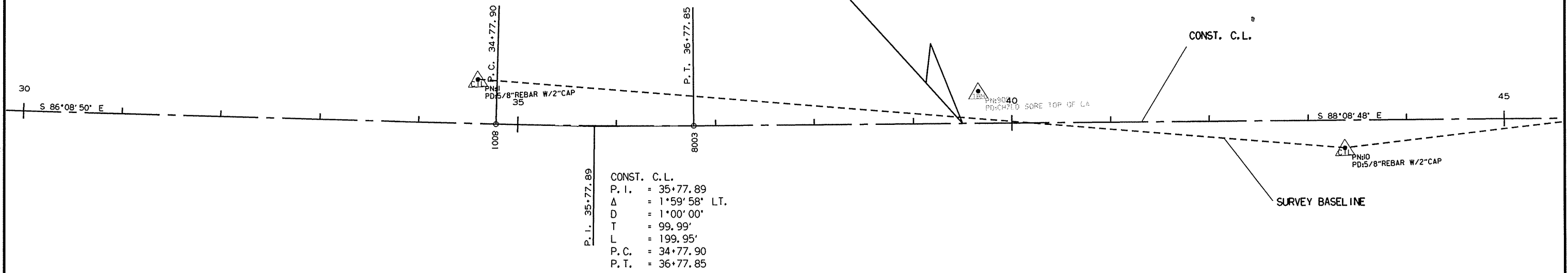
R090284.DGN 4/28/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							60	174

2 SURVEY CONTROL DETAILS



STA. 39+50.00 BEGIN  
JOB 090284  
LOG MILE 0.10



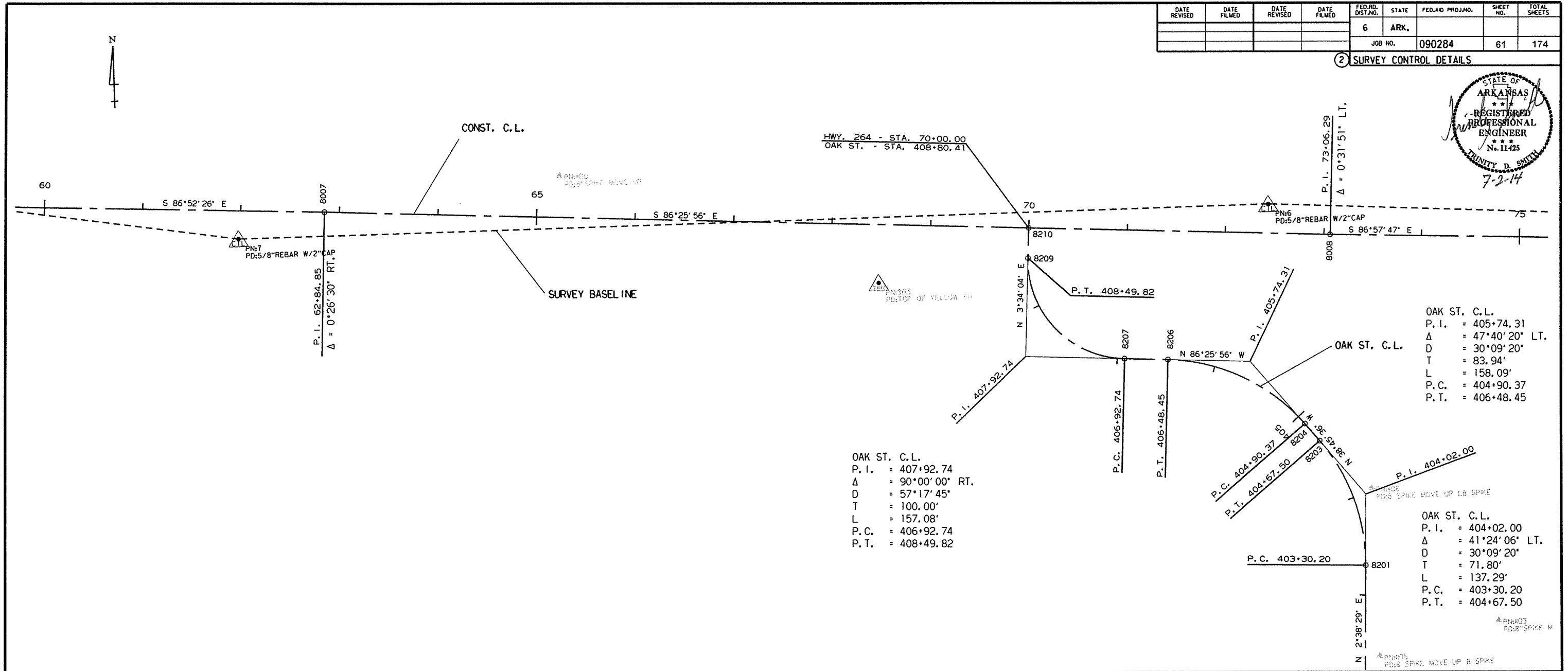
4/28/2014

R090284.DGN

HWY. 264  
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. 090284							61	174

2 SURVEY CONTROL DETAILS

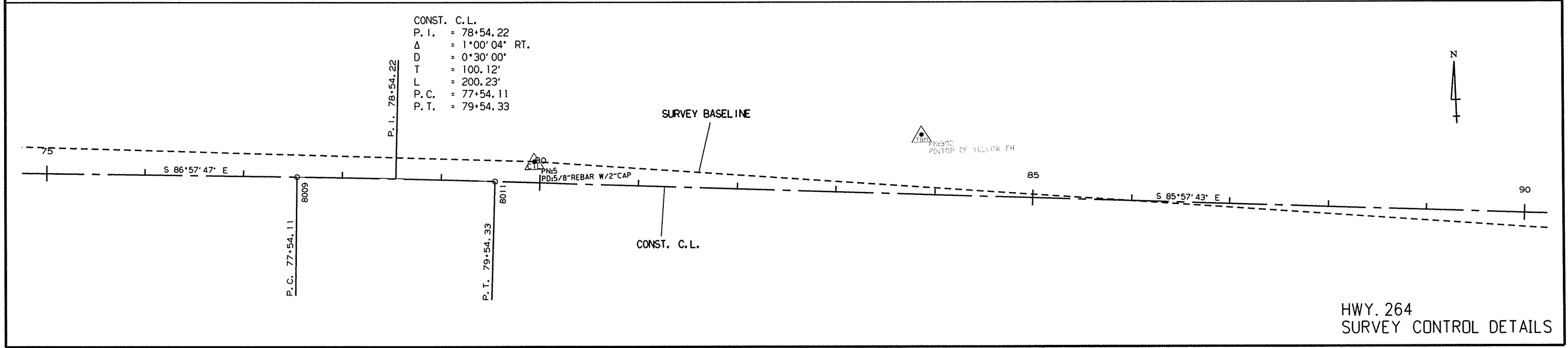


OAK ST. C.L.  
P. I. = 405+74.31  
Δ = 47°40'20" LT.  
D = 30°09'20"  
T = 83.94'  
L = 158.09'  
P. C. = 404+90.37  
P. T. = 406+48.45

OAK ST. C.L.  
P. I. = 407+92.74  
Δ = 90°00'00" RT.  
D = 57°17'45"  
T = 100.00'  
L = 157.08'  
P. C. = 406+92.74  
P. T. = 408+49.82

OAK ST. C.L.  
P. I. = 404+02.00  
Δ = 41°24'06" LT.  
D = 30°09'20"  
T = 71.80'  
L = 137.29'  
P. C. = 403+30.20  
P. T. = 404+67.50

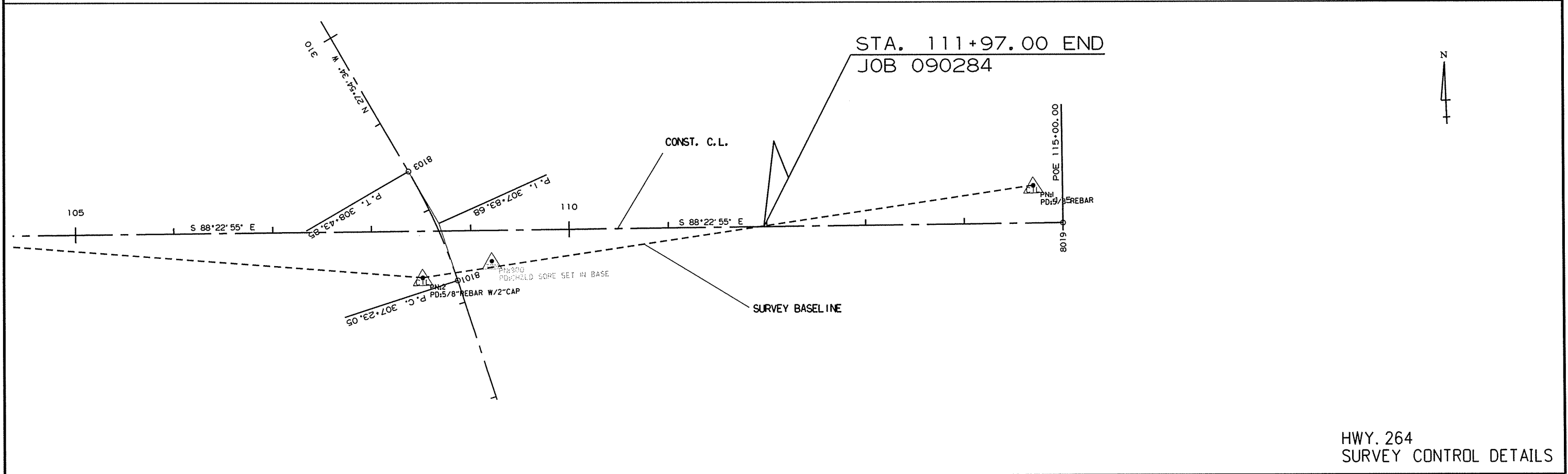
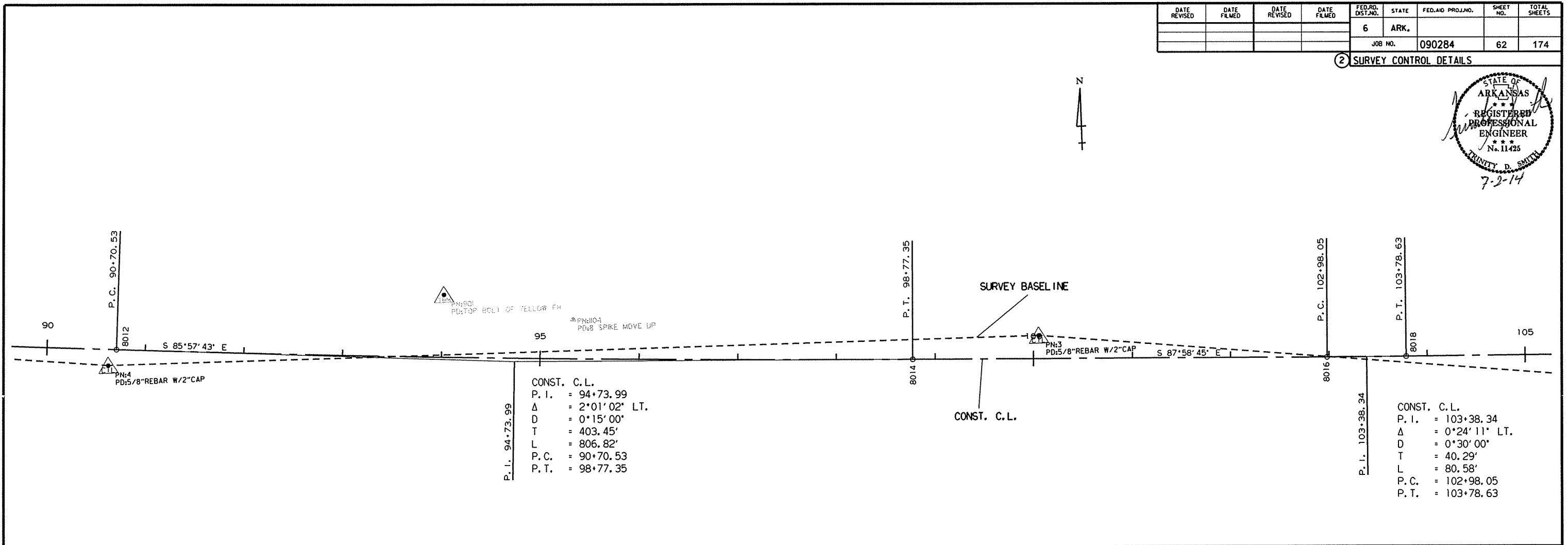
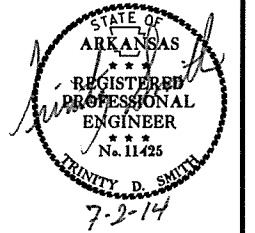
CONST. C.L.  
P. I. = 78+54.22  
Δ = 1°00'04" RT.  
D = 0°30'00"  
T = 100.12'  
L = 200.23'  
P. C. = 77+54.11  
P. T. = 79+54.33



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							62	174

2 SURVEY CONTROL DETAILS



4/28/2014

R090284.DGN

HWY. 264  
SURVEY CONTROL 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.	090284		64	174

2 SOIL BORING LOG



SOIL BORING LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC						
40+80	36	13	29.50	94	8	6.40	HWY. 264 - 5' RT	0-5	23	7	A-4 (3)	BROWN
40+80	36	13	29.40	94	8	6.40	HWY. 264 - 13' RT	0-5	23	6	A-4 (2)	BROWN
40+80	36	13	29.30	94	8	6.40	HWY. 264 - 30' RT	0-5	32	7	A-4 (4)	BR/RD
49+80	36	13	29.70	94	7	57.90	HWY. 264 - 5' LT	0-5	24	5	A-4 (1)	RD/BR
49+80	36	13	29.80	94	7	57.90	HWY. 264 - 14' LT	0-5	22	4	A-4 (0)	RD/BR
49+80	36	13	29.90	94	7	57.90	HWY. 264 - 33' LT	0-5	33	12	A-6 (6)	RED
56+80	36	13	29.20	94	7	47.20	HWY. 264 - 5' RT	0-2.0Z	26	10	A-4 (3)	RED
56+80	36	13	29.20	94	7	47.00	HWY. 264 - 14' RT	0-3.0Z	24	8	A-4 (1)	RED
56+80	36	13	29.10	94	7	46.90	HWY. 264 - 28' RT	0-2.5Z	26	6	A-4 (0)	RED
64+90	36	13	28.90	94	7	37.30	HWY. 264 - 5' RT	0-5	23	7	A-4 (1)	RED
64+90	36	13	29.00	94	7	37.30	HWY. 264 - 14' RT	0-5	21	5	A-4 (0)	RED
64+90	36	13	29.10	94	7	37.10	HWY. 264 - 23' RT	5	35	8	A-4 (3)	RED
70+90	36	13	28.80	94	7	29.80	HWY. 264 - 5' RT	0-4.0Z	24	6	A-4 (1)	RD/BR
70+90	36	13	28.70	94	7	29.90	HWY. 264 - 15' RT	0-5	23	5	A-4 (0)	RD/BR
70+90	36	13	29.10	94	7	37.10	HWY. 264 - 28' RT	0-4.0Z	33	14	A-6 (6)	RED
80+80	36	13	28.70	94	7	17.80	HWY. 264 - 5' LT	0-3.1Z	27	11	A-6 (6)	RD/BR
80+80	36	13	28.70	94	7	17.70	HWY. 264 - 12' LT	0-3.0Z	28	14	A-6 (5)	RED
80+80	36	13	28.70	94	7	17.60	HWY. 264 - 26' LT	0-3.6Z	31	16	A-6 (6)	RED
88+80	36	13	27.90	94	7	8.60	HWY. 264 - 5' RT	0-2.2Z	21	6	A-4 (0)	RED
88+80	36	13	27.90	94	7	8.00	HWY. 264 - 14' RT	0-4.0Z	24	8	A-4 (2)	RED
88+80	36	13	27.80	94	7	8.00	HWY. 264 - 28' RT	0-2.0Z	39	7	A-4 (4)	RED
96+90	36	13	28.00	94	6	58.30	HWY. 264 - 5' LT	0-5	20	4	A-4 (0)	RED
96+90	36	13	28.00	94	6	58.20	HWY. 264 - 13' LT	0-5	19	3	A-4 (0)	RED
96+90	36	13	28.00	94	6	58.10	HWY. 264 - 23' LT	0-1.0Z	26	9	A-2-4 (0)	RED
104+90	36	13	27.40	94	6	48.90	HWY. 264 - 5' RT	0-5	22	9	A-4 (3)	RED
104+90	36	13	27.50	94	6	48.90	HWY. 264 - 12' RT	0-5	28	8	A-4 (3)	BROWN
104+90	36	13	27.40	94	6	48.50	HWY. 264 - 24' RT	0-5	32	19	A-6 (8)	BR/RD
104+90	36	13	27.40	94	6	48.50	HWY. 264 - 24' RT	0-5	26	12	A-6 (5)	RED

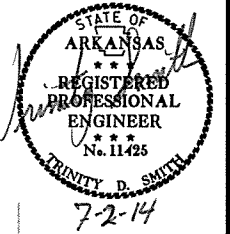
SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.

Z- AUGER REFUSAL



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		65	174

2 PLAN SHEETS



STA. 39+50.00 BEGIN  
JOB 090284  
LOG MILE 0.10

STA. 40+90 IN PLACE  
12" x 55' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 5 CU. YDS.

STA. 40+90 IN PLACE  
12" x 50' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 5 CU. YDS.

STA. 39+64 - IN PLACE  
D. I. ON LT.  
WITH 24" x 219' RC PIPE CULVERT  
RETAIN

STA. 39+61 - IN PLACE  
D. I. ON RT.  
WITH 24" x 218' RC PIPE CULVERT  
RETAIN

STA. 44+64 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 45+25 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 42+15 CONSTRUCT  
APPROACH ON RT. = 135 CU. YDS.

P. I. = 35+77.89  
Δ = 1°59'58" LT.  
D = 1°00'00"  
T = 99.99'  
L = 199.95'  
P. C. = 34+77.90  
P. T. = 36+77.85  
NO SUPER

WIRE FENCE				
STA.	STA.	SIDE	TYPE	LIN. FT.
39+50	43+05	RT.	6' CHAIN LINK	355

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)				
STA.	STA.	SIDE	LIN. FT.	
39+50	48+59	LT.	889	
39+50	44+81	RT.	549	

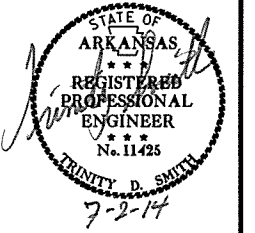
REMOVAL AND DISPOSAL OF FENCE				
STA.	STA.	SIDE	LIN. FT.	
39+50	43+05	RT.	353	

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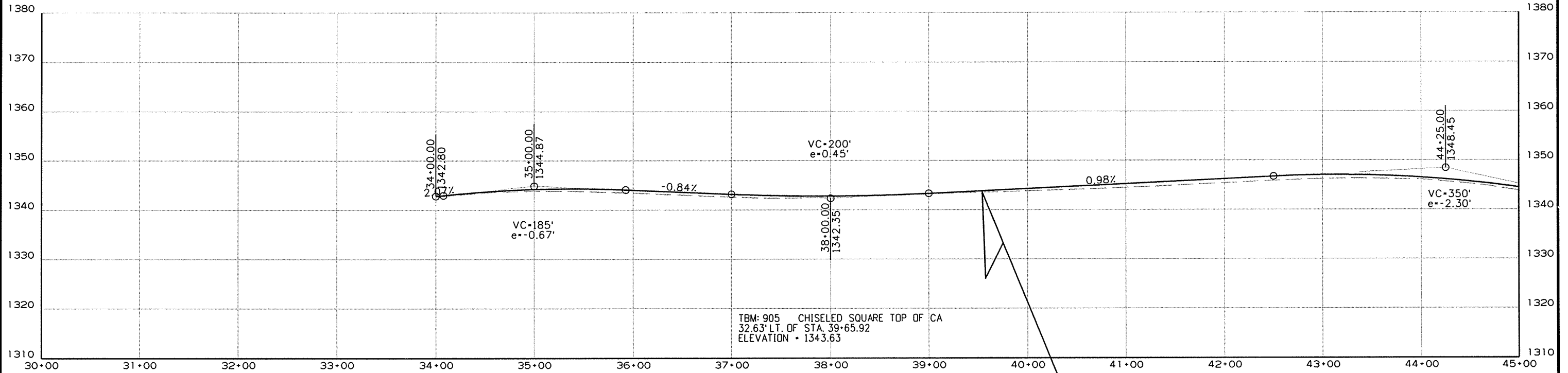
NOTE:  
 FOR R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							66	174

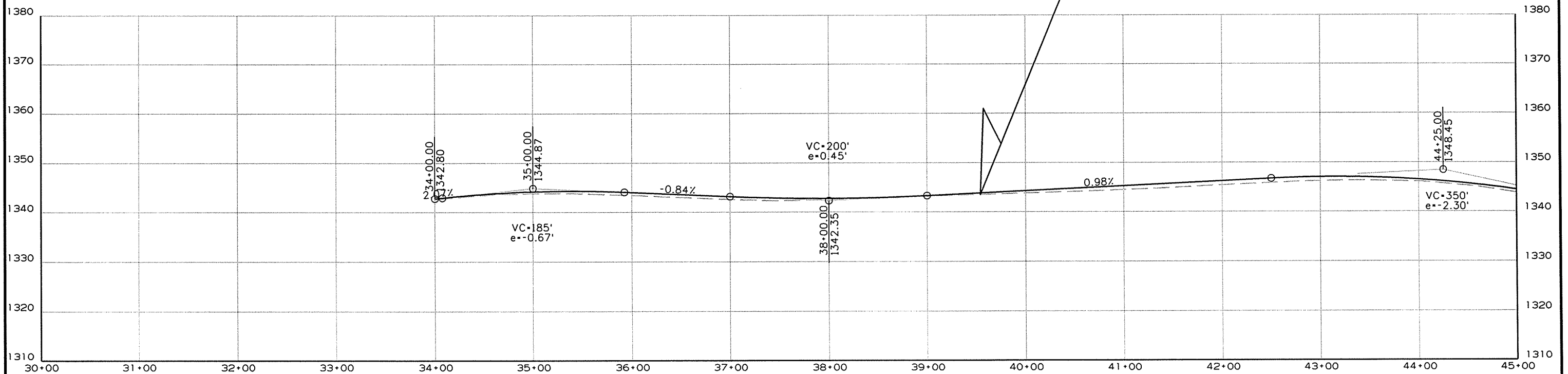
2 PROFILE SHEETS



LEFT SIDE OF HWY. 264



RIGHT SIDE OF HWY. 264



STA. 39+50.00 BEGIN  
 JOB 090284

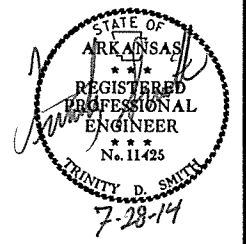
4/28/2014

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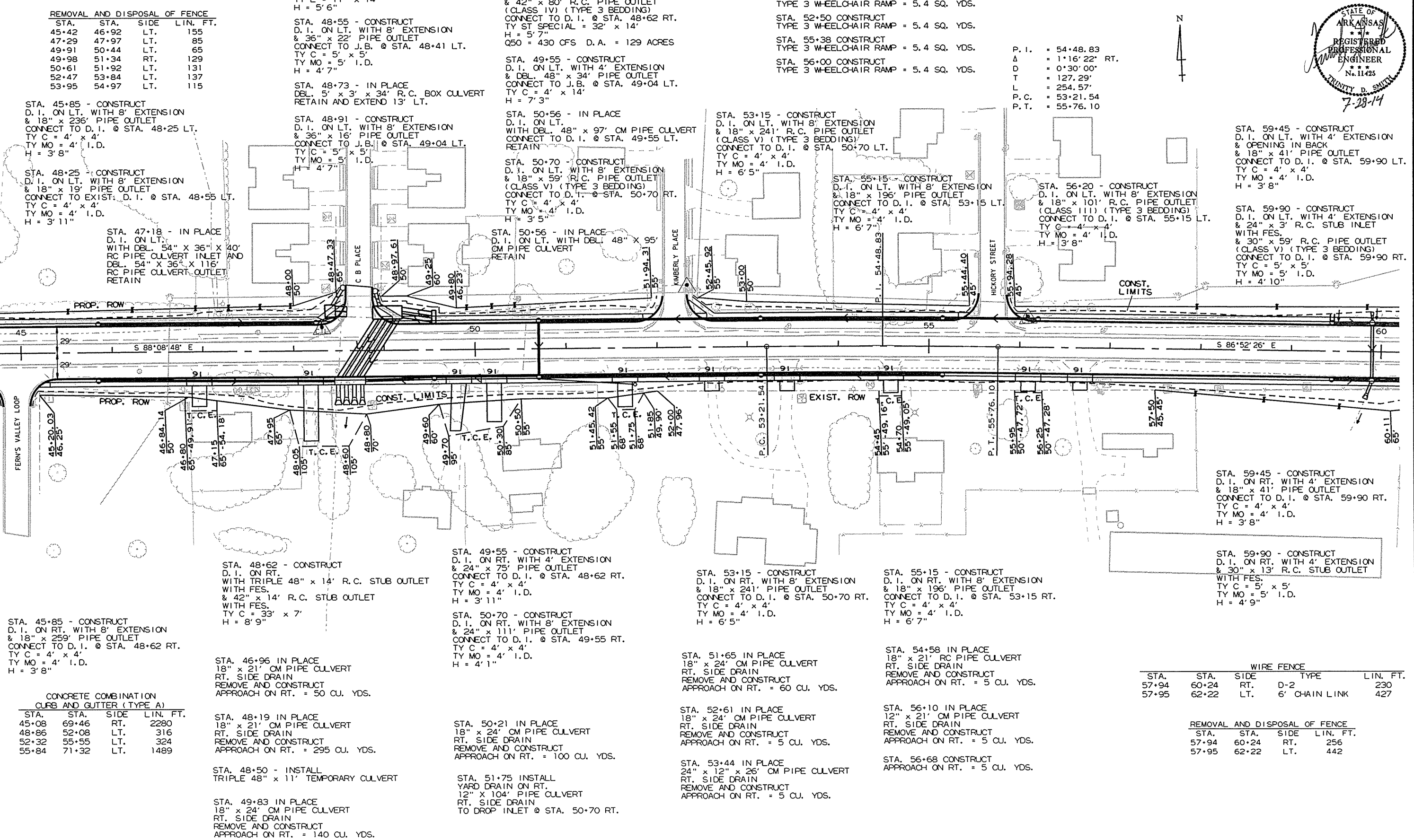
WIRE FENCE				FLOODPLAIN LIMITS	
STA.	STA.	SIDE	TYPE	LIN. FT.	
45+42	46+92	LT.	6' CHAIN LINK	150	+85
47+29	47+97	LT.	4' CHAIN LINK	68	
49+91	50+44	LT.	4' CHAIN LINK	53	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 090284	67	174

2 PLAN SHEETS



P. I. = 54+48.83  
 Δ = 1°16'22" RT.  
 D = 0°30'00"  
 T = 127.29'  
 L = 254.57'  
 P. C. = 53+21.54  
 P. T. = 55+76.10



REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
45+42	46+92	LT.	155
47+29	47+97	LT.	85
49+91	50+44	LT.	65
49+98	51+34	RT.	129
50+61	51+92	LT.	131
52+47	53+84	LT.	137
53+95	54+97	LT.	115

STA. 45+85 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 18" x 236' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 48+25 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'8"

STA. 48+25 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 18" x 19' PIPE OUTLET  
 CONNECT TO EXIST. D. I. @ STA. 48+55 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'11"

STA. 47+18 - IN PLACE  
 D. I. ON LT.  
 WITH DBL. 54" x 36" x 40'  
 RC PIPE CULVERT INLET AND  
 DBL. 54" x 36" x 116'  
 RC PIPE CULVERT OUTLET  
 RETAIN

STA. 48+91 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 36" x 22' PIPE OUTLET  
 CONNECT TO J.B. @ STA. 49+04 LT.  
 TY C = 5' x 5'  
 TY MO = 5' I.D.  
 H = 4'7"

STA. 50+56 - IN PLACE  
 D. I. ON LT.  
 WITH DBL. 48" x 97' CM PIPE CULVERT  
 CONNECT TO D. I. @ STA. 49+55 LT.  
 RETAIN

STA. 53+15 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 18" x 241' R.C. PIPE OUTLET  
 (CLASS V) (TYPE 3 BEDDING)  
 CONNECT TO D. I. @ STA. 50+70 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 6'5"

STA. 55+15 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 18" x 196' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 53+15 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 6'7"

STA. 56+20 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 18" x 101' R.C. PIPE OUTLET  
 (CLASS III) (TYPE 3 BEDDING)  
 CONNECT TO D. I. @ STA. 55+15 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'8"

STA. 59+45 - CONSTRUCT  
 D. I. ON LT. WITH 4' EXTENSION  
 & 18" x 41' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 59+90 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'8"

STA. 59+90 - CONSTRUCT  
 D. I. ON LT. WITH 4' EXTENSION  
 & 24" x 3' R.C. STUB INLET  
 WITH FES.  
 & 30" x 59' R.C. PIPE OUTLET  
 (CLASS V) (TYPE 3 BEDDING)  
 CONNECT TO D. I. @ STA. 59+90 RT.  
 TY C = 5' x 5'  
 TY MO = 5' I.D.  
 H = 4'10"

STA. 45+85 - CONSTRUCT  
 D. I. ON RT. WITH 8' EXTENSION  
 & 18" x 259' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 48+62 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'8"

STA. 48+62 - CONSTRUCT  
 D. I. ON RT.  
 WITH TRIPLE 48" x 14' R.C. STUB OUTLET  
 WITH FES.  
 & 42" x 14' R.C. STUB OUTLET  
 WITH FES.  
 TY C = 33' x 7'  
 H = 8'9"

STA. 49+55 - CONSTRUCT  
 D. I. ON RT. WITH 4' EXTENSION  
 & 24" x 75' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 48+62 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'11"

STA. 50+70 - CONSTRUCT  
 D. I. ON RT. WITH 8' EXTENSION  
 & 24" x 111' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 49+55 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 4'1"

STA. 53+15 - CONSTRUCT  
 D. I. ON RT. WITH 8' EXTENSION  
 & 18" x 241' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 50+70 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 6'5"

STA. 55+15 - CONSTRUCT  
 D. I. ON RT. WITH 8' EXTENSION  
 & 18" x 196' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 53+15 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 6'7"

STA. 59+45 - CONSTRUCT  
 D. I. ON RT. WITH 4' EXTENSION  
 & 18" x 41' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 59+90 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'8"

STA. 59+90 - CONSTRUCT  
 D. I. ON RT. WITH 4' EXTENSION  
 & 30" x 13' R.C. STUB OUTLET  
 WITH FES.  
 TY C = 5' x 5'  
 TY MO = 5' I.D.  
 H = 4'9"

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)

STA.	STA.	SIDE	LIN. FT.
45+08	69+46	RT.	2280
48+86	52+08	LT.	316
52+32	55+55	LT.	324
55+84	71+32	LT.	1489

STA. 46+96 IN PLACE  
 18" x 21' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 50 CU. YDS.

STA. 48+19 IN PLACE  
 18" x 21' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 295 CU. YDS.

STA. 48+50 - INSTALL  
 TRIPLE 48" x 11' TEMPORARY CULVERT

STA. 49+83 IN PLACE  
 18" x 24' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 140 CU. YDS.

STA. 50+21 IN PLACE  
 18" x 24' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 100 CU. YDS.

STA. 51+75 INSTALL  
 YARD DRAIN ON RT.  
 12" x 104' PIPE CULVERT  
 RT. SIDE DRAIN  
 TO DROP INLET @ STA. 50+70 RT.

STA. 51+65 IN PLACE  
 18" x 24' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 60 CU. YDS.

STA. 52+61 IN PLACE  
 18" x 24' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 5 CU. YDS.

STA. 53+44 IN PLACE  
 24" x 12" x 26' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 5 CU. YDS.

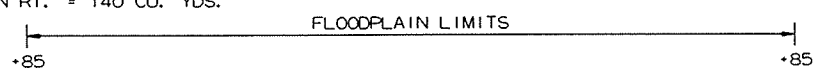
STA. 54+58 IN PLACE  
 18" x 21' RC PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 5 CU. YDS.

STA. 56+10 IN PLACE  
 12" x 21' CM PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON RT. = 5 CU. YDS.

STA. 56+68 CONSTRUCT  
 APPROACH ON RT. = 5 CU. YDS.

WIRE FENCE				
STA.	STA.	SIDE	TYPE	LIN. FT.
57+94	60+24	RT.	D-2	230
57+95	62+22	LT.	6' CHAIN LINK	427

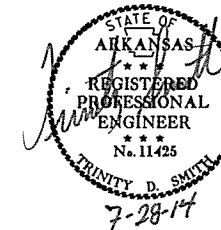
REMOVAL AND DISPOSAL OF FENCE				
STA.	STA.	SIDE	LIN. FT.	
57+94	60+24	RT.	256	
57+95	62+22	LT.	442	



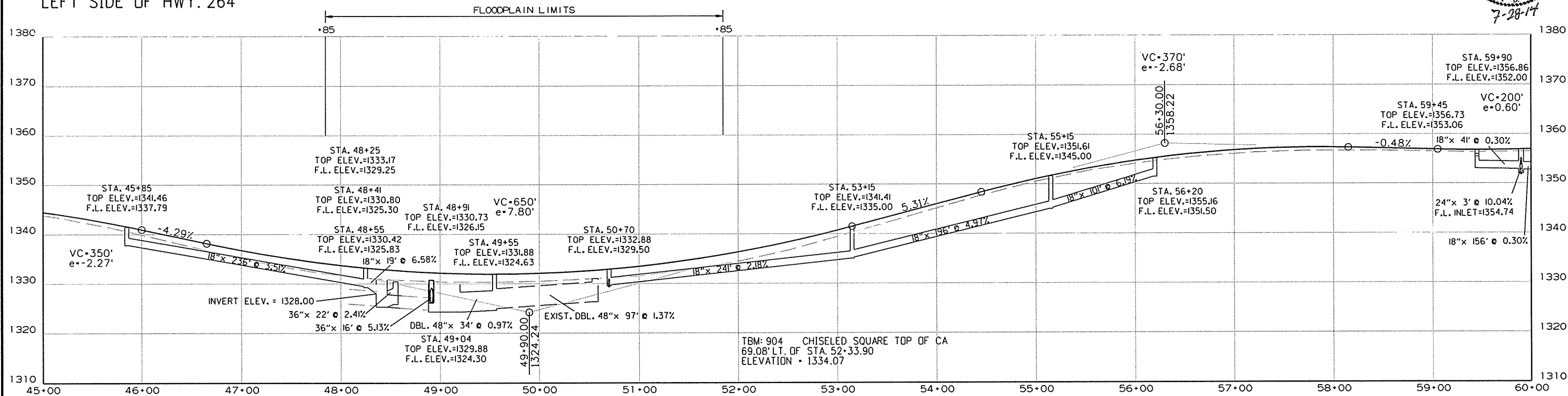
NOTE:  
 FOR R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							68	174

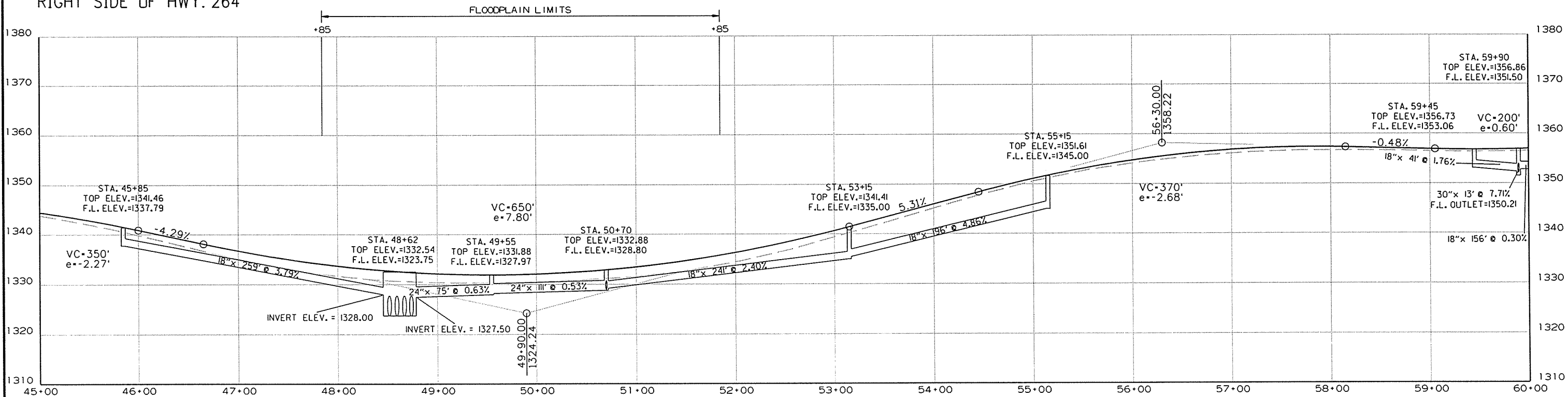
2 PROFILE SHEETS



LEFT SIDE OF HWY. 264



RIGHT SIDE OF HWY. 264

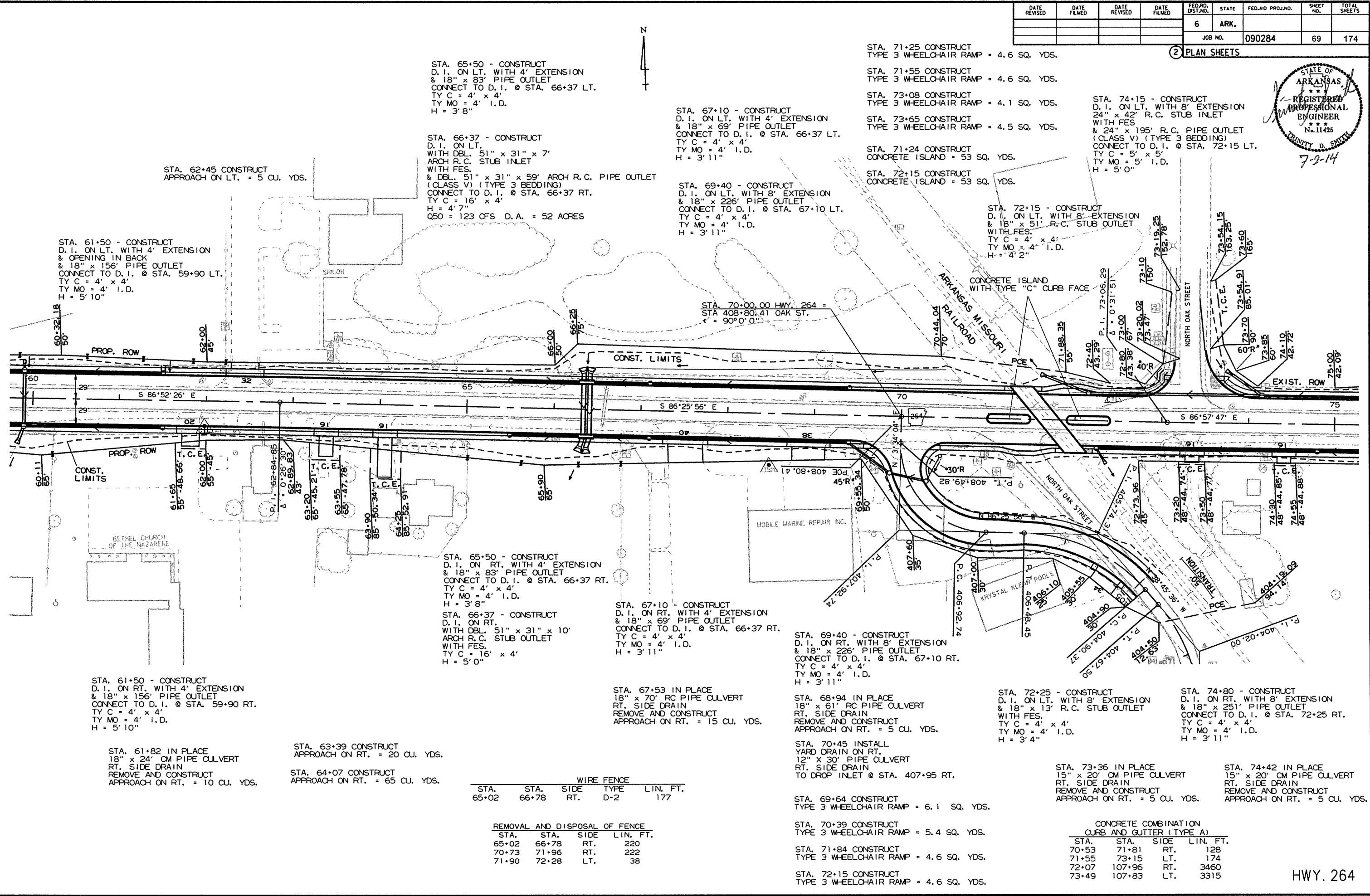


4/28/2014

R090284.DGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		69	174
				JOB NO.	090284		69	174

2 PLAN SHEETS



STA. 65+50 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 83' PIPE OUTLET  
CONNECT TO D.I. @ STA. 66+37 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'8"

STA. 66+37 - CONSTRUCT  
D.I. ON LT.  
WITH DBL. 51" x 31" x 7'  
ARCH R.C. STUB INLET  
WITH FES.  
& DBL. 51" x 31" x 59' ARCH R.C. PIPE OUTLET  
(CLASS V) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 66+37 RT.  
TY C = 16' x 4'  
H = 4'7"  
Q50 = 123 CFS D.A. = 52 ACRES

STA. 62+45 CONSTRUCT  
APPROACH ON LT. = 5 CU. YDS.

STA. 61+50 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& OPENING IN BACK  
& 18" x 156' PIPE OUTLET  
CONNECT TO D.I. @ STA. 59+90 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 5'10"

STA. 67+10 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 69' PIPE OUTLET  
CONNECT TO D.I. @ STA. 66+37 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'11"

STA. 69+40 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 18" x 226' PIPE OUTLET  
CONNECT TO D.I. @ STA. 67+10 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'11"

STA. 71+25 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 4.6 SQ. YDS.

STA. 71+55 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 4.6 SQ. YDS.

STA. 73+08 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 4.1 SQ. YDS.

STA. 73+65 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 4.5 SQ. YDS.

STA. 71+24 CONSTRUCT  
CONCRETE ISLAND = 53 SQ. YDS.

STA. 72+15 CONSTRUCT  
CONCRETE ISLAND = 53 SQ. YDS.

STA. 74+15 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
24" x 42' R.C. STUB INLET  
WITH FES.  
& 24" x 195' R.C. PIPE OUTLET  
(CLASS V) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 72+15 LT.  
TY C = 5' x 5'  
TY MO = 5' I.D.  
H = 5'0"

STA. 72+15 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 18" x 51' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 4'2"

STA. 65+50 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 83' PIPE OUTLET  
CONNECT TO D.I. @ STA. 66+37 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'8"

STA. 66+37 - CONSTRUCT  
D.I. ON RT.  
WITH DBL. 51" x 31" x 10'  
ARCH R.C. STUB OUTLET  
WITH FES.  
TY C = 16' x 4'  
H = 5'0"

STA. 67+10 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 69' PIPE OUTLET  
CONNECT TO D.I. @ STA. 66+37 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'11"

STA. 69+40 - CONSTRUCT  
D.I. ON RT. WITH 8' EXTENSION  
& 18" x 226' PIPE OUTLET  
CONNECT TO D.I. @ STA. 67+10 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'11"

STA. 67+53 IN PLACE  
18" x 70' RC PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 15 CU. YDS.

STA. 68+94 IN PLACE  
18" x 61' RC PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 72+25 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 18" x 13' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'4"

STA. 74+80 - CONSTRUCT  
D.I. ON RT. WITH 8' EXTENSION  
& 18" x 251' PIPE OUTLET  
CONNECT TO D.I. @ STA. 72+25 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'11"

STA. 61+50 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 156' PIPE OUTLET  
CONNECT TO D.I. @ STA. 59+90 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 5'10"

STA. 61+82 IN PLACE  
18" x 24' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 10 CU. YDS.

STA. 63+39 CONSTRUCT  
APPROACH ON RT. = 20 CU. YDS.

STA. 64+07 CONSTRUCT  
APPROACH ON RT. = 65 CU. YDS.

WIRE FENCE				
STA.	STA.	SIDE	TYPE	LIN. FT.
65+02	66+78	RT.	D-2	177

REMOVAL AND DISPOSAL OF FENCE				
STA.	STA.	SIDE	LIN. FT.	
65+02	66+78	RT.	220	
70+73	71+96	RT.	222	
71+90	72+28	LT.	38	

STA. 69+64 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 6.1 SQ. YDS.

STA. 70+39 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 5.4 SQ. YDS.

STA. 71+84 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 4.6 SQ. YDS.

STA. 72+15 CONSTRUCT  
TYPE 3 WHEEL-CHAIR RAMP = 4.6 SQ. YDS.

STA. 73+36 IN PLACE  
15" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 74+42 IN PLACE  
15" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)				
STA.	STA.	SIDE	LIN. FT.	
70+53	71+81	RT.	128	
71+55	73+15	LT.	174	
72+07	107+96	RT.	3460	
73+49	107+83	LT.	3315	

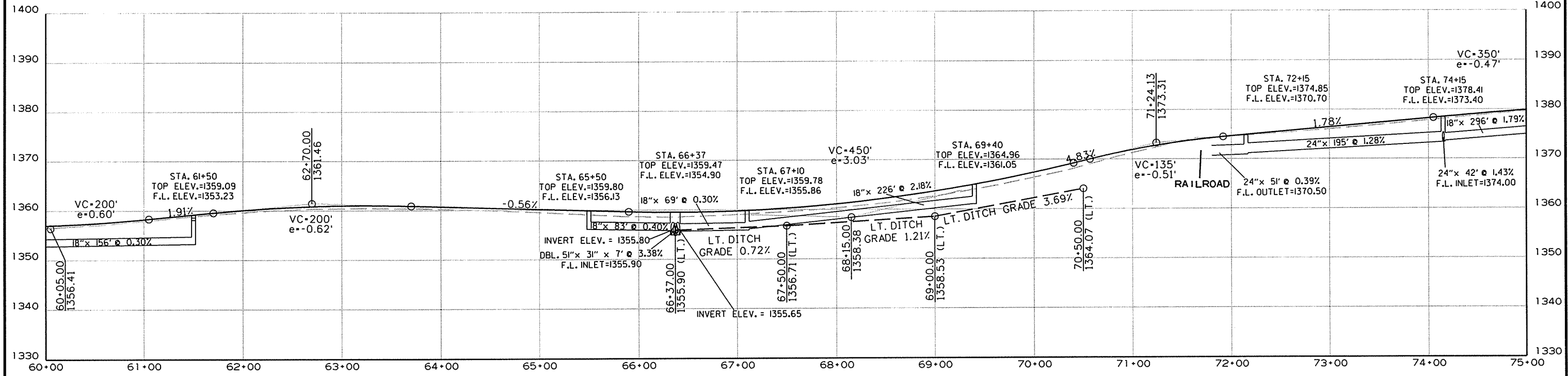
NOTE:  
 FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		70	174
				JOB NO.	090284			

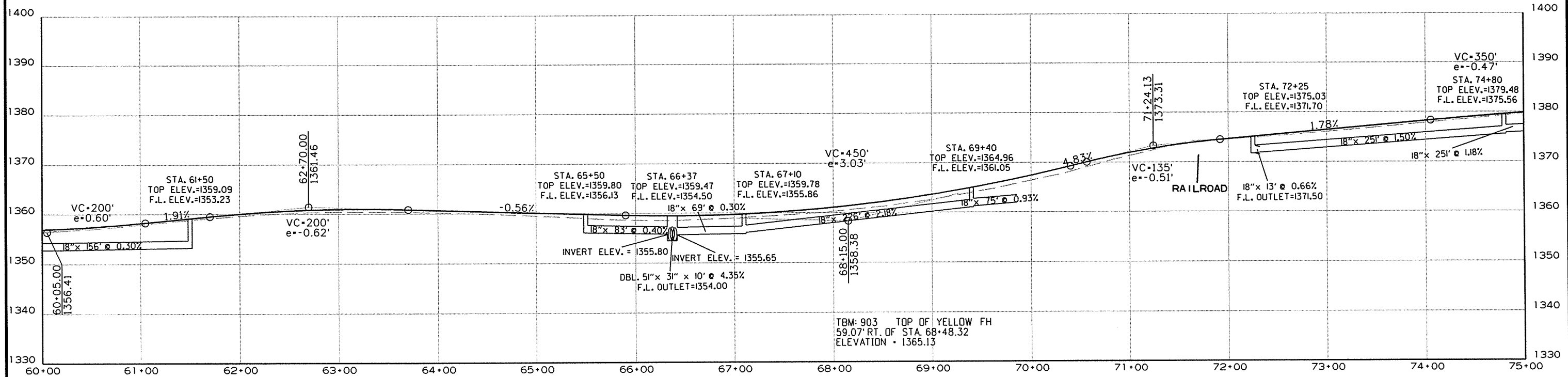
2 PROFILE SHEETS



LEFT SIDE OF HWY. 264



RIGHT SIDE OF HWY. 264



R090284.DGN 4/28/2014

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							71	174

2 PLAN SHEETS



STA. 79+44 CONSTRUCT  
APPROACH ON LT. = 15 CU. YDS.  
STA. 80+39 CONSTRUCT  
APPROACH ON LT. = 25 CU. YDS.

STA. 83+54 INSTALL  
YARD DRAIN ON LT.  
12" x 77' PIPE CULVERT  
LT. SIDE DRAIN  
TO DROP INLET ON LT.  
STA. 83+54 IN PLACE  
18" x 40' RC PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 25 CU. YDS.

STA. 86+31 CONSTRUCT  
APPROACH ON LT. = 20 CU. YDS.

STA. 88+52 IN PLACE  
18" x 24" x 24' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 30 CU. YDS.

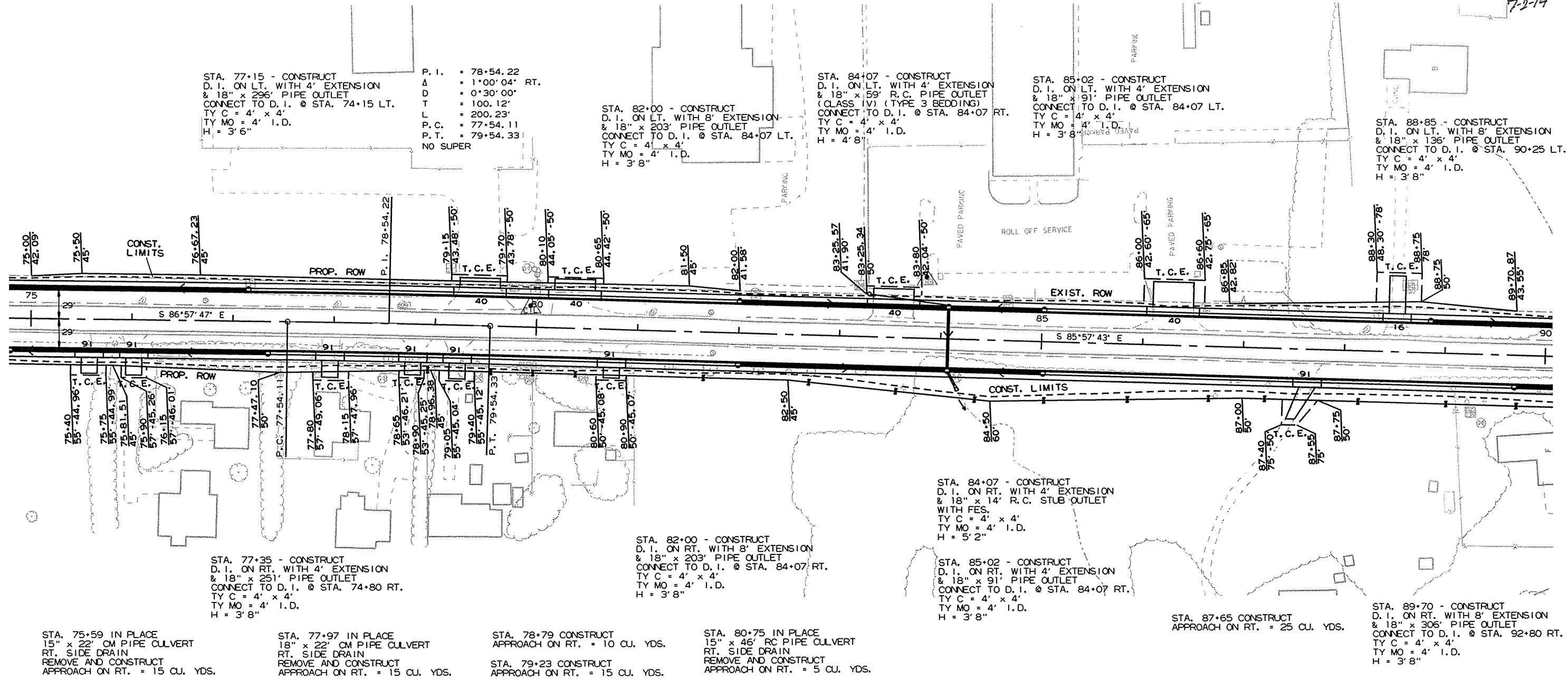
STA. 77+15 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 296' PIPE OUTLET  
CONNECT TO D.I. @ STA. 74+15 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3' 6"  
P. I. = 78+54.22  
Δ = 1'00'04" RT.  
D = 0'30'00"  
T = 100.12'  
L = 200.23'  
P.C. = 77+54.11  
P.T. = 79+54.33  
NO SUPER

STA. 82+00 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 18" x 203' PIPE OUTLET  
CONNECT TO D.I. @ STA. 84+07 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3' 8"

STA. 84+07 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 59' R.C. PIPE OUTLET  
(CLASS IV) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 84+07 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 4' 8"

STA. 85+02 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 91' PIPE OUTLET  
CONNECT TO D.I. @ STA. 84+07 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3' 8"

STA. 88+85 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 18" x 136' PIPE OUTLET  
CONNECT TO D.I. @ STA. 90+25 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3' 8"



STA. 75+59 IN PLACE  
15" x 22' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 15 CU. YDS.

STA. 77+97 IN PLACE  
18" x 22' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 15 CU. YDS.

STA. 78+79 CONSTRUCT  
APPROACH ON RT. = 10 CU. YDS.  
STA. 79+23 CONSTRUCT  
APPROACH ON RT. = 15 CU. YDS.

STA. 80+75 IN PLACE  
15" x 46' RC PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 84+07 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 14' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 5' 2"

STA. 85+02 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 91' PIPE OUTLET  
CONNECT TO D.I. @ STA. 84+07 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3' 8"

STA. 87+65 CONSTRUCT  
APPROACH ON RT. = 25 CU. YDS.

STA. 89+70 - CONSTRUCT  
D.I. ON RT. WITH 8' EXTENSION  
& 18" x 306' PIPE OUTLET  
CONNECT TO D.I. @ STA. 92+80 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3' 8"

WIRE FENCE				
STA.	STA.	SIDE	TYPE	LIN. FT.
78+93	80+98	RT.	4' CHAIN LINK	205
80+98	94+92	RT.	D-2	1396

REMOVAL AND DISPOSAL OF FENCE			
STA.	STA.	SIDE	LIN. FT.
76+25	77+49	RT.	146
78+93	94+92	RT.	1663

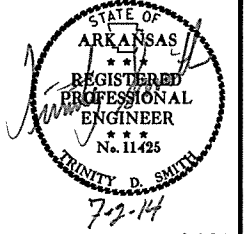
4/28/2014

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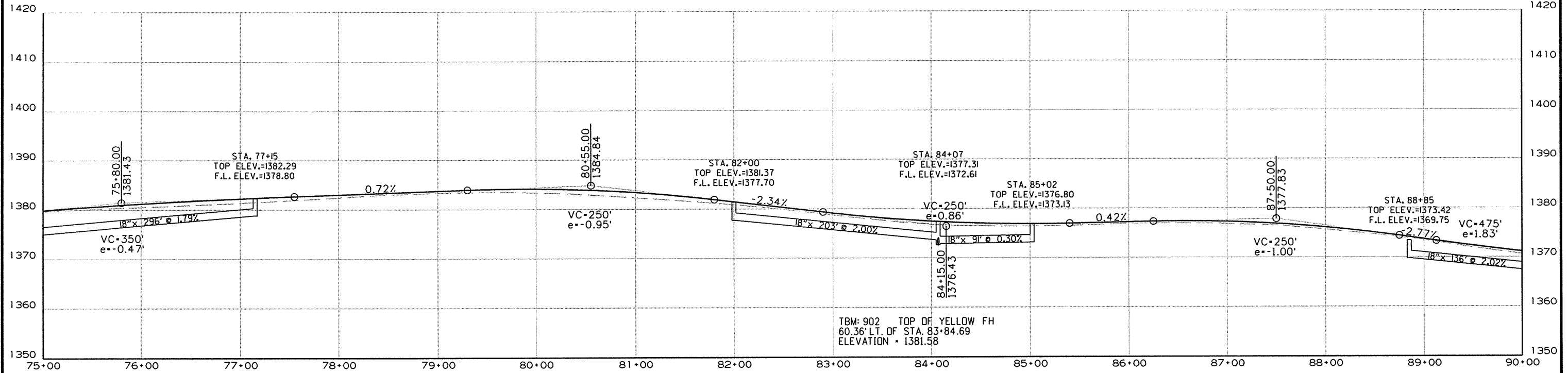
NOTE:  
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 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							72	174

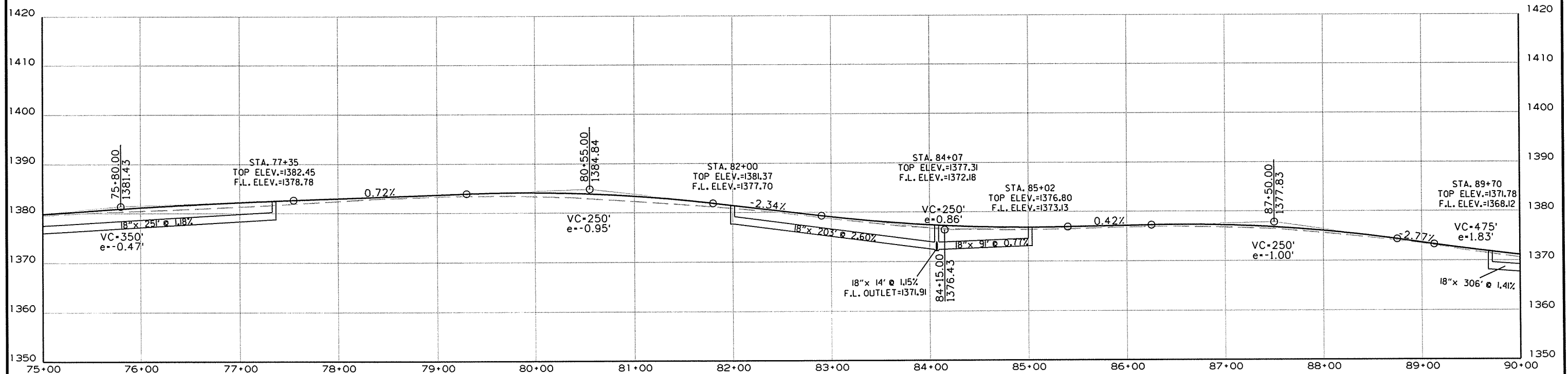
2 PROFILE SHEETS



LEFT SIDE OF HWY. 264



RIGHT SIDE OF HWY. 264



4/28/2014

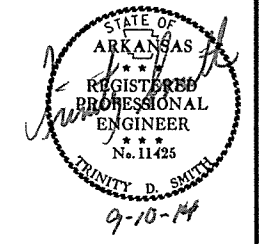
R090284.DGN



FLOODPLAIN LIMITS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/3/2014				6	ARK.			
9/9/2014								

2 PLAN SHEETS



STA. 90+53 IN PLACE  
18" x 25' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 40 CU. YDS.

STA. 90+25 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 18" x 16' PIPE OUTLET  
CONNECT TO D.I. @ STA. 91+90 LT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'9"

STA. 92+21 IN PLACE  
12" x 18" x 25' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 10 CU. YDS.

STA. 91+90 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& 24" x 95' PIPE OUTLET  
CONNECT TO D.I. @ STA. 92+90 LT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 4'1"

STA. 92+90 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& OPENING IN BACK  
& 24" x 43' PIPE OUTLET  
CONNECT TO D.I. @ STA. 93+39 LT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'10"

STA. 93+39 - CONSTRUCT  
D.I. ON LT. WITH 8' EXTENSION  
& OPENING IN BACK  
& 30" x 141' PIPE OUTLET  
CONNECT TO D.I. @ STA. 94+85 LT.  
TY C = 5' x 5'  
TY MO = 5' x 5'  
H = 4'2"

STA. 94+85 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& OPENING IN BACK  
& 36" x 133' PIPE OUTLET  
CONNECT TO R.C. BOX CULVERT  
@ STA. 96+20 LT.  
TY C = 5' x 5'  
TY MO = 5' x 5'  
H = 5'1"

REMOVAL AND DISPOSAL OF FENCE  
STA. STA. SIDE LIN. FT.  
96+03 96+06 LT. 11

STA. 94+14 IN PLACE  
18" x 25' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 5 CU. YDS.

STA. 96+16 CONSTRUCT  
APPROACH ON LT. = 5 CU. YDS.

STA. 98+62 IN PLACE  
36" x 20' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 135 CU. YDS.

STA. 99+05 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 11' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 4'1"

REMOVAL AND DISPOSAL OF FENCE  
STA. STA. SIDE LIN. FT.  
99+21 108+07 LT. 931

WIRE FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.
99+21	107+42	LT.	D-2	829
100+47	102+66	RT.	D-2	219

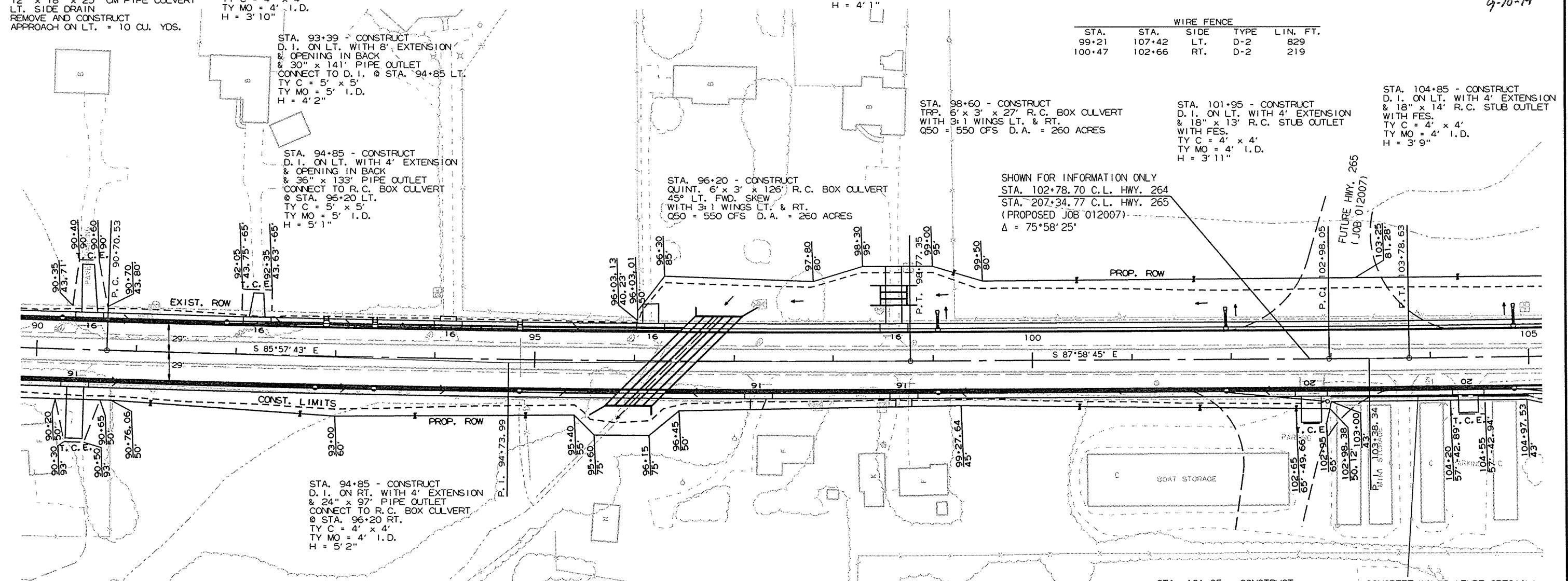
STA. 98+60 - CONSTRUCT  
TRP. 6' x 3' x 27' R.C. BOX CULVERT  
WITH 3:1 WINGS LT. & RT.  
Q50 = 550 CFS D.A. = 260 ACRES

STA. 101+95 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 13' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'11"

STA. 104+85 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 18" x 14' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'9"

STA. 96+20 - CONSTRUCT  
QUINT. 6' x 3' x 126' R.C. BOX CULVERT  
45° LT. FWD. SKEW  
WITH 3:1 WINGS LT. & RT.  
Q50 = 550 CFS D.A. = 260 ACRES

SHOWN FOR INFORMATION ONLY  
STA. 102+78.70 C.L. HWY. 264  
STA. 207+34.77 C.L. HWY. 265  
(PROPOSED JOB 012007)  
Δ = 75°58'25"



STA. 90+40 IN PLACE  
15" x 18" CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 70 CU. YDS.

STA. 92+80 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 55' PIPE OUTLET  
CONNECT TO D.I. @ STA. 93+39 RT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'11"

STA. 93+39 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 142' PIPE OUTLET  
CONNECT TO D.I. @ STA. 94+85 RT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 4'3"

STA. 94+85 - INSTALL  
24" x 18" x 18' TEMPORARY CULVERT

STA. 96+20 - INSTALL  
DBL. 57" x 38" x 19' TEMPORARY CULVERT

P.I. = 94+73.99  
Δ = 2°01'02" LT.  
D = 0°15'00"  
T = 403.45'  
L = 806.82'  
P.C. = 90+70.53  
P.T. = 98+77.35  
NO SUPER

STA. 97+25 IN PLACE  
24" x 15" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 99+05 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 283' PIPE OUTLET  
CONNECT TO R.C. BOX CULVERT  
@ STA. 96+20 RT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'11"

STA. 98+72 IN PLACE  
18" x 12" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
100+47	102+66	RT.	219

STA. 101+95 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 286' PIPE OUTLET  
CONNECT TO D.I. @ STA. 99+05 RT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'11"

STA. 102+81 IN PLACE  
24" x 18" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 45 CU. YDS.

STA. 102+96 INSTALL  
YARD DRAIN ON RT.  
12" x 100' PIPE CULVERT  
RT. SIDE DRAIN  
TO DROP INLET ON RT.

CONCRETE WALKS (TYPE SPECIAL)

STA.	STA.	SIDE	SQ. YD.
103+00	104+28	RT.	71
104+48	105+00	RT.	29

CONCRETE WALKS (TYPE SPECIAL)  
(REFER TO SPECIAL DETAILS) AND  
HAND RAILING  
(REFER TO STANDARD DRAWING S1-1)

STA. 104+85 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 18" x 286' PIPE OUTLET  
CONNECT TO D.I. @ STA. 101+95 RT.  
TY C = 4' x 4'  
TY MO = 4' x 4'  
H = 3'8"

STA. 104+40 CONSTRUCT  
APPROACH ON RT. = 25 CU. YDS.

P.I. = 103+38.34  
Δ = 0°24'11" LT.  
D = 0°30'00"  
T = 40.29'  
L = 80.58'  
P.C. = 102+98.05  
P.T. = 103+78.63  
NO SUPER

FLOODPLAIN LIMITS

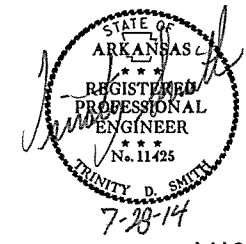
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HWY. 264

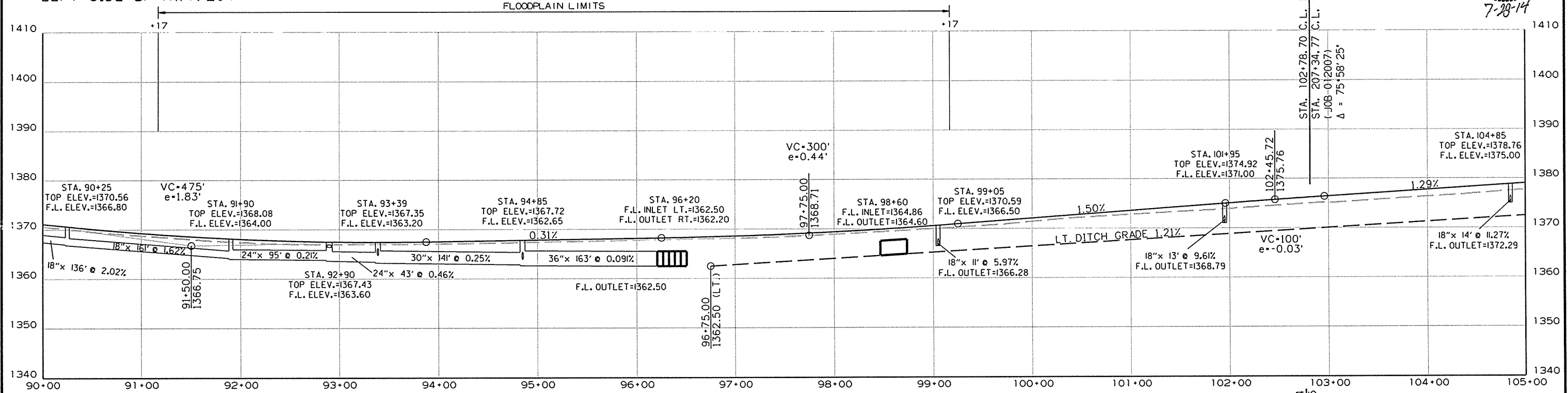
NOTE:  
 FOR R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		74	174

2 PROFILE SHEETS

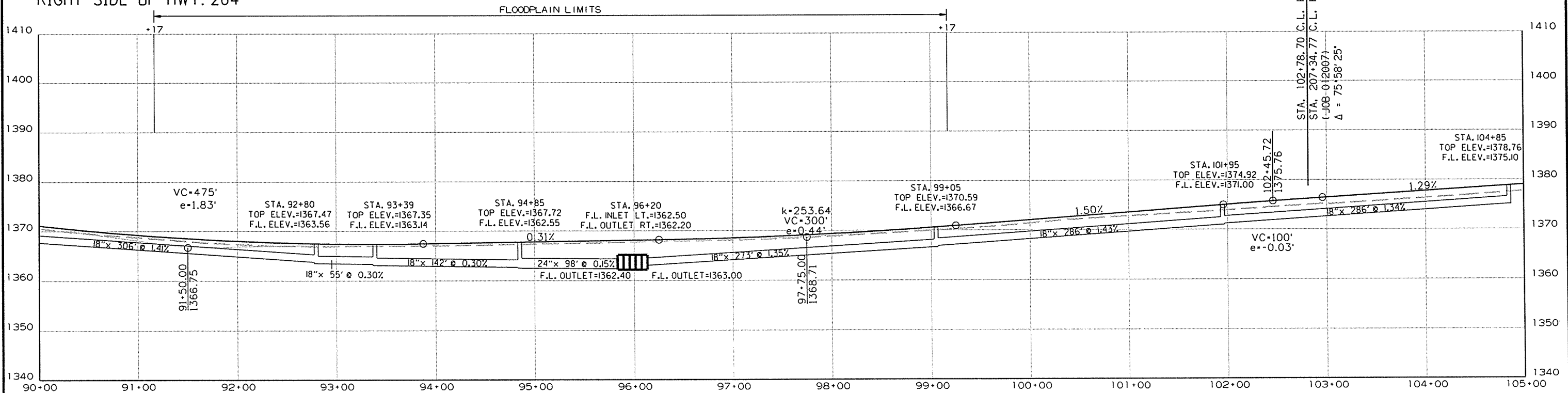


LEFT SIDE OF HWY. 264



NOTE: FOR THE CONSTRUCTION OF TEMPORARY WORK ROADS OR HALL ROADS, THIS STREAM IS CLASSIFIED AS AN INTERMITTENT STREAM. THE STREAM BANK ELEVATION IS 1365 FT. MSL.

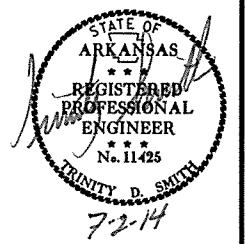
RIGHT SIDE OF HWY. 264



4/28/2014 R090284.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090284	75	174

2 PLAN SHEETS



STA. 108+04 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 4.8 SQ. YDS.  
STA. 108+10 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 3.5 SQ. YDS.  
STA. 108+72 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 4.2 SQ. YDS.  
STA. 109+29 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 4.8 SQ. YDS.

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)

STA.	STA.	SIDE	LIN. FT.
109+25	112+07	LT.	278
109+48	112+03	RT.	262

WIRE FENCE

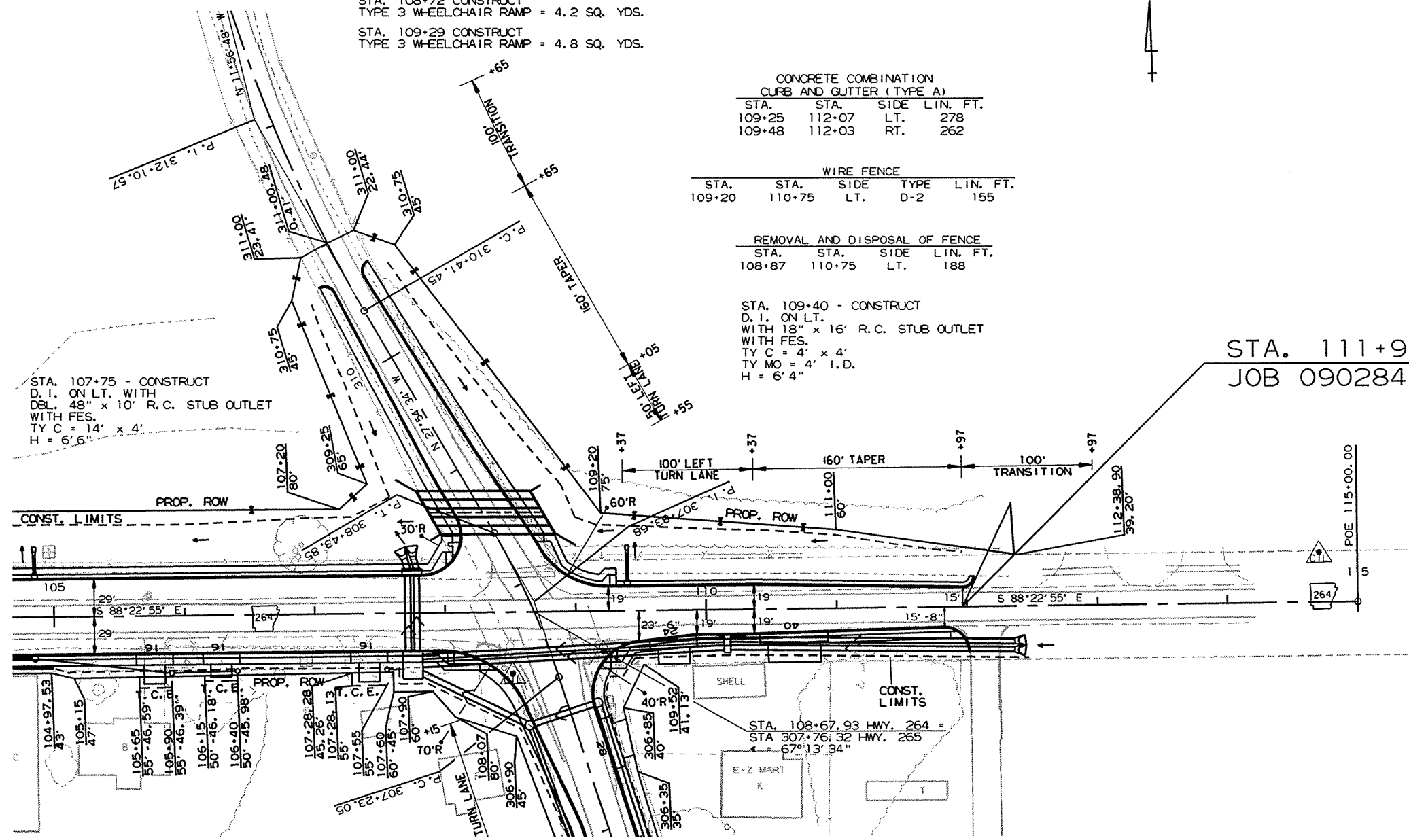
STA.	STA.	SIDE	TYPE	LIN. FT.
109+20	110+75	LT.	D-2	155

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
108+87	110+75	LT.	188

STA. 109+40 - CONSTRUCT  
D.I. ON LT.  
WITH 18" x 16' R.C. STUB OUTLET  
WITH FES.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 6'4"

STA. 111+97.00 END  
JOB 090284



STA. 107+75 - CONSTRUCT  
D.I. ON LT. WITH  
DBL. 48" x 10' R.C. STUB OUTLET  
WITH FES.  
TY C = 14' x 4'  
H = 6'6"

STA. 105+78 IN PLACE  
18" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 15 CU. YDS.

STA. 106+29 IN PLACE  
18" x 24' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 105+90 INSTALL  
YARD DRAIN ON RT.  
12" x 103' PIPE CULVERT  
RT. SIDE DRAIN  
TO DROP INLET ON RT.

STA. 106+40 INSTALL  
YARD DRAIN ON RT.  
12" x 48' PIPE CULVERT  
RT. SIDE DRAIN  
TO DROP INLET ON RT.

STA. 107+55 INSTALL  
YARD DRAIN ON RT.  
12" x 13' PIPE CULVERT  
RT. SIDE DRAIN  
TO DROP INLET ON RT.

STA. 107+75 - CONSTRUCT  
D.I. ON RT.  
WITH DBL. 48" x 59' R.C. PIPE OUTLET  
(CLASS V) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 107+75 LT.  
TY C SPECIAL = 14' x 20'  
H = 5'9"  
Q50 = 276 CFS D.A. = 57 ACRES

STA. 107+42 IN PLACE  
18" x 20' CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 10 CU. YDS.

STA. 108+04 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 5.4 SQ. YDS.

STA. 108+32 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 5.5 SQ. YDS.

STA. 110+16 - CONSTRUCT  
D.I. ON RT.  
WITH DBL. 42" x 218' R.C. PIPE INLET  
WITH FES.  
& DBL. 42" x 232' R.C. PIPE OUTLET  
(CLASS IV) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 107+75 RT.  
TY C = 4' x 13'  
H = 6'7"

STA. 109+75 CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 110+68 CONSTRUCT  
APPROACH ON RT. = 10 CU. YDS.

STA. 109+29 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 4.6 SQ. YDS.

STA. 111+93 CONSTRUCT  
TYPE 3 WHEELCHAIR RAMP = 4.9 SQ. YDS.

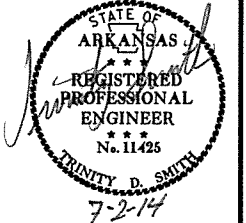
4/28/2014

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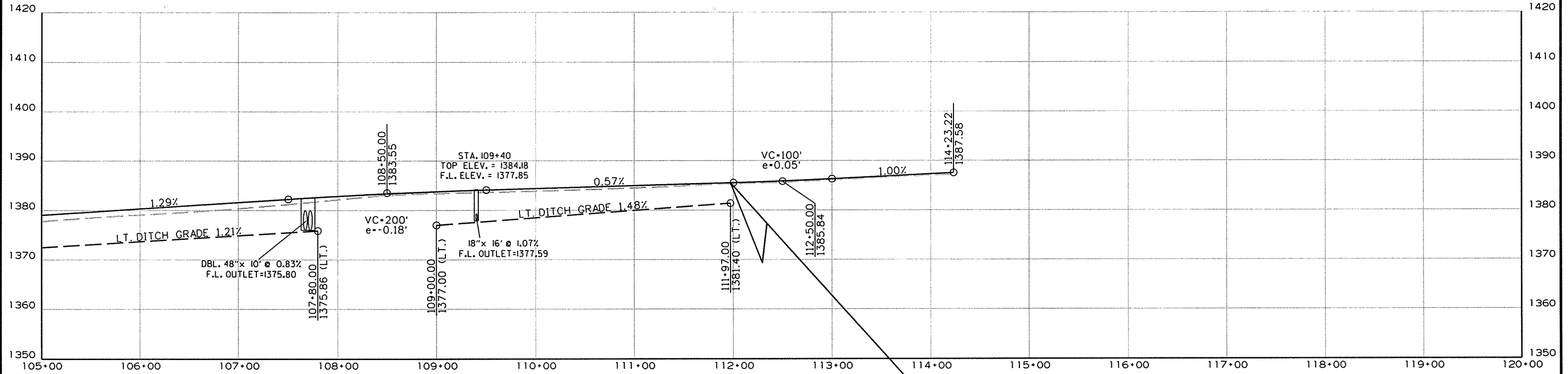
NOTE:  
 FOR R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 090284	76

2 PROFILE SHEETS

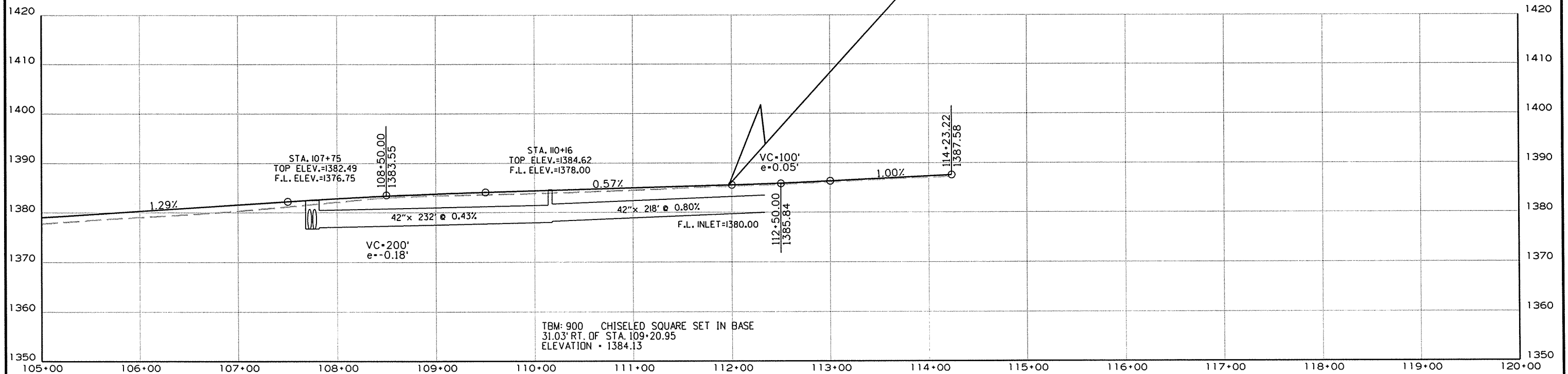


LEFT SIDE OF HWY. 264



STA. 111+97.00 END  
 JOB 090284

RIGHT SIDE OF HWY. 264

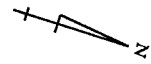
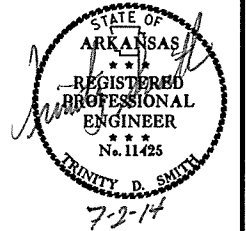


4/28/2014

R090284.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		77	174

2 PLAN SHEETS

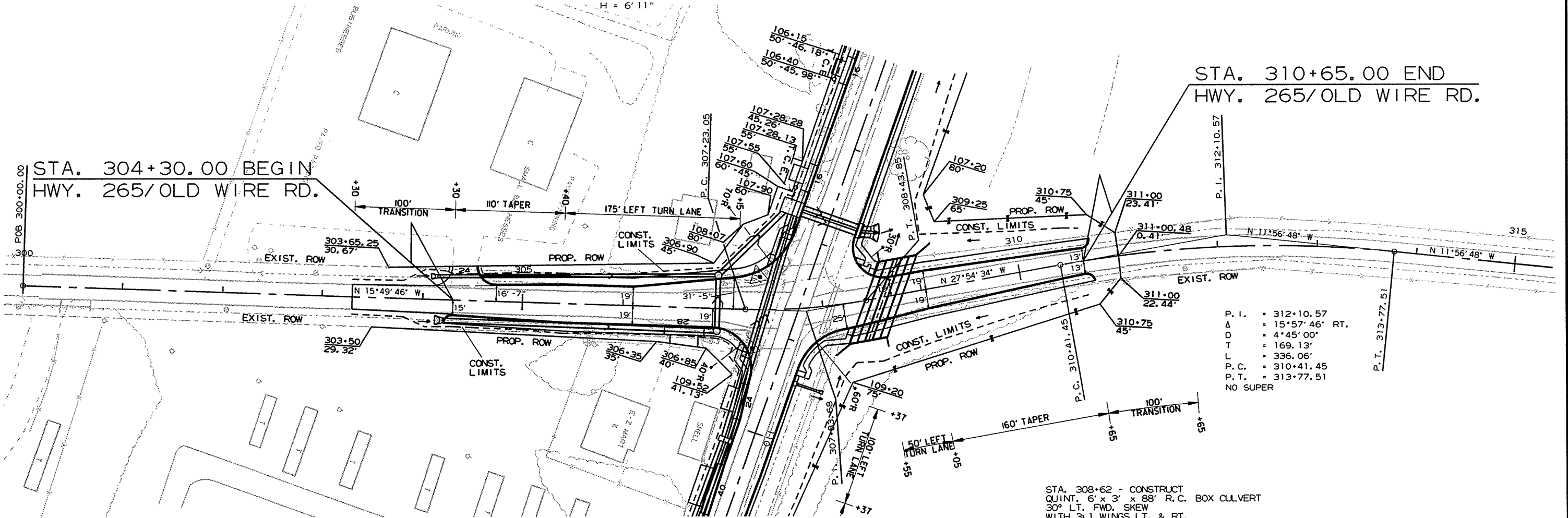


STA. 304+40 IN PLACE  
30" x 40' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 10 CU. YDS.

STA. 306+95 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 30" x 278' R.C. PIPE INLET  
WITH FES.  
& 48" x 89' R.C. PIPE OUTLET  
CONNECT TO D.I. @ STA. 107+75 LT.  
TY C = 6' x 6'  
TY MO = 6' I.D.  
H = 6' 11"

STA. 310+65.00 END  
HWY. 265/OLD WIRE RD.

STA. 304+30.00 BEGIN  
HWY. 265/OLD WIRE RD.



P. I. = 312+10.57  
Δ = 15° 57' 46" RT.  
D = 4° 45' 00"  
T = 169.13'  
L = 336.06'  
P. C. = 310+41.45  
P. T. = 313+77.51  
NO SUPER

STA. 308+62 - CONSTRUCT  
QUINT. 6' x 3' x 88' R.C. BOX CULVERT  
30° LT. FWD. SKEW  
WITH 3:1 WINGS LT. & RT.  
Q50 = 420 CFS D.A. = 115 ACRES

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)

STA.	STA.	SIDE	LIN. FT.
304+20	307+30	RT.	346
304+53	307+78	LT.	349

STA. 306+62 CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

STA. 306+95 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 48" x 273' R.C. PIPE INLET  
WITH FES.  
& 48" x 51' R.C. PIPE OUTLET  
(CLASS V) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 306+95 LT.  
TY C = 6' x 6'  
TY MO = 6' I.D.  
H = 6' 2"

P. I. = 307+83.68  
Δ = 12° 04' 48" LT.  
D = 10° 00' 00"  
T = 60.63'  
L = 120.80'  
P. C. = 307+23.05  
P. T. = 308+43.85  
NO SUPER

WIRE FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.
308+19	310+98	RT.	D-2	290
309+25	311+00	LT.	D-2	187

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)

STA.	STA.	SIDE	LIN. FT.
307+71	310+75	RT.	327
308+38	310+75	LT.	276

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
308+06	310+98	RT.	294
308+42	311+00	LT.	259

HWY. 265/OLD WIRE RD.

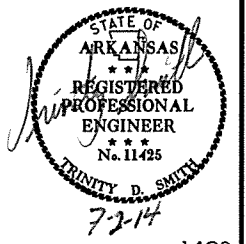
4/28/2014

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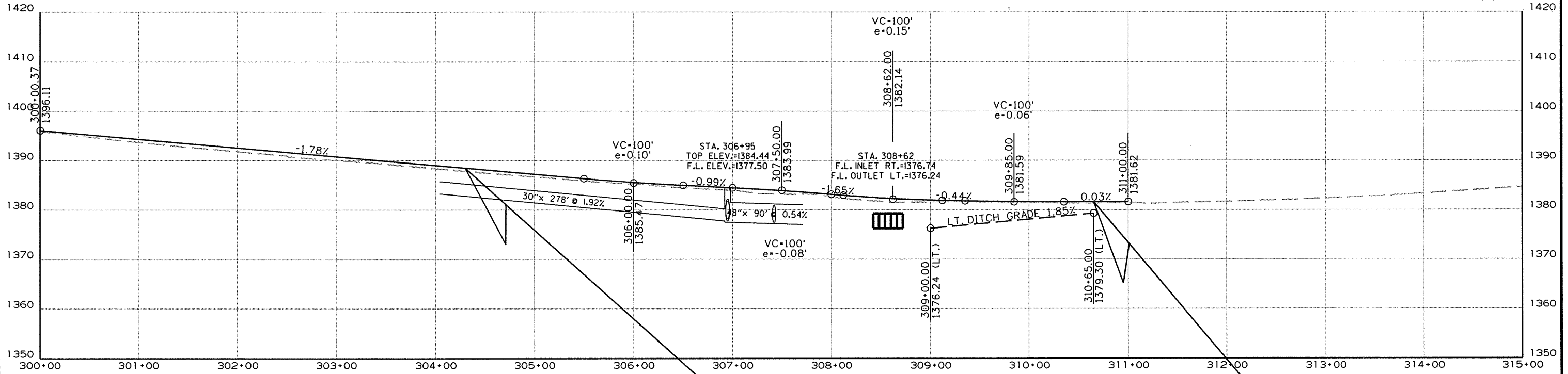
NOTE:  
 FOR R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							78	174

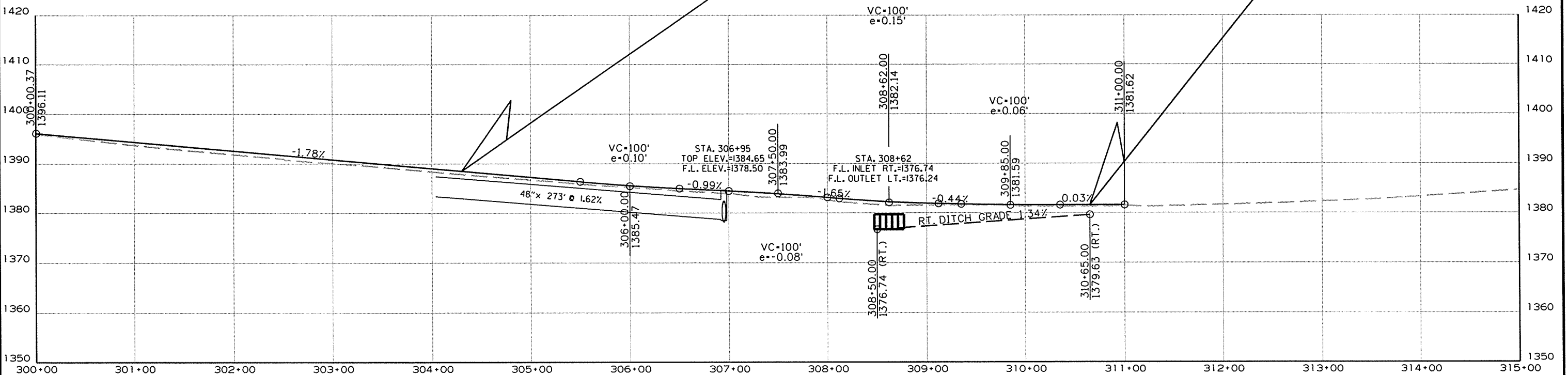
2 PROFILE SHEETS



LEFT SIDE OF HWY. 265/OLD WIRE RD.



RIGHT SIDE OF HWY. 265/OLD WIRE RD.



STA. 304+30.00 BEGIN  
 HWY. 265/OLD WIRE RD.

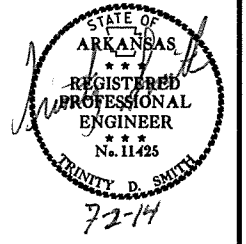
STA. 310+65.00 END  
 HWY. 265/OLD WIRE RD.

4/28/2014

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		79	174

2 PLAN SHEETS



P. I. = 407+92.74  
 Δ = 90°00'00" RT.  
 D = 57'17'45"  
 T = 100.00'  
 L = 157.08'  
 P. C. = 406+92.74  
 P. T. = 408+49.82  
 NO SUPER



STA. 405+35 IN PLACE  
 18" x 46' RC PIPE CULVERT  
 LT. SIDE DRAIN  
 REMOVE AND CONSTRUCT  
 APPROACH ON LT. = 5 CU. YDS.

STA. 408+20 - CONSTRUCT  
 D. I. ON LT. WITH 8' EXTENSION  
 & 18" x 55' PIPE OUTLET  
 CONNECT TO D. I. @ STA. 69+40 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 5'7"

STA. 404+90.00 BEGIN  
 N. OAK ST.

STA. 408+52.00 END  
 N. OAK ST.

P. I. = 404+02.00  
 Δ = 41°24'06" LT.  
 D = 30°09'20"  
 T = 71.80'  
 L = 137.29'  
 P. C. = 403+30.20  
 P. T. = 404+67.50  
 NO SUPER

P. I. = 405+74.31  
 Δ = 47°40'20" LT.  
 D = 30°09'20"  
 T = 83.94'  
 L = 158.09'  
 P. C. = 404+90.37  
 P. T. = 406+48.45  
 NO SUPER

CONCRETE COMBINATION  
 CURB AND GUTTER (TYPE A)

STA.	STA.	SIDE	LIN. FT.
404+90	408+52	LT.	392
404+90	408+52	RT.	371

STA. 407+95 - CONSTRUCT  
 D. I. ON RT. WITH 8' EXTENSION  
 & 18" x 39' R.C. PIPE OUTLET  
 (CLASS III) (TYPE 3 BEDDING)  
 CONNECT TO D. I. @ STA. 96+20 RT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 5'4"

N. OAK STREET

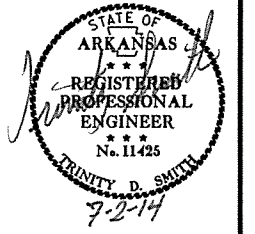
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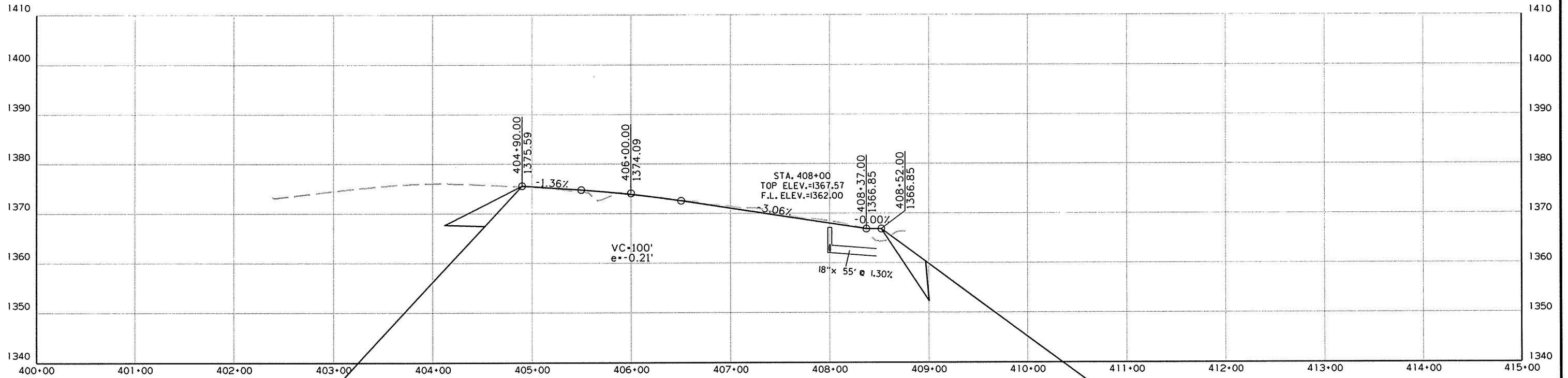
NOTE:  
 FOR R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 FOR C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 090284	80

2 PROFILE SHEETS



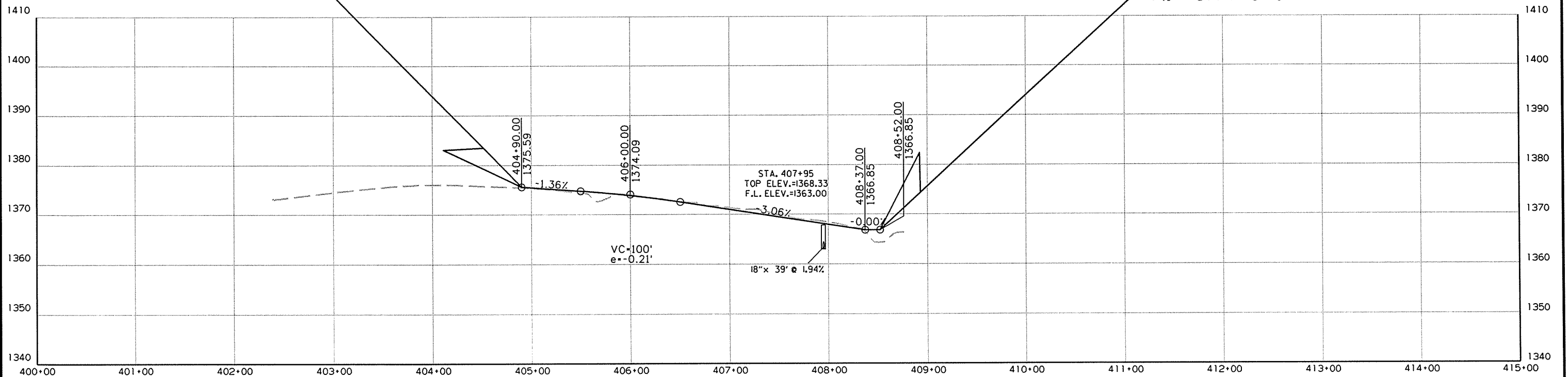
LEFT SIDE OF N. OAK STREET



RIGHT SIDE OF N. OAK STREET

STA. 404+90.00 BEGIN  
N. OAK ST.

STA. 408+52.00 END  
N. OAK ST.



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		81	174

2 SIGNALIZATION PLAN SHEET

### STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2, E-NET (8 PHASES)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1614	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	291	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	40	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	2	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 2, 40')	4	EACH
733	VIDEO CABLE	796	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	4	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	2	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	E-NET CABLE (EXTERIOR CAT 5)	75	LIN. FT.
SP	ETHERNET SWITCH, 100 HARDENED (4 PORT)	1	EACH
SP	LOCAL RADIO (E-NET 5,8) WITH ANTENNA	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

STAGE 1  
THE EXISTING TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL STAGE 1 TRAFFIC SIGNAL IS COMPLETED AND IN OPERATION.  
INSTALL PERMANENT SERVICE POINT, SYSTEM LOCAL CONTROLLER TS 2 - TYPE 2, E-NET (8 PHASE), LOCAL RADIO (E-NET 5, 8) WITH ANTENNA AND ALL ASSOCIATED COMMUNICATION EQUIPMENT, CONCRETE PULL BOX (TYPE 2 HD), GALVANIZED STEEL CONDUIT AND ALL NON-METALLIC CONDUIT AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLAN.  
INSTALL TEMPORARY TREATED WOOD POLES, SPAN WIRE ASSEMBLY, TRAFFIC SIGNAL HEADS, VIDEO DETECTORS, AND ALL ASSOCIATED VIDEO AND ELECTRICAL EQUIPMENT AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLAN.  
ESTABLISH VIDEO ZONES AND REMOVE EXISTING TRAFFIC SIGNAL INSTALLATION.  
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.  
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

### STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH

STAGE 2  
BAG AND COVER TRAFFIC SIGNAL HEADS AND DISABLE THE VIDEO DETECTOR ASSOCIATED WITH THE SOUTHBOUND MOVEMENT AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLAN.  
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

### STAGE 3 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	LUMP SUM

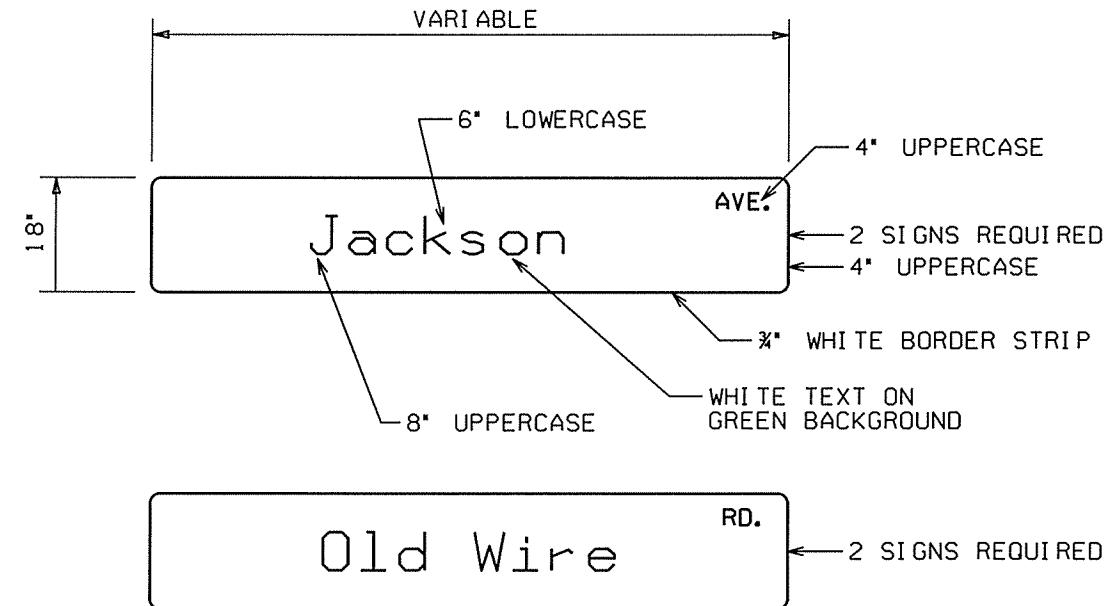
STAGE 3  
REMOVE THE EXISTING TRAFFIC SIGNAL HEAD #1 AND RE-ESTABLISH TRAFFIC SIGNAL HEADS, THE VIDEO DETECTOR AND VIDEO ZONES ASSOCIATED WITH THE SOUTHBOUND MOVEMENT AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLAN.  
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

### PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	10	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	4	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2191	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	2067	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	595	LIN. FT.
710	NON-METALLIC CONDUIT (3")	574	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
733	VIDEO CABLE	1754	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	9	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	795	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	518	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	200	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	LUMP SUM
SP	18" STREET NAME SIGN	4	EACH

\*ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

### OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:  
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII, PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.  
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 256 ( OLD WIRE RD. )  
CITY: SPRINGDALE  
COUNTY: BENTON  
DISTRICT: 9 SCALE: N/A DRAWN BY: GWE

DATE: 04-21-14 FILE NAME: t090284\_01.dgn



# TRAFFIC SIGNAL NOTES:

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		82	174

2 SIGNALIZATION PLAN SHEET

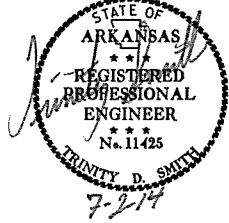
1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2012) NATIONAL ELECTRICAL CODE, NFPA 101 (2014) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (EGC) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND EGC TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY TO A SERVICE POLE WITH EXTERNAL RAIN-TIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET SHALL HAVE 16 LOAD BAYS AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARDS AND DETAILS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PAVEMENT MARKING PLAN SHEETS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON SPECIAL DETAILS). PAYMENT WILL BE INCLUDED IN SECTION 714, AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
12. ALL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY.
17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, 38 FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF 21' SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL 6 FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS 6 FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714-TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO ISMA STANDARDS.
22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
23. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

25. AT THE INTERSECTION OF HWY. 264 AND HWY. 265, THE ALIGNMENT FOR EACH APPROACH LANE IN EACH STAGE OF CONSTRUCTION HAS COMPLEMENTARY DESIGNED VIDEO DETECTOR AND VIDEO ZONE LOCATIONS. ANY DEVIATION FROM THIS TRAFFIC CONTROL PLAN SHALL MINIMIZE TRAFFIC DELAYS AND ANY ADDITIONAL VIDEO DETECTION RELOCATIONS OR ROTATIONS WILL BE MADE AT NO COST TO THE DEPARTMENT.



LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: N/A DRAWN BY: GWE

2 SIGNALIZATION PLAN SHEET

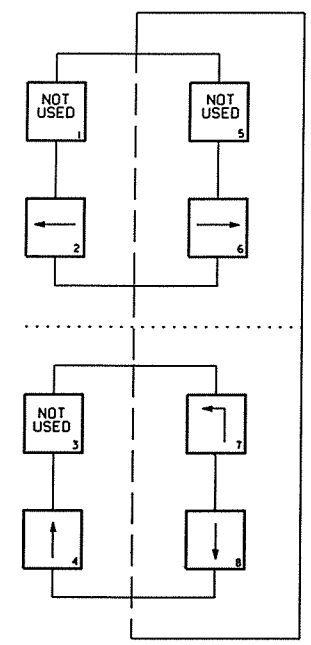


INTERVAL CHART

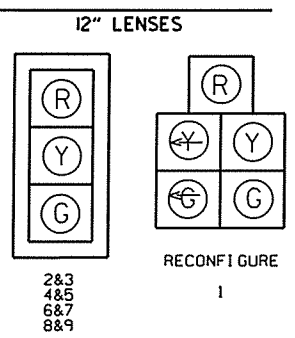
SIGNAL FACES	HWY. 264/HWY. 265					FLASH SEQ.
	2+6	CLR. 4+7	CLR. 4+8	CLR.		
	R	R	G	•	R	R
2&3	R	R	G	••	G	••
4&5	G	••	R	R	R	R
6&7	R	R	R	R	G	••
8&9	G	••	R	R	R	R

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

PHASING DIAGRAM

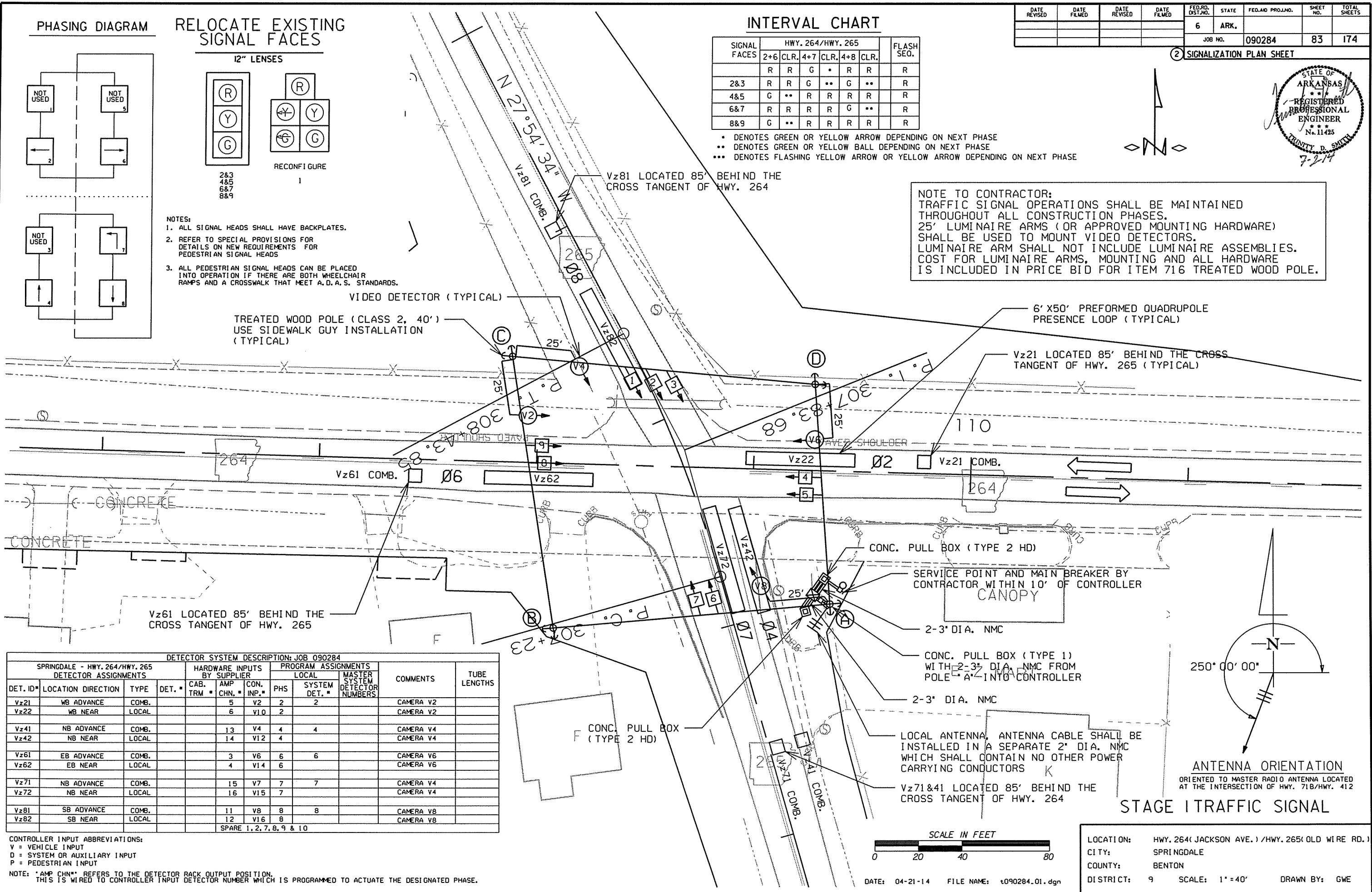


RELOCATE EXISTING SIGNAL FACES



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

NOTE TO CONTRACTOR:  
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES. 25' LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



DETECTOR SYSTEM DESCRIPTION: JOB 090284

SPRINGDALE - HWY. 264/HWY. 265 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER				PROGRAM ASSIGNMENTS				COMMENTS	TUBE LENGTHS
DET. ID#	LOCATION	DIRECTION	TYPE	DET. #	CAB. TRM	AMP CHN.	CON. INP. #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS			
Vz21	WB ADVANCE	COMB.				5	V2	2	2		CAMERA V2		
Vz22	WB NEAR	LOCAL				6	V10	2			CAMERA V2		
Vz41	NB ADVANCE	COMB.				13	V4	4	4		CAMERA V4		
Vz42	NB NEAR	LOCAL				14	V12	4			CAMERA V4		
Vz61	EB ADVANCE	COMB.				3	V6	6	6		CAMERA V6		
Vz62	EB NEAR	LOCAL				4	V14	6			CAMERA V6		
Vz71	NB ADVANCE	COMB.				15	V7	7	7		CAMERA V4		
Vz72	NB NEAR	LOCAL				16	V15	7			CAMERA V4		
Vz81	SB ADVANCE	COMB.				11	V8	8	8		CAMERA V8		
Vz82	SB NEAR	LOCAL				12	V16	8			CAMERA V8		
SPARE 1, 2, 7, 8, 9 & 10													

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

NOTE: \*AMP CHN\* REFERS TO THE DETECTOR RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.

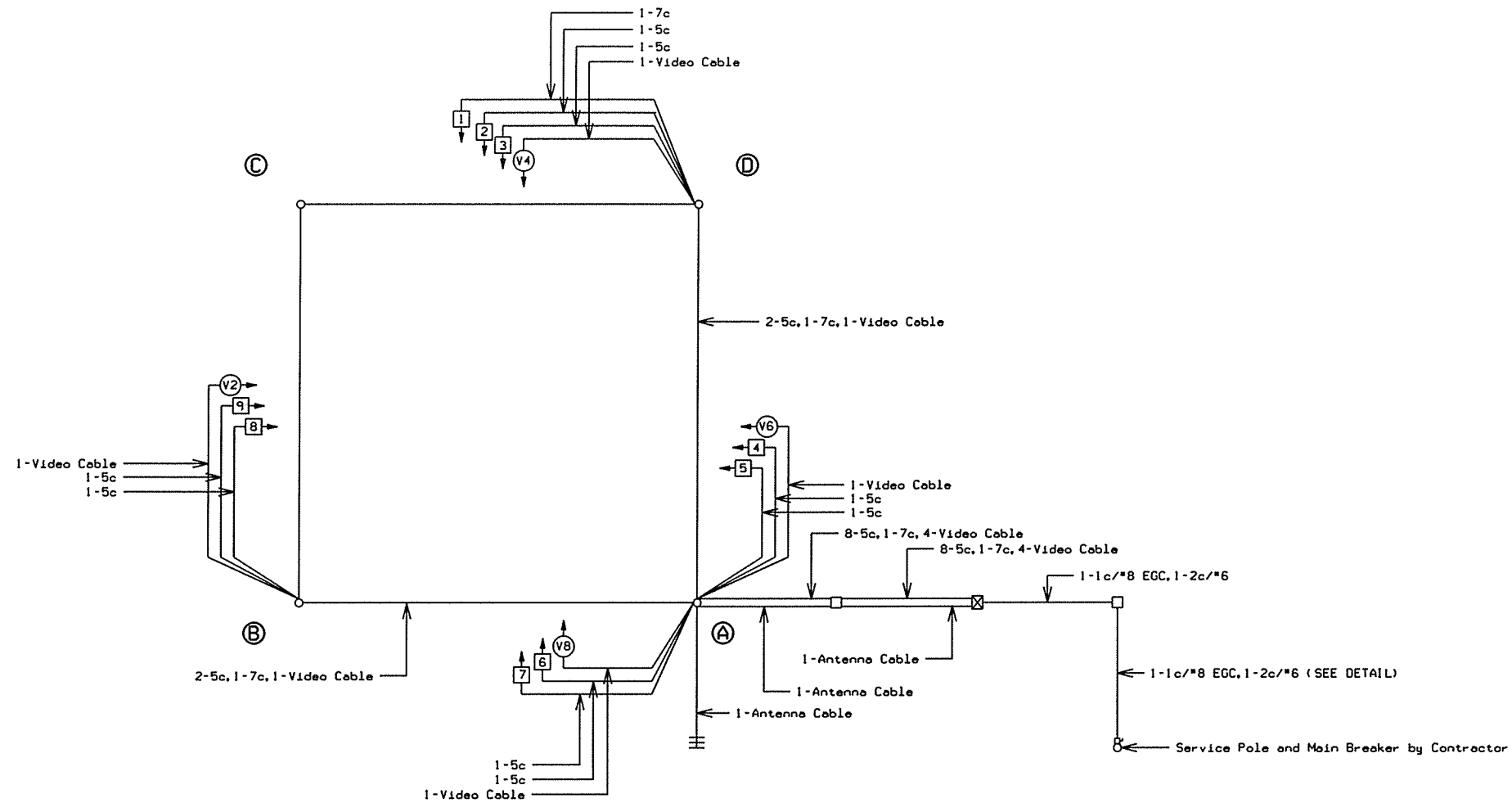
LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: 1" = 40' DRAWN BY: GWE



DATE: 04-21-14 FILE NAME: t090284\_01.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		84	174
				JOB NO.		090284		

2 SIGNALIZATION PLAN SHEET



### STAGE 1-3 WIRING DIAGRAM

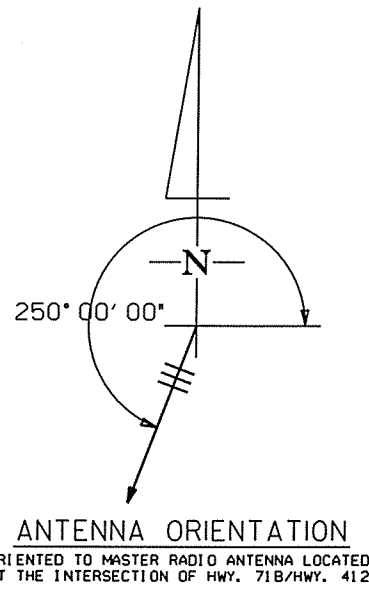
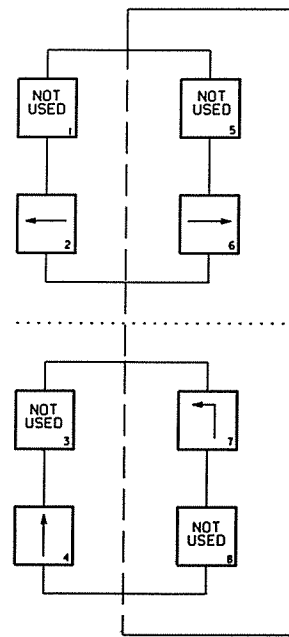
#### NOTES TO CONTRACTOR:

1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

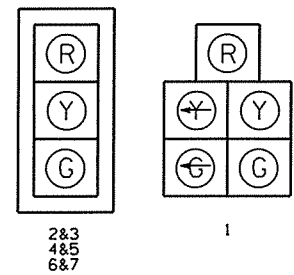
LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: N/A DRAWN BY: GWE

DATE: 04-21-14 FILE NAME: t090284\_01.dgn

PHASING DIAGRAM



EXISTING SIGNAL FACES



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		85	174
				JOB NO. 090284		SIGNALIZATION PLAN SHEET		

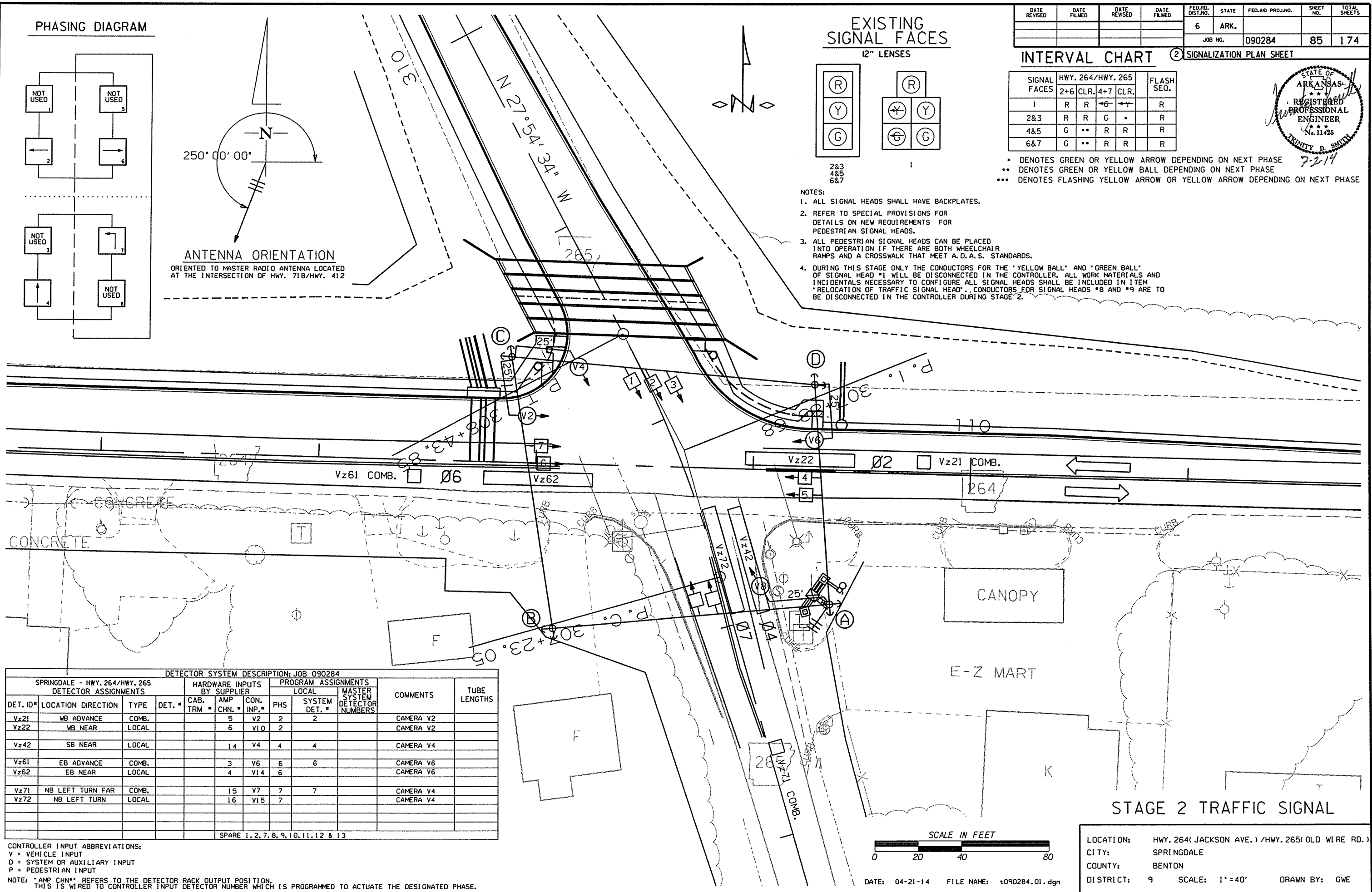
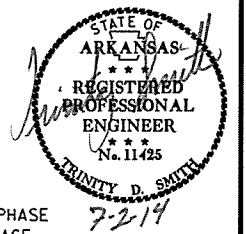
INTERVAL CHART

SIGNAL FACES	HWY. 264/HWY. 265				FLASH SEQ.
	2+6	CLR.	4+7	CLR.	
1	R	R	G	Y	R
2&3	R	R	G	.	R
4&5	G	**	R	R	R
6&7	G	**	R	R	R

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

NOTES:

- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
- REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
- ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.
- DURING THIS STAGE ONLY THE CONDUCTORS FOR THE 'YELLOW BALL' AND 'GREEN BALL' OF SIGNAL HEAD #1 WILL BE DISCONNECTED IN THE CONTROLLER. ALL WORK MATERIALS AND INCIDENTALS NECESSARY TO CONFIGURE ALL SIGNAL HEADS SHALL BE INCLUDED IN ITEM 'RELOCATION OF TRAFFIC SIGNAL HEAD'. CONDUCTORS FOR SIGNAL HEADS #8 AND #9 ARE TO BE DISCONNECTED IN THE CONTROLLER DURING STAGE 2.

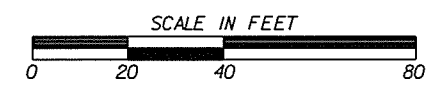


DETECTOR SYSTEM DESCRIPTION: JOB 090284

SPRINGDALE - HWY. 264/HWY. 265 DETECTOR ASSIGNMENTS			HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #		
Vz21	WB ADVANCE	COMB.			5	V2	2	2		CAMERA V2
Vz22	WB NEAR	LOCAL			6	V10	2			CAMERA V2
Vz42	SB NEAR	LOCAL			14	V4	4	4		CAMERA V4
Vz61	EB ADVANCE	COMB.			3	V6	6	6		CAMERA V6
Vz62	EB NEAR	LOCAL			4	V14	6			CAMERA V6
Vz71	NB LEFT TURN FAR	COMB.			15	V7	7	7		CAMERA V4
Vz72	NB LEFT TURN	LOCAL			16	V15	7			CAMERA V4
SPARE 1, 2, 7, 8, 9, 10, 11, 12 & 13										

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

NOTE: \*AMP CHN\* REFERS TO THE DETECTOR RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.



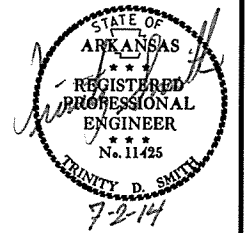
DATE: 04-21-14 FILE NAME: t090284\_01.dgn

STAGE 2 TRAFFIC SIGNAL

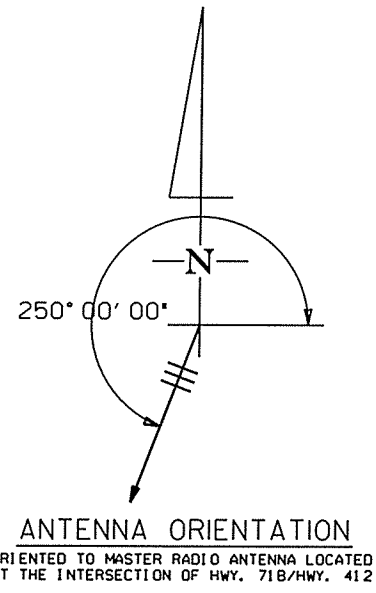
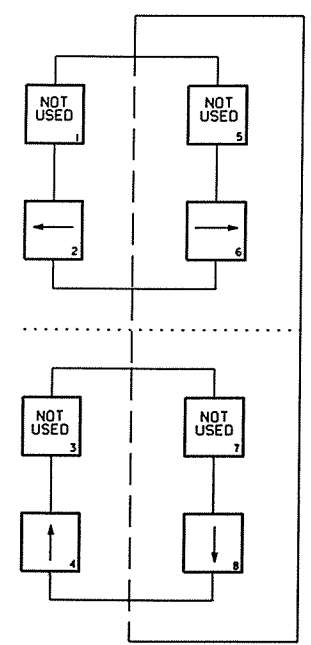
LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
CITY: SPRINGDALE  
COUNTY: BENTON  
DISTRICT: 9 SCALE: 1" = 40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		86	174
				JOB NO. 090284				

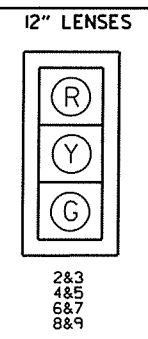
2 SIGNALIZATION PLAN SHEET



PHASING DIAGRAM



EXISTING SIGNAL FACES

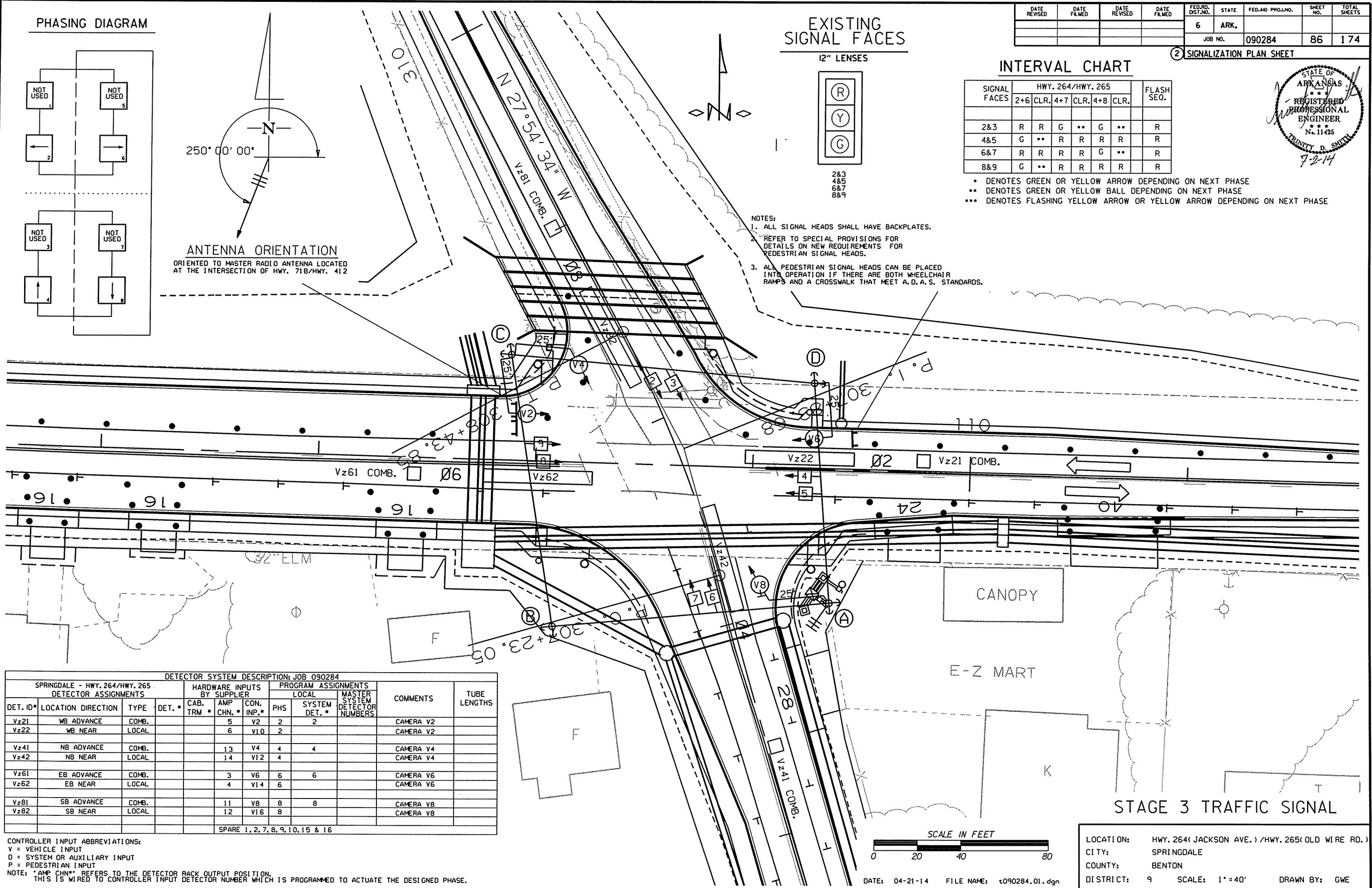


INTERVAL CHART

SIGNAL FACES	HWY. 264/HWY. 265						FLASH SEQ.
	2+6	CLR.	4+7	CLR.	4+8	CLR.	
2&3	R	R	G	**	G	**	R
4&5	G	**	R	R	R	R	R
6&7	R	R	R	R	G	**	R
8&9	G	**	R	R	R	R	R

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

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



DETECTOR SYSTEM DESCRIPTION: JOB 090284

SPRINGDALE - HWY. 264/HWY. 265 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER		PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #		
Vz21	WB ADVANCE	COMB.			5	V2	2	2		CAMERA V2
Vz22	WB NEAR	LOCAL			6	V10	2			CAMERA V2
Vz41	NB ADVANCE	COMB.			13	V4	4	4		CAMERA V4
Vz42	NB NEAR	LOCAL			14	V12	4			CAMERA V4
Vz61	EB ADVANCE	COMB.			3	V6	6	6		CAMERA V6
Vz62	EB NEAR	LOCAL			4	V14	6			CAMERA V6
Vz81	SB ADVANCE	COMB.			11	V8	8	8		CAMERA V8
Vz82	SB NEAR	LOCAL			12	V16	8			CAMERA V8
SPARE 1, 2, 7, 8, 9, 10, 15 & 16										

CONTROLLER INPUT ABBREVIATIONS:  
V = VEHICLE INPUT  
D = SYSTEM OR AUXILIARY INPUT  
P = PEDESTRIAN INPUT  
NOTE: \*AMP CHN\* REFERS TO THE DETECTOR RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNED PHASE.

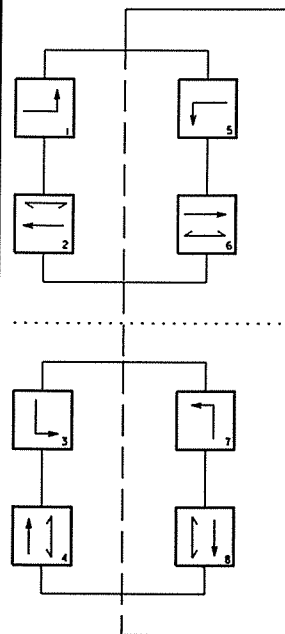


STAGE 3 TRAFFIC SIGNAL

LOCATION: HWY. 264 (JACKSON AVE.) / HWY. 265 (OLD WIRE RD.)  
CITY: SPRINGDALE  
COUNTY: BENTON  
DISTRICT: 9 SCALE: 1" = 40' DRAWN BY: GWE

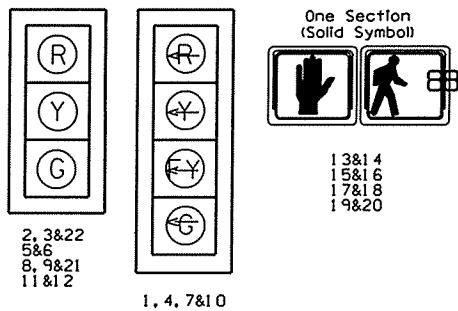
DATE: 04-21-14 FILE NAME: t090284.01.dgn

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



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

NOTE TO CONTRACTOR:  
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 090284	87	174

2 SIGNALIZATION PLAN SHEET

DETECTOR SPACING CHART

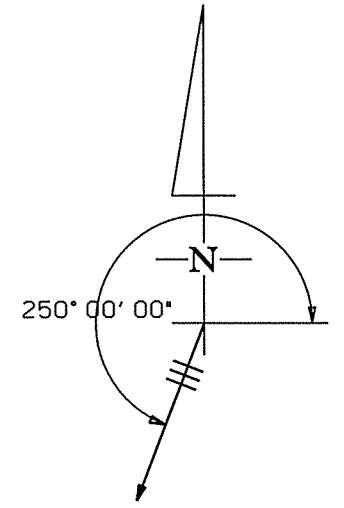
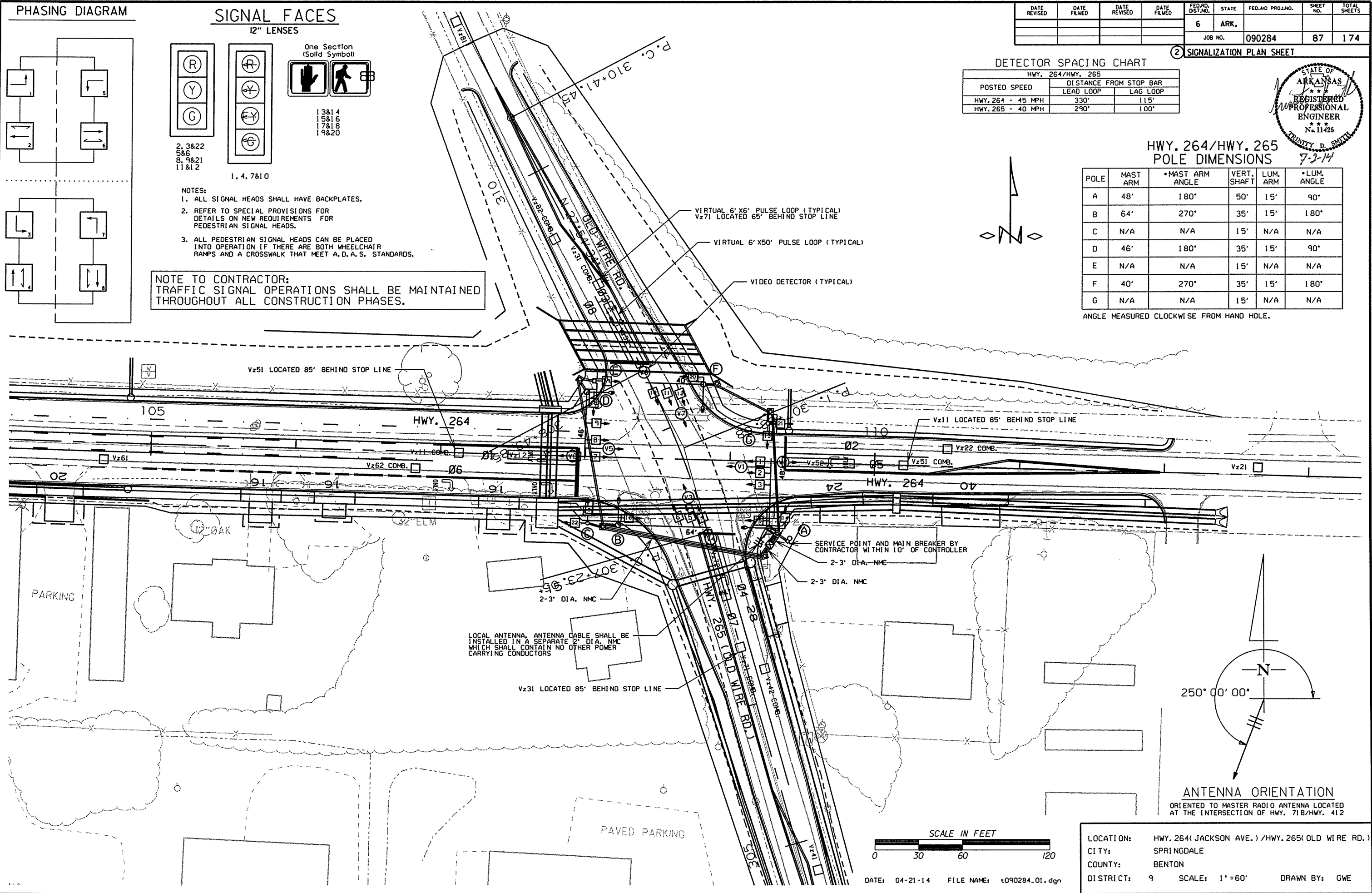
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY. 264 - 45 MPH	330'	115'
HWY. 265 - 40 MPH	290'	100'



HWY. 264/HWY. 265 POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	48'	180°	50'	15'	90°
B	64'	270°	35'	15'	180°
C	N/A	N/A	15'	N/A	N/A
D	46'	180°	35'	15'	90°
E	N/A	N/A	15'	N/A	N/A
F	40'	270°	35'	15'	180°
G	N/A	N/A	15'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.



ANTENNA ORIENTATION  
ORIENTED TO MASTER RADIO ANTENNA LOCATED AT THE INTERSECTION OF HWY. 71B/HWY. 412



DATE: 04-21-14 FILE NAME: t090284\_01.dgn

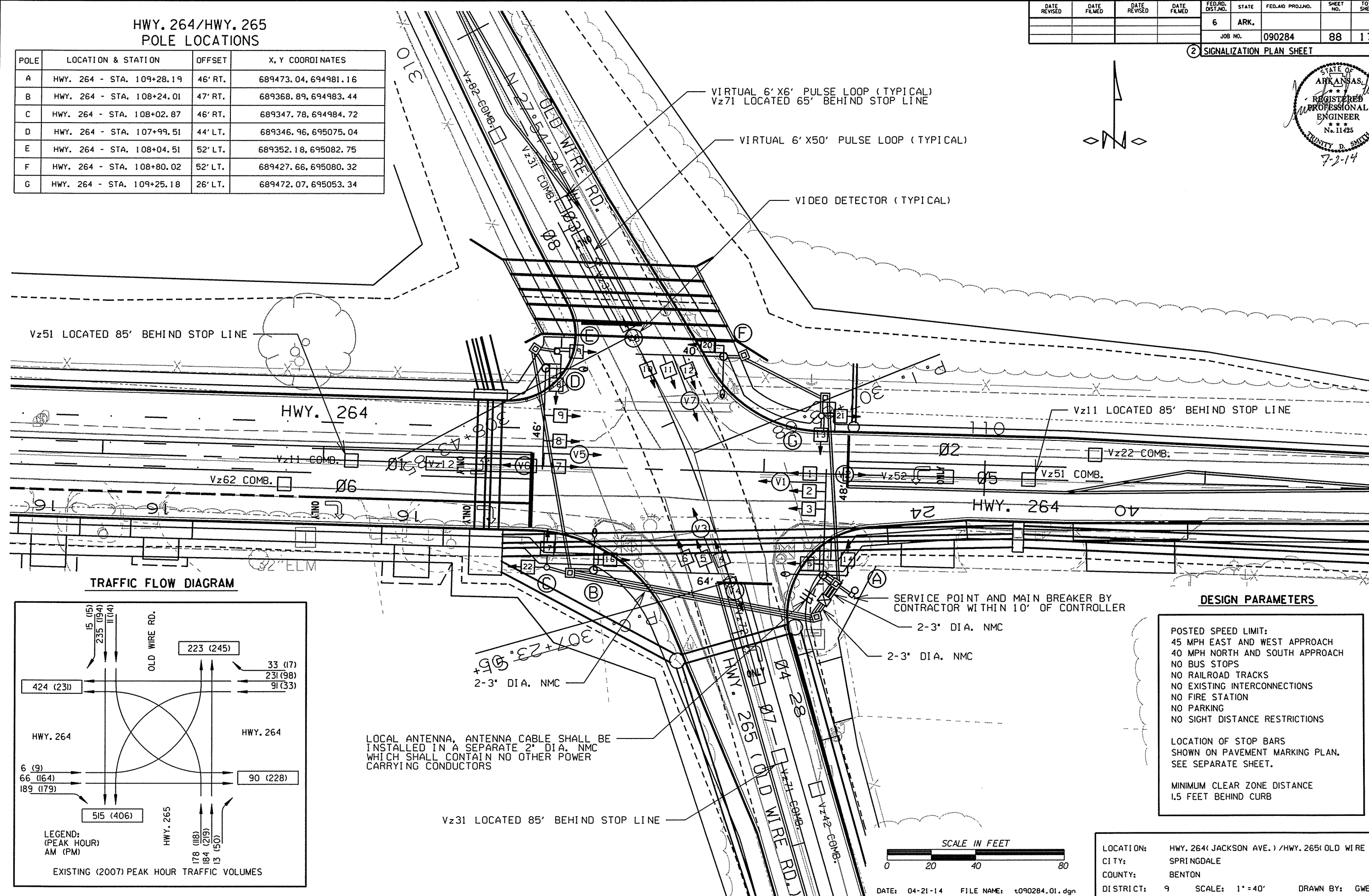
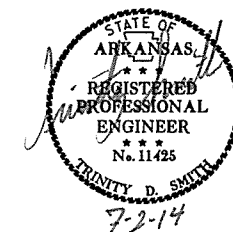
LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: 1" = 60' DRAWN BY: GWE

HWY. 264/HWY. 265  
POLE LOCATIONS

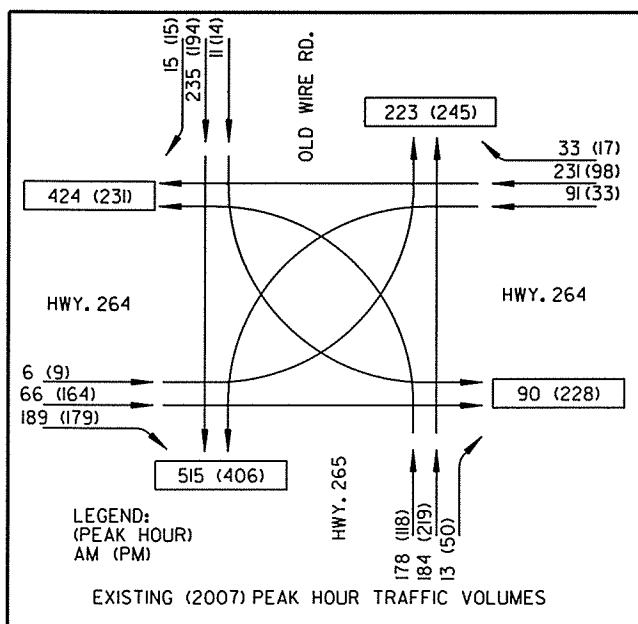
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 264 - STA. 109+28.19	46' RT.	689473.04, 694981.16
B	HWY. 264 - STA. 108+24.01	47' RT.	689368.89, 694983.44
C	HWY. 264 - STA. 108+02.87	46' RT.	689347.78, 694984.72
D	HWY. 264 - STA. 107+99.51	44' LT.	689346.96, 695075.04
E	HWY. 264 - STA. 108+04.51	52' LT.	689352.18, 695082.75
F	HWY. 264 - STA. 108+80.02	52' LT.	689427.66, 695080.32
G	HWY. 264 - STA. 109+25.18	26' LT.	689472.07, 695053.34

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		88	174
				JOB NO.		090284		

2 SIGNALIZATION PLAN SHEET



TRAFFIC FLOW DIAGRAM



DESIGN PARAMETERS

- POSTED SPEED LIMIT:
  - 45 MPH EAST AND WEST APPROACH
  - 40 MPH NORTH AND SOUTH APPROACH
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO EXISTING INTERCONNECTIONS
- NO FIRE STATION
- NO PARKING
- NO SIGHT DISTANCE RESTRICTIONS
- LOCATION OF STOP BARS SHOWN ON PAVEMENT MARKING PLAN. SEE SEPARATE SHEET.
- MINIMUM CLEAR ZONE DISTANCE 1.5 FEET BEHIND CURB

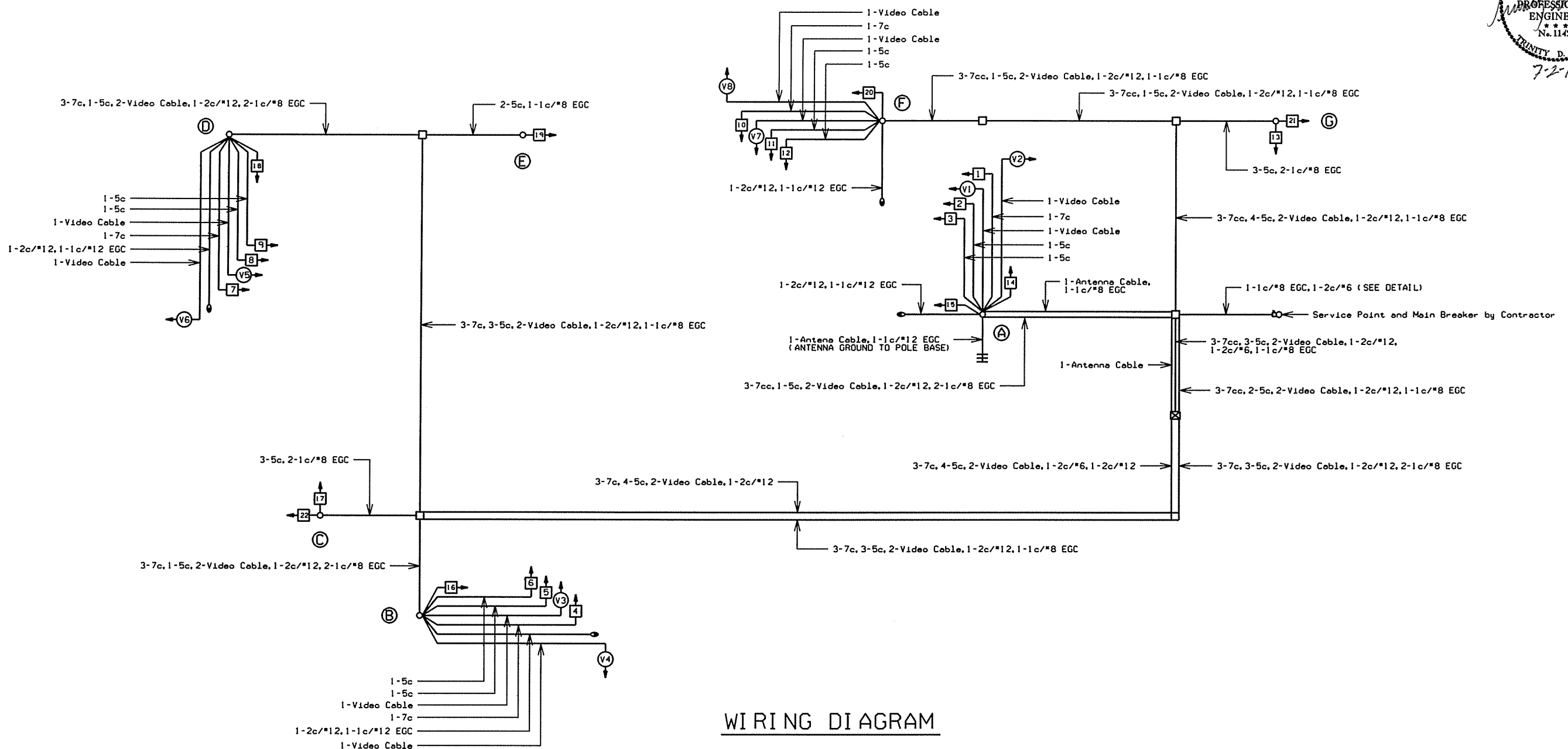
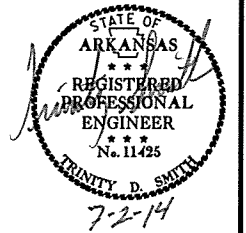
LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: 1" = 40' DRAWN BY: GWE

DATE: 04-21-14 FILE NAME: t090284.01.dgn



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	090284
							SHEET NO.	89
							TOTAL SHEETS	174

2 SIGNALIZATION PLAN SHEET



### WIRING DIAGRAM

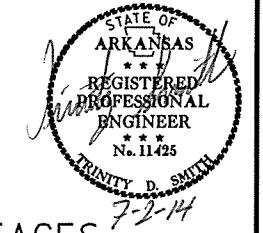
#### NOTES TO CONTRACTOR:

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

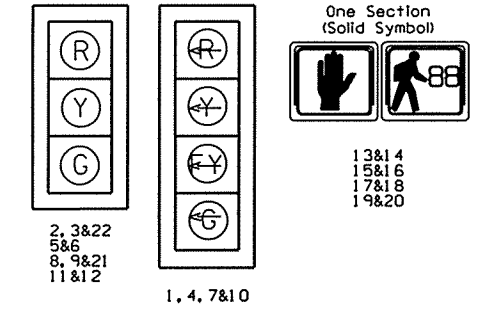
LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							090284	90	174

2 SIGNALIZATION PLAN SHEET

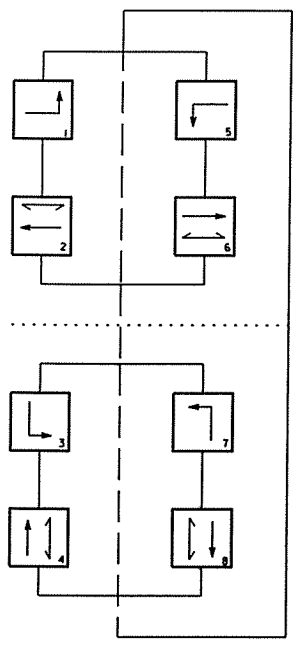


**SIGNAL FACES**  
12" LENSES



- NOTES:  
 1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.  
 2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS

**PHASING DIAGRAM**



DETECTOR SYSTEM DESCRIPTION: JOB 090284										COMMENTS	TUBE LENGTHS	
SPRINGDALE - HWY. 264/HWY. 265 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS					
DET. ID#	LOCATION	DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #			MASTER SYSTEM DETECTOR NUMBERS
Vz11	EB LEFT TURN	FAR	COMB.			1	V9	1	1		CAMERA V1	74'
Vz12	EB LEFT TURN		LOCAL			2	V1	1			CAMERA V1	74'
Vz21	WB ADVANCE		LOCAL			5	V2	2			CAMERA V2	74'
Vz22	WB NEAR		COMB.			6	V10	2	2		CAMERA V5	74'
Vz31	SB LEFT TURN FAR		COMB.			9	V11	3	3		CAMERA V3	74'
Vz32	SB LEFT TURN		LOCAL			10	V3	3			CAMERA V3	74'
Vz41	NB ADVANCE		LOCAL			15	V4	4			CAMERA V4	74'
Vz42	NB NEAR		COMB.			16	V12	4	4		CAMERA V7	74'
Vz51	WB LEFT TURN FAR		COMB.			7	V13	5	5		CAMERA V5	74'
Vz52	WB LEFT TURN		LOCAL			8	V5	5			CAMERA V5	74'
Vz61	EB ADVANCE		LOCAL			3	V6	6			CAMERA V6	74'
Vz62	EB NEAR		COMB.			4	V14	6	6		CAMERA V1	74'
Vz71	NB LEFT TURN FAR		COMB.			13	V15	7	7		CAMERA V7	74'
Vz72	NB LEFT TURN		LOCAL			14	V7	7			CAMERA V7	74'
Vz81	SB ADVANCE		LOCAL			11	V8	8			CAMERA V8	74'
Vz82	SB NEAR		COMB.			12	V16	8	8		CAMERA V3	74'
PB2A&B	HWY. 265 N. LEG		PED.				P2	2				
PB4A&B	HWY. 264 E. LEG		PED.				P4	4				
PB6A&B	HWY. 265 S. LEG		PED.				P6	6				
PB8A&B	HWY. 264 W. LEG		PED.				P8	8				
SPARE												

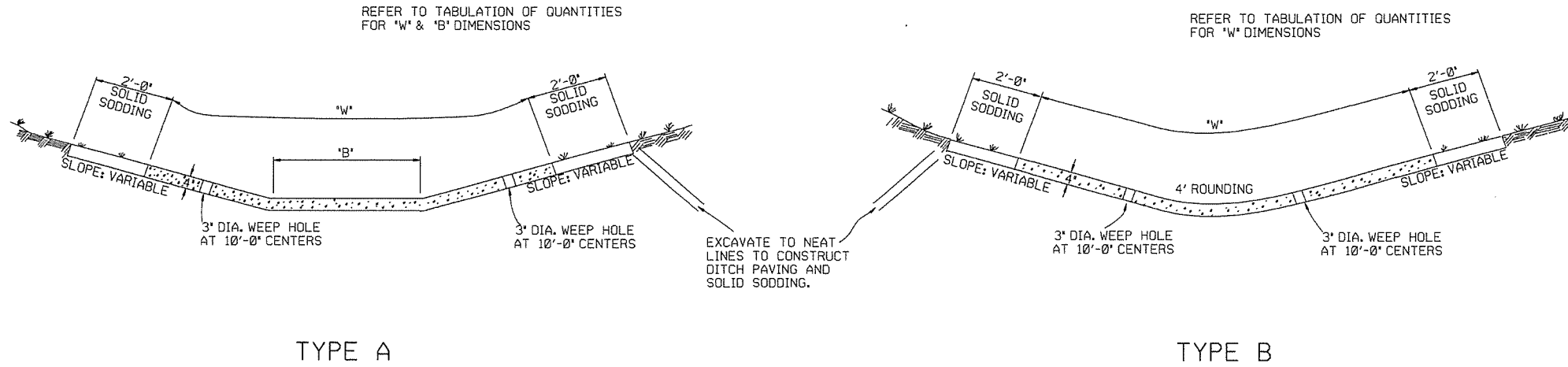
CONTROLLER INPUT ABBREVIATIONS:  
 V = VEHICLE INPUT  
 D = SYSTEM OR AUXILIARY INPUT  
 P = PEDESTRIAN INPUT  
 NOTE: \*AMP CHN\* REFERS TO THE DETECTOR RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.

**INTERVAL CHART**

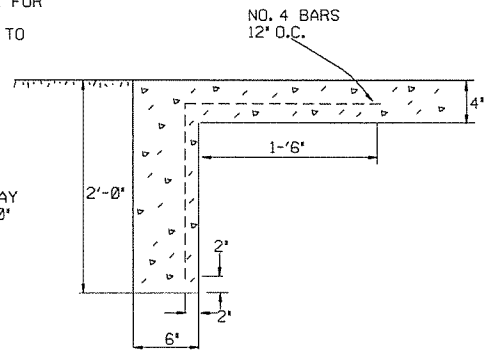
SIGNAL FACES	HWY. 264/HWY. 265														FLASH SEQ.		
	I+5	CLR.	I+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.		4+8	CLR.
1	←G	•	←G	•	←FY	...	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
2,3&22	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←G	•	←FY	...	←FY	...	←R
5&6	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	←G	•	←FY	...	←G	•	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
8,9&21	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
10	←R	←R	←R	←R	←R	←R	←R	←R	←G	•	←FY	...	←G	•	←FY	...	←R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
19&20	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK

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

LOCATION: HWY. 264 ( JACKSON AVE. ) / HWY. 265 ( OLD WIRE RD. )  
 CITY: SPRINGDALE  
 COUNTY: BENTON  
 DISTRICT: 9 SCALE: N/A DRAWN BY: GWE

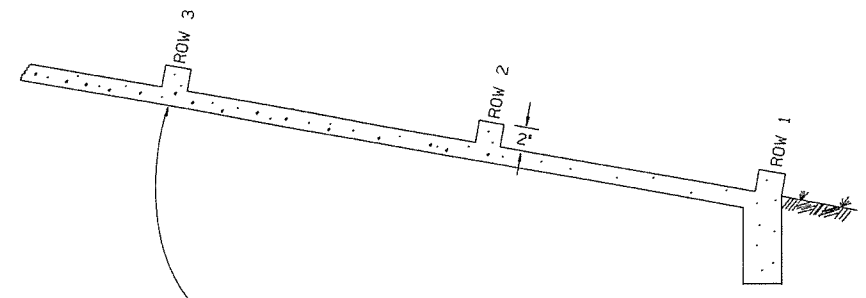


THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR 'CONCRETE DITCH PAVING.'



