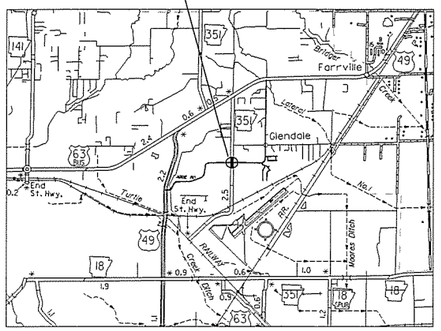
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	1	67
				(2)	HWY. 351/AGGIE RD. INTERS. IMPVTS. (JONESBORO) (S)			

PROJECT LOCATION



VICINITY MAP

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

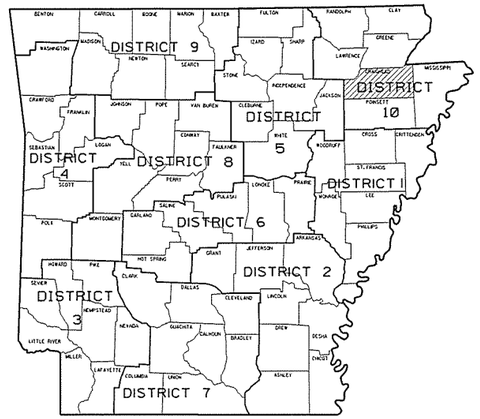
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 351/AGGIE RD.
INTERS. IMPVTS. (JONESBORO) (S)

CRAIGHEAD COUNTY
ROUTE 351 SECTION 1

FEDERAL AID PROJECT SD-STP-AR51(4)

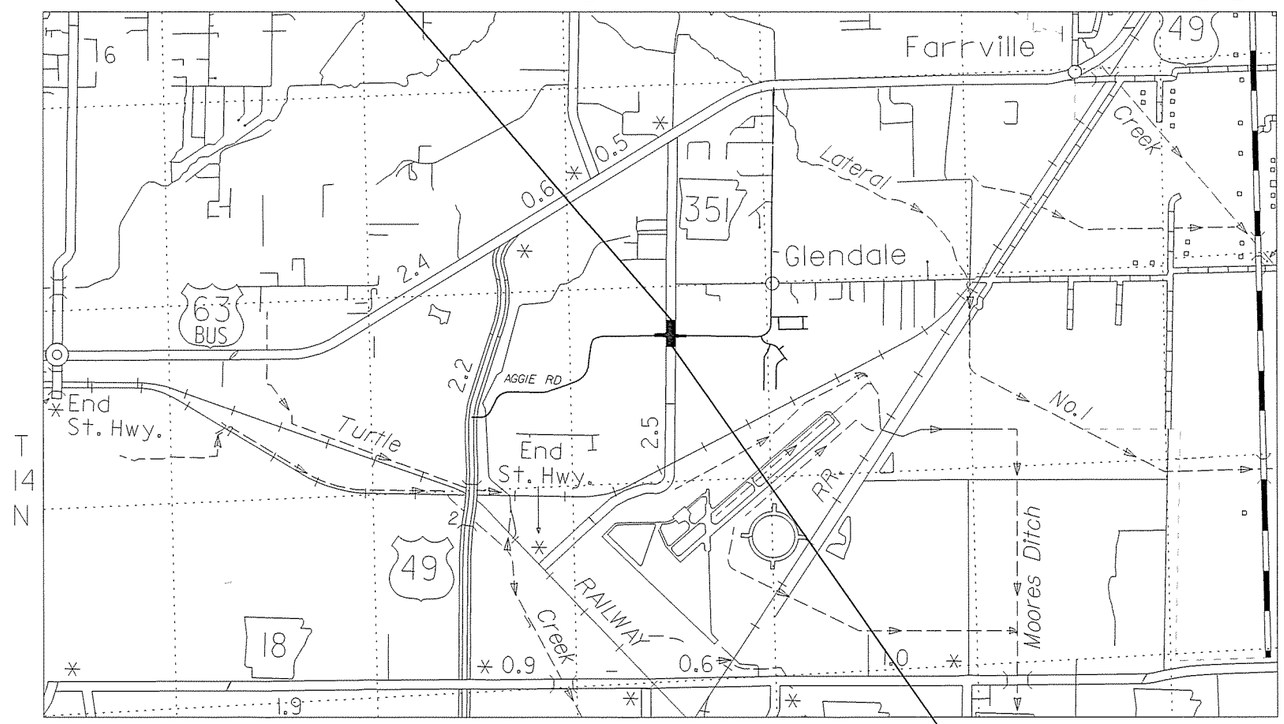
JOB 100790



ARKANSAS HIGHWAY DISTRICT 10

STA. 106+79.34
END JOB 100790
L.M. 1.59

R-4-E NOT TO SCALE R-5-E



STA. 99+10.00
BEGIN JOB 100790
L.M. 1.44

· DESIGN TRAFFIC DATA ·	HWY. 351	AGGIE RD.
DESIGN YEAR	2035	2035
2015 ADT	4,858	4,751
2035 ADT	6,908	6,848
2035 DHV	755	833
DIRECTIONAL DISTRIBUTION	0.60	0.60
TRUCKS	1%	1%
DESIGN SPEED	45 MPH	30 MPH

PROJECT COORDINATES

	BEGIN	MID-POINT	END
LATITUDE	N 35°50'43"	N 35°50'47"	N 35°50'51"
LONGITUDE	W 90°38'59"	W 90°38'59"	W 90°38'59"
STATION	99+10.00	102+94.67	106+79.34

LENGTH COMPUTED ALONG C.L. HWY. 351

GROSS LENGTH OF PROJECT	769.34 FEET OR	0.146 MILES
NET LENGTH OF ROADWAY	769.34 FEET OR	0.146 MILES
NET LENGTH OF BRIDGES	0.00 FEET OR	0.000 MILES
NET LENGTH OF PROJECT	769.34 FEET OR	0.146 MILES

CITY OF JONESBORO

GARVER
PROJECT NO. 13017040

GARVER LLC
No. 766
CERTIFICATE OF AUTHORIZATION
ARKANSAS ENGINEER

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No. 11835
TODD E. MUELLER
Digitally Signed 06/04/2015

P.E. JOB 100790

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6-30-15				6	ARK.			
				JOB NO.		100790	2	67

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

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/30/2015

INDEX OF SHEETS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
108-1	LIQUIDATED DAMAGES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
620-1	MULCH COVER
JOB 100790	AIRPORT CLEARANCE REQUIREMENTS
JOB 100790	BIDDING REQUIREMENTS AND CONDITIONS
JOB 100790	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 100790	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 100790	CHANNEL POST SIGN SUPPORT
JOB 100790	COMPACTED EMBANKMENT
JOB 100790	CONCRETE WALKS (TYPE SPECIAL)
JOB 100790	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 100790	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 100790	MANDATORY ELECTRONIC CONTRACT
JOB 100790	NESTING SITES OF MIGRATORY BIRDS
JOB 100790	SHORING FOR CULVERTS
JOB 100790	SOIL STABILIZATION
JOB 100790	STORM WATER POLLUTION PREVENTION PLAN
JOB 100790	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 100790	UTILITY ADJUSTMENTS
JOB 100790	WARM MIX ASPHALT

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.

2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.

3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.

5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.

6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.

8. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENT REMOVED SHALL BE PAID FOR UNDER PAY ITEM 210 - EXCAVATION AND EMBANKMENT, UNLESS OTHERWISE NOTED.

INDEX OF SHEETS,
GOVERNING SPECIFICATIONS,
& GENERAL NOTES

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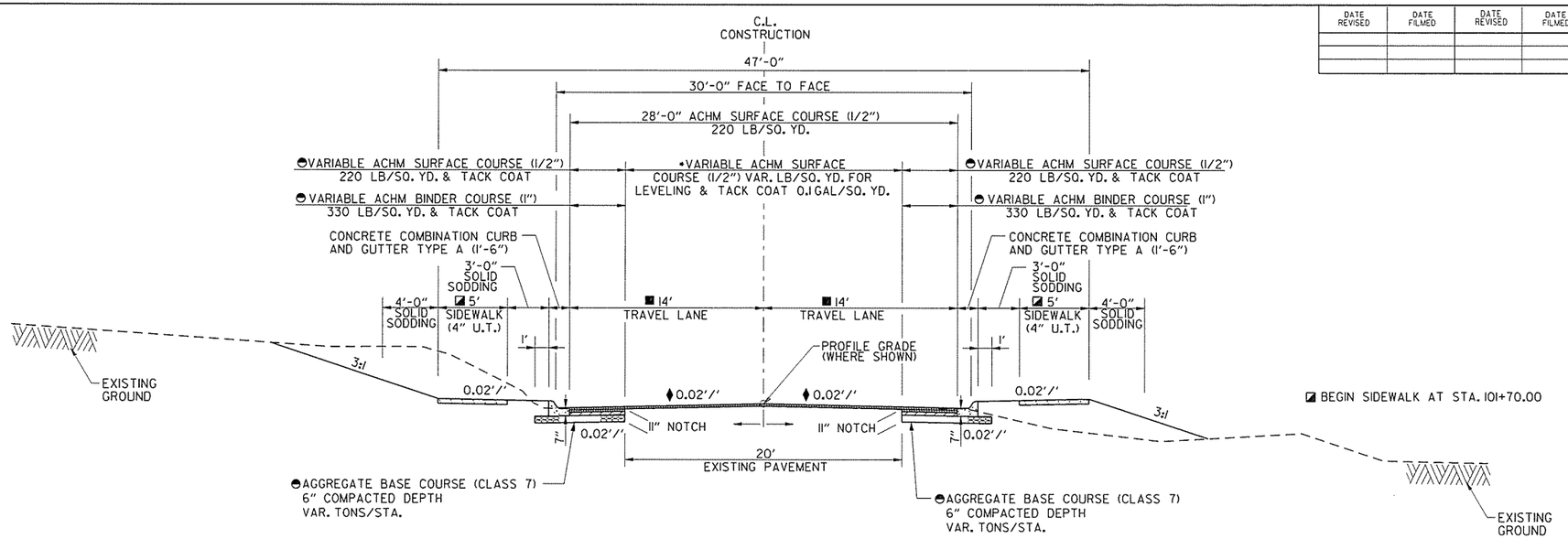
				6	ARK.			
				JOB NO.		100790	3	67

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/04/2015



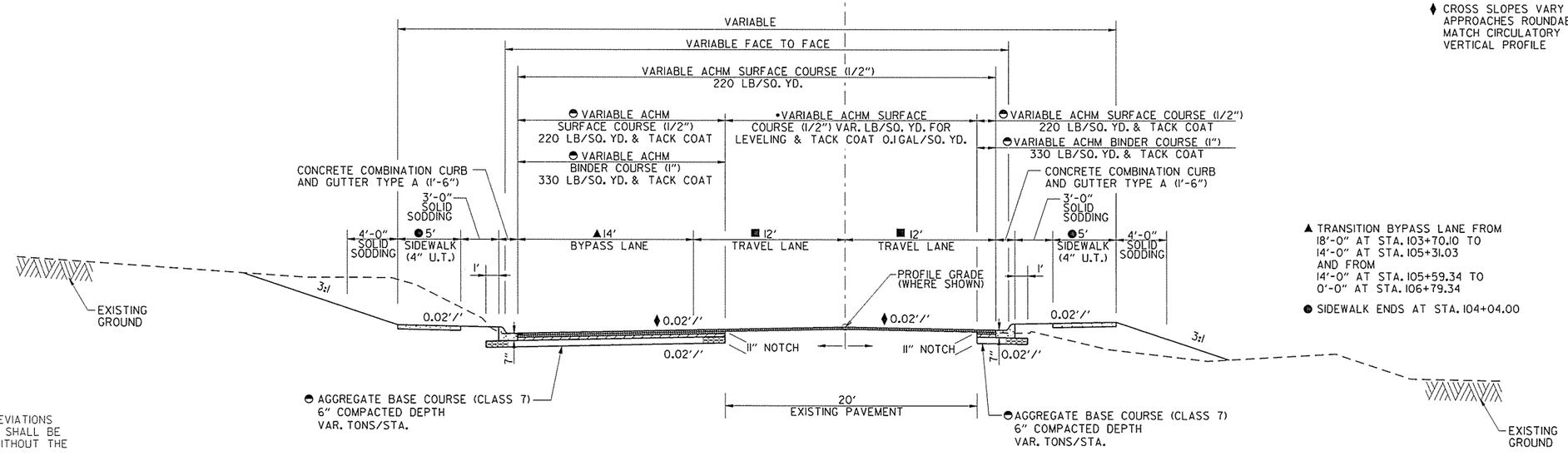
TYPICAL SECTION
HWY. 351
STA. 99+10.00 TO STA. 102+00.00

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

◓ P.C.C. BASE IN LOCATIONS WITH A WIDTH OF LESS THAN 4'-0" (SEE DETAIL A)

■ TRAVEL LANES VARY AS SECTION APPROACHES ROUNDABOUT (SEE SPECIAL DETAILS)

♦ CROSS SLOPES VARY AS SECTION APPROACHES ROUNDABOUT TO MATCH CIRCULATORY ROADWAY VERTICAL PROFILE

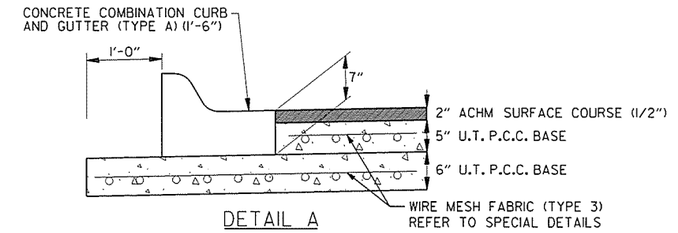


TYPICAL SECTION
HWY. 351
STA. 103+60.00 TO STA. 106+79.34

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

▲ TRANSITION BYPASS LANE FROM 18'-0" AT STA. 103+70.10 TO 14'-0" AT STA. 105+31.03 AND FROM 14'-0" AT STA. 105+59.34 TO 0'-0" AT STA. 106+79.34

● SIDEWALK ENDS AT STA. 104+04.00



DETAIL A

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.

4. 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 SHALL NOT BE PAID FOR DIRECTLY, BUT PAYMENT SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS PAY ITEMS.

TYPICAL SECTIONS OF IMPROVEMENT

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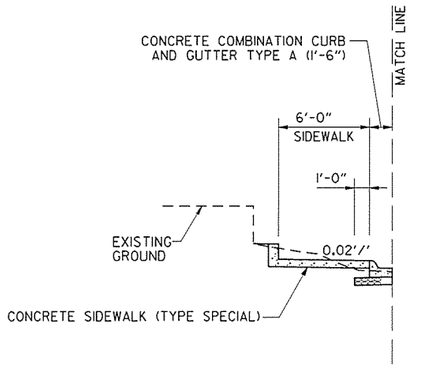
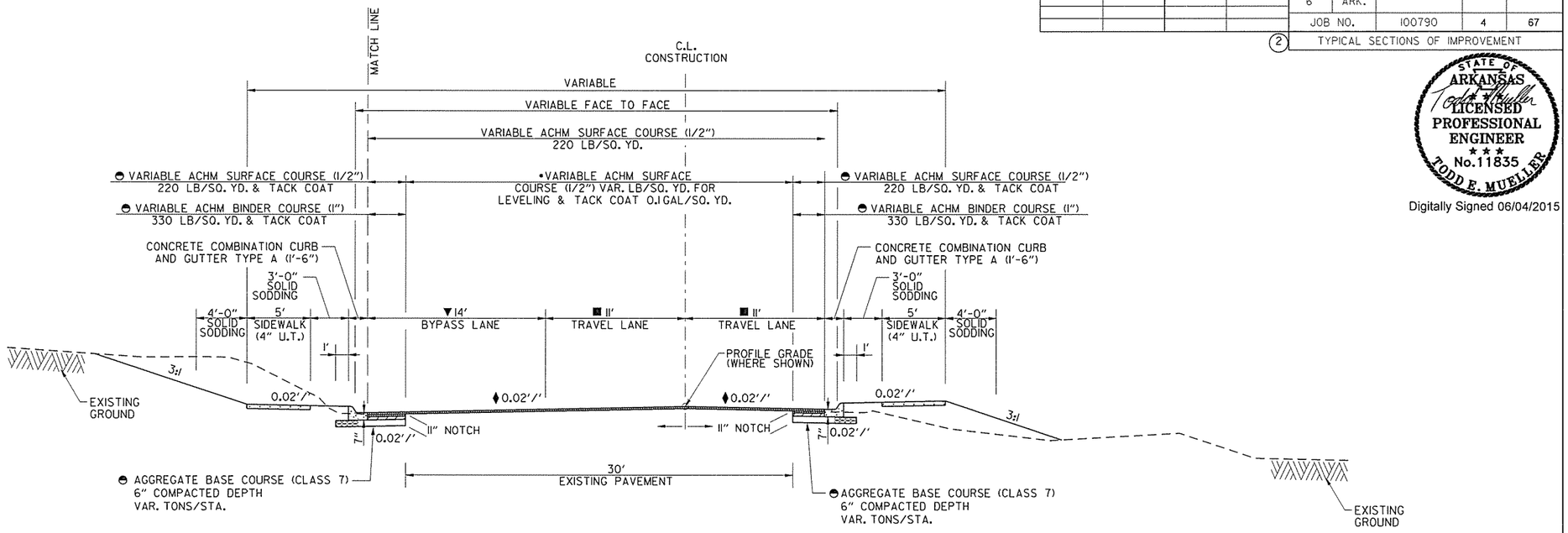
				6	ARK.			
				JOB NO.		100790	4	67

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015



TYPICAL SECTION
CONCRETE SIDEWALK (TYPE SPECIAL)
STA. 100+36.00 TO STA. 100+55.00



TYPICAL SECTION
AGGIE RD.
STA. 99+92.62 TO STA. 103+70.00

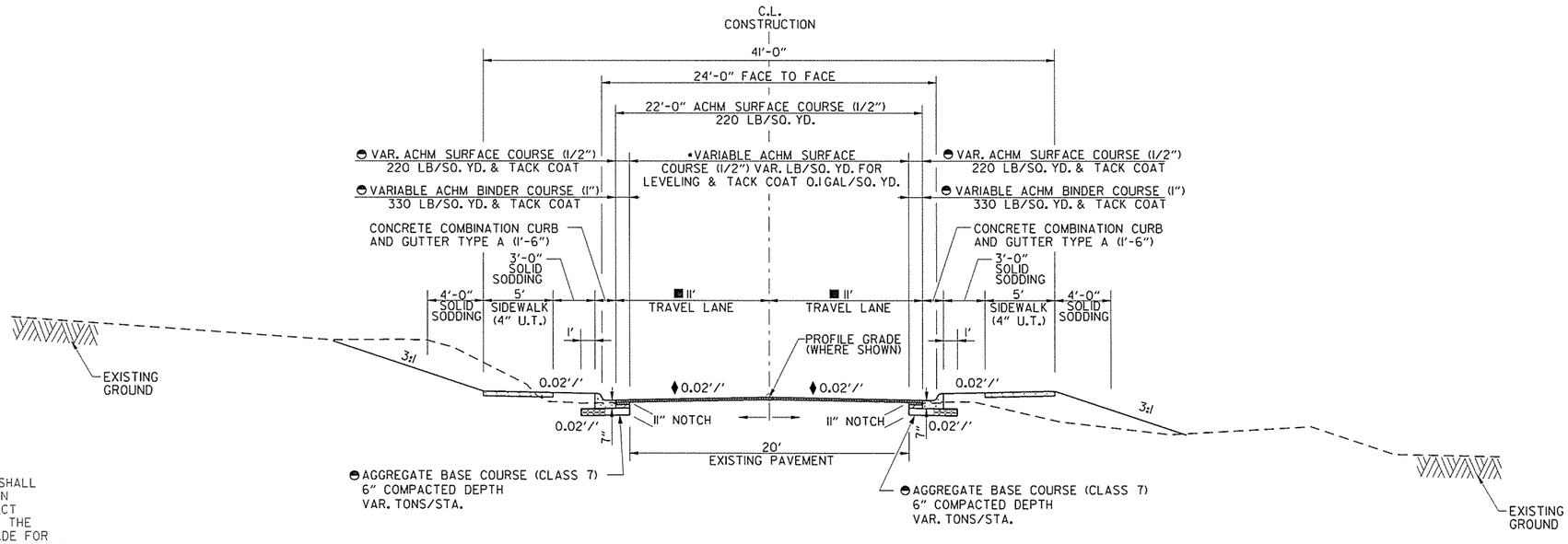
•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

▼ TRANSITION BYPASS LANE FROM 11'-0" AT STA. 101+12.64 TO 14'-0" AT STA. 101+57.64 AND FROM 14'-0" AT STA. 102+36.71 TO 18'-0" AT STA. 103+62.68

◓ P.C.C. BASE IN LOCATIONS WITH A WIDTH OF LESS THAN 4'-0" (SEE DETAIL A)

■ TRAVEL LANES VARY AS SECTION APPROACHES ROUNDABOUT (SEE SPECIAL DETAILS)

♦ CROSS SLOPES VARY AS SECTION APPROACHES ROUNDABOUT TO MATCH CIRCULATORY ROADWAY VERTICAL PROFILE



TYPICAL SECTION
AGGIE RD.
STA. 105+30.00 TO STA. 106+73.29

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

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.

4. 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 SHALL NOT BE PAID FOR DIRECTLY, BUT PAYMENT SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS PAY ITEMS.

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TYPICAL SECTIONS OF IMPROVEMENT

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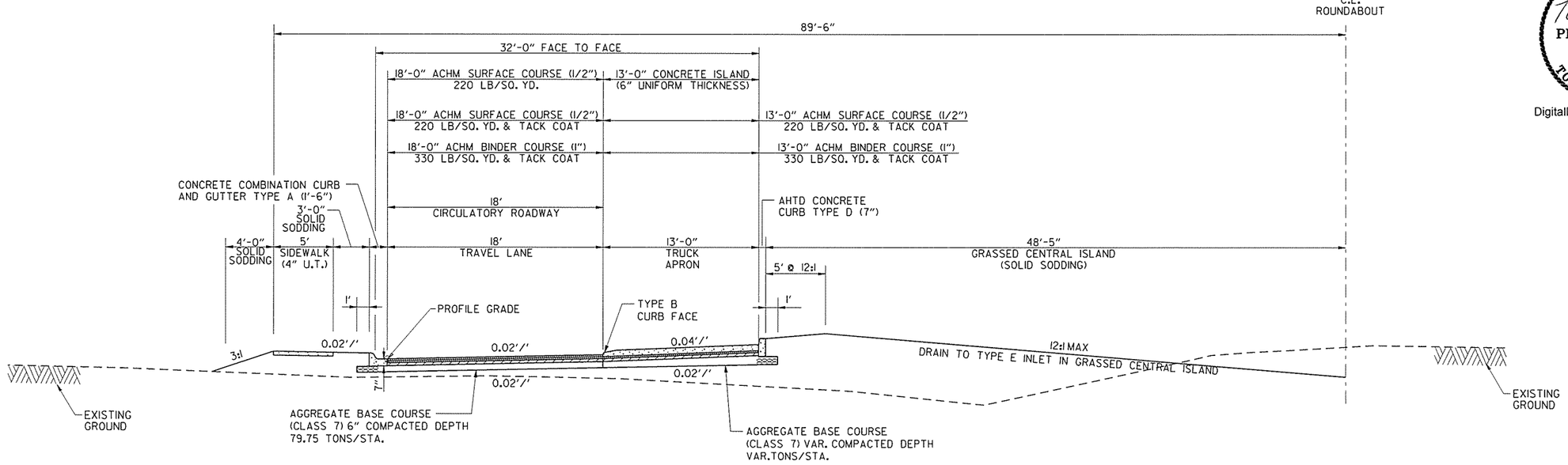
				6	ARK.			
				JOB NO.		100790	5	67

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/04/2015



TYPICAL SECTION

ROUNDABOUT
STA. 0+00.00 TO STA. 5+02.65

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.

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				6	ARK.			
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				(2)	SPECIAL DETAILS			

STATE OF ARKANSAS
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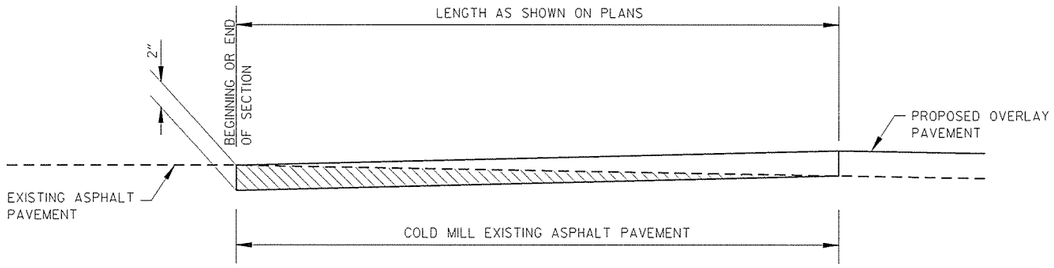

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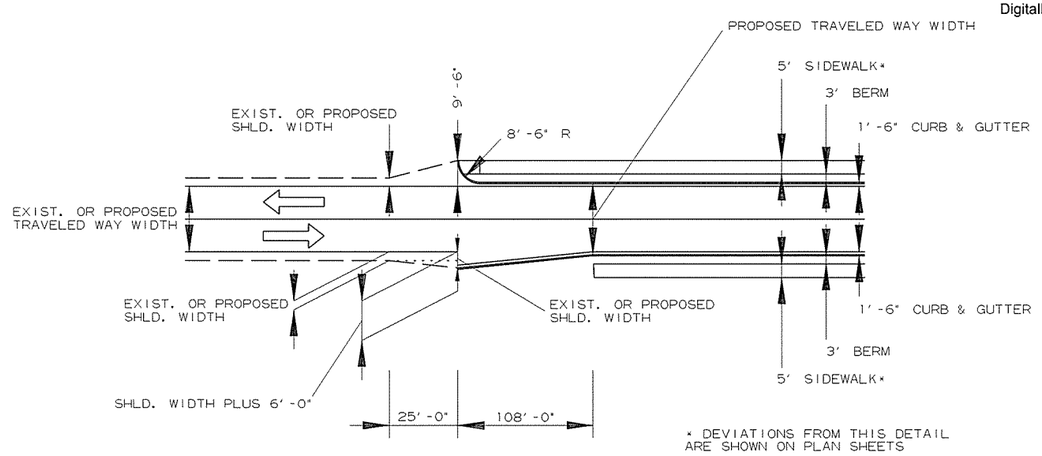
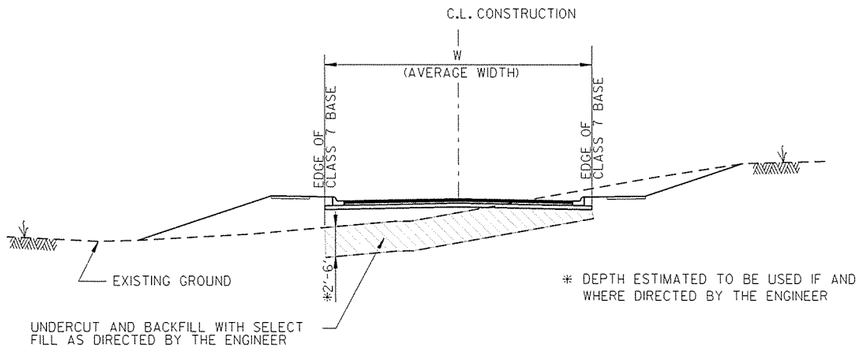


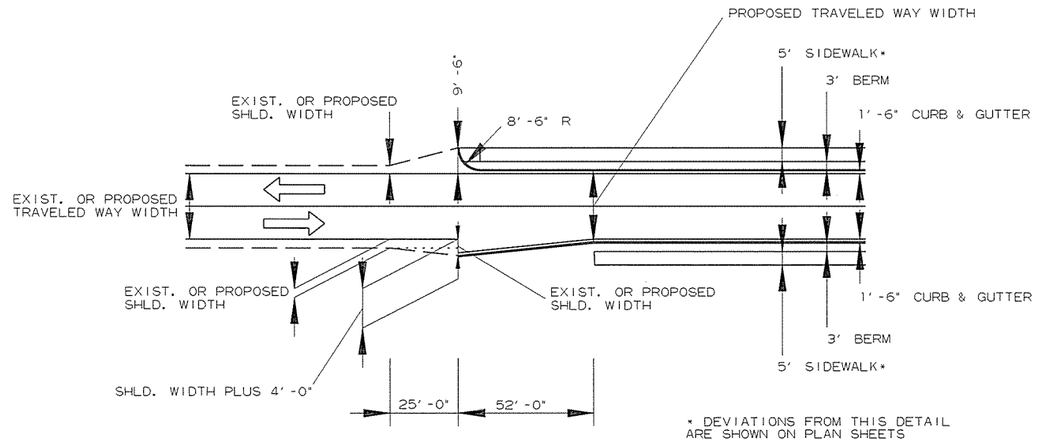
TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

HWY. 351



DETAIL OF UNDERCUT

HWY. 351 STA. 99+10 TO STA. 106+79.34 W = VARIES
AGGIE RD. STA. 99+92.62 TO STA. 106+73.29 W = VARIES



TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

AGGIE RD.

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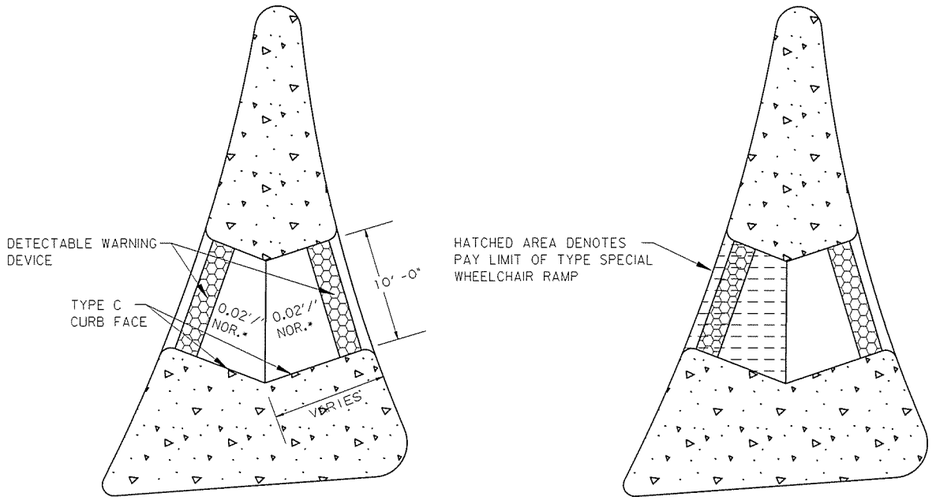
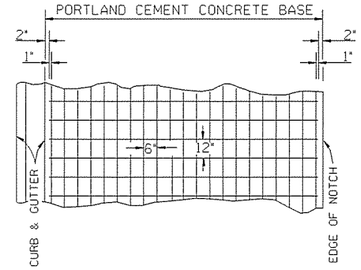


* MATCH ROADWAY CROSS SLOPE UP TO A MAXIMUM SLOPE OF 12:1

NOTE: SEE AHTD STANDARD DRAWING WR-1 FOR ADDITIONAL DETAILS AND GENERAL NOTES

TYPE SPECIAL WHEELCHAIR RAMP



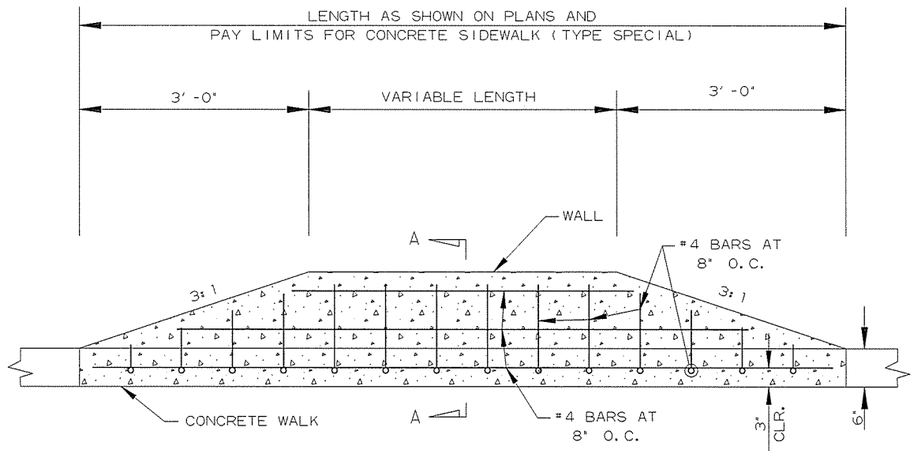
DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)

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

NOTES:

1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (5" U.T. & 6" U.T.)

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015



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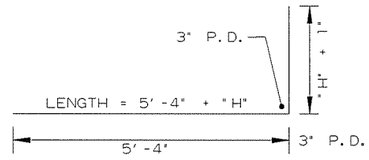
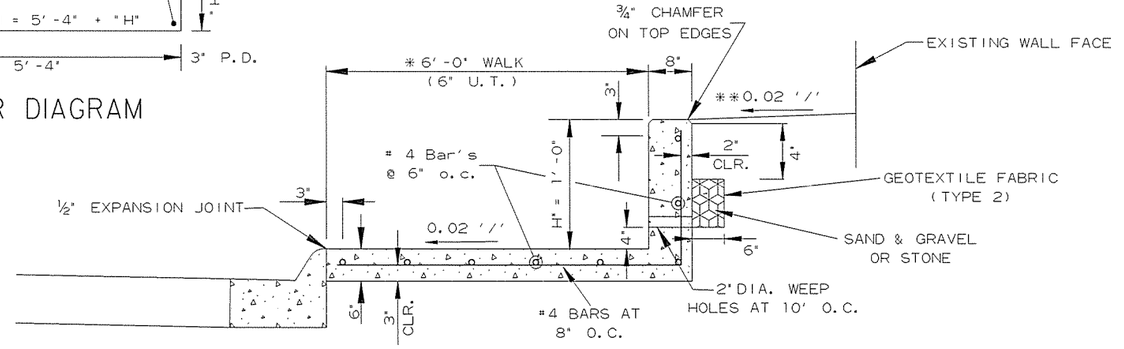


BAR DIAGRAM



SECTION A-A

* ADJUST SIDEWALK WIDTH AS NEEDED TO AVOID CONFLICTING WITH EXISTING WALL FOOTING.

** SLOPE AT 3:1 MAX OUTSIDE EXISTING WALL LIMITS

NOTE: PAYMENT FOR THE REINF. STEEL, EXPANSION JOINT, WEEP HOLES, AND ADDL. CONCRETE REQUIRED FOR THE RETAINING WALL TO BE INCLUDED IN THE UNIT PRICE BID PER SQ. YD. FOR CONCRETE WALKS (TYPE SPECIAL).

CONCRETE WALK (TYPE SPECIAL) DETAILS (2'-0" MAX. HEIGHT)

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				6	ARK.			
				JOB NO.		100790	8	67

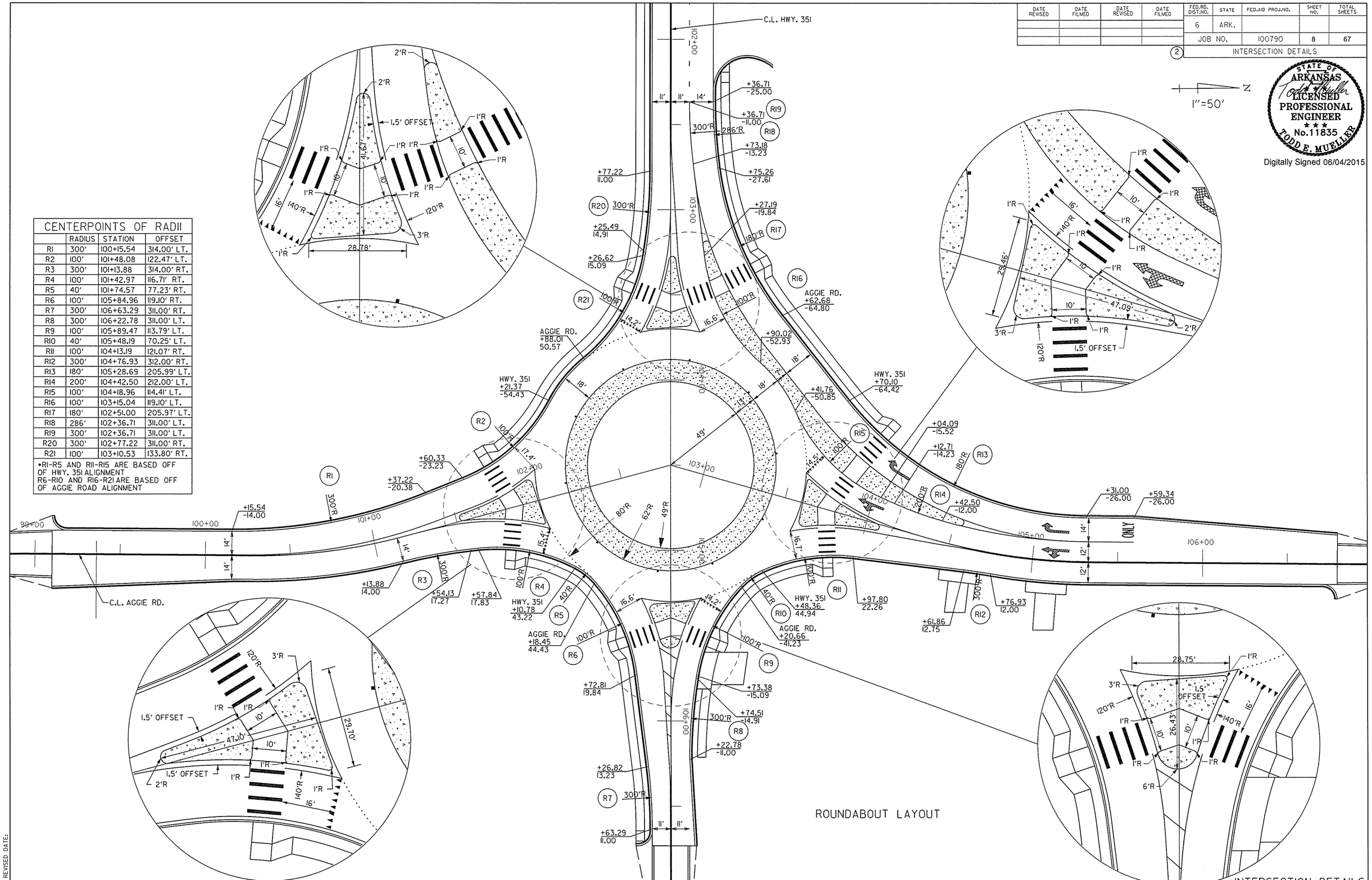
(2) INTERSECTION DETAILS

CENTERPOINTS OF RADII			
	RADIUS	STATION	OFFSET
RI	300′	100+15.54	314.00′ LT.
R2	100′	101+48.08	122.47′ LT.
R3	300′	101+13.88	314.00′ RT.
R4	100′	101+42.97	116.71′ RT.
R5	40′	101+74.57	77.23′ RT.
R6	100′	105+84.96	119.10′ RT.
R7	300′	106+63.29	311.00′ RT.
R8	300′	106+22.78	311.00′ LT.
R9	100′	105+89.47	113.79′ LT.
R10	40′	105+48.19	70.25′ LT.
RII	100′	104+13.19	121.07′ RT.
R12	300′	104+76.93	312.00′ RT.
R13	180′	105+28.69	205.99′ LT.
R14	200′	104+42.50	212.00′ LT.
R15	100′	104+18.96	114.41′ LT.
R16	100′	103+15.04	119.10′ LT.
R17	180′	102+51.00	205.97′ LT.
R18	286′	102+36.71	311.00′ LT.
R19	300′	102+36.71	311.00′ LT.
R20	300′	102+77.22	311.00′ RT.
R21	100′	103+10.53	133.80′ RT.

