| 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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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 1 | 168 |

(2) CONWAY SOUTH INTERCHANGE - HWY. 365 (BASE & SURF.) (S)

"THIS PROJECT IS A FULLY CONTROLLED ACCESS FACILITY"
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS

# CONWAY SOUTH INTERCHANGE - HWY. 365 (BASE & SURF.) (S)

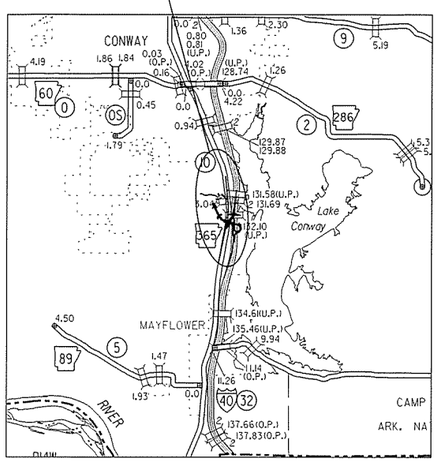
## FAULKNER COUNTY

## ROUTE I-40 SECTION 32

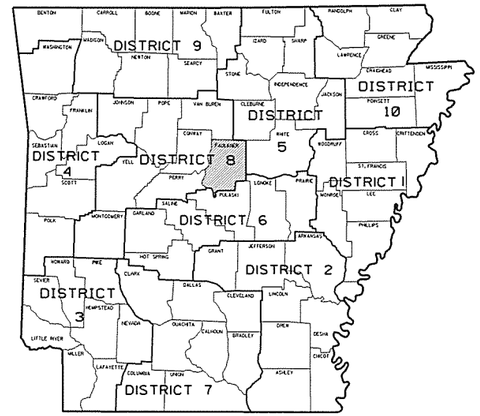
## FEDERAL AID PROJECT NHPP-40-3(127)132

## JOB 080396

PROJECT LOCATION



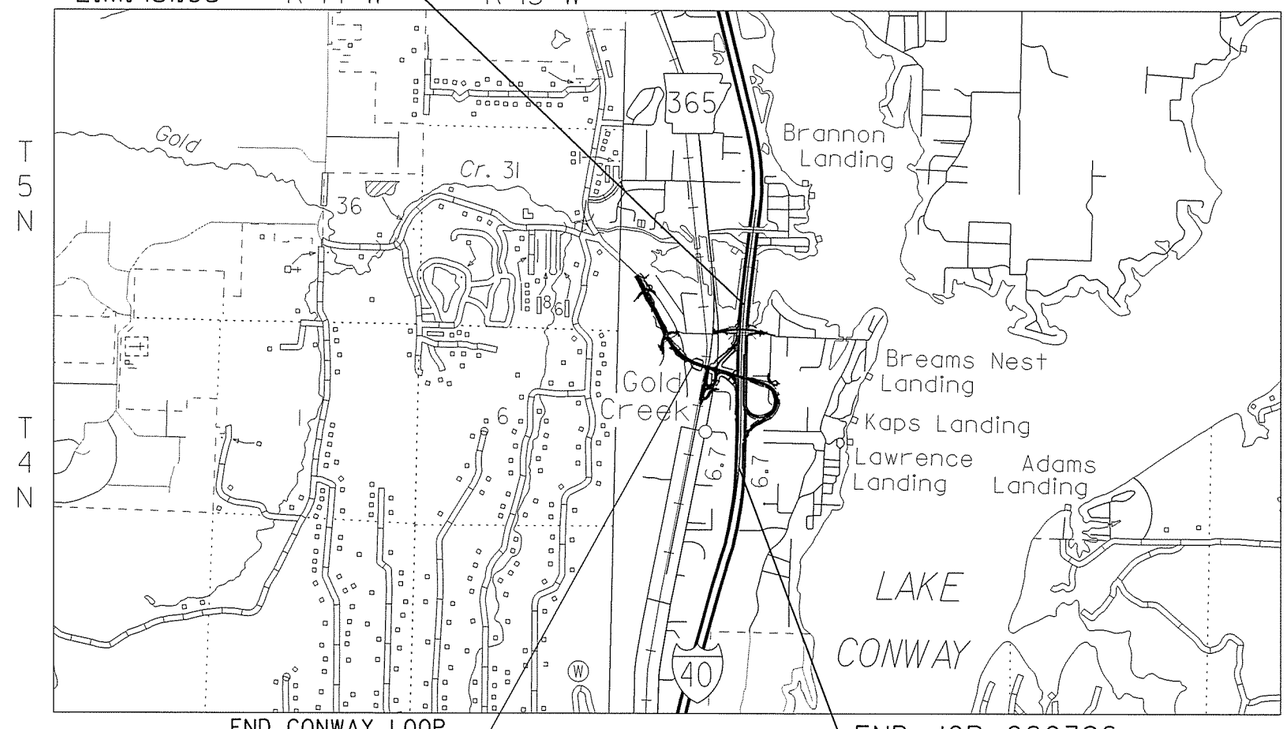

VICINITY MAP




ARKANSAS HIGHWAY DISTRICT 8

BEGIN JOB 080396
STA. 7413+98.59
L.M. 131.95

NOT TO SCALE




END CONWAY LOOP
CONST. STA. 33+00.00

END JOB 080396
STA. 7458+15.13

**BRIDGE DATA**

(1) IN PLACE
STA. 18+83.88 BRIDGE END
BRIDGE NO. 07257 OVER INTERSTATE 40
218'-0" CONT. COMP. PLATE GIRDER UNIT
40'-0" CLEAR ROADWAY
15 33/64 42'54" RT. FORWARD SKEW
220'-3 " BRIDGE LENGTH
STA. 21+04.13 BRIDGE END
RETAIN

(2) IN PLACE
STA. 28+50.31 BRIDGE END
BRIDGE NO. 07258 OVER HWY. 365 & UPRR
235'-0" CONT. COMP. PLATE GIRDER UNIT
64'-0" CLEAR ROADWAY
5 33/64 00'00" RT. FORWARD SKEW
237'-2 1/8" BRIDGE LENGTH
STA. 30+87.49 BRIDGE END
RETAIN

(3) IN PLACE
STA. 17+90.92 BRIDGE END
BRIDGE NO. 07259 OVER INTERSTATE 40
308'-0" CONT. COMP. PLATE GIRDER UNIT
40'-0" CLEAR ROADWAY
310'-2" BRIDGE LENGTH
STA. 21+01.08 BRIDGE END
RETAIN

**STRUCTURES OVER 20'-0" SPAN**

(4) IN PLACE
RAMP I STA. 7426+50 CONSTRUCT
TRIPLE 8' X 4' X 104' R.C. BOX CULVERT
30 33/64 LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 7101 CFS DA = 406 ACRES
SPAN = 30.79'
RETAIN

PROJECT COORDINATES

| | BEGIN | MID-POINT | END |
|---|---|---|---|
| LATITUDE | N 35°01'15" | N 35°0'53" | N 35°00'31" |
| LONGITUDE | W 92°24'35" | W 92°24'36" | W 92°24'37" |
| STATION | 7413+98.59 | 7436+56.76 | 7458+15.13 |

| · DESIGN TRAFFIC DATA · | I-40 | CONWAY LOOP |
|---|---|---|
| DESIGN YEAR | 2035 | 2035 |
| 2015 ADT | 66,000 | 8,700 |
| 2035 ADT | 101,200 | 22,000 |
| 2035 DHV | 11,132 | 2,420 |
| DIRECTIONAL DISTRIBUTION | 60% | 60% |
| TRUCKS | 21% | 8% |
| DESIGN SPEED | 70 MPH | 40 MPH |

N

LENGTH COMPUTED ALONG C.L. MEDIAN

| | | | |
|---|---|---|---|
| GROSS LENGTH OF PROJECT | 4416.54 FEET | OR | 0.836 MILES |
| NET LENGTH OF ROADWAY | 4416.54 FEET | OR | 0.836 MILES |
| NET LENGTH OF BRIDGES | 0.00 FEET | OR | 0.000 MILES |
| NET LENGTH OF PROJECT | 4416.54 FEET | OR | 0.836 MILES |

GARVER LLC CERTIFICATE OF AUTHORIZATION No. 766 ARKANSAS ENGINEER

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11855 TODD E. MUELLER
5-19-15

P.E. JOB 080174

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WORKSPACE: AHTD
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REVISED DATE:

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| 72 | DETAILS OF TYPE SPECIAL APPROACH GUTTERS (SHEET 2 OF 2) | 07257 - 07258 | 53016 | |
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| 85 | GUARD RAIL DETAILS | | GR-10A | 7-14-10 |
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| 114 | TEMPORARY EROSION CONTROL DEVICES | | TEC-2 | 6-2-94 |
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| 121 | DETAILS OF STANDARD WINGS FOR REINFORCED BOX CULVERTS | | W-X003-1 | 5-10-66 |
| 122 | DETAILS OF STANDARD WINGS FOR REINFORCED BOX CULVERTS 30° SKEW | | W-X303-1 | 5-10-66 |
| | | | | |
| 123-168 | CROSS SECTIONS | | | |


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

| 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. | | 080396 | 2 | 168 |

(2) INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES

### GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON THE 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 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. 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 TO THE PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER ITEM NO. 210 UNCLASSIFIED EXCAVATION.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 21835
TODD E. MUELLER
9-11-15

### GOVERNING SPECIFICATIONS

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

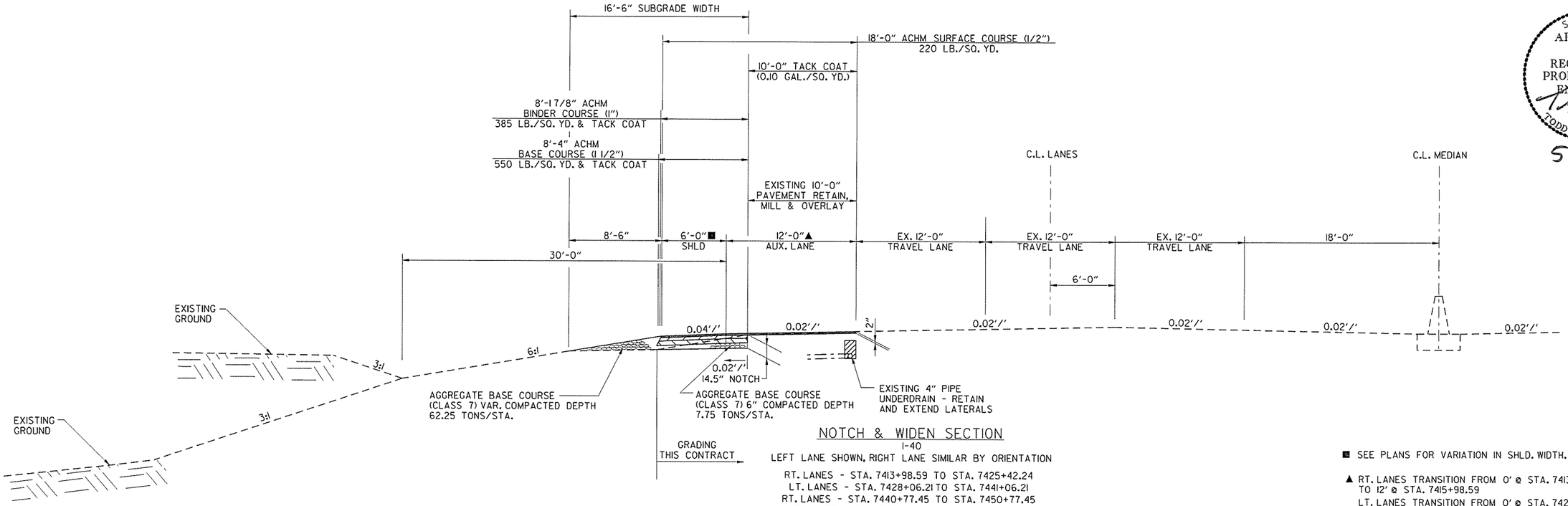
| NUMBER | TITLE |
|---|---|
| ERRATA | ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS |
| FHWA-1273 | REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS |
| FHWA-1273 | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS |
| FHWA-1273 | SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140) |
| FHWA-1273 | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES |
| FHWA-1273 | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS |
| FHWA-1273 | SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS |
| FHWA-1273 | SUPPLEMENT - WAGE RATE DETERMINATION |
| 108-I | LIQUIDATED DAMAGES |
| 410-I | CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES |
| 604-I | RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES |
| 606-I | PIPE CULVERTS FOR SIDE DRAINS |
| 620-I | MULCH COVER |
| JOB 080396 | ARCHITECTURAL FINISH |
| JOB 080396 | BIDDING REQUIREMENTS AND CONDITIONS |
| JOB 080396 | BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT |
| JOB 080396 | BROADBAND INTERNET SERVICE FOR FIELD OFFICE |
| JOB 080396 | CHANNEL POST SIGN SUPPORT |
| JOB 080396 | COORDINATION OF WORK |
| JOB 080396 | DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES |
| JOB 080396 | EXCAVATION AND EMBANKMENT |
| JOB 080396 | GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION |
| JOB 080396 | HIGH PERFORMANCE PAVEMENT MARKING |
| JOB 080396 | MAINTENANCE OF TRAFFIC |
| JOB 080396 | MANDATORY ELECTRONIC CONTRACT |
| JOB 080396 | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT |
| JOB 080396 | PARTNERING REQUIREMENTS |
| JOB 080396 | PLASTIC PIPE |
| JOB 080396 | REMOVAL AND DISPOSAL OF GUARDRAIL |
| JOB 080396 | SHORING FOR CULVERTS |
| JOB 080396 | SIGN PANEL MATERIALS AND FABRICATION |
| JOB 080396 | SOIL STABILIZATION |
| JOB 080396 | SPECIAL SAFETY REQUIREMENTS FOR OVERHEAD SIGNS |
| JOB 080396 | STEEL OVERHEAD SIGN STRUCTURES |
| JOB 080396 | STORM WATER POLLUTION PREVENTION PLAN |
| JOB 080396 | SUBGRADE PREPARATION |
| JOB 080396 | SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS |
| JOB 080396 | TEXTURED COATING FINISH |
| JOB 080396 | TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES |
| JOB 080396 | UTILITY ADJUSTMENTS |
| JOB 080396 | VALUE ENGINEERING |
| JOB 080396 | WARM MIX ASPHALT |

INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES


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(2) TYPICAL SECTIONS OF IMPROVEMENT



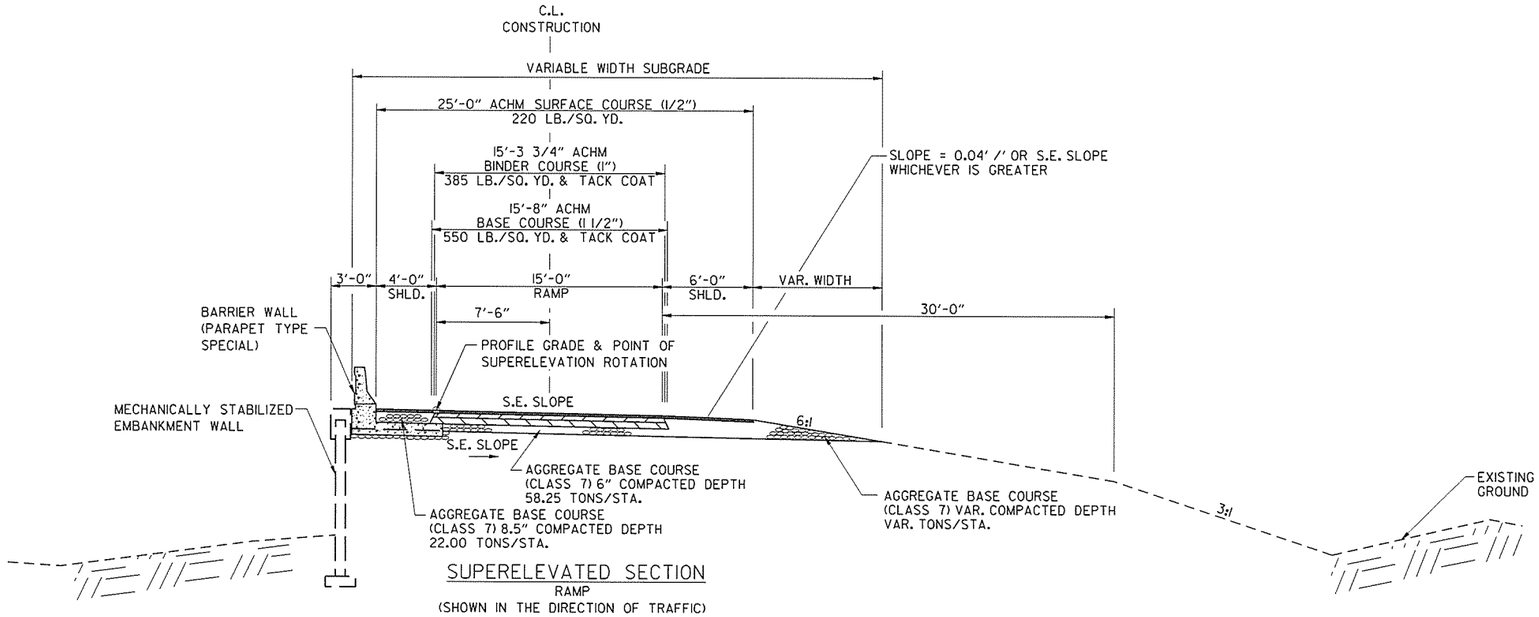

NOTCH & WIDEN SECTION
I-40
LEFT LANE SHOWN, RIGHT LANE SIMILAR BY ORIENTATION

RT. LANES - STA. 7413+98.59 TO STA. 7425+42.24
LT. LANES - STA. 7428+06.21 TO STA. 7441+06.21
RT. LANES - STA. 7440+77.45 TO STA. 7450+77.45
LT. LANES. - STA. 7451+48.93 TO STA. 7458+15.13

■ SEE PLANS FOR VARIATION IN SHLD. WIDTH.

▲ RT. LANES TRANSITION FROM 0' @ STA. 7413+98.59 TO 12' @ STA. 7415+98.59
LT. LANES TRANSITION FROM 0' @ STA. 7428+06.21 TO 12' @ STA. 7431+06.21
RT. LANES TRANSITION FROM 12' @ STA. 7447+77.45 TO 0' @ STA. 7450+77.45

RT. LANES AUXILLIARY LANE VARIES FROM STA. 7420+38.59 TO STA. 7425+42.24
LT. LANES AUXILLIARY LANE VARIES FROM STA. 7440+29.10 TO STA. 7441+06.21
RT. LANES AUXILLIARY LANE VARIES FROM STA. 7440+77.45 TO STA. 7442+22.02
LT. LANES AUXILLIARY LANE VARIES FROM STA. 7451+48.93 TO STA. 7458+15.13




SUPERELEVATED SECTION
RAMP
(SHOWN IN THE DIRECTION OF TRAFFIC)

RAMP 2 STA. 7434+60.00 TO STA. 7437+70.00

NOTES:

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

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

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

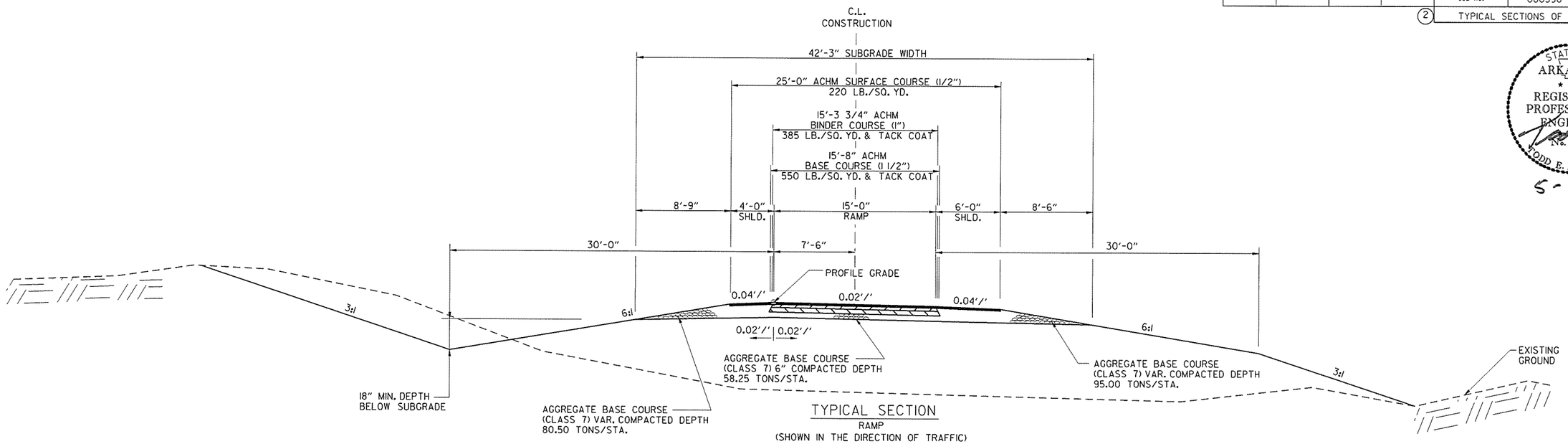
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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

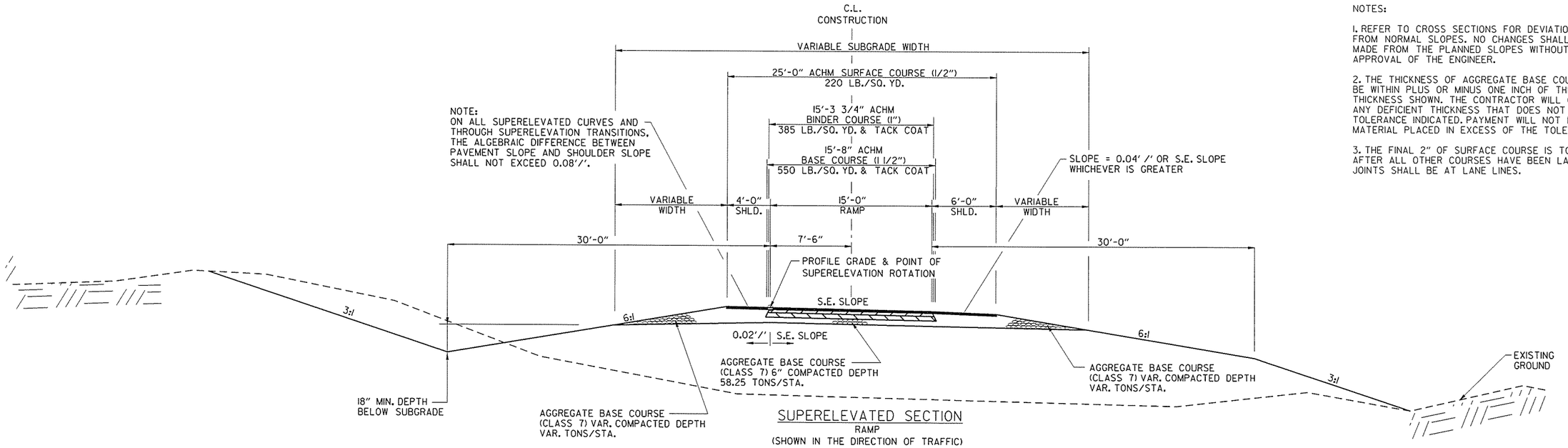



## TYPICAL SECTION

RAMP

(SHOWN IN THE DIRECTION OF TRAFFIC)

RAMP 1 STA. 7429+01.48 TO STA. 7429+12.34
RAMP 2 STA. 7438+71.82 TO STA. 7438+78.13
RAMP 3 STA. 7453+50.65 TO STA. 7453+88.97




## SUPERELEVATED SECTION

RAMP

(SHOWN IN THE DIRECTION OF TRAFFIC)

RAMP 1 STA. 7423+44.25 TO STA. 7429+01.48
RAMP 1 STA. 7429+12.34 TO STA. 7434+11.39
RAMP 2 STA. 7432+74.42 TO STA. 7434+60.00
RAMP 2 STA. 7437+70.00 TO STA. 7438+71.82
RAMP 2 STA. 7438+78.13 TO STA. 7440+77.95
RAMP 3 STA. 7441+34.94 TO STA. 7453+50.65
RAMP 4 STA. 7441+05.30 TO STA. 7448+25.00

NOTES:

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

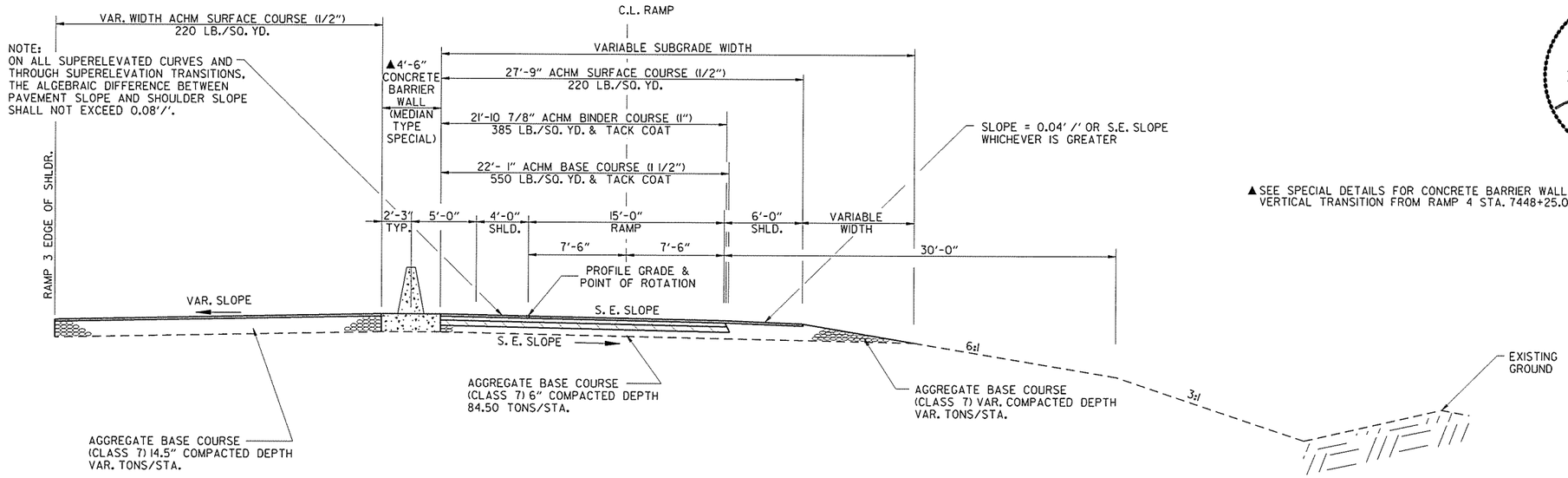
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3. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

TYPICAL SECTIONS OF IMPROVEMENT

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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 5 | 168 |
| | | | | (2) | TYPICAL SECTIONS OF IMPROVEMENT | | | |




STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

▲SEE SPECIAL DETAILS FOR CONCRETE BARRIER WALL VERTICAL TRANSITION FROM RAMP 4 STA. 7448+25.00 TO STA. 7448+50.00

## RAMP 4 WITH BARRIER WALL SUPERELEVATED SECTION

(SHOWN IN THE DIRECTION OF TRAFFIC)
RAMP 4 STA. 7448+25.00 TO STA. 7449+63.52

NOTES:

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

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

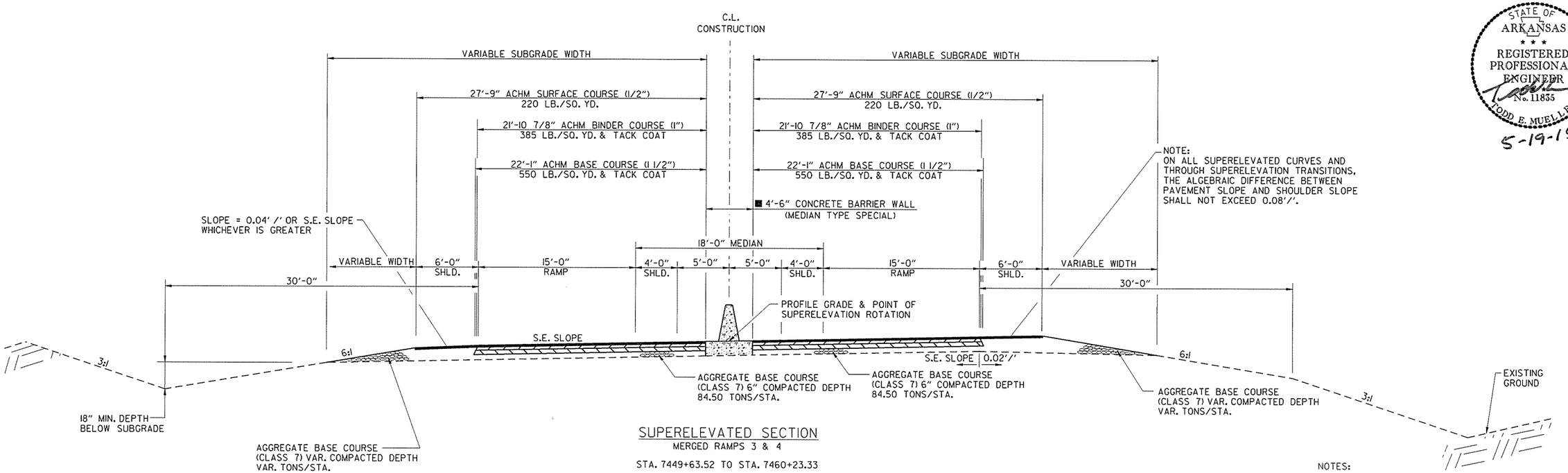
3. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

TYPICAL SECTIONS OF IMPROVEMENT

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| | | | | (2) | TYPICAL SECTIONS OF IMPROVEMENT | | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15




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

## SUPERELEVATED SECTION
MERGED RAMPS 3 & 4

STA. 7449+63.52 TO STA. 7460+23.33

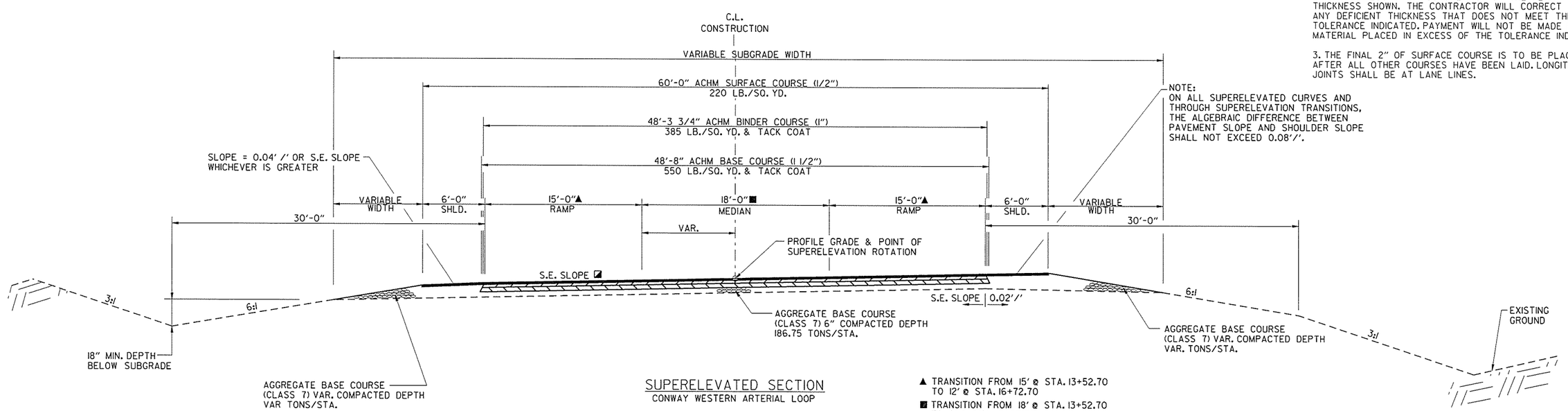
NOTES:

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

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

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

■ SEE SPECIAL DETAILS FOR CONCRETE BARRIER WALL VERTICAL TRANSITION FROM CONWAY LOOP STA. 13+52.70 TO STA. 13+77.70




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

## SUPERELEVATED SECTION
CONWAY WESTERN ARTERIAL LOOP

STA. 13+52.70 TO STA. 16+72.70

▲ TRANSITION FROM 15' @ STA. 13+52.70 TO 12' @ STA. 16+72.70

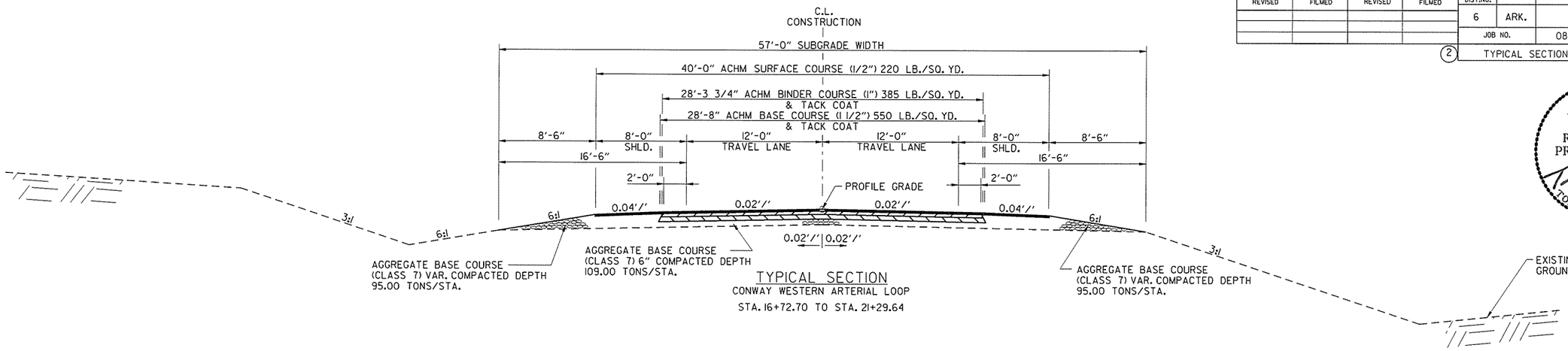
■ TRANSITION FROM 18' @ STA. 13+52.70 TO 0' @ STA. 16+72.70

◪ TRANSITION FROM 0.070'/' SUPERELEVATION @ STA. 13+52.70 TO NORMAL CROWN @ STA. 15+77.70.

# TYPICAL SECTIONS OF IMPROVEMENT

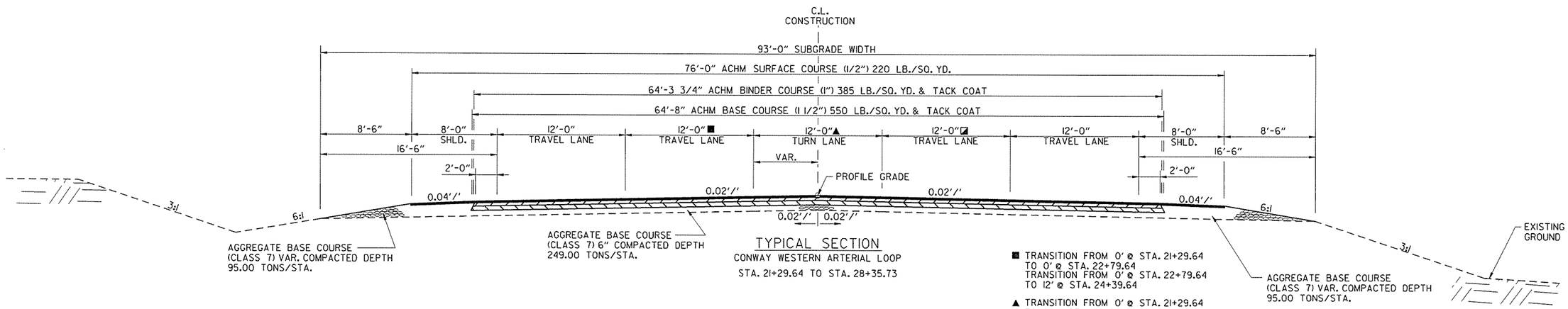
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| | | | | (2) | TYPICAL SECTIONS OF IMPROVEMENT | | | |




TYPICAL SECTION
CONWAY WESTERN ARTERIAL LOOP
STA. 16+72.70 TO STA. 21+29.64

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15




TYPICAL SECTION
CONWAY WESTERN ARTERIAL LOOP
STA. 21+29.64 TO STA. 28+35.73

■ TRANSITION FROM 0' @ STA. 21+29.64 TO 0' @ STA. 22+79.64
TRANSITION FROM 0' @ STA. 22+79.64 TO 12' @ STA. 24+39.64

▲ TRANSITION FROM 0' @ STA. 21+29.64 TO 0' @ STA. 22+79.64
TRANSITION FROM 0' @ STA. 22+79.64 TO 12' @ STA. 24+39.64
TRANSITION FROM 12' @ STA. 26+75.73 TO 0' @ STA. 28+35.73

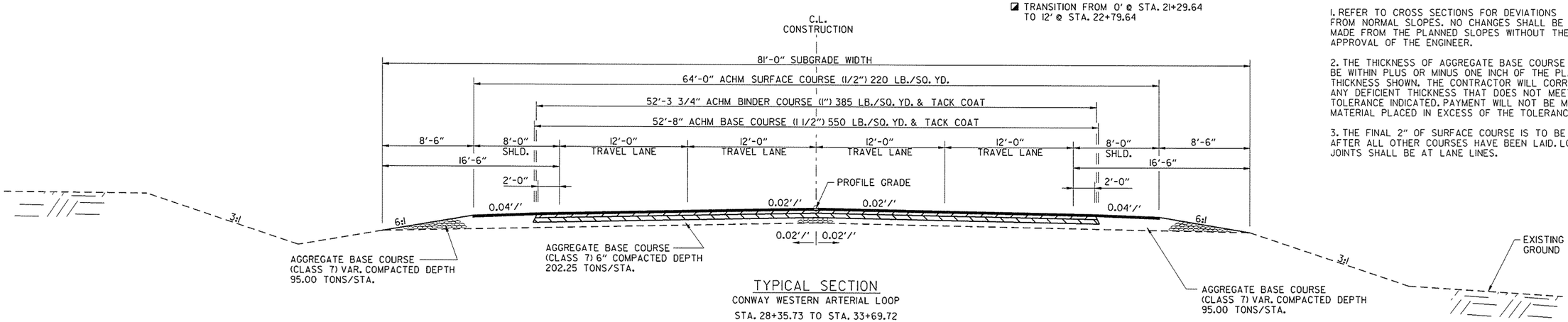
◪ TRANSITION FROM 0' @ STA. 21+29.64 TO 12' @ STA. 22+79.64

NOTES:

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

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

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



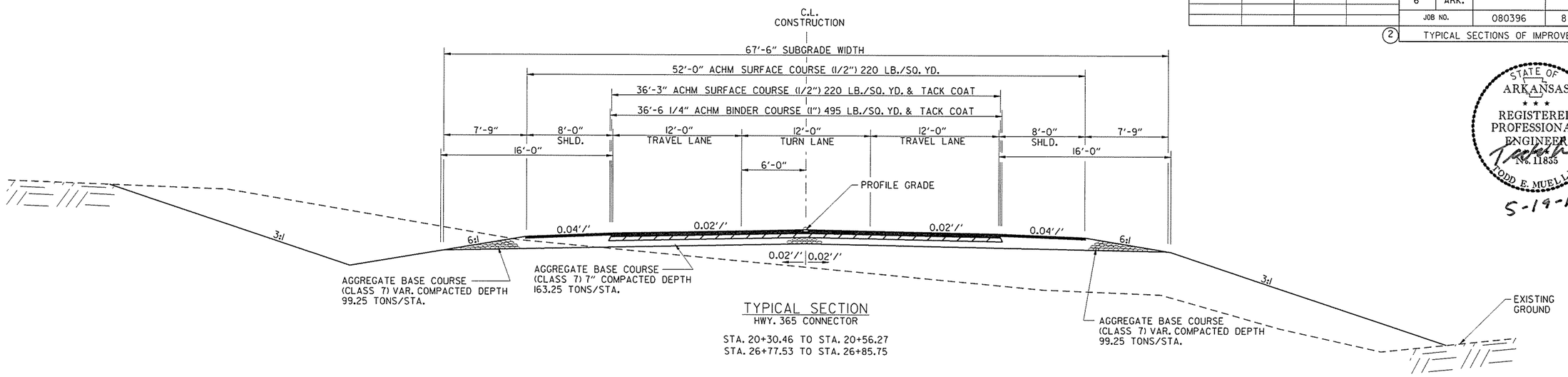

TYPICAL SECTION
CONWAY WESTERN ARTERIAL LOOP
STA. 28+35.73 TO STA. 33+69.72

TYPICAL SECTIONS OF IMPROVEMENT

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| | | | | JOB NO. | | 080396 | 8 | 168 |

(2) TYPICAL SECTIONS OF IMPROVEMENT




TYPICAL SECTION
HWY. 365 CONNECTOR

STA. 20+30.46 TO STA. 20+56.27
STA. 26+77.53 TO STA. 26+85.75

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

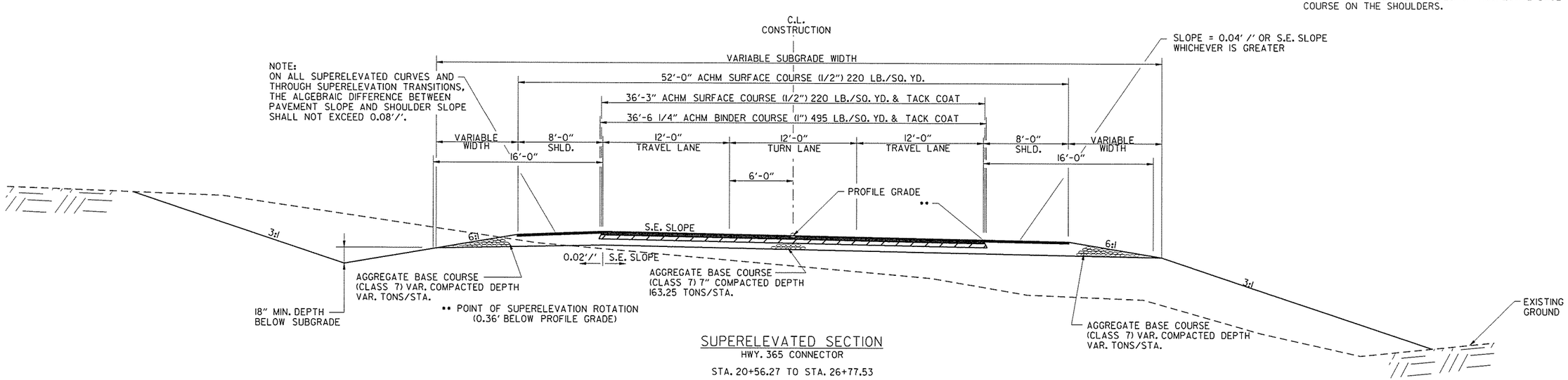
NOTES:

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




SUPERELEVATED SECTION
HWY. 365 CONNECTOR

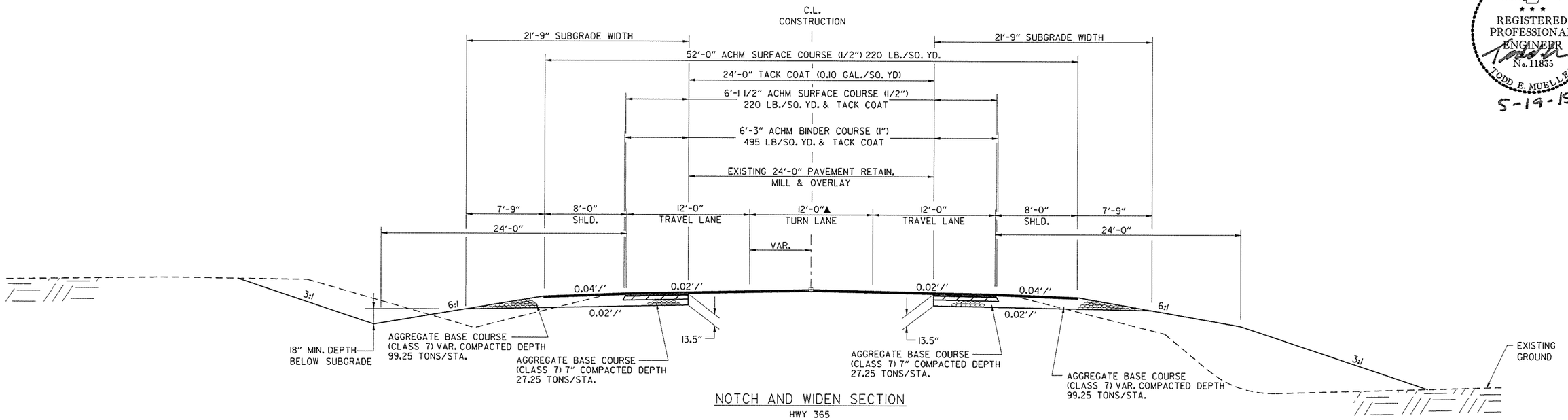
STA. 20+56.27 TO STA. 26+77.53

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| | | | | (2) | TYPICAL SECTIONS OF IMPROVEMENT | | | |

STATE OF ARKANSAS
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No. 11835
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5-19-15




## NOTCH AND WIDEN SECTION

HWY 365

STA. 430+74.37 TO STA. 439+21.75

▲ TRANSITION FROM 0' @ STA. 430+81.75 TO 12' @ STA. 434+11.75
TRANSITION FROM 12' @ STA. 435+91.75 TO 0' @ STA. 439+21.75

NOTES:

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

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

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

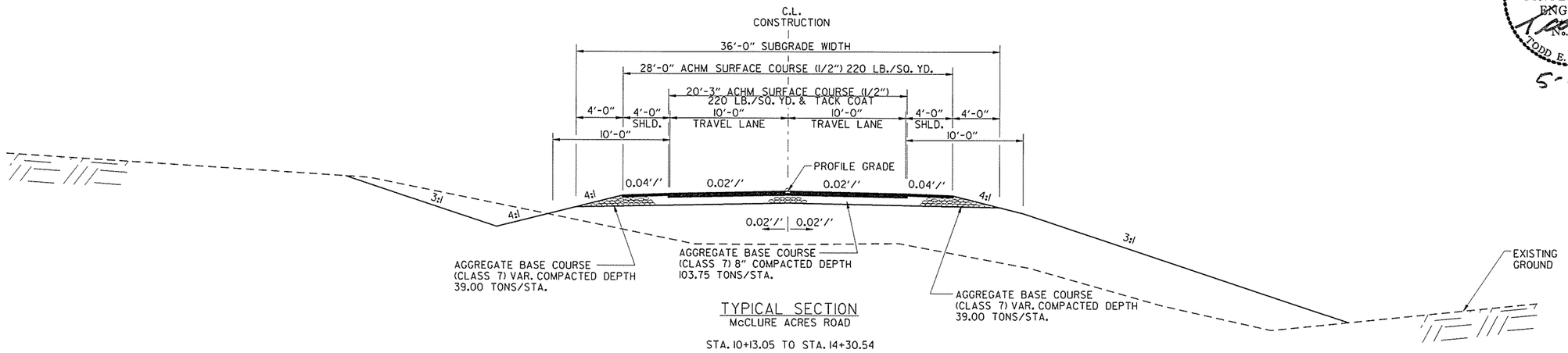
5. WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT. THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

TYPICAL SECTIONS OF IMPROVEMENT

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| | | | | (2) | TYPICAL SECTIONS OF IMPROVEMENT | | | |

STATE OF ARKANSAS
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No. 11835
TODD E. MUELLER
5-19-15




TYPICAL SECTION
McCLURE ACRES ROAD

STA. 10+13.05 TO STA. 14+30.54

NOTES:

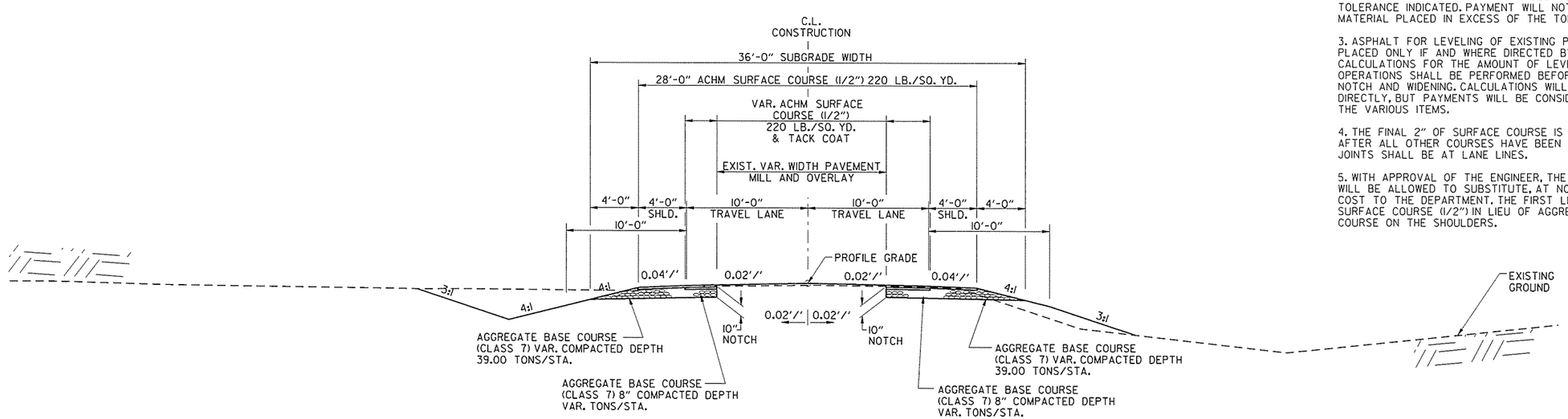
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NOTCH AND WIDEN TYPICAL SECTION
McCLURE ACRES ROAD

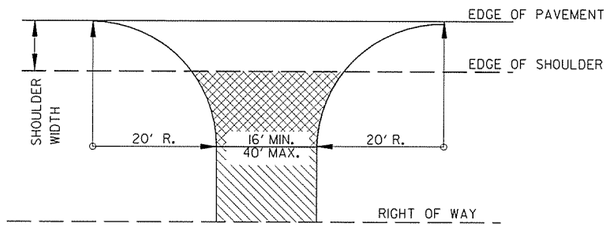
STA. 14+30.54 TO STA. 15+15.73

TYPICAL SECTIONS OF IMPROVEMENT

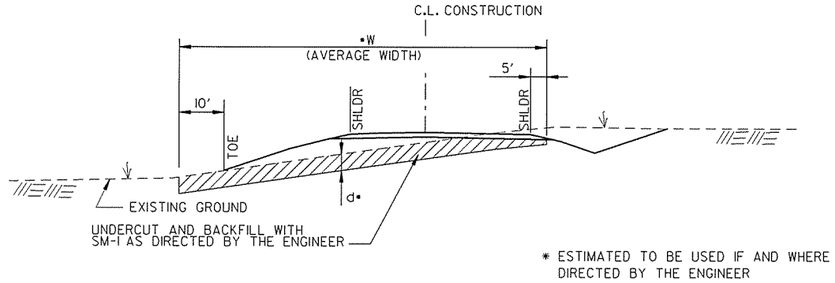
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| | | | | (2) | SPECIAL DETAILS | | | |

STATE OF ARKANSAS
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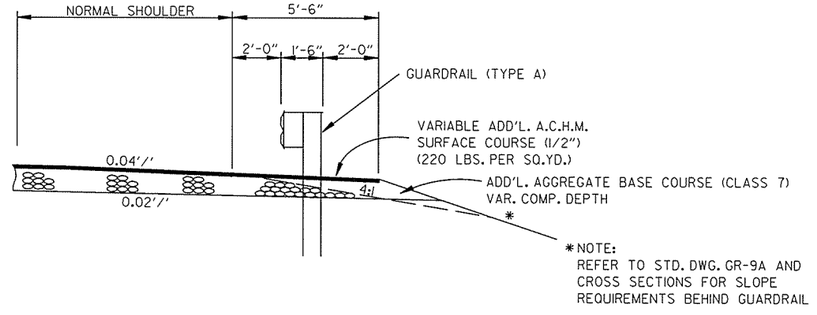

## DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)



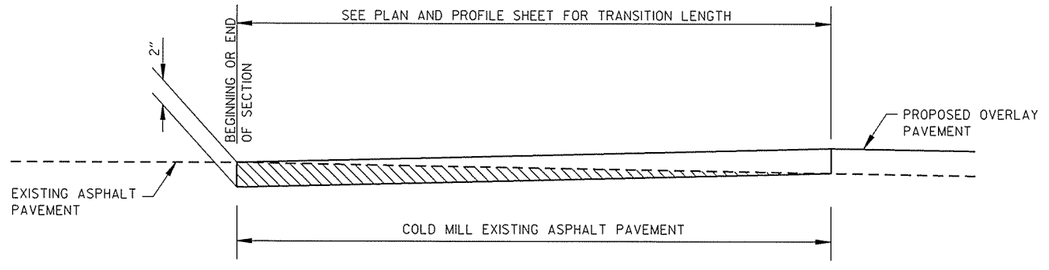

* ESTIMATED TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

## DETAIL OF UNDERCUT

| | | |
|---|---|---|
| RAMP 2 | d = 2' | W = 55' |
| RAMP 3 | d = 2' | W = 82' |
| McCLURE ACRES ROAD | d = 2' | W = 35' |




## WIDENING FOR GUARDRAIL

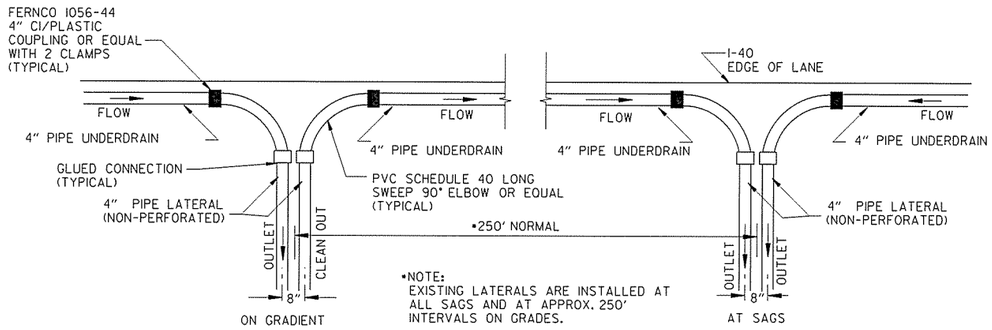



## DETAIL FOR TRANSITIONS



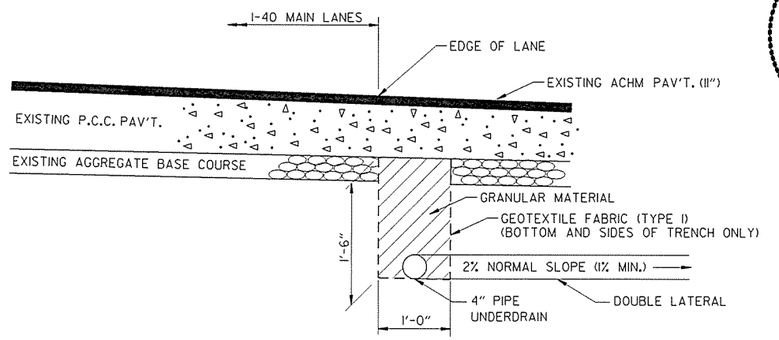
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| | | | | JOB NO. | | 080396 | 12 | 168 |
| | | | | (2) | SPECIAL DETAILS | | | |




NOTE:
PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

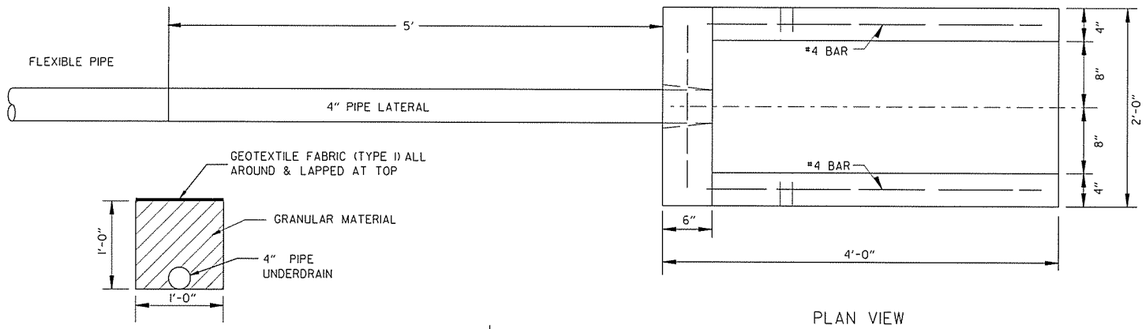
## PLAN DETAIL OF EXISTING PIPE UNDERDRAIN LATERAL TO BE RETAINED AND EXTENDED




## TYPICAL SECTION OF EXISTING PIPE UNDERDRAINS TO BE RETAINED AND EXTENDED

NOTES:

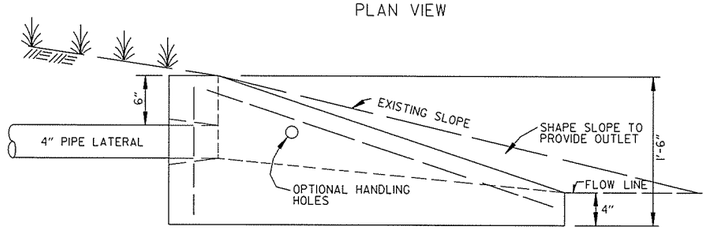
1. EXISTING 4" PIPE UNDERDRAIN LATERALS SHALL BE EXTENDED WHERE SHOWN ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER. EXISTING OUTLET PROTECTORS SHOULD BE REMOVED AND RECONSTRUCTED. PAYMENT SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR 4" PIPE UNDERDRAINS.
2. ANY PIPE UNDERDRAIN OR LATERAL TO REMAIN IN PLACE THAT IS DAMAGED BY THE CONTRACTOR, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
3. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



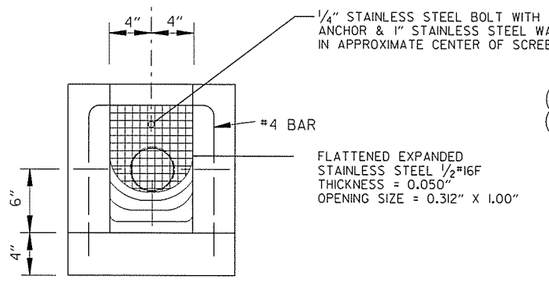

PLAN VIEW

DETAIL OF PIPE UNDERDRAINS

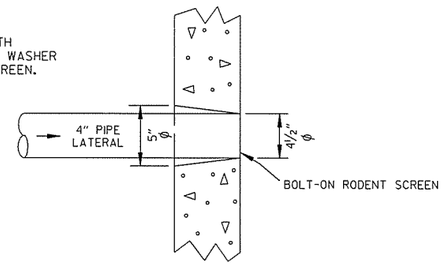
NOTE: NO ADDITIONAL PAYMENT WILL BE MADE FOR THE 5' SCHEDULE 40 PORTIONS OF THE 4" PIPE LATERAL AND SHALL BE INCLUDED IN THE LINEAR FOOT BID PRICE.




UNDERDRAIN OUTLET PROTECTORS
SIDE VIEW




FRONT VIEW




DETAIL OF HOLE
FOR 4" PIPE

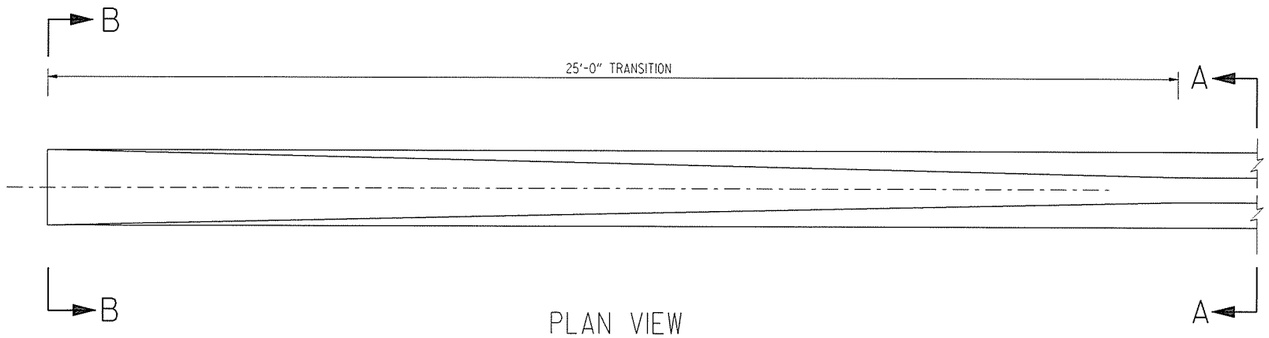
## DETAILS OF INTERNAL DRAINAGE FOR EMBANKMENT CONSTRUCTION AND UNDERDRAIN OUTLETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15


rnfortner 5/13/2015 3:35:22 PM
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REVISED DATE:

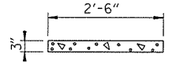
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| | | | | JOB NO. | | 080396 | 13 | 168 |

(2) SPECIAL DETAILS

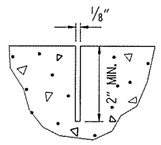



PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL) TRANSITION
MERGED RAMPS 3 & 4

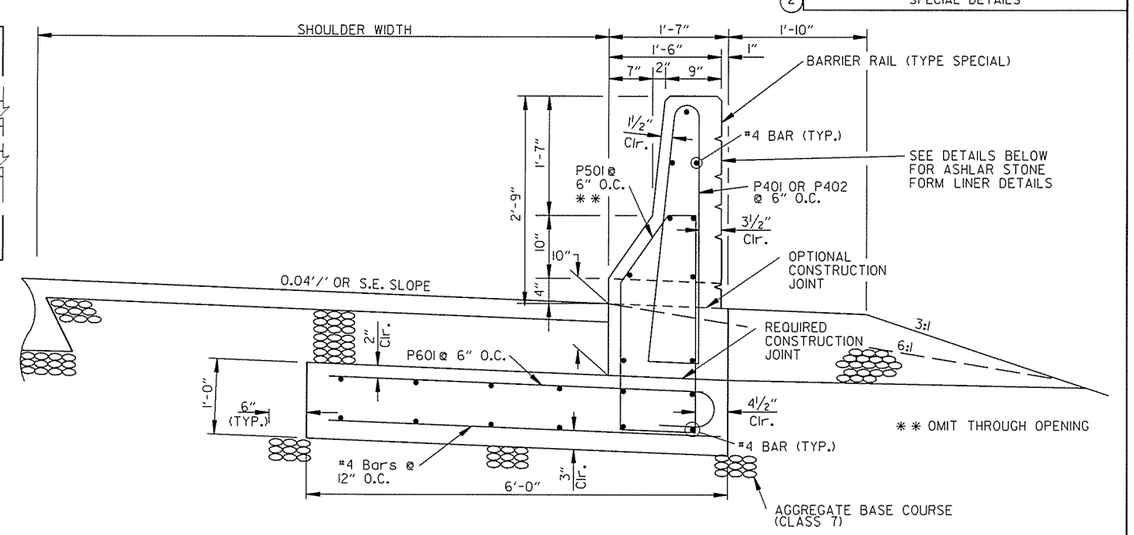
NOTE: TO BE CONSTRUCTED AT BEGINNING AND END OF BARRIER WALL

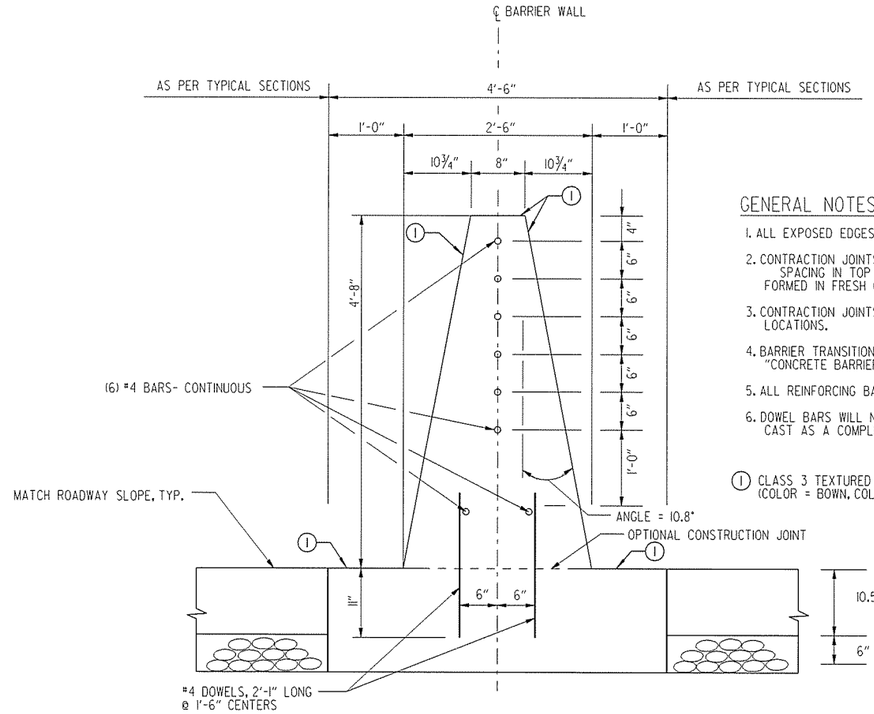



CONCRETE BARRIER WALL
(MEDIAN TYPE SPECIAL)
(SECTION B-B)




CONTRACTION JOINT DETAIL



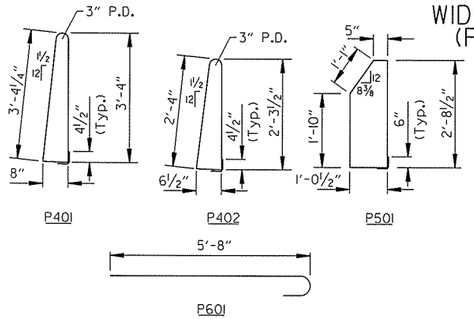




SECTION OF CONCRETE BARRIER WALL
(MEDIAN TYPE SPECIAL)
MERGED RAMPS 3 & 4
(SECTION A-A)

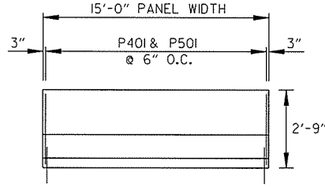
## GENERAL NOTES FOR CONCRETE BARRIER WALLS

1. ALL EXPOSED EDGES SHALL HAVE ¾" CHAMFERS.
2. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
3. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
4. BARRIER TRANSITIONS WILL BE MEASURED AND PAID FOR AS "CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)."
5. ALL REINFORCING BARS SHALL HAVE 2" MINIMUM COVER.
6. DOWEL BARS WILL NOT BE REQUIRED IF BARRIER AND BASE ARE CAST AS A COMPLETE UNIT.

(1) CLASS 3 TEXTURED COATING FINISH (COLOR = BOWN, COLOR CHIP NO. 33522)

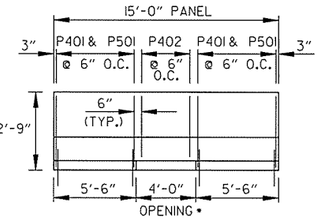



## WIDENING FOR BARRIER WALL (PARAPET TYPE SPECIAL)



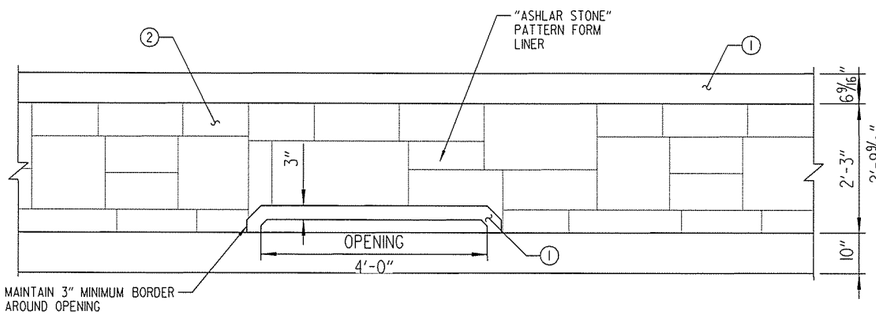

CLOSED BARRIER WALL
(PARAPET TYPE SPECIAL)

CONWAY LOOP STA. 30+95.69 TO 33+39.66 LT.
CONWAY LOOP STA. 31+01.36 TO 33+79.25 RT.
RAMP 2 STA. 7433+13.09 TO 7437+70.00 LT.




OPEN BARRIER WALL
(PARAPET TYPE SPECIAL)

CONWAY LOOP STA. 21+09.46 TO 22+90.78 LT.

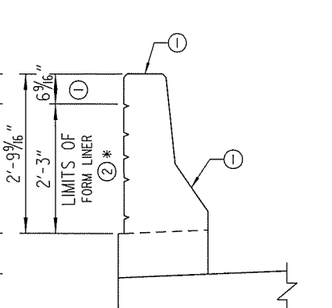



ARCHITECTURAL FINISH DETAIL
(SHOWING OUTSIDE FACE OF PARAPET)

(1) CLASS 3 TEXTURED COATING FINISH (COLOR = BROWN, COLOR CHIP NO. 33522)

(2) CLASS 3 TEXTURED COATING FINISH (COLOR = BROWN, COLOR CHIP NO. 30219)

NOTE:
FORM LINEAR SHALL BE A MAX. DEPTH OF 2" TO PROVIDE A MIN. CLEARANCE OF 1½" TO PARAPET REINFORCING.




CLOSED BARRIER WALL

* "ASHLAR STONE" PATTERN

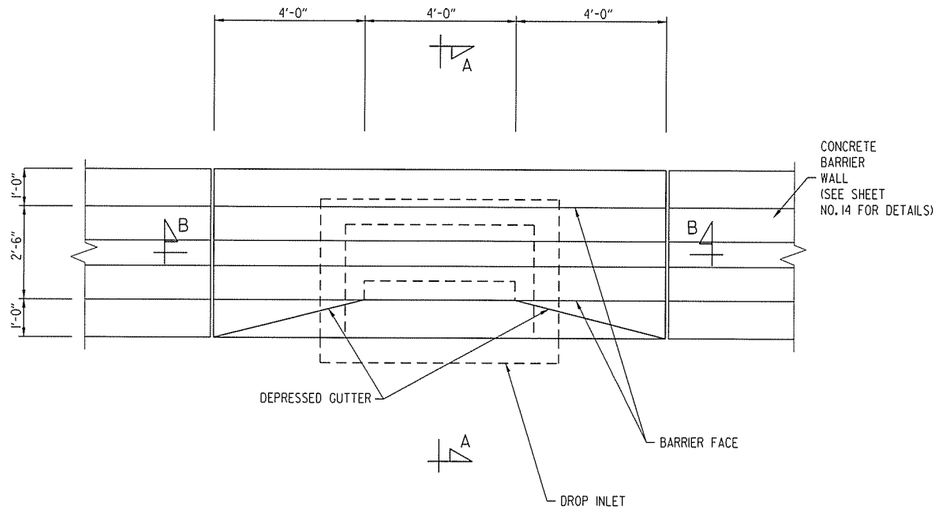
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

SPECIAL DETAILS

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| | | | | (2) | SPECIAL DETAILS | | | |

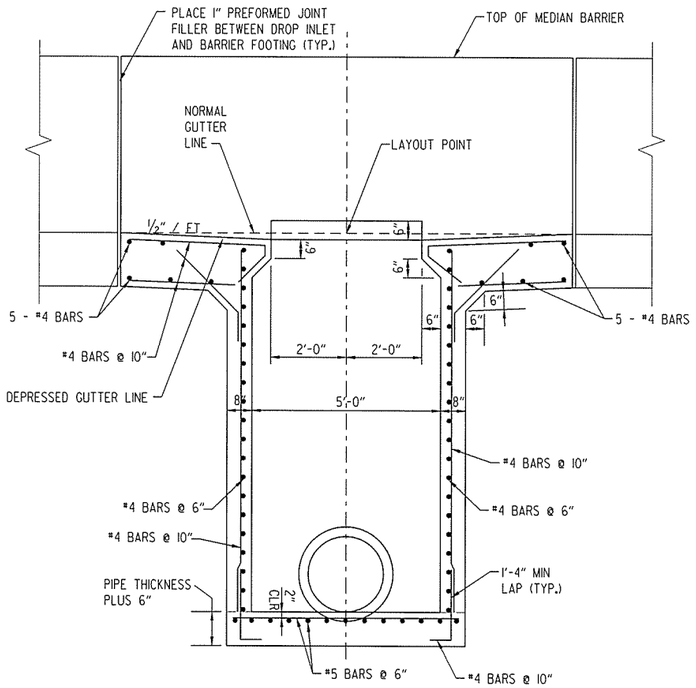
STATE OF ARKANSAS
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No. 11835
TODD E. MUELLER
5-19-15



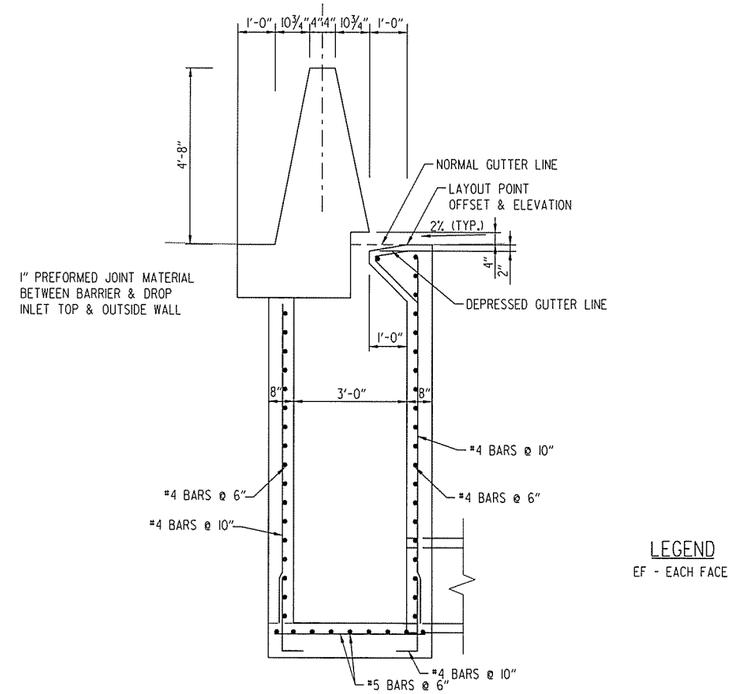

DROP INLET (TYPE SPECIAL)

## GENERAL NOTES FOR DROP INLET (TYPE SPECIAL)

1. ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 631 OF THE STANDARD SPECIFICATIONS, 2003 EDITION.
2. ALL EXPOSED EDGES OF CONCRETE BARRIER WALL SHALL HAVE A ¾" CHAMFER.
3. EXPANSION JOINTS SHALL BE FORMED USING 1" PREFORMED JOINT FILLER. REINFORCEMENT SHALL BE CUT 2" CLEAR OF EXPANSION JOINTS.
4. MAINTAIN 3" CLEARANCE ON ALL FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.




SECTION B-B



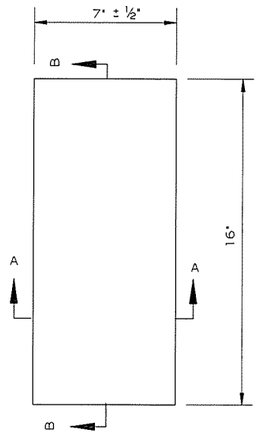

SECTION A-A

LEGEND
EF - EACH FACE

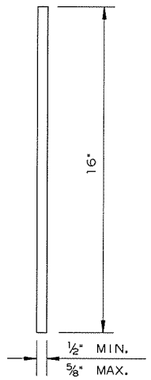
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SPECIAL DETAILS

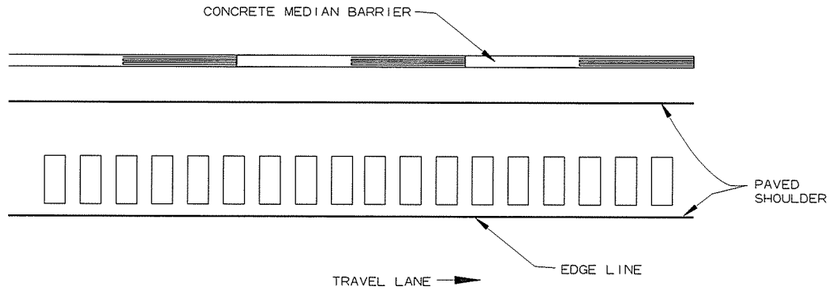
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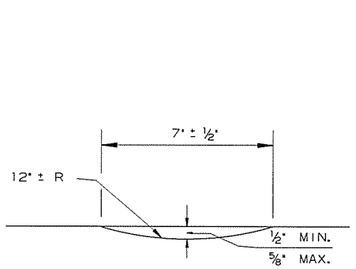

PLAN



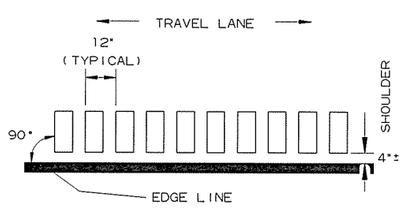

SECTION B-B



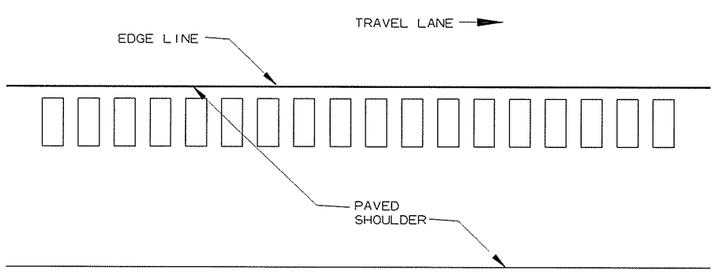

STATE OF ARKANSAS
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No. 11835
TODD E. MUELLER
5-19-15




SECTION A-A




LOCATION PLAN OF RUMBLE STRIPS
LEFT SHOULDER




PLAN VIEW

DETAILS OF RUMBLE STRIPS

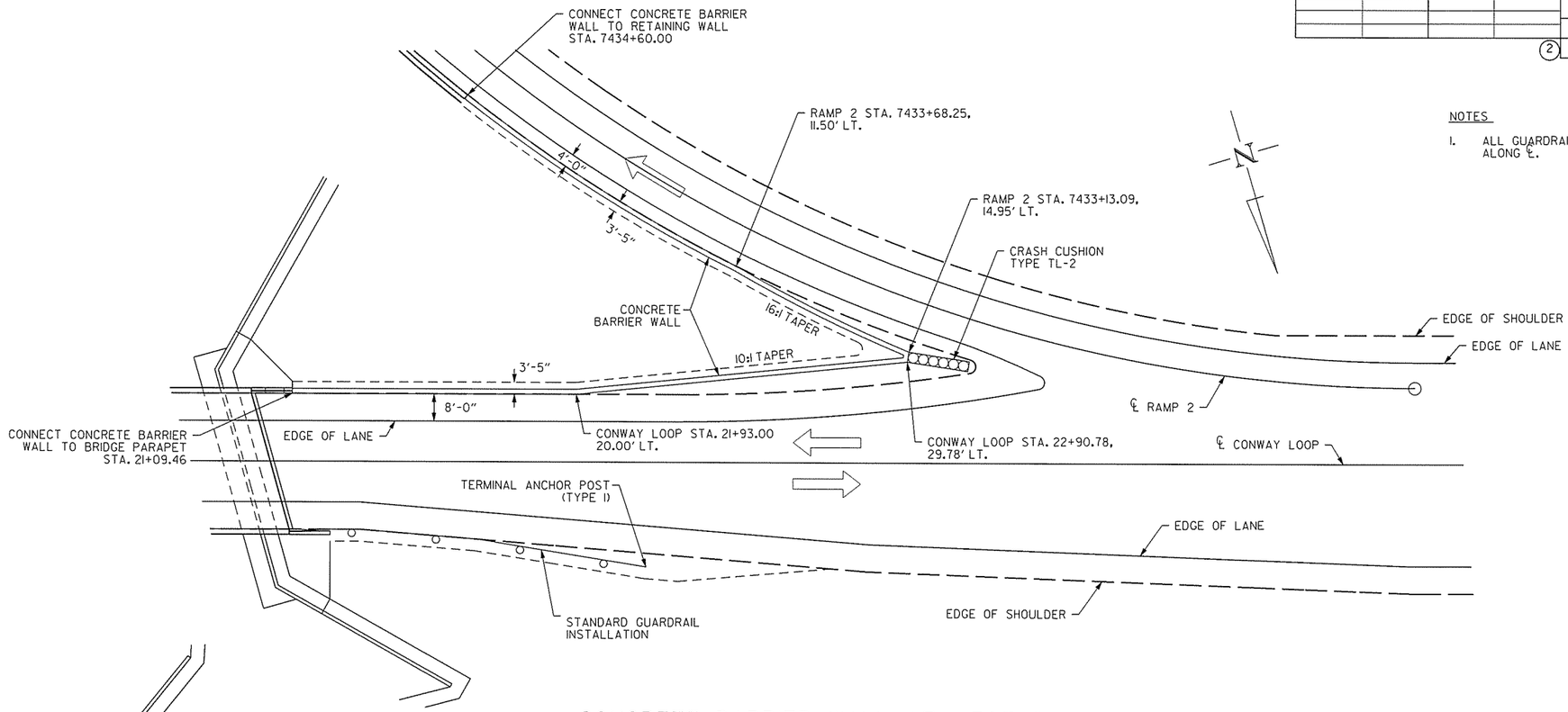
NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE AS WELL AS TO AVOID EXISTING LONGITUDINAL JOINTS.
2. THE ½" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.



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| | | | | JOB NO. | | 080396 | 16 | 168 |
| | | | | (2) | SPECIAL DETAILS | | | |



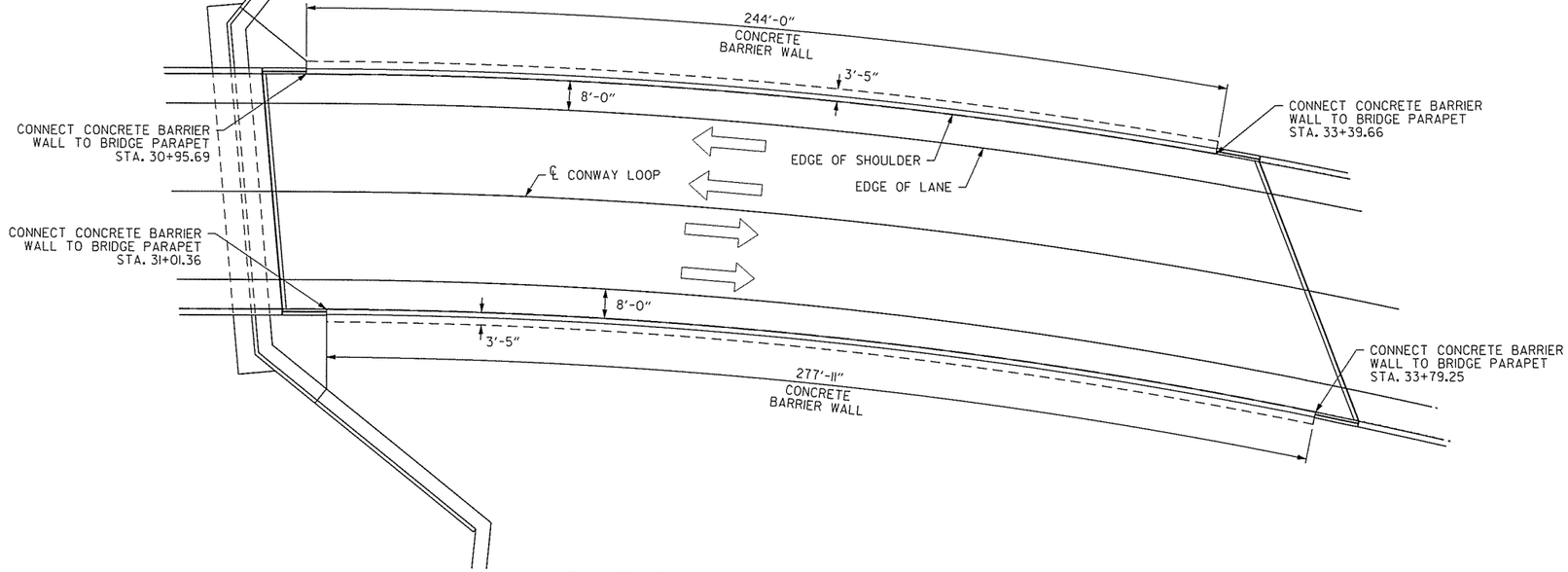

NOTES

1. ALL GUARDRAIL AND TAPER LENGTHS ARE MEASURED ALONG ℄.

STATE OF ARKANSAS
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## CONCRETE BARRIER WALL AT WEST BRIDGE END - CONWAY LOOP OVER I-40

NOTE: REFER TO STANDARD DRAWINGS GR-8, GR-8A, GR-9, GR-9A, GR-10, GR-10A, GR-11, & GRT-1 FOR ADDITIONAL INFORMATION.




## CONCRETE BARRIER WALL AT WEST BRIDGE END - CONWAY LOOP OVER HWY. 365

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| | | | | JOB NO. | | 080396 | 17 | 168 |
| | | | | (2) | SPECIAL DETAILS | | | |

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5-19-15

N

6' 15' 4'
7433+07.74
C.L. RAMP 1
PT 7433+61.70
7433+66.21
CONCRETE ISLAND W/ (TYPE C) CURB FACE
125' R.
6' 20'
13.5'
75' R.
26+65.42
C.L. CONWAY LOOP STA. 26+87.92 =
C.L. RAMP 1 STA. 7434+41.21
Δ = 90°
C.L. CONWAY LOOP
24+39.64
22+79.64
28+35.73
28+11.34
8'
24'
24.91'
+20.14
36.34'
+03.35
36.97'
S16°17'49"W
30'
25+00
S73°42'11"E
NOSE
+31.34
28.53'
217.5' R.
2' R. (TYP.)
12'
8'
22+22.93
R. 1080'
24'
25.73'
8'
28+35.73
27+89.70
38'
2' R. (TYP.)
CONCRETE ISLAND (TYPE C)
20'
8'
14'
125' R.
S06°17'49"W
25+03.20
7433+03.96
14'
15'
6'
C.L. RAMP 2
C.L. RAMP 2 PC STA. 7431+65.85 =
C.L. CONWAY LOOP STA. 24+40.64, 22.5' RT.
C.L. CONWAY LOOP STA. 26+75.73 =
C.L. HWY. 365 CONN. STA. 20+00.00
Δ = 80°
21+27.75
21+82.61
8' 36' 8'
C.L. HWY. 365 CONNECTOR

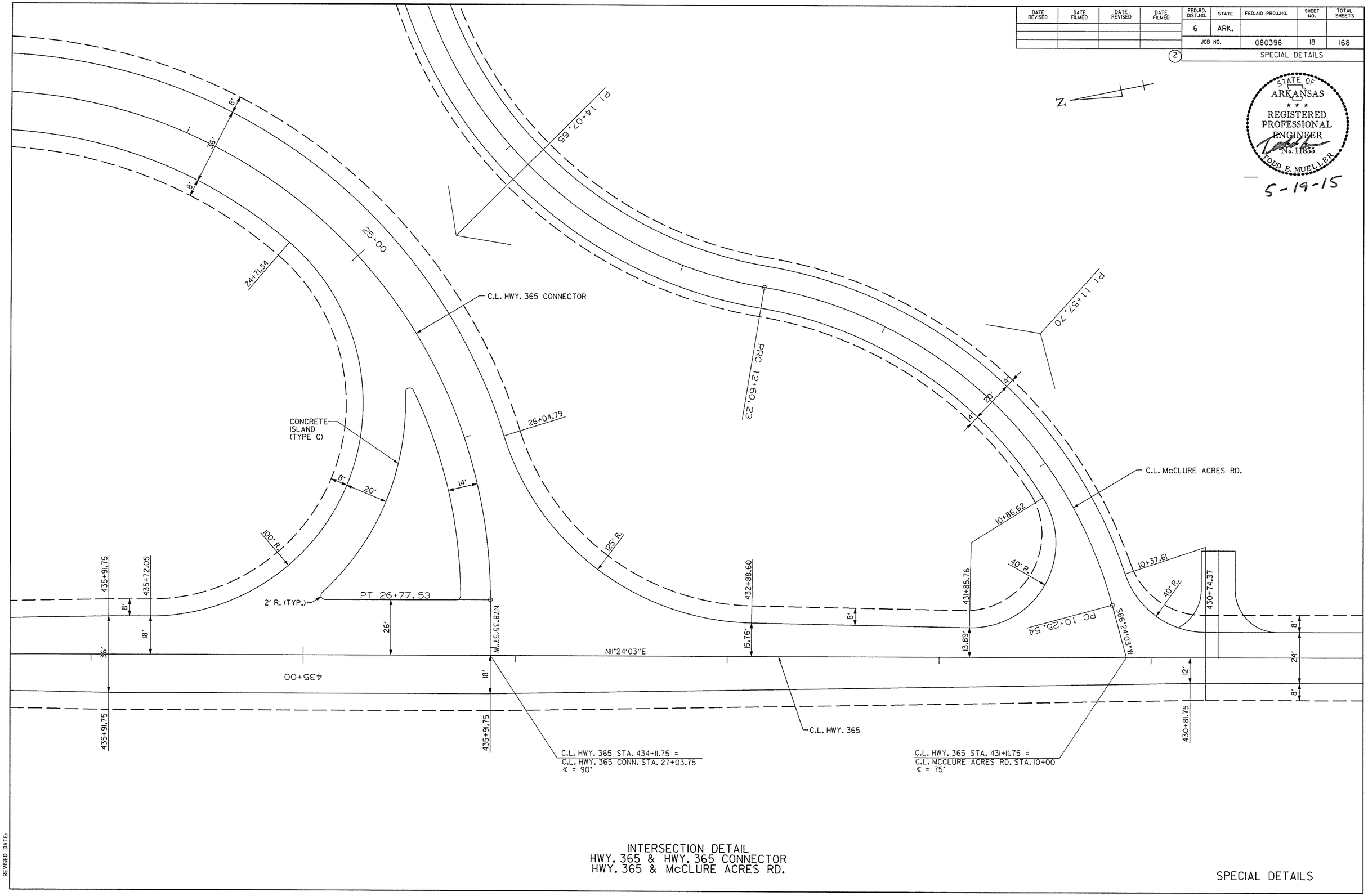
INTERSECTION DETAIL
MAIN LANES, RAMP 1 & HWY. 365 CONNECTOR

SPECIAL DETAILS

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| | | | | JOB NO. | | 080396 | 18 | 168 |
| | | | | (2) | SPECIAL DETAILS | | | |

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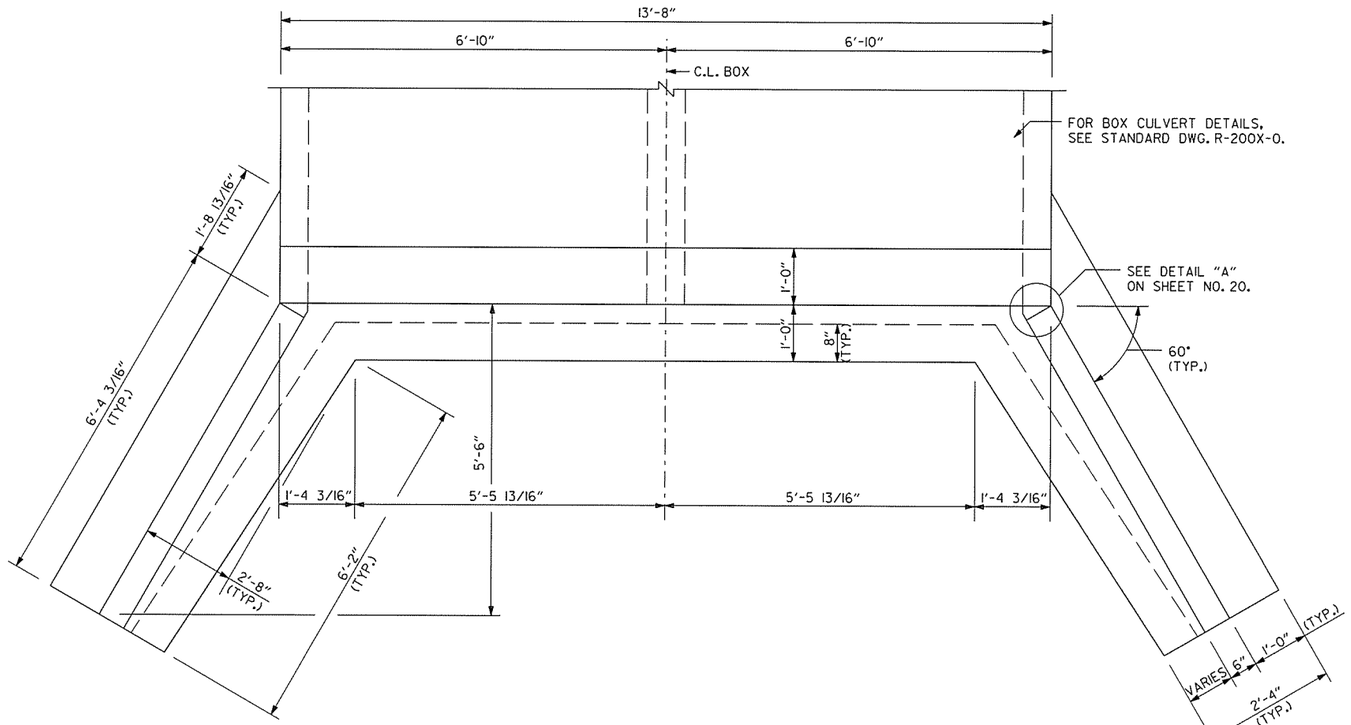



INTERSECTION DETAIL
HWY. 365 & HWY. 365 CONNECTOR
HWY. 365 & McCLURE ACRES RD.

SPECIAL DETAILS

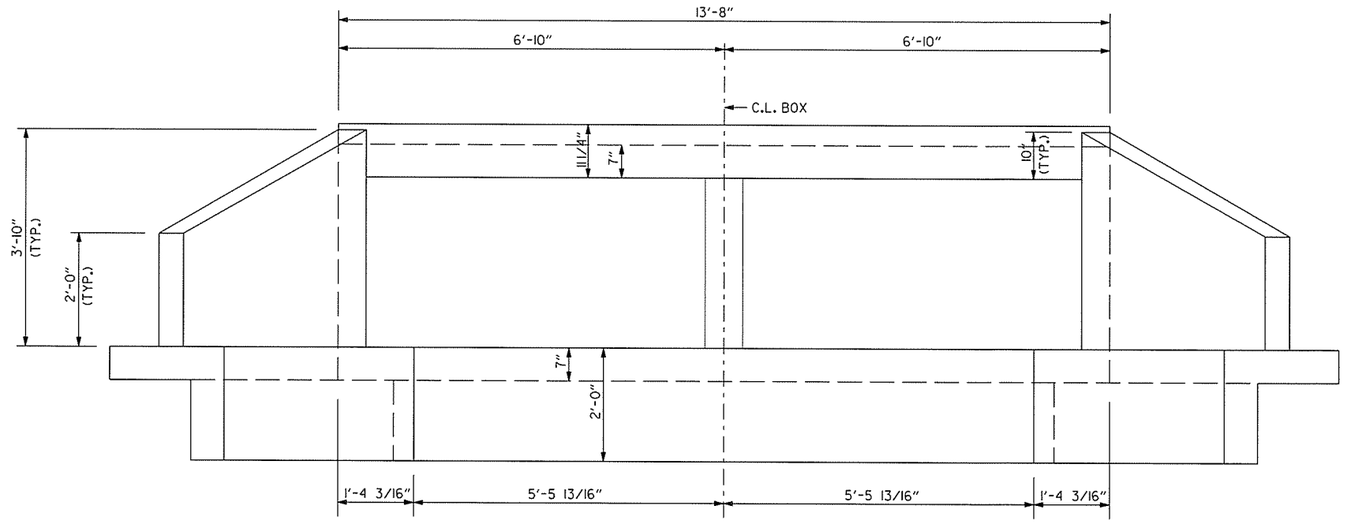
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| | | | | JOB NO. | | 080396 | 19 | 168 |
| | | | | (2) | SPECIAL DETAILS | | | |




PLAN OF INLET WINGS & APRON - HWY. 365 STA. 434+83

SCALE: 3/4" = 1'-0"




END ELEVATION OF INLET WINGS & APRON - HWY. 365 STA. 434+83

SCALE: 3/4" = 1'-0"

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NOTE:
FOR WINGWALL DETAILS. SEE SHEET NO. 20.

GENERAL NOTES:

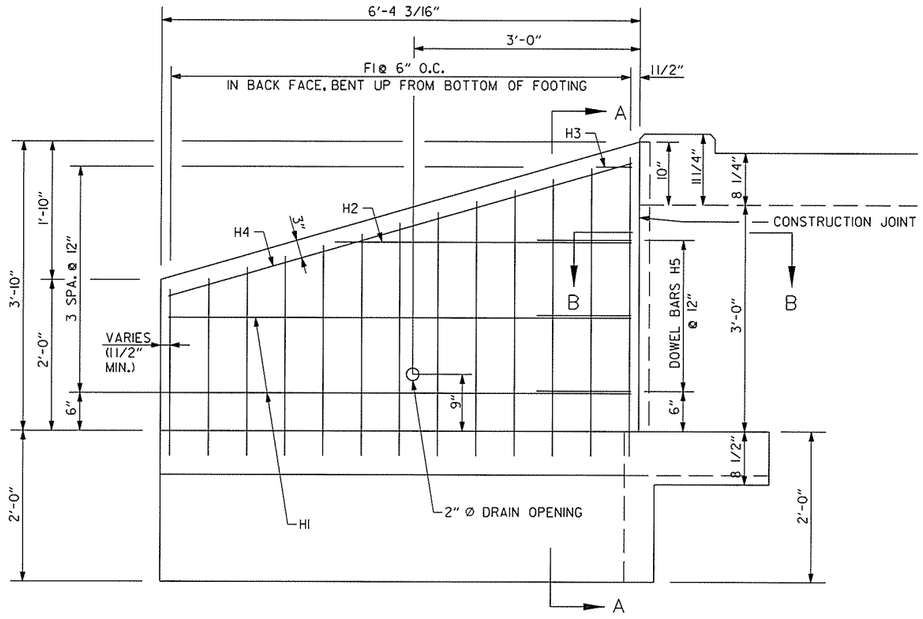
1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
2. ALL CONCRETE SHALL BE POURED IN THE DRY. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".

| WINGWALLS & APRON QUANTITIES | |
|---|---|
| CLASS S CONCRETE | REINFORCING STEEL GRADE 60 |
| CU. YD. | LBS. |
| 2.48 | 156 |

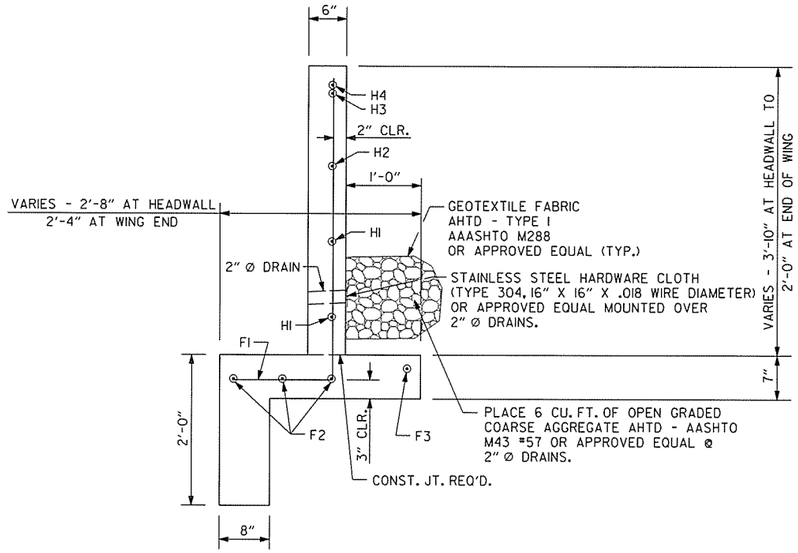
SPECIAL DETAILS

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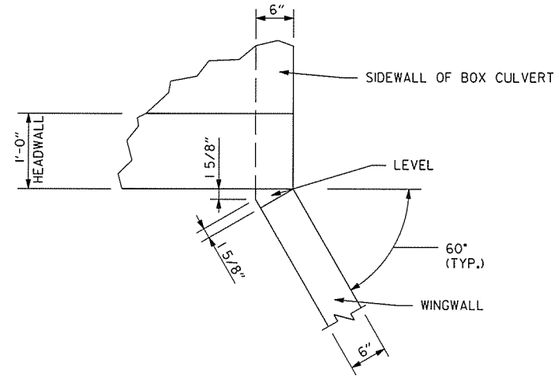
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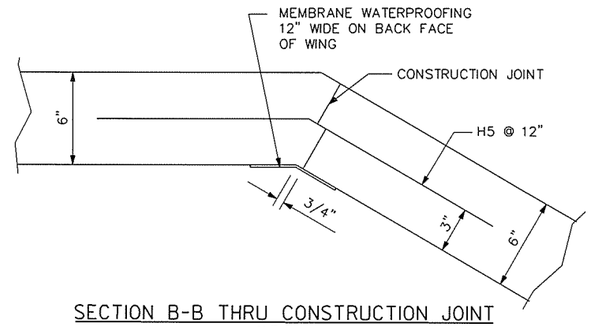

REAR ELEVATION OF INLET WING - SHOWING BACK FACE REINFORCEMENT
SCALE: 1" = 1'-0"




SECTION A-A
SCALE: 1" = 1'-0"




DETAIL "A"
SCALE: 1" = 1'-0"

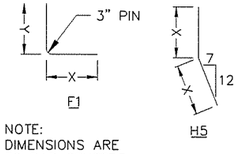



SECTION B-B THRU CONSTRUCTION JOINT
N.T.S.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

BAR LIST FOR ONE INLET WING – 2 EACH REQUIRED

| WING LOCATION | CLEAR HEIGHT | F1 BENT IN BOTTOM OF FOOTING, BENT UP INTO BACK FACE OF WING. ONE BAR OF EACH LENGTH. | | | | | | | | | | F2 STRAIGHT LONGITUDINAL IN BOTTOM OF WING FOOTING TOE | | | F3 STRAIGHT LONGITUDINAL IN TOP OF WING FOOTING HEEL | | | H1 STRAIGHT HORIZONTAL IN BACK FACE OF WING | | | | H2 STRAIGHT HORIZONTAL IN BACK FACE OF WING. | | | | H3 STRAIGHT HORIZONTAL IN BACK FACE OF WING | | | | H4 STRAIGHT IN BACK FACE OF WING AT TOP – ON SLOPE | | | H5 BENT DOWELS THRU CONSTRUCTION JOINT AT HEADWALL | | | | | BAR BENDING DIAGRAMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H | SIZE | SPACING | # REQ'D | LENGTHS VARY | | X | | Y | | SIZE | # REQ'D | LENGTH | SIZE | # REQ'D | LENGTH | SIZE | SPACING | # REQ'D | LENGTH | SIZE | SPACING | # REQ'D | LENGTH | SIZE | SPACING | # REQ'D | LENGTH | SIZE | # REQ'D | LENGTH | SIZE | SPACING | # REQ'D | LENGTH | X | |
| | | | | | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INLET | 3' | #4 | 6" | 13 | 3'-4" | 5'-6" | 1'-4" | 1'-8" | 2'-0" | 3'-10" | #4 | 3 | 7'-0" | #4 | 1 | 7'-10" | #4 | 12" | 2 | 6'-0" | #4 | 12" | 1 | 3'-10" | #4 | 12" | 1 | 6" | #4 | 1 | 6'-3" | #4 | 12" | 3 | 2'-8" | 1'-4" | |




SPECIAL DETAILS

rnfortner 5/13/2015 4:00:37 PM
WORKSPACE: AHTD
L:\2009\090172301 - Conway Western Arterial Loop\Drawings\PRJL.BS\PRJL.BS.6x3-DoubleBox.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 21 | 168 |

(2) TEMPORARY EROSION CONTROL CLEAR. & GRUB.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

## LEGEND

E-II = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

HWY. 365

| SILT FENCE | E-II | LIN. FT. |
|---|---|---|
| STA. 430+80 TO 431+90 | LT. | 110 |
| STA. 434+10 TO 434+70 | LT. | 70 |
| STA. 434+95 TO 438+90 | LT. | 400 |

HWY. 365 CONNECTOR

| SILT FENCE | E-II | LIN. FT. |
|---|---|---|
| STA. 24+75 TO 26+50 | LT. | 235 |

C.L. CONWAY LOOP
PC 7431+65.85
PC 439+52.10
PC 30+98.10
PT 7433+61.70
PI 7432+52.11
PC 7437.34
C.L. RAMP 1
C.L. HWY. 365 CONNECTOR
PT 15+15.73
RC 22+81.27
PI 25+42.27
PI 14+07.85
C.L. McCLURE ACRES RD.
PI 11+57.70
PC 12+60.23
PC 10+25.58
C.L. HWY. 365
PC 26+77.58
+75 E-II
+90 E-II
+95 E-II
+70 E-II
+10 E-II
+50 E-II
+90 E-II
+80 E-II
25+00
15+00
30+00
44+00
43+00
TELE
CONCRETE

## REVISIONS

| DATE OF REVISION | REVISION |
|---|---|
| | |

TEMPORARY EROSION CONTROL DETAILS CLEARING & GRUBBING STAGE

rmfortner 5/14/2015 8:09:14 AM
WORKSPACE: AHTD
L:\2009\09017230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_STGCGEC_01.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 22 | 168 |

(2) TEMPORARY EROSION CONTROL CLEAR. & GRUB.

## LEGEND

(E-II) = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

C.L. RAMP 3
C.L. RAMP 4
C.L. RAMP 2
C.L. MEDIAN I-40
PC 7440+29.10
PI 7441+30.81
PT 7436+84.32
PC 7442+39.38
PT 7442+22.02
PI 7448+39.47
PI 7448+15.69
PC 7449+77.89
7440+00
7445+00
7450+00
+55
+70
DROP INLET
CONCRETE

RAMP 2

| SILT FENCE | (E-II) | LIN. FT. |
|---|---|---|
| STA. 7437+70 TO 7439+55 | LT. | 190 |

## REVISIONS

| DATE OF REVISION | REVISION |
|---|---|
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| | |

TEMPORARY EROSION CONTROL DETAILS CLEARING & GRUBBING STAGE

rnfortner 5/14/2015 8:22:20 AM
WORKSPACE: AHTD
L:\2009\090723O - Conway Western ArterialLoop\Drawings\PRJL.BS\PRJL.BS_STGCGEC_02.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 23 | 168 |

(2) TEMPORARY EROSION CONTROL CLEAR. & GRUB.

RAMP 3

| SILT FENCE | (E-II) | LIN. FT. |
|---|---|---|
| STA. 7450+00 TO 7451+50 | LT. | 160 |
| STA. 7451+60 TO 7458+20 | LT. | 665 |

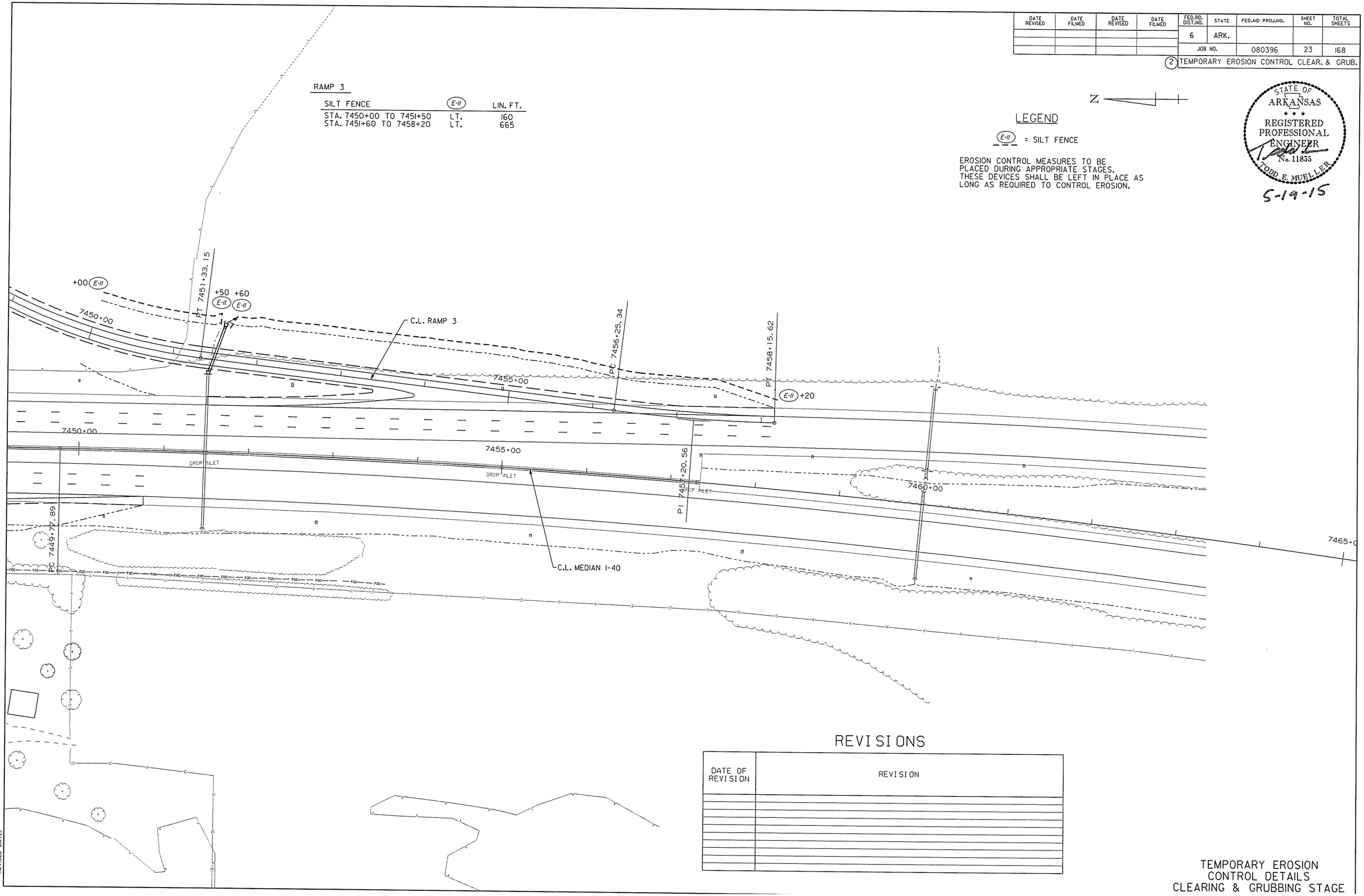
N

LEGEND

(E-II) = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15




REVISIONS

| DATE OF REVISION | REVISION |
|---|---|
| | |

TEMPORARY EROSION CONTROL DETAILS CLEARING & GRUBBING STAGE

rnfortner 5/14/2015 8:18:09 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 24 | 168 |

(2) TEMPORARY EROSION CONTROL CLEAR. & GRUB.

LEGEND

(E-5) = SAND BAG DITCH CHECK

(E-6) = ROCK DITCH CHECK

(E-11) = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

HWY. 365 CONNECTOR

| SILT FENCE | (E-11) | LIN. FT. |
|---|---|---|
| STA. 24+75 TO 26+50 | LT. | RETAIN |
| SAND BAG DITCH CHECK | (E-5) | INSTALLATION |
| STA. 24+90 TO 25+60 | RT. | 1 |
| ROCK DITCH CHECK | (E-6) | INSTALLATION |
| STA. 24+90 TO 25+60 | RT. | 1 |

McCLURE ACRES RD.

| SAND BAG DITCH CHECK | (E-5) | INSTALLATION |
|---|---|---|
| STA. 10+20 TO 15+00 | RT. | 1 |
| STA. 10+20 TO 15+00 | LT. | 1 |
| ROCK DITCH CHECK | (E-6) | INSTALLATION |
| STA. 10+20 TO 15+00 | RT. | 1 |
| STA. 10+20 TO 15+00 | LT. | 1 |

HWY. 365

| SILT FENCE | (E-11) | LIN. FT. |
|---|---|---|
| STA. 430+80 TO 431+90 | LT. | RETAIN |
| STA. 434+10 TO 434+70 | LT. | RETAIN |
| STA. 434+95 TO 438+90 | LT. | RETAIN |
| SAND BAG DITCH CHECK | (E-5) | INSTALLATION |
| STA. 431+90 TO 433+20 | RT. | 1 |
| STA. 432+00 TO 434+00 | LT. | 1 |
| STA. 439+00 TO 440+20 | LT. | 1 |

REVISIONS

| DATE OF REVISION | REVISION |
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| | |

TEMPORARY EROSION CONTROL DETAILS STAGE I

rnfortner 5/14/2015 8:49:54 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 25 | 168 |

(2) TEMPORARY EROSION CONTROL CLEAR. & GRUB.

## LEGEND

(E-5) = SAND BAG DITCH CHECK

(E-6) = ROCK DITCH CHECK

(E-11) = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

C.L. RAMP 3

C.L. RAMP 4

C.L. MEDIAN I-40

C.L. RAMP 2

PC 7440+29.10

PI 7441+30.81

PI 7448+39.47

PI 7448+75.69

PT 7436+84.32

PC 7440+39.38

PT 7442+22.02

PC 7449+77.89

7440+00

7445+00

7450+00

+55

+70

DROP INLET

CONCRETE

RAMP 2

| SILT FENCE | (E-11) | LIN. FT. |
|---|---|---|
| STA. 7437+70 TO 7439+55 | LT. | RETAIN |
| STA. 7437+70 TO 7437+90 | RT. | RETAIN |
| SAND BAG DITCH CHECK | (E-5) | INSTALLATION |
| STA. 7437+70 TO 7450+00 | RT. | 3 |
| ROCK DITCH CHECK | (E-6) | INSTALLATION |
| STA. 7437+70 TO 7450+00 | RT. | 1 |

## REVISIONS

| DATE OF REVISION | REVISION |
|---|---|
| | |

# TEMPORARY EROSION CONTROL DETAILS STAGE I

rnfortner 5/4/2015 8:21:40 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 26 | 168 |

(2) TEMPORARY EROSION CONTROL CLEAR. & GRUB.

RAMP 3

| SILT FENCE | (E-11) | LIN. FT. |
|---|---|---|
| STA. 7450+00 TO 7451+50 | LT. | RETAIN |
| STA. 7451+60 TO 7458+20 | LT. | RETAIN |

## LEGEND

(E-5) = SAND BAG DITCH CHECK

(E-6) = ROCK DITCH CHECK

(E-11) = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

N

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

+00 (E-11)
+50 (E-11)
+60 (E-11)
PT 7451+33.15
7450+00
C.L. RAMP 3
PC 7456+25.34
PT 7458+15.62
7455+00
(E-11) +20
7450+00
DROP INLET
DROP INLET
DROP INLET
PI 7457+20.56
7460+00
PC 7449+77.89
C.L. MEDIAN I-40
7465+0

## REVISIONS

| DATE OF REVISION | REVISION |
|---|---|
| | |

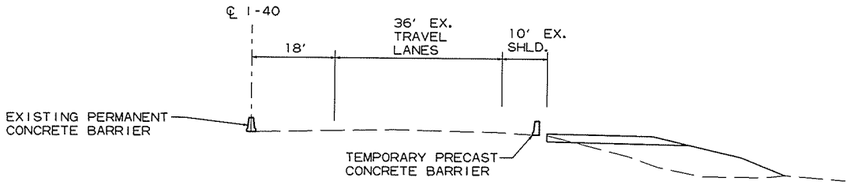
TEMPORARY EROSION CONTROL DETAILS STAGE I

rnfortner 5/14/2015 8:23:16 AM
WORKSPACE: AHTD
L:\2009\090172\30 - Conway Western ArterialLoop\Drawings\PRJ_BS\PRJ_BS_STGEC_03.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 27 | 168 |
| | | | | (2) | M.O.T - BASE AND SURFACING | | | |

CONSTRUCTION SEQUENCE NOTES - STAGE 1

1. INSTALL TEMPORARY PRECAST CONCRETE BARRIER AT EDGE OF OUTSIDE SHOULDER. GRADE AND PAVE REMAINDER OF RAMPS 2, 3, AND HWY. 365 CONNECTOR.
2. PAVE RAMPS, HWY. 365 CONNECTOR, AND CONWAY LOOP.
3. A PORTABLE CHANGEABLE MESSAGE SIGN IS TO BE PLACED ON BOTH ENDS OF THE PROJECT LOCATION ALONG I-40 AS DIRECTED BY THE ENGINEER.
4. LANE CLOSURES WILL BE REQUIRED TO PLACE OVERHEAD SIGNS ON EXISTING OVERHEAD SIGN STRUCTURES. LANE CLOSURES SHOULD BE DONE IN ACCORDANCE WITH AHTD STANDARD DRAWINGS.



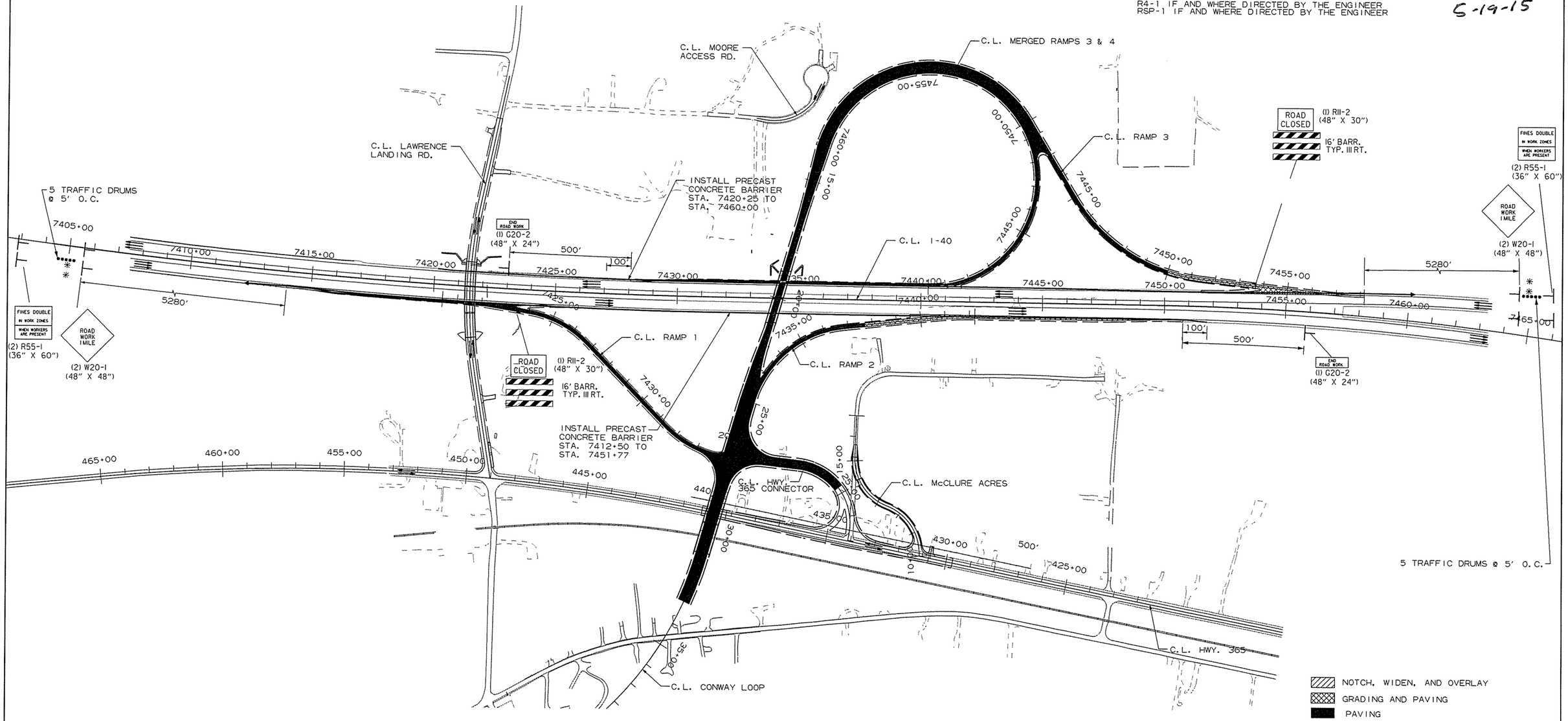

## I-40 MOT TYPICAL SECTION
## STAGE 1

N

1" = 400'

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

USE:
R4-1 IF AND WHERE DIRECTED BY THE ENGINEER
RSP-1 IF AND WHERE DIRECTED BY THE ENGINEER




NOTCH, WIDEN, AND OVERLAY
GRADING AND PAVING
PAVING
TRAFFIC
TEMPORARY IMPACT ATTENUATION BARRIER
PORTABLE CHANGEABLE MESSAGE SIGN

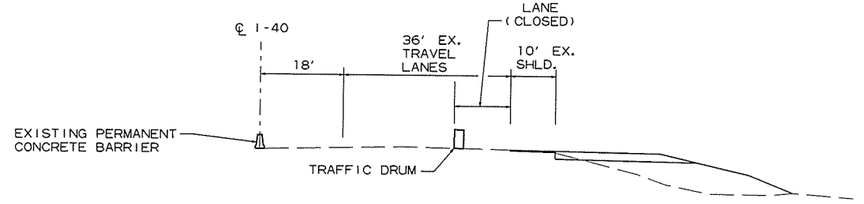
## STAGE 1
## MAINTENANCE OF TRAFFIC

rntortner 5/8/2015 7:55:35 AM
WORKSPACE: AHTD
L:\2009\G9017230 - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_MOT_01.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 27A | 168 |
| | | | | (2) | M.O.T - BASE AND SURFACING | | | |

CONSTRUCTION SEQUENCE NOTES - STAGE 2

1. PLACE TRAFFIC DRUMS ON INSIDE EDGE OF OUTSIDE TRAVEL LANE AS SHOWN.
2. OUTSIDE LANE ALONG I-40 TO BE CLOSED WHILE MILLING, OVERLAY, AND CONSTRUCTION OPERATIONS ARE CONDUCTED ON I-40 OUTER EXISTING SHOULDERS.
3. A PORTABLE CHANGEABLE MESSAGE SIGN IS TO BE PLACED ON BOTH ENDS OF THE PROJECT LOCATION ALONG I-40 AS DIRECTED BY THE ENGINEER.

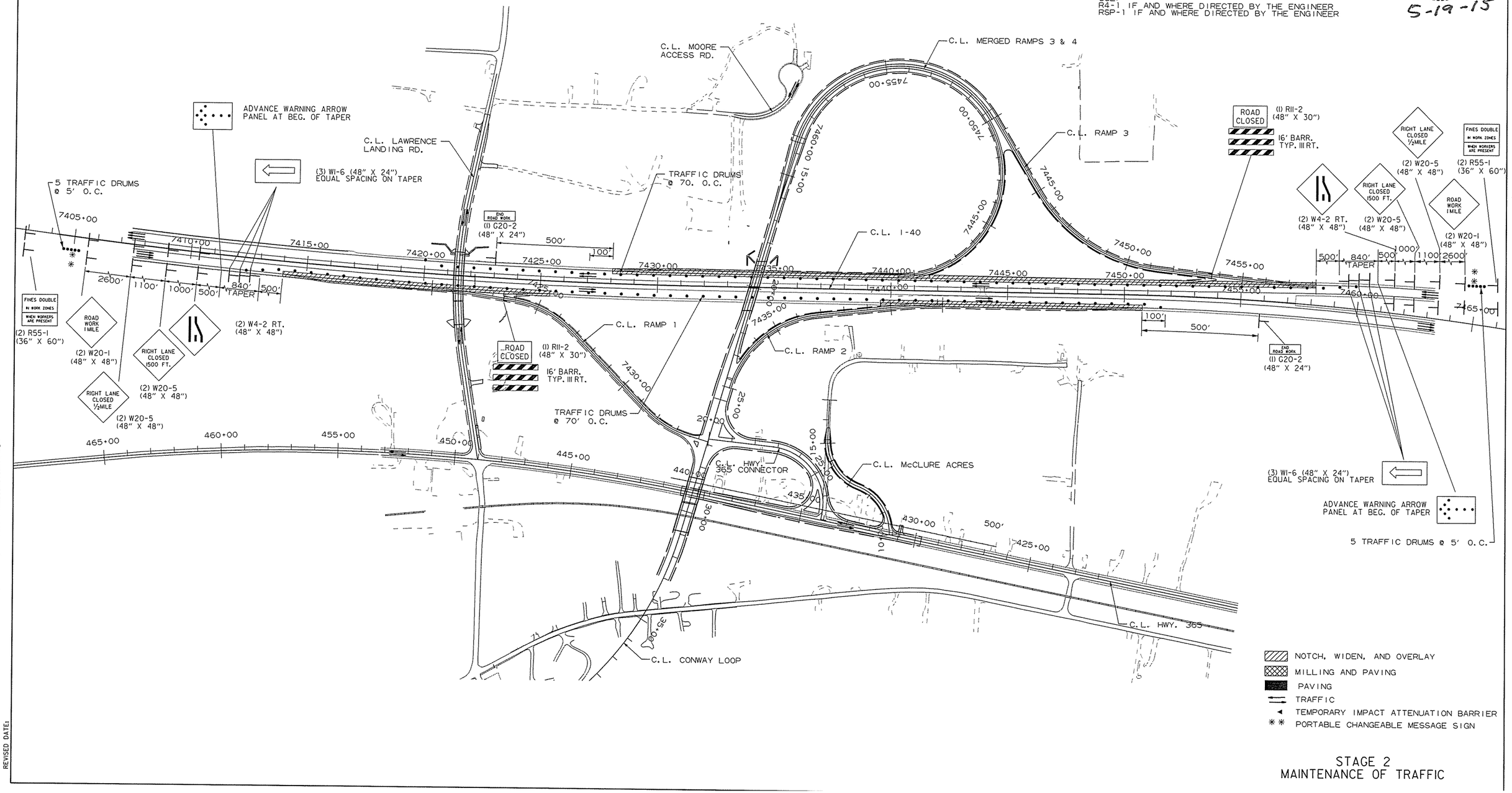



# I-40 MOT TYPICAL SECTION
## STAGE 2

N
1" = 400'

USE:
R4-1 IF AND WHERE DIRECTED BY THE ENGINEER
RSP-1 IF AND WHERE DIRECTED BY THE ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15




NOTCH, WIDEN, AND OVERLAY
MILLING AND PAVING
PAVING
TRAFFIC
TEMPORARY IMPACT ATTENUATION BARRIER
** PORTABLE CHANGEABLE MESSAGE SIGN

STAGE 2
MAINTENANCE OF TRAFFIC

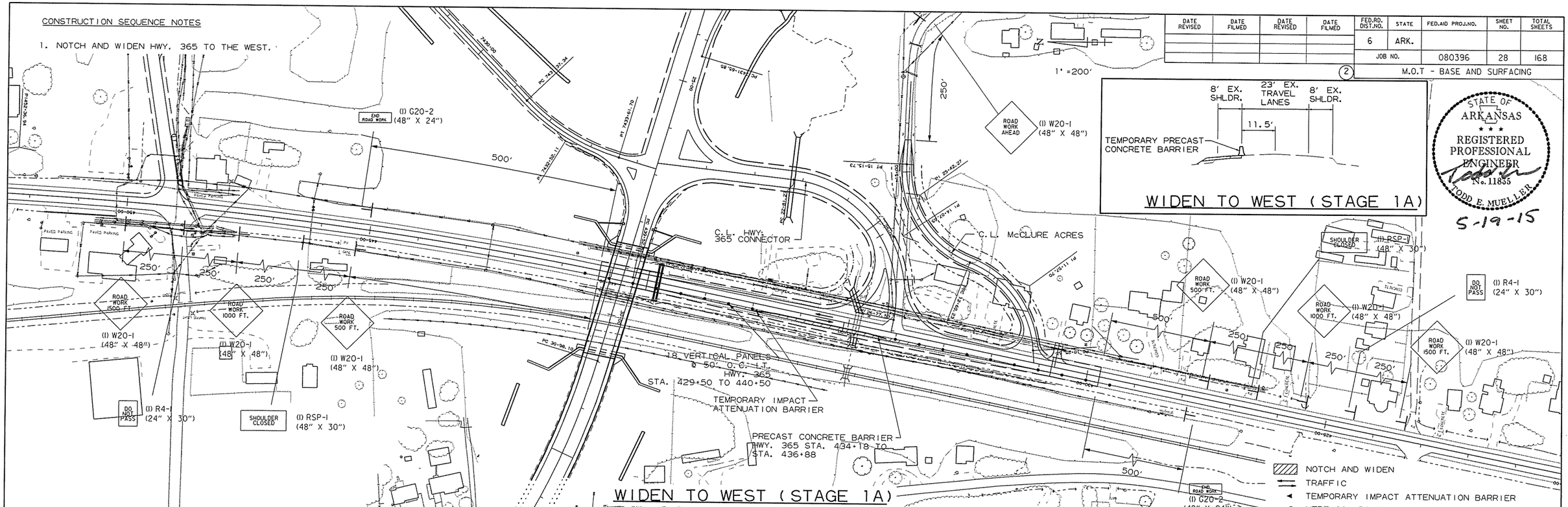
rnfortner 5/14/2015 8:34:08 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 28 | 168 |

2 M.O.T - BASE AND SURFACING

CONSTRUCTION SEQUENCE NOTES

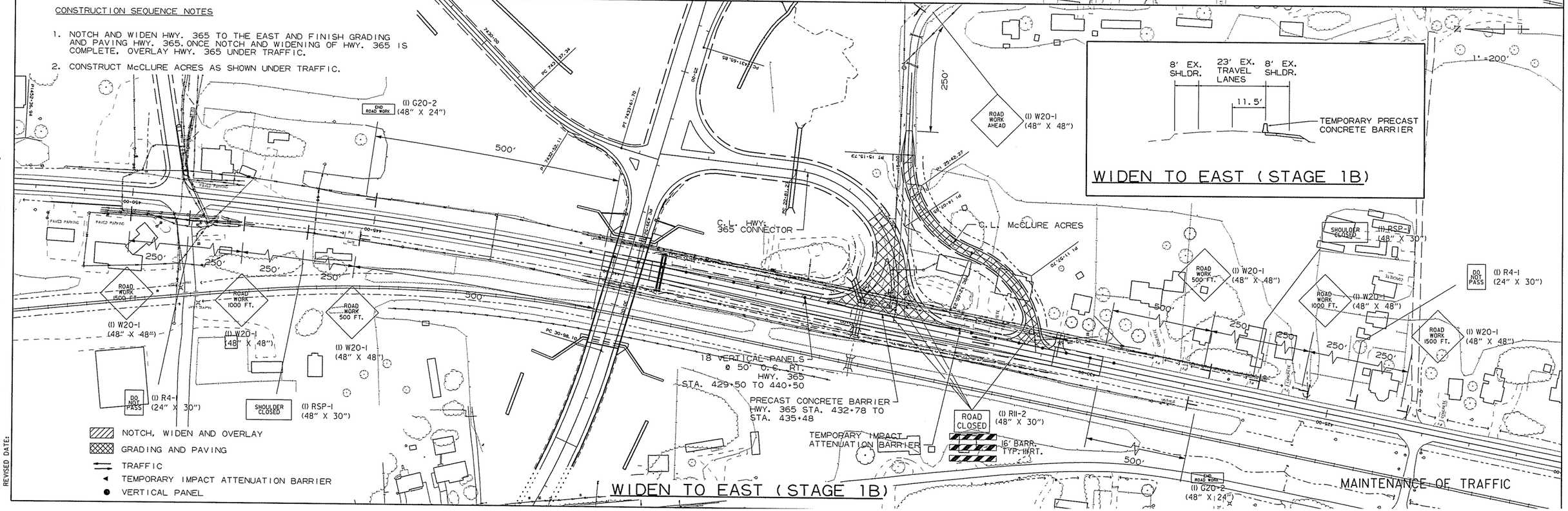
1. NOTCH AND WIDEN HWY. 365 TO THE WEST.




STATE OF ARKANSAS
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No. 11835
TODD E. MUELLER
5-19-15

CONSTRUCTION SEQUENCE NOTES

1. NOTCH AND WIDEN HWY. 365 TO THE EAST AND FINISH GRADING AND PAVING HWY. 365. ONCE NOTCH AND WIDENING OF HWY. 365 IS COMPLETE, OVERLAY HWY. 365 UNDER TRAFFIC.
2. CONSTRUCT McCLURE ACRES AS SHOWN UNDER TRAFFIC.




MAINTENANCE OF TRAFFIC

rnfortner 5/14/2015 8:36:04 AM
WORKSPACE: AHTD
L:\2009\090170230 - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_MOT_Olb.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 29 | 168 |
| | | | | (2) | PERMANENT PAVEMENT MARKINGS | | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

N

C.L. MEDIAN I-40

7415+00

7420+00

7425+00

375'

280'

4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

6" DOTTED WHITE THERMOPLASTIC PAVEMENT MARKING (3' STRIPE, 9' GAP) W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS @ 36' O.C.

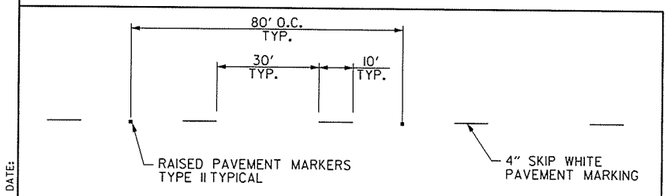
8" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS SPACED @ 10' O.C.

DIRECTIONAL ARROW W/ (19) TYPE II RED/WHITE RAISED PAVEMENT MARKERS

4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

RAMP I




TYPICAL SKIP WHITE STRIPING

NOTE: SEE PM-2 FOR STANDARD ENTRANCE AND EXIT RAMP PAVEMENT MARKINGS.

PERMANENT PAVEMENT MARKINGS

rnfortner 5/14/2015 8:38:39 AM
WORKSPACE: AHTD
L:\2009\090172\30 - Conway Western Arterial Loop\Drawings\PRJL_BS\PRJL_BS_PM_01.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 30 | 168 |

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

N

12" YELLOW - 45° DIAGONAL THERMOPLASTIC PAVEMENT MARKING @ 25' O.C.

4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 40' O.C.

4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 40' O.C.

4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING

CONWAY LOOP

4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

8" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS SPACED @ 10' O.C.

RAMP 4

C.L. MEDIAN I-40

590' - 8" DOTTED WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS @ 36' O.C.

60'

7430+00

7435+00

7440+00

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.

4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING

4" DOUBLE YELLOW HIGH PERFORMANCE CONTRAST MARKING TAPE W/ TYPE II YELLOW RAISED PAVEMENT MARKERS ON BRIDGE 40' O.C.

7440+00

60'

8" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS SPACED @ 10' O.C.

440' - 8" DOTTED WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS @ 36' O.C.

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

7435+00

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING

RAMP 2

150'

12" YELLOW - 45° DIAGONAL THERMOPLASTIC PAVEMENT MARKING @ 25' O.C.

107'

4" SKIP WHITE THERMOPLASTIC PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.

8" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING

4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 80' O.C.

53'

6" DOTTED WHITE THERMOPLASTIC PAVEMENT MARKING (3' STRIPE, 9' GAP) W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS @ 36' O.C.

WORD "ONLY" THERMOPLASTIC

TURN LANE-USE ARROW THERMOPLASTIC

200' LT. TURN LANE

4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.

4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING

RAMP 1

7430+00

4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING

4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING

PERMANENT PAVEMENT MARKINGS

rnfortner 5/14/2015 8:39:45 AM
WORKSPACE: AHTD
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REVISED DATE:

| 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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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 31 | 168 |

(2) PERMANENT PAVEMENT MARKINGS

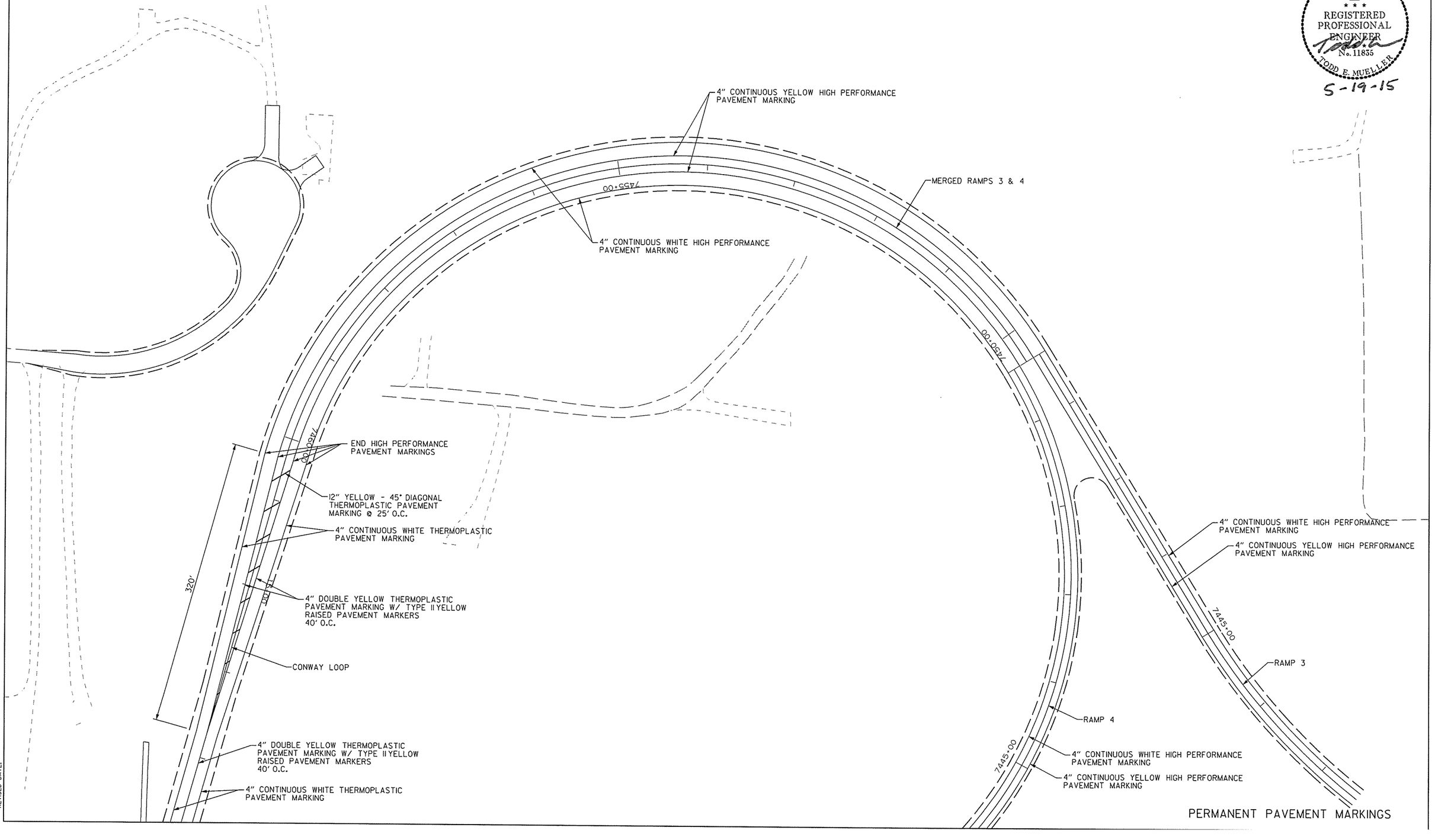
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15

RAMP 3
RAMP 4
7445+00
7450+00
7455+00
4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING
4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING
4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING
4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING
DIRECTIONAL ARROW W/ (19) TYPE II RED/WHITE RAISED PAVEMENT MARKERS
280'
8" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS SPACED @ 10' O.C.
375'
4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.
4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING
440' - 8" DOTTED WHITE HIGH PERFORMANCE PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS @ 36' O.C.

rnfortner 5/14/2015 9:02:10 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 32 | 168 |
| | | | | (2) | PERMANENT PAVEMENT MARKINGS | | | |

STATE OF ARKANSAS
★ ★ ★
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15




PERMANENT PAVEMENT MARKINGS

rnfortner 5/14/2015 9:03:15 AM
WORKSPACE: AHTD
L:\2009\090730 - Conway Western Arterial Loop\Drawings\PRJ_BS\PRJ_BS_PM_04.dgn
REVISED DATE:

| 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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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 33 | 168 |
| | | | | (2) | PERMANENT PAVEMENT MARKINGS | | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING
4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.
WORD "ONLY" THERMOPLASTIC
TURN LANE-USE ARROW THERMOPLASTIC
6" DOTTED WHITE THERMOPLASTIC PAVEMENT MARKING (3' STRIPE, 9' GAP) W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS @ 36' O.C.
4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 80' O.C.
8" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING (TYP. AROUND ISLAND) & 10" REFL. PAINT ON ISLAND CURBS
12" WHITE STOP BAR THERMOPLASTIC PAVEMENT MARKING
24" WHITE STOP BAR THERMOPLASTIC PAVEMENT MARKING
RAMP I
4" CONTINUOUS WHITE HIGH PERFORMANCE PAVEMENT MARKING
4" CONTINUOUS YELLOW HIGH PERFORMANCE PAVEMENT MARKING
8" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING (TYP. AROUND ISLAND) & 10" REFL. PAINT ON ISLAND CURBS
8" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING
12" YELLOW - 45° DIAGONAL THERMOPLASTIC PAVEMENT MARKING @ 25' O.C.
4" SKIP WHITE THERMOPLASTIC PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.
4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 80' O.C.
4" DOUBLE YELLOW HIGH PERFORMANCE CONTRAST MARKING TAPE W/ TYPE II YELLOW RAISED PAVEMENT MARKERS ON BRIDGE 80' O.C.
4" SKIP WHITE HIGH PERFORMANCE CONTRAST MARKING TAPE W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS ON BRIDGE 80' O.C.
CONWAY LOOP
4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 80' O.C.
4" SKIP WHITE THERMOPLASTIC PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 80' O.C.
4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING
JOB NO. 080431
JOB NO. 080396
7430+00
200' LT. TURN LANE
40'
60'
25'
50'
R=60'
150'
50'
40'
60'
40'
200' LT. TURN LANE
100'
TURN LANE-USE ARROW THERMOPLASTIC
4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING
WORD "ONLY" THERMOPLASTIC
HWY 365 CONNECTOR
15+00
100'
40'
25+50
200' LT. TURN LANE
60'
40'
4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING W/ TYPE II RED/WHITE RAISED PAVEMENT MARKERS 40' O.C.
4" WHITE REFL. PAINT PAVEMENT MARKING
4" DOUBLE YELLOW REFL. PAINT PAVEMENT MARKING
MCLURE ACRES RD.
4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 40' O.C.
8" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING (TYP. AROUND ISLAND) & 10" REFL. PAINT ON ISLAND CURBS
WORD "ONLY" THERMOPLASTIC
TURN LANE-USE ARROW THERMOPLASTIC
12" WHITE STOP BAR THERMOPLASTIC PAVEMENT MARKING
8" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING
4" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING W/ TYPE II YELLOW RAISED PAVEMENT MARKERS 40' O.C.
4" CONTINUOUS WHITE THERMOPLASTIC PAVEMENT MARKING
HWY 365
12" YELLOW - 45° DIAGONAL THERMOPLASTIC PAVEMENT MARKING @ 25' O.C.
12" WHITE STOP BAR THERMOPLASTIC PAVEMENT MARKING
220'
110'
150' LT. TURN LANE
40'
50'
30'
31'
330'
R=60'
30'
50'
30'
00+90
00+30
90+00
30+00

PERMANENT PAVEMENT MARKINGS

rnfortner 5/14/2015 9:05:08 AM
WORKSPACE: AHTD
L:\2009\0901230 - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_PM_05.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 34 | 168 |

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 8141
NICCI D. TINER
5-19-15

INSTALL SS-RAMPI-23-STA7429+50EB
INSTALL SS-040-23-STA7419+55WB
INSTALL SS-040-23-STA7427+05WB
W8-13 INSTALLED IN PREVIOUS CONTRACT
OM-3L INSTALLED IN PREVIOUS CONTRACT
OM-3R INSTALLED IN PREVIOUS CONTRACT
INSTALL SS-RAMPI-23-STA7429+50WB
INSTALL SS-MAINLINE-23-STA25+46WB
INSTALL SS-RAMP3/4-23-STA7459+32NB
INSTALL SS-RAMP3/4-23-STA7458+12NB
INSTALL SS-RAMP3/4-23-STA7455+72NB
INSTALL SS-RAMP3/4-23-STA7454+52NB
INSTALL SS-RAMP3/4-23-STA7453+32NB
INSTALL SS-RAMP3/4-23-STA7452+12NB
INSTALL SS-RAMP3/4-23-STA7450+92NB
INSTALL SS-RAMP3/4-23-STA7449+72NB
INSTALL SS-RAMP3/4-23-STA7448+52NB
INSTALL SS-MAINLINE-23-STA21+80WB
INSTALL SS-RAMP3/4-23-STA7456+92NB
INSTALL SS-MAINLINE-23-STA15+62WB
INSTALL SS-MAINLINE-23-STA18+79WB(R)
INSTALL SS-MAINLINE-23-STA18+71WB(L)
INSTALL SS-MAINLINE-23-STA21+06EB(R)
INSTALL SS-MAINLINE-23-STA21+22EB(L)
INSTALL SS-040-23-STA7435+02EB
INSTALL SS-RAMP2-23-STA7432+88EB
INSTALL SS-MAINLINE-23-STA24+13EB
INSTALL EX-RAMP3-23-STA7452+77NB
INSTALL SS-RAMP3-23-STA7456+21NB
INSTALL SS-RAMP4-23-STA7447+64WB
INSTALL SS-RAMP4-23-STA7446+38WB
INSTALL SS-RAMP4-23-STA7445+23WB
INSTALL SS-RAMP4-23-STA7443+93WB
INSTALL SS-RAMP4-23-STA7442+71WB
INSTALL SS-040-23-STA7459+21EB
INSTALL SS-040-23-STA7448+41WB
INSTALL SS-RAMPI-23-STA7422+49EB
INSTALL SS-365CON-23-STA20+61NB
INSTALL SS-365CON-23-STA20+66NB
INSTALL SS-MAINLINE-23-STA25+23EB
INSTALL SS-040-23-STA7451+72EB
INSTALL SS-365CON-23-STA23+56SB
INSTALL SS-365CON-23-STA21+63NB
INSTALL SS-365CON-23-STA24+30SB
INSTALL SS-365CON-23-STA25+10SB
INSTALL SS-365CON-23-STA26+40NB
INSTALL SS-MCCLURE-23-STA10+40WB
INSTALL SS-MAINLINE-23-STA28+37WB(L)
INSTALL SS-MAINLINE-23-STA28+43WB(R)
INSTALL SS-365CON-23-STA26+71SB
INSTALL SS-365-23-STA435+71EB
INSTALL SS-365-23-STA424+15WB
INSTALL SS-MAINLINE-23-STA30+95EB(L)
INSTALL SS-365CON-23-STA23+05SB
INSTALL SS-365CON-23-STA27+37SB
INSTALL SS-MAINLINE-23-STA30+90EB(R)
INSTALL SS-365-23-STA432+98WB
INSTALL SS-RAMPI-23-STA7433+87EB
INSTALL SS-365CON-23-STA23+05NB
INSTALL SS-MAINLINE-23-STA32+04EB
INSTALL SS-RAMPI-23-STA7433+94EB
INSTALL SS-365-23-STA444+01EB
INSTALL SS-365CON-23-STA26+39SB
INSTALL OH-040-23-STA7394+56EB-A (TO BE MOUNTED ON EXISTING SIGN TRUSS)
INSTALL OH-040-23-STA7414+00EB-A (TO BE MOUNTED ON EXISTING SIGN TRUSS)
INSTALL OH-040-23-STA7414+00EB-B (TO BE MOUNTED ON EXISTING SIGN TRUSS)
INSTALL OH-040-23-STA7414+00EB-C
REMOVE OH-040-23-STA7414+00EB-C
INSTALL EX-RAMP3-23-STA7424+38EB
REMOVE EXISTING GM SIGN
INSTALL OH-040-23-I7
INSTALL OH-040-23-STA7458+12WB-A
INSTALL OH-040-23-STA7458+12WB-B
INSTALL OH-040-23-STA7519+30WB-B (TO BE MOUNTED ON EXISTING SIGN TRUSS)
EXISTING SIGN TO REMAIN
EXISTING SIGN TRUSS TO REMAIN. SEE OVERHEAD SIGN PLACEMENT SHEETS FOR DETAILS.
SEE OVERHEAD SIGN PLACEMENT SHEETS FOR DETAILS.
STA. 33+00.00 OF PROJECT
MAINLANES
RAMP 1
RAMP 2
RAMP 3
RAMP 4
HWY. 365
HWY. 365 CONNECTOR
I-40
SHLD.
12' TRAFFIC LANE
10' SHLD.
7'-6"

PERMANENT SIGNING - I-40 TO HWY. 365

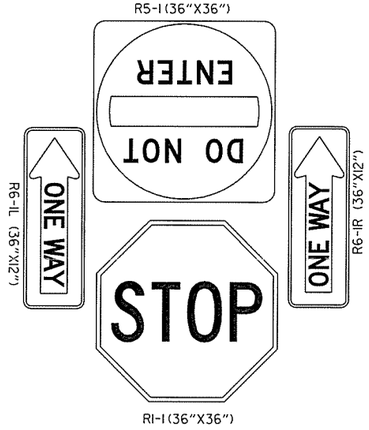
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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 35 | 168 |

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
5-19-15

R5-1 (36"X36")




R6-IL (36"X12") R6-IR (36"X12") R1-1 (36"X36")

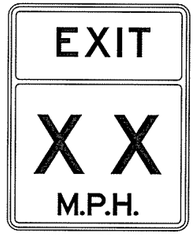
SS-RAMPI-23-STA7433+94EB



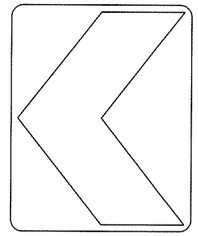

R2-1 (48"X60")




R2-2 (48"X48")
SS-040-23-STA7419+55WB
SS-040-23-STA7459+21EB




WI3-2 (36"X48")
SS-RAMPI-23-STA7422+49EB
SS-RAMPI-23-STA7456+2INB



WI-8L (36"X48")
SS-RAMP3/4-23-STA7459+32NB
SS-RAMP3/4-23-STA7458+12NB
SS-RAMP3/4-23-STA7456+92NB
SS-RAMP3/4-23-STA7455+72NB
SS-RAMP3/4-23-STA7454+52NB
SS-RAMP3/4-23-STA7453+32NB
SS-RAMP3/4-23-STA7452+12NB
SS-RAMP3/4-23-STA7450+92NB
SS-RAMP3/4-23-STA7449+72NB
SS-RAMP3/4-23-STA7448+52NB
SS-RAMP4-23-STA744T+64WB
SS-RAMP4-23-STA7446+38WB
SS-RAMP4-23-STA7445+23WB
SS-RAMP4-23-STA7443+93WB
SS-RAMP4-23-STA7442+71WB
SS-365CON-23-STA23+56SB
SS-365CON-23-STA24+30SB
SS-365CON-23-STA25+10SB



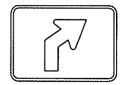

M3-2 (24"X12")
MI-1 (24"X24")



M6-2R (21"X15")
SS-RAMP2-23-STA7432+88EB




M4-5 (24"X12")
MI-1 (24"X24")



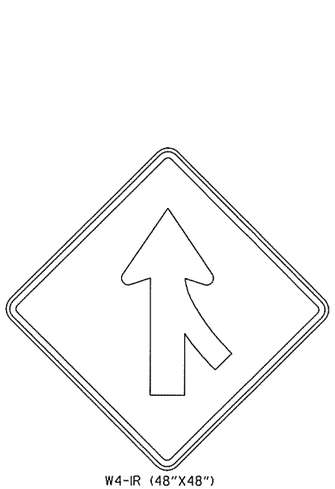
M5-2R (21"X15")
SS-365CON-23-STA21+63NB



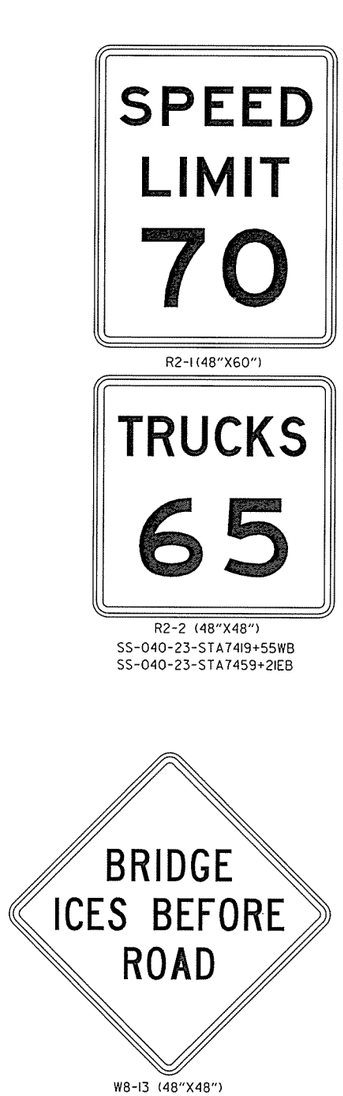

M4-5 (24"X12")
MI-1 (24"X24")
M6-IL (21"X15")
SS-365-23-STA436+71EB




M4-5 (24"X12")
MI-1 (24"X24")
M6-IR (21"X15")
SS-365-23-STA432+98WB



W4-IR (48"X48")
SS-040-23-STA7435+02EB
SS-040-23-STA7448+41WB



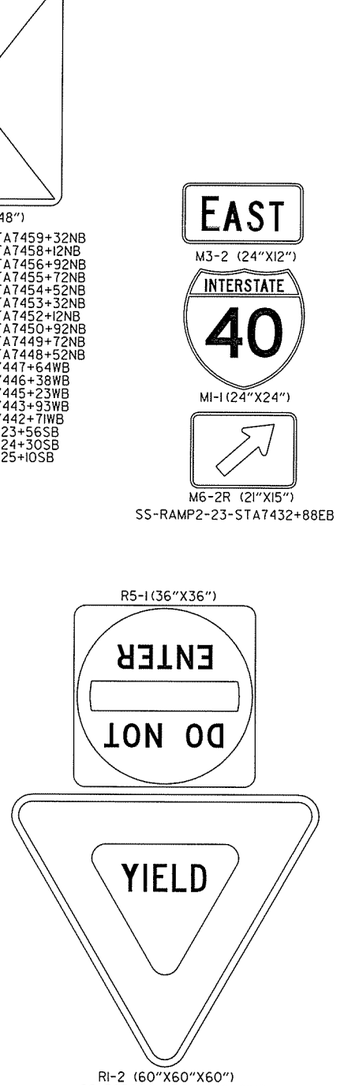

W8-13 (48"X48")
SS-MAINLINE-23-STAI5+62WB
SS-MAINLINE-23-STA25+46WB
SS-MAINLINE-23-STA24+13EB



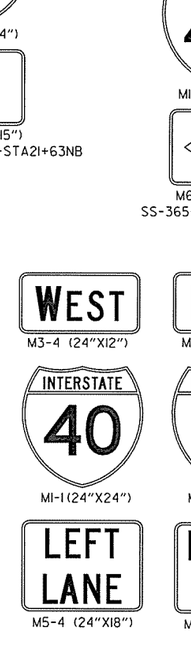

MI-5 (30"X24")



SS-365CON-23-STA27+37SB
WI-7 (48"X24")



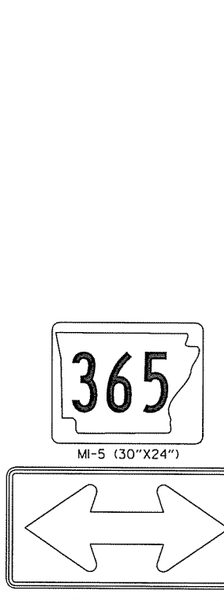

RI-2 (60"X60"X60")
SS-365CON-23-STA20+61NB
SS-RAMPI-23-STA7433+87EB
SS-365CON-23-STA26+39SB
SS-365CON-23-STA26+40NB



OM-3L (12"X36")
SS-MAINLINE-23-STA30+95EB(L)
SS-MAINLINE-23-STA28+37WB(L)
SS-MAINLINE-23-STA21+22EB(L)
SS-MAINLINE-23-STAI8+71WB(L)



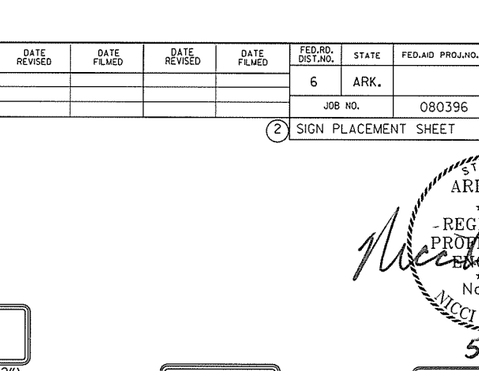
OM-3R (12"X36")
SS-MAINLINE-23-STA30+90EB(R)
SS-MAINLINE-23-STA28+43WB(R)
SS-MAINLINE-23-STA21+06EB(R)
SS-MAINLINE-23-STAI8+79WB(R)




RI-1 (36"X36")
SS-365CON-23-STA20+66NB
SS-MCCLURE-23-STAI0+40WB
SS-365CON-23-STA26+71SB

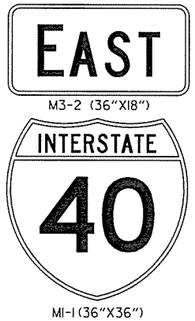



R5-1A (36"X24")
SS-RAMPI-23-STA7429+50WB




M3-4 (24"X12") M3-2 (24"X12") M4-5 (24"X12")
MI-1 (24"X24") MI-1 (24"X24") MI-5 (30"X24")
M5-4 (24"X18") M5-6 (24"X18") M5-6 (24"X18")

SS-MAINLINE-23-STA32+04EB




M3-2 (36"X18")
MI-1 (36"X36")
SS-040-23-STA745I+72EB




M3-4 (36"X18")
MI-1 (36"X36")
SS-040-23-STA7427+05WB

rnfortner 5/14/2015 9:45:42 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 36 | 168 |

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 8141
MICCI D. TINER
5-19-15

SOUTH
M3-3 (24"X12")

365
M1-5 (30"X24")

M5-1L (21"X15")

NORTH
M3-1 (24"X12")

365
M1-5 (30"X24")

M5-1R (21"X15")

Mayflower
Conway

6.5 | 8 | 6 | 38.98 | 6.5
6.5 | 29.15 | 9 | 8 | 13.34

5'-6"

5.75 | 6.5 | 5.75 | 6 | 6 | 5.75 | 6.5 | 5.75 | 6 | 6 | 4.50 | 6 | 6 | 2'-6"

DI-2
2.25" Radius, 0.75" Border, White on Green;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
[Mayflower] ClearviewHwy-2-W;
[Conway] ClearviewHwy-2-W;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
SS-365CON-23-STA23+05SB

WEST
M3-4 (24"X12")

INTERSTATE
40
M1-1 (24"X24")

LEFT LANE
M5-4 (24"X18")

EAST
M3-2 (24"X12")

INTERSTATE
40
M1-1 (24"X24")

RIGHT LANE
M5-6 (24"X18")

Fort Smith
Little Rock

6.62 | 6 | 6 | 13.97 | 3.79 | 20.55 | 9.07
6.62 | 18.27 | 4.5 | 17.02 | 6 | 6.97 | 6.61

5'-6"

5.42 | 7.16 | 6.42 | 6 | 6 | 4.50 | 6 | 6 | 4.50 | 6 | 6 | 2'-6"

DI-2
2.25" Radius, 0.75" Border, White on Green;
Standard Arrow Custom 9" X 6" 90°;
[Fort Smith] ClearviewHwy-2-W;
[Little Rock] ClearviewHwy-2-W;
Standard Arrow Custom 9" X 6" 45°;
SS-MAINLINE-23-STA25+23EB

TO
M4-5 (24"X12")

INTERSTATE
40
M1-1 (24"X24")

M5-1R (21"X15")

Conway
Fort Smith
Little Rock

6.1 | 6 | 6 | 29.15 | 18.75
6.1 | 13.97 | 3.8 | 20.54 | 6 | 8 | 7.59
6.1 | 18.27 | 4.5 | 17.02 | 6 | 8 | 6.1

5'-6"

5.75 | 6.5 | 5.5 | 6.5 | 6 | 6 | 4.50 | 6 | 6 | 9 | 4.50 | 6 | 6 | 3'-6"

DI-3
2.25" Radius, 0.75" Border, White on Green;
Standard Arrow Custom 9" X 6" 90°;
[Conway] ClearviewHwy-2-W;
[Fort Smith] ClearviewHwy-2-W;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
[Little Rock] ClearviewHwy-2-W;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
SS-365-23-STA424+15WB

EXIT
132

28.8 | 36.4 | 24.8
9.75 | 41.5 | 9.75 | 23 | 6

7'-6"

11 | 6 | 18 | 23 | 10 | 12 | 9 | 31 | 5'-0"

EX-RAMP1-23-STA7424+38EB
EX-RAMP3-23STA7452+77NB
6.00" Radius, 1.50" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[132] ClearviewHwy-5-W-R;
Arrow Custom - 29.24" 45°;

TO
M4-5 (24"X12")

INTERSTATE
40
M1-1 (24"X24")

M5-1L (21"X15")

Mayflower
Fort Smith
Little Rock

6.1 | 8 | 6 | 29.15 | 16.75
6.1 | 13.97 | 3.79 | 20.55 | 6 | 8 | 7.59
6.1 | 18.27 | 4.5 | 17.02 | 6 | 8 | 6.1

5'-6"

5.75 | 6.5 | 5.5 | 6.5 | 6 | 6 | 4.50 | 6 | 6 | 9 | 4.50 | 6 | 6 | 3'-6"

DI-3
2.25" Radius, 0.75" Border, White on Green;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
[Conway] ClearviewHwy-2-W;
[Fort Smith] ClearviewHwy-2-W;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
[Little Rock] ClearviewHwy-2-W;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
SS-365CON-23-STA23+05NB

TO
M4-5 (24"X12")

365
M1-5 (30"X24")

M5-1L (21"X15")

Conway
Mayflower

6.5 | 8 | 6 | 38.98 | 6.5
7.5 | 6 | 7 | 29.15 | 16.34

5'-6"

5.75 | 6.5 | 4.25 | 9 | 4.5 | 6 | 6 | 6 | 6 | 2'-6"

DI-2
2.25" Radius, 0.75" Border, White on Green;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
[Mayflower] ClearviewHwy-2-W;
Standard Arrow Custom 9" X 6" 90°;
[Conway] ClearviewHwy-2-W;
SS-MAINLINE-23-STA21+80WB

R5-1A (36"X24")
WRONG WAY

TO
M4-5 (24"X12")

365
M1-5 (30"X24")

M6-3 (21"X15")

Mayflower
Conway

6.5 | 6 | 6 | 38.98 | 8.5
6.5 | 29.15 | 9 | 8 | 13.34

5'-6"

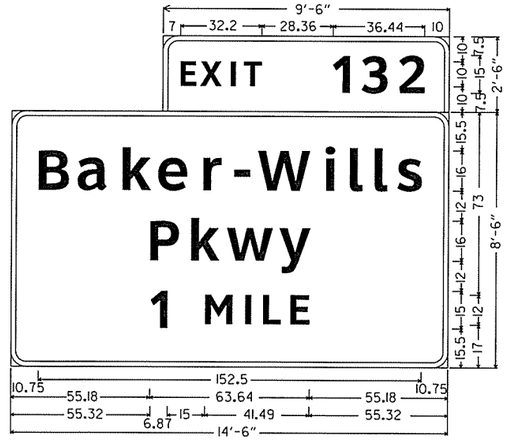
5.75 | 6.5 | 4.25 | 9 | 4.5 | 6 | 6 | 6 | 6 | 2'-6"

DI-2
2.25" Radius, 0.75" Border, White on Green;
Standard Arrow Custom 9" X 6" 90°;
[Mayflower] ClearviewHwy-2-W;
[Conway] ClearviewHwy-2-W;
90 Deg Advanced Turn Arrow 8.00" X 6.50";
SS-RAMP1-23-STA7429+50EB

rnfortner 5/14/2015 9:46:07 AM
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REVISED DATE:

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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 37 | 168 |

(2) SIGN PLACEMENT SHEET




OH-040-23-STA7394+56EB-A
6.00" Radius, 2.00" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [132] ClearviewHwy-5-W;
6.00" Radius, 2.00" Border, White on Green;
[Baker-Wills] ClearviewHwy-5-W;
[Pkwy] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;

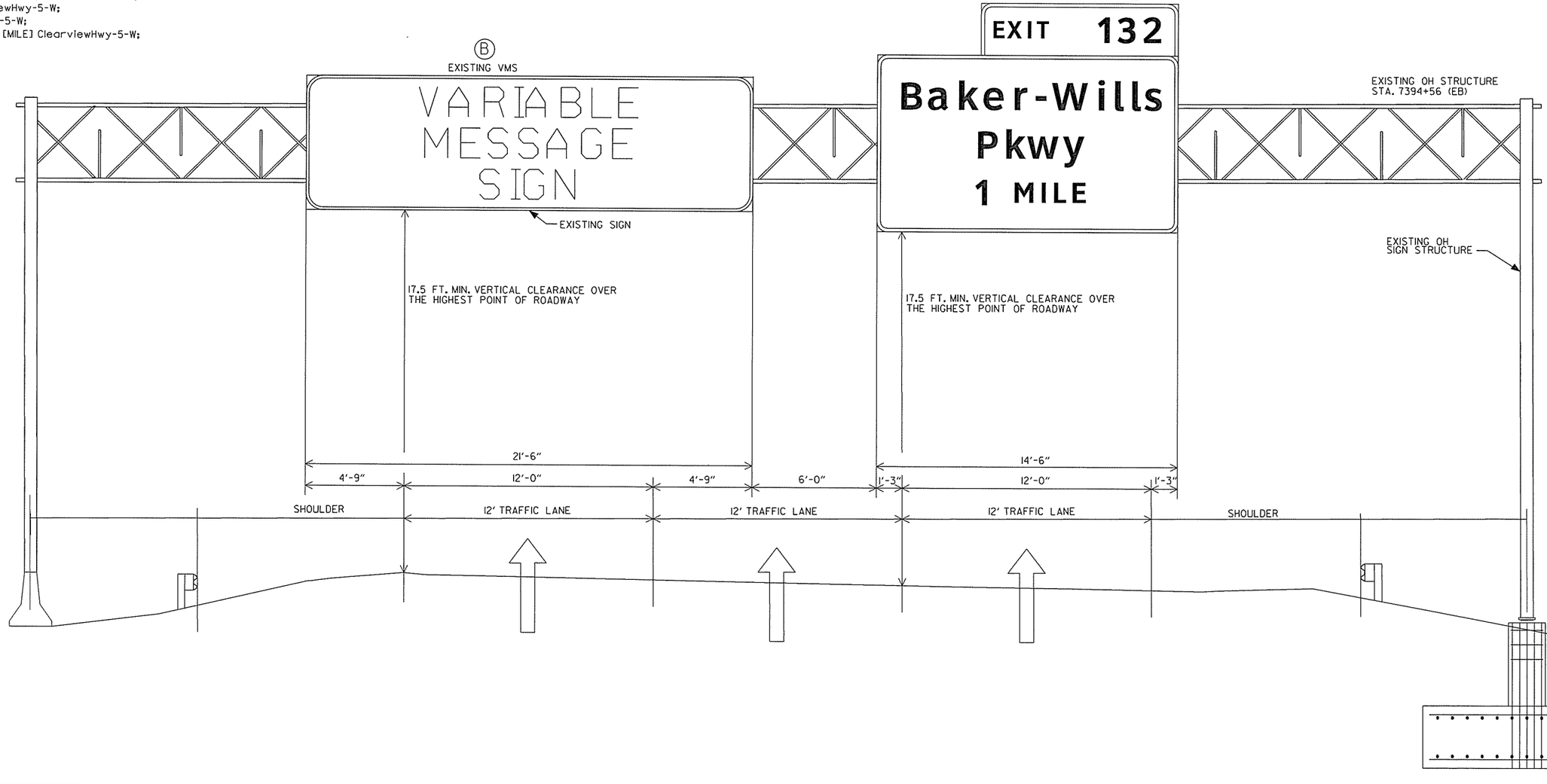
NOTES:

THE CONTRACTOR WILL VERIFY SIGN PLACEMENT AND MAKE ANY ADJUSTMENTS NECESSARY TO ALIGN SIGNS OVER INTENDED LANES.

SINCE THE CONTRACTOR WILL BE REQUIRED TO INSTALL OVERHEAD SIGNS ON STRUCTURES WHICH ARE LOCATED OVER THE ROADWAYS WHICH ARE CURRENTLY OPEN TO TRAFFIC, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE LANE CLOSURES AS A PART OF TRAFFIC CONTROL. PAYMENT FOR PROVIDING LANE CLOSURES WILL BE PAID SUBSIDIARY TO THE PAY ITEM "MAINTENANCE OF TRAFFIC". ALL MAINTENANCE OF TRAFFIC WORK MUST CONFORM WITH THE MUTCD.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 8141
NICCI D. TINER
5-19-15

(A)
OH-040-23-STA7394+56EB-A




rnfortner 5/14/2015 9:44:33 AM
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REVISED DATE:

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| | | | | JOB NO. | | 080396 | 38 | 168 |

(2) SIGN PLACEMENT SHEET

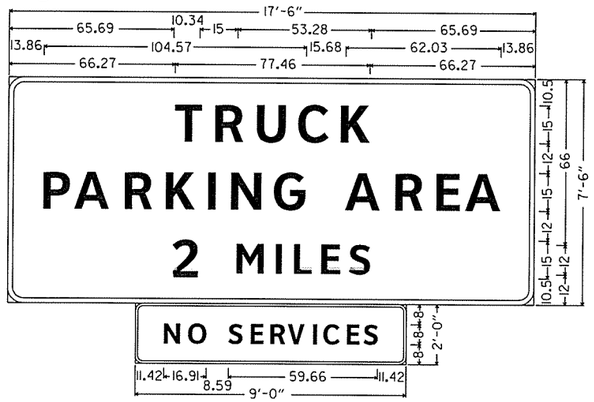
NOTES:

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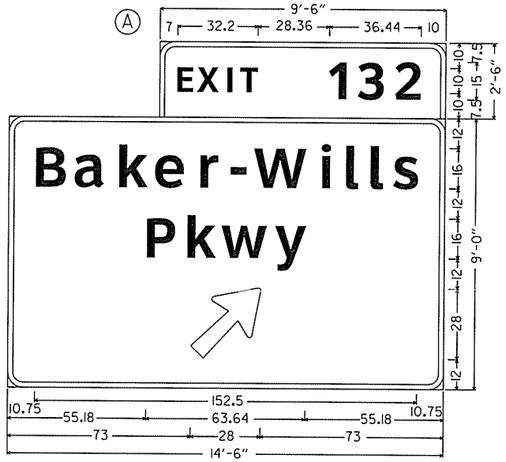
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
5-19-15

Ⓑ

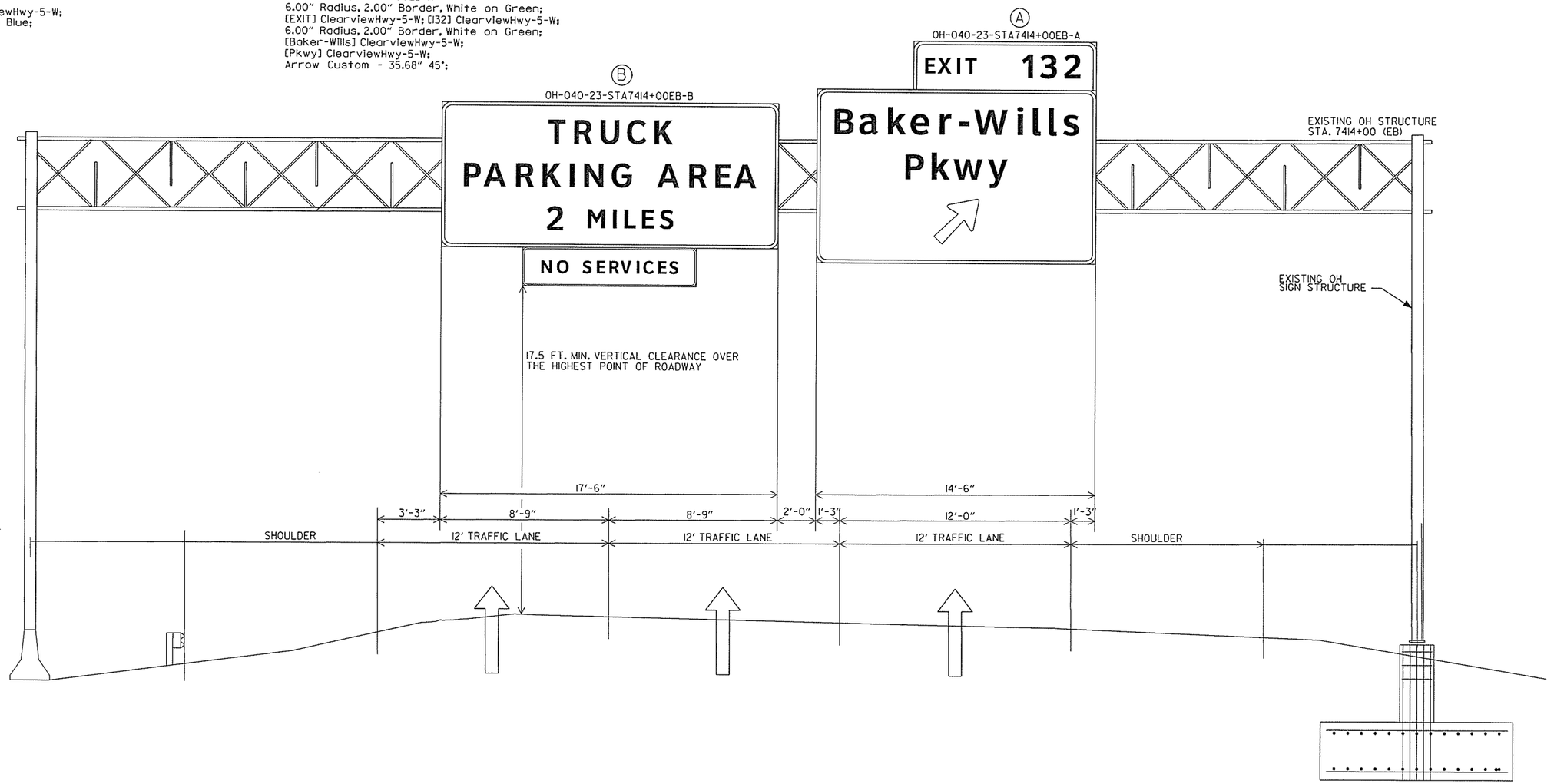



OH-040-23-STA7414+00EB-B
6.00" Radius, 2.00" Border, White on Blue;
[TRUCK] ClearviewHwy-5-W;
[PARKING AREA] ClearviewHwy-5-W;
[2] ClearviewHwy-5-W; [MILES] ClearviewHwy-5-W;
3.00" Radius, 1.00" Border, White on Blue;
[NO SERVICES] ClearviewHwy-5-W;

Ⓐ




OH-040-23-STA7414+00EB-A
6.00" Radius, 2.00" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [132] ClearviewHwy-5-W;
6.00" Radius, 2.00" Border, White on Green;
[Baker-Wills] ClearviewHwy-5-W;
[Pkwy] ClearviewHwy-5-W;
Arrow Custom - 35.68" 45°;

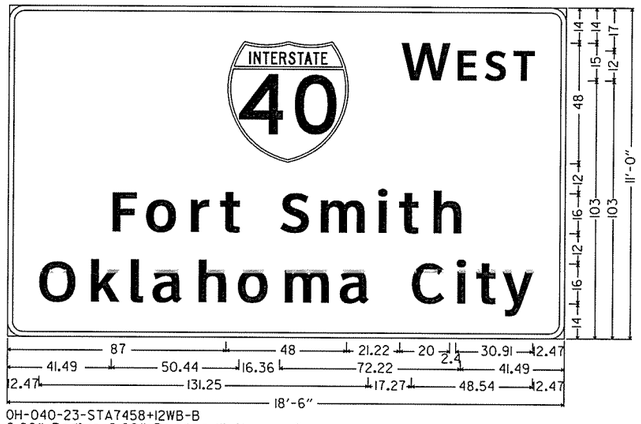



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REVISED DATE:

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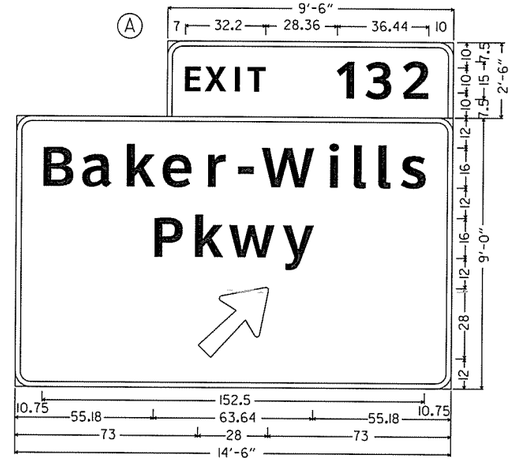
(2) SIGN PLACEMENT SHEET

Ⓑ




OH-040-23-STA7458+12WB-B
6.00" Radius, 2.00" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W;
[Fort Smith] ClearviewHwy-5-W;
[Oklahoma City] ClearviewHwy-5-W;

Ⓐ




OH-040-23-STA7458+12WB-A
6.00" Radius, 2.00" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [132] ClearviewHwy-5-W;
6.00" Radius, 2.00" Border, White on Green;
[Baker-Wills] ClearviewHwy-5-W;
[Pkwy] ClearviewHwy-5-W;
Arrow Custom - 35.68" 45°;

NOTES:

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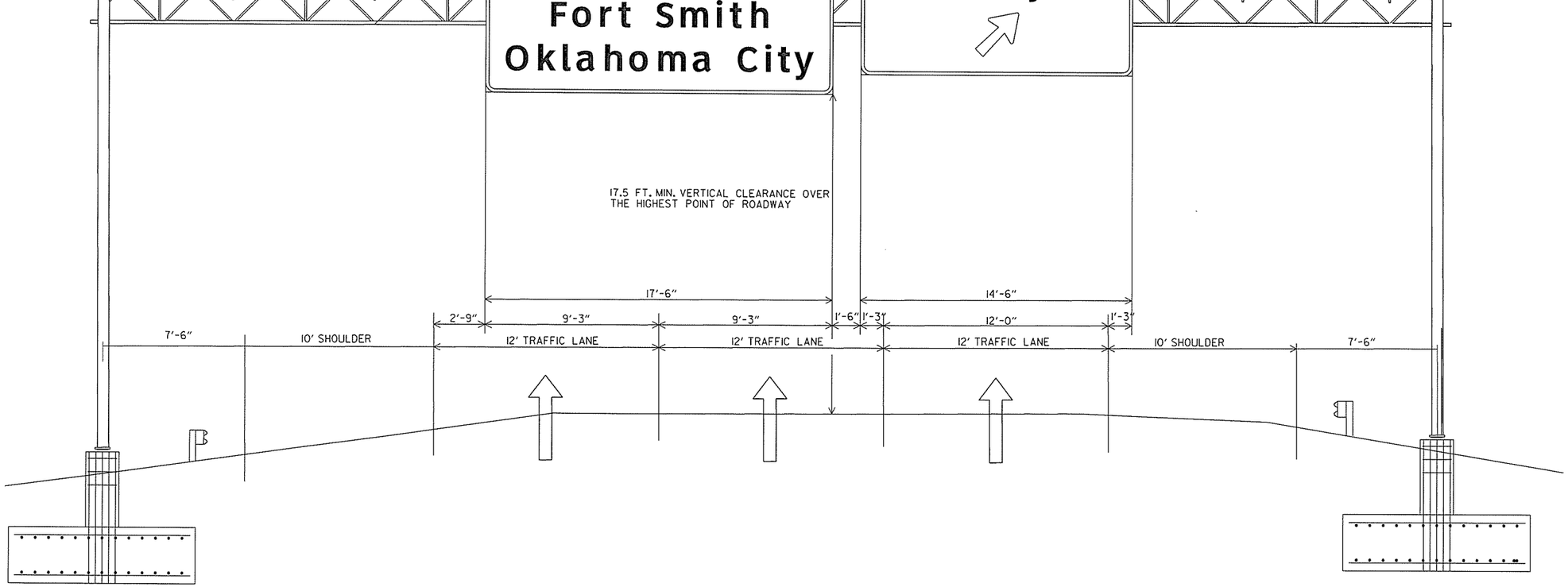
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
5-19-15

Ⓑ OH-040-23-STA7458+12WB-B

Ⓐ OH-040-23-STA7458+12WB-A

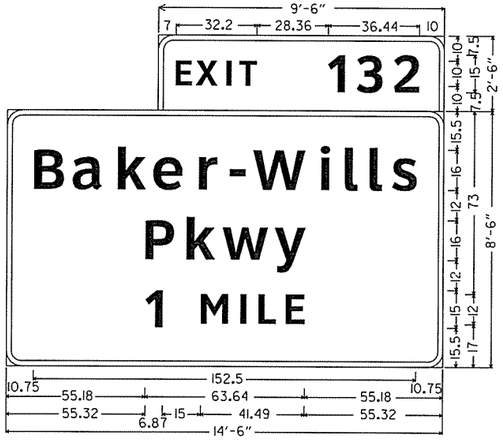
SEE OVERHEAD SIGN STRUCTURE DEAIL SHEETS FOR DESIGN SPECIFICATIONS.

INSTALL OH-040-23-17




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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 40 | 168 |
| | | | | (2) | SIGN PLACEMENT SHEET | | | |




OH-040-23-STA7519+30WB-B
6.00" Radius, 2.00" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [132] ClearviewHwy-5-W;
6.00" Radius, 2.00" Border, White on Green;
[Baker-Wills] ClearviewHwy-5-W;
[Pkwy] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;

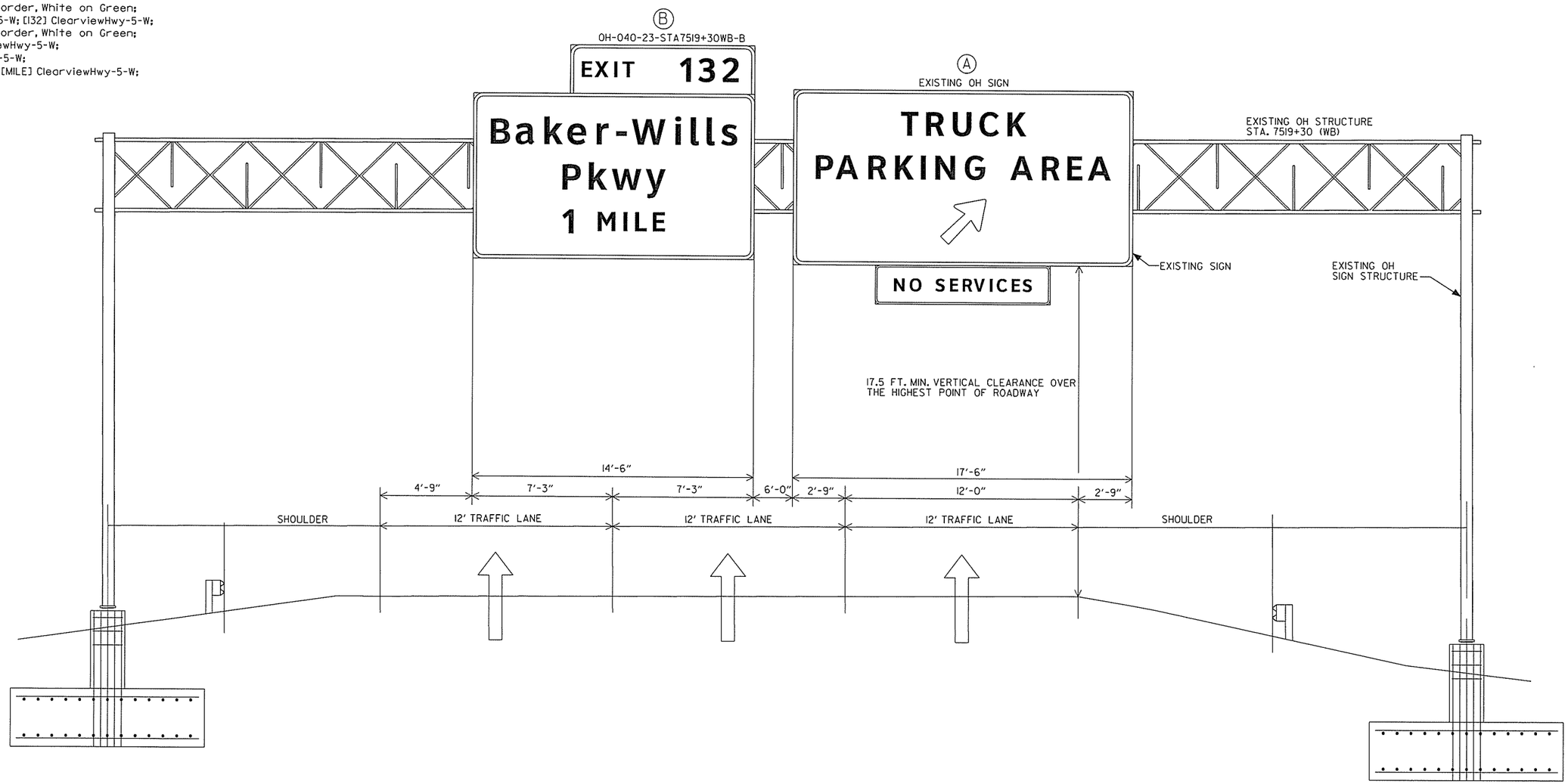
NOTES:

THE CONTRACTOR WILL VERIFY SIGN PLACEMENT AND MAKE ANY ADJUSTMENTS NECESSARY TO ALIGN SIGNS OVER INTENDED LANES.

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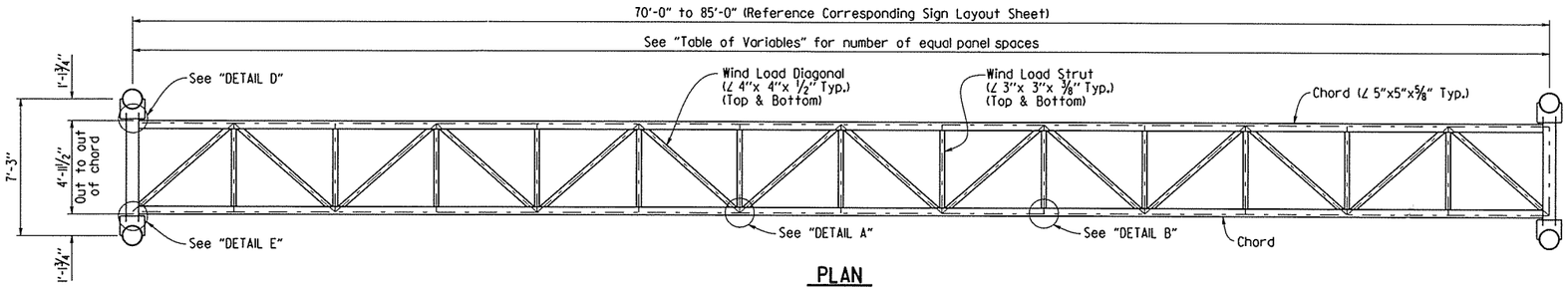
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 8141
NICCI D. TINER

5-19-15

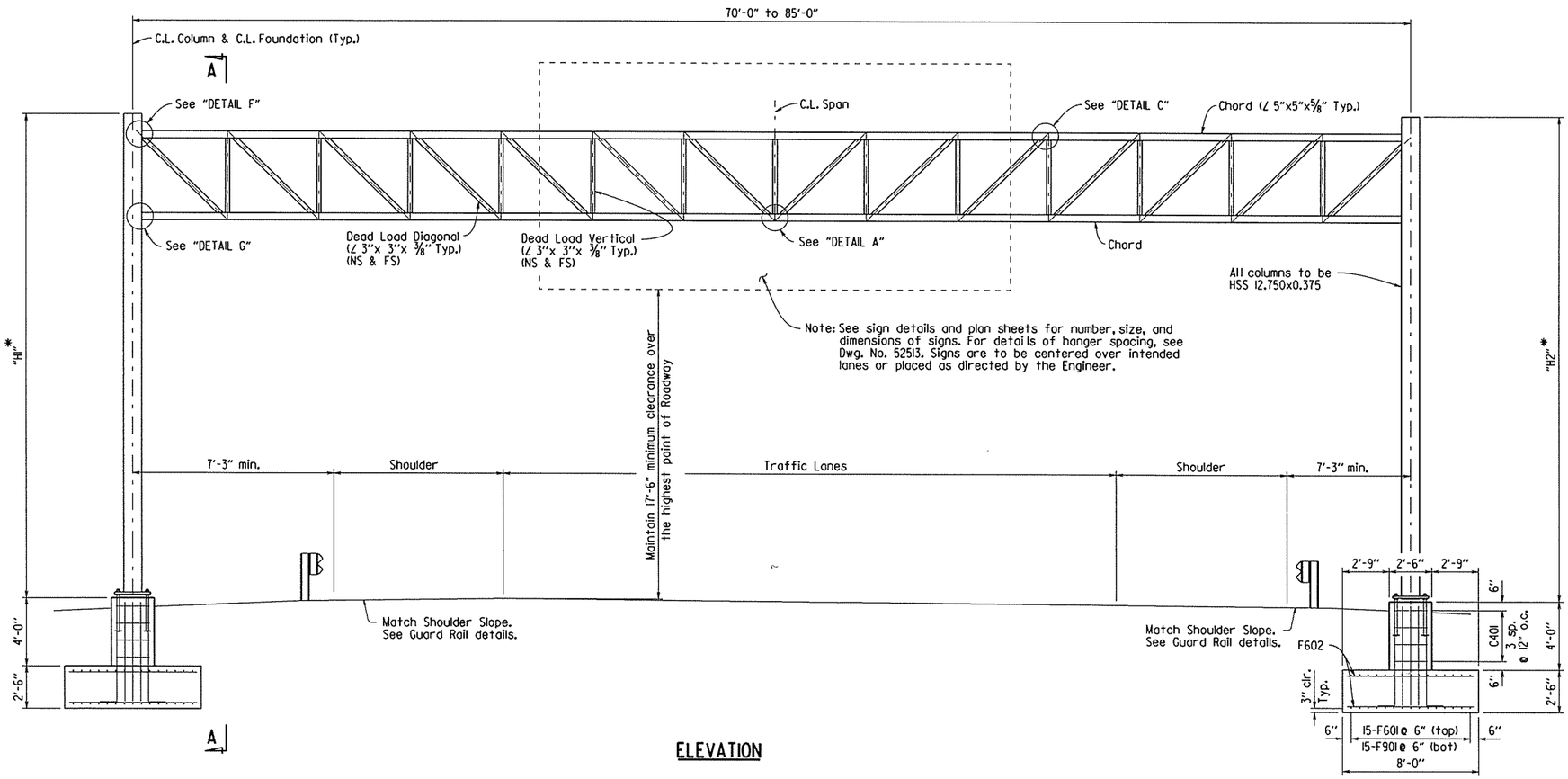



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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 41 | 168 |
| | | | | (1) OH-040-23-17 | | SIGN STRUCTURE | | 52509 |




PLAN



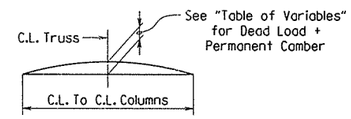

ELEVATION

## BAR LIST-FOUNDATION - PER FOOTING

| MARK | NO. REQ'D | LENGTH | P.D. | BENDING DIAGRAMS |
|---|---|---|---|---|
| | | | | Dimensions are out to out of bars. |
| C401 | 8 | 18'-2" | 2" | 6'-9" 2'-1" 5" (Typ.) 45° 5'-11" 12" C401 C601 |
| C601 | 48 | 6'-9" | 4½" | |
| F601 | 15 | 17'-6" | Str. | |
| F602 | 70 | 7'-6" | Str. | |
| F901 | 15 | 17'-6" | Str. | |

## TABLE OF VARIABLES

| Span (ft) | No. of Equal Panel Spaces | Dead Load + Permanent Camber |
|---|---|---|
| 70' thru 75' | 14 | 1" |
| 76' thru 85' | 16 | 1¼" |




TRUSS CAMBER DIAGRAM

* Note: The Contractor shall make field measurements to determine the Column heights "H1" and "H2" that are required to maintain the minimum vertical clearance with the centerline of the sign located at the centerline of the truss. These column heights shall be shown on the shop drawings with a note stating that the Contractor has made the required field measurements. If the structure height ("H1" or "H2") exceeds 30'-0" contact the Engineer. The Contractor shall also verify that the variable span length (70'-0" to 85'-0") is sufficient to meet the minimum clearances and to fit the new structure to the existing and/or proposed conditions.

## APPROXIMATE QUANTITIES FOR FOUNDATION PER FOOTING - (FOR INFORMATION ONLY)

| CLASS S CONCRETE (Cu. Yds.) | REINFORCING STEEL (Lbs.) | EXCAVATION (Cu. Yds.) |
|---|---|---|
| 17.2 | 2659 | 51 |

STATE OF ARKANSAS
CARL J. FUSELIER
REGISTERED PROFESSIONAL ENGINEER
No. 7510
10/31/12

BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS FOR 70' TO 85'
STEEL OVERHEAD SIGN STRUCTURES
CONWAY SOUTH INTERCHANGE
HWY. 365 (BASE & SURF.) (S)
FAULKNER COUNTY

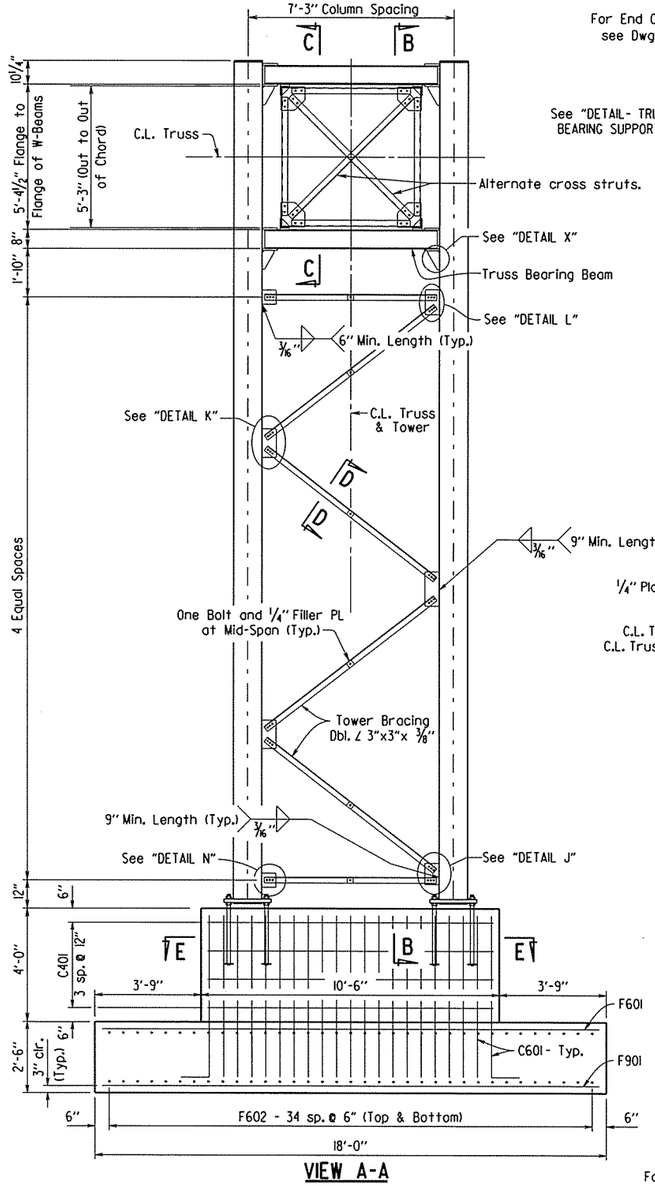
ROUTE 40 SEC. 32

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

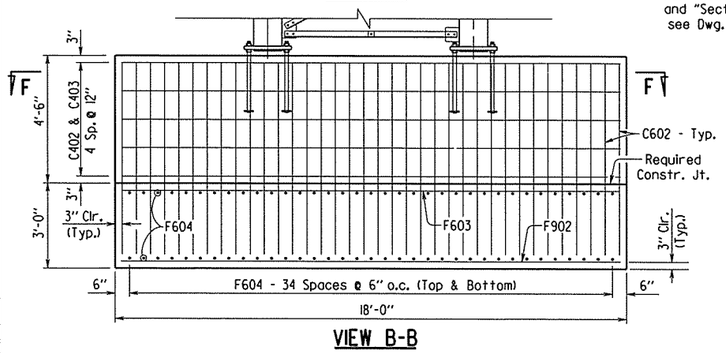
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CHECKED BY: CSL DATE: 10/30/12 SCALE: NOT TO SCALE
DESIGNED BY: RBR DATE: 9/9/12

STR. NO. OH-040-23-17 DRAWING NO. 52509

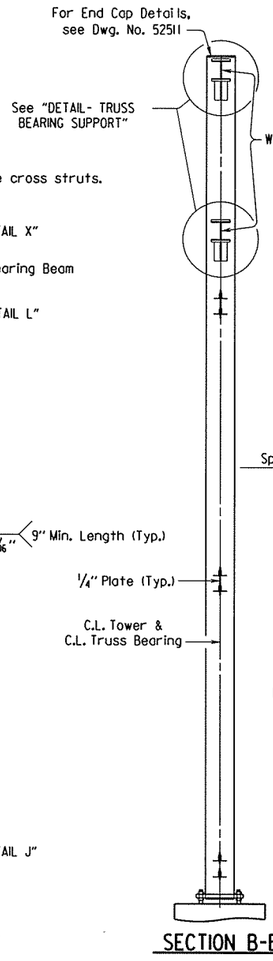
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 42 | 168 |
| | | | | ① OH-040-23-17 | | SIGN STRUCTURE | | 52510 |



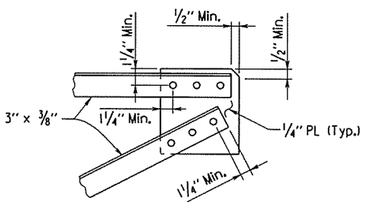

VIEW A-A



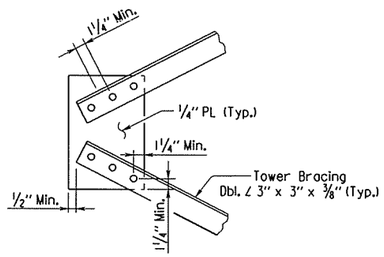

VIEW B-B



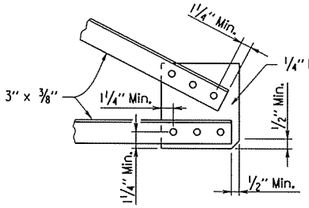

SECTION B-B



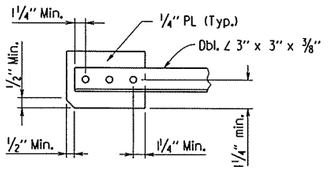

DETAIL L



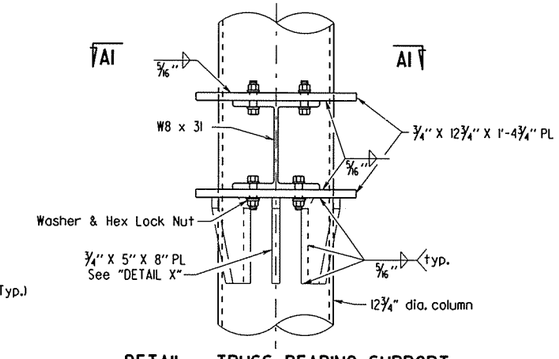

DETAIL K



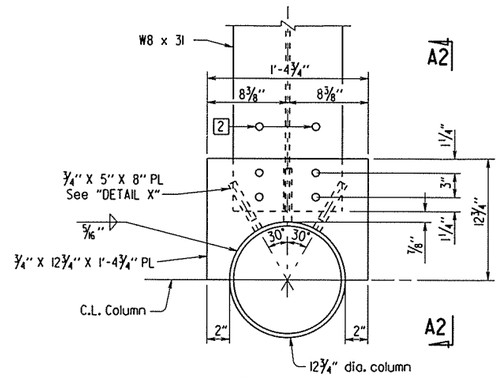

DETAIL J



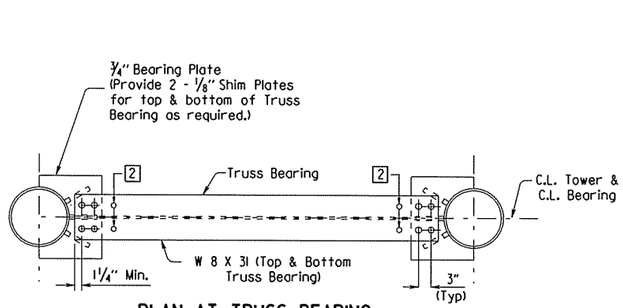

DETAIL N



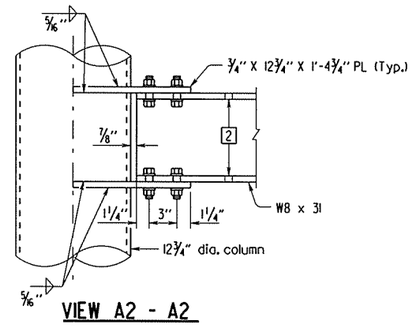

DETAIL - TRUSS BEARING SUPPORT




VIEW AI - AI

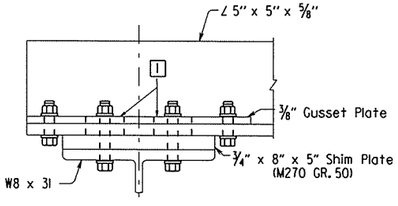



PLAN AT TRUSS BEARING

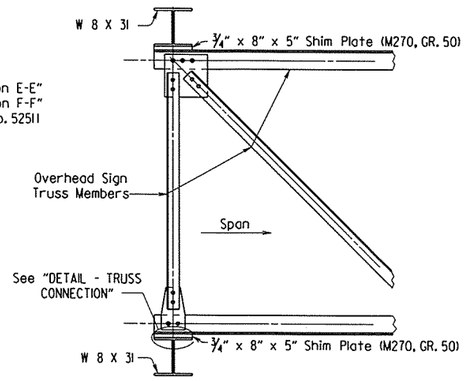



VIEW A2 - A2

¾" X 5" X 8" Plate not shown for clarity

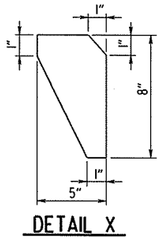



DETAIL - TRUSS CONNECTION

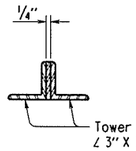



SECTION C-C

For "Section E-E" and "Section F-F" see Dwg. No. 52511




DETAIL X




SECTION D-D

1 Slotted Hole in Gusset Plate and Chord Angle 11/16" X 2". Use plate washer on Gusset plate side. 11/16" ø holes in ¾" shim plate and beam flange.

2 11/16" Dia. holes at top or bottom flanges as required.

STATE OF ARKANSAS
CARL J. FUSELIER
REGISTERED PROFESSIONAL ENGINEER
No. 7510
10/31/12

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS FOR 70' TO 85'
STEEL OVERHEAD SIGN STRUCTURES
CONWAY SOUTH INTERCHANGE
HWY. 365 (BASE & SURF.) (S)
FAULKNER COUNTY

ROUTE 40 SEC. 32

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

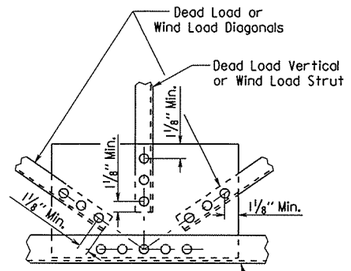
DRAWN BY: CMW DATE: 08/28/2012 FILENAME: b080396_tl.dgn
CHECKED BY: CJF DATE: 10/30/12 SCALE: NOT TO SCALE
DESIGNED BY: RBR DATE: 5/4/12

STR. NO. OH-040-23-17 DRAWING NO. 52510

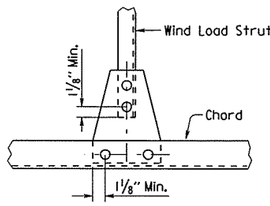
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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 43 | 168 |
| | | | | (1) | OH-040-23-17 | SIGN STRUCTURE | | 52511 |

Note: All Gusset Plate thicknesses shall be 3/8".

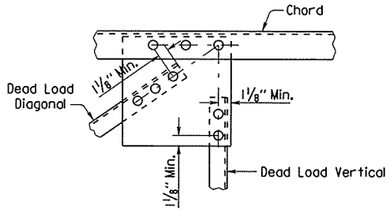
[1] Slotted Hole in Gusset Plate and Chord Angle 11/16" X 2". Use plate washer on Gusset plate side. 11/16" ø holes in 3/4" shim plate and beam flange.



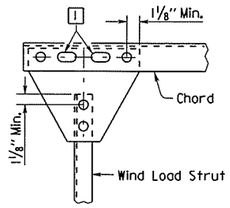

DETAIL A



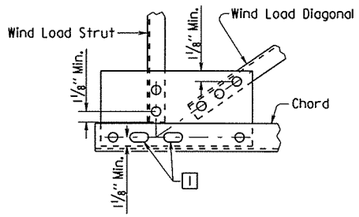

DETAIL B



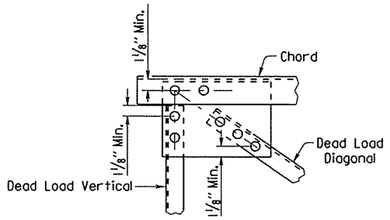

DETAIL C



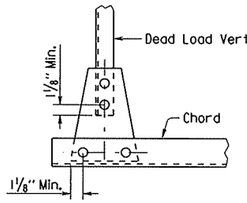

DETAIL D



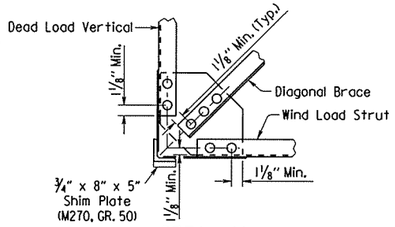

DETAIL E



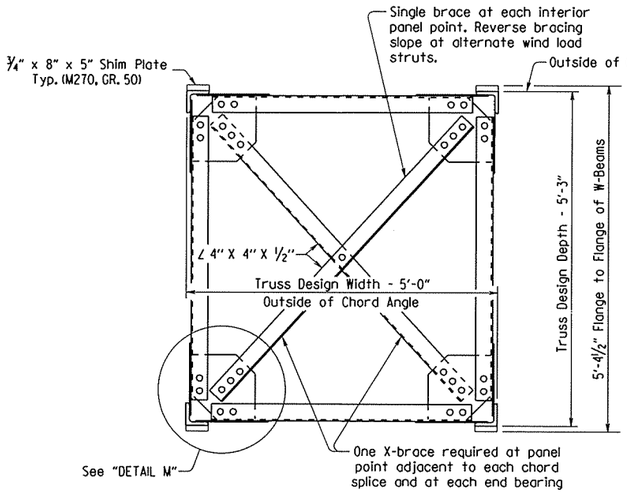

DETAIL F



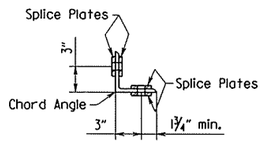

DETAIL G



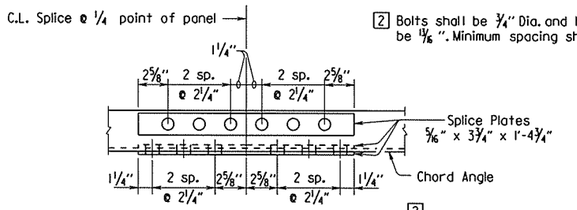

DETAIL M




TRUSS SECTION

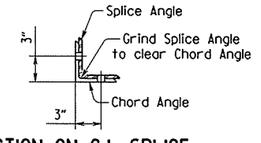



SECTION ON C.L. SPLICE

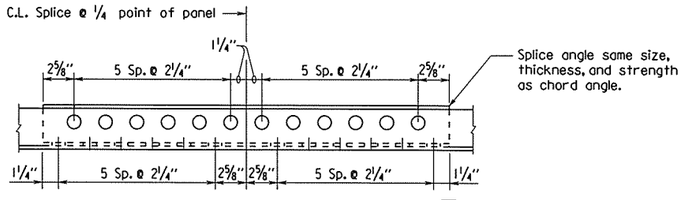



[2] Bolts shall be ¾" Dia. and holes shall be 13/16". Minimum spacing shall be 2¼".

CHORD SPLICE USING PLATES [2]



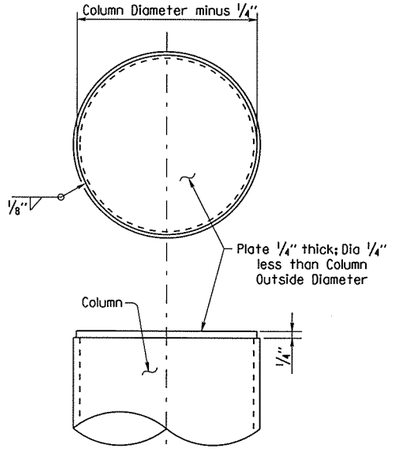

SECTION ON C.L. SPLICE



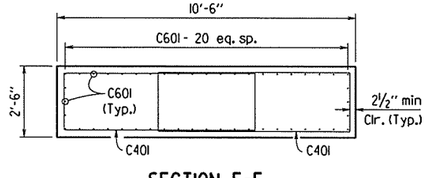

OPTIONAL CHORD SPLICE USING ANGLES [2]

Place Splice Angle on inside of Truss

Note: Chord angles may be spliced in convenient lengths for galvanizing and sign placement.

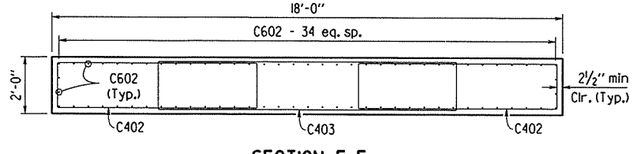



END CAP DETAILS




SECTION E-E

Foundation A




SECTION F-F

Foundation B

STATE OF ARKANSAS
CARL J. FUSELIER
No. 7519
REGISTERED PROFESSIONAL ENGINEER
10/31/12

BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS FOR 70' TO 85'
STEEL OVERHEAD SIGN STRUCTURES
CONWAY SOUTH INTERCHANGE
HWY. 365 (BASE & SURF.) (S)
FAULKNER COUNTY

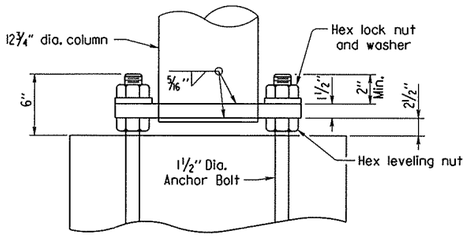
ROUTE 40 SEC. 32

ARKANSAS STATE HIGHWAY COMMISSION

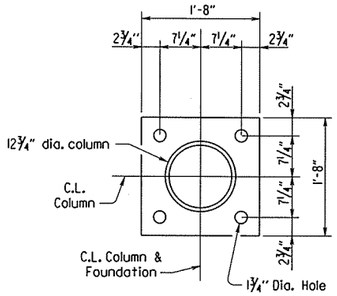
LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 08/28/2012 FILENAME: b080396_tl.dgn
CHECKED BY: CSL DATE: 10/30/12 SCALE: NOT TO SCALE
DESIGNED BY: RBR DATE: 9/5/17
STR. NO. OH-040-23-17 DRAWING NO. 52511

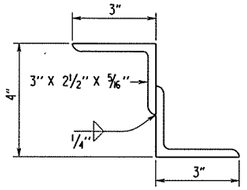
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 44 | 168 |
| | | | | (1) | OH-040-23-17 | SIGN STRUCTURE | | 52512 |




ELEVATION - COLUMN BASE

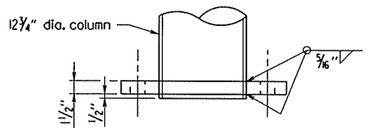



PLAN - COLUMN BASE



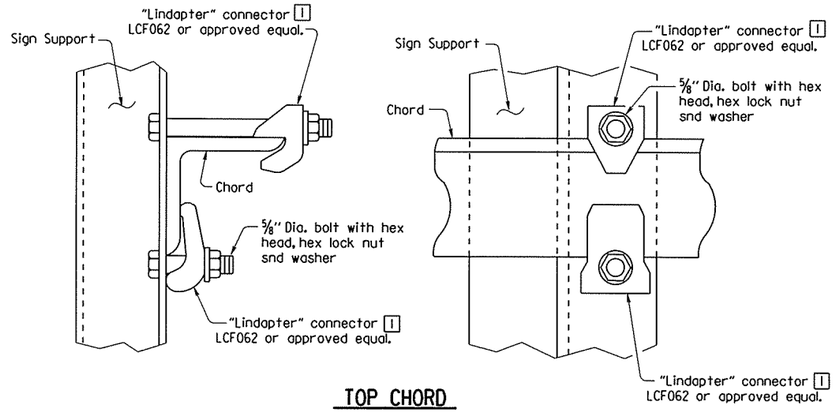

NOTE: Structural Z support may be fabricated from angles as shown.

DETAILS OF ALTERNATE Z SUPPORT

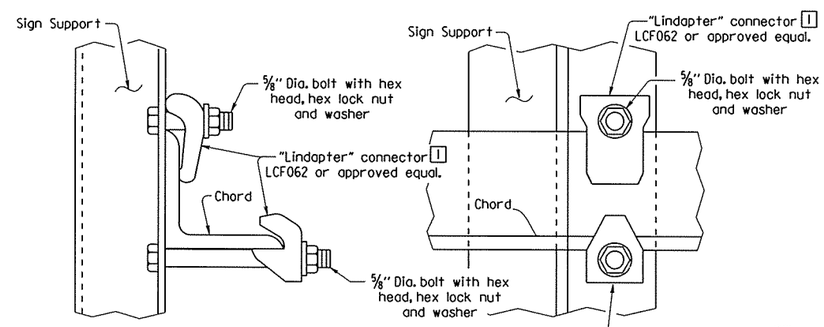



Note: Diameter of hole in base plate to be ⅛" larger than column diameter.

DETAIL OF COLUMN CONNECTION TO BASE PLATE




TOP CHORD

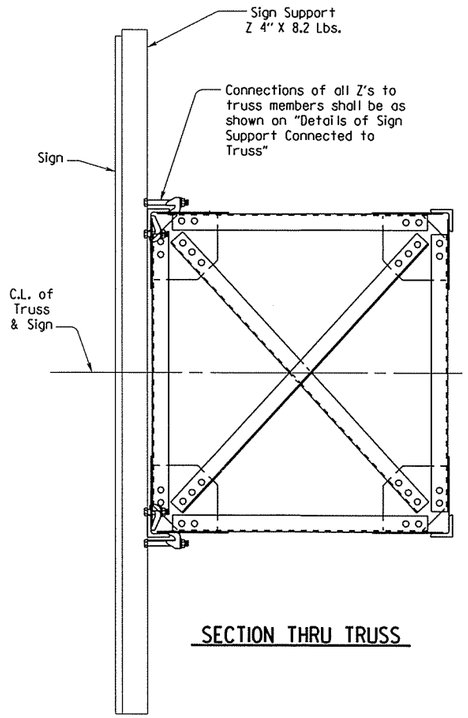



BOTTOM CHORD

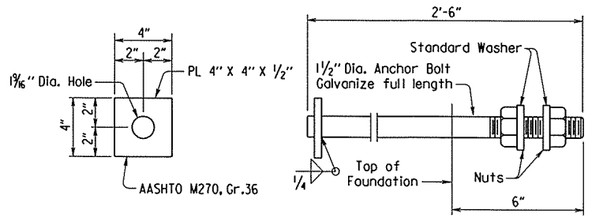
[I] Note: All "Lindapter" connectors or approved equal shall be installed according to manufacturer's recommendations. All connectors, bolts, nuts and washers shall be galvanized.

Note: Install all support connectors clear of the gusset plates and splice locations.

DETAIL OF SIGN SUPPORT CONNECTED TO TRUSS




SECTION THRU TRUSS




Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement S1, and galvanized according to Section 807.07. Nuts for bolts shall be as specified in Section 807.07.

ANCHOR BOLT DETAIL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL R. PUSELLER
5/31/12

BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS FOR 70' TO 85'
STEEL OVERHEAD SIGN STRUCTURES
CONWAY SOUTH INTERCHANGE
HWY. 365 (BASE & SURF.) (S)
FAULKNER COUNTY

ROUTE 40 SEC. 32

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CWN DATE: 08/28/2012
CHECKED BY: CRL DATE: 10/30/12
DESIGNED BY: RBR DATE: 3/5/12
FILENAME: b080396_t1.dgn
SCALE: NOT TO SCALE

STR. NO. OH-040-23-17 DRAWING NO. 52512

| 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. | | 080396 | 45 | 168 |
| | | | | (1) | OH-040-23-17 | SIGN STRUCTURE | | 52513 |

GENERAL NOTES:
Construction Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 2003, with applicable special provisions and Supplemental Specifications.

Design Specifications: Standard Specifications for Structural supports for Highway Signs, Luminaries and Traffic Signals, AASHTO Fifth Edition 2009.

Basic Wind Speed = 90 m.p.h.

Fatigue Category I

This structure is approved for a sign area equivalent to 75% of the span at 15' tall. Use of additional sign area must be approved by the Engineer. If the structure height ('H1' or 'H2') exceeds 30'-0" contact the engineer.

FOUNDATION MATERIALS AND STRENGTHS:
Class S Concrete f 'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M53, Grade 60) fy = 60,000 psi

Structural steel sign support members shall comply with the following specifications:

| | |
|---|---|
| Angles: | AASHTO M270, Grade 36 (Fy = 36,000 psi). |
| Plate, W-Section, WT-Section: | AASHTO M270, Grade 50 (Fy = 50,000 psi). |
| [1] Pipe: | ASTM A139 Grade C, straight-seam welded (Fy = 42,000 psi). |
| | ASTM A500 Grade B (Fy = 42,000 psi). |
| | ASTM A501 Grade B (Fy = 50,000 psi). |
| | ASTM A714 Class 2, Grade II, Type E or S (Fy = 50,000 psi). |
| All grades of pipe require Heat traceability back to the original melting mill | |
| Z-Shapes: | AASHTO M270, Grade 36 (Fy = 36,000 psi). |
| Shim Plates: | ASTM A1011, SS, Grade 36, Type 2, or Grade 40. |
| Bolts: | AASHTO M164, Type I. |
| Locknuts - Approved Type: | Meeting or exceeding AASHTO M292 |
| Washers: | AASHTO M293 |
| Nuts: | AASHTO M291 or M292, Grade 2H or Grade DH (Grade IOS) |

All steel shall be Galvanized according to section 807.19. Steel completely encased in concrete may not be Galvanized.

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

No circumferential butt welds will be allowed in any pipe sections.

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

Connections shall be bolted with high-strength bolts. Unless noted otherwise, bolts shall be 5/8" diameter and open holes shall be 11/16". Bolt spacing shall be 2 1/4" for 5/8" diameter bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of all members.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval, If additional welds are required, whether temporary or permanent, a formal request with detailed drawings shall be submitted to the Engineer for approval. All welding shall conform to subsection 807.26.

Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement SI, and galvanized according to Section 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with subsection 807.07. Anchor bolts shall be pretensioned in accordance with Special Provision Job 080396 "STEEL SIGN STRUCTURES".

All truss frame bolts shall comply with AASHTO M164 Type I, galvanized according to Subsection 807.06, Nuts and washers for AASHTO MI64 Type I bolts shall be furnished and galvanized in accordance with subsection 807.06.

Field splices shall be located In order to avoid sign panel connections, There shall be a maximum of two field splices and they shall be spaced a minimum of 15 ft. apart.

All main load carrying tension members greater than ½" in thickness shall conform to the requirements of the Longitudinal Charpy V-notch test specified for Zone I minimum service temperature. This work and materials shall be paid for in accordance with Special Provision Job 080396 "STEEL SIGN STRUCTURES".

All fillet welds of critical members shall be tested according to AWS D1.1 Structural Welding Code - Steel, using the magnetic particle method, Critical welds shall include: column to base plate and truss bottom support to column.

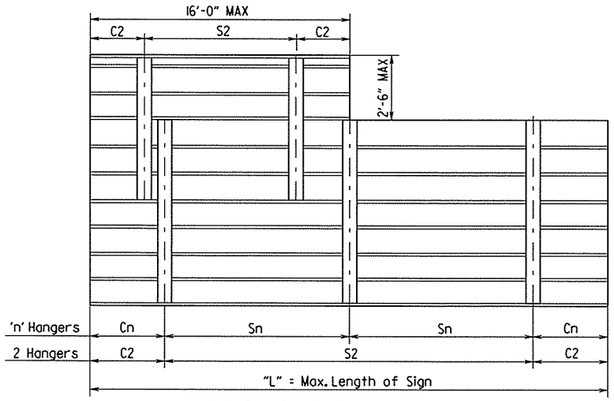
Truss field sections shall be shop assembled. Entire truss shall be fully assembled and lifted into place as one unit on to tower supports.
All truss member connections shall be bolted connections.

Lock nuts to be equipped with nylon locking inserts or other approved type locking system. Lock nuts to be installed according to manufacturer's recommendations.

The excavations for the footings shall be back-filled before the structure is attached to the foundations.

Galvanized Coating damaged during transport, handling, or erection shall be field repaired in accordance with section 807.88.

The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and to fit the new structures to the existing conditions.




Note: See sign details and plan sheets for number, size and dimensions of signs.

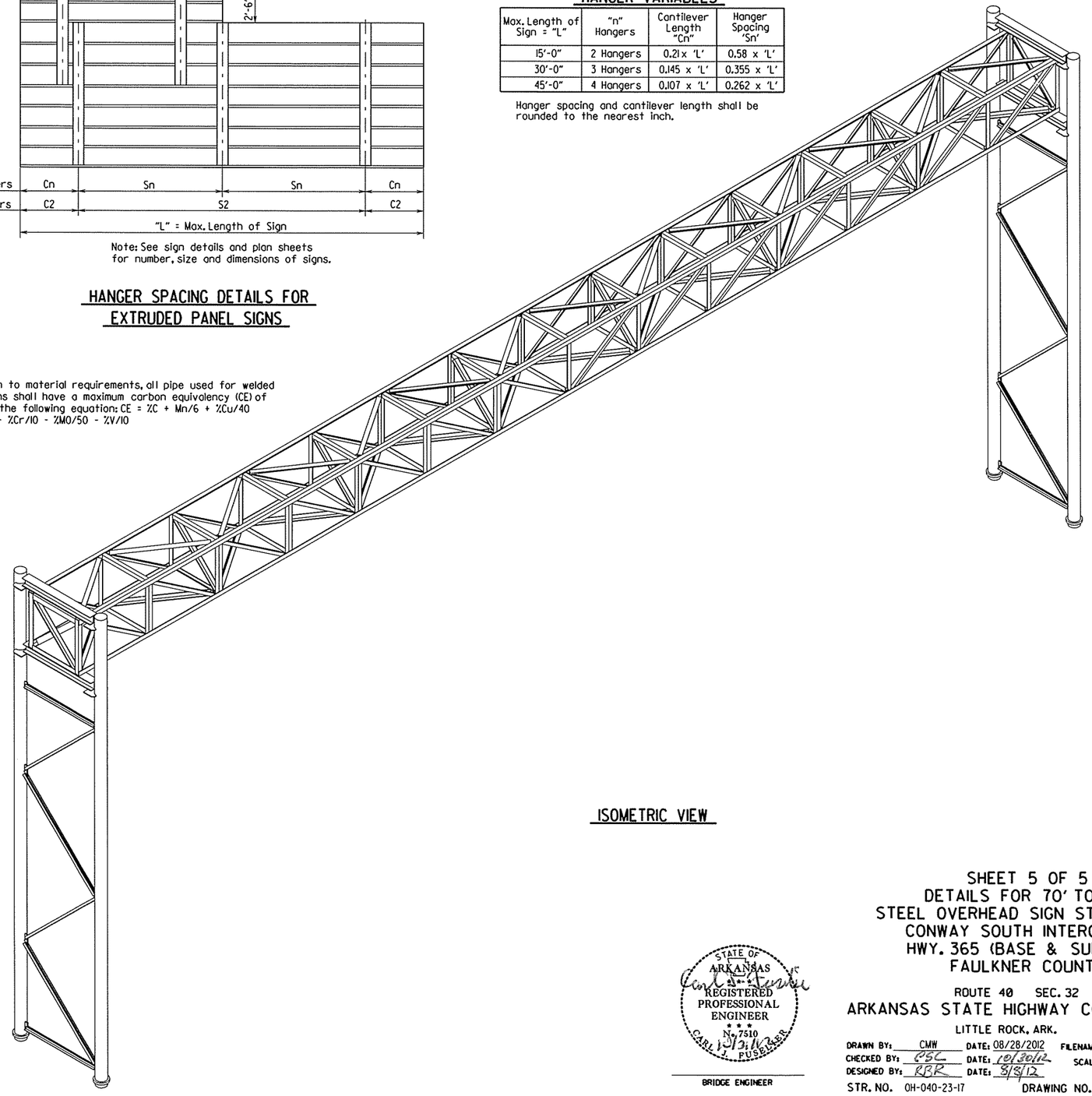
## HANGER SPACING DETAILS FOR EXTRUDED PANEL SIGNS

[1] In addition to material requirements, all pipe used for welded applications shall have a maximum carbon equivalency (CE) of 0.4 using the following equation: CE = %C + Mn/6 + %Cu/40 + %Ni/20 + %Cr/10 - %MO/50 - %V/10

## HANGER VARIABLES

| Max. Length of Sign = "L" | "n" Hangers | Cantilever Length "Cn" | Hanger Spacing 'Sn' |
|---|---|---|---|
| 15'-0" | 2 Hangers | 0.21 x 'L' | 0.58 x 'L' |
| 30'-0" | 3 Hangers | 0.145 x 'L' | 0.355 x 'L' |
| 45'-0" | 4 Hangers | 0.107 x 'L' | 0.262 x 'L' |

Hanger spacing and cantilever length shall be rounded to the nearest inch.



ISOMETRIC VIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL J. PUSEKER

BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS FOR 70' TO 85'
STEEL OVERHEAD SIGN STRUCTURES
CONWAY SOUTH INTERCHANGE
HWY. 365 (BASE & SURF.) (S)
FAULKNER COUNTY

ROUTE 40 SEC. 32
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 08/28/2012 FILENAME: b080396_tl.dgn
CHECKED BY: CSC DATE: 10/30/12 SCALE: NOT TO SCALE
DESIGNED BY: RBR DATE: 8/8/12
STR. NO. OH-040-23-17 DRAWING NO. 52513

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 46 | 168 |

(2) SIGN QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
5-19-15

## MAIN LANES SIGNING QUANTITIES U CHANNEL POSTS

| SIGN NO./LOCATION | U-CHANNEL POST ASSEMBLIES | | | | |
|---|---|---|---|---|---|
| | U-1 | U-2(A) | U-2(B) | U-2(2) | U-2(6) |
| | EACH | EACH | EACH | EACH | EACH |
| SS-365-23-STA432+98WB | 1 | | | | |
| SS-365-23-STA435+71EB | 1 | | | | |
| SS-365CON-23-STA20+61NB | | | 1 | | |
| SS-365CON-23-STA20+66NB | 1 | | | | |
| SS-365CON-23-STA21+63NB | 1 | | | | |
| SS-365CON-23-STA23+56SB | 1 | | | | |
| SS-365CON-23-STA24+30SB | 1 | | | | |
| SS-365CON-23-STA25+10SB | 1 | | | | |
| SS-365CON-23-STA26+39SB | | | 1 | | |
| SS-365CON-23-STA26+40NB | | | 1 | | |
| SS-365CON-23-STA26+71SB | 1 | | | | |
| SS-365CON-23-STA27+37SB | | | | | 1 |
| SS-MAIN LINE-23-STA15+62WB | | 1 | | | |
| SS-MAIN LINE-23-STA18+71WB(L) | 1 | | | | |
| SS-MAIN LINE-23-STA18+79WB(R) | 1 | | | | |
| SS-MAIN LINE-23-STA21+06EB(R) | 1 | | | | |
| SS-MAIN LINE-23-STA21+22EB(L) | 1 | | | | |
| SS-MAIN LINE-23-STA24+13EB | | 1 | | | |
| SS-MAIN LINE-23-STA25+46WB | | 1 | | | |
| SS-MAIN LINE-23-STA28+37WB(L) | 1 | | | | |
| SS-MAIN LINE-23-STA28+43WB(R) | 1 | | | | |
| SS-MAIN LINE-23-STA30+90EB(R) | 1 | | | | |
| SS-MAIN LINE-23-STA30+95EB(L) | 1 | | | | |
| SS-MAIN LINE-23-STA32+04EB | | | | 1 | |
| SS-MCCLURE-23-STA10+40WB | 1 | | | | |
| | | | | | |
| **TOTALS** | 17 | 3 | 3 | 1 | 1 |

## MAIN LANES SIGNING QUANTITIES SQUARE TUBE POSTS

| SIGN NO./LOCATION | SQUARE TUBE POST ASSEMBLIES | | |
|---|---|---|---|
| | G-1 | G2-1 | G2-3 |
| | EACH | EACH | EACH |
| SS-RAMP1-23-STA7422+49EB | 1 | | |
| SS-RAMP1-23-STA7429+50WB | 1 | | |
| SS-RAMP1-23-STA7433+94EB | | | 1 |
| SS-RAMP1-23-STA7433+87EB | | | 1 |
| SS-RAMP2-23-STA7432+88EB | 1 | | |
| SS-RAMP3-23-STA7456+21NB | 1 | | |
| SS-RAMP3/4-23-STA7448+52NB | 1 | | |
| SS-RAMP3/4-23-STA7449+72NB | 1 | | |
| SS-RAMP3/4-23-STA7450+92NB | 1 | | |
| SS-RAMP3/4-23-STA7452+12NB | 1 | | |
| SS-RAMP3/4-23-STA7453+32NB | 1 | | |
| SS-RAMP3/4-23-STA7454+52NB | 1 | | |
| SS-RAMP3/4-23-STA7455+72NB | 1 | | |
| SS-RAMP3/4-23-STA7456+92NB | 1 | | |
| SS-RAMP3/4-23-STA7458+12NB | 1 | | |
| SS-RAMP3/4-23-STA7459+32NB | 1 | | |
| SS-RAMP4-23-STA7442+71WB | 1 | | |
| SS-RAMP4-23-STA7443+93WB | 1 | | |
| SS-RAMP4-23-STA7445+23WB | 1 | | |
| SS-RAMP4-23-STA7446+38WB | 1 | | |
| SS-RAMP4-23-STA7447+64WB | 1 | | |
| SS-040-23-STA7419+55WB | 1 | | |
| SS-040-23-STA7427+05WB | 1 | | |
| SS-040-23-STA7435+02EB | | 1 | |
| SS-040-23-STA7448+41WB | | 1 | |
| SS-040-23-STA7451+72EB | 1 | | |
| SS-040-23-STA7459+21EB | 1 | | |
| | | | |
| **TOTALS** | 23 | 2 | 2 |

## STANDARD ROADSIDE SIGNS SHEET ALUMINUM 0.100" THICKNESS (5 SQ. FT. OR LESS)

**STANDARD ROADSIDE SIGNS**
**SHEET ALUMINUM 0.100" THICKNESS (5 SF OR LESS)**

| SIGN NO. | SIZE OF SIGN | UNIT AREA (SQ. FT.) | QUANTITY REQUIRED | TOTAL SIGN AREA (SQ. FT.) | LEGEND/BACKGROUND |
|---|---|---|---|---|---|
| M1-1 | 24" x 24" | 4.00 | 11 | 44.00 | WHITE/BLUE |
| M1-5 | 30" x 24" | 5.00 | 6 | 30.00 | BLACK/WHITE |
| M3-1 | 24" x 12" | 2.00 | 1 | 2.00 | BLACK/WHITE |
| M3-2 | 24" x 12" | 2.00 | 3 | 6.00 | BLACK/WHITE |
| M3-3 | 24" x 12" | 2.00 | 1 | 2.00 | BLACK/WHITE |
| M3-4 | 24" x 12" | 2.00 | 2 | 4.00 | BLACK/WHITE |
| M3-2 | 36" x 18" | 4.50 | 1 | 4.50 | BLACK/WHITE |
| M3-4 | 36" x 18" | 4.50 | 1 | 4.50 | BLACK/WHITE |
| M4-5 | 24" x 12" | 2.00 | 9 | 18.00 | BLACK/WHITE |
| M5-1L | 21" x 15" | 2.19 | 3 | 6.56 | BLACK/WHITE |
| M5-1R | 21" x 15" | 2.19 | 3 | 6.56 | BLACK/WHITE |
| M5-2R | 21" x 15" | 2.19 | 1 | 2.19 | BLACK/WHITE |
| M5-4 | 24" x 18" | 3.00 | 2 | 6.00 | BLACK/WHITE |
| M5-6 | 24" x 18" | 3.00 | 3 | 9.00 | BLACK/WHITE |
| M6-1L | 21" x 15" | 2.19 | 1 | 2.19 | BLACK/WHITE |
| M6-1R | 21" x 15" | 2.19 | 1 | 2.19 | BLACK/WHITE |
| M6-2R | 21" x 15" | 2.19 | 1 | 2.19 | BLACK/WHITE |
| M6-3 | 21" x 15" | 2.19 | 1 | 2.19 | BLACK/WHITE |
| R6-1L | 36" x 12" | 3.00 | 1 | 3.00 | BLACK/WHITE |
| R6-1R | 36" x 12" | 3.00 | 1 | 3.00 | BLACK/WHITE |
| OM-3L | 12" x 36" | 3.00 | 4 | 12.00 | BLACK/YELLOW |
| OM-3R | 12" x 36" | 3.00 | 4 | 12.00 | BLACK/YELLOW |
| TOTAL 0.100" THICKNESS | | | | 184.07 | |

## STANDARD ROADSIDE SIGNS SHEET ALUMINUM 0.125" THICKNESS (GREATER THAN 5 SQ. FT.)

**STANDARD ROADSIDE SIGNS**
**SHEET ALUMINUM 0.125" THICKNESS (GREATER THAN 5 SF)**

| SIGN NO. | SIZE OF SIGN | UNIT AREA (SQ. FT.) | QUANTITY REQUIRED | TOTAL SIGN AREA (SQ. FT.) | LEGEND/BACKGROUND |
|---|---|---|---|---|---|
| M1-1 | 36" x 36" | 9.00 | 2 | 18.00 | WHITE/BLUE |
| R1-1 | 60" x 60" x 60" | 9.00 | 4 | 36.00 | WHITE/RED |
| R1-2 | 48" x 60" | 10.83 | 4 | 43.30 | RED/WHITE |
| R2-1 | 48" x 48" | 20.00 | 2 | 40.00 | BLACK/WHITE |
| R2-2 | 36" x 36" | 16.00 | 2 | 32.00 | BLACK/WHITE |
| R5-1 | 36" x 24" | 9.00 | 5 | 45.00 | WHITE/RED |
| R5-1A | 36" x 24" | 6.00 | 2 | 12.00 | WHITE/RED |
| W1-7 | 48" x 24" | 8.00 | 1 | 8.00 | BLACK/YELLOW |
| W1-8L | 36" x 48" | 12.00 | 18 | 216.00 | BLACK/YELLOW |
| W4-1R | 48" x 48" | 16.00 | 2 | 32.00 | BLACK/YELLOW |
| W8-13 | 48" x 48" | 16.00 | 3 | 48.00 | BLACK/YELLOW |
| W13-2 | 36" x 48" | 12.00 | 2 | 24.00 | BLACK/YELLOW |
| TOTAL 0.125" THICKNESS | | | | 554.30 | |

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WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 47 | 168 |
| | | | | (2) | SIGN QUANTITIES | | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
5-19-15

# MAIN LANES SIGNING QUANTITIES
# ROADSIDE MOUNTED I-BEAM SIGN SUPPORTS

| SIGN NO./ LOCATION | STRUCTURE TYPE | | | SIGN | | | | BREAKAWAY SIGN SUPPORT | | | | | | | | | | | EXIT NUMBER PANEL | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TYPE | | | STANDARD SIGN | GUIDE SIGN LENGTH | GUIDE SIGN HEIGHT | | STEEL SECT. A-572 | | SIGN POST LENGTH | | | STUB POST | | | FOOTINGS | | | SIGN POST AND STUB | LEGEND | TYPE | | |
| | G-2 | G2-4 | G2-5 | SQ. FT. | FT. | FT. | SQ. FT. | BEAM | LBS | H-1 | H-2 | H-3 | H-1 | H-2 | H-3 | DIA. | DEPTH | EMBED. | POUND | | A | B | C |
| | | | | | | | | | | LIN FT | | | LIN FT | | | LIN FT | | | | | SQ. FT. | | |
| EX-RAMP1-23-STA7424+38EB | 1 | | | | 7.50 | 5.00 | 37.50 | W6 | 9 | 13 | 13.25 | | 3.00 | 3.00 | | 1.5 | 4 | 2.67 | 290.19 | | | | |
| EX-RAMP3-23-STA7452+77NB | 1 | | | | 7.50 | 5.00 | 37.50 | W6 | 9 | 13.25 | 13.5 | | 3.66 | 3.66 | | 1.5 | 5 | 3.33 | 306.69 | | | | |
| SS-365-23-STA424+15WB | | 1 | | 8.19 | 5.50 | 3.50 | 19.25 | W6 | 9 | 11 | 11 | | 3.33 | 3.33 | | 1.5 | 4.5 | 3.00 | 257.94 | | | | |
| SS-365-23-STA444+01EB | | 1 | | 8.19 | 5.50 | 3.50 | 19.25 | W6 | 9 | 12.5 | 12.75 | | 3.33 | 3.33 | | 1.5 | 4.5 | 3.00 | 287.19 | | | | |
| SS-365CON-23-STA23+05NB | | 1 | | 8.19 | 5.50 | 3.50 | 19.25 | W6 | 12 | 12.5 | 13.75 | | 3.33 | 3.33 | | 1.5 | 4.5 | 3.00 | 394.92 | | | | |
| SS-365CON-23-STA23+05SB | | | 1 | 18.38 | 5.50 | 2.50 | 13.75 | W6 | 15 | 12.5 | 13.5 | | 3.66 | 3.66 | | 1.5 | 5 | 3.33 | 499.91 | | | | |
| SS-MAIN LINE-23-STA21+80WB | | 1 | | 9.19 | 5.50 | 2.50 | 13.75 | W6 | 9 | 10.25 | 10.25 | | 3.33 | 3.33 | | 1.5 | 4.5 | 3.00 | 244.44 | | | | |
| SS-MAIN LINE-23-STA25+23EB | | | 1 | 18.00 | 5.50 | 2.50 | 13.75 | W6 | 9 | 9.5 | 9.5 | | 3.33 | 3.33 | | 1.5 | 4.5 | 3.00 | 230.94 | | | | |
| SS-RAMP1-23-STA7429+50EB | | 1 | | 15.19 | 5.50 | 2.50 | 13.75 | W6 | 9 | 8.75 | 8.5 | | 3.33 | 3.33 | | 1.5 | 4.5 | 3.00 | 215.19 | | | | |
| TOTALS: | 2 | 5 | 2 | 85.33 | | | 187.75 | | | | | | | | | | | | 2727.41 | | | | |

# MAIN LANES SIGNING QUANTITIES
# OVERHEAD MOUNTED

| SIGN NO./ LOCATION | STRUCTURE TYPE | | | GUIDE SIGN | | | EXIT NUMBER PANEL | | | | GUARDRAIL | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LENGTH | HEIGHT | | | TYPE | | | | TERM. ANCHOR TYPE 1 | GUARDRAIL TERM. TYPE 2 | AGG. BASE CR (CL. 7) | ACHM SURF. CR. 220 |
| | OH | BM | CL | LIN. FT. | | SQ. FT. | LEGEND | A | B | C | TYPE A | | | | |
| | | | | | | | | SQ. FT. | | | LIN. FT. | EACH | EACH | TON | TON |
| **EXISTING OH SIGN STRUCTURE** | | | | | | | | | | | SEE ROADWAY PLANS FOR GUARDRAIL DETAILS | | | | |
| OH-040-23-STA7394+56EB | | | | 14.50 | 8.50 | 123.25 | 132 | 23.75 | | | | | | | |
| **EXISTING OH SIGN STRUCTURE** | | | | | | | | | | | SEE ROADWAY PLANS FOR GUARDRAIL DETAILS | | | | |
| OH-040-23-STA7414+00EB-A | | | | 14.50 | 9.00 | 130.50 | 132 | 23.75 | | | | | | | |
| OH-040-23-STA7414+00EB-B | | | | 17.50 | 7.50 | 149.25 | | | | | | | | | |
| **OH-040-23-17** | 1 | | | | | | | | | | SEE ROADWAY PLANS FOR GUARDRAIL DETAILS | | | | |
| OH-040-23-STA7458+12WB-A | | | | 14.50 | 9.00 | 130.50 | 132 | 23.75 | | | | | | | |
| OH-040-23-STA7458+12WB-B | | | | 18.50 | 11.00 | 203.50 | | | | | | | | | |
| **EXISTING OH SIGN STRUCTURE** | | | | | | | | | | | SEE ROADWAY PLANS FOR GUARDRAIL DETAILS | | | | |
| OH-040-23-STA7519+30WB | | | | 14.50 | 8.50 | 123.25 | 132 | 23.75 | | | | | | | |
| **TOTALS** | | | | | | **860.25** | | **95.00** | | | | | | | |

# SIGNING SUMMARY OF QUANTITIES

| ITEM NUMBER | ITEM | TOTAL | UNIT |
|---|---|---|---|
| SP | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G-1) | 23 | EACH |
| SP | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G2-1) | 2 | EACH |
| SP | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G2-3) | 2 | EACH |
| SP | STEEL OVERHEAD SIGN STRUCTURE (OH-040-23-17) | 1 | EACH |
| SP & 725 | GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND) | 188 | SQ. FT. |
| SP & 725 | GUIDE SIGN-OVERHEAD MOUNTED (DEMOUNTABLE LEGEND) | 860 | SQ. FT. |
| SP & 726 | STANDARD SIGN | 738 | SQ. FT. |
| SP & 727 | EXIT NUMBER PANEL (TYPE A) | 95 | SQ. FT. |
| SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-1) | 17 | EACH |
| SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(A)) | 3 | EACH |
| SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(B)) | 3 | EACH |
| SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(2)) | 1 | EACH |
| SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(6)) | 1 | EACH |
| 730 | BREAKAWAY SIGN SUPPORT (TYPE G-2) | 597 | POUND |
| 730 | BREAKAWAY SIGN SUPPORT (TYPE G2-4) | 1400 | POUND |
| 730 | BREAKAWAY SIGN SUPPORT (TYPE G2-5) | 731 | POUND |

NOTE:
BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H-1, H-2, AND EACH STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).



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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 48 | 168 |
| | | | | (2) | SOIL BORING LOG | | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

## SOIL BORING LOG

| BORING NO. | APPROX. STATION | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS | | | PERCENT PASSING #200 | UNIFIED CLASS. | AASHTO CLASS. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | | | |
| C1 | 433+25 | 1.5-2.5 | 18 | 26 | 16 | 10 | 85 | CL | A-4 |
| C2 | 434+80 | 1.5-2.5 | 22 | 32 | 18 | 14 | 83 | CL | A-6 |
| C3 | 437+20 | 1.5-2.5 | 20 | 24 | 17 | 7 | 90 | CL-ML | A-4 |
| 1 | 7459+25, 20 L | 0.5-1.5 | 18 | 28 | 19 | 9 | 83 | CL | A-4 |
| 2 | 26+65, 20 R | 0.5-1.5 | 13 | 35 | 21 | 14 | 82 | CL | A-6 |
| 14 | 10+00, CL | 0.5-1.5 | 7 | 25 | 18 | 7 | 77 | CL-ML | A-4 |
| 14 | 10+00, CL | 2.5-3.5 | 10 | 30 | 18 | 12 | ---- | Shale | |
| 15 | 17+50, CL | 2.5-3.5 | 18 | 28 | 18 | 10 | 58 | CL | A-4 |
| 15 | 17+50, CL | 6.5-7.5 | 16 | 22 | 16 | 6 | 54 | CL-ML | A-4 |
| 16 | 7442+00, CL | 0.5-1.5 | 5 | 17 | 15 | 2 | 26 | SM | A-2-4 |
| 16 | 7442+00, CL | 2.5-3.5 | 11 | 37 | 22 | 15 | ---- | Shale | |
| 17 | 7449+00, CL | 0.5-1.5 | 9 | 25 | 18 | 7 | 84 | CL-ML | A-4 |
| 18 | 7451+00, 15 R | 2.5-3.5 | 18 | 32 | 19 | 13 | 50 | CL | A-6 |
| 18 | 7451+00, 15 R | 9-10 | 24 | 37 | 19 | 18 | 87 | CL | A-6 |
| 19 | 7428+00, CL | 0.5-1.5 | 14 | 24 | 17 | 7 | 67 | CL-ML | A-4 |
| 20 | 7438+00, CL | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 22 | 14+40, CL | 0.5-1.5 | 1 | 20 | 19 | 1 | 12 | GW-GM | A-1-a |
| 22 | 14+40, CL | 2.5-3 | 6 | 30 | 19 | 11 | 11 | GP-GC | A-2-6 |
| 23 | 26+00, CL | 0.5-1.5 | 3 | 21 | 16 | 5 | 18 | SM-SC | A-1-b |
| 23 | 26+00, CL | 2.5-3.5 | 17 | 26 | 18 | 8 | 71 | CL | A-4 |
| 24 | 14+50, CL | 0.5-1.5 | 6 | 22 | 17 | 5 | 43 | SM-SC | A-4 |
| 25 | 23+00, 15 L | 0.5-1.5 | 12 | 28 | 18 | 10 | 46 | SC | A-4 |
| 25 | 23+00, 15 L | 4-4.5 | 15 | 42 | 26 | 16 | ---- | Shale | |

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



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WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 49 | 168 |

(2) QUANTITIES

## ADVANCE WARNING SIGNS AND DEVICES

| SIGN NUMBER | DESCRIPTION | SIGN SIZE | | TOTAL REQUIRED | ADVANCE WARNING ARROW PANEL | PORTABLE CHANGEABLE MESSAGE SIGN | TRAFFIC DRUMS | VERTICAL PANELS | BARRICADES (TYPE III) RIGHT | TEMP. IMP. ATT. BAR. | TEMP. IMP. ATT. BAR. (REP.) | FURNISH AND INSTALL PRECAST CONC. BAR. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IN. | EACH | SQ. FT. | DAY | WEEK | EACH | EACH | L.F. | EACH | EACH | L.F. |
| G20-2 | END ROAD WORK | 48" X 24" | 4 | 32.00 | | | | | | | | |
| R11-2 | ROAD CLOSED | 48" X 30" | 7 | 70.00 | | | | | | | | |
| R55-1 | FINES DOUBLE IN WORK ZONES | 36" X 60" | 4 | 60.00 | | | | | | | | |
| W1-6 | LARGE ARROW | 48" X 24" | 6 | 48.00 | | | | | | | | |
| W4-2 RT. | RIGHT LANE CLOSED GRAPHIC | 48" X 48" | 4 | 64.00 | | | | | | | | |
| W20-1 | ROAD WORK 500 FT | 48" X 48" | 2 | 32.00 | | | | | | | | |
| W20-1 | ROAD WORK 1000 FT | 48" X 48" | 2 | 32.00 | | | | | | | | |
| W20-1 | ROAD WORK 1500 FT | 48" X 48" | 2 | 32.00 | | | | | | | | |
| W20-1 | ROAD WORK AHEAD | 48" X 48" | 1 | 16.00 | | | | | | | | |
| W20-1 | ROAD WORK 1 MILE | 48" X 48" | 4 | 64.00 | | | | | | | | |
| W20-5 | RIGHT LANE CLOSED 1500 FT | 48" X 48" | 4 | 64.00 | | | | | | | | |
| W20-5 | RIGHT LANE CLOSED 1/2 MILE | 48" X 48" | 4 | 64.00 | | | | | | | | |
| RSP-1 | SHOULDER CLOSED | 48" X 30" | 4 | 40.00 | | | | | | | | |
| R4-1 | DO NOT PASS | 24" X 30" | 4 | 20.00 | | | | | | | | |
| | | | | | | | | | | | | |
| | ADVANCE WARNING ARROW PANEL | | 2 | | 120 | | | | | | | |
| | PORTABLE CHANGEABLE MESSAGE SIGN | | 2 | | | 24 | | | | | | |
| | TYPE III BARRICADE-RT. (16') | | 7 | | | | | | 112 | | | |
| | TRAFFIC DRUMS | | | | | | 124 | | | | | |
| | VERTICAL PANELS | | | | | | | 18 | | | | |
| | TEMPORARY IMPACT ATTENUATION BARRIER | | | | | | | | | 2 | | |
| | TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR) | | | | | | | | | | 2 | |
| | FURN. AND INST. PRECAST CONC. BARRIER | | | | | | | | | | | 7902 |
| | | | | | | | | | | | | |
| * RSP-1 | SHOULDER CLOSED | 48" X 30" | 4 | 40.00 | | | | | | | | |
| * R4-1 | DO NOT PASS | 24" X 30" | 4 | 20.00 | | | | | | | | |
| | TOTALS | | | 698.00 | 120 | 24 | 124 | 18 | 112 | 2 | 2 | 7902 |

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

*QUANTITY ESTIMATED, TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

## FENCING

| STATION | STATION | LOCATION | WIRE FENCE TYPE A |
|---|---|---|---|
| | | | L.F. |
| 24+10 | 26+66 | HWY. 365 CONN. - LT. | 455 |
| TOTAL | | | 455 |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15

## CLEARING AND GRUBBING

| STATION | STATION | LOCATION | CLEARING | GRUBBING |
|---|---|---|---|---|
| | | | STA. | |
| 7440+78 | 7450+78 | I-40 | 11 | 11 |
| 7453+89 | 7458+15 | I-40 | 6 | 6 |
| 7437+84 | 7440+78 | RAMP 2 | 4 | 4 |
| 7450+17 | 7453+89 | RAMP 3 | 4 | 4 |
| 429+74 | 440+22 | HWY. 365 | 12 | 12 |
| 24+89 | 26+86 | HWY. 365 CONNECTOR | 3 | 3 |
| 10+13 | 15+66 | McCLURE ACRES | 6 | 6 |
| | | | | |
| TOTALS | | | 46 | 46 |

## MAILBOXES

| STATION | LOCATION | MAILBOXES | MAILBOX SUPPORTS (SINGLE) |
|---|---|---|---|
| | | EACH | EACH |
| 430+80 | HWY. 365 - RT. | 1 | 1 |
| | | | |
| TOTALS | | 1 | 1 |

## REMOVAL AND DISPOSAL OF STRUCTURES

| STATION | STATION | LOCATION | PIPE CULVERT | FENCE | SIGN POST | GUARDRAIL | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | | EACH | L.F. | EACH | L.F. | |
| 7414+00 | 7417+20 | I-40 - RT. | | | | 320 | |
| 7444+75 | 7448+15 | I-40 - LT. | | 340 | | | |
| 7445+78 | | I-40 - RT. | | | 1 | | TRUCK PARKING AREA 1 MILE |
| 7451+46 | 7452+33 | I-40 - LT. | | 87 | | | |
| 430+70 | | HWY. 365. - RT. | 1 | | | | 18" X 22' SIDE DRAIN |
| 432+05 | | HWY. 365. - RT. | 1 | | | | 18" X 40' SIDE DRAIN |
| 432+60 | | HWY. 365. - RT. | 1 | | | | 20" X 25' SIDE DRAIN |
| 434+05 | | HWY. 365. - RT. | 1 | | | | 12" X 30' SIDE DRAIN |
| 434+75 | | HWY. 365. - LT. & RT. | | | 2 | | SPEED LIMIT SIGNS |
| 434+91 | | HWY. 365. - LT. & RT. | | | 2 | | OBJECT MARKER |
| 435+55 | | HWY. 365. - RT. | 1 | | | | 18" X 20' SIDE DRAIN |
| 436+55 | | HWY. 365. - RT. | 1 | | | | 20" X 24' SIDE DRAIN |
| 436+95 | | HWY. 365. - RT. | 1 | | | | 18" X 24' SIDE DRAIN |
| 438+50 | | HWY. 365. - RT. | 1 | | | | 18" X 18' SIDE DRAIN |
| 438+85 | | HWY. 365. - RT. | 1 | | | | 18" X 25' SIDE DRAIN |
| 26+50 | | HWY. 365 CONNECTOR - RT. | | | 1 | | OBJECT MARKER |
| 26+56 | | HWY. 365 CONNECTOR - LT. | | | 2 | | OBJECT MARKER/SUBDIVISION SIGN |
| 26+70 | | HWY. 365 CONNECTOR - LT. | | | 1 | | ROAD SIGN |
| 12+12 | 12+52 | McCLURE ACRES RD. - LT. & RT. | | 93 | | | |
| 13+12 | 14+82 | McCLURE ACRES RD. - LT. & RT. | | 263 | | | |
| | | | | | | | |
| TOTALS | | | 9 | 783 | 9 | 320 | |

*THE PRICE BID FOR REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ANY TERMINAL ANCHOR POSTS.

## REMOVAL OF PERMANENT PAVEMENT MARKINGS

| STATION | STATION | LOCATION | L.F. |
|---|---|---|---|
| 7414+00.00 | 7450+77.00 | I-40 RT. LANE - RT. EDGE. LINE | 3677.00 |
| 7428+07.00 | 7458+15.00 | I-40 LT. LANE - LT. EDGE LINE | 3008.00 |
| | | | |
| TOTALS | | | 6685.00 |

## EARTHWORK

| LOCATION | UNCLASSIFIED EXCAVATION | | | COMPACTED EMBANKMENT | | |
|---|---|---|---|---|---|---|
| | UNDERCUT | TYPICAL | TOTAL | TYPICAL | SM-1 | TOTAL |
| | CU. YDS. | | | | | |
| I-40 | | 5861 | 5861 | 801 | | 801 |
| RAMP 1 | | 0 | 0 | 0 | | 0 |
| RAMP 2 | 1255 | 1764 | 3019 | 403 | 1255 | 1658 |
| RAMP 3 | 2363 | 10 | 2373 | 2450 | 2363 | 4813 |
| RAMP 4 | | 0 | 0 | 0 | | 0 |
| MERGED RAMPS 3 & 4 | | 0 | 0 | 0 | | 0 |
| CONWAY LOOP | | 0 | 0 | 0 | | 0 |
| HWY 365 | | 856 | 856 | 839 | | 839 |
| HWY 365 CONNECTOR | | 83 | 83 | 759 | | 759 |
| McCLURE ACRES | 1303 | 1076 | 2379 | 41 | 1303 | 1344 |
| DRIVEWAYS | | 100 | 100 | 100 | | 100 |
| | | | | | | |
| TOTALS | 4921 | 9750 | 14671 | 5393 | 4921 | 10314 |

EARTHWORK QUANTITIES SHALL BE PAID FOR AS PLAN QUANTITY.

## ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

| LOCATION | ASPHALT CONCRETE | TACK COAT |
|---|---|---|
| | TON | GAL. |
| ENTIRE PROJECT | 6 | 11 |

QUANTITIES ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

BASIS OF ESTIMATE:
ASPHALT CONCRETE= 25 TONS PER MILE
TACK COAT = 50 GAL. PER MILE

## SUBGRADE PREPARATION

| STATION | STATION | LOCATION | STA. |
|---|---|---|---|
| | | | |
| 7413+98.59 | 7425+42.24 | I-40 RT. | 11.44 |
| 7428+06.21 | 7441+06.21 | I-40 LT. | 13.00 |
| 7421+74.00 | 7434+11.39 | RAMP 1 | 12.37 |
| 7432+74.42 | 7437+70.00 | RAMP 2 | 4.96 |
| 7441+34.94 | 7450+00.00 | RAMP 3 | 8.65 |
| 7441+05.30 | 7449+63.52 | RAMP 4 | 8.58 |
| 7449+63.52 | 7460+23.33 | MERGED RAMPS 3 & 4 | 10.60 |
| 13+52.70 | 18+83.88 | CONWAY LOOP | 5.31 |
| 21+04.13 | 28+50.31 | CONWAY LOOP | 7.46 |
| 30+87.49 | 33+00.00 | CONWAY LOOP | 2.13 |
| 20+30.46 | 24+75.00 | HWY. 365 CONNECTOR | 4.45 |
| | | | |
| TOTAL | | | 88.95 |

NOTE: REFER TO SP - SUBGRADE PREPARATION

## CONCRETE DITCH PAVING

| STATION | STATION | DESCRIPTION | LENGTH | CONCRETE DITCH PAVING (TYPE B) | | SOLID SODDING | WATER |
|---|---|---|---|---|---|---|---|
| | | | FEET | "W" | SQ. YD. | SQ. YD. | M.G. |
| 7437+70 | 7440+00 | RAMP 2 - RT. | 230 | 6.00 | 153.3 | 102.2 | 1.3 |
| | | | | | | | |
| * ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER | | | | | 20.0 | 20.0 | 0.3 |
| | | | | | | | |
| TOTALS | | | | | 173.3 | 122.2 | 1.6 |

BASIS OF ESTIMATE:
WATER = 12.6 GALS. PER SQ. YD. SOLID SODDING

* QUANTITY ESTIMATED, SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

## PERMANENT PAVEMENT MARKINGS

| DESCRIPTION | UNIT | I-40 | RAMP 1 | RAMP 2 | RAMP 3 | RAMP 4 | MERGED RAMPS 3 & 4 | CONWAY LOOP | HWY. 365 | HWY. 365 CONNECTOR | McCLURE ACRES | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| THERMOPLASTIC PAVEMENT MARKING WHITE (4") | L.F. | | | | | | | 3725 | 1849 | 1753 | | 7327 |
| THERMOPLASTIC PAVEMENT MARKING WHITE (6") | L.F. | 184 | | | | | | 63 | | | | 247 |
| THERMOPLASTIC PAVEMENT MARKING WHITE (8") | L.F. | | | | | | | 867 | 531 | | | 1398 |
| THERMOPLASTIC PAVEMENT MARKING WHITE (12") | L.F. | | | | | | | | 12 | 24 | | 36 |
| THERMOPLASTIC PAVEMENT MARKING WHITE (24") | L.F. | | 24 | | | | | | | | | 24 |
| THERMOPLASTIC PAVEMENT MARKING YELLOW (4") | L.F. | | | | | | | 4104 | 3238 | 1190 | | 8532 |
| THERMOPLASTIC PAVEMENT MARKING YELLOW (12") | L.F. | | | | | | | 243 | 169 | | | 412 |
| THERMOPLASTIC PAVEMENT MARKING (WORDS) | EACH | | | | | | | 2 | 1 | 4 | | 7 |
| THERMOPLASTIC PAVEMENT MARKING (ARROWS) | EACH | | | | | | | 2 | 1 | 4 | | 7 |
| REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4") | L.F. | | | | | | | | | | 1148 | 1148 |
| REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4") | L.F. | | | | | | | | | | 1070 | 1070 |
| REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10") | L.F. | | | | | | | 286 | 281 | | | 567 |
| HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4") | L.F. | | 1016 | 772 | 1168 | 857 | 2118 | | | | | 5931 |
| HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4") | L.F. | | | | | | | 904 | | | | 904 |
| HIGH PERFORMANCE PAVEMENT MARKING WHITE (4") | L.F. | 9139 | 1138 | 971 | 1681 | 918 | 2118 | | | | | 15965 |
| HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4") | L.F. | | | | | | | 117 | | | | 117 |
| HIGH PERFORMANCE PAVEMENT MARKING WHITE (8") | L.F. | 1756 | | | | | | | | | | 1756 |
| RAISED PAVEMENT MARKERS (TYPE II)(YELLOW/YELLOW) | EACH | | | | | | | 49 | 42 | 15 | | 106 |
| RAISED PAVEMENT MARKERS (TYPE II)(RED/WHITE) | EACH | 371 | 19 | | 19 | | | 30 | 4 | 5 | | 448 |
| DELINEATOR (TYPE 1)(WHITE) | EACH | | 7 | 4 | 6 | 11 | 18 | | | | | 46 |
| DELINEATOR (TYPE 1)(YELLOW) | EACH | | 5 | | 9 | | | | | | | 14 |

NOTE:
(1) THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

## 4" PIPE UNDERDRAINS

| LOCATION | 4" PIPE UNDERDRAINS | UNDERDRAIN OUTLET PROTECTORS |
|---|---|---|
| | LIN. FT. | EACH |
| * ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER | 1000 | 8 |

* QUANTITIES ESTIMATED, SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

## PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

| LOCATION | ASPHALT |
|---|---|
| | TON |
| HWY. 365 STA. 439+00 | 50 |
| | |
| TOTAL | 50 |

BASIS OF ESTIMATE:
1.5' OUTSIDE TRENCH EXCAVATION
13" ESTIMATED PAVEMENT DEPTH

## CONCRETE BARRIER WALL

| STATION | STATION | LOCATION | MEDIAN TYPE SPECIAL | PARAPET TYPE SPECIAL | TEXTURED COATING FINISH | ARCHITECTURAL FINISH |
|---|---|---|---|---|---|---|
| | | | L.F. | L.F. | S.Y. | S.F. |
| 7448+25.00 | 7449+63.52 | RAMP 4 | 138.52 | | 187.3 | |
| 7449+63.52 | 7460+23.33 | MERGED RAMPS 3 & 4 | 1059.81 | | 1433.1 | |
| 13+52.70 | 13+77.70 | CONWAY LOOP | 25.00 | | 33.8 | |
| 21+09.46 | 22+90.78 | CONWAY LOOP - LT. | | 181.32 | 129.7 | 408.0 |
| 7433+13.09 | 7437+70.00 | RAMP 2 - LT. | | 456.91 | 326.9 | 1028.0 |
| 30+95.69 | 33+39.66 | CONWAY LOOP - LT. | | 243.97 | 174.6 | 548.9 |
| 31+01.36 | 33+79.25 | CONWAY LOOP - RT. | | 277.89 | 198.8 | 625.3 |
| | | | | | | |
| | | TOTALS | 1223.33 | 1160.09 | 2484.2 | 2610.2 |

QUANTITIES

rnforrner 5/18/2015 8:19:56 AM
WORKSPACE: AHTD
L:\2009\0901230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_QTY_Old.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 50 | 168 |

(2) QUANTITIES

## TEMPORARY EROSION CONTROL

| STATION | STATION | SAND BAG DITCH CHECK (E-5) | ROCK DITCH CHECK (E-6) | SILT FENCE (E-11) | SEDIMENT BASIN (E-14) | OBLITERATION OF SEDIMENT BASIN | SEDIMENT REMOVAL AND DISPOSAL | TEMPORARY SEEDING | MULCH COVER | WATER |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BAG | CU. YD. | L.F. | CU. YD. | CU. YD. | CU. YD. | ACRE | ACRE | M.G. |
| **CLEARING & GRUBBING** | | | | | | | | | | |
| RAMP 2 | | | | | | | | | | |
| 7437+70 | 7439+55 | | | 190 | | | | | | |
| | | | | | | | | | | |
| RAMP 3 | | | | | | | | | | |
| 7450+00 | 7451+50 | | | 160 | | | | | | |
| 7451+60 | 7458+20 | | | 665 | | | | | | |
| | | | | | | | | | | |
| HWY. 365 | | | | | | | | | | |
| 430+80 | 431+90 | | | 110 | | | | | | |
| 434+10 | 434+70 | | | 70 | | | | | | |
| 434+95 | 438+90 | | | 400 | | | | | | |
| | | | | | | | | | | |
| HWY 365 CONNECTOR | | | | | | | | | | |
| 24+75 | 26+50 | | | 235 | | | | | | |
| | | | | | | | | | | |
| **STAGE 1** | | | | | | | | | | |
| RAMP 2 | | | | | | | | | | |
| 7437+70 | 7450+00 | 60 | | | | | | | | |
| 7437+70 | 7450+00 | | 15 | | | | | | | |
| | | | | | | | | | | |
| HWY. 365 | | | | | | | | | | |
| 431+90 | 433+20 | 20 | | | | | | | | |
| 432+00 | 434+00 | 20 | | | | | | | | |
| 439+00 | 440+20 | 20 | | | | | | | | |
| | | | | | | | | | | |
| HWY. 365 CONNECTOR | | | | | | | | | | |
| 24+90 | 25+60 | 20 | | | | | | | | |
| 24+90 | 25+60 | | 15 | | | | | | | |
| | | | | | | | | | | |
| McCLURE ACRES | | | | | | | | | | |
| 10+20 | 15+00 | 20 | | | | | | | | |
| 10+20 | 15+00 | 20 | | | | | | | | |
| 10+20 | 15+00 | | 15 | | | | | | | |
| 10+20 | 15+00 | | 15 | | | | | | | |
| | | | | | | | | | | |
| * ENTIRE PROJECT AS DIRECTED BY THE ENGINEER | | | | | 100 | 100 | 2500 | 6.12 | 6.12 | 124.8 |
| | | | | | | | | | | |
| TOTALS | | 180 | 60 | 1830 | 100 | 100 | 2500 | 6.12 | 6.12 | 124.8 |

* QUANTITIES ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

BASIS OF ESTIMATE:
SAND BAG DITCH CHECKS = 20 BAGS / LOCATION
ROCK DITCH CHECKS = 15 CU. YD. / LOCATION
WATER = 20.4 M.G. PER ACRE TEMPORARY SEEDING

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

## EROSION CONTROL

| LOCATION | LIME | SEEDING | MULCH COVER | SECOND SEEDING APPLICATION | WATER |
|---|---|---|---|---|---|
| | TON | ACRE | | | M.G. |
| WEST OF I-40 | 3.64 | 1.82 | 1.82 | 1.82 | 185.6 |
| EAST OF I-40 | 2.12 | 1.06 | 1.06 | 1.06 | 108.1 |
| WEST OF HWY. 365 | 1.46 | 0.73 | 0.73 | 0.73 | 74.5 |
| EAST OF HWY. 365 | 5.02 | 2.51 | 2.51 | 2.51 | 256.0 |
| | | | | | |
| TOTALS | 12.24 | 6.12 | 6.12 | 6.12 | 624.2 |

BASIS OF ESTIMATE:
LIME = 2 TONS PER ACRE SEEDING
WATER = 102.0 M.G. PER ACRE SEEDING

## SOIL STABILIZATION

| LOCATION | TON |
|---|---|
| ENTIRE PROJECT | 250 |

QUANTITY ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

## COLD MILLING ASPHALT PAVEMENT

| STATION | STATION | LOCATION | WIDTH FEET | SQ. YD. |
|---|---|---|---|---|
| | | | | |
| 7413+98.59 | 7425+42.24 | I-40 RT. LANES | 10.00 | 1270.72 |
| 7428+06.21 | 7441+65.06 | I-40 LT. LANES | 10.00 | 1509.83 |
| 7439+55.64 | 7450+77.45 | I-40 RT. LANES | 10.00 | 1246.46 |
| 7451+48.93 | 7458+15.13 | I-40 LT. LANES | 10.00 | 740.22 |
| 429+74.37 | 440+21.75 | HWY. 365 | 24.00 | 2793.01 |
| 14+30.54 | 15+65.73 | McCLURE ACRES RD. | VAR. | 203.82 |
| | | | | |
| TOTAL | | | | 7764.06 |

## APPROACH GUTTERS

| STATION | STATION | LOCATION | APPROACH GUTTERS (TYPE C) | APPROACH GUTTERS (TYPE SPECIAL) | REINFORCING STEEL - ROADWAY (GR 60) |
|---|---|---|---|---|---|
| | | | CU. YD. | CU. YD. | LB. |
| 18+41.75 | 18+78.25 | CONWAY LOOP - LT. | 9.28 | | 807 |
| 18+53.00 | 18+89.50 | CONWAY LOOP - RT. | 9.28 | | 807 |
| 20+98.49 | 21+34.99 | CONWAY LOOP - LT. | | 8.02 | 713 |
| 21+10.32 | 21+46.82 | CONWAY LOOP - RT. | 9.28 | | 807 |
| 28+10.74 | 28+47.24 | CONWAY LOOP - LT. | 9.28 | | 807 |
| 28+16.33 | 28+52.83 | CONWAY LOOP - RT. | 9.28 | | 807 |
| 30+84.69 | 31+20.69 | CONWAY LOOP - LT. | | 8.18 | 730 |
| 30+90.29 | 31+26.37 | CONWAY LOOP - RT. | | 8.34 | 742 |
| 33+14.53 | 33+51.03 | CONWAY LOOP - LT. | | 8.80 | 793 |
| 33+52.99 | 33+89.49 | CONWAY LOOP - RT. | | 7.74 | 696 |
| TOTALS | | | 46.40 | 41.08 | 7709 |

## SELECTED PIPE BEDDING

| LOCATION | SELECTED PIPE BEDDING |
|---|---|
| | CU. YD. |
| ENTIRE PROJECT | 50 |

QUANTITY ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

## GUARDRAIL

| STATION | STATION | LOCATION | GUARDRAIL TYPE "A" | TERMINAL ANCHOR POSTS (TYPE 1) | GUARDRAIL TERMINAL (TYPE 2) | THRIE BEAM GUARDRAIL TERMINAL |
|---|---|---|---|---|---|---|
| | | | L.F. | EACH | EACH | EACH |
| 7414+00 | 7417+50 | I-40 - RT. | 350 | 1 | | |
| 16+60.39 | 18+79.14 | CONWAY LOOP - RT. | 150 | | 1 | 1 |
| 17+74.14 | 18+67.89 | CONWAY LOOP - LT. | 75 | 1 | | 1 |
| 21+20.11 | 22+13.86 | CONWAY LOOP - RT. | 75 | 1 | | 1 |
| 26+91.86 | 28+42.72 | CONWAY LOOP - RT. | 175 | | 1 | 1 |
| 27+43.37 | 28+37.12 | CONWAY LOOP - LT. | 75 | 1 | | 1 |
| | | | | | | |
| TOTALS | | | 900 | 4 | 2 | 5 |

## CONCRETE ISLAND TYPE "C" CURB FACE

| STATION | LOCATION | SIDE | AREA SQ. YDS. |
|---|---|---|---|
| 26+28 | CONWAY LOOP | LT. | 220.10 |
| 27+08 | CONWAY LOOP | RT. | 28.50 |
| 434+52 | HWY. 365 | RT. | 340.81 |
| | | | |
| TOTAL | | | 589.41 |

## BENCH MARK CAPS

| STATION | LOCATION | EACH |
|---|---|---|
| 434+83 | HWY. 365 - HEADWALL OF R.C. BOX CULVERT ON RT. | 1 |
| | | |
| TOTAL | | 1 |

SHOWN FOR INFORMATIONAL PURPOSES ONLY. BENCH MARK CAPS TO BE PLACED AND RECORDED BY STATE FORCES.

## STRUCTURES

| STATION | LOCATION | DESCRIPTION | ZINC COATED C.S.P. (16 GAUGE) | SIDE DRAINS | REINFORCED CONCRETE PIPE CULVERTS CLASS III | | | FLARED END SECTIONS | | | CONCRETE SPILLWAY (TYPE A) | DROP INLET | | | JUNCTION BOX | R.C. BOX CULVERTS DIMENSIONS | | | CLASS S CONCRETE - ROADWAY | REINFORCING STEEL - ROADWAY (GR 60) | UNCL. EX. FOR STRUCTURES - ROADWAY | SOLID SODDING | WATER | STANDARD DRAWINGS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12 IN. | 18 IN. | 24 IN. | 30 IN. | 29 IN. X 18 IN. | 24 IN. | 30 IN. | 29 IN. X 18 IN. | | (TYPE N2) | (TYPE N3) | (TYPE SPECIAL) | (TYPE ST) | LENGTH | SPAN | HEIGHT | | | | | |
| | | | L.F. | L.F. | L.F. | L.F. | L.F. | EACH | | | EACH | EACH | | | EACH | FEET | | | CU. YD. | LB. | CU. YD. | SQ. YD. | M.G. | |
| 7451+48 | RAMP 3 | CONSTRUCT TYPE ST JUNCTION BOX W/ R.C. PIPE CULVERT & FES | | | | 56 | | | 1 | | | | | | 1 | | | | | | | 13 | 0.2 | FES-1, FES-2, FPC-9S, PCC-1 |
| 7454+33 | MERGED RAMPS 3 & 4 | CONSTRUCT TYPE SPECIAL DROP INLET | | | 59 | | | 1 | | | | | | 1 | | | | | | | | 8 | 0.1 | FES-1, FES-2, PCC-2, SHEET NO. 15 |
| 18+39.75 | CONWAY LOOP | CONSTRUCT TYPE N-2 DROP INLET LT. | 34 | | | | | | | | 1 | 1 | | | | | | | | | | | | FPC-9N, PCM-1 |
| 18+51.00 | CONWAY LOOP | CONSTRUCT TYPE N-2 DROP INLET RT. | 24 | | | | | | | | 1 | 1 | | | | | | | | | | | | FPC-9N, PCM-1 |
| 21+36.99 | CONWAY LOOP | CONSTRUCT TYPE N-2 DROP INLET LT. | 52 | | | | | | | | 1 | 1 | | | | | | | | | | | | FPC-9N, PCM-1 |
| 21+48.45 | CONWAY LOOP | CONSTRUCT TYPE N-2 DROP INLET RT. | 33 | | | | | | | | 1 | 1 | | | | | | | | | | | | FPC-9N, PCM-1 |
| 28+08.89 | CONWAY LOOP | CONSTRUCT TYPE N-3 DROP INLET LT. | 40 | | | | | | | | 1 | | 1 | | | | | | | | | | | FPC-9N, PCM-1 |
| 28+14.48 | CONWAY LOOP | CONSTRUCT TYPE N-3 DROP INLET RT. | 51 | | | | | | | | 1 | | 1 | | | | | | | | | | | FPC-9N, PCM-1 |
| 430+70 | HWY. 365 | INSTALL PIPE CULVERT | | 32 | | | | | | | | | | | | | | | | | | | | PCC-1,PCM-1, PCP-1, PCP-2 |
| 434+83 | HWY. 365 | EXTEND DBL. 6'X3' R.C. BOX CULVERT 16' LT. AND 52' RT. | | | | | | | | | | | | | | 68 | 6 | 3 | 66.46 | 11227 | 34 | 16 | 0.2 | R-200X-0, R-230X-01, W-X003-1, W-X303-1, * |
| 439+00 | HWY. 365 | CONSTRUCT DBL. R.C. ARCH PIPE CULVERT & FES | | | | | 130 | | | 4 | | | | | | | | | | | | 60 | 0.8 | FES-1, FES-2, PCC-1 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS FOR STRUCTURES** | | | **234** | **32** | **59** | **56** | **130** | **1** | **1** | **4** | **6** | **4** | **2** | **1** | **1** | | | | **66.46** | **11227** | **34** | **97** | **1.3** | |

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

BASIS OF ESTIMATE:
WATER = 12.6 GALS. PER SQ. YD. SOLID SODDING

* SEE SHT. NO 19 & 20 FOR SPECIAL DETAILS OF INLET HEADWALLS AND APRON.



rnfortner 5/14/2015 10:04:2 AM
WORKSPACE: AHTD
L:\2009\090723O - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_QTY_02.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 51 | 168 |

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15

## BASE & SURFACING - RAMPS

| STATION | STATION | LOCATION | LENGTH | ACHM SURFACE COURSE (1/2") | | | | ACHM BINDER COURSE (1") | | | | ACHM BASE COURSE (1 1/2") | | | | AGGREGATE BASE COURSE (CLASS 7) | | TACK COAT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FEET | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | TONS PER STATION | TON | AVG. WIDTH FEET | SQUARE YARDS | 0.03 G/SY GAL. | AVG. WIDTH FEET | SQUARE YARDS | 0.10 G/SY GAL. |
| 741398.59 | 741598.59 | RAMP 1 (TAPER) | 200.00 | VAR | 281.28 | 220 | 30.94 | VAR | 61.96 | 385 | 11.93 | VAR | 65.91 | 550 | 18.13 | 72.46 | 144.91 | VAR | 127.87 | 3.84 | 10.00 | 222.22 | 22.22 |
| 741598.59 | 742038.59 | RAMP 1 (DECEL LANE) | 440.00 | 18.00 | 880.00 | 220 | 96.80 | 8.16 | 398.93 | 385 | 76.79 | 8.33 | 407.24 | 550 | 111.99 | 70.00 | 308.00 | 16.49 | 806.18 | 24.19 | 10.00 | 488.89 | 48.89 |
| 742038.59 | 742542.27 | RAMP 1 (EXIT) | 503.68 | VAR | 1230.55 | 220 | 135.36 | VAR | 677.47 | 385 | 130.41 | VAR | 686.54 | 550 | 188.80 | 102.82 | 517.88 | VAR | 1364.01 | 40.92 | 10.00 | 559.64 | 55.96 |
| 742344.25 | 742474.00 | RAMP 1 | 129.75 | 25.00 | 360.42 | 220 | 39.65 | 16.74 | 241.35 | 385 | 46.46 | 17.03 | 245.51 | 550 | 67.52 | 293.36 | 380.63 | 33.77 | 486.85 | 14.61 | | | |
| 742474.00 | 742601.48 | RAMP 1 | 127.48 | 25.00 | 354.11 | 220 | 38.95 | 15.31 | 216.86 | 385 | 41.75 | 15.67 | 221.96 | 550 | 61.04 | 359.80 | 458.67 | 30.98 | 438.81 | 13.16 | | | |
| 742601.48 | 742901.48 | RAMP 1 | 300.00 | 25.00 | 833.33 | 220 | 91.67 | 15.31 | 510.33 | 385 | 98.24 | 15.67 | 522.33 | 550 | 143.64 | 296.72 | 890.17 | 30.98 | 1032.67 | 30.98 | | | |
| 742901.48 | 742912.34 | RAMP 1 | 10.86 | 25.00 | 30.17 | 220 | 3.32 | 15.31 | 18.47 | 385 | 3.56 | 15.67 | 18.91 | 550 | 5.20 | 233.75 | 25.39 | 30.98 | 37.38 | 1.12 | | | |
| 742912.34 | 743212.34 | RAMP 1 | 300.00 | 25.00 | 833.33 | 220 | 91.67 | 15.31 | 510.33 | 385 | 98.24 | 15.67 | 522.33 | 550 | 143.64 | 313.60 | 940.80 | 30.98 | 1032.67 | 30.98 | | | |
| 743212.34 | 743246.39 | RAMP 1 | 34.05 | 25.00 | 94.58 | 220 | 10.40 | 15.31 | 57.92 | 385 | 11.15 | 15.67 | 59.28 | 550 | 16.30 | 393.57 | 134.01 | 30.98 | 117.21 | 3.52 | | | |
| 743246.39 | 743307.74 | RAMP 1 | 61.35 | 25.00 | 170.42 | 220 | 18.75 | 15.31 | 104.36 | 385 | 20.09 | 15.67 | 106.82 | 550 | 29.38 | 368.98 | 226.37 | 30.98 | 211.18 | 6.34 | | | |
| 743307.74 | 743411.67 | RAMP 1 (INT) | 103.93 | VAR | 595.39 | 220 | 65.49 | VAR | 469.02 | 385 | 90.29 | VAR | 474.10 | 550 | 130.38 | 470.74 | 489.24 | VAR | 943.12 | 28.29 | | | |
| | | | | | | | 0.00 | | | | 0.00 | | | | 0.00 | | | | | 0.00 | | | |
| 743274.42 | 743368.17 | RAMP 2 | 93.75 | 25.00 | 260.42 | 220 | 28.65 | 15.65 | 162.97 | 385 | 31.37 | 16.00 | 166.67 | 550 | 45.83 | 308.14 | 288.88 | 31.65 | 329.69 | 9.89 | | | |
| 743368.17 | 743460.00 | RAMP 2 | 91.83 | 25.00 | 255.08 | 220 | 28.06 | 15.31 | 156.21 | 385 | 30.07 | 15.67 | 159.89 | 550 | 43.97 | 359.80 | 330.40 | 30.98 | 316.10 | 9.48 | | | |
| 743460.00 | 743621.82 | RAMP 2 | 161.82 | 25.00 | 449.50 | 220 | 49.45 | 15.31 | 275.27 | 385 | 52.99 | 15.67 | 281.75 | 550 | 77.48 | 246.56 | 398.98 | 30.98 | 557.02 | 16.71 | | | |
| 743621.82 | 743770.00 | RAMP 2 | 148.18 | 25.00 | 411.61 | 220 | 45.28 | 15.31 | 252.07 | 385 | 48.52 | 15.67 | 258.00 | 550 | 70.95 | 223.15 | 330.66 | 30.98 | 510.07 | 15.30 | | | |
| 743770.00 | 743871.82 | RAMP 2 | 101.82 | 25.00 | 282.83 | 220 | 31.11 | 15.31 | 173.21 | 385 | 33.34 | 15.67 | 177.28 | 550 | 48.75 | 262.89 | 267.67 | 30.98 | 350.49 | 10.51 | | | |
| 743871.82 | 743878.13 | RAMP 2 | 6.31 | 25.00 | 17.53 | 220 | 1.93 | 15.31 | 10.73 | 385 | 2.07 | 15.67 | 10.99 | 550 | 3.02 | 233.75 | 14.75 | 30.98 | 21.72 | 0.65 | | | |
| 743878.13 | 744077.95 | RAMP 2 (ENTRANCE) | 199.82 | 29.02 | 644.40 | 220 | 70.88 | 15.59 | 346.05 | 385 | 66.61 | 15.84 | 351.62 | 550 | 96.70 | 210.35 | 420.32 | 31.43 | 697.82 | 20.93 | 10.00 | 135.31 | 13.53 |
| 744077.45 | 744777.45 | RAMP 2 (ACCEL LANE) | 700.00 | 18.45 | 1434.67 | 220 | 157.81 | 8.60 | 669.21 | 385 | 128.82 | 8.78 | 682.95 | 550 | 187.81 | 95.08 | 665.54 | 17.38 | 1351.78 | 40.55 | 10.00 | 777.78 | 77.78 |
| 744777.45 | 745077.45 | RAMP 2 (TAPER) | 300.00 | VAR | 434.75 | 220 | 47.82 | VAR | 107.14 | 385 | 20.62 | VAR | 113.08 | 550 | 31.10 | 74.12 | 222.35 | VAR | 220.22 | 6.61 | 10.00 | 333.33 | 33.33 |
| | | | | | | | 0.00 | | | | 0.00 | | | | 0.00 | | | | | 0.00 | | | |
| 744134.94 | 744316.12 | RAMP 3 | 181.18 | 33.98 | 684.02 | 220 | 75.24 | 15.31 | 308.21 | 385 | 59.33 | 15.67 | 315.45 | 550 | 86.75 | 320.44 | 580.57 | 30.98 | 623.66 | 18.71 | | | |
| 744316.12 | 744606.12 | RAMP 3 | 290.00 | 25.00 | 805.56 | 220 | 88.61 | 15.31 | 493.32 | 385 | 94.96 | 15.67 | 504.92 | 550 | 138.85 | 296.72 | 860.49 | 30.98 | 998.24 | 29.95 | | | |
| 744606.12 | 745060.65 | RAMP 3 | 454.53 | 25.00 | 1262.58 | 220 | 138.88 | 15.31 | 773.21 | 385 | 148.84 | 15.67 | 791.39 | 550 | 217.63 | 359.80 | 1635.40 | 30.98 | 1564.59 | 46.94 | | | |
| 745060.65 | 745350.65 | RAMP 3 | 290.00 | 25.00 | 805.56 | 220 | 88.61 | 15.48 | 498.87 | 385 | 96.03 | 15.83 | 510.03 | 550 | 140.26 | 297.57 | 862.94 | 31.31 | 1008.88 | 30.27 | | | |
| 745350.65 | 745388.97 | RAMP 3 | 38.32 | 25.00 | 106.44 | 220 | 11.71 | 19.16 | 81.56 | 385 | 15.70 | 19.33 | 82.31 | 550 | 22.64 | 154.38 | 59.16 | 38.49 | 163.88 | 4.92 | | | |
| 745148.74 | 745815.62 | RAMP 3 (EXIT) | 666.88 | VAR | 1371.08 | 220 | 150.82 | VAR | 637.06 | 385 | 122.63 | VAR | 646.58 | 550 | 177.81 | 90.78 | 605.40 | VAR | 1283.64 | 38.51 | 10.00 | 740.98 | 74.10 |
| | | | | | | | 0.00 | | | | 0.00 | | | | 0.00 | | | | | 0.00 | | | |
| 742806.21 | 743106.21 | RAMP 4 (TAPER) | 300.00 | VAR | 431.25 | 220 | 47.44 | VAR | 102.34 | 385 | 19.70 | VAR | 106.68 | 550 | 29.34 | 73.72 | 221.17 | VAR | 209.02 | 6.27 | 10.00 | 333.33 | 33.33 |
| 743106.21 | 744106.21 | RAMP 4 (ACCEL LANE) | 1000.00 | 18.14 | 2015.19 | 220 | 221.67 | 8.30 | 922.04 | 385 | 177.49 | 8.47 | 941.64 | 550 | 258.95 | 93.89 | 938.88 | 16.77 | 1863.33 | 55.90 | 10.00 | 1111.11 | 111.11 |
| 744105.30 | 744217.80 | RAMP (ENTRANCE) | 112.50 | 28.06 | 350.77 | 220 | 38.58 | 15.19 | 189.92 | 385 | 36.56 | 15.46 | 193.29 | 550 | 53.15 | 270.85 | 304.71 | 30.65 | 383.13 | 11.49 | 10.00 | 65.39 | 6.54 |
| 744217.80 | 744963.52 | RAMP 4 | 745.72 | 25.56 | 2118.01 | 220 | 232.98 | 15.31 | 1268.55 | 385 | 244.20 | 15.67 | 1298.38 | 550 | 357.05 | 359.80 | 2683.10 | 30.98 | 2566.93 | 77.01 | | | |
| | | | | | | | 0.00 | | | | 0.00 | | | | 0.00 | | | | | 0.00 | | | |
| 744963.52 | 745082.34 | MERGED RAMPS 3 & 4 | 118.82 | 55.50 | 732.72 | 220 | 80.60 | 43.81 | 578.39 | 385 | 111.34 | 44.17 | 583.14 | 550 | 160.36 | 506.03 | 601.26 | 87.98 | 1161.53 | 34.85 | | | |
| 745082.34 | 745948.33 | MERGED RAMPS 3 & 4 | 865.99 | 55.50 | 5340.27 | 220 | 587.43 | 43.81 | 4215.45 | 385 | 811.47 | 44.17 | 4250.09 | 550 | 1168.77 | 524.53 | 4542.41 | 87.98 | 8465.53 | 253.97 | | | |
| 745948.33 | 746023.33 | MERGED RAMPS 3 & 4 | 75.00 | 55.50 | 462.50 | 220 | 50.88 | 43.81 | 365.08 | 385 | 70.28 | 44.17 | 368.08 | 550 | 101.22 | 494.93 | 371.20 | 87.98 | 733.17 | 22.00 | | | |
| | | | | | | | 0.00 | | | | | | | | | | | | | | | | |
| 741398.59 | 741815.04 | I-40 GUARDRAIL WIDENING - RT. | 416.45 | VAR | 164.31 | 220 | 18.07 | | | | | | | | | VAR | 138.98 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS | | | | | 26504.63 | | 2915.51 | | 15853.86 | | 3051.85 | | 16125.14 | | 4434.41 | | 21861.29 | | | 959.37 | | | 476.79 |

BASIS OF ESTIMATE:
ACHM BASE COURSE (1 1/2"): 4.1% ASPHALT BINDER, 95.9% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205
ACHM BINDER COURSE (1"): 4.4% ASPHALT BINDER, 95.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205
ACHM SURFACE COURSE (1/2"): 5.4% ASPHALT BINDER, 94.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205

## BASE & SURFACING - CONWAY LOOP

| STATION | STATION | LOCATION | LENGTH | ACHM SURFACE COURSE (1/2") | | | | ACHM BINDER COURSE (1") | | | | ACHM BASE COURSE (1 1/2") | | | | AGGREGATE BASE COURSE (CLASS 7) | | TACK COAT | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FEET | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | TONS PER STATION | TON | AVG. WIDTH FEET | SQUARE YARDS | 0.03 G/SY GAL. |
| 1352.70 | 1577.70 | CONWAY LOOP | 225.00 | 51.57 | 1289.25 | 220 | 141.82 | 41.28 | 1032.03 | 385 | 198.67 | 41.64 | 1040.88 | 550 | 286.24 | 397.29 | 893.90 | 82.92 | 2073.00 | 62.19 |
| 1577.70 | 1672.70 | CONWAY LOOP | 95.00 | 40.69 | 429.51 | 220 | 47.25 | 31.28 | 330.20 | 385 | 63.56 | 31.64 | 333.94 | 550 | 91.83 | 304.97 | 289.72 | 62.92 | 664.16 | 19.92 |
| 1672.70 | 1883.88 | CONWAY LOOP | 211.18 | 40.00 | 938.58 | 220 | 103.24 | 28.31 | 664.28 | 385 | 127.87 | 28.67 | 672.73 | 550 | 185.00 | 299.00 | 631.43 | 56.98 | 1337.00 | 40.11 |
| 2104.13 | 2439.64 | CONWAY LOOP | 335.51 | 57.58 | 2146.43 | 220 | 236.11 | 46.48 | 1732.71 | 385 | 333.55 | 46.83 | 1745.86 | 550 | 480.11 | 369.48 | 1239.64 | 93.31 | 3478.49 | 104.35 |
| 2439.64 | 2675.73 | CONWAY LOOP | 236.09 | 71.35 | 1871.77 | 220 | 205.89 | 64.19 | 1683.90 | 385 | 324.15 | 64.41 | 1689.60 | 550 | 464.64 | 365.28 | 862.38 | 128.60 | 3373.46 | 101.20 |
| 2675.73 | 2850.31 | CONWAY LOOP | 174.58 | 60.93 | 1181.83 | 220 | 130.00 | 57.59 | 1117.14 | 385 | 215.05 | 57.69 | 1119.10 | 550 | 307.75 | 277.79 | 484.97 | 115.28 | 2236.18 | 67.09 |
| 3087.49 | 3369.72 | CONWAY LOOP | 282.23 | 64.00 | 2006.97 | 220 | 220.77 | 52.31 | 1640.38 | 385 | 315.77 | 52.67 | 1651.67 | 550 | 454.21 | 392.25 | 1107.05 | 104.98 | 3292.06 | 98.76 |
| | | | | | | | 0.00 | | | | | | | | 0.00 | | | | | |
| 1617.99 | 1879.14 | GUARDRAIL WIDENING - RT. | 261.15 | VAR | 120.37 | 220 | 13.24 | | | | | | | | | VAR | 101.81 | | | |
| 1718.47 | 1867.89 | GUARDRAIL WIDENING - LT. | 149.42 | VAR | 74.78 | 220 | 8.23 | | | | | | | | | VAR | 63.25 | | | |
| 2109.46 | 2310.91 | BARRIER RAIL WIDENING - LT. | 201.45 | VAR | 70.77 | 220 | 7.78 | | | | | | | | | VAR | 189.49 | | | |
| 2120.11 | 2268.63 | GUARDRAIL WIDENING - RT. | 148.52 | VAR | 74.46 | 220 | 8.19 | | | | | | | | | VAR | 62.98 | | | |
| 2703.60 | 2837.12 | GUARDRAIL WIDENING - LT. | 133.52 | VAR | 73.64 | 220 | 8.10 | | | | | | | | | VAR | 62.29 | | | |
| 2677.78 | 2842.72 | GUARDRAIL WIDENING - RT. | 164.94 | VAR | 134.84 | 220 | 14.83 | | | | | | | | | VAR | 114.05 | | | |
| 3095.69 | 3339.66 | BARRIER RAIL WIDENING - LT. | 243.97 | | | | | | | | | | | | | VAR | 91.22 | | | |
| 3101.36 | 3379.25 | BARRIER RAIL WIDENING - RT. | 277.89 | | | | | | | | | | | | | VAR | 99.15 | | | |
| | | | | | | | | | | | | | | | | | | | | |
| TOTALS | | | | | 10413.20 | | 1145.45 | | 8200.64 | | 1578.62 | | 8253.78 | | 2269.78 | | 6293.33 | | | 493.62 |

BASIS OF ESTIMATE:
ACHM BASE COURSE (1 1/2"): 4.1% ASPHALT BINDER, 95.9% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205
ACHM BINDER COURSE (1"): 4.4% ASPHALT BINDER, 95.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205
ACHM SURFACE COURSE (1/2"): 5.4% ASPHALT BINDER, 94.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205

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WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 52 | 168 |
| | | | | (2) | QUANTITIES | | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

## BASE & SURFACING - HWY. 365

| STATION | STATION | LOCATION | LENGTH | ACHM SURFACE COURSE (1/2") | | | | ACHM BINDER COURSE (1") | | | | AGGREGATE BASE COURSE (CLASS 7) | | TACK COAT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FEET | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | TONS PER STATION | TON | AVG. WIDTH FEET | SQUARE YARDS | 0.03 G/SY GAL. | AVG. WIDTH FEET | SQUARE YARDS | 0.10 G/SY GAL. |
| 42974.37 | 43074.37 | TRANSITION | 100.00 | 40.00 | 444.44 | 220 | 48.89 | | | | | | | | | | 40.00 | 444.44 | 44.44 |
| 43074.37 | 43081.75 | HWY. 365 (OVERLAY) | 7.38 | 32.00 | 26.24 | 220 | 2.89 | | | | | 99.50 | 7.00 | | | | 24.00 | 19.68 | 1.97 |
| 43081.75 | 43411.75 | HWY. 365 (OVERLAY) | 330.00 | 47.65 | 1747.34 | 220 | 192.21 | 7.32 | 268.56 | 495 | 66.47 | 161.92 | 534.35 | 14.32 | 525.10 | 15.75 | 24.00 | 880.00 | 88.00 |
| 43411.75 | 43591.75 | HWY. 365 (OVERLAY) | 180.00 | 58.05 | 1160.99 | 220 | 127.71 | 13.31 | 266.27 | 495 | 65.90 | 169.25 | 304.65 | 26.35 | 527.02 | 15.81 | 24.00 | 480.00 | 48.00 |
| 43591.75 | 43921.75 | HWY. 365 (OVERLAY) | 330.00 | 53.26 | 1952.76 | 220 | 214.80 | 7.50 | 275.18 | 495 | 68.11 | 230.27 | 759.89 | 14.52 | 532.22 | 15.97 | 24.00 | 880.00 | 88.00 |
| 43921.75 | 44021.75 | TRANSITION | 100.00 | 40.00 | 444.44 | 220 | 48.89 | | | | | | | | | | 40.00 | 444.44 | 44.44 |
| | | | | | | | | | | | | | | | | | | | |
| TOTALS | | | | | 5776.21 | | 635.39 | | 810.01 | | 200.48 | | 1605.89 | | | 47.53 | | | 314.85 |

BASIS OF ESTIMATE:
ACHM BINDER COURSE (1"): 4.4% ASPHALT BINDER, 95.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205
ACHM SURFACE COURSE (1/2"): 5.4% ASPHALT BINDER, 94.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205

## BASE & SURFACING - HWY. 365 CONNECTOR

| STATION | STATION | LOCATION | LENGTH | ACHM SURFACE COURSE (1/2") | | | | ACHM BINDER COURSE (1") | | | | AGGREGATE BASE COURSE (CLASS 7) | | TACK COAT | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FEET | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 76-22) TON | TONS PER STATION | TON | AVG. WIDTH FEET | SQUARE YARDS | 0.03 G/SY GAL. |
| 2030.46 | 2182.61 | HWY. 365 CONNECTOR (INT) | 152.15 | VAR | 2818.31 | 220 | 310.01 | VAR | 1340.03 | 495 | 331.66 | VAR | 960.17 | VAR | 2674.06 | 80.22 |
| 2182.61 | 2356.27 | HWY. 365 CONNECTOR | 173.66 | 88.25 | 1702.83 | 220 | 187.31 | 36.52 | 704.67 | 495 | 174.41 | 423.19 | 734.91 | 72.77 | 1404.14 | 42.12 |
| 2356.27 | 2377.53 | HWY. 365 CONNECTOR | 21.26 | 88.25 | 208.47 | 220 | 22.93 | 36.52 | 86.27 | 495 | 21.35 | 481.66 | 102.40 | 72.77 | 171.90 | 5.16 |
| 2377.53 | 2471.34 | HWY. 365 CONNECTOR | 93.81 | 88.25 | 919.86 | 220 | 101.18 | 36.52 | 380.66 | 495 | 94.21 | 467.21 | 438.29 | 72.77 | 758.51 | 22.76 |
| 2471.34 | 2685.75 | HWY. 365 CONNECTOR (INT) | 214.41 | VAR | 3716.20 | 220 | 408.78 | VAR | 1804.68 | 495 | 446.66 | VAR | 1370.64 | VAR | 3601.20 | 108.04 |
| | | | | | | | | | | | | | | | | |
| TOTALS | | | | | 9365.67 | | 1030.21 | | 4316.31 | | 1068.29 | | 3606.41 | | | 258.30 |

BASIS OF ESTIMATE:
ACHM BINDER COURSE (1"): 4.4% ASPHALT BINDER, 95.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205
ACHM SURFACE COURSE (1/2"): 5.4% ASPHALT BINDER, 94.6% MINERAL AGGREGATE (PG 76-22), $N_{MAX}$ = 205

## BASE & SURFACING - McCLURE ACRES RD.

| STATION | STATION | LOCATION | LENGTH | ACHM SURFACE COURSE (1/2") | | | | AGGREGATE BASE COURSE (CLASS 7) | | TACK COAT | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FEET | AVG. WIDTH FEET | SQUARE YARDS | LBS. PER SQ. YD. | (PG 64-22) TON | TONS PER STATION | TON | AVG. WIDTH FEET | SQUARE YARDS | 0.03 G/SY GAL. | AVG. WIDTH FEET | SQUARE YARDS | 0.10 G/SY GAL. |
| 1013.05 | 1086.62 | McCLURE ACRES (INT) | 73.57 | VAR | 696.46 | 220 | 76.61 | 335.84 | 247.08 | VAR | 288.71 | 8.66 | | | |
| 1086.62 | 1430.54 | McCLURE ACRES | 343.92 | 48.25 | 1843.79 | 220 | 202.82 | 181.75 | 625.00 | 20.25 | 773.82 | 23.21 | | | |
| 1430.54 | 1515.73 | McCLURE ACRES (OVERLAY) | 85.19 | 37.12 | 351.35 | 220 | 38.65 | 124.33 | 105.92 | 9.12 | 86.31 | 2.59 | 11.05 | 104.61 | 10.46 |
| 1515.73 | 1565.73 | TRANSITION | 50.00 | 23.65 | 131.39 | 220 | 14.45 | 93.16 | 46.58 | 3.19 | 17.70 | 0.53 | 13.53 | 75.17 | 7.52 |
| | | | | | | | | | | | | | | | |
| TOTALS | | | | | 3022.99 | | 332.53 | | 1024.58 | | | 34.99 | | | 17.98 |

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2"): 5.5% ASPHALT BINDER, 94.5% MINERAL AGGREGATE (PG 64-22), $N_{MAX}$ = 115

## BASE & SURFACING - DRIVEWAYS

| LOCATION | AGGREGATE BASE COURSE (CLASS 7)(7" DEPTH) | | | ACHM SURFACE COURSE (1/2") (220 LBS. PER S.Y.) | |
|---|---|---|---|---|---|
| | AVG. AREA ( S.Y.) | TON PER S.Y. | TON | SQUARE YARDS | (PG 64-22) TON |
| HIGHWAY 365 @ STA. 430+68.45 | 57.11 | 0.41 | 23.42 | 57.11 | 6.28 |
| | | | | | |
| TEMPORARY DRIVEWAYS | | | | | |
| * ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER | | | 50.00 | | |
| TOTALS | | | 73.42 | 57.11 | 6.28 |

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2"): 5.5% ASPHALT BINDER, 94.5% MINERAL AGGREGATE (PG 64-22), $N_{MAX}$ = 115

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

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

## RUMBLE STRIPS IN ASPHALT SHOULDERS

| STATION | STATION | LOCATION | RUMBLE STRIPS IN ASPHALT SHOULDERS |
|---|---|---|---|
| | | | L.F. |
| 7413+98.59 | 7425+42.24 | I-40 - RT. SIDE RT. MAIN LANES | 1144 |
| 7428+06.21 | 7441+06.21 | I-40 - LT. SIDE LT. MAIN LANES | 2600 |
| 7440+77.45 | 7450+77.45 | I-40 - RT. SIDE RT. MAIN LANES | 2000 |
| 7451+48.93 | 7458+15.13 | I-40 - LT. SIDE LT. MAIN LANES | 1332 |
| TOTAL | | | 7076 |

## CRASH CUSHION

| STATION | LOCATION | CRASH CUSHION |
|---|---|---|
| | | EACH |
| 22+91 | LT. OF CONWAY LOOP | 1 |
| TOTAL: | | 1 |

NOTE: THE CRASH CUSHION SHALL BE NON-GATING AND REDIRECTIVE AND COMPATIBLE WITH THE SITE GEOMETRY SHOWN IN THE PLANS.

rnfortner 5/14/2015 10:22:09 AM
WORKSPACE: AHTD
L:\2009\090172301 - Conway Western Arterial Loop\Drawings\PRJL_BS\PRJL_BS_QTY_04.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| 9-11-15 | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 53 | 168 |

(2) SUMMARY OF QUANTITIES & REVISIONS

## SUMMARY OF QUANTITIES (BOX 1 OF 2)

| ITEM NUMBER | ITEM | QUANTITY | UNIT |
|---|---|---|---|
| 201 | CLEARING | 46 | STA. |
| 201 | GRUBBING | 46 | STA. |
| 202 | REMOVAL AND DISPOSAL OF FENCE | 783 | L.F. |
| SP & 202 | REMOVAL AND DISPOSAL OF GUARDRAIL | 320 | L.F. |
| 202 | REMOVAL AND DISPOSAL OF PIPE CULVERTS | 9 | EACH |
| 202 | REMOVAL AND DISPOSAL OF SIGN POST | 9 | EACH |
| 210 | UNCLASSIFIED EXCAVATION | 14671 | CU.YD. |
| SP & 210 | COMPACTED EMBANKMENT | 10314 | CU.YD. |
| SP & 210 | SOIL STABILIZATION | 250 | TON |
| SP & 214 | SUBGRADE PREPARATION | 88.95 | STA. |
| 303 | AGGREGATE BASE COURSE (CLASS 7) | 34465 | TON |
| 401 | TACK COAT | 2614 | GAL. |
| SP & 405 | MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2") | 6429 | TON |
| SP & 405 | ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2") | 275 | TON |
| SP, SS & 406 | MINERAL AGGREGATE IN ACHM BINDER COURSE (1") | 5639 | TON |
| SP, SS & 406 | ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1") | 260 | TON |
| SP, SS & 407 | MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2") | 5738 | TON |
| SP, SS & 407 | ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2") | 19 | TON |
| SP, SS & 407 | ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2") | 309 | TON |
| 412 | COLD MILLING ASPHALT PAVEMENT | 7764 | SQ.YD. |
| SP & 414 | ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC | 6 | TON |
| 504 | APPROACH GUTTERS | 87.48 | CU.YD. |
| 601 | MOBILIZATION | 1.00 | L.S. |
| SP & 602 | FURNISHING FIELD OFFICE | 1 | EACH |
| SP & 603 | MAINTENANCE OF TRAFFIC | 1.00 | L.S. |
| SS & 604 | SIGNS | 698 | SQ.FT. |
| SS & 604 | TRAFFIC DRUMS | 124 | EACH |
| SS & 604 | BARRICADES | 112 | L.F. |
| 604 | FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER | 7902 | L.F. |
| SS & 604 | VERTICAL PANELS | 18 | EACH |
| 604 | ADVANCE WARNING ARROW PANEL | 120 | DAY |
| SP & 604 | PORTABLE CHANGEABLE MESSAGE SIGN | 24 | WEEK |
| 604 | REMOVAL OF PERMANENT PAVEMENT MARKINGS | 6685 | L.F. |
| 605 | CONCRETE DITCH PAVING (TYPE B) | 173 | SQ.YD. |
| 606 | 24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) | 59 | L.F. |
| 606 | 30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) | 56 | L.F. |
| 606 | 12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE) | 234 | L.F. |
| 606 | 29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III) | 130 | L.F. |
| 606 | 24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS | 1 | EACH |
| 606 | 30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS | 1 | EACH |
| 606 | 29" X 18" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS | 4 | EACH |
| SP, SS & 606 | 18" SIDE DRAIN | 32 | L.F. |
| 606 | SELECTED PIPE BEDDING | 50 | CU.YD. |
| 609 | DROP INLETS (TYPE N2) | 4 | EACH |
| 609 | DROP INLETS (TYPE N3) | 2 | EACH |
| 609 | DROP INLETS (TYPE SPECIAL) | 1 | EACH |
| 609 | JUNCTION BOXES (TYPE ST) | 1 | EACH |
| 611 | 4" PIPE UNDERDRAINS | 1000 | L.F. |
| 611 | UNDERDRAIN OUTLET PROTECTORS | 8 | EACH |
| 614 | CONCRETE SPILLWAY (TYPE A) | 6 | EACH |
| 615 | PAVEMENT REPAIR OVER CULVERTS (ASPHALT) | 50 | TON |
| 617 | GUARDRAIL (TYPE A) | 900 | L.F. |
| 617 | THRIE BEAM GUARDRAIL TERMINAL | 5 | EACH |
| 617 | TERMINAL ANCHOR POST (TYPE 1) | 4 | EACH |
| 617 | GUARDRAIL TERMINAL (TYPE 2) | 2 | EACH |
| 619 | WIRE FENCE (TYPE A) | 455 | L.F. |
| 620 | LIME | 12 | TON |
| 620 | SEEDING | 6.12 | ACRE |
| SS & 620 | MULCH COVER | 12.24 | ACRE |
| 620 | WATER | 751.9 | M.G. |
| 621 | TEMPORARY SEEDING | 6.12 | ACRE |
| 621 | SILT FENCE | 1830 | L.F. |
| 621 | SAND BAG DITCH CHECKS | 180 | BAG |
| 621 | ROCK DITCH CHECKS | 60 | CU.YD. |
| 621 | SEDIMENT BASIN | 100 | CU.YD. |
| 621 | OBLITERATION OF SEDIMENT BASIN | 100 | CU.YD. |
| 621 | SEDIMENT REMOVAL AND DISPOSAL | 2500 | CU.YD. |
| 623 | SECOND SEEDING APPLICATION | 6.12 | ACRE |
| 624 | SOLID SODDING | 219 | SQ.YD. |

## SUMMARY OF QUANTITIES (BOX 2 OF 2)

| | ITEM NUMBER | ITEM | | QUANTITY | UNIT |
|---|---|---|---|---|---|
| | 631 | CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL) | | 1223 | L.F. |
| | 631 | CONCRETE BARRIER WALL (PARAPET TYPE SPECIAL) | | 1160 | L.F. |
| | 632 | CONCRETE ISLAND | | 589 | SQ.YD. |
| | 635 | ROADWAY CONSTRUCTION CONTROL | | 1.00 | L.S. |
| | 637 | MAILBOXES | | 1 | EACH |
| | 637 | MAILBOX SUPPORTS (SINGLE) | | 1 | EACH |
| | 642 | RUMBLE STRIPS IN ASPHALT SHOULDERS | | 7076 | L.F. |
| | 718 | REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4") | | 1148 | L.F. |
| | 718 | REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10") | | 567 | L.F. |
| | 718 | REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4") | | 1070 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING WHITE (4") | | 7327 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING WHITE (6") | | 247 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING WHITE (8") | | 1398 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING WHITE (12") | | 36 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING WHITE (24") | | 24 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING YELLOW (4") | | 8532 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING YELLOW (12") | | 412 | L.F. |
| | 719 | THERMOPLASTIC PAVEMENT MARKING (WORDS) | | 7 | EACH |
| | 719 | THERMOPLASTIC PAVEMENT MARKING (ARROWS) | | 7 | EACH |
| * | SP & 719 | INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4") | (ALTERNATE NO. 1) | 15965 | L.F. |
| * | SP | HIGH PERFORMANCE MARKING TAPE WHITE (4") | (ALTERNATE NO. 2) | 15965 | L.F. |
| * | SP & 719 | INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8") | (ALTERNATE NO. 1) | 1756 | L.F. |
| * | SP | HIGH PERFORMANCE MARKING TAPE WHITE (8") | (ALTERNATE NO. 2) | 1756 | L.F. |
| * | SP & 719 | INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") | (ALTERNATE NO. 1) | 5931 | L.F. |
| * | SP | HIGH PERFORMANCE MARKING TAPE YELLOW (4") | (ALTERNATE NO. 2) | 5931 | L.F. |
| * | SP & 719 | INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") | (ALTERNATE NO. 1) | 117 | L.F. |
| * | SP | HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") | (ALTERNATE NO. 2) | 117 | L.F. |
| * | SP & 719 | INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4") | (ALTERNATE NO. 1) | 904 | L.F. |
| * | SP | HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4") | (ALTERNATE NO. 2) | 904 | L.F. |
| | 721 | RAISED PAVEMENT MARKERS (TYPE II) | | 554 | EACH |
| | SP | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1) | | 23 | EACH |
| | SP | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1) | | 2 | EACH |
| | SP | OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3) | | 2 | EACH |
| | SP | STEEL OVERHEAD SIGN STRUCTURE (OH-040-23-17) | | 1 | EACH |
| | SP & 725 | GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND) | | 188 | SQ.FT. |
| | SP & 725 | GUIDE SIGN - OVERHEAD MOUNTED (DEMOUNTABLE LEGEND) | | 860 | SQ.FT. |
| | SP & 726 | STANDARD SIGN | | 738 | SQ.FT. |
| | SP & 727 | EXIT NUMBER PANEL (TYPE A) | | 95 | SQ. FT. |
| | 728 | DELINEATOR (TYPE 1) | | 60 | EACH |
| | SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-1) | | 17 | EACH |
| | SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(A)) | | 3 | EACH |
| | SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(B)) | | 3 | EACH |
| | SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(2)) | | 1 | EACH |
| | SP & 729 | CHANNEL POST SIGN SUPPORT (TYPE U-2(6)) | | 1 | EACH |
| | 730 | BREAKAWAY SIGN SUPPORT (TYPE G-2) | | 597 | POUND |
| | 730 | BREAKAWAY SIGN SUPPORT (TYPE G2-4) | | 1400 | POUND |
| | 730 | BREAKAWAY SIGN SUPPORT (TYPE G2-5) | | 731 | POUND |
| | 731 | TEMPORARY IMPACT ATTENUATION BARRIER | | 2 | EACH |
| | 731 | TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR) | | 2 | EACH |
| | 732 | CRASH CUSHION | | 1 | EACH |
| | 801 | UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY | | 34 | CU.YD. |
| | 802 | CLASS S CONCRETE - ROADWAY | | 66.46 | CU.YD. |
| | 804 | REINFORCING STEEL - ROADWAY (GRADE 60) | | 18936 | LB. |
| | SP | ARCHITECTURAL FINISH | | 2610 | SQ.FT. |
| | SP | TEXTURED COATING FINISH | | 2484 | SQ.YD. |

* DENOTES ALTERNATE BID ITEMS.

## REVISIONS

| DATE | REVISION | SHEET NUMBER |
|---|---|---|
| 9-11-15 | REMOVED REQUIREMENTS ON RAILROAD PROPERTY SP | 2 & 53 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
9-11-15

SUMMARY OF QUANTITIES AND REVISIONS

mfortner 9/11/2015 8:33:35 AM
W:\ROADS\080396 AHTD - Conway Western ArterialLoop\Drawings\PRJL_BS\PRJL_BS_QTY_SUM.dgn
LU:2015/09/080396/7230
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 54 | 168 |

(2) SURVEY CONTROL DETAILS

SURVEY CONTROL COORDINATES

Project Name: S080395
Date: 12/20/2011
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

| Point Name | Northing | Easting | Elev | Feature | Description |
|---|---|---|---|---|---|
| 1 | 253171.2514 | 1185460.3027 | 283.66 | CTL | 5/8" REBAR* |
| 2 | 252377.2672 | 1185289.3187 | 276.96 | CTL | 5/8" REBAR |
| 3 | 252252.1476 | 1185673.1350 | 271.39 | CTL | 5/8" REBAR |
| 4 | 251357.5368 | 1186594.5081 | 306.05 | CTL | 5/8" REBAR |
| 5 | 250815.2395 | 1187174.2119 | 289.96 | CTL | 5/8" REBAR |
| 6 | 250293.1565 | 1187513.6796 | 291.90 | CTL | 5/8" REBAR |
| 7 | 249681.7101 | 1187886.6548 | 297.30 | CTL | 5/8" REBAR |
| 8 | 249063.7573 | 1188150.2719 | 303.11 | CTL | 5/8" REBAR |
| 20 | 250309.8267 | 1188812.8706 | 275.04 | CTL | 5/8" REBAR W/2" ALM MON* |
| 21 | 249515.4918 | 1188763.6507 | 286.38 | CTL | 5/8" REBAR W/2" ALM MON |
| 22 | 248729.1419 | 1188648.3083 | 286.89 | CTL | 5/8" REBAR W/2" ALM MON |
| 23 | 247947.7436 | 1188491.0067 | 288.44 | CTL | 5/8" REBAR W/2" ALM MON |
| 24 | 247164.0934 | 1188332.8996 | 292.24 | CTL | 5/8" REBAR W/2" ALM MON |
| 25 | 246382.1928 | 1188176.1933 | 296.04 | CTL | 5/8" REBAR W/2" ALM MON |
| 80 | 250709.5000 | 1189639.6517 | 277.28 | CTL | 5/8" REBAR W/2" CAP* |
| 81 | 249762.4949 | 1189502.1942 | 276.74 | CTL | 5/8" REBAR W/2" CAP |
| 82 | 249714.8894 | 1188949.2681 | 285.07 | CTL | 5/8" REBAR W/2" CAP |
| 83 | 249688.8389 | 1189997.4522 | 284.21 | CTL | 5/8" REBAR W/2" CAP |
| 84 | 248814.2643 | 1189536.3863 | 280.25 | CTL | 5/8" REBAR W/2" CAP |
| 85 | 247990.0360 | 1189524.7909 | 295.32 | CTL | 5/8" REBAR W/2" CAP |
| 86 | 247184.9583 | 1189514.5176 | 297.54 | CTL | 5/8" REBAR W/2" CAP |
| 87 | 246347.6324 | 1189539.2146 | 294.89 | CTL | 5/8" REBAR W/2" CAP |
| 954 | 250380.5061 | 1189630.5089 | 274.07 | TBM | CHL SQ IN DI IN MEDIAN |
| 956 | 249659.4137 | 1189473.3265 | 298.66 | TBM | CHL SQ IN SW CORN OF BR"3786 |
| 958 | 249380.2732 | 1189567.5770 | 274.07 | TBM | CHL SQ IN DI IN MEDIAN |
| 959 | 248280.4852 | 1189545.5165 | 288.03 | TBM | CHL SQ IN DI IN MEDIAN |
| 990 | 285016.9076 | 1178342.9846 | 401.140 | BM | NGS MARK E 291 |
| 991 | 282193.5202 | 1179189.7671 | 351.690 | BM | NGS MARK D 291 |

*Note - 5/8" REBAR - Standard = 5/8" Rebar without Cap
5/8"REBAR W/2"ALM MON - Standard = 5/8" Rebar with 2" Aluminum Cap stamped GARVER CONTROL POINT, PN =
5/8"REBAR W/2"CAP - Standard = 5/8" Rebar with 2" Aluminum Cap stamped AHTD, JOB" 080388, PN =

ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999676209 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.
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.
BASED ON NGS PTS. D 291 & E 291

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
BASED ON GPS PTS.
230026 - 230020
230028 - 230028A
230027 - 230027A
DETERMINED FROM GPS CONTROL POINT: 62
AHTD JOB #080388
NORTHING 264067.0068, EASTING 1187664.3294
CONVERGENCE ANGLE: 0-14-33 LEFT
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

**ALIGNMENT NAME: RAMP 1**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8000 | 7420+38.59 | PC | 249845.8551 | 1189531.7615 |
| 8001 | 7421+33.81 | PI | 249750.8202 | 1189525.8655 |
| 8002 | 7422+28.87 | PT | 249656.8430 | 1189510.5462 |
| 8003 | 7423+99.00 | PC | 249488.9307 | 1189483.1746 |
| 8004 | 7425+42.70 | PI | 249347.0944 | 1189460.0537 |
| 8005 | 7426+76.48 | PT | 249247.3117 | 1189356.6345 |
| 8006 | 7431+37.34 | PC | 248927.3188 | 1189024.9796 |
| 8007 | 7432+52.11 | PI | 248847.6303 | 1188942.3868 |
| 8008 | 7433+61.70 | PT | 248737.4730 | 1188910.1808 |
| 8009 | 7434+41.21 | POE | 248661.1597 | 1188887.8697 |

**ALIGNMENT NAME: RAMP 2**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8010 | 7431+65.85 | PC | 248570.1738 | 1189118.8974 |
| 8011 | 7434+59.79 | PI | 248487.6895 | 1189401.0273 |
| 8012 | 7436+84.32 | PT | 248195.5254 | 1189433.2931 |
| 8013 | 7440+39.38 | PC | 247842.6152 | 1189472.2675 |
| 8014 | 7441+30.81 | PI | 247751.7377 | 1189482.3038 |
| 8015 | 7442+22.02 | PT | 247660.3117 | 1189481.4308 |

**ALIGNMENT NAME: RAMP 3**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8016 | 7441+34.94 | POB | 247441.1141 | 1190284.4135 |
| 8017 | 7444+97.30 | PC | 247255.0303 | 1189973.4896 |
| 8018 | 7448+39.47 | PI | 247079.3109 | 1189679.8835 |
| 8019 | 7451+33.15 | PT | 246739.4352 | 1189640.3073 |
| 8020 | 7456+25.34 | PC | 246250.5501 | 1189583.3800 |
| 8021 | 7457+20.56 | PI | 246155.9715 | 1189572.3670 |
| 8022 | 7458+15.62 | PT | 246060.7665 | 1189570.8158 |

**ALIGNMENT NAME: RAMP 4**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8023 | 7440+29.10 | PC | 247852.0339 | 1189600.4158 |
| 8024 | 7448+15.69 | PI | 247065.4851 | 1189592.5224 |
| 8025 | 7449+63.52 | PT | 247469.4302 | 1190267.4666 |

**ALIGNMENT NAME: MERGED RAMPS 3 & 4**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8026 | 7449+63.52 | PC | 247455.2722 | 1190275.9402 |
| 8027 | 7460+10.17 | PI | 247992.7695 | 1191174.0342 |
| 8028 | 7460+23.33 | PT | 248286.4762 | 1190169.4385 |

**ALIGNMENT NAME: CONWAY LOOP**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8028 | 13+52.70 | POB | 248286.4762 | 1190169.4385 |
| 8029 | 30+98.10 | PC | 248776.2619 | 1188494.1738 |
| 8030 | 37+32.12 | PI | 248954.1784 | 1187885.6276 |
| 8031 | 42+91.88 | PT | 249524.2666 | 1187608.1709 |
| 8032 | 56+51.90 | PC | 250747.1454 | 1187013.0070 |
| 8033 | 60+48.55 | PI | 251103.7996 | 1186839.4266 |
| 8034 | 64+43.94 | PT | 251433.1327 | 1186618.3562 |
| 8035 | 80+09.78 | PC | 252733.2281 | 1185745.6452 |
| 8036 | 87+99.39 | PI | 253388.8269 | 1185305.5634 |
| 8037 | 94+53.07 | PT | 253366.7284 | 1184516.2642 |
| 8038 | 123+22.20 | POE | 253286.4312 | 1181648.2557 |

**ALIGNMENT NAME: HWY. 365**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8039 | 384+00.00 | POB | 243262.6640 | 1187567.8485 |
| 8040 | 439+52.50 | PC | 248705.5975 | 1188665.4304 |
| 8041 | 452+36.94 | PI | 249964.6896 | 1188919.3297 |
| 8042 | 465+02.50 | PT | 251242.9983 | 1188794.0118 |
| 8043 | 500+00.00 | POE | 254723.8110 | 1188452.7735 |

**ALIGNMENT NAME: I-40**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8044 | 7389+60.40 | POB | 252900.1834 | 1189936.6374 |
| 8045 | 7404+27.38 | PC | 251445.7447 | 1189745.1930 |
| 8046 | 7418+12.40 | PI | 250072.5736 | 1189564.4457 |
| 8047 | 7431+94.05 | PT | 248687.6293 | 1189550.3787 |
| 8048 | 7449+77.89 | PC | 246903.8871 | 1189532.2611 |
| 8049 | 7466+49.60 | PI | 245232.2633 | 1189515.2824 |
| 8050 | 7482+97.89 | PT | 243635.1591 | 1189021.4477 |
| 8051 | 7507+69.65 | POE | 241273.7099 | 1188291.2729 |

**ALIGNMENT NAME: HWY. 365 CONNECTOR**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8052 | 20+00.00 | POB | 248657.7404 | 1188899.5652 |
| 8053 | 22+81.27 | PC | 248378.1691 | 1188868.7152 |
| 8054 | 25+42.27 | PI | 248118.7380 | 1188840.0876 |
| 8055 | 26+77.53 | PT | 248170.3320 | 1188584.2320 |
| 8056 | 27+03.75 | POE | 248175.5133 | 1188558.5376 |

**ALIGNMENT NAME: McCLURE ACRES**

| POINT | STATION | TYPE | NORTHING | EASTING |
|---|---|---|---|---|
| 8062 | 10+00.00 | POB | 247881.4330 | 1188499.2355 |
| 8063 | 10+25.54 | PC | 247883.0361 | 1188524.7229 |
| 8064 | 11+57.70 | PI | 247891.3323 | 1188656.6227 |
| 8065 | 12+60.23 | PRC | 248014.9712 | 1188703.3112 |
| 8066 | 14+07.65 | PI | 248152.8864 | 1188755.3907 |
| 8067 | 15+15.73 | PT | 248147.1552 | 1188902.7000 |
| 8068 | 16+84.93 | POE | 248140.5773 | 1189071.7692 |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15

SURVEY CONTROL DETAILS

rnfortner 5/14/2015 10:25:30 AM
WORKSPACE: AHTD
L:\2009\090723O - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_SC_01.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 55 | 168 |

(2) SURVEY CONTROL DETAILS

N

400 200 0 400

Scale: 1" = 400'

BEGIN JOB 080396
STA. 7413+98.59

END JOB 080396
STA. 7458+15.13

SURVEY BASELINE

C.L. MERGED RAMPS 3 & 4

C.L. RAMP 4

C.L. RAMP 3

C.L. RAMP 2

C.L. MEDIAN I-40

C.L. MAIN LANES

C.L. HWY. 365 CONNECTOR

C.L. McCLURE ACRES RD.

C.L. HWY. 365

C.L. CONWAY LOOP STA. 26+75.73 =
C.L. HWY. 365 CONN. STA. 20+00.00
∢ = 100°

C.L. CONWAY LOOP STA. 26+87.92 =
C.L. RAMP I STA. 7434+41.21
∢ = 90°

C.L. HWY. 365 STA. 434+11.75 =
C.L. HWY. 365 CONN. STA. 27+03.75
∢ = 90°

C.L. HWY. 365 CONN. STA. 431+11.75 =
C.L. McCLURE ACRES RD. STA. 10+00.00
∢ = 75°

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

## CURVE DATA

| CURVE | PC | PI | PT | Δ | D | TANGENT FEET | LENGTH FEET | e FT./FT. | Ls FEET | DESIGN SPEED |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-1 | 7420+38.59 | 7421+33.81 | 7422+28.87 | 5°42'30" | 3°00'00" | 95.22 | 190.28 | NA | NA | 70 MPH |
| 1-2 | 7423+99.00 | 7425+42.70 | 7426+76.48 | 36°46'01" | 13°15'00" | 143.71 | 277.49 | 0.100 | 300 | 40 MPH |
| 1-3 | 7431+37.34 | 7432+52.11 | 7433+61.70 | 29°43'42" | 13°15'00" | 114.77 | 224.36 | 0.100 | 300 | 40 MPH |
| 2-1 | 7431+65.85 | 7434+59.79 | 7436+84.32 | 67°24'04" | 13°00'00" | 293.94 | 518.47 | 0.100 | 250 | 40 MPH |
| 2-2 | 7440+39.38 | 7441+30.81 | 7442+22.02 | 6°50'57" | 3°45'00" | 91.43 | 182.64 | 0.069 | 215 | 50 MPH |
| 3-1 | 7444+97.30 | 7448+39.47 | 7451+33.15 | 52°27'30" | 8°15'00" | 342.17 | 635.86 | 0.100 | 290 | 50 MPH |
| 3-2 | 7456+25.34 | 7457+20.56 | 7458+15.62 | 5°42'30" | 3°00'00" | 95.22 | 190.28 | NA | NA | 70 MPH |
| 4-1 | 7440+29.10 | 7448+15.69 | 7449+63.52 | 121°28'30" | 13°00'00" | 786.59 | 934.42 | 0.100 | 300 | 40 MPH |
| 3&4 | 7449+63.52 | 7460+10.17 | 7460+23.33 | 132°48'11" | 12°31'51" | 1046.65 | 1059.81 | 0.100 | 300 | 40 MPH |
| ML-1 | 30+98.10 | 37+32.12 | 42+91.88 | 47°45'04" | 4°00'00" | 634.02 | 1193.78 | NA | NA | 45 MPH |
| 40-1 | 7404+27.38 | 7418+12.40 | 7431+94.05 | 6°55'00" | 0°15'00" | 1385.02 | 2766.67 | NA | NA | 70 MPH |
| 40-2 | 7449+77.89 | 7466+49.60 | 7482+97.89 | 16°36'00" | 0°30'00" | 1671.71 | 3320.00 | NA | NA | 70 MPH |
| 365-1 | 439+52.50 | 452+36.94 | 465+02.50 | 17°00'00" | 0°40'00" | 1284.44 | 2550.00 | NA | NA | 55 MPH |
| C-1 | 22+81.27 | 25+42.27 | 26+77.53 | 95°06'14" | 24°00'00" | 261.01 | 396.27 | 0.060 | 300 | 30 MPH |
| M-1 | 10+25.54 | 11+57.70 | 12+60.23 | 65°42'48" | 28°00'00" | 132.16 | 234.69 | NA | NA | 25 MPH |
| M-2 | 12+60.23 | 14+07.65 | 15+15.73 | 71°32'26" | 28°00'00" | 147.42 | 255.50 | NA | NA | 25 MPH |

SURVEY CONTROL DETAILS

rnfortner 5/14/2015 10:27:06 AM
WORKSPACE: AHTD - Conway Western Arterial Loop\Drawings\PRJ.BS\PRJ.BS_SC_02.dgn
L:\2009\0901230
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 6 | ARK. | | | |
| JOB NO. | | 080396 | 56 | 168 |

(2) INTERCHANGE LAYOUT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

100 YR FLOODPLAIN LIMITS

BEGIN JOB 080396
STA. 7413+98.59

END JOB 080396
STA. 7458+15.13

C.L. MERGED RAMPS 3 & 4

C.L. MERGED RAMP 3 & 4 STA. 7449+63.52 =
C.L. RAMP 3 STA. 7441+34.94, 16.50' LT.
C.L. RAMP 4 STA. 7449+63.52, 16.50' RT.

C.L. MAIN LANE STA. 13+52.70 =
C.L. MERGED RAMP 3 & 4
STA. 7460+23.33

C.L. MAIN LANE STA. 20+00.00
C.L. I-40 STA. 7434+13.57

C.L. I-40
STA. 7441+06.21

C.L. RAMP 4

C.L. RAMP 3

C.L. MEDIAN I-40

C.L. I-40 STA. 7420+38.59, 59.58' RT. =
C.L. RAMP 1PC STA. 7420+38.59

C.L. I-40 STA. 7440+77.45

C.L. RAMP 1

C.L. RAMP 2

C.L. MAIN LANE
STA. 23+20.34, 23.88' LT. =
C.L. RAMP 2
STA. 7432+75.20, 12.50' LT.

C.L. HWY. 365 CONNECTOR

C.L. McCLURE ACRES RD.

C.L. HWY. 365

C.L. MAIN LANE STA. 26+75.73 =
C.L. HWY. 365 CONN. STA. 20+00.00

C.L. MAIN LANE STA. 26+87.92 =
C.L. RAMP 1 STA. 7434+41.21

C.L. MAIN LANES

C.L. HWY. 365 STA. 431+11.75 =
C.L. McCLURE ACRES STA. 10+00.00

C.L. HWY. 365 STA. 434+11.75 =
C.L. HWY. 365 CONN. STA. 27+03.75

C.L. MAIN LANES STA. 29+15.61 =
C.L. HWY. 365 STA. 439+72.34

## CURVE DATA

| CURVE | PC | PI | PT | Δ | D | TANGENT FEET | LENGTH FEET | e FT./FT. | Ls FEET | DESIGN SPEED |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-1 | 7420+38.59 | 7421+33.81 | 7422+28.87 | 5°42'30" | 3°00'00" | 95.22 | 190.28 | NA | NA | 70 MPH |
| 1-2 | 7423+99.00 | 7425+42.70 | 7426+76.48 | 36°46'01" | 13°15'00" | 143.71 | 277.49 | 0.100 | 300 | 40 MPH |
| 1-3 | 7431+37.34 | 7432+52.11 | 7433+61.70 | 29°43'42" | 13°15'00" | 114.77 | 224.36 | 0.100 | 300 | 40 MPH |
| 2-1 | 7431+65.85 | 7434+59.79 | 7436+84.32 | 67°24'04" | 13°00'00" | 293.94 | 518.47 | 0.100 | 250 | 40 MPH |
| 2-2 | 7440+39.38 | 7441+30.81 | 7442+22.02 | 6°50'57" | 3°45'00" | 91.43 | 182.64 | 0.069 | 215 | 50 MPH |
| 3-1 | 7444+97.30 | 7448+39.47 | 7451+33.15 | 52°27'30" | 8°15'00" | 342.17 | 635.86 | 0.100 | 290 | 50 MPH |
| 3-2 | 7456+25.34 | 7457+20.56 | 7458+15.62 | 5°42'30" | 3°00'00" | 95.22 | 190.28 | NA | NA | 70 MPH |
| 4-1 | 7440+29.10 | 7448+15.69 | 7449+63.52 | 121°28'30" | 13°00'00" | 786.59 | 934.42 | 0.100 | 300 | 40 MPH |
| 3&4 | 7449+63.52 | 7460+10.17 | 7460+23.33 | 132°48'11" | 12°31'51" | 1046.65 | 1059.81 | 0.100 | 300 | 40 MPH |
| | | | | | | | | | | |
| ML-1 | 30+98.10 | 37+32.12 | 42+91.88 | 47°45'04" | 4°00'00" | 634.02 | 1193.78 | NA | NA | 45 MPH |
| 40-1 | 7404+27.38 | 7418+12.40 | 7431+94.05 | 6°55'00" | 0°15'00" | 1385.02 | 2766.67 | NA | NA | 70 MPH |
| 40-2 | 7449+77.89 | 7466+49.60 | 7482+97.89 | 16°36'00" | 0°30'00" | 1671.71 | 3320.00 | NA | NA | 70 MPH |
| 365-1 | 439+52.50 | 452+36.94 | 465+02.50 | 17°00'00" | 0°40'00" | 1284.44 | 2550.00 | NA | NA | 55 MPH |
| C-1 | 22+81.27 | 25+42.27 | 26+77.53 | 95°06'14" | 24°00'00" | 261.01 | 396.27 | 0.060 | 300 | 30 MPH |
| M-1 | 10+25.54 | 11+57.70 | 12+60.23 | 65°42'48" | 28°00'00" | 132.16 | 234.69 | NA | NA | 25 MPH |
| M-2 | 12+60.23 | 14+07.65 | 15+15.73 | 71°32'26" | 28°00'00" | 147.42 | 255.50 | NA | NA | 25 MPH |

INTERCHANGE LAYOUT - MAIN LANES @ I-40 & HWY. 365

rnfortner 5/14/2015 10:28:51 AM
WORKSPACE: AHTD
L:\2009\090I7230 - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_IP_01.dgn
REVISED DATE:

| DATE | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 57 | 168 |

(2) PLAN & PROFILE - I-40

STA. 7413+68 IN PLACE
DROP INLET IN MEDIAN
WITH 18" X 252' R.C. PIPE OUTLET
CONNECTED TO D.I. @ STA. 7411+16
RETAIN

STA. 7414+00 IN PLACE
OVERHEAD HIGHWAY SIGN
EASTBOUND LANES
RETAIN

STA. 7415+00 IN PLACE
DROP INLET IN MEDIAN
WITH 18" X 118' C.M. PIPE
OUTLET ON LT.
RETAIN

STA. 7418+66 IN PLACE
DROP INLET IN MEDIAN
WITH 18" X 246' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7416+20
RETAIN

STA. 7416+20 IN PLACE
DROP INLET IN MEDIAN
WITH 18" X 120' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7415+00
RETAIN

STA. 7421+17 IN PLACE
DROP INLET IN MEDIAN
WITH 18" X 252' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7418+66
RETAIN

STA. 7425+00 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 102' R.C. PIPE
OUTLET ON LT.
RETAIN

STA. 7423+66 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 134' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7425+00
RETAIN

STA. 7426+14 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 114' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7425+00
RETAIN

STA. 7428+65 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 134' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7429+99
RETAIN

BEGIN JOB 080396
STA. 7413+98.59
L.M. = 131.95

C.L. I-40
P. I. = 7418+12.40
Δ = 6°55'00.0" LT.
D = 0°15'00"
T = 1385.02
L = 2766.67
P.C. = 7404+27.38
P.T. = 7431+94.05
e = NA
Ls = NA

STA. 18+00.92 TO STA. 21+01.08
CONSTRUCT 300'-2" X 40' BRIDGE
298'-0" CONTINUOUS COMPOSITE
PLATE GIRDER UNIT (90'-108'-100')

EXISTING LAWRENCE LANDING RD.

EXISTING R/W, C/A & FENCE

+50 139.94'

+90 141.84'

8' 24' 8'

+06.21

300' TAPER

C.L. MEDIAN I-40

7415+00

7420+00

7425+00

7426+00

36' DROP INLET

10'

6:12

200' TAPER

+98.59

PI 7418+12.40

440' DECELERATION LANE

PI 8047

PC 8000

PI 8002

PT 8004

PI 7421+33.81

PC 7420+38.59

PT 7422+28.87

PI 7425+42.70

PC 8003

PI 8004

PC 7423+99.00

PT 7426+76.48

N09°15'30"W

NOISE +743.10 175.51'

+38.59

+06.21

C.L. RAMP 1
P. I. = 7421+33.81
Δ = 5°42'30.0" RT.
D = 3°00'00"
T = 95.22
L = 190.28
P.C. = 7420+38.59
P.T. = 7422+28.87
e = NA
Ls = NA

C.L. RAMP 1
P. I. = 7425+42.70
Δ = 36°46'00.7" RT.
D = 13°15'00"
T = 143.71
L = 277.49
P.C. = 7423+99.00
P.T. = 7426+76.48
e = 0.100'/'
Ls = 300'

REMOVAL AND DISPOSAL OF GUARDRAIL I-40

| STA. | STA. | SIDE | UNIT |
|---|---|---|---|
| 7414+00 | 7417+20 | RT. | 320 LIN. FT. |

C.L. MEDIAN I-40 STATIONING
STA. 7414+00.00 TO STA. 7417+50.00 RT.

GUARDRAIL (TYPE A) = 350 LIN. FT.

GUARDRAIL TERMINAL (TYPE I) 1 EACH

+10 85.20'

+55.22 140' BEGIN PROP. C/A

+00 130'

C.L. RAMP 1

I-40

| STREAM ELEVATION | STATION | STREAM TYPE | TOP OF CHANNEL |
|---|---|---|---|
| UNNAMED TRIB. TO LAKE CONWAY | 7426+35 - 7426+65 | EPHERMAL | 770 FT. MSL |
| UNNAMED TRIB. TO LAKE CONWAY | 7433+48 - 7433+60 | EPHERMAL | 775 FT. MSL |

NOTCH, WIDEN AND OVERLAY RT. LANES

EXISTING GROUND @ OUTSIDE EDGE OF LANES

NOTCH, WIDEN AND OVERLAY LT. LANES

STA. 7425+42.24

STA. 7428+06.21

BEGIN JOB 080396
STA. 7413+98.59

PN: 81
PD: 5/8" REBAR W/2" CAP
ST: 7421+17.77
OF: 15.64' LT
ZC: 276.74

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

320 310 300 290 280 270 260 250 240 230

7414+00 7415+00 7416+00 7417+00 7418+00 7419+00 7420+00 7421+00 7422+00 7423+00 7424+00 7425+00 7426+00 7427+00 7428+00

rnfortner 5/14/2015 10:3h0 AM
WORKSPACE: AHTD
L:\2009\090117230 - Conway Western ArterialLoop\Drawings\PRJL_BS\PRJL_BS_PP_I-40_01.dgn
REVISED DATE:

| DATE | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 58 | 168 |

(2) PLAN & PROFILE - I-40

C.L. I-40
P.I. = 7418+12.40
Δ = 6°55'00.0" LT.
D = 0°15'00"
T = 1385.02
L = 2766.67
P.C. = 7404+27.38
P.T. = 7431+94.05
e = NA
Ls = NA

STA. 7428+65 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 134' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7429+99
RETAIN

STA. 7431+13 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 114' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7429+99
RETAIN

STA. 7432+76 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 164' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7431+13
RETAIN

STA. 7436+00 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 86' R.C. PIPE
OUTLET ON RT.
RETAIN

STA. 7440+00 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 400' R.C. PIPE OUTLET
CONNECTED TO D.I. @STA. 7436+00
RETAIN

STA. 7429+99 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 98' R.C. PIPE
OUTLET ON RT.
RETAIN

EXISTING R/W, C/A & FENCE
C.L. CONWAY LOOP
C.L. RAMP 4
C.L. RAMP 2
C.L. MEDIAN I-40
C.L. CONWAY LOOP STA. 20+00.00 = C.L. I-40 STA. 7434+13.57
Δ = 105°42'54"
S73°42'11"E
S00°34'55"W
S06°18'07"E
300' TAPER
1000' ACCELERATION LANE
700' ACCELERATION LANE
+41.15 65' BEGIN PROP. C/A
+20 54.62' END PROP. C/A
+11.81 77'
PC 7440+29.10
PT 7431+94.05
PT 8048
PC 8028
PC 8015
PT 8015
PC 8042
PT 8042
NOSE +06.21 57.71'
NOSE 7441+30.81 57.92'
NOSE 7441+77.45
PC 7440+39.38
PT 7442+22.02
7436+84.32
7434+59.79
7435+00.00
DROP INLET
MSE WALL
CONSTRUCTION LIMITS
EXISTING R/W, C/A & FENCE
I-40

| STREAM ELEVATION | STATION | STREAM TYPE | TOP OF CHANNEL |
|---|---|---|---|
| UNNAMED TRIB. TO LAKE CONWAY | 7426+35 - 7426+65 | EPHERMAL | 770 FT. MSL |
| UNNAMED TRIB. TO LAKE CONWAY | 7433+48 - 7433+60 | EPHERMAL | 775 FT. MSL |

NOTCH, WIDEN AND OVERLAY LT. LANES
NOTCH, WIDEN AND OVERLAY RT. LANES
EXISTING GROUND & OUTSIDE EDGE OF LANES
STA. 7439+55.64
STA. 7441+65.06

PN: 84
PD: ⅝" REBAR W/2" CAP
ST: 7430+67.70
OF: 15.63' RT
ZC: 280.25

PN: 85
PD: ⅝" REBAR W/2" CAP
ST: 7438+91.87
OF: 8.50' RT
ZC: 295.32

320 310 300 290 280 270 260 250 240 230

7429+00 7430+00 7431+00 7432+00 7433+00 7434+00 7435+00 7436+00 7437+00 7438+00 7439+00 7440+00 7441+00 7442+00 7443+00

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

rnfortner 5/14/2015 10:32:45 AM
WORKSPACE: AHTD
L:\2009\090T230 - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_PP_I-40_02.dgn
REVISED DATE:

| DATE | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 59 | 168 |

(2) PLAN & PROFILE - I-40

STA. 7444+00 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 400' R.C. PIPE OUTLET
CONNECTED TO D.I. ℄STA. 7448+00
RETAIN

C.L. RAMP 4

PRESERVE VEGETATION

STA. 7448+00 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 348' R.C. PIPE OUTLET
CONNECTED TO D.I. ℄STA. 7451+48
RETAIN

C.L. RAMP 3
P. I. = 7448+39.47
Δ = 52°27'29.7" LT.
D = 8°15'00"
T = 342.17
L = 635.86
P.C. = 7444+97.30
P.T. = 7451+33.15
e = 0.100'/'
Ls = 290'

STA. 7451+48 IN PLACE
DROP INLET IN MEDIAN
WITH 30" X 179' R.C. PIPE CULVERT
WITH HDWL. LT. & FES RT.
REMOVE HDWL. LT. AND CONSTRUCT
TYPE ST JUNCTION BOX (4' X 4' X H=7'-6")
WITH 30" X 56' R.C. PIPE CULVERT
13° LT. FWD. SKEW
(CLASS III) TYPE 3 BEDDING
WITH FES LT.
050 = 35 CFS DA= 10 ACRES

C.L. RAMP 3
P. I. = 7457+20.56
Δ = 5°42'30.0" LT.
D = 3°00'00"
T = 95.22
L = 190.28
P.C. = 7456+25.34
P.T. = 7458+15.62
e = NA
Ls = NA

STA. 7455+00 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 352' R.C. PIPE OUTLET
CONNECTED TO D.I. ℄STA. 7451+48
RETAIN

STA. 7457+32 IN PLACE
DROP INLET IN MEDIAN
WITH 24" X 232' R.C. PIPE OUTLET
CONNECTED TO D.I. ℄STA. 7455+00
RETAIN

C.L. MEDIAN I-40

CONSTRUCTION LIMITS

EXISTING R/W, C/A & FENCE

+50
61.37'
END
PROP.
C/A

S00°34'55"W

S06°38'30"W

DROP INLET

NOSE
+91.52
82.78'

CONSTRUCTION LIMITS

700'
ACCELERATION LANE

300'
TAPER

EXISTING R/W, C/A & FENCE

C.L. I-40
P. I. = 7466+49.60
Δ = 16°36'00.0" RT.
D = 0°30'00"
T = 1671.71
L = 3320.00
P.C. = 7449+77.89
P.T. = 7482+97.89
e = NA
Ls = NA

END JOB 080396
STA. 7458+15.13

I-40

NOTCH, WIDEN AND
OVERLAY RT. LANES

EXISTING GROUND ℄
OUTSIDE EDGE OF LANES

NOTCH, WIDEN AND
OVERLAY LT. LANES

PN: 86
PD: ⅝" REBAR W/2" CAP
ST: 1446+97.01
OF: 20.60' RT
ZC: 297.54

PN: 87
PD: ⅝" REBAR W/2" CAP
ST: 7455+32.99
OF: 26.08' LT
ZC: 294.89

STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

rnfortner 5/14/2015 10:34:08 AM
WORKSPACE: AHTD
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| FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 6 | ARK. | | | |
| JOB NO. | | 080396 | 60 | 168 |

(2) PLAN & PROFILE - RAMP I

C.L. LAWRENCE LANDING RD.

C.L. MEDIAN I-40

C.L. CONWAY LOOP STA. 26+87.92 =
C.L. RAMP I STA. 7434+41.21
Δ = 90°

PRESERVE VEGETATION

C.L. CONWAY LOOP

C.L. RAMP I

S46°01'31"W

S73°42'11"E

S16°17'49"W

POE 300p

EXISTING R/W, C/A & FENCE

+10
85.20
BEGIN PROP. ℄ C/A

+55.22
140'
BEGIN PROP. C/A

+00
130'

+40
140'

+66.08
90'

+95
120'

+00
125'

+79
140'
END PROP. C/A

C.L. RAMP 1
P.I. = 7421+33.81
Δ = 5°42'30.0" RT.
D = 3°00'00"
T = 95.22
L = 190.28
P.C. = 7420+38.59
P.T. = 7422+28.87
e = NA
Ls = NA

C.L. RAMP 1
P.I. = 7425+42.70
Δ = 36°46'00.7" RT.
D = 13°15'00"
T = 143.71
L = 277.49
P.C. = 7423+99.00
P.T. = 7426+76.48
e = 0.100'/'
Ls = 300'

STA. 7426+50 IN PLACE
TRIPLE 8' X 4' X 104' R.C. BOX CULVERT
30° LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 701 CFS DA = 406 ACRES
SPAN = 30.79'
RETAIN

C.L. RAMP 1
P.I. = 7432+52.11
Δ = 29°43'41.9" LT.
D = 13°15'00"
T = 114.77
L = 224.36
P.C. = 7431+37.34
P.T. = 7433+61.70
e = 0.100'/'
Ls = 300'

RAMP I

STA. 7421+74.00 BEGIN SUPERELEVATION
STA. 7424+74.00 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7426+01.48 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7429+01.48 END SUPERELEVATION

STA. 7429+12.84 BEGIN SUPERELEVATION
STA. 7432+12.84 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7432+46.39 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7434+11.99 SUPERELEVATION (S.E. = .034'/')

C.L. MEDIAN I-40
STA. 7423+43.09
C.L. RAMP I STA. 7423+44.25
STA. 7423+44.45
ELEV. 277.45
7.50' LT.

PVC 7424+00.00
ELEV 277.26

-0.84%

VC=400.00'
K 77.82

PVI 7428+00.00
ELEV. 286.18

PROFILE GRADE

4.80%

EXISTING GROUND

Q50 ELEV. = 273.68

PVI 7426+00.60
ELEV 276.88
P.G. 279.15

PN: BL
PD: 5/8" REBAR W/2" CAP
ST: 7421+14.39
OF: 77.02' LT
ZC: 276.74

F.L. = 268.39 (RT.)
F.L. = 268.91 (LT.)

PVC 7431+50.00
ELEV. 302.98

VC=200.00'
K 77.43

PVI 7432+50.00
ELEV. 307.78
P.G. 307.08

PVT 7433+50.00
ELEV. 309.78

2.00%

C.L. CONWAY LOOP
STA. 25+90.46
29.82' RT.
C.L. RAMP I
STA. 7434+11.99
7.50' LT.
ELEV. 311.01

CONWAY LOOP

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-14-15

330 320 310 300 290 280 270 260 250 240

7420+00 7421+00 7422+00 7423+00 7424+00 7425+00 7426+00 7427+00 7428+00 7429+00 7430+00 7431+00 7432+00 7433+00 7434+00 7435+00

rnfortner 5/14/2015 10:35:35 AM
WORKSPACE: AHTD
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| FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 6 | ARK. | | | |
| JOB NO. | | 080396 | 61 | 168 |

PLAN & PROFILE - RAMP 2

C.L. CONWAY LOOP STA. 20+00.00
C.L. I-40 STA. 7434+13.57
Δ = 105°42'54"

C.L. MEDIAN I-40

C.L. RAMP 4

C.L. CONWAY LOOP

CONSTRUCTION LIMITS

EXISTING R/W, C/A & FENCE

CONWAY LOOP STA. 22+48 IN PLACE
10' X 7' X 287' R.C. BOX CULVERT
19° LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 738 CFS DA = 395 ACRES
RETAIN

C.L. RAMP 2
P.I. = 7434+59.79
Δ = 67°24'03.5" RT.
D = 13°00'00"
T = 293.94
L = 518.47
P.C. = 7431+65.85
P.T. = 7436+84.32
e = 0.100'/'
Ls = 250'

C.L. RAMP 2
P.I. = 7441+30.81
Δ = 6°50'56.7" RT.
D = 3°45'00"
T = 91.43
L = 182.64
P.C. = 7440+39.38
P.T. = 7442+22.02
e = 0.069'/'
Ls = 215'

STA. 7435+40 IN PLACE
24" X 101' R.C. PIPE CULVERT
(CLASS IV) TYPE 3 BEDDING
WITH FES RT.
Q50 = 14 CFS DA = 3 ACRES
RETAIN

CONCRETE DITCH PAVING (TYPE B)

| STA. | STA. | SIDE | "W" | SQ. YDS. |
|---|---|---|---|---|
| 7437+70 | 7440+00 | RT. = 230 LIN. FT. | 6'-0" | 153 |

700' ACCELERATION LANE

RAMP 2

C.L. CONWAY LOOP STA. 24+88.32 BEGIN SUPERELEVATION
STA. 7433+68.17 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7436+21.82 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7438+71.82 END SUPERELEVATION

STA. 7438+28.13 BEGIN SUPERELEVATION
STA. 7440+93.13 MAXIMUM SUPERELEVATION (S.E. = .069'/')
STA. 7441+69.27 MAXIMUM SUPERELEVATION (S.E. = .069'/')
STA. 7443+83.27 END SUPERELEVATION

CONWAY LOOP
C.L. STA. 23+31.34
28.15' LT.

C.L. RAMP 2
STA. 7432+74.42
Z 1.50
ELEV. 307.29

PVI 7434+00.00
ELEV. 307.92
P.G. 307.00

PVC 7433+00.00
ELEV. 307.42

PVC 7435+00.00
ELEV. 307.58

PVT 7435+00.00
ELEV. 304.75

PROFILE GRADE

CONWAY LOOP

VC=200.00'
K 54.50

3.17%

EXISTING GROUND

0.50%

5.15% RIGHT DITCH GRADE

0.30% RIGHT DITCH GRADE

0.85%

END PAVING
BEGIN GRADING AND PAVING
STA. 7437+70.00
ELEV. 297.64

VC=400.00'
K 99.50

+70.00 RT. 289.79
+00.00 RT. 291.33

PVI 7438+00.00
ELEV. 295.24
P.G. 297.25

+00.00 RT. 291.93

PVT 7440+00.00
ELEV. 296.94

C.L. MEDIAN I-40
STA. 7440+77.45
57.92' LT.

C.L. RAMP 2
STA. 7440+77.95
7.50' LT.
ELEV. 297.66

F.L. = 272.58 (LT.)
F.L. = 273.32 (RT.)

F.L. = 28.63 (LT.)
F.L. = 277.94 (RT.)

PN: 84
PD: 5/8" REBAR W/2" CAP
ST: 7433+40.87
OF: 418.28' LT
ZC: 280.25

PN: 85
PD: 5/8" REBAR W/2" CAP
ST: 7438+98.61
OF: 68.39' LT
ZC: 295.32

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

rnfortner 5/14/2015 10:43:29 AM
WORKSPACE: AHTD
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REVISED DATE:

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| FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
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| 6 | ARK. | | | |
| JOB NO. | | 080396 | 62 | 168 |

2 PLAN & PROFILE - RAMP 3

C.L. MERGED RAMPS 3 & 4
P. I. = 7460+10.17
Δ = 132°48'11.0" LT.
D = 12°31'51.2
T = 1046.65
L = 1059.81
P.C. = 7449+63.52
P.T. = 7460+23.33
e = 0.100'/'
Ls = 300'

C.L. RAMP 4
P. I. = 7448+15.69
Δ = 121°28'29.7" LT.
D = 13°00'00"
T = 786.59
L = 934.42
P.C. = 7440+29.10
P.T. = 7449+63.52
e = 0.100'/'
Ls = 300'

C.L. RAMP 3
P. I. = 7448+39.47
Δ = 52°27'29.7" LT.
D = 8°15'00"
T = 342.17
L = 635.86
P.C. = 7444+97.30
P.T. = 7451+33.15
e = 0.100'/'
Ls = 290'

C.L. RAMP 3
P. I. = 7457+20.56
Δ = 5°42'30.0" LT.
D = 3°00'00"
T = 95.22
L = 190.28
P.C. = 7456+25.34
P.T. = 7458+15.62
e = NA
Ls = NA

MERGED RAMP 3 & 4
STA. 7449+75 IN PLACE
24" X 140' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 12 CFS DA = 4 ACRES
RETAIN

STA. 7444+40 IN PLACE
24" X 87' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 19 CFS DA = 5 ACRES
RETAIN

I-40 STA. 7451+48 IN PLACE
DROP INLET IN MEDIAN
WITH 30" X 179' R.C. PIPE CULVERT
WITH HDWL. LT. & FES RT.
REMOVE HDWL. LT. AND CONSTRUCT
TYPE ST JUNCTION BOX (4' X 4' X H=7'-6")
WITH 30" X 56' R.C. PIPE CULVERT
13° LT. FWD. SKEW
(CLASS III) TYPE 3 BEDDING
WITH FES LT.
Q50 = 35 CFS DA= 10 ACRES

C.L. MERGED RAMPS 3 & 4
C.L. RAMP 3 STA. 7441+34.94, 16.50' RT.
C.L. RAMP 4 PT STA. 7449+63.52, 16.50' RT.

PRESERVE VEGETATION

PRESERVE VEGETATION

C.L. MERGED RAMPS 3 & 4

C.L. RAMP 4

C.L. RAMP 3

EXISTING R/W, C/A & FENCE

CONSTRUCTION LIMITS

C.L. MEDIAN I-40

EXISTING R/W, C/A & FENCE

RAMP 3

STA. 7441+34.94 SUPERELEVATION (S.E. = .0525'/')
STA. 7443+16.12 END SUPERELEVATION
STA. 7443+16.12 BEGIN SUPERELEVATION
STA. 7446+06.12 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7450+60.65 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7453+50.65 END SUPERELEVATION

C.L. RAMP 3
STA. 7441+34.94 (-7.5' RT.*)
ELEV. 292.66

C.L. MERGED RAMPS 3 & 4
STA. 7442+63.52 (9.0' RT.)
ELEV. 292.66

PVI 7442+116.00
ELEV. 293.70
P.G. 293.50

PVC 7441+41.00
ELEV. 292.73

PVT 7442+91.00
ELEV. 293.87

-3.0%

VC=150.00'
K=138.89

PROFILE GRADE

EXISTING GROUND

0.22%

END PAVING
BEGIN GRADING AND PAVING
STA. 7450+00.00
ELEV. 295.42

TOP = 295.56
INV. = 288.06
F.L. = 286.89 (LT.)

F.L. = 284.65 (RT.)
F.L. = 284.47 (LT.)

C.L. MED. AV. I-40
STA. 7451+92.78
C.L. RAMP 3
STA. 7453+88.97, 7.5' RT.
ELEV. 296.28

PN: 86
PD: 5/8" REBAR W/2" CAP
ST: 7448+15.95
OF: 275.95' RT
ZC: 297.54

PN: 87
PD: 5/8" REBAR W/2" CAP
ST: 7455+34.02
OF: 55.10' RT
ZC: 294.89

STATE OF ARKANSAS
TODD E. MUELLER
REGISTERED PROFESSIONAL ENGINEER
No. 11855
5-19-15

rnfortner 5/14/2015 10:44:44 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 63 | 168 |

(2) PLAN & PROFILE - RAMP 4

**C.L. MERGED RAMPS 3 & 4**
P. I. = 7460+10.17
Δ = 132°48'11.0" LT.
D = 12°31'51.2
T = 1046.65
L = 1059.81
P. C. = 7449+63.52
P. T. = 7460+23.33
e = 0.100'/'
Ls = 300'

**C.L. RAMP 4**
P. I. = 7448+15.69
Δ = 121°28'29.7" LT.
D = 13°00'00"
T = 786.59
L = 934.42
P. C. = 7440+29.10
P. T. = 7449+63.52
e = 0.100'/'
Ls = 300'

MERGED RAMP 3 & 4
STA. 7449+75 IN PLACE
24" X 140' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 12 CFS DA = 4 ACRES
RETAIN

C.L. MERGED RAMP 3 & 4 PC STA. 7449+63.52 =
C.L. RAMP 3 STA. 7441+34.94, 16.50' LT.
C.L. RAMP 4 PT STA. 7449+63.52, 16.50' RT.

BEGIN CONCRETE BARRIER WALL STA. 7448+25.00

PRESERVE VEGETATION

C.L. RAMP 2

C.L. RAMP 4

C.L. RAMP 3

C.L. MEDIAN I-40

EXISTING R/W, C/A & FENCE

CONSTRUCTION LIMITS

ACCELERATION LANE 1000'

PC 7440+29.10

PT 7441+30.81

PC 7442+22.02

PT 7444+97.30

PC 7449+63.52

PT 7450+00

PC 7445+00

PT 7445+00

PC 7441+39.38

+06.21

+70 120'

+00 65'

N

RAMP 4

STA. 7439+17.80 BEGIN SUPERELEVATION
STA. 7442+17.80 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7449+63.52 MAXIMUM SUPERELEVATION (S.E. = .100'/')

C.L. MEDIAN I-40
STA. 7441+06.21, 97.7' LT. =
C.L. RAMP 4
STA. 7441+05.30, 7.5' RT.
ELEV. 297.72

PVI 7441+00.00
ELEV. 298.50
P.S. 298.20

PVC 7443+00.00
ELEV. 298.30

VC=200.00'
K=105.00

PVT 7445+00.00
ELEV. 297.30

C.L. RAMP 4
STA. 7449+63.52, 7.5' RT. =
C.L. MERGED RAMPS 3 & 4
STA. 7449+63.52, 9.0' RT.
ELEV. 291.27

0.30%

-.30%

PROFILE GRADE

EXISTING GROUND

PN: 85
PD: 5/8" REBAR W/2" CAP
ST: 7438+91.87
OF: 17.01' RT
ZC: 295.32

PN: 86
PD: 5/8" REBAR W/2" CAP
ST: 7444+29.87
OF: 405.69' RT
ZC: 297.54

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11855
TODD E. MUELLER
5-19-15

rnfortner 5/14/2015 10:46:12 AM
WORKSPACE: AHTD
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 64 | 168 |

(2) PLAN & PROFILE - MERGED RAMPS 3 & 4

C.L. MERGED RAMPS 3 & 4
P. I. = 7460+10.17
Δ = 132°48'11.0" LT.
D = 12°31'51.2
T = 1046.65
L = 1059.81
P. C. = 7449+63.52
P. T. = 7460+23.33
e = 0.100'/'
Ls = 300'

C.L. RAMP 4
P. I. = 7448+15.69
Δ = 121°28'29.7" LT.
D = 13°00'00"
T = 786.59
L = 934.42
P. C. = 7440+29.10
P. T. = 7449+63.52
e = 0.100'/'
Ls = 300'

C.L. RAMP 3
C.L. RAMP 4
BEGIN CONCRETE BARRIER WALL RAMP 4 STA. 7448+25.00
C.L. MERGED RAMP 3 & 4 PC STA. 7449+63.52 =
C.L. RAMP 3 STA. 7441+34.94, 16.50' LT. ~
C.L. RAMP 4 PT STA. 7449+63.52, 16.50' RT.
PT 7449+63.52
PC 7449+63.52
EXISTING R/W, C/A & FENCE
PRESERVE VEGETATION
C.L. MERGED RAMPS 3 & 4
C.L. CONWAY LOOP
END CONCRETE BARRIER WALL CONWAY LOOP STA. 13+77.70
PT 7460+23.33
POB 8208
POB 8209
POB 8206
POB 8207
7460+00
7455+00
7450+00
20' R
15'
6'
+70 120'
+70 100'
+65 100'
+95.72 106.90'
+67.90 200'
+10 245'
+40 245.65'
+15 160'
+60 215'
+83.96 286.71'
+01.07 110.92'
+65 263.52'
+90.61 92.85'
POB 8135
PC 8136
PI 8137
PT 8138
EXIST. MOORE LANE
EXISTING R/W
POND
LEVEE
N 73°42'11" W
S 59°05'00" W 54'

STA. 7449+75 IN PLACE
24" X 140' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 12 CFS DA = 4 ACRES
RETAIN

STA. 7453+75 IN PLACE
24" X 126' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 17 CFS DA = 8 ACRES
RETAIN

STA. 7454+33 CONSTRUCT
TYPE SPECIAL DROP INLET H=3'-6"
WITH 24" X 59' R.C. PIPE OUTLET ON RT.
(CLASS III) TYPE 3 BEDDING WITH FES.
Q50 = 14 CFS DA = 1 ACRES

STA. 7455+77 IN PLACE
24" X 130' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 14 CFS DA = 5 ACRES
RETAIN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

MERGED RAMPS 3 & 4

STA. 7449+63.52 LT. LANES SUPERELEVATION (S.E. = .00'/')
STA. 7449+63.52 RT. LANES SUPERELEVATION (S.E. = .0525'/')
STA. 7450+82.34 RT. LANES MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7459+48.33 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7460+23.33 SUPERELEVATION (S.E. = .070'/')

C.L. MERGED RAMPS 3 & 4
STA. 7449+63.52
ELEV. 292.17

C.L. RAMP 3
STA. 7441+34.94, 16.5' RT.

C.L. RAMP 4
STA. 7449+63.52, 16.5' RT.

PVC 7453+00.00
ELEV. 287.80

PROFILE GRADE

VC=400.00'
K 102.56

PVT 7457+00.00
ELEV. 290.40

EXISTING GROUND

C.L. CONWAY LOOP
STA. 13+52.70 =
C.L. MERGED RAMPS 3 & 4
STA. 7460+23.33
ELEV. 298.81

-1.30%
2.60%

PVI 7455+00.00
ELEV. 285.20
P.S. 2.85

F.L. = 280.77 (LT.)
F.L. = 277.44 (RT.)

F.L. = 276.70 (RT.)
F.L. = 277.60 (LT.)

F.L. = 280.56 (RT.)

F.L. = 277.70 (LT.)
F.L. = 276.84 (RT.)

PN: 85
PD: 5/8" REBAR W/2" CAP
ST: 7453+12.09
OF: 982.86' LT
ZC: 295.32

330 320 310 300 290 280 270 260 250 240

7449+00 7450+00 7451+00 7452+00 7453+00 7454+00 7455+00 7456+00 7457+00 7458+00 7459+00 7460+00 7461+00

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WORKSPACE: AHTD
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 65 | 168 |

# PLAN & PROFILE - CONWAY LOOP

| C.L. CONWAY LOOP STATIONING | GUARDRAIL (TYPE A) | THRIE BEAM GUARDRAIL TERMINAL | GUARDRAIL TERMINAL (TYPE I) | GUARDRAIL TERMINAL (TYPE 2) |
|---|---|---|---|---|
| STA. 16+60.39 TO STA. 18+79.14 RT. | = 150 LIN. FT. | 1 EACH | | 1 EACH |
| STA. 17+74.14 TO STA. 18+67.89 LT. | = 75 LIN. FT. | 1 EACH | 1 EACH | |
| STA. 21+20.11 TO STA. 22+13.86 RT. | = 75 LIN. FT. | 1 EACH | 1 EACH | |

C.L. MERGED RAMPS 3 & 4
PT 7460+23.33
END CONCRETE BARRIER WALL STA. 13+77.70
STA. 18+39.75 CONSTRUCT TYPE N-2 DI. LT. 12" X 34' Z.C.C.S.P. OUTLET ON LT.
STA. 17+19.14
STA. 17+64.14
STA. 17+74.14
RETAINING WALL
C.L. RAMP 2
STA. 21+36.99 CONSTRUCT TYPE N-2 DI. LT. 12" X 52' Z.C.C.S.P. OUTLET ON LT.
C.L. CONWAY LOOP STA. 24+40.64 = C.L. RAMP 2 STA. 7431+65.85
CRASH CUSHION TYPE TL-2
+38.72 113.66'
EXISTING R/W, C/A & FENCE
+34.99 105.00'
C.L. CONWAY LOOP STA. 26+75.73 = C.L. HWY. 365 CONN. STA. 20+00.00
Δ = 80°
C.L. HWY. 365 CONNECTOR
PC 7431+65.85
+00 135'
PT 7460+00
+15 160'
+01.07 110.92'
+90.61 92.85'
320' TAPER
+00 75'
+41.15 65' BEGIN PROP C/A
+00 90
EXISTING R/W, C/A & FENCE
+72.70
STA. 16+11.39
STA. 16+50.39
STA. 16+60.39
C.L. CONWAY LOOP STA. 13+52.70 = C.L. MERGED RAMP 3 & 4 PT STA. 7460+23.33
EXISTING R/W
STA. 18+51.00 CONSTRUCT TYPE N-2 DI. RT. 12" X 24' Z.C.C.S.P. OUTLET ON RT.
C.L. CONWAY LOOP STA. 20+00.00 = C.L. Q-40 STA. 7434+13.57
Δ = 105°42'54"
C.L. MEDIAN I-40
EXISTING R/W, C/A & FENCE
PARKING
EXIST. MOORE LANE
PC 8136
+60 215'
+65 263.52'
N
PT 7431+94.06
S00°34'55"W
S73°42'11"E
24.34'-59'-29"
+39.64
STA. 22+23.86
STA. 22+68.86
+39.64
150' TAPER
160' TAPER
C.L. CONWAY LOOP
STA. 21+48.45 CONSTRUCT TYPE N-2 DI. RT. 12' X 33' Z.C.C.S.P. OUTLET ON RT.
STA. 22+48 IN PLACE 10' X 7' X 287' R.C. BOX CULVERT 19° LT. FWD. SKEW WITH 3:1 WINGS LT. & RT. Q50 = 738 CFS DA = 395 ACRES RETAIN
C.L. CONWAY LOOP STA. 26+87.92 = C.L. RAMP 1 STA. 7434+41.21
Δ = 90°
PT 7433+61.70
C.L. RAMP 1
PT 7432+52.11
CONWAY LOOP
NOSE +31.64 28.53'
PC 25+00
PC 7435+00
PT 7435+00
PC 7436+49.49
PT 7436+49.49
S06°17'49"W
125' R
75' R
13.5'
36.97'
36.34'
38'
30'
24'
8'
20'
14'
36'
10'
6'
4'
DROP INLET

STA. 13+52.70 SUPERELEVATION (S.E. = .070'/')
STA. 15+77.70 END SUPERELEVATION (N.C.)
STA. 13+52.70 CONWAY LOOP
STA. 7460+23.33 C.L. MERGED RAMPS 3 & 4
ELEV. 293.83
PVC 16+00.00
ELEV. 307.32
2.60%
EXISTING GROUND
BEGIN BRIDGE STA. 18+33.88
PVI 19+00.00
ELEV. 313.82
P.G. 311.26
VC=300.00'
K 121.95
END BRIDGE STA. 21+04.13
PROFILE GRADE
PVI 21+80.00
ELEV. 310.07
-1.50%
PVC 23+00.00
ELEV. 308.27
VC=400.00'
K 80.00
3.50%
PVI 25+00.00
ELEV. 305.27
P.G. 307.77
PVI 27+00.00
ELEV. 312.27
FUTURE I-40
EXISTING I-40
F.L. = 273.32 (LT.)
F.L. = 272.45 (RT.)

PN: 35
PD: 5/8" REBAR W/2" CAP
ST: 18+88.26
OF: 465.43' LT
ZC: 295.32

PN: 84
PD: 5/8" REBAR W/2" CAP
ST: 21+08.42
OF: 328.94' RT
ZC: 280.25

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REGISTERED PROFESSIONAL ENGINEER
No. 11845
TODD R. MUELLER
5-19-15

330 320 310 300 290 280 270 260 250 240
14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00

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| | | | | JOB NO. | | 080396 | 66 | 168 |

(2) PLAN & PROFILE - CONWAY LOOP

C.L. HWY. 365

STA. 28+08.89 CONSTRUCT TYPE N-3 DI. LT. 12" X 40' Z.C.C.S.P. OUTLET ON LT.

C.L. HWY. 365 CONNECTOR

125' R

8'

N11°24'38"E

PC 439+52.45 S73°42'11"E

POE 80+08.05

POB 80+03.49 W

S16°17'49"W

20'

125' R

160' TAPER

+35.73

C.L. RAMP 1

STA. 28+14.48 CONSTRUCT TYPE N-3 DI. RT. 12" X 51' Z.C.C.S.P. OUTLET ON RT.

4'

16'

+00 125'

+79 140' END PROP. C/A

POB 74+75.83

PI 74+32.11

PROPOSED R/W, C/A & FENCE

+80.08 145'

+84.76 145'

C.L. HWY. 365

EXIST. UPRR

+52.94 150'

PERMANENT CONSTRUCTION EASEMENT

+53.11 152.37'

+35 160'

EXISTING R/W

EXIST. STURGIS RD.

+00 150'

+49.74 321.94'

C.L. CONWAY LOOP STA. 29+15.61 = C.L. HWY. 365 STA. 439+72.34
Δ = 95°01'42"

C.L. CONWAY LOOP

PC 439+52.45 80+41

30+00

PC 80+50

8'

24'

24'

8'

PC 30+98.10

JOB NO. 080396 JOB NO. 080431

+87.00 151.76'

+96.49 150'

+25 142.37'

EXISTING R/W

+01.88 93.07'

+15.74 105'

STA. 33+00.00 END JOB 080396

+55 74.17'

+00 100'

PI 37°32.12

PI 8031

JOB 080430 R/W

JOB 080430 CONSTRUCTION

+52.99 113.51'

| C.L. CONWAY LOOP STATIONING | GUARDRAIL (TYPE A) | THRIE BEAM GUARDRAIL TERMINAL | GUARDRAIL TERMINAL (TYPE I) | GUARDRAIL TERMINAL (TYPE 2) |
|---|---|---|---|---|
| STA. 26+91.86 TO STA. 28+42.72 RT. | = 175 LIN. FT. | 1 EACH | | 1 EACH |
| STA. 27+43.37 TO STA. 28+37.12 LT. | = 75 LIN. FT. | 1 EACH | 1 EACH | |

C.L. CONWAY LOOP
P.I. = 37+32.12
Δ = 47°45'04.5" RT.
D = 4°00'00"
T = 634.02
L = 1193.78
P.C. = 30+98.10
P.T. = 42+91.88
e = NA
Ls = NA

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

N

CONWAY LOOP

PVT 27+00.00 ELEV. 312.27

3.50%

PROFILE GRADE

PVC 28+40.00 ELEV. 312.17

BEG. IN BR. DGE STA. 28+50.81

END BRIDGE STA. 30+87.49

PVI 32+40.00 ELEV. 331.17 P.G. 326.15

1.52%

END PAVING STA. 33+69.72 ELEV. 326.91

EXISTING GROUND

VC=800.00' K 159.36

PVT 36+40.00 ELEV. 325.09

1.52%

PN: 8
PD: 5/8" REBAR W/2" CAP
ST: 35+51.87
OF: 115.83' RT
ZC: 303.11

340 330 320 310 300 290 280 270 260 250

27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00

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| 6 | ARK. | | | |
| JOB NO. | | 080396 | 67 | 168 |

PLAN & PROFILE - HWY. 365

STA. 432+05 IN PLACE
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 432+60 IN PLACE
20" X 25' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 434+05 IN PLACE
12" X 30" PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 435+55 IN PLACE
18" X 20' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 436+55 IN PLACE
20" X 24' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 436+95 IN PLACE
18" X 24' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 438+50 IN PLACE
18" X 18' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

C.L. HWY. 365
P. I. = 452+36.94
Δ = 17°00'00.0" LT.
D = 0°40'00"
T = 1284.44
L = 2550.00
P.C. = 439+52.50
P.T. = 465+02.50
e = NA
Ls = NA

STA. 438+85 IN PLACE
18" X 25' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 434+83 IN PLACE
DBL. 6' X 3' X 51' R.C. BOX CULVERT
WITH WINGS RT. & SPECIAL WINGS LT.
RETAIN AND EXTEND 16' LT
AND EXTEND 52' RT
30° RT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 193 CFS DA = 70 ACRES

100' TRANSITION TO MATCH EX.

330' TAPER

150' 110' TAPER 220' TAPER

EXIST. UPRR

STA. 439+00 CONSTRUCT
DBL. 29" X 18" X 65' R.C.A.P. CULVERT
CLASS III TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 12 CFS DA = 3 ACRES

BEGIN HWY. 365
STA. 430+74.37

C.L. HWY. 365 STA. 431+11.75 =
C.L. McCLURE ACRES RD. STA. 10+00.00

C.L. HWY. 365 STA. 434+11.75 =
C.L. HWY. 365 CONN. STA. 27+03.75

TCE

CONSTRUCTION LIMITS

PCE

C.L. HWY. 365

C.L. HWY. 365 DRIVEWAY

STA. 430+70 IN PLACE
18" X 22' PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH
0.0 CU. YDS.

EXISTING R/W

STRIPED ISLAND

BEGIN C/A AND FENCE

EXISTING R/W C/A & FENCE

CONSTRUCTION LIMITS

C.L. CONWAY LOOP STA. 29+15.61 =
C.L. HWY. 365 STA. 439+72.34

330' TAPER

CONCRETE ISLAND (TYPE C)

C.L. HWY. 365 CONNECTOR

END HWY. 365
STA. 439+21.75

C.L. CONWAY LOOP

100' TRANSITION TO MATCH EX.

C.L. McCLURE ACRES RD.

OBLITERATE EXISTING ROADWAY

STATE OF ARKANSAS
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No. 11835
TODD E. MUELLER
5-19-15

STA. 430+74.37
100' TRANSITION TO MATCH EX.
NOTCH, WIDEN AND OVERLAY
EXISTING GROUND
0.17% LEFT DITCH GRADE
+88.00 LT. 286.75 ℄
+36.00 LT. 286.35 ℄
+24.00 RT. 282.65 ℄
F.L. = 283.08 LT.
F.L. = 282.63 RT.
0.36% RIGHT DITCH GRADE
STA. 439+21.75
100' TRANSITION TO MATCH EX.
0.18% LT. DT. GRADE
F.L. = 284.32 LT.
F.L. = 284.00 RT.
+00.00 RT. 284.00 ℄
+00.00 LT. 284.32 ℄
+25.00 LT. 284.55 ℄

PN: 85
PD: 5/8" REBAR W/2" CAP
ST: 434+20.93
OF: 983.85' RT
ZC: 295.32

330 320 310 300 290 280 270 260 250 240

427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00

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(2) PLAN & PROFILE - HWY. 365 CONNECTOR

C.L. HWY. 365 CONNECTOR
P.I. = 25+42.27
Δ = 95°06'14.3" RT.
D = 24°00'00"
T = 261.06
L = 396.27
P.C. = 22+81.27
P.T. = 26+77.53
e = 0.060'/'
Ls = 300'

OBLITERATE EXISTING ROADWAY

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

STA. 22+80 IN PLACE
8' X 4' X 168' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
Q50 = 210 CFS DA = 73 ACRES
RETAIN

C.L. CONWAY LOOP
C.L. RAMP 1
C.L. CONWAY LOOP STA. 26+87.92 = C.L. RAMP 1 STA. 7434+41.21 ∠ = 90°
C.L. CONWAY LOOP STA. 26+75.73 = C.L. HWY. 365 CONN. STA. 20+00.00 ∠ = 100°
C.L. HWY. 365 CONNECTOR
C.L. McCLURE ACRES RD.
C.L. HWY. 365
EXISTING R/W
EXISTING R/W C/A & FENCE
CONSTRUCTION LIMITS
PT 7433+61.70
PC 7435+52.08
PC 22+81.27
PI 25+42.27
PT 26+15.73
PC 2+60.23
PC 10+25.64
PT 11+57.70
PCE
TCE
EXISTING U.P.R.R.
C.L. HWY. 365 STA. 434+11.75 = C.L. HWY. 365 CONN. STA. 27+03.75 ∠ = 90°
C.L. HWY. 365 CONN. STA. 431+11.75 = C.L. McCLURE ACRES RD. STA. 10+00.00 ∠ = 75°
BEGIN C/A & FENCE
END PROP. C/A
END FENCE
S06°17'49"W
S73°42'11"E
N11°24'03"E
HWY. 365 CONNECTOR

STA. 20+56.27 BEGIN SUPERELEVATION
STA. 23+56.27 MAXIMUM SUPERELEVATION (S.E. = .060'/')
STA. 23+77.53 MAXIMUM SUPERELEVATION (S.E. = .060'/')
STA. 26+77.53 END SUPERELEVATION

C.L. CONWAY LOOP STA. 26+70.45, 30.00' LT. = C.L. HWY. 365 CONN. STA. 20+36.46, ELEV. 310.69
PVC 20+50.00 OG, ELEV. 310.30
PVI 21+50.00, ELEV. 308.30, P.G. 307.33
VC=200.00', K 5.28
CONWAY LOOP
PROFILE GRADE
PVT 22+50.00, ELEV. 302.40
PVC 23+80.00, ELEV. 294.73
END PAV'NG BEG'N GRADING AND PAVING STA. 24+75.00, ELEV. 290.25
VC=280.00', K 38.78
EXISTING GROUND
PVI 25+20.00, ELEV. 286.47, P.G. 289.00
80.00 RT. 280.77
68.00 RT. 282.63
1:1 SLOPE DITCH GRADE
F.L. = 279.77 (R.T.)
F.L. = 276.82 (L.T.)
PN: 85
PD: 5/8" REBAR W/2" CAP
ST: 23+58.70
OF: 746.03' LT
ZO: 295.32
PVT 26+60.00, ELEV. 288.32
C.L. HWY. 365 CONN. STA. 26+35.75, 18.00' RT. = C.L. HWY. 365 STA. 436+03.66, ELEV. 288.66

330 320 310 300 290 280 270 260 250 240
20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00

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PLAN & PROFILE - McCLURE ACRES RD.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

N

C.L. HWY. 365 CONNECTOR
EXISTING R/W, C/A & FENCE
CONSTRUCTION LIMITS
C.L. HWY. 365 STA. 434+11.75 = C.L. HWY. 365 CONN. STA. 27+03.75
CONSTRUCTION LIMITS
TCE
C.L. HWY. 365 STA. 431+11.75 = C.L. McCLURE ACRES RD. STA. 10+00.00
C.L. HWY. 365
EXISTING R/W
C.L. McCLURE ACRES RD.
50' TRANSITION TO MATCH EXISTING
EXISTING R/W
CONSTRUCTION LIMITS
END McCLURE ACRES RD. STA. 15+15.73
OBLITERATE EXISTING ROADWAY
McCLURE ACRES RD.
C.L. RAMP 2
CONCRETE
DROP INLET

| C.L. McCLURE ACRES RD. | C.L. McCLURE ACRES RD. |
|---|---|
| P.I. = 11+57.70 | P.I. = 14+07.65 |
| Δ = 65°42' 48.3" RT. | Δ = 71°32' 25.8" RT. |
| D = 28°00' 00" | D = 28°00' 00" |
| T = 132.16 | T = 147.42 |
| L = 264.69 | L = 255.50 |
| P.C. = 10+25.54 | P.C. = 12+60.23 |
| P.T. = 12+60.23 | P.T. = 15+15.73 |
| e = N.C. | e = N.C. |
| Ls = N.A. | Ls = N.A. |

C.L. HWY. 365 STA. 431+15.12. 12.61' RT. = C.L. McCLURE ACRES RD. STA. 10+13.05
ELEV. 289.48
-0.00%
PVC 10+90.00 ELEV. 287.94
VC = 100.00' K = 58.82
PVI 11+40.00 ELEV. 286.94
PVT 11+90.00 ELEV. 286.79
PROFILE GRADE
-0.30%
EXISTING GROUND
PVC 13+82.00 ELEV. 286.22
VC = 100.00' K = 58.82
PVI 14+32.00 ELEV. 286.06
PVT 14+82.00 ELEV. 285.07
NOTCH, WIDEN AND OVERLAY
50' TRANSITION TO MATCH EXISTING
PVI 15+15.73 ELEV. 284.99
-0.00%
P.G. 287.15
P.G. 285.86

320 310 300 290 280 270 260 250 240 230

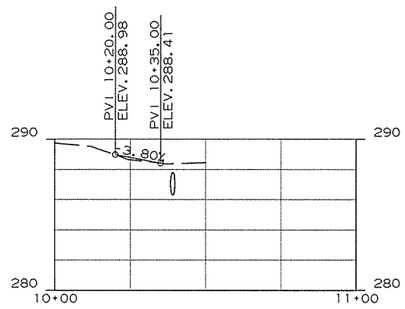
10+00 11+00 12+00 13+00 14+00 15+00 16+00 16+85

PN: 85
PD: 5/8" REBAR W/2" CAP
ST: RAMP 2 STA.7438+98.61
OF: 68.39' LT
ZC: 295.32

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| | | | | (2) | DRIVEWAY PROFILES | | | |

STATE OF ARKANSAS
★ ★ ★
REGISTERED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
5-19-15

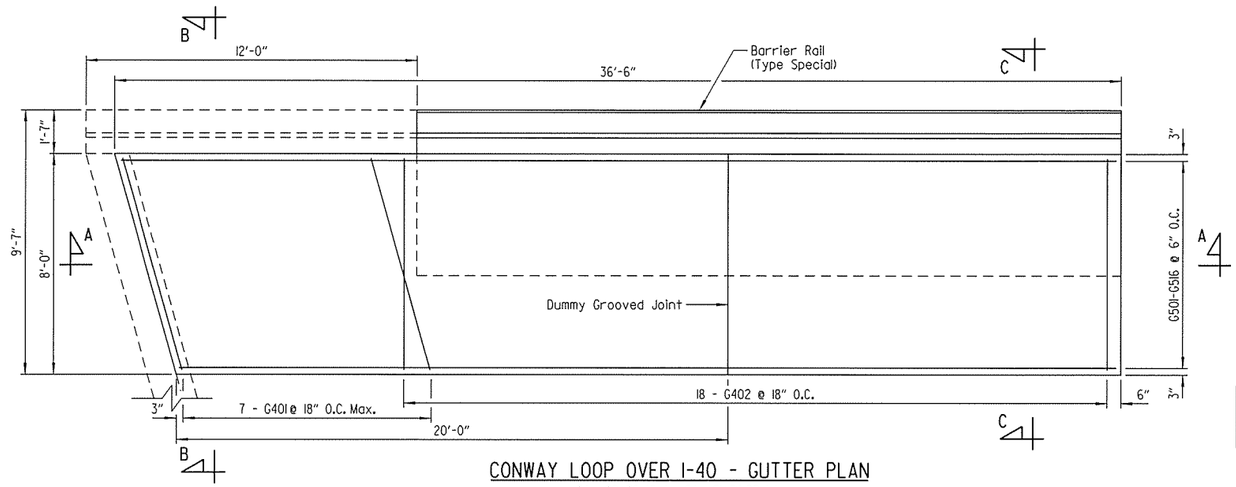



HWY. 365 DRIVEWAY

DRIVEWAY PROFILES

rnfortner 5/14/2015 10:57:17 AM
WORKSPACE: AHTD
L:\2009\D0907230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_PR_DRIVEWAYS.dgn
REVISED DATE:

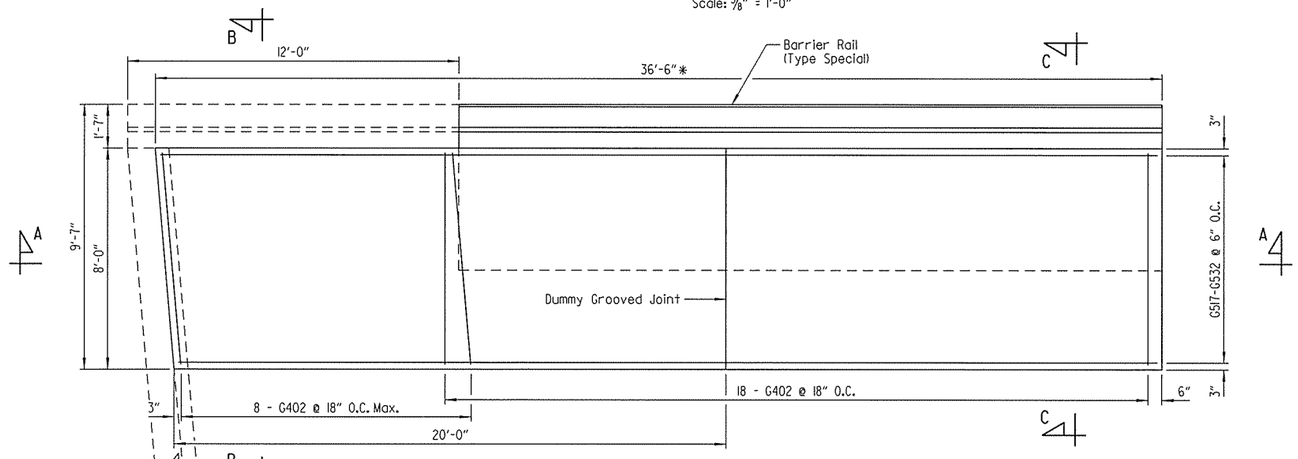
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 71 | 168 |
| | | | | (1) 07257-07258 | | APPROACH GUTTERS | | 53015 |




CONWAY LOOP OVER I-40 - GUTTER PLAN

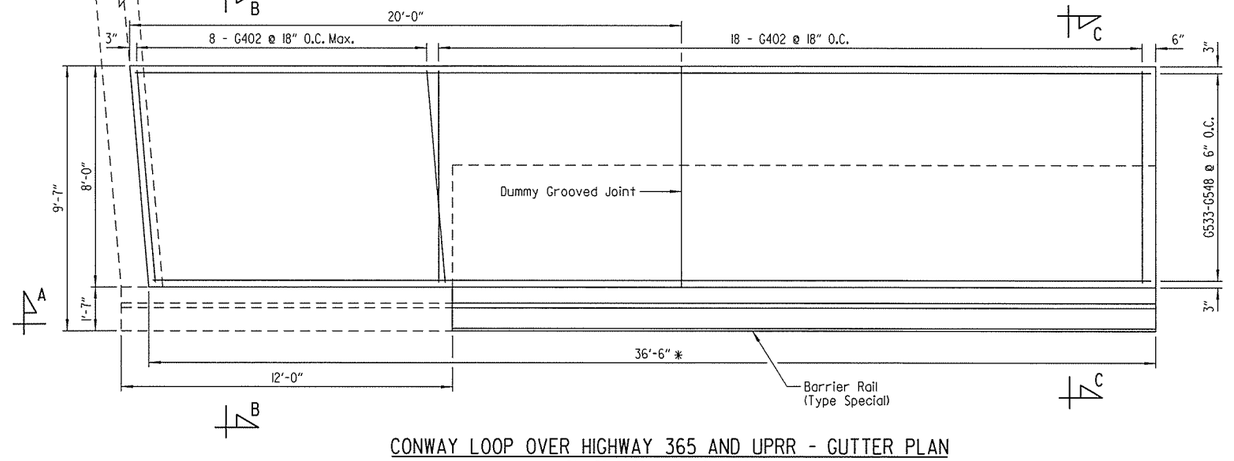
Sta. 20+98.49 to Sta. 21+34.99 Lt.
Scale: 3/8" = 1'-0"

| Reinforcing Steel (lbs.) | Concrete (cub. yds.) |
|---|---|
| 713 | 8.02 |




* — Measured along inside face of Barrier Rail.

| Reinforcing Steel (lbs.) | Concrete (cub. yds.) |
|---|---|
| 730 | 8.18 |




CONWAY LOOP OVER HIGHWAY 365 AND UPRR - GUTTER PLAN

Sta. 30+84.69 to Sta. 31+20.69 Lt.
Sta. 30+90.29 to Sta. 31+26.37 Rt.
Scale: 3/8" = 1'-0"

| Reinforcing Steel (lbs.) | Concrete (cub. yds.) |
|---|---|
| 742 | 8.34 |

Note:
For Barrier Rail (Type Special) details see Roadway Plans.

## GENERAL NOTES

Concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcing Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).

Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

For "SECTION A-A", "SECTION B-B", "SECTION C-C" & "BAR LIST", see Dwg. No. 53016.

Class I Protective Surface Treatment shall be applied to the roadway surface.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 8017
JOHN H. RUDDELL
5-14-15
BRIDGE ENGINEER

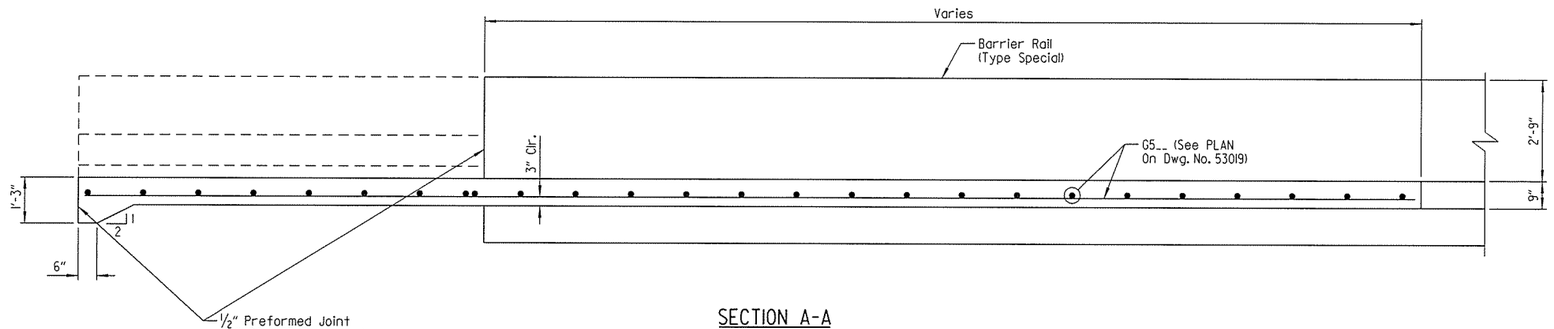
SHEET 1 OF 2
DETAILS OF TYPE SPECIAL
APPROACH GUTTERS
FAULKNER COUNTY
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JES DATE: MAR. 2012 FILENAME: -
CHECKED BY: SRY DATE: JULY 2012 SCALE: AS SHOWN
DESIGNED BY: JES DATE: MAR. 2012

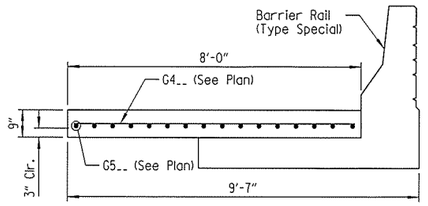
BRIDGE NO. 07257-07258 DRAWING NO. 53015

rnforzttner 5/14/2015 11:04:01 AM
WINDSTATE AHTD
L:\2009\09607230 - Conway Western Arterial Loop\Bridge\Drawings\Phase 1\Special Approach Gutters Sheet 1 of 2.dgn
REVISED DATE:

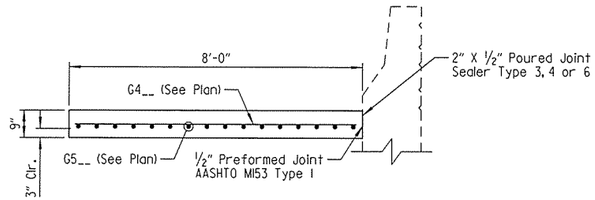
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 72 | 168 |
| | | | | (1) 07257-07258 | | APPROACH GUTTERS | | 53016 |



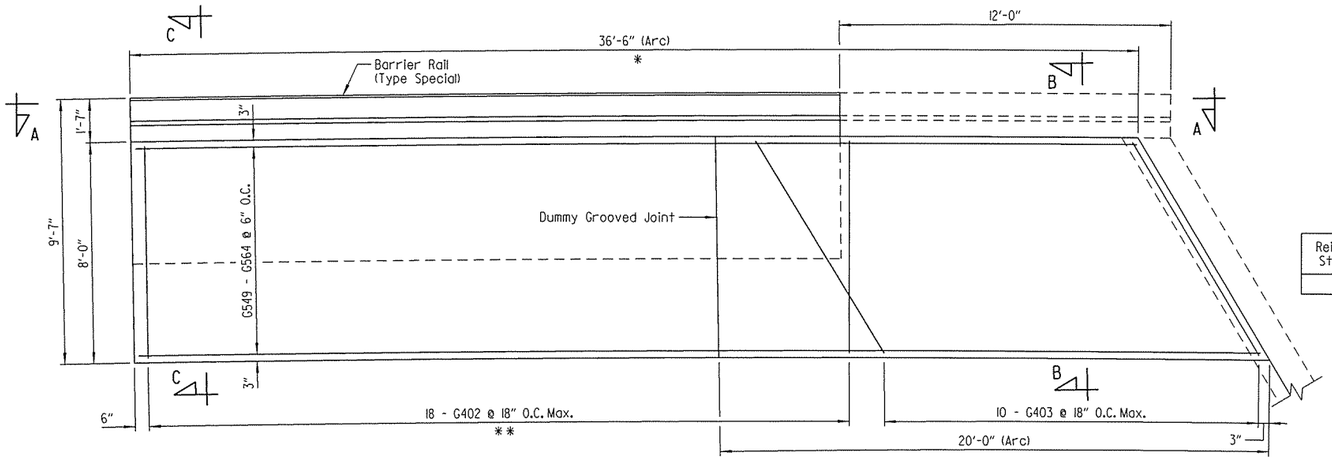

SECTION A-A
Scale: ½" = 1'-0"



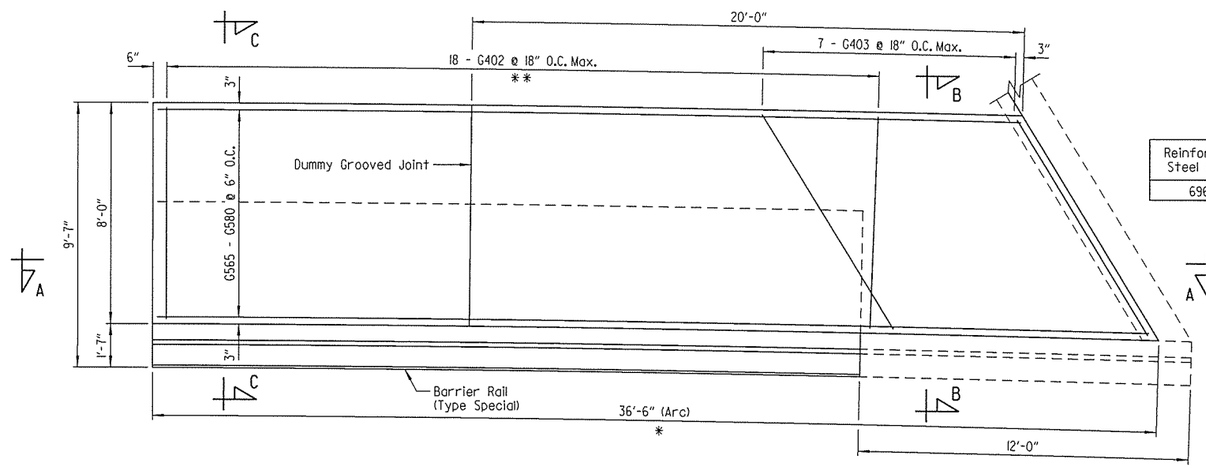

SECTION C-C
Scale: ½" = 1'-0"




SECTION B-B
Scale: ½" = 1'-0"




| Reinforcing Steel (lbs.) | Concrete (cu. yds.) |
|---|---|
| 793 | 8.80 |




| Reinforcing Steel (lbs.) | Concrete (cu. yds.) |
|---|---|
| 696 | 7.74 |

NOTE:
Construct approach gutters on concentric arcs to CL Conway Loop.

NOTES:
For "GENERAL NOTES", see Dwg. No. 53015.

For Barrier Rail (Type Special) details see Roadway Plans.

* Measured Along Inside Face Of Barrier Rail

** Reinforcing Steel Shall Be Placed On Radial Lines. Spacing Measured Along Inside Edge Of Gutter (Inside Is Defined As Closest To CL Bridge).

CONWAY LOOP OVER STURGIS RD. - GUTTER PLAN
Sta. 33+14.53 to Sta. 33+51.03 Lt.
Sta. 33+52.99 to Sta. 33+89.49 Rt.
Scale: ⅜" = 1'-0"

| BAR LIST - CONWAY LOOP OVER I-40 | | | |
|---|---|---|---|
| Mark | No. Req'd. | Length | Pin. Dia. |
| G401 | 7 | 7'-11" | STR. |
| G402 | 18 | 7'-8" | STR. |
| | | | |
| G501 TO G516 | 1 Each | 33'-11" TO 36'-1" | STR. |

| BAR LIST - CONWAY LOOP OVER HWY. 365 & UPRR | | | |
|---|---|---|---|
| Mark | No. Req'd. | Length | Pin. Dia. |
| G402 | 52 | 7'-8" | STR. |
| | | | |
| G517 TO G532 | 1 Each | 35'-5" TO 36'-1" | STR. |
| G533 TO G548 | 1 Each | 36'-2" TO 36'-10" | STR. |

| BAR LIST - CONWAY LOOP OVER STURGIS RD. | | | |
|---|---|---|---|
| Mark | No. Req'd. | Length | Pin. Dia. |
| G402 | 36 | 7'-8" | STR. |
| G403 | 17 | 9'-0" | STR. |
| | | | |
| G549 TO G564 | 1 Each | 36'-3" TO 40'-7" | STR. |
| G565 TO G580 | 1 Each | 31'-4" TO 35'-11" | STR. |

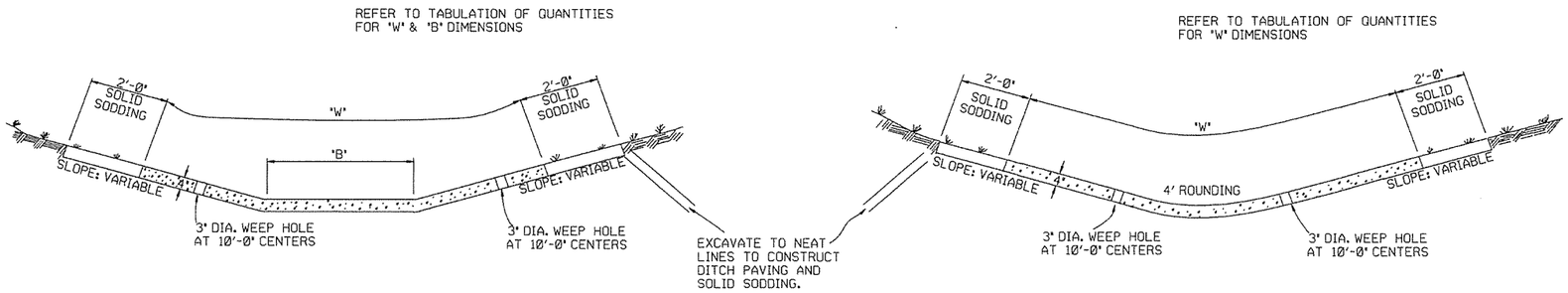
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 8017
JOHN H. RUDDELL
5-14-15
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF TYPE SPECIAL
APPROACH GUTTERS
FAULKNER COUNTY
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JES DATE: MAR. 2012 FILENAME: -
CHECKED BY: SRY DATE: JULY 2012 SCALE: AS SHOWN
DESIGNED BY: JES DATE: MAR. 2012

BRIDGE NO. 07257-07258 DRAWING NO. 53016

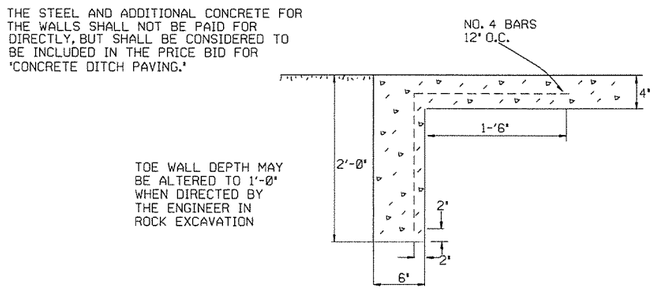
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REVISED DATE:



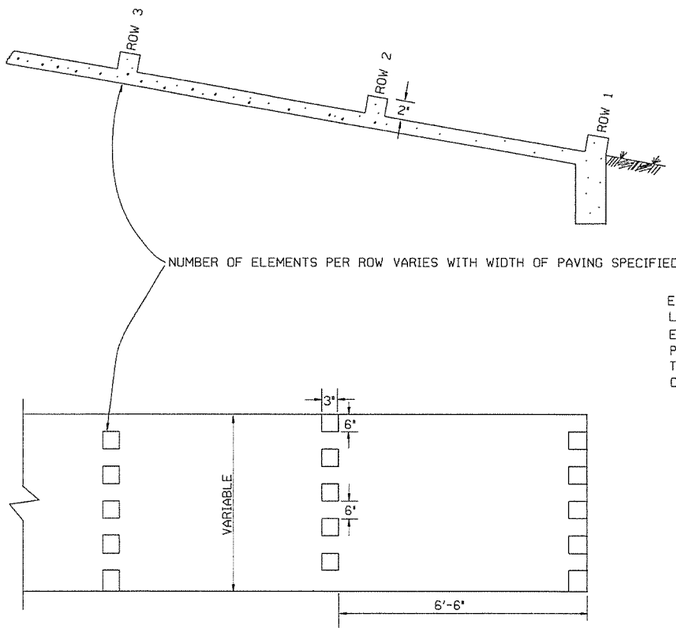

TYPE A




TYPE B




TOE WALL DETAIL FOR CONCRETE DITCH PAVING




ENERGY DISSIPATORS
(NO SCALE)

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE UNCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

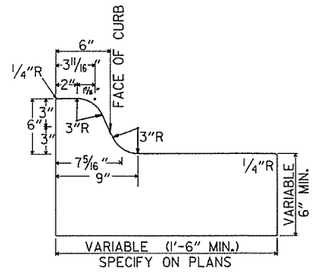
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

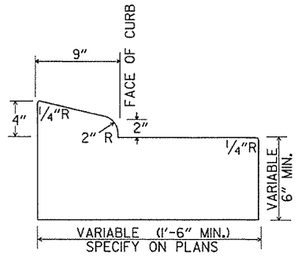
ARKANSAS STATE HIGHWAY COMMISSION

# CONCRETE DITCH PAVING

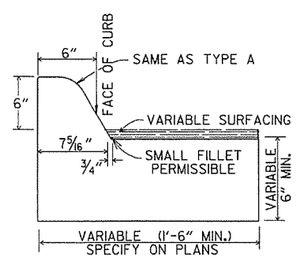
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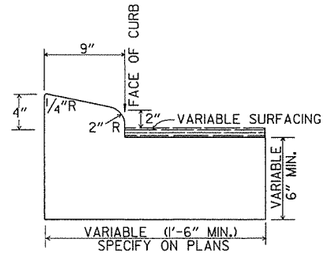

TYPE A



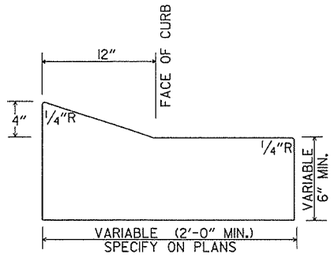

TYPE B-I



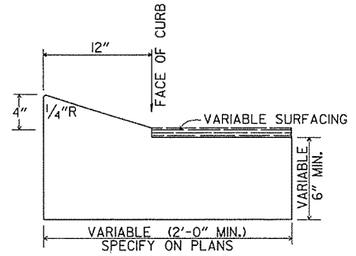

TYPE C




TYPE B-2

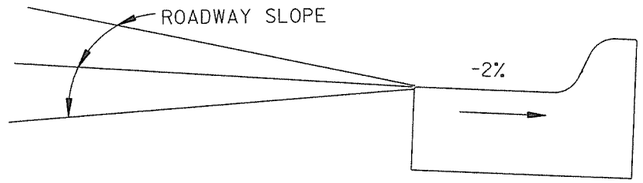



TYPE E-1



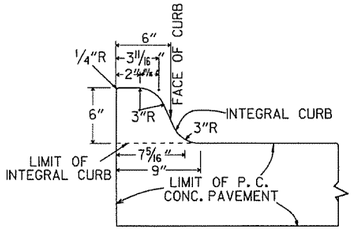

TYPE E-2

# CONCRETE COMBINATION CURB AND GUTTER

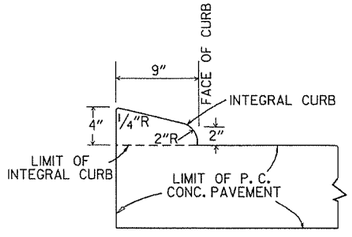



## DETAIL OF GUTTER SLOPE

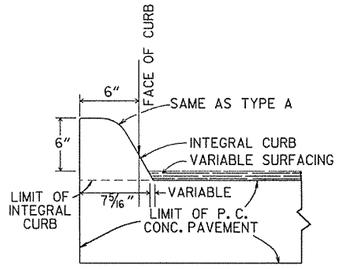
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.




TYPE A

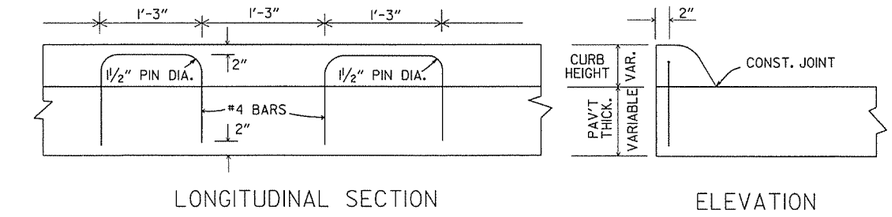



TYPE B

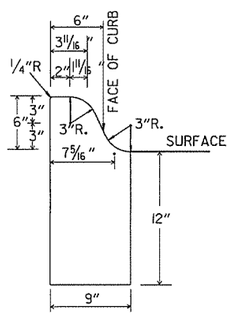



TYPE C

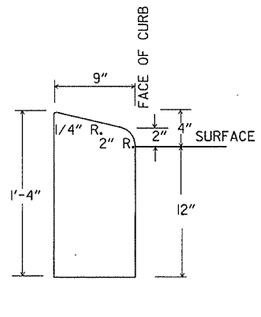
## INTEGRAL CURB



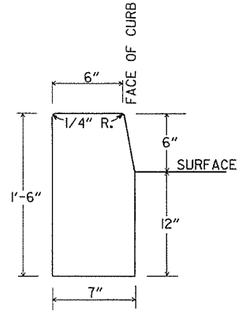

## ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



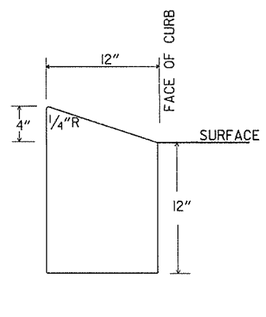

TYPE A




TYPE B

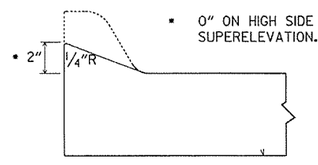



TYPE D




TYPE E

## CONCRETE CURB




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

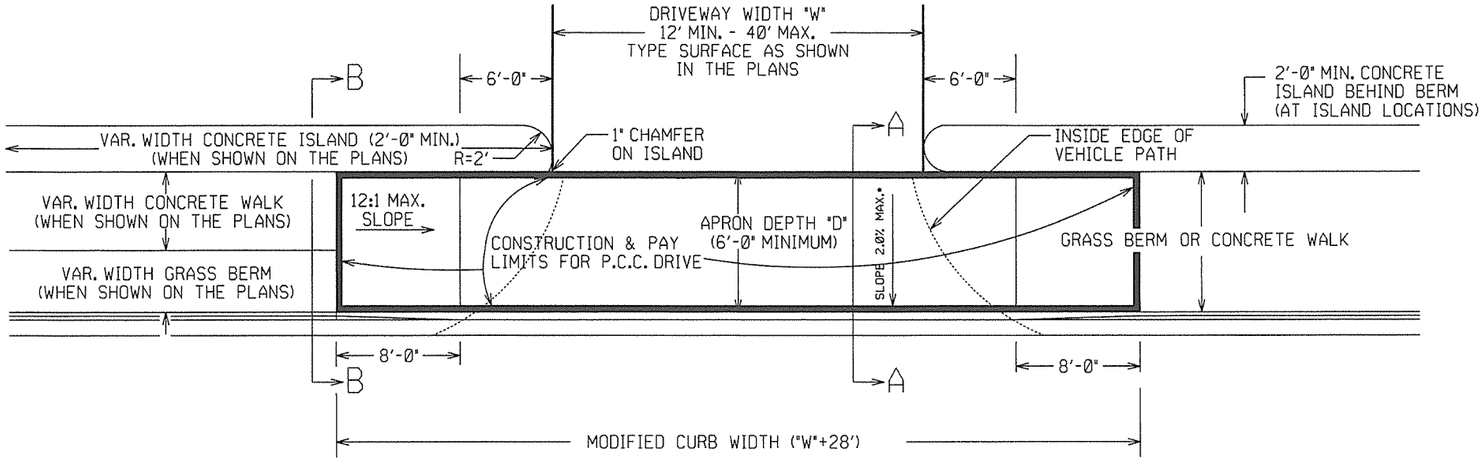
## DETAILS OF MODIFIED CURB

| DATE | REVISION | DATE FILMED |
|---|---|---|
| 11-29-07 | REVISED GUTTER SLOPE & MODIFIED CURB DETAILS | |
| 11-10-05 | ADDED DETAILS OF TYPE E CURBS | |
| 11-16-01 | REVISED CONCRETE CURB TYPE B | |
| 11-18-98 | REVISED MODIFIED CURB | |
| 6-2-94 | ADDED NOTE TO SPECIAL MODIFIED CURB | |
| 8-5-93 | CORRECTED GUTTER SLOPE | 8-5-93 |
| 10-1-92 | ADDED DETAILS OF GUTTER SLOPE | 10-1-92 |
| 5-24-90 | ADDED DETAILS OF MODIFIED CURB | 5-24-90 |
| 11-30-89 | VARIBLE DEPTH TYPE A & B I | 11-30-89 |
| 7-15-88 | REVISED MODIFIED CURB | 630-7-15-88 |
| 11-1-73 | REVISED MODIFIED CURB | 500-11-1-73 |
| 10-2-72 | REVISED AND REDRAWN | 512-10-2-72 |

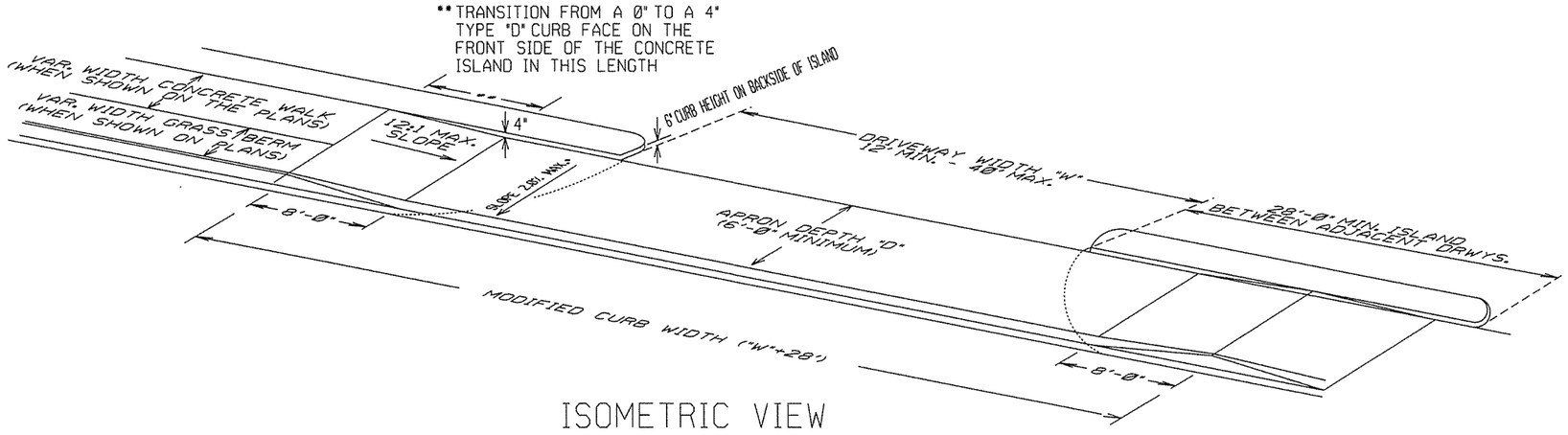
ARKANSAS STATE HIGHWAY COMMISSION

# CURBING DETAILS

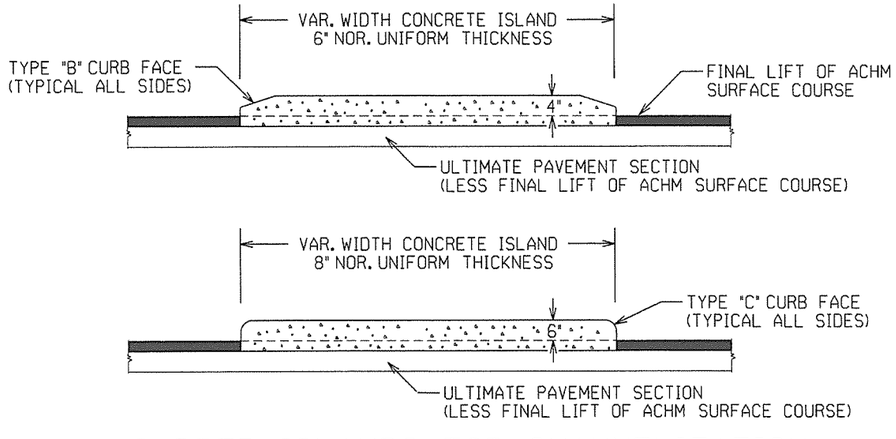
STANDARD DRAWING CG-1




PLAN VIEW

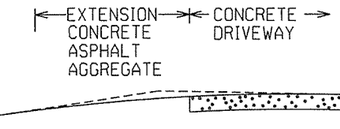



ISOMETRIC VIEW




CURBED ISLANDS FOR CHANNELIZATION

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




EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

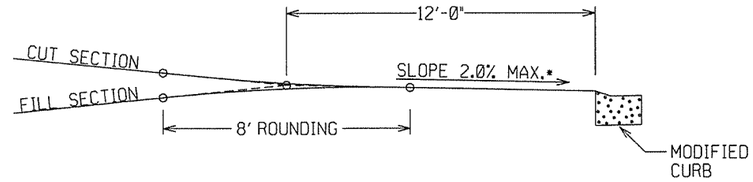
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

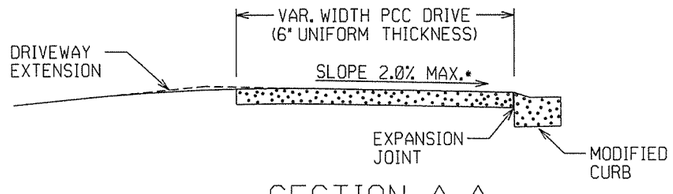
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

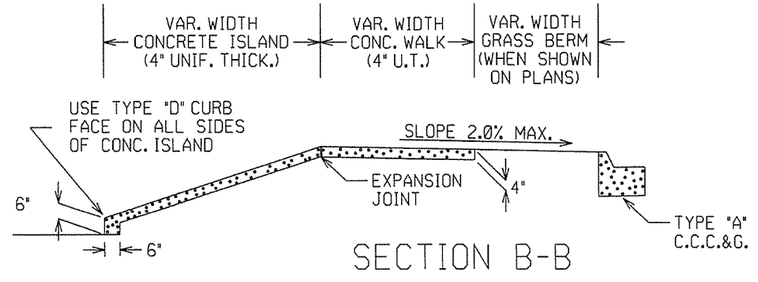



DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



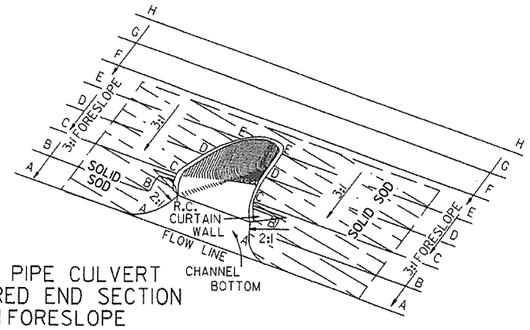

SECTION A-A



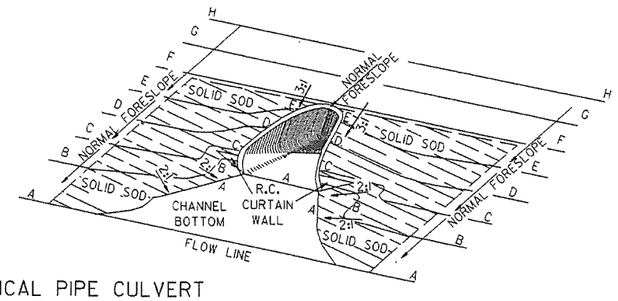

SECTION B-B
CURBED ISLAND BEHIND WALK

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

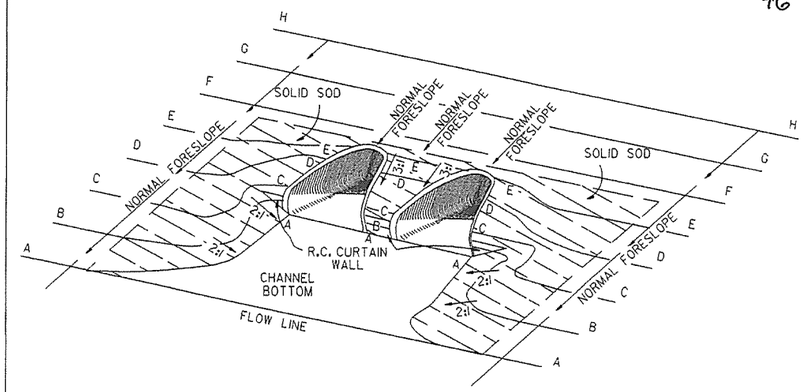
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1




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




TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES




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

## R.C. CURTAIN WALL
## DIMENSIONS & QUANTITIES

| PIPE DIA. | $H_1$ | $L_1$ | L | L (DBL.)/2 | SINGLE R.C.P.C. | | DOUBLE R.C.P.C. | |
|---|---|---|---|---|---|---|---|---|
| | | | | | CONC. | REINF. STEEL | CONC. | REINF. STEEL |
| | | | | | CU. YDS. | LBS. | CU. YDS. | LBS. |
| 18" | 11½" | 3'-5" | 8'-0" | 6'-3" | 0.31 | 27.7 | 0.45 | 39.5 |
| 24" | 1'-0½" | 4'-6" | 9'-6" | 7'-6" | 0.37 | 33.4 | 0.53 | 48.0 |
| 30" | 1'-3½" | 5'-7" | 11'-0" | 9'-0" | 0.45 | 39.0 | 0.67 | 59.0 |
| 36" | 1'-7" | 6'-8" | 13'-0" | 10'-6" | 0.58 | 52.6 | 0.83 | 73.9 |
| 42" | 2'-1½" | 7'-3" | 15'-6" | 12'-0" | 0.82 | 77.1 | 1.10 | 100.7 |
| 48" | 2'-5" | 7'-10" | 17'-0" | 13'-0" | 0.98 | 94.9 | 1.27 | 120.4 |
| 54" | 2'-9½" | 8'-5" | 18'-6" | 14'-0" | 1.16 | 115.8 | 1.47 | 143.7 |
| 60" | 3'-4" | 9'-0" | 20'-6" | 15'-6" | 1.47 | 149.7 | 1.84 | 180.3 |
| 72" | 4'-5" | 10'-2" | 25'-6" | 18'-6" | 2.31 | 232.6 | 2.73 | 271.0 |

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

## REINFORCING STEEL SCHEDULE

| PIPE DIA. | SINGLE R.C. PIPE CULVERT | | | | | | | | DOUBLE R.C. PIPE CULVERT | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H401 | | H402 | | V401 | | V402 | | H401 | | H402 | | H403 | | V401 | | V402 | |
| | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. |
| 18" | 7'-8" | 2 | 1'-11½" | 4 | 1'-7½" | 8 | 8" | 8 | 12'-2" | 2 | 1'-11½" | 4 | 8" | 2 | 1'-7½" | 10 | 8" | 14 |
| 24" | 9'-2" | 2 | 2'-2" | 4 | 1'-8½" | 10 | 8" | 9 | 14'-8" | 2 | 2'-2" | 4 | 8" | 2 | 1'-8½" | 12 | 8" | 18 |
| 30" | 10'-8" | 2 | 2'-4½" | 4 | 1'-11½" | 10 | 8" | 12 | 17'-8" | 2 | 2'-4½" | 4 | 8" | 2 | 1'-11½" | 14 | 8" | 22 |
| 36" | 12'-8" | 2 | 2'-10" | 6 | 2'-3" | 12 | 8" | 14 | 20'-8" | 2 | 2'-10" | 6 | 8" | 3 | 2'-3" | 14 | 8" | 28 |
| 42" | 15'-2" | 2 | 3'-9½" | 8 | 2'-9½" | 16 | 8" | 15 | 23'-8" | 2 | 3'-9½" | 8 | 8" | 4 | 2'-9½" | 18 | 8" | 30 |
| 48" | 16'-8" | 2 | 4'-3" | 10 | 3'-1" | 18 | 8" | 16 | 25'-8" | 2 | 4'-3" | 10 | 8" | 5 | 3'-1" | 20 | 8" | 32 |
| 54" | 18'-2" | 2 | 4'-8½" | 12 | 3'-5½" | 20 | 8" | 17 | 27'-8" | 2 | 4'-9" | 12 | 8" | 6 | 3'-5½" | 22 | 8" | 34 |
| 60" | 20'-2" | 2 | 5'-5" | 14 | 4'-0" | 24 | 8" | 18 | 30'-8" | 2 | 5'-5" | 14 | 8" | 7 | 4'-0" | 26 | 8" | 36 |
| 72" | 25'-2" | 2 | 7'-4" | 18 | 5'-1" | 30 | 8" | 20 | 36'-8" | 2 | 7'-4" | 18 | 8" | 9 | 5'-1" | 33 | 8" | 40 |

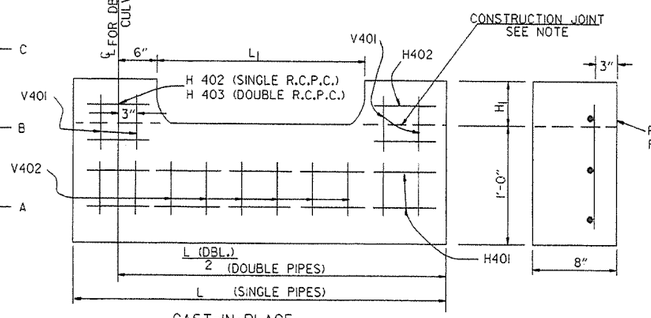
ALL REINFORCING STEEL #4 BARS @ 6" O.C.




PLAN VIEW
3:1 FORESLOPES

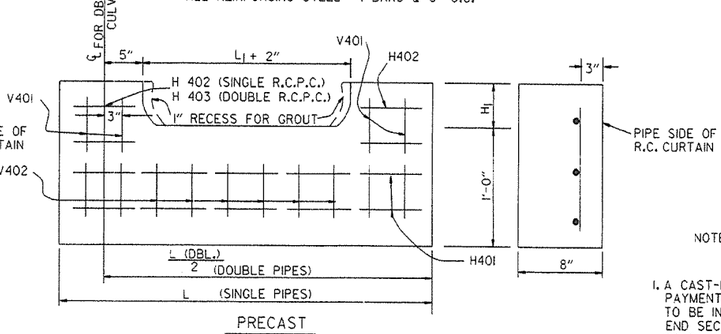
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES




CAST-IN-PLACE

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




PRECAST

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

R.C. CURTAIN WALL DETAILS

## SOLID SODDING

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

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

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.




END VIEW

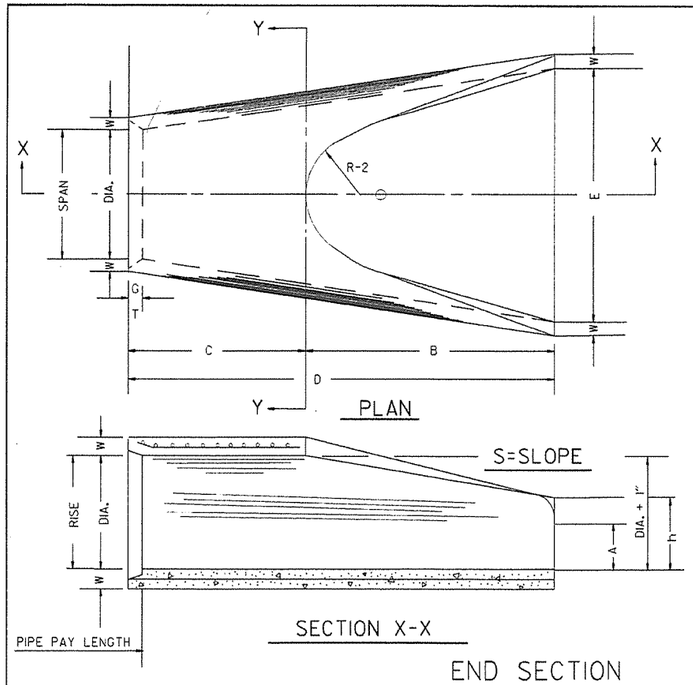
SECTIONAL VIEW "X-X"

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

ARKANSAS STATE HIGHWAY COMMISSION

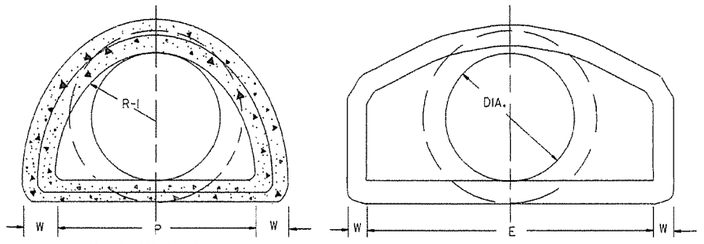
FLARED END SECTION

STANDARD DRAWING FES-1




## TABLE OF DIMENSIONS

| DIA. | WALL | A | B | C | D | E | S | DIA. ± 1" | P | R-1 | R-2 | G-T | WT. | h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18" | 2½" | 9" | 2'-3" | 3'-10" | 6'-1" | 3'-0" | 3:1 | 19" | 29" | 15½" | 12" | 2" | 1000 | 1'-0½" |
| 24" | 3" | 9½" | 3'-7½" | 2'-6" | 6'-1½" | 4'-0" | 3:1 | 25" | 33⅜" | 16⅜" | 14" | 2½" | 1600 | 1'-1½" |
| 30" | 3½" | 1'-0" | 4'-6" | 1'-7¾" | 6'-1¾" | 5'-0" | 3:1 | 31" | 37" | 18½" | 15" | 3¼" | 1940 | 1'-4⅝" |
| 36" | 4" | 1'-3" | 5'-3" | 2'-10¾" | 8'-1⅞" | 6'-0" | 3:1 | 37" | 47⅛" | 24⅝" | 20" | 3½" | 4100 | 1'-8" |
| 42" | 4½" | 1'-9" | 5'-3" | 2'-11" | 8'-2" | 6'-6" | 3:1 | 43" | 53⅞" | 27½" | 22" | 3½" | 5380 | 2'-2½" |
| 48" | 5" | 2'-0" | 6'-0" | 2'-2" | 8'-2" | 7'-0" | 3:1 | 49" | 56½" | 28½" | 22" | 3½" | 6550 | 2'-6" |
| 54" | 5½" | 2'-4" | 6'-6" | 1'-10" | 8'-4" | 7'-6" | 3:1 | 55" | 65½" | 33⅛" | 24" | 4" | 8750 | 2'-10½" |
| 60" | 6" | 2'-10" | 6'-6" | 1'-10" | 8'-4" | 8'-0" | 3:1 | 61" | 72½" | 36⅛" | 24" | 4" | 9270 | 3'-5" |
| 72" | 7" | 3'-10" | 6'-6" | 1'-10" | 8'-4" | 9'-0" | 3:1 | 73" | 77⅛" | 38⅝" | 24" | 5" | 13250 | 4'-6" |



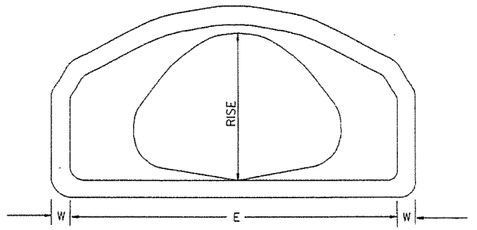

NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

# END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

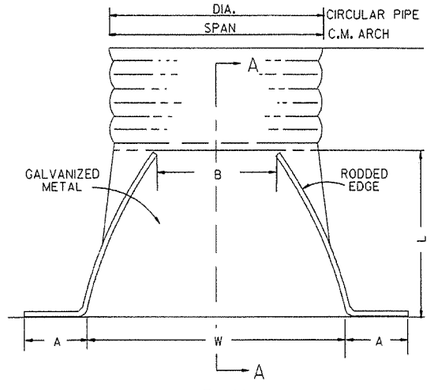
## ARCH PIPE

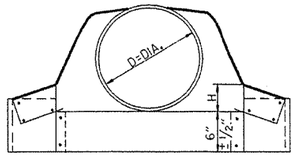
| EQUIV. DIA. | • SPAN AASHTO M 206 | • SPAN AHD NOMINAL | • RISE AASHTO M 206 | • RISE AHD NOMINAL | W | A | B | C | D | E | P | R2 | G-T | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INCHES | | | | | | | | | | | | | |
| 15 | 18 | 18 | 11 | 11 | 2" | 4" | 2'-0" | 4'-0" | 6'-0" | 3'-0" | 29" | 12" | 1½" | 2½:1 |
| 18 | 22 | 22 | 13½ | 14 | 2½" | 5" | 2'-0" | 4'-1" | 6'-1" | 3'-6" | 32⅛" | 13" | 2½" | 2½:1 |
| 21 | 26 | 26 | 15½ | 16 | 2¾" | 7" | 2'-3" | 3'-10" | 6'-1" | 4'-0" | 34⅛" | 14" | 2½" | 2½:1 |
| 24 | 28½ | 29 | 18 | 18 | 3" | 9" | 2'-3" | 3'-10" | 6'-1" | 5'-0" | 36⅝" | 15" | 2½" | 2½:1 |
| 30 | 36¼ | 36 | 22½ | 23 | 3½" | 10" | 3'-1" | 3'-0½" | 6'-1½" | 6'-0" | 47⅛" | 20" | 3" | 2½:1 |
| 36 | 43¾ | 44 | 26⅝ | 27 | 4" | 10½" | 4'-0" | 2'-11½" | 6'-1½" | 6'-6" | 54⅝" | 22" | 3½" | 2½:1 |
| 42 | 51⅛ | 51 | 31⅝ | 31 | 4½" | 11½" | 4'-7" | 1-10¼" | 6'-5¼" | 7'-2" | 59½" | 23" | 3¾" | 2½:1 |
| 48 | 58½ | 59 | 36 | 36 | 5" | 1'-3" | 5'-3" | 2'-10¾" | 8'-1¾" | 7'-10" | 70⅝" | 24" | 4¼" | 2½:1 |
| 54 | 65 | 65 | 40 | 40 | 5½" | 1'-7" | 5'-3" | 2'-11" | 8'-2" | 8'-6" | 72⅛" | 24" | 4¾" | 2¼:1 |
| 60 | 73 | 73 | 45 | 45 | 6" | 1'-10" | 5'-6" | 2'-8" | 8'-2" | 9'-0" | 77⅛" | 24" | 5" | 2¼:1 |

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




END VIEW
CONCRETE ARCH PIPE

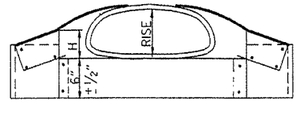



CIRCULAR PIPE

## CIRCULAR PIPE

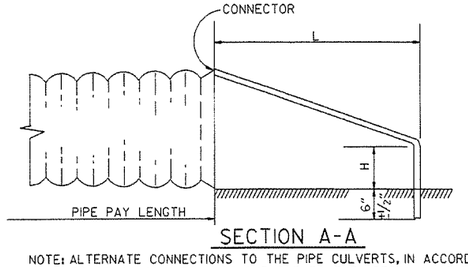
| D. DIA. | GAUGE | A 1" ± | B. MAX. | H 1" ± | L 1½" ± | W 2" ± | S |
|---|---|---|---|---|---|---|---|
| | | INCHES | | | | | |
| 12 | 16 | 6 | 6 | 6 | 21 | 24 | 2½:1 |
| 15 | 16 | 7 | 8 | 6 | 26 | 30 | 2½:1 |
| 18 | 16 | 8 | 10 | 6 | 31 | 36 | 2½:1 |
| 21 | 16 | 9 | 12 | 6 | 36 | 42 | 2½:1 |
| 24 | 16 | 10 | 13 | 6 | 41 | 48 | 2½:1 |
| 30 | 14 | 12 | 16 | 8 | 51 | 60 | 2½:1 |
| 36 | 14 | 14 | 19 | 9 | 60 | 72 | 2½:1 |
| 42 | 12 | 16 | 22 | 11 | 69 | 84 | 2½:1 |
| 48 | 12 | 18 | 27 | 12 | 78 | 90 | 2½:1 |
| 54 | 12 | 18 | 30 | 12 | 84 | 102 | 2:1 |
| 60 | 12 | 18 | 33 | 12 | 87 | 114 | 1¾:1 |
| 66 | 12 | 18 | 36 | 12 | 87 | 120 | 1½:1 |
| 72 | 12 | 18 | 39 | 12 | 87 | 126 | 1 1/3:1 |




C.M. ARCH PIPE

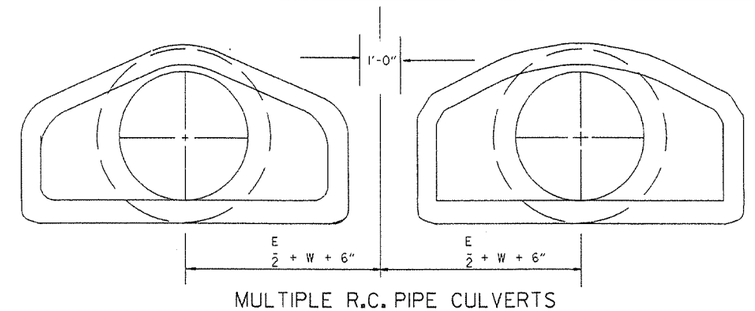
## C.M. ARCH PIPE

| EQUIV. DIA. | SPAN | RISE | A 1" ± | B MAX. | H 1" ± | L 1½" ± | W 2" ± | S | GAUGE |
|---|---|---|---|---|---|---|---|---|---|
| | INCHES | | | | | | | | |
| 15" | 17 | 13 | 7 | 9 | 6 | 19 | 30 | 2½:1 | 16 |
| 18" | 21 | 15 | 7 | 10 | 6 | 23 | 36 | 2½:1 | 16 |
| 21" | 24 | 18 | 8 | 12 | 6 | 28 | 42 | 2½:1 | 16 |
| 24" | 28 | 20 | 9 | 14 | 6 | 32 | 48 | 2½:1 | 16 |
| 30" | 35 | 24 | 10 | 16 | 6 | 39 | 60 | 2½:1 | 14 |
| 36" | 42 | 29 | 12 | 18 | 8 | 46 | 75 | 2½:1 | 14 |
| 42" | 49 | 33 | 13 | 21 | 9 | 53 | 85 | 2½:1 | 12 |
| 48" | 57 | 38 | 18 | 26 | 12 | 63 | 90 | 2½:1 | 12 |
| 54" | 64 | 43 | 18 | 30 | 12 | 70 | 102 | 2½:1 | 12 |
| 60" | 71 | 47 | 18 | 33 | 12 | 77 | 114 | 2¼:1 | 12 |

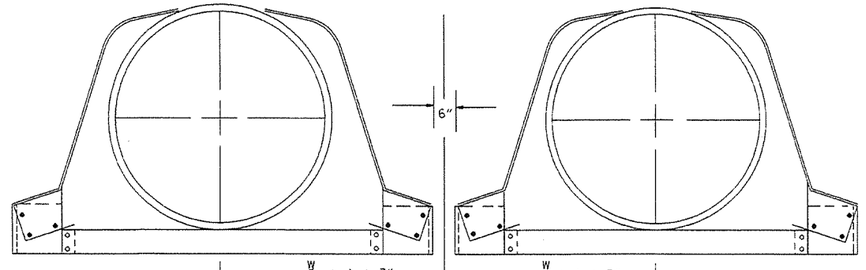



NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

# END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS




MULTIPLE R.C. PIPE CULVERTS




MULTIPLE C.M. PIPE CULVERTS

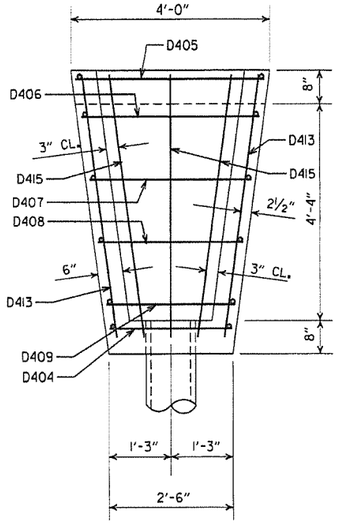
| DATE | REVISION | FILMED |
|---|---|---|
| 10-18-96 | REVISED ASTM REF. TO AASHTO | 10-18-96 |
| 5-15-80 | REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S. | 664-5-15-80 |
| 7-14-78 | C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES | 752-7-14-78 |
| 8-22-75 | ADDED MULTIPLE PIPE CULVERTS | 517-8-22-75 |
| 12-5-74 | REMOVED NOTE RE REINF. FOR R.C. F.E.S. | 500-12-5-74 |
| 5-24-73 | CMP END SECTION, SHOW PIPE PAY LENGTH | 627-5-24-73 |
| 10-2-72 | REVISED AND REDRAWN | 760-10-2-72 |

ARKANSAS STATE HIGHWAY COMMISION

FLARED END SECTION

STANDARD DRAWING FES-2

stdfes2.dgn

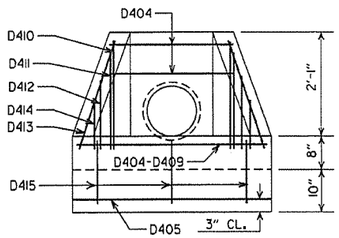



PLAN

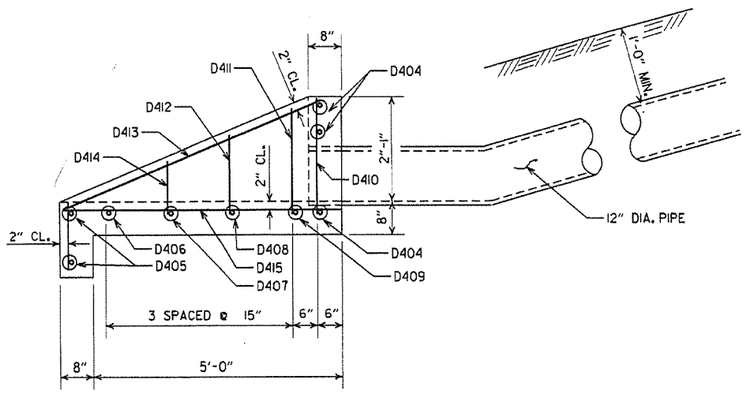
## BAR LIST (CONCRETE SPILLWAY)

| MARK | NO. REQ'D. | LENGTH | BENDING DIAGRAM |
|---|---|---|---|
| D404 | 3 | 2'-2" | |
| D405 | 2 | 3'-8" | |
| D406 | 1 | 3'-5" | |
| D407 | 1 | 3'-1" | |
| D408 | 1 | 2'-9" | |
| D409 | 1 | 2'-5" | |
| D410 | 2 | 2'-5" | |
| D411 | 2 | 2'-2" | |
| D412 | 2 | 1'-9" | |
| D413 | 2 | 5'-6" | |
| D414 | 2 | 1'-2" | |
| D415 | 3 | 6'-5" | |



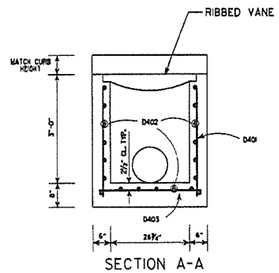




FRONT ELEVATION




SIDE ELEVATION
CONCRETE SPILLWAY

# DETAILS OF CONCRETE SPILLWAY (TYPE A)

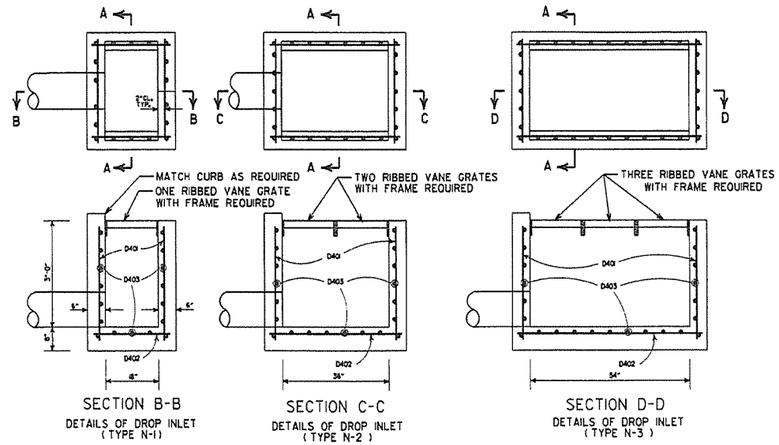



SECTION A-A

## BAR LIST (DROP INLET)

| MARK | TYPE N-1 | | TYPE N-2 | | TYPE N-3 | |
|---|---|---|---|---|---|---|
| | NO. REQ'D. | LENGTH | NO. REQ'D. | LENGTH | NO. REQ'D. | LENGTH |
| D401 | 20 | 3'-0" | 26 | 3'-0" | 32 | 3'-0" |
| D402 | 19 | 2'-2" | 19 | 3'-8" | 19 | 5'-2" |
| D403 | 17 | 2'-11" | 20 | 2'-11" | 23 | 2'-11" |
| | | | | | | |
| | | | | | | |

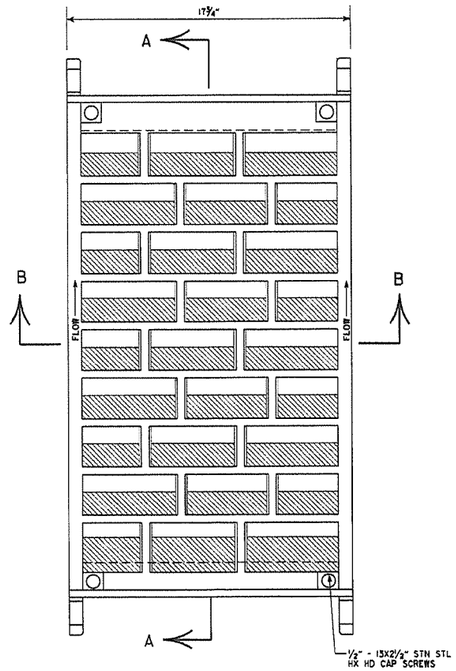
ALL BARS #4 @ 6" SPACING

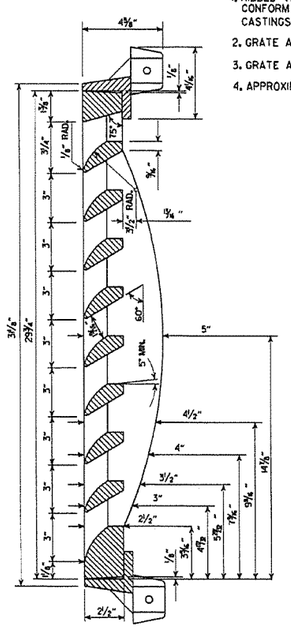



SECTION B-B
DETAILS OF DROP INLET
(TYPE N-1)

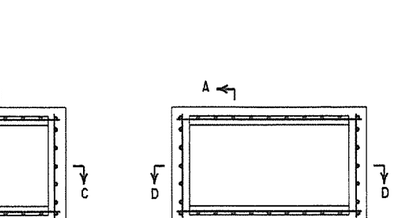
SECTION C-C
DETAILS OF DROP INLET
(TYPE N-2)

SECTION D-D
DETAILS OF DROP INLET
(TYPE N-3)




SECTION A-A




SECTION B-B




SECTION THRU FRAME

## DETAILS OF DROP INLET

GENERAL NOTES ( GRATE & FRAME )

1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

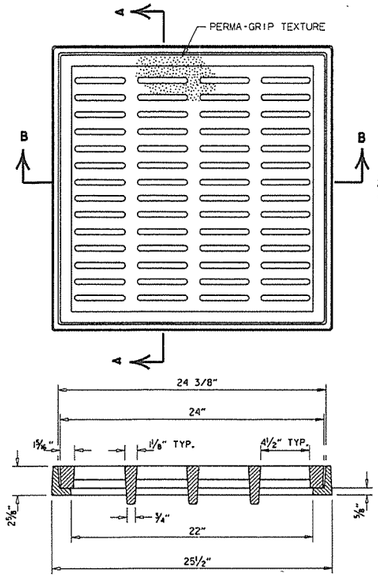
# DETAILS OF RIBBED VANE GRATE AND FRAME

| DATE REVISED | DATE FILMED | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| 7-02-98 | 7-2-98 | REVISED SECT. A-A DETAIL OF DROP INLET & ADDED AASHTO REF. TO NOTE 1, REVISED GRATE |
| 10-18-96 | | REVISED ASTM REF. TO AASHTO |
| 8-15-91 | | ISSUED |

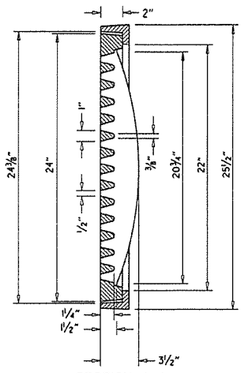
ARKANSAS STATE HIGHWAY COMMISSION

# DETAILS OF DROP INLETS AND SPILLWAY OUTLET

STANDARD DRAWING FPC-9N




SECTION B-B

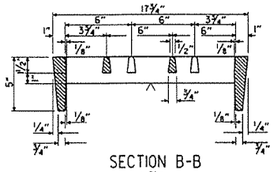



SECTION A-A

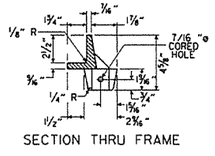
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES ( PEDESTRIAN GRATE & FRAME )

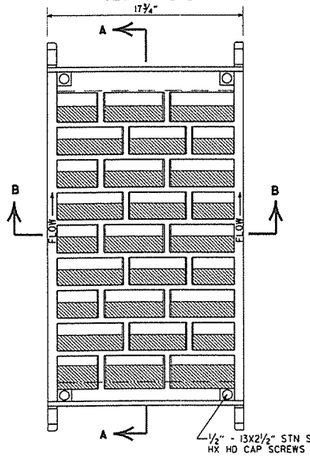
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

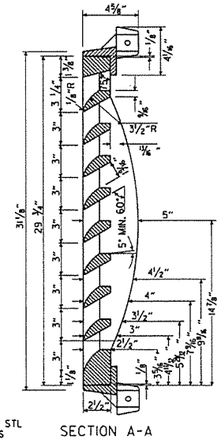



SECTION B-B




SECTION THRU FRAME



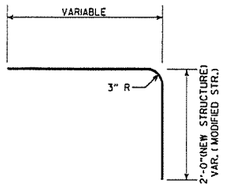




SECTION A-A

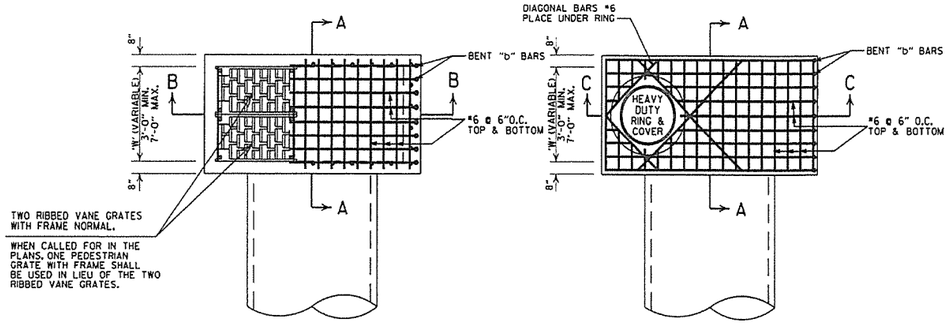
DETAILS OF RIBBED VANE GRATE AND FRAME

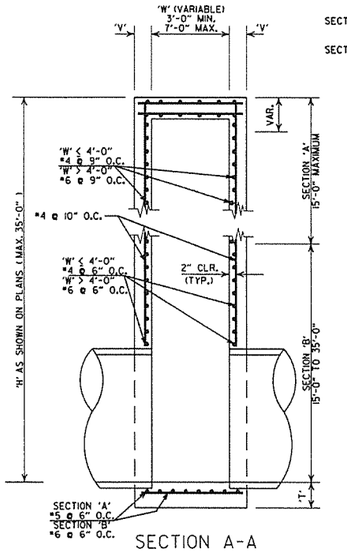
GENERAL NOTES ( RIBBED VANE GRATE & FRAME )

1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.



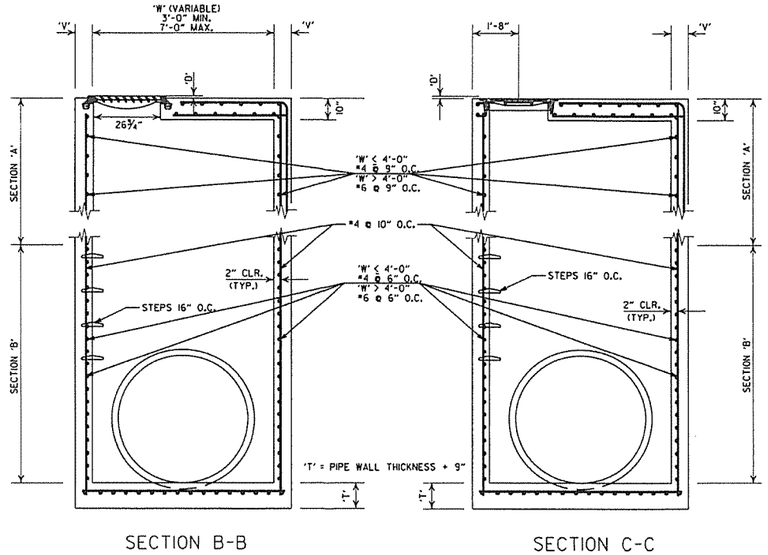

DETAIL OF BENT "b" BAR




SECTION A-A

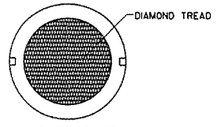
SECTION 'A' 'V' = 8"
SECTION 'B' (W≤4'-0") 'V' = 8"
SECTION 'B' (W>4'-0") 'V' = 10"



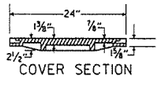

SECTION B-B

SECTION C-C

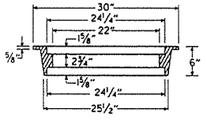
DETAILS OF DROP INLET ( TYPE ST )




COVER FACE




COVER SECTION




RING SECTION

HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

1. THE "D" DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.

GENERAL NOTES (HEAVY DUTY RING & COVER):

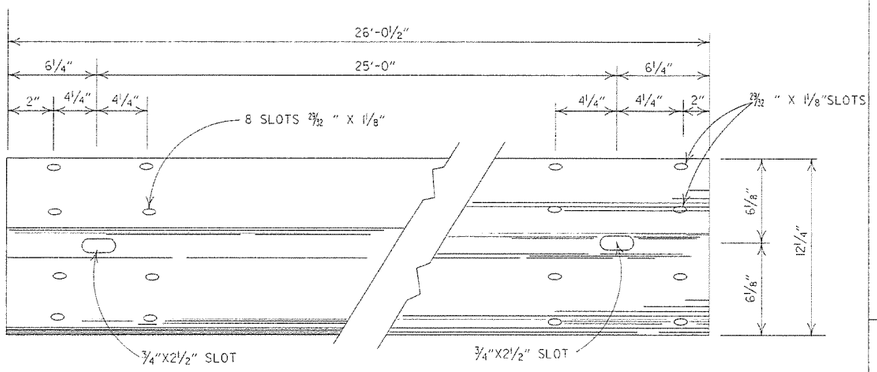
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

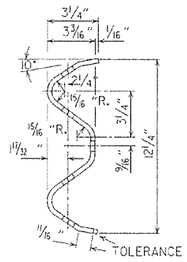
| DATE REVISED | DATE FILMED | DESCRIPTION |
|---|---|---|
| 7-26-12 | | REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS |
| 11-16-01 | | ADDED NOTE 4 |
| 1-12-00 | | REVISED HEAVY DUTY RING & COVER |
| 5-13-99 | | ADDED PEDESTRIAN FRAME & GRATE |
| 7-02-98 | | REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE |
| 10-18-96 | | REVISED ASTM REF. TO AASHTO |
| 10-1-92 | | REVISED & REISSUED |
| 8-15-91 | 8-15-91 | REVISED & REISSUED |

ARKANSAS STATE HIGHWAY COMMISSION

# DETAILS OF DROP INLET & JUNCTION BOX ( TYPE ST )

STANDARD DRAWING FPC-9S



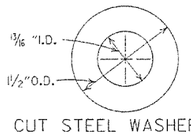




## DETAILS OF W-BEAM GUARD RAIL

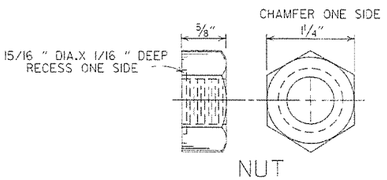
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



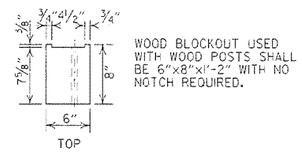

## SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH




CUT STEEL WASHER

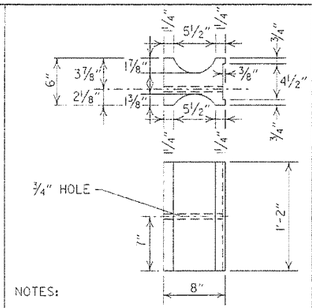



NUT




WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

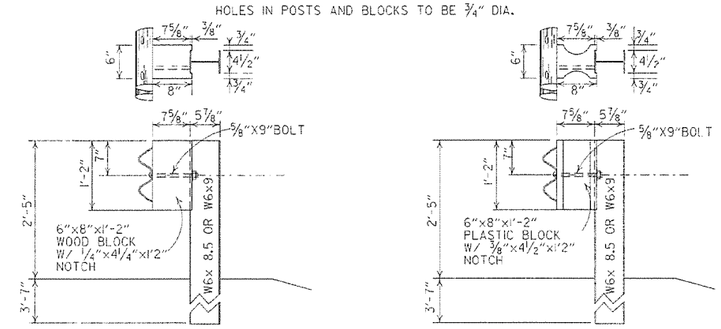
## WOOD BLOCKOUT
(W-BEAM)




NOTES:
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

## PLASTIC BLOCKOUT
(W-BEAM)

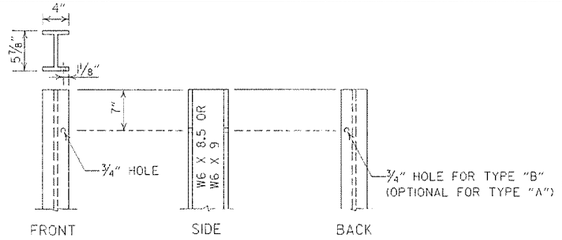
HOLES IN POSTS AND BLOCKS TO BE 3/4" DIA.



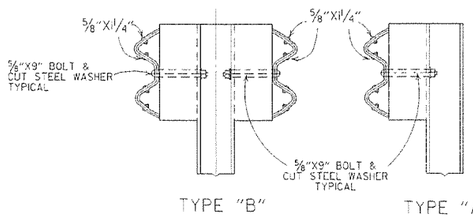

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

## DETAILS OF STEEL LINE POST CONNECTIONS
(W-BEAM)




## STEEL POST




TYPE "B" TYPE "A"

## DETAILS OF STEEL LINE POST CONNECTIONS
(W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE 3/4" DIA.




WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

## DETAILS OF WOOD LINE POST CONNECTIONS
(W-BEAM)

### -GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.

WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

USE W-BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARD RAIL, W-BEAM GUARD RAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7# (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

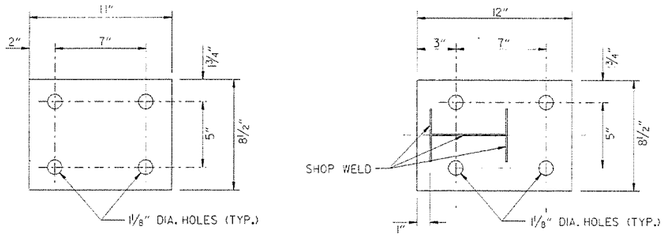
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

| DATE | REVISION | DATE FILM |
|---|---|---|
| 7-14-10 | RAISED HEIGHT OF GUARD RAIL 1" | |
| 0-15-09 | ADDED REFERENCE TO MASH | |
| 4-10-03 | REVISED GENERAL NOTES | |
| 8-22-02 | REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST | |
| 11-16-01 | REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS | |
| 3-30-00 | REMOVED GUARD RAIL AT BRIDGE ENDS | |
| 1-12-00 | ADDED PLASTIC BLOCKOUT | |
| 8-12-98 | REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES | |
| 4-3-97 | REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS | |
| 10-18-96 | REVISED WOOD POST NOTE | |
| 6-2-94 | ADDED ALT. STEEL POST SIZE | |
| 8-5-93 | REVISED STEEL POST SIZE | 8-5-93 |
| 10-1-92 | REDRAWN & REVISED | 10-1-92 |
| 8-15-91 | REVISED WASHER NOTE | 8-15-91 |
| 8-2-90 | REV. GEN. NOTE & DEPHT OF ANC. POST IN ROCK | 8-2-90 |
| 7-15-88 | REVISED SECTION 3 & GENERAL NOTES | |
| 3-4-88 | REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK | 780-3-4-88 |
| 10-30-87 | REVISED WOOD LINE POST DETAIL | 546-10-30-87 |
| 10-9-87 | REDRAWN & REVISED | 802-10-9-87 |

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

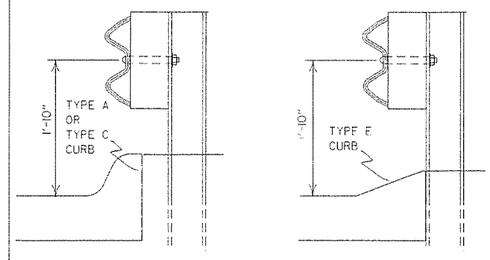
STANDARD DRAWING GR-8




WASHER PLATE

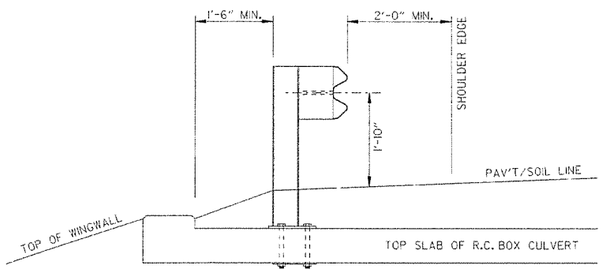
BASE PLATE

Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.

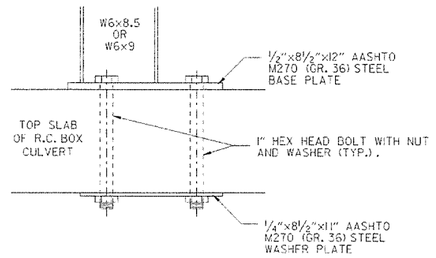



## DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

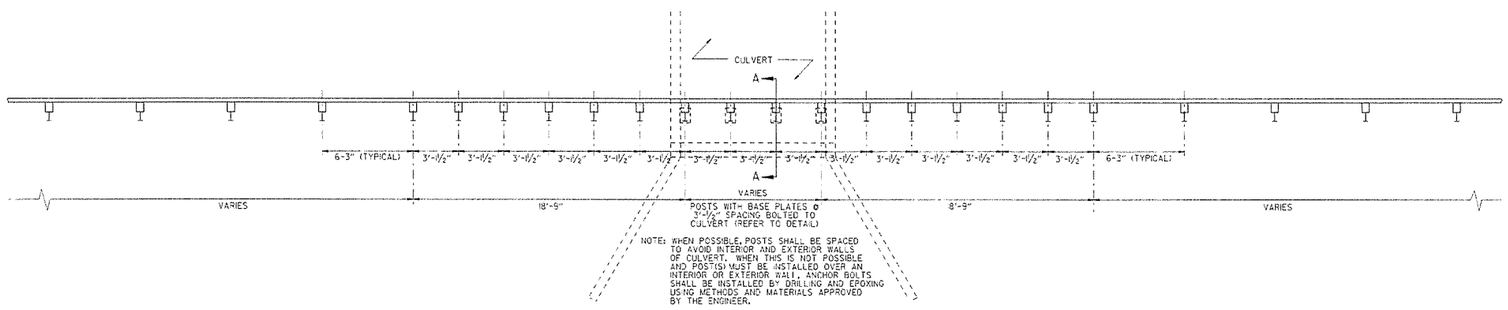
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.




SECTION A-A



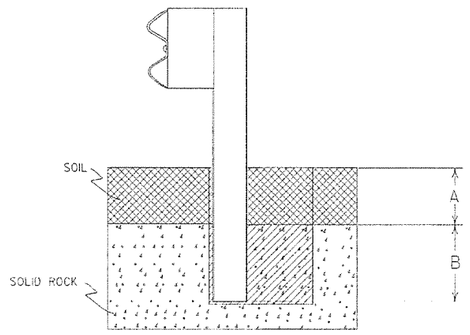

DETAIL OF CONNECTION



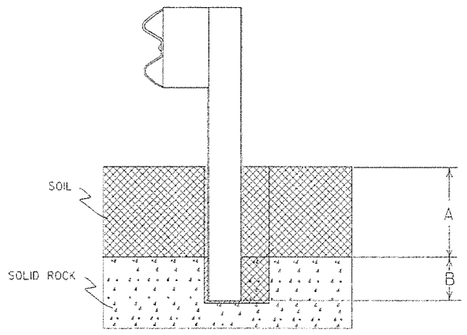

PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DWG. GR-8.

Case 1

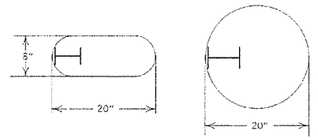


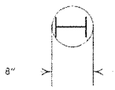

Case 2




Plan View Steel Posts

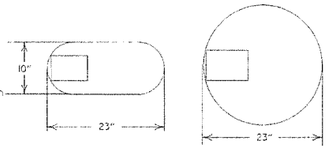
Either hole configuration acceptable

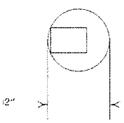



Plan View Wood Posts

Either hole configuration acceptable




Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

Zone A:
Backfill according to Section 617.03(a).

Zone B:
Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B:
Backfill according to Section 617.03(a).

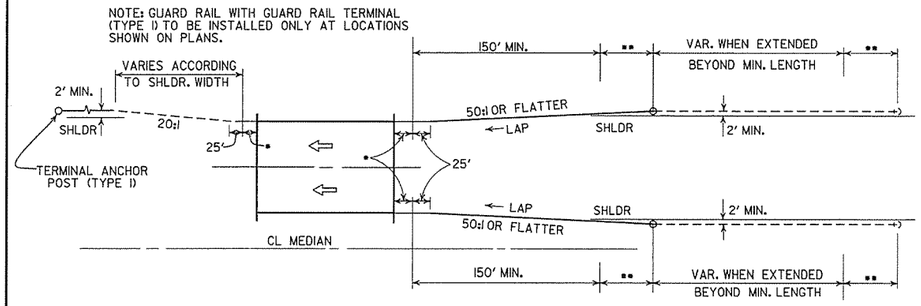
## DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)

| DATE | REVISION | DATE FILM |
|---|---|---|
| 7-14-10 | RAISED HEIGHT OF GUARD RAIL 1" | |
| 4-12-07 | REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB | |
| 11-10-05 | ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION | |
| 11-18-04 | REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS, ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS | |
| 3-30-00 | REMOVED CONCRETE INSERT ANCHOR | |
| 8-12-98 | CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT, ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULVT. DELETED DET. OF STEEL LINE POST CONN.& ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK | |
| 4-3-96 | PLACED ARROWS AT CUT STEEL WASHERS | 4-3-96 |
| 10-18-96 | REV. ASTM REF. TO AASHTO | |
| 11-22-95 | ADDED OPTIONAL HOLES | |
| 6-2-94 | REVISED ALTERNATE POST SIZE | |
| 8-6-93 | REVISED STEEL POST SIZE | |
| 10-1-92 | REDRAWN & REVISED | 10-1-92 |
| 8-2-90 | DEL. WASHER ON ANCHOR ASSEMBLY | 8-2-90 |
| 7-15-88 | CONFORMED TO 1988 SPECS | |
| 3-4-88 | REVISED ANCHOR NOTE | |
| 10-30-87 | REVISED ANCHOR ASSEMBLY | 712-10-30-87 |
| 10-30-87 | REVISED PLACEMENT BEHIND CURB | 547-10-30-87 |
| 10-9-87 | REDRAWN & REVISED | 803-10-9-87 |

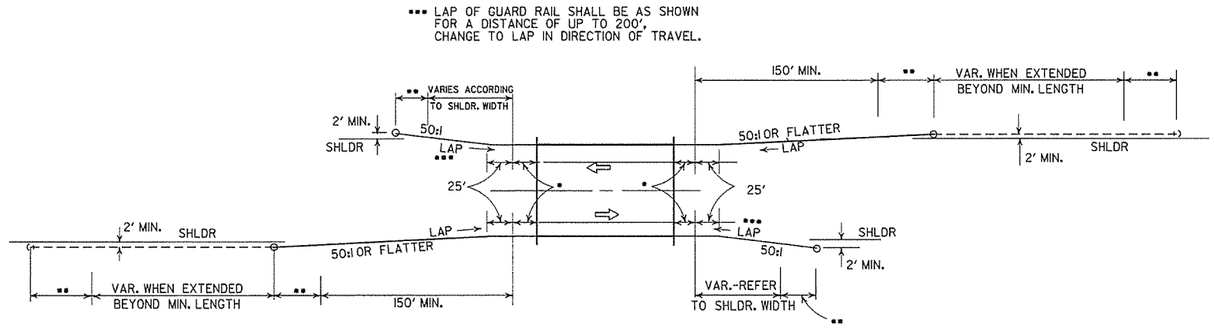
ARKANSAS STATE HIGHWAY COMMISSION

# GUARD RAIL DETAILS

STANDARD DRAWING GR-8A

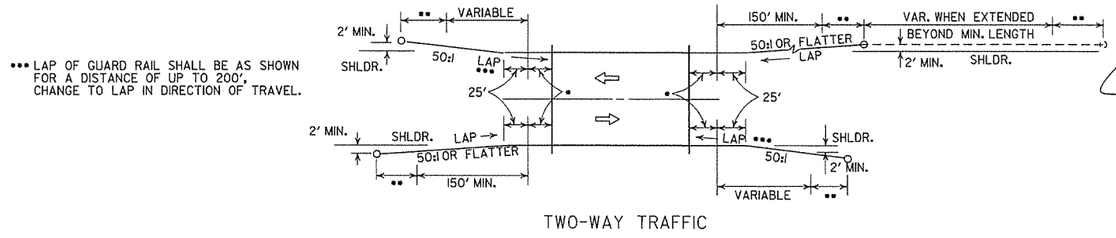



ONE-WAY TRAFFIC

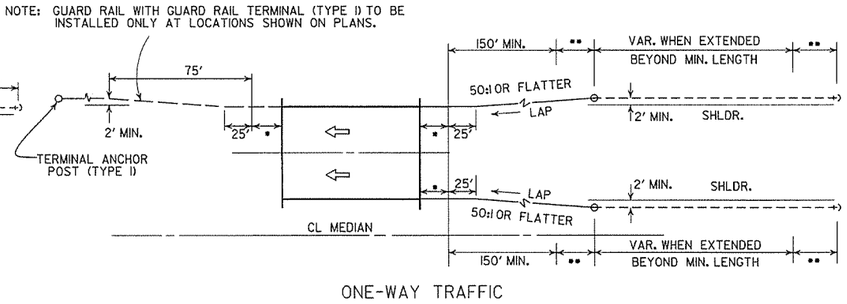



TWO-WAY TRAFFIC

## METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)



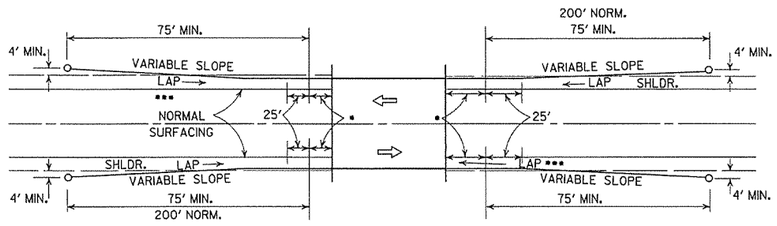

TWO-WAY TRAFFIC




ONE-WAY TRAFFIC

## METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.




## METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE I) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

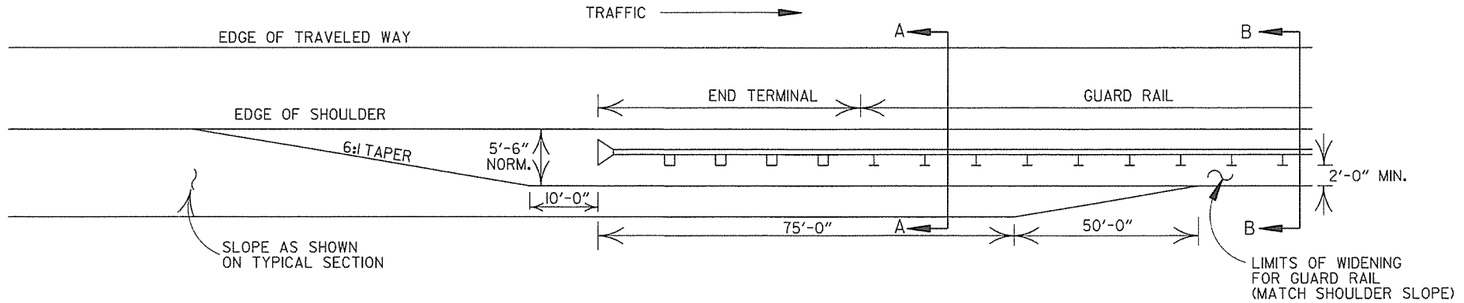
- • THRIE BEAM GUARD RAIL TERMINAL
- •• GUARD RAIL TERMINAL (TYPE 2)

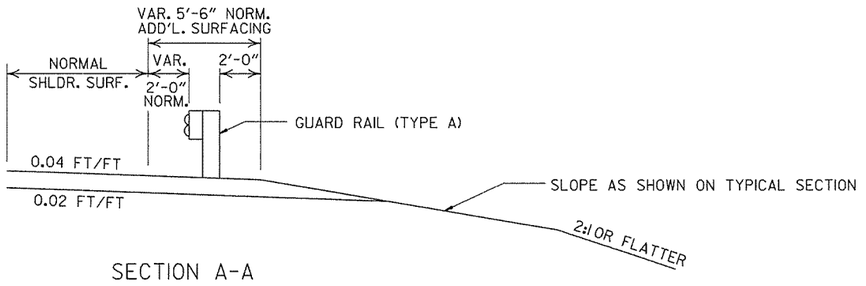
| DATE | REVISION | DATE FILM |
|---|---|---|
| 4-17-08 | REVISED LAYOUTS | |
| 11-10-05 | REMOVED GUARD RAIL NOTES AND DETAILS | |
| 11-16-01 | DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I) | |
| 1-12-00 | ADDED CONSTRUCTION NOTE | 1-12-00 |
| 6-26-97 | REVISED LAYOUT | |
| 10-1-92 | REDRAWN & REVISED | 10-1-92 |
| | ADDED NOTE | |
| 10-9-87 | REDRAWN & REVISED | |

ARKANSAS STATE HIGHWAY COMMISSION

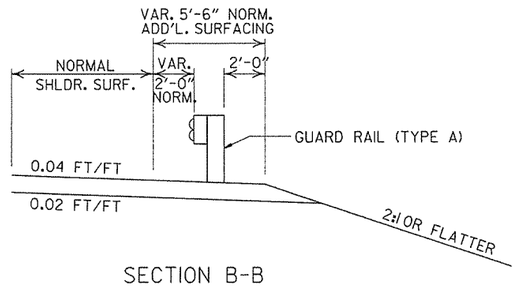
# GUARD RAIL DETAILS

STANDARD DRAWING GR-9



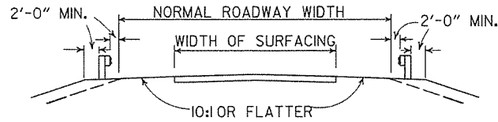

SECTION A-A



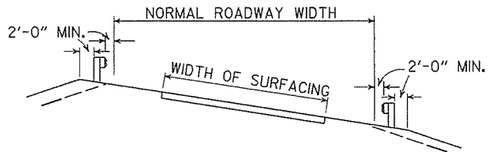

SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

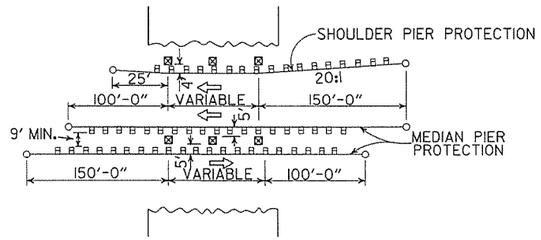



SECTION ON TANGENT




SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY



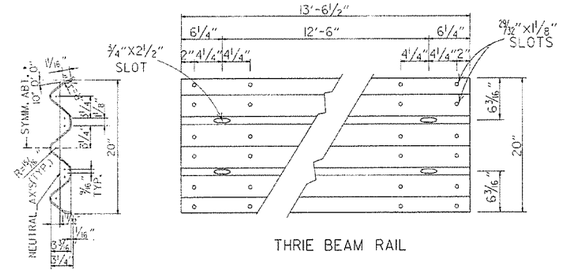

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

| DATE | REVISION | DATE FILM |
|---|---|---|
| 4-17-08 | MINOR REVISION | |
| 11-10-05 | DRAWN | |

ARKANSAS STATE HIGHWAY COMMISSION

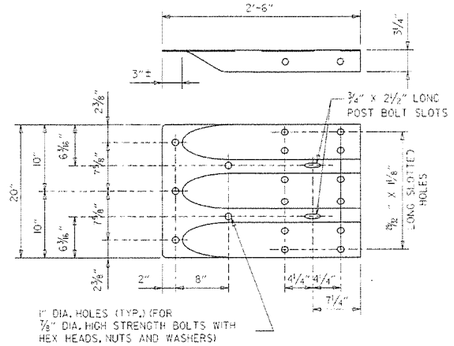
# GUARD RAIL DETAILS

STANDARD DRAWING GR-9A



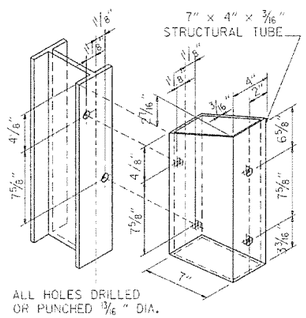

THRIE BEAM RAIL

SECTION THRU
THRIE BEAM RAIL




1" DIA. HOLES (TYP.) (FOR ⅞" DIA. HIGH STRENGTH BOLTS WITH HEX HEADS, NUTS AND WASHERS)

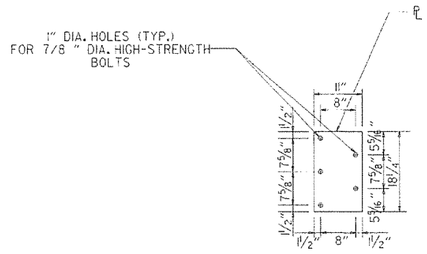
SPECIAL END SHOE




ATTACH BLOCKOUT TO POST USING ⅝" DIA. HEX HEAD BOLTS WITH 1½" O.D. CUT STEEL WASHERS AND NUT.

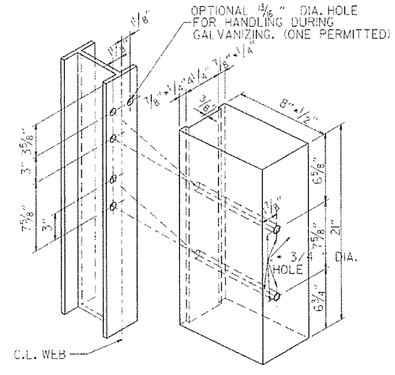
ALL HOLES DRILLED OR PUNCHED ⅜" DIA.

STRUCTURAL STEEL TUBING BLOCKOUT DETAIL




CONNECTOR PLATE

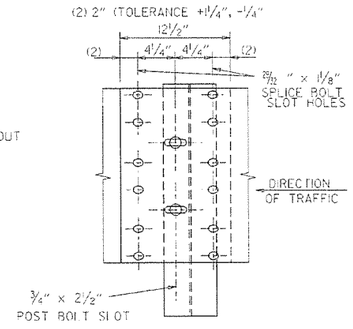
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



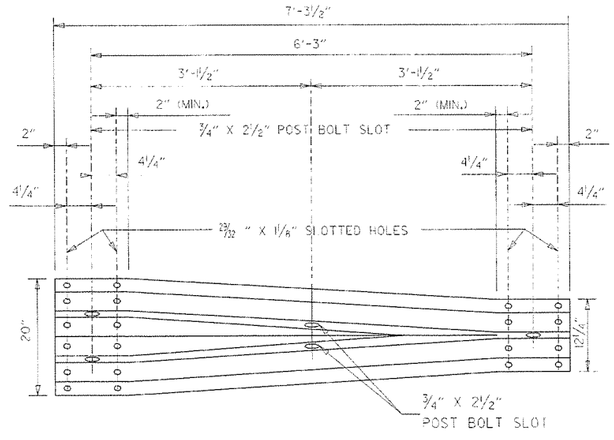

ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL
FOR STEEL POST & WOOD
OR PLASTIC BLOCKOUTS

NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.

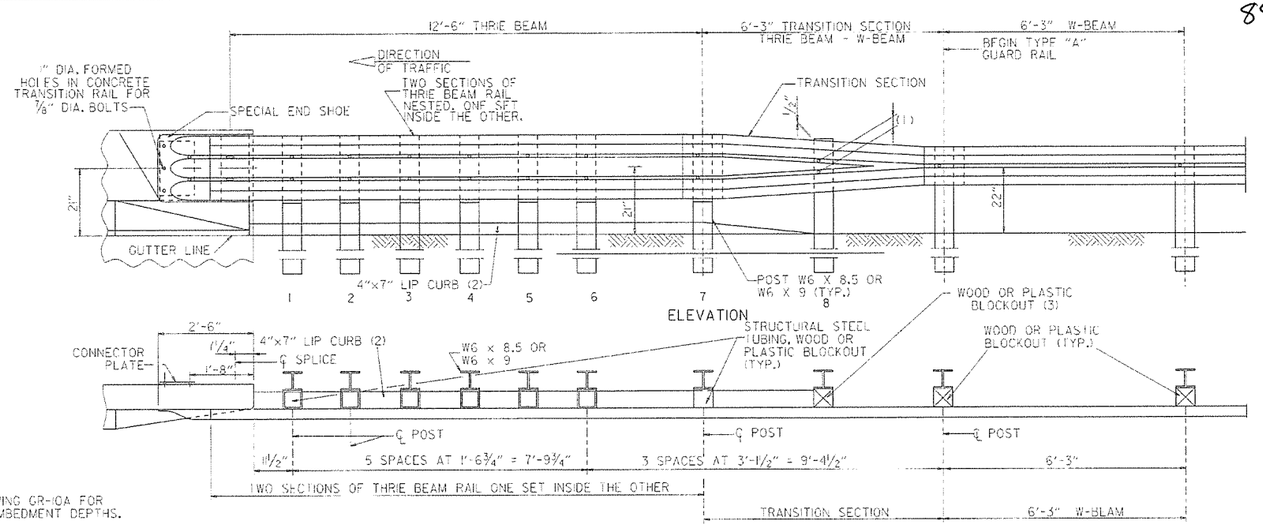



THRIE BEAM RAIL
SPLICE AT POST




TRANSITION SECTION

NOTE:
SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.




(1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
(2) REFER TO APPROACH GUTTER DETAILS.
(3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

## THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE II.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7# (1400 #) OR NO. 1 1350 f SOUTHERN PINE.

REFER TO STD. DRWG. GR-10A FOR POST DETAILS.

USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

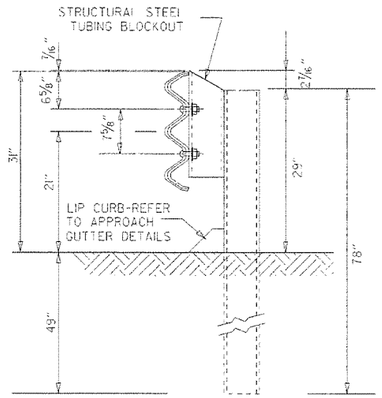
THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W BEAM POSTS FOR ENTIRE JOB.

| DATE | REVISION | DATE FILM |
|---|---|---|
| 7-14-10 | RAISED HEIGHT OF W-BEAM 1" | |
| 11-29-07 | ADDED PLASTIC BLOCKOUTS | |
| 11-10-05 | ADDED NOTE FOR ATTACHING STEEL BLOCKOUT | |
| 11-18-04 | REVISED GENERAL NOTES | |
| 10-9-03 | REVISED GENERAL NOTES | |
| 4-10-03 | REVISED GENERAL NOTES | |
| 8-22-02 | REVISED NOTE (2) | |
| 6-29-00 | MOVED DIMENSION LINES | |
| 5-18-00 | ADDED NOTE | |
| 3-30-00 | DRAWN & ISSUED | |

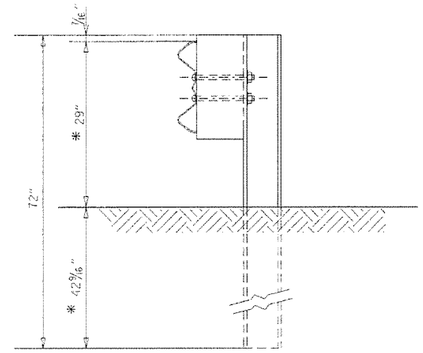
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10

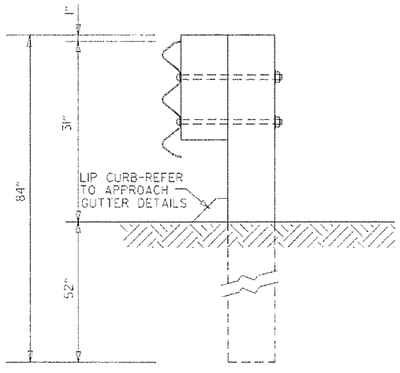



THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

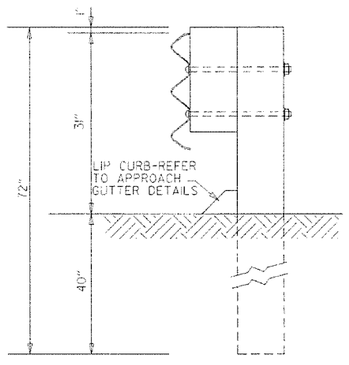



W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

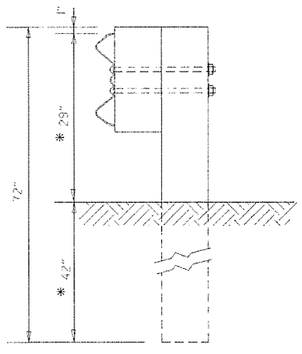
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.




THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUTS & WOOD POSTS
POSTS 1-6




THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUT & WOOD POST
POST 7




W-BEAM TO THRIE BEAM
TRANSITION RAIL WITH WOOD OR
PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

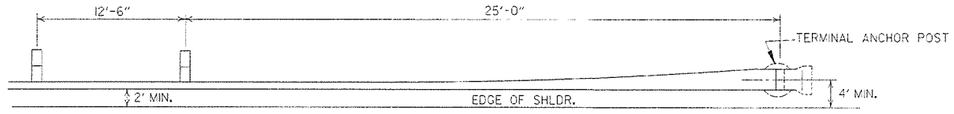
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 (1350 f SOUTHERN PINE.

| DATE | REVISION | DATE FILM |
|---|---|---|
| | | |
| | | |
| | | |
| 7-14-10 | REVISED POST 8 DIMENSIONS | |
| 11-29-07 | ADDED PLASTIC BLOCKOUTS | |
| 8-22-02 | REVISED LIP CURB NOTE | |
| 3-30-00 | DRAWN & ISSUED | |

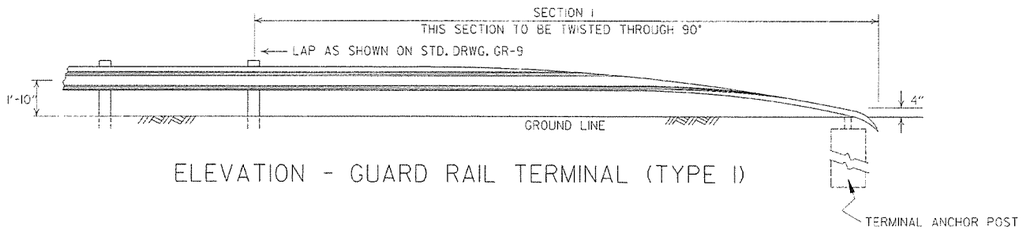
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10A

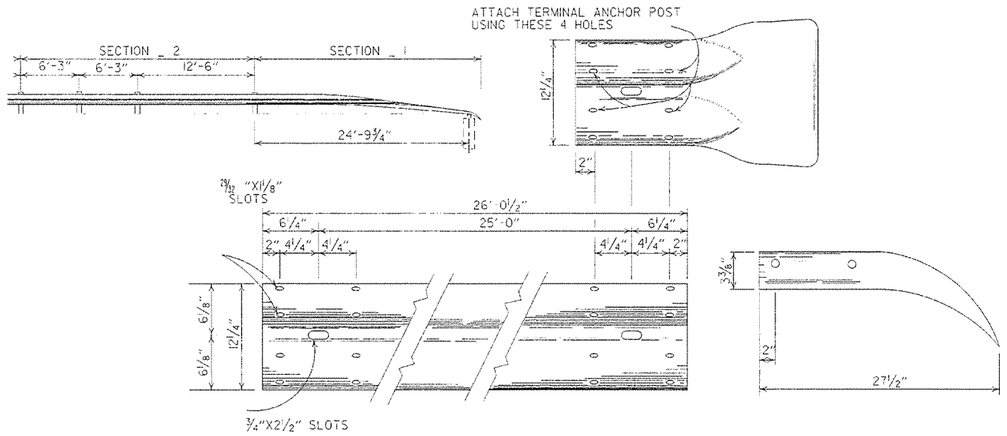



PLAN - GUARD RAIL TERMINAL (TYPE I)



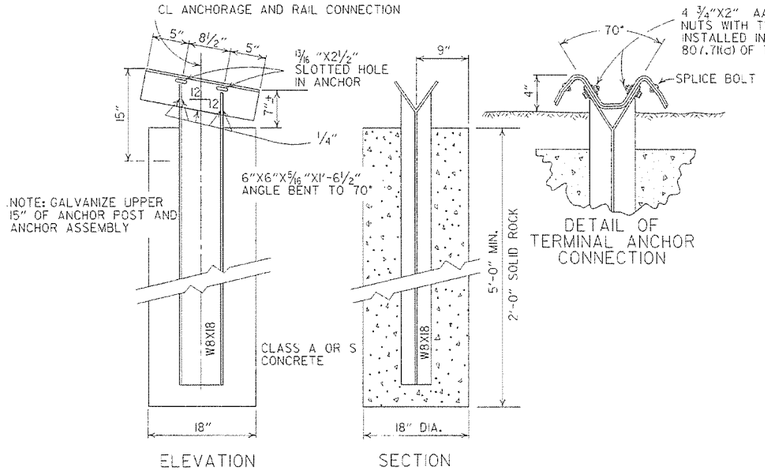

ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:
SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL SHALL BE PAID FOR AT THE PRICE BID PER LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.




SECTION 1

TERMINAL SECTION




NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 WF 17 POST IF CONTRACTOR SO DESIRES.

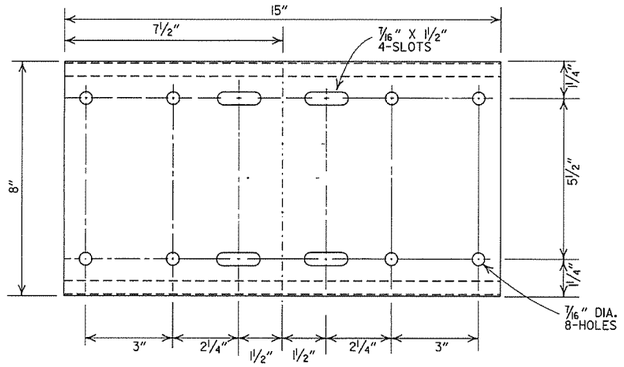
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

| DATE | REVISION | DATE FILM |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| 7-14-10 | RAISED HEIGHT OF GUARD RAIL 1" | |
| 6-26-97 | REVISED LAP NOTE | |
| 10-18-96 | REVISED ASTM REF. TO AASHTO | |
| 11-3-94 | DIMENSION TERMINAL DETAIL | |
| 11-11-92 | ADDED NOTE FOR PAYMENT | 11-11-92 |
| 10-1-92 | DRAWN & ISSUED | 10-1-92 |

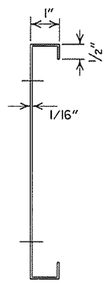
ARKANSAS STATE HIGHWAY COMMISSION

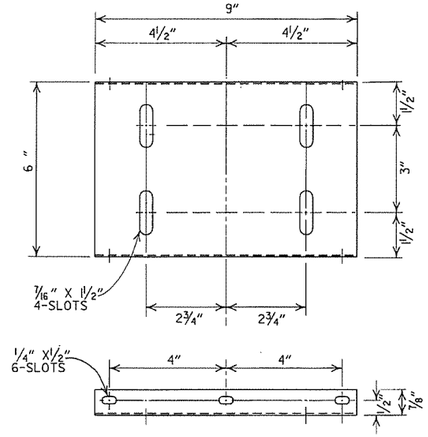
GUARD RAIL DETAILS

STANDARD DRAWING GRT-1

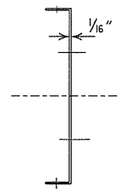


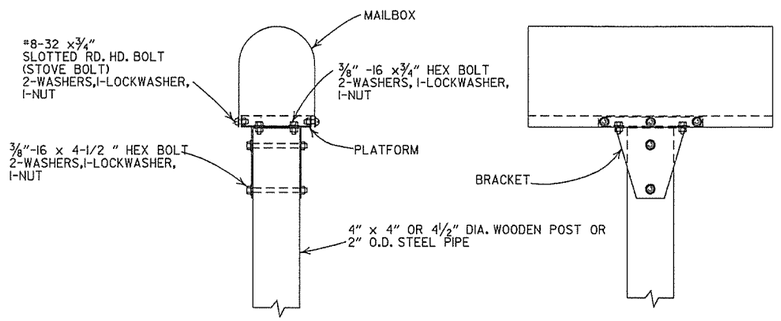

SHELF



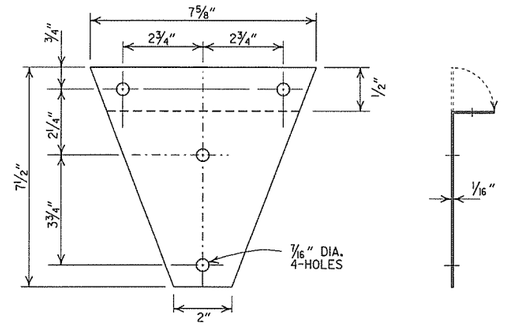




PLATFORM



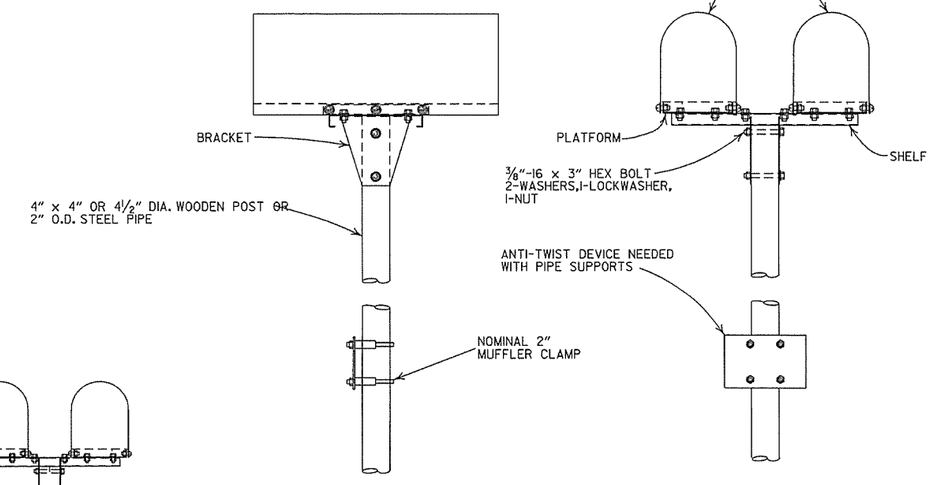

SINGLE INSTALLATION



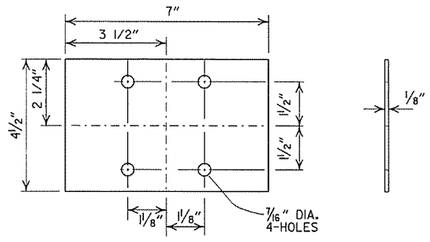

BRACKET

GENERAL NOTES

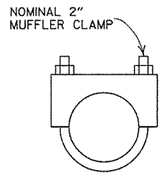
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED 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 X¾" 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.



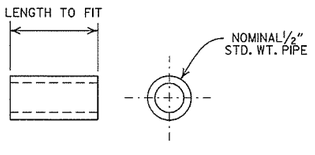

DOUBLE INSTALLATION



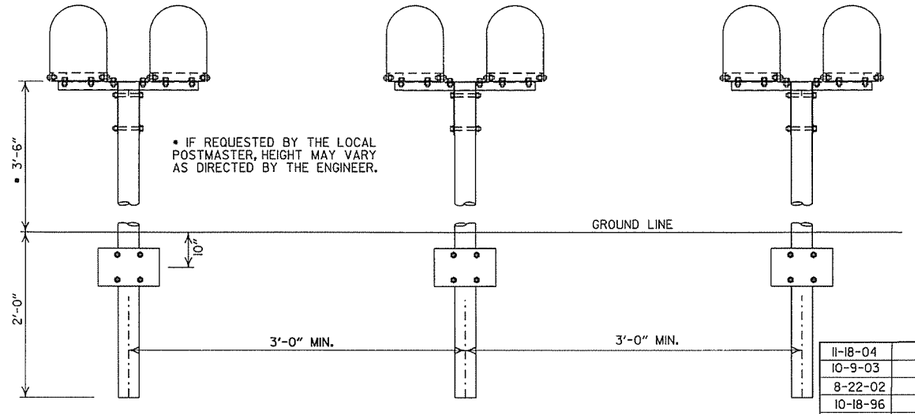

ANTI-TWIST PLATE




CLAMP




SPACER



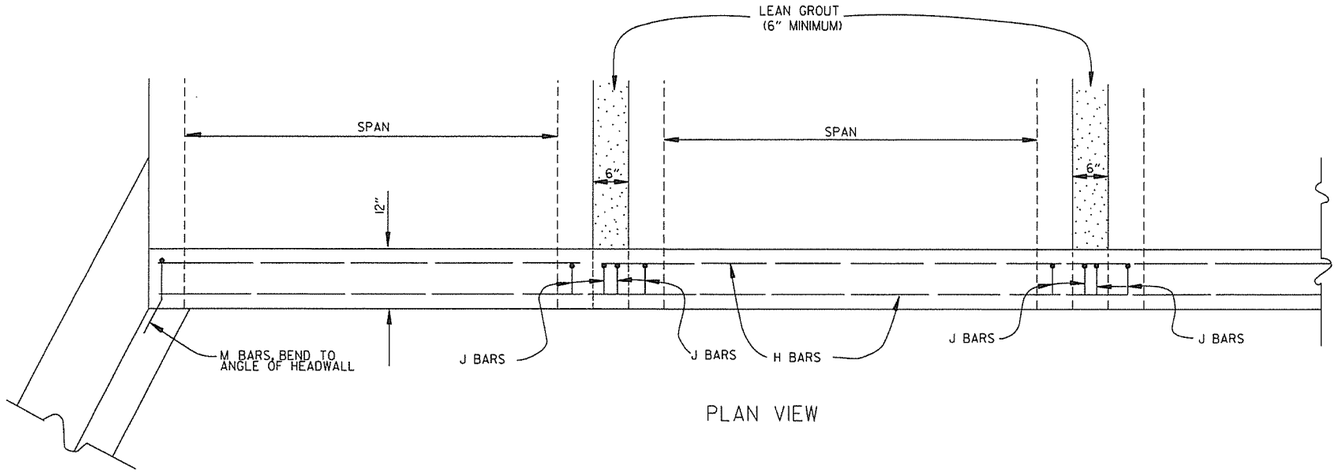

SPACING FOR MULTIPLE POST INSTALLATION

| 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

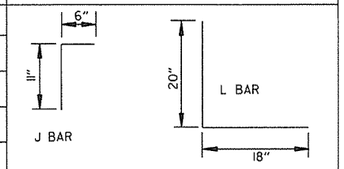
STANDARD DRAWING MB-1




PLAN VIEW

## BAR LIST

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




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

### GENERAL NOTES

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

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

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

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

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

LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:
PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.
SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS.
THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE.
THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

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

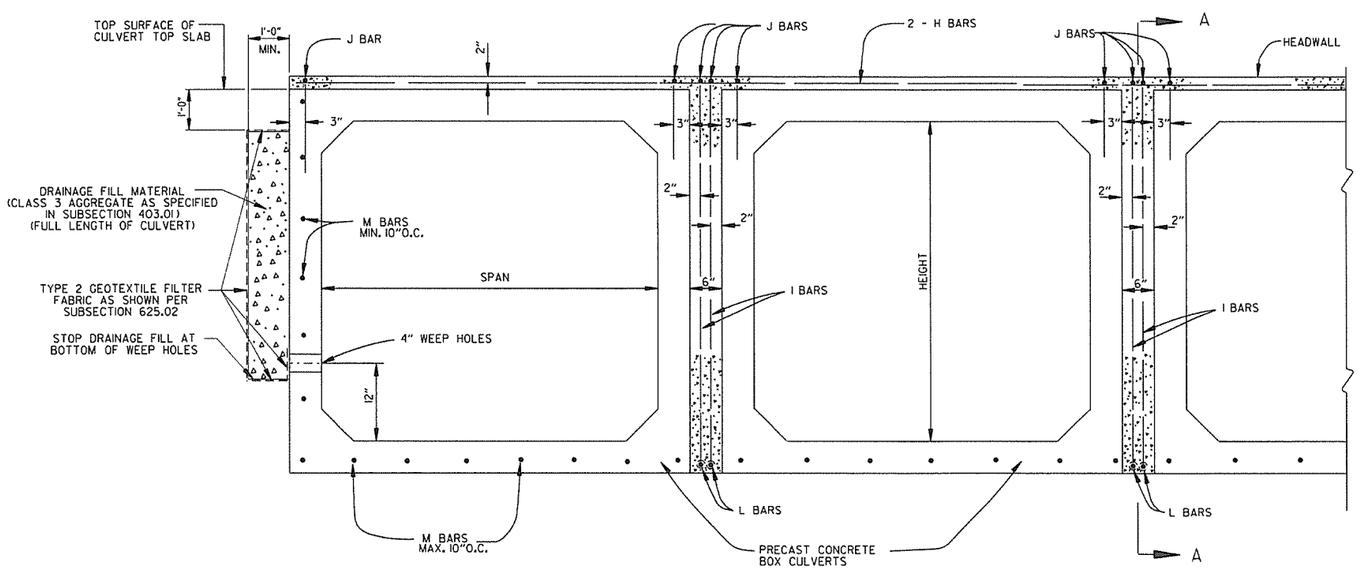
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

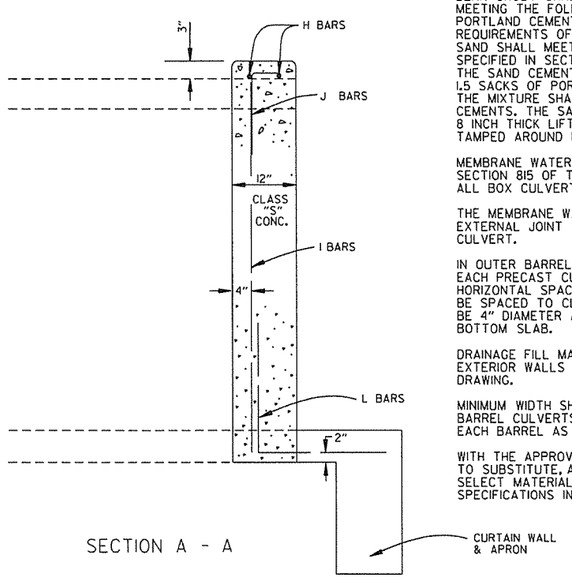
DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT. SEE DETAILS ON THIS DRAWING.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.




END VIEW




SECTION A - A

| DATE | REVISION | DATE FILMED |
|---|---|---|
| 1-28-15 | REVISED GEOTEXTILE FABRIC PLACEMENT | |
| 12-15-11 | ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL | |
| 10-15-09 | ADDED GENERAL NOTE | |
| 11-10-05 | REVISED SPACING OF "M" BARS | |
| 4-10-03 | REVISED GENERAL NOTES | |
| 10-18-96 | CORRECTED AASHTO REF. | |
| 10-1-92 | ADDED NOTE FOR MEMBRANE WATERPROOFING | |
| 8-15-91 | ADDED NOTE FOR LEAN GROUT | |
| 11- 8-90 | REVISED FOR 1991 SPECS | |
| 11-30-89 | ISSUED: JABE | |

ARKANSAS STATE HIGHWAY COMMISSION

# PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

## REINFORCED CONCRETE ARCH PIPE DIMENSIONS

| EQUIV. DIA. | SPAN | | RISE | |
|---|---|---|---|---|
| | AASHTO M 206 | AHTD NOMINAL | AASHTO M 206 | AHTD NOMINAL |
| INCHES | INCHES | | | |
| 15 | 18 | 18 | 11 | 11 |
| 18 | 22 | 22 | 13½ | 14 |
| 21 | 26 | 26 | 15½ | 16 |
| 24 | 28½ | 29 | 18 | 18 |
| 30 | 36¼ | 36 | 22½ | 23 |
| 36 | 43⅜ | 44 | 26⅝ | 27 |
| 42 | 51⅛ | 51 | 31 3/16 | 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.

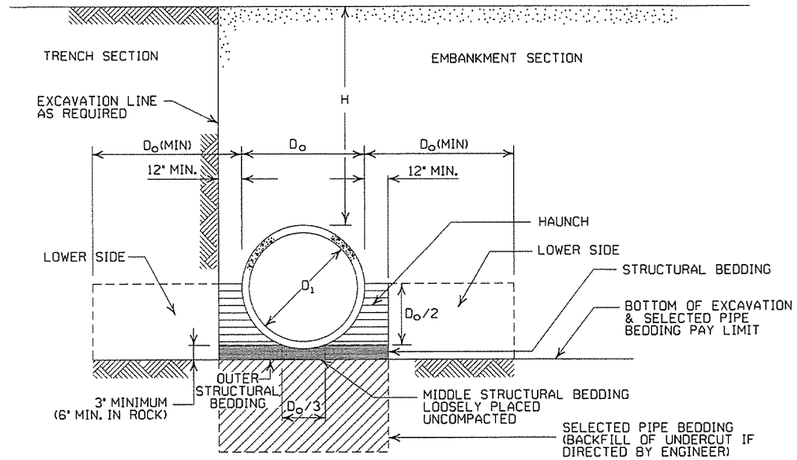
## - LEGEND -

$D_1$ = 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 |
| | | 2⅔ 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.) | MAX. HEIGHT OF FILL, "H" (FT.) | | MIN. THICKNESS REQUIRED INCHES | ① MIN. HEIGHT OF FILL, "H" (FT.) | MAX. HEIGHT OF FILL, "H" (FT.) | |
| | | | | INSTALLATION | INSTALLATION | | | INSTALLATION | INSTALLATION | |
| | | | | TYPE 1 | TYPE 1 | | | TYPE 1 | 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 | | INSTALLATION | | | | |
| | | | | TYPE 2 | TYPE 1 | TYPE 2 | TYPE 1 | | | |
| 36 | 40x31 | 5 | 0.079 | 3 | 2 | 12 | 15 | | | |
| 42 | 46x36 | 6 | 0.079 | 3 | 2 | 13 | 15 | | | |
| 48 | 53x41 | 7 | 0.079 | 3 | 2 | 13 | 15 | | | |
| 54 | 60x46 | 8 | 0.079 | 3 | 2 | 13 | 15 | | | |
| 60 | 66x51 | 9 | 0.079 | 3 | 2 | 13 | 15 | | | |
| 66 | 73x55 | 12 | 0.079 | 3 | 2 | 15 | 15 | | | |
| 72 | 81x59 | 14 | 0.079 | 3 | 2 | 15 | 15 | | | |
| 78 | 87x63 | 14 | 0.079 | 3 | 2 | 15 | 15 | | | |
| 84 | 95x67 | 16 | 0.109 | 3 | 2 | 15 | 15 | | | |
| 90 | 103x71 | 16 | 0.109 | 3 | 2 | 15 | 15 | | | |
| 96 | 112x75 | 18 | 0.109 | 3 | 2 | 15 | 15 | | | |
| 102 | 117x79 | 18 | 0.109 | 3 | 2 | 15 | 15 | | | |
| 108 | 128x83 | 18 | 0.138 | 3 | 2 | 15 | 15 | | | |

## 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 |

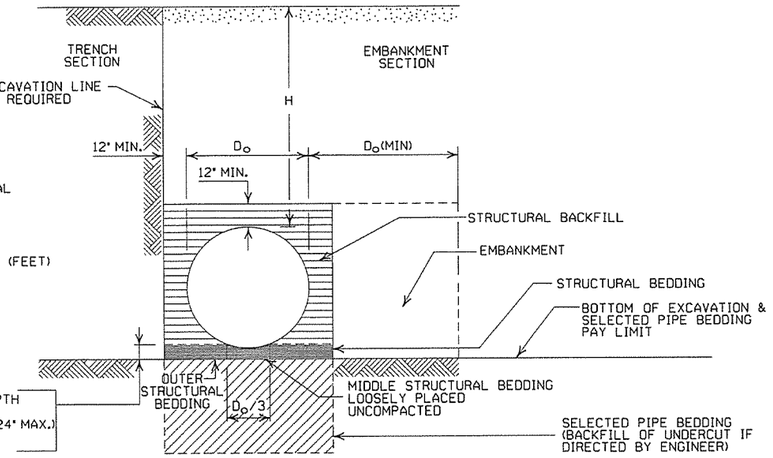
③ SM-3 WILL NOT BE ALLOWED.

## 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 |

- LEGEND -

$D_o$ = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL
EQUIV. DIA. = EQUIVALENT DIAMETER
H = FILL COVER HEIGHT OVER PIPE (FEET)




## EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. 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 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 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

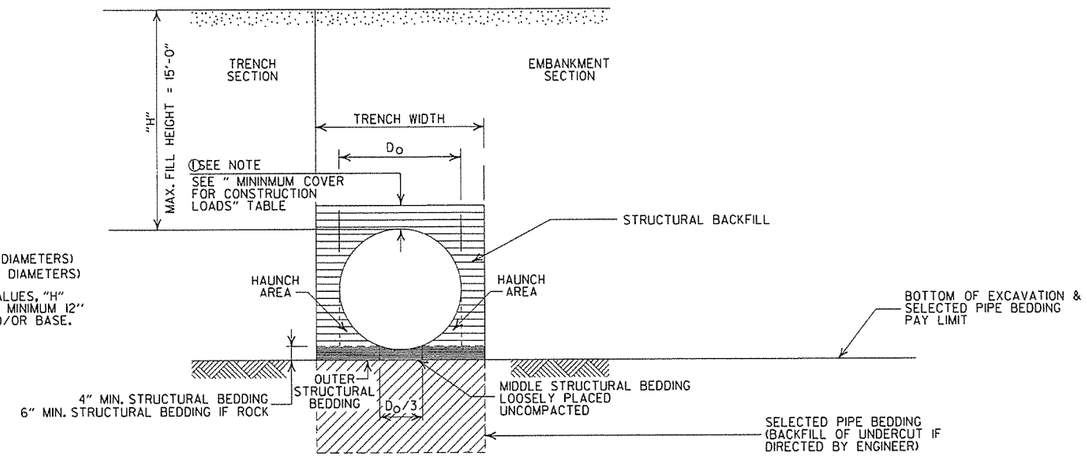
STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

## MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

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

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




## TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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.

## MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

## MINIMUM COVER FOR CONSTRUCTION LOADS

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

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

## CONSTRUCTION SEQUENCE

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.)
Do = 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

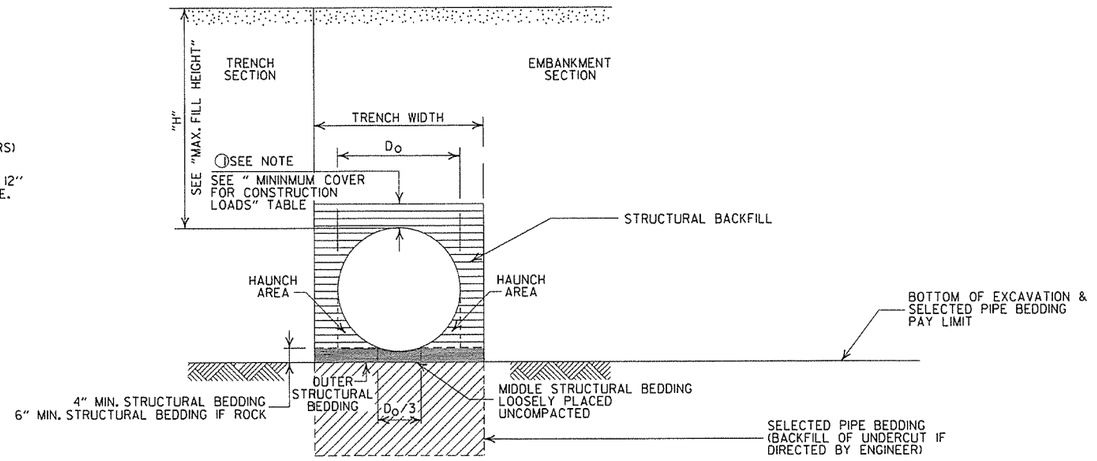
| PIPE DIAMETER | "H" |
|---|---|
| 18" | 45'-0" |
| 24" | 45'-0" |
| 30" | 40'-0" |
| 36" | 40'-0" |

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 | |

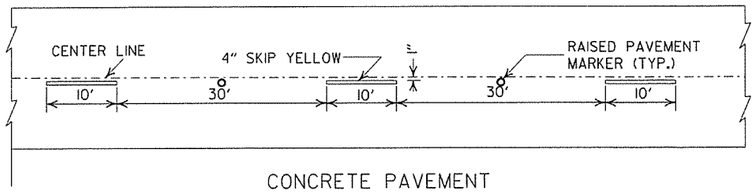
ARKANSAS STATE HIGHWAY COMMISSION

# PLASTIC PIPE CULVERT (PVC F949)

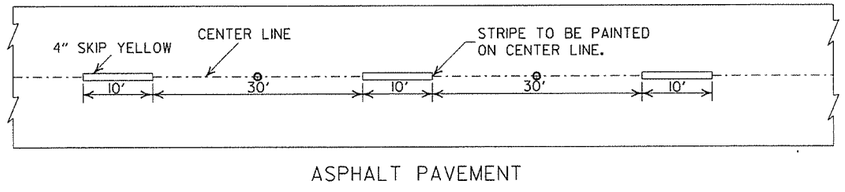
STANDARD DRAWING PCP-2

NOTES:

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

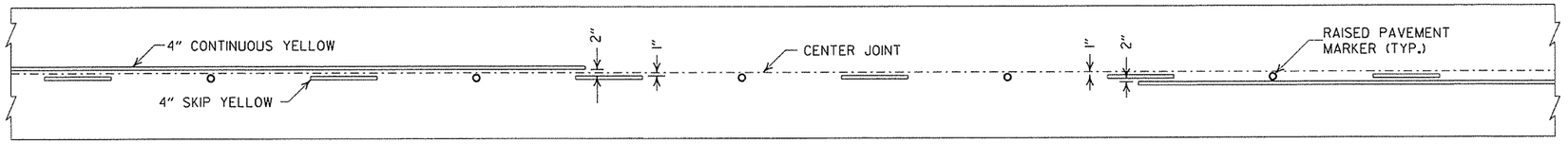



CONCRETE PAVEMENT

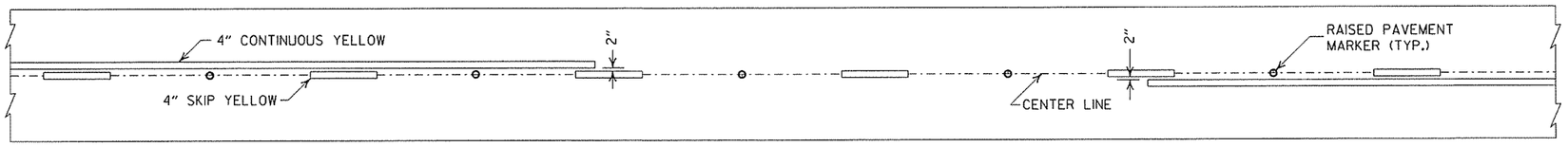



ASPHALT PAVEMENT

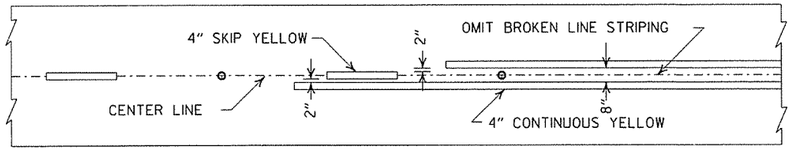
## BROKEN LINE STRIPING



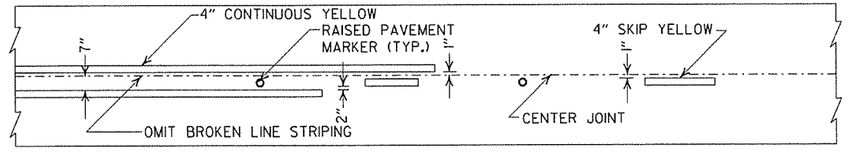

## SOLID LINE STRIPING ON CONCRETE PAVEMENT




## SOLID LINE STRIPING ON ASPHALT PAVEMENT

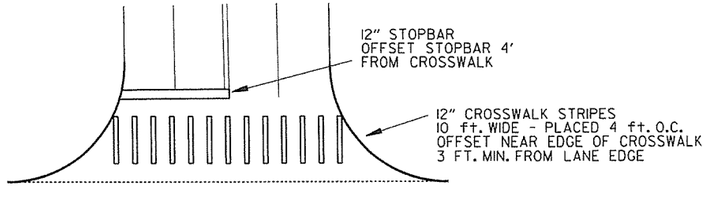



ASPHALT PAVEMENT



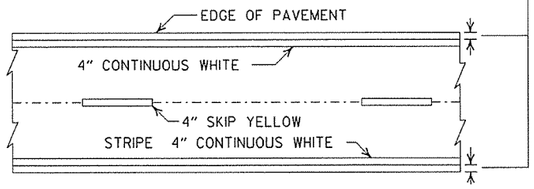

CONCRETE PAVEMENT

## STRIPING AT ADJACENT NO PASSING LANES

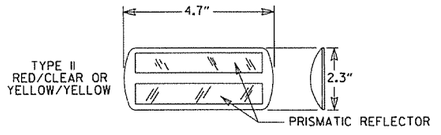



## CROSSWALK AND STOPBAR DETAILS

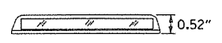
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT




## PAVEMENT EDGE LINE MARKING




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




## DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

# PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

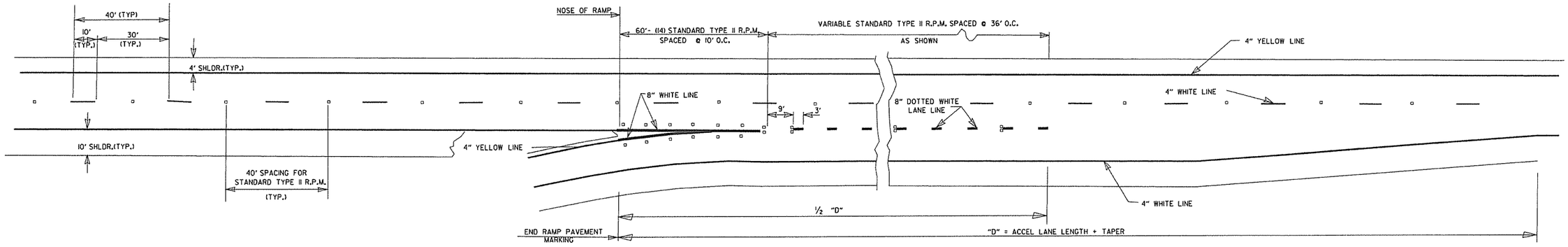
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

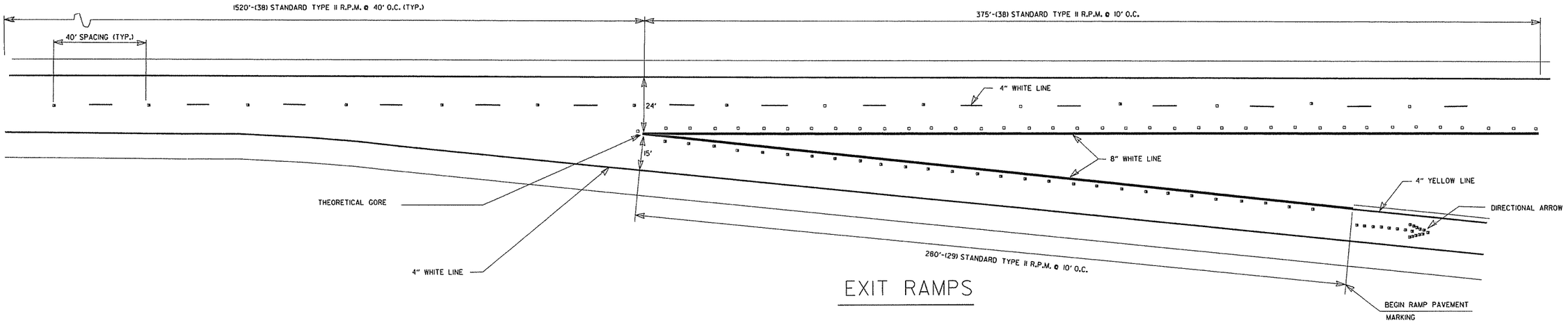
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

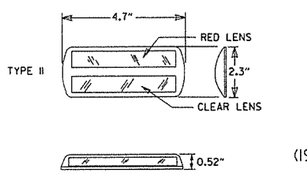
4" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH




## ENTRANCE RAMPS

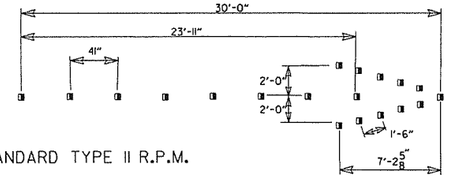



## EXIT RAMPS




DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

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




(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

GENERAL NOTES:

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

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

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

| DATE | REVISION | FILMED |
|---|---|---|
| 9-12-13 | REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS | |
| 7-26-12 | REVISED RPM NOTATION | |
| 12-15-11 | REVISED RPMs ACCORDING TO LATEST POLICY | |
| 11-17-10 | REMOVED PLOWABLE PAVEMENT MARKERS | |
| 6-3-10 | REVISED PER 2009 MUTCD | |
| 11-18-04 | REVISED NOTES | |
| 8-22-02 | ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS | |
| 5-18-00 | REMOVED HASHMARKS | |
| 7-02-98 | CHANGED TYPES TO ROMAN NUMERALS | |
| 4-26-96 | ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP | |
| 2-2-95 | PLACED IN USE | 2-2-95 |

ARKANSAS STATE HIGHWAY COMMISSION

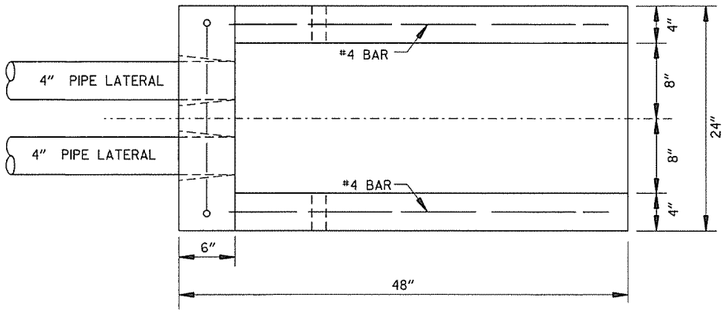
PERMANENT PAVEMENT MARKING
ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

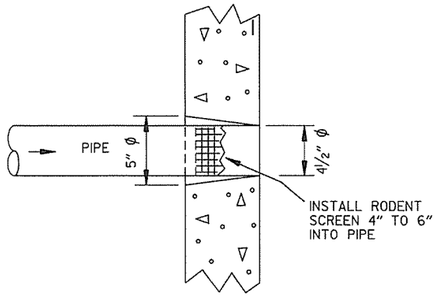
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

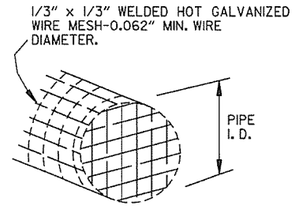
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



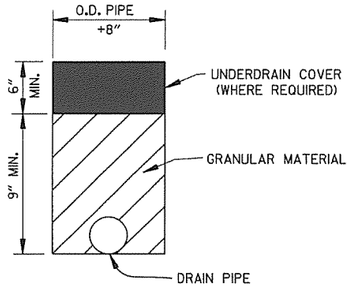

PLAN VIEW

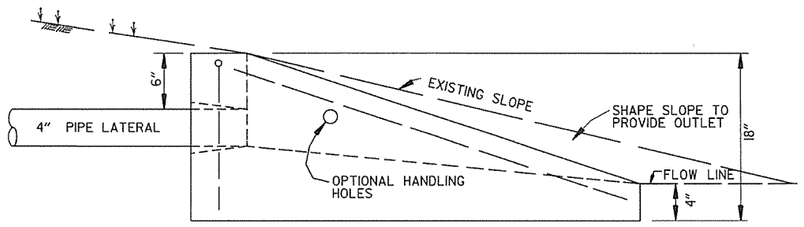



DETAIL OF HOLE FOR 4" PIPE

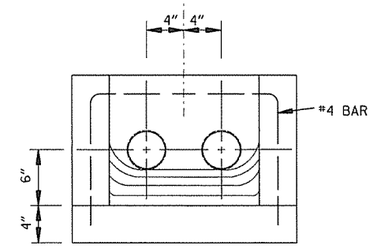



DETAIL OF RODENT SCREEN

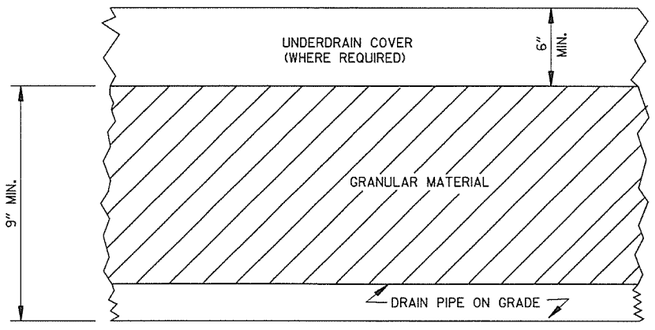



SIDE VIEW

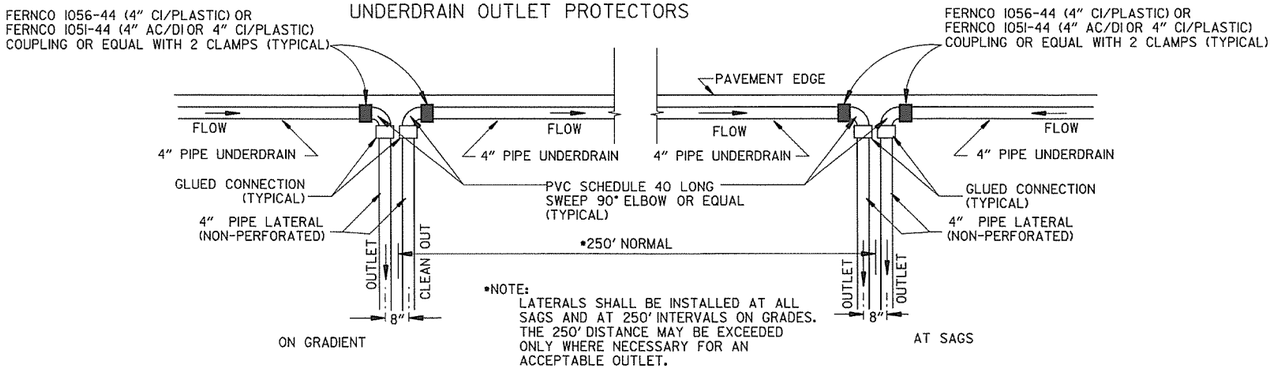



FRONT VIEW




DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS




DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

| DATE | REVISION | DATE FILMED |
|---|---|---|
| 4-10-03 | REVISED NOTE 3 | |
| 1-12-00 | REVISED DETAIL OF UNDERDRAIN LATERALS | |
| 11-18-98 | REVISED NOTE | |
| 10-18-96 | REVISED MIN. DEPTH & GEOTEXTILE FABRIC | |
| 4-26-96 | ADDED LATERAL NOTE; 5½" TO 5" | |
| 11-22-95 | REVISED LATERALS | |
| 7-20-95 | REVISED LATERALS & ADDED NOTE | |
| 11- 3-94 | REVISED FOR DUAL LATERALS | 11- 3-94 |
| 10- 1-92 | SUBSTITUTED GEOTEXTILE | 10- 1-92 |
| 8-15-91 | ADDED POLYEDTHYLENE PIPE | 8-15-91 |
| 11- 8-90 | DELETED ALTERNATE NOTE | 11- 8-90 |
| 1-25-90 | ADDED 4" SNAP ADAPTER | 1-25-90 |
| 11-30-89 | DEL. (SUBGRADE); ADDED (WHERE REQUIRED) | 11-30-89 |
| 7-15-88 | ISSUED P.L.M. | 647-7-15-88 |

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

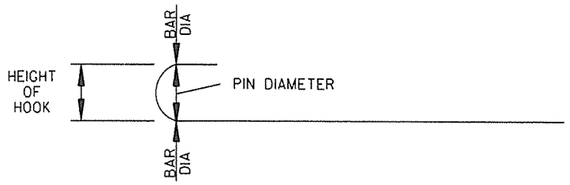
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

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

| BAR SIZE | PIN DIAMETER | HOOK EXTENSION "K" |
|---|---|---|
| 3 | 2¼" | 4" |
| 4 | 3 " | 4½" |
| 5 | 3¾" | 5" |
| 6 | 4½" | 6" |
| 7 | 5¼" | 7" |
| 8 | 6" | 8" |

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.




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

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

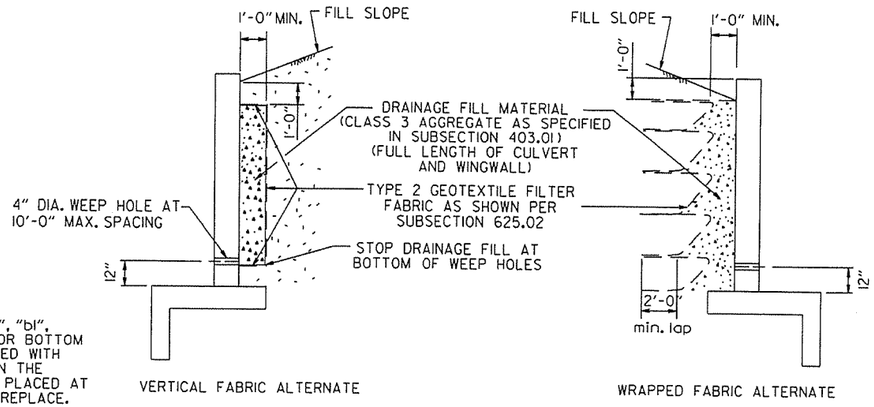
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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

REPLACEMENT BAR LENGTHS TABLE

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

L = "OW" - 3 INCHES




WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

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

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

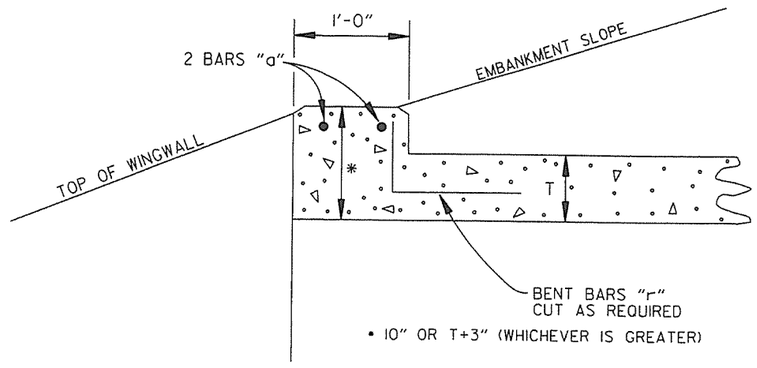
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.




NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

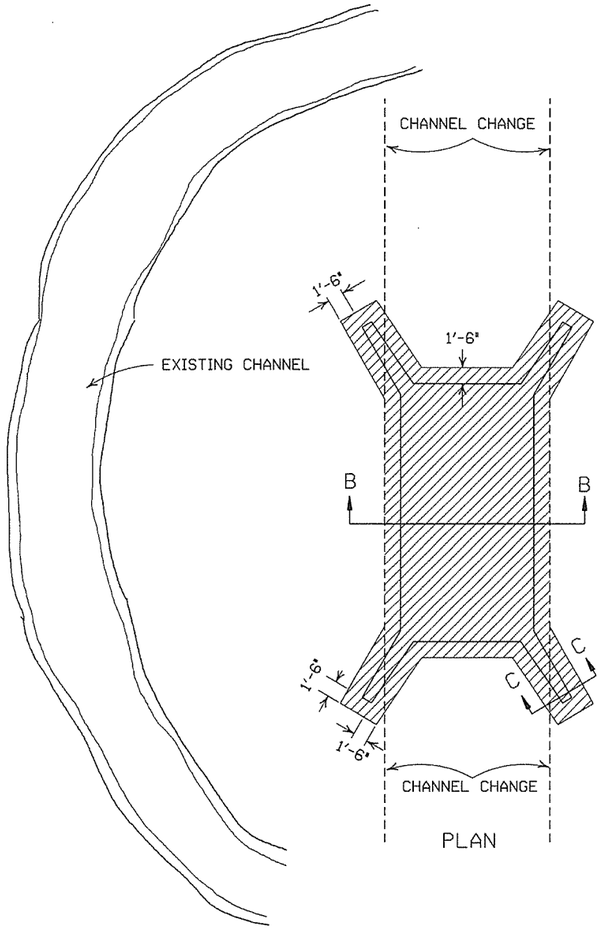
R.C. BOX CULVERT HEADWALL MODIFICATIONS

| DATE | REVISION | DATE FILMED |
|---|---|---|
| 7/26/12 | REV. DRAINAGE FILL MATERIAL & DETAIL | |
| 12/15/11 | REQUIRE WEEP HOLES IN BOX CULVERT WALLS | |
| 5-25-06 | REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM | |
| 11-16-01 | ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES | |
| 10-18-96 | REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM | |
| 10-12-95 | MOVED SOLID SODDING DETAIL TO RCB-2 | |
| 6-2-94 | ADDED SOLID SODDING PLAN DETAIL | |
| 8-5-93 | REVISED PIN DIAMETER TO SPECS. | |
| 8-15-91 | DRAWN AND ISSUED | |

ARKANSAS STATE HIGHWAY COMMISSION

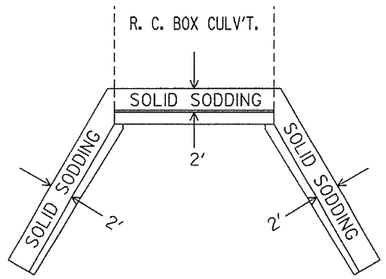
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1




PLAN

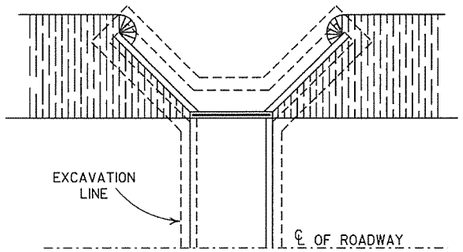
SOLID SODDING



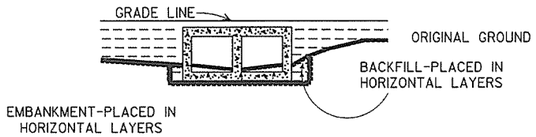

PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

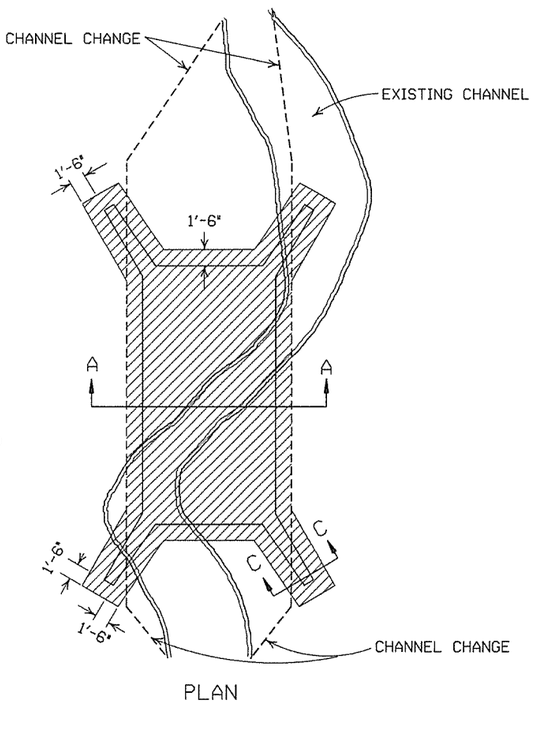



PLAN

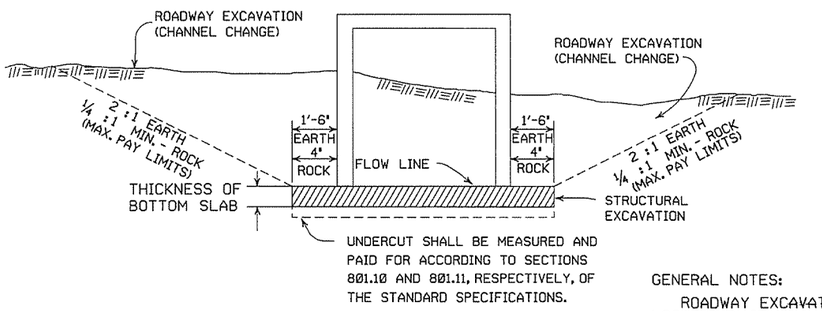



LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

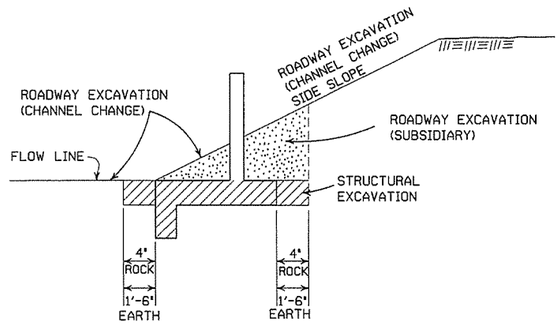



PLAN

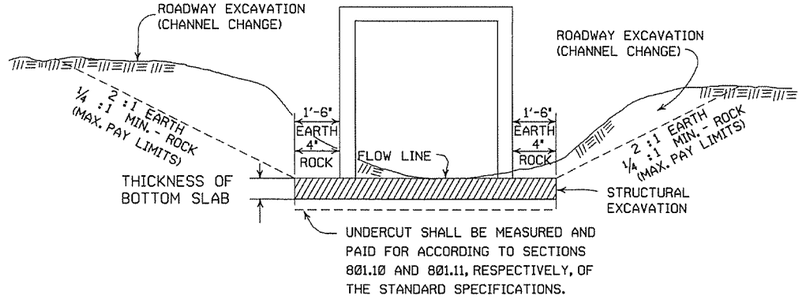



SECTION B-B

DETAILS FOR NEW CHANNELS




SECTION C-C




SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

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

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

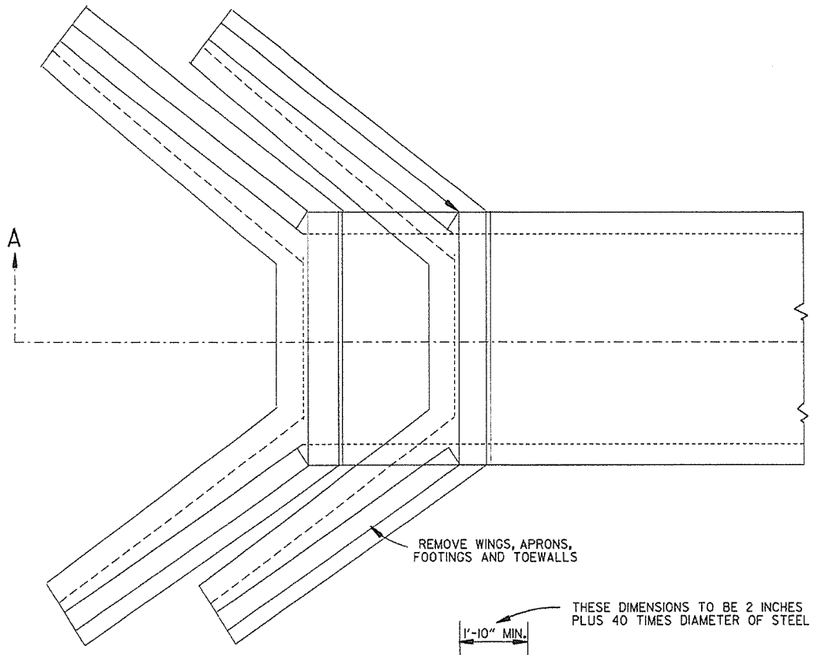
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

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

ARKANSAS STATE HIGHWAY COMMISSION

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

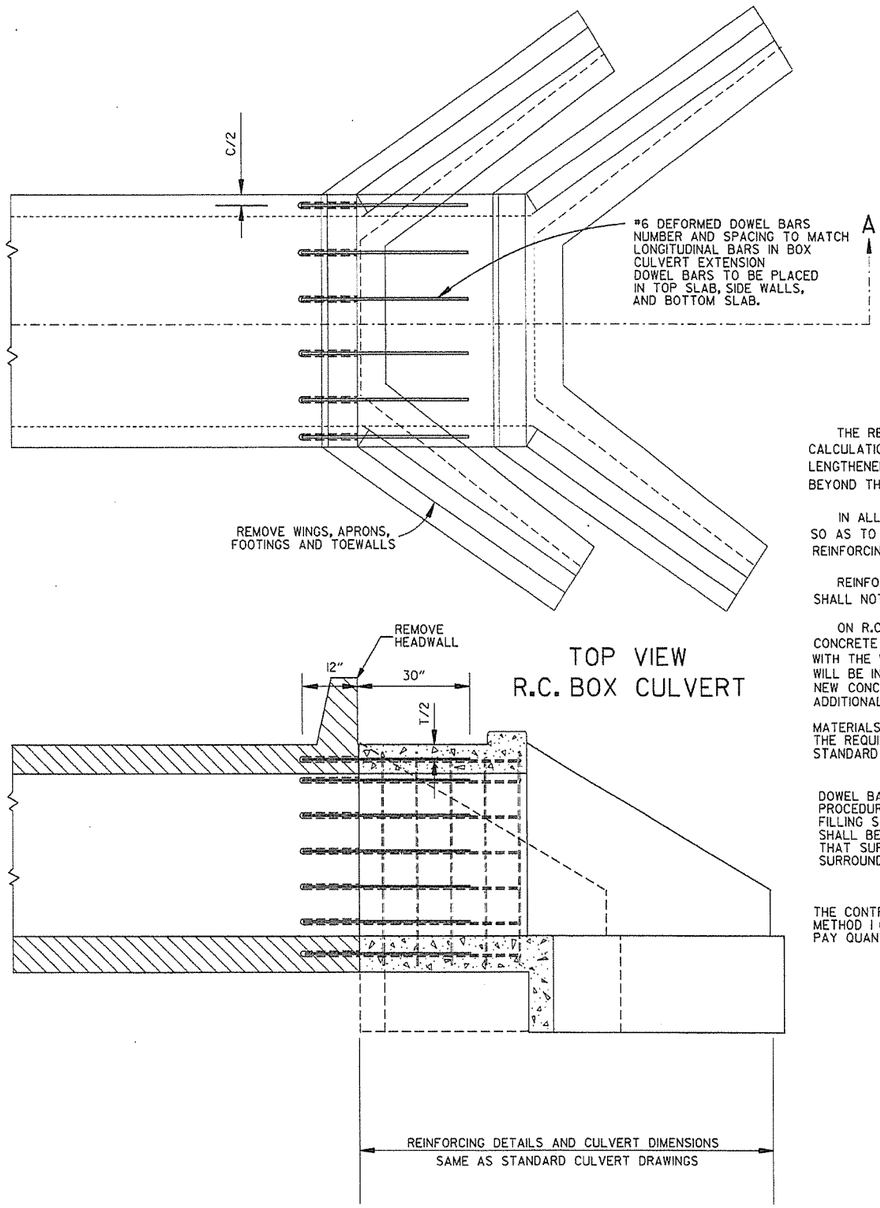
STANDARD DRAWING RCB-2




TOP VIEW
R.C. BOX CULVERT

SECTION A-A

METHOD 1




TOP VIEW
R.C. BOX CULVERT

SECTION A-A

METHOD 2

GENERAL NOTES

| | USE FOR METHOD |
|---|---|
| THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED. | 1 |
| IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL. | 1 |
| REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION. | 1&2 |
| ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. | 1&2 |
| MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS. | 2 |
| DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER. AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES. | 2 |
| THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1. | 1&2 |

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

| DATE | REVISION | DATE FILM |
|---|---|---|
| 10-12-95 | CHANGED DRAWING # FROM 144-A | |
| 4-1-93 | ADDED GENERAL NOTE | |
| 10-1-92 | ADDED ALT. METHOD OF EXTENSION | |
| 11-30-89 | REDRAWN | |
| 1-4-83 | ELIMINATED CONCRETE CLASS | |
| 12-20-56 | RETRACED | |

ARKANSAS STATE HIGHWAY COMMISSION

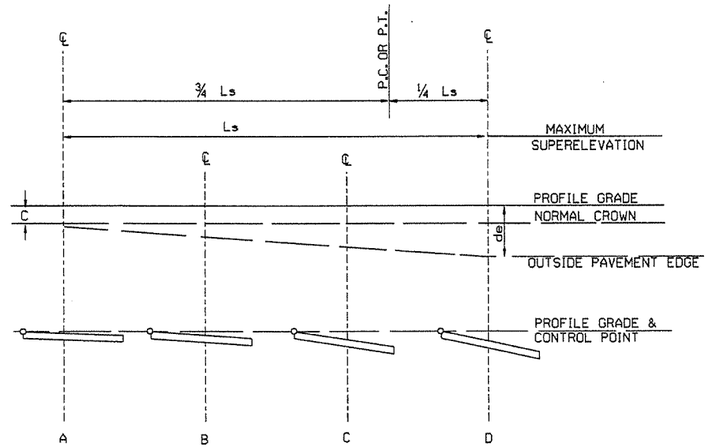
# METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS

# STANDARD DRAWING RCB-3

## SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

| DEGREE OF CURVE | 30 MPH e | 30 MPH Ls (FT) MINIMUM | 30 MPH Ls (FT) DESIRABLE | 40 MPH e | 40 MPH Ls (FT) MINIMUM | 40 MPH Ls (FT) DESIRABLE | 50 MPH e | 50 MPH Ls (FT) MINIMUM | 50 MPH Ls (FT) DESIRABLE | 55 MPH e | 55 MPH Ls (FT) MINIMUM | 55 MPH Ls (FT) DESIRABLE | 60 MPH e | 60 MPH Ls (FT) MINIMUM | 60 MPH Ls (FT) DESIRABLE | 65 MPH e | 65 MPH Ls (FT) MINIMUM | 65 MPH Ls (FT) DESIRABLE | 70 MPH e | 70 MPH Ls (FT) MINIMUM | 70 MPH Ls (FT) DESIRABLE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° 15′ | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | |
| 0° 30′ | N.C. | | | N.C. | | | N.C. | | | 0.022 | | | 0.023 | | | 0.025 | | | 0.028 | | |
| 0° 45′ | N.C. | | | N.C. | | | R.C. | | | 0.026 | | | 0.030 | | | 0.033 | 250 | | 0.037 | 275 | |
| 1° 00′ | N.C. | | | N.C. | | | 0.021 | | | 0.032 | | | 0.037 | | | 0.041 | | 350 | 0.046 | | 350 |
| 1° 15′ | N.C. | | | R.C. | | | 0.026 | 200 | | 0.037 | 225 | | 0.043 | 250 | | 0.048 | | | 0.054 | | |
| 1° 30′ | N.C. | | | 0.021 | | | 0.031 | | | 0.043 | | 350 | 0.049 | | 350 | 0.055 | | | 0.062 | | |
| 1° 45′ | N.C. | | | 0.025 | 175 | | 0.036 | | | 0.048 | | | 0.055 | | | 0.062 | | | 0.070 | | |
| 2° 00′ | R.C. | | | 0.028 | | | 0.040 | | | 0.053 | | | 0.061 | | | 0.069 | 265 | | 0.078 | 300 | |
| 2° 15′ | R.C. | | | 0.031 | | | 0.045 | | 300 | 0.058 | | | 0.067 | | | 0.075 | 280 | | 0.085 | 315 | 400 |
| 2° 30′ | 0.021 | | | 0.034 | | | 0.049 | | | 0.063 | | | 0.072 | | | 0.081 | 300 | | 0.091 | 335 | |
| 2° 45′ | 0.023 | | | 0.037 | | 250 | 0.053 | | | 0.067 | 230 | | 0.077 | 260 | | 0.087 | 315 | | 0.096 | 350 | |
| 3° 00′ | 0.025 | 150 | | 0.040 | | | 0.057 | | | 0.072 | 245 | | 0.082 | 275 | | 0.090 | 325 | 400 | 0.098 | 360 | 450 |
| 3° 15′ | 0.027 | | | 0.043 | | | 0.061 | | | 0.076 | 255 | | 0.086 | 285 | | 0.095 | 340 | | 0.100 | 360 | |
| 3° 30′ | 0.029 | | | 0.046 | | | 0.065 | 205 | | 0.080 | 265 | | 0.090 | 295 | 400 | 0.097 | 345 | | | | |
| 3° 45′ | 0.031 | | | 0.049 | | | 0.069 | 215 | | 0.083 | 270 | | 0.093 | 305 | | 0.099 | 350 | | | | |
| 4° 00′ | 0.033 | | | 0.051 | | | 0.072 | 225 | | 0.087 | 280 | | 0.096 | 315 | | | | | | | |
| 4° 30′ | 0.037 | | | 0.056 | | | 0.078 | 240 | | 0.091 | 295 | 400 | 0.098 | 320 | | | | | | | |
| 5° 00′ | 0.040 | | | 0.061 | | | 0.083 | 250 | | 0.094 | 300 | | | | | | | | | | |
| 5° 30′ | 0.043 | | | 0.066 | 185 | | 0.088 | 260 | | 0.096 | 305 | | | | | | | | | | |
| 6° 00′ | 0.046 | | | 0.070 | 190 | | 0.092 | 270 | | 0.100 | 315 | | | | | | | | | | |
| 6° 30′ | 0.050 | | | 0.074 | 200 | | 0.095 | 280 | 350 | | | | | | | | | | | | |
| 7° 00′ | 0.053 | | | 0.078 | 210 | | 0.098 | 285 | | | | | | | | | | | | | |
| 7° 30′ | 0.056 | | | 0.081 | 215 | | 0.099 | 290 | | | | | | | | | | | | | |
| 8° 00′ | 0.058 | | | 0.084 | 220 | 300 | 0.100 | 290 | | | | | | | | | | | | | |
| 8° 30′ | 0.061 | | | 0.087 | 225 | | | | | | | | | | | | | | | | |
| 9° 00′ | 0.063 | | | 0.089 | 230 | | | | | | | | | | | | | | | | |
| 10° 00′ | 0.068 | 160 | | 0.094 | 235 | | | | | | | | | | | | | | | | |
| 11° 00′ | 0.072 | 170 | | 0.097 | 250 | | | | | | | | | | | | | | | | |
| 12° 00′ | 0.076 | 175 | | 0.099 | 250 | | | | | | | | | | | | | | | | |
| 13° 00′ | 0.080 | 180 | | 0.100 | 250 | | | | | | | | | | | | | | | | |
| 14° 00′ | 0.083 | 190 | | | | | | | | | | | | | | | | | | | |
| 15° 00′ | 0.086 | 195 | | | | | | | | | | | | | | | | | | | |
| 16° 00′ | 0.089 | 200 | | | | | | | | | | | | | | | | | | | |
| 17° 00′ | 0.091 | 200 | | | | | | | | | | | | | | | | | | | |
| 18° 00′ | 0.093 | 205 | | | | | | | | | | | | | | | | | | | |
| 19° 00′ | 0.095 | 210 | | | | | | | | | | | | | | | | | | | |
| 20° 00′ | 0.097 | 215 | 300 | | | | | | | | | | | | | | | | | | |
| 21° 00′ | 0.098 | 215 | | | | | | | | | | | | | | | | | | | |
| 22° 00′ | 0.099 | 215 | | | | | | | | | | | | | | | | | | | |
| 23° 00′ | 0.099 | 215 | | | | | | | | | | | | | | | | | | | |
| 24° 00′ | 0.100 | 220 | | | | | | | | | | | | | | | | | | | |

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 4° 15′ | D MAX = 3° 30′




ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{Ls} - C$

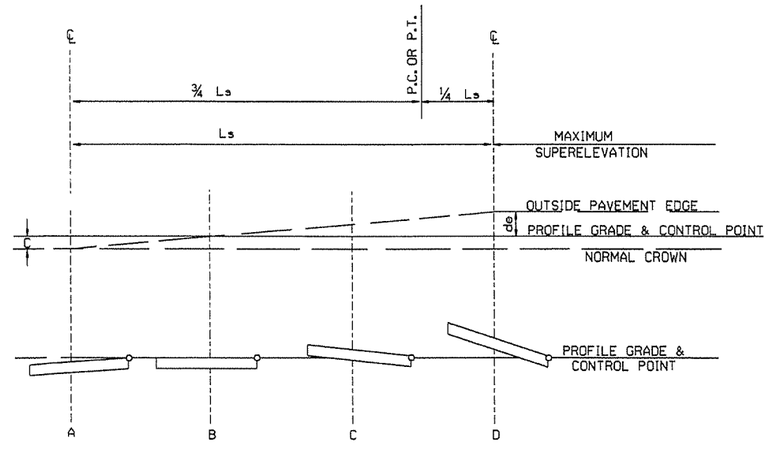
### ABBREVIATIONS

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

### GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

6 LANE DIVIDED---------+20%
8 LANE DIVIDED---------+50%




ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{Ls} - C$

| DATE | REVISION | DATE FILMED |
|---|---|---|
| 01-09-87 | ISSUED | 578-1-15-87 |

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

STANDARD DRAWING SE-1

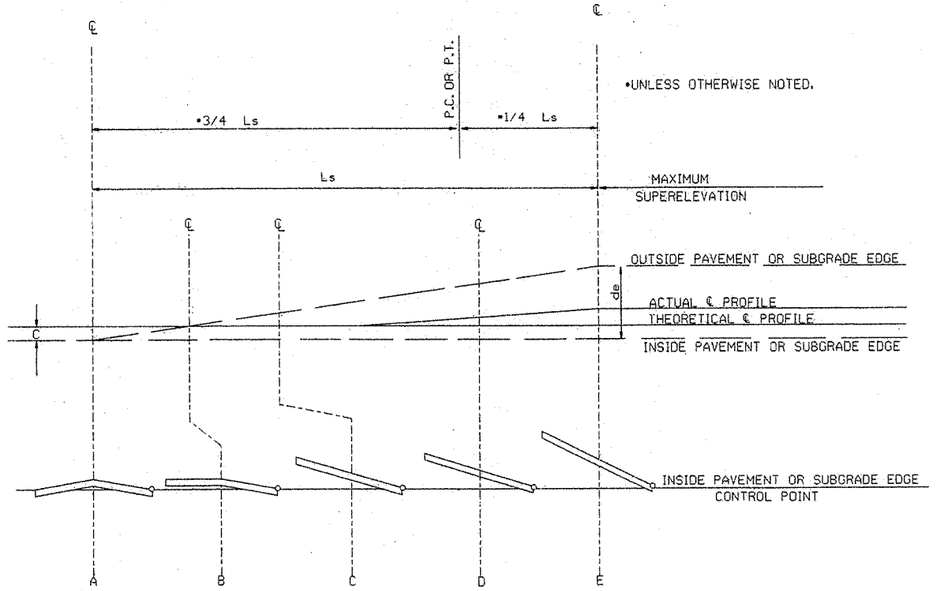
## SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

| DEGREE OF CURVE | 30 MPH e | 30 MPH Ls (FT) MINIMUM | 30 MPH Ls (FT) DESIRABLE | 40 MPH e | 40 MPH Ls (FT) MINIMUM | 40 MPH Ls (FT) DESIRABLE | 50 MPH e | 50 MPH Ls (FT) MINIMUM | 50 MPH Ls (FT) DESIRABLE | 55 MPH e | 55 MPH Ls (FT) MINIMUM | 55 MPH Ls (FT) DESIRABLE | 60 MPH e | 60 MPH Ls (FT) MINIMUM | 60 MPH Ls (FT) DESIRABLE | 70 MPH e | 70 MPH Ls (FT) MINIMUM | 70 MPH Ls (FT) DESIRABLE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° 15′ | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | |
| 0° 30′ | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | | N.C. | | |
| 0° 45′ | N.C. | | | N.C. | | | R.C. | | | 0.022 | | | 0.023 | | | 0.028 | | |
| 1° 00′ | N.C. | | | N.C. | | | 0.021 | | | 0.026 | | | 0.030 | | | 0.037 | 275 | 300 |
| 1° 15′ | N.C. | | | R.C. | | | 0.026 | | | 0.032 | | | 0.037 | | | 0.046 | | |
| 1° 30′ | N.C. | | | 0.021 | | | 0.031 | 200 | | 0.037 | 225 | | 0.043 | 250 | | 0.054 | | |
| 1° 45′ | N.C. | | | 0.025 | 175 | | 0.036 | | | 0.043 | | 300 | 0.049 | | 300 | 0.062 | | |
| 2° 00′ | R.C. | | | 0.028 | | | 0.040 | | | 0.048 | | | 0.055 | | | 0.070 | | |
| 2° 15′ | R.C. | | | 0.031 | | | 0.045 | | 250 | 0.053 | | | 0.061 | | | 0.078 | 300 | 350 |
| 2° 30′ | 0.021 | | | 0.034 | | | 0.049 | | | 0.058 | | | 0.067 | | | 0.085 | 315 | |
| 2° 45′ | 0.023 | | | 0.037 | | 200 | 0.053 | | | 0.063 | | | 0.072 | | | 0.091 | 335 | |
| 3° 00′ | 0.025 | 150 | | 0.040 | | | 0.057 | | | 0.067 | 230 | | 0.077 | 260 | | 0.096 | 350 | 400 |
| 3° 15′ | 0.027 | | | 0.043 | | | 0.061 | | | 0.072 | 245 | | 0.082 | 275 | | 0.098 | 360 | |
| 3° 30′ | 0.029 | | | 0.046 | | | 0.065 | 205 | | 0.076 | 255 | | 0.086 | 285 | | 0.100 | 360 | |
| 3° 45′ | 0.031 | | 200 | 0.049 | | | 0.069 | 215 | | 0.080 | 265 | | 0.090 | 295 | 350 | | | |
| 4° 00′ | 0.033 | | | 0.051 | | | 0.072 | 225 | | 0.083 | 270 | | 0.093 | 305 | | | | |
| 4° 30′ | 0.037 | | | 0.056 | | | 0.078 | 240 | | 0.087 | 280 | | 0.096 | 315 | | | | |
| 5° 00′ | 0.040 | | | 0.061 | | | 0.083 | 250 | | 0.091 | 295 | 350 | 0.098 | 320 | | | | |
| 5° 30′ | 0.043 | | | 0.066 | 185 | | 0.088 | 260 | | 0.094 | 300 | | | | | | | |
| 6° 00′ | 0.046 | | | 0.070 | 190 | | 0.092 | 270 | | 0.096 | 305 | | | | | | | |
| 6° 30′ | 0.050 | | | 0.074 | 200 | | 0.095 | 280 | 300 | 0.100 | 315 | | | | | | | |
| 7° 00′ | 0.053 | | | 0.078 | 210 | | 0.098 | 285 | | | | | | | | | | |
| 7° 30′ | 0.056 | | | 0.081 | 215 | | 0.099 | 290 | | | | | | | | | | |
| 8° 00′ | 0.058 | | | 0.084 | 220 | | 0.100 | 290 | | | | | | | | | | |
| 8° 30′ | 0.061 | | | 0.087 | 225 | 250 | | | | | | | | | | | | |
| 9° 00′ | 0.063 | | | 0.089 | 230 | | | | | | | | | | | | | |
| 10° 00′ | 0.068 | 160 | | 0.094 | 235 | | | | | | | | | | | | | |
| 11° 00′ | 0.072 | 170 | | 0.097 | 250 | | | | | | | | | | | | | |
| 12° 00′ | 0.076 | 175 | | 0.099 | 250 | | | | | | | | | | | | | |
| 13° 00′ | 0.080 | 180 | | 0.100 | 250 | | | | | | | | | | | | | |
| 14° 00′ | 0.083 | 190 | | | | | | | | | | | | | | | | |
| 15° 00′ | 0.086 | 195 | | | | | | | | | | | | | | | | |
| 16° 00′ | 0.089 | 200 | | | | | | | | | | | | | | | | |
| 17° 00′ | 0.091 | 200 | | | | | | | | | | | | | | | | |
| 18° 00′ | 0.093 | 205 | | | | | | | | | | | | | | | | |
| 19° 00′ | 0.095 | 210 | | | | | | | | | | | | | | | | |
| 20° 00′ | 0.097 | 215 | 250 | | | | | | | | | | | | | | | |
| 21° 00′ | 0.098 | 215 | | | | | | | | | | | | | | | | |
| 22° 00′ | 0.099 | 215 | | | | | | | | | | | | | | | | |
| 23° 00′ | 0.099 | 215 | | | | | | | | | | | | | | | | |
| 24° 00′ | 0.100 | 220 | | | | | | | | | | | | | | | | |

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 3° 30′

### ABBREVIATIONS

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




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

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

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

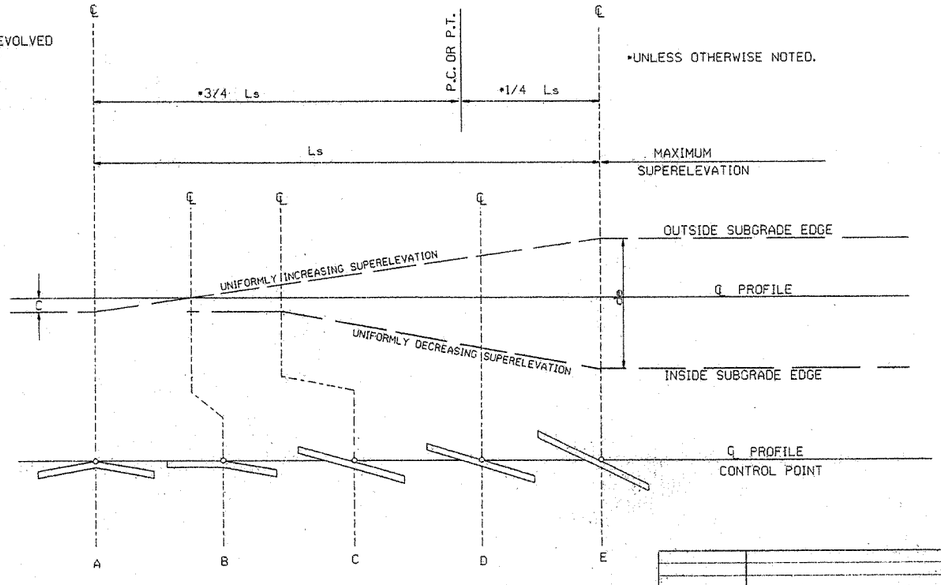
### GENERAL NOTES

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

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

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

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.




STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

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

ARKANSAS STATE HIGHWAY COMMISSION

# TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

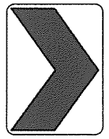
FILE STDSE2.DGN




R1-1
30"X30"



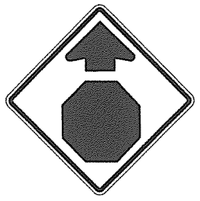
W1-3
30"X30"
(LT. OR RT.)



W1-8
18"X24"



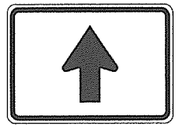
W2-5
30"X30"



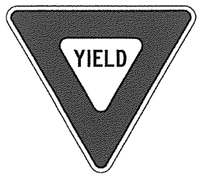
W3-1
36"X36"




W5-1
36"X36"



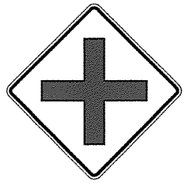
M6-3
21"X15"




R1-2
36"X36"X36"



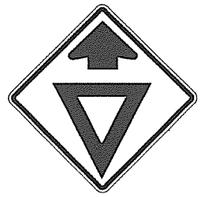
W1-4
30"X30"
(LT. or RT.)



W2-1
30"X30"



S1-1
36"X36"

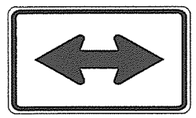


W3-2
36"X36"

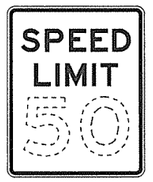



County
Route Marker
M1-6
24"X24"

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



M6-4
21"X15"




R2-1
24"X30"



W1-5
30"X30"
(LT. or RT.)



W2-2
30"X30"



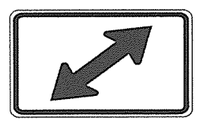

W5-2
36"X36"




W8-3
36"X36"



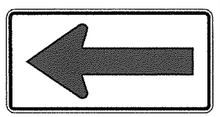

R1-3P
18"X6"



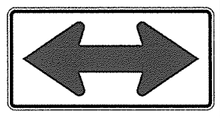
M6-5
21"X15"



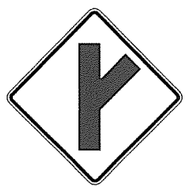
W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"



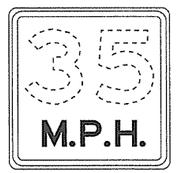
W1-7
48"X24"



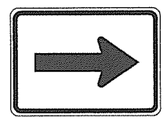
W2-3
30"X30"
(LT. or RT.)




W5-3
36"X36"

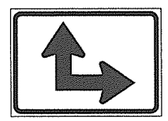



W13-1P
18"X18"

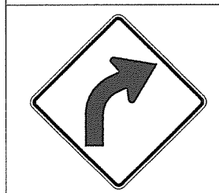


M6-1
21"X15"

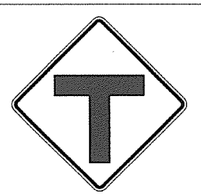
NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.



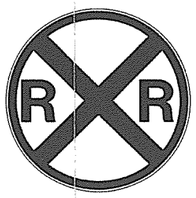
M6-6
21"X15"



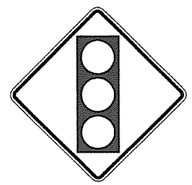
W1-2
30"X30"
(LT. or RT.)



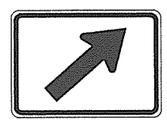
W2-4
30"X30"




W10-1
36" DIAMETER



W3-3
36"X36"



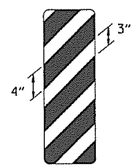
M6-2
21"X15"




S4-3P
24"X8"




S4-2P
24"X10"



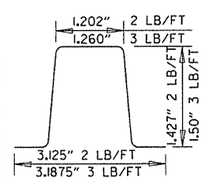

OM-3
12"X36"
(LT. or RT.)

## STANDARD HIGHWAY SIGNS

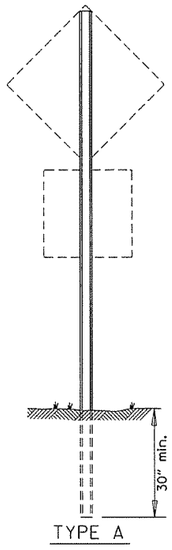
| DATE | REVISION | DATE FILMED |
|---|---|---|
| 9-12-13 | DELETED JOB NO. BLOCK; REVISED R1-3 TO R1-3P | |
| 4-17-08 | REVISED SIGN DESIGNATION - W3-1& W3-2 | |
| 4-10-03 | REVISED W5-2, W8-3, OM-3; ADDED W1-8 | |
| 1-5-81 | REDRAWN | 960-1-15-81 |
| 9-15-78 | ADDED W14-3 | 877-9-15-78 |
| 9-2-76 | POST WT. | 623-9-3-76 |
| 5-3-76 | STEEL POST WT. FROM 2#-3#; ADDED S4-2 & S4-3 | 504-5-3-76 |
| 8-12-74 | REV. HT. TYPE "C" ASSEMBLY | 500-8-21-74 |
| 12-21-72 | ADDED M6-2,3,4,5,6 | 500-12-21-72 |
| 12-1-72 | ISSUED | 562-12-1-72 |

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

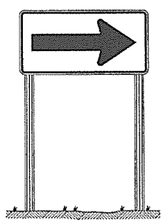



(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES

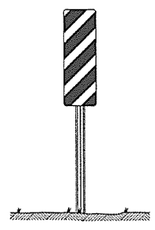



TYPE A

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



TYPE B



TYPE C

MINIMUM WEIGHT

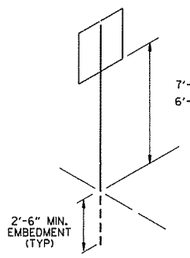
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

## SUPPORT ASSEMBLIES

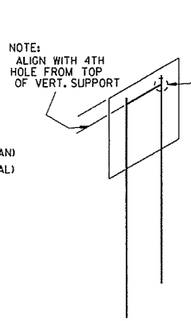
ARKANSAS STATE HIGHWAY COMMISSION

# STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

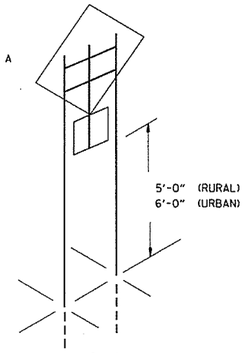
STANDARD DRAWING SHS-1



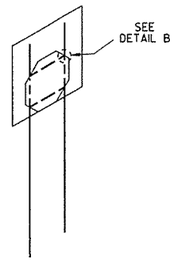
U-1



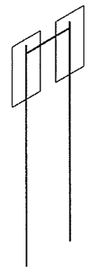
U-2

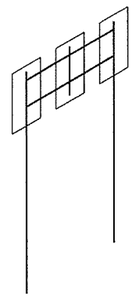


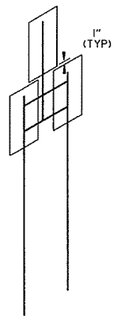
U-2 (A)



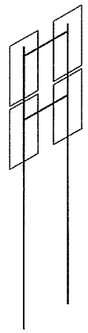
U-2 (B)

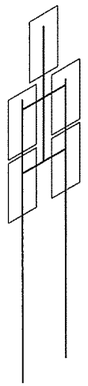

U-2 (1)

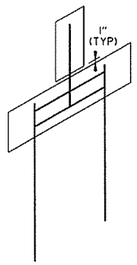

U-2 (2)



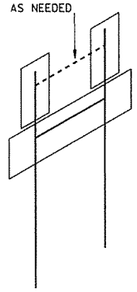
U-2 (3)


U-2 (4)

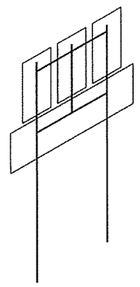

U-2 (5)

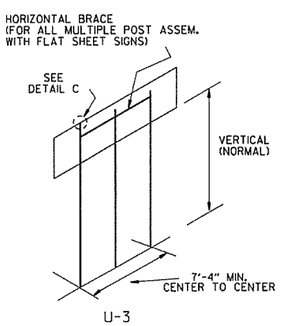


U-2 (6)

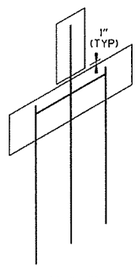


U-2 (7)

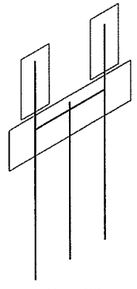

U-2 (8)

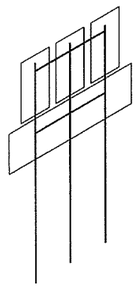


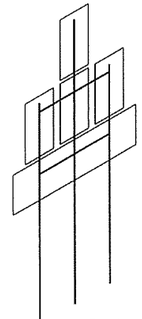
U-3

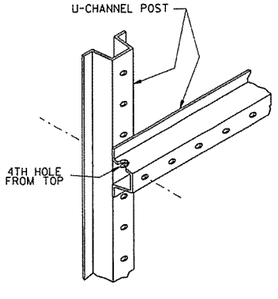


U-3 (1)


U-3 (2)

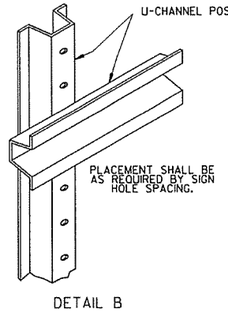

U-3 (3)


U-3 (4)



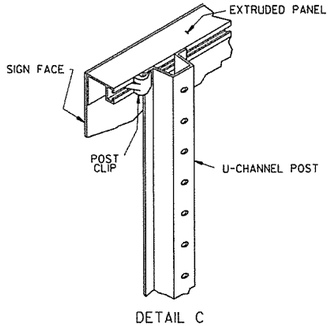
DETAIL A

SHOWING HORIZONTAL BRACE



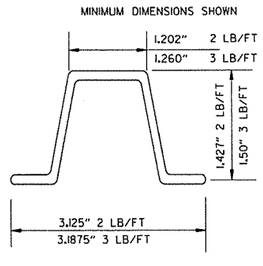
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



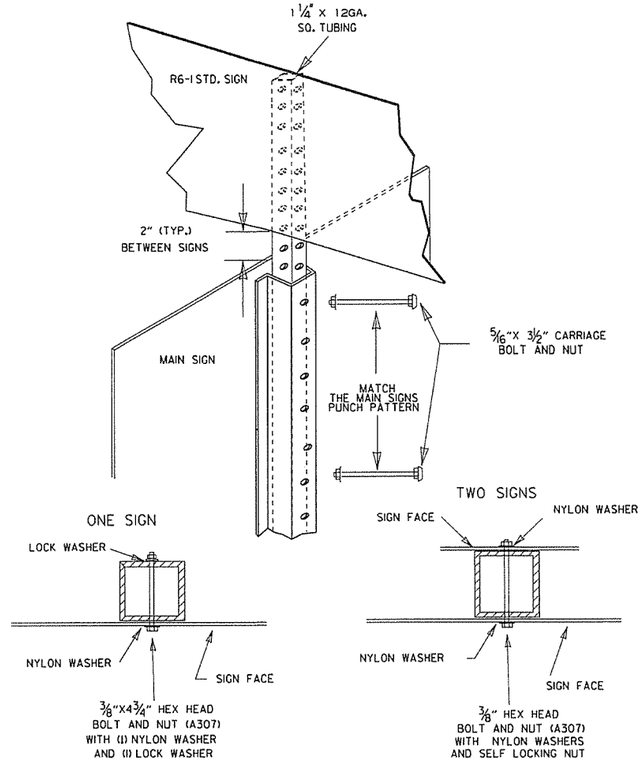
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



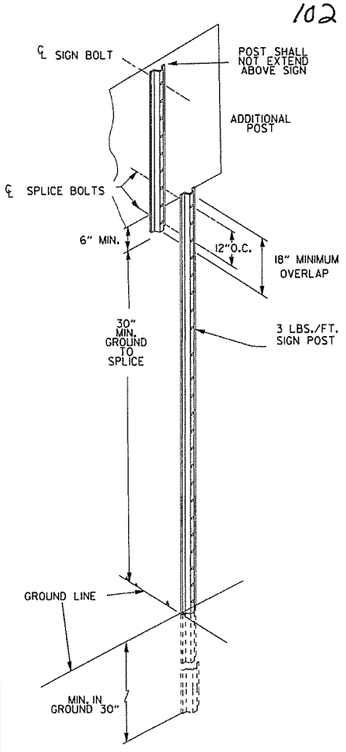
DETAIL C

U-CHANNEL POST



DETAIL E

R6-1 EXTENSION FOR U-CHANNEL POST



DETAIL F

DETAIL OF SPLICES

NOTES:

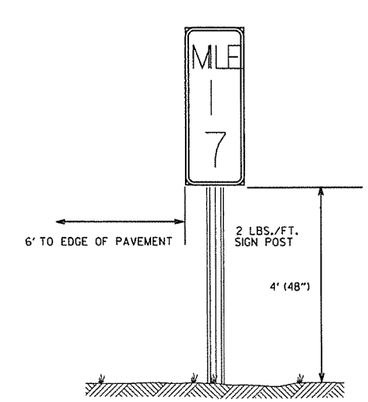
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

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

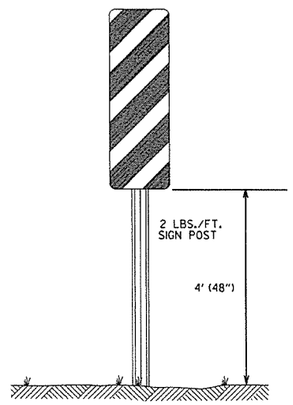
NORMAL INSTALLATIONS WILL REQUIRE $\frac{5}{16}$" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



TYPICAL MILE MARKER INSTALLATION



TYPICAL OM-3 INSTALLATION AT EDGE OF OBSTRUCTION

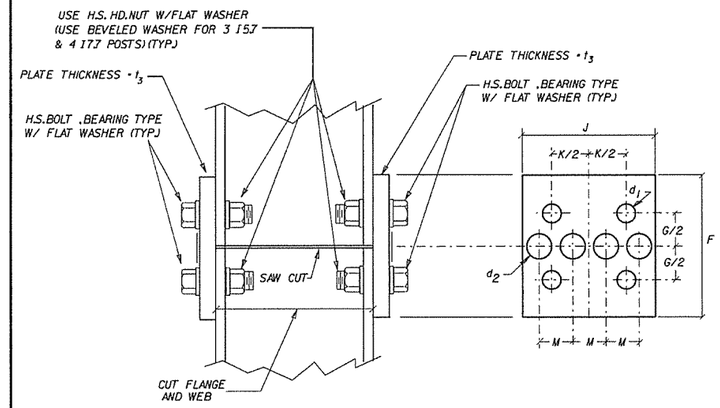
| DATE | REVISION | FILMED |
|---|---|---|
| 9-12-13 | REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS | |
| 10-9-03 | REMOVED ROUND POST & REVISED SPACING | |
| 10-12-95 | MOVED UPPER SPLICE | |
| 6-8-95 | REVISED SPLICE DETAIL | 6-8-95 |
| 2-2-95 | REDRAWN | 2-2-95 |

ARKANSAS STATE HIGHWAY COMMISSION

# U-CHANNEL POST ASSEMBLIES

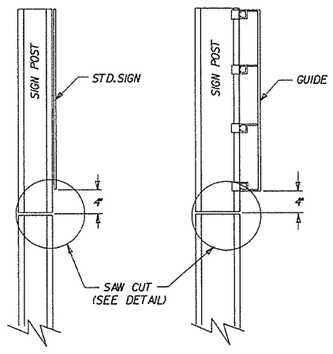
STANDARD DRAWING SHS-2

| POST SIZE | BASE CONNECTION DATA | | | | | | | | | | FUSE PLATE DATA | | | | | | | | | WT. OF EACH FUSE PLATE LBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BOLT SIZE | BOLT TORQUE (INCH/LBS) | A | B | C | D | E | $t_1$ | $t_2$ | W | R | F | G | | J | K | M | $d_1$ | $d_2$ | $t_3$ | BOLT SIZE | |
| W 6X9 | | | | | | | | | | | | 4¼" | 2" | | 4" | 2¼" | 1" | 9/16" | ¾" | ¼" | ½" x 1½" | 1.01 |
| W 6X12 | ⅝" x 2¾" | 450"-680" | 5" | 2" | 1¼" | 2¾" | 1⅛" | ¾" | ½" | ¼" | 11/32" | | | | | | | | | | | |
| W 6X15 | | | | | | | | | | | | 5" | 2½" | | 6" | 3½" | 1½" | 11/16" | 1¼" | ⅜" | ⅝" x 2¼" | 2.51 |
| W 8X18 | | | | | | | | | | | | 5" | 2½" | | 5¼" | 2¾" | 1¼" | 13/16" | 11/16" | ⅜" | ¾" x 2¼" | 2.26 |
| W 8X21 | | | | | | | | | | | | 5½" | 2½" | | 5¼" | 2¾" | 1¼" | 13/16" | 1" | ½" | ¾" x 2¼" | 3.35 |
| W 10X22 | ¾" x 3½" | 750"-1050" | 6" | 2¼" | 1⅜" | 3½" | 1¼" | 1" | ¾" | 5/16" | 13/32" | 6" | 3" | | 5¾" | 2¾" | 1⅜" | 13/16" | 1⅛" | ½" | ¾" x 2¼" | 4.03 |
| W 10X26 | | | | | | | | | | | | | | | | | | | | | | |
| W 12X26 | | | | | | | | | | | | 6" | 3" | | 6½" | 3½" | 1⅝" | 13/16" | 15/16" | ½" | ¾" x 2¼" | 4.47 |




NOTE: USE H.S. HEX HEAD BOLTS, HEX HEAD NUTS AND BEVEL OR FLAT WASHERS (WHERE REQ) UNDER NUTS. ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS, HOWEVER FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A36, ASTM-A441, ASTM-572 GRADE 50, OR ASTM-A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

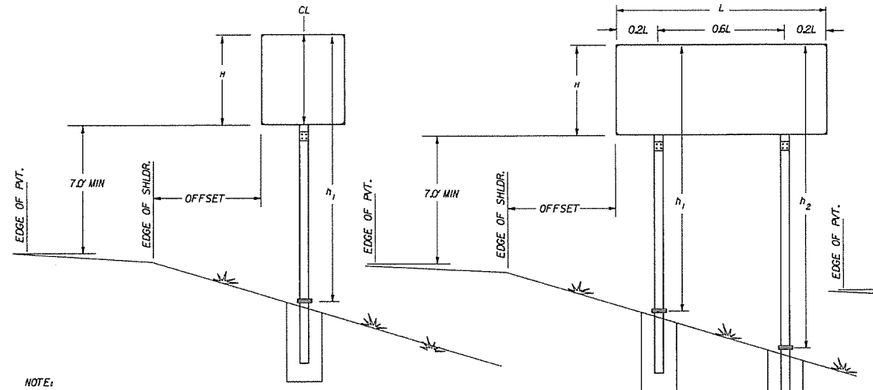
NOTE: BOLT HOLES, USED IN THE MOUNTING OF STANDARD SIGNS SHALL BE LOCATED IN THE FLANGE ADJACENT TO THE NEAR EDGE OF PAVEMENT FOR SINGLE POST ASSEMBLIES AND IN THE OUTSIDE FLANGES FOR MULTIPLE POST ASSEMBLIES.




NOTE: POST SHALL BE SAW CUT AFTER GALVANIZING AND THE CUT SURFACE TREATED, AFTER PLATE IS INSTALLED AND ALL BOLTS FULLY TIGHTENED, WITH AN APPROVED ZINC SOLDER MEETING THE FEDERAL SPEC. O-G-93 (STICK ONLY).

STANDARD SIGNS GUIDE SIGNS

## FUSE PLATE DETAILS

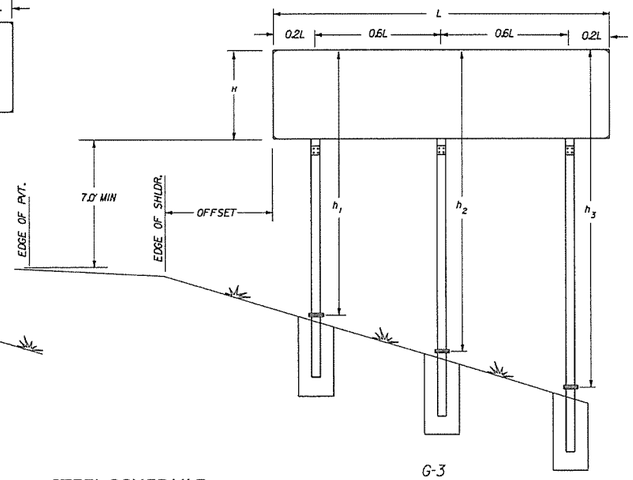



NOTE:
THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER

G-1

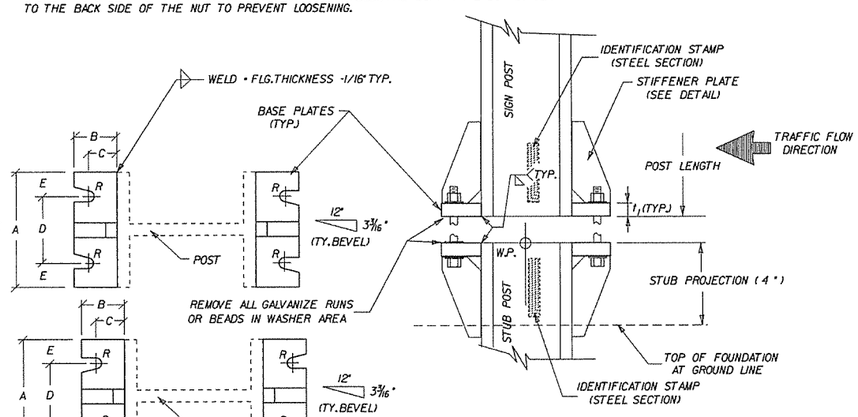



G-2

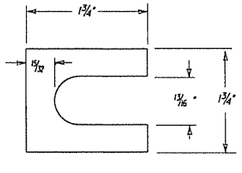



G-3

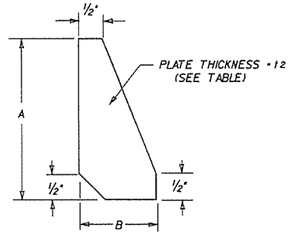
NOTE: SECTIONS SHOWN ARE FOR INSTALLATION ON THE RIGHT SHOULDER AND IN THE GORE. BOLT HOLES IN BASE PLATE ARE SLOTTED AND BEVELED AS SHOWN. USE H.S. BOLTS WITH HEX HD., HEX NUT AND THREE FLAT WASHERS FOR EACH BOLT. SEE TABLE FOR BOLT DIA. AND TORQUE.
NOTE: ASSEMBLE SIGN POST TO STUB POST USING THE BOLTS SPEC. IN THE TABLE AND AS SHOWN IN THE ELEVATION DETAILS. THERE SHALL BE THREE FLAT WASHERS ON EACH BOLT LOCATED AS SHOWN IN THE ELEVATIONS. USE A SHIM TO PLUMB THE SIGN POST. THEN TIGHTEN THE BOLTS USING A 12" TO 15" WRENCH UNTIL THE WASHERS AND SHIMS ARE SEATED AND THE BOLT THREADS ARE CLEAR, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE (SEE TABLE). THE BURR THREADS ADJACENT TO THE BACK SIDE OF THE NUT TO PREVENT LOOSENING.




FURNISH 2 ~ .012"+/- THICK AND 2 ~ .032"+/- THICK SHIMS PER POST




## SHIM DETAIL

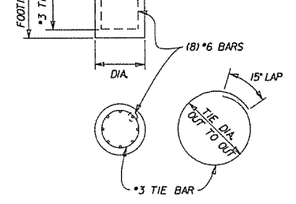



## STIFFENER PLATE DETAIL

## STEEL SCHEDULE

| FOOTING DIAMETER | #3 TIE BARS | | |
|---|---|---|---|
| | DIAMETER | BAR LENGTH | POUNDS |
| INCHES | INCHES | FEET | |
| 18 | 12 | 4.39 | 1.65 |
| 24 | 18 | 5.96 | 2.24 |
| 30 | 24 | 7.53 | 2.83 |
| 36 | 30 | 9.1 | 3.42 |

| FOOTINIG DEPTH | #6 STRAIGHT BARS | | |
|---|---|---|---|
| | BAR LENGTH | NUMBER REQ'D. | POUNDS |
| FEET | FEET | | |
| 2.50 | 2.00 | 8 | 24.03 |
| 3.00 | 2.50 | 8 | 30.04 |
| 3.50 | 3.00 | 8 | 36.05 |
| 4.00 | 3.50 | 8 | 42.06 |
| 4.50 | 4.00 | 8 | 48.06 |
| 5.00 | 4.50 | 8 | 54.07 |
| 5.50 | 5.00 | 8 | 60.08 |
| 6.00 | 5.50 | 8 | 66.09 |
| 6.50 | 6.00 | 8 | 72.10 |
| 7.00 | 6.50 | 8 | 78.10 |
| 7.50 | 7.00 | 8 | 84.11 |
| 8.00 | 7.50 | 8 | 90.12 |




## FOOTING QUANTITIES

| FOOTINIG DEPTH | NUMBER TIE BARS REQ'D | 18" DIAMETER | | 24" DIAMETER | | 30" DIAMETER | | 36" DIAMETER | |
|---|---|---|---|---|---|---|---|---|---|
| | | CLASS S CONCRETE | REINF STEEL | CLASS S CONCRETE | REINF STEEL | CLASS S CONCRETE | REINF STEEL | CLASS S CONCRETE | REINF STEEL |
| FEET | | CU. YD. | (GRADE 60) | CU. YD. | (GRADE 60) | CU. YD. | (GRADE 60) | CU. YD. | (GRADE 60) |
| 2.50 | 4 | 0.16 | 31 | | | | | | |
| 3.00 | 4 | 0.20 | 37 | | | | | | |
| 3.50 | 5 | 0.23 | 44 | | | | | | |
| 4.00 | 6 | 0.26 | 52 | 0.47 | 56 | | | | |
| 4.50 | 6 | 0.29 | 58 | 0.52 | 62 | | | | |
| 5.00 | 7 | 0.33 | 66 | 0.58 | 70 | 0.91 | 74 | | |
| 5.50 | 8 | | | 0.64 | 78 | 1.00 | 83 | | |
| 6.00 | 8 | | | 0.70 | 84 | 1.09 | 89 | 1.57 | 93 |
| 6.50 | 9 | | | | | 1.18 | 98 | 1.70 | 103 |
| 7.00 | 10 | | | | | 1.27 | 106 | 1.83 | 112 |
| 7.50 | 10 | | | | | | | 1.96 | 118 |
| 8.00 | 11 | | | | | | | 2.09 | 128 |

GENERAL NOTES

TIGHTEN THE HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

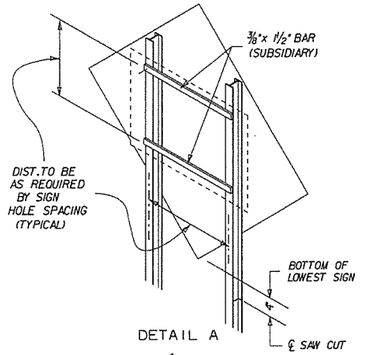
BASE PLATES AND STIFFENER PLATES SHALL BE OF THE SAME MATERIAL AS THE PRIMARY SUPPORT POSTS WHICH THEY ARE WELDED.

REFER TO THE PLANS FOR FOOTING DIMENSIONS.

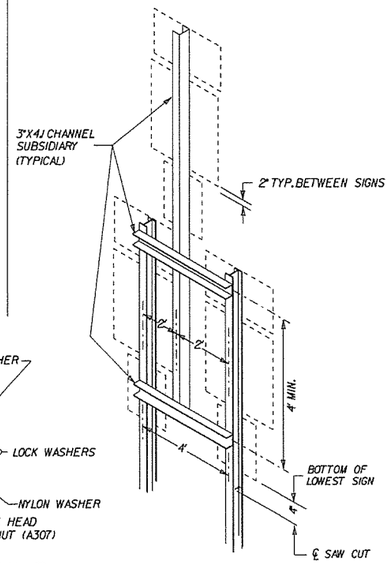
EACH STUB POST AND SIGN POST SHALL HAVE A PERMANENT IDENTIFYING STAMP WHICH SPECIFIES THE STEEL SECTION USED. IF THE CONTRACTOR ELECTS TO SHIP THE STUB POST SEPARATE FROM THE SIGN POST A MATCH MARK SYSTEM WILL BE REQUIRED.

## SIGN POST AND STUB POST

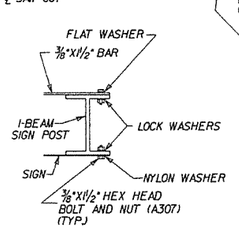
| | | | |
|---|---|---|---|
| | | | ARKANSAS STATE HIGHWAY COMMISSION |
| | | | DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS |
| 9-12-13 | ISSUED | | STANDARD DRAWING SHS-3 |
| DATE | REVISION | FILMED | |



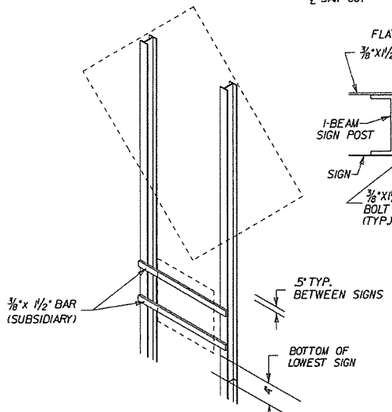

DETAIL A



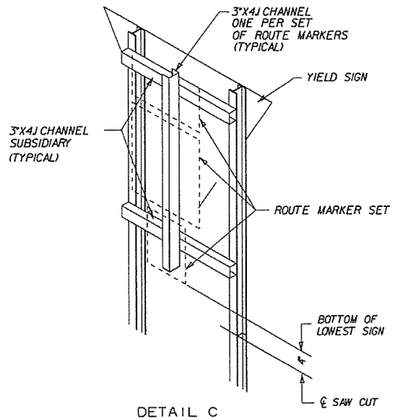

DETAIL D



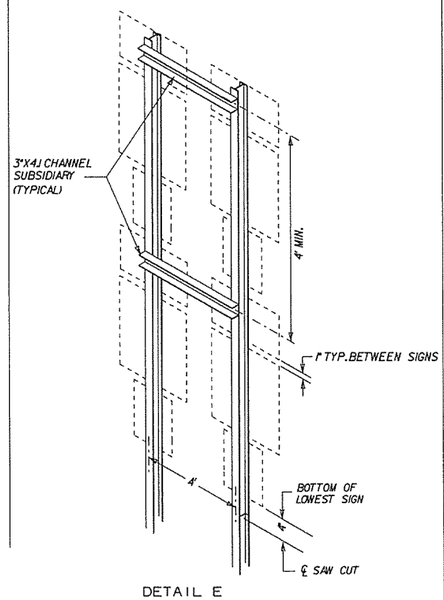

DETAIL F




DETAIL B




DETAIL C




DETAIL E

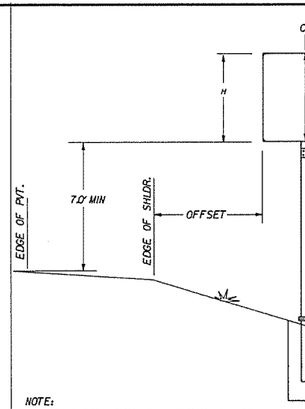
NOTE

ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.

THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.

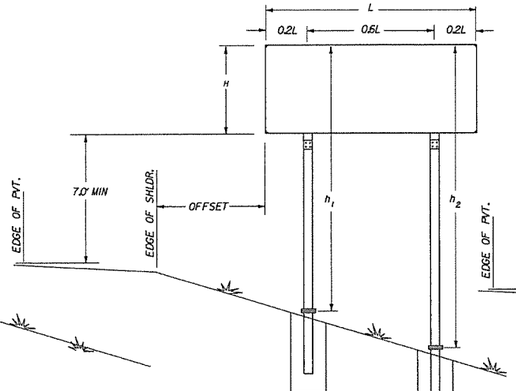
REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

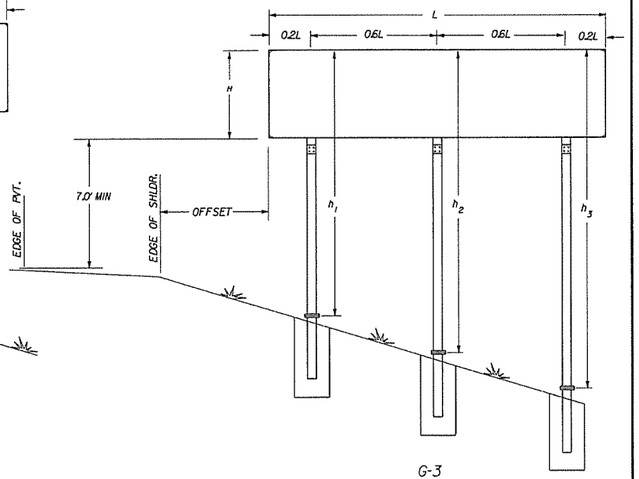



G-1

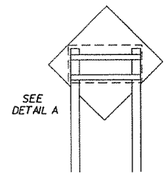
NOTE:
THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER.



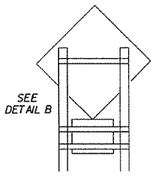

G-2



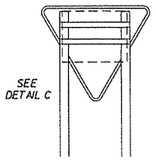

G-3



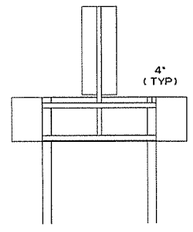

G2-1



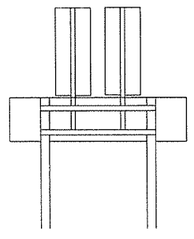

G2-2



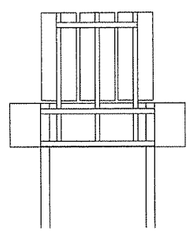

G2-3



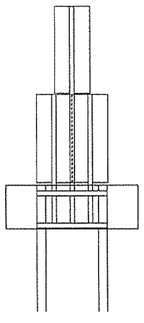

G2-4



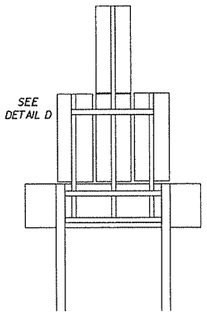
G2-5



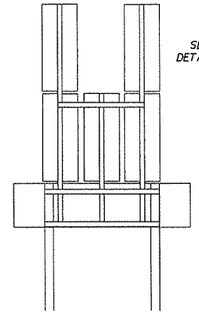
G2-6



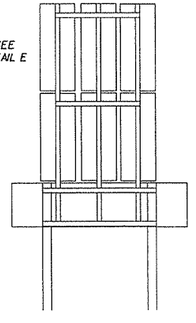
G2-7




G2-8

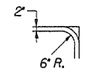


G2-9



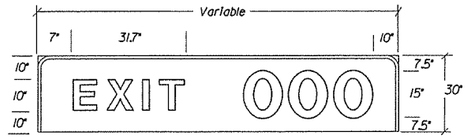

G2-10

| | | | |
|---|---|---|---|
| | | | ARKANSAS STATE HIGHWAY COMMISSION |
| | | | DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS |
| 9-12-13 | ISSUED | | STANDARD DRAWING SHS-4 |
| DATE | REVISION | FILMED | |



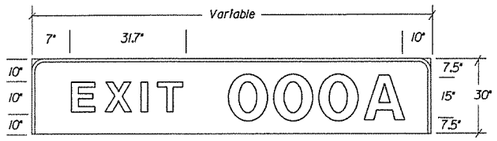

TYPICAL DETAIL

TYPE A




EXIT WITH 1 DIGIT 84"X30"=17.50 SF
EXIT WITH 2 DIGITS 96"X30"=20.0 SF
EXIT WITH 3 DIGITS 114"X30"=23.57 SF

TYPE B



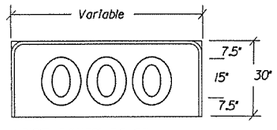

EXIT WITH 1 DIGIT PLUS "A"OR"B" 96"X30"=20.0 SF
EXIT WITH 2 DIGITS PLUS "A"OR"B" 114"X30"=23.57 SF
EXIT WITH 3 DIGITS PLUS "A"OR"B" 126"X30"=26.25 SF

TYPE C



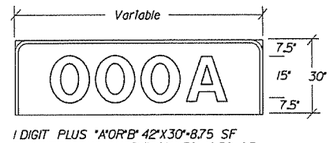

EXITS WITH 1 DIGIT PLUS "A"&"B" 132"X30"=27.50 SF
EXITS WITH 2 DIGITS PLUS "A"&"B" 150"X30"=31.25 SF
EXITS WITH 3 DIGITS PLUS "A"&"B" 168"X30"=35.00 SF

TYPE D




1 DIGIT 24"X30"=5.0 SF
2 DIGITS 42"X30"=8.75 SF
3 DIGITS 60"X30"=12.50 SF

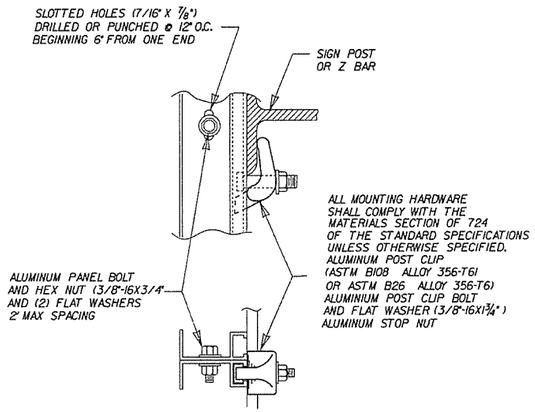
TYPE E

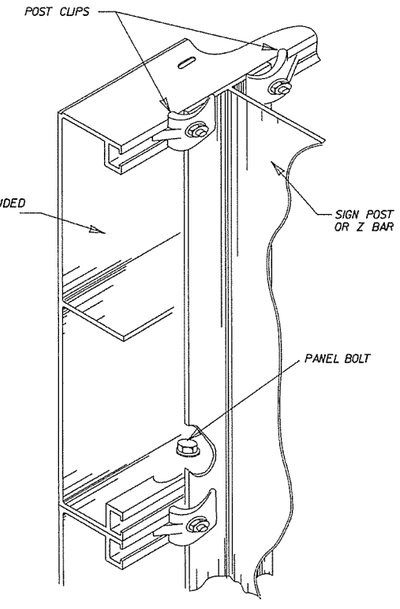



1 DIGIT PLUS "A"OR"B" 42"X30"=8.75 SF
2 DIGITS PLUS "A"OR"B" 60"X30"=12.50 SF
3 DIGITS PLUS "A"OR"B" 78"X30"=16.25 SF

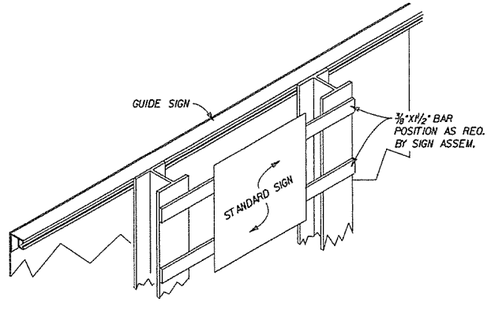
## EXIT PANEL DETAILS

NOTE: EXIT NUMBER PANELS SHALL HAVE WHITE LEGENDS AND BORDERS. THE BACK GROUND COLOR WILL BE AS USE SPECIFIES. SHEETING TYPE WILL BE THE SAME AS THE GUIDE SIGN WHICH THE EXIT PANEL IS ATTACHED OR AS SPECIFIED IN THE PLANS. PAYMENT FOR ALL POST CLIPS, BOLTS, AND ANGLES SHALL BE SUBSIDIARY TO THE ITEM "EXIT NUMBER PANEL".

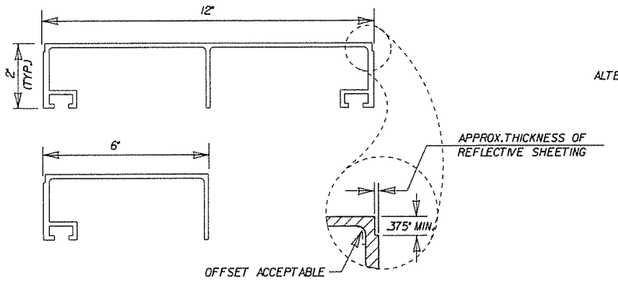



MOUNTING HARDWARE



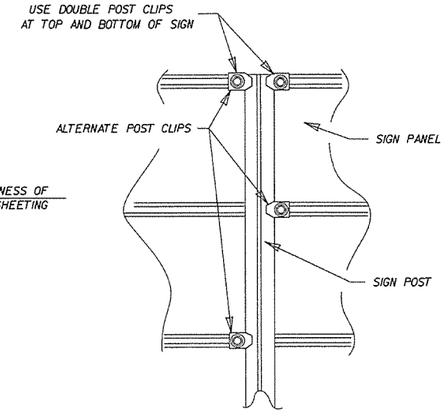

SECONDARY SIGN INSTALLATION ON BACKSIDE OF GUIDE SIGN



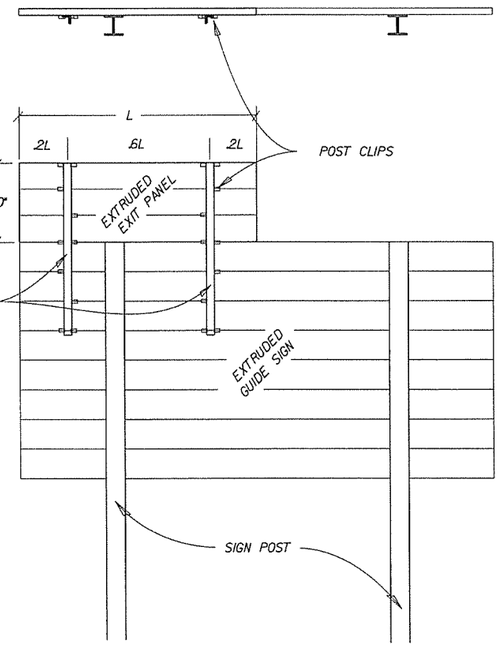

ONE PIECE EXTRUDED SIGN PANELS




POST CLIP BOLT



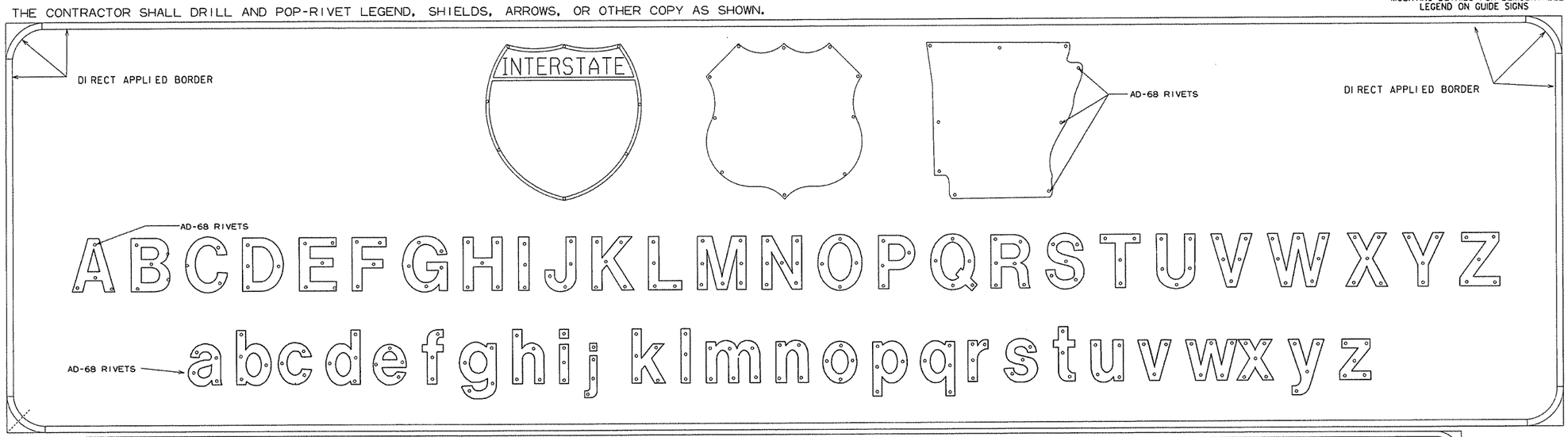

POST CLIP PLACEMENT

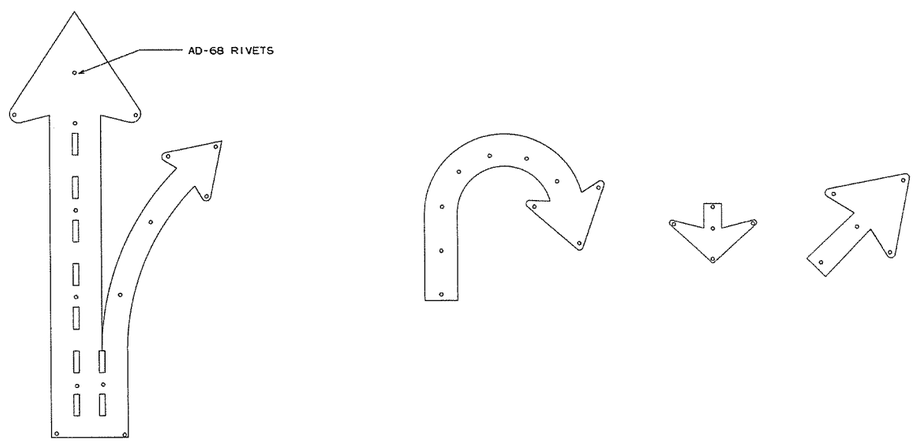



| | | | |
|---|---|---|---|
| | | | ARKANSAS STATE HIGHWAY COMMISSION |
| | | | DETAILS OF GUIDE SIGN PANELS |
| 9-12-13 | ISSUED | | STANDARD DRAWING SHS-5 |
| DATE | REVISION | FILMED | |

THE CONTRACTOR SHALL DRILL AND POP-RIVET LEGEND, SHIELDS, ARROWS, OR OTHER COPY AS SHOWN.

MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS




NOTES:

LEGEND ON GUIDE SIGNS ON THE MAIN LANES SHALL BE DEMOUNTABLE LEGEND. LEGEND ON GUIDE SIGNS ON CROSS ROADS AND RAMPS SHALL BE DIRECT APPLIED. THE DEMOUNTABLE AND DIRECT APPLIED LEGENDS SHALL BE TYPE IX SHEETING.

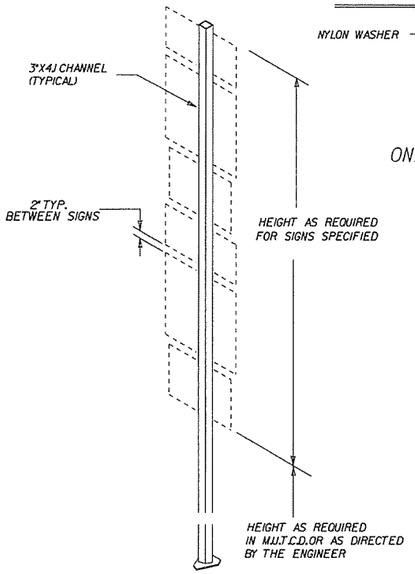
THE BACKGROUND ON ALL GUIDE SIGNS AND STANDARD SIGNS SHALL BE CONSTRUCTED USING TYPE III SHEETING.

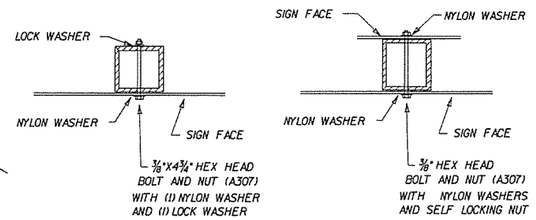
TYPE IX SHEETING FOR BORDER, LEGEND, SHIELDS, ARROWS, OR OTHER COPY SHALL BE ORIENTED VERTICALLY AS PER MANUFACTURERS' DATUM MARKS, ORIENTATION MARKS, OR OTHER RECOMMENDATIONS.

SIGN LEGEND, SHIELDS, ARROWS OR OTHER COPY SHALL BE APPLIED WITH RIVETS ONLY.

NO OTHER METHOD OF APPLYING CHARACTERS IS ALLOWED.

| | | | |
|---|---|---|---|
| | | | ARKANSAS STATE HIGHWAY COMMISSION |
| | | | MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS |
| 9-12-13 DATE | ISSUED REVISION | FILMED | STANDARD DRAWING SHS-6 |

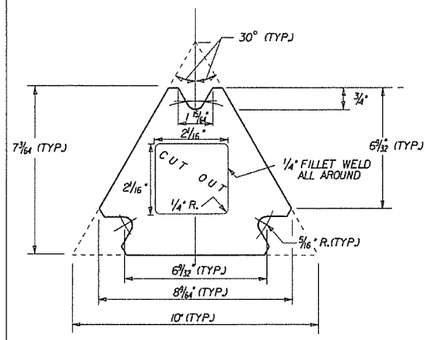


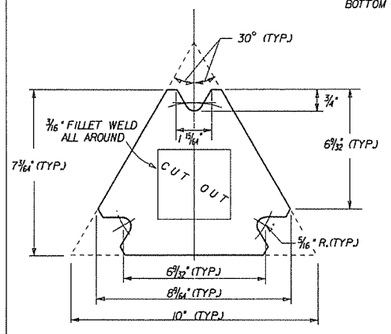

ONE SIGN TWO SIGNS

CHANNEL SHALL BE FULL LENGTH OF RECTANGULAR AND SQUARE SIGNS AND SHALL EXTEND 1/2" BEYOND BOLT HOLES ON DIAMOND OR IRREGULAR SHAPED SIGNS.

## MOUNTING HARDWARE




## TOP PLATE



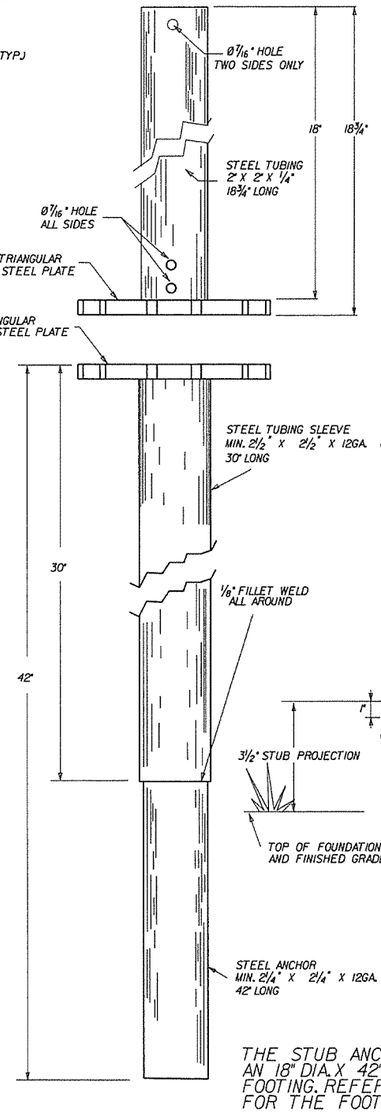

## BOTTOM PLATE

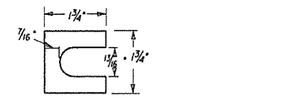
GENERAL NOTES:

THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.

INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE . ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING . FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF f-500 .

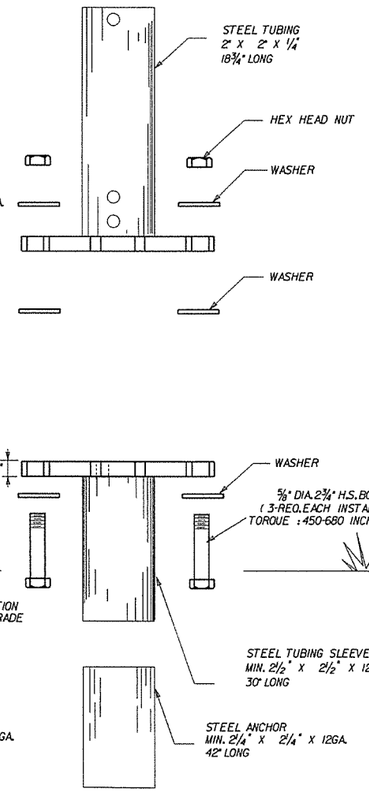
OTHER NASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2 1/4" X 2 1/4" SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.



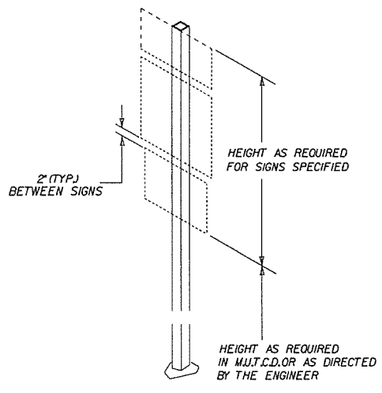




FURNISH (2) .012" THICK AND (2) .032" THICK SHIMS PER POST

## SHIM DETAIL

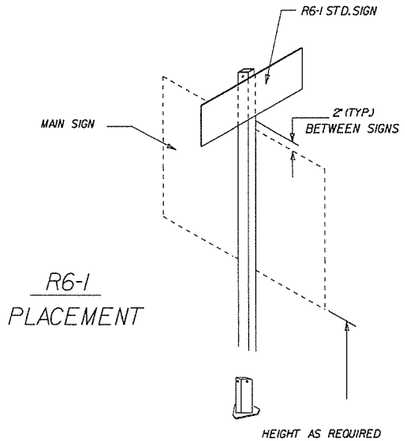



THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD. DRWG. SHS-3 FOR THE FOOTING DETAILS.




## TYPE-I

BASIS OF ESTIMATE APPROX. 100 lbs STEEL

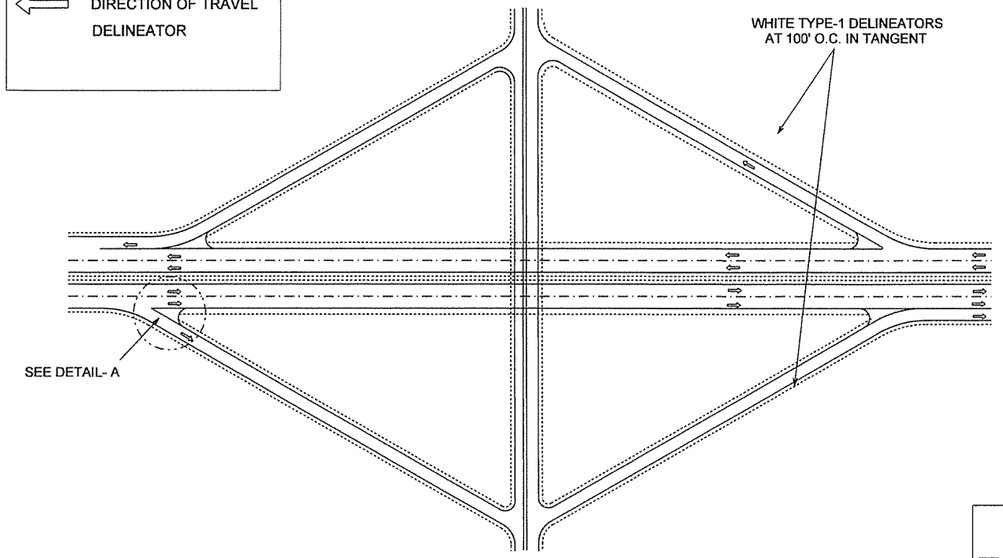



## R6-1 PLACEMENT

| | | | |
|---|---|---|---|
| | | | ARKANSAS STATE HIGHWAY COMMISSION |
| | | | DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS |
| 9-12-13 | ISSUED | | STANDARD DRAWING SHS-7 |
| DATE | REVISION | FILMED | |

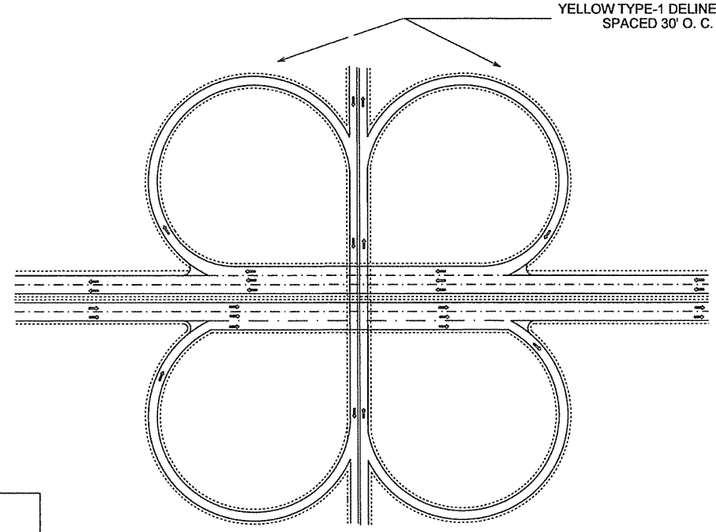
LEGEND

⇦ DIRECTION OF TRAVEL DELINEATOR

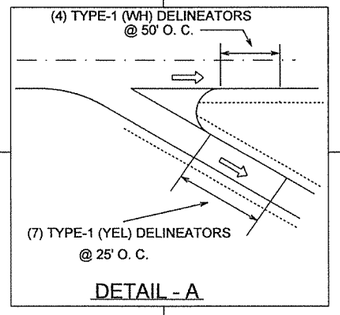



## TYPICAL DIAMOND INTERCHANGE (ALL RAMPS)

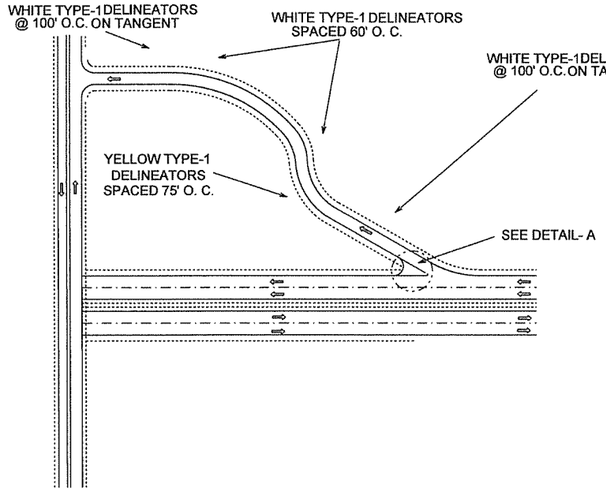
DELINEATORS PLACEMENT DETAIL




## TYPICAL CLOVERLEAF INTERCHANGE (ALL RAMPS)



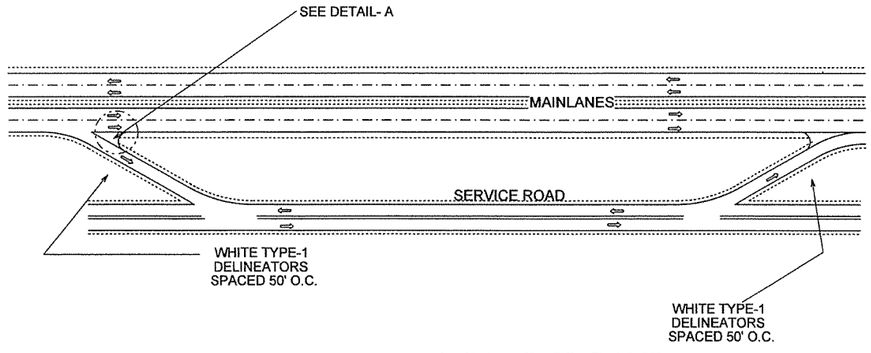

DETAIL - A




## MODIFIED DIAMOND INTERCHANGE

NOTE:

DELINEATORS SHALL ONLY BE INSTALLED AS SHOWN IN DETAIL-A IF RAISED PAVEMENT MARKERS ARE NOT PRESENT IN THE GORE OF THE OFF RAMPS.

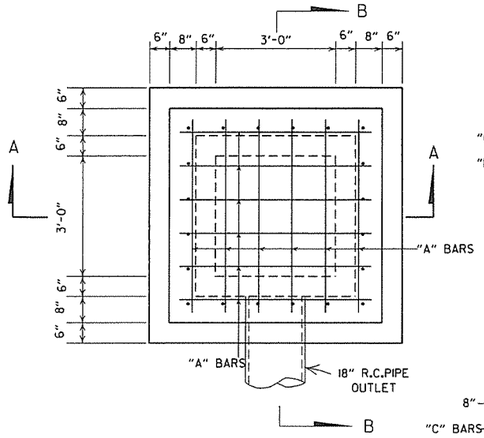


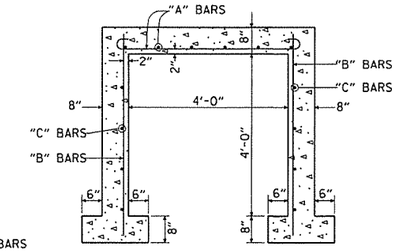

## TYPICAL SLIP RAMP

GUIDANCE:

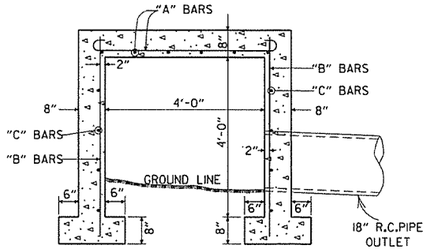
DELINEATORS SHOULD BE MOUNTED ON SUITABLE SUPPORTS SO THAT THE TOP OF THE HIGHEST RETROREFLECTOR IS 1.2 M (4 FT) ABOVE THE NEAR ROADWAY EDGE. THEY SHOULD BE PLACED 0.6 TO 2.4 M (2 TO 8 FT) OUTSIDE THE OUTER EDGE OF THE SHOULDER, OR IF APPROPRIATE, IN LINE WITH THE ROADSIDE BARRIER THAT IS 2.4 M (8 FT) OR LESS OUTSIDE THE OUTER EDGE OF THE SHOULDER.

| | | | |
|---|---|---|---|
| | | | ARKANSAS STATE HIGHWAY COMMISSION |
| | | | TYPICAL DELINEATOR PLACEMENT ALONG THE INTERSTATE SYSTEM |
| 9-12-13 DATE | ISSUED REVISION | FILMED | STANDARD DRAWING SHS-8 |




SEC A-A



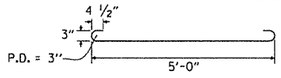

SEC B-B

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

STEEL SCHEDULE

| BARS | NUMBER | LENGTH | SPACING |
|---|---|---|---|
| "A" | 12 | 6'-0" | 10" |
| "B" | 20 | 5'-0" | 10 ½" |
| "C" | 16 | 5'-0" | 12" |

ALL STEEL TO BE #4 BARS




"A" BARS

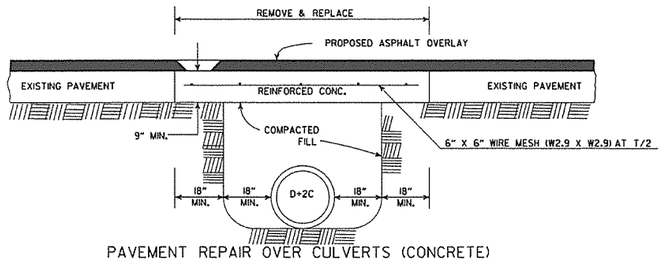
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

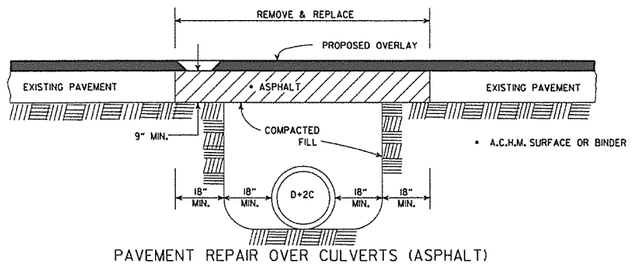
GENERAL NOTE:

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

## REINFORCED CONCRETE SPRING BOX



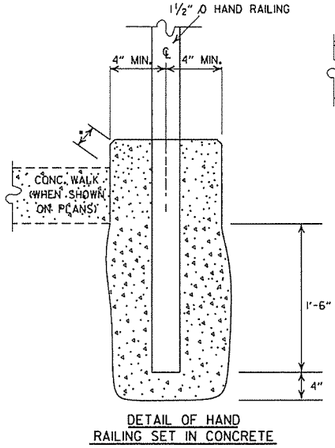

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



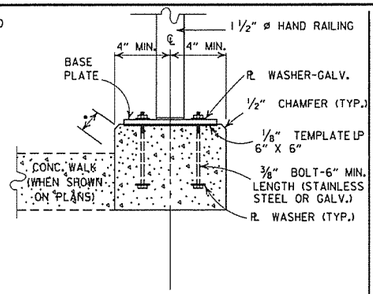

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

## DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

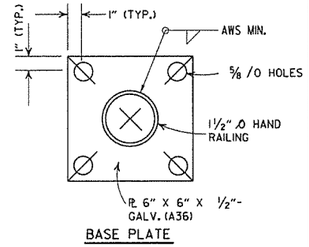
* A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.




DETAIL OF HAND RAILING SET IN CONCRETE

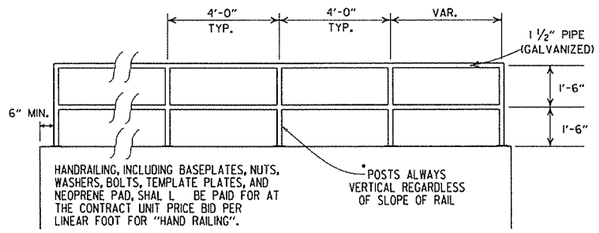



POST CONNECTION TO WALL

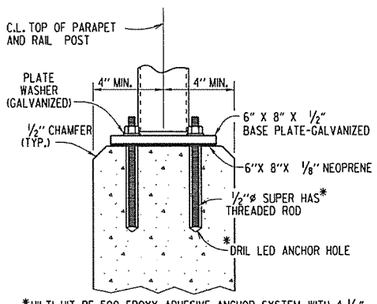



BASE PLATE

## POST CONNECTION DETAILS



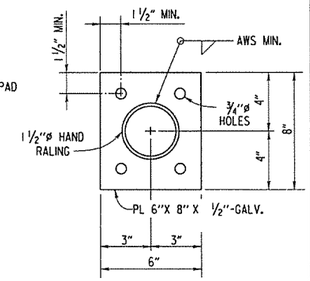

HAND RAILING SHAL L CONFORM TO SECTION 633.




*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHAL L BE INSTAL LED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

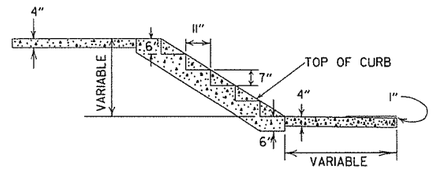
POST CONNECTION TO WALL

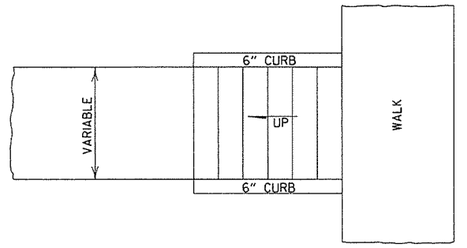



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

## HAND RAILING DETAILS




GENERAL NOTES

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

## DETAILS OF CONCRETE STEPS & WALKS

| DATE | REVISION | DATE FILMED |
|---|---|---|
| 9-12-13 | REVISED REINFORCED CONCRETE SPRING BOX | |
| 7-26-12 | REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS | |
| 4-17-08 | REV. JOINT & FOOTING STEP DETAILS | |
| 11-29-07 | REVISED RETAINING WALL DRAINAGE | |
| 5-25-06 | REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX | |
| 10-9-03 | REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS | |
| 4-10-03 | REVISED RETAINING WALL DRAWING | |
| 8-22-02 | ADDED HAND RAILING DETAIL | |
| 11-16-01 | REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES | |
| 11-18-98 | ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS | |
| 7-02-98 | ENLARGED PIPE | |
| 4-03-97 | ADDED NOTE TO STEEL BAR SCHED. | |
| 10-18-96 | CORRECTED SPELLING | |
| 4-26-96 | ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL | |
| 6-2-94 | CHANGED CONST. TO CONTRACTION JOINT | |
| 10-1-92 | CHANGED MESH FABRIC TO WIRE MESH | 10-1-92 |
| 8-15-91 | DELETED HDWL MODIFICATION DETAIL | 8-15-91 |
| 11-8-90 | DELETED COLD MIX FROM CULV'T. REPAIR | 11-8-90 |
| 11-30-89 | REV. RETAINING WALL STEEL SCHEDULE | 11-30-89 |
| 11-17-88 | V. BARS BEHIND ARROW | 665-11-17-88 |
| 7-15-88 | REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS | 649-7-15-88 |
| 11-1-84 | REV. TRENCH FOR PIPE UNDERDRAIN | 510-11-1-84 |
| 1-4-83 | ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE | 682-1-4-83 |
| 3-2-81 | SPELLING OF "UNDERDRAIN" | 721-3-2-81 |
| 4-20-79 | REV. UNDERDRAIN DET& PAVEMENT REPAIR | 674-4-20-79 |
| 2-2-76 | 12"MIN. GRAN. MAT'L. OVER PIPE | 919-2-2-76 |
| 4-10-75 | REM. SPECS. FOR GRAN. MAT'L. | 568-4-10-75-853 |
| 5-22-74 | GRANULAR MAT'L. TO BE SB-3 | 567-5-22-74-740 |
| 10-2-72 | REVISED AND REDRAWN | 564-10-16-72 |

ARKANSAS STATE HIGHWAY COMMISSION

# DETAILS OF SPECIAL ITEMS

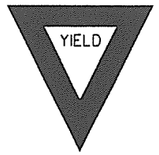
STANDARD DRAWING SI - 1

R1-1



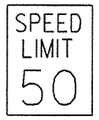

STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

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



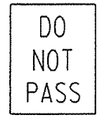

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a




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

R4-1



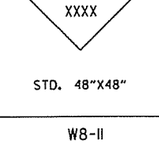

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2



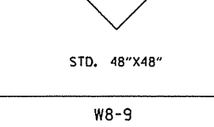

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



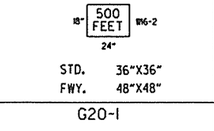

STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



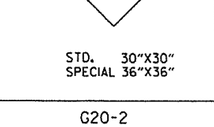

48"X30"

R11-3A



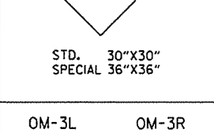

60"X30"

R11-4



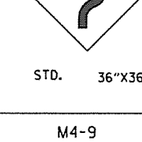

60"X30"

RSP-1



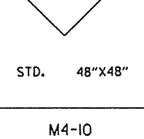

48"X30"

W1-1



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

W1-2



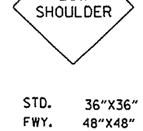
STD. 36"X36"
FWY. 48"X48"

W1-3



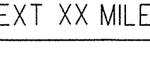
STD. 48"X48"

W1-4



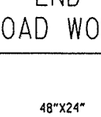
STD. 48"X48"

W1-6



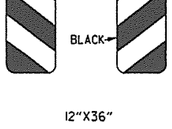
STD. 48"X24"
SPECIAL 60"X30"

W1-8



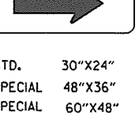
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



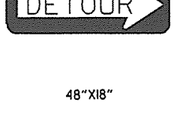
STD. 36"X36"
SPECIAL 48"X48"

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"

W13-1




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"

W1-4b



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.

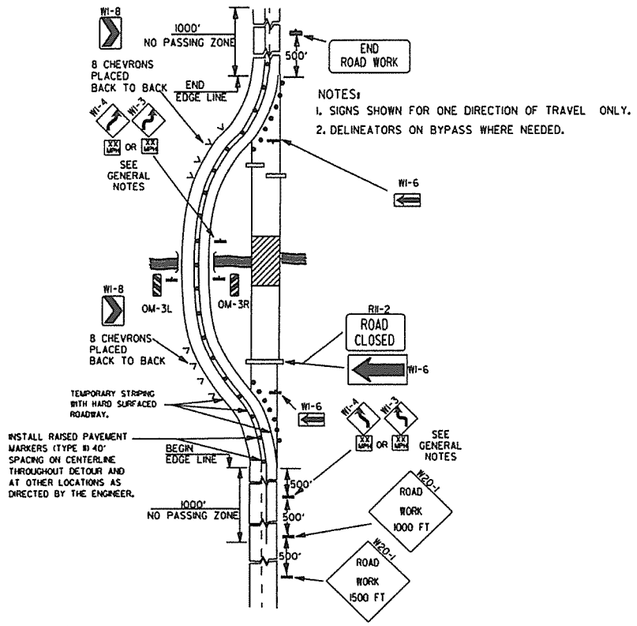
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

| DATE | REVISION | FILMED |
|---|---|---|
| 9-2-15 | REVISED REDUCED SPEED LIMIT AHEAD SIGNS<br>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 | |
| 11-18-98 | ADDED NOTE | |
| 6-26-97 | REVISED NOTE 5 | |
| 4-03-97 | REVISED NOTE 5 | |
| 10-18-96 | ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7 | |
| 10-12-95 | ADDED R55-1 | |
| 6-8-95 | REVISED TO CORRECT SIGN ILLUSTRATIONS | G-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

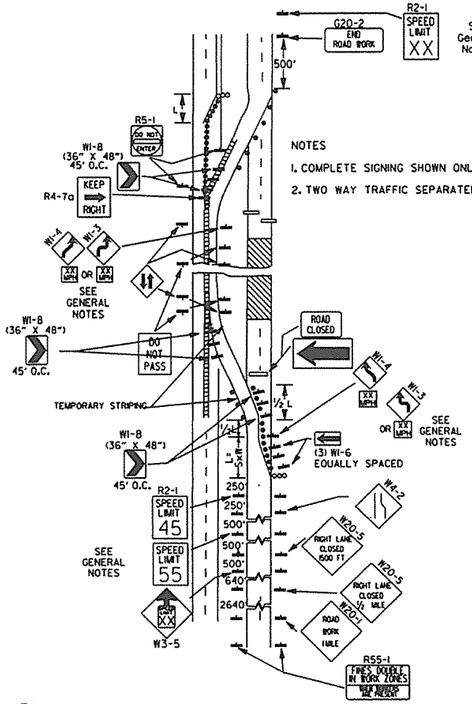
# STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



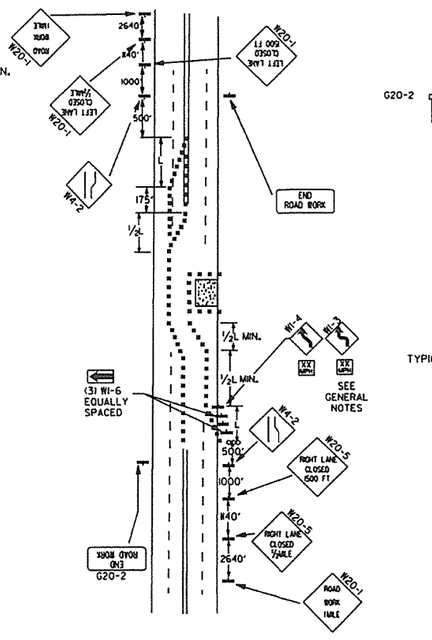

NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

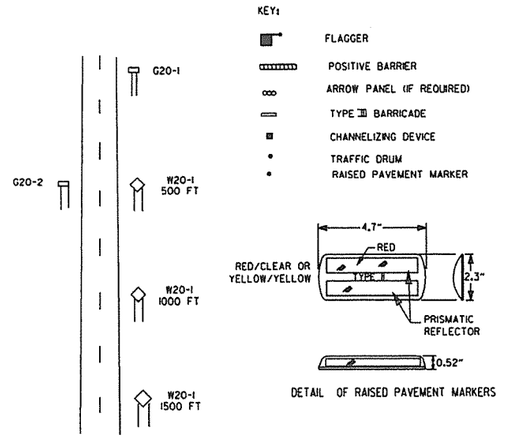



NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(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.




TYPICAL ADVANCE WARNING SIGN PLACEMENT

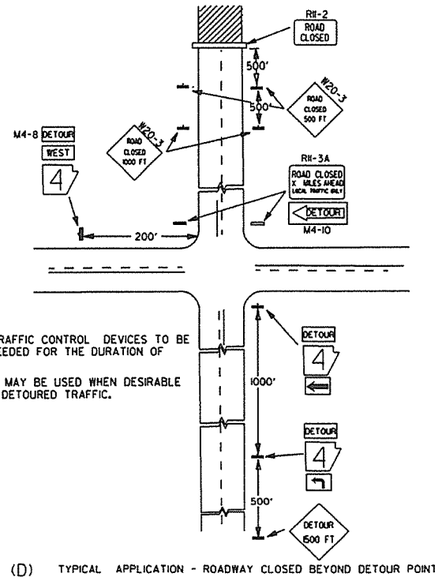
TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

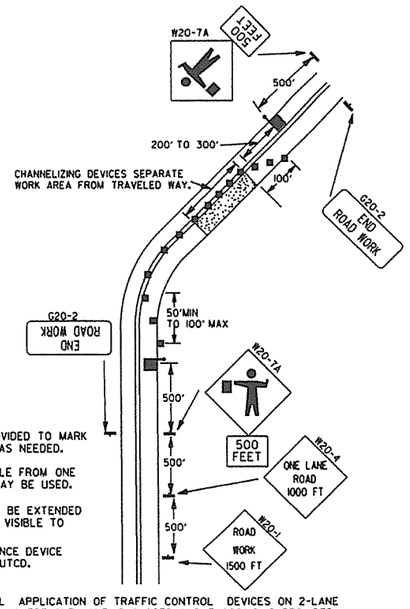
WHERE:
L= MINIMUM LENGTH OF TAPER.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
W= WIDTH OF OFFSET.

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 1MILE 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 1MILE 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.



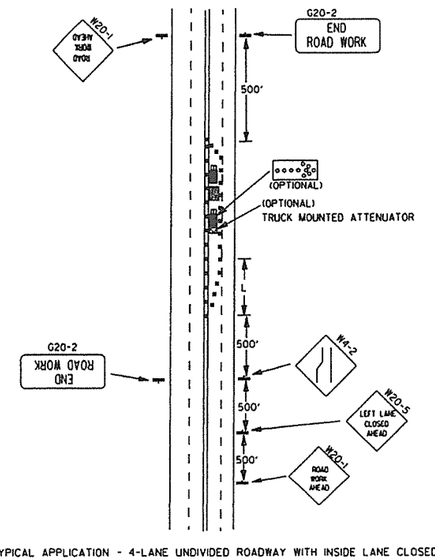

NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(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.



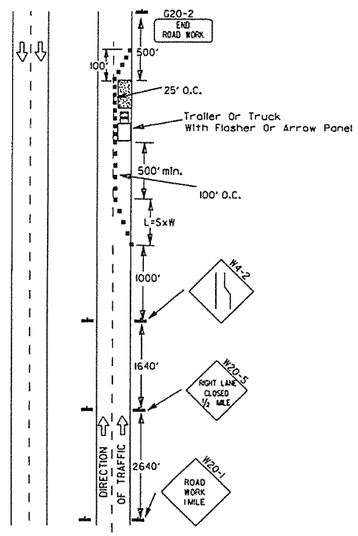

(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

| 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 (G) BEHIND G20-2 | |
| 6-8-95 | CORRECTED SIGN IDENT. ON W1-4A | 6-8-95 |
| 2-2-95 | REVISED PER PART VI, MUTCD, SEPT. 3, 1993 | |
| 8-15-91 | DRAWN AND PLACED IN USE | |

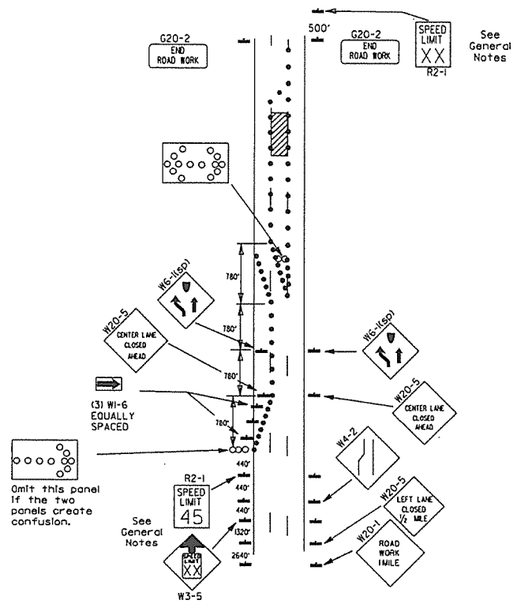
ARKANSAS STATE HIGHWAY COMMISSION

# 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.



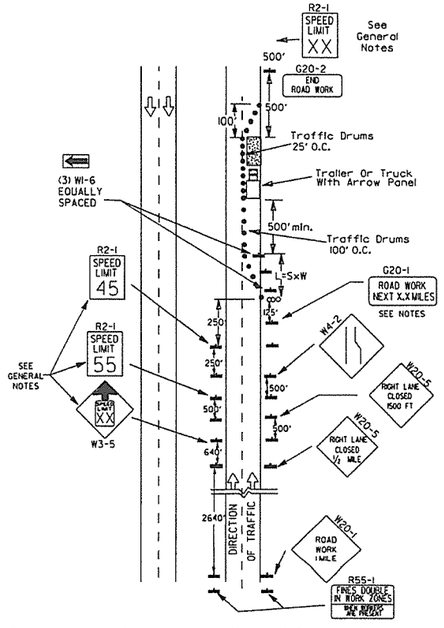

(B) Typical application - 3-lane oneway roadway where center lane is closed.

KEY:

- Arrow Panel (If Required)
- Channelizing Device
- Traffic drum

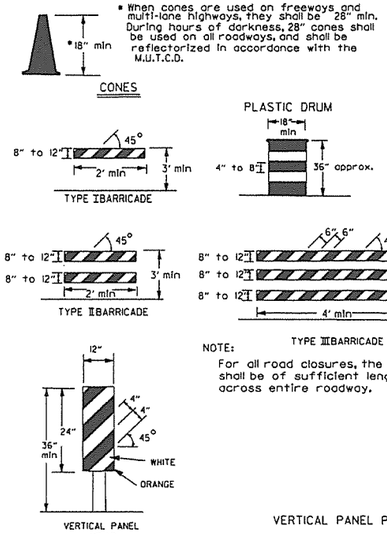
GENERAL NOTES:

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




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

Channelizing devices




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

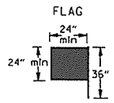
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

| 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.

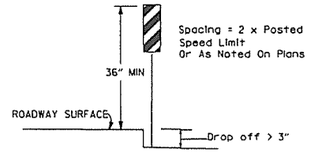
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

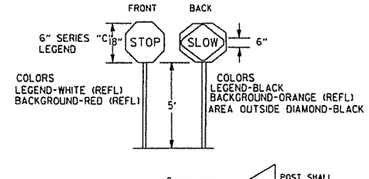


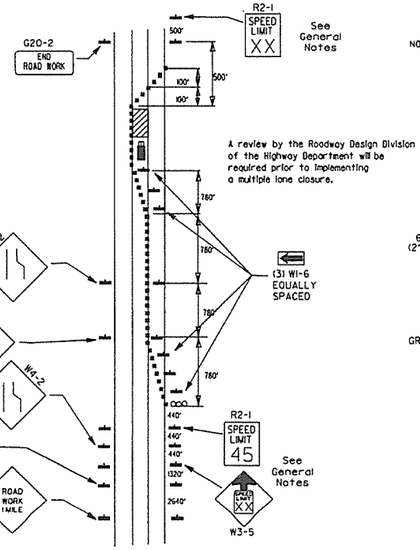

Flag shall be of good grade red material

VERTICAL PANEL PLACEMENT



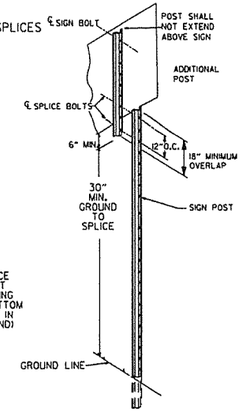

STOP SLOW PADDLE




(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 | |
| 11-20-08 | REVISED SIGN DESIGNATIONS | |
| 11-18-04 | ADDED NOTE | |
| 10-1-98 | ADDED NOTE | |
| 4-03-97 | ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE | |
| 10-18-96 | ADDED R55-1 | |
| 10-12-95 | MOVED UPPER SPLICE | |
| 6-8-95 | REVISED SPLICE DETAIL, TEXT | 6-8-95 |
| 2-2-95 | REVISED PER PART VI, MUTCD, SEPT. 3, 1993 | |
| 8-15-91 | DRAWN AND PLACED IN USE | |

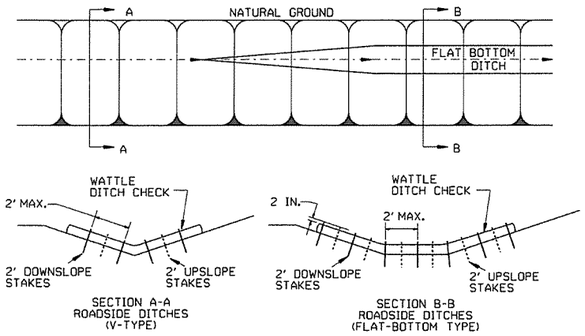
ARKANSAS STATE HIGHWAY COMMISSION

# STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

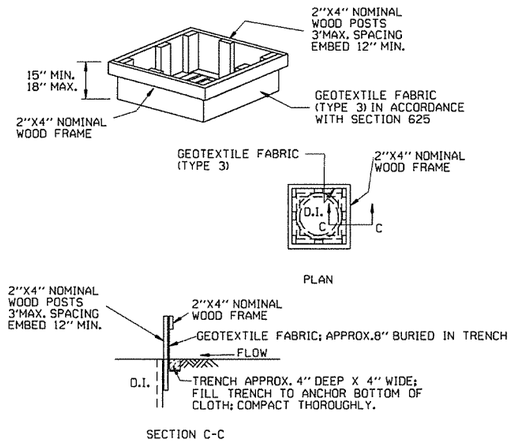
STANDARD DRAWING TC-3

GENERAL NOTES

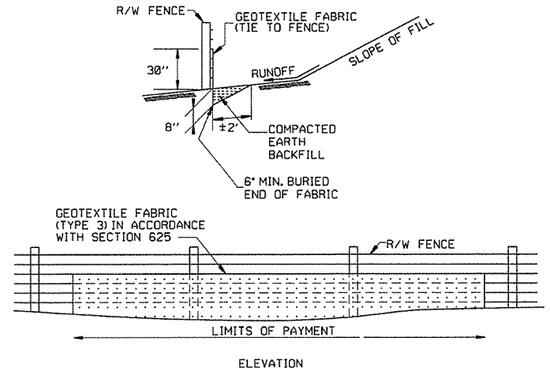
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.




WATTLE DITCH CHECK (E-1)




DROP INLET SILT FENCE (E-7)



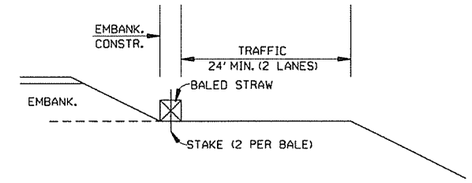

SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

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

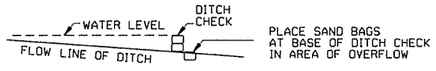
GENERAL NOTES

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

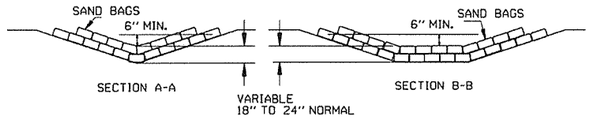



BALED STRAW FILTER BARRIER (E-2)

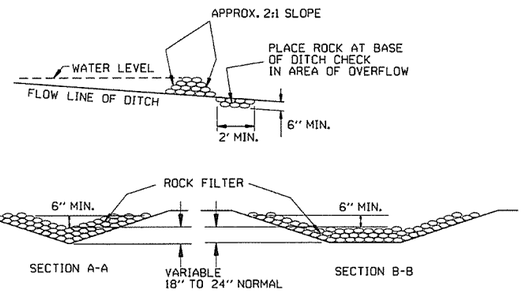
NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS.




PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW

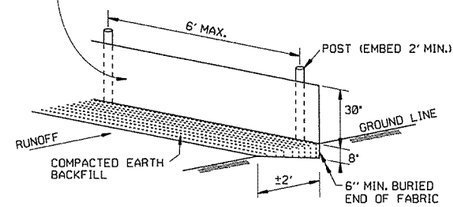



SAND BAG DITCH CHECK (E-5)




ROCK DITCH CHECK (E-6)

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625




SILT FENCE (E-11)

GENERAL NOTES

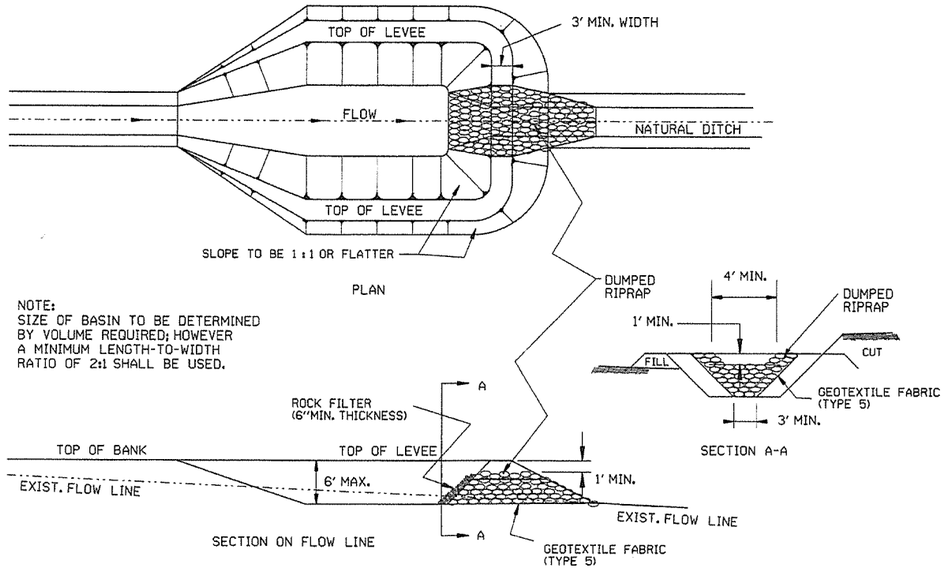
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

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

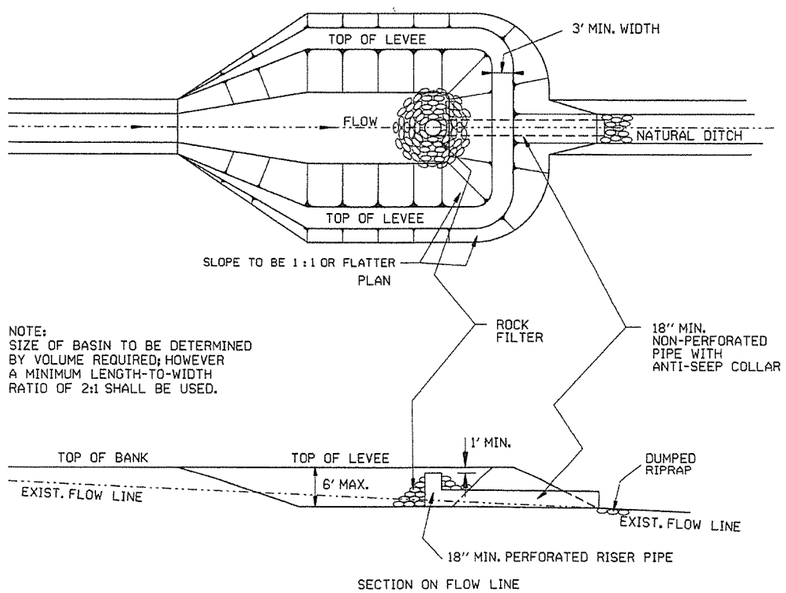
ARKANSAS STATE HIGHWAY COMMISSION

# TEMPORARY EROSION CONTROL DEVICES

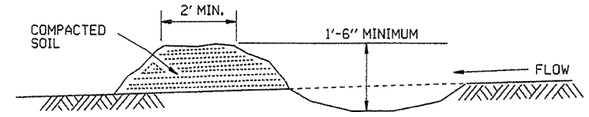
STANDARD DRAWING TEC-1



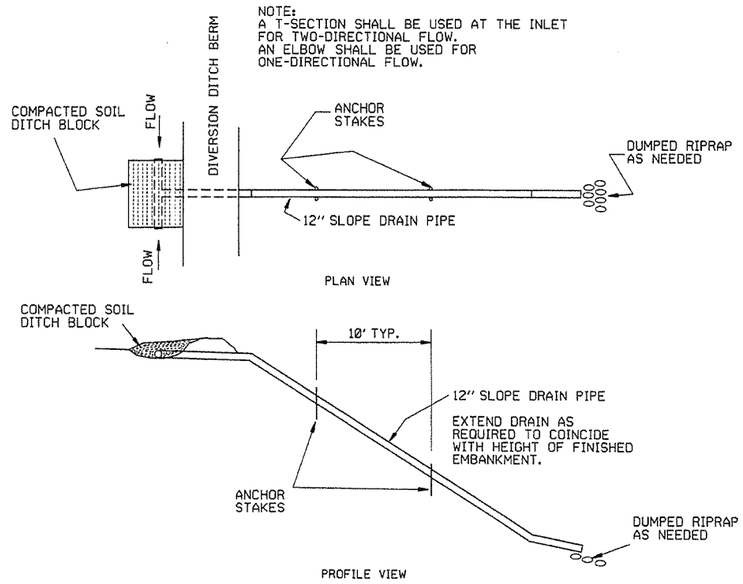

SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



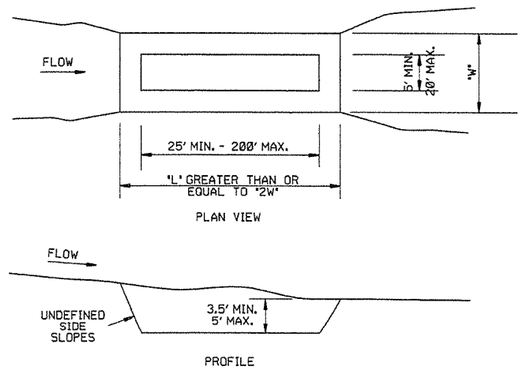

SEDIMENT BASIN WITH PIPE OUTLET (E-10)




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

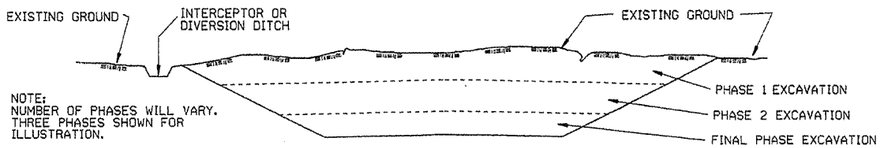
STANDARD DRAWING TEC-2

## 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



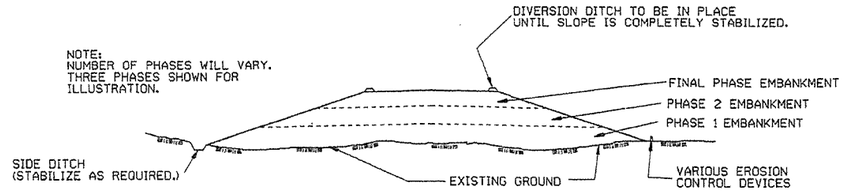

GENERAL NOTE

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

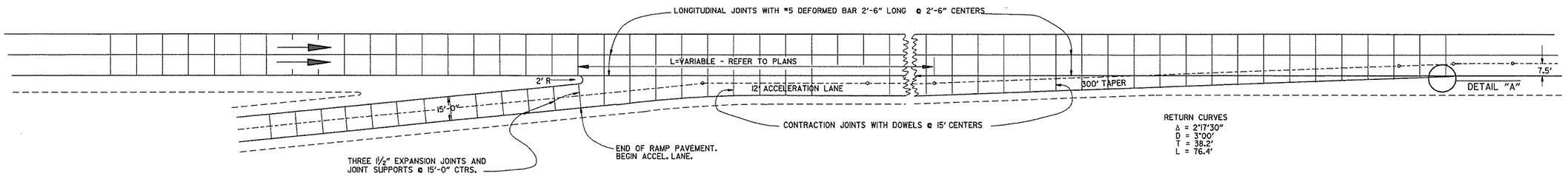
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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 | Drawn & Issued | 6-2-94 |

ARKANSAS STATE HIGHWAY COMMISSION

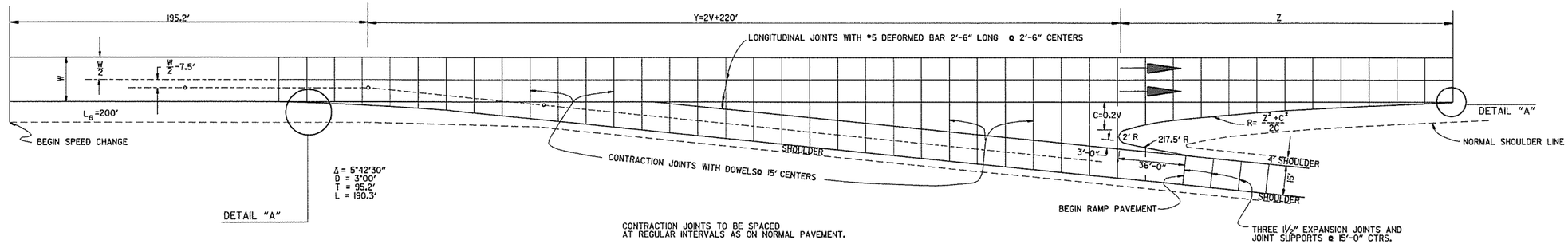
# TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3




## ENTRANCE RAMP

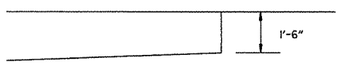
NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.



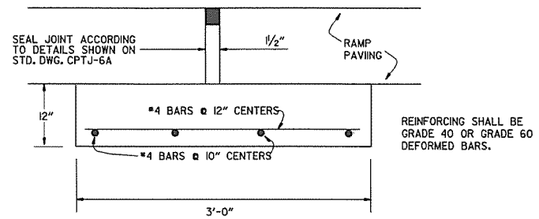

## EXIT RAMP

## EXIT RAMP

| DESIGN SPEED V | Y | NOSE OFFSET C | LENGTH NOSE TAPER Z | RETURN RADIUS R | ADDITIONAL SURFACING SQ. YDS. |
|---|---|---|---|---|---|
| 40 | 300.0 | 8.0 | 96.0 | 580.0 | 602.43 |
| 50 | 320.0 | 10.0 | 120.0 | 725.0 | 687.29 |
| 60 | 340.0 | 12.0 | 168.0 | 1182.0 | 790.55 |
| 70 | 360.0 | 14.0 | 210.0 | 1582.0 | 902.27 |




## DETAIL "A"




## DETAIL OF EXPANSION JOINT & JOINT SUPPORT

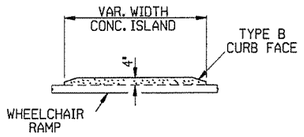
NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED.
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED. ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.

| DATE | REVISION | DATE FILM'D |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| 8-22-02 | DELETED NOTE | |
| 11-16-01 | CORRECTED SPELLING ON ENTRANCE RAMP NOTE | |
| 5-13-99 | ADDED, EDITED AND DELETED NOTES | |
| 11-03-94 | ADDED NOTE RE: REINF. BARS | |
| 10-1-92 | ADDED DETAIL A & OTHER MINOR CHANGES | 10-1-92 |
| 1-25-90 | REVISED EXPANSION JOINT | 1-25-90 |
| 7-15-88 | CONFORM'D TO 1988 SPECIFICATIONS | 65C-7-15-88 |
| 3-2-81 | ISSUED | 511-10-2-72 |

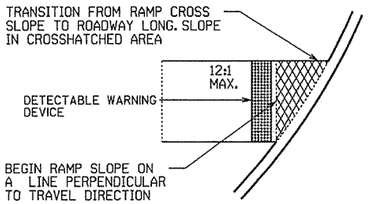
ARKANSAS STATE HIGHWAY COMMISSION

# DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

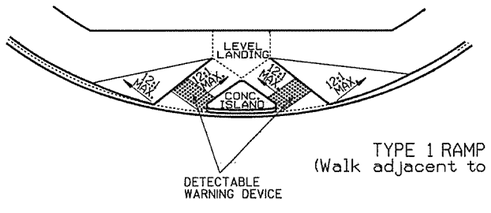
STANDARD DRAWING TR-1A



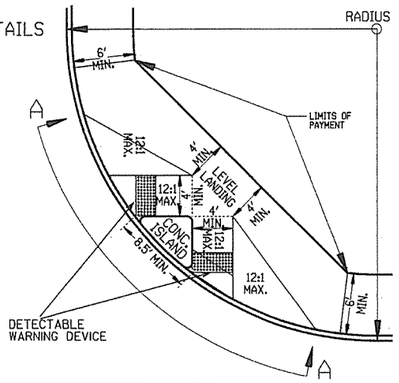

CONCRETE ISLAND DETAIL

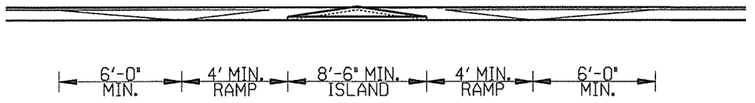



SLOPE TRANSITION DETAILS




TYPE 1 RAMP
(Walk adjacent to curb)

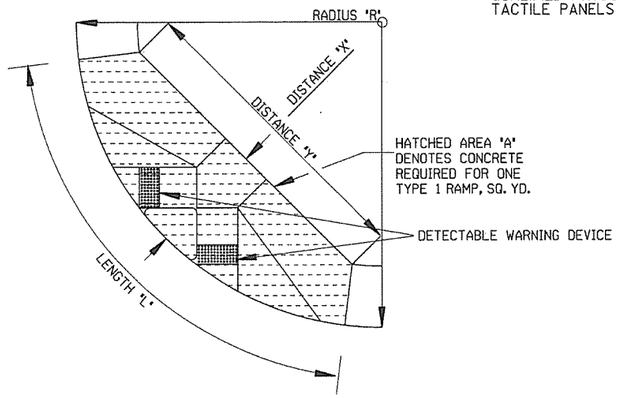



SECTION A-A

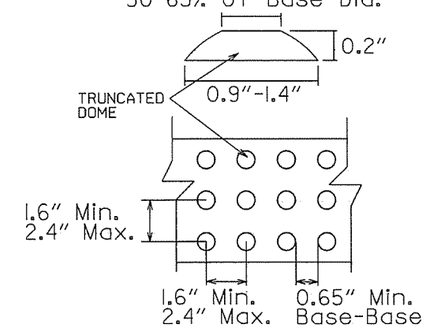
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

| RADIUS "R" FEET | DISTANCE "X" FEET | DISTANCE "Y" FEET | LENGTH "L" FEET | RAMP AREA "A" SQ. YD. |
|---|---|---|---|---|
| 15 | 11.67 | 18.82 | 32.18 | 26.21 |
| 20 | 11.52 | 22.28 | 35.46 | 30.07 |
| 25 | 11.43 | 26.60 | 38.77 | 33.80 |
| 30 | 11.37 | 30.26 | 40.93 | 36.90 |
| 35 | 11.33 | 33.51 | 43.11 | 39.77 |
| 40 | 11.30 | 36.45 | 45.26 | 42.45 |
| 45 | 11.27 | 39.16 | 47.34 | 44.97 |
| 50 | 11.25 | 41.69 | 49.36 | 47.35 |
| 55 | 11.24 | 44.07 | 51.31 | 49.63 |
| 60 | 11.22 | 46.33 | 53.21 | 51.80 |




GENERAL NOTES FOR DETECTABLE WARNING DEVICES

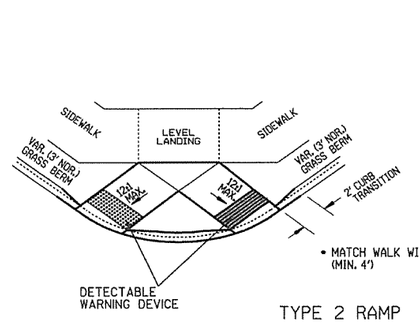
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



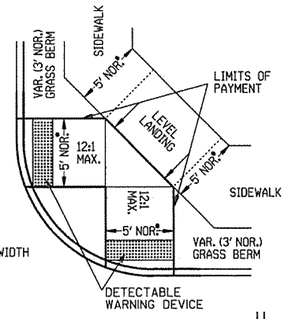

DETECTABLE WARNING DEVICE DETAIL

GENERAL NOTES:

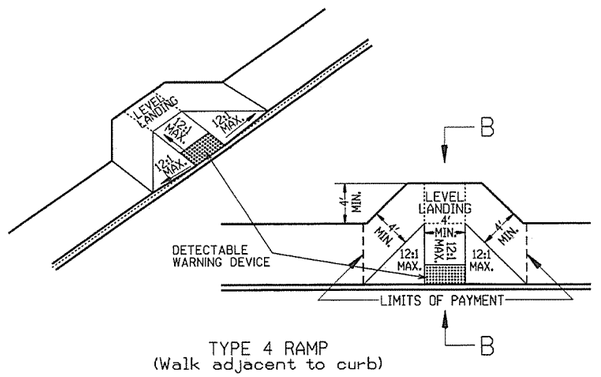
IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.



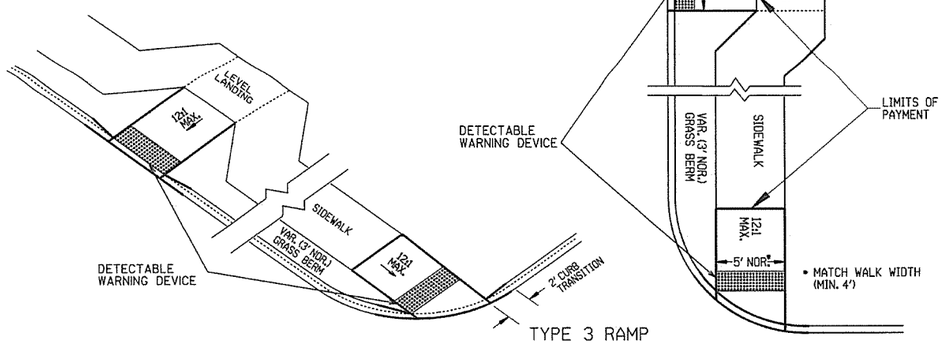

TYPE 2 RAMP



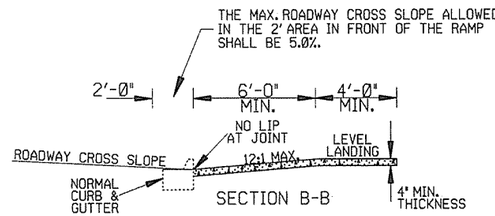

NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.




TYPE 4 RAMP
(Walk adjacent to curb)




TYPE 3 RAMP




SECTION B-B

RAMP SELECTION CRITERIA

| | | |
|---|---|---|
| FIRST CHOICE | TYPE 1 | CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| | TYPE 2 | CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| | TYPE 3 | CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| | TYPE 4 | TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| SECOND CHOICE | TYPE 5 | TANGENT LOCATIONS (ALTERATIONS ONLY). |
| THIRD CHOICE | TYPE 6 | CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS. |
| FOURTH CHOICE | | IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES. |

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

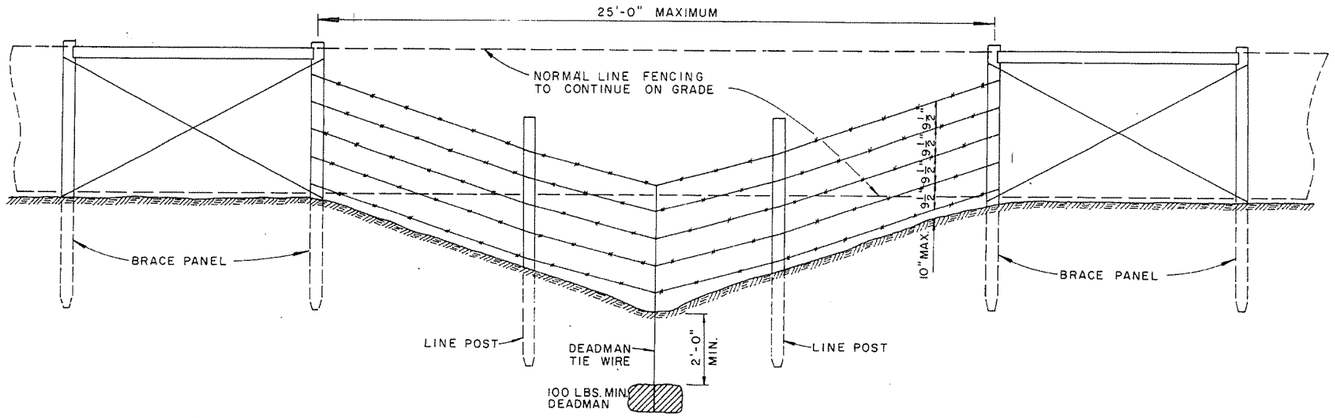
AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

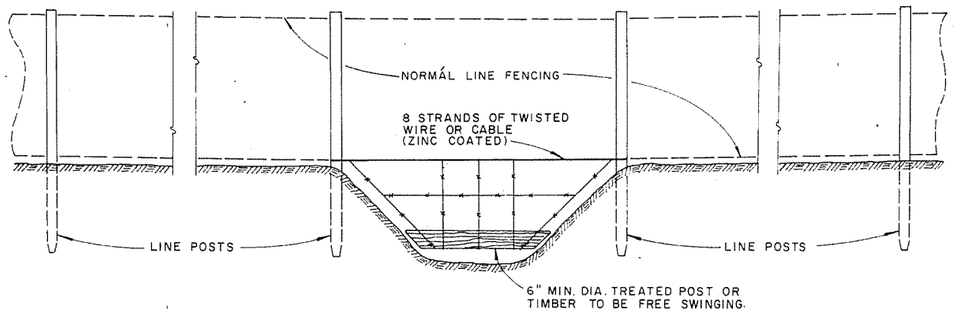
| DATE | REVISION | DATE FILM |
|---|---|---|
| | | |
| | | |
| 11-10-05 | REVISED TO NEW SIDEWALK POLICY | |
| 10-9-03 | REVISED GEN. NOTES & ADDED NOTE | |
| 4-10-03 | REV. DETECTABLE WARNING DEVICES | |
| 8-22-02 | ADD DETECTABLE WARNING DEVICES | |
| 3-30-00 | ADD.SLOPE TRANS. & REV. ISL. DIMS. | |
| 11-18-98 | REVISED NOTES | |
| 8-12-98 | REVISED TEXTURE | |
| 7-02-98 | REDRAWN & REISSUED | |
| 10-18-96 | CORRECTED DIMENSIONS | 10-18-96 |
| 5-24-90 | FROM@1TO12=MAX.SLOPES | 5-24-90 |
| 7-15-88 | ADJUSTED MAX. SLOPE | 652-7-15-88 |
| 7-14-88 | INCLUD."CONC. ISLD."IN PAY ITEM | ------- |
| 6-02-76 | ISSUED-P.H.D. | 299-7-28-76 |

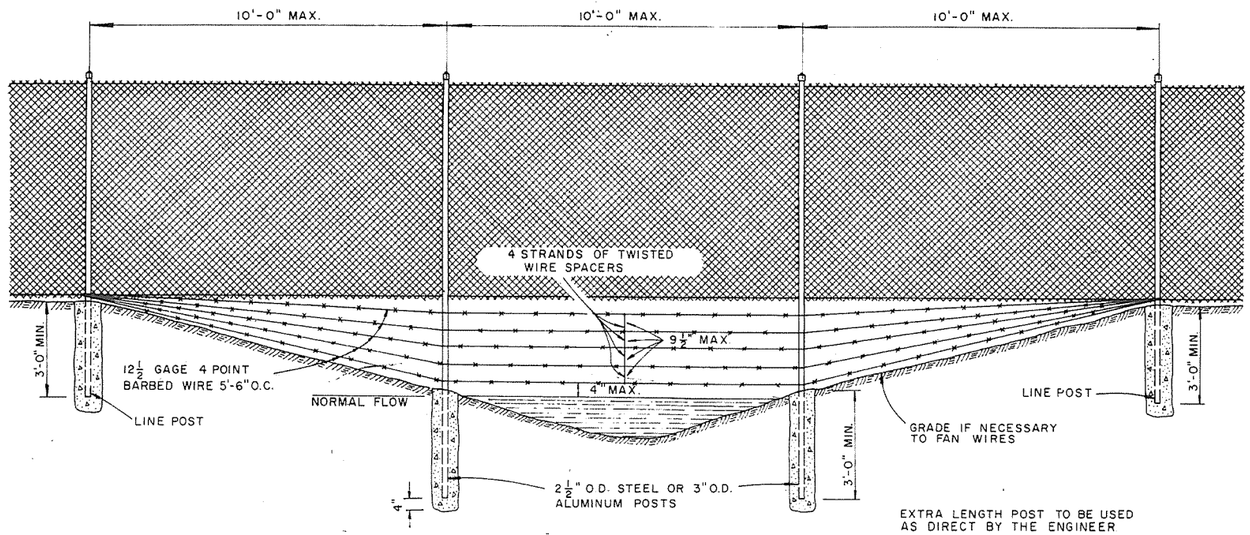
ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

STANDARD DRAWING WR-1




GENERAL NOTES:

THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.

WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.

PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

| DATE | REVISION | DATE FILM'D. |
|---|---|---|
| 4-20-79 | REVISED TOP RAIL & TENSION WIRE | 696-4-20-79 |
| 10-2-72 | REVISED & REDRAWN | 529 10-2-72 |

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING

WF-2

73

13M—11-71—67001—PPASCo

RESHOT 3-5-93

157

| FED. ROAD No. | STATE | FED. AID PROJECT | FISCAL YEAR | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 6 | ARK. | | | 119 | |
| JOB No. | | | | | |

# BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "a" bars STRAIGHT — In Top and Bottom Slab of Barrel & Add'l in Apron and Headwall.- Each. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH |
|---|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 128 | 128 | 9'-5" |
| | | 3' | | | 128 | 128 | 9'-5" |
| | | 4' | #5 | 12" | 128 | 128 | 9'-5" |
| | | 5' | | | 128 | 128 | 9'-5" |
| | | 6' | | | 128 | 128 | 9'-8" |
| | 5'@ 2 | 3' | | | 128 | 128 | 11'-5" |
| | | 4' | | | 128 | 128 | 11'-5" |
| | | 5' | #6 | 12" | 128 | 128 | 11'-5" |
| | | 6' | | | 128 | 128 | 11'-8" |
| | | 7' | | | 128 | 128 | 11'-10" |
| | 6'@ 2 | 3' | | | 140 | 140 | 13'-5" |
| | | 4' | | | 140 | 140 | 13'-5" |
| | | 5' | #6 | 11" | 140 | 140 | 13'-5" |
| | | 6' | | | 140 | 140 | 13'-8" |
| | | 7' | | | 140 | 140 | 13'-11" |
| | | 8' | | | 140 | 140 | 13'-11" |
| | 7'@ 2 | 4' | | | 128 | 128 | 15'-5" |
| | | 5' | | | 128 | 128 | 15'-5" |
| | | 6' | #6 | 12" | 128 | 128 | 15'-8" |
| | | 7' | | | 128 | 128 | 15'-10" |
| | | 8' | | | 128 | 128 | 15'-11" |
| | | 9' | | | 128 | 128 | 16'-2" |
| | 8'@ 2 | 5' | | | 140 | 140 | 17'-5" |
| | | 6' | | | 140 | 140 | 17'-8" |
| | | 7' | #6 | 11" | 140 | 140 | 17'-8" |
| | | 8' | | | 140 | 140 | 17'-10" |
| | | 9' | | | 140 | 140 | 17'-11" |
| | | 10' | | | 140 | 140 | 18'-2" |
| | | 11' | | | 140 | 140 | 18'-5" |
| | 9'@ 2 | 5' | | | 140 | 140 | 19'-8" |
| | | 6' | | | 140 | 140 | 19'-10" |
| | | 7' | | | 140 | 140 | 19'-10" |
| | | 8' | #6 | 11" | 140 | 140 | 19'-11" |
| | | 9' | | | 140 | 140 | 20'-2" |
| | | 10' | | | 140 | 140 | 20'-5" |
| | | 11' | | | 140 | 140 | 20'-7" |
| | 10'@ 2 | 6' | | | 128 | 128 | 21'-8" |
| | | 7' | | | 128 | 128 | 21'-10" |
| | | 8' | #7 | 12" | 128 | 128 | 21'-10" |
| | | 9' | | | 128 | 128 | 22'-2" |
| | | 10' | | | 128 | 128 | 22'-5" |
| | | 11' | | | 128 | 128 | 22'-7" |
| | | 12' | | | 128 | 128 | 22'-9" |
| | 11'@ 2 | 6' | | | 128 | 128 | 23'-11" |
| | | 7' | | | 128 | 128 | 23'-11" |
| | | 8' | | | 128 | 128 | 23'-11" |
| | | 9' | #7 | 12" | 128 | 128 | 24'-2" |
| | | 10' | | | 128 | 128 | 24'-5" |
| | | 11' | | | 128 | 128 | 24'-7" |
| | | 12' | | | 128 | 128 | 24'-10" |
| | 12'@ 2 | 6' | | | 140 | 140 | 25'-11" |
| | | 7' | | | 140 | 140 | 25'-11" |
| | | 8' | | | 140 | 140 | 25'-11" |
| | | 9' | #7 | 11" | 140 | 140 | 26'-2" |
| | | 10' | | | 140 | 140 | 26'-5" |
| | | 11' | | | 140 | 140 | 26'-7" |
| | | 12' | | | 140 | 140 | 26'-9" |

| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "b" bars STRAIGHT — In Bottom of Top Slab bent up over Division Wall - hooked. Alternate with "a" and "c" bars. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 59 | 59 | 10'-6" | 0'-3" | 2'-2½" | 3'-0" |
| | | 3' | | | 59 | 59 | 10'-6" | 0'-3" | 2'-2½" | 3'-0" |
| | | 4' | #5 | 12" | 59 | 59 | 10'-6" | 0'-3" | 2'-2½" | 3'-0" |
| | | 5' | | | 59 | 59 | 10'-6" | 0'-3" | 2'-2½" | 3'-0" |
| | | 6' | | | 59 | 59 | 10'-9" | 0'-3" | 2'-2½" | 3'-0" |
| | 5'@ 2 | 3' | | | 59 | 59 | 12'-7" | 0'-3½" | 2'-7½" | 4'-1" |
| | | 4' | | | 59 | 59 | 12'-7" | 0'-3½" | 2'-7½" | 4'-1" |
| | | 5' | #6 | 12" | 59 | 59 | 12'-7" | 0'-3½" | 2'-7½" | 4'-1" |
| | | 6' | | | 59 | 59 | 12'-10" | 0'-3½" | 2'-8½" | 4'-2" |
| | | 7' | | | 59 | 59 | 13'-0" | 0'-3½" | 2'-8½" | 4'-2" |
| | 6'@ 2 | 3' | | | 65 | 65 | 14'-7" | 0'-4" | 3'-0½" | 4'-10" |
| | | 4' | | | 65 | 65 | 14'-7" | 0'-4" | 3'-0½" | 4'-10" |
| | | 5' | #6 | 11" | 65 | 65 | 14'-7" | 0'-4" | 3'-0½" | 4'-10" |
| | | 6' | | | 65 | 65 | 14'-10" | 0'-4" | 3'-1½" | 4'-11" |
| | | 7' | | | 65 | 65 | 15'-0" | 0'-4" | 3'-1½" | 4'-11½" |
| | | 8' | | | 65 | 65 | 15'-1" | 0'-4" | 3'-1½" | 5'-0" |
| | 7'@ 2 | 4' | | | 59 | 59 | 16'-5" | 0'-4½" | 3'-5" | 5'-7" |
| | | 5' | | | 59 | 59 | 16'-5" | 0'-4½" | 3'-5" | 5'-7" |
| | | 6' | #6 | 12" | 59 | 59 | 17'-0" | 0'-4½" | 3'-5½" | 5'-8" |
| | | 7' | | | 59 | 59 | 17'-2" | 0'-4½" | 3'-7" | 5'-8½" |
| | | 8' | | | 59 | 59 | 17'-3" | 0'-4½" | 3'-7" | 5'-9" |
| | | 9' | | | 59 | 59 | 17'-6" | 0'-4½" | 3'-8" | 5'-10" |
| | 8'@ 2 | 5' | | | 65 | 65 | 18'-10" | 0'-5" | 3'-10" | 6'-4" |
| | | 6' | | | 65 | 65 | 19'-1" | 0'-5" | 3'-11" | 6'-5" |
| | | 7' | | | 65 | 65 | 19'-1" | 0'-5" | 3'-11" | 6'-5" |
| | | 8' | #6 | 11" | 65 | 65 | 19'-3" | 0'-5" | 4'-0" | 6'-5½" |
| | | 9' | | | 65 | 65 | 19'-6" | 0'-5" | 4'-0" | 6'-6" |
| | | 10' | | | 65 | 65 | 19'-7" | 0'-5" | 4'-1" | 6'-7" |
| | | 11' | | | 65 | 65 | 19'-10" | 0'-5" | 4'-2" | 6'-8" |
| | 9'@ 2 | 5' | | | 65 | 65 | 21'-1" | 0'-5½" | 4'-4½" | 7'-2" |
| | | 6' | | | 65 | 65 | 21'-3" | 0'-5½" | 4'-5" | 7'-2½" |
| | | 7' | | | 65 | 65 | 21'-3" | 0'-5½" | 4'-5" | 7'-2½" |
| | | 8' | #6 | 11" | 65 | 65 | 21'-4" | 0'-5½" | 4'-5" | 7'-3" |
| | | 9' | | | 65 | 65 | 21'-7" | 0'-5½" | 4'-6" | 7'-3" |
| | | 10' | | | 65 | 65 | 21'-10" | 0'-5½" | 4'-7" | 7'-5" |
| | | 11' | | | 65 | 65 | 22'-0" | 0'-5½" | 4'-7" | 7'-6" |
| | 10'@ 2 | 6' | | | 59 | 59 | 23'-2" | 0'-6" | 4'-9" | 7'-11" |
| | | 7' | | | 59 | 59 | 23'-4" | 0'-6" | 4'-10" | 7'-11½" |
| | | 8' | | | 59 | 59 | 23'-4" | 0'-6" | 4'-10" | 7'-11½" |
| | | 9' | #6 | 12" | 59 | 59 | 23'-5" | 0'-6" | 4'-10" | 8'-0" |
| | | 10' | | | 59 | 59 | 23'-8" | 0'-6" | 4'-11" | 8'-0" |
| | | 11' | | | 59 | 59 | 23'-11" | 0'-6" | 5'-0" | 8'-0" |
| | | 12' | | | 59 | 59 | 24'-1" | 0'-6" | 5'-0" | 8'-3" |
| | 11'@ 2 | 6' | | | 59 | 59 | 25'-5" | 0'-6½" | 5'-3" | 8'-9" |
| | | 7' | | | 59 | 59 | 25'-5" | 0'-6½" | 5'-3" | 8'-9" |
| | | 8' | | | 59 | 59 | 25'-5" | 0'-6½" | 5'-3" | 8'-9" |
| | | 9' | #7 | 12" | 59 | 59 | 25'-8" | 0'-6½" | 5'-3" | 8'-10" |
| | | 10' | | | 59 | 59 | 25'-11" | 0'-6½" | 5'-3" | 8'-11" |
| | | 11' | | | 59 | 59 | 26'-1" | 0'-6½" | 5'-3" | 9'-0" |
| | | 12' | | | 59 | 59 | 26'-3" | 0'-6½" | 5'-3" | 9'-1" |
| | 12'@ 2 | 6' | | | 65 | 65 | 27'-5" | 0'-7" | 5'-8" | 9'-6" |
| | | 7' | | | 65 | 65 | 27'-5" | 0'-7" | 5'-8" | 9'-6" |
| | | 8' | | | 65 | 65 | 27'-5" | 0'-7" | 5'-8" | 9'-6" |
| | | 9' | #7 | 11" | 65 | 65 | 27'-8" | 0'-7" | 5'-9" | 9'-7" |
| | | 10' | | | 65 | 65 | 27'-11" | 0'-7" | 5'-10" | 9'-8" |
| | | 11' | | | 65 | 65 | 28'-1" | 0'-7" | 5'-10" | 9'-9" |
| | | 12' | | | 65 | 65 | 28'-3" | 0'-7" | 5'-10" | 9'-10" |

| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "b2" bars STRAIGHT — In Top of Bottom Slab bent down under Division Wall - hooked. Alternate with "a" and "c" bars. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 59 | 59 | 10'-6" | 0'-2½" | 2'-2½" | 3'-0" |
| | | 3' | | | 59 | 59 | 10'-6" | 0'-2½" | 2'-2½" | 3'-0" |
| | | 4' | #5 | 12" | 59 | 59 | 10'-6" | 0'-2½" | 2'-2½" | 3'-0" |
| | | 5' | | | 59 | 59 | 10'-6" | 0'-2½" | 2'-2½" | 3'-0" |
| | | 6' | | | 59 | 59 | 10'-9" | 0'-2½" | 2'-2½" | 3'-0" |
| | 5'@ 2 | 3' | | | 59 | 59 | 12'-4" | 0'-3" | 2'-2½" | 4'-1" |
| | | 4' | | | 59 | 59 | 12'-4" | 0'-3" | 2'-2½" | 4'-1" |
| | | 5' | #6 | 12" | 59 | 59 | 12'-4" | 0'-3" | 2'-2½" | 4'-1" |
| | | 6' | | | 59 | 59 | 12'-7" | 0'-3" | 2'-2½" | 4'-2" |
| | | 7' | | | 59 | 59 | 12'-11" | 0'-3" | 2'-10½" | 4'-2½" |
| | 6'@ 2 | 3' | | | 65 | 65 | 14'-7" | 0'-4" | 3'-0½" | 4'-10" |
| | | 4' | | | 65 | 65 | 14'-7" | 0'-4" | 3'-0½" | 4'-10" |
| | | 5' | #6 | 11" | 65 | 65 | 14'-7" | 0'-4" | 3'-0½" | 4'-10" |
| | | 6' | | | 65 | 65 | 14'-10" | 0'-4" | 3'-1½" | 4'-11" |
| | | 7' | | | 65 | 65 | 15'-0" | 0'-4" | 3'-1½" | 4'-11½" |
| | | 8' | | | 65 | 65 | 15'-1" | 0'-4" | 3'-1½" | 5'-0" |
| | 7'@ 2 | 4' | | | 59 | 59 | 16'-5" | 0'-4½" | 3'-5" | 5'-7" |
| | | 5' | | | 59 | 59 | 16'-5" | 0'-4½" | 3'-5" | 5'-7" |
| | | 6' | #6 | 12" | 59 | 59 | 17'-0" | 0'-4½" | 3'-5½" | 5'-8" |
| | | 7' | | | 59 | 59 | 17'-2" | 0'-4½" | 3'-7" | 5'-8½" |
| | | 8' | | | 59 | 59 | 17'-3" | 0'-4½" | 3'-7" | 5'-9" |
| | | 9' | | | 59 | 59 | 17'-6" | 0'-4½" | 3'-8" | 5'-10" |
| | 8'@ 2 | 5' | | | 65 | 65 | 18'-10" | 0'-5" | 3'-10" | 6'-4" |
| | | 6' | | | 65 | 65 | 19'-1" | 0'-5" | 3'-11" | 6'-5" |
| | | 7' | | | 65 | 65 | 19'-1" | 0'-5" | 3'-11" | 6'-5" |
| | | 8' | #6 | 11" | 65 | 65 | 19'-3" | 0'-5" | 4'-0" | 6'-5½" |
| | | 9' | | | 65 | 65 | 19'-6" | 0'-5" | 4'-0" | 6'-6" |
| | | 10' | | | 65 | 65 | 19'-7" | 0'-5" | 4'-1" | 6'-7" |
| | | 11' | | | 65 | 65 | 19'-10" | 0'-5" | 4'-2" | 6'-8" |
| | 9'@ 2 | 5' | | | 65 | 65 | 21'-1" | 0'-5½" | 4'-4½" | 7'-2" |
| | | 6' | | | 65 | 65 | 21'-3" | 0'-5½" | 4'-5" | 7'-2½" |
| | | 7' | | | 65 | 65 | 21'-3" | 0'-5½" | 4'-5" | 7'-2½" |
| | | 8' | #6 | 11" | 65 | 65 | 21'-4" | 0'-5½" | 4'-5" | 7'-3" |
| | | 9' | | | 65 | 65 | 21'-7" | 0'-5½" | 4'-6" | 7'-3" |
| | | 10' | | | 65 | 65 | 21'-10" | 0'-5½" | 4'-6½" | 7'-5" |
| | | 11' | | | 65 | 65 | 22'-0" | 0'-5½" | 4'-6½" | 7'-6" |
| | 10'@ 2 | 6' | | | 59 | 59 | 23'-2" | 0'-6" | 4'-9" | 7'-11" |
| | | 7' | | | 59 | 59 | 23'-4" | 0'-6" | 4'-10" | 7'-11½" |
| | | 8' | | | 59 | 59 | 23'-4" | 0'-6" | 4'-10" | 7'-11½" |
| | | 9' | #6 | 12" | 59 | 59 | 23'-5" | 0'-6" | 4'-10" | 8'-0" |
| | | 10' | | | 59 | 59 | 23'-8" | 0'-6" | 4'-11" | 8'-0" |
| | | 11' | | | 59 | 59 | 23'-11" | 0'-6" | 5'-0" | 8'-0" |
| | | 12' | | | 59 | 59 | 24'-1" | 0'-6" | 5'-0" | 8'-3" |
| | 11'@ 2 | 6' | | | 59 | 59 | 25'-5" | 0'-6½" | 5'-3" | 8'-9" |
| | | 7' | | | 59 | 59 | 25'-5" | 0'-6½" | 5'-3" | 8'-9" |
| | | 8' | | | 59 | 59 | 25'-5" | 0'-6½" | 5'-3" | 8'-9" |
| | | 9' | #7 | 12" | 59 | 59 | 25'-8" | 0'-6½" | 5'-3" | 8'-10" |
| | | 10' | | | 59 | 59 | 25'-11" | 0'-6½" | 5'-3" | 8'-11" |
| | | 11' | | | 59 | 59 | 26'-1" | 0'-6½" | 5'-3" | 9'-0" |
| | | 12' | | | 59 | 59 | 26'-3" | 0'-6½" | 5'-3" | 9'-1" |
| | 12'@ 2 | 6' | | | 65 | 65 | 27'-5" | 0'-7" | 5'-8" | 9'-6" |
| | | 7' | | | 65 | 65 | 27'-5" | 0'-7" | 5'-8" | 9'-6" |
| | | 8' | | | 65 | 65 | 27'-5" | 0'-7" | 5'-8" | 9'-6" |
| | | 9' | #7 | 11" | 65 | 65 | 27'-8" | 0'-7" | 5'-9" | 9'-7" |
| | | 10' | | | 65 | 65 | 27'-11" | 0'-7" | 5'-10" | 9'-8" |
| | | 11' | | | 65 | 65 | 28'-1" | 0'-7" | 5'-10" | 9'-9" |
| | | 12' | | | 65 | 65 | 28'-3" | 0'-7" | 5'-10" | 9'-10" |

| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "c" bars STRAIGHT — In Top and Bottom Slab of Barrel. Alternate with "b" and "b2" bars. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH |
|---|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 120 | 120 | 4'-8" |
| | | 3' | | | 120 | 120 | 4'-8" |
| | | 4' | #5 | 12" | 120 | 120 | 4'-8" |
| | | 5' | | | 120 | 120 | 4'-8" |
| | | 6' | | | 120 | 120 | 4'-9" |
| | 5'@ 2 | 3' | | | 120 | 120 | 5'-8" |
| | | 4' | | | 120 | 120 | 5'-8" |
| | | 5' | #6 | 12" | 120 | 120 | 5'-8" |
| | | 6' | | | 120 | 120 | 5'-9" |
| | | 7' | | | 120 | 120 | 5'-10" |
| | 6'@ 2 | 3' | | | 132 | 132 | 6'-6" |
| | | 4' | | | 132 | 132 | 6'-6" |
| | | 5' | #6 | 11" | 132 | 132 | 6'-6" |
| | | 6' | | | 132 | 132 | 6'-6" |
| | | 7' | | | 132 | 132 | 6'-10" |
| | | 8' | | | 132 | 132 | 6'-10" |
| | 7'@ 2 | 4' | | | 120 | 120 | 7'-8" |
| | | 5' | | | 120 | 120 | 7'-8" |
| | | 6' | #6 | 12" | 120 | 120 | 7'-9" |
| | | 7' | | | 120 | 120 | 7'-10" |
| | | 8' | | | 120 | 120 | 7'-10" |
| | | 9' | | | 120 | 120 | 7'-11" |
| | 8'@ 2 | 5' | | | 132 | 132 | 8'-6" |
| | | 6' | | | 132 | 132 | 8'-9" |
| | | 7' | | | 132 | 132 | 8'-9" |
| | | 8' | #6 | 11" | 132 | 132 | 8'-10" |
| | | 9' | | | 132 | 132 | 8'-10" |
| | | 10' | | | 132 | 132 | 8'-11" |
| | | 11' | | | 132 | 132 | 9'-0" |
| | 9'@ 2 | 5' | | | 132 | 132 | 9'-8" |
| | | 6' | | | 132 | 132 | 9'-10" |
| | | 7' | | | 132 | 132 | 9'-10" |
| | | 8' | #7 | 12" | 132 | 132 | 9'-11" |
| | | 9' | | | 132 | 132 | 9'-11" |
| | | 10' | | | 132 | 132 | 10'-0" |
| | | 11' | | | 132 | 132 | 10'-0" |
| | 10'@ 2 | 6' | | | 120 | 120 | 10'-8" |
| | | 7' | | | 120 | 120 | 10'-8" |
| | | 8' | | | 120 | 120 | 10'-8" |
| | | 9' | #7 | 12" | 120 | 120 | 10'-9" |
| | | 10' | | | 120 | 120 | 11'-0" |
| | | 11' | | | 120 | 120 | 11'-0" |
| | | 12' | | | 120 | 120 | 11'-0" |
| | 11'@ 2 | 6' | | | 120 | 120 | 11'-10" |
| | | 7' | | | 120 | 120 | 11'-10" |
| | | 8' | | | 120 | 120 | 11'-10" |
| | | 9' | #7 | 12" | 120 | 120 | 11'-11" |
| | | 10' | | | 120 | 120 | 12'-0" |
| | | 11' | | | 120 | 120 | 12'-0" |
| | | 12' | | | 120 | 120 | 12'-0" |
| | 12'@ 2 | 6' | | | 132 | 132 | 12'-10" |
| | | 7' | | | 132 | 132 | 12'-10" |
| | | 8' | | | 132 | 132 | 12'-11" |
| | | 9' | #7 | 11" | 132 | 132 | 12'-11" |
| | | 10' | | | 132 | 132 | 13'-0" |
| | | 11' | | | 132 | 132 | 13'-0" |
| | | 12' | | | 132 | 132 | 13'-0" |

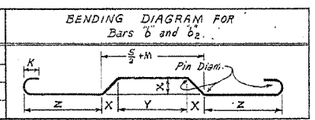
| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "d" bars STRAIGHT — Longitudinal in Top Slab of Barrel SIZE | SPACING | NO. REQ'D | LENGTH |
|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 14 | 8' |
| | | 3' | | | 14 | 12' |
| | | 4' | #5 | 12" | 14 | 16' |
| | | 5' | | | 14 | 20' |
| | | 6' | | | 14 | 24' |
| | 5'@ 2 | 3' | | | 16 | 12' |
| | | 4' | | | 16 | 16' |
| | | 5' | #6 | 12" | 16 | 20' |
| | | 6' | | | 16 | 24' |
| | | 7' | | | 16 | 28' |
| | 6'@ 2 | 3' | | | 18 | 12' |
| | | 4' | | | 18 | 16' |
| | | 5' | #6 | 11" | 18 | 20' |
| | | 6' | | | 18 | 24' |
| | | 7' | | | 18 | 28' |
| | | 8' | | | 18 | 32' |
| | 7'@ 2 | 4' | | | 20 | 16' |
| | | 5' | | | 20 | 20' |
| | | 6' | #6 | 12" | 20 | 24' |
| | | 7' | | | 20 | 28' |
| | | 8' | | | 20 | 32' |
| | | 9' | | | 20 | 36' |
| | 8'@ 2 | 5' | | | 22 | 20' |
| | | 6' | | | 22 | 24' |
| | | 7' | #6 | 11" | 22 | 28' |
| | | 8' | | | 22 | 32' |
| | | 9' | | | 22 | 36' |
| | | 10' | | | 22 | 40' |
| | 9'@ 2 | 5' | | | 26 | 20' |
| | | 6' | | | 26 | 24' |
| | | 7' | | | 26 | 28' |
| | | 8' | #6 | 11" | 26 | 32' |
| | | 9' | | | 26 | 36' |
| | | 10' | | | 26 | 40' |
| | | 11' | | | 26 | 44' |
| | 10'@ 2 | 6' | | | 28 | 28' |
| | | 7' | | | 28 | 28' |
| | | 8' | | | 28 | 32' |
| | | 9' | #7 | 12" | 28 | 36' |
| | | 10' | | | 28 | 40' |
| | | 11' | | | 28 | 44' |
| | | 12' | | | 28 | 48' |
| | 11'@ 2 | 6' | | | 30 | 28' |
| | | 7' | | | 30 | 28' |
| | | 8' | | | 30 | 32' |
| | | 9' | #7 | 12" | 30 | 36' |
| | | 10' | | | 30 | 40' |
| | | 11' | | | 30 | 44' |
| | | 12' | | | 30 | 48' |
| | 12'@ 2 | 6' | | | 32 | 24' |
| | | 7' | | | 32 | 28' |
| | | 8' | | | 32 | 32' |
| | | 9' | #8 | 12" | 32 | 36' |
| | | 10' | | | 32 | 40' |
| | | 11' | | | 32 | 44' |
| | | 12' | | | 32 | 48' |

| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "d1" bars STRAIGHT — Longitudinal in Sidewalls and Division Walls. SIZE | SPACING | NO. REQ'D | LENGTH |
|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 16 | |
| | | 3' | | | 16 | |
| | | 4' | #4 | 12" | 16 | |
| | | 5' | | | 16 | |
| | | 6' | | | 16 | |
| | 5'@ 2 | 3' | | | 16 | |
| | | 4' | | | 16 | |
| | | 5' | #4 | 12" | 16 | |
| | | 6' | | | 16 | |
| | | 7' | | | 16 | |
| | 6'@ 2 | 3' | | | 18 | |
| | | 4' | | | 18 | |
| | | 5' | #5 | 11½" | 18 | |
| | | 6' | | | 18 | |
| | | 7' | | | 18 | |
| | | 8' | | | 18 | |
| | 7'@ 2 | 4' | | | 20 | |
| | | 5' | | | 20 | |
| | | 6' | #5 | 11½" | 20 | |
| | | 7' | | | 20 | |
| | | 8' | | | 20 | |
| | | 9' | | | 20 | |
| | 8'@ 2 | 5' | | | 22 | |
| | | 6' | | | 22 | |
| | | 7' | #5 | 11½" | 22 | |
| | | 8' | | | 22 | |
| | | 9' | | | 22 | |
| | | 10' | | | 22 | |
| | 9'@ 2 | 5' | | | 26 | |
| | | 6' | | | 26 | |
| | | 7' | #5 | 11½" | 26 | |
| | | 8' | | | 26 | |
| | | 9' | | | 26 | |
| | | 10' | | | 26 | |
| | | 11' | | | 26 | |
| | 10'@ 2 | 6' | | | 28 | |
| | | 7' | | | 28 | |
| | | 8' | | | 28 | |
| | | 9' | #5 | 11½" | 28 | |
| | | 10' | | | 28 | |
| | | 11' | | | 28 | |
| | | 12' | | | 28 | |
| | 11'@ 2 | 6' | | | 30 | |
| | | 7' | | | 30 | |
| | | 8' | | | 30 | |
| | | 9' | #5 | 11½" | 30 | |
| | | 10' | | | 30 | |
| | | 11' | | | 30 | |
| | | 12' | | | 30 | |
| | 12'@ 2 | 6' | | | 32 | |
| | | 7' | | | 32 | |
| | | 8' | | | 32 | |
| | | 9' | #5 | 11½" | 32 | |
| | | 10' | | | 32 | |
| | | 11' | | | 32 | |
| | | 12' | | | 32 | |

| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "e" bars STRAIGHT — Longitudinal in Bottom Slab of Barrel. SIZE | SPACING | NO. REQ'D | LENGTH |
|---|---|---|---|---|---|---|
| 0'-0" TO 5'-0" MAXIMUM. | 4'@ 2 | 2' | | | 16 | |
| | | 3' | | | 16 | |
| | | 4' | #4 | 12" | 16 | |
| | | 5' | | | 16 | |
| | | 6' | | | 16 | |
| | 5'@ 2 | 3' | | | 16 | |
| | | 4' | | | 16 | |
| | | 5' | #4 | 12" | 16 | |
| | | 6' | | | 16 | |
| | | 7' | | | 16 | |
| | 6'@ 2 | 3' | | | 18 | |
| | | 4' | | | 18 | |
| | | 5' | #4 | 12" | 18 | |
| | | 6' | | | 18 | |
| | | 7' | | | 18 | |
| | | 8' | | | 18 | |
| | 7'@ 2 | 4' | | | 20 | |
| | | 5' | | | 20 | |
| | | 6' | #4 | 12" | 20 | |
| | | 7' | | | 20 | |
| | | 8' | | | 20 | |
| | | 9' | | | 20 | |
| | 8'@ 2 | 5' | | | 22 | |
| | | 6' | | | 22 | |
| | | 7' | #4 | 12" | 22 | |
| | | 8' | | | 22 | |
| | | 9' | | | 22 | |
| | | 10' | | | 22 | |
| | 9'@ 2 | 5' | | | 26 | |
| | | 6' | | | 26 | |
| | | 7' | #4 | 12" | 26 | |
| | | 8' | | | 26 | |
| | | 9' | | | 26 | |
| | | 10' | | | 26 | |
| | | 11' | | | 26 | |
| | 10'@ 2 | 6' | | | 28 | |
| | | 7' | | | 28 | |
| | | 8' | | | 28 | |
| | | 9' | #4 | 12" | 28 | |
| | | 10' | | | 28 | |
| | | 11' | | | 28 | |
| | | 12' | | | 28 | |
| | 11'@ 2 | 6' | | | 30 | |
| | | 7' | | | 30 | |
| | | 8' | | | 30 | |
| | | 9' | #4 | 12" | 30 | |
| | | 10' | | | 30 | |
| | | 11' | | | 30 | |
| | | 12' | | | 30 | |
| | 12'@ 2 | 6' | | | 32 | |
| | | 7' | | | 32 | |
| | | 8' | | | 32 | |
| | | 9' | #4 | 12" | 32 | |
| | | 10' | | | 32 | |
| | | 11' | | | 32 | |
| | | 12' | | | 32 | |

| BAR SIZE | PIN DIAM. | K | ADD FOR 2 HOOKS |
|---|---|---|---|
| #5 | 2⅝" | 4½" | 0'-11½" |
| #6 | 3" | 5" | 1'-2" |

BENDING DIAGRAM FOR Bars "b" and "b2".

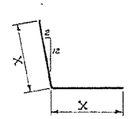



Note:- Dimensions are to centers of bars. (Bars "b" and "b2")

## DOWEL BARS FOR TWO HEADWALLS

| 2 SPANS @ | SIZE | SPACING | NO. REQ'D | LENGTH | X |
|---|---|---|---|---|---|
| 4' | #4 | 12"± | 20 | 2'-5" | 1'-2½" |
| 5' | #4 | 12"± | 24 | 2'-6" | 1'-3" |
| 6' | #4 | 12"± | 28 | 2'-7" | 1'-3⅜" |
| 7' | #4 | 12"± | 32 | 2'-8" | 1'-4" |
| 8' | #4 | 12"± | 36 | 2'-9" | 1'-4½" |
| 9' | #4 | 12"± | 40 | 2'-10" | 1'-5" |
| 10' | #4 | 12"± | 46 | 2'-11" | 1'-5½" |
| 11' | #4 | 12"± | 50 | 3'-0" | 1'-6" |
| 12' | #4 | 12"± | 54 | 3'-1" | 1'-6½" |

Bars "i" Dowel bars in Headwalls.




Designed by:- W.C.H. 1-17-63.
Drawn by:- W.C.H. 2-15-63.
Quantities by:- W.C.H. 2-19-63.
Checked by:- TWS - 5-14-63
Checked by:- TWS - 5-24-63
Checked by:- TWS - 5-28-63

## DIMENSIONS — BARREL DIMENSIONS

| MAX. DESIGN DEPTH OF COVER D | CLEAR SPANS S | CLEAR HEIGHT H | SQ. FT. OPENING A | OVERALL WIDTH OW | THICKNESS OF TOP SLAB T | THICKNESS OF BOTTOM SLAB & SIDEWALLS C | THICKNESS OF DIVISION WALL M | THICKNESS OF BOTTOM SLAB B | OVERALL HEIGHT OH |
|---|---|---|---|---|---|---|---|---|---|
| 5'-0" | 2 @ 4' | 2' | 16 | 3'-8" | 6½" | 6" | 8" | 6" | 3'-0⅝" |
| | | 3' | 24 | 3'-8" | | | | | 4'-0⅝" |
| | | 4' | 32 | 3'-8" | | | | | 5'-0⅝" |
| | | 5' | 40 | 3'-8" | | | | | 6'-0⅝" |
| | | 6' | 48 | 3'-11" | | 7" | 9" | | 7'-0⅝" |
| | 2 @ 5' | 3' | 30 | 11'-8" | 7" | 6" | 8" | 6½" | 4'-1⅝" |
| | | 4' | 40 | 11'-8" | | 6" | 8" | | 5'-1⅝" |
| | | 5' | 50 | 11'-8" | | 6" | 8" | | 6'-1⅝" |
| | | 6' | 60 | 11'-11" | | 7" | 9" | | 7'-1⅝" |
| | | 7' | 70 | 12'-1" | | 7⅝" | 10" | | 8'-1⅝" |
| | 2 @ 6' | 3' | 36 | 13'-6" | 7½" | 6" | 8" | 7½" | 4'-3" |
| | | 4' | 48 | 13'-6" | | 6" | 8" | | 5'-3" |
| | | 5' | 60 | 13'-6" | | 6" | 8" | | 6'-3" |
| | | 6' | 72 | 13'-11" | | 7" | 9" | | 7'-3" |
| | | 7' | 84 | 14'-1" | | 7½" | 10" | | 8'-3" |
| | | 8' | 96 | 14'-2" | | 8" | 10" | | 9'-3" |
| | 2 @ 7' | 4' | 56 | 15'-8" | 8" | 6" | 8" | 8" | 5'-4" |
| | | 5' | 70 | 15'-8" | | 6" | 8" | | 6'-4" |
| | | 6' | 84 | 15'-11" | | 7" | 9" | | 7'-4" |
| | | 7' | 98 | 16'-1" | | 7½" | 10" | | 8'-4" |
| | | 8' | 112 | 16'-8" | | 8" | 10" | | 9'-4" |
| | | 9' | 126 | 16'-5" | | 9" | 11" | | 10'-4" |
| | 2 @ 8' | 5' | 80 | 17'-11" | 8½" | 7" | 9" | 8½" | 6'-5" |
| | | 6' | 96 | 17'-11" | | 7" | 9" | | 7'-5" |
| | | 7' | 112 | 18'-1" | | 7½" | 10" | | 8'-5" |
| | | 8' | 128 | 18'-2" | | 8" | 10" | | 9'-5" |
| | | 9' | 144 | 18'-5" | | 9" | 11" | | 10'-5" |
| | | 10' | 160 | 18'-8" | | 10" | 12" | | 11'-5" |
| | 2 @ 9' | 5' | 90 | 19'-11" | 9" | 7" | 9" | 9½" | 6'-6" |
| | | 6' | 108 | 20'-1" | | 7½" | 10" | | 7'-6" |
| | | 7' | 126 | 20'-1" | | 7½" | 10" | | 8'-6" |
| | | 8' | 144 | 20'-2" | | 8" | 10" | | 9'-6" |
| | | 9' | 162 | 20'-5" | | 9" | 11" | | 10'-6" |
| | | 10' | 180 | 20'-8" | | 10" | 12" | | 11'-6" |
| | | 11' | 198 | 20'-8" | | 11" | 12" | | 12'-6" |
| | 2 @ 10' | 5' | 100 | 21'-11" | 10" | 7" | 9" | 10" | 6'-7½" |
| | | 6' | 120 | 22'-1" | | 7½" | 10" | | 7'-7½" |
| | | 7' | 140 | 22'-1" | | 7½" | 10" | | 8'-7½" |
| | | 8' | 160 | 22'-2" | | 8" | 10" | | 9'-7½" |
| | | 9' | 180 | 22'-5" | | 9" | 11" | | 10'-7½" |
| | | 10' | 200 | 22'-8" | | 10" | 12" | | 11'-7½" |
| | | 11' | 220 | 22'-10" | | 11" | 12" | | 12'-7½" |
| | | 12' | 240 | 23'-0" | | 12" | 12" | | 13'-7½" |
| | 2 @ 11' | 6' | 132 | 24'-2" | 11" | 8" | 10" | 11" | 7'-9" |
| | | 7' | 154 | 24'-2" | | 8" | 10" | | 8'-9" |
| | | 8' | 176 | 24'-2" | | 8" | 10" | | 9'-9" |
| | | 9' | 198 | 24'-5" | | 9" | 11" | | 10'-9" |
| | | 10' | 220 | 24'-8" | | 10" | 12" | | 11'-9" |
| | | 11' | 242 | 24'-10" | | 11" | 12" | | 12'-9" |
| | | 12'

Reshot 3-8-93

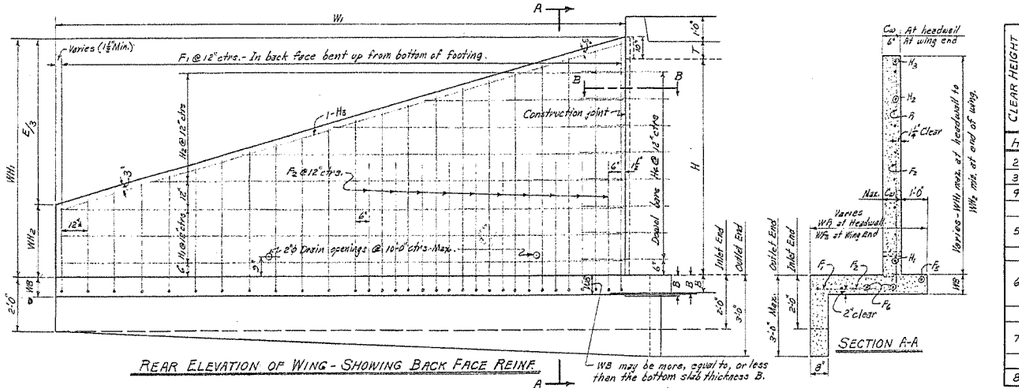
389

| FED. ROAD No. | STATE | FED. AID PROJECT | FISCAL YEAR | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 6 | ARK. | | | 120 | |
| JOB No. | | | | | |

# BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH - TWO 30° SKEWED ENDS

| DEPTH OF COVER | CLEAR SPANS | CLEAR HEIGHT | 'a' bars STRAIGHT: In Top and Bottom Slab of Barrel. | | | 'a1' bars STRAIGHT: In Top and Bottom Slab of Barrel - (Four of each Length) | | | 'b' bars BENT - See Diagrams below: In Bottom of Top Slab bent up over Division Wall - hooked. Alternate with 'a' and 'c' bars. | | | | | | 'b1' bars BENT - See Diagrams below: In Bottom of Top Slab - some bent up over Division Wall - one end hooked. (2 of Each Length) Alternate with 'a1' and 'c1' bars. | | | | | | 'b2' bars BENT - See Diagrams below: In Top of Bottom Slab - bent down under Division Wall - hooked. Alternate with 'a' and 'c' bars. | | | | | | 'b3' bars BENT - See Diagrams below: In Top of Bottom Slab - some bent down under Division Wall - one end hooked. (2 of Each Length) Alternate with 'a1' and 'c1' bars. | | | | | | 'c' bars STRAIGHT: In Top and Bottom Slab of Barrel. Alternate with 'b' and 'b2' bars. | | | 'c1' bars STRAIGHT: In Top and Bottom Slab of Barrel Alt. with 'b1' & 'b3' bars. (Four of each Length). | | | 'd' bars STRAIGHT: Longitudinal in Top Slab of Barrel | | | 'd1' bars STRAIGHT: Longitudinal in Sidewalls and Division Wall. | | | 'e' bars STRAIGHT: Longitudinal in Bottom Slab of Barrel. | | | 'f' bars STRAIGHT: Verticals in Sidewalls and Division Wall | | | 'k' bars STRAIGHT: In Bottom of Headwalls | | | 'k2' bars STRAIGHT: In Top of Headwalls and Aprons (2 Each) | | |
|---|---|---|---|---|---

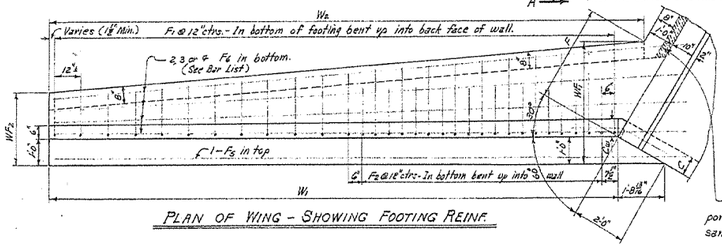
| FED. ROAD PROJECT | STATE PROJECT | FED. AID PROJECT | JOINT PROJECT | SURVEY NO. | VERTICAL CONTROL |
|---|---|---|---|---|---|
| | | | | 121 | |
| JOB NO. | | | | | |




REAR ELEVATION OF WING - SHOWING BACK FACE REINF.

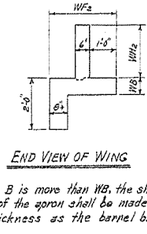



SECTION A-A



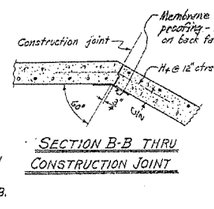

PLAN OF WING - SHOWING FOOTING REINF.

W8 may be more, equal to, or less than the bottom slab thickness B.

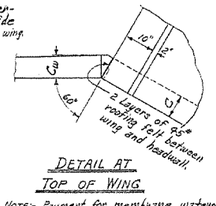



END VIEW OF WING

When B is more than W8, the shaded portion of the apron shall be made the same thickness as the barrel base B.




SECTION B-B THRU CONSTRUCTION JOINT




DETAIL AT TOP OF WING

Note:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

## WING DIMENSIONS

| CLEAR HEIGHT BEHIND WING | THICKNESS OF WING FOOTING | THICKNESS OF WING AT HEADWALL = C | WINGWALL HEIGHTS | | WIDTHS OF WING FOOTINGS | | PERPENDICULAR DIST. FROM HEAD TO END OF WING | LENGTH OF WING WALLS | INSIDE FOOTING DIMENSION | * QUANTITY PER WING CLASS S CONCRETE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AT HEADWALL | AT END OF WING | AT HEADWALL | AT END OF WING | F | E | W1 | W2 | INLET END | OUTLET END |
| H | WB | Cw | WH1 | WH2 | W6 | W5 | | | | | CU.YD. | CU.YD. |
| 2' | 7" | 6" | 2'-10" | 0'-8" | 2'-6" | 2'-0" | 0'-11⅜" | 6'-6" | 7'-6" | 7'-1⅝" | 0.889 | 0.986 |
| 3' | 7" | 6" | 3'-10" | 1'-0" | 2'-8" | 2'-1½" | 1'-4⅜" | 8'-6" | 9'-9⅜" | 9'-7½" | 1.338 | 1.466 |
| 4' | 7" | 6" | 4'-10" | 1'-9" | 3'-0" | 2'-3" | 1'-9" | 10'-6" | 12'-1⅝" | 12'-1⅝" | 1.868 | 2.027 |
| 5' | 7" | 6" | 5'-10" | 1'-8" | 3'-4" | 2'-6½" | 2'-1⅜" | 12'-6" | 14'-5⅛" | 14'-7⅛" | 2.478 | 2.668 |
| | | 7" | 5'-10" | 1'-8" | 3'-6" | 2'-4½" | 2'-1⅜" | 12'-6" | 14'-5⅛" | 14'-7⅛" | 2.582 | 2.772 |
| 6' | 8" | 7" | 6'-10" | 2'-0" | 3'-8" | 2'-6" | 2'-4½" | 14'-6" | 16'-9" | 17'-1⅝" | 3.440 | 3.661 |
| | | 7½" | 6'-10" | 2'-0" | 3'-8" | 2'-6" | 2'-5⅛" | 14'-6" | 16'-9" | 17'-1⅝" | 3.511 | 3.732 |
| | | 8" | 6'-10" | 2'-0" | 3'-8" | 2'-6" | 2'-5⅝" | 14'-6" | 16'-9" | 17'-1⅝" | 3.582 | 3.803 |
| 7' | 8½" | 7½" | 7'-10" | 2'-4" | 4'-2" | 2'-7½" | 3'-1⅛" | 16'-6" | 19'-0⅝" | 19'-3⅜" | 4.505 | 4.758 |
| | | 8" | 7'-10" | 2'-4" | 4'-2" | 2'-7½" | 3'-1⅛" | 16'-6" | 19'-0⅝" | 19'-3⅜" | 4.597 | 4.851 |
| 8' | 9" | 8" | 8'-10" | 2'-8" | 4'-8" | 2'-9" | 3'-5" | 18'-6" | 21'-0⅝" | 22'-0" | 5.761 | 6.097 |

* Quantity per wing does not include headwall or that portion of apron or footwall for the length W3.

## APRON DIMENSION W3

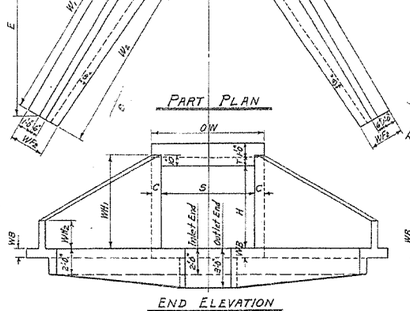
W3 = (CW - 2F)

| CLEAR SPAN | CLEAR HEIGHT | 2 x FOOTING DIMENSION | SINGLE BARREL CULVERT | | DOUBLE BARREL CULVERT | | TRIPLE BARREL CULVERT | | QUADRUPLE BARREL CULVERT | | QUINTUPLE BARREL CULVERT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | H | 2F | OW | W3 | OW | W3 | OW | W3 | OW | W3 | OW | W3 |
| 4' | 2' | 1'-11⅛" | 5'-0" | 3'-0⅛" | 9'-8" | 7'-8⅛" | 14'-4" | 12'-4⅛" | 19'-0" | 17'-0⅛" | 23'-8" | 21'-8⅛" |
| | 3' | 2'-8⅜" | 5'-0" | 2'-3⅝" | 9'-8" | 7'-11⅛" | 14'-4" | 11'-7⅝" | 19'-0" | 16'-3⅛" | 23'-8" | 20'-11⅝" |
| | 4' | 3'-5" | 5'-0" | 1'-6" | 9'-8" | 6'-2" | 14'-4" | 10'-10" | 19'-0" | 15'-6" | 23'-8" | 20'-2" |
| | 5' | 4'-1⅜" | 5'-0" | 0'-8⅝" | 9'-8" | 5'-4⅝" | 14'-4" | 10'-1⅝" | 19'-0" | 14'-8⅝" | 23'-8" | 19'-9⅝" |
| | 6' | 5'-0⅛" | 5'-0" | 0'-1⅛" | 9'-11" | 4'-10⅛" | 14'-8" | 9'-7⅛" | 19'-5" | 14'-2" | 24'-2" | 19'-1⅛" |
| 5' | 3' | 2'-8⅜" | 6'-0" | 3'-3⅝" | 11'-8" | 8'-8⅛" | 17'-4" | 14'-4⅛" | 23'-0" | 20'-3⅝" | 28'-8" | 25'-11⅝" |
| | 4' | 3'-5" | 6'-0" | 2'-6" | 11'-8" | 8'-2" | 17'-4" | 13'-10" | 23'-0" | 19'-6" | 28'-8" | 25'-2" |
| | 5' | 4'-1⅜" | 6'-0" | 1'-8⅝" | 11'-8" | 7'-6⅝" | 17'-4" | 13'-2⅝" | 23'-0" | 18'-10⅝" | 28'-8" | 24'-6⅝" |
| | 6' | 5'-0⅛" | 6'-0" | 1'-1⅛" | 11'-11" | 6'-10⅛" | 17'-8" | 12'-7⅛" | 23'-5" | 18'-2⅛" | 29'-2" | 24'-1⅛" |
| | 7' | 6'-2⅝" | 6'-0" | 0'-0⅝" | 12'-1" | 6'-0⅝" | 17'-11" | 11'-11⅝" | 23'-9" | 17'-6⅝" | 29'-7" | 23'-5⅝" |
| 6' | 3' | 2'-8⅜" | 7'-0" | 4'-3⅝" | 13'-8" | 10'-1⅛" | 20'-4" | 17'-0⅛" | 27'-0" | 23'-3⅝" | 33'-8" | 30'-1⅛" |
| | 4' | 3'-5" | 7'-0" | 3'-6" | 13'-8" | 10'-2" | 20'-4" | 16'-10" | 27'-0" | 23'-6" | 33'-8" | 30'-2" |
| | 5' | 4'-1⅜" | 7'-0" | 2'-8⅝" | 13'-8" | 9'-6⅝" | 20'-4" | 16'-0⅝" | 27'-0" | 22'-8⅝" | 33'-8" | 29'-4⅝" |
| | 6' | 5'-0⅛" | 7'-0" | 2'-1⅛" | 13'-11" | 8'-10⅛" | 20'-8" | 15'-7⅛" | 27'-5" | 22'-2⅛" | 34'-2" | 28'-11⅛" |
| | 7' | 6'-2⅝" | 7'-0" | 1'-0⅝" | 14'-1" | 7'-10⅝" | 20'-11" | 14'-9⅝" | 27'-9" | 21'-6⅝" | 34'-7" | 28'-1⅝" |
| | 8' | 7'-1⅜" | 7'-0" | 0'-0" | 14'-1" | 6'-11" | 21'-0" | 13'-8" | 27'-10" | 20'-8" | 34'-8" | 27'-8" |
| 7' | 4' | 3'-5" | 8'-0" | 4'-6" | 15'-8" | 12'-2" | 23'-4" | 19'-0" | 31'-0" | 27'-6" | 38'-8" | 35'-2" |
| | 5' | 4'-1⅜" | 8'-0" | 3'-8⅝" | 15'-8" | 11'-4⅝" | 23'-4" | 18'-0⅝" | 31'-0" | 26'-8⅝" | 38'-8" | 34'-4⅝" |
| | 6' | 5'-0⅛" | 8'-0" | 3'-1⅛" | 15'-11" | 10'-8⅛" | 23'-8" | 17'-7⅛" | 31'-5" | 26'-2⅛" | 39'-2" | 33'-11⅛" |
| | 7' | 6'-2⅝" | 8'-0" | 2'-0⅝" | 16'-1" | 9'-10⅝" | 23'-11" | 16'-9⅝" | 31'-9" | 25'-6⅝" | 39'-7" | 33'-1⅝" |
| | 8' | 7'-1⅜" | 8'-0" | 1'-0" | 16'-3" | 8'-11" | 23'-11" | 15'-9" | 31'-10" | 24'-8" | 39'-8" | 32'-8" |
| 9' | 4' | 3'-5" | 9'-0" | 5'-6" | 17'-8" | 14'-2" | 26'-4" | 22'-10" | 35'-6" | 31'-6" | 48'-8" | 40'-2" |
| | 5' | 4'-1⅜" | 9'-0" | 4'-8⅝" | 17'-8" | 13'-6⅝" | 26'-8" | 22'-0⅝" | 35'-5" | 31'-1⅝" | 44'-2" | 39'-10⅝" |
| | 6' | 5'-0⅛" | 9'-2" | 4'-1⅛" | 17'-11" | 12'-10⅛" | 26'-8" | 21'-2⅝" | 35'-5" | 30'-1⅛" | 44'-8" | 38'-11⅛" |
| | 7' | 6'-2⅝" | 9'-2" | 3'-0⅝" | 18'-1" | 11'-10⅝" | 26'-11" | 20'-3⅝" | 35'-9" | 29'-6⅝" | 45'-1" | 38'-1⅝" |
| | 8' | 7'-1⅜" | 9'-2" | 2'-0" | 18'-2" | 10'-11" | 27'-0" | 19'-3" | 35'-10" | 28'-8" | 44'-8" | 37'-8" |
| 10' | 5' | 4'-1⅜" | 11'-2" | 6'-0⅝" | 21'-11" | 17'-7⅝" | 32'-8" | 28'-4⅝" | 43'-5" | 39'-1⅝" | 54'-2" | 49'-10⅝" |
| | 6' | 5'-0⅛" | 11'-3" | 5'-2⅛" | 22'-1" | 17'-0⅛" | 32'-11" | 27'-11⅝" | 43'-9" | 38'-6⅛" | 54'-7" | 49'-2⅛" |
| | 7' | 6'-2⅝" | 11'-3" | 4'-0⅝" | 22'-4" | 16'-0⅝" | 32'-11" | 26'-11⅝" | 43'-9" | 37'-6⅝" | 54'-7" | 48'-2⅝" |
| | 8' | 7'-1⅜" | 11'-4" | 4'-0" | 22'-2" | 14'-10" | 33'-0" | 25'-8" | 43'-10" | 36'-4" | 54'-8" | 47'-4" |
| 11' | 6' | 5'-0⅛" | 12'-6" | 7'-3⅛" | 25'-6" | 19'-1⅛" | 36'-0" | 30'-1⅛" | 47'-10" | 42'-1⅛" | | |
| | 7' | 6'-2⅝" | 12'-6" | 6'-1⅝" | 25'-10" | 18'-2⅝" | 36'-4" | 29'-2⅝" | 47'-10" | 41'-2⅝" | | |
| | 8' | 7'-1⅜" | 12'-6" | 5'-0" | 26'-1" | 16'-10" | 36'-0" | 28'-0" | 47'-10" | 40'-0" | | |
| 12' | 6' | 5'-0⅛" | 13'-6" | 8'-3⅛" | 26'-8" | 21'-1⅛" | 39'-0" | 33'-1⅛" | 51'-10" | 46'-1⅛" | | |
| | 7' | 6'-2⅝" | 13'-6" | 7'-1⅝" | 26'-8" | 19'-11⅛" | 39'-0" | 32'-0⅝" | 51'-10" | 45'-0⅝" | | |
| | 8' | 7'-1⅜" | 13'-6" | 6'-0" | 26'-6" | 18'-10" | 39'-0" | 31'-0" | 51'-10" | 44'-0" | | |

## QUANTITIES

| CLEAR SPAN | CLEAR HEIGHT | THICKNESS OF WING AT HEADWALL | THICKNESS OF WING FOOTING | REINFORCING STEEL @ | CLASS S CONCRETE - 4 WINGS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS | | | | | |
| | | | | 4 WINGS | SINGLE BARREL CULVERT | DOUBLE BARREL CULVERT | TRIPLE BARREL CULVERT | QUADRUPLE BARREL CULVERT | QUINTUPLE BARREL CULVERT | |
| S | H | Cw | WB | LB. | CU.YD. | CU.YD. | CU.YD. | CU.YD. | CU.YD. | |
| 4' | 2' | 6" | 7" | 102.0 | 4.50 | 5.46 | 6.42 | 7.36 | 8.34 | |
| | 3' | 6" | 7" | 164.9 | 6.26 | 7.21 | 8.17 | 9.13 | 10.09 | |
| | 4' | 6" | 7" | 254.6 | 8.33 | 9.28 | 10.24 | 11.20 | 12.16 | |
| | 5' | 6" | 7" | 357.8 | 10.72 | 11.68 | 12.64 | 13.60 | 14.56 | |
| | 6' | 7" | 8" | 583.1 | 14.55 | 15.53 | 16.52 | 17.51 | 18.49 | |
| 5' | 3' | 6" | 7" | 164.9 | 6.97 | 7.43 | 8.79 | 9.96 | 11.12 | |
| | 4' | 6" | 7" | 254.6 | 8.54 | 9.70 | 10.87 | 12.03 | 13.20 | |
| | 5' | 6" | 7" | 357.8 | 10.96 | 12.10 | 13.26 | 14.43 | 15.59 | |
| | 6' | 7" | 8" | 583.1 | 14.77 | 15.96 | 17.15 | 18.34 | 19.54 | |
| | 7' | 7½" | 8½" | 1134.6 | 18.99 | 20.15 | 21.37 | 22.59 | 23.80 | |
| 6' | 3' | 6" | 7" | 164.9 | 6.68 | 8.06 | 9.42 | 10.80 | 12.18 | |
| | 4' | 6" | 7" | 254.6 | 8.75 | 10.14 | 11.49 | 12.87 | 14.25 | |
| | 5' | 6" | 7" | 357.8 | 11.15 | 12.53 | 13.89 | 15.27 | 16.65 | |
| | 6' | 7" | 8" | 583.1 | 14.98 | 16.39 | 17.78 | 19.18 | 20.59 | |
| | 7' | 7½" | 8½" | 1134.6 | 19.15 | 20.58 | 22.00 | 23.43 | 24.86 | |
| | 8' | 8" | 9" | 1922.6 | 24.09 | 25.53 | 26.96 | 28.39 | 29.83 | |
| 7' | 4' | 6" | 7" | 254.6 | 8.97 | 10.58 | 12.15 | 13.76 | 15.35 | |
| | 5' | 6" | 7" | 357.8 | 11.36 | 12.97 | 14.58 | 16.15 | 17.75 | |
| | 6' | 7" | 8" | 583.1 | 15.20 | 16.82 | 18.42 | 20.04 | 21.66 | |
| | 7' | 7½" | 8½" | 1134.6 | 19.38 | 21.02 | 22.69 | 24.28 | 25.92 | |
| | 8' | 8" | 9" | 1925.6 | 24.32 | 25.97 | 27.60 | 29.25 | 30.89 | |
| 8' | 4' | 6" | 7" | 254.6 | 9.19 | 11.03 | 12.82 | 14.65 | 16.45 | |
| | 5' | 7" | 7" | 357.8 | 12.03 | 13.89 | 15.70 | 17.55 | 19.36 | |
| | 6' | 7" | 8" | 583.1 | 15.92 | 17.27 | 19.09 | 20.93 | 22.75 | |
| | 7' | 7½" | 8½" | 1134.6 | 19.59 | 21.96 | 23.30 | 25.16 | 26.93 | |
| | 8' | 8" | 9" | 1925.6 | 24.54 | 26.91 | 28.27 | 30.11 | 31.96 | |
| 9' | 5' | 7" | 7" | 357.8 | 12.26 | 13.93 | 16.87 | 18.55 | 20.47 | |
| | 6' | 7½" | 8" | 583.1 | 15.94 | 18.04 | 20.02 | 22.13 | 24.23 | |
| | 7' | 7½" | 8½" | 1134.6 | 19.81 | 21.91 | 23.96 | 26.06 | 28.10 | |
| | 8' | 8" | 9" | 1925.6 | 24.76 | 26.86 | 28.91 | 31.00 | 33.05 | |
| 10' | 5' | 7" | 7" | 357.8 | 12.49 | 14.80 | 17.05 | 19.24 | 21.52 | |
| | 6' | 7½" | 8" | 583.1 | 16.17 | 18.50 | 20.77 | 22.99 | 25.28 | |
| | 7' | 7½" | 8½" | 1134.6 | 20.06 | 22.37 | 24.64 | 26.87 | 29.15 | |
| | 8' | 8" | 9" | 1925.6 | 24.98 | 27.31 | 29.58 | 31.81 | 34.10 | |
| 11' | 6' | 8" | 8" | 583.1 | 16.69 | 19.27 | 21.76 | 24.28 | | |
| | 7' | 8" | 8½" | 1134.6 | 20.64 | 23.22 | 25.71 | 28.18 | | |
| | 8' | 8" | 9" | 1925.6 | 25.19 | 27.77 | 30.27 | 32.74 | | |
| 12' | 6' | 8" | 8" | 583.1 | 16.92 | 19.75 | 22.45 | 25.18 | | |
| | 7' | 8" | 8½" | 1134.6 | 20.87 | 23.69 | 26.40 | 29.13 | | |
| | 8' | 8" | 9" | 1925.6 | 25.42 | 28.25 | 30.96 | 33.69 | | |

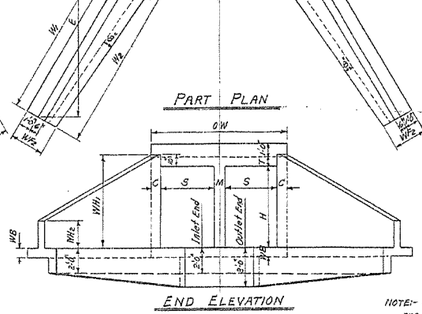
* For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.




PART PLAN

END ELEVATION

SINGLE BARREL CULVERT

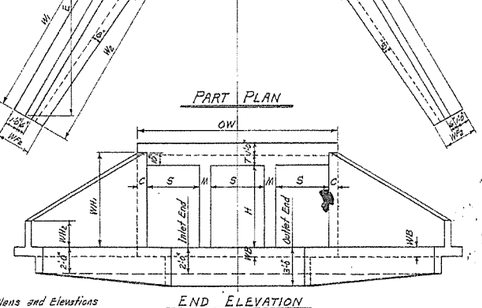



PART PLAN

END ELEVATION

DOUBLE BARREL CULVERT

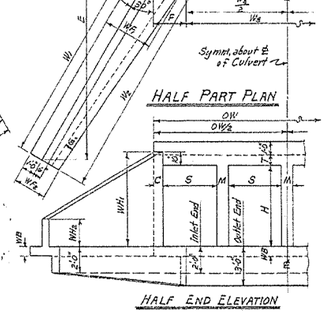
NOTE:- Plans and Elevations are not to scale.




PART PLAN

END ELEVATION

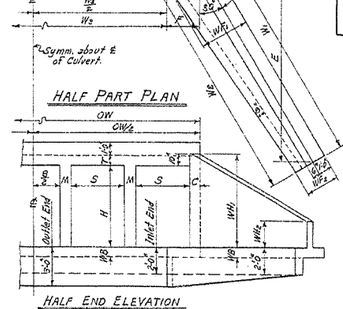
TRIPLE BARREL CULVERT




HALF PART PLAN

HALF END ELEVATION

QUADRUPLE BARREL CULVERT




HALF PART PLAN

HALF END ELEVATION

QUINTUPLE BARREL CULVERT

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three moppings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

## BAR LIST FOR ONE WING - 4 REQUIRED

| CLEAR HEIGHT | F1 Bent: In bottom of footing, bent up into back face of wing. One bar of each length. | | | | | | | F2 Bent: In bottom of footing, bent up into back face of wing. Alt. with F1 bars. | | | | | F5 Straight: Longitudinal in top of wing footing heel. | | | F6 Straight: Longitudinal in bottom of wing footing toe. | | | H1 Straight: Horizontal in back face of wing. | | | H2 Straight: Horizontal in back face of wing. One bar of each length. | | | | H3 Straight: In back face of wing at top on slope. | | | H4 Bent: Dowels thru construction joint at headwall. | | | | QUANTITY REINFORCING STEEL PER WING | BAR BENDING DIAGRAMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LENGTHS VARY | | X | Y | | | | | | | | | | | | | | | LENGTHS VARY | | | | | | | | | | | | |
| H | SIZE | SPACING | NO. REQD | MIN. | MAX. | MIN. | MAX. | SIZE | SPACING | NO. REQD | LENGTH | X | Y | SIZE | NO. REQD | LENGTH | SIZE | NO. REQD | LENGTH | SIZE | SPACING | NO. REQD | LENGTH | SIZE | SPACING | NO. REQD | MAX. | MIN. | SIZE | NO. REQD | LENGTH | SIZE | SPACING | NO. REQD | LENGTH | X | LB. | |
| 2' | #3 | 12" | 8 | 1'-6" | 3'-10" | 0'-8" | 1'-0" | #3 | 1 | 9'-8" | #3 | 2 | 8'-6" | #3 | 1 | 9'-8" | #3 | 2 | 8'-6" | #3 | 12" | 1 | 9'-8" | #3 | 12" | 2 | 7'-6" | 9'-8" | #3 | 1 | 7'-6" | #3 | 12" | 2 | 2'-8" | 1'-9" | 27.0 | F1 & F2 Y X 3" Pin; H4 X Y 1/2 X |
| 3' | #3 | 12" | 10 | 2'-2" | 5'-2" | 0'-10" | 1'-3" | #3 | 1 | 12'-0" | #3 | 2 | 11'-6" | #3 | 1 | 9'-6" | #3 | 2 | 11'-6" | #3 | 12" | 1 | 9'-6" | #3 | 12" | 3 | 10'-11" | 9'-6" | #3 | 1 | 9'-9" | #3 | 12" | 3 | 2'-8" | 1'-9" | 41.1 | |
| 4' | #3 | 12" | 13 | 2'-9" | 6'-6" | 0'-11" | 1'-7" | #3 | 1 | 14'-9" | #3 | 3 | 13'-6" | #3 | 1 | 11'-10" | #3 | 3 | 13'-6" | #3 | 12" | 1 | 11'-10" | #3 | 12" | 3 | 10'-11" | 9'-6" | #3 | 1 | 12'-2" | #3 | 12" | 4 | 2'-8" | 1'-9" | 63.7 | |
| 5' | #3 | 12" | 15 | 2'-11" | 7'-10" | 1'-1" | 1'-11" | #3 | 12" | 4 | 3'-6" | 1'-1" | 2'-6" | #3 | 1 | 16'-8" | #3 | 3 | 16'-0" | #5 | 12" | 2 | 14'-2" | #3 | 12" | 3 | 10'-11" | 9'-6" | #3 | 1 | 14'-7" | #3 | 12" | 5 | 2'-8" | 1'-9" | 89.5 | |
| 6' | #4 | 12" | 17 | 3'-6" | 9'-3" | 1'-2" | 2'-3" | #3 | 12" | 4 | 4'-6" | 1'-5" | 3'-3" | #3 | 1 | 18'-0" | #3 | 3 | 18'-6" | #5 | 12" | 2 | 16'-6" | #3 | 12" | 4 | 16'-4" | 9'-6" | #3 | 1 | 17'-0" | #3 | 12" | 6 | 2'-8" | 1'-9" | 145.8 | |
| 7' | #4 | 12" | 20 | 3'-9" | 10'-5" | 1'-3" | 2'-9" | 2'-7" | 8'-1" | #4 | 12" | 7 | 5'-6" | 1'-7" | 6'-0" | #4 | 1 | 21'-4" | #4 | 4 | 21'-0" | #4 | 12" | 2 | 18'-9" | #4 | 12" | 5 | 17'-9" | 9'-6" | #4 | 1 | 19'-5" | #4 | 12" | 7 | 3'-6" | 1'-9" | 283.7 | |
| 8' | #4 | 12" | 22 | 4'-6" | 12'-3" | 1'-5" | 3'-2" | 3'-0" | 9'-2" | #4 | 12" | 10 | 6'-6" | 1'-10" | 9'-9" | #4 | 1 | 23'-8" | #4 | 4 | 23'-8" | #4 | 12" | 3 | 21'-1" | #4 | 12" | 5 | 17'-9" | 9'-6" | #4 | 1 | 21'-10" | #4 | 12" | 8 | 3'-6" | 1'-9" | 356.4 | |

NOTE:- Dimensions are to bar centers.

REVISIONS:- Membrane added. 5-10-66 W.C.H.

Designed By:- W.C.H. 5-20-62. Checked By:- RMS - 1-9-63
Drawn By:- W.C.H. 12-4-62. Checked By:- RMS - 1-31-63
Quantities By:- W.C.H. 12-14-62. Rechecked By:- PWS - 3-22-63

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

| SINGLES | DOUBLES | TRIPLES | QUADRUPLES | QUINTUPLES |
|---|---|---|---|---|
| R-100X-0 | R-200X-0 | R-300X-0 | R-400X-0 | R-500X-0 |
| R-100X-X1 | R-200X-X1 | R-300X-X1 | R-400X-X1 | R-500X-X1 |
| R-100X-X2 | R-200X-X2 | R-300X-X2 | R-400X-X2 | |
| | R-200X-X3 | R-300X-X3 | | |

CLASS S CONCRETE

# ARKANSAS STATE HIGHWAY COMMISSION

## DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES

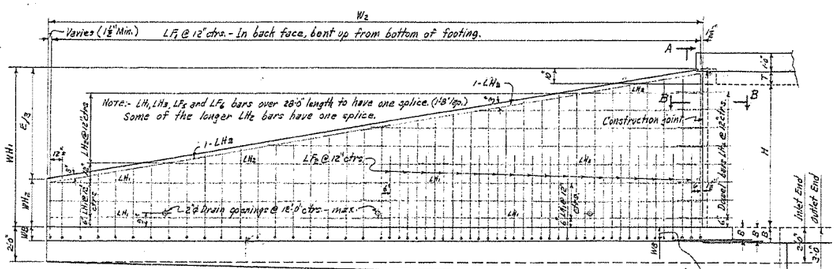
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

STANDARD DRAWING NO. W-X003-1

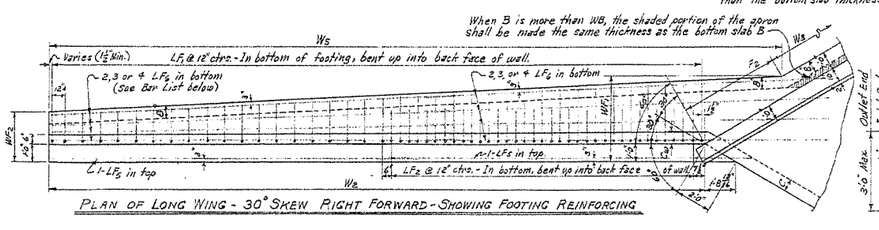
MVL 68 (3)

Reshot 3-8-93

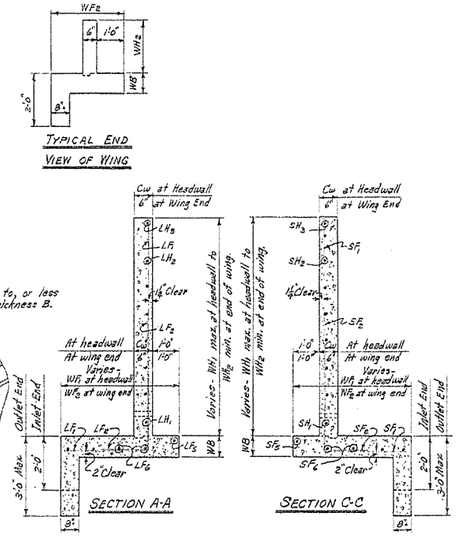
| FED. ROAD No. | STATE | FED. AID PROJECT | FISCAL YEAR | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 6 | ARK. | | | 122 | |
| JOB No. | | | | | |

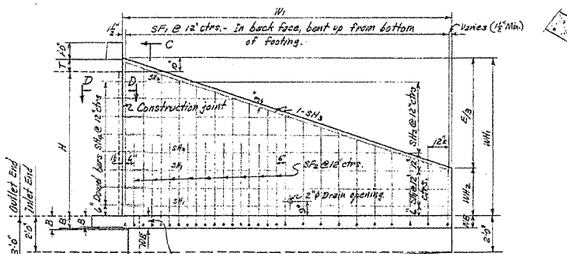



REAR ELEVATION OF LONG WING - 30° SKEW RIGHT FORWARD - SHOWING BACK FACE REINFORCING

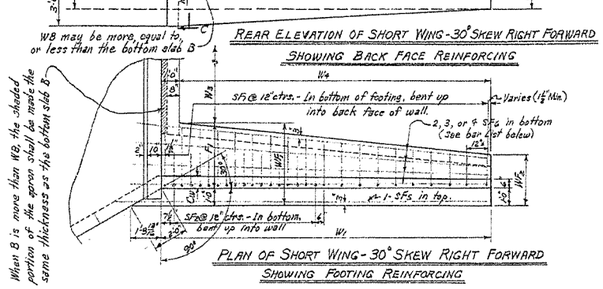



PLAN OF LONG WING - 30° SKEW RIGHT FORWARD - SHOWING FOOTING REINFORCING

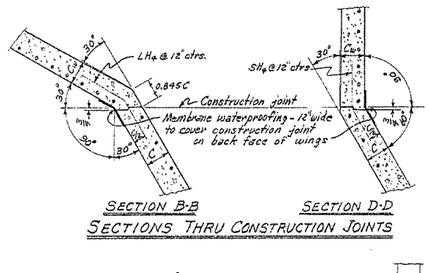



REAR ELEVATION OF SHORT WING - 30° SKEW RIGHT FORWARD SHOWING BACK FACE REINFORCING

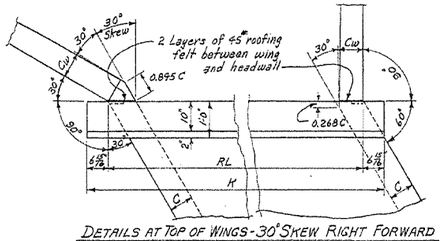



PLAN OF SHORT WING - 30° SKEW RIGHT FORWARD SHOWING FOOTING REINFORCING




SECTIONS THRU CONSTRUCTION JOINTS

NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.




DETAILS AT TOP OF WINGS - 30° SKEW RIGHT FORWARD

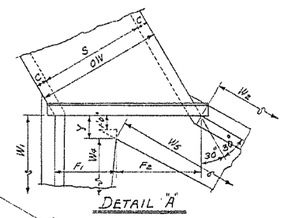
## REGULAR WING DIMENSIONS - 3:1 SLOPES

| CLEAR HEIGHT OF BOX | THICKNESS OF WING FOOTING | THICKNESS OF WING AT POINT C | WINGWALL HEIGHTS: At Headwall | At End of Wing | WIDTHS OF WING FOOTINGS: At Headwall | At End of Wing | FOOTING DIMENSION PARALLEL WITH HEADWALL | | PERPENDICULAR DIST. FROM HWY. TO END OF WING | LENGTHS OF WINGWALLS | | INSIDE FOOTING DIMENSION | | * QUANTITY PER WING CLASS S CONCRETE: INLET END | | OUTLET END | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | SHORT WING | LONG WING | SHORT WING | LONG WING |
| H | WB | Cw | WH1 | WH2 | WF1 | WF2 | F1 | F2 | E | W1 | W2 | W4 | W5 | Cu.Yd. | Cu.Yd. | Cu.Yd. | Cu.Yd. |
| 2' | 7" | 6" | 2'-10" | 0'-8" | 2'-6" | 2'-0" | 1'-8" | 0'-11½" | 6'-6" | 6'-6" | 13'-0" | 5'-6" | 13'-3⅜" | 0.752 | 1.569 | 0.836 | 1.717 |
| 3' | 7" | 6" | 3'-10" | 1'-0" | 2'-8" | 2'-1½" | 1'-8" | 1'-7½" | 0'-6" | 8'-6" | 17'-0" | 7'-6" | 17'-10⅜" | 1.130 | 2.340 | 1.239 | 2.565 |
| 4' | 7" | 6" | 4'-10" | 1'-4" | 3'-0" | 2'-3" | 2'-0" | 2'-3⅜" | 10'-6" | 10'-6" | 21'-0" | 9'-6" | 22'-5½" | 1.577 | 3.290 | 1.711 | 3.552 |
| 5' | 7" | 6" | 5'-10" | 1'-8" | 3'-4" | 2'-4½" | 2'-4" | 2'-11⅛" | 12'-6" | 12'-6" | 25'-0" | 11'-6" | 27'-0½" | 2.093 | 4.391 | 2.252 | 4.680 |
| | | 7" | 5'-10" | 1'-8" | 3'-4" | 2'-4½" | 2'-4" | 2'-11⅛" | 12'-6" | 12'-6" | 25'-0" | 11'-6" | 27'-0½" | 2.179 | 4.529 | 2.337 | 4.862 |
| 6' | 8" | 7" | 6'-10" | 2'-0" | 3'-8" | 2'-6" | 2'-8" | 3'-7½" | 14'-6" | 14'-6" | 29'-0" | 13'-6" | 31'-7½" | 2.908 | 6.026 | 3.092 | 6.419 |
| | | 7½" | 6'-10" | 2'-0" | 3'-8" | 2'-6" | 2'-8" | 3'-7½" | 14'-6" | 14'-6" | 29'-0" | 13'-6" | 31'-7⅛" | 2.966 | 6.147 | 3.150 | 6.543 |
| | | 8" | 6'-10" | 2'-0" | 3'-8" | 2'-6" | 2'-8" | 3'-7½" | 14'-6" | 14'-6" | 29'-0" | 13'-6" | 31'-7⅛" | 3.025 | 6.272 | 3.208 | 6.667 |
| 7' | 8½" | 7½" | 7'-10" | 2'-8" | 4'-2" | 2'-7½" | 3'-2" | 4'-7⅛" | 16'-6" | 16'-6" | 33'-0" | 15'-6" | 36'-5⅜" | 3.811 | 7.895 | 4.019 | 8.350 |
| | | 8" | 7'-10" | 2'-8" | 4'-2" | 2'-7½" | 3'-2" | 4'-7⅛" | 16'-6" | 16'-6" | 33'-0" | 15'-6" | 36'-5⅜" | 3.867 | 8.057 | 4.095 | 8.512 |
| 8' | 9" | 8" | 8'-10" | 2'-8" | 4'-8" | 2'-9" | 3'-8" | 5'-7⅛" | 18'-6" | 18'-6" | 37'-0" | 17'-6" | 41'-4⅜" | 4.894 | 10.097 | 5.107 | 10.612 |

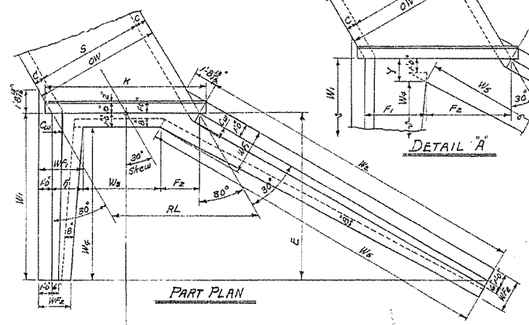
* Quantity per wing does not include headwall or that portion of apron or foewall for the length Ws.
○ See Table 'A' for special values of F1 & F2 and W4 & W5 for Single 4'x6', 5'x7' and 6'x8' Box Culverts.

## TABLE 'A' - DIMENSIONS FOR DETAIL 'A'

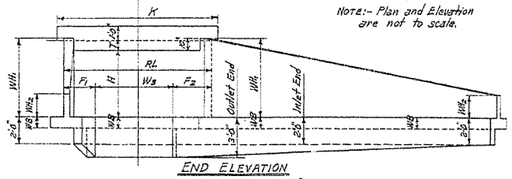
| S | H | F1 | F2 | W3 | Y | W4 | W5 |
|---|---|---|---|---|---|---|---|
| 4' | 6' | 2'-7⅞" | 3'-8⅝" | 0" | 1'-1⅜" | 13'-6⅛" | 31'-3⅝" |
| 5' | 7' | 3'-1⅜" | 4'-1" | 0" | 1'-3⅛" | 15'-2⅜" | 35'-10⅝" |
| 6' | 8' | 3'-7⅛" | 4'-10⅝" | 0" | 1'-4⅝" | 17'-1⅛" | 40'-6" |




DETAIL 'A'




PART PLAN




END ELEVATION

NOTE:- Plan and Elevation are not to scale.

SINGLE BARREL CULVERT - 30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Drawing No. W-X30.

## TYPICAL WING DETAILS

NOTE:- For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X30. For values of RL, K and W3 for each box, see above Std. also.

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three moppings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints of wings.

## QUANTITIES

| CLEAR SPAN | CLEAR HEIGHT | THICKNESS OF WING AT HEADWALL | THICKNESS OF WING FOOTING | REINFORCING STEEL - LBS. FOR 4 WINGS ® | CLASS S CONCRETE - 4 WINGS: HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | SINGLE BARREL CULVERT | DOUBLE BARREL CULVERT | TRIPLE BARREL CULVERT | QUADRUPLE BARREL CULVERT | QUINTUPLE BARREL CULVERT | |
| S | H | Cw | WB | LB. | Cu.Yd. | Cu.Yd. | Cu.Yd. | Cu.Yd. | Cu.Yd. | |
| 4' | 2' | 6" | 7" | 141 | 5.80 | 6.90 | 8.01 | 9.12 | 10.23 | |
| | 3' | 6" | 7" | 213 | 8.08 | 9.18 | 10.29 | 11.40 | 12.51 | |
| | 4' | 6" | 7" | 327 | 10.78 | 11.88 | 12.99 | 14.10 | 15.21 | |
| | 5' | 6" | 7" | 460 | 13.90 | 15.00 | 16.11 | 17.22 | 18.32 | |
| | 6' | 7" | 8" | 762 | 18.85 | 19.99 | 21.13 | 22.27 | 23.41 | |
| 5' | 3' | 6" | 7" | 213 | 8.33 | 9.47 | 11.01 | 12.34 | 13.70 | |
| | 4' | 6" | 7" | 327 | 11.03 | 12.36 | 13.71 | 15.06 | 16.40 | |
| | 5' | 6" | 7" | 460 | 14.14 | 15.98 | 16.83 | 18.17 | 19.52 | |
| | 6' | 7" | 8" | 762 | 19.11 | 20.98 | 21.86 | 23.24 | 24.62 | |
| | 7' | 7½" | 8½" | 1474 | 24.51 | 25.84 | 27.35 | 28.75 | 30.16 | |
| 6' | 3' | 6" | 7" | 213 | 8.67 | 10.17 | 11.73 | 13.33 | 14.92 | |
| | 4' | 6" | 7" | 327 | 11.27 | 12.86 | 14.49 | 16.09 | 17.62 | |
| | 5' | 6" | 7" | 460 | 14.38 | 15.98 | 17.55 | 19.15 | 20.73 | |
| | 6' | 7" | 8" | 762 | 19.35 | 20.98 | 22.59 | 24.21 | 25.83 | |
| | 7' | 7½" | 8½" | 1474 | 24.79 | 26.44 | 28.08 | 29.73 | 31.38 | |
| | 8' | 8" | 9" | 1870 | 31.15 | 32.87 | 34.51 | 36.17 | 37.83 | |
| 7' | 4' | 6" | 7" | 327 | 11.52 | 13.37 | 15.19 | 17.05 | 18.85 | |
| | 5' | 6" | 7" | 460 | 14.43 | 14.99 | 18.31 | 20.16 | 21.97 | |
| | 6' | 7" | 8" | 762 | 19.61 | 21.98 | 23.32 | 25.20 | 27.04 | |
| | 7' | 7½" | 8½" | 1474 | 25.05 | 26.95 | 28.82 | 30.71 | 32.59 | |
| | 8' | 8" | 9" | 1870 | 31.47 | 33.37 | 35.25 | 37.16 | 39.05 | |
| 8' | 4' | 6" | 7" | 327 | 11.77 | 13.83 | 15.97 | 18.09 | 20.12 | |
| | 5' | 7" | 7" | 460 | 15.46 | 17.60 | 19.70 | 21.83 | 23.89 | |
| | 6' | 7" | 8" | 762 | 19.86 | 21.98 | 24.05 | 26.17 | 28.20 | |
| | 7' | 7½" | 8½" | 1474 | 25.80 | 27.96 | 29.58 | 31.73 | 33.81 | |
| | 8' | 8" | 9" | 1870 | 31.72 | 33.88 | 36.00 | 38.16 | 40.27 | |
| 9' | 5' | 7" | 7" | 460 | 15.72 | 18.13 | 20.47 | 22.87 | 25.15 | |
| | 6' | 7½" | 8" | 762 | 20.50 | 22.93 | 25.29 | 27.71 | 30.01 | |
| | 7' | 7½" | 8½" | 1474 | 25.55 | 27.98 | 30.34 | 32.76 | 35.07 | |
| | 8' | 8" | 9" | 1870 | 31.97 | 34.39 | 36.76 | 39.18 | 41.49 | |
| 10' | 5' | 7" | 7" | 460 | 15.98 | 18.65 | 21.25 | 23.80 | 26.92 | |
| | 6' | 7½" | 8" | 762 | 20.76 | 23.45 | 26.07 | 28.69 | 31.28 | |
| | 7' | 7½" | 8½" | 1474 | 25.81 | 28.50 | 31.12 | 33.70 | 36.34 | |
| | 8' | 8" | 9" | 1870 | 32.22 | 34.91 | 37.54 | 40.12 | 42.76 | |
| 11' | 6' | 8" | 8" | 762 | 21.39 | 24.98 | 27.25 | 30.11 | —— | |
| | 7' | 8" | 8½" | 1474 | 26.55 | 29.53 | 32.41 | 35.27 | —— | |
| | 8' | 8" | 9" | 1870 | 32.47 | 35.95 | 38.83 | 41.19 | —— | |
| 12' | 6' | 8" | 8" | 762 | 21.46 | 24.93 | 28.05 | 31.20 | —— | |
| | 7' | 8" | 8½" | 1474 | 26.81 | 30.08 | 33.21 | 36.36 | —— | |
| | 8' | 8" | 9" | 1870 | 32.73 | 35.99 | 39.13 | 42.28 | —— | |

® For reinforcing steel in Headwalls and Aprons, see Drawing Nos. of Barrel Sections listed below.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.
UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.-

| SINGLES | DOUBLES | TRIPLES | QUADRUPLES | QUINTUPLES |
|---|---|---|---|---|
| R-130X-0 | R-230X-01 | R-330X-01 | R-430X-01 | R-530X-01 |
| | R-230X-02 | R-330X-02 | R-430X-02 | R-530X-02 |
| R-130X-1 | R-230X-1 | R-330X-1 | R-430X-1 | R-530X-1 |
| | R-230X-2 | R-330X-2 | | |

## BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

| CLEAR HEIGHT | WING LOCATION | SF1 & LF1 BENT: In bottom of footing, bent up into back face of wing. One bar (or two bars) of each length | | | | | | | | SF2 & LF2 BENT: In bottom of footing, bent up into back face of wing. Alt. with F1 bars. | | | | | | SF3 & LF3 STRAIGHT: Longitudinal in top of wing footing (Typ.) | | | SF4 & LF4 STRAIGHT: Longitudinal in bottom of wing footing (Typ.) | | | SH1 & LH1 STRAIGHT: Horizontal in back face of wing. | | | SH2 & LH2 STRAIGHT: Horizontal in back face of wing. One bar of each length. * | | | | SH3 & LH3 STRAIGHT: In back face of wing at top - on slope. | | | SH4 & LH4 BENT: Dowels thru construction joint at headwall. | | | | BAR BENDING DIAGRAM | QUANTITY: REINFORCING STEEL PER WING - LBS. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LENGTHS VARY | | X | | | | | | | | | | | | | | | | | | | LENGTHS VARY | | | | | | | | | | | | | |
| H | SHORT LONG | SIZE | SPACING | NO. READ | MIN. | MAX. | MIN. | MAX. | SIZE | SPACING | NO. READ | LENGTH | X | Y | SIZE | NO. READ | LENGTH | SIZE | NO. READ | LENGTH | SIZE | NO. READ | LENGTH | SIZE | SPACING | NO. READ | LENGTH | MAX. | MIN. | SIZE | NO. READ | LENGTH | SIZE | SPACING | NO. READ | LENGTH | X | | SHORT WING | LONG WING |
| 2' | Short | #3 | 12" | 7 | 1'-7" | 3'-11" | 0'-8" | 1'-0" | — | — | — | — | — | — | #3 | 1 | 9'-0" | #3 | 2 | 8'-0" | #3 | 1 | 6'-9" | #3 | 12" | 1 | 6'-9" | 3'-3" | 3'-3" | #3 | 1 | 6'-7" | #3 | 12" | 2 | 2'-8" | 1'-9" | | 29.7 | 45.6 |
| | Long | #3 | 12" | 14 | 1'-5" | 3'-11" | 0'-8" | 1'-0" | — | — | — | — | — | — | #3 | 1 | 15'-6" | #3 | 2 | 15'-6" | #3 | 1 | 12'-9" | #3 | 12" | 1 | 12'-9" | 6'-6" | 6'-6" | #3 | 1 | 12-11" | #3 | 12" | 2 | " | " | | | |
| 3' | Short | #3 | 12" | 9 | 2'-1" | 5'-3" | 0'-10" | 1'-2" | — | — | — | — | — | — | #3 | 1 | 11'-0" | #3 | 2 | 10'-0" | #3 | 1 | 8'-3" | #3 | 12" | 1 | 8'-3" | 3'-3" | 3'-3" | #3 | 1 | 8'-6" | #3 | 12" | 3 | " | " | | 37.0 | 69.5 |
| | Long | #3 | 12" | 18 | 1'-11" | 5'-3" | 0'-10" | 1'-2" | — | — | — | — | — | — | #3 | 1 | 19'-6" | #3 | 2 | 20'-2" | #3 | 1 | 16'-8" | #3 | 12" | 1 | 16'-8" | 6'-6" | 6'-6" | #3 | 1 | 16-11" | #3 | 12" | 3 | " | " | | | |
| 4' | Short | #3 | 12" | 11 | 2'-6" | 6'-7" | 0'-11" | 1'-5" | — | — | — | — | — | — | #3 | 1 | 13'-0" | #3 | 3 | 12'-0" | #3 | 1 | 10'-3" | #3 | 12" | 1 | 10'-3" | 3'-3" | 3'-3" | #3 | 1 | 10'-9" | #3 | 12" | 4 | " | " | | 56.2 | 107.2 |
| | Long | #3 | 12" | 22 | 2'-2" | 6'-6" | 0'-11" | 1'-7" | — | — | — | — | — | — | #3 | 1 | 23'-6" | #3 | 3 | 24'-10" | #3 | 1 | 20'-8" | #3 | 12" | 1 | 20'-8" | 6'-6" | 6'-6" | #3 | 1 | 21'-0" | #3 | 12" | 4 | " | " | | | |
| 5' | Short | #3 | 12" | 13 | 2'-11" | 7'-11" | 1'-0" | 1'-6" | 2'-0" | 6'-10" | #3 | 12" | 3 | 3'-6" | #3 | 1 | 15'-0" | #3 | 3 | 14'-10" | #3 | 1 | 12'-5" | #4 | 12" | 1 | 12'-5" | 3'-3" | 3'-3" | #3 | 1 | 12'-11" | #3 | 12" | 5 | " | " | | 78.0 | 152.2 |
| | Long | #3 | 12" | 26 | 2'-9" | 7'-10" | 1'-0" | 1'-11" | 2'-10" | 6'-10" | #3 | 12" | 6 | 3'-6" | #3 | 1 | 27'-6" | #3 | 6 | 29'-7" | #3 | 1 | 24'-9" | #3 | 12" | 2 | 24'-9" | 6'-6" | 6'-6" | #3 | 1 | 25'-1" | #3 | 12" | 5 | " | " | | | |
| 6' | Short | #3 | 12" | 15 | 3'-6" | 9'-3" | 1'-2" | 1'-8" | 2'-5" | 7'-1" | #3 | 12" | 3 | 4'-1" | #3 | 1 | 17'-0" | #3 | 3 | 16'-10" | #3 | 1 | 14'-3" | #3 | 12" | 2 | 14'-3" | 3'-3" | 3'-3" | #3 | 1 | 15'-0" | #3 | 12" | 6 | " | " | | 127.8 | 253.1 |
| | Long | #3 | 12" | 30 | 3'-4" | 9'-3" | 1'-2" | 2'-2" | 2'-3" | 7'-1" | #3 | 12" | 6 | 4'-1" | #3 | 1 | 30'-8" | #3 | 6 | 33'-0" | #3 | 1 | 28'-6" | #3 | 12" | 4 | 28'-6" | 6'-6" | 6'-6" | #3 | 2 | 29'-0" | #3 | 12" | 6 | 2'-8" | 1'-9" | | | |
| 7' | Short | #3 | 12" | 17 | 3'-11" | 10'-10" | 1'-5" | 2'-0" | 2'-9" | 8'-1" | #3 | 12" | 4 | 4'-8" | #3 | 1 | 19'-0" | #3 | 4 | 18'-10" | #3 | 1 | 16'-3" | #3 | 12" | 2 | 16'-3" | 3'-3" | 3'-3" | #3 | 1 | 17'-1" | #3 | 12" | 7 | 3'-8" | 1'-9" | | 267.0 | 489.8 |
| | Long | #3 | 12" | 34 | 3'-9" | 10'-9" | 1'-5" | 2'-8" | 2'-7" | 8'-1" | #3 | 12" | 8 | 4'-8" | #3 | 2 | 38'-8" | #3 | 8 | 40'-8" | #3 | 2 | 32'-6" | #3 | 12" | 4 | 32'-6" | 6'-6" | 6'-6" | #3 | 2 | 33'-1" | #3 | 12" | 8 | " | " | | | |
| 8' | Short | #3 | 12" | 19 | 4'-4" | 12'-3" | 1'-5" | 2'-11" | 3'-4" | 9'-2" | #3 | 12" | 5 | 5'-3" | #3 | 1 | 21'-0" | #3 | 5 | 20'-10" | #3 | 1 | 18'-0" | #3 | 12" | 2 | 18'-0" | 3'-3" | 3'-3" | #3 | 1 | 19'-3" | #3 | 12" | 8 | 3'-8" | 1'-9" | | 312.9 | 622.3 |
| | Long | #3 | 12" | 38 | 4'-4" | 12'-3" | 1'-5" | 3'-2" | 3'-0" | 9'-2" | #3 | 12" | 10 | 5'-3" | #3 | 2 | 46'-8" | #3 | 10 | 48'-8" | #3 | 2 | 39'-6" | #3 | 12" | 5 | 39'-6" | 6'-6" | 6'-6" | #3 | 2 | 40'-0" | #3 | 12" | 10 | " | " | | | |

NOTE:- Bars for short wing shall be marked with prefix letter 'S', while those for long wing shall be marked with letter 'L'.

* Length without splice. Bars over 28'-0" length may be spliced. (1'-8" lap.)

BAR BENDING DIAGRAM: SF1 & SF3, LF2 & LF4 ∠ 3" Pin; SH4 & LH4; Note:- Dimensions are to bar centers.

REVISIONS:- Membrane Added. 5-10-66 W.C.H.

Designed By:- W.C.H. 5-13-63 Checked By:- 12/25 8-19-63
Drawn By:- W.C.H. 7-26-63 Checked By:- DMT 7-25-64
Quantities By:- W.C.H. 1-7-64

# ARKANSAS STATE HIGHWAY COMMISSION

## DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS 30° SKEW

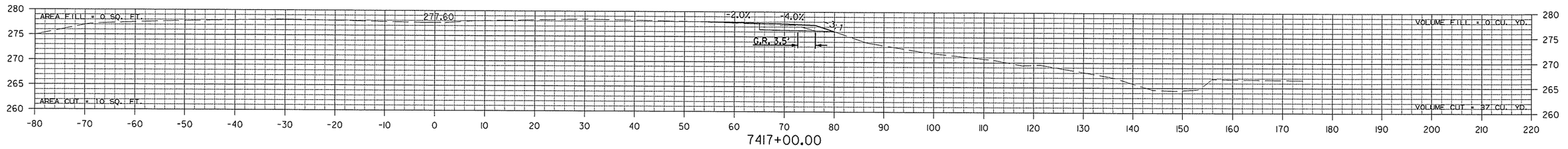
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

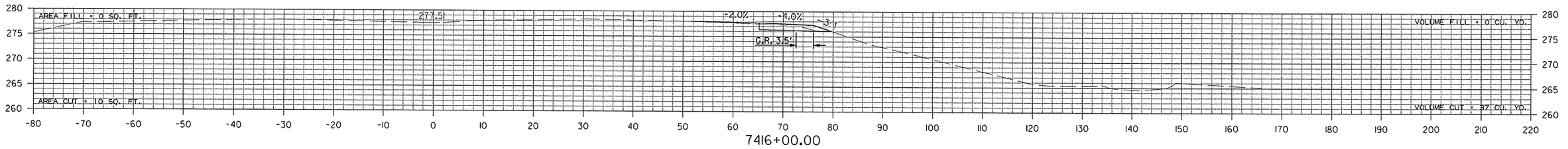
STANDARD DRAWING NO. W-X303-1

(53)

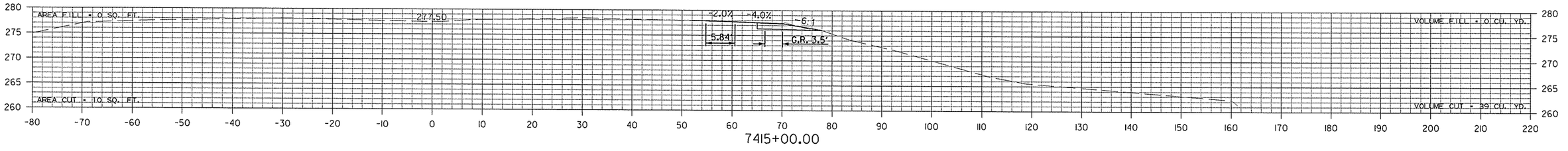
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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 123 | 168 |

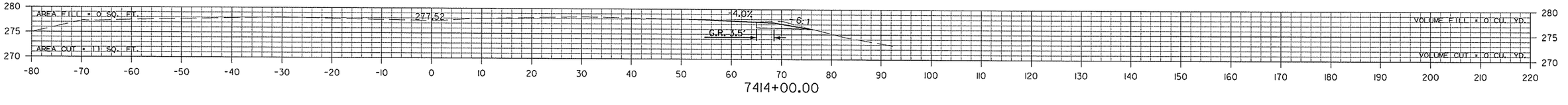
(2) CROSS SECTIONS




STA. 7415+98.59 END TAPER




AREA FILL = 0 SQ. FT.

AREA CUT = 0 SQ. FT.

STA. 7413+98.59 BEGIN TAPER
STA. 7413+98.59 BEGIN RAMP I DECELERATION LANE

VOLUME FILL = 0 CU. YD.

VOLUME CUT = 0 CU. YD.

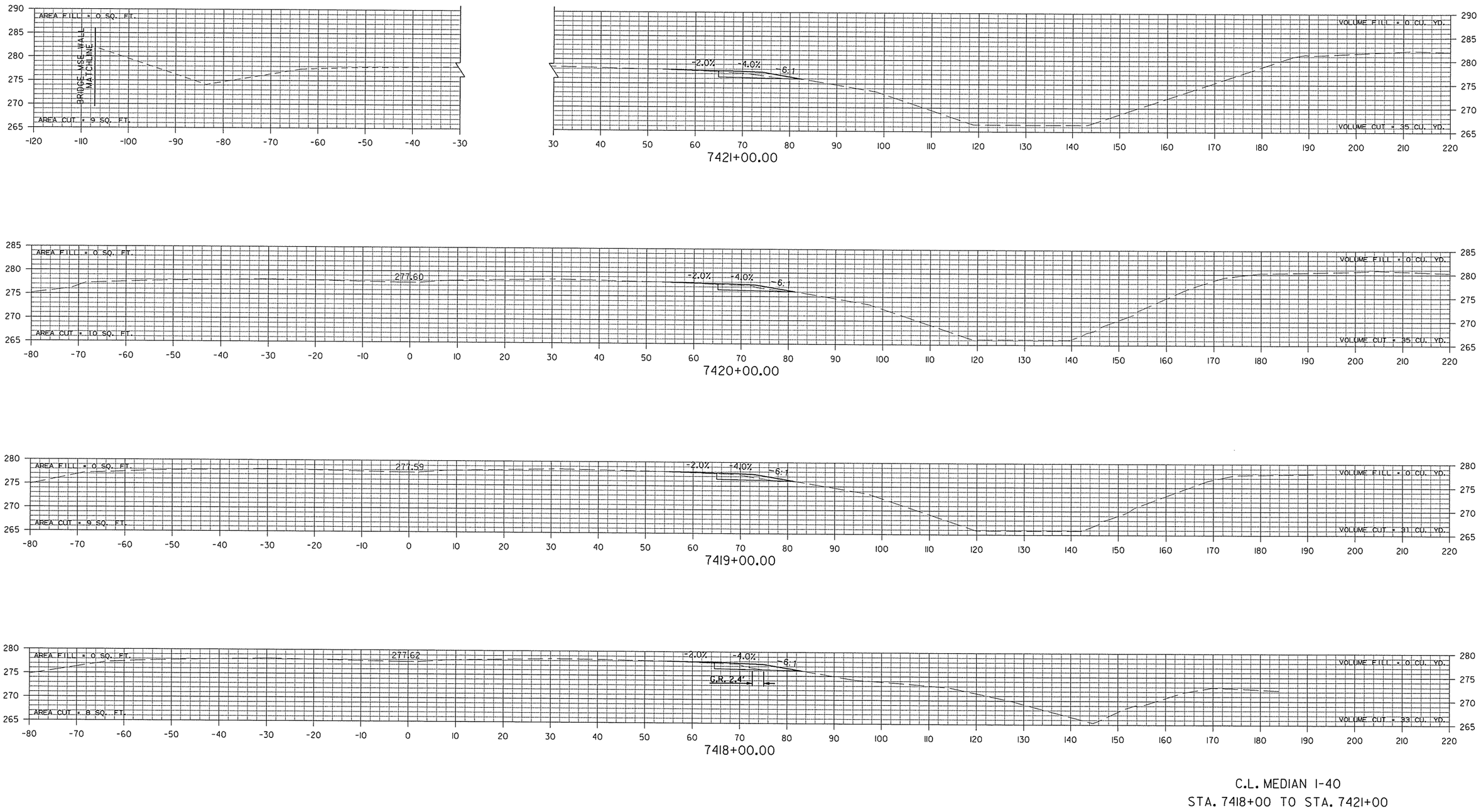
STA. 7413+98.59 BEGIN JOB 080396

C.L. MEDIAN I-40
STA. 7414+00 TO STA. 7417+00

rnfortner 5/14/2015 12:50:38 PM
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L:\2009\0901230 - Conway Western ArterialLoop\Drawings\PRJL_BS\PRJL_BS_CX_I-40.dgn
REVISED DATE:

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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 124 | 168 |

(2) CROSS SECTIONS



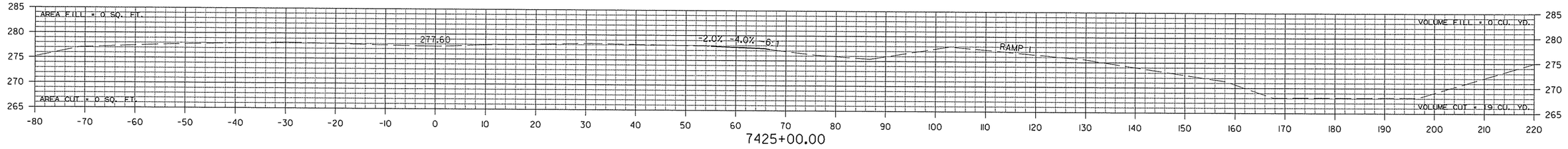

C.L. MEDIAN I-40
STA. 7418+00 TO STA. 7421+00

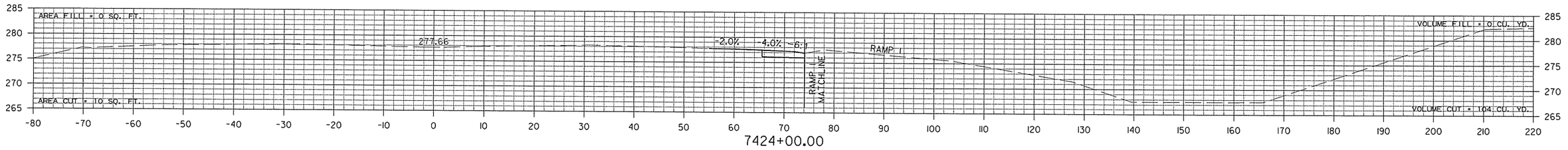
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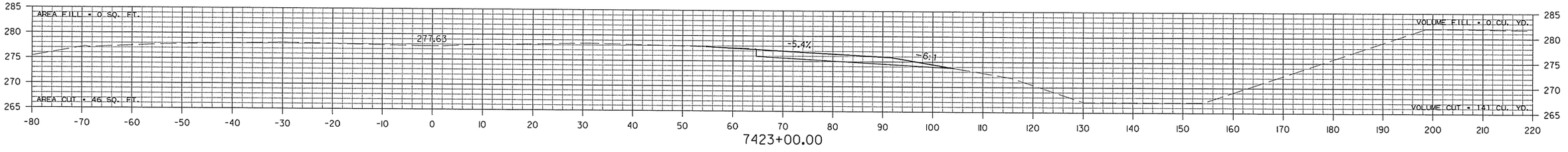
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 125 | 168 |

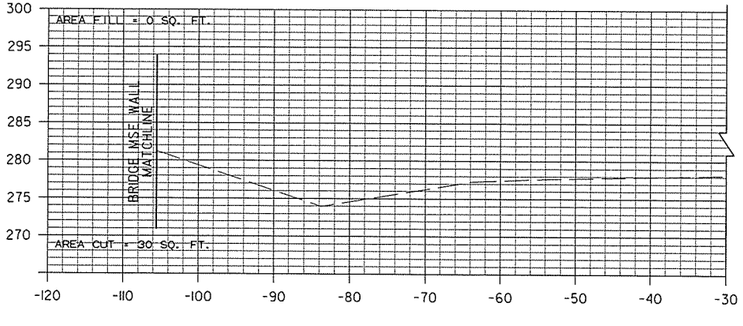
(2) CROSS SECTIONS

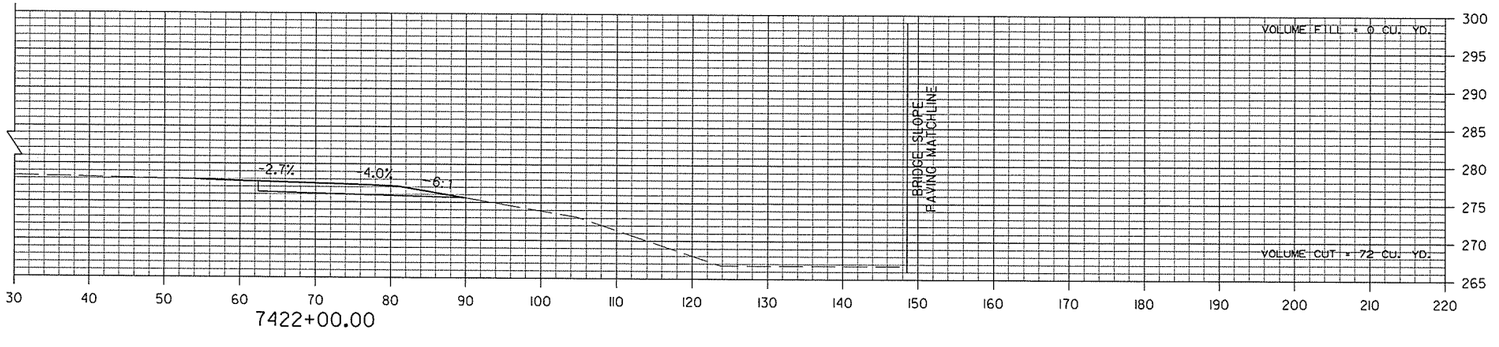
STA. 7425+42.24 END RAMP I DECELERATION LANE



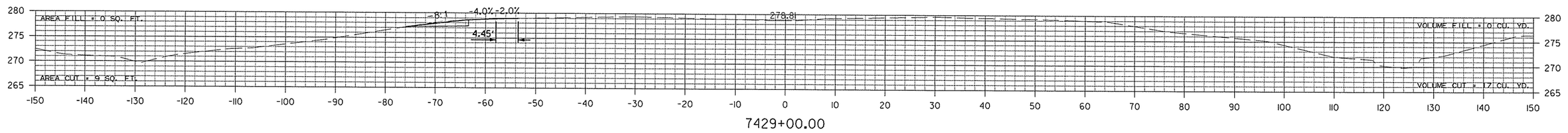




C.L. MEDIAN I-40
STA. 7422+00 TO STA. 7425+00

rnfortner 5/4/2015 12:52:05 PM
WORKSPACE: AHTD
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REVISED DATE:

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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 126 | 168 |

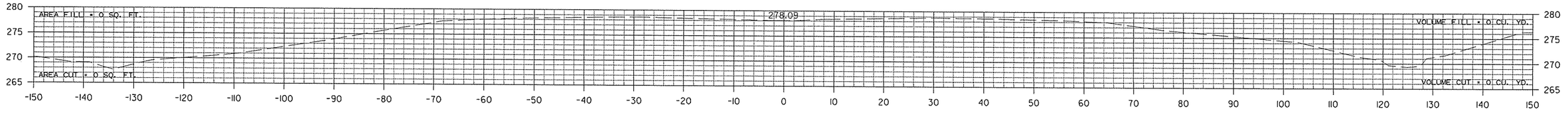
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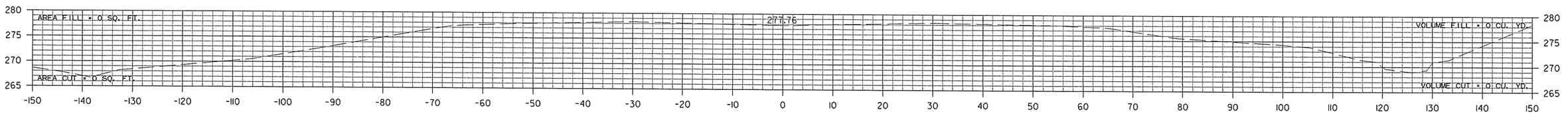

7429+00.00

STA. 7428+06.21 BEGIN TAPER

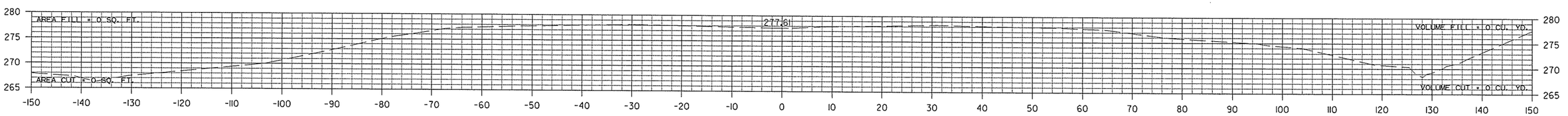
STA. 7428+06.21 BEGIN RAMP 4 ACCELERATION LANE




7428+00.00




7427+00.00



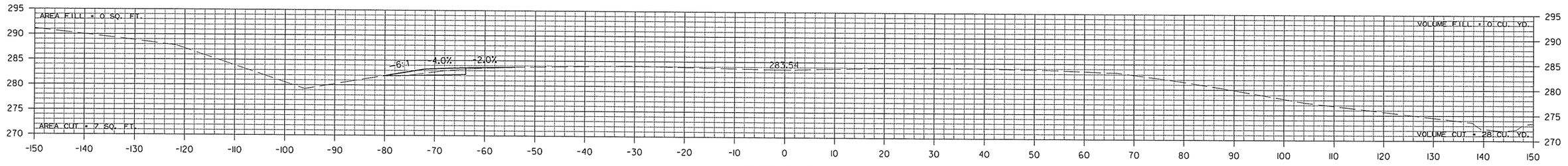

7426+00.00

C.L. MEDIAN I-40
STA. 7426+00 TO STA. 7429+00

rnfortner 5/14/2015 12:52:25 PM
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REVISED DATE:

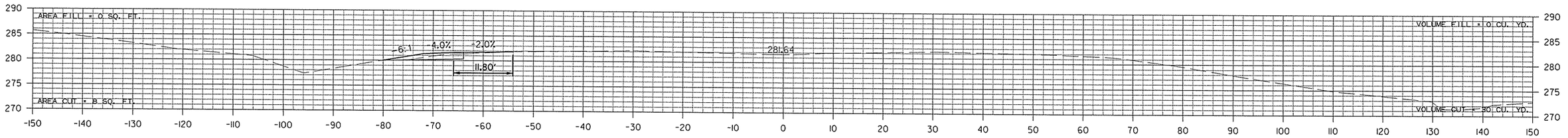
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 127 | 168 |

(2) CROSS SECTIONS

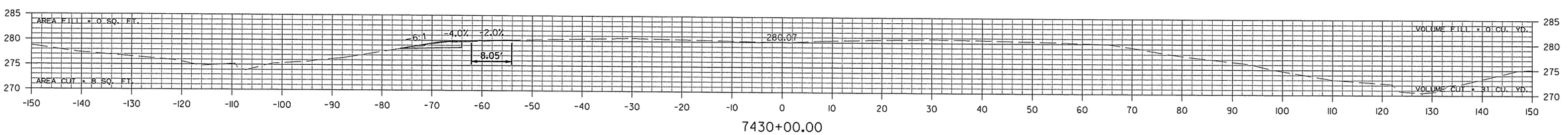



7432+00.00

STA. 7431+06.21 END TAPER




7431+00.00




7430+00.00

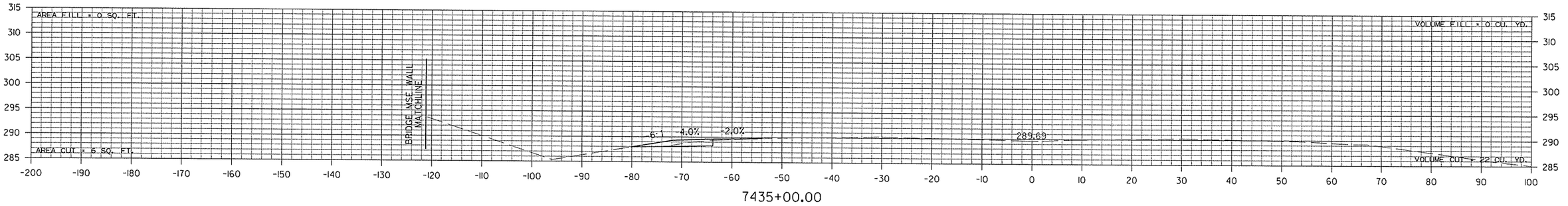
C.L. MEDIAN I-40
STA. 7430+00 TO STA. 7432+00

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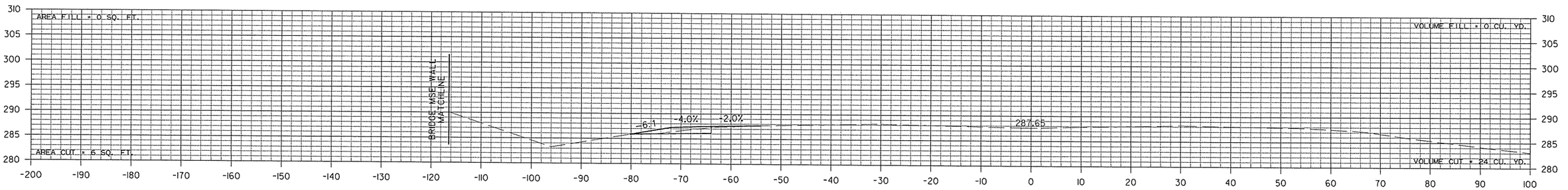
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| FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
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| JOB NO. | | 080396 | 128 | 168 |

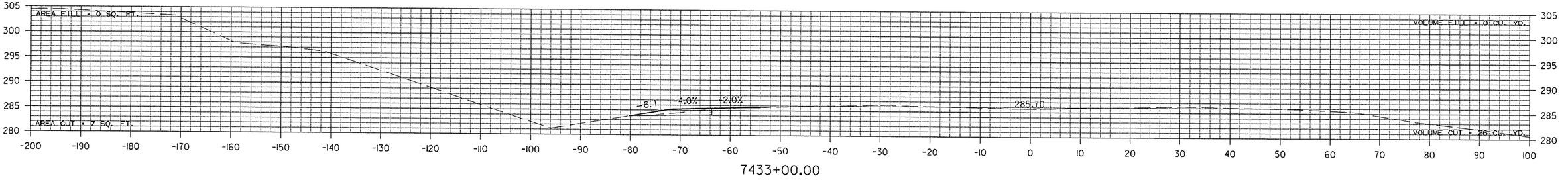
(2) CROSS SECTIONS




7435+00.00




7434+00.00



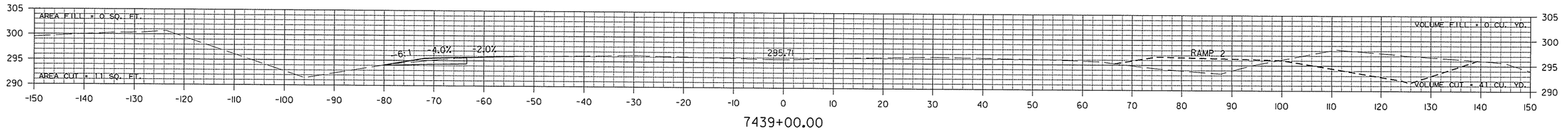

7433+00.00

C.L. MEDIAN I-40
STA. 7433+00 TO STA. 7435+00

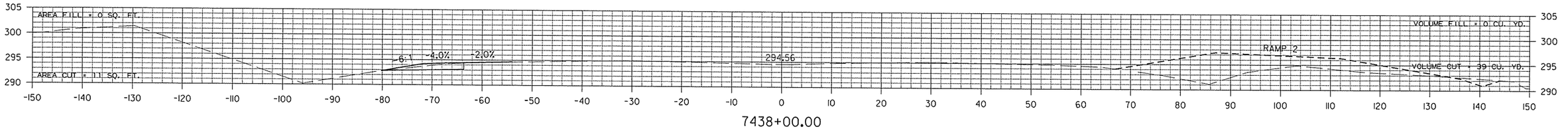
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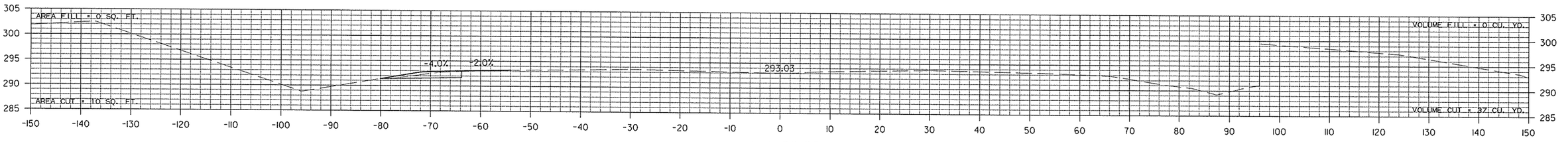
(2) CROSS SECTIONS



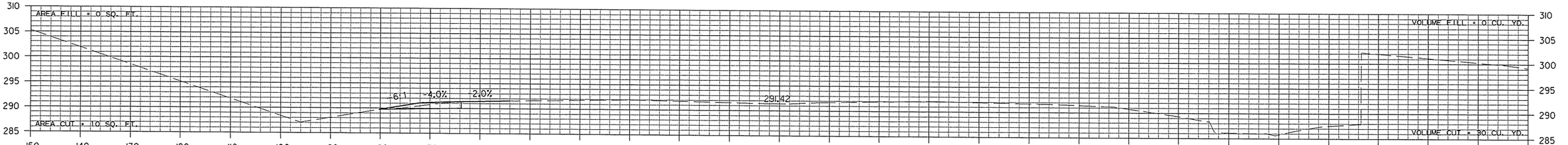

7439+00.00




7438+00.00




7437+00.00

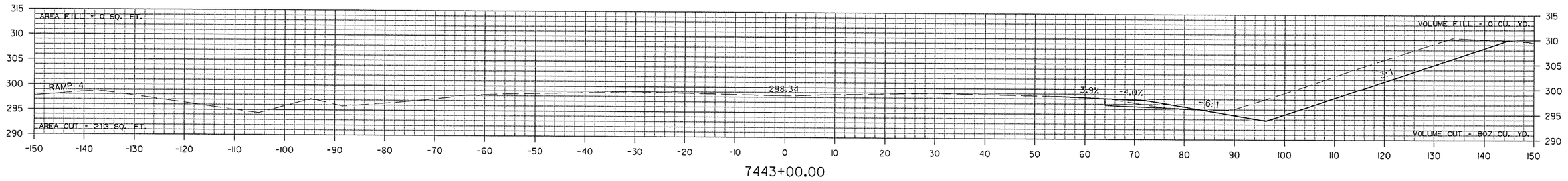



7436+00.00

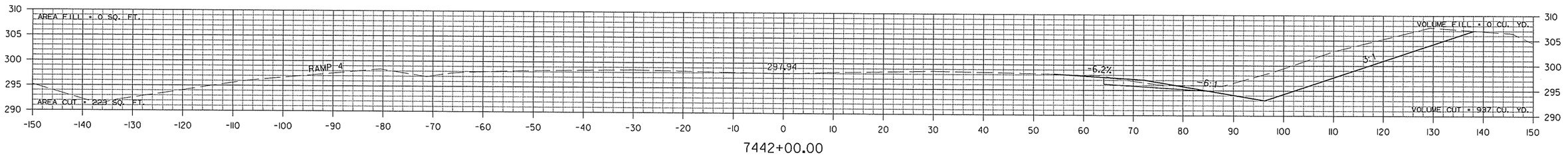
C.L. MEDIAN I-40
STA. 7436+00 TO STA. 7439+00

rnfortner 5/14/2015 12:53:27 PM
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REVISED DATE:

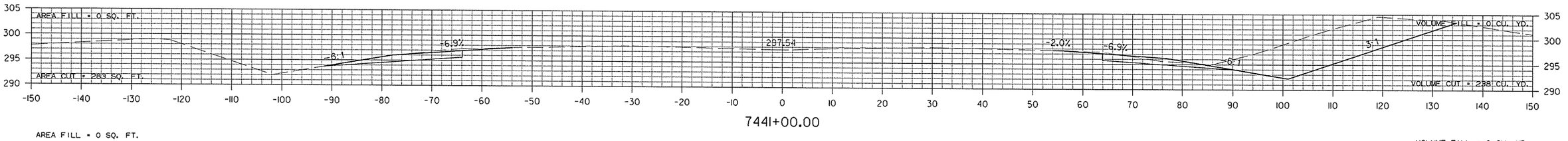
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 130 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |




STA. 7442+17.80 MAXIMUM SUPERELEVATION (S.E. = .100'/')




STA. 7441+06.21 END RAMP 4 ACCELERATION LANE




AREA FILL = 0 SQ. FT.

AREA CUT = 262 RT. + 26 LT. = 288 SQ. FT.

AREA FILL = 0 SQ. FT.

AREA CUT = 26 SQ. FT.

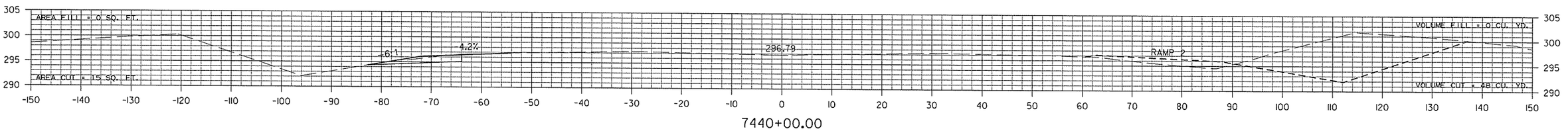
VOLUME FILL = 0 CU. YD.

VOLUME CUT = 0 CU. YD.

VOLUME FILL = 0 CU. YD.

VOLUME CUT = 59 CU. YD.

STA. 7440+77.45 BEGIN RAMP 2 ACCELERATION LANE

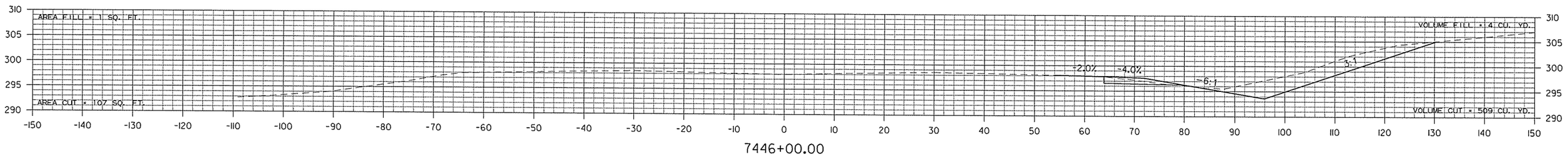



STA. 7439+17.80 BEGIN SUPERELEVATION

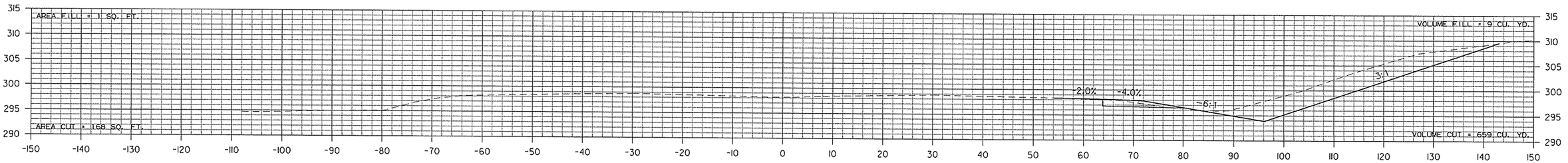
C.L. MEDIAN I-40
STA. 7440+00 TO STA. 7443+00

rnfortner 5/14/2015 12:53:46 PM
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REVISED DATE:

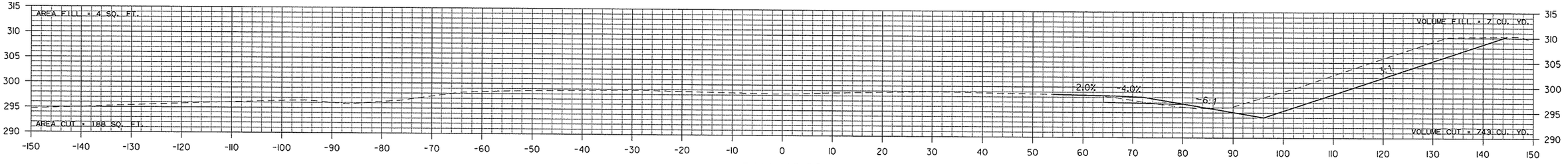
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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 131 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |




7446+00.00




7445+00.00



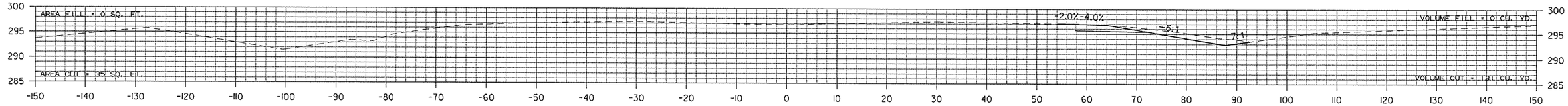

7444+00.00

C.L. MEDIAN I-40
STA. 7444+00 TO STA. 7446+00

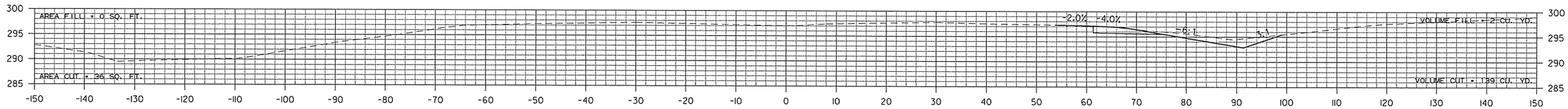
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WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 132 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

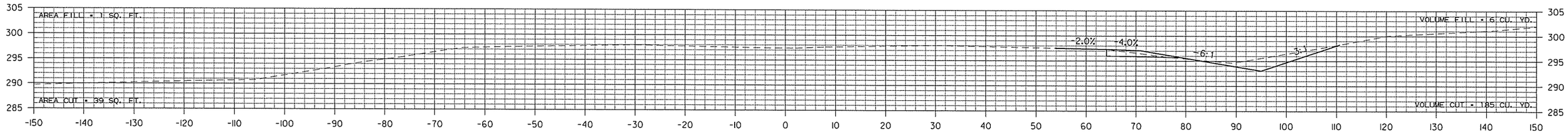
STA. 7450+77.45 END TAPER




7450+00.00

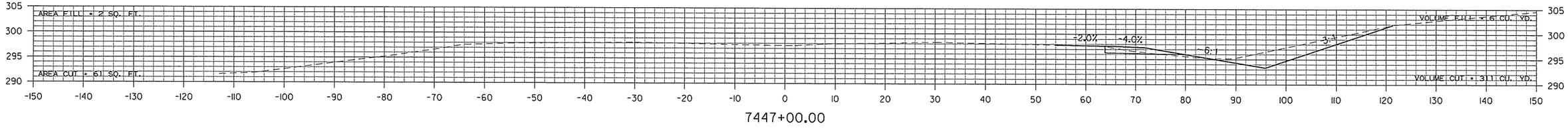



7449+00.00




7448+00.00

STA. 7447+77.45 BEGIN TAPER



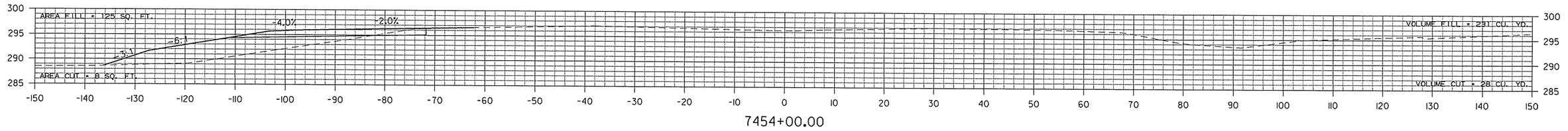

7447+00.00

C.L. MEDIAN I-40
STA. 7447+00 TO STA. 7450+00

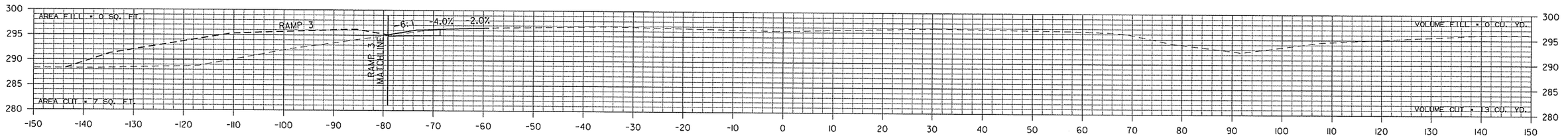
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REVISED DATE:

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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 133 | 168 |

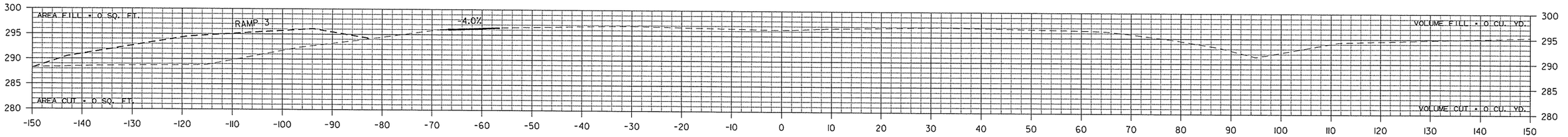
(2) CROSS SECTIONS



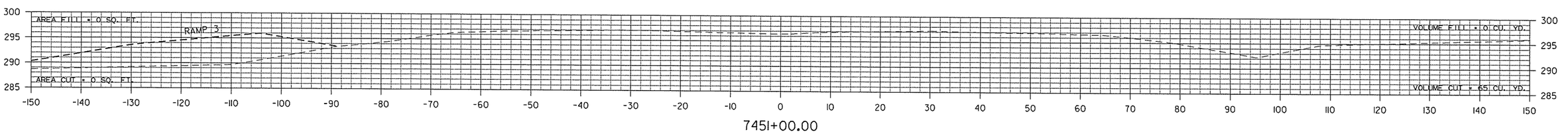

7454+00.00




7453+00.00




7452+00.00




7451+00.00

C.L. MEDIAN I-40
STA. 7451+00 TO STA. 7454+00

rnfortner 5/14/2015 12:54:37 PM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 134 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

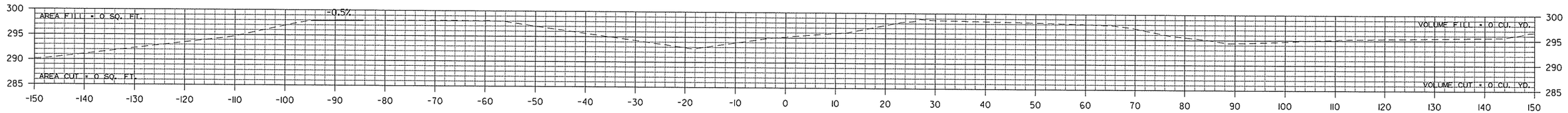
AREA FILL = 0 SQ. FT.

AREA CUT = 0 SQ. FT.

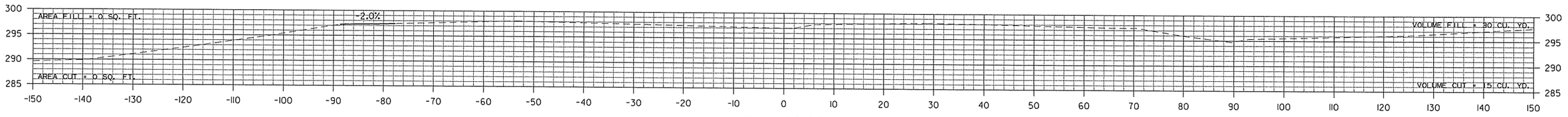
## STA. 7458+15.13 END JOB 080396

VOLUME FILL = 0 CU. YD.

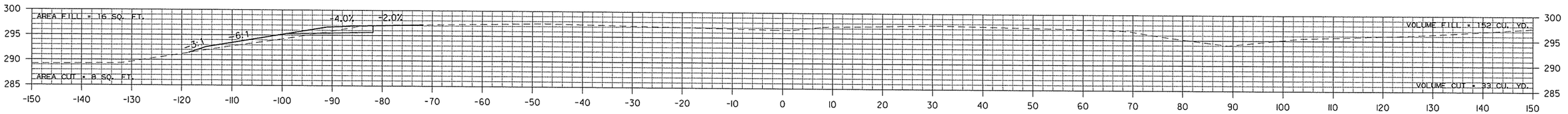
VOLUME CUT = 0 CU. YD.



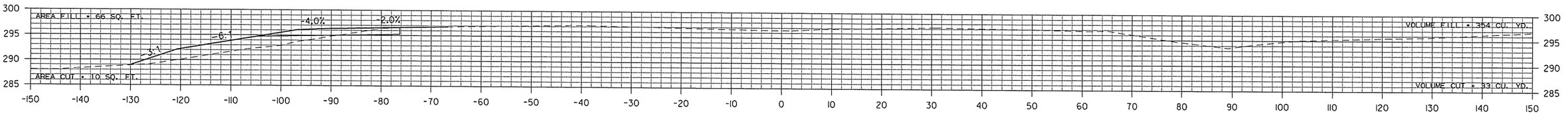

7458+00.00




7457+00.00




7456+00.00




7455+00.00

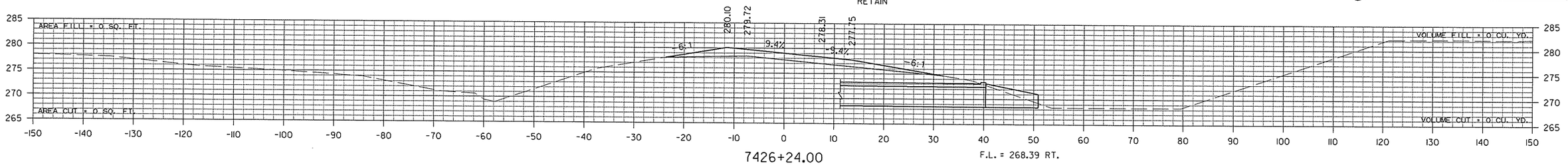
C.L. MEDIAN I-40
STA. 7455+00 TO STA. 7458+00

rnfortner 5/14/2015 12:57:34 PM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 135 | 168 |

(2) CROSS SECTIONS

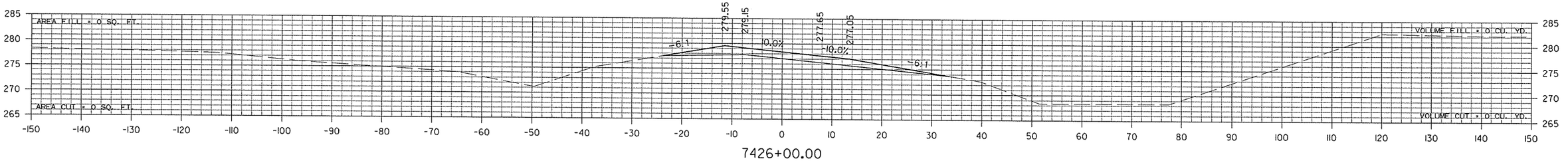
STA. 7426+50 IN PLACE
TRIPLE 8' X 4' X 104' R.C. BOX CULVERT
30° LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 701 CFS  DA = 406 ACRES
SPAN = 30.79'
RETAIN



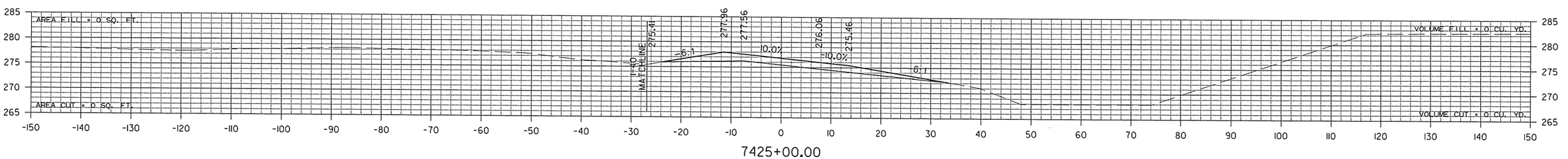

7426+24.00

F.L. = 268.39 RT.

STA. 7426+01.48 MAXIMUM SUPERELEVATION (S.E. = .100'/')

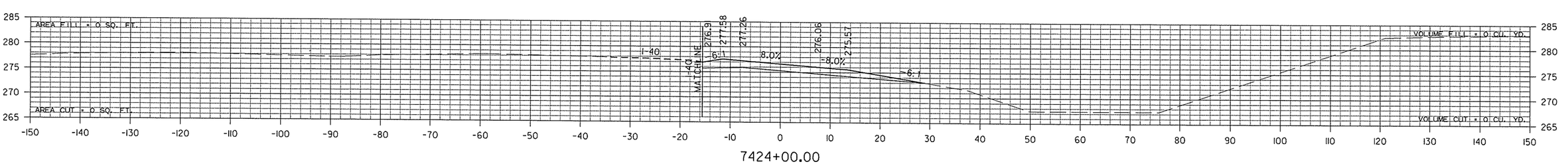



7426+00.00




7425+00.00

STA. 7424+74.00 MAXIMUM SUPERELEVATION (S.E. = .100'/')




7424+00.00

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

STA. 7423+44.25 BEGIN RAMP I

STA. 7421+74.00 BEGIN SUPERELEVATION

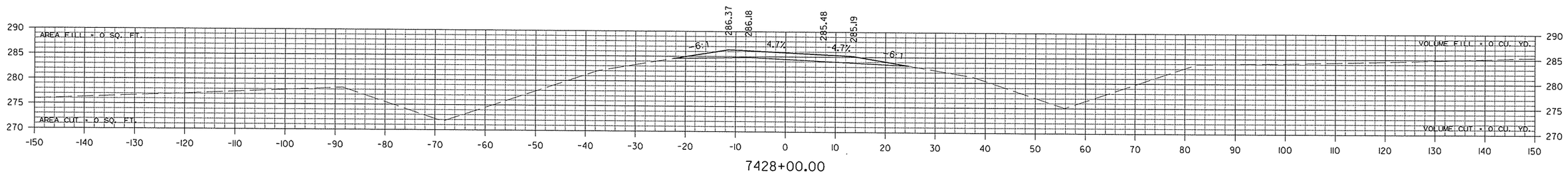
VOLUME FILL = 0 CU. YD.
VOLUME CUT = 0 CU. YD.

RAMP I
STA. 7424+00 TO STA. 7426+24

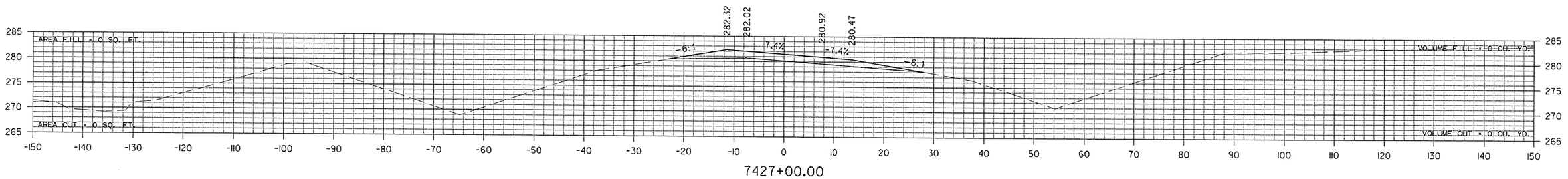
rnfortner 5/14/2015 1:05:10 PM
WORKSPACE: AHTD
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 136 | 168 |

(2) CROSS SECTIONS

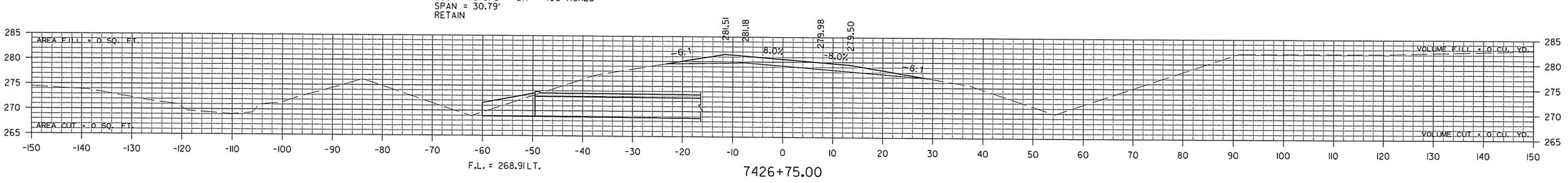



7428+00.00




7427+00.00

STA. 7426+50 IN PLACE
TRIPLE 8' X 4' X 104' R.C. BOX CULVERT
30° LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 7010 CFS DA = 406 ACRES
SPAN = 30.79'
RETAIN




F.L. = 268.91 LT.

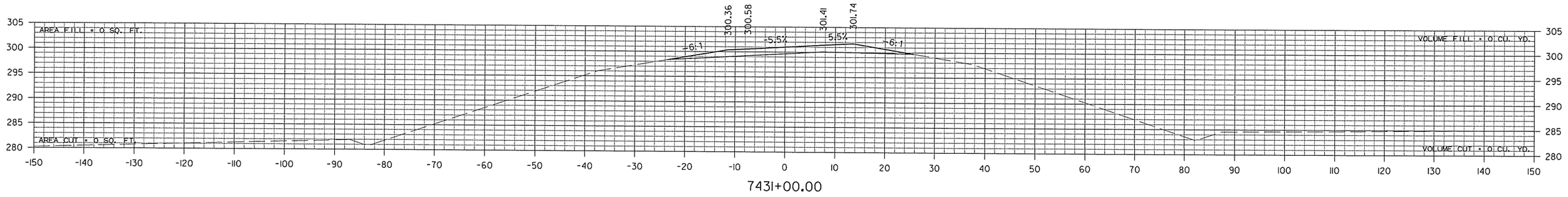
7426+75.00

RAMP I
STA. 7426+75 TO STA. 7428+00

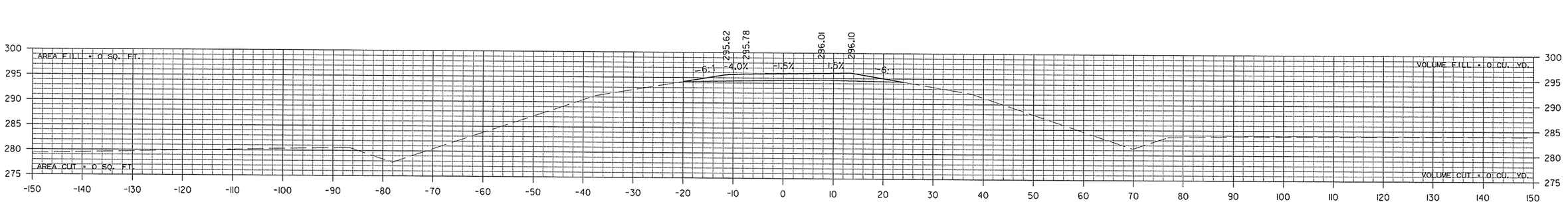
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REVISED DATE:

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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 137 | 168 |

(2) CROSS SECTIONS

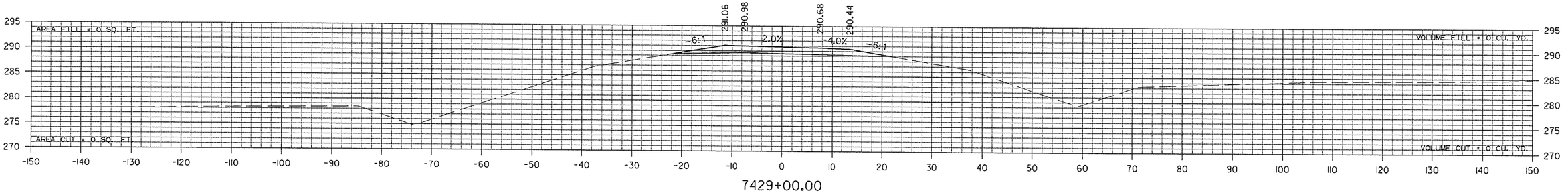



7431+00.00




7430+00.00

STA. 7429+12.34 BEGIN SUPERELEVATION
STA. 7429+01.48 END SUPERELEVATION




7429+00.00

RAMP I
STA. 7429+00 TO STA. 7431+00

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WORKSPACE: AHTD
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REVISED DATE:

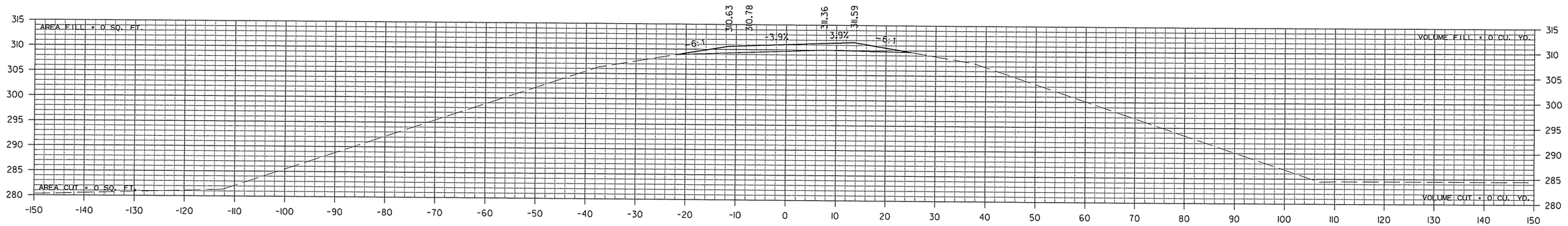
AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

# STA. 7434+11.39 END RAMP I

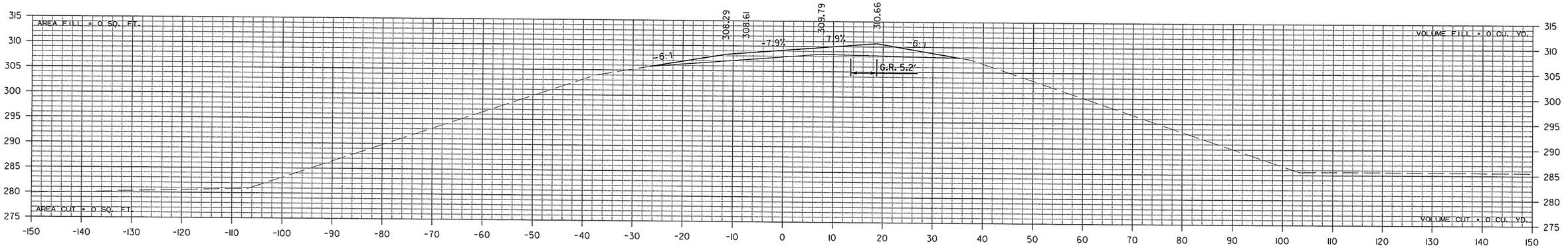
VOLUME FILL = 0 CU. YD.
VOLUME CUT = 0 CU. YD.

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 138 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

STA. 7434+11.39 SUPERELEVATION (S.E. = .034'/')

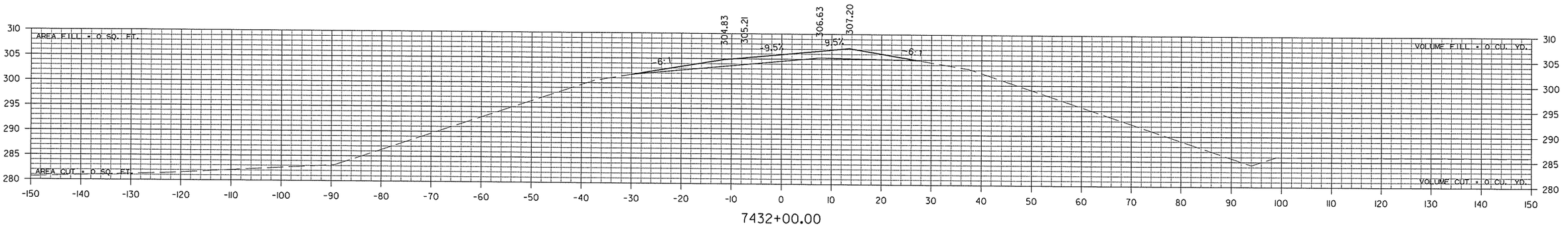



7434+00.00




7433+00.00

STA. 7432+46.39 MAXIMUM SUPERELEVATION (S.E. = .100'/')
STA. 7432+12.34 MAXIMUM SUPERELEVATION (S.E. = .100'/')




7432+00.00

RAMP I
STA. 7432+00 TO STA. 7434+00

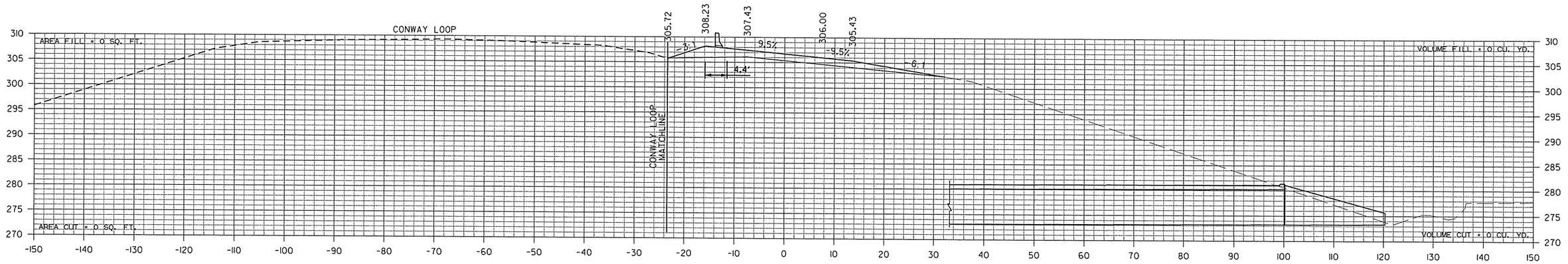
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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 139 | 168 |

(2) CROSS SECTIONS

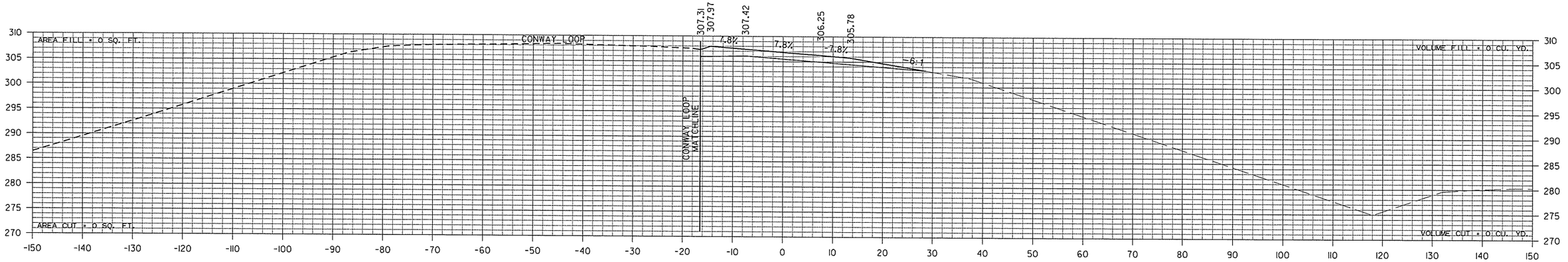
STA. 7433+68.17 MAXIMUM SUPERELEVATION (S.E. = .100'/')

CONWAY LOOP STA. 22+48 IN PLACE
10' X 7' X 287' R.C. BOX CULVERT
19° LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 738 CFS DA = 395 ACRES
RETAIN




7433+53.00

F.L. = 273.32 RT.




7433+00.00

C.L. CONWAY LOOP STA. 24+88.32 BEGIN SUPERELEVATION

STA. 7432+74.42 BEGIN RAMP 2

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

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

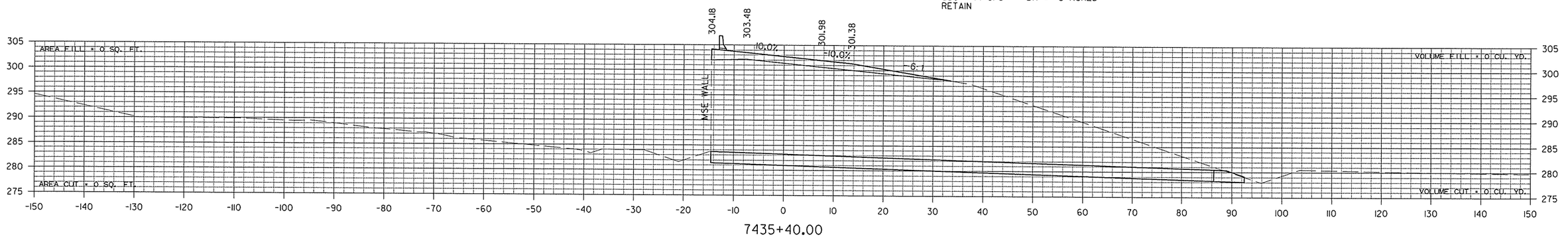
RAMP 2
STA. 7433+00 TO STA. 7433+53

rnfortner 5/14/2015 3:24:01 PM
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REVISED DATE:

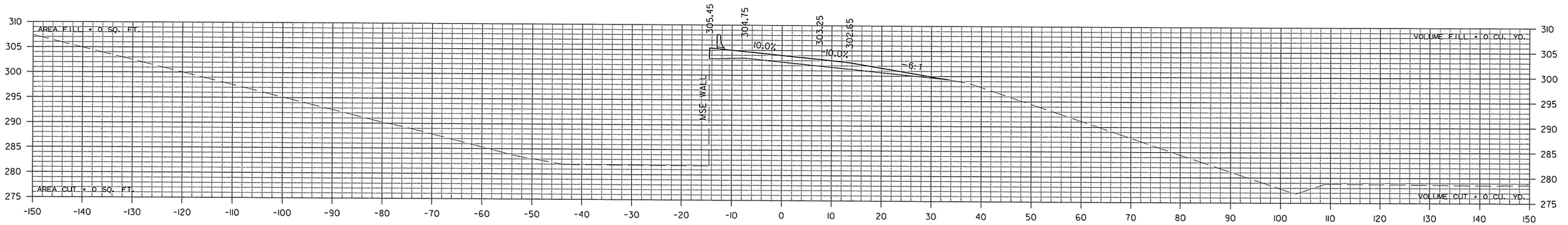
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 140 | 168 |

(2) CROSS SECTIONS

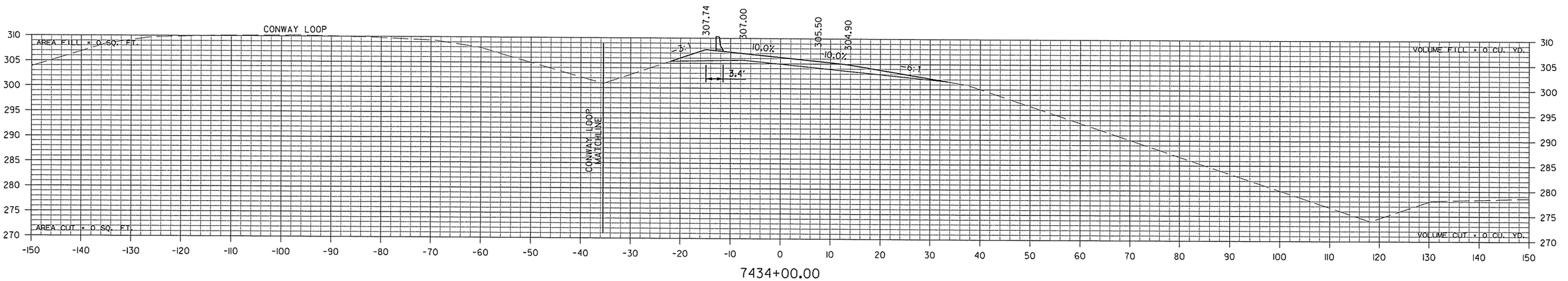
STA. 7435+40 IN PLACE
24" X 101' R.C. PIPE CULVERT
(CLASS IV) TYPE 3 BEDDING
WITH FES RT.
Q50 = 14 CFS DA = 3 ACRES
RETAIN




7435+40.00




7435+00.00



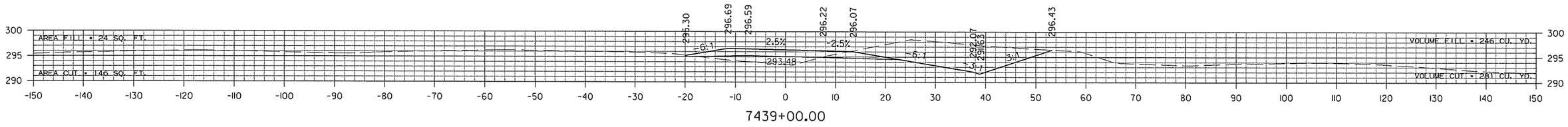

7434+00.00

RAMP 2
STA. 7434+00 TO STA. 7435+40

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WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 141 | 168 |

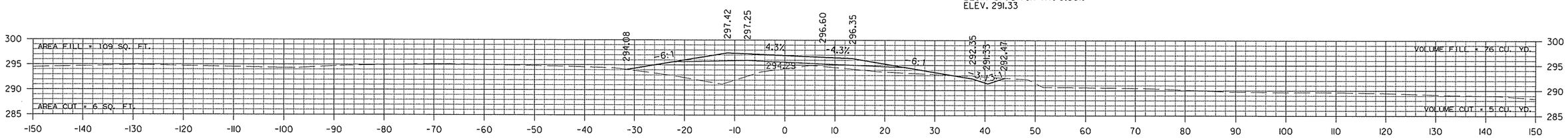
(2) CROSS SECTIONS




7439+00.00

STA. 7438+78.13 BEGIN SUPERELEVATION
STA. 7438+71.82 END SUPERELEVATION

STA. 7438+00.00
END SP. DITCH RT. 5.15%
BEGIN SP. DITCH RT. 0.30%
ELEV. 291.33




7438+00.00

AREA FILL = 144 SQ. FT.
AREA CUT = 9 SQ. FT.

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

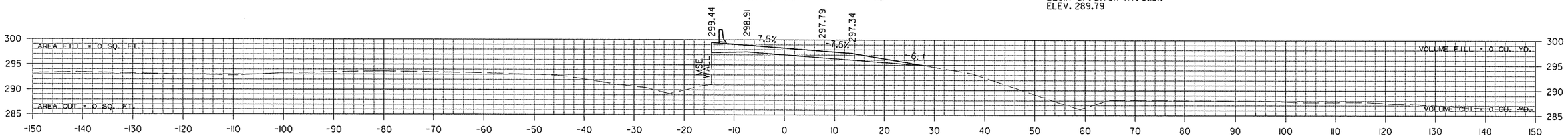
STA. 7437+83.79 TOE OF SLOPE

VOLUME FILL = 37 CU. YD.
VOLUME CUT = 2 CU. YD.

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

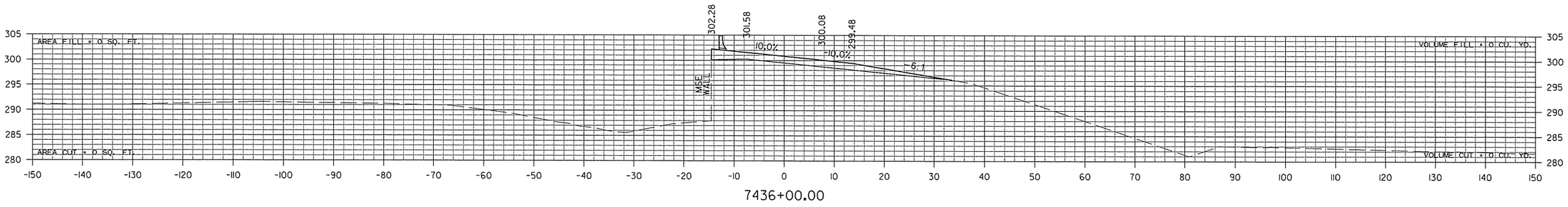
STA. 7437+70 END PAVING RAMP 2
BEGIN GRADING AND PAVING

STA. 7437+70.00
BEGIN SP. DITCH RT. 5.15%
ELEV. 289.79




7437+00.00

STA. 7436+21.82 MAXIMUM SUPERELEVATION (S.E. = .100'/')




7436+00.00

RAMP 2
STA. 7436+00 TO STA. 7439+00

rnfortner 5/14/2015 3:24:49 PM
WORKSPACE: AHTD
L:\2009\0907230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_RAMP_2.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 142 | 168 |

(2) CROSS SECTIONS

STA. 7440+93.13 MAXIMUM SUPERELEVATION (S.E. = .069'/')

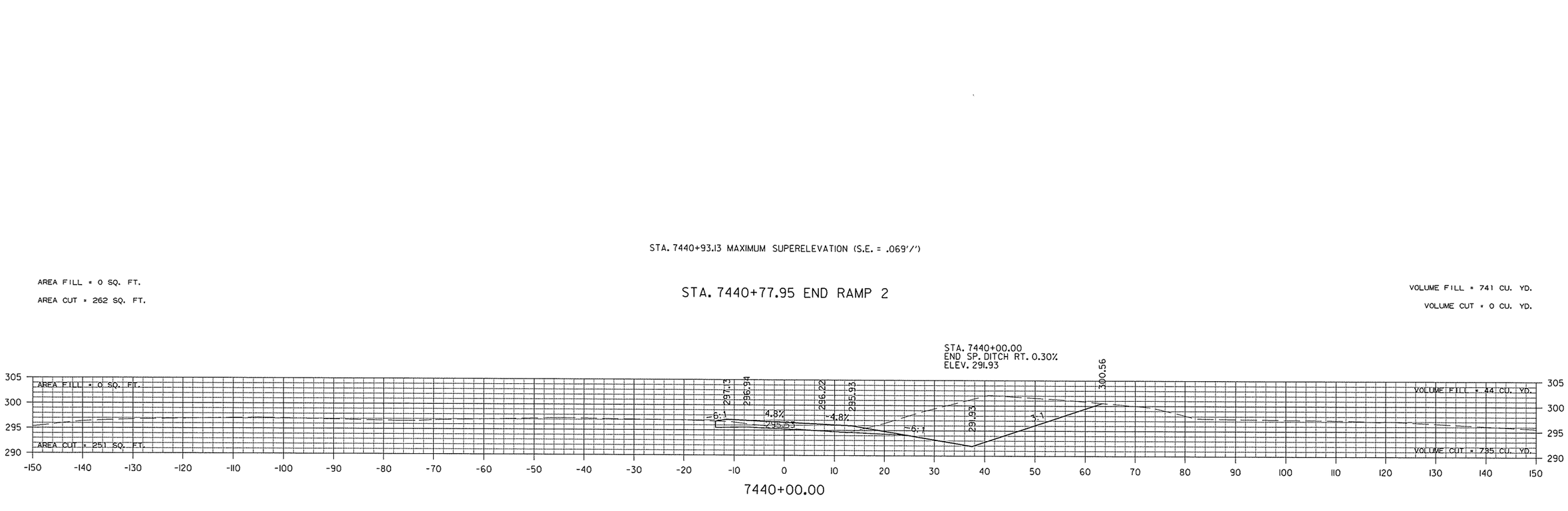
AREA FILL = 0 SQ. FT.

AREA CUT = 262 SQ. FT.

## STA. 7440+77.95 END RAMP 2

VOLUME FILL = 741 CU. YD.

VOLUME CUT = 0 CU. YD.




RAMP 2

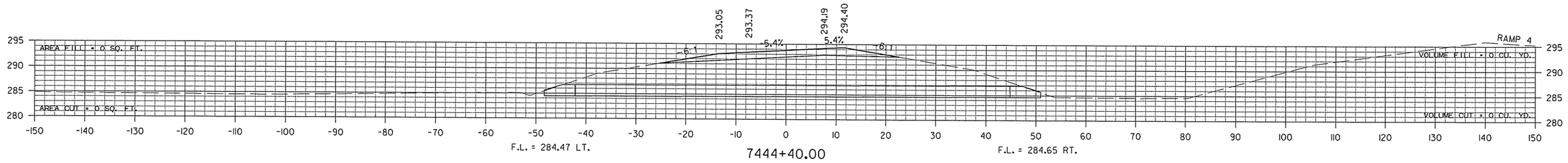
STA. 7440+00 TO STA. 7440+00

rntortner 5/14/2015 3:25:15 PM
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REVISED DATE:

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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 143 | 168 |

(2) CROSS SECTIONS

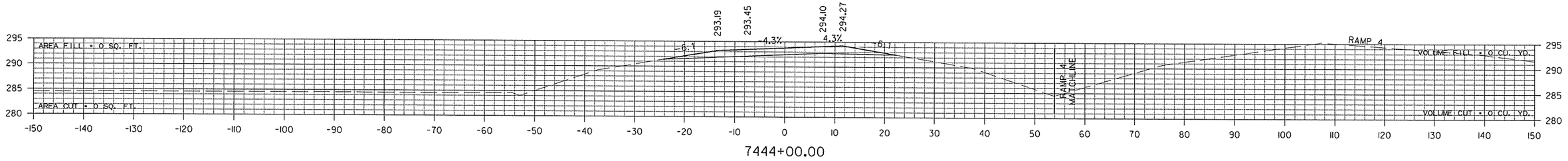
STA. 7444+40 IN PLACE
24" X 87' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 19 CFS DA = 5 ACRES
RETAIN




F.L. = 284.47 LT.

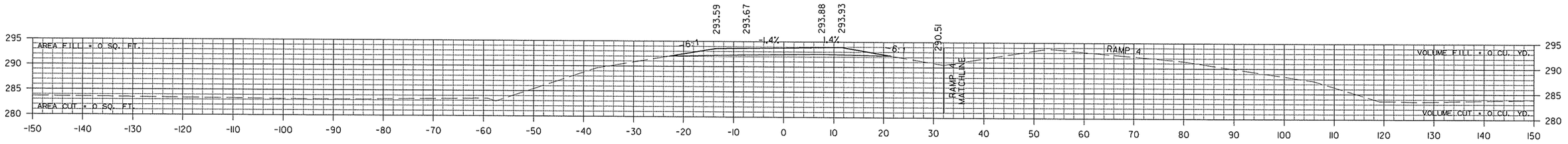
7444+40.00

F.L. = 284.65 RT.

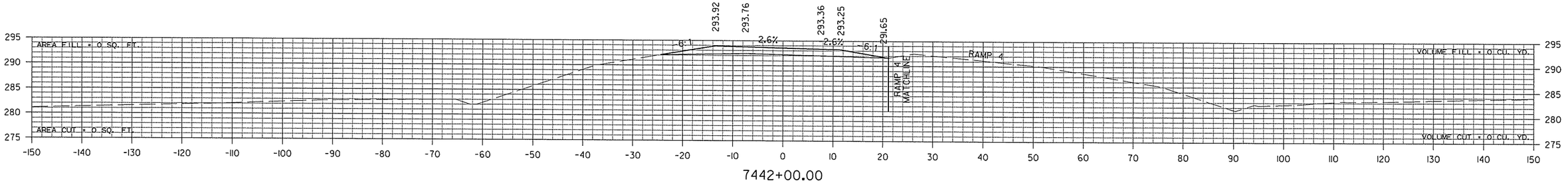



7444+00.00

STA. 7443+16.12 END SUPERELEVATION
STA. 7443+16.12 BEGIN SUPERELEVATION




7443+00.00




7442+00.00

STA. 7441+34.94 SUPERELEVATION (S.E. = .0525'/')

STA. 7441+34.94 BEGIN RAMP 3

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

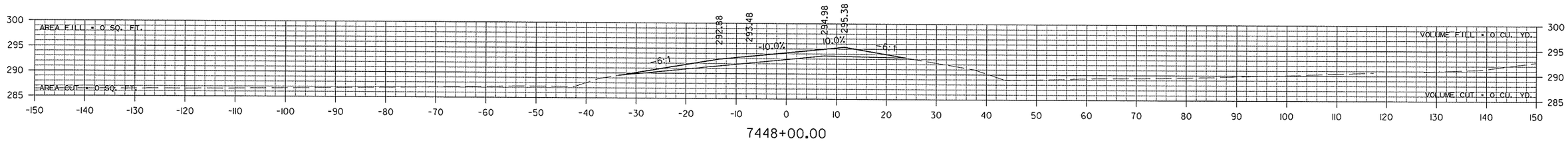
VOLUME FILL = 0 CU. YD.
VOLUME CUT = 0 CU. YD.

RAMP 3
STA. 7442+00 TO STA. 7444+40

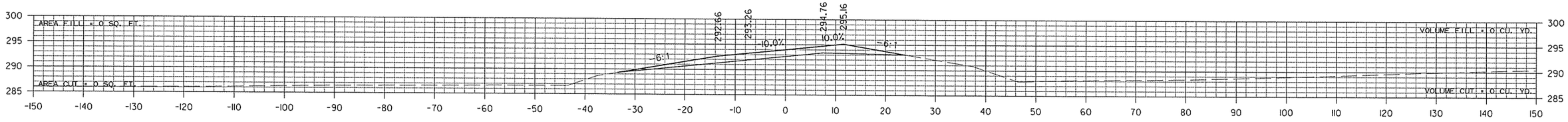
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 144 | 168 |

(2) CROSS SECTIONS

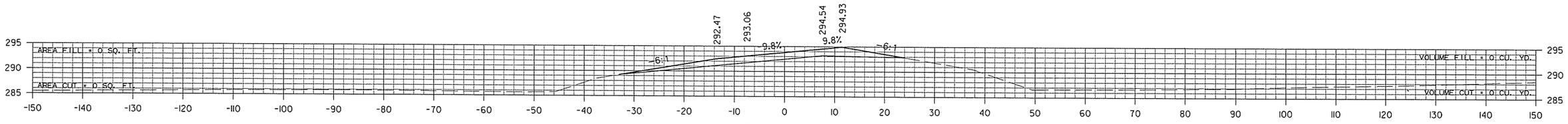



7448+00.00

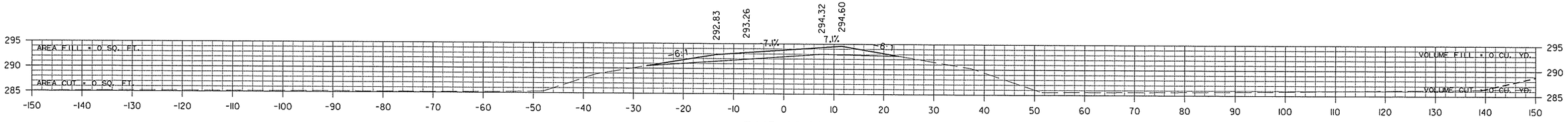



7447+00.00

STA. 7446+06.12 MAXIMUM SUPERELEVATION (S.E. = .100'/')




7446+00.00




7445+00.00

RAMP 3

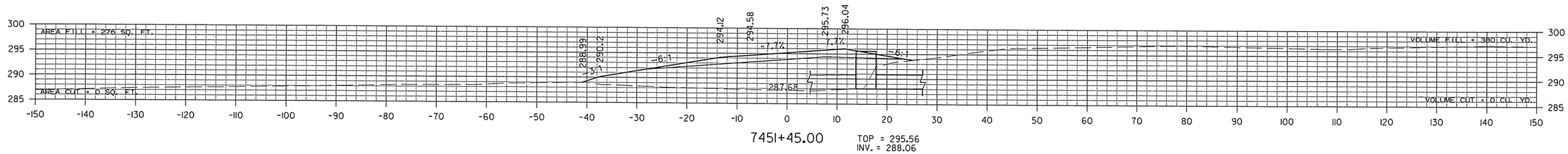
STA. 7445+00 TO STA. 7448+00

rnfortner 5/14/2015 3:29:39 PM
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REVISED DATE:

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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 145 | 168 |

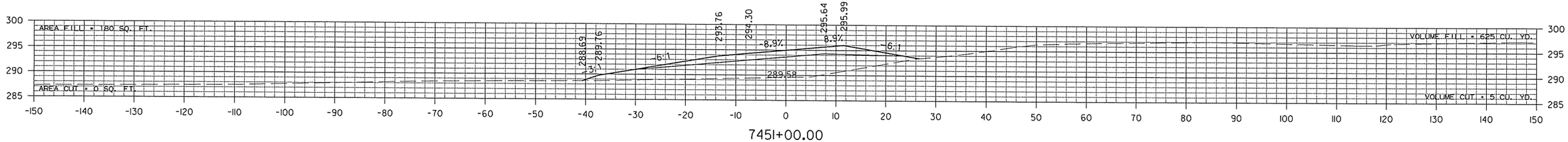
(2) CROSS SECTIONS

I-40 STA. 7451+48 IN PLACE
DROP INLET IN MEDIAN
WITH 30" X 179' R.C. PIPE CULVERT
WITH HDWL. LT. & FES RT.
REMOVE HDWL. LT. AND CONSTRUCT
TYPE ST JUNCTION BOX (4' X 4' X H=7'-6")
WITH 30" X 56' R.C. PIPE CULVERT
13° LT. FWD. SKEW
(CLASS III) TYPE 3 BEDDING
WITH FES LT.
Q50 = 35 CFS DA= 10 ACRES




7451+45.00

TOP = 295.56
INV. = 288.06




7451+00.00

STA. 7450+60.65 MAXIMUM SUPERELEVATION (S.E. = .100'/')

AREA FILL = 230 SQ. FT.
AREA CUT = 3 SQ. FT.

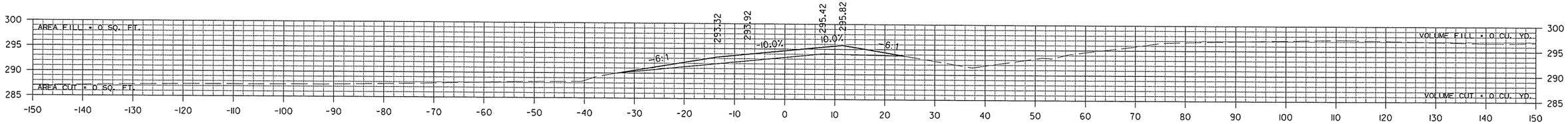
AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

STA. 7450+17.63 TOE OF SLOPE

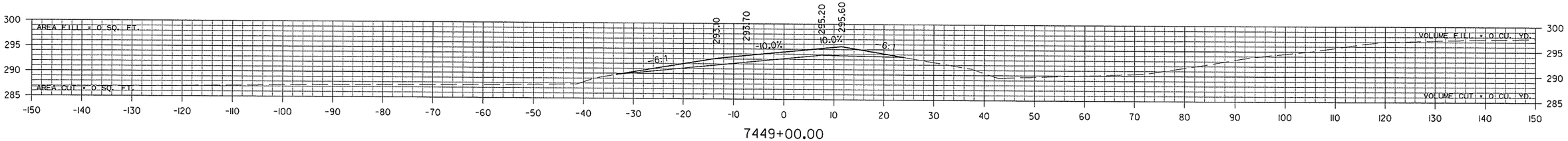
VOLUME FILL = 75 CU. YD.
VOLUME CUT = 1 CU. YD.

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

## STA. 7450+00.00 END PAVING RAMP 3
## BEGIN GRADING AND PAVING




7450+00.00




7449+00.00

RAMP 3
STA. 7449+00 TO STA. 7451+45

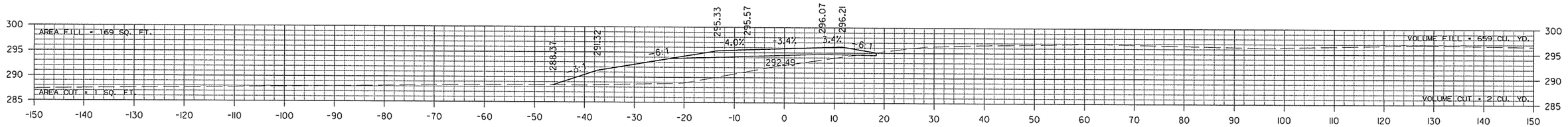
rnfortner 5/14/2015 3:30:00 PM
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 146 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

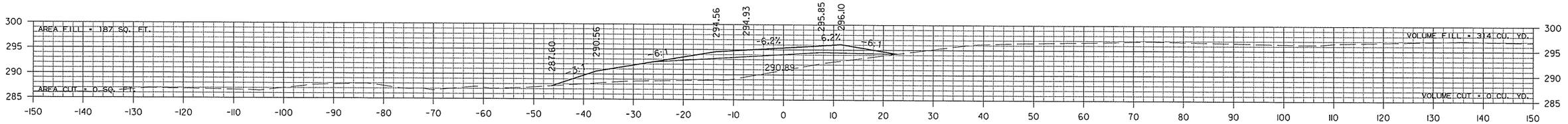
AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

## STA. 7453+88.97 END RAMP 3

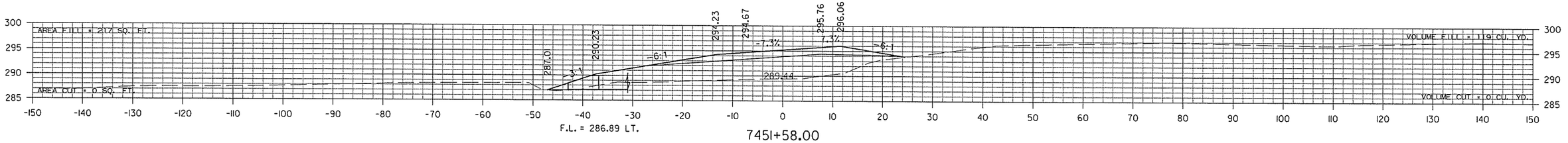
VOLUME FILL = 278 CU. YD.
VOLUME CUT = 2 CU. YD.




7453+00.00




7452+00.00




F.L. = 286.89 LT.

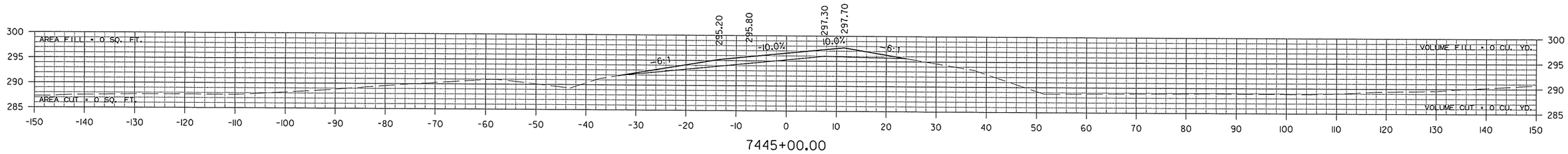
7451+58.00

RAMP 3
STA. 7451+58 TO STA. 7453+00

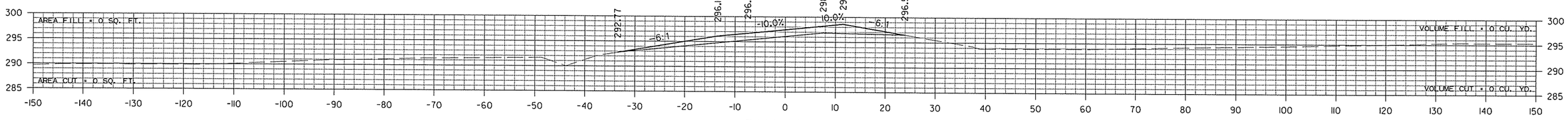
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 147 | 168 |

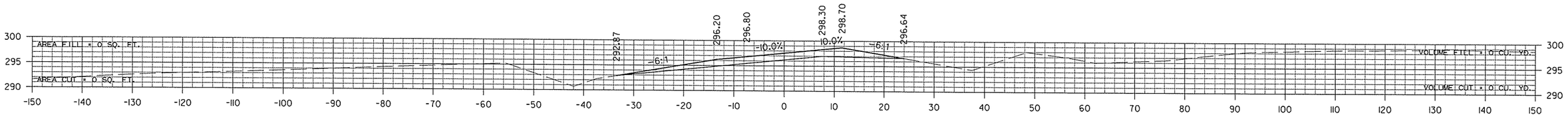
(2) CROSS SECTIONS




7445+00.00

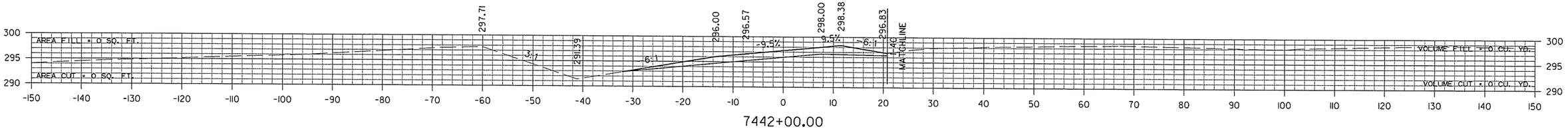



7444+00.00




7443+00.00

STA. 7442+17.80 MAXIMUM SUPERELEVATION (S.E. = .100'/')




7442+00.00

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

STA. 7441+05.30 BEGIN RAMP 4

STA. 7439+17.80 BEGIN SUPERELEVATION

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

RAMP 4

STA. 7442+00 TO STA. 7445+00

rnfortner 5/14/2015 3:33:58 PM
WORKSPACE: AHTD
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REVISED DATE:

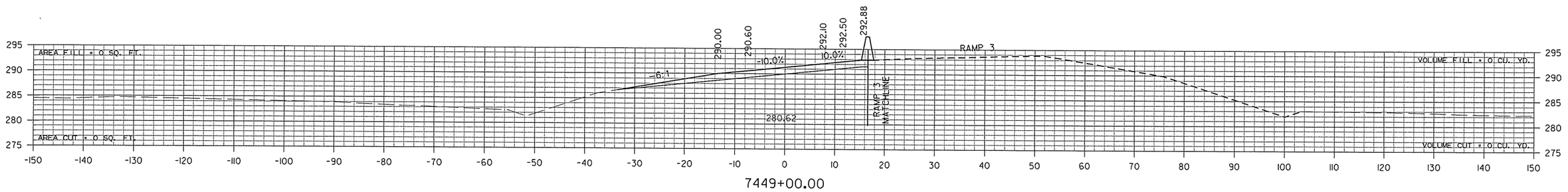
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 148 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

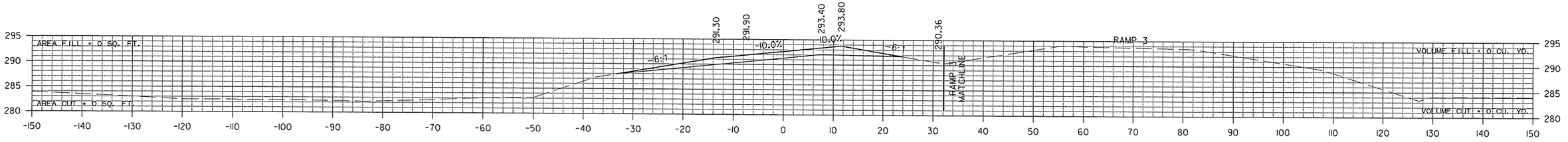
VOLUME FILL = 0 CU. YD.
VOLUME CUT = 0 CU. YD.

# STA. 7449+63.52 END RAMP 4

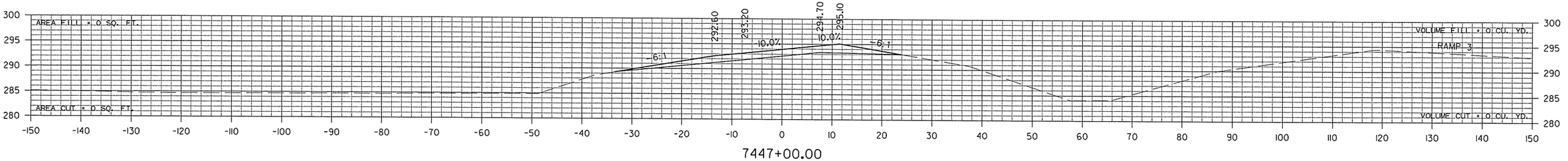
STA. 7449+63.52 SUPERELEVATION (S.E. = .100'/')



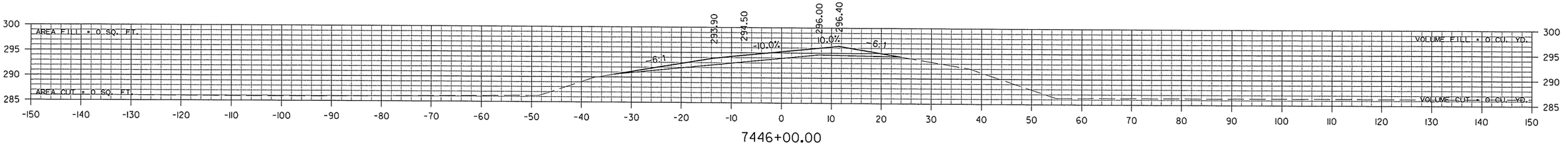

7449+00.00




7448+00.00




7447+00.00



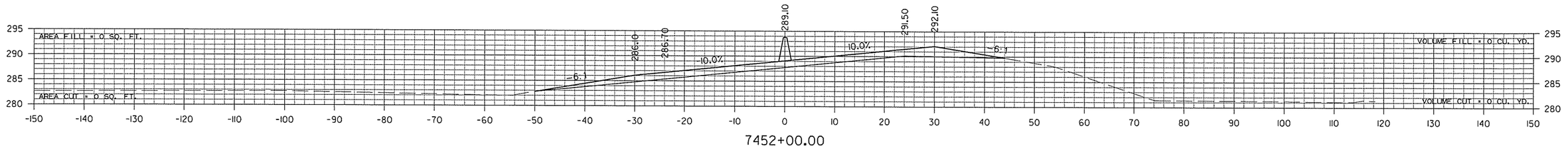

7446+00.00

RAMP 4
STA. 7446+00 TO STA. 7449+00

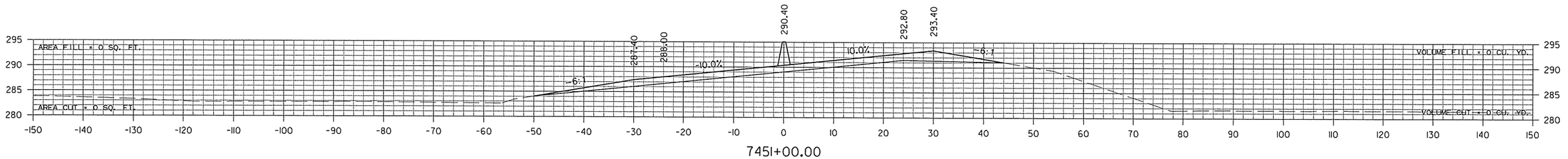
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|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 149 | 168 |

(2) CROSS SECTIONS

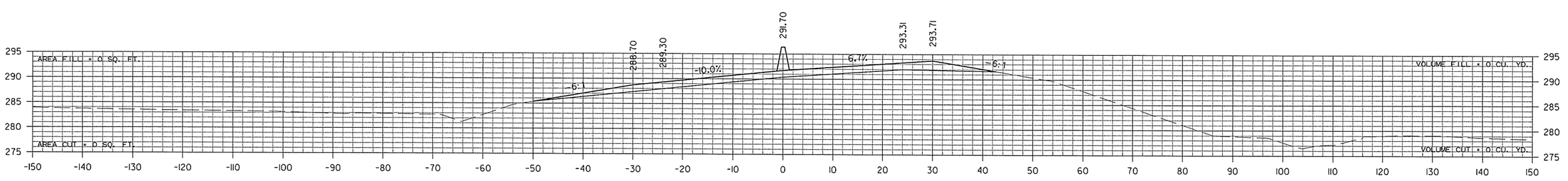



7452+00.00



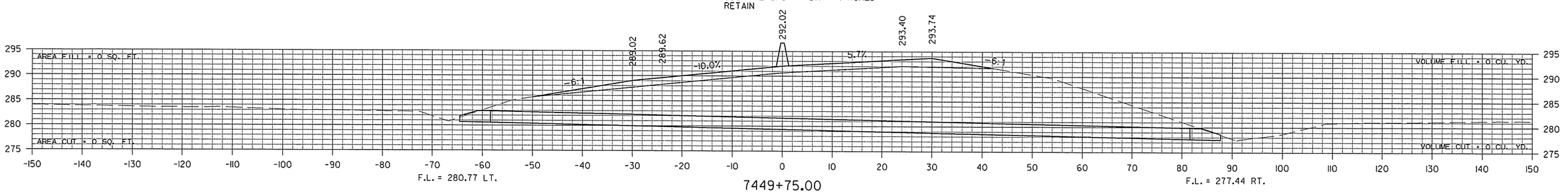

7451+00.00

STA. 7450+82.34 RT. LANES MAXIMUM SUPERELEVATION (S.E. = .100'/')




7450+00.00

STA. 7449+75 IN PLACE
24" X 140' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 12 CFS DA = 4 ACRES
RETAIN




F.L. = 280.77 LT.

7449+75.00

F.L. = 277.44 RT.

STA. 7449+63.52 LT. LANES SUPERELEVATION (S.E. = .100'/')
STA. 7449+63.52 RT. LANES SUPERELEVATION (S.E. = .0525'/')

STA. 7449+63.52 BEGIN MERGED RAMPS 3 & 4

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

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

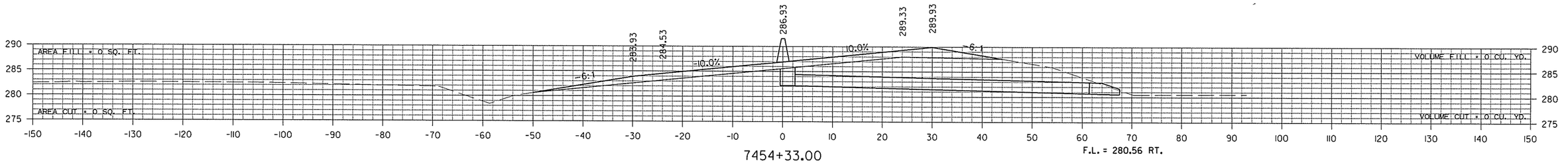
MERGED RAMPS 3 & 4
STA. 7449+75 TO STA. 7452+00

rnfortner 5/14/2015 3:48:08 PM
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REVISED DATE:

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| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 150 | 168 |

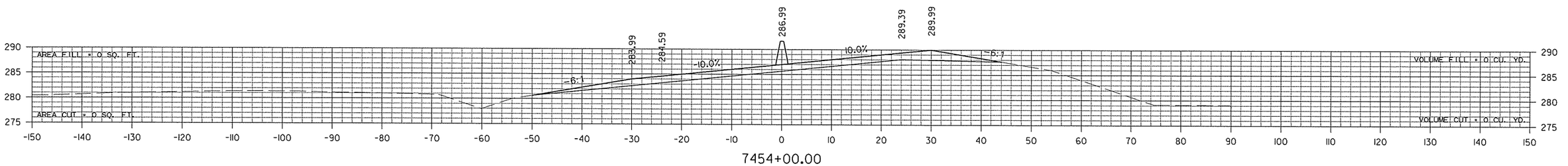
(2) CROSS SECTIONS

STA. 7454+33 CONSTRUCT
TYPE SPECIAL DROP INLET H=3'-6"
WITH 24" X 59' R.C. PIPE OUTLET ON RT.
(CLASS III) TYPE 3 BEDDING WITH FES.
Q50 = 6 CFS DA = 1 ACRES



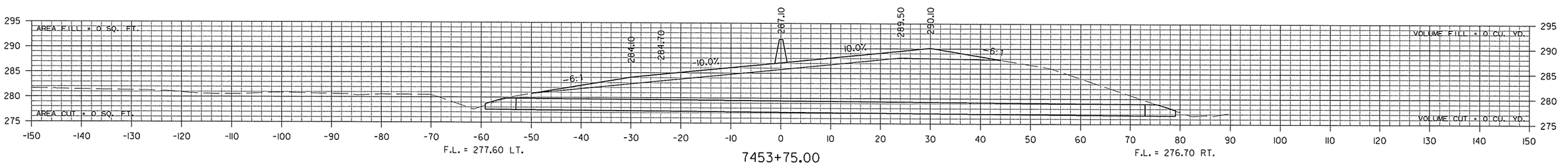

7454+33.00

F.L. = 280.56 RT.




7454+00.00

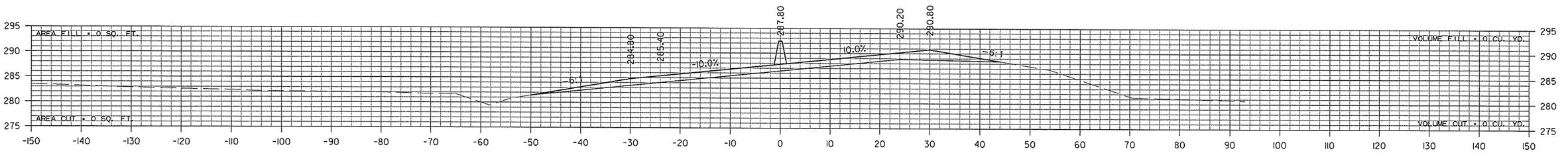
STA. 7453+75 IN PLACE
24" X 126' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 17 CFS DA = 8 ACRES
RETAIN




F.L. = 277.60 LT.

7453+75.00

F.L. = 276.70 RT.



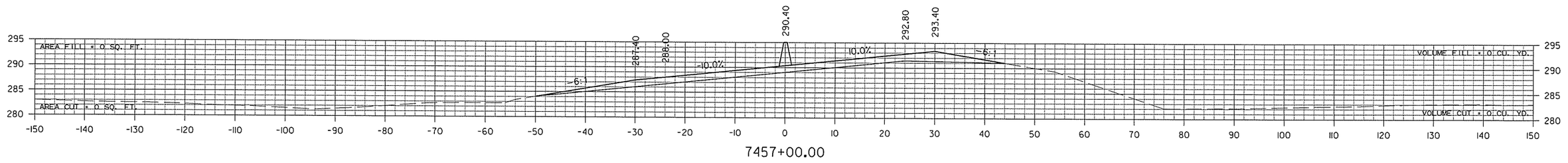

7453+00.00

MERGED RAMPS 3 & 4
STA. 7453+00 TO STA. 7454+33

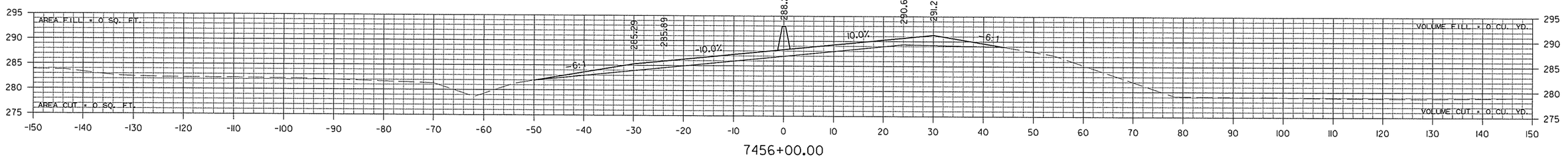
rnfortner 5/14/2015 3:48:28 PM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 151 | 168 |

(2) CROSS SECTIONS

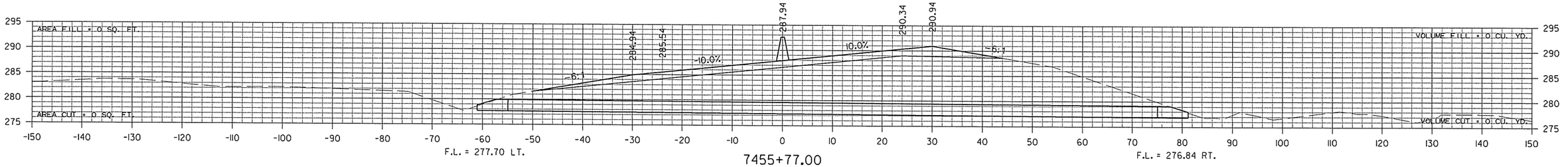



7457+00.00




7456+00.00

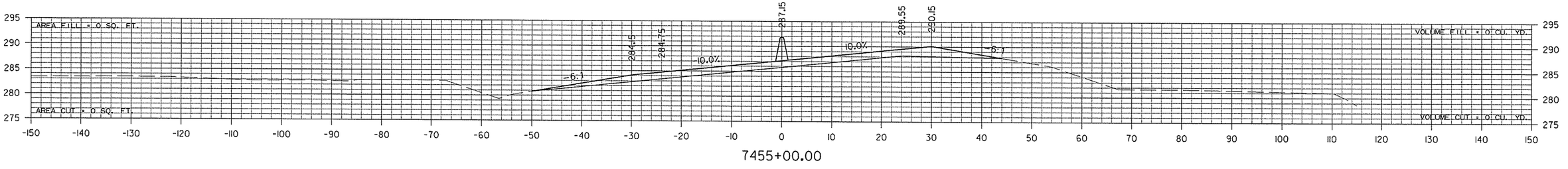
STA. 7455+77 IN PLACE
24" X 130' R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 14 CFS DA = 5 ACRES
RETAIN




F.L. = 277.70 LT.

7455+77.00

F.L. = 276.84 RT.




7455+00.00

MERGED RAMPS 3 & 4
STA. 7455+00 TO STA. 7457+00

rnfortner 5/14/2015 3:48:46 PM
WORKSPACE: AHTD
L:\2009\0907230 - Conway Western Arterial Loop\Drawings\PRJ.BS\PRJ.BS.CX.MERGED.RAMPS.3&4.dgn
REVISED DATE:

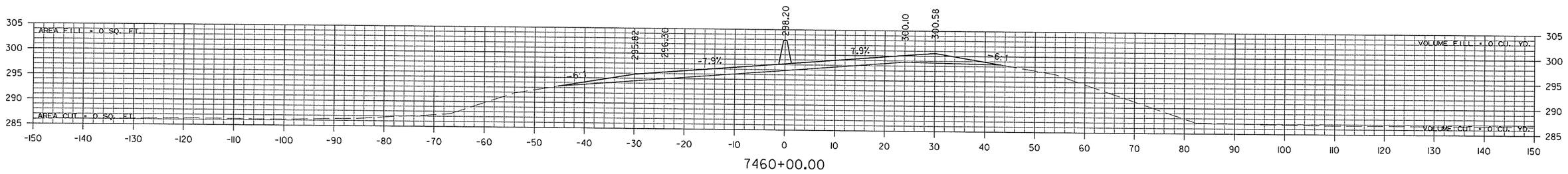
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 152 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

## STA. 7460+23.33 END MERGED RAMPS 3 & 4

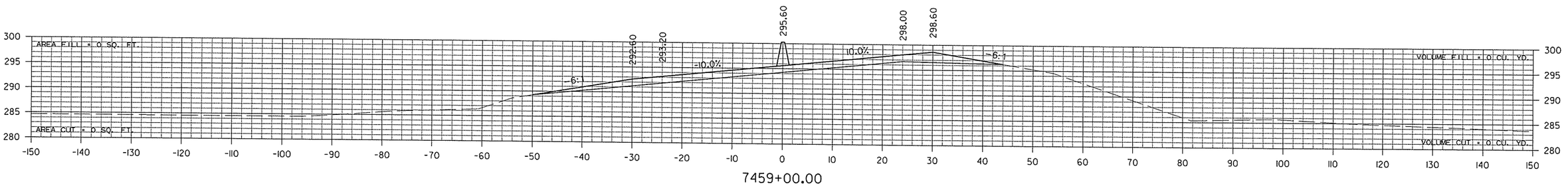
VOLUME FILL = 0 CU. YD.
VOLUME CUT = 0 CU. YD.

STA. 7460+23.33 SUPERELEVATION (S.E. = .070'/')

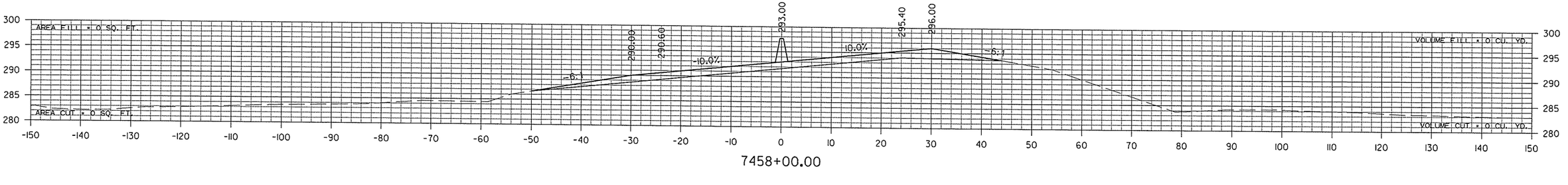



7460+00.00

STA. 7459+48.33 MAXIMUM SUPERELEVATION (S.E. = .100'/')




7459+00.00



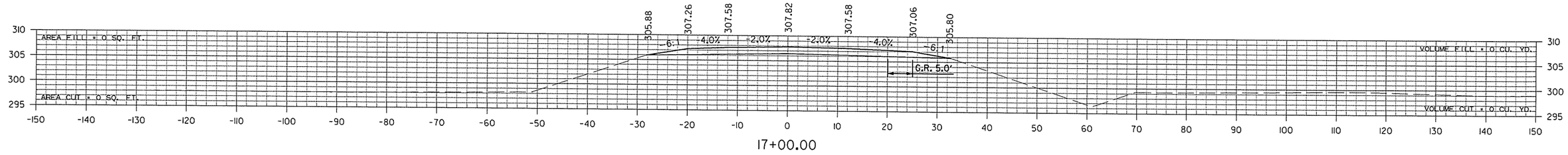

7458+00.00

MERGED RAMPS 3 & 4
STA. 7458+00 TO STA. 7460+00

rnfortner 5/14/2015 4:06:04 PM
WORKSPACE: AHTD
L:\2009\090T230 - Conway Western Arterial Loop\Drawings\PRJLBS\PRJLBS_CX_MERGED_RAMPS_3&4.dgn
REVISED DATE:

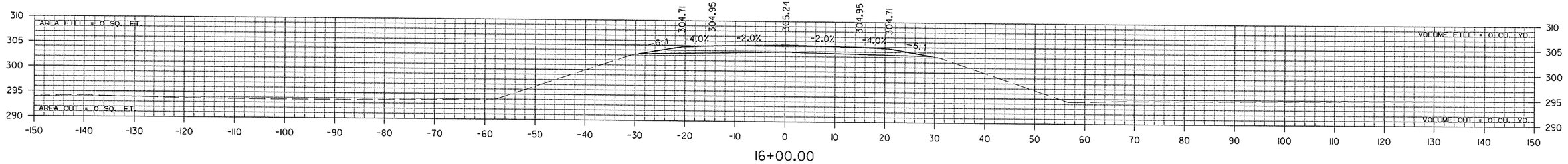
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 153 | 168 |

(2) CROSS SECTIONS



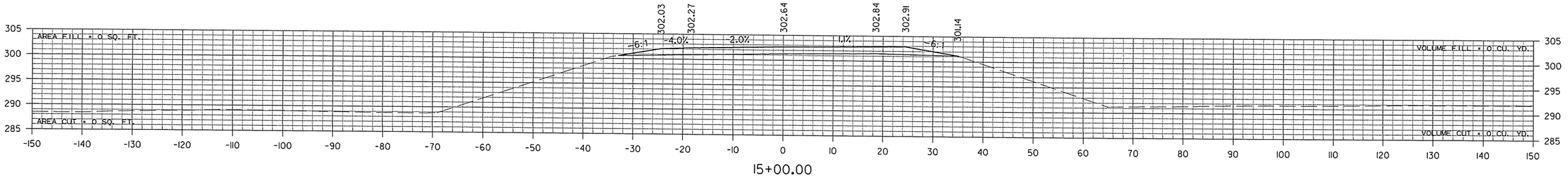

17+00.00

STA. 16+72.70 END TAPER

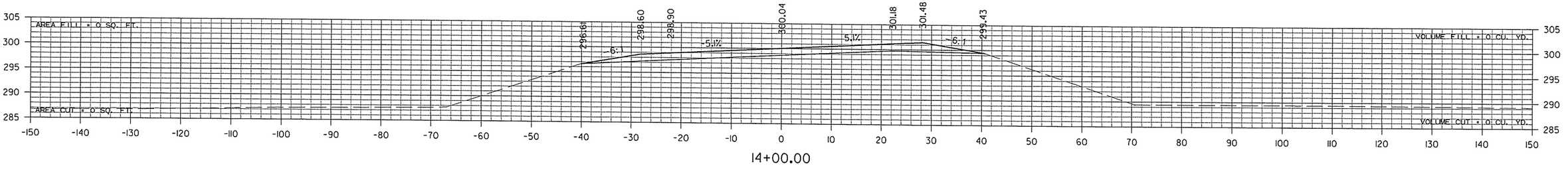



16+00.00

STA. 15+77.70 END SUPERELEVATION




15+00.00




14+00.00

STA. 13+52.70 BEGIN TAPER

STA. 13+52.70 SUPERELEVATION (S.E. = .070'/')

STA. 13+52.70 BEGIN CONWAY LOOP

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

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

CONWAY LOOP

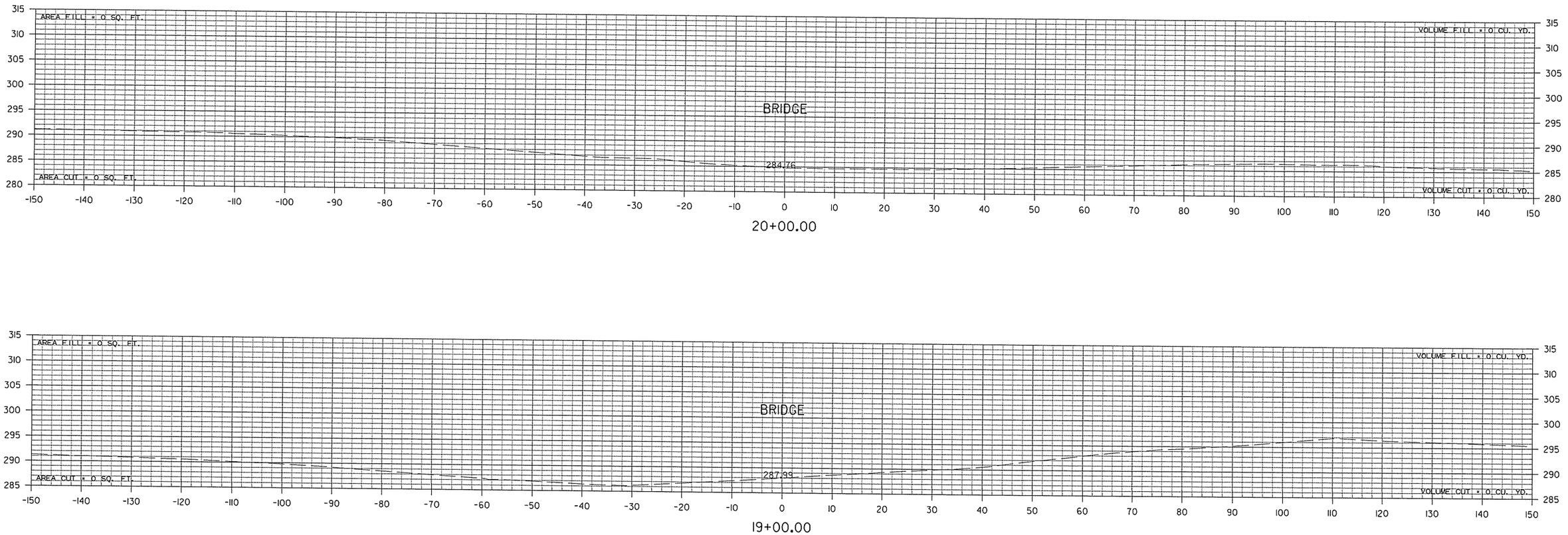
STA. 14+00 TO STA. 17+00

rnfortner 5/15/2015 8:17:38 AM
WORKSPACE: AHTD
L:\2009\090172\30 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_MNL.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 6 | ARK. | | | |
| JOB NO. | | 080396 | 154 | 168 |

(2) CROSS SECTIONS

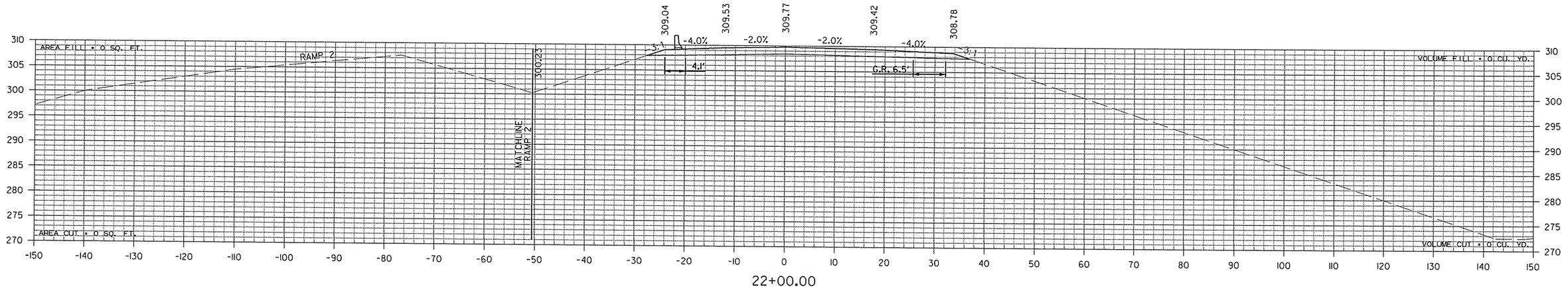



CONWAY LOOP
STA. 18+00 TO STA. 20+00

rnfortner 5/15/2015 8:48:10 AM
WORKSPACE: AHTD
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REVISED DATE:

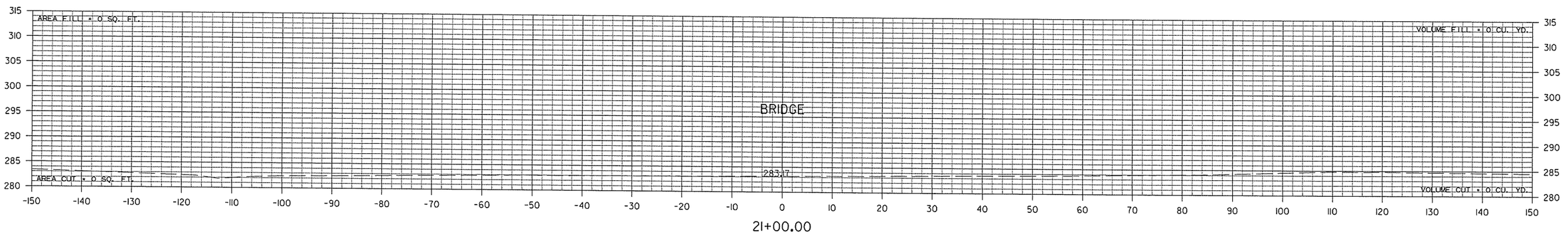
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 155 | 168 |

(2) CROSS SECTIONS




STA. 21+29.64 BEGIN TAPER

STA. 21+04.13 END BRIDGE



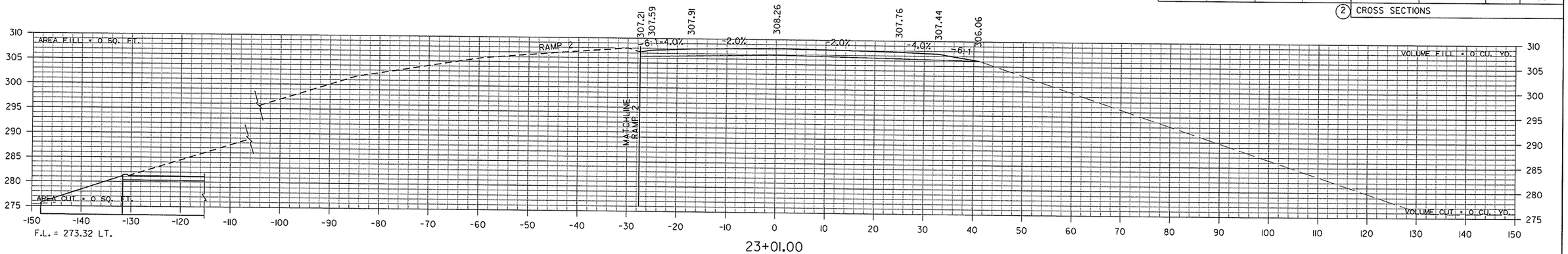

CONWAY LOOP

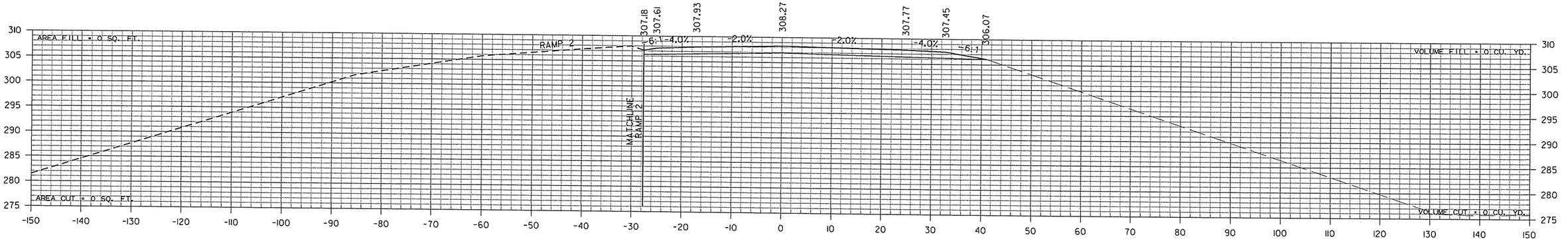
STA. 21+00 TO STA. 22+00

rnfortner 5/15/2015 8:18:36 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 156 | 168 |

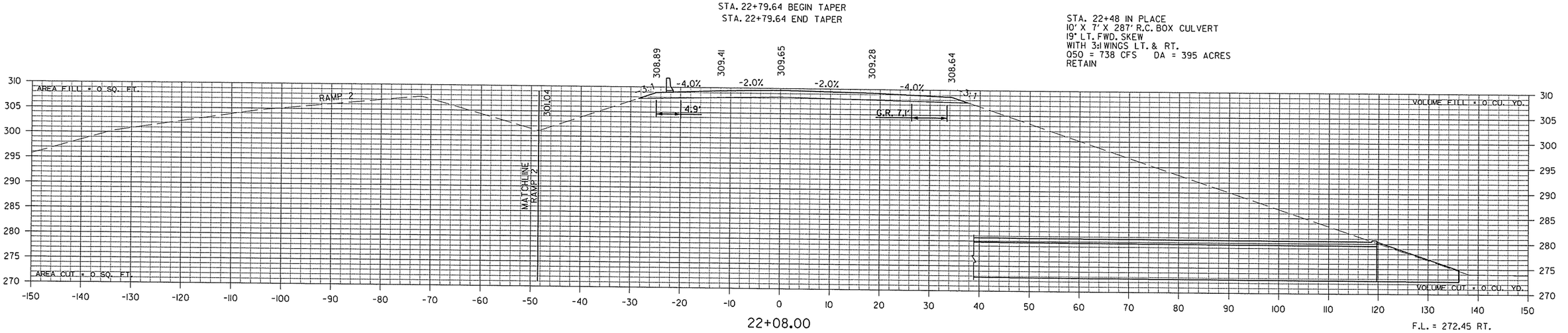
(2) CROSS SECTIONS




STA. 22+79.64 BEGIN TAPER
STA. 22+79.64 END TAPER

STA. 22+48 IN PLACE
10' X 7' X 287' R.C. BOX CULVERT
19° LT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 738 CFS DA = 395 ACRES
RETAIN

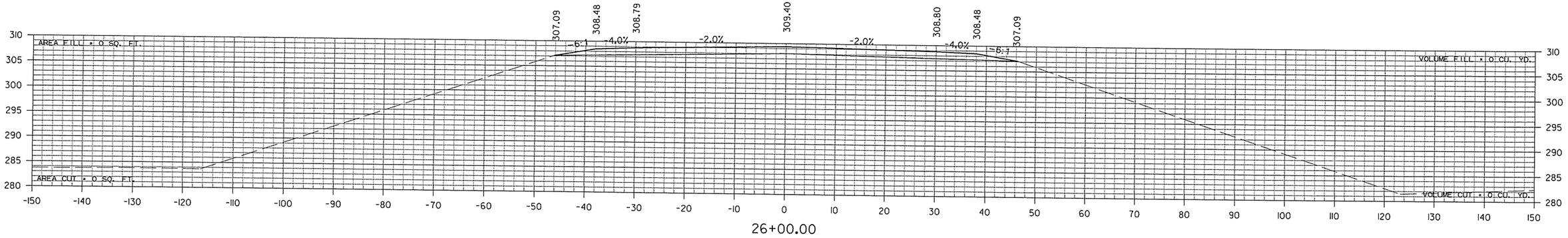



CONWAY LOOP
STA. 22+08 TO STA. 23+01

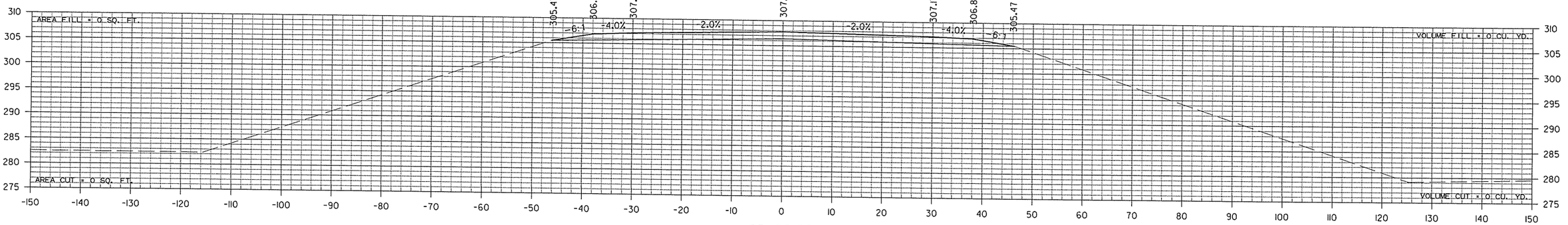
rnfortner 5/15/2015 8:19:00 AM
WORKSPACE: AHTD
L:\2009\090T230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_MNL.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 157 | 168 |

(2) CROSS SECTIONS

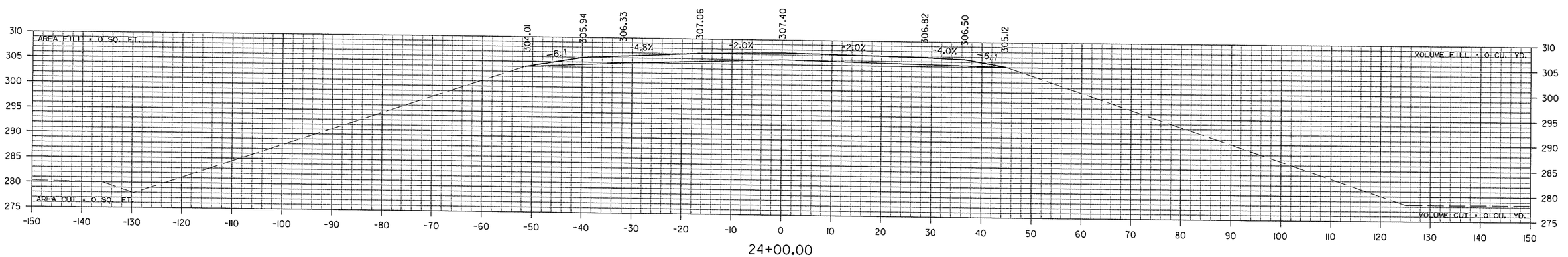



26+00.00




25+00.00

STA. 24+39.64 END TAPER



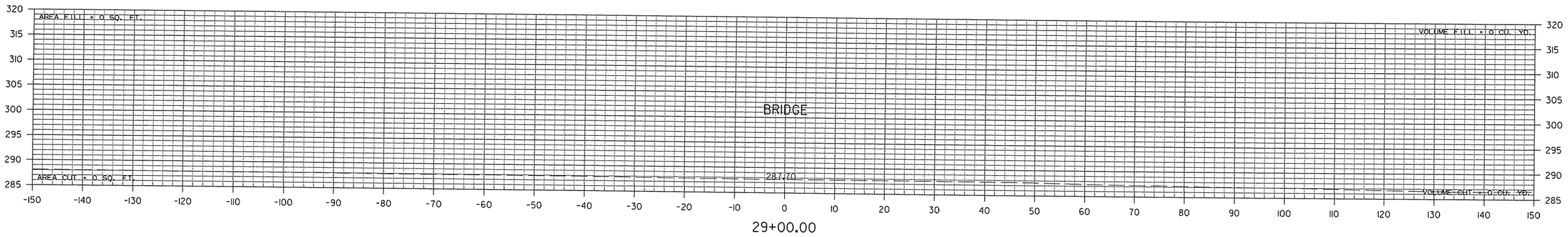

24+00.00

CONWAY LOOP
STA. 24+00 TO STA. 26+00

rnfortner 5/15/2015 8:19:23 AM
WORKSPACE: AHTD
L:\2009\090723O - Conway Western ArterialLoop\Drawings\PRJ_BS\PRJ_BS_CX_MNL.dgn
REVISED DATE:

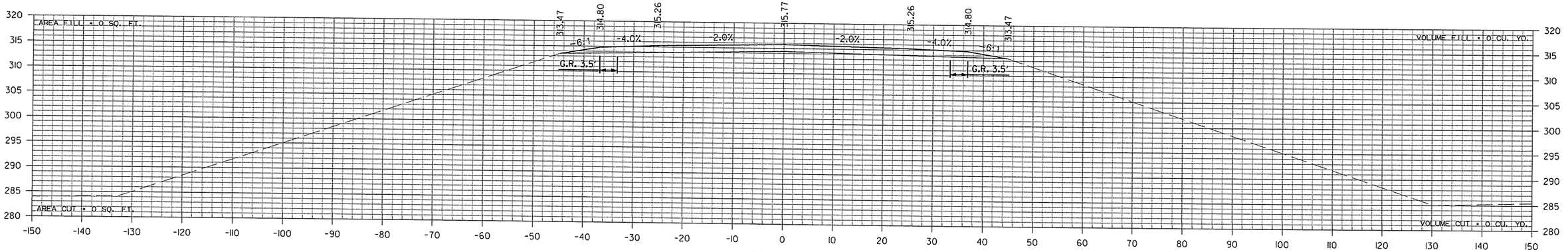
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 158 | 168 |

(2) CROSS SECTIONS

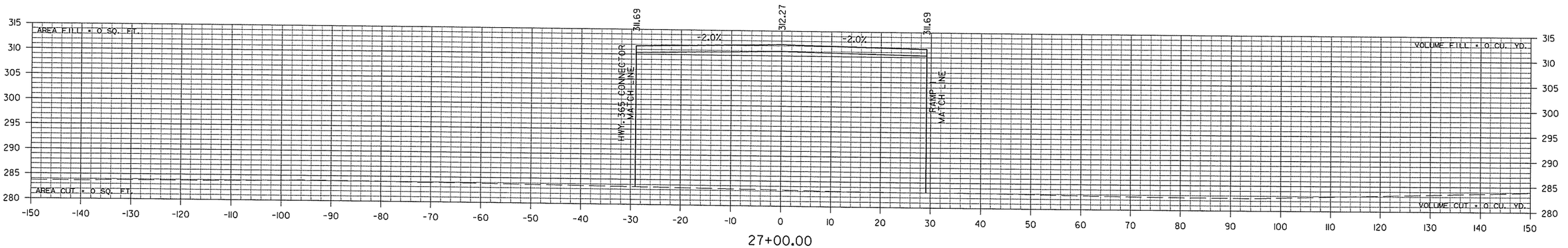



29+00.00

STA. 28+50.31 BEGIN BRIDGE




28+00.00



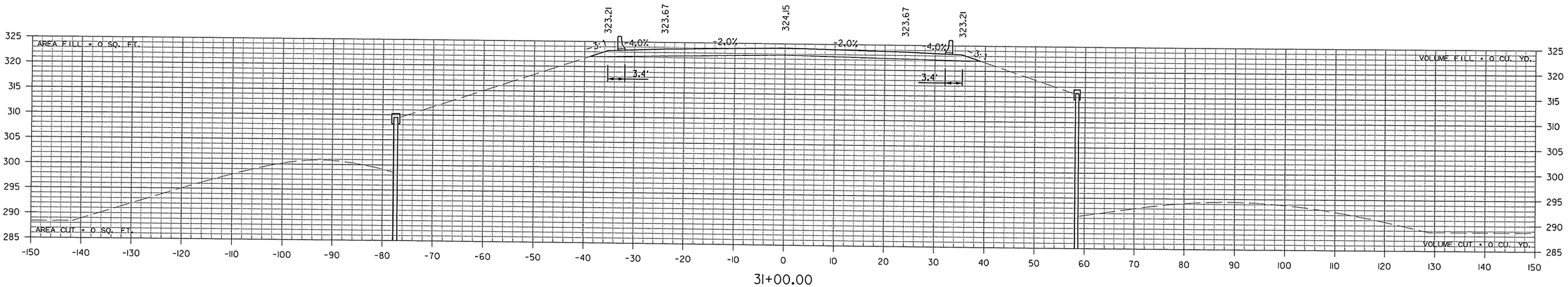

27+00.00

CONWAY LOOP
STA. 27+00 TO STA. 29+00


rnfortner 5/15/2015 8:9:45 AM
WORKSPACE: AHTD
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REVISED DATE:

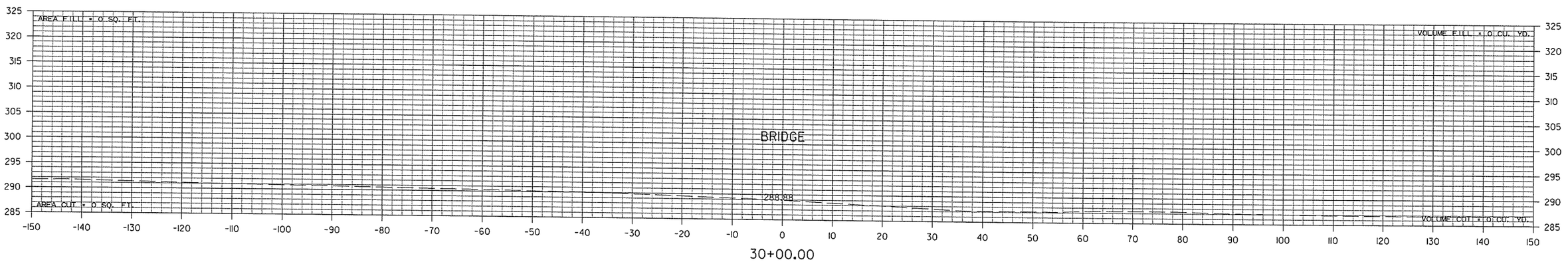
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 159 | 168 |

(2) CROSS SECTIONS




31+00.00

STA. 30+87.49 END BRIDGE




30+00.00

CONWAY LOOP
STA. 30+00 TO STA. 31+00

rnfortner 5/15/2015 8:20:02 AM
WORKSPACE: AHTD
L:\2009\0907230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_MNL.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 160 | 168 |

(2) CROSS SECTIONS

AREA FILL = 0 SQ. FT.

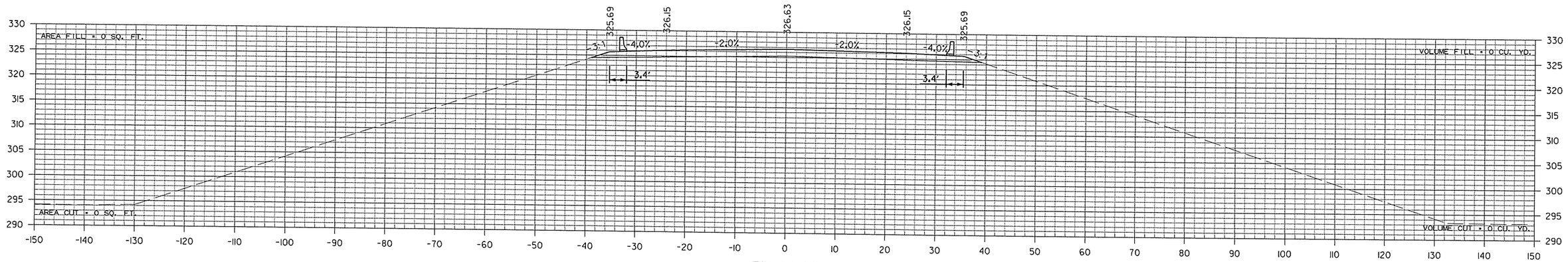
AREA CUT = 0 SQ. FT.

## STA. 33+69.72 END PAVING JOB 080396

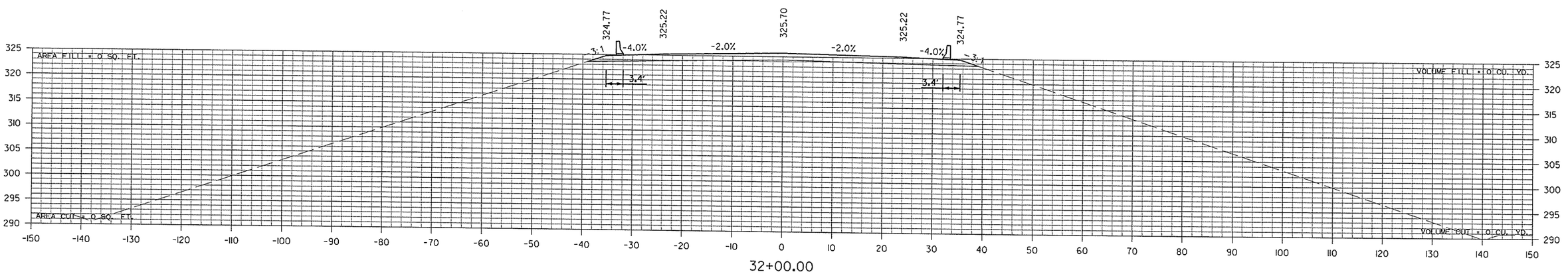
## STA. 33+00.00 END JOB 080396

VOLUME FILL = 0 CU. YD.

VOLUME CUT = 0 CU. YD.




33+00.00




32+00.00

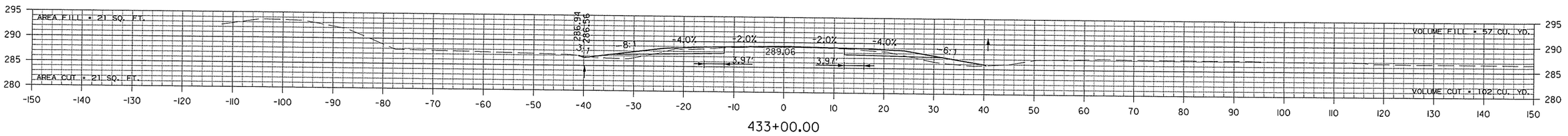
CONWAY LOOP

STA. 32+00 TO STA. 33+00

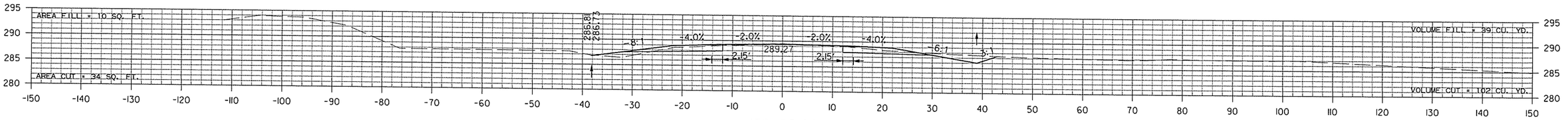
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WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 161 | 168 |

(2) CROSS SECTIONS

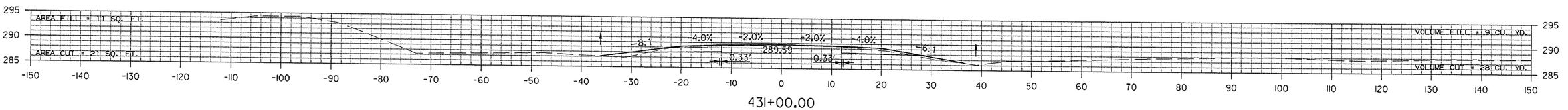



433+00.00



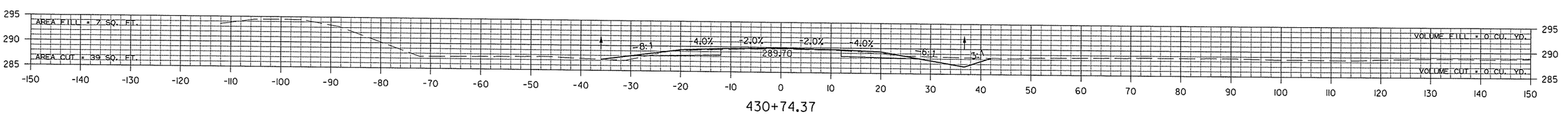

432+00.00

STA. 431+88
BEGIN SP. DITCH LT. -0.17%
ELEV. 286.75




431+00.00

STA. 430+81.75 BEGIN TAPER




430+74.37

STA. 430+74.37 BEGIN HWY. 365

HWY 365
STA. 430+74 TO STA. 433+00

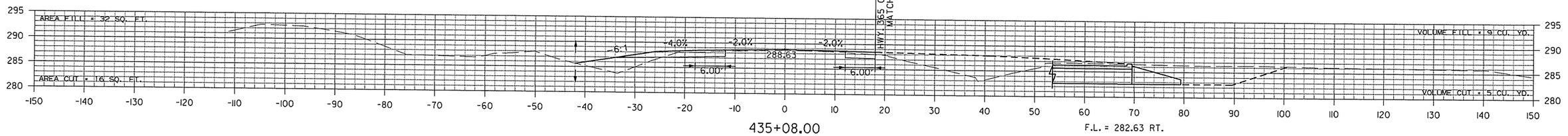
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 162 | 168 |

(2) CROSS SECTIONS

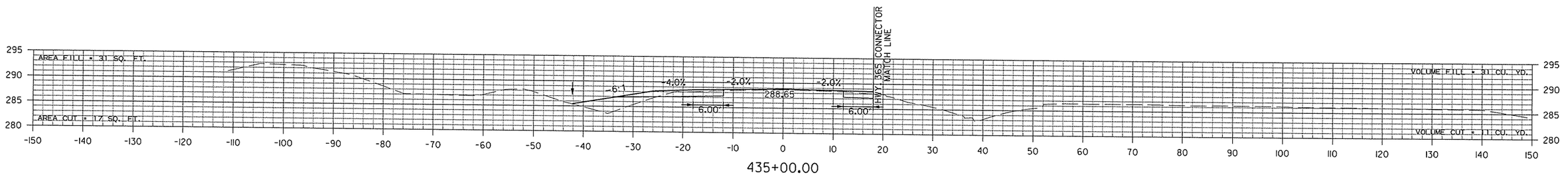
STA. 435+24.00
BEGIN SP. DITCH RT. 0.36%
ELEV. 282.63

STA. 435+91.75 BEGIN TAPER



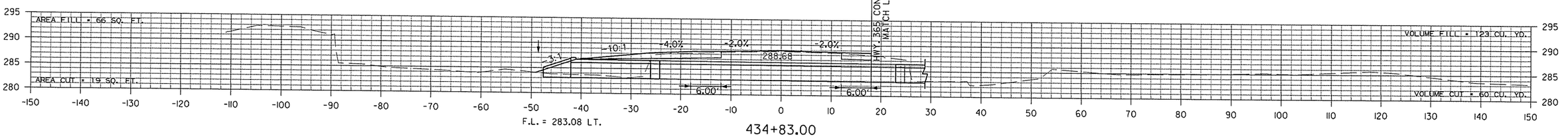

435+08.00

F.L. = 282.63 RT.




435+00.00

STA. 434+83 IN PLACE
DBL. 6' X 3' X 5I' R.C. BOX CULVERT
WITH WINGS LT. & RT.
RETAIN AND EXTEND 18' LT
AND EXTEND 54' RT
30° RT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 193 CFS DA = 70 ACRES

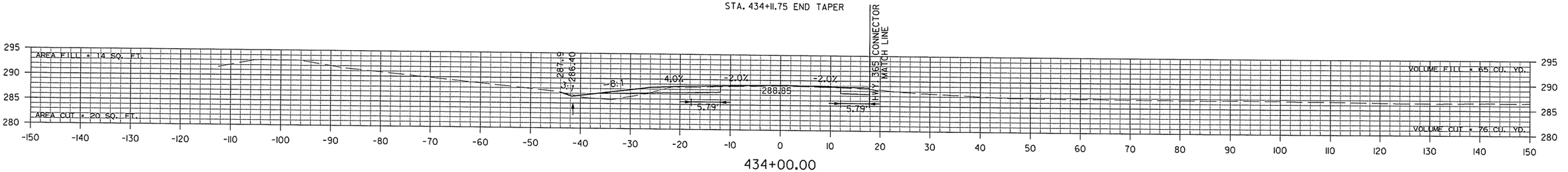



F.L. = 283.08 LT.

434+83.00

STA. 434+30.00
END SP. DITCH LT. -0.17%
ELEV. 286.35

STA. 434+11.75 END TAPER




434+00.00

HWY 365
STA. 434+00 TO STA. 435+08

rnfortner
WORKSPACE: AHTD
L:\2005\050917\230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_HWY_365.dgn
5/15/2015 8:36:41 AM
REVISED DATE:

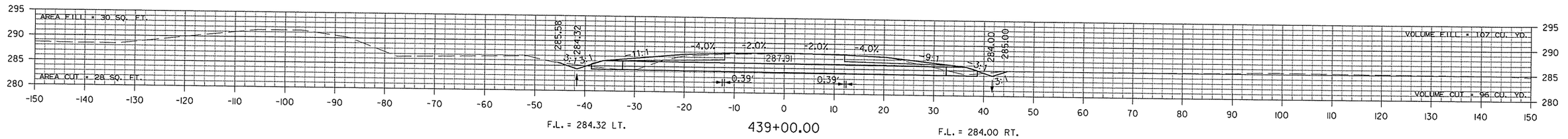
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 163 | 168 |

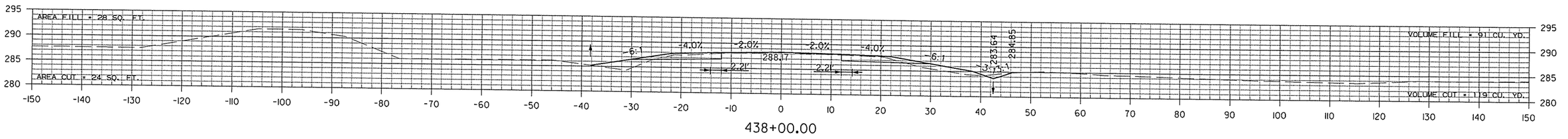
(2) CROSS SECTIONS

STA. 439+00.00
BEGIN SP. DITCH LT. 0.18%
ELEV. 284.32

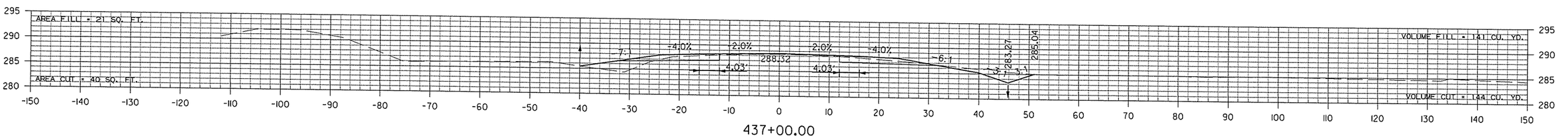
STA. 439+00 CONSTRUCT
DBL. 18" X 29" X 65' R.C.A.P. CULVERT
(CLASS III) TYPE 3 BEDDING
WITH FES LT. & RT.
Q50 = 12 CFS DA = 3 ACRES

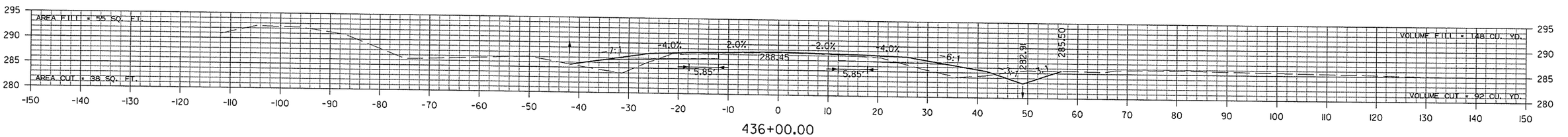
STA. 439+00.00
END SP. DITCH RT. 0.36%
ELEV. 284.00




STA. 437+01.75 BEGIN TAPER
STA. 437+01.75 END TAPER




HWY 365
STA. 436+00 TO STA. 439+00

rnfortner 5/15/2015 8:37:02 AM
WORKSITE: AHTD - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_HWY_365.dgn
L:\2009\090230
REVISED DATE:

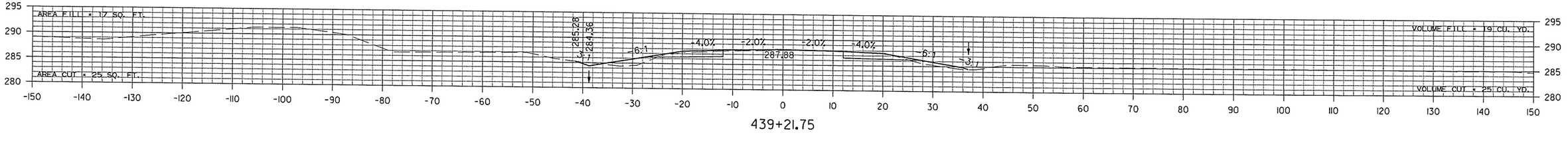
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 164 | 168 |

(2) CROSS SECTIONS

STA. 440+25.00
END SP. DITCH LT. 0.18%
ELEV. 284.55

STA. 439+21.75 END HWY. 365

STA. 439+21.75 END TAPER




439+21.75

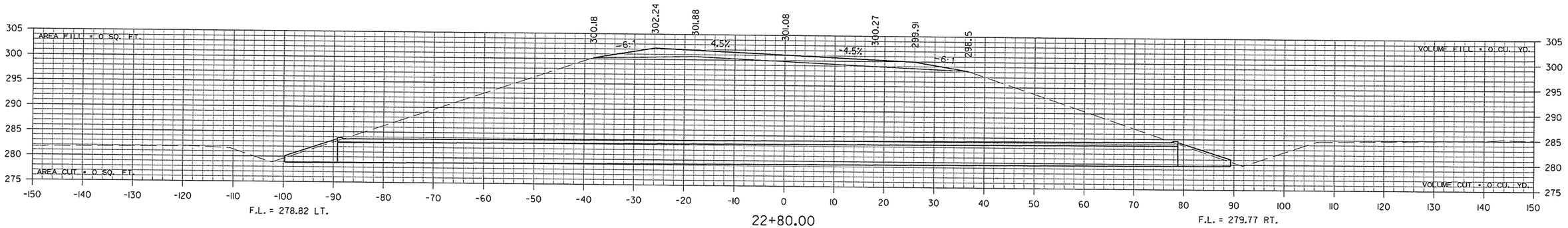
HWY 365
STA. 439+22 TO STA. 439+22

rnfortner 5/15/2015 8:37:20 AM
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REVISED DATE:

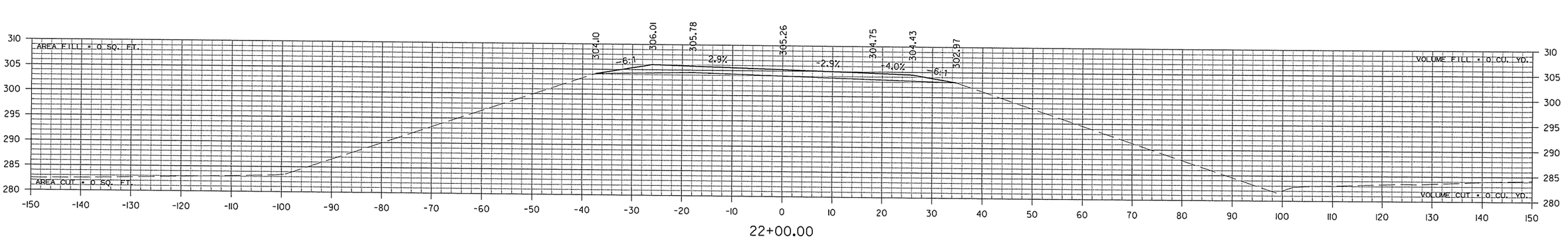
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 165 | 168 |

(2) CROSS SECTIONS

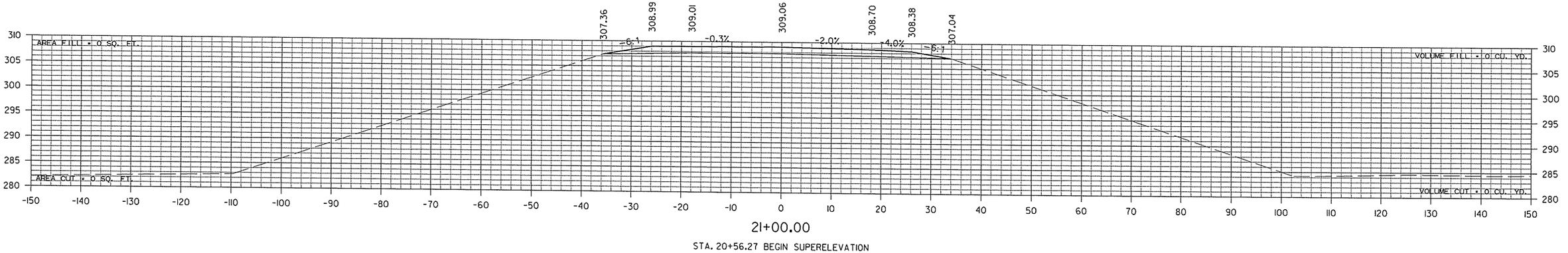
STA. 22+80 IN PLACE
8' X 4' X 168' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
Q50 = 210 CFS DA = 73 ACRES
RETAIN




22+80.00




22+00.00




21+00.00

STA. 20+56.27 BEGIN SUPERELEVATION

STA. 20+30.46 BEGIN HWY. 365 CONNECTOR

AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

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

HWY. 365 CONNECTOR
STA. 21+00 TO STA. 22+80

rnfortner 5/5/2015 8:40:22 AM
WORKSPACE: AHTD
L:\2009\090I230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_365_CONN.dgn
REVISED DATE:

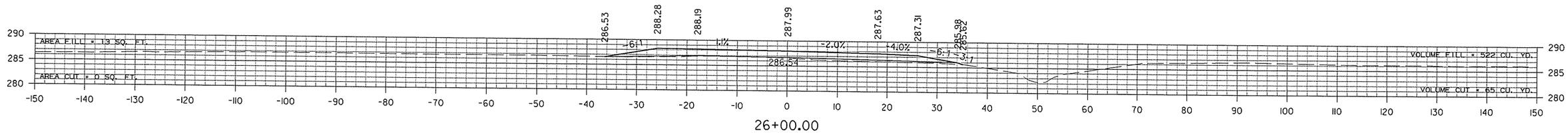
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 166 | 168 |
| | | | | (2) CROSS SECTIONS | | | | |

AREA FILL = 13 SQ. FT.
AREA CUT = 0 SQ. FT.

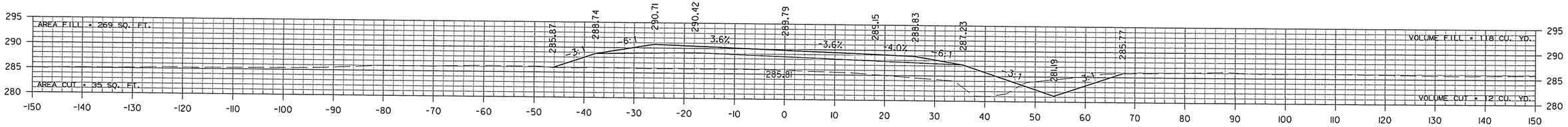
VOLUME FILL = 41 CU. YD.
VOLUME CUT = 0 CU. YD.

## STA. 26+85.75 END HWY. 365 CONNECTOR

STA. 26+77.53 END SUPERELEVATION




26+00.00




25+00.00

AREA FILL = 304 SQ. FT.
AREA CUT = 24 SQ. FT.

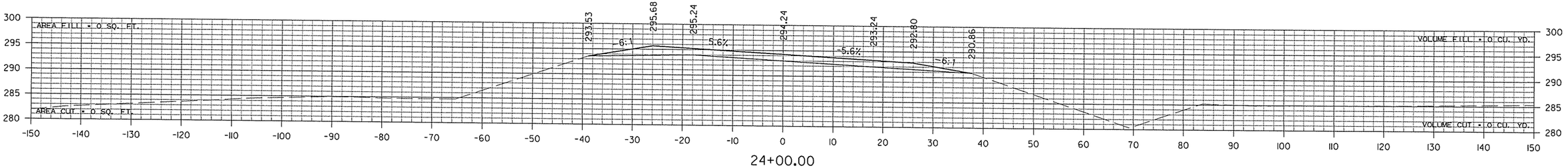
AREA FILL = 0 SQ. FT.
AREA CUT = 0 SQ. FT.

STA. 24+88.92 TOE OF SLOPE

## STA. 24+75.00 END PAVING HWY. 365 CONNECTOR
## BEGIN GRADING AND PAVING

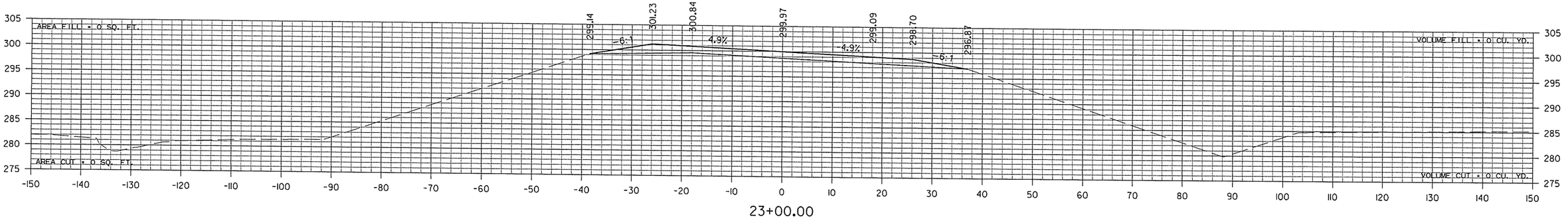
VOLUME FILL = 78 CU. YD.
VOLUME CUT = 6 CU. YD.

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




24+00.00

STA. 23+77.53 MAXIMUM SUPERELEVATION (S.E. = .060'/')
STA. 23+56.27 MAXIMUM SUPERELEVATION (S.E. = .060'/')



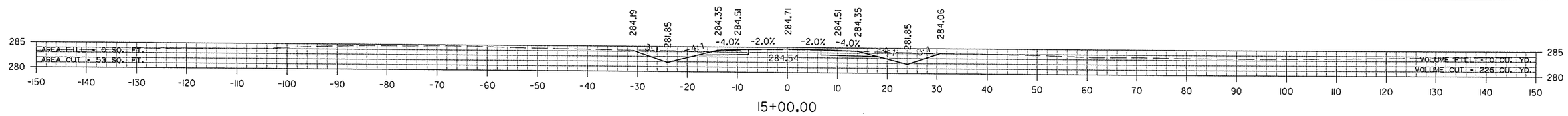

23+00.00

HWY. 365 CONNECTOR
STA. 23+00 TO STA. 26+00

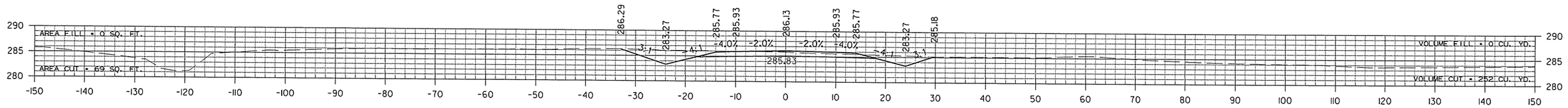
rnfortner 5/15/2015 8:40:46 AM
WORKSPACE: AHTD
L:\2009\090T230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_365_CONN.dgn
REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 167 | 168 |

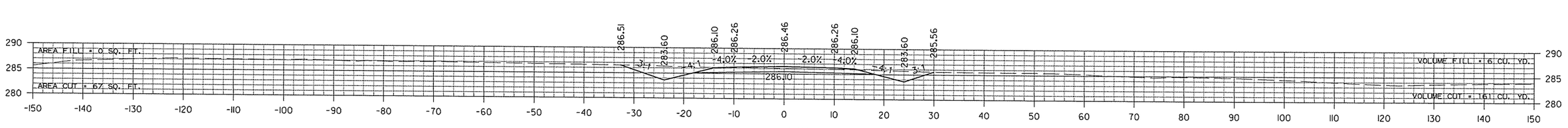
(2) CROSS SECTIONS



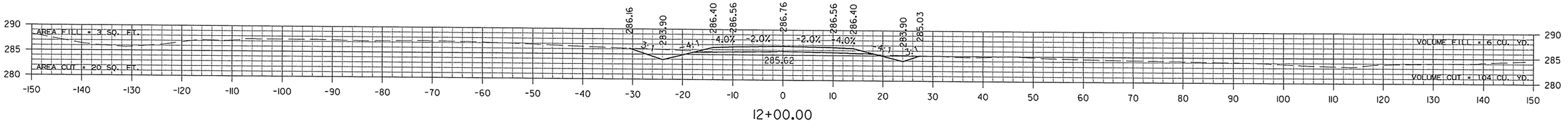

15+00.00



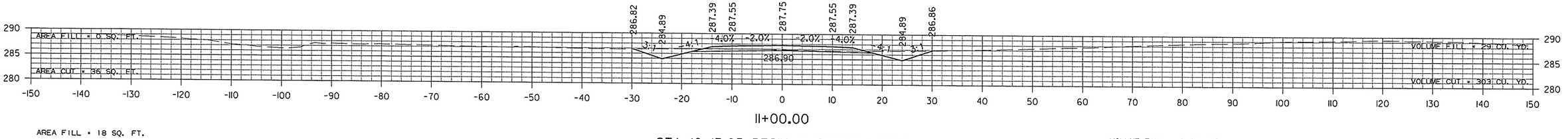

14+00.00




13+00.00




12+00.00




11+00.00

AREA FILL = 18 SQ. FT.
AREA CUT = 152 SQ. FT.

STA. 10+13.05 BEGIN McCLURE ACRES

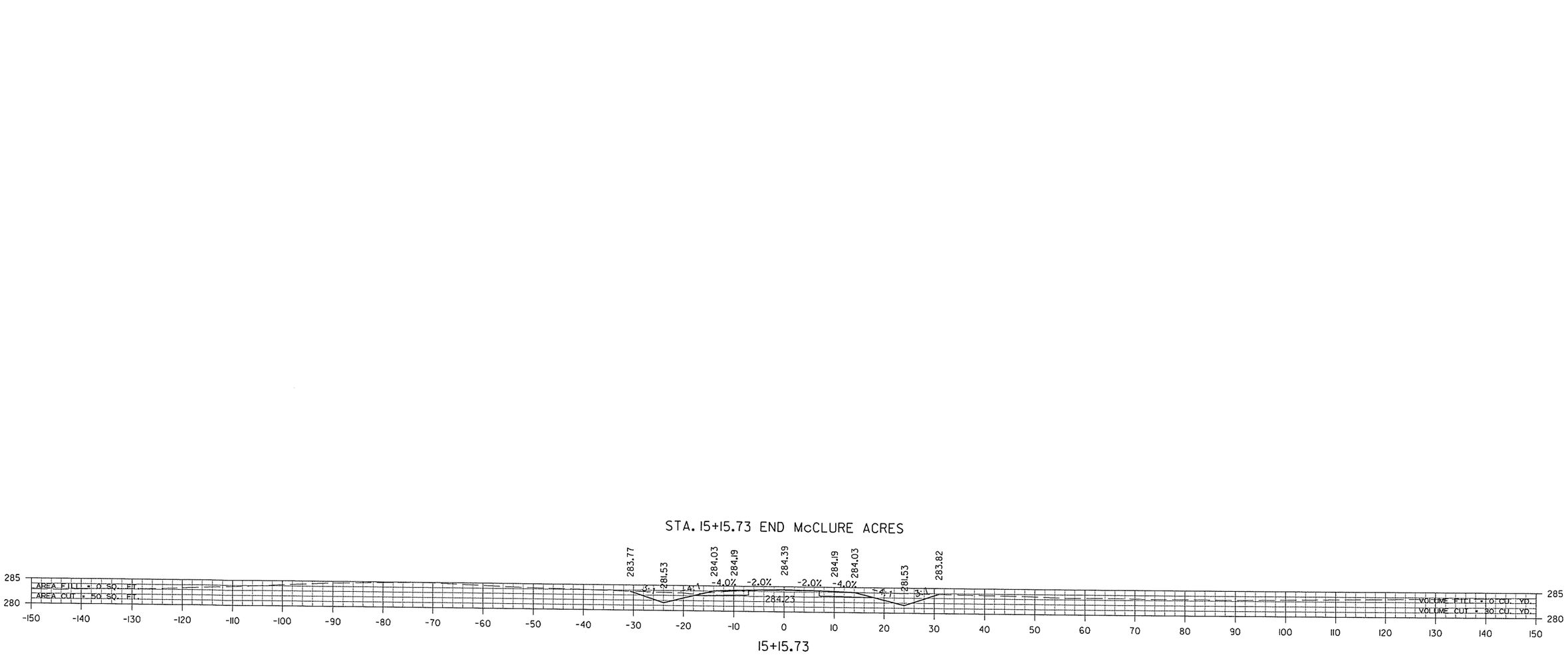
VOLUME FILL = 0 CU. YD.
VOLUME CUT = 0 CU. YD.

McCLURE ACRES
STA. 11+00 TO STA. 15+00

rnfortner 5/15/2015 8:44:05 AM
WORKSPACE: AHTD
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REVISED DATE:

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | 080396 | 168 | 168 |

(2) CROSS SECTIONS




McCLURE ACRES
STA. 15+16 TO STA. 15+16

rnfortner 5/15/2015 8:44:23 AM
WORKSPACE: AMTD
L:\2009\090230 - Conway Western ArterialLoop\Drawings\PRJLBS\PRJLBS_CX_MCCLURE.dgn
REVISED DATE: