DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
11-16-17				6	ARK.			
				JOB NO.		110540	1	86
				(2)	WHITE RIVER STRS. DEMO. & REMOVAL (CLARENDON) (S)			

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS

WHITE RIVER STRS. DEMO. & REMOVAL (CLARENDON) (S)

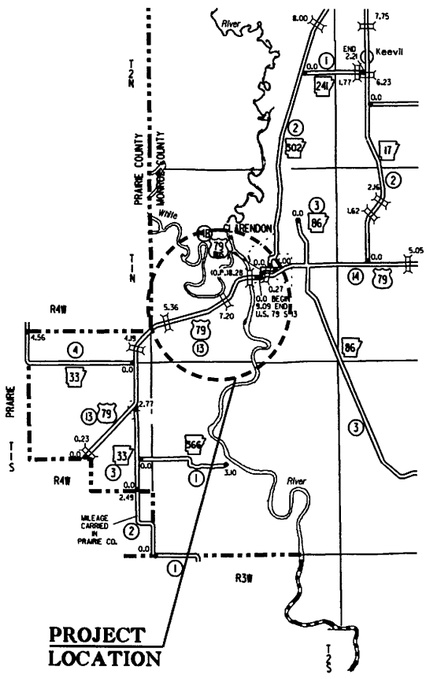
MONROE COUNTY

ROUTE 79 SECTION 13

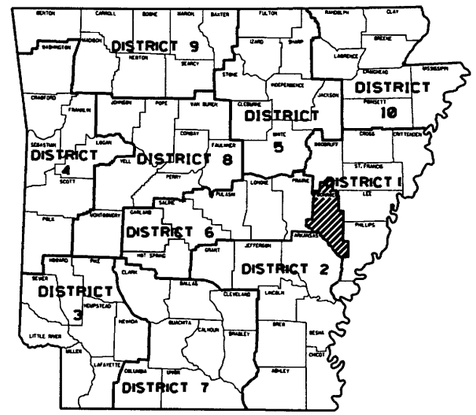
JOB 110540

FEDERAL AID PROJECT NHPP-0048(23)

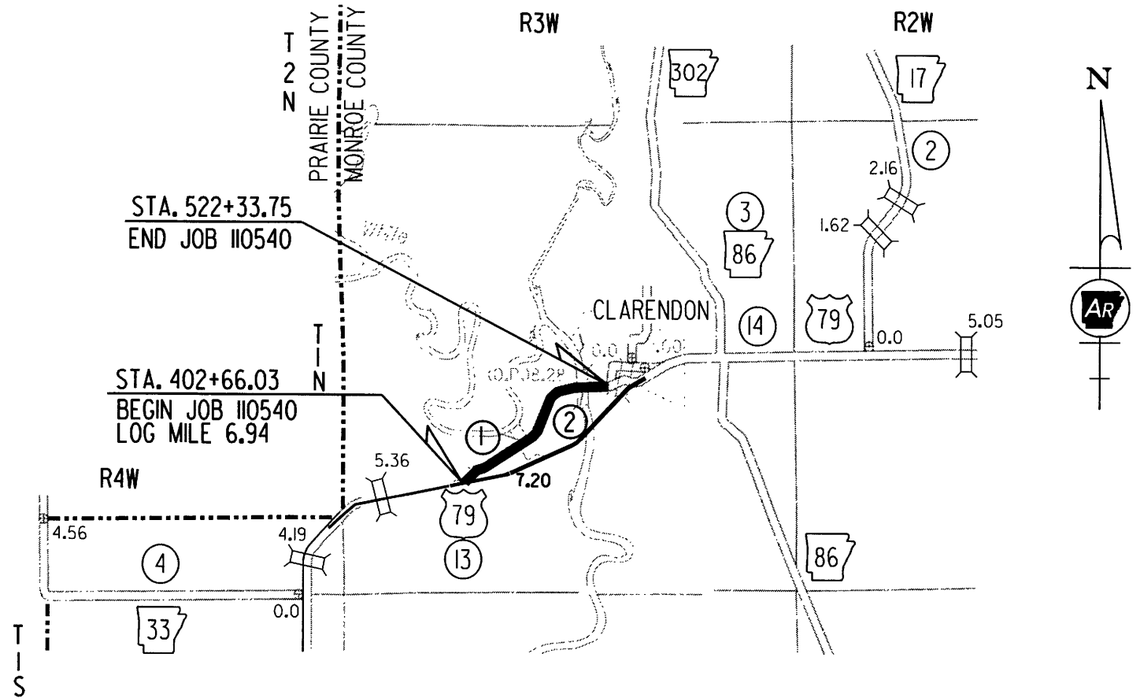
NOT TO SCALE



VICINITY MAP



ARK. HIGHWAY DIST. 1



BRIDGE REMOVAL DATA

(1) OLD RIVER LAKE BRIDGE - BR. NO. 81253
STA. 418+52.77 - STA. 456+03.55
3750'-9¼" TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH 55 STEEL GIRDER SPANS WITH SUBSTRUCTURE
TWO R. C. COLUMNS PER BENT ON FOUNDATION PILING
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 1) = 1.00 LUMP SUM

(2) WHITE RIVER BRIDGE - BR. NO. 01253
STA. 475+67.04 - STA. 518+50.04
4283' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH: 2517' LENGTH STEEL GIRDER APPROACH SPANS;
722' MAIN CONTINUOUS STEEL TRUSS SPAN LENGTH; &
1044' LENGTH R. C. DECK GIRDER APPROACH SPANS
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 2) = 1.00 LUMP SUM

PROJECT COORDINATES

	BEGIN	MID-POINT	END
LAT.	N 34° 40' 22"	N 34° 40' 58"	N 34° 41' 19"
LONG.	W 91° 20' 30"	W 91° 19' 36"	W 91° 18' 37"

LENGTH OF PROJECT CALCULATED ALONG C.L. REMOVAL

GROSS LENGTH OF PROJECT	11967.72	FEET	2.267 MILES
NET LENGTH OF ROADWAY	3933.94	FEET	0.745 MILES
NET LENGTH OF BRIDGES	8033.78	FEET	1.522 MILES
NET LENGTH OF PROJECT	11967.72	FEET	2.267 MILES

P.E. JOB 110123

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
M. E. BANKS

11-17-17
DEPUTY DIRECTOR
AND CHIEF ENGINEER

11/14/2017
R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
6-7-16		6-29-17		12-7-17	
6-9-16		7-6-17			
9-8-16		11-16-17			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		110540	2	86

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. BUGETT
12/7/17

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG.NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES			
3 - 5	TYPICAL SECTIONS OF IMPROVEMENT			
6 - 7	SPECIAL DETAILS			
8 - 16	TEMPORARY EROSION CONTROL DETAILS			
17 - 23	MAINTENANCE OF TRAFFIC			
24 - 25	QUANTITIES			
26	SUMMARY OF QUANTITIES AND REVISIONS			
27 - 32	SURVEY CONTROL DETAILS			
33 - 42	PLAN AND PROFILE SHEETS			
43	PROFILE OF BRIDGE OVER WEST OLD WHITE RIVER	B1253	58317	
44	PROFILE OF BRIDGE OVER WHITE RIVER	01253	58318	
45	DETAILS OF BRIDGE REMOVAL	B1253,01253	58319	
46	MAILBOX DETAILS		MB-1	11-18-04
47	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING		PCC-1	2-27-14
48	METAL PIPE CULVERT FILL HEIGHTS & BEDDING		PCM-1	2-27-14
49	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)		PCP-1	2-27-14
50	PLASTIC PIPE CULVERT (PVC F949)		PCP-2	2-27-14
51	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1	4-13-17
52	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2	9-02-15
53	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	9-02-15
54	TEMPORARY EROSION CONTROL DEVICES		TEC-1	11-16-17
55	TEMPORARY EROSION CONTROL DEVICES		TEC-2	6-02-94
56	TEMPORARY EROSION CONTROL DEVICES		TEC-3	11-03-94
57	CHAIN LINK FENCE		WF-3	11-17-10
58 - 86	CROSS SECTIONS			

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

NOTE: FULL PLANS FOR EXISTING BRIDGES MAY BE HAD UPON REQUEST.

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. 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.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. 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.
7. 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.
8. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 110540	BIDDING REQUIREMENTS AND CONDITIONS
JOB 110540	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 110540	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 110540	CARGO PREFERENCE ACT REQUIREMENTS
JOB 110540	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 110540	DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 110540	DETAILS FOR SAFETY OF RIVER TRAFFIC
JOB 110540	EXCAVATION AND EMBANKMENT (CLAY FILL)
JOB 110540	MANDATORY ELECTRONIC CONTRACT
JOB 110540	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 110540	NESTING SITES OF MIGRATORY BIRDS
JOB 110540	OBLITERATION OF EXISTING ROADWAY
JOB 110540	PARTNERING REQUIREMENTS
JOB 110540	PLASTIC PIPE
JOB 110540	PROTECTION OF WATER QUALITY AND WETLANDS
JOB 110540	REHABILITATION OF USFWS ACCESS ROADS
JOB 110540	REQUIREMENTS OF U.S. COAST GUARD PERMIT
JOB 110540	SECTION 404 INDIVIDUAL PERMIT REQUIREMENTS
JOB 110540	SHORING FOR CULVERTS
JOB 110540	SOIL STABILIZATION
JOB 110540	SPECIAL FACILITIES AT SITE
JOB 110540	SPECIAL SAFETY REQUIREMENTS FOR BRIDGES
JOB 110540	STORM WATER POLLUTION PREVENTION PLAN
JOB 110540	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 110540	TEMPORARY SILT FENCE (WITH BACKING)
JOB 110540	UTILITY ADJUSTMENTS
JOB 110540	VALUE ENGINEERING
JOB 110540	WARM MIX ASPHALT
JOB 110540	WATER POLLUTION CONTROL
JOB 110540	WELLHEAD PROTECTION
JOB 110540	ZEBRA MUSSEL CONTAINMENT

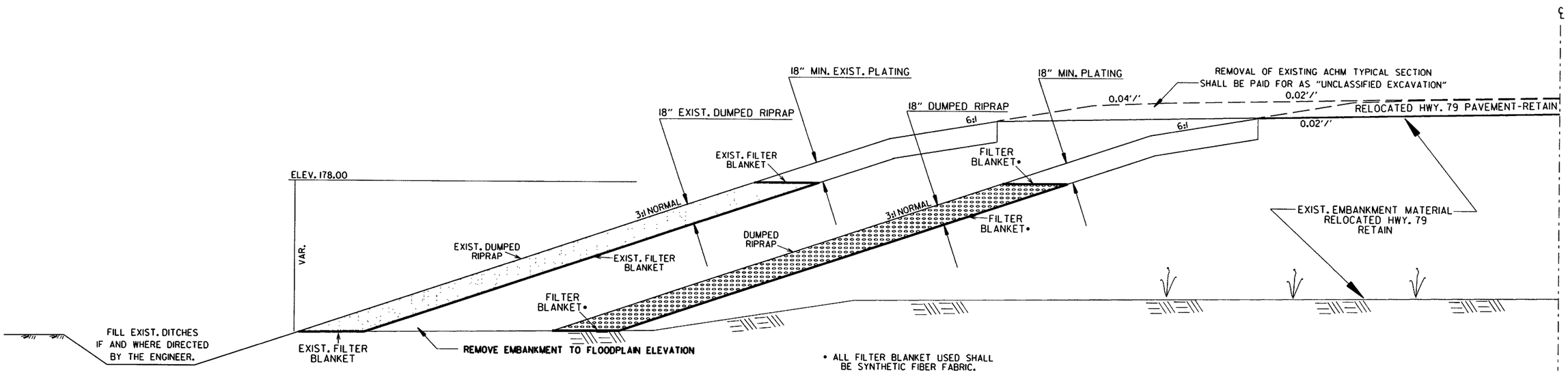
12/7/2017

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	3	86

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11425
TRINITY D. SMITH
5-13-16



SPECIAL DETAIL FOR REMOVAL AND DISPOSAL OF EXISTING ROADWAY EMBANKMENTS

STA. 402+66.03 TO STA. 408+02.57

REFER TO SPECIAL PROVISIONS
AND CROSS SECTIONS
FOR ADDITIONAL INFORMATION.

4/22/2016

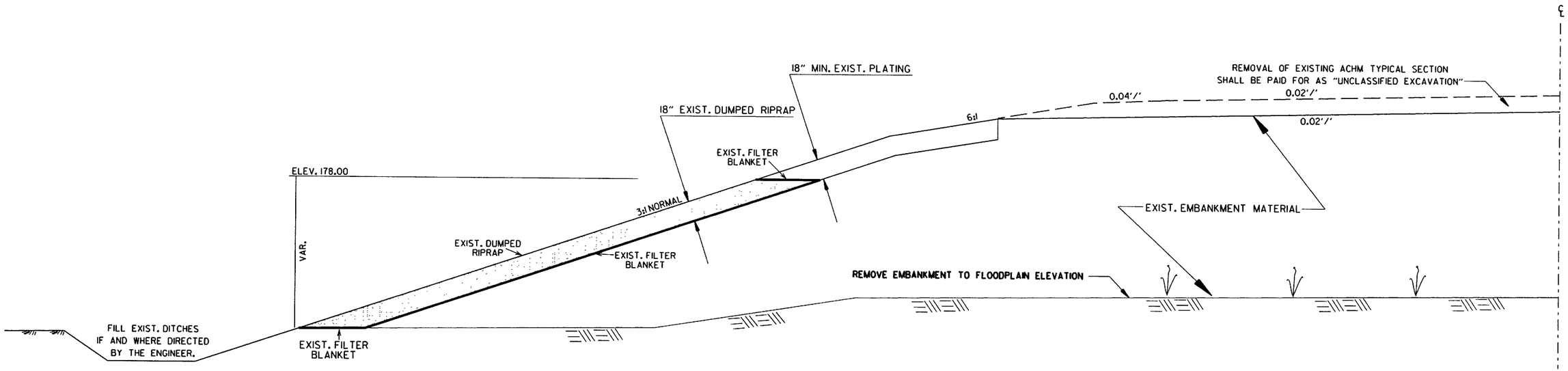
R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	4	86

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

5-13-16



SPECIAL DETAIL FOR REMOVAL AND DISPOSAL OF EXISTING ROADWAY EMBANKMENTS: HALF-SECTION

STA. 408+02.57 TO STA. 418+52.77

REFER TO SPECIAL PROVISIONS AND CROSS SECTIONS FOR ADDITIONAL INFORMATION.

4/22/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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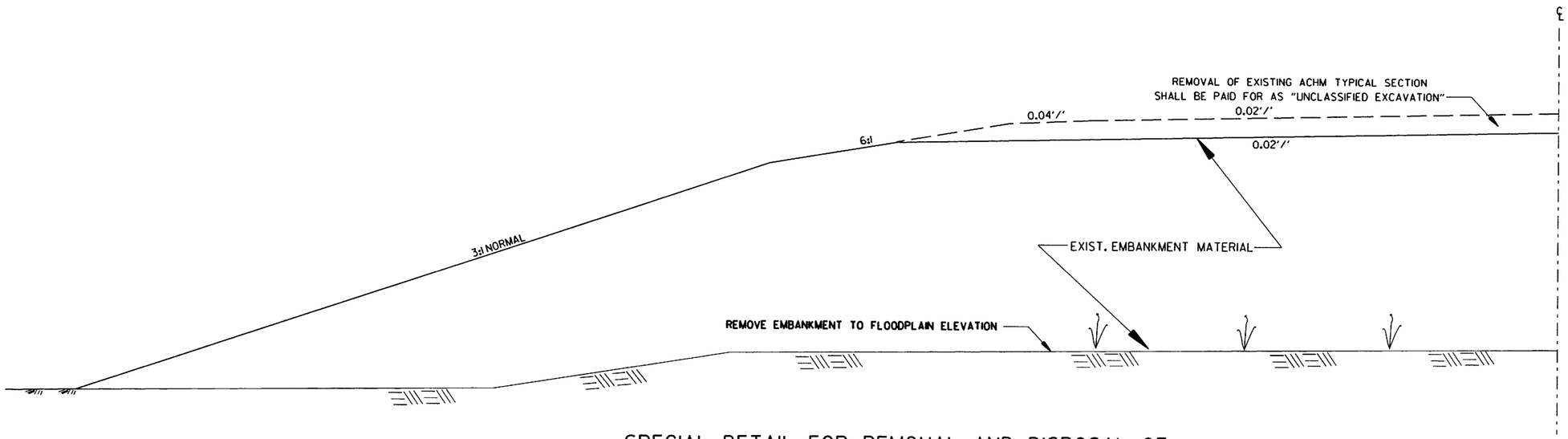
				JOB NO.		110540	5	86

(2) TYPICAL SECTIONS OF IMPROVEMENT

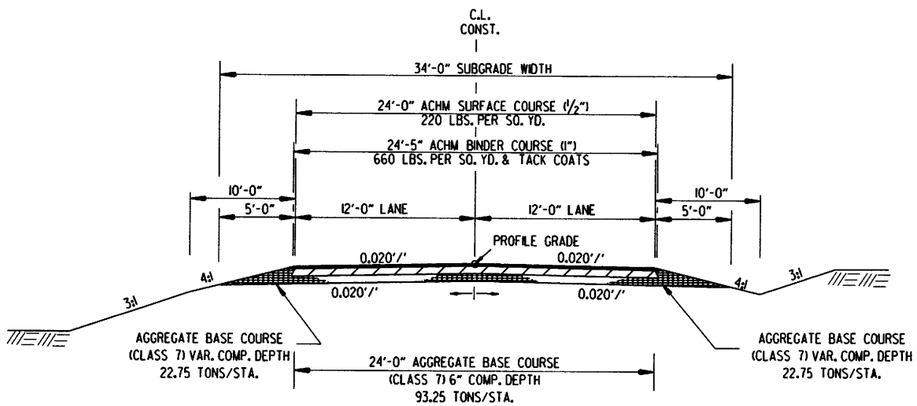
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



SPECIAL DETAIL FOR REMOVAL AND DISPOSAL OF EXISTING ROADWAY EMBANKMENTS: HALF-SECTION

STA. 456+03.55 TO STA. 475+67.04

REFER TO SPECIAL PROVISIONS
AND CROSS SECTIONS
FOR ADDITIONAL INFORMATION.



EWAN ST. - FULL DEPTH

STA. 511+07.00 - STA. 522+33.75

NOTES:

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

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH (1") OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

4/22/2016

R110540.DGN

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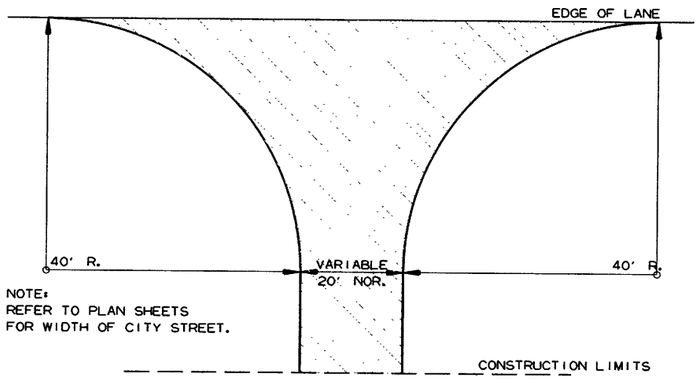
				6	ARK.			
				JOB NO.		110540	6	86

(2) SPECIAL DETAILS

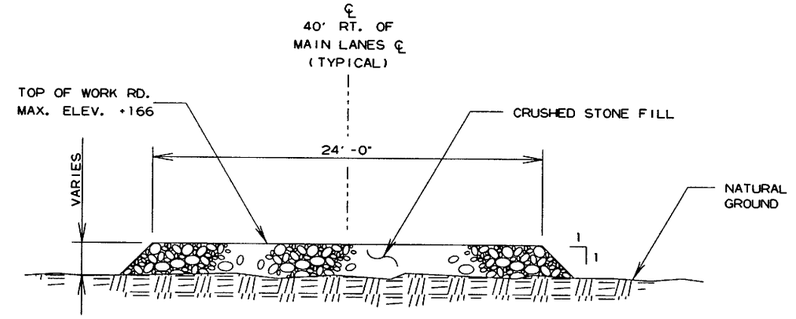
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



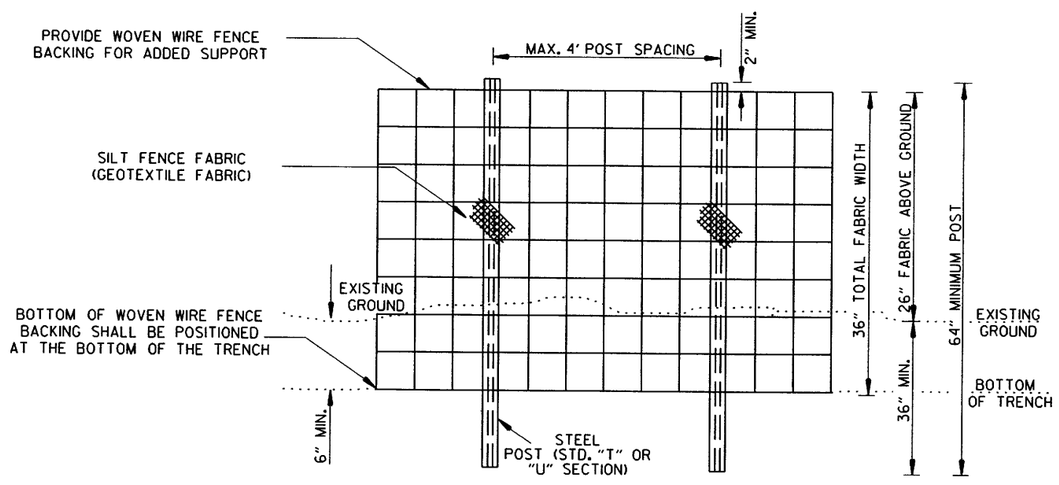
NOTE:
REFER TO PLAN SHEETS FOR WIDTH OF CITY STREET.

PAVEMENT STRUCTURE FOR CITY STREET TO BE SAME AS EWAN STREET.

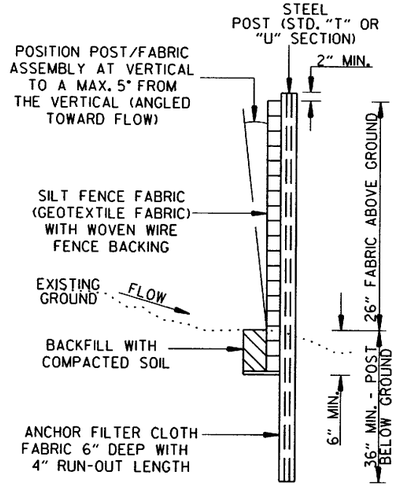
DETAIL FOR CITY STREET TURNOUTS OPEN SHOULDER SECTION



TYP. SECTION WORK ROAD

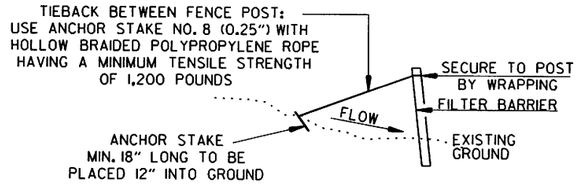


ELEVATION VIEW



SECTIONAL VIEW

NOTE: SILT FENCE TIEBACKS SHALL BE INSTALLED IF AND WHERE DIRECTED BY THE ENGINEER OR WHERE NOTED IN THE PLANS. COST OF TIEBACKS SHALL BE INCLUDED IN THE BID PRICE FOR THE ITEM TEMPORARY SILT FENCE (WITH BACKING).



SILT FENCE TIEBACK

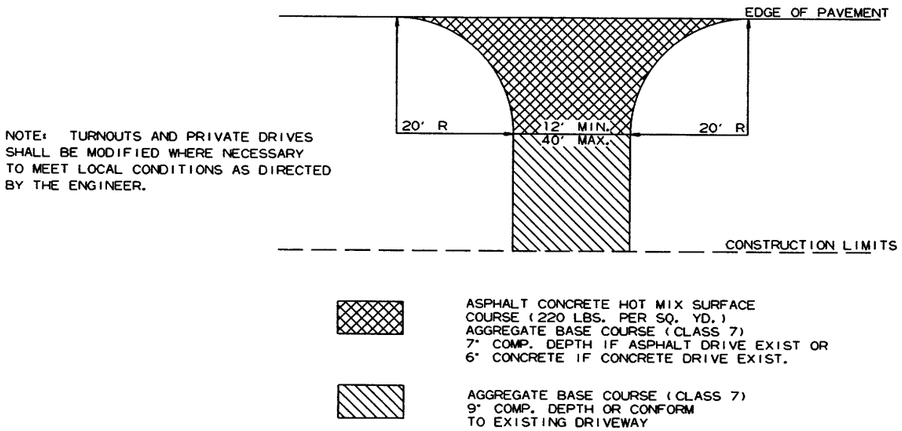
DETAILS FOR TEMPORARY SILT FENCE (WITH BACKING)

12/26/2013

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	7	86

(2) SPECIAL DETAILS

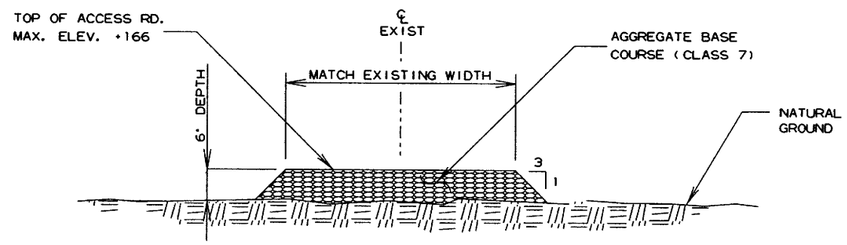


NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

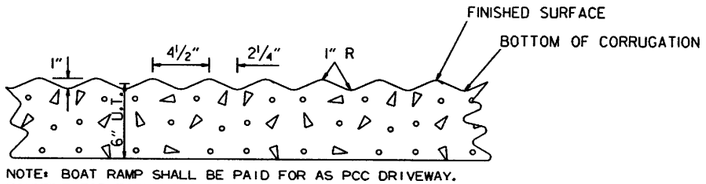
ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6" CONCRETE IF CONCRETE DRIVE EXIST.

AGGREGATE BASE COURSE (CLASS 7)
9" COMP. DEPTH OR CONFORM
TO EXISTING DRIVEWAY

DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

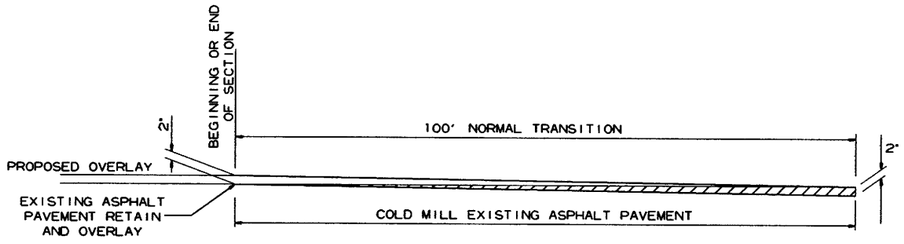


TYP. SECTION
US FISH AND WILDLIFE SERVICE REFUGE ACCESS ROADS



NOTE: BOAT RAMP SHALL BE PAID FOR AS PCC DRIVEWAY. PAYMENT FOR FORMING CORRUGATIONS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE DRIVEWAY.

DETAIL OF CORRUGATIONS FOR BOAT RAMP



DETAIL FOR TRANSITIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

12/26/2013

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	8	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

STA. 402+66 - STA. 420+66 LT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 1840 LIN. FT.

POB 400+00.000

N 78°40'07" E

P.C. 402+66.03
BEGIN EXIST. HWY. 79 CONNECTOR EMBANKMENT REMOVAL

STA. 402+66.03
BEGIN JOB 110540

TEMPORARY SILT FENCE (WITH BACKING)

CONST. LIMITS

405

410

P.I. 410+10.10

N 30°17'16" E C.L. REMOVAL

P.C. 411+44.82

TEMPORARY SILT FENCE (WITH BACKING)

P.I. 413+72.24

TEMPORARY SILT FENCE (WITH BACKING)

415

N 59°13'17" E

P.T. 415+89.95

CONST.

TEMPORARY EROSION CONTROL GENERAL NOTES:

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

2) REFER TO SEC. 110 OF STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONST. LIMITS

P.I. 406+62.00

REVISIONS

DATE OF REVISION	REVISION

STA. 412+00 - STA. 414+51 RT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 210 LIN. FT.

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

TEMPORARY SILT FENCE (WITH BACKING)

CONST. LIMITS

415

STA. 418+52.77
END EXIST. HWY. 79 CONNECTOR EMBANKMENT REMOVAL & BEGIN BRIDGE REMOVAL OF OLD RIVER LAKE BRIDGE

420

STA. 420+80 - STA. 440+08 LT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 1813 LIN. FT.

425

430

TEMPORARY SILT FENCE (WITH BACKING)

N 59°13'17" E

C.L. REMOVAL N 59°28'45" E

N 59°28'45" E

WORK ROAD

P.T. 415+89.95

CONST. LIMITS

.74

P.I. 418+57.34
Δ = 0°15'28" RT

TEMPORARY SILT FENCE (WITH BACKING)

STORAGE AREA

TEMPORARY SILT FENCE (WITH BACKING)

STORAGE AREA

TEMPORARY SILT FENCE (WITH BACKING)

P.I. 430+19.14
Δ = 0°16'20" RT

.88 .03

.51

STA. 417+74 - STA. 420+88 RT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 315 LIN. FT.

STA. 421+03 - STA. 439+58 RT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 2080 LIN. FT.

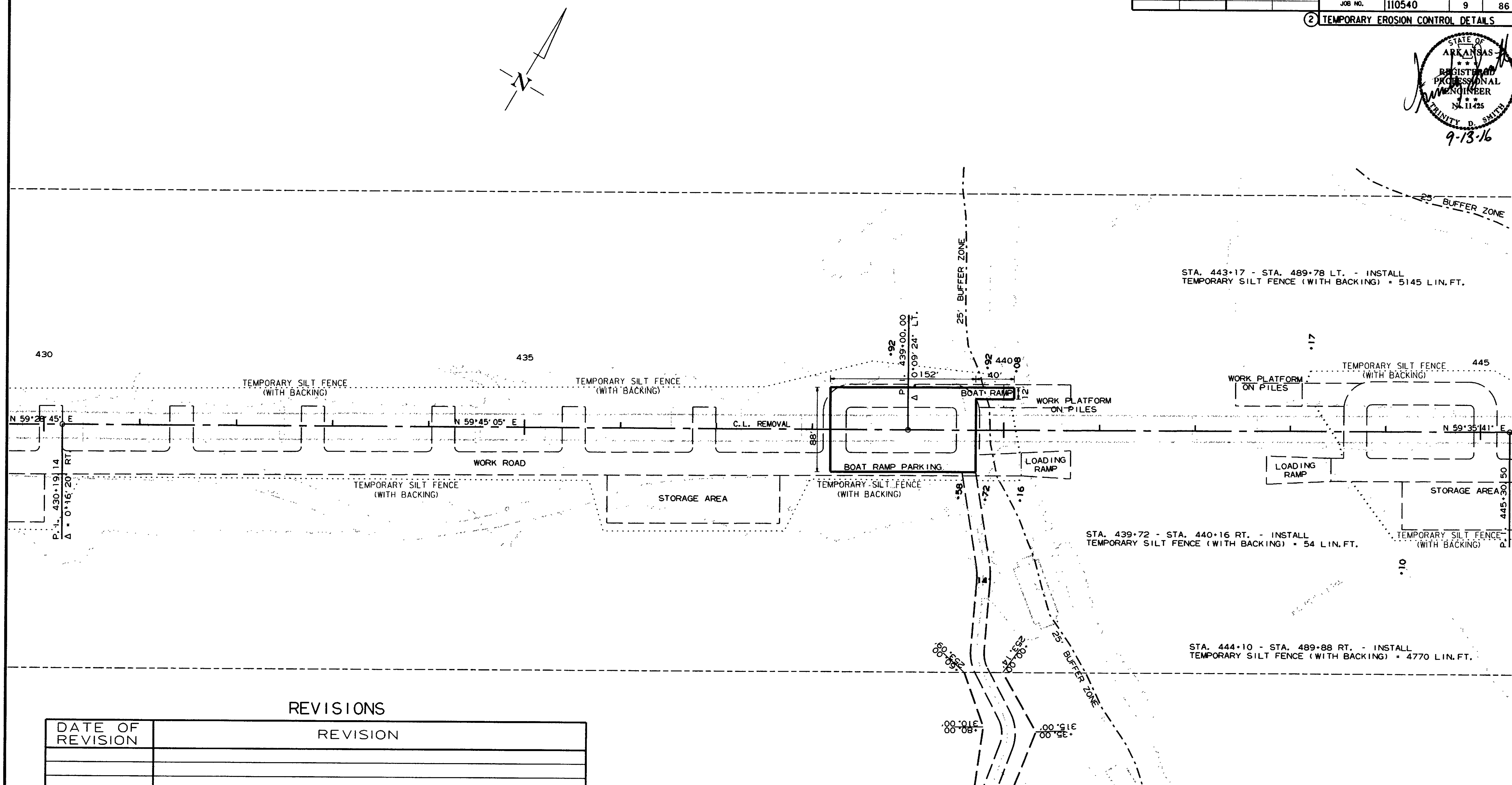
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

2/12/2015

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
9-8-16				6	ARK.			
				JOB NO.		110540	9	86

(2) TEMPORARY EROSION CONTROL DETAILS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-13-16
N
25' BUFFER ZONE
STA. 443+17 - STA. 489+78 LT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 5145 LIN.FT.
430
435
445
TEMPORARY SILT FENCE
(WITH BACKING)
N 59°28'45" E
N 59°45'05" E
N 59°35'41" E
C.L. REMOVAL
WORK ROAD
P.I. 430+19.14
Δ = 0°16'20" RT
P.I. 439+00.00
Δ = 0°09'24" LT.
BOAT RAMP
BOAT RAMP PARKING
STORAGE AREA
WORK PLATFORM ON PILES
LOADING RAMP
P.I. 445+30.50
Δ = 1°02'37" RT
STA. 439+72 - STA. 440+16 RT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 54 LIN.FT.
STA. 444+10 - STA. 489+88 RT. - INSTALL
TEMPORARY SILT FENCE (WITH BACKING) = 4770 LIN.FT.

REVISIONS

DATE OF REVISION	REVISION

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

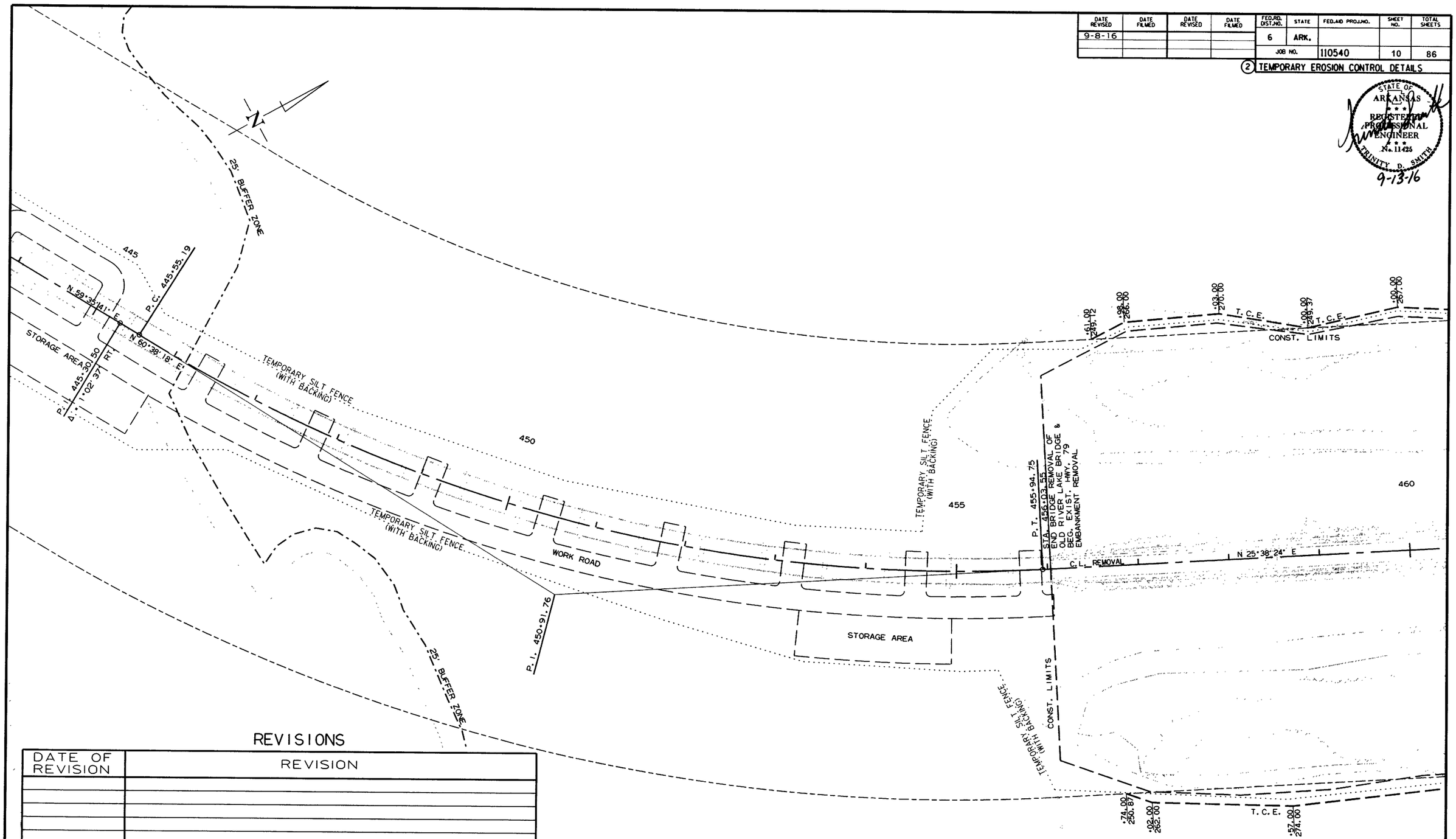
9/8/2016
R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
9-8-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		110540	10	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-13-16



REVISIONS

DATE OF REVISION	REVISION

9/8/2016

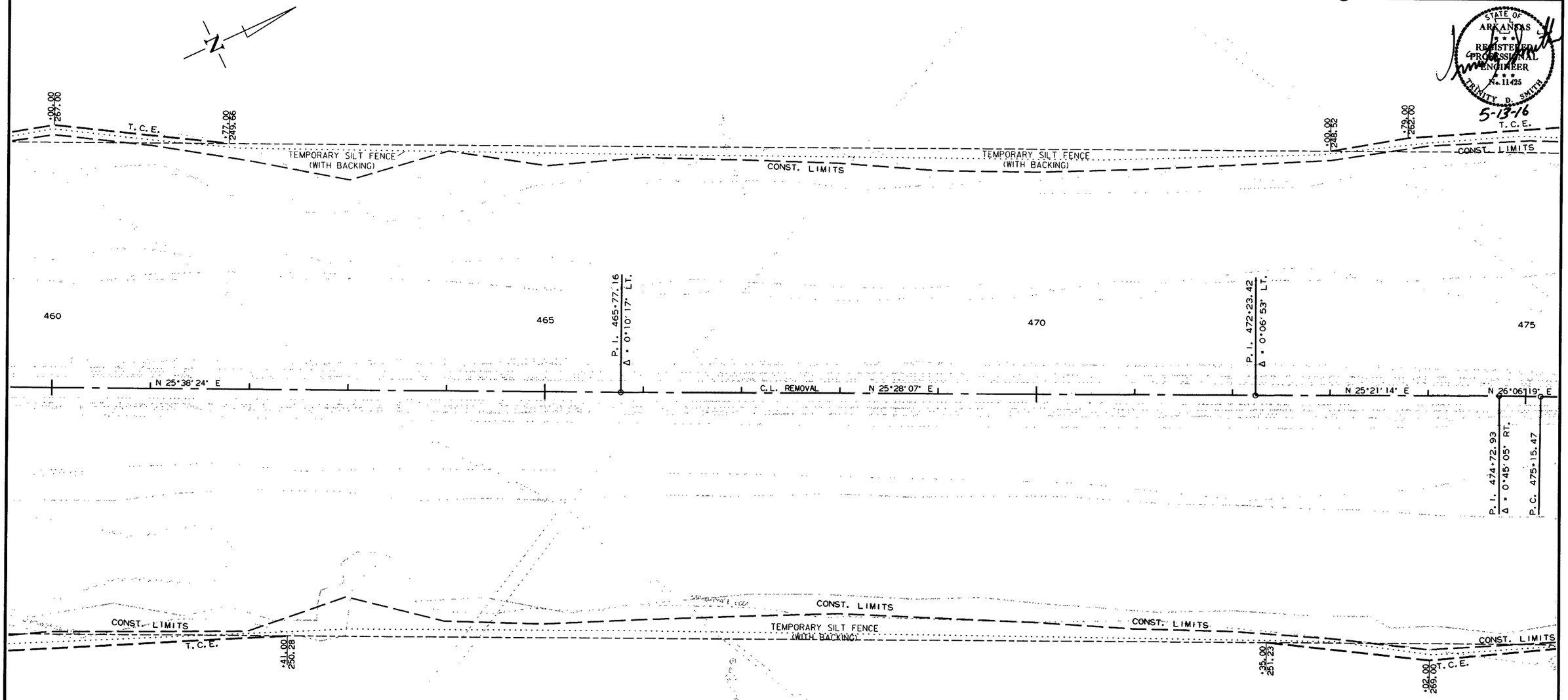
R110540.DGN

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	11	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



REVISIONS

DATE OF REVISION	REVISION

4/22/2016

R110540.DGN

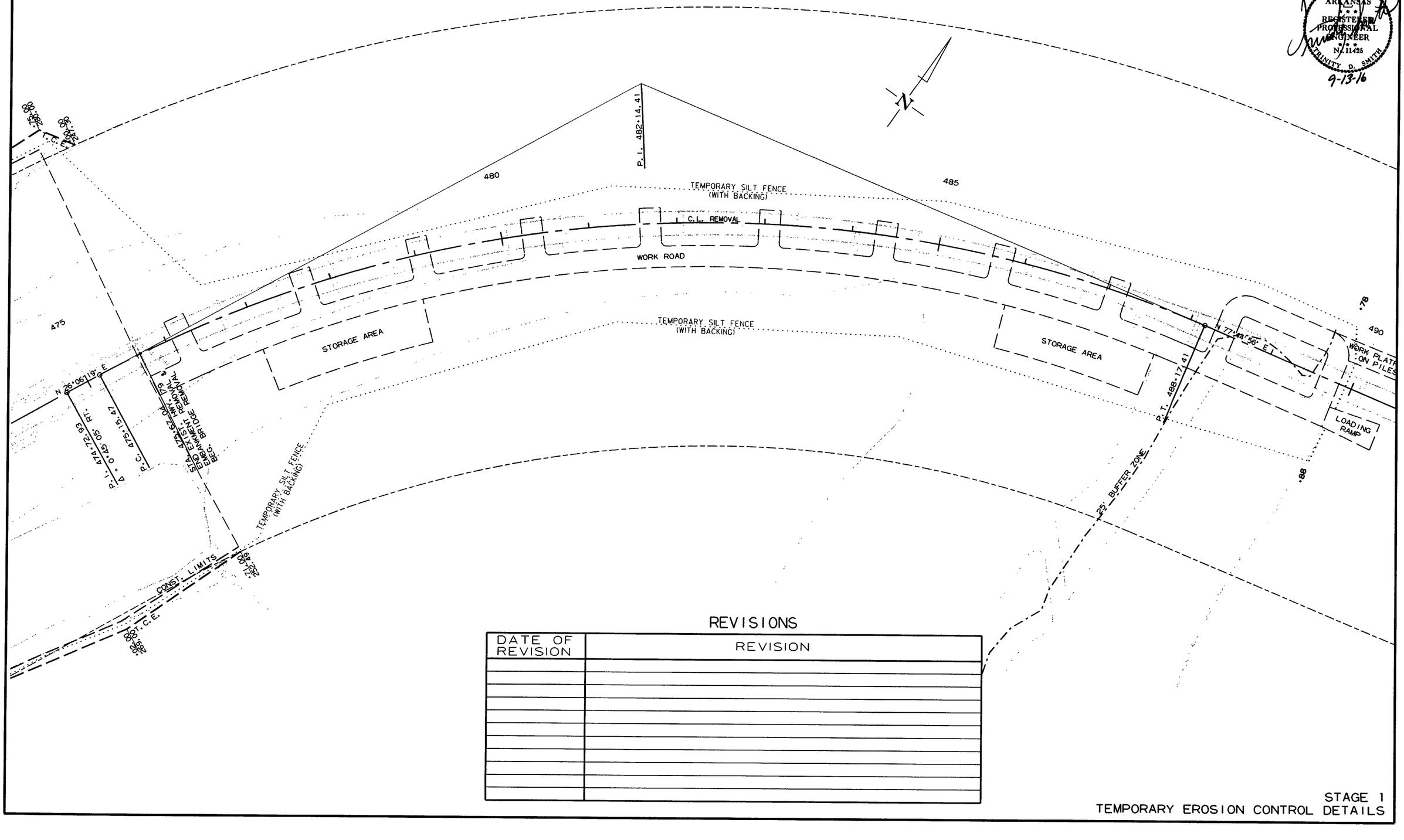
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
9-8-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		110540	12	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-13-16



REVISIONS

DATE OF REVISION	REVISION

9/8/2016

R110540.DGN

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
9-8-16				JOB NO.		110540	13	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-13-16

STA. 493+64 - STA. 500+95 LT. - INSTALL TEMPORARY SILT FENCE (WITH BACKING) = 895 LIN. FT.

STA. 493+12 - STA. 500+99 RT. - INSTALL TEMPORARY SILT FENCE (WITH BACKING) = 881 LIN. FT.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-11 ···· E-11 SILT FENCE

STA. 506+57 - STA. 506+73 LT. INSTALL E-11 = 46 LIN. FT.

STA. 506+88 - STA. 508+32 LT. INSTALL E-11 = 143 LIN. FT.

STA. 506+57 - STA. 506+75 RT. INSTALL E-11 = 46 LIN. FT.

STA. 506+90 - STA. 508+50 RT. INSTALL E-11 = 160 LIN. FT.

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

9/8/2016

R110540.DGN

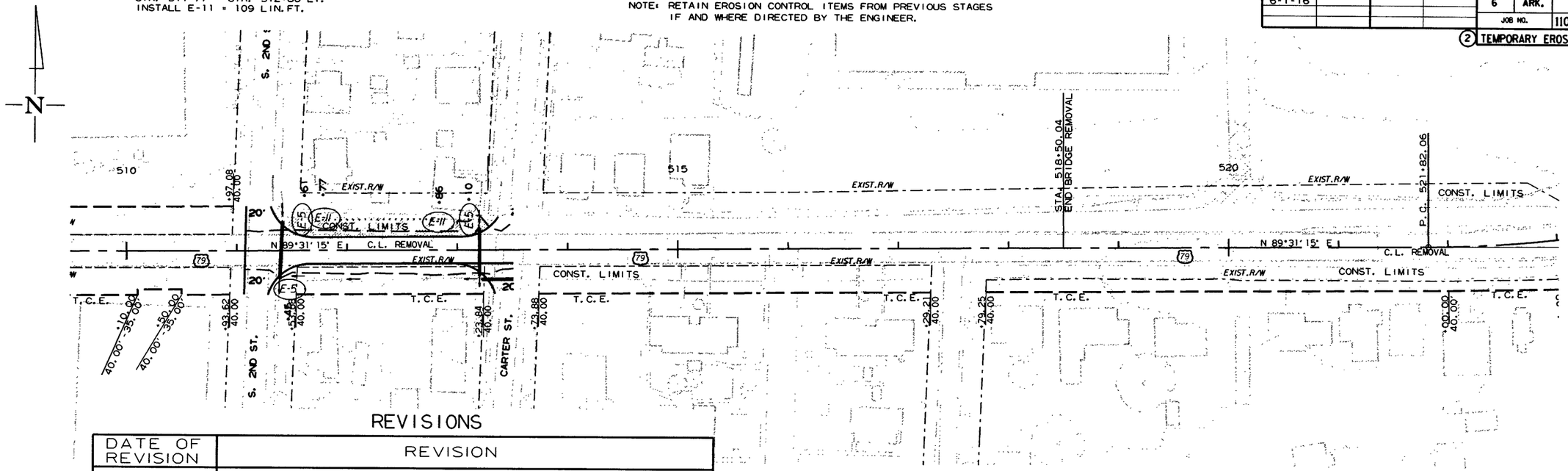
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	14	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TERRINITY D. SMITH
6-2-16

STA. 511+77 - STA. 512+86 LT.
INSTALL E-11 = 109 LIN. FT.

NOTE: RETAIN EROSION CONTROL ITEMS FROM PREVIOUS STAGES IF AND WHERE DIRECTED BY THE ENGINEER.



REVISIONS

DATE OF REVISION	REVISION

LEGEND

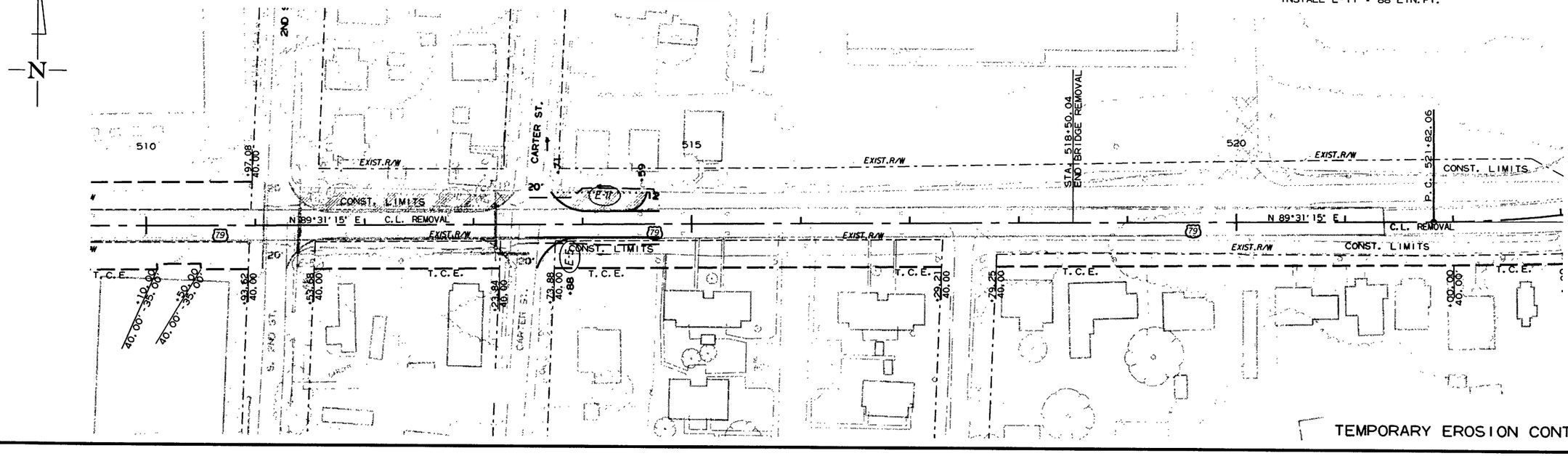
E-5 SAND BAG DITCH CHECKS

E-11 SILT FENCE

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

NOTE: RETAIN EROSION CONTROL ITEMS FROM PREVIOUS STAGES IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 513+71 - STA. 514+59 LT.
INSTALL E-11 = 88 LIN. FT.



STAGE 3
TEMPORARY EROSION CONTROL DETAILS

6/1/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	15	86

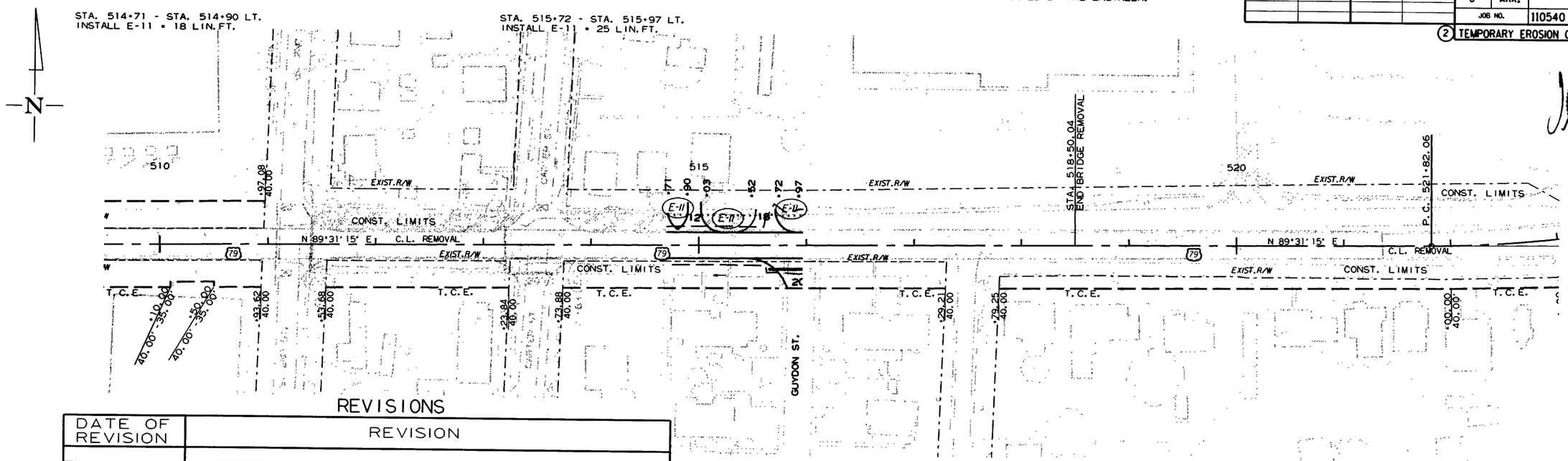
(2) TEMPORARY EROSION CONTROL DETAILS

STA. 515+03 - STA. 515+52 LT.
INSTALL E-11 = 50 LIN. FT.

NOTE: RETAIN EROSION CONTROL ITEMS FROM PREVIOUS STAGES IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 514+71 - STA. 514+90 LT.
INSTALL E-11 = 18 LIN. FT.

STA. 515+72 - STA. 515+97 LT.
INSTALL E-11 = 25 LIN. FT.



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16

STAGE 4
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

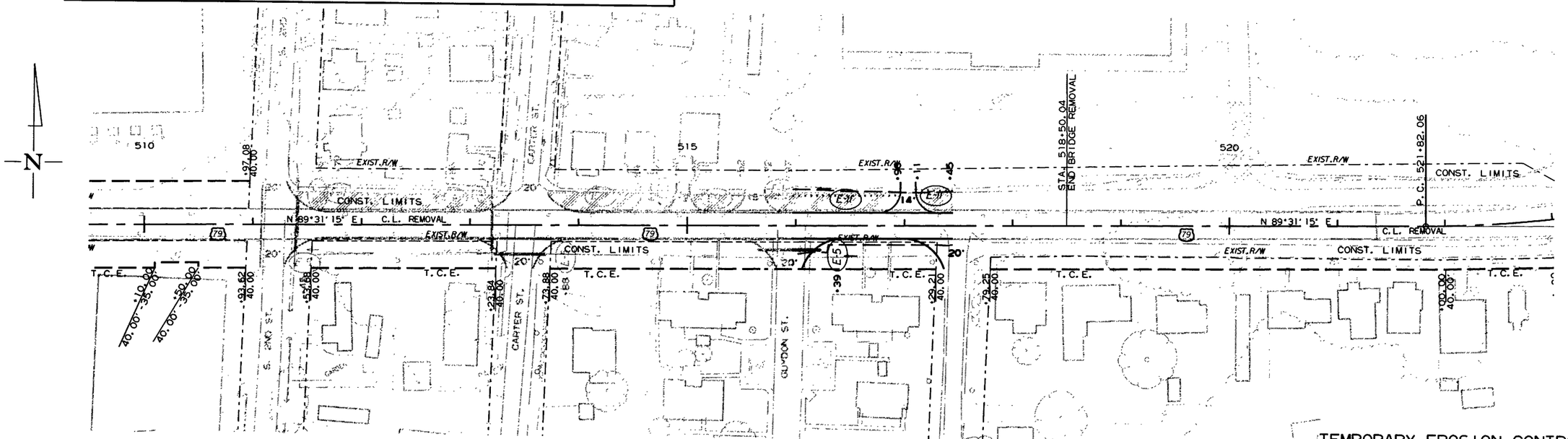
E-5 SAND BAG DITCH CHECKS

E-11 ..... E-11 SILT FENCE

STA. 515+97 - STA. 516+96 LT.
INSTALL E-11 = 99 LIN. FT.

STA. 517+11 - STA. 517+45 LT.
INSTALL E-11 = 34 LIN. FT.

NOTE: RETAIN EROSION CONTROL ITEMS FROM PREVIOUS STAGES IF AND WHERE DIRECTED BY THE ENGINEER.



STAGE 5
TEMPORARY EROSION CONTROL DETAILS

6/1/2016

R110540.DGN

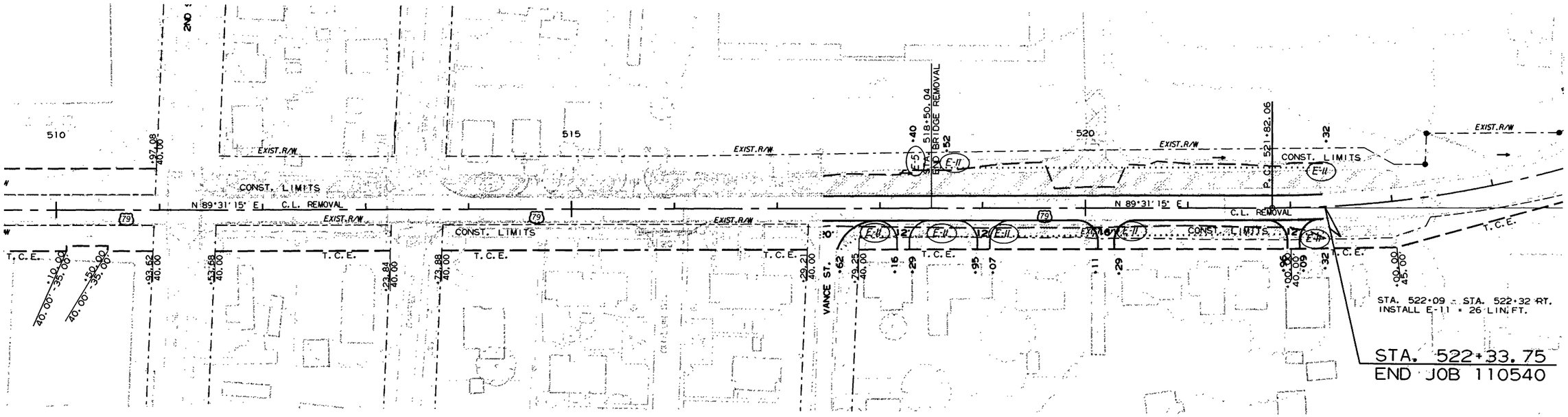
NOTE: RETAIN EROSION CONTROL ITEMS FROM PREVIOUS STAGES IF AND WHERE DIRECTED BY THE ENGINEER.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	16	86

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16

STA. 518+52 - STA. 522+32 LT.
INSTALL E-11 = 379 LIN. FT.



STA. 522+09 - STA. 522+32 RT.
INSTALL E-11 = 26 LIN. FT.

STA. 522+33.75
END JOB 110540

STA. 517+62 - STA. 518+16 RT.
INSTALL E-11 = 58 LIN. FT.

STA. 518+29 - STA. 518+95 RT.
INSTALL E-11 = 65 LIN. FT.

STA. 519+07 - STA. 520+11 RT.
INSTALL E-11 = 104 LIN. FT.

STA. 520+29 - STA. 521+96 RT.
INSTALL E-11 = 167 LIN. FT.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-5 SAND BAG DITCH CHECKS

E-11 ..... E-11 SILT FENCE

6/1/2016

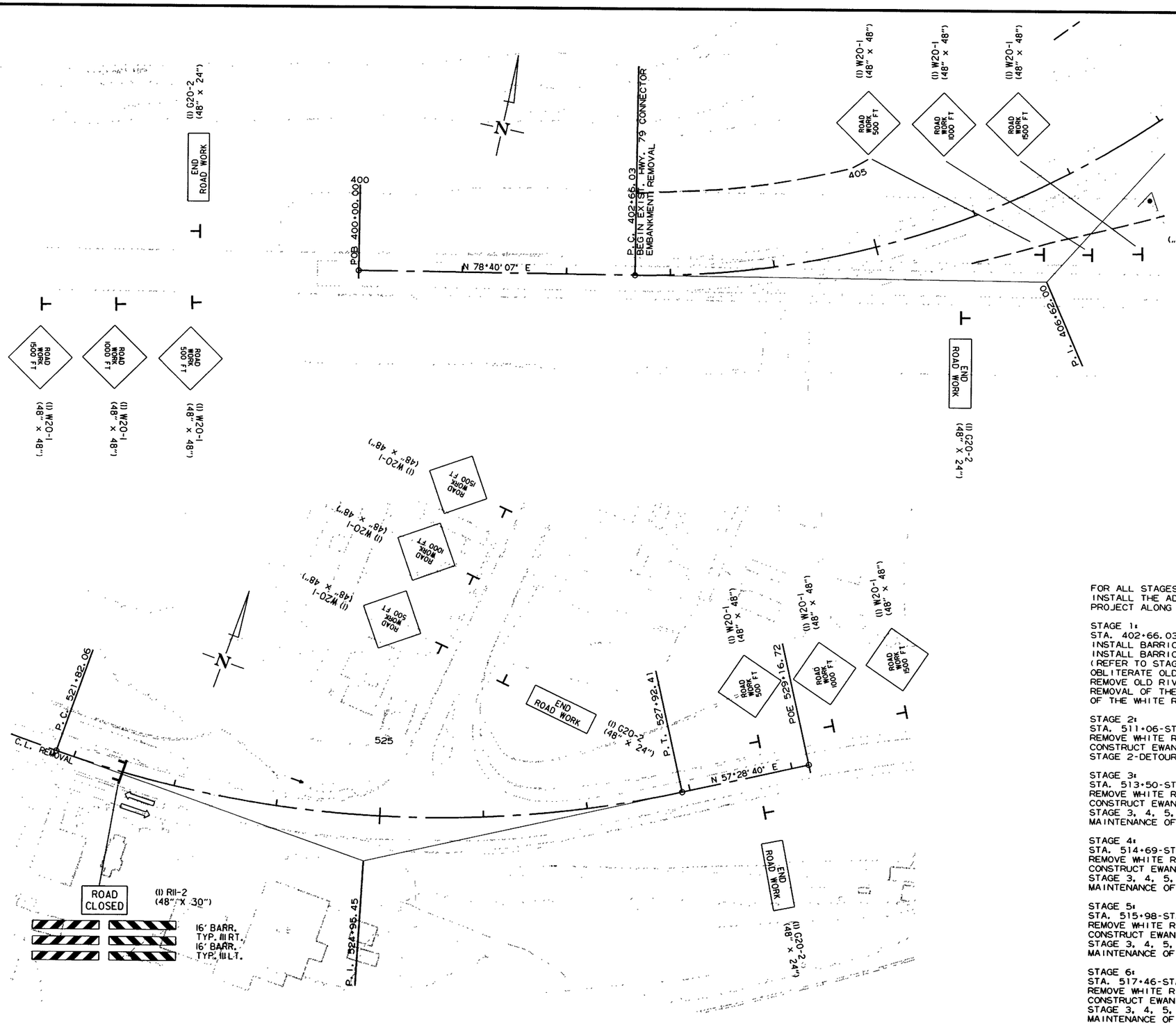
R110540.DGN

STAGE 6
TEMPORARY EROSION CONTROL DETAILS

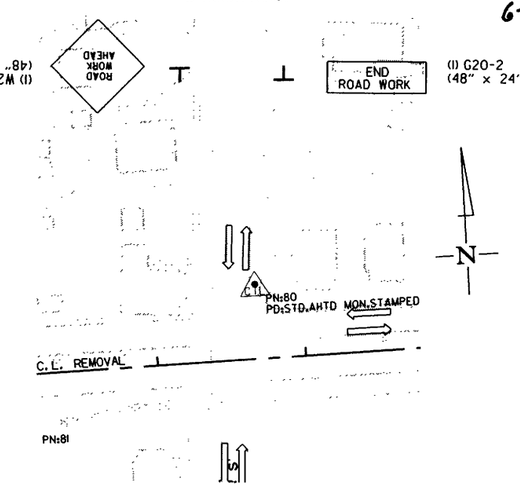
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	17	86

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16



TO BE PLACED ON ALL CITY STREETS
(8 LOCATIONS)



FOR ALL STAGES:
INSTALL THE ADVANCE WARNING SIGNS AT THE BEGINNING AND END OF THE PROJECT ALONG WITH SIGNS INDICATED FOR SIDE STREETS AND HWYS.

STAGE 1:
STA. 402+66.03-STA. 511+06
INSTALL BARRICADES WITH SIGNS TO CLOSE OLD HWY. 79.
INSTALL BARRICADES WITH SIGNS TO CLOSE RIVER ROAD.
(REFER TO STAGE 1 DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.)
OBLITERATE OLD HWY. 79 AND HWY. 79 CONNECTOR.
REMOVE OLD RIVER LAKE BRIDGE AND WHITE RIVER BRIDGE.
REMOVAL OF THE OLD RIVER LAKE BRIDGE AND A PORTION (STA. 475+67-501+25) OF THE WHITE RIVER BRIDGE SHALL BE A PRIORITY.

STAGE 2:
STA. 511+06-STA. 513+50
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 2-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 3:
STA. 513+50-STA. 514+69
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 4:
STA. 514+69-STA. 515+98
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 5:
STA. 515+98-STA. 517+46
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 6:
STA. 517+46-STA. 522+33.75
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

6/1/2016

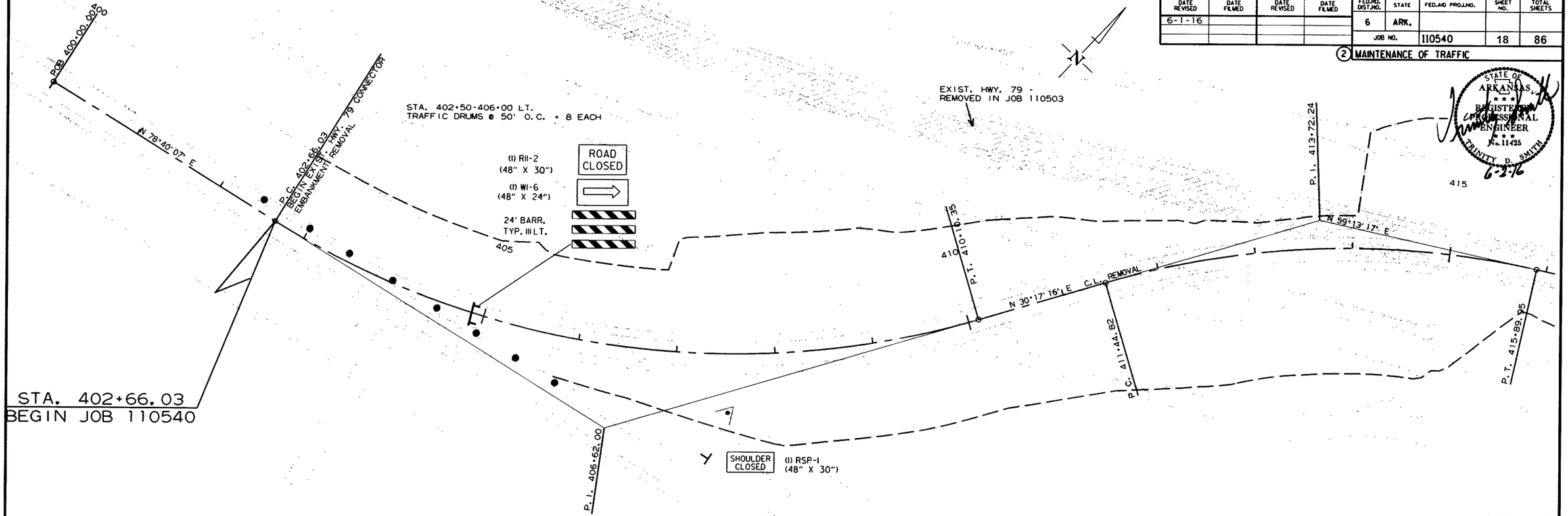
R110540.DGN

ALL STAGES
MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	18	86

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16



STAGE 1
MAINTENANCE OF TRAFFIC

FOR ALL STAGES:
INSTALL THE ADVANCE WARNING SIGNS AT THE BEGINNING AND END OF THE PROJECT ALONG WITH SIGNS INDICATED FOR SIDE STREETS AND HWYS.

STAGE 1:
STA. 402+66.03-STA. 511+06
INSTALL BARRICADES WITH SIGNS TO CLOSE OLD HWY. 79.
INSTALL BARRICADES WITH SIGNS TO CLOSE RIVER ROAD.
(REFER TO STAGE 1 DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.)
OBLITERATE OLD HWY. 79 AND HWY. 79 CONNECTOR.
REMOVE OLD RIVER LAKE BRIDGE AND WHITE RIVER BRIDGE.
REMOVAL OF THE OLD RIVER LAKE BRIDGE AND A PORTION (STA. 475+67-501+25) OF THE WHITE RIVER BRIDGE SHALL BE A PRIORITY.

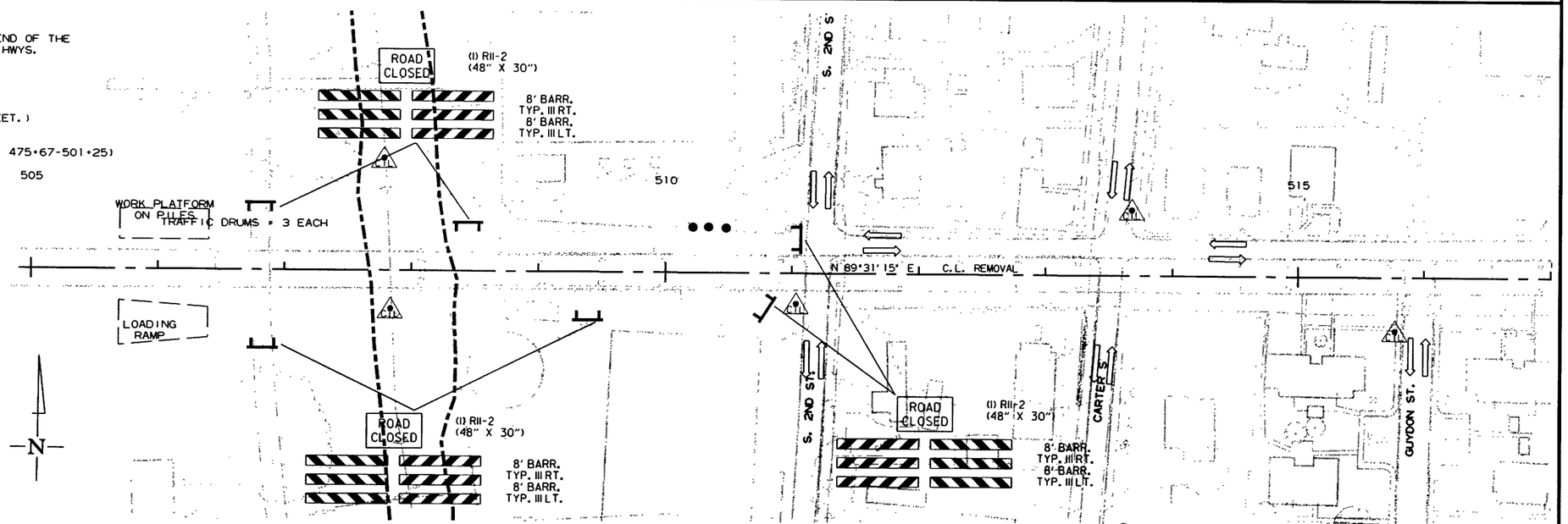
STAGE 2:
STA. 511+06-STA. 513+50
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 2-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 3:
STA. 513+50-STA. 514+69
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 4:
STA. 514+69-STA. 515+98
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 5:
STA. 515+98-STA. 517+46
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 6:
STA. 517+46-STA. 522+33.75
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.



STAGE 1
MAINTENANCE OF TRAFFIC

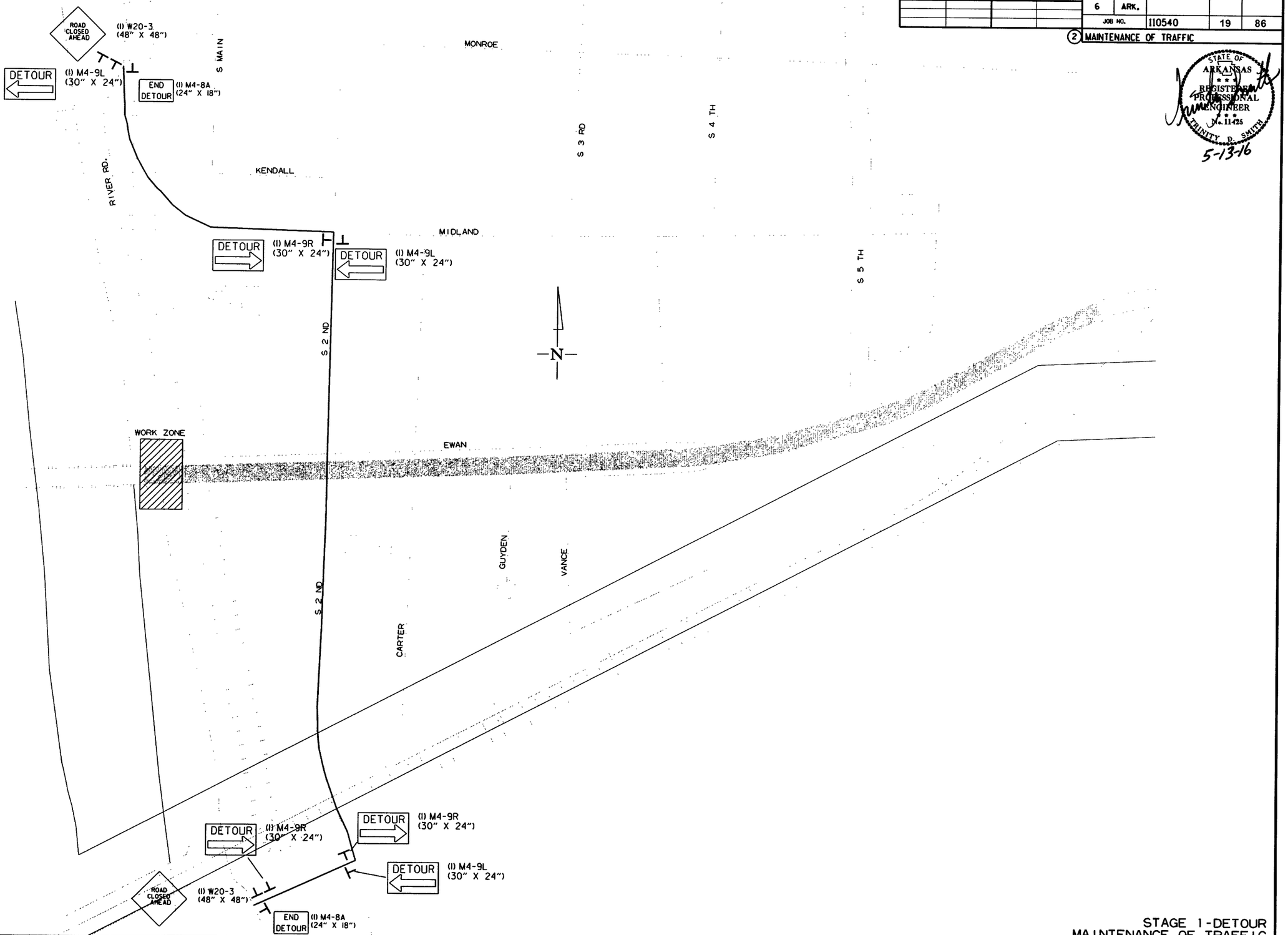
6/1/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	19	86

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



5/5/2016

R110540.DGN

STAGE 1 - DETOUR
MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	20	86

(2) MAINTENANCE OF TRAFFIC

FOR ALL STAGES:
INSTALL THE ADVANCE WARNING SIGNS AT THE BEGINNING AND END OF THE PROJECT ALONG WITH SIGNS INDICATED FOR SIDE STREETS AND HWYS.

STAGE 1:
STA. 402+66.03-STA. 511+06
INSTALL BARRICADES WITH SIGNS TO CLOSE OLD HWY. 79.
INSTALL BARRICADES WITH SIGNS TO CLOSE RIVER ROAD.
(REFER TO STAGE 1 DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.)
OBLITERATE OLD HWY. 79 AND HWY. 79 CONNECTOR.
REMOVE OLD RIVER LAKE BRIDGE AND WHITE RIVER BRIDGE.
REMOVAL OF THE OLD RIVER LAKE BRIDGE AND A PORTION (STA. 475+67-501+25) OF THE WHITE RIVER BRIDGE SHALL BE A PRIORITY.

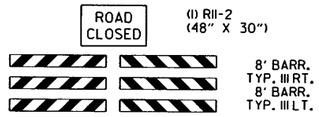
STAGE 2:
STA. 511+06-STA. 513+50
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 2-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 3:
STA. 513+50-STA. 514+69
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

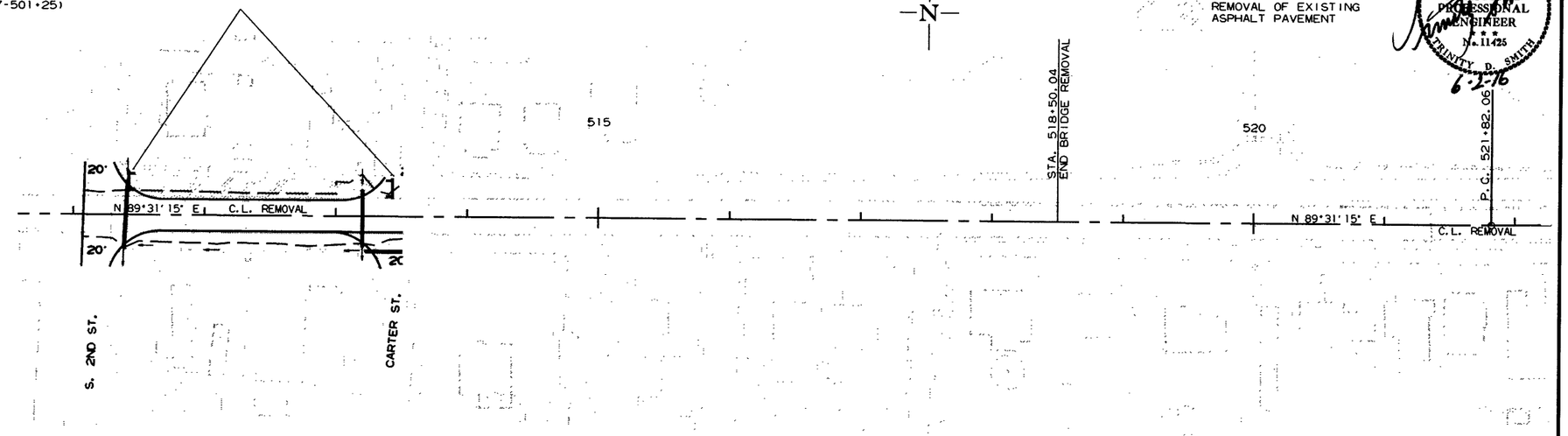
STAGE 4:
STA. 514+69-STA. 515+98
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 5:
STA. 515+98-STA. 517+46
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

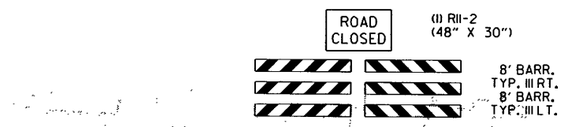
STAGE 6:
STA. 517+46-STA. 522+33.75
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.



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



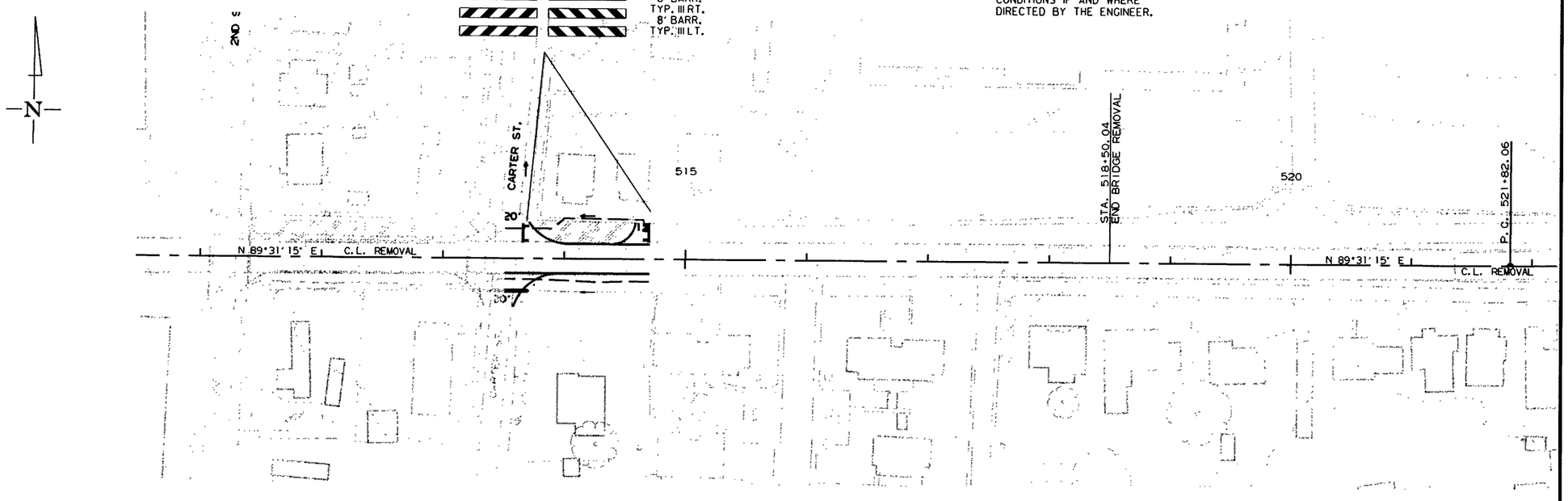
STAGE 2
MAINTENANCE OF TRAFFIC



REMOVAL OF EXISTING ASPHALT PAVEMENT

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

ROAD PREVIOUSLY REMOVED BY OTHERS



STAGE 3
MAINTENANCE OF TRAFFIC

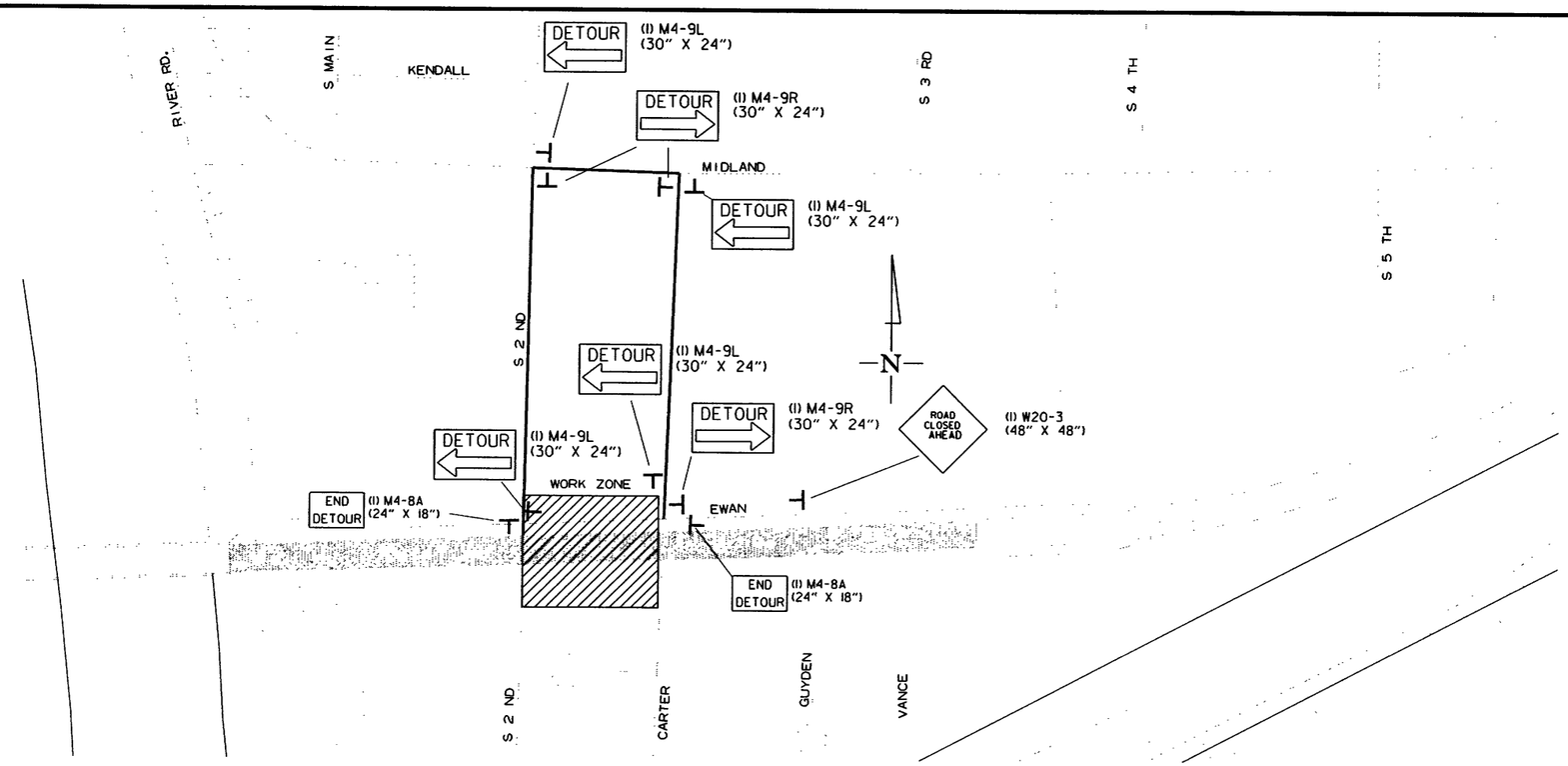
6/1/2016

R110540.DGN

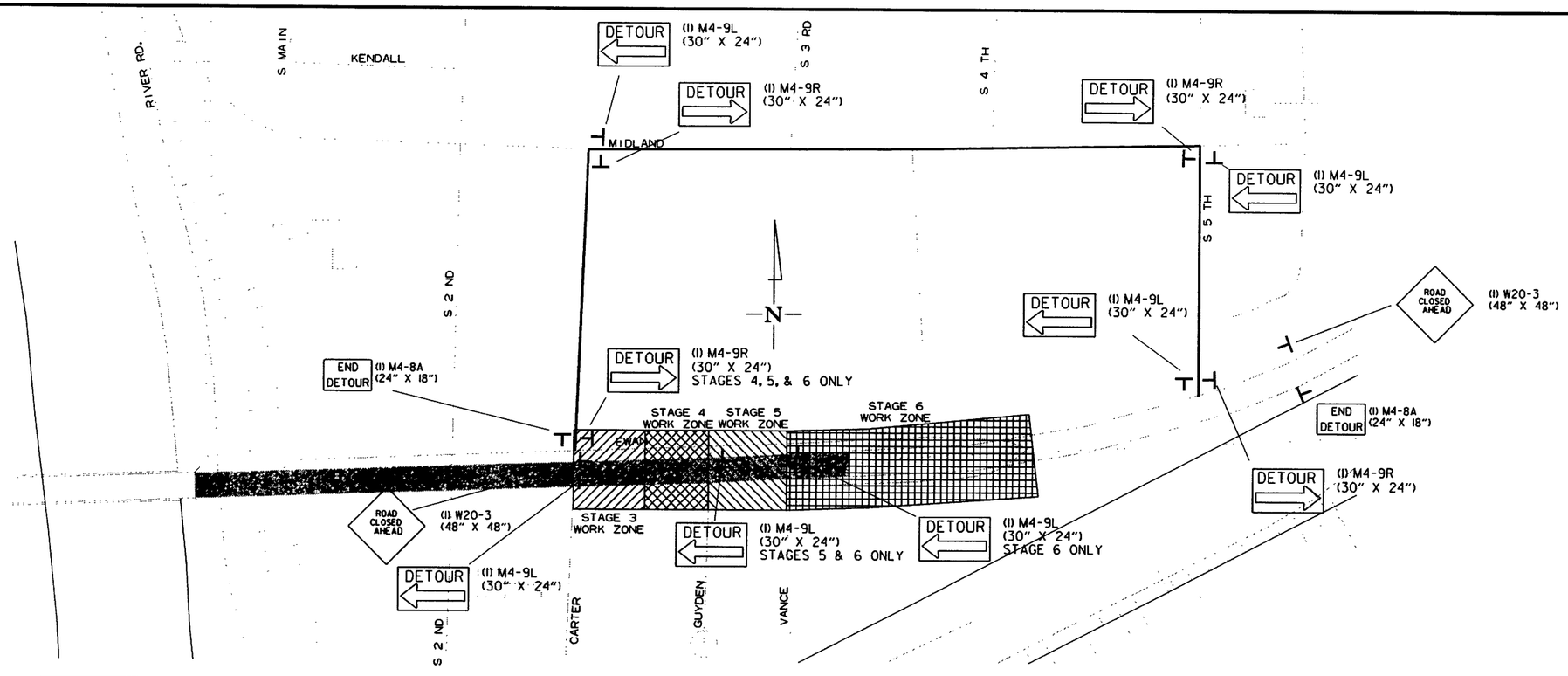
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	21	86

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



STAGE 2-DETOUR
MAINTENANCE OF TRAFFIC



STAGES 3, 4, 5, & 6-DETOUR
MAINTENANCE OF TRAFFIC

5/5/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	22	86

(2) MAINTENANCE OF TRAFFIC

FOR ALL STAGES:
INSTALL THE ADVANCE WARNING SIGNS AT THE BEGINNING AND END OF THE PROJECT ALONG WITH SIGNS INDICATED FOR SIDE STREETS AND HWYS.

STAGE 1:
STA. 402+66.03-STA. 511+06
INSTALL BARRICADES WITH SIGNS TO CLOSE OLD HWY. 79.
INSTALL BARRICADES WITH SIGNS TO CLOSE RIVER ROAD.
(REFER TO STAGE 1 DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.)
OBLITERATE OLD HWY. 79 AND HWY. 79 CONNECTOR.
REMOVE OLD RIVER LAKE BRIDGE AND WHITE RIVER BRIDGE.
REMOVAL OF THE OLD RIVER LAKE BRIDGE AND A PORTION (STA. 475+67-501+25) OF THE WHITE RIVER BRIDGE SHALL BE A PRIORITY.

