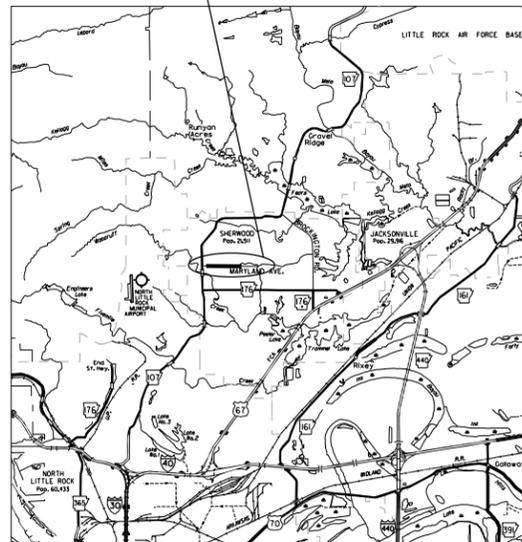


PROJECT LOCATION



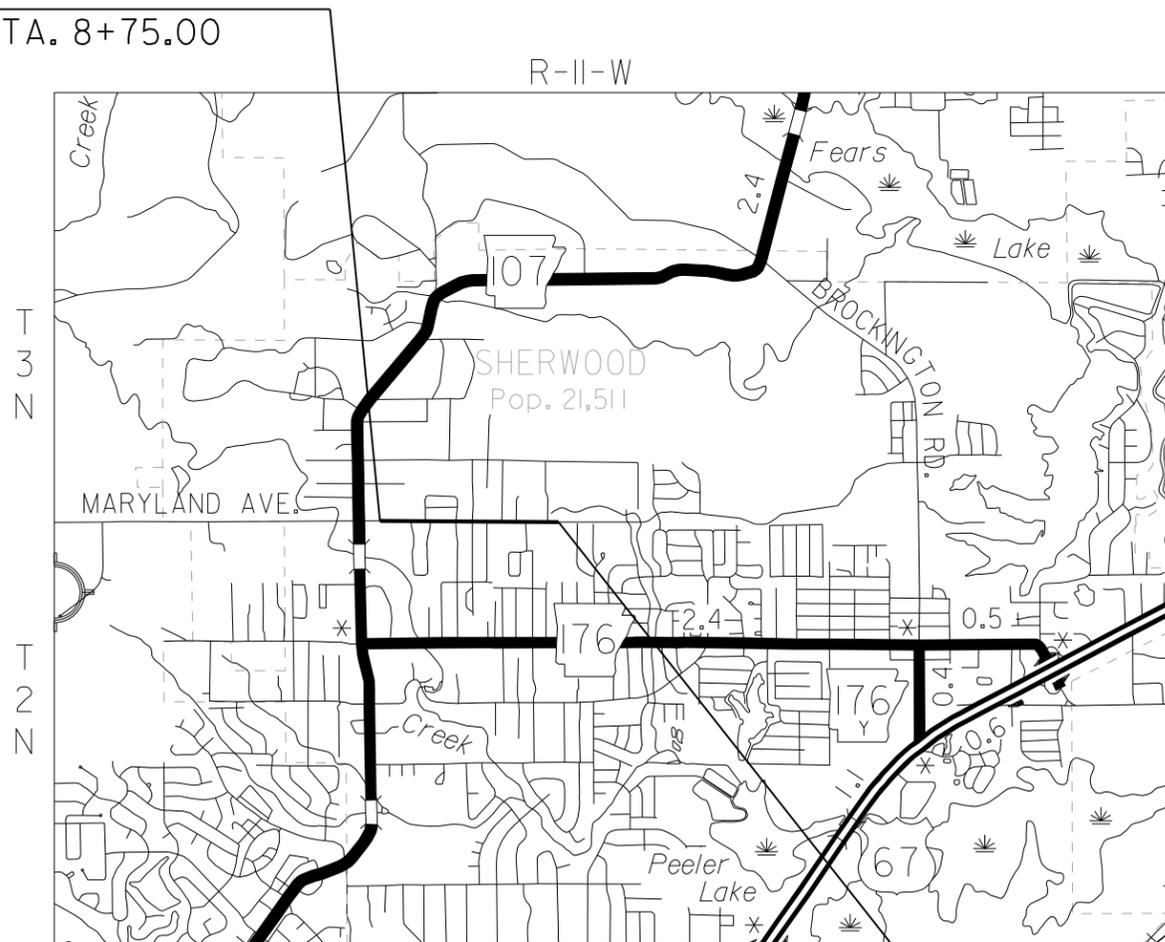
VICINITY MAP

CONSTRUCTION PLANS

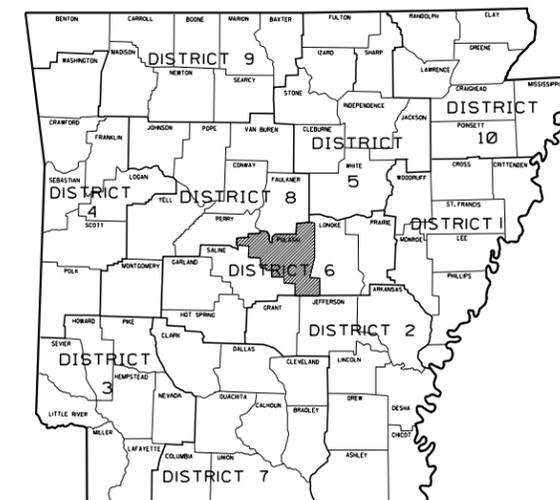
MARYLAND AVENUE IMPVTS. & EXTENSION (SHERWOOD) (S)
PULASKI COUNTY

FEDERAL AID PROJECT STPU-9391(13)
JOB 061295

BEGIN JOB 061295
STA. 8+75.00



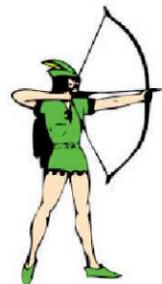
END JOB 061295
STA. 49+79.30



ARKANSAS HIGHWAY DISTRICT 6

DESIGN TRAFFIC DATA

DESIGN YEAR-----	2033
2017 ADT-----	4480
2037 ADT-----	6187
2037 DHV-----	683
DIRECTIONAL DISTRIBUTION-----	0.60
TRUCKS-----	2%
DESIGN SPEED-----	30 MPH



CITY OF SHERWOOD



METROPLAN

GARVER PROJECT NO. 12017400
DEC, 2016



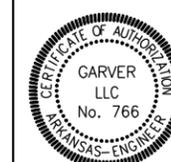
4701 Northshore Drive
North Little Rock, AR 72118
501-376-3633

PROJECT COORDINATES

	BEGIN	MID-POINT	END
LATITUDE	N 34°50'26"	N 34°50'25"	N 34°50'24"
LONGITUDE	W 92°13'52"	W 92°13'27"	W 92°13'02"

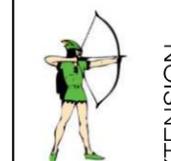
LENGTH COMPUTED ALONG C.L. MARYLAND AVE.	
GROSS LENGTH OF PROJECT	4104.30 FEET OR 0.777 MILES
NET LENGTH OF ROADWAY	4104.30 FEET OR 0.777 MILES
NET LENGTH OF BRIDGES	0.00 FEET OR 0.00 MILES
NET LENGTH OF PROJECT	4104.30 FEET OR 0.777 MILES

P.E. JOB 061295
F.A.P. STPU-9391(13)



Digitally Signed:
12/19/2016

REV.	DATE	DESCRIPTION



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

COVER SHEET

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER
G001

SHEET NUMBER
1



Digitally Signed: 12/19/2016

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

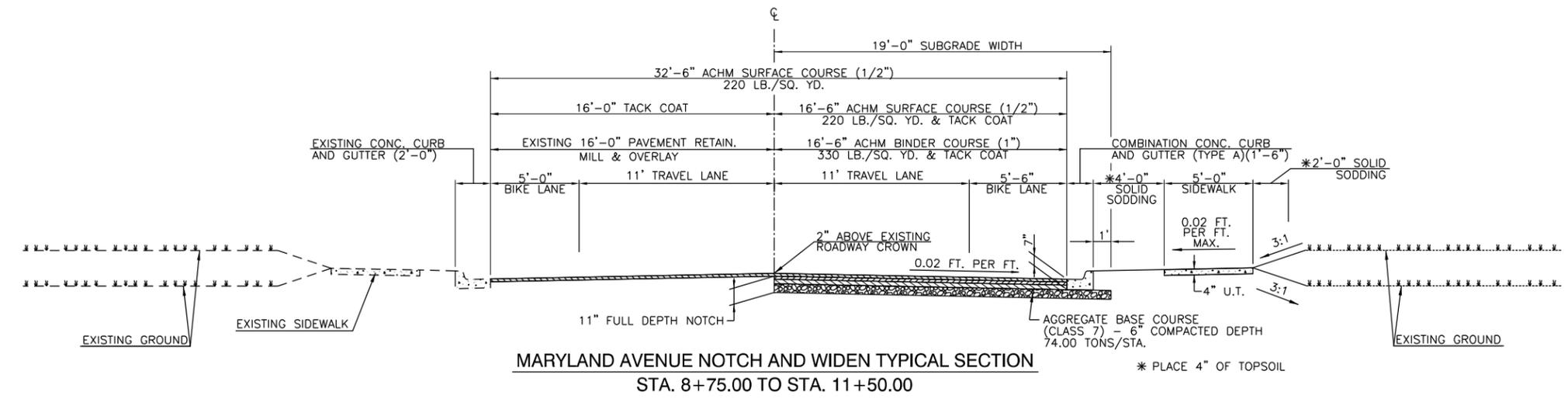
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

TYPICAL SECTIONS OF IMPROVEMENT

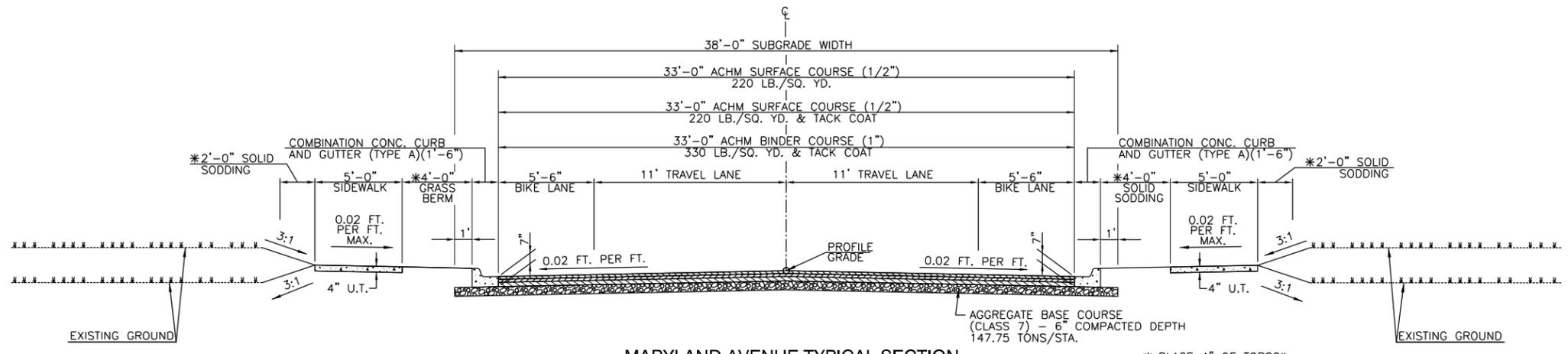
JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **3**

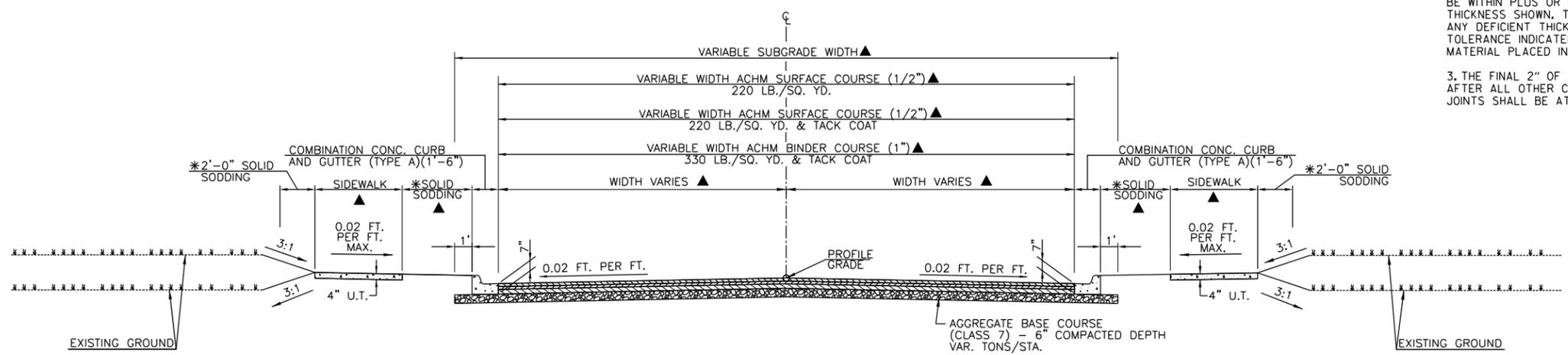


MARYLAND AVENUE NOTCH AND WIDEN TYPICAL SECTION
STA. 8+75.00 TO STA. 11+50.00



MARYLAND AVENUE TYPICAL SECTION
STA. 11+50.00 TO STA. 49+79.30

- 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.



SIDE ROADS TYPICAL SECTION

▲ TRANSITION TO EXISTING
* PLACE 4" OF TOPSOIL

12/19/2016 8:03:06 AM
WORKSPACE\AHTD
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Digitally Signed:
12/19/2016

REV.	DATE	DESCRIPTION	BY



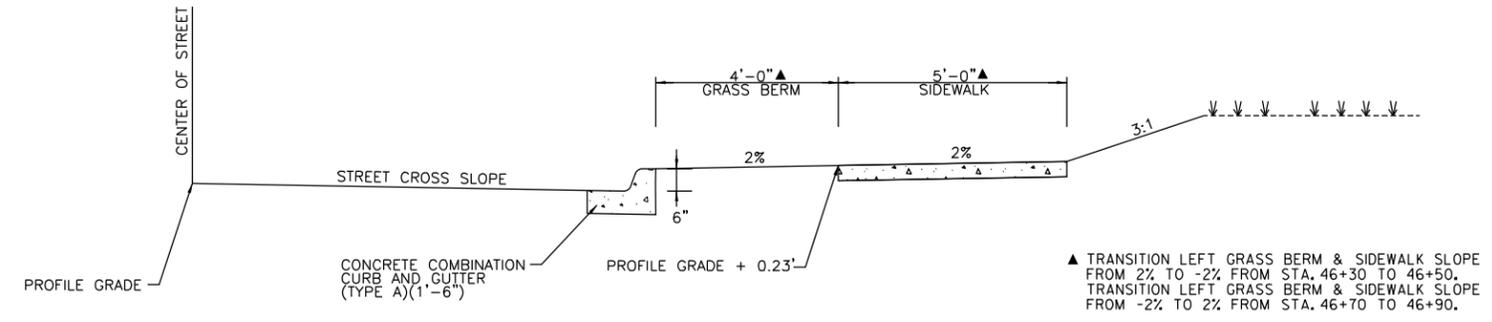
CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

SPECIAL DETAILS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

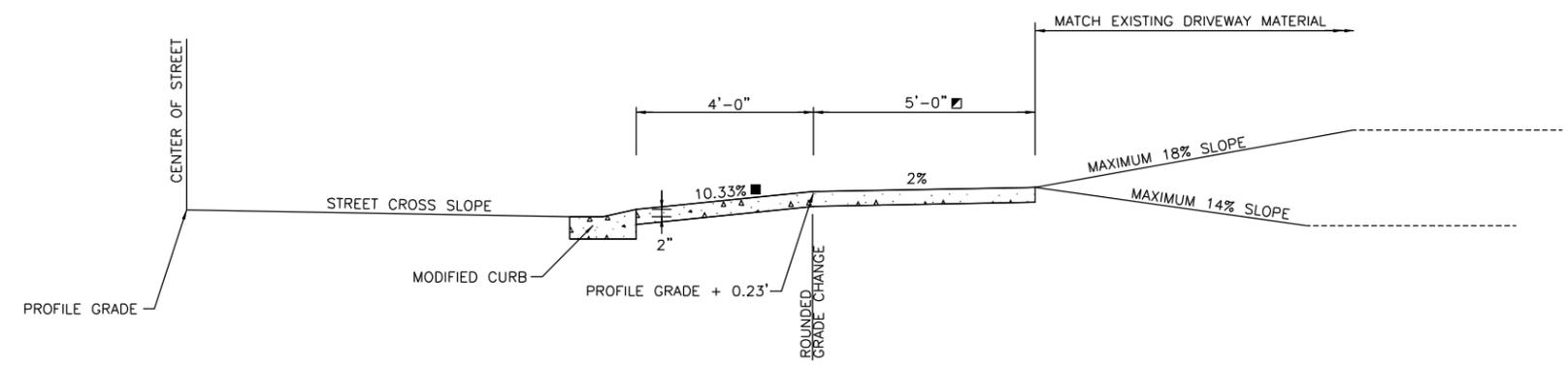
DRAWING NUMBER

SHEET NUMBER **4**



TYPICAL SIDEWALK DETAIL

▲ TRANSITION LEFT GRASS BERM & SIDEWALK SLOPE FROM 2% TO -2% FROM STA. 46+30 TO 46+50.
TRANSITION LEFT GRASS BERM & SIDEWALK SLOPE FROM -2% TO 2% FROM STA. 46+70 TO 46+90.

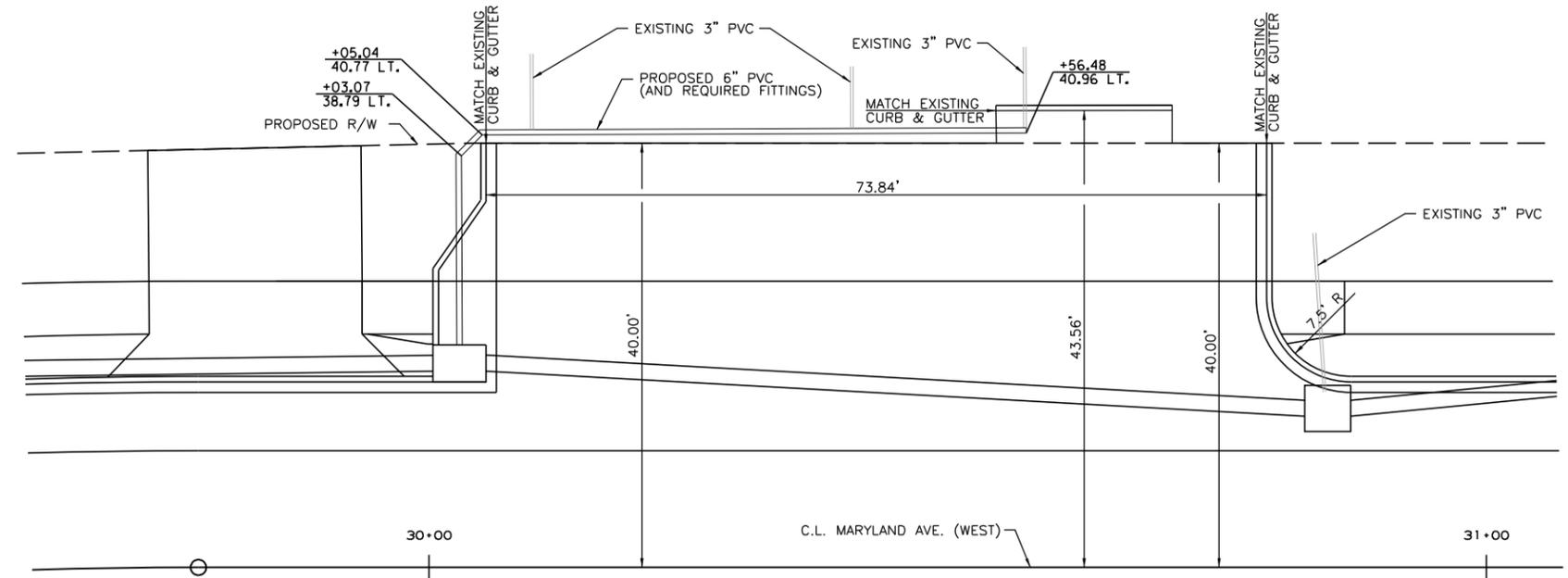


TYPICAL DRIVEWAY DETAIL

NOTE:
1. ALL GRADE CHANGES SHALL BE ROUNDED OFF WITH A 2' RADIUS
2. THE MAXIMUM GRADE CHANGE SHALL NOT EXCEED 16%
3. 16% GRADE CHANGE IS A MAXIMUM AND SHOULD NOT BE USED EXCEPT IN EXTREME CONDITIONS

■ SEE CROSS SECTIONS FOR VARIATIONS IN DRIVEWAY SLOPES.

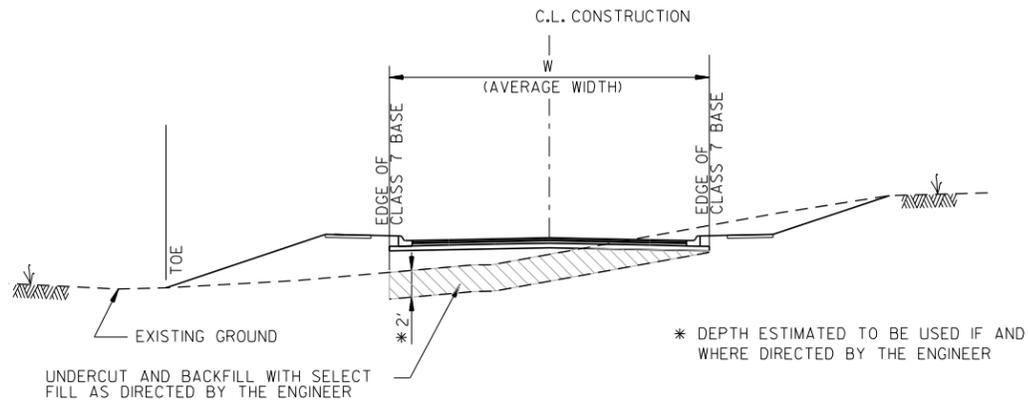
■ AT LOCATIONS APPROVED BY THE ENGINEER, A 3'-0" SIDEWALK APRON MAY BE UTILIZED AT DRIVEWAY CROSSINGS.



DETAIL OF APPROACH @ STA. 30+30

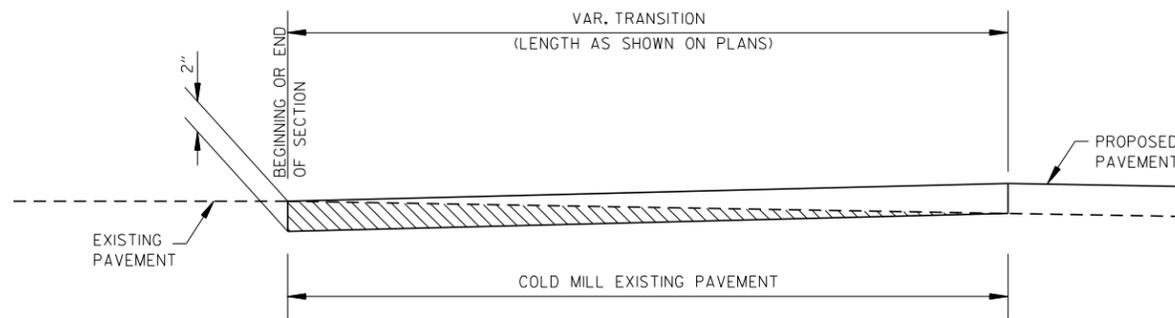


Digitally Signed:
12/19/2016



DETAIL OF UNDERCUT

MARYLAND AVE. STA. 8+75 TO STA. 21+00 W = 38' (AVG.)
 MARYLAND AVE. STA. 29+00 TO STA. 49+79.30 W = 38' (AVG.)



DETAIL FOR TRANSITIONS ON MARYLAND AVENUE

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

SPECIAL DETAILS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

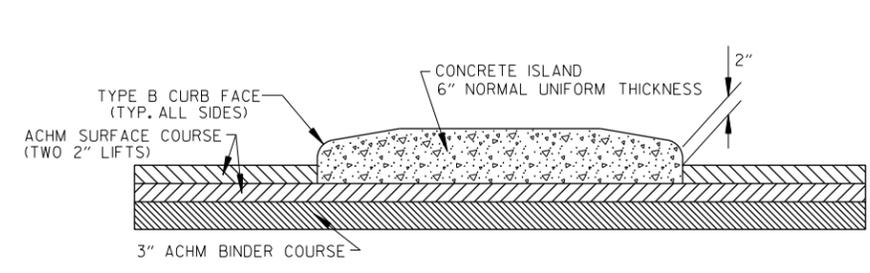
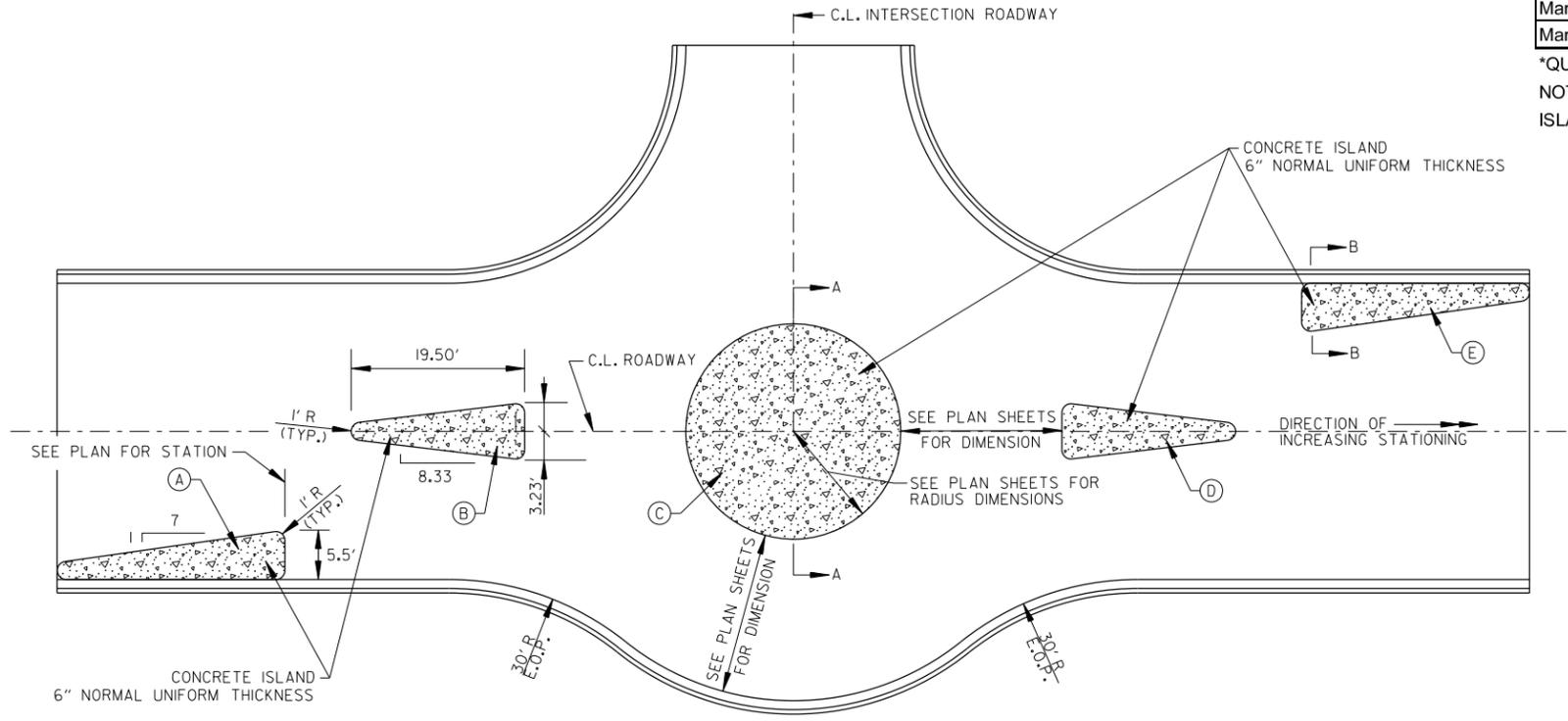
SHEET NUMBER **5**



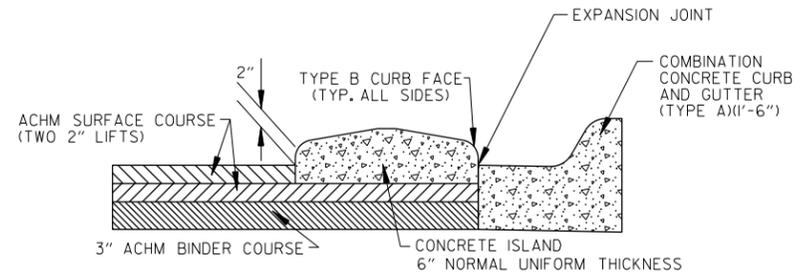
Digitally Signed:
12/19/2016

Concrete Islands At Traffic Circles					
LOCATION	A	B	C	D	E
	SQ. YDS.				
Maryland Ave. 18+22.83	10.31	0	50.27	8.73	10.31
Maryland Ave. 28+13.84	10.31	8.73	34.91	5.9	10.31
Maryland Ave. 38+03.05	10.31	8.73	50.27	0	10.31
Maryland Ave. 48+11.55	10.31	0	50.27	0	10.31

*QUANTITIES ARE FOR INFORMATION ONLY
NOTE: SEE PERMANENT PAVEMENT MARKINGS SHEETS FOR STRIPING DETAILS WHERE NO ISLANDS ARE PRESENT.



SECTION A-A



SECTION B-B

DETAIL FOR TRAFFIC CIRCLES

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

SPECIAL DETAILS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **6**



Digitally Signed: 12/19/2016

REV.	DATE	DESCRIPTION	BY



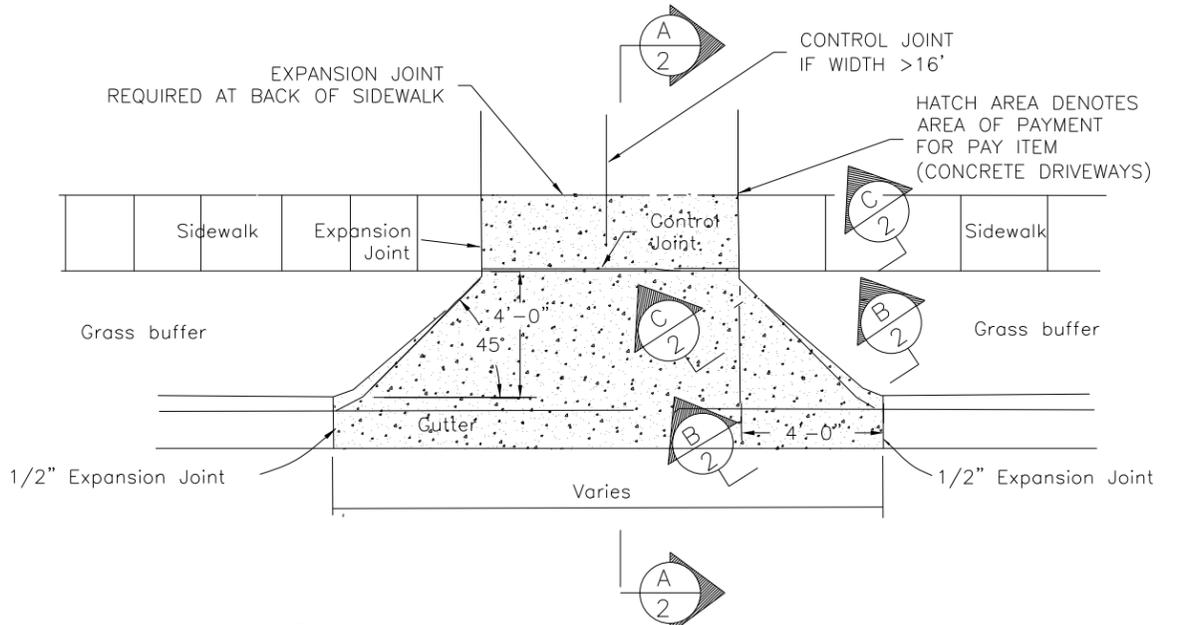
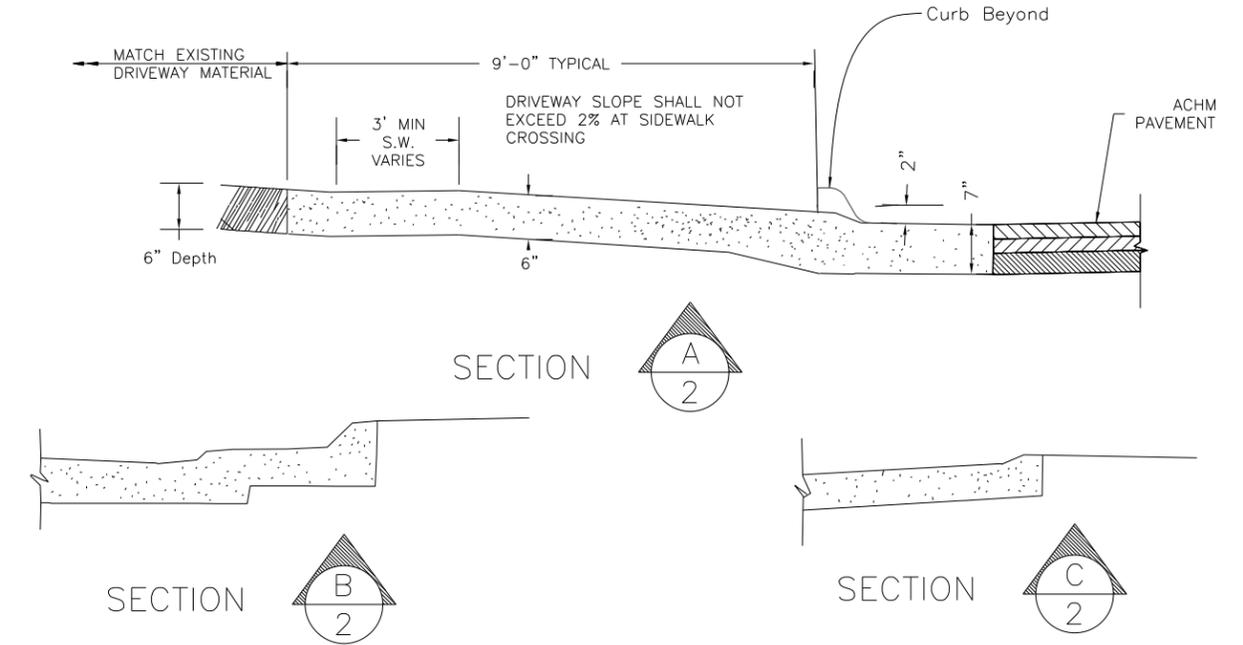
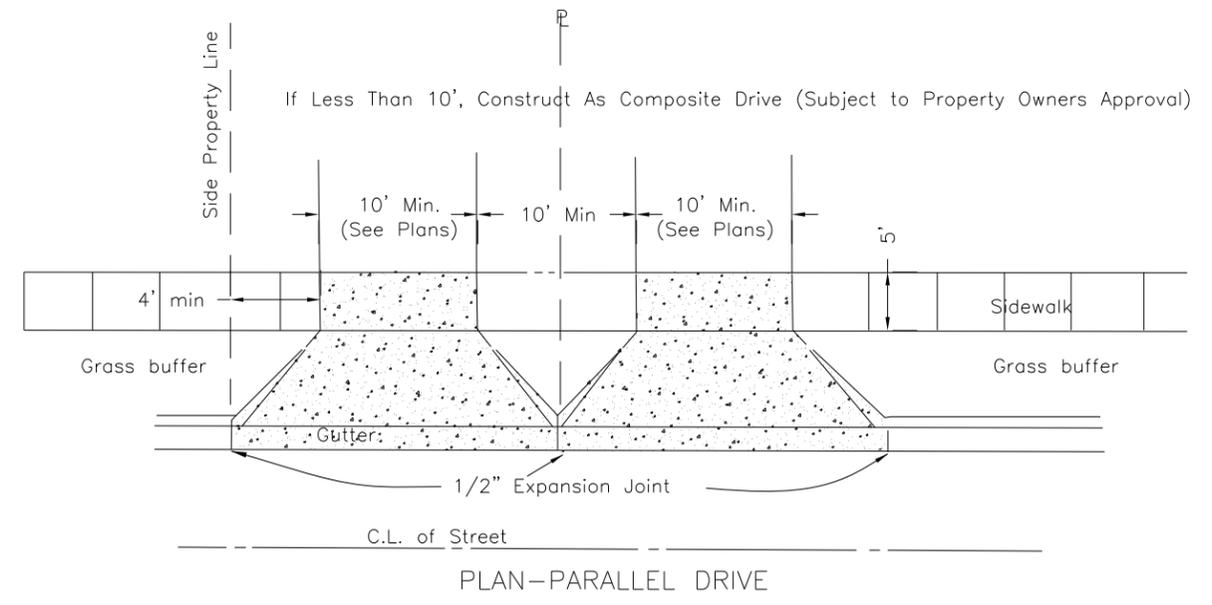
CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

SPECIAL DETAILS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **7**



- NOTE:
- CONTROL JOINTS REQUIRED IN ALL DRIVEWAYS AT 12'-0" O.C. EACH WAY OR SPACED EQUAL TO THE WIDTH OF DRIVEWAY WHICHEVER IS LESS.
 - GRASS BUFFER TO BE 4' WIDE UNLESS APPROVED BY CITY TO BE MODIFIED. GRASS BUFFER MAY BE REDUCED TO MINIMUM 36" WITH CITY APPROVAL.
 - DRIVEWAY GRADES SHALL BE DESIGNED BY ENGINEER TO KEEP STORMWATER IN STREET, 2% MINIMUM SLOPE AT SIDEWALK CROSSING, MAXIMUM % OF GRADE CHANGE IS 16.
 - DRIVEWAY GRADE NOT TO EXCEED CITY ORDINANCE REQUIREMENTS STATED IN SECTION 31-210. FIELD ADJUSTMENT MAY BE REQUIRED AT CERTAIN LOCATIONS TO INSURE PROPER RELATION BETWEEN DRIVEWAY AND STREET GRADES.
 - DRIVEWAY APRON SHALL BE CONSTRUCTED MONOLITHICALLY WITH GUTTER SECTION, UNLESS DOWLED INTO GUTTER SECTION WITH 1/2" DOWELS 18" LONG AT 12" ON CENTER AND APPROVED BY ENGINEER.
 - REFER TO STANDARD DRAWING DR-1 FOR DRIVEWAY EXTENSION DETAILS. IN CASE OF CONFLICT BETWEEN THIS SPECIAL DETAILS SHEET AND STANDARD DRAWING DR-1, THIS SPECIAL DETAILS SHEET SHALL GOVERN.

*EXISTING DRIVEWAY MATERIAL					
DRIVEWAY STATION	SIDE OF STREET	EXISTING MATERIAL	DRIVEWAY STATION	SIDE OF STREET	EXISTING MATERIAL
9+17	RT	AGGREGATE	26+63	LT	CONCRETE
9+66	RT	CONCRETE	26+91	RT	CONCRETE
10+97	RT	ASPHALT	29+00	RT	AGGREGATE
11+84	RT	AGGREGATE	29+82	RT	CONCRETE
12+11	LT	CONCRETE	29+84	LT	CONCRETE
12+43	RT	AGGREGATE	30+30	LT	CONCRETE
13+74	LT	AGGREGATE	30+75	LT	CONCRETE
13+88	RT	AGGREGATE	33+03	RT	CONCRETE
14+15	RT	CONCRETE	33+24	LT	ASPHALT
14+83	RT	CONCRETE	33+83	RT	CONCRETE
15+33	RT	AGGREGATE	34+63	LT	ASPHALT
15+36	LT	CONCRETE	36+72	RT	AGGREGATE
16+06	RT	ASPHALT	38+47	LT	ASPHALT
16+51	LT	AGGREGATE	39+81	RT	ASPHALT
16+68	RT	ASPHALT	40+39	LT	CONCRETE
17+56	RT	CONCRETE	41+14	RT	CONCRETE
17+82	LT	CONCRETE	41+60	LT	AGGREGATE
19+02	LT	CONCRETE	42+14	RT	CONCRETE
20+22	RT	CONCRETE	42+97	LT	CONCRETE
23+18	LT	CONCRETE	43+42	LT	AGGREGATE
23+65	LT	CONCRETE	44+65	LT	AGGREGATE
24+42	LT	CONCRETE	45+11	RT	ASPHALT
24+99	RT	ASPHALT	46+64	LT	CONCRETE
25+13	LT	CONCRETE	47+62	RT	AGGREGATE
25+94	LT	CONCRETE	48+59	RT	AGGREGATE
26+52	RT	CONCRETE	49+59	LT	CONCRETE

*FOR INFORMATION ONLY

RESIDENTIAL DRIVEWAY

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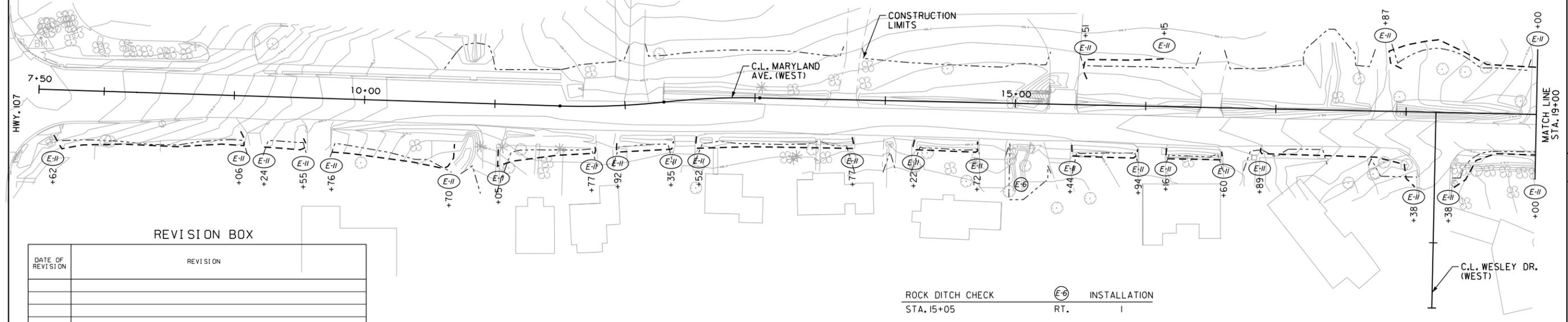
Digitally Signed:
12/19/2016

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.

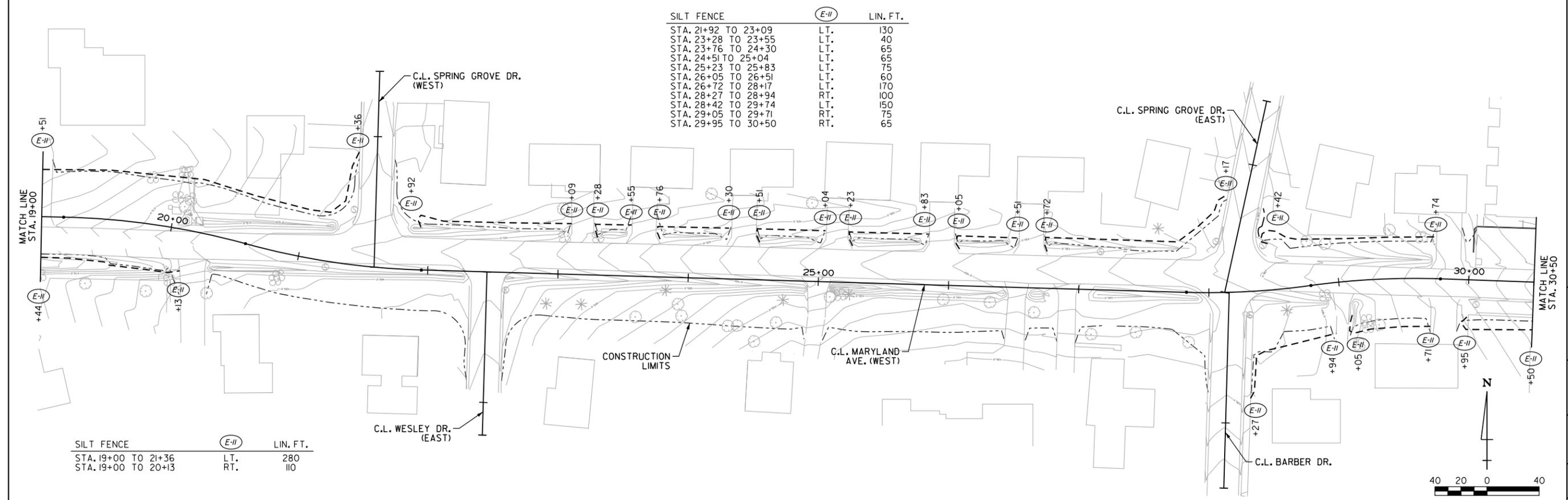
SILT FENCE	(E-II)	LIN. FT.
STA. 7+62 TO 9+06	RT.	170
STA. 9+24 TO 9+55	RT.	40
STA. 9+76 TO 10+70	RT.	110
STA. 11+05 TO 11+77	RT.	100
STA. 11+92 TO 12+35	RT.	55
STA. 12+52 TO 13+77	RT.	140
STA. 14+22 TO 14+72	RT.	65
STA. 15+44 TO 15+94	RT.	65
STA. 15+51 TO 16+15	LT.	80
STA. 16+16 TO 16+61	RT.	60
STA. 16+89 TO 18+09	RT.	135
STA. 17+87 TO 19+00	LT.	140
STA. 18+38 TO 19+00	RT.	75



REVISION BOX

DATE OF REVISION	REVISION

SILT FENCE	(E-II)	LIN. FT.
STA. 21+92 TO 23+09	LT.	130
STA. 23+28 TO 23+55	LT.	40
STA. 23+76 TO 24+30	LT.	65
STA. 24+51 TO 25+04	LT.	65
STA. 25+23 TO 25+83	LT.	75
STA. 26+05 TO 26+51	LT.	60
STA. 26+72 TO 28+17	RT.	170
STA. 28+27 TO 28+94	RT.	100
STA. 28+42 TO 29+74	LT.	150
STA. 29+05 TO 29+71	RT.	75
STA. 29+95 TO 30+50	RT.	65



SILT FENCE	(E-II)	LIN. FT.
STA. 19+00 TO 21+36	LT.	280
STA. 19+00 TO 20+13	RT.	110

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REV.	DATE	DESCRIPTION



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

TEMPORARY EROSION CONTROL DETAILS - CLEARING AND GRUBBING STA. 7+50 TO 30+50
 JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER
 SHEET NUMBER **8**



Digitally Signed:
12/19/2016

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

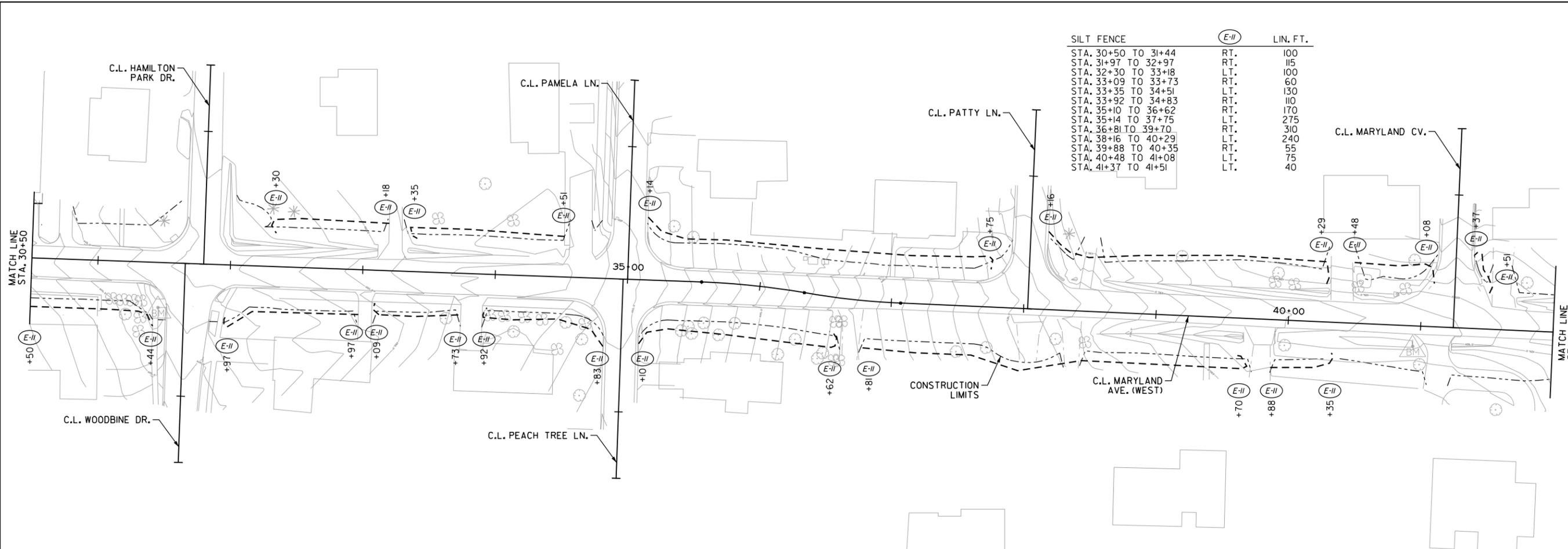
TEMPORARY EROSION
CONTROL DETAILS -
CLEARING AND
GRUBBING
STA. 30+50 TO 50+30

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **9**

SILT FENCE	(E-II)	LIN. FT.
STA. 30+50 TO 31+44	RT.	100
STA. 31+97 TO 32+97	RT.	105
STA. 32+30 TO 33+18	LT.	100
STA. 33+09 TO 33+73	RT.	60
STA. 33+35 TO 34+51	LT.	130
STA. 33+92 TO 34+83	RT.	110
STA. 35+10 TO 36+62	RT.	170
STA. 35+14 TO 37+75	LT.	275
STA. 36+81 TO 39+70	RT.	310
STA. 38+16 TO 40+29	LT.	240
STA. 39+88 TO 40+35	RT.	55
STA. 40+48 TO 41+08	LT.	75
STA. 41+37 TO 41+51	LT.	40

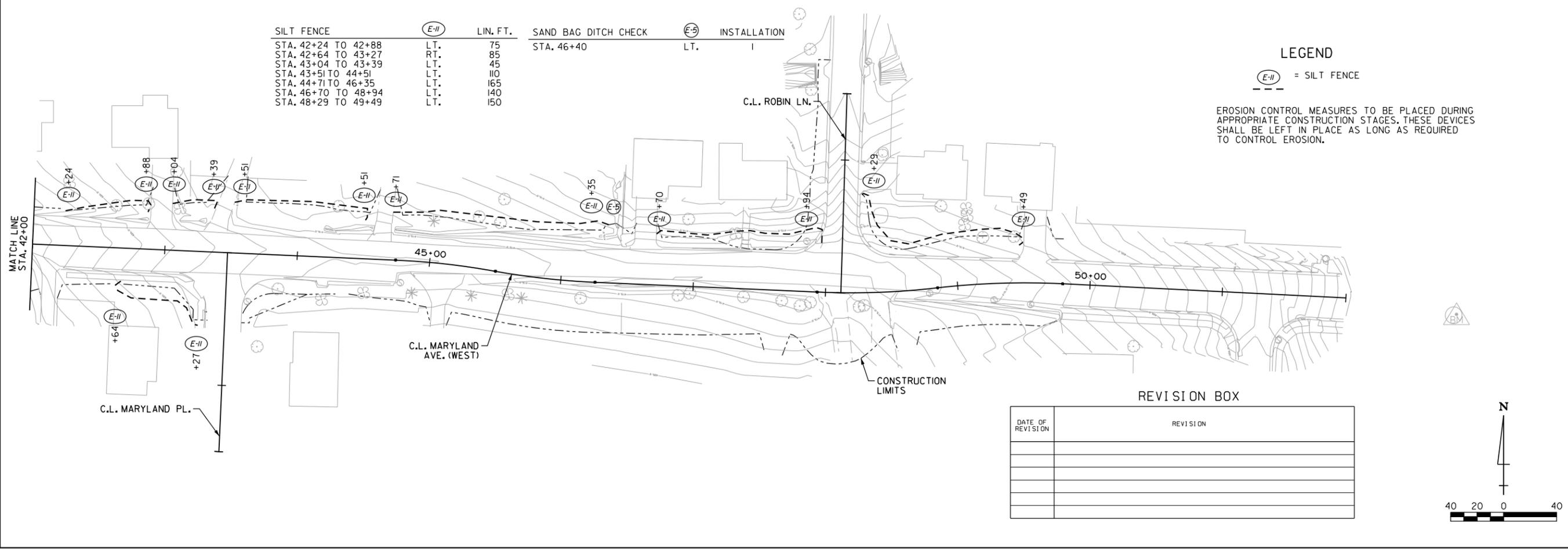


SILT FENCE	(E-II)	LIN. FT.	SAND BAG DITCH CHECK	(E-S)	INSTALLATION
STA. 42+24 TO 42+88	LT.	75	STA. 46+40	LT.	I
STA. 42+64 TO 43+27	RT.	85			
STA. 43+04 TO 43+39	LT.	45			
STA. 43+51 TO 44+51	LT.	110			
STA. 44+71 TO 46+35	LT.	165			
STA. 46+70 TO 48+94	LT.	140			
STA. 48+29 TO 49+49	LT.	150			

LEGEND

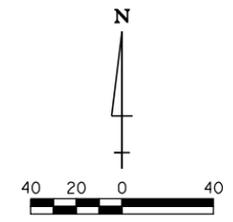
(E-II) = SILT FENCE

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



REVISION BOX

DATE OF REVISION	REVISION



RC:corbyn 12/19/2016 8:03:24 AM
WORKSPACE:AHFD
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Digitally Signed:
12/19/2016

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

TEMPORARY EROSION
CONTROL DETAILS -
STAGE 1

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

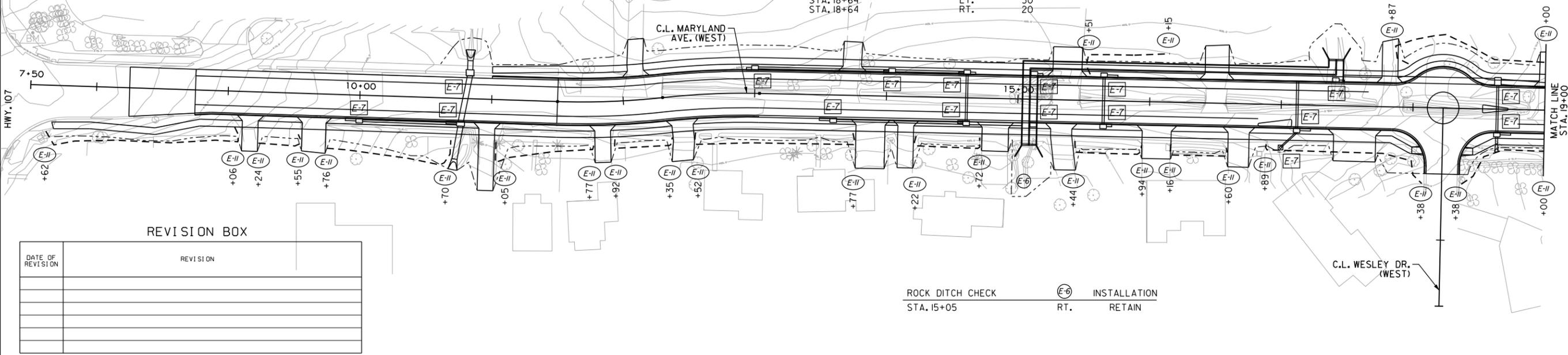
SHEET NUMBER **10**

LEGEND

- = DROP INLET SILT FENCE
- = SAND BAG DITCH CHECK
- = ROCK DITCH CHECK
- = 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.

SILT FENCE	RT.	LT.	LIN. FT.	DROP INLET SILT FENCE	RT.	LT.	LIN. FT.
STA. 7+62 TO 9+06	RT.	RETAIN		STA. 10+00	RT.	20	
STA. 9+24 TO 9+55	RT.	RETAIN		STA. 10+77	RT.	25	
STA. 9+76 TO 10+70	RT.	RETAIN		STA. 10+82	LT.	25	
STA. 11+05 TO 11+77	RT.	RETAIN		STA. 13+00	LT.	20	
STA. 11+92 TO 12+35	RT.	RETAIN		STA. 13+60	RT.	20	
STA. 12+52 TO 13+77	RT.	RETAIN		STA. 14+61	LT.	20	
STA. 14+22 TO 14+72	RT.	RETAIN		STA. 14+61	RT.	20	
STA. 15+44 TO 15+94	RT.	RETAIN		STA. 15+12	LT.	20	
STA. 15+51 TO 16+15	LT.	RETAIN		STA. 15+12	RT.	20	
STA. 16+16 TO 16+61	RT.	RETAIN		STA. 15+65	LT.	20	
STA. 16+89 TO 18+09	RT.	RETAIN		STA. 15+65	RT.	20	
STA. 17+87 TO 19+00	LT.	RETAIN		STA. 17+00	RT.	20	
STA. 18+38 TO 19+00	RT.	RETAIN		STA. 17+12	RT.	20	
				STA. 17+35	LT.	20	
				STA. 18+64	LT.	30	
				STA. 18+64	RT.	20	

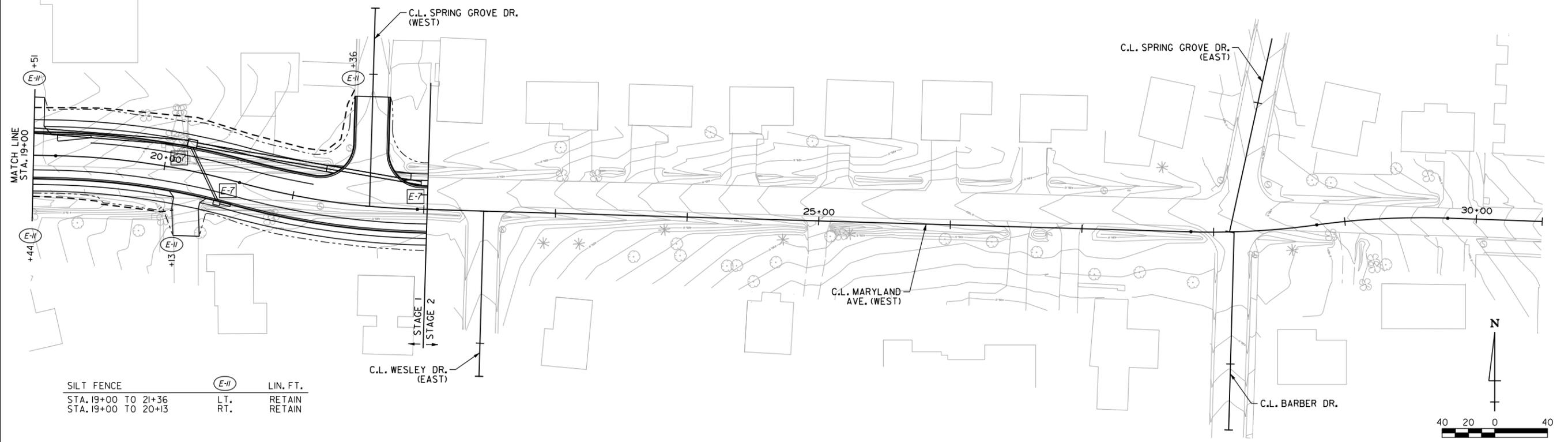


REVISION BOX

DATE OF REVISION	REVISION

DROP INLET SILT FENCE

STA.	RT.	LT.	LIN. FT.
20+17.50	LT.	30	
20+45	RT.	20	
22+00	LT.	25	



SILT FENCE

STA.	RT.	LT.	LIN. FT.
19+00 TO 21+36	LT.	RETAIN	
19+00 TO 20+13	RT.	RETAIN	

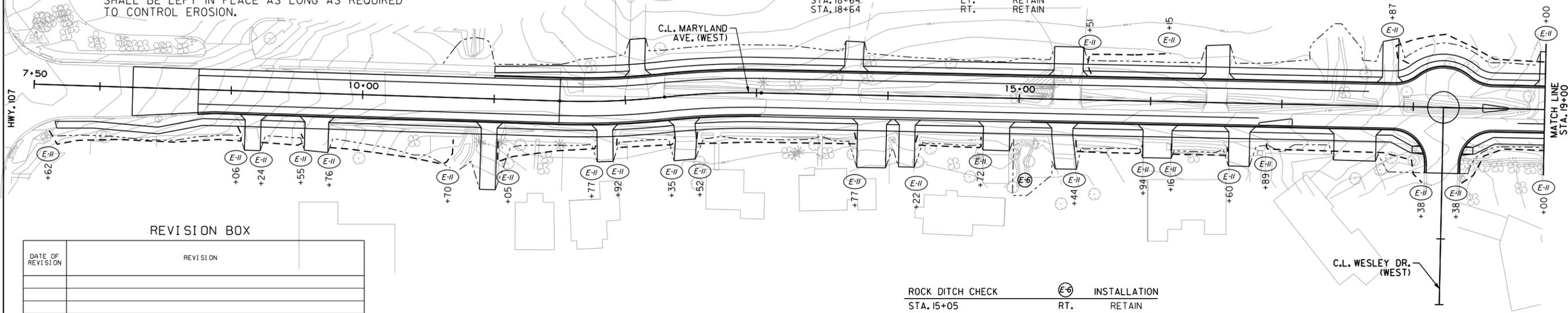
12/19/2016 8:03:24 AM
 WORKSPACE\AHTD
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LEGEND

- E-7 = DROP INLET SILT FENCE
- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- 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.

SILT FENCE		LINE FT.	DROP INLET SILT FENCE		LINE FT.
STA. 7+62 TO 9+06	RT.	RETAIN	STA. 10+00	RT.	RETAIN
STA. 9+24 TO 9+55	RT.	RETAIN	STA. 10+77	RT.	RETAIN
STA. 9+76 TO 10+70	RT.	RETAIN	STA. 10+82	LT.	RETAIN
STA. 11+05 TO 11+77	RT.	RETAIN	STA. 13+00	LT.	RETAIN
STA. 11+92 TO 12+35	RT.	RETAIN	STA. 13+60	RT.	RETAIN
STA. 12+52 TO 13+77	RT.	RETAIN	STA. 14+61	LT.	RETAIN
STA. 14+22 TO 14+72	RT.	RETAIN	STA. 14+61	RT.	RETAIN
STA. 15+44 TO 15+94	RT.	RETAIN	STA. 15+12	LT.	RETAIN
STA. 15+51 TO 16+15	LT.	RETAIN	STA. 15+12	RT.	RETAIN
STA. 16+16 TO 16+61	RT.	RETAIN	STA. 15+65	LT.	RETAIN
STA. 16+89 TO 18+09	RT.	RETAIN	STA. 15+65	RT.	RETAIN
STA. 17+87 TO 19+00	LT.	RETAIN	STA. 17+00	RT.	RETAIN
STA. 18+38 TO 19+00	RT.	RETAIN	STA. 17+12	RT.	RETAIN
			STA. 17+35	LT.	RETAIN
			STA. 18+64	LT.	RETAIN
			STA. 18+64	RT.	RETAIN



REVISION BOX

DATE OF REVISION	REVISION

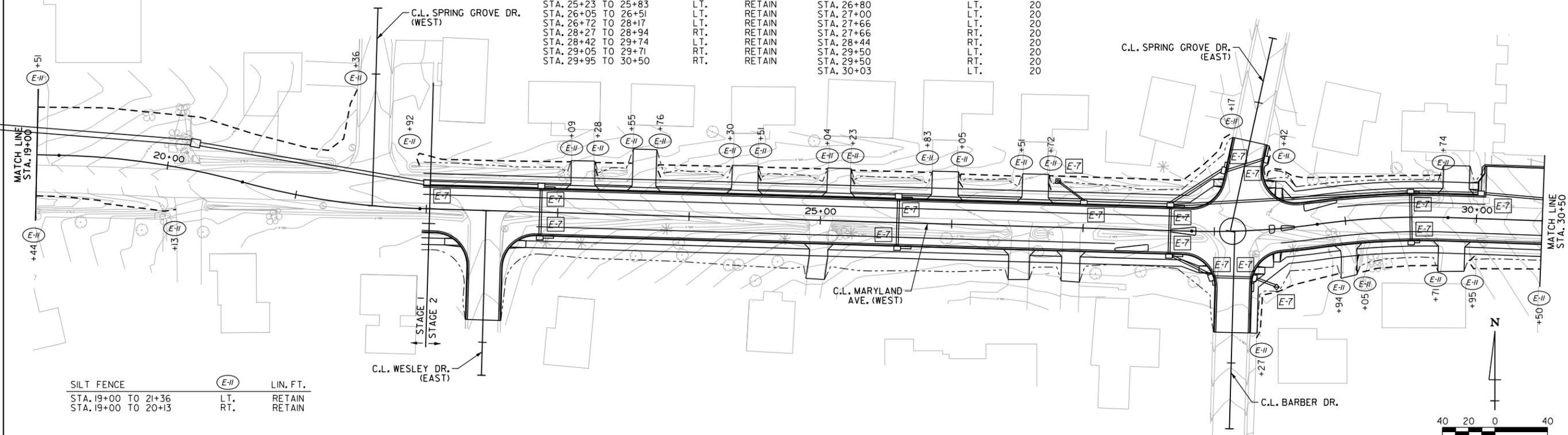
ROCK DITCH CHECK E-6 INSTALLATION
 STA. 15+05 RT. RETAIN



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12/19/2016

REV.	DATE	DESCRIPTION

DROP INLET SILT FENCE		LINE FT.	SILT FENCE		LINE FT.	DROP INLET SILT FENCE		LINE FT.	DROP INLET SILT FENCE		LINE FT.
STA. 20+17.50	LT.	RETAIN	STA. 21+92 TO 23+09	LT.	RETAIN	STA. 22+87	LT.	25	BARBER ST. STA. 9+65	LT.	20
STA. 20+45	RT.	RETAIN	STA. 23+28 TO 23+55	LT.	RETAIN	STA. 22+87	RT.	20	BARBER ST. STA. 9+65	LT.	20
STA. 22+00	LT.	RETAIN	STA. 23+76 TO 24+30	LT.	RETAIN	STA. 25+59	LT.	25	SPRING GROVE STA. 10+44	LT.	20
			STA. 24+51 TO 25+04	LT.	RETAIN	STA. 25+59	RT.	20	SPRING GROVE STA. 10+59	RT.	20
			STA. 25+23 TO 25+83	LT.	RETAIN	STA. 26+80	LT.	20			
			STA. 26+05 TO 26+51	LT.	RETAIN	STA. 27+00	LT.	20			
			STA. 26+72 TO 28+17	LT.	RETAIN	STA. 27+66	LT.	20			
			STA. 28+27 TO 28+94	RT.	RETAIN	STA. 27+66	RT.	20			
			STA. 28+42 TO 29+74	LT.	RETAIN	STA. 28+44	LT.	20			
			STA. 29+05 TO 29+71	RT.	RETAIN	STA. 29+50	LT.	20			
			STA. 29+95 TO 30+50	RT.	RETAIN	STA. 29+50	RT.	20			
						STA. 30+03	LT.	20			



SILT FENCE E-II LINE FT.
 STA. 19+00 TO 21+36 LT. RETAIN
 STA. 19+00 TO 20+13 RT. RETAIN

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CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

TEMPORARY EROSION CONTROL DETAILS - STAGE 2
 STA. 7+50 TO 30+50

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER
 SHEET NUMBER **11**



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

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 12/19/2016

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CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

TEMPORARY EROSION CONTROL DETAILS - STAGE 2
 STA. 30+50 TO 50+30

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **12**

DROP INLET SILT FENCE	E-7	LIN. FT.
STA. 30+85	LT.	20
STA. 31+34	LT.	20
STA. 31+58,25	LT.	20
STA. 32+23	LT.	20
STA. 32+23	RT.	20
STA. 37+62	RT.	20
STA. 40+83	LT.	20
STA. 40+83	RT.	20

SILT FENCE	E-11	LIN. FT.
STA. 30+50 TO 31+44	RT.	RETAIN
STA. 31+97 TO 32+97	RT.	RETAIN
STA. 32+30 TO 33+18	LT.	RETAIN
STA. 33+09 TO 33+73	RT.	RETAIN
STA. 33+35 TO 34+51	LT.	RETAIN
STA. 33+92 TO 34+83	RT.	RETAIN
STA. 35+10 TO 36+62	RT.	RETAIN
STA. 35+14 TO 37+75	LT.	RETAIN
STA. 36+81 TO 39+70	RT.	RETAIN
STA. 38+16 TO 40+29	LT.	RETAIN
STA. 39+88 TO 40+35	RT.	RETAIN
STA. 40+48 TO 41+08	LT.	RETAIN
STA. 41+37 TO 41+51	LT.	RETAIN

SILT FENCE	E-11	LIN. FT.
STA. 42+24 TO 42+88	LT.	RETAIN
STA. 42+64 TO 43+27	RT.	RETAIN
STA. 43+04 TO 43+39	LT.	RETAIN
STA. 43+51 TO 44+51	LT.	RETAIN
STA. 44+71 TO 46+35	LT.	30
STA. 46+35 TO 46+50	LT.	RETAIN
STA. 46+70 TO 48+94	LT.	RETAIN
STA. 48+29 TO 49+49	LT.	RETAIN

DROP INLET SILT FENCE	E-7	LIN. FT.
STA. 42+72	LT.	20
STA. 42+72	RT.	20
STA. 44+20	RT.	20
STA. 44+90	LT.	30
STA. 44+90	RT.	25
STA. 46+40	LT.	30
STA. 46+40	RT.	20
STA. 47+43	RT.	20
STA. 47+69	LT.	30
MARYLAND PL. STA. 9+55	LT.	30
MARYLAND PL. STA. 9+55	RT.	20
ROBIN LN. STA. 11+65	LT.	20

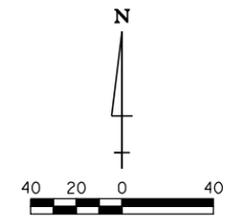
LEGEND

- = DROP INLET SILT FENCE
- = SAND BAG DITCH CHECK
- = ROCK DITCH CHECK
- = 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.

REVISION BOX

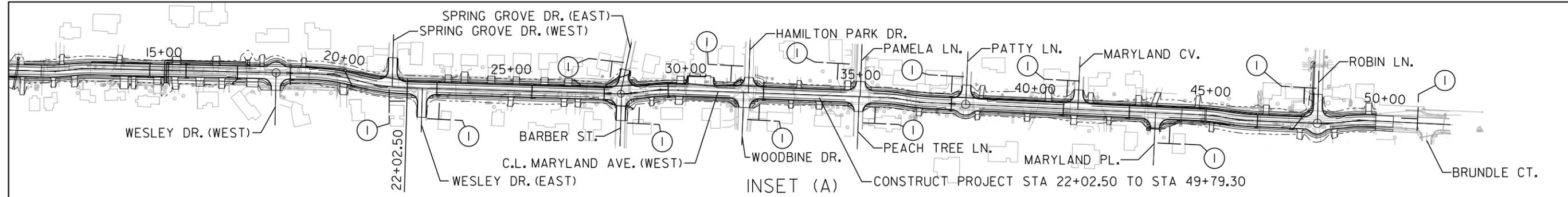
DATE OF REVISION	REVISION



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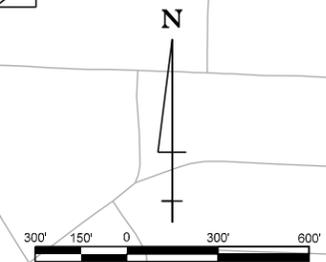
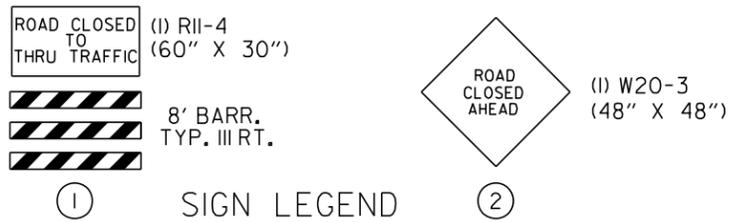
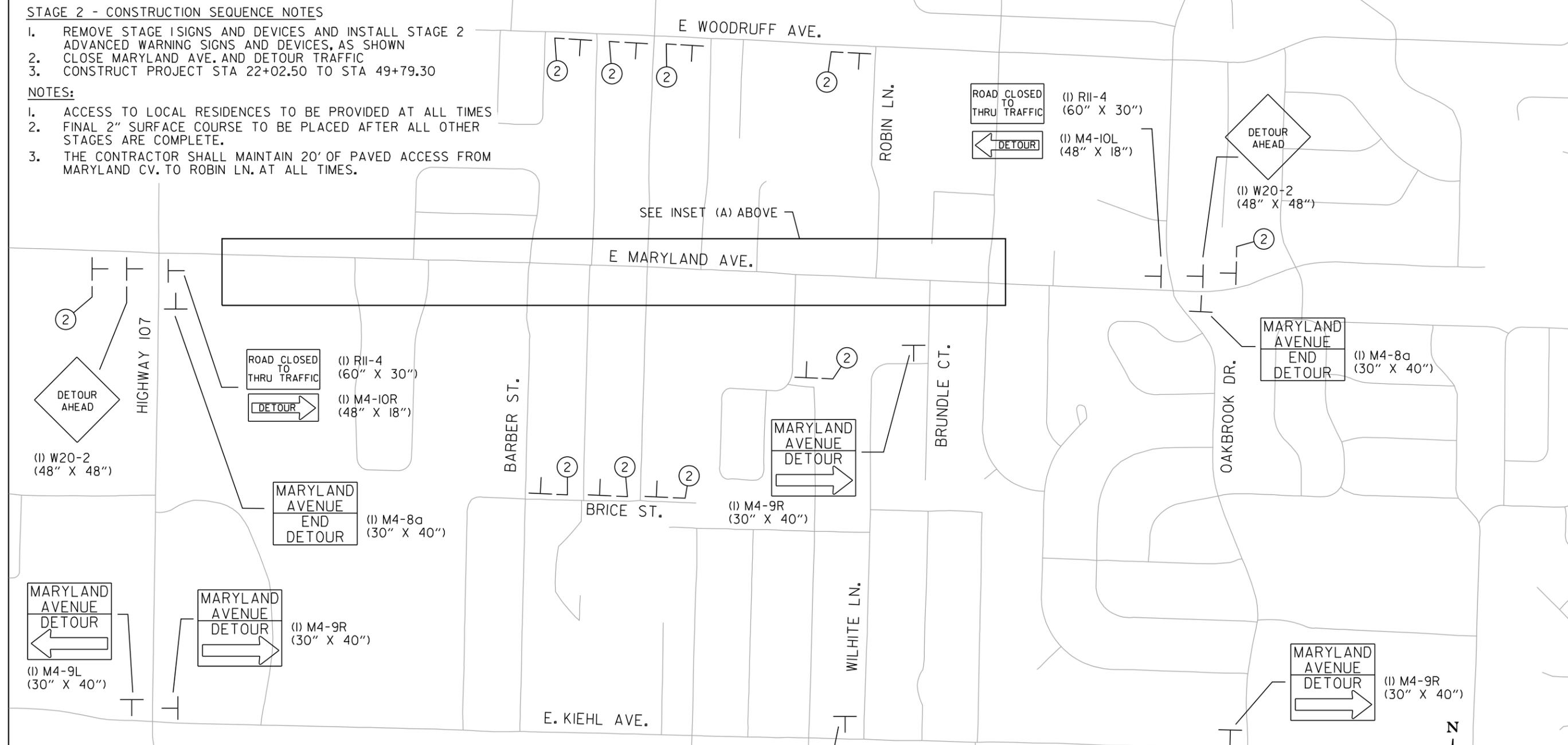


STAGE 2 - CONSTRUCTION SEQUENCE NOTES

1. REMOVE STAGE 1 SIGNS AND DEVICES AND INSTALL STAGE 2 ADVANCED WARNING SIGNS AND DEVICES, AS SHOWN
2. CLOSE MARYLAND AVE. AND DETOUR TRAFFIC
3. CONSTRUCT PROJECT STA 22+02.50 TO STA 49+79.30

NOTES:

1. ACCESS TO LOCAL RESIDENCES TO BE PROVIDED AT ALL TIMES
2. FINAL 2" SURFACE COURSE TO BE PLACED AFTER ALL OTHER STAGES ARE COMPLETE.
3. THE CONTRACTOR SHALL MAINTAIN 20' OF PAVED ACCESS FROM MARYLAND CV. TO ROBIN LN. AT ALL TIMES.



REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
MAINTENANCE
OF
TRAFFIC
STAGE 2

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
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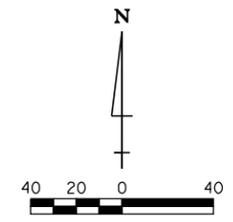
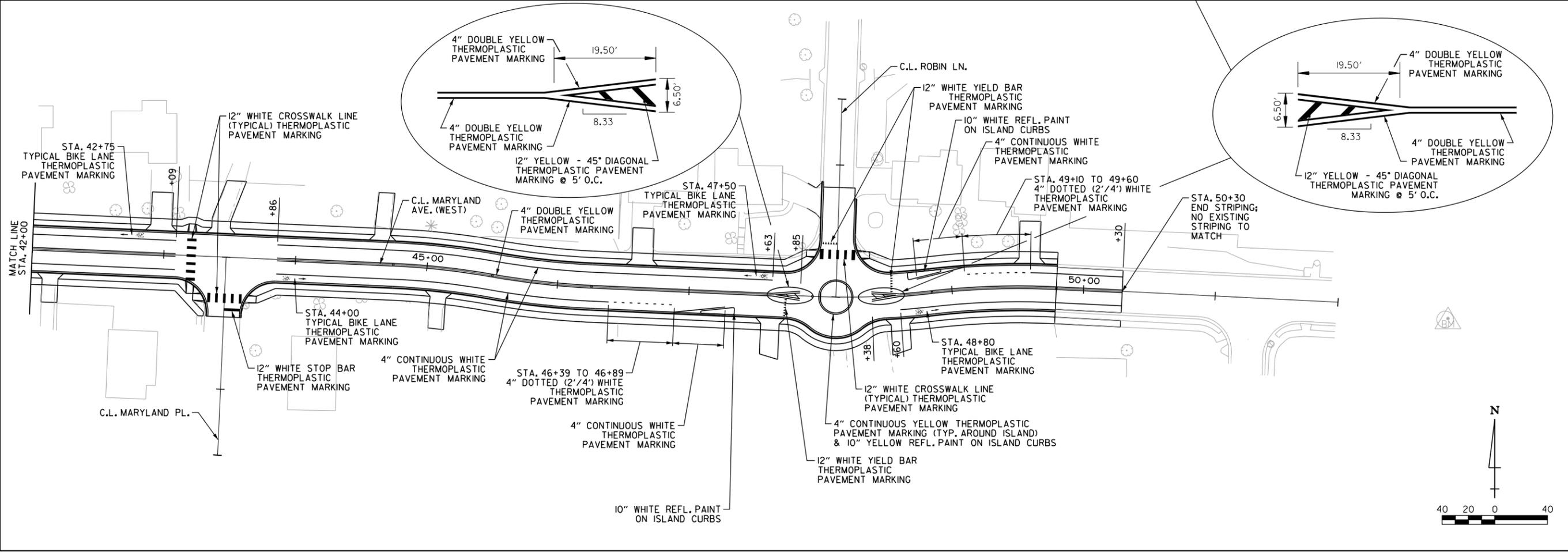
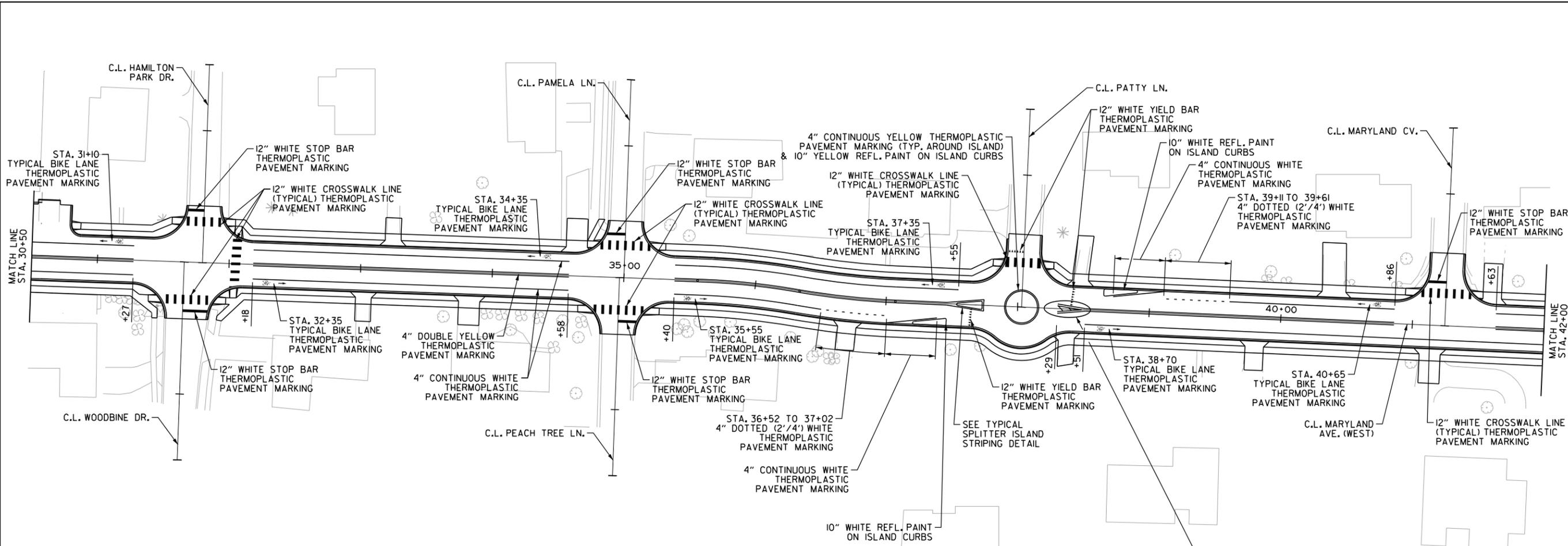
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REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
PERMANENT
PAVEMENT
MARKINGS
STA. 30+50 TO 50+30

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **16**

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SOIL BORING LOG															
BORING NO.	APPROX. MARYLAND STA.	SAMPLE DEPTH (ft)	WATER CONTENT (%)	ATTERBERG LIMITS			SIEVE ANALYSIS PERCENT PASSING							UNIFIED CLASS.	AASHTO CLASS.
				LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	1 in.	3/4 in.	3/8 in.	#4	#10	#40	#200		
1	11+68, 39' RT.	1-2	13	41	21	20	100	100	94	90	84	81	70	CL	A-7-6
2	15+99, 24' LT.	1-2	11	24	18	6	100	100	83	78	73	68	45	GC-GM	A-4
3	20+52, 50' RT.	2-2.8	9	32	20	12	---	---	---	---	---	---	33	GC	A-2-6
3	20+52, 50' RT.	6.5-7.5	14	35	23	12	---	---	---	---	---	---	30	GC	A-2-6
4	25+35, 53' RT.	1-2	12	27	17	10	---	---	---	---	---	---	53	CL	A-4
4	25+35, 53' RT.	2.5-3.5	16	28	17	11	---	---	---	---	---	---	57	CL	A-6
5	29+34, 22' LT.	1-2	9	25	16	9	---	---	---	---	---	---	48	GC	A-4
6	33+31, 25' LT.	1-2	8	18	14	4	100	100	85	77	75	73	45	SM	A-4
7	37+26, 57' RT.	1-2	12	26	16	10	---	---	---	---	---	---	56	CL	A-4
8	41+26, 25' RT.	1-2	13	20	16	4	---	---	---	---	---	---	57	ML	A-4
9	45+43, 21' LT.	1-2	6	16	14	2	100	92	89	79	73	69	44	ML	A-4
10	49+56, 43' RT.	1-2	16	22	16	6	---	---	---	---	---	---	64	CL-ML	A-4



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REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

SOIL BORING LOG
 JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER
 SHEET NUMBER **17**



Digitally Signed: 12/19/2016

MIDPOINT:
LAT: 34-50-24
LONG: 092-12-55

SURVEY CONTROL COORDINATES

Project Name: 061295
Date: 2/27/2013
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,
PROJECTED TO GROUND,
Units: U.S. SURVEY FOOT

Table with columns: Point Name, Northing, Easting, Elev, Feature, Description. Lists 103 survey points with their coordinates and features like '2" ALM MON' and 'GPS'.

Note - 2" ALM MON = Standard - 5/8" Rebar with 2" Aluminum Cap stamped "GARVER CONTROL" and appropriate point number "##"
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999991244 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
AT A SPECIFIC POINT. BASED ON TBM 918 FROM JOB 060497. 3 WIRE LEVEL RAN THROUGH POINTS 1-21, 30-32, 38, 100-103.

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 100 - 103
CONVERGENCE ANGLE: 0-08-03 LEFT AT PN: 101
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

PN: 101
LT: 34-50-25.8 LG: 092-13-49.7
GRID NORTHING: 184680.6385 GRID EASTING: 1243170.2330
GROUND NORTHING: 184680.4768 GROUND EASTING: 1243169.1445

ALIGNMENT NAME: MARYLAND AVE. (WEST)

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8000-8031 for Maryland Ave. (West) alignment.

ALIGNMENT NAME: WESLEY DR. (WEST)

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8040-8041 for Wesley Dr. (West) alignment.

ALIGNMENT NAME: SPRING GROVE DR. (WEST)

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8050-8051 for Spring Grove Dr. (West) alignment.

ALIGNMENT NAME: WESLEY DR. (EAST)

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8060-8061 for Wesley Dr. (East) alignment.

ALIGNMENT NAME: BARBER ST.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8070-8071 for Barber St. alignment.

ALIGNMENT NAME: SPRING GROVE DR. (EAST)

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8080-8081 for Spring Grove Dr. (East) alignment.

ALIGNMENT NAME: WOODBINE DR.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8090-8091 for Woodbine Dr. alignment.

ALIGNMENT NAME: HAMILTON PARK DR.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8100-8101 for Hamilton Park Dr. alignment.

ALIGNMENT NAME: PEACH TREE LN.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8110-8111 for Peach Tree Ln. alignment.

ALIGNMENT NAME: PAMELA LN.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8120-8121 for Pamela Ln. alignment.

ALIGNMENT NAME: PATTY LN.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8130-8131 for Patty Ln. alignment.

ALIGNMENT NAME: MARYLAND CV.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8140-8141 for Maryland Cv. alignment.

ALIGNMENT NAME: MARYLAND PL.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8150-8151 for Maryland Pl. alignment.

ALIGNMENT NAME: ROBIN LN.

Table with columns: POINT, STATION, TYPE, NORTHING, EASTING. Lists points 8160-8161 for Robin Ln. alignment.

Table with columns: REV., DATE, DESCRIPTION, BY. A revision table with empty rows.



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

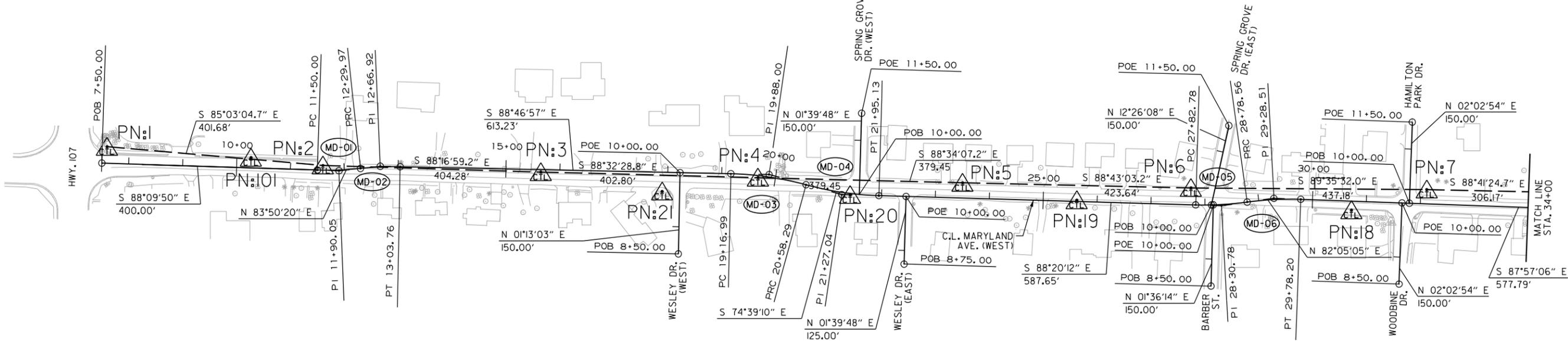
SURVEY CONTROL
DETAILS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

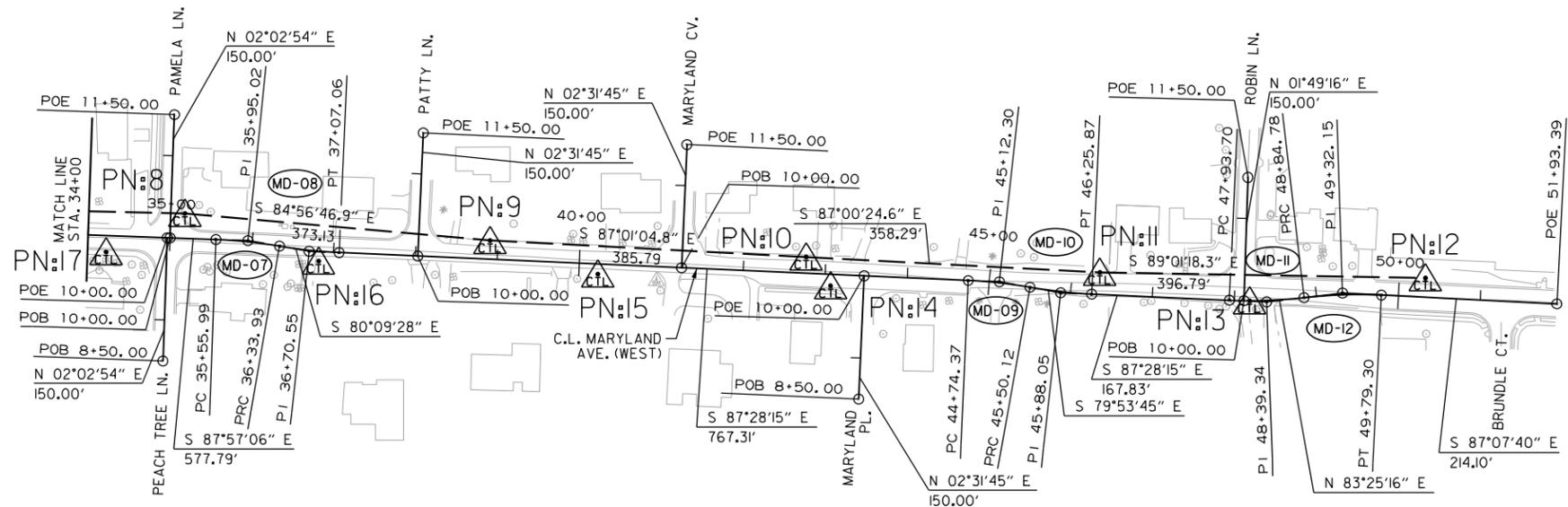
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SHEET NUMBER 18

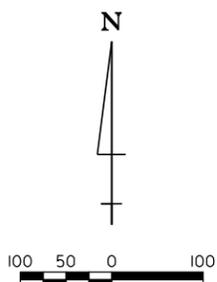
MARYLAND AVE. (WEST)



MARYLAND AVE. (WEST) CONT'D



CURVE	PC/PRC	PI	PT/PRC	Δ	D	TANGENT	LENGTH	e	Ls	DESIGN SPEED
						FEET	FEET	FT./FT.	FEET	
MD-01	11+50.00	11+90.05	12+29.97	7°59'50"	10°00'00"	40.05	79.97	N/A	N/A	30 MPH
MD-02	12+29.97	12+66.92	13+03.76	7°22'44"	10°00'00"	36.95	73.79	N/A	N/A	30 MPH
MD-03	19+16.99	19+88.00	20+58.29	14°07'47"	10°00'00"	71.01	141.30	N/A	N/A	30 MPH
MD-04	20+58.29	21+27.04	21+95.13	13°41'02"	10°00'00"	68.75	136.84	N/A	N/A	30 MPH
MD-05	27+82.78	28+30.78	28+78.56	9°34'43"	10°00'00"	48.00	95.78	N/A	N/A	30 MPH
MD-06	28+78.56	29+28.51	29+78.20	9°57'48"	10°00'00"	49.94	99.63	N/A	N/A	30 MPH
MD-07	35+55.99	35+95.02	36+33.93	7°47'38"	10°00'00"	39.02	77.94	N/A	N/A	30 MPH
MD-08	36+33.93	36+70.55	37+07.06	7°18'47"	10°00'00"	36.61	73.13	N/A	N/A	30 MPH
MD-09	44+47.37	45+12.30	45+50.12	7°34'30"	10°00'00"	37.93	75.75	N/A	N/A	30 MPH
MD-10	45+50.12	45+88.05	46+25.87	7°34'30"	10°00'00"	37.93	75.75	N/A	N/A	30 MPH
MD-11	47+93.70	48+39.34	48+84.78	9°06'30"	10°00'00"	45.64	91.08	N/A	N/A	30 MPH
MD-12	48+84.78	49+32.15	49+79.30	9°27'05"	10°00'00"	47.36	94.51	N/A	N/A	30 MPH



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REV.	DATE	DESCRIPTION



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

SURVEY CONTROL
DETAILS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **19**



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

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 12/19/2016

REV.	DATE	DESCRIPTION



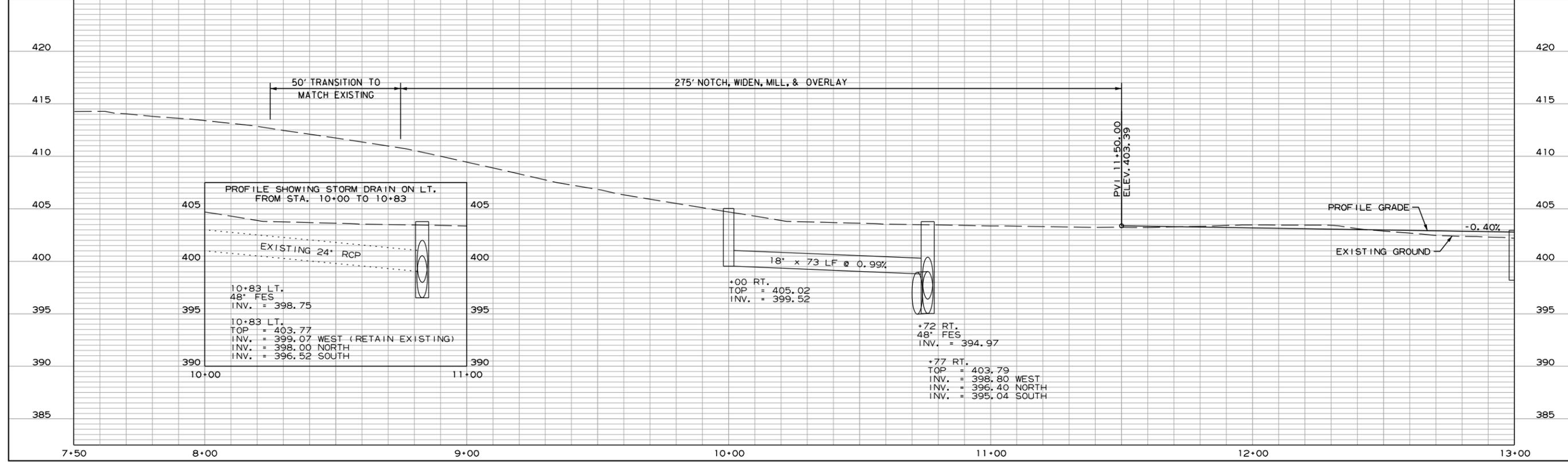
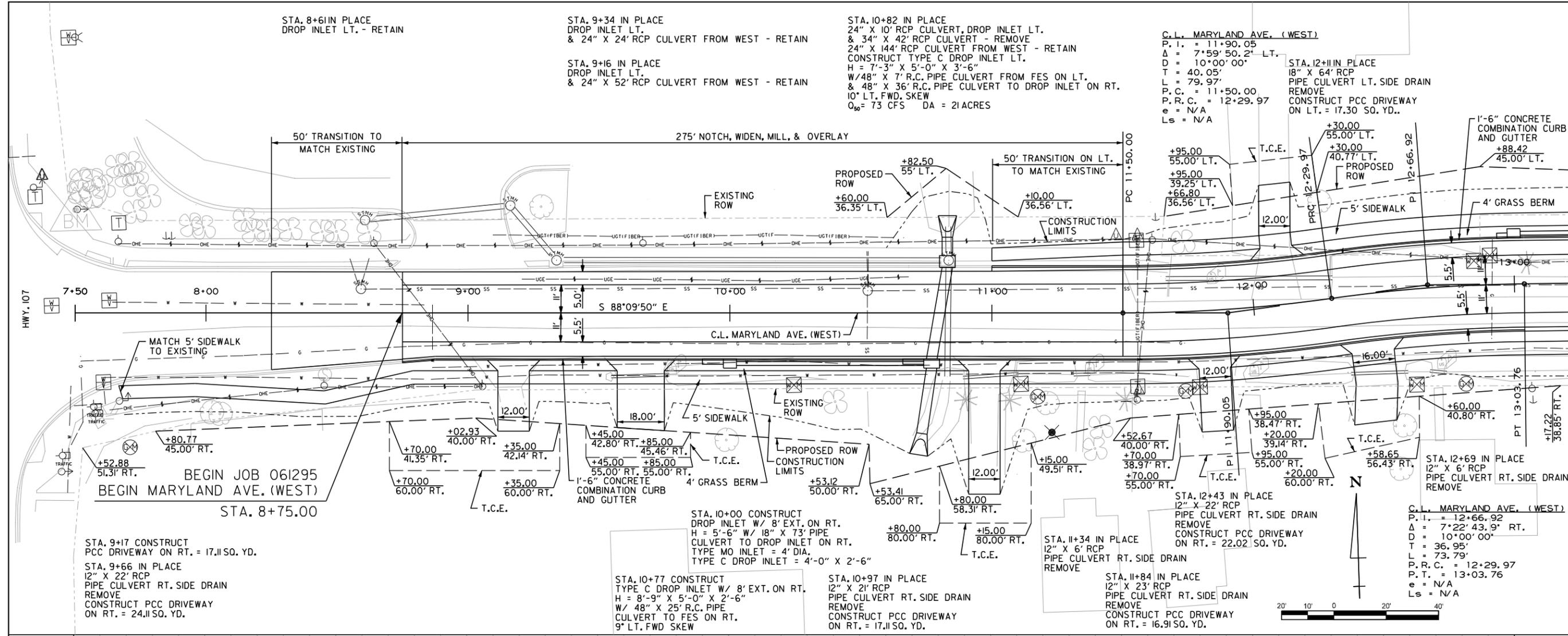
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
 PLAN & PROFILE
 STA. 7+50 TO
 STA. 13+00

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
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SHEET NUMBER **20**



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

Digitally Signed:
 12/19/2016

REV.	DATE	DESCRIPTION



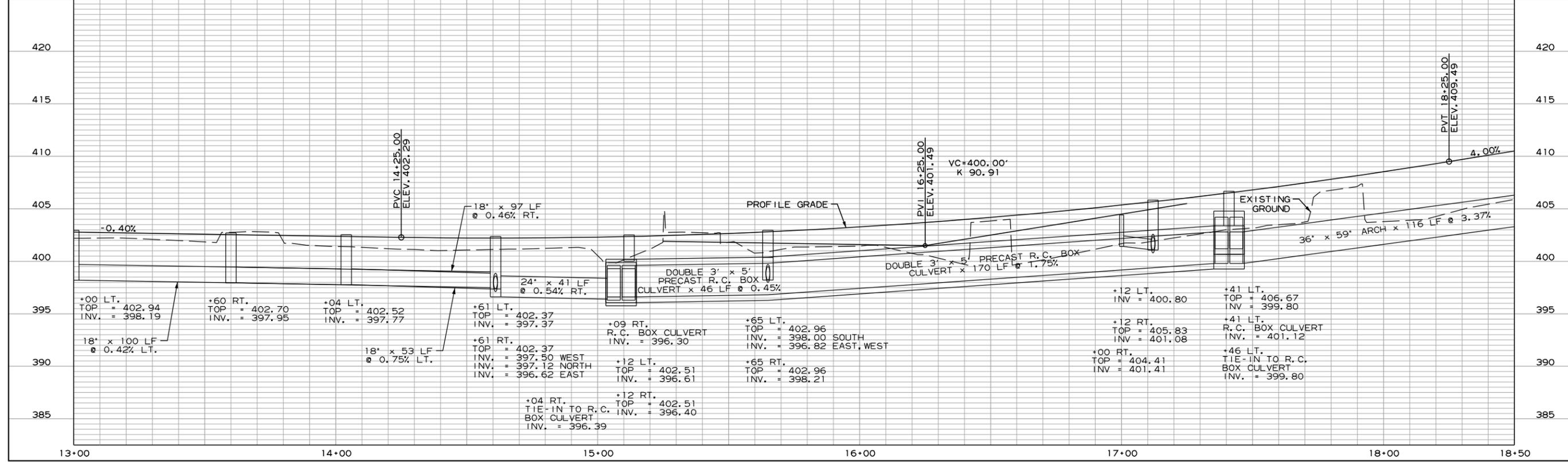
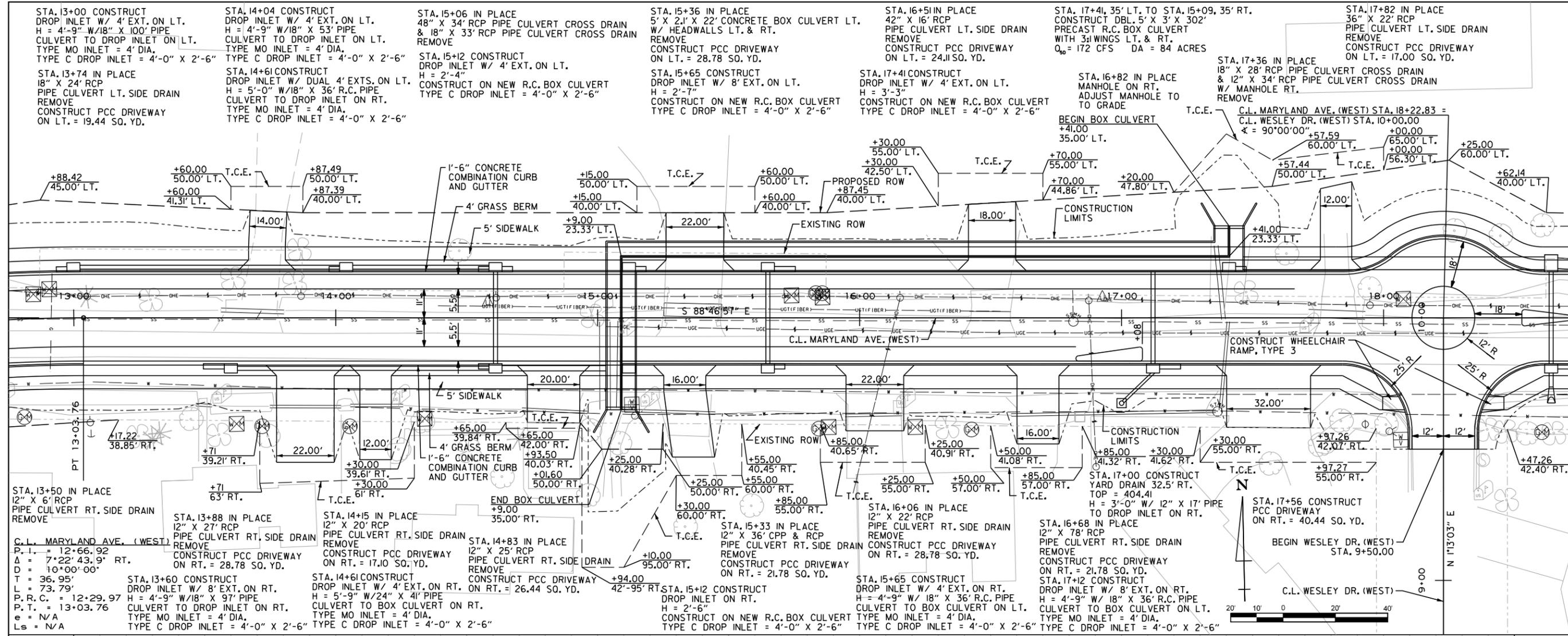
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
 PLAN & PROFILE
 STA. 13+00 TO
 STA. 18+50

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
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DRAWING NUMBER

SHEET NUMBER **21**



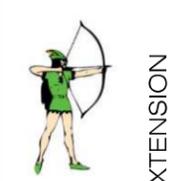
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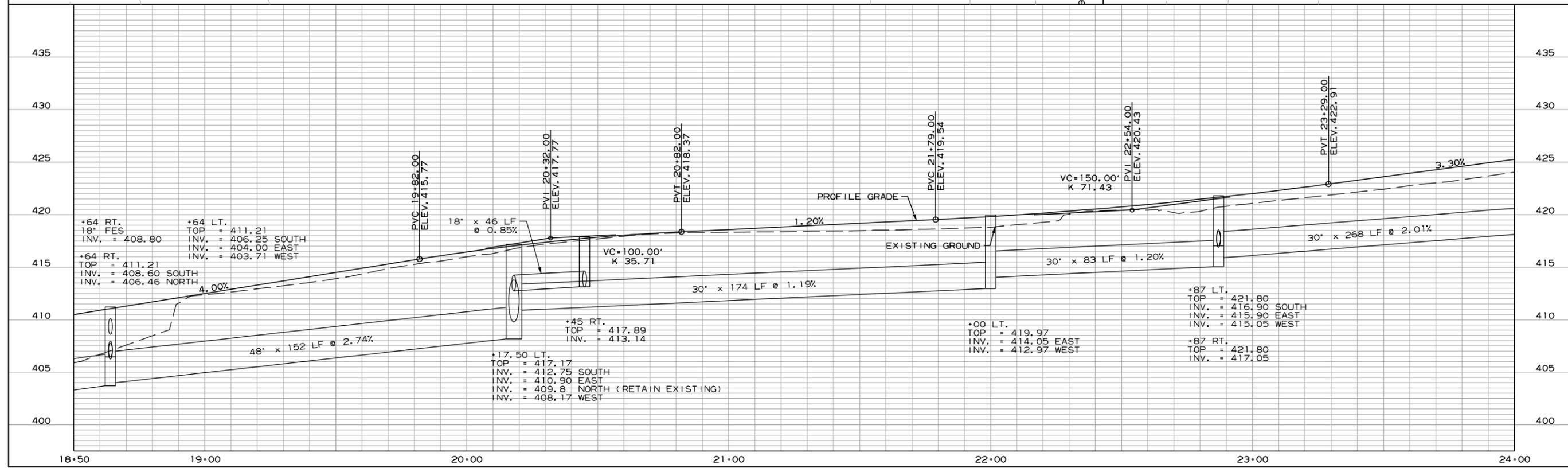
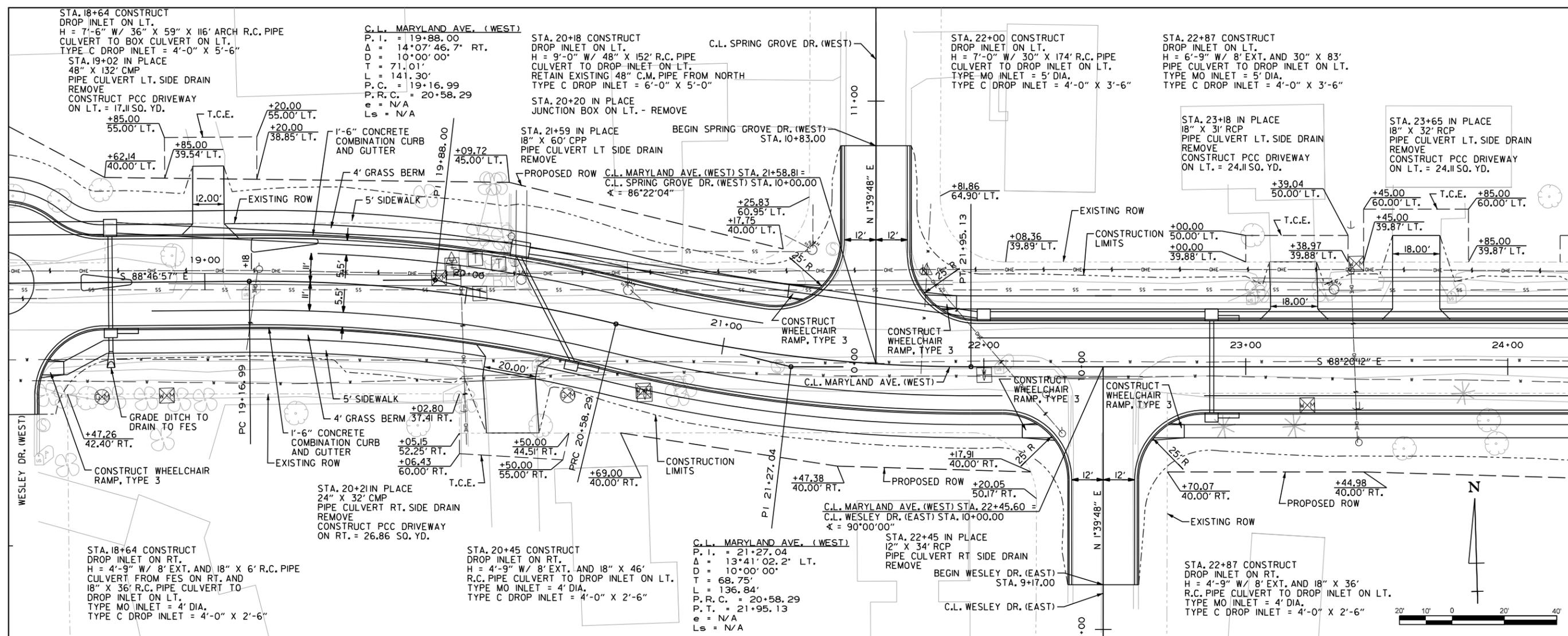
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
 PLAN & PROFILE
 STA. 18+50 TO
 STA. 24+00

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
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DRAWING NUMBER

SHEET NUMBER **22**



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STA. 24+42 IN PLACE
18" X 29' RCP
PIPE CULVERT LT. SIDE DRAIN
REMOVE
CONSTRUCT PCC DRIVEWAY
ON LT. = 24.44 SQ. YD.

STA. 25+59 CONSTRUCT
DROP INLET ON LT.
H = 8'-3" W/ 8' EXT. AND 30" X 268'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO INLET = 5' DIA.
TYPE C DROP INLET = 4'-0" X 3'-6"

STA. 27+00 CONSTRUCT
DROP INLET ON LT.
H = 5'-6" W/ 24" X 137'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO INLET = 5' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 27+66 CONSTRUCT
DROP INLET ON LT.
H = 5'-9" W/ 8' EXT. AND 24" X 62'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO INLET = 5' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"

NOTE: CONSTRUCT NOTES FOR
PIPES AND DROP INLETS FOR
SPRING GROVE DR. TO BARBER ST.
ARE SHOWN IN DRAINAGE PROFILE
BELOW

STA. 25+13 IN PLACE
18" X 31' RCP
PIPE CULVERT LT. SIDE DRAIN
REMOVE
CONSTRUCT PCC DRIVEWAY
ON LT. = 24.11 SQ. YD.

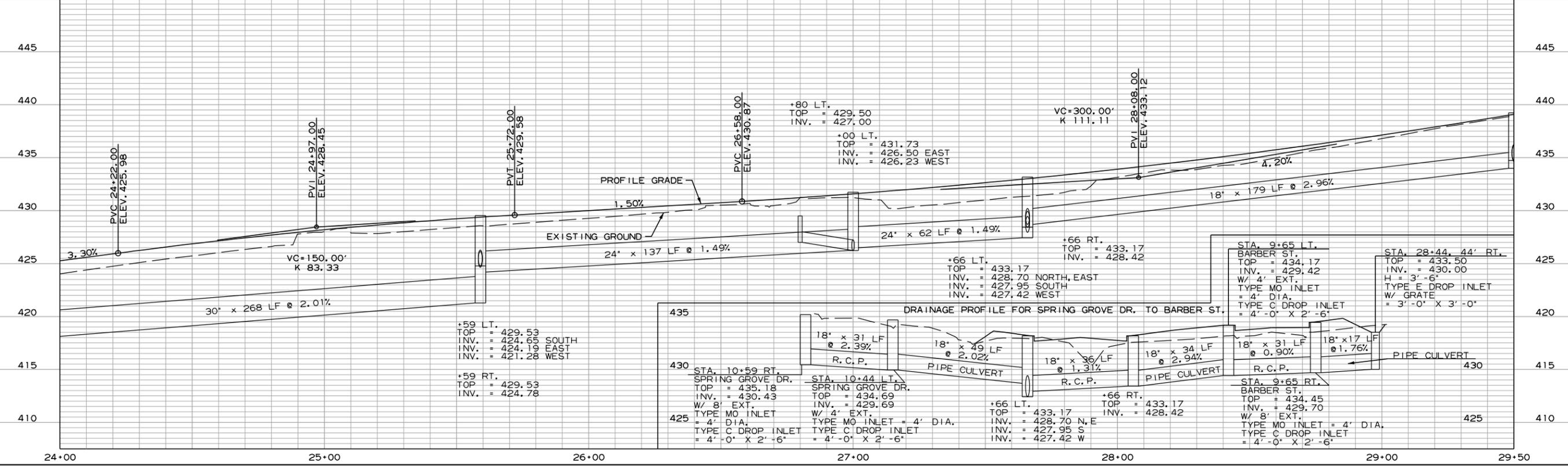
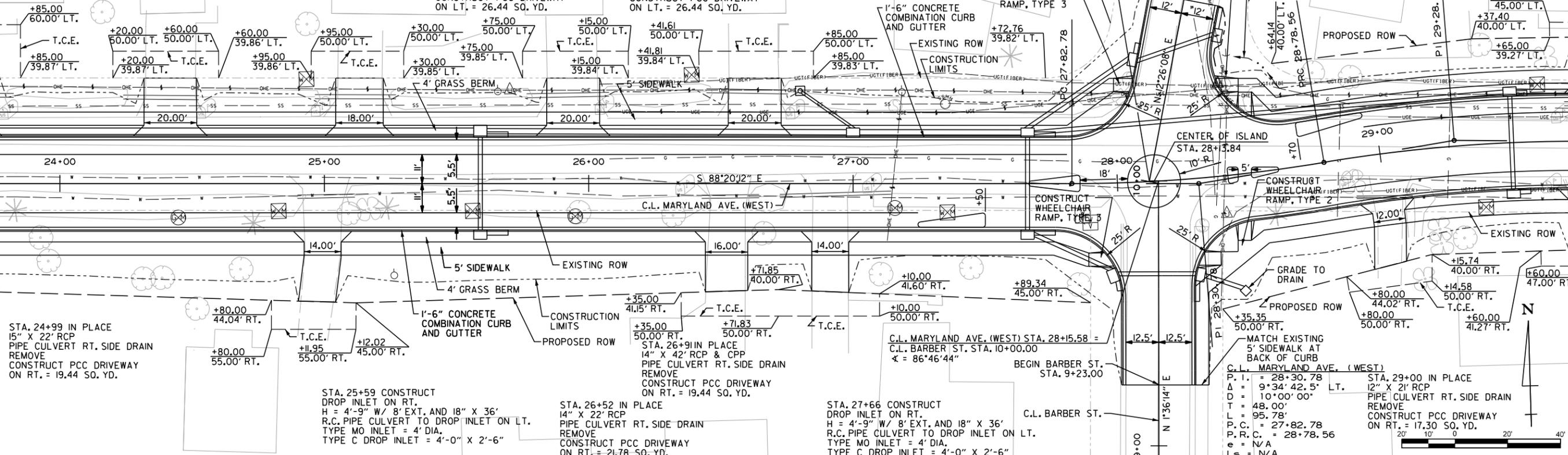
STA. 25+94 IN PLACE
18" X 31' RCP
PIPE CULVERT LT. SIDE DRAIN
REMOVE
CONSTRUCT PCC DRIVEWAY
ON LT. = 26.44 SQ. YD.

STA. 26+63 IN PLACE
18" X 31' RCP
PIPE CULVERT LT. SIDE DRAIN
REMOVE
CONSTRUCT PCC DRIVEWAY
ON LT. = 26.44 SQ. YD.

STA. 26+80 CONSTRUCT
YARD DRAIN ON LT.
TOP = 429.50
H = 2'-6" W/ 12" X 24' PIPE
TO DROP INLET ON LT.

C.L. MARYLAND AVE. (WEST) STA. 28+12.09 =
C.L. SPRING GROVE DR. (EAST) STA. 10+00.00
Δ = 76'17.49"

C.L. MARYLAND AVE. (WEST)
P. I. = 29+28.51
Δ = 9°57' 48.2" RT.
D = 10°00' 00"
T = 49.94'
L = 99.63'
P. R. C. = 28+78.56
P. T. = 29+78.20
e = N/A
Ls = N/A



Digitally Signed:
12/19/2016

REV.	DATE	DESCRIPTION



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
PLAN & PROFILE
STA. 24+00 TO
STA. 29+50

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

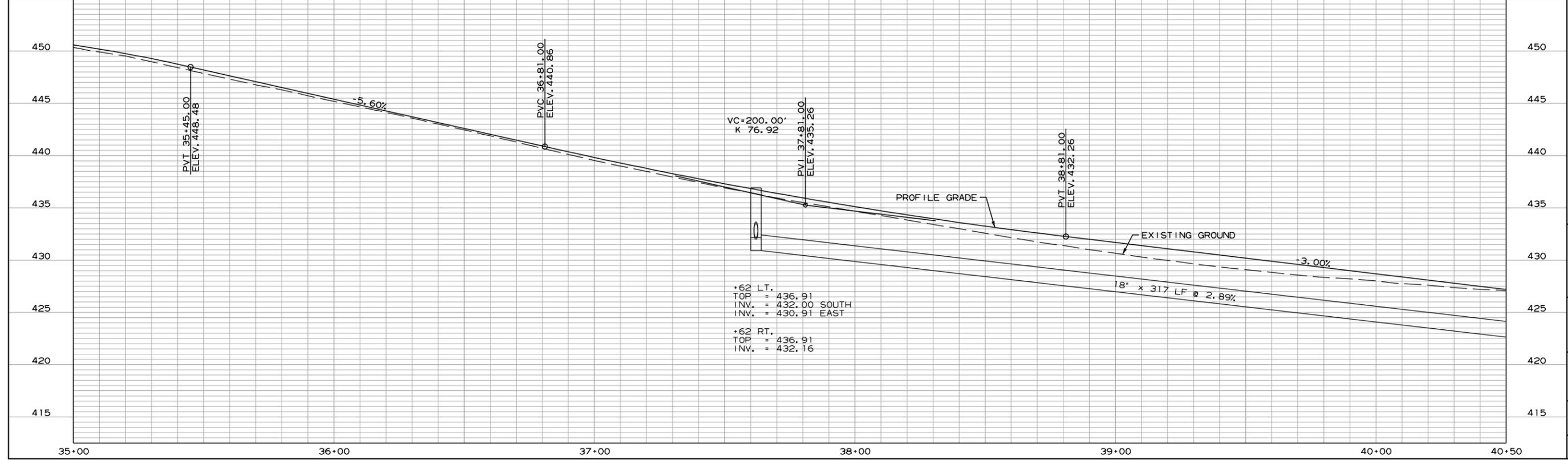
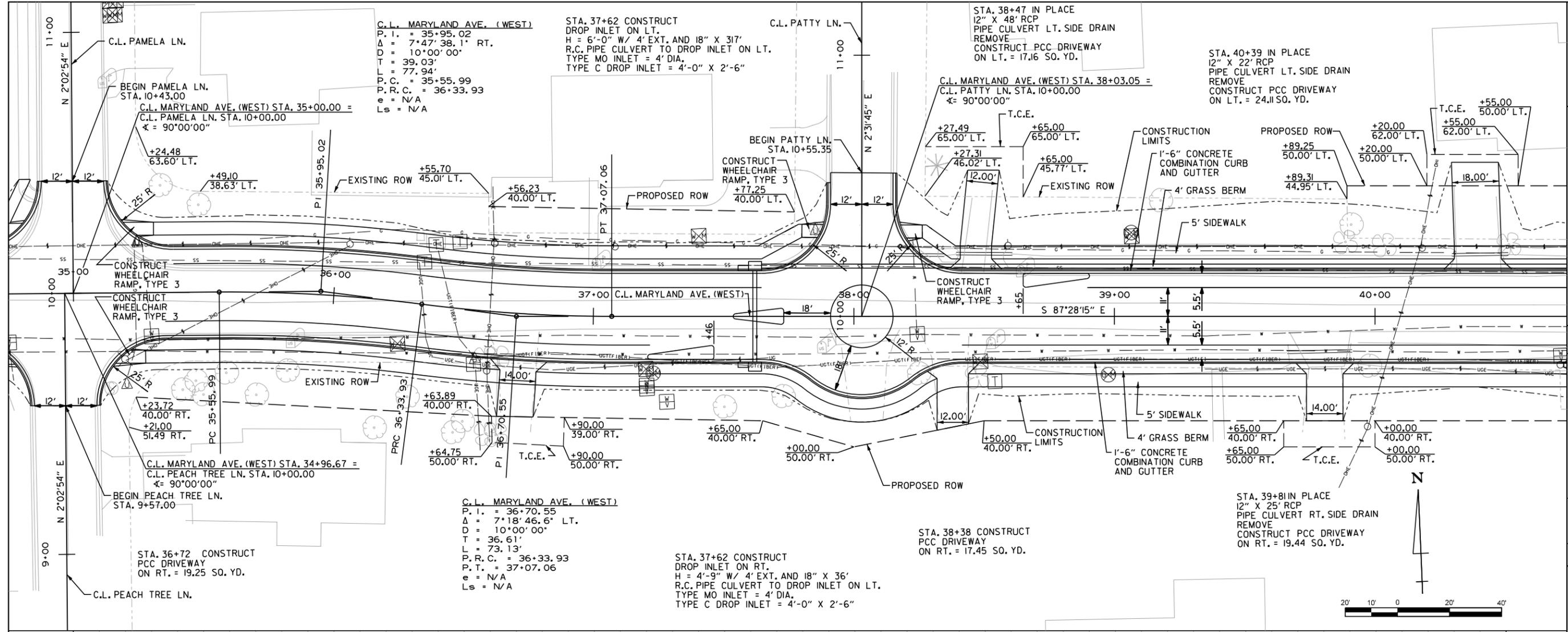
DRAWING NUMBER

SHEET NUMBER **23**

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 WORKSPACE\AFTD
 L:\2017\12017400 - Sherwood - Maryland Avenue\Drawings\WRLD-C105-PP.dgn



Digitally Signed:
12/19/2016



REV.	DATE	DESCRIPTION



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
PLAN & PROFILE
STA. 35+00 TO
STA. 40+50

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

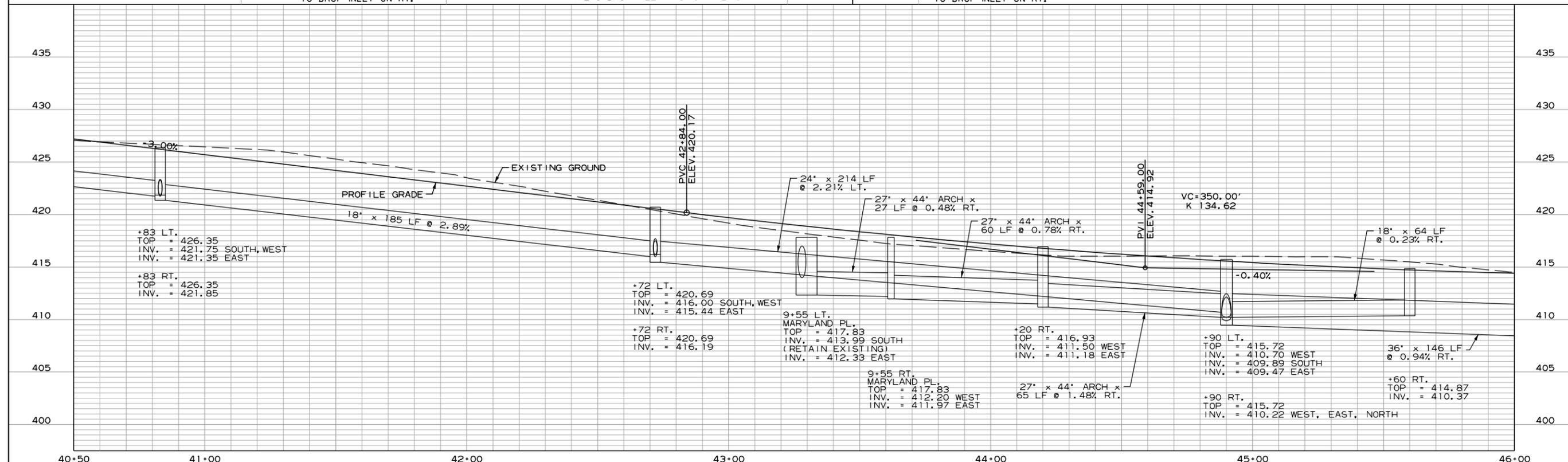
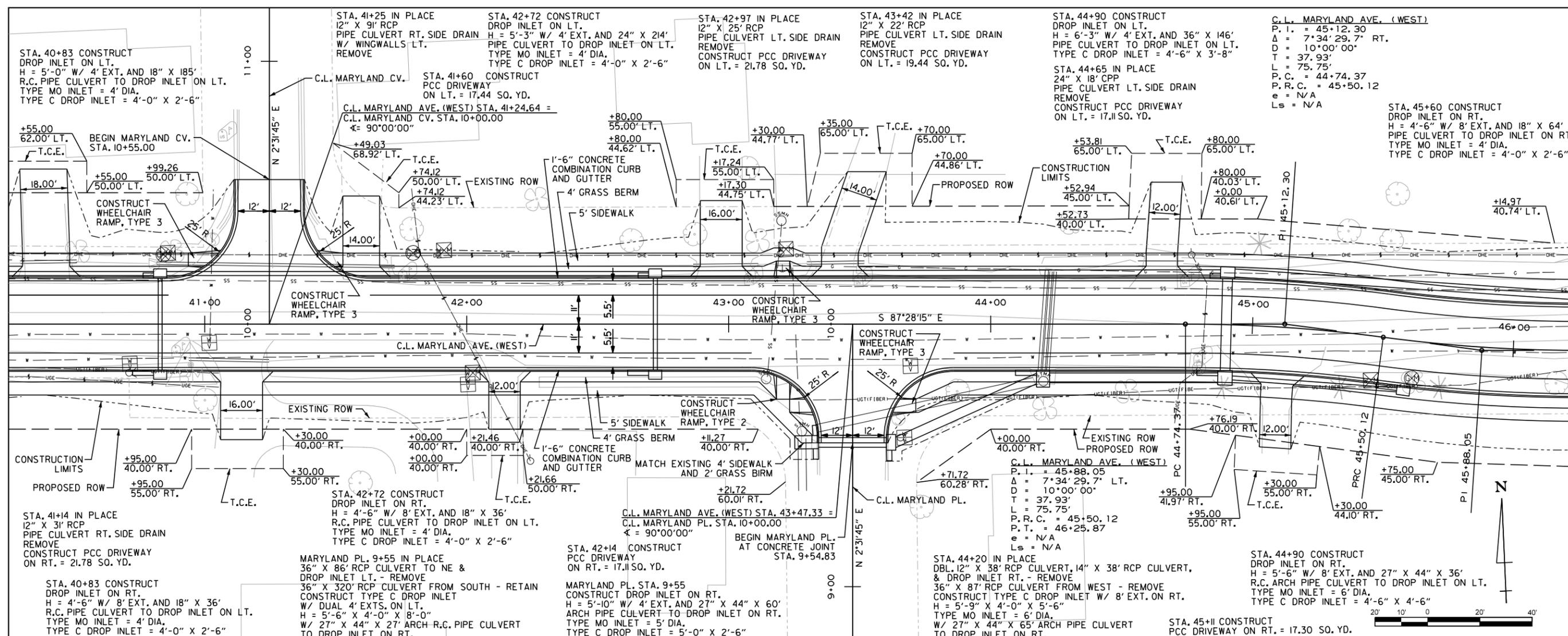
SHEET NUMBER **25**

RC:corbyn
WORKSPACE:AHFD
L:201212017400 - Sherwood - Maryland Avenue Drawings\WRLD-C108-PP.dgn
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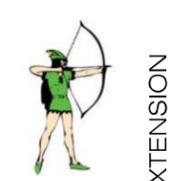


STATE OF ARKANSAS
 LICENSED PROFESSIONAL ENGINEER
 No. 11835
 TODD E. MUELLER

Digitally Signed:
 12/19/2016



REV.	DATE	DESCRIPTION



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

MARYLAND AVE.
 PLAN & PROFILE
 STA. 40+50 TO
 STA. 46+00

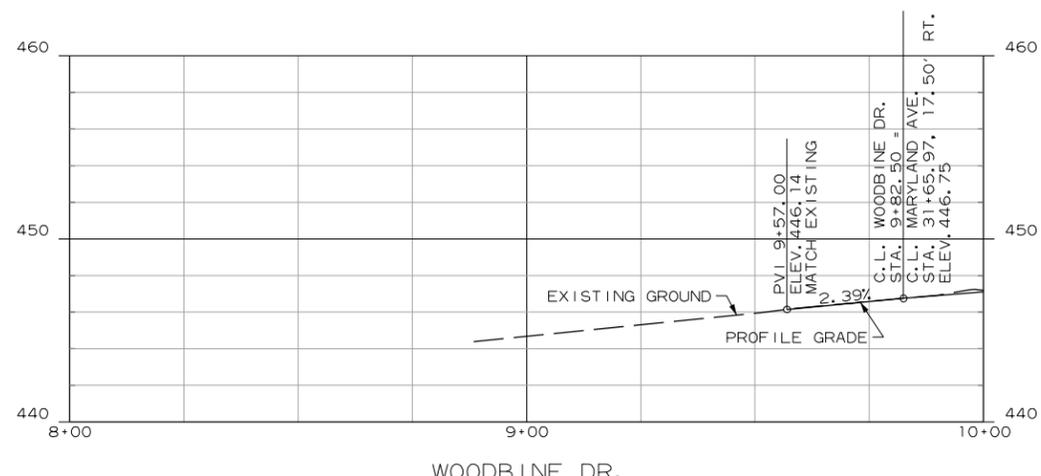
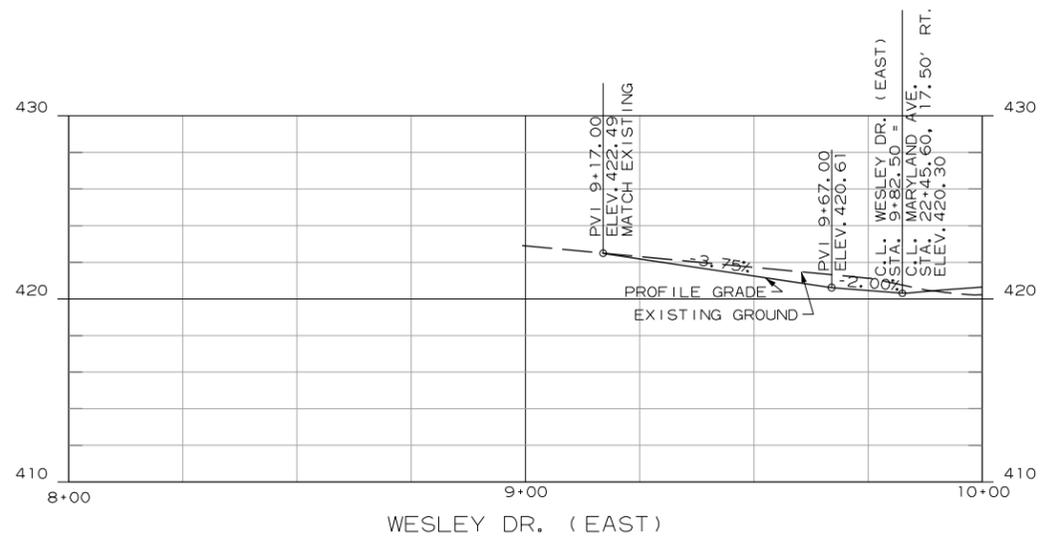
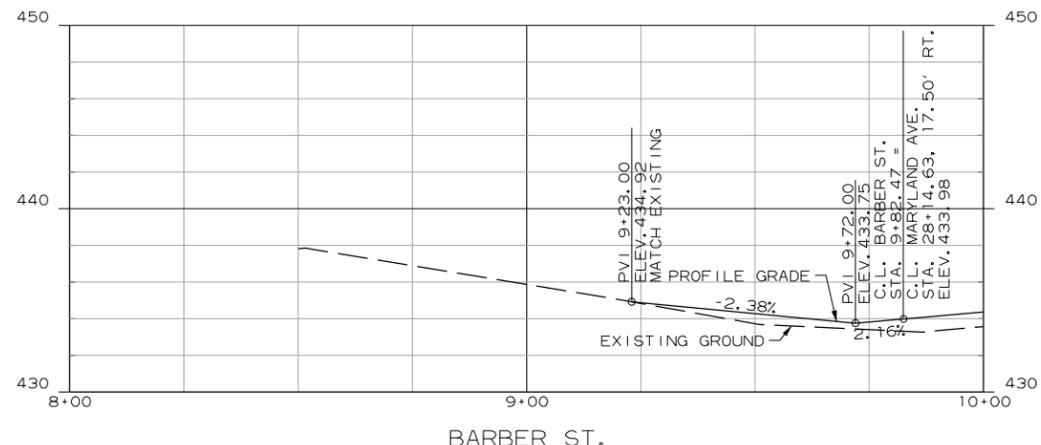
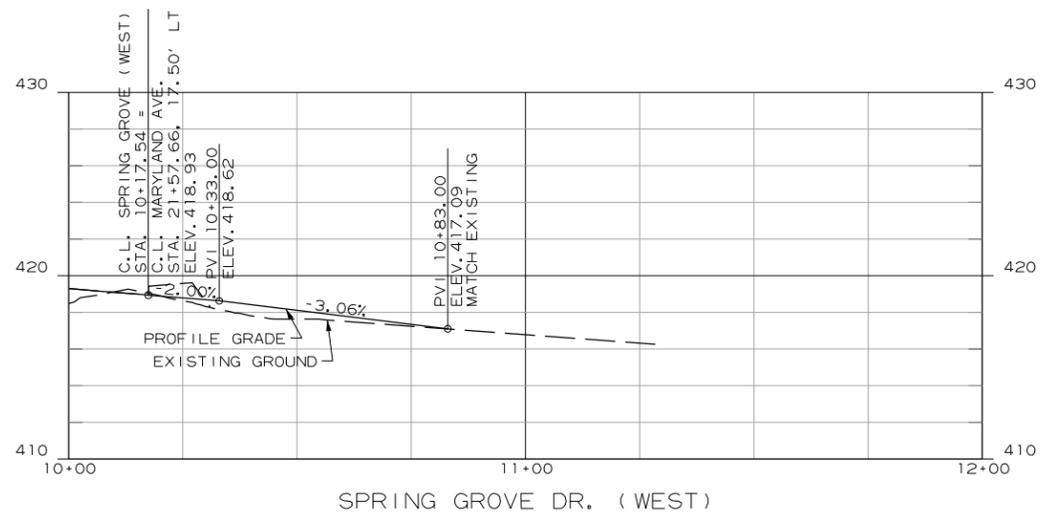
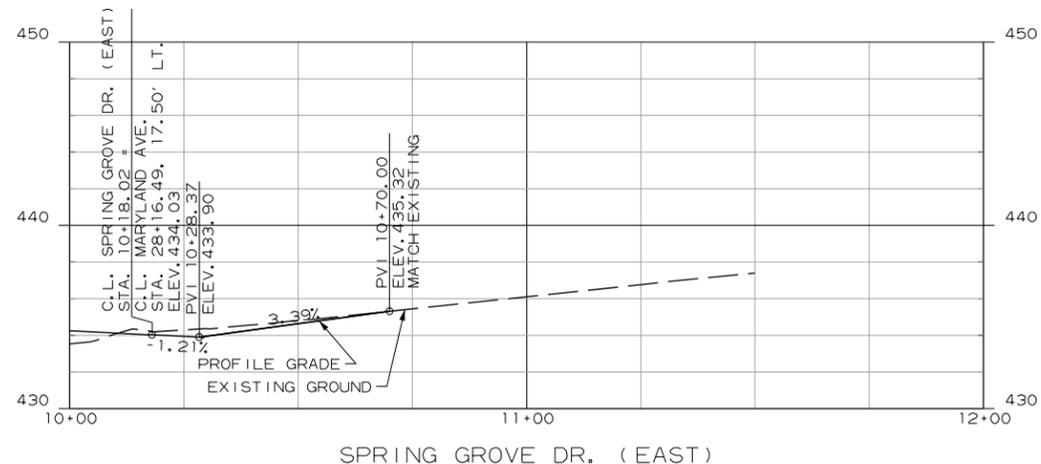
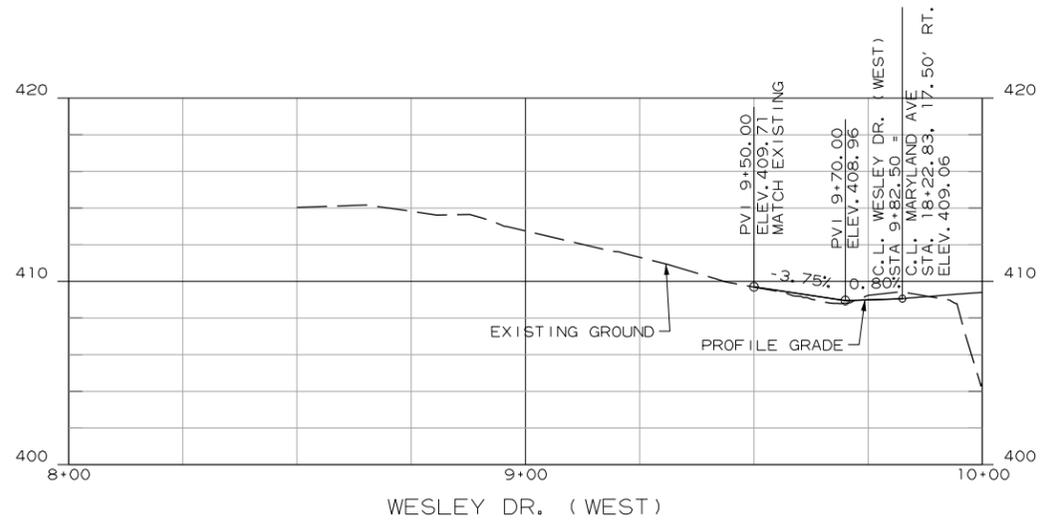
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 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

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RCCorbin
 WORKSPACE\AHTD
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 12/19/2016 8:03:47 AM



Digitally Signed:
12/19/2016

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

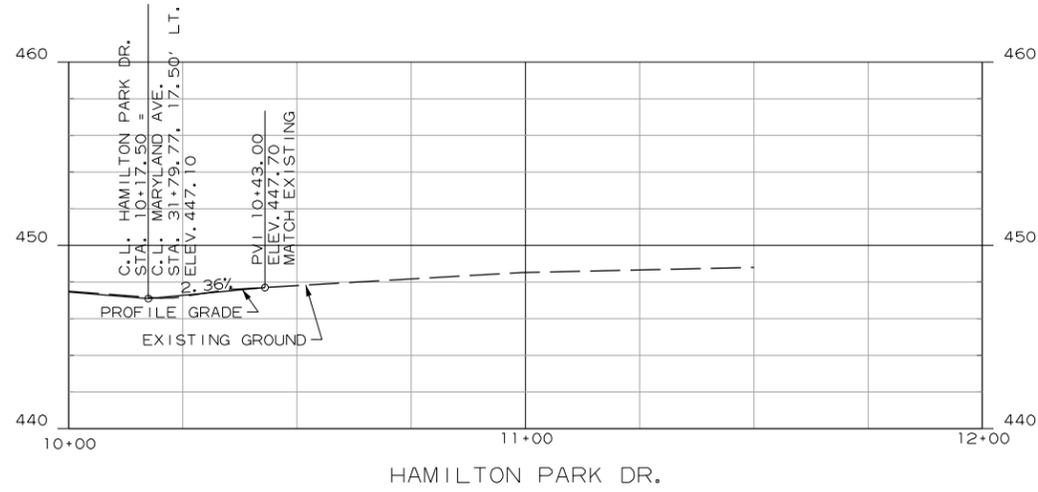
SIDE
 ROAD
 PROFILES

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **29**

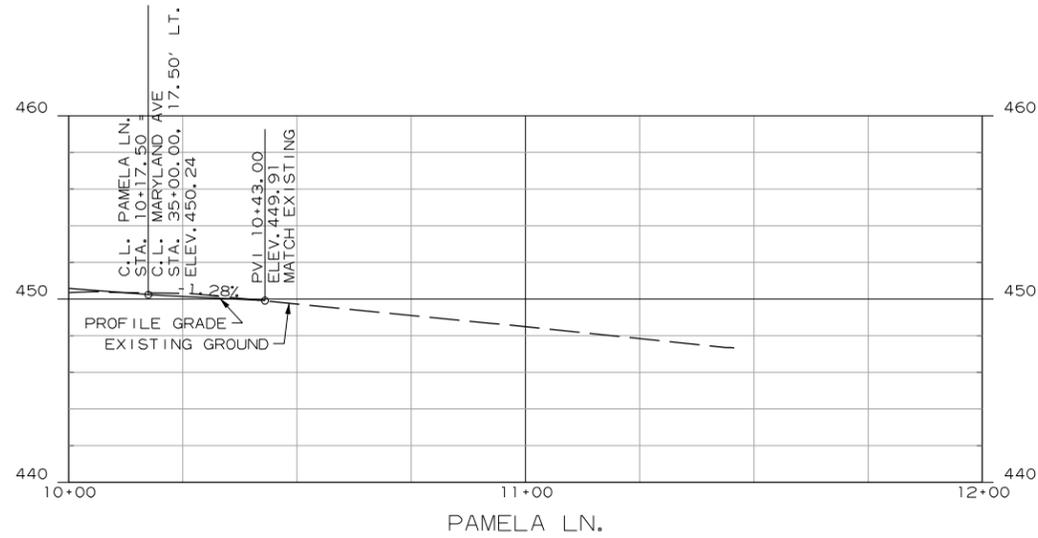
RCConby\n
 WORKSPACE\AHTD\n
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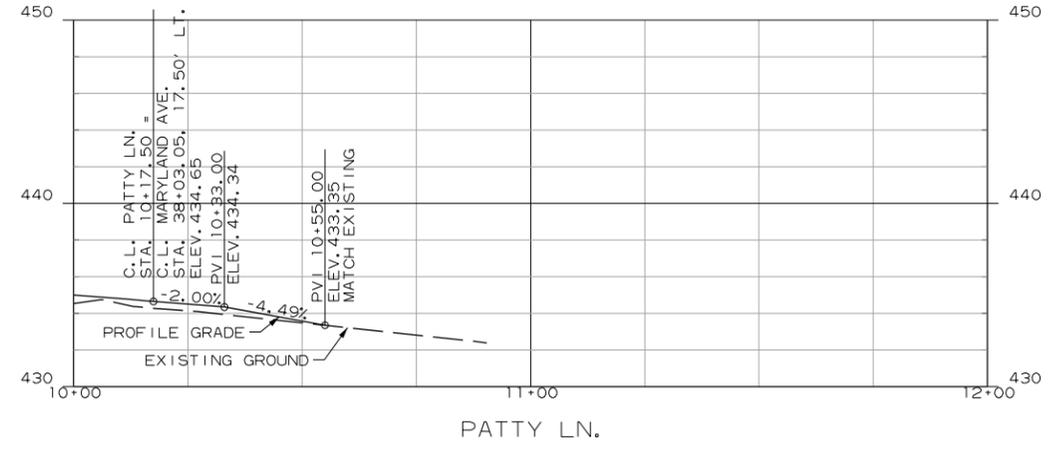
HAMILTON PARK DR.



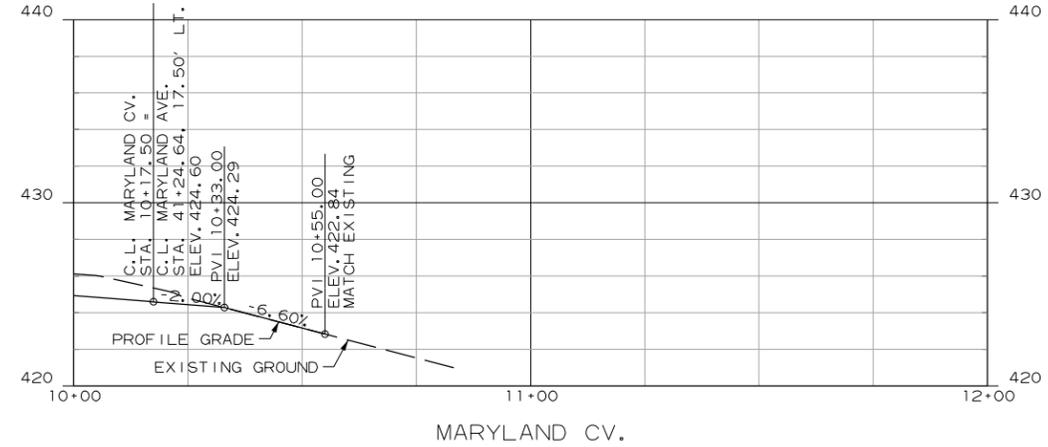
PEACH TREE LN.



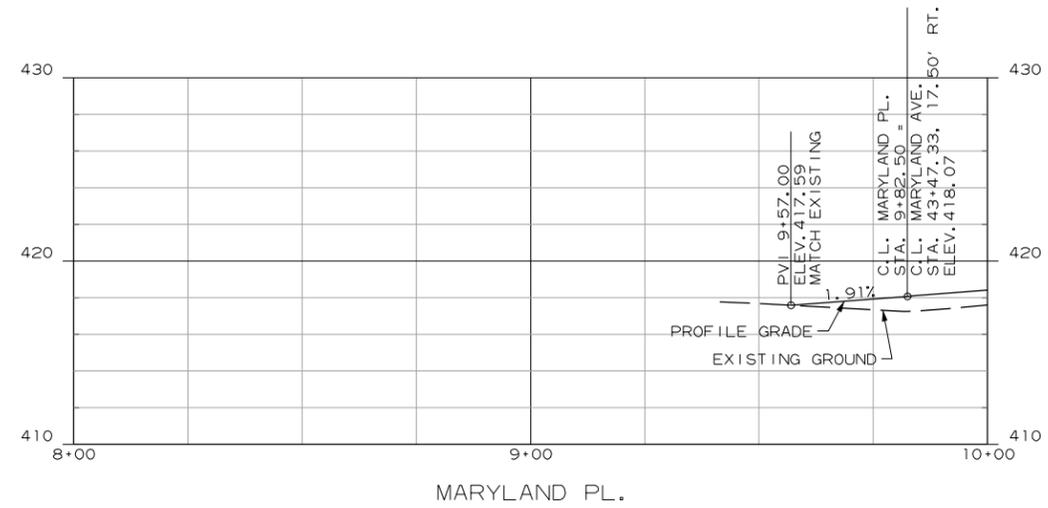
PAMELA LN.



PATTY LN.



MARYLAND CV.



MARYLAND PL.



Digitally Signed:
 12/19/2016

REV.	DATE	DESCRIPTION	BY



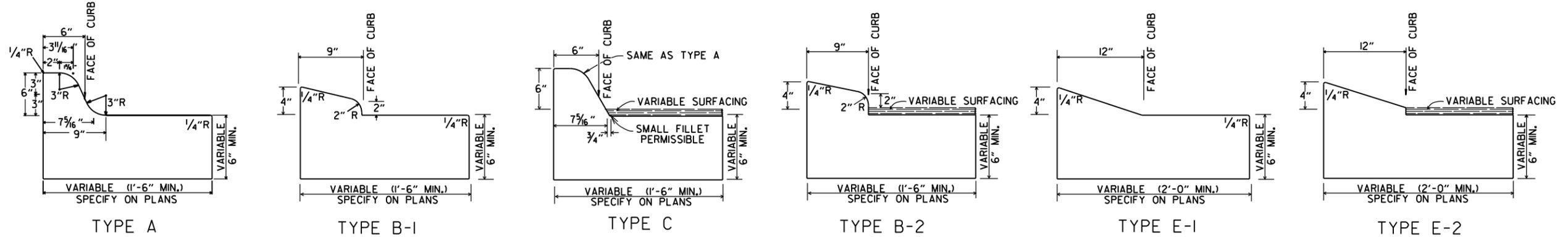
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

SIDE
 ROAD
 PROFILES

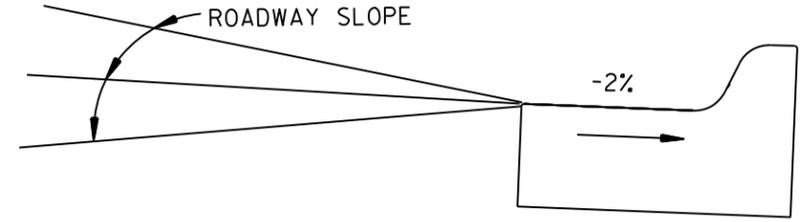
JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

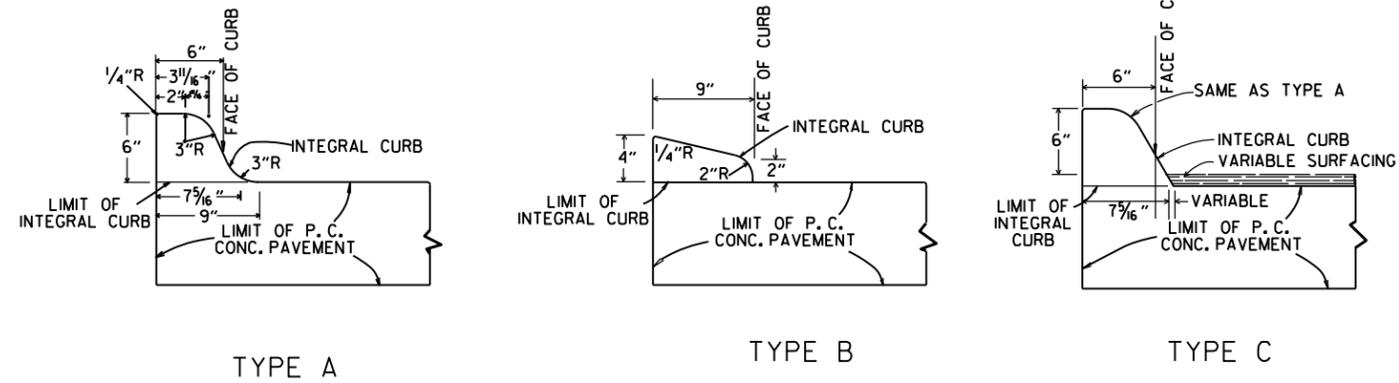
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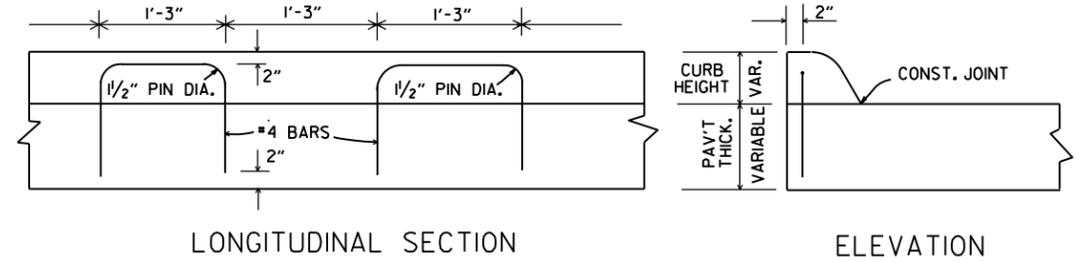
CONCRETE COMBINATION CURB AND GUTTER



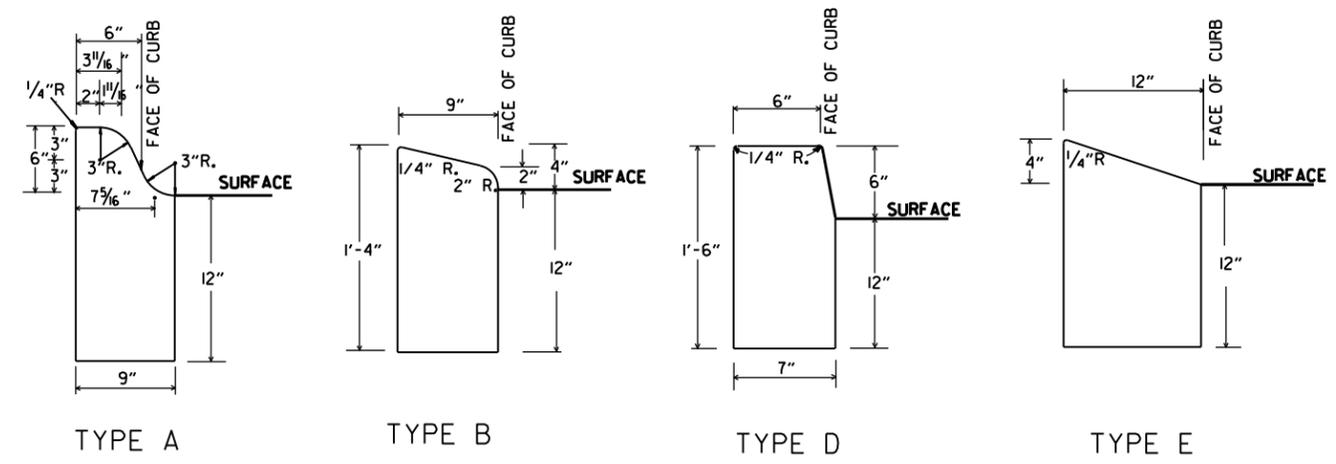
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



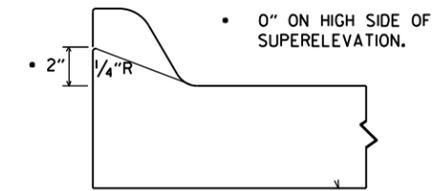
INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



CONCRETE CURB



DETAILS OF MODIFIED CURB

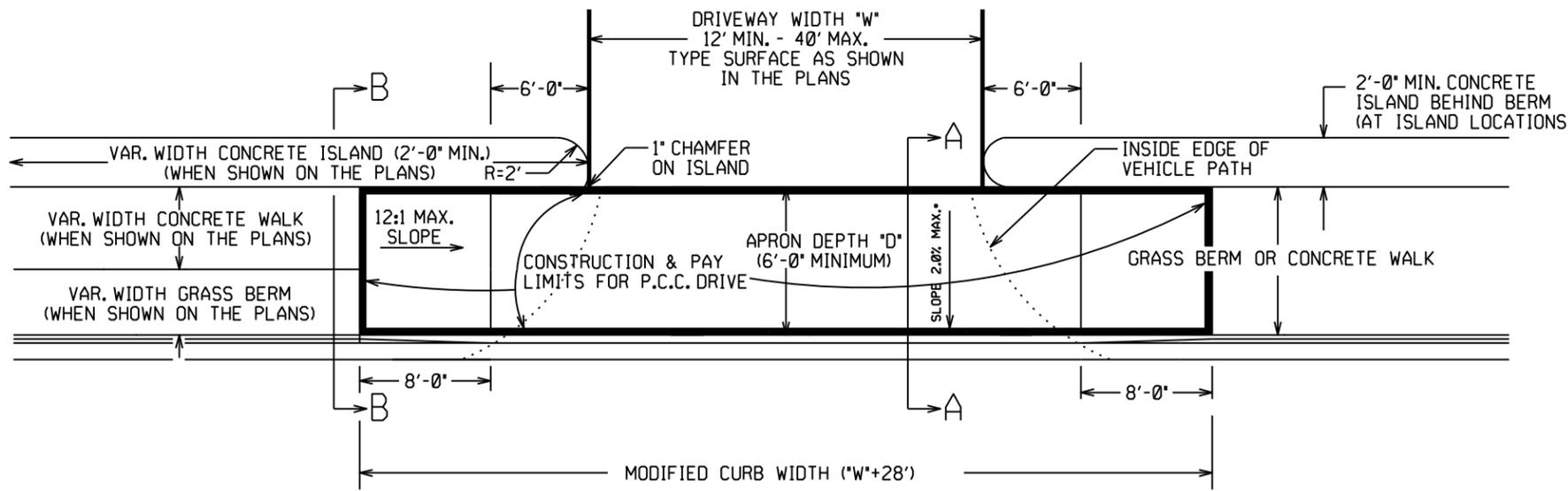
NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

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	VARIABLE DEPTH TYPE A & B 1	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

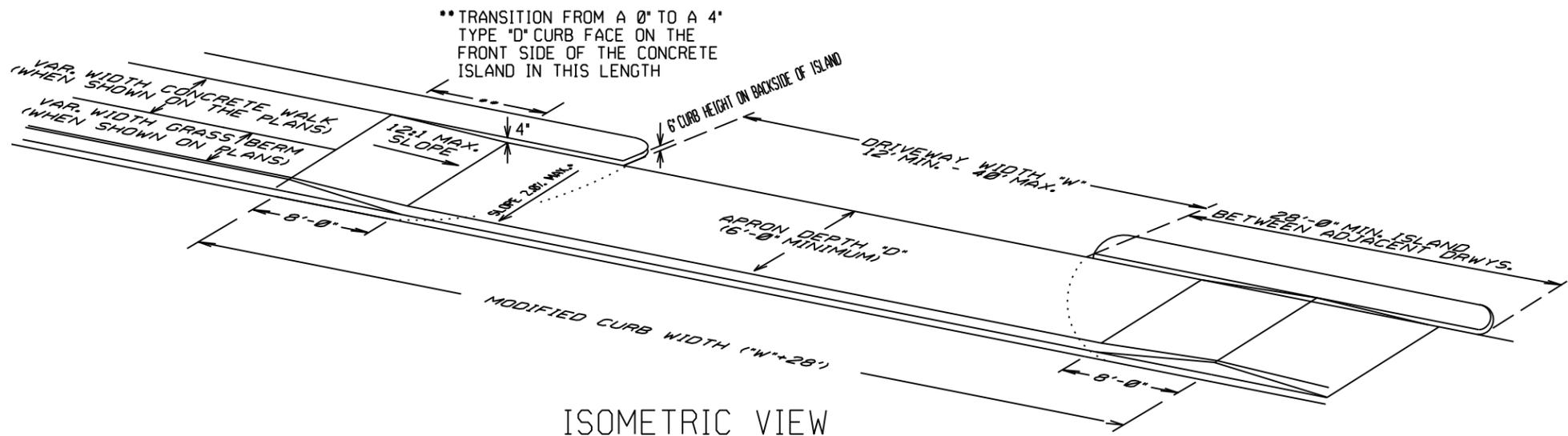
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1

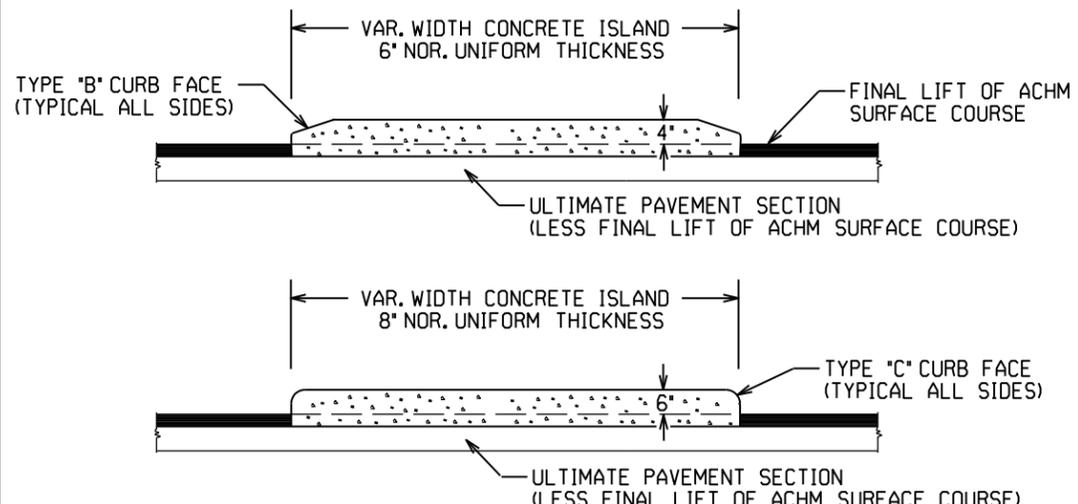


PLAN VIEW

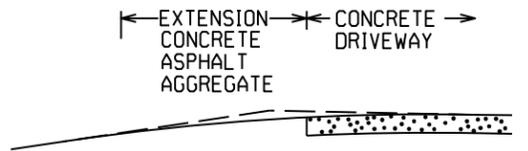


ISOMETRIC VIEW

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".



CURBED ISLANDS FOR CHANNELIZATION

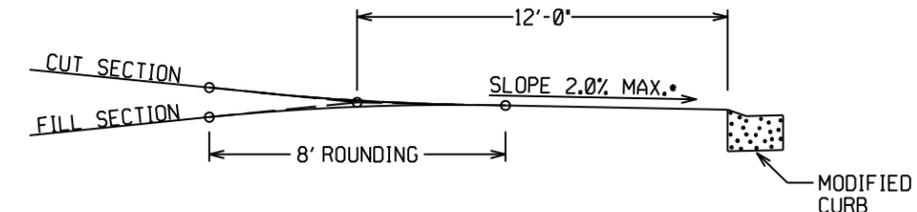


EXTENSION TYPICAL SECTIONS

- 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

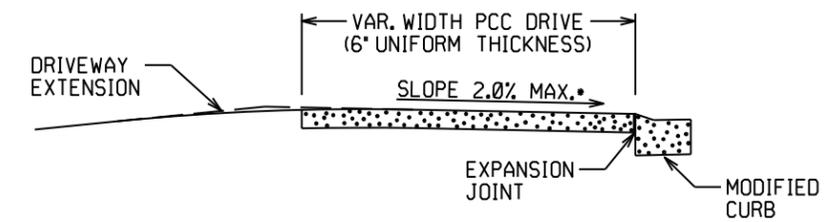
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS.
THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER,
SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU
OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL
COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

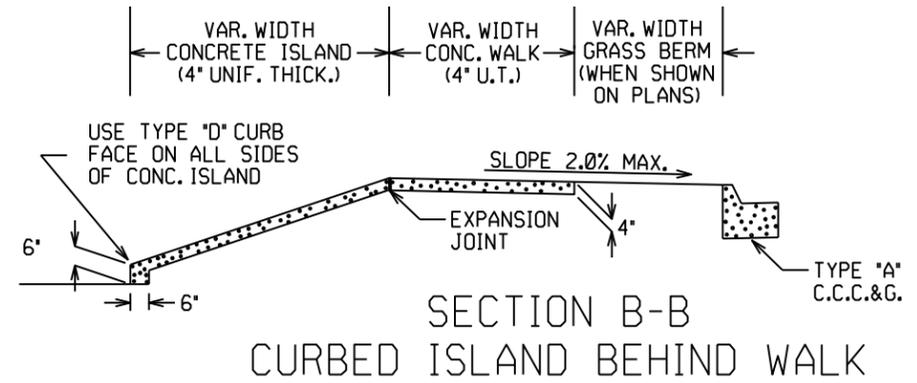


DRIVEWAY VERTICAL ALIGNMENT DETAILS

* 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

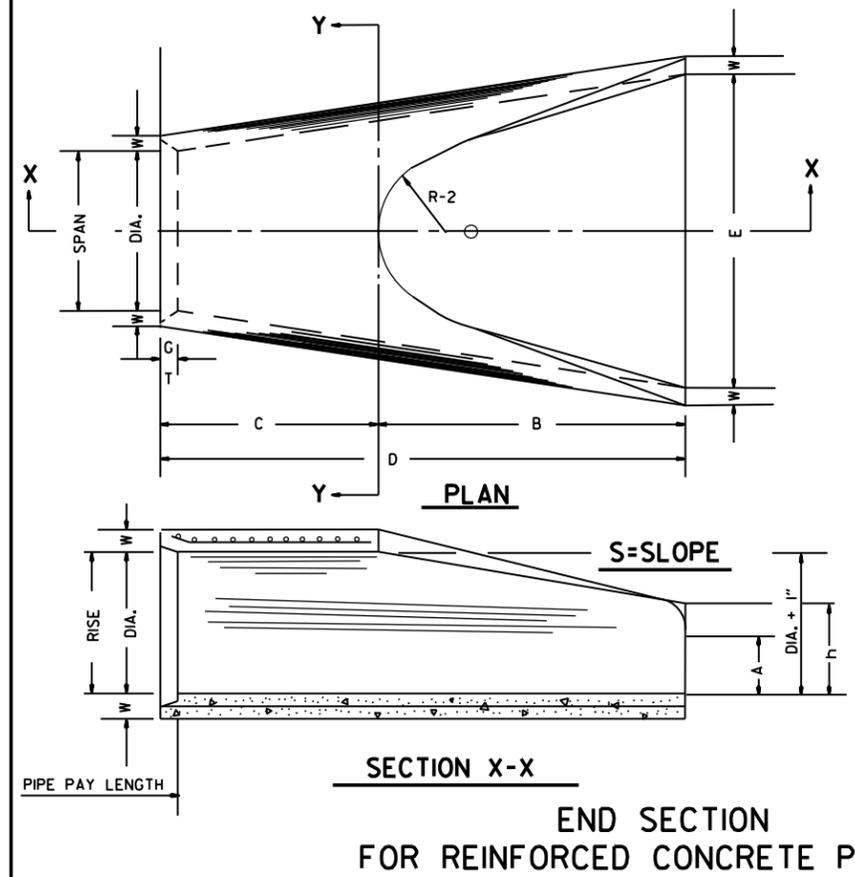


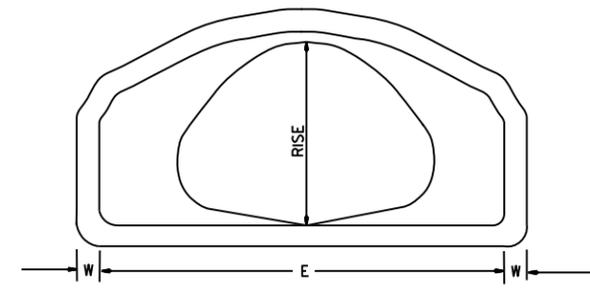
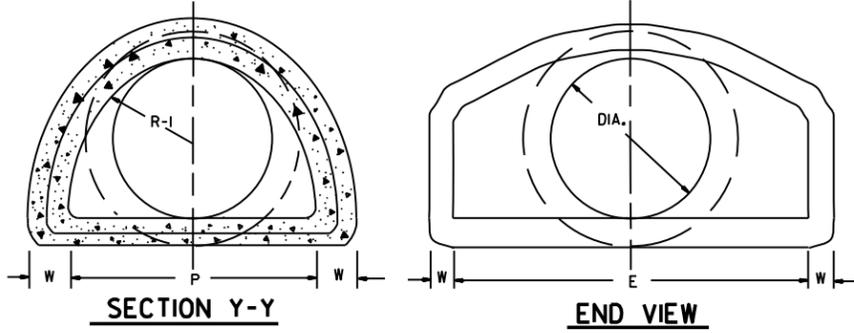
TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 3/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/8"	24 3/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 3/8"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 3/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 3/8"	38 3/8"	24"	5"	13250	4'-6"

ARCH PIPE

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

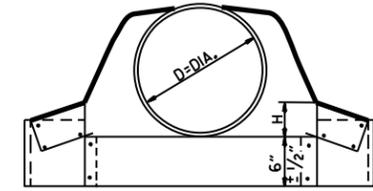
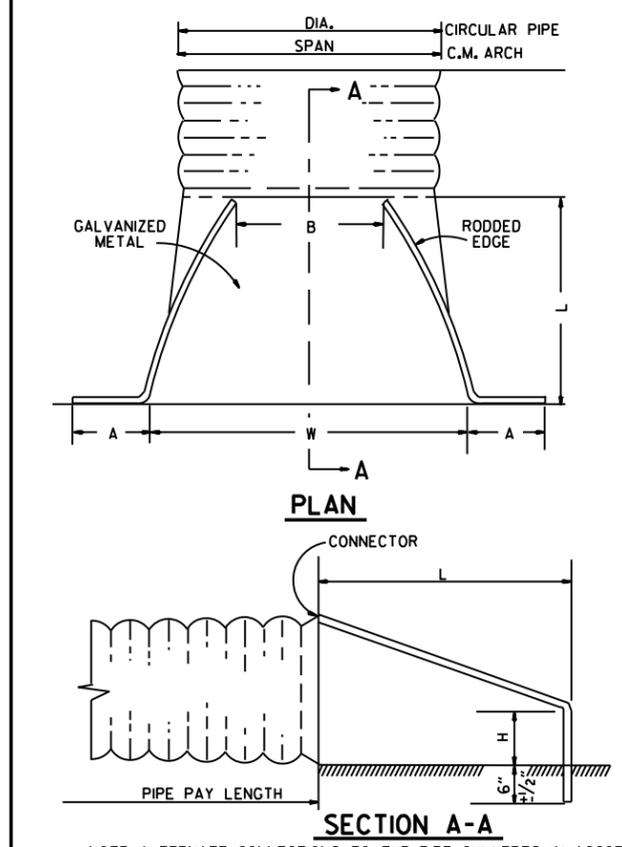
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



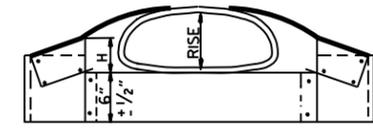
**END VIEW
CONCRETE ARCH PIPE**

**END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS**

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



CIRCULAR PIPE



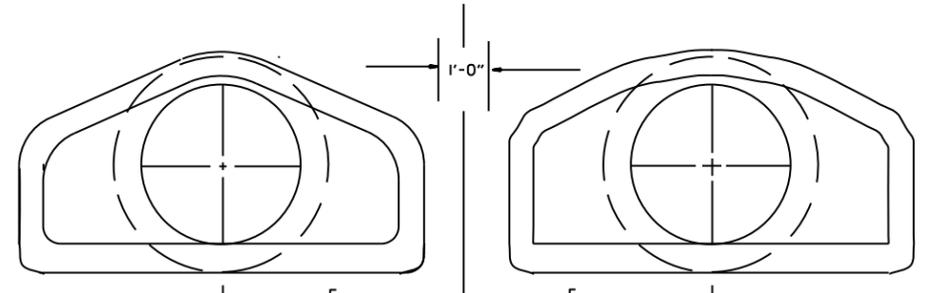
C.M. ARCH PIPE

CIRCULAR PIPE

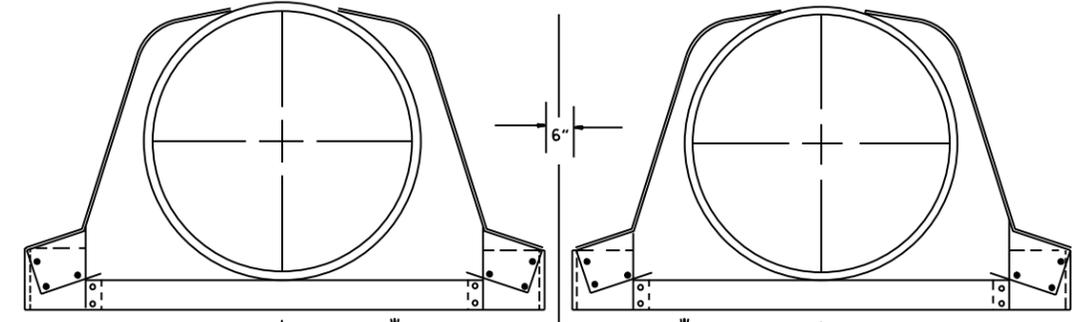
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W ± 2" ±	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1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

C.M. ARCH PIPE

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



MULTIPLE R.C. PIPE CULVERTS

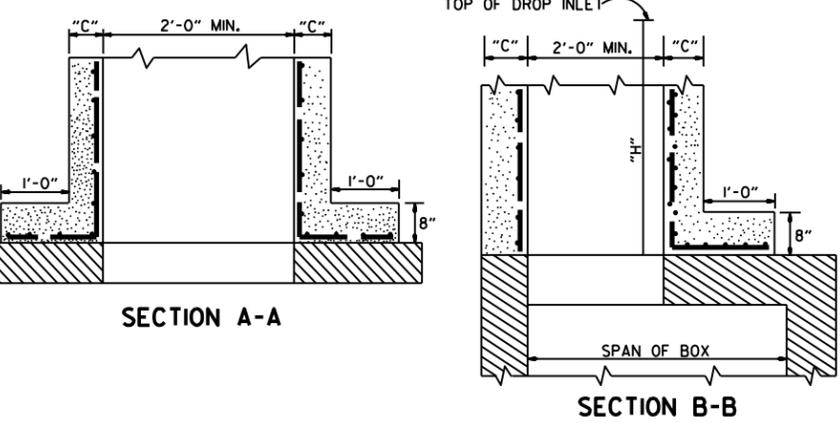
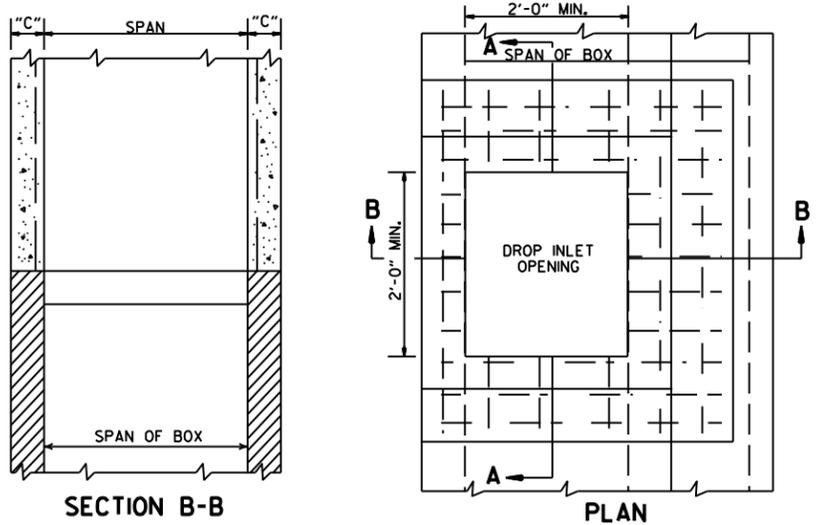


MULTIPLE C.M. PIPE CULVERTS

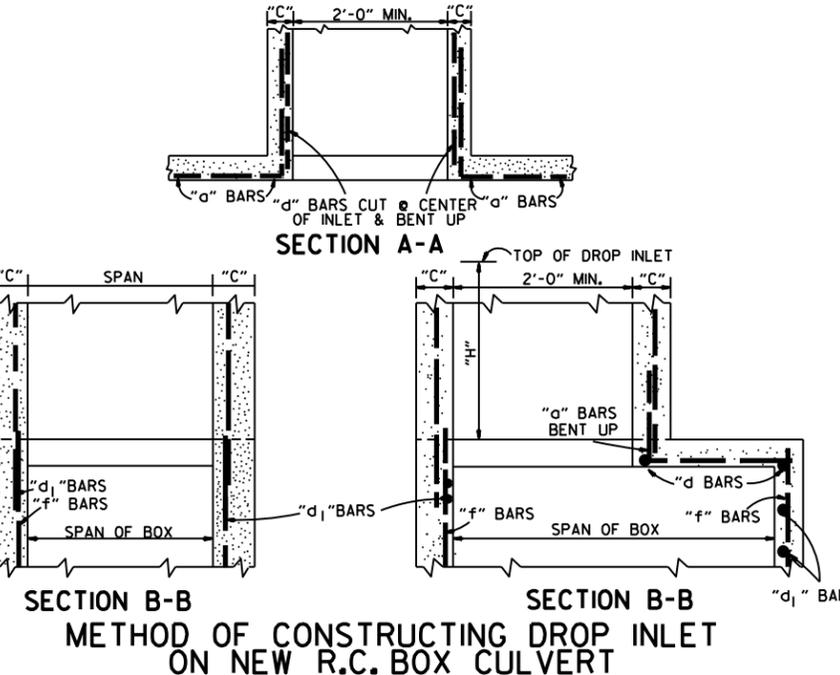
NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