•RI-R5 AND RII-R15 ARE BASED OFF OF HWY. 351 ALIGNMENT
R6-RIO AND R16-R21 ARE BASED OFF OF AGGIE ROAD ALIGNMENT

N
1″=50′

STATE OF ARKANSAS
Todd Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015



ROUNDABOUT LAYOUT

INTERSECTION DETAILS

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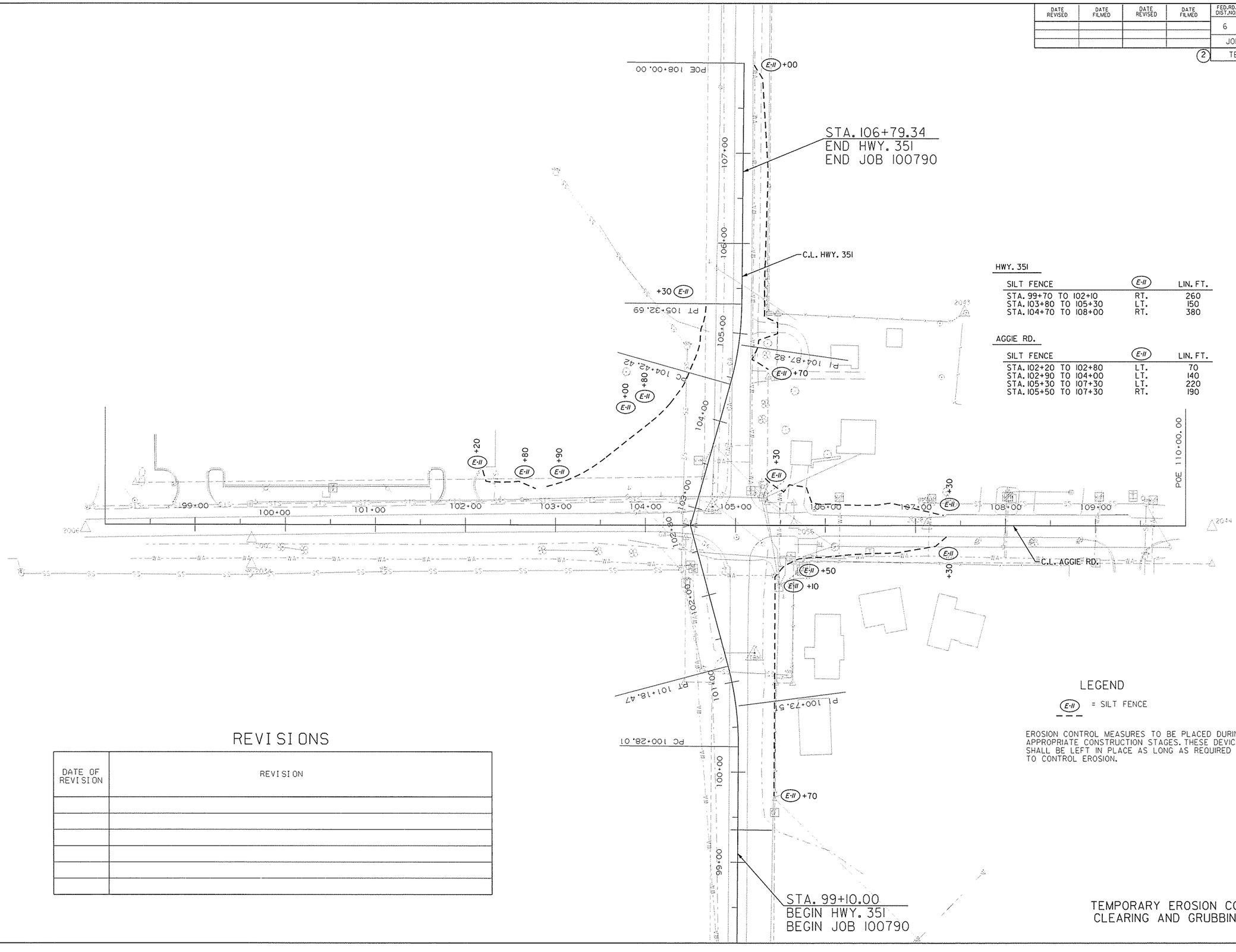
				JOB NO.		100790	9	67
				(2)	TEMPORARY EROSION CONTROL DETAILS			



N

1"=100'

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

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HWY. 351

SILT FENCE	E-II	LIN. FT.
STA. 99+70 TO 102+10	RT.	260
STA. 103+80 TO 105+30	LT.	150
STA. 104+70 TO 108+00	RT.	380

AGGIE RD.

SILT FENCE	E-II	LIN. FT.
STA. 102+20 TO 102+80	LT.	70
STA. 102+90 TO 104+00	LT.	140
STA. 105+30 TO 107+30	LT.	220
STA. 105+50 TO 107+30	RT.	190

LEGEND

E-II = SILT FENCE

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

REVISIONS

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING AND STAGE I

rcoorbyn 6/4/2015 10:29:42 AM
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REVISED DATE:

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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		100790	10	67

(2) TEMPORARY EROSION CONTROL DETAILS

HWY. 351

SILT FENCE	(E-11)	LIN. FT.
STA. 99+70 TO 102+10	RT.	RETAIN
STA. 103+80 TO 105+30	LT.	RETAIN
STA. 104+70 TO 108+00	RT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 98+57 TO 102+00	LT.	1
STA. 103+77 TO 107+00	LT.	1

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 98+57 TO 102+00	LT.	1
STA. 99+00 TO 99+36	RT.	1
STA. 103+77 TO 107+00	LT.	1

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 100+90	LT.	20
STA. 100+91	RT.	20
STA. 102+22	RT.	20
STA. 102+24	LT.	20
STA. 102+56	LT.	20
STA. 103+50	RT.	20
STA. 104+08	RT.	20
STA. 104+08	RT.	20
STA. 104+85	RT.	20

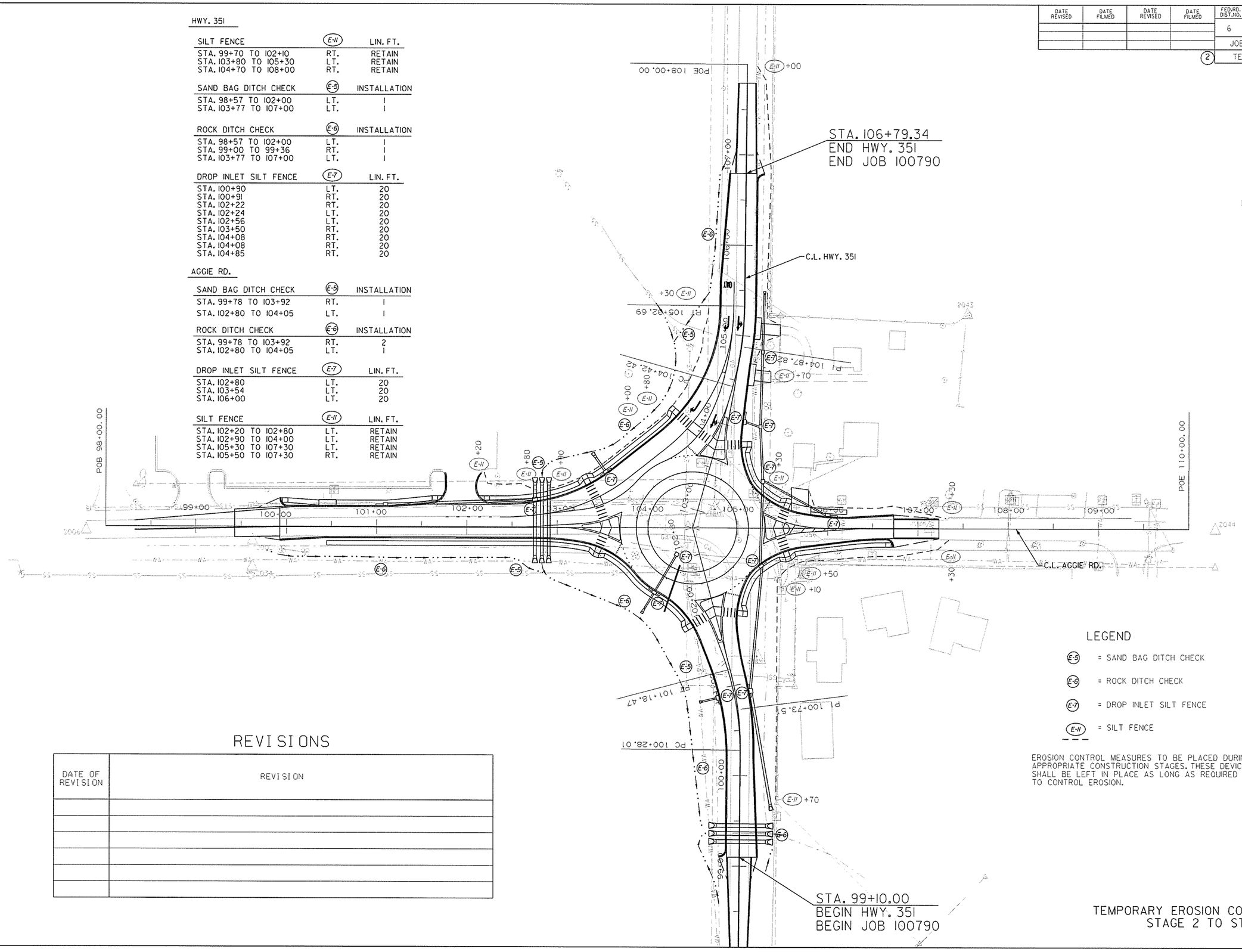
AGGIE RD.

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 99+78 TO 103+92	RT.	1
STA. 102+80 TO 104+05	LT.	1

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 99+78 TO 103+92	RT.	2
STA. 102+80 TO 104+05	LT.	1

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 102+80	LT.	20
STA. 103+54	LT.	20
STA. 106+00	LT.	20

SILT FENCE	(E-11)	LIN. FT.
STA. 102+20 TO 102+80	LT.	RETAIN
STA. 102+90 TO 104+00	LT.	RETAIN
STA. 105+30 TO 107+30	LT.	RETAIN
STA. 105+50 TO 107+30	RT.	RETAIN



N

1"=100'

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
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LEGEND

(E-5) = SAND BAG DITCH CHECK

(E-6) = ROCK DITCH CHECK

(E-7) = DROP INLET SILT FENCE

(E-11) = SILT FENCE

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

REVISIONS

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 2 TO STAGE 4

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	11	67

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
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N

1"=100'

STAGE I - CONSTRUCTION SEQUENCE NOTES

1) MAINTAIN TRAFFIC ON AGGIE RD. AND HWY. 351.

2) CONSTRUCT PIPE CULVERTS UNDER AGGIE RD. AND HWY. 351. UTILIZE FLAGGERS AS NECESSARY WHEN CLOSING 1 LANE AT A TIME WHEN CONSTRUCTING THE PIPE CULVERTS UNDER THE EXISTING LANES.

GENERAL NOTES:

1) ALL OPEN CUTS IN THE ROADWAY SHALL BE PROPERLY REPAIRED BEFORE THE WORK DAY IS COMPLETE.

2) LANE CLOSURES SHALL TAKE PLACE OUTSIDE OF AM/PM PEAK HOUR TRAFFIC.

STA. 106+79.34
END HWY. 351
END JOB 100790

STA. 99+10.00
BEGIN HWY. 351
BEGIN JOB 100790

C.L. HWY. 351

C.L. AGGIE RD.

9 TRAFFIC DRUMS AT 25' O.C.
AGGIE RD. STA. 101+50 TO STA. 103+50

9 TRAFFIC DRUMS AT 25' O.C.
HWY. 351 STA. 98+14 TO STA. 100+14

100' TAPER

100' TAPER

POE 108+00.00

POE 110+00.00

PT 105+32.69

PC 104+42.42

P1 104+87.82

PT 101+18.47

PC 100+28.01

PL 100+73.51

STAGE 1 CONSTRUCTION

STAGE 1 TRAFFIC

MAINTENANCE OF TRAFFIC
STAGE 1

rccorbyn 6/4/2015 10:29:43 AM
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6	ARK.			
JOB NO.		100790	12	67

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
Todd F. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD F. MUELLER
Digitally Signed 06/04/2015

N

1"=100'

STAGE 2 - CONSTRUCTION PAVEMENT MARKINGS

AGGIE RD. STA. 99+43 TO STA. 104+64
DOUBLE CENTERLINE= 1042 L.F.
AGGIE RD. STA. 99+43 TO STA. 104+64
LEFT EDGE LINE= 521L.F.
AGGIE RD. STA. 99+43 TO STA. 104+64
RIGHT EDGE LINE= 521L.F.
AGGIE RD. STA. 105+33 TO STA. 107+23
DOUBLE CENTERLINE = 380 L.F.
AGGIE RD. STA. 105+33 TO STA. 107+23
LEFT EDGE LINE = 190 L.F.
AGGIE RD. STA. 105+33 TO STA. 107+23
RIGHT EDGE LINE = 190 L.F.
HWY. 351 STA. 98+10 TO STA. 102+37
DOUBLE CENTERLINE = 854 L.F.
HWY. 351 STA. 98+10 TO STA. 102+37
LEFT EDGE LINE = 427 L.F.
HWY. 351 STA. 98+10 TO STA. 102+37
RIGHT EDGE LINE = 427 L.F.
HWY. 351 STA. 103+33 TO STA. 107+79
DOUBLE CENTERLINE = 892 L.F.
HWY. 351 STA. 103+33 TO STA. 107+79
LEFT EDGE LINE = 446 L.F.
HWY. 351 STA. 103+33 TO STA. 107+79
RIGHT EDGE LINE = 446 L.F.

STAGE 2 - CONSTRUCTION SEQUENCE NOTES

1) MAINTAIN TRAFFIC ON AGGIE RD. AND HWY. 351.
2) CONSTRUCT LEVELING UNDER TRAFFIC
3) CONSTRUCT GRADING AS SHOWN.

NOTE: ONLY ONE SIDE OF THE ROAD SHALL BE NOTCHED AT A TIME

ROAD WORK 1000 FT. — (I) W20-1 (48" X 48")
500' 500' 500'
ROAD WORK 1500 FT. — (I) W20-1 (48" X 48")
END ROAD WORK (I) G20-2 (48" X 24")
ROAD WORK 500 FT. — (I) W20-1 (48" X 48")

C.L. HWY. 351
STA. 106+79.34
END HWY. 351
END JOB 100790

4" CONTINUOUS WHITE
4" DOUBLE YELLOW
19 VERTICAL PANELS AT 40' O.C.
HWY. 351 STA. 103+80 TO STA. 107+00
8 VERTICAL PANELS AT 10' O.C.
HWY. 351 STA. 102+95 TO STA. 103+40
8 VERTICAL PANELS AT 10' O.C.
AGGIE RD. STA. 105+15 TO STA. 105+60
5 VERTICAL PANELS AT 30' O.C.
AGGIE RD. STA. 105+95 TO STA. 107+15
4" DOUBLE YELLOW
4" CONTINUOUS WHITE
END ROAD WORK (I) G20-2 (48" X 24")
C.L. AGGIE RD.
5 VERTICAL PANELS AT 30' O.C.
AGGIE RD. STA. 105+80 TO STA. 107+00
7 VERTICAL PANELS AT 10' O.C.
AGGIE RD. STA. 105+15 TO STA. 105+50
ROAD WORK 500 FT. — (I) W20-1 (48" X 48")
ROAD WORK 1000 FT. — (I) W20-1 (48" X 48")
ROAD WORK 1500 FT. — (I) W20-1 (48" X 48")
500' 500' 500'
4" CONTINUOUS WHITE
4" DOUBLE YELLOW
END ROAD WORK (I) G20-2 (48" X 24")
34 VERTICAL PANELS AT 30' O.C.
AGGIE RD. STA. 99+40 TO STA. 104+20
8 VERTICAL PANELS AT 10' O.C.
HWY. 351 STA. 102+25 TO STA. 102+70
ROAD WORK 1500 FT. — (I) W20-1 (48" X 48")
ROAD WORK 1000 FT. — (I) W20-1 (48" X 48")
ROAD WORK 500 FT. — (I) W20-1 (48" X 48")
500' 500' 500'
4" CONTINUOUS WHITE
4" DOUBLE YELLOW
STA. 99+10.00
BEGIN HWY. 351
BEGIN JOB 100790
8 VERTICAL PANELS AT 40' O.C.
HWY. 351 STA. 99+10 TO STA. 101+90
5 VERTICAL PANELS AT 40' O.C.
HWY. 351 STA. 99+10 TO STA. 100+70
END ROAD WORK (I) G20-2 (48" X 24")
ROAD WORK 1500 FT. — (I) W20-1 (48" X 48")
ROAD WORK 500 FT. — (I) W20-1 (48" X 48")
ROAD WORK 1000 FT. — (I) W20-1 (48" X 48")
500' 500' 500'

STAGE 2 LEVELING UNDER TRAFFIC
STAGE 2 CONSTRUCTION
STAGE 2 TRAFFIC

MAINTENANCE OF TRAFFIC
STAGE 2

rccorbyn 6/4/2015 10:29:43 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.		100790	13	67

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

N

1"=100'

STAGE 3 - CONSTRUCTION SEQUENCE NOTES

1) MAINTAIN TRAFFIC ON AGGIE RD. AND HWY. 351.

2) CONSTRUCT NOTCH AND WIDEN SECTIONS AS SHOWN.

3) CONSTRUCT PAVING SECTIONS AS SHOWN.

ROAD WORK 1000 FT. — (1) W20-1 (48" X 48")
500' 500' 500'
ROAD WORK 500 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1500 FT. — (1) W20-1 (48" X 48")
END ROAD WORK — (1) G20-2 (48" X 24")

C.L. HWY. 351

STA. 106+79.34
END HWY. 351
END JOB 100790

ROAD CLOSED — (1) R11-2 (48" X 30") (24') BARR. TYP. III LT.

19 VERTICAL PANELS AT 40' O.C.
HWY. 351 STA. 103+80 TO STA. 107+00

8 VERTICAL PANELS AT 10' O.C.
HWY. 351 STA. 102+95 TO STA. 103+40

PC 104+42.42
PI 104+87.82
PI 105+82.69

8 VERTICAL PANELS AT 10' O.C.
AGGIE RD. STA. 105+15 TO STA. 105+60

5 VERTICAL PANELS AT 30' O.C.
AGGIE RD. STA. 105+95 TO STA. 107+15

ROAD WORK 500 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1000 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1500 FT. — (1) W20-1 (48" X 48")
500' 500' 500'

105+00
110+00
2043
2044
2056
2058

END ROAD WORK — (1) G20-2 (48" X 24")

C.L. AGGIE RD.

5 VERTICAL PANELS AT 30' O.C.
AGGIE RD. STA. 105+80 TO STA. 107+00

7 VERTICAL PANELS AT 10' O.C.
AGGIE RD. STA. 105+15 TO STA. 105+50

END ROAD WORK — (1) G20-2 (48" X 24")

ROAD WORK 1500 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1000 FT. — (1) W20-1 (48" X 48")
ROAD WORK 500 FT. — (1) W20-1 (48" X 48")
500' 500' 500'

34 VERTICAL PANELS AT 30' O.C.
AGGIE RD. STA. 99+40 TO STA. 104+20

2006
2034

ROAD CLOSED — (1) R11-2 (48" X 30") (24') BARR. TYP. III LT.

8 VERTICAL PANELS AT 10' O.C.
HWY. 351 STA. 102+25 TO STA. 102+70

ROAD CLOSED — (1) R11-2 (48" X 30") (24') BARR. TYP. III RT.

PI 101+18.55
PI 100+73.57
PC 100+27.92
100+00

STA. 99+10.00
BEGIN HWY. 351
BEGIN JOB 100790

5 VERTICAL PANELS AT 40' O.C.
HWY. 351 STA. 99+10 TO STA. 100+70

8 VERTICAL PANELS AT 40' O.C.
HWY. 351 STA. 99+10 TO STA. 101+90

END ROAD WORK — (1) G20-2 (48" X 24")

ROAD WORK 500 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1000 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1500 FT. — (1) W20-1 (48" X 48")
500' 500' 500'

STAGE 3 NOTCH AND WIDEN
STAGE 3 PAVING
STAGE 3 TRAFFIC

MAINTENANCE OF TRAFFIC
STAGE 3

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WORKSPACE: AHTD
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6	ARK.			
JOB NO.		100790	14	67

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
Todd F. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD F. MUELLER
Digitally Signed 06/04/2015

STAGE 4 - CONSTRUCTION PAVEMENT MARKINGS

AGGIE RD. STA. 100+73 TO STA. 103+75
DOUBLE CENTERLINE= 610 L.F.
AGGIE RD. STA. 100+73 TO STA. 104+02
LEFT EDGE LINE= 341 L.F.
AGGIE RD. STA. 100+73 TO STA. 103+72
RIGHT EDGE LINE = 301 L.F.
AGGIE RD. STA. 104+12 TO STA. 105+91
RIGHT EDGE LINE = 203 L.F.
AGGIE RD. STA. 104+54 TO STA. 105+91
DOUBLE CENTERLINE = 316 L.F.
AGGIE RD. STA. 104+54 TO STA. 105+91
LEFT EDGE LINE = 157 L.F.
HWY. 351 STA. 100+16 TO STA. 103+10
RIGHT EDGE LINE = 345 L.F.
HWY. 351 STA. 100+16 TO STA. 102+80
DOUBLE CENTERLINE = 626 L.F.
HWY. 351 STA. 100+16 TO STA. 102+80
LEFT EDGE LINE = 315 L.F.
HWY. 351 STA. 103+58 TO STA. 106+79
RIGHT EDGE LINE = 325 L.F.
HWY. 351 STA. 103+57 TO STA. 106+79
DOUBLE CENTERLINE = 626 L.F.
HWY. 351 STA. 103+28 TO STA. 105+77
LEFT EDGE LINE = 252 L.F.

STAGE 4 - CONSTRUCTION SEQUENCE NOTES

1) MOVE TRAFFIC TO PROPOSED AGGIE RD. AND HWY. 351 IMPROVEMENTS.

2) CONSTRUCT AREAS SHOWN UNDER TRAFFIC.

3) FINISH CONSTRUCTING THE ROUNDABOUT AND AGGIE RD. AND HWY. 351 APPROACHES.

4) OPEN ROUNDABOUT AND APPROACHES TO TRAFFIC AND CONSTRUCT ISLANDS AND TRUCK APRON.

4) PLACE FINAL 2" SURFACE COURSE ON ENTIRE PROJECT UNDER TRAFFIC.

N

1"=100'

STA. 106+79.34
END HWY. 351
END JOB 100790

STA. 99+10.00
BEGIN HWY. 351
BEGIN JOB 100790

C.L. HWY. 351

C.L. AGGIE RD.

4" DOUBLE YELLOW

4" CONTINUOUS WHITE

4" DOUBLE YELLOW

4" CONTINUOUS WHITE

4" CONTINUOUS WHITE

4" DOUBLE YELLOW

4" CONTINUOUS WHITE

4" DOUBLE YELLOW

STOP
(4) R1-1
48"x48"

10 TRAFFIC DRUMS AT 10' O.C.
AGGIE RD. STA. 103+13 TO STA. 103+65

18 TRAFFIC DRUMS AT 30' O.C.
AGGIE RD. STA. 101+50 TO STA. 103+13

51 TRAFFIC DRUMS AT 10' O.C.
ROUNDABOUT STA. 0+00 TO STA. 5+03

10 TRAFFIC DRUMS AT 40' O.C.
HWY. 351 STA. 104+48 TO STA. 106+79

10 TRAFFIC DRUMS AT 10' O.C.
HWY. 351 STA. 103+69 TO STA. 101+92

6 TRAFFIC DRUMS AT 10' O.C.
AGGIE RD. STA. 105+36 TO STA. 105+84

6 TRAFFIC DRUMS AT 10' O.C.
HWY. 351 STA. 101+43 TO STA. 101+92

4 TRAFFIC DRUMS AT 40' O.C.
HWY. 351 STA. 100+16 TO STA. 101+33

ROAD WORK 1000 FT. — (1) W20-1 (48" X 48")
ROAD WORK 1500 FT. — (1) W20-1 (48" X 48")
END ROAD WORK — (1) G20-2 (48" X 24")
ROAD WORK 500 FT. — (1) W20-1 (48" X 48")

500' 500' 500'

STAGE 4 CONSTRUCTION UNDER TRAFFIC
STAGE 4 CONSTRUCTION
STAGE 4 TRAFFIC

MAINTENANCE OF TRAFFIC
STAGE 4

rccorbyn 6/8/2015 4:32:23 PM
WORKSPACE: AHTD
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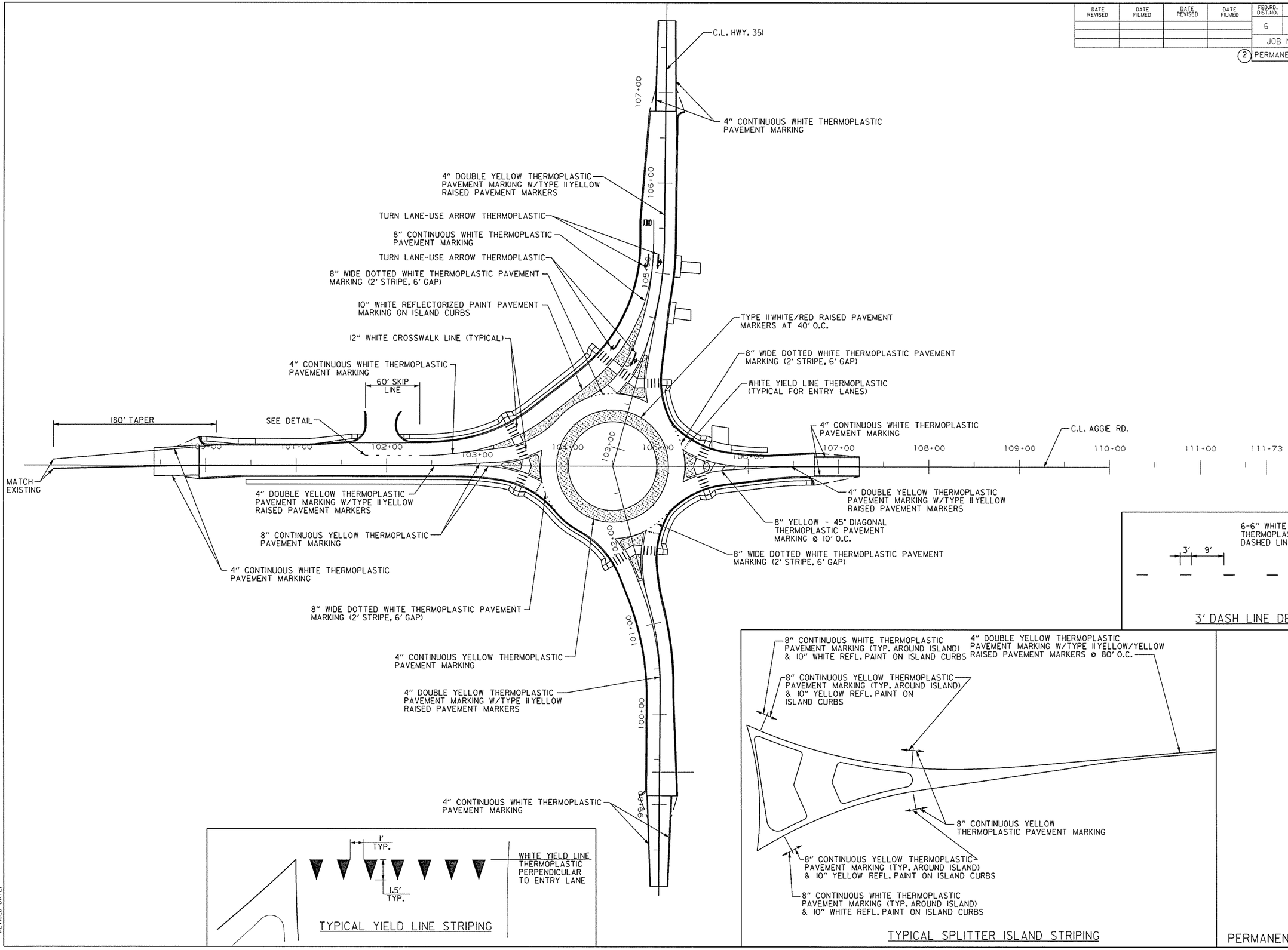
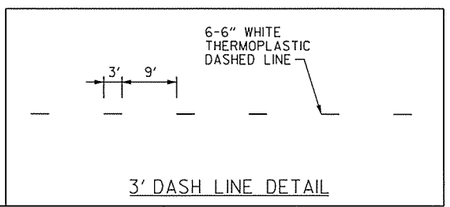
				6	ARK.			
				JOB NO.		100790	15	67

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
Todd F. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD F. MUELLER

Digitally Signed 06/04/2015

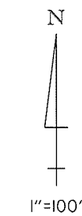




3' DASH LINE DETAIL

TYPICAL YIELD LINE STRIPING

TYPICAL SPLITTER ISLAND STRIPING



PERMANENT PAVEMENT MARKINGS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	16	67
				(2)	PERMANENT SIGNING PLANS			

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

INSTALL SS-35I-I6-STAI07+86SB
Airport Rd. South
Aggie Rd. East
Aggie Rd. West

INSTALL SS-35I-I6-STAI06+86SB
LEFT LANE
RIGHT LANE

INSTALL SS-35I-I6-STAI06+86NB
SPEED LIMIT 45

INSTALL SS-35I-I6-STAI05+25NB
NORTH 351

INSTALL SS-35I-I6-STAI03+79NB

INSTALL SS-35I-I6-STAI03+68NB
NORTH 351

INSTALL SS-AGGIE-I6-STAI07+28WB
Aggie Rd. West
Airport Rd. North
Airport Rd. South

INSTALL SS-AGGIE-I6-STAI02+37WB

INSTALL SS-35I-I6-STAI03+91SB
SS-35I-I6-STAI04+03SB

EXISTING W3-I TO BE REMOVED STA. I06+07SB

EXISTING W3-I TO BE REMOVED STA. I06+07SB

INSTALL SS-AGGIE-I6-STAI03+40WB
SS-AGGIE-I6-STAI03+52WB

INSTALL SS-35I-I6-STAI03+20SB

INSTALL SS-AGGIE-I6-STAI04+90WB

INSTALL SS-35I-I6-STAI03+67SB
YIELD

INSTALL SS-AGGIE-I6-STAI09+28WB
NORTH 351
SOUTH 351

INSTALL SS-AGGIE-I6-STAI00+50WB
SPEED LIMIT 30
SHARE THE ROAD

EXISTING SOLOR PANEL FLASHING BEACON TO BE RELOCATED BY OTHERS

INSTALL SS-AGGIE-I6-STAI05+36WB
YIELD

INSTALL SS-AGGIE-I6-STAI05+58WB

INSTALL SS-AGGIE-I6-STAIII+28WB
JCT 351

97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 111+73

EXISTING W3-I TO BE REMOVED STA. I09+47WB

INSTALL SS-AGGIE-I6-STAI05+50EB

INSTALL SS-AGGIE-I6-STA97+72EB
JCT 351

INSTALL SS-AGGIE-I6-STAI03+70EB
YIELD

INSTALL SS-AGGIE-I6-STAI03+40EB

INSTALL SS-AGGIE-I6-STAI04+09EB

INSTALL SS-35I-I6-STAI0I+93SB
SOUTH 351

INSTALL SS-35I-I6-STAI0I+94NB
YIELD

INSTALL SS-35I-I6-STAI02+39NB

INSTALL SS-AGGIE-I6-STA99+72EB
NORTH 351
SOUTH 351

INSTALL SS-AGGIE-I6-STAI0I+72EB
Airport Rd. North
Airport Rd. South
Aggie Rd. East

EXISTING R2-I TO BE REMOVED STA. 99+57SB

EXISTING W3-I TO BE REMOVED STA. 99+48SB

INSTALL SS-35I-I6-STAI0I+83SB

INSTALL SS-35I-I6-STAI0I+70NB

EXISTING W3-I TO BE REMOVED STA. 99+48NB

INSTALL SS-35I-I6-STA99+19SB
SOUTH 351

INSTALL SS-35I-I6-STA98+20SB
SPEED LIMIT 45

INSTALL SS-35I-I6-STA99+22NB
Airport Rd. North
Aggie Rd. West
Aggie Rd. East

EXISTING R2-I TO BE REMOVED

N

100 50 0 100
Scale: 1" = 100'

PERMANENT SIGNING PLANS

rcoorbyn 6/4/2015 10:29:46 AM
WORKSPACE: AHTD
L:\2013\1301040 - Jonesboro - Hwy. 351at Aggie Rd. Inters. Impvts\Drawings\AARI_SP_MNL_01.dgn
REVISED DATE:

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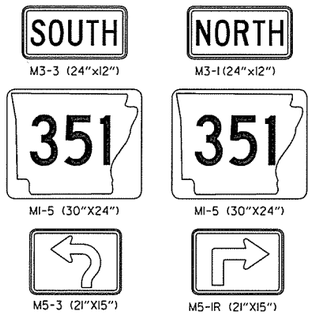
				6	ARK.			
				JOB NO.		100790	17	67
				(2)	PERMANENT SIGNING PLANS			

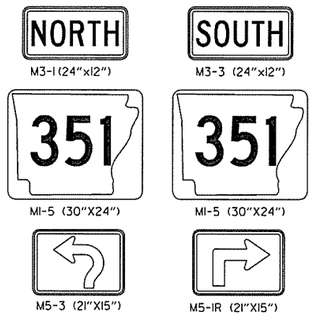
STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015



M3-3 (24"x12")
M1-5 (30"X24")
M5-3 (21"X15")

M3-1 (24"x12")
M1-5 (30"X24")
M5-1R (21"X15")

SS-AGGIE-I6-STA109+28WB



M3-1 (24"x12")
M3-3 (24"x12")
M1-5 (30"X24")
M1-5 (30"X24")
M5-3 (21"X15")
M5-1R (21"X15")

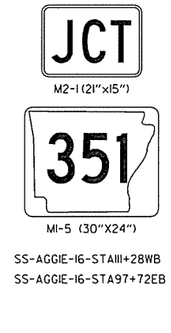
SS-AGGIE-I6-STA99+72EB

M3-1 (24"x12")
M1-5 (30"X24")
M6-2a (21"X15")

SS-35I-I6-STA103+68NB

M3-3 (24"x12")
M1-5 (30"X24")
M6-2a (21"X15")

SS-35I-I6-STA101+93SB



M2-1 (21"x15")
M1-5 (30"X24")

SS-AGGIE-I6-STAIII+28WB
SS-AGGIE-I6-STA97+72EB

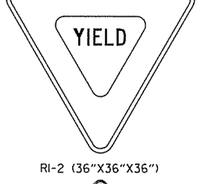
M3-1 (24"x12")
M1-5 (30"X24")

SS-35I-I6-STA105+25NB

M3-3 (24"x12")

M1-5 (30"X24")

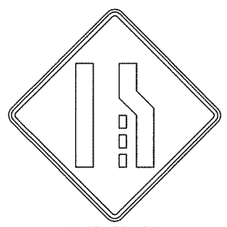
SS-35I-I6-STA99+19SB



R1-2 (36"X36"X36")


W2-6 (24"X24")

SS-AGGIE-I6-STA105+36WB
SS-AGGIE-I6-STA103+70EB
SS-35I-I6-STA101+94NB
SS-35I-I6-STA103+67SB

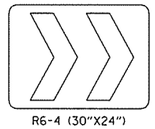

W4-2R (36"X36")

SS-AGGIE-I6-STA102+37WB

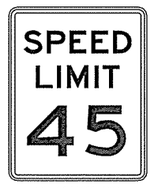

W11-2 (36"X36")


W16-7P (24"X12")

SS-AGGIE-I6-STA103+40WB
SS-AGGIE-I6-STA103+52WB
SS-AGGIE-I6-STA105+58WB
SS-AGGIE-I6-STA105+50EB
SS-AGGIE-I6-STA103+40EB
SS-35I-I6-STA101+70NB
SS-35I-I6-STA103+79NB
SS-35I-I6-STA103+91SB
SS-35I-I6-STA104+03SB
SS-35I-I6-STA101+83SB


R6-4 (30"X24")

SS-AGGIE-I6-STA104+90WB
SS-AGGIE-I6-STA104+09EB
SS-35I-I6-STA102+39NB
SS-35I-I6-STA103+20SB



R2-1 (24"X30")

SS-35I-I6-STA106+86NB
SS-35I-I6-STA98+20SB

R2-1 (24"X30")

W16-1P (18"X24")

SS-AGGIE-I6-STA100+50WB

PERMANENT SIGNING PLANS

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WORKSPACE: AHTD
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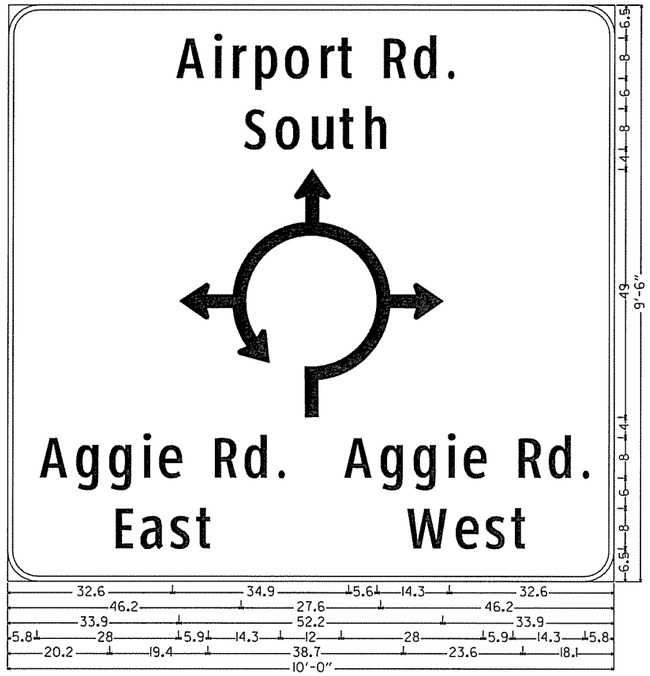
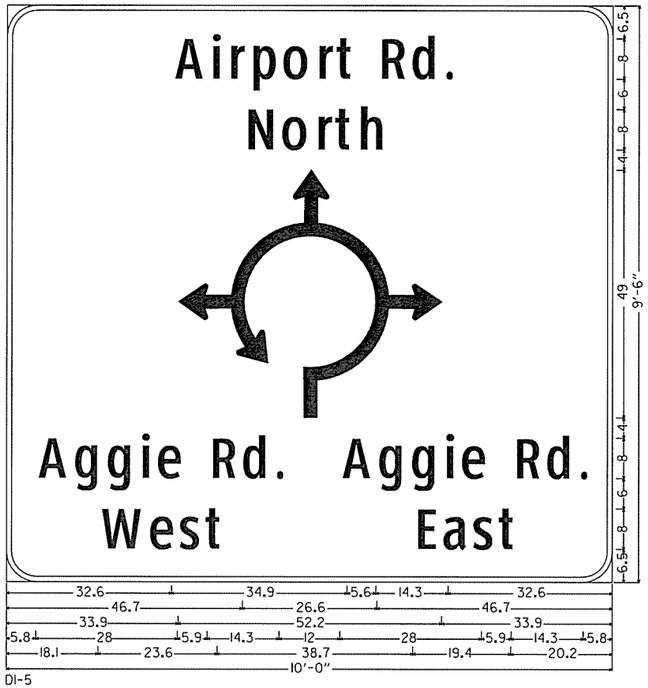
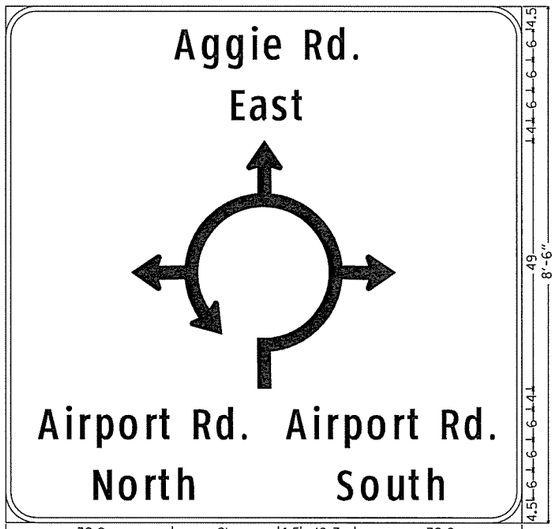
REVISED DATE:



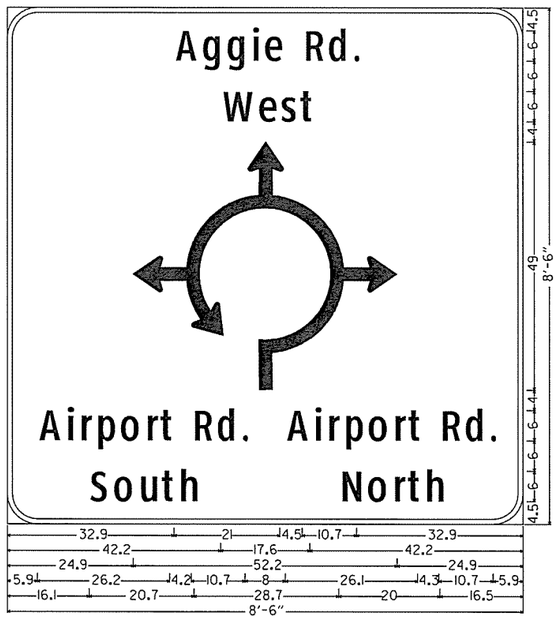
DI-5
6.0" Radius, 1.0" Border, White on Green;
[Airport Rd.] ClearviewHwy-2-W; [South] ClearviewHwy-2-W;
[Aggie Rd.] ClearviewHwy-2-W; [East] ClearviewHwy-2-W;
[Aggie Rd.] ClearviewHwy-2-W; [West] ClearviewHwy-2-W;
SS-351-16-STA107+86SB



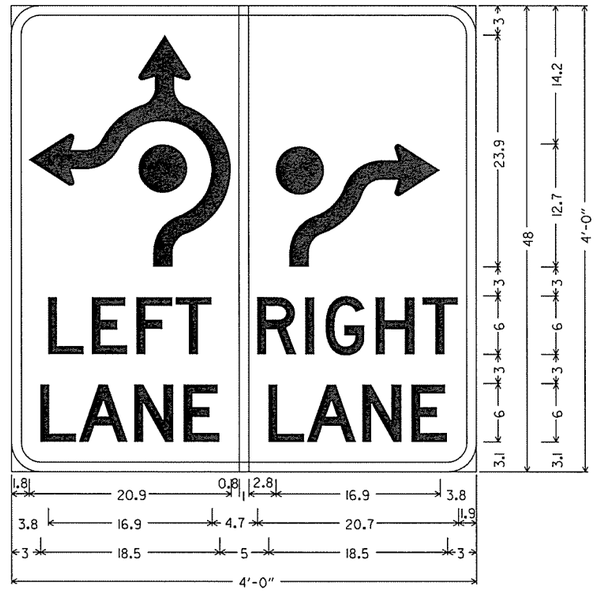
DI-5
6.0" Radius, 1.0" Border, White on Green;
[Airport Rd.] ClearviewHwy-2-W; [North] ClearviewHwy-2-W;
[Aggie Rd.] ClearviewHwy-2-W; [West] ClearviewHwy-2-W;
[Aggie Rd.] ClearviewHwy-2-W; [East] ClearviewHwy-2-W;
SS-351-16-STA99+22NB



DI-5
6.0" Radius, 1.0" Border, White on Green;
[Aggie Rd.] ClearviewHwy-2-W; [East] ClearviewHwy-2-W;
[Airport Rd.] ClearviewHwy-2-W; [North] ClearviewHwy-2-W;
[Airport Rd.] ClearviewHwy-2-W; [South] ClearviewHwy-2-W;
SS-AGGIE-16-STA101+72EB



DI-5
6.0" Radius, 1.0" Border, White on Green;
[Aggie Rd.] ClearviewHwy-2-W; [West] ClearviewHwy-2-W;
[Airport Rd.] ClearviewHwy-2-W; [South] ClearviewHwy-2-W;
[Airport Rd.] ClearviewHwy-2-W; [North] ClearviewHwy-2-W;
SS-AGGIE-16-STA107+28WB



DI-1
3.0" Radius, 1.0" Border, Black on White;
[LEFT] D 2K specified length;
[LANE] D 2K specified length;
[RIGHT] D 2K specified length;
[LANE] D 2K specified length;
SS-351-16-STA106+86SB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	18	67

(2) PERMANENT SIGNING PLANS

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/04/2015

PERMANENT SIGNING PLANS

rccorbyn 6/4/2015 10:29:46 AM
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L:\2013\13017040 - Jonesboro - Hwy. 351at Aggie Rd.Inters.impvts\Drawings\AAR_SP_MNL_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.		100790	19	67
				(2)	SIGNING QUANTITIES			

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

MAIN LANES SIGNING QUANTITIES
ROADSIDE MOUNTED I-BEAM SIGN SUPPORTS

SIGN NO./ LOCATION	STRUCTURE TYPE			SIGN				BREAKAWAY SIGN SUPPORT										
	TYPE			STANDARD SIGN	GUIDE SIGN			STEEL SECT. A-572		SIGN POST LENGTH			STUB POST			FOOTINGS			SIGN POST AND STUB
	G-1	G-2	G-3	SQ. FT.	LENGTH FT.	HEIGHT FT.	SQ. FT.	BEAM	LBS	H-1	H-2	H-3	H-1	H-2	H-3	DIA.	DEPTH	EMBED.	POUND
										LIN FT			LIN FT			LIN FT			
SS-351-16-STA107+86SB		1			10.00	9.50	95.00	W8	18	18.25	17.25		5.66	5.66		3	8	5.33	842.89
SS-351-16-STA99+22NB		1			10.00	9.50	95.00	W10	22	20.25	22.25		5.66	5.66		3	8	5.33	1184.20
SS-351-16-STA106+86SB		1			4.00	4.00	16.00	W6	9	12.25	11.5		3.00	3.00		1.5	4	2.67	267.69
SS-AGGIE-16-STA101+72EB		1			8.50	8.50	72.25	W8	18	16.5	18.25		5.00	5.00		2.5	7	4.67	805.39
SS-AGGIE-16-STA107+28WB		1			8.50	8.50	72.25	W6	12	16.25	15.5		4.33	4.33		2	6	4.00	484.92
TOTALS:	0	5	0	0.00			350.50												3585.09

STANDARD SIGN QUANTITIES
U-CHANNEL POSTS

SIGN NO./ LOCATION	STANDARD ROADSIDE SIGNS TO BE MOUNTED	U-CHANNEL POST ASSEMBLIES		
		U-1	U-2(A)	U-2(1)
		EACH	EACH	EACH
SS-AGGIE-16-97+72EB	M2-1, M1-5	1		
SS-AGGIE-16-STA99+72EB	M3-3, M1-5, M5-3, M3-1, M1-5, M5-1R			1
SS-AGGIE-16-STA100+50WB	R2-1, W16-1P	1		
SS-AGGIE-16-STA103+40EB	W11-2, W16-7P		1	
SS-AGGIE-16-STA103+40WB	W11-2, W16-7P		1	
SS-AGGIE-16-STA103+52WB	W11-2, W16-7P		1	
SS-AGGIE-16-STA103+70EB	R1-2, W2-6	1		
SS-AGGIE-16-STA104+06WB	W4-2R	1		
SS-AGGIE-16-STA104+09EB	R6-4	1		
SS-AGGIE-16-STA104+90WB	R6-4	1		
SS-AGGIE-16STA105+36WB	R1-2, W2-6	1		
SS-AGGIE-16-STA105+50EB	W11-2, W16-7P		1	
SS-AGGIE-16-STA105+58WB	W11-2, W16-7P		1	
SS-AGGIE-16-STA109+28WB	M3-3, M1-5, M5-3, M3-1, M1-5, M5-1R			1
SS-AGGIE-16-STA111+28WB	M2-1, M1-5	1		
SS-351-16-STA98+20SB	R2-1	1		
SS-351-16-STA99+19SB	M3-3, M1-5	1		
SS-351-16-STA101+70NB	W11-2, W16-7P		1	
SS-351-16-STA101+83SB	W11-2, W16-7P		1	
SS-351-16-STA101+93SB	M3-3, M1-5, M6-2a	1		
SS-351-16-STA101+94NB	R1-2, W2-6	1		
SS-351-16-STA102+39NB	R6-4	1		
SS-351-16-STA103+20SB	R6-4	1		
SS-351-16-STA103+67SB	R1-2, W2-6	1		
SS-351-16-STA103+68NB	M3-1, M1-5, M6-2a	1		
SS-351-16-STA103+79NB	W11-2, W16-7P		1	
SS-351-16-STA103+91SB	W11-2, W16-7P		1	
SS-351-16-STA104+03SB	W11-2, W16-7P		1	
SS-351-16-STA105+25NB	M3-1, M1-5	1		
SS-351-16-STA106+86NB	R2-1	1		
TOTALS:		18	10	2

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

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
M1-5	30" x 24"	5.00	10	50.00	BLACK/WHITE
M2-1	30" x 24"	2.19	2	4.38	BLACK/WHITE
M3-1	24" x 12"	2.00	4	8.00	BLACK/WHITE
M3-3	24" x 12"	2.00	4	8.00	BLACK/WHITE
M5-1R	21" x 15"	2.19	2	4.38	BLACK/WHITE
M5-3	21" x 15"	2.19	2	4.38	BLACK/WHITE
M6-2a	21" x 15"	2.19	2	4.38	BLACK/WHITE
R2-1	24" x 30"	5.00	3	15.00	BLACK/WHITE
R6-4	30" x 24"	5.00	4	20.00	BLACK/YELLOW
W2-6	24" x 24"	4.00	4	16.00	BLACK/YELLOW
W16-1P	18" x 24"	3.00	1	3.00	BLACK/WHITE
W16-7P	24" x 12"	2.00	10	20.00	BLACK/YELLOW
TOTAL 0.100" THICKNESS:				157.52	

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

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
R1-2	36" x 36" x 36"	3.90	4	15.60	WHITE/RED
W4-2R	36" x 36"	4.00	1	4.00	BLACK/YELLOW
W11-2	36" x 36"	9.00	10	90.00	BLACK/YELLOW
TOTAL 0.125" THICKNESS:				109.60	

SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
SP & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	351	SQ. FT.
SP & 726	STANDARD SIGN	267	SQ. FT.
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	18	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(A))	10	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(1))	2	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	3585	POUND

SIGNING QUANTITIES

rccorbyn 6/4/2015 10:43:41 AM
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L:\2013\130T040 - Jonesboro - Hwy. 351at Aggie Rd. Inters.\mpvts\Drawings\AARI_SP_MNL_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
				6	ARK.			
				JOB NO.		100790	20	67

(2) SOIL BORING LOG

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/04/2015

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			
1	102+94, 32' LT.	0.5-1.5	18	42	28	14	38	GM	A-7-6
1	102+94, 32' LT.	2.5-3.5	23	37	17	20	98	CL	A-6
2	98+42, 137' LT.	1-2	15	29	19	10	82	CL	A-4
2	98+42, 137' LT.	2.5-3.5	30	38	21	17	90	CL	A-6

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.

SOIL BORING LOG

rcorbyn 6/4/2015 10:42:55 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.		100790	21	67
				(2)	QUANTITIES			

REMOVAL AND DISPOSAL OF STRUCTURES

STATION	STATION	LOCATION	CURB	ROCK RIPRAP	HEADWALL	PIPE CULVERT	SIGNS
			L.F.	SQ. YD.	EACH	EACH	EACH
98+90		HWY. 351 - RT					1
99+48		HWY. 351 - LT & RT					2
99+57		HWY. 351 - LT					1
101+25		HWY. 351 - RT			1		
101+33		HWY. 351 - LT			1		
101+67	102+21	HWY. 351 - LT	80				
102+80		HWY. 351 - RT					8
102+40		HWY. 351 - RT			1		
103+10		HWY. 351 - LT			1		
103+00	104+50	HWY. 351 - LT		250			
106+07		HWY. 351 - LT & RT					2
101+12	104+54	AGGIE RD. - LT				1	
104+73		AGGIE RD. - LT					1
TOTALS:			80	250	4	1	15

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	STAGE 4	MAX. NUMBER	TOTAL REQUIRED	TRAFFIC DRUMS	VERTICAL PANEL	BARRICADES (TYPE III) RIGHT	BARRICADES (TYPE III) LEFT
		IN.	EACH	EACH	EACH	EACH	REQ'D.	SQ. FT.	EACH	EACH	L.F.	
G20-2	END ROAD WORK	48" X 24"	4	4	4	4	4	32.00				
R11-2	ROAD CLOSED	48" X 30"			3		3	30.00				
W20-1	ROAD WORK 500 FT	48" X 48"	4	4	4	4	4	64.00				
W20-1	ROAD WORK 1000 FT	48" X 48"	4	4	4	4	4	64.00				
W20-1	ROAD WORK 1500 FT	48" X 48"	4	4	4	4	4	64.00				
R1-1	STOP	48" X 48"	4	4	4	4	4	64.00				
	TYPE III BARRICADE-RT. (24')				1		1				24	
	TYPE III BARRICADE-LT. (24')				2		2					48
	TRAFFIC DRUMS		18			115	115		115			
	VERTICAL PANELS			107	107		107			107		
TOTALS:								318.00	115	107	24	48

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

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	ENTIRE JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT TYPE II (WHITE/RED)	RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	THERMOPLASTIC PAVEMENT MARKING 4" WHITE	6" WHITE	8" WHITE	12" WHITE	4" YELLOW	8" YELLOW	REFLECTORIZED PAINT PAVEMENT MARKING 10" WHITE	10" YELLOW	THERMOPLASTIC PAVEMENT MARKING (ARROW)	THERMOPLASTIC PAVEMENT MARKING (WORD)	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)
	LIN. FT. - EACH	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.						LIN. FT.		EACH	EACH	LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS	932	932														
CONSTRUCTION PAVEMENT MARKINGS	10753		10753													
RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED)	10			10												
RAISED PAVEMENT MARKERS (TYPE II) (YELLOW/YELLOW)	30				30											
THERMOPLASTIC PAVEMENT MARKING WHITE (4")	731					731										
THERMOPLASTIC PAVEMENT MARKING WHITE (6")	18						18									
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	494							494								
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	370								370							
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	2446									2446						
THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	991										991					
THERMOPLASTIC PAVEMENT MARKING (ARROW)	4													4		
THERMOPLASTIC PAVEMENT MARKING (WORD)	1														1	
THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	58															58
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	550											550				
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	236												236			
TOTALS:		932	10753	10	30	731	18	494	370	2446	991	550	236	4	1	58

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

STRUCTURES

STATION	LOCATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERTS CLASS III 18 IN.	24 IN.	30 IN.	36 IN.	48 IN.	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18 IN.	24 IN.	FLARED END SECTIONS 18 IN.	FLARED END SECTIONS 30 IN.	FLARED END SECTIONS 36 IN.	FLARED END SECTIONS 48 IN.	DROP INLETS (TYPE MO)	(TYPE E) (W/GRATE)	EXTENSION 4'	EXTENSION 8'	JUNCTION BOX (TYPE E)	SOLID SODDING	WATER	STANDARD DRAWINGS
			L.F.					L.F.		EACH				EACH				EACH	SQ. YD.	M.G.	
99+36	HWY. 351	CONSTRUCT TRIPLE R.C. PIPE CULVERT WITH F.E.S. LT. & RT.					165						6						66	0.8	FES-1, FES-2, PCC-1, PCM-1
100+90	HWY 351	CONSTRUCT D.I. LT. W/ DUAL EXT. & R.C. PIPE CULVERT LT. W/ F.E.S.	16							1				1		2			5	0.1	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
100+91	HWY. 351	CONSTRUCT D.I. RT. W/ DUAL EXT. & R.C. PIPE CULVERT RT. W/ F.E.S.			125						1			1		2			13	0.2	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
102+22	HWY. 351	CONSTRUCT D.I. RT. W/ EXT. & PIPE CULVERT TO D.I. TO S.							136					1		1					FPC-9E, FPC-9M, PCC-1, PCM-1
102+24	HWY. 351	CONSTRUCT D.I. LT. W/ DUAL EXT. & R.C. PIPE CULVERT LT. TO F.E.S.	19							1				1		2			5	0.1	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
102+56	HWY. 351	CONSTRUCT D.I. LT. & R.C. PIPE CULVERT TO D.I. TO S.	44												1						FPC-9, PCC-1, PCM-1
103+50	HWY. 351	CONSTRUCT J.B. RT. & R.C. PIPE CULVERT TO D.I. TO S.		90														1			FPC-9, PCC-1, PCM-1
104+08	HWY. 351	CONSTRUCT D.I. RT. & PIPE CULVERT TO J.B. TO S.							57						1						FPC-9, PCC-1, PCM-1
104+08	HWY. 351	CONSTRUCT D.I. RT. W/ EXT. & PIPE CULVERT TO D.I. TO E.						16						1			1				FPC-9E, FPC-9M, PCC-1, PCM-1
104+85	HWY. 351	CONSTRUCT D.I. RT. & PIPE CULVERT TO D.I. S W/ F.E.S. N.	62						79	1					1				5	0.1	FES-1, FES-2, FPC-9, PCC-1, PCM-1
101+10	AGGIE RD.	CONSTRUCT D.I. LT. W/EXT. & R.C. PIPE CULVERT TO D.I. TO E.			161									1			1				FPC-9E, FPC-9M, PCC-1, PCM-1
102+75.65	AGGIE RD.	CONSTRUCT D.I. LT. W/EXT. & R.C. PIPE CULVERT WITH F.E.S. LT. & RT.				74						2		1			1		34	0.4	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
102+87	AGGIE RD.	CONSTRUCT DOUBLE R.C. PIPE CULVERT WITH FES LT. & RT.				156						4							36	0.5	FES-1, FES-2, PCC-1, PCM-1
103+54	AGGIE RD.	CONSTRUCT D.I. LT. W/ DUAL EXT. & R.C. PIPE CULVERT LT. TO F.E.S.	18							1				1		2					FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
106+00	AGGIE RD.	CONSTRUCT D.I. LT. & PIPE CULVERT TO J.B. TO W.						78						1			1				FPC-9E, FPC-9M, PCC-1, PCM-1
TOTALS:			159	90	286	230	165	94	272	4	1	6	6	9	3	9	4	1	164	2.2	

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

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.

rccorbyn 6/8/2015 4:40:07 PM
WORKSPACE: AHTD
L:\2013\13017040 - Jonesboro - Hwy. 351 at Aggie Rd. Inters. imp\ts\Drawings\AAR_QUANTITIES.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.		100790	22	67

(2) QUANTITIES

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/04/2015

FLOWABLE SELECT MATERIAL

STATION	STATION	LOCATION	CU. YD.
101+25	101+33	HWY. 351	39
102+40	103+10	HWY. 351	30
TOTAL:			69

SOIL STABILIZATION

LOCATION	TON
ENTIRE PROJECT *	20

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	ASPHALT CONCRETE	TACK COAT
	TON	GAL.
ENTIRE PROJECT*	4	8

* 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

MAILBOXES

STATION	LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
		EACH	EACH
104+77	HWY. 351	1	1
105+87	AGGIE RD.	1	1
TOTALS:		2	2

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STA.	
99+10	106+79	HWY. 351	8	8
99+93	106+73	AGGIE RD.	7	7
TOTALS:			15	15

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	WIDTH FEET	SQ. YD.
98+10.00	99+10.00	HWY. 351	24.00	266.67
106+79.34	107+79.34	HWY. 351	22.00	244.44
99+42.61	99+92.61	AGGIE RD.	31.00	172.22
106+73.29	107+23.29	AGGIE RD.	22.00	122.22
* ENTIRE	PROJECT	IF AND WHERE DIRECTED BY ENGINEER	VAR.	400.00
TOTAL:				1205.55

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

TEMPORARY EROSION CONTROL

STATION	STATION	SAND BAG DITCH CHECK (E-5)	ROCK DITCH CHECK (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	TRIANGULAR SILT DIKE	WATTLE (20") (E-1)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	SEDIMENT REMOVAL AND DISPOSAL	TEMPORARY SEEDING	MULCH COVER	WATER
		BAG	CU. YD.	L.F.	L.F.	L.F.	L.F.	CU. YD.	CU. YD.	CU. YD.	ACRE	ACRE	M.G.
HWY. 351													
99+70	102+10				260								
103+80	105+30				150								
104+70	108+00				380								
98+57	102+00	20	15										
99+00	99+36		15										
103+77	107+00	20	15										
100+90				20									
100+91				20									
102+22				20									
102+24				20									
102+56				20									
103+50				20									
104+08				20									
104+08				20									
104+85				20									
AGGIE RD.													
102+20	102+80				70								
102+90	104+00				140								
105+30	107+30				220								
105+50	107+30				190								
99+78	103+92	20	30										
102+80	104+05	20	15										
102+80				20									
103+54				20									
106+00				20									
* ENTIRE PROJECT AS DIRECTED BY THE ENGINEER						100	100	100	100	400	3.62	3.62	73.8
TOTALS:		80	90	240	1410	100	100	100	100	400	3.62	3.62	73.8

* 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.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU. YD.
ENTIRE PROJECT *	100

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

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

LOCATION	WIDTH	LENGTH	ASPHALT
	FEET		TON
HWY. 351 STA. 99+36.00	20	36.83	40.5
AGGIE ROAD: 102+87.00	32	30.23	53.2
AGGIE ROAD: 105+25.00	36	10	19.8
TOTAL:			113.5

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

EARTHWORK

LOCATION	UNCLASSIFIED EXCAVATION			COMPACTED EMBANKMENT		
	UNDERCUT	TYPICAL	TOTAL	TYPICAL	*ADDITIONAL	TOTAL
	CU. YD.					
HWY. 351 - STA. 98+10 TO STA. 102+00		1705	1705	1483		1483
HWY. 351 - STA. 103+60 TO STA. 107+79		360	360	455		455
AGGIE RD. - STA. 99+42 TO STA. 103+70		2002	2002	519		519
AGGIE RD. - STA. 105+30 TO STA. 107+23		40	40	252		252
ROUNDABOUT		94	94	1386		1386
DRIVEWAYS		27	27	9		9
**ENTIRE PROJECT	3025		3025		3025	3025
						0
TOTALS:	3025	4228	7253	4104	3025	7129

EARTHWORK NOTES:

1. ESTIMATES FOR QUANTITIES OF EXCAVATION AND EMBANKMENT ARE TAKEN DIRECTLY FROM THE CROSS SECTIONS, DETAILED IN ACCORDANCE WITH THE PLANS.

2. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENT REMOVED SHALL BE PAID FOR UNDER PAY ITEM 210 - EXCAVATION AND EMBANKMENT, UNLESS OTHERWISE NOTED.

3. EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

* INCLUDES 3025 CU. YDS. OF COMPACTED EMBANKMENT USED FOR BACKFILL OF UNDERCUT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

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

EROSION CONTROL

LOCATION	LIME	SEEDING	MULCH COVER	SECOND SEEDING	WATER	SOLID SOD	WATER
	TON	ACRE			M.G.	SQ. YD.	M.G.
HWY. 351	2.34	1.17	1.17	1.17	119.3	814.30	10.3
AGGIE RD.	1.28	0.64	0.64	0.64	65.3	855.07	10.8
TOTALS:	3.62	1.81	1.81	1.81	184.6	1669.37	21.1

BASIS OF ESTIMATE:
LIME = 2 TONS PER ACRE SEEDING
WATER = 102.0 M.G.PER ACRE SEEDING
WATER = 12.6 GAL. PER SQ. YD. SOLID SODDING

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	23	67

(2) QUANTITIES

STATE OF ARKANSAS
TODD E. MUELLER
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

BASE & SURFACING

STATION	STATION	LOCATION	LENGTH	ACHM SURFACE COURSE (1/2")				ACHM BINDER COURSE (1")				PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)		PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)		AGGREGATE BASE COURSE (CLASS 7)		TACK COAT					
			FEET	AVG. WIDTH FEET	SQUARE YARDS	LBS. PER SQ. YD.	TON	AVG. WIDTH FEET	SQUARE YARDS	LBS. PER SQ. YD.	TON	AVG. WIDTH FEET	SQUARE YARDS	AVG. WIDTH FEET	SQUARE YARDS	TONS PER STATION	TON	AVG. WIDTH FEET	SQUARE YARDS	0.03 G/SY GAL.	AVG. WIDTH FEET	SQUARE YARDS	0.1 G/SY GAL.
98+10.00	99+10.00	HWY 351 - TRANSITION	100.00	29.43	327.00	220	35.97	3.49	38.78	330	6.40	2.13	23.67	3.63	40.33	VAR	15.58	6.97	77.44	2.32	20.33	225.89	22.59
99+10.00	100+15.55	HWY 351	105.55	30.67	359.69	220	39.57	0.00	0.00	330	0.00	10.34	121.27	15.44	181.08	VAR	0.00	0.00	0.00	0.00	20.36	238.78	23.88
100+15.55	102+00.00	HWY 351	184.45	58.43	1197.49	220	131.72	22.91	469.53	330	77.47	0.99	20.29	2.00	40.99	VAR	184.70	45.82	939.06	28.17	14.13	289.59	28.96
103+60.00	105+59.34	HWY 351	199.34	92.86	2056.75	220	226.24	42.92	950.63	330	156.85	0.35	7.75	1.24	27.46	VAR	354.50	85.83	1901.04	57.03	15.50	343.31	34.33
105+59.34	106+79.34	HWY 351 - TAPER	120.00	45.61	608.13	220	66.89	12.00	160.00	330	26.40	1.43	19.07	4.01	53.47	VAR	67.68	24.00	320.00	9.60	20.18	269.07	26.91
106+79.34	107+79.34	HWY 351 - TRANSITION	100.00	23.88	265.33	220	29.19	0.00	0.00	330	0.00	3.72	41.33	5.75	63.89	VAR	0.00	0.00	0.00	0.00	20.15	223.89	22.39
99+42.62	99+92.62	AGGIE RD. - TRANSITION	50.00	49.60	275.56	220	30.31	14.34	79.67	330	13.15	0.97	5.39	1.97	10.94	VAR	30.02	28.69	159.39	4.78	19.94	110.78	11.08
99+92.62	101+12.64	AGGIE RD.	120.02	46.04	613.97	220	67.54	12.28	163.76	330	27.02	1.42	18.94	3.92	52.28	VAR	69.54	24.57	327.65	9.83	20.05	267.38	26.74
101+12.64	101+57.64	AGGIE RD. - TAPER	45.00	46.83	234.15	220	25.76	12.35	61.75	330	10.19	1.97	9.85	4.47	22.35	VAR	25.99	24.70	123.50	3.71	20.16	100.80	10.08
101+57.64	102+77.18	AGGIE RD.	119.54	49.63	659.20	220	72.51	13.30	176.65	330	29.15	2.72	36.13	5.22	69.33	VAR	73.47	26.61	353.44	10.60	20.31	269.76	26.98
102+77.18	103+70.00	AGGIE RD.	92.82	112.13	1156.43	220	127.21	51.81	534.33	330	88.16	0.00	0.00	0.00	0.00	VAR	210.65	103.63	1068.77	32.06	20.29	209.26	20.93
105+30.00	106+73.29	AGGIE RD.	143.29	41.37	658.66	220	72.45	9.53	151.73	330	25.04	1.01	16.08	3.61	57.48	VAR	70.63	19.06	303.46	9.10	24.64	392.30	39.23
106+73.29	107+23.29	AGGIE RD. - TRANSITION	50.00	28.75	159.72	220	17.57	0.00	0.00	330	0.00	7.22	40.11	9.42	52.33	VAR	0.00	0.00	0.00	0.00	21.59	119.94	11.99
0+00.00	5+02.65	ROUNDABOUT	251.33	67.17	1875.76	220	206.33	35.22	983.54	330	162.28	0.00	0.00	0.00	0.00	VAR	355.98	70.44	1967.08	59.01	14.77	412.46	41.25
* ENTIRE	PROJECT	IF AND WHERE DIRECTED BY ENGINEER		VAR.	VAR.	VAR.	200.00	VAR.	VAR.	VAR.	200.00		0.00			VAR.	50.00	VAR.	VAR.	20.00			
TOTALS:					10447.84		1349.26		3770.37		822.11		359.88		671.93		1508.74		7540.83	246.21		3473.21	347.34

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2"): 5.1% ASPHALT BINDER (PG 70-22), 94.9% MINERAL AGGREGATE, N_{MAX} = 160 FOR PG 70-22

ACHM BINDER COURSE (1"): 4.1% ASPHALT BINDER (PG 64-22), 95.9% MINERAL AGGREGATE, N_{MAX} = 115 FOR PG 64-22

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

BASE & SURFACING - DRIVEWAYS

LOCATION	WIDTH	PORTLAND CEMENT CONCRETE DRIVEWAY	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2") (220 LBS. PER S.Y.) (PG 70-22)	
	FEET	SQUARE YARDS	TONS PER STATION	TONS	SQUARE YARDS	TON
DRIVEWAY 1 AGGIE RD. STA . 101+94	32				145.97	16
DRIVEWAY 2 AGGIE RD.STA. 105+69	19	14.68	VAR.	15		
DRIVEWAY 3 HWY 351STA. 104+58	12	16.00	VAR.	8		
DRIVEWAY 4 HWY 351 STA. 105+09	12	16.00	VAR.	10		
*ENTIRE PROJECT - TEMPORARY DRIVES				20		
TOTALS:		46.68		53	145.97	16

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") : 5.1% ASPHALT BINDER (PG 70-22), 94.9% MINERAL AGGREGATE, N_{MAX}=160

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

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

NON-METALLIC CONDUIT

STATION	LOCATION	NON-METALLIC CONDUIT 4 IN. LIN. FT.
102+21	HWY. 351	108
TOTAL:		108

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH LIN. FT.	CONCRETE WALKS SQ. YD.
101+72	102+21	HWY. 351 - LT.	54	29
103+47	104+02	HWY. 351 - LT	65	35
101+71	102+12	HWY. 351 - RT.	48	26
103+47	103+88	HWY. 351 - RT.	48	26
100+01	100+36	AGGIE RD. - LT.	35	20
100+55	101+62	AGGIE RD. - LT.	107	68
102+25	103+85	AGGIE RD. - LT.	176	96
105+19	105+60	AGGIE RD. - LT.	48	25
105+79	106+23	AGGIE RD. - LT.	42	24
100+43	104+07	AGGIE RD. - RT.	387	214
105+17	106+65	AGGIE RD. - RT.	157	85
TOTAL:				648

CONCRETE WALKS (TYPE SPECIAL)

STATION	STATION	LOCATION	LENGTH LIN. FT.	CONCRETE WALKS SQ. YD.
100+36	100+55	AGGIE RD. - LT.	19	12
TOTAL:				12

CONCRETE COMBINATION CURB AND GUTTER (TYPE A)(1'6")

BEGINNING STATION	ENDING STATION	LOCATION	SIDE	L.F.
99+10	100+78	HWY. 351	LT.	168
101+01	102+18	HWY. 351	LT.	124
103+45	106+80	HWY. 351	LT.	340
99+10	100+81	HWY. 351	RT.	173
101+01	102+16	HWY. 351	RT.	119
103+43	104+06	HWY. 351	RT.	69
104+19	106+79	HWY. 351	RT.	267
99+93	101+03	AGGIE RD.	LT.	116
101+12	101+75	AGGIE RD.	LT.	92
102+17	102+73	AGGIE RD.	LT.	90
102+83	103+46	AGGIE RD.	LT.	68
103+64	103+87	AGGIE RD.	LT.	30
105+16	106+73	AGGIE RD.	LT.	166
99+93	104+03	AGGIE RD.	RT.	426
105+14	106+73	AGGIE RD.	RT.	170
TOTAL:				2418

CONCRETE CURB (TYPE D)

BEGINNING STATION	ENDING STATION	LOCATION	SIDE	L.F.
0+00	5+02.65	ROUNDABOUT	LT.	304
TOTAL:				304

CONCRETE ISLANDS

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ. YD.
101+70	HWY. 351 PEDESTRIAN ISLAND	C	23
101+94	HWY. 351 PEDESTRIAN ISLAND	C	29
103+31	HWY. 351 BYPASS ISLAND - LT.	C	143
103+66	HWY. 351 PEDESTRIAN ISLAND	C	29
103+92	HWY. 351 PEDESTRIAN ISLAND	C	23
104+20	HWY. 351 BYPASS ISLAND - LT.	C	62
103+30	AGGIE RD. BYPASS ISLAND - LT.	C	15
103+42	AGGIE RD. PEDESTRIAN ISLAND	C	17
103+64	AGGIE RD. PEDESTRIAN ISLAND	C	27
105+35	AGGIE RD. PEDESTRIAN ISLAND	C	27
105+54	AGGIE RD. PEDESTRIAN ISLAND	C	6
102+80	ROUNDABOUT TRUCK APRON	B	504
TOTAL:			905

NOTE: CONCRETE ISLANDS WITH TYPE B CURB FACE SHALL BE 6" U.T. AND CONCRETE ISLANDS WITH TYPE C CURB FACE SHALL BE 8" U.T.

WHEELCHAIR RAMPS

STATION	LOCATION	WHEELCHAIR RAMPS (TYPE 3) S.Y.	WHEELCHAIR RAMPS (TYPE SPECIAL) S.Y.
101+74	HWY. 351 - LT.	4.01	
101+74	HWY. 351 - RT.	4.01	
101+83	HWY. 351 - LT.		10.44
101+83	HWY. 351 - RT.		8.41
103+77	HWY. 351 - RT.		10.44
103+77	HWY. 351 - LT.		8.41
103+84	HWY. 351 - LT.		7.60
103+85	HWY. 351 - RT.	4.00	
103+88	HWY. 351 - LT.		7.60
103+96	HWY. 351 - LT.	4.00	
99+95	AGGIE RD. - LT.	3.85	
101+68	AGGIE RD. - LT.	4.93	
102+19	AGGIE RD. - LT.	4.93	
103+34	AGGIE RD. - LT.	4.01	
103+44	AGGIE RD. - LT.		5.01
103+46	AGGIE RD. - LT.		5.01
103+46	AGGIE RD. - RT.	3.99	
103+53	AGGIE RD. - LT.		9.22
103+53	AGGIE RD. - RT.		8.38
105+47	AGGIE RD. - RT.		9.28
105+47	AGGIE RD. - LT.		8.52
105+53	AGGIE RD. - RT.	4.02	
105+54	AGGIE RD. - LT.	3.99	
106+71	AGGIE RD. - RT.	3.85	
TOTALS:		49.59	98.32

QUANTITIES

rccorbyn 6/4/2015 10:41:24 AM
WORKSPACE: AHTD
L:\2015\15017HD - Jonesboro - Hwy. 351at Aggie Rd. Interse. Imprvts\Drawings\AARLQUANTITIES.dgn
REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6-30-15				6	ARK.			
				JOB NO.		100790	24	67

(2) SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER

Digitally Signed 06/30/2015

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		15	STA.
201	GRUBBING		15	STA.
202	REMOVAL AND DISPOSAL OF CURB		80	L.F.
202	REMOVAL AND DISPOSAL OF ROCK RIPRAP		250	SQ. YD.
202	REMOVAL AND DISPOSAL OF HEADWALLS		4	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		1	EACH
202	REMOVAL AND DISPOSAL OF SIGNS		15	EACH
206	FLOWABLE SELECT MATERIAL		69	CU. YD.
210	UNCLASSIFIED EXCAVATION		7253	CU. YD.
SP & 210	COMPACTED EMBANKMENT		7129	CU. YD.
SP & 210	SOIL STABILIZATION		20	TON
303	AGGREGATE BASE COURSE (CLASS 7)		1562	TON
309	PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)		360	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)		672	SQ. YD.
401	TACK COAT		602	GAL.
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		788	TON
SP, SS & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")		34	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		1295	TON
SP, SS & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")		70	TON
412	COLD MILLING ASPHALT PAVEMENT		1206	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		4	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY		46.68	SQ. YD.
601	MOBILIZATION		1.00	L.S.
SP & 602	FURNISHING FIELD OFFICE		1	EACH
603	MAINTENANCE OF TRAFFIC		1.00	L.S.
SS & 604	SIGNS		318	SQ.FT.
SS & 604	TRAFFIC DRUMS		115	EACH
SS & 604	VERTICAL PANELS		107	EACH
SS & 604	BARRICADES		72	L.F.
604	CONSTRUCTION PAVEMENT MARKINGS		10753	L.F.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		932	L.F.
* 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	94	L.F.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	94	L.F.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		159	L.F.
* 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	272	L.F.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	272	L.F.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		90	L.F.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		286	L.F.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		230	L.F.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		165	L.F.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		4	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		1	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		6	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		6	EACH
606	SELECTED PIPE BEDDING		100	CU. YD.
609	DROP INLETS (TYPE MO)		9	EACH
609	DROP INLETS (TYPE E)		3	EACH
609	JUNCTION BOXES (TYPE E)		1	EACH
609	DROP INLET EXTENSIONS (4')		9	EACH
609	DROP INLET EXTENSIONS (8')		4	EACH
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)		114	TON
620	LIME		4	TON
620	SEEDING		1.81	ACRE
620	WATER		281.7	M.G.
SS & 620	MULCH COVER		5.43	ACRE
621	TEMPORARY SEEDING		3.62	ACRE
621	DROP INLET SILT FENCE		240	L.F.
621	SILT FENCE		1410	L.F.