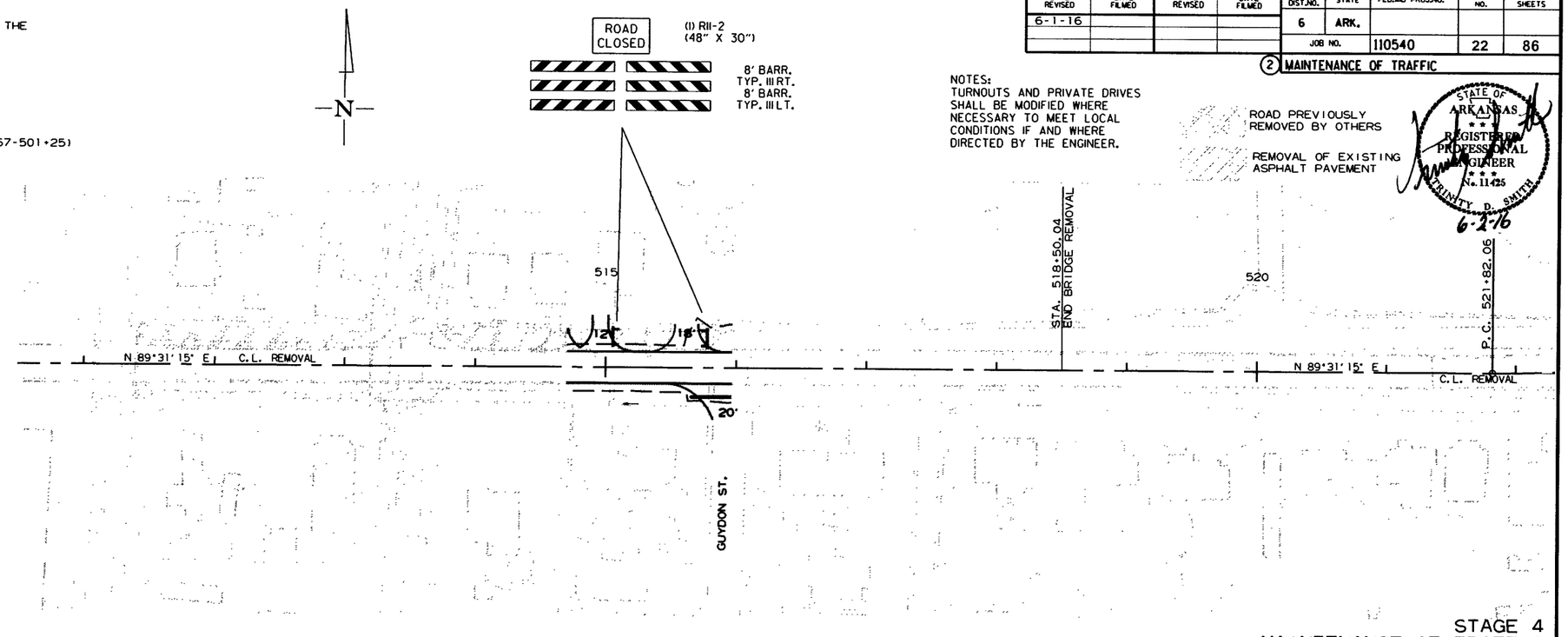
STAGE 2:
STA. 511+06-STA. 513+50
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 2-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 3:
STA. 513+50-STA. 514+69
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

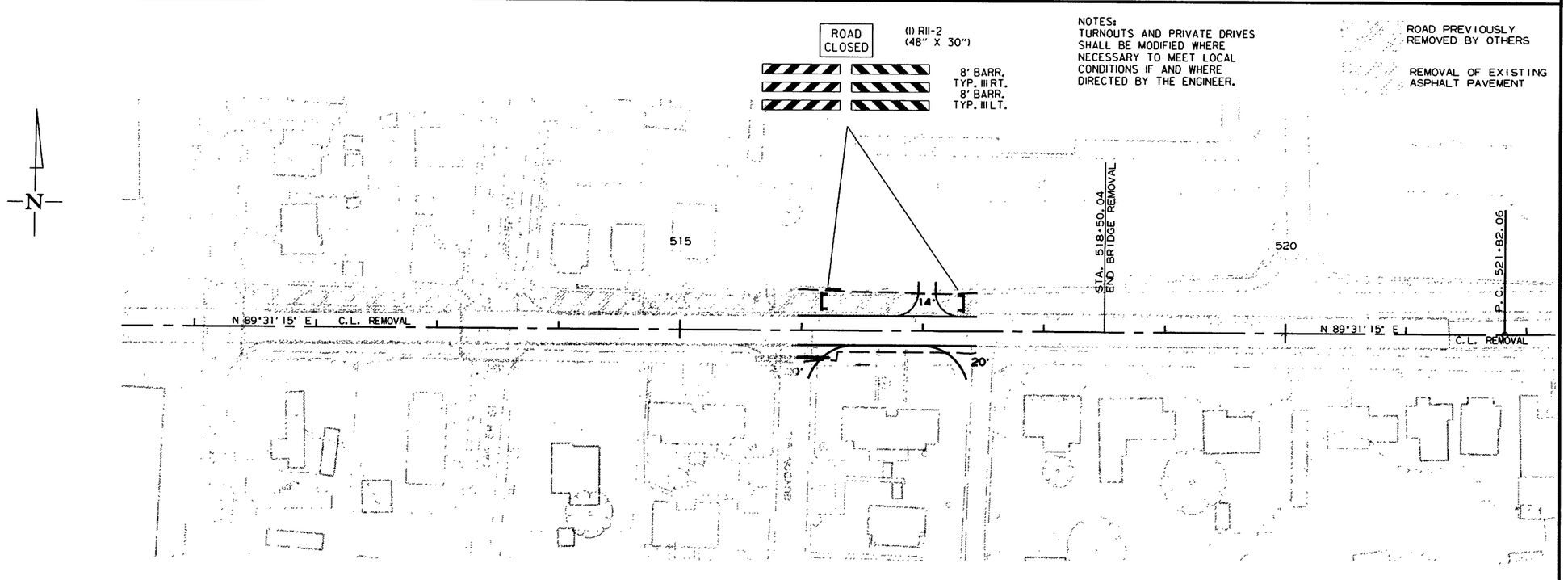
STAGE 4:
STA. 514+69-STA. 515+98
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 5:
STA. 515+98-STA. 517+46
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 6:
STA. 517+46-STA. 522+33.75
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.



STAGE 4
MAINTENANCE OF TRAFFIC



STAGE 5
MAINTENANCE OF TRAFFIC

6/1/2016

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FOR ALL STAGES:
INSTALL THE ADVANCE WARNING SIGNS AT THE BEGINNING AND END OF THE PROJECT ALONG WITH SIGNS INDICATED FOR SIDE STREETS AND HWYS.

STAGE 1:
STA. 402+66.03-STA. 511+06
INSTALL BARRICADES WITH SIGNS TO CLOSE OLD HWY. 79.
INSTALL BARRICADES WITH SIGNS TO CLOSE RIVER ROAD.
(REFER TO STAGE 1 DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.)
OBLITERATE OLD HWY. 79 AND HWY. 79 CONNECTOR.
REMOVE OLD RIVER LAKE BRIDGE AND WHITE RIVER BRIDGE.
REMOVAL OF THE OLD RIVER LAKE BRIDGE AND A PORTION (STA. 475+67-501+25) OF THE WHITE RIVER BRIDGE SHALL BE A PRIORITY.

STAGE 2:
STA. 511+06-STA. 513+50
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 2-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 3:
STA. 513+50-STA. 514+69
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 4:
STA. 514+69-STA. 515+98
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 5:
STA. 515+98-STA. 517+46
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

STAGE 6:
STA. 517+46-STA. 522+33.75
REMOVE WHITE RIVER BRIDGE PORTION.
CONSTRUCT EWAN ST., DIVERTING TRAFFIC BASED ON STAGE 3, 4, 5, & 6-DETOUR MAINTENANCE OF TRAFFIC PLAN SHEET.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	23	86

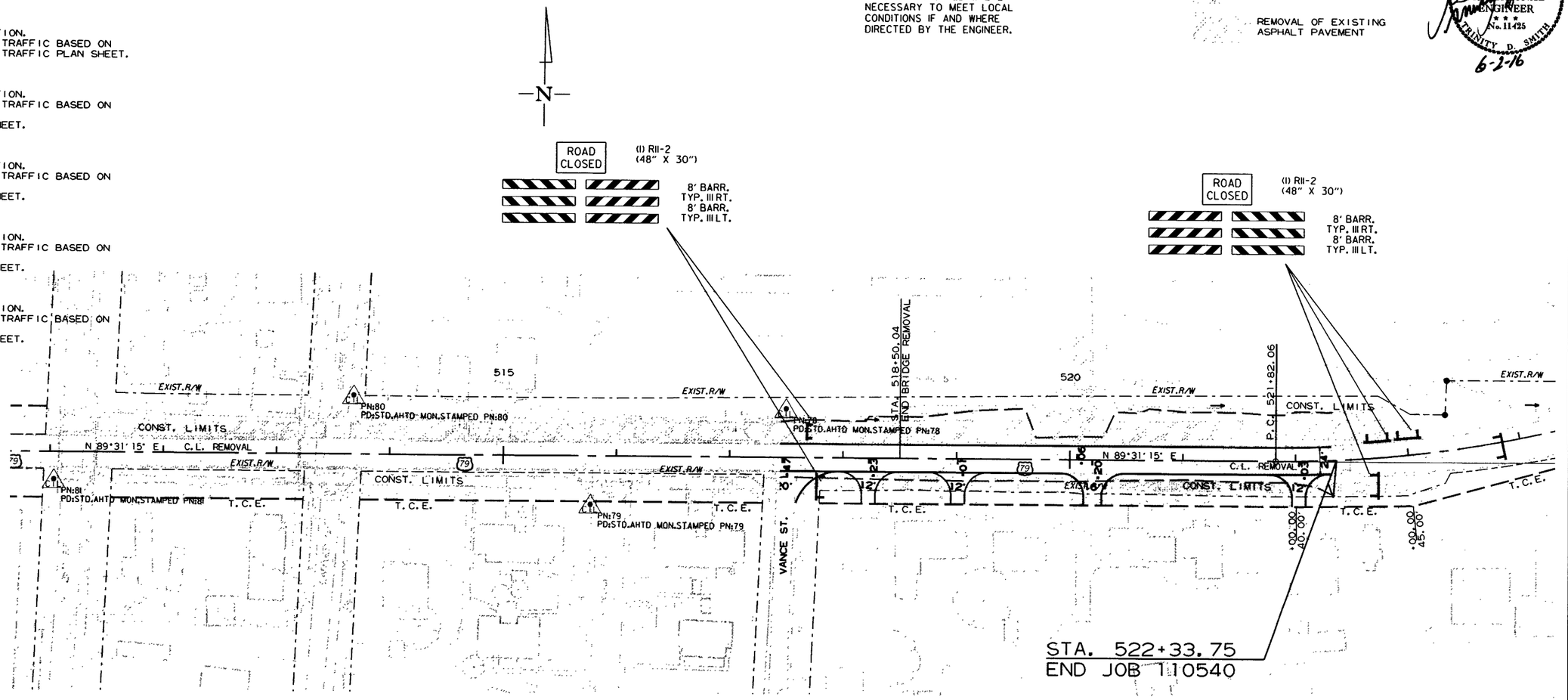
(2) MAINTENANCE OF TRAFFIC

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

ROAD PREVIOUSLY REMOVED BY OTHERS

REMOVAL OF EXISTING ASPHALT PAVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16



6/1/2016

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STAGE 6
MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-12-18				6	ARK.			
				JOB NO.		110540	24	86

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
1/12/18

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	BARRICADES (TYPE III)	
			LIN. FT. - EACH							NO.	SQ. FT.	EACH	RIGHT	LEFT
													LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	4	4	4	64.0			
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	4	4	4	4	64.0			
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	4	4	4	4	64.0			
W20-1	ROAD WORK AHEAD	48"x48"	8	8	8	8	8	8	8	8	128.0			
W20-3	ROAD CLOSED AHEAD	48"x48"	2	1	2	2	2	2	2	2	32.0			
G20-2	END ROAD WORK	48"x24"	12	10	10	10	10	10	12	12	96.0			
R11-2	ROAD CLOSED	48"x30"	8	3	3	3	3	5	8	8	80.0			
W1-6	LARGE ARROW	48"x24"	1						1	1	8.0			
RSP-1	SHOULDER CLOSED	48"x30"	1						1	1	10.0			
M4-9L	DETOUR LEFT	30"x24"	3	4	4	4	5	6	6	6	30.0			
M4-9R	DETOUR RIGHT	30"x24"	3	2	3	4	4	4	4	4	20.0			
M4-8A	END DETOUR	24"x18"	2	2	2	2	2	2	2	2	6.0			
	WARNING! BRIDGE CONSTRUCTION 1,100 FEET DOWNSTREAM	60"x36"	1						1	1	15.0			
	TRAFFIC DRUMS		11						11			11		
	TYPE III BARRICADE-RT. (6')		6	2	2	2	2	4	6				48	
	TYPE III BARRICADE-LT. (8')		6	2	2	2	2	4	6					48
	TYPE III BARRICADE-RT. (16')		1	1	1	1	1	1	1				16	
	TYPE III BARRICADE-LT. (16')		1	1	1	1	1	1	1					16
	TYPE III BARRICADE-LT. (24')		1						1					24
TOTALS:											617.0	11	64	88

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

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED	200.0	177.8
		BY THE ENGINEER.		
TOTAL:				177.8

NOTE: AVERAGE WIDTH = 8'-0"

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL								
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	TEMPORARY SILT FENCE (WITH BACKING)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	STAGE 1	40.27	80.54	40.27	4107.5	40.27	114.21	114.21	2329.9		16250	395			15
ENTIRE	PROJECT	STAGE 2	0.11	0.22	0.11	11.2	0.11	0.42	0.42	8.6	66		109			7
ENTIRE	PROJECT	STAGE 3	0.05	0.10	0.05	5.1	0.05	0.21	0.21	4.3	22		88			4
ENTIRE	PROJECT	STAGE 4	0.05	0.10	0.05	5.1	0.05	0.23	0.23	4.7			93			3
ENTIRE	PROJECT	STAGE 5	0.08	0.16	0.08	8.2	0.08	0.27	0.27	5.5	22		133			6
ENTIRE	PROJECT	STAGE 6	0.44	0.88	0.44	44.9	0.44	0.72	0.72	14.7	22		799			31
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.											220	1500	300	500	500	521
TOTALS:			41.00	82.00	41.00	4182.0	41.00	116.06	116.06	2367.7	352	17750	1917	500	500	587

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION

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.

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

REMOVAL OF EXISTING BRIDGE STRUCTURE

STATION	STATION	LOCATION	LUMP SUM
418+53	456+04	OLD RIVER LAKE BRIDGE (SITE NO. 1)	1.00
475+67	519+50	WHITE RIVER BRIDGE (SITE NO. 2)	1.00

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
402+00	441+00	MAIN LANES	39	
442+00	490+00	MAIN LANES	48	
492+00	502+00	MAIN LANES	10	
511+00	514+00	MAIN LANES	3	3
518+00	519+00	MAIN LANES	1	1
518+00	521+00	MAIN LANES	3	3
TOTALS:			104	7

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE
			LIN. FT.
508+28	510+78	EWAN ST. RT.	279
511+50	511+67	EWAN ST. LT.	18
TOTAL:			297

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT NORMAL	COMPACTED EMBANKMENT CLAY FILL	TOPSOIL FURNISHED AND PLACED	* SOIL STABILIZATION
			CU. YD.				TON
403+00.00	418+57.34	STAGE 1 - TEMPORARY CONNECTION	180116	68		5162	
456+03.55	511+07.00	STAGE 1	155461	153074			
511+07.00	513+51.00	STAGE 2	102	311			
513+51.00	514+71.00	STAGE 3	43	31			
514+71.00	515+98.00	STAGE 4	66	115			
515+98.00	517+46.00	STAGE 5	95	89			
517+46.00	522+33.75	STAGE 6	2693	322			
438+19.00	439+71.00	BOAT RAMP AND PARKING LOT	257				
508+09.00		LEVEE			35		
ENTIRE	PROJECT	APPROACHES		100			
ENTIRE	PROJECT	TO BE USED IF AND WHERE					100
		DIRECTED BY THE ENGINEER					
TOTALS:			338833	154110	35	5162	100

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

BOAT RAMP AND PARKING LOTS

STATION	STATION	DESCRIPTION	AGGREGATE BASE COURSE (CLASS 7)	PORTLAND CEMENT CONCRETE DRIVEWAY
			TONS	SQ. YDS.
439+71	440+11	BOAT RAMP		53.00
438+19	439+71	BOAT RAMP PARKING LOT	520	
412+77	417+11	UNDER BRIDGE PARKING ON RT.	852	
TOTALS:			1372	53.00

1/12/2018

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	25	86

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS		STANDARD DRAWINGS
								18"	22"X14"	
			FEET	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.		
511+40		ACROSS EWAN ST						54		PCC-1, PCM-1, PCP-1, PCP-2
513+20		ACROSS EWAN ST.							44	PCC-1, PCM-1, PCP-1, PCP-2
513+46	RT	CARTER ST						48		PCC-1, PCM-1, PCP-1, PCP-2
514+65	LT	EWAN ST	12	42 40						
514+96	LT	EWAN ST	12		52.40	5.76	21.40			
515+62	LT	EWAN ST	18		59.20	6.51	25 50			
515+94	RT	GUYDON ST.						58		PCC-1, PCM-1, PCP-1, PCP-2
517+04	LT	EWAN ST.	14		62 70	6.90	25.60			
518+23	RT	EWAN ST.	12	57.10						
519+01	RT	EWAN ST.	12	56.70						
520+20	RT	EWAN ST	16		56.20	6.18	28 60			
522+03	RT	EWAN ST	12		56.80	6.25	23 19			
* ENTIRE	PROJECT	TEMPORARY DRIVES					140 00			
TOTALS:				156.20	287.30	31.60	264.29	160	44	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") ....94.5% MIN. AGGR. . . . .5 5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

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

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
511+41	18" X 24' C.M. PIPE CULVERT ON LT.	1
513+35	12" X 21' C.M. PIPE CULVERT ON LT	1
513+46	18" X 30' R.C PIPE CULVERT ON RT	1
515+94	18" X 36' R C PIPE CULVERT ON RT	1
TOTAL:		4

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

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	20
ENGINEER	
TOTAL:	20

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
522+33.75	523+33.75	EWAN ST.	27	300.00
TOTAL:				300.00

NOTE: AVERAGE MILLING DEPTH 1".

FENCING

STATION	STATION	LOCATION	* 4' CHAIN LINK FENCE
			LIN. FT.
511+50	511+70	EWAN ST. LT.	20
TOTAL:			20

* DENOTES ALTERNATE BID ITEM

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
		EACH
ENTIRE PROJECT	1	1
TOTALS:	1	1

DUMPED RIPRAP AND FILTER BLANKET

STATION	STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
			CU. YDS.	SQ. YDS.
402+66	408+50	HWY 79 CONNECTOR	1120	2240
TOTALS:			1120	2240

NOTE FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5)

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	RETAINING WALLS	GUARDRAIL
			LIN. FT.	LIN. FT.
416+11	418+30	LT. OF EXISTING HWY. 79		219
416+11	418+30	RT OF EXISTING HWY 79		219
418+23	418+53	LT OF EXISITING HWY. 79	30	
418+23	418+53	RT. OF EXISTING HWY 79	30	
456+04	456+34	LT. OF EXISITING HWY. 79	30	
456+04	456+34	RT. OF EXISTING HWY. 79	30	
456+32	460+00	LT. OF EXISTING HWY. 79		368
456+32	460+00	RT OF EXISTING HWY 79		368
460+00	475+00	LT. OF EXISTING HWY 79		1500
460+00	475+00	RT OF EXISTING HWY. 79		1500
475+00	475+37	LT. OF EXISTING HWY. 79		37
475+00	475+37	RT. OF EXISTING HWY. 79		37
475+37	475+67	LT. OF EXISITING HWY. 79	30	
475+37	475+67	RT OF EXISTING HWY. 79	30	
508+50	509+16	EWAN ST. RT.		
509+91	510+54	EWAN ST. LT.		
510+12	510+59	EWAN ST. RT.		
515+03	515+82	EWAN ST. RT.		
516+08	516+88	EWAN ST. RT.		
518+50	521+30	EWAN ST. LT	280	
518+50	521+30	EWAN ST. RT.	280	
TOTALS:			740	4248

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	5	10
DIRECTED BY THE ENGINEER		
TOTALS:	5	10

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

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22
			FEET			FEET				FEET			TON	FEET			TON
MAIN LANES																	
511+07.00	522+33.75	EWAN ST.	1126.75	138.75	1563.37	48.84	6114.50	0.05	305.73	24.42	3057.25	660.00	1008.89	24.00	3004.67	220.00	330.51
522+33.75	523+33.75	EWAN ST. - TRANSITION	100.00			27.00	300.00	0.17	51.00					27.00	300.00	220.00	33.00
420+84.00		ACCESS ROAD	1160.00	VAR.	609 00												
439+44.00		ACCESS ROAD	1325.00	VAR.	844.00												
511+21.00		S. 2ND ST. (LT)	28.09	VAR.	53.56	VAR.	207.32	0.05	10.37	VAR.	103.68	660 00	34.21	VAR.	101 84	220.00	11.20
511+21.00		S. 2ND ST (RT)	27.89	VAR.	52.37	VAR.	200 78	0.05	10.04	VAR	100 39	660 00	33.13	VAR	98 57	220.00	10.84
513+46.00		CARTER ST. (RT)	28 30	VAR	71.56	VAR.	282 10	0.05	14.11	VAR	141 05	660.00	46.55	VAR.	138.71	220.00	15.26
513+54.00		CARTER ST. (LT)	17.75	VAR.	55.48	VAR.	217.90	0.05	10.90	VAR.	108 95	660.00	35.95	VAR.	107.12	220.00	11.78
515+94.00		GUYDON ST	27.95	VAR	71.46	VAR.	281 60	0 05	14.08	VAR.	140 80	660.00	46.46	VAR.	138.46	220 00	15.23
517+47.00		VANCE ST.	28.00	VAR	69.45	VAR.	270.18	0 05	13.51	VAR.	135.09	660.00	44.58	VAR.	132.75	220.00	14.60
TOTALS:					3390.25		7874.38		429.74		3787.21		1249.77		4022.12		442.42

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2")... . .. . 94.5% MIN. AGGR.. .. .. .5.5% ASPHALT BINDER
ACHM BINDER COURSE (1").. .... 95.1% MIN. AGGR. . ... .4.9% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

4/22/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
6-1-16		6-15-16		6-29-17		12-7-17	
6-7-16		9-8-16		7-6-17		1-12-18	
6-9-16		10-17-16		11-16-17			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		110540	26	86

(2) SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
1/12/18

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	104	STATION
201	GRUBBING	7	STATION
202	REMOVAL AND DISPOSAL OF FENCE	297	LIN. FT.
202	REMOVAL AND DISPOSAL OF RETAINING WALLS	740	LIN. FT.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	4	EACH
202	REMOVAL AND DISPOSAL OF GUARDRAIL	4248	LIN. FT.
SP & 210	UNCLASSIFIED EXCAVATION	338833	CU. YD.
SP & 210	COMPACTED EMBANKMENT	154145	CU. YD.
SP & 210	SOIL STABILIZATION	100	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	5027	TON
SS & 401	TACK COAT	440	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	1189	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	61	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	448	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	26	TON
412	COLD MILLING ASPHALT PAVEMENT	300	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	5	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY	209.20	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SP, SS, & 604	SIGNS	617	SQ. FT.
SS & 604	BARRICADES	152	LIN. FT.
SS & 604	TRAFFIC DRUMS	11	EACH
SP, SS, & 606	18" SIDE DRAIN	160	LIN. FT.
SS & 606	22" X 14" SIDE DRAIN	44	LIN. FT.
606	SELECTED PIPE BEDDING	20	CU. YD.
619	4' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	20	LIN. FT.
619	4' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	20	LIN. FT.
620	LIME	82	TON
620	SEEDING	41.00	ACRE
SS & 620	MULCH COVER	157.06	ACRE
620	WATER	6549.7	M.GAL.
621	TEMPORARY SEEDING	116.06	ACRE
621	SILT FENCE	1917	LIN. FT.
SP & 621	TEMPORARY SILT FENCE (WITH BACKING)	17750	LIN. FT.
621	SAND BAG DITCH CHECKS	352	BAG
621	SEDIMENT BASIN	500	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	500	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	587	CU. YD.
623	SECOND SEEDING APPLICATION	41.00	ACRE
626	EROSION CONTROL MATTING (CLASS 3)	178	SQ. YD.
SP & 628	TOPSOIL FURNISHED AND PLACED	5162	CU. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	1	EACH
637	MAILBOX SUPPORTS (SINGLE)	1	EACH
816	FILTER BLANKET	2240	SQ. YD.
816	DUMPED RIPRAP	1120	CU. YD.
	STRUCTURES OVER 20' SPAN		
SP & 205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
SP & 205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 2)	1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
6/1/2016	T.C.E. ADJUSTMENT TO AVOID STRUCTURES AND SURVEY FILE REFERENCE ADJUSTMENTS	13-18, 20, 22, 23, 26, 36-40
6/7/2016	ADDED THE SPECIAL PROVISION TITLED "COORDINATION OF LiDAR BRIDGE SCAN"	2, 26
6/9/2016	ADDED THE SPECIAL PROVISION TITLED "ISSUANCE OF PROPOSALS"	2, 26
6/15/2016	REVISED THE SPECIAL PROVISION TITLED "SEQUENCE OF CONSTRUCTION"	26
9/8/2016	DISPLAYED BUFFER ZONES, UPDATED THE "STORM WATER POLLUTION PREVENTION PLAN", "UTILITY ADJUSTMENTS", AND "DELAY IN RIGHT OF WAY OCCUPANCY" SPECIAL PROVISIONS, REPLACED THE "ISSUANCE OF PROPOSALS" SPECIAL PROVISION WITH SUPPLEMENTAL SPECIFICATION 102-2, ADDED THE "MANDATORY ELECTRONIC DOCUMENT SUBMITTAL" SPECIAL PROVISION, UPDATED THE "BIDDING REQUIREMENTS AND CONDITIONS" AND "DETAILS FOR SAFETY OF RIVER TRAFFIC" SPECIAL PROVISIONS, AND REMOVED THE "COORDINATION OF LiDAR BRIDGE SCAN" AND "SEQUENCE OF CONSTRUCTION" SPECIAL PROVISIONS.	2, 9, 10, 12, 13, 26
10/17/2016	ADDED PLAN NOTE TO RETAIN EXISTING BOLLARDS AND REVISED THE "REQUIREMENTS OF U.S. COAST GUARD PERMIT" SPECIAL PROVISION.	26, 40
6/29/2017	UPDATED THE STORM WATER POLLUTION PREVENTION PLAN, REMOVED THE "DELAY IN RIGHT OF WAY OCCUPANCY" AND "CONSTRUCTION DELAY DUE TO ENDANGERED SPECIES MITIGATION" SPECIAL PROVISIONS, UPDATED THE "UTILITY ADJUSTMENTS", "REQUIREMENTS OF U.S. COAST GUARD PERMIT", AND "SECTION 404 INDIVIDUAL PERMIT REQUIREMENTS" SPECIAL PROVISIONS, UPDATED STANDARD DRAWING TC-1, AND ADDED THE "WATER POLLUTION CONTROL" SPECIAL PROVISION.	2, 26, 51
7/6/2017	ADDED THE SPECIAL PROVISION TITLED "PROTECTION OF WATER QUALITY AND WETLANDS"	2, 26
11/16/2017	REVISED ALL SPECIAL PROVISIONS AND TITLE SHEET DUE TO DEPARTMENT'S CHANGE OF NAME, AND ADDED SUPPLEMENTAL SPECIFICATIONS 100-4 AND 400-4.	1, 2, 26
12/7/2017	UPDATED STANDARD DRAWING TEC-1.	2, 26
1/12/2018	REVISED THE STAGE 1 UNCLASSIFIED EXCAVATION EARTHWORK QUANTITY.	24, 26, 74

1/12/2018

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	27	86

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

SURVEY CONTROL COORDINATES

Project Name: s110123f.alg
Date: 11/15/2010
Coordinate System: ARKANSAS STATE PLANE - SOUTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	2038821.7714	1498415.5794	-999999	CTL	5/8" Rebar with 2" Aluminum Cap
2	2040807.1443	1500464.3035	-999999	CTL	5/8" Rebar with 2" Aluminum Cap
3	2043439.5322	1511950.8073	-999999	CTL	5/8" Rebar with 2" Aluminum Cap
4	2044990.7720	1516172.2146	-999999	CTL	5/8" Rebar with 2" Aluminum Cap
5	2048990.2062	1521563.4988	-999999	CTL	5/8" Rebar with 2" Aluminum Cap
6	2050179.2797	1523689.4686	-999999	CTL	5/8" Rebar with 2" Aluminum Cap
50	2040943.7888	1500574.0100	194.429	CTL	5/8" Rebar with 2" Aluminum Cap
51	2041111.4165	1501826.1860	163.408	CTL	5/8" Rebar with 2" Aluminum Cap
52	2041284.1064	1502568.6550	165.069	CTL	5/8" Rebar with 2" Aluminum Cap
53	2041613.8892	1503968.1896	162.637	CTL	5/8" Rebar with 2" Aluminum Cap
54	2041876.8972	1505324.0956	163.779	CTL	5/8" Rebar with 2" Aluminum Cap
55	2042242.4837	1506925.5426	160.931	CTL	5/8" Rebar with 2" Aluminum Cap
56	2042629.3006	1508605.3391	165.682	CTL	5/8" Rebar with 2" Aluminum Cap
57	2042811.9019	1509406.9287	165.823	CTL	5/8" Rebar with 2" Aluminum Cap
58	2042954.1391	1510001.0909	164.832	CTL	5/8" Rebar with 2" Aluminum Cap
59	2043118.6959	1510712.5593	164.081	CTL	5/8" Rebar with 2" Aluminum Cap
60	2043398.6921	1511861.3201	163.717	CTL	5/8" Rebar with 2" Aluminum Cap
61	2043745.1940	1512763.8544	164.521	CTL	5/8" Rebar with 2" Aluminum Cap
62	2044081.1448	1513635.2897	164.941	CTL	5/8" Rebar with 2" Aluminum Cap
63	2044287.2008	1514174.6226	165.101	CTL	5/8" Rebar with 2" Aluminum Cap
64	2044576.1667	1514947.2752	167.172	CTL	5/8" Rebar with 2" Aluminum Cap
65	2044871.5664	1515743.3235	167.424	CTL	5/8" Rebar with 2" Aluminum Cap
66	2045045.5457	1516195.6520	183.280	CTL	5/8" Rebar with 2" Aluminum Cap
67	2045383.4978	1516651.9962	166.112	CTL	5/8" Rebar with 2" Aluminum Cap
68	2045928.8117	1517421.4927	165.597	CTL	5/8" Rebar with 2" Aluminum Cap
69	2046263.4140	1517892.7713	165.157	CTL	5/8" Rebar with 2" Aluminum Cap
70	2046596.3924	1518517.2057	172.857	CTL	5/8" Rebar with 2" Aluminum Cap
71	2047202.5427	1519453.1356	166.322	CTL	5/8" Rebar with 2" Aluminum Cap
72	2048892.6903	1521590.3886	187.746	CTL	5/8" Rebar with 2" Aluminum Cap
75	2049551.7164	1522667.2298	172.94	CTL	STD. AHTD MON. STAMPED PN: 75
76	2049208.2225	1521106.5790	203.09	CTL	STD. AHTD MON. STAMPED PN: 76
77	2048954.7327	1520015.9189	172.37	CTL	STD. AHTD MON. STAMPED PN: 77
78	2048971.1590	1519228.7419	172.30	CTL	STD. AHTD MON. STAMPED PN: 78
79	2048884.2960	1519057.1849	172.44	CTL	STD. AHTD MON. STAMPED PN: 79
80	2048977.0132	1518847.0791	171.07	CTL	STD. AHTD MON. STAMPED PN: 80
81	2048898.7884	1518583.2780	171.31	CTL	STD. AHTD MON. STAMPED PN: 81
82	2049009.0649	1518256.8125	189.18	CTL	STD. AHTD MON. STAMPED PN: 82
83	2048890.0512	1518263.4417	188.95	CTL	STD. AHTD MON. STAMPED PN: 83
84	2050188.9280	1518136.3198	187.90	CTL	STD. AHTD MON. STAMPED PN: 84
100	2040369.3986	1500062.8059	200.731	GPS	AHTD GPS 480001A, RTK ELEV
101	2050632.5212	1528284.7287	181.991	GPS	AHTD GPS 480002A, RTK ELEV

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9999770470 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME s110123gi.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 480001A - 480002A
CONVERGENCE ANGLE: 0-22-37.5126 RIGHT AT LT: 34-41-01.4541 LG: 091-19-34.5307
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

C.L. REMOVAL

POINT NO.	TYPE	STATION	NORTHING	EASTING
8015	POB	400+00.00	2043051.2750	1510014.4830
8016	PC	402+66.03	2043103.5452	1510275.3258
8018	PT	410+10.35	2043523.2690	1510863.2834
8019	PC	411+44.82	2043639.3877	1510931.1045
8021	PT	415+89.95	2043952.1403	1511241.1897
8022	PI	418+57.34	2044088.9680	1511470.9160
8023	PI	430+19.14	2044678.9914	1512471.7459
8024	PI	439+00.00	2045122.7252	1513232.6707
8025	PI	445+30.50	2045441.8323	1513776.4621
8026	PC	445+55.19	2045453.9349	1513797.9746
8028	PT	455+94.75	2046200.7573	1514497.7968
8029	PI	465+77.16	2047086.4301	1514922.8993
8030	PI	472+23.42	2047669.8897	1515200.8034
8031	PI	474+72.93	2047895.3657	1515307.6443
8032	PC	475+15.47	2047933.5655	1515326.3625
8034	PT	488+17.41	2048709.5230	1516316.9390
8035	PC	495+09.16	2048856.3106	1516992.9346
8037	PT	500+28.51	2048913.7875	1517508.1843
8038	PC	521+82.06	2048931.7931	1519661.6594
8040	PT	527+92.41	2049102.8965	1520239.2720
8041	POE	529+16.72	2049169.7277	1520344.0863

2/12/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	28	86

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

POB 400+00.00
400
8015
N 78°40'07" E
266.03'
8016
P.C. 402+66.03
STA. 402+66.03
BEGIN JOB 110540
405
PI = 406+62.00
Δ = 48°22'51" LT.
D = 06°30'00"
T = 395.97'
L = 744.32'
PC = 402+66.03
PT = 410+10.35
N 78°40'07" E
C.L. REMOVAL
P.I. 406+62.00
410
P.T. 410+10.35
8018
N 30°17'16" E
134.47'
N 30°17'16" E
8019
P.I. 413+72.24
415
N 59°13'17" E
8021
P.C. 411+44.82
PI = 413+72.24
Δ = 28°56'01" RT.
D = 06°30'00"
T = 227.42'
L = 445.13'
PC = 411+44.82
PT = 415+89.95
P.T. 415+89.95
420
425
430
N
415
17" E
8021
N 59°13'17" E
267.39'
8022
C.L. REMOVAL
N 59°28'45" E
1161.80'
8023
P.T. 415+89.95
P.I. 418+57.34
Δ = 0°15'28" RT.
P.I. 430+19.14
Δ = 0°16'20" RT.
PI = 413+72.24
Δ = 28°56'01" RT.
D = 06°30'00"
T = 227.42'
L = 445.13'
PC = 413+72.24
PT = 415+89.95

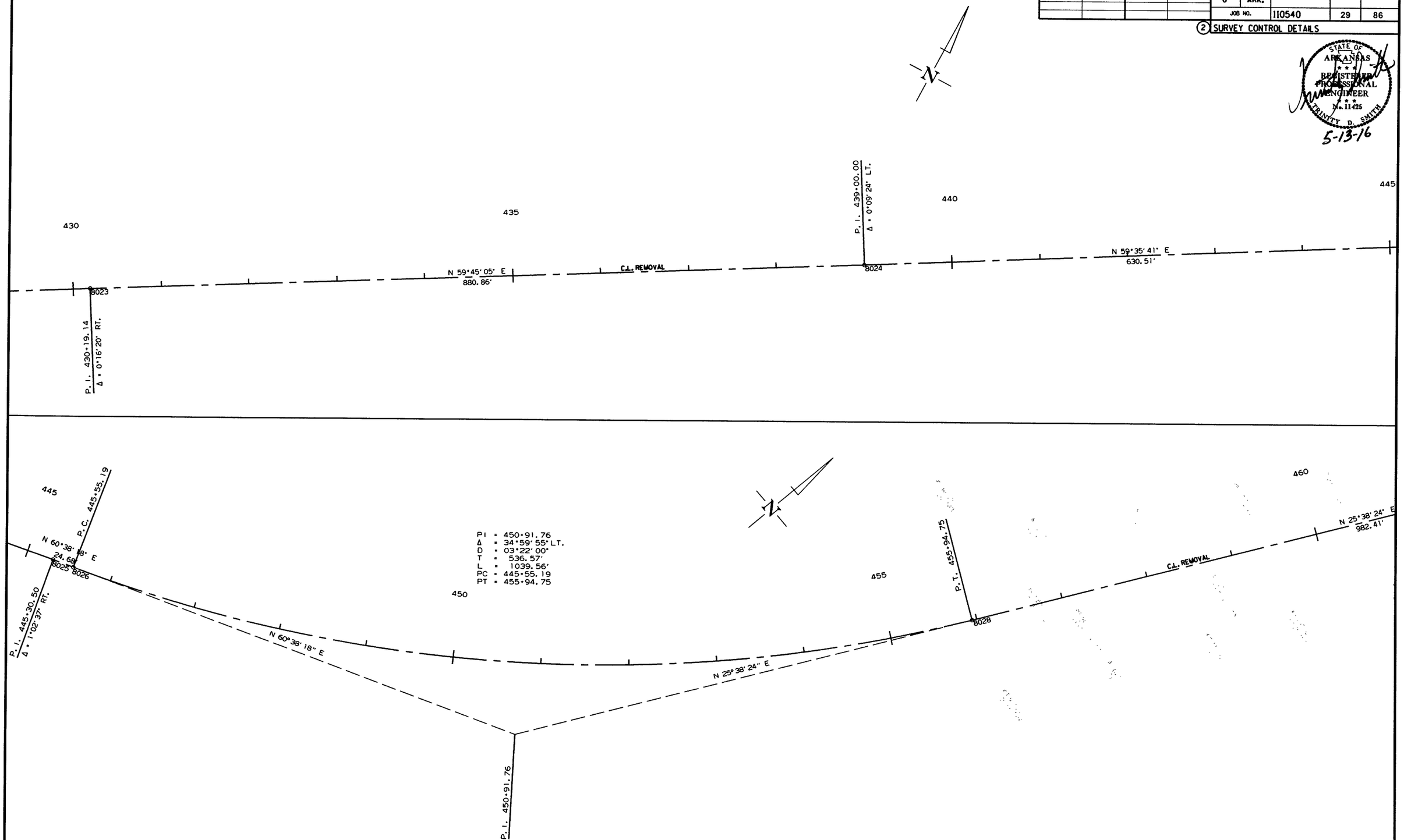
2/12/2015
R110540.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	29	86

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



2/12/2015

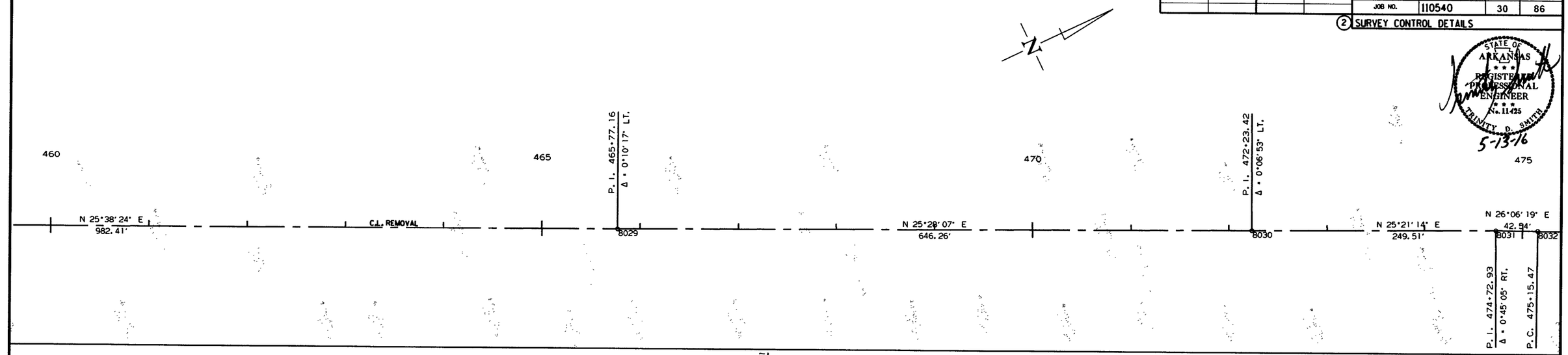
R110540.DGN

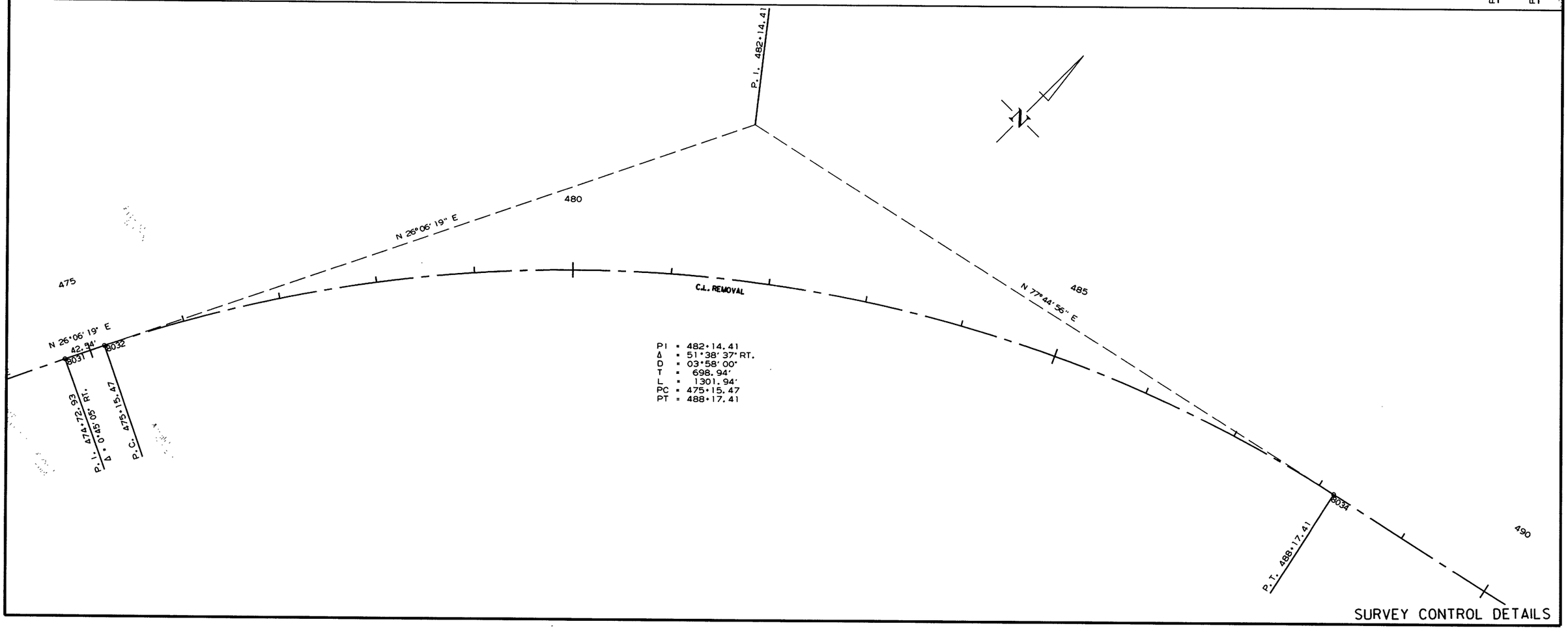
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	30	86

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16





2/12/2015

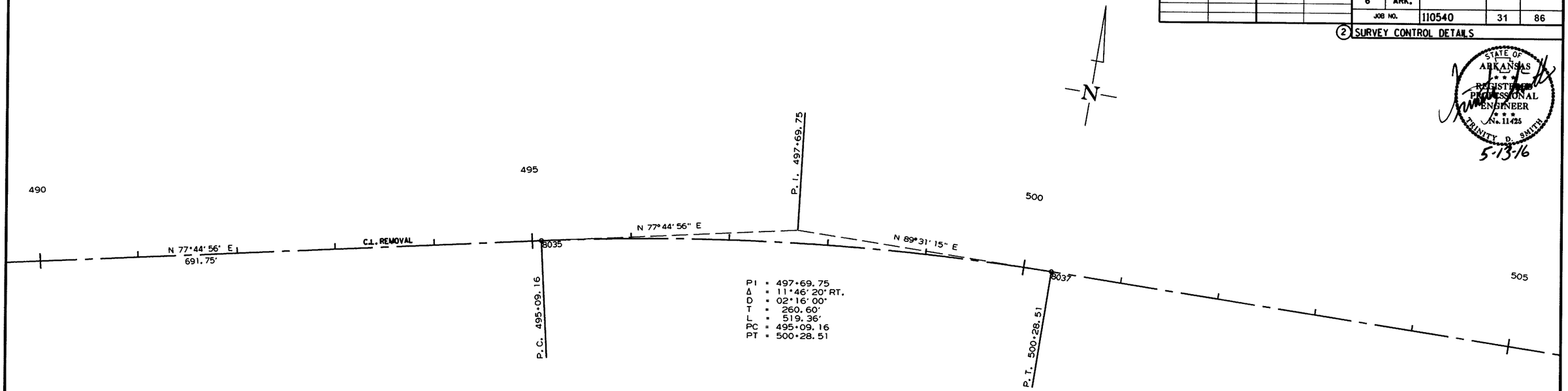
R110540.DGN

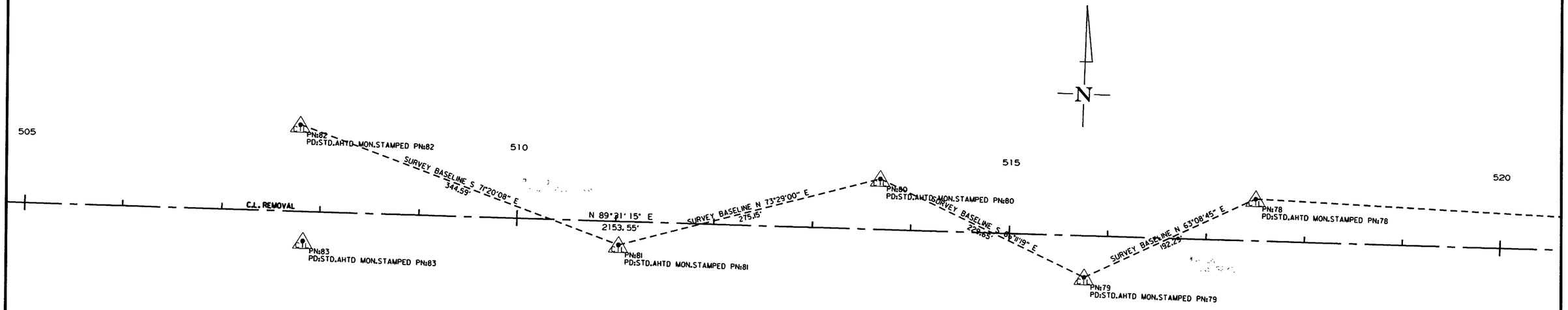
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	31	86

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16





2/12/2015

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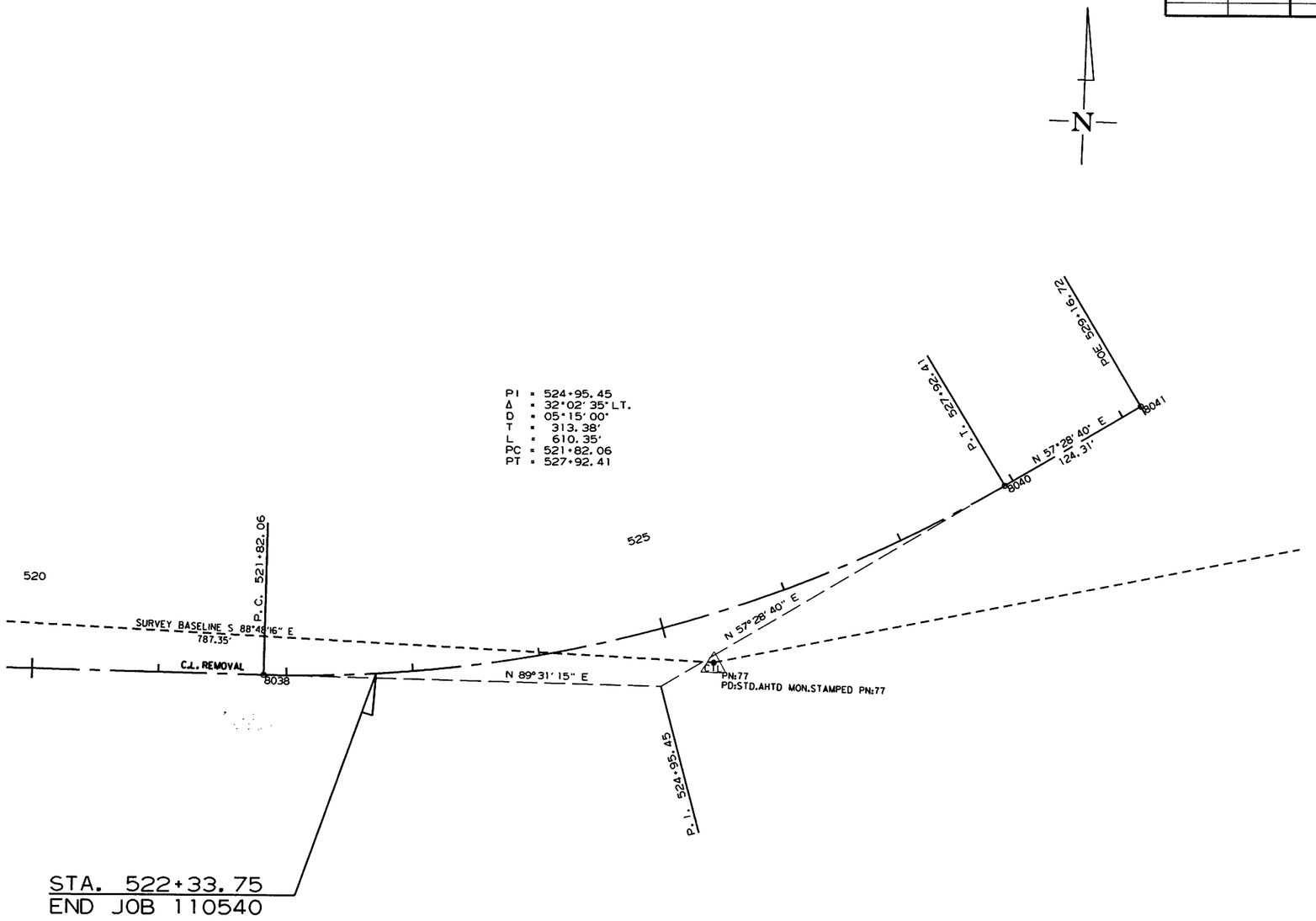
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	32	86

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16



2/12/2015

R110540.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	33	86

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

POB 400+00.00

N 78°40'07" E

P.C. 402+66.03
BEGIN EXIST. HWY. 79 CONNECTOR EMBANKMENT REMOVAL

EXIST. HWY. 79 - REMOVED IN JOB 110503

STA. 402+66.03
BEGIN JOB 110540

PI = 406+62.00
Δ = 48°22'51" LT.
D = 06°30'00"
T = 395.97'
L = 744.32'
PC = 402+66.03
PT = 410+10.35

CONST. LIMITS

405

410

P.T. 410+10.35

N 30°17'16" E C.L. REMOVAL

P.I. 413+72.24

N 59°13'17" E

P.C. 411+44.82

P.T. 415+89.95

CONST.