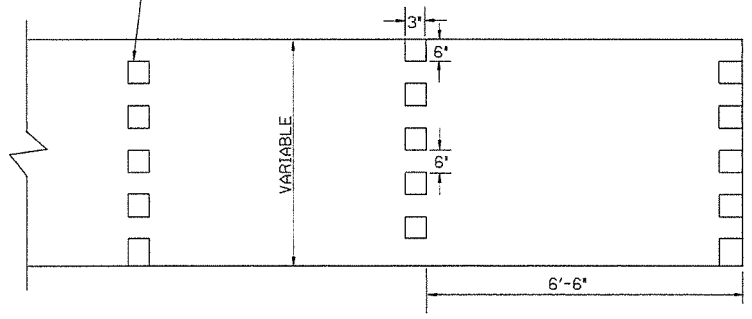
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



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)

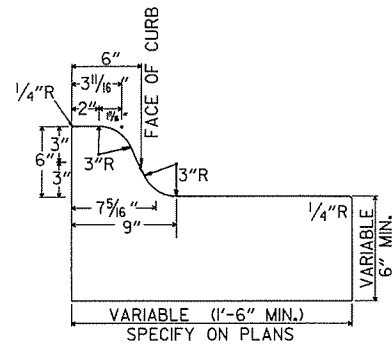
- GENERAL NOTES:
- THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.
  - TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.
  - SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.
  - 1' WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED	
10-2-72	REVISED AND REDRAWN	508-10-2-72
DATE	REVISION	DATE FILED

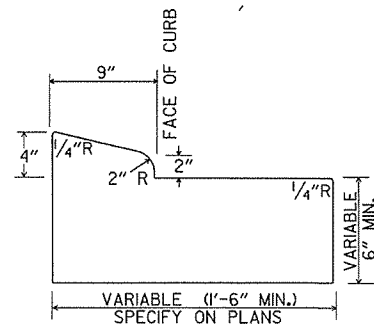
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

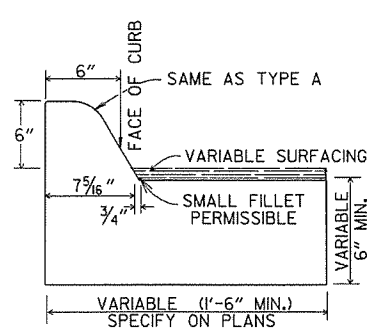
STANDARD DRAWING CDP-1



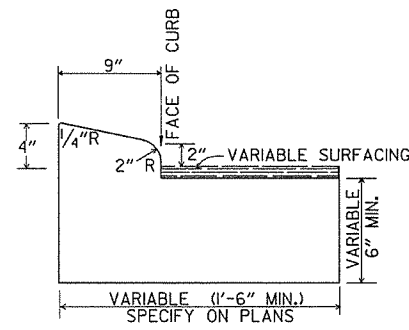
TYPE A



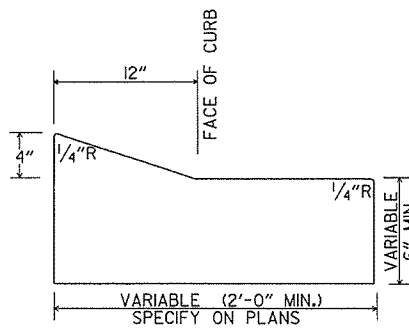
TYPE B-1



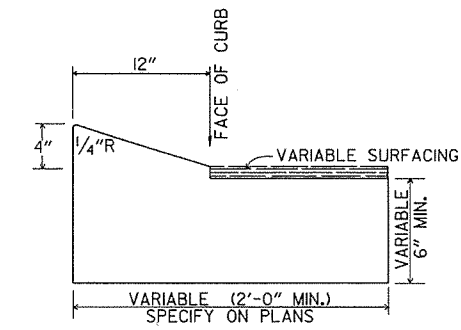
TYPE C



TYPE B-2

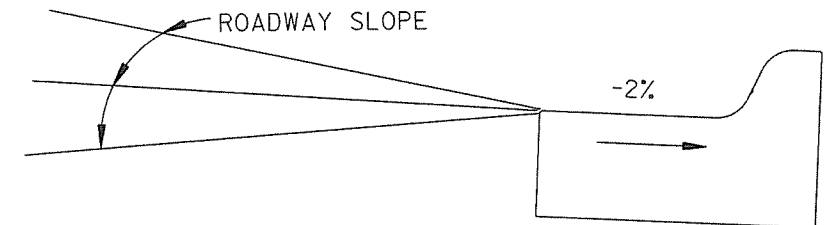


TYPE E-1

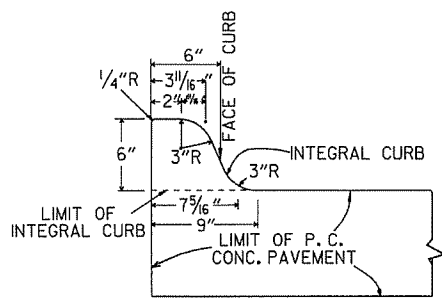


TYPE E-2

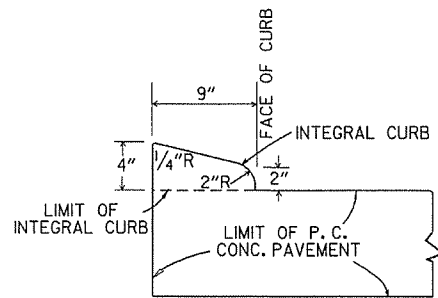
CONCRETE COMBINATION CURB AND GUTTER



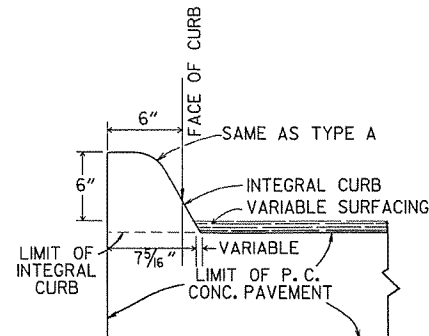
DETAIL OF GUTTER SLOPE  
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

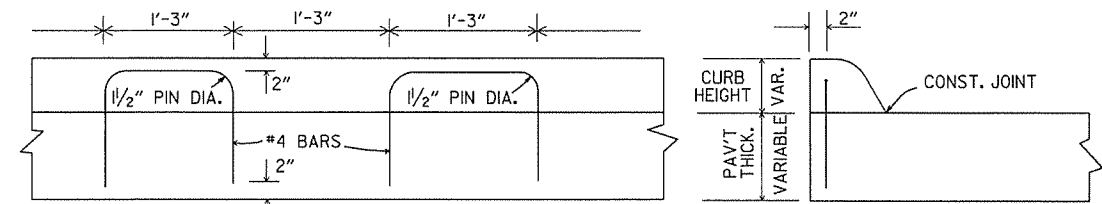


TYPE B



TYPE C

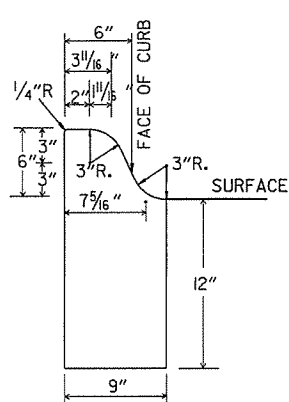
INTEGRAL CURB



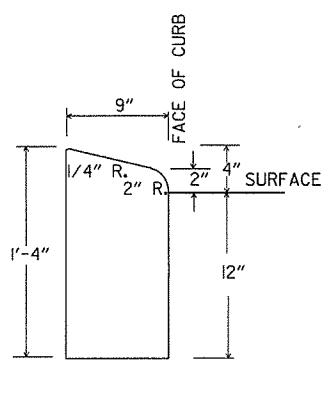
LONGITUDINAL SECTION

ELEVATION

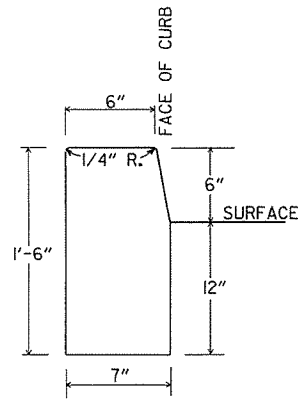
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



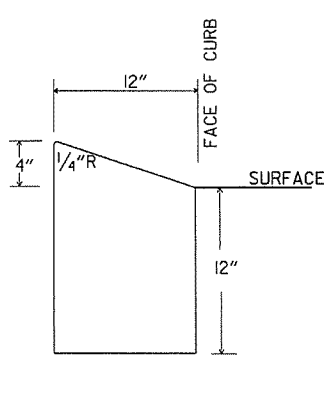
TYPE A



TYPE B

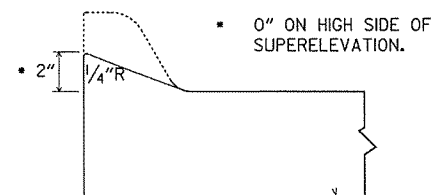


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

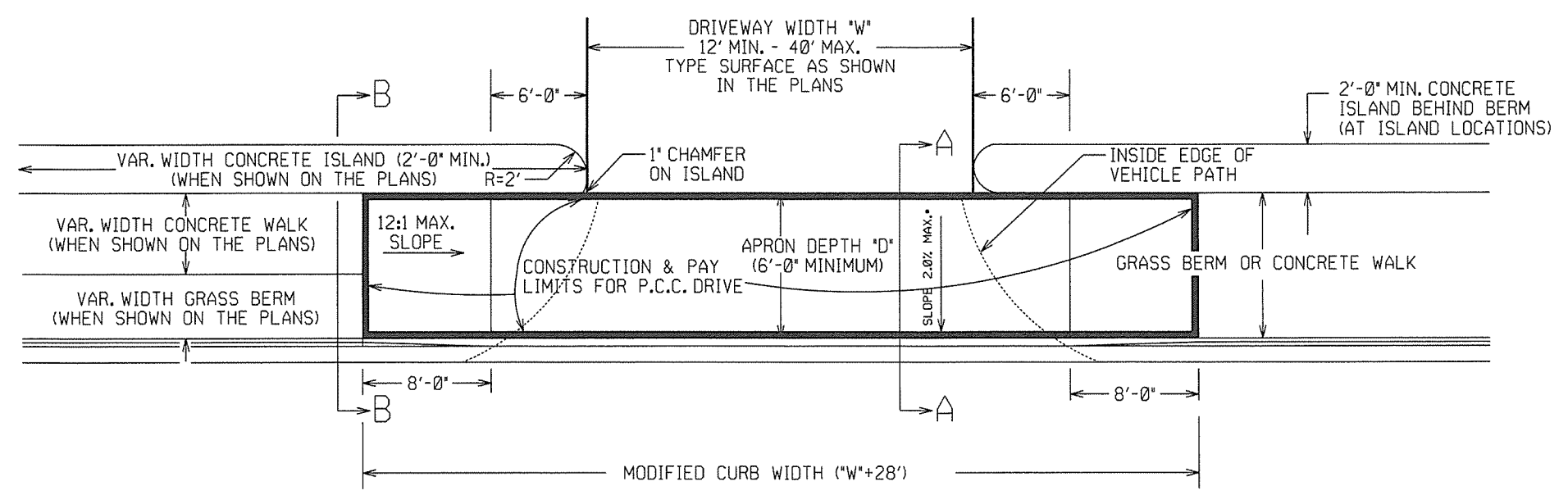
DETAILS OF MODIFIED CURB

11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
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
11-30-89	VARIABLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72
DATE	REVISION	DATE FILMED

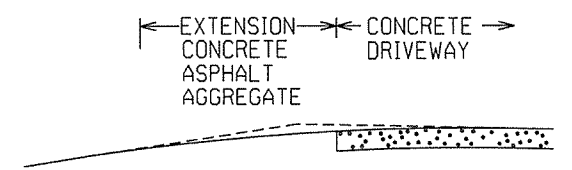
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1



PLAN VIEW

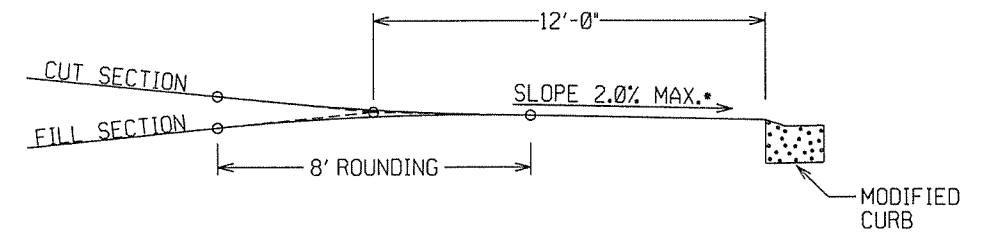


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")  
4" ACHM BINDER COURSE (1") OR  
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")  
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

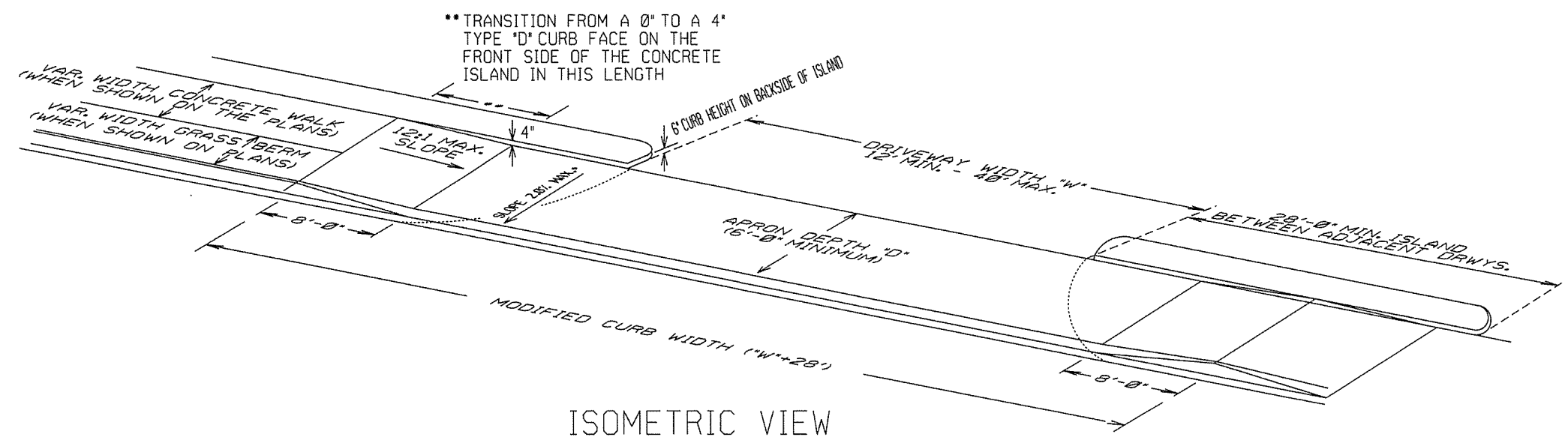
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

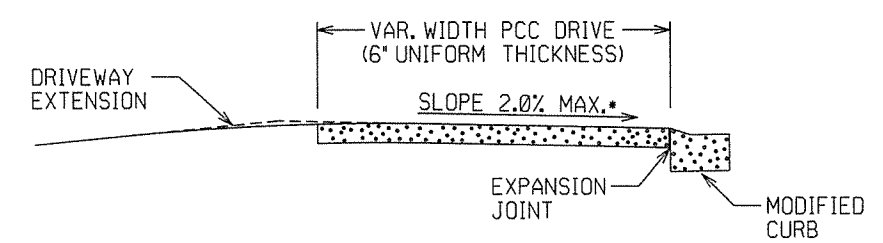


DRIVEWAY VERTICAL ALIGNMENT DETAILS

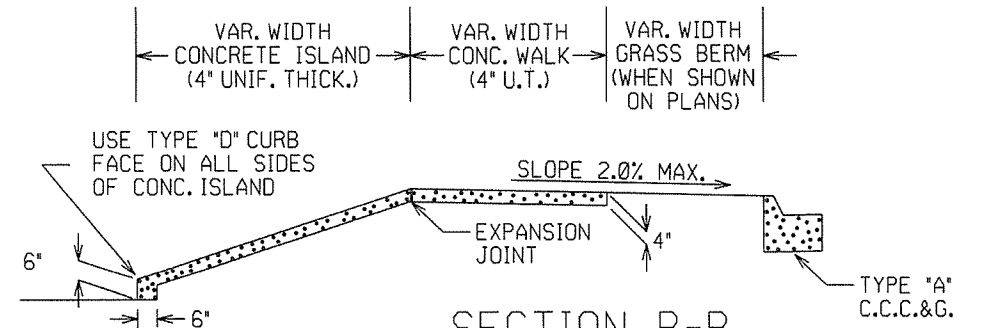
\* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



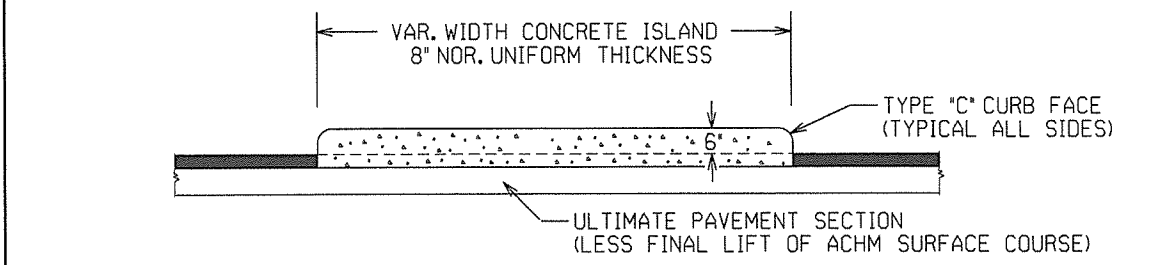
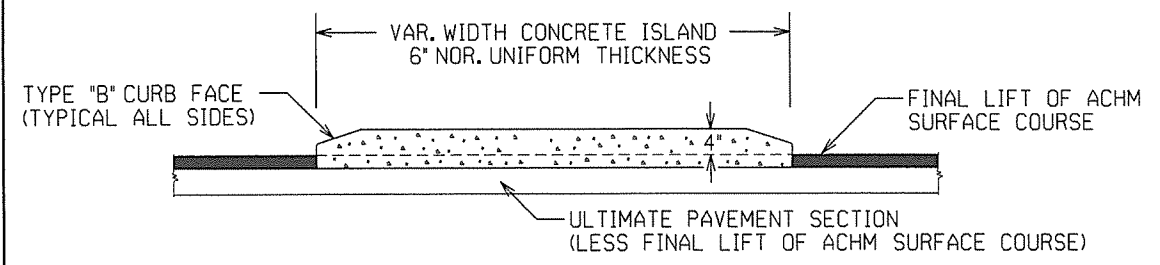
ISOMETRIC VIEW



SECTION A-A



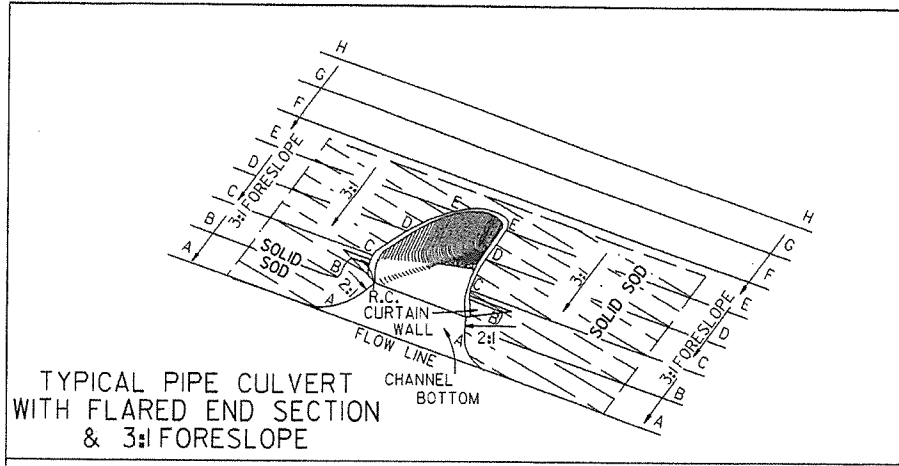
SECTION B-B  
CURBED ISLAND BEHIND WALK



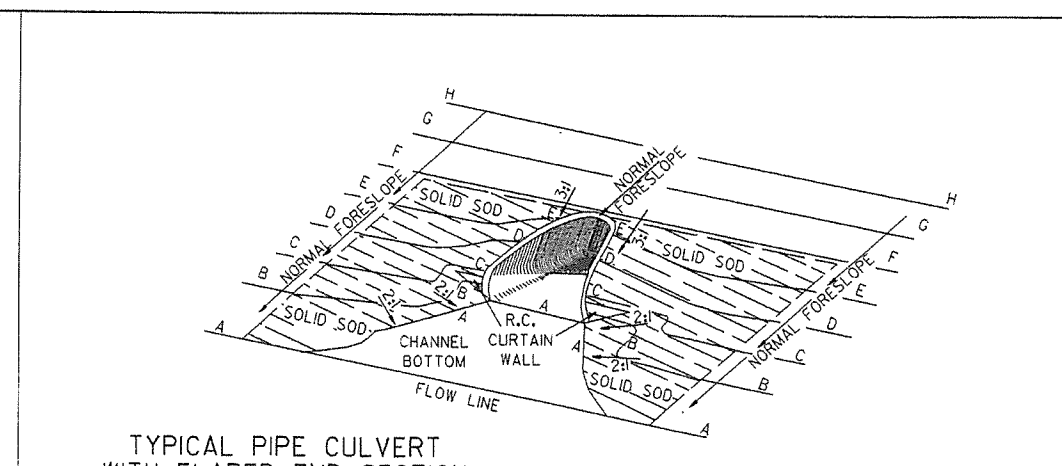
CURBED ISLANDS FOR CHANNELIZATION

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".

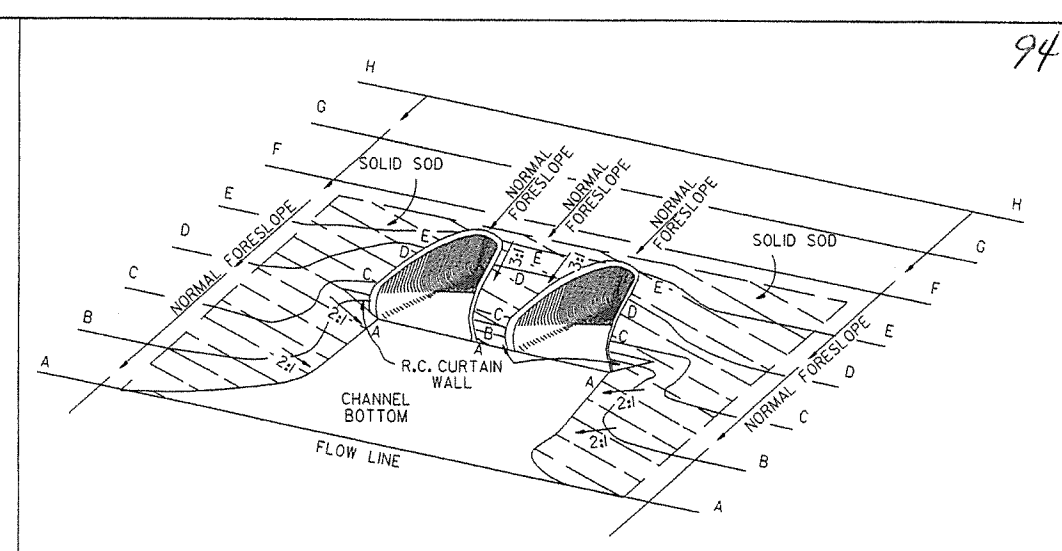
DATE	REVDATE	FILMED	DESCRIPTION
2-27-14			REVISED PLAN & ISOMETRIC VIEW
11-29-07			ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05			REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02			ADDED ISLAND DETAILS & NOTES
3-30-00			REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98			REVISED NOTES
11-18-98			REDRAWN AND REISSUED



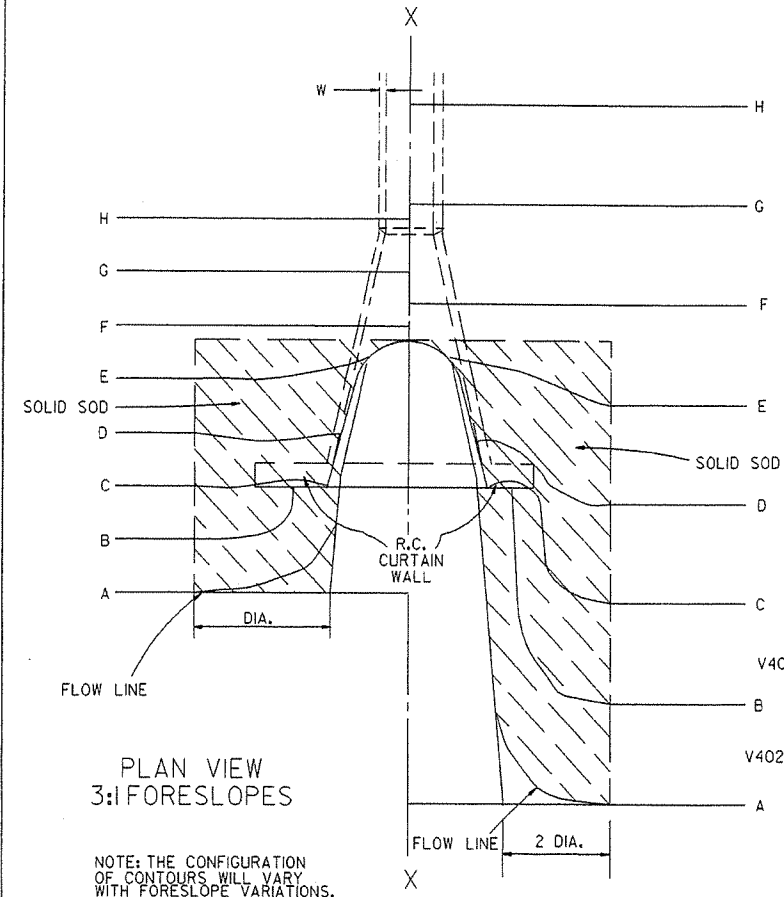
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

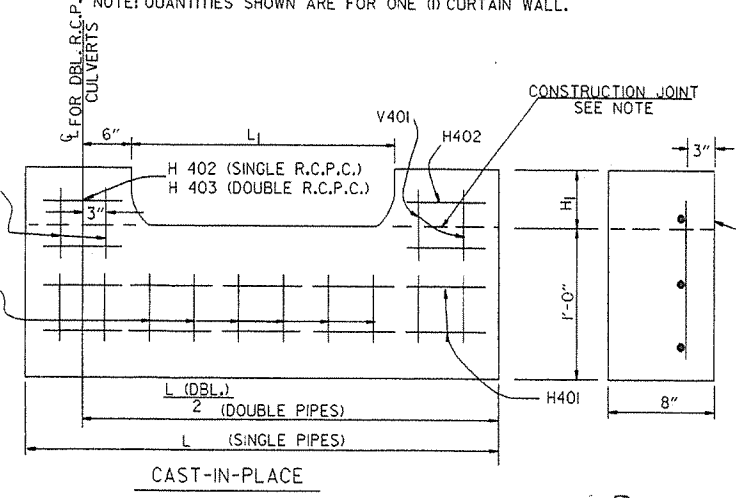
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

PIPE DIA.	H <sub>1</sub>	L <sub>1</sub>	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

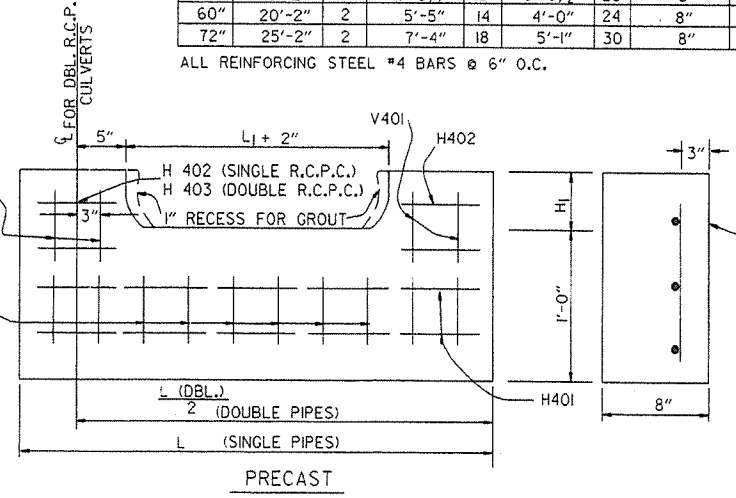
NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.

R.C. CURTAIN WALL DETAILS



PRECAST

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

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'-8 1/2"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

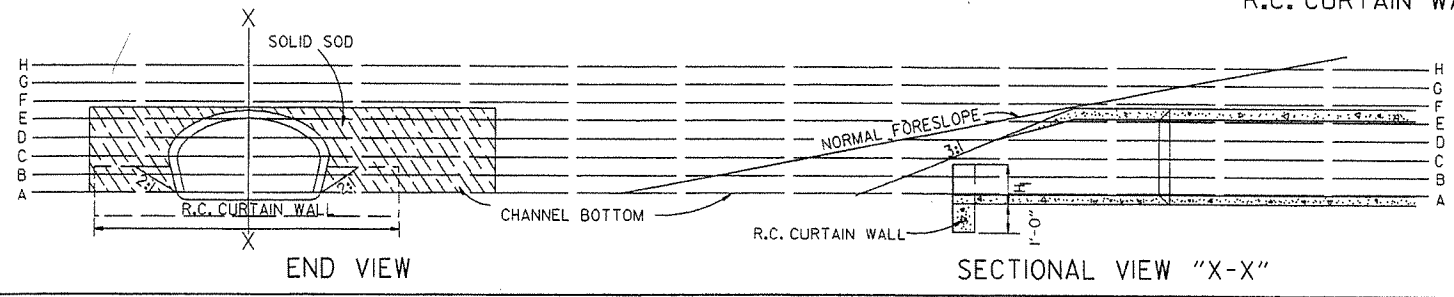
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.					
	3:1	4:1	6:1	3:1	4:1	6:1	3:1	4:1	6:1	3:1	4:1	6:1
	SQ. YDS.						SQ. YDS.					
18"	5	7	12	6	8	13	8	12	19	9	13	20
24"	8	12	19	9	13	20	13	18	29	14	19	30
30"	13	18	29	14	19	30	17	26	41	18	28	43
36"	17	26	41	18	28	43	23	35	55	25	37	57
42"	23	35	55	25	37	57	29	46	68	31	48	70
48"	29	46	68	31	48	70	35	57	85	37	59	87
54"	35	57	85	37	59	87	45	62	104	48	65	107
60"	45	62	104	48	65	107	55	72	123	57	77	123
72"	64	92	156	67	95	159						

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

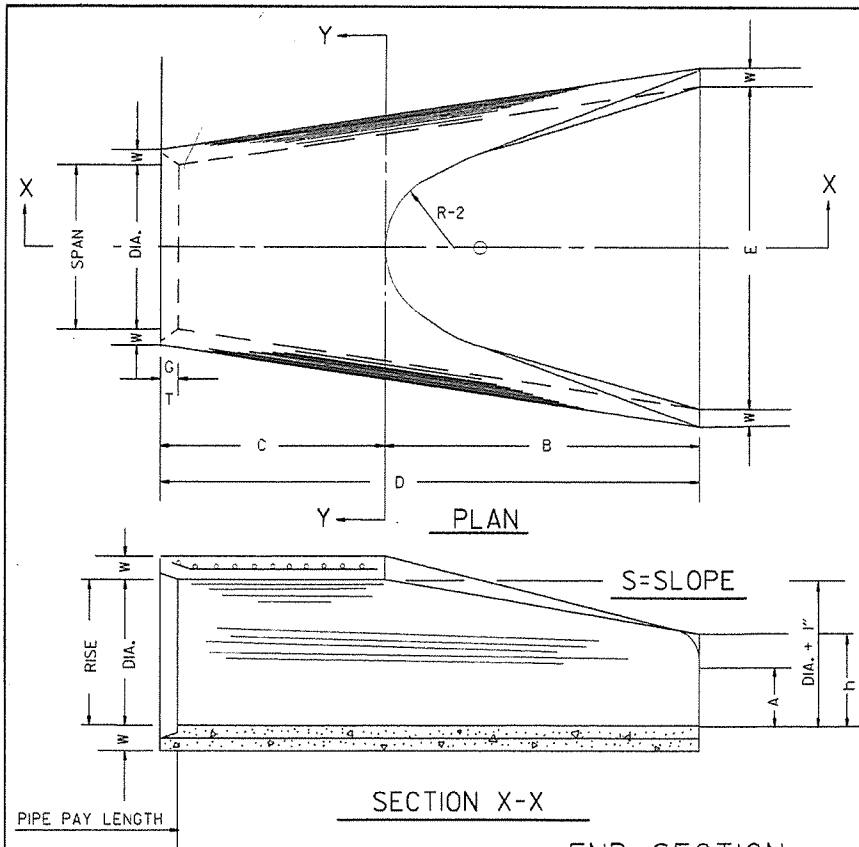
- A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
- ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
- CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
- WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

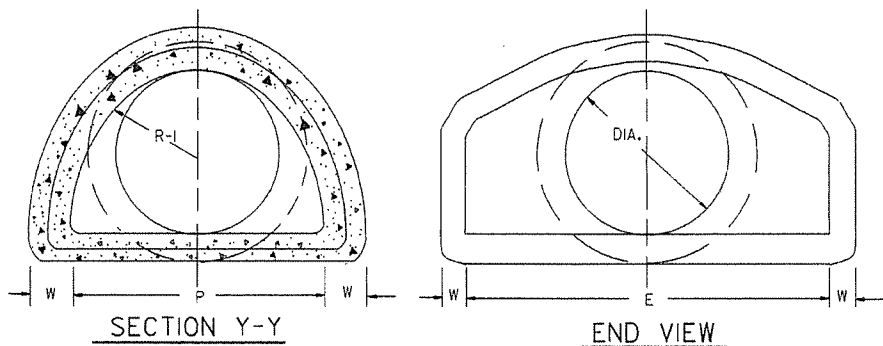
10-18-96	ADDED NOTE TO SOLID SODDING		ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING	10-18-96	
11-3-94	ADDED GENERAL NOTE NO. 4		
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.		
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES		
5-15-80	ADDED PRECAST WALL & GENERAL NOTES		
10-2-72	REVISED AND REDRAWN		
DATE	REVISION	FILMED	STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 3/8"	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 3/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/8"	24 5/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 3/8"	27 7/8"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	63 1/2"	33 3/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 1/8"	24"	5"	13250	4'-6"

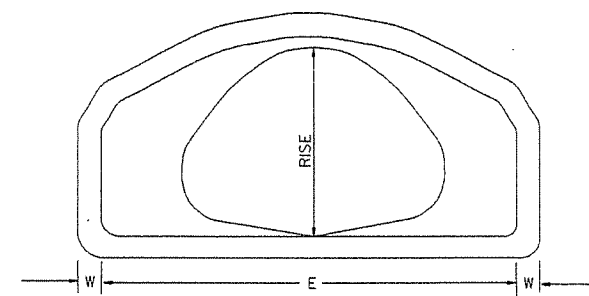


NOTE: TONGUE END ON UPSTREAM SECTION  
GROOVE END ON DOWNSTREAM SECTION

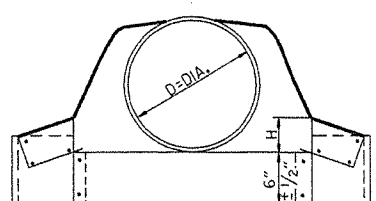
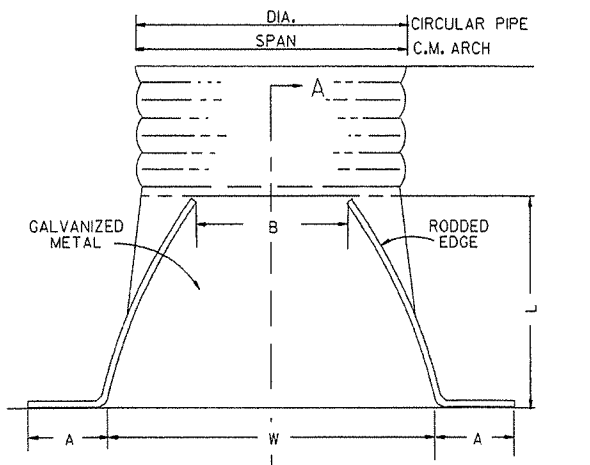
ARCH PIPE

EQUIV. DIA.	SPAN		RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	NOMINAL	AASHTO M 206	NOMINAL										
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/8"	14"	2 1/2"	2 1/2:1
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/8"	15"	2 1/2"	2 1/2:1
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/8"	20"	3"	2 1/2:1
36	43 3/4	44	26 5/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 7/8"	22"	3 1/2"	2 1/2:1
42	51 1/2	51	31 1/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 3/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/8"	24"	5"	2 1/2:1

\* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



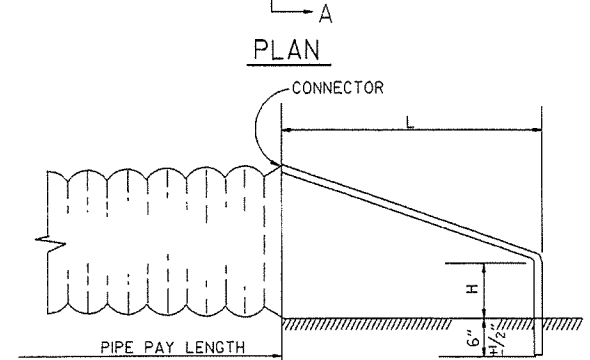
END VIEW CONCRETE ARCH PIPE



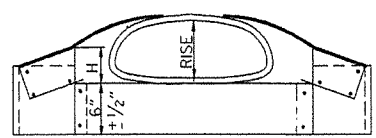
CIRCULAR PIPE

CIRCULAR PIPE

D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	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



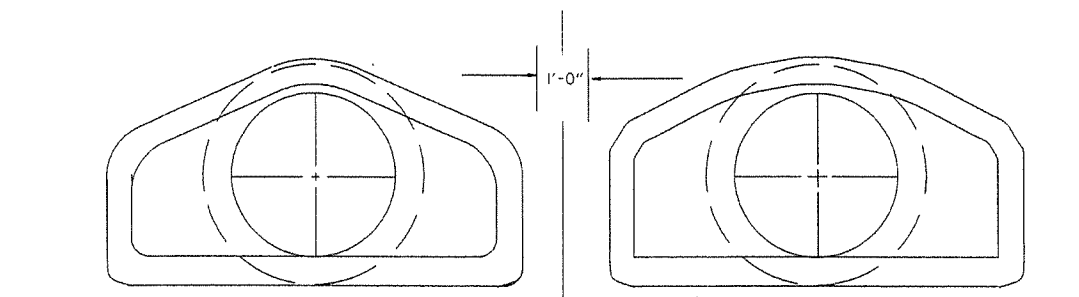
SECTION A-A



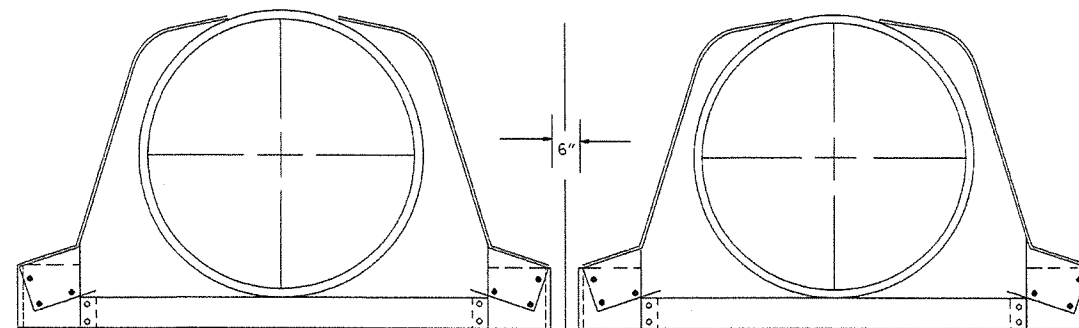
C.M. ARCH PIPE

C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	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 1/4:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



MULTIPLE R.C. PIPE CULVERTS

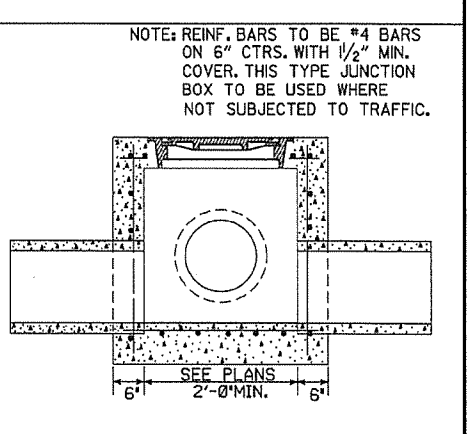
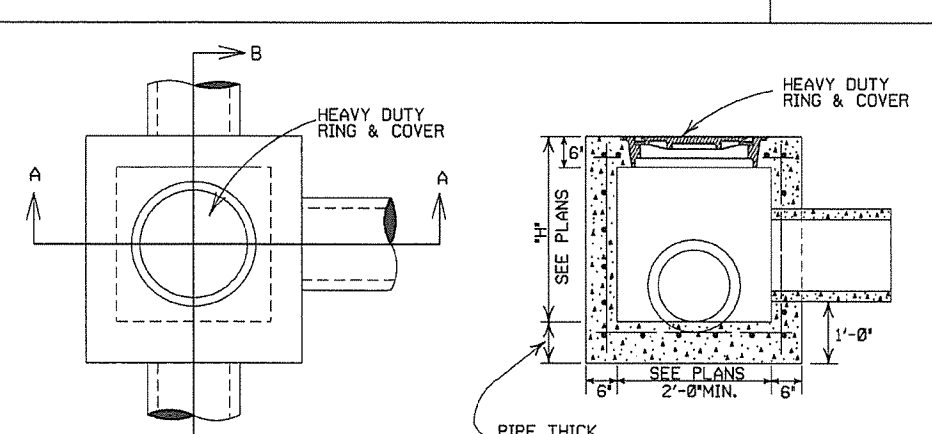
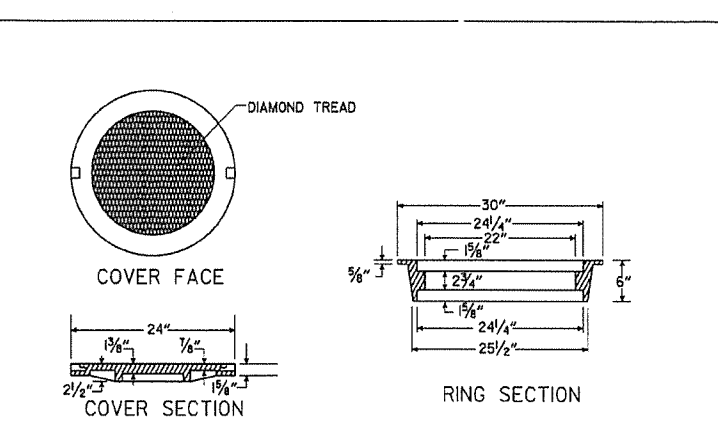
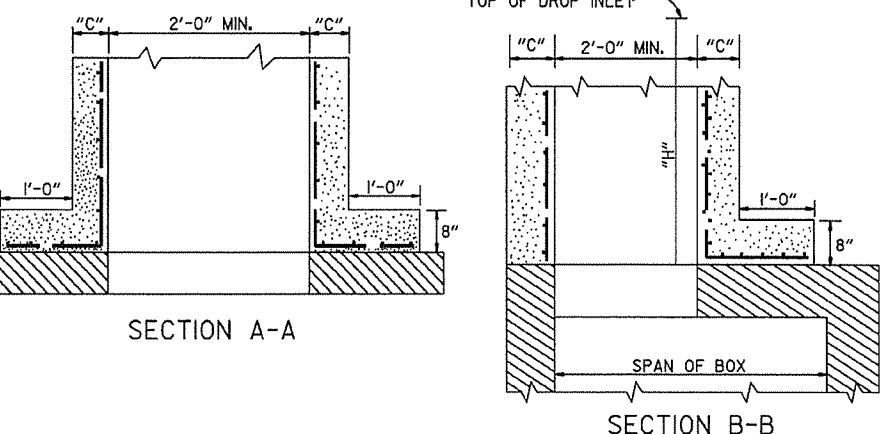
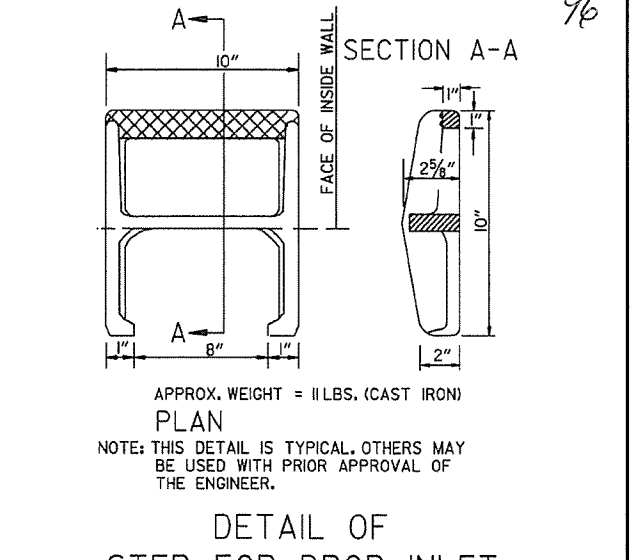
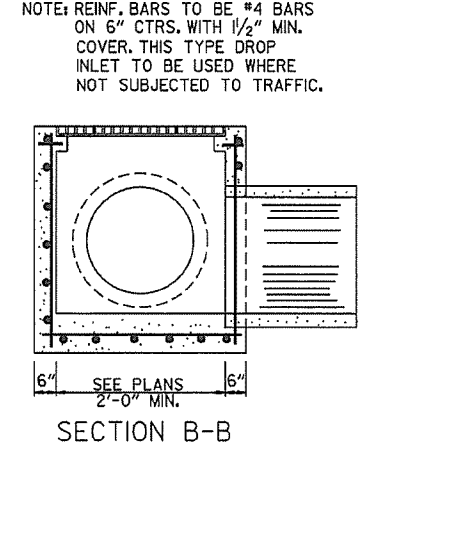
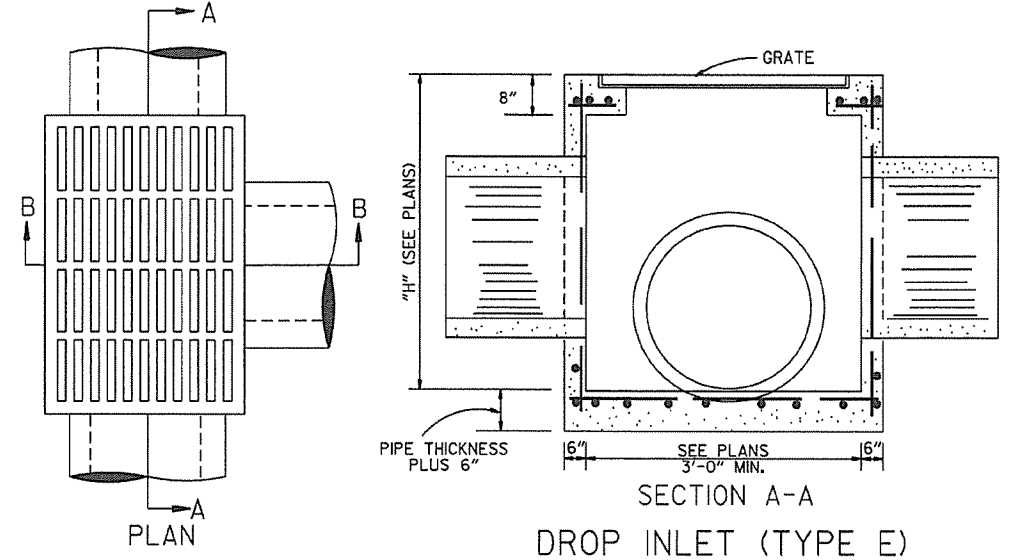
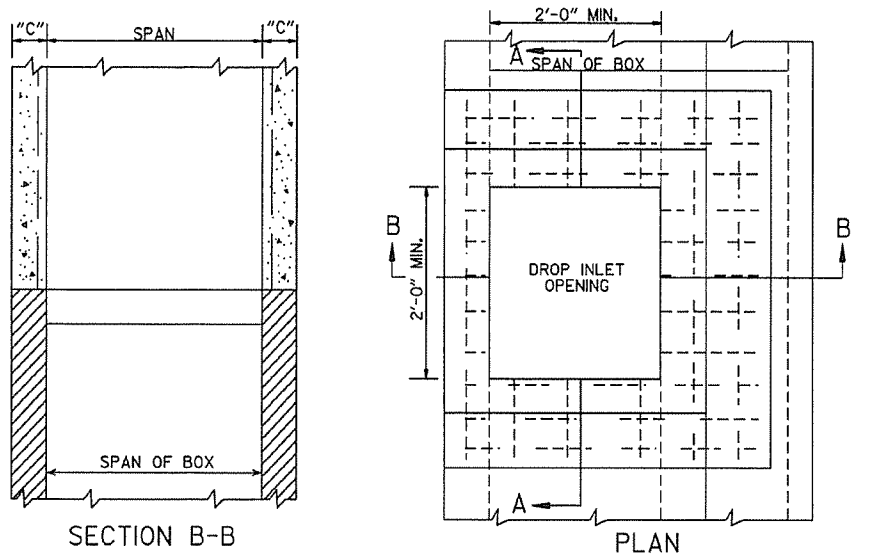


MULTIPLE C.M. PIPE CULVERTS

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

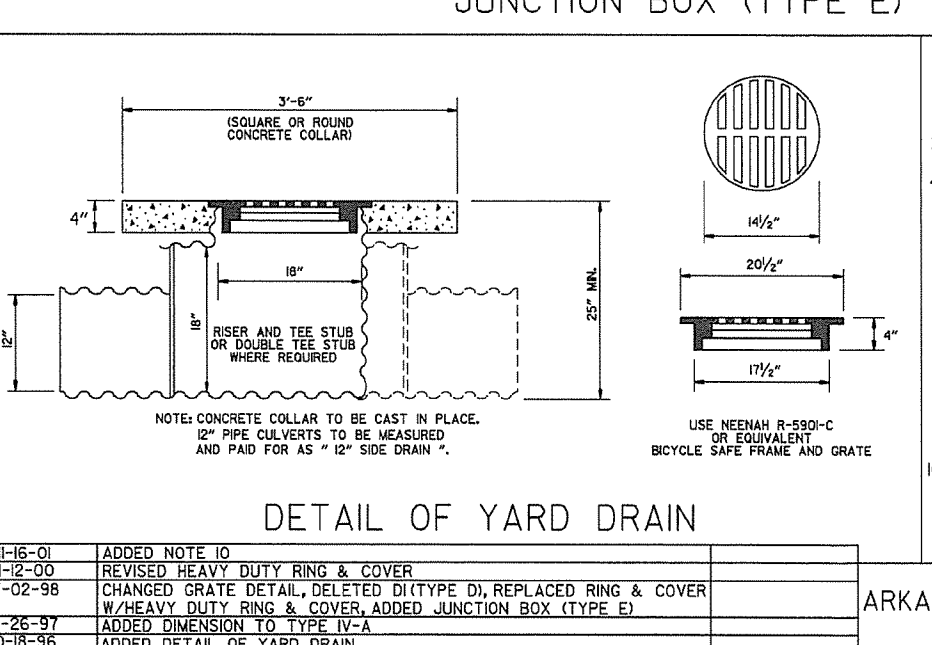
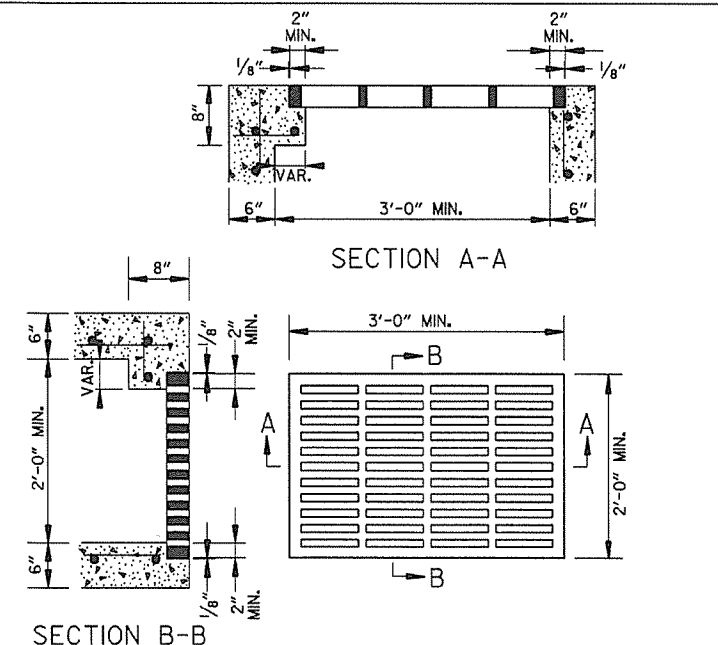
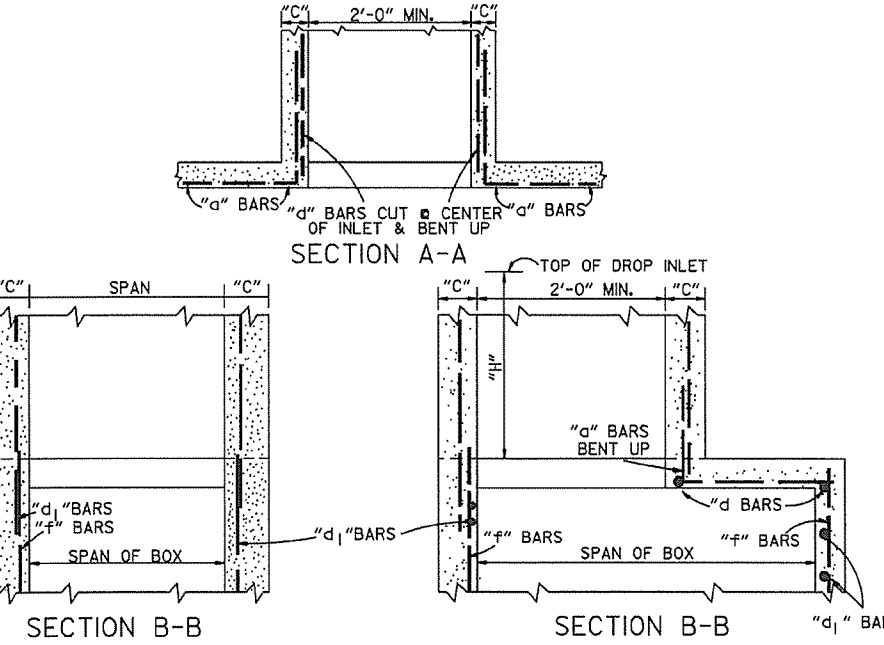
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74	
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73	
10-2-72	REVISED AND REDRAWN	760-10-2-72	
DATE	REVISION	FILE NO.	STANDARD DRAWING FES-2



METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT

HEAVY DUTY RING & COVER

JUNCTION BOX (TYPE E)



- GENERAL NOTES:
1. ALL EXPOSED CORNERS SHALL BE  $\frac{3}{4}$ " CHAMFERED.
  2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
  3. EXPANSION JOINT MATERIAL SHALL BE  $\frac{3}{4}$ " PREFORMED FIBER.
  4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
  5. GRATE AND FRAME SHALL NOT BE PAINTED.
  6. GRATE SHALL BE BICYCLE SAFE.
  7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
  8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
  9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
  10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

GRATE FOR TYPE E DROP INLET

DETAIL OF YARD DRAIN

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

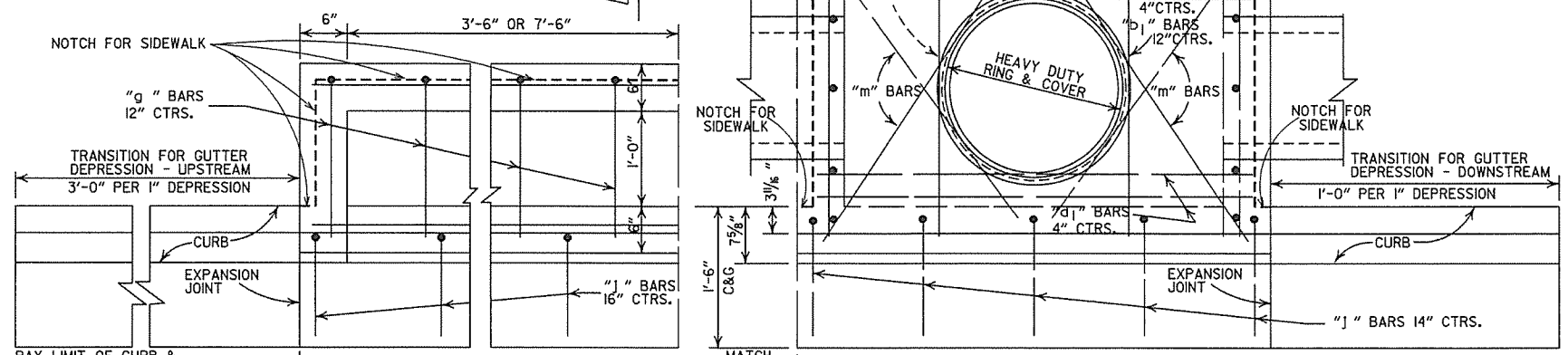
APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

DATE	REV.	REVISION	DATE FILMED
11-16-01		ADDED NOTE 10	
1-12-00		REVISED HEAVY DUTY RING & COVER	
7-02-98		CHANGED GRATE DETAIL, DELETED DI (TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97		ADDED DIMENSION TO TYPE IV-A	
10-18-96		ADDED DETAIL OF YARD DRAIN	
8-15-91		DELETE TYPE IV GRATE	
7-15-88		REVISED STEP DETAIL	
5-20-83		REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83		ADDED GENERAL NOTE NO. 4	
3-2-81		ADDED TYPE IV-A GRATE	
5-22-74		DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72		REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION  
 DETAILS OF DROP INLETS  
 & JUNCTION BOXES  
 STANDARD DRAWING FPC-9



NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.

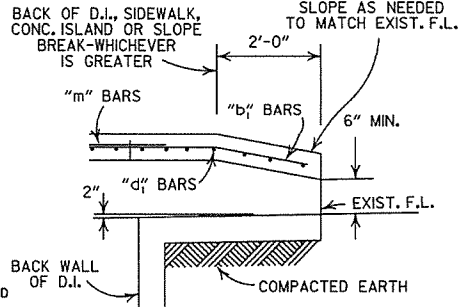
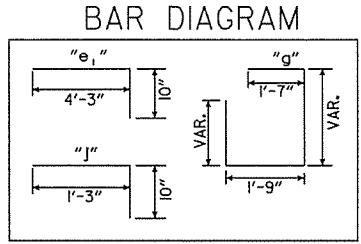


PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL
18"	2'-6"	1.77	156	0.28	22	0.58	38	0.87	72
24"	2'-6"	1.79	156	0.28	22				
30"	3'-2"	2.39	205	0.30	26				
36"	3'-8"	2.63	236	0.32	28				
42"	4'-4"	2.95	250	0.34	30				
48"	4'-10"	3.21	265	0.36	32				
						DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
						0.04	3		

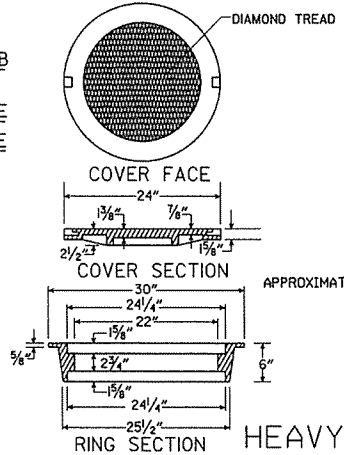
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

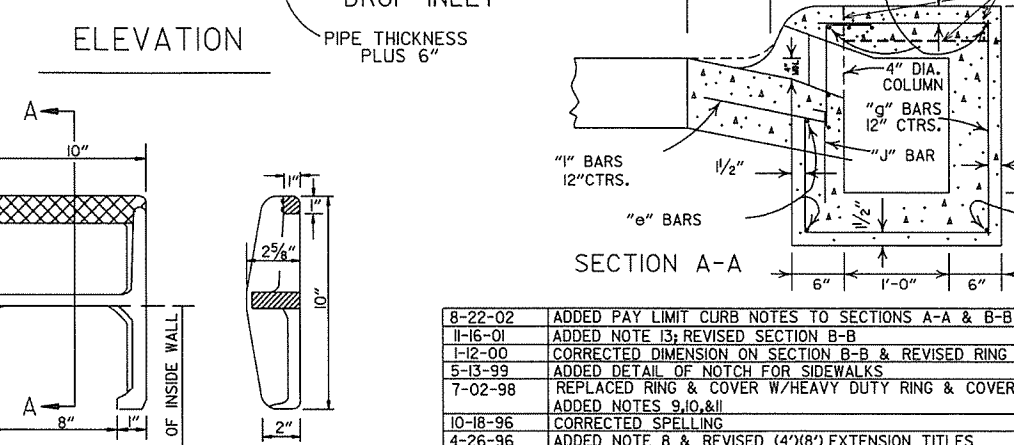
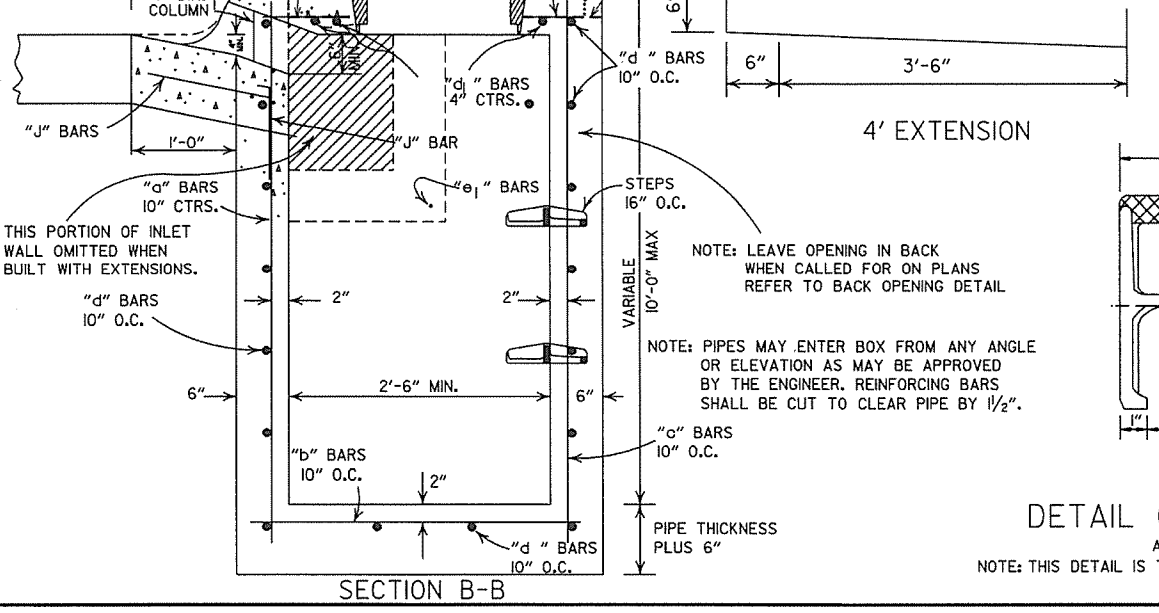
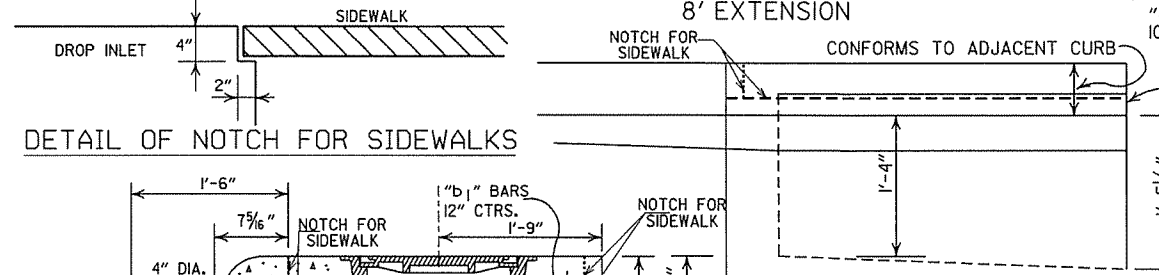
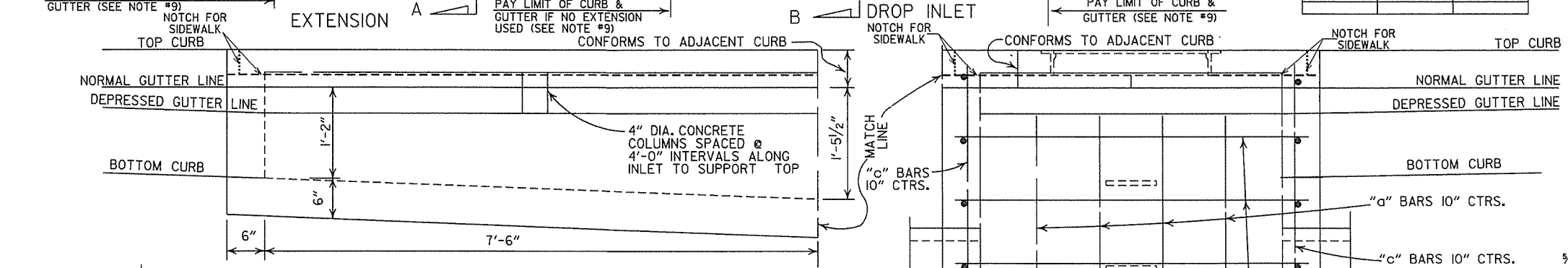


BACK OPENING  
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



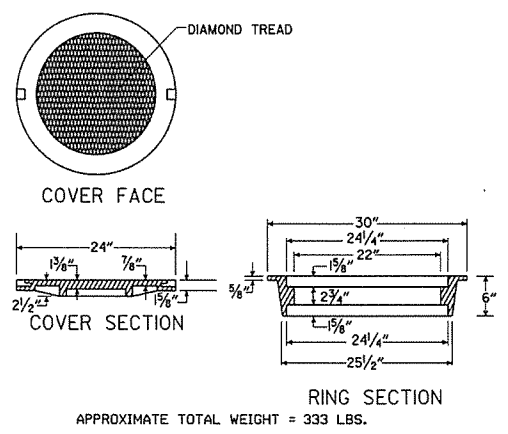
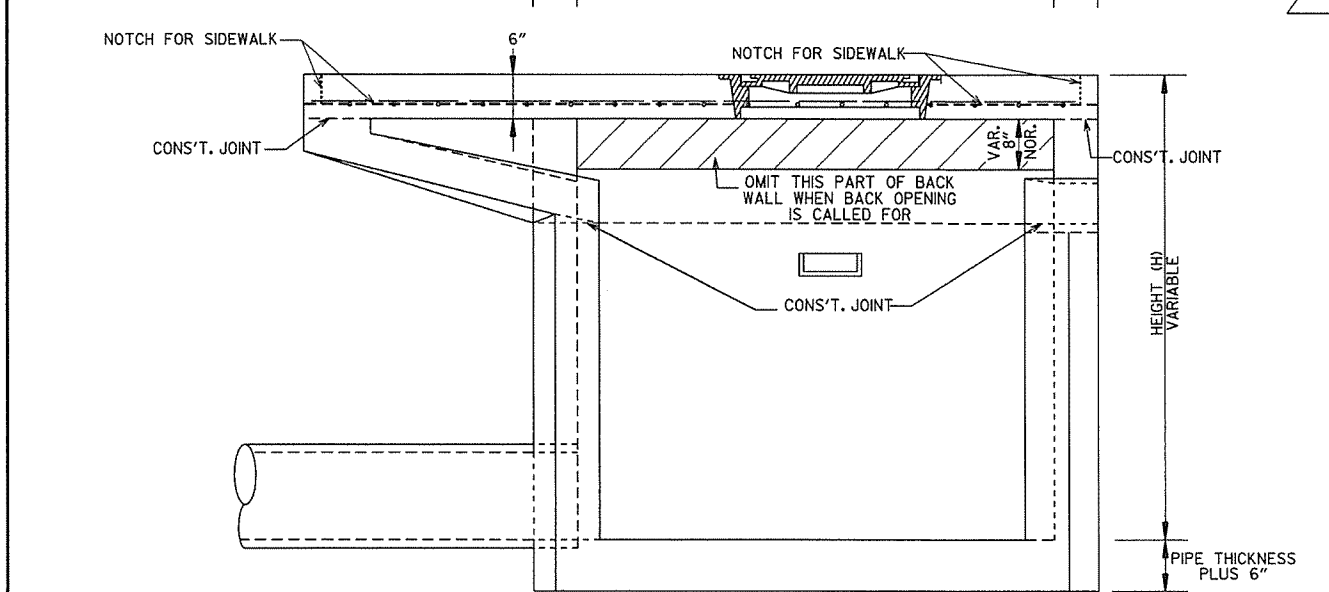
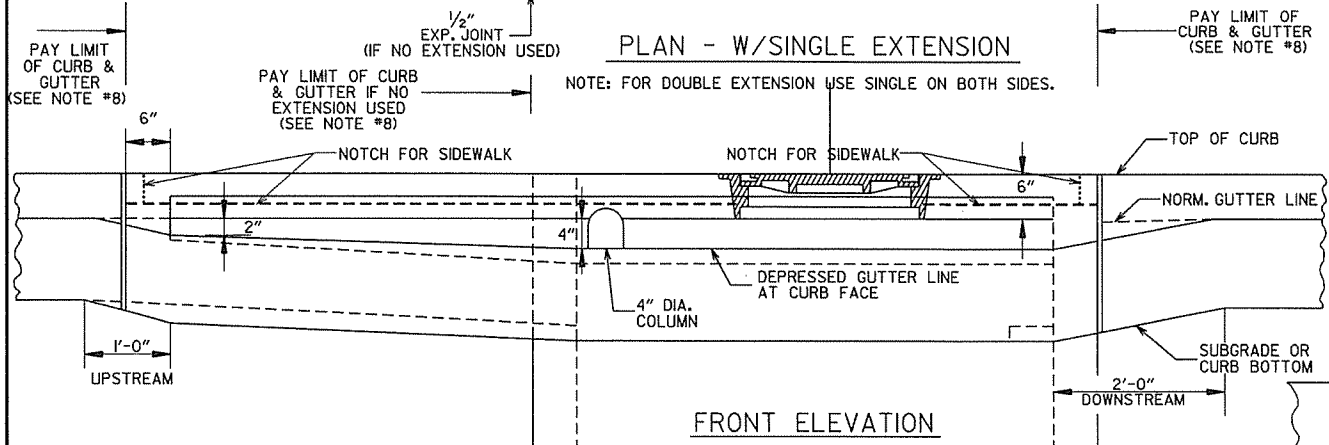
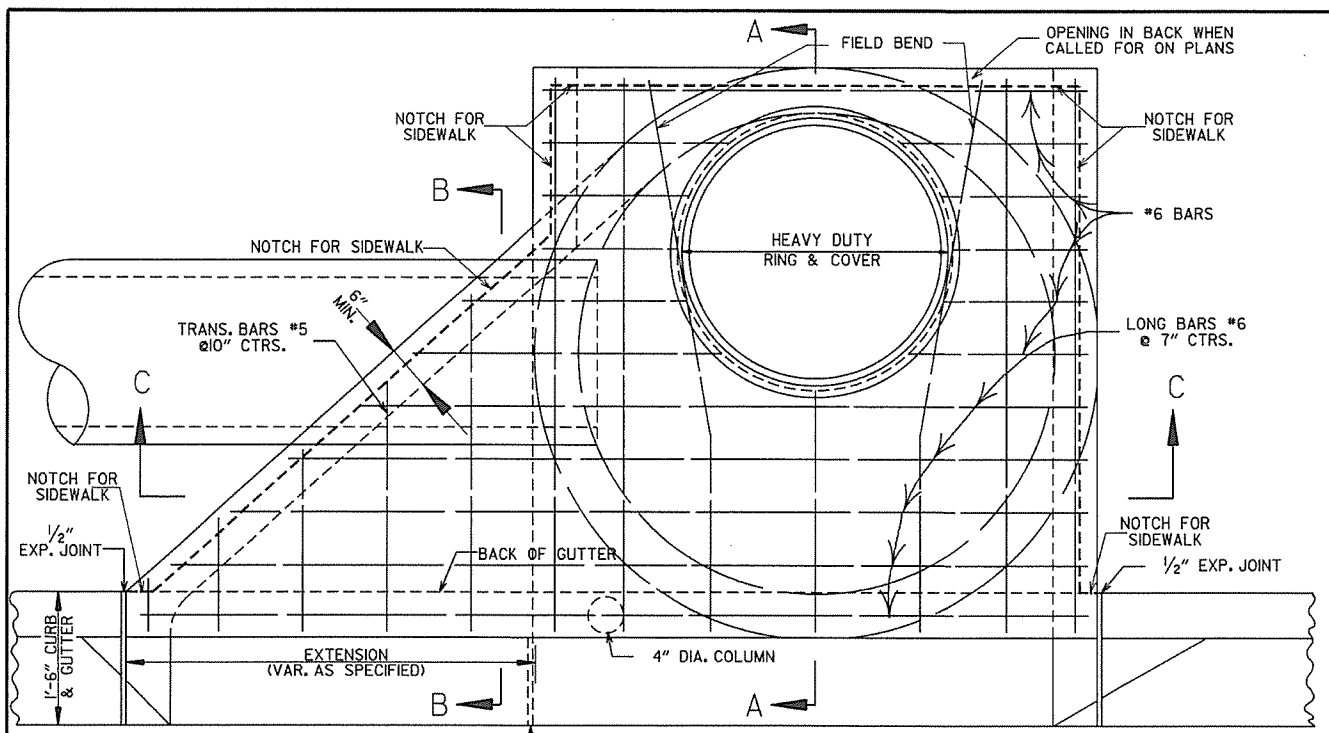
HEAVY DUTY RING & COVER

- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
  - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
  - ALL REINF. BARS SHALL BE #4 AND HAVE 1/2" COVER.
  - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
  - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
  - WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
  - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
  - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
  - PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
  - HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
  - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
  - 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
  - DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



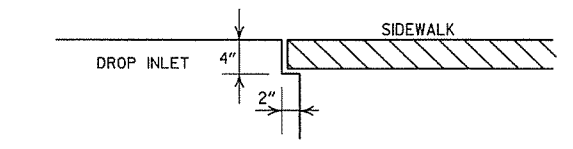
PLAN SECTION A-A  
DETAIL OF STEP FOR DROP INLET  
APPROX. WEIGHT = 11 LBS. (CAST IRON)  
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4') (8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

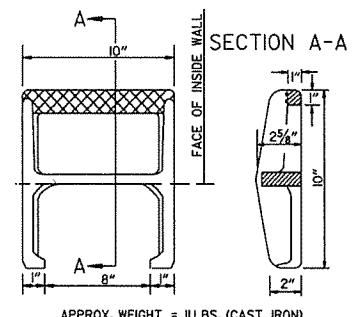


**HEAVY DUTY RING & COVER**

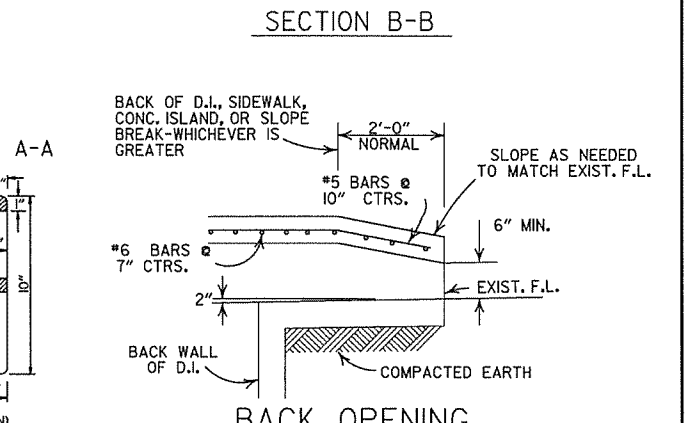
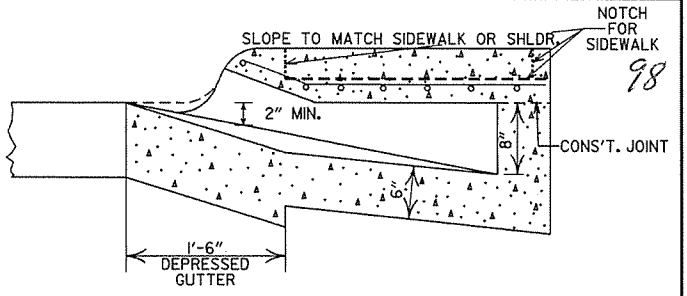
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



**DETAIL OF NOTCH FOR SIDEWALKS**



**DETAIL OF STEP FOR DROP INLET**



**BACK OPENING**

- WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).
- GENERAL NOTES:**
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
  2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
  3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1/2" COVER.
  4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
  5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
  6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
  7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
  8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
  9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
  10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
  11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
  12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
  13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

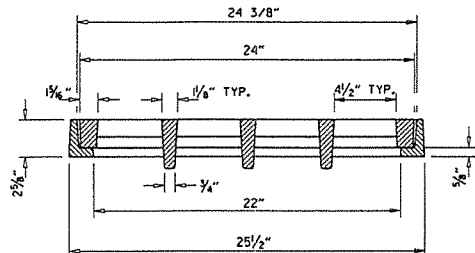
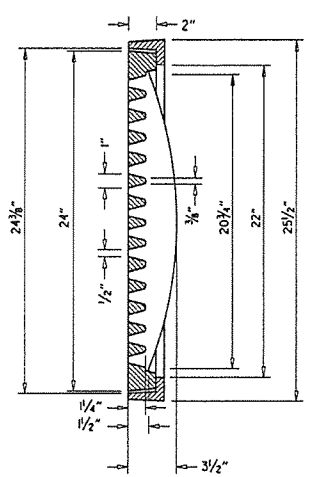
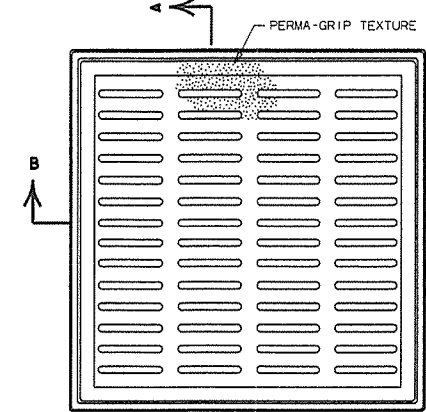
MINIMUM WALL THICKNESS			
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4" I.D.	12" THRU 27"	6"	5"
5" I.D.	30" THRU 42"	8"	6"
6" I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
8-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE B, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE #11 AND OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
12-2-95	TYPE C TO NO OPEN BACK DETAIL	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
12-16-91	REVISED NOTES #12 & ADDED BK. OPEN DETAIL	12-16-91
11-30-89	ADDED NOTE #12	11-30-89
11-23-88	ADDED NOTE & MINIMUM WALL THICKNESS	11-23-88
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	7-15-88
11-14-87	MODIFIED WALL THICKNESS	11-14-87
12-2-87	ISSUED	12-2-87

ARKANSAS STATE HIGHWAY COMMISSION

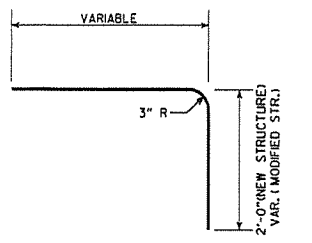
DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



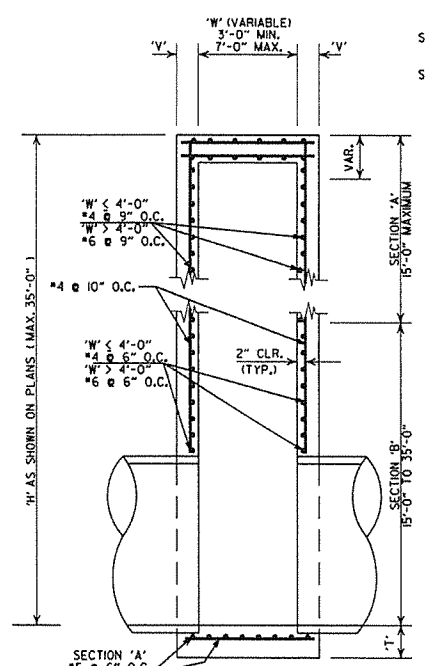
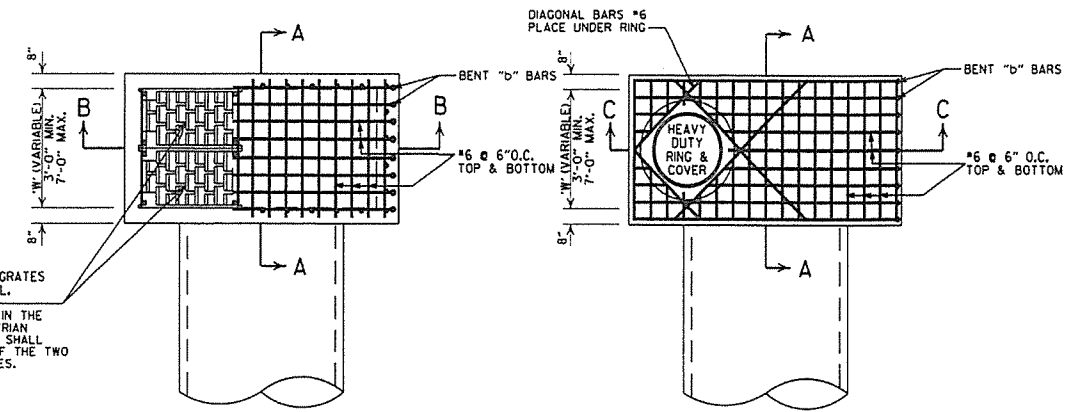
SECTION B-B  
DETAILS OF PEDESTRIAN GRATE AND FRAME

- GENERAL NOTES (PEDESTRIAN GRATE & FRAME)
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE 1/2" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
  2. THE PEDESTRIAN 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, & AASHTO M 306.
  3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
  4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
  5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211 LBS.
  6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

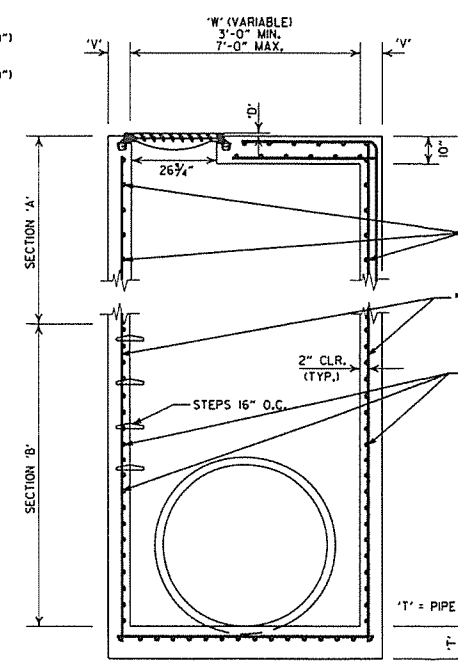


DETAIL OF BENT "b" BAR

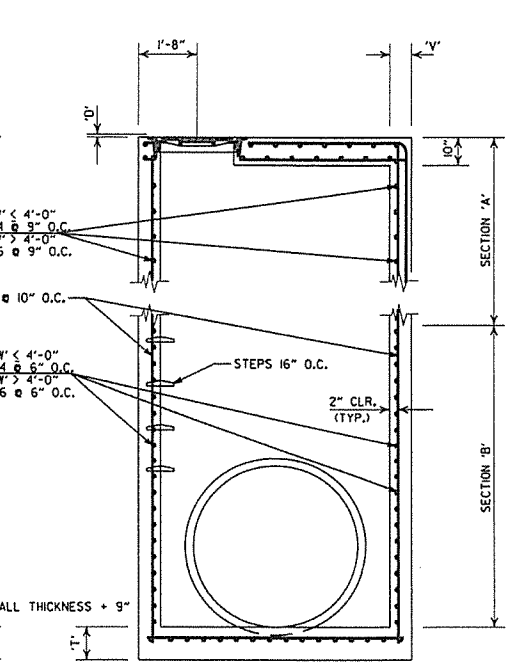
TWO RIBBED VANE GRATES WITH FRAME NORMAL.  
WHEN CALLED FOR IN THE PLANS, ONE PEDESTRIAN GRATE WITH FRAME SHALL BE USED IN LIEU OF THE TWO RIBBED VANE GRATES.



SECTION A-A  
DETAILS OF DROP INLET (TYPE ST)

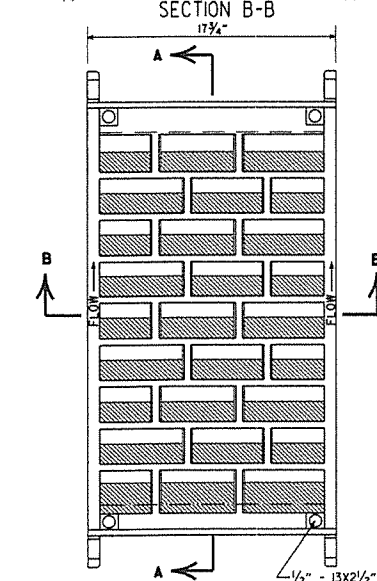
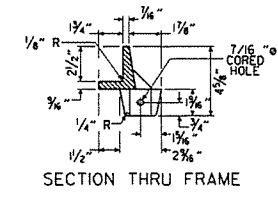
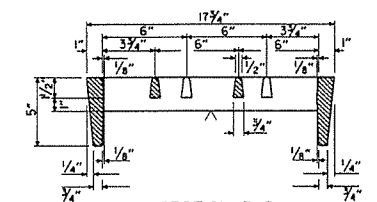


SECTION B-B

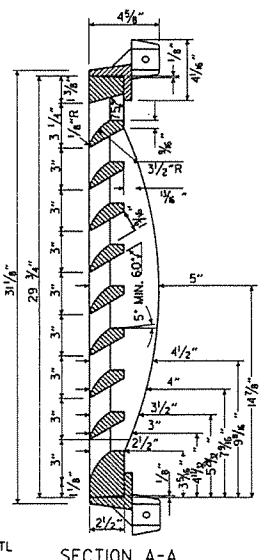


SECTION C-C  
DETAILS OF JUNCTION BOX (TYPE ST)

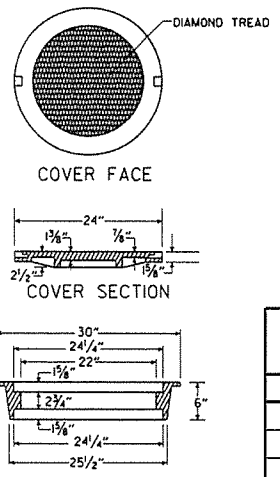
- GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
  2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
  3. ALL EXPOSED CORNERS ARE TO HAVE A 1/4" CHAMFER.



SECTION B-B  
DETAILS OF RIBBED VANE GRATE AND FRAME



- GENERAL NOTES (RIBBED VANE GRATE & FRAME)
1. RIBBED VANE 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, & AASHTO M 306.
  2. GRATE AND FRAME SHALL NOT BE PAINTED.
  3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
  4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

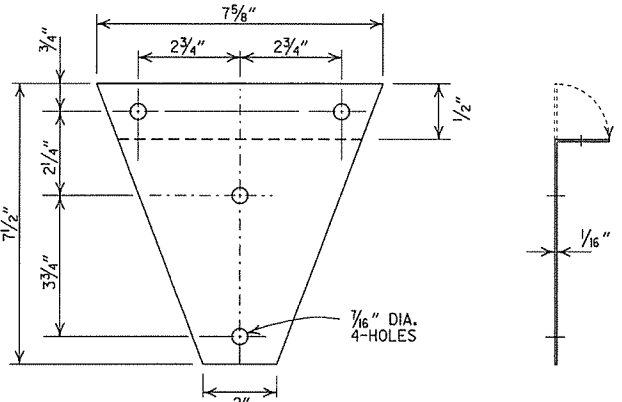
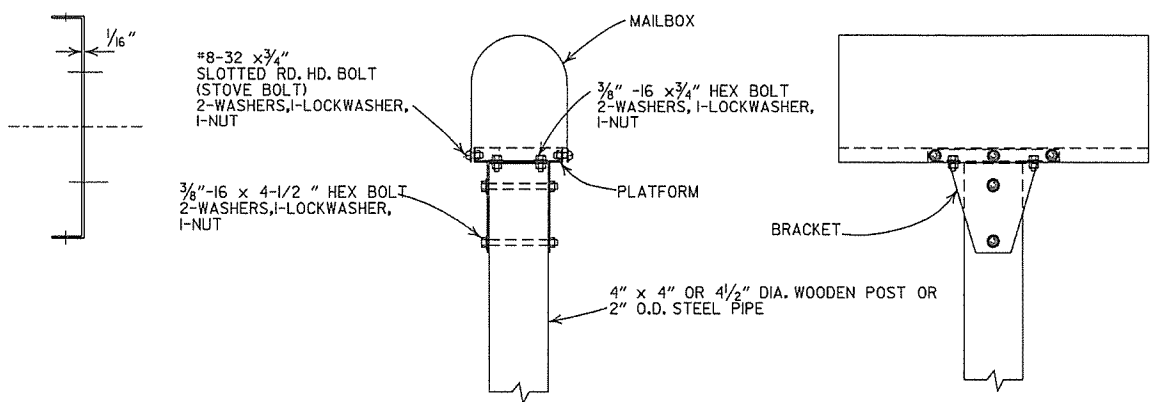
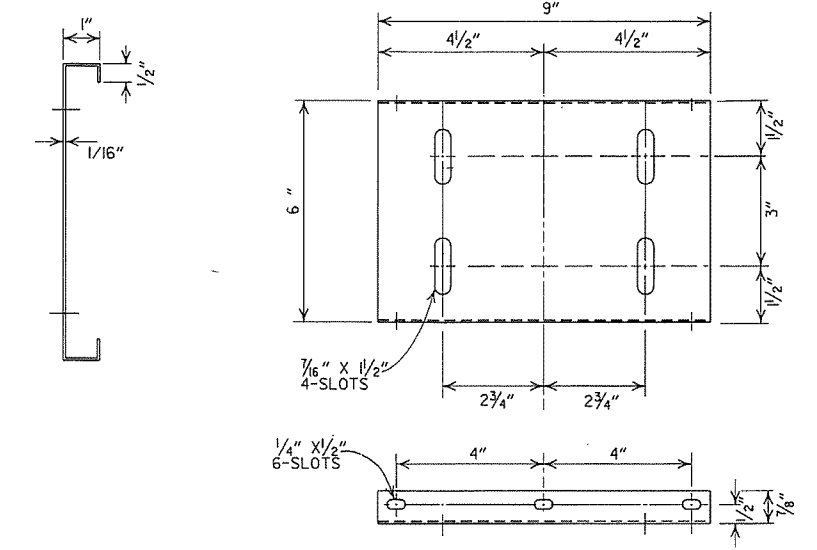
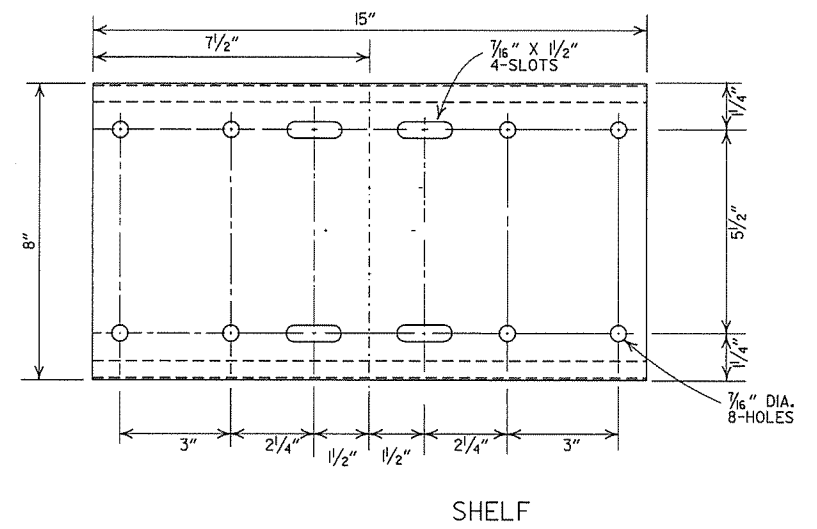


RING SECTION  
HEAVY DUTY RING & COVER  
APPROXIMATE TOTAL WEIGHT = 333 LBS.

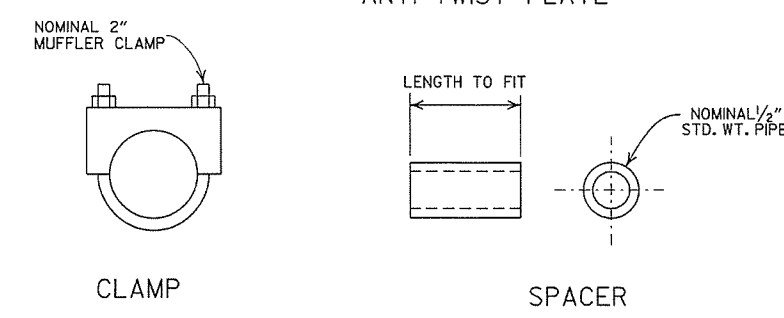
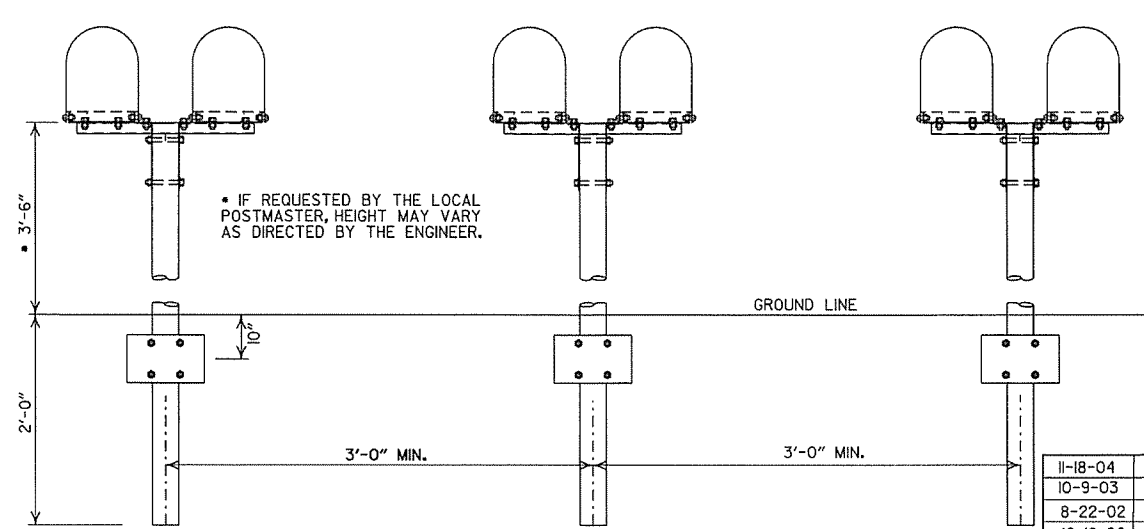
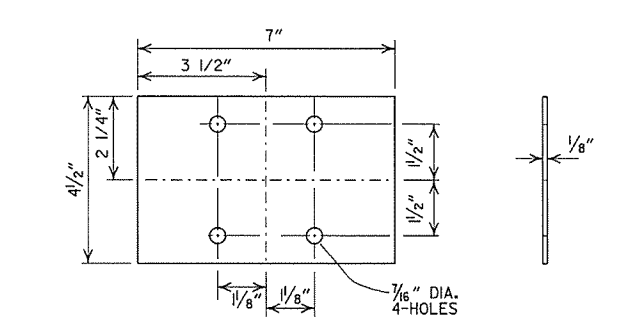
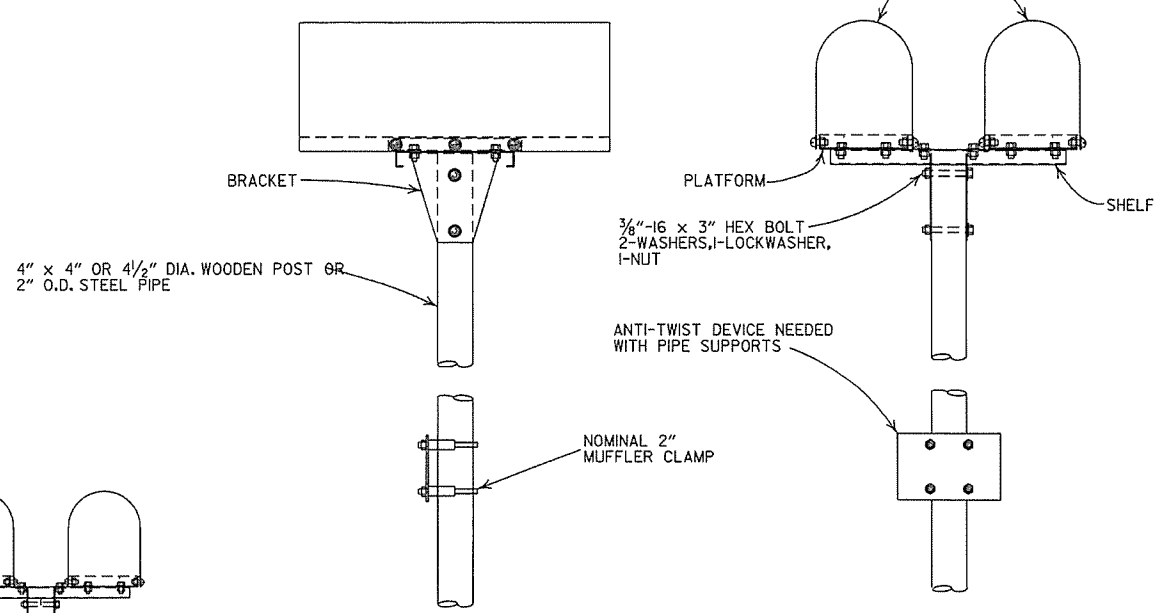
- GENERAL NOTES (HEAVY DUTY RING & COVER):
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
  2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
  3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
  4. 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 REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER, ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

ARKANSAS STATE HIGHWAY COMMISSION  
**DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)**  
 STANDARD DRAWING FFC-9S



- GENERAL NOTES**
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
  2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
  3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 3/4" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X 3/4" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
  4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
  5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
  6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.

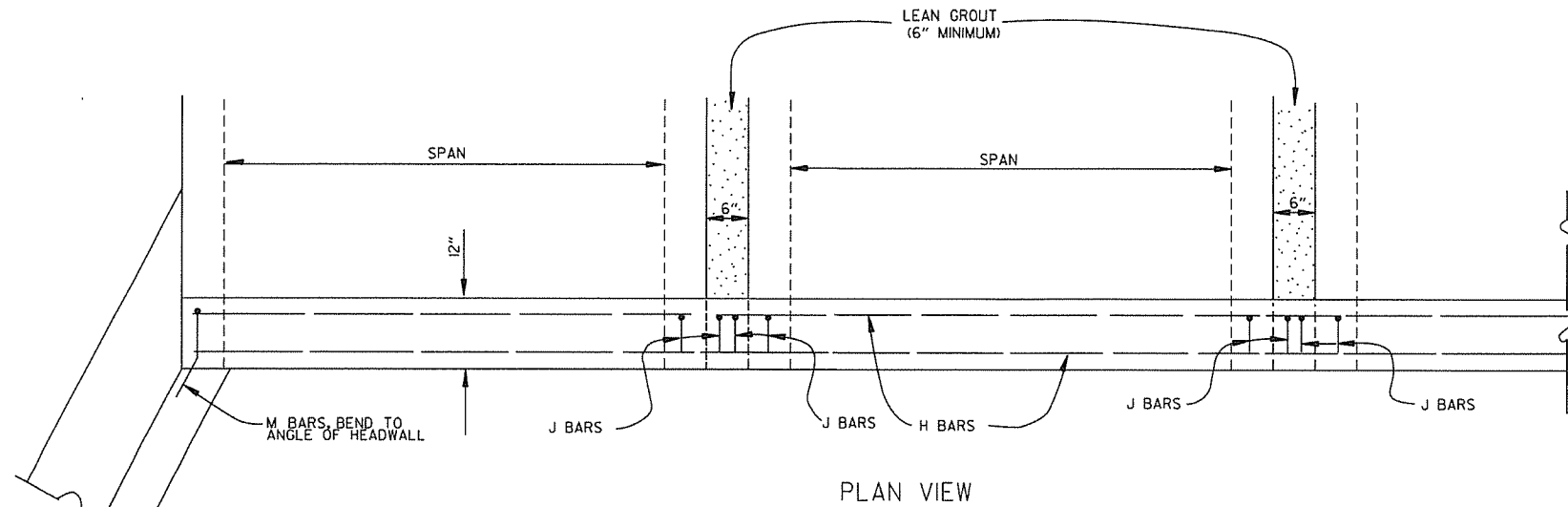


11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED
DATE	FILMED	REVISION

ARKANSAS STATE HIGHWAY COMMISSION

**MAILBOX DETAILS**

STANDARD DRAWING MB-1



BAR LIST

BAR	NO.	SIZE	LENGTH	BAR BENDING DIAGRAM
H	2	#4	•	
I	•	#4	•	
J	•	#4	1'-5"	
L	•	#4	3'-2"	
M	•	#4	1'-8"	

• NOTE: LENGTH AND NUMBER OF BARS VARIES WITH SIZE OF CULVERT

GENERAL NOTES

WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

WINGS, FOOTINGS, APRONS AND CURTAIN WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE WING DRAWING. STEEL AND CONCRETE QUANTITIES WILL BE ADJUSTED TO FIT THE IN-PLACE WIDTH & HEIGHT OF THE PRECAST CONCRETE BOX CULVERTS.

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

WINGWALLS AND FOOTINGS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

ALL CONCRETE, REINFORCING STEEL, LEAN GROUT, MEMBRANE WATERPROOFING, DRAINAGE FILL MATERIAL, GEOTEXTILE FILTER FABRIC, LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLING PRECAST BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR THE ITEMS AS SPECIFIED IN SECTION 607 OF THE STANDARD SPECIFICATIONS.

LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:  
PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.

SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS. THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE. THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

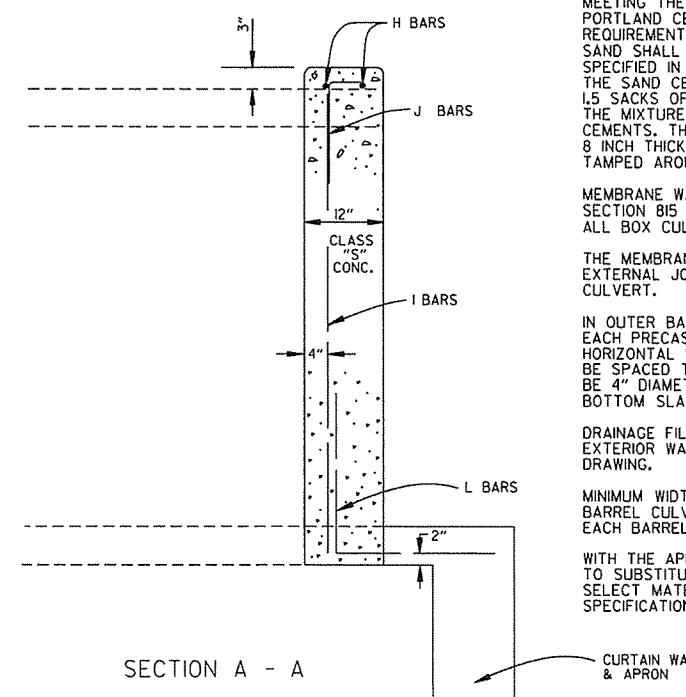
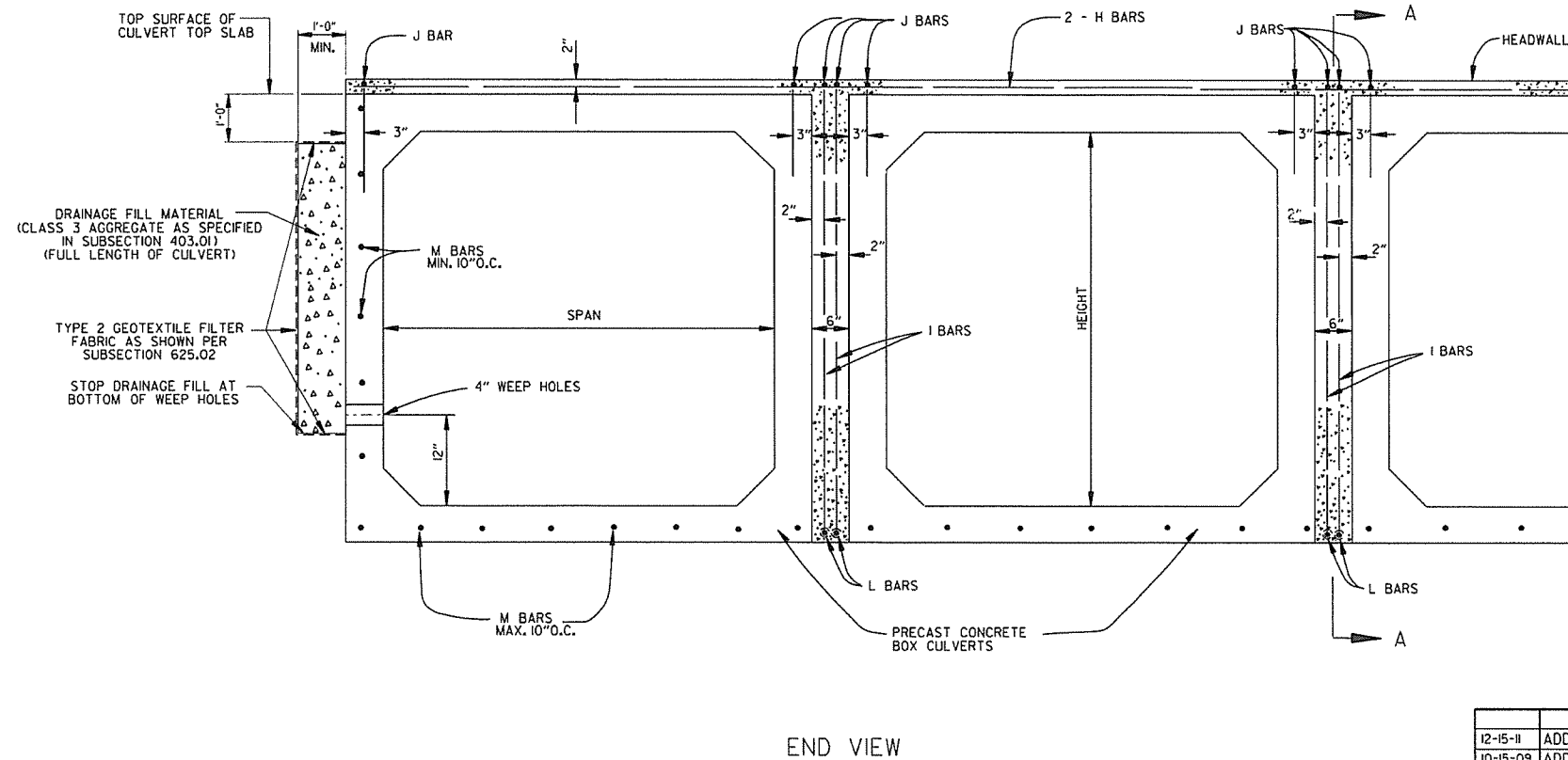
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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
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 5/8	27
42	51 1/8	51	31 5/16	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.

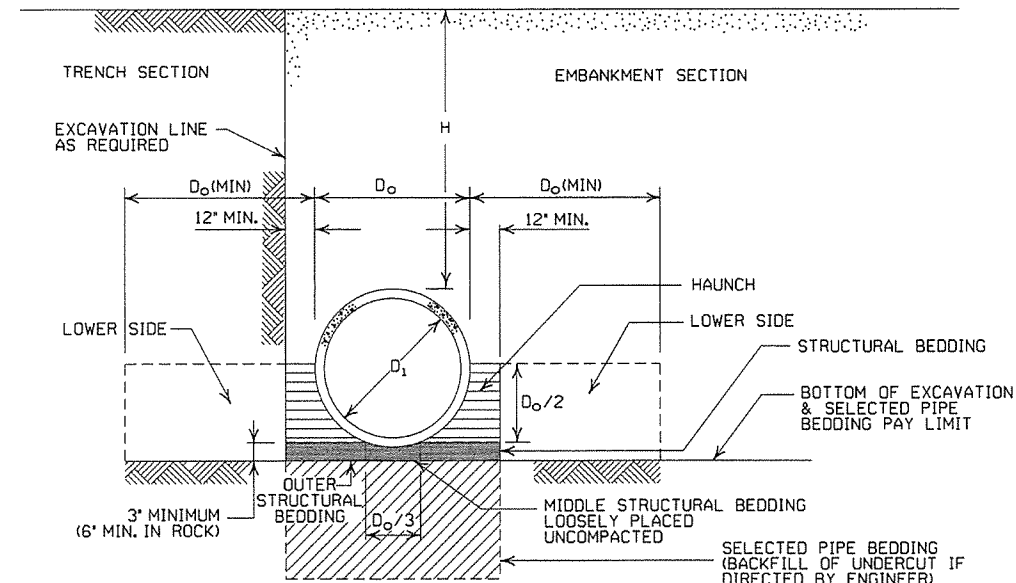
- LEGEND -

- D<sub>1</sub> = NORMAL INSIDE DIAMETER OF PIPE
- D<sub>o</sub> = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

\* SM-3 WILL NOT BE ALLOWED.

\*\* MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH, IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE			
	CLASS III	CLASS IV	CLASS V	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
FEET		
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
FEET			
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.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
FEET		
TYPE 2	13	11
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1



CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	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	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

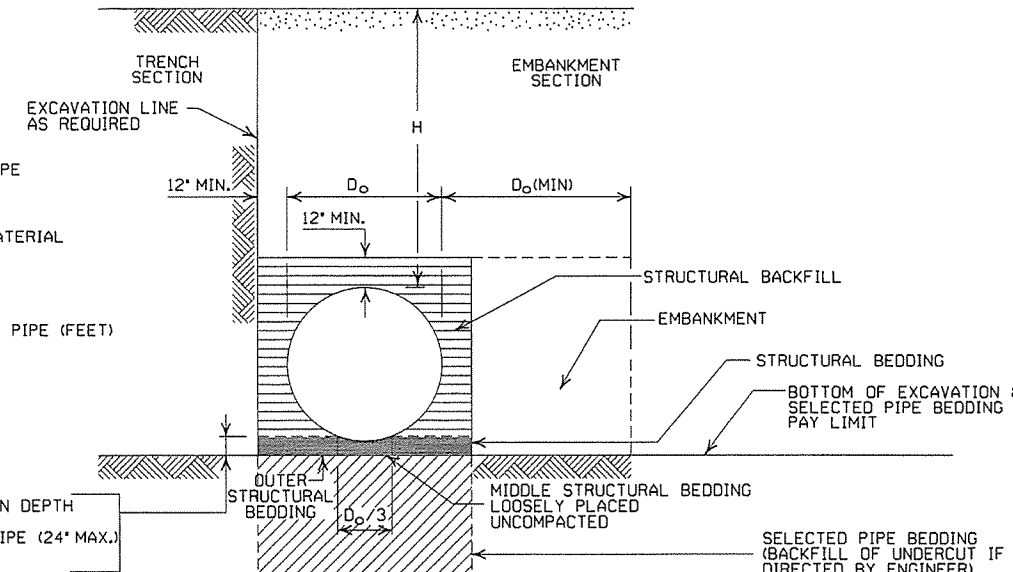
1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT 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
  - ==== = STRUCTURAL BACKFILL MATERIAL
  - ===== = UNDISTURBED SOIL
  - ===== = EQUIV. DIA. = EQUIVALENT DIAMETER
  - H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" x 1/2" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" x 1" OR 5" x 1" CORRUGATION.

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39		
30	2		18	31	32	34
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 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2,25	15	0.060	2,25	15		
24	28x20	3	0.064	2,5	15	0.075	2,5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3 1/2	0.079	3	12	0.105	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.109	3	13	0.135	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.164	3	15		
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
			INSTALLATION				INSTALLATION			
			TYPE 2		TYPE 1		TYPE 2		TYPE 1	
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

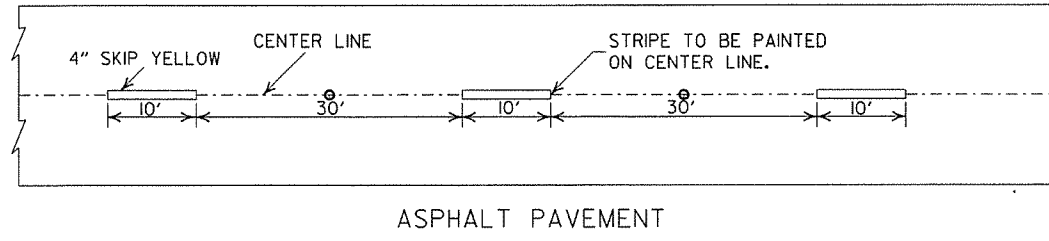
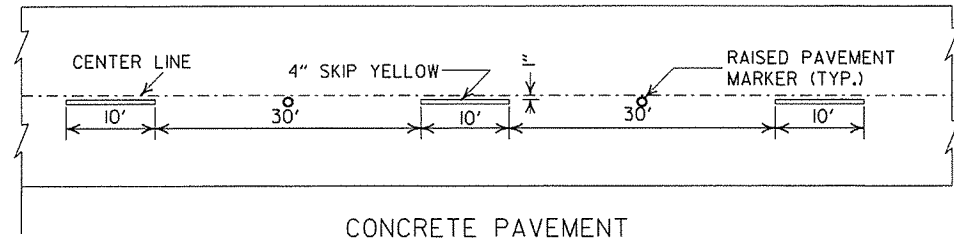
② WHERE THE STANDARD 2 2/3" x 1/2" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED 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

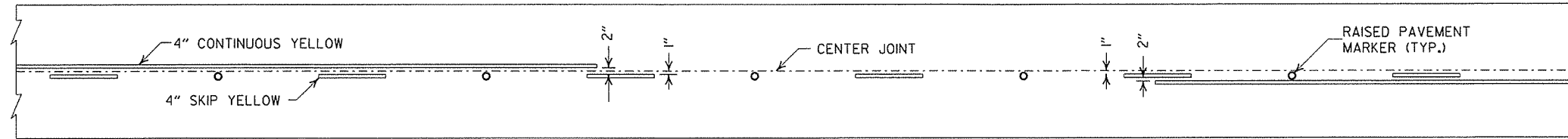
STANDARD DRAWING PCM-1



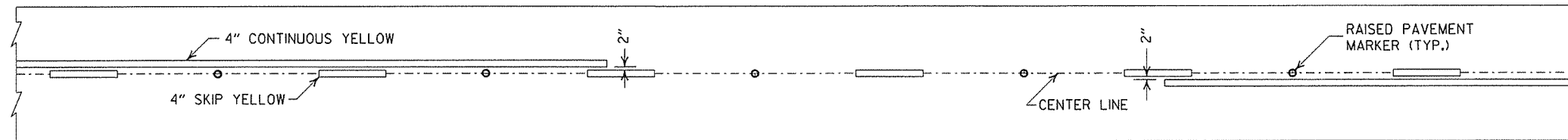
CONCRETE PAVEMENT

ASPHALT PAVEMENT

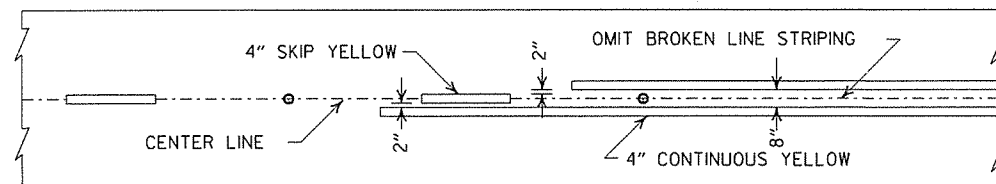
BROKEN LINE STRIPING



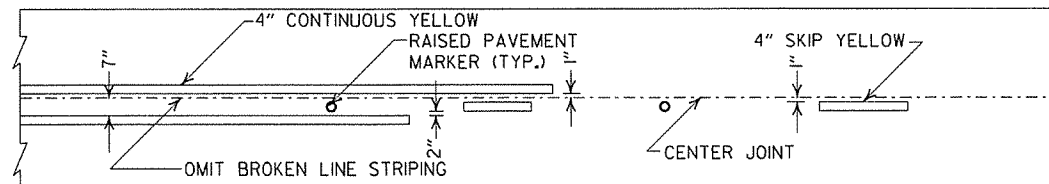
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

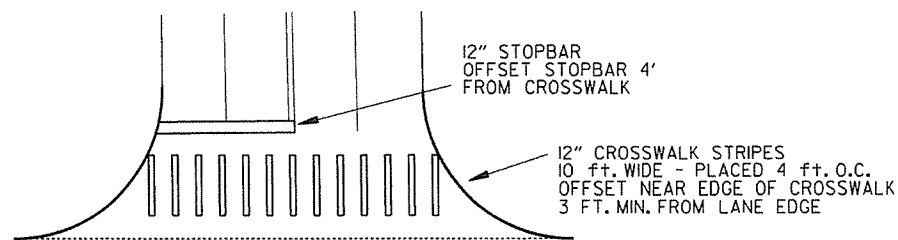


ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

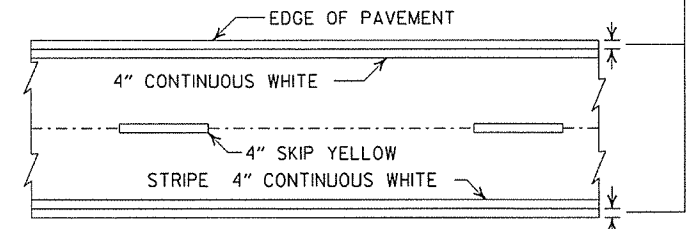


CROSSWALK AND STOPBAR DETAILS

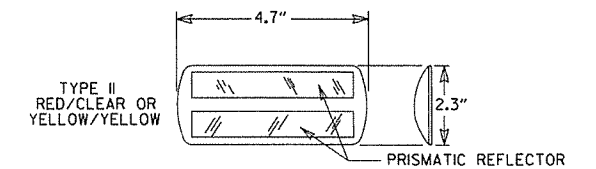
NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

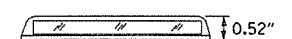
2" FOR ASPHALT OR CONCRETE PAVEMENT  
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING



NOTE:  
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

NOTE:  
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

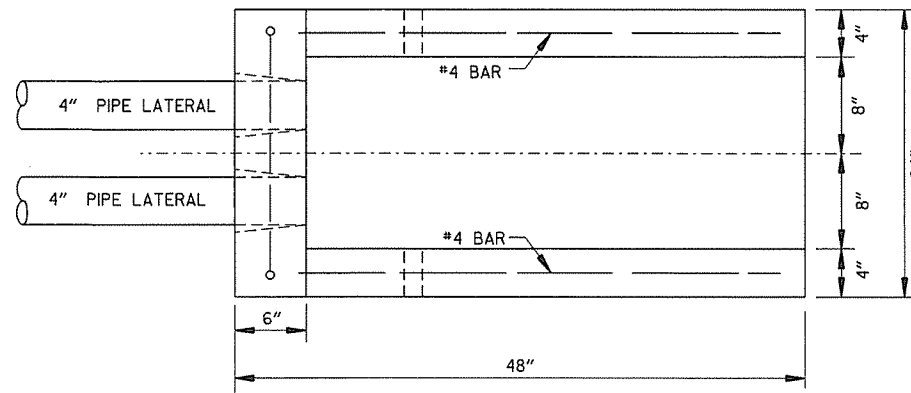
ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

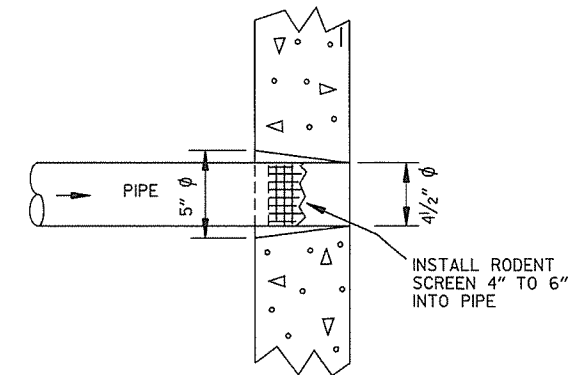
STANDARD DRAWING PM-1



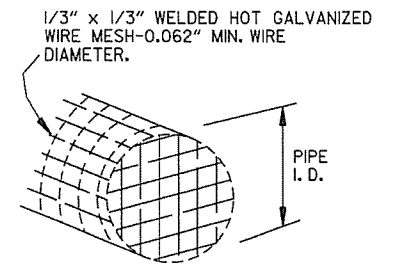
NOTE:  
 1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.  
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.  
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



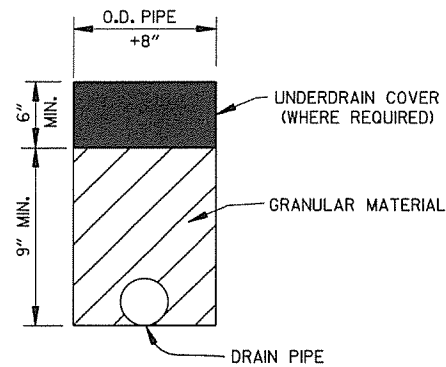
PLAN VIEW



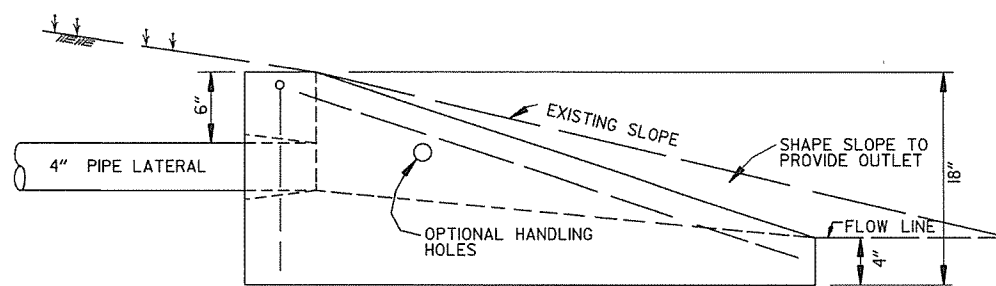
DETAIL OF HOLE FOR 4" PIPE



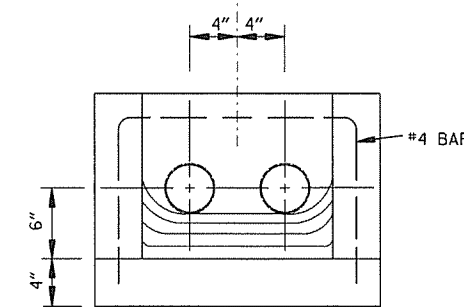
DETAIL OF RODENT SCREEN



DETAILS OF PIPE UNDERDRAIN



SIDE VIEW

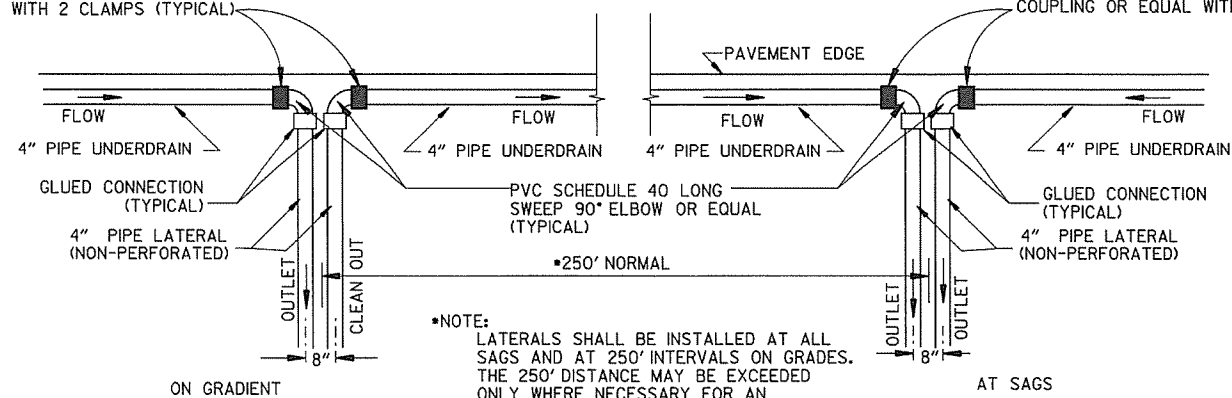


FRONT VIEW

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)

UNDERDRAIN OUTLET PROTECTORS

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



NOTE:  
 LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE  
 NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5 1/2" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11-3-94	REVISED FOR DUAL LATERALS	11-3-94
10-1-92	SUBSTITUTED GEOTEXTILE	10-1-92
8-15-91	ADDED POLYETHYLENE PIPE	8-15-91
11-8-90	DELETED ALTERNATE NOTE	11-8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

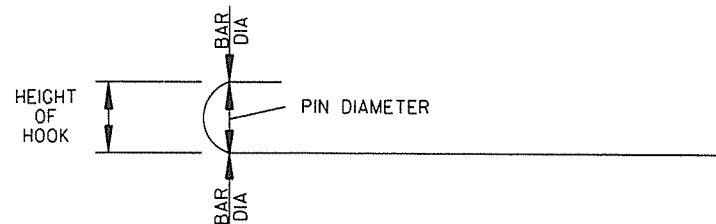
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 1/4"	4"
4	3"	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR, IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2 3/4 INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

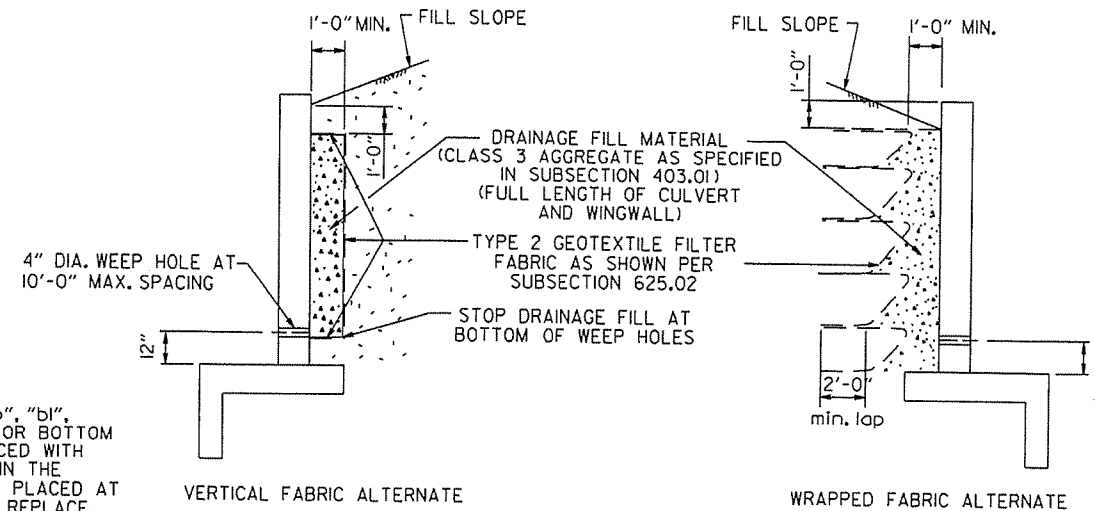
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. REINFORCING STEEL SHALL BE AASHTO M 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.

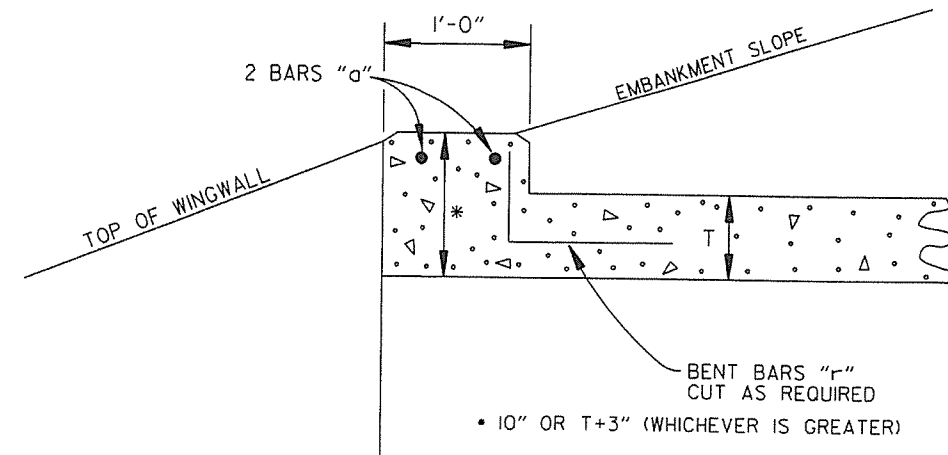
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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.

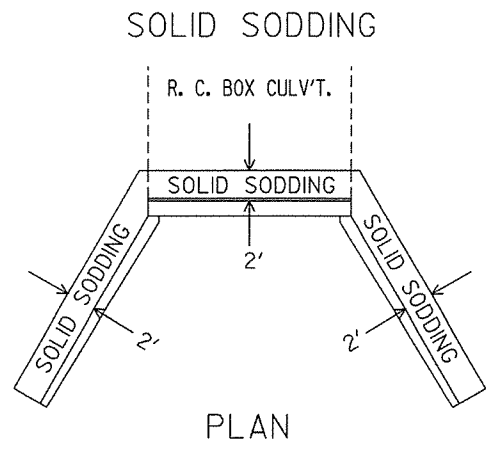
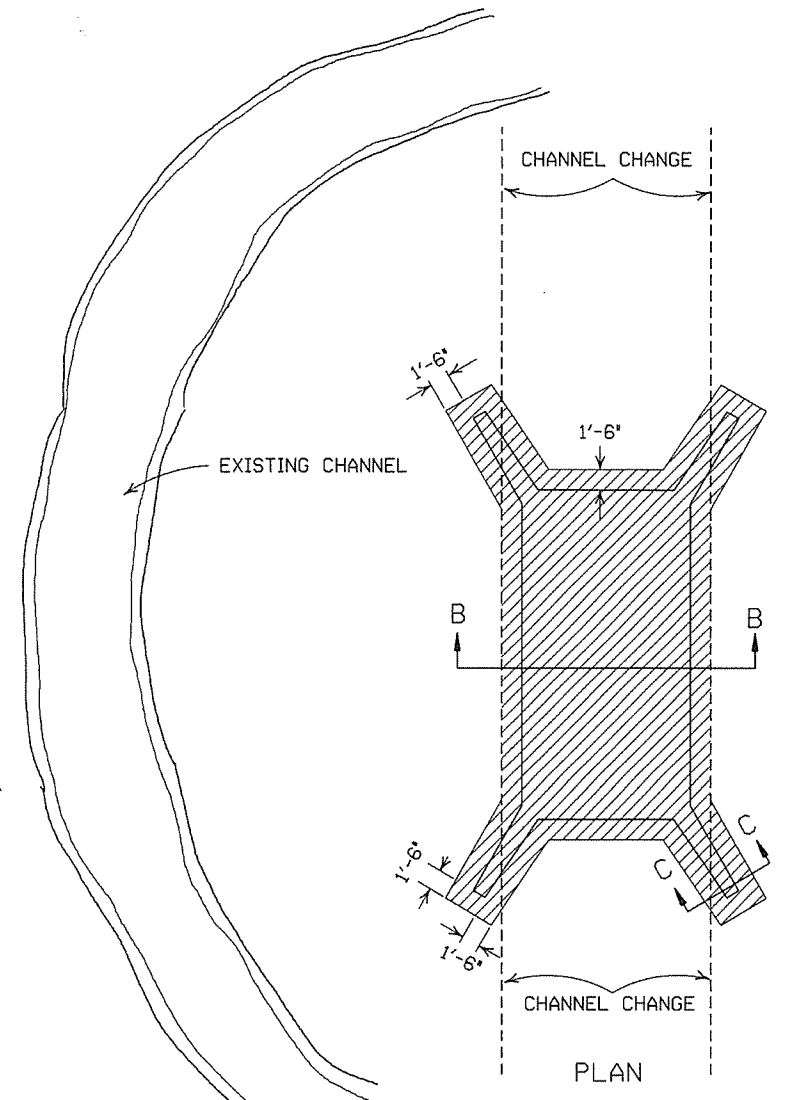
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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	

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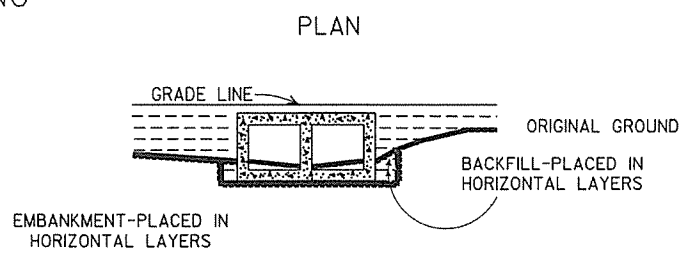
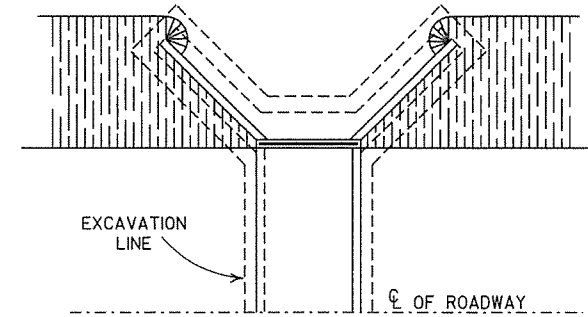
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1

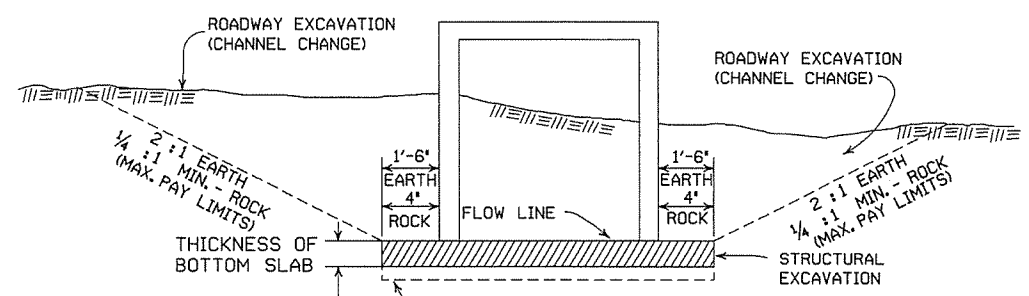
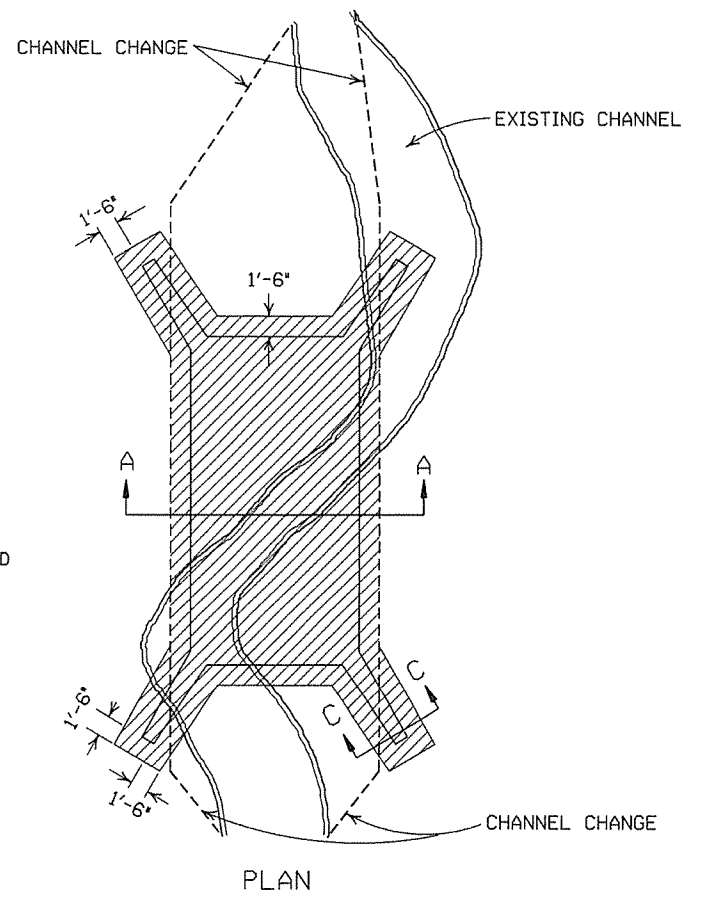


PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

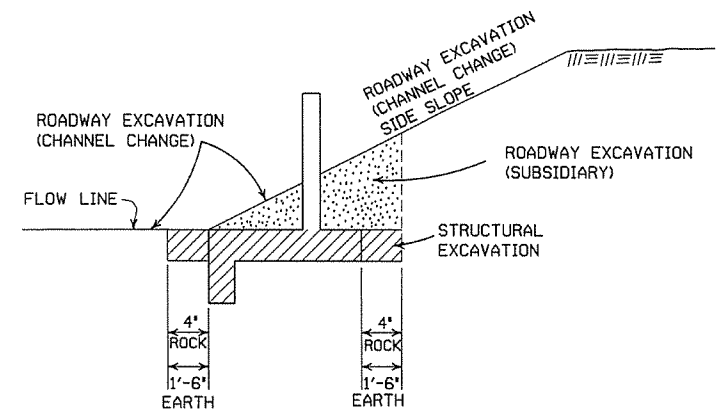


BACKFILL DETAILS FOR BOX CULVERT

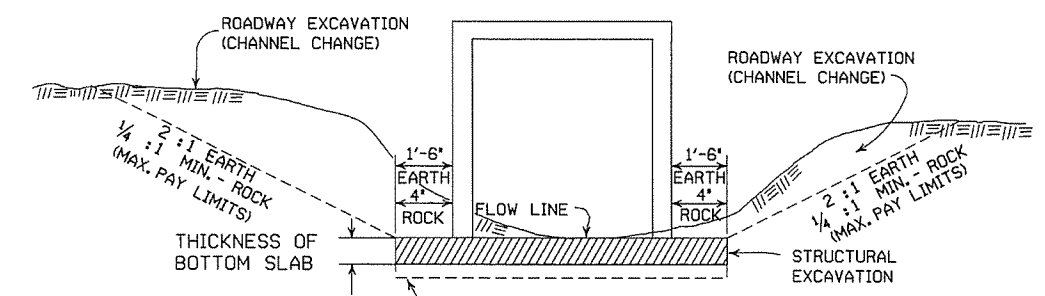


SECTION B-B  
DETAILS FOR NEW CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.



SECTION C-C



SECTION A-A  
DETAILS THROUGH EXISTING CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

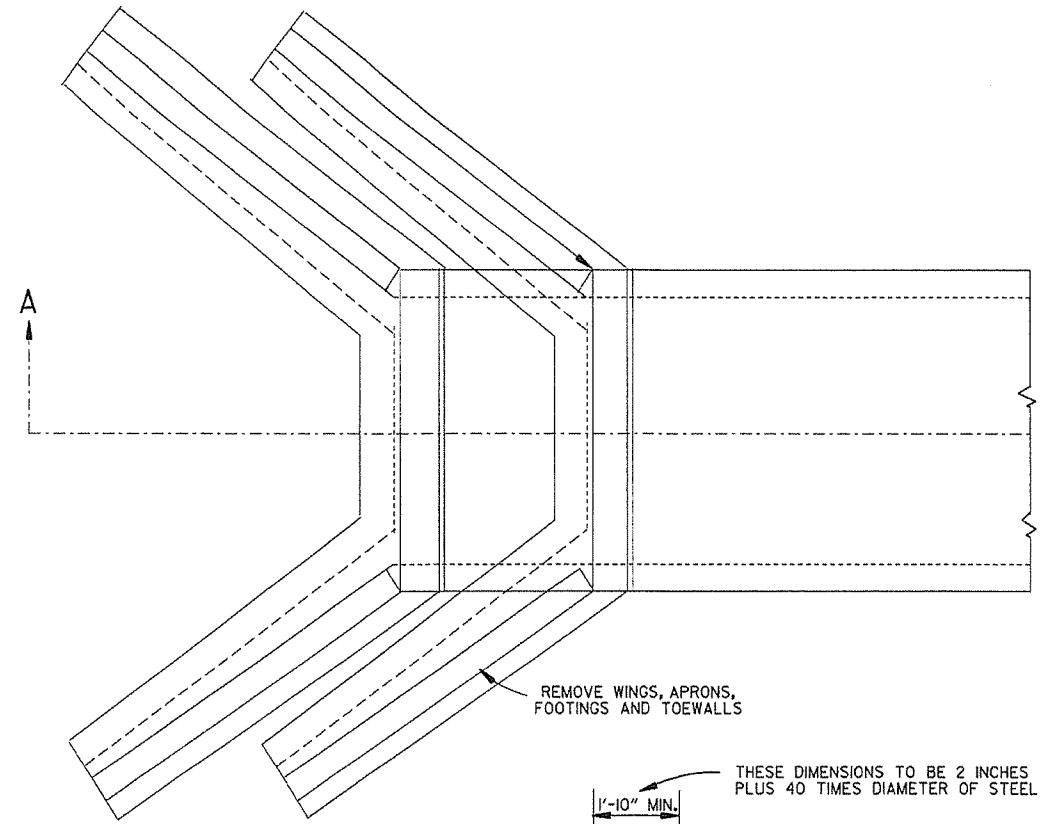
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES (AND ADDED MAXIMUM PAY LIMIT NOTES)	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72
DATE	REVISION	FILMED

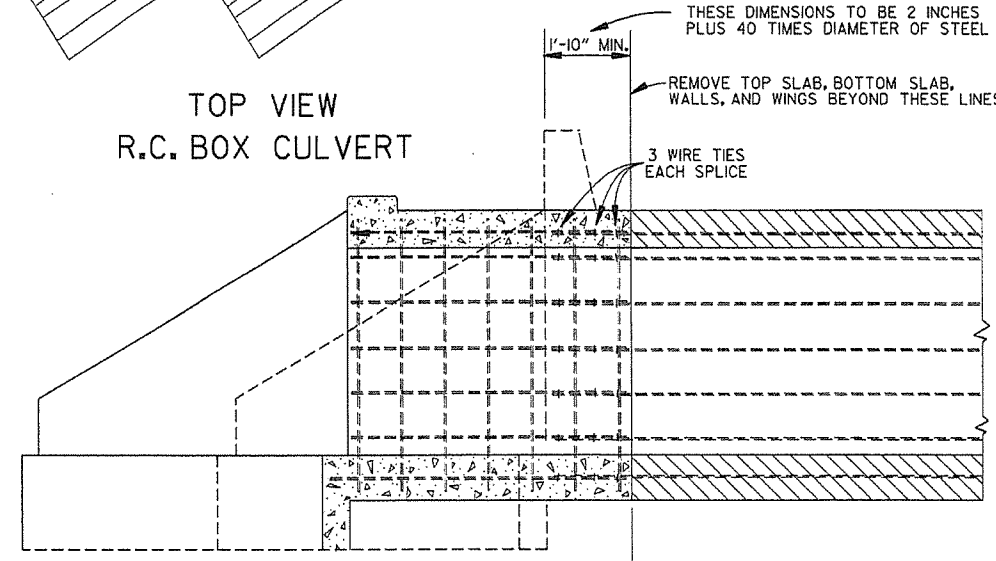
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS,  
BACKFILL, & SOLID SODDING  
FOR BOX CULVERTS

STANDARD DRAWING RCB-2

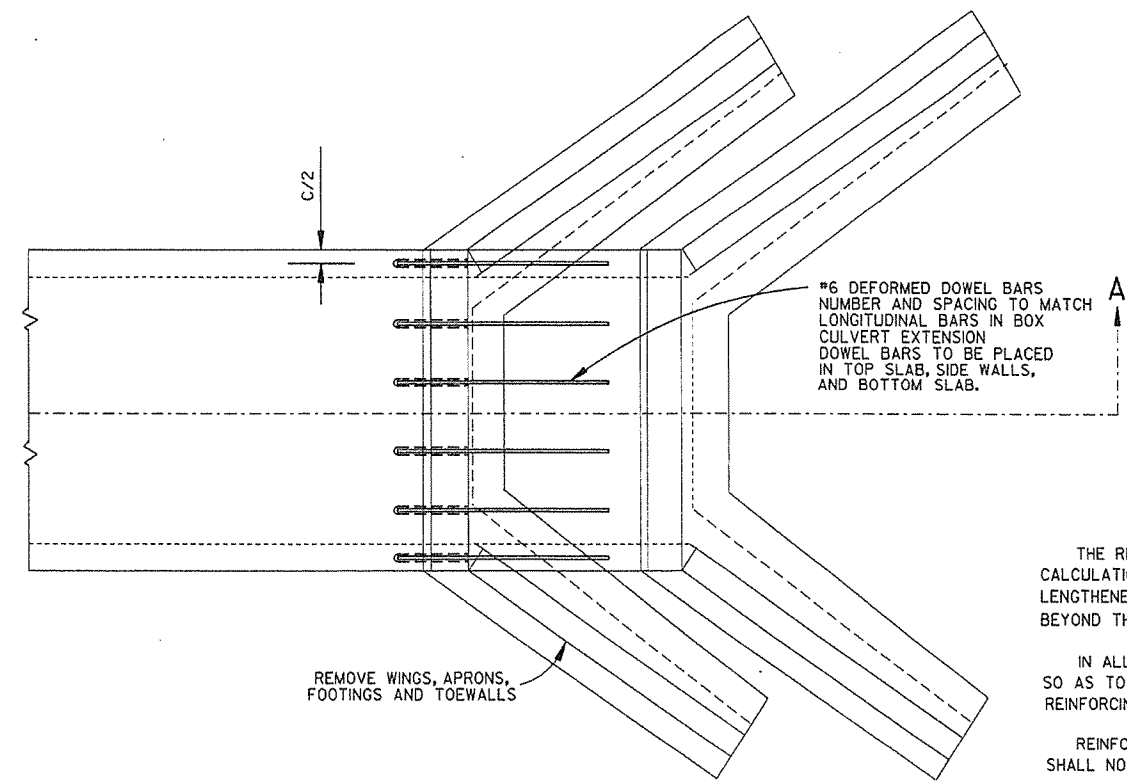


TOP VIEW  
R.C. BOX CULVERT

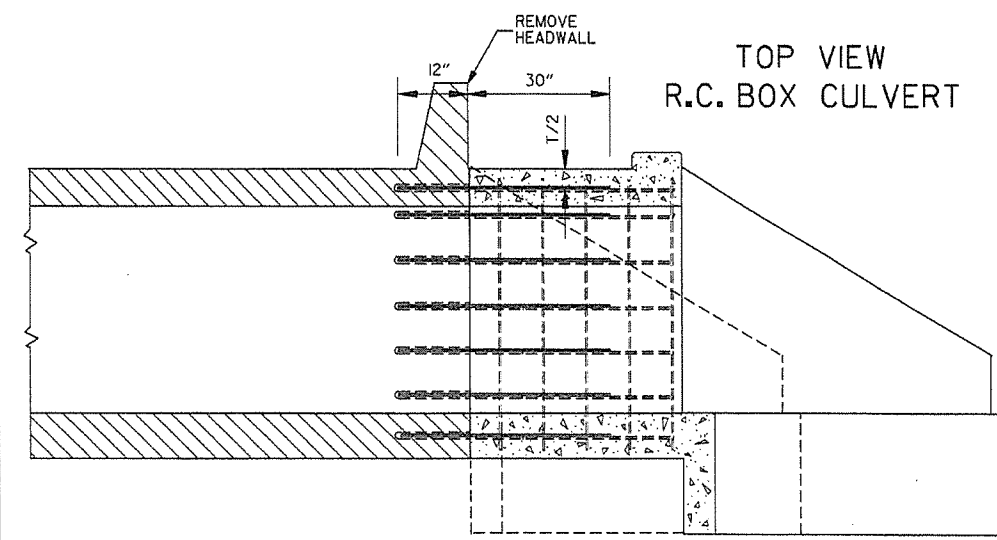


REINFORCING DETAILS AND CULVERT DIMENSIONS  
SAME AS STANDARD CULVERT DRAWINGS

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

1 THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.

1 IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.

1&2 REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.

1&2 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.

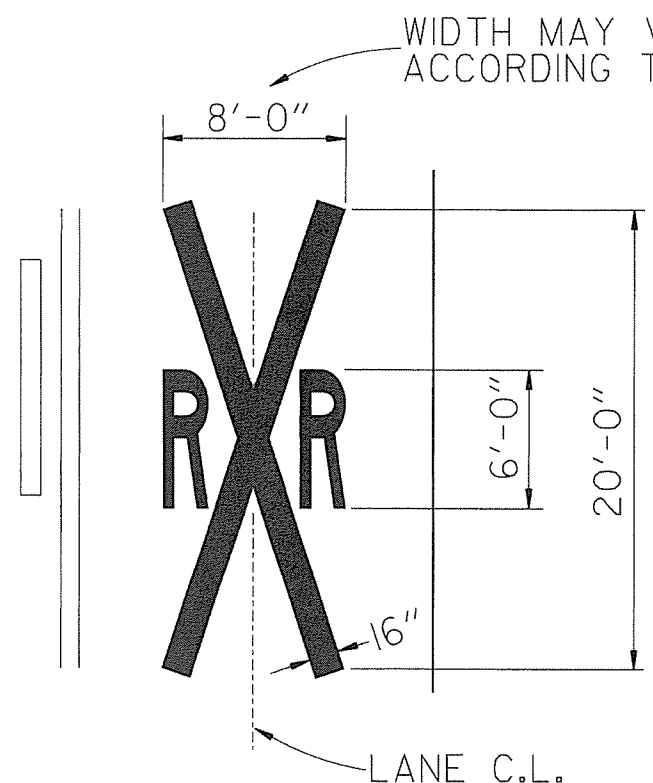
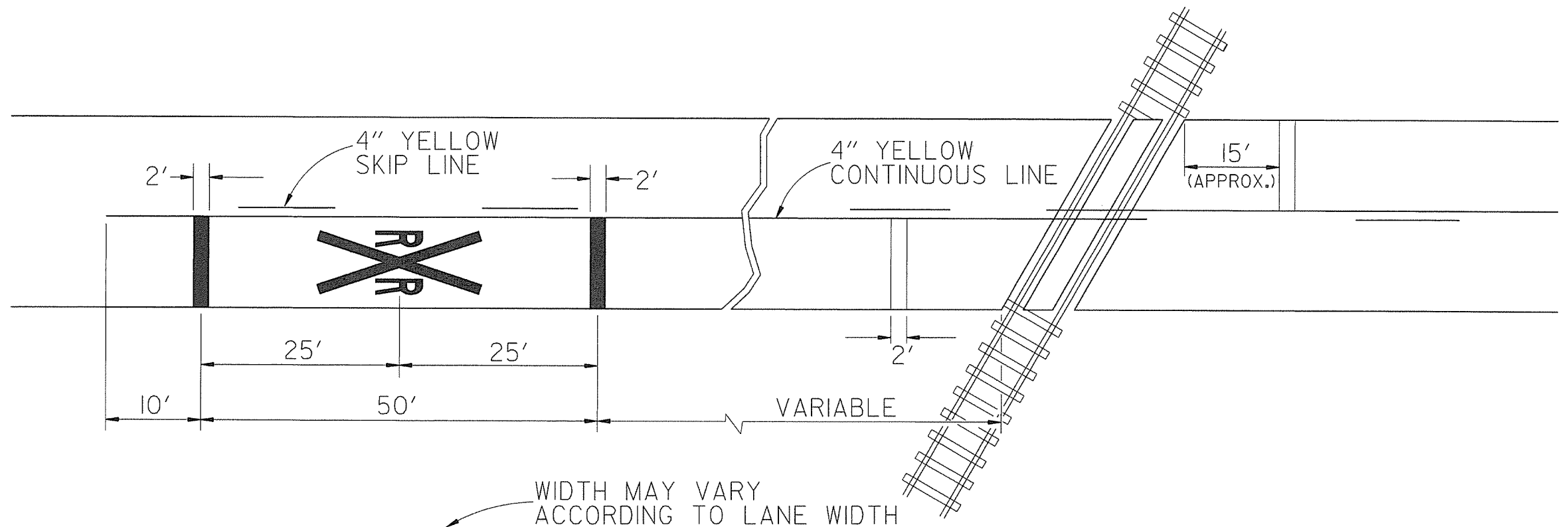
2 MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.

2 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.

1&2 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.

ARKANSAS STATE HIGHWAY COMMISSION		
METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS		
STANDARD DRAWING RCB-3		
10-12-95	CHANGED DRAWING FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	
DATE	REVISION	DATE FILM



DETAIL OF PAVEMENT MARKINGS FOR RAILROAD CROSSING

PAVEMENT MARKING TO BE SYMMETRICAL ABOUT RAILROAD

NOTES:  
THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND THE SIGHT DISTANCE OF THE VEHICULAR TRAFFIC APPROACHING, BUT PROBABLY SHOULD BE NOT LESS THAN 50 FEET.

A THREE LANE ROADWAY SHOULD BE MARKED WITH A CENTERLANE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL RXR SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR RXR SYMBOLS DETAILS.

DATE	REVISION	DATE FILMED
11-20-08	CORRECTED SPELLING	
4-10-03	REVISED NOTES	
3-2-81	DELETED LETTER & ADDED NOTE	684-3-2-81
7-20-79	STOP LINE CHGD. TO PERP.	636-8-30-79
4-23-75	SHEET RENUMBER	697-4-20-79
4-23-75	REDRAWN	860-4-23-75

ARKANSAS STATE HIGHWAY COMMISSION
PAVEMENT MARKING FOR RAILROAD CROSSING
STANDARD DRAWING RRS-1

# LOOP DETECTOR INSTALLATION AND TESTING

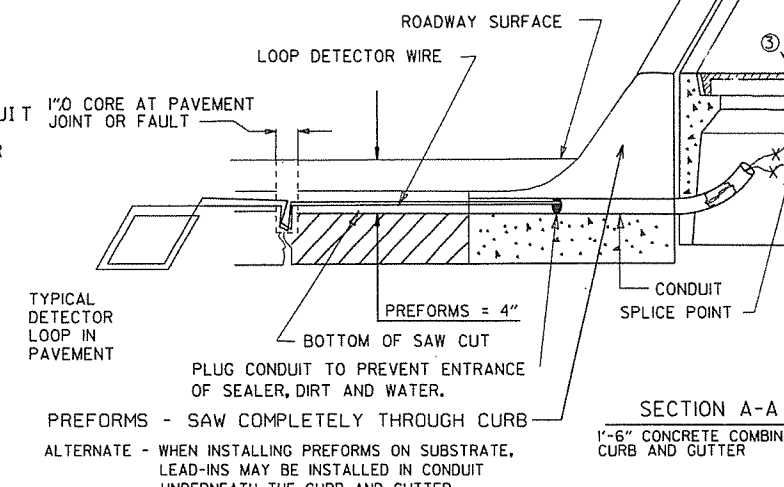
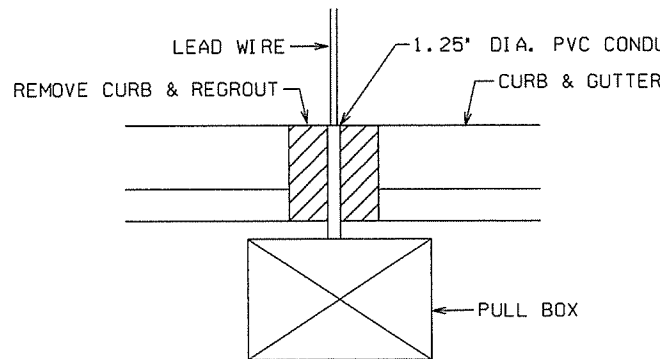
**NOTES:**

- LOOPS WITH A PERIMETER GREATER THAN 40' SHALL HAVE TWO TURNS. LOOPS WITH A PERIMETER LESS THAN OR EQUAL TO 40' SHALL HAVE THREE TURNS, UNLESS OTHERWISE NOTED ON THE PLANS. QUADRUPOLE LOOPS SHALL BE TWO TURNS (2-4-2 CONFIGURATION) UNLESS OTHERWISE NOTED.
- LOOP AND FEEDER WIRE SHALL BE CONTINUOUS WITHOUT SPLICES EXCEPT AT THE LOOP/FEEDER WIRE SPlice AS SHOWN. SPlice SHALL BE ROSIN SOLDERED AND WATERPROOFED WITH AN ACCEPTED SPlice KIT. DRAIN WIRE SHALL BE GROUNDED IN CABINET AND INSULATED AT LOOP TO FEEDER SPlice.
- THE LOOP TO FEEDER SPlice, FEEDER JACKET AND JACKET OF LOOP WIRE IN DUCT SHALL BE COMPLETELY SEALED AND WATERPROOFED.
- CONTRACTOR MAY MAKE CONNECTIONS TO SIGNAL CABLE AND LOOP TO FEEDER CONNECTION AT TERMINAL STRIPS MOUNTED TO POLE INSIDE HAND HOLD COVER AS SHOWN IN DETAIL. TERMINALS MUST BE EASILY ACCESSIBLE, BUT PROTECTED AGAINST ACCIDENTAL CONTACT. CONNECTION OF POWER CARRYING CIRCUITS MUST BE SEPARATED FROM LOOP OR LOGIC CIRCUITS. ALL CONNECTIONS TO TERMINAL STRIPS SHALL UTILIZE SPADE LUGS OR AS APPROVED BY THE ENGINEER.
- EACH LOOP SHALL HAVE A SEPARATE "FEEDER WIRE" UNLESS OTHERWISE NOTED. ALL FEEDER WIRES SHALL BE LABELED AS TO LOOP NUMBER AS DESIGNATED ON THE PLANS.
- ALL LOOP WIRE ENTERING PULL BOXES SHALL BE ENCLOSED IN CONDUIT. EACH LOOP WIRE SHALL ENTER PULL BOX OR POLE BASE THROUGH A SEPARATE PIECE OF ONE INCH (1"Ø) CONDUIT.
- LOOP WIRE FROM LOOP TO CONDUIT IS NOT TWISTED. LOOP WIRE IN THE CONDUIT MUST BE TWISTED TWO TO FIVE TURNS PER FOOT.
- WARRANTY PERIOD FOR LOOPS SHALL NOT COMMENCE UNTIL TESTED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER. CONTRACTOR SHALL PERFORM TEST AND PROVIDE A RECORD TO THE ENGINEER AS LISTED IN THE DETECTOR LOOP TESTING PROCEDURE.
- UNLESS OTHERWISE APPROVED BY THE ENGINEER, BACKER ROD SHALL BE INSTALLED IN SHORT SECTIONS SPACED NOT MORE THAN 18" APART AND WEDGED INTO SLOT TO HOLD CABLE IN PLACE. CABLE SHALL BE TOTALLY ENCAPSULATED IN SEALER.
- "HOT POUR" SEALER SHALL NOT BE ALLOWED WITH 705-LOOP WIRING IN DUCT.
- WHERE UNDERGROUND SPLICES OF SIGNAL CABLE ARE REQUIRED, CONNECTIONS SHALL BE SOLDERED AND COMPLETELY WATERPROOFED TO THE SATISFACTION OF THE ENGINEER. WATERPROOFING SHALL EXTEND A MINIMUM OF TWO INCHES PAST THE SIGNAL CABLE JACKET AND SHALL COMPLETELY COVER ALL INDIVIDUAL CONDUCTORS OF THE SIGNAL CABLE. WATERPROOFING DOES NOT APPLY TO CONNECTIONS MADE IN POLE BASES.
- CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE. ONLY ONE NEUTRAL IS REQUIRED FOR PEDESTRIAN SIGNALS. A SEPARATE 5C (TYPICAL) IS PROVIDED FOR PEDESTRIAN PUSH BUTTONS.
- TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO CONTROLLER. CONTROLLER CABINET SHALL BE WIRED SUCH POWER TO LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS DURING FLASH OPERATION.

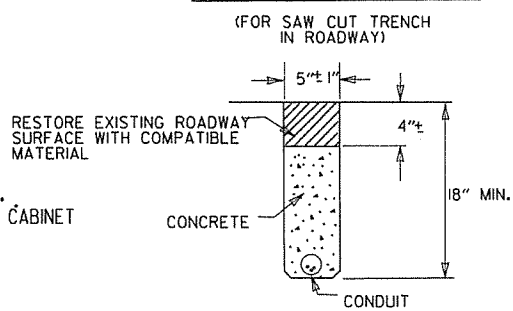
**TYPICAL PROCEDURE FOR DETECTOR LOOP TESTING**

- DISCONNECT AND TEST CONTINUITY (< 10 OHMS) IF CONTINUITY IS BAD, GO TO TEST 3
- TEST INSULATION (@ 500 VOLT TEST > 10 MEG-OHM) IF TESTS 1 & 2 ARE GOOD, NO FURTHER TESTING IS NECESSARY. RECORDED RESULTS CONSIST OF TESTS 1 & 2 FROM CONTROL CABINET WITH FEEDER WIRE CONNECTED TO LOOP.
- OPEN SPlice (DO NOT BREAK CONNECTION) REPEAT TEST 1 & 2 IF TEST 3 IS BAD, GO TO TEST 4
- BREAK SPlice, INSTALL JUMPER IN CABINET, REPEAT TESTS 1 & 2 SEPARATELY FOR FEEDER AND FOR LOOP

FAILURES TYPICALLY RESULT FROM BROKEN WIRE IN PAVEMENT, FAULTY INSULATION OF LOOP OR FEEDER WIRE, OR POORLY INSULATED SPlice CONNECTION.

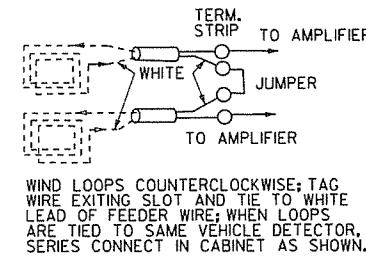


**TRENCHING DETAIL**

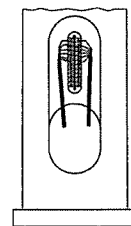


NOTE: CONDUIT SHALL BE INSTALLED IN CURB AS SHOWN OR AS DIRECTED BY THE ENGINEER. END OF CONDUIT SHALL BE WATER-TIGHT.

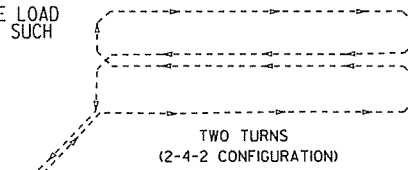
**SERIES CONNECTED LOOPS**



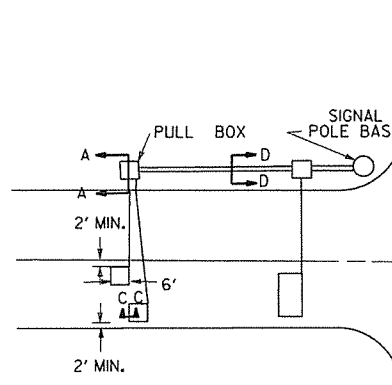
**HANDHOLE TERMINAL**



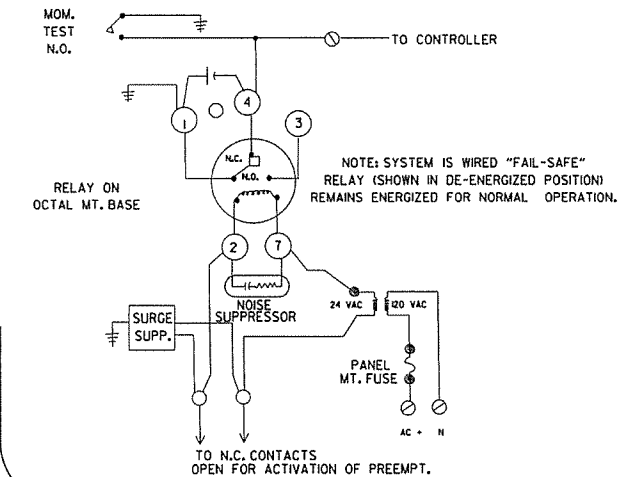
**QUADRUPOLE LOOP**



**TYPICAL INTERSECTION**

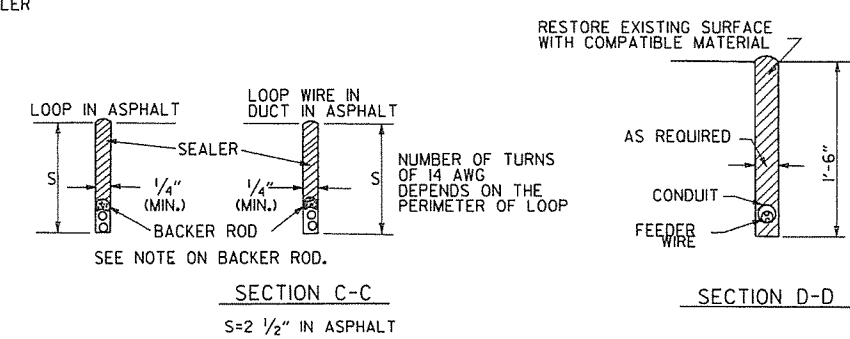


**TRAFFIC SIGNAL PRE-EMPTION INTERFACE WIRING DIAGRAM**



WHEN NECESSARY, USE WOODEN STICK TO PUSH WIRE IN SAWED SLOT. CUT DIAGONALS TO PREVENT SHARP BENDS OF WIRE.

**TYPICAL SECTIONS FOR PULSE AND PRESENCE LOOP DETECTORS**

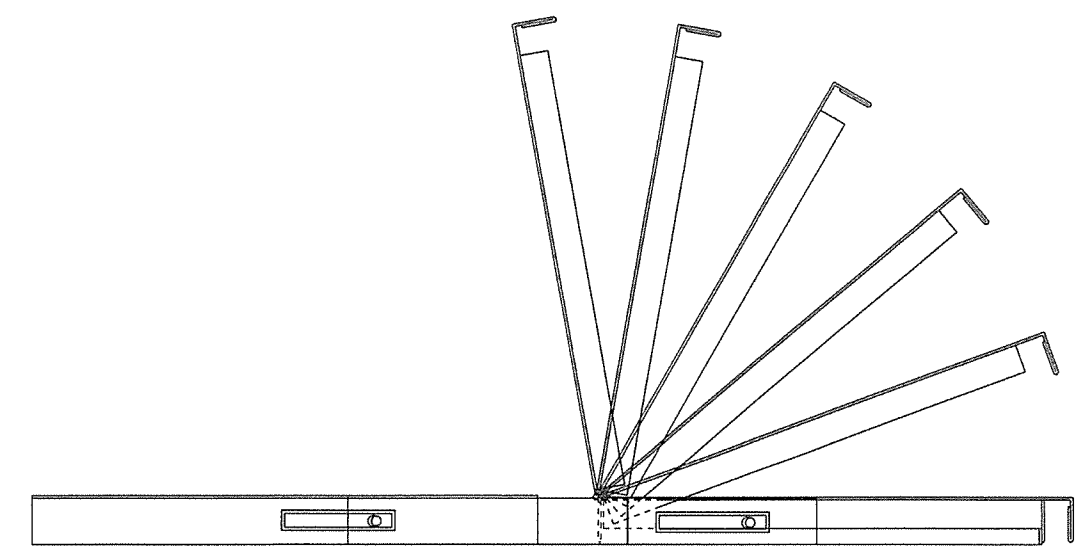
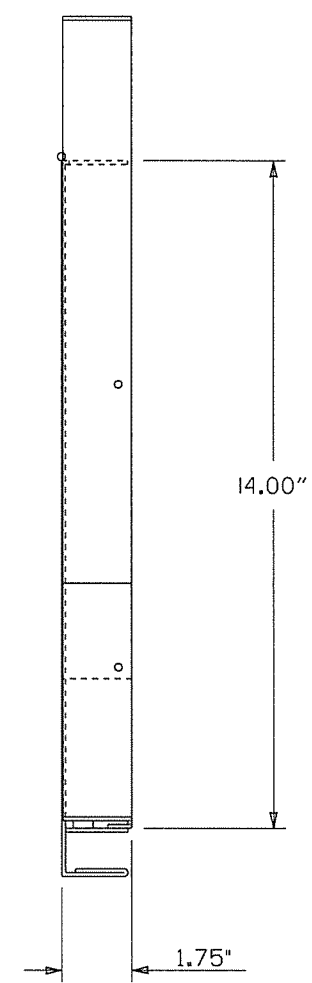
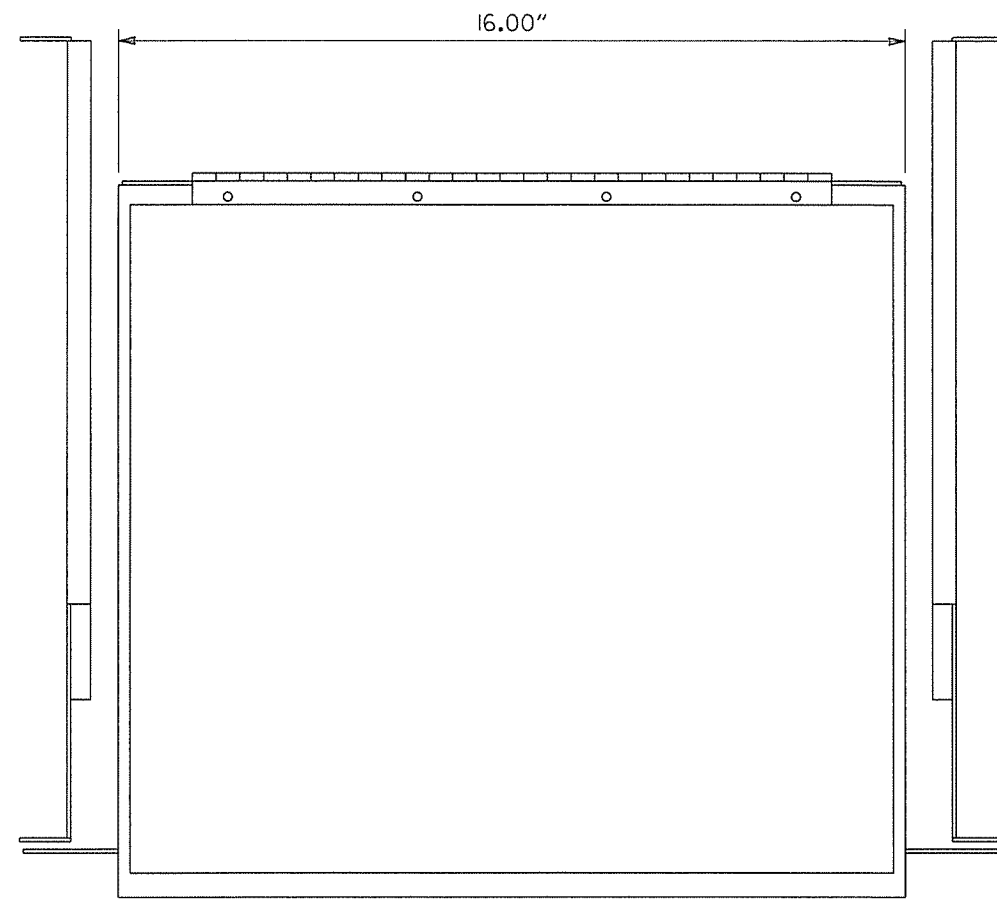


**SPECIAL NOTE**  
IF FEEDER WIRE JACKET IS LEFT UNSEALED AND WATER IS ALLOWED TO ENTER JACKET, CONTRACTOR WILL BE REQUIRED TO REPLACE FEEDER AT NO COST TO THE DEPARTMENT.

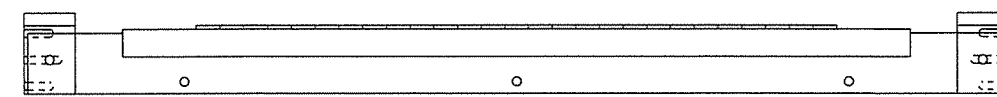
DATE	REVISION	DATE FILM	STANDARD DRAWING SD-4
9-12-13	ISSUED AS STANDARD DRAWING		
5-17-01	REVISED		
4-11-01	REVISED		
2-4-00	REVISED PRE-EMPTION TEST SWITCH		
11-18-98	REVISED NOTES		
11-21-95	ISSUED		

ARKANSAS STATE HIGHWAY COMMISSION  
**LOOP DETECTOR INSTALLATION**  
STANDARD DRAWING SD-4

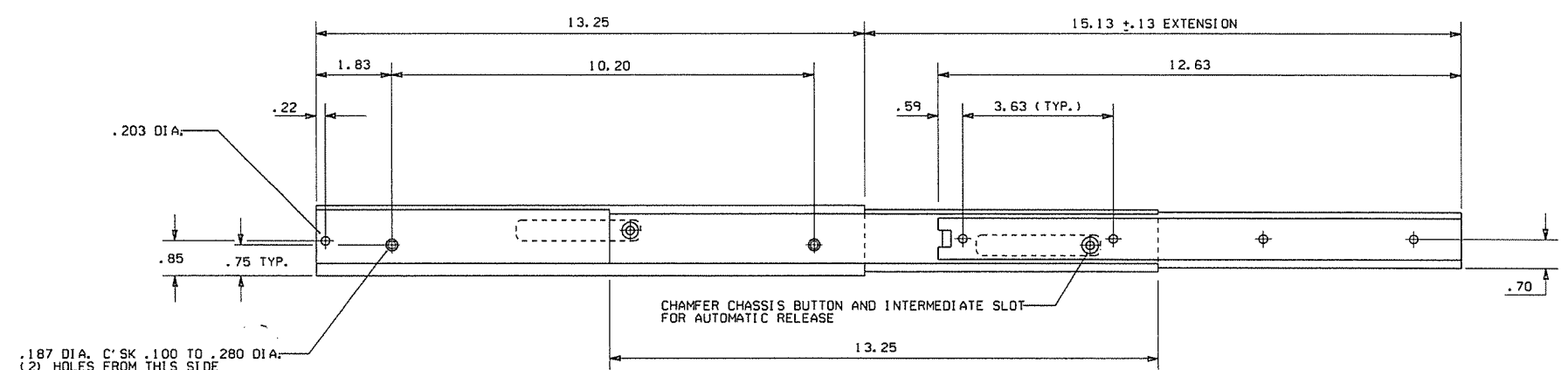
### DRAWER PLAN VIEW



- NOTES:  
 1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.  
 2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.  
 3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



### FRONT VIEW

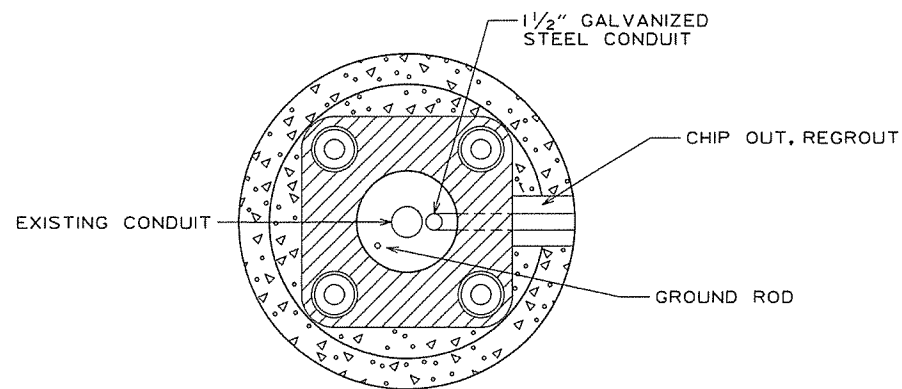


.187 DIA. C'SK .100 TO .280 DIA.  
 (2) HOLES FROM THIS SIDE

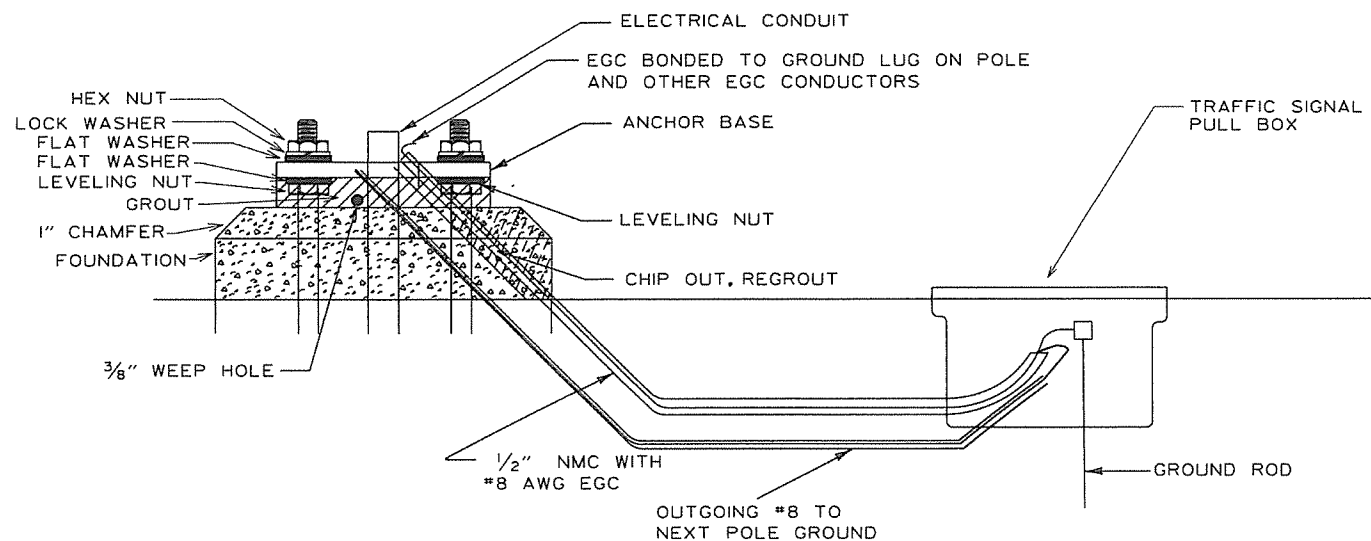
### RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			CONTROLLER CABINET UTILITY DRAWER
9-12-13	ISSUED AS STANDARD DRAWING		
6-15-05	ISSUED		
DATE	REVISION	DATE FILM	STANDARD DRAWING SD-5

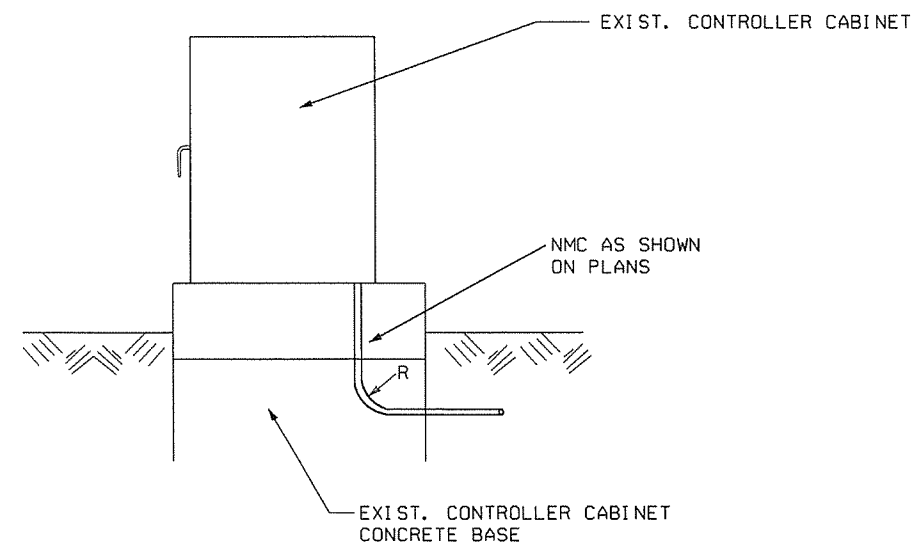
CONDUIT ENTRY TO EXISTING POLE BASE



ANCHOR BASE

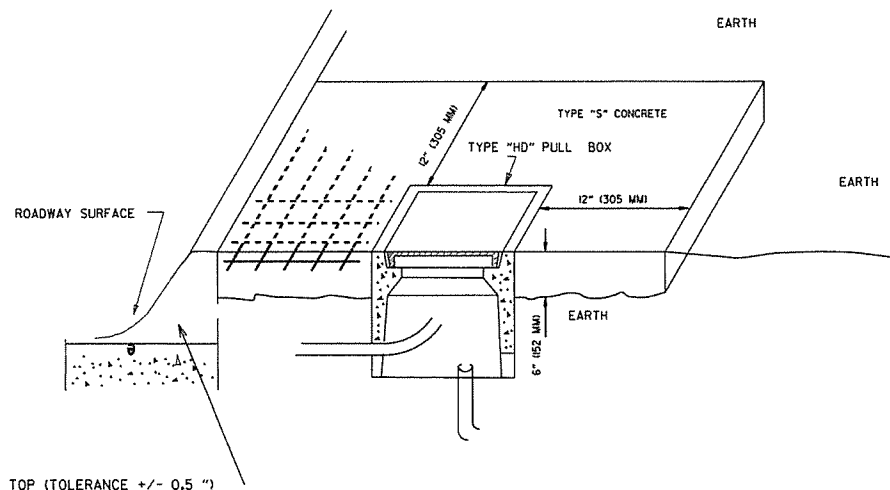


CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



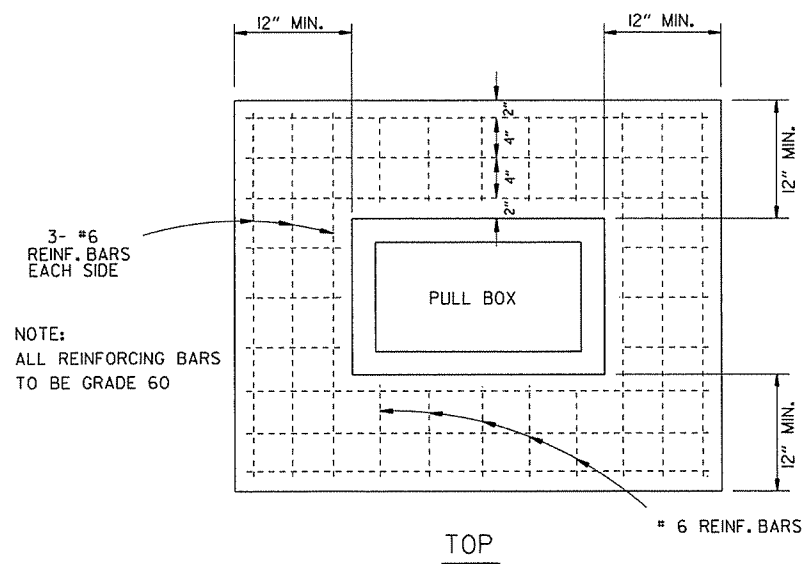
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

TYPE "HD" CONCRETE PULL BOX DETAIL



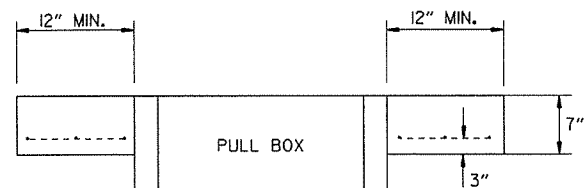
2" CLEAR FROM TOP (TOLERANCE +/- 0.5 ")

NOTE: ALL TYPE 1 AND TYPE 2 HD PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" (305 MM) WIDE AND 6" (152 MM) IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD PULL BOX. PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S." THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE PULL BOX IS REQUIRED IN CONCRETE.



NOTE: ALL REINFORCING BARS TO BE GRADE 60

TOP



ELEVATION

9-12-13	ISSUED AS STANDARD DRAWING	
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	
DATE	REVISION	DATE FILM

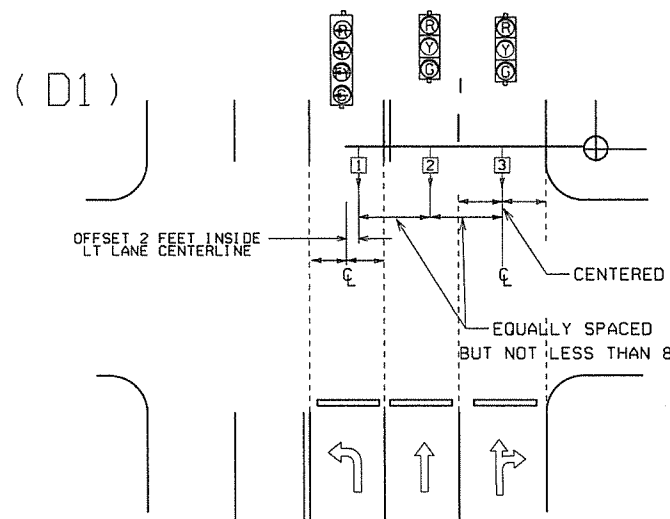
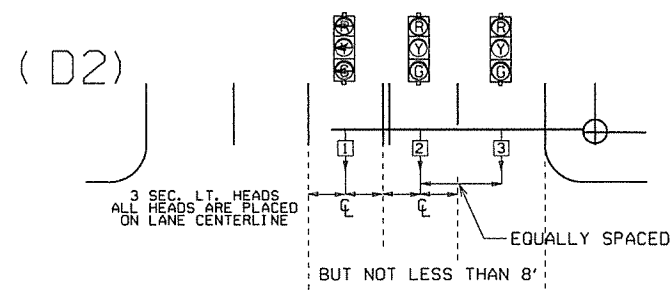
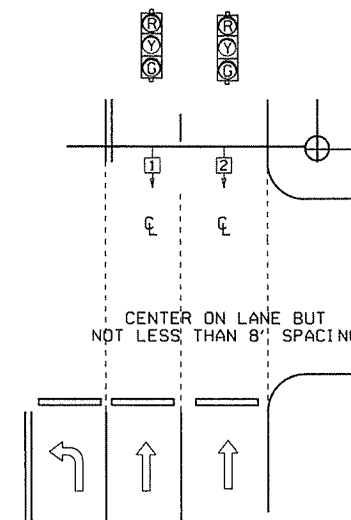
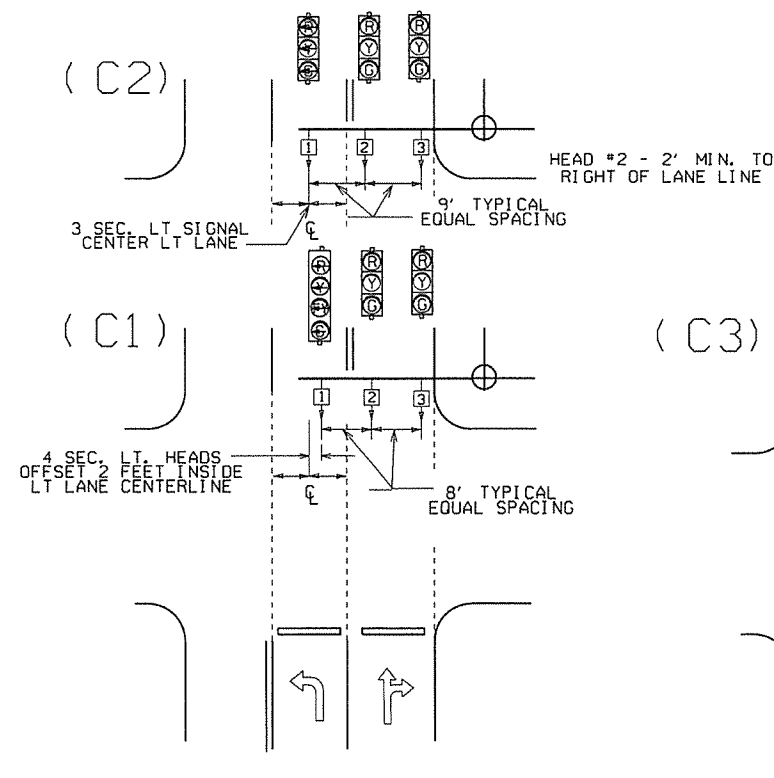
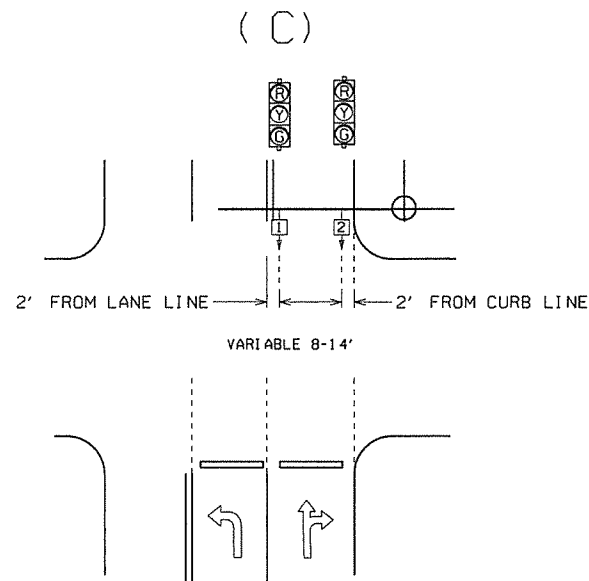
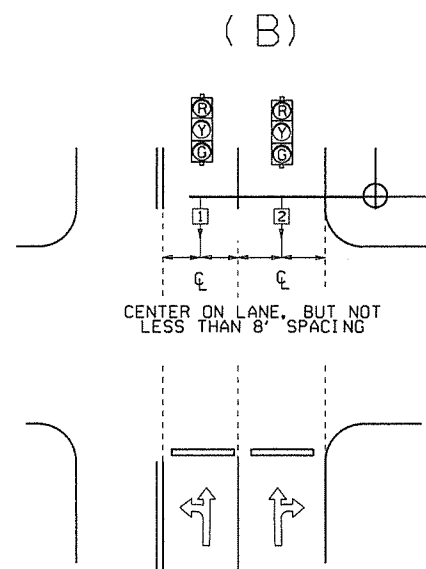
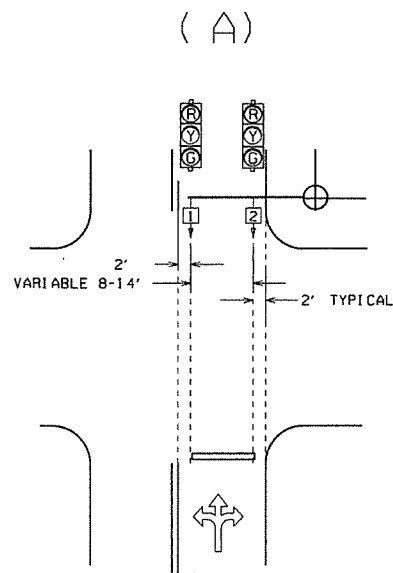
ARKANSAS STATE HIGHWAY COMMISSION

HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6



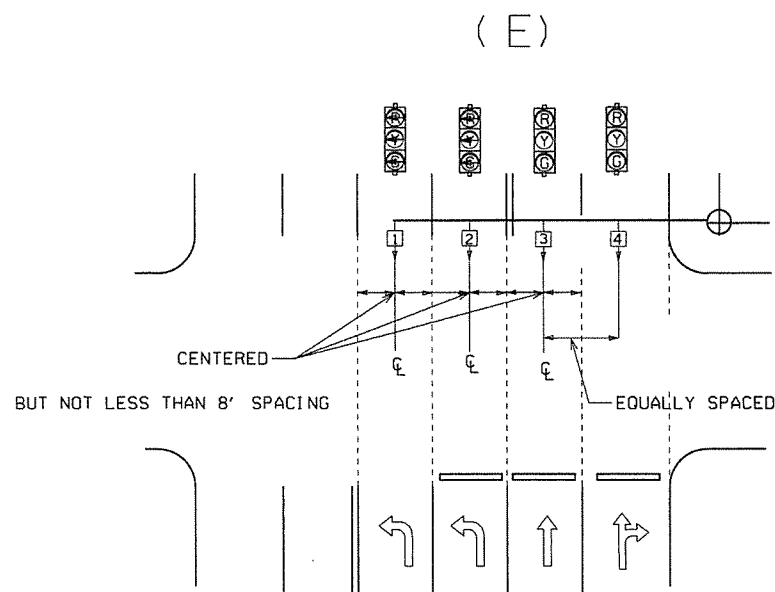




NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.

GENERAL NOTES:

- FOUR SECTION 'PROTECTED/PERMISSIVE' LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- THREE SECTION 'PROTECTED' LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.
- SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.
- ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.
- MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-1 OF 2009 MUTCD.



℄ = CENTER OF LANE FROM APPROACH SIDE

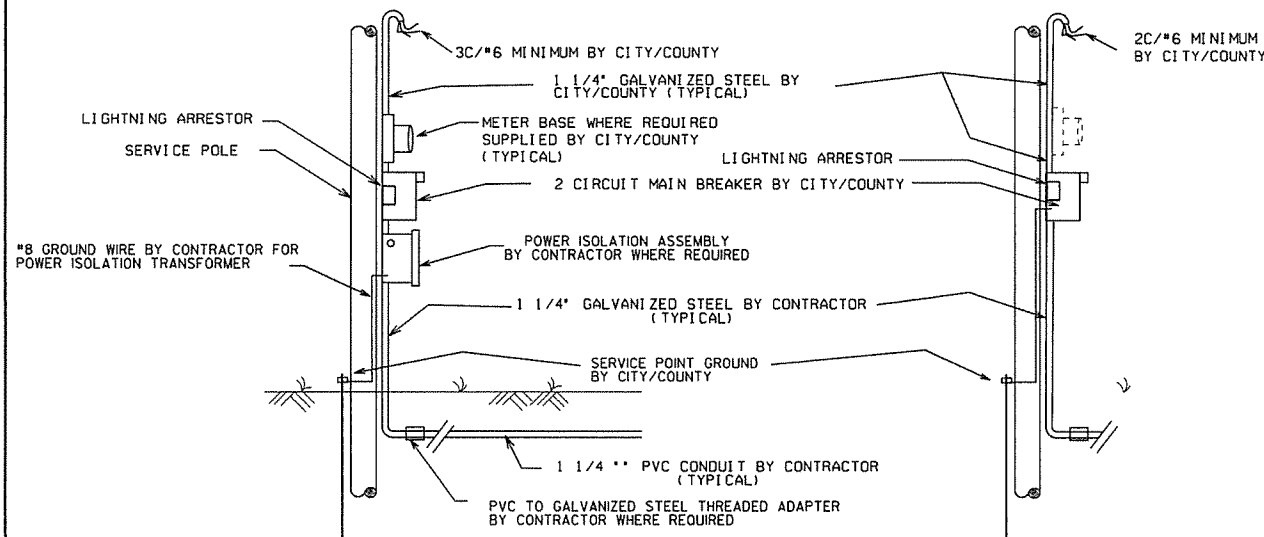
			ARKANSAS STATE HIGHWAY COMMISSION
9-12-13	ISSUED AS STANDARD DRAWING		SIGNAL HEAD PLACEMENT
3-11-10	2009 MUTCD		
12-9-99	ISSUED		STANDARD DRAWING SD-8
DATE	REVISION	DATE FILM	

# MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

115

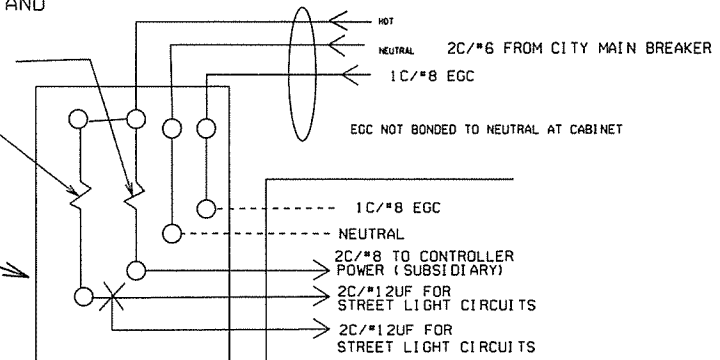
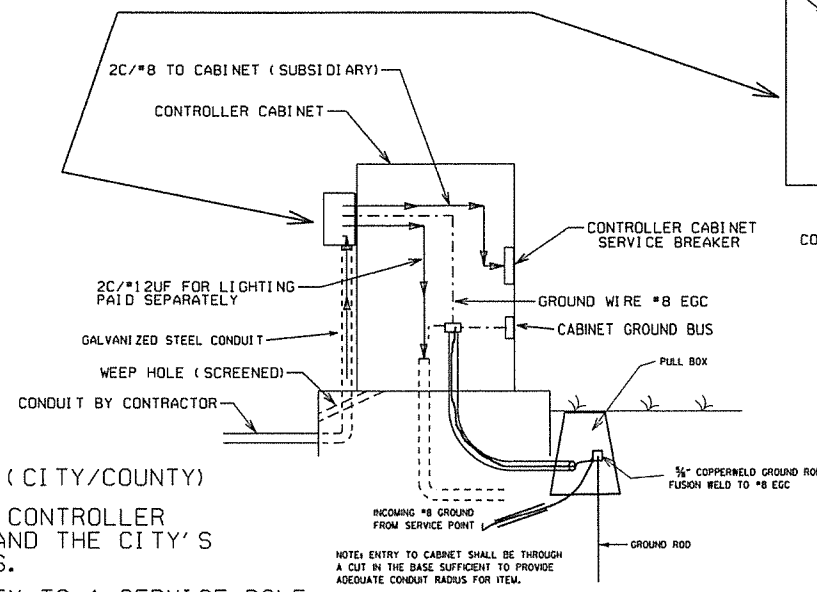
WITH POWER ISOLATION ASSEMBLY

WITHOUT POWER ISOLATION ASSEMBLY



GROUND ROD-A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

## SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)



## MAIN BREAKER WIRING (TYPICAL)

### NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

ELECTRICAL SERVICE TYPICALLY FALLS INTO TWO CATEGORIES: MAIN BREAKER NEAR CONTROLLER CABINET; AND MAIN BREAKER NOT NEAR CONTROLLER CABINET. THE CONTRACTOR'S AND THE CITY'S OR COUNTY'S RESPONSIBILITY VARIES ACCORDINGLY AS INDICATED ON THESE DETAILS.

1. ALL SITUATIONS: ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINLIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2C/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

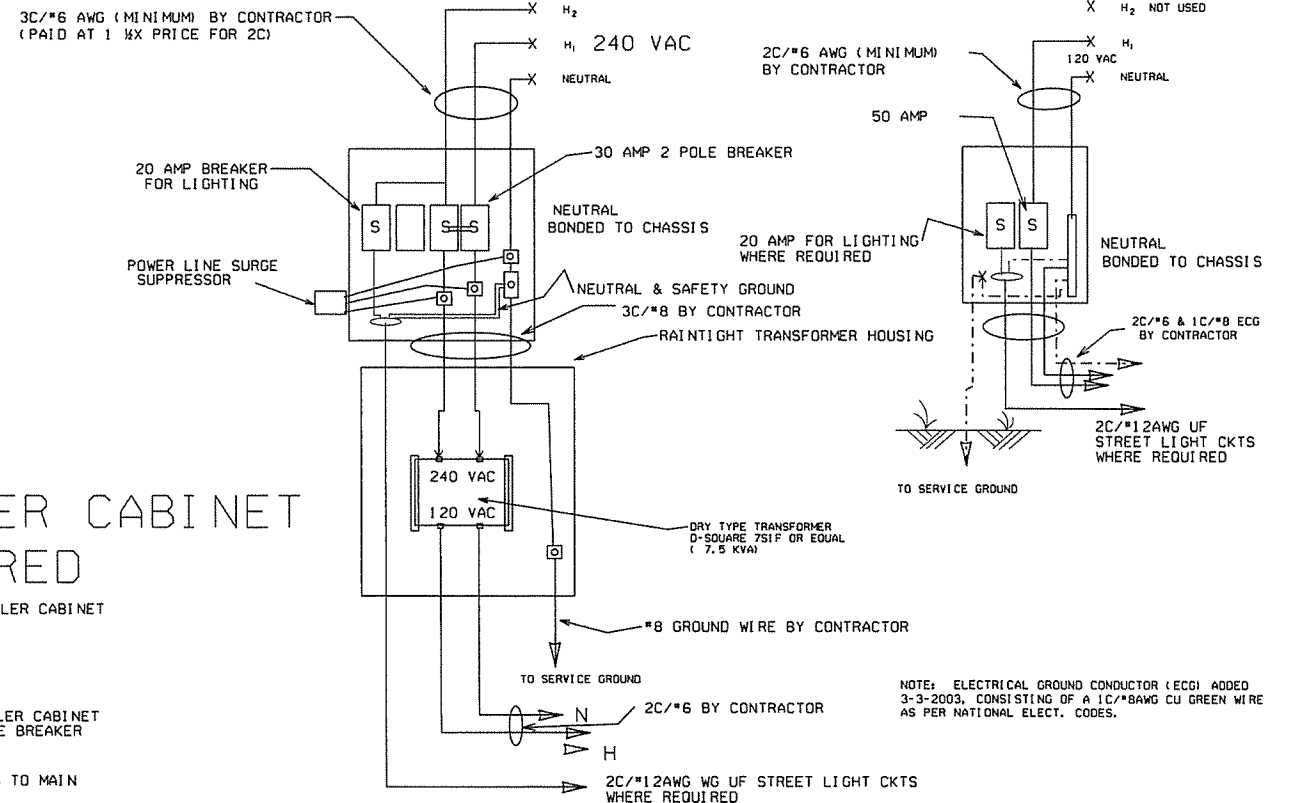
2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

3. MAIN BREAKER NEAR CONTROLLER CABINET: ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

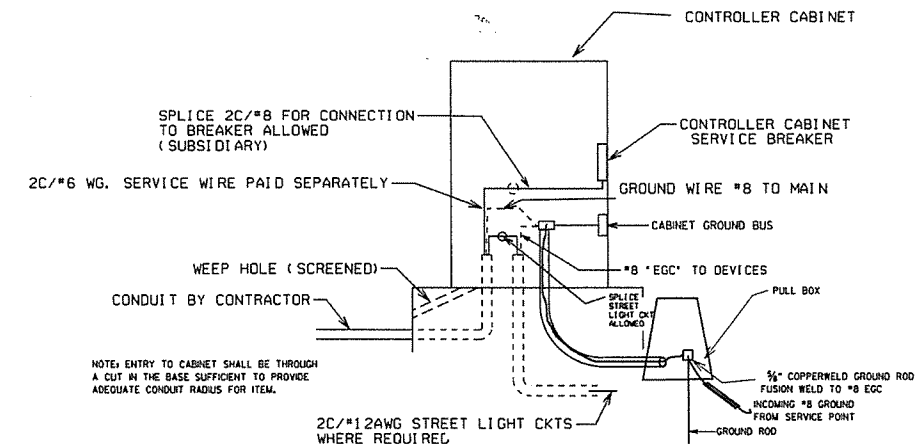
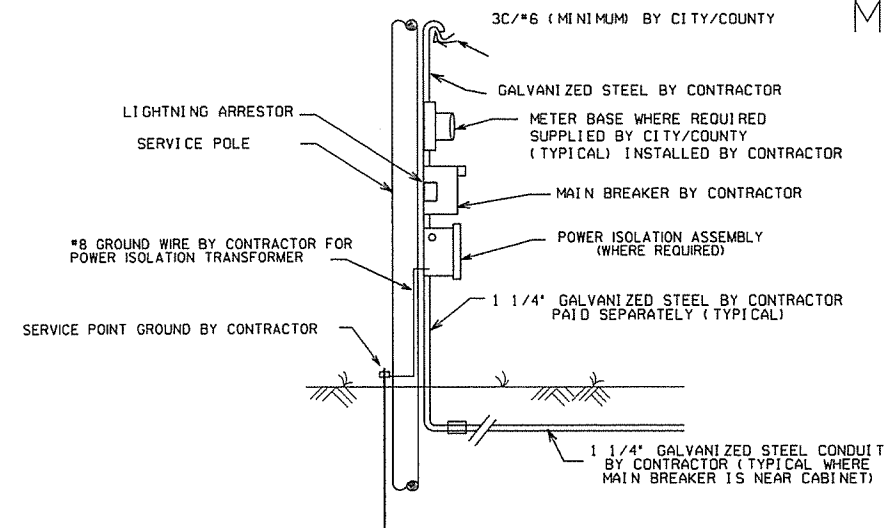
SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

WITH POWER ISOLATION ASSEMBLY  
4 CIRCUIT MAIN BREAKER

WITHOUT POWER ISOLATION ASSEMBLY  
2 CIRCUIT MAIN BREAKER



# MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED



DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
4-18-13	ADDED LIGHTNING ARRESTOR	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED EGC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

NOTE: ELECTRICAL GROUND CONDUCTOR (EGC) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

ARKANSAS STATE HIGHWAY COMMISSION

SERVICE POINT

STANDARD DRAWING SD-9

NOTES, PED AND TRAFFIC SIGNAL HEAD SIGNS: EACH ITEM TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY) SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY) TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE 111) WITH SILKSCREEN LEGEND AND BORDER.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:

1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF 4 FT. BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS: DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY II FOR STRUCTURES ON ROUTES WITH A SPEED LIMIT LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH ARMS LESS THAN 60' AND ROUTES WITH SPEED LIMITS OF 45 MPH AND LESS WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE SPEED LIMIT IS 45 MPH AND LESS AND ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, 12 INCH, AND HAVE 5 IN. BACK PLATES.

HEADS AT END OF ARM - ONE 4 SEC., 85 LB., 16.0 SQ. FT. ONE SIGN MOUNTED 3 FT. FROM SIGNAL. 2' X 0' X 2' X 6', 20 LB. REMAINING HEADS SPACED 8 FT. X 3 SEC., 56 LB., TWO 5 SEC. 14.4 SQ. FT. DESIGN TO ACCOMMODATE (INCLUDING 2 HEADS FOR ARMS 10 TO 16 FT., 2 HEADS FOR ARMS 10 TO 16 FT., INCLUDING LB., 3 HEADS FOR 18 TO 24 FT. ARMS, 4 HEADS FOR OVER 26 FT. ARMS.

STREET NAME SIGN -- 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) \* VARIABLE ARM LENGTH (MAX.), 3.3 SQ. FT., 75 LB. PED SIGNALS -- TWO 2 SEC. 12 INCH MOUNTED 8 FT. FROM BASE OF POLE. POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

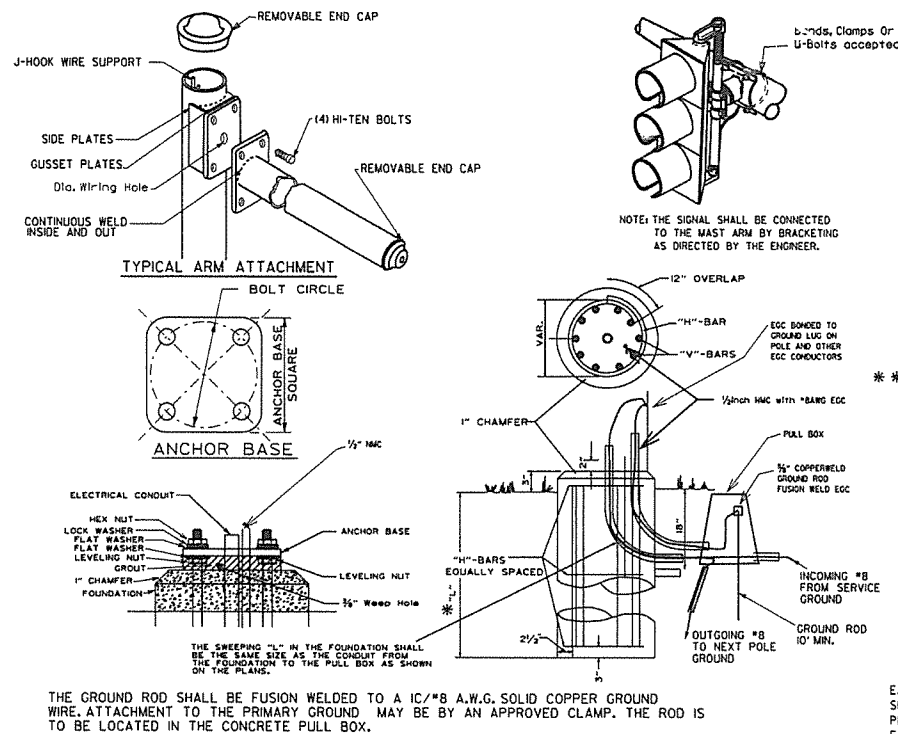
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE -- HAND HOLES SHALL BE 4 X 6 INCHES FOR STANDARD, AND 3 X 5 INCHES FOR PED POLES, MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDE A HAND HOLD WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE ARM SHALL MAINTAIN A POSITIVE AFTER IT IS PLACED UNDER LOAD.

7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.

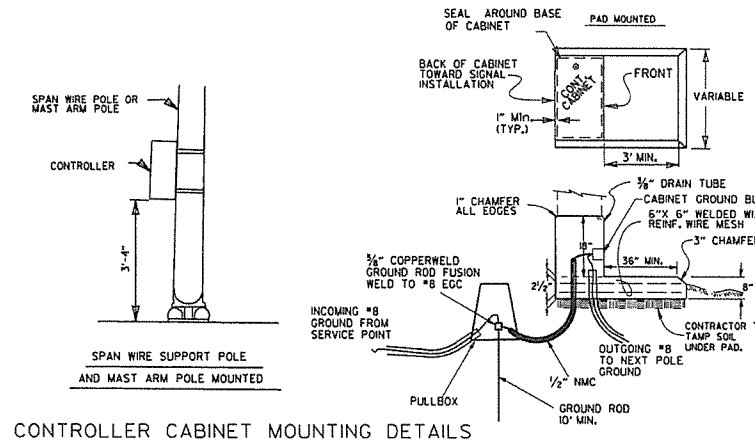


THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FDN. DIAMETER	DEPTH 'L' *	STEEL		
			VERT.	HORZ.	O/C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44'
2' to 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42'
over 12' to 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66'
over 20' to 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88'
over 35' to 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56'
over 50' to 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74'
Twins to 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76'
Twins over 20' to 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76'
Twins over 44' to 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76'
Twins over 50' to 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64'



CONTROLLER CABINET MOUNTING DETAILS

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX. NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUDED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS 'S' OR GREATER.

10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS 'S' OR GREATER.

11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PED PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM PEDESTRIAN SIGNAL HEAD.

SIGNAL OPERATION NOTES:

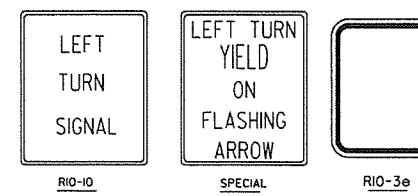
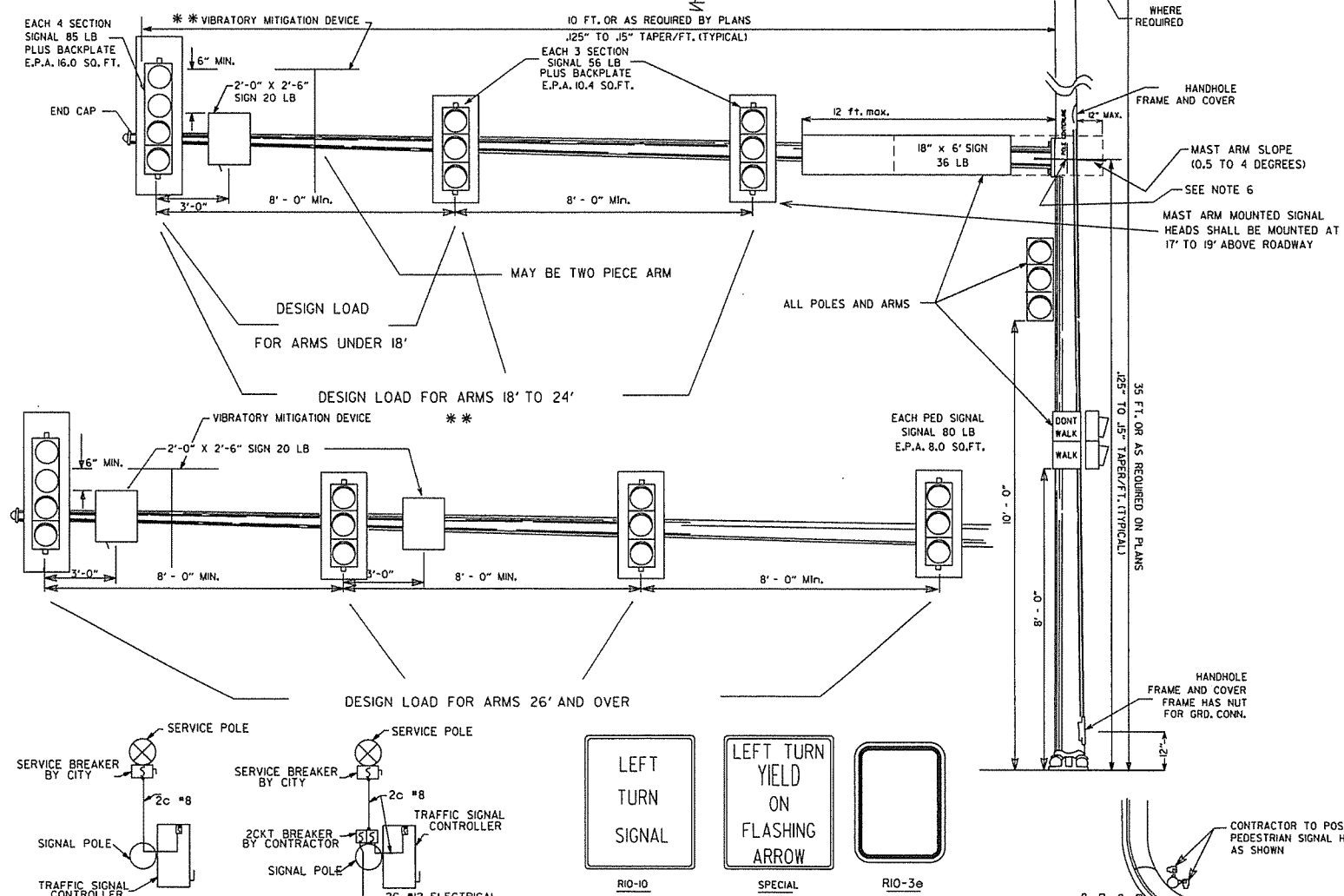
FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

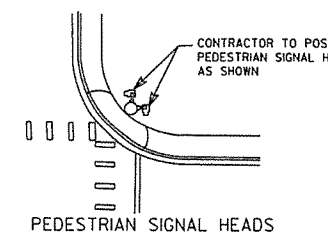
\* WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHEET AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 OF THE STANDARD SPECIFICATIONS.

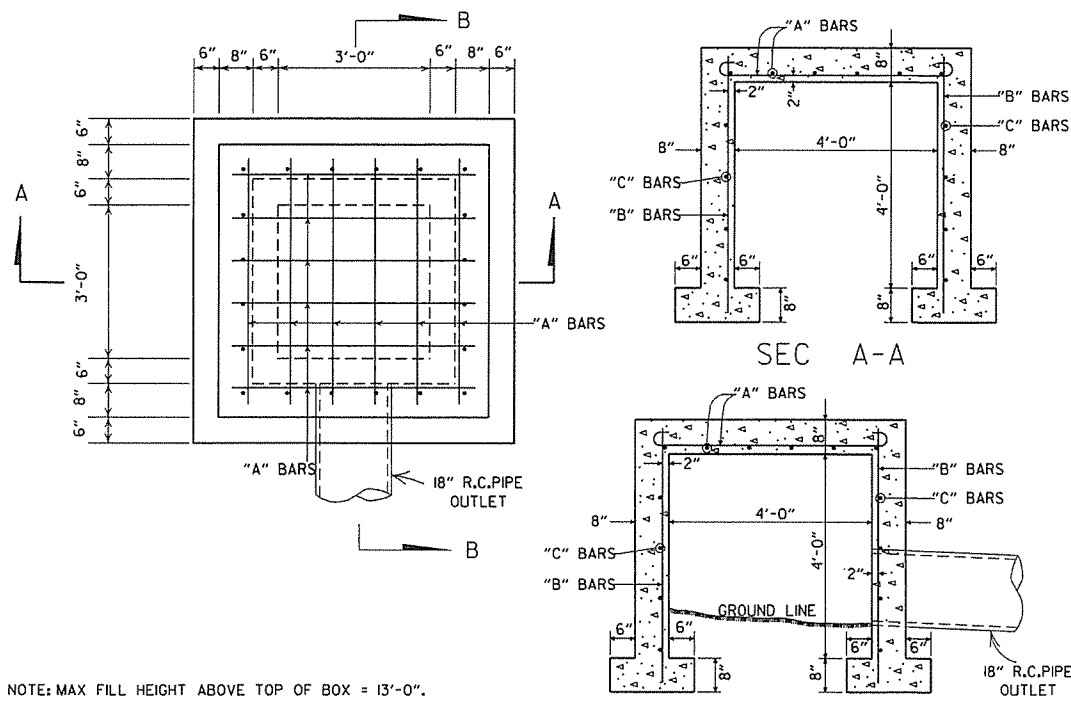
\*\* IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH A HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OR SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.



DATE	REVISION
2-27-14	REVISED NOTES
5-12-15	ISSUED AS STANDARD DRAWING
1-2-16	REVISED YIELD SIGNAL HEADS
5-21-09	REVISED GROUNDING
7-31-03	REVISED GROUNDING
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES
4-18-08	REVISED AASHTO NOTES
4-17-08	REVISED TO 2001 AASHTO STANDARDS
10-12-04	REVISED CABINET ORIENTATION
6-23-04	REVISED
5-8-04	REV. NOTE 3/AASHTO REQUIREMENTS
6-11-01	REV. NOTES & POLE MAST ARM SLOPE
4-1-01	REVISED POLE TAPERS
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT
11-22-99	REVISED FOUNDATION DETAILS
11-17-98	REVISED DETAILS AND NOTES
11-21-95	ISSUED

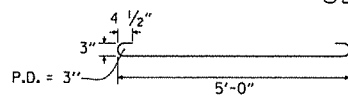




NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE			
BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"

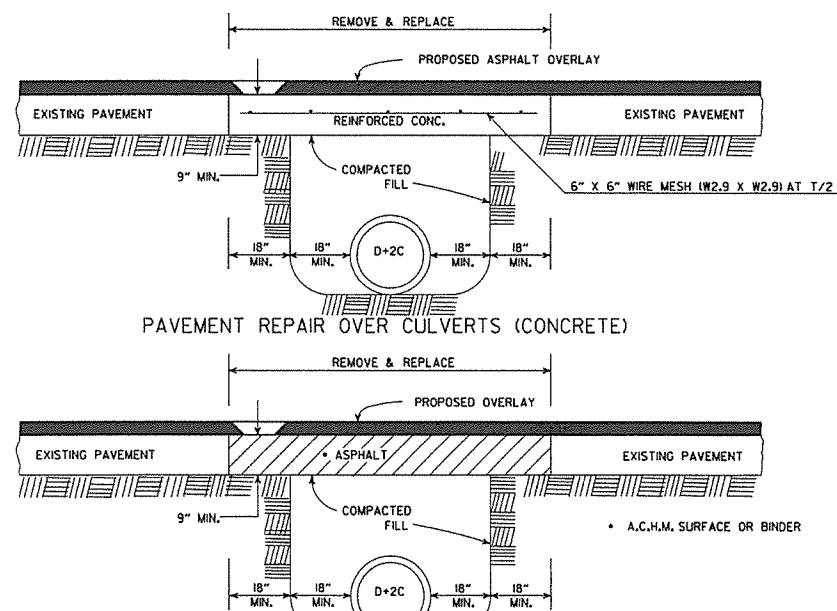
ALL STEEL TO BE #4 BARS



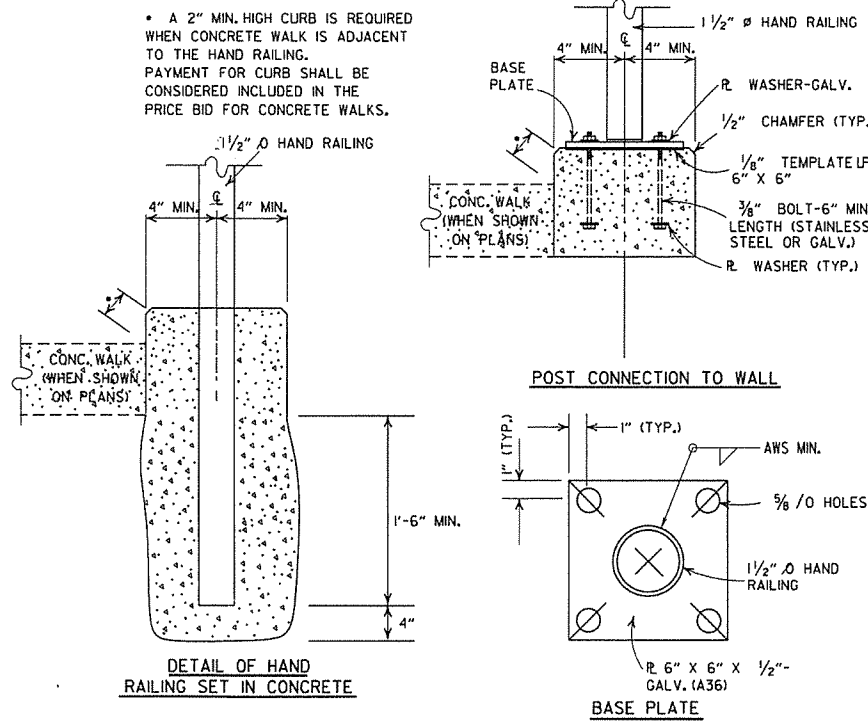
GENERAL NOTE:  
THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

QUANTITIES  
CONCRETE 3.31 CU. YDS.  
REINFORCING STEEL 168 LB.

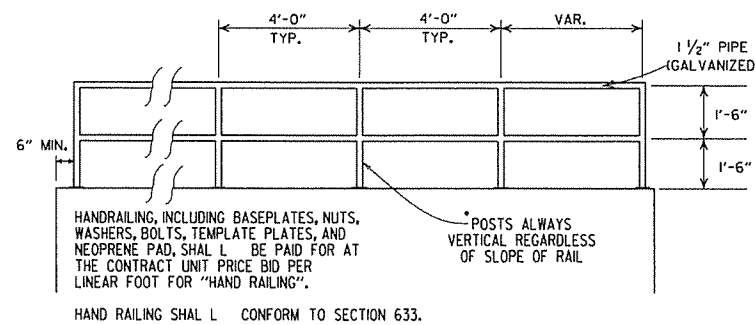
REINFORCED CONCRETE SPRING BOX



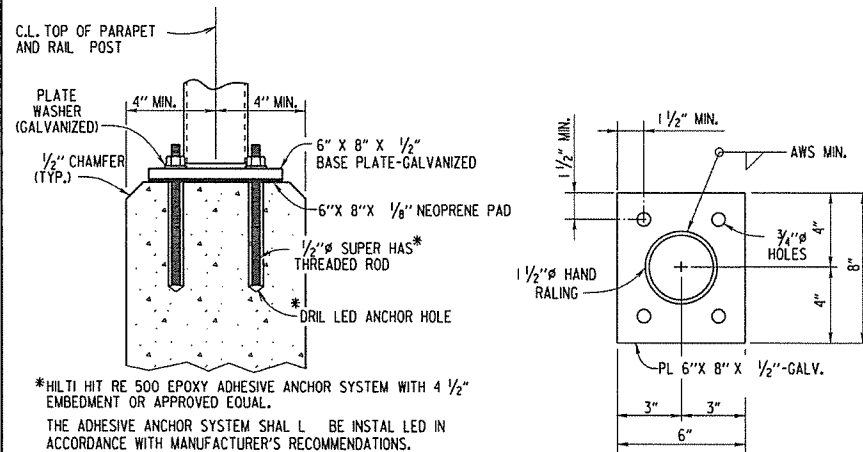
DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS



POST CONNECTION DETAILS



HAND RAILING SHALL CONFORM TO SECTION 633.

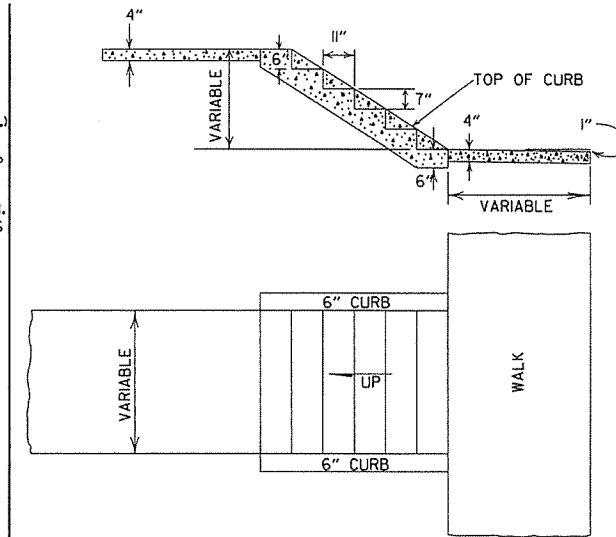


POST CONNECTION TO WALL

BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



DETAILS OF CONCRETE STEPS & WALKS


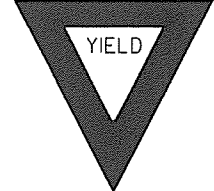
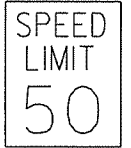
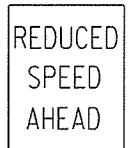





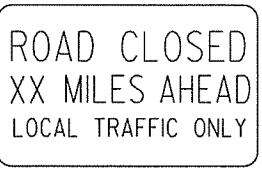
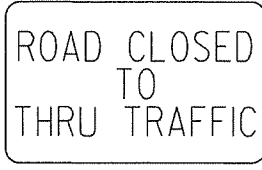

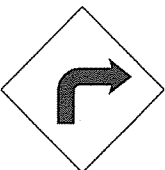
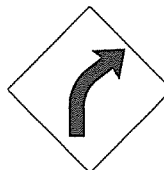
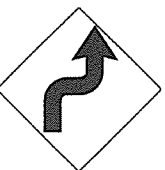

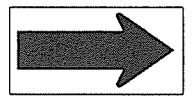
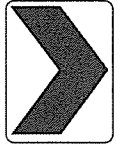
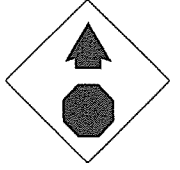
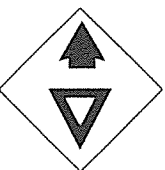
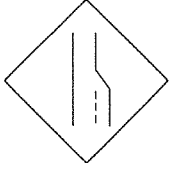

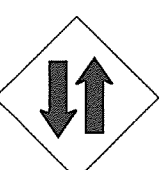

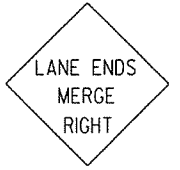


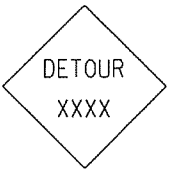


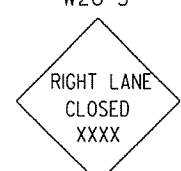


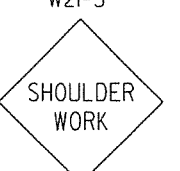
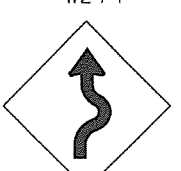
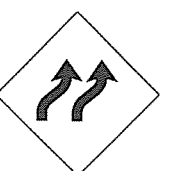

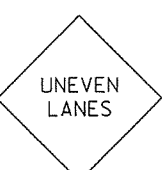
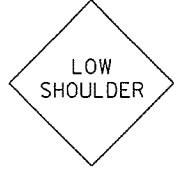
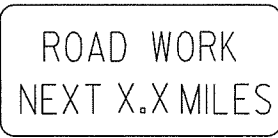
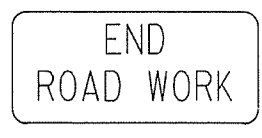
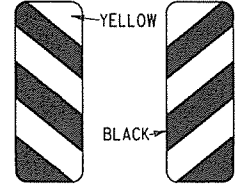
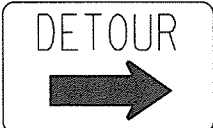

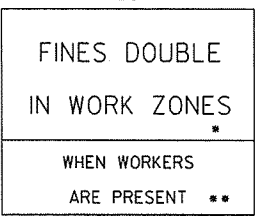
GENERAL NOTES  
1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.  
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

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 ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET. & PAVEMENT REPAIR	674-4-20-79
2-2-76	12" MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5A</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5C</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>500 FEET W16-2 24"</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

ADVANCE DISTANCES (XXXX)

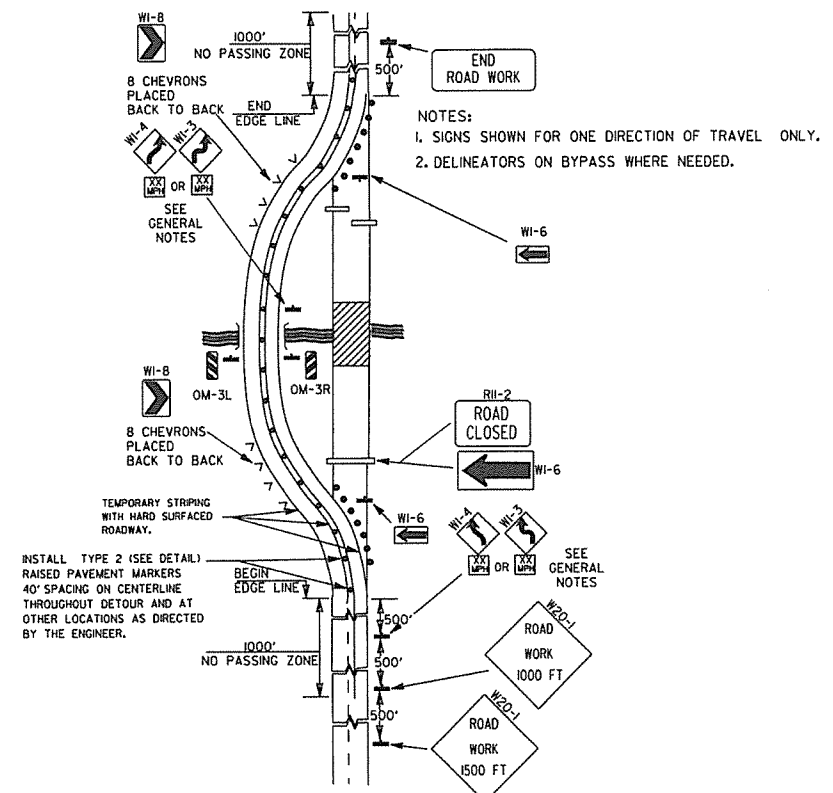
500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

- 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 SO. 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.

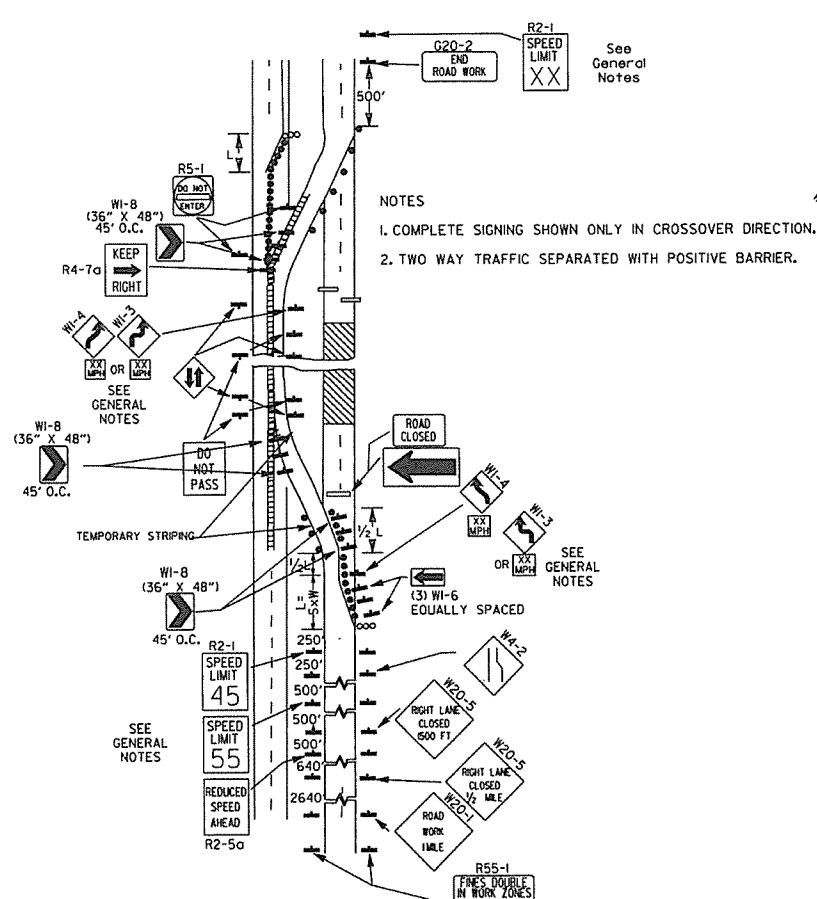
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT, HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER 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.

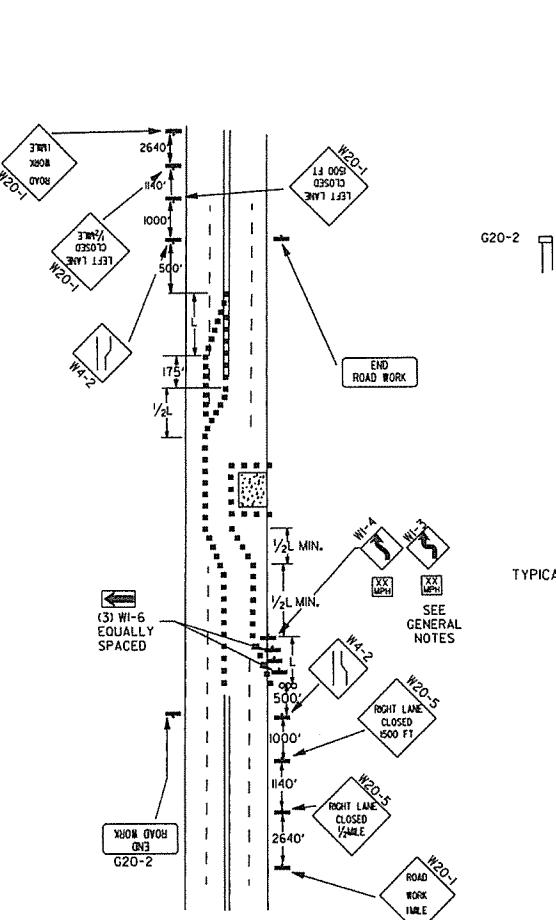
DATE	REVISION	FILMED
12-15-81	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED 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 VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	



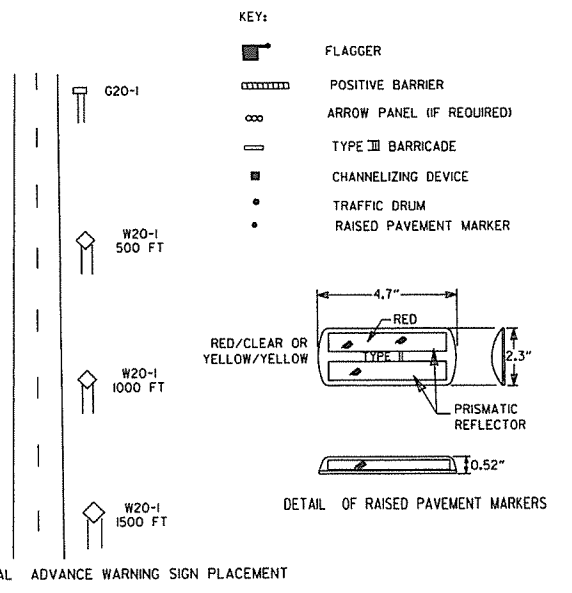
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



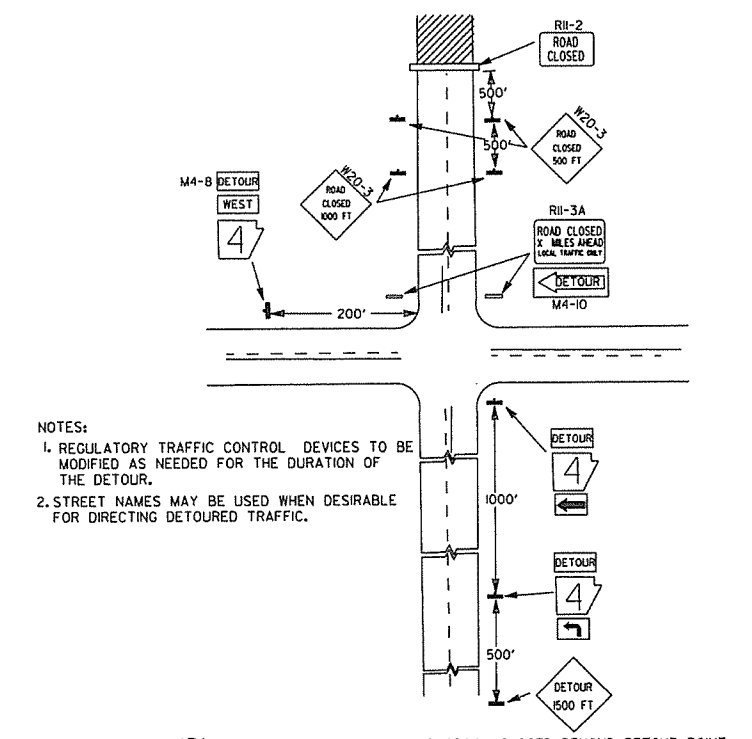
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



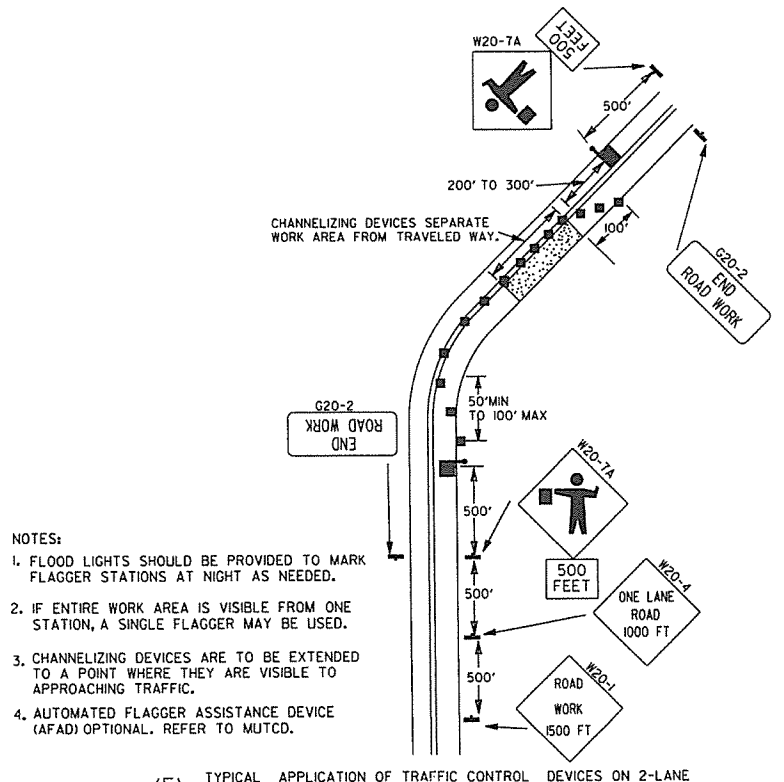
TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:  
 L=SW FOR SPEEDS OF 45MPH OR MORE.  
 L=  $\frac{WS^2}{60}$  FOR SPEEDS OF 40MPH OR LESS.  
 WHERE:  
 L= MINIMUM LENGTH OF TAPER.  
 S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.  
 W= WIDTH OF OFFSET.

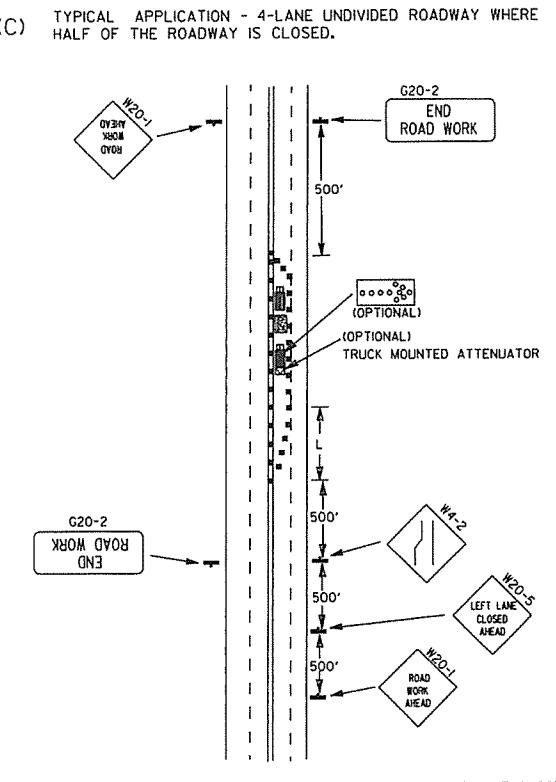
- GENERAL NOTES:
- ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
  - WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE R2-5A SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
  - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(65) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
  - THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
  - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
  - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
  - TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.



(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



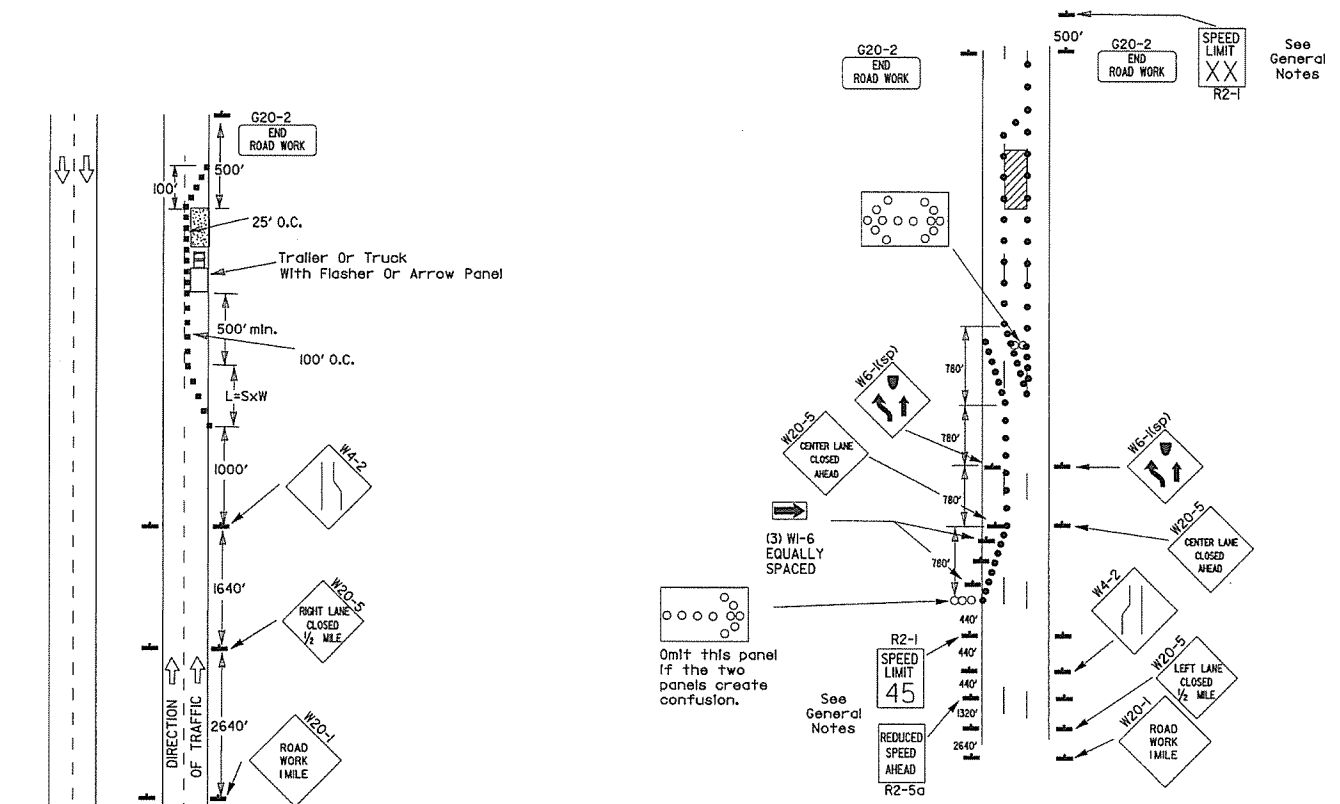
(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



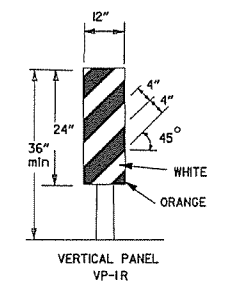
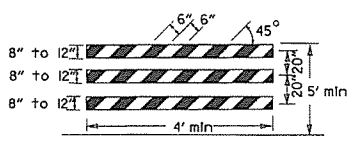
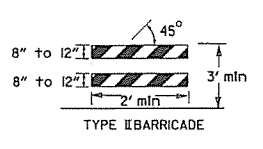
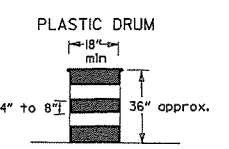
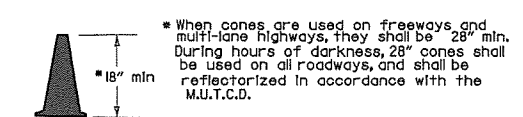
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

Channelizing devices



(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.

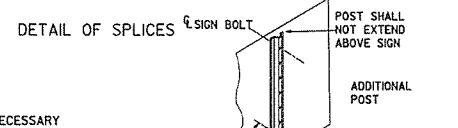
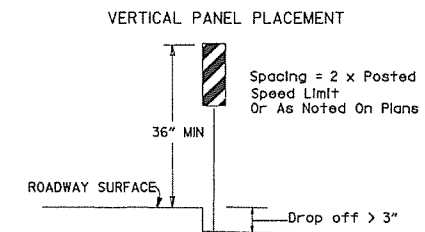
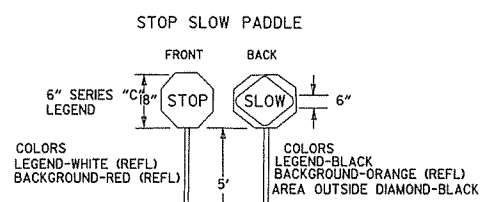
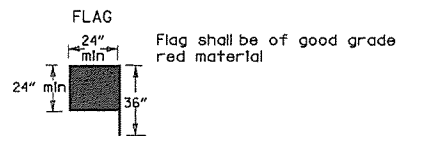


NOTE: For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

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-land vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

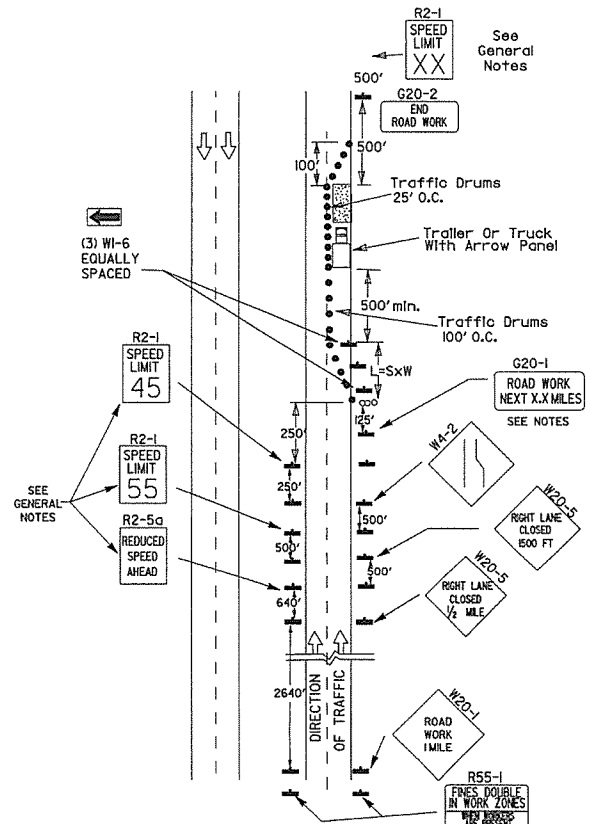
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



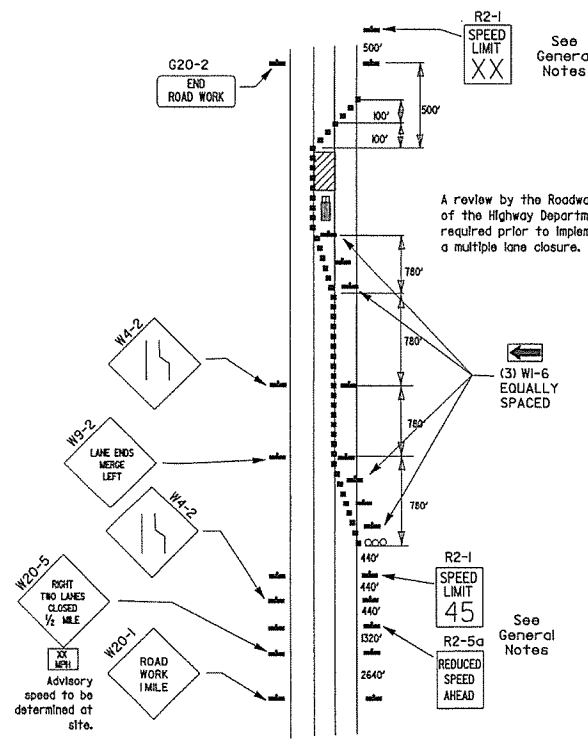
(B) Typical application - 3-lane oneway roadway where center lane is closed.

- KEY:
- Arrow Panel (if Required)
  - Channelizing Device
  - Traffic drum

- GENERAL NOTES:
- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
  - 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 R2-5A shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
  - When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
  - The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
  - Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
  - Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
  - 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 MILE) signs are not required in advance of lane closures that begin inside the project limits.
  - Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
  - All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
  - 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.

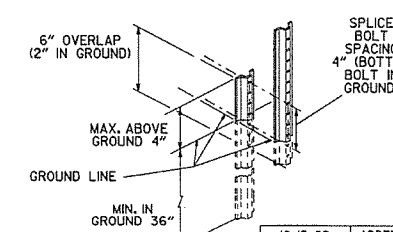


(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



(D) Typical application - closing multiple lanes of a multilane highway.

NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21) 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.

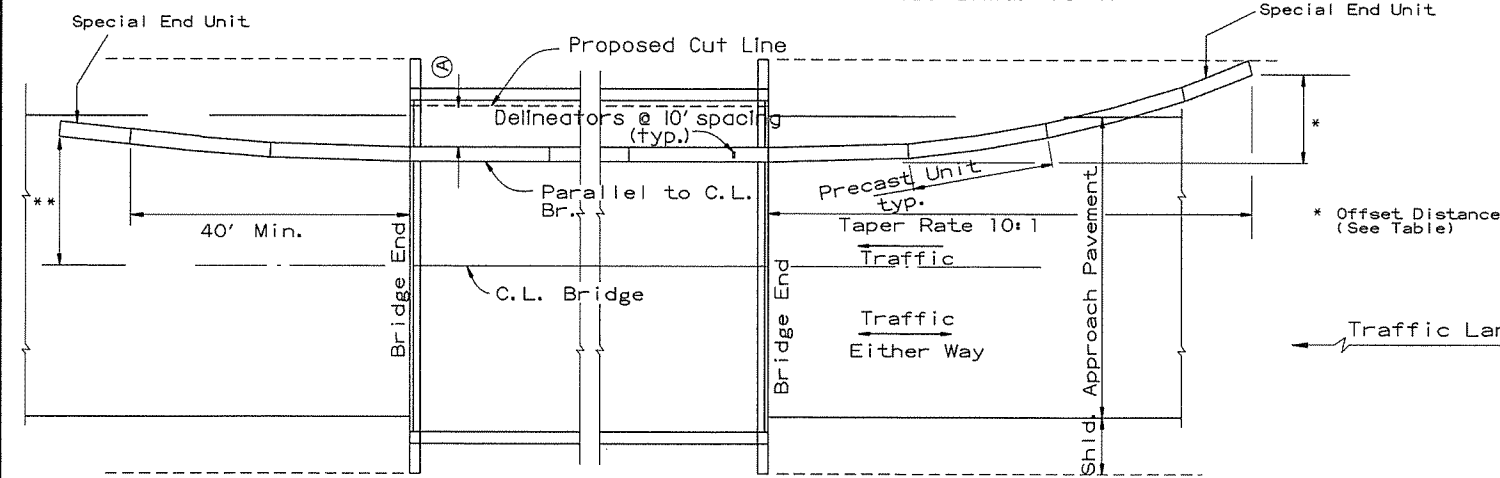


DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-95	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	





(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)

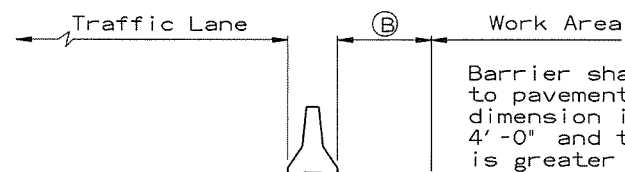


BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

\*\* Offset Distance for Two Way Traffic Only

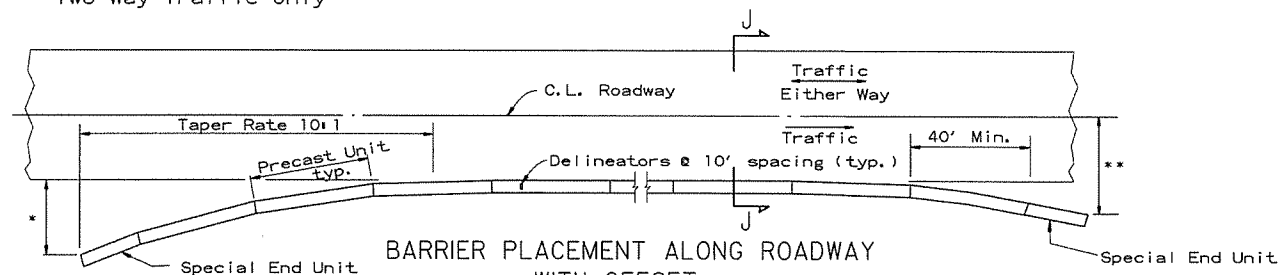
\* Offset Distance (See Table)



SECTION J-J

No Scale

Barrier shall be doweled to pavement when the B dimension is less than 4'-0" and the C dimension is greater than 24 inches.



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

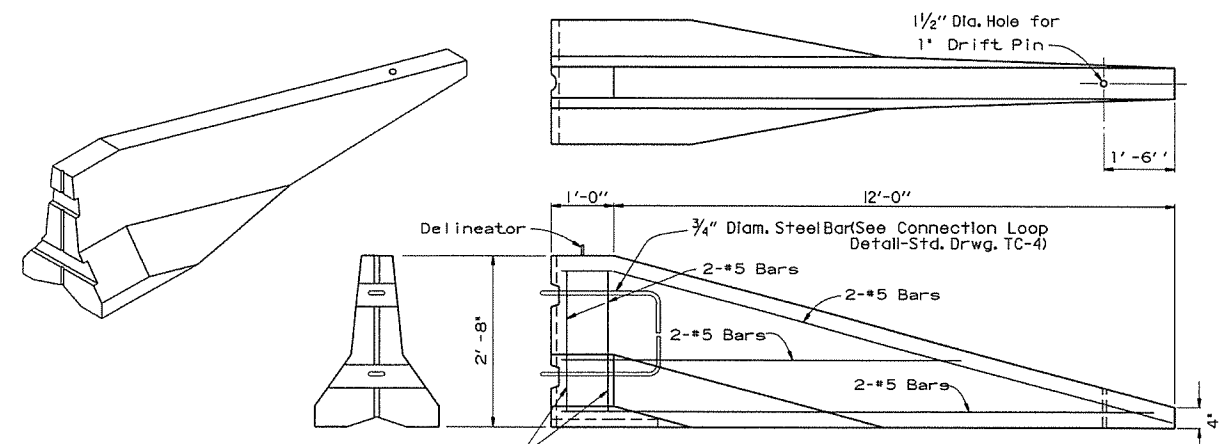
\*\* Offset Distance For Two Way Traffic Only

\* Offset Distance (See Table)

Offset Distance Table

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

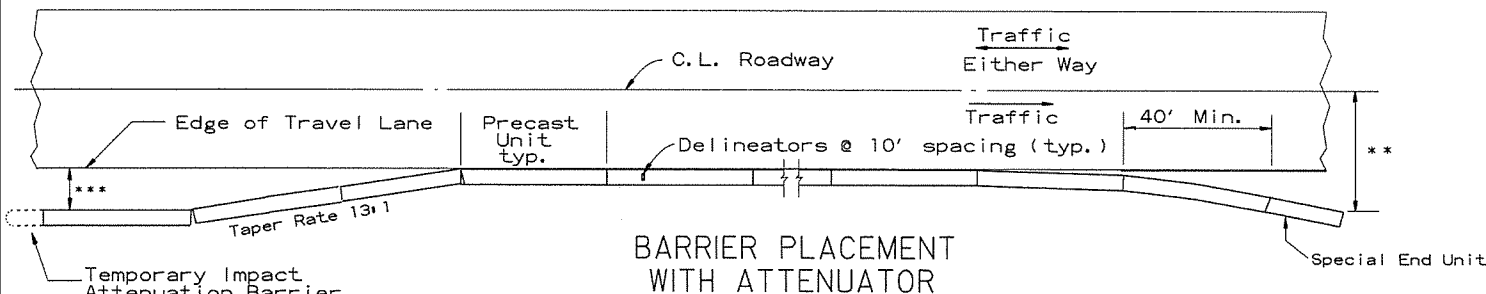


SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."



BARRIER PLACEMENT WITH ATTENUATOR

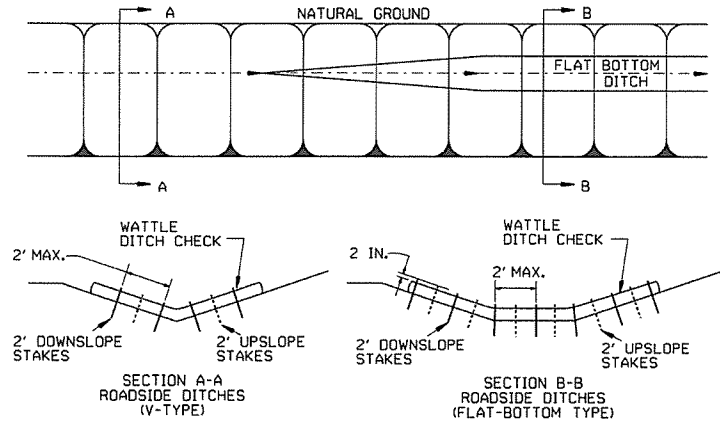
No Scale

\*\* Offset Distance For Two Way Traffic Only

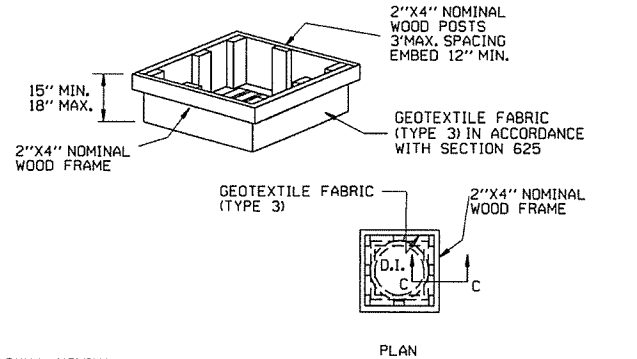
\*\*\* Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

ARKANSAS STATE HIGHWAY COMMISSION		
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER		
STANDARD DRAWING TC-5		
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	
DATE	REVISION	FILMED

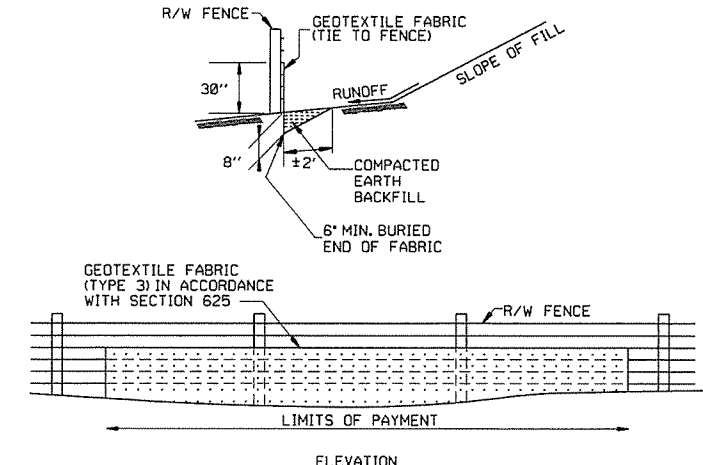
GENERAL NOTES  
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



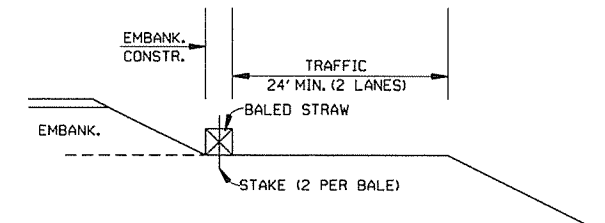
DROP INLET SILT FENCE (E-7)



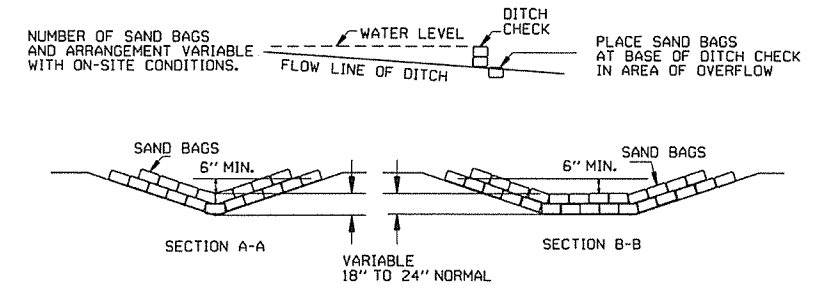
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES  
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST. TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

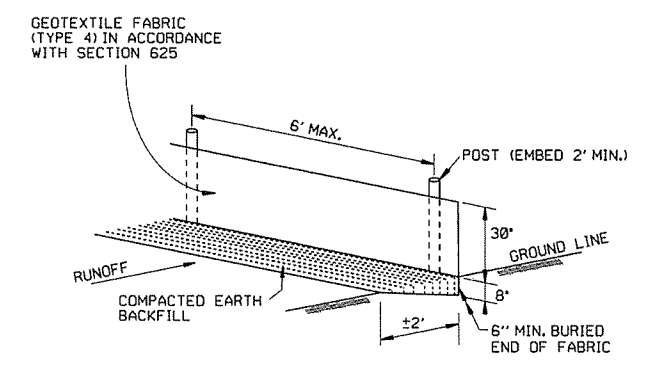
GENERAL NOTES  
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.  
2. NO GAPS SHALL BE LEFT BETWEEN BALES.  
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)

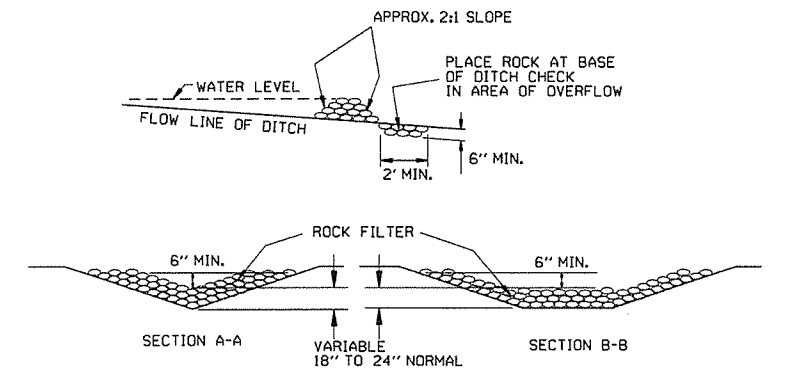


SAND BAG DITCH CHECK (E-5)



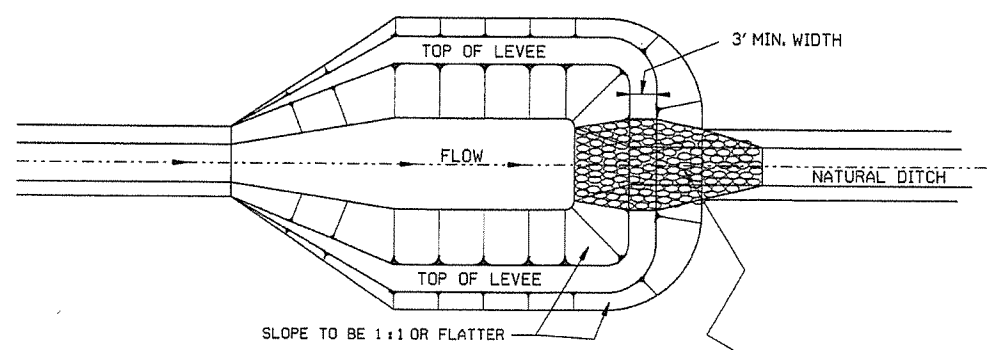
SILT FENCE (E-11)

GENERAL NOTES  
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

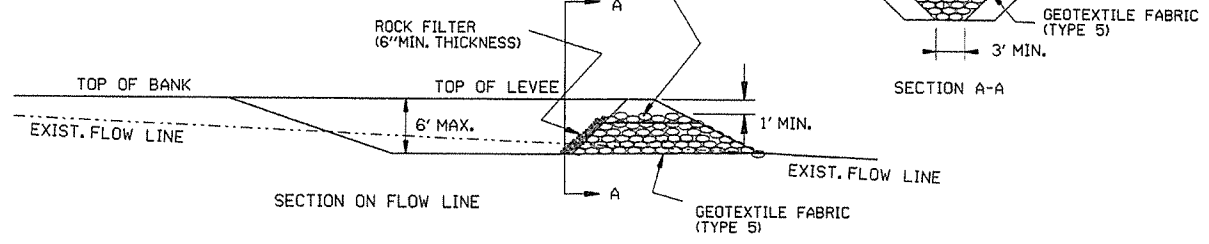


ROCK DITCH CHECK (E-6)

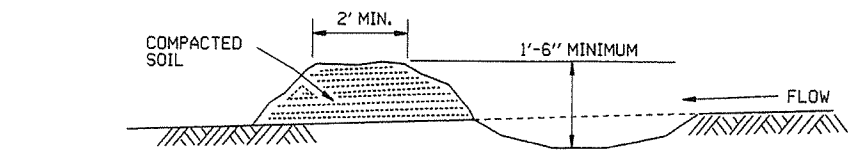
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	TEMPORARY EROSION CONTROL DEVICES
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94	
4-1-93	REDRAWN		
10-1-92	REDRAWN		
8-2-76	ISSUED R.D.M.	298-7-28-76	STANDARD DRAWING TEC-1
DATE	REVISION	FILMED	



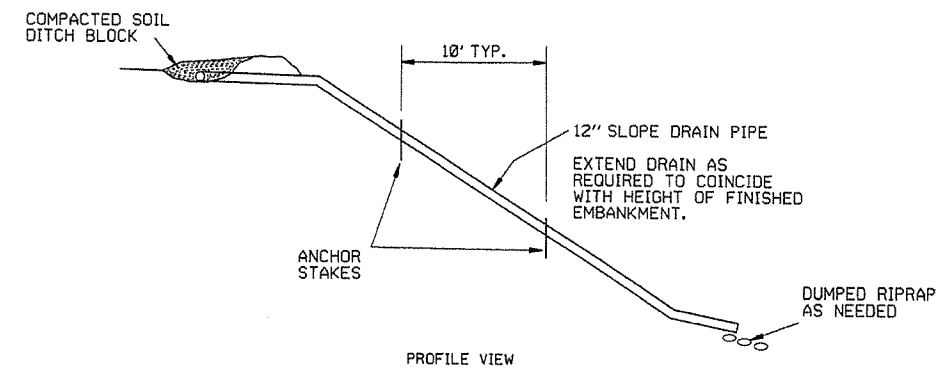
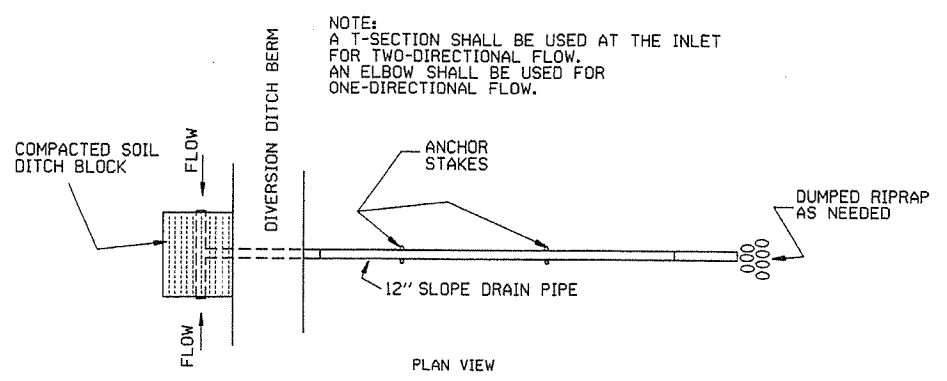
NOTE:  
SIZE OF BASIN TO BE DETERMINED  
BY VOLUME REQUIRED; HOWEVER  
A MINIMUM LENGTH-TO-WIDTH  
RATIO OF 2:1 SHALL BE USED.



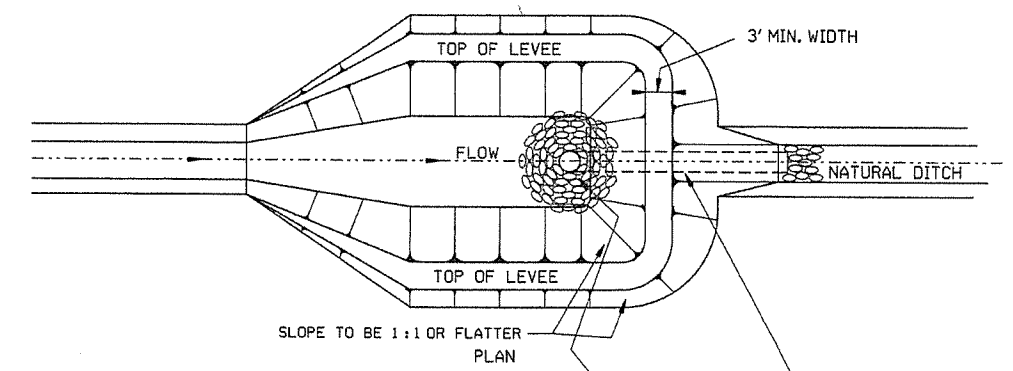
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



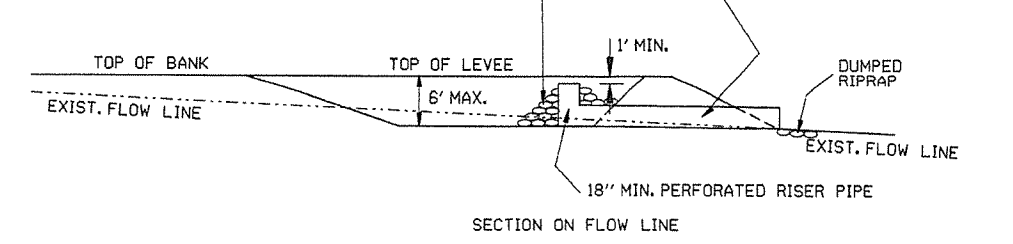
DIVERSION DITCH (E-8)



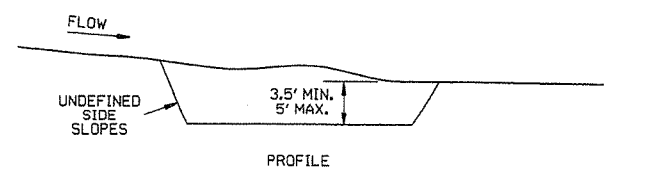
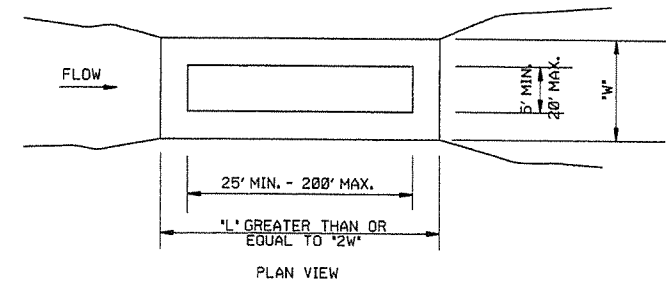
SLOPE DRAIN (E-12)



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)

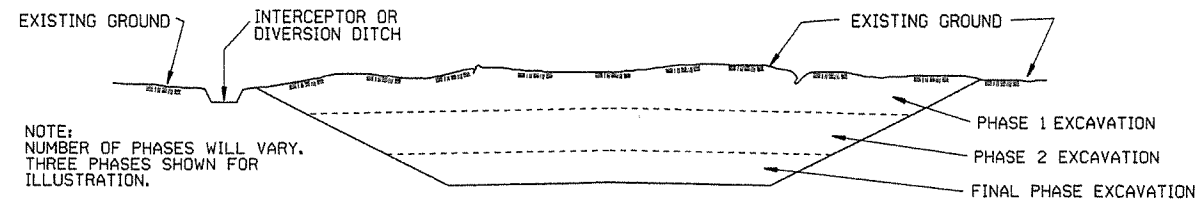
ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
STANDARD DRAWING TEC-2		
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13	
4-1-93	ISSUED	
DATE	REVISION	FILMED

# CLEARING AND GRUBBING

## CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

# EXCAVATION



NOTE:  
NUMBER OF PHASES WILL VARY.  
THREE PHASES SHOWN FOR  
ILLUSTRATION.

## GENERAL NOTE

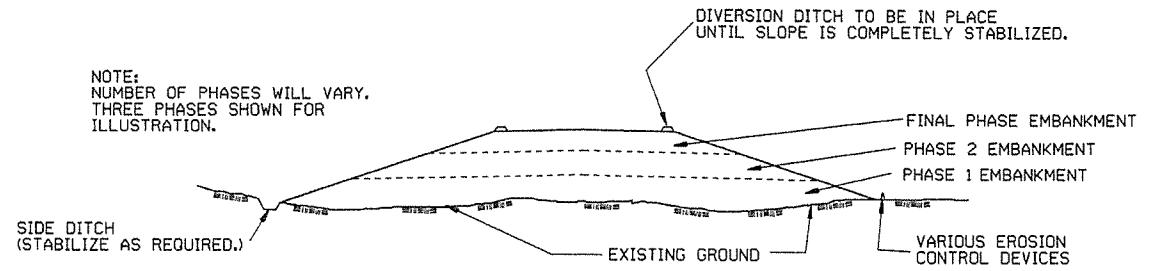
ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

## CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

# EMBANKMENT

125



NOTE:  
NUMBER OF PHASES WILL VARY.  
THREE PHASES SHOWN FOR  
ILLUSTRATION.

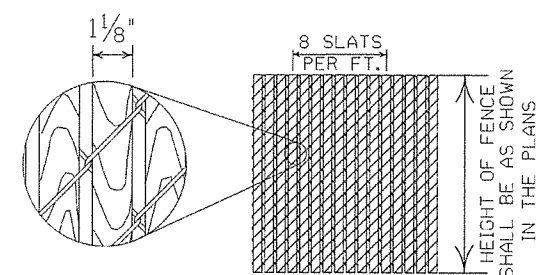
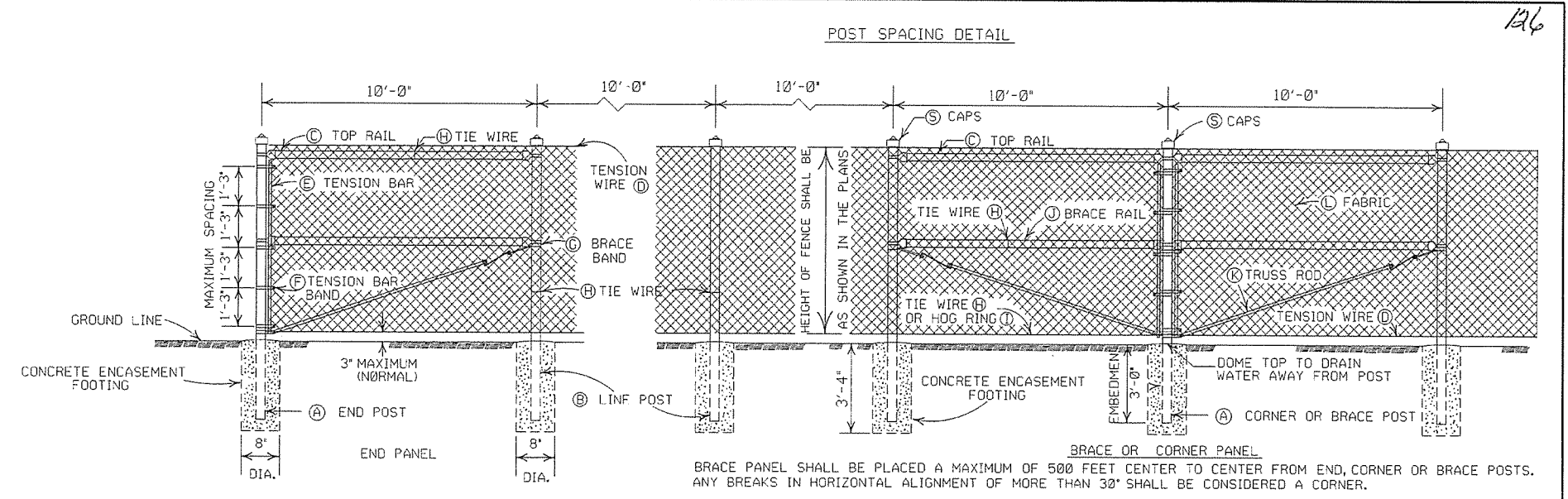
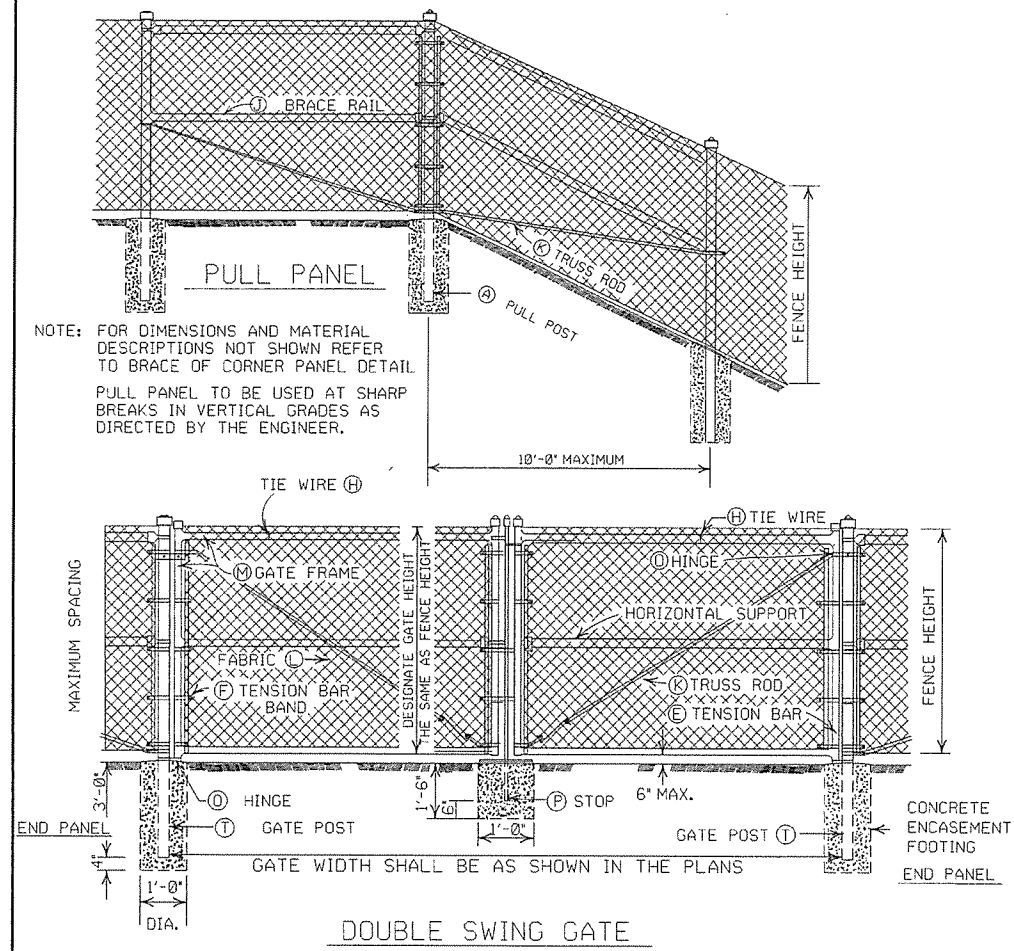
## GENERAL NOTE

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:**
- (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.

HEIGHT OF FENCE FABRIC	(A) END, PULL CORNER OR BRACE POST		(B) LINE POSTS			(C) TOP RAIL			(D) TENSION WIRE		(E) TENSION BAR		(F) TENSION BAR BAND		(G) BRACE BAND	
	SIZE	TIE SPACING	SIZE	TIE SPACING	MIN. LENGTH	SIZE	TIE SPACING	MIN. OF	MIN. OF	SIZE	BOLT SIZE	SPACING	SIZE	BOLT SIZE		
6' AND LESS	2 1/2" O.D.	2' O.D.	1 1/2" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	3/8" x 3/4"	2" MIN. OF FABRIC HEIGHT	3/4" x 0.074	5/8" x 1 1/4"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	3/4" x 0.105	5/8" x 1 1/4"		
OVER 6' TO 12' INCL.	3" O.D.	2 1/2" O.D.	1 1/2" O.D.	1 TIE EVERY 2'-0"			1 TIE EVERY 1'-0"	3/8" x 3/4"	2" MIN. OF FABRIC HEIGHT	3/4" x 0.074	5/8" x 1 1/4"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	3/4" x 0.105	5/8" x 1 1/4"		

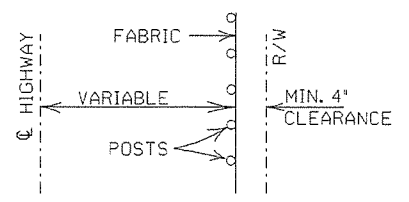
HEIGHT OF FENCE FABRIC	(H) TIE WIRE	(I) HOG RING	(J) BRACE RAIL		(K) TRUSS ROD	(L) FABRIC		(M) GATE FRAME	(N) HORIZONTAL SUPPORT	(O) HINGE	(P) GATE POST		
	SIZE	TIE SPACING	SIZE	TIE SPACING	MIN. OF	SIZE	MESH SELVAGE	SIZE	TIE SPACING	SIZE	TIE SPACING	GATE WIDTH	GATE WIDTH OVER 12' AND LESS 12' TO 24' 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'	KNUCK-ING AND/OR TWIST-ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	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'	KNUCK-ING AND/OR TWIST-ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	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.

- (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) 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.
- CONCRETE REQUIRED FOR THE EMBEDMENT OF ALL POSTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CHAIN LINK FENCE.
- POSTS SHALL BE SPACED EQUIDISTANT ON A MAXIMUM OF 10' CENTERS.
- EXCAVATION FOR POSTS: IN OTHER THAN ROCK SHALL BE OF THE DIMENSIONS INDICATED. IF ROCK IS ENCOUNTERED BEFORE REACHING THE REQUIRED DEPTH, THE EXCAVATION SHALL BE CONTINUED TO THE DEPTH INDICATED OR 1'-6" INTO THE ROCK, WHICHEVER IS LESS, AND SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER.



**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

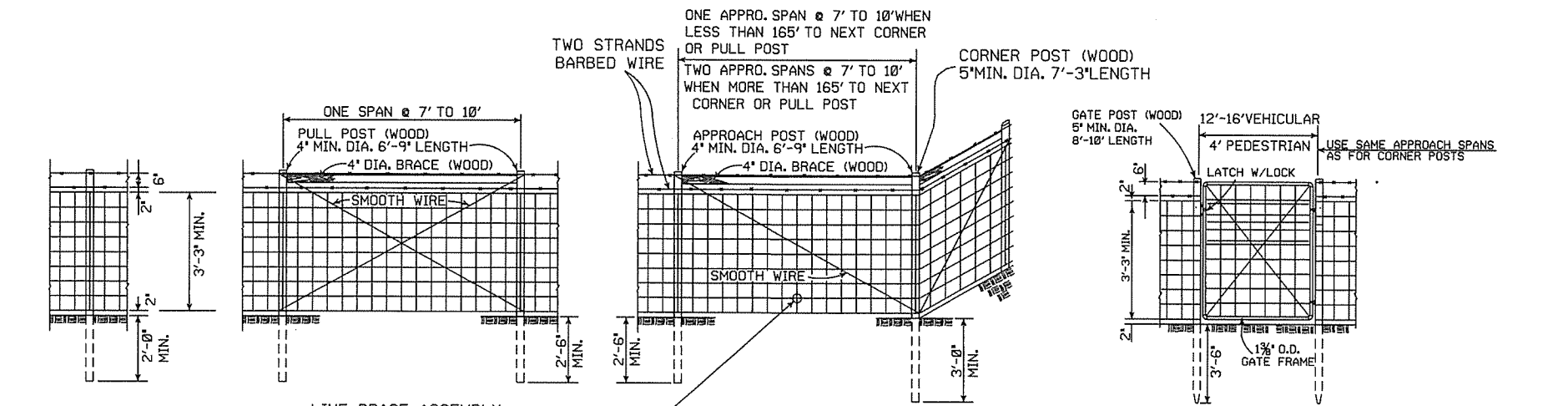
TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

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

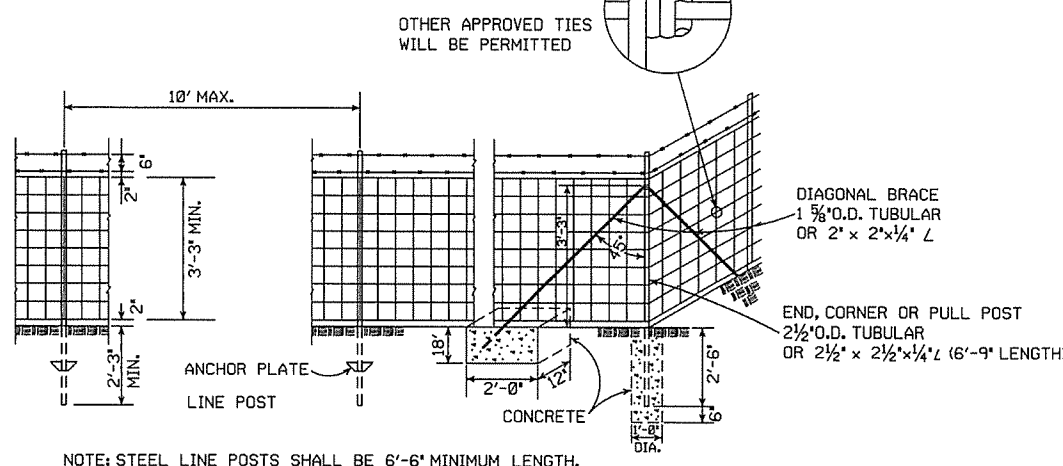
ARKANSAS STATE HIGHWAY COMMISSION

**CHAIN LINK FENCE**

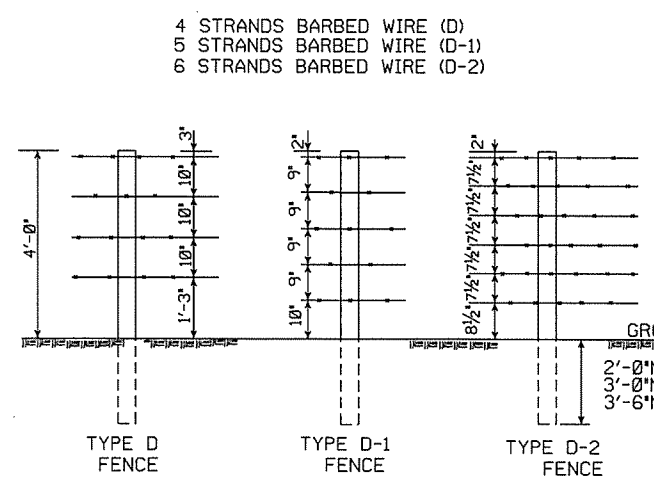
STANDARD DRAWING WF-3



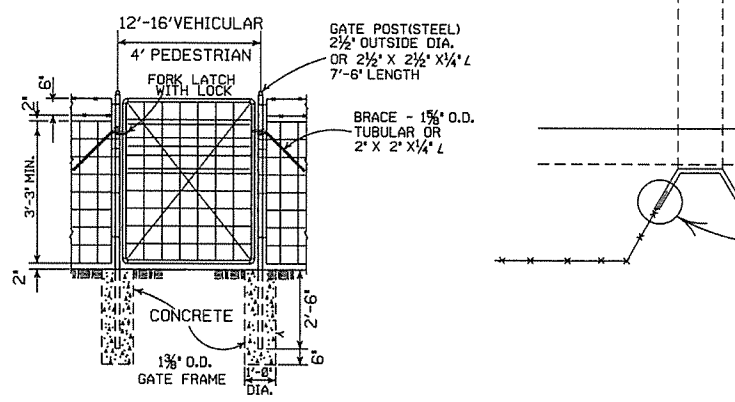
TYPE C FENCE (WOOD POSTS)



TYPE C FENCE (STEEL POSTS)



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.



GENERAL NOTES:

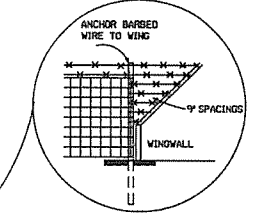
STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE. AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE -1" TO +2". 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 3/8" X 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.

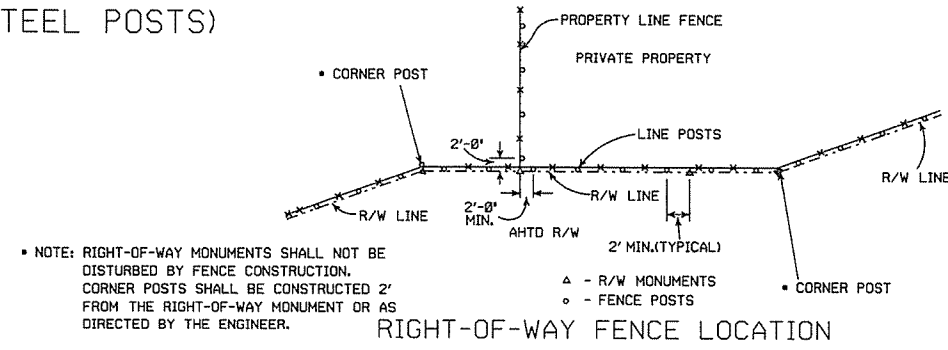


DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

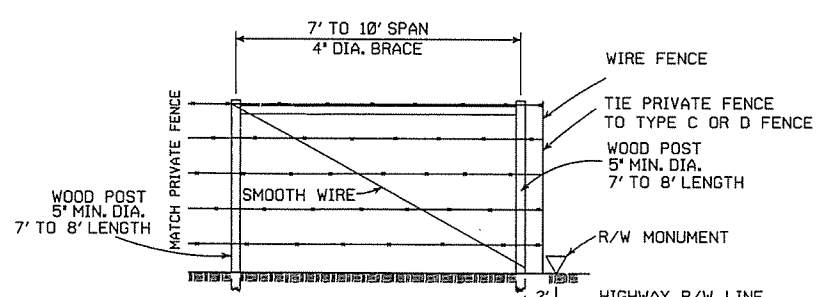
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE 'EYE METHOD' AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST ASSEMBLY 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.

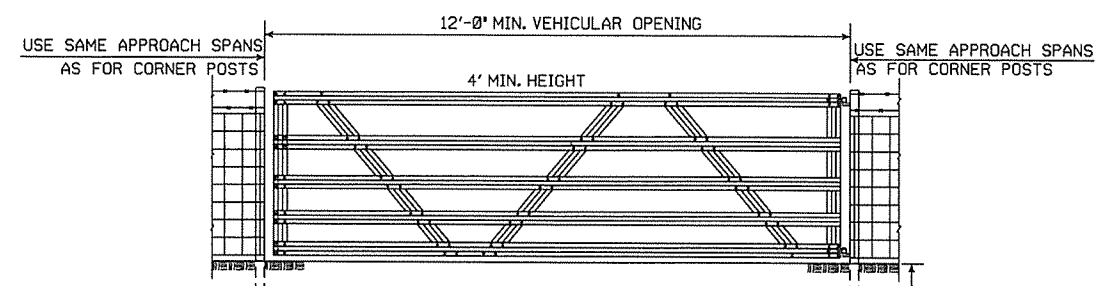
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.



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.



TYPICAL VEHICULAR GATES (ALTERNATE TYPE)

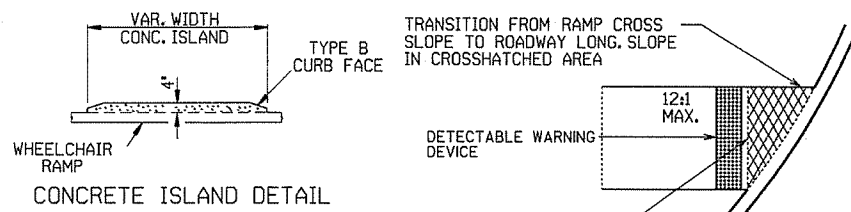
OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER. THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

DATE	REVISION	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



TRANSITION FROM RAMP CROSS SLOPE TO ROADWAY LONG. SLOPE IN CROSSHATCHED AREA

DETECTABLE WARNING DEVICE

BEGIN RAMP SLOPE ON A LINE PERPENDICULAR TO TRAVEL DIRECTION

TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS 'R'	DISTANCE 'X'	DISTANCE 'Y'	LENGTH 'L'	RAMP AREA 'A'
FEET	FEET	FEET	FEET	SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	25.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

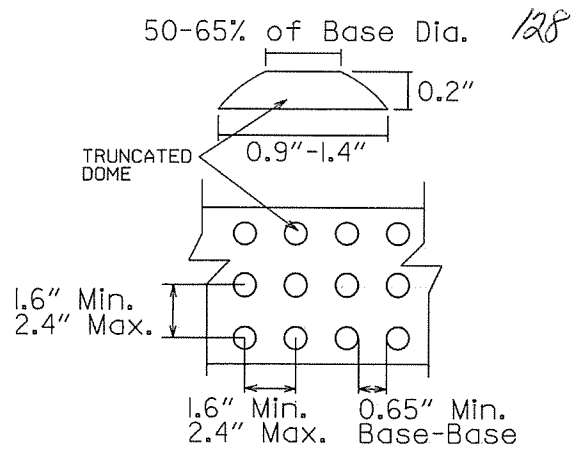
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.

TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.

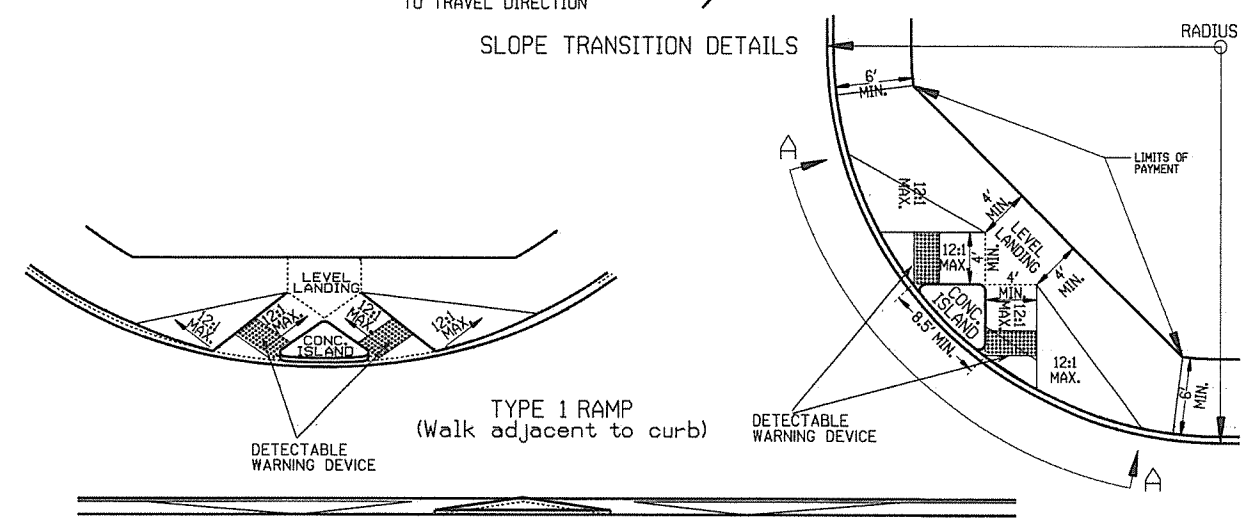
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

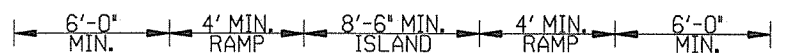
DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



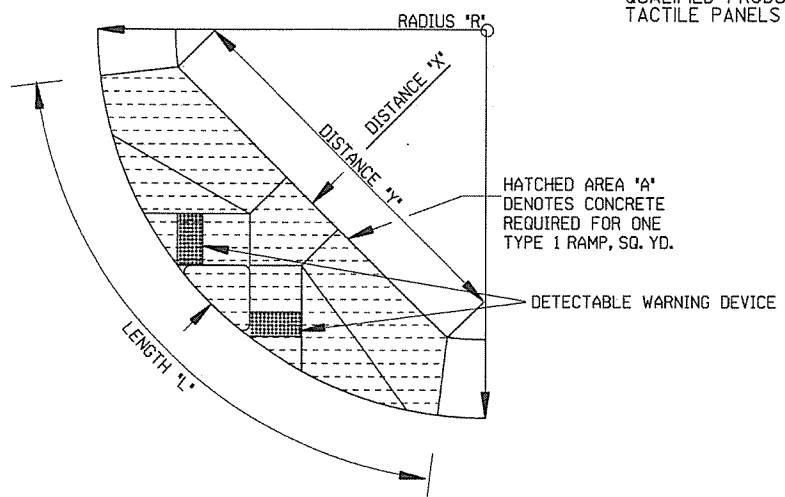
DETECTABLE WARNING DEVICE DETAIL



TYPE 1 RAMP (Walk adjacent to curb)



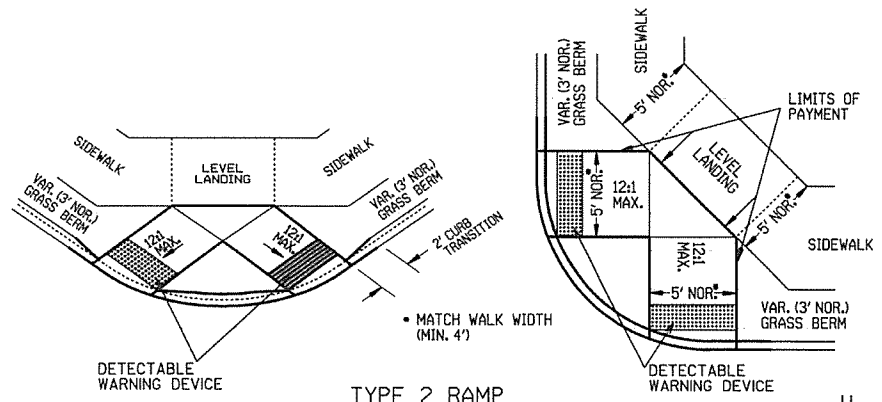
SECTION A-A



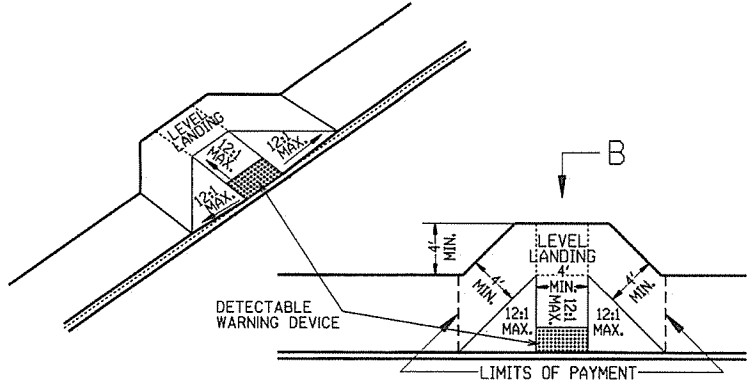
HATCHED AREA 'A' DENOTES CONCRETE REQUIRED FOR ONE TYPE 1 RAMP, SQ. YD.

DETECTABLE WARNING DEVICE

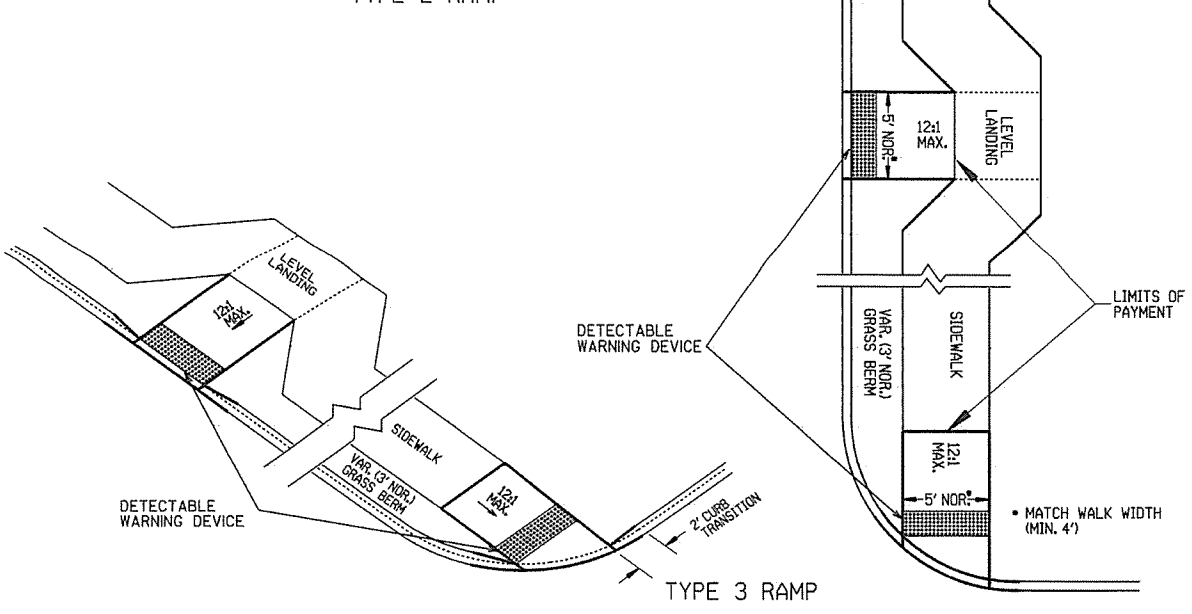
NOTE: THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



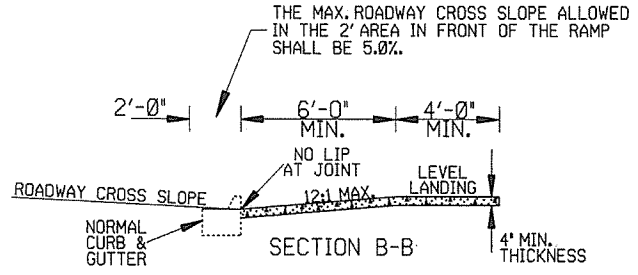
TYPE 2 RAMP



TYPE 4 RAMP (Walk adjacent to curb)



TYPE 3 RAMP



SECTION B-B

GENERAL NOTES:

IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.

IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.

THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 002.19.

THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.

ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.

THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4". THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.

RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.

THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

RAMP SELECTION CRITERIA

CHOICE	TYPE	DESCRIPTION
FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPER TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	ISSUED-P.H.D.	REVISION	DATE FILM
11-10-05		REVISED TO NEW SIDEWALK POLICY	
10-9-03		REVISED GEN. NOTES & ADDED NOTE	
4-10-03		REV. DETECTABLE WARNING DEVICES	
8-22-02		ADD DETECTABLE WARNING DEVICES	
3-30-00		ADD SLOPE TRANS. & REV. ISL. DIMS.	
1-18-98		REVISED NOTES	
8-12-98		REVISED TEXTURE	
7-02-98		REDRAWN & REISSUED	
10-18-96		CORRECTED DIMENSIONS	10-18-96
5-24-90		FROM 8:1 TO 12:1 MAX. SLOPES	5-24-90
7-15-88		ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88		INCLUD. CONC. ISLD. IN PAY ITEM	-----
6-02-76		ISSUED-P.H.D.	299-7-28-76
		REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS  
NEW CONSTRUCTION  
AND ALTERATIONS

STANDARD DRAWING WR-1



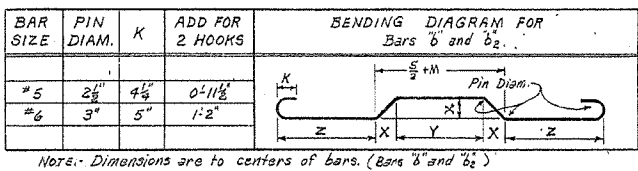
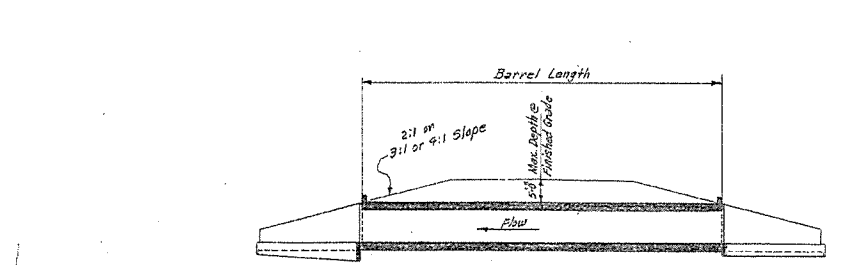
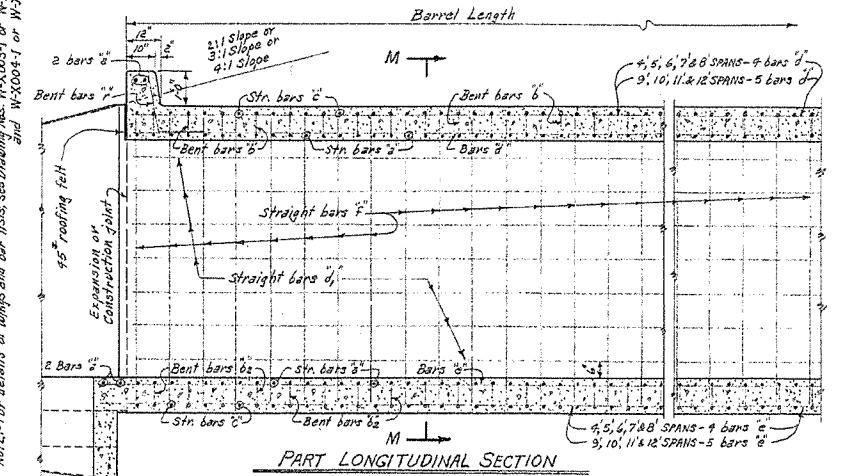
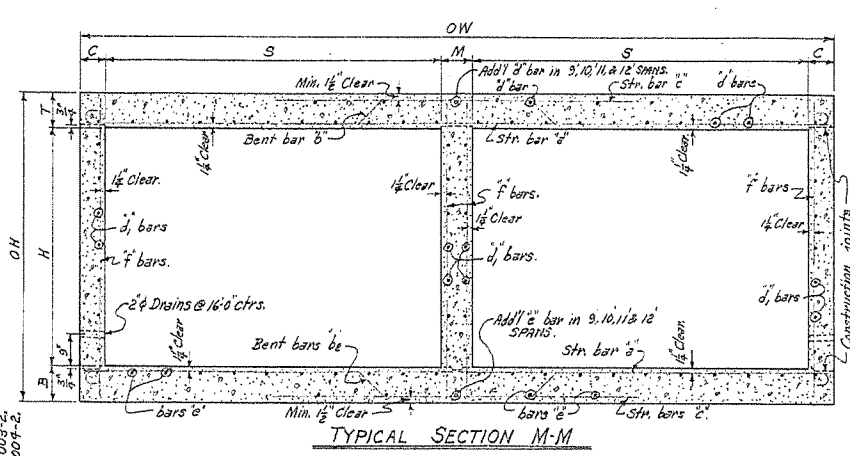
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			129	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEARSPAN	CLEAR HEIGHT	BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH																							
			5' bars				6' bars				6' bars				6' bars				6' bars				6' bars			
			STRAIGHT	BENT - See Diagram below.	BENT - See Diagram below.	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	
D	S	H	SIZE	SPACING	NO. REQS.	LENGTH	X	Y	Z	SIZE	SPACING	NO. REQS.	LENGTH	X	Y	Z	SIZE	SPACING	NO. REQS.	LENGTH	SIZE	SPACING	NO. REQS.	LENGTH		

DIMENSIONS QUANTITIES

MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS										UNIT QUANTITIES		
	D	S	H	A	OW	T	C	M	B	OH	CLYD.	REINFORCING STEEL	
												PER LIN. FT. OF BARREL	ADDITIONAL
2'	2'	16'	9'-8"	6"	8"	3'-0"	0.936	88.15	42.71	189.56			



DOWEL BARS FOR TWO HEADWALLS

SPANS @	SIZE	SPACING	NO. REQS.	LENGTH	X
4'	#4	12"	20	2'-5"	1'-2 1/2"
5'	#4	12"	24	2'-6"	1'-3"
6'	#4	12"	28	2'-7"	1'-3 1/2"
7'	#4	12"	32	2'-8"	1'-4"
8'	#4	12"	36	2'-9"	1'-4 1/2"
9'	#4	12"	40	2'-10"	1'-5"
10'	#4	12"	46	2'-11"	1'-5 1/2"
11'	#4	12"	50	3'-0"	1'-6"
12'	#4	12"	54	3'-1"	1'-6 1/2"

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 22'-0". Lap longitudinal bars 30 diameters.  
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls, division walls and slabs shall be only where shown on plans.  
 SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

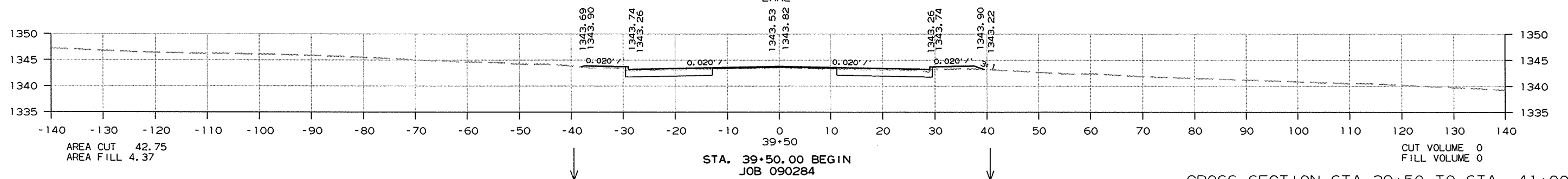
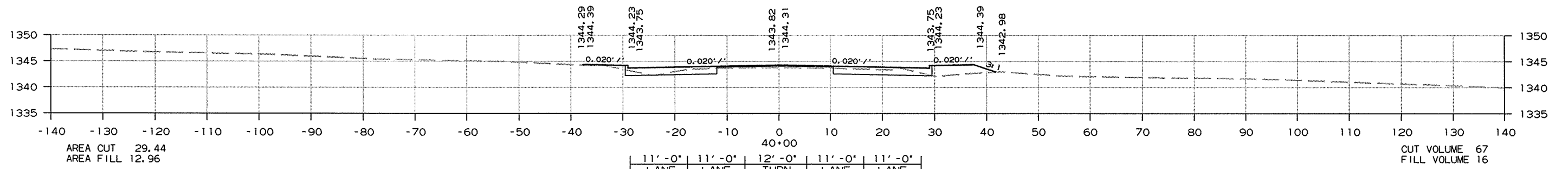
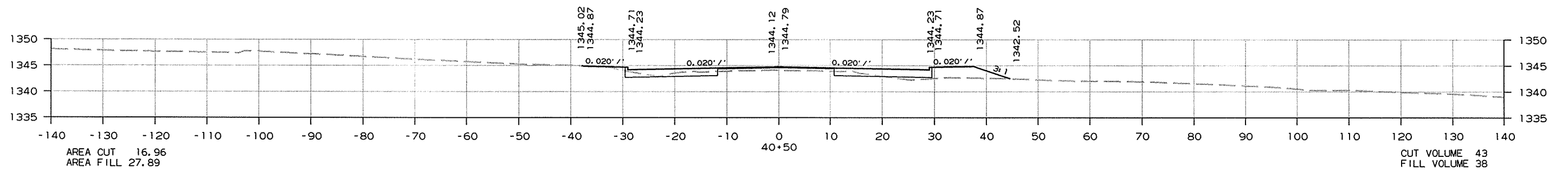
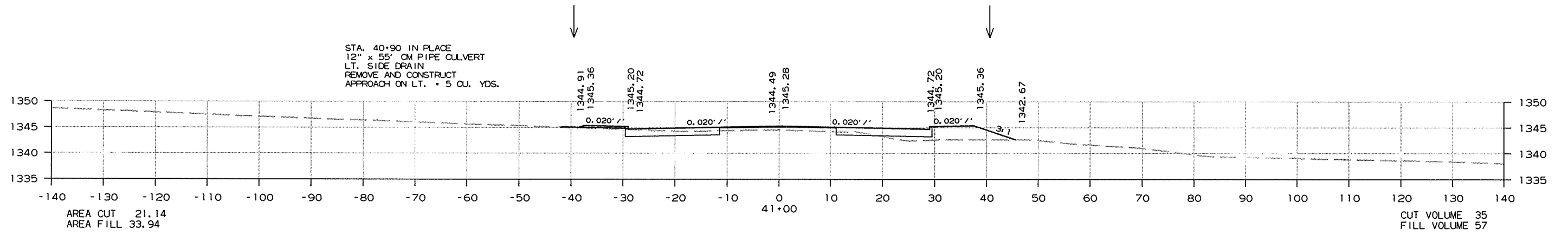
DESIGN LIVE LOAD  
 H20-S16 LOADING A.A.S.H.O. 1961  
 AND  
 SPECIAL MILITARY LOADING  
 Two 24,000 Lb. Axles @ 4'-0" ctrs.  
 UNIT STRESSES:-  
 Class S Concrete (n=10) 1200%  
 Reinforcing Steel 20,000%  
 CLASS S CONCRETE

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.

Checked by: PMS - 5-14-63  
 Checked by: PMS - 5-26-63  
 Checked by: PMS - 5-26-63  
 Designed by: W.C.H. 1-17-63  
 Division by: W.C.H. 2-15-63  
 Quantities by: W.C.H. 2-19-63

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							130	174

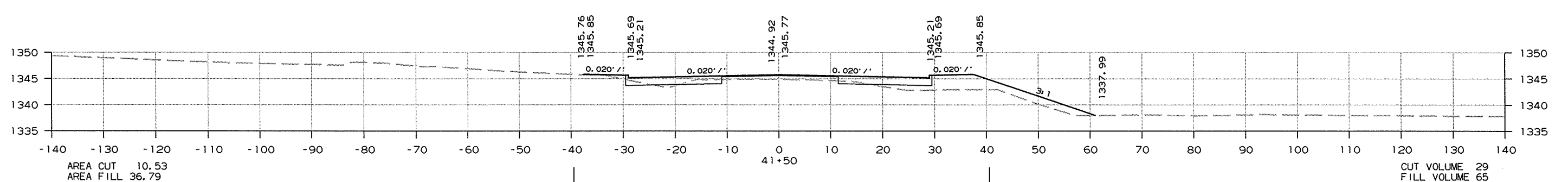
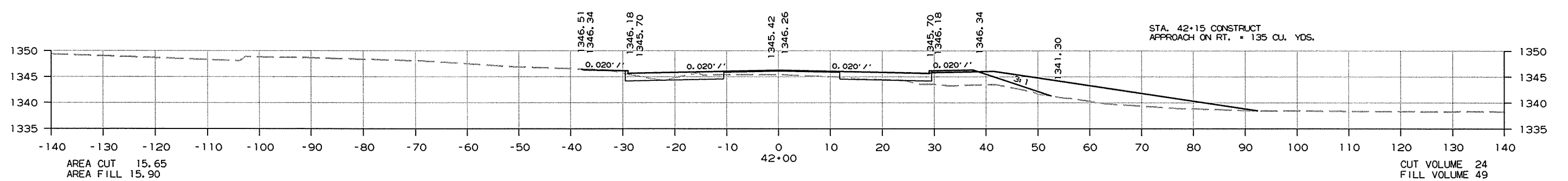
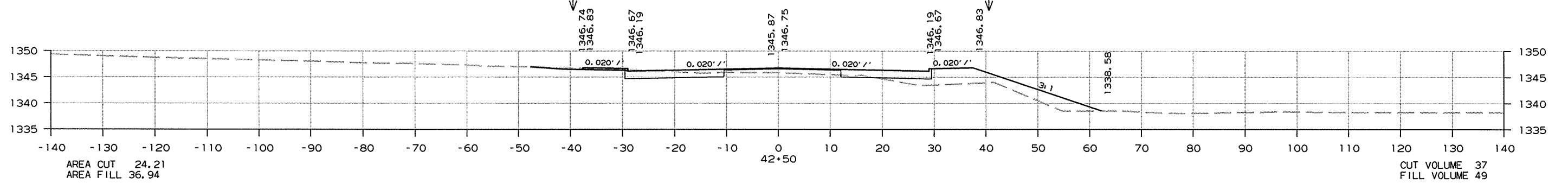
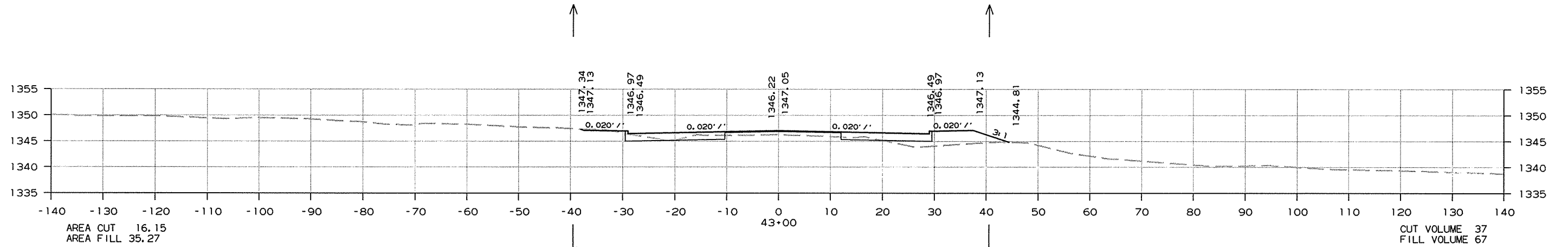
2 CROSS SECTIONS



CROSS SECTION STA. 39+50 TO STA. 41+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. 090284							131	174

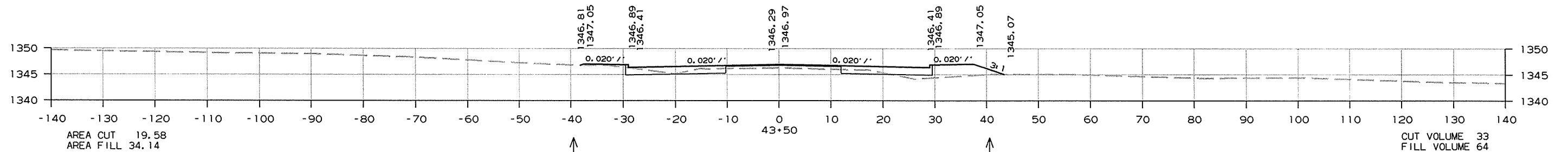
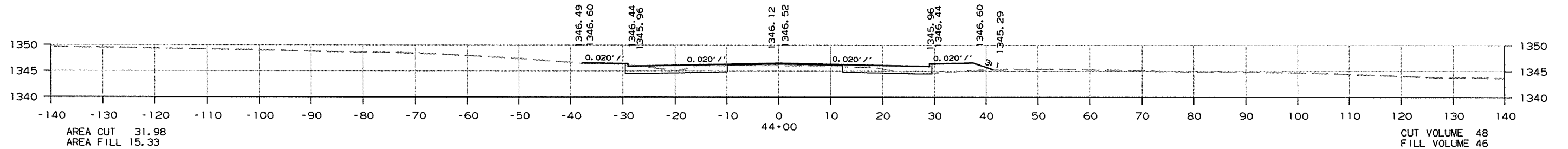
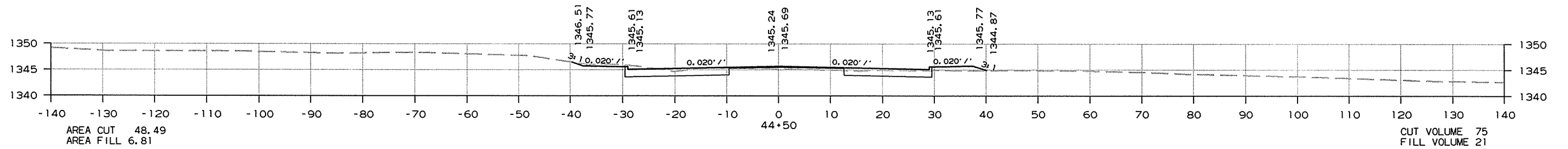
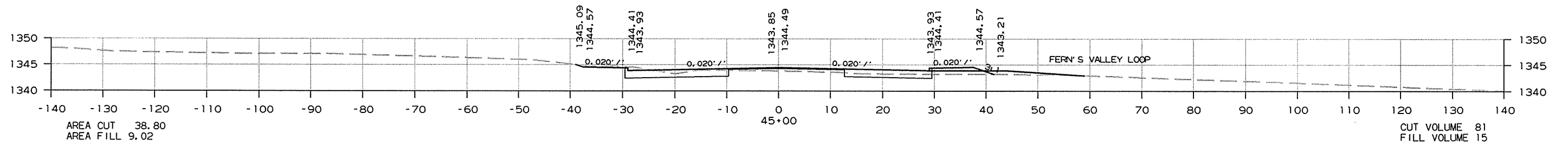
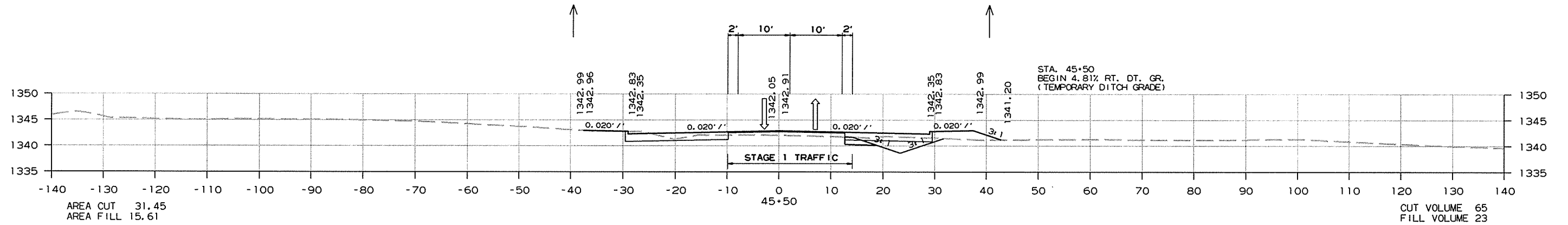
2 CROSS SECTIONS



CROSS SECTION STA. 41+50 TO STA. 43+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. 090284							132	174

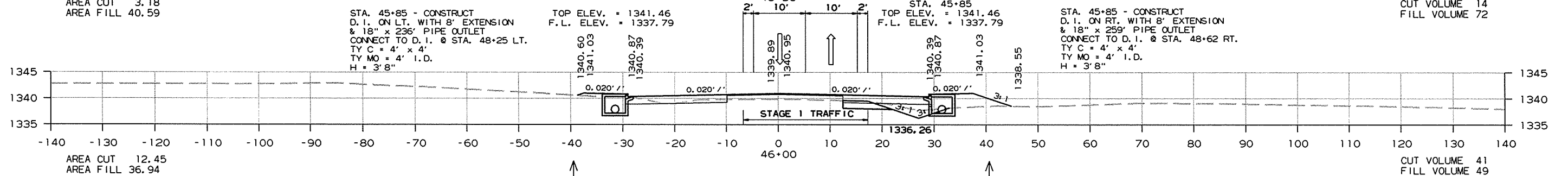
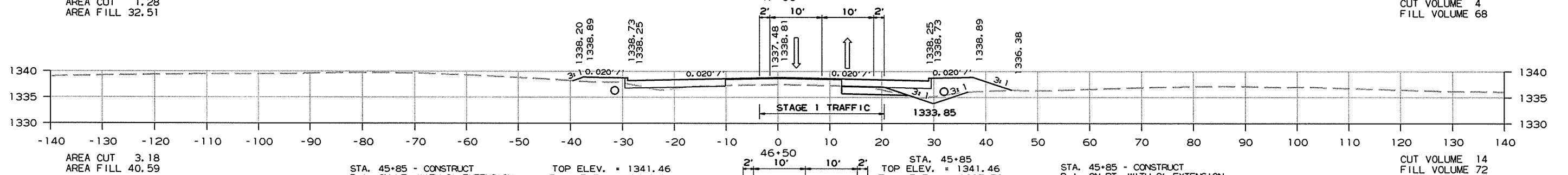
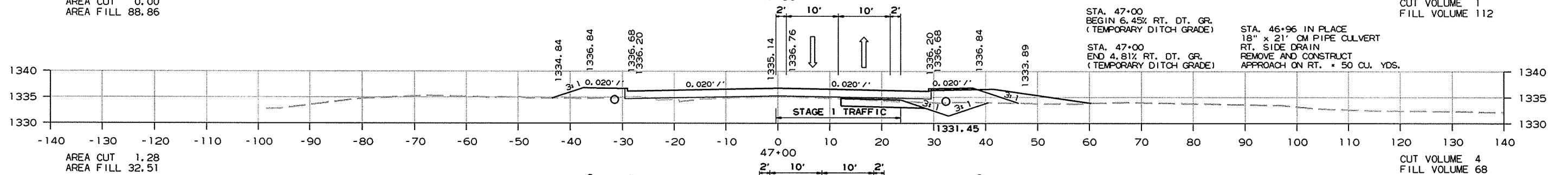
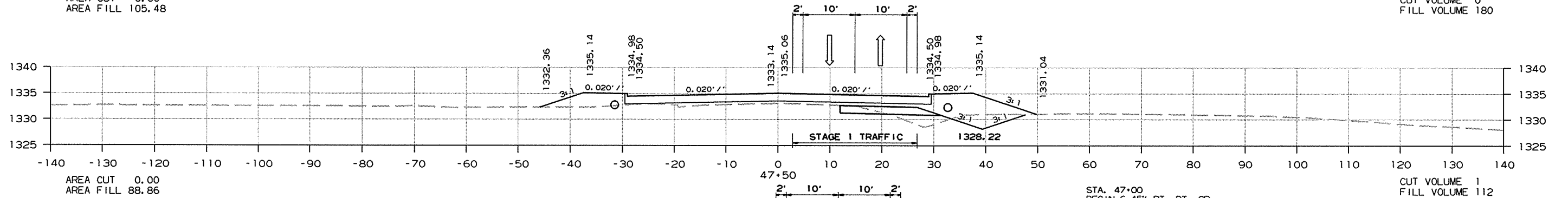
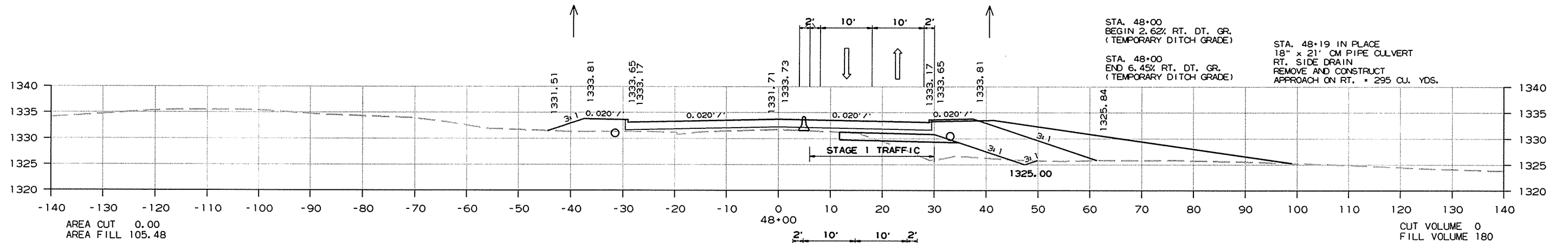
2 CROSS SECTIONS



CROSS SECTION STA. 43+50 TO STA. 45+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. 090284							133	174

2 CROSS SECTIONS



CROSS SECTION STA. 46+00 TO STA. 48+00

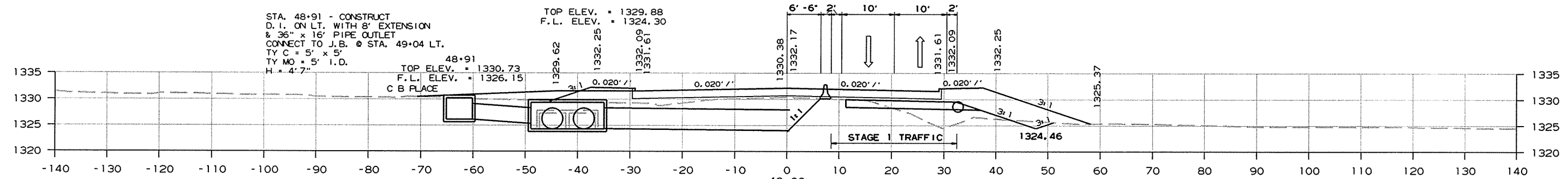
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				6	ARK.			
						JOB NO. 090284	134	174

2 CROSS SECTIONS

STA. 49+04 - CONSTRUCT  
 JUNCTION BOX ON LT.  
 WITH TRIPLE 48" x 80" R.C. PIPE OUTLET  
 & 42" x 80" R.C. PIPE OUTLET  
 (CLASS IV) (TYPE 3 BEDDING)  
 CONNECT TO D.I. @ STA. 48+62 RT.  
 TY ST SPECIAL = 32" x 14"  
 H = 5'7"

STA. 48+91 - CONSTRUCT  
 D.I. ON LT. WITH 8' EXTENSION  
 & 36" x 16" PIPE OUTLET  
 CONNECT TO J.B. @ STA. 49+04 LT.  
 TY C = 5' x 5'  
 TY MO = 5' I.D.  
 H = 4'7"

TOP ELEV. = 1329.88  
 F.L. ELEV. = 1324.30

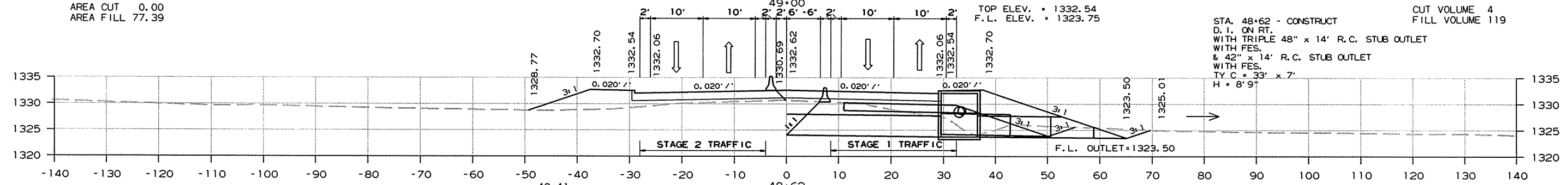


AREA CUT 0.00  
 AREA FILL 77.39

CUT VOLUME 4  
 FILL VOLUME 119

STA. 48+62 - CONSTRUCT  
 D.I. ON RT.  
 WITH TRIPLE 48" x 14' R.C. STUB OUTLET  
 WITH FES.  
 & 42" x 14' R.C. STUB OUTLET  
 WITH FES.  
 TY C = 33" x 7'  
 H = 8'9"

TOP ELEV. = 1332.54  
 F.L. ELEV. = 1323.75



AREA CUT 5.59  
 AREA FILL 91.49

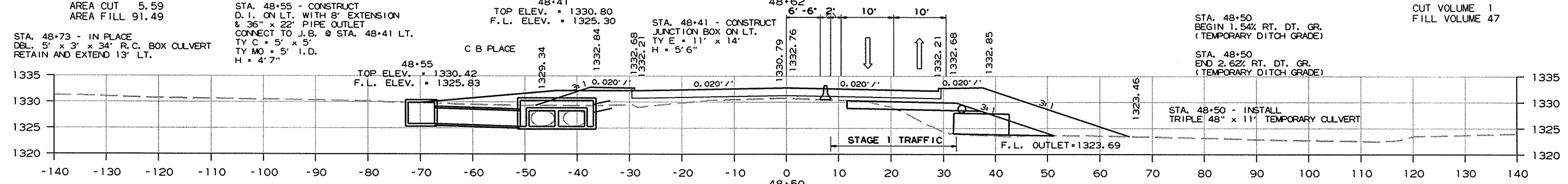
CUT VOLUME 1  
 FILL VOLUME 47

STA. 48+50  
 BEGIN 1.54% RT. DT. GR.  
 (TEMPORARY DITCH GRADE)  
  
 STA. 48+50  
 END 2.62% RT. DT. GR.  
 (TEMPORARY DITCH GRADE)

STA. 48+55 - CONSTRUCT  
 D.I. ON LT. WITH 8' EXTENSION  
 & 36" x 22" PIPE OUTLET  
 CONNECT TO J.B. @ STA. 48+41 LT.  
 TY C = 5' x 5'  
 TY MO = 5' I.D.  
 H = 4'7"

STA. 48+41 - CONSTRUCT  
 JUNCTION BOX ON LT.  
 TY E = 11' x 14"  
 H = 5'6"

TOP ELEV. = 1330.80  
 F.L. ELEV. = 1325.30



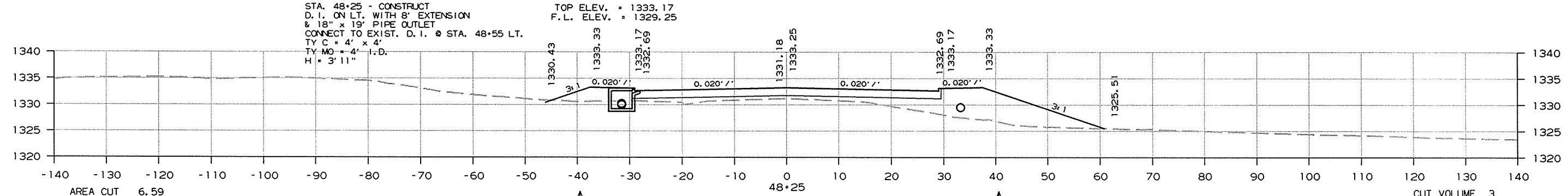
AREA CUT 0.00  
 AREA FILL 121.38

CUT VOLUME 3  
 FILL VOLUME 95

STA. 48+50 - INSTALL  
 TRIPLE 48" x 11' TEMPORARY CULVERT

STA. 48+25 - CONSTRUCT  
 D.I. ON LT. WITH 8' EXTENSION  
 & 18" x 19" PIPE OUTLET  
 CONNECT TO EXIST. D.I. @ STA. 48+55 LT.  
 TY C = 4' x 4'  
 TY MO = 4' I.D.  
 H = 3'11"

TOP ELEV. = 1333.17  
 F.L. ELEV. = 1329.25



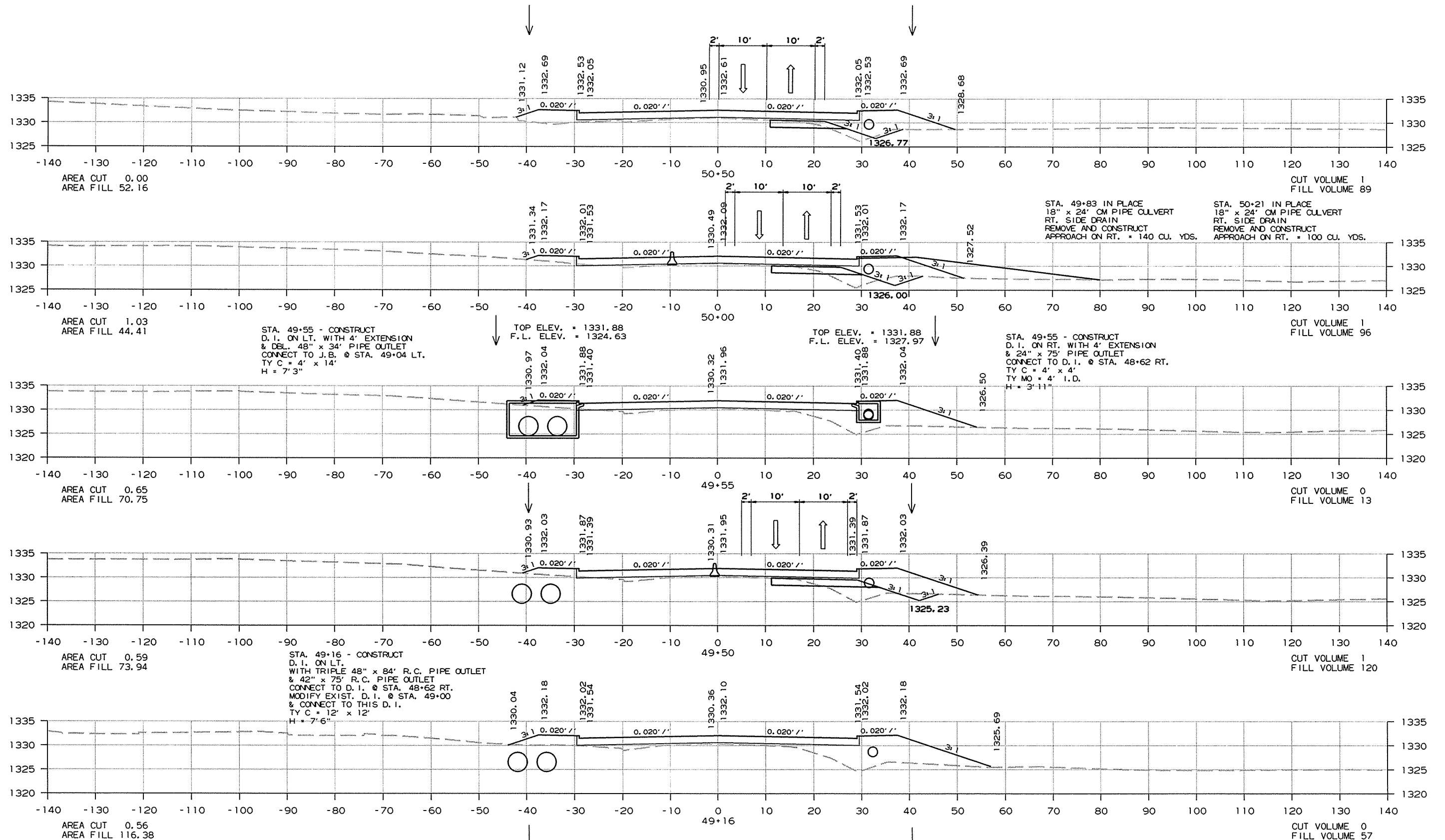
AREA CUT 6.59  
 AREA FILL 83.14

CUT VOLUME 3  
 FILL VOLUME 87

CROSS SECTION STA. 48+25 TO STA. 49+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. 090284							135	174

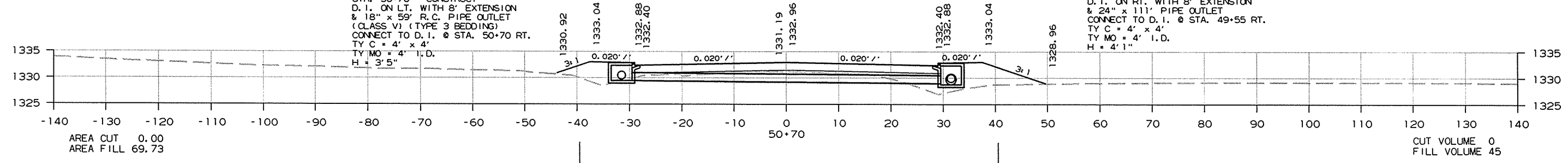
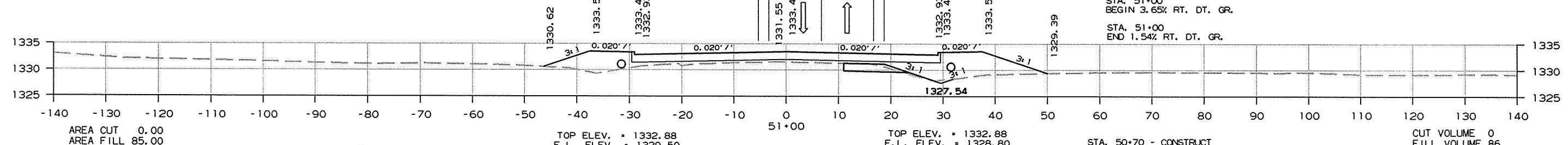
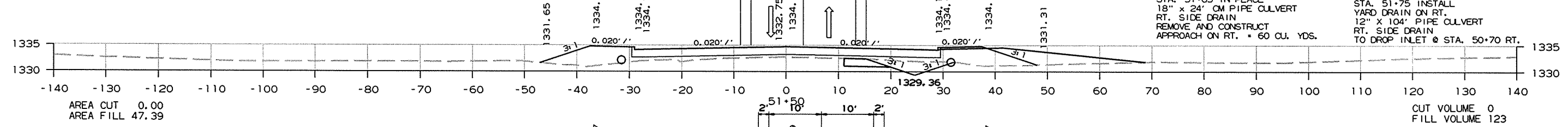
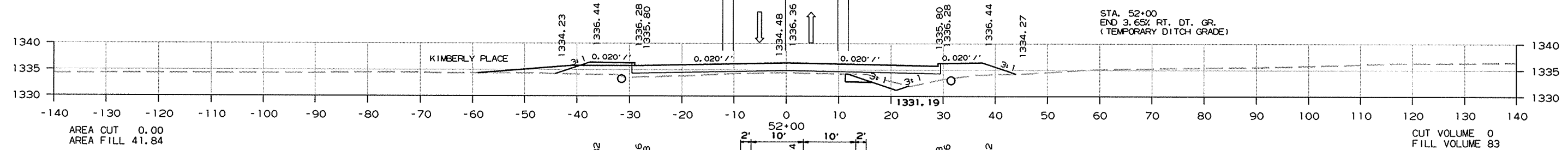
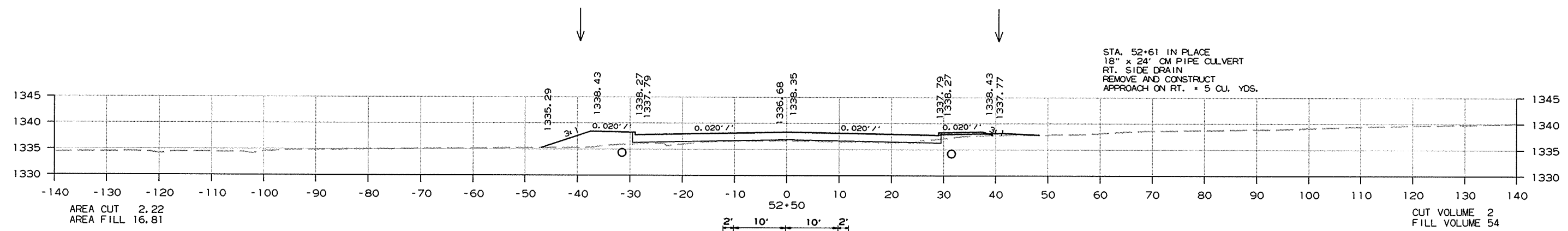
2 CROSS SECTIONS



CROSS SECTION STA. 49+16 TO STA. 50+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. 090284	136	174

② CROSS SECTIONS



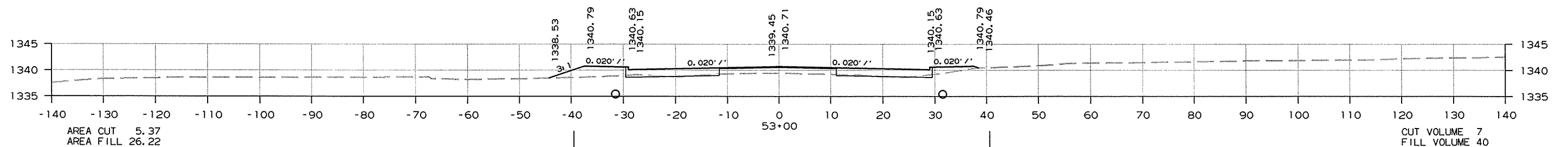
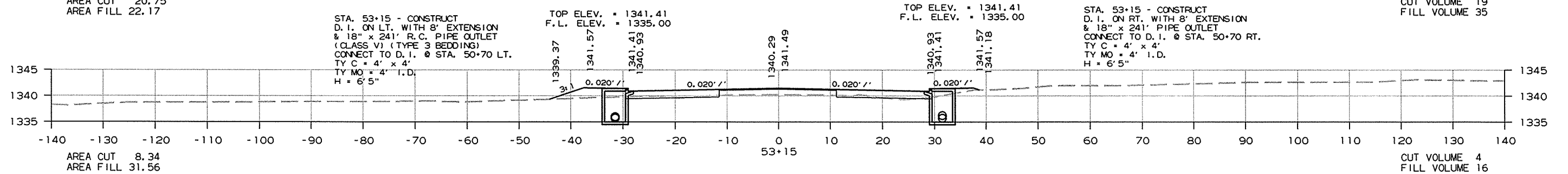
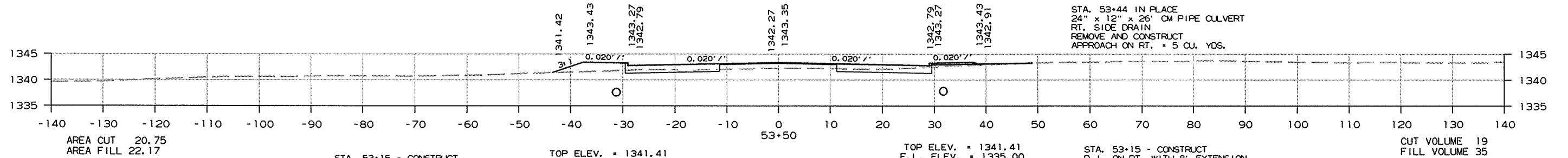
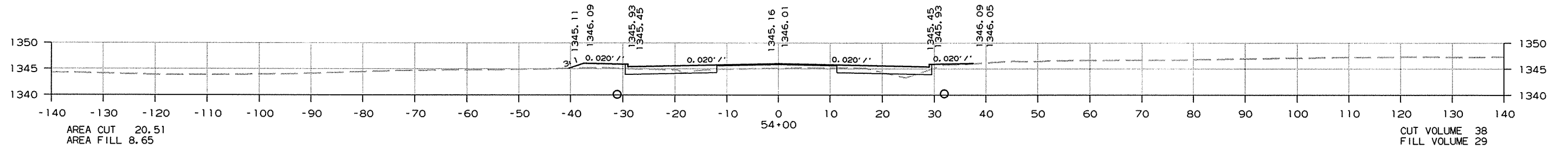
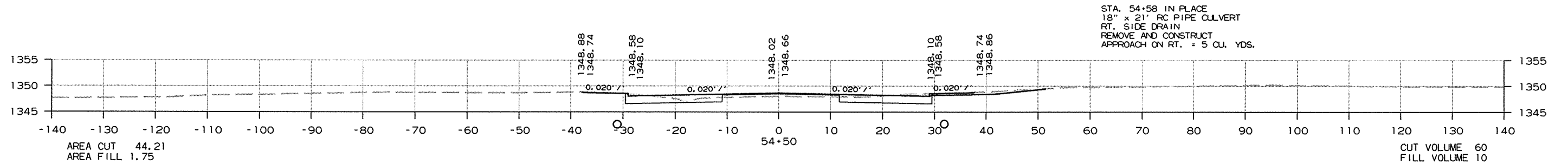
CROSS SECTION STA. 50+70 TO STA. 52+50

R090284.DGN 4/28/2014



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							137	174

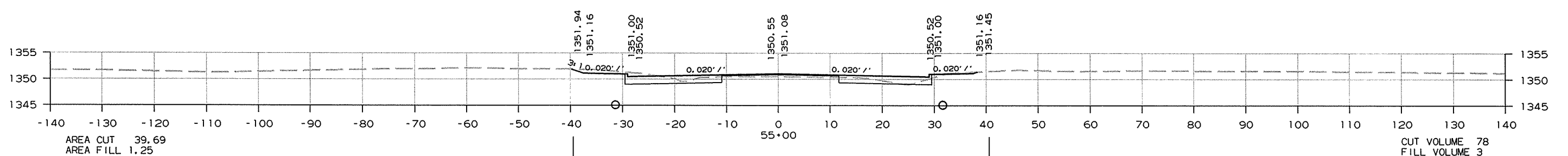
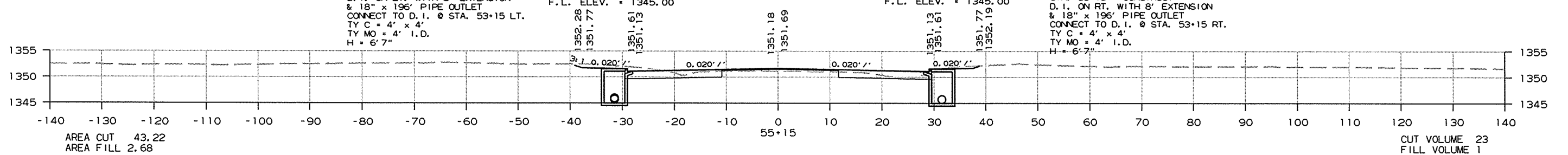
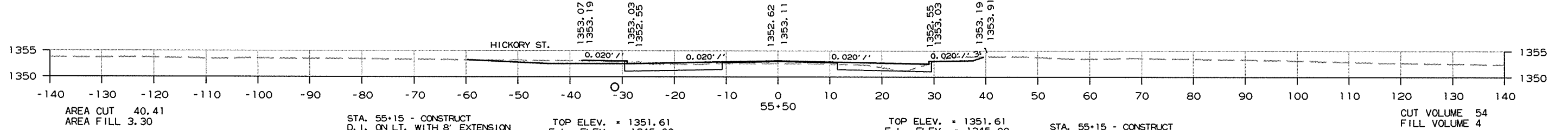
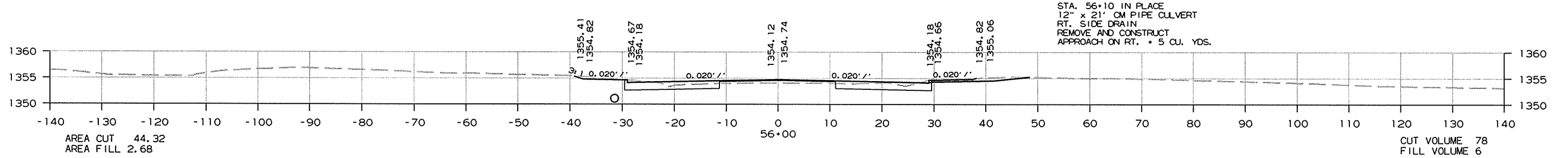
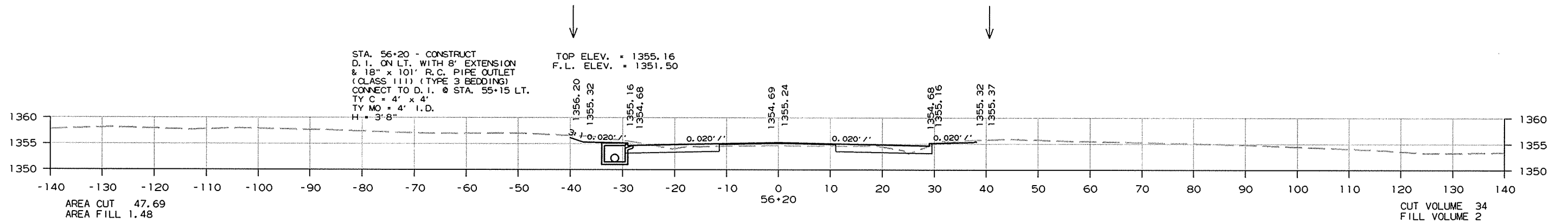
② CROSS SECTIONS



CROSS SECTION STA. 53+00 TO STA. 54+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. 090284							138	174

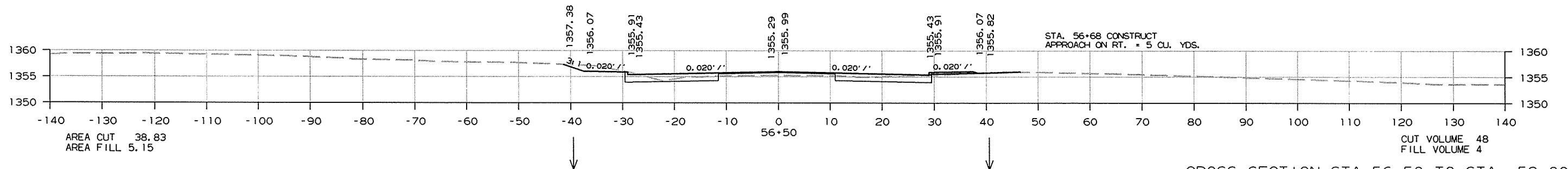
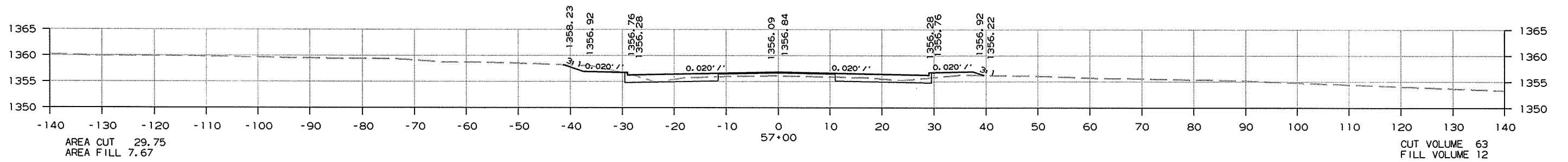
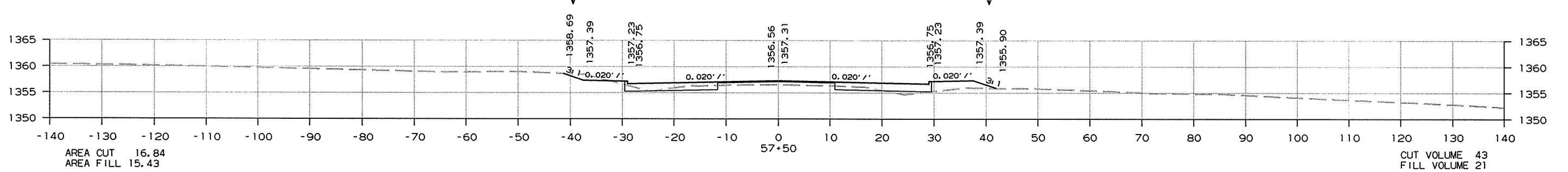
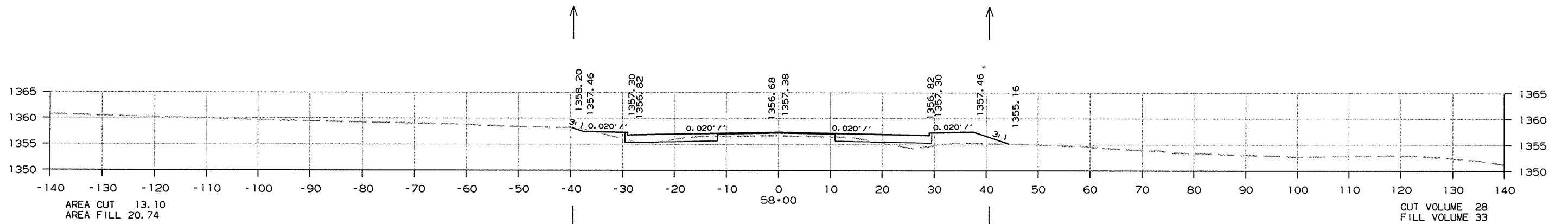
② CROSS SECTIONS



CROSS SECTION STA. 55+00 TO STA. 56+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. 090284							139	174

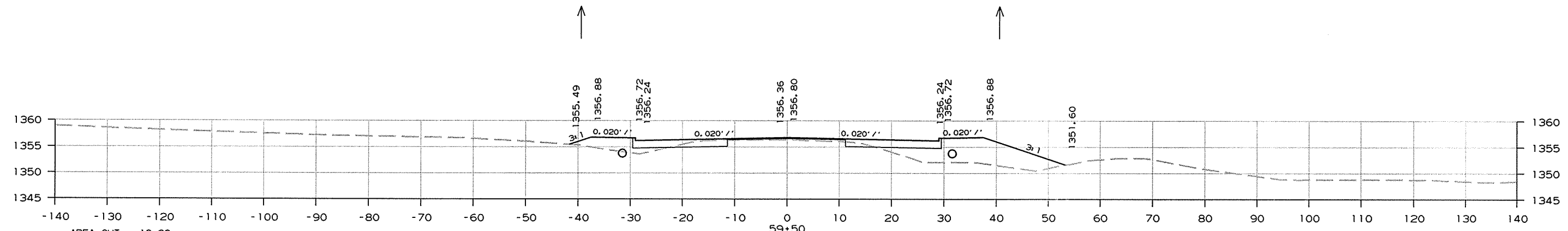
② CROSS SECTIONS



CROSS SECTION STA. 56+50 TO STA. 58+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.						090284	140	174

2 CROSS SECTIONS



AREA CUT 13.23  
AREA FILL 61.57

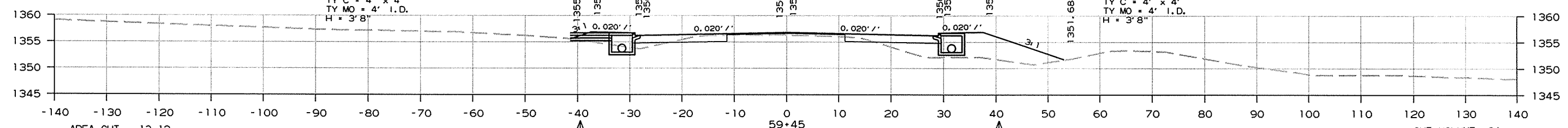
CUT VOLUME 2  
FILL VOLUME 13

STA. 59+45 - CONSTRUCT  
D. I. ON LT. WITH 4' EXTENSION  
& OPENING IN BACK  
& 18" x 41' PIPE OUTLET  
CONNECT TO D. I. @ STA. 59+90 LT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'8"

TOP ELEV. = 1356.73  
F.L. ELEV. = 1353.06

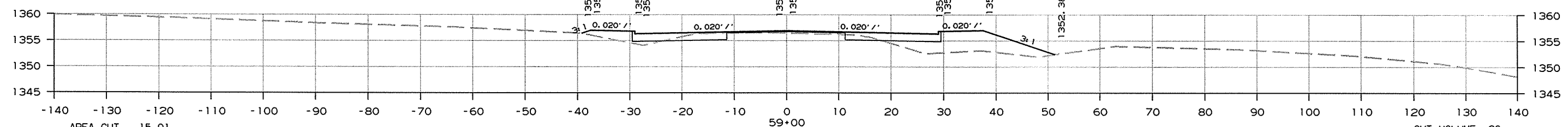
TOP ELEV. = 1356.73  
F.L. ELEV. = 1353.06

STA. 59+45 - CONSTRUCT  
D. I. ON RT. WITH 4' EXTENSION  
& 18" x 41' PIPE OUTLET  
CONNECT TO D. I. @ STA. 59+90 RT.  
TY C = 4' x 4'  
TY MO = 4' I.D.  
H = 3'8"



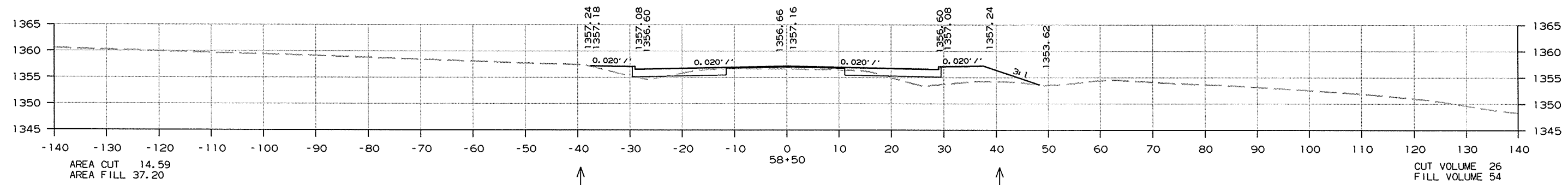
AREA CUT 13.12  
AREA FILL 73.67

CUT VOLUME 24  
FILL VOLUME 94



AREA CUT 15.91  
AREA FILL 39.04

CUT VOLUME 28  
FILL VOLUME 71



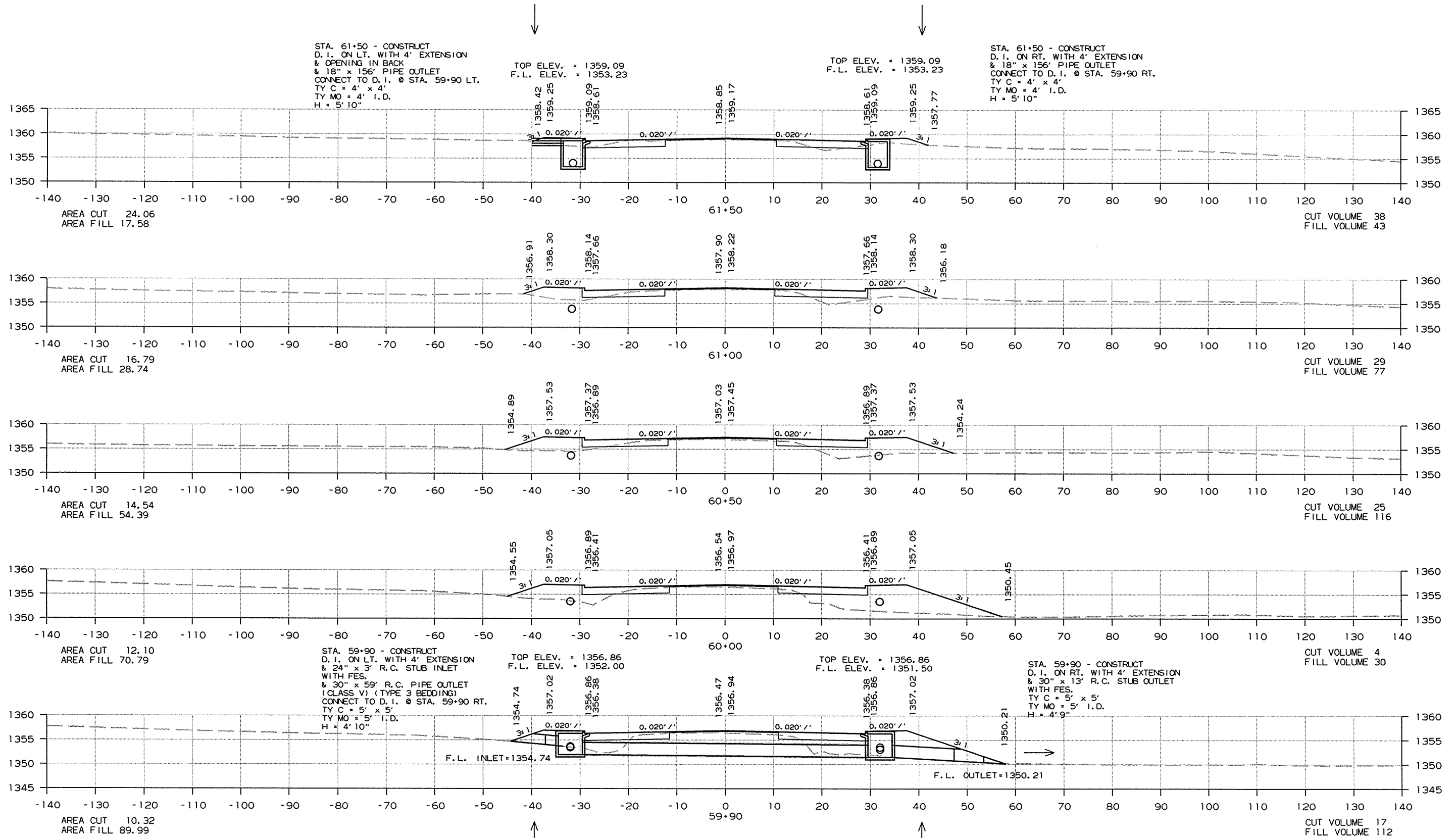
AREA CUT 14.59  
AREA FILL 37.20

CUT VOLUME 26  
FILL VOLUME 54

CROSS SECTION STA. 58+50 TO STA. 59+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. 090284							141	174

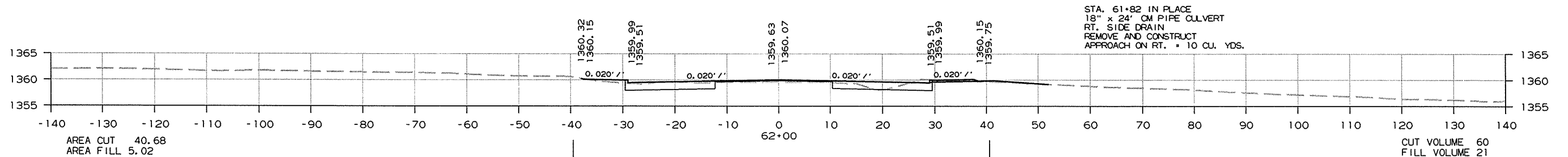
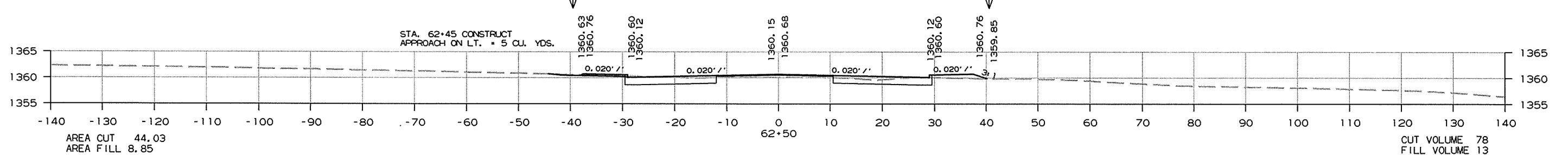
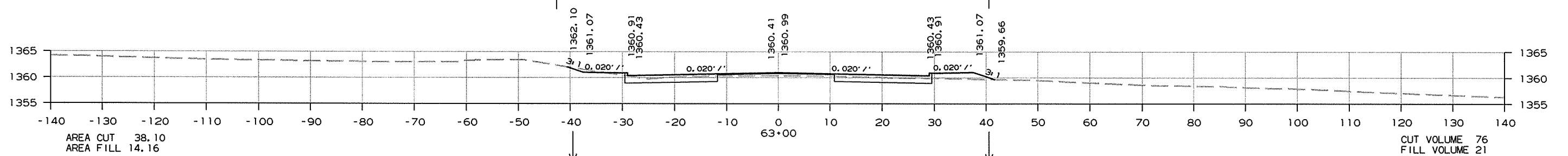
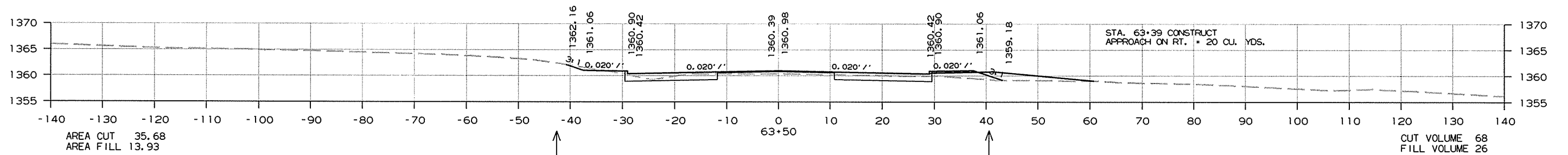
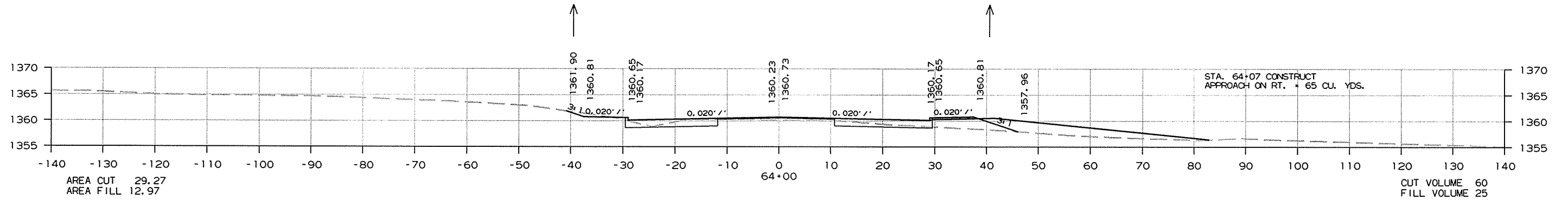
2 CROSS SECTIONS



CROSS SECTION STA. 59+90 TO STA. 61+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.	090284		142	174

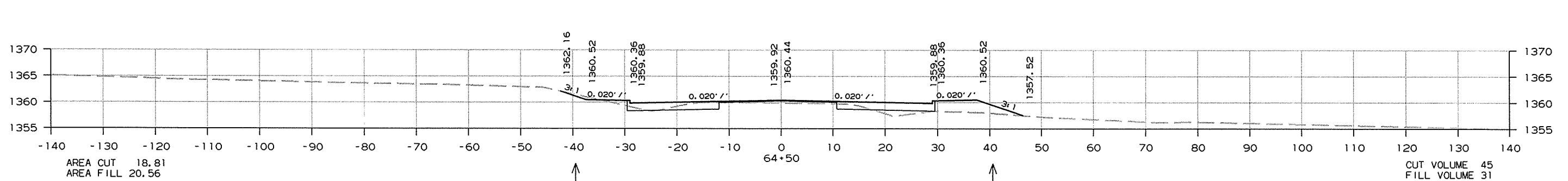
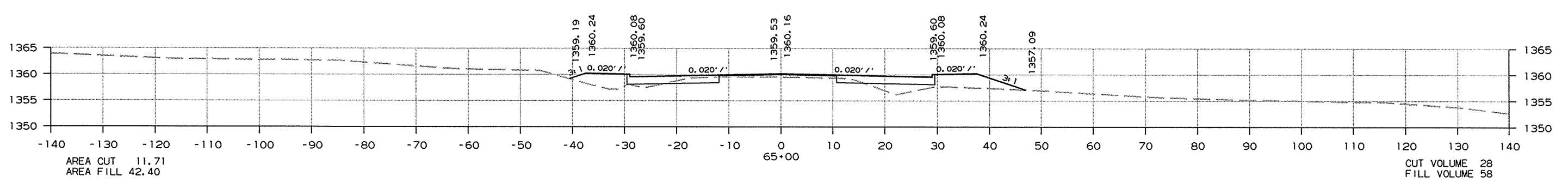
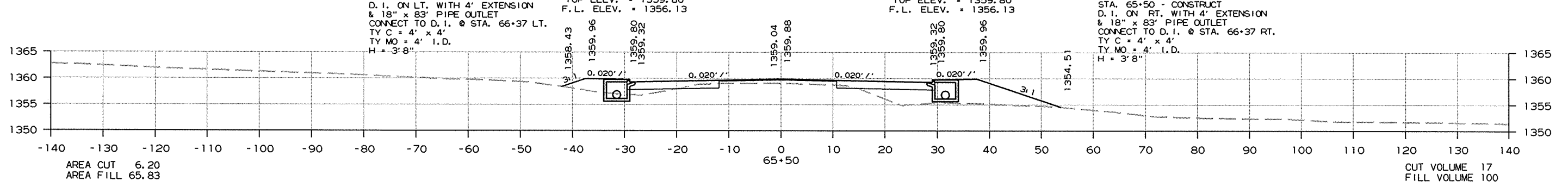
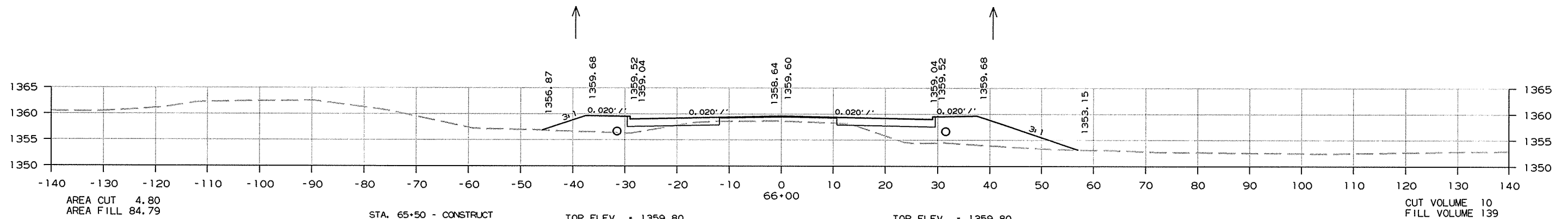
② CROSS SECTIONS



CROSS SECTION STA. 62+00 TO STA. 64+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						090284	143	174

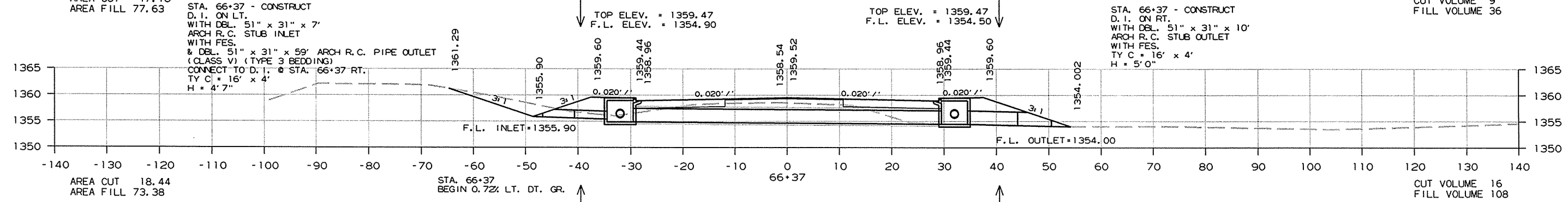
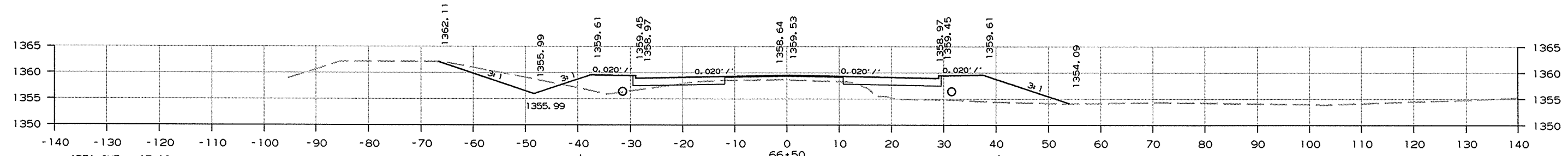
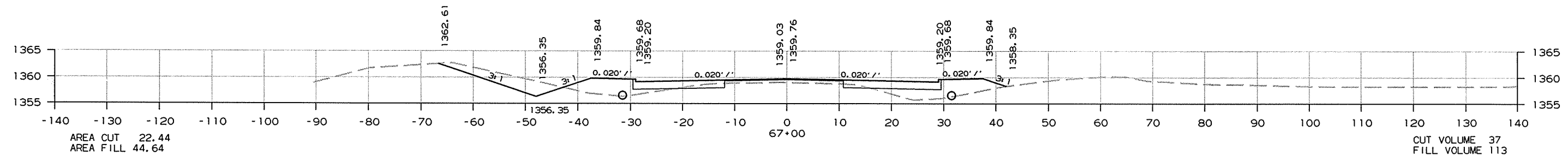
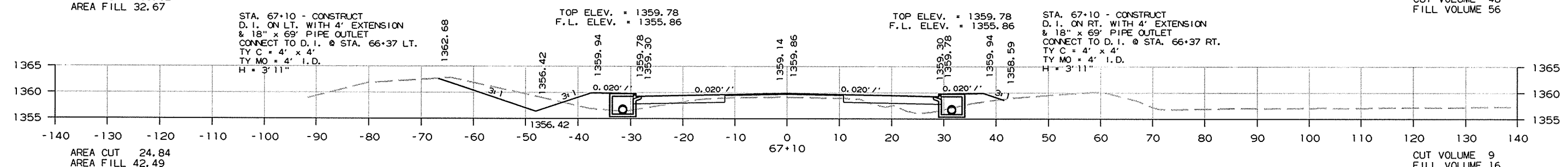
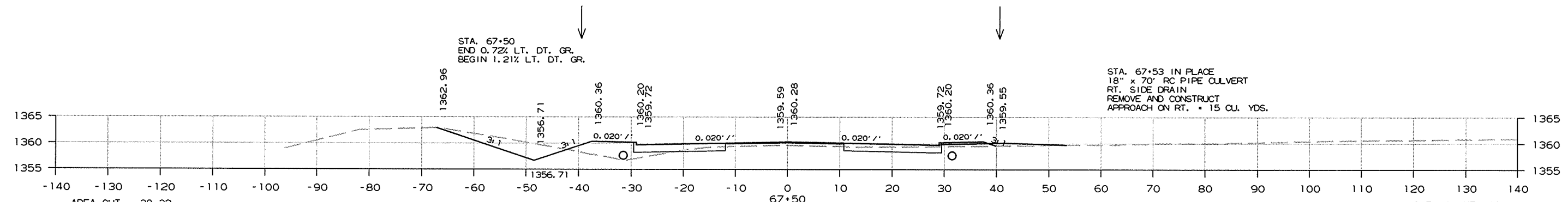
② CROSS SECTIONS



CROSS SECTION STA. 64+50 TO STA. 66+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. 090284	144	174

2 CROSS SECTIONS



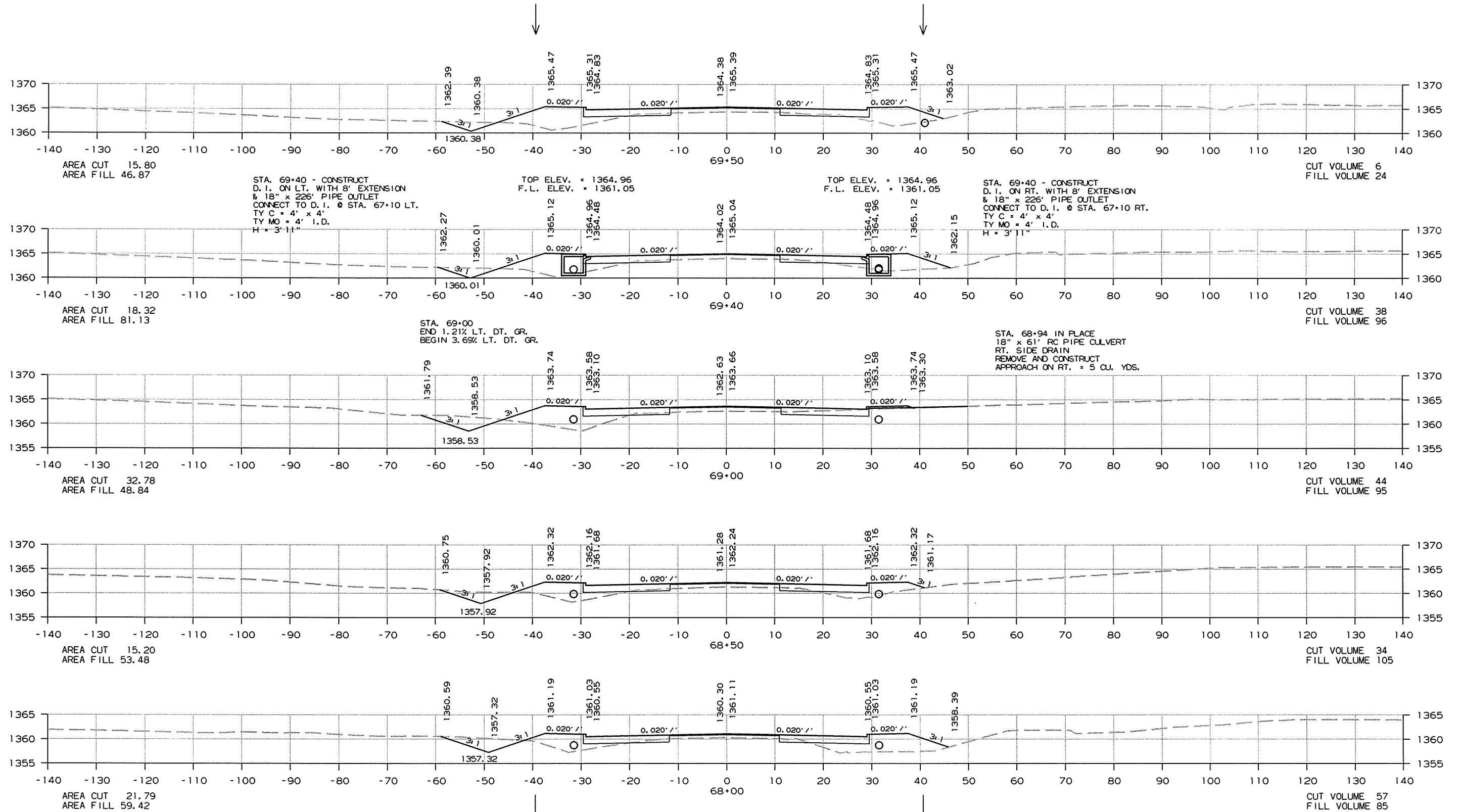
CROSS SECTION STA. 66+37 TO STA. 67+50

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						090284	145	174

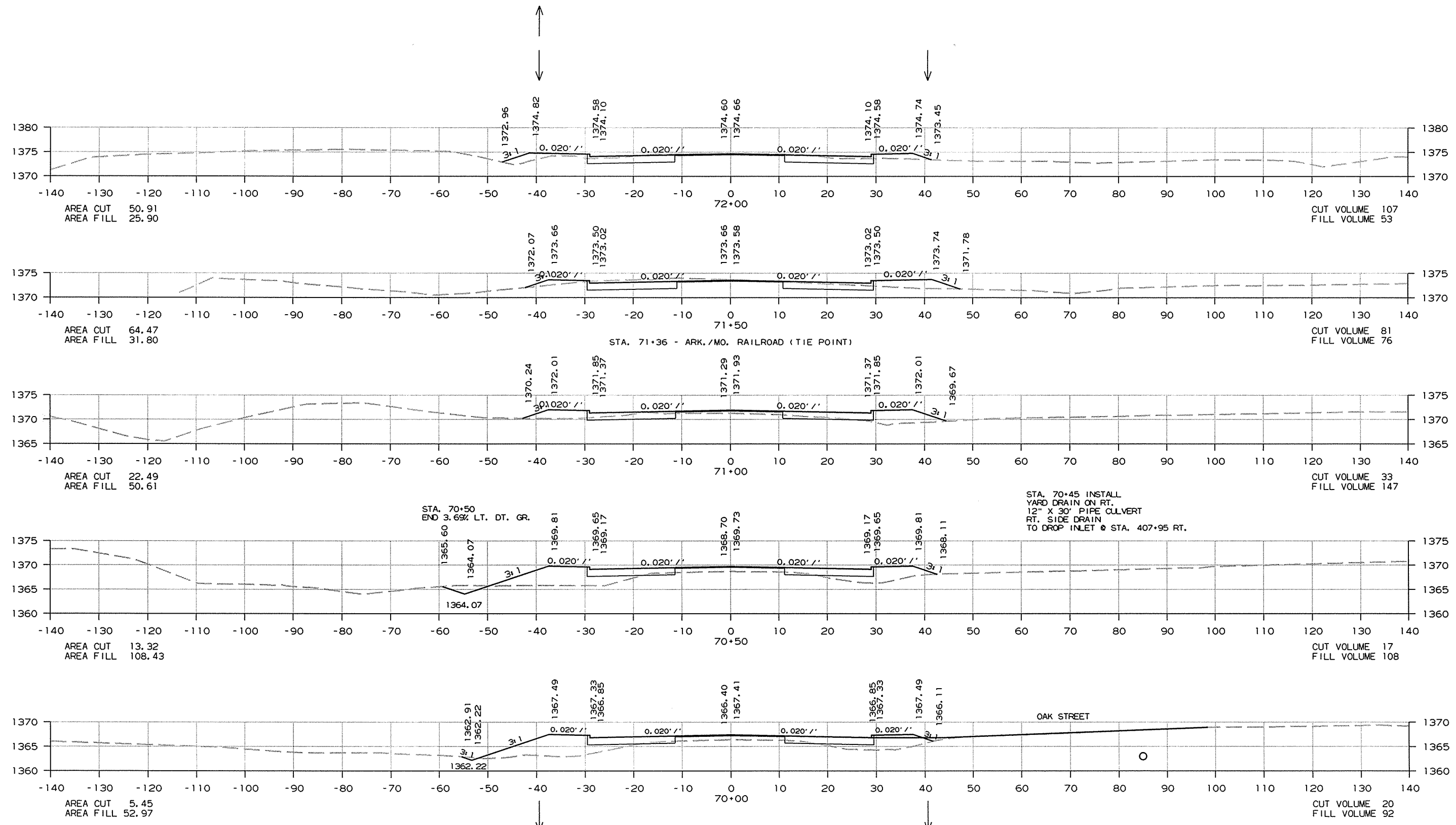
2 CROSS SECTIONS



CROSS SECTION STA. 68+00 TO STA. 69+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.	090284		146	174

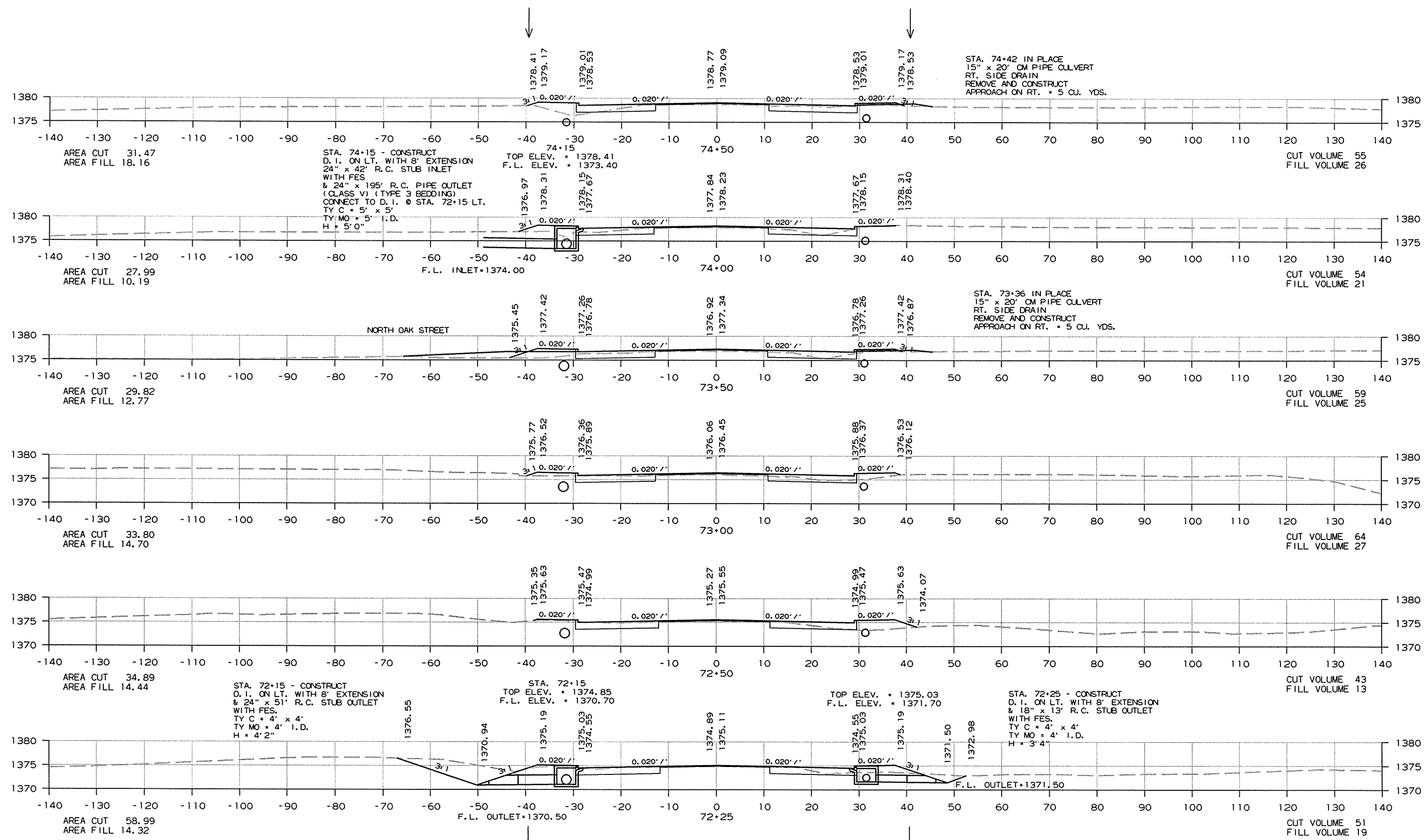
② CROSS SECTIONS



CROSS SECTION STA. 70+00 TO STA. 72+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. 090284							147	174

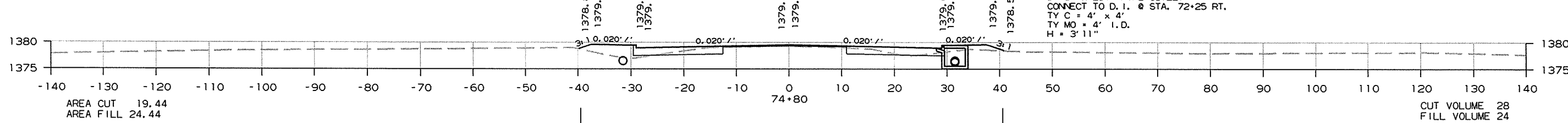
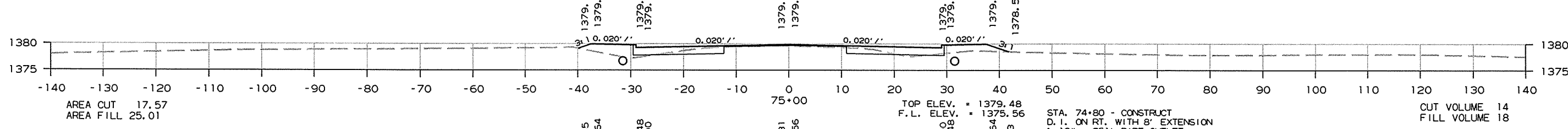
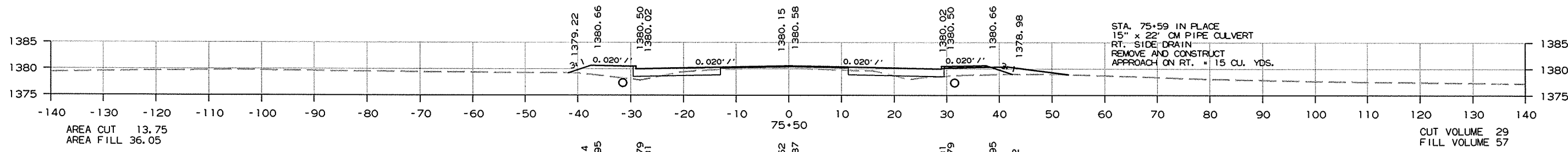
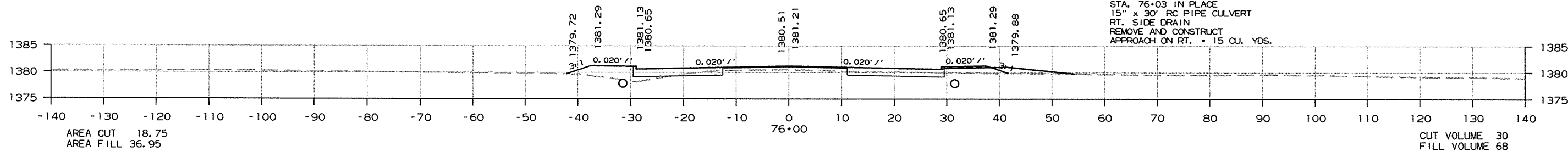
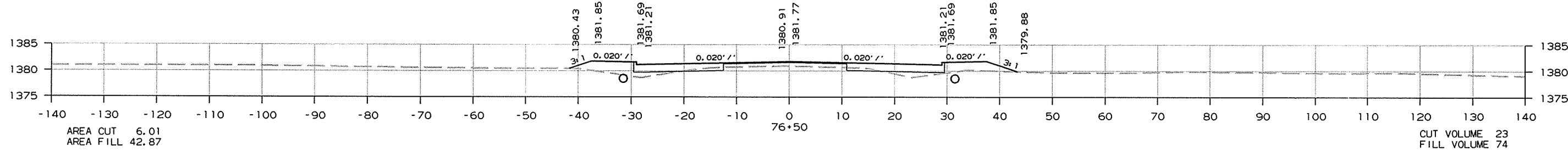
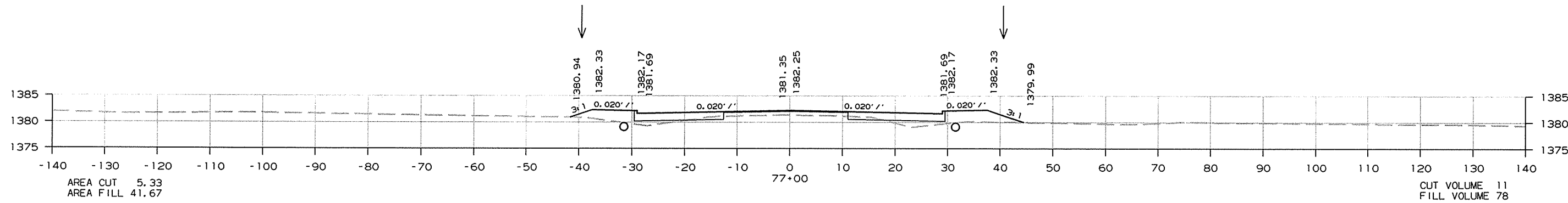
2 CROSS SECTIONS



CROSS SECTION STA. 72+25 TO STA. 74+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. 090284							148	174

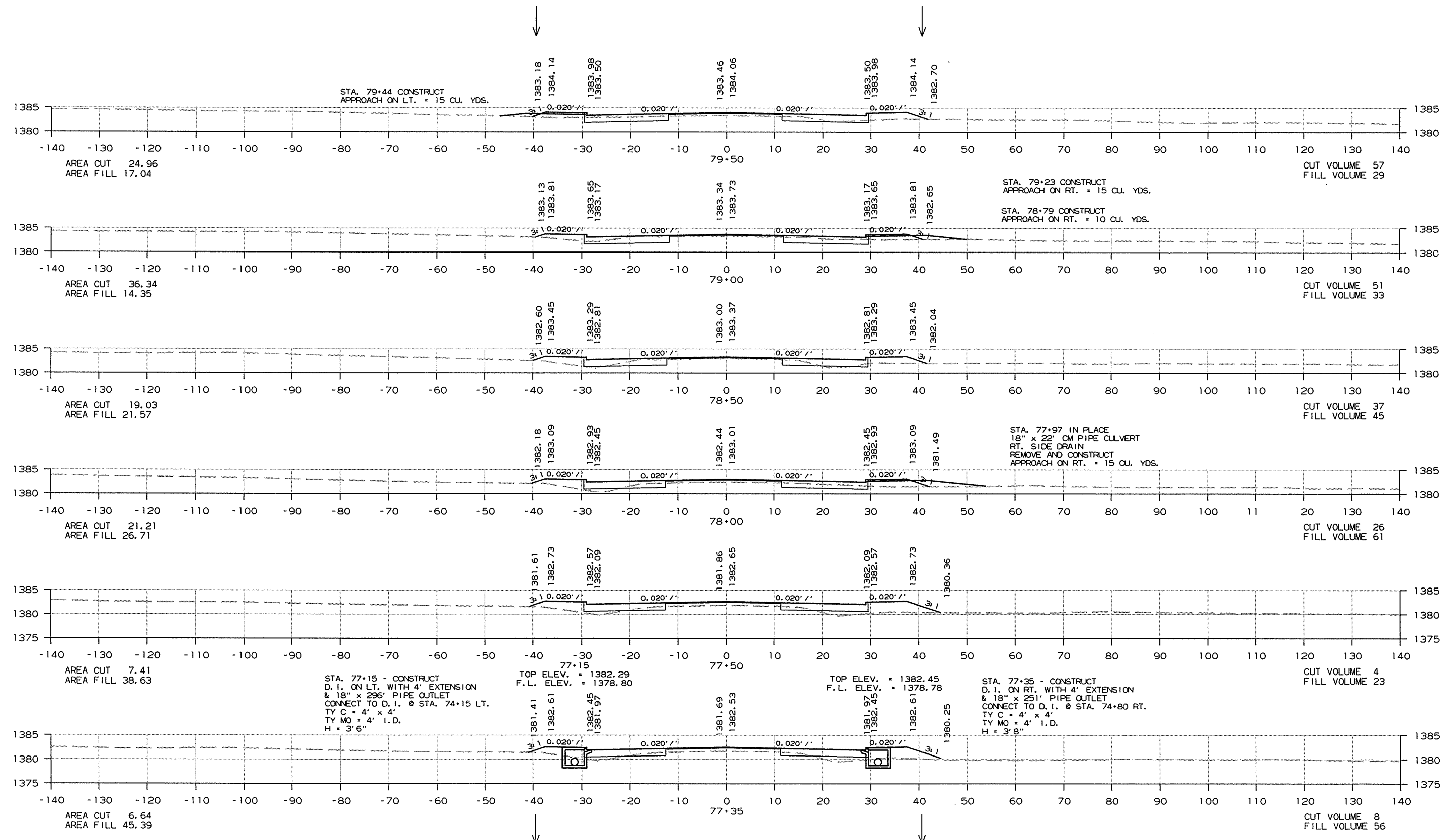
2 CROSS SECTIONS



CROSS SECTION STA. 74+80 TO STA. 77+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. 090284	149	174

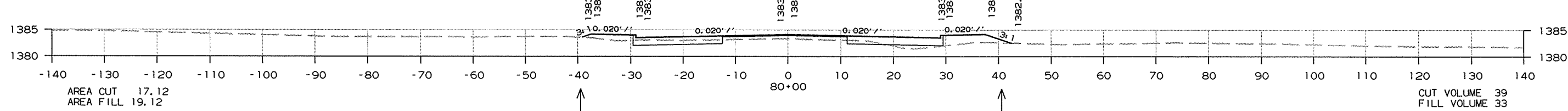
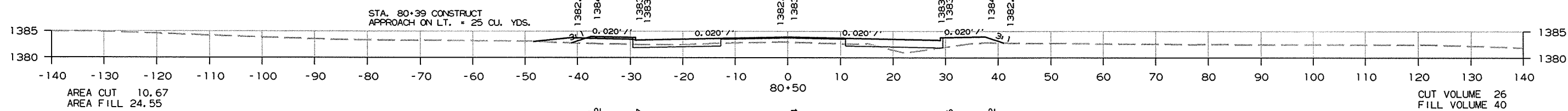
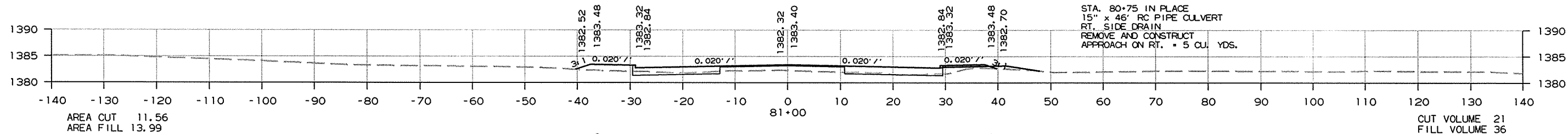
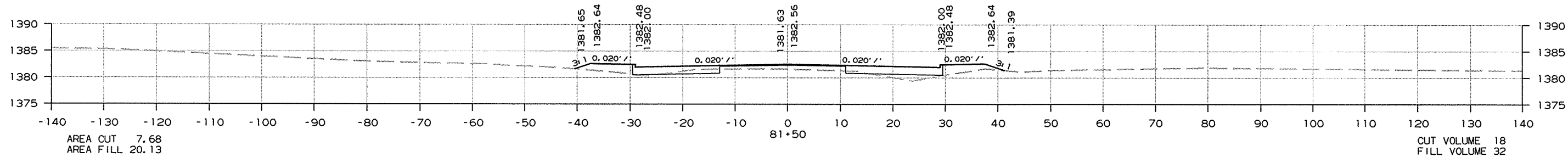
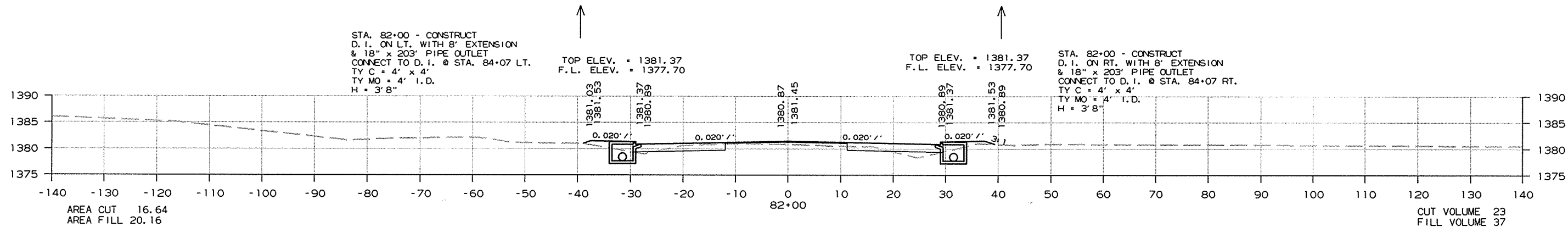
2 CROSS SECTIONS



CROSS SECTION STA. 77+35 TO STA. 79+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.						090284	150	174

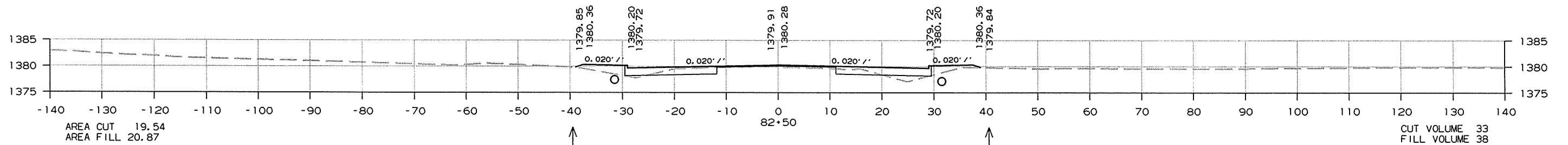
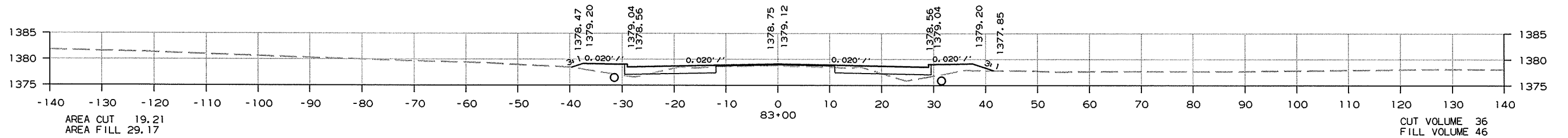
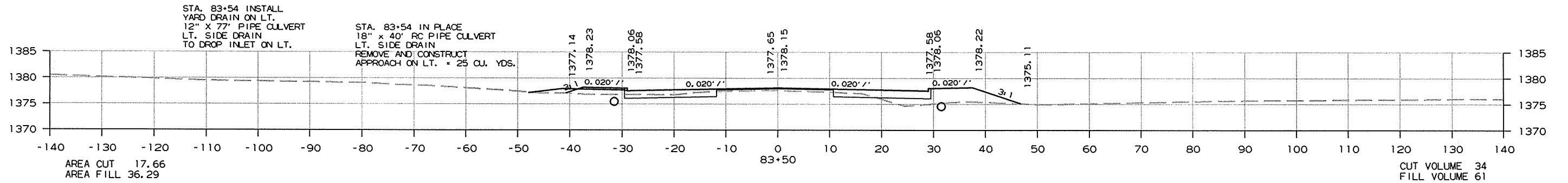
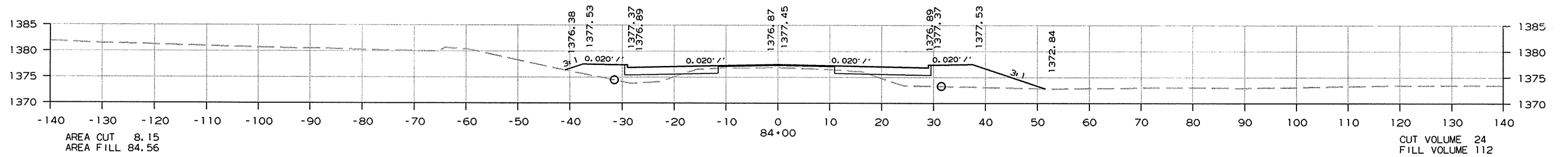
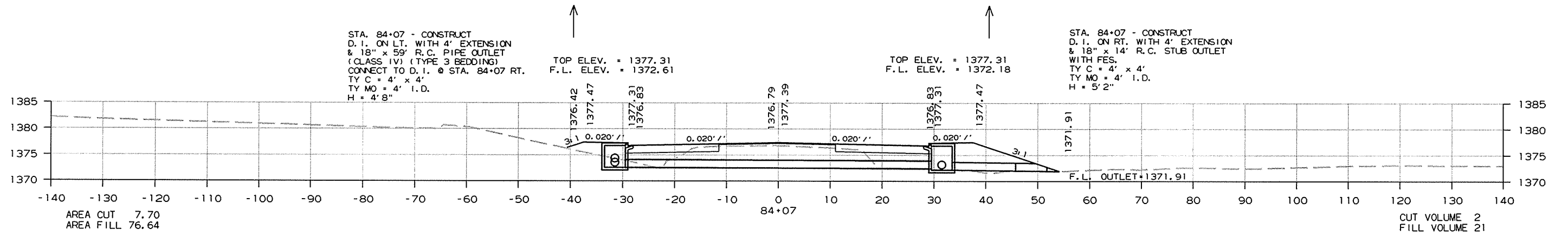
② CROSS SECTIONS



CROSS SECTION STA. 80+00 TO STA. 82+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. 090284	151	174

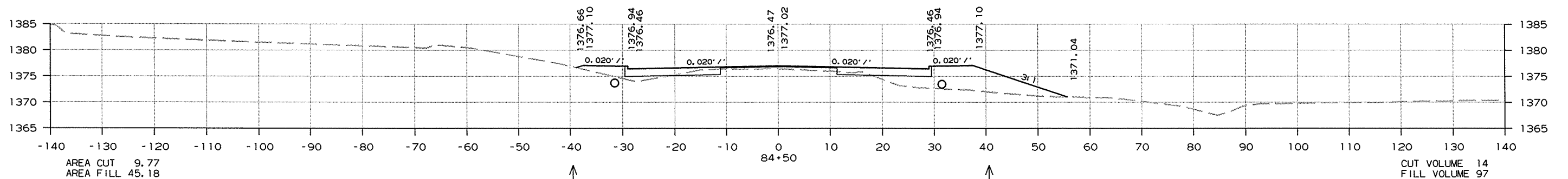
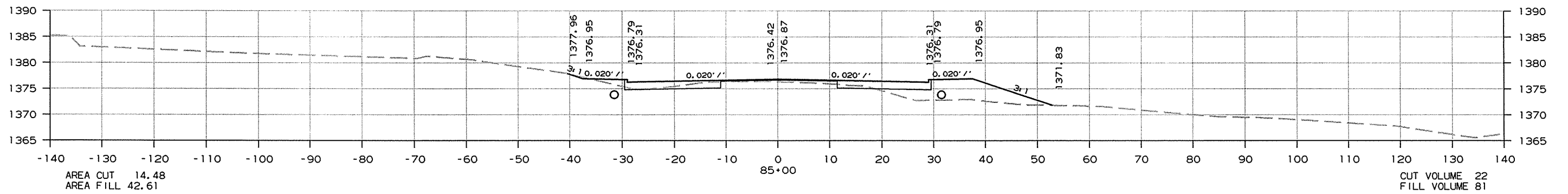
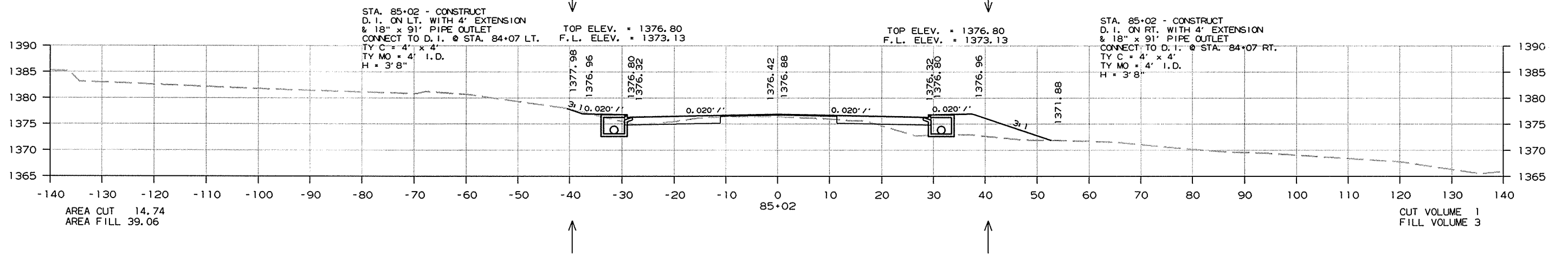
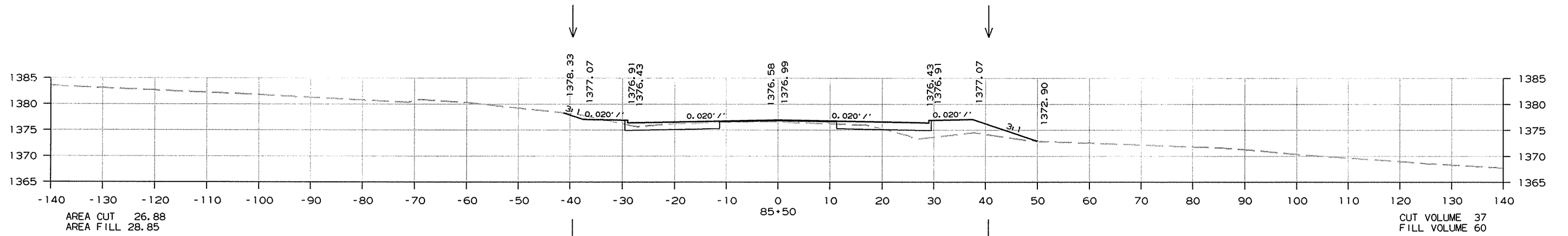
2 CROSS SECTIONS



CROSS SECTION STA. 82+50 TO STA. 84+07

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		152	174

2 CROSS SECTIONS

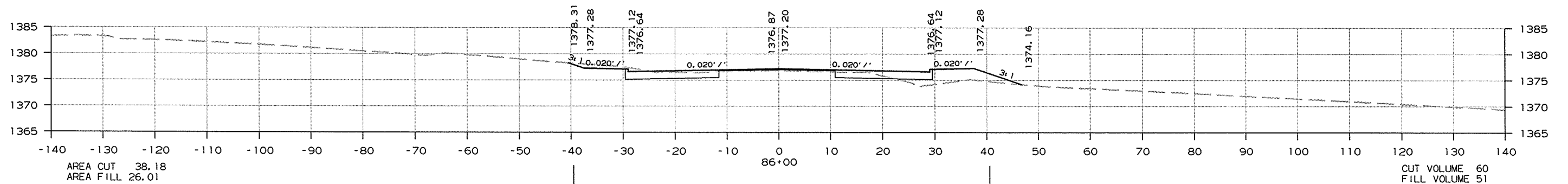
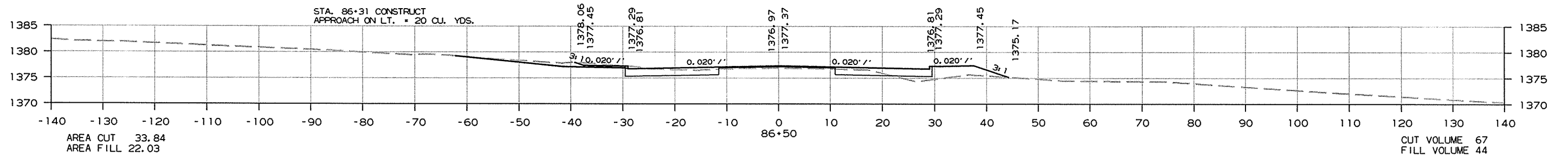
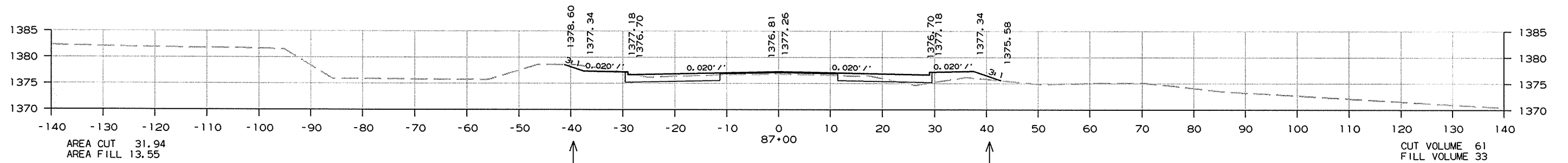
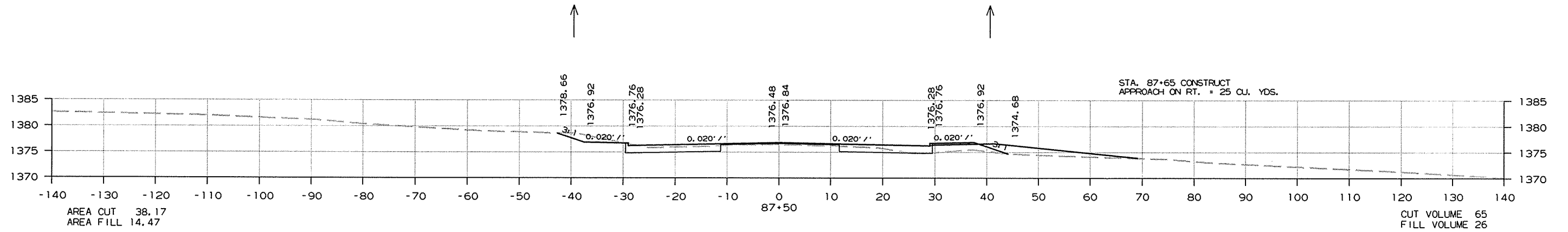


CROSS SECTION STA. 84+50 TO STA. 85+50



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.						090284	153	174

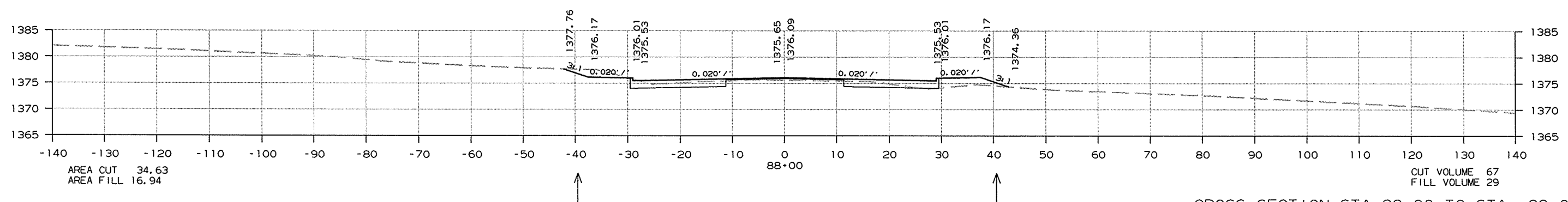
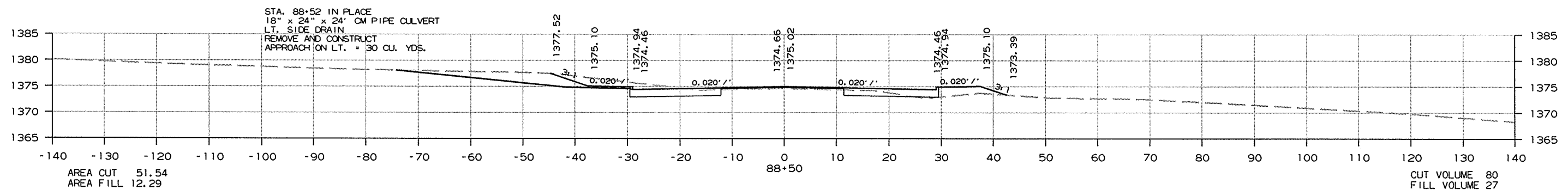
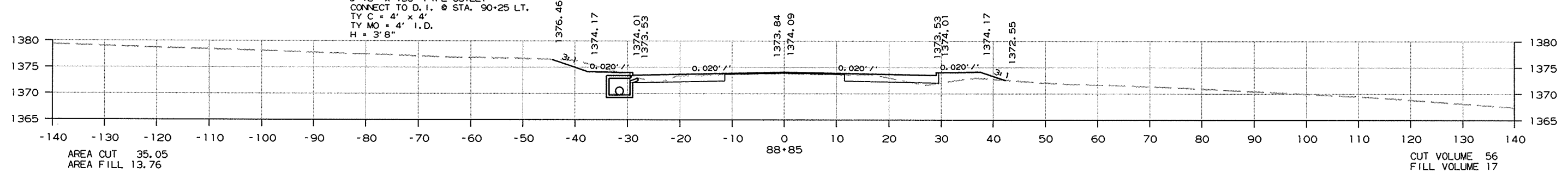
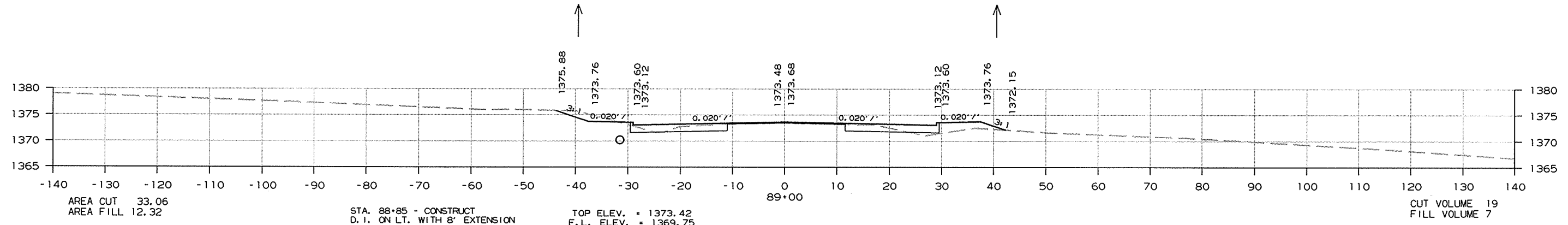
② CROSS SECTIONS



CROSS SECTION STA. 86+00 TO STA. 87+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.	090284		154	174

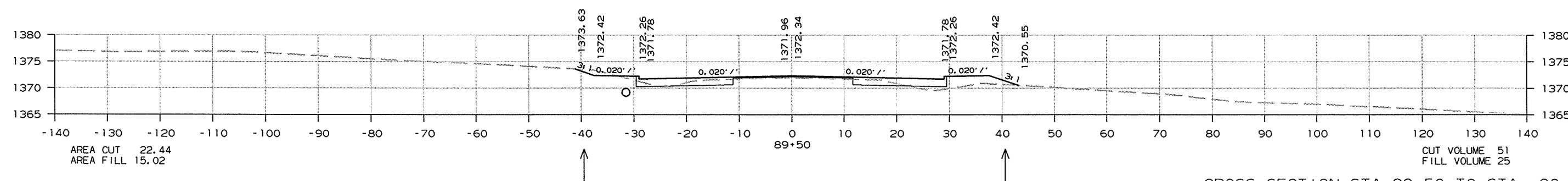
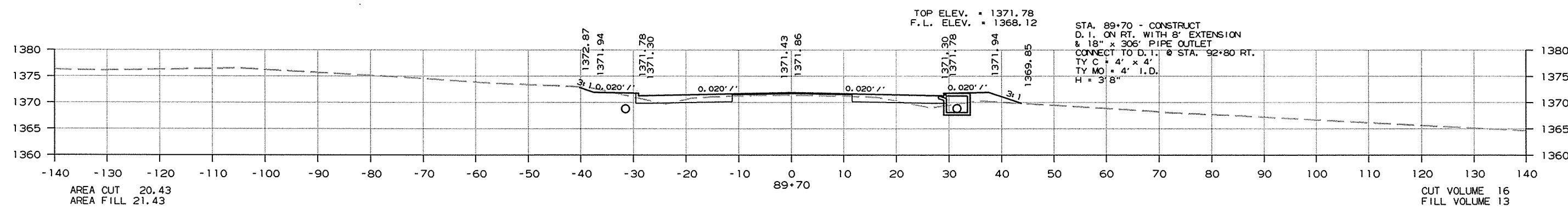
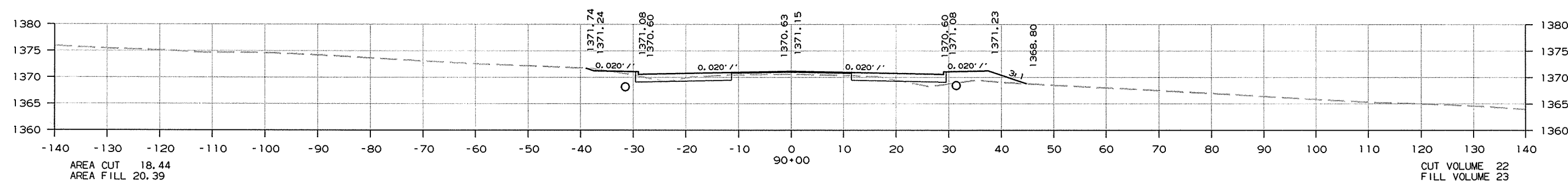
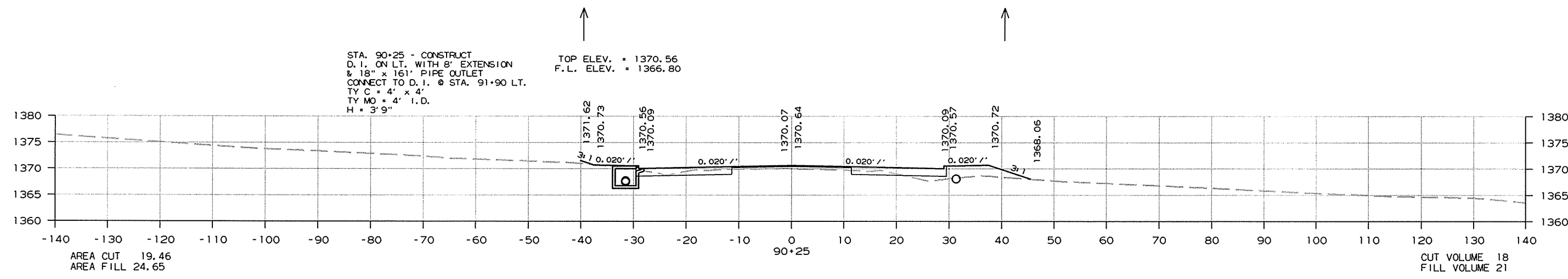
② CROSS SECTIONS



CROSS SECTION STA. 88+00 TO STA. 89+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. 090284	155	174

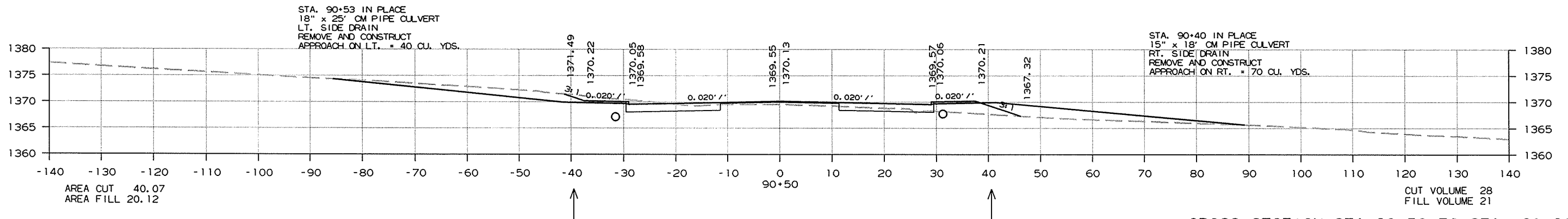
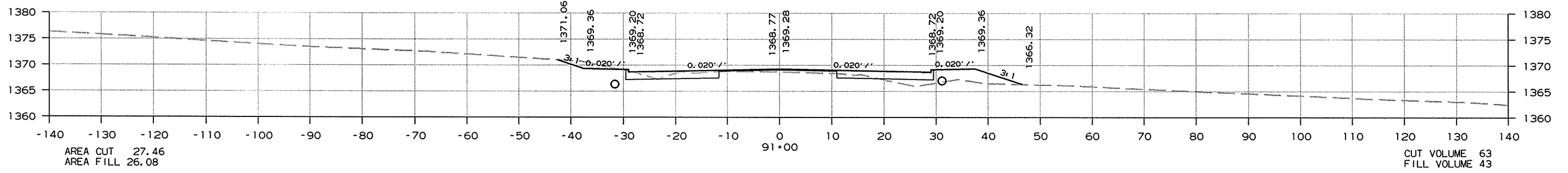
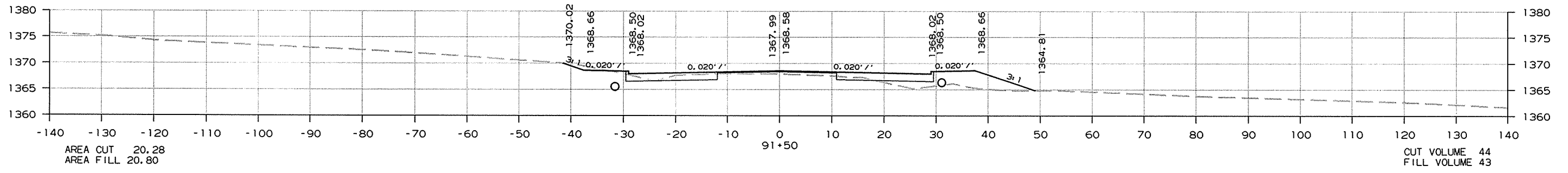
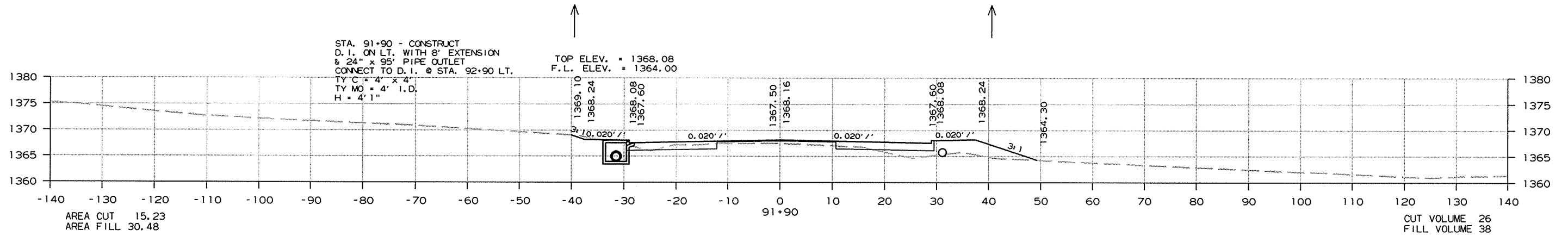
2 CROSS SECTIONS



CROSS SECTION STA. 89+50 TO STA. 90+25

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090284		156	174

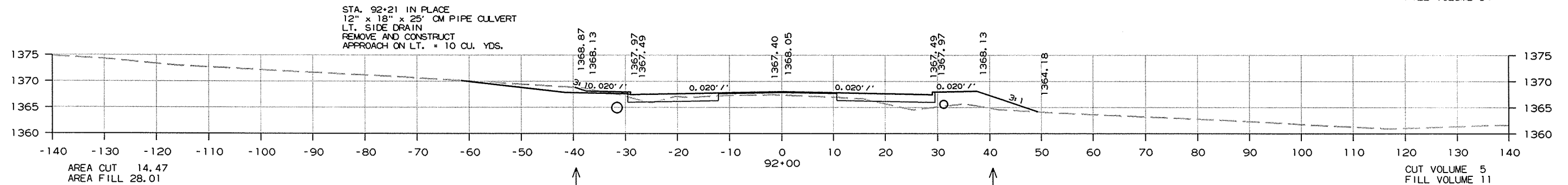
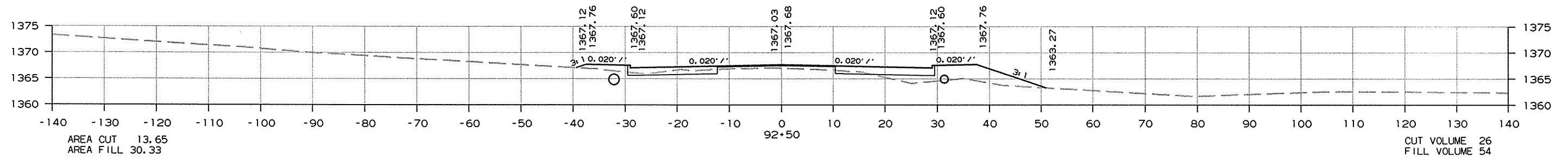
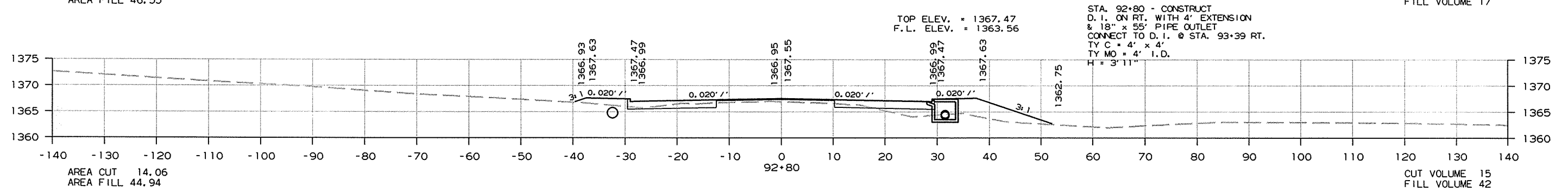
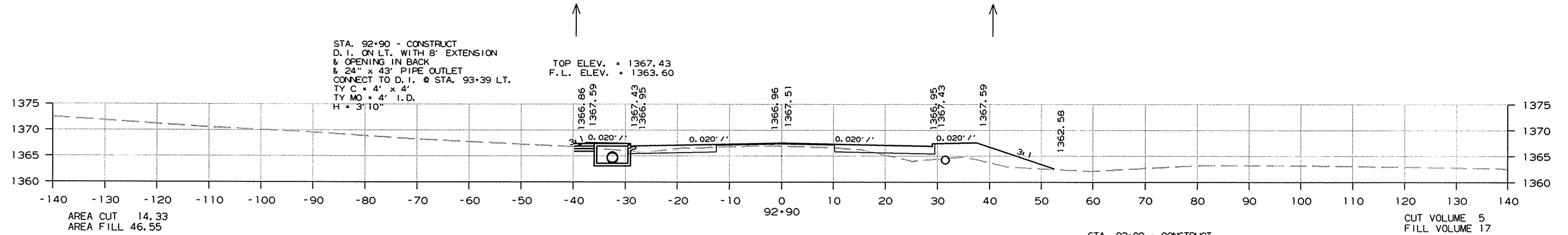
2 CROSS SECTIONS



CROSS SECTION STA. 90+50 TO STA. 91+90

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090284	157	174

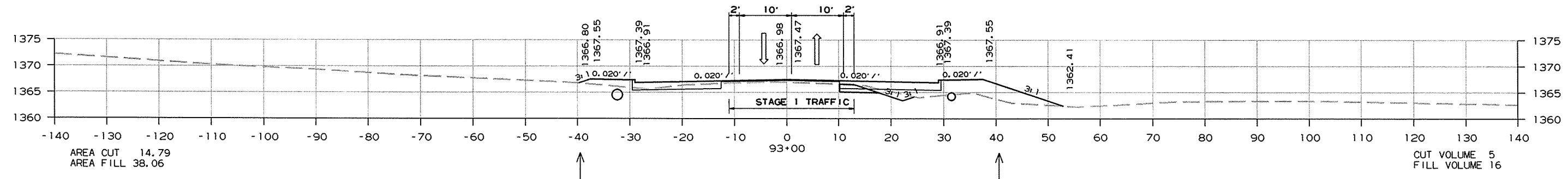
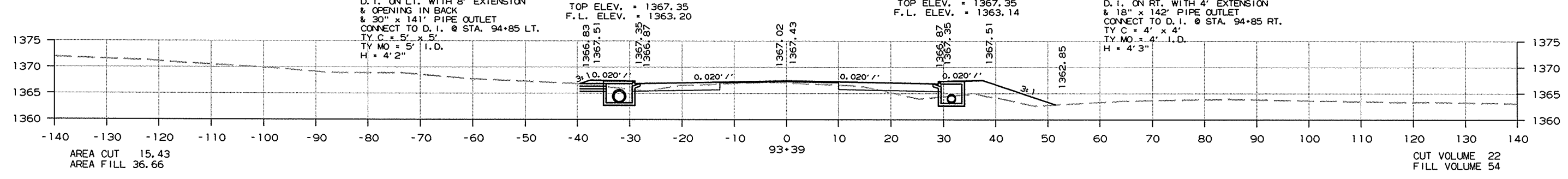
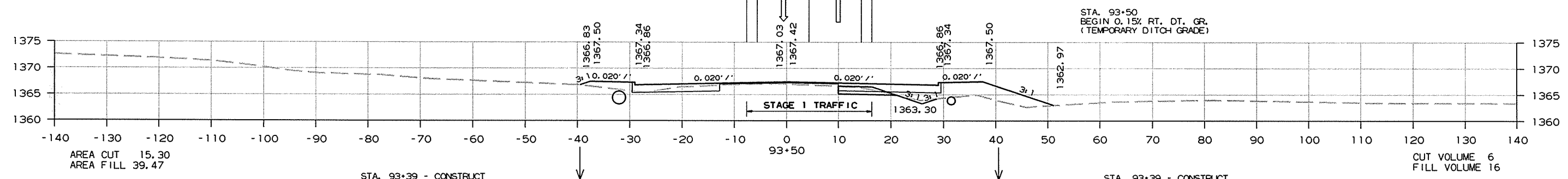
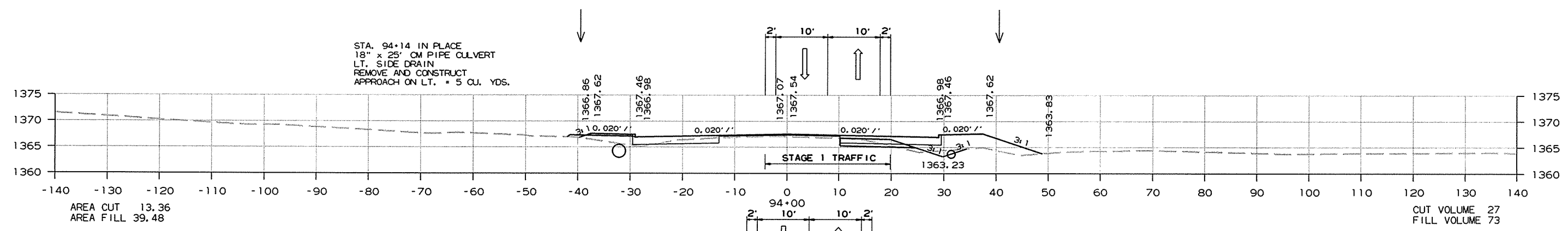
② CROSS SECTIONS



CROSS SECTION STA. 92+00 TO STA. 92+90

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090284	158	174

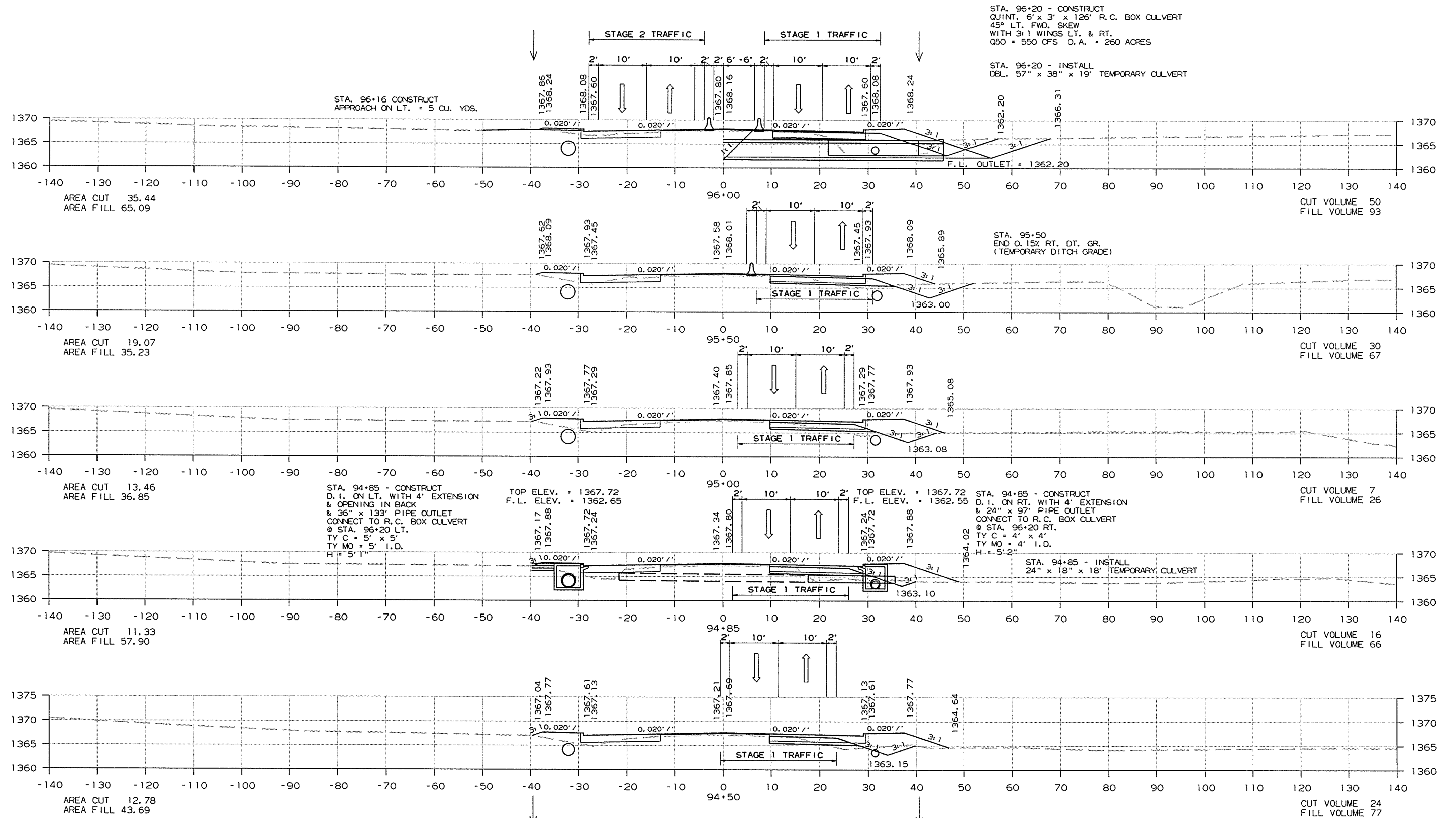
2 CROSS SECTIONS



CROSS SECTION STA. 93+00 TO STA. 94+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/3/2014				6	ARK.			
9/9/2014						090284	159	174

2 CROSS SECTIONS



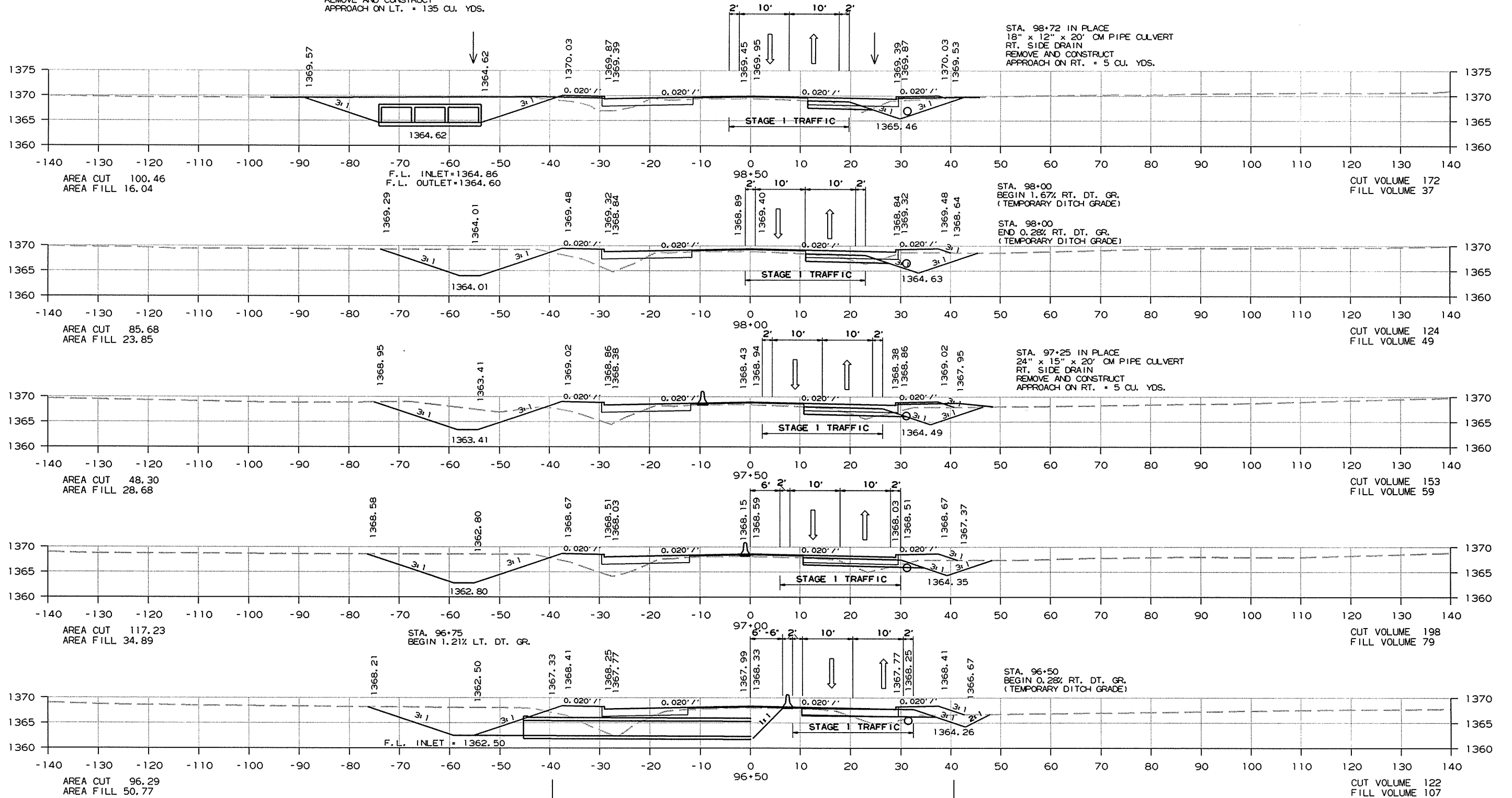
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							160	174

2 CROSS SECTIONS

STA. 98+60 - CONSTRUCT  
TRP. 6' x 3' x 27' R.C. BOX CULVERT  
WITH 3:1 WINGS LT. & RT.  
Q50 = 550 CFS D.A. = 260 ACRES

STA. 98+62 IN PLACE  
36" x 20" CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 135 CU. YDS.

STA. 98+72 IN PLACE  
18" x 12" x 20" CM PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.

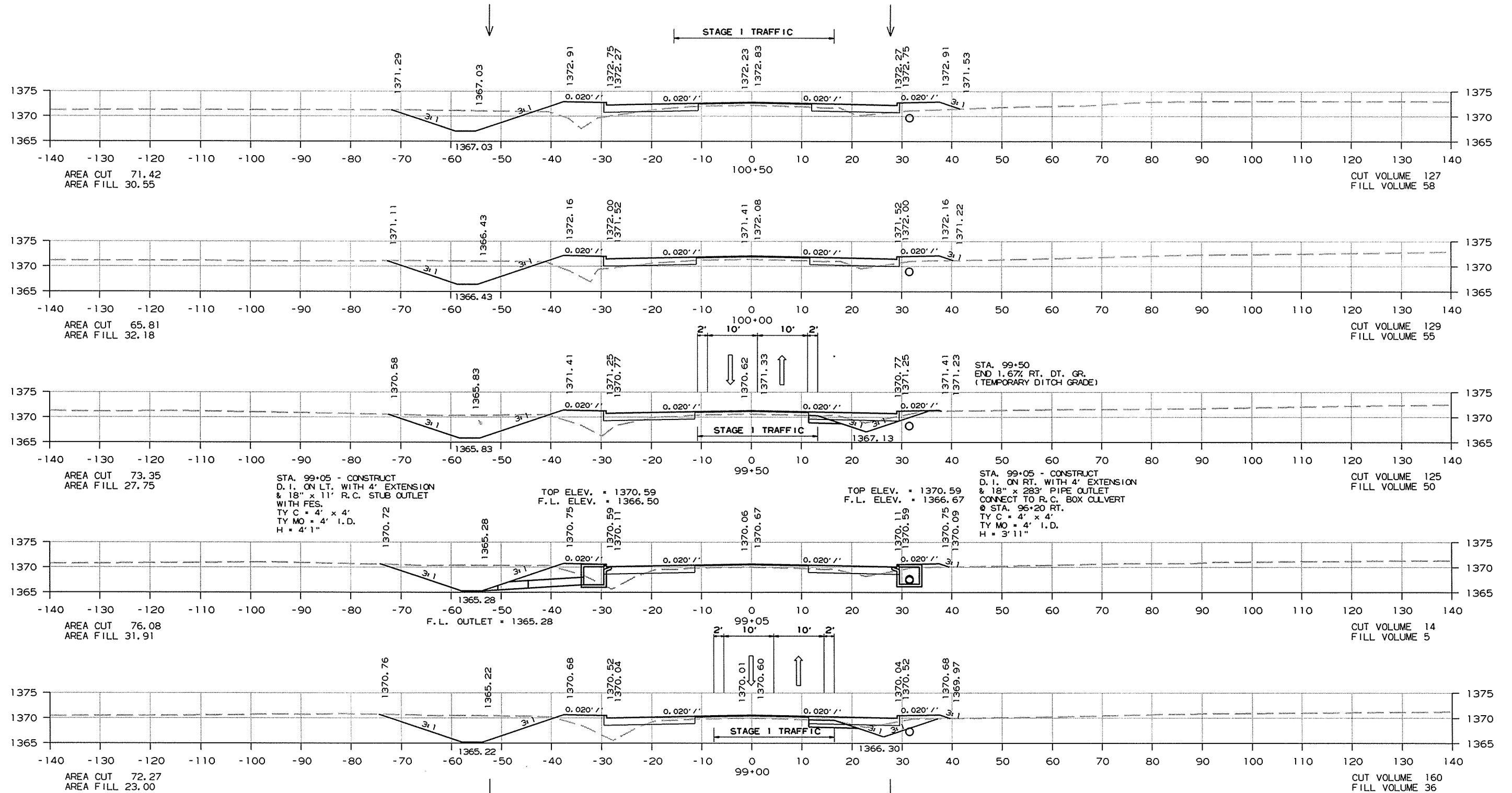


CROSS SECTION STA. 96+50 TO STA. 98+50



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. 090284							161	174

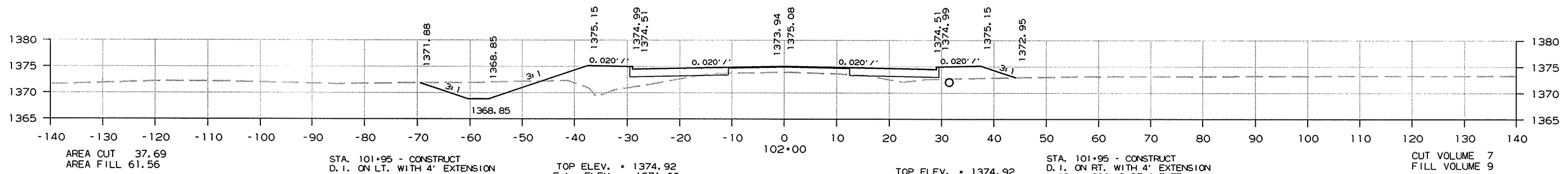
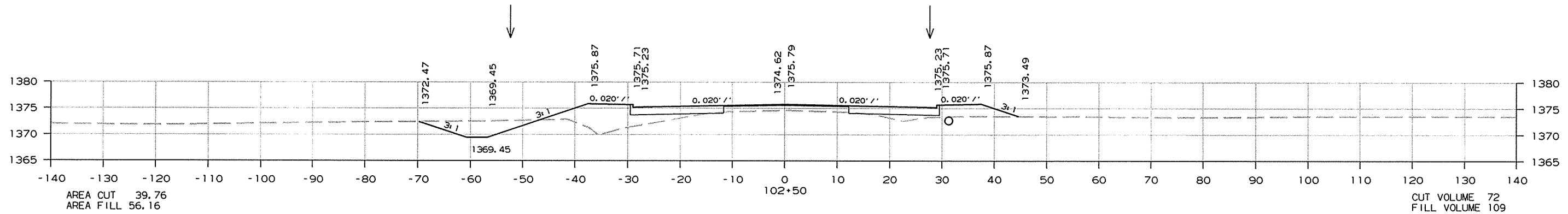
2 CROSS SECTIONS



CROSS SECTION STA. 99+00 TO STA. 100+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. 090284							162	174

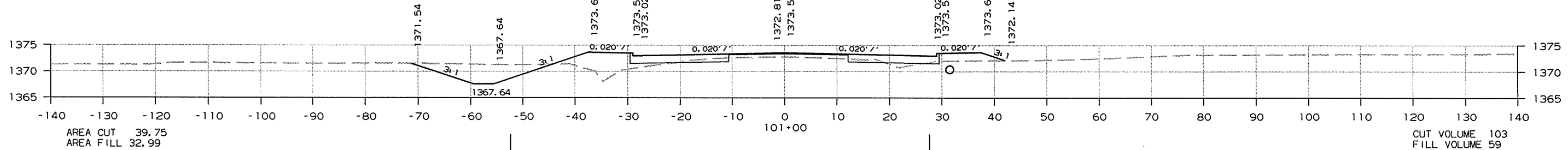
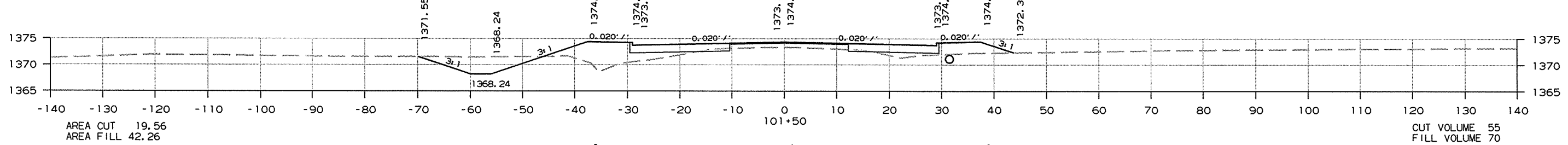
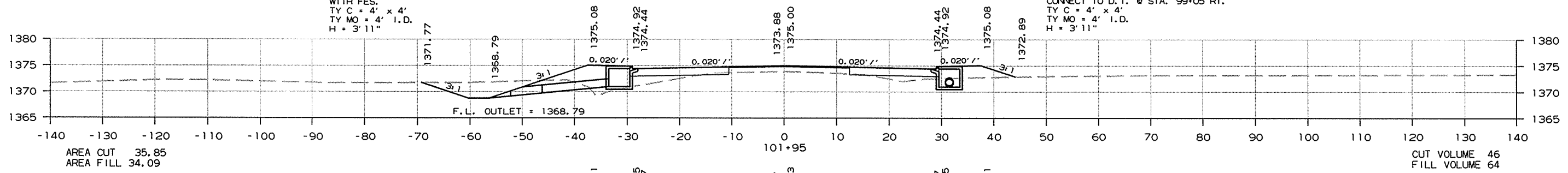
2 CROSS SECTIONS



STA. 101+95 - CONSTRUCT D.I. ON LT. WITH 4' EXTENSION & 18" x 13' R.C. STUB OUTLET WITH FES. TY C = 4' x 4' TY MO = 4' I.D. H = 3' 11"

TOP ELEV. = 1374.92  
F.L. ELEV. = 1371.00

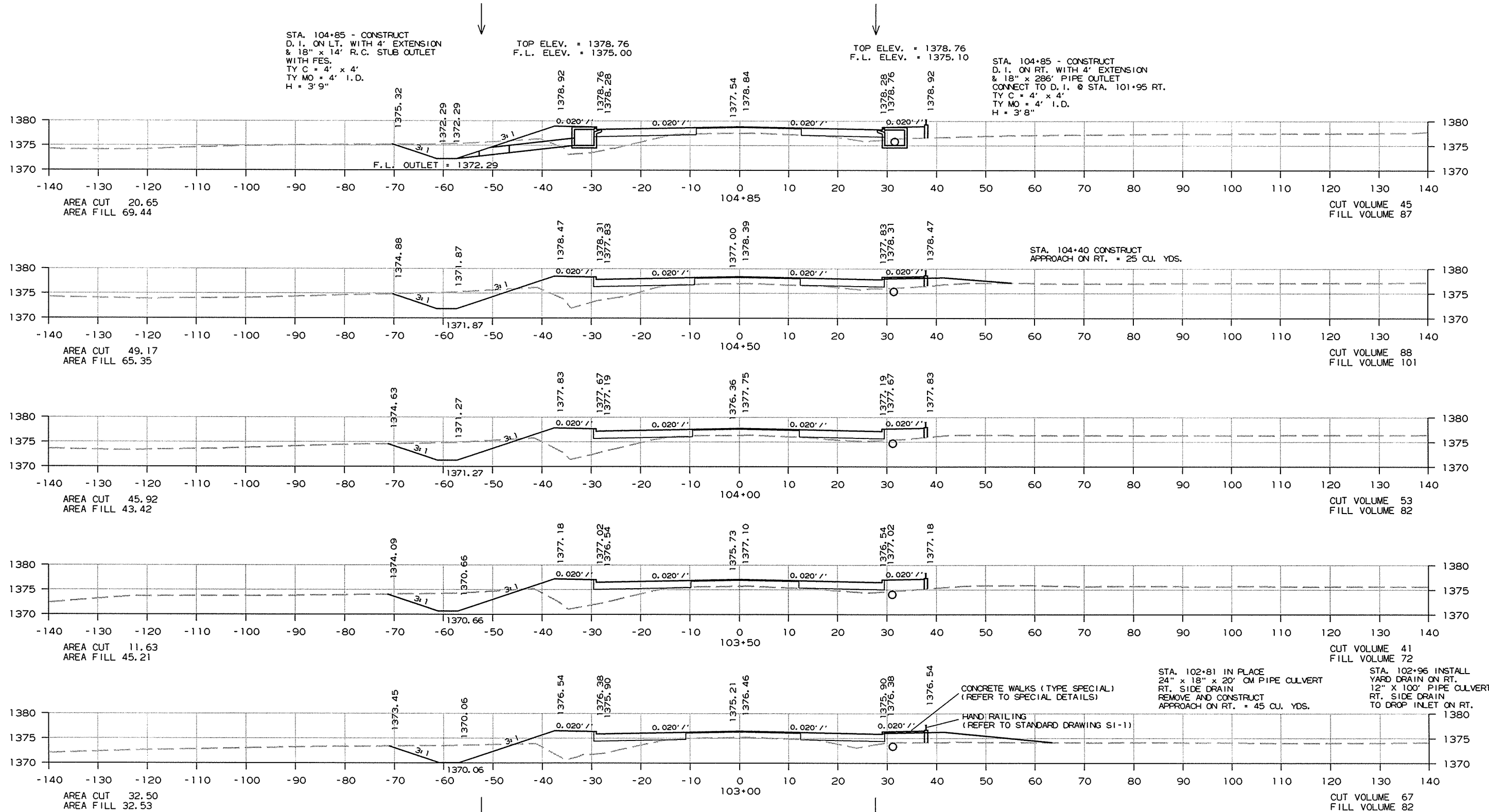
STA. 101+95 - CONSTRUCT D.I. ON RT. WITH 4' EXTENSION & 18" x 286' PIPE OUTLET CONNECT TO D.I. @ STA. 99+05 RT. TY C = 4' x 4' TY MO = 4' I.D. H = 3' 11"



CROSS SECTION STA. 101+00 TO STA. 102+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. 090284							163	174

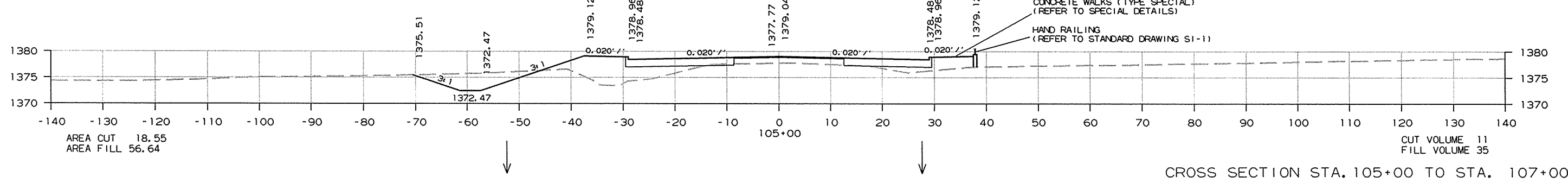
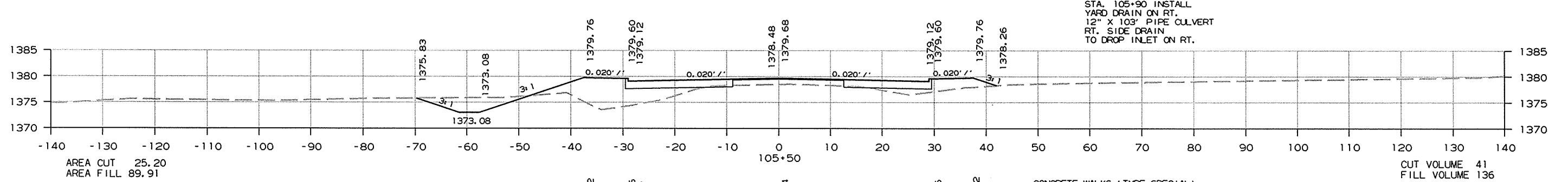
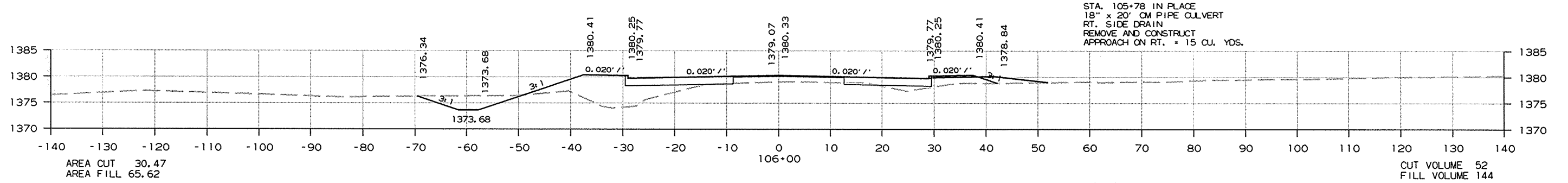
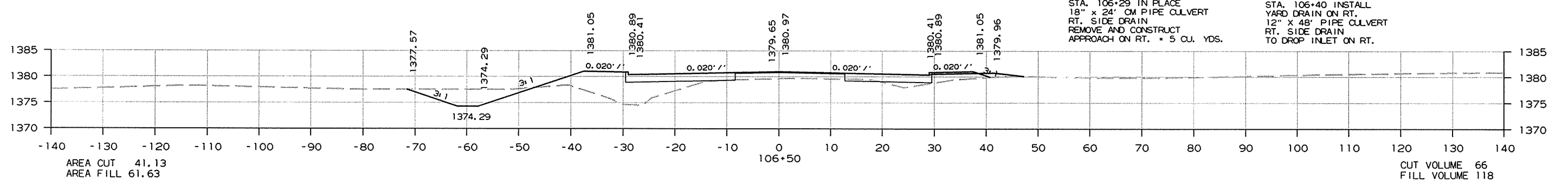
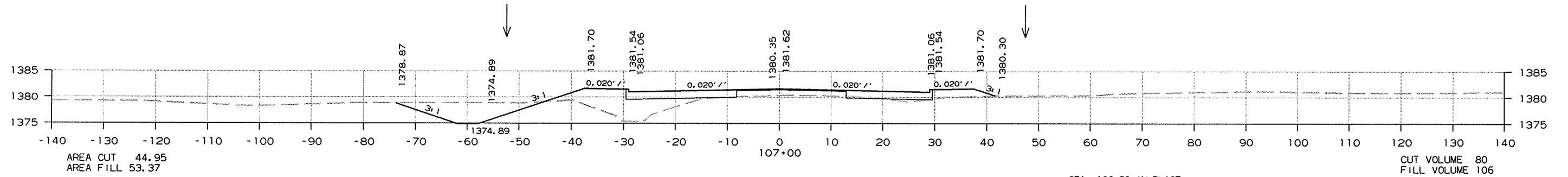
2 CROSS SECTIONS



CROSS SECTION STA. 103+00 TO STA. 104+85

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							164	174

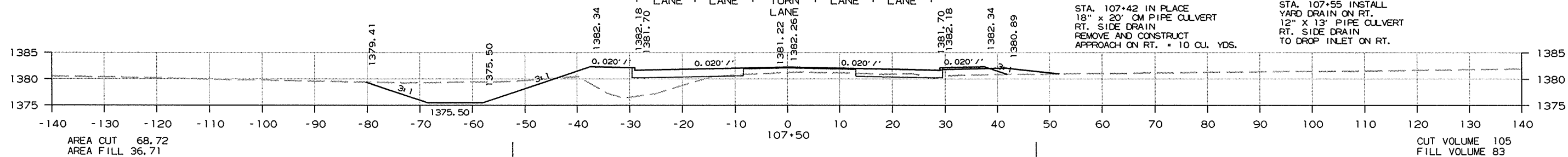
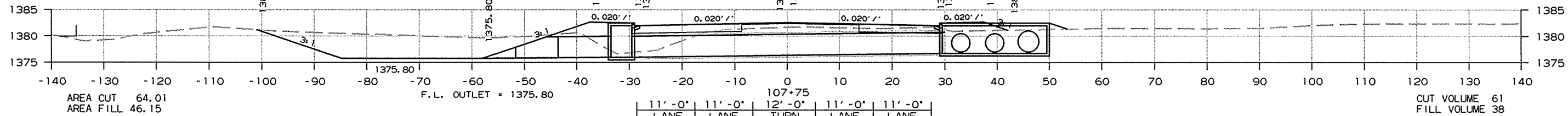
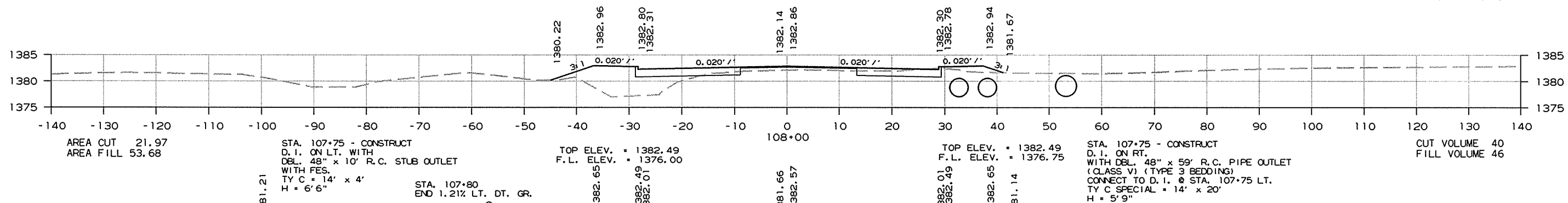
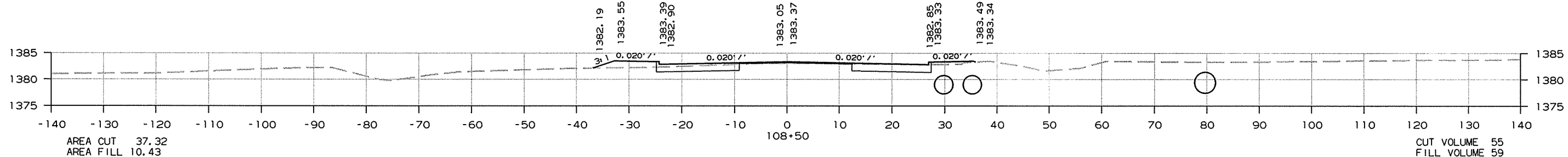
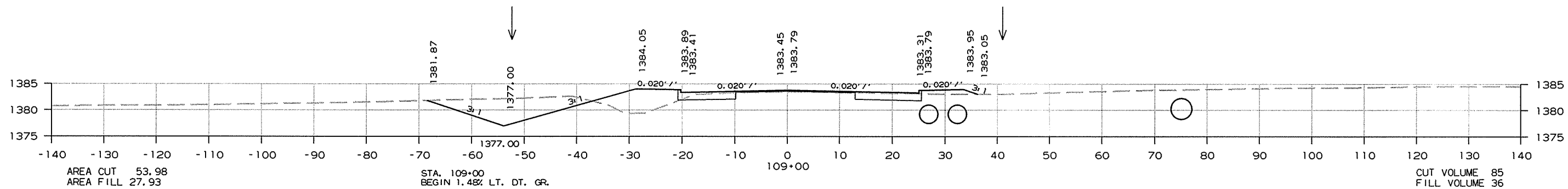
2 CROSS SECTIONS



CROSS SECTION STA. 105+00 TO STA. 107+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. 090284							165	174

② CROSS SECTIONS

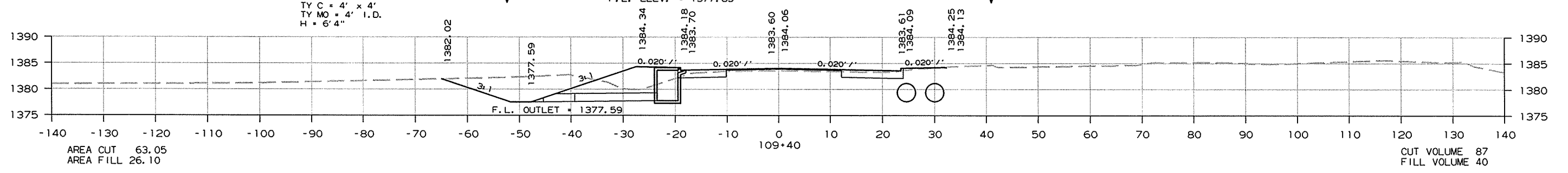
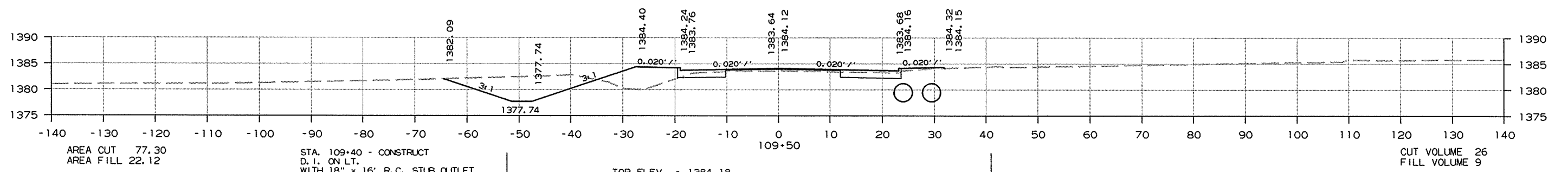
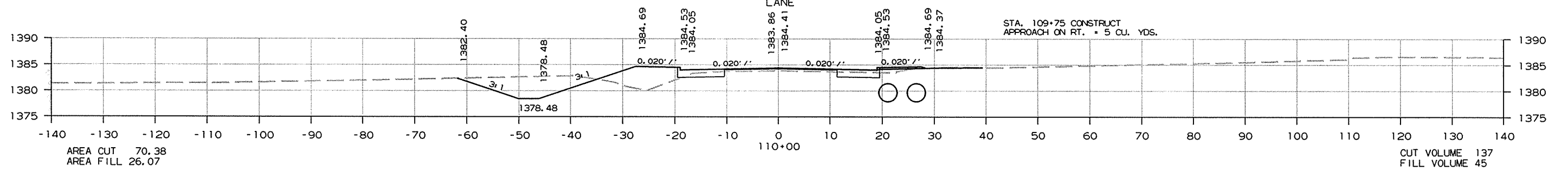
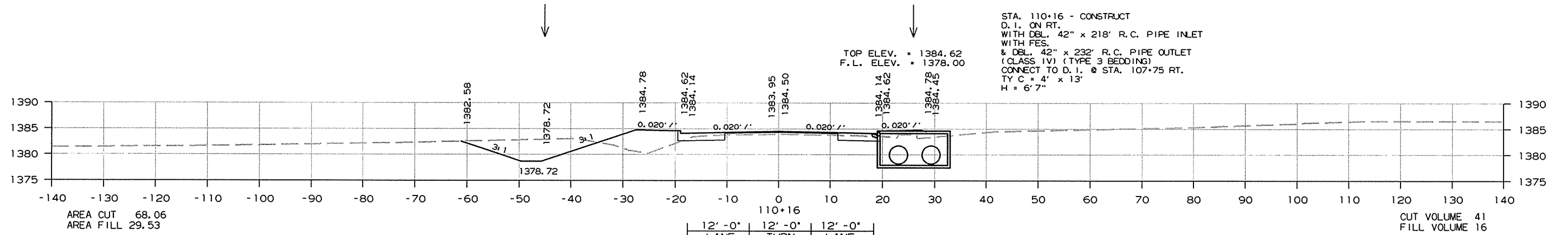


CROSS SECTION STA. 107+50 TO STA. 109+00

R090284.DGN 4/28/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							166	174

2 CROSS SECTIONS

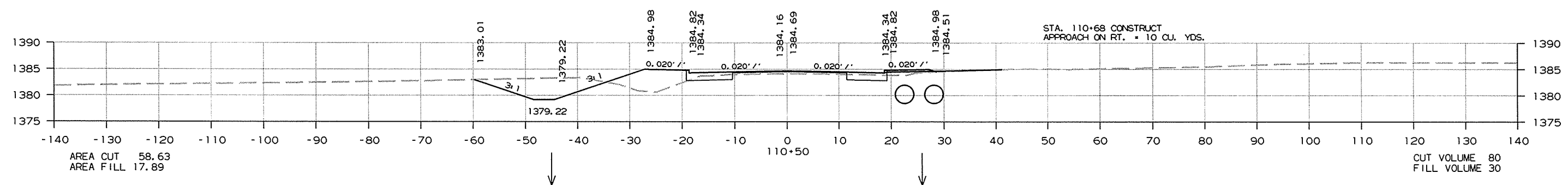
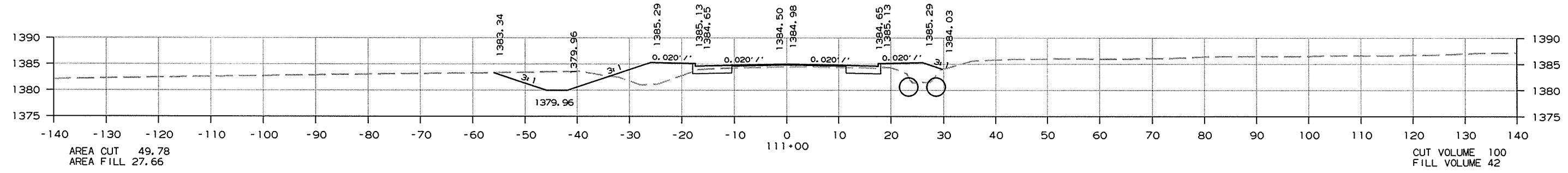
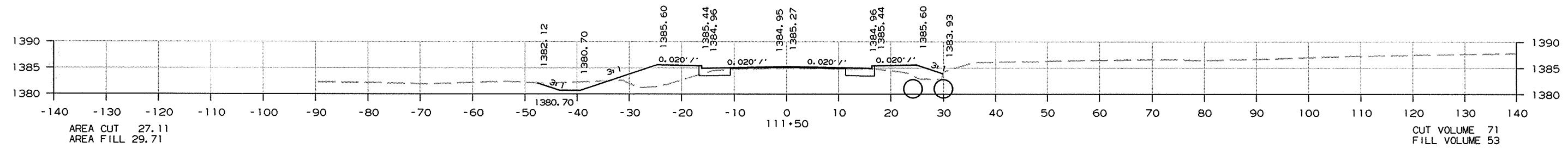
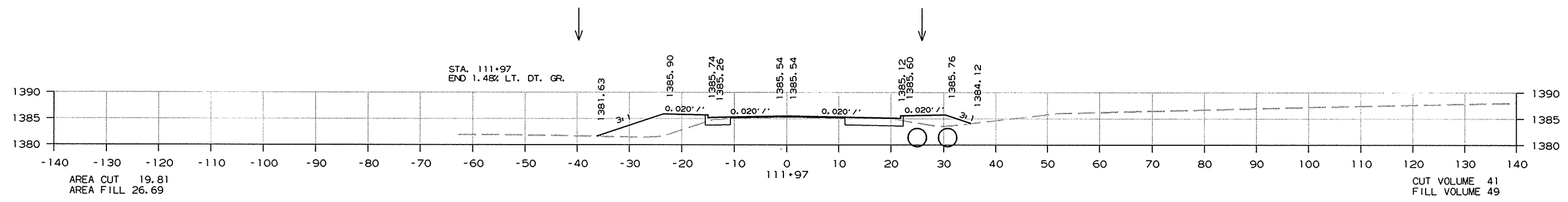


CROSS SECTION STA. 109+40 TO STA. 110+16

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							167	174

② CROSS SECTIONS

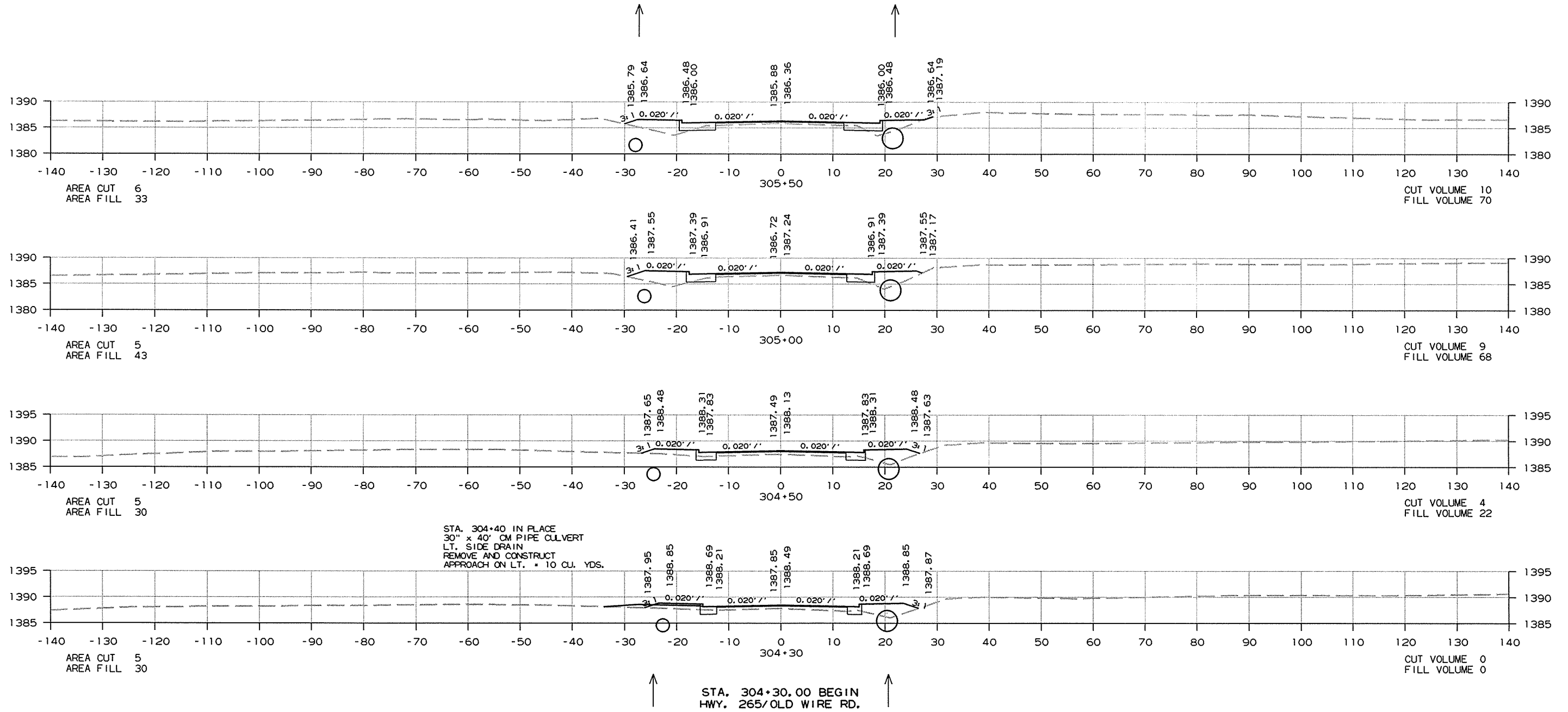
STA. 111+97.00 END  
JOB 090284



CROSS SECTION STA. 110+50 TO STA. 111+97

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090284	168	174

② CROSS SECTIONS



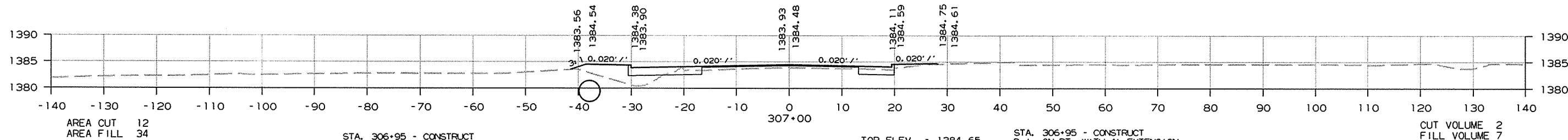
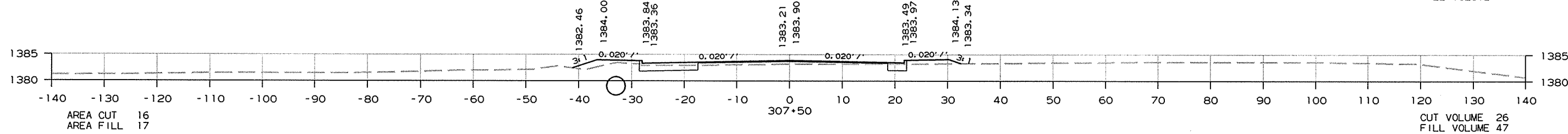
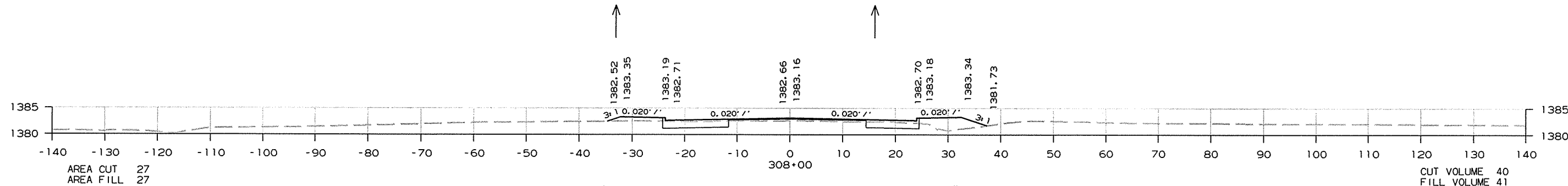
STA. 304+40 IN PLACE  
30" x 40' CM PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND CONSTRUCT  
APPROACH ON LT. = 10 CU. YDS.

STA. 304+30.00 BEGIN  
HWY. 265/OLD WIRE RD.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090284							169	174

② CROSS SECTIONS

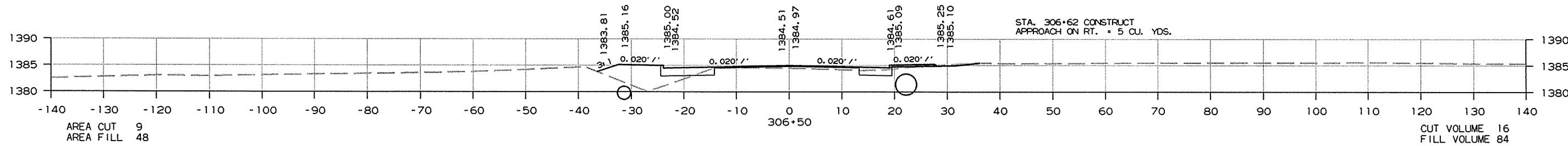
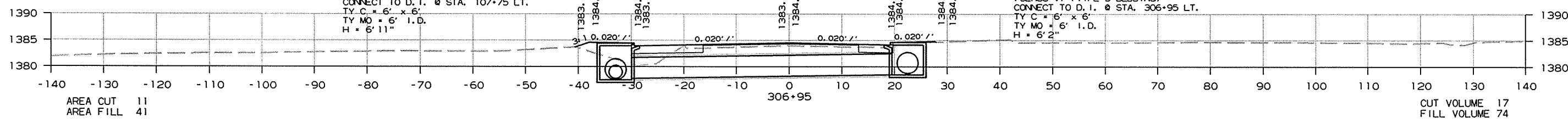


STA. 306+95 - CONSTRUCT  
D.I. ON LT. WITH 4' EXTENSION  
& 30" x 325' R.C. PIPE INLET  
WITH FES.  
& 48" x 89' R.C. PIPE OUTLET  
CONNECT TO D.I. @ STA. 107+75 LT.  
TY C = 6' x 6'  
TY MO = 6' I.D.  
H = 6' 11"

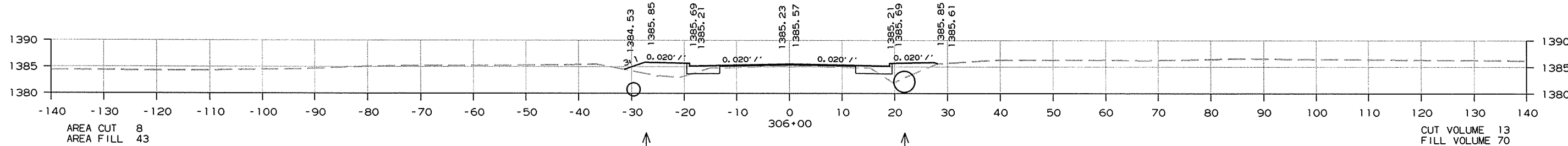
TOP ELEV. = 1384.44  
F.L. ELEV. = 1377.50

TOP ELEV. = 1384.65  
F.L. ELEV. = 1378.50

STA. 306+95 - CONSTRUCT  
D.I. ON RT. WITH 4' EXTENSION  
& 48" x 325' R.C. PIPE INLET  
WITH FES.  
& 48" x 51' R.C. PIPE OUTLET  
(CLASS VI) (TYPE 3 BEDDING)  
CONNECT TO D.I. @ STA. 306+95 LT.  
TY C = 6' x 6'  
TY MO = 6' I.D.  
H = 6' 2"



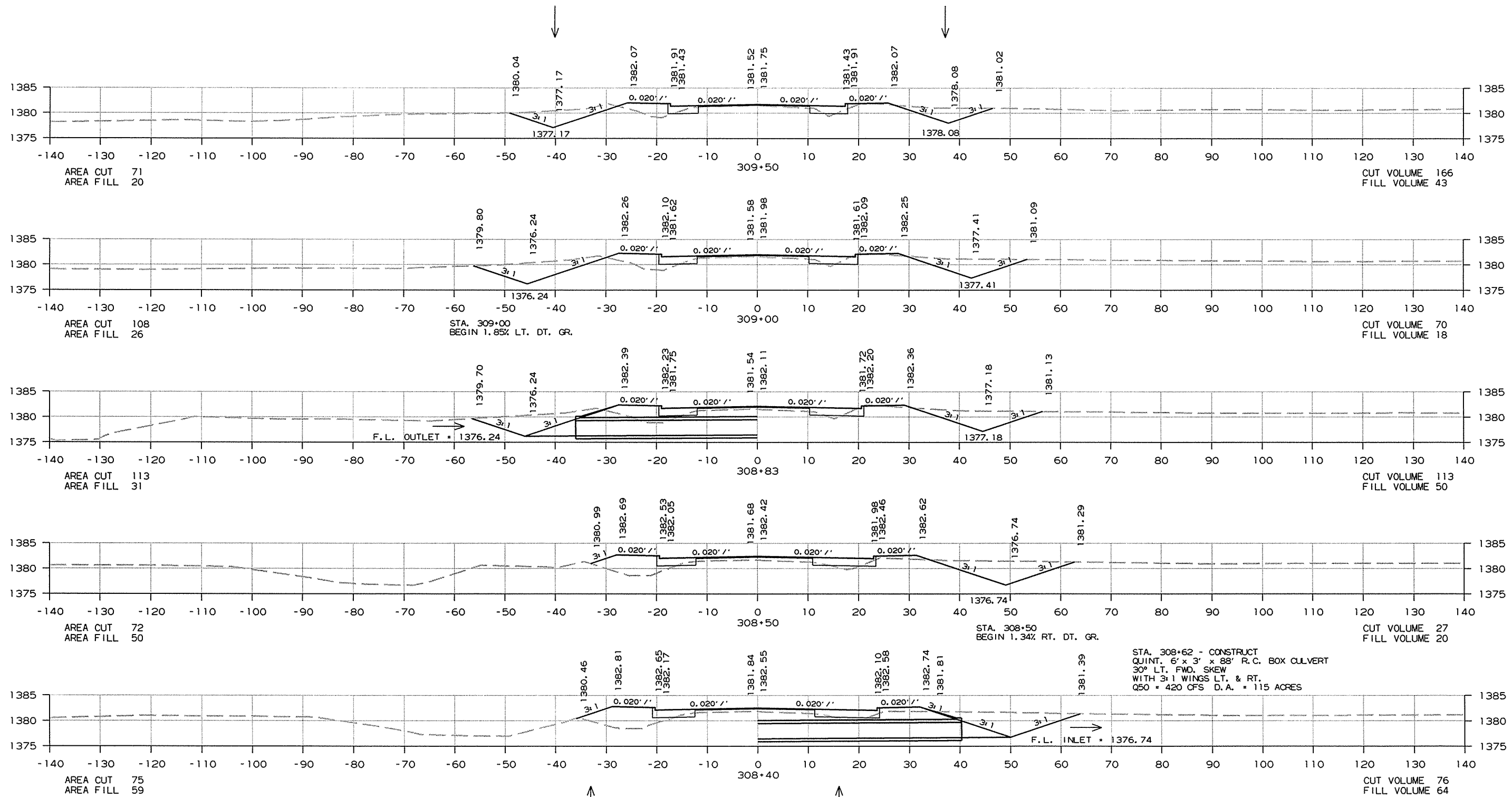
STA. 306+62 CONSTRUCT  
APPROACH ON RT. = 5 CU. YDS.



CROSS SECTION STA. 306+00 TO STA. 308+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. 090284	170	174

② CROSS SECTIONS



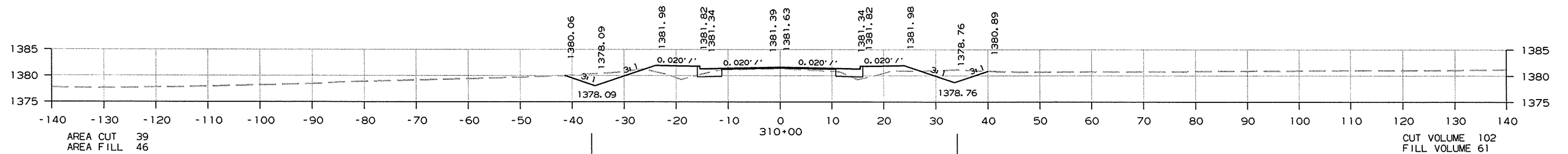
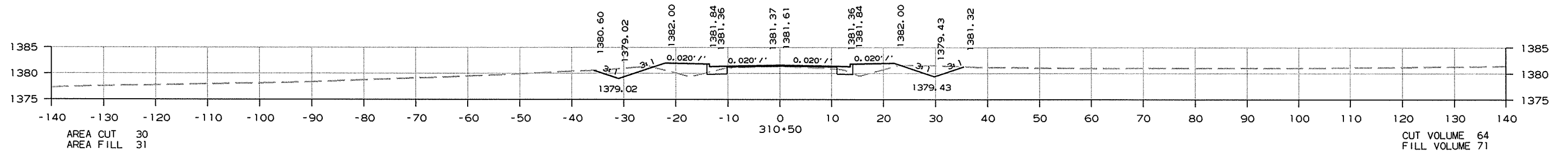
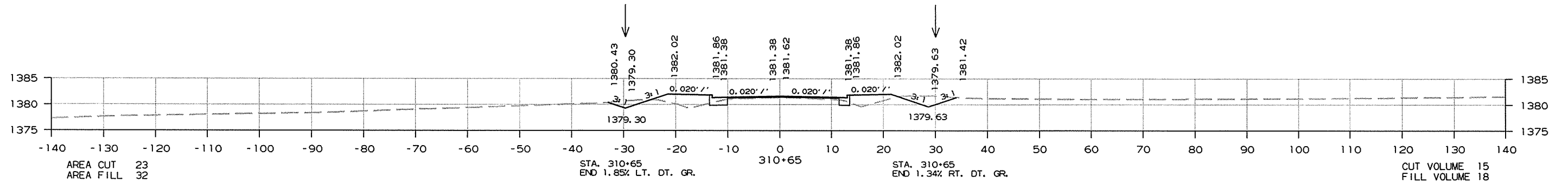
CROSS SECTION STA. 308+40 TO STA. 309+50

STA. 308+62 - CONSTRUCT  
 QUINT. 6' x 3' x 88' R.C. BOX CULVERT  
 30° LT. FWD. SKEW  
 WITH 3:1 WINGS LT. & RT.  
 Q50 = 420 CFS D.A. = 115 ACRES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						090284	171	174

② CROSS SECTIONS

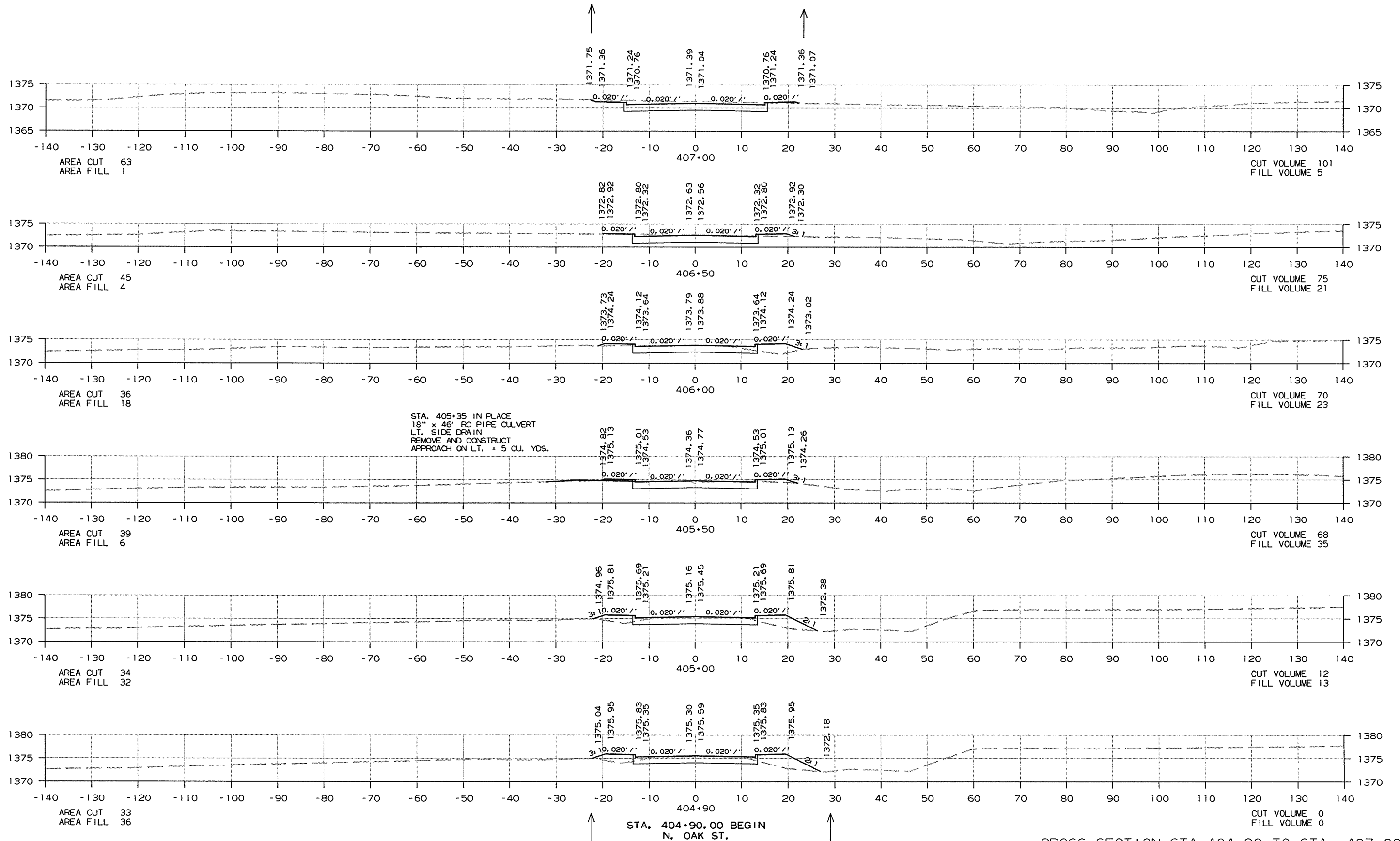
STA. 310+65.00 END  
HWY. 265/OLD WIRE RD.



CROSS SECTION STA. 310+00 TO STA. 310+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. 090284	172	174

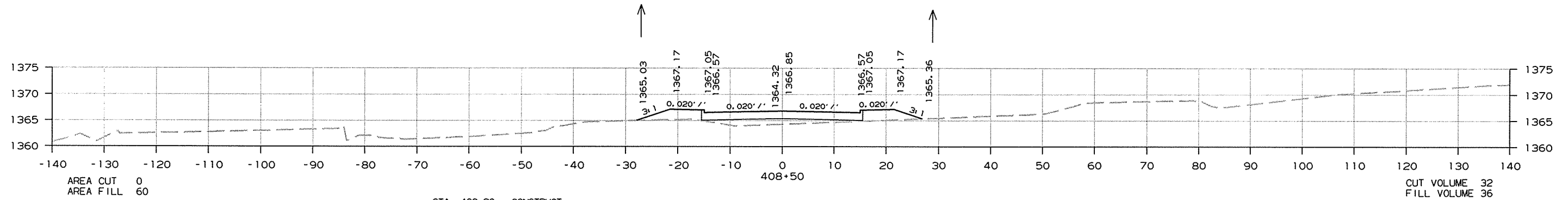
2 CROSS SECTIONS



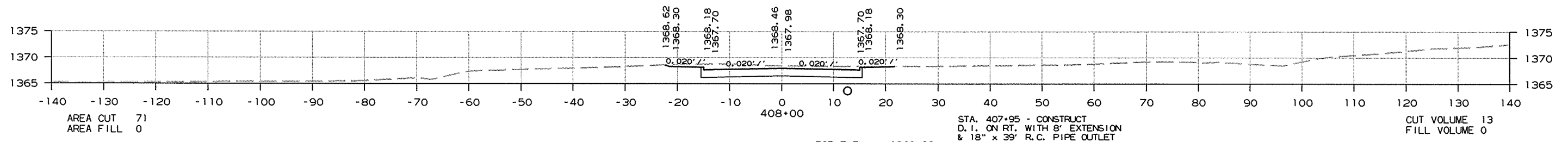
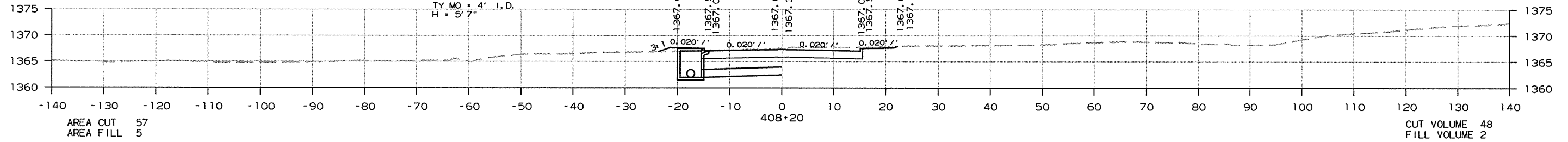
CROSS SECTION STA. 404+90 TO STA. 407+00

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. 090284							173	174

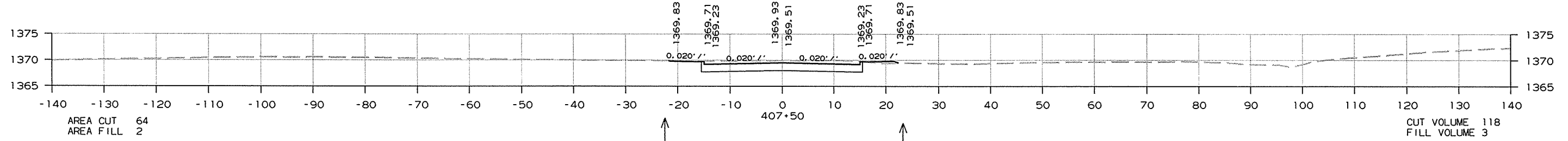
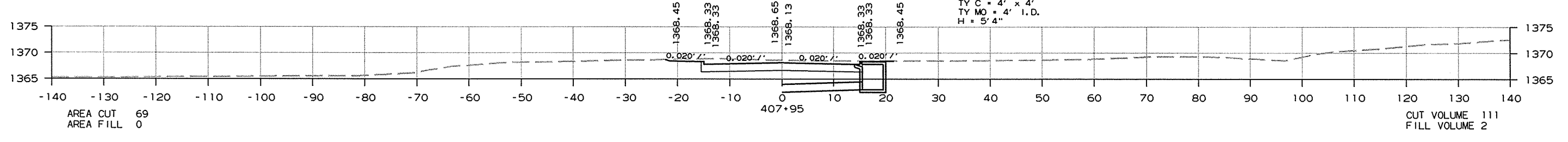
② CROSS SECTIONS



STA. 408+20 - CONSTRUCT  
 D.I. ON LT. WITH 8' EXTENSION  
 & 18" x 55' PIPE OUTLET  
 CONNECT TO D.I. @ STA. 69+40 LT.  
 TY C = 4' x 4'  
 TY M0 = 4' I.D.  
 H = 5' 7"



STA. 407+95 - CONSTRUCT  
 D.I. ON RT. WITH 8' EXTENSION  
 & 18" x 39' R.C. PIPE OUTLET  
 (CLASS III) (TYPE 3 BEDDING)  
 CONNECT TO D.I. @ STA. 96+20 RT.  
 TY C = 4' x 4'  
 TY M0 = 4' I.D.  
 H = 5' 4"

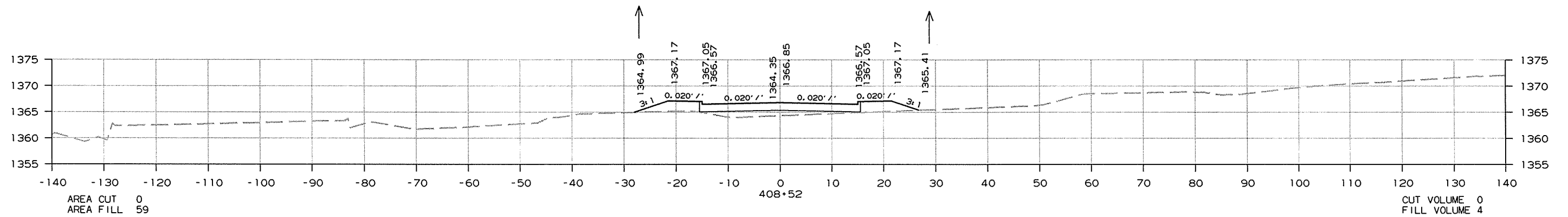


CROSS SECTION STA. 407+50 TO STA. 408+50

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.		090284	174	174

② CROSS SECTIONS

STA. 408+52.00 END  
N. OAK ST.



CROSS SECTION STA. 408+52 TO STA. 408+52