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

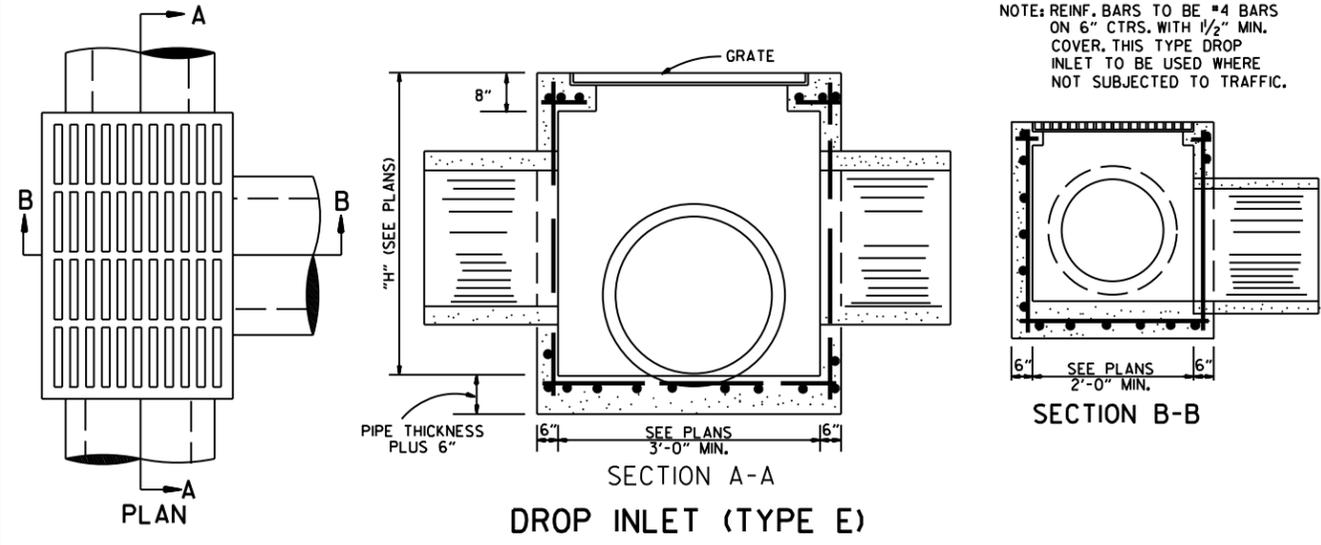


METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



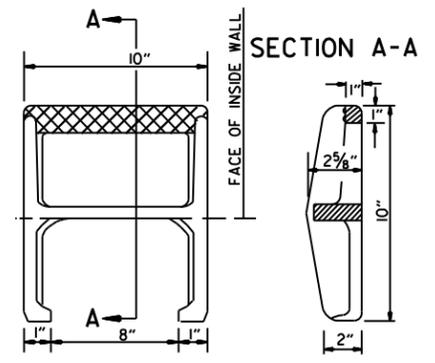
METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

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



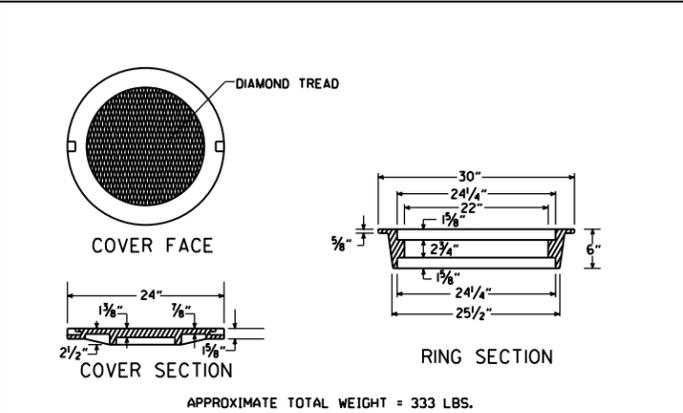
DROP INLET (TYPE E)

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



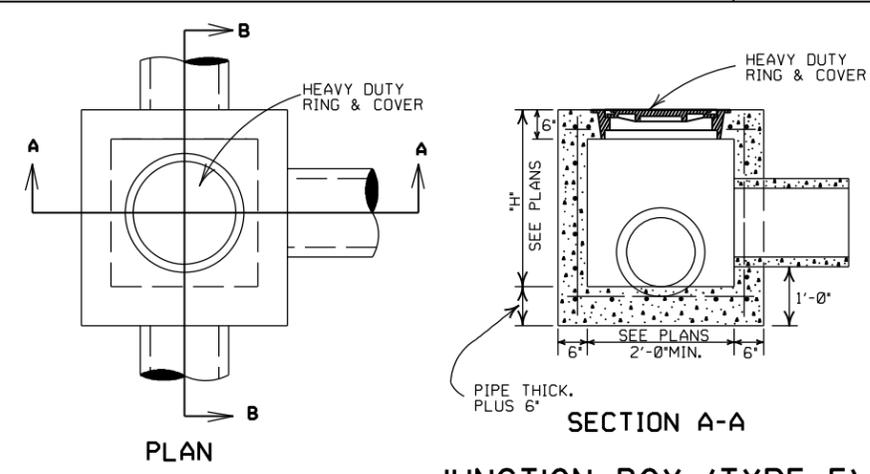
DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11 LBS. (CAST IRON)
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



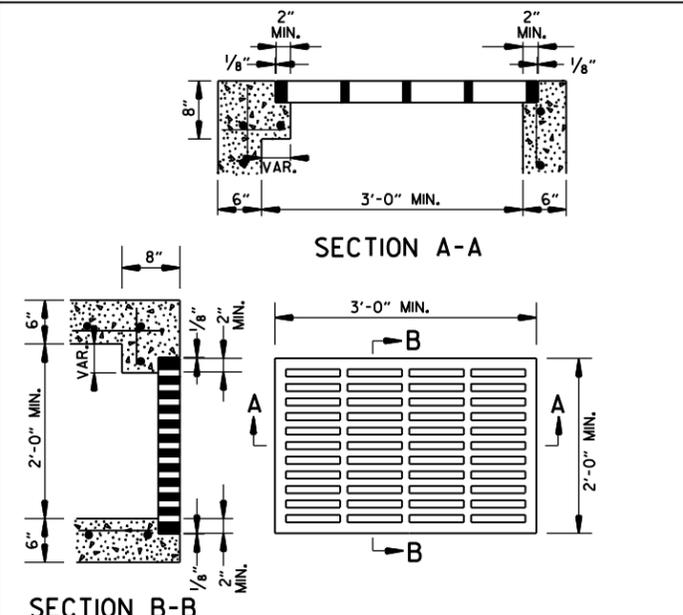
HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.



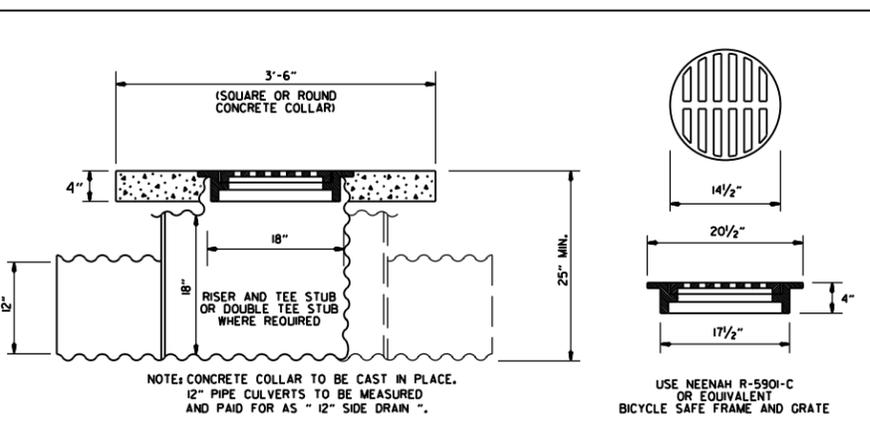
JUNCTION BOX (TYPE E)

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



GRATE FOR TYPE E DROP INLET

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.



DETAIL OF YARD DRAIN

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

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

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	

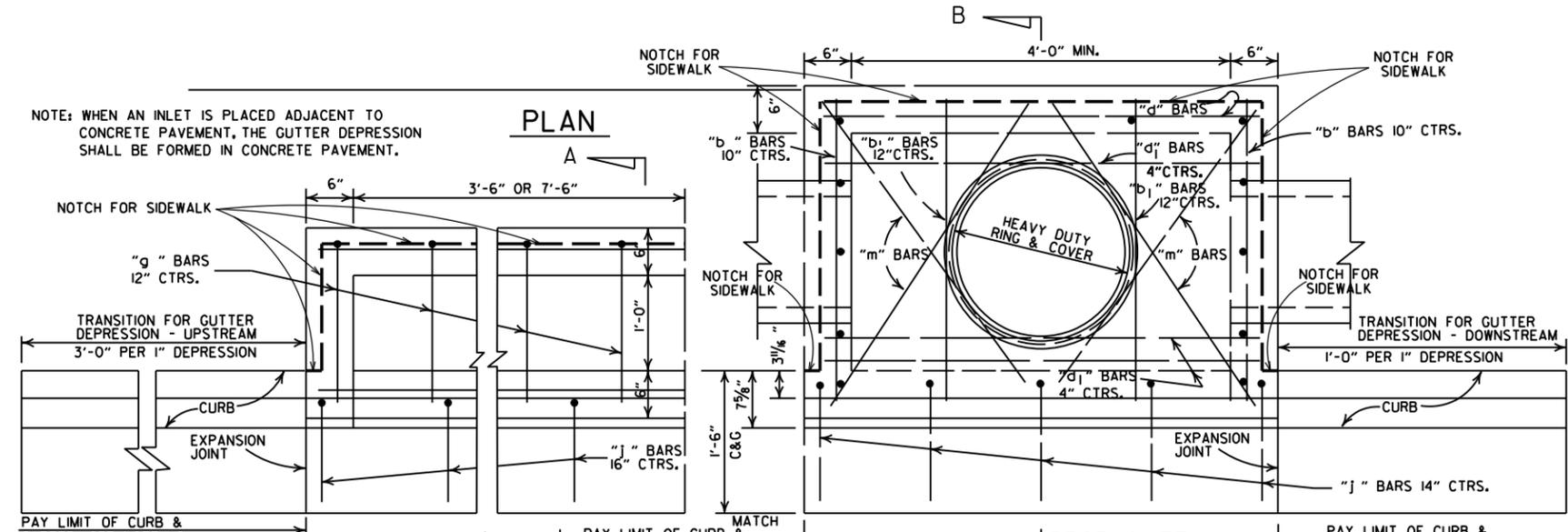
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DROP INLETS & JUNCTION BOXES
STANDARD DRAWING FPC-9

4'-0" LENGTH DROP INLET DROP INLET EXTENSION

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	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				
42"	4'-4"	2.95	250	0.34	30				
48"	4'-10"	3.21	265	0.36	32				
						DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
						0.04	3		

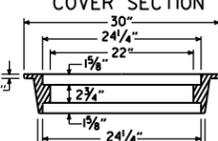
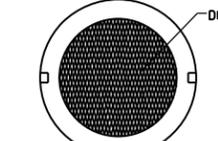
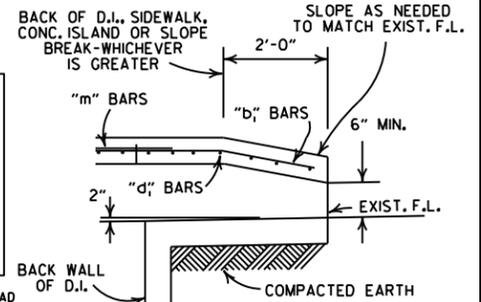
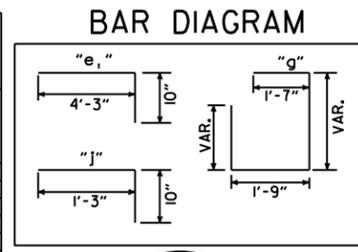
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

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

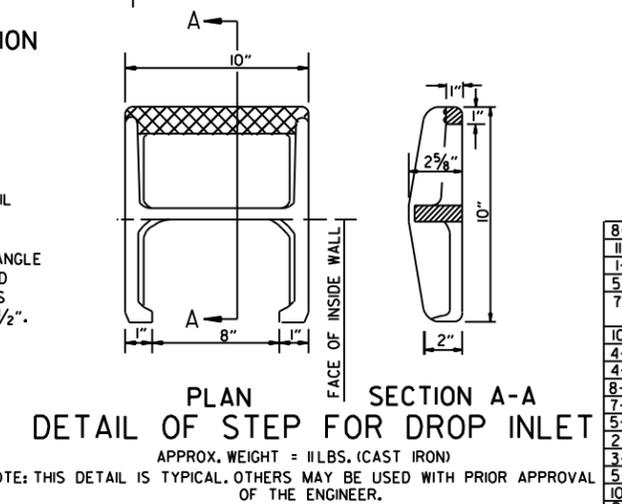
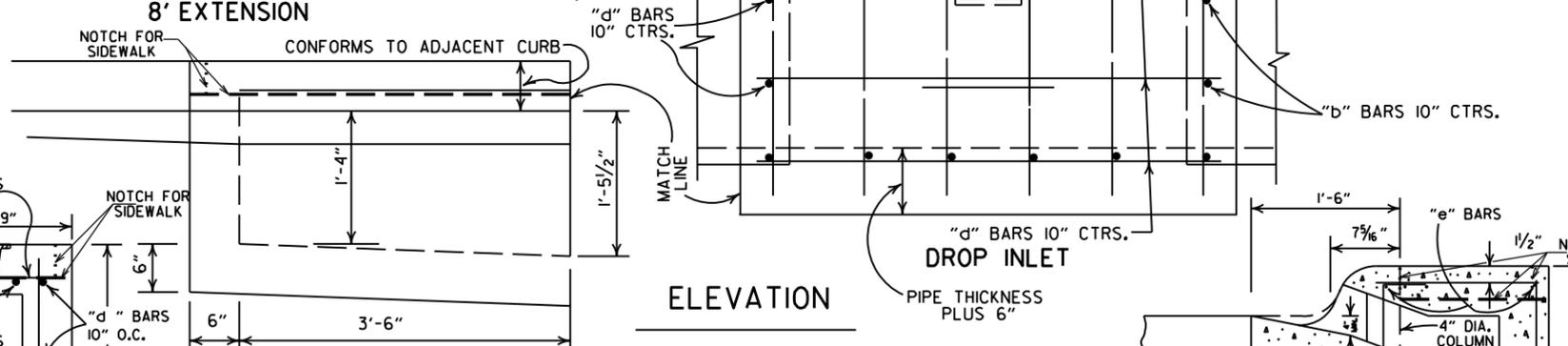
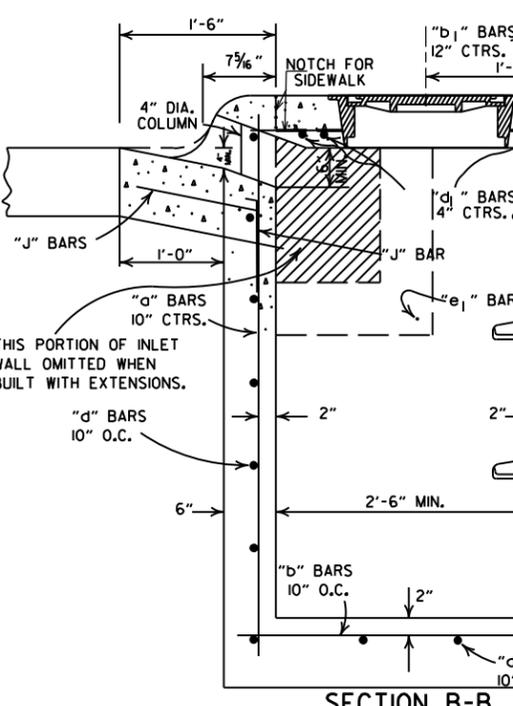
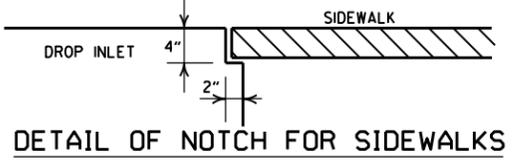
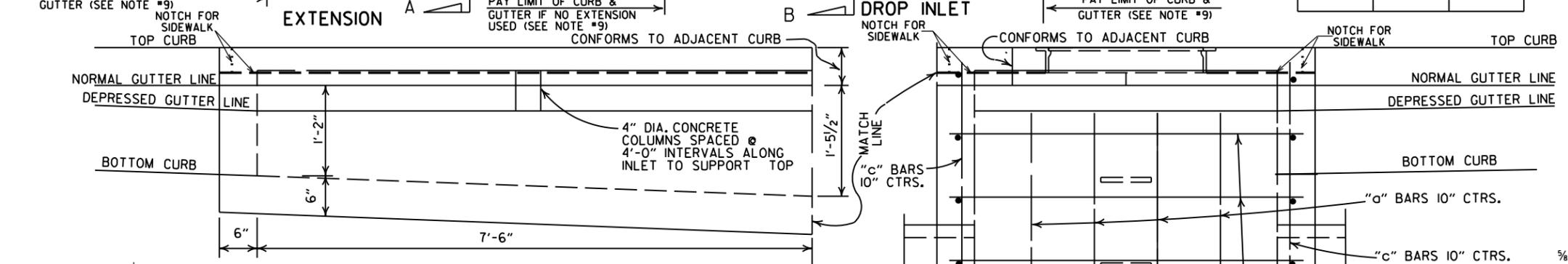
INSIDE DIA. PIPE	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8



APPROXIMATE TOTAL WEIGHT = 333 LBS.

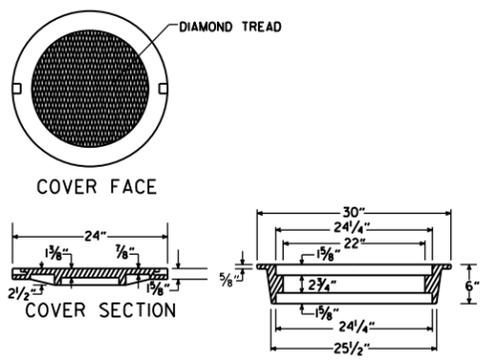
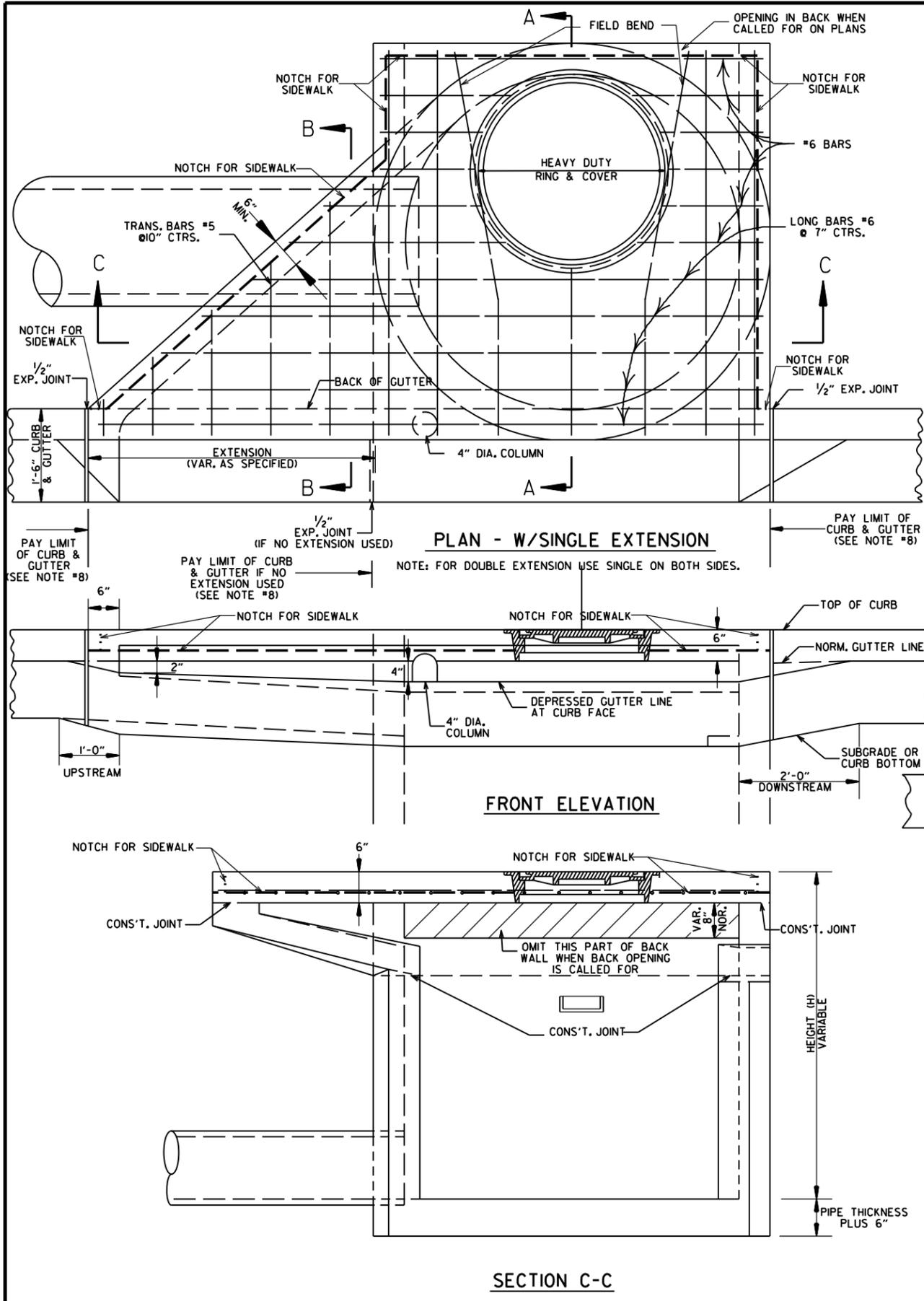
HEAVY DUTY RING & COVER

- GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" 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 1/2" 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"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.



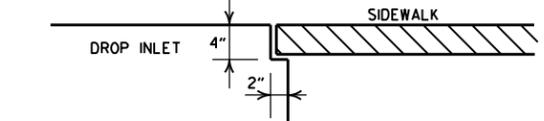
DATE	REV.	REVISION	DATE FILMED
8-22-02		ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01		ADDED NOTE 13; REVISED SECTION B-B	
1-12-00		CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99		ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98		REPLACED RING & COVER W/HEAVY DUTY RING & 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

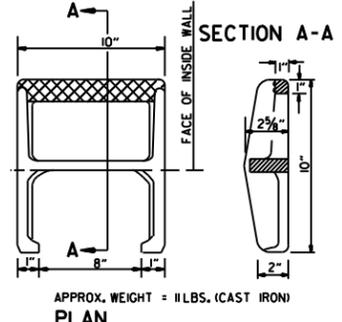


HEAVY DUTY RING & COVER

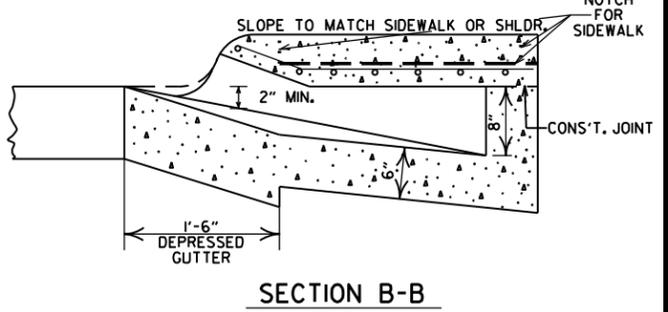
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON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



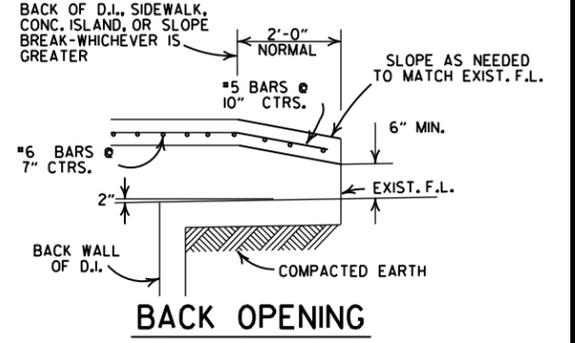
DETAIL OF NOTCH FOR SIDEWALKS



DETAIL OF STEP FOR DROP INLET



SECTION B-B



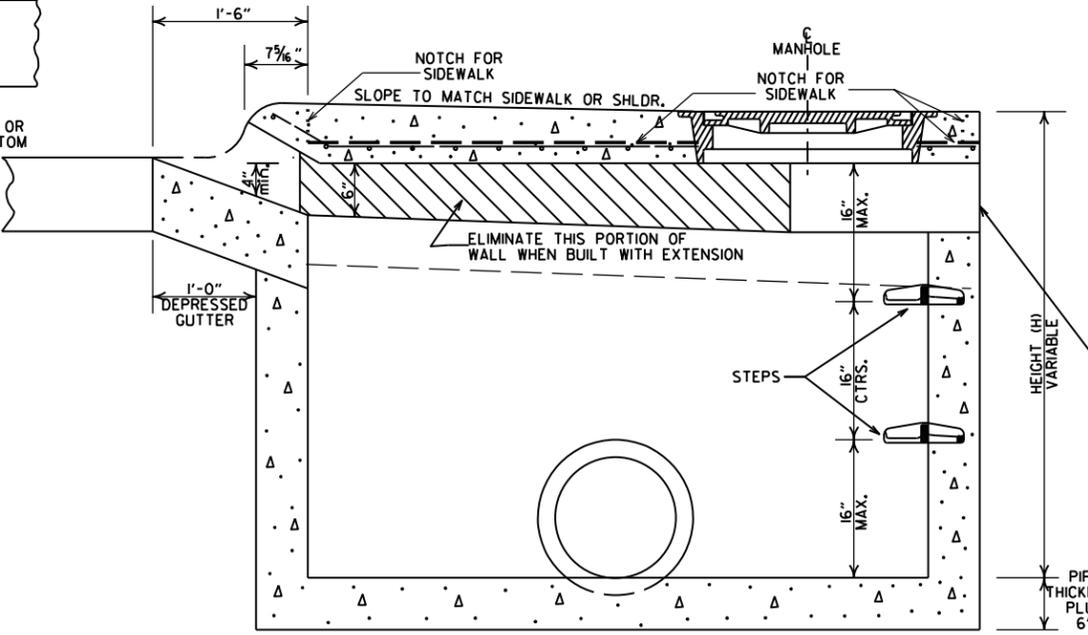
BACK OPENING

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

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

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

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



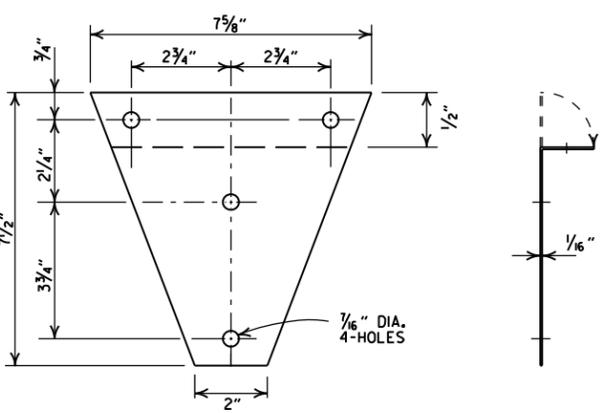
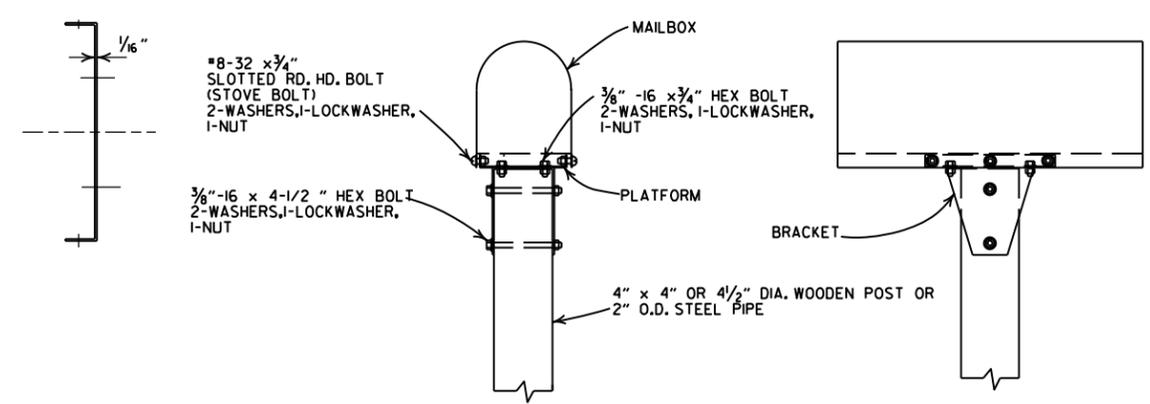
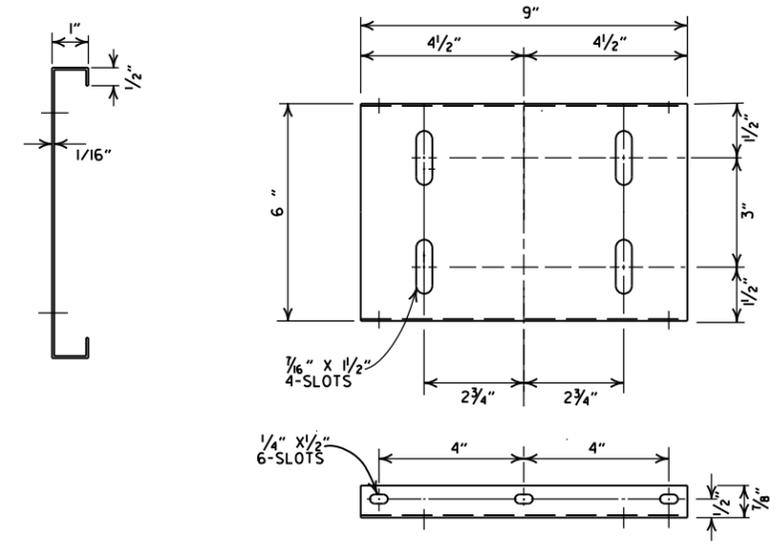
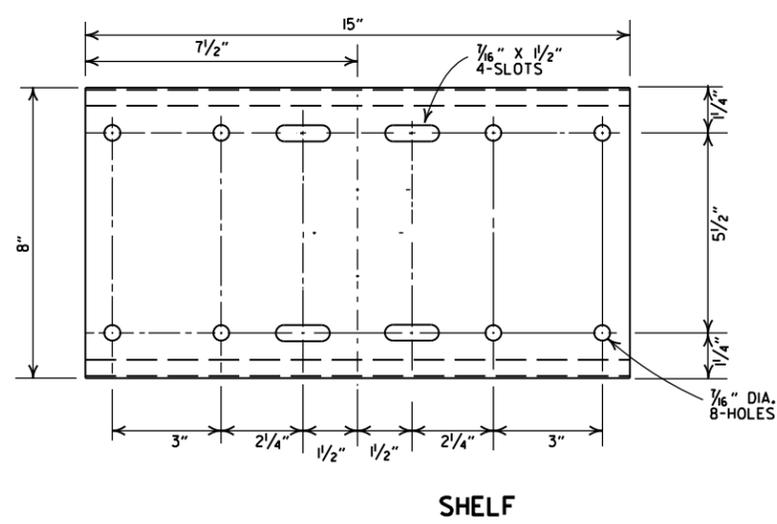
SECTION A-A