EXIST. R/W

LIMITS OF SPECIAL FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67

P.I. 406+62.00

RELOCATED HWY. 79 - RETAIN

CONST. LIMITS

EXIST. R/W

EXIST. R/W

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

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+61.52)
WHITE RIVER BRIDGE (STA. 475+61.52-STA. 519+32.20)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER

PI = 413+72.24
Δ = 28°56'01" RT.
D = 06°30'00"
T = 227.42'
L = 445.13'
PC = 411+44.82
PT = 415+89.95

EXIST. HWY. 79 TEMP. CONNECTION

240 230 220 210 200 190 180 170 160

400+00 401+00 402+00 403+00 404+00 405+00 406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00

12/26/2013

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	34	86

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

REMOVAL & DISPOSAL OF GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
416+11.09	418+29.84	LT.	218.75
416+11.09	418+29.84	RT.	218.75

OLD RIVER LAKE BRIDGE - BR. NO. B1253
STA. 418+52.77 - STA. 456+03.55
3740' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH 55 STEEL GIRDER SPANS WITH SUBSTRUCTURE
TWO R.C. COLUMNS PER BENT ON FOUNDATION PILING
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 1) = 1.00 LUMP SUM

EXIST. R/W

CONST. LIMITS

415

420

425

430

STA. 418+52.77, END EXIST. HWY. 79 CONNECTOR EMBANKMENT REMOVAL & BEGIN BRIDGE REMOVAL OF OLD RIVER LAKE BRIDGE

N 59°13'17" E

C.L. REMOVAL N 59°28'45" E

N 59°28'45" E

P.T. 415+89.95

CONST. LIMITS

P.I. 418+57.34
Δ = 0°15'28" RT.

WORK ROAD

STORAGE AREA

STORAGE AREA

P.I. 430+19.14
Δ = 0°16'20" RT.

EXISTING ACCESS ROAD TO BE RETAINED AND REHABILITATED (WIDTH AND LOCATION ARE APPROXIMATED)

PI = 413+72.24
Δ = 28°56'01" RT.
D = 06°30'00"
T = 227.42'
L = 445.13'
PC = 411+44.82
PT = 415+89.95

REMOVAL & DISPOSAL OF RETAINING WALL

STA.	STA.	SIDE	LIN. FT.
418+22.65	418+52.65	LT.	30
418+22.65	418+52.65	RT.	30

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+61.52)
WHITE RIVER BRIDGE (STA. 475+61.52-STA. 519+32.20)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER

LIMITS OF SPECIAL FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67

EXIST. HWY. 79

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

EXIST. R/W

250 240 230 220 210 200 190 180 170

415+00 416+00 417+00 418+00 419+00 420+00 421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00

12/26/2013

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	35	86

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-13-16

EXIST. R/W

OLD RIVER LAKE BRIDGE - BR. NO. B1253
STA. 418+52.77 - STA. 456+03.55
3740' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH 55 STEEL GIRDER SPANS WITH SUBSTRUCTURE
TWO R.C. COLUMNS PER BENT ON FOUNDATION PILING
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 1) - 1.00 LUMP SUM

N

430 435 440 445

N 59°28'45" E

P.I. 430+19.14
Δ = 0°16'20" RT

N 59°45'05" E

C.L. REMOVAL

WORK ROAD

STORAGE AREA

P.I. 439+00.00
0°09'24" LT.

0152'

40'

88'

BOAT RAMP

WORK PLATFORM ON PILES

BOAT RAMP PARKING

LOADING RAMP

WORK PLATFORM ON PILES

N 59°35'41" E

LOADING RAMP

STORAGE AREA

P.I. 445+30.50
Δ = 1°02'37" RT

EXISTING ACCESS ROAD TO BE RETAINED AND REHABILITATED (WIDTH AND LOCATION ARE APPROXIMATED)

14

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+61.52)
WHITE RIVER BRIDGE (STA. 475+61.52-STA. 519+32.20)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER

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

LIMITS OF SPECIAL FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67

EXIST. HWY. 79

FIRST OLD RIVER LAKE (WEST CROSSING):
STA. 440+10 - STA. 443+40
THIS STREAM IS CLASSIFIED AS AN OX-BOW LAKE.
THE TOP OF CHANNEL ELEVATION IS 165 FT. MSL.
REFER TO SECTION 110.06(c) TEMPORARY FILL OF THE 2014 STANDARD SPECIFICATIONS.

250 240 230 220 210 200 190 180 170

430+00 431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00

R110540.DGN 12/26/2013

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	36	86

(2) PLAN AND PROFILE SHEETS

OLD RIVER LAKE BRIDGE - BR. NO. B1253
STA. 418+52.77 - STA. 456+03.55
3740' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH 55 STEEL GIRDER SPANS WITH SUBSTRUCTURE
TWO R.C. COLUMNS PER BENT ON FOUNDATION PILING
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 1) = 1.00 LUMP SUM

REMOVAL & DISPOSAL OF GUARDRAIL

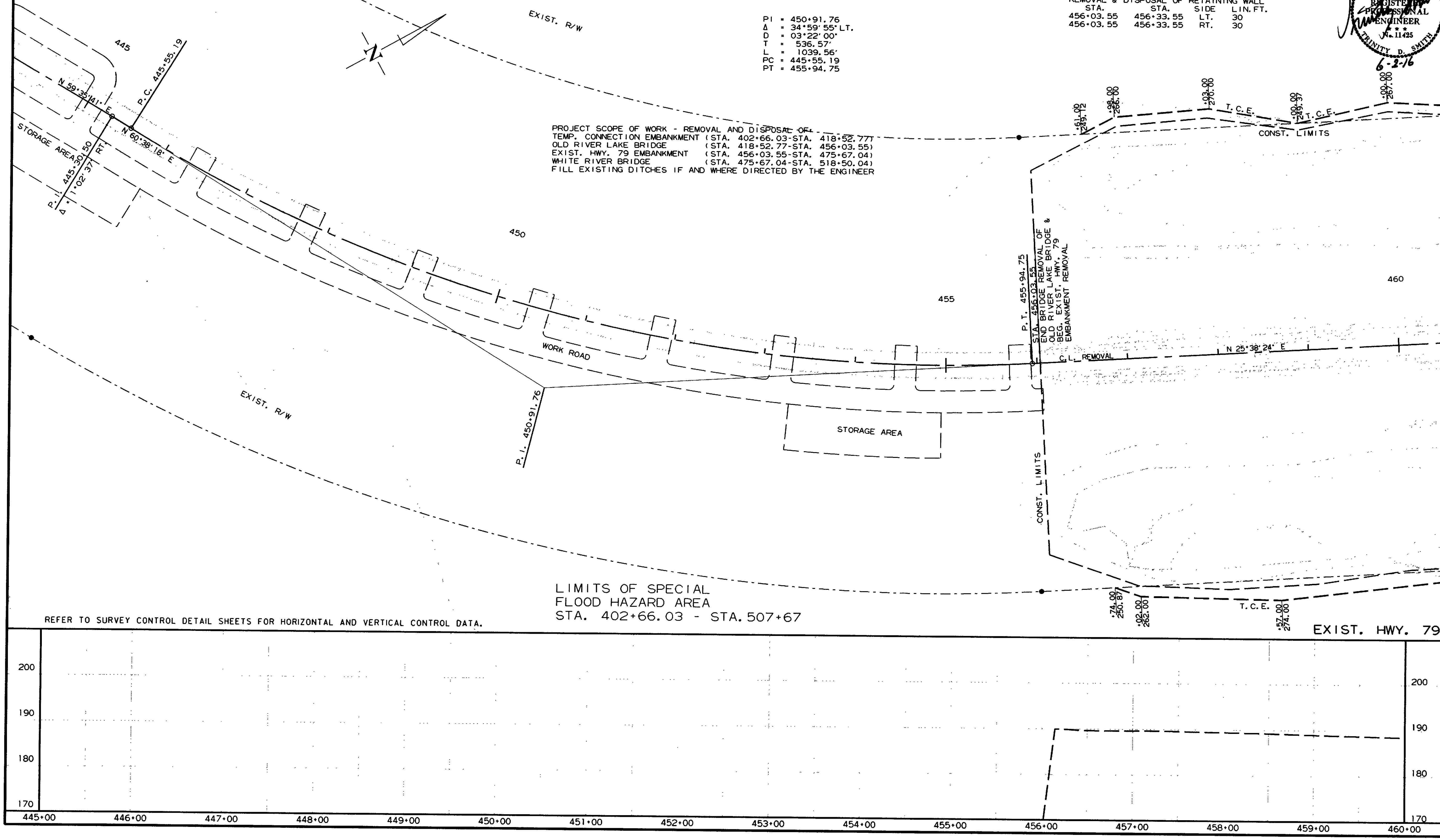
STA.	STA.	SIDE	LIN. FT.
456+32	460+00	LT.	368
456+32	460+00	RT.	368

REMOVAL & DISPOSAL OF RETAINING WALL

STA.	STA.	SIDE	LIN. FT.
456+03.55	456+33.55	LT.	30
456+03.55	456+33.55	RT.	30

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
6-2-16

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+67.04)
WHITE RIVER BRIDGE (STA. 475+67.04-STA. 518+50.04)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER



LIMITS OF SPECIAL
FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67

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

EXIST. HWY. 79

R110540.DGN 6/1/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	37	86

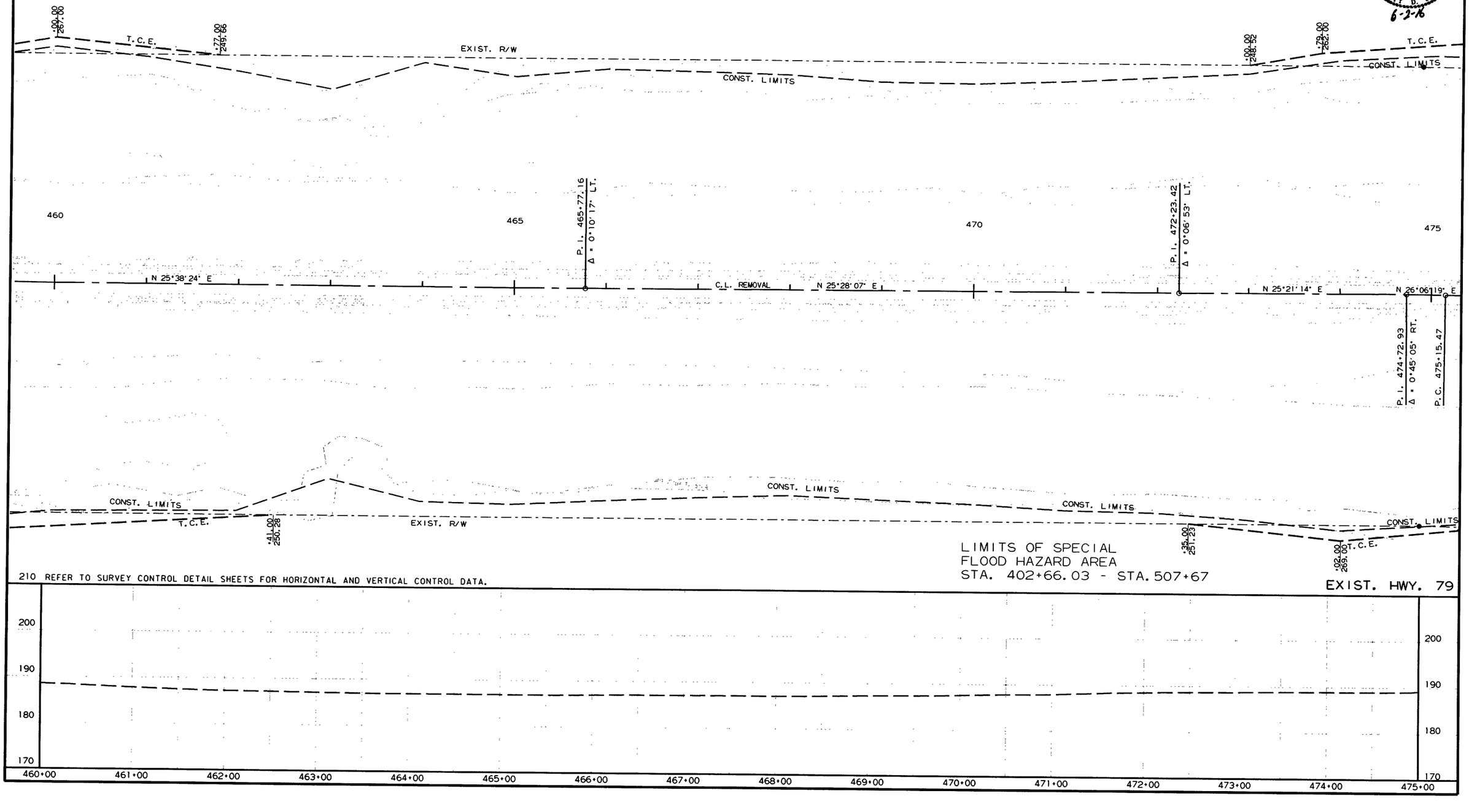
(2) PLAN AND PROFILE SHEETS

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+67.04)
WHITE RIVER BRIDGE (STA. 475+67.04-STA. 518+50.04)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER

REMOVAL & DISPOSAL OF GUARDRAIL

STA.	STA.	SIDE	LIN.FT.
460+00	475+00	LT.	1500
460+00	475+00	RT.	1500

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16

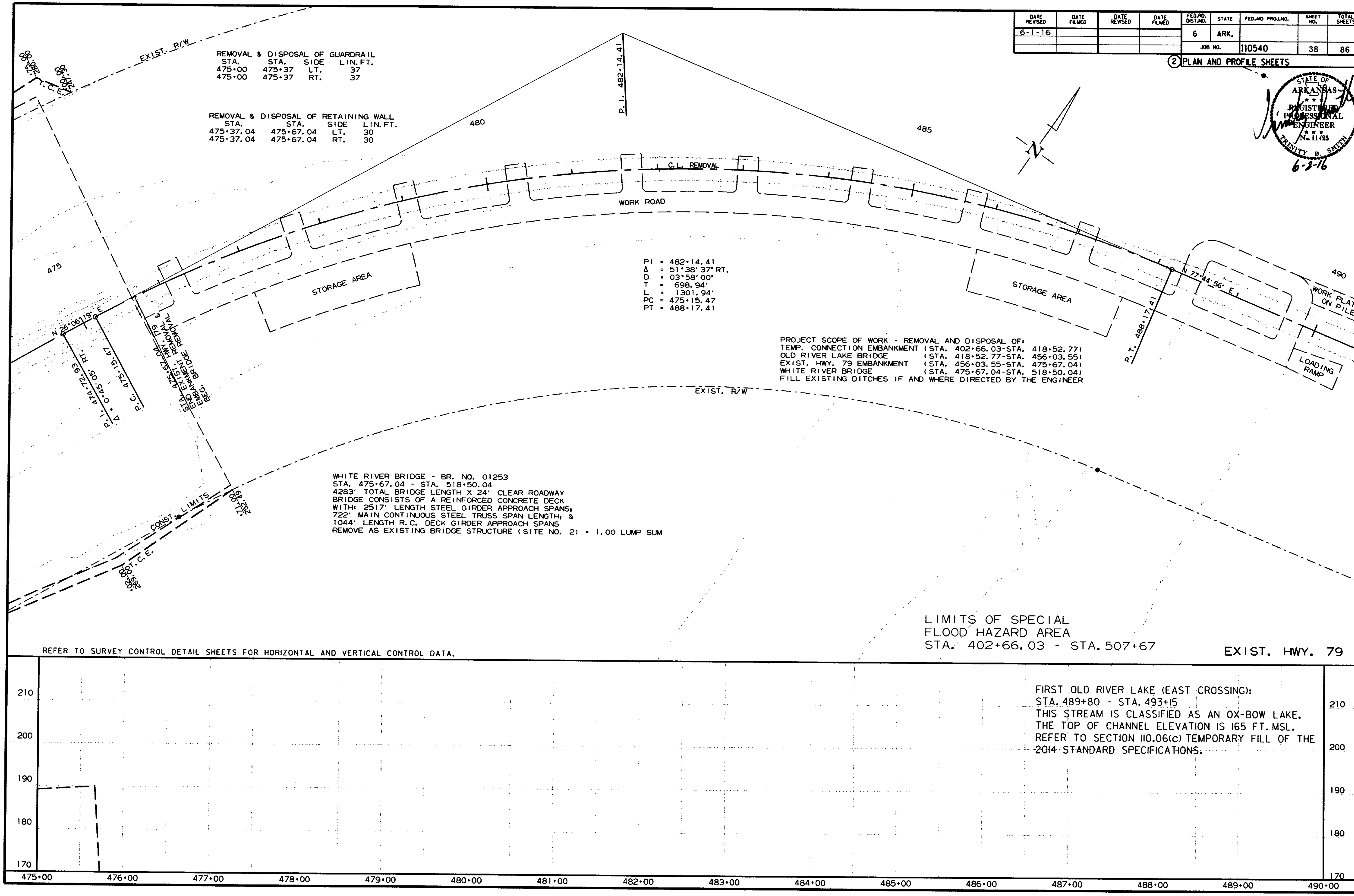


6/1/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	38	86

(2) PLAN AND PROFILE SHEETS



REMOVAL & DISPOSAL OF GUARDRAIL
STA. STA. SIDE LIN.FT.
475+00 475+37 LT. 37
475+00 475+37 RT. 37
REMOVAL & DISPOSAL OF RETAINING WALL
STA. STA. SIDE LIN.FT.
475+37.04 475+67.04 LT. 30
475+37.04 475+67.04 RT. 30
EXIST. R/W
T.C.E.
P.I. 482+14.41
C.L. REMOVAL
WORK ROAD
STORAGE AREA
STORAGE AREA
PI = 482+14.41
Δ = 51°38'37" RT.
D = 03°58'00"
T = 698.94'
L = 1301.94'
PC = 475+15.47
PT = 488+17.41
N 26°06'19" E
N 77°44'56" E
P.I. 474+72.93 Δ = 0°45'05" RT.
P.C. 475+15.47
STA. 475+67.04 END EXIST. HWY. 79 EMBANKMENT REMOVAL & BEG. BRIDGE REMOVAL
P.T. 488+17.41
WORK PLATFORM ON PILES
LOADING RAMP
PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+67.04)
WHITE RIVER BRIDGE (STA. 475+67.04-STA. 518+50.04)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER
EXIST. R/W
WHITE RIVER BRIDGE - BR. NO. 01253
STA. 475+67.04 - STA. 518+50.04
4283' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH: 2517' LENGTH STEEL GIRDER APPROACH SPANS;
722' MAIN CONTINUOUS STEEL TRUSS SPAN LENGTH; &
1044' LENGTH R.C. DECK GIRDER APPROACH SPANS
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 2) = 1.00 LUMP SUM
CONST. LIMITS
T.C.E.
LIMITS OF SPECIAL
FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
EXIST. HWY. 79
FIRST OLD RIVER LAKE (EAST CROSSING):
STA. 489+80 - STA. 493+15
THIS STREAM IS CLASSIFIED AS AN OX-BOW LAKE.
THE TOP OF CHANNEL ELEVATION IS 165 FT. MSL.
REFER TO SECTION 110.06(c) TEMPORARY FILL OF THE
2014 STANDARD SPECIFICATIONS.
210
200
190
180
170
475+00 476+00 477+00 478+00 479+00 480+00 481+00 482+00 483+00 484+00 485+00 486+00 487+00 488+00 489+00 490+00

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
6-2-16

6/1/2016
R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
				JOB NO.		110540	39	86

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
6-2-16

EXIST. R/W

N 77°44'56" E

WORK PLATFORM ON PILES

LOADING RAMP

490

495

500

505

N

P.I. 497+69.75

WORK ROAD

STORAGE AREA

P.C. 495+09.16

P.I. 500+28.51

C.L. REMOVAL

N 89°31'15" E

EXIST. R/W

(79)

T.C.E.

55.00

65.00

PI = 497+69.75
Δ = 11°46'20" RT.
D = 02°16'00"
T = 260.60'
L = 519.36'
PC = 495+09.16
PT = 500+28.51

WHITE RIVER BRIDGE - BR. NO. 01253
STA. 475+67.04 - STA. 518+50.04
4283' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH: 2517' LENGTH STEEL GIRDER APPROACH SPANS;
722' MAIN CONTINUOUS STEEL TRUSS SPAN LENGTH; &
1044' LENGTH R.C. DECK GIRDER APPROACH SPANS
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 2) - 1.00 LUMP SUM

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+67.04)
WHITE RIVER BRIDGE (STA. 475+67.04-STA. 518+50.04)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER

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

LIMITS OF SPECIAL FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67

EXIST. HWY. 79

FIRST OLD RIVER LAKE (EAST CROSSING):
STA. 489+80 - STA. 493+15
THIS STREAM IS CLASSIFIED AS AN OX-BOW LAKE.
THE TOP OF CHANNEL ELEVATION IS 165 FT. MSL.
REFER TO SECTION 110.06(c) TEMPORARY FILL OF THE 2014 STANDARD SPECIFICATIONS.

WHITE RIVER:
STA. 501+25 - STA. 506+40
THIS STREAM IS CLASSIFIED AS PERENNIAL.
THE TOP OF CHANNEL ELEVATION IS 165 FT. MSL.
REFER TO SECTION 110.06(c) TEMPORARY FILL OF THE 2014 STANDARD SPECIFICATIONS.

250 240 230 220 210 200 190 180 170

490+00 491+00 492+00 493+00 494+00 495+00 496+00 497+00 498+00 499+00 500+00 501+00 502+00 503+00 504+00 505+00

6/1/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-1-16				6	ARK.			
10-17-16				JOB NO.		110540	40	86

(2) PLAN AND PROFILE SHEETS

WHITE RIVER BRIDGE - BR. NO. 01253
STA. 475+67.04 - STA. 518+50.04
4283' TOTAL BRIDGE LENGTH X 24' CLEAR ROADWAY
BRIDGE CONSISTS OF A REINFORCED CONCRETE DECK
WITH: 2517' LENGTH STEEL GIRDER APPROACH SPANS;
722' MAIN CONTINUOUS STEEL TRUSS SPAN LENGTH; &
1044' LENGTH R.C. DECK GIRDER APPROACH SPANS
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 2) - 1.00 LUMP SUM

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
508+28	510+78	RT.	279
511+50	511+67	LT.	18

4' CHAIN LINK FENCE

STA.	STA.	SIDE	LIN. FT.
511+50	511+70	LT.	20

STA. 511+40 - INSTALL
18" x 54' PIPE CULVERT
(18" SIDE DRAIN)

STA. 511+41 - IN PLACE
18" x 24' PIPE CULVERT
REMOVE

STA. 511+21 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 513+20 - INSTALL
22" x 14" x 44' ARCH PIPE CULVERT
(22" x 14" ARCH SIDE DRAIN)

STA. 513+54 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 514+65 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 514+96 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 515+62 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

REMOVAL OF EXISTING
ASPHALT PAVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-17-16

LIMITS OF SPECIAL
FLOOD HAZARD AREA
STA. 508+34 - STA. 523+33.75

STA. 517+04 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

ROAD PREVIOUSLY
REMOVED BY OTHERS

STA. 508+00-STA. 510+97 - IN PLACE
BOLLARDS
RETAIN

N

505 510 515 520

WORK PLATFORM ON PILES

LOADING RAMP

FLOODPLAIN LIMITS

PN:82 PD:STD.AHTD MON.STAMPED PN:82

PN:83 PD:STD.AHTD MON.STAMPED PN:83

PN:80 PD:STD.AHTD MON.STAMPED PN:80

PN:81 PD:STD.AHTD MON.STAMPED PN:81

PN:79 PD:STD.AHTD MON.STAMPED PN:79

PN:78 PD:STD.AHTD MON.STAMPED PN:78

EXIST. R/W

EXIST. ROW

CONST. LIMITS

N 89°31' 15" E

C.L. REMOVAL

T.C.E.

CARTER ST.

S. 2ND ST.

GUYDON ST.

VANCE ST.

EXIST. 79

STA. 518+50.04
END BRIDGE REMOVAL

LIMITS OF SPECIAL
FLOOD HAZARD AREA
STA. 402+66.03 - STA. 507+67

PROJECT SCOPE OF WORK - REMOVAL AND DISPOSAL OF:
TEMP. CONNECTION EMBANKMENT (STA. 402+66.03-STA. 418+52.77)
OLD RIVER LAKE BRIDGE (STA. 418+52.77-STA. 456+03.55)
EXIST. HWY. 79 EMBANKMENT (STA. 456+03.55-STA. 475+67.04)
WHITE RIVER BRIDGE (STA. 475+67.04-STA. 518+50.04)
FILL EXISTING DITCHES IF AND WHERE DIRECTED BY THE ENGINEER
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 511+07.00
BEGIN EWAN ST.

STA. 511+21 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 513+35- IN PLACE
12" x 21' PIPE CULVERT
REMOVE

STA. 513+46 - IN PLACE
18" x 30' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18" x 48' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YDS.

STA. 515+94 - IN PLACE
18" x 36' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18" x 58' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YDS.

STA. 517+47 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 518+23 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 519+01 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

REMOVAL & DISPOSAL OF RETAINING WALL

STA.	STA.	SIDE	LIN. FT.
518+50.04	521+30.04	LT.	280
518+50.04	521+30.04	RT.	280

WHITE RIVER:
STA. 501+25 - STA. 506+40
THIS STREAM IS CLASSIFIED AS PERENNIAL.
THE TOP OF CHANNEL ELEVATION IS 165 FT. MSL.
REFER TO SECTION 110.06(c) TEMPORARY FILL OF THE
2014 STANDARD SPECIFICATIONS.

P.V.I. 511+07.00 ELEV. 172.63
P.V.C. 513+00.00 ELEV. 173.02
K 133.98 VC-100' e-0.09'
P.V.T. 514+00.00 ELEV. 173.60
P.V.I. 514+93.04 ELEV. 174.48
P.V.C. 515+93.05 ELEV. 173.93
K 117.08 VC-100' e-0.11'
P.V.T. 516+93.05 ELEV. 173.80
K 284.25 VC-300' e-0.40'
K 66.56 VC-100' e-0.19'

0.20% 0.95% -0.55% 0.30%

STA. 511+40.00
F.L. INLET LT.=169.18
STA. 511+40.00
F.L. OUTLET RT.=169.07

P.V.I. 513+50.00 ELEV. 173.12
P.V.C. 514+43.04 ELEV. 174.01
P.V.T. 515+43.04 ELEV. 174.20
P.V.I. 516+43.05 ELEV. 173.65
P.V.C. 518+69.59 ELEV. 174.33

STA. 513+20.00
F.L. INLET LT.=170.21
STA. 513+20.00
F.L. OUTLET RT.=170.20

EXIST. HWY. 79

210 200 190 180 170 160 150 140 130 120

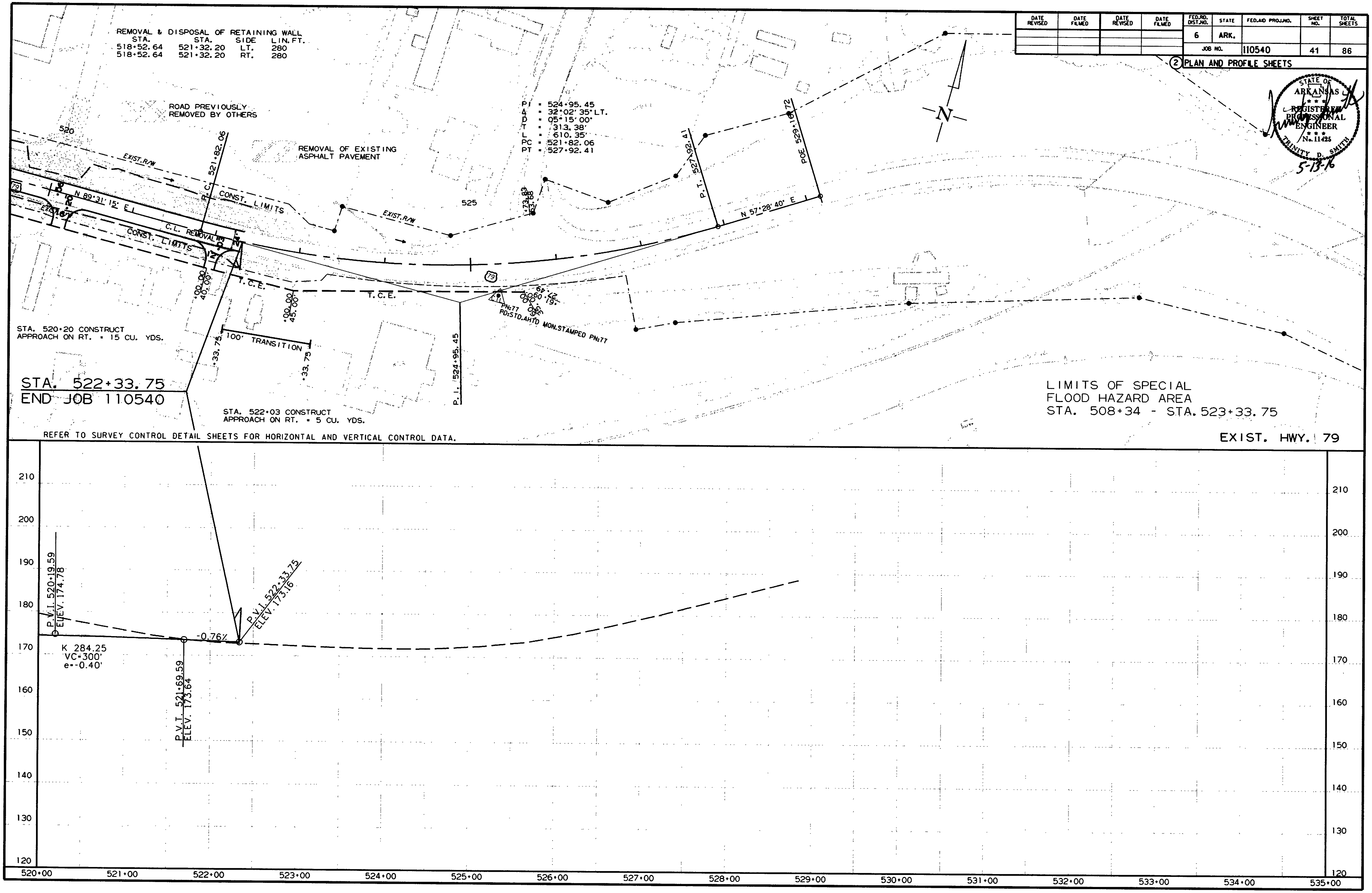
505+00 506+00 507+00 508+00 509+00 510+00 511+00 512+00 513+00 514+00 515+00 516+00 517+00 518+00 519+00 520+00

10/17/2016

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	41	86

(2) PLAN AND PROFILE SHEETS



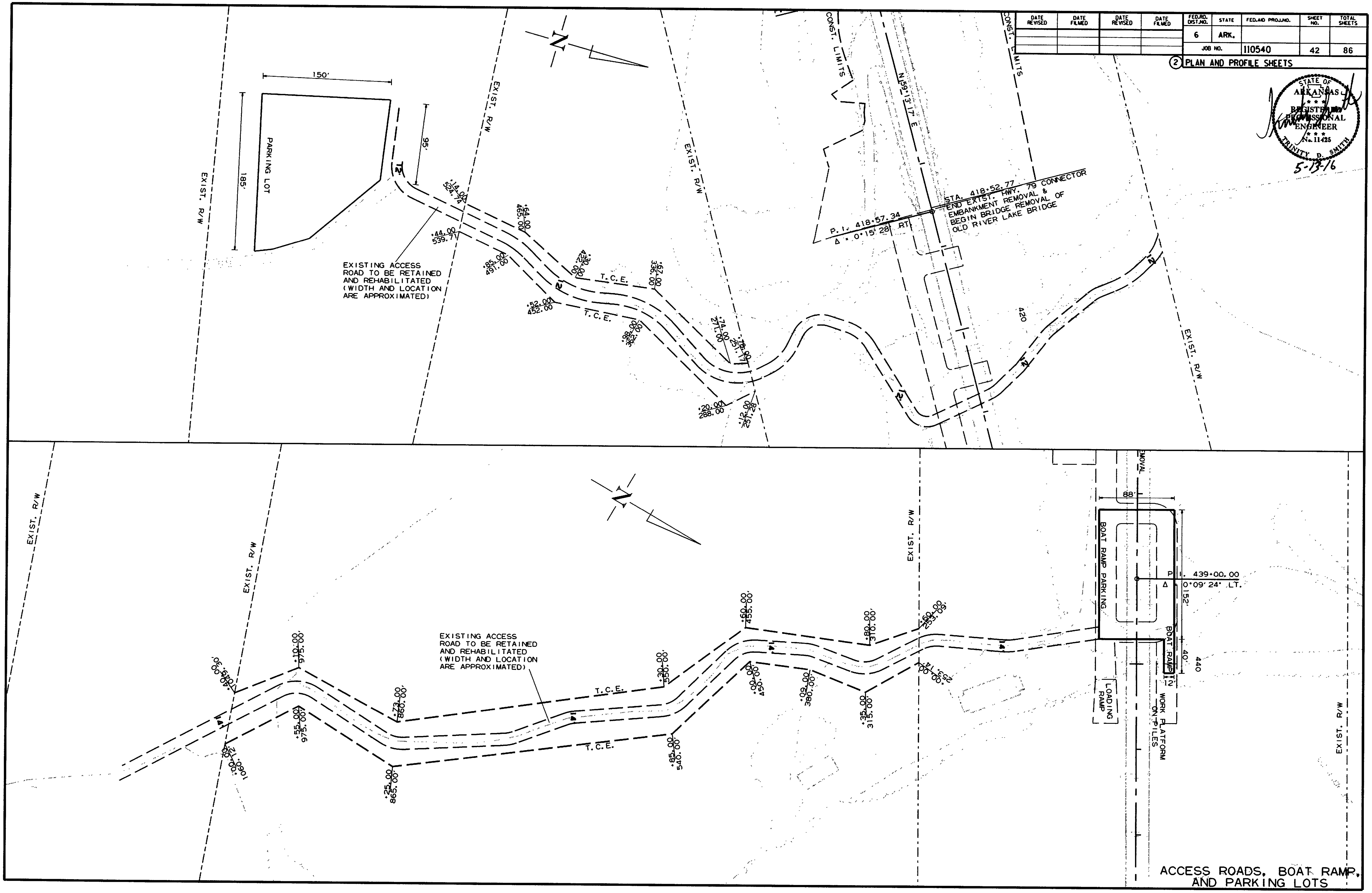
REMOVAL & DISPOSAL OF RETAINING WALL
STA. STA. SIDE LIN.FT.
518+52.64 521+32.20 LT. 280
518+52.64 521+32.20 RT. 280
ROAD PREVIOUSLY REMOVED BY OTHERS
REMOVAL OF EXISTING ASPHALT PAVEMENT
PI = 524+95.45
Δ = 32°02′35″LT.
D = 05°15′00″
T = 313.38′
L = 610.35′
PC = 521+82.06
PT = 527+92.41
EXIST. R/W
CONST. LIMITS
C.L. REMOVAL
N 89°31′15″ E
N 57°28′40″ E
P.C. 521+82.06
P.T. 527+92.41
POE 529+16.72
P.I. 524+95.45
T.C.E.
100′ TRANSITION
PD: STD. AHTD MON. STAMPED PN:77
STA. 520+20 CONSTRUCT APPROACH ON RT. = 15 CU. YDS.
STA. 522+03 CONSTRUCT APPROACH ON RT. = 5 CU. YDS.
STA. 522+33.75
END JOB 110540
LIMITS OF SPECIAL FLOOD HAZARD AREA
STA. 508+34 - STA. 523+33.75
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
EXIST. HWY. 79
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
5-13-16
P.V.I. 520+19.59
ELEV. 174.78
K 284.25
VC=300′
e=-0.40′
P.V.T. 521+69.59
ELEV. 173.64
-0.76%
P.V.I. 522+33.75
ELEV. 173.16
210
200
190
180
170
160
150
140
130
120
520+00
521+00
522+00
523+00
524+00
525+00
526+00
527+00
528+00
529+00
530+00
531+00
532+00
533+00
534+00
535+00

12/26/2013

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	42	86

(2) PLAN AND PROFILE SHEETS

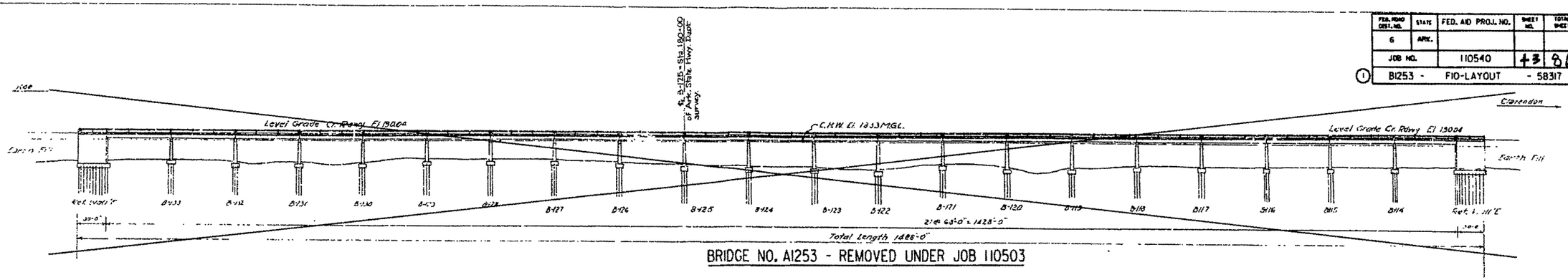


STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
5-13-16
PARKING LOT
150'
185'
95'
EXIST. R/W
CONST. LIMITS
N 59°13'17" E
STA. 418+52.77
END EXIST. HWY. 79 CONNECTOR
EMBANKMENT REMOVAL &
BEGIN BRIDGE REMOVAL OF
OLD RIVER LAKE BRIDGE
P.I. 418+57.34
Δ = 0°15'28" RT
EXISTING ACCESS
ROAD TO BE RETAINED
AND REHABILITATED
(WIDTH AND LOCATION
ARE APPROXIMATED)
T.C.E.
420
88'
BOAT RAMP PARKING
P.I. 439+00.00
Δ = 0°09'24" LT.
152'
40'
440
BOAT RAMP TO
LOADING RAMP
WORK PLATFORM ON PILES
ACCESS ROADS, BOAT RAMP, AND PARKING LOTS

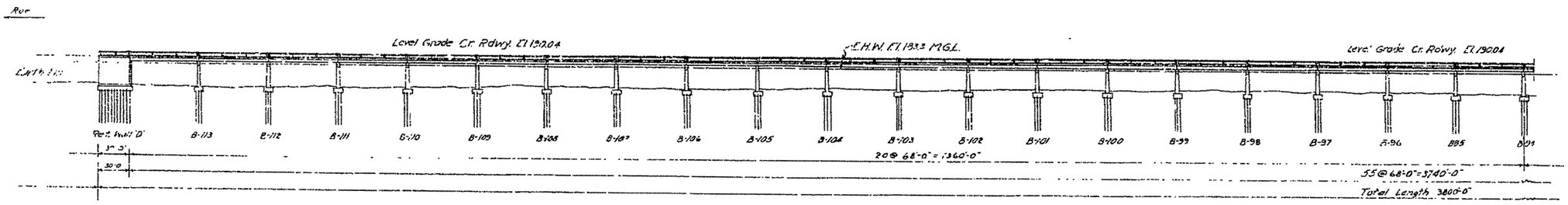
11/8/2011

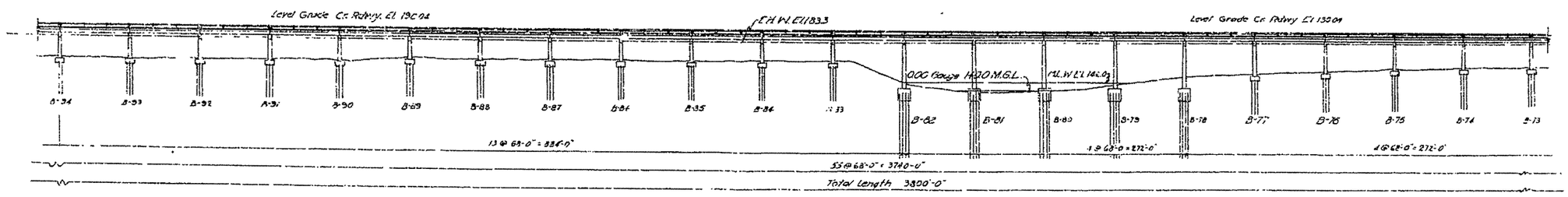
ZBORDER.CEL

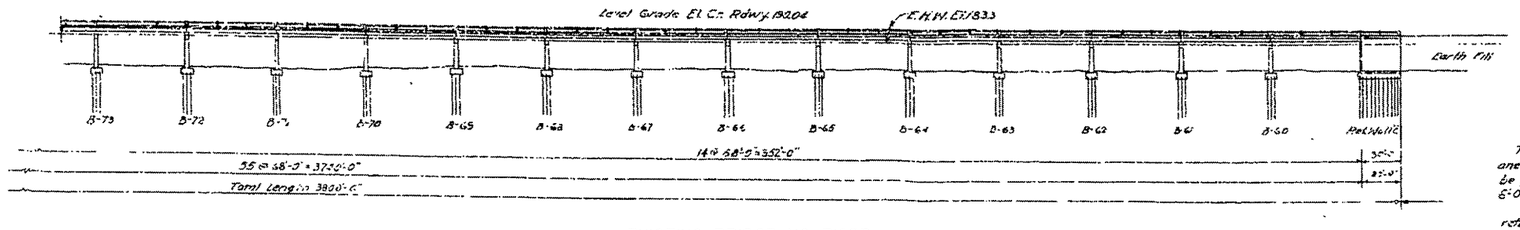
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		110540	+3	86
(1) BI253 -		FIO-LAYOUT	- 58317	



BRIDGE NO. A1253 - REMOVED UNDER JOB 110503







EXISTING BRIDGE NO. BI253

WEST OLD RIVER CROSSING

Note: Elevations, bottoms of Columns:-
Bents 60 to 74 incl El. 1543
Bents 75 to 77 incl. El. 1560
Bents 78 to 82 incl El. 1620

Bent 83 to 113 incl El. 1643
Bents 114 to 125 incl. El. 1620
Bents 126 to 134 incl. El. 1540

The bottom of the remaining footings and retaining walls 'C', 'D', 'E' & 'F' to be placed so that they will be at least 6'-0" below the surface of the ground.

