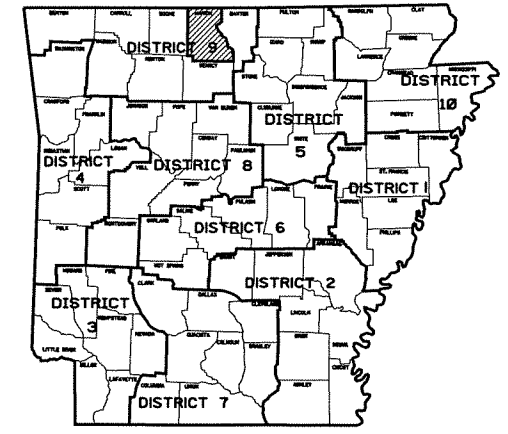
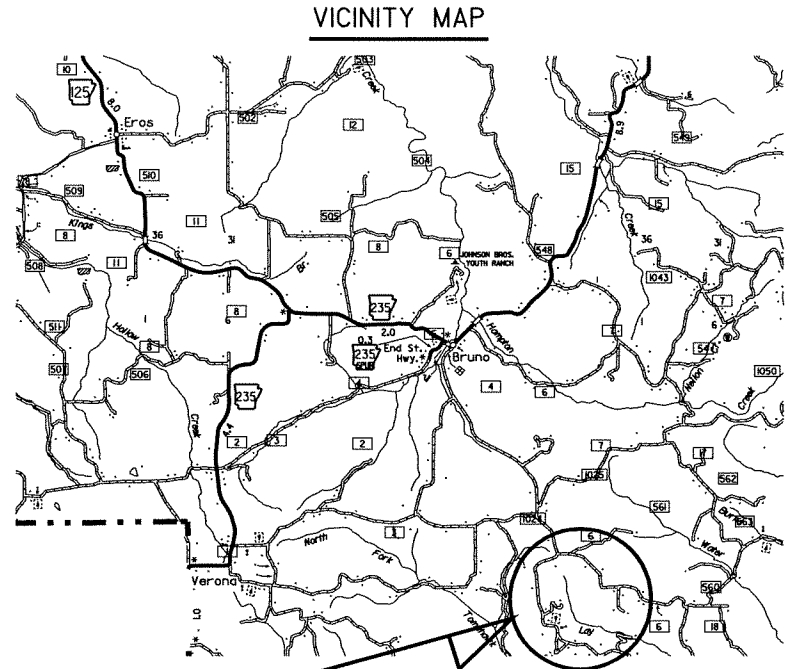


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		I	96

4 SEARCHY CO. LINE - NORTHWEST (RECONST.) (SEL. SEC.) (S)

ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR PROPOSED COUNTY ROAD

**SEARCHY CO. LINE -
NORTHWEST (RECONST.) (SEL. SEC.) (S)**
**COUNTY ROAD 6
MARION COUNTY
FED. AID PROJECT STPR-0045(16)
JOB FA4510**

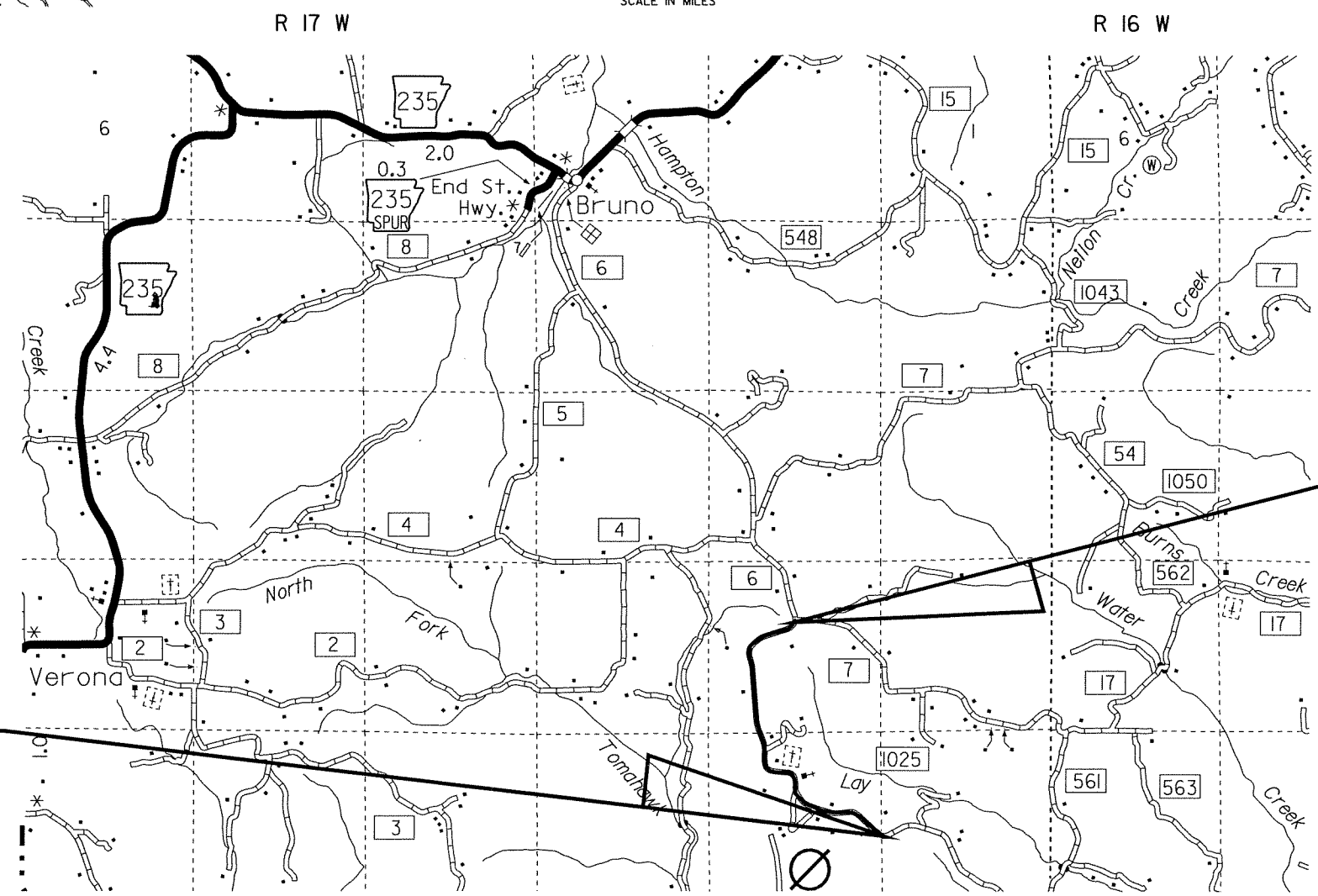
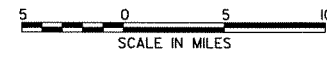


ARKANSAS HIGHWAY DIST. 9

PROJECT LOCATION



T 17 N



**STA. 320+00.00 END JOB FA4510
FED. AID PROJECT BRO-0045(16)**

**STA. 220+00.00 BEGIN JOB FA4510
FED. AID PROJECT STPR-0045(16)**

DESIGN TRAFFIC DATA

DESIGN YEAR.....	2031
2011 ADT.....	75
2031 ADT.....	105
2031 DHV.....	12
DIRECTIONAL DISTRIBUTION.....	0.60
TRUCKS.....	10%
DESIGN SPEED.....	30 MPH

	BEGIN	MID-POINT	END
LATITUDE	N36°05'19"	N36°05'44"	N36°06'25"
LONGITUDE	W92°44'52"	W92°45'33"	W92°45'21"

GROSS LENGTH OF PROJECT	10000.00 FEET OR 1.894 MILES
NET " " ROADWAY	10000.00 " " 1.894 "
NET " " BRIDGE	N/A " " N/A "
NET " " PROJECT	10000.00 " " 1.894 "

APPROVED

Frank Yotam
FRANK YOTAM
REGISTERED PROFESSIONAL ENGINEER
No. 3917
DEPUTY DIRECTOR
AND CHIEF ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(6)		
				JOB NO.	FA4510	2	96	

4 INDEX OF SHEETS, GOVERNING SPEC. & GEN. NOTES

INDEX OF SHEETS

SHEET NO.	TITLE	DRWG. NO.	DATE
1.	TITLE SHEET		
2.	INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES		
3.	TYPICAL SECTION OF IMPROVEMENT AND SPECIAL DETAILS		
4-14.	SURVEY CONTROL DETAIL		
15-23.	TEMPORARY EROSION CONTROL DETAILS		
24-26.	QUANTITY SHEETS		
27.	SUMMARY OF QUANTITIES AND REVISIONS		
28-36.	PLAN AND PROFILE SHEETS		
37.	FLARED END SECTION-----	FES-1	10-18-96
38.	FLARED END SECTION-----	FES-2	10-18-96
39.	MAILBOX DETAILS-----	MB-1	11-18-04
40.	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING-----	PCC-1	05-18-00
41.	METAL PIPE CULVERT FILL HEIGHTS & BEDDING-----	PCM-1	03-30-00
42.	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)-----	PCP-1	11-17-10
43.	PLASTIC PIPE CULVERT (PVC F949)-----	PCP-2	11-17-10
44.	PAVEMENT MARKING DETAILS-----	PM-1	11-17-10
45.	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC-----	SE-2	10-18-96
46.	STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES-----	SHS-1	04-17-08
47.	U-CHANNEL POST ASSEMBLIES-----	SHS-2	10-09-03
48.	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-----	TC-1	11-17-10
49.	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-----	TC-2	03-11-10
50.	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-----	TC-3	10-15-09
51.	TEMPORARY EROSION CONTROL DEVICES-----	TEC-1	11-18-98
52.	TEMPORARY EROSION CONTROL DEVICES-----	TEC-2	06-02-94
53.	TEMPORARY EROSION CONTROL DEVICES-----	TEC-3	11-03-94
54.	WIRE FENCE TYPE C AND D-----	WF-4	08-22-02
55-96.	CROSS SECTIONS		

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

GENERAL NOTES

- LEVEL DATUM IS U. S. C. & G. S.
- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE MOVED BY THE OWNERS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THIS PROJECT IS PERMITTED UNDER A NATIONWIDE 14 SECTION 404 PERMIT. REFER TO SUPPLEMENTAL SPECIFICATION 110-1 FOR PERMIT REQUIREMENTS.
- SUPERELEVATION SHALL BE COMPUTED IN ACCORDANCE WITH STD. DRWG. SE-2 USING 30 M.P.H. DESIGN VALUES AND REVOLVE ABOUT THE INNER TRAVEL LANE EDGE UNLESS OTHERWISE SHOWN.
- ALL SALVAGE PIPE CULVERTS SHALL BE STORED ON THE RIGHT-OF-WAY AND REMAIN THE PROPERTY OF MARION COUNTY.
- 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.
- THE ROAD WILL REMAIN OPEN TO THRU TRAFFIC DURING CONSTRUCTION.

GOVERNING SPECIFICATIONS

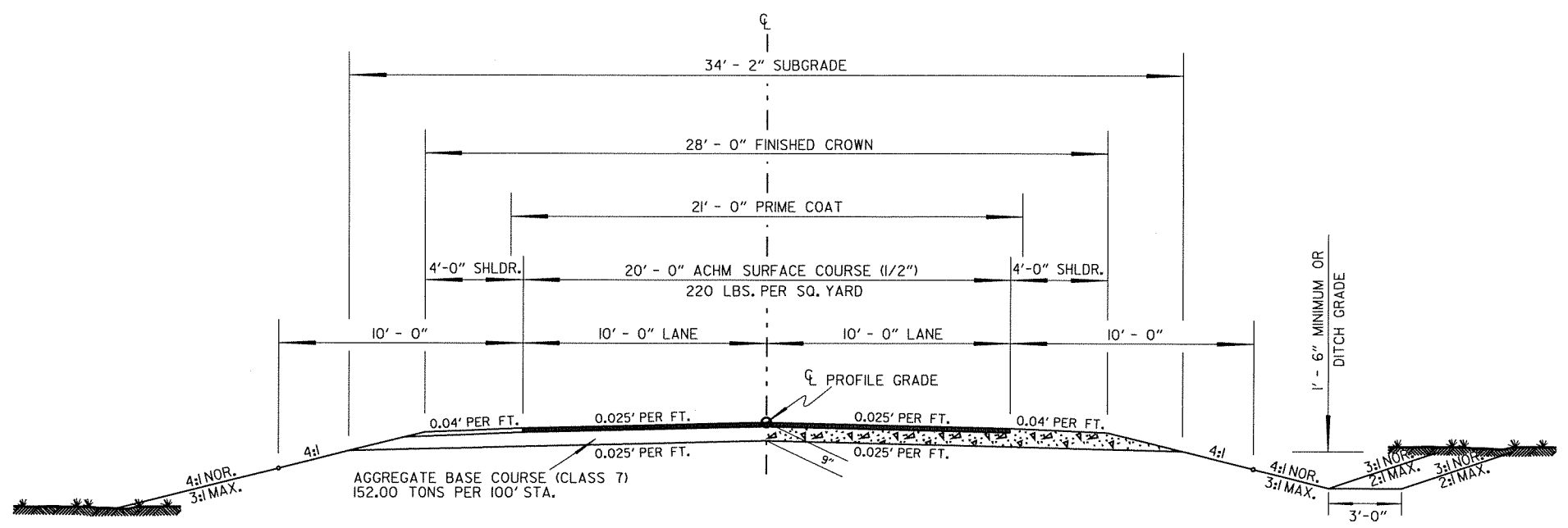
THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS FOR THIS PROJECT SUPPLEMENT THE STANDARD SPECIFICATIONS, EDITION OF 2003. IN CASE OF CONFLICT, THE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL GOVERN.

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	FHWA-1273 REVISIONS
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
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
606-2	PIPE CULVERTS
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
723-1	GENERAL REQUIREMENTS FOR SIGNS
JOB FA4510	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB FA4510	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB FA4510	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB FA4510	INTERNET BIDDING
JOB FA4510	PLASTIC PIPE
JOB FA4510	STORM WATER POLLUTION PREVENTION PLAN
JOB FA4510	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB FA4510	UTILITY ADJUSTMENTS
JOB FA4510	WARM MIX ASPHALT



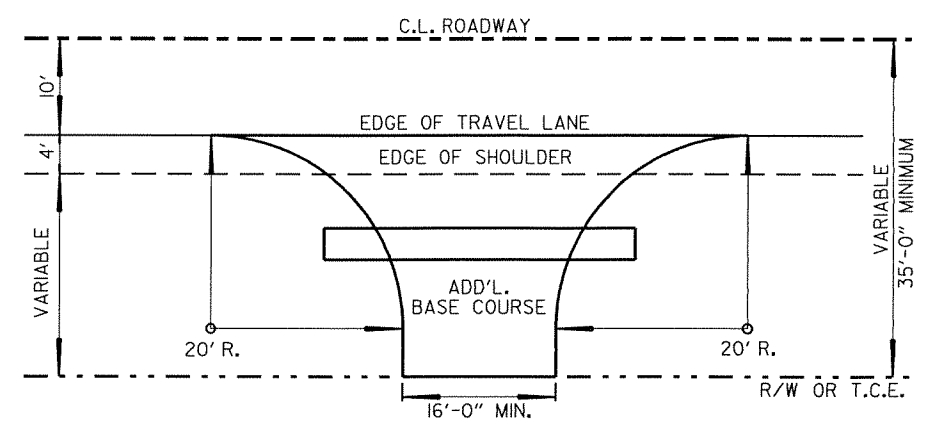
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	3	96	

4 TYPICAL SECTION OF IMPROVEMENT & SPECIAL DTLs.

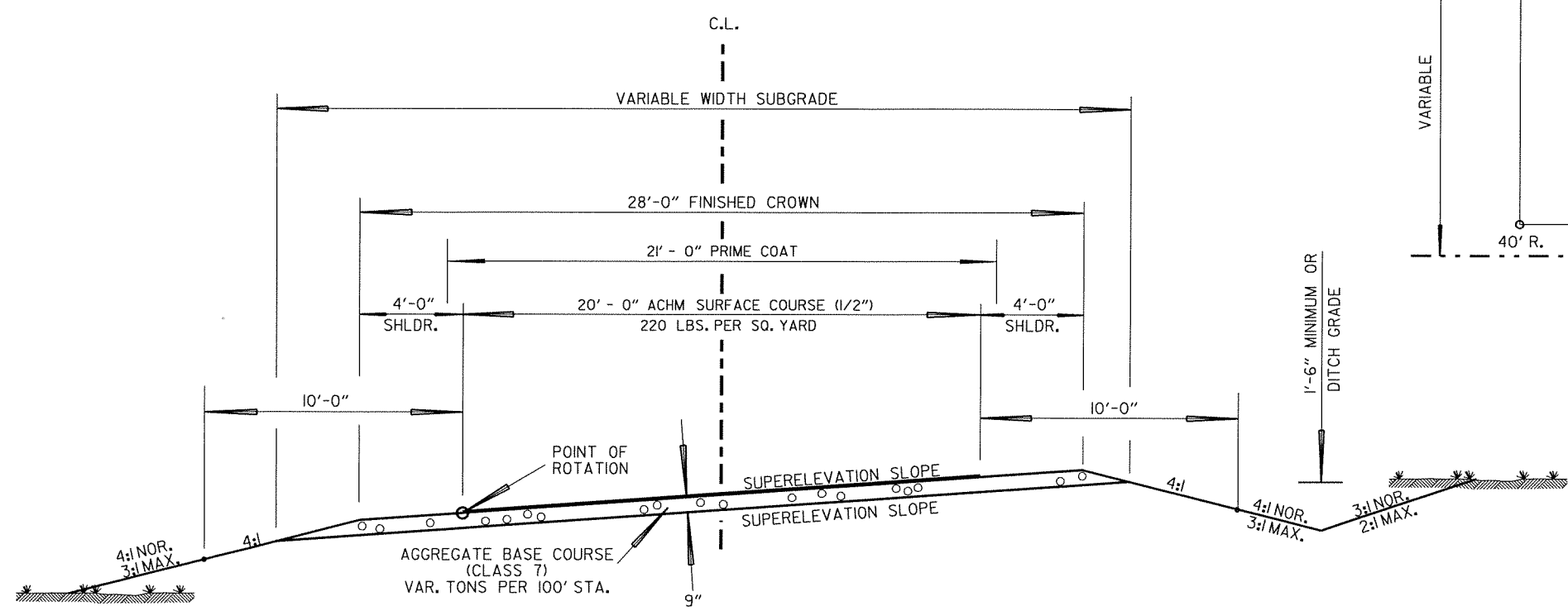


TYPICAL SECTION OF IMPROVEMENT

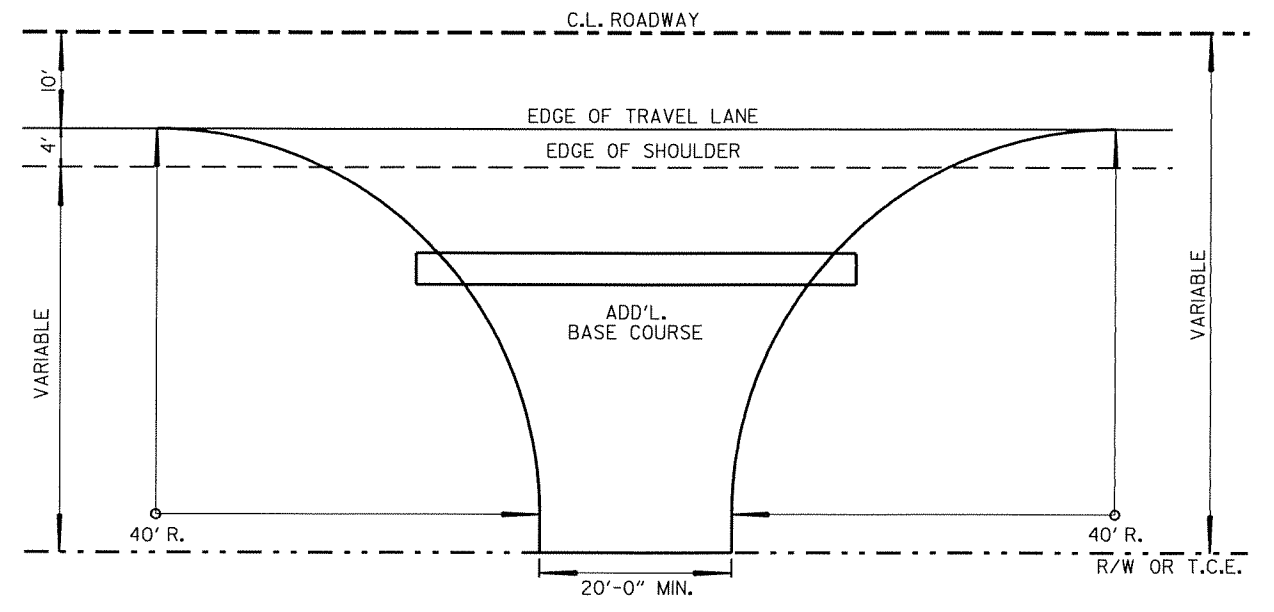
NOTES:
 THE THICKNESS OF BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
 REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.



DETAIL OF PRIVATE ENTRANCES
 VARIABLE TONS ADD'L. BASE COURSE



SUPERELEVATED SECTION OF IMPROVEMENT



DETAIL OF COUNTY ROAD TURNOUT
 95 TONS ADD'L. BASE COURSE



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(I6)		
				JOB NO.	FA4510	4	96	

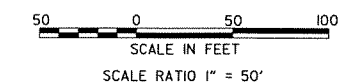
4 SURVEY CONTROL DETAIL

COORDINATES
APPROXIMATE STATE PLANE, DETERMINED FROM A SCALED LATITUDE,
AND LONGITUDE FOR THE POSITION OF THE SOLAR OBSERVATION,
AS PLOTTED ON A QUADRANGLE SHEET, PROJECTED TO GROUND.

NAME	NORTHING	EASTING	ELEVATION	PREFERENCE	DESCRIPTION	NAME	NORTHING	EASTING	ELEVATION	PREFERENCE	DESCRIPTION
200	632007.05932	1096511.81103	1067.63670	IP	BURIED AXLE	1208	637041.19994	1096337.97847	1029.79850	TV	NBC
201	632000.70985	1096832.31220	1033.41880	IP	IRON PIPE	1209	637071.43762	1096505.14265	1024.36180	TV	NBC
202	637247.51361	1096827.81041	1070.10070	IP	FE COR	1210	637174.24657	1096738.19031	1003.08230	TV	NBC
203	637254.08295	1096894.48763	1006.34450	IP	FE COR CENTER OF SEC 26 T17N R17W	1211	637536.24548	1095373.13822	1021.21700	TV	NBC
215	640131.26466	1088942.31147	1110.34330	IP	FE COR C SEI/4 SEC 26 T17N R17W	1212	637872.61604	1094798.94501	1042.86180	TV	NBC
216	638712.74790	1090310.13268	1111.46720	IP	FE COR C WI/16 SEC 26 T17N R17W	1213	638254.23759	1094224.06708	1073.48910	TV	NBC
218	640139.91672	1087620.45591	1139.42540	IP	FE COR C SEI/16 SEC 23 T17N R17W	1214	638582.98121	1094011.96890	1091.09020	TV	NBC
219	643966.12331	1089041.61858	1162.41380	IP	WD PO CENTER SI/16 COR, SEC 23 T17N R17W	1215	639633.71549	1093078.64608	1127.85120	TV	NBC
220	643950.67165	1090362.22728	1174.79240	IP	FE COR & PROP COR CENTER SEI/4, SEC 23	1216	639458.25287	1091864.58449	1158.21660	TV	NBC
224	638686.54850	1091630.05066	1140.44590	IP	ROCK NEAR FE COR SI/16 COR, SECS 25 & 2	1217	639773.79222	1091257.53599	1180.33170	TV	NBC
901	631957.11230	1096341.91413	1077.99380	BM	NIS 18IN WALNUT Z=1077.9417	1218	640447.44144	1091566.54128	1184.66520	TV	NBC
902	632761.34145	1096825.39340	1065.87020	BM	NIS 6IN OAK Z=1065.6514	1219	640225.12100	1089967.17416	1180.16470	TV	NBC
903	633890.63516	1097194.52943	1043.42650	BM	NIS 10IN OAK Z=1043.3885	1220	641288.64505	1088827.36681	1185.20070	TV	NBC
904	634730.53162	1097262.05269	1035.41710	BM	7IN ELM Z=1035.5622	1221	641579.41586	1088334.79305	1174.09080	TV	NBC
905	635533.10069	1096545.88887	1042.40530	BM	NIR 30IN OAK	1222	642633.61869	1087921.42265	1151.60090	TV	NBC
906	636227.75410	1095720.08861	1021.96210	BM	NIS 18IN OAK Z=1021.8239	1223	643290.44120	1087806.90071	1157.33170	TV	NBC
907	637050.53693	1095711.24514	1040.54410	BM	NIR 24IN OAK Z=1040.5186	1224	643860.70534	1087762.64283	1156.35900	TV	NBC
908	637919.62413	1094629.60594	1050.24590	BM	NIR 16IN OAK Z=1050.2217	1225	644815.51790	1087716.64227	1170.37080	TV	NBC
909	638948.25277	1093874.52098	1116.05720	BM	NIR 18IN OAK Z=1116.0268	1226	645547.52366	1087948.21599	1192.86760	TV	NBC
910	639518.67012	1093372.19211	1127.37350	BM	NIS 12IN ELM Z=1127.4405	1227	645704.94812	1088413.98861	1190.53550	TV	NBC
911	639694.83858	1092555.44313	1154.46910	BM	NIS 3IN CHERRY Z=1154.4414	1229	639495.67945	1091629.69184	1173.80700	TV	NBC
912	639704.23328	1091321.82061	1181.04850	BM	NIS 4IN PERSIMMON Z=1181.1063	1230	639260.55870	1091636.36623	1173.90480	TV	NBC
913	640287.72438	1090343.40529	1183.19970	BM	NIR 12IN ELM Z=1183.2586	1231	638828.20359	1091627.10833	1156.74900	TV	NBC
914	640648.87847	1089320.78200	1196.83230	BM	NIR 6IN APPLE Z=1196.8448	1232	640530.87657	1088987.27568	1165.83270	TV	NBC
915	641426.47299	1088507.45476	1192.28210	BM	NIR 18IN OAK Z=1192.4574	1233	640876.95903	1088995.31832	1183.75630	TV	NBC
916	642288.25457	1088067.13922	1152.33180	BM	NIS 4IN ELM Z=1152.3925	1234	643072.04576	1088013.53195	1088013.53195	TV	NBC
917	643199.56055	1087827.85239	1162.38520	BM	NIS 3IN HICKORY	1235	631965.71367	1096277.58741	1076.71290	CTL	NBC
918	644327.94082	1087760.14093	1183.24200	BM	NIS 6IN HICKORY Z=1183.2457	1500	631999.35489	1096342.43426	1076.64800	CTL	NBC
919	645359.08058	1087687.10543	1192.89850	BM	NIS 18IN OAK Z=1193.0068	1501	632035.01520	1096364.28448	1076.45590	CTL	NBC
920	645828.25634	1086639.08164	1171.06100	BM	NIS 8IN OAK Z=1171.9841	1502	631929.43103	1096259.74616	1076.40220	CTL	NBC
921	646065.09147	1089141.85662	1177.93960	BM	NIR 4IN WALNUT Z=1177.9280	1503	634591.59114	1091425.31130	1043.52280	CTL	NBC
922	645264.73438	1087930.10252	1217.71030	BM	NIR 4IN ELM Z=1217.7511	1504	634531.05003	1091461.49563	1043.05410	CTL	NBC
1000	645277.85264	1088005.92093	1217.65900	CTL	NBC	1505	634722.11906	1097237.53315	1032.53000	CTL	NBC
1001	644865.48808	1087848.56507	1184.08170	CTL	NBC	1506	634838.82950	1097202.24256	1035.25330	CTL	NBC
1002	644324.51148	1087792.54010	1182.20520	CTL	NBC	1507	637054.73931	1095709.43326	1039.59340	CTL	NBC
1003	641375.70784	1088473.58383	1191.50290	CTL	NBC	1508	637115.97110	1095705.09488	1036.52210	CTL	NBC
1004	639995.83852	1091140.95855	1176.03550	CTL	NBC	1509	638951.20490	1093887.13231	1114.87060	CTL	NBC
1005	634782.52012	1097485.80476	1042.81740	CTL	NBC	1510	638978.63306	1093931.47449	1114.03420	CTL	NBC
1010	636365.43486	1096604.51655	1070.16650	CTL	NBC	1511	638822.20704	1094014.40470	1112.67770	CTL	NBC
1011	633375.81437	1097108.54679	1058.16370	CTL	NBC	1512	638183.39449	1093973.65577	1111.69300	CTL	NBC
1012	633549.43662	1097152.93747	1054.49060	CTL	NBC	1513	639672.61684	1091317.45452	1179.08840	CTL	NBC
1013	634073.36090	1097211.03023	1042.00140	CTL	NBC	1514	639761.20939	109192.25142	1178.32580	CTL	NBC
1014	636159.33151	1095828.69571	1016.22660	CTL	NBC	1515	639868.22702	1091275.29854	1182.56080	CTL	NBC
1015	636413.2796	1095579.06534	1031.42300	CTL	NBC	1516	639759.14090	1091381.93405	1181.05080	CTL	NBC
1016	636813.32229	1095539.68247	1039.29580	CTL	NBC	1517	640792.76026	1089160.74662	1193.64320	CTL	NBC
1017	640180.47624	1090755.25822	1155.44060	CTL	NBC	1518	641105.91282	1089073.57923	1185.31150	CTL	NBC
1018	641515.90298	1088152.89565	1172.92500	CTL	NBC	1519	641294.40420	1089045.22993	1187.44000	CTL	NBC
1019	642138.39023	1088076.99244	1155.44200	CTL	NBC	1520	641410.20960	1088988.55573	1186.76100	CTL	NBC
1110	643590.45240	1087775.77519	1156.61160	CTL	NBC	1521	646102.52225	1089502.35028	1189.44690	CTL	NBC
1111	645840.78417	1088952.45750	1174.32140	CTL	NBC	1522	646154.23604	1089190.48268	1180.20550	CTL	NBC
1112	646144.47993	1089169.01737	1179.28810	CTL	NBC	1523	646203.77464	1089212.37751	1180.00290	CTL	NBC
1200	632481.25192	1096535.36032	1069.38260	TV	NBC	1524	646348.12165	1089128.66666	1178.45790	CTL	NBC
1201	633208.55028	1097052.97524	1055.86810	TV	NBC	1525	644280.32091	1087689.92665	1183.29460	CTL	NBC
1202	633477.48057	1097130.94834	1057.37670	TV	NBC	1526	644384.71273	1087688.35969	1177.89540	CTL	NBC
1203	634303.42484	1097202.24706	1046.30640	TV	NBC	1527	644425.88887	1087788.30742	1181.33440	CTL	NBC
1204	635660.87190	1096426.07910	1031.35680	TV	NBC	1528	644324.53458	1087792.59250	1182.40830	CTL	NBC
1205	632054.33842	1096418.93700	1073.56540	TV	NBC	2019	639391.27513	1091747.07671	1168.38690	CTL	NBC-RETURN TV
1206	632026.79455	1096591.87502	1059.37240	TV	NBC						
1207	637105.41986	1095922.50638	1030.62260	TV	NBC						

USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
TO CONVERT TO GRID USE CAF = 0.9999261079.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME 5608G1.CTL
HORIZONTAL DATUM: NAD 83
VERTICAL DATUM: NAVD 88
REFERENCES POINTS (1500 SERIES) TO BE USED TO ESTABLISH CONTROL POINTS BY RESECTION.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL.

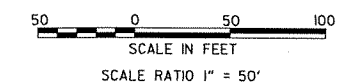
BASIS OF BEARINGS
GRID NORTH, BASED ON SOLAR OBSERVATION AT POINT NUMBER 6,
APPROXIMATE ARKANSAS STATE PLANE GRID COORDINATES NORTH ZONE,
NORTHING 423826.49975, EASTING 171102.86937,
CONVERGENCE ANGLE 0°46'40.56412" RIGHT
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA45IO	5	96	

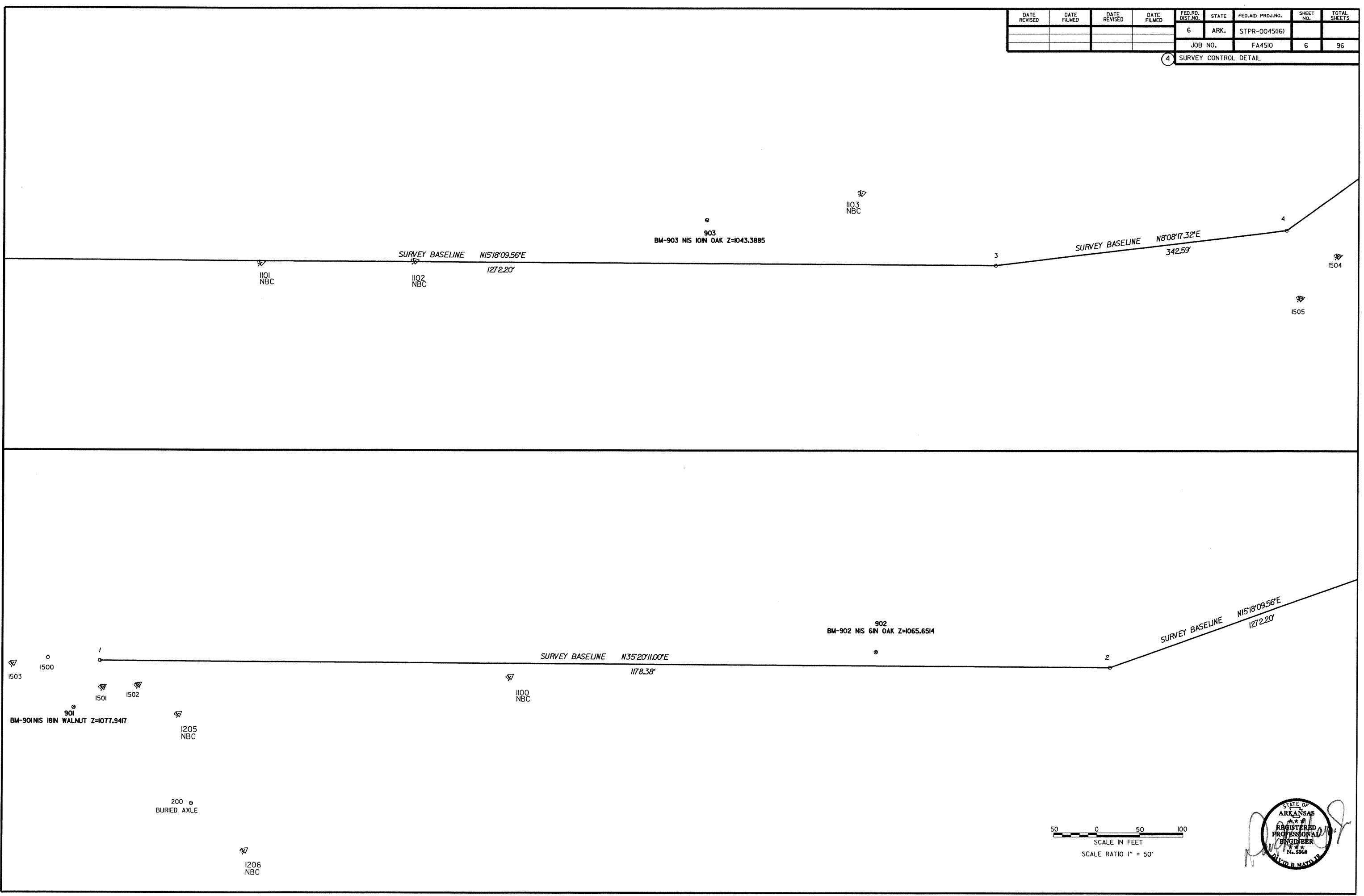
4 SURVEY CONTROL DETAIL

CONSTRUCTION CENTERLINE				SURVEY BASELINE						
NAME	STATION	NORTHING	EASTING	NAME	NORTHING	EASTING	ELEVATION	PREFERENCE	DESCRIPTION	
8000	POT	220+00.00	639632.37903	1091433.56076	1	632013.64730	1096315.06700	1075.92430	CTL	NBC
8001	PC	226+56.58	640073.67526	1090947.39413	2	632974.93599	1096996.61435	1064.30950	CTL	NBC
8002	CC		639790.84402	1090690.66661	3	634202.03024	1097332.37047	1045.40950	CTL	NBC
8003	PT	229+66.72	640171.74578	1090662.09426	4	634541.17170	1097380.86782	1035.45810	CTL	NBC
8004	PC	233+71.29	640141.48240	1090258.64915	5	634997.27831	1097206.41643	1030.15190	CTL	NBC
8005	CC		640572.69190	1090226.30309	6	635361.52533	1096851.47901	1040.02230	CTL	NBC
8006	PT	235+51.73	640165.37066	1090081.2285	7	635559.94543	1096587.47623	1039.61400	CTL	NBC
8007	PC	243+22.89	640424.27985	1089354.72086	8	635864.72563	1096171.40752	1025.17570	CTL	NBC
8008	CC		640831.60110	1089499.90110	9	636933.23247	1095623.04400	1038.26500	CTL	NBC
8009	PT	247+62.61	640740.84461	1089077.11780	10	637277.19323	1095619.58456	1024.08190	CTL	NBC
8010	PC	251+67.08	640365.26303	1088992.19978	11	637723.80884	1095214.71521	1015.67170	CTL	NBC
8011	CC		640169.44009	1088680.98430	12	637935.29169	1094651.57157	1051.22800	CTL	NBC
8012	PT	255+38.86	641381.94269	1088741.50956	13	638357.27976	1094099.84837	1081.58890	CTL	NBC
8013	PC	259+83.70	641466.52825	1088304.77934	14	638884.67958	1093862.84348	1112.46650	CTL	NBC
8014	CC		641779.03086	1088365.30459	15	639326.06937	1093710.18832	1105.21710	CTL	NBC
8015	PT	264+27.66	641783.88483	1088047.03172	16	639492.14820	1093421.71391	1125.76630	CTL	NBC
8016	PC	268+24.38	642180.56211	1088053.08143	17	639758.68338	1092566.73881	1156.62660	CTL	NBC
8017	CC		642187.84306	1087575.67212	18	639615.97904	1092247.21419	1166.28150	CTL	NBC
8018	PT	269+92.84	642345.97393	1088026.1903	19	639391.27943	1091747.07231	1168.32230	CTL	NBC
8019	PC	275+09.45	642833.42793	1087855.09605	20	639794.13518	1091317.36292	1182.10990	CTL	NBC
8020	CC		643070.62423	1088530.87443	21	640247.10076	1090310.31849	1183.08260	CTL	NBC
8021	PT	277+08.24	643027.67513	1087815.96613	22	640289.58566	1089897.21590	1196.66340	CTL	NBC
8022	PC	297+44.98	645060.75599	1087693.82599	23	640700.29275	1089141.92542	1191.11140	CTL	NBC
8023	CC		645092.71811	1088225.85076	24	641257.46283	1089033.40923	1187.22780	CTL	NBC
8024	PT	304+64.18	645604.73522	1088077.82908	25	641458.08523	1088522.22429	1190.28420	CTL	NBC
8025	PC	313+21.41	645842.80908	1088901.34280	26	642411.65260	1088018.10725	1151.18880	CTL	NBC
8026	CC		646132.50297	1088817.59369	27	642927.81875	1087821.96514	1164.95490	CTL	NBC
8027	PT	318+10.11	646230.56533	1089102.76073	28	644339.36361	1087738.37190	1181.94540	CTL	NBC
8028	PC	320+00.00	646410.13711	1089041.01014	29	644862.46505	1087692.21235	1180.39630	CTL	NBC
					30	645156.16119	1087615.23329	1196.34370	CTL	NBC
					31	645383.15560	1087729.25132	1195.32300	CTL	NBC
					32	645619.46290	1088075.25337	1196.36700	CTL	NBC
					33	645907.73600	1089094.87873	1179.38440	CTL	NBC

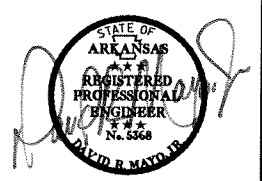


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
JOB NO.						FA4510	6	96

4 SURVEY CONTROL DETAIL

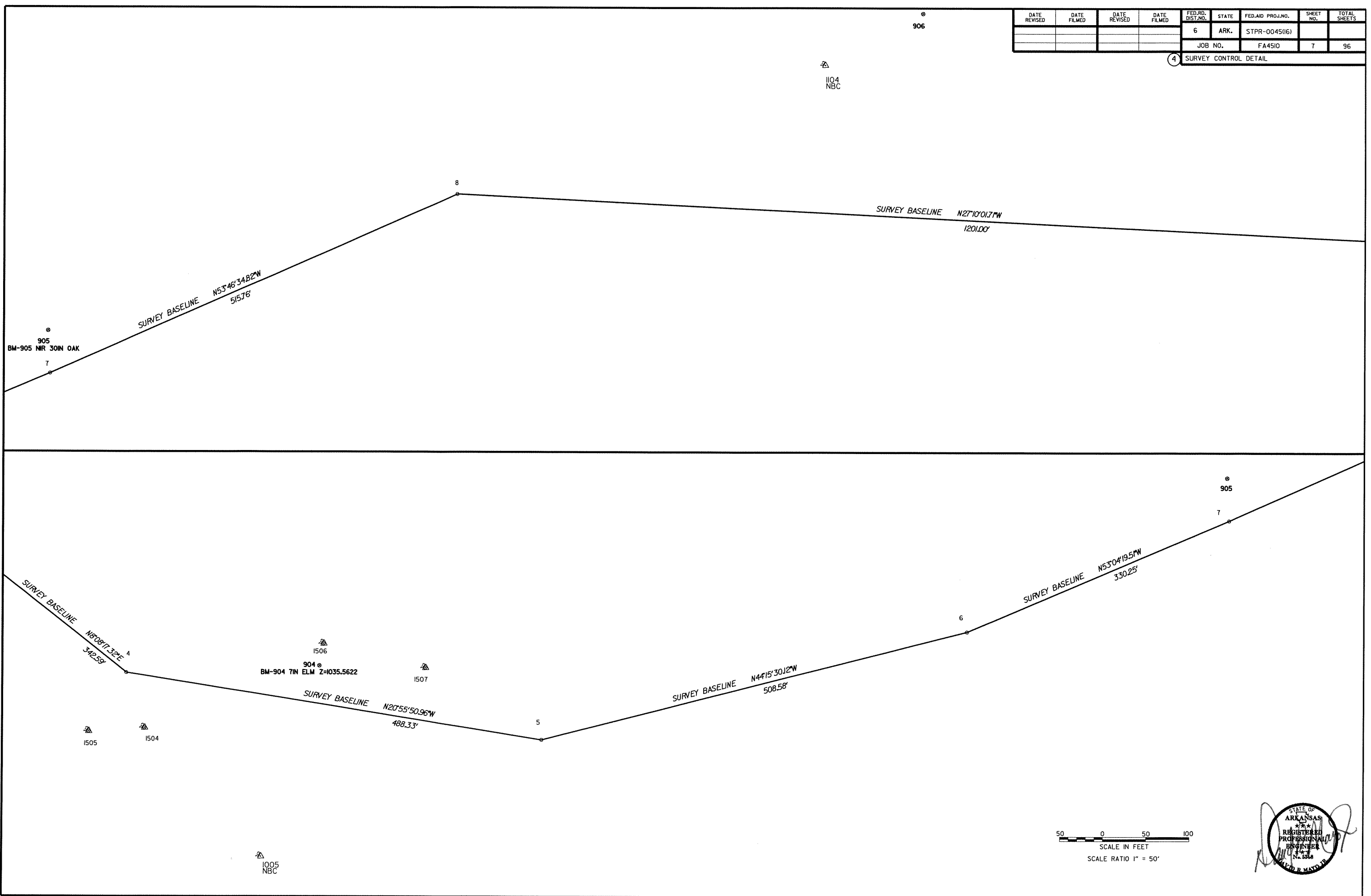


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SCALE IN FEET
SCALE RATIO 1" = 50'

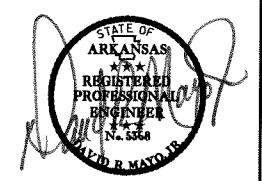


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		7	96

4 SURVEY CONTROL DETAIL



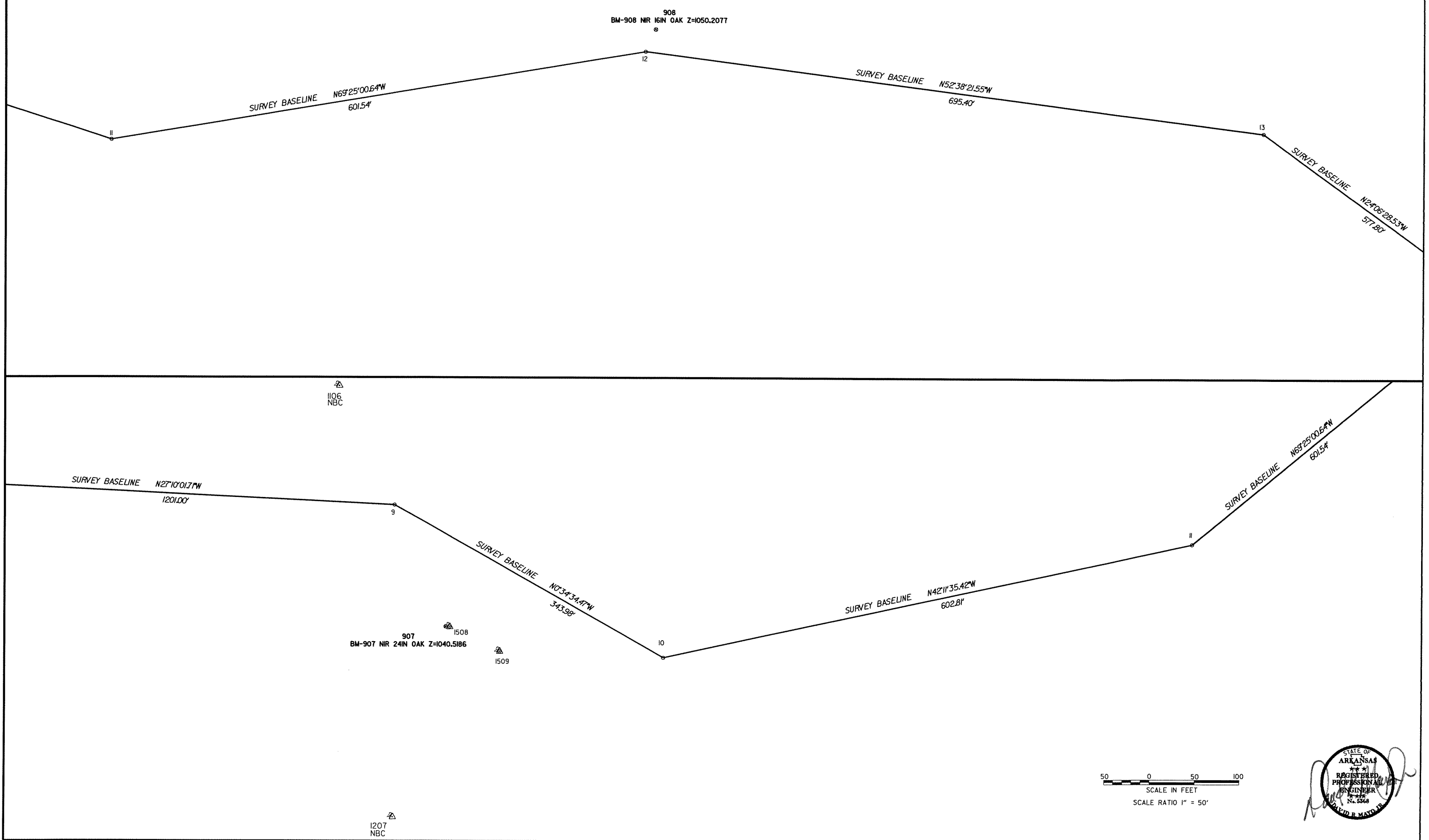
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SCALE IN FEET
SCALE RATIO 1" = 50'



I005 NBC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	8	96	

4 SURVEY CONTROL DETAIL

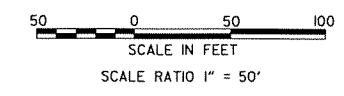
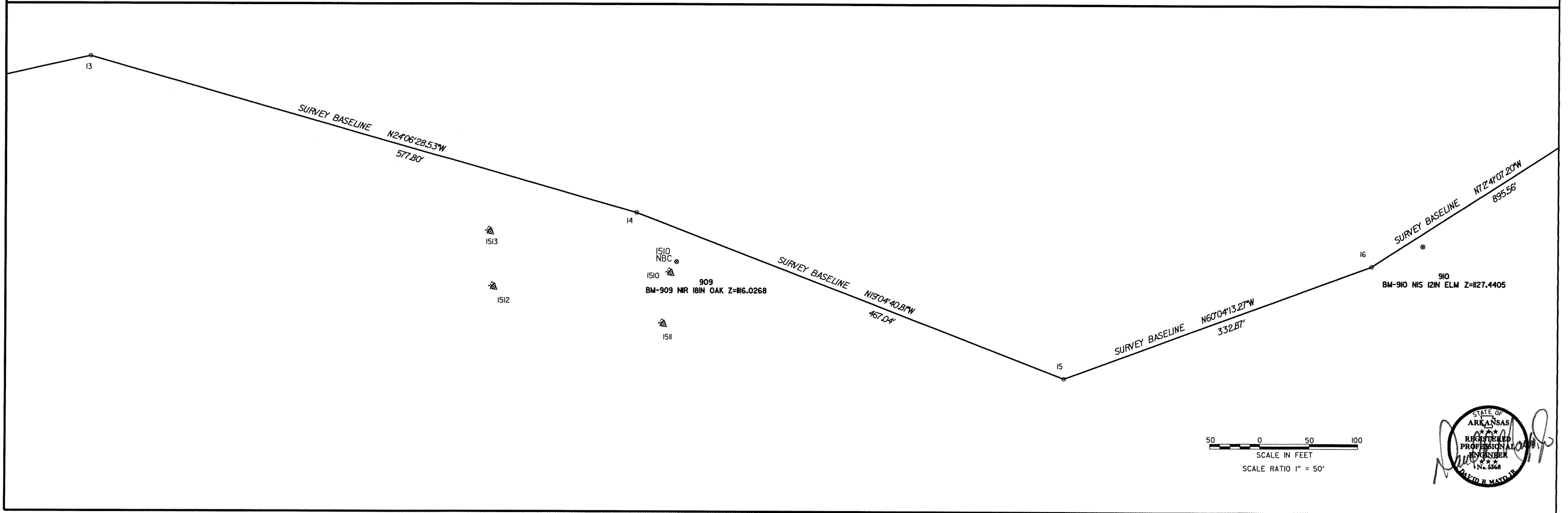
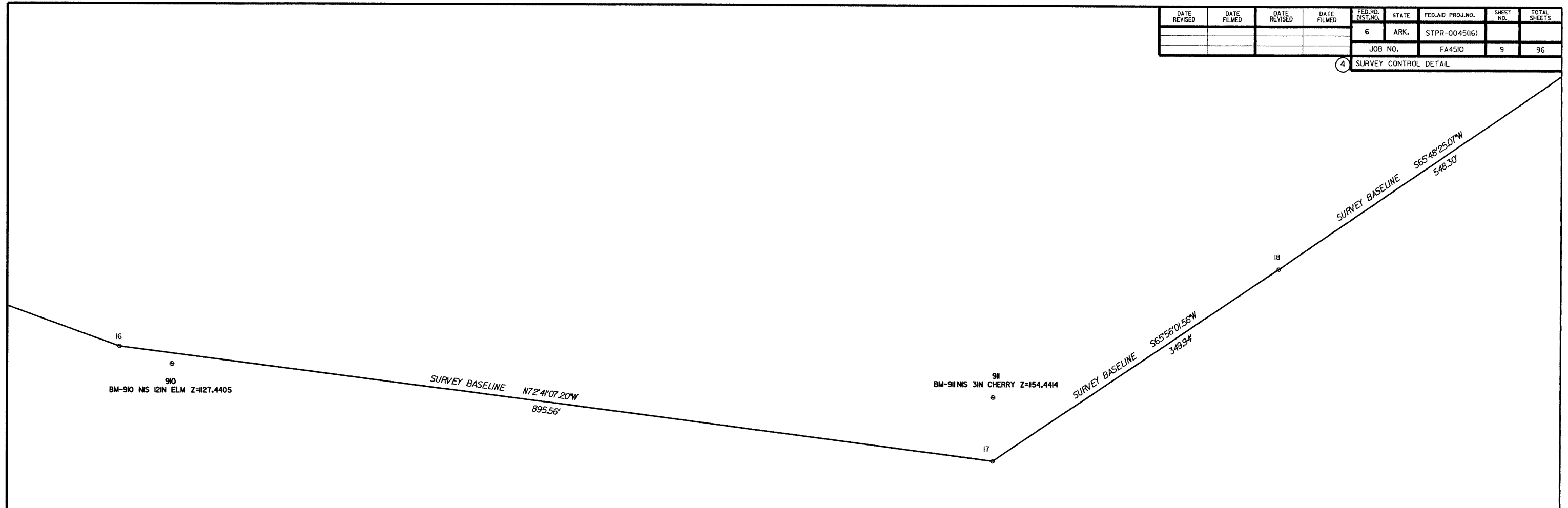


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SCALE IN FEET
SCALE RATIO 1" = 50'



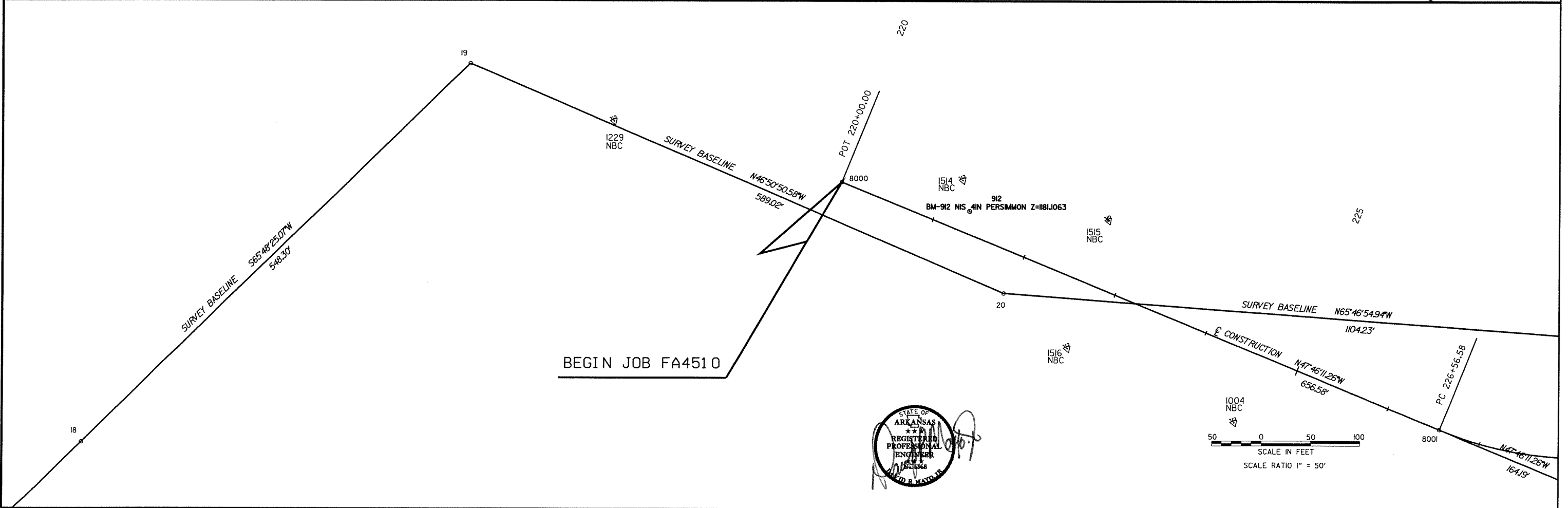
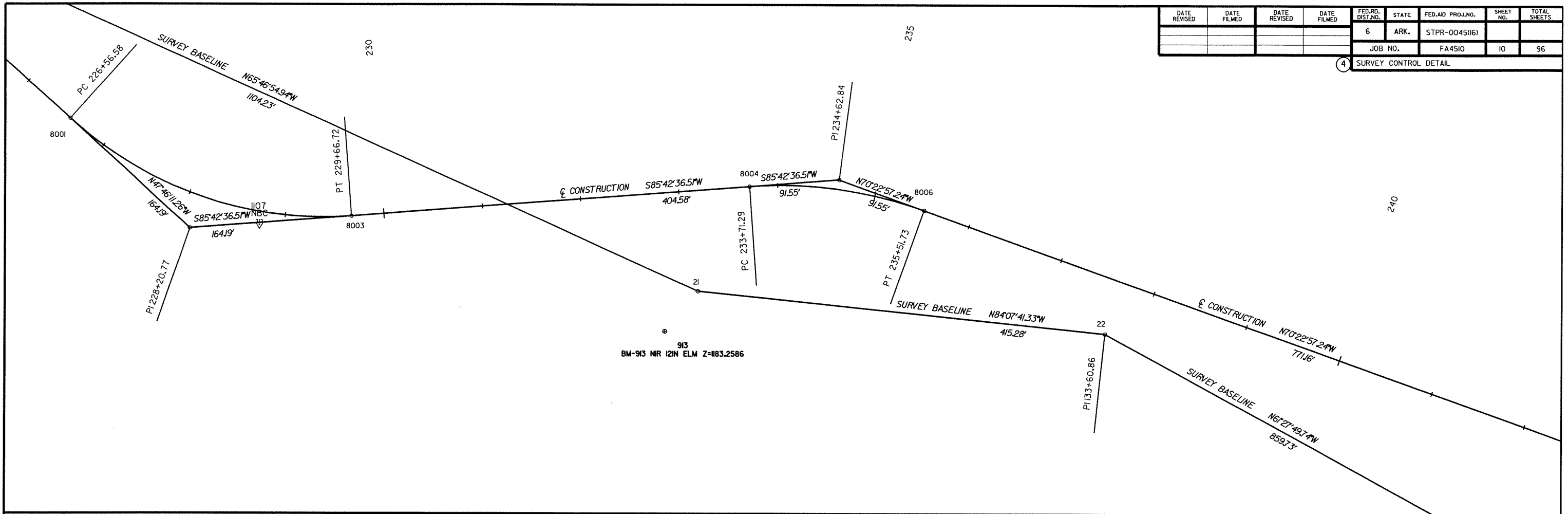
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	FA4510		9	96

4 SURVEY CONTROL DETAIL

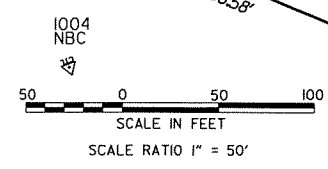


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				JOB NO.	FA4510		10	96

4 SURVEY CONTROL DETAIL

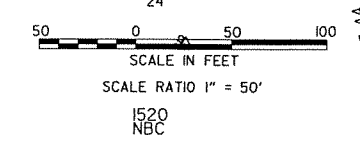
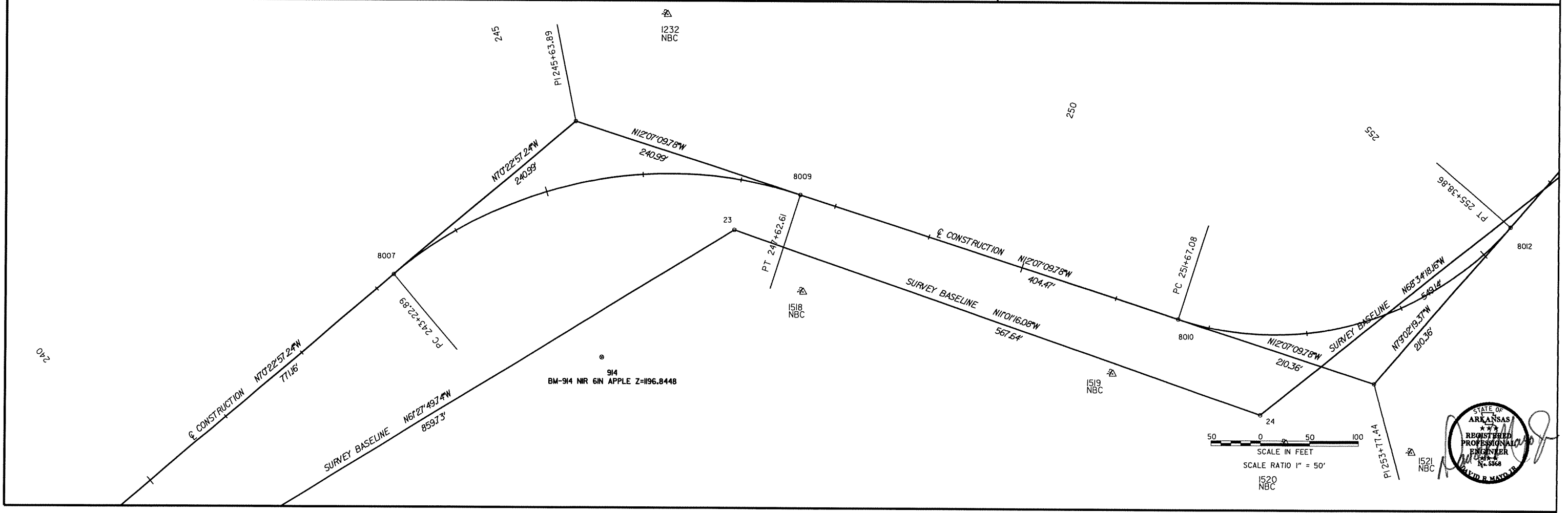
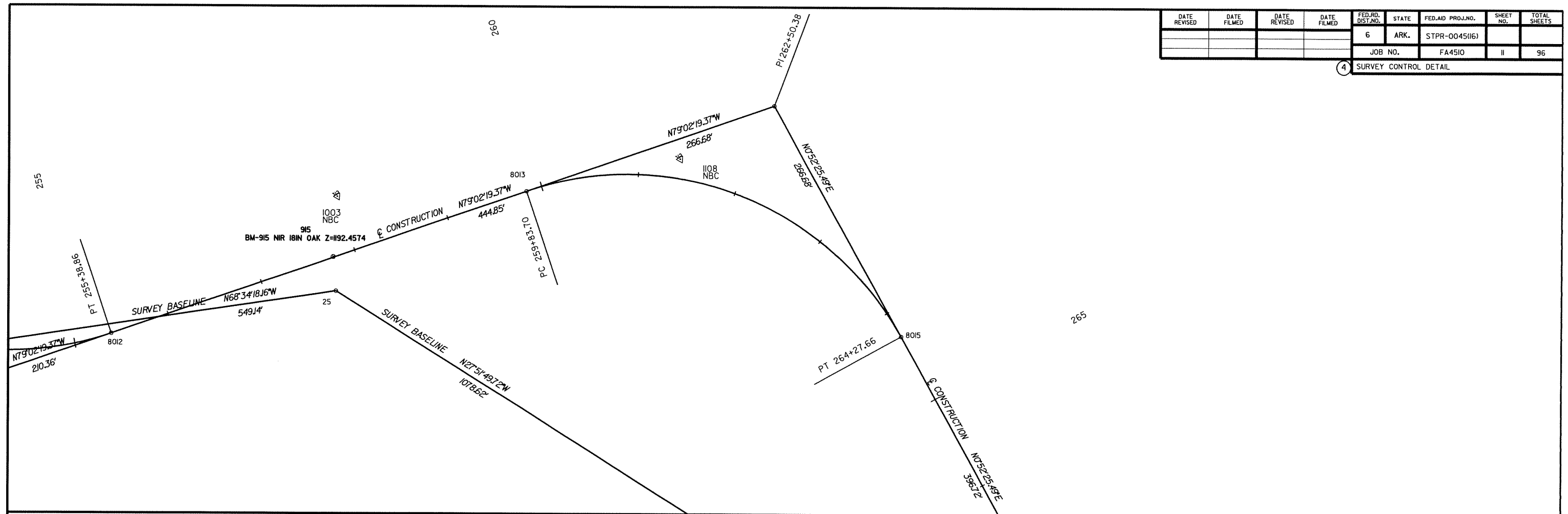


BEGIN JOB FA4510



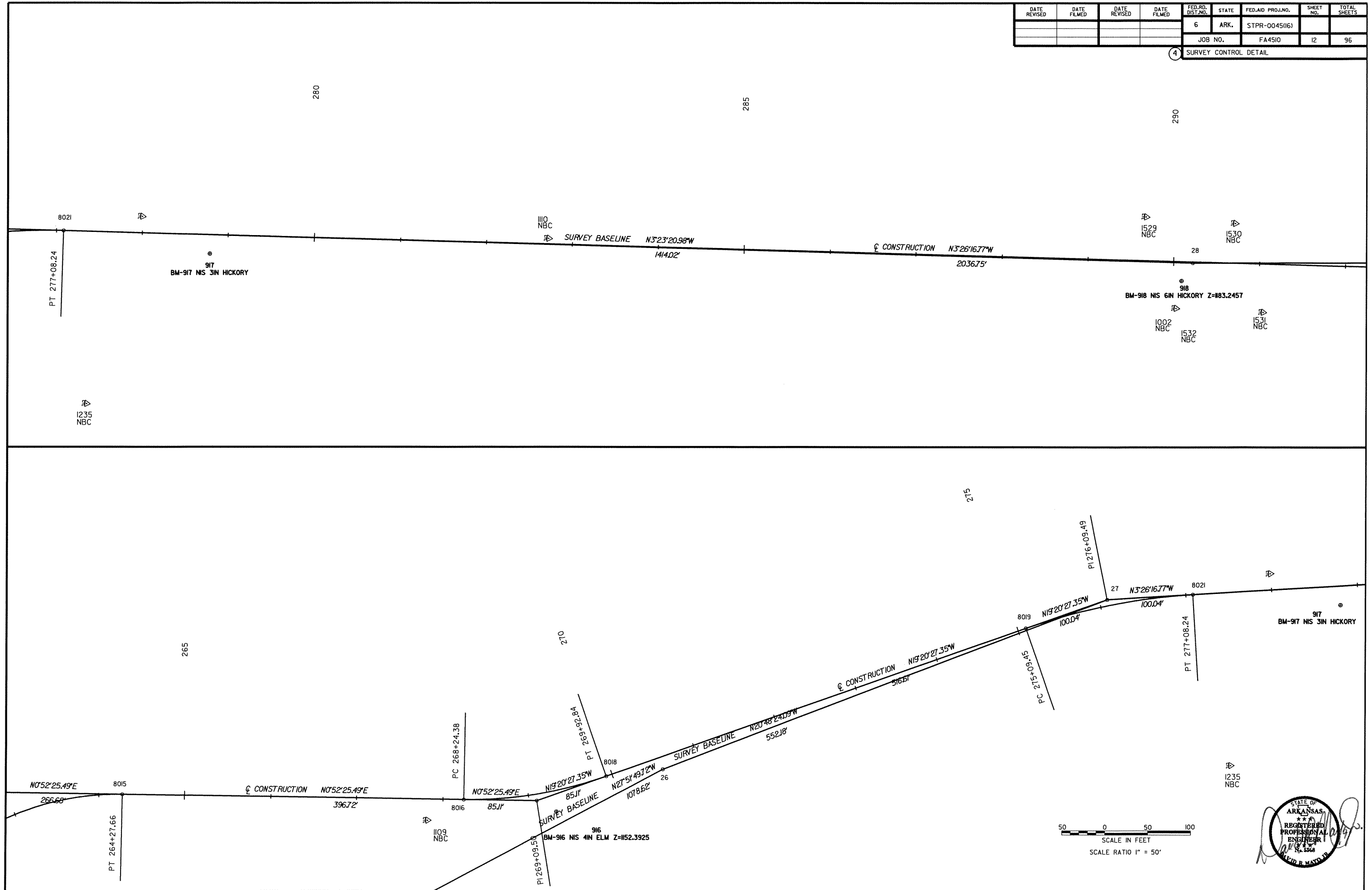
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				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	II	96	

4 SURVEY CONTROL DETAIL



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	12	96	

4 SURVEY CONTROL DETAIL

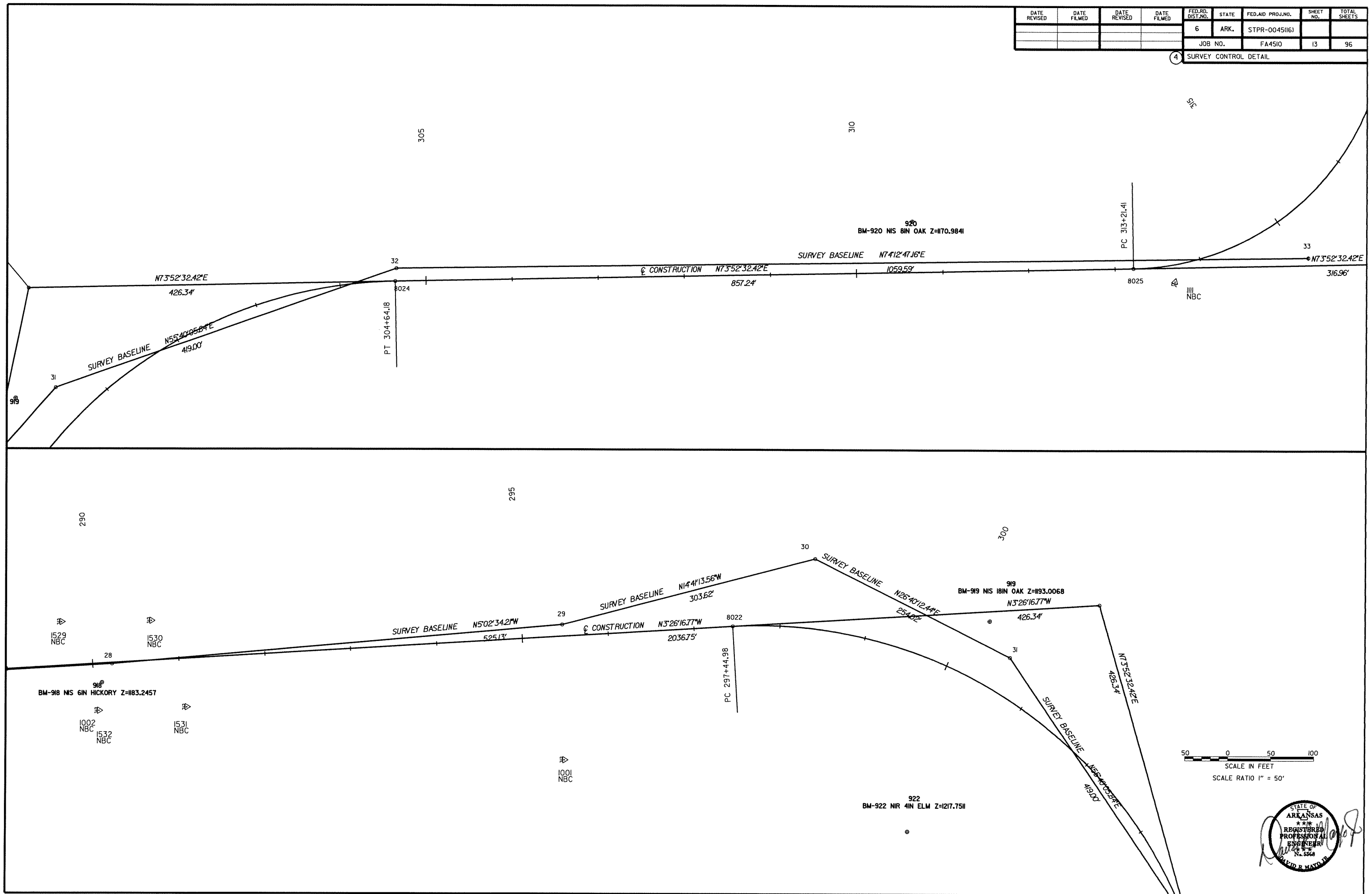


SCALE IN FEET
SCALE RATIO 1" = 50'



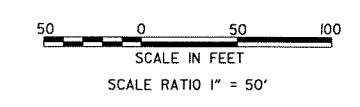
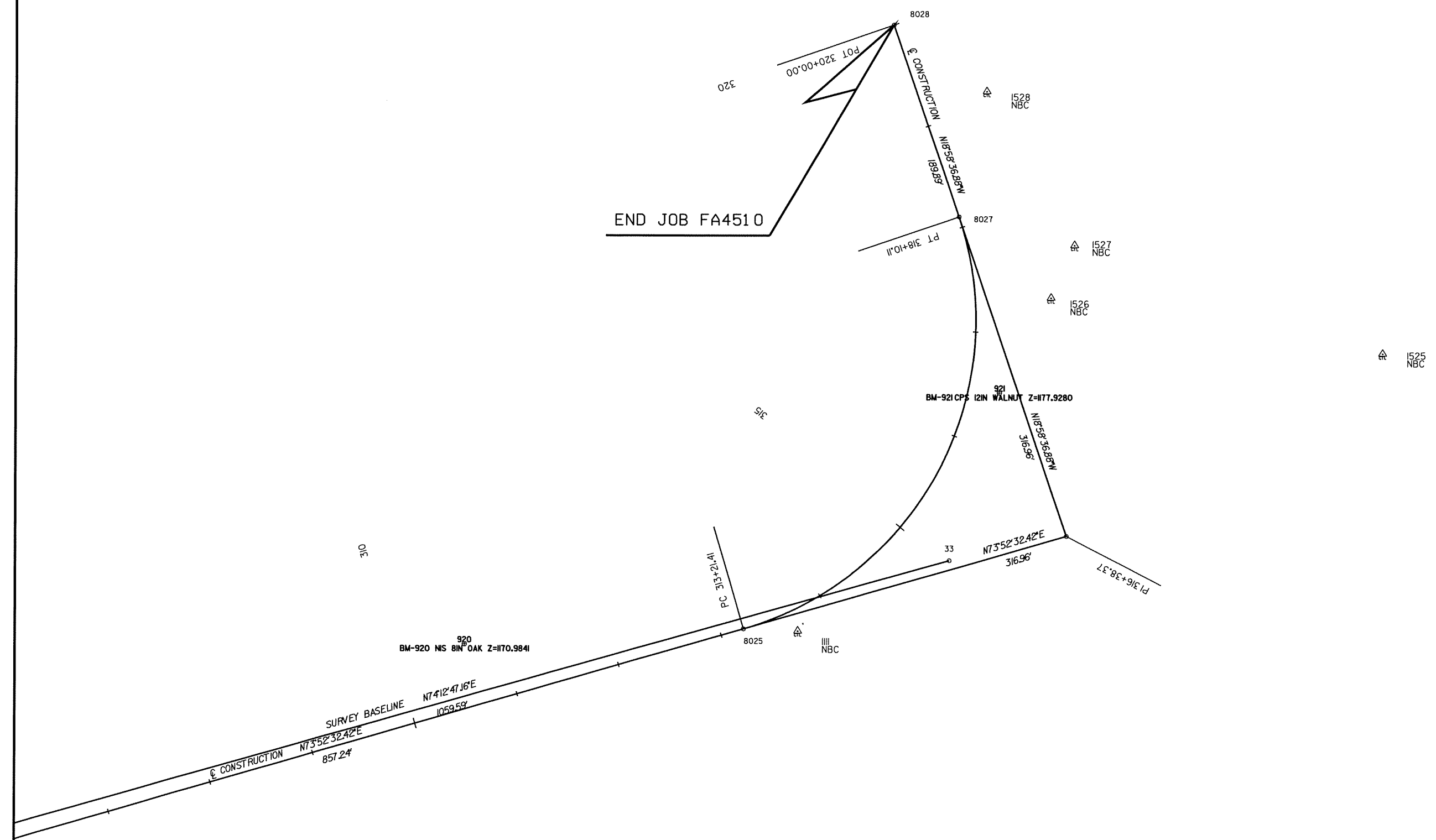
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				JOB NO.	FA4510	13	96	

4 SURVEY CONTROL DETAIL



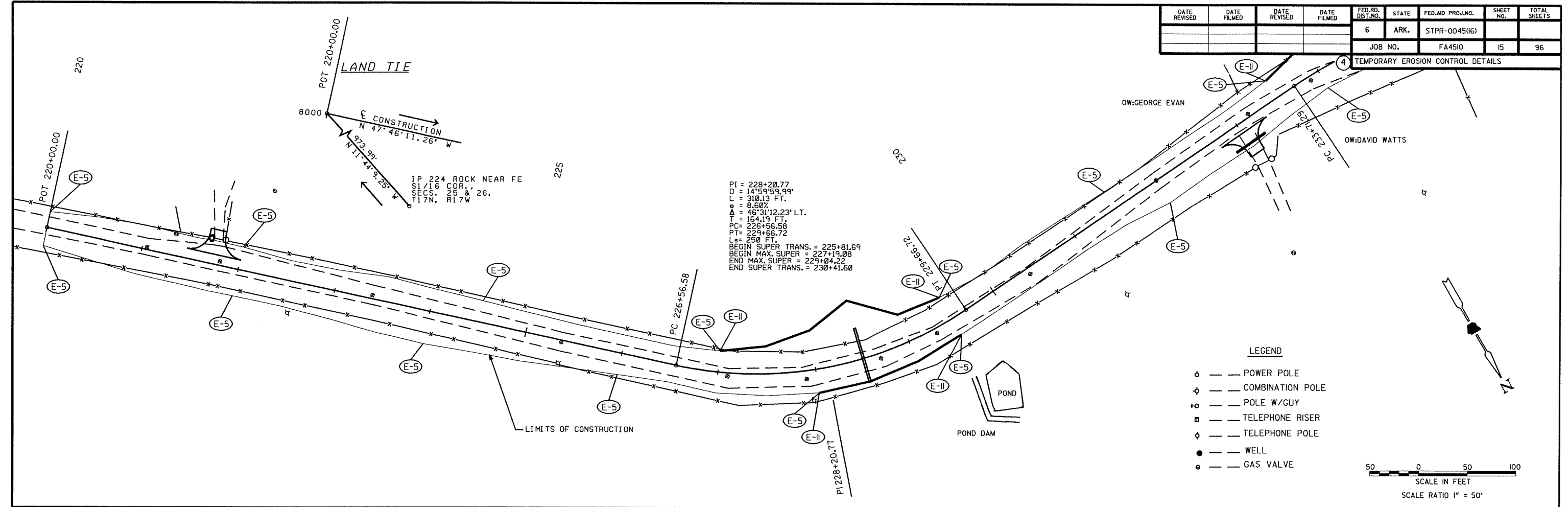
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						JOB NO.	FA4510	14
						4 SURVEY CONTROL DETAIL		

END JOB FA4510



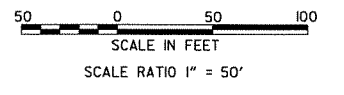
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				6	ARK.	STPR-0045(6)		
				JOB NO.	FA4510	15	96	

TEMPORARY EROSION CONTROL DETAILS



LEGEND

- — POWER POLE
- ◇ — COMBINATION POLE
- ⊙ — POLE W/GUY
- — TELEPHONE RISER
- ◇ — TELEPHONE POLE
- — WELL
- — GAS VALVE

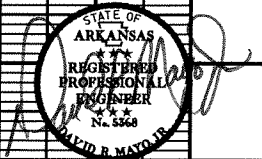


TEMPORARY EROSION CONTROL

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
220+00		LT. & RT.	12		2	TEC-L, 2&3
222+00		LT. & RT.	12		2	TEC-L, 2&3
224+00		RT.	6		1	TEC-L, 2&3
224+50		LT.	6		1	TEC-L, 2&3
226+00		RT.	6		1	TEC-L, 2&3
227+00		LT.	6		1	TEC-L, 2&3
227+00	229+50	LT.		245	7	TEC-L, 2&3
228+00		RT.	6		1	TEC-L, 2&3
228+00	229+50	RT.		159	5	TEC-L, 2&3
229+50		LT. & RT.	12		2	TEC-L, 2&3
231+50		LT.	6		1	TEC-L, 2&3
232+00		RT.	6		1	TEC-L, 2&3

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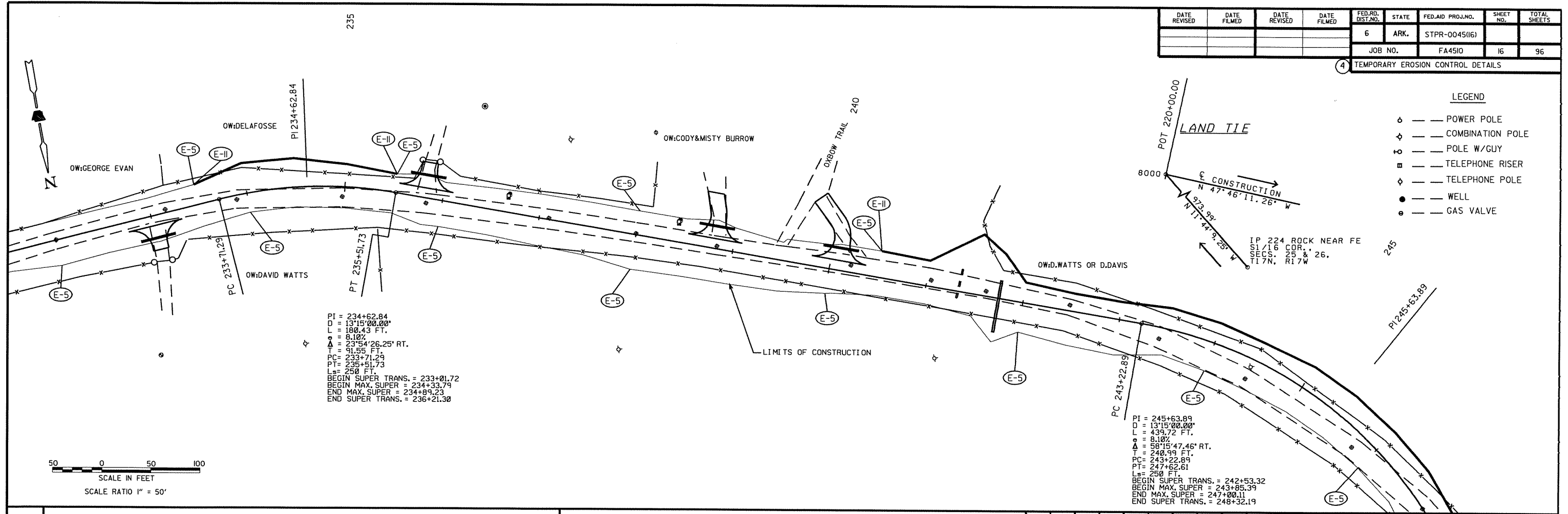
BM-912 NIS 4' PERSIMMON
STA. 221+31.03 ELEV. 1181.05'



4 TEMPORARY EROSION CONTROL DETAILS

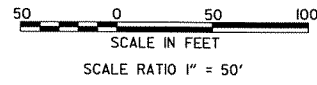
LEGEND

- — POWER POLE
- ◇ — COMBINATION POLE
- — POLE W/ GUY
- ⊞ — TELEPHONE RISER
- ◇ — TELEPHONE POLE
- — WELL
- — GAS VALVE



PI = 234+62.84
 D = 13°15'00.00"
 L = 180.43 FT.
 e = 8.10%
 Δ = 23°54'26.25" RT.
 T = 91.55 FT.
 PC = 233+71.29
 PT = 235+51.73
 L = 259 FT.
 BEGIN SUPER TRANS. = 233+01.72
 BEGIN MAX. SUPER = 234+33.79
 END MAX. SUPER = 234+09.23
 END SUPER TRANS. = 236+21.30

PI = 245+63.89
 D = 13°15'00.00"
 L = 439.72 FT.
 e = 8.10%
 Δ = 58°15'47.46" RT.
 T = 240.99 FT.
 PC = 243+22.89
 PT = 247+62.61
 L = 259 FT.
 BEGIN SUPER TRANS. = 242+53.32
 BEGIN MAX. SUPER = 243+05.39
 END MAX. SUPER = 247+00.11
 END SUPER TRANS. = 248+32.19



TEMPORARY EROSION CONTROL

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
233+50		LT.	6		1	TEC-1, 2&3
233+50	235+50	LT.	6	213	6	TEC-1, 2&3
234+00		RT.	6		1	TEC-1, 2&3
235+50		LT.	6		1	TEC-1, 2&3
236+00		RT.	6		1	TEC-1, 2&3
238+00		LT. & RT.	12		2	TEC-1, 2&3
240+00		RT.	6		1	TEC-1, 2&3
240+50		LT.	6		1	TEC-1, 2&3
240+50	250+00	LT.	6	1004	30	TEC-1, 2&3
242+00		RT.	6		1	TEC-1, 2&3
244+00		RT.	6		1	TEC-1, 2&3
246+00		RT.	6		1	TEC-1, 2&3

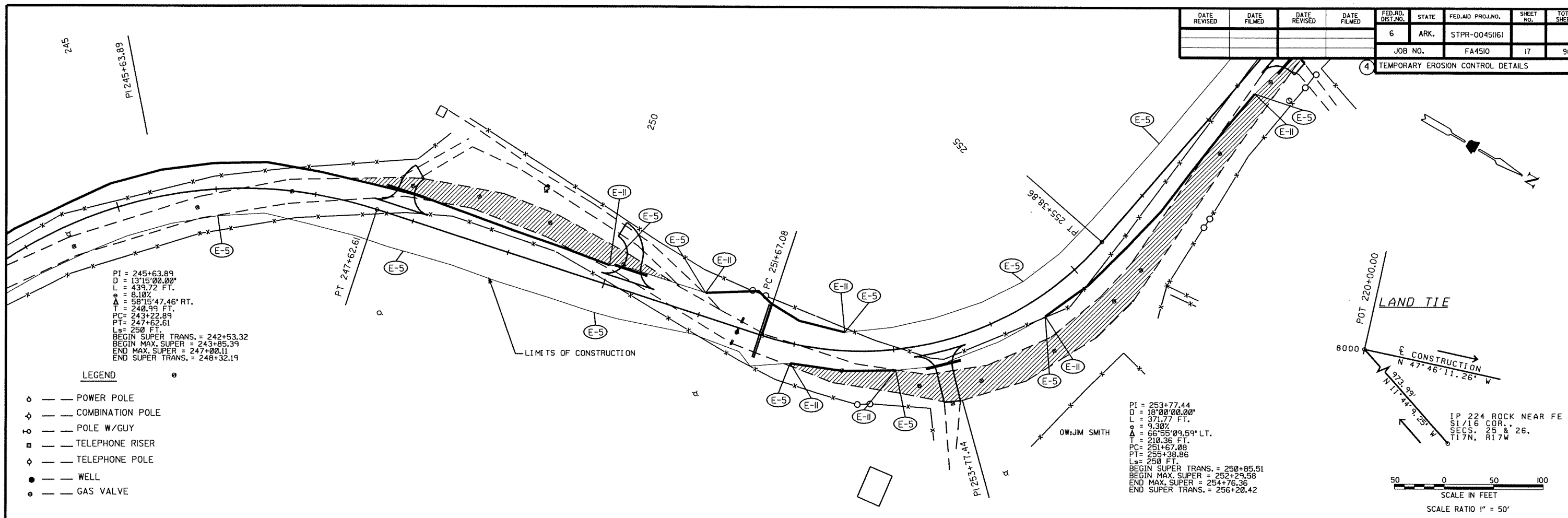
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BM-912 NIS 4" PERSIMMON
 STA. 221+31.03 ELEV. 1181.05'

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 366
 DAVID R. HAYDEN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	IT	96	

4 TEMPORARY EROSION CONTROL DETAILS



TEMPORARY EROSION CONTROL

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
248+00		RT.	6		1	TEC-1, 2&3
250+00		LT. & RT.	12		2	TEC-1, 2&3
251+00		LT.	6		1	TEC-1, 2&3
251+00	252+50	LT.		151	5	TEC-1, 2&3
252+00		RT.	6		1	TEC-1, 2&3
252+00	253+00	RT.		106	3	TEC-1, 2&3
252+50		LT.	6		1	TEC-1, 2&3
253+00		RT.	6		1	TEC-1, 2&3
254+50		LT. & RT.	12		2	TEC-1, 2&3
254+50	257+50	RT.		306	9	TEC-1, 2&3
256+50		LT.	6		1	TEC-1, 2&3

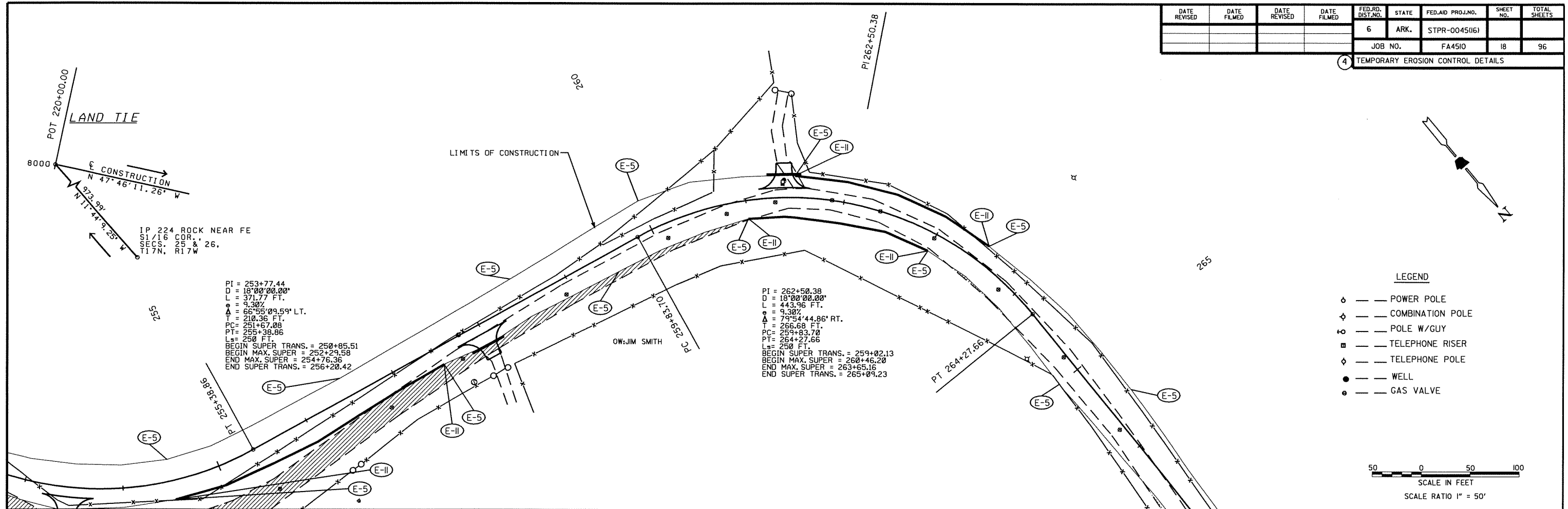
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BM-912 NIS 4' PERSIMON
 STA. 221+31.03' ELEV. 1181.05'



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(6)		
				JOB NO.	FA4510	18	96	

4 TEMPORARY EROSION CONTROL DETAILS

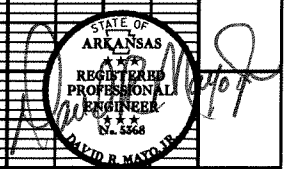


TEMPORARY EROSION CONTROL

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
257+50		RT.	6		I	TEC-I, 2&3
258+50		LT.	6		I	TEC-I, 2&3
259+50		RT.	6		I	TEC-I, 2&3
260+00		LT.	6		I	TEC-I, 2&3
261+00		RT.	6		I	TEC-I, 2&3
261+00	263+00	RT.		188	6	TEC-I, 2&3
261+50		LT.	6		I	TEC-I, 2&3
261+50	263+50	LT.		213	6	TEC-I, 2&3
263+00		RT.	6		I	TEC-I, 2&3
263+50		LT.	6		I	TEC-I, 2&3
265+00		RT.	6		I	TEC-I, 2&3
265+50		LT.	6		I	TEC-I, 2&3

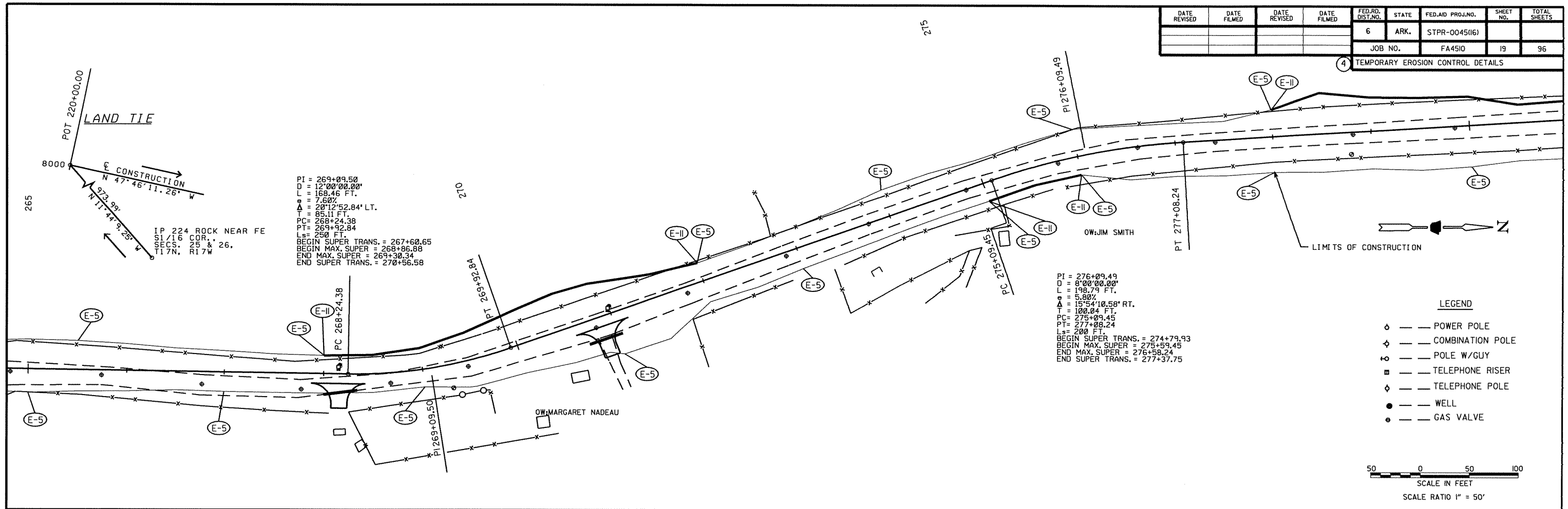
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BM-912 NIS. 4' PERSIMMON
STA. 221+31.03 ELEV. 1181.05'



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	19	96	

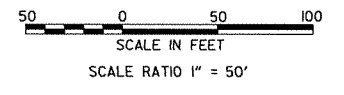
4 TEMPORARY EROSION CONTROL DETAILS



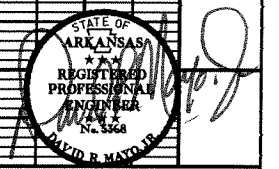
TEMPORARY EROSION CONTROL

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
267+00		RT.	6		1	TEC-1, 2&3
268+00		LT.	6		1	TEC-1, 2&3
268+00	272+00	LT.		394	12	TEC-1, 2&3
269+00		RT.	6		1	TEC-1, 2&3
271+00		RT.	6		1	TEC-1, 2&3
272+00		LT.	6		1	TEC-1, 2&3
273+00		RT.	6		1	TEC-1, 2&3
274+00		LT.	6		1	TEC-1, 2&3
275+00		RT.	6		1	TEC-1, 2&3
275+00	276+00	RT.		98	3	TEC-1, 2&3
276+00		LT. & RT.	12		2	TEC-1, 2&3
278+00		LT. & RT.	12		2	TEC-1, 2&3
278+00	280+50	LT.		254	8	TEC-1, 2&3

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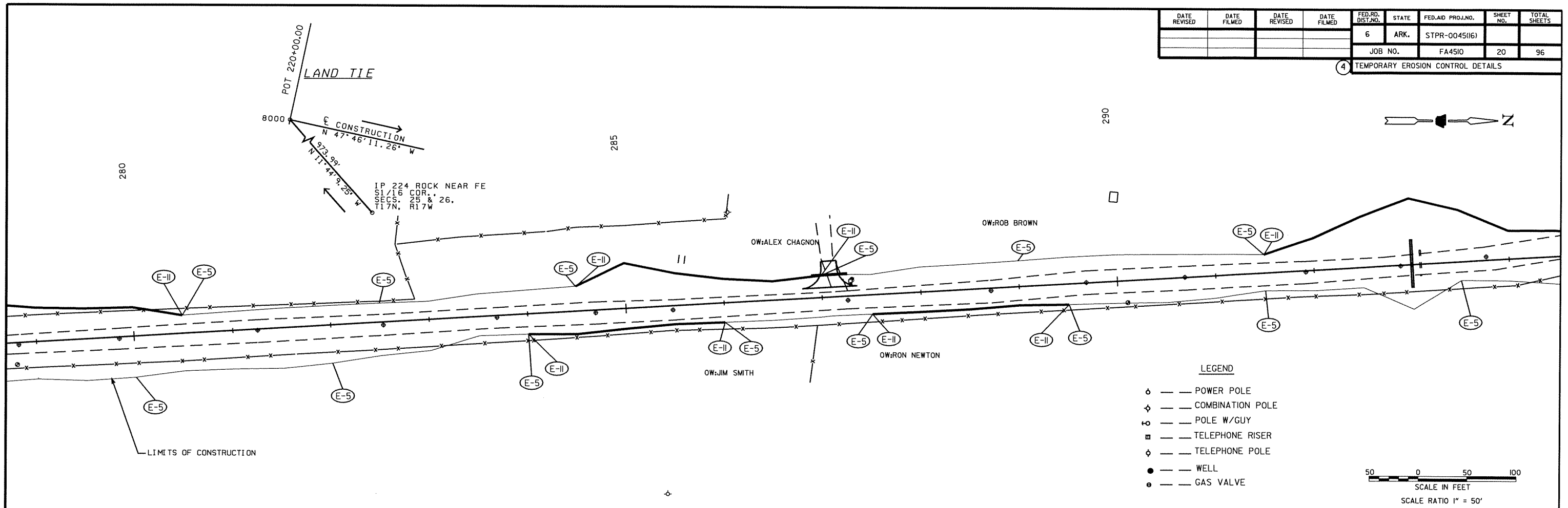


BM-912 NIS 4" PERSIMON
STA. 221+31.03 ELEV. 1181.05'



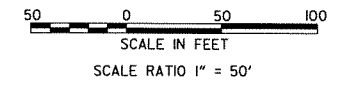
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
JOB NO. FA4510							20	96

4 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- — POWER POLE
- ◇ — COMBINATION POLE
- ⊕ — POLE W/GUY
- ▣ — TELEPHONE RISER
- ⊠ — TELEPHONE POLE
- — WELL
- ⊙ — GAS VALVE



TEMPORARY EROSION CONTROL

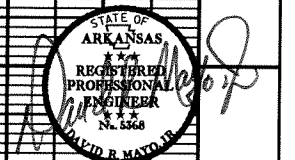
STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
280+00		RT.	6		1	TEC-1, 2&3
280+50		LT.	6		1	TEC-1, 2&3
282+00		RT.	6		1	TEC-1, 2&3
282+50		LT.	6		1	TEC-1, 2&3
284+00		RT.	6		1	TEC-1, 2&3
284+00	286+00	RT.		200	6	TEC-1, 2&3
284+50		LT.	6		1	TEC-1, 2&3
284+50	287+00	LT.		258	8	TEC-1, 2&3
286+00		RT.	6		1	TEC-1, 2&3
287+00		LT.	6		1	TEC-1, 2&3
287+50		RT.	6		1	TEC-1, 2&3
287+50	289+50	RT.		200	6	TEC-1, 2&3
289+00		LT.	6		1	TEC-1, 2&3
289+50		RT.	6		1	TEC-1, 2&3
291+50		LT. & RT.	12		2	TEC-1, 2&3
291+50	296+00	LT.		468	14	TEC-1, 2&3

REVISION NO.

REVISION

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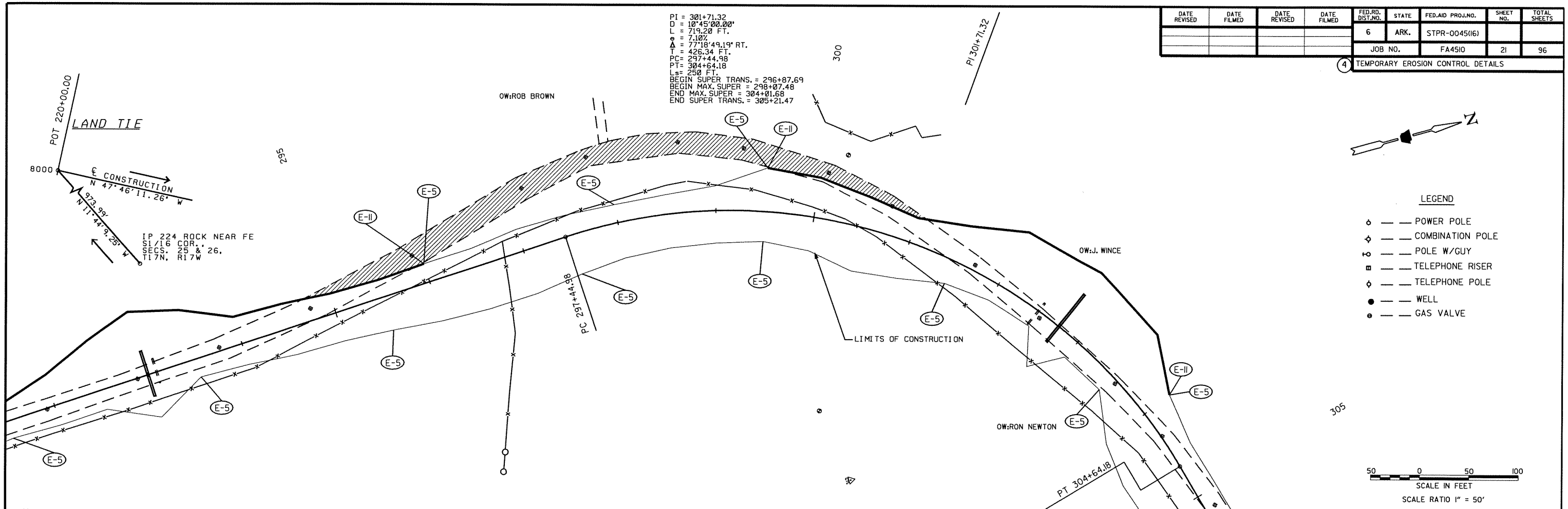
BM-912 NIS 4' PERSIMMON
STA. 221+31.03 ELEV. 1181.05'



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
JOB NO.			FA4510		21		96	

4 TEMPORARY EROSION CONTROL DETAILS

PI = 301+71.32
 D = 10° 45' 00.00"
 L = 719.20 FT.
 e = 7.10%
 Δ = 77° 18' 49.19" RT.
 T = 426.34 FT.
 PC = 297+44.98
 PT = 304+64.18
 Ls = 250 FT.
 BEGIN SUPER TRANS. = 296+87.69
 BEGIN MAX. SUPER = 298+07.48
 END MAX. SUPER = 304+01.68
 END SUPER TRANS. = 305+21.47



- LEGEND**
- --- POWER POLE
 - ◇ --- COMBINATION POLE
 - ⊙ --- POLE W/GUY
 - --- TELEPHONE RISER
 - --- TELEPHONE POLE
 - --- WELL
 - --- GAS VALVE

TEMPORARY EROSION CONTROL

REVISION NO.	REVISION
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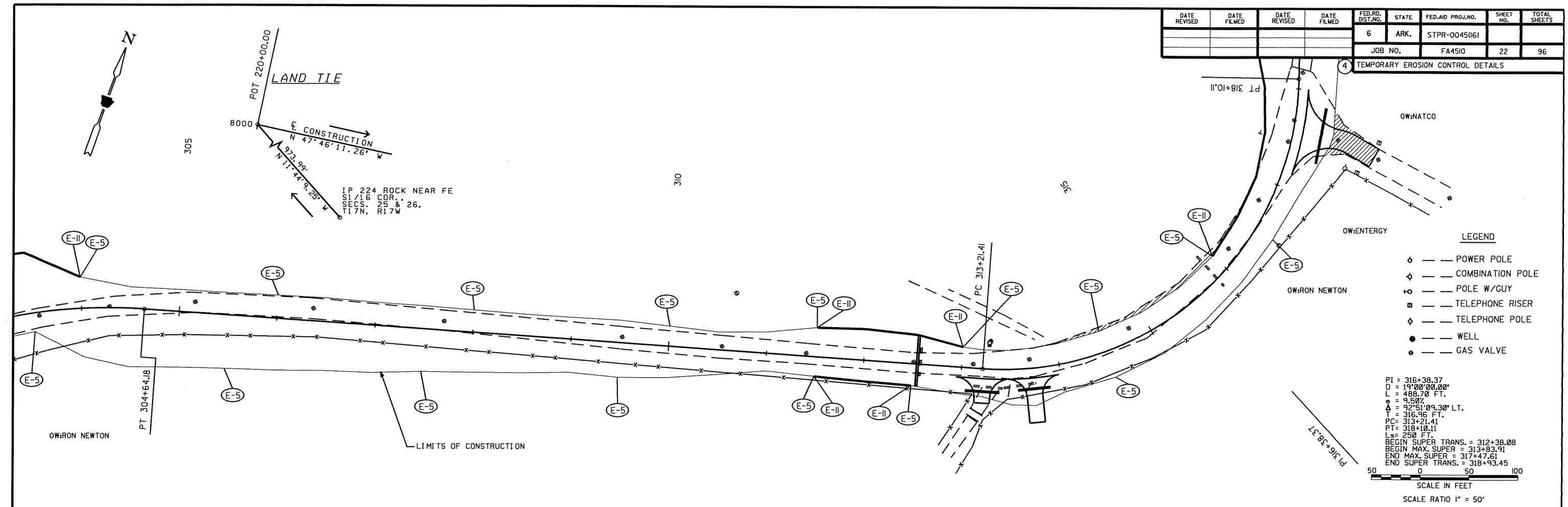
STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
293+50		RT.	6		1	TEC-1, 2&3
295+50		RT.	6		1	TEC-1, 2&3
296+00		LT.	6		1	TEC-1, 2&3
297+50		RT.	6		1	TEC-1, 2&3
298+00		LT.	6		1	TEC-1, 2&3
299+50		LT. & RT.	12		2	TEC-1, 2&3
299+50	304+00	LT.		505	15	TEC-1, 2&3
301+50		RT.	6		1	TEC-1, 2&3
303+50		RT.	6		1	TEC-1, 2&3
304+00		LT.	6		1	TEC-1, 2&3

BM-912 NIS 4' PERSIMMON
STA. 221+31.03 ELEV. 1181.05'



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
JOB NO. FA4510							22	96

4 TEMPORARY EROSION CONTROL DETAILS

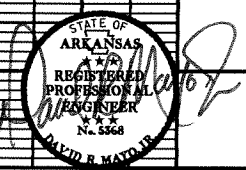


TEMPORARY EROSION CONTROL

REVISION NO.	REVISION
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STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5) BAGS	SILT FENCE (E-II) LIN. FT.	SEDIMENT REMOVAL & DISPOSAL CU. YDS.	STANDARD DRAWING NUMBER
305+50		RT.	6		1	TEC-1, 2&3
306+00		LT.	6		1	TEC-1, 2&3
307+50		RT.	6		1	TEC-1, 2&3
308+00		LT.	6		1	TEC-1, 2&3
309+50		RT.	6		1	TEC-1, 2&3
310+00		LT.	6		1	TEC-1, 2&3
311+50		LT. & RT.	12		2	TEC-1, 2&3
311+50	312+50	RT.		100	3	TEC-1, 2&3
311+50	313+00	LT.		150	5	TEC-1, 2&3
312+50		RT.	6		1	TEC-1, 2&3
313+00		LT.	6		1	TEC-1, 2&3
314+50		LT. & RT.	12		2	TEC-1, 2&3
316+00		LT.	6		1	TEC-1, 2&3
316+00	320+00	LT.		388	12	TEC-1, 2&3

BM-912 NIS 4' PERSIMMON STA. 221+31.03 ELEV. 1181.05'



EARTHWORK

BASE AND SURFACING

STATION	STATION	UNCLASSIFIED EXCAVATION			COMPACTED EMBANKMENT		
		NORMAL	ADDITIONAL	TOTAL	NORMAL	ADDITIONAL	TOTAL
		CUBIC YARDS					
220+00	320+00	15976		15976	11426		11426
221+73					5		5
233+03					5		5
235+82					5		5
238+81					5		5
240+08					45		45
247+85					20		20
250+23					10		10
253+44					5		5
257+99					5		5
261+39					15		15
268+15					5		5
270+87					5		5
287+08					10		10
313+23					5		5
313+73					5		5
317+60					20		20
TOTALS:		15976	0	15976	11426	170	11596

STATION	STATION	LENGTH LIN. FT.	AGGREGATE BASE COURSE (CLASS 7)			2 1/2" PRIME COAT			20'-0" A.C.H.M. SURFACE COURSE (1/2")		TONS
			TONS/STA.	NORMAL TONS	TOTAL	NORMAL SQ. YDS.	TOTAL SQ. YDS.	GAL.	NORMAL SQ. YDS.	TOTAL	
220+00	320+00	10000	152.00	15200	15200	23334	23334	9334	22223	22223	2445
221+73				26	26	64	64	26	64	64	7
233+03				26	26	64	64	26	64	64	7
235+82				27	27	67	67	27	67	67	7
238+81				26	26	64	64	26	64	64	7
240+08				62	62	153	153	62	153	153	17
247+85				37	37	91	91	37	91	91	10
250+23				49	49	120	120	48	120	120	13
253+44				44	44	108	108	43	108	108	12
257+99				26	26	64	64	26	64	64	7
261+39				26	26	64	64	26	64	64	7
268+15				26	26	64	64	26	64	64	7
270+87				31	31	75	75	30	75	75	8
287+08				26	26	64	64	26	64	64	7
313+23				26	26	64	64	26	64	64	7
313+73				40	40	97	97	39	97	97	11
313+49				41	41	116	116	47	116	116	13
317+60				95	95	232	232	93	232	232	26
TOTALS:		10000	152.00	15834	15834	24905	24905	9968	23794	23794	2618

NOTE: EARTHWORK QUANTITIES SHOWN SHALL BE PAID AS PLAN QUANTITY.

BASIS OF ESTIMATE:
 AGGREGATE BASE COURSE (CLASS 7) AS SHOWN
 PRIME COAT 0.4 GAL. PER SQ. YD.
 A.C.H.M. SURFACE COURSE (1/2") 220 LBS. PER SQ. YD.

VOLUME CONTROL:
 MIN. AGGREGATE IN A.C.H.M. SURFACE COURSE (1/2") 94.5%
 ASPHALT BINDER IN A.C.H.M. SURFACE COURSE (1/2") 5.5%
 Nmax = 115

TEMPORARY & PERMANENT SEEDING

STATION	TEMPORARY SEEDING	LIME	SEEDING	MULCH COVER	WATER	STANDARD DRAWING NO.
	ACRES	TONS	ACRES	ACRES	M. GAL.	
ENTIRE PROJECT	24.69	25	12.34	37.03	1765.0	TEC-3
TOTALS:	24.69	25	12.34	37.03	1765.0	

BASIS OF ESTIMATE:
 LIME 2 TONS PER ACRE
 WATER 102 M. GALS. PER ACRE PERMANENT SEEDING
 WATER 20.4 M. GALS. PER ACRE TEMPORARY SEEDING

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	DESCRIPTION	PIPE CULVERTS	FENCE	METAL GATE
				EACH	LIN. FT.	EACH
220+00	221+67	LT.	3B - 3 STRAND BARBED WIRE		167	
220+00	230+25	RT.	5B - 5 STRAND BARBED WIRE		1053	
221+30	221+35	LT.	4B - 4 STRAND BARBED WIRE		10	
221+73		LT.	16' METAL GATE			1
221+82		LT.	4B - 4 STRAND BARBED WIRE		9	
221+82	235+74	LT.	4B - 4 STRAND BARBED WIRE		1398	
233+20	233+21	LT.	5B - 5 STRAND BARBED WIRE		8	
233+26	233+50	RT.	5B - 5 STRAND BARBED WIRE		27	
235+89	243+60	RT.	5B - 5 STRAND BARBED WIRE		771	
235+99	238+13	LT.	3B - WEBBED WIRE		220	
241+33		CENTER	18" X 30' C.M. PIPE CULVERT CROSS DRAIN	1		
241+51	247+22	LT.	4B - 4 STRAND BARBED WIRE		603	
246+43	251+75	RT.	5B - 5 STRAND BARBED WIRE		540	
251+30	251+44	LT.	4B - 4 STRAND BARBED WIRE		14	
251+42		CENTER	18" X 30' C.M. PIPE CULVERT CROSS DRAIN	1		
251+51		LT.	12' METAL GATE			1
251+58	260+39	LT.	4B - 4 STRAND BARBED WIRE		902	
259+49	260+75	LT.	4B - 4 STRAND BARBED WIRE		146	
261+60	282+82	LT.	4B - 4 STRAND BARBED WIRE		2168	
264+61	266+79	RT.	1B - WEBBED WIRE		220	
268+48	269+35	RT.	5B - 5 STRAND BARBED WIRE		91	
269+56	269+61	RT.	5B - 5 STRAND BARBED WIRE		5	
270+87		RT.	12' METAL GATE			1
271+77	313+08	RT.	2B - WEBBED WIRE		4138	
272+79	272+80	LT.	5B - 5 STRAND BARBED WIRE		15	
275+13		RT.	2B - WEBBED WIRE		8	
286+93		RT.	4B - 4 STRAND BARBED WIRE		7	
293+09		CENTER	18" X 26' C.M. PIPE CULVERT CROSS DRAIN	1		
296+71	296+83	RT.	4B - 4 STRAND BARBED WIRE		67	
302+49		CENTER	18" X 27' C.M. PIPE CULVERT CROSS DRAIN	1		
312+58		CENTER	18" X 29' C.M. PIPE CULVERT CROSS DRAIN	1		
313+28		RT.	12" X 29' C.M. PIPE CULVERT SIDE DRAIN RT.	1		
313+42	316+66	RT.	3B - 3 STRAND BARBED WIRE		359	
313+99		RT.	14" X 33' C.M. PIPE CULVERT SIDE DRAIN RT.	1		
315+86		CENTER	24" X 41' C.M. PIPE CULVERT CROSS DRAIN	1		
318+54		CENTER	24" X 55' C.M. PIPE CULVERT CROSS DRAIN	1		
TOTALS:				9	12946	3

TRAFFIC CONTROL DEVICES

LOCATION	W20-1						G20-1		G20-2		TRAFFIC DRUMS EACH	TOTAL SQ. FT.	STANDARD DRAWING NUMBER
	1500 FT.		1000 FT.		500 FT.		NO.	SQ. FT.	NO.	SQ. FT.			
	NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.							
STA. 205+00	1	16									16	TC-1, 2 & 3	
STA. 210+00			1	16							16	TC-1, 2 & 3	
STA. 215+00					1	16					16	TC-1, 2 & 3	
STA. 220+00							1	10	1	8	18	TC-1, 2 & 3	
STA. 320+00							1	10	1	8	18	TC-1, 2 & 3	
STA. 325+00					1	16					16	TC-1, 2 & 3	
STA. 330+00			1	16							16	TC-1, 2 & 3	
STA. 335+00	1	16									16	TC-1, 2 & 3	
CO. RD. 5020	1	16	1	16							32	TC-1, 2 & 3	
ENTIRE JOB										40		TC-1, 2 & 3	
TOTALS:	3	48	3	48	2	32	2	20	2	16	40		



STRUCTURES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.		FA4510	25	96

4 QUANTITY SHEET

STATION	DESCRIPTION	SIDE DRAINS	CROSS DRAIN ALTS.				F.E.S. ALTS.		SOLID SODDING	WATER	SELECTED PIPE BEDDING	STANDARD DRAWING
		18"	24" R.C.P.	24" C.M.P.	24" H.D.P.E.	24" P.V.C.	24" R.C.P.	24" C.M.P.				
		LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	SQ. YD.	M. GAL.	CU. YDS.	
233+03	18" X 34' SIDE DRAIN RT.	34										PCC-I, PCM-I
235+82	18" X 33' SIDE DRAIN LT.	33										PCC-I, PCM-I
238+81	18" X 33' SIDE DRAIN LT.	33										PCC-I, PCM-I
240+08	18" X 41' SIDE DRAIN LT.	41										PCC-I, PCM-I
241+75	24" X 41' CROSS DRAIN		41	46	46	46	2	2	16	0.2	3	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
247+85	18" X 38' SIDE DRAIN LT.	38										PCC-I, PCM-I
250+23	18" X 33' SIDE DRAIN LT.	33										PCC-I, PCM-I
251+65	24" X 40' CROSS DRAIN		40	46	46	46	2	2	16	0.2	3	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
253+44	18" X 32' SIDE DRAIN RT.	32										PCC-I, PCM-I
257+99	18" X 33' SIDE DRAIN RT.	33										PCC-I, PCM-I
261+39	18" X 32' SIDE DRAIN LT.	32										PCC-I, PCM-I
268+15	18" X 33' SIDE DRAIN RT.	33										PCC-I, PCM-I
270+87	18" X 33' SIDE DRAIN RT.	33										PCC-I, PCM-I
271+50	24" X 41' CROSS DRAIN		41	46	46	46	2	2	16	0.2	3	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
287+08	18" X 33' SIDE DRAIN LT.	33										PCC-I, PCM-I
293+00	24" X 45' CROSS DRAIN		45	50	50	50	2	2	16	0.2	3	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
302+75	24" X 50' CROSS DRAIN		50	55	55	55	2	2	16	0.2	4	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
312+55	24" X 40' CROSS DRAIN		40	46	46	46	2	2	16	0.2	3	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
313+23	18" X 32' SIDE DRAIN RT.	32										PCC-I, PCM-I
313+73	18" X 32' SIDE DRAIN RT.	32										PCC-I, PCM-I
317+60	18" X 56' SIDE DRAIN RT.	56										PCC-I, PCM-I
318+54	24" X 58' CROSS DRAIN		58	63	63	63	2	2	16	0.2	5	PCC-I, PCM-I, FES-1, FES-2, PCP-1, PCP-2
TOTALS:		528	315	352	352	352	14	14	112	1.4	24	

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

WATER - 12.6 GAL. PER SQ. YD. SOLID SODDING

CLEARING AND GRUBBING

STATION	STATION	CLEARING	GRUBBING
		STATIONS	STATIONS
220+00	320+00	100	100
TOTALS:		100	100

METAL VEHICULAR GATES

STATION	SIDE	WIDTH	12'	16'
		LIN. FT.	EACH	EACH
221+73	LT.	16		1
251+51	RT.	12	1	
270+87	RT.	12	1	
TOTALS:			2	1

WIRE FENCE

STATION	STATION	SIDE	WIRE FENCE	WIRE FENCE	STANDARD DRAWING NUMBER
			(TYPE D) LIN. FT.	(TYPE D) LIN. FT.	
220+00	221+67	LT.	167		WF-4
220+00	230+25	RT.		1060	WF-4
221+82	235+74	LT.	1388		WF-4
233+26	233+50	RT.		24	WF-4
235+89	243+60	RT.		775	WF-4
235+99	238+13	LT.	222		WF-4
241+51	247+22	LT.	613		WF-4
246+43	251+75	RT.	522		WF-4
251+30	251+44	LT.	14		WF-4
251+58	260+39	LT.	848		WF-4
261+60	282+82	LT.	2151		WF-4
264+61	266+79	RT.	218		WF-4
268+48	269+35	RT.	93		WF-4
269+56	269+61	RT.	5		WF-4
271+77	313+08	RT.	4063		WF-4
313+42	316+66	RT.	363		WF-4
TOTALS:			10667	1859	

REFLECTORIZED PAINT PAVEMENT MARKING

LOCATION	YELLOW MARKING	STANDARD DRAWING NUMBER
	4" CONT. LIN. FT.	
STA. 220+00 - STA. 320+00	20000	PM-1
TOTALS:	20000	

NOTE: THIS IS A LOW VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003.

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

STATION	SIDE	STANDARD SIGN NUMBER								SUPPORT ASSEMBLIES (TYPE A) EACH	STANDARD DRAWING NUMBER		
		W1-2 LT.		W1-2 RT.		W13-1		W8-3					
		NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.				
221+00	LT.									1	9.00		SHS - 1 & 2
225+57	RT.	1	6.25					1	2.25				SHS - 1 & 2
230+67	LT.			1	6.25			1	2.25				SHS - 1 & 2
242+23	RT.			1	6.25			1	2.25				SHS - 1 & 2
248+63	LT.	1	6.25					1	2.25				SHS - 1 & 2
250+67	RT.	1	6.25					1	2.25				SHS - 1 & 2
256+39	LT.			1	6.25			1	2.25				SHS - 1 & 2
258+84	RT.			1	6.25			1	2.25				SHS - 1 & 2
265+28	LT.	1	6.25					1	2.25				SHS - 1 & 2
267+24	RT.	1	6.25					1	2.25				SHS - 1 & 2
270+93	LT.			1	6.25			1	2.25				SHS - 1 & 2
274+09	RT.			1	6.25			1	2.25				SHS - 1 & 2
278+08	LT.	1	6.25					1	2.25				SHS - 1 & 2
296+45	RT.			1	6.25			1	2.25				SHS - 1 & 2
305+64	LT.	1	6.25					1	2.25				SHS - 1 & 2
312+21	RT.	1	6.25					1	2.25				SHS - 1 & 2
319+10	LT.			1	6.25			1	2.25				SHS - 1 & 2
TOTALS:		8	50.00	8	50.00	16	36.00	1	9.00			17	

OBLITERATION OF ABANDONED ROADWAY

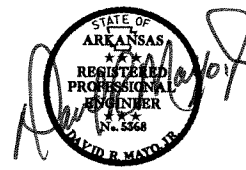
STATION	STATION	SIDE	UNCLASSIFIED EXCAVATION	LIME	SEEDING	MULCH COVER	WATER
			CUBIC YARD	TON	ACRE	M. GALS.	
247+28	250+64	LT.	325	0.26	0.13	0.13	13.3
251+95	261+06	RT.	888	0.74	0.37	0.37	37.7
294+73	301+10	LT.	736	0.60	0.30	0.30	30.6
313+72	316+71	LT.	49	0.04	0.02	0.02	2.0
317+41	317+82	RT.	111	0.06	0.03	0.03	3.1
TOTALS:			2109	1.70	0.85	0.85	86.7

USE: 2109 2 0.85 0.85 86.7
BASIS OF ESTIMATE:
LIME 2 TONS PER ACRE
WATER 102 M. GALS. PER ACRE PERMANENT SEEDING

NOTE: FINAL LOCATION TO BE DETERMINED BY THE ENGINEER.

MAILBOXES

STATION	SIDE	MAILBOX SUPPORTS (SINGLE)	MAILBOX	STANDARD DRAWING NUMBER
		EACH		
221+67	LT.	1	1	MB-1
236+66	LT.	1	1	MB-1
238+38	LT.	1	1	MB-1
249+17	LT.	1	1	MB-1
261+37	LT.	1	1	MB-1
268+14	LT.	1	1	MB-1
270+98	LT.	1	1	MB-1
287+30	LT.	1	1	MB-1
313+29	LT.	1	1	MB-1
TOTALS:		9	9	



TEMPORARY EROSION CONTROL (BOX 1 OF 2)

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
220+00		LT. & RT.	12		2	TEC-1, 2&3
222+00		LT. & RT.	12		2	TEC-1, 2&3
224+00		RT.	6		1	TEC-1, 2&3
224+50		LT.	6		1	TEC-1, 2&3
226+00		RT.	6		1	TEC-1, 2&3
227+00		LT.	6		1	TEC-1, 2&3
227+00	229+50	LT.		245	7	TEC-1, 2&3
228+00		RT.	6		1	TEC-1, 2&3
228+00	229+50	RT.		159	5	TEC-1, 2&3
229+50		LT. & RT.	12		2	TEC-1, 2&3
231+50		LT.	6		1	TEC-1, 2&3
232+00		RT.	6		1	TEC-1, 2&3
233+50		LT.	6		1	TEC-1, 2&3
233+50	235+50	LT.		213	6	TEC-1, 2&3
234+00		RT.	6		1	TEC-1, 2&3
235+50		LT.	6		1	TEC-1, 2&3
236+00		RT.	6		1	TEC-1, 2&3
238+00		LT. & RT.	12		2	TEC-1, 2&3
240+00		RT.	6		1	TEC-1, 2&3
240+50		LT.	6		1	TEC-1, 2&3
240+50	250+00	LT.		1004	30	TEC-1, 2&3
242+00		RT.	6		1	TEC-1, 2&3
244+00		RT.	6		1	TEC-1, 2&3
246+00		RT.	6		1	TEC-1, 2&3
248+00		RT.	6		1	TEC-1, 2&3
250+00		LT. & RT.	12		2	TEC-1, 2&3
251+00		LT.	6		1	TEC-1, 2&3
251+00	252+50	LT.		151	5	TEC-1, 2&3
252+00		RT.	6		1	TEC-1, 2&3
252+00	253+00	RT.		106	3	TEC-1, 2&3
252+50		LT.	6		1	TEC-1, 2&3
253+00		RT.	6		1	TEC-1, 2&3
254+50		LT. & RT.	12		2	TEC-1, 2&3
254+50	257+50	RT.		306	9	TEC-1, 2&3
256+50		LT.	6		1	TEC-1, 2&3
257+50		RT.	6		1	TEC-1, 2&3
258+50		LT.	6		1	TEC-1, 2&3
259+50		RT.	6		1	TEC-1, 2&3
260+00		LT.	6		1	TEC-1, 2&3
261+00		RT.	6		1	TEC-1, 2&3
261+00	263+00	RT.		188	6	TEC-1, 2&3
261+50		LT.	6		1	TEC-1, 2&3
261+50	263+50	LT.		213	6	TEC-1, 2&3
263+00		RT.	6		1	TEC-1, 2&3
263+50		LT.	6		1	TEC-1, 2&3
265+00		RT.	6		1	TEC-1, 2&3
265+50		LT.	6		1	TEC-1, 2&3
267+00		RT.	6		1	TEC-1, 2&3
268+00		LT.	6		1	TEC-1, 2&3
268+00	272+00	LT.		394	12	TEC-1, 2&3
269+00		RT.	6		1	TEC-1, 2&3
271+00		RT.	6		1	TEC-1, 2&3
272+00		LT.	6		1	TEC-1, 2&3
273+00		RT.	6		1	TEC-1, 2&3
274+00		LT.	6		1	TEC-1, 2&3
275+00		RT.	6		1	TEC-1, 2&3
275+00	276+00	RT.		98	3	TEC-1, 2&3
276+00		LT. & RT.	12		2	TEC-1, 2&3
278+00		LT. & RT.	12		2	TEC-1, 2&3
278+00	280+50	LT.		254	8	TEC-1, 2&3
280+00		RT.	6		1	TEC-1, 2&3
280+50		LT.	6		1	TEC-1, 2&3
282+00		RT.	6		1	TEC-1, 2&3
282+50		LT.	6		1	TEC-1, 2&3
284+00		RT.	6		1	TEC-1, 2&3
284+00	286+00	RT.		200	6	TEC-1, 2&3
284+50		LT.	6		1	TEC-1, 2&3
284+50	287+00	LT.		258	8	TEC-1, 2&3
286+00		RT.	6		1	TEC-1, 2&3
287+00		LT.	6		1	TEC-1, 2&3
287+50		RT.	6		1	TEC-1, 2&3
287+50	289+50	RT.		200	6	TEC-1, 2&3
289+00		LT.	6		1	TEC-1, 2&3
289+50		RT.	6		1	TEC-1, 2&3
291+50		LT. & RT.	12		2	TEC-1, 2&3
291+50	296+00	LT.		468	14	TEC-1, 2&3
293+50		RT.	6		1	TEC-1, 2&3
295+50		RT.	6		1	TEC-1, 2&3
296+00		LT.	6		1	TEC-1, 2&3
297+50		RT.	6		1	TEC-1, 2&3
298+00		LT.	6		1	TEC-1, 2&3
299+50		LT. & RT.	12		2	TEC-1, 2&3
299+50	304+00	LT.		505	15	TEC-1, 2&3
301+50		RT.	6		1	TEC-1, 2&3
303+50		RT.	6		1	TEC-1, 2&3
304+00		LT.	6		1	TEC-1, 2&3
305+50		RT.	6		1	TEC-1, 2&3
306+00		LT.	6		1	TEC-1, 2&3
307+50		RT.	6		1	TEC-1, 2&3
308+00		LT.	6		1	TEC-1, 2&3

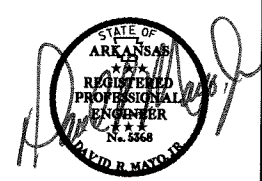
TEMPORARY EROSION CONTROL (BOX 2 OF 2)

STATION	STATION	SIDE	SAND BAG DITCH CKS. (E-5)	SILT FENCE (E-II)	SEDIMENT REMOVAL & DISPOSAL	STANDARD DRAWING NUMBER
			BAGS	LIN. FT.	CU. YDS.	
309+50		RT.	6		1	TEC-1, 2&3
310+00		LT.	6		1	TEC-1, 2&3
311+50		LT. & RT.	12		2	TEC-1, 2&3
311+50	312+50	RT.		100	3	TEC-1, 2&3
311+50	313+00	LT.		150	5	TEC-1, 2&3
312+50		RT.	6		1	TEC-1, 2&3
313+00		LT.	6		1	TEC-1, 2&3
314+50		LT. & RT.	12		2	TEC-1, 2&3
316+00		LT.	6		1	TEC-1, 2&3
316+00	320+00	LT.		388	12	TEC-1, 2&3
316+50		RT.	6		1	TEC-1, 2&3
318+50		RT.	6		1	TEC-1, 2&3
320+00		LT. & RT.	12		2	TEC-1, 2&3
TOTALS:			576	5600	265	

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.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	26	96	

4 QUANTITY SHEET



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	27	96	

4 SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	100	STA.
201	GRUBBING	100	STA.
202	REMOVAL AND DISPOSAL OF FENCE	12946	LIN. FT.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	9	EACH
202	REMOVAL AND DISPOSAL OF GATES	3	EACH
210	UNCLASSIFIED EXCAVATION	18085	CU. YD.
210	COMPACTED EMBANKMENT	11596	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	15834	TON
401	PRIME COAT	9968	GAL.
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	2474	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	144	TON
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	164	SQ. FT.
SS & 604	TRAFFIC DRUMS	40	EACH
SS & 606	18" SIDE DRAIN	528	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	315	LIN. FT.
606	24" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	352	LIN. FT.
606	24" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	352	LIN. FT.
606	24" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	352	LIN. FT.
SP & 606	24" HIGH DENSITY POLYETHYLENE PIPE	352	LIN. FT.
SP & 606	24" PVC PIPE	352	LIN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERT	14	EACH
606	24" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS	14	EACH
606	SELECTED PIPE BEDDING	24	CU. YD.
619	WIRE FENCE (TYPE D)	10667	LIN. FT.
619	WIRE FENCE (TYPE D-I)	1859	LIN. FT.
619	12" STEEL GATES	2	EACH
619	12" ALUMINUM GATES	2	EACH
619	16" STEEL GATES	1	EACH
619	16" ALUMINUM GATES	1	EACH
620	LIME	27	TON
620	SEEDING	13.19	ACRE
620	MULCH COVER	37.88	ACRE
SS & 620	WATER	1853.1	M. GAL.
621	TEMPORARY SEEDING	24.69	ACRE
621	SILT FENCE	5600	LIN. FT.
621	SAND BAG DITCH CHECKS	576	BAGS
621	SEDIMENT REMOVAL AND DISPOSAL	265	CU. YD.
624	SOLID SODDING	112	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	9	EACH
637	MAILBOX SUPPORTS (SINGLE)	9	EACH
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4")	20000	LIN. FT.
SS & 726	STANDARD SIGN	145.00	SQ. FT.
729	CHANNEL POST SIGN SUPPORTS (TYPE A)	17	EACH

• ALTERNATE BID ITEMS

REVISION BOX

DATE	REVISION	SHEET NUMBER



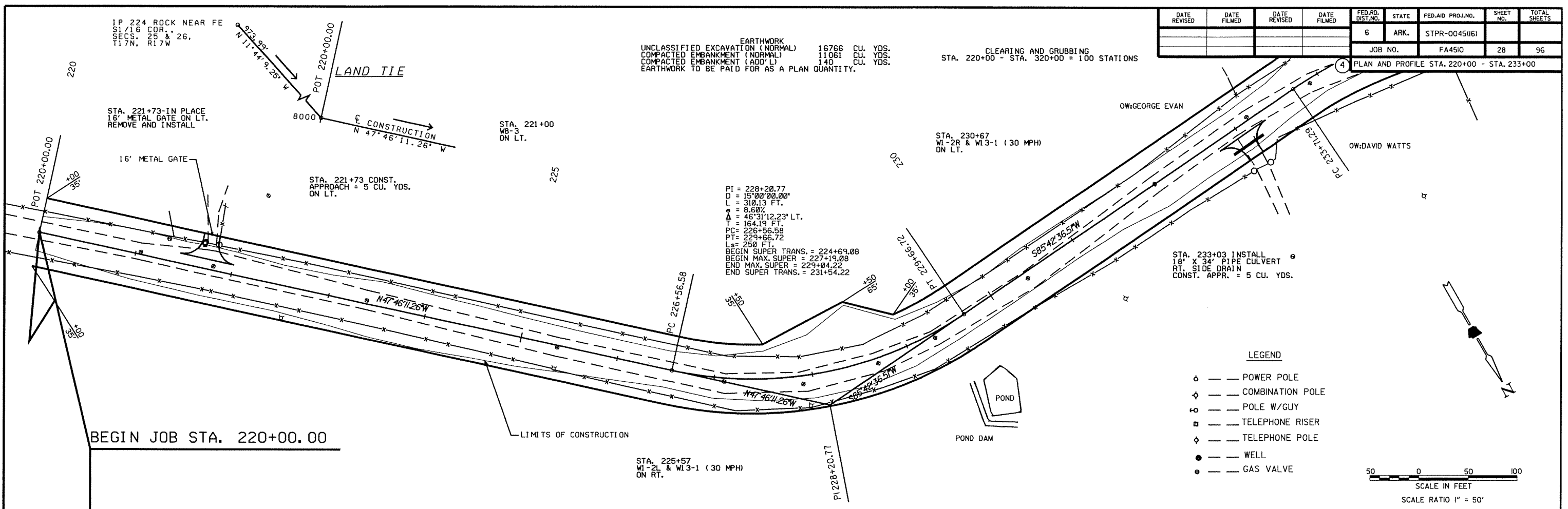
IP 224 ROCK NEAR FE
S1/16 COR.
SECS. 25 & 26,
T17N, R17W

EARTHWORK
UNCLASSIFIED EXCAVATION (NORMAL) 16766 CU. YDS.
COMPACTED EMBANKMENT (NORMAL) 11061 CU. YDS.
COMPACTED EMBANKMENT (ADD'L) 140 CU. YDS.
EARTHWORK TO BE PAID FOR AS A PLAN QUANTITY.

CLEARING AND GRUBBING
STA. 220+00 - STA. 320+00 = 100 STATIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA450	28	96	

PLAN AND PROFILE STA. 220+00 - STA. 233+00

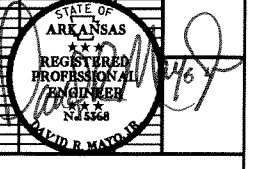
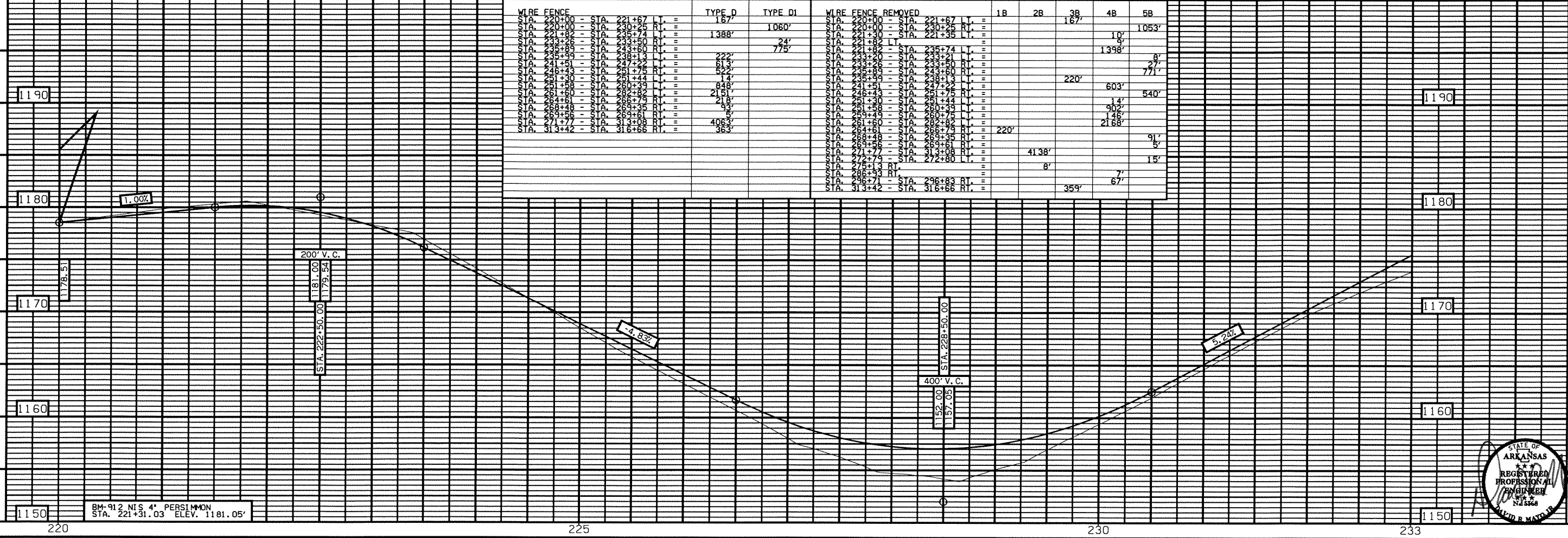


PI = 228+28.77
D = 1500'00.00'
L = 310.13 FT.
e = 8.60%
Δ = 46°31'12.23" LT.
T = 164.19 FT.
PC = 226+56.58
PT = 229+66.72
Ls = 250 FT.
BEGIN SUPER TRANS. = 224+69.08
BEGIN MAX. SUPER = 227+19.08
END MAX. SUPER = 229+04.22
END SUPER TRANS. = 231+54.22

STA. 233+03 INSTALL
18" X 34" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

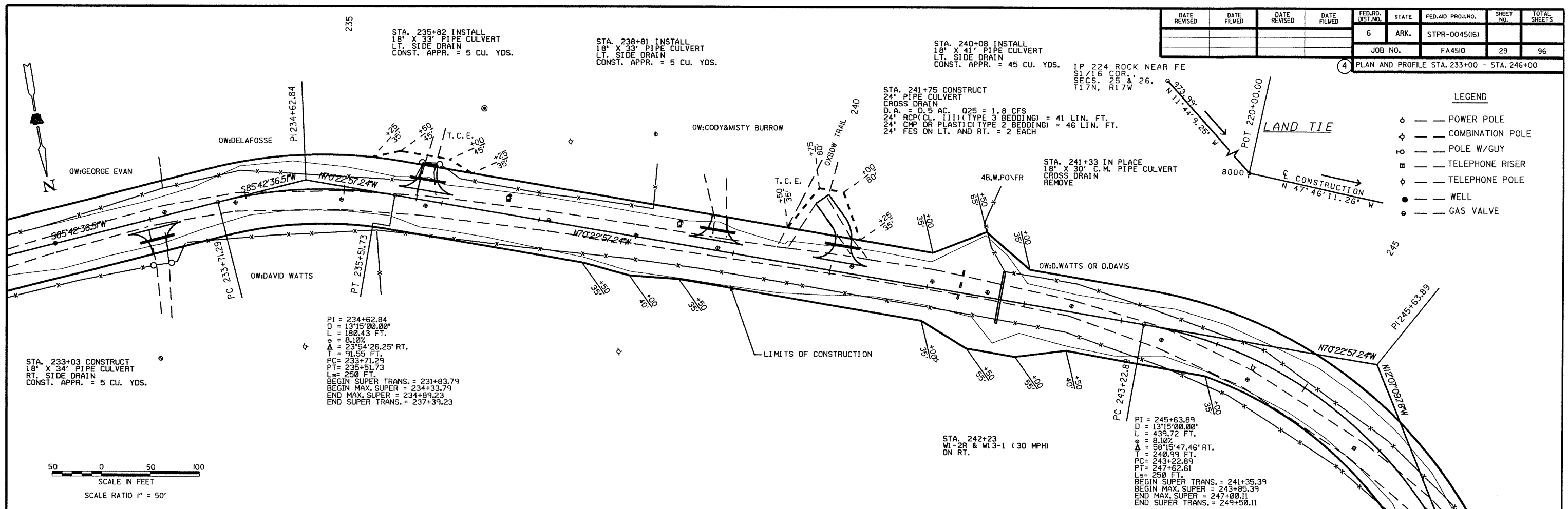
- LEGEND
- — POWER POLE
 - ◇ — COMBINATION POLE
 - ⊙ — POLE W/GUY
 - — TELEPHONE RISER
 - ◇ — TELEPHONE POLE
 - — WELL
 - ⊙ — GAS VALVE

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

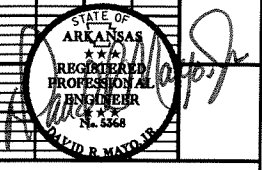
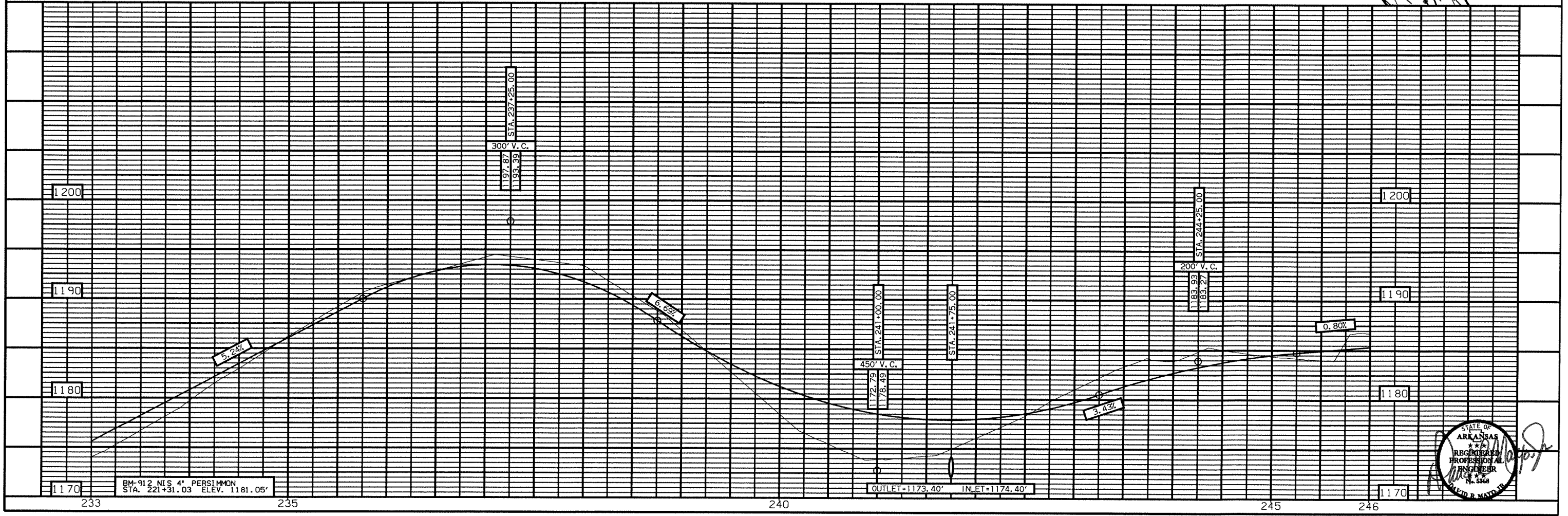
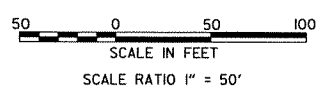


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	29	96	

4 PLAN AND PROFILE STA. 233+00 - STA. 246+00

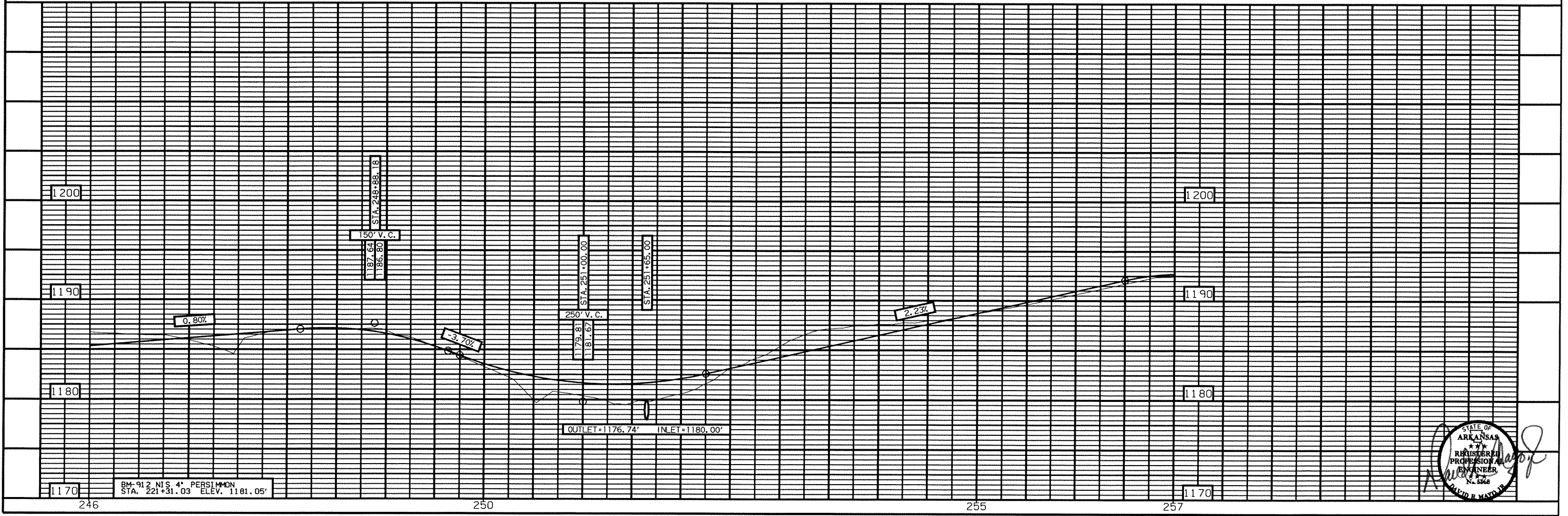
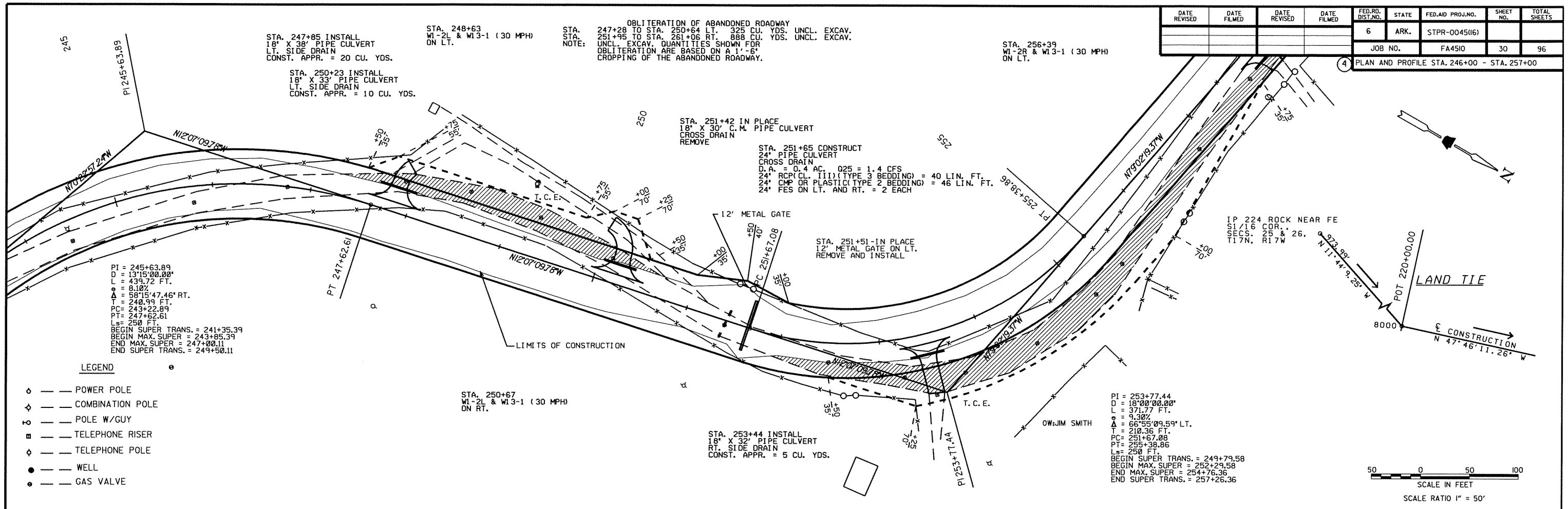


- LEGEND
- — POWER POLE
 - ◇ — COMBINATION POLE
 - ⊙ — POLE W/GUY
 - ⊠ — TELEPHONE RISER
 - ◇ — TELEPHONE POLE
 - — WELL
 - — GAS VALVE



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	30	96	

PLAN AND PROFILE STA. 246+00 - STA. 257+00



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
						JOB NO.	FA4510	31
						PLAN AND PROFILE STA. 257+00 - STA. 266+00		

IP 224 ROCK NEAR FE
S1/16 COR.,
SECS. 25 & 26,
T17N, R17W

STA. 261+39 INSTALL
18" X 32" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 15 CU. YDS.

PI = 253+77.44
D = 18'00"00.00"
L = 371.77 FT.
e = 9.30%
Δ = 66°55'09.59" LT.
T = 210.36 FT.
PC = 251+67.00
PT = 255+38.86
Ls = 250 FT.
BEGIN SUPER TRANS. = 249+79.58
BEGIN MAX. SUPER = 252+29.58
END MAX. SUPER = 254+76.36
END SUPER TRANS. = 257+26.36

PI = 262+50.38
D = 18'00"00.00"
L = 443.96 FT.
e = 9.30%
Δ = 79°54'44.86" RT.
T = 266.68 FT.
PC = 259+83.70
PT = 264+27.66
Ls = 250 FT.
BEGIN SUPER TRANS. = 257+96.20
BEGIN MAX. SUPER = 260+46.20
END MAX. SUPER = 263+65.16
END SUPER TRANS. = 266+15.16

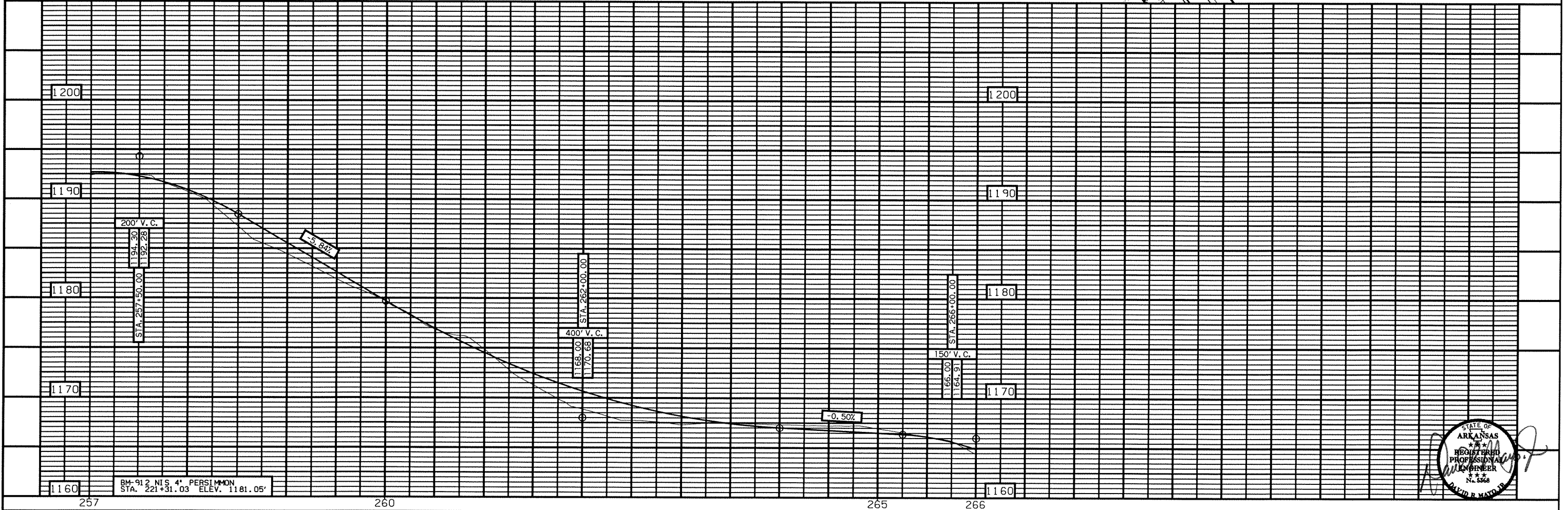
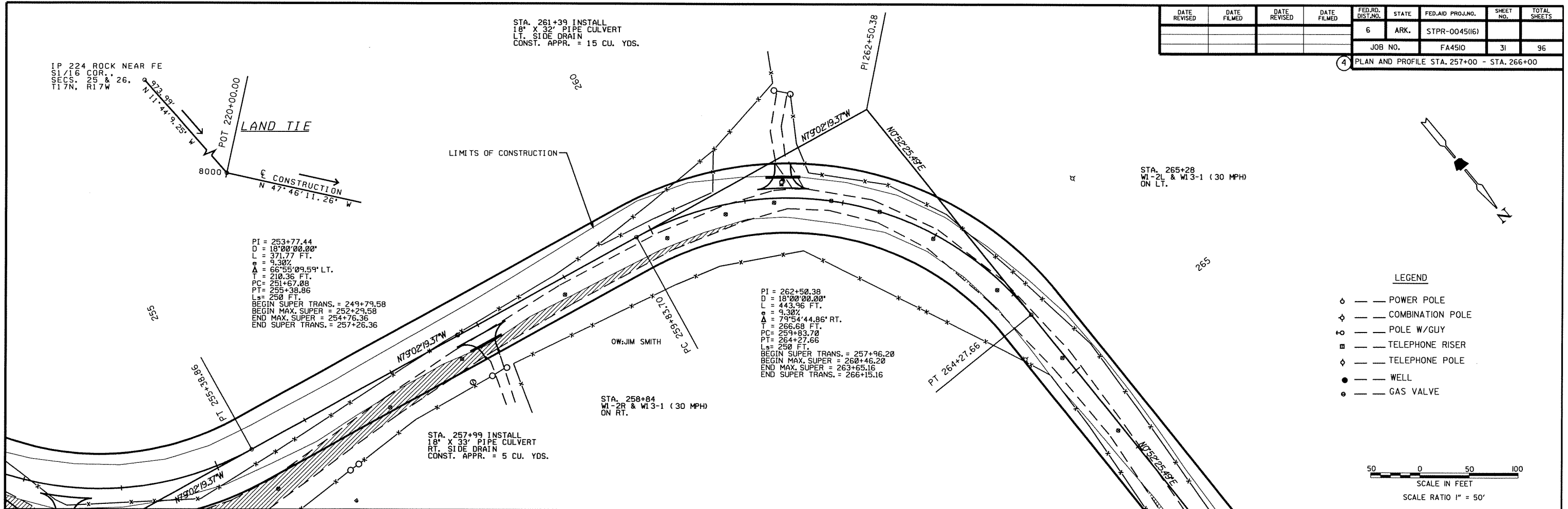
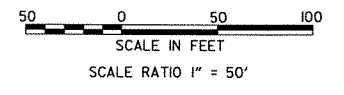
STA. 257+99 INSTALL
18" X 33" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

STA. 258+84
W1-2R & W13-1 (30 MPH)
ON RT.

STA. 265+28
W1-2L & W13-1 (30 MPH)
ON LT.

PLAN AND PROFILE STA. 257+00 - STA. 266+00

- LEGEND
- — POWER POLE
 - ◇ — COMBINATION POLE
 - ◊ — POLE W/GUY
 - — TELEPHONE RISER
 - ◇ — TELEPHONE POLE
 - — WELL
 - — GAS VALVE



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5368
DAVID R. MATTHEW

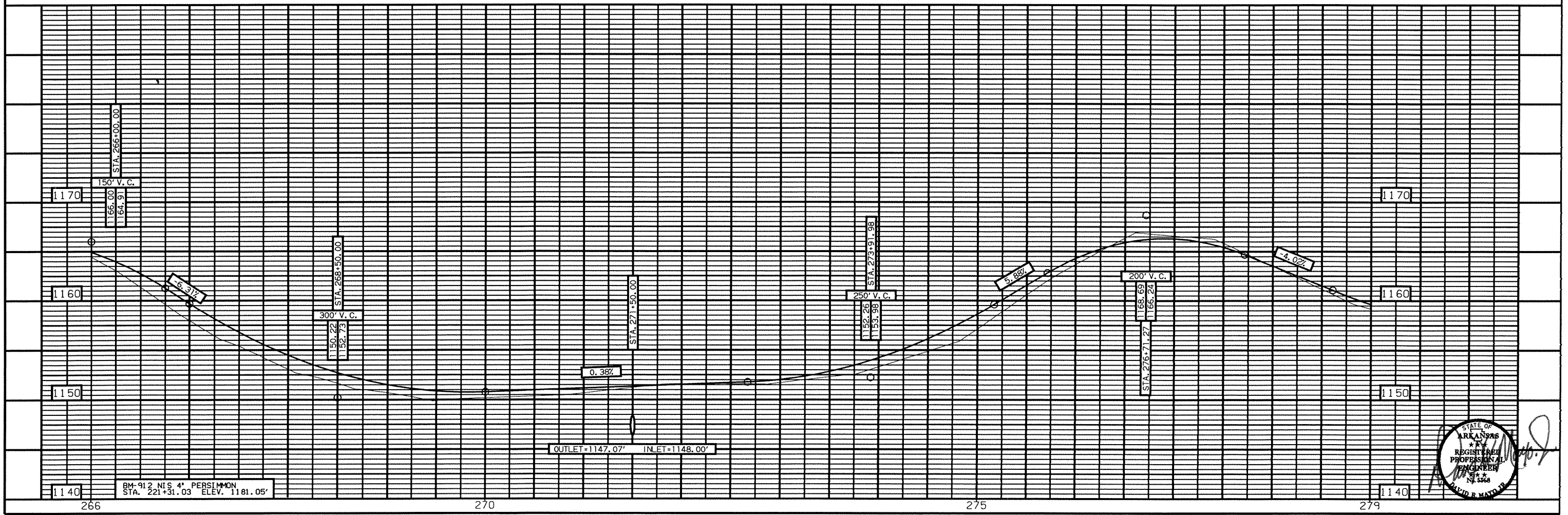
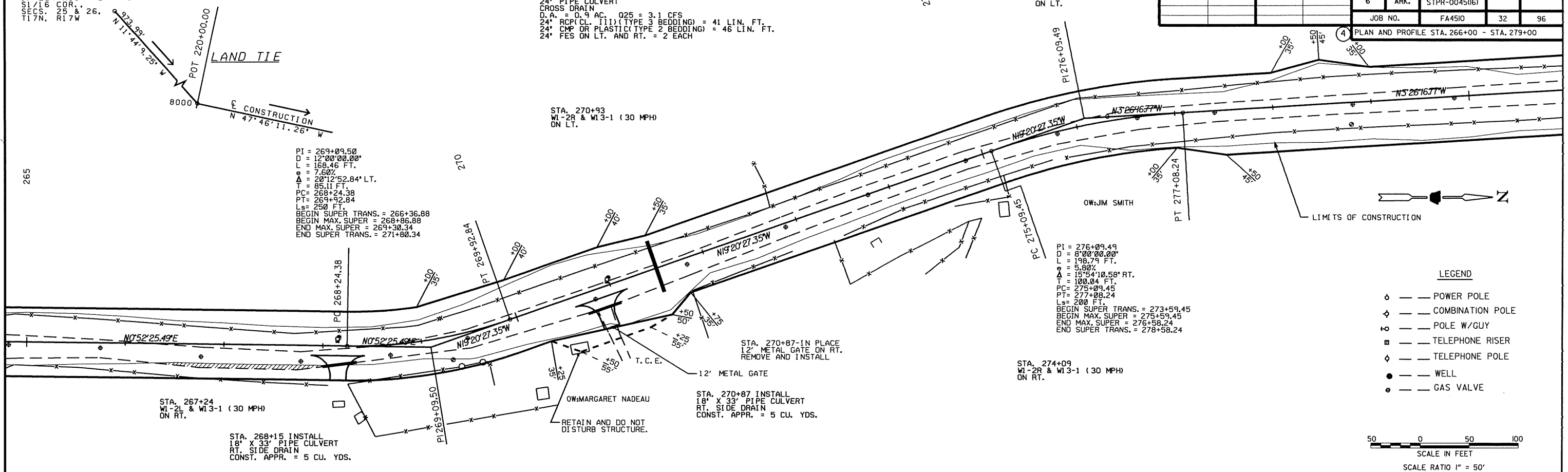
IP 224 ROCK NEAR FE
S1/16 COR.,
SECS. 25 & 26,
T17N, R17W

STA. 271+50 CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN
D.A. = 0.9 AC. Q25 = 3.1 CFS
24" RCP (CL. III) (TYPE 3 BEDDING) = 41 LIN. FT.
24" CMP OR PLASTIC (TYPE 2 BEDDING) = 46 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH

STA. 278+08
WI-2L & WI3-1 (30 MPH)
ON LT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)	32	96
JOB NO. FA4510							32	96

PLAN AND PROFILE STA. 266+00 - STA. 279+00

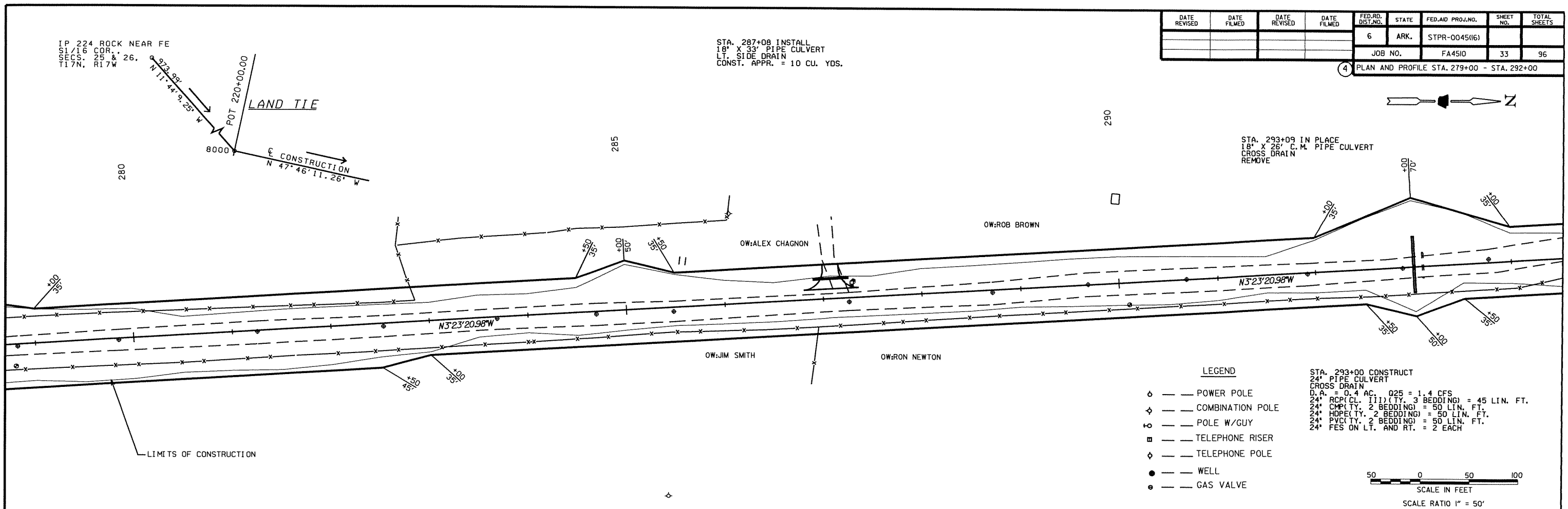


IP 224 ROCK NEAR FE
S1/16 COR. 26,
SECS. 25 & 26,
T17N, R17W

STA. 287+08 INSTALL
18" X 33" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 10 CU. YDS.

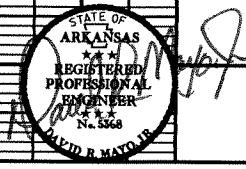
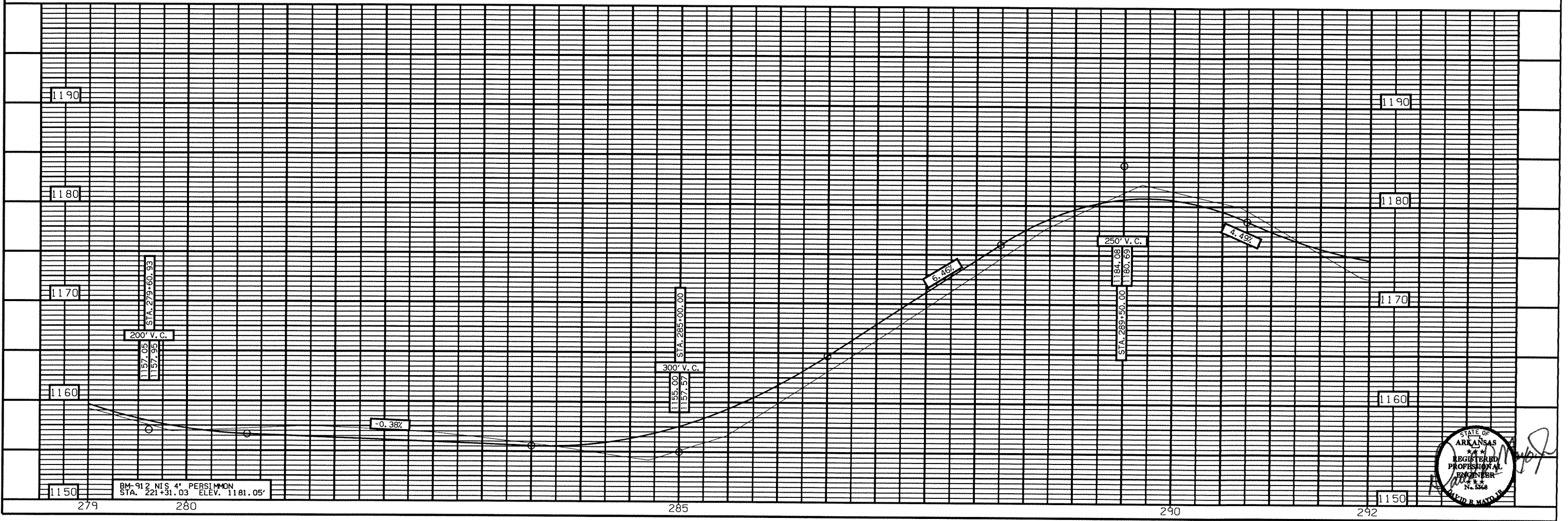
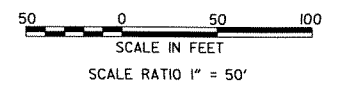
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(6)		
JOB NO. FA4510							33	96

4 PLAN AND PROFILE STA. 279+00 - STA. 292+00



- LEGEND**
- — POWER POLE
 - ◇ — COMBINATION POLE
 - ◐ — POLE W/GUY
 - — TELEPHONE RISER
 - ◊ — TELEPHONE POLE
 - — WELL
 - ⊙ — GAS VALVE

STA. 293+00 CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN
D.A. = 0.4 AC. Q25 = 1.4 CFS
24" RCP (CL. 11) (TY. 3 BEDDING) = 45 LIN. FT.
24" CMP (TY. 2 BEDDING) = 50 LIN. FT.
24" HDPE (TY. 2 BEDDING) = 50 LIN. FT.
24" PVC (TY. 2 BEDDING) = 50 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.		FA4510	34	96
(4) PLAN AND PROFILE STA. 292+00 - STA. 304+00								

PI = 301+71.32
 D = 10°45'00.00"
 L = 719.20 FT.
 e = 71.02'
 Δ = 77°18'49.19" RT.
 T = 426.34 FT.
 PC = 297+44.98
 PT = 304+64.18
 Ls = 250 FT.
 BEGIN SUPER TRANS. = 295+57.48
 BEGIN MAX. SUPER = 298+07.48
 END MAX. SUPER = 304+01.68
 END SUPER TRANS. = 306+51.68

STA. 293+09 IN PLACE
 18" X 26" C.M. PIPE CULVERT
 CROSS DRAIN
 REMOVE
 IP 224 ROCK NEAR FE
 S1/16 COR. 26.
 SECS. 25 & 26.
 T17N, R17W

STA. 293+00 CONSTRUCT
 24" PIPE CULVERT
 CROSS DRAIN
 D.A. = 0.4 AC. Q25 = 1.4 CFS
 24" RCP (CL. III) (TYPE 3 BEDDING) = 45 LIN. FT.
 24" CMP OR PLASTIC (TYPE 2 BEDDING) = 50 LIN. FT.
 24" FES ON LT. AND RT. = 2 EACH

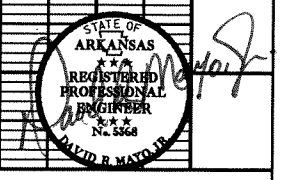
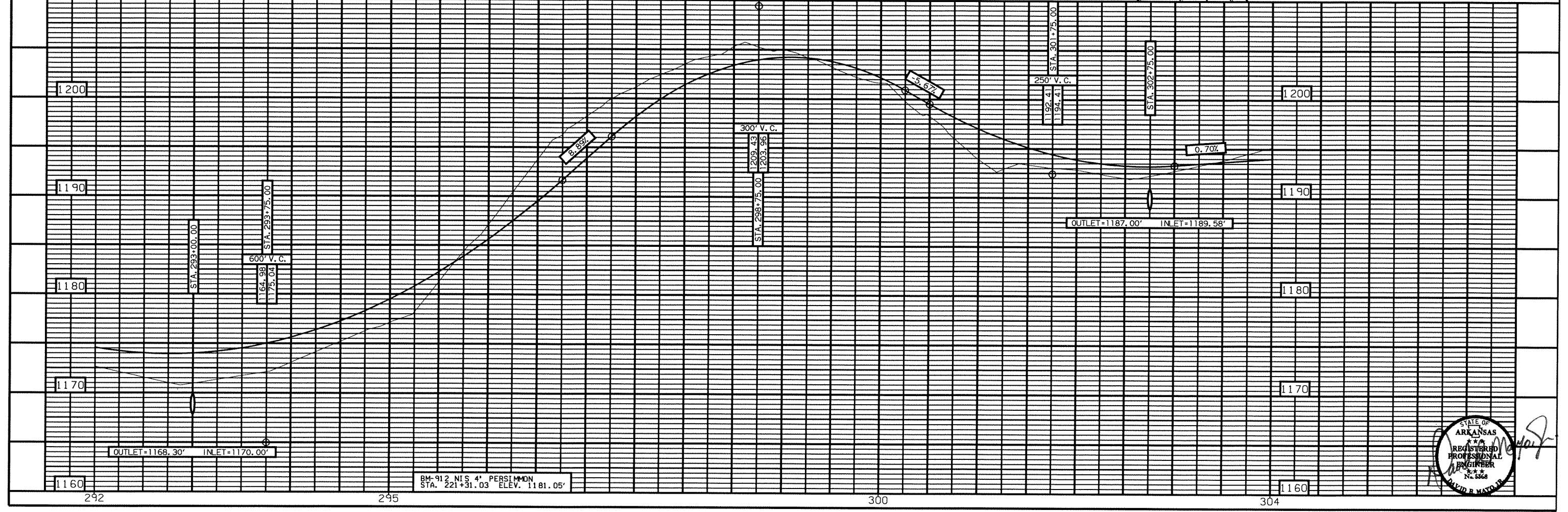
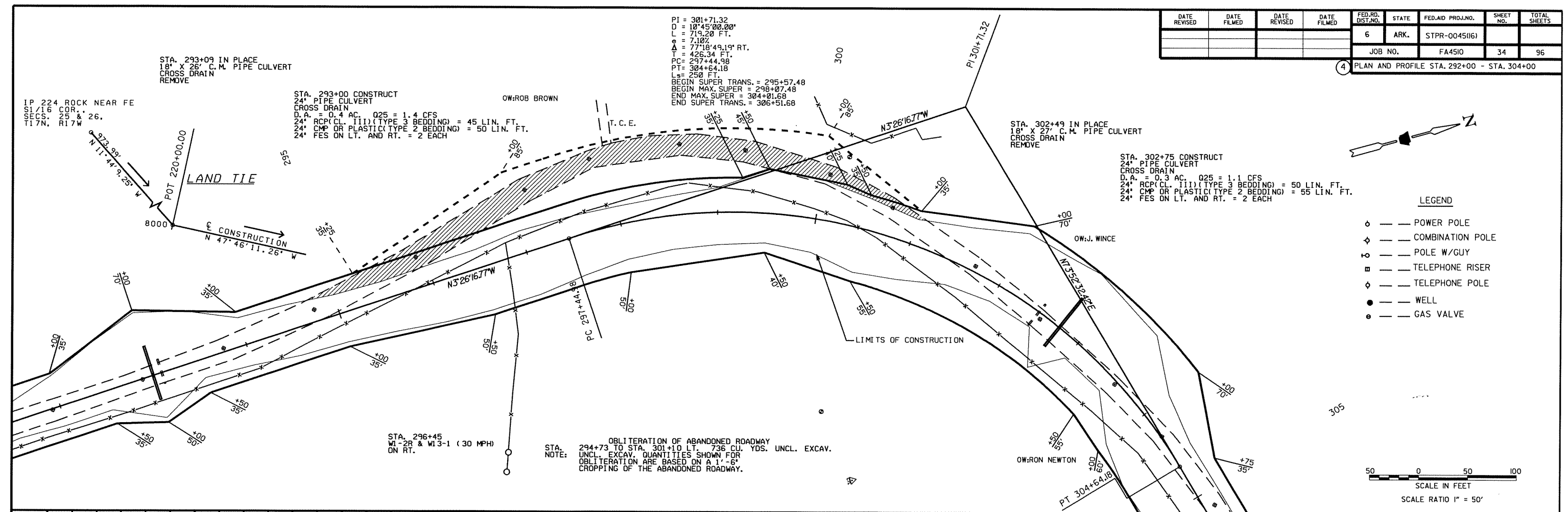
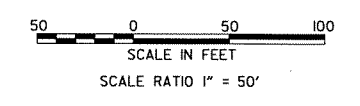
STA. 302+49 IN PLACE
 18" X 27" C.M. PIPE CULVERT
 CROSS DRAIN
 REMOVE

STA. 302+75 CONSTRUCT
 24" PIPE CULVERT
 CROSS DRAIN
 D.A. = 0.3 AC. Q25 = 1.1 CFS
 24" RCP (CL. III) (TYPE 3 BEDDING) = 50 LIN. FT.
 24" CMP OR PLASTIC (TYPE 2 BEDDING) = 55 LIN. FT.
 24" FES ON LT. AND RT. = 2 EACH

STA. 296+45
 W1-2R & W1-1 (30 MPH)
 ON RT.
 STA. 294+73 TO STA. 301+10 LT.
 736 CU. YDS. UNCL. EXCAV.
 UNCL. EXCAV. QUANTITIES SHOWN FOR
 OBLITERATION ARE BASED ON A 1'-6"
 CROPPING OF THE ABANDONED ROADWAY.



- LEGEND**
- — POWER POLE
 - ◊ — COMBINATION POLE
 - ⊙ — POLE W/GUY
 - ⊠ — TELEPHONE RISER
 - ◇ — TELEPHONE POLE
 - — WELL
 - ⊙ — GAS VALVE



STA. 312+55 CONSTRUCT
 24" PIPE CULVERT
 CROSS DRAIN
 D.A. = 0.6 AC. Q25 = 2.1 CFS
 24" RCP (CL. III) (TYPE 3 BEDDING) = 40 LIN. FT.
 24" CMP OR PLASTIC (TYPE 2 BEDDING) = 46 LIN. FT.
 24" FES ON LT. AND RT. = 2 EACH

STA. 313+23 INSTALL
 18" X 32" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. = 5 CU. YDS.

STA. 318+54 IN PLACE
 24" X 55" C.M. PIPE CULVERT
 CROSS DRAIN
 REMOVE

STA. 312+58 IN PLACE
 18" X 29" C.M. PIPE CULVERT
 CROSS DRAIN
 REMOVE

STA. 313+28 IN PLACE
 12" X 29" C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

STA. 313+99 IN PLACE
 14" X 33" C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

STA. 313+73 INSTALL
 18" X 32" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. = 5 CU. YDS.

STA. 315+86 IN PLACE
 24" X 41" C.M. PIPE CULVERT
 CROSS DRAIN
 REMOVE

STA. 319+10
 W1-2R & W13-1 (30 MPH)
 ON LT.

STA. 318+54 CONSTRUCT
 24" PIPE CULVERT
 CROSS DRAIN
 D.A. = 0.1 AC. Q25 = 0.3 CFS
 24" RCP (CL. III) (TYPE 3 BEDDING) = 58 LIN. FT.
 24" CMP OR PLASTIC (TYPE 2 BEDDING) = 63 LIN. FT.
 24" FES ON LT. AND RT. = 2 EACH

STA. 317+60 INSTALL
 18" X 56" PIPE CULVERT
 RT. SIDE DRAIN
 CO. RD. TURNOUT = 20 CU. YDS.

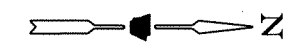
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	36	96	

4 PLAN AND PROFILE STA. 316+00 - STA. 320+00

IP 224 ROCK NEAR FE
 S1/16 COR.,
 SECS. 25 & 26,
 T17N, R17W

LAND TIE

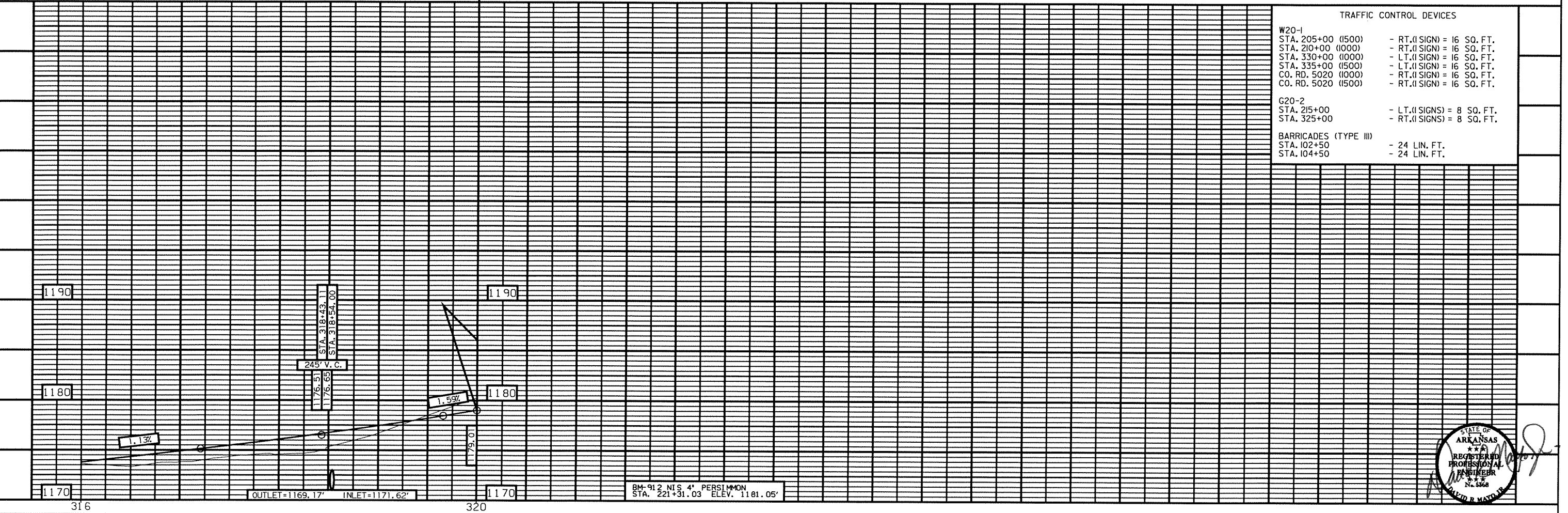
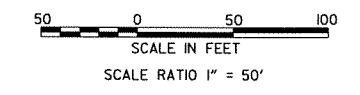
END JOB STA. 320+00.00



LEGEND

- ◊ — POWER POLE
- ◊ — COMBINATION POLE
- ⊕ — POLE W/GUY
- ⊞ — TELEPHONE RISER
- ◊ — TELEPHONE POLE
- — WELL
- ⊙ — GAS VALVE

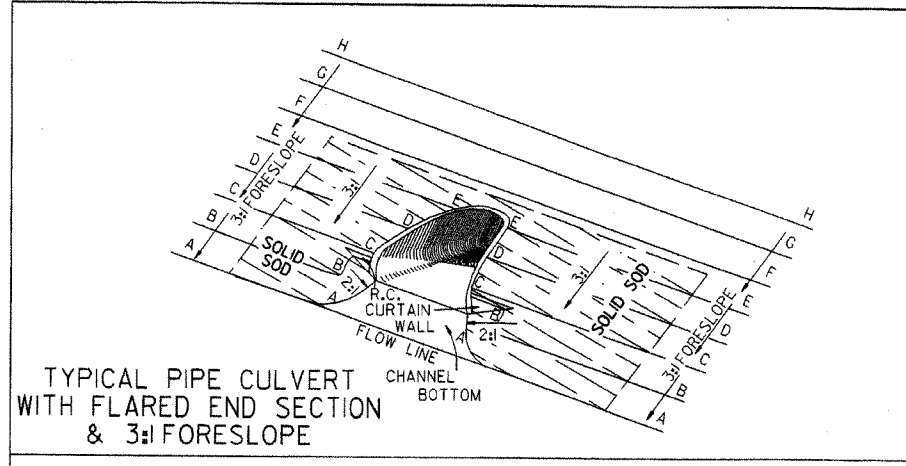
STA. 317+41 TO STA. 317+82 RT. 111 CU. YDS. UNCL. EXCAV.
 NOTE: UNCL. EXCAV. QUANTITIES SHOWN FOR OBLITERATION ARE BASED ON A 1'-6" CROPPING OF THE ABANDONED ROADWAY.



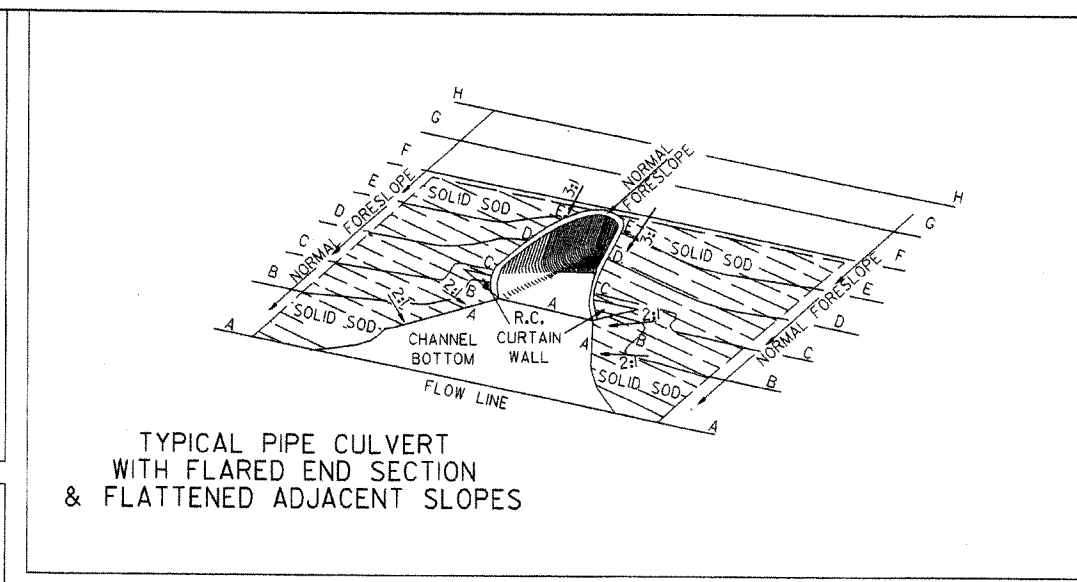
TRAFFIC CONTROL DEVICES	
W20-1	
STA. 205+00 (1500)	- RT.(I) SIGN = 16 SQ. FT.
STA. 210+00 (1000)	- RT.(I) SIGN = 16 SQ. FT.
STA. 330+00 (1000)	- LT.(I) SIGN = 16 SQ. FT.
STA. 335+00 (1500)	- LT.(I) SIGN = 16 SQ. FT.
CO. RD. 5020 (1000)	- RT.(I) SIGN = 16 SQ. FT.
CO. RD. 5020 (1500)	- RT.(I) SIGN = 16 SQ. FT.
G20-2	
STA. 215+00	- LT.(I) SIGNS = 8 SQ. FT.
STA. 325+00	- RT.(I) SIGNS = 8 SQ. FT.
BARRICADES (TYPE III)	
STA. 102+50	- 24 LIN. FT.
STA. 104+50	- 24 LIN. FT.



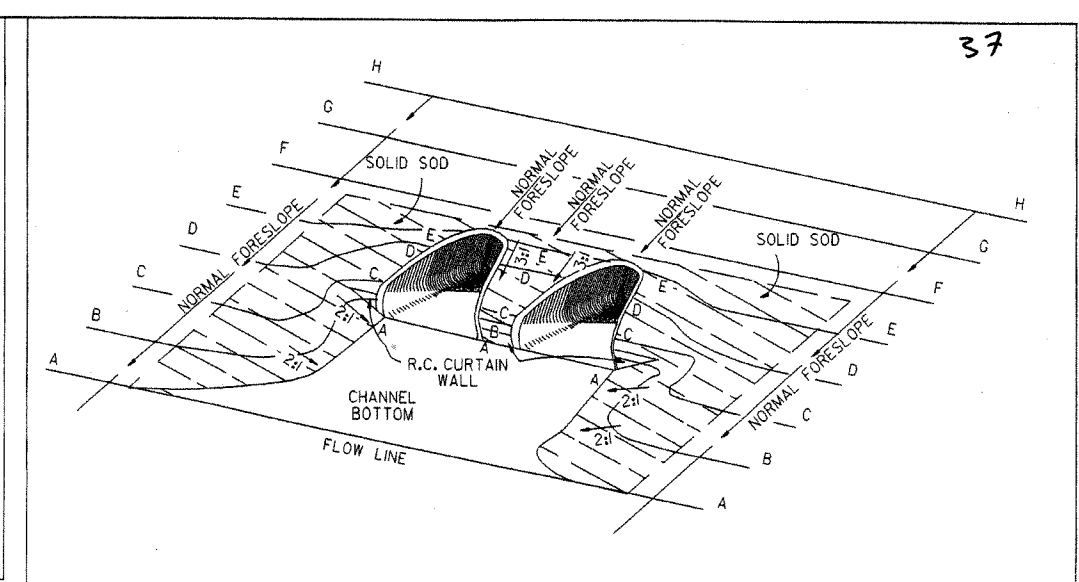
BM 912 NIS 4' PERSIMMON
 STA. 221+31.03 ELEV. 1181.05'



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

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

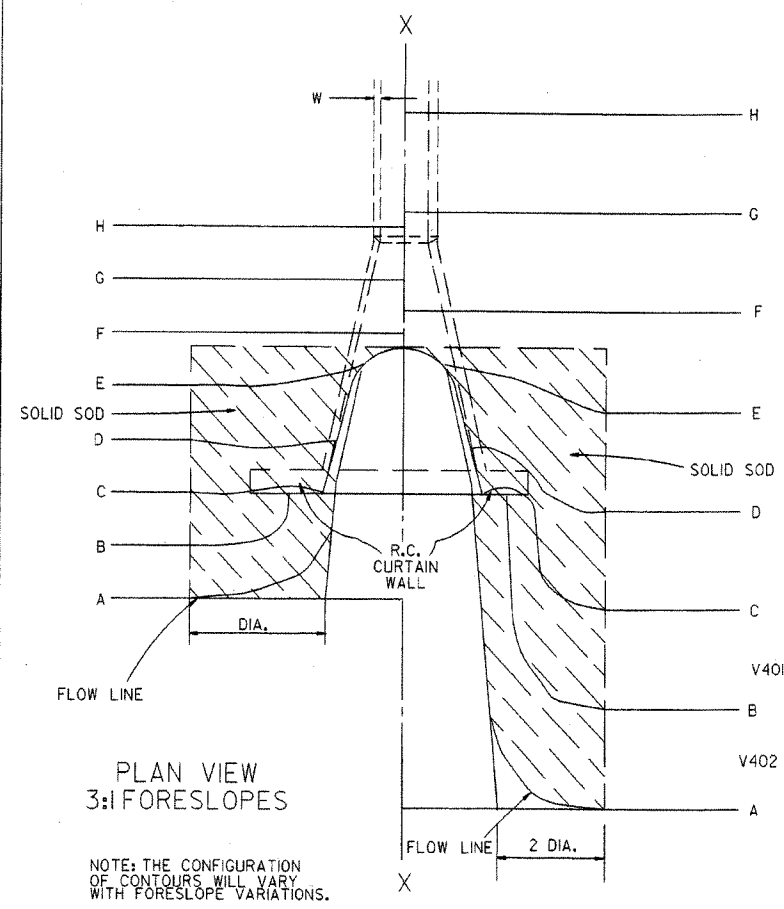
PIPE DIA.	H ₁	L ₁	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"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

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

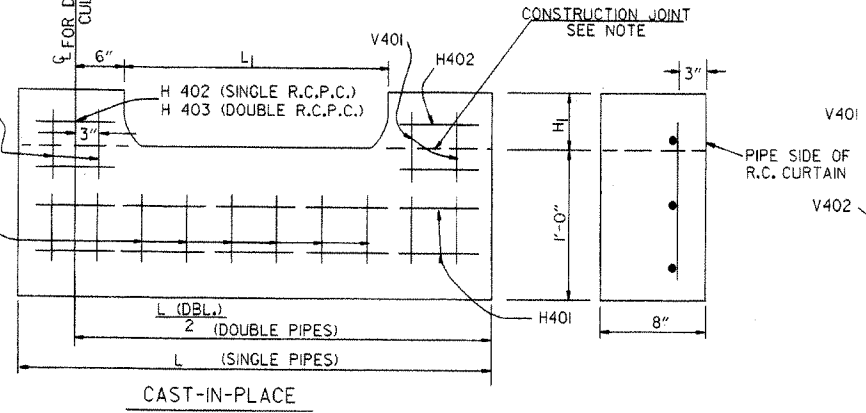
REINFORCING STEEL SCHEDULE

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'-11/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11/2"	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'-11/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11/2"	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.



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



R.C. CURTAIN WALL DETAILS

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

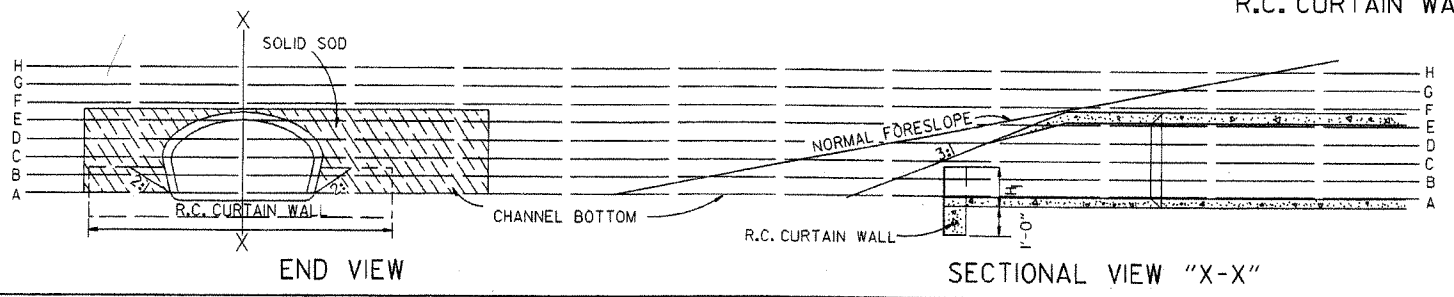
NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION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

SOLID SODDING

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

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

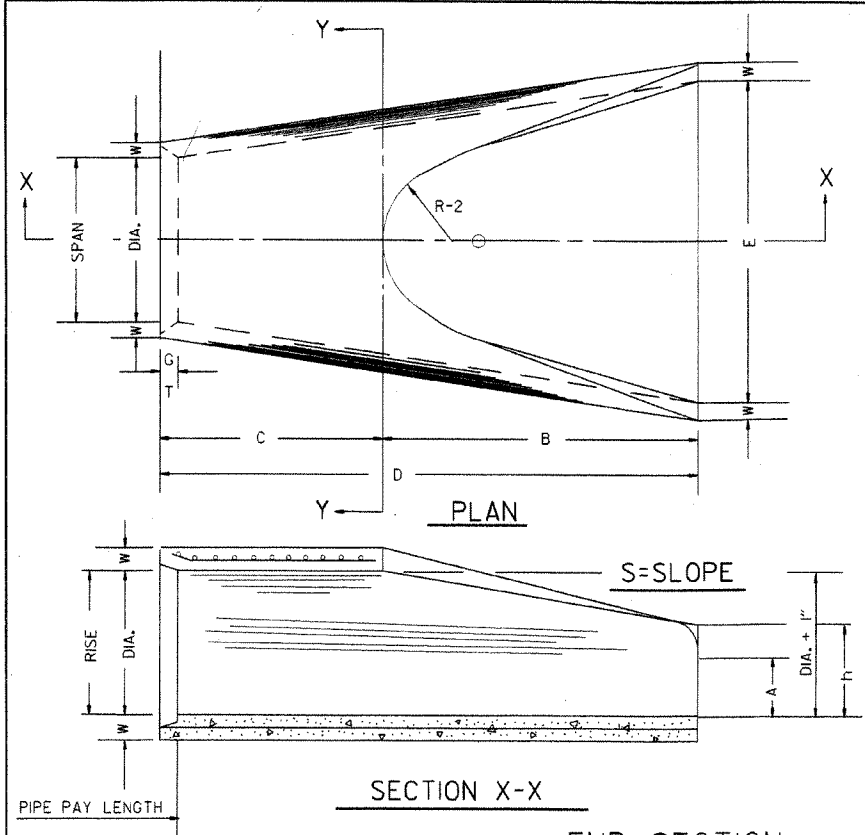
- GENERAL NOTES
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL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



END VIEW

SECTIONAL VIEW "X-X"

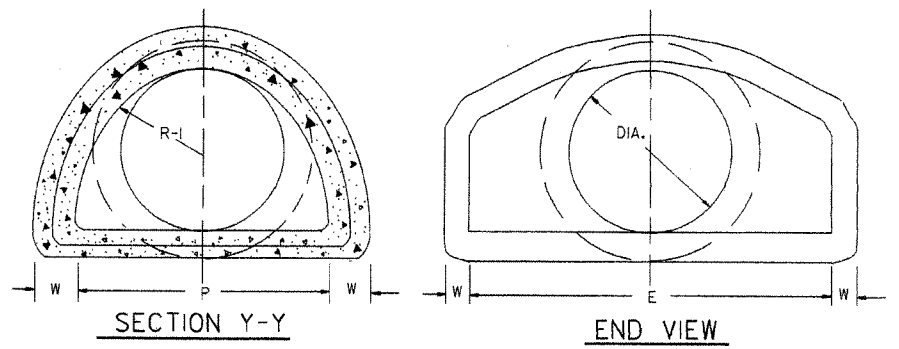
10-18-96	ADDED NOTE TO SOLID SODDING		ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING		
11-3-94	ADDED GENERAL NOTE NO. 4		
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.		
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES		
5-15-80	ADDED PRECAST WALL & GENERAL NOTES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



SECTION X-X
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 9/16"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 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 1/2"	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"	65 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"

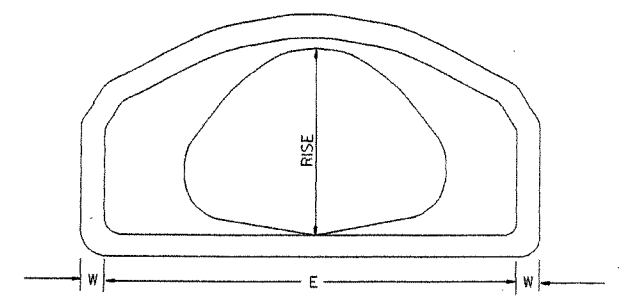


SECTION Y-Y
END VIEW
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

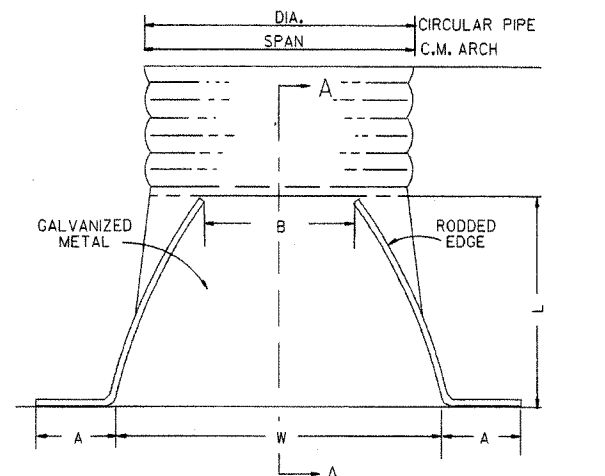
ARCH PIPE

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 3/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 3/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 5/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 3/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 3/8"	24"	5"	2 1/2:1

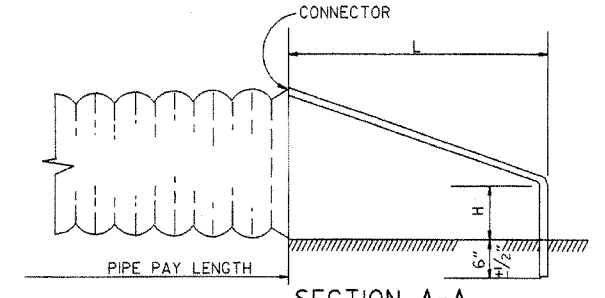
* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



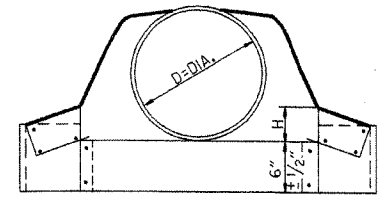
END VIEW
CONCRETE ARCH PIPE



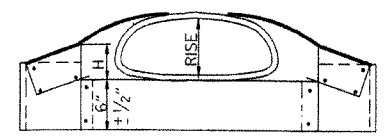
PLAN



SECTION A-A



CIRCULAR PIPE



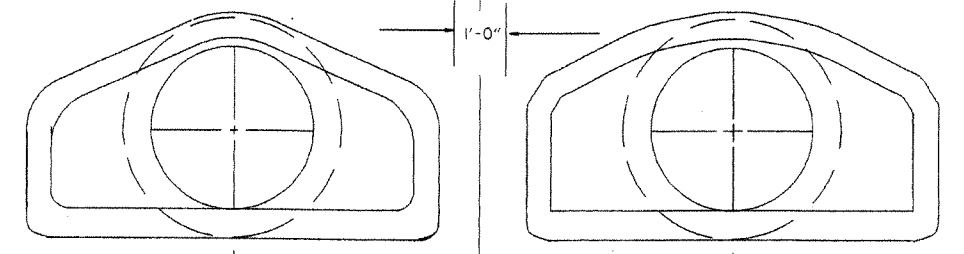
C.M. ARCH PIPE

CIRCULAR PIPE

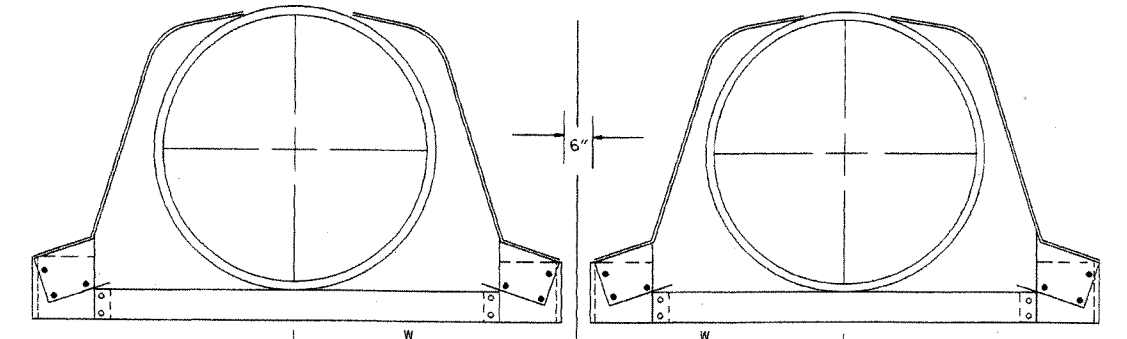
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1 3/4:1
66	12	18	36	12	87	120	1 1/2:1
72	12	18	39	12	87	126	1 1/3:1

C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/4:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



MULTIPLE R.C. PIPE CULVERTS



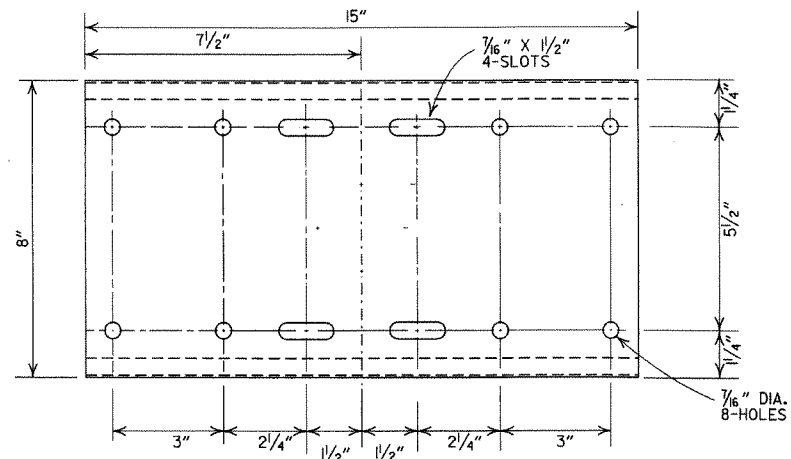
MULTIPLE C.M. PIPE CULVERTS

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

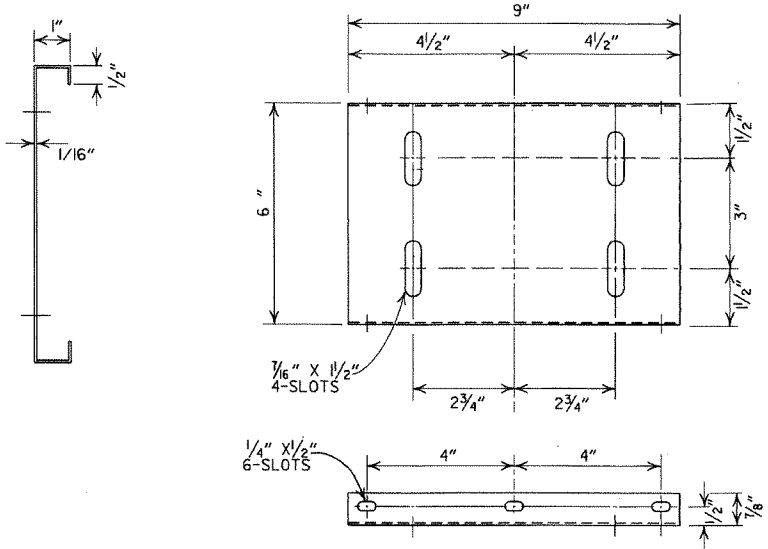
END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

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	500-12-5-74	
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	517-8-22-75	
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	FILMED	

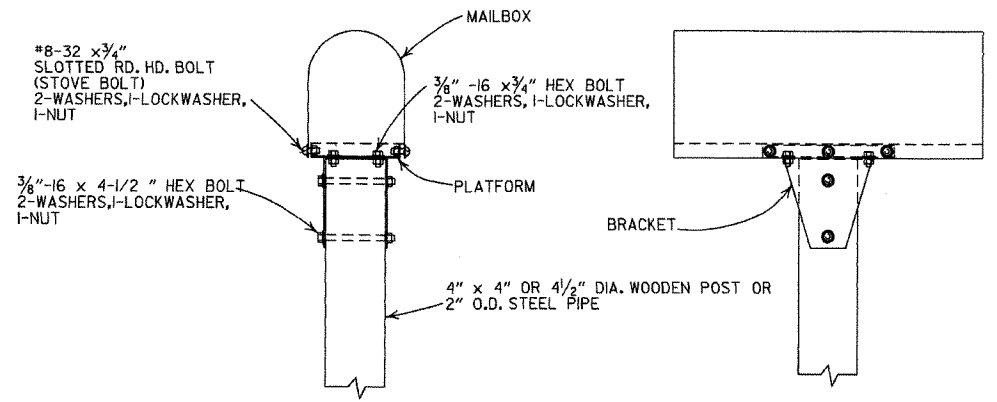
FLARED END SECTION
STANDARD DRAWING FES-2



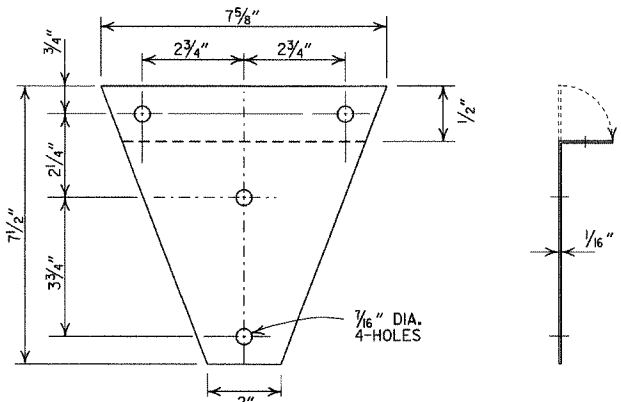
SHELF



PLATFORM

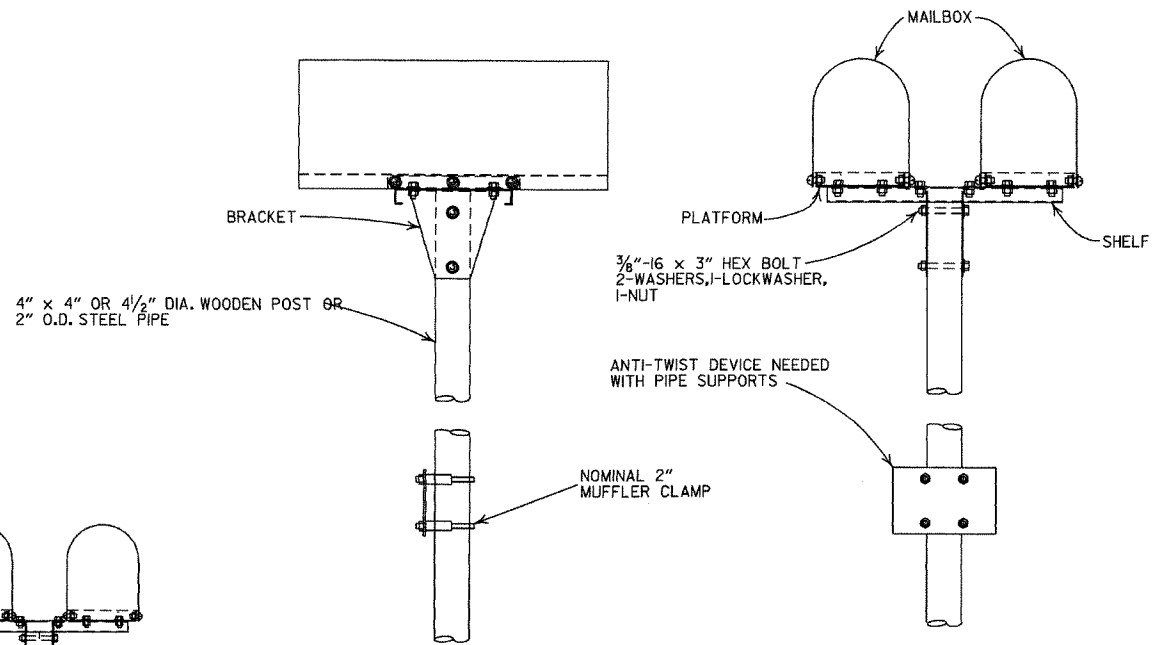


SINGLE INSTALLATION

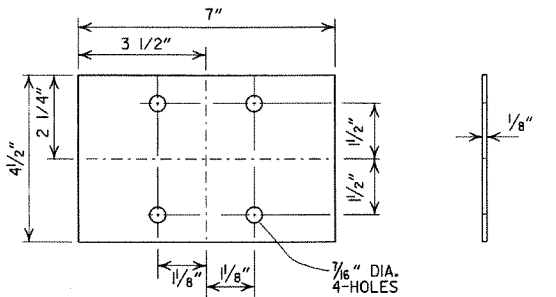


BRACKET

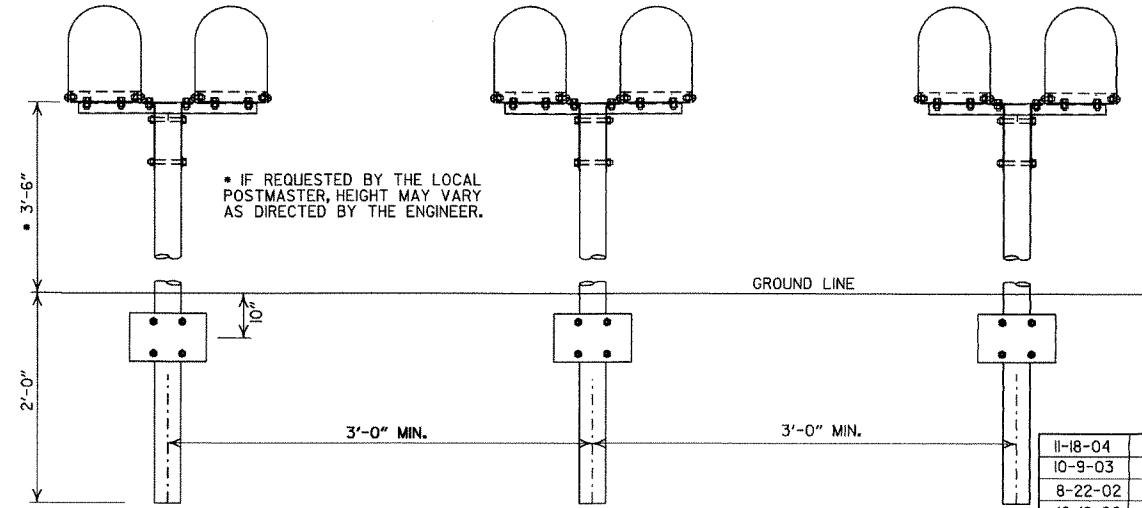
- GENERAL NOTES**
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED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



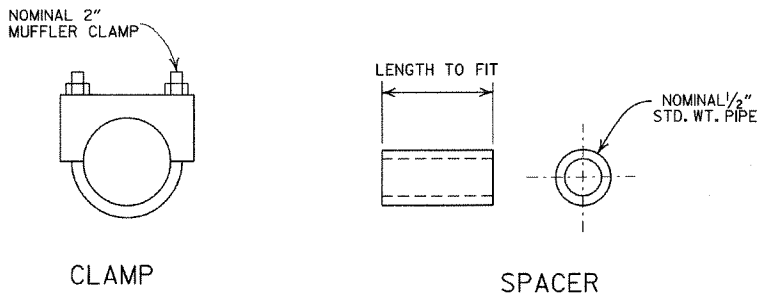
DOUBLE INSTALLATION



ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



CLAMP

SPACER

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

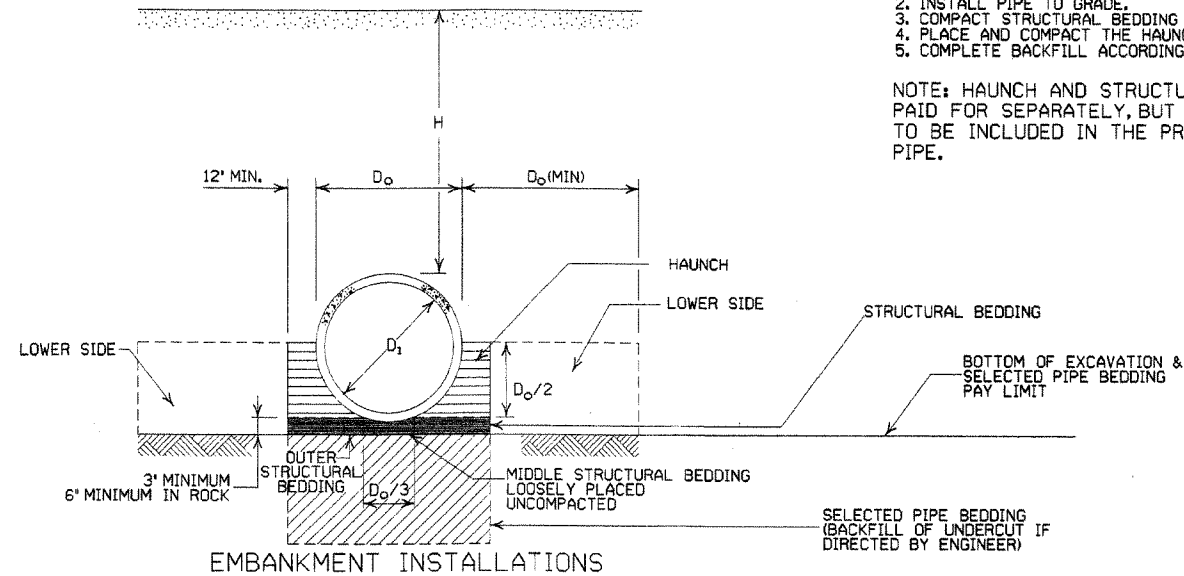
ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS
STANDARD DRAWING MB-1

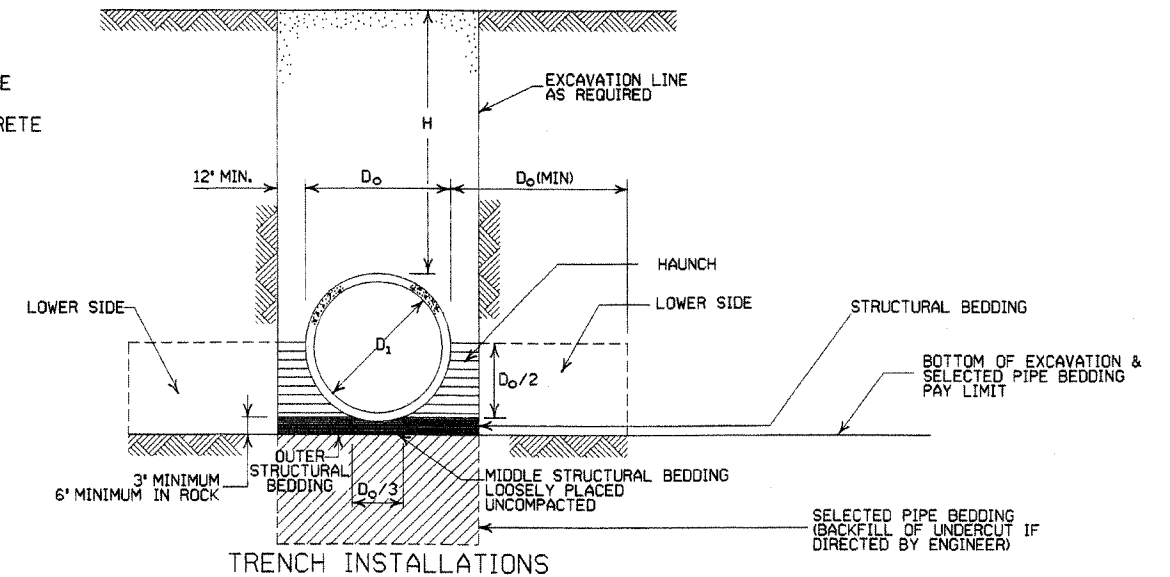
CONSTRUCTION SEQUENCE

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 SPECIFICATIONS.

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.



1. MATERIAL IN THE LOWER SIDE, HAUNCH, AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.



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.

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD 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 3/4	44	26 3/4	27
42	51 1/2	51	31 3/4	31
48	58 1/2	59	36 3/4	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 1/4	77
108	138	138	87 1/2	87
120	154	154	96 3/4	97
132	168 1/4	169	106 1/2	107

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

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-3) OR TYPE 1 INSTALLATION MATERIAL
TYPE 3	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

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

MAXIMUM HEIGHT OF FILL OVER R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	17	27	41
TYPE 3	13	20	32

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

GENERAL NOTES

1. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
2. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
4. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE.
5. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
6. 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.
7. 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.
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 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.'

- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D₀ = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

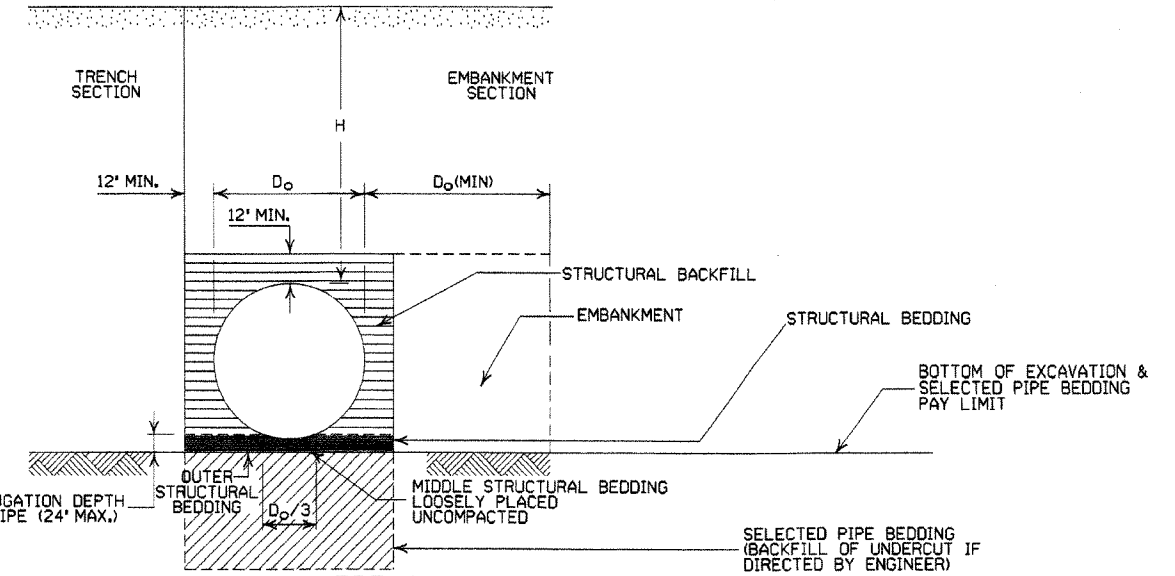
CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND) H-20 LOADING

PIPE DIAMETER (INCHES)	MINIMUM COVER TOP OF PIPE TO TOP OF SUBGRADE (INCHES)	MAX. FILL HEIGHT ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.064	0.079	0.109	0.138	0.168
2 1/2 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL						
12	12	84	61			
15	12	67	73			
18	12	56	61			
24	12	42	46	59		
30	12	34	36	47		
36	12		30	39	41	
42	12		43	46	67	70
48	12		37	45	58	61
3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION** RIVETED, WELDED, HELICAL, OR ROLTED						
36	12	48	68	78	89	101
42	12	41	61	72	83	95
48	12	36	45	57	64	77
54	12	32	40	52	59	71
60	12	29	36	49	53	64
66	12	26	33	47	49	58
72	12	24	30	44	47	53
78	12		28	41	46	49
84	12		26	38	45	46
90	12		24	35	43	45
96	12		22	33	40	44
102	24			31	38	42
108	24			30	35	39
114	24			28	34	37
120	24			27	32	35

- * MAX. FILL CAN BE INCREASED IN THESE DIAMETER PIPES BY USING THE NEXT LARGER CORRUGATION, REFER TO 'CORRUGATED METAL PIPE', REVISED 1970, PUBLISHED BY U.S. DEPARTMENT OF TRANSPORTATION, F.H.W.A., B.P.R.
- ** WHERE THE STANDARD 2 1/2 x 1/2 CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER A 3' x 1' OR 5' x 1' CORRUGATION PIPE OF THE SAME DIAMETER 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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

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.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	*SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-3)

* AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL

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.

GENERAL NOTES

1. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
2. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
4. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE.
5. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
6. 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.
7. 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.'
8. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS 'STRUCTURAL BACKFILL'), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF 'SELECTED PIPE BACKFILL.'

- LEGEND -

- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Hatched Pattern] = STRUCTURAL BACKFILL MATERIAL
- [Diagonal Lines] = UNDISTURBED SOIL
- ELONG. = ELONGATED
- EQUIV. DIA. = EQUIVALENT DIAMETER
- H = FILL COVER HEIGHT OVER PIPE (FEET)

CORRUGATED ALUMINUM PIPE (ROUND) H-20 LOADING

PIPE DIAMETER (INCHES)	MINIMUM COVER TOP OF PIPE TO TOP OF SUBGRADE (INCHES)	MAX. FILL HEIGHT ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 1/2 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL						
12	12	45	45			
18	12	30	30			
24	12	22	22	39		
30	12	18	18	31	32	34
36	12		15	26	27	28
42	12		26	43	43	44
48	12			40	41	43
54	12			35	37	38
60	12				33	34
66	12				30	31
72	12					29

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	
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
0.188	0.1838		7
0.218	0.2145		5
0.249	0.2451		3
0.280	0.2758		1

CORRUGATED METAL PIPE ARCHES (H - 20 LOADING)

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	MIN. COVER TOP OF PIPE TO TOP OF SUBGRADE FOR 2 TONS PER SQ. FT. (INCHES)	STEEL		ALUMINUM	
				MINIMUM THICKNESS REQUIRED INCHES	MAX. FILL HEIGHT ABOVE TOP OF PIPE (IN FT.) FOR THE FOLLOWING CORNER BEARING PRESSURE IN TONS PER SQ. FT.	MINIMUM THICKNESS REQUIRED INCHES	MAX. FILL HEIGHTS ABOVE TOP OF PIPE (IN FT.) FOR THE FOLLOWING CORNER BEARING PRESSURE IN TONS PER SQ. FT.
2 1/2 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL							
15	17x13	3	12	0.064	13	15+	0.060
18	21x15	3	12	0.064	12	15+	0.060
21	24x18	3	12	0.064	10	15+	0.060
24	28x20	3	12	0.064	10	15	0.060
30	35x24	3	12	0.079	9	14	0.075
36	42x29	3 1/2	12	0.079	9	13	0.075
42	49x33	4	12	0.079	8	12	0.105
48	57x38	5	12	0.109	8	12	0.135
54	64x43	6	12	0.109	8	12	0.135
60	71x47	7	12	0.138	8	12	0.164
66	77x52	8	12	0.168	8	12	0.164
72	83x57	9	12	0.168	9	13	
3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION** RIVETED, WELDED, OR HELICAL							
36	40x31	5	12	0.079	15	15+	
42	46x36	6	12	0.079	15	15+	
48	53x41	7	12	0.079	15	15+	
54	60x46	8	12	0.079	15	15+	
60	66x51	9	12	0.079	15	15+	
66	73x55	12	12	0.079	15	15+	
72	81x59	14	18	0.079	15	15+	
78	87x63	14	18	0.079	14	15+	
84	95x67	16	18	0.109	13	15+	
90	103x71	16	24	0.109	12	15+	
96	112x75	18	24	0.109	11	15+	
102	117x79	18	24	0.109	10	15	
108	128x83	18	24	0.138	9	14	

- 1 WHERE BEARING PRESSURE EXCEEDING 2 TONS PER SQUARE FOOT IS REQUIRED FOR GIVEN FILL HEIGHTS, THE FOUNDATION MATERIAL SHALL BE INVESTIGATED TO DETERMINE THE BEARING CAPACITY.
- ** WHERE THE STANDARD 2 1/2 x 1/2 CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A 3' x 1' OR 5' x 1' CORRUGATION PIPE OF THE SAME DIAMETER 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
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

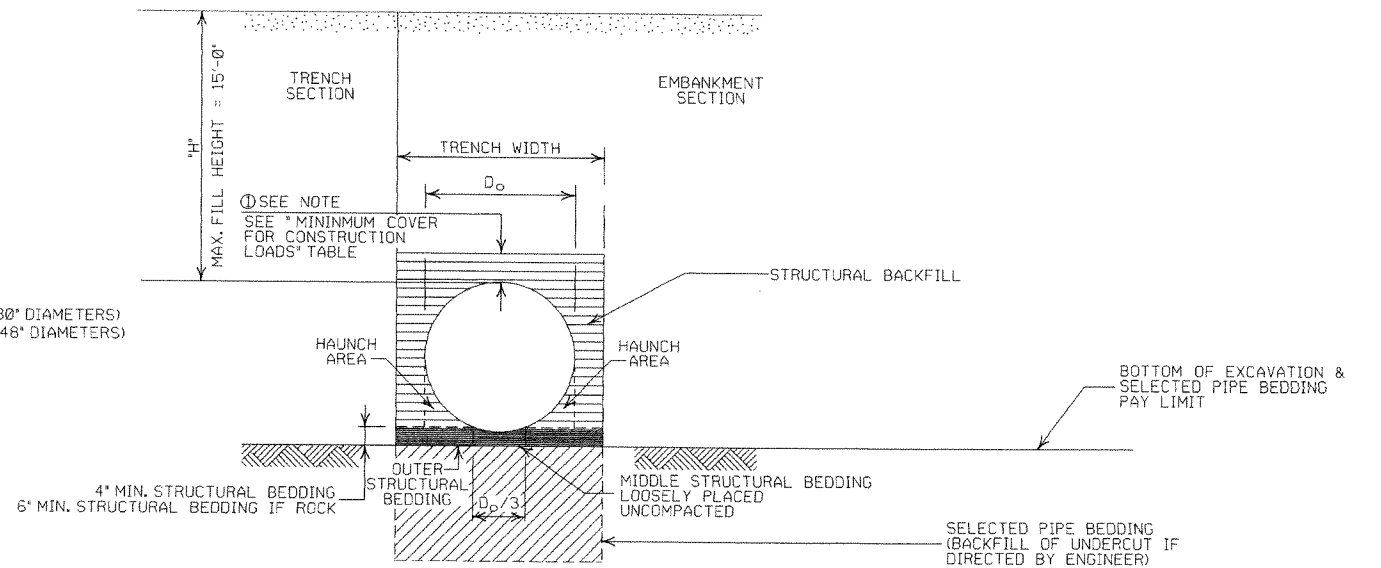
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
- SM3 WILL NOT BE ALLOWED.
- STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HOPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" > OR = 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

① NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (32" - 48" DIAMETERS)



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

- STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

CONSTRUCTION SEQUENCE

- PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
- INSTALL PIPE TO GRADE.
- COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
- THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
- PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

===== = STRUCTURAL BACKFILL MATERIAL
||||| = UNDISTURBED SOIL

GENERAL NOTES

- PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
- THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
- IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
- WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
- WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
- FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
- HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOILTIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 36.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURERS

11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION
PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)
STANDARD DRAWING PCP-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2, SM-3 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MAXIMUM FILL HEIGHT
BASED ON STRUCTURAL BACKFILL

	(SM-1, SM-2, OR SM-4)	(SM-3)
PIPE DIAMETER	"H"	"H"
18"	45'-0"	26'-0"
24"	45'-0"	26'-0"
30"	40'-0"	26'-0"
36"	40'-0"	26'-0"

MINIMUM TRENCH WIDTH
BASED ON FILL HEIGHT "H"

	TRENCH WIDTH (FEET)	
PIPE DIAMETER	"H" < 10'-0"	"H" > OR = 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

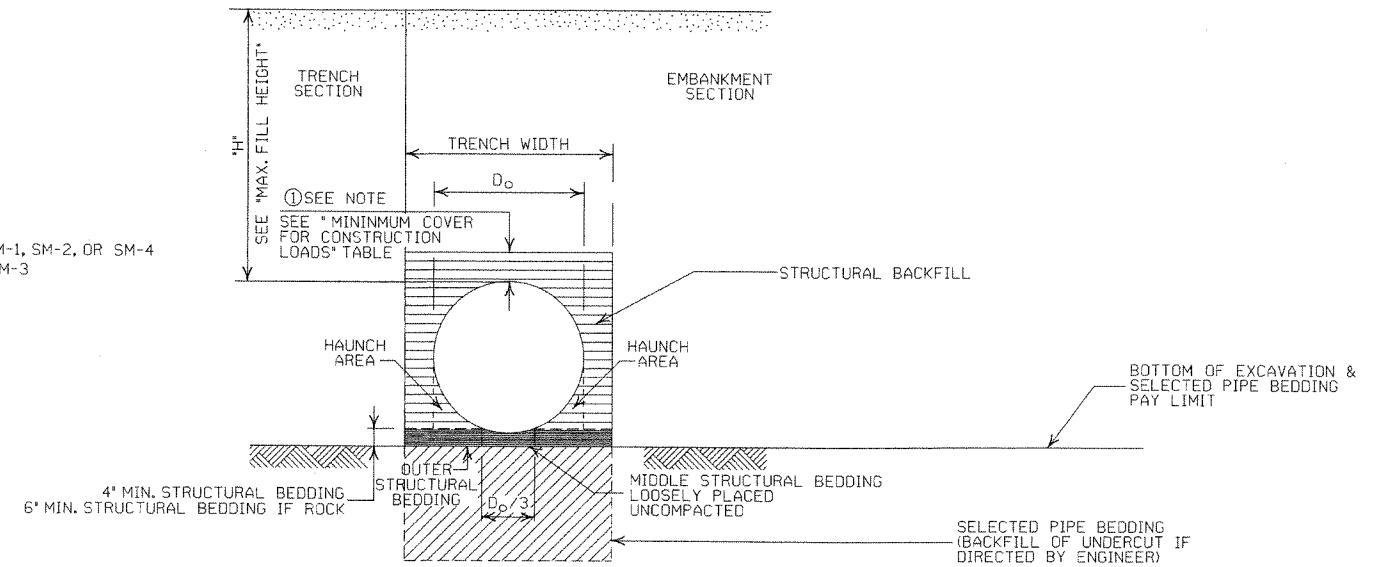
MULTIPLE INSTALLATION OF
PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MINIMUM COVER FOR
CONSTRUCTION LOADS

	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
PIPE DIAMETER	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



① NOTE:
12" MIN FOR SM-1, SM-2, OR SM-4
24" MIN FOR SM-3

TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

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. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

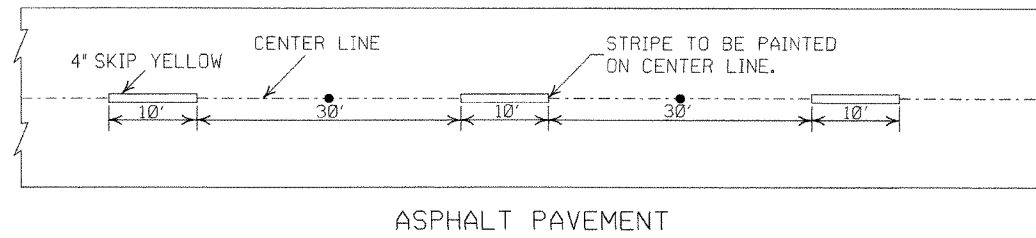
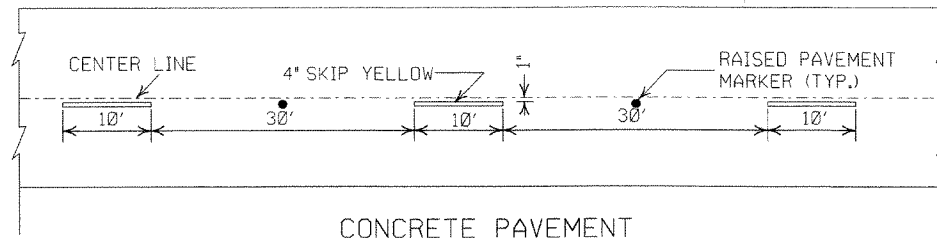
1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
2. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
3. 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.
4. 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."
5. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
6. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
7. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
8. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOILTIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION
PLASTIC PIPE CULVERT (PVC F949)
STANDARD DRAWING PCP-2

NOTES:

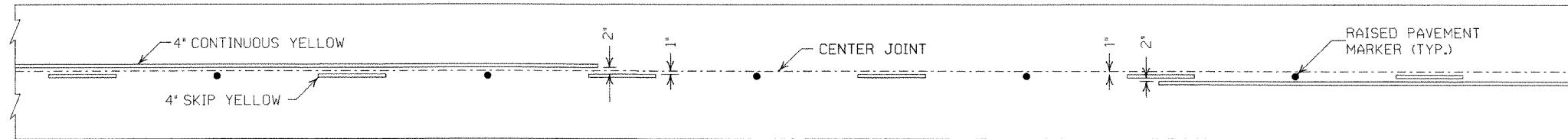
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED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



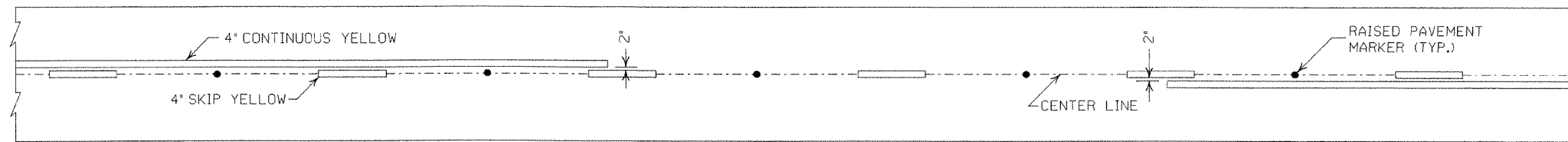
CONCRETE PAVEMENT

ASPHALT PAVEMENT

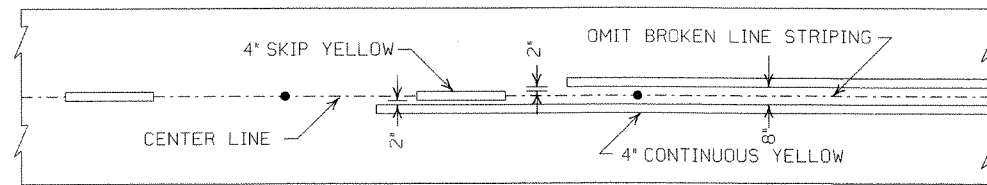
BROKEN LINE STRIPING



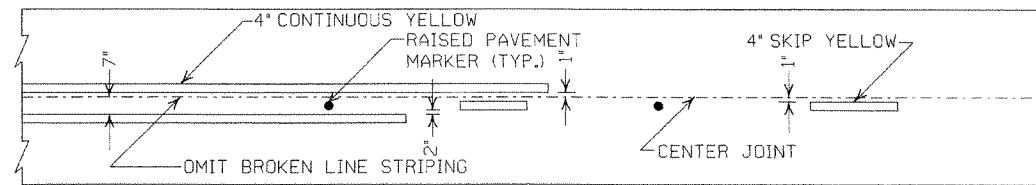
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

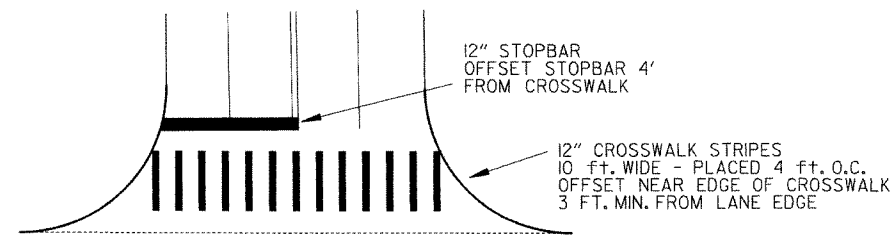


ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



CROSSWALK AND STOPBAR DETAILS

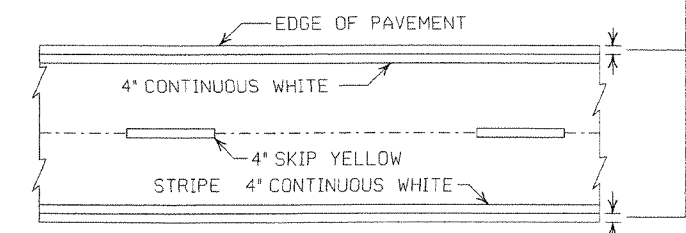
GENERAL NOTES:

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

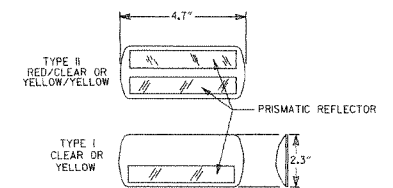
THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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

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



PAVEMENT EDGE LINE MARKING



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
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

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		70 MPH	
	e	Ls (FT)	e	Ls (FT)	e	Ls (FT)	e	Ls (FT)	e	Ls (FT)	e	Ls (FT)
	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 30'	N.C.		0.021		0.031	200	0.037	225	0.043	250	0.046	275
1° 45'	N.C.		0.025		0.036		0.043		0.049		0.054	
2° 00'	R.C.		0.028	175	0.040		0.048	300	0.055		0.062	300
2° 15'	R.C.		0.031		0.045		0.053		0.061		0.070	300
2° 30'	0.021		0.034		0.049	250	0.056		0.067		0.078	350
2° 45'	0.023		0.037		0.053		0.063		0.072		0.085	350
3° 00'	0.025	150	0.040	200	0.057		0.067	230	0.077	260	0.091	350
3° 15'	0.027		0.043		0.061		0.072	245	0.082	275	0.096	350
3° 30'	0.029		0.046		0.065	205	0.076	255	0.086	285	0.098	360
3° 45'	0.031	200	0.049		0.069	215	0.080	265	0.090	295	0.100	360
4° 00'	0.033		0.051		0.072	225	0.083	270	0.093	305		400
4° 30'	0.037		0.056		0.078	240	0.087	280	0.096	315		
5° 00'	0.040		0.061		0.083	250	0.091	295	0.098	320		
5° 30'	0.043		0.065	185	0.088	260	0.094	300				
6° 00'	0.046		0.070	190	0.092	270	0.096	305				
6° 30'	0.050		0.074	200	0.095	280	0.098	310				
7° 00'	0.053		0.078	210	0.098	285						
7° 30'	0.056		0.081	215	0.099	290						
8° 00'	0.058		0.084	220	0.100	290						
8° 30'	0.061		0.087	225								
9° 00'	0.063		0.089	230								
10° 00'	0.068	160	0.094	235								
11° 00'	0.072	170	0.097	250								
12° 00'	0.075	175	0.099	250								
13° 00'	0.080	180	0.100	250								
14° 00'	0.083	190										
15° 00'	0.086	195										
16° 00'	0.089	200										
17° 00'	0.091	200										
18° 00'	0.093	205										
19° 00'	0.095	210										
20° 00'	0.097	215										
21° 00'	0.098	215										
22° 00'	0.099	215										
23° 00'	0.099	215										
24° 00'	0.100	220										

D MAX = 24° 45'

ABBREVIATIONS

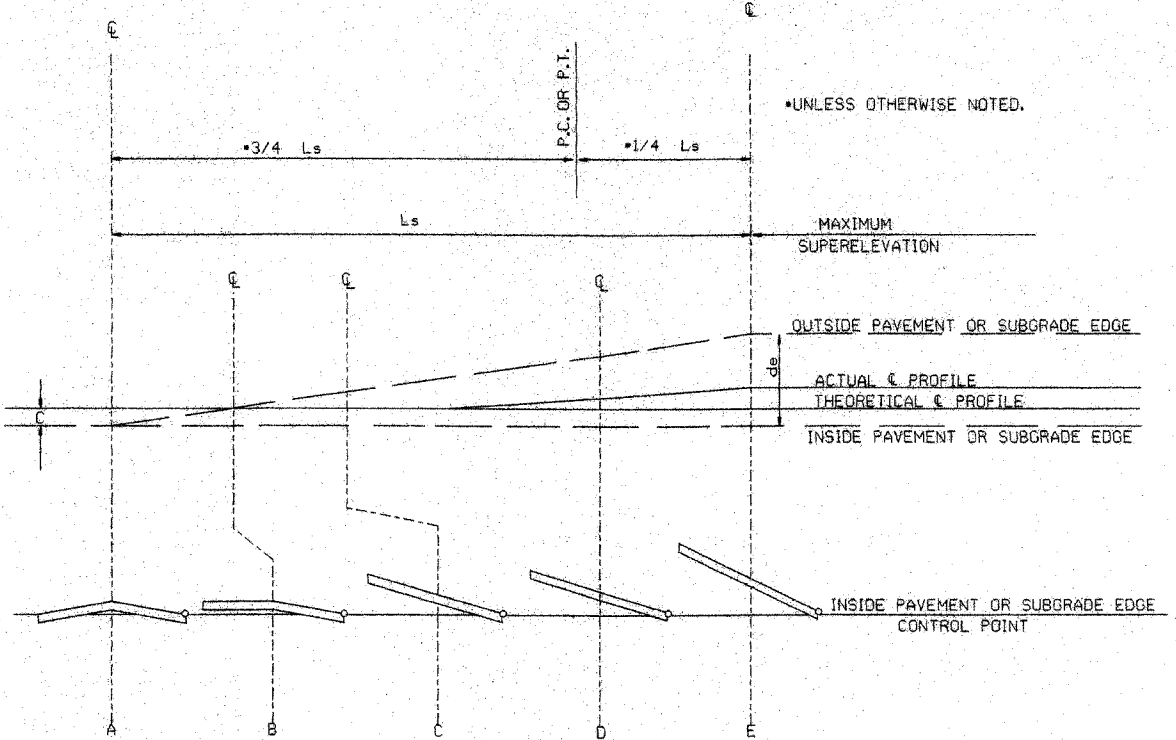
- NC - NORMAL CROWN
- RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
- e - RATE OF SUPERELEVATION (FT. PER FT.)
- Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
- L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
- d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)
- C - NORMAL CROWN (FT.)

GENERAL NOTES

- ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
- SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
- LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
- PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

- 3 LANE UNDIVIDED - - - - +20%
- 4 LANE UNDIVIDED - - - - +50%
- 5 LANE UNDIVIDED - - - - +80%
- 6 LANE UNDIVIDED - - - - +100%

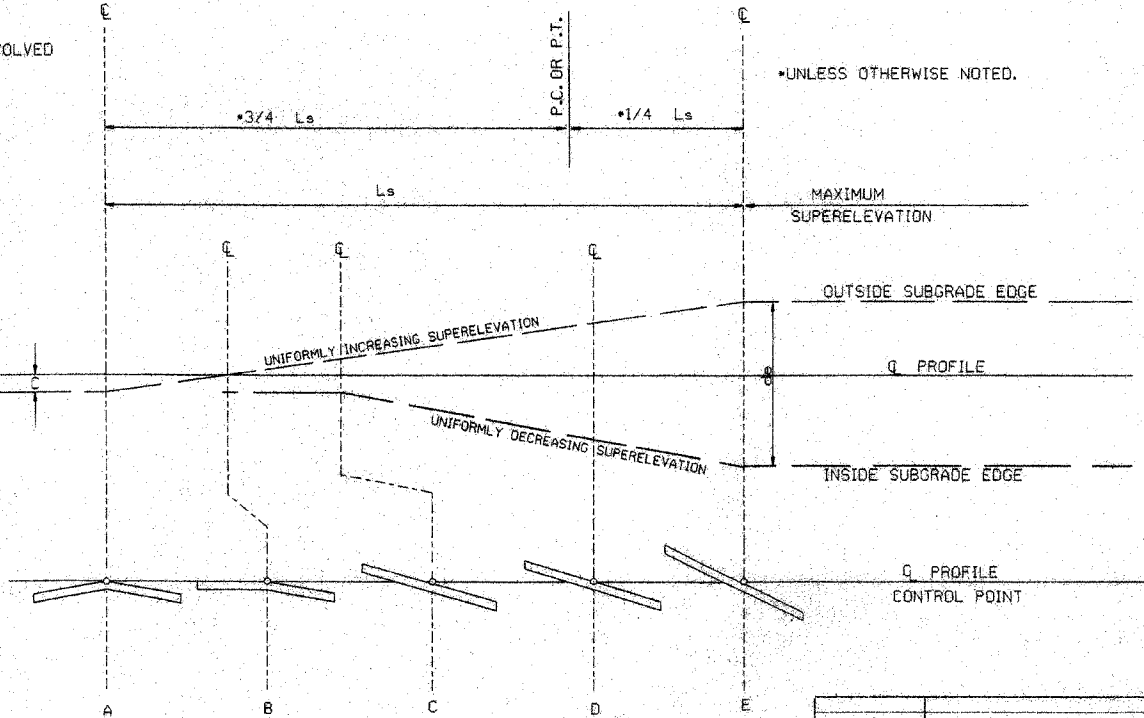
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.
RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$




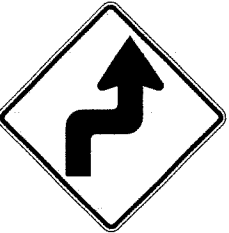
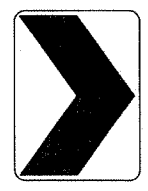



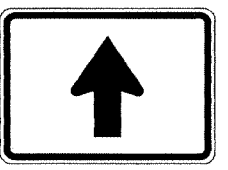
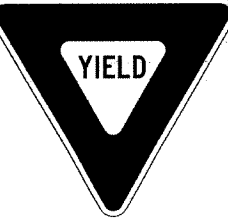

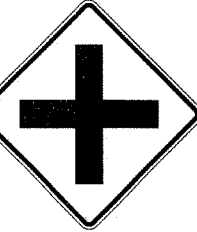

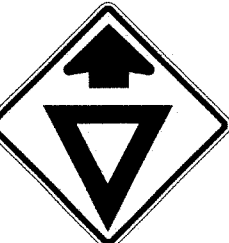
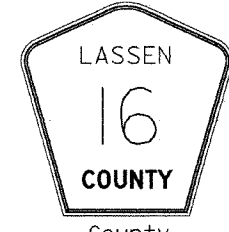
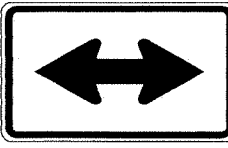
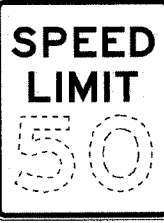

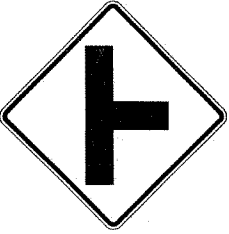



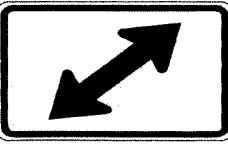

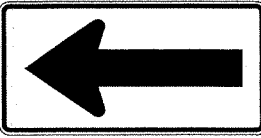
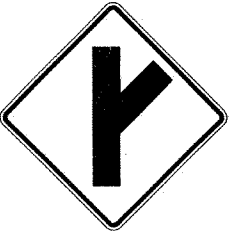

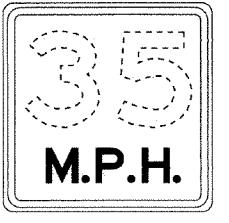
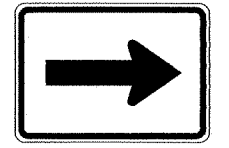


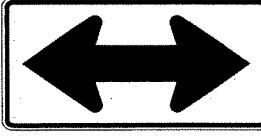
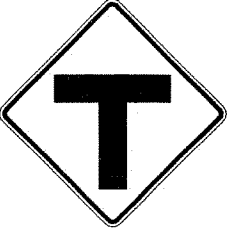

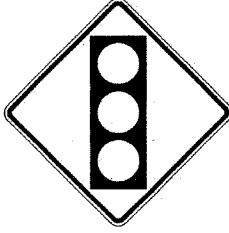



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

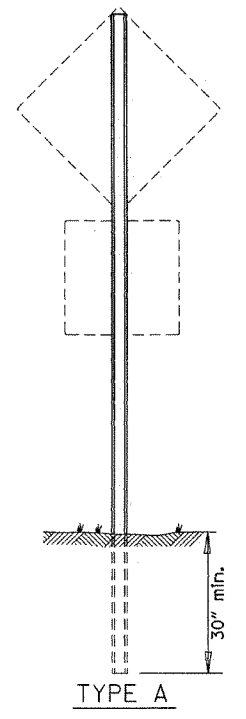
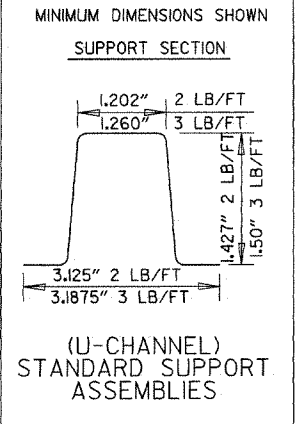
TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

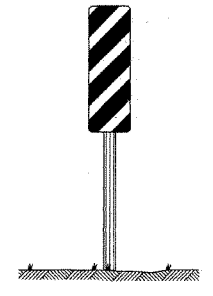
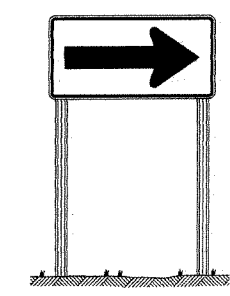
 RI-1 30"X30"	 WI-3 30"X30" (LT. OR RT.)	 WI-8 18"X24"	 W2-5 30"X30"	 W3-1 36"X36"	 W5-1 36"X36"	 M6-3 21"X15"
 RI-2 36"X36"X36"	 WI-4 30"X30" (LT. OR RT.)	 W2-1 30"X30"	 SI-1 36"X36"	 W3-2 36"X36"	 LASSEN 16 COUNTY County Route Marker MI-5 24"X24"	 M6-4 21"X15"
 R2-1 24"X30"	 WI-5 30"X30" (LT. OR RT.)	 W2-2 30"X30"	 W5-2 36"X36"	 W8-3 36"X36"	 RI-3 12"X6"	 M6-5 21"X15"
 WI-1 30"X30" (LT. OR RT.)	 WI-6 48"X24"	 W2-3 30"X30" (LT. OR RT.)	 W5-3 36"X36"	 WI3-1 18"X18"	 M6-1 21"X15"	 M6-6 21"X15"
 WI-2 30"X30" (LT. OR RT.)	 WI-7 48"X24"	 W2-4 30"X30"	 W10-1 36" DIAMETER	 W3-3 36"X36"	 M6-2 21"X15"	 S4-3 24"X8"  S4-2 24"X10"

NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.

NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.



NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.

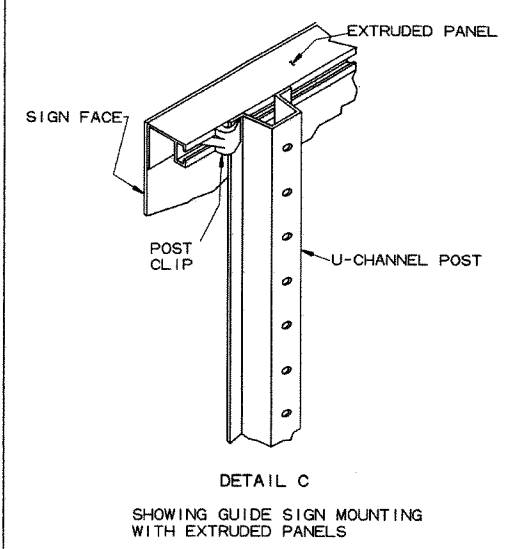
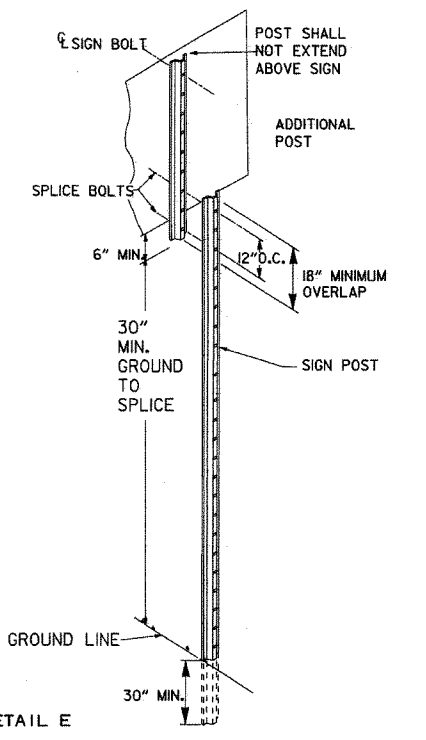
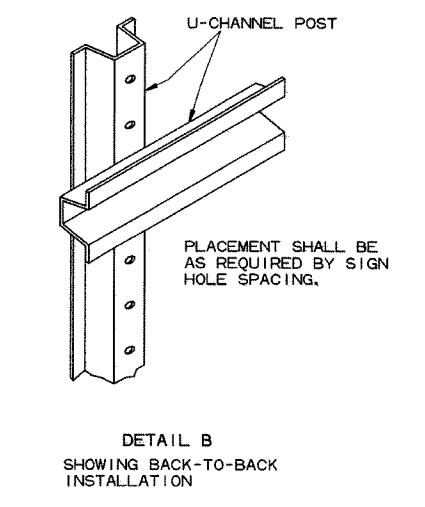
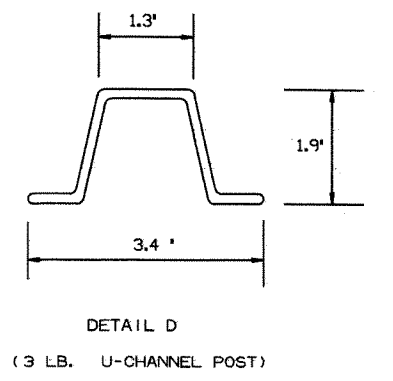
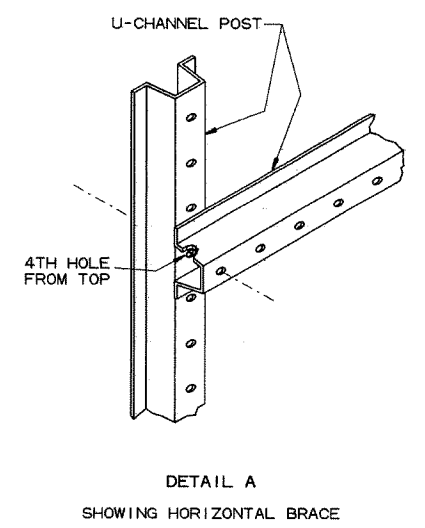
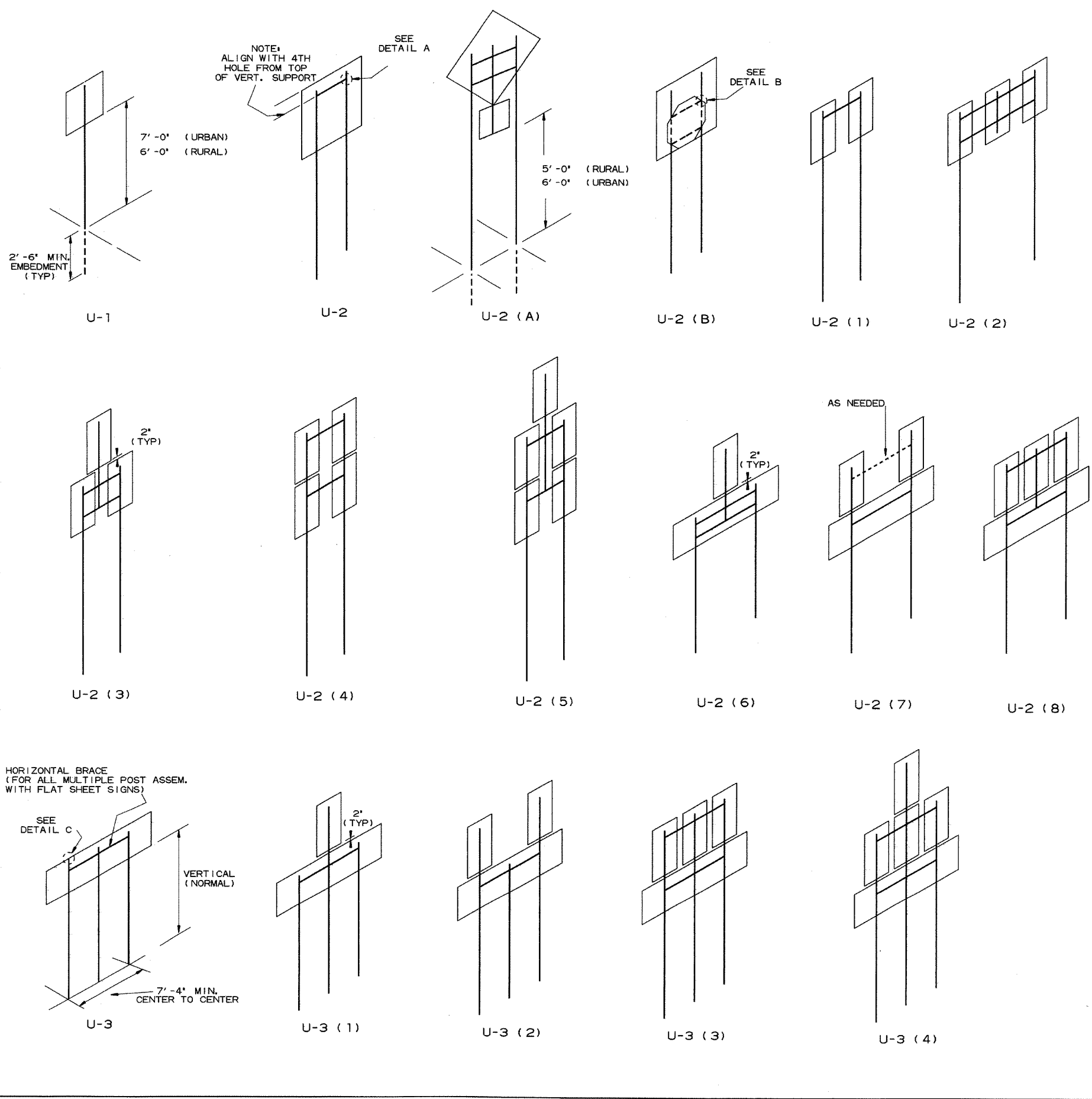


MINIMUM WEIGHT
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

STANDARD HIGHWAY SIGNS

4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED WI-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2" - 3"	
	ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72
DATE	REVISION	DATE FILMED

SUPPORT ASSEMBLIES
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES
STANDARD DRAWING SHS-1



NOTES:

SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (E).

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. CARRIAGE BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS.


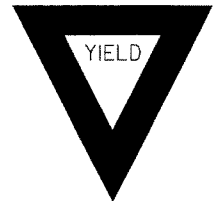
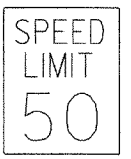
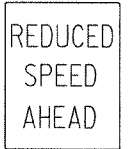




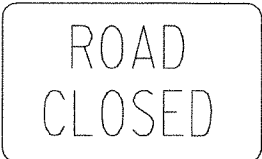
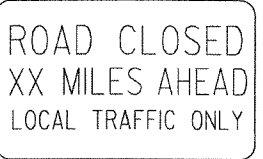
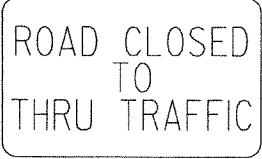

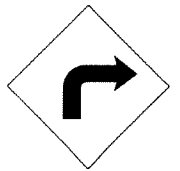
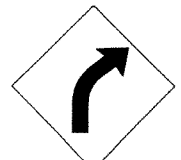
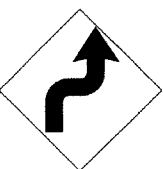

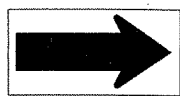
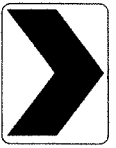
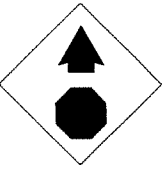
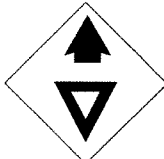
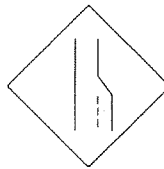



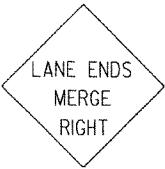


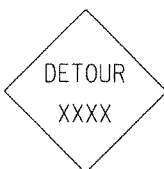
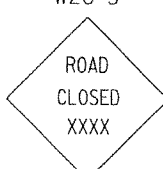


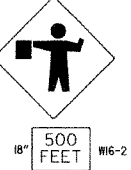

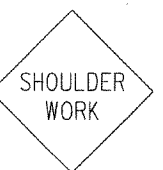
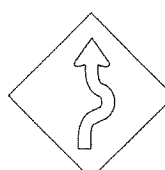
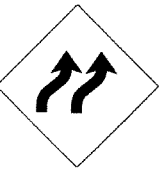


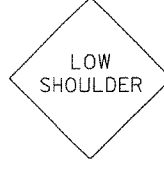

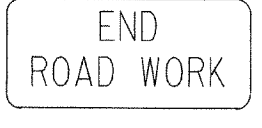
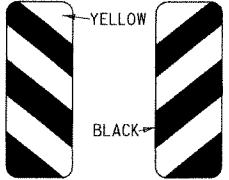


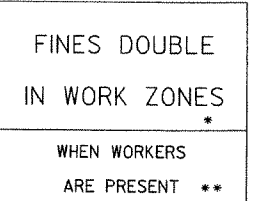
ALL SIGN POSTS SHALL BE PLUMB.

DATE	REVISION	FILMED
10-9-03	REMOVED ROUND POST & REVISED SPACING	10-9-03
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

STANDARD DRAWING SHS-2

<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>WI-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>WI-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>WI-3</p>  <p>STD. 48"x48"</p>	<p>WI-4</p>  <p>STD. 48"x48"</p>	<p>WI-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>WI-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>18" 500 FEET 18" 24" W16-2</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>WI-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

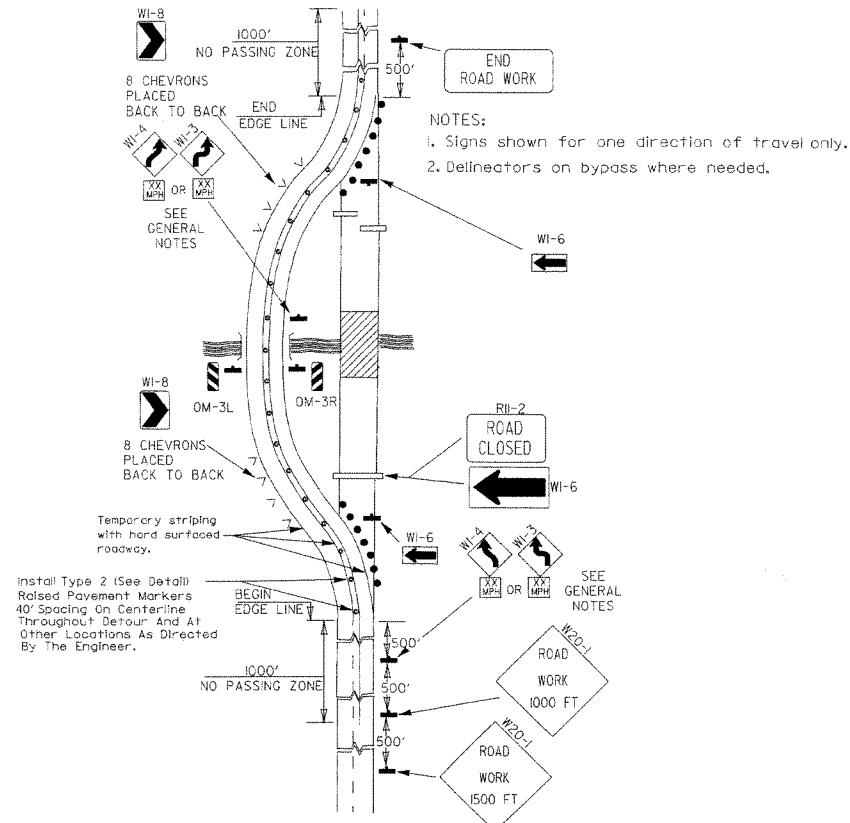
GENERAL NOTES:

- 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.

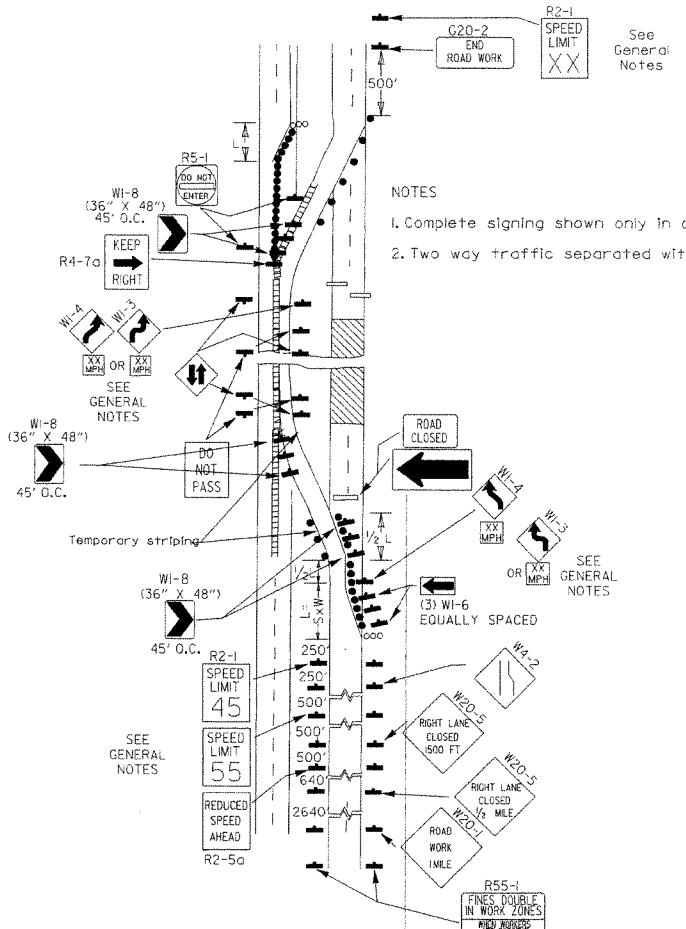
* NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

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	
DATE	REVISION	FILMED

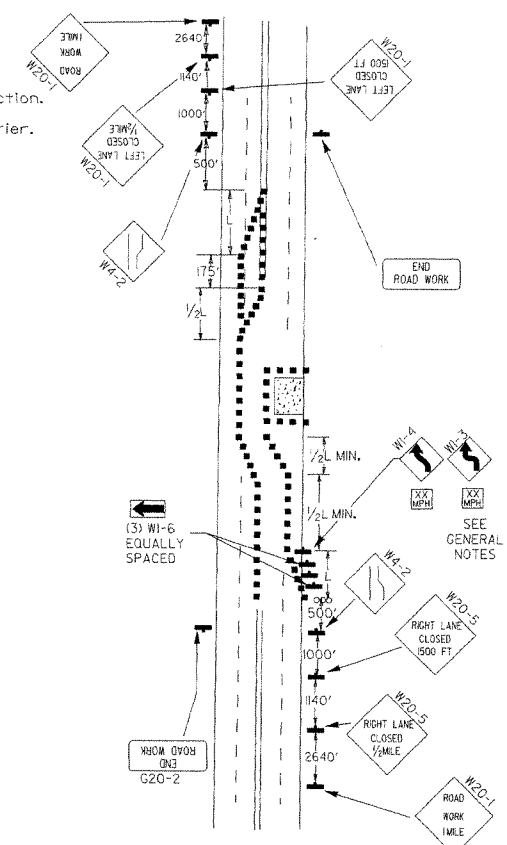
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



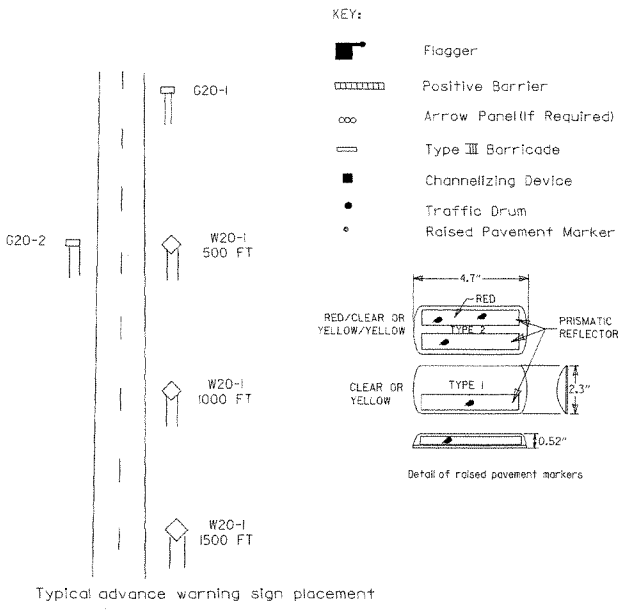
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



(B) Typical application - 4-lane divided roadway where one roadway is closed.

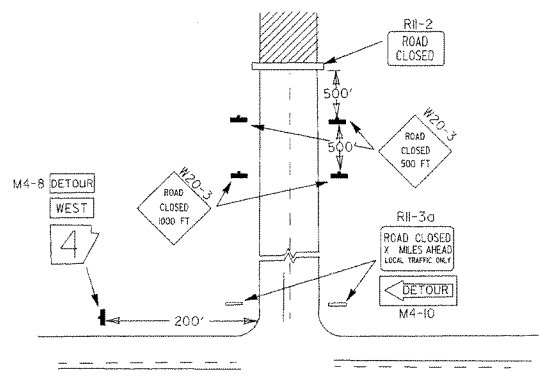


(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.

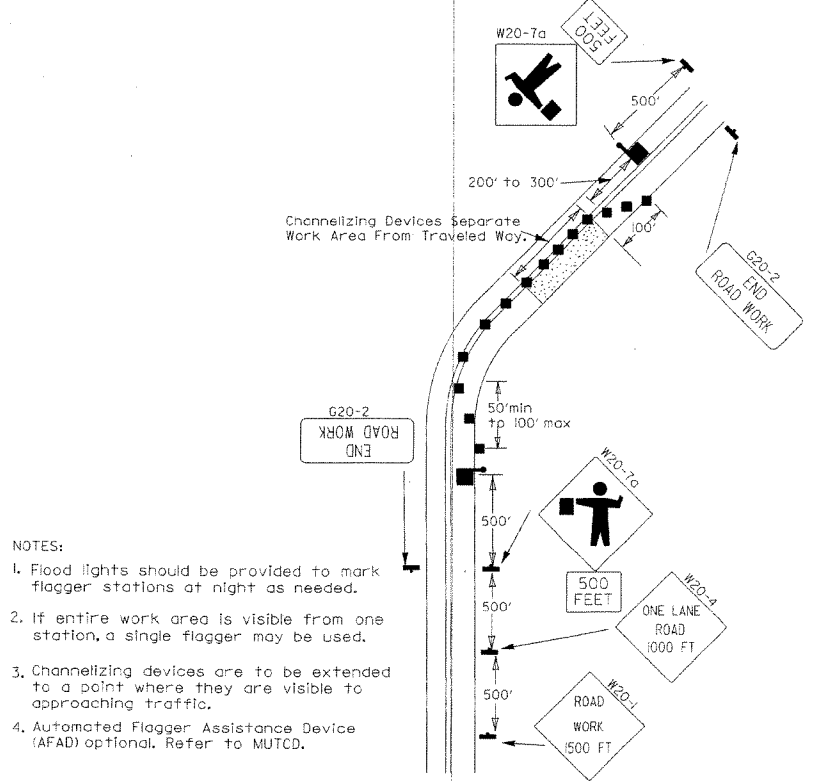


Taper formulae:
 $L = 5xW$ for speeds of 45mph or more.
 $L = \frac{WS^2}{60}$ for speeds of 40mph or less.
 Where:
 L = Minimum length of taper.
 S = Numerical value of posted speed limit prior to work or 85th percentile speed.
 W = Width of offset.

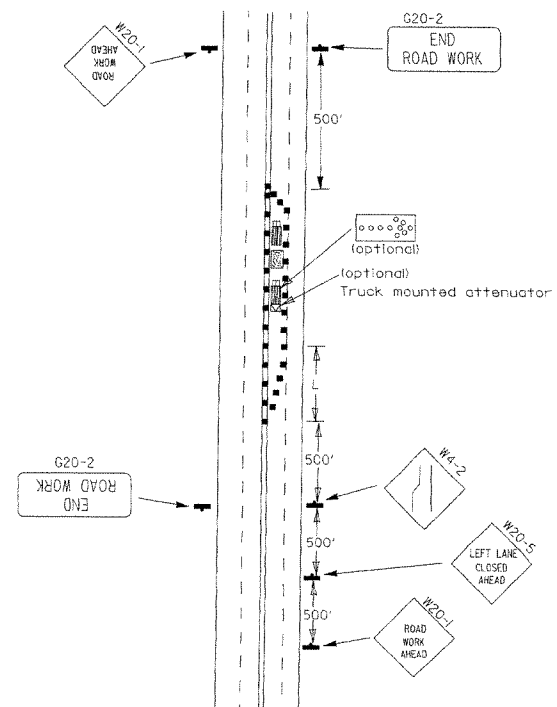
GENERAL NOTES:
 1. Advisory speed posted on W1-3 or W1-4 curve warning signs to be determined at site. Use W1-4 when speed is greater than 30mph and W1-3 when 30mph or less.
 2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(45) shall be installed to match original speed limit.
 3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(55) shall be installed to match original speed limit.
 4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit, or as directed by the Engineer.
 5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
 6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
 7. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a 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.



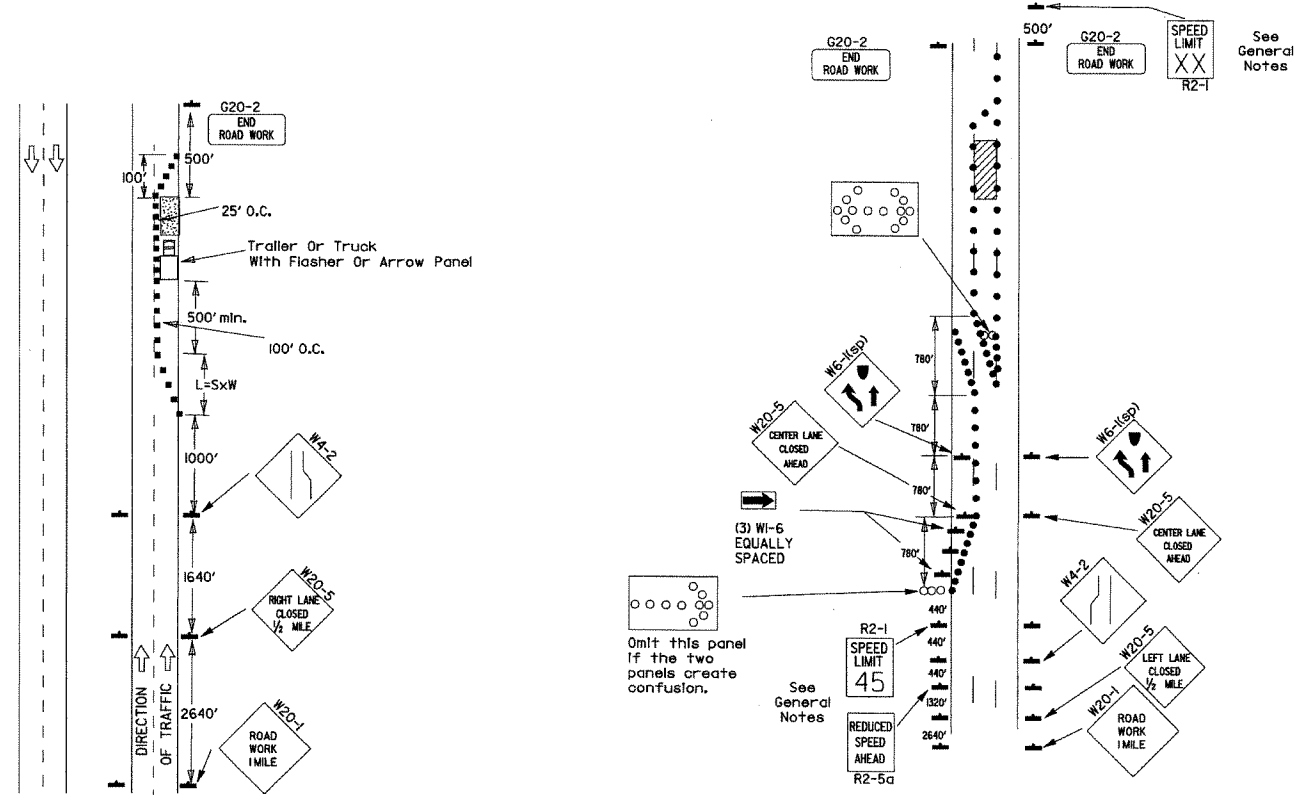
(E) Typical application of traffic control devices on 2-lane highway where one lane is closed and flagging is provided.



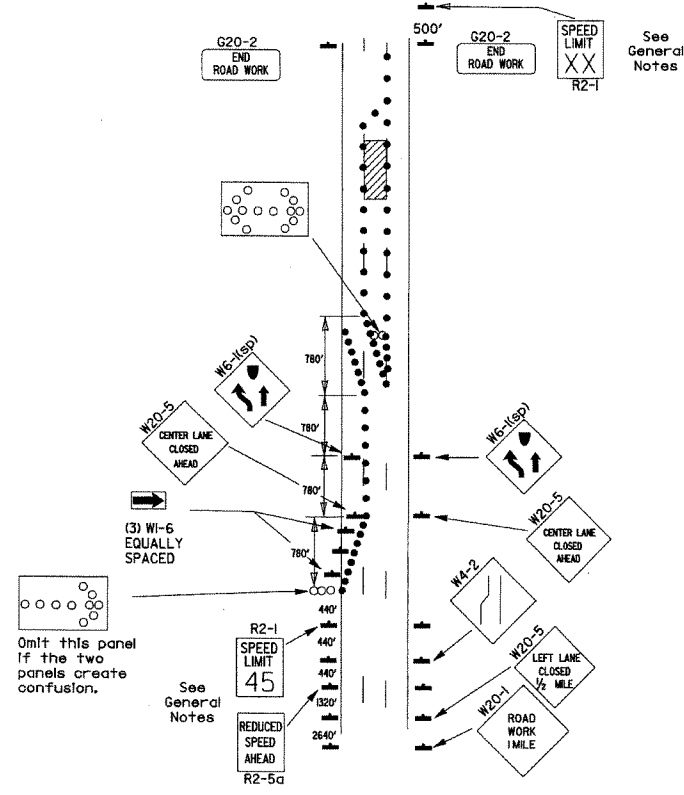
(F) Typical application - 4-lane undivided roadway with inside lane closed.

DATE	REVISION	FILMED
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.

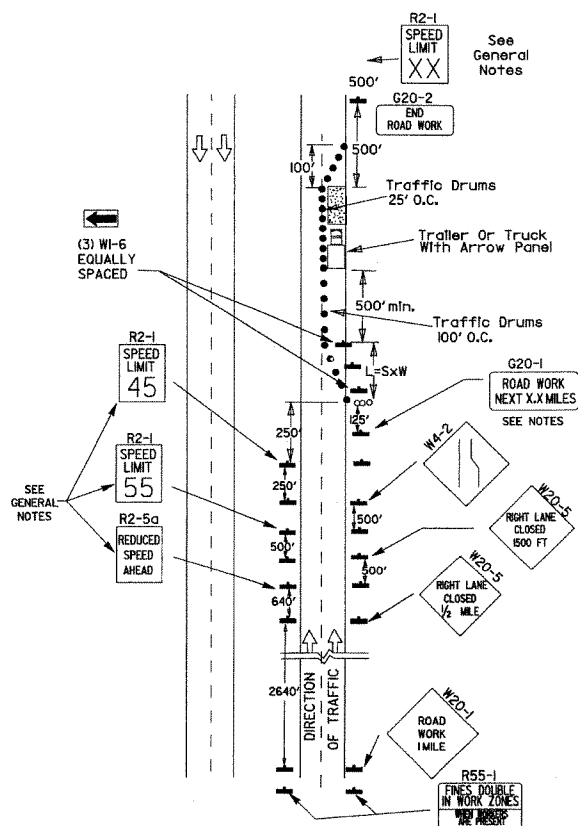


(B) Typical application - 3-lane one-way roadway where center lane is closed.

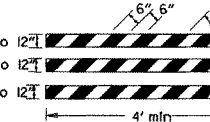
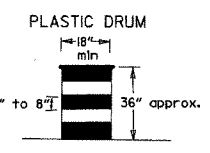
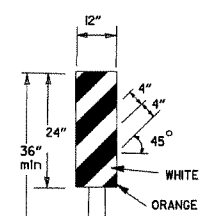
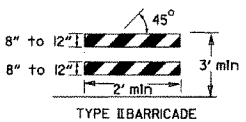
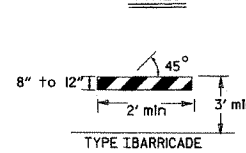
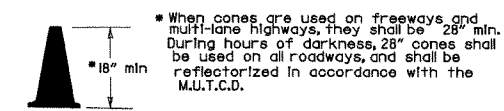
- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1XX shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1XX shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

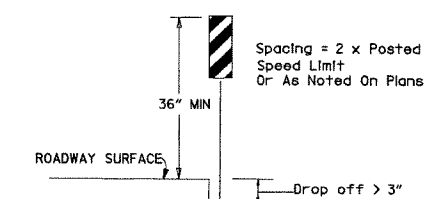


(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



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

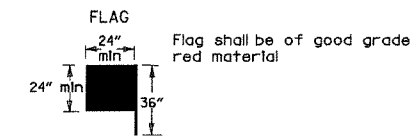
VERTICAL PANEL PLACEMENT



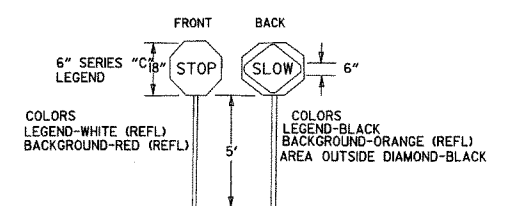
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

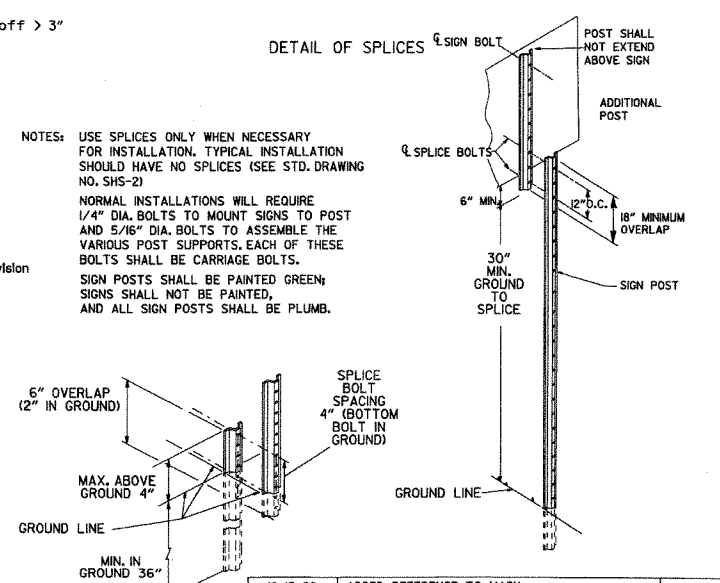
* When shown on the plans concrete barrier will be used.
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



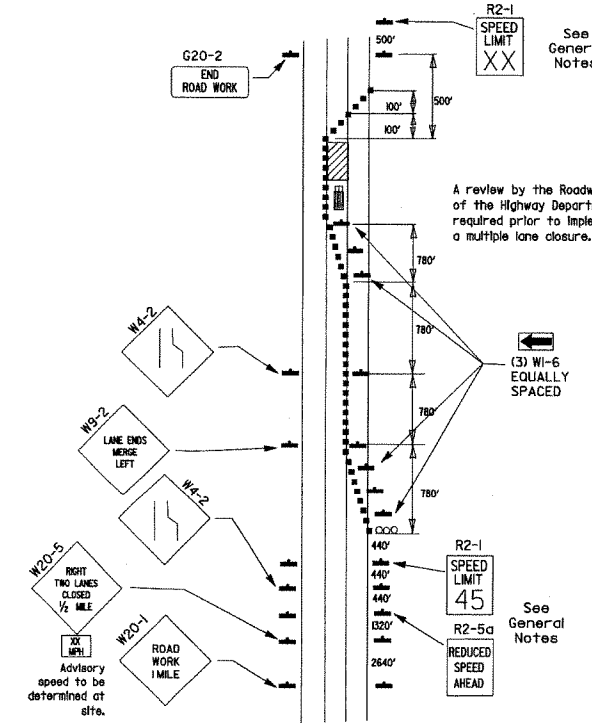
STOP SLOW PADDLE



DETAIL OF SPLICES



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



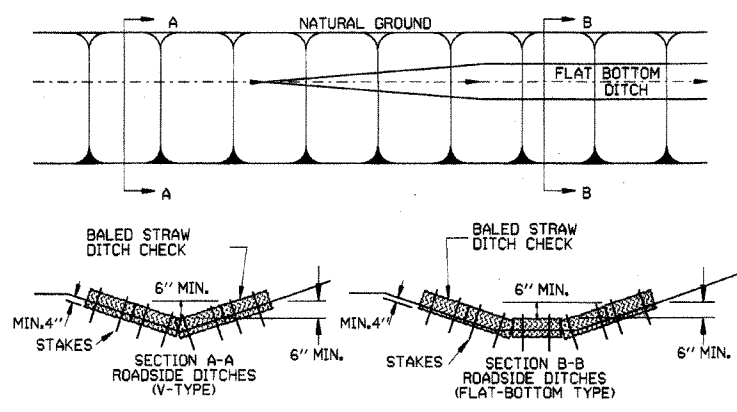
(D) Typical application - closing multiple lanes of a multi-lane highway.

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	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

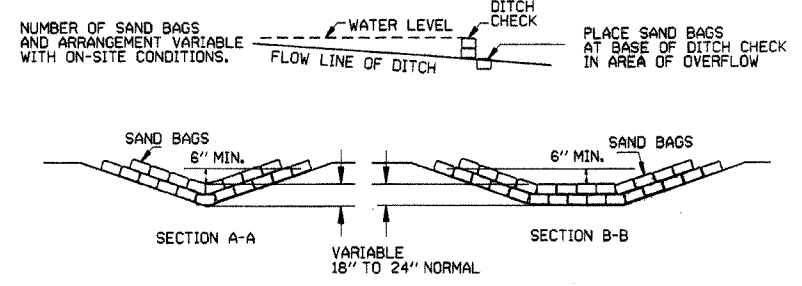
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-3

GENERAL NOTES

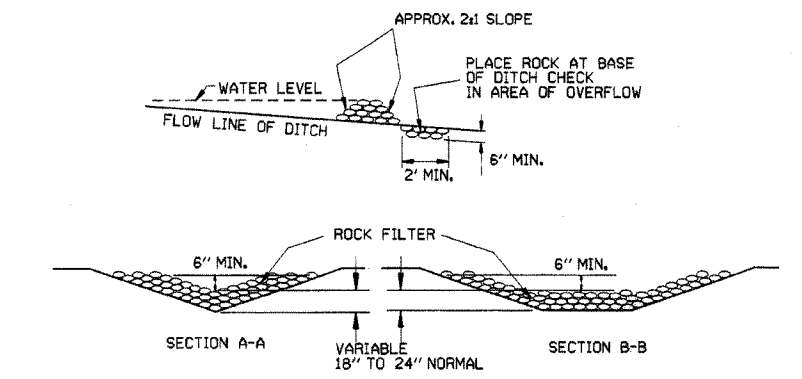
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. STRAW BALES SHALL BE KEYPED INTO SOIL A MINIMUM OF 4' AND NO GAPS SHALL BE LEFT BETWEEN BALES.



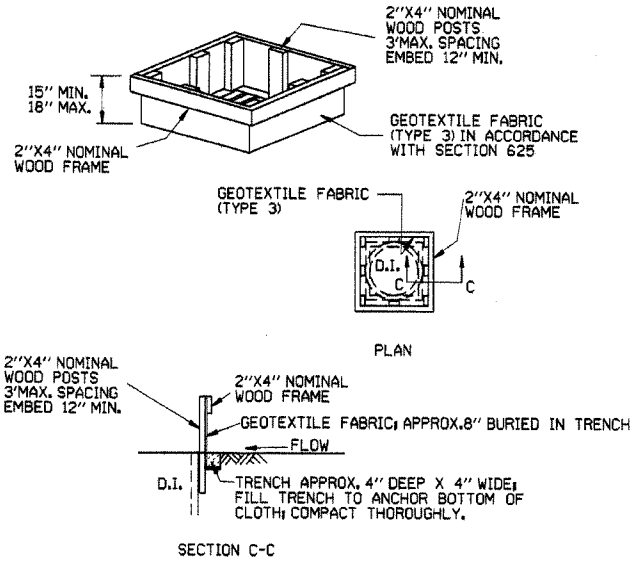
BALED STRAW DITCH CHECK (E-1)



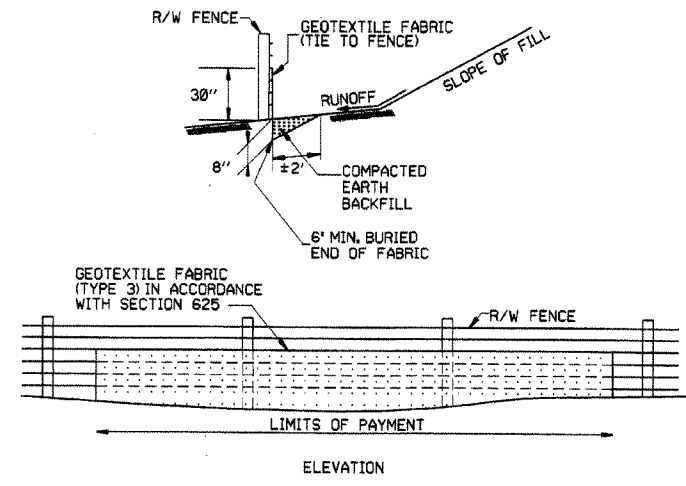
SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



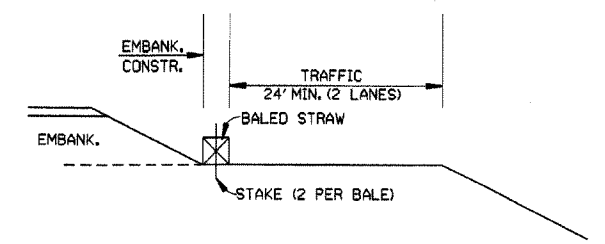
DROP INLET SILT FENCE (E-7)



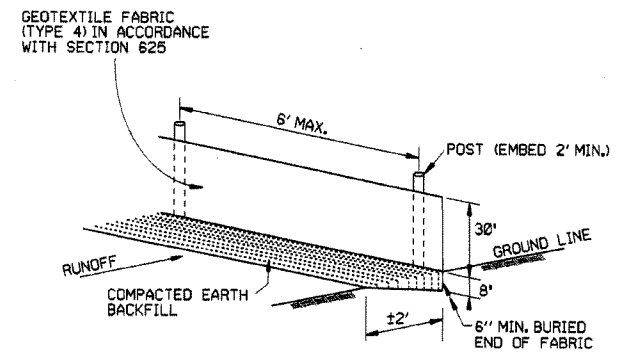
SILT FENCE ON R/W FENCE (E-4)

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

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



BALED STRAW FILTER BARRIER (E-2)

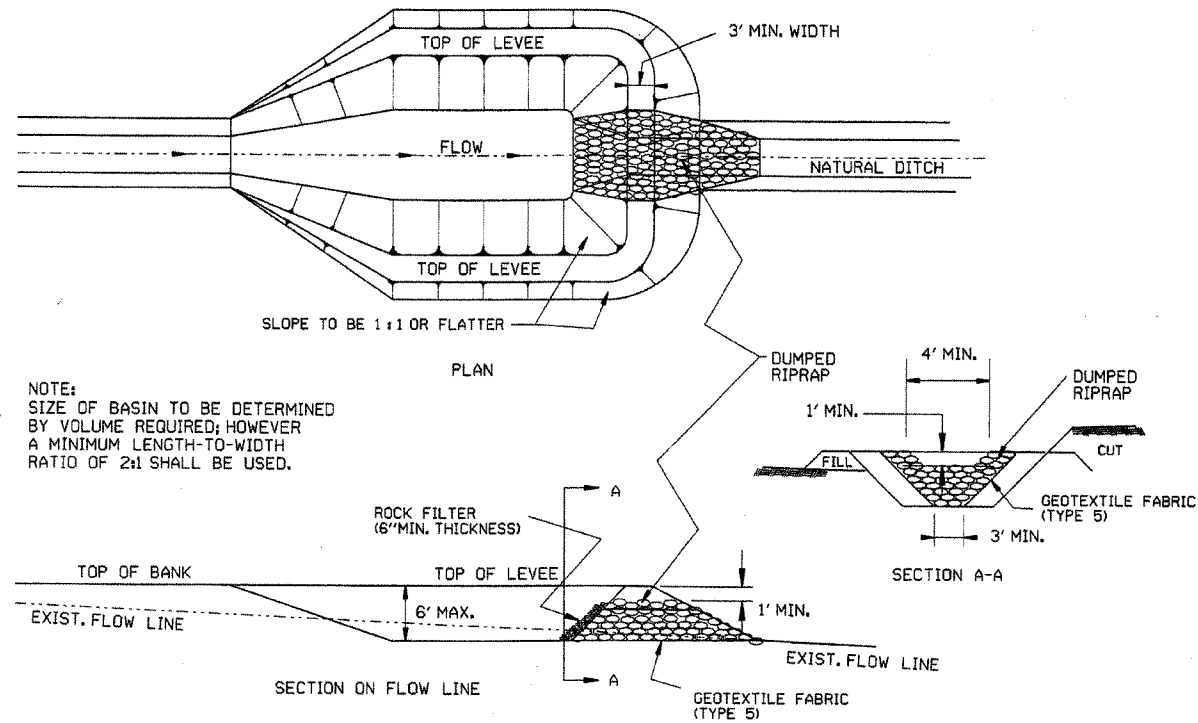


SILT FENCE (E-11)

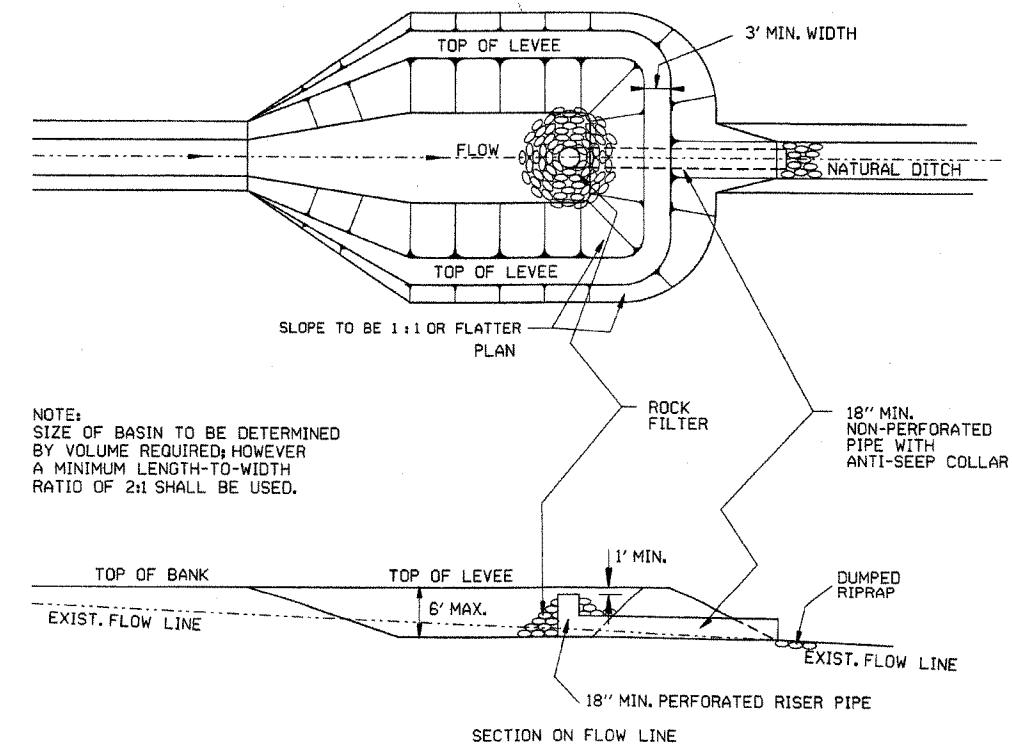
GENERAL NOTES
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

11-18-98	ADDED NOTES	11-18-98	ARKANSAS STATE HIGHWAY COMMISSION
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	
7-15-94	Rev. E-4 & E-11 Min. 13' Buried End of Fabric		
6-2-94	Revised E-1,4,7, & 11 Deleted E-2 & 3	6-2-94	
4-1-93	REDRAWN		
10-1-92	REDRAWN		
8-2-76	ISSUED R.D.M.	298-7-28-76	
DATE	REVISION	FILMED	

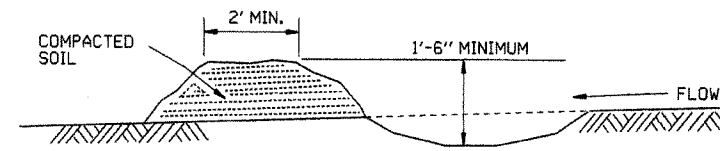
TEMPORARY EROSION CONTROL DEVICES
 STANDARD DRAWING TEC-1



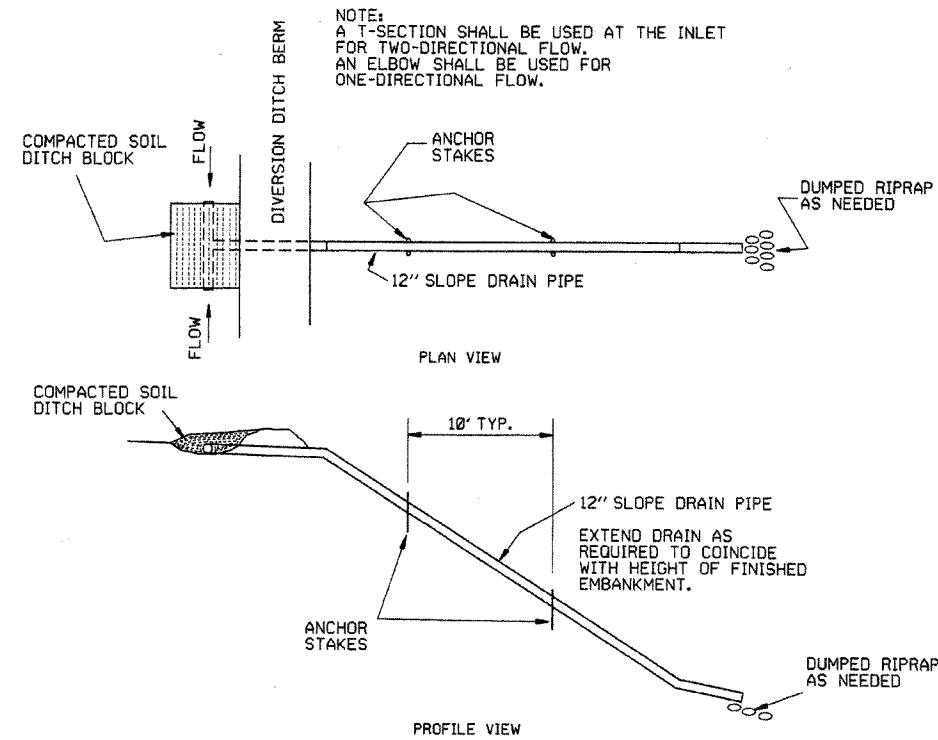
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



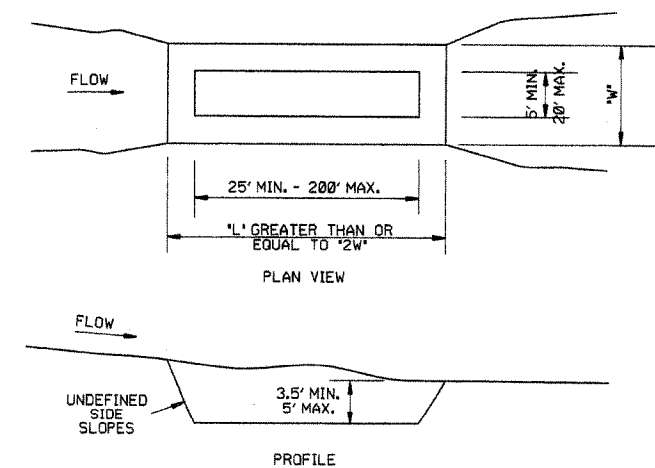
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

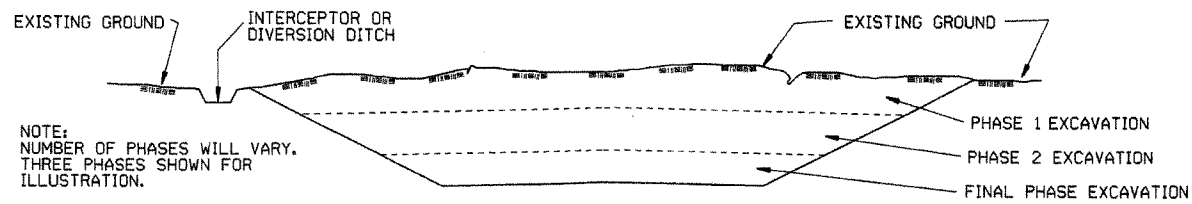
		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

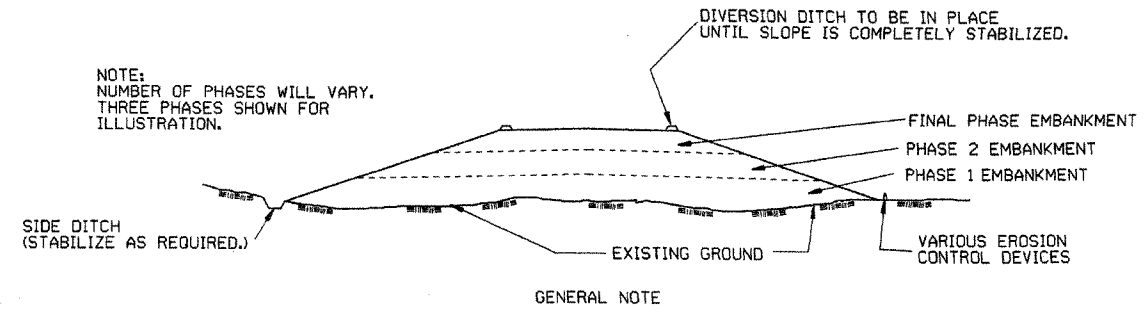
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
11-23-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		
DATE	REVISION	6-2-94	FILMED
		STANDARD DRAWING TEC-3	

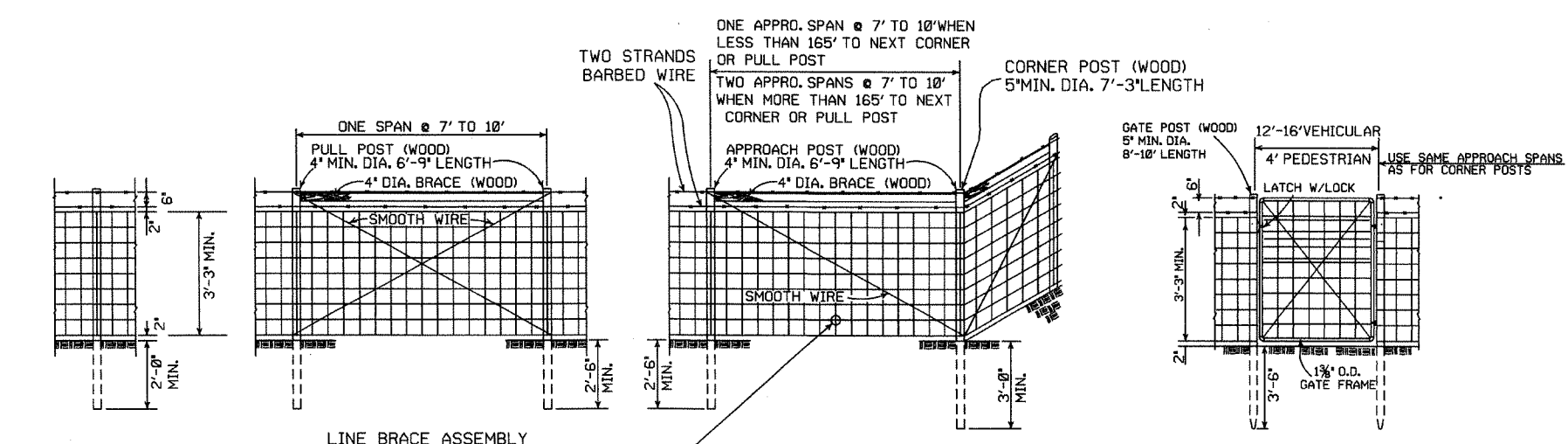
GENERAL NOTES:

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.

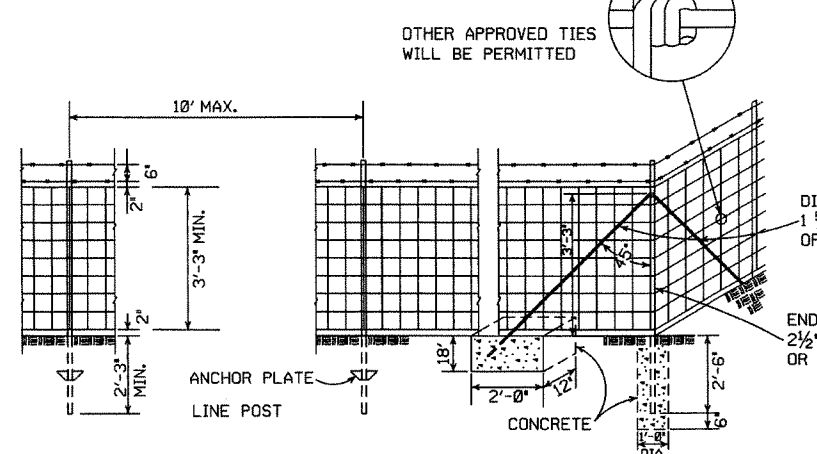
DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED 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.

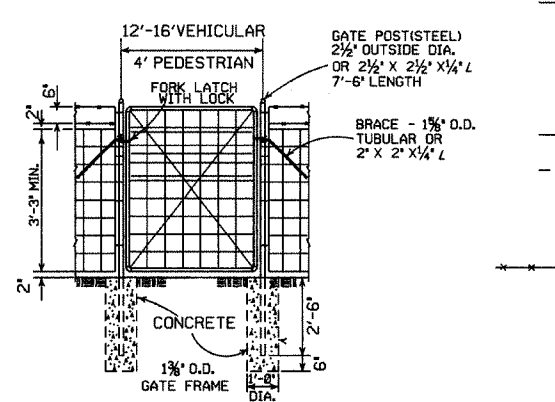


LINE POST
3" MIN. DIA. 6'-3" LENGTH
MAX. SPACING TO BE 10'-0"

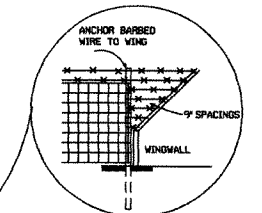
TYPE C FENCE (WOOD POSTS)



TYPE C FENCE (STEEL POSTS)



NOTE: USE 3/8" X 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.

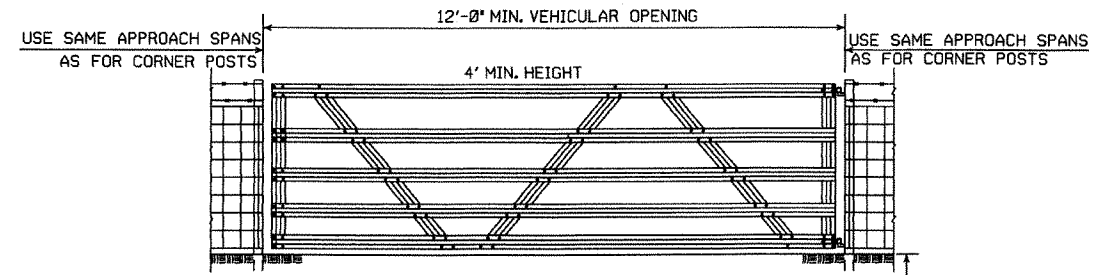


DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

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.

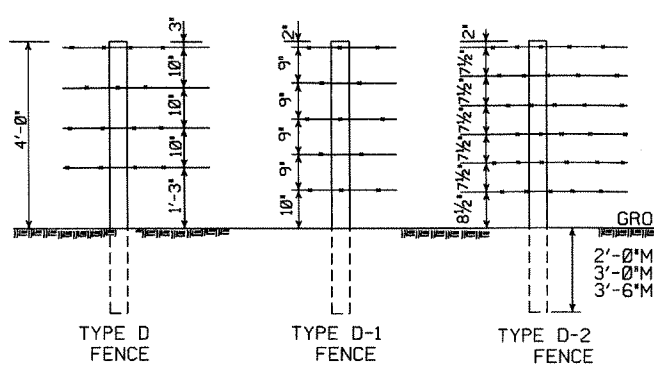
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.



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.

- 4 STRANDS BARBED WIRE (D)
- 5 STRANDS BARBED WIRE (D-1)
- 6 STRANDS BARBED WIRE (D-2)

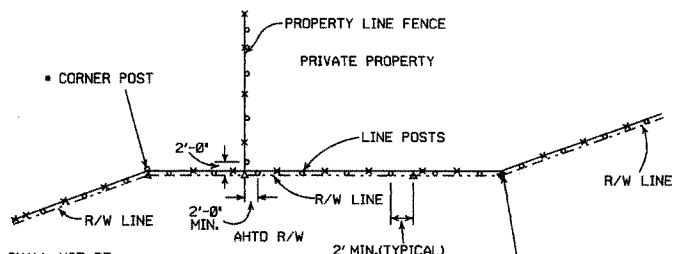


TYPE D FENCE
TYPE D-1 FENCE
TYPE D-2 FENCE

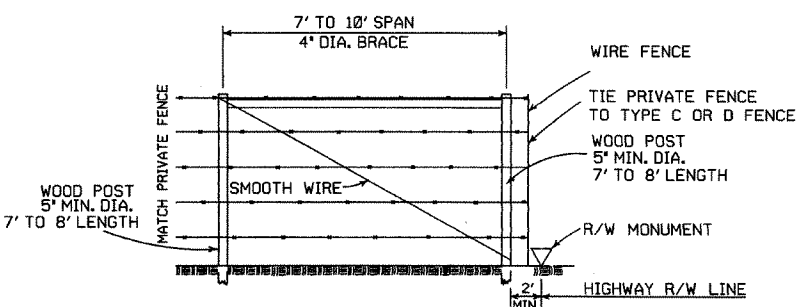
NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.

NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



PRIVATE FENCE TERMINAL INSTALLATION



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.

DATE	REVISION	FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-96	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

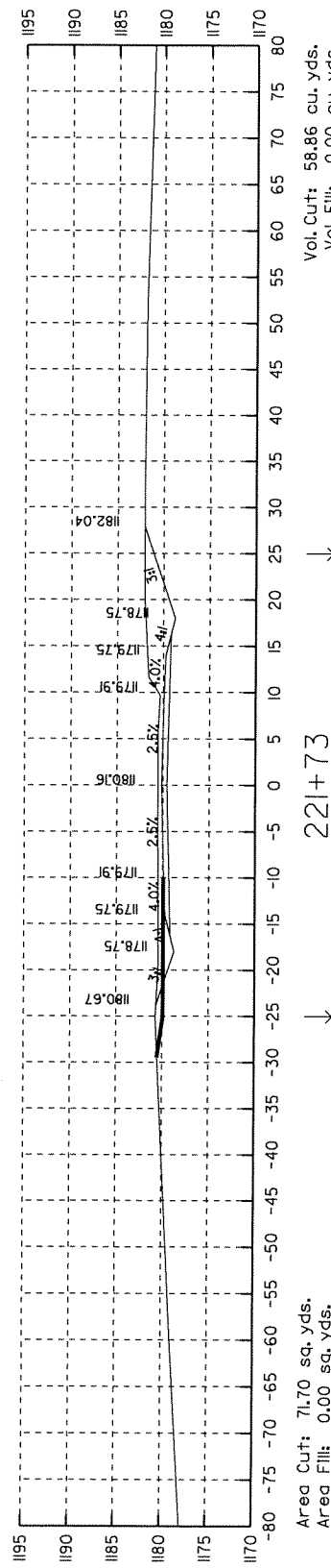
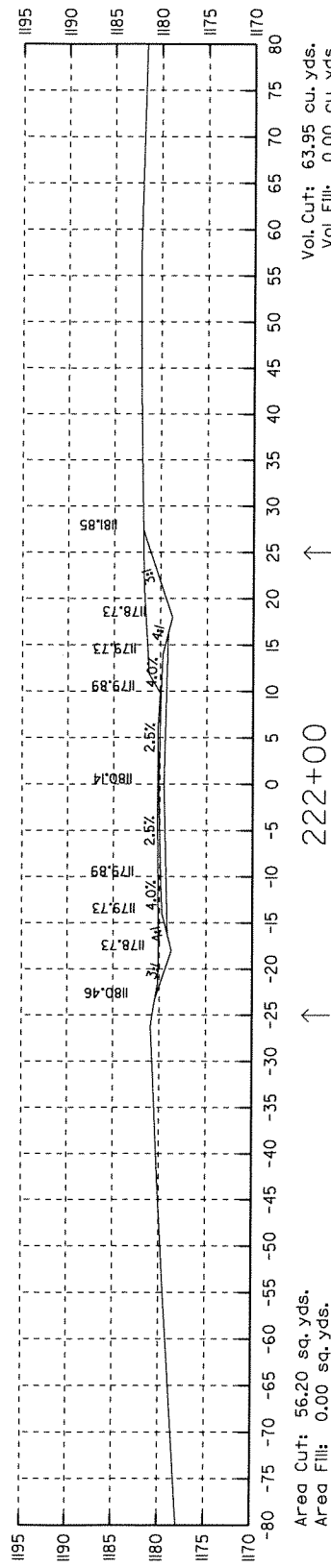
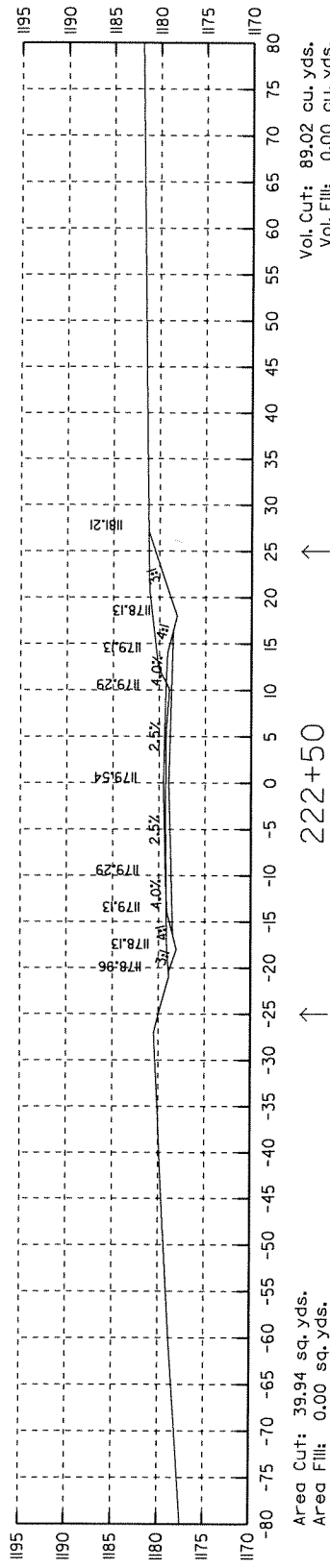
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE C AND D

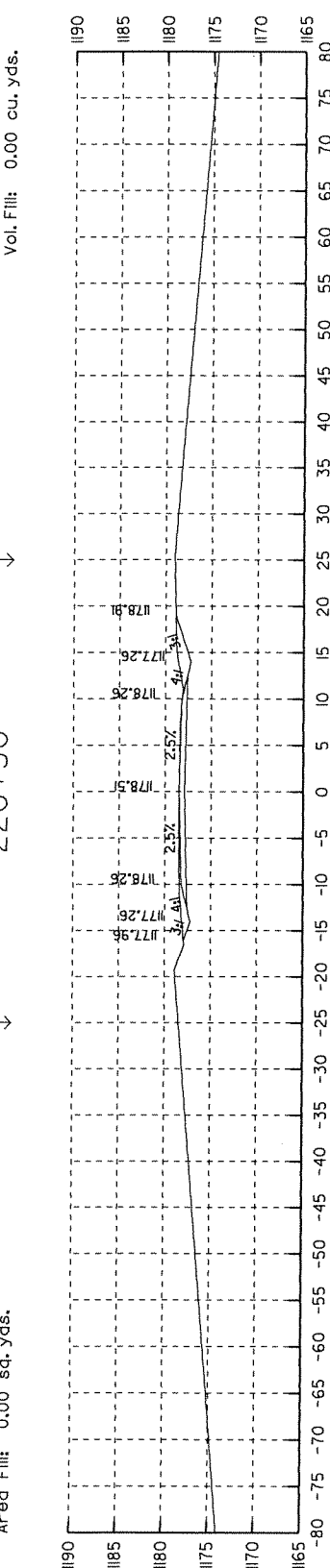
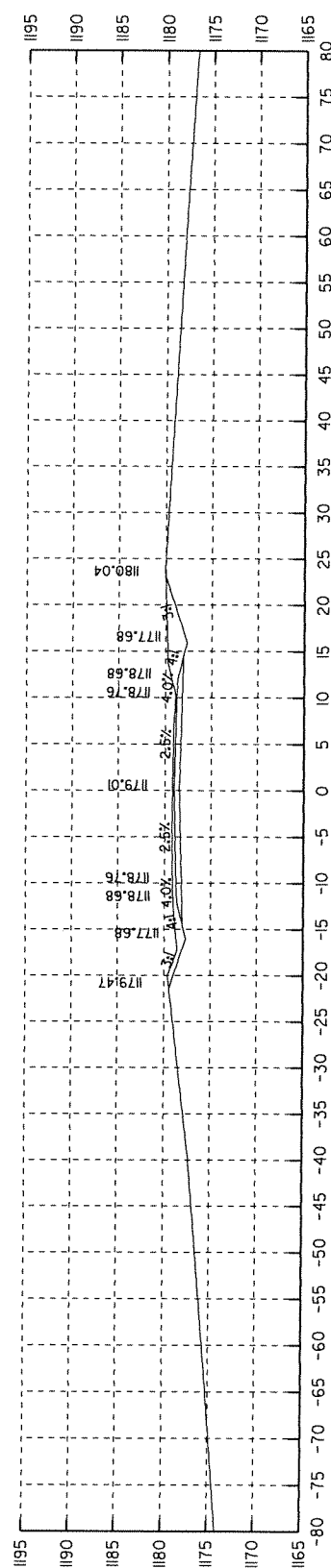
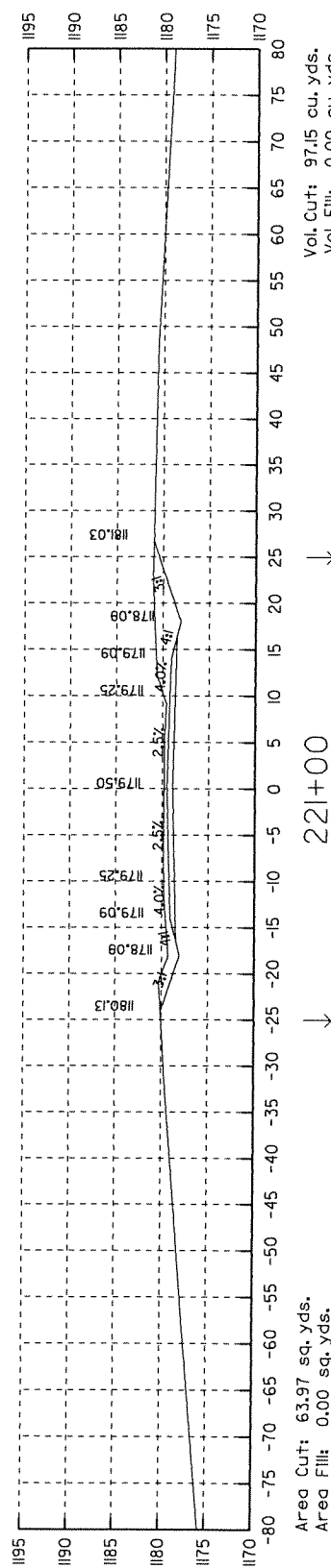
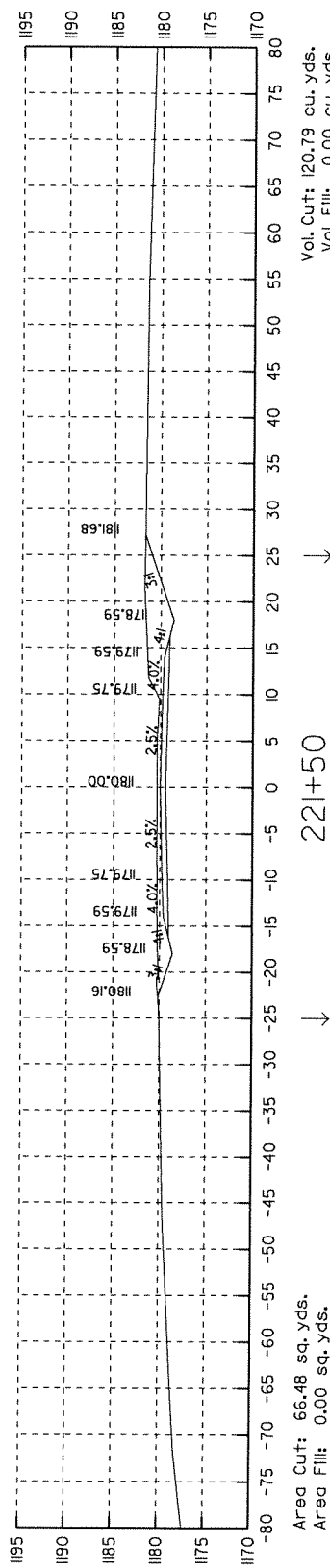
STANDARD DRAWING WF-4

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		55	96

4 STA. 220+00 TO STA. 222+50



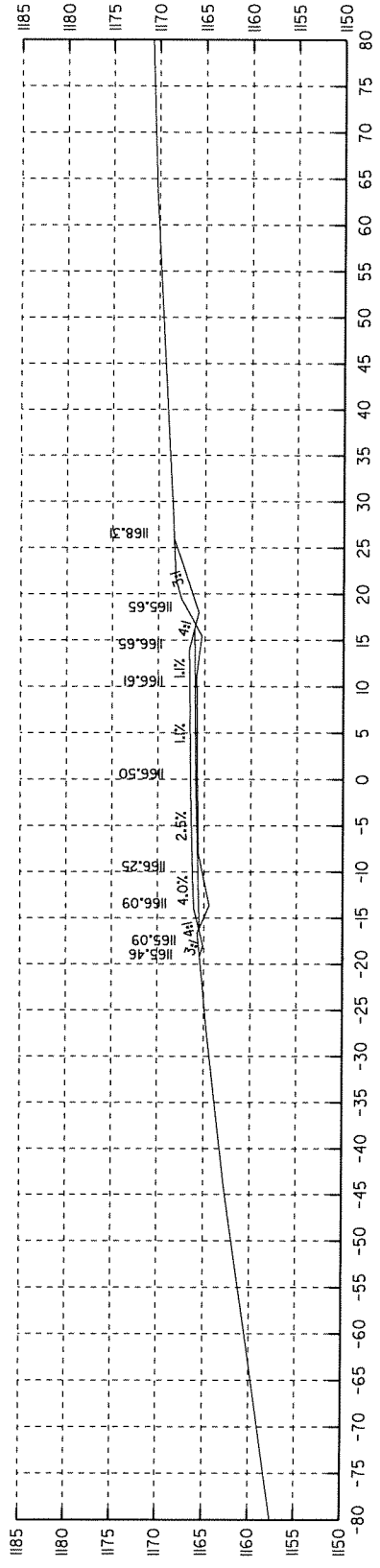
CONSTRUCT APPROACH
ON LT. = 5 CU. YDS.



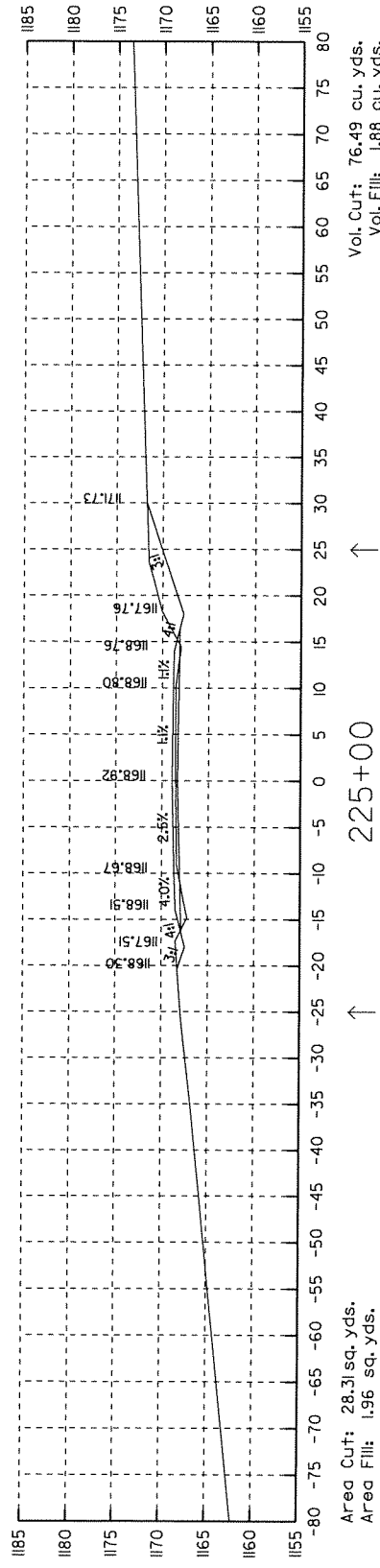
BEGIN JOB FA4510

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	56	96	

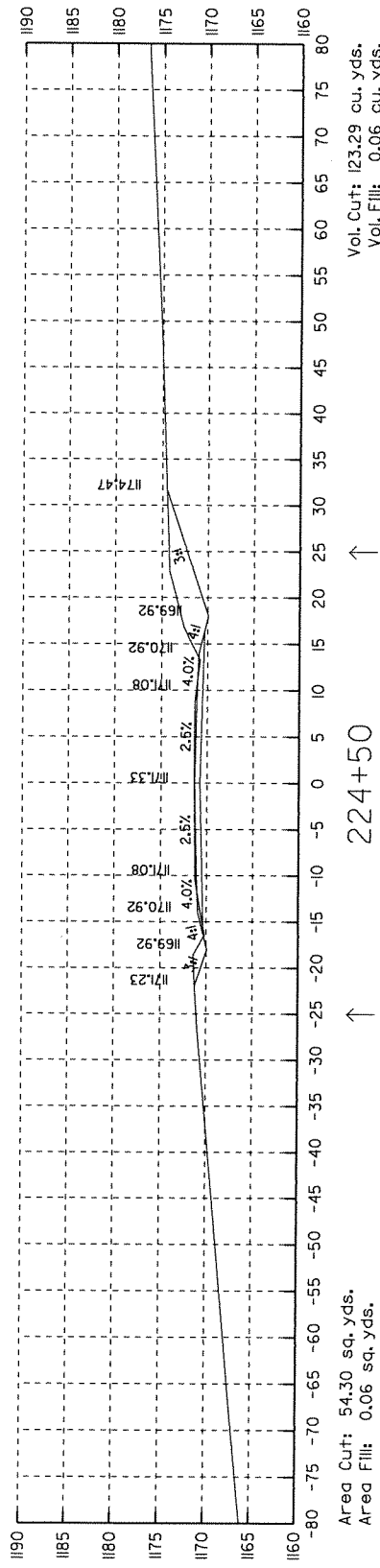
4 STA. 223+00 TO STA. 225+50



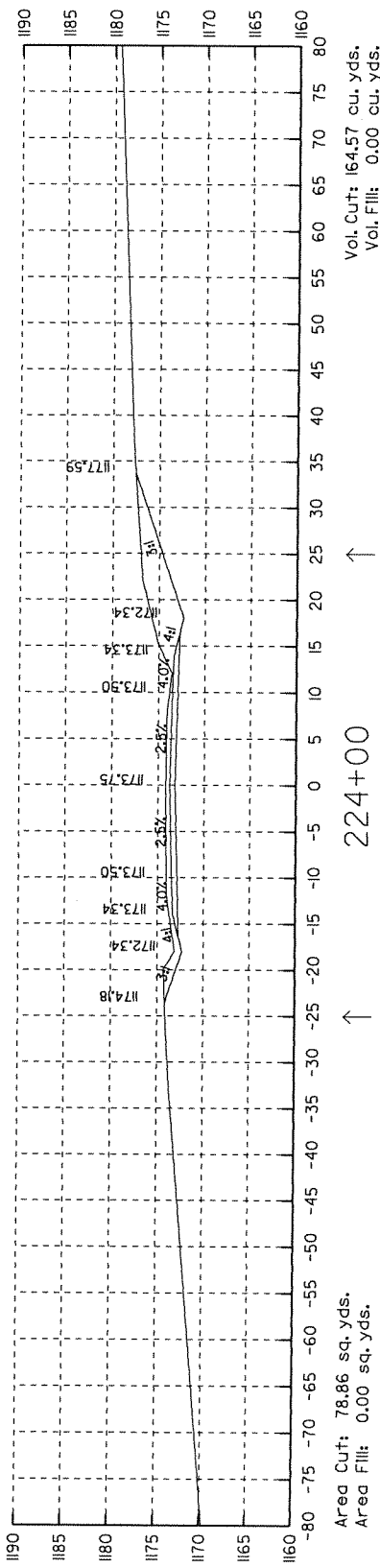
225+50



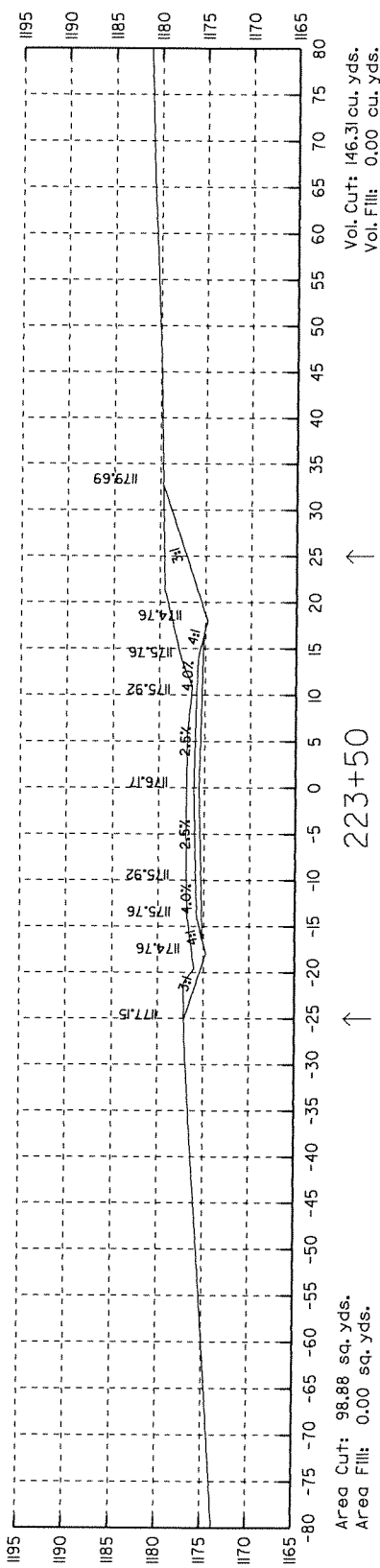
225+00



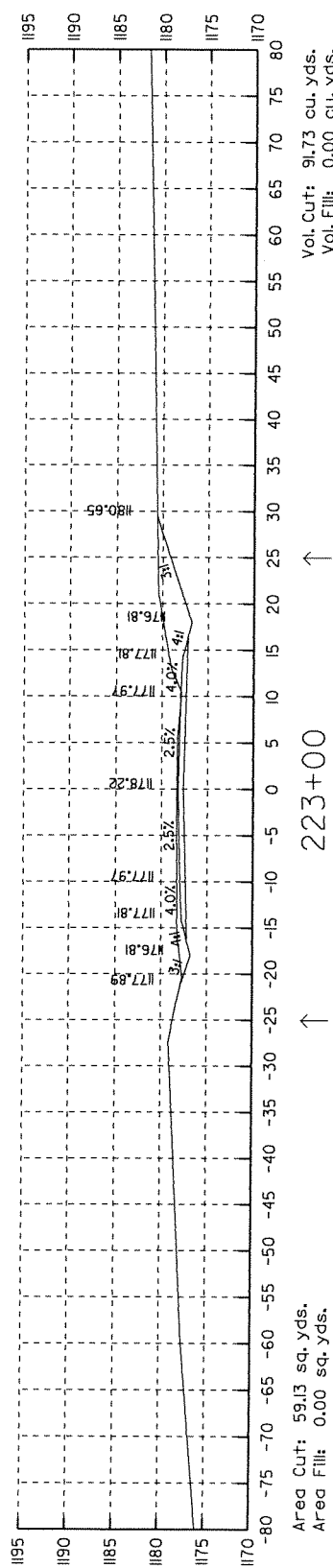
224+50



224+00



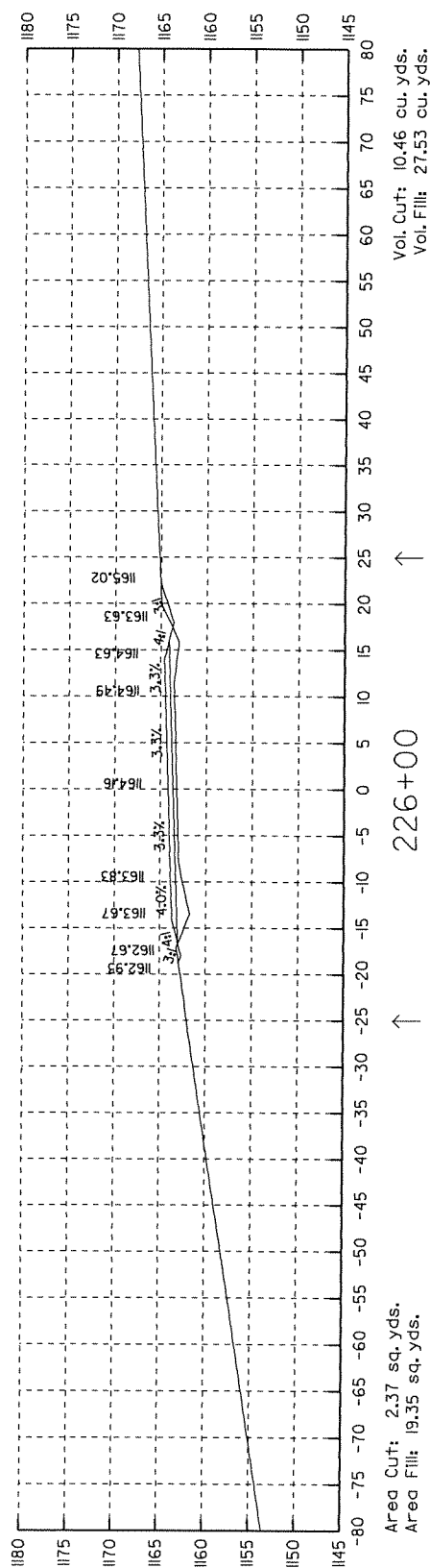
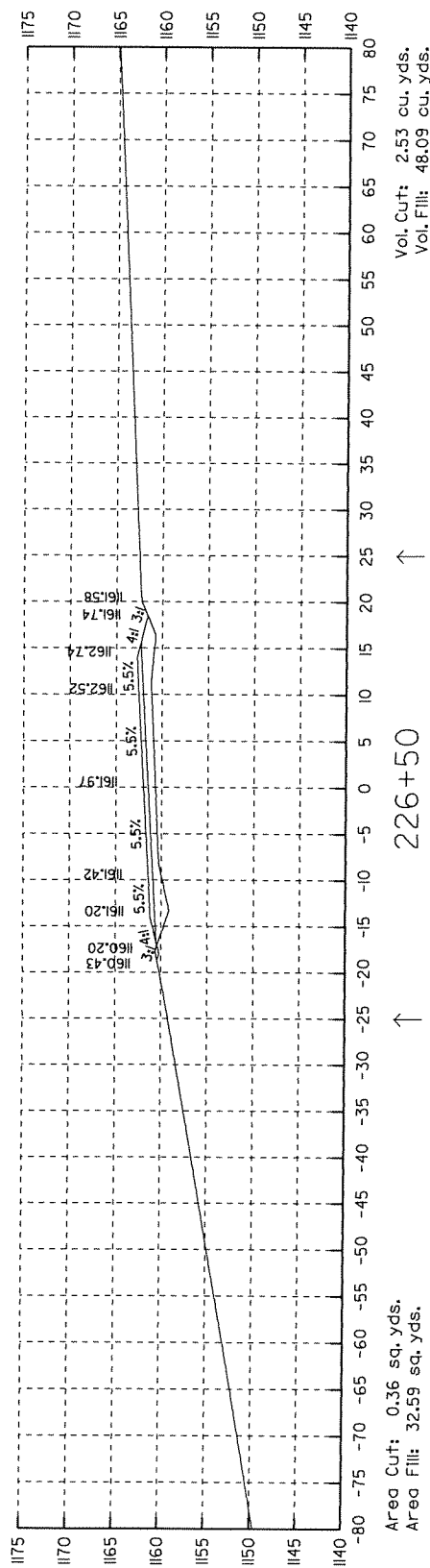
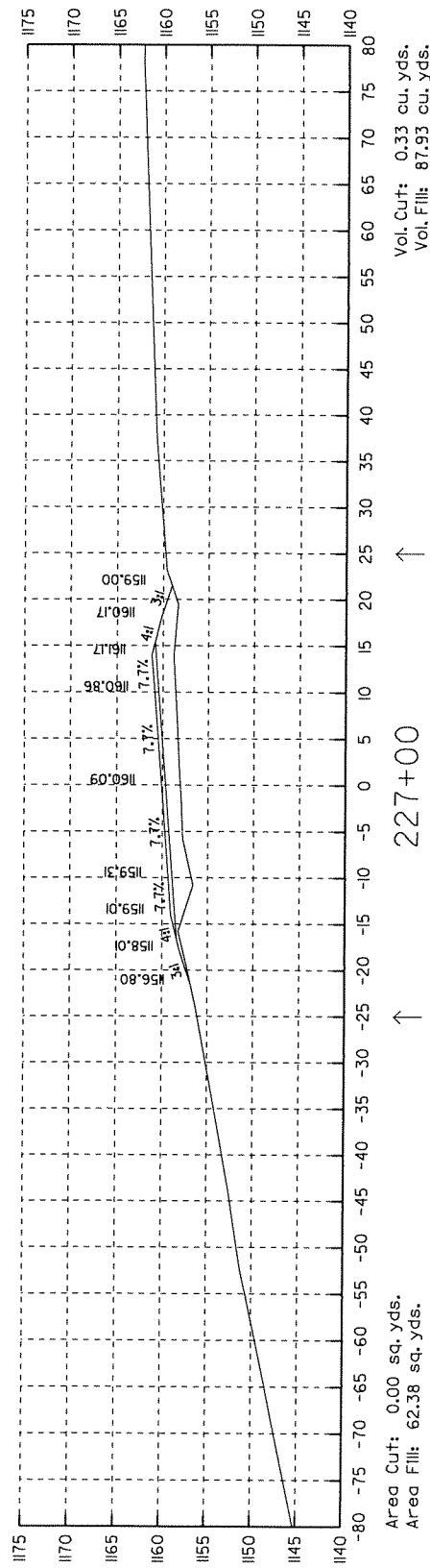
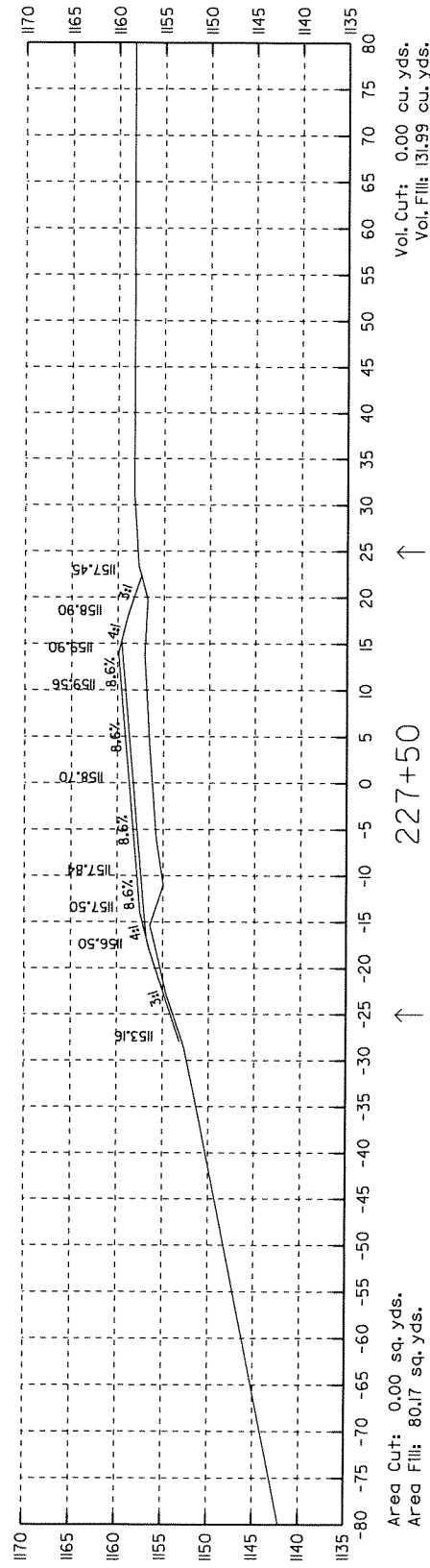
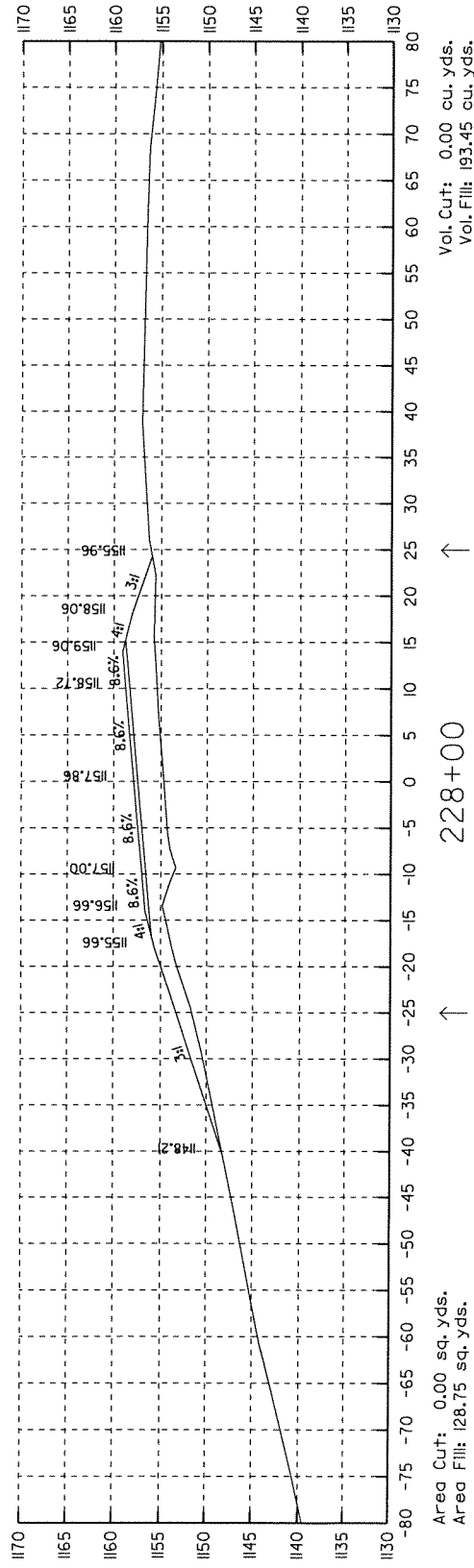
223+50



223+00

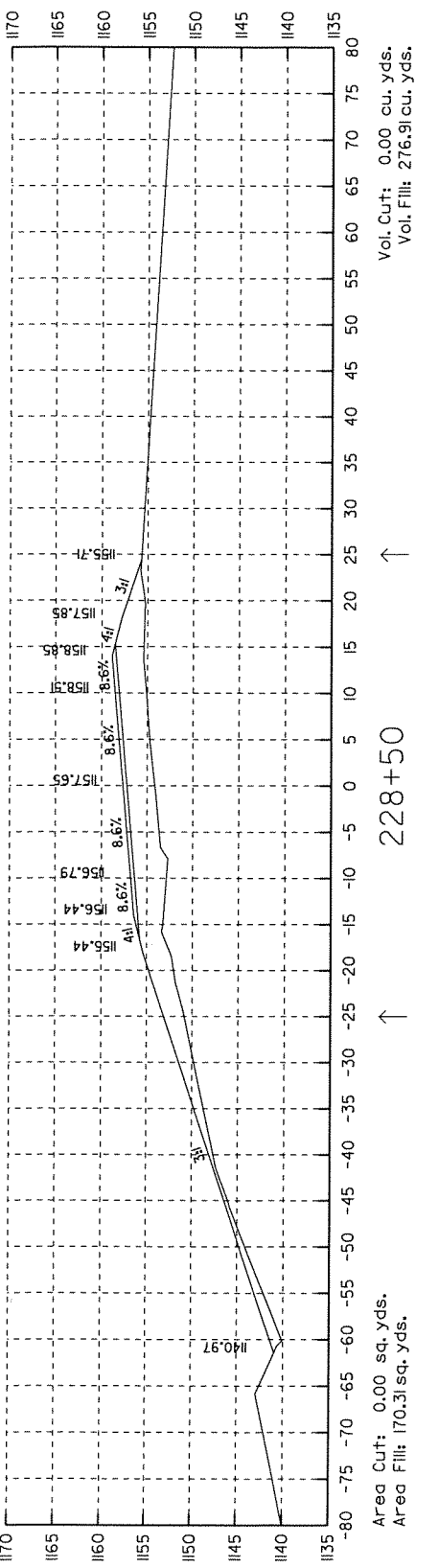
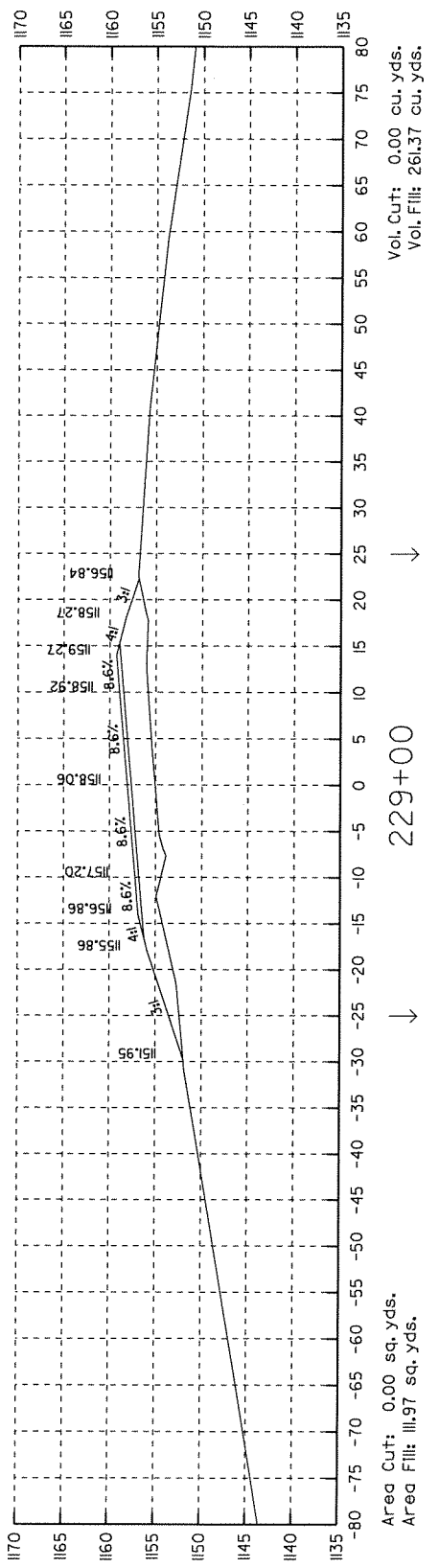
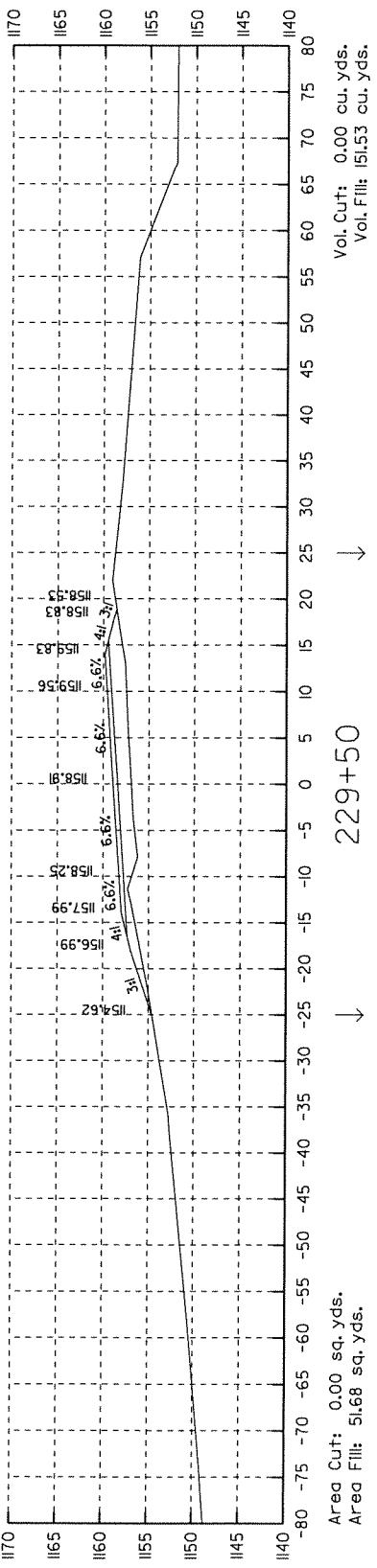
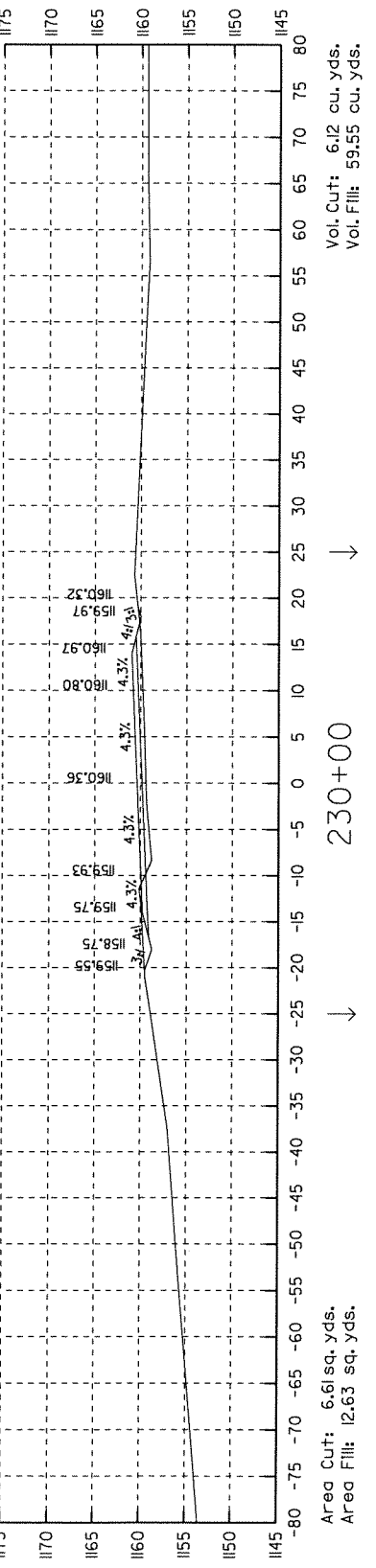
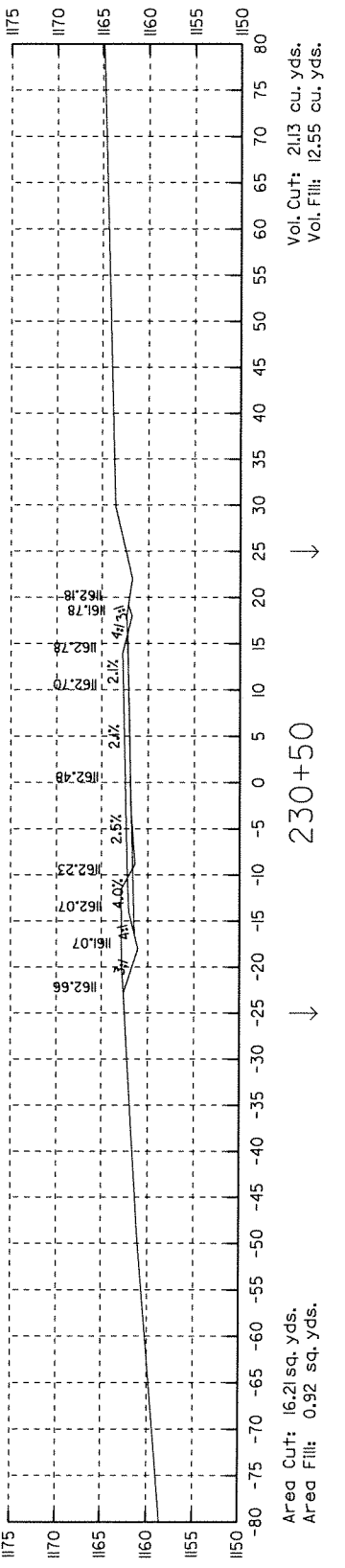
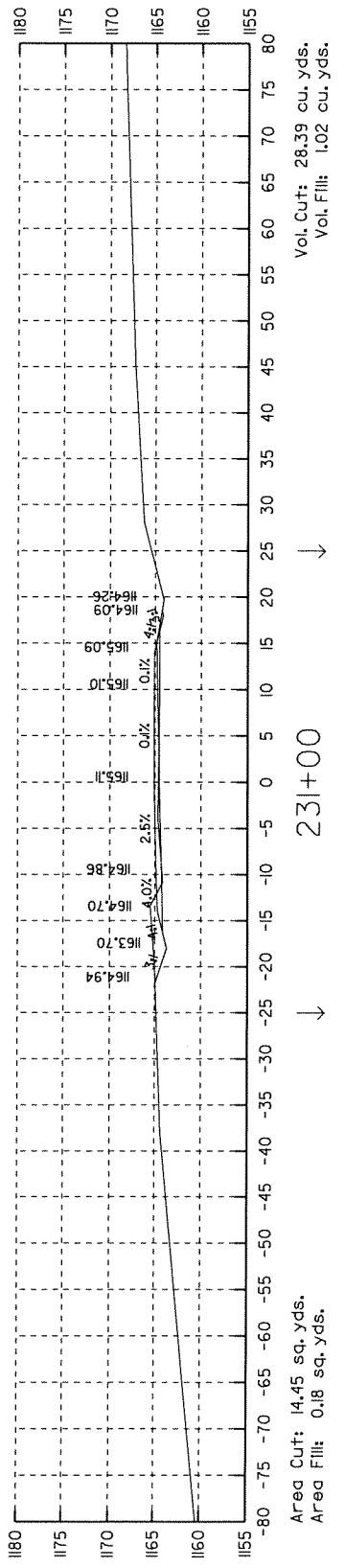
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	57	96	