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
11-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REV. 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	
7-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-1-94	REV. BACK OPEN DETAIL & NOTE	11-23-94
4-1-93	REVISED GENERAL NOTE 1	4-1-93
8-15-91	REVISED NOTES 11, 12 & 13 ADDED BK. OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
5-24-89	ADDED NOTE 1 & MINIMUM WALL THICKNESS	513-2-25-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	639-7-15-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

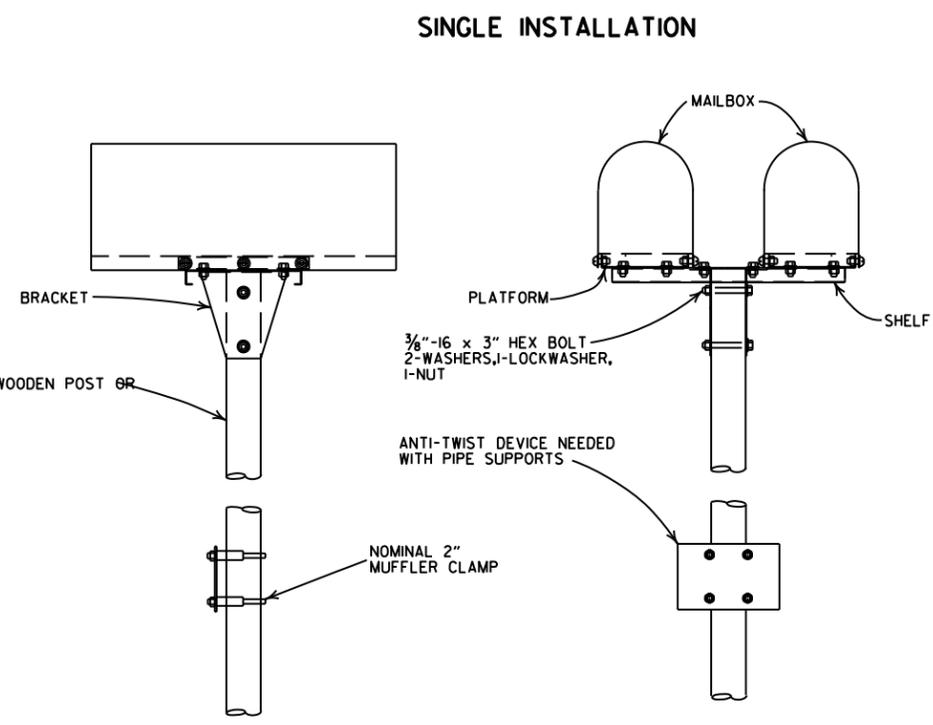
STANDARD DRAWING FPC-9M



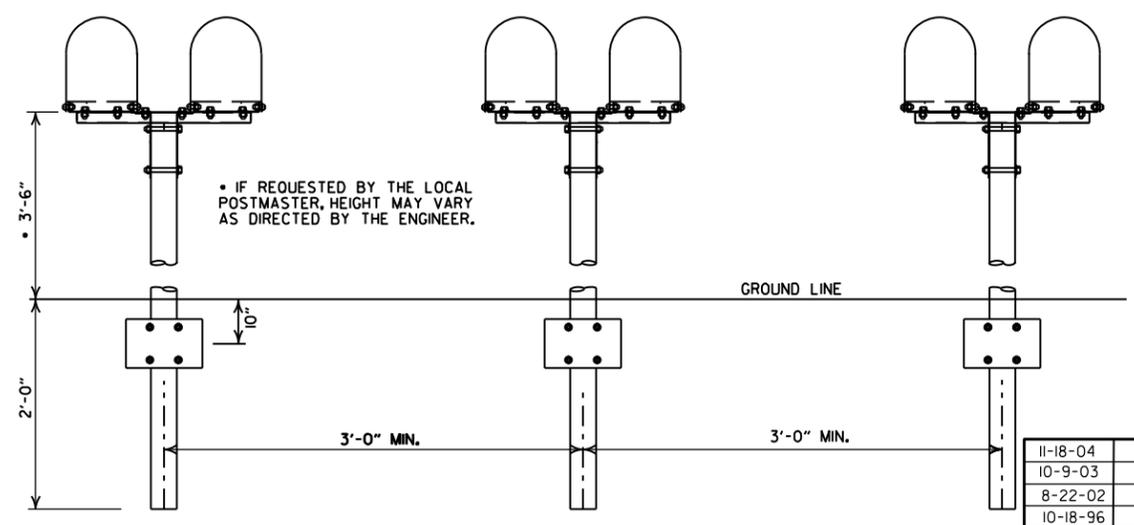
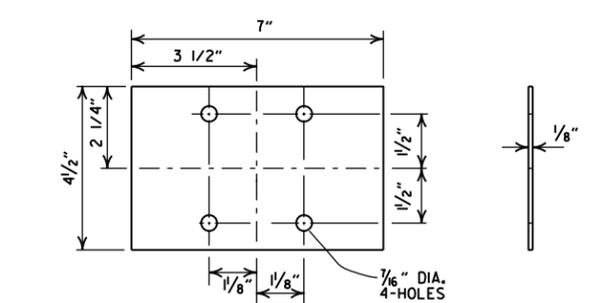
PLATFORM

GENERAL NOTES

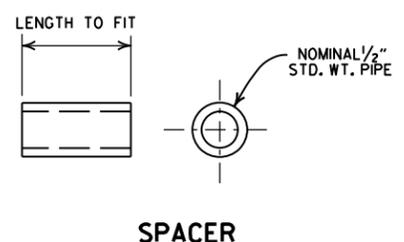
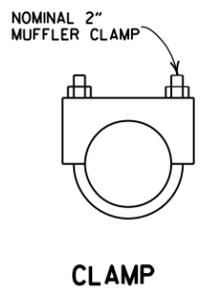
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED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



DOUBLE INSTALLATION



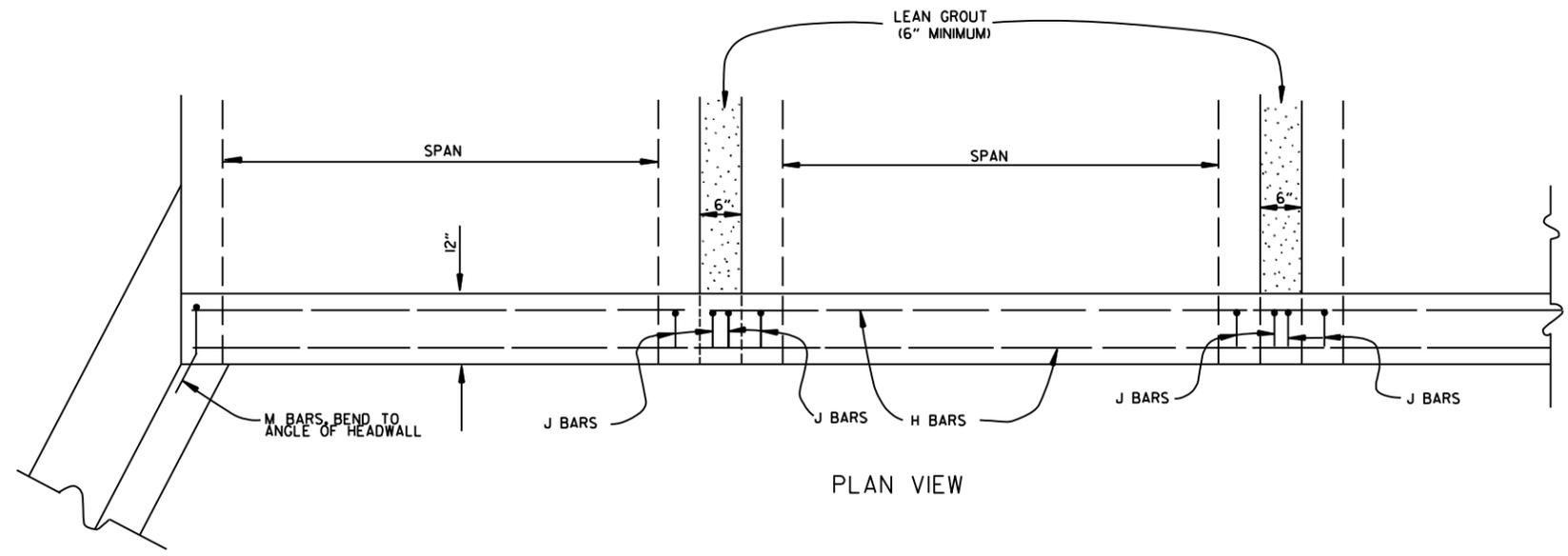
SPACING FOR MULTIPLE POST INSTALLATION



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

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS
STANDARD DRAWING MB-1



BAR LIST

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

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

GENERAL NOTES

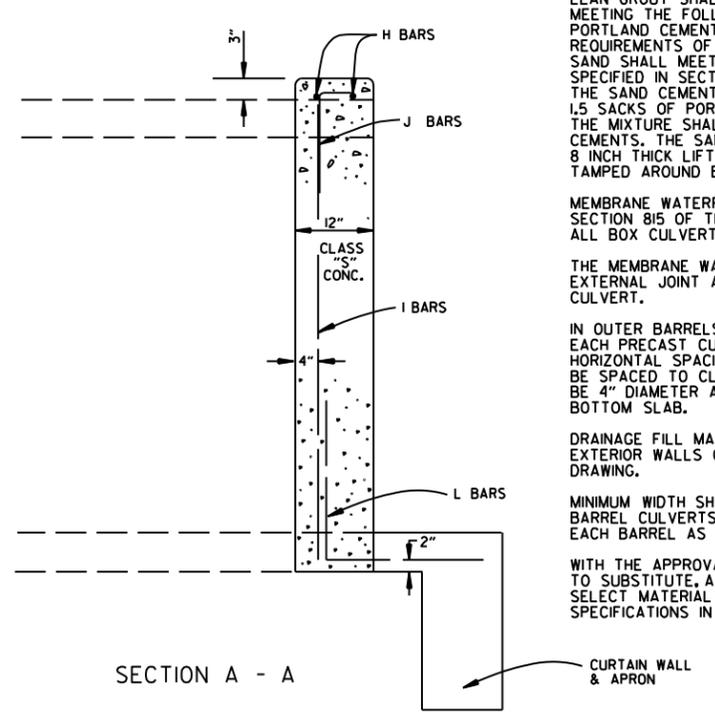
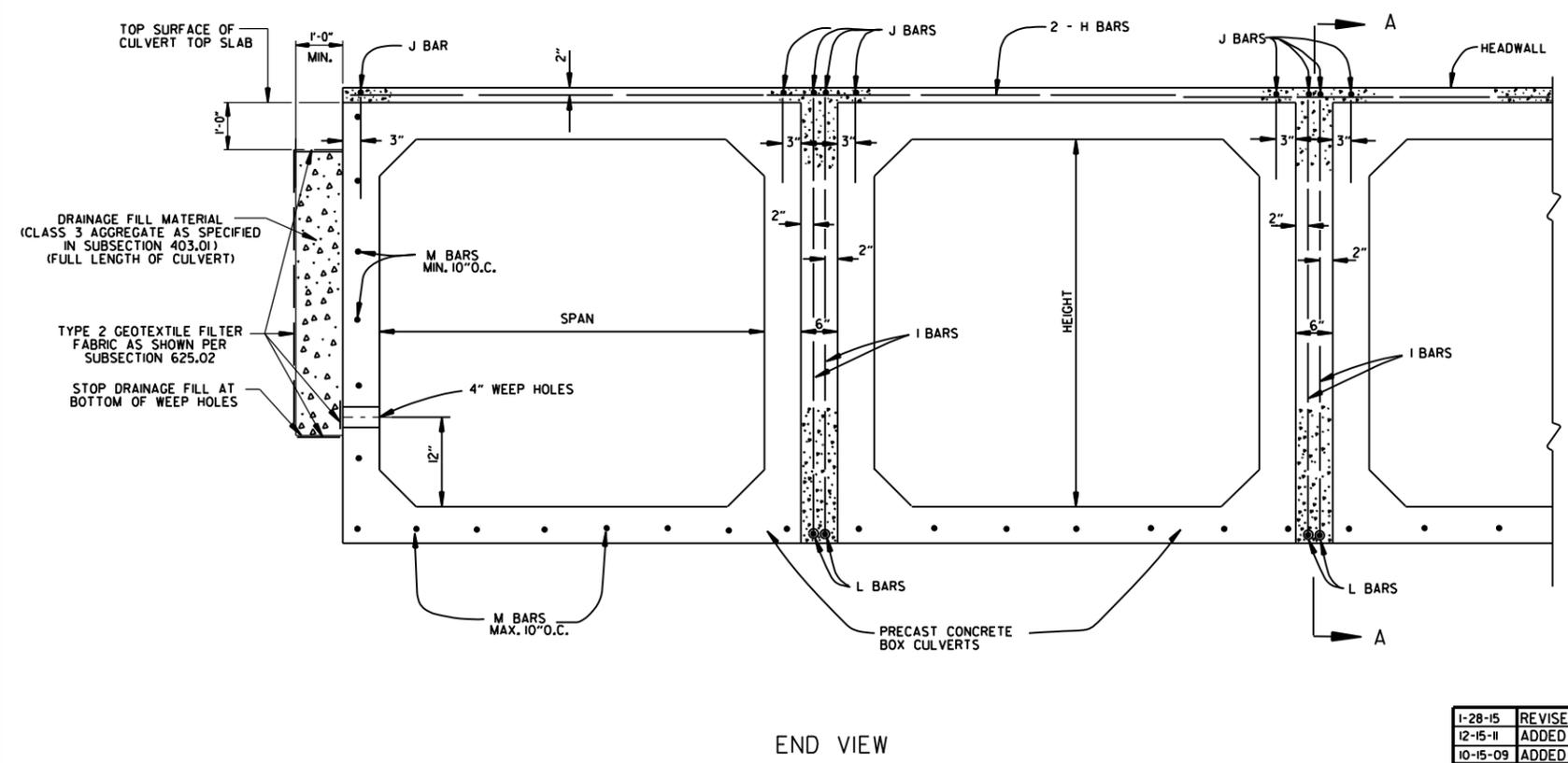
WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

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

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

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

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



LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS: PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85. SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS. THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE. THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

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

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

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.

1-28-15	REVISED GEOTEXTILE FABRIC PLACEMENT	
12-15-11	ADDED NOTE & DTLs FOR WEEP HOLE AND DRAINAGE FILL	
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	
DATE	REVISION	DATE FILED

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43¾	44	26¾	27
42	51½	51	31½	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	87½	87
120	154	154	96¾	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.

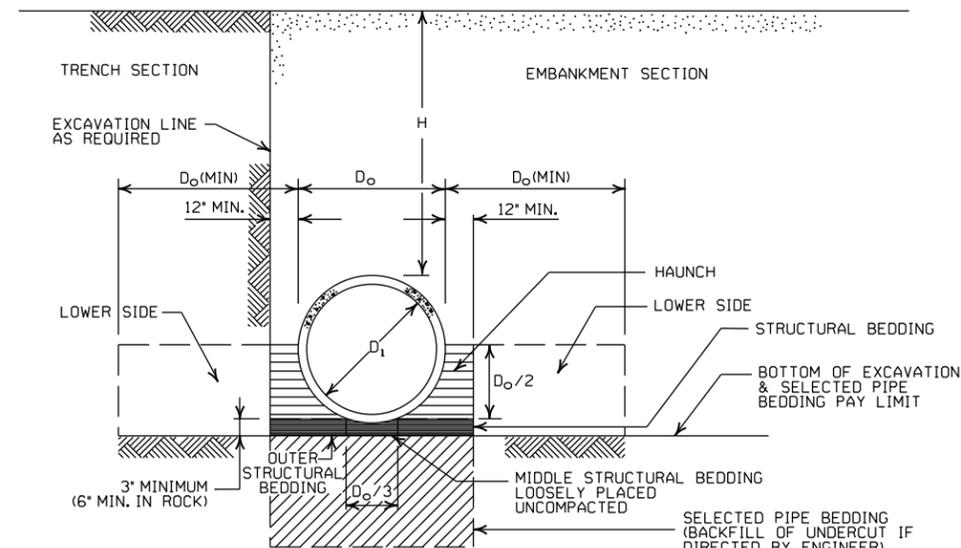
- LEGEND -

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

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M10, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

**CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING**

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 2/3 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	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

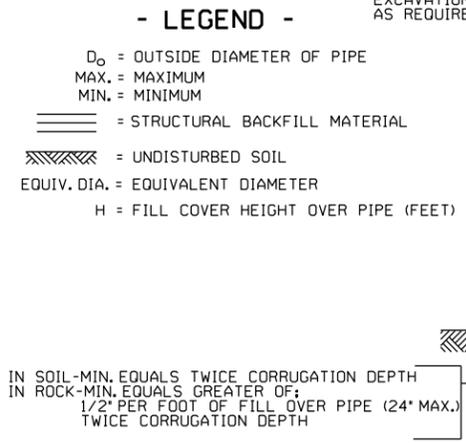
CONSTRUCTION SEQUENCE

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.



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 2/3 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45			
18	2	30	30	52	41	
24	2	22	22	39	32	34
30	2		18	31	27	28
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

EQUIVALENT METAL THICKNESSES AND GAUGES

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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)			
				INSTALLATION TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	INSTALLATION TYPE 1		
2 2/3 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2,25	15	0.060	2,25	15		
24	28x20	3	0.064	2,5	15	0.075	2,5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3/2	0.079	3	12	0.105	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.109	3	13	0.135	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.164	3	15		
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
			INSTALLATION				INSTALLATION			
			TYPE 2		TYPE 1		TYPE 2		TYPE 1	
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

**METAL PIPE CULVERT
FILL HEIGHTS & BEDDING**

STANDARD DRAWING PCM-1

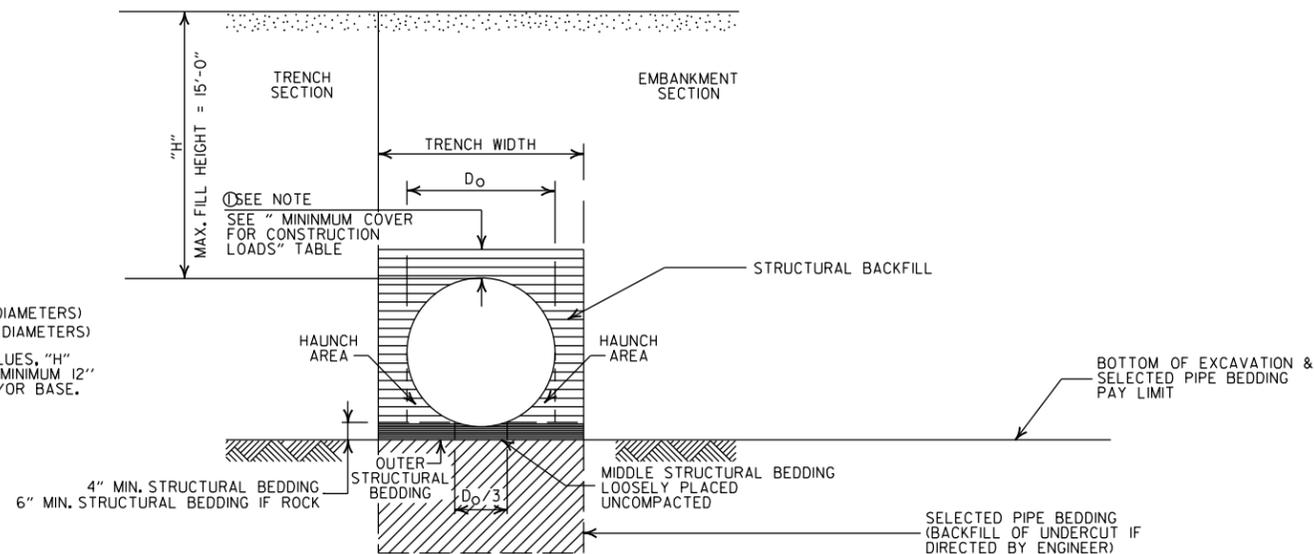
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
 - SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/2 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

NOTE:
 18" MIN. (18" - 30" DIAMETERS)
 24" MIN. (36" - 48" DIAMETERS)
 MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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

CONSTRUCTION SEQUENCE

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

GENERAL NOTES

- PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
- IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
- WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
- WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
- FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
- HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

**PLASTIC PIPE CULVERT
(HIGH DENSITY POLYETHYLENE)**

STANDARD DRAWING PCP-1 

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

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL. SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/8 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

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

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

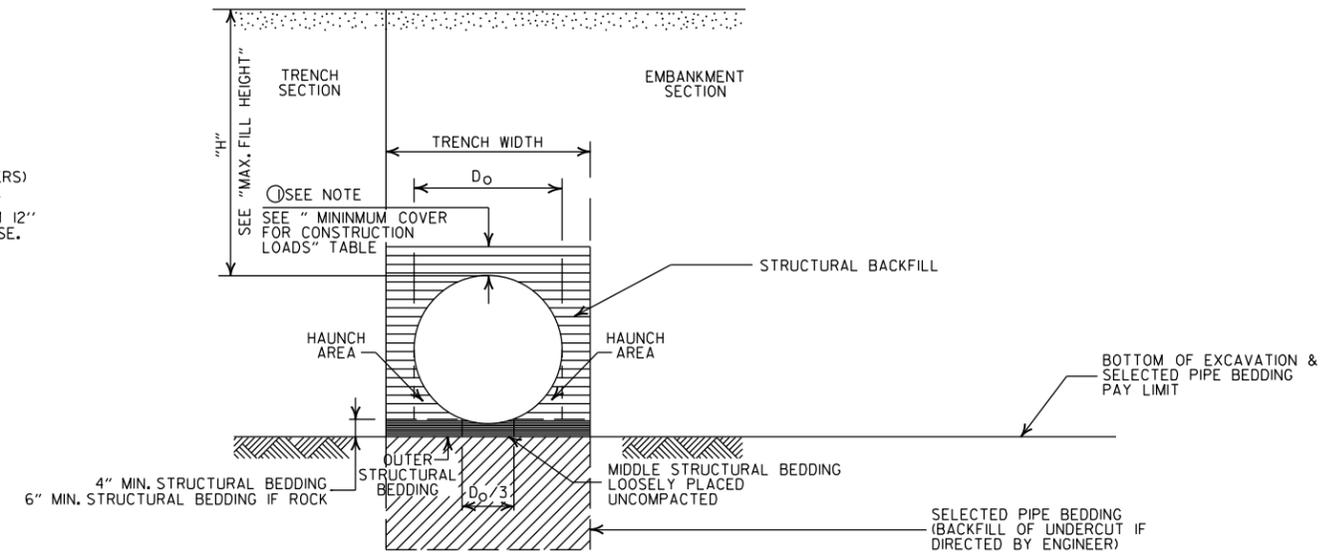
MULTIPLE INSTALLATION OF PVC PIPES

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

- LEGEND -

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

==== = STRUCTURAL BACKFILL MATERIAL

|||||| = UNDISTURBED SOIL

GENERAL NOTES

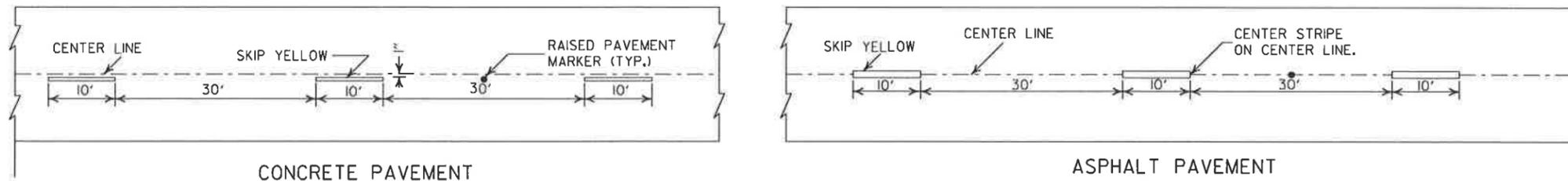
- PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
- IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
- WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
- WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
- FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
- PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

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

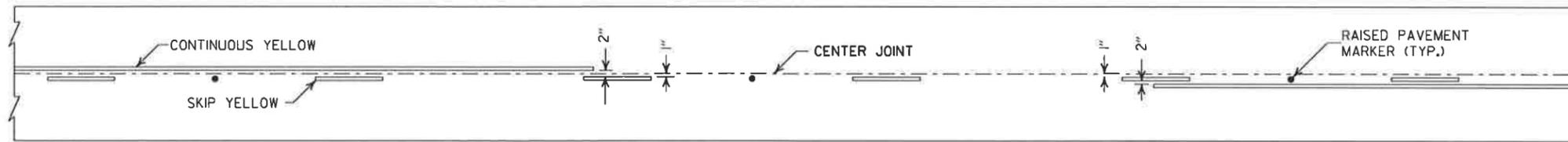
ARKANSAS STATE HIGHWAY COMMISSION
PLASTIC PIPE CULVERT (PVC F949)
STANDARD DRAWING PCP-2

NOTES:

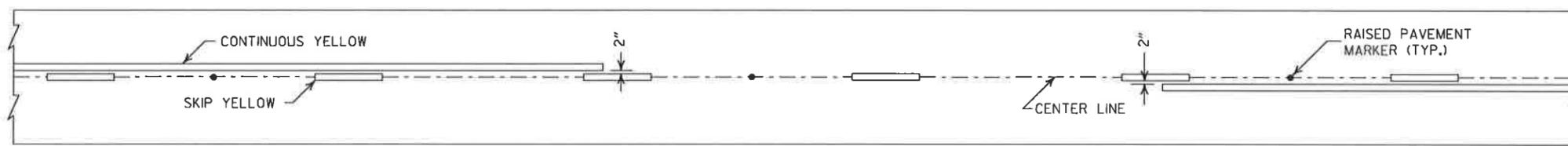
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



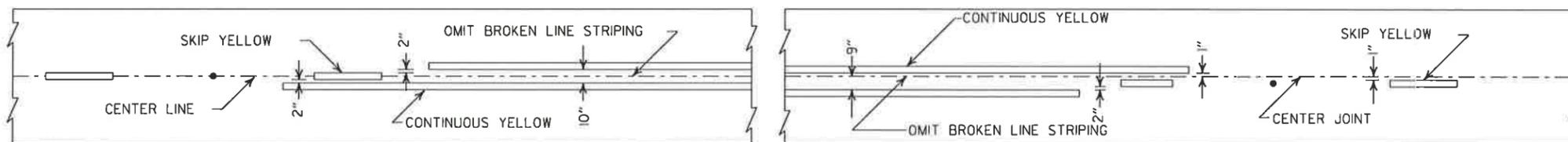
BROKEN LINE STRIPING



SOLID LINE STRIPING ON CONCRETE PAVEMENT