Expansion joints at all bents and retaining walls on West Approach

Revised, West Old River Crossing, Aug. 20, 30
Revised, July 10, '36 K.F.

FOR INFORMATION ONLY

ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
CLARENDON, ARKANSAS
PROFILE OF BRIDGE OVER WEST OLD WHITE RIVER

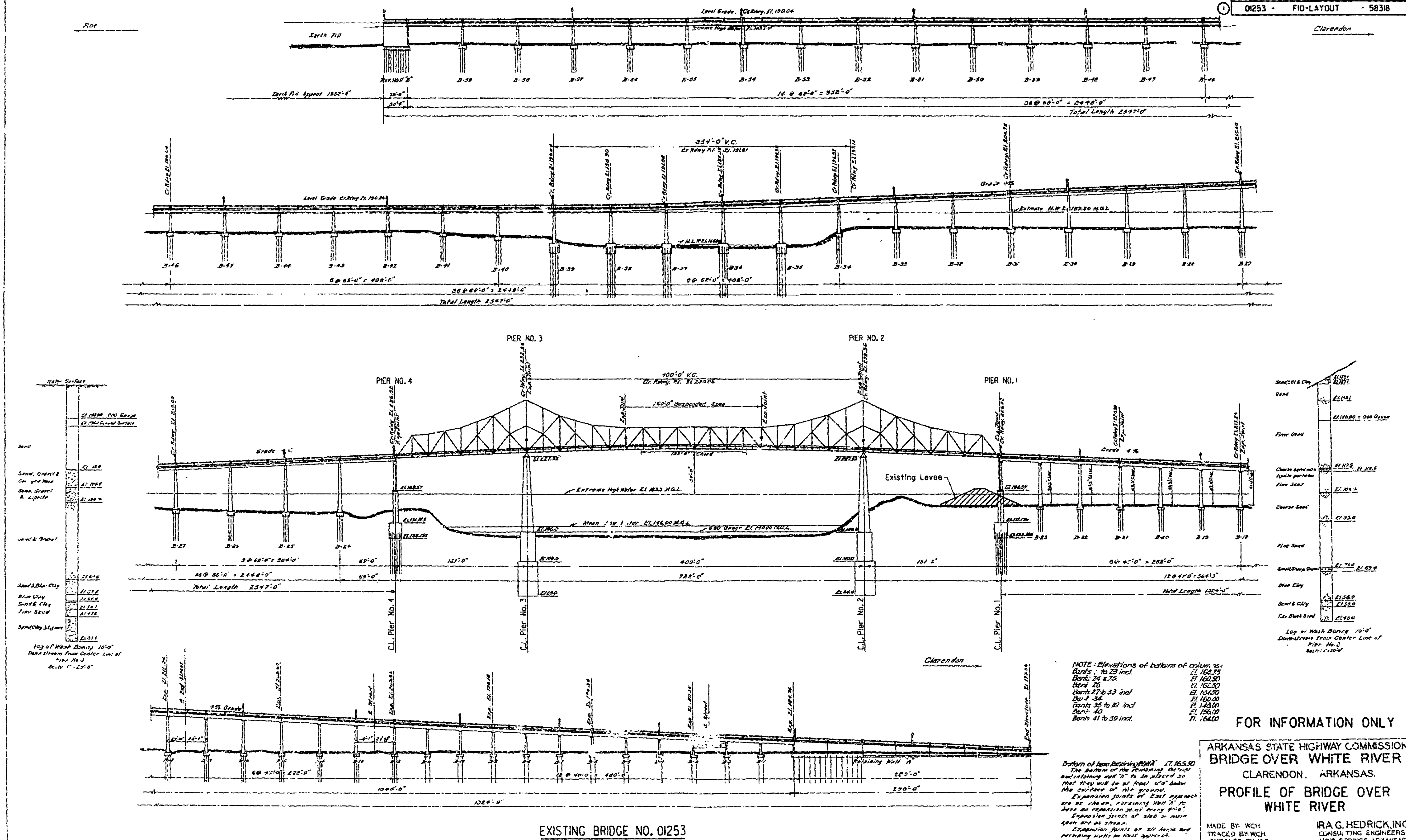
MADE BY W.C.H.
TRACED BY I.C.D.
CHECKED BY W.C.H.
DATE APRIL 22, 1930
SCALE 1" = 50'-0"
SHEET NO. 11

IRA G. HEDRICK, INC.
CONSULTING ENGINEERS
HOT SPRINGS, ARKANSAS

BRIDGE NO. BI253 DRAWING NO. 58317

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		110540	44	86

① 01253 - F10-LAYOUT - 58318



EXISTING BRIDGE NO. 01253

NOTE: Elevations of bottoms of columns:

Bents 1 to 23 incl.	El. 168.75
Bents 24 & 25	El. 160.50
Bent 26	El. 162.50
Bents 27 to 33 incl.	El. 164.50
Bent 34	El. 160.00
Bents 35 to 39 incl.	El. 148.00
Bent 40	El. 156.00
Bents 41 to 59 incl.	El. 164.00

Bottom of base Retaining Wall "A" El. 165.50

The bottom of the remaining footings and retaining wall "A" to be placed so that they will be at least 6'-0" below the surface of the ground.

Expansion joints of East approach are as shown, retaining Wall "A" to have an expansion joint every 40'-0".

Expansion joints of slab of main span are as shown.

Expansion joints at all bents and retaining walls on West approach.

Revised East Approach Ftg & Rtg Walls Column - Sept. 1, 30

FOR INFORMATION ONLY

ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
CLARENDON, ARKANSAS.
PROFILE OF BRIDGE OVER WHITE RIVER

MADE BY: WCH
TRACED BY: WCH
CHECKED BY: ICD
DATE: APRIL 25, 1930
SCALE: 1"=50'-0"

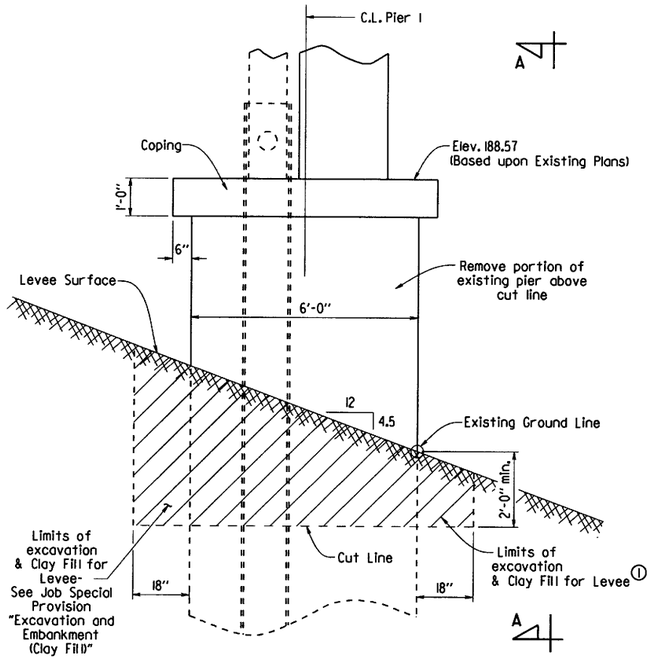
IRA G. HEDRICK, INC.
CONSULTING ENGINEERS
HOT SPRINGS ARKANSAS
SHEET NO. 10

BRIDGE NO. 01253 DRAWING NO. 58318

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	45	86

① BI 253 & 01253 -PIER REMOVAL- 58319

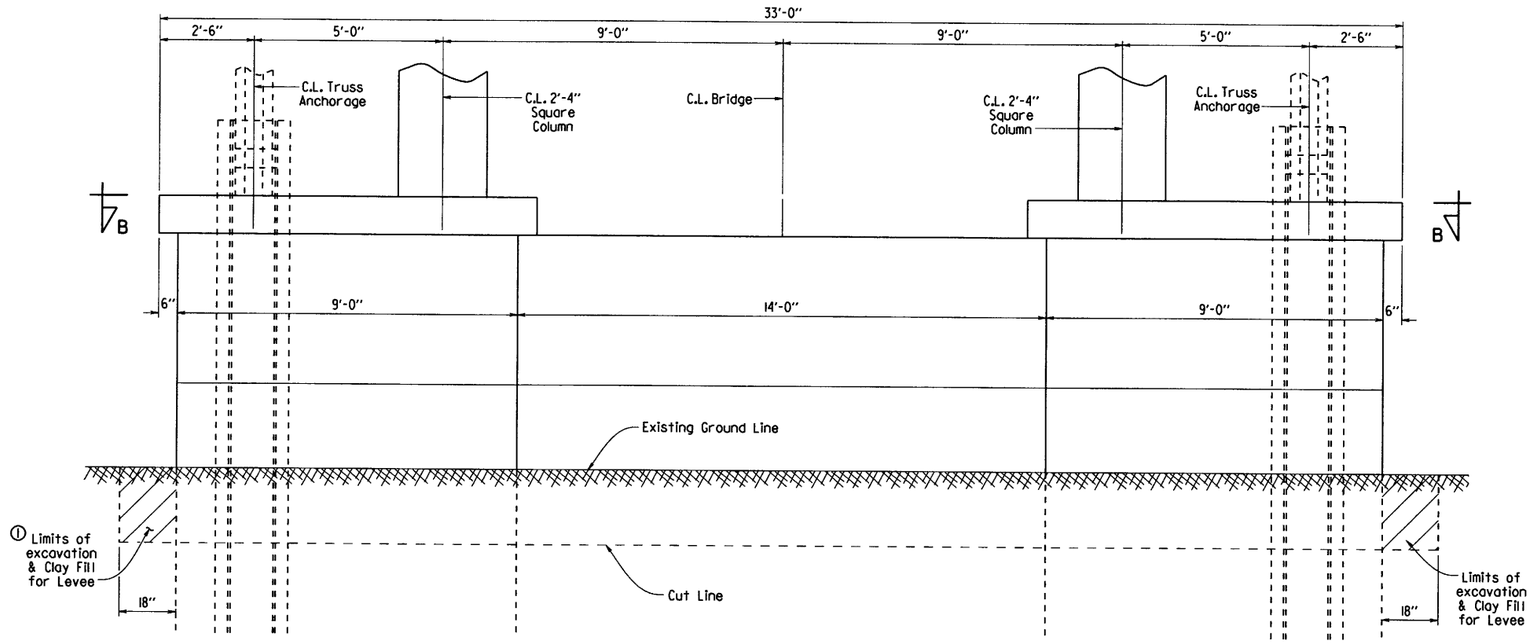
Ahead Stationing



PIER I REMOVAL AT LEVEE (SIDE VIEW)

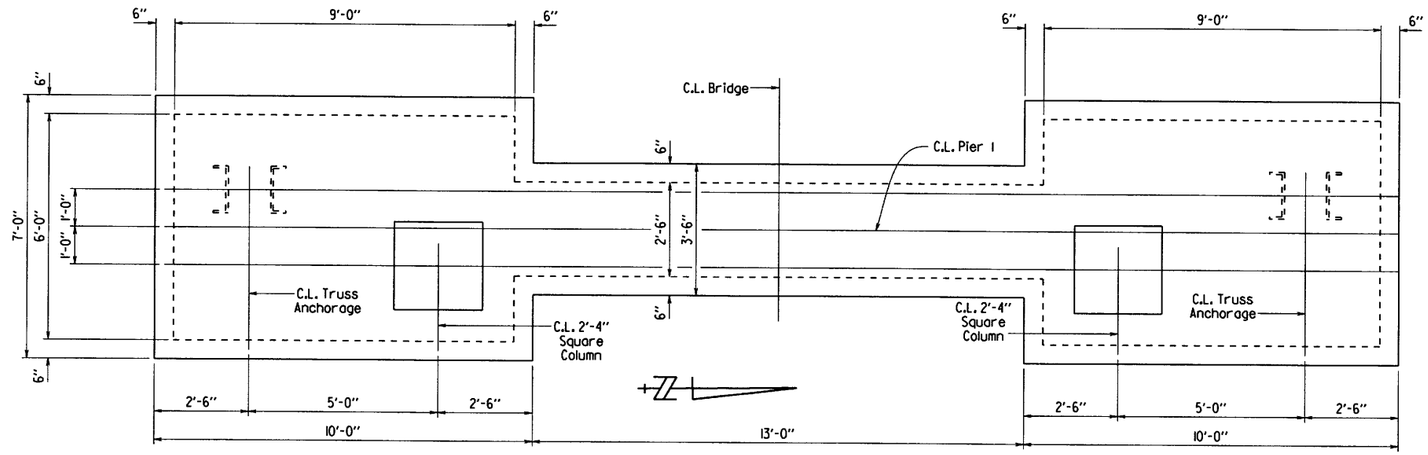
½" = 1'-0"

① Approx. 35 Cu. Yds.



VIEW A-A

½" = 1'-0"



VIEW B-B

½" = 1'-0"

GENERAL NOTES

EXISTING BRIDGE PLANS: Existing Bridge Plans may be obtained from the Construction Contract Procurement Section of the Program Management Division.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway Department Standard Specifications for Highway Construction, 2014 edition, with applicable Supplemental Specifications and Special Provisions. Unless otherwise noted in the plans, Section and Subsection refer to the Standard Construction Specifications.

USGS RECORDING STATION: A US Army Corps of Engineers recording station (USGS Gage No. 7077800) is mounted on Existing Bridge No. 01253. The Corps shall be contacted in a timely manner before the existing bridge is removed to allow them to take possession of and relocate the recording station. US Army Corps contact information: Mr. Edward Dean, Edward.F.Dean@usace.army.mil, (901) 544-3247.

EXISTING BRIDGES: Existing Bridge No. BI 253 (Site No. 1) is 28'-6" wide and 3,740' long. It consists of 55 steel I-beam spans supported by concrete 2-column bents on footings with concrete foundation piling. Existing Bridge No. 01253 (Site No. 2) is 29'-0" wide and 4,283' long. It consists of 37 steel I-beam approach spans, 24 RC Deck Girder Spans, and a 722' long continuous main truss unit. Approach spans on this bridge are supported by 2-column bents on footings with concrete foundation piling. Main truss unit is supported by concrete piers on a concrete base with concrete piling.

REMOVAL AND SALVAGE: Existing Bridge Nos. BI 253 & 01253 shall be removed in accordance with the plans, Special Provisions, Section 205, and the Requirements of the U.S. Coast Guard Permit. All material from the existing bridges shall become the property of the Contractor except the bridge name plates, which will remain the property of the Department.

MAINTENANCE OF TRAFFIC: For details of maintenance of traffic, see Roadway Plans.

NOTE: Any demolition work that produces noise pollution deemed excessive by the Engineer shall be limited to the hours of 7:00 AM and 9:00 PM, Monday thru Saturday.

STATE OF ARKANSAS
CHARLES R. ELLIS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
5-10-16

BRIDGE ENGINEER

DETAILS OF BRIDGE REMOVAL

ROUTE 79 SEC. 13

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

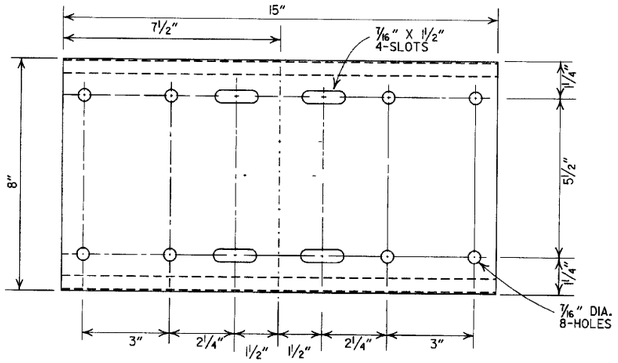
DRAWN BY: KDH DATE: 10-28-14 FILENAME: b110540_PierIRmvlDtls.dgn

CHECKED BY: JAC DATE: 1-28-16 SCALE: AS NOTED

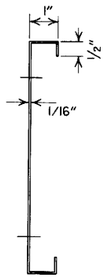
DESIGNED BY: — DATE: —

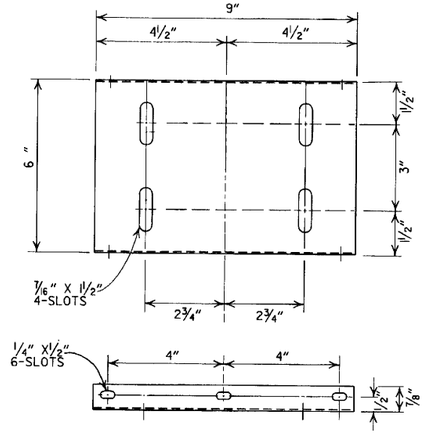
BRIDGE NOS. BI 253 & 01253 DRAWING NO. 58319

PRINT DATE: 5/10/2016

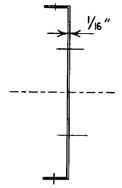


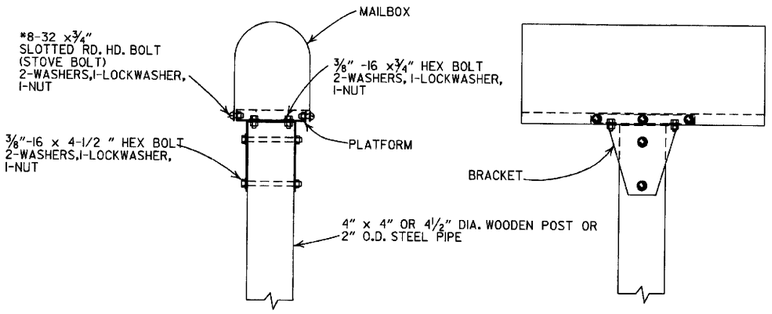
SHELF



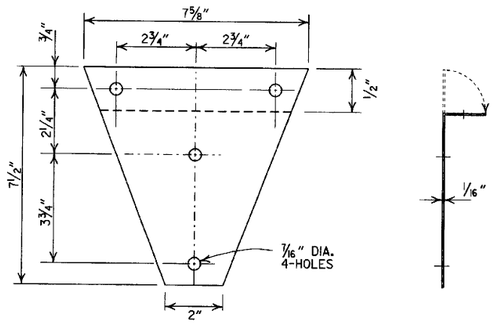


PLATFORM





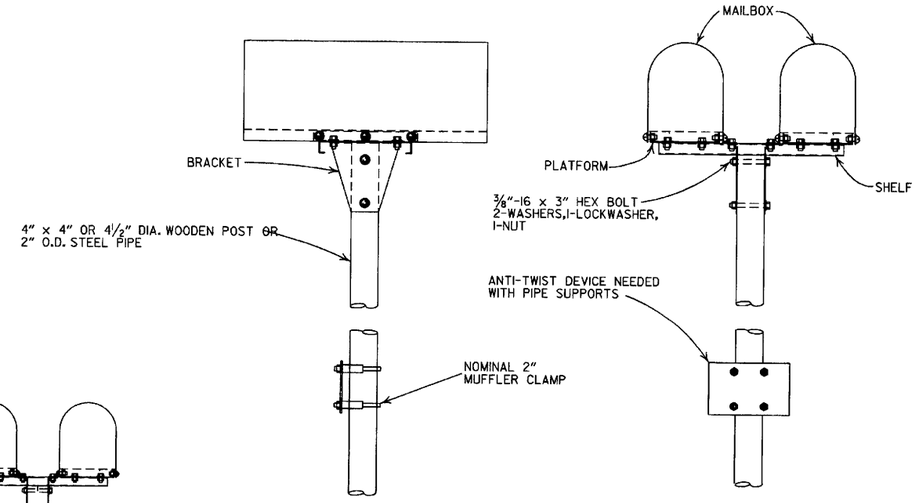
SINGLE INSTALLATION



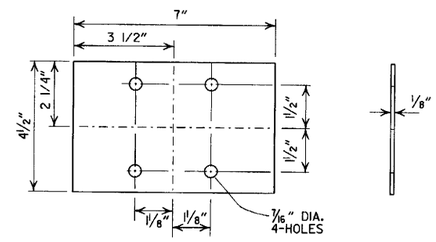
BRACKET

GENERAL NOTES

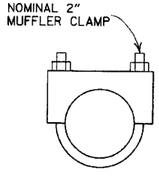
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X ¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



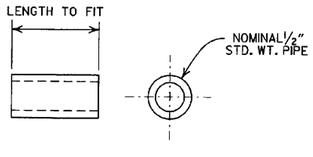
DOUBLE INSTALLATION



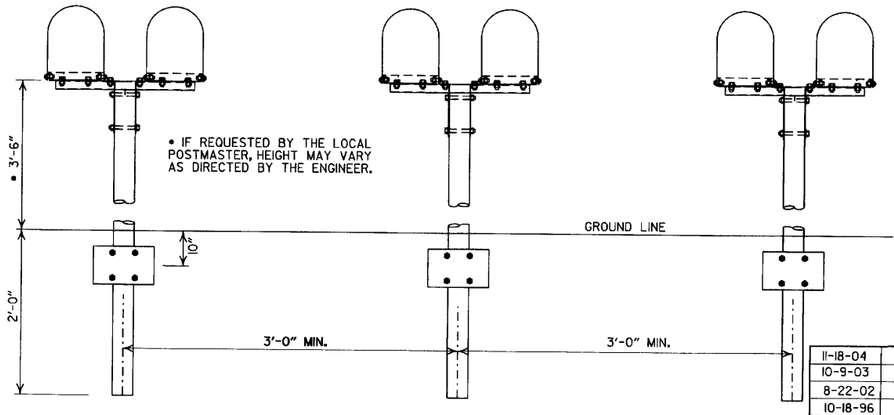
ANTI-TWIST PLATE



CLAMP



SPACER



SPACING FOR MULTIPLE POST INSTALLATION

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

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅞	27
42	51⅛	51	31⅝	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

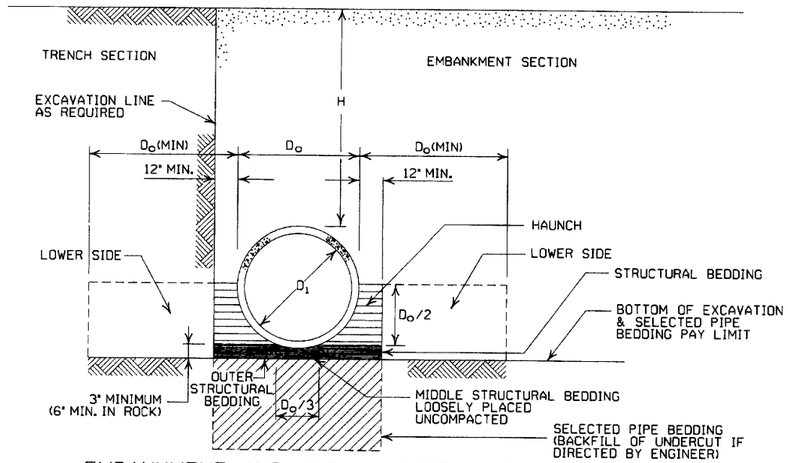
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
▨ = UNDISTURBED SOIL

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

*SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

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

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

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

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

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

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

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL			ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM		
15	17x13	3	0.064	2	15	0.060	2	15
18	21x15	3	0.064	2	15	0.060	2	15
21	24x18	3	0.064	2.25	15	0.060	2.25	15
24	28x20	3	0.064	2.5	15	0.075	2.5	15
30	35x24	3	0.079	3	12	0.075	3	12
36	42x29	3½	0.079	3	12	0.105	3	12
42	49x33	4	0.079	3	12	0.105	3	12
48	57x38	5	0.109	3	13	0.135	3	13
54	64x43	6	0.109	3	14	0.135	3	14
60	71x47	7	0.138	3	15	0.164	3	15
66	77x52	8	0.168	3	15			
72	83x57	9	0.168	3	15			
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM					
				INSTALLATION TYPE 2	INSTALLATION TYPE 1	INSTALLATION TYPE 2	INSTALLATION TYPE 1	
36	40x31	5	0.079	3	2	12	15	
42	46x36	6	0.079	3	2	13	15	
48	53x41	7	0.079	3	2	13	15	
54	60x46	8	0.079	3	2	13	15	
60	66x51	9	0.079	3	2	13	15	
66	73x55	12	0.079	3	2	15	15	
72	81x59	14	0.079	3	2	15	15	
78	87x63	14	0.079	3	2	15	15	
84	95x67	16	0.109	3	2	15	15	
90	103x71	16	0.109	3	2	15	15	
96	112x75	18	0.109	3	2	15	15	
102	117x79	18	0.109	3	2	15	15	
108	128x83	18	0.138	3	2	15	15	

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

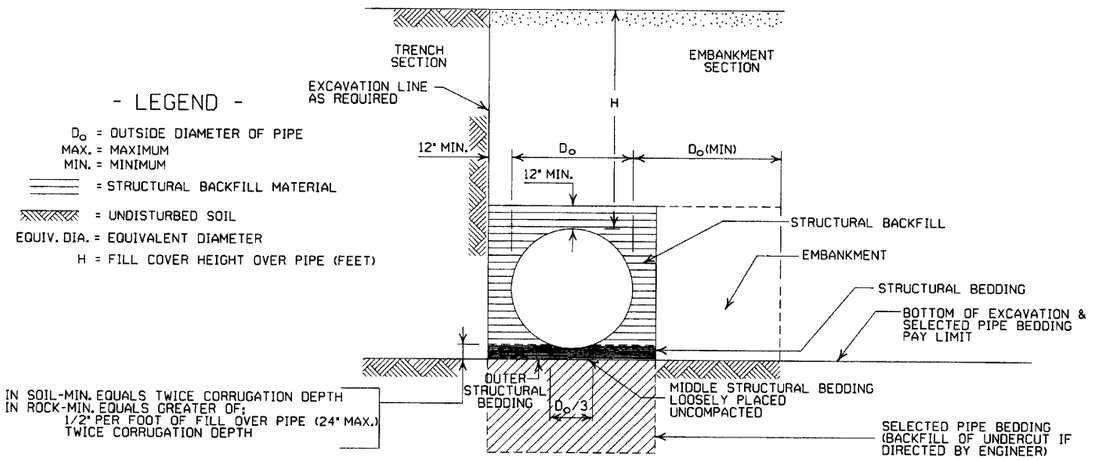
NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" X 1" OR 5" X 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

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

② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

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

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

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

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 TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

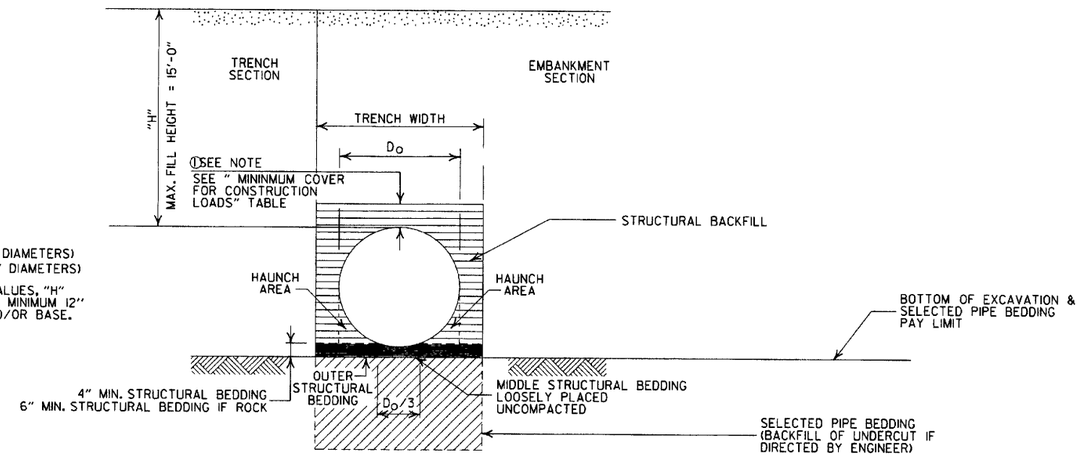
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



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.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFROM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. 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.
4. 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.
5. 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."
6. 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."
7. 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.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

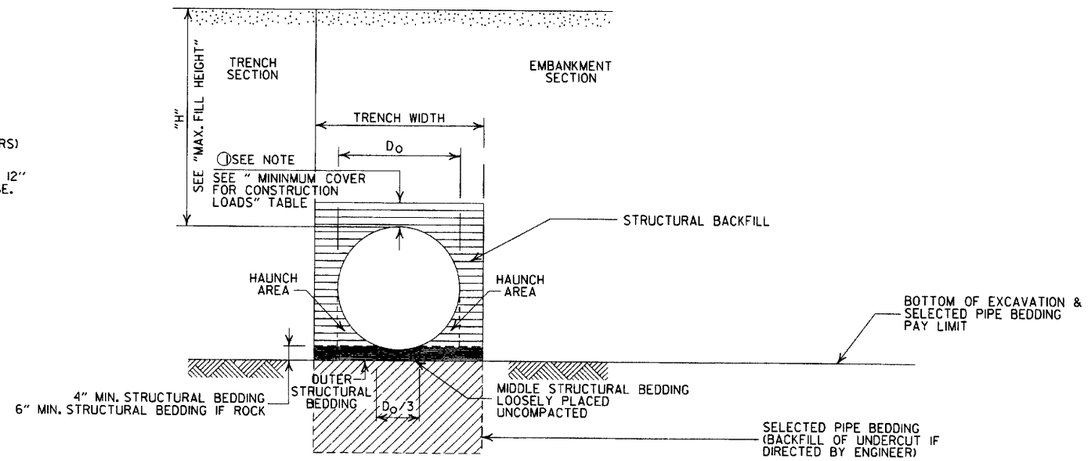
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE. "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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.

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFROM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. 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.
4. 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.
5. 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."
6. 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."
7. 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.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

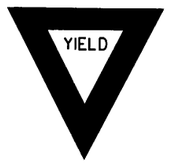
PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

R1-1

STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

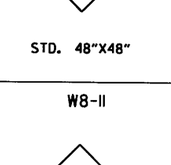
R4-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2

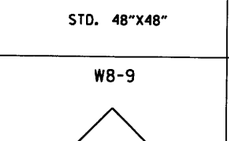
STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



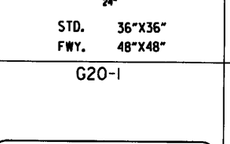
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



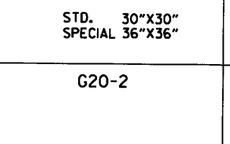
48"X30"

RII-3A



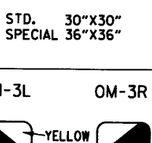
60"X30"

RII-4



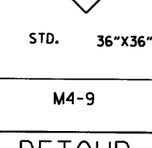
60"X30"

W21-5a



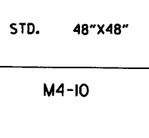
STD. 36"X36"
FWY. 48"X48"

WI-1



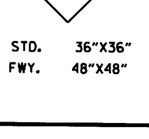
STD. 36"X36"
FWY. 48"X48"

WI-2



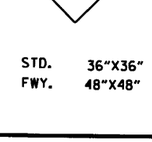
STD. 36"X36"
FWY. 48"X48"

WI-3



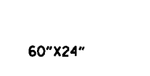
STD. 48"X48"

WI-4



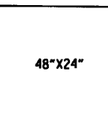
STD. 48"X48"

WI-6



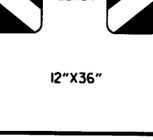
STD. 48"X24"
SPECIAL 60"X30"

WI-8



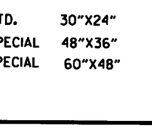
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



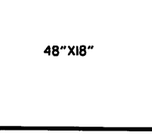
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

EXPWY. 36"X36"
FWY. 48"X48"

W9-2

STD. 36"X36"
FWY. 48"X48"

WI3-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

STD. 36"X36"
FWY. 48"X48"

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

WI-4b

STD. 48"X48"

R56-1

STD. 18"X18"

W8-11

STD. 36"X36"
FWY. 48"X48"

W8-9

STD. 36"X36"
FWY. 48"X48"

G20-1

60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1

36"X60"

• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE
	AHEAD

GENERAL NOTES:

1. 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.
2. 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.
3. 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.
- 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- 5. 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.
6. 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.
7. 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.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. 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.
10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

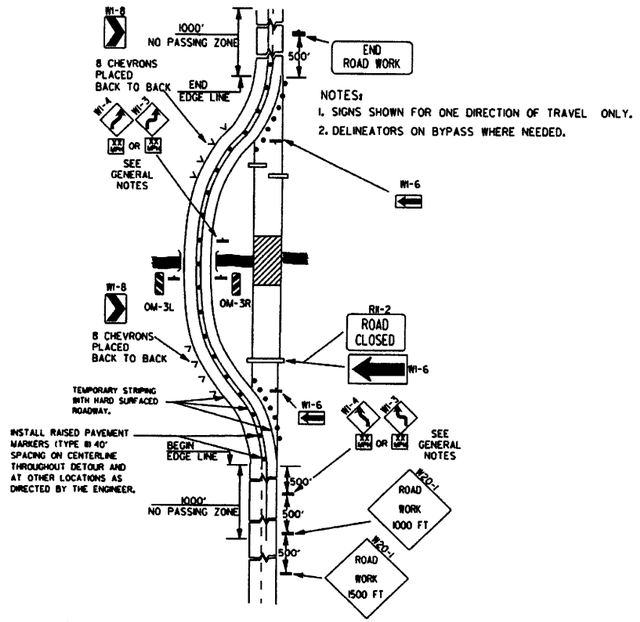
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

DATE	REVISION	FILMED
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
8-18-98	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	

ARKANSAS STATE HIGHWAY COMMISSION

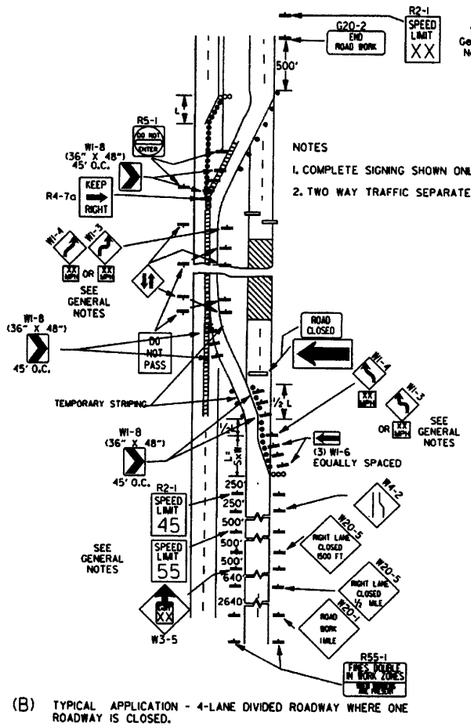
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



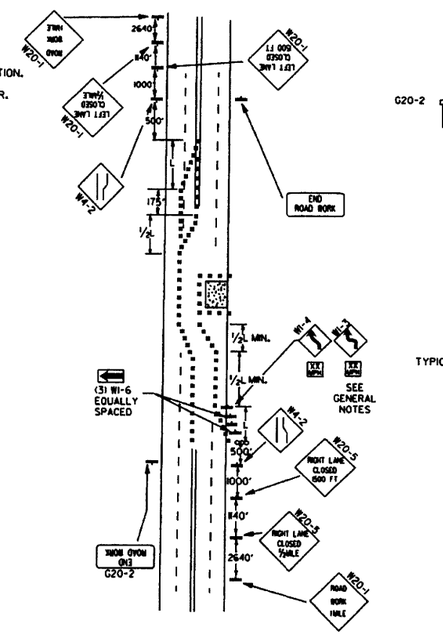
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

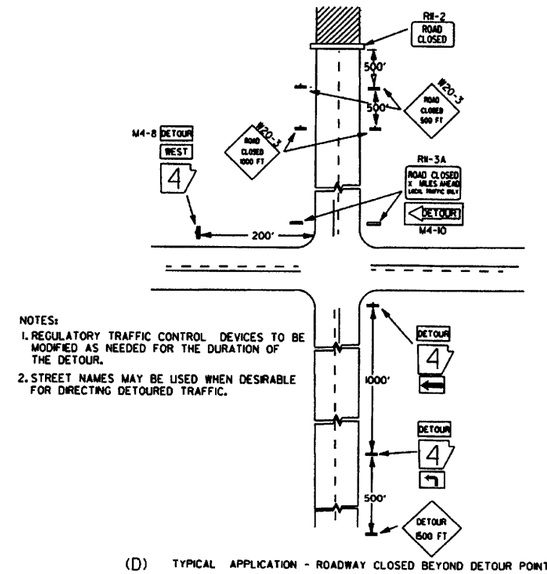


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

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

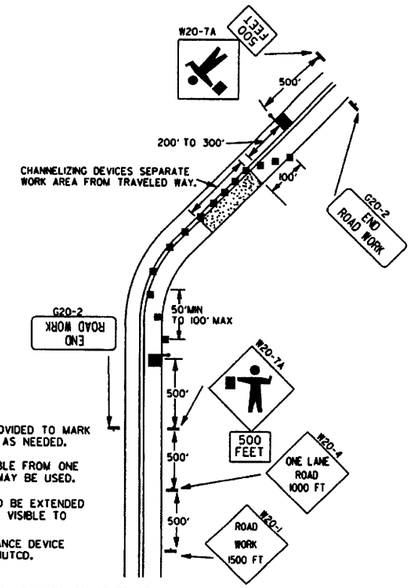


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



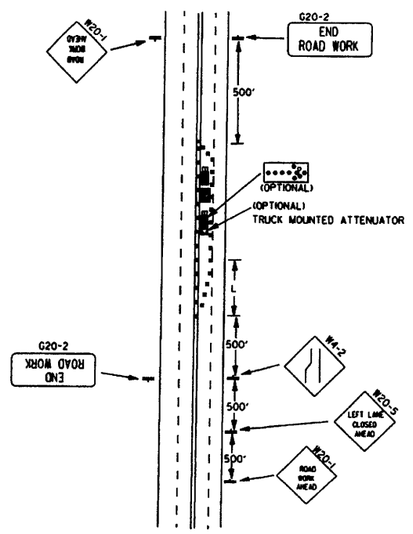
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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

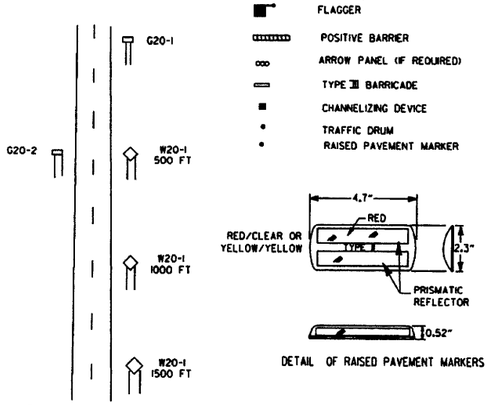


NOTES:
1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

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



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



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:
L= MINIMUM LENGTH OF TAPER.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
W= WIDTH OF OFFSET.

GENERAL NOTES:

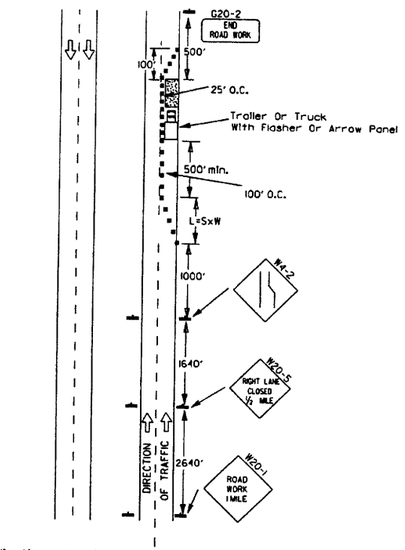
1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
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.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

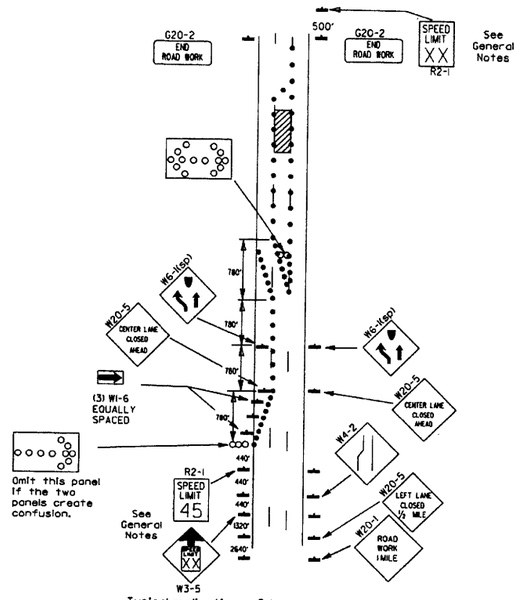
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

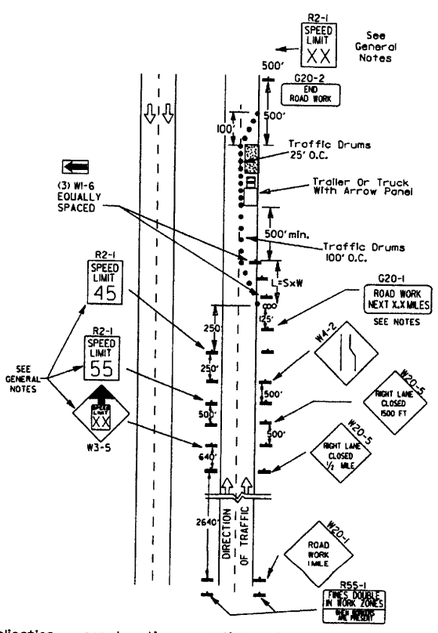
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel (if Required)

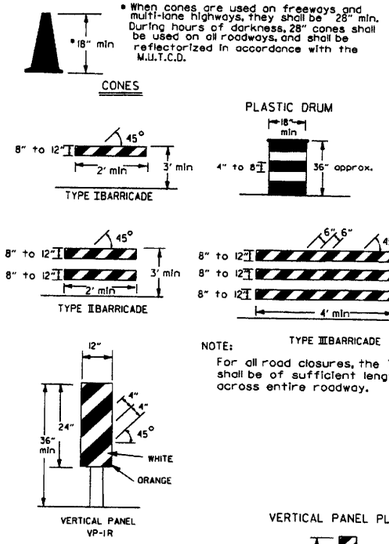
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
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 R2-1 55mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
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 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.

Channelizing devices



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

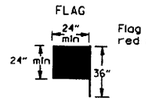
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-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.

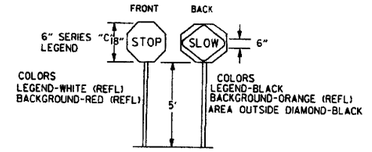
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

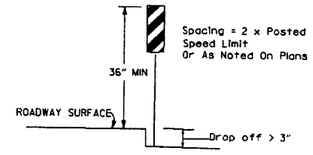


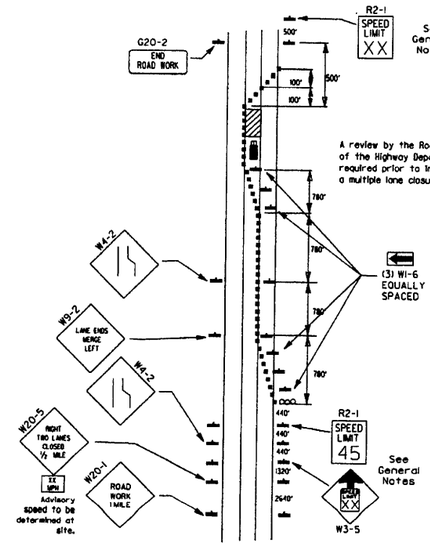
Flag shall be of good grade red material

STOP SLOW PADDLE



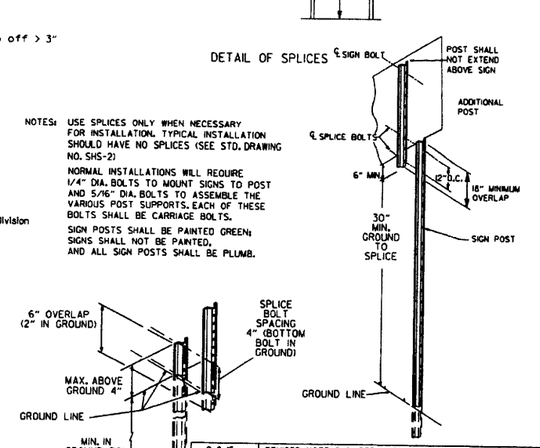
VERTICAL PANEL PLACEMENT





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

DETAIL OF SPLICES



NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

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

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	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	

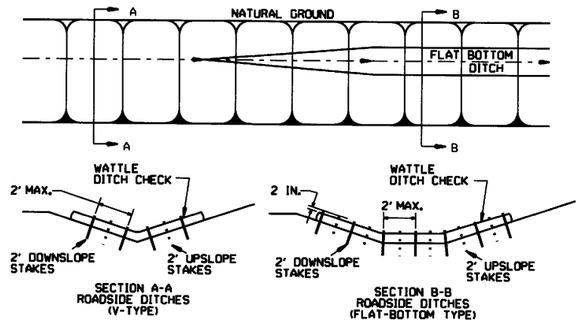
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

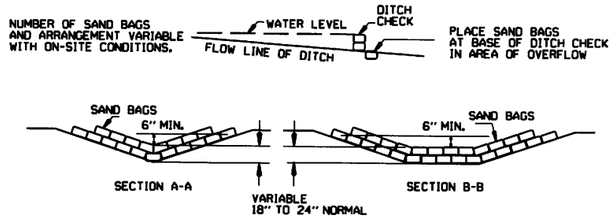
STANDARD DRAWING TC-3

GENERAL NOTES

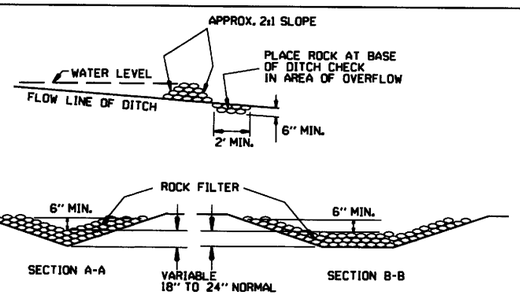
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

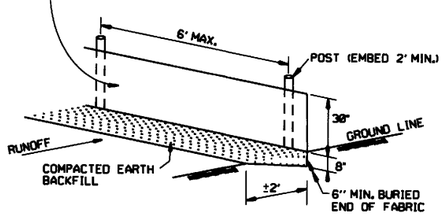


ROCK DITCH CHECK (E-6)

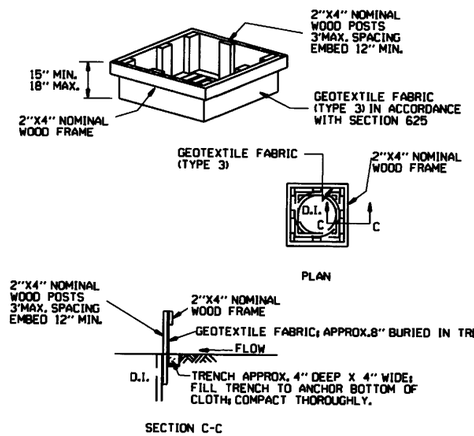
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

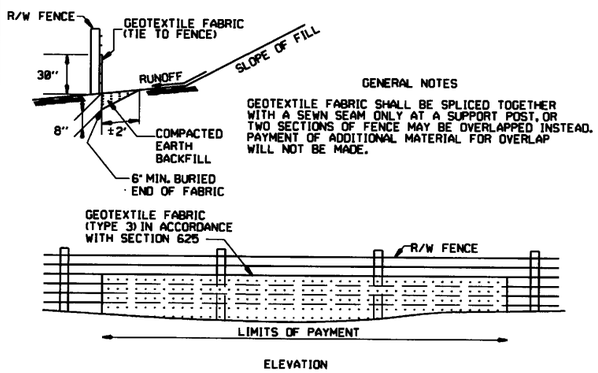
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



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.

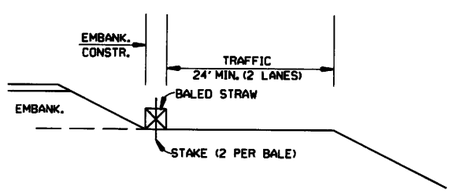
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

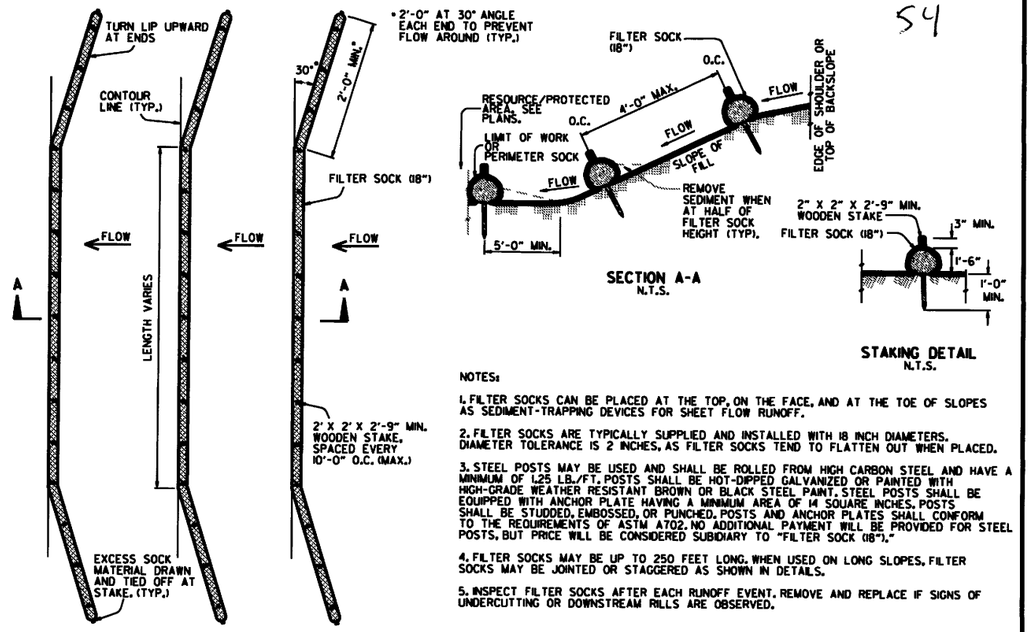
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

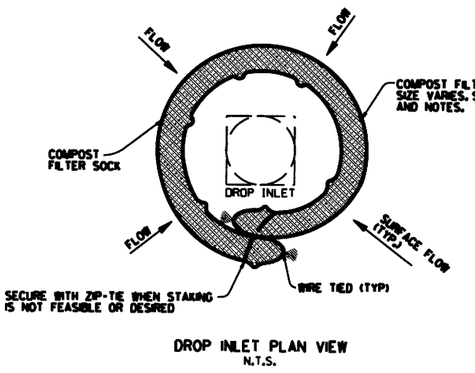
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

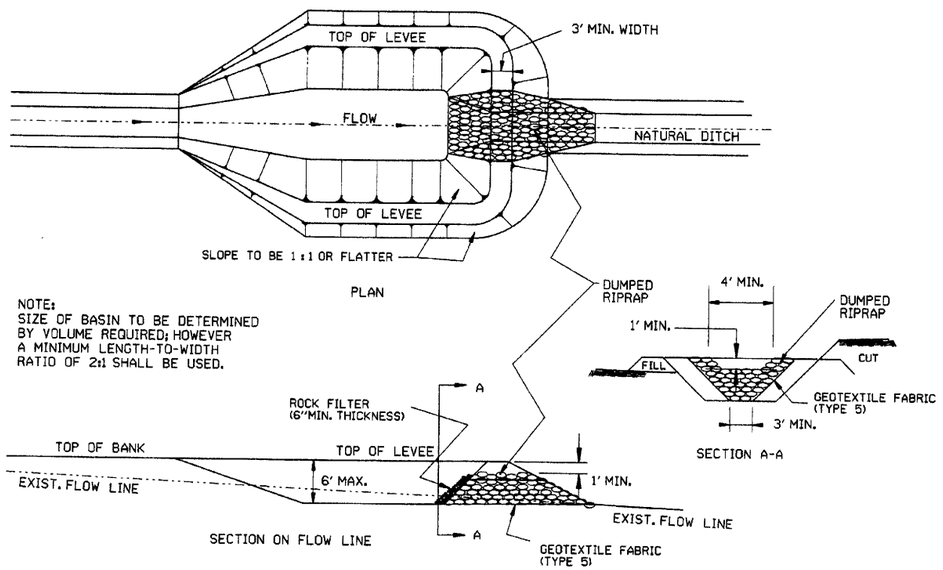
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
8-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 15" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 8; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

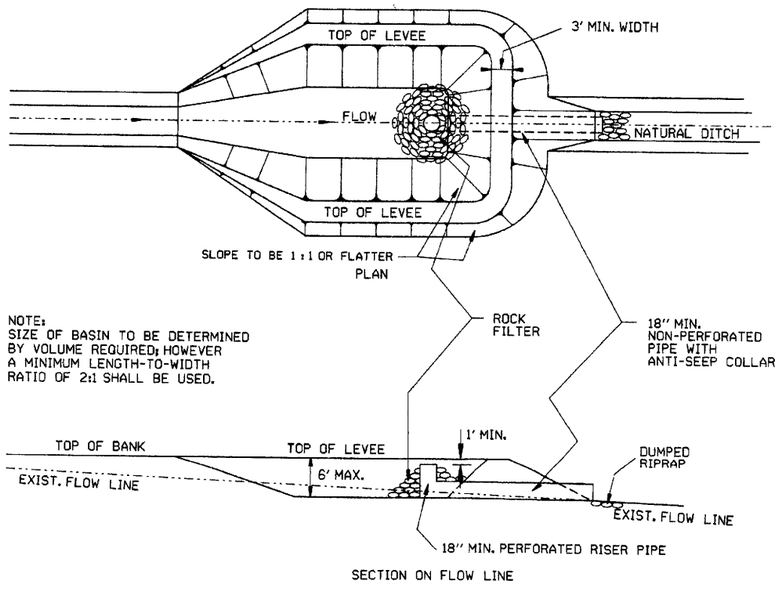
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

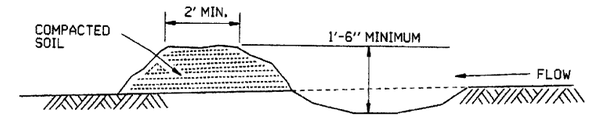
STANDARD DRAWING TEC-1



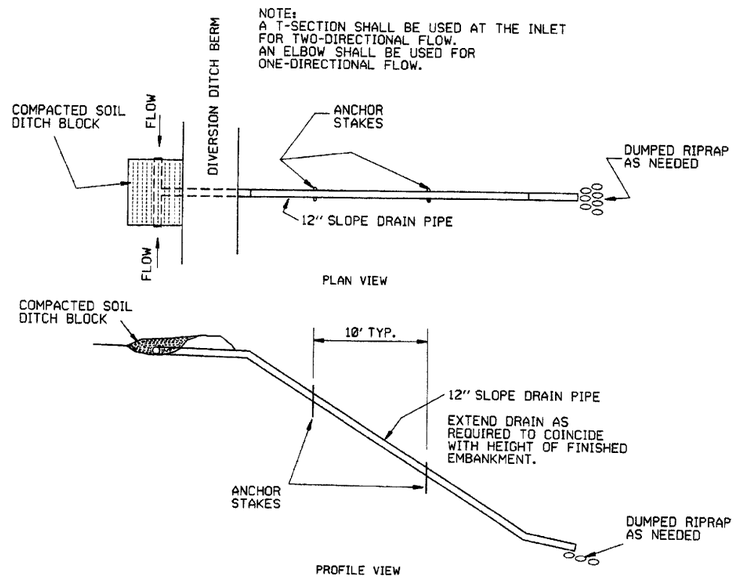
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



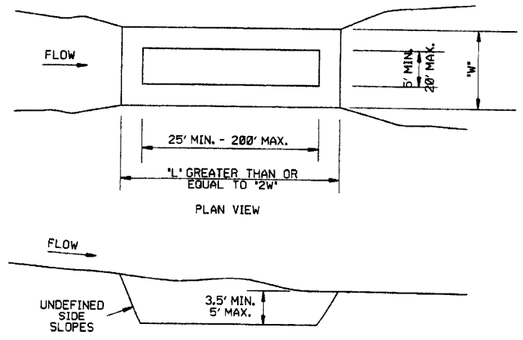
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

DATE	REVISION	FILMED
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13	
4-1-93	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

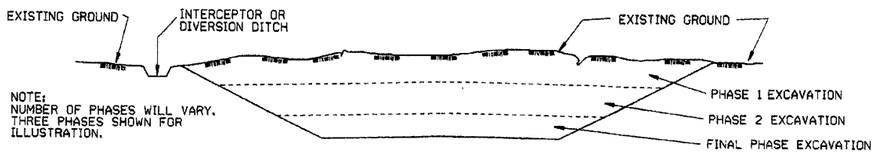
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



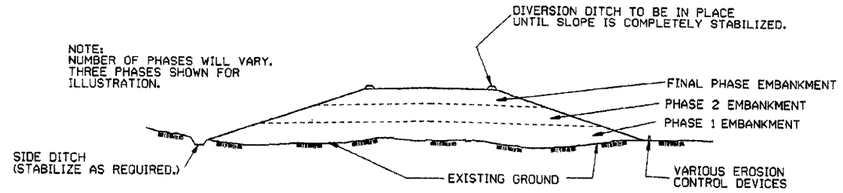
GENERAL NOTE

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



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.

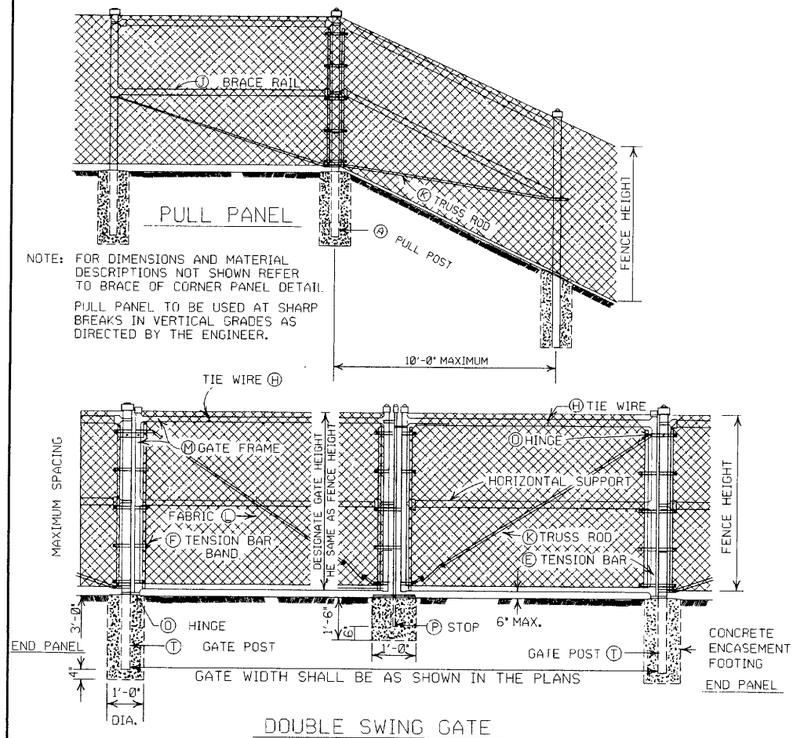
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	6-2-94
6-2-94	Drawn & Issued	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3

stdtec3.dgn

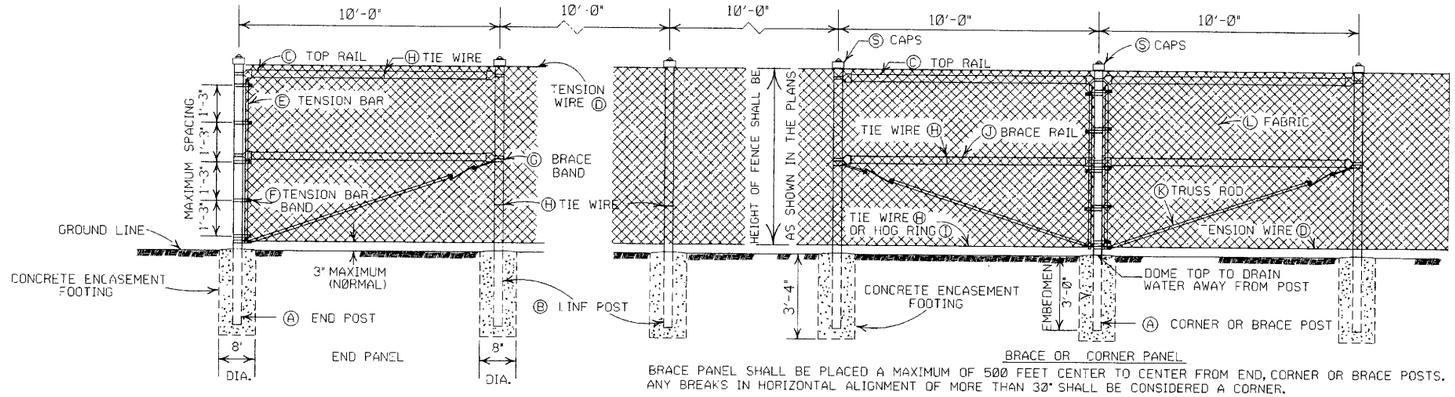


NOTE: FOR DIMENSIONS AND MATERIAL DESCRIPTIONS NOT SHOWN REFER TO BRACE OF CORNER PANEL DETAIL.

PULL PANEL TO BE USED AT SHARP BREAKS IN VERTICAL GRADES AS DIRECTED BY THE ENGINEER.

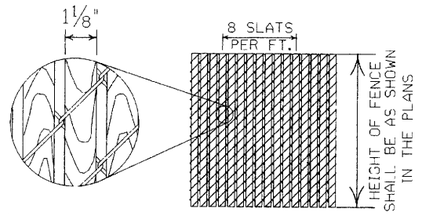
DOUBLE SWING GATE

POST SPACING DETAIL



BRACE OR CORNER PANEL

BRACE PANEL SHALL BE PLACED A MAXIMUM OF 500 FEET CENTER TO CENTER FROM END, CORNER OR BRACE POSTS. ANY BREAKS IN HORIZONTAL ALIGNMENT OF MORE THAN 30° SHALL BE CONSIDERED A CORNER.



1⅛" X ¼" REDWOOD SLATS(LENGTH TO MATCH HEIGHT OF FENCE)

DETAIL OF REDWOOD SLAT INSTALLATION

(WHERE APPLICABLE)

GENERAL NOTES:

(C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.

(D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.

(J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.

(L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.

(M) GATE FRAMES: SHALL BE CONSTRUCTED OF TUBULAR MEMBERS ASSEMBLED BY USE OF HEAVY PRESSED STEEL, MALLEABLE FITTINGS OR BY WELDING. ALL GATES SHALL HAVE ONE HORIZONTAL SUPPORT EXTENDING THE WIDTH OF THE GATE AT THE MIDPOINTS OF VERTICAL FRAME MEMBERS. THE COMPLETE FRAME SHALL BE RIGID AND HAVE AMPLE STRENGTH TO BE FREE FROM SAG AND TWIST.

(O) HINGES: SHALL BE OF HEAVY PATTERN, OF ADEQUATE STRENGTH FOR GATE, AND WITH LARGE BEARING SURFACES FOR CLAMPING IN POSITION. THE HINGE SHALL BE OF THE PROPER TYPE TO ALLOW FOR THE DESIGNATED DEGREE OF SWING. THE HINGE SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATES SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON.

(P) LATCHES AND STOPS: SHALL BE PROVIDED FOR ALL GATES. GATES SHALL HAVE A DROP BAR LATCH. LATCHES SHALL BE ARRANGED FOR LOCKING. THE STOP FOR DROP BAR LATCHES SHALL BE SET IN CONCRETE AND ENGAGE THE PLUNGER OF THE BAR LATCH.

(S) CAPS: ALL POSTS, EXCEPT ROLL FORMED POSTS AND "I" POSTS SHALL BE CAPPED OVER THE EXTERIOR OF THE POST, AND SHALL CONFORM TO ASTM F626.

CONCRETE REQUIRED FOR THE EMBEDMENT OF ALL POSTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CHAIN LINK FENCE.

POSTS SHALL BE SPACED EQUIDISTANT ON A MAXIMUM OF 10' CENTERS.

EXCAVATION FOR POSTS: IN OTHER THAN ROCK SHALL BE OF THE DIMENSIONS INDICATED. IF ROCK IS ENCOUNTERED BEFORE REACHING THE REQUIRED DEPTH, THE EXCAVATION SHALL BE CONTINUED TO THE DEPTH INDICATED OR 1'-6" INTO THE ROCK, WHICHEVER IS LESS, AND SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER.

HEIGHT OF FENCE FABRIC	(A) END, PULL CORNER OR BRACE POST	(B) LINE POSTS SIZE	(B) LINE POSTS TIE SPACING	(C) TOP RAIL SIZE	(C) TOP RAIL TIE SPACING	(C) TOP RAIL MIN. LENGTH	(D) TENSION WIRE SIZE	(D) TENSION WIRE TIE SPACING	(E) TENSION BAR SIZE	(E) TENSION BAR LENGTH
6' AND LESS	2½" O.D.	2" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	1⅝" O.D.	1 TIE EVERY 2'-0"	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	MIN. OF ⅜" X ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT
OVER 6' TO 12' INCL.	3 " O.D.	2½" O.D.								

HEIGHT OF FENCE FABRIC	(F) TENSION BAR BAND SIZE	(F) TENSION BAR BAND BOLT SIZE	(F) TENSION BAR BAND SPACING	(G) BRACE BAND SIZE	(G) BRACE BAND BOLT SIZE
6' AND LESS	MIN. OF ¾" X 0.074	⅝"X 1¼"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	MIN. OF ¾" X 0.105	⅜" X 1¼"
OVER 6' TO 12' INCL.					

HEIGHT OF FENCE FABRIC	(H) TIE WIRE	(I) HOG RING	(J) BRACE RAIL SIZE	(J) BRACE RAIL TIE SPACING	(K) TRUSS ROD	(L) FABRIC SIZE	(L) FABRIC MESH	(L) FABRIC SELVAGE
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1⅝" O.D.	1 TIE EVERY 2'-0"	MIN. OF ⅜" ROUND WITH TIGHTNERS AND FITTINGS	9 GA.	2"	KNUCK -ING AND/OR TWIST -ING
OVER 6' TO 12' INCL.								

HEIGHT OF FENCE FABRIC	(M) GATE FRAME SIZE	(M) GATE FRAME TIE SPACING	(N) HORIZONTAL SUPPORT SIZE	(N) HORIZONTAL SUPPORT TIE SPACING	(O) HINGE TYPE 180° SWING	(T) GATE POST GATE WIDTH 12' AND LESS	(T) GATE POST GATE WIDTH OVER 12' TO 24' INCL.
6' AND LESS	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.
OVER 6' TO 12' INCL.						4" O.D.	

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUT SIDE DIAMETER OF 2½" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS; AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHT OF 6' AND LESS. ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER. MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

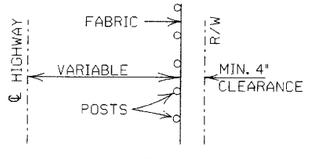
OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS. 9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.

POSTS AND RAILS

SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT. STEEL	LBS. PER LINEAR FT. ALUMINUM	GRADE 2 O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
1⅞	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.122	2.28
2½	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.162	4.64
3½	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181



INSTALLATION MAY BE MODIFIED AS SHOWN IN THE PLANS

TYPICAL INSTALLATION DIAGRAM

DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-01	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES, REMOVED TABLE. & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST DETAIL & ADDED NOTE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11 30 89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

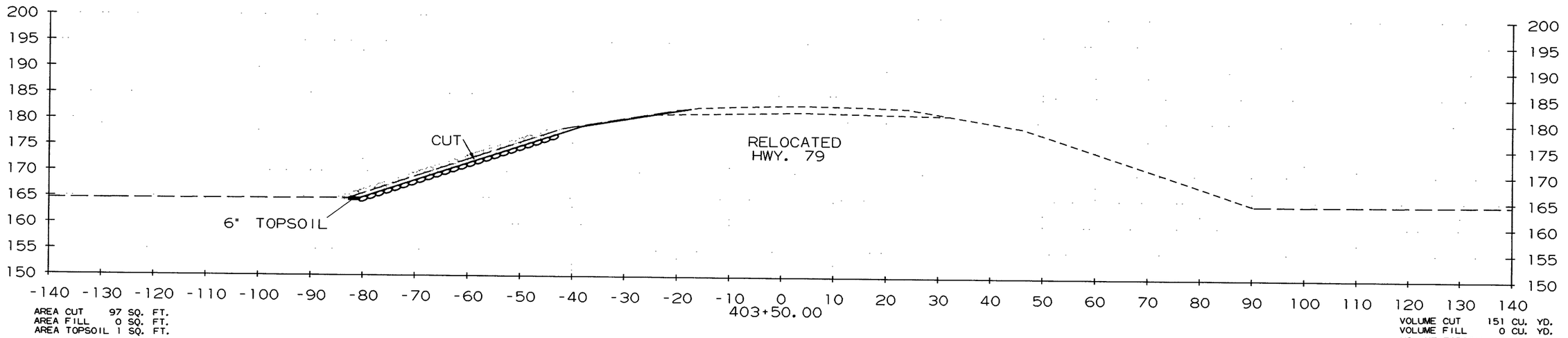
ARKANSAS STATE HIGHWAY COMMISSION

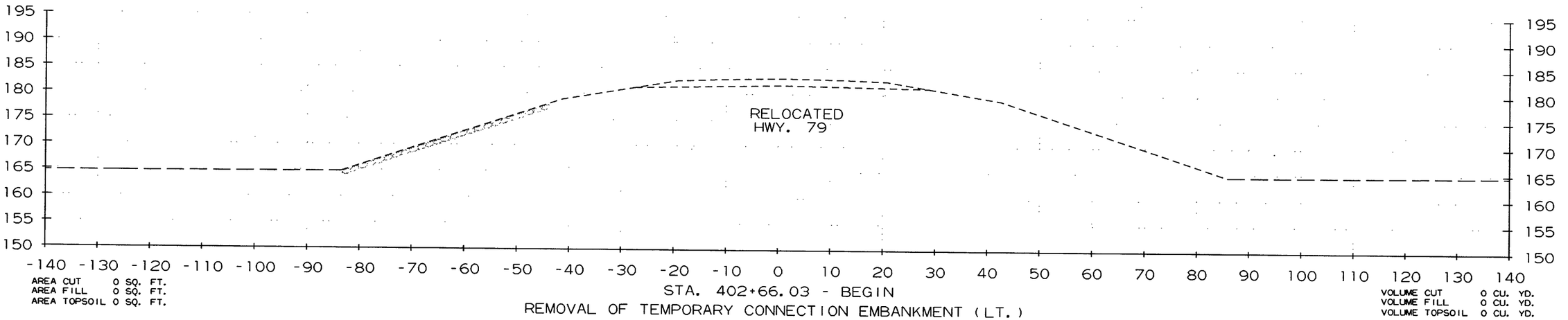
CHAIN LINK FENCE

STANDARD DRAWING WF-3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	58	86

(2) CROSS SECTIONS





STA. 402+66.03 - BEGIN
REMOVAL OF TEMPORARY CONNECTION EMBANKMENT (LT.)

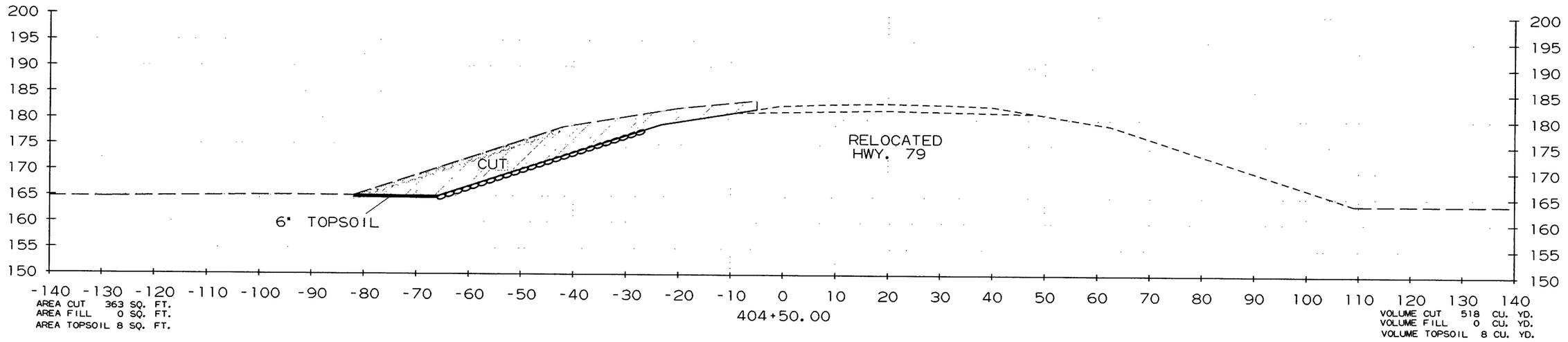
2/11/2015

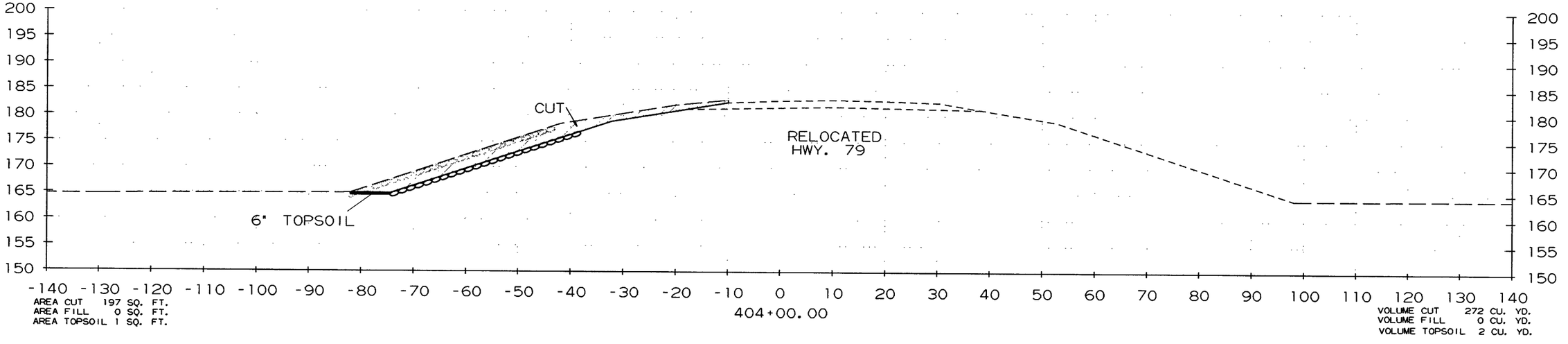
R110540.DGN

CROSS SECTION STA. 402+66.03 TO STA. 403+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	59	86

(2) CROSS SECTIONS





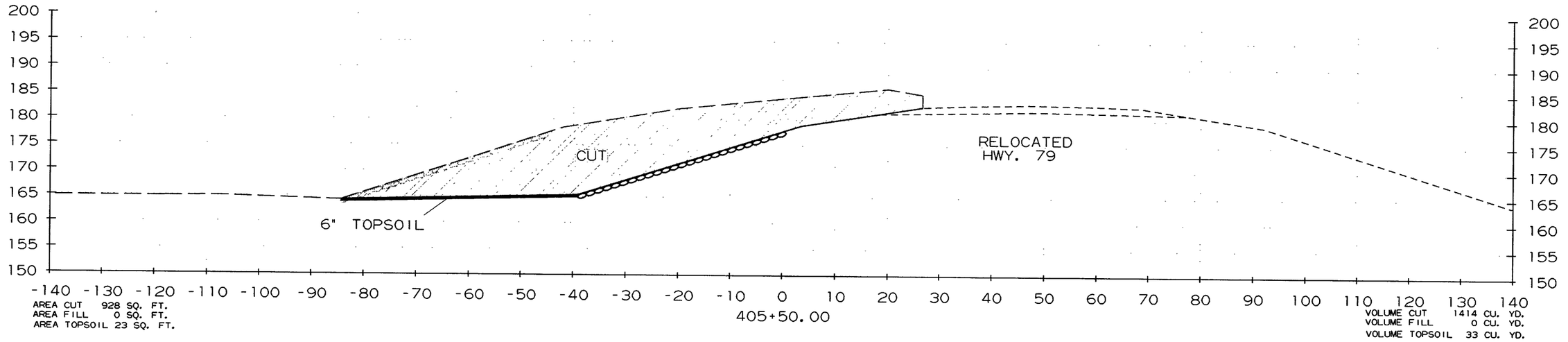
2/11/2015

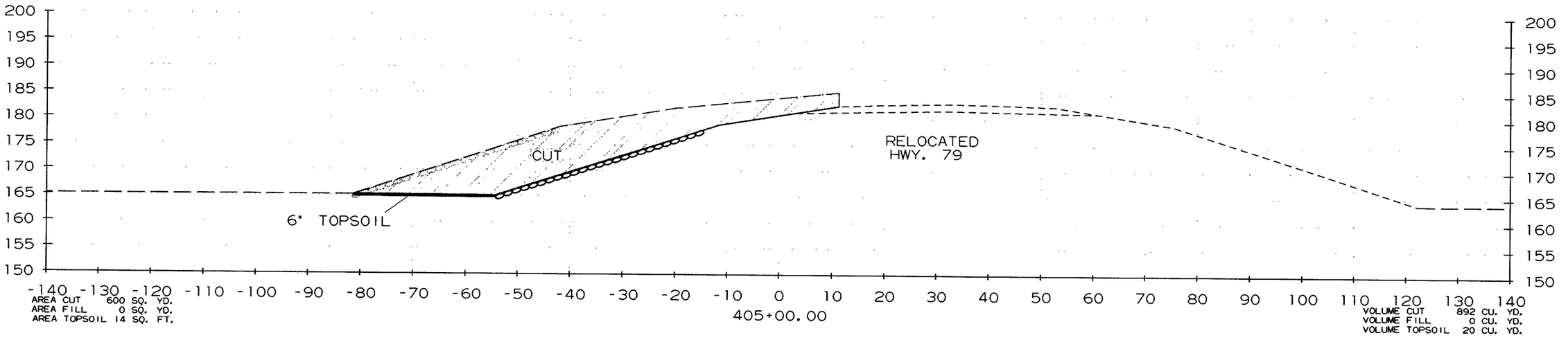
R110540.DGN

CROSS SECTION STA. 404+00 TO STA. 404+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	60	86

(2) CROSS SECTIONS





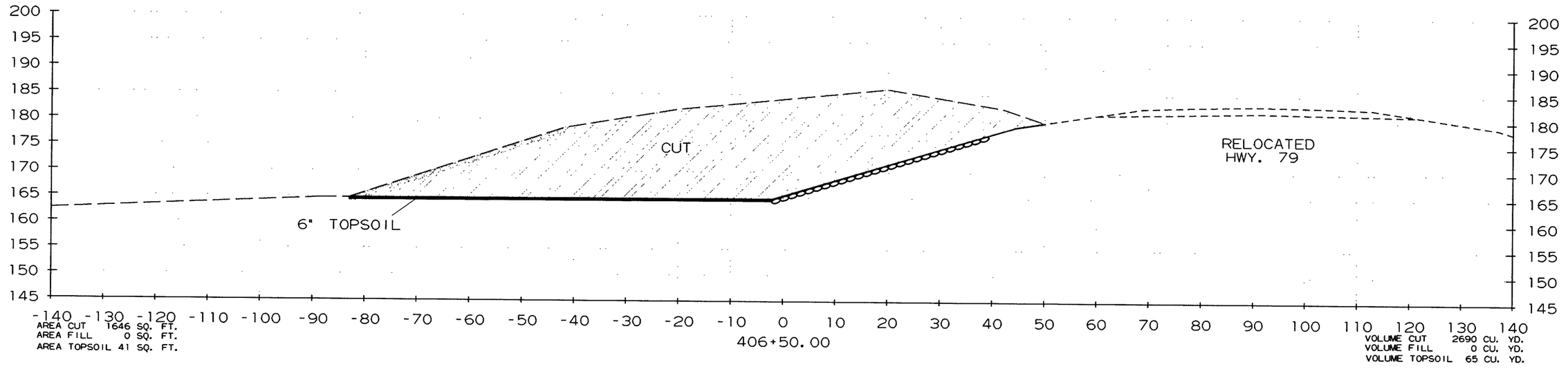
2/11/2015

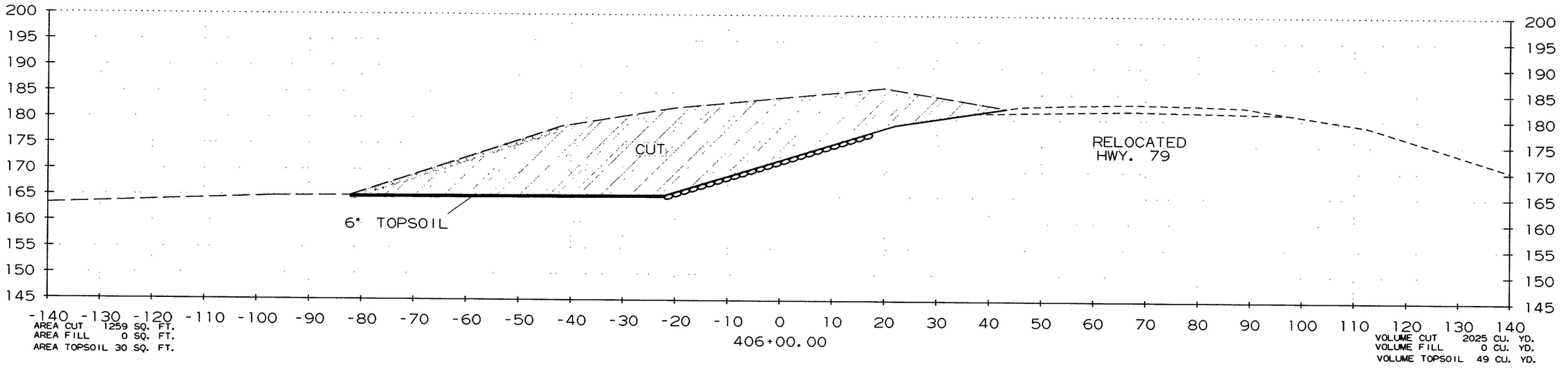
R110540.DGN

CROSS SECTION STA. 405+00 TO STA. 405+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	61	86

(2) CROSS SECTIONS





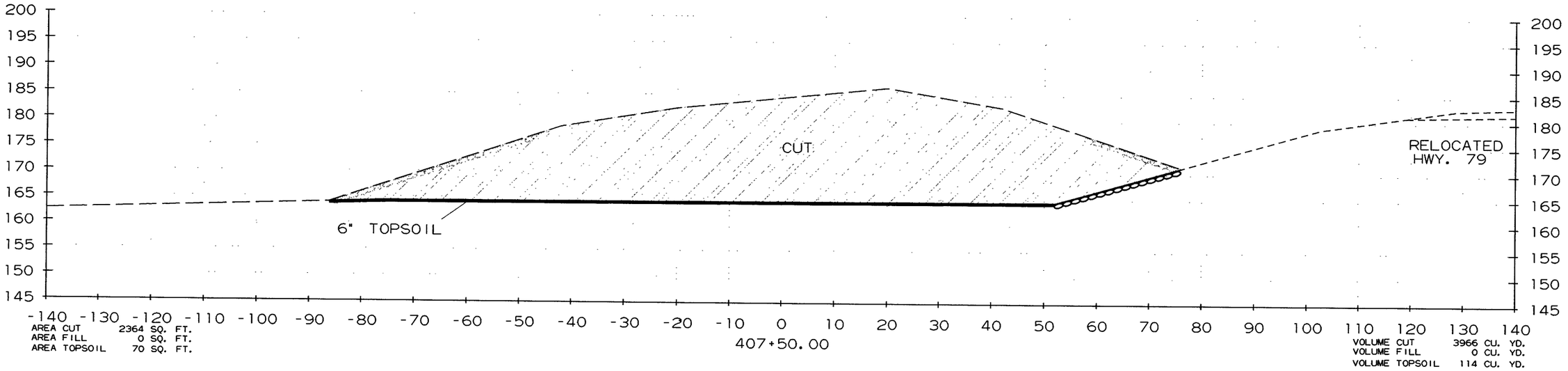
2/11/2015

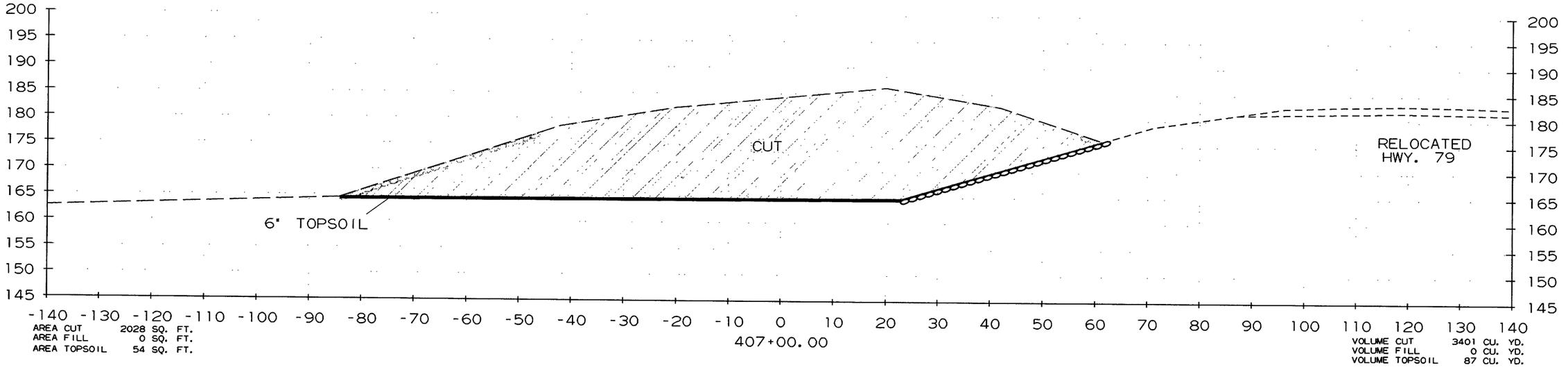
R110540.DGN

CROSS SECTION STA. 406+00 TO STA. 406+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	62	86

(2) CROSS SECTIONS





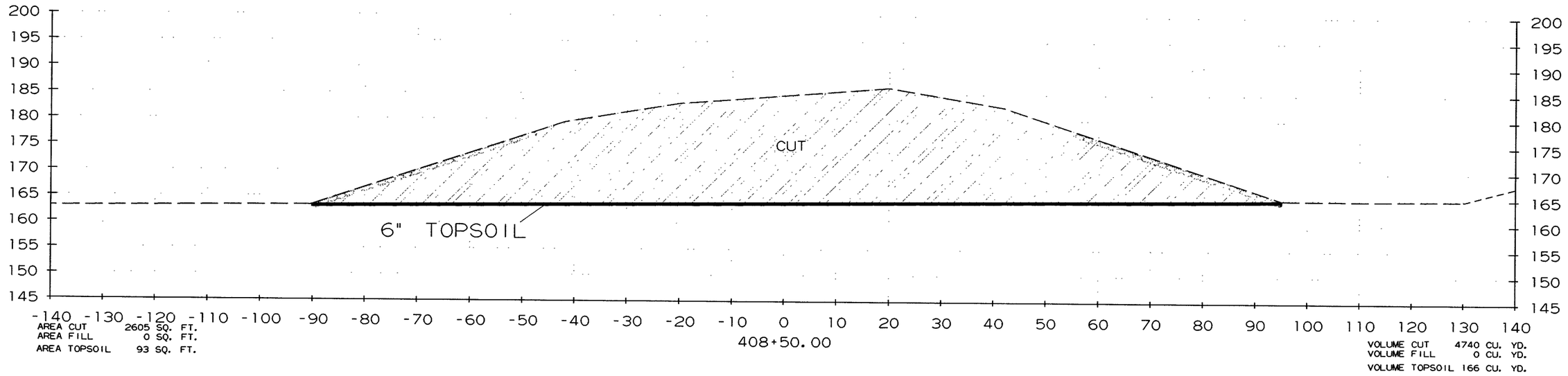
2/11/2015

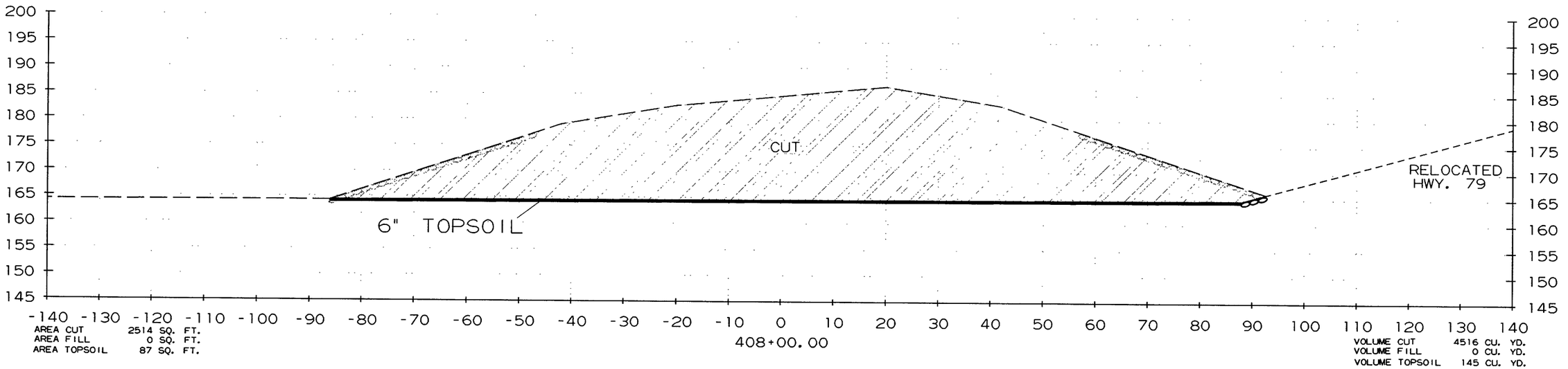
R110540.DGN

CROSS SECTION STA. 407+00 TO STA. 407+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	63	86

(2) CROSS SECTIONS





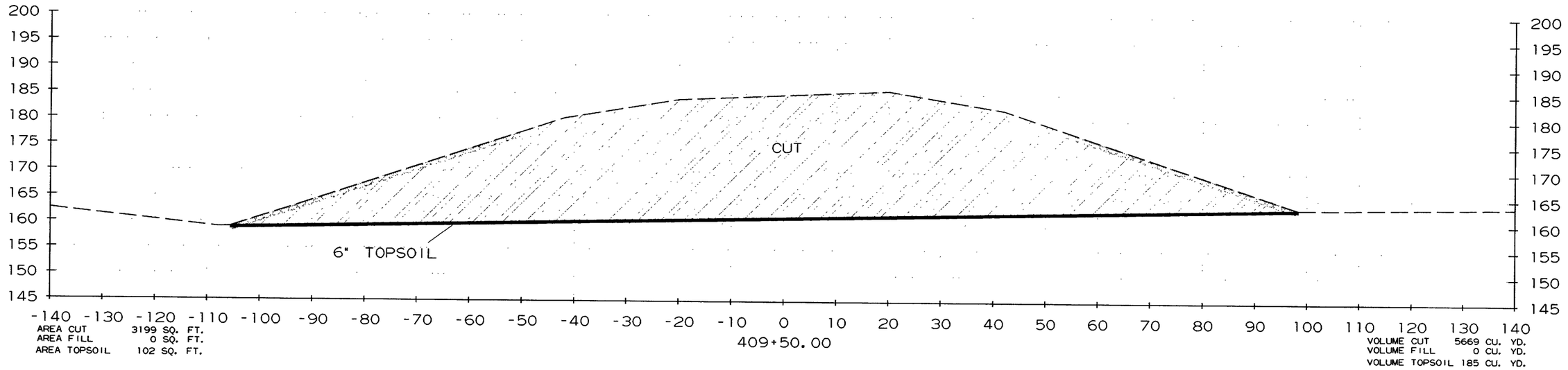
2/11/2015

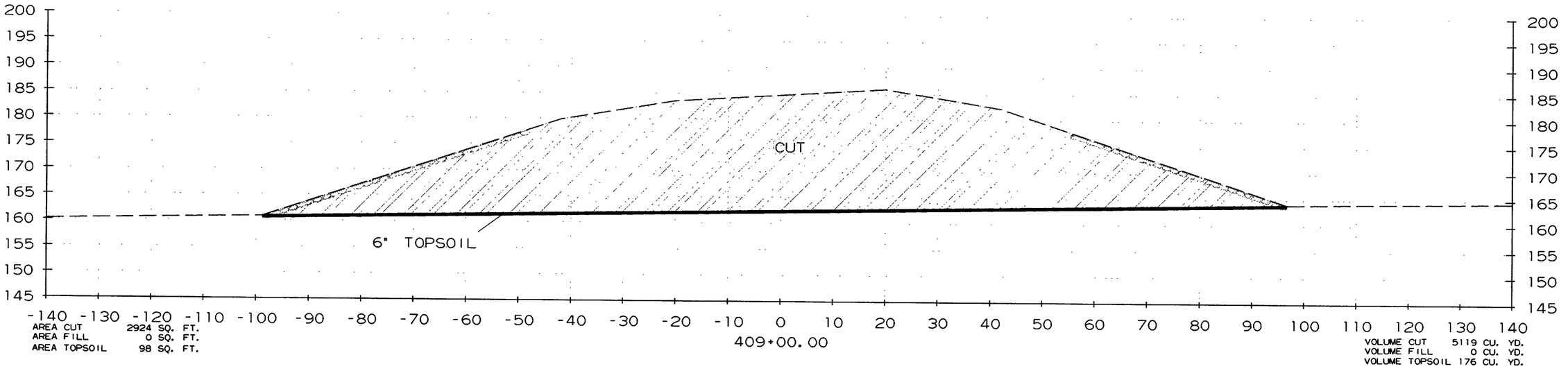
R110540.DGN

CROSS SECTION STA. 408+00 TO STA. 408+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	64	86