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
621	SAND BAG DITCH CHECKS	80	BAG
621	ROCK DITCH CHECKS	90	CU. YD.
621	TRIANGULAR SILT DIKE	100	L.F.
621	WATTLE (20")	100	L.F.
621	SEDIMENT BASIN	100	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	100	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	400	CU. YD.
623	SECOND SEEDING APPLICATION	1.81	ACRE
624	SOLID SODDING	1833	SQ. YD.
632	CONCRETE ISLAND	905	SQ. YD.
633	CONCRETE WALKS	648	SQ. YD.
SP & 633	CONCRETE WALKS (TYPE SPECIAL)	12	SQ. YD.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	2418	L.F.
634	CONCRETE CURB (TYPE D)	304	L.F.
635	ROADWAY CONSTRUCTION CONTROL	1.00	L.S.
637	MAILBOXES	2	EACH
637	MAILBOX SUPPORTS (SINGLE)	2	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	50	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE SPECIAL)	98	SQ. YD.
710	NON-METALLIC CONDUIT (4")	108	L.F.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	550	L.F.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	236	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	731	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	18	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	494	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	370	L.F.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	2446	L.F.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	991	L.F.
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4	EACH
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	1	EACH
719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	58	L.F.
721	RAISED PAVEMENT MARKERS (TYPE II)	40	EACH
SP & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	351	SQ. FT.
SP & 726	STANDARD SIGN	267	SQ. FT.
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	18	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(A))	10	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(1))	2	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	3585	POUND

REVISIONS

DATE	REVISION	SHEET NUMBER
6-30-15	ADDED SPECIAL PROVISION "MANDATORY ELECTRONIC CONTRACT"	2, 24

rccorbyn 6/30/2015 2:10:54 PM
WORKSPACE: AHTD
L:\2013\13017040 - Jonesboro - Hwy. 351 at Aggie Rd. Inters. Impvts\Drawings\AARLQTY_SUM.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.		100790	25	67
				(2)	SURVEY CONTROL DETAILS			

SURVEY CONTROL COORDINATES

Project Name: s100790
Date: 8/26/2014
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	553503.6282	1712737.7076	296.36	CTL	5/8" Rebar w/2" Alum Mon
2	553740.6078	1712488.9354	293.51	CTL	5/8" Rebar w/2" Alum Mon
3	553459.8457	1712111.2438	290.13	CTL	5/8" Rebar w/2" Alum Mon
4	553224.3357	1712441.7201	288.08	CTL	5/8" Rebar w/2" Alum Mon
100	555944.0692	1707898.1087	309.11	GPS	ALM MON 160015-A
900	553495.0270	1712490.5560	288.88	TBM	CHISELED SQUARE IN HEADWALL
901	553332.6410	1712537.0980	286.26	TBM	CHISELED SQUARE IN HEADWALL
1500	553080.2609	1712657.2847	280.94	RCP	5/8" Rebar w/ No Cap
1501	552967.4885	1712422.6289	295.15	RCP	5/8" Rebar w/ No Cap
1502	553313.6384	1712138.7643	291.11	RCP	5/8" Rebar w/ No Cap
1503	553764.7208	1712260.0489	298.76	RCP	5/8" Rebar w/ No Cap

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*STAMPED 100790 AND CORRESPONDING POINT NUMBER
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999321383 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.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 100
CONVERGENCE ANGLE: 0-46-35.5 RIGHT AT LT: 35-51-11.7 LG: 090-39-55.9
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

ALIGNMENT NAME: HWY. 351

POINT	STATION	TYPE	NORTHING	EASTING
8000	98+00.00	POB	553000.6045	1712516.9508
8001	100+28.01	PC	553228.6024	1712518.8595
8002	100+73.51	PI	553274.1057	1712519.2404
8003	101+18.47	PT	553318.0807	1712507.5404
8004	102+80.00	POE/POB	553474.1805	1712466.0083
8005	104+42.42	PC	553630.4213	1712510.3755
8006	104+87.82	PI	553674.1011	1712522.7791
8007	105+32.69	PT	553719.5061	1712523.1808
8008	108+00.00	POE	553986.8075	1712525.5456

ALIGNMENT NAME: AGGIE ROAD

POINT	STATION	TYPE	NORTHING	EASTING
8009	98+00.00	POB	553475.0916	1711816.0055
8010	110+00.00	POE	553473.4095	1713016.0044

SURVEY CONTROL DETAILS

rccorbyn 6/4/2015 10:43:19 AM
WORKSPACE: AHTD
L:\2013\130170A0 - Jonesboro - Hwy. 351at Aggie Rd. Inters. Imprvts\Drawings\AAR1_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.		100790	26	67

(2) SURVEY CONTROL DETAILS

N

1"=100'

STATE OF ARKANSAS
Todd Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
Digitally Signed 06/04/2015

POE 108+00.00

PT 8008

N0°30'25"E 267.31'

107+00

106+00

2

5/8" REBAR W/ 2" CAP

C.L. HWY. 351

1503
5/8" REBAR
W/ NO CAP

PT 105+32.69

PT 8007

105+00

351-02

PI 8006

PI 104+87.82

2043

PC 104+42.42

PC 8005

S 53°22'27" W 410.61'

N 46°23'27" W 345.56'

104+00

N15°51'10"E 162.42'

SURVEY BASELINE

900
CHISELED SQUARE
IN HEADWALL

103+00

5/8" REBAR
W/ 2" CAP

AGGIE RD.

POE 110+00.00

99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00

POB 8009

S89°55'11"E 1200'

POE/POB 8004

POB 8010

2044

2056

3
5/8" REBAR
W/ 2" CAP

102+00

N14°53'57"W 161.53'

S 54°31'30" E 405.81'

901
CHISELED SQUARE
IN HEADWALL

PT 8003

PI 101+18.47

101+00

P 8002

PI 100+73.51

1502
5/8" REBAR
W/ NO CAP

351-01

PC 100+28.01

PC 8001

4
5/8" REBAR
W/ 2" CAP

100+00

N0°28'47"E 218.01'

99+66

1500
5/8" REBAR
W/ NO CAP

POB 98+00.00

POB 8000

1501
5/8" REBAR
W/ NO CAP

CURVE DATA

CURVE	PC	PI	PT	Δ	D	TANGENT FEET	LENGTH FEET	e FT./FT.	Ls FEET	DESIGN SPEED
351-01	100+28.01	100+73.51	101+18.47	15°22'43" LT.	17°00'00"	45.50'	90.46'	N/A	N/A	30 MPH
351-02	104+42.42	104+87.82	105+32.69	15°20'45" LT.	17°00'00"	45.41'	90.27'	N/A	N/A	30 MPH

SURVEY CONTROL DETAILS

rccorbyn 6/4/2015 10:29:54 AM
WORKSPACE: AHTD
L:\2013\130170\40 - Jonesboro - Hwy. 351at Aggie Rd.Inters.Impvts\Drawings\AARI_SC_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.		100790	27	67
				(2)	PLAN AND PROFILE - HWY. 351			

HWY. 351 STA. 102+24 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
WITH DUAL 4' EXT. AND 18" X 19'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
WITH FES.
TYPE MO DROP INLET = 4' DIA.
TYPE C = 4'-0" X 2'-6"

HWY. 351 STA. 100+90 CONSTRUCT
DROP INLET ON LT. H = 3'-0"
WITH DUAL 4' EXT. AND 18" X 16'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
WITH FES.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" x 2'-6"

HWY. 351 STA. 102+56 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
AND 18" X 44' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE E DROP INLET = 4'-0" X 4'-0" W/GRATE

HWY. 351 STA. 102+21 CONSTRUCT
DBL. 4" X 54' NON-METALLIC CONDUIT ON LT.
FOR FUTURE WATER AND UTILITIES

HWY. 351 STA. 101+77 CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP ON LT.
= 4.00 SQ. YD.

C.L. HWY. 351
PI = 100+73.51
Δ = 15°22'43" LT.
D = 17°00'00"
T = 45.50'
L = 90.46'
PC= 100+28.01
PT= 101+18.47
e = N/A
Ls = N/A

C.L. HWY. 351
PI = 104+87.82
Δ = 15°20'45" RT.
D = 17°00'00"
T = 45.41'
L = 90.27'
PC= 104+42.42
PT= 105+32.69
e = N/A
Ls = N/A

HWY. 351 STA. 103+97 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.00 SQ. YD.

HWY. 351 STA. 101+83 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 10.44 SQ. YD.

HWY. 351 STA. 101+83 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON RT.
= 8.41 SQ. YD.

HWY. 351 STA. 103+77 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON RT.
= 10.44 SQ. YD.

HWY. 351 STA. 103+77 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 8.41 SQ. YD.

HWY. 351 STA. 103+84 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 7.60 SQ. YD.

HWY. 351 STA. 103+88 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 7.60 SQ. YD.

STA. 99+10.00
BEGIN HWY. 351
BEGIN JOB 100790

STA. 106+79.34
END HWY. 351
END JOB 100790

HWY. 351 STA. 99+36 CONSTRUCT
TRIPLE 48" X 55' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 252 CFS DA = 89.9 ACRES

HWY. 351 STA. 101+25 TO STA. 101+34
IN PLACE R.C. BOX CULVERT ON RT.
FILL AND ABANDON

HWY. 351 STA. 101+76 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.01 SQ. YD.

HWY. 351 STA. 100+91 CONSTRUCT
DROP INLET ON RT. H = 5'-6"
WITH DUAL 4' EXT. AND 30" X 125'
R.C. PIPE CULVERT
TO FES ON RT.
(CLASS III)(TYPE 3 BEDDING)
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 3'-6"

HWY. 351 STA. 102+22 CONSTRUCT
DROP INLET ON RT. H = 5'-5"
WITH 4' EXT. AND 24" X 136'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"
24" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 136 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 136 LIN. FT.

HWY. 351 STA. 104+58 CONSTRUCT
APPROACH ON RT.
= 3 CU. YD.

HWY. 351 STA. 105+09 CONSTRUCT
APPROACH ON RT.
= 4 CU. YD.

HWY. 351 STA. 103+83 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.02 SQ. YD.

HWY. 351 STA. 102+41 TO STA. 103+10
IN PLACE R.C. BOX CULVERT ON RT.
FILL AND ABANDON

HWY. 351 STA. 103+50 CONSTRUCT
JUNCTION BOX ON RT. H = 6'-0"
AND 24" X 90' R.C. PIPE CULVERT
TO DROP INLET ON RT.
(CLASS III)(TYPE 3 BEDDING)
TYPE E JUNCTION BOX = 3'-0" X 3'-0"

HWY. 351 STA. 104+08 CONSTRUCT
DROP INLET ON RT. H = 4'-6"
AND 24" X 57'
PIPE CULVERT TO JUNCTION BOX ON RT.
TYPE E DROP INLET = 4'-0" X 3'-0" W/GRATE
24" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 57 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 57 LIN. FT.

HWY. 351 STA. 104+08 CONSTRUCT
DROP INLET ON RT. H = 3'-0"
WITH 8' EXT. AND 18" X 16'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 16 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 16 LIN. FT.

HWY. 351 STA. 104+85 CONSTRUCT
DROP INLET ON RT. H = 5'-6"
AND 24" X 79' PIPE CULVERT
TO DROP INLET ON RT.
AND 18" X 62' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
WITH FES.
TYPE E DROP INLET = 4'-0" X 3'-0" W/GRATE
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 62 LIN. FT.
24" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 79 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 79 LIN. FT

STATE OF ARKANSAS
Todd E. Mueller
LICENSED PROFESSIONAL ENGINEER
No.11835
TODD E. MUELLER
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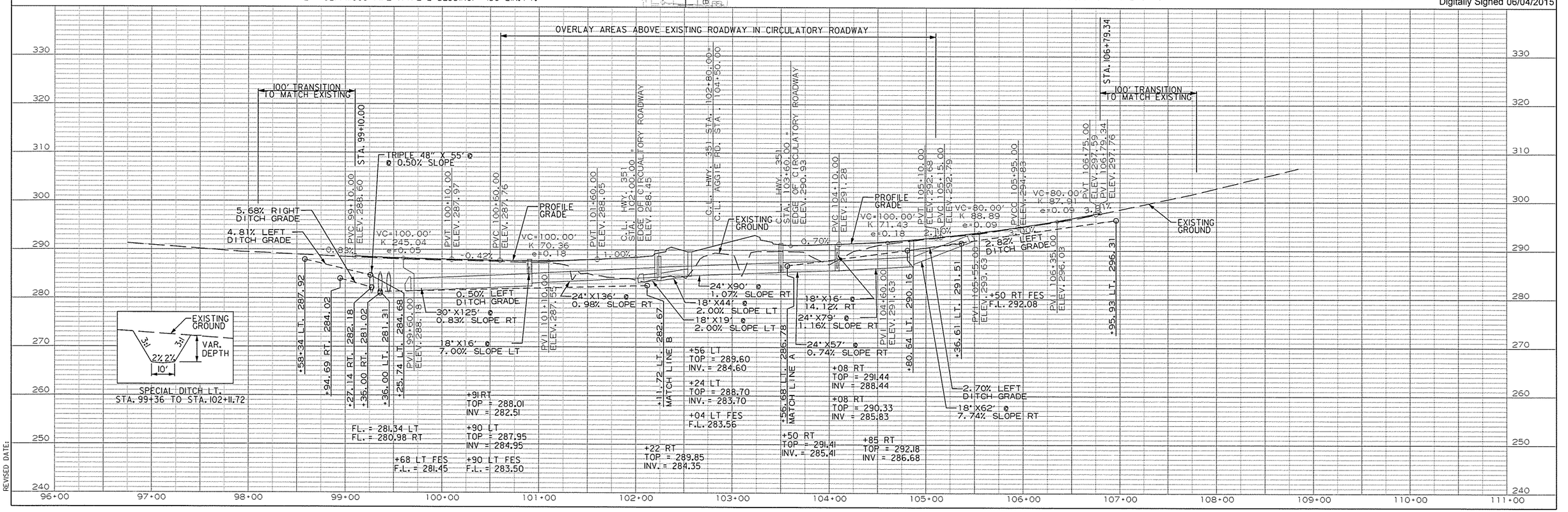
HWY. 351



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		100790	28	67

(2) PLAN AND PROFILE - AGGIE ROAD

AGGIE RD. STA. 101+10 IN PLACE
24" X 150' R.C. PIPE CULVERT FROM WEST - RETAIN
AGGIE RD. STA. 101+10 CONSTRUCT
DROP INLET ON LT. H = 4'-6"
WITH 8' EXT. AND 30" X 161'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 3'-6"

AGGIE RD. STA. 101+94 CONSTRUCT
APPROACH ON LT. = 27 CU. YD.

AGGIE RD. STA. 99+98 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.00 SQ. YD.

AGGIE RD. STA. 101+71 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.95 SQ. YD.

AGGIE RD. STA. 102+16 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.95 SQ. YD.

AGGIE RD. STA. 103+35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.00 SQ. YD.

AGGIE RD. STA. 103+54 CONSTRUCT
DROP INLET ON LT. H = 3'-0"
WITH DUAL 4' EXT. AND 18" X 18'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
TO FES ON LT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"

AGGIE RD. STA. 102+75.65 CONSTRUCT
DROP INLET ON LT. H = 6'-2"
WITH 8' EXT. AND 36" X 14' R.C. PIPE CULVERT
FROM FES ON LT. AND
36" X 60' R.C. PIPE CULVERT
TO FES ON RT.
(CLASS III) (TYPE 3 BEDDING)
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4'-6" X 3'-6"
Q50 = 44CFS DA = 35.3 ACRES

AGGIE RD. STA. 102+87 CONSTRUCT
DOUBLE 36" X 78' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
W/ FES LT. & RT.
Q50 = 87CFS DA = 35.3 ACRES

AGGIE RD. STA. 103+46 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.00 SQ. YD.

AGGIE RD. STA. 106+00 CONSTRUCT
DROP INLET ON LT. H = 4'-6"
WITH 8' EXT. AND 18" X 78'
PIPE CULVERT TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 78 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 78 LIN. FT.

AGGIE RD. STA. 105+69 CONSTRUCT
APPROACH ON LT. = 2 CU. YD.

AGGIE RD. STA. 105+53 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.00 SQ. YD.

AGGIE RD. STA. 106+68 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.00 SQ. YD.

AGGIE RD. STA. 105+54 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.00 SQ. YD.

AGGIE RD. STA. 103+44 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 5.01 SQ. YD.

AGGIE RD. STA. 103+46 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 5.01 SQ. YD.

AGGIE RD. STA. 103+53 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 9.22 SQ. YD.

AGGIE RD. STA. 103+53 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON RT.
= 8.38 SQ. YD.

AGGIE RD. STA. 105+47 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON RT.
= 9.28 SQ. YD.

AGGIE RD. STA. 105+47 CONSTRUCT
TYPE SPECIAL WHEELCHAIR RAMP ON LT.
= 8.52 SQ. YD.

STA. 99+92.62
BEGIN AGGIE ROAD

STA. 106+73.29
END AGGIE ROAD

C.L. HWY. 351 STA. 102+80.00 =
C.L. AGGIE RD. STA. 104+50.00

N

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AGGIE ROAD

OVERLAY AREAS ABOVE EXISTING ROADWAY IN CIRCULATORY ROADWAY

SPECIAL DITCH RT.
STA. 102+83.00 TO STA. 103+90.52

+10 LT.
TOP = 291.80
EX. INV. = 288.94 WEST
INV. = 287.29 EAST

+75.65 LT.
TOP = 289.81
INV. = 283.72 WEST
INV. = 283.64 NORTH
INV. = 283.62 SOUTH

+75 LT FES F.L. 283.75
+75 RT FES F.L. 283.28
FL. = 283.75 LT
FL. = 283.28 RT

+00 LT
TOP = 291.73
INV. = 287.23

+54 LT
TOP = 288.84
INV = 285.84

+39 LT FES
F.L. 285.69

MATCH LINE A

rccorbyn 6/8/2015 4:32:26 PM
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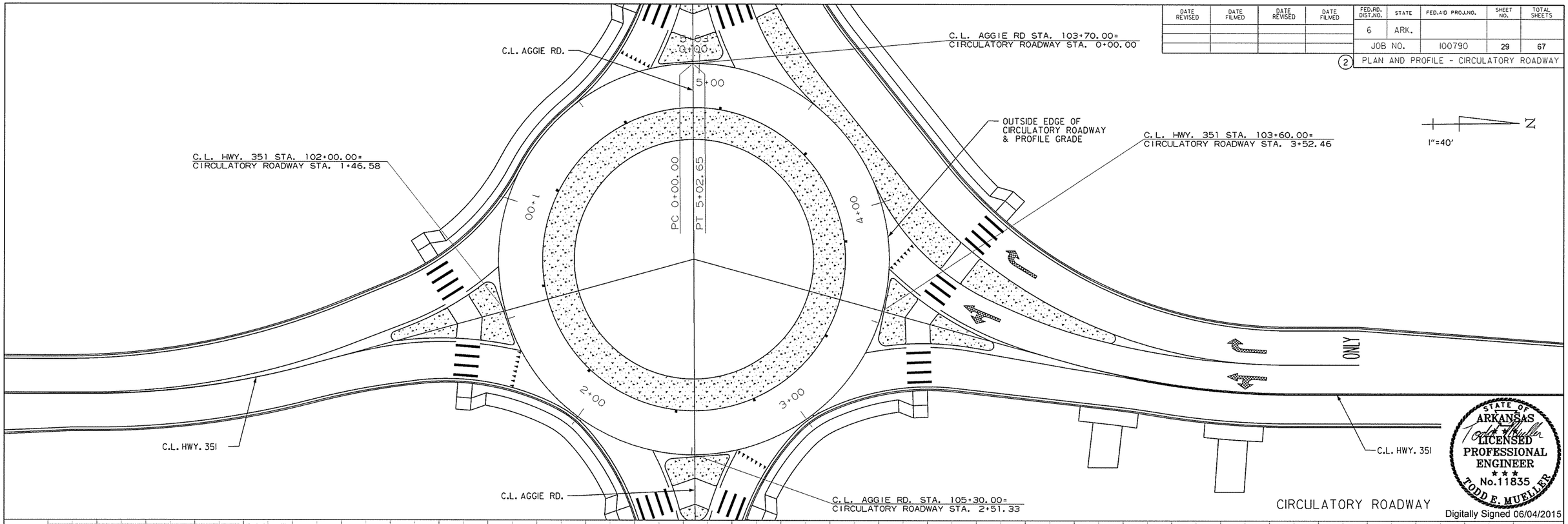
				6	ARK.			
				JOB NO.		100790	29	67

(2) PLAN AND PROFILE - CIRCULATORY ROADWAY



STATE OF ARKANSAS
Todd E. Mueller
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* * *
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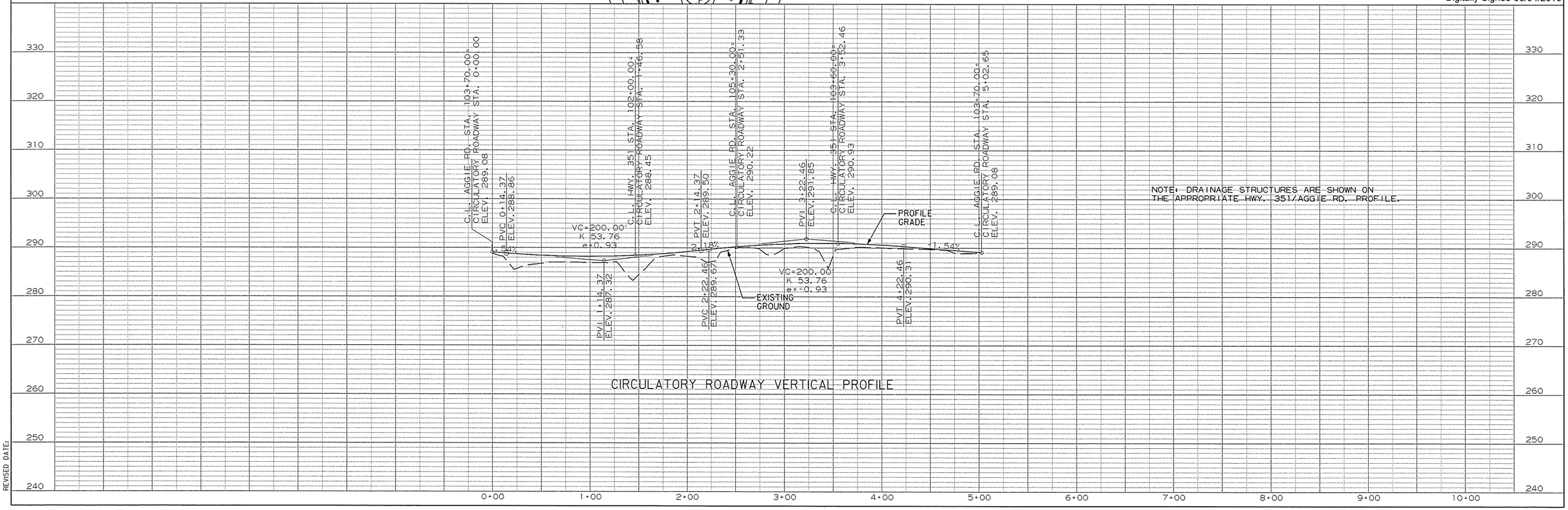
Digitally Signed 06/04/2015



CIRCULATORY ROADWAY VERTICAL PROFILE

NOTE: DRAINAGE STRUCTURES ARE SHOWN ON THE APPROPRIATE HWY. 351/AGGIE RD. PROFILE.

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	30	67

(2) DRIVEWAY PROFILES

STATE OF ARKANSAS
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TODD E. MUELLER

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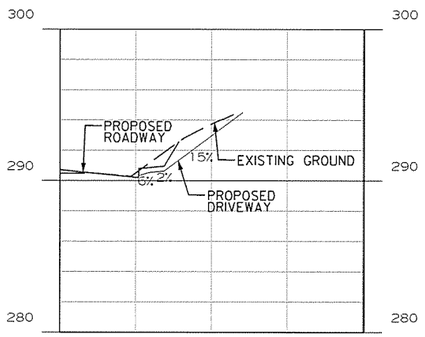
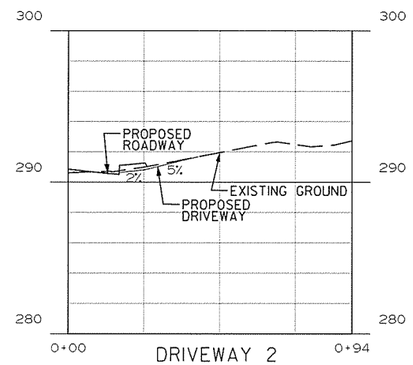
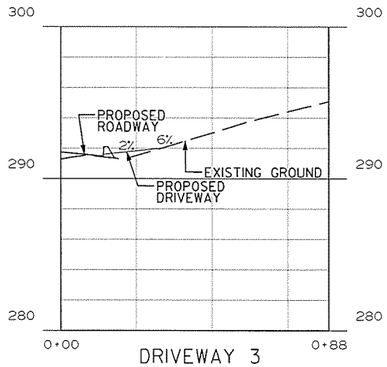


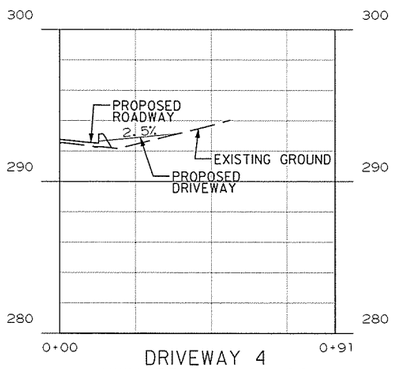
DRIVEWAY 1
AGGIE RD. STA. 101+94



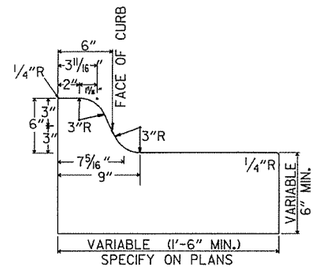
DRIVEWAY 2
AGGIE RD. STA. 105+69



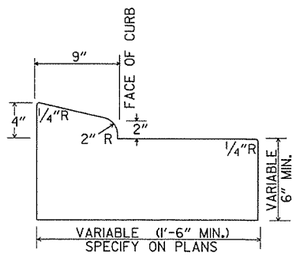
DRIVEWAY 3
HWY. 351 STA. 104+58



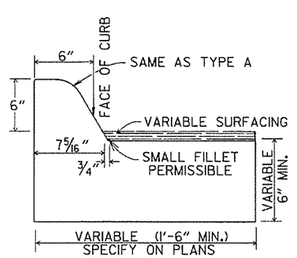
DRIVEWAY 4
HWY. 351 STA. 105+09



TYPE A



TYPE B-1



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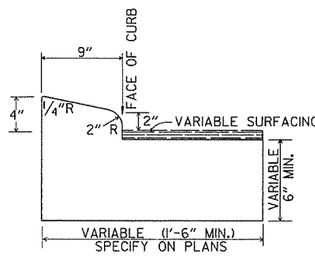

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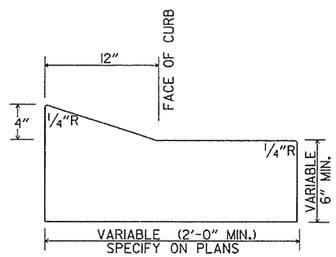
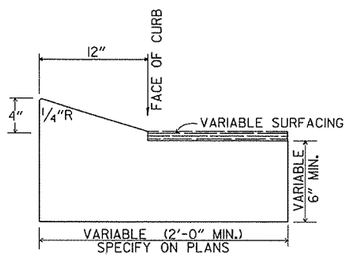
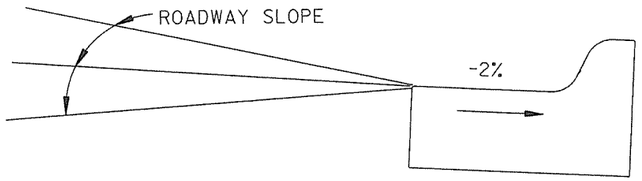


TYPE E-1



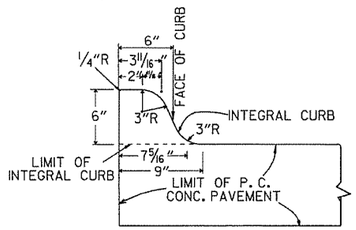
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER



DETAIL OF GUTTER SLOPE

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



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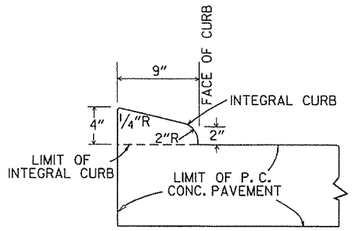

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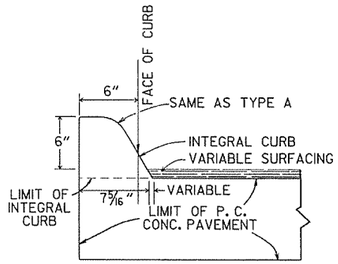
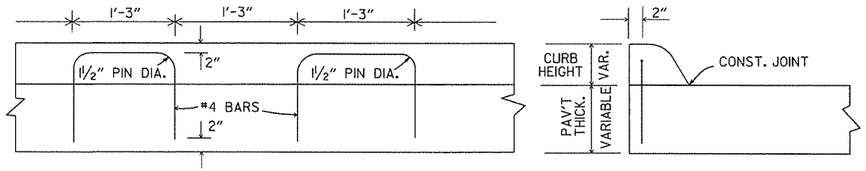


TYPE C

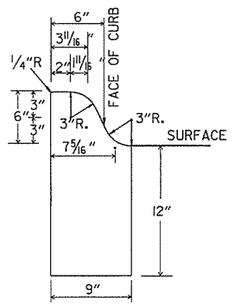
INTEGRAL CURB



LONGITUDINAL SECTION

ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



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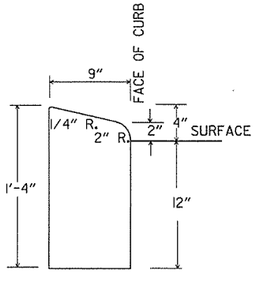

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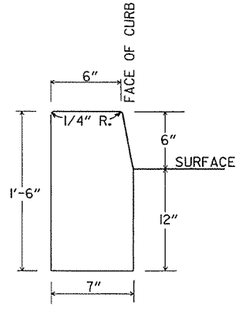

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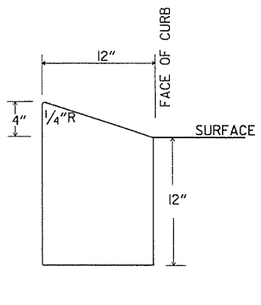
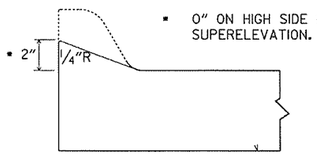


TYPE E

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.

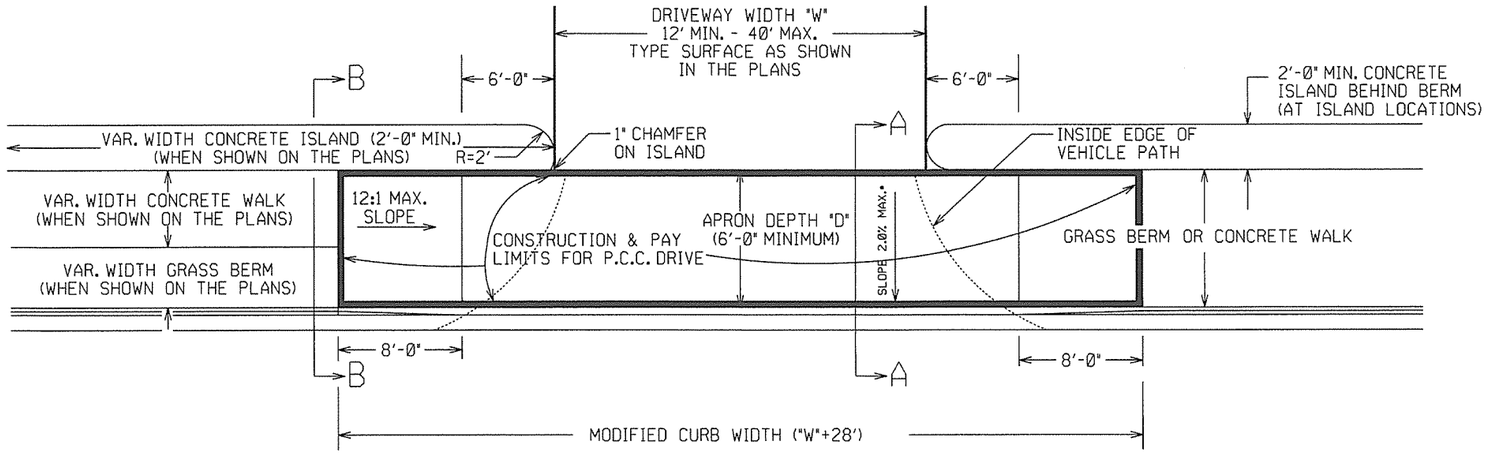
DETAILS OF MODIFIED CURB

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

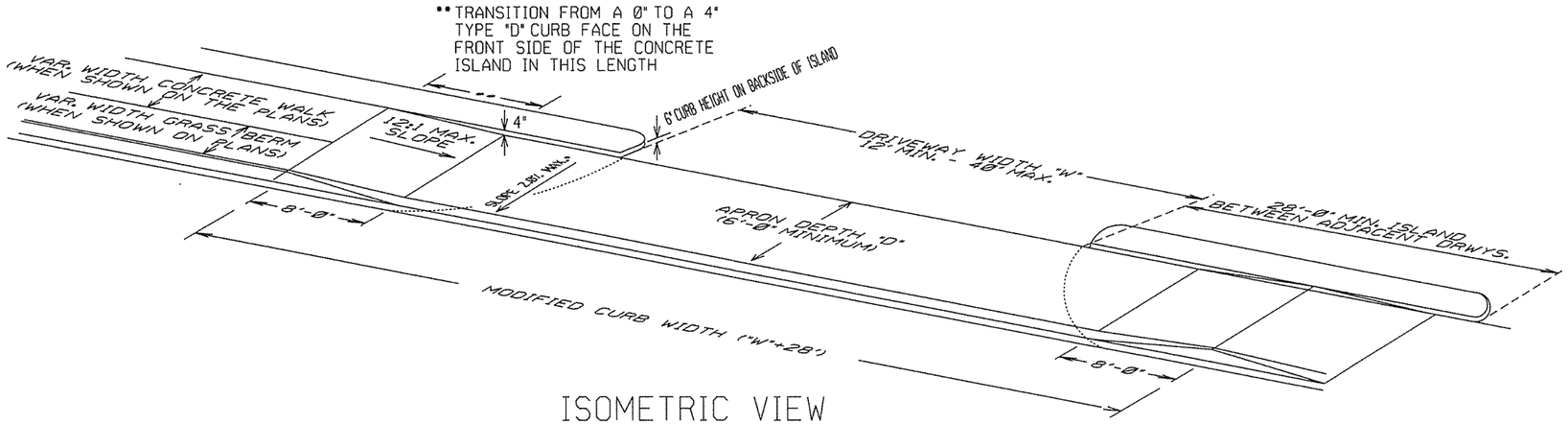
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

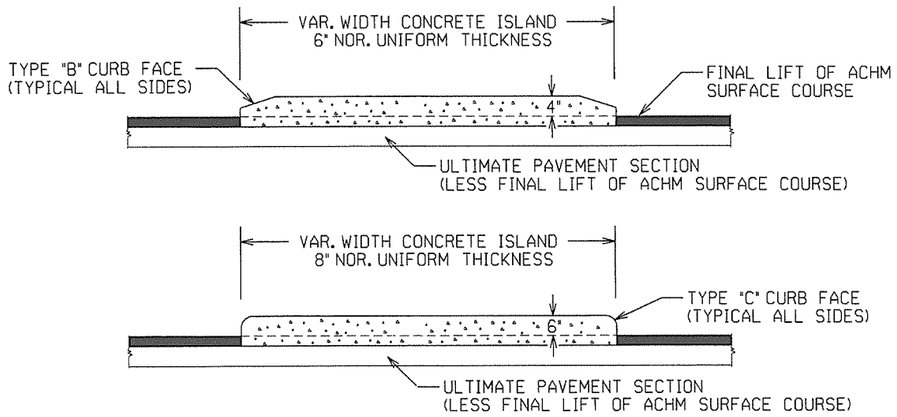
STANDARD DRAWING CG-1



PLAN VIEW

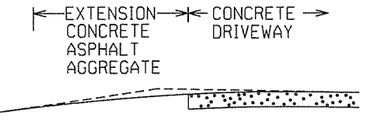


ISOMETRIC VIEW



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

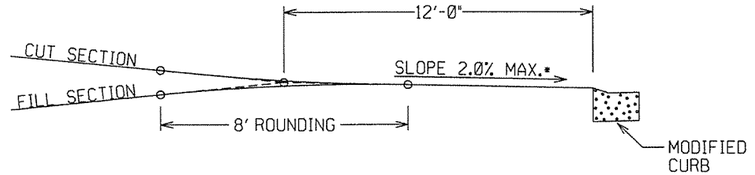
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

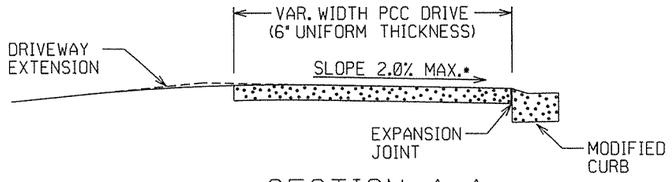
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

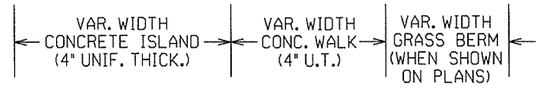


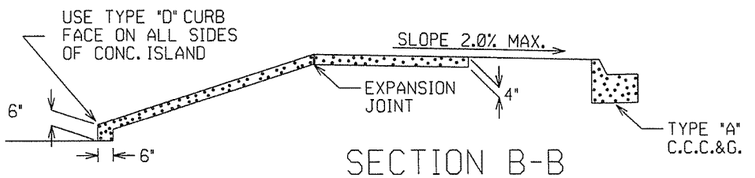
DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A

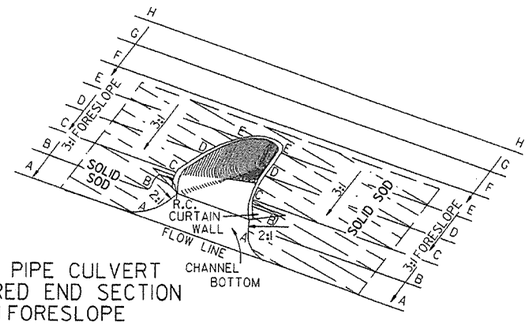




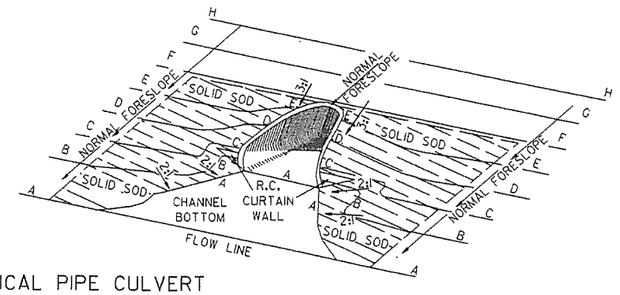
SECTION B-B
CURBED ISLAND BEHIND WALK

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

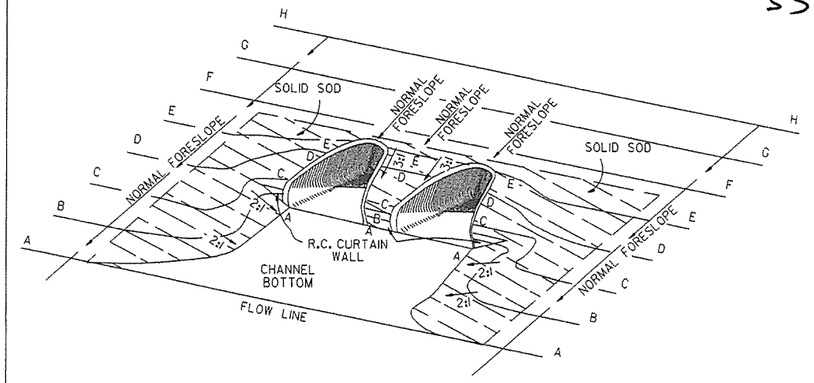
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



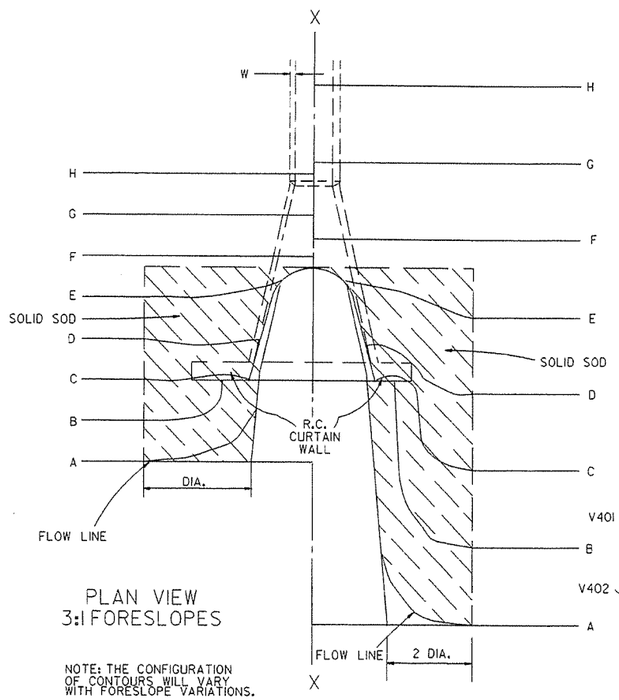
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

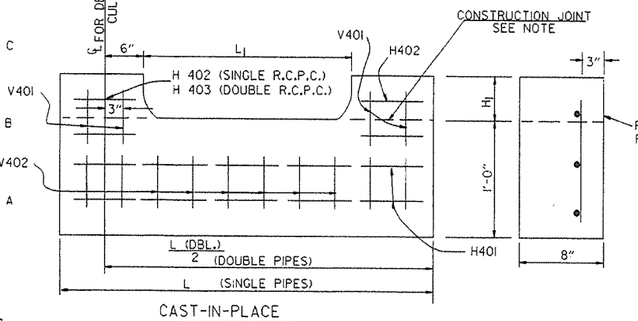
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

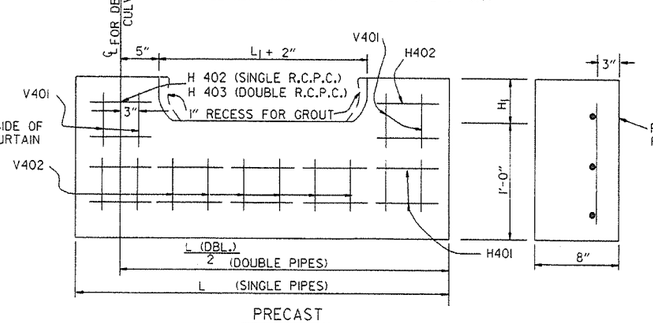
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	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.



CAST-IN-PLACE

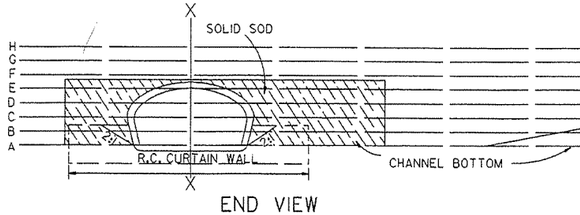
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



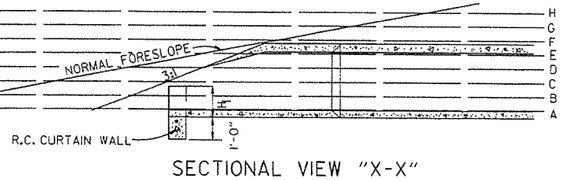
PRECAST

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



END VIEW



SECTIONAL VIEW "X-X"

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 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.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	4:1	6:1	DOUBLE R.C.P.C. 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

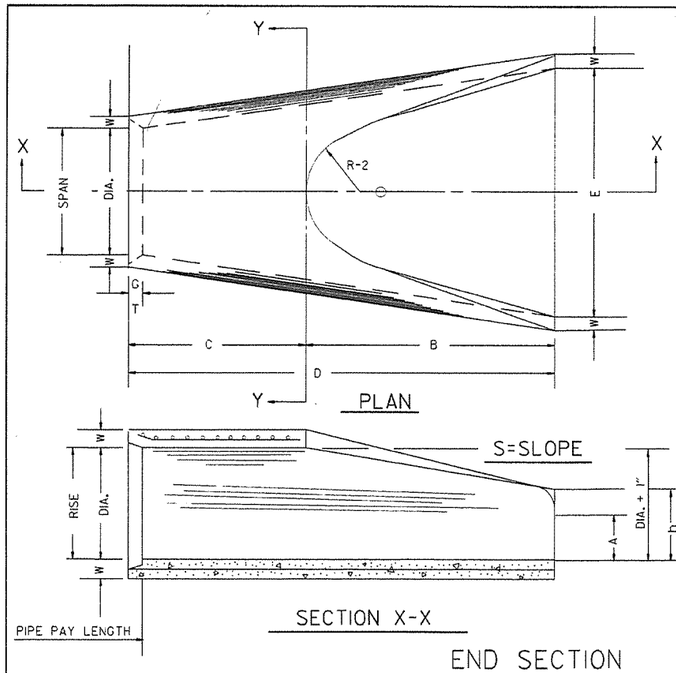
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; 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 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.

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

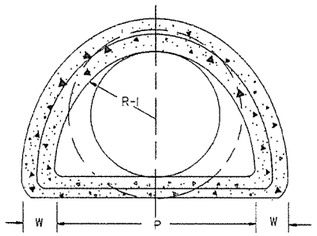
STANDARD DRAWING FES-1



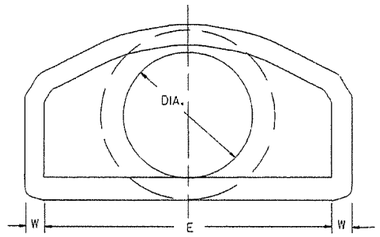
END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. ~ 1"	P	R-1	R-2	G-T	WT.	h
18"	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'-11½"	4'-0"	3:1	25"	33 3/16"	16 13/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3½"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3:1	37"	47 1/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅛"	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"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 5/16"	24"	5"	13250	4'-6"



SECTION Y-Y



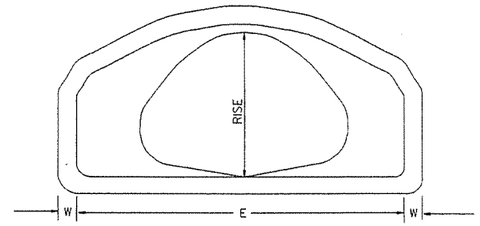
END VIEW

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

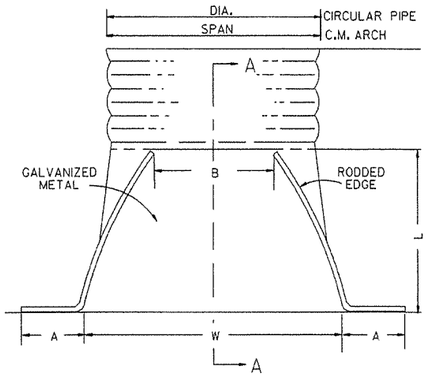
ARCH PIPE

EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	C-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"	36 11/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 11/16"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54⅜"	22"	3½"	2½:1
42	51⅛	51	31 3/16	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"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 3/16"	24"	5"	2¼:1

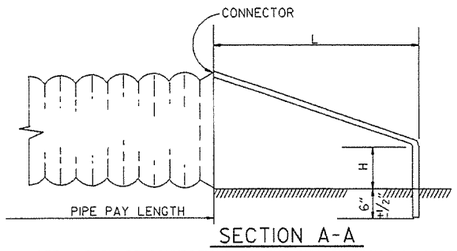
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW
CONCRETE ARCH PIPE

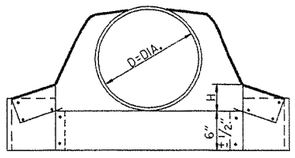


PLAN

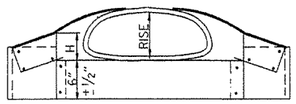


SECTION A-A

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



CIRCULAR PIPE



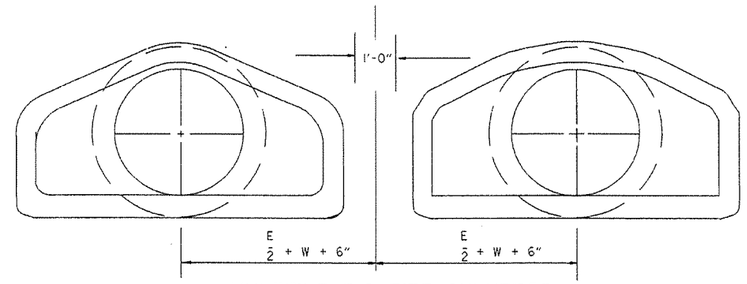
C.M. ARCH PIPE

CIRCULAR PIPE

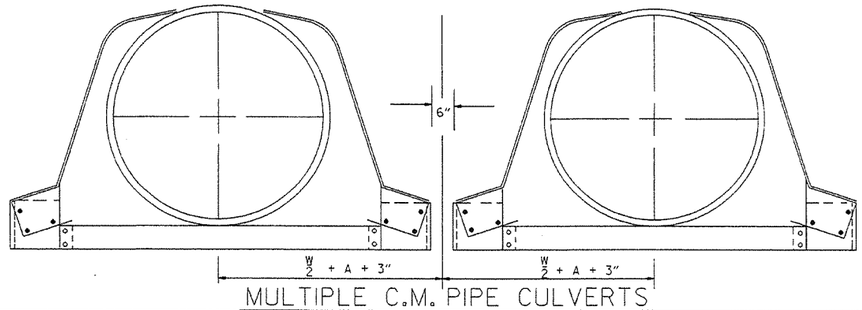
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	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

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	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

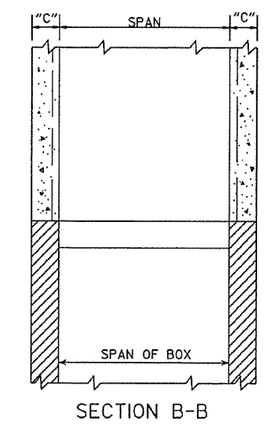
DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
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

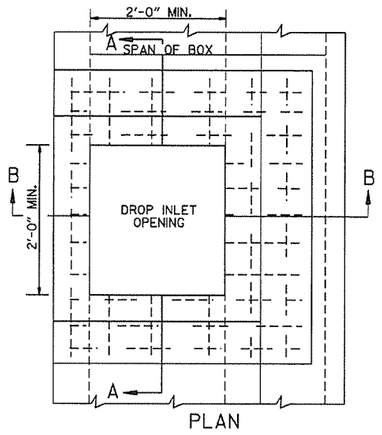
FLARED END SECTION

STANDARD DRAWING FES-2

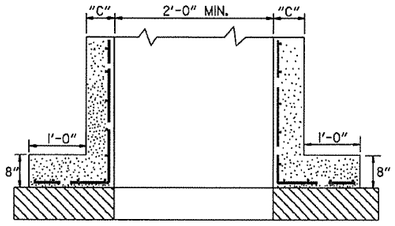
stdfes2.dgn



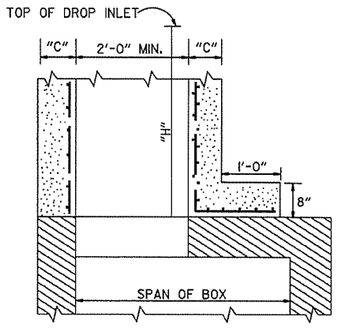
SECTION B-B



PLAN

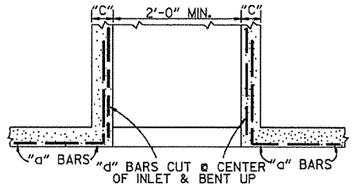


SECTION A-A

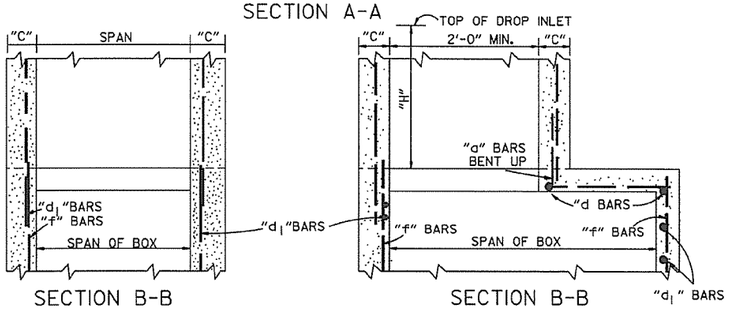


SECTION B-B

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



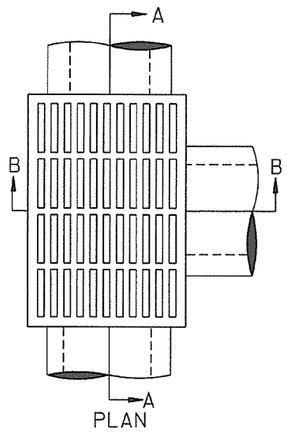
SECTION A-A



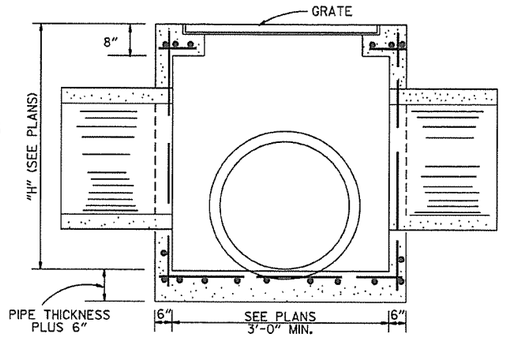
SECTION B-B SECTION B-B

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

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

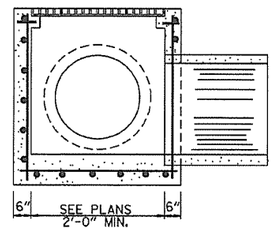


PLAN



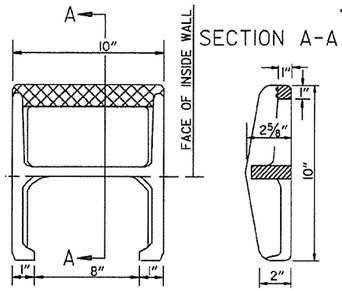
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

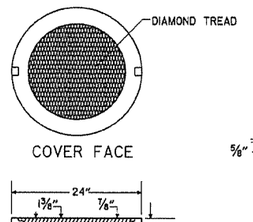


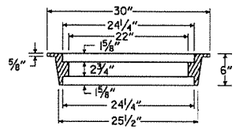
APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

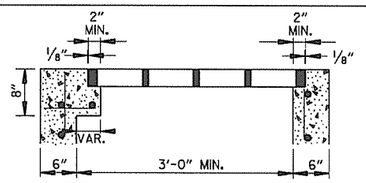
DETAIL OF STEP FOR DROP INLET



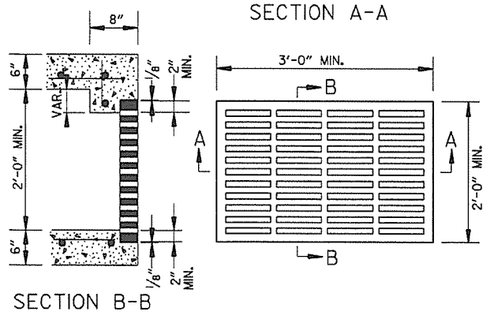


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



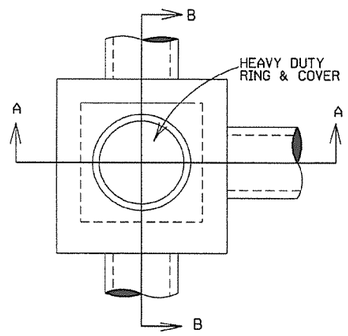
SECTION A-A



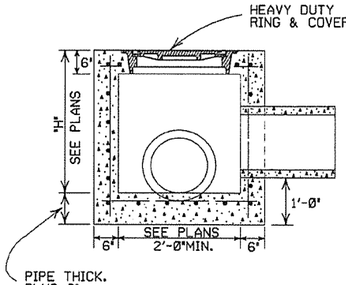
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

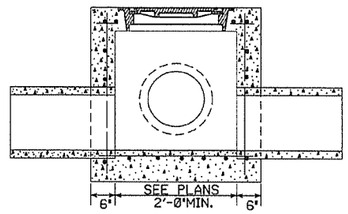


PLAN



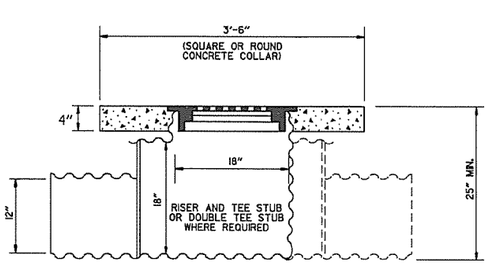
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

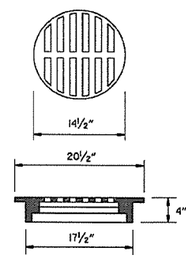


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

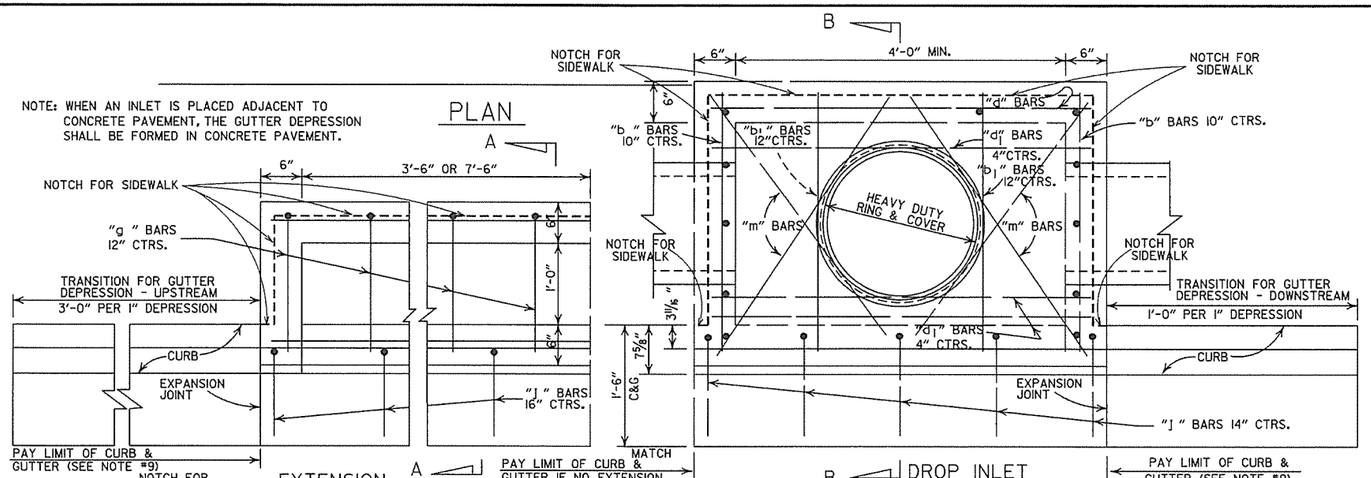
STANDARD DRAWING FPC-9

4′-0″ LENGTH DROP INLET — DROP INLET EXTENSION

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

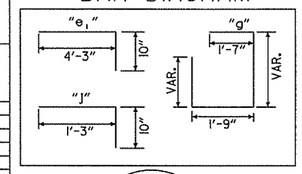
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

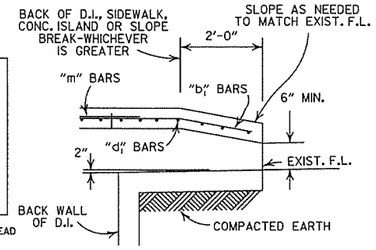
NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.



DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET		
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

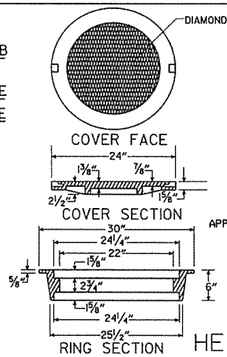
BAR DIAGRAM





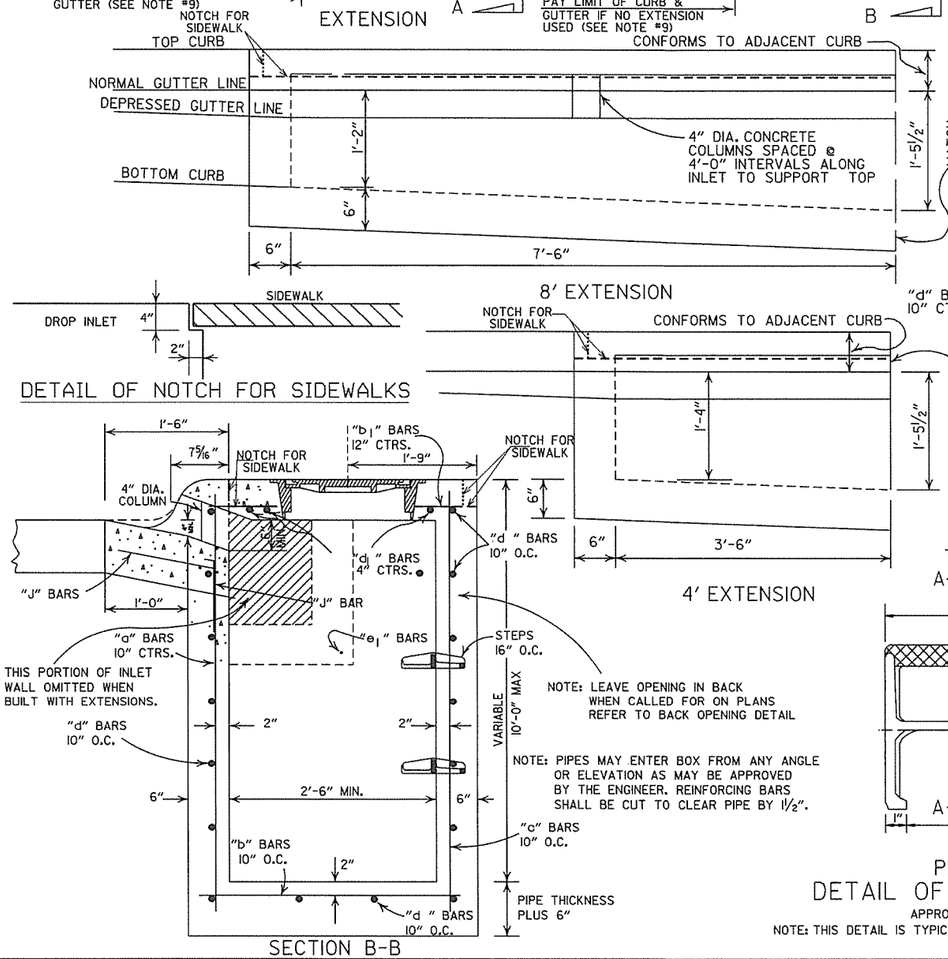
BACK OPENING

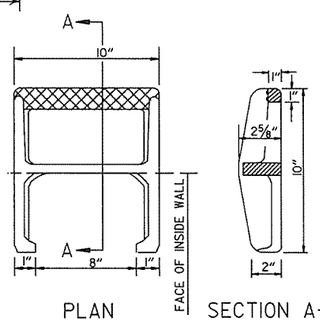
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

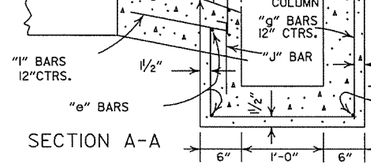




DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11 LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



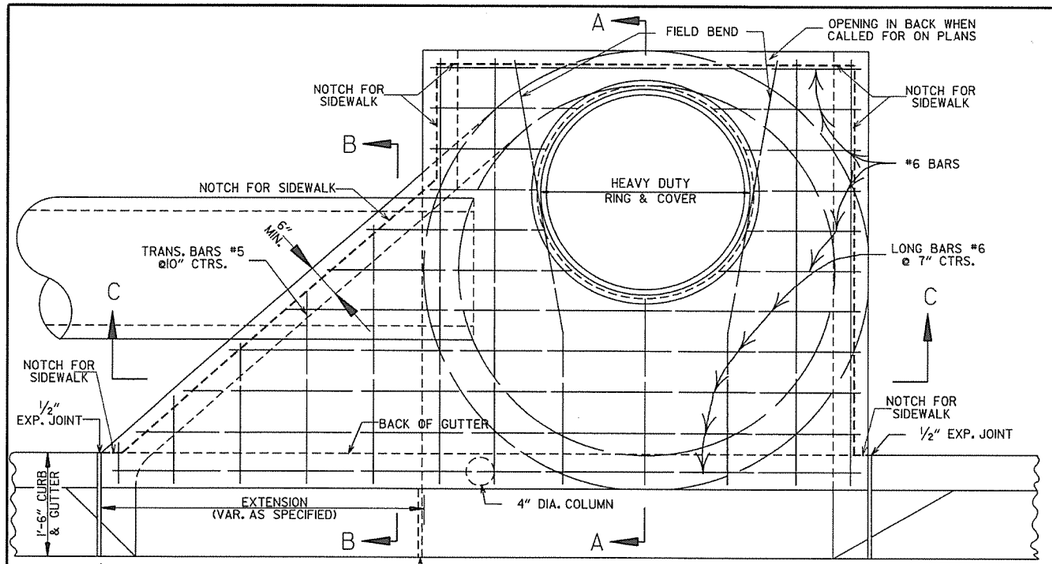
GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾″ CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4′-0″ HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½″ COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10′-0″ HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4″×2″ NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

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

ARKANSAS STATE HIGHWAY COMMISSION

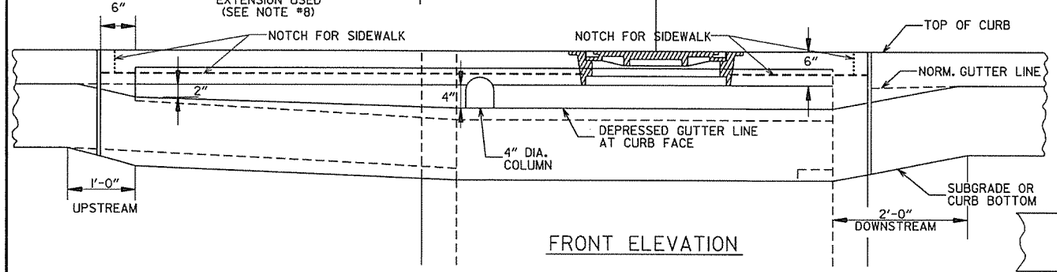
DETAILS OF DROP INLETS (TYPE C)

STANDARD DRAWING FPC-9E

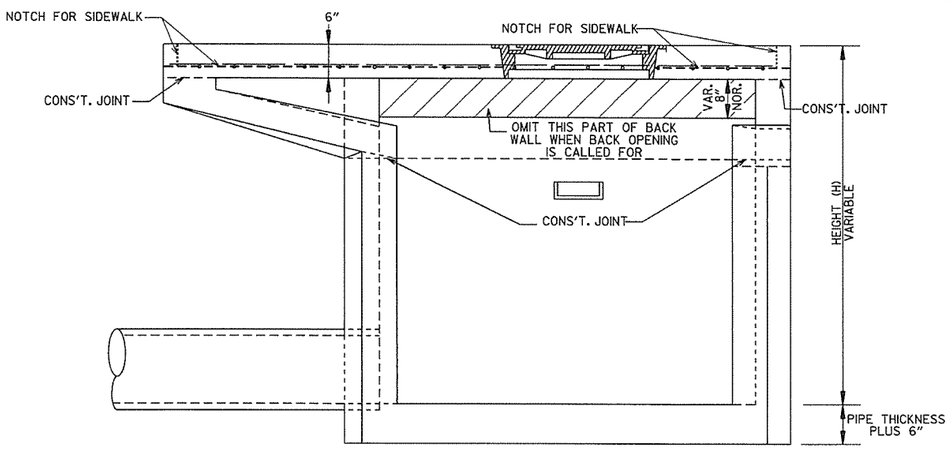


PLAN - W/SINGLE EXTENSION

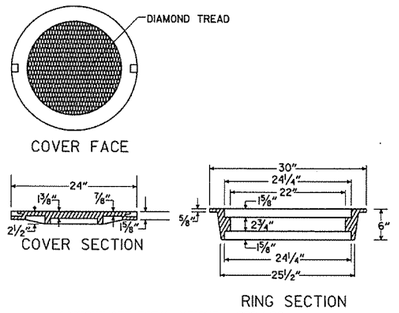
NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.



FRONT ELEVATION



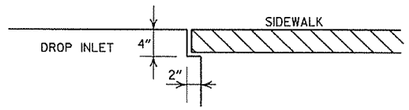
SECTION C-C



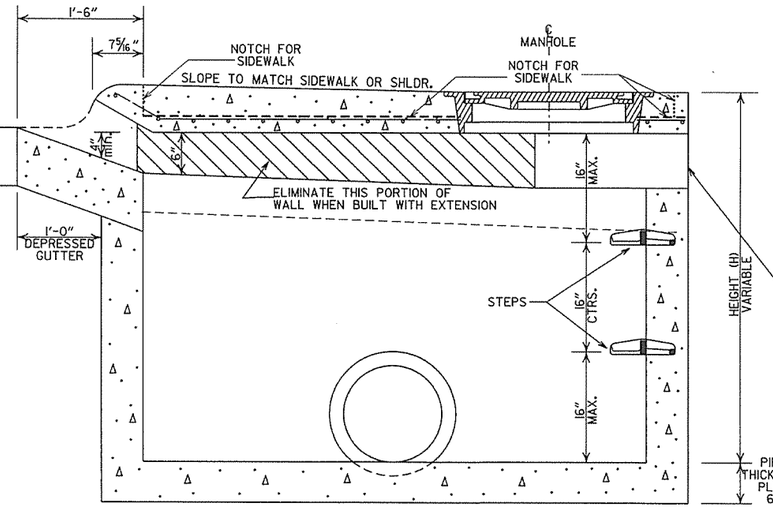
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

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

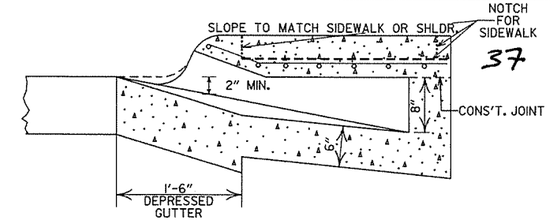


DETAIL OF NOTCH FOR SIDEWALKS

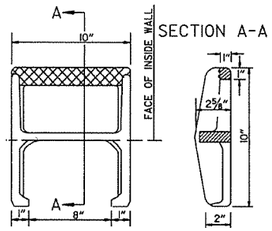


SECTION A-A

8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11 ADJ. OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN, BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN. DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO.12	11-30-89
5-23-89	ADDED NOTE 8 MINIMUM WALL THICKNESS	5&7-5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	6&9-7-15-88
1-14-87	MODIFIED WALL THICKNESS	7&8-1-14-87
5-12-87	ISSUED	4-5-12-87
DATE	REVISIONS	DATE FILMED



SECTION B-B

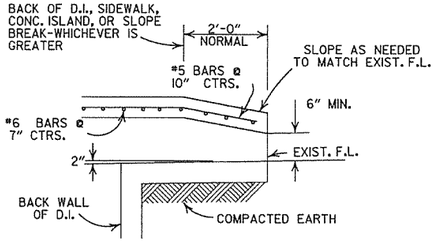


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET



BACK OPENING

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

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

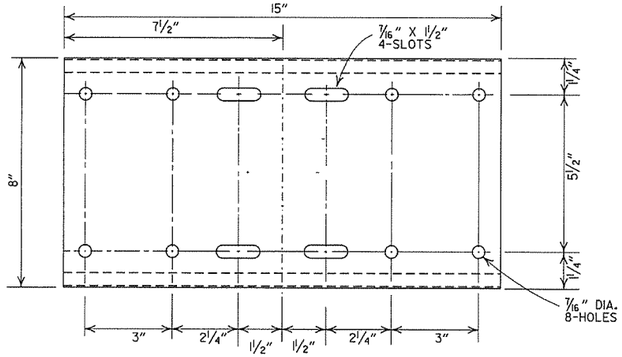
LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

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

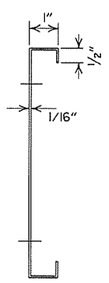
ARKANSAS STATE HIGHWAY COMMISSION

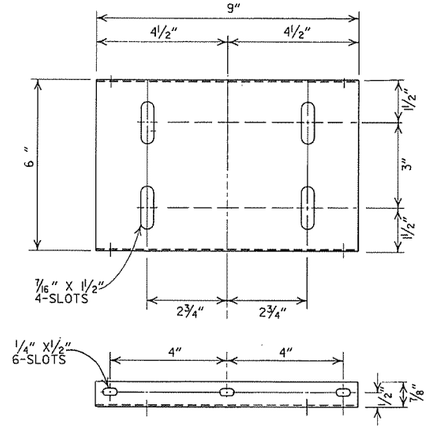
DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M

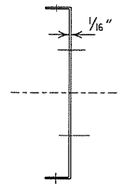


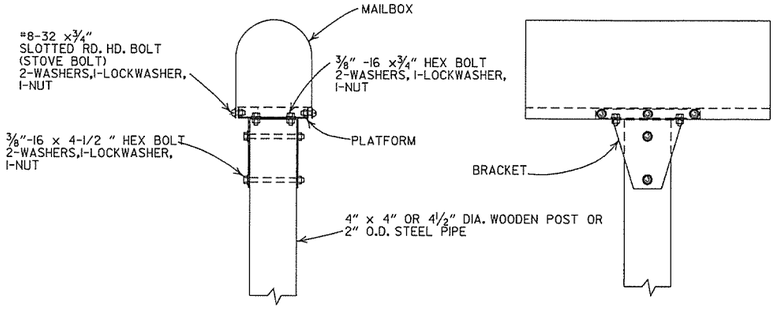
SHELF



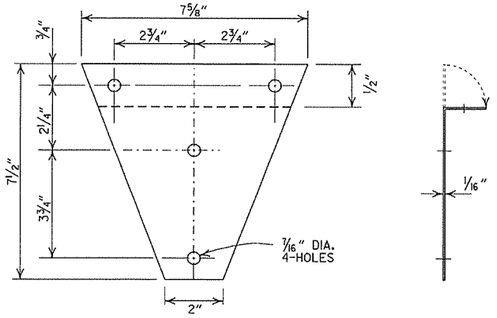


PLATFORM





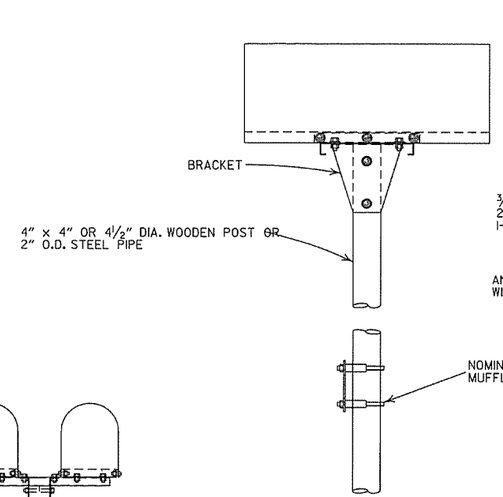
SINGLE INSTALLATION



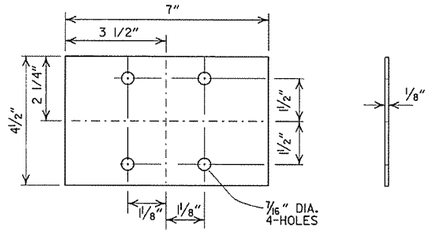
BRACKET

GENERAL NOTES

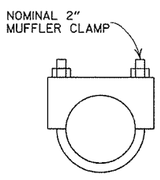
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED 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.



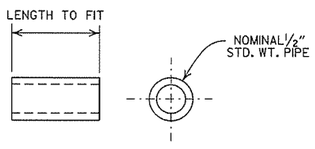
DOUBLE INSTALLATION



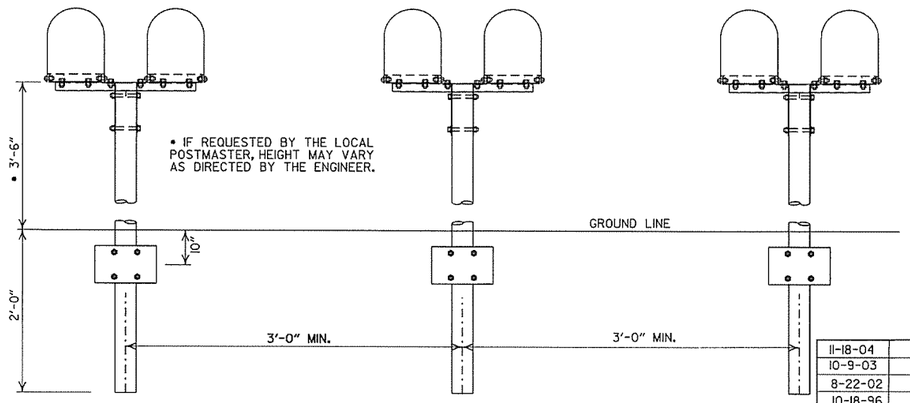
ANTI-TWIST PLATE



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	20-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31 5/16	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.