4 STA. 226+00 TO STA. 228+00

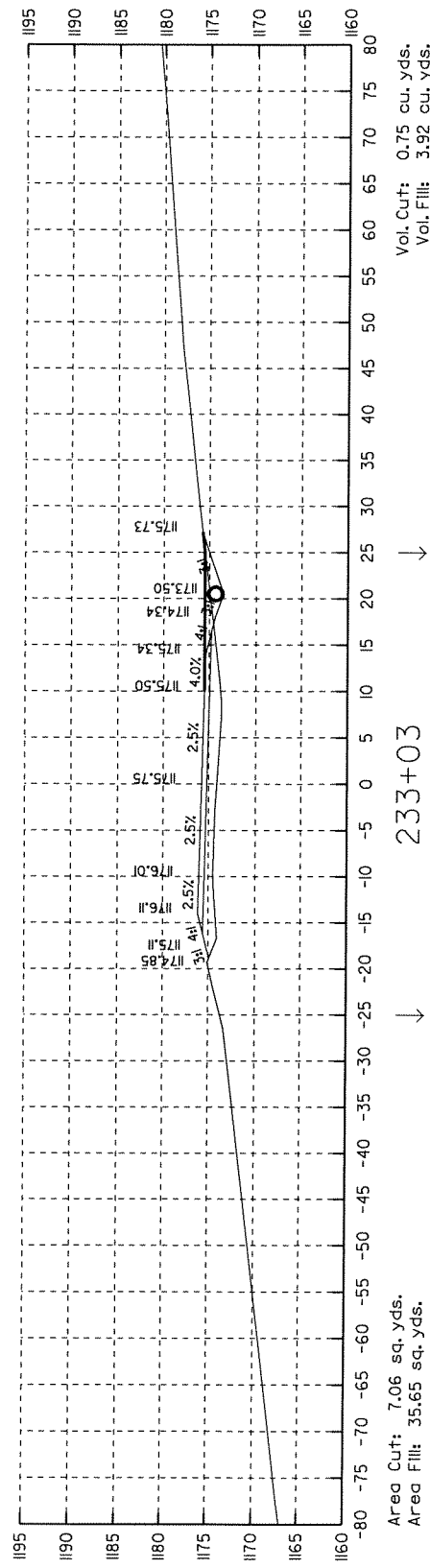
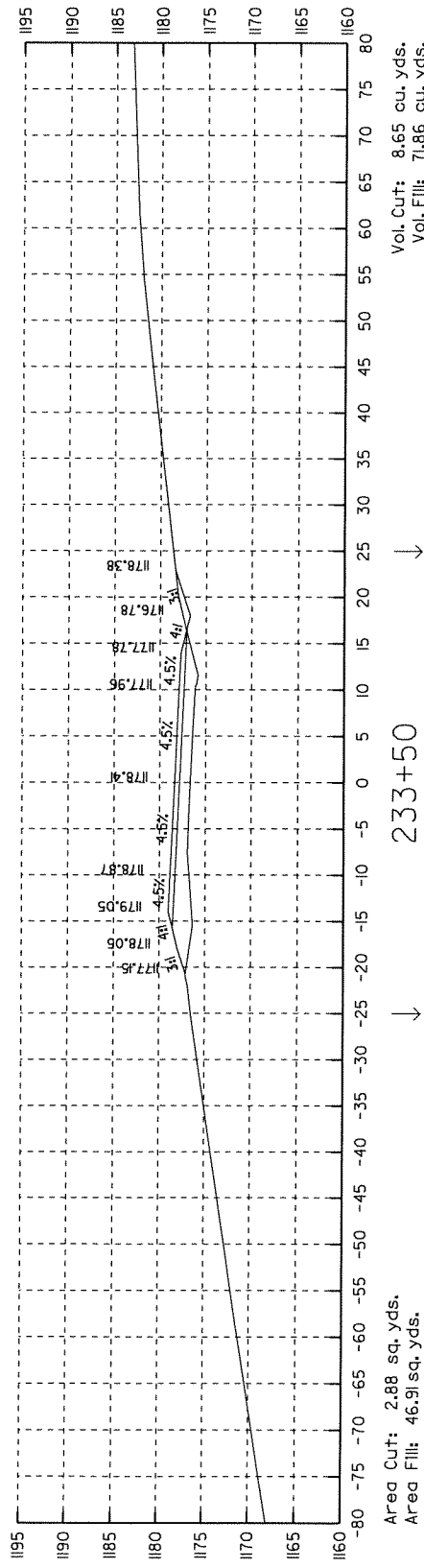


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA45IO	58	96	

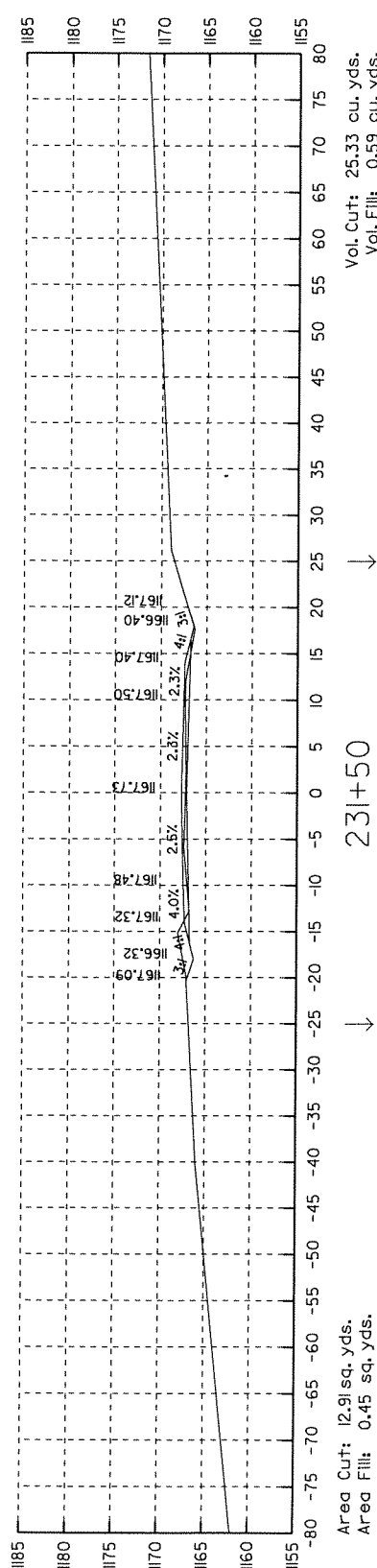
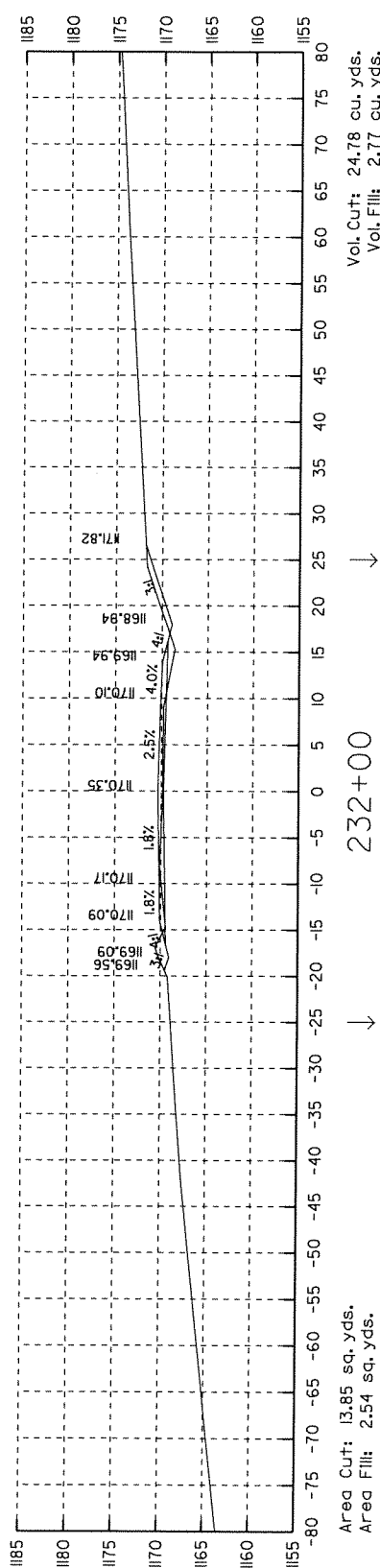
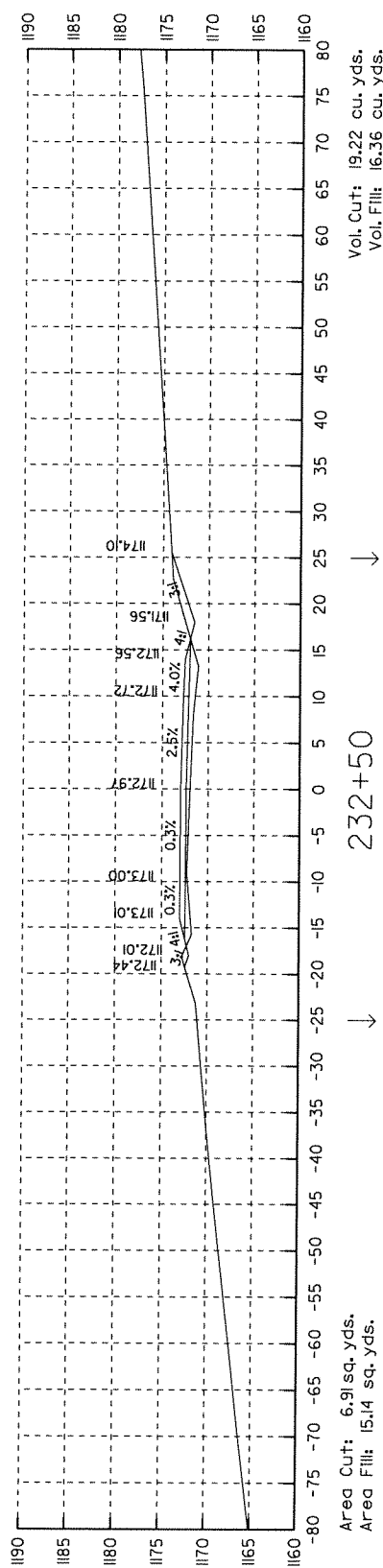
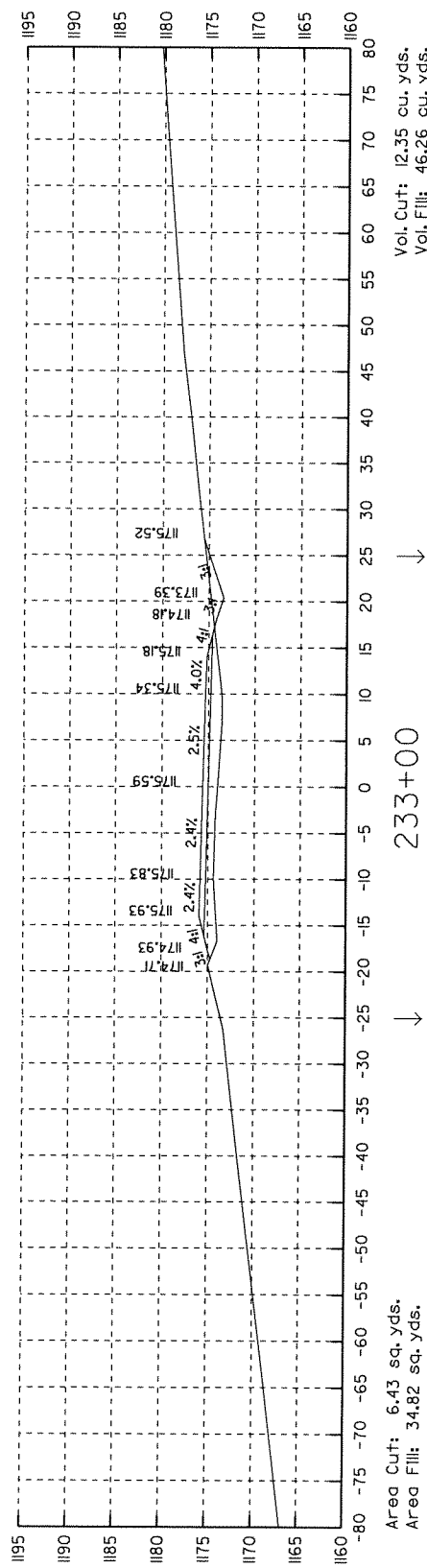
4 STA. 228+50 TO STA. 231+00



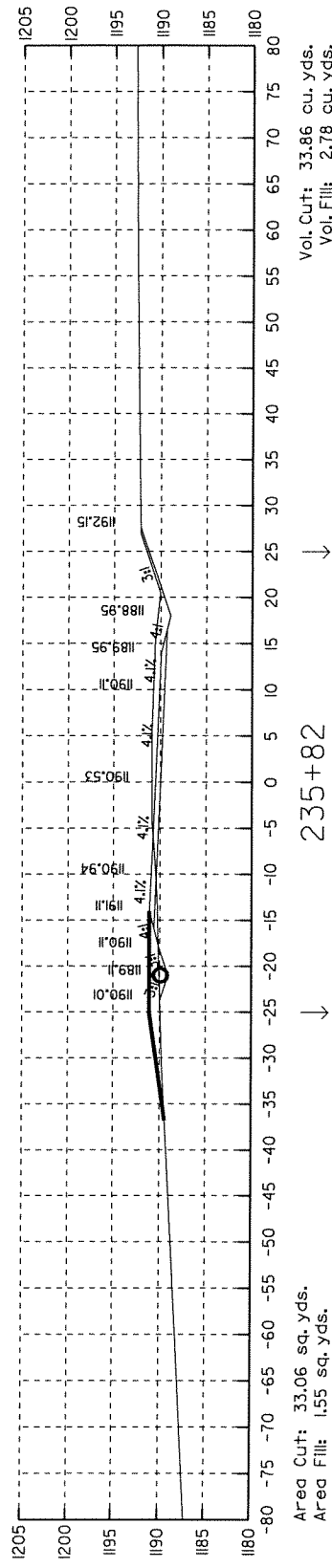
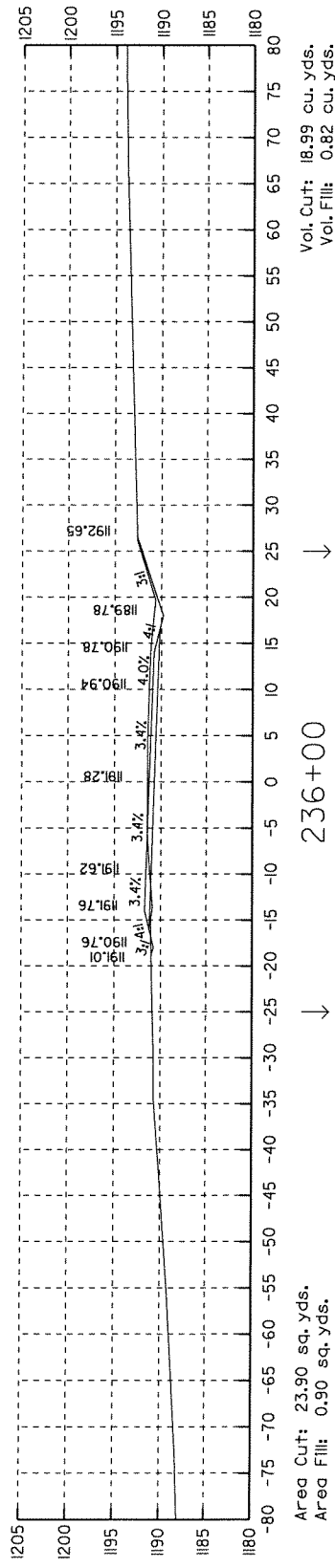
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	59	96	
				4 STA. 231+50 TO STA. 233+50				



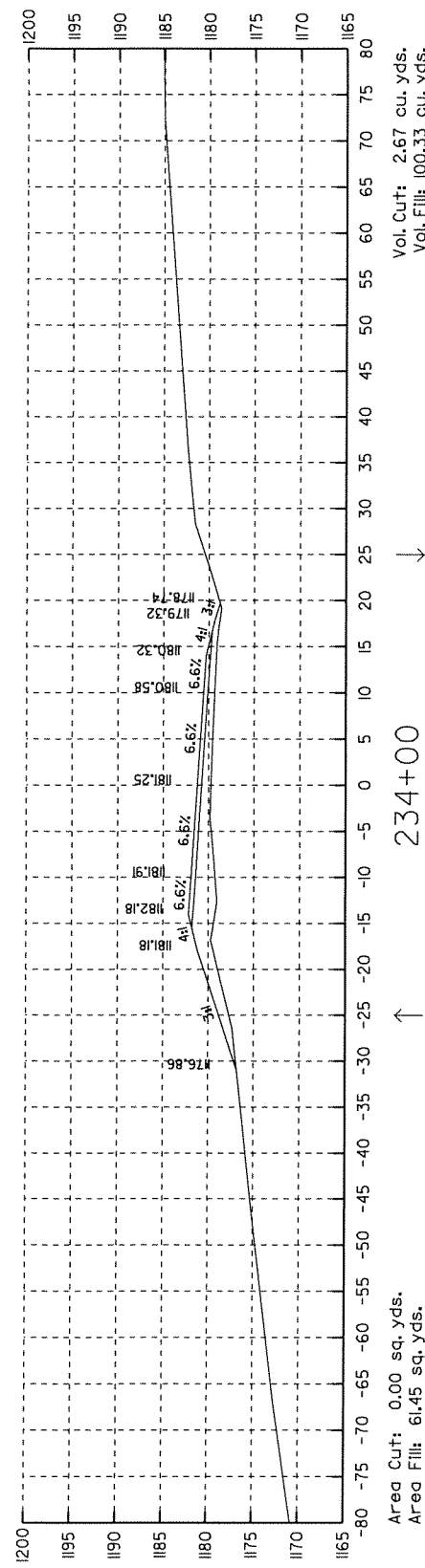
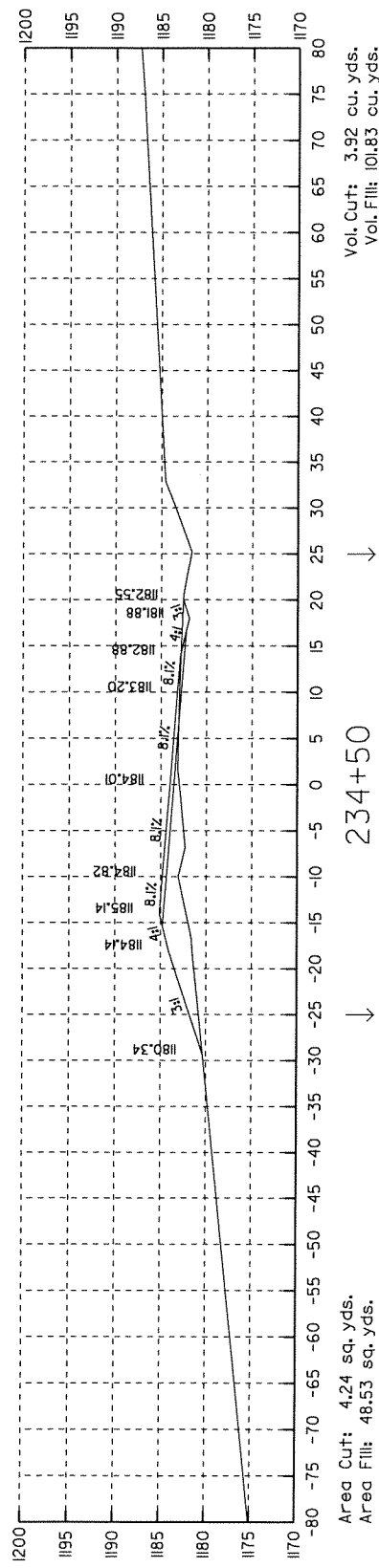
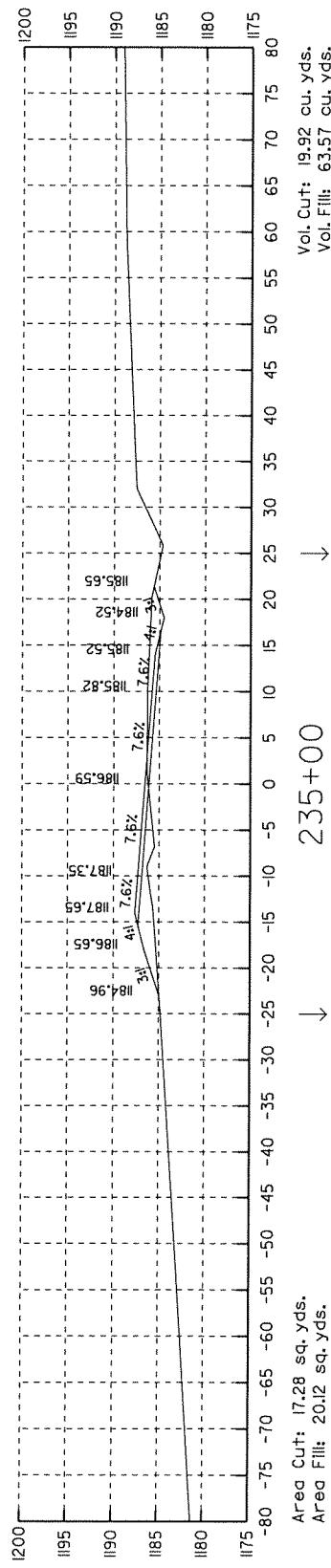
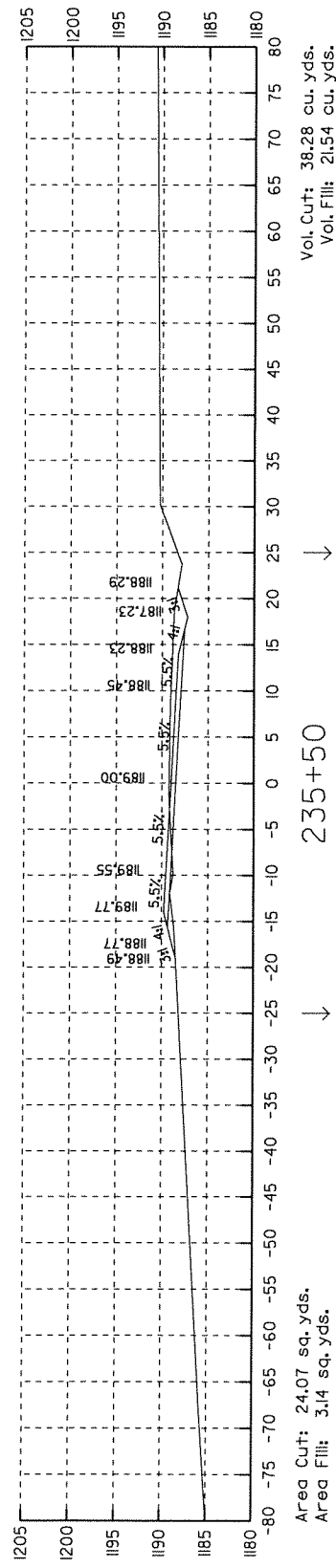
INSTALL
18" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.		FA4510	60	96
				4		STA. 234+00 TO STA. 236+00		

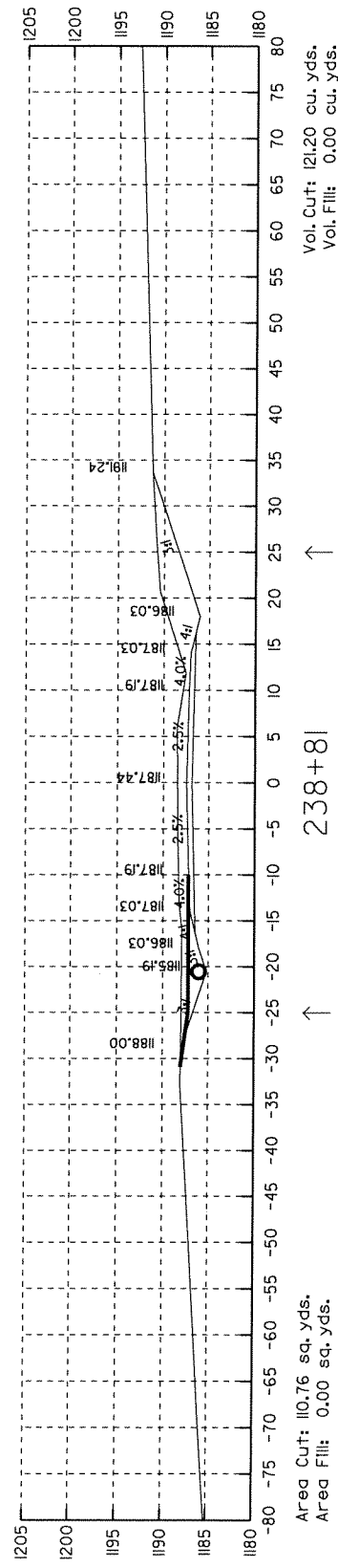


INSTALL
18" X 33' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

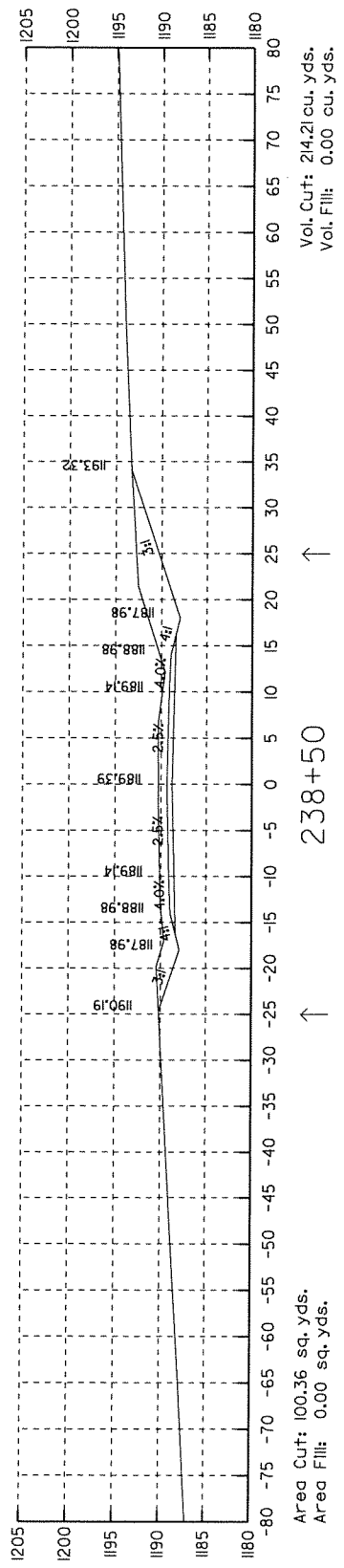


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.		FA4510	61	96

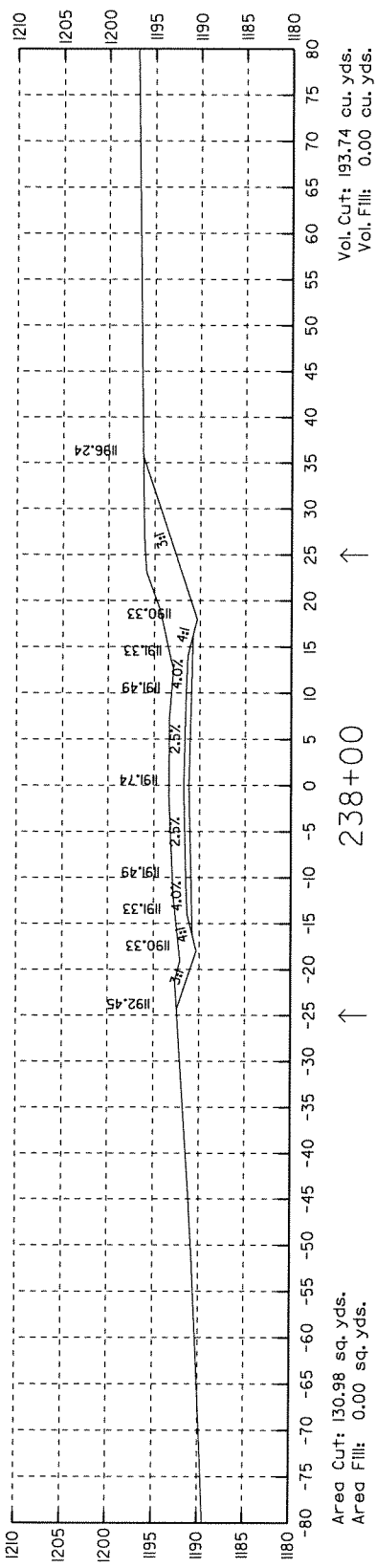
4 STA. 236+50 TO STA. 238+81



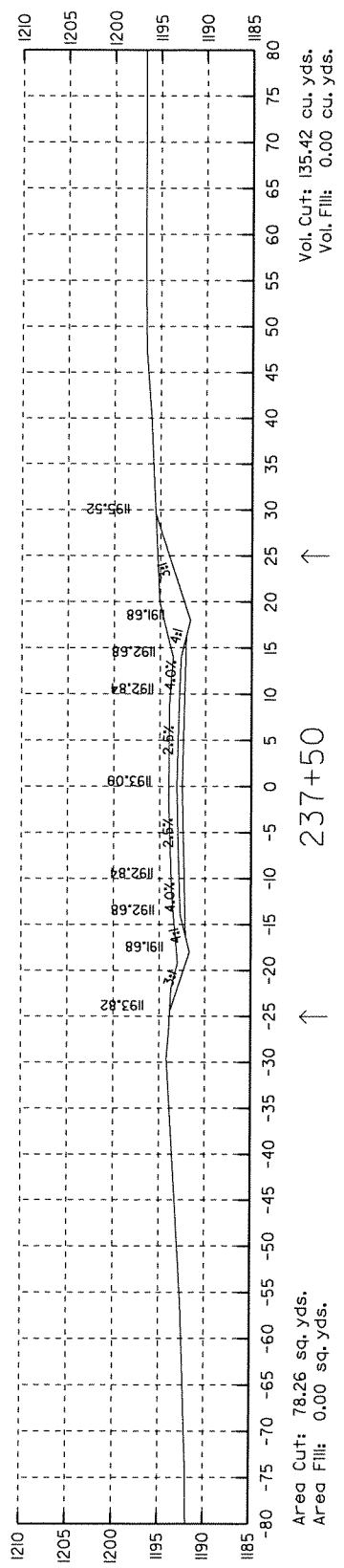
↑ 238+81
 INSTALL
 18" X 33' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. = 5 CU. YDS.



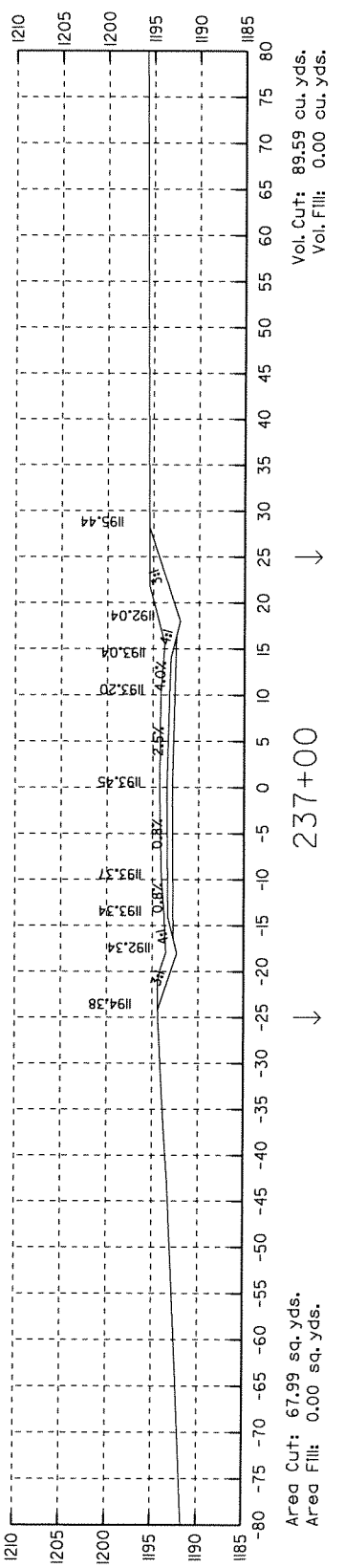
↑ 238+50



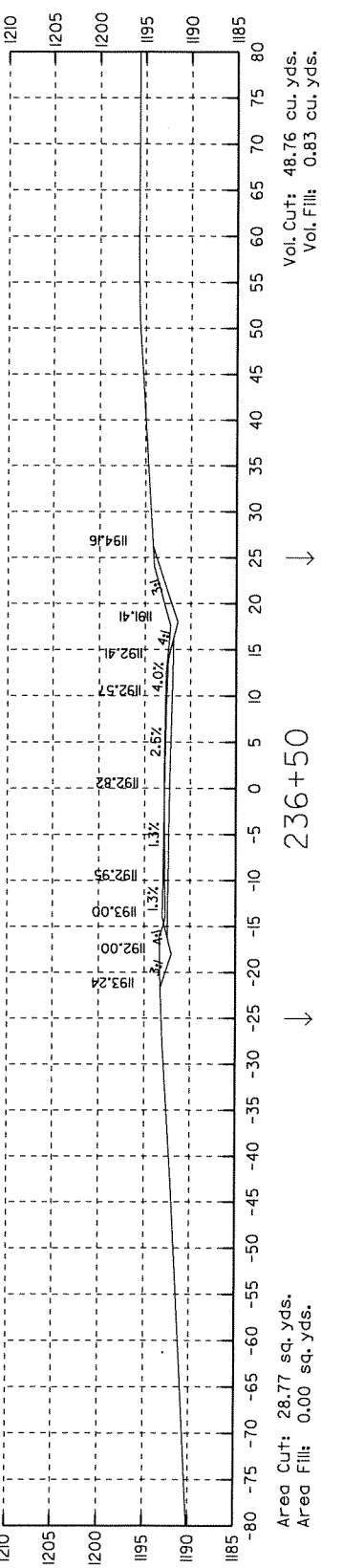
↑ 238+00



↑ 237+50



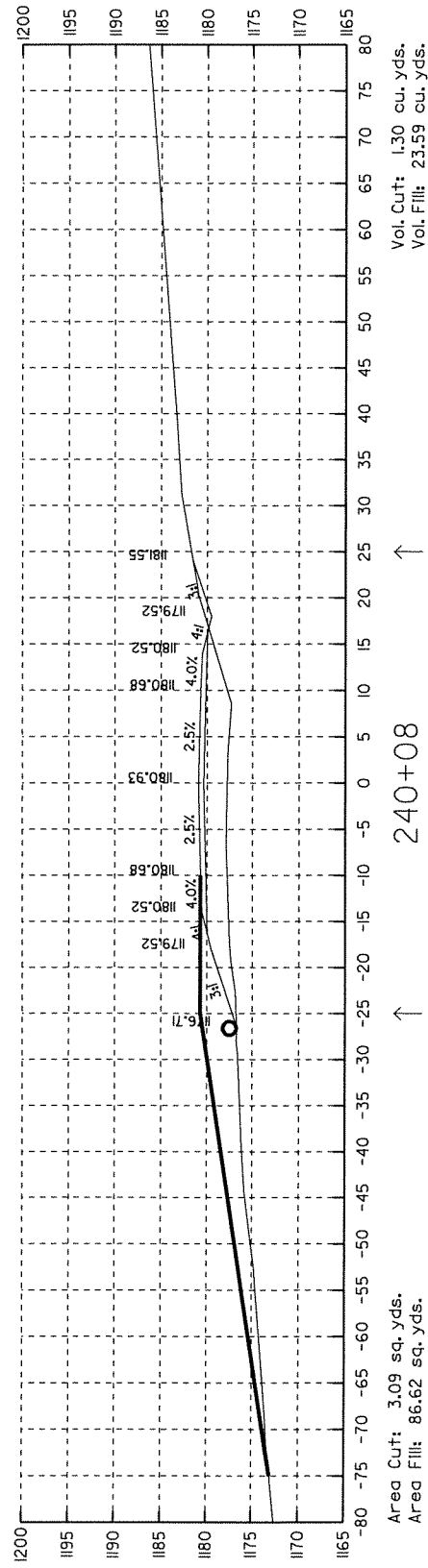
↓ 237+00



↓ 236+50

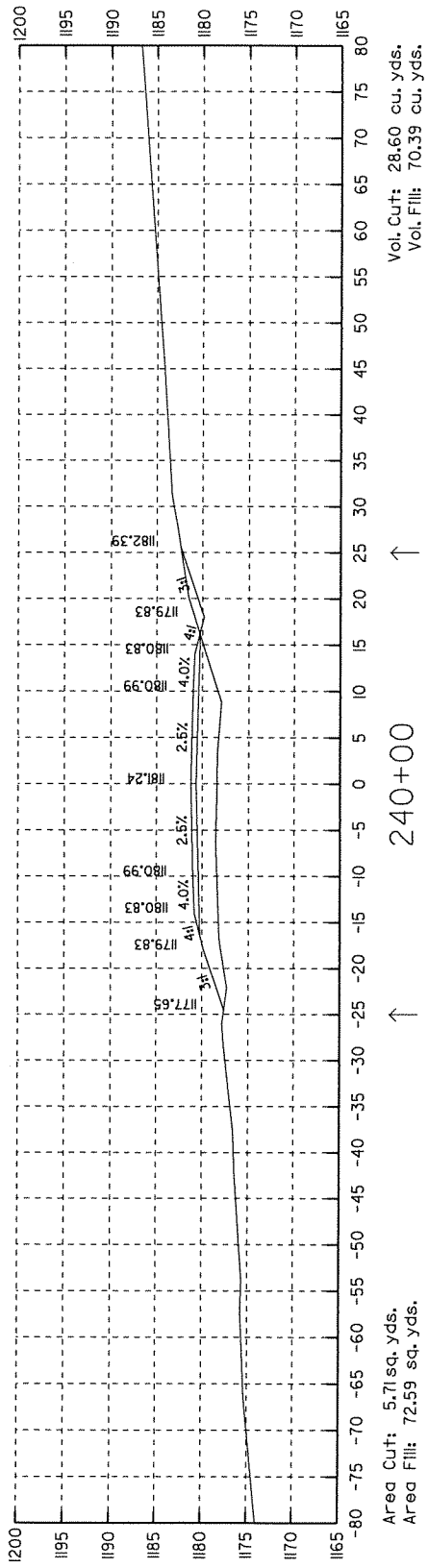
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(IIG)		
				JOB NO.		FA4510	62	96

4 STA. 239+00 TO STA. 240+08

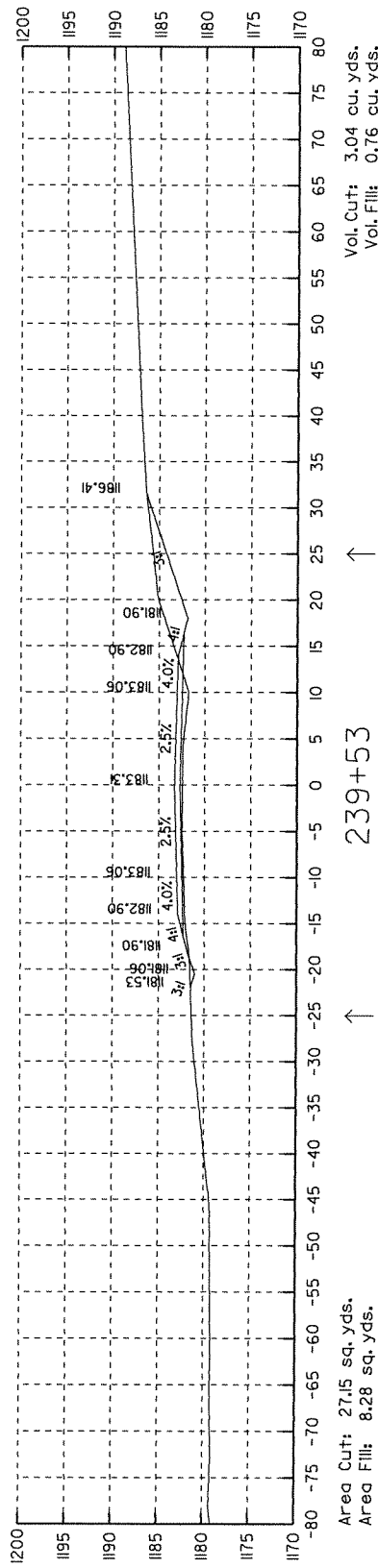


↑ 240+08 ↑

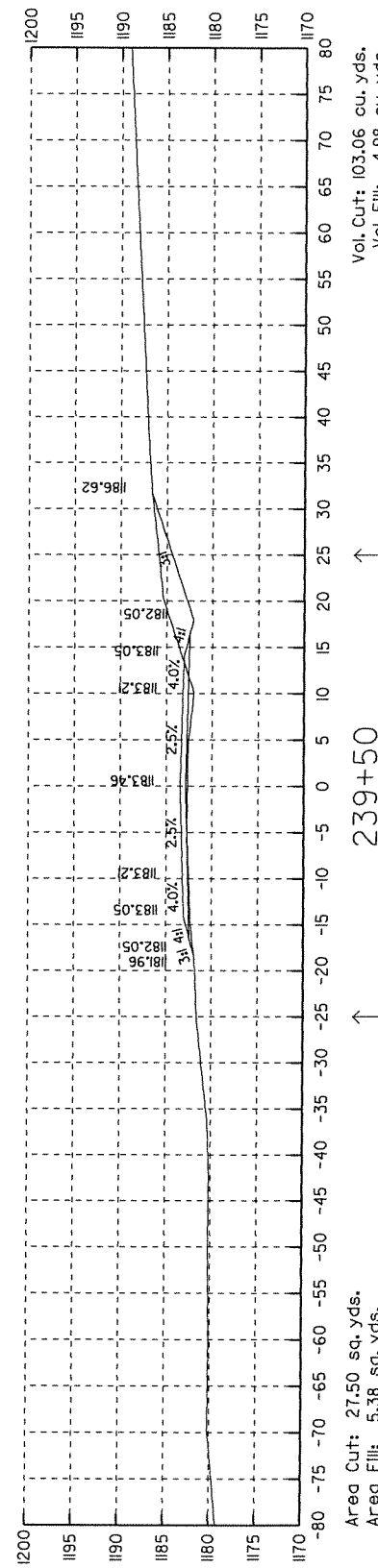
INSTALL
18" X 4' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 45 CU. YDS.



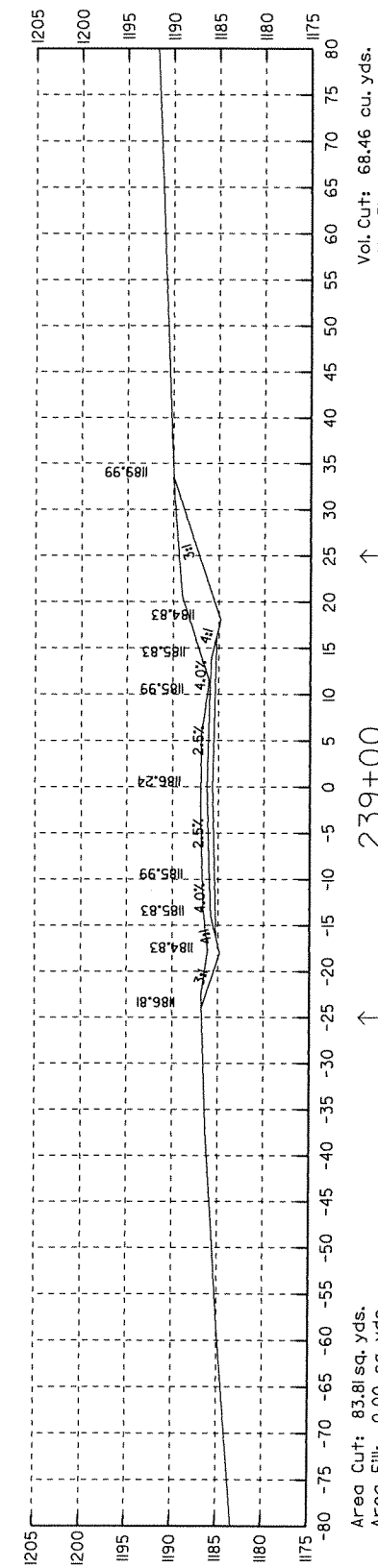
↑ 240+00 ↑



↑ 239+53 ↑



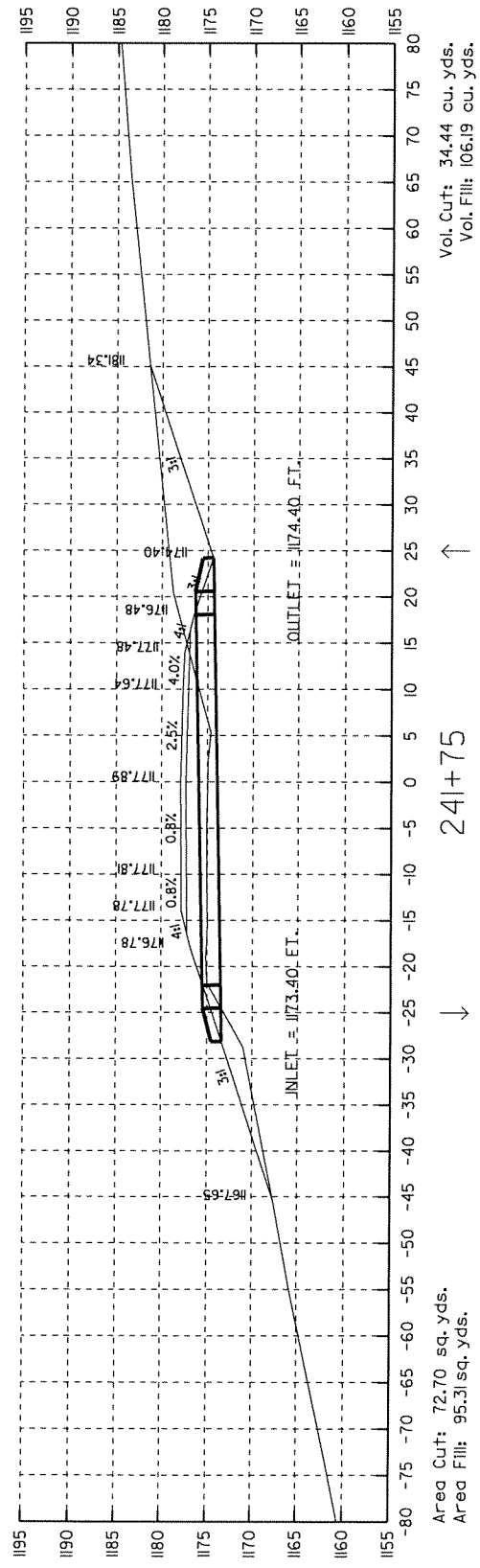
↑ 239+50 ↑



↑ 239+00 ↑

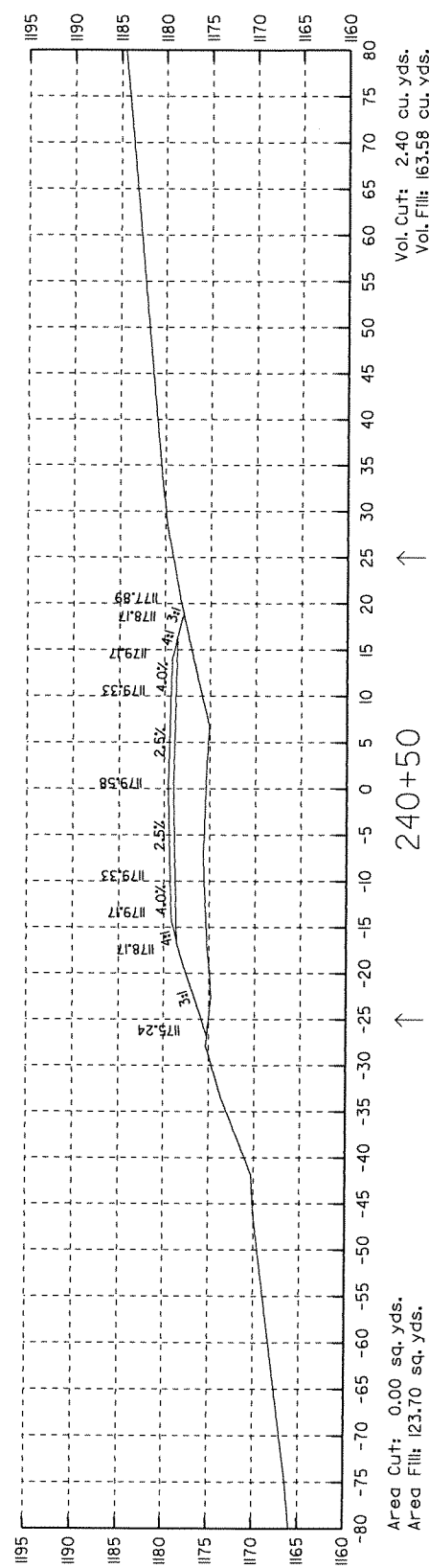
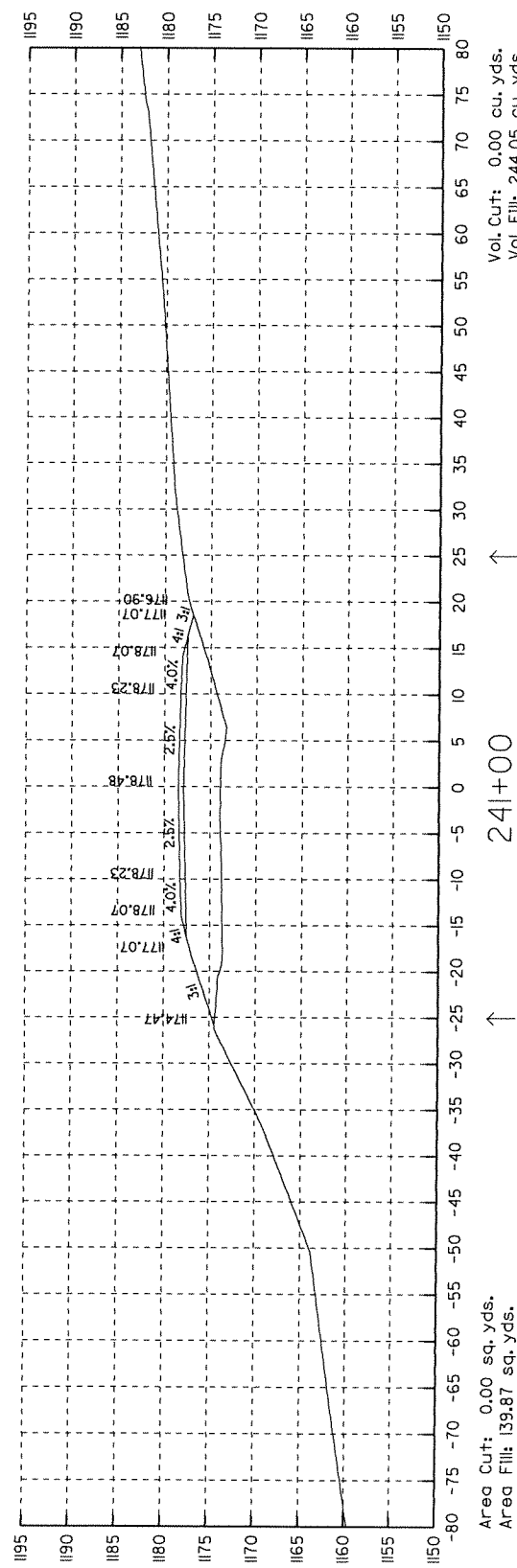
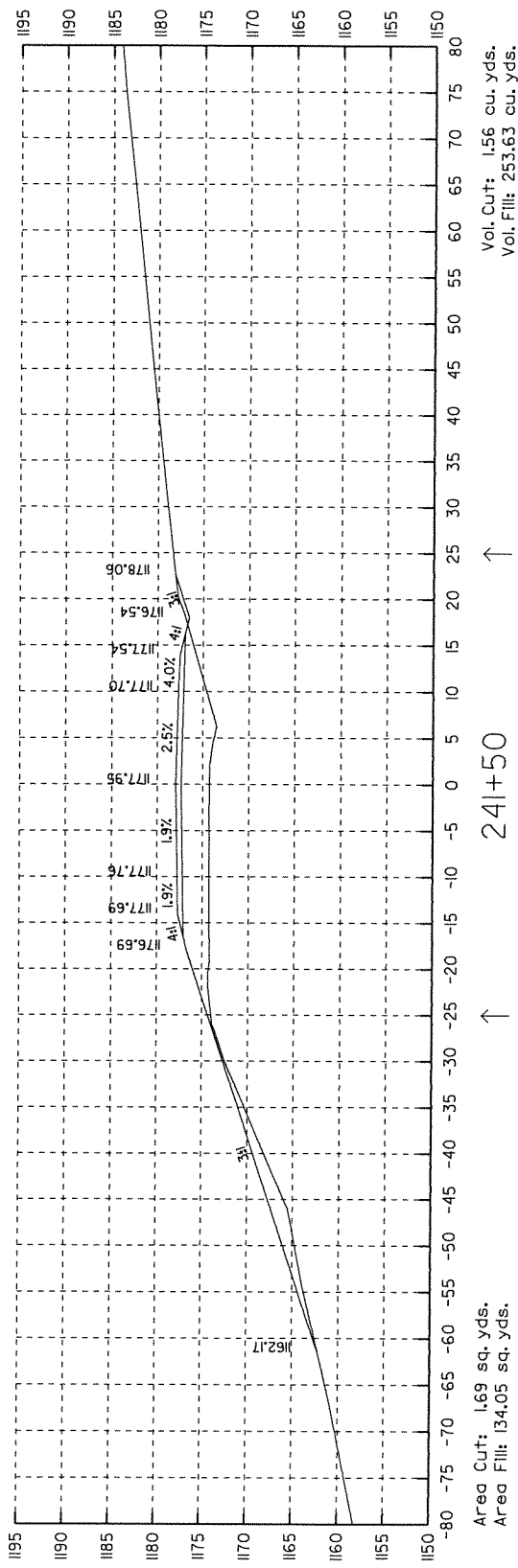
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	63	96	

4 STA. 240+50 TO STA. 241+75

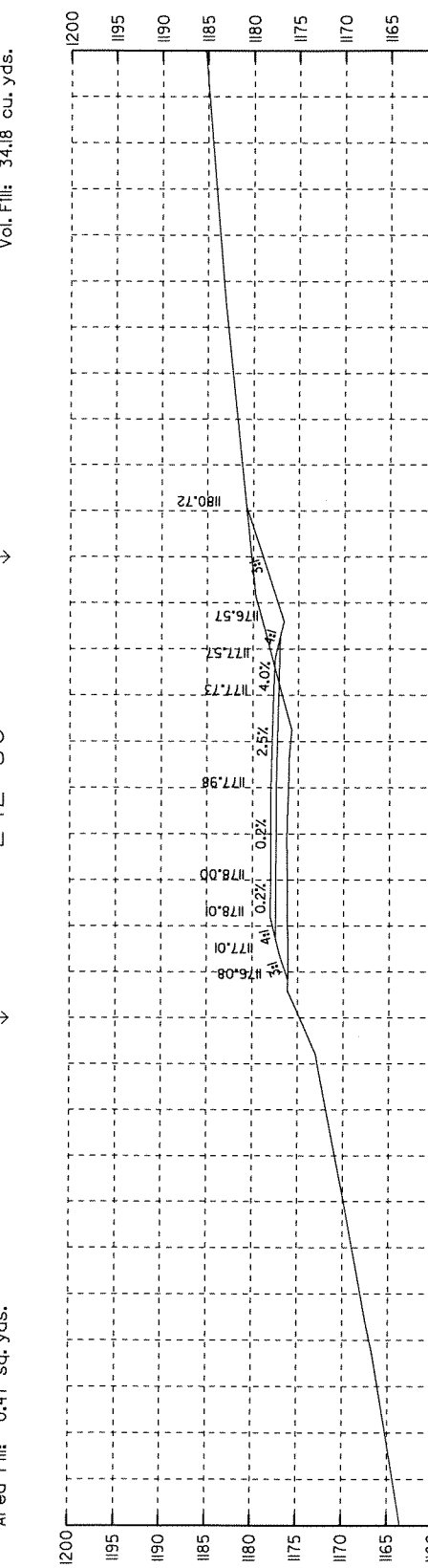
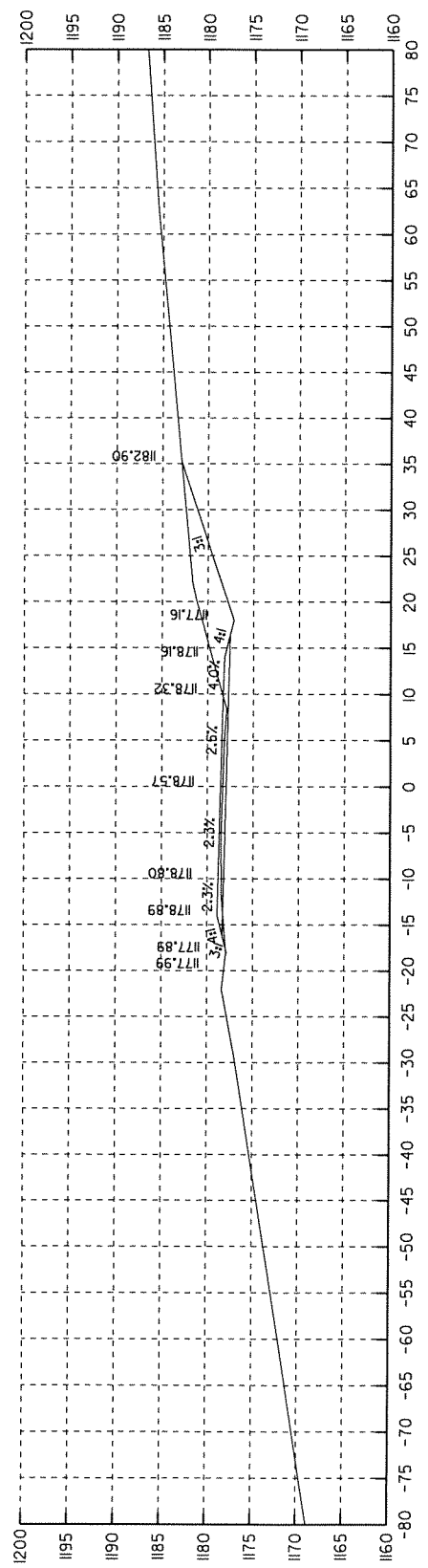
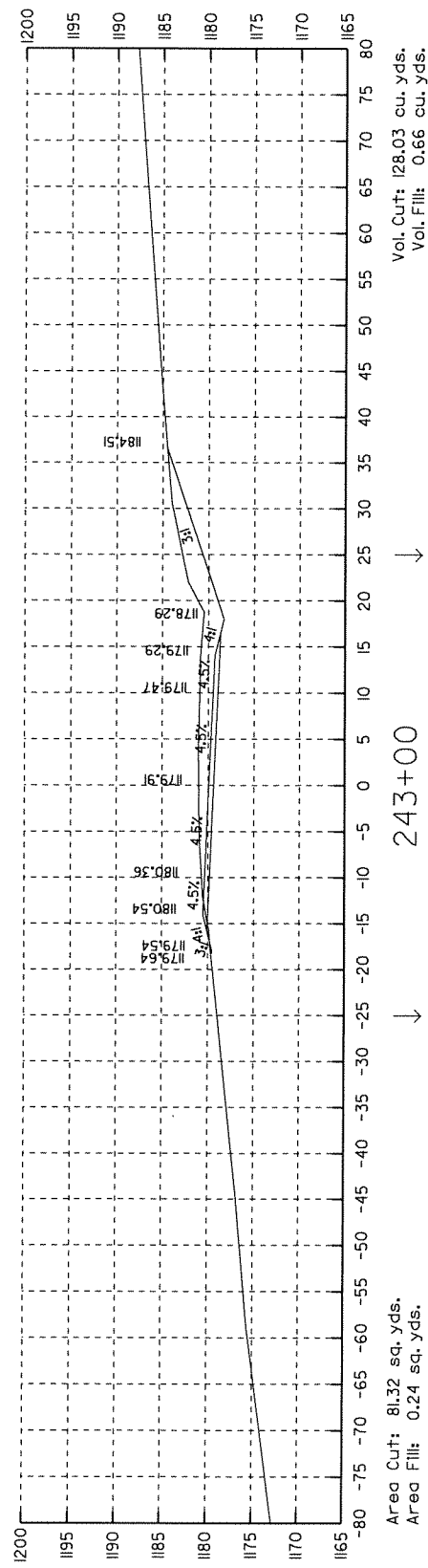
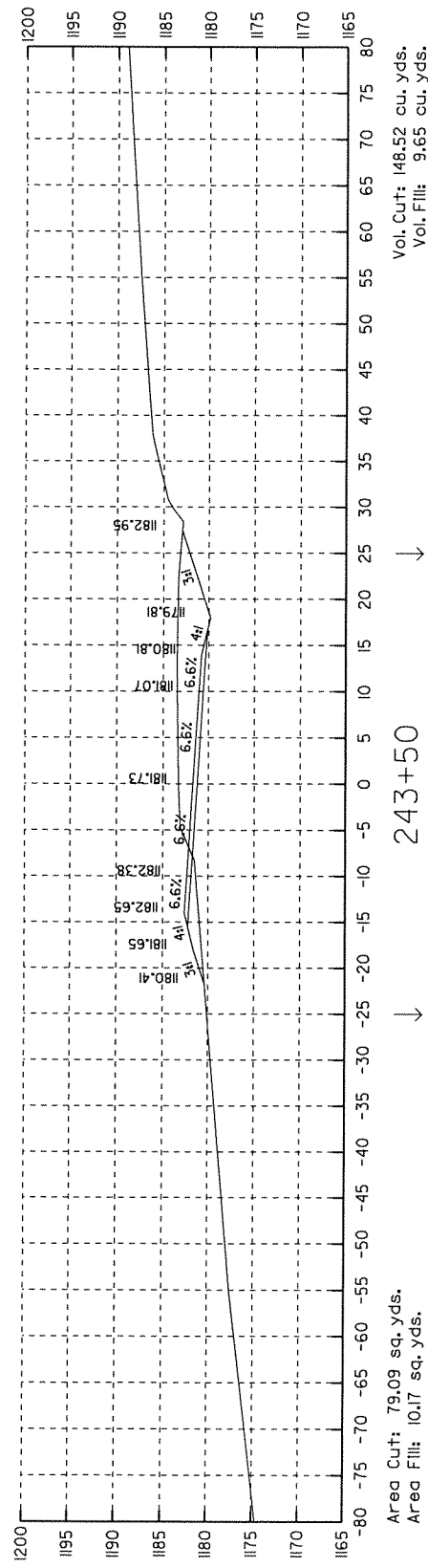
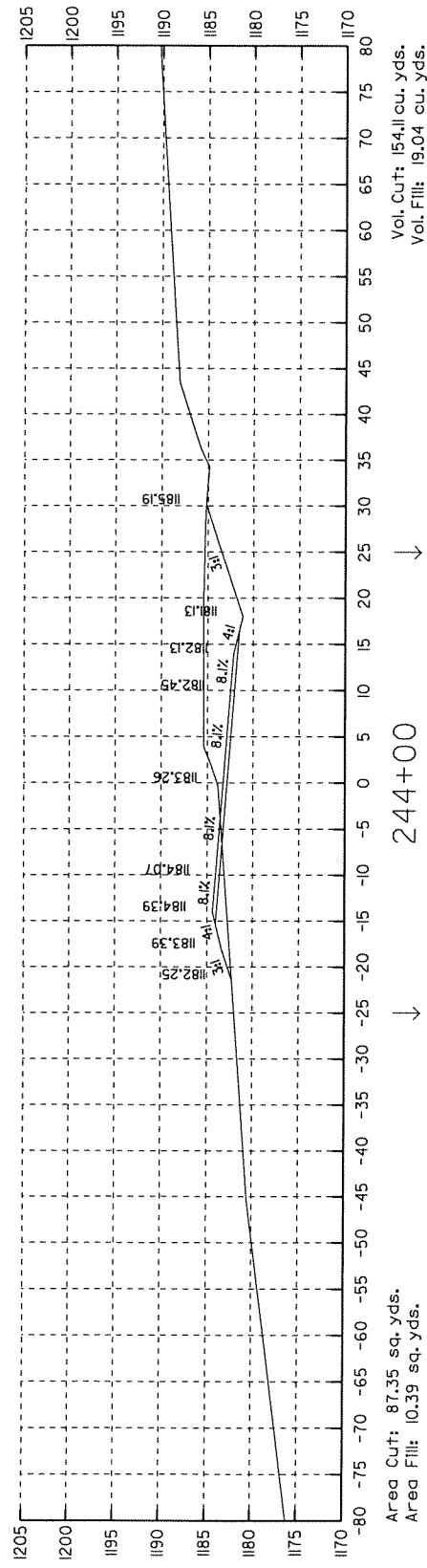


CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN

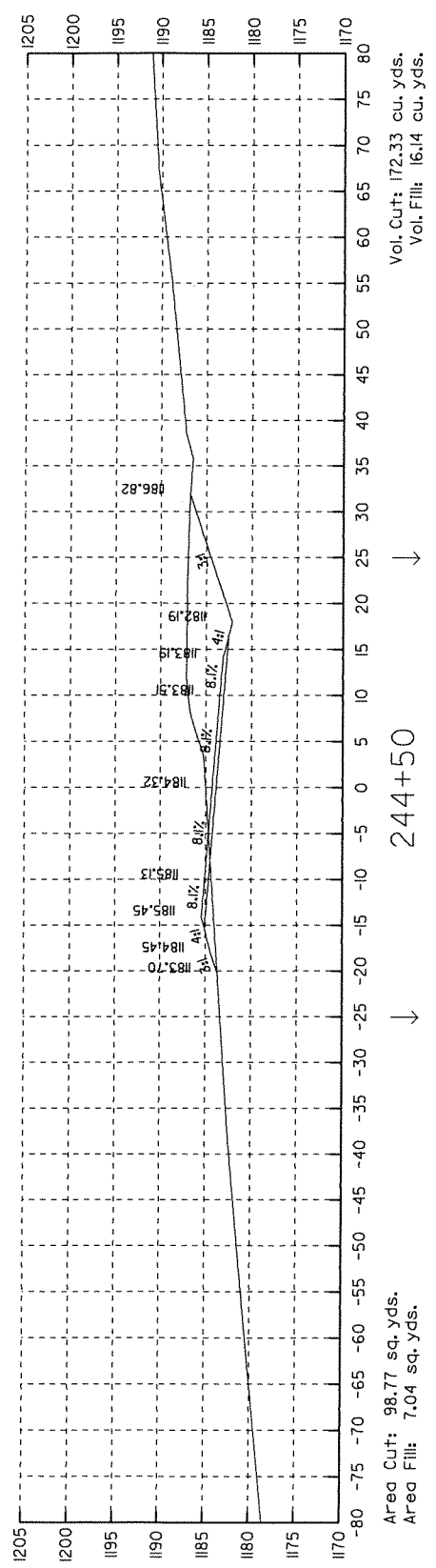
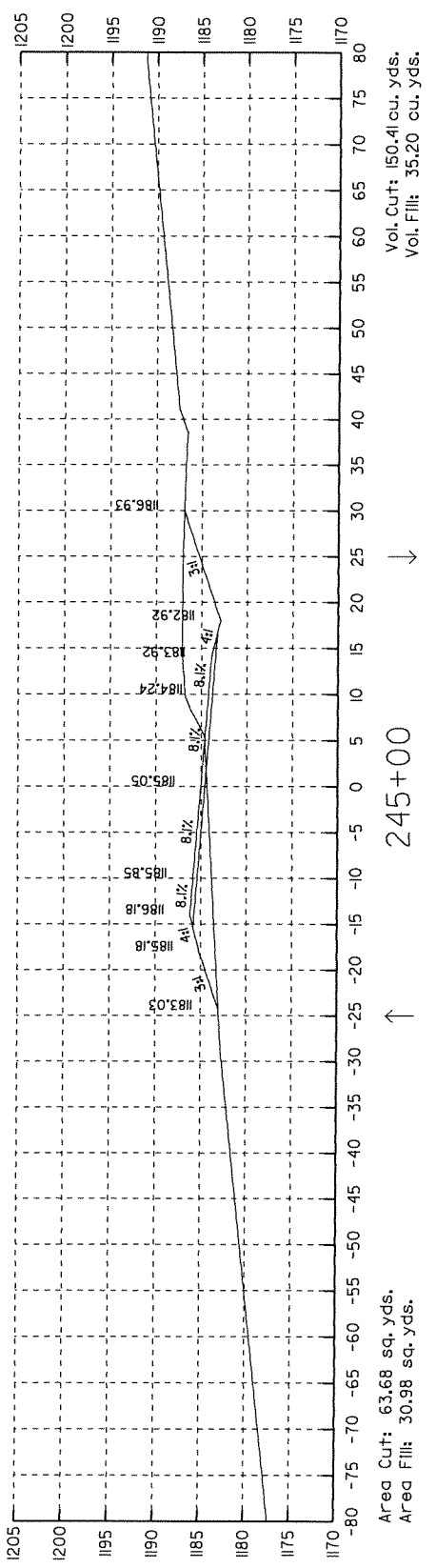
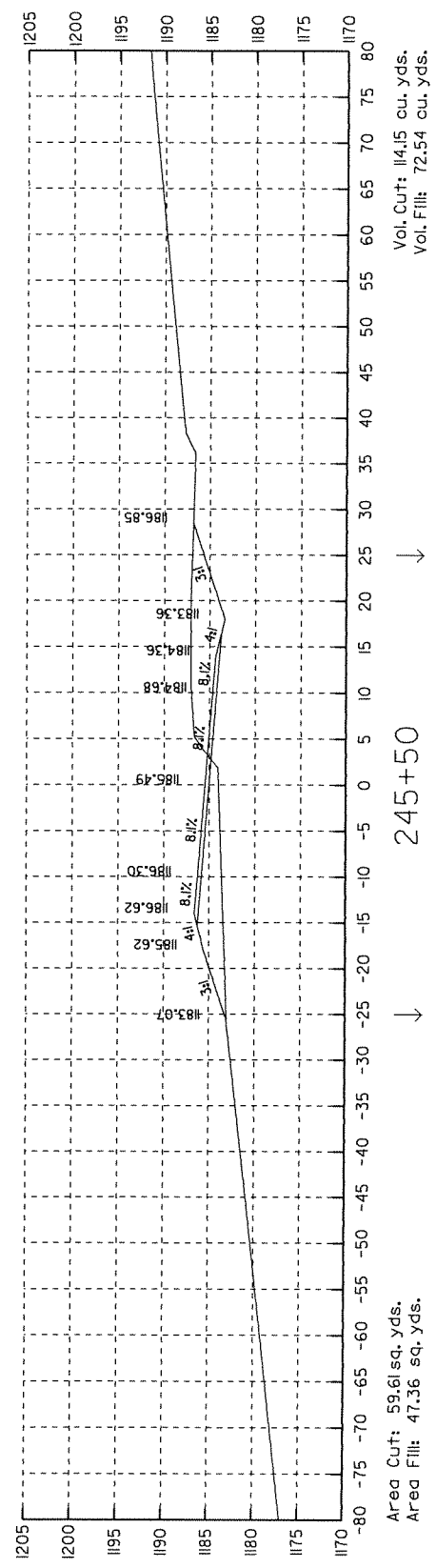
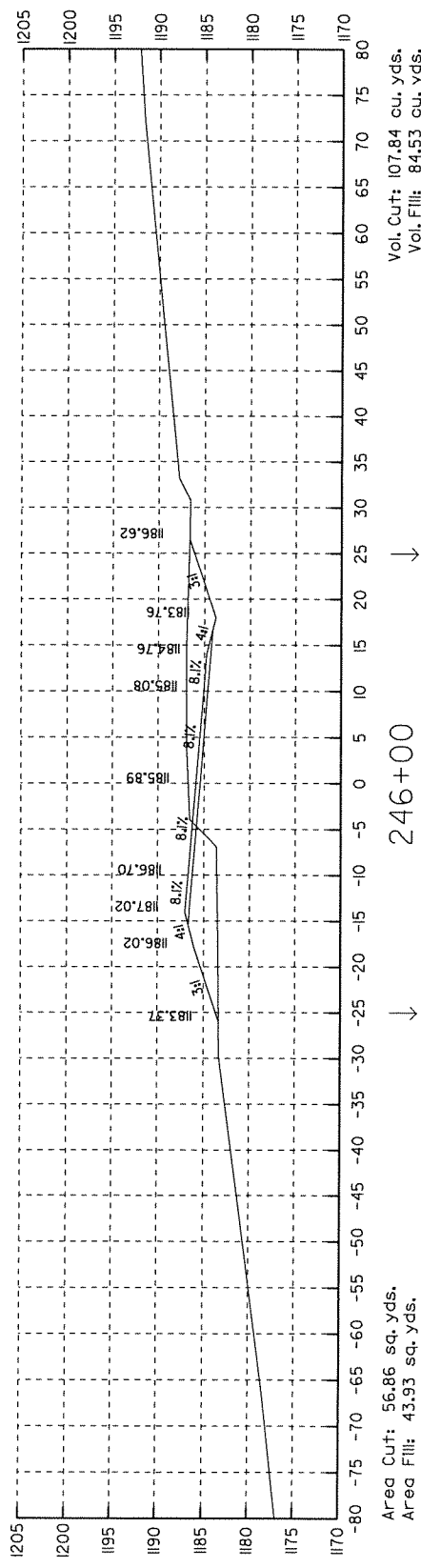
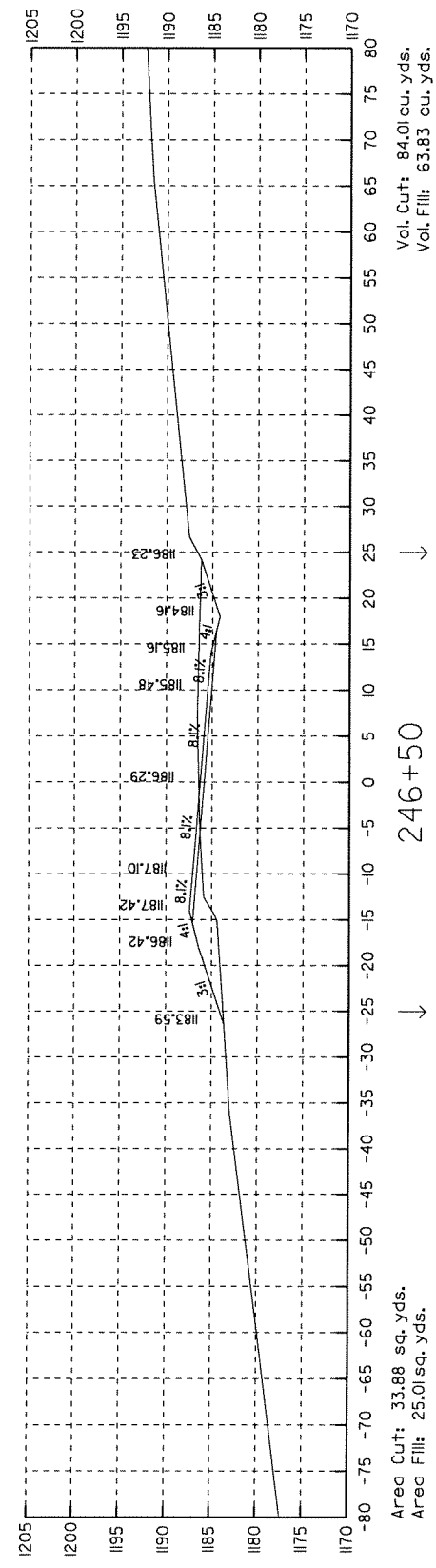
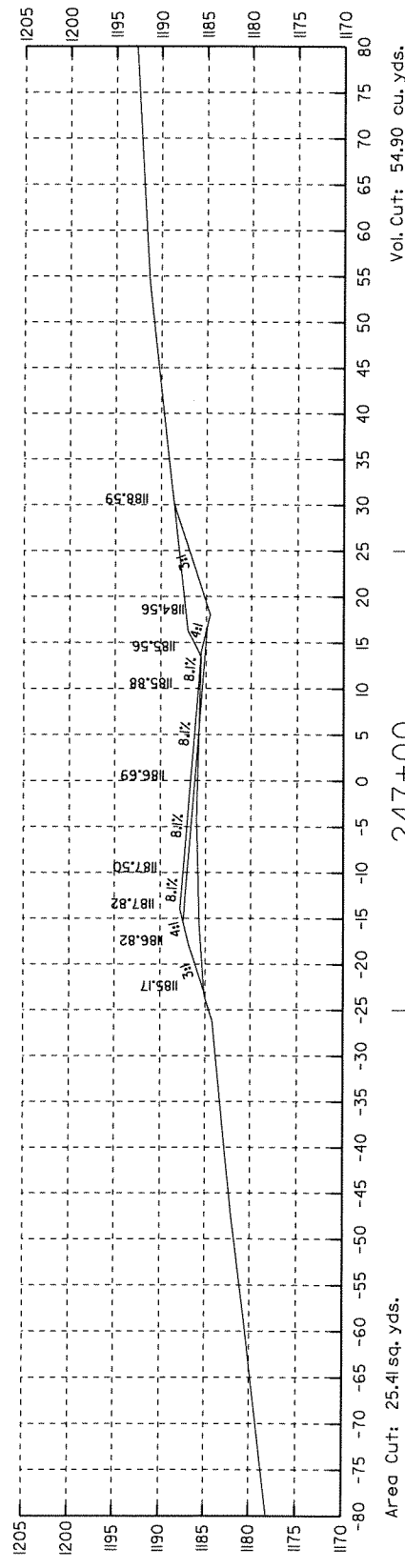
D.A. = 0.5 AC. Q25 = 1.8 CFS
24" RCP(CL.III)(TYPE 3 BEDDING) = 41 LIN. FT.
24" CMP OR PLASTIC(TYPE 2 BEDDING) = 46 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	64	96	
				4 STA. 242+00 TO STA. 244+00				

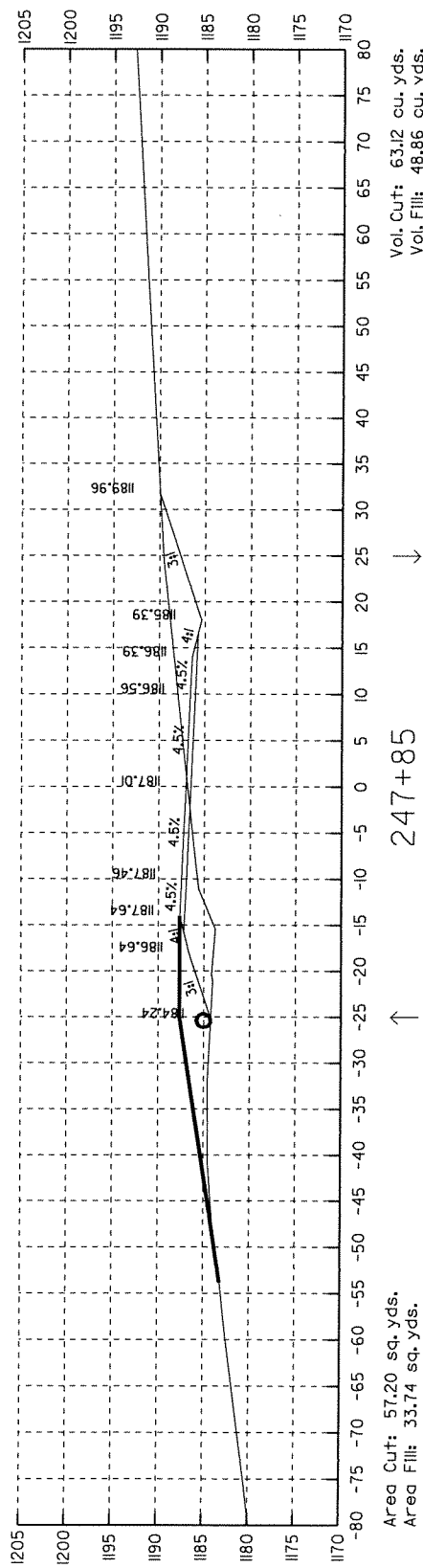
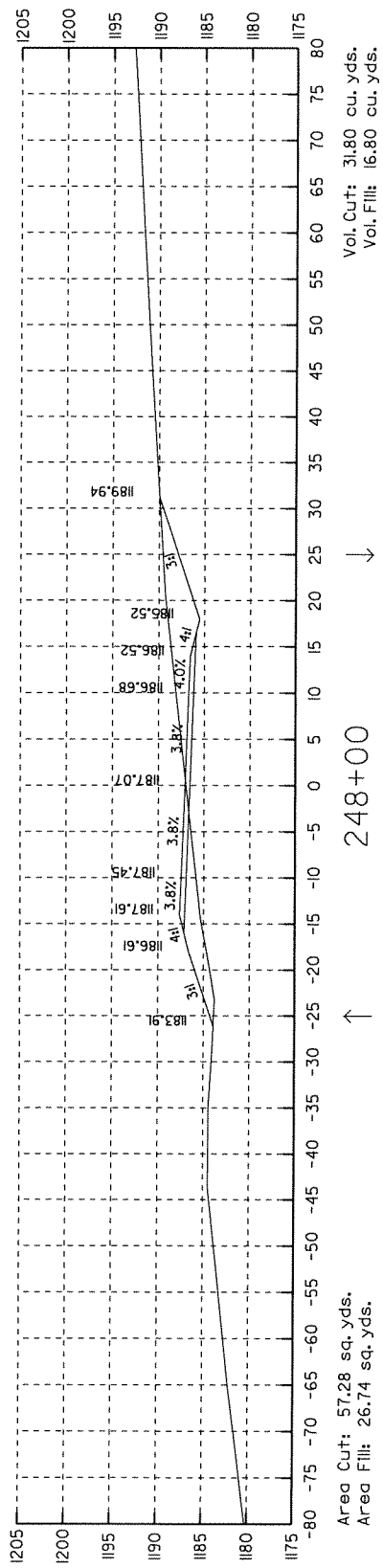
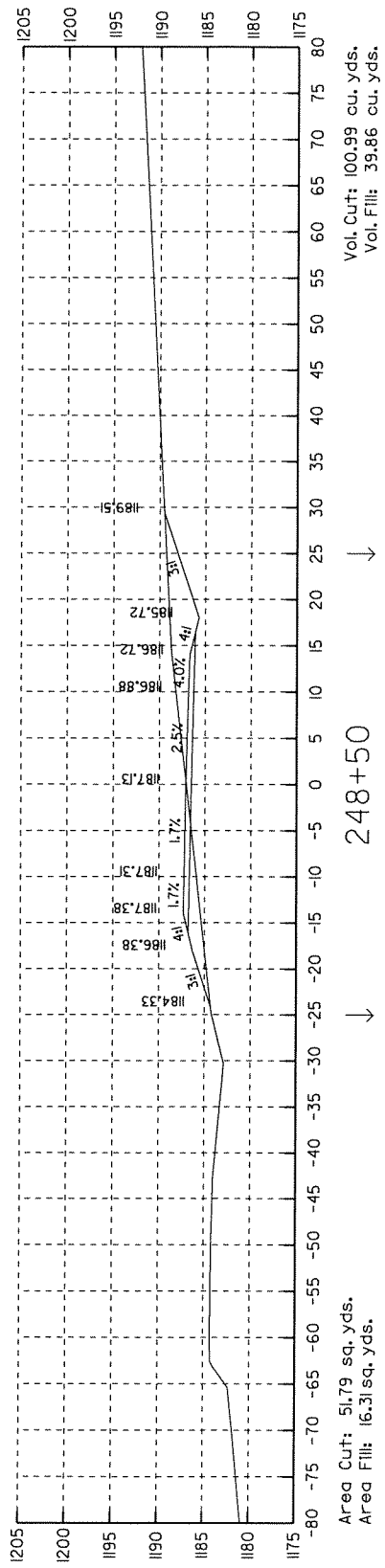
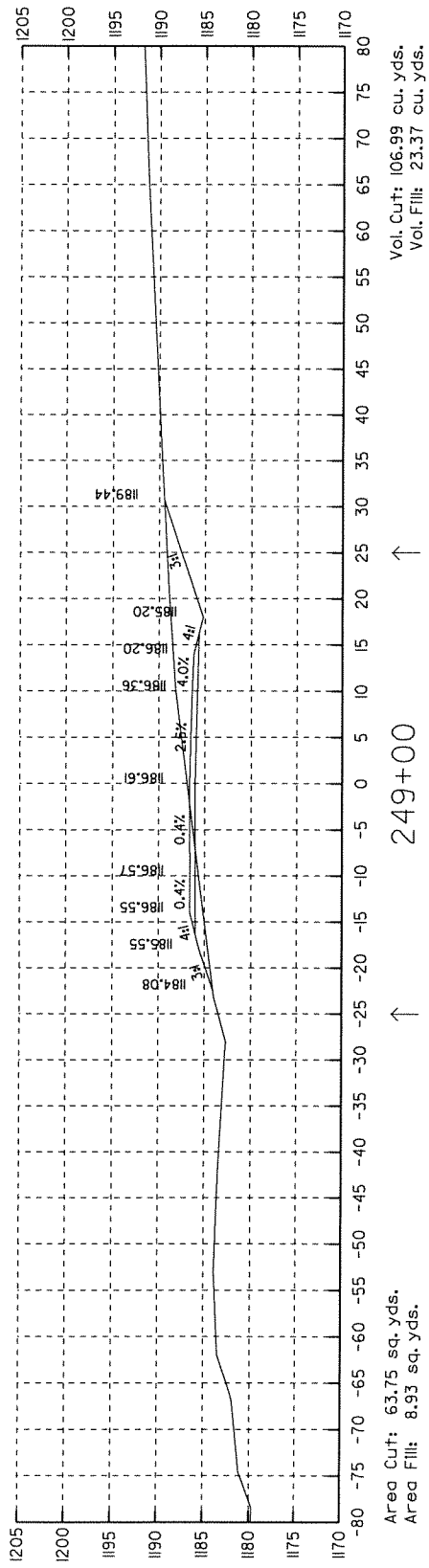


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	FA4510		65	96
				4 STA. 244+50 TO STA. 247+00				

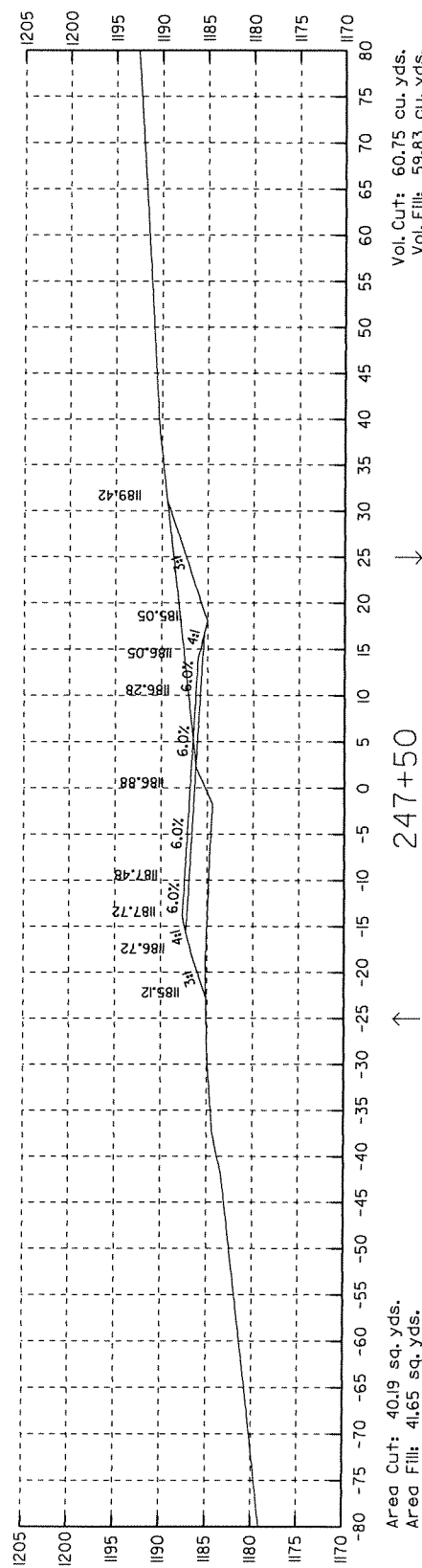


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		66	96

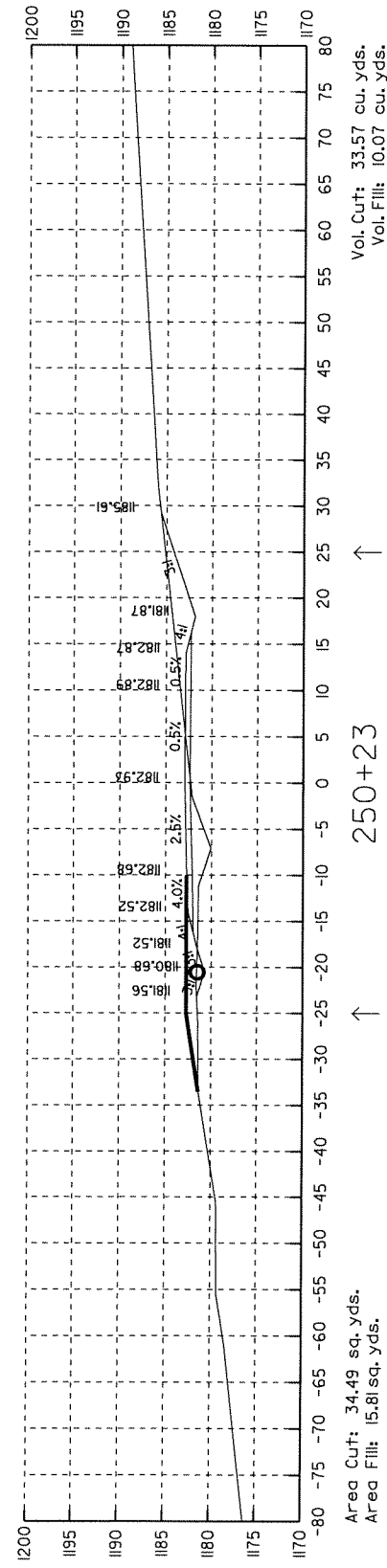
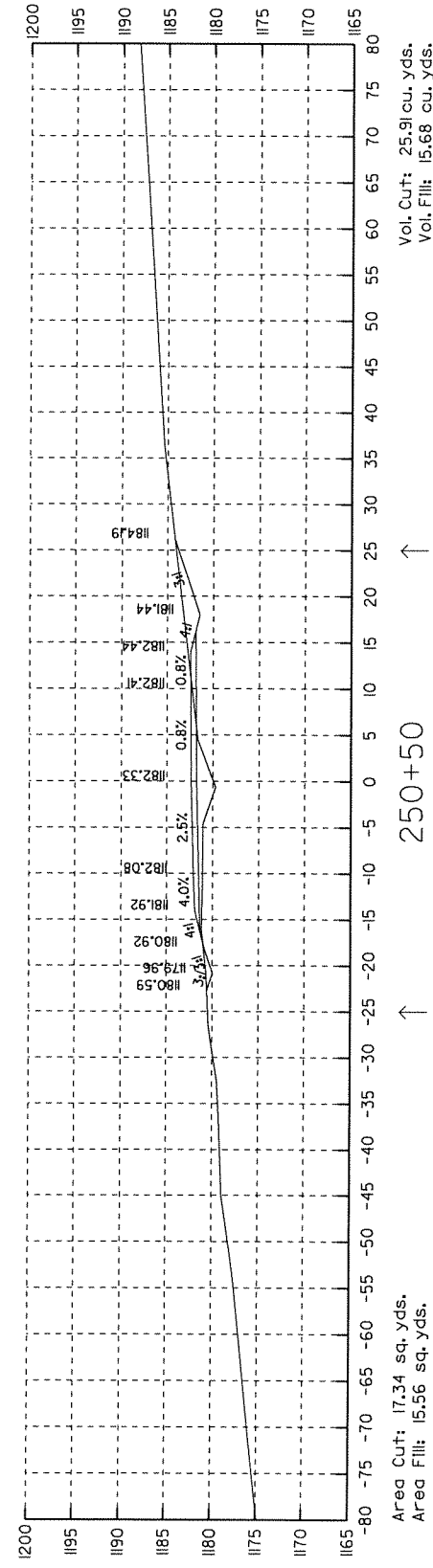
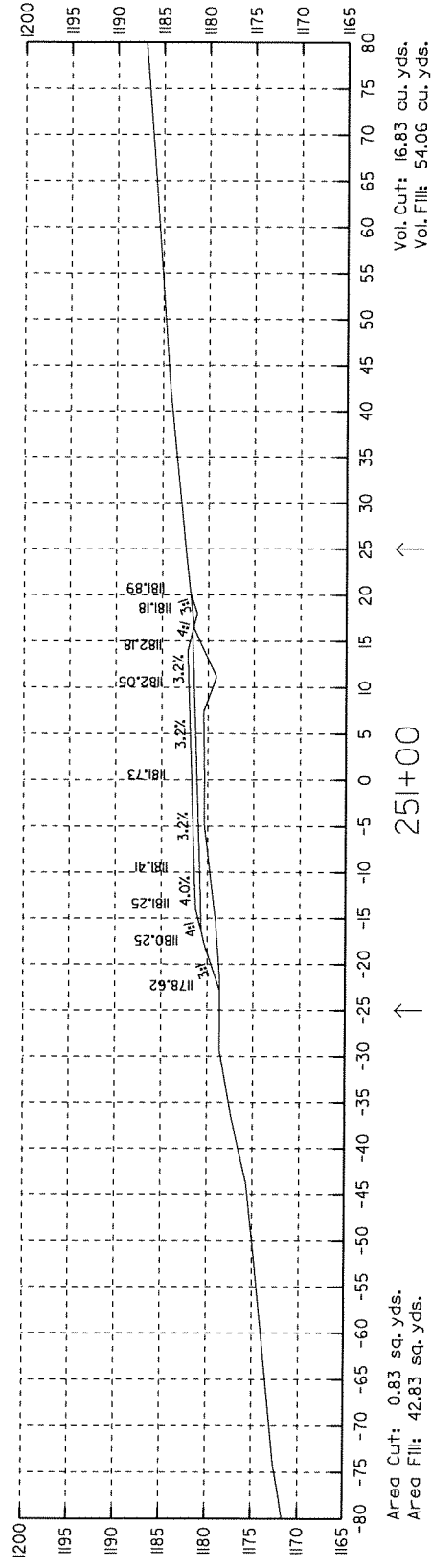
4 STA. 247+50 TO STA. 249+00



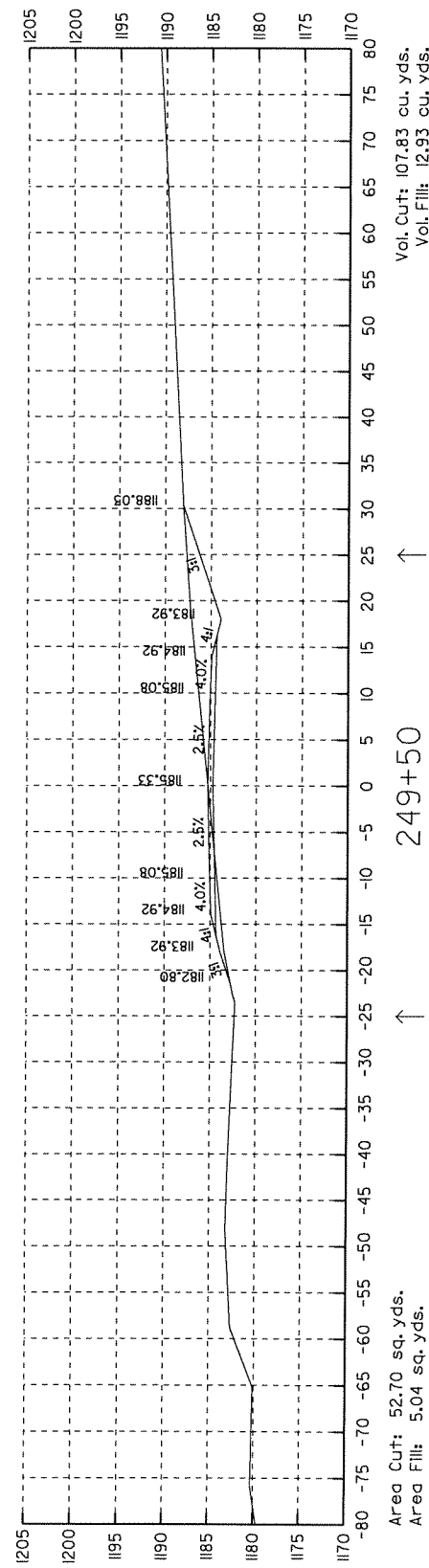
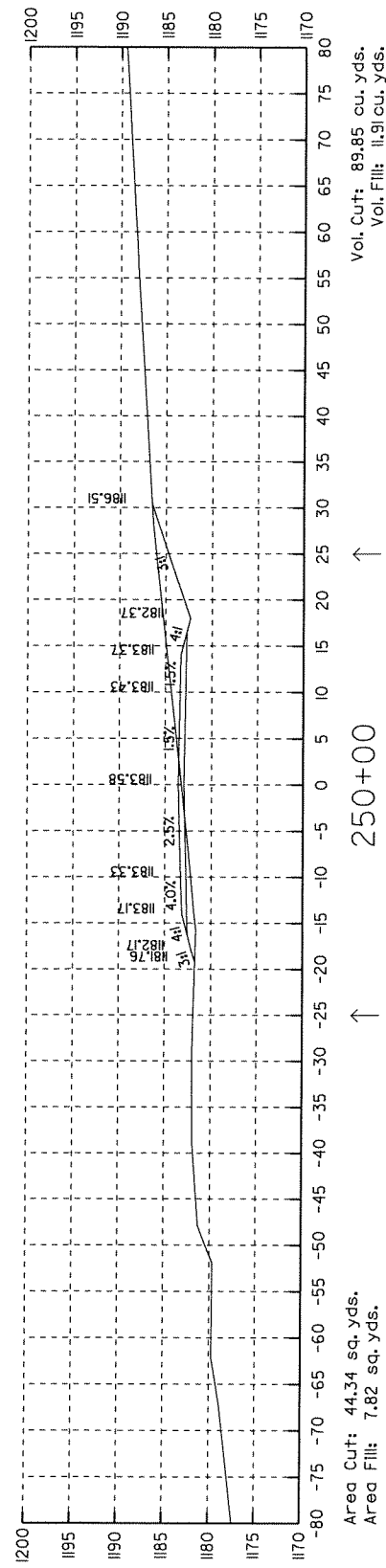
INSTALL
18" X 38' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 20 CU. YDS.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	67	96	
				4 STA. 249+50 TO STA. 251+00				

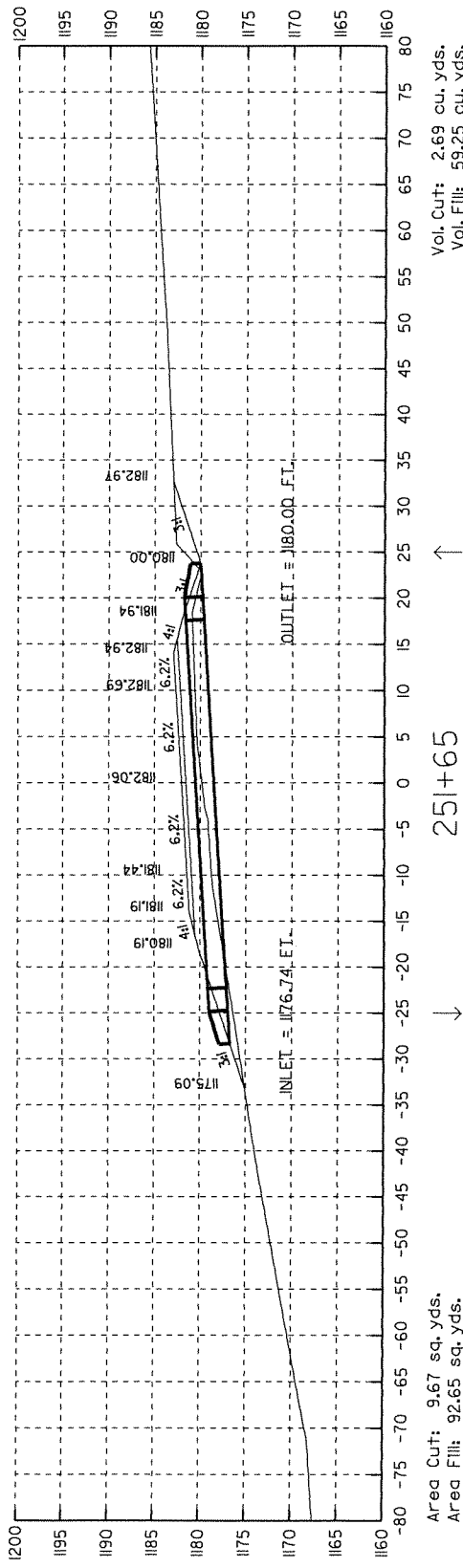
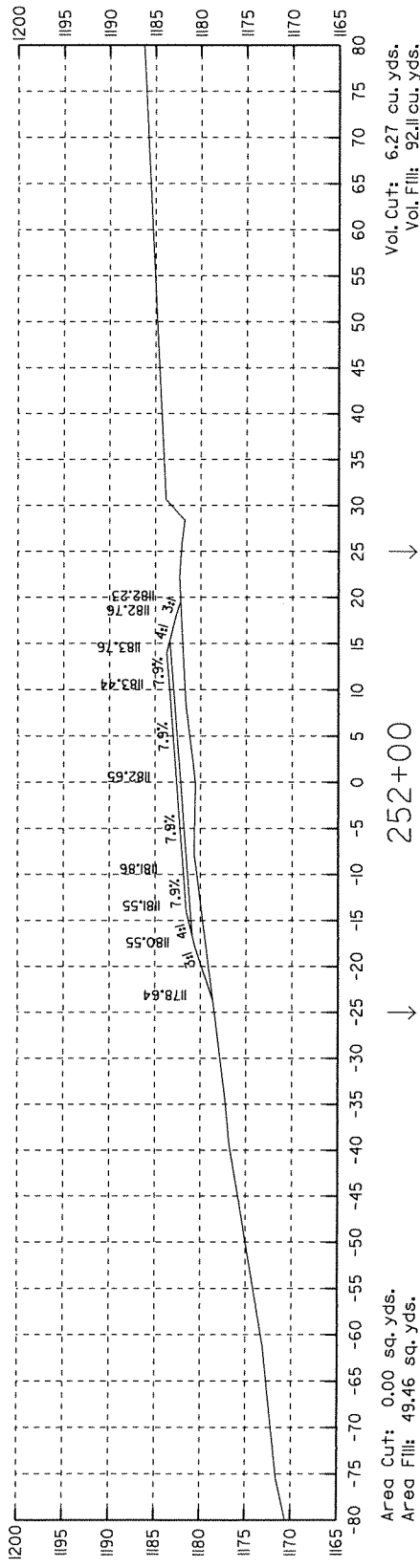
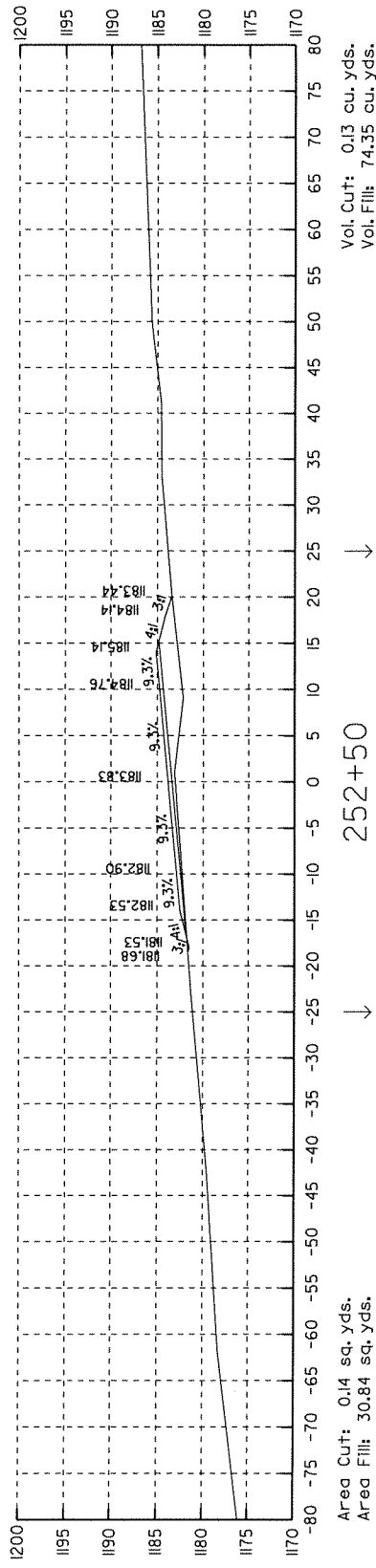
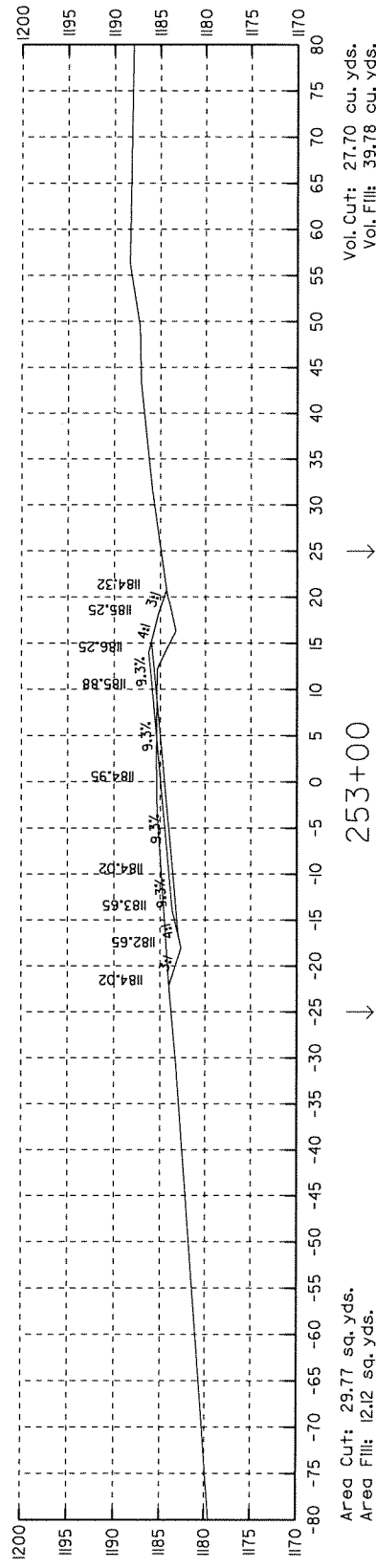


INSTALL
18" X 33' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 10 CU. YDS.

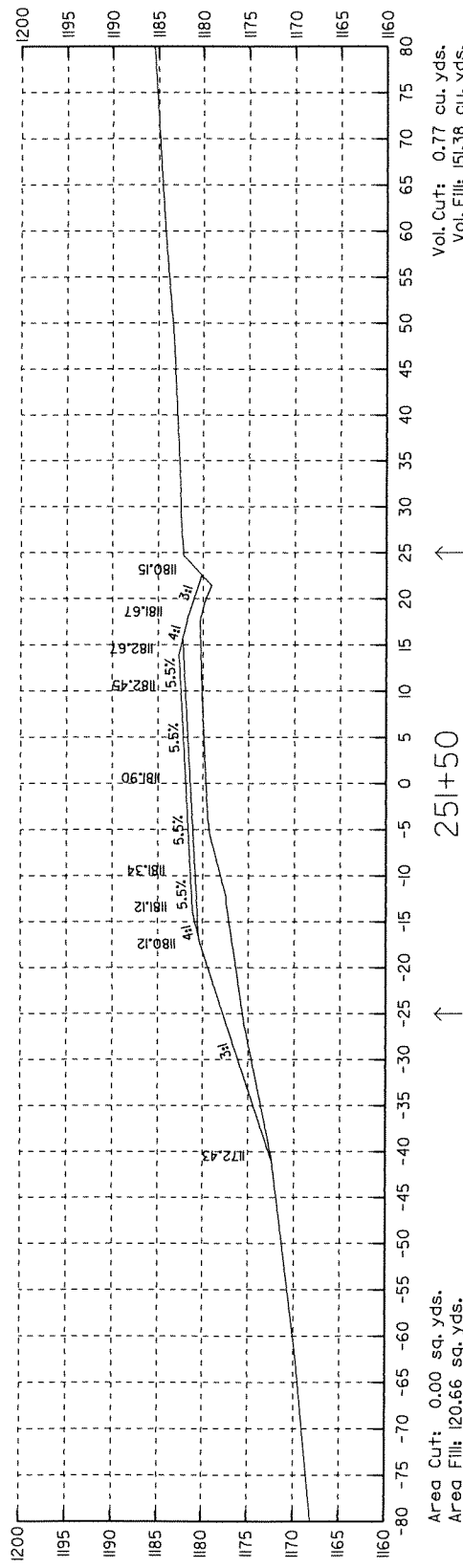


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	68	96	

4 STA. 251+50 TO STA. 253+00

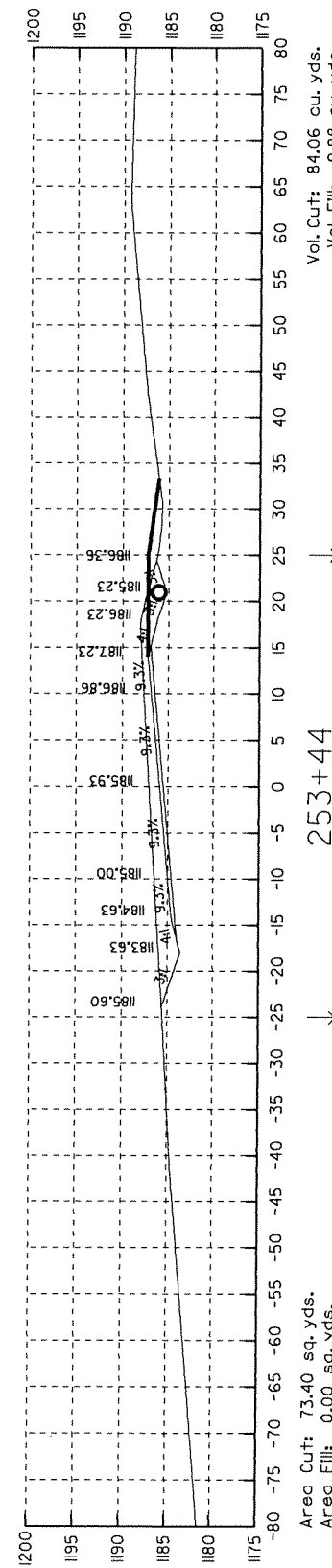
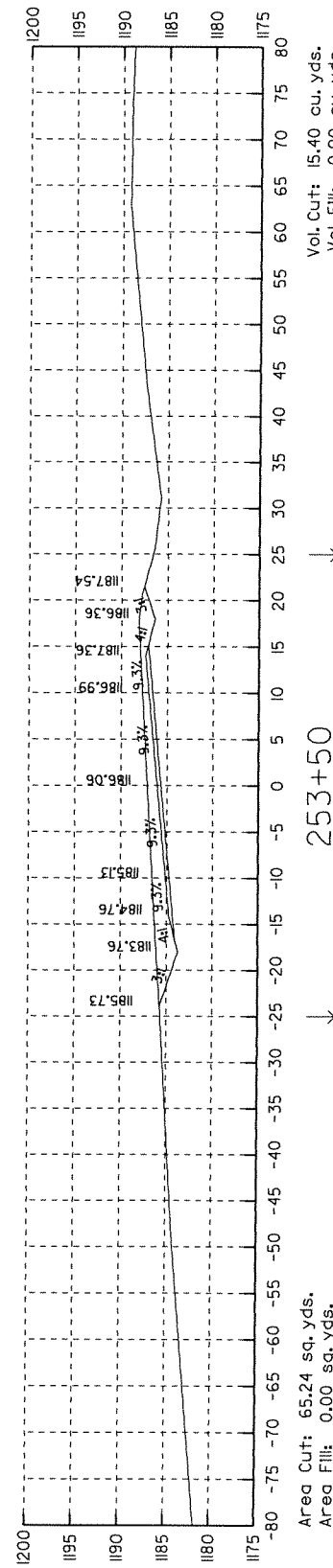
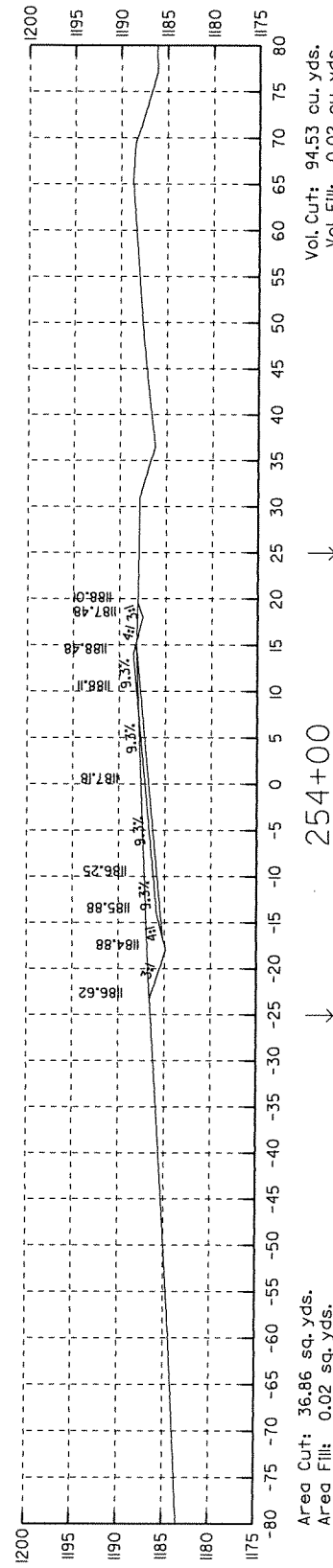
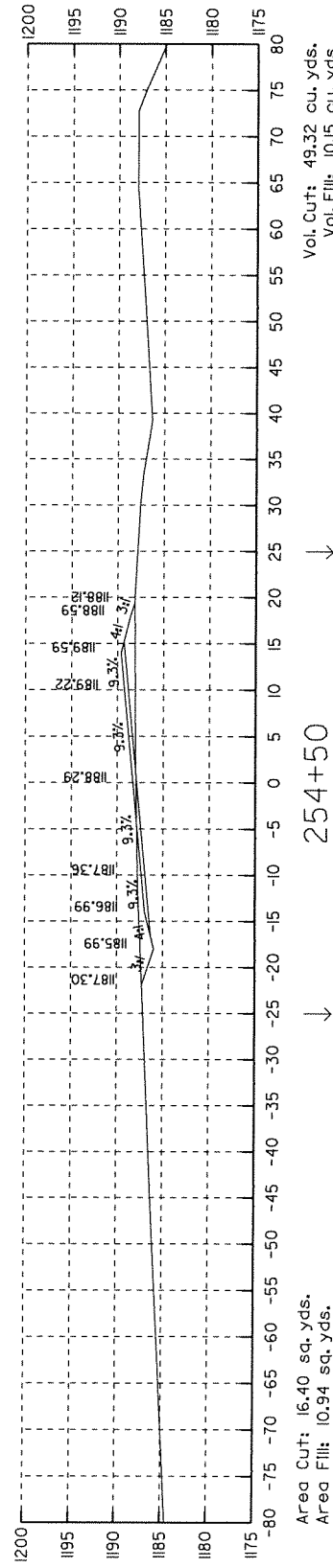
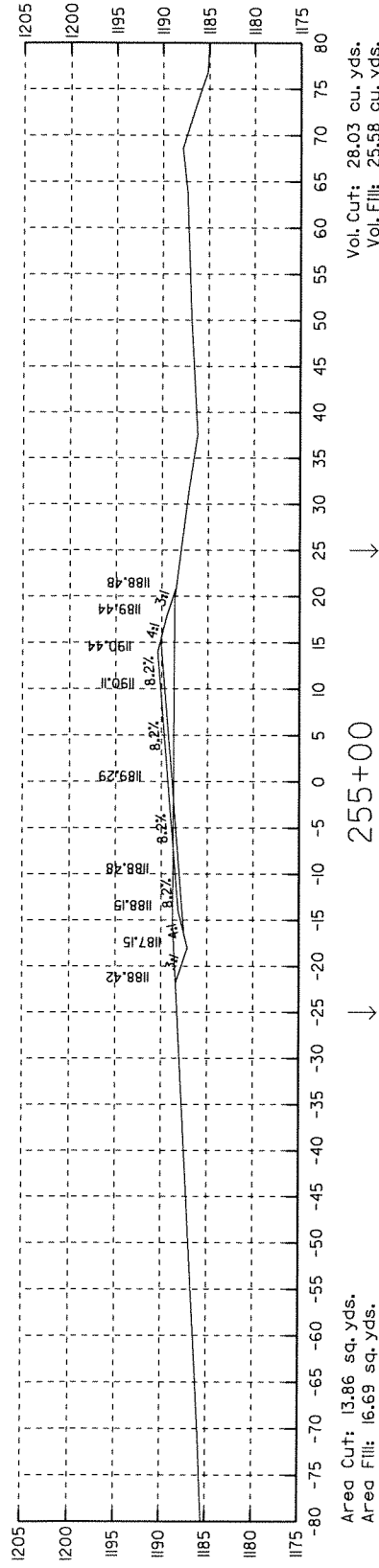
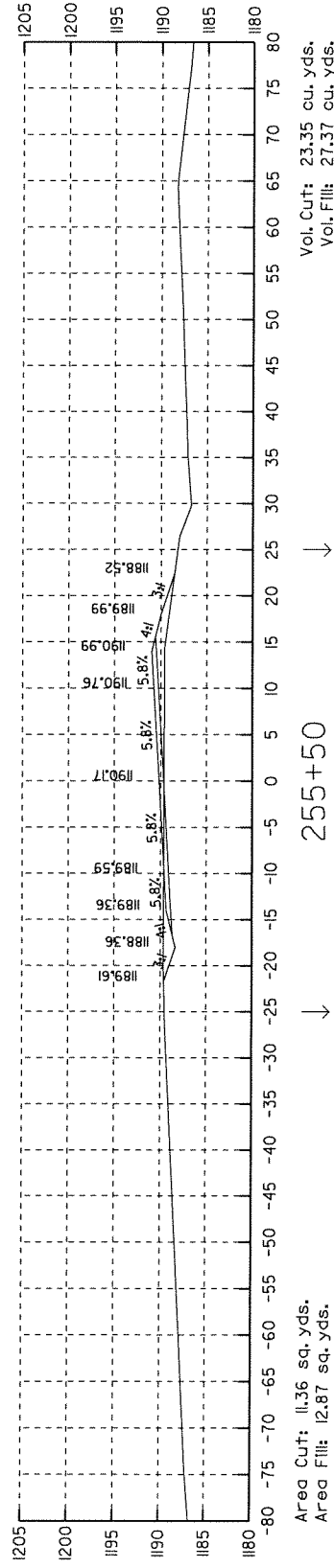
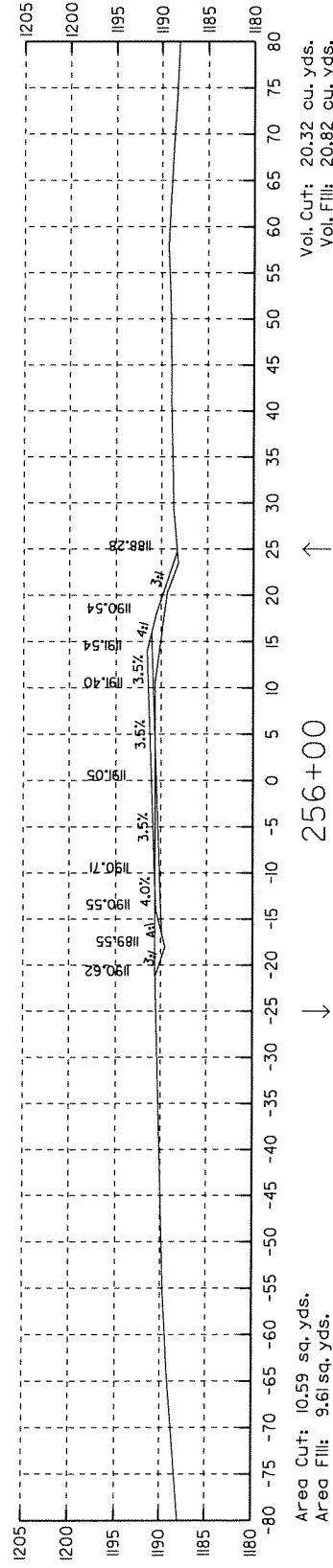


CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN
D.A. = 0.5 AC. Q25 = 1.8 CFS
24" RCP(CL.III)(TYPE 3 BEDDING) = 40 LIN. FT.
24" CMP OR PLASTIC(TYPE 2 BEDDING) = 46 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH

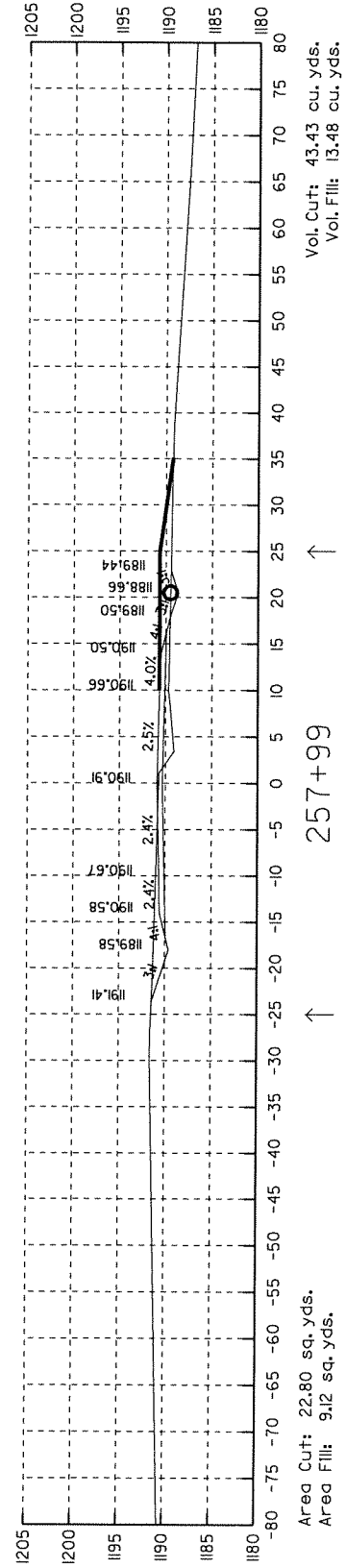
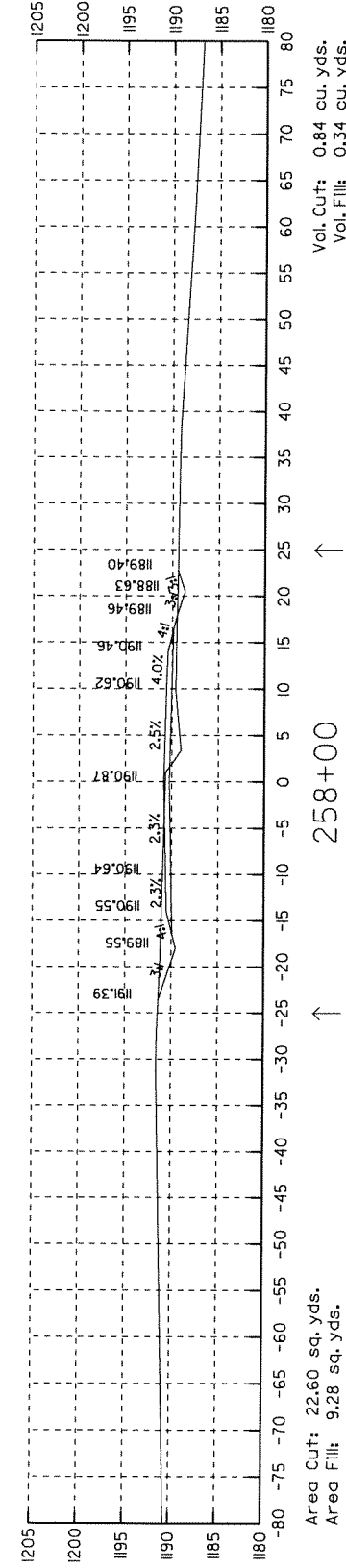
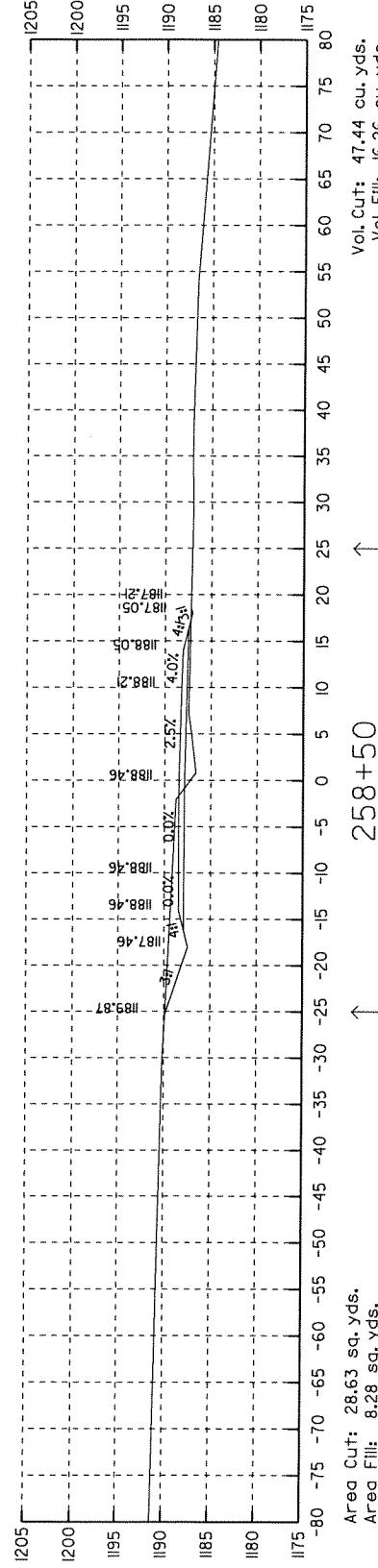
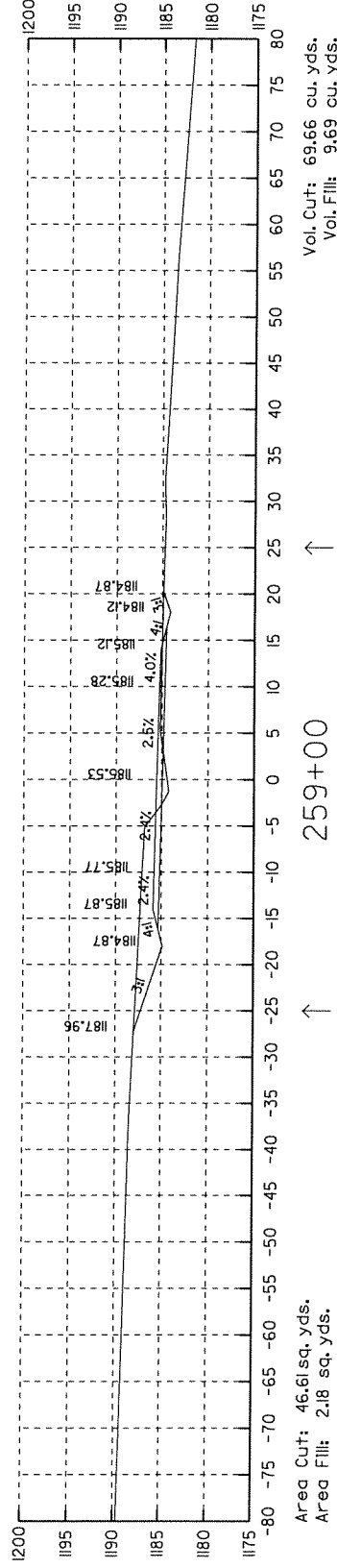


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	69	96	

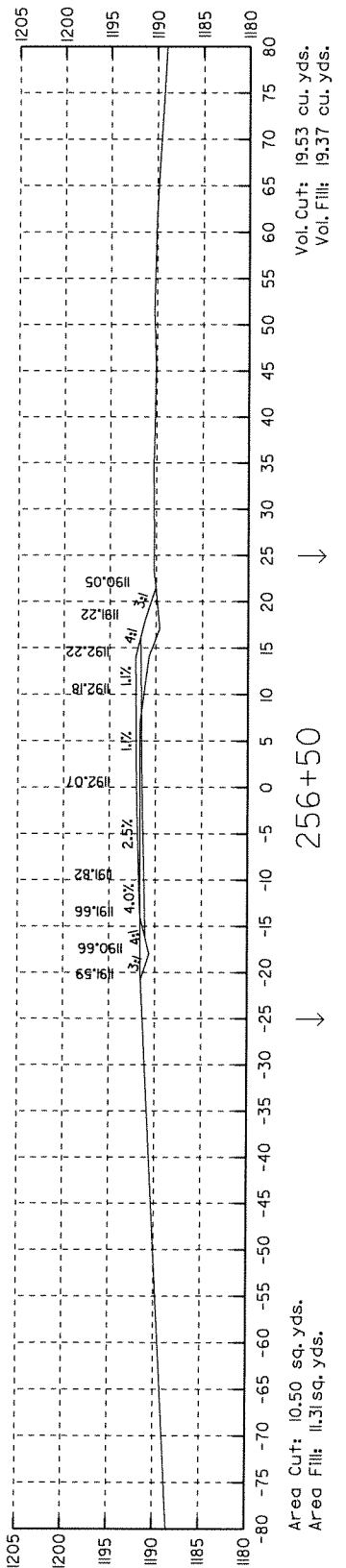
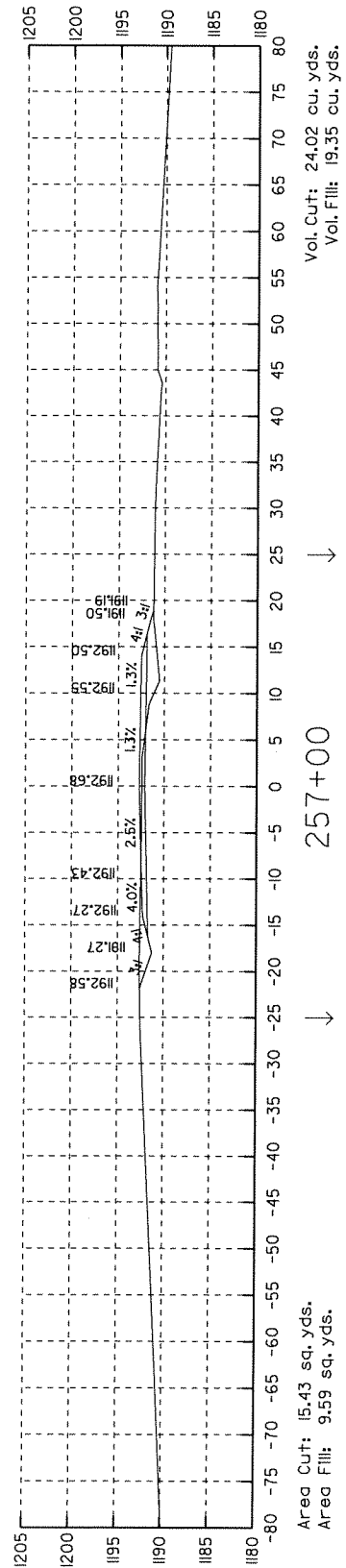
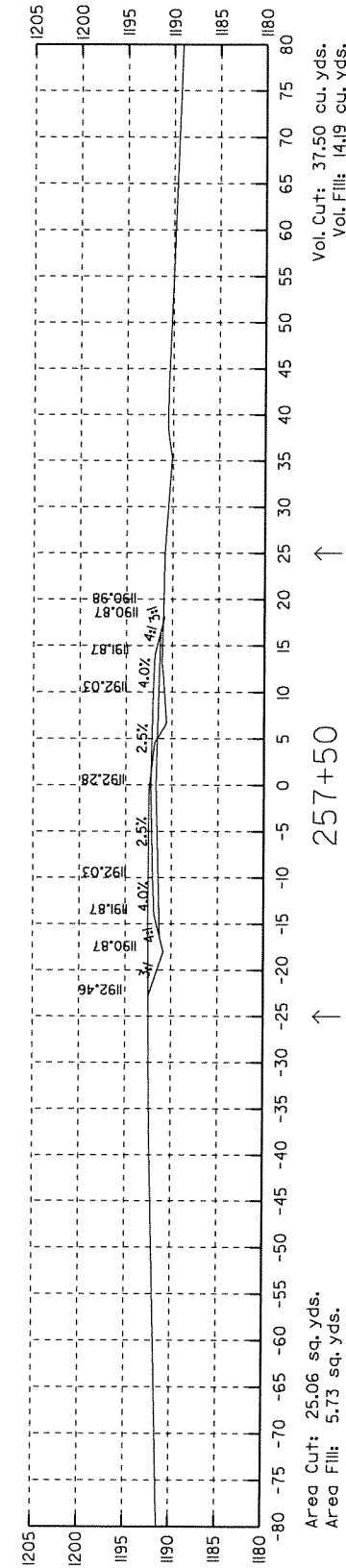
4 STA. 253+44 TO STA. 256+00



INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

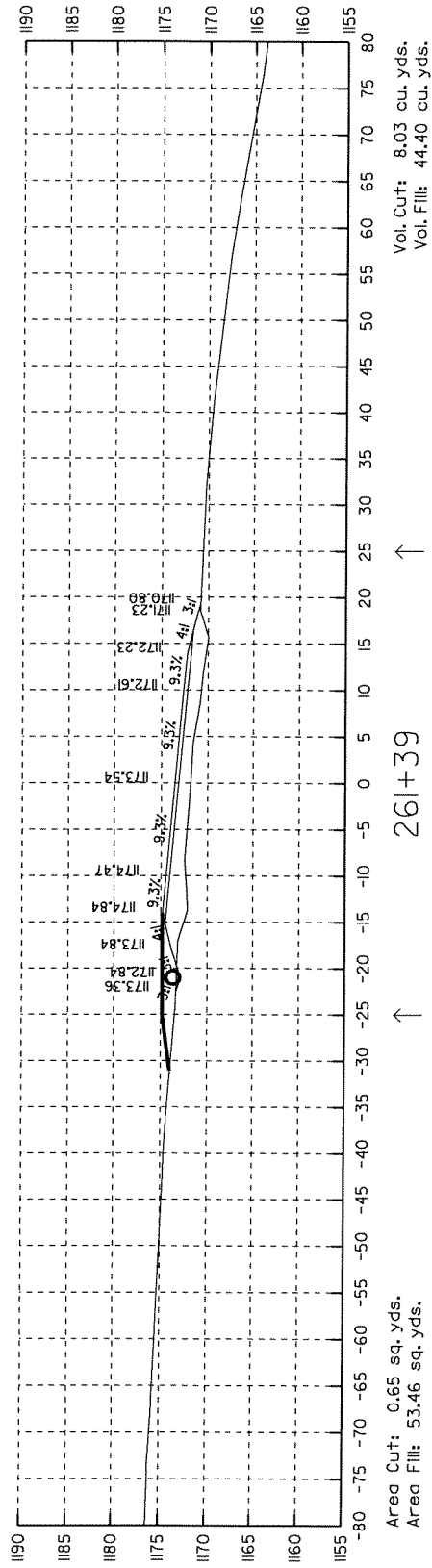
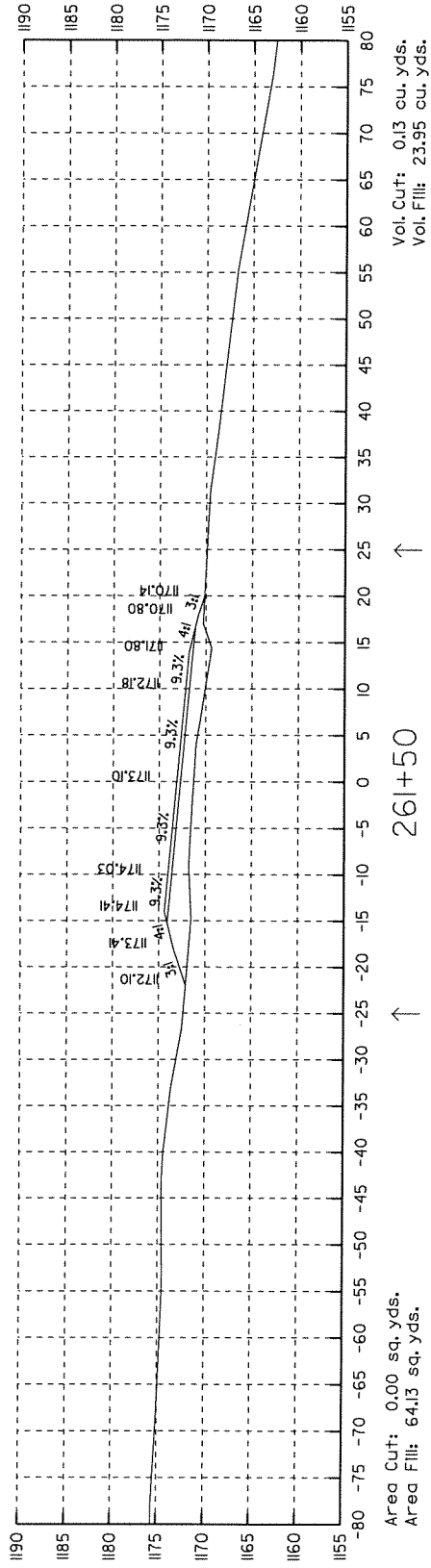


INSTALL
18" X 33' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

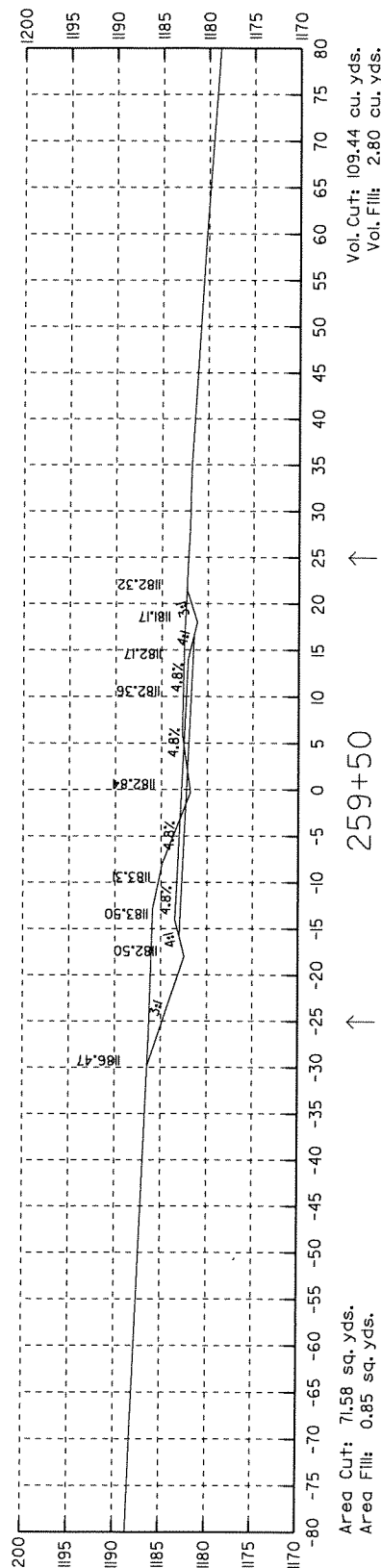
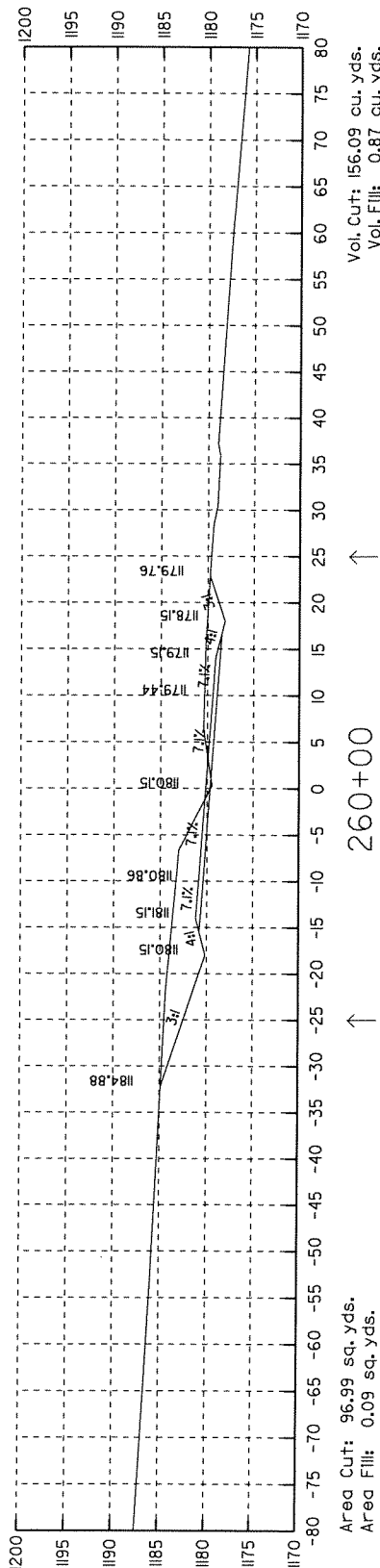
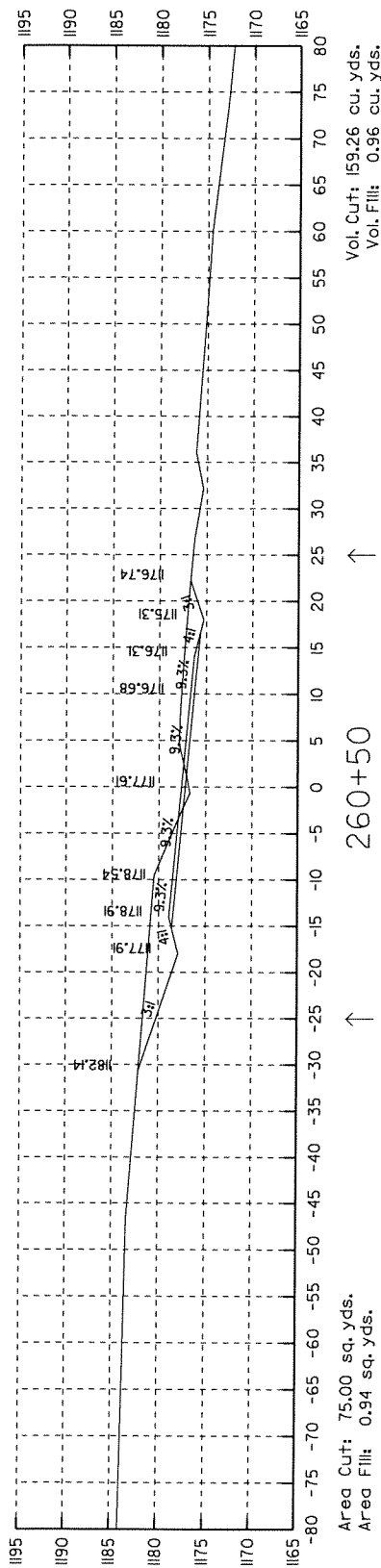
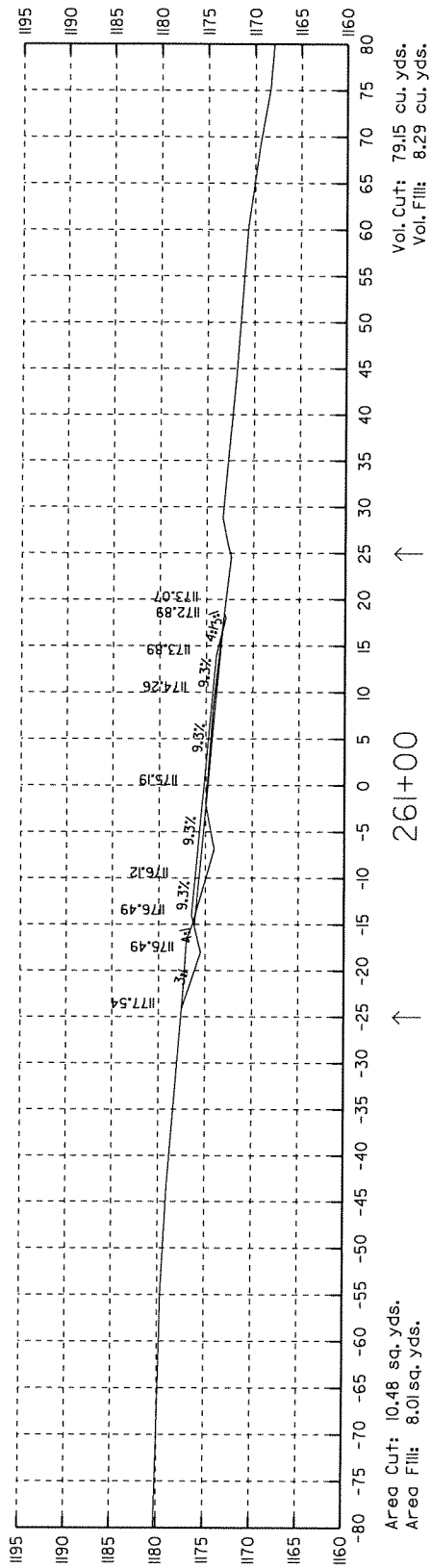


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	70	96	
				4 STA. 256+50 TO STA. 259+00				

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	F44510	71	96	
				4 STA. 259+50 TO STA. 261+50				

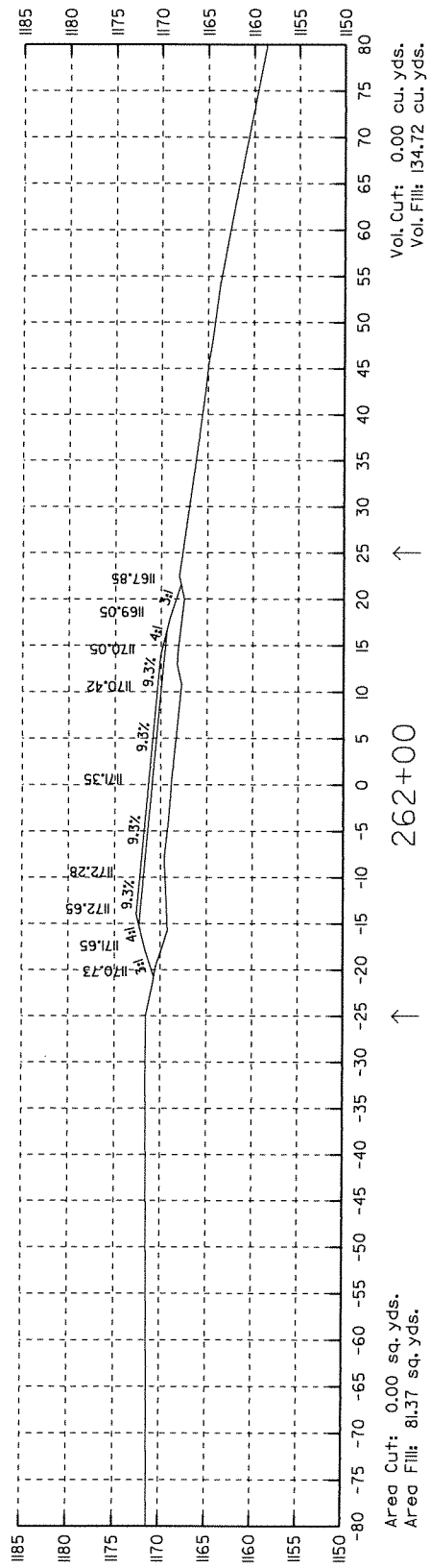
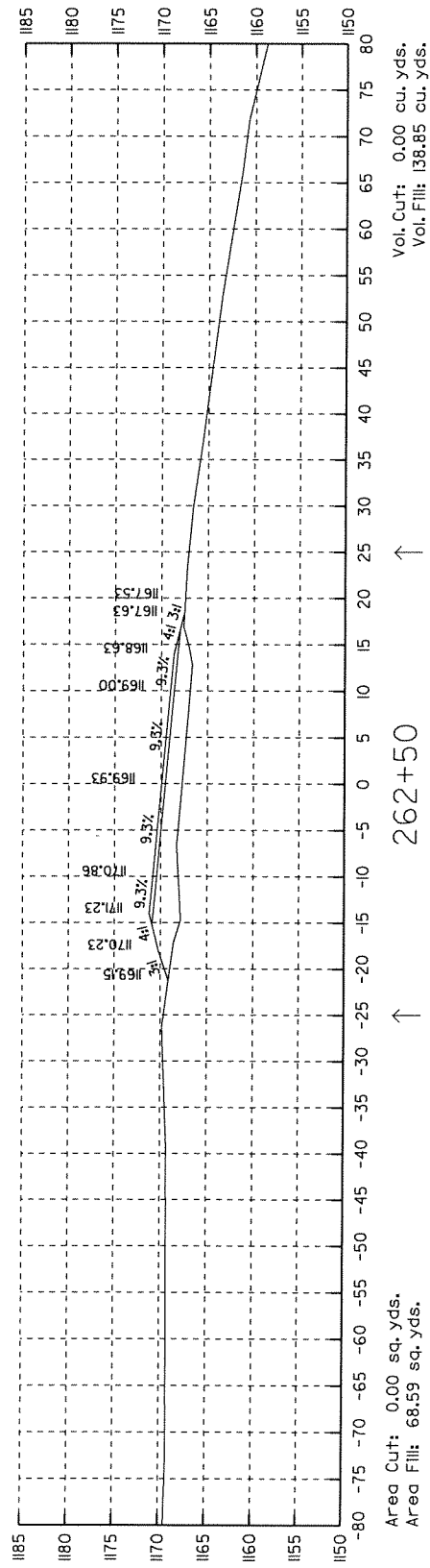
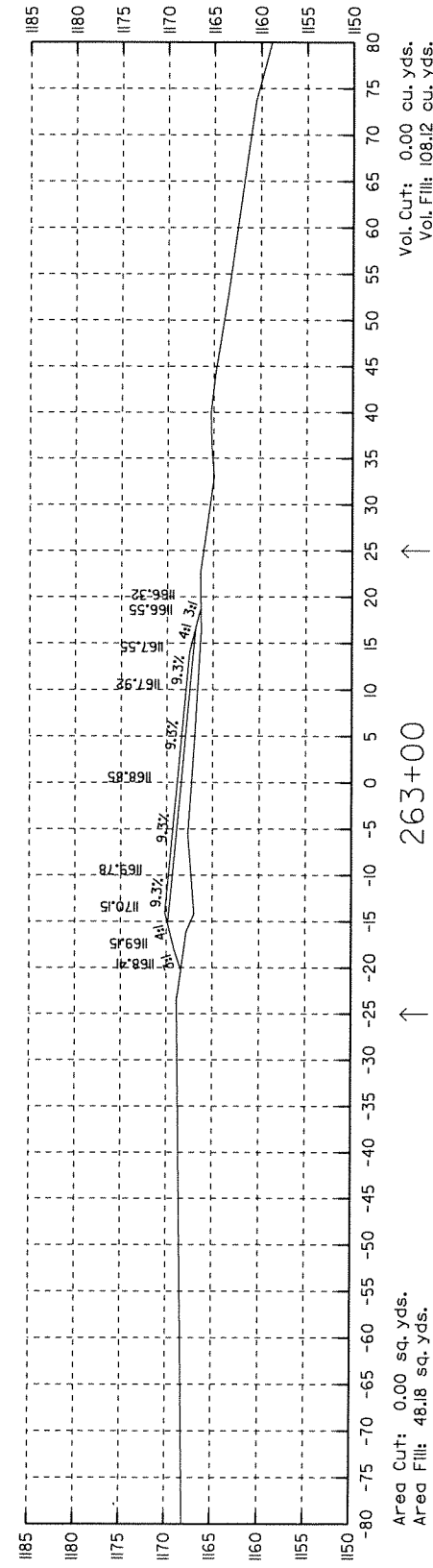
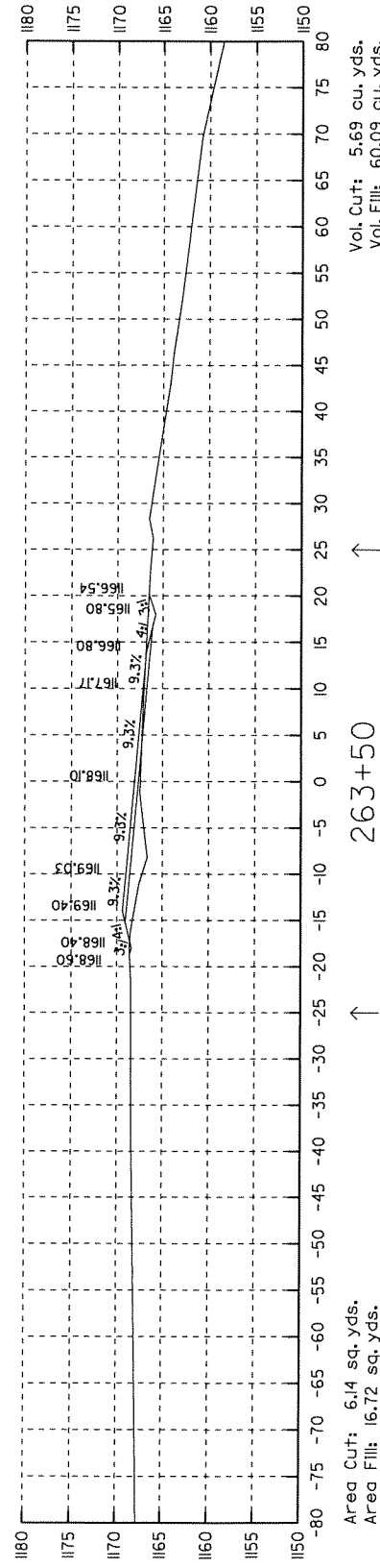
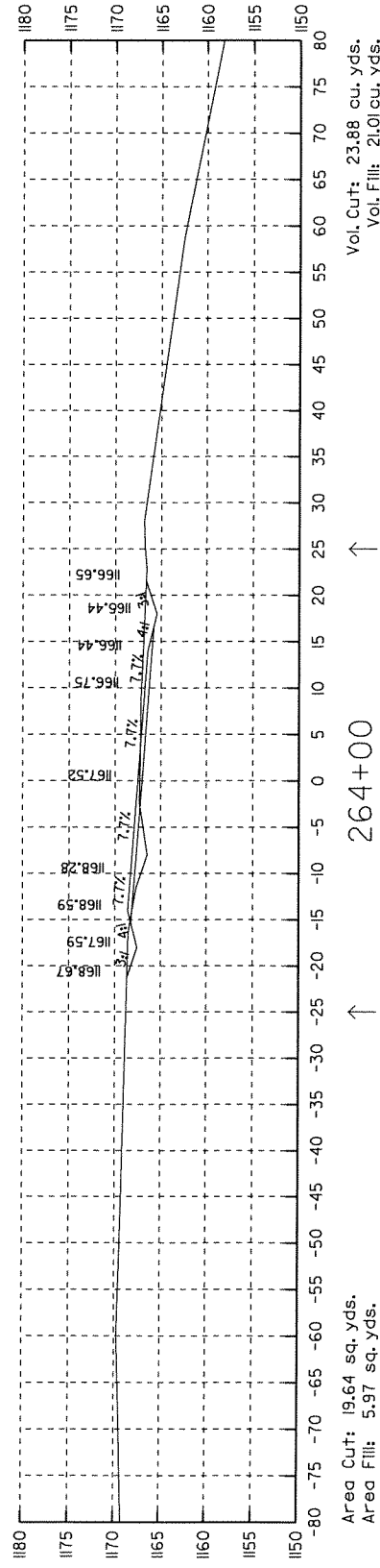
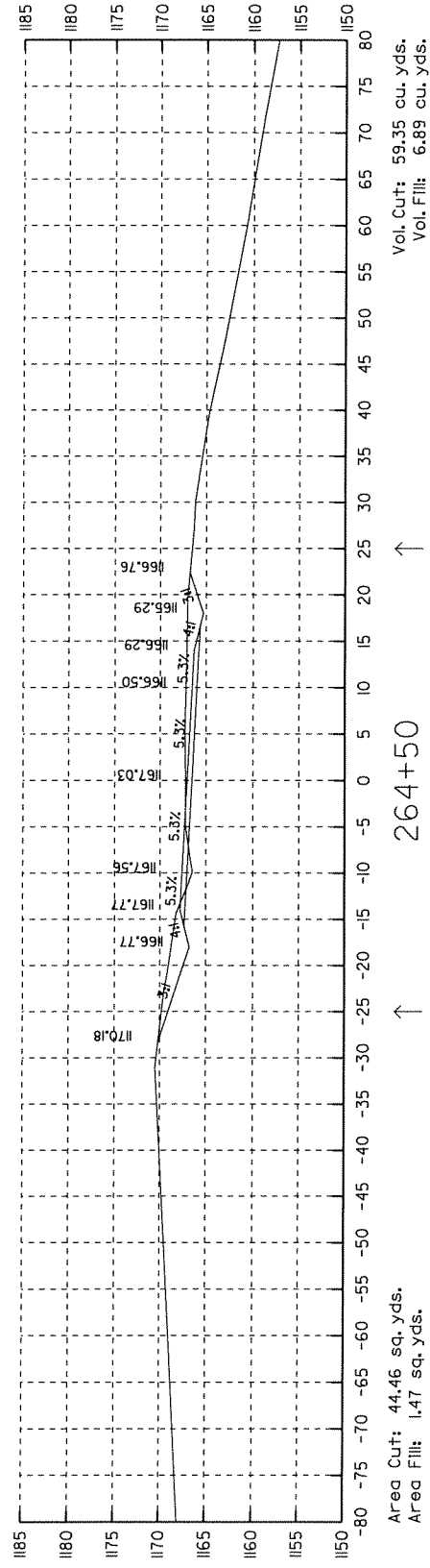


INSTALL
18" X 32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 15 CU. YDS.



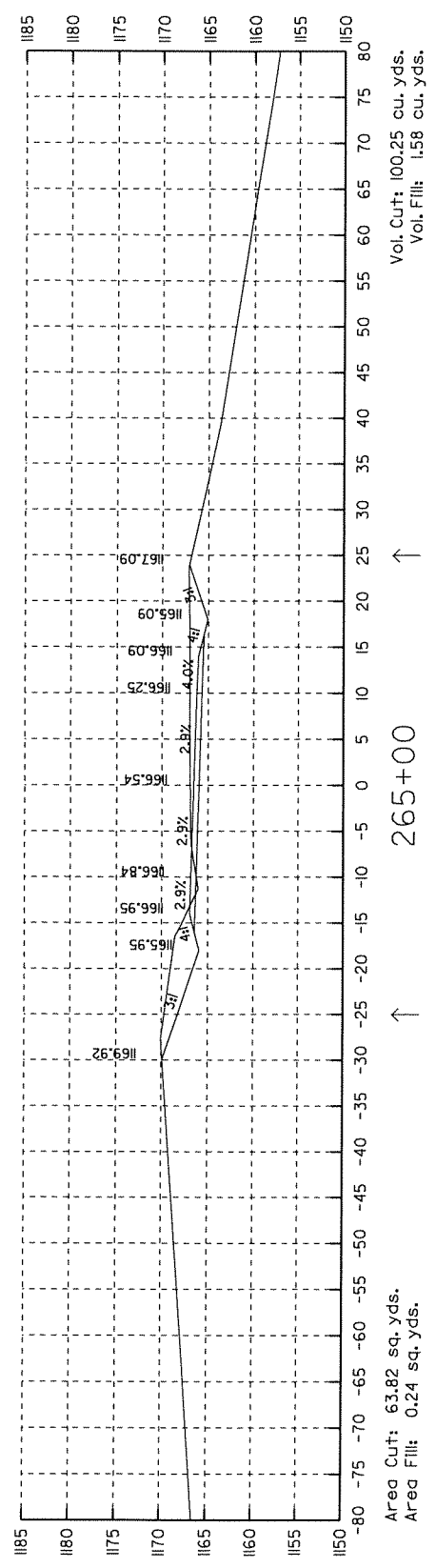
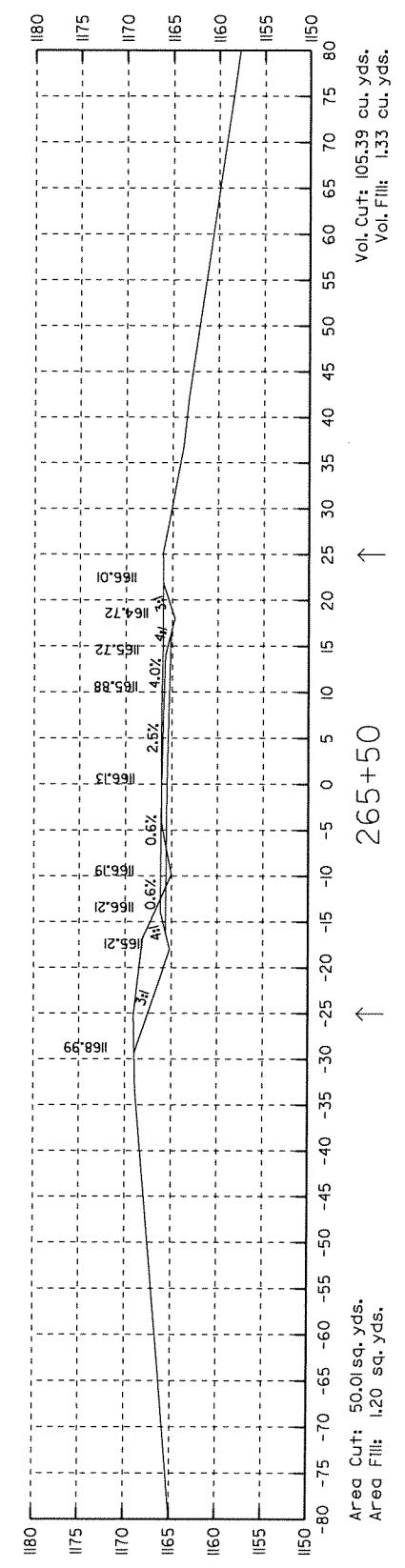
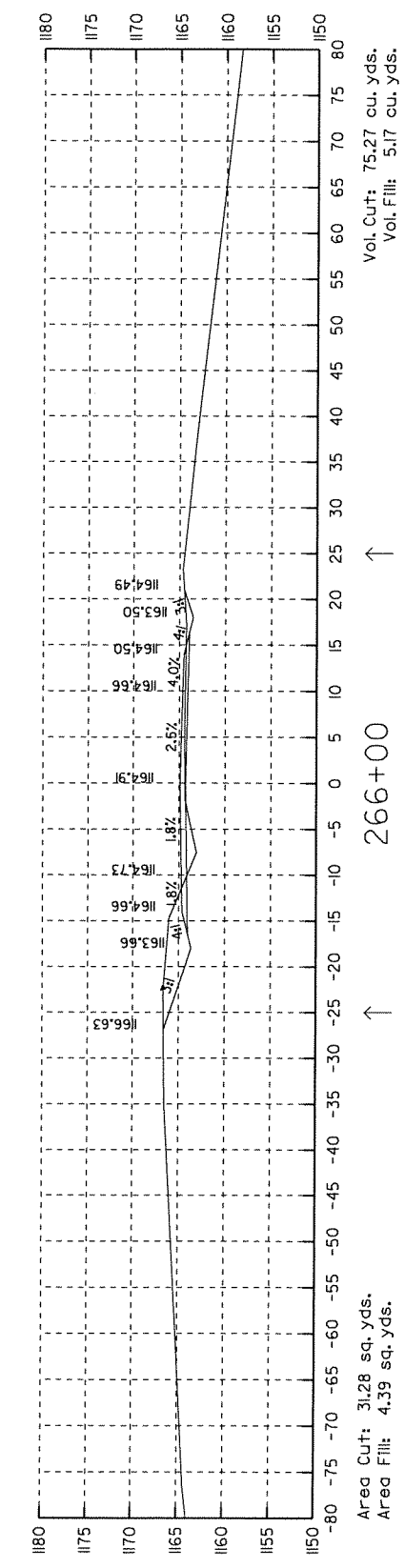
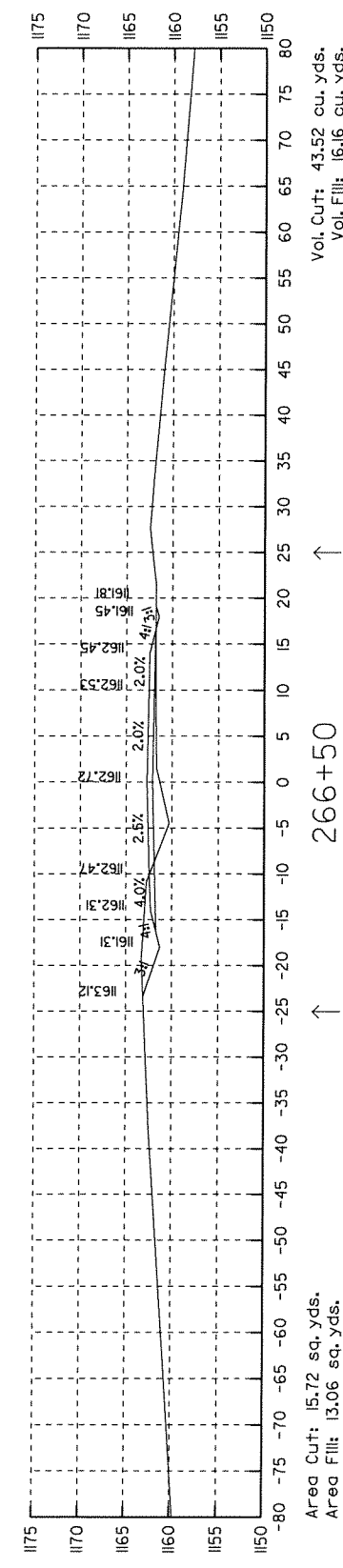
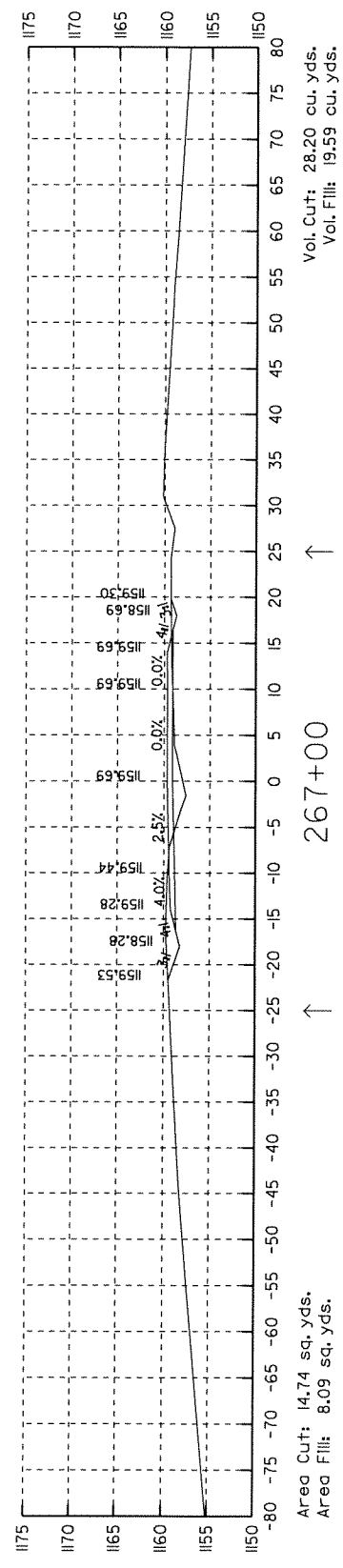
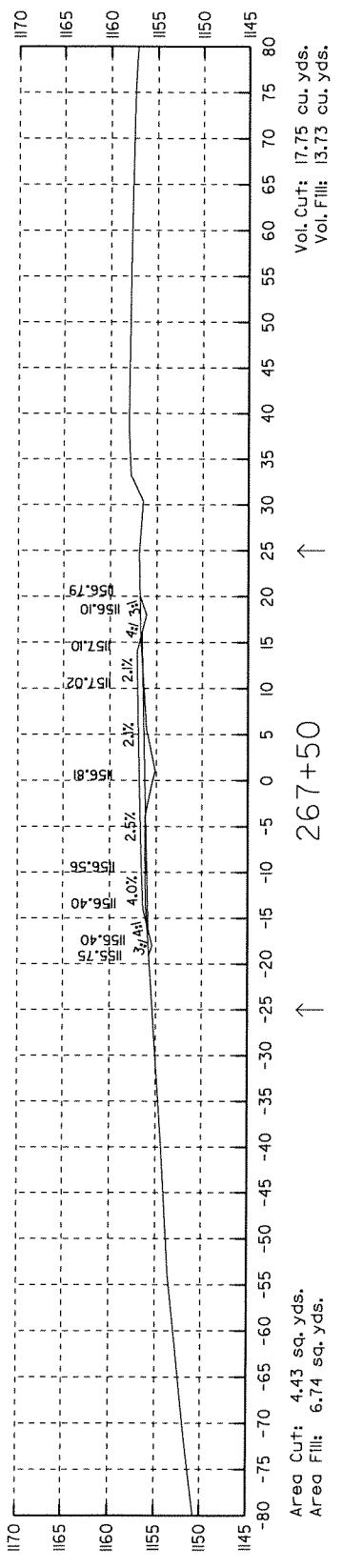
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	72	96	

4 STA. 262+00 TO STA. 264+50



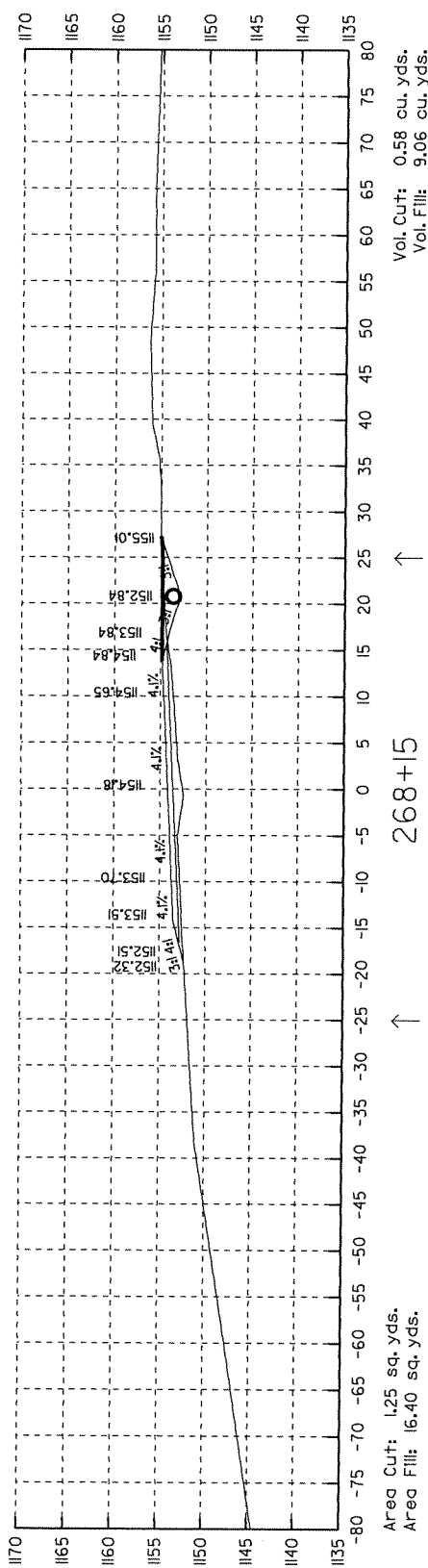
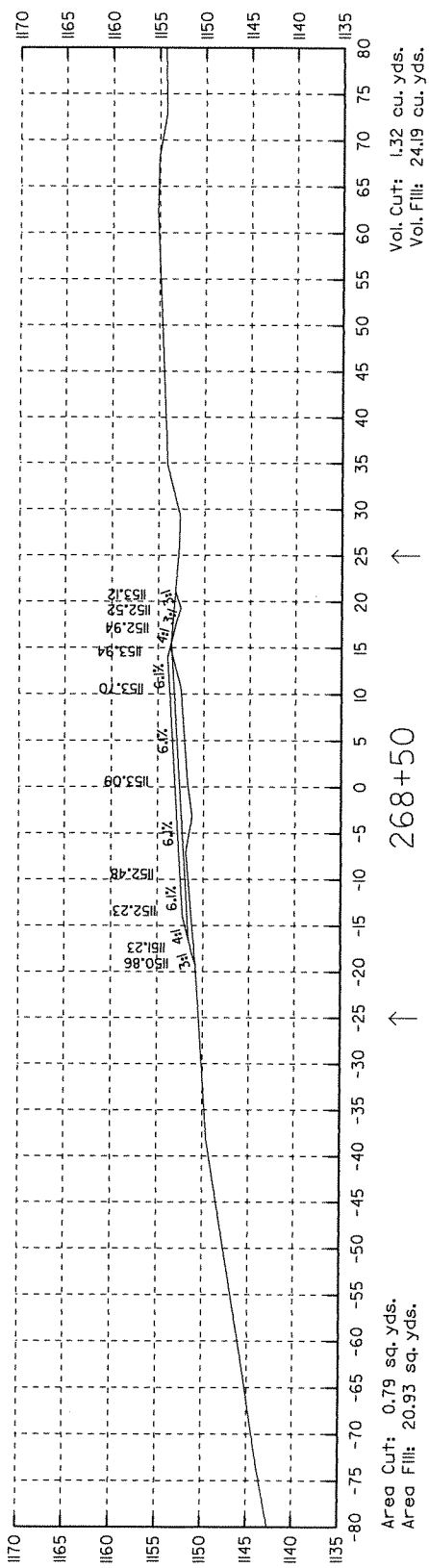
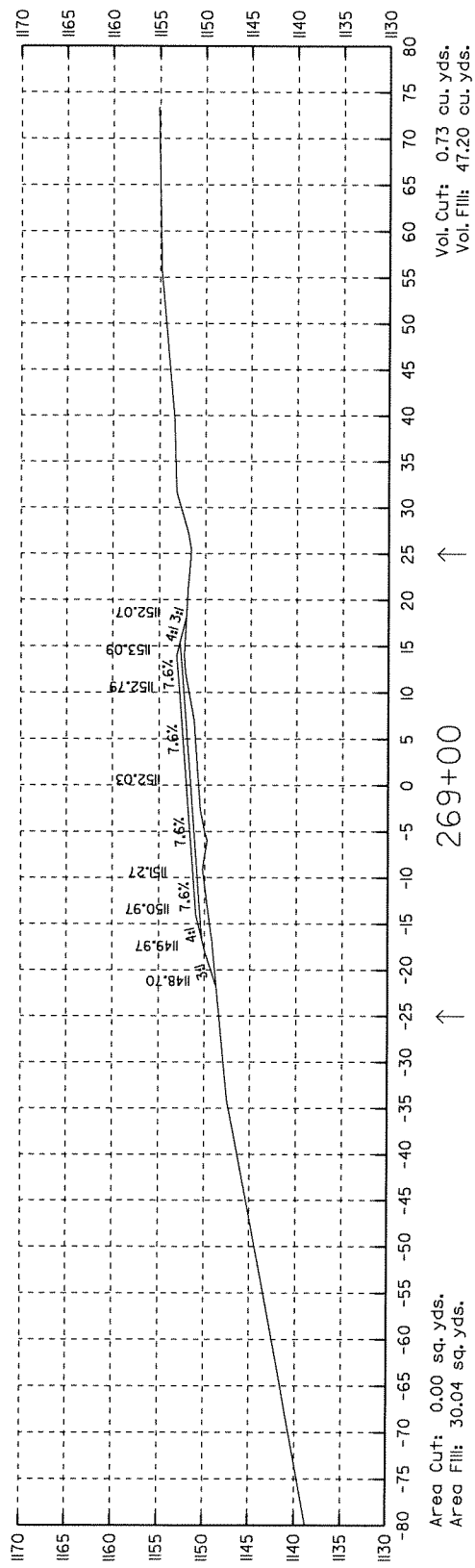
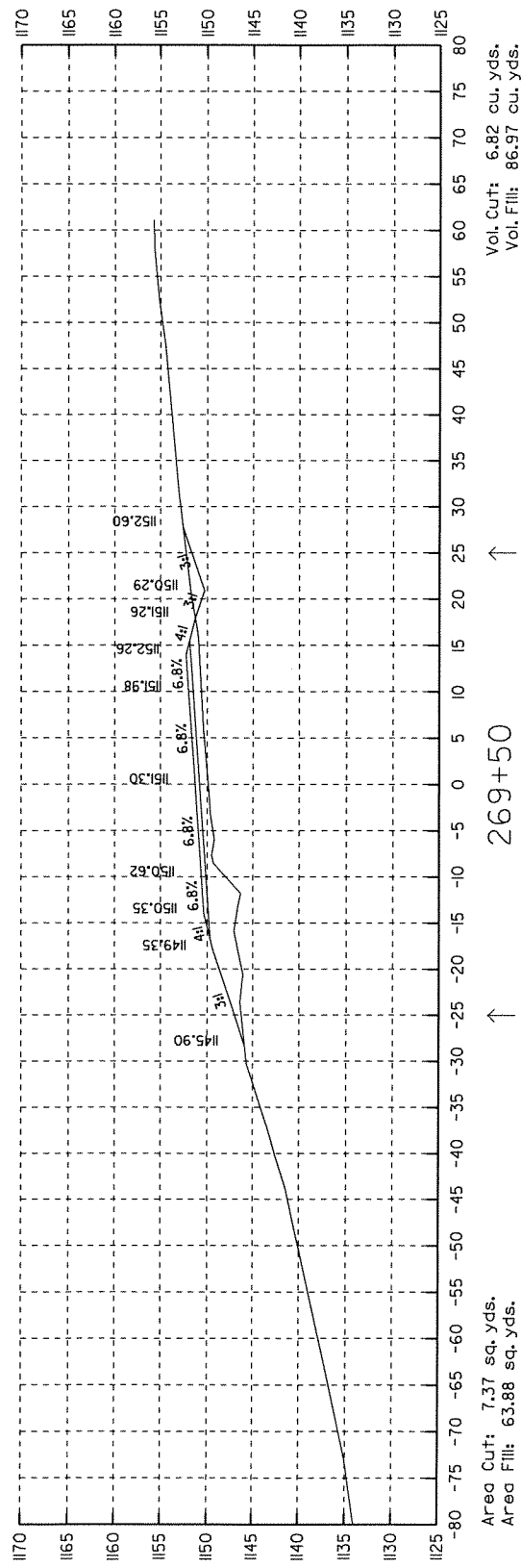
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		73	96

4 STA. 265+00 TO STA. 267+50

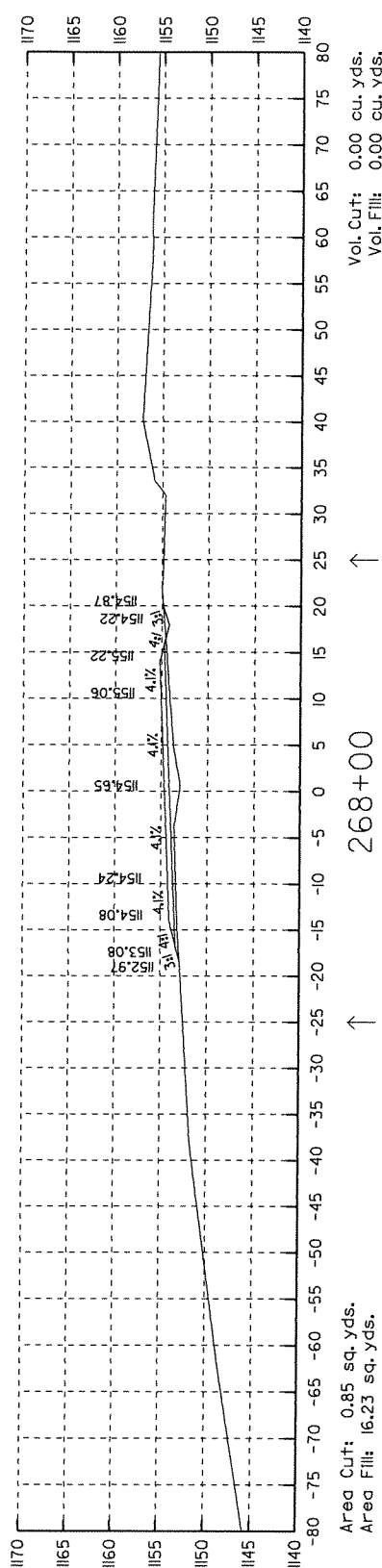


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	74	96	

4 STA. 268+00 TO STA. 269+50

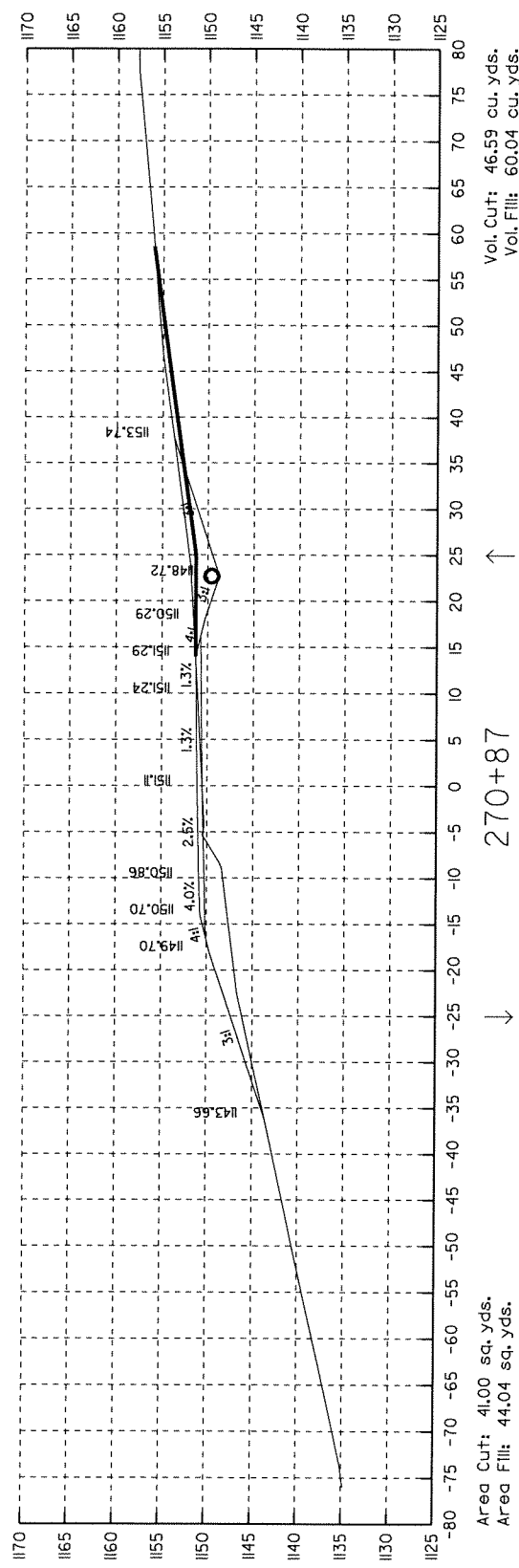
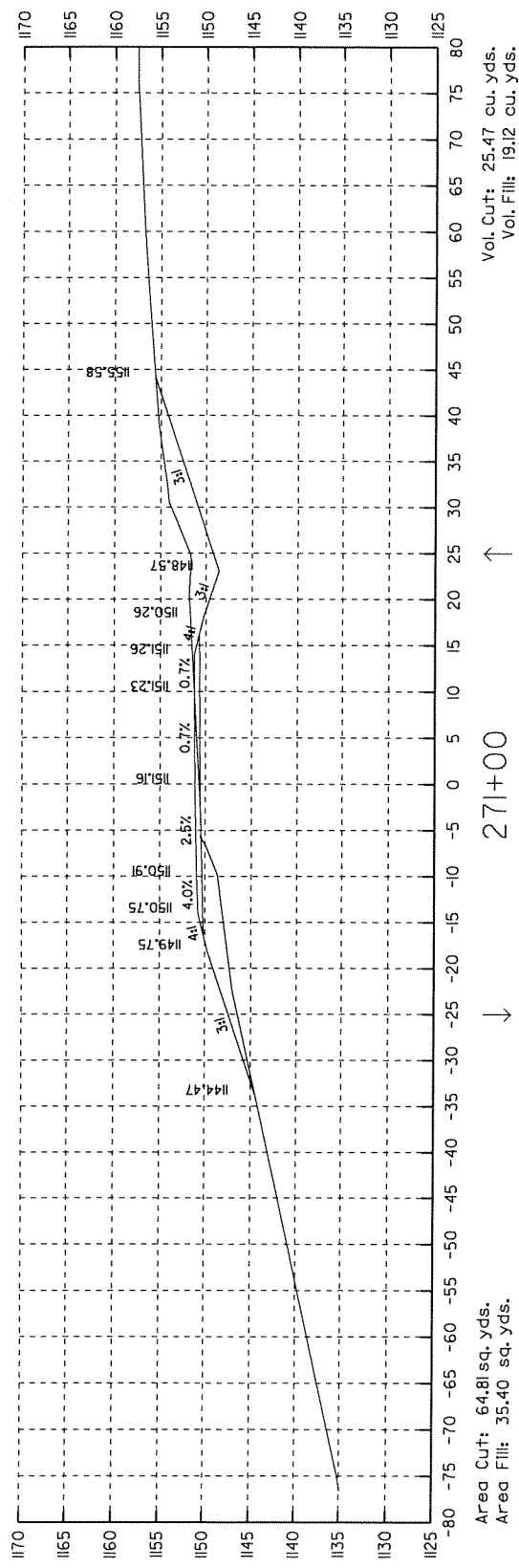


INSTALL
18" X 33' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

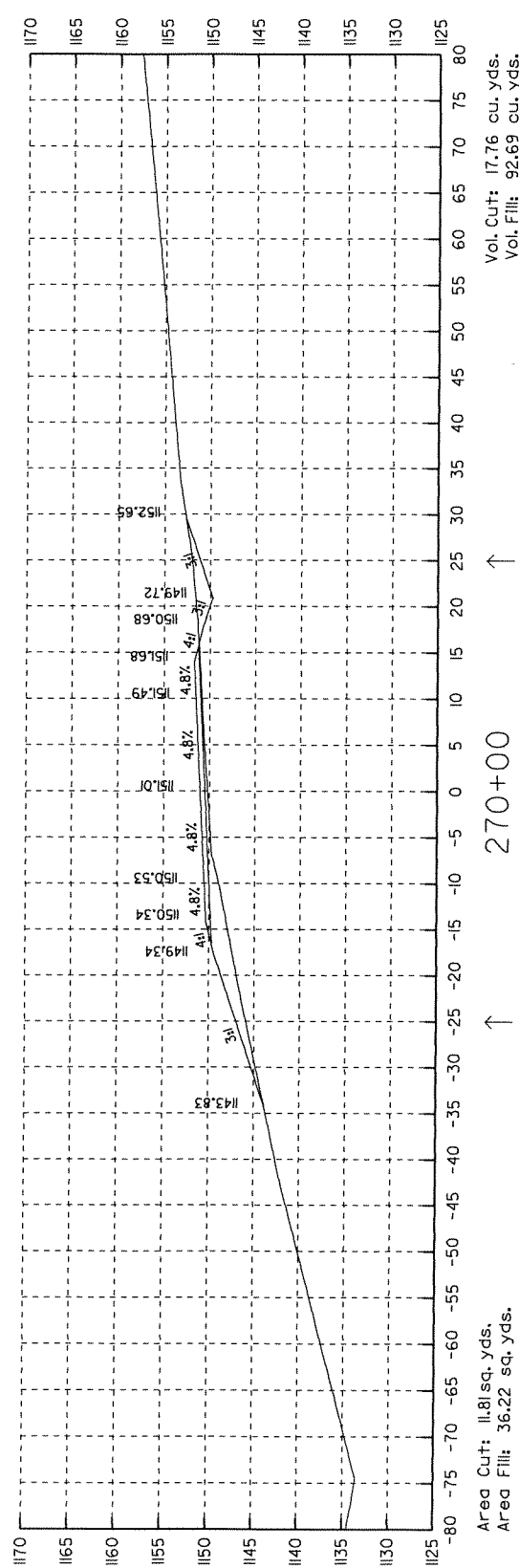
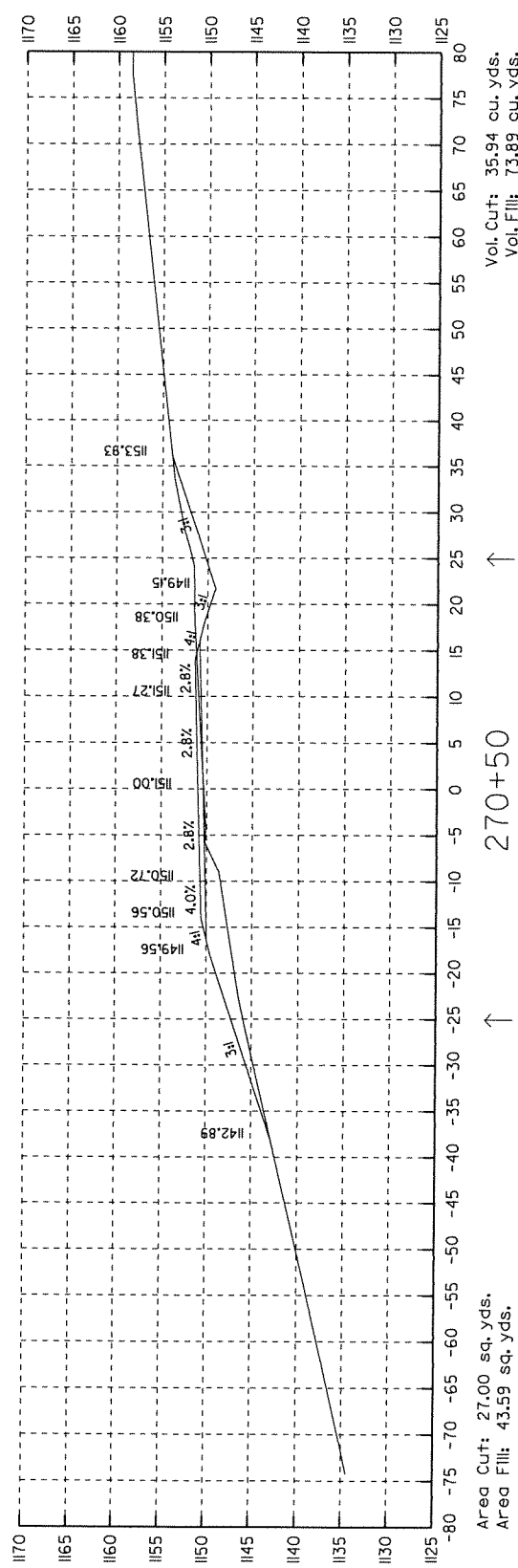


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(116)		
				JOB NO.	FA4510	75	96	

4 STA. 270+00 TO STA. 271+00

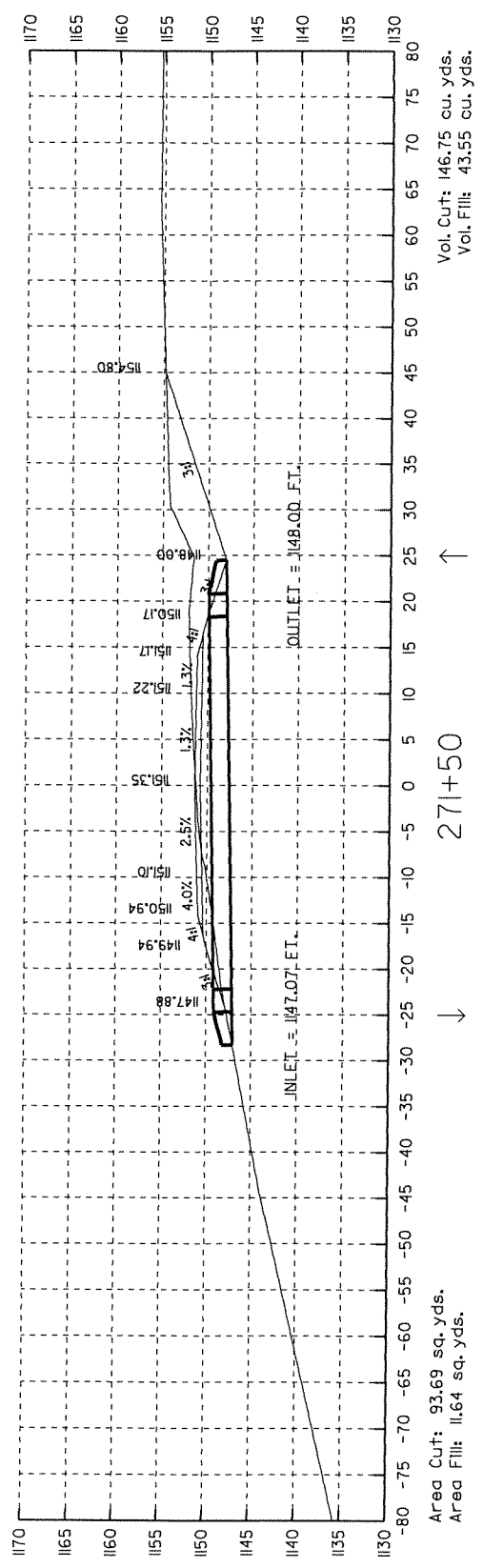
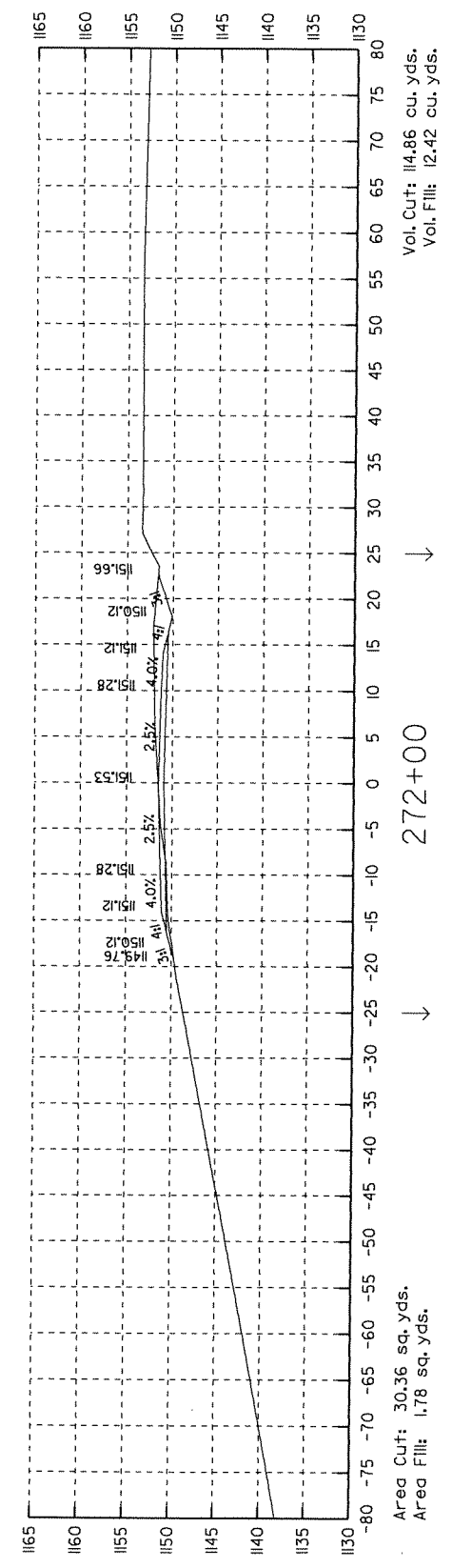
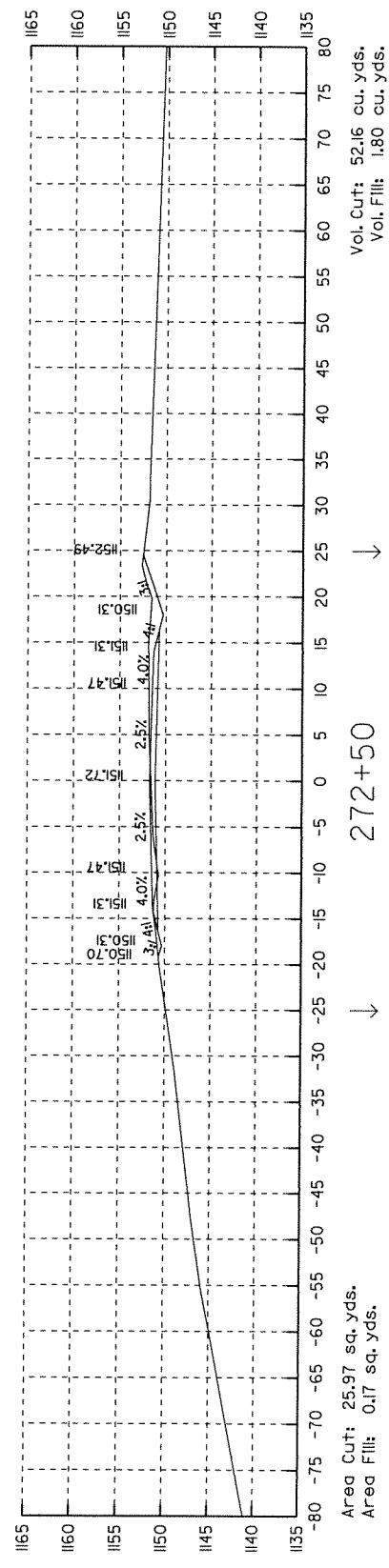
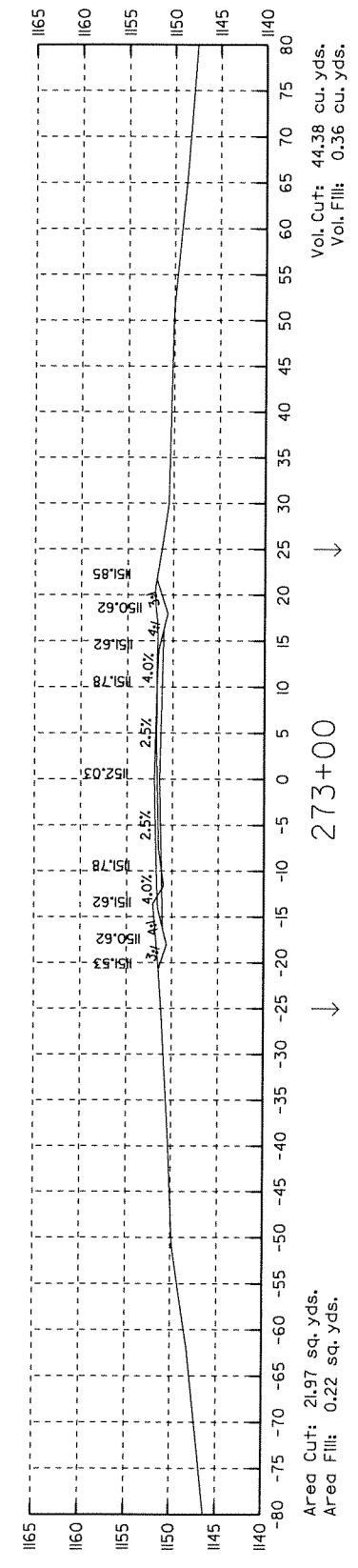
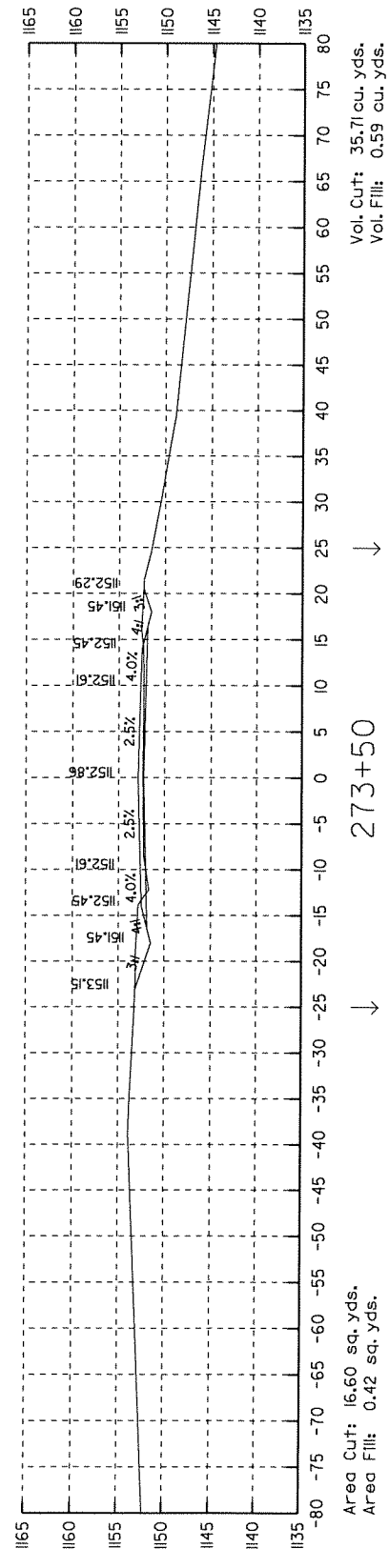


INSTALL
18" X 33' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(116)		
				JOB NO.	FA4510		76	96

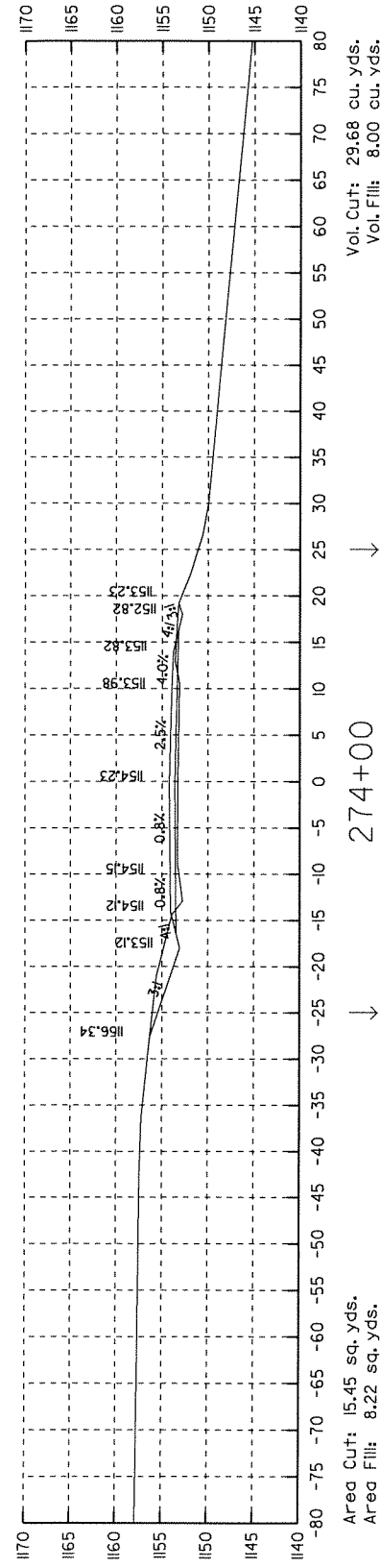
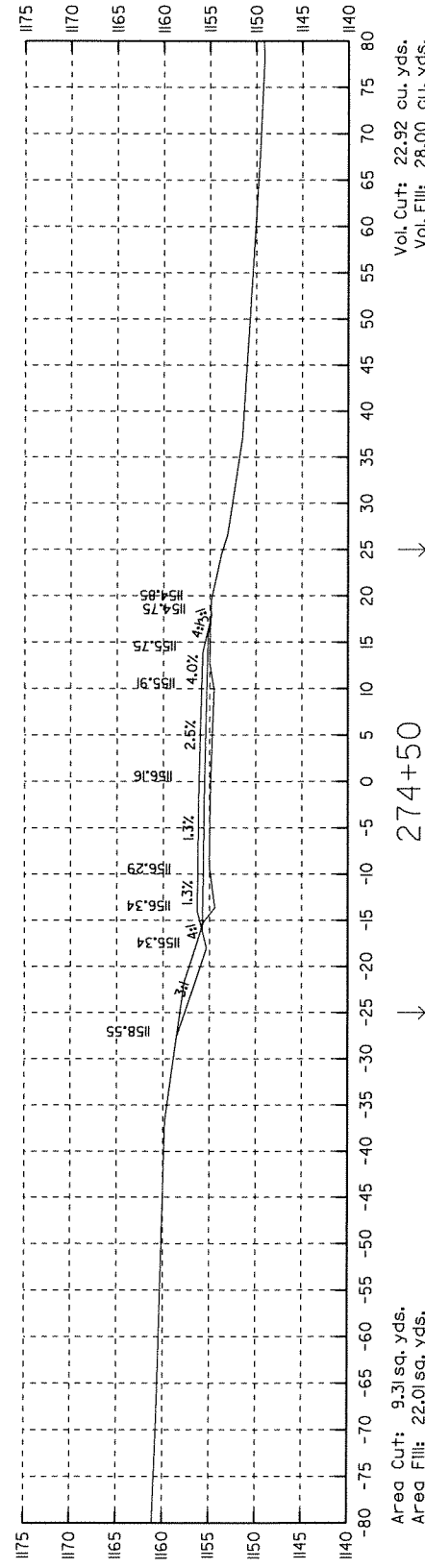
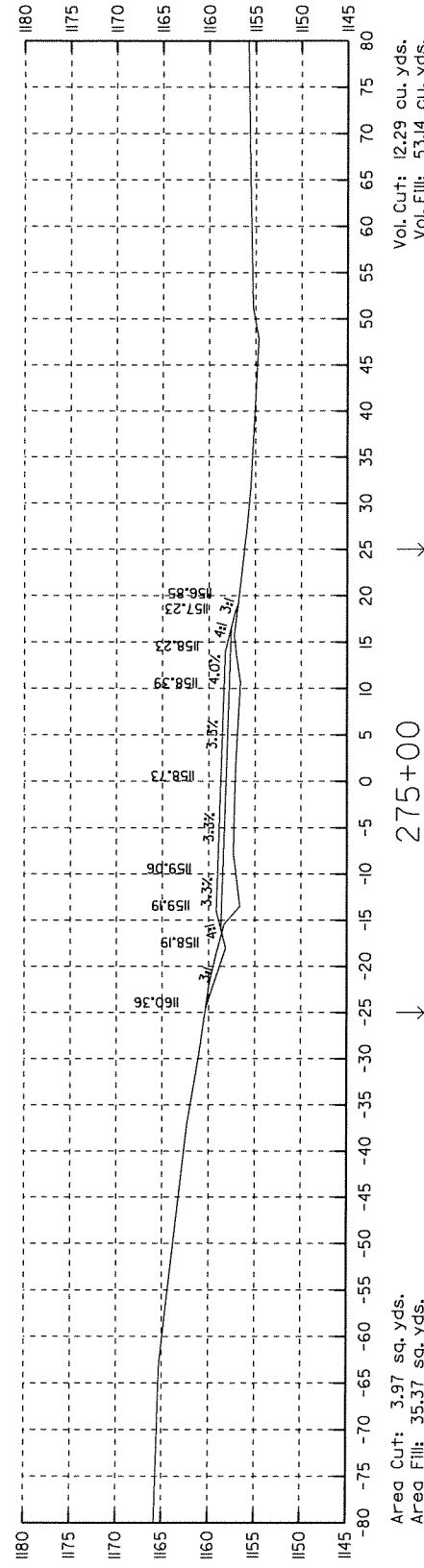
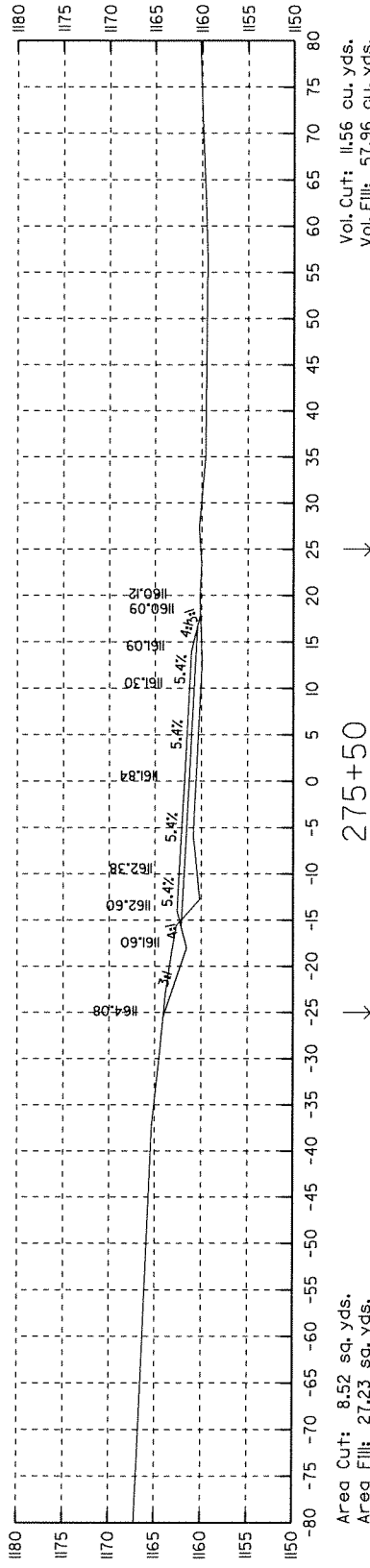
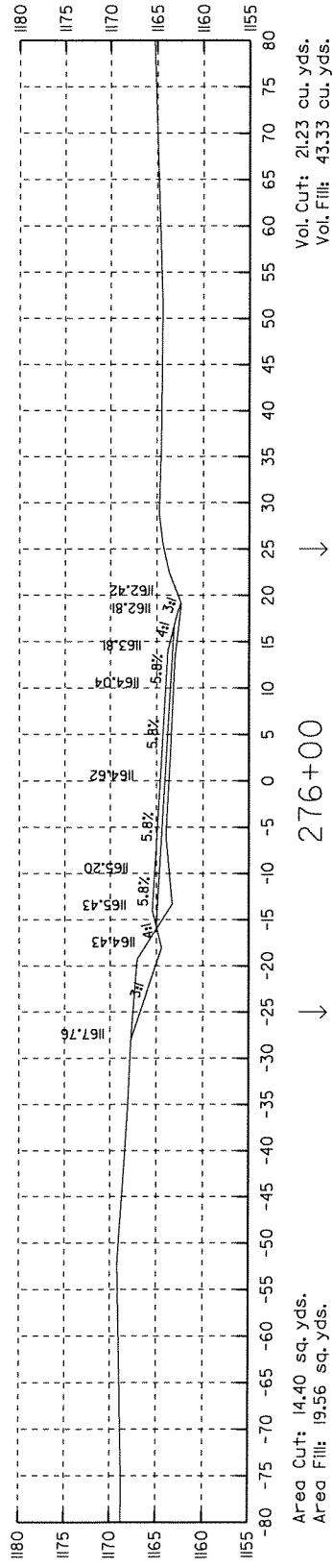
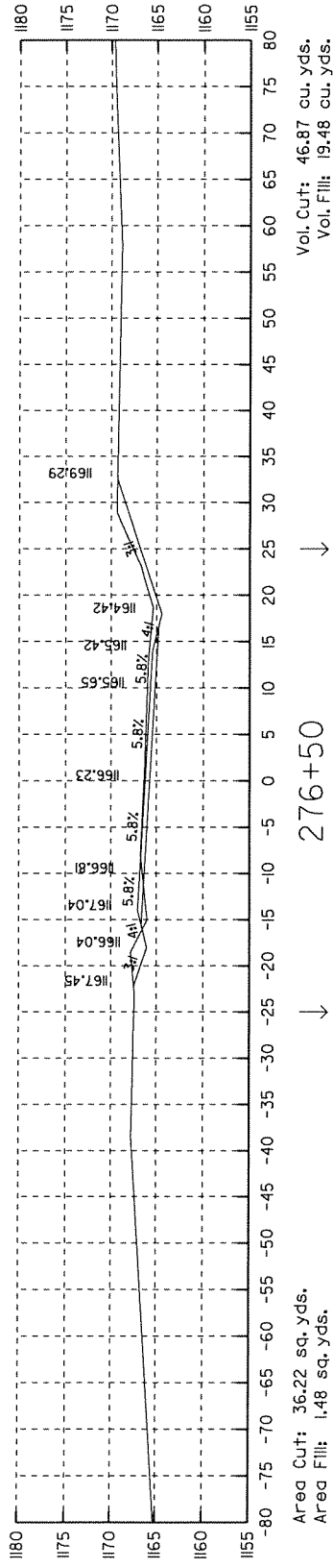
4 STA. 271+50 TO STA. 273+50



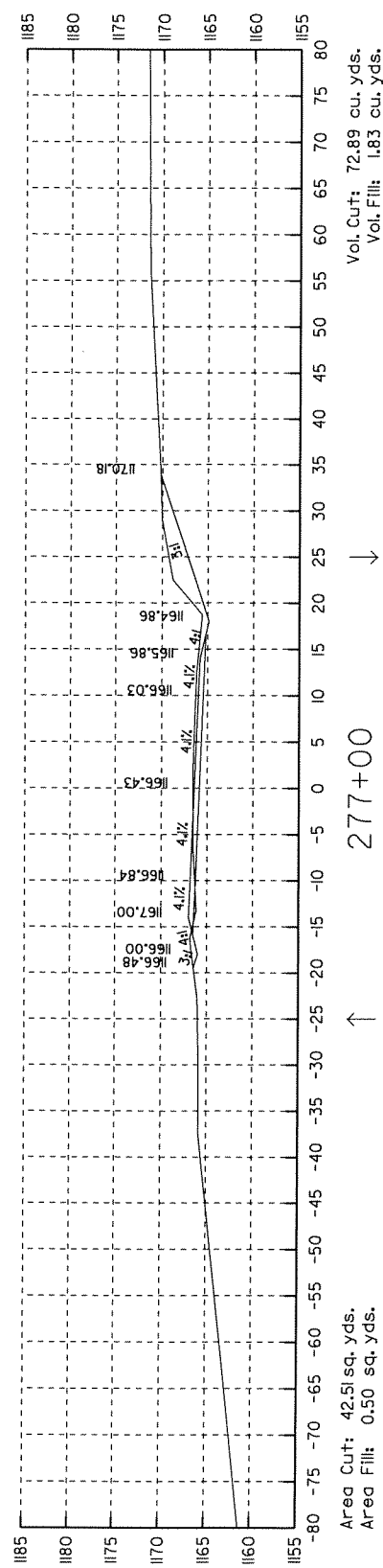
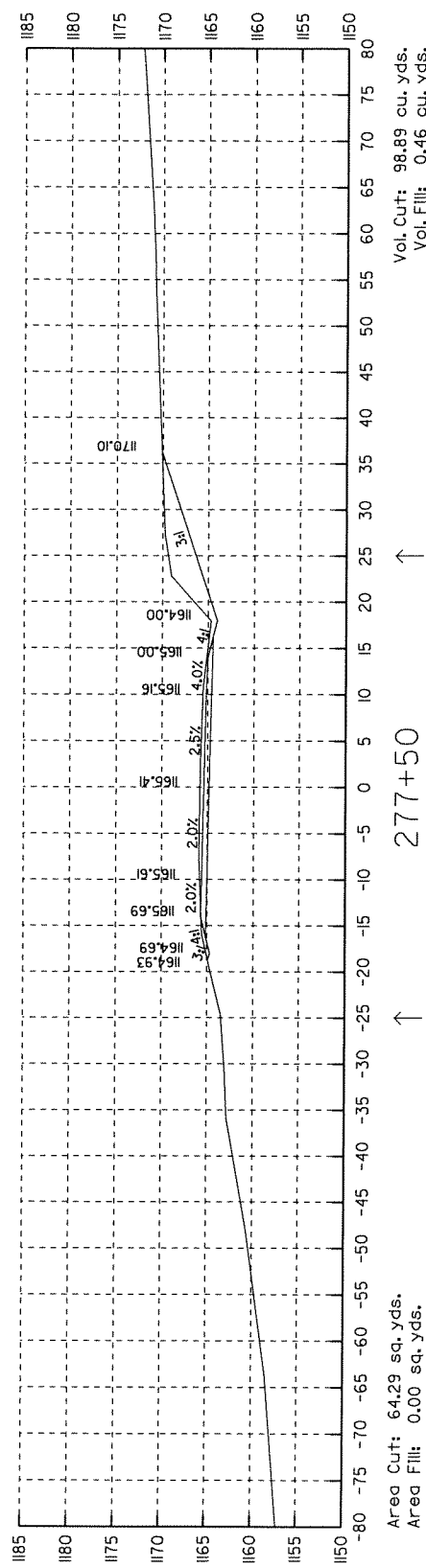
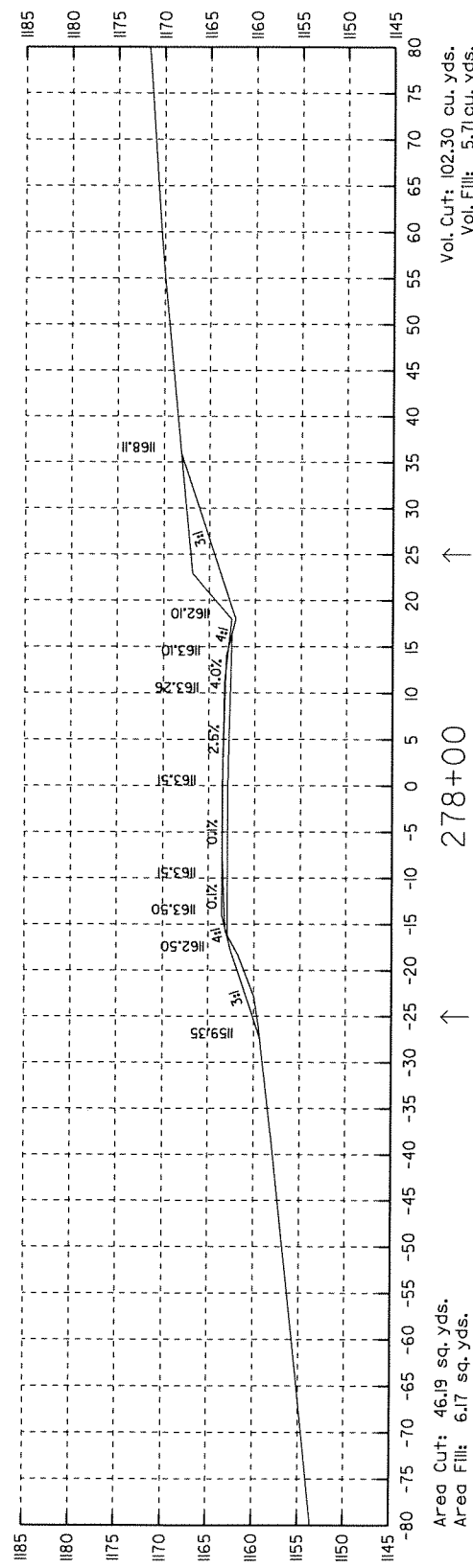
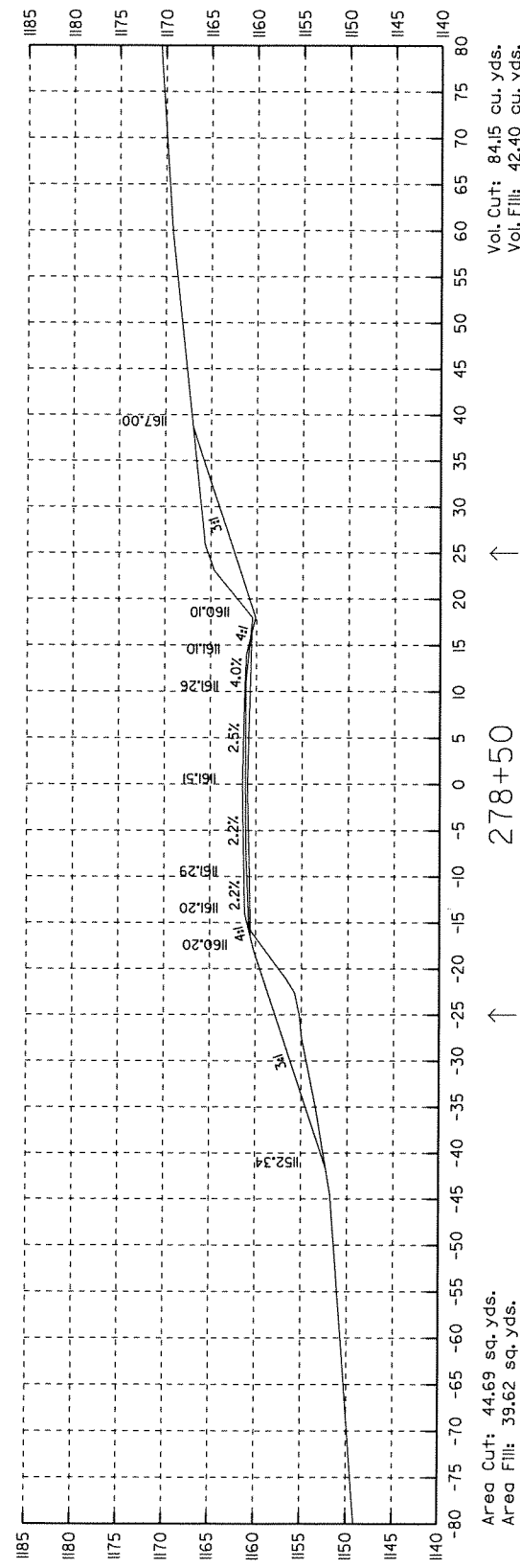
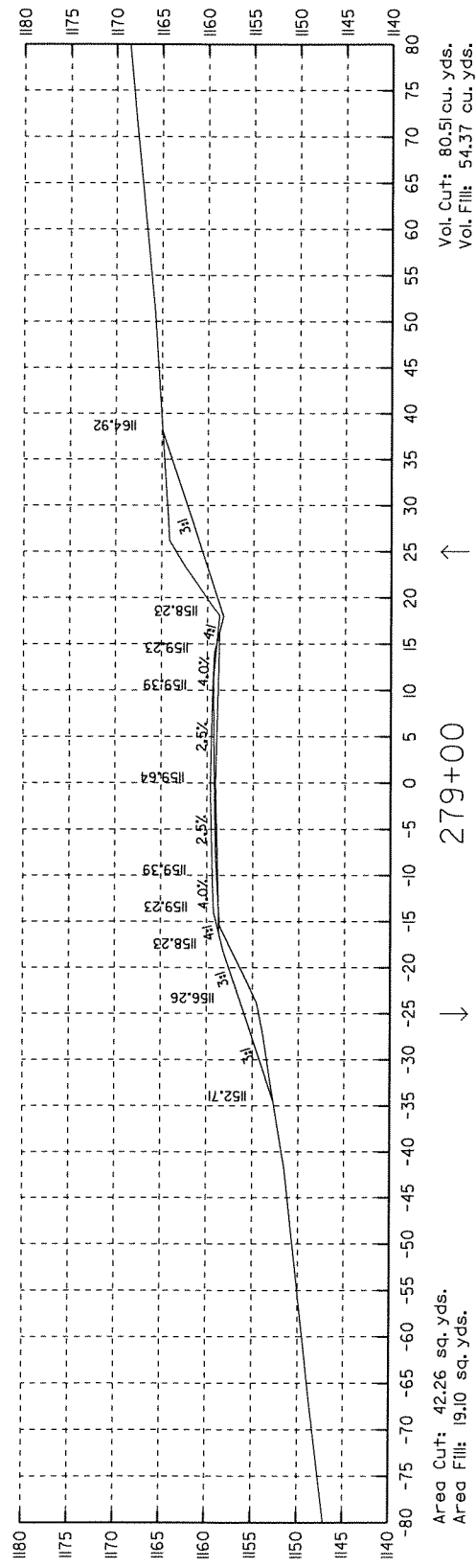
CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN
D.A. = 0.5 AC. Q25 = 1.8 CFS
24" RCP(CL.III)(TYPE 3 BEDDING) = 41 LIN. FT.
24" CMP OR PLASTIC(TYPE 2 BEDDING) = 46 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	77	96	

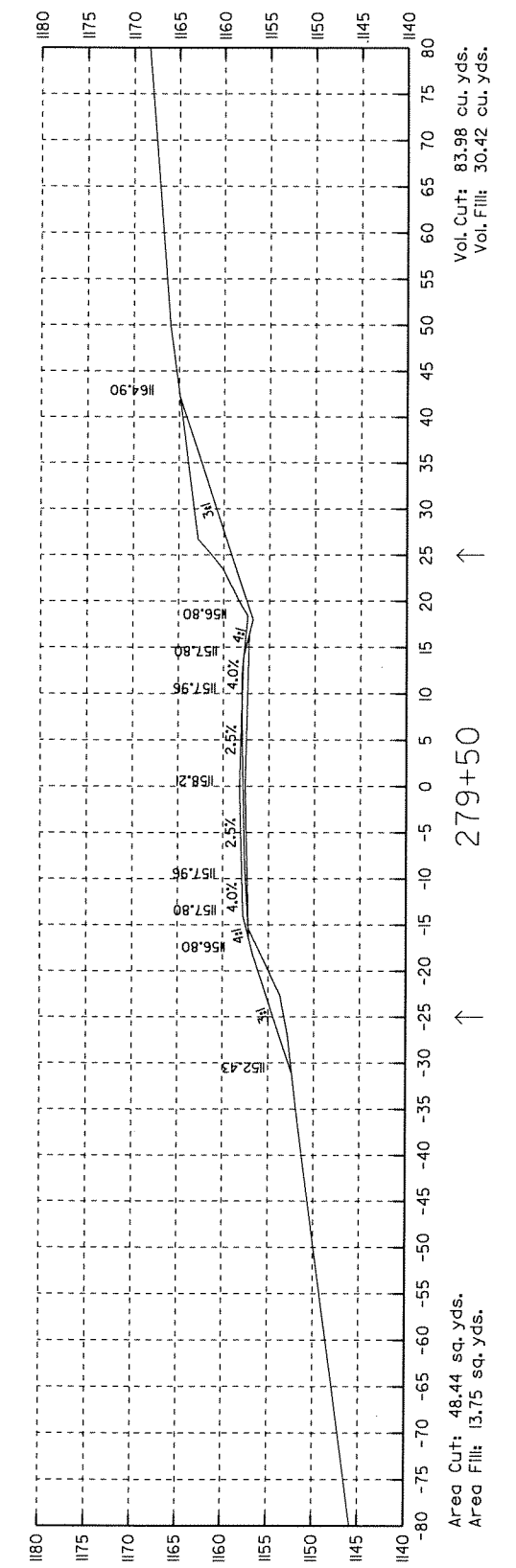
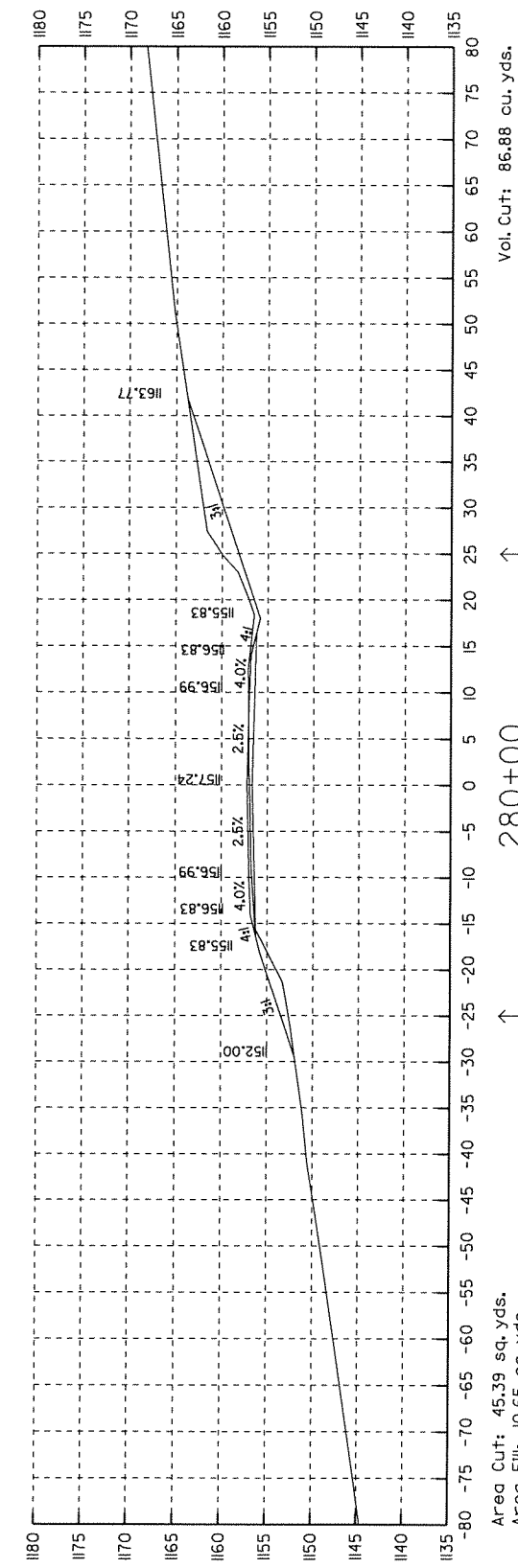
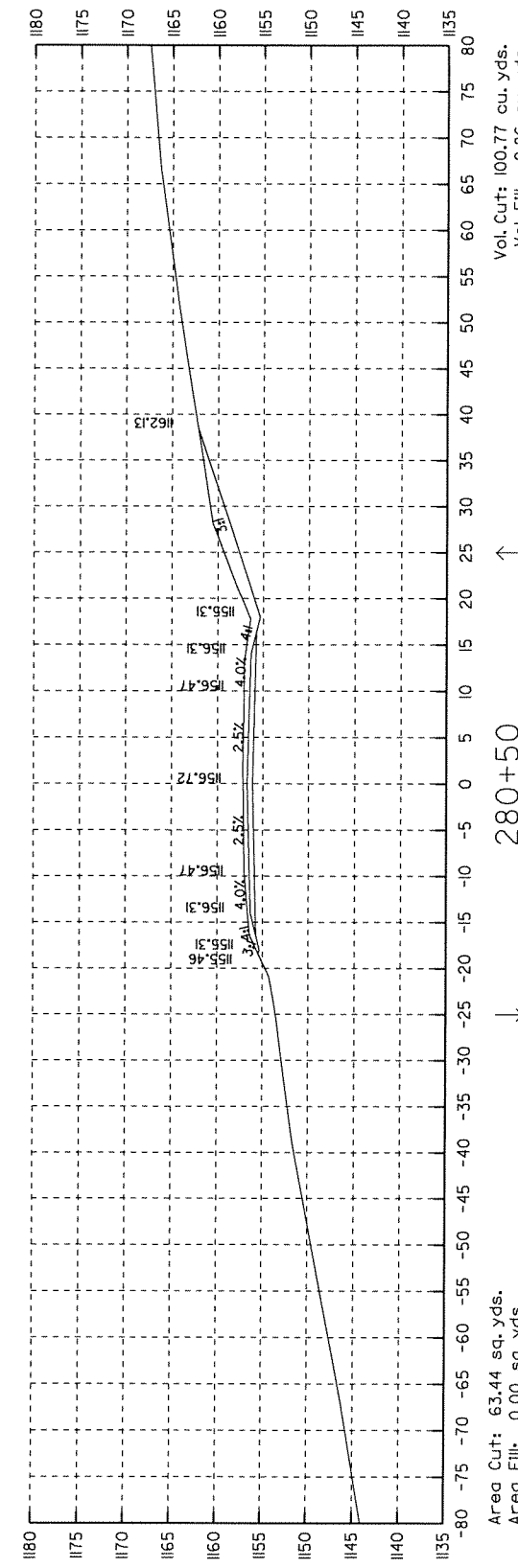
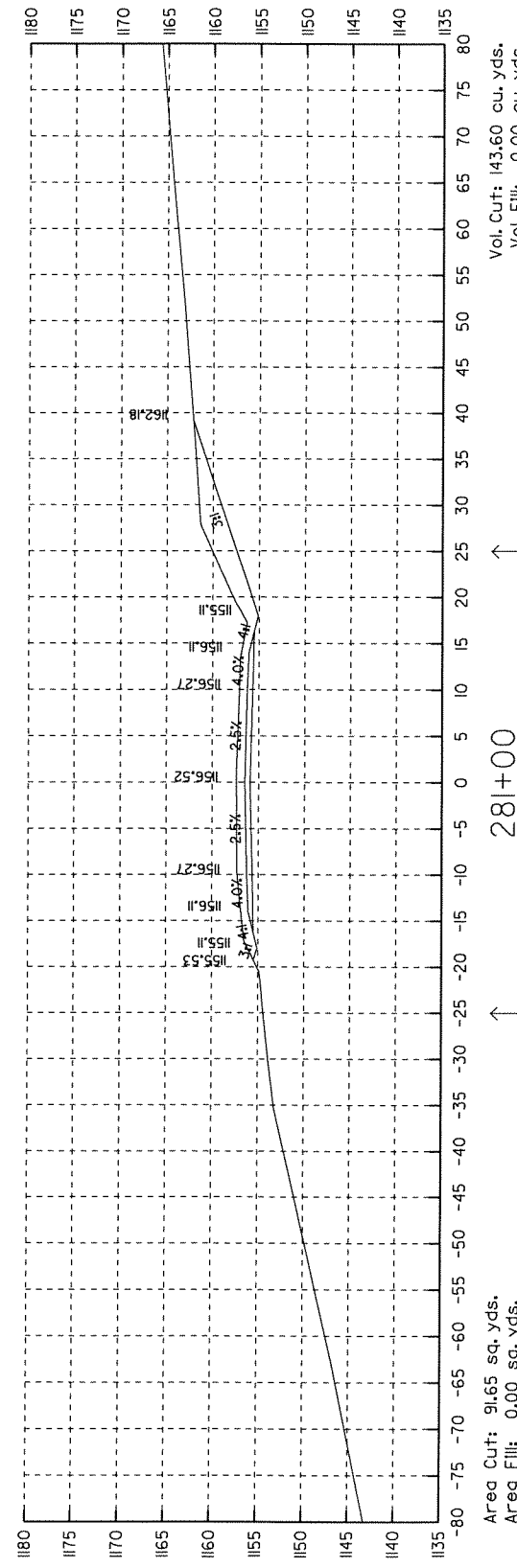
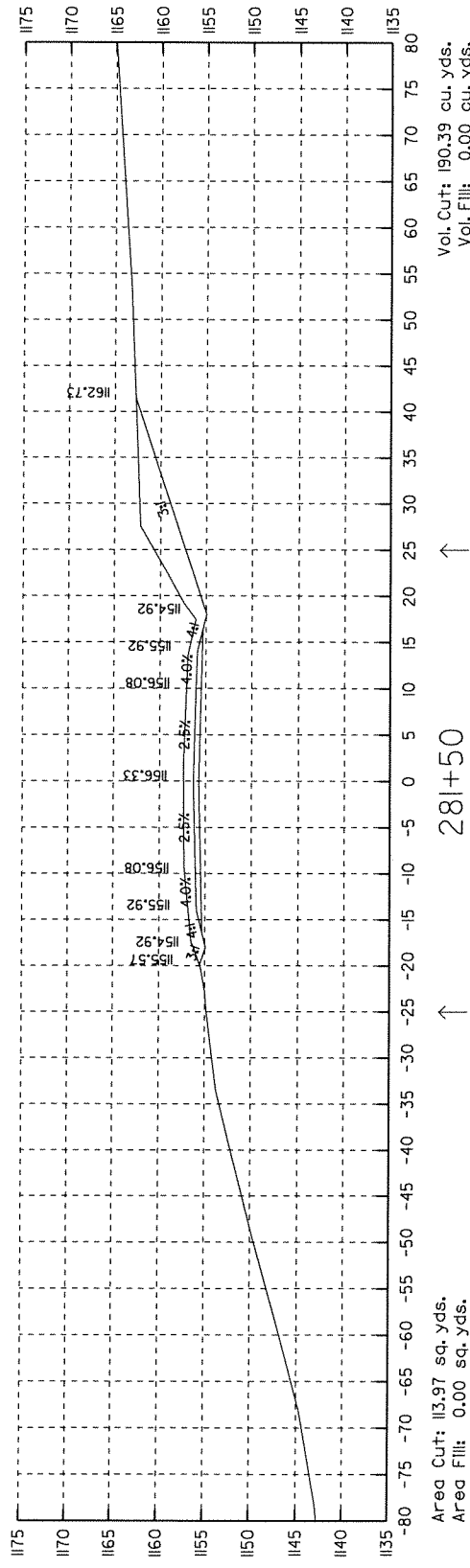
4 STA. 274+00 TO STA. 276+50



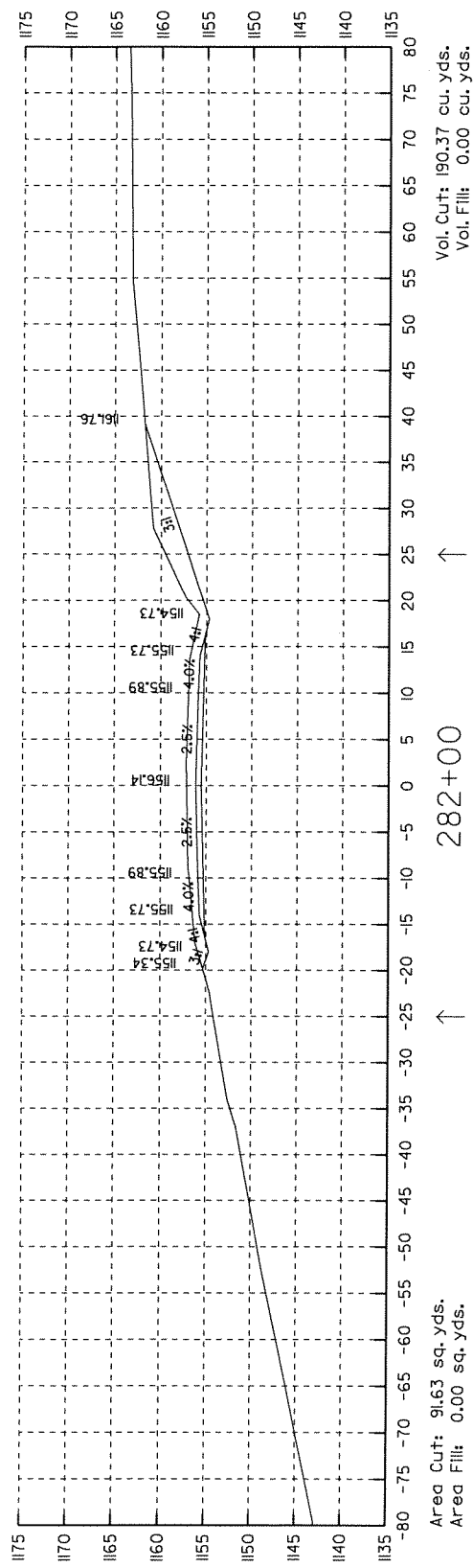
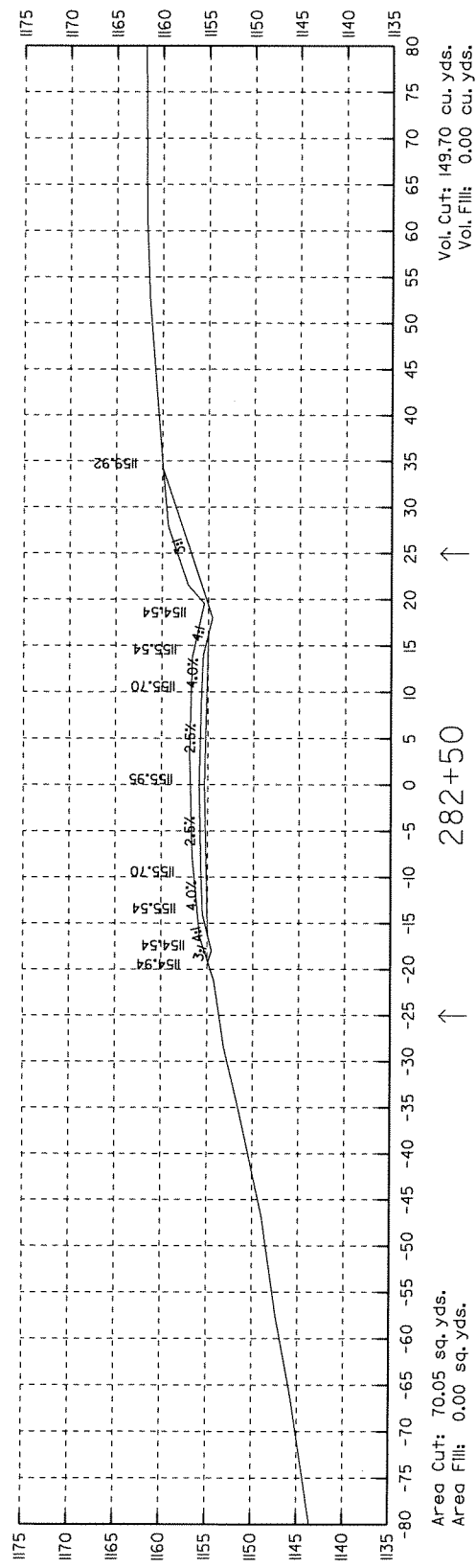
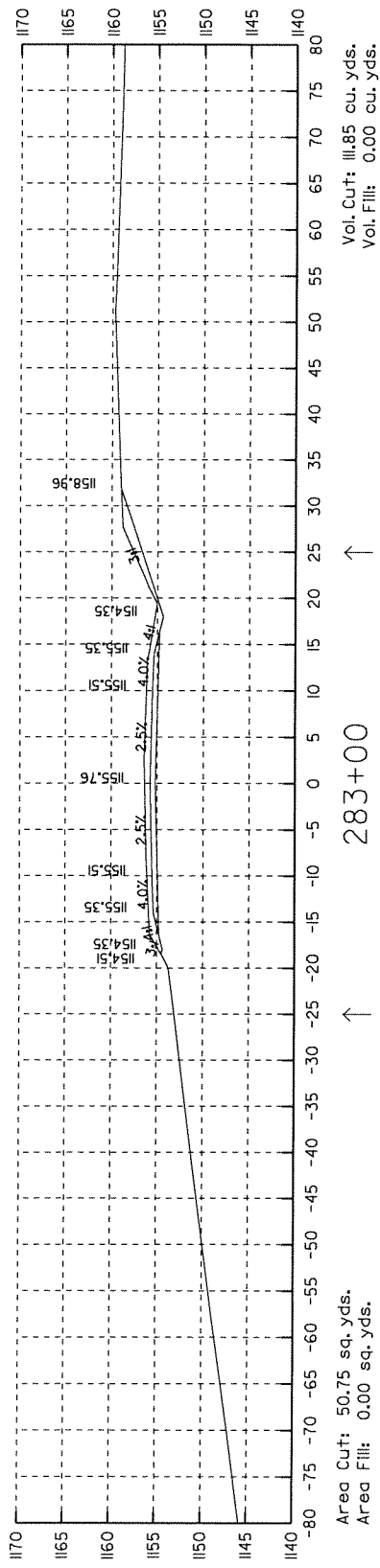
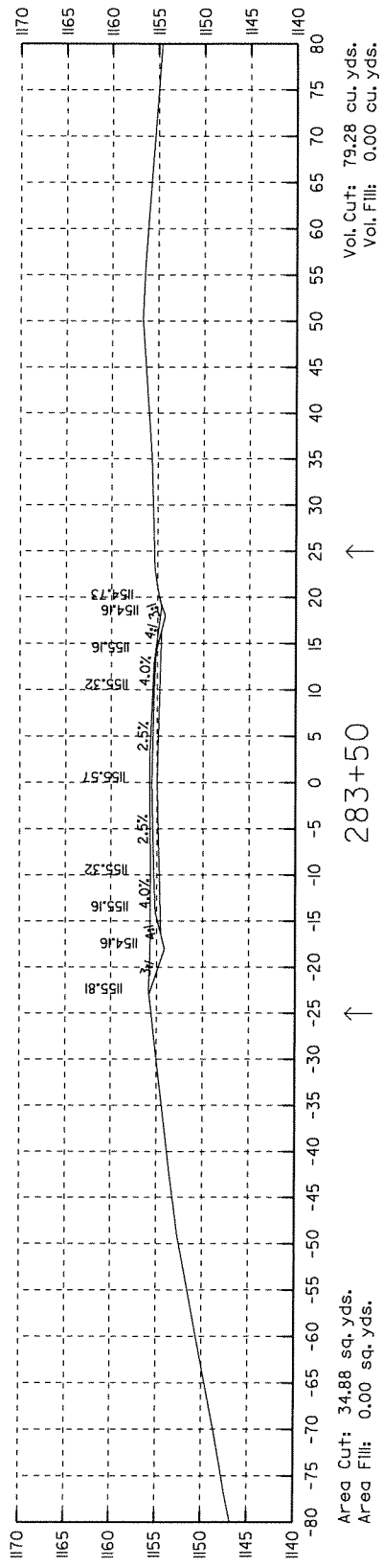
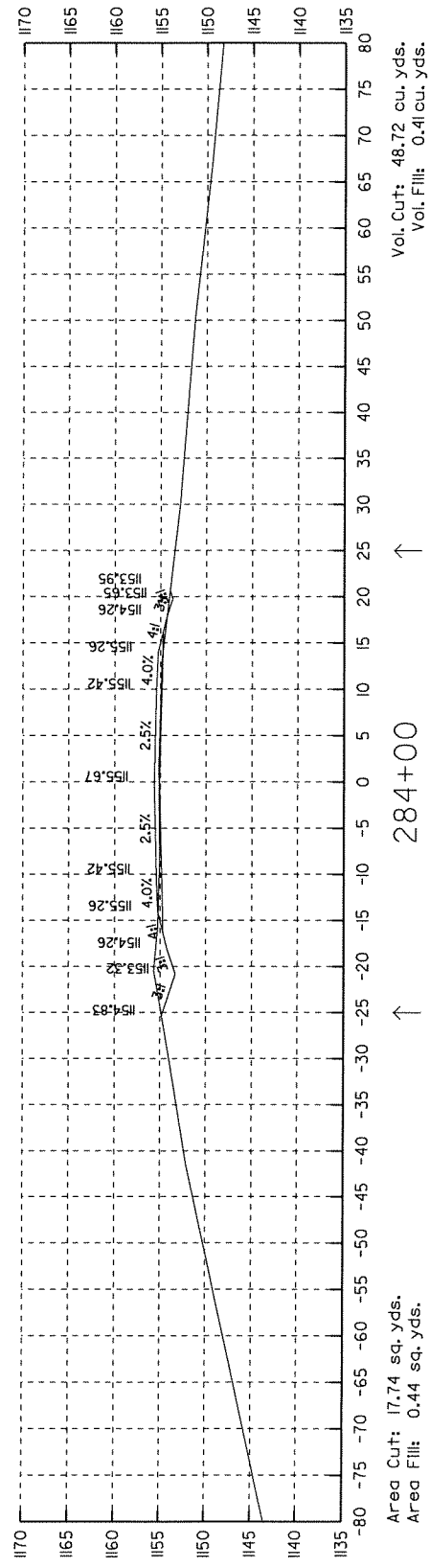
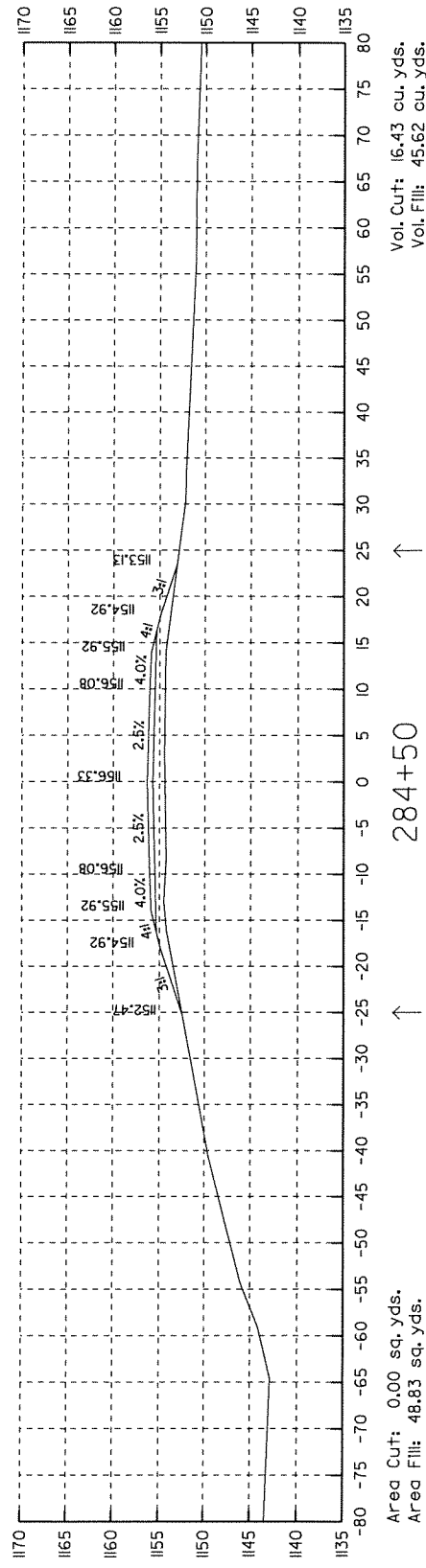
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		78	96
				4 STA. 277+00 TO STA. 279+00				



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	79	96	
				4 STA. 279+50 TO STA. 281+50				

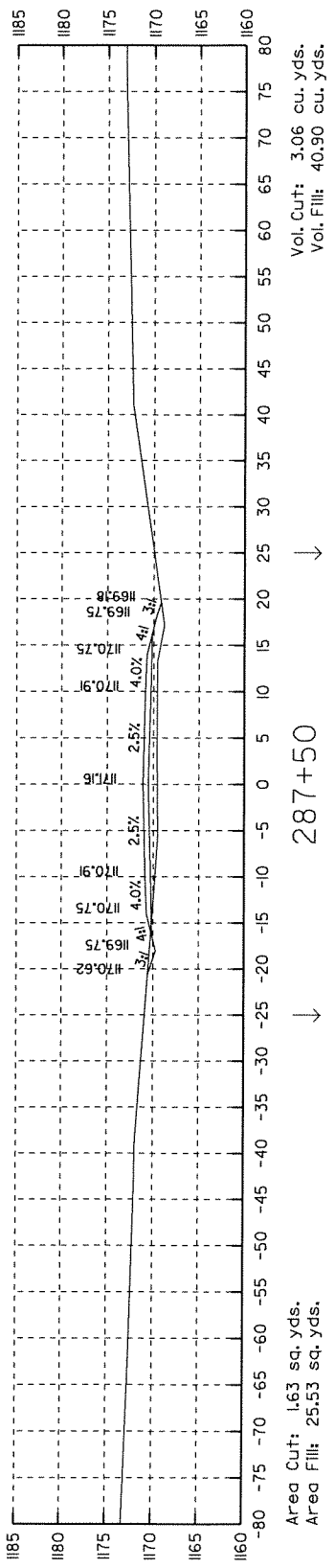
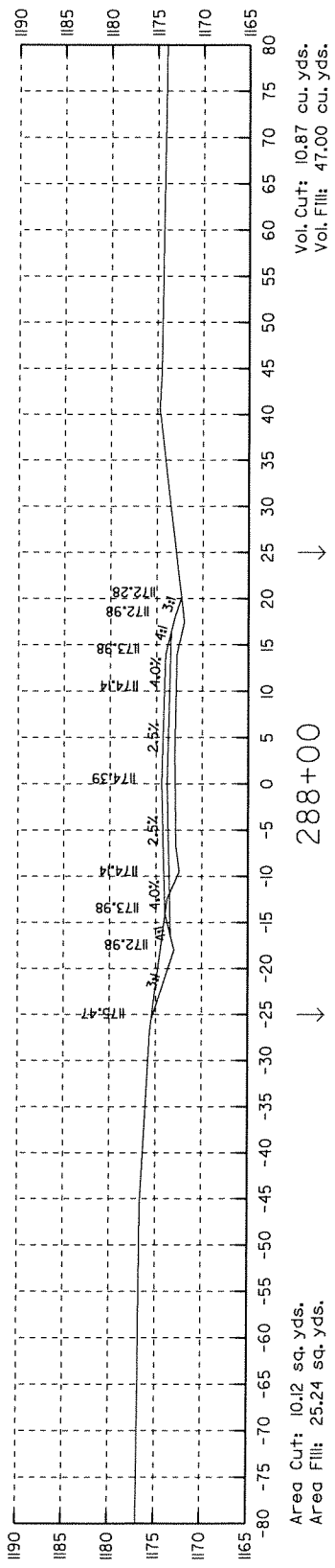
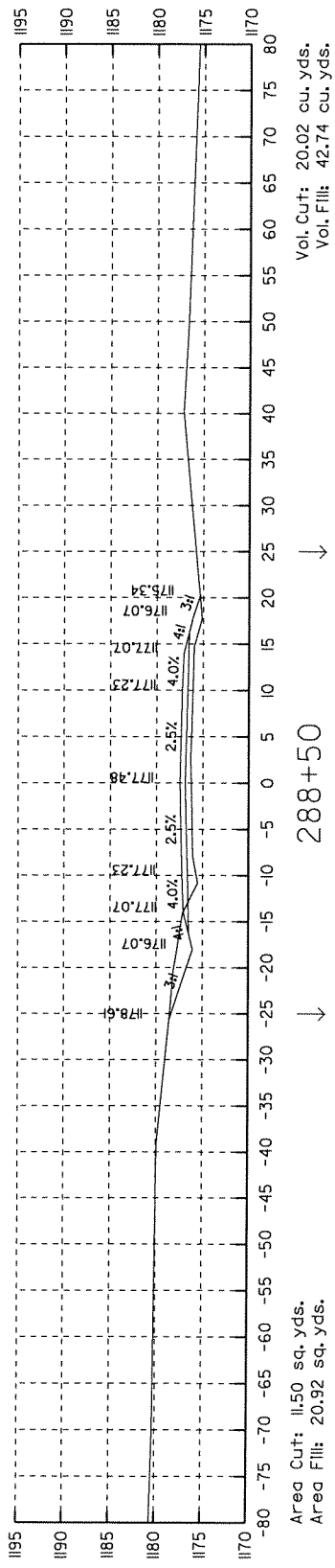
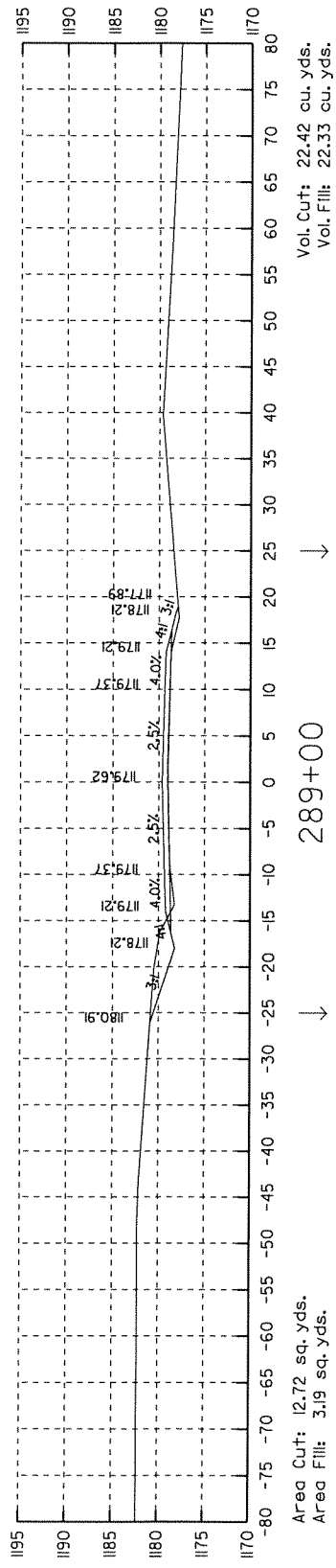
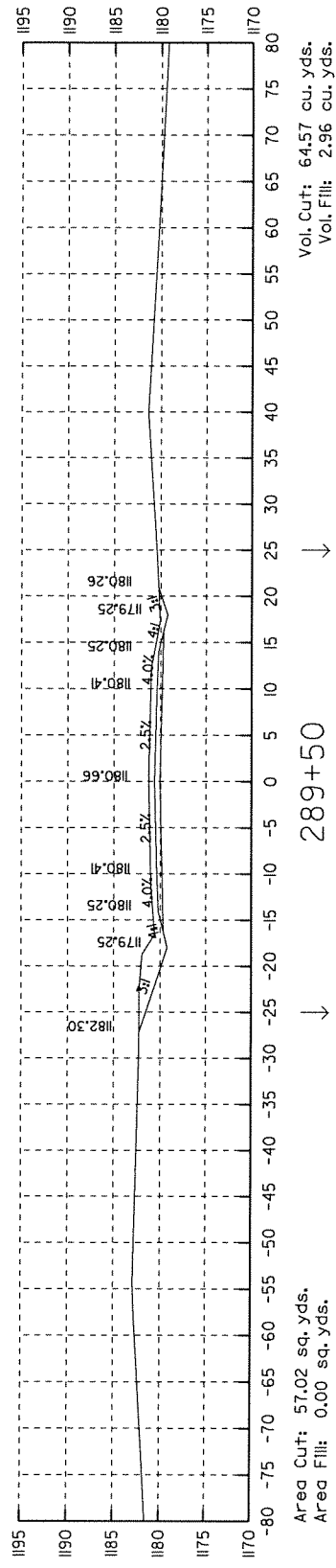
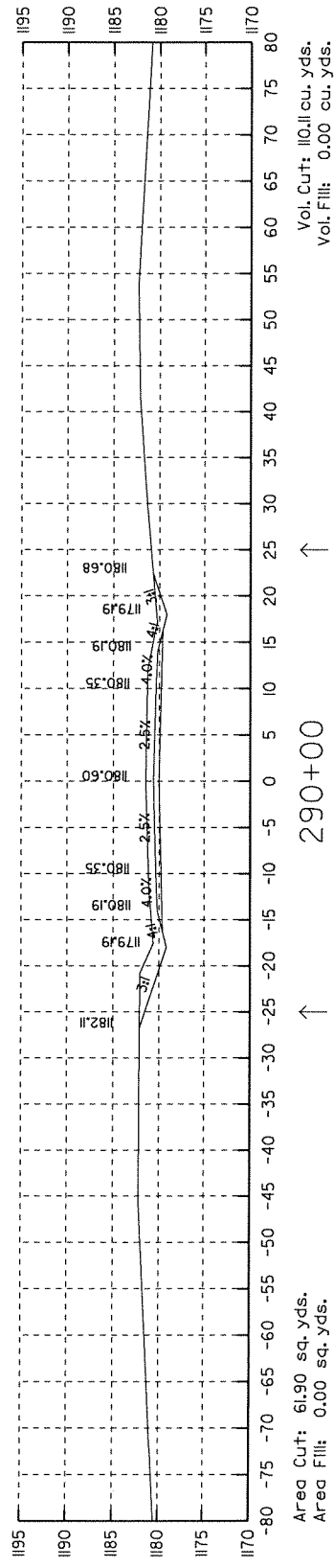
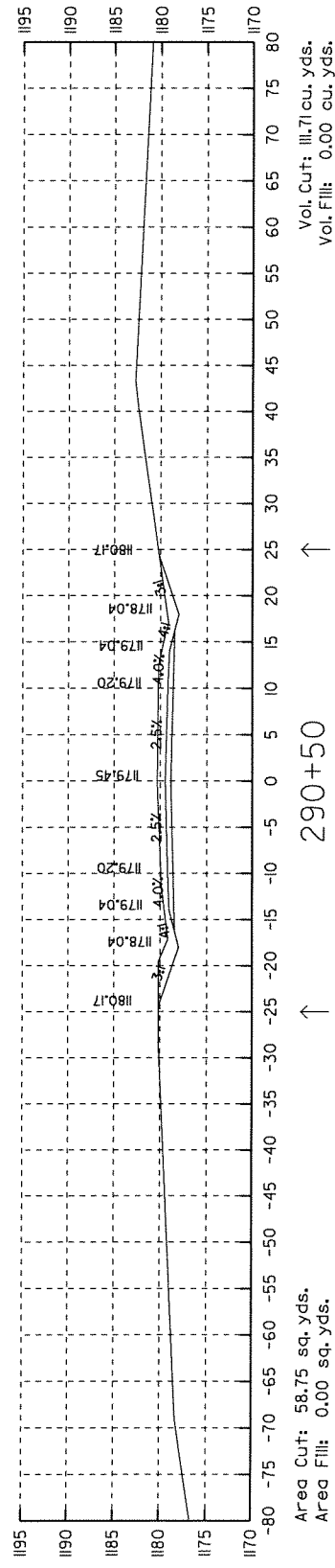


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	80	96	
				4 STA. 282+00 TO STA. 284+50				

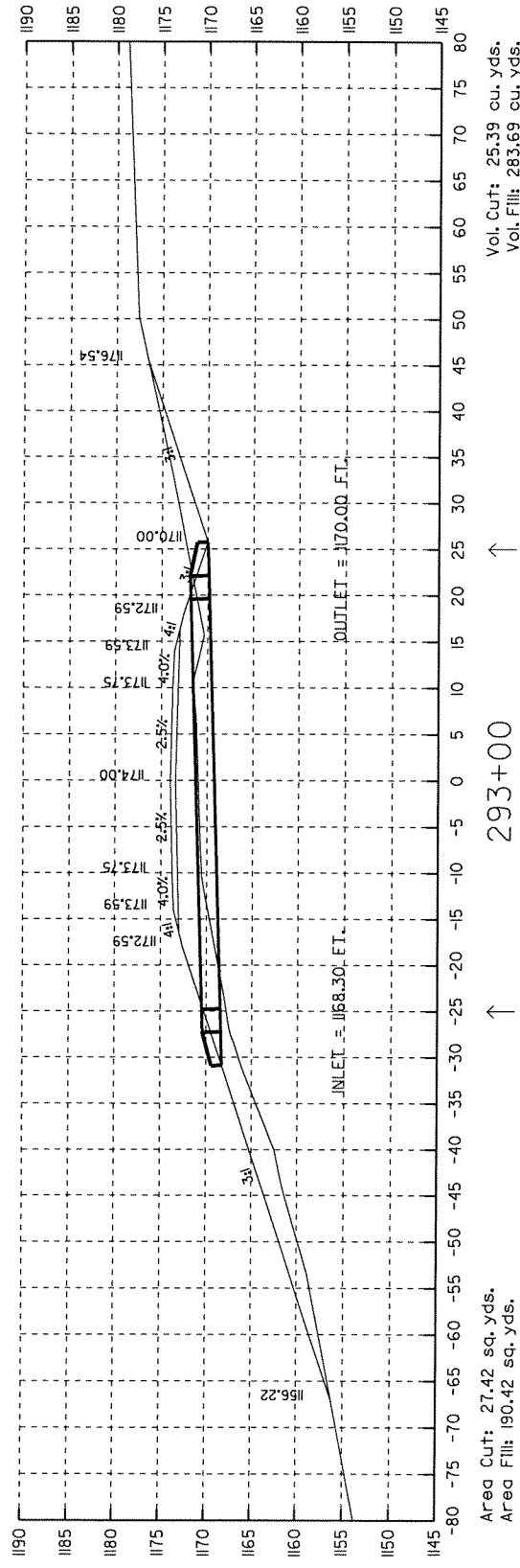


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	82	96	

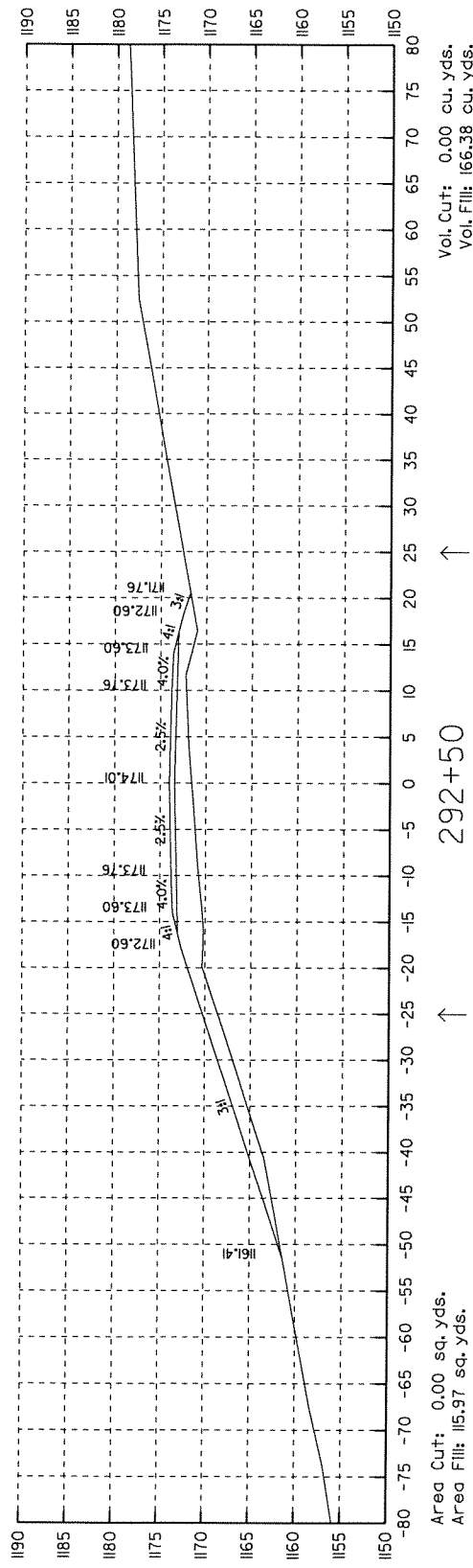
4 STA. 287+50 TO STA. 290+50



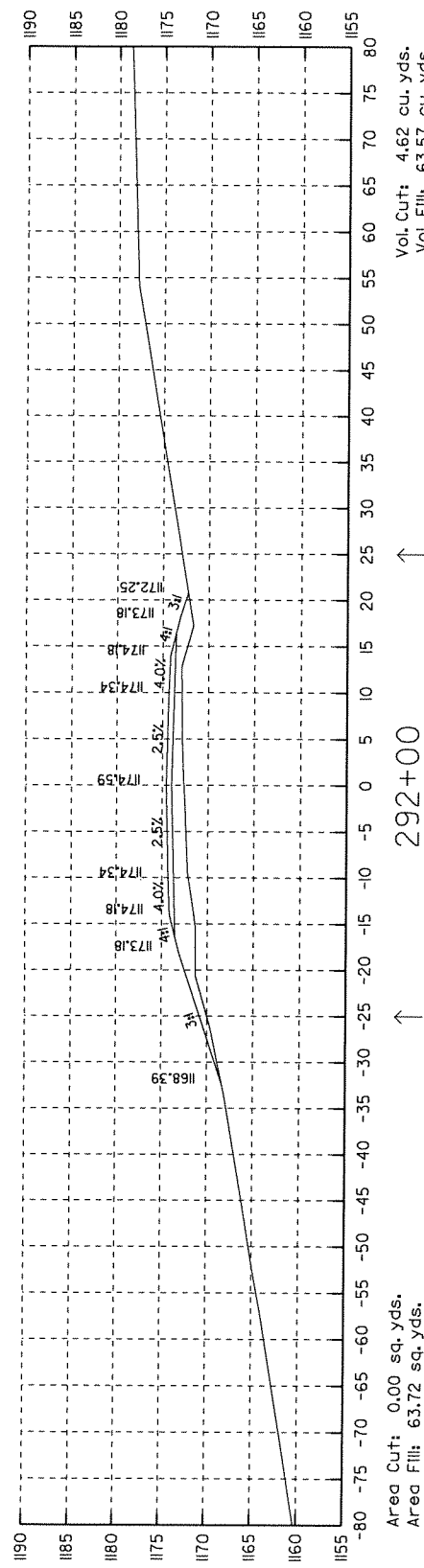
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	83	96	
				4 STA. 291+00 TO STA. 293+00				



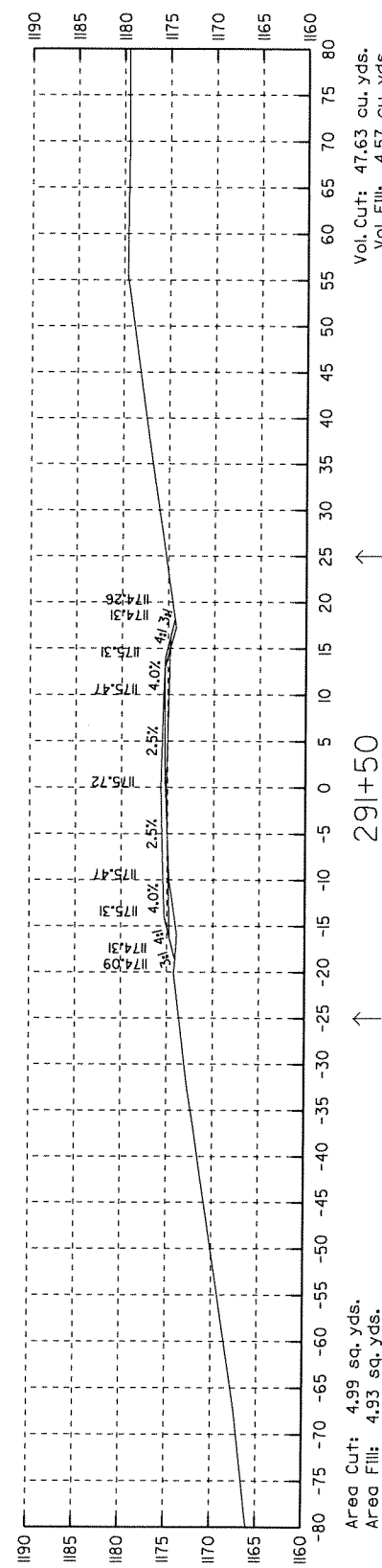
293+00
 CONSTRUCT
 24" PIPE CULVERT
 CROSS DRAIN
 D.A. = 0.5 AC. Q25 = 1.8 CFS
 24" RCP(CL. III)(TYPE 3 BEDDING) = 45 LIN. FT.
 24" CMP OR PLASTIC(TYPE 2 BEDDING) = 50 LIN. FT.
 24" FES ON LT. AND RT. = 2 EACH



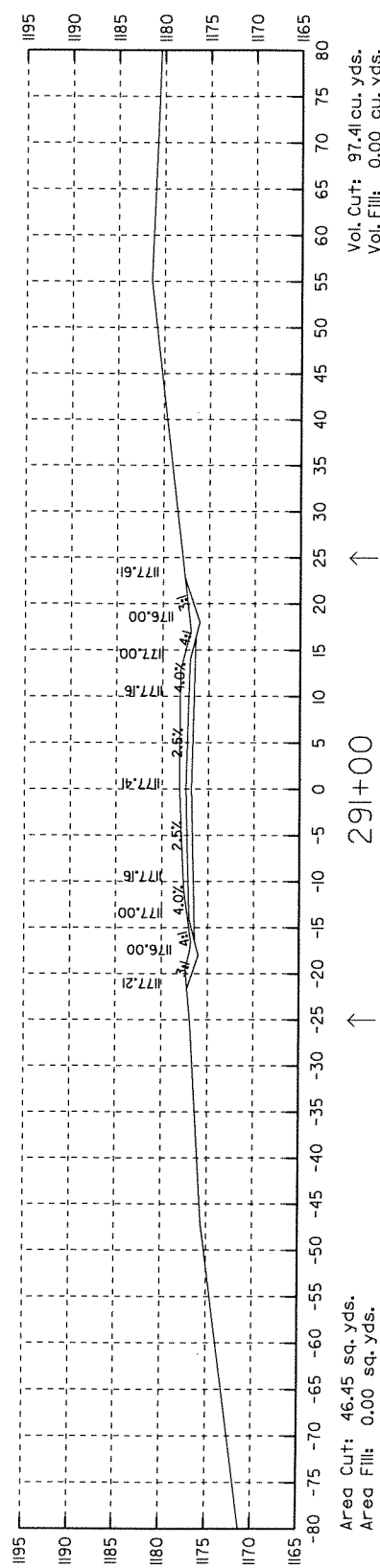
292+50



292+00



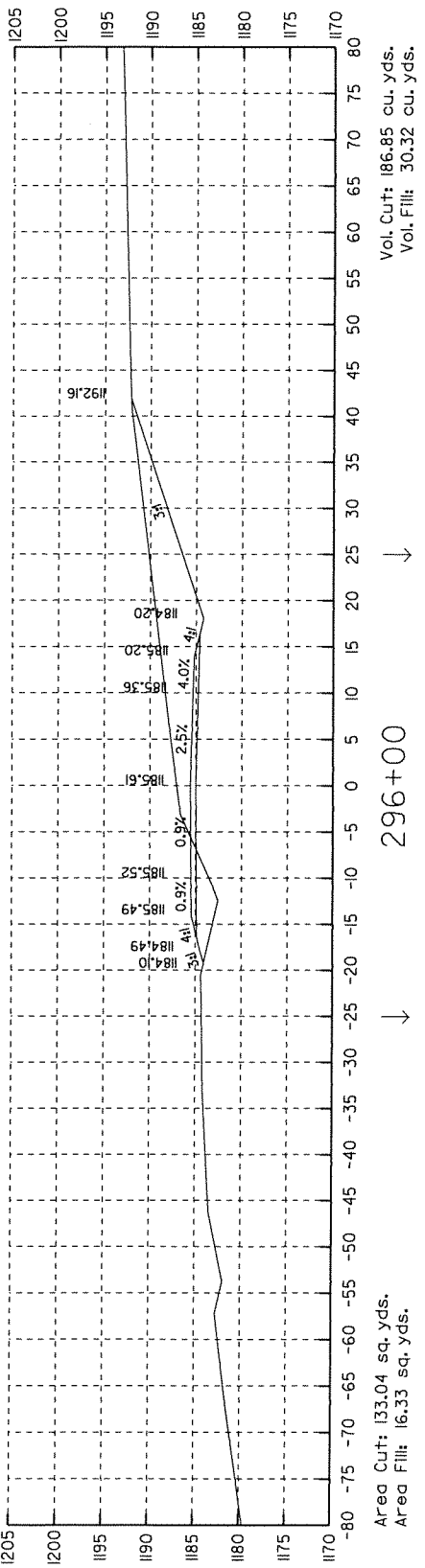
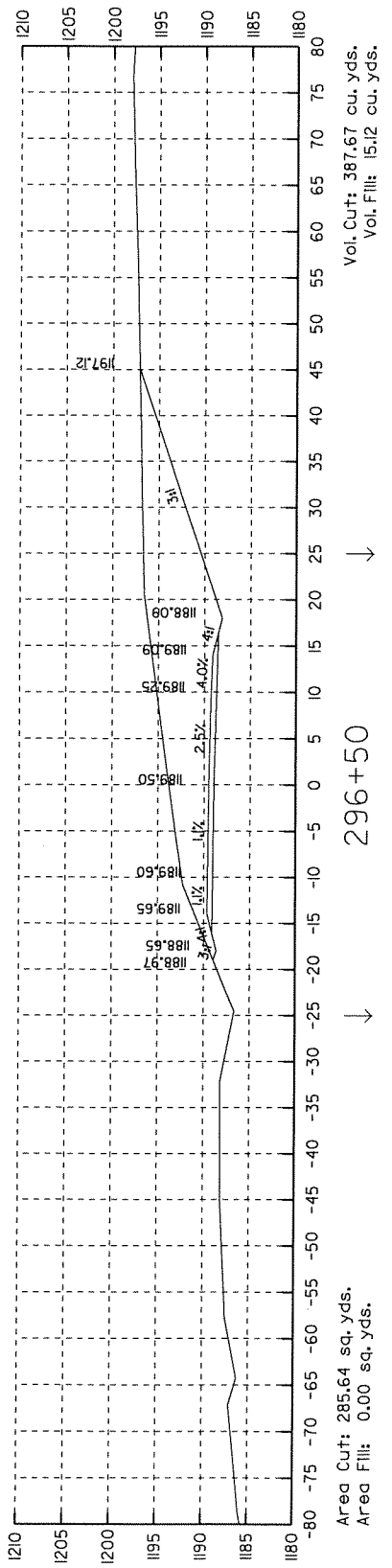
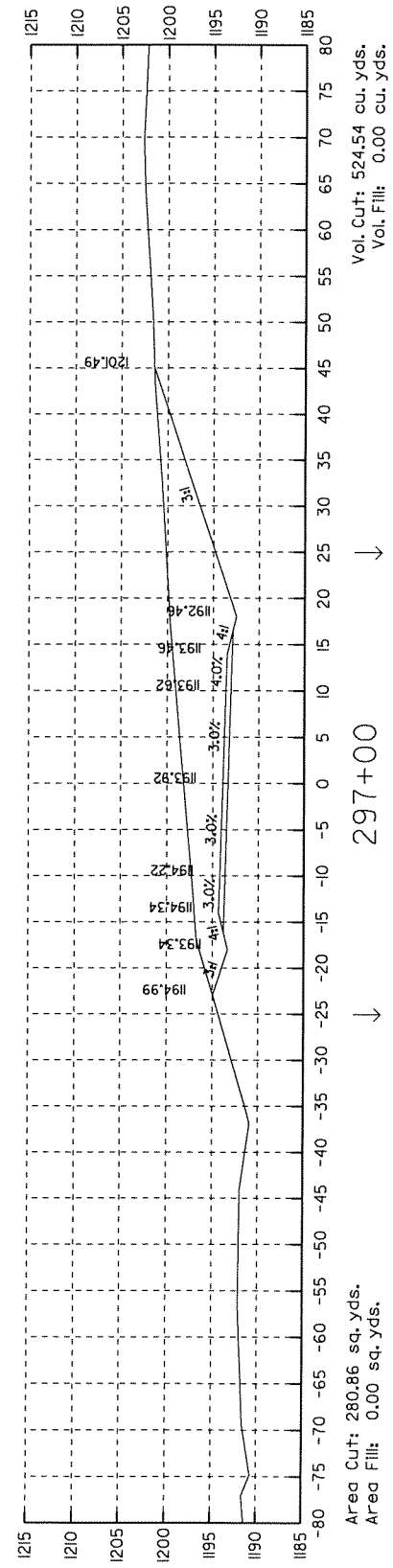
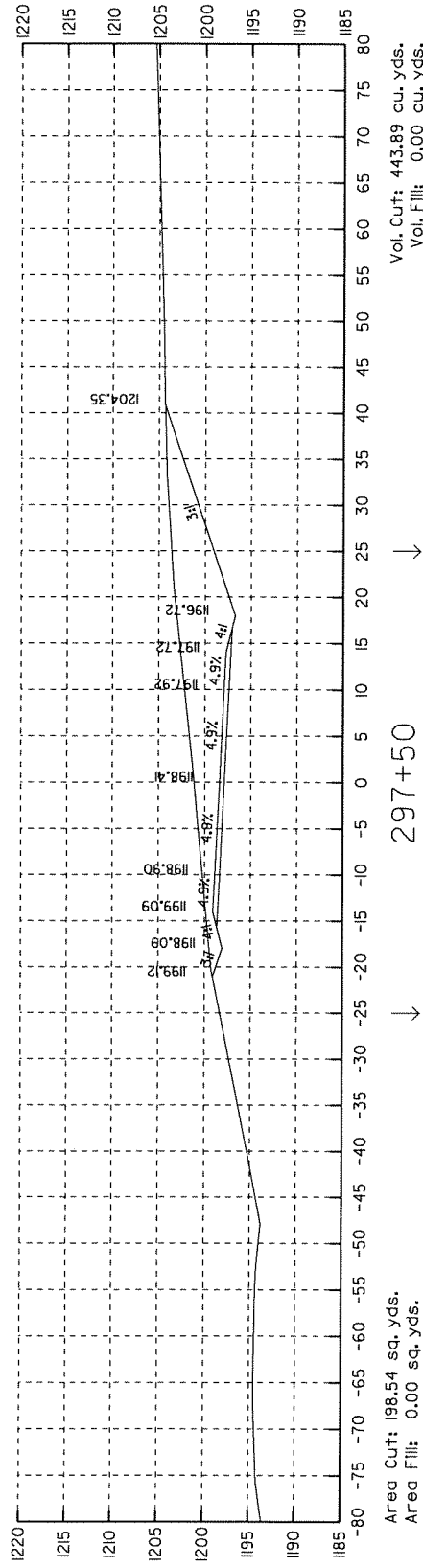
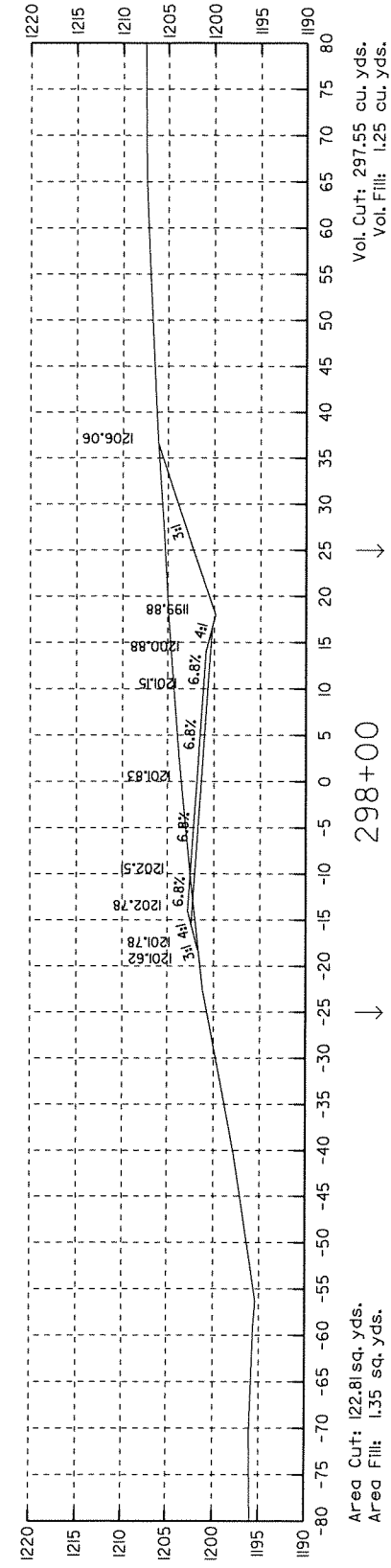
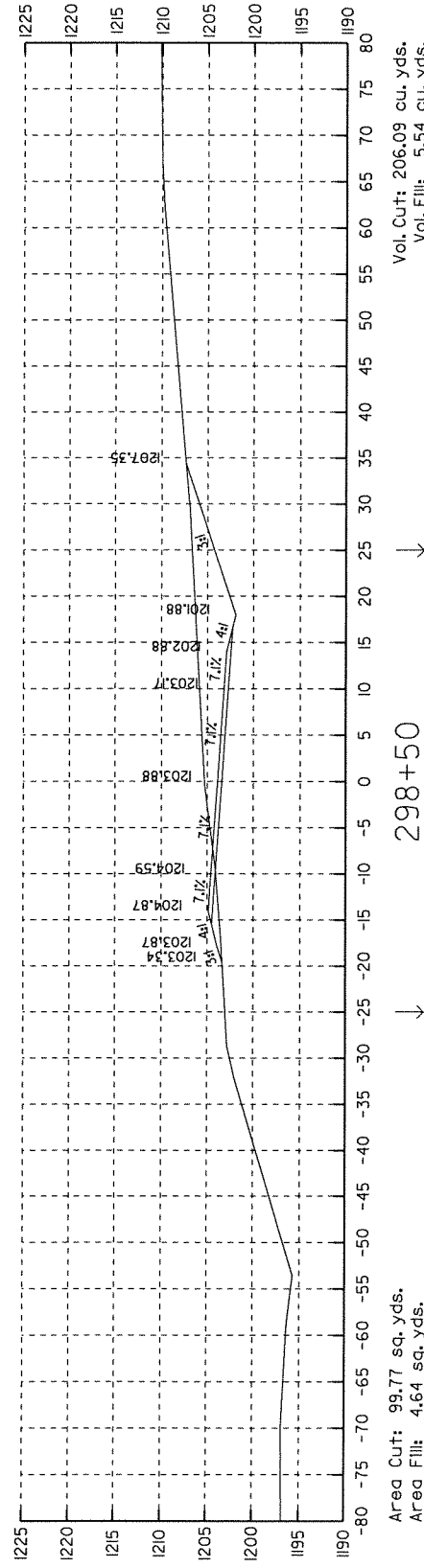
291+50



291+00

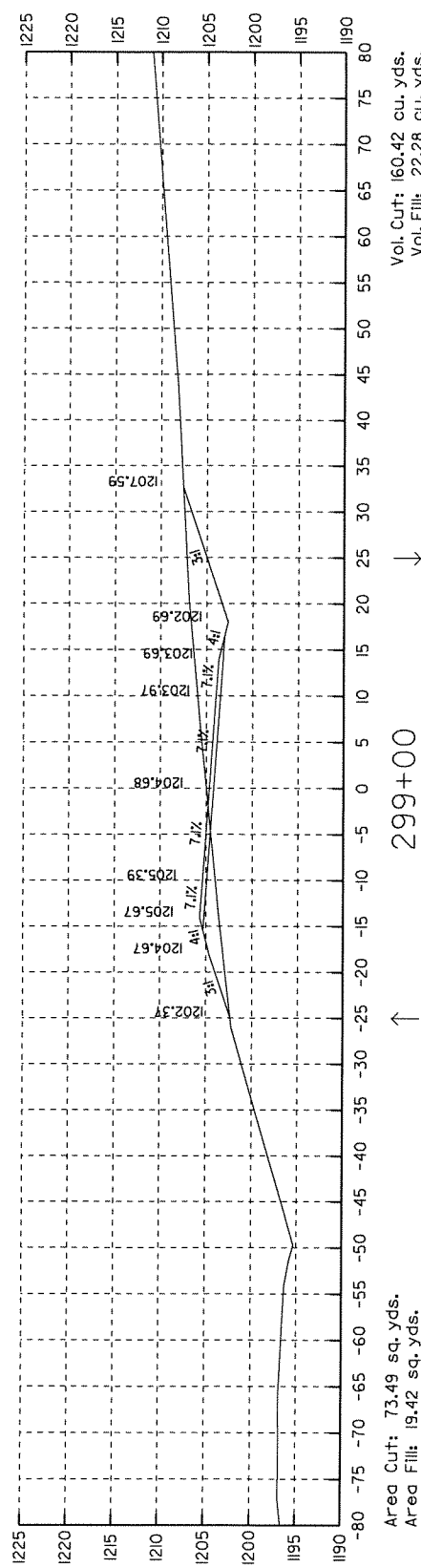
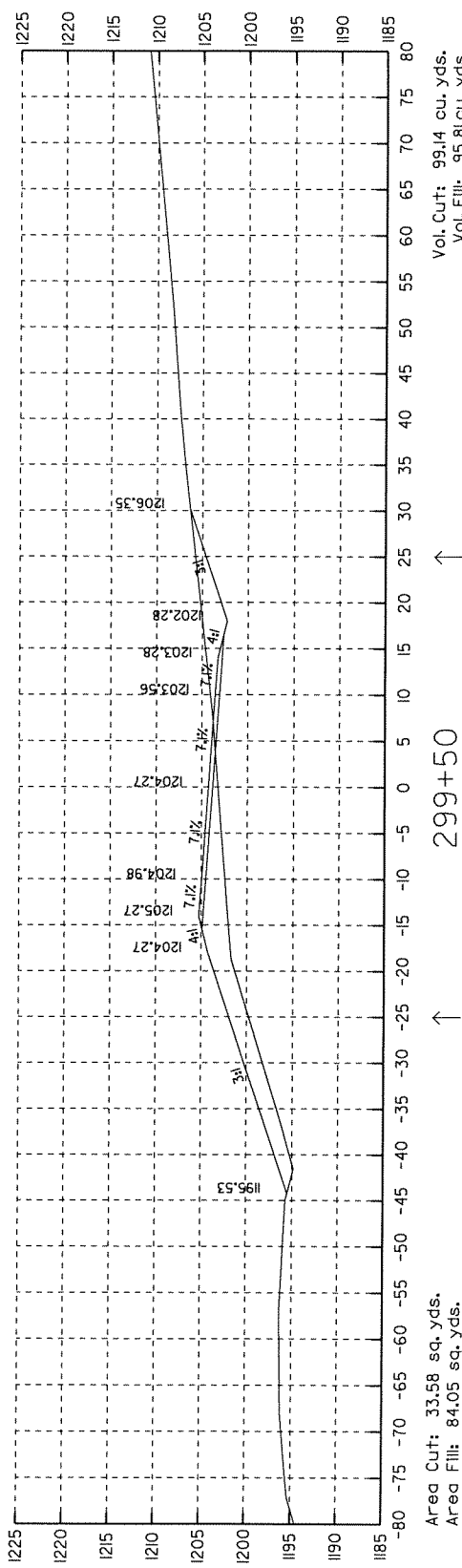
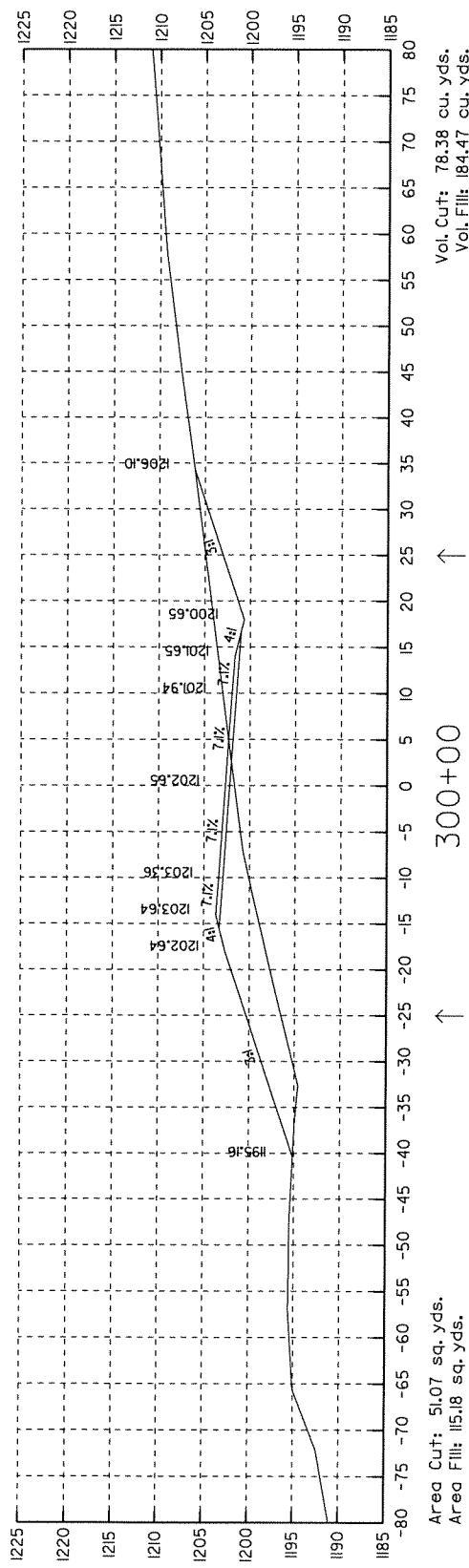
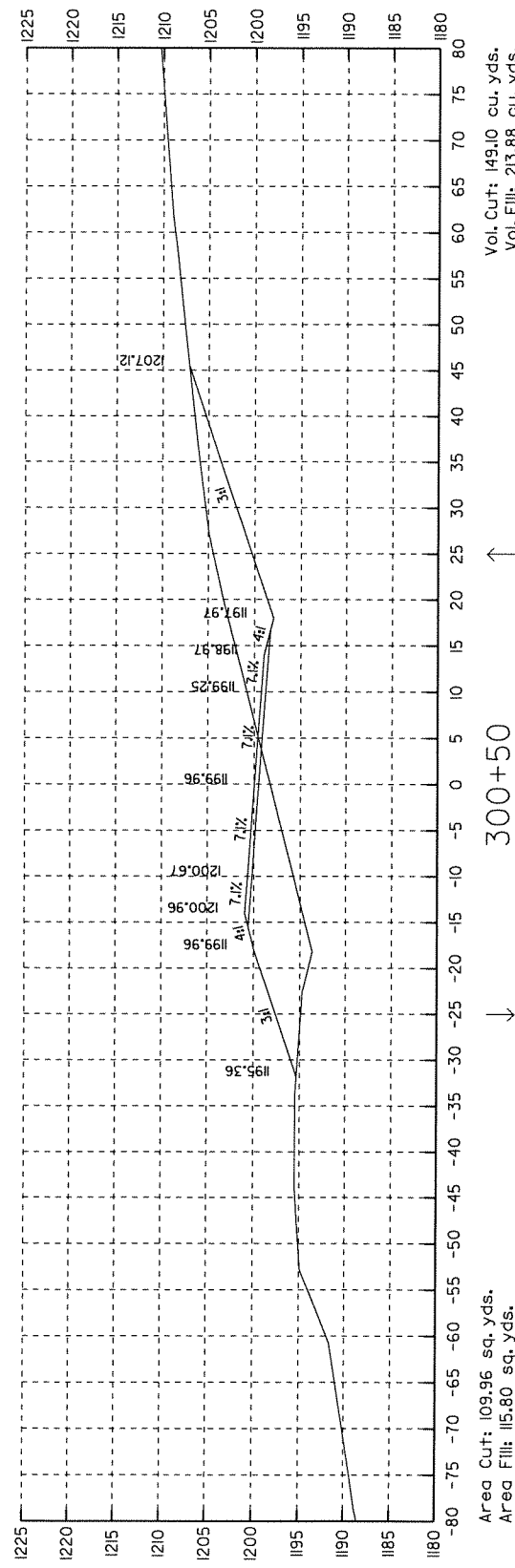
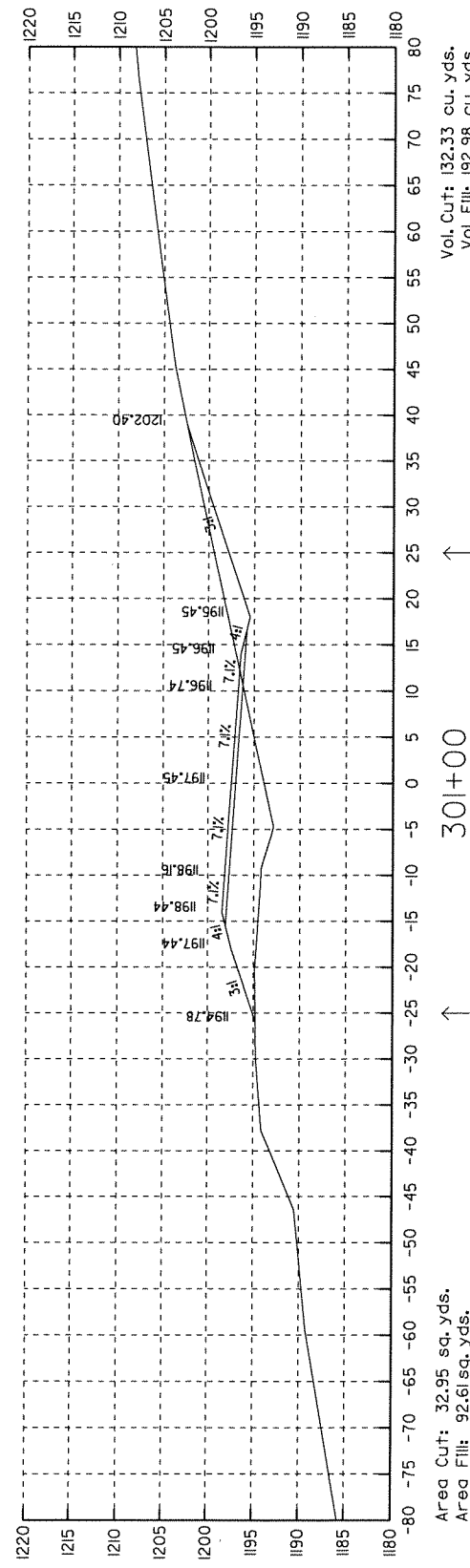
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
JOB NO.		FA4510		85		96		

4 STA. 296+00 TO STA. 298+50

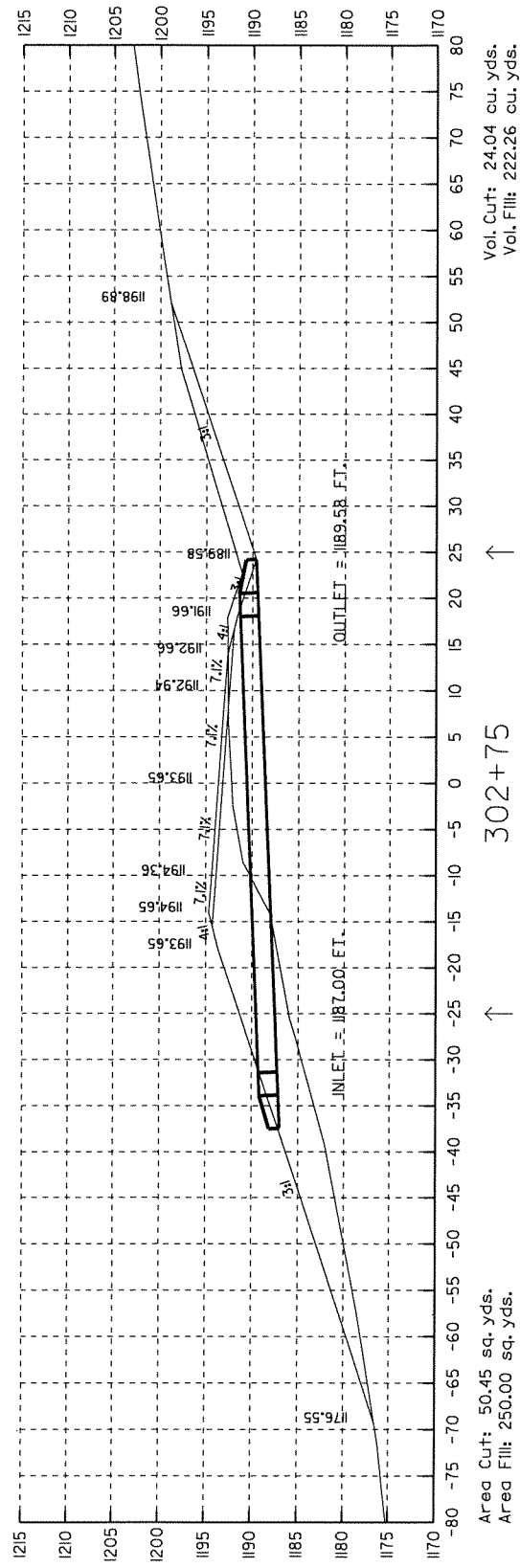


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		86	96

4 STA. 299+00 TO STA. 301+00



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510		87	96
				4 STA. 301+50 TO STA. 302+75				



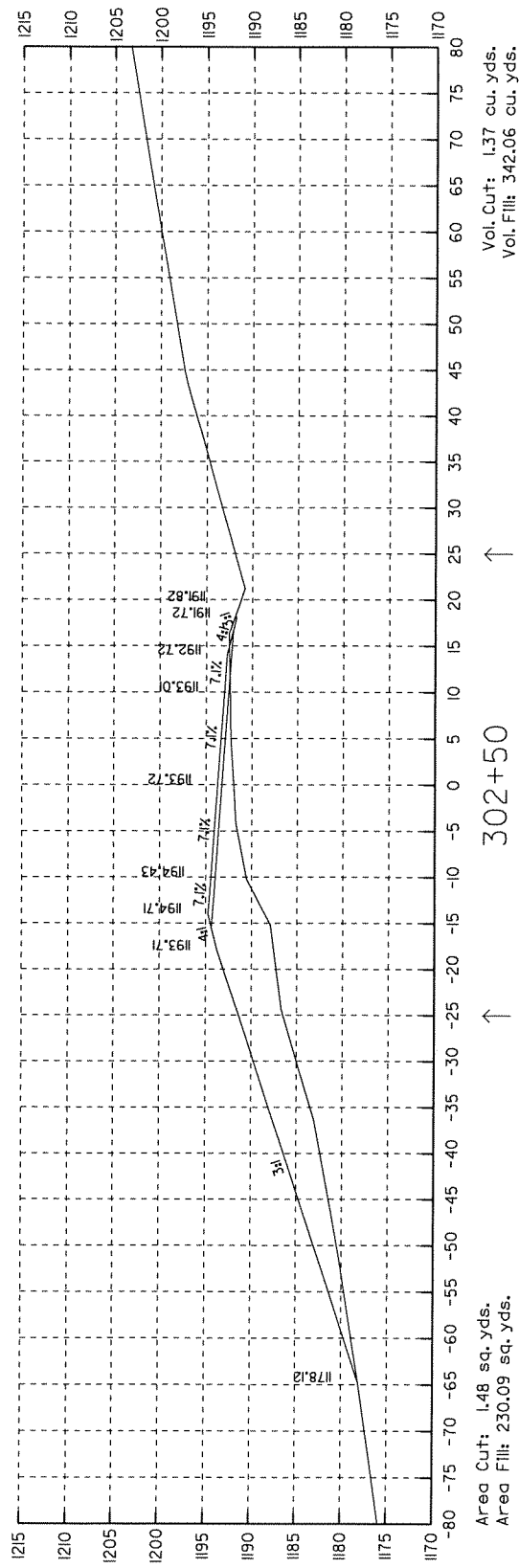
Area Cut: 24.04 cu. yds.
Vol. Fill: 222.26 cu. yds.

↑
302+75

**CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN**

D.A. = 0.5 AC. Q25 = 1.8 CFS
24" RCP(CL.III)(TYPE 3 BEDDING) = 50 LIN. FT.
24" CMP OR PLASTIC(TYPE 2 BEDDING) = 55 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH

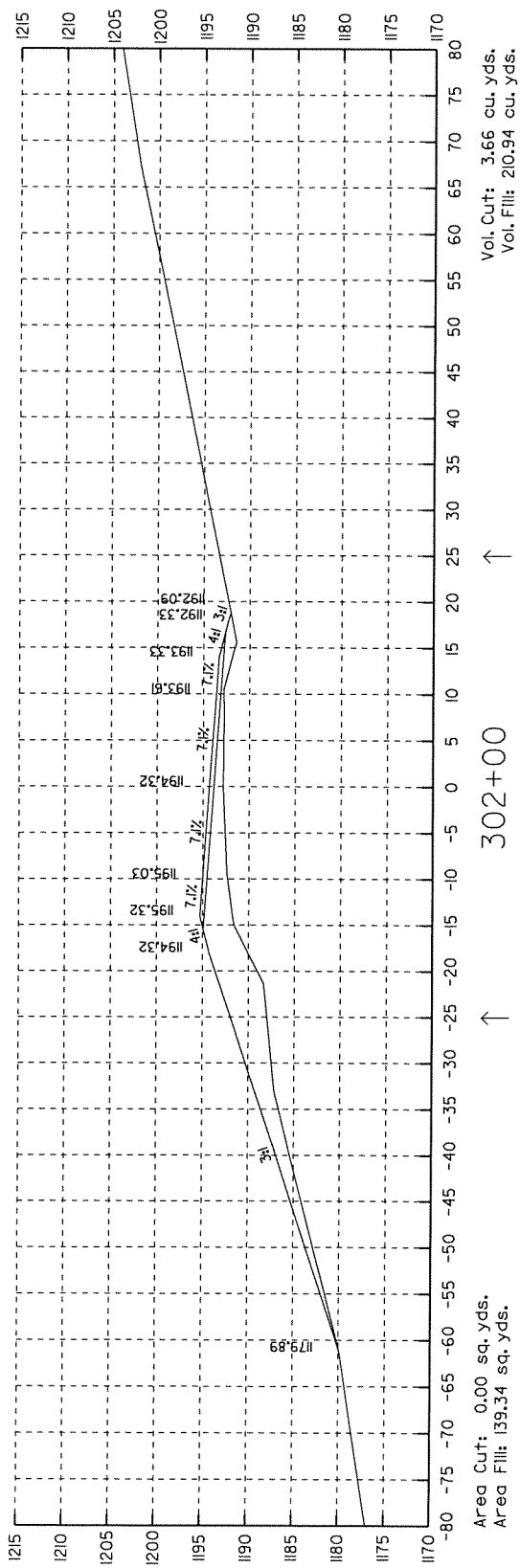
Area Cut: 50.45 sq. yds.
Area Fill: 250.00 sq. yds.



Vol. Cut: 1.37 cu. yds.
Vol. Fill: 342.06 cu. yds.

↑
302+50

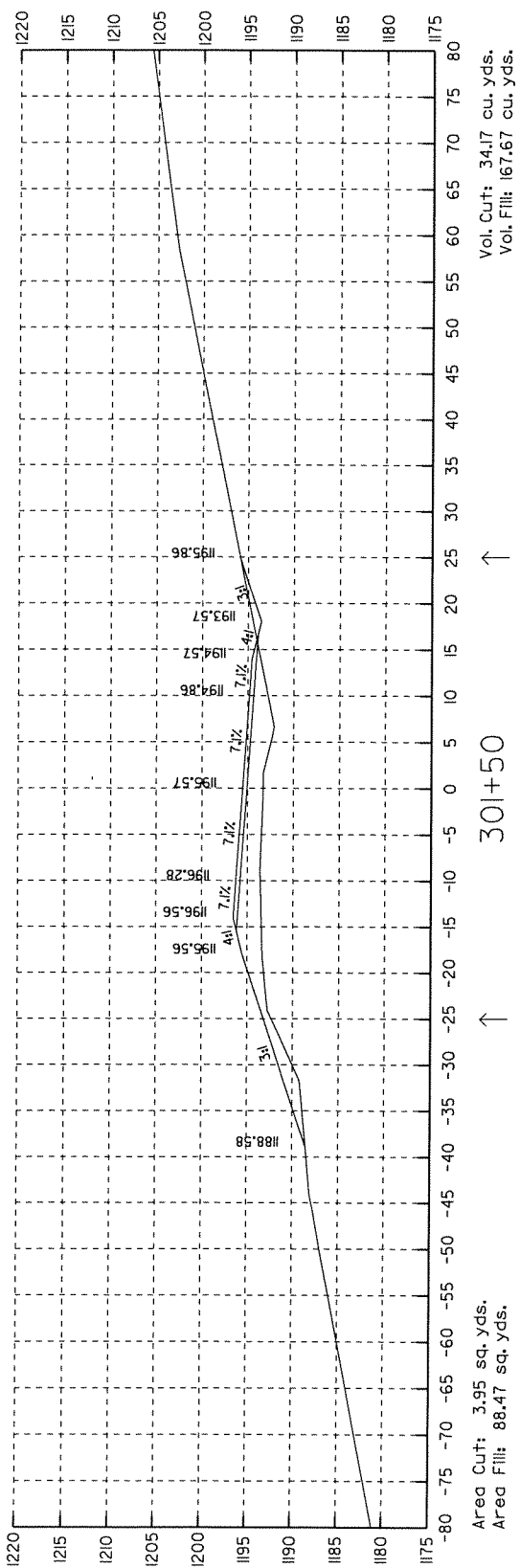
Area Cut: 1.48 sq. yds.
Area Fill: 230.09 sq. yds.



Vol. Cut: 3.66 cu. yds.
Vol. Fill: 210.94 cu. yds.

↑
302+00

Area Cut: 0.00 sq. yds.
Area Fill: 139.34 sq. yds.



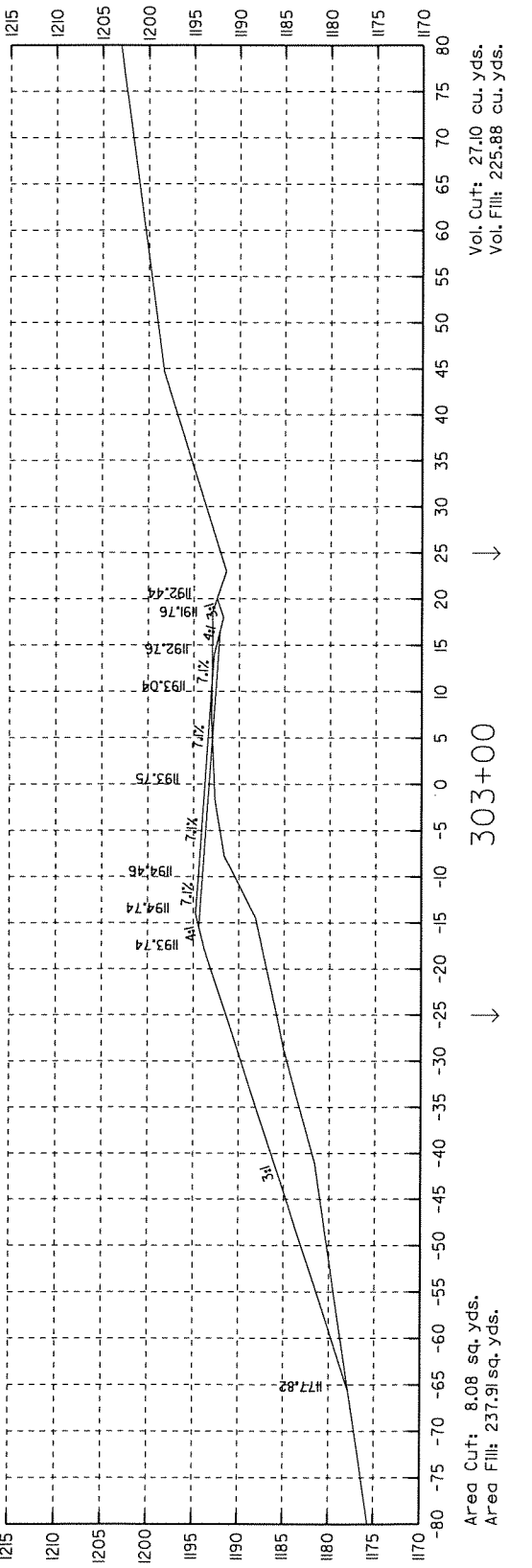
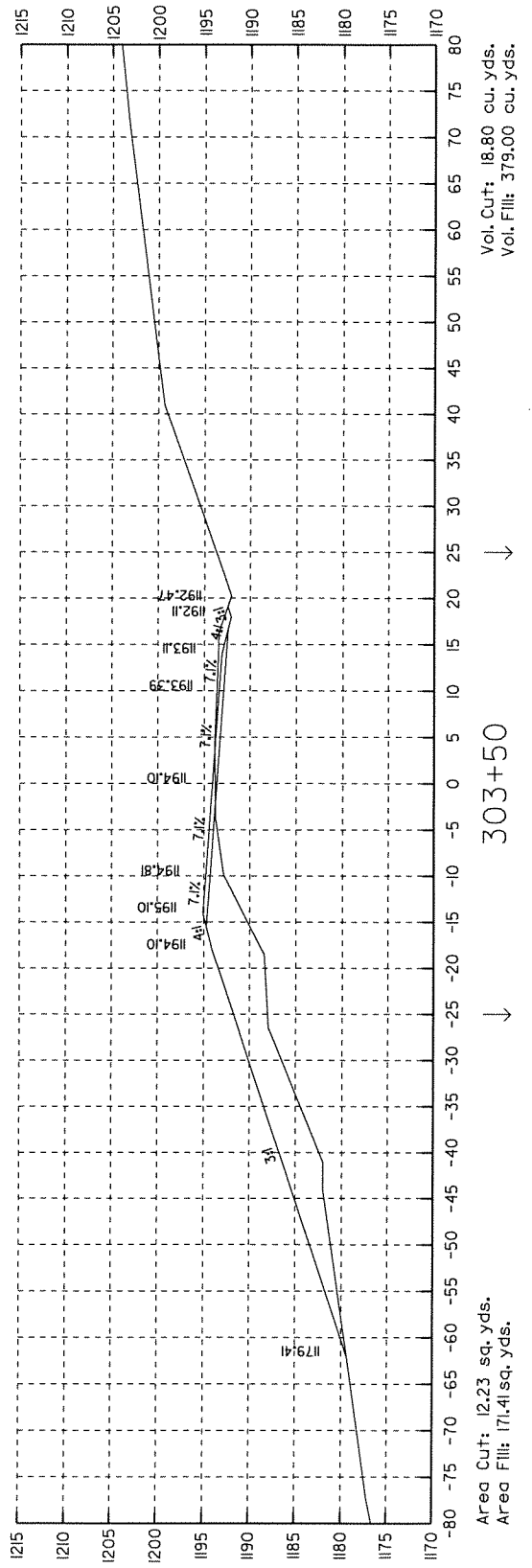
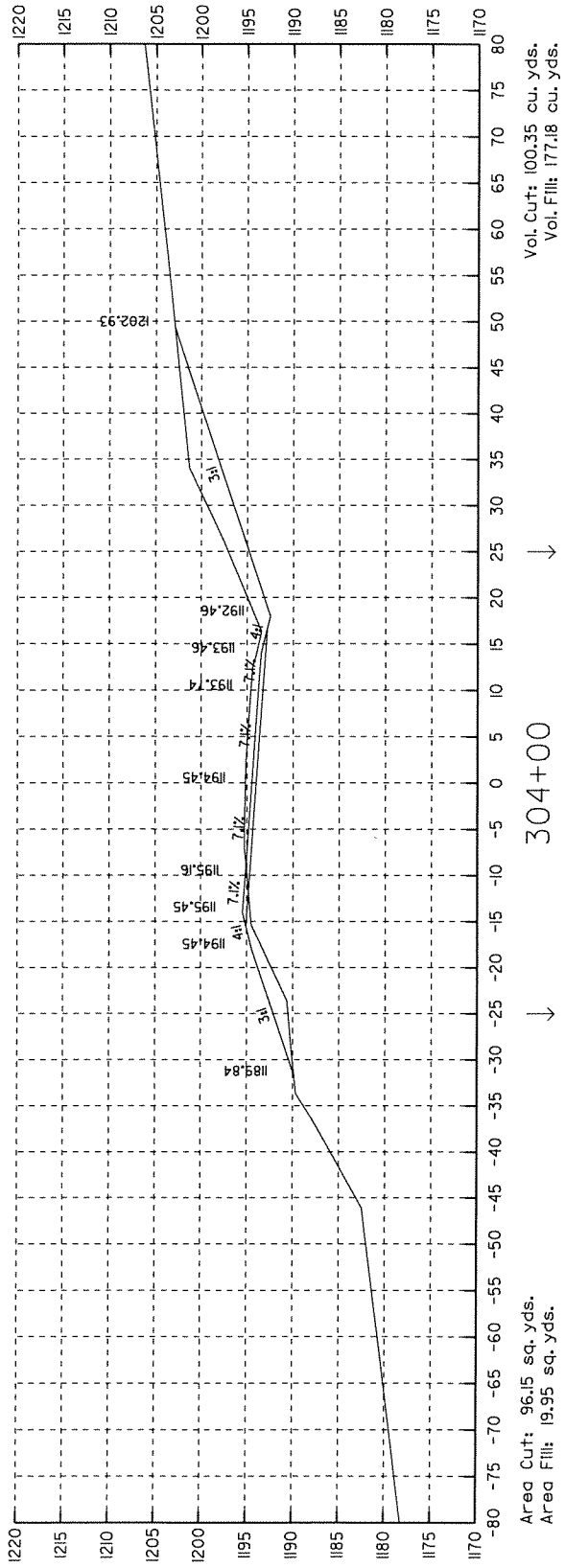
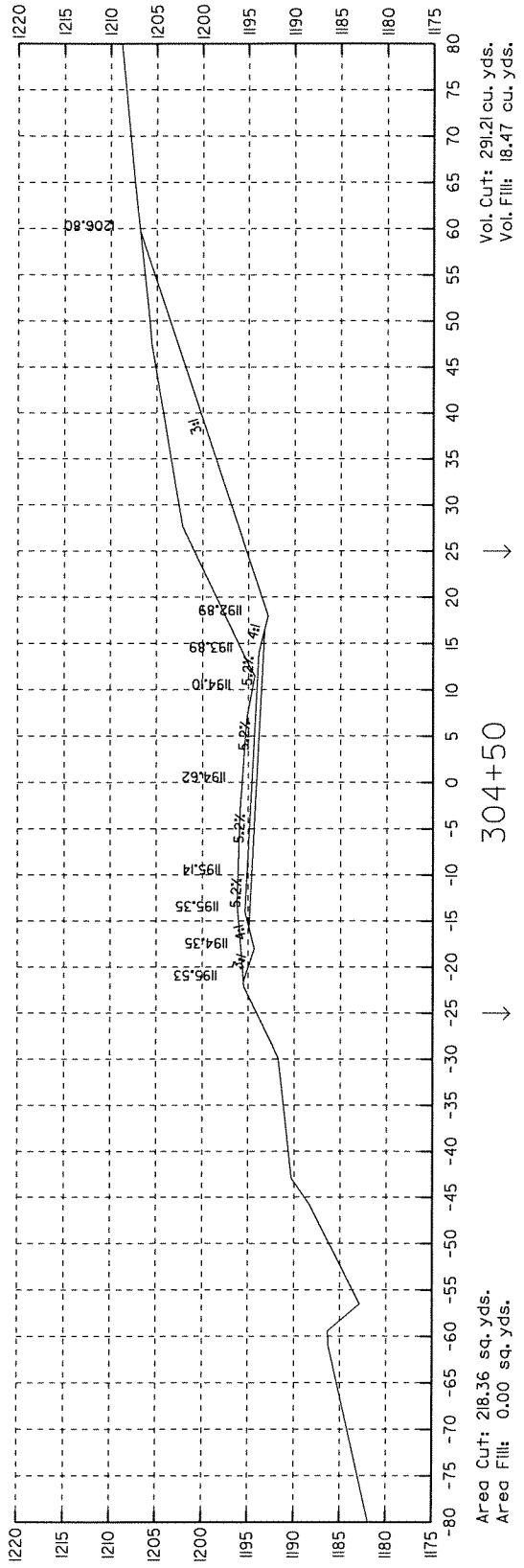
Vol. Cut: 34.17 cu. yds.
Vol. Fill: 167.67 cu. yds.

↑
301+50

Area Cut: 3.95 sq. yds.
Area Fill: 88.47 sq. yds.

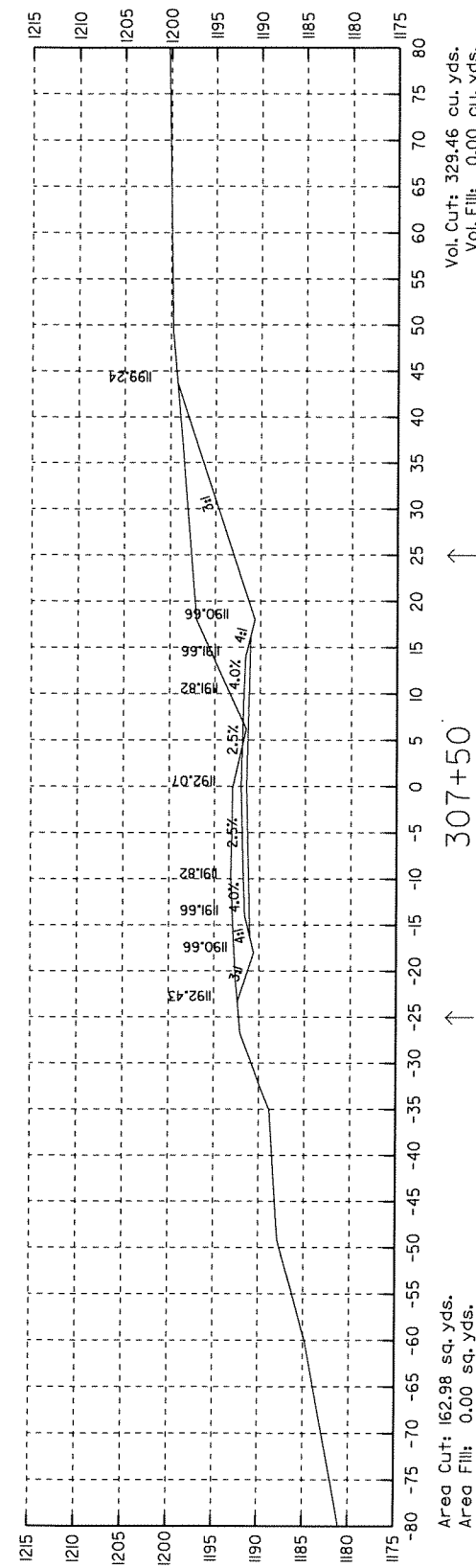
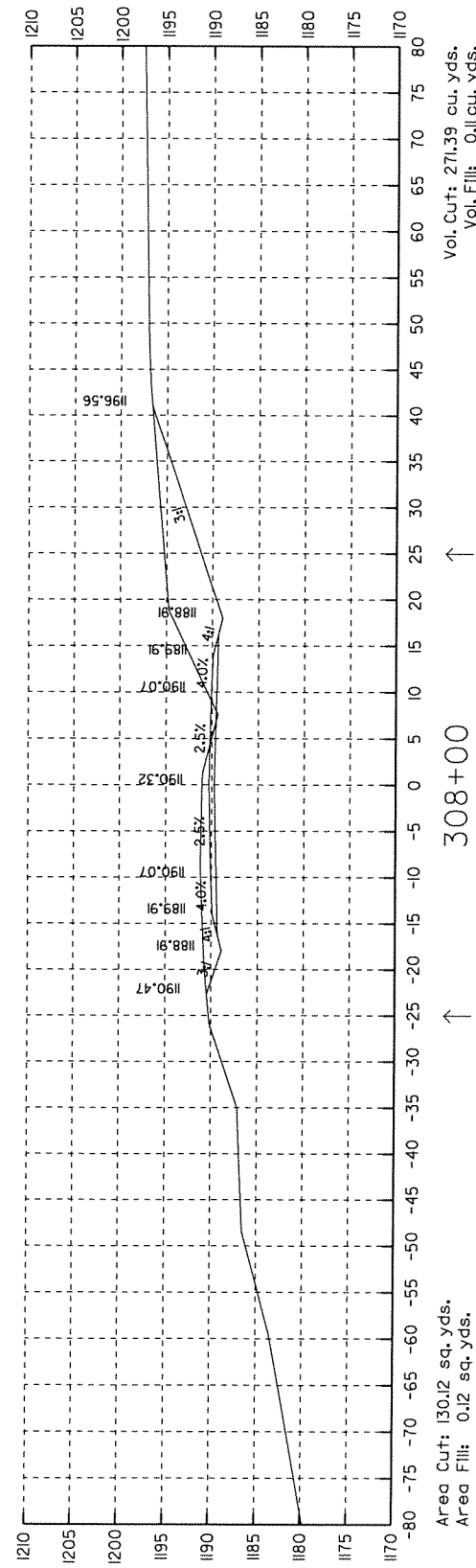
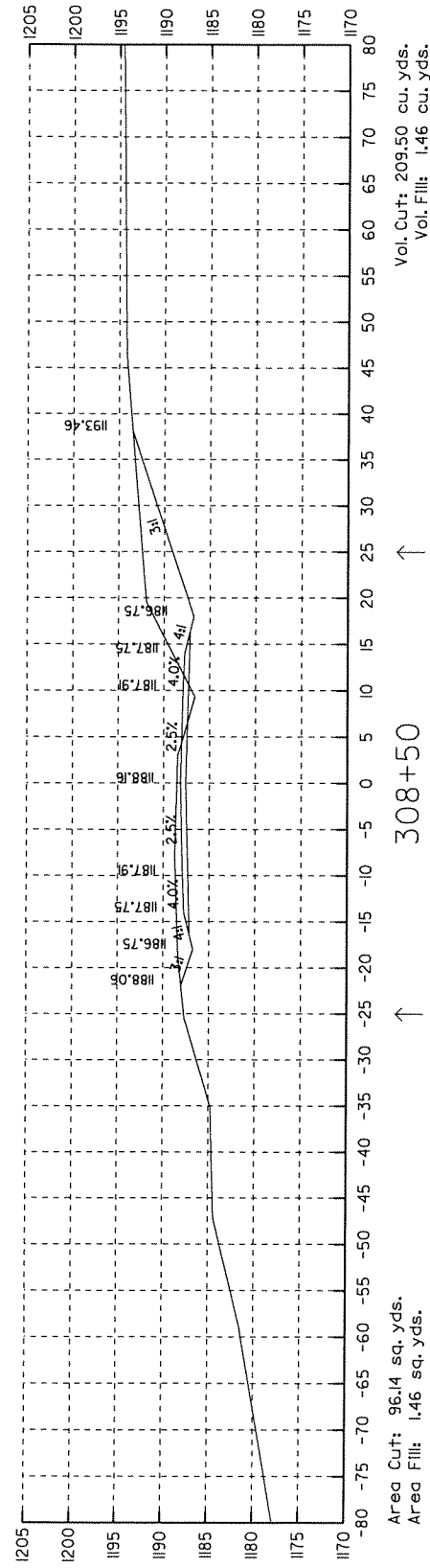
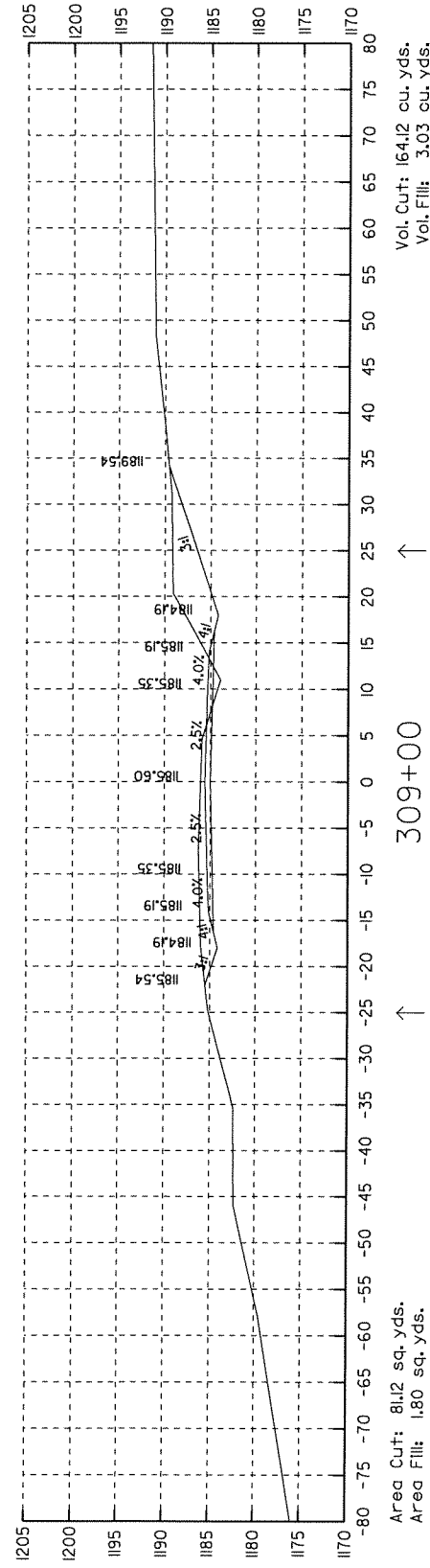
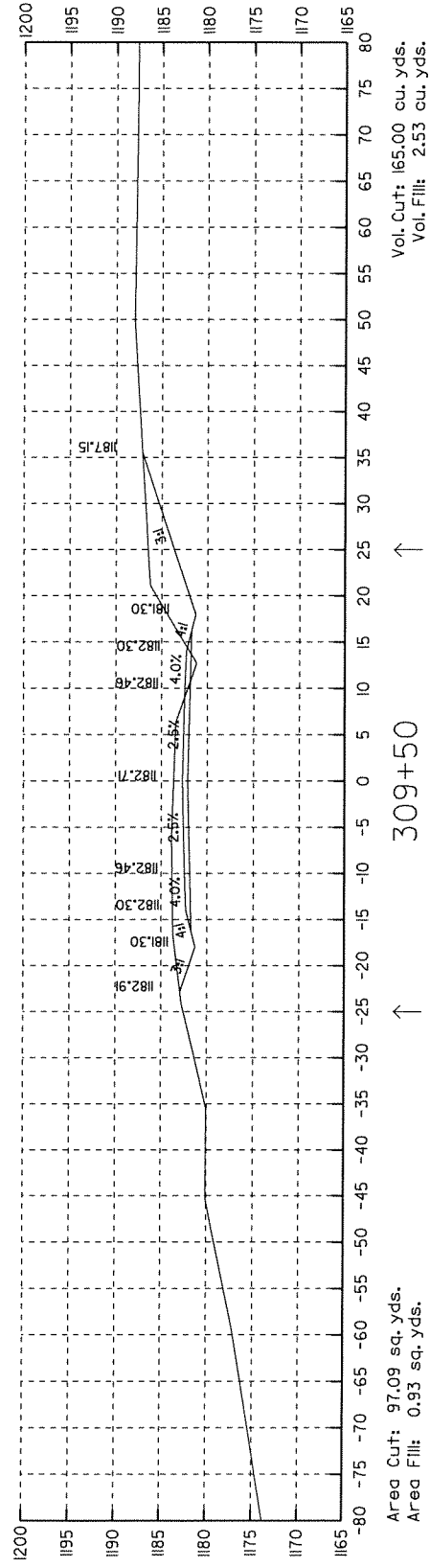
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
JOB NO.		FA4510		88		96		

4 STA. 303+00 TO STA. 304+50



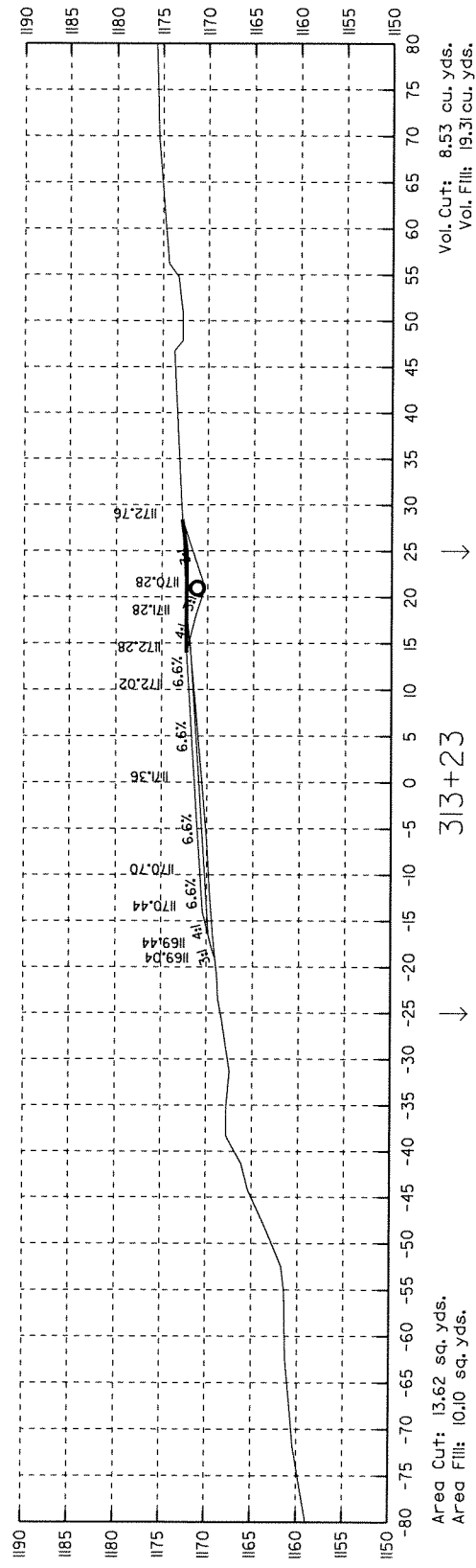
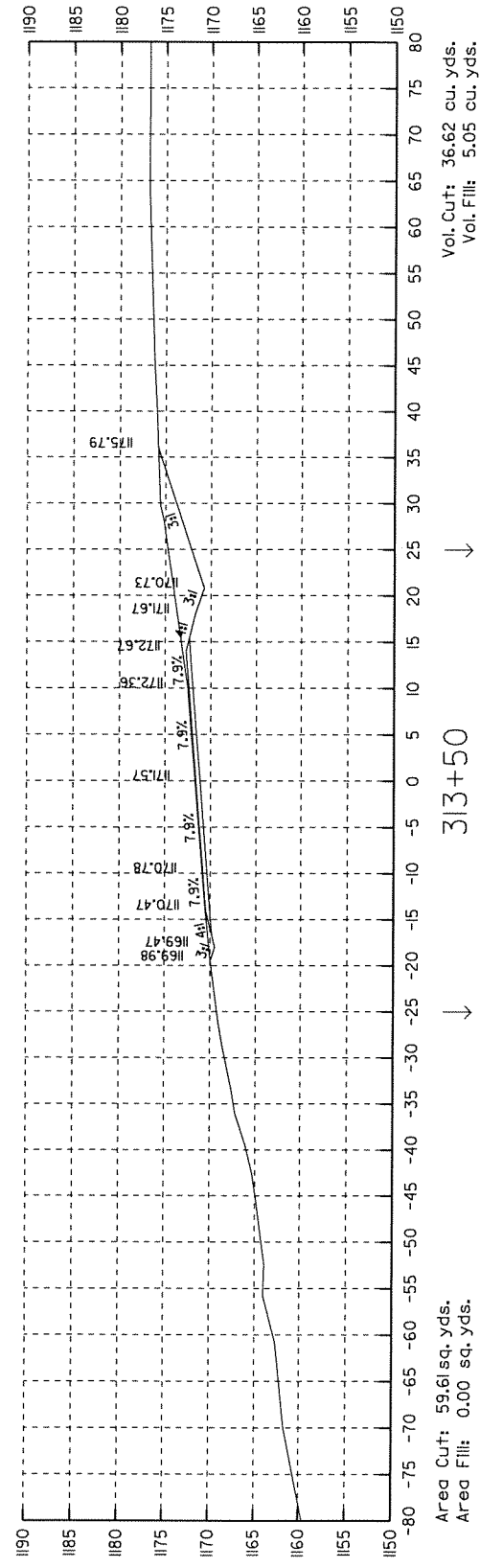
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	90	96	

4 STA. 307+50 TO STA. 309+50

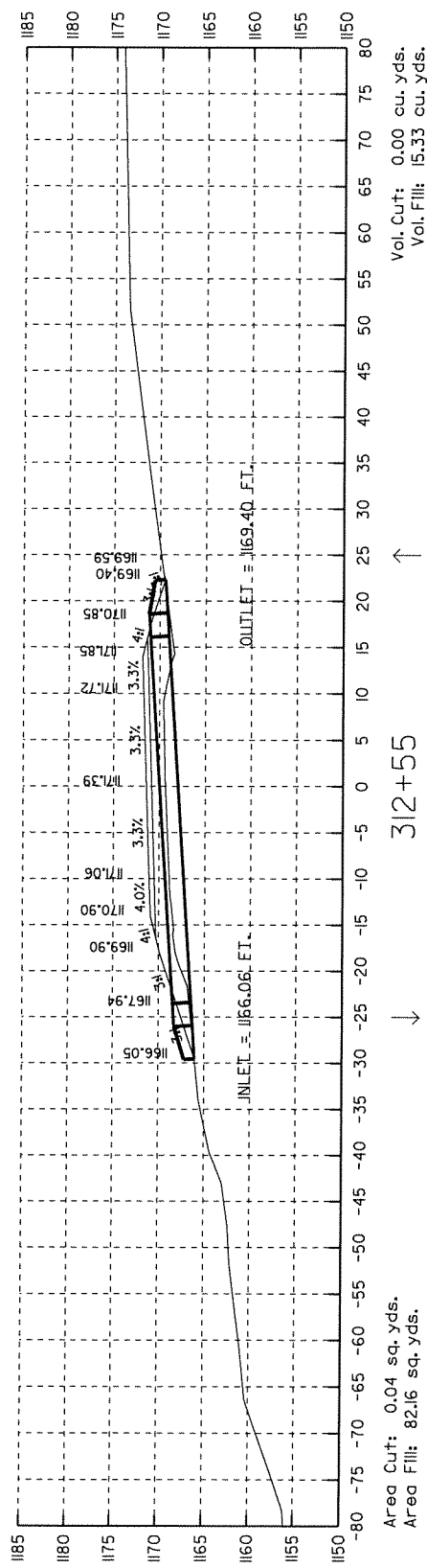
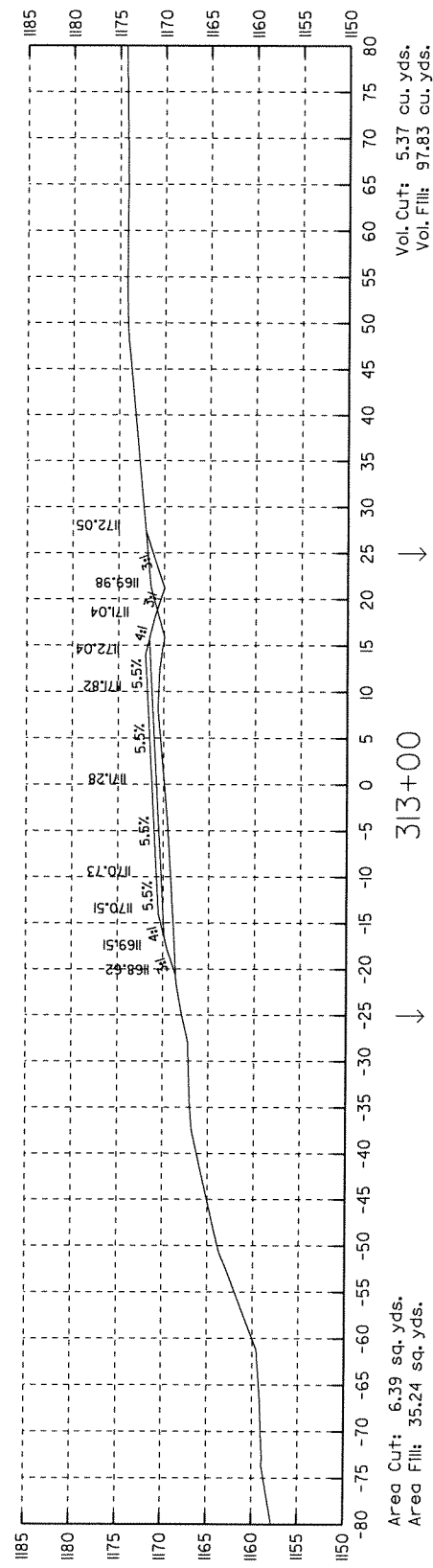


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	92	96	

4 STA. 312+55 TO STA. 313+50



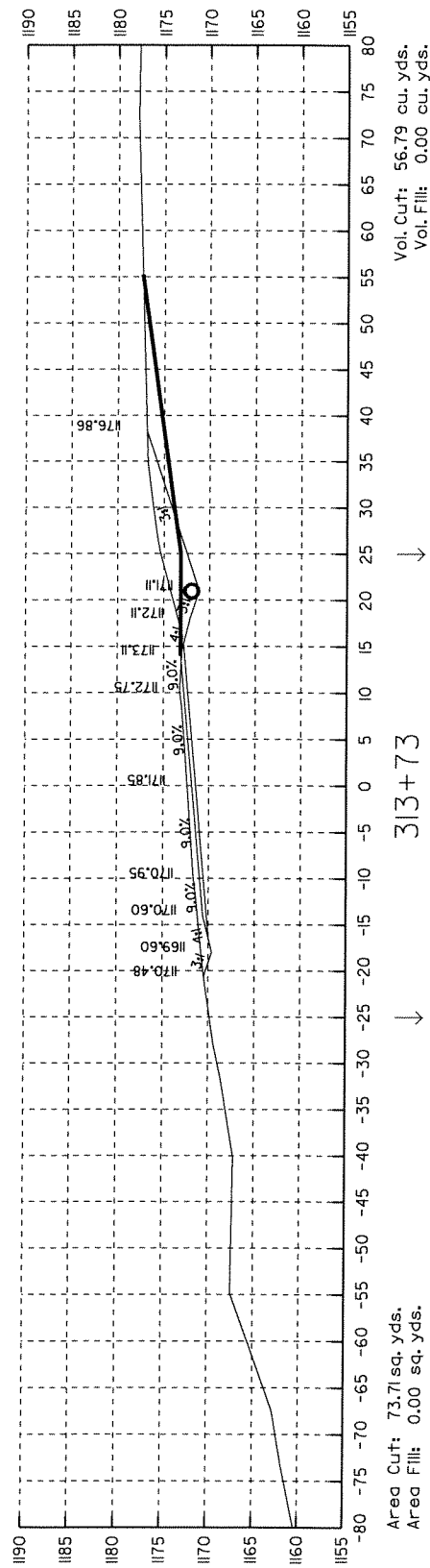
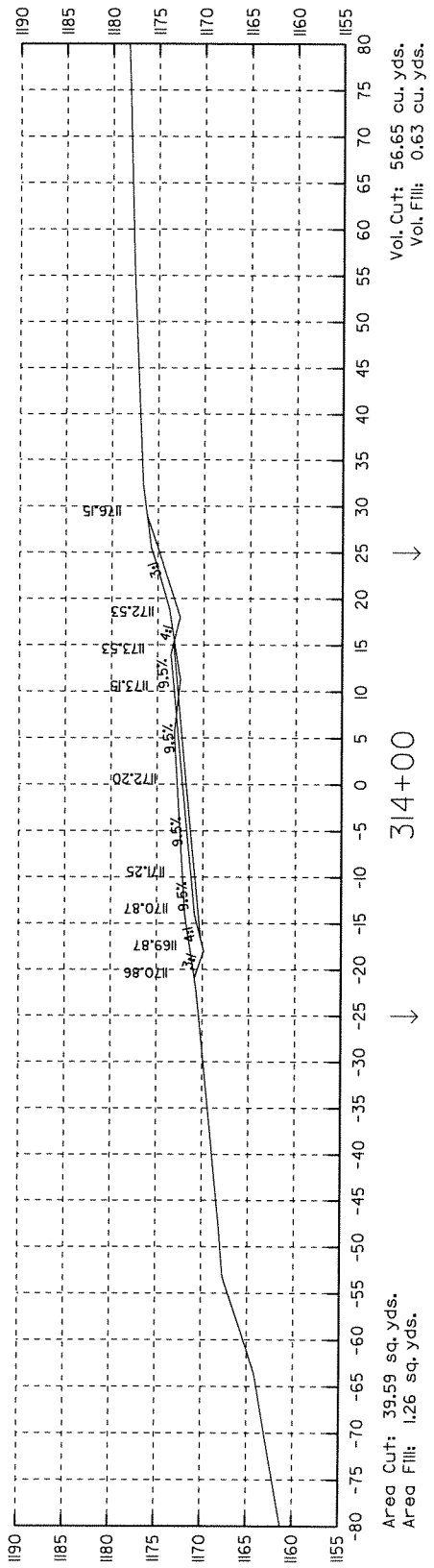
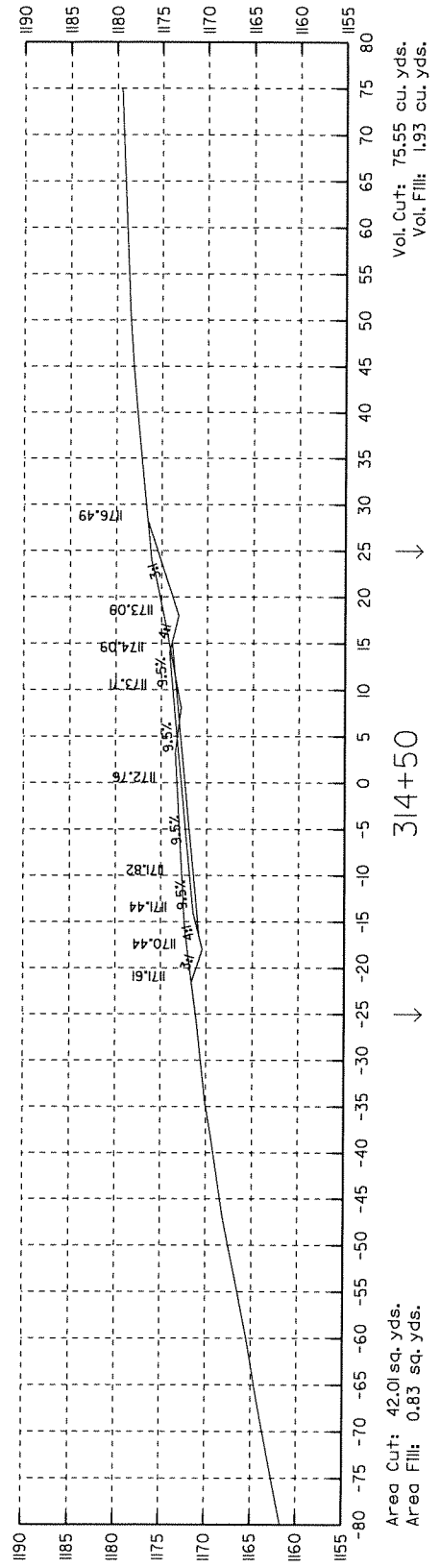
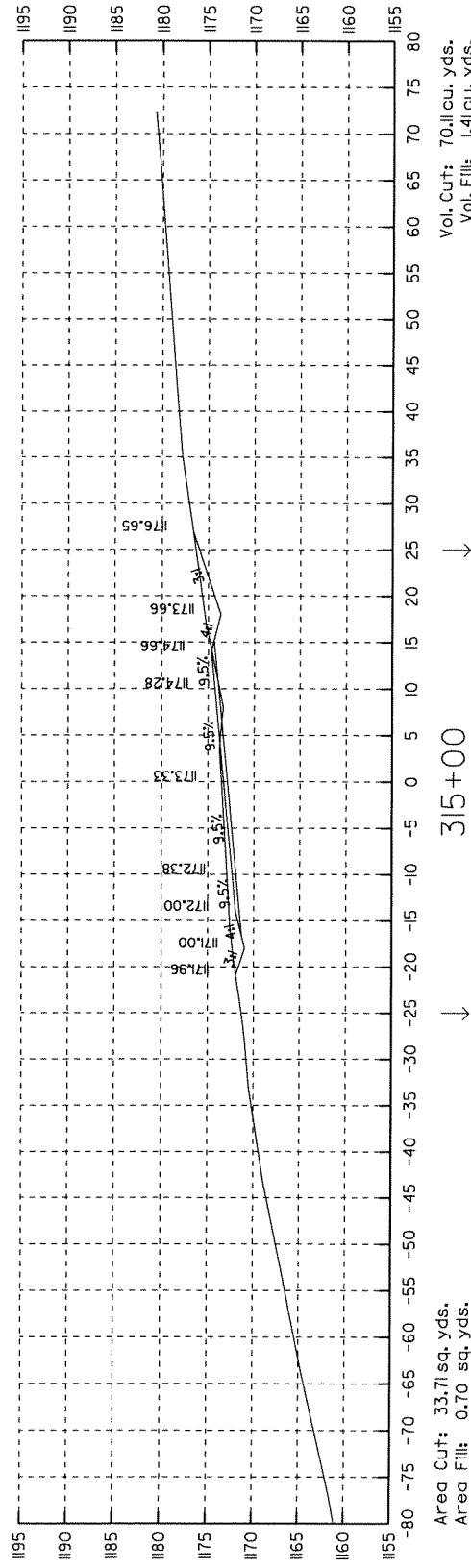
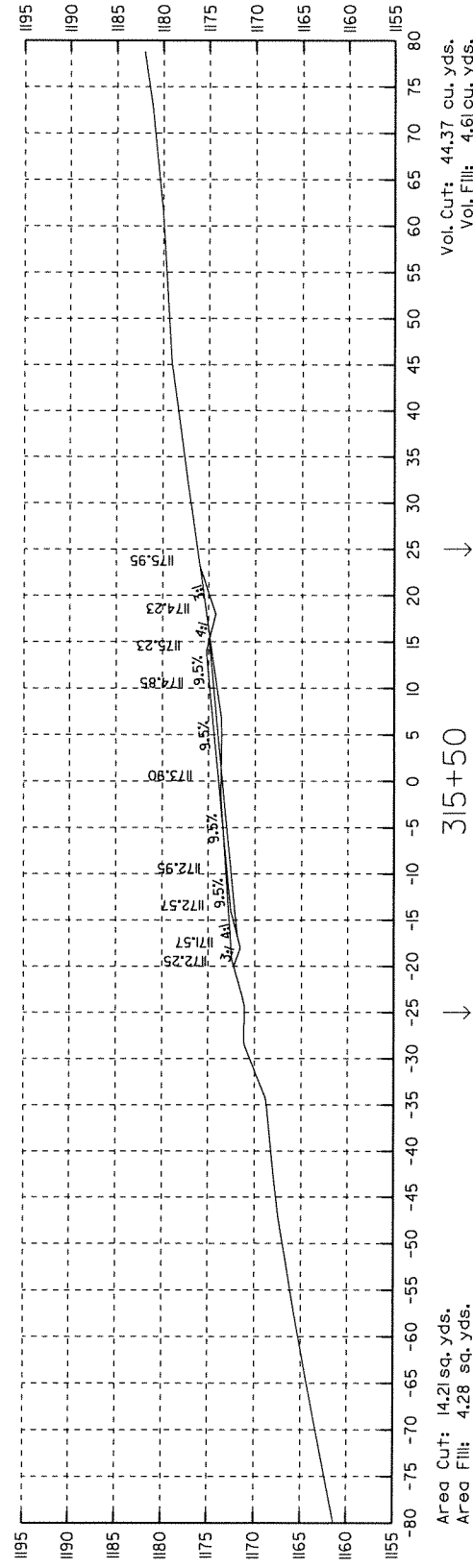
INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.



CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN
D.A. = 0.5 AC. Q25 = 1.8 CFS
24" RCP(CL. III)TYPE 3 BEDDING) = 40 LIN. FT.
24" CMP OR PLASTIC(TYPE 2 BEDDING) = 46 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.		FA4510	93	96

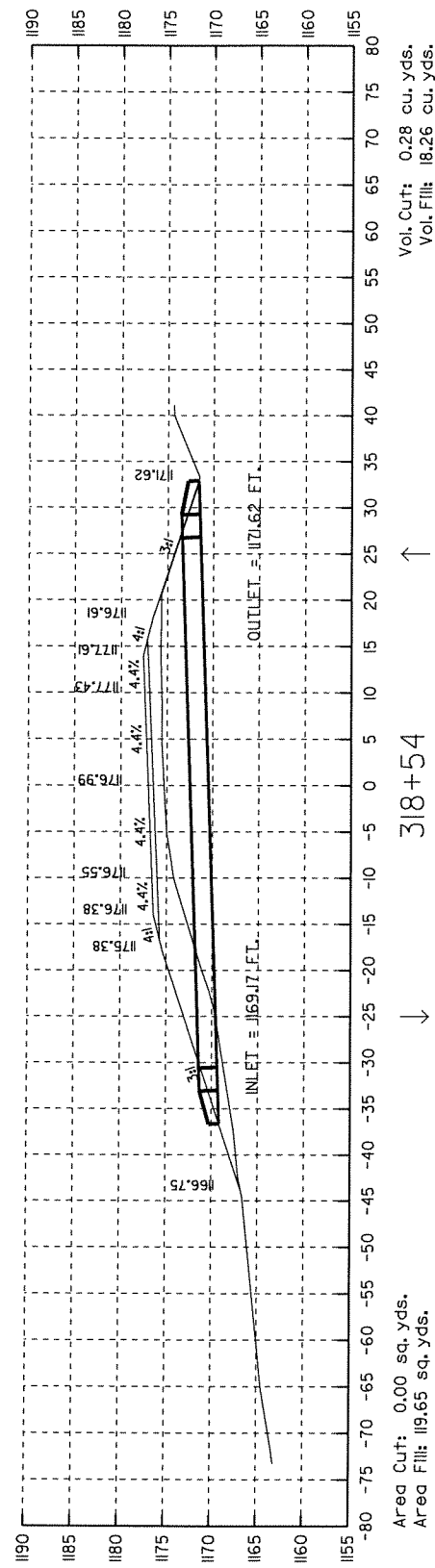
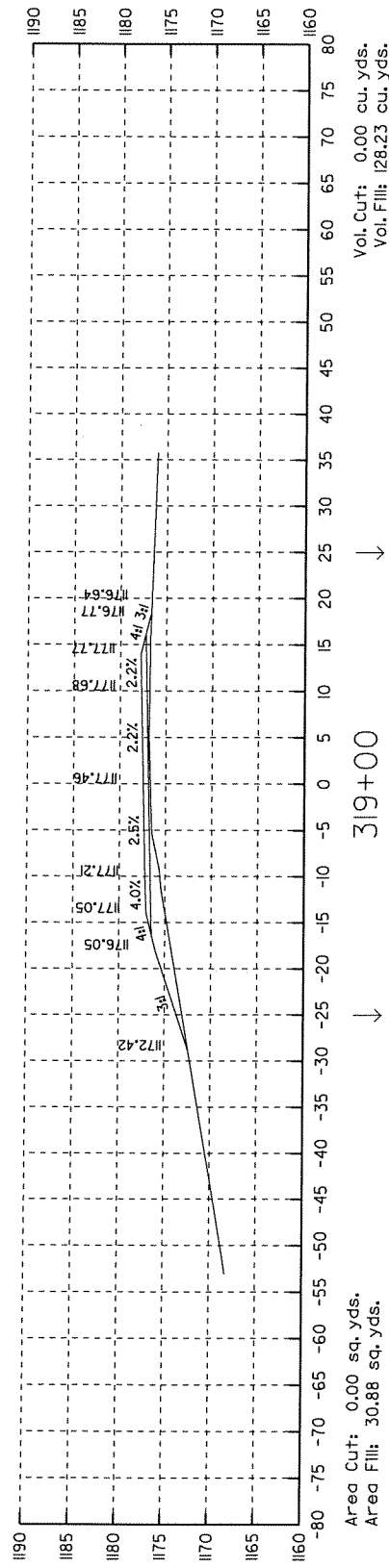
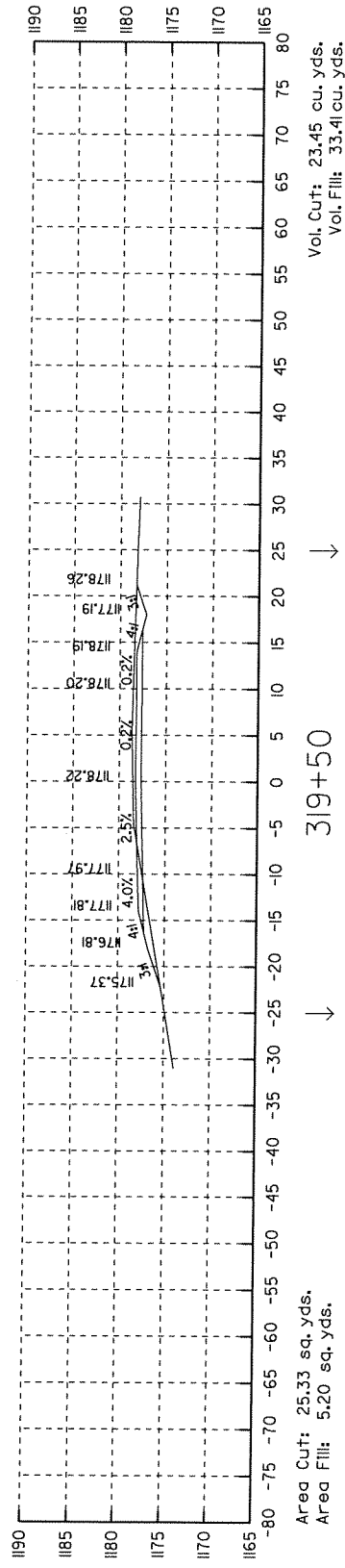
4 STA. 313+73 TO STA. 315+50



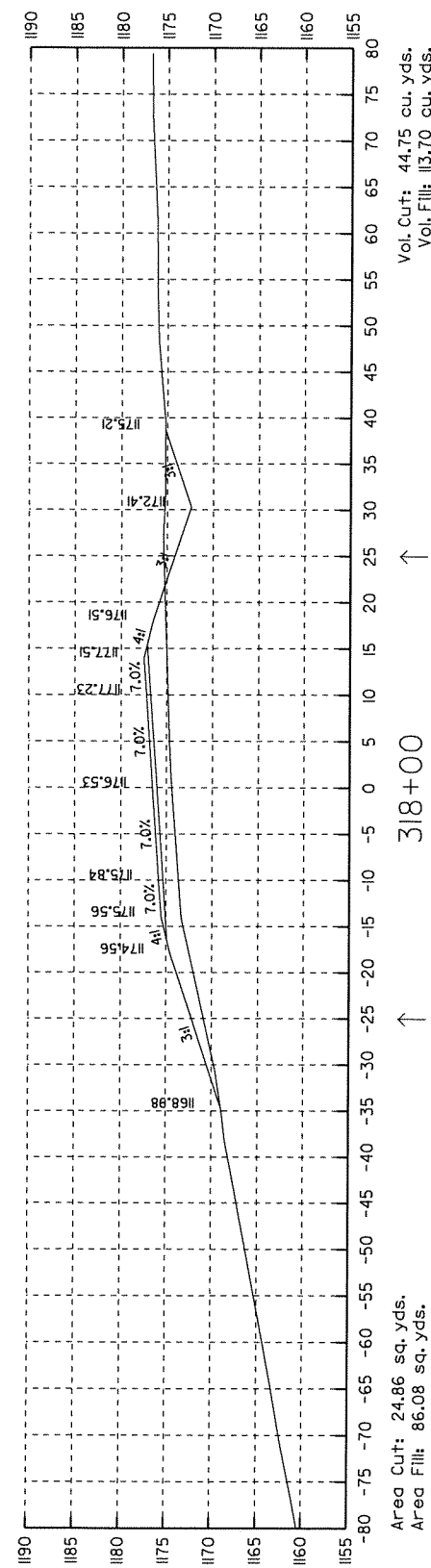
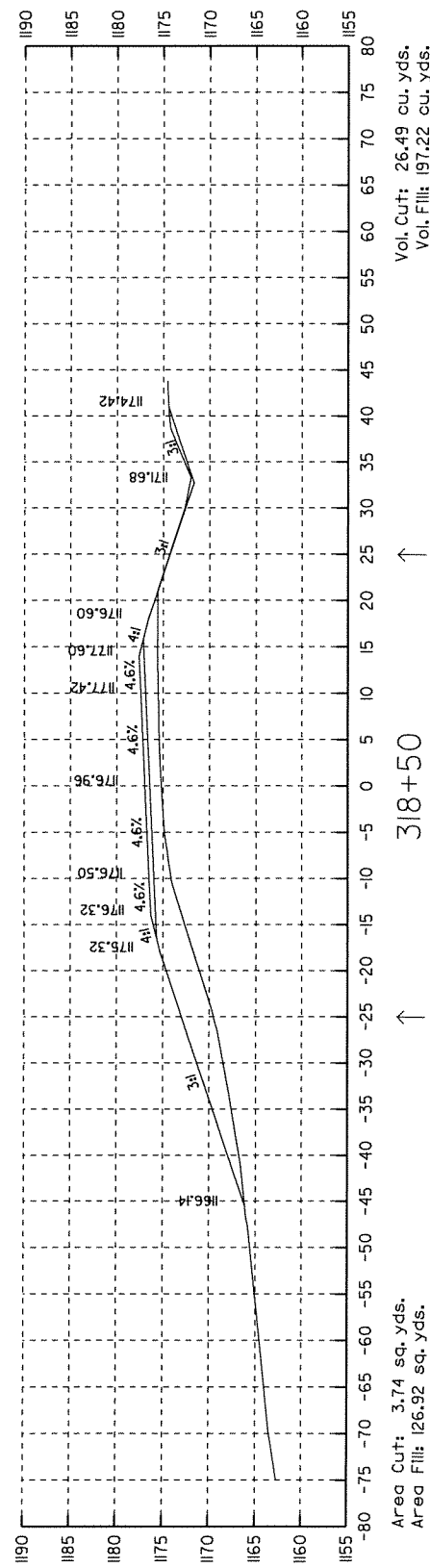
INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 5 CU. YDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.	FA4510	95	96	

4 STA. 318+00 TO STA. 319+50



CONSTRUCT
24" PIPE CULVERT
CROSS DRAIN
D.A. = 0.5 AC. Q25 = 1.8 CFS
24" RCP(CL. III)(TYPE 3 BEDDING) = 58 LIN. FT.
24" CMP OR PLASTIC(TYPE 2 BEDDING) = 63 LIN. FT.
24" FES ON LT. AND RT. = 2 EACH



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	STPR-0045(16)		
				JOB NO.		FA4510	96	96

4 STA. 320+00

END JOB FA4510