(2) CROSS SECTIONS





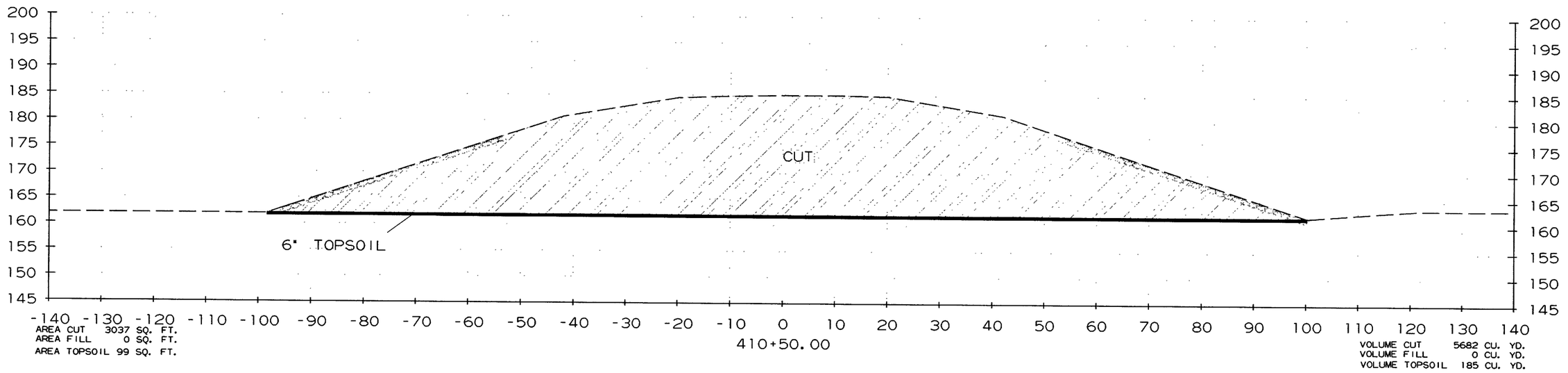
2/11/2015

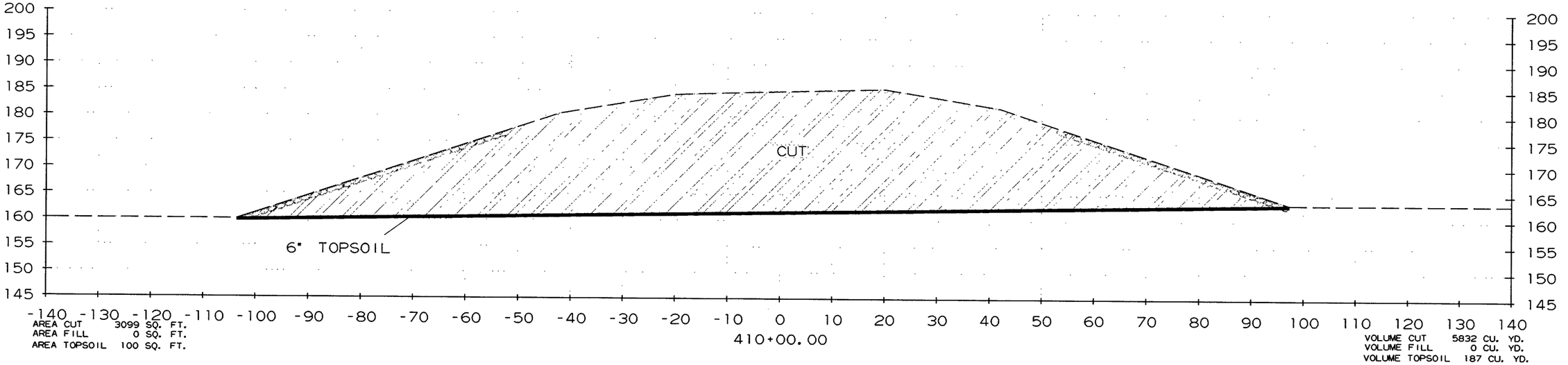
R110540.DGN

CROSS SECTION STA. 409+00 TO STA. 409+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	65	86

(2) CROSS SECTIONS





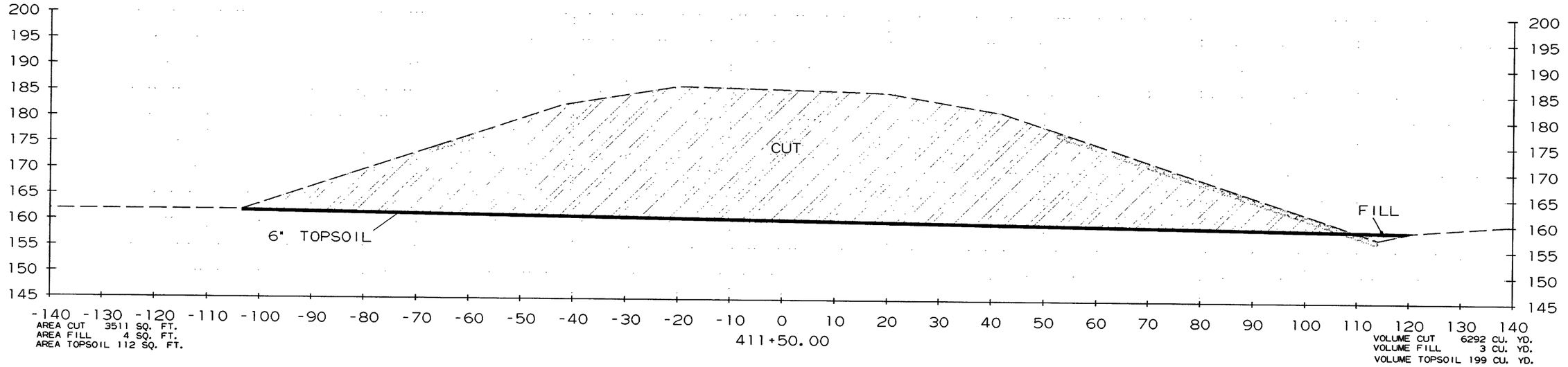
2/11/2015

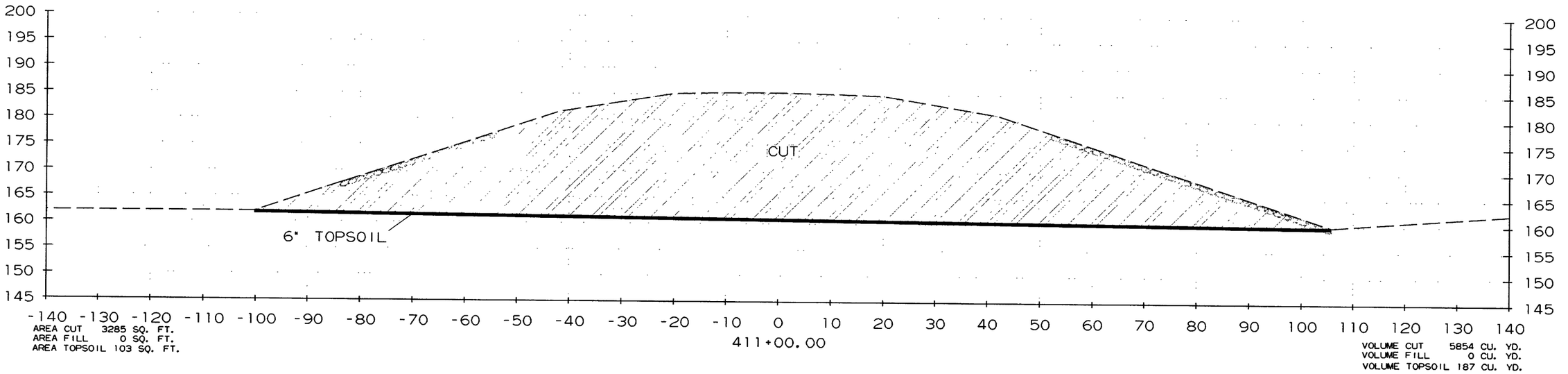
R110540.DGN

CROSS SECTION STA. 410+00 TO STA. 410+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	66	86

(2) CROSS SECTIONS





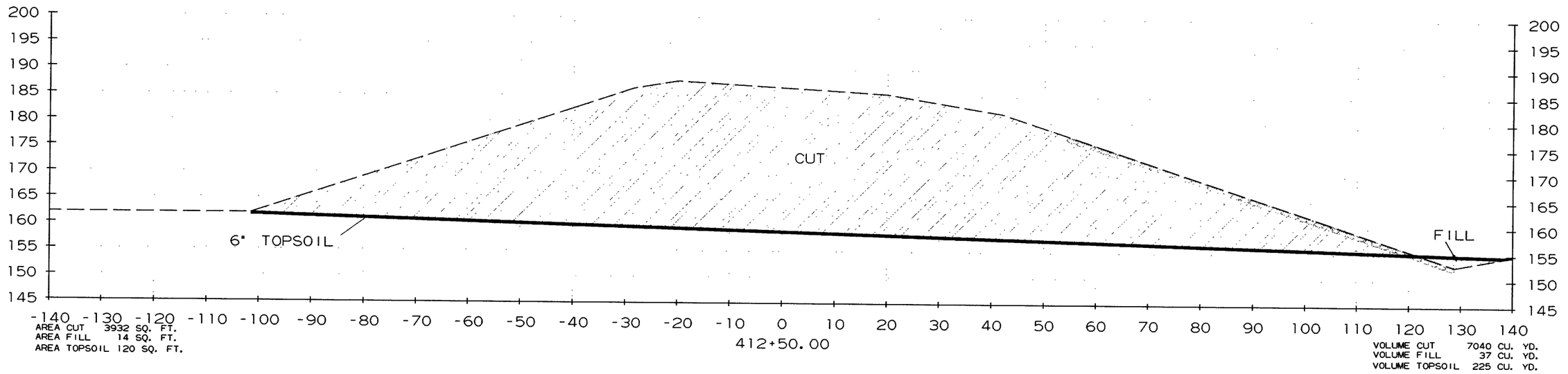
2/11/2015

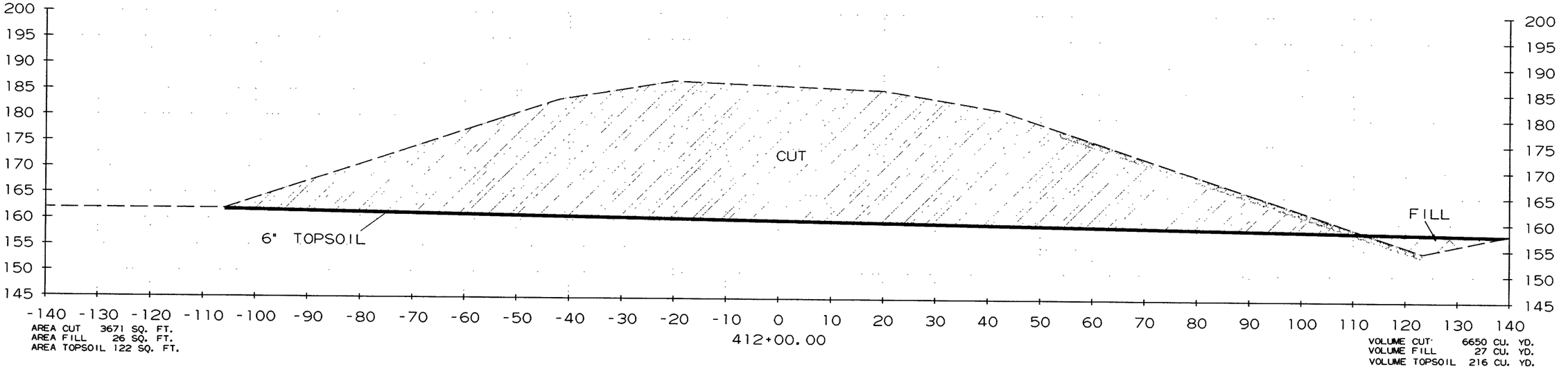
R110540.DGN

CROSS SECTION STA. 411+00 TO STA. 411+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	67	86

(2) CROSS SECTIONS





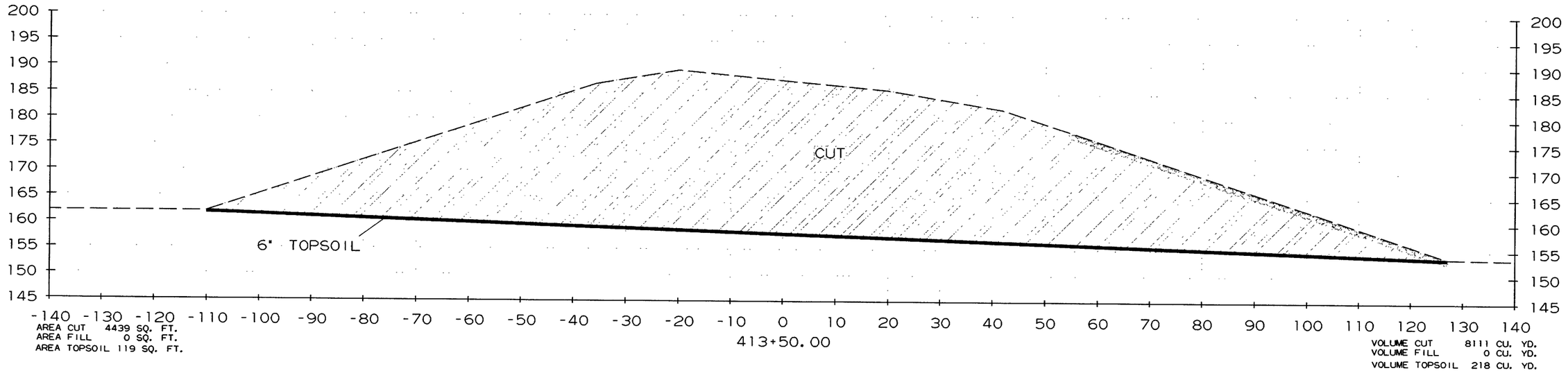
2/11/2015

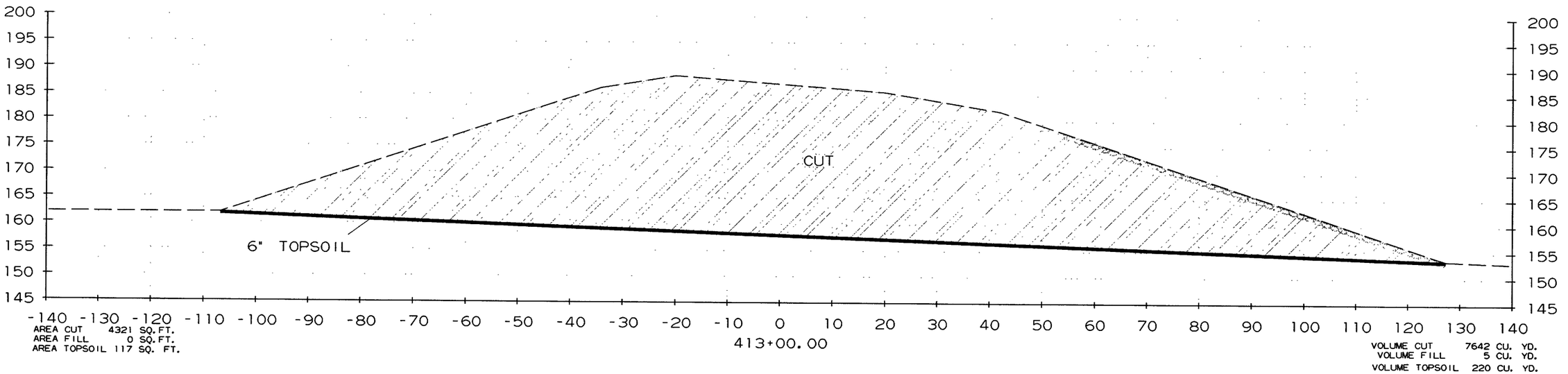
R110540.DGN

CROSS SECTION STA. 412+00 TO STA. 412+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	68	86

(2) CROSS SECTIONS





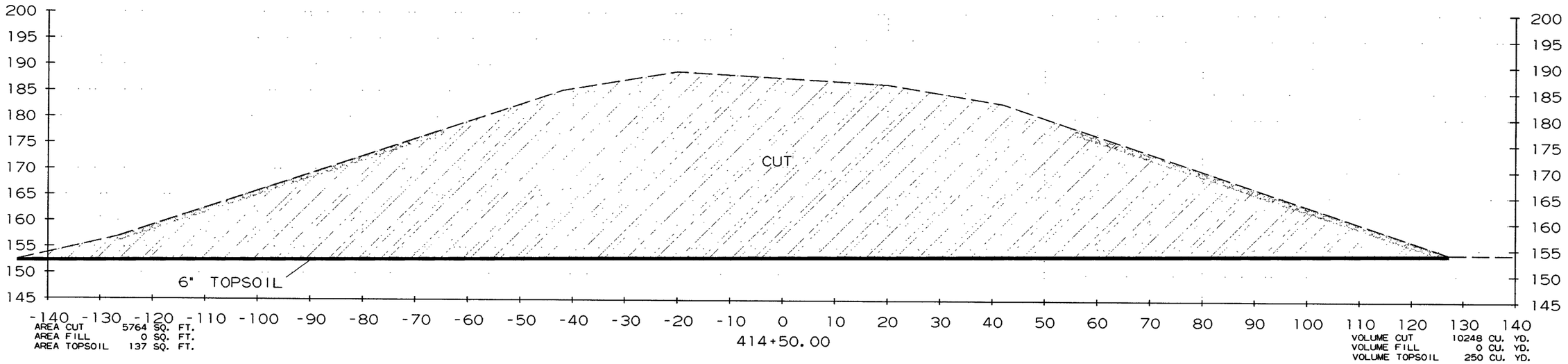
2/11/2015

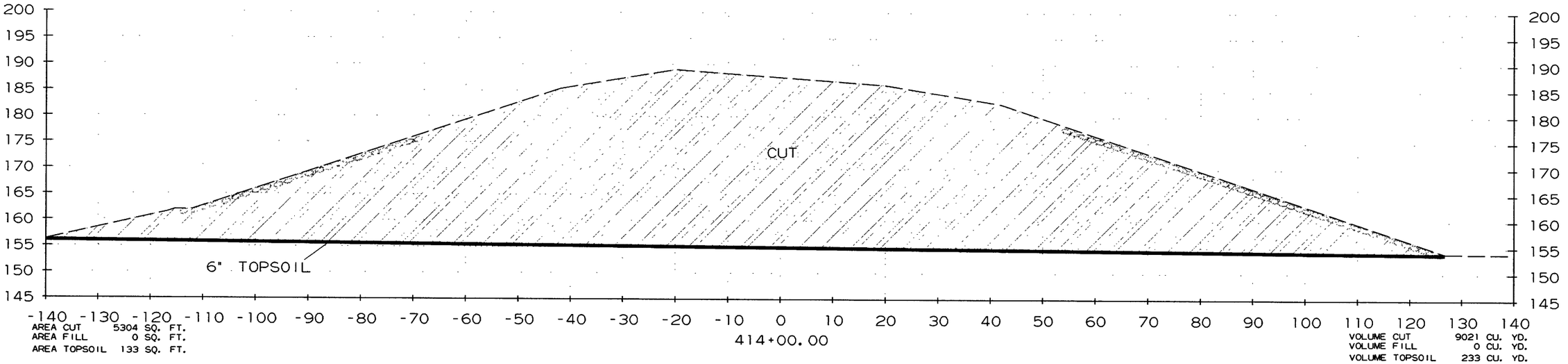
R110540.DGN

CROSS SECTION STA. 413+00 TO STA. 413+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	69	86

(2) CROSS SECTIONS





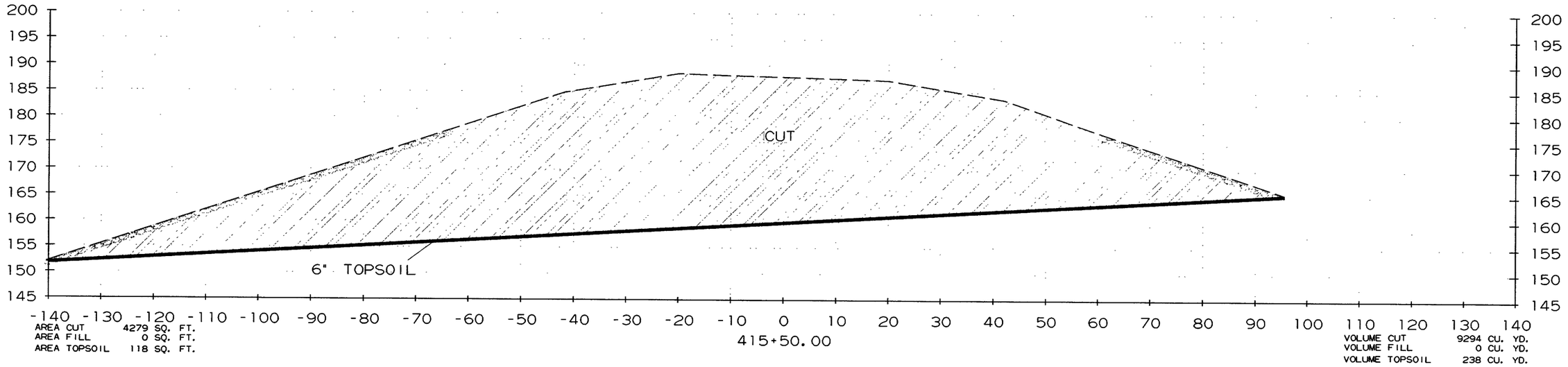
2/11/2015

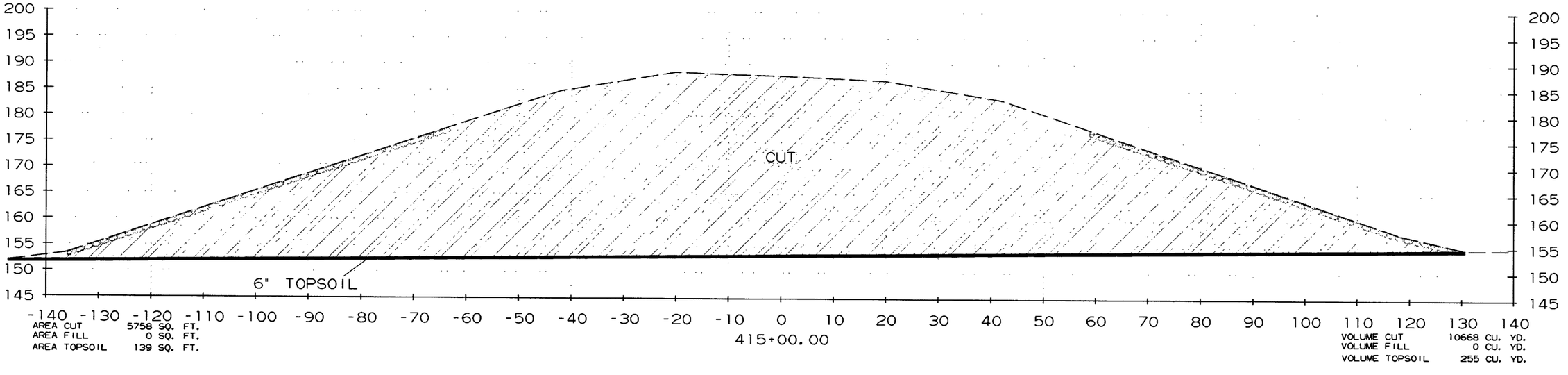
R110540.DGN

CROSS SECTION STA. 414+00 TO STA. 414+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	70	86

(2) CROSS SECTIONS





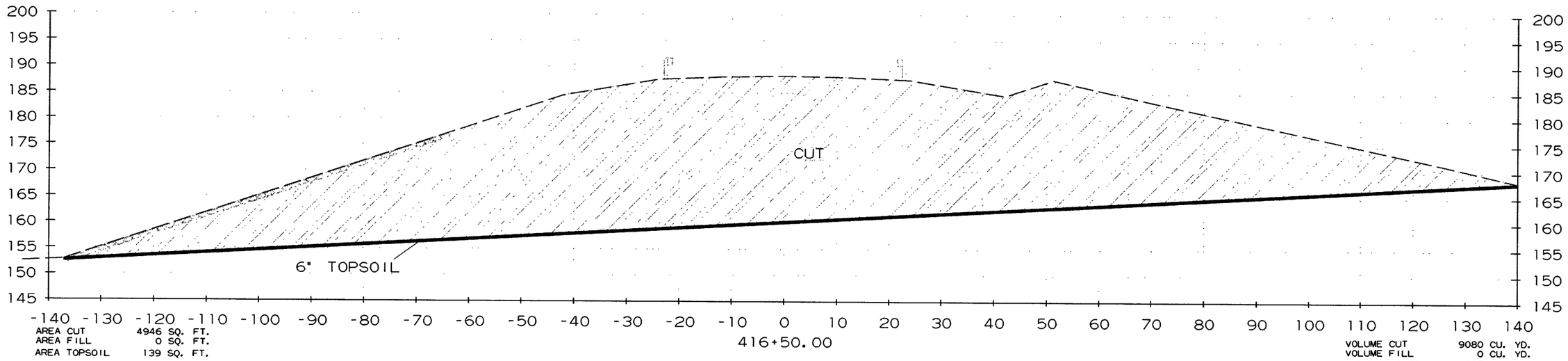
2/11/2015

R110540.DGN

CROSS SECTION STA. 415+00 TO STA. 415+50

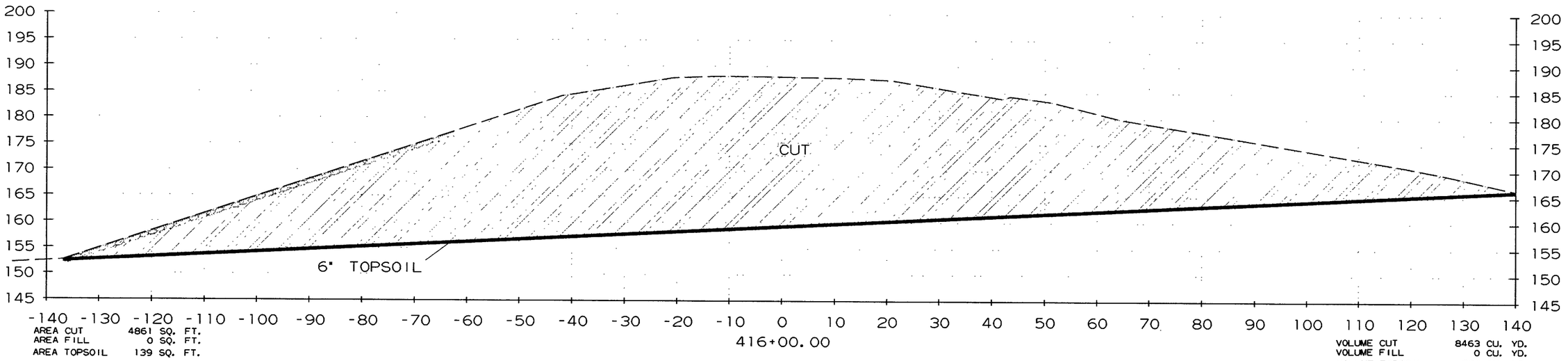
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	71	86

(2) CROSS SECTIONS



AREA CUT 4946 SQ. FT.
AREA FILL 0 SQ. FT.
AREA TOPSOIL 139 SQ. FT.

VOLUME CUT 9080 CU. YD.
VOLUME FILL 0 CU. YD.
VOLUME TOPSOIL 257 CU. YD.



AREA CUT 4861 SQ. FT.
AREA FILL 0 SQ. FT.
AREA TOPSOIL 139 SQ. FT.

VOLUME CUT 8463 CU. YD.
VOLUME FILL 0 CU. YD.
VOLUME TOPSOIL 238 CU. YD.

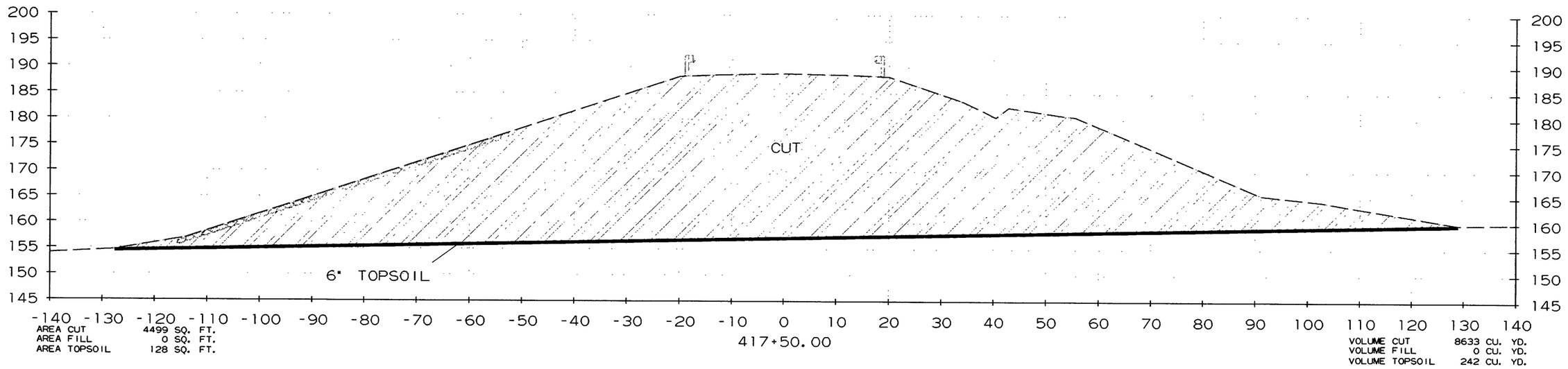
2/11/2015

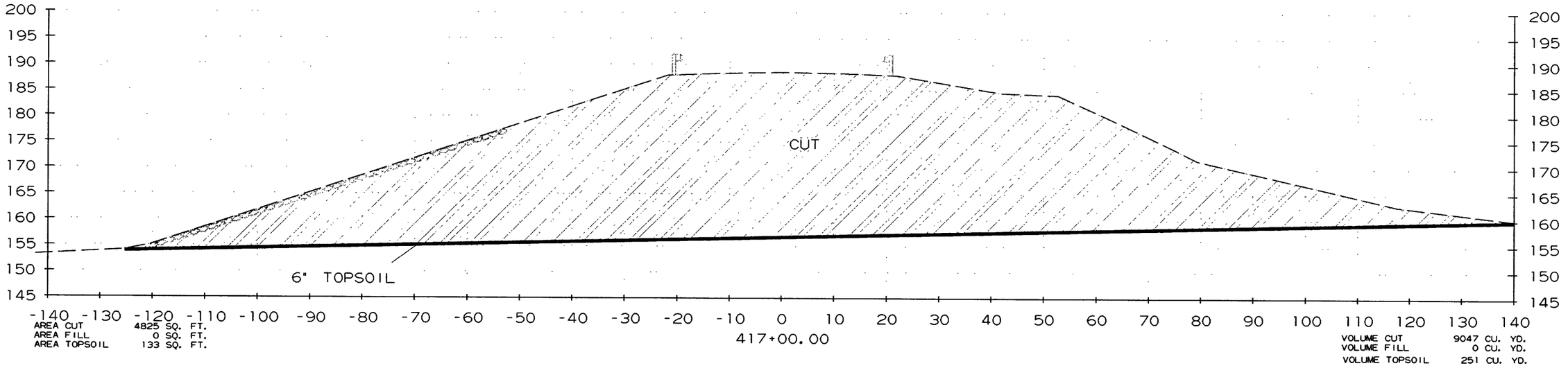
R110540.DGN

CROSS SECTION STA. 416+00 TO STA. 416+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	72	86

(2) CROSS SECTIONS





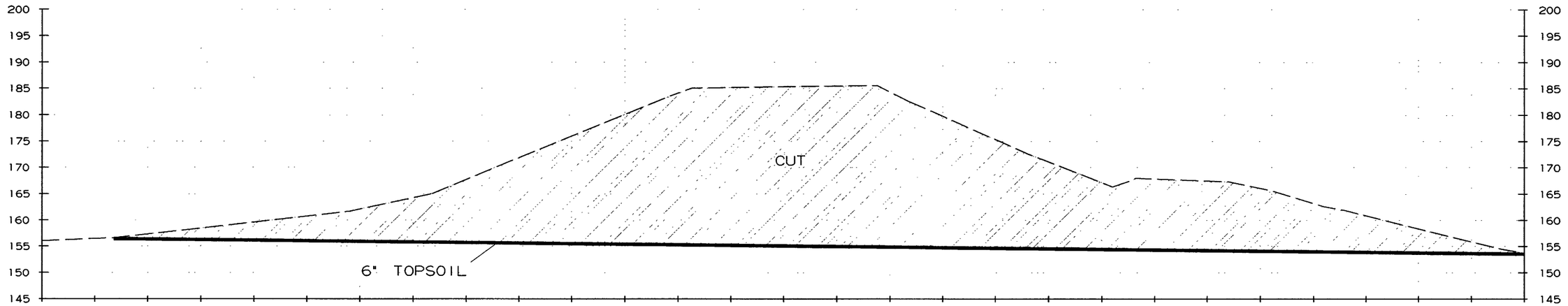
2/11/2015

R110540.DGN

CROSS SECTION STA. 417+00 TO STA. 417+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	73	86

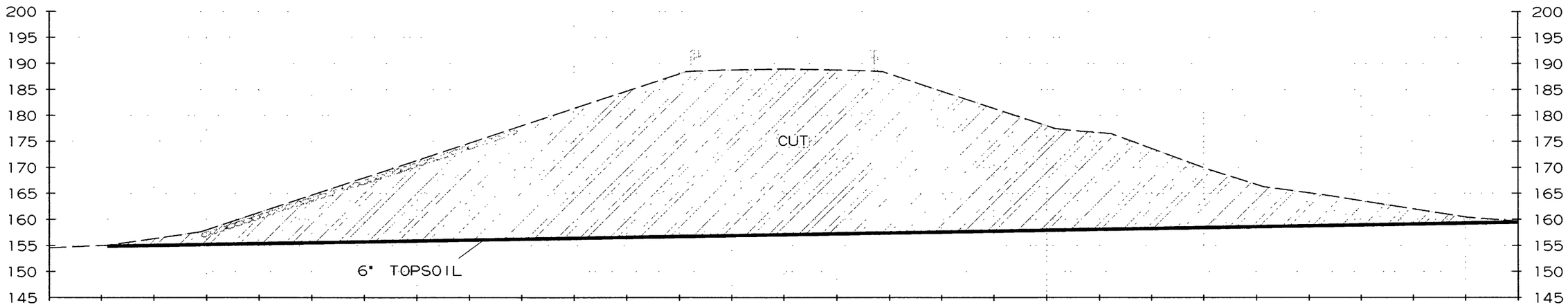
(2) CROSS SECTIONS



AREA CUT 3941 SQ. FT.
AREA FILL 0 SQ. FT.
AREA TOPSOIL 133 SQ. FT.

STA. 418+52.77 - BR. END
END REMOVAL OF TEMP. CONNECTION

VOLUME CUT 10961 CU. YD.
VOLUME FILL 0 CU. YD.
VOLUME TOPSOIL 349 CU. YD.



AREA CUT 4462 SQ. FT.
AREA FILL 0 SQ. FT.
AREA TOPSOIL 134 SQ. FT.

417+82.34

VOLUME CUT 5367 CU. YD.
VOLUME FILL 0 CU. YD.
VOLUME TOPSOIL 157 CU. YD.

2/11/2015

R110540.DGN

CROSS SECTION STA. 417+82.34 TO STA. 418+52.77

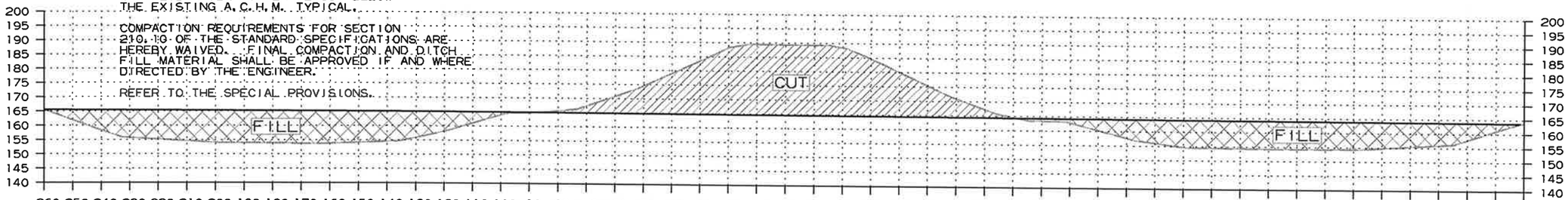
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-12-18				6	ARK.			
				JOB NO.		110540	74	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

COMPACTION REQUIREMENTS FOR SECTION 210.10 OF THE STANDARD SPECIFICATIONS ARE HEREBY WAIVED. FINAL COMPACTION AND DITCH FILL MATERIAL SHALL BE APPROVED IF AND WHERE DIRECTED BY THE ENGINEER.

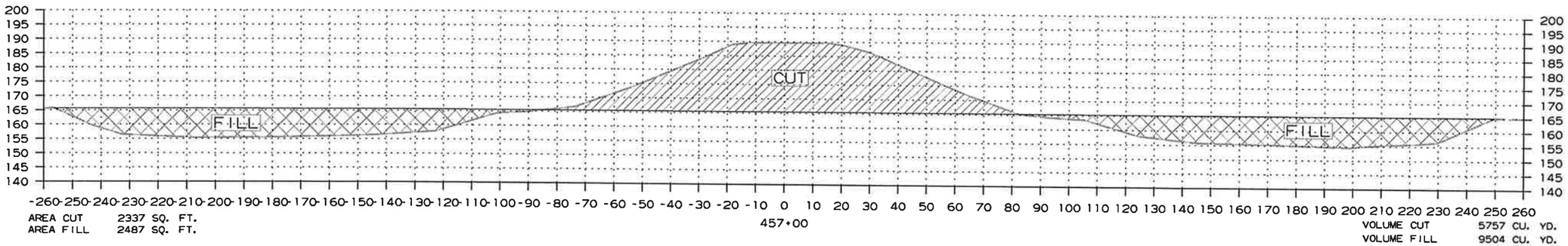
REFER TO THE SPECIAL PROVISIONS.



AREA CUT 2294 SQ. FT.
AREA FILL 2645 SQ. FT.

458+00

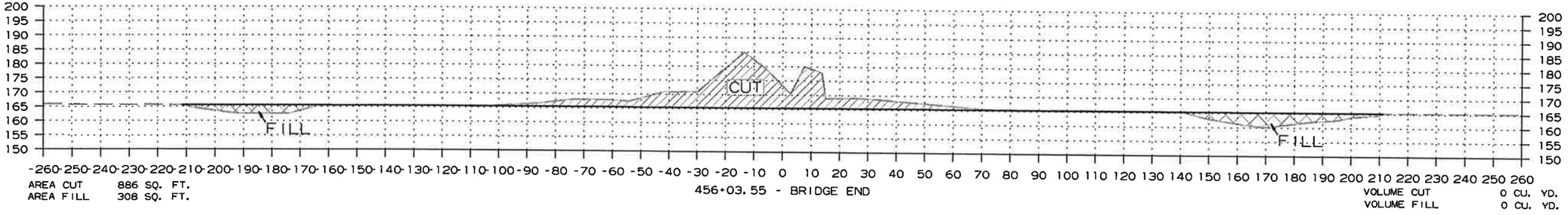
VOLUME CUT 8576 CU. YD.
VOLUME FILL 9504 CU. YD.



AREA CUT 2337 SQ. FT.
AREA FILL 2487 SQ. FT.

457+00

VOLUME CUT 5757 CU. YD.
VOLUME FILL 9504 CU. YD.



AREA CUT 886 SQ. FT.
AREA FILL 308 SQ. FT.

456+03.55 - BRIDGE END

VOLUME CUT 0 CU. YD.
VOLUME FILL 0 CU. YD.

CROSS SECTION STA. 456+04 TO STA. 458+00

1/12/2018

R110540.DGN

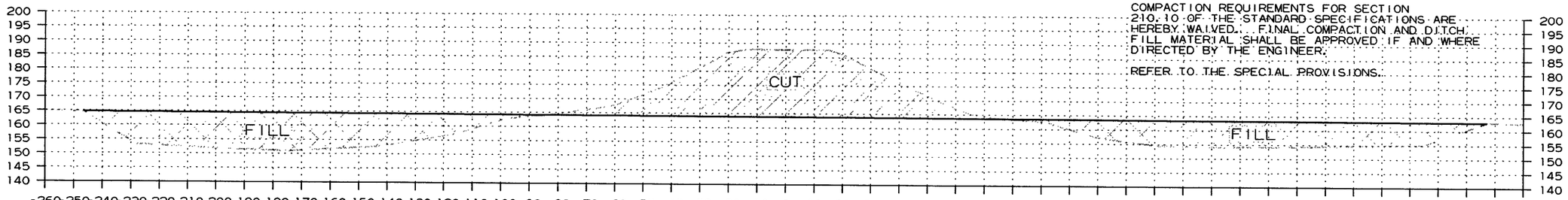
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	75	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

COMPACTION REQUIREMENTS FOR SECTION 210.10 OF THE STANDARD SPECIFICATIONS ARE HEREBY WAIVED. FINAL COMPACTION AND DITCH FILL MATERIAL SHALL BE APPROVED IF AND WHERE DIRECTED BY THE ENGINEER.

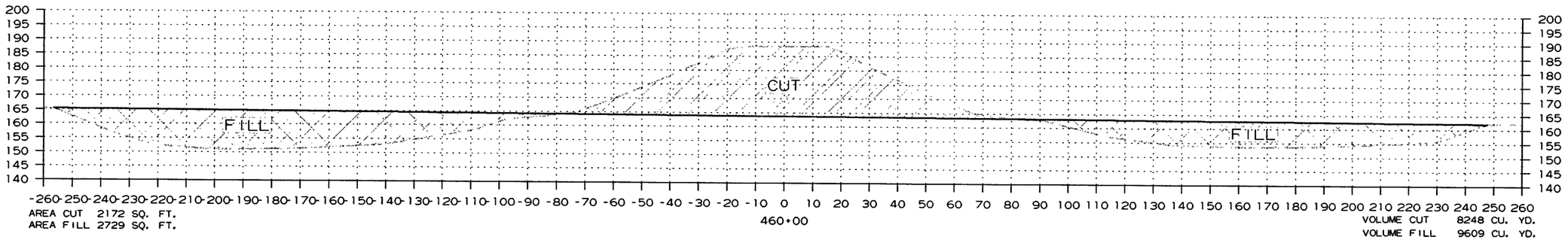
REFER TO THE SPECIAL PROVISIONS.



AREA CUT 2016 SQ. FT.
AREA FILL 2672 SQ. FT.

461+00

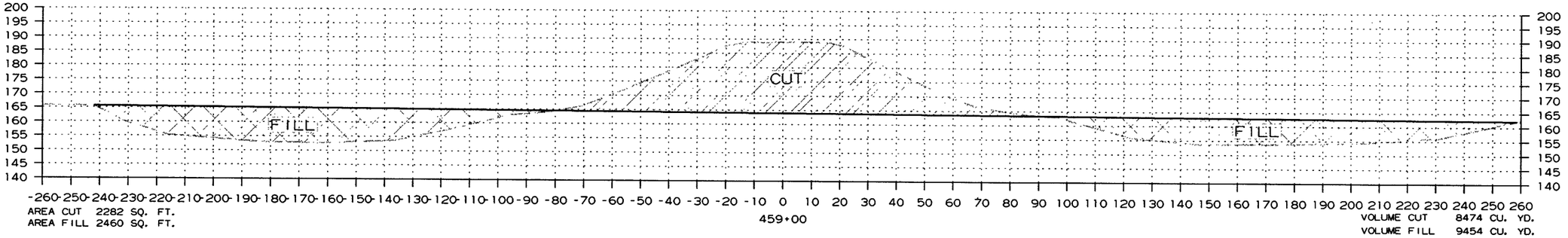
VOLUME CUT 7756 CU. YD.
VOLUME FILL 10002 CU. YD.



AREA CUT 2172 SQ. FT.
AREA FILL 2729 SQ. FT.

460+00

VOLUME CUT 8248 CU. YD.
VOLUME FILL 9609 CU. YD.



AREA CUT 2282 SQ. FT.
AREA FILL 2460 SQ. FT.

459+00

VOLUME CUT 8474 CU. YD.
VOLUME FILL 9454 CU. YD.

CROSS SECTION STA. 459+00 TO STA. 461+00

2/11/2015

R110540.DGN

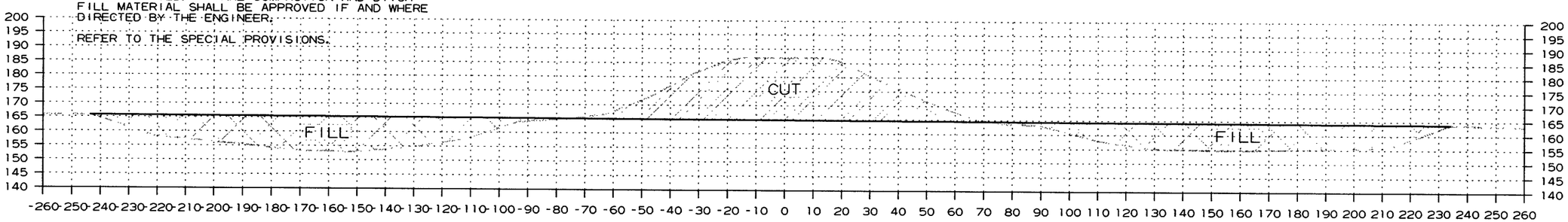
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	76	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

COMPACTION REQUIREMENTS FOR SECTION 210.10 OF THE STANDARD SPECIFICATIONS ARE HEREBY WAIVED. FINAL COMPACTION AND DITCH FILL MATERIAL SHALL BE APPROVED IF AND WHERE DIRECTED BY THE ENGINEER.

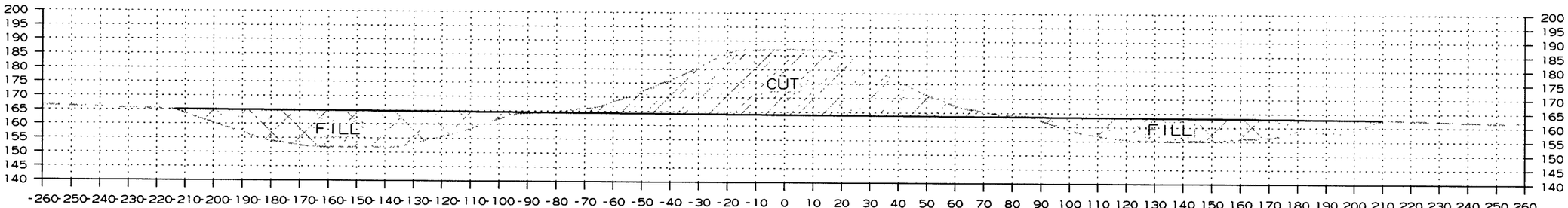
REFER TO THE SPECIAL PROVISIONS.



AREA CUT 1846 SQ. FT.
AREA FILL 2390 SQ. FT.

464+00

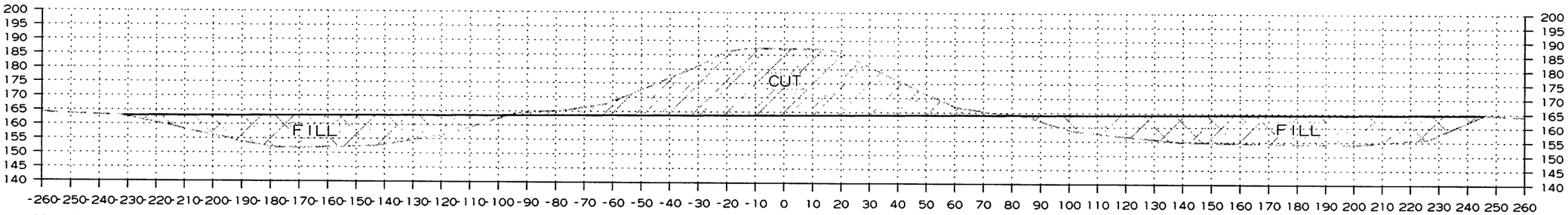
VOLUME CUT 7067 CU. YD.
VOLUME FILL 7713 CU. YD.



AREA CUT 1970 SQ. FT.
AREA FILL 1775 SQ. FT.

463+00

VOLUME CUT 7459 CU. YD.
VOLUME FILL 7498 CU. YD.



AREA CUT 2058 SQ. FT.
AREA FILL 2274 SQ. FT.

462+00

VOLUME CUT 7544 CU. YD.
VOLUME FILL 9159 CU. YD.

CROSS SECTION STA. 462+00 TO STA. 464+00

2/11/2015

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	77	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

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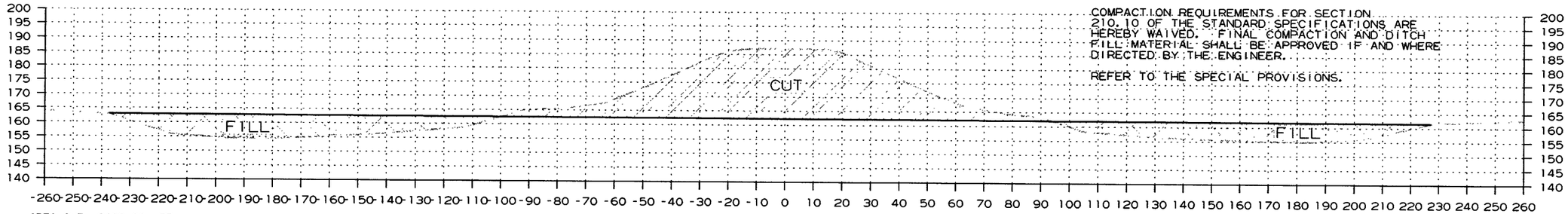
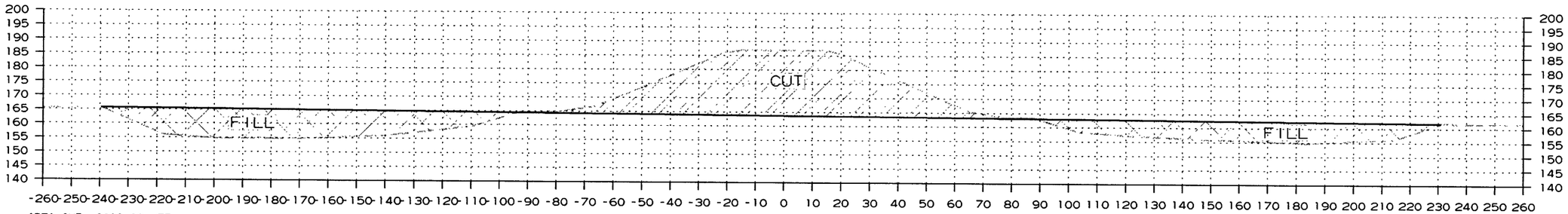


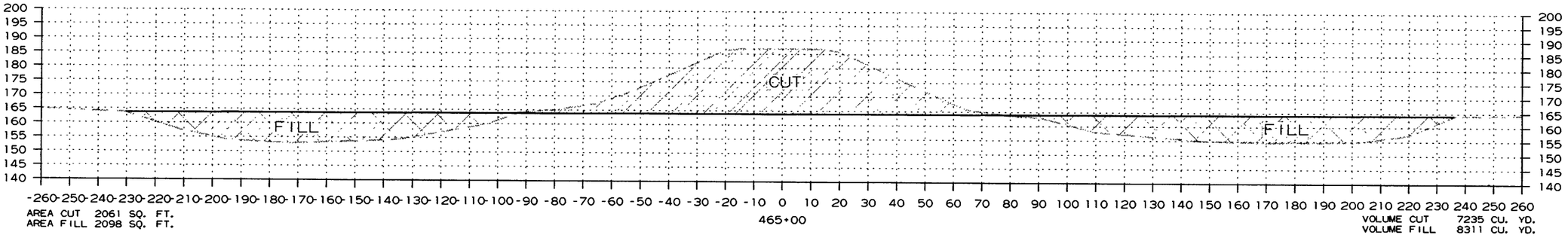
AREA CUT 2402 SQ. FT.
AREA FILL 1470 SQ. FT.

VOLUME CUT 8324 CU. YD.
VOLUME FILL 6289 CU. YD.



AREA CUT 2093 SQ. FT.
AREA FILL 1926 SQ. FT.

VOLUME CUT 7693 CU. YD.
VOLUME FILL 7452 CU. YD.



AREA CUT 2061 SQ. FT.
AREA FILL 2098 SQ. FT.

VOLUME CUT 7235 CU. YD.
VOLUME FILL 8311 CU. YD.

CROSS SECTION STA. 465+00 TO STA. 467+00

2/11/2015

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	78	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

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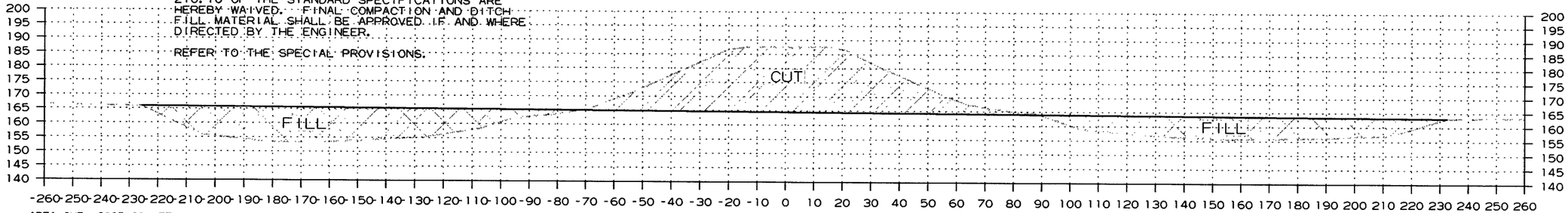
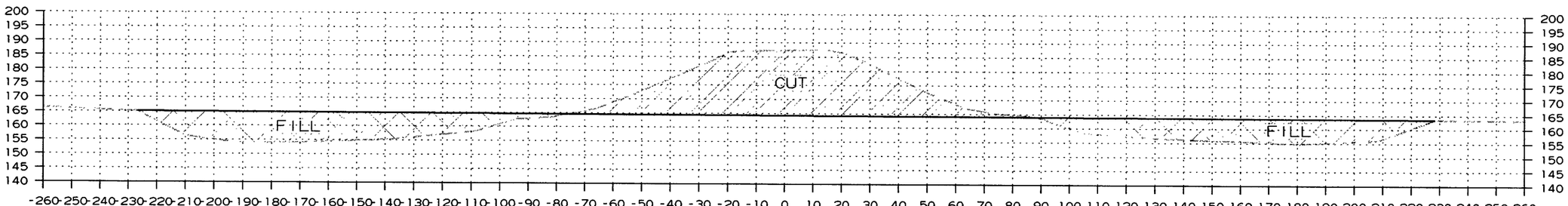


AREA CUT 2035 SQ. FT.
AREA FILL 2119 SQ. FT.

470+00

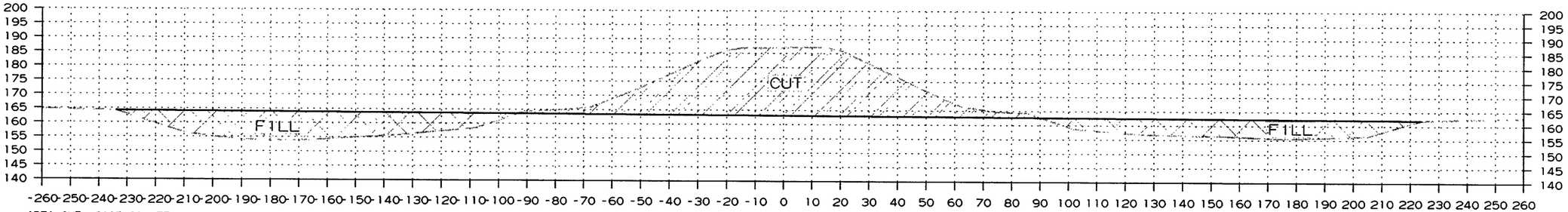
VOLUME CUT 7554 CU. YD.
VOLUME FILL 7693 CU. YD.



AREA CUT 2044 SQ. FT.
AREA FILL 2035 SQ. FT.

469+00

VOLUME CUT 7850 CU. YD.
VOLUME FILL 6889 CU. YD.



AREA CUT 2195 SQ. FT.
AREA FILL 1685 SQ. FT.

468+00

VOLUME CUT 8513 CU. YD.
VOLUME FILL 5843 CU. YD.

CROSS SECTION STA. 468+00 TO STA. 470+00

2/11/2015

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	79	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

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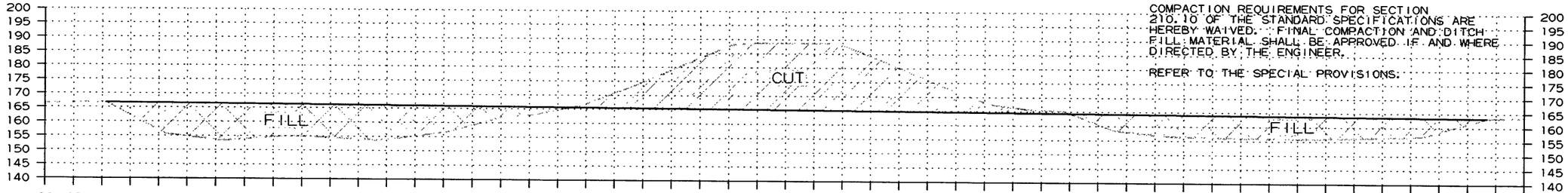
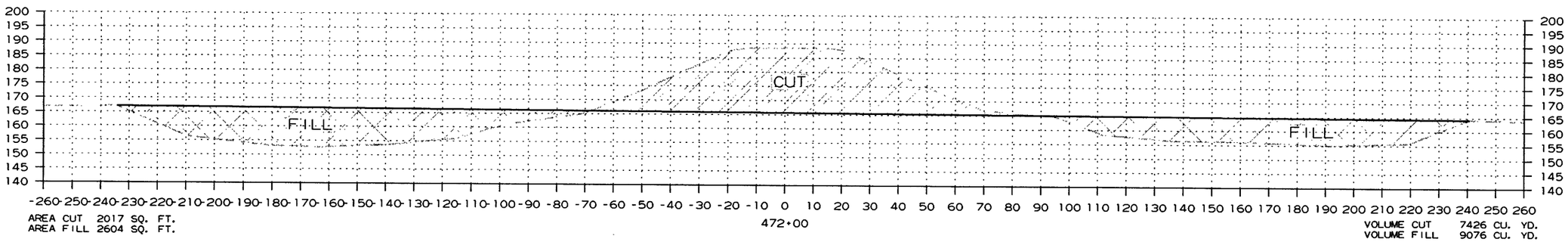


AREA CUT 2234 SQ. FT.
AREA FILL 2382 SQ. FT.

473+00

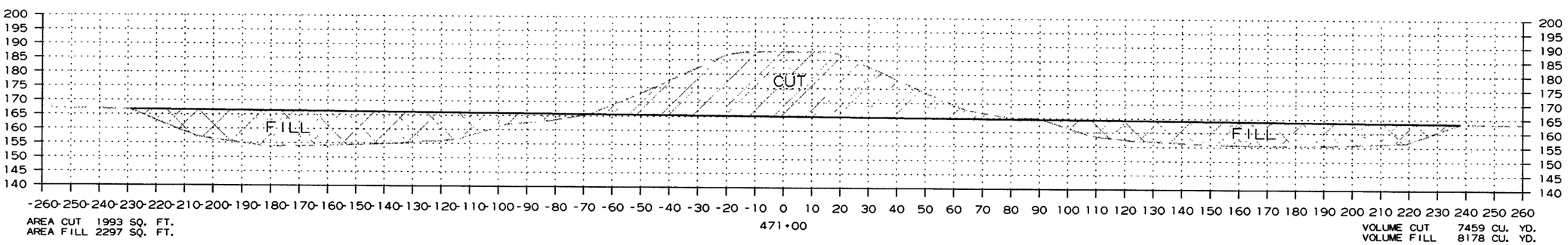
VOLUME CUT 7872 CU. YD.
VOLUME FILL 9233 CU. YD.



AREA CUT 2017 SQ. FT.
AREA FILL 2604 SQ. FT.

472+00

VOLUME CUT 7426 CU. YD.
VOLUME FILL 9076 CU. YD.



AREA CUT 1993 SQ. FT.
AREA FILL 2297 SQ. FT.

471+00

VOLUME CUT 7459 CU. YD.
VOLUME FILL 8178 CU. YD.

CROSS SECTION STA. 471+00 TO STA. 473+00

2/11/2015

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	80	86

(2) CROSS SECTIONS

NOTES: EXISTING DITCHES ARE TO BE FILLED WITH EMBANKMENT MATERIAL CUT BELOW THE EXISTING A.C.H.M. TYPICAL.

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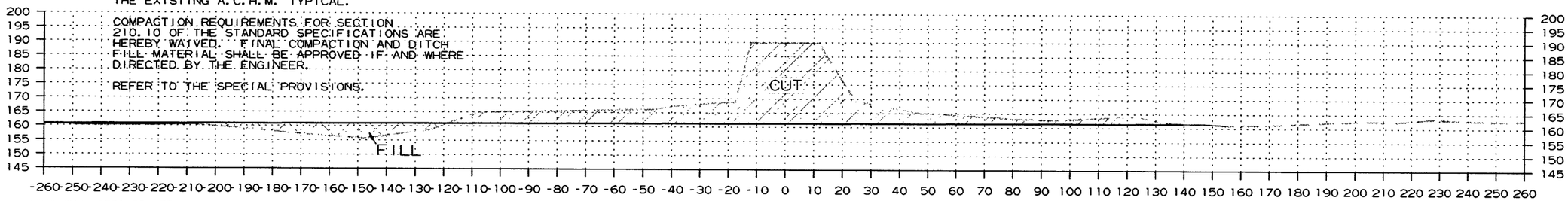
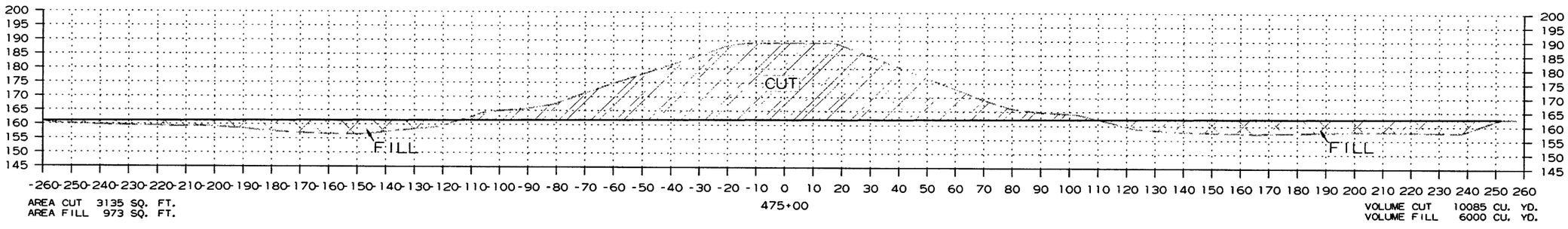


AREA CUT 1821 SQ. FT.
AREA FILL 292 SQ. FT.

475+67.04 - BRIDGE END

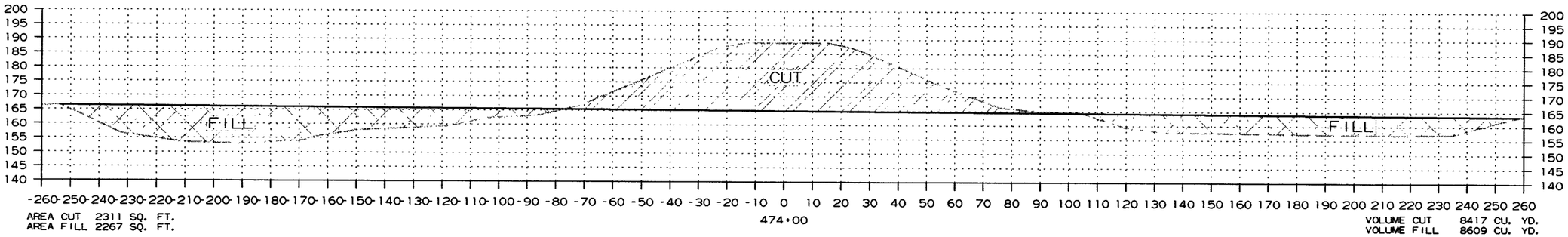
VOLUME CUT 6153 CU. YD.
VOLUME FILL 1570 CU. YD.



AREA CUT 3135 SQ. FT.
AREA FILL 973 SQ. FT.

475+00

VOLUME CUT 10085 CU. YD.
VOLUME FILL 6000 CU. YD.



AREA CUT 2311 SQ. FT.
AREA FILL 2267 SQ. FT.

474+00

VOLUME CUT 8417 CU. YD.
VOLUME FILL 8609 CU. YD.

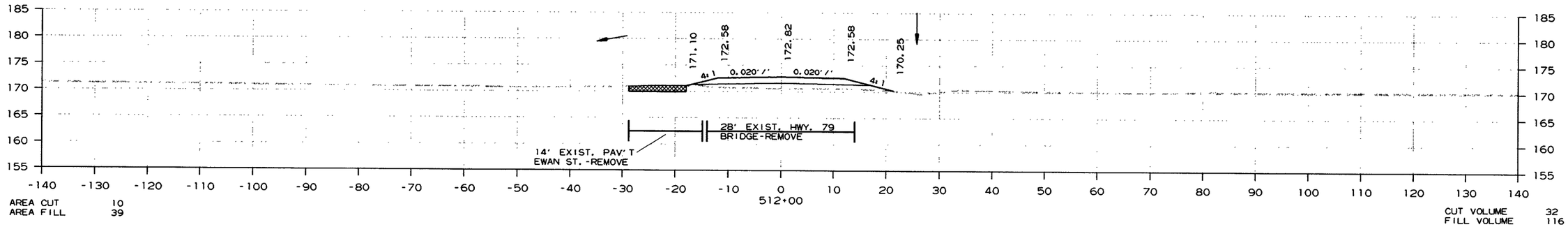
CROSS SECTION STA. 474+00 TO STA. 475+61.52

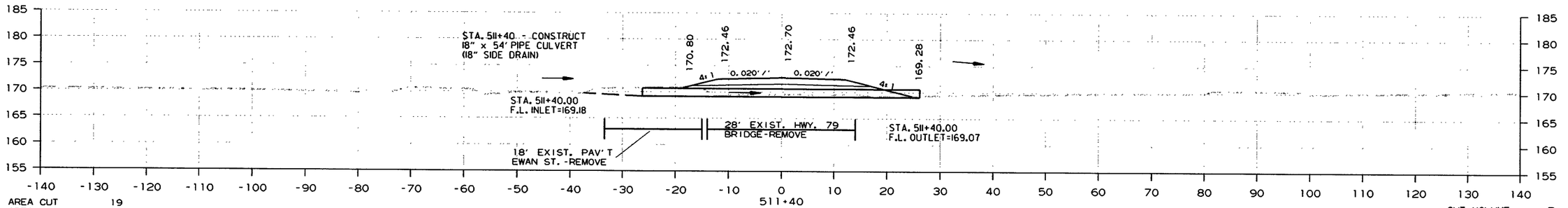
2/11/2015

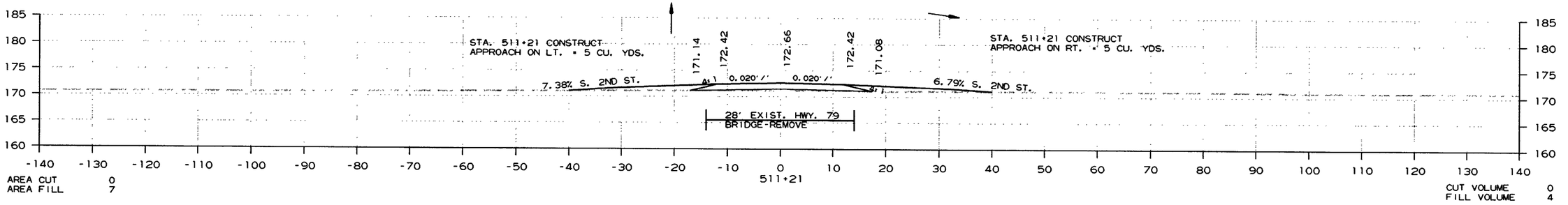
R110540.DGN

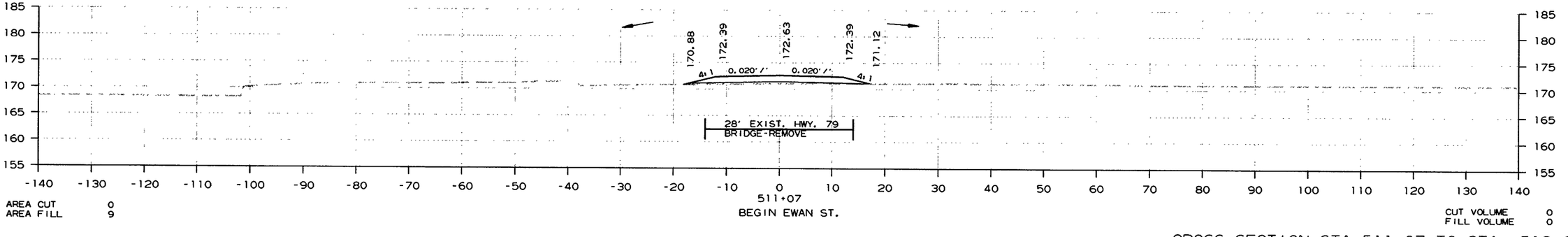
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	81	86

(2) CROSS SECTIONS









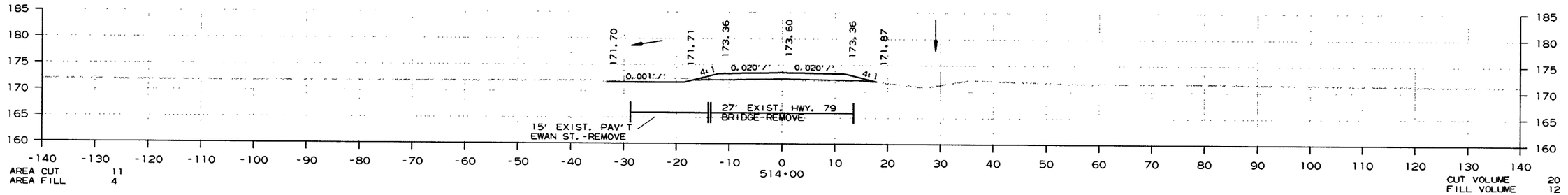
CROSS SECTION STA. 511+07 TO STA. 512+00

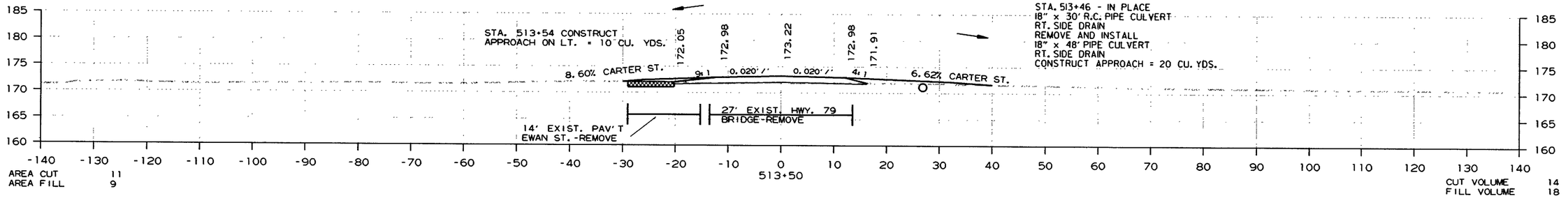
2/11/2015

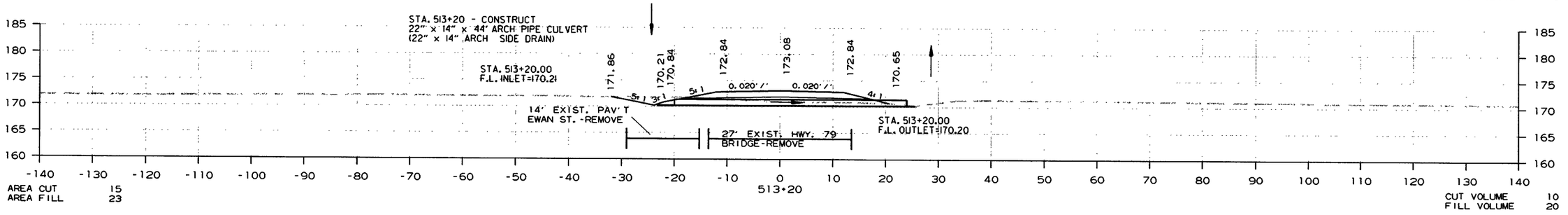
R110540.DGN

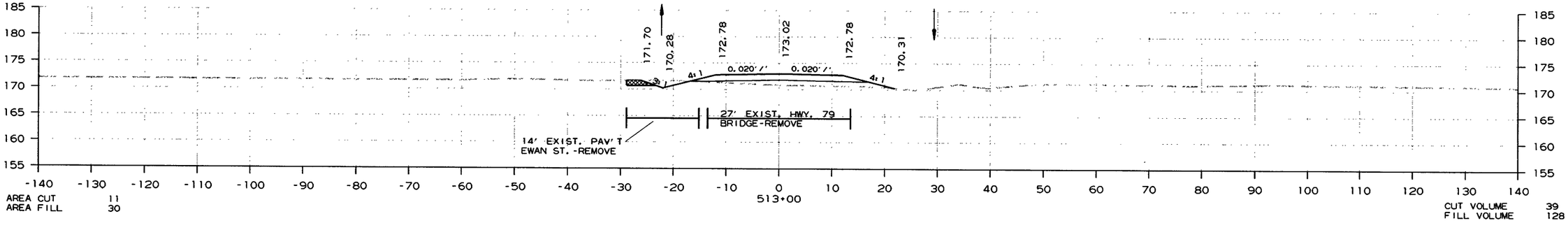
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	82	86

(2) CROSS SECTIONS









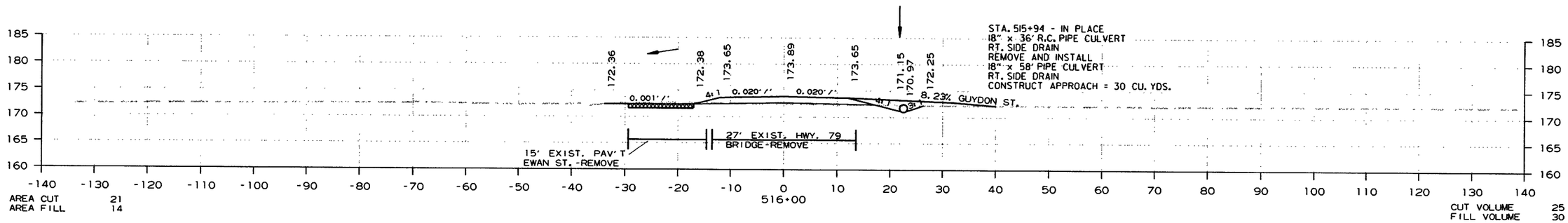
CROSS SECTION STA. 513+00 TO STA. 514+00

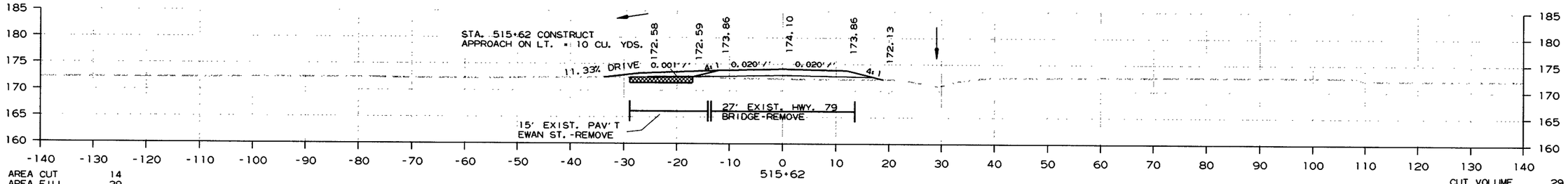
2/11/2015

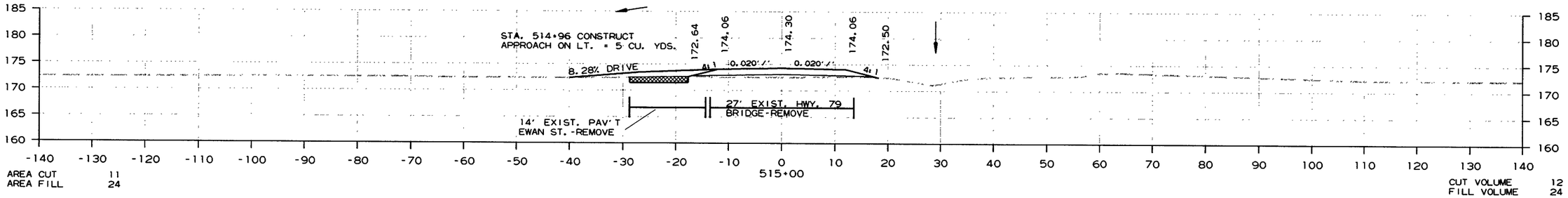
R110540.DGN

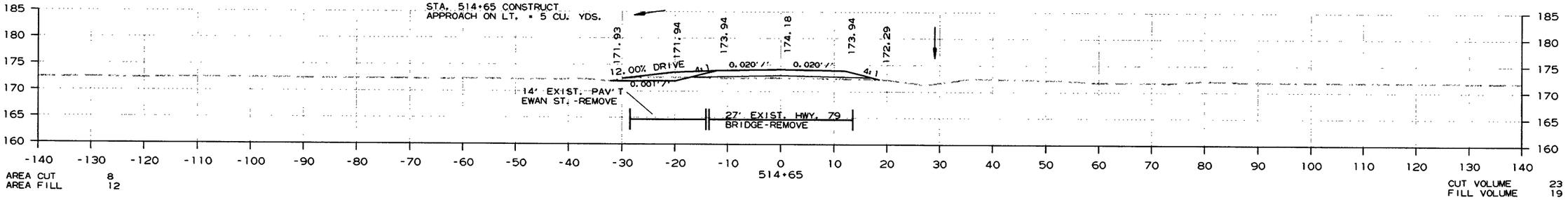
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	83	86

(2) CROSS SECTIONS









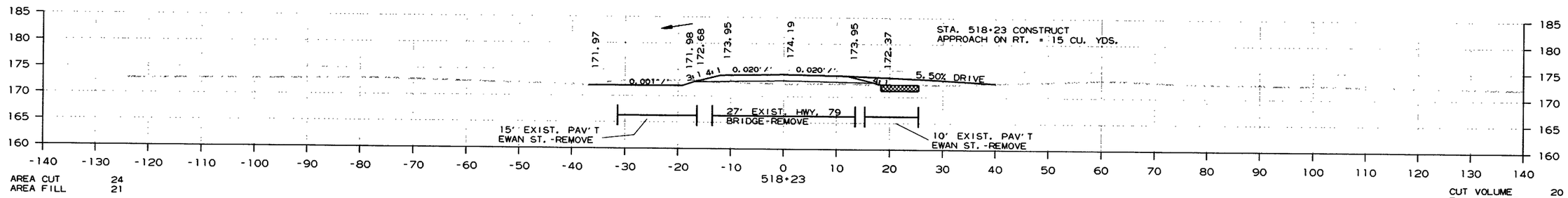
CROSS SECTION STA. 514+65 TO STA. 516+00

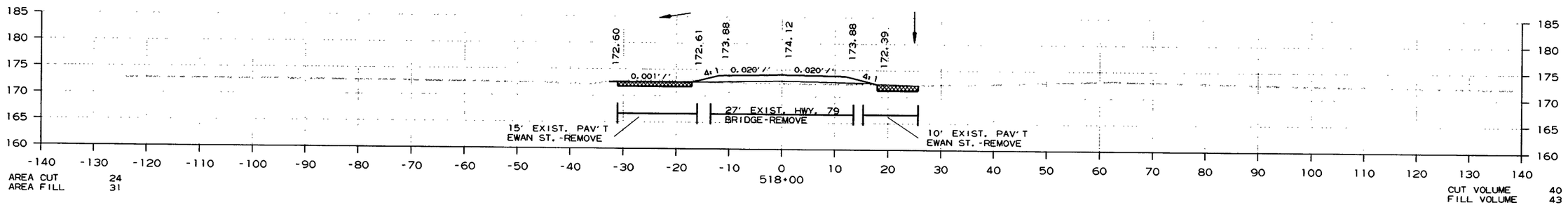
2/11/2015

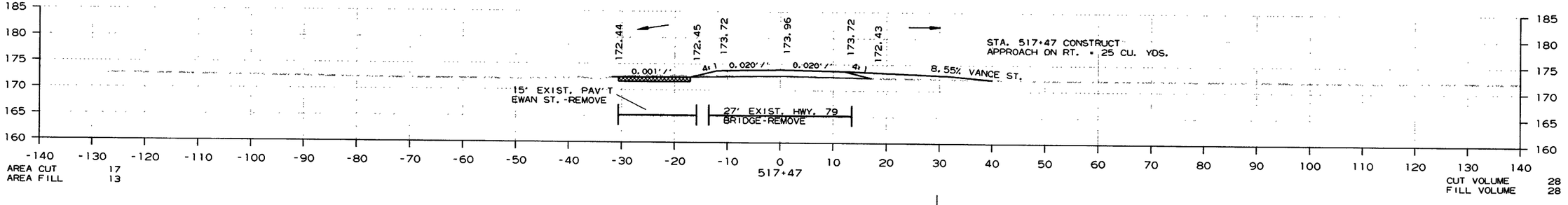
R110540.DGN

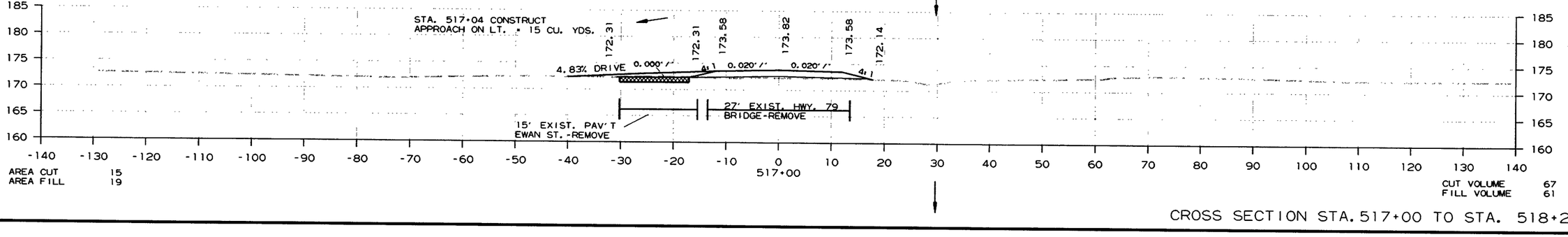
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	84	86

(2) CROSS SECTIONS









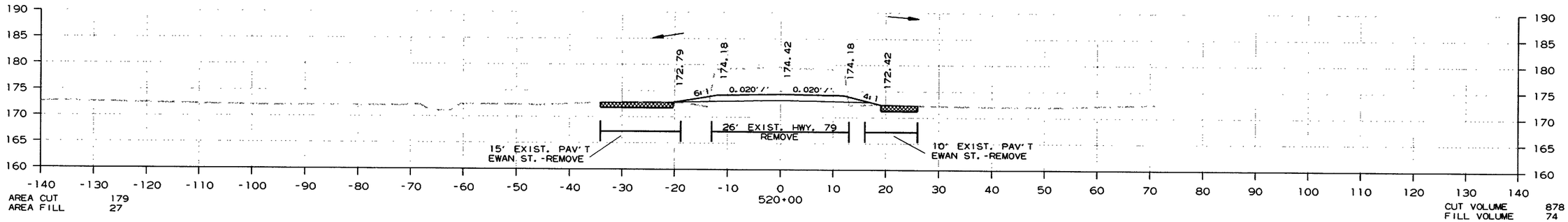
CROSS SECTION STA. 517+00 TO STA. 518+23

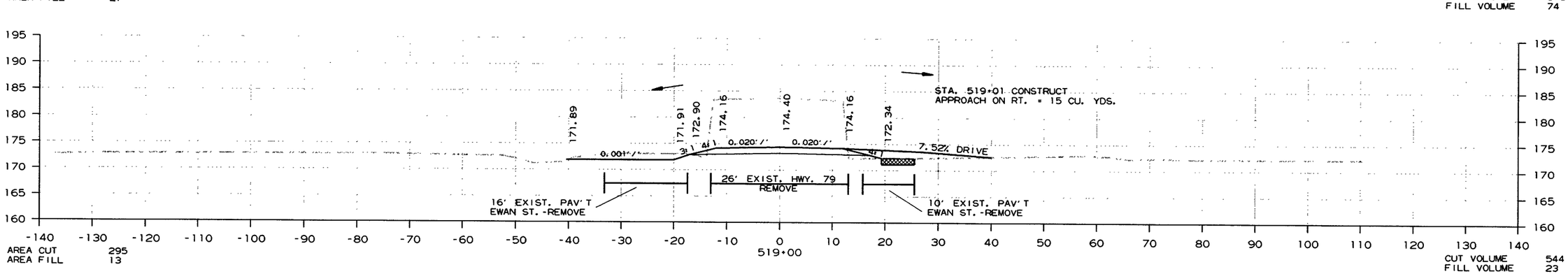
2/11/2015

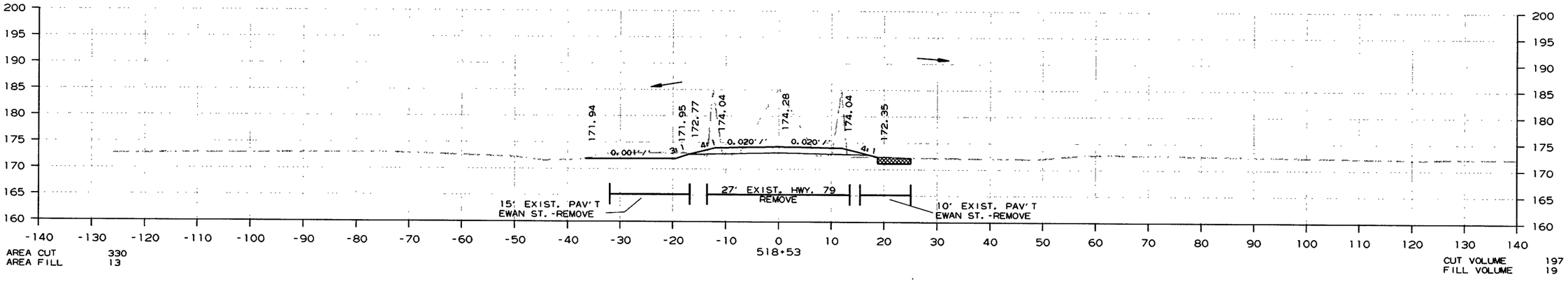
R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	85	86

(2) CROSS SECTIONS







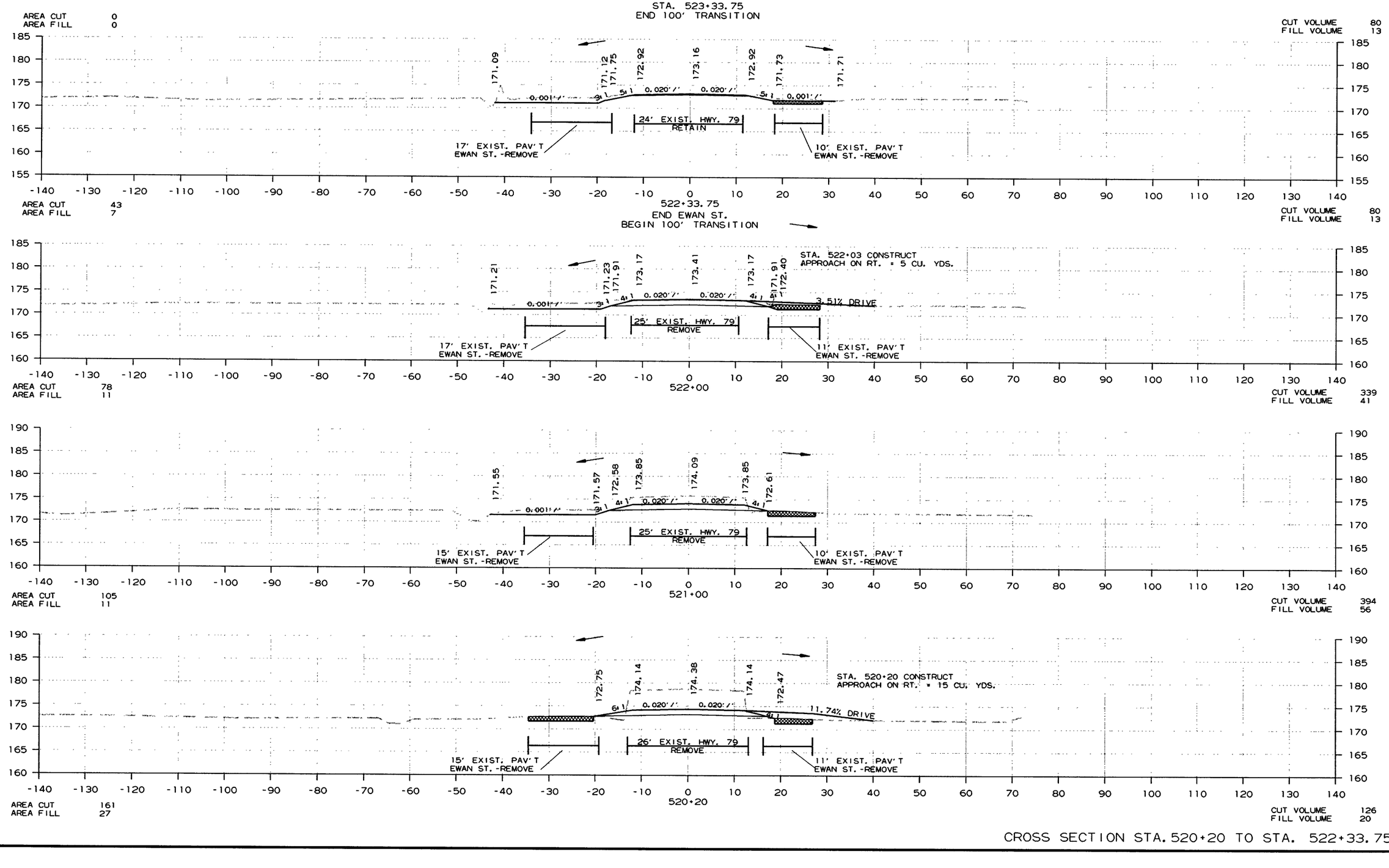
CROSS SECTION STA. 518+53 TO STA. 520+00

2/11/2015

R110540.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110540	86	86

(2) CROSS SECTIONS



CROSS SECTION STA. 520+20 TO STA. 522+33.75

2/11/2015

R110540.DGN