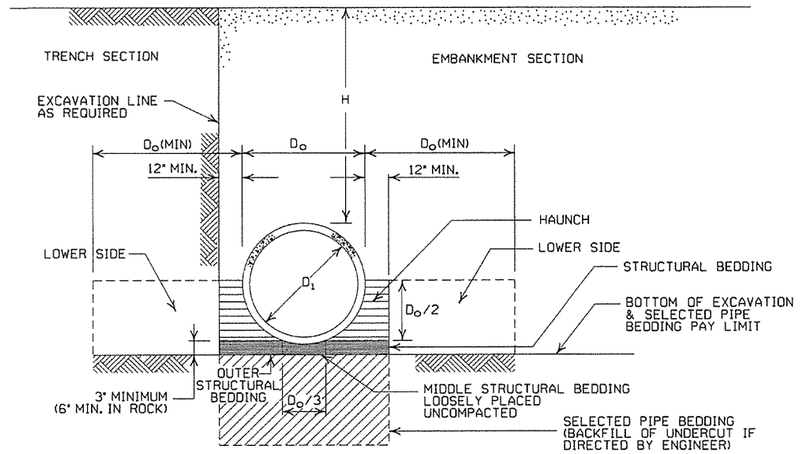
- LEGEND -

D_i = 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.

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.

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."

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL			ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	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.

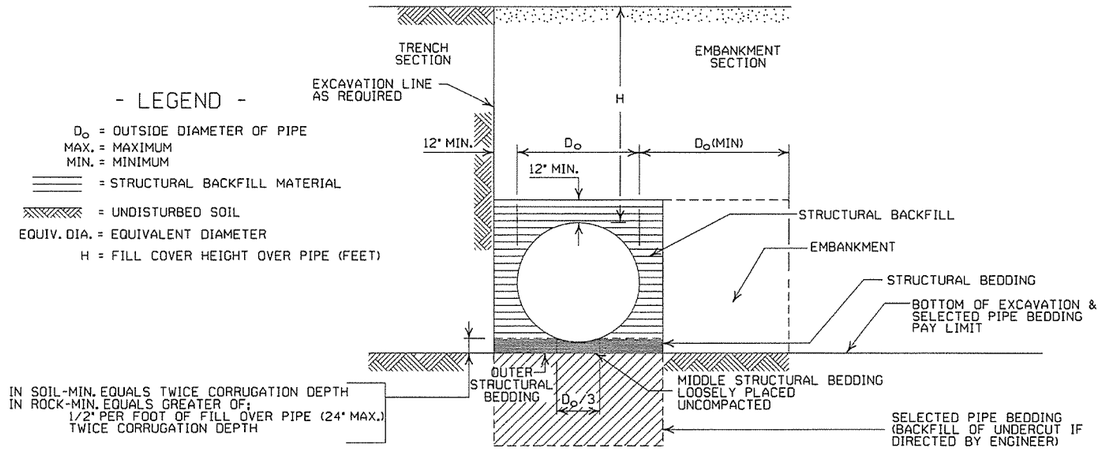
NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

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



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.

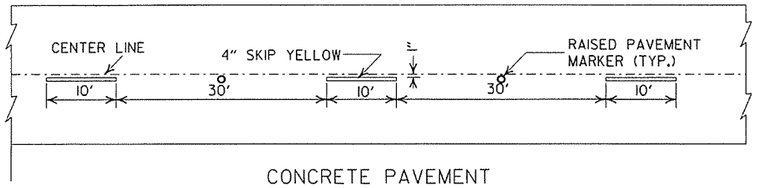
② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED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

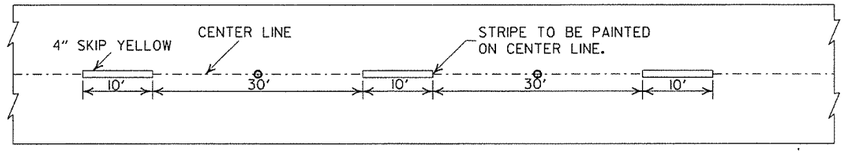
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

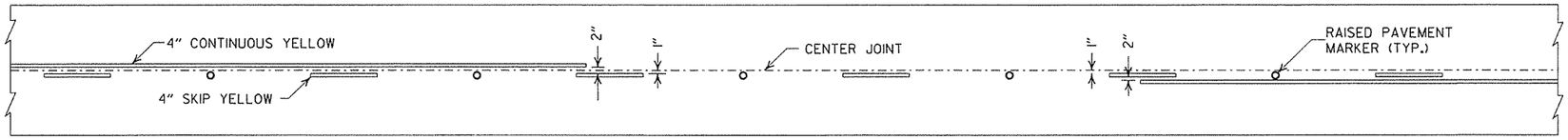


CONCRETE PAVEMENT

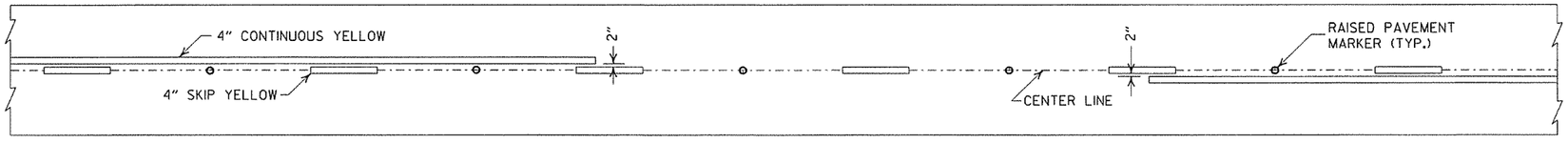


ASPHALT PAVEMENT

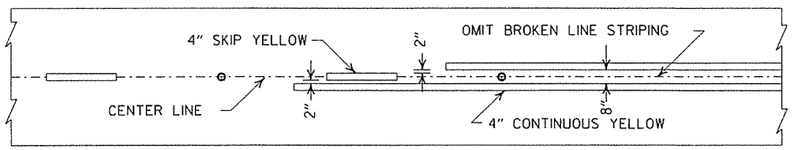
BROKEN LINE STRIPING



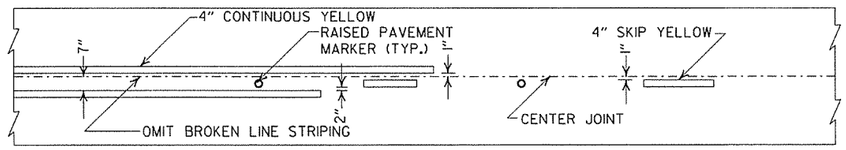
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

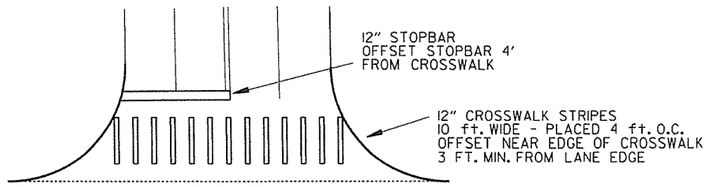


ASPHALT PAVEMENT



CONCRETE PAVEMENT

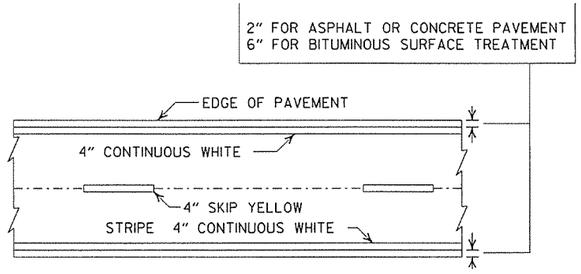
STRIPING AT ADJACENT NO PASSING LANES



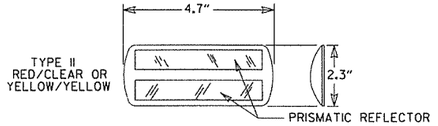
CROSSWALK AND STOPBAR DETAILS

NOTES:

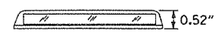
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED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



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.

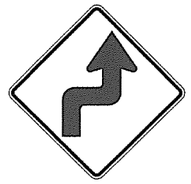
DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4;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

ARKANSAS STATE HIGHWAY COMMISSION

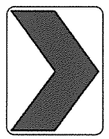
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

R1-1
30"X30"



W1-3
30"X30"
(LT. OR RT.)

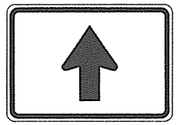


W1-8
18"X24"

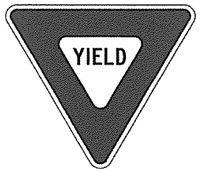
W2-5
30"X30"

W3-1
36"X36"

W5-1
36"X36"



M6-3
21"X15"

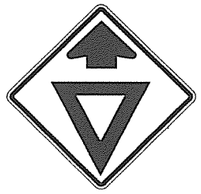


R1-2
36"X36"X36"

W1-4
30"X30"
(LT. or RT.)

W2-1
30"X30"

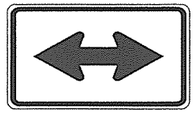
S1-1
36"X36"



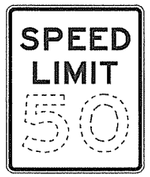
W3-2
36"X36"

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"

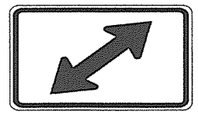
W1-5
30"X30"
(LT. or RT.)

W2-2
30"X30"

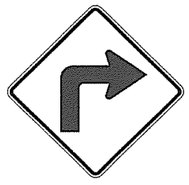
W5-2
36"X36"

W8-3
36"X36"

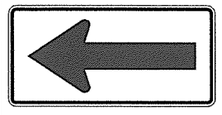
R1-3P
18"X6"



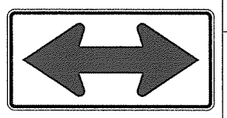
M6-5
21"X15"



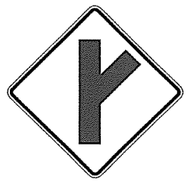
W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"

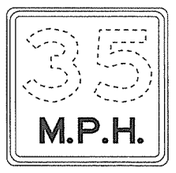


W1-7
48"X24"

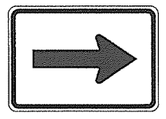


W2-3
30"X30"
(LT. or RT.)

W5-3
36"X36"

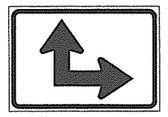


W13-1P
18"X18"



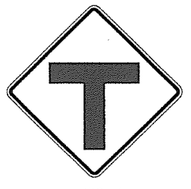
M6-1
21"X15"

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

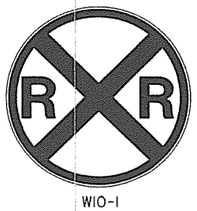


M6-6
21"X15"

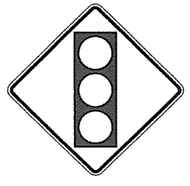
W1-2
30"X30"
(LT. or RT.)



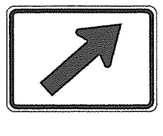
W2-4
30"X30"



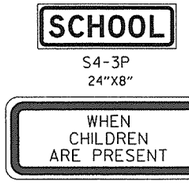
W10-1
36" DIAMETER



W3-3
36"X36"

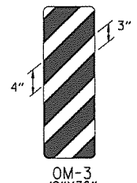


M6-2
21"X15"



S4-3P
24"X8"

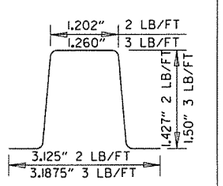
S4-2P
24"X10"



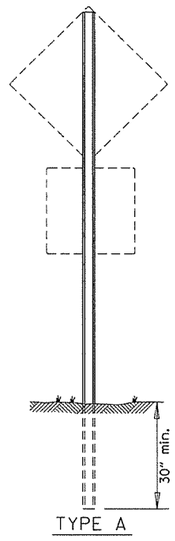
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

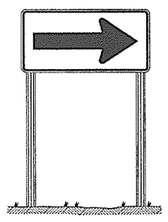


(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES

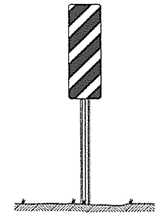


TYPE A

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.

STANDARD HIGHWAY SIGNS

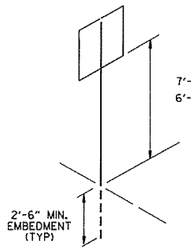
SUPPORT ASSEMBLIES

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

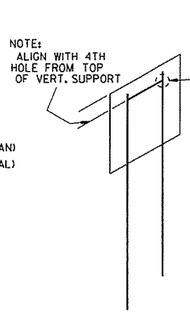
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES

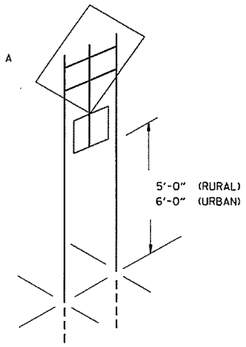
STANDARD DRAWING SHS-1



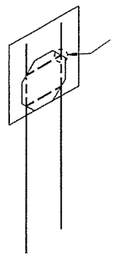
U-1



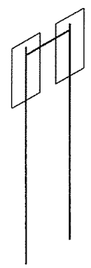
U-2

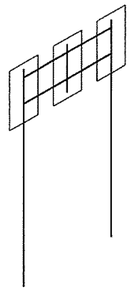


U-2 (A)



U-2 (B)


U-2 (1)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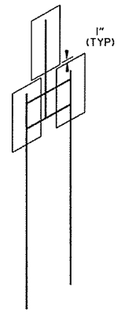

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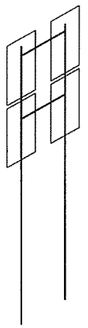
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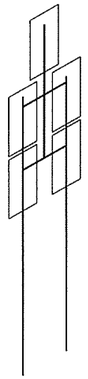
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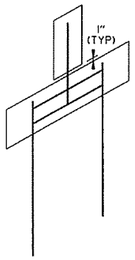

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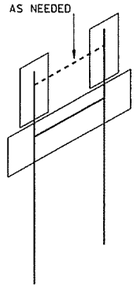

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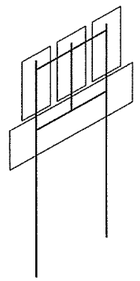
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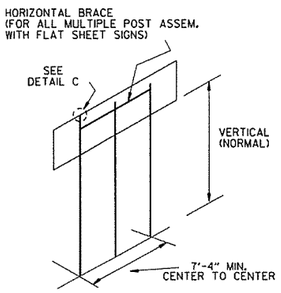
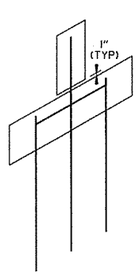


U-3



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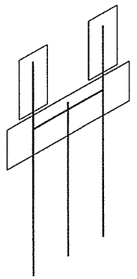
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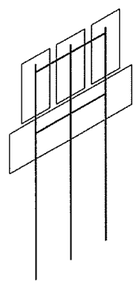
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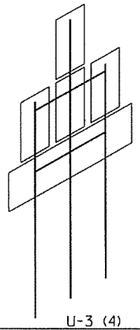
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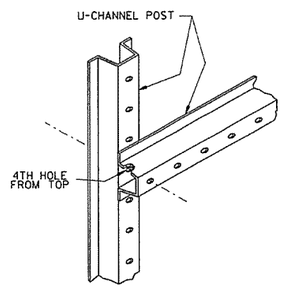
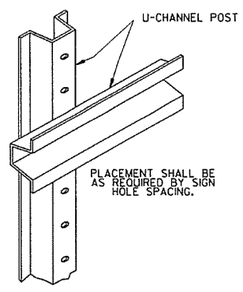
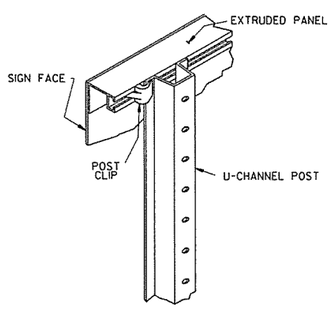


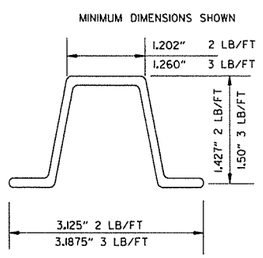
DETAIL A
SHOWING HORIZONTAL BRACE



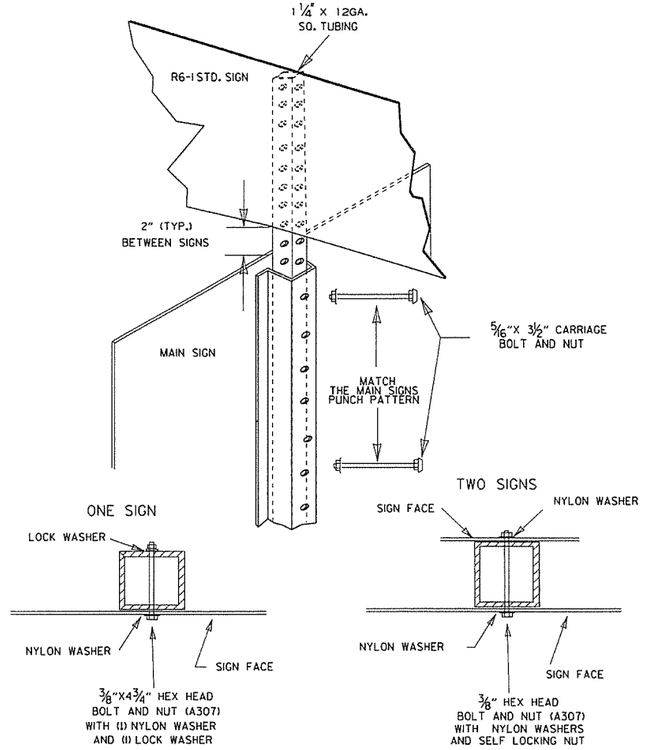
DETAIL B
SHOWING BACK-TO-BACK INSTALLATION



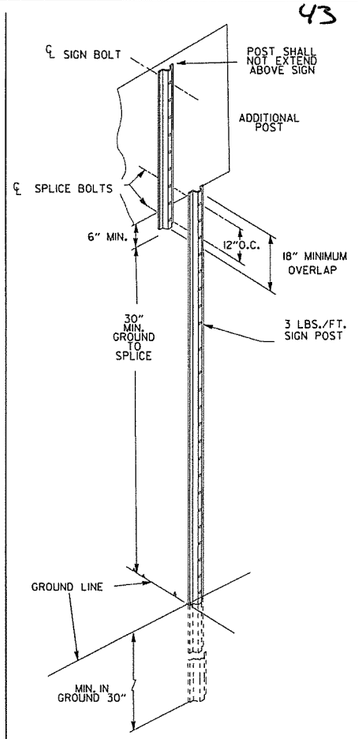
DETAIL C
SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



DETAIL C
U-CHANNEL POST



DETAIL E
R6-1 EXTENSION
FOR U-CHANNEL POST



DETAIL F
DETAIL OF SPLICES

NOTES:

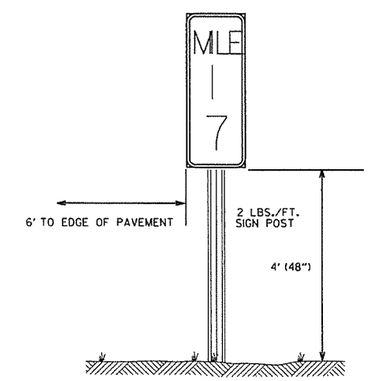
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

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

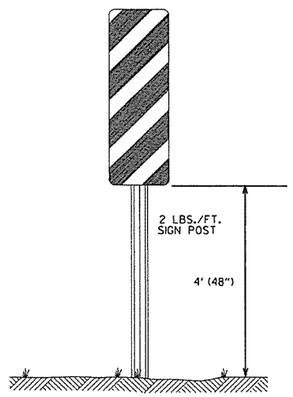
NORMAL INSTALLATIONS WILL REQUIRE $\frac{5}{16}$" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

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

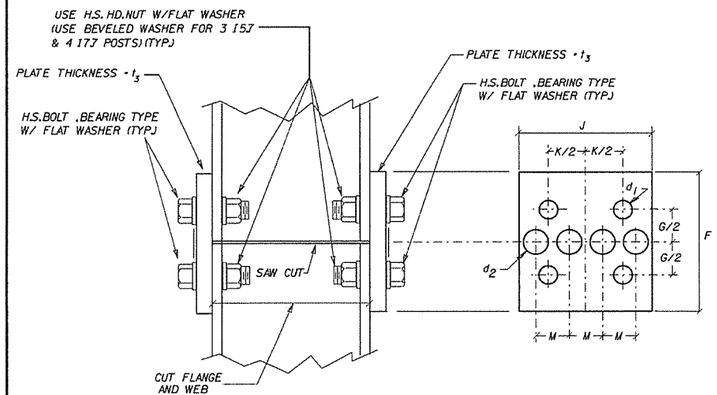
DATE	REVISION	FILMED
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

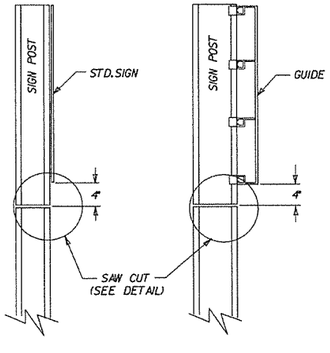
STANDARD DRAWING SHS-2

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																				
W 6X12	5/8" x 2 3/4"	450"-680"	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	11/32"	4 1/4"	2"	4"	2 1/4"	1"	9/16"	3/4"	1/4"	1/2" x 1 1/2"	1.01
W 6X15												5"	2 1/2"	6"	3 1/2"	1 1/2"	11/16"	1 1/4"	3/8"	5/8" x 2 1/4"	2.51
W 8X18												5"	2 1/2"	5 1/4"	2 3/4"	1 1/4"	13/16"	1 1/16"	3/8"	3/4" x 2 1/4"	2.26
W 8X21												5 1/2"	2 1/2"	5 1/4"	2 3/4"	1 1/4"	13/16"	1"	1/2"	3/4" x 2 1/4"	3.35
W 10X22	3/4" x 3 1/2"	750"-1050"	6"	2 1/4"	1 7/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	13/32"	6"	3"	5 3/4"	2 3/4"	1 7/8"	13/16"	1 1/8"	1/2"	3/4" x 2 1/4"	4.03
W 10X26																					
W 12X26												6"	3"	6 1/2"	3 1/2"	1 7/8"	13/16"	1 5/16"	1/2"	3/4" x 2 1/4"	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.

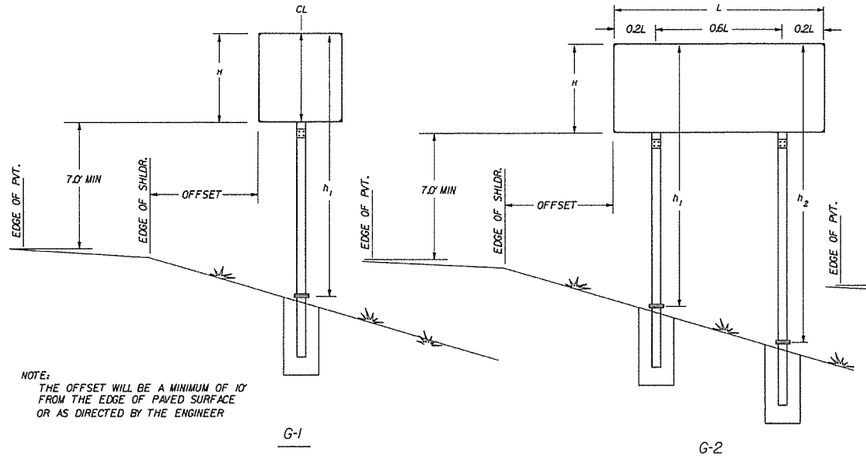
NOTE: BOLT HOLES, USED IN THE MOUNTING OF STANDARD SIGNS SHALL BE LOCATED IN THE FLANGE ADJACENT TO THE NEAR EDGE OF PAVEMENT FOR SINGLE POST ASSEMBLIES AND IN THE OUTSIDE FLANGES FOR MULTIPLE POST ASSEMBLIES.



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

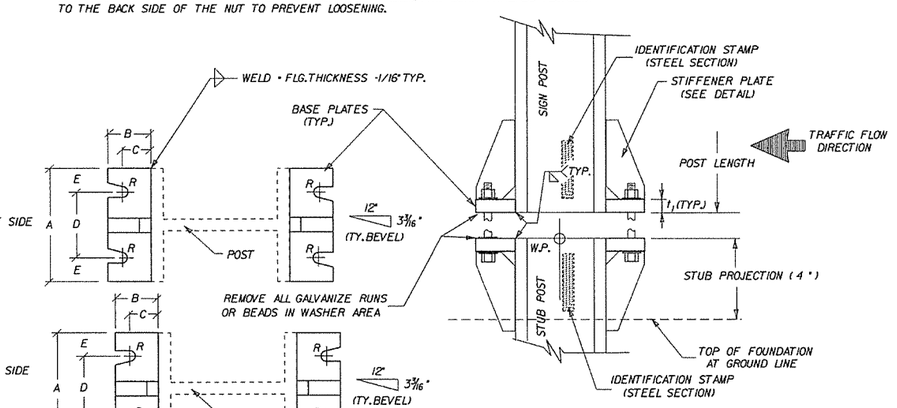
FUSE PLATE DETAILS



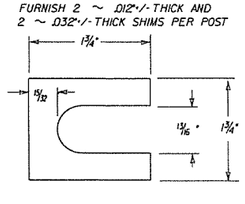
NOTE: THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER

G-1 G-2 G-3

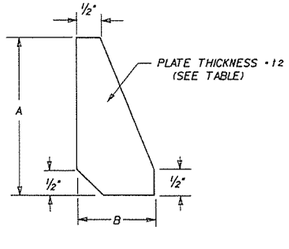
NOTE: SECTIONS SHOWN ARE FOR INSTALLATION ON THE RIGHT SHOULDER AND IN THE GORE. BOLT HOLES IN BASE PLATE ARE SLOTTED AND BEVELED AS SHOWN. USE H.S. BOLTS WITH HEX HD., HEX NUT AND THREE FLAT WASHERS FOR EACH BOLT. SEE TABLE FOR BOLT DIA. AND TORQUE.
NOTE: ASSEMBLE SIGN POST TO STUB POST USING THE BOLTS 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

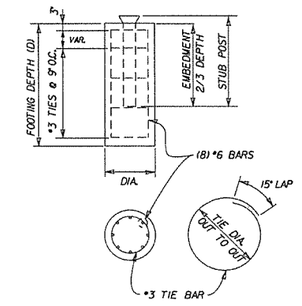


STIFFENER PLATE DETAIL

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.

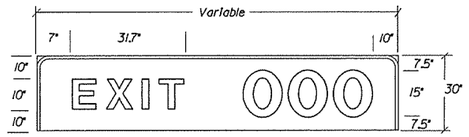
EACH STUB POST AND SIGN POST SHALL HAVE A PERMANENT IDENTIFYING STAMP WHICH SPECIFIES THE STEEL SECTION USED. IF THE CONTRACTOR ELECTS TO SHIP THE STUB POST SEPARATE FROM THE SIGN POST A MATCH MARK SYSTEM WILL BE REQUIRED.

SIGN POST AND STUB POST

		ARKANSAS STATE HIGHWAY COMMISSION
		DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS
9-12-13	ISSUED	
DATE	REVISION	FILMED
		STANDARD DRAWING SHS-3

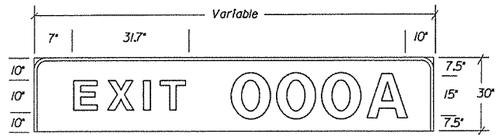
TYPICAL DETAIL

TYPE A



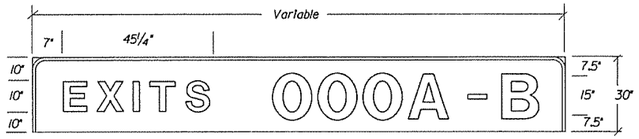
EXIT WITH 1 DIGIT 84"X30"=17.50 SF
EXIT WITH 2 DIGITS 96"X30"=20.0 SF
EXIT WITH 3 DIGITS 114"X30"=23.57 SF

TYPE B



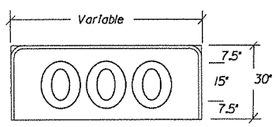
EXIT WITH 1 DIGIT PLUS "A"OR"B" 96"X30"=20.0 SF
EXIT WITH 2 DIGITS PLUS "A"OR"B" 114"X30"=23.57 SF
EXIT WITH 3 DIGITS PLUS "A"OR"B" 126"X30"=26.25 SF

TYPE C



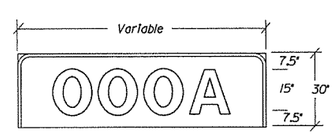
EXITS WITH 1 DIGIT PLUS "A"&"B" 132"X30"=27.50 SF
EXITS WITH 2 DIGITS PLUS "A"&"B" 150"X30"=31.25 SF
EXITS WITH 3 DIGITS PLUS "A"&"B" 168"X30"=35.00 SF

TYPE D



1 DIGIT 24"X30" =5.0 SF
2 DIGITS 42"X30" =8.75 SF
3 DIGITS 60"X30" =12.50 SF

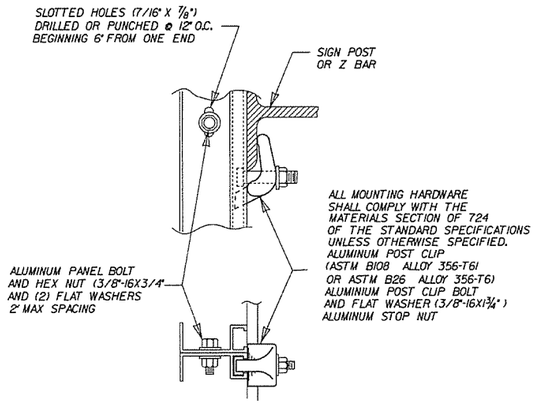
TYPE E

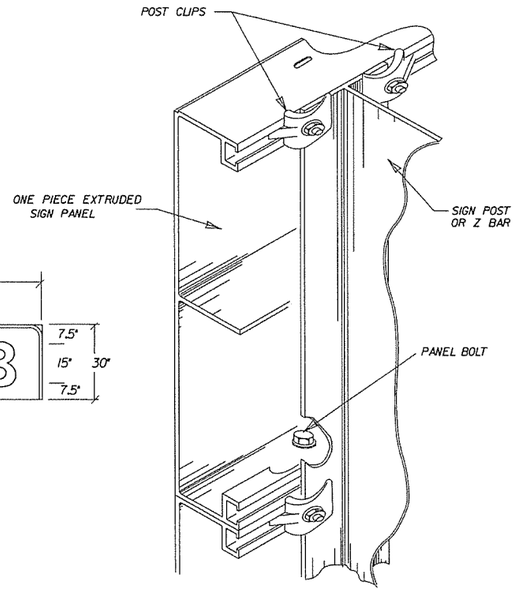


1 DIGIT PLUS "A"OR"B" 42"X30"=8.75 SF
2 DIGITS PLUS "A"OR"B" 60"X30"=12.50 SF
3 DIGITS PLUS "A"OR"B" 78"X30"=16.25 SF

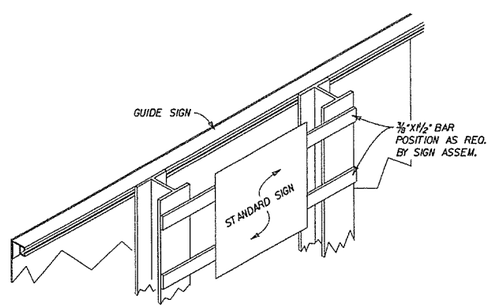
EXIT PANEL DETAILS

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".

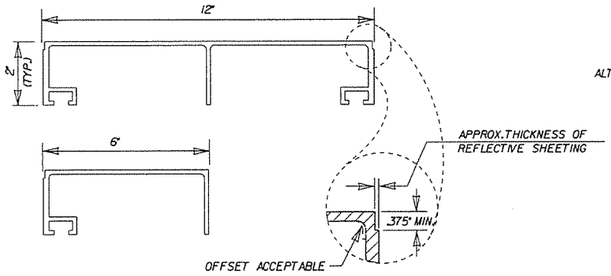




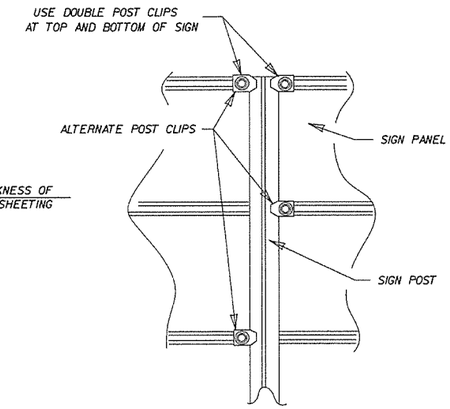
MOUNTING HARDWARE



SECONDARY SIGN INSTALLATION ON BACKSIDE OF GUIDE SIGN

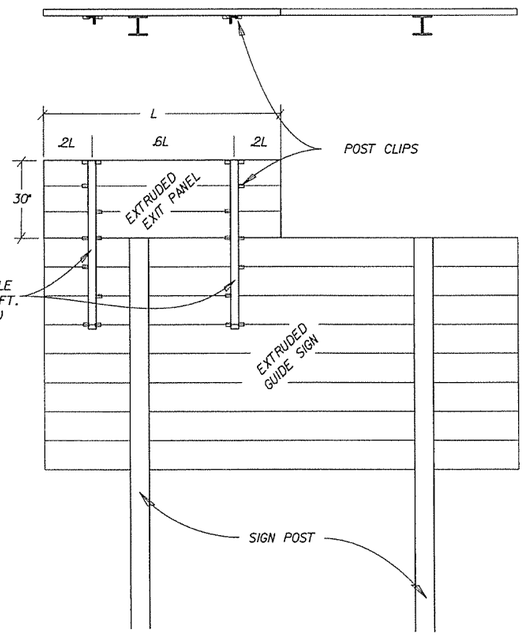


ONE PIECE EXTRUDED SIGN PANELS



POST CLIP PLACEMENT

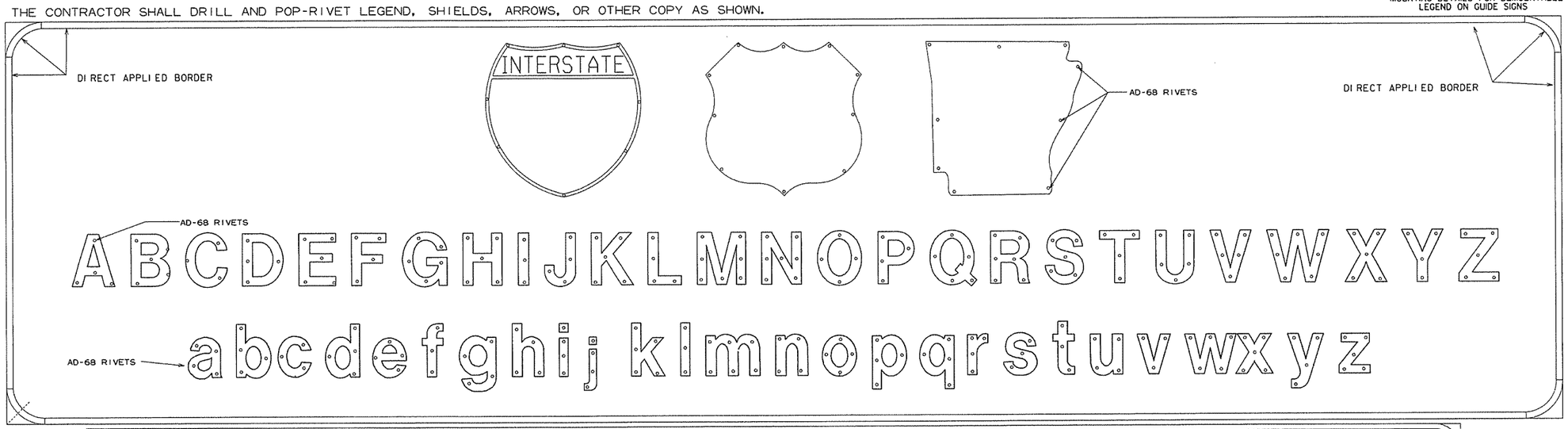
POST CLIP BOLT

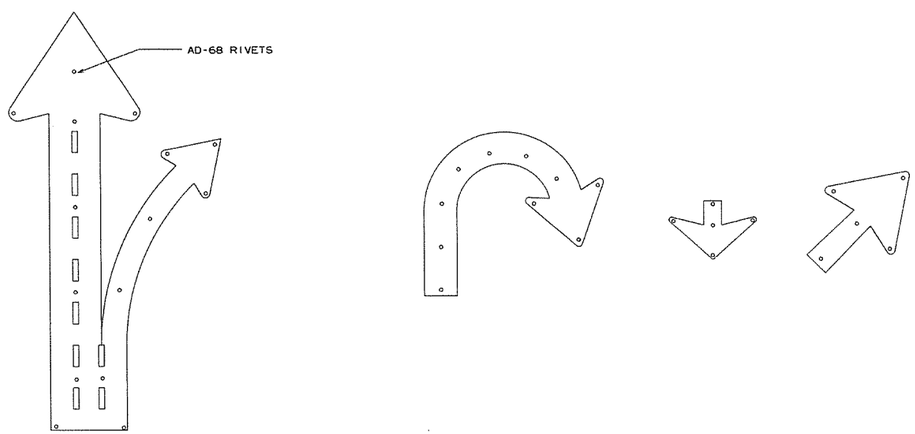


			ARKANSAS STATE HIGHWAY COMMISSION
			DETAILS OF GUIDE SIGN PANELS
9-12-13	ISSUED		STANDARD DRAWING SHS-5
DATE	REVISION	FILMED	

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.

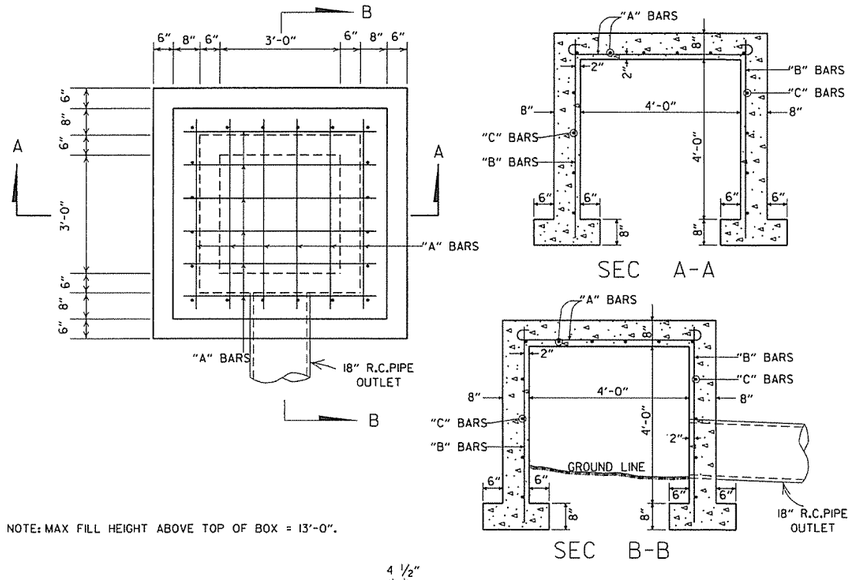
THE BACKGROUND ON ALL GUIDE SIGNS AND STANDARD SIGNS SHALL BE CONSTRUCTED USING TYPE III SHEETING.

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	ISSUED		STANDARD DRAWING SHS-6
DATE	REVISION	FILMED	

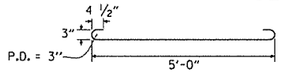


NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

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

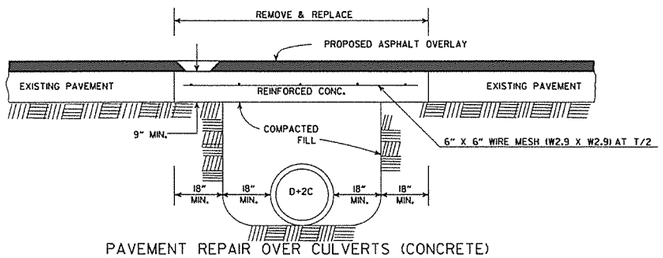


QUANTITIES

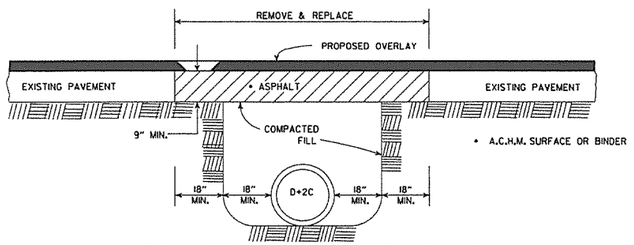
CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

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

REINFORCED CONCRETE SPRING BOX



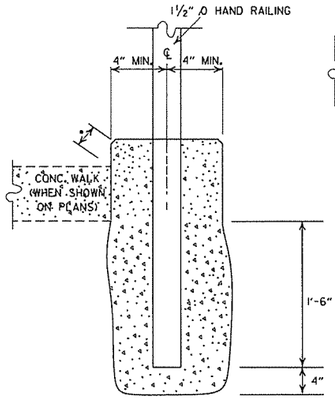
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



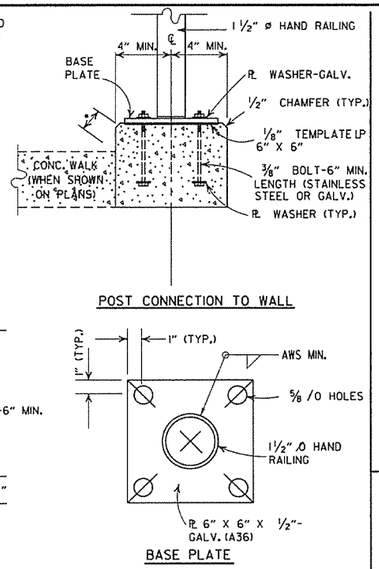
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

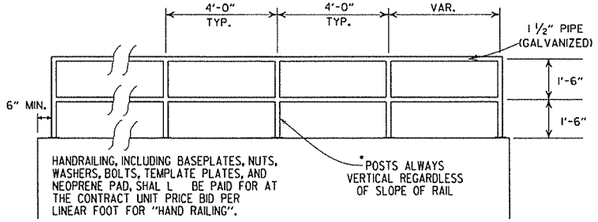
* A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



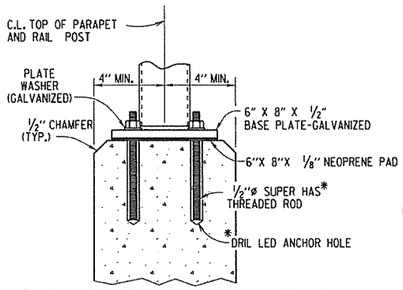
DETAIL OF HAND RAILING SET IN CONCRETE



POST CONNECTION DETAILS



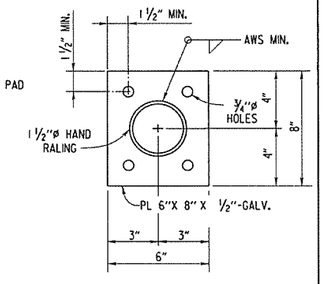
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

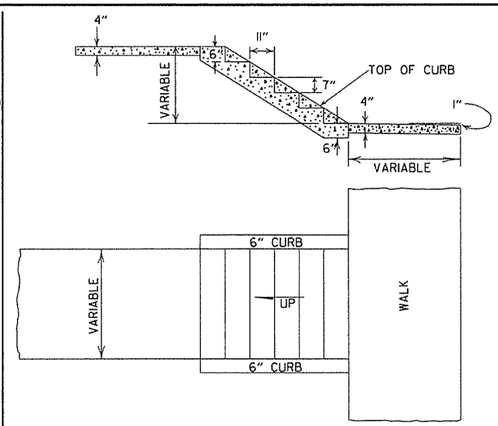
POST CONNECTION TO WALL



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

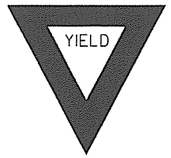
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI-1

R1-1

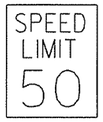
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

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"

R2-5A

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

R2-5C

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

R4-1

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

R4-2

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

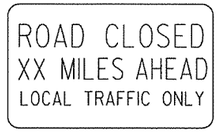
R5-1

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

R11-2

48"X30"

R11-3A



60"X30"

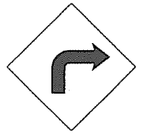
R11-4

60"X30"

RSP-1

48"X30"

W1-1



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

W1-2

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

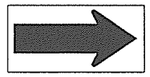
W1-3

STD. 48"X48"

W1-4

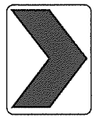
STD. 48"X48"

W1-6



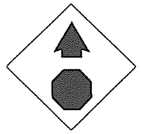
STD. 48"X24"
SPECIAL 60"X30"

W1-8



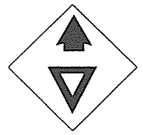
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



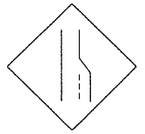
STD. 36"X36"
SPECIAL 48"X48"

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"

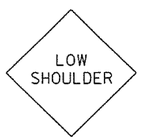
R56-1

STD. 18"X18"

W8-11

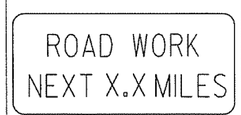
STD. 36"X36"
FWY. 48"X48"

W8-9



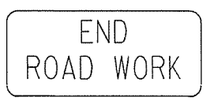
STD. 36"X36"
FWY. 48"X48"

G20-1



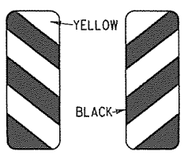
60"X24"

G20-2



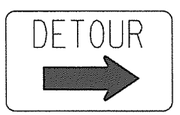
48"X24"

OM-3L OM-3R



12"X36"

M4-9

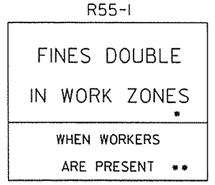


STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1



36"X60"

* USE 6" C LETTERS
** USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	1/2 MILE
1000 FT	3/4 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.

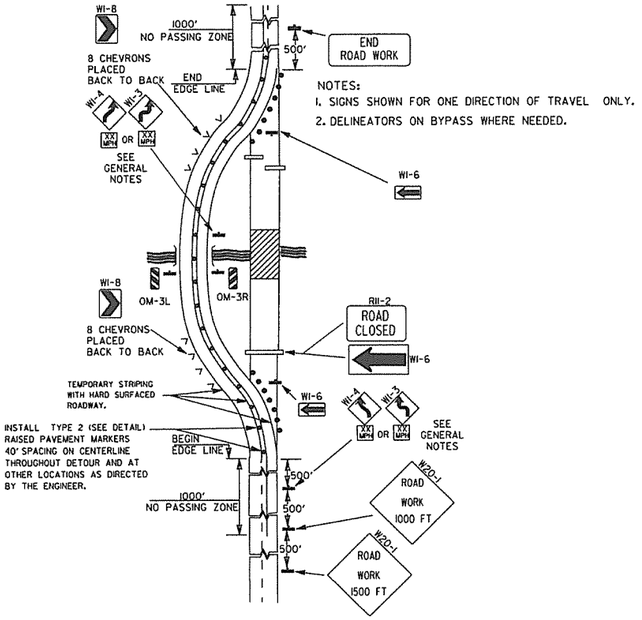
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

DATE	REVISION	FILMED
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	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

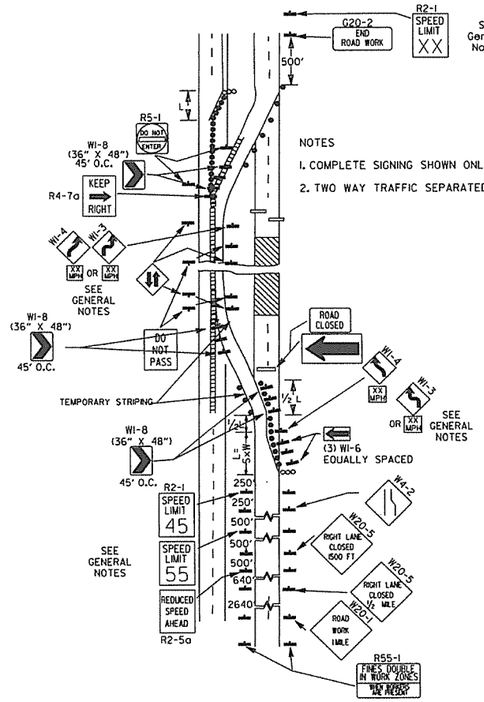
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



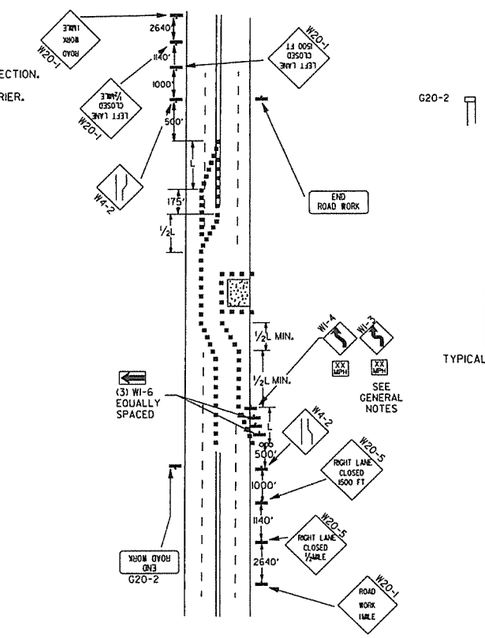
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

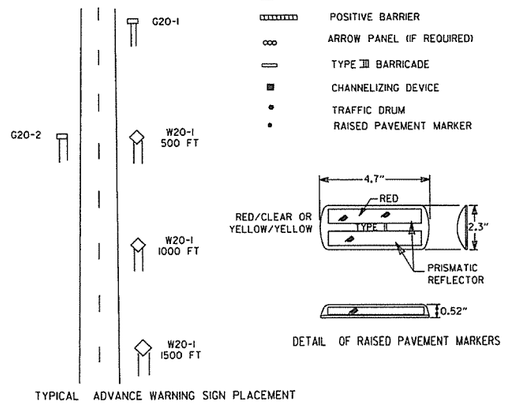


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

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



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



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

WHERE:

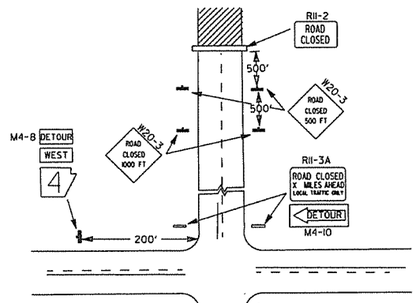
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

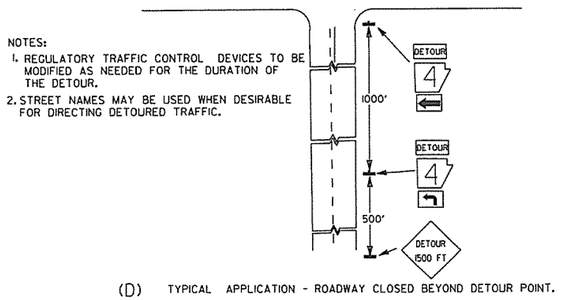
W= WIDTH OF OFFSET.

GENERAL NOTES:

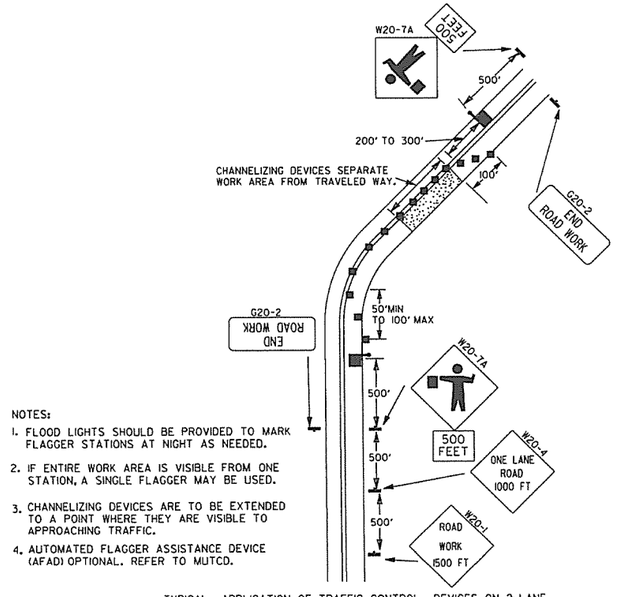
1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE R2-5A SHALL BE INSTALLED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



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.

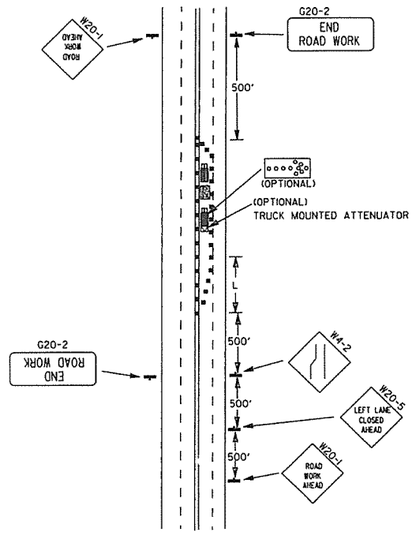


(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



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.



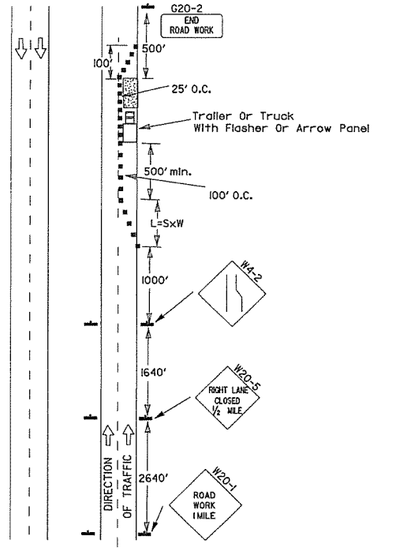
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

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

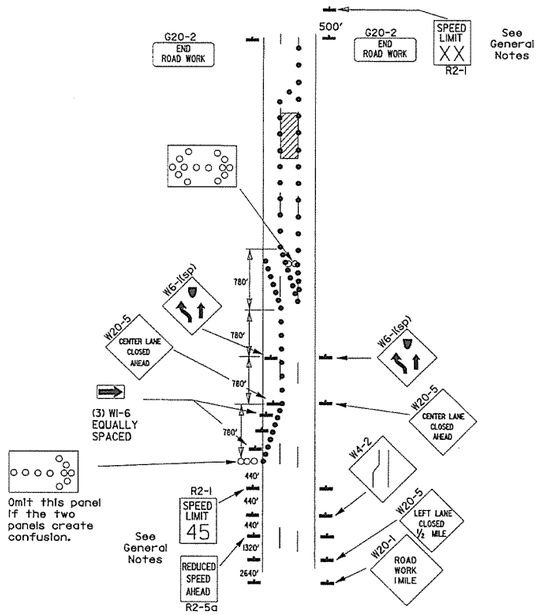
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

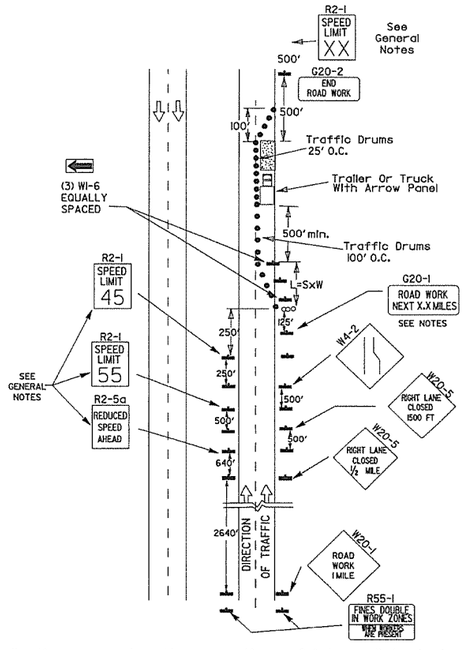
STANDARD DRAWING TC-2



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



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



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

KEY:

○○○ Arrow Panel (If Required)

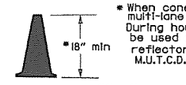
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

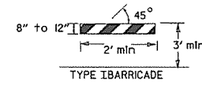
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional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

Channelizing devices



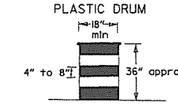
* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

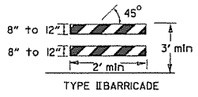
CONES



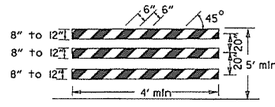
TYPE I BARRICADE

PLASTIC DRUM



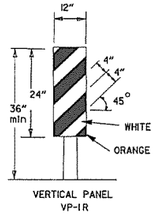


TYPE II BARRICADE



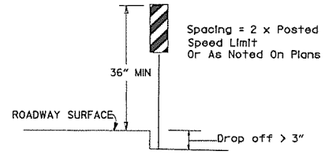
TYPE III BARRICADE

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



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



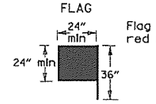
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

* When shown on the plans concrete barrier will be used.

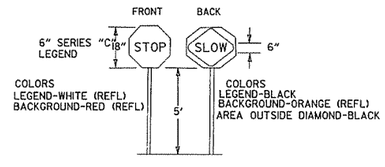
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

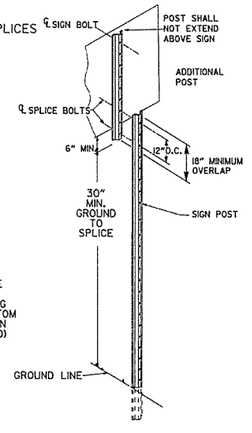


Flag shall be of good grade red material

STOP SLOW PADDLE



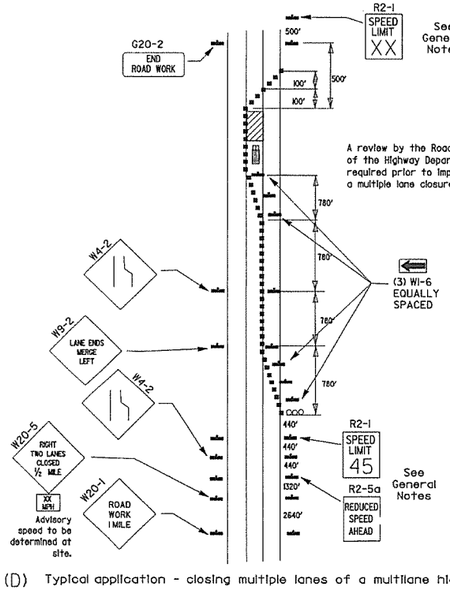
DETAIL OF SPLICES



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

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

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



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

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	
DATE	REVISION	FILMED

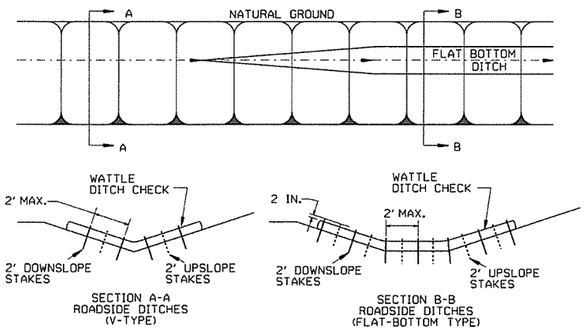
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

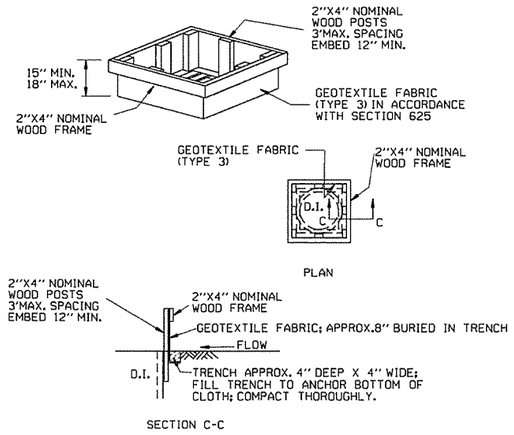
STANDARD DRAWING TC-3

GENERAL NOTES

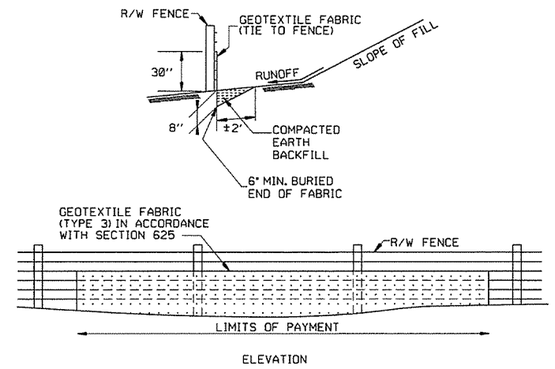
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



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

GENERAL NOTES

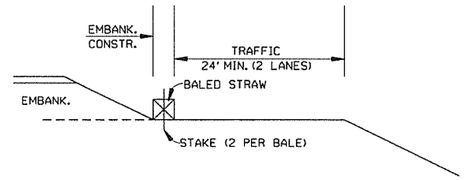
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

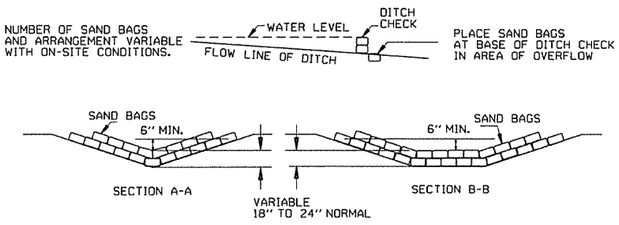
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

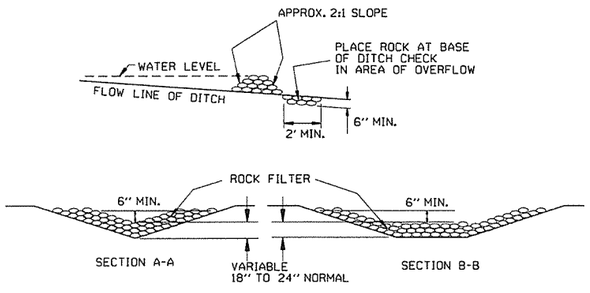
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



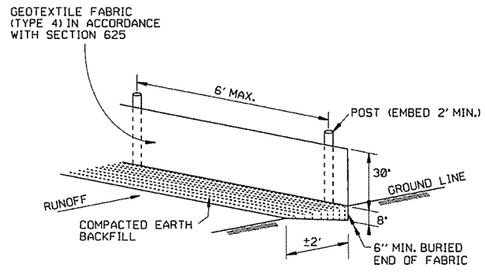
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



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

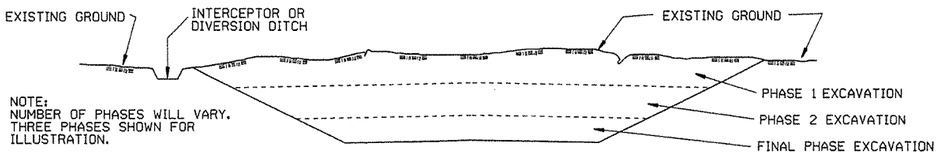
STANDARD DRAWING TEC-1

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



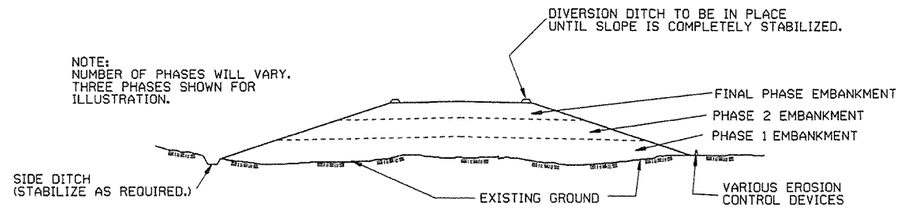
GENERAL NOTE

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.

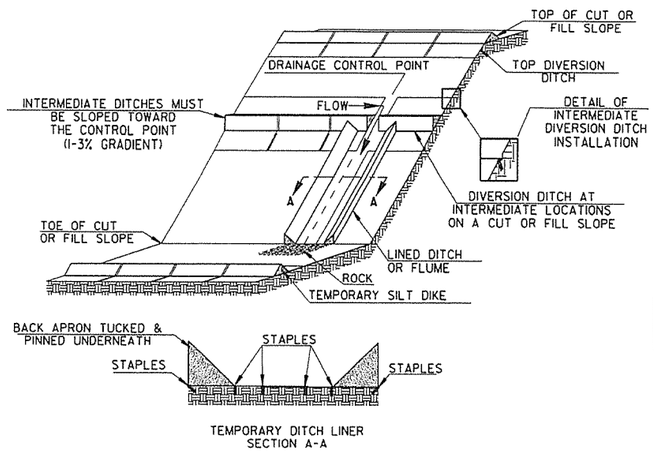
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

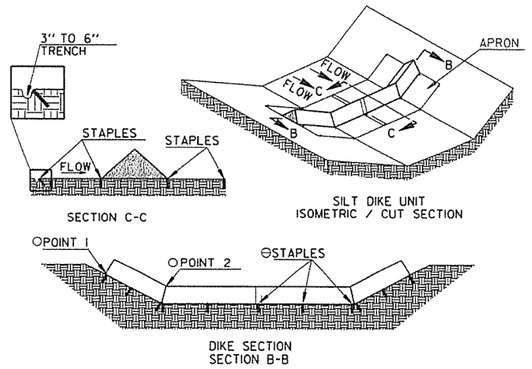
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3

stdtec3.dgn



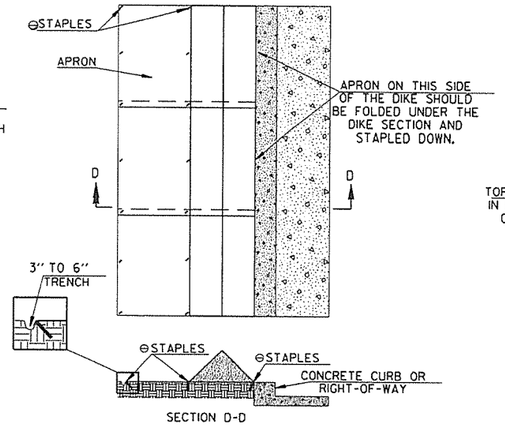
TRIANGULAR SILT DIKE INSTALLATION
FOR
DIVERSION DITCH AND/OR DITCH LINER



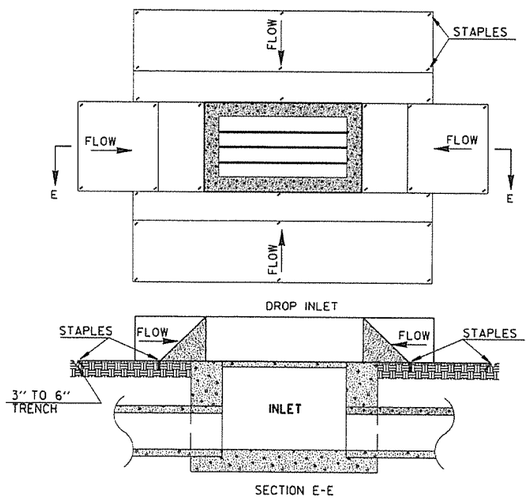
TRIANGULAR SILT DIKE INSTALLATION
FOR
ROADWAY DITCH OR DRAINAGE DITCH

○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

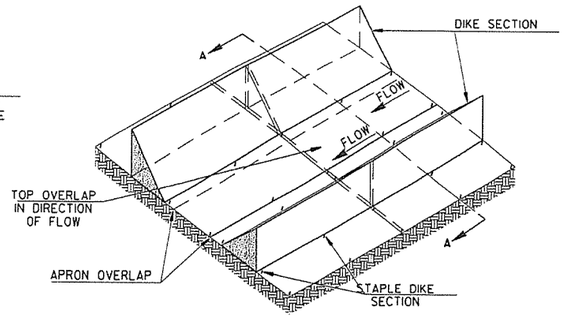
⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION
FOR
CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION
FOR
DROP INLETS



TRIANGULAR SILT DIKE INSTALLATION
FOR
TEMPORARY DITCH LINER

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.

   THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.

3. ACCEPTED TRIANGULAR SILT DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR TRIANGULAR SILT DIKE. PRICE BID WILL INCLUDE THE COST OF FURNISHING THE DIKES, INSTALLING, MAINTAINING AND REMOVAL WHEN DIRECTED BY THE ENGINEER.

SYMBOLOGY
SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

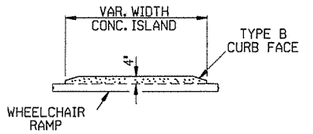
NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

DATE	REVISION	FILMED
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	

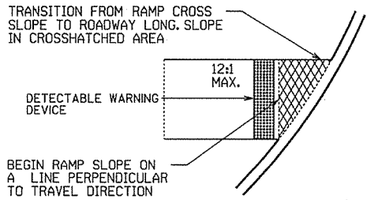
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4



CONCRETE ISLAND DETAIL



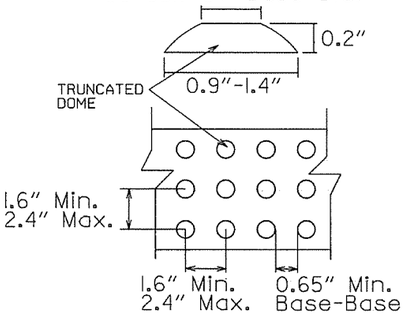
SLOPE TRANSITION DETAILS

TYPE 1 RAMP DIMENSIONS AND QUANTITIES

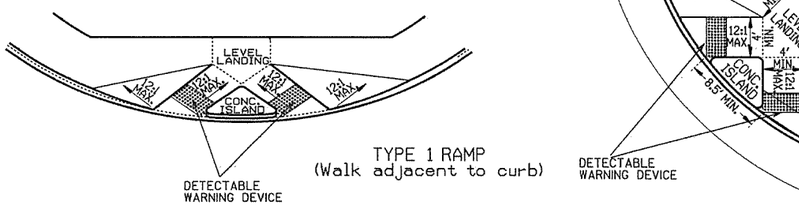
RADIUS 'R' FEET	DISTANCE 'X' FEET	DISTANCE 'Y' FEET	LENGTH 'L' FEET	RAMP AREA 'A' SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

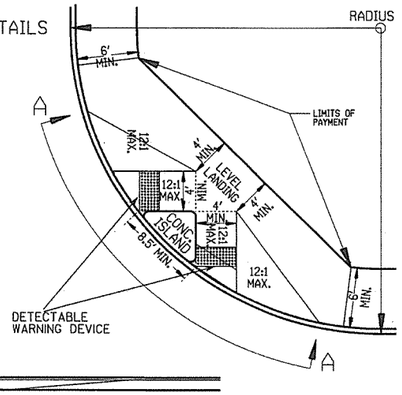
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT 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).

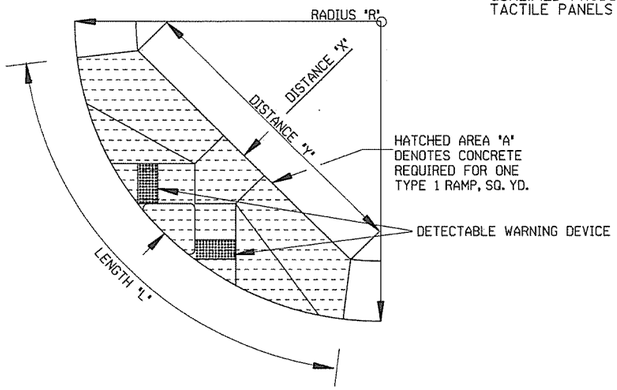


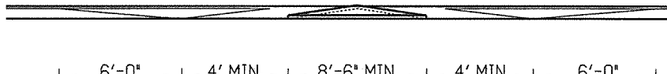
DETECTABLE WARNING DEVICE DETAIL



TYPE 1 RAMP
(Walk adjacent to curb)





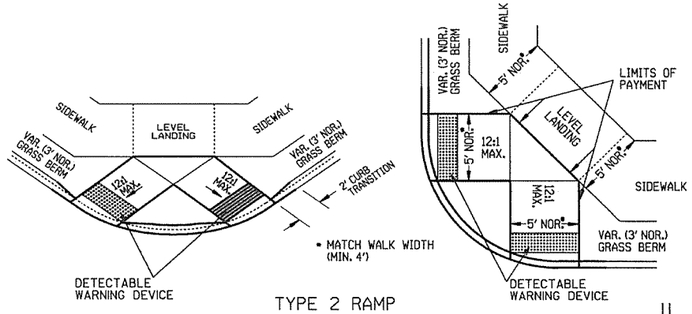


SECTION A-A

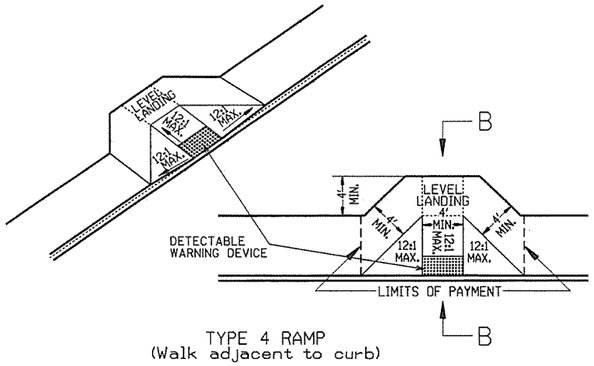
NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.

GENERAL NOTES:

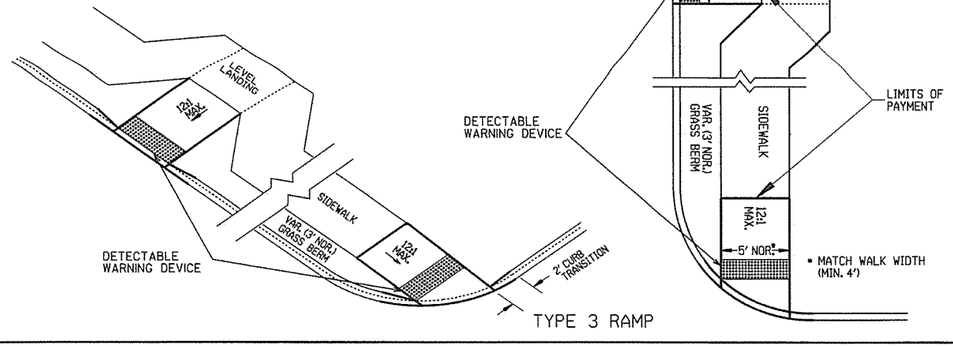
IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK 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.



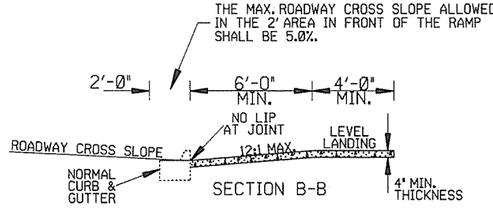
TYPE 2 RAMP



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.	
8-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8:1TO12:1MAX.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

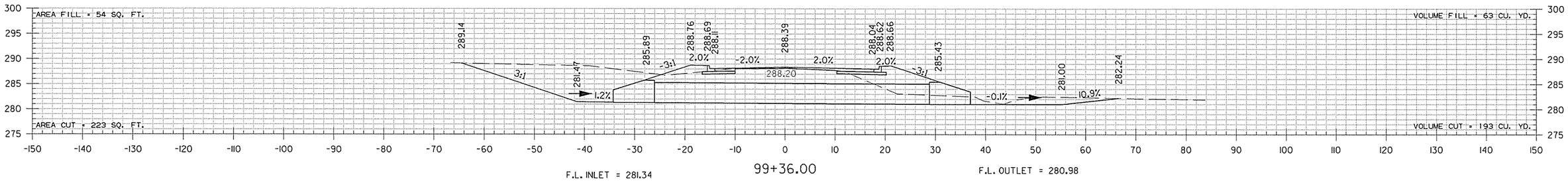
ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

STANDARD DRAWING WR-1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	55	67
				(2)	CROSS SECTIONS			

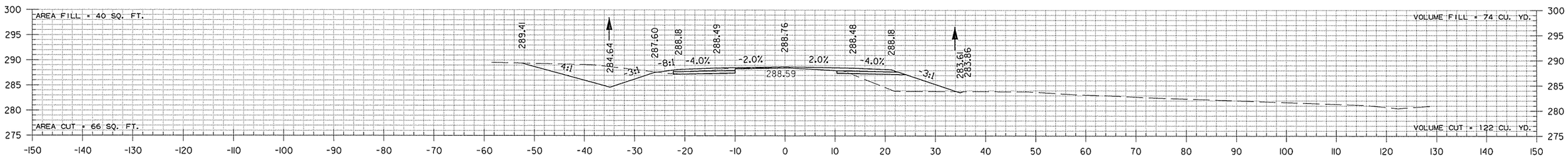
HWY. 351 STA. 99+36 CONSTRUCT
TRIPLE 48" X 55' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 252 CFS DA = 89.9 ACRES



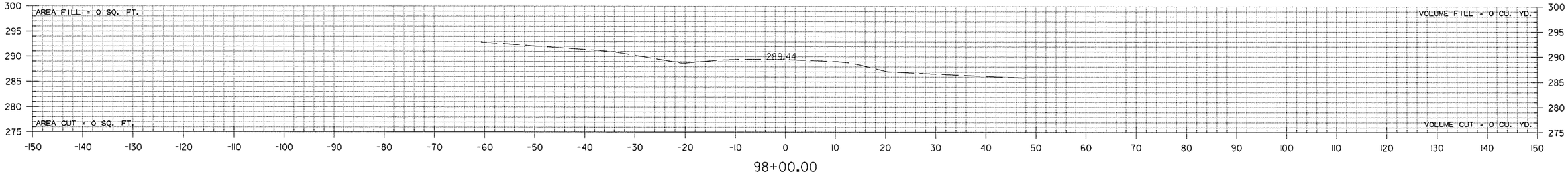
F.L. INLET = 281.34

99+36.00

F.L. OUTLET = 280.98



99+00.00



98+00.00

HWY. 351
STA. 98+00 TO STA. 99+36

rccorbyn 6/4/2015 10:29:56 AM
WORKSPACE: AHTD
L:\2013\130170\40 - Jonesboro - Hwy. 351at Aggie Rd. Inters. Impvts\Drawings\4ARI_CX_ALL.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.		100790	56	67
				(2)	CROSS SECTIONS			

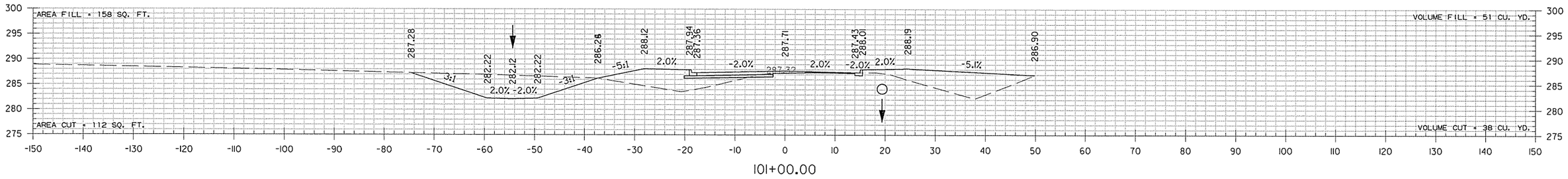
AREA FILL = 156 SQ. FT.

VOLUME FILL = 585 CU. YD.

AREA CUT = 113 SQ. FT.

VOLUME CUT = 415 CU. YD.

102+00.00



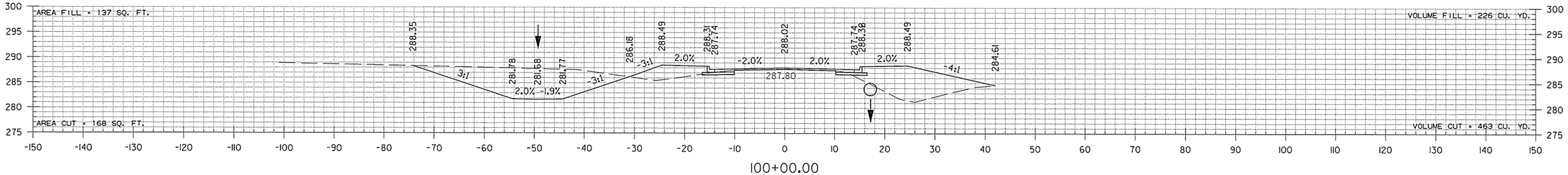
101+00.00

HWY. 351 STA. 100+90 CONSTRUCT
DROP INLET ON LT. H = 3'-0"
WITH DUAL 4' EXT. AND 18" X 16'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
WITH FES.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" x 2'-6"

HWY. 351 STA. 100+91 CONSTRUCT
DROP INLET ON RT. H = 5'-6"
WITH 4' EXT. AND 8' EXT. AND 30" X 125'
R.C. PIPE CULVERT
TO FES ON RT.
(CLASS III)(TYPE 3 BEDDING)
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 3'-6"

F.L. FES = 283.50 LT.

100+91.00

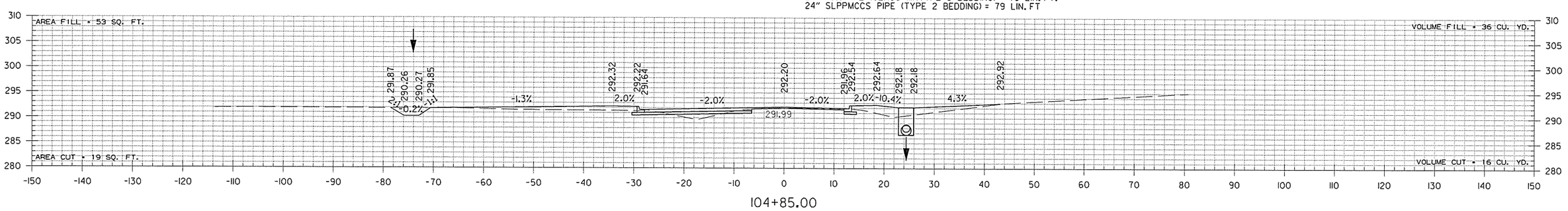


100+00.00

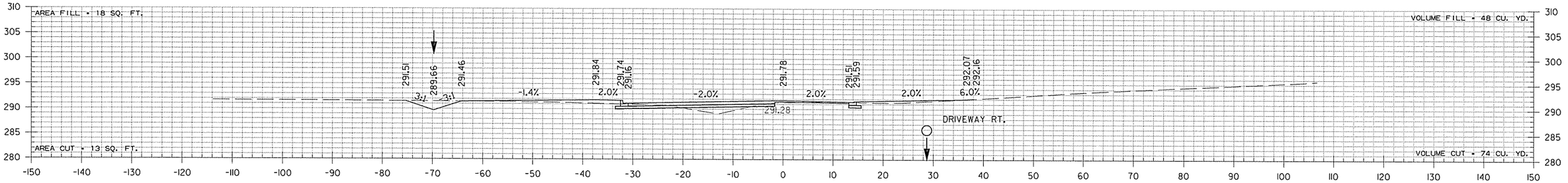
HWY. 351
STA. 100+00 TO STA. 101+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	57	67
				(2)	CROSS SECTIONS			

HWY. 351 STA. 104+85 CONSTRUCT
DROP INLET ON RT. H = 5'-6"
AND 24" X 79' PIPE CULVERT
TO DROP INLET ON RT.
AND 18" X 62' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
WITH FES.
TYPE E DROP INLET = 4'-0" X 3'-0" W/GRATE
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 62 LIN. FT.
24" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 79 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 79 LIN. FT



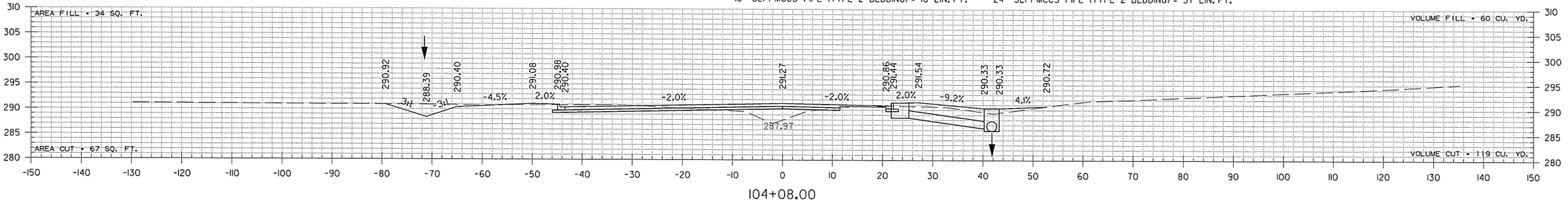
104+85.00



104+58.00

HWY. 351 STA. 104+08 CONSTRUCT
DROP INLET ON RT. H = 3'-0"
WITH 8' EXT. AND 18" X 16'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 16 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 16 LIN. FT.

HWY. 351 STA. 104+08 CONSTRUCT
DROP INLET ON RT. H = 4'-6"
AND 24" X 57'
PIPE CULVERT TO JUNCTION BOX ON RT.
TYPE E DROP INLET = 4'-0" X 3'-0" W/GRATE
24" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 57 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 57 LIN. FT.



104+08.00

AREA FILL = 34 SQ. FT.

AREA CUT = 67 SQ. FT.

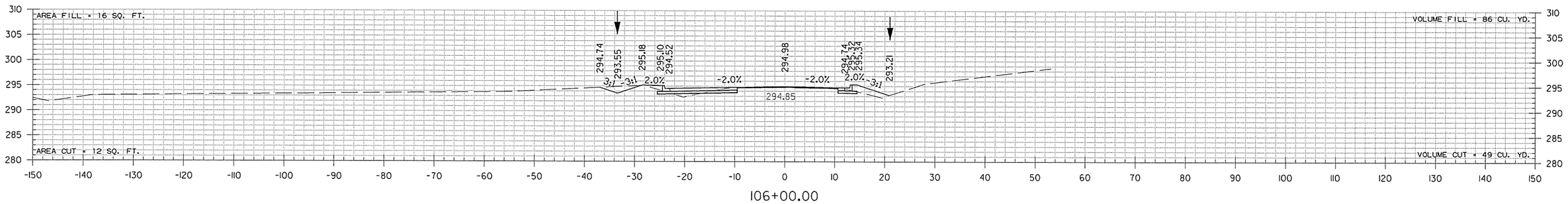
VOLUME FILL = 0 CU. YD.

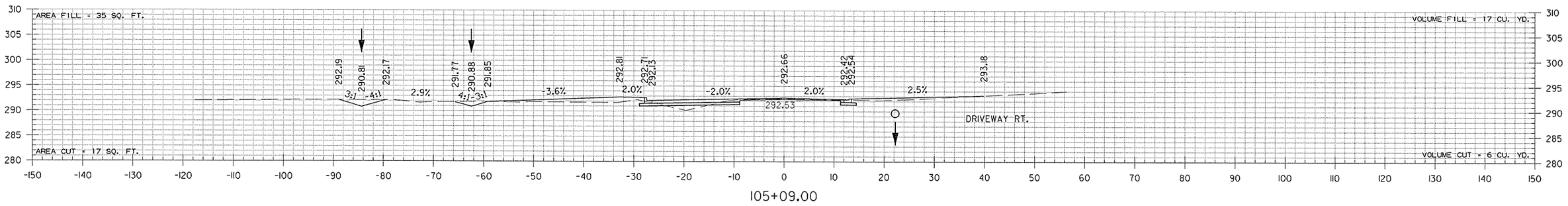
VOLUME CUT = 0 CU. YD.

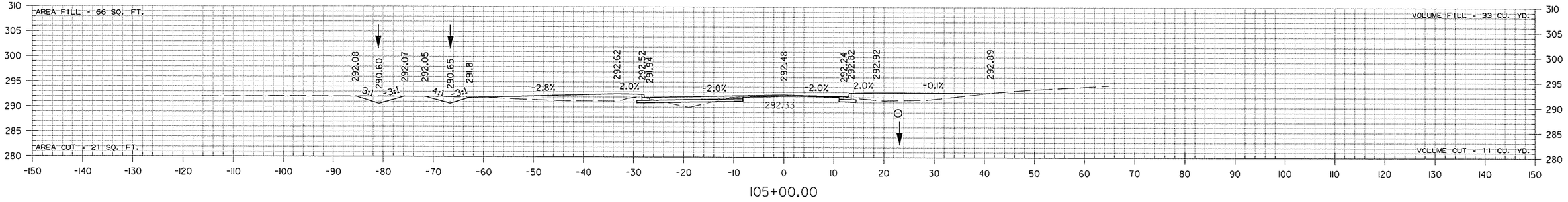
103+60.00

HWY. 351
STA. 104+08 TO STA. 104+85

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	58	67
				(2)	CROSS SECTIONS			





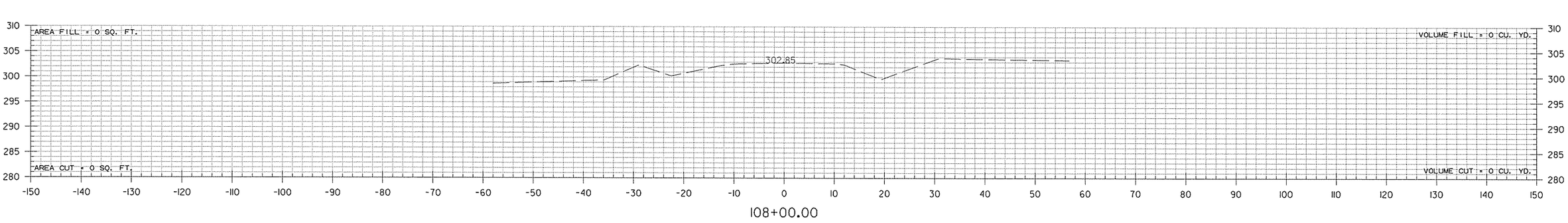


HWY. 351
STA. 105+00 TO STA. 106+00

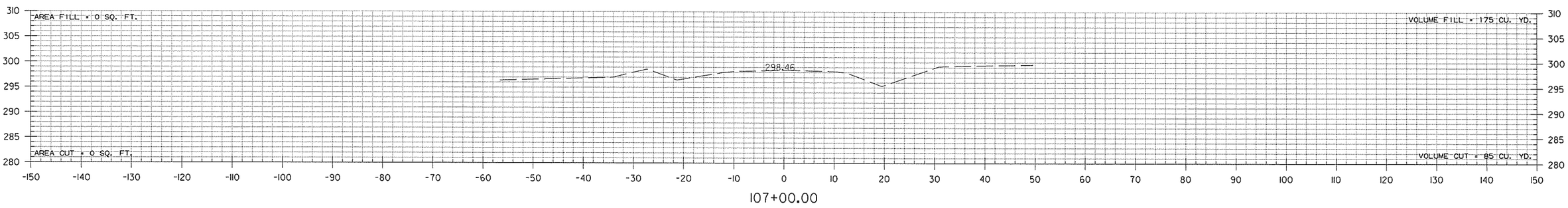
rccarbyn 6/4/2015 10:29:57 AM
WORKSPACE: AHTD
L:\2013\1301040 - Jonesboro - Hwy. 351at Aggie Rd. Inters. Imprvts\Drawings\AAR_CX_ALL.dgn
REVISED DATE:

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.		100790	59	67

(2) CROSS SECTIONS



108+00.00



107+00.00

HWY. 351

STA. 107+00 TO STA. 108+00

rccorbyn 6/4/2015 10:29:57 AM
WORKSPACE: AHTD
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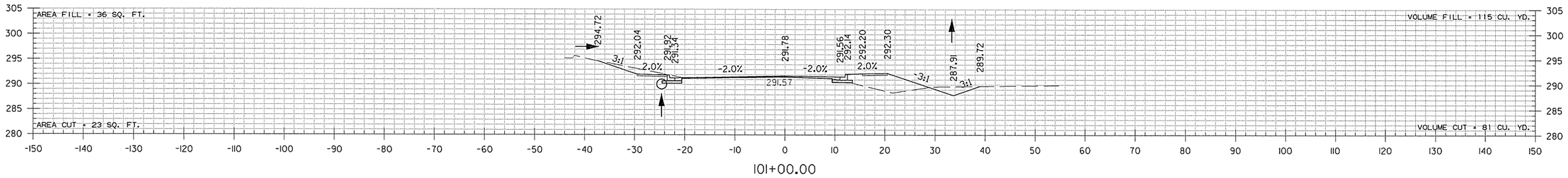
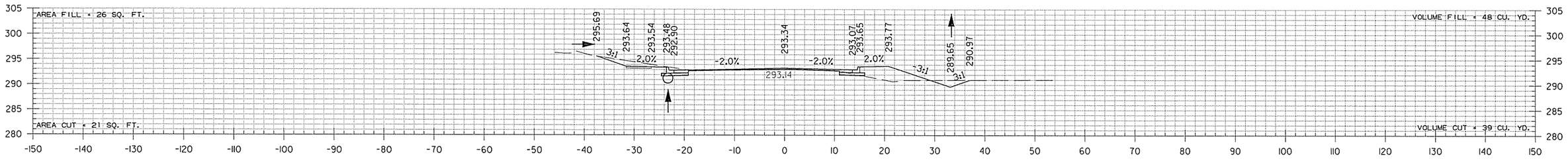
REVISED DATE:

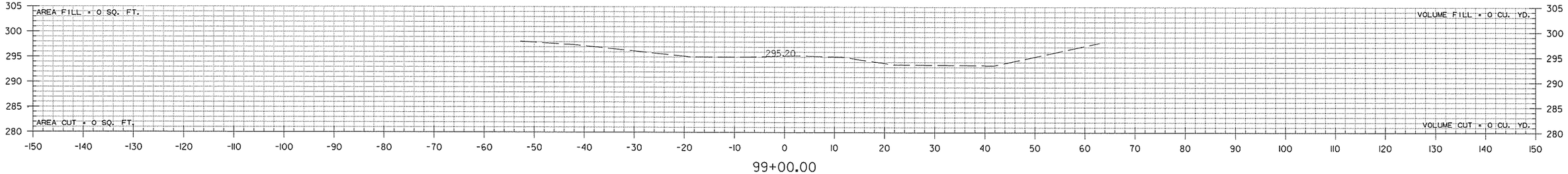
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	60	67
				(2)	CROSS SECTIONS			



101+00.00



100+00.00



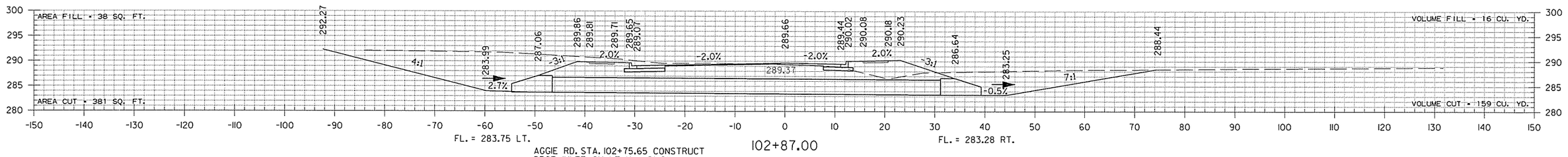
99+00.00

AGGIE ROAD
STA. 99+00 TO STA. 101+00

rcoorbyn 6/4/2015 10:29:57 AM
WORKSPACE: AHTD
L:\2013\130170\040 - Jonesboro - Hwy. 351at Aggie Rd. Inters. Impvts\Drawings\AARI_CX_ALL.dgn
REVISED DATE:

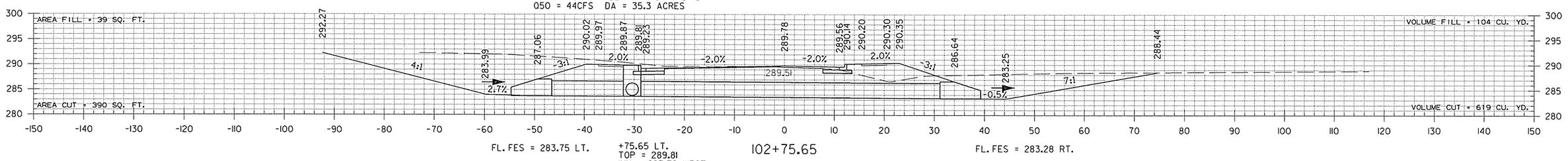
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	61	67
				(2)	CROSS SECTIONS			

AGGIE RD. STA. 102+87 CONSTRUCT
DOUBLE 36" X 78' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
W/ FES LT. & RT.
Q50 = 87CFS DA = 35.3 ACRES

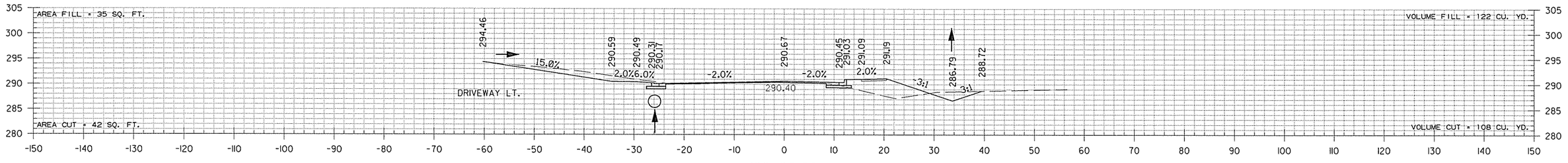


FL. = 283.75 LT. 102+87.00 FL. = 283.28 RT.

AGGIE RD. STA. 102+75.65 CONSTRUCT
DROP INLET ON LT. H = 6'-2"
WITH 8' EXT. AND 36" X 14' R.C. PIPE CULVERT
FROM FES ON LT. AND
36" X 60' R.C. PIPE CULVERT
TO FES ON RT.
(CLASS III) (TYPE 3 BEDDING)
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4'-6" X 3'-6"
Q50 = 44CFS DA = 35.3 ACRES

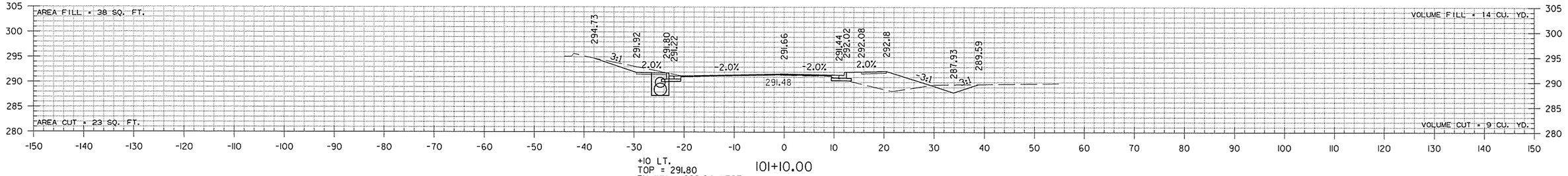


FL. FES = 283.75 LT. +75.65 LT.
TOP = 289.81
INV. = 283.72 WEST
INV. = 283.64 NORTH
INV. = 283.62 SOUTH
102+75.65
FL. FES = 283.28 RT.



102+00.00

AGGIE RD. STA. 101+10 IN PLACE
24" X 150' R.C. PIPE CULVERT FROM WEST - RETAIN
AGGIE RD. STA. 101+10 CONSTRUCT
DROP INLET ON LT. H = 4'-6"
WITH 8' EXT. AND 30" X 161'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 3'-6"



+10 LT.
TOP = 291.80
EX. INV. = 288.94 WEST
INV. = 287.29 EAST
101+10.00

AGGIE ROAD
STA. 101+10 TO STA. 102+83

rccorbyn 6/4/2015 10:29:57 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.		100790	62	67
				(2)	CROSS SECTIONS			

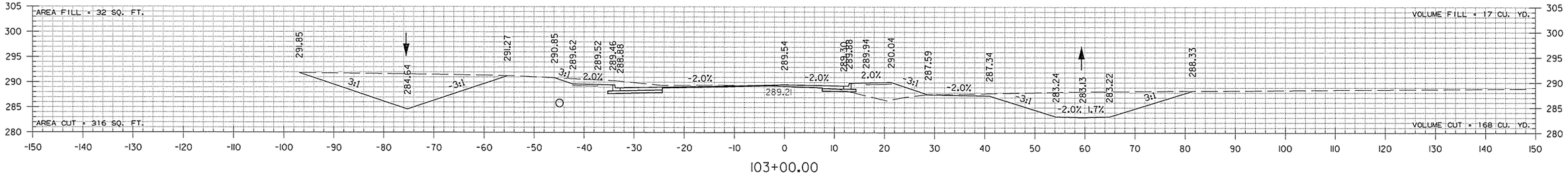
AREA FILL = 32 SQ. FT.

VOLUME FILL = 83 CU. YD.

AREA CUT = 316 SQ. FT.

VOLUME CUT = 819 CU. YD.

103+70.00



103+00.00

AGGIE ROAD
STA. 103+00 TO STA. 103+70

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WORKSPACE: AHTD
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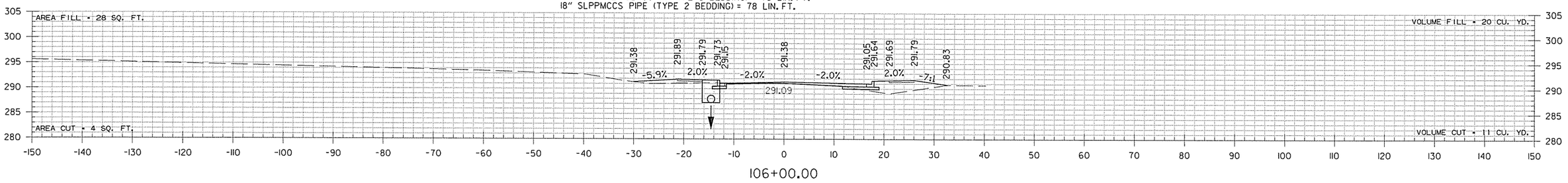
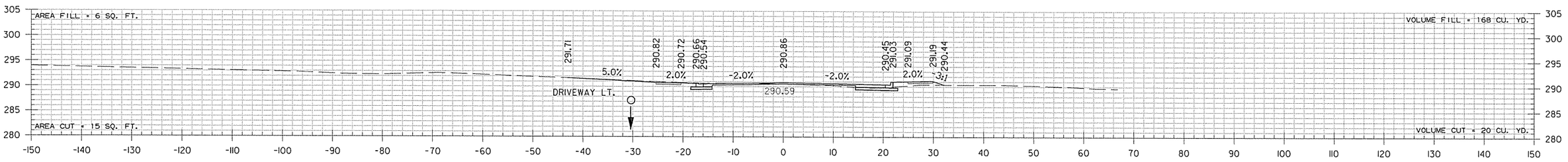
REVISED DATE:

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.		100790	63	67
				(2)	CROSS SECTIONS			

AGGIE RD. STA. 106+00 CONSTRUCT
DROP INLET ON LT. H = 4'-6"
WITH 8' EXT. AND 18" X 78'
PIPE CULVERT TO JUNCTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 78 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 78 LIN. FT.



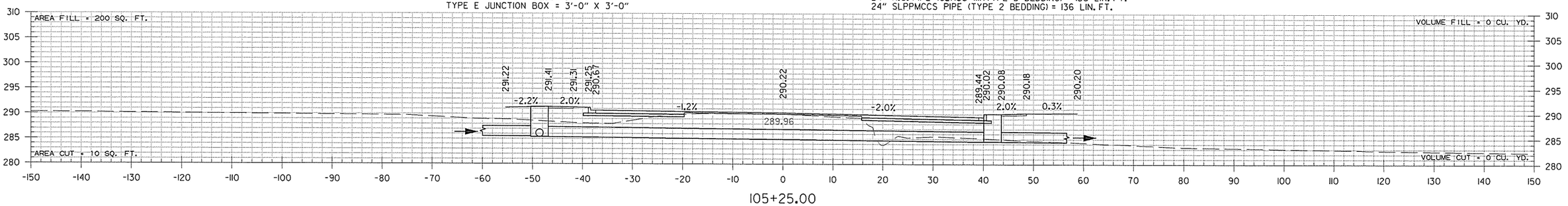
106+00.00



105+69.00

HWY. 351 STA. 103+50 = AGGIE RD. STA. 105+28 CONSTRUCT
JUNCTION BOX ON RT. H = 6'-0"
AND 24" X 90' R.C. PIPE CULVERT
TO DROP INLET ON RT.
(CLASS III)(TYPE 3 BEDDING)
TYPE E JUNCTION BOX = 3'-0" X 3'-0"

HWY. 351 STA. 102+22 = AGGIE RD. STA. 105+25 CONSTRUCT
DROP INLET ON RT. H = 5'-5"
WITH 4' EXT. AND 24" X 136'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'-0" X 2'-6"
24" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 136 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 136 LIN. FT.



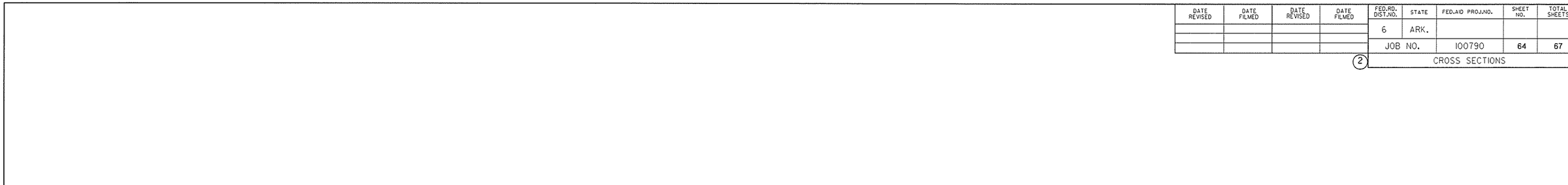
105+25.00

AGGIE ROAD
STA. 105+25 TO STA. 106+00

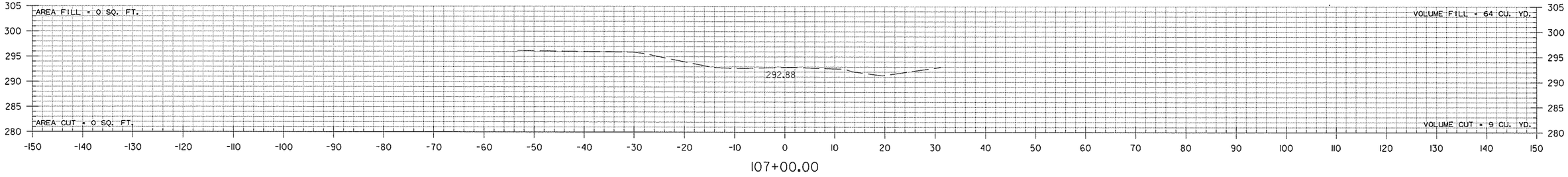
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		100790	64	67

(2) CROSS SECTIONS



108+00.00



107+00.00

AGGIE ROAD
STA. 107+00 TO STA. 108+00

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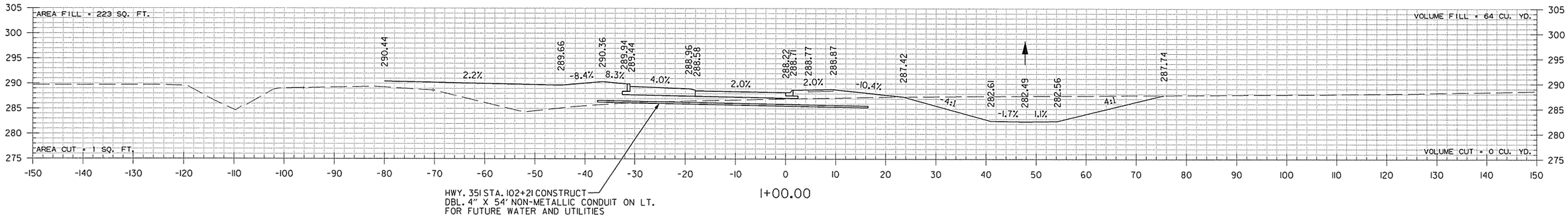
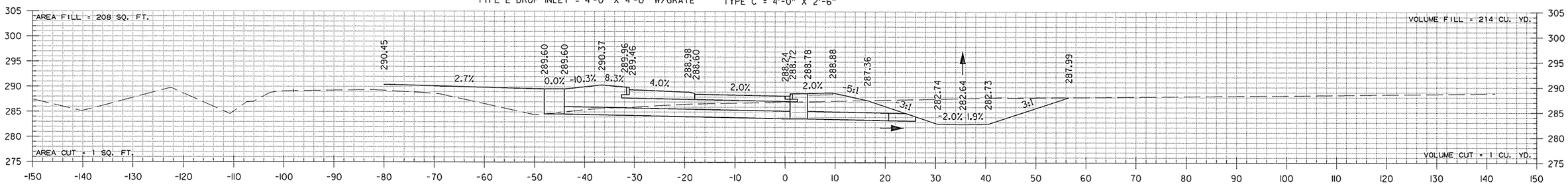
REVISED DATE:

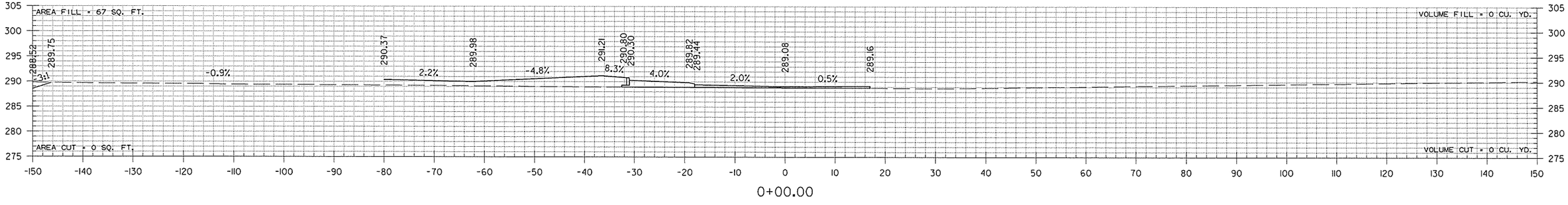
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100790	65	67
				(2)	CROSS SECTIONS			



HWY. 351 STA. 102+56 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
AND 18" X 44' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE E DROP INLET = 4'-0" X 4'-0" W/GRATE

HWY. 351 STA. 102+24 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
WITH DUAL 4' EXT. AND 18" X 19'
R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING)
WITH FES.
TYPE MO DROP INLET = 4' DIA.
TYPE C = 4'-0" X 2'-6"





ROUNDABOUT
STA. 0+00 TO STA. 1+00

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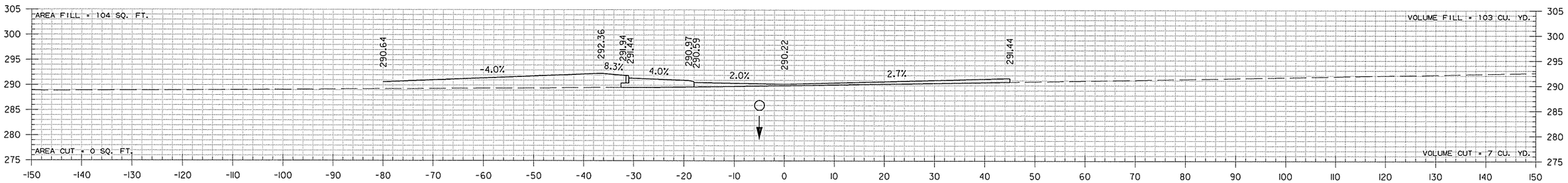
REVISED DATE:

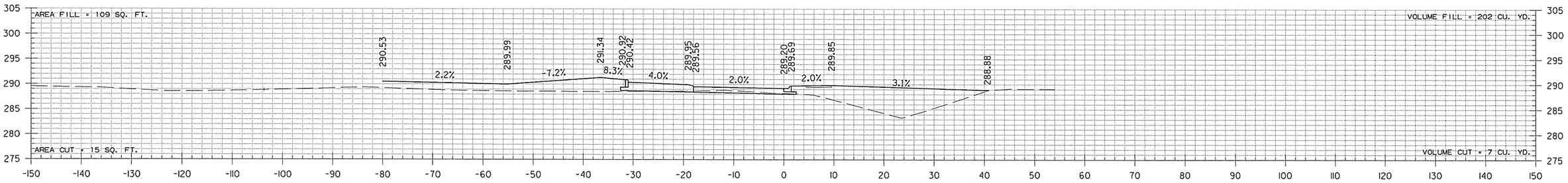
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		100790	66	67

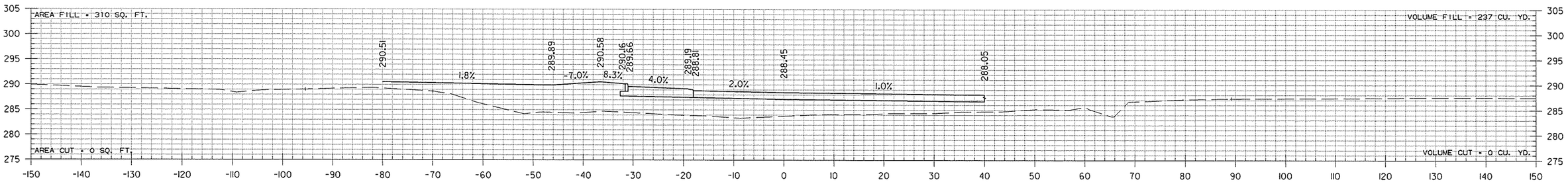
(2) CROSS SECTIONS



2+51.33



2+00.00



1+46.58

ROUNDABOUT
STA. 1+47 TO STA. 2+51

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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.		100790	67	67
				(2)	CROSS SECTIONS			

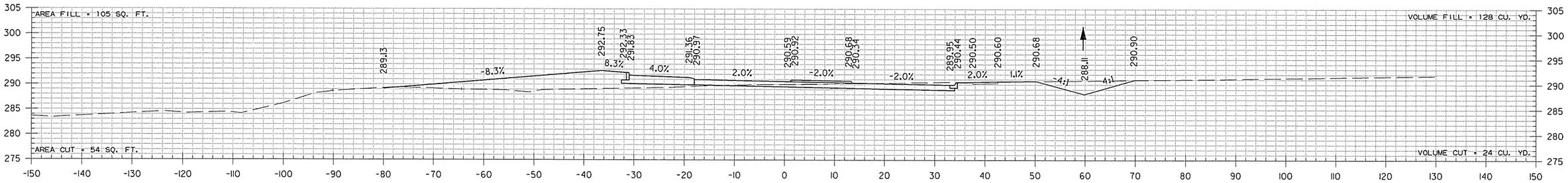
AREA FILL = 67 SQ. FT.

AREA CUT = 0 SQ. FT.

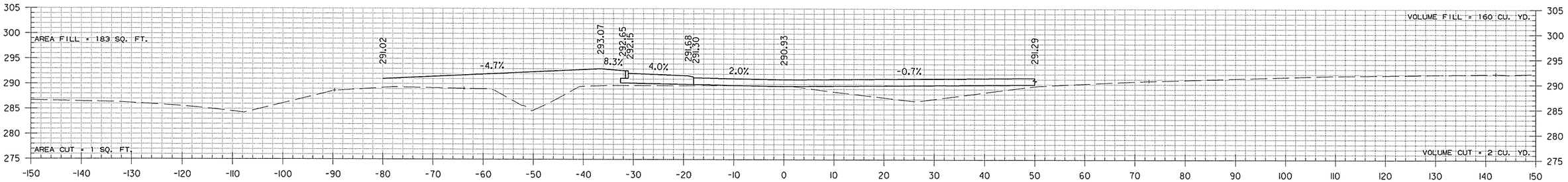
VOLUME FILL = 166 CU. YD.

VOLUME CUT = 52 CU. YD.

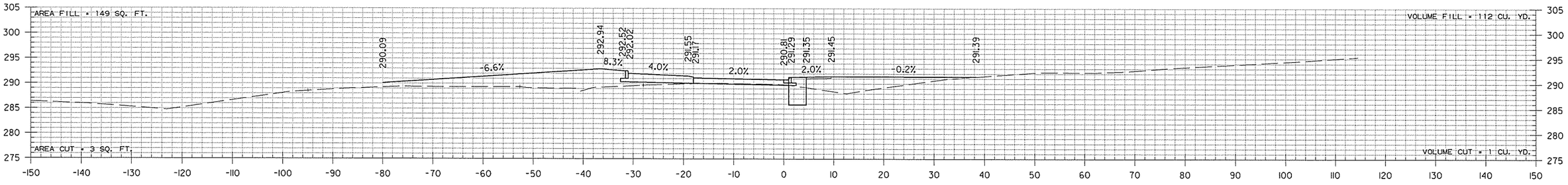
5+03.00



4+00.00



3+52.46



3+00.00

ROUNDABOUT

STA. 3+00 TO STA. 4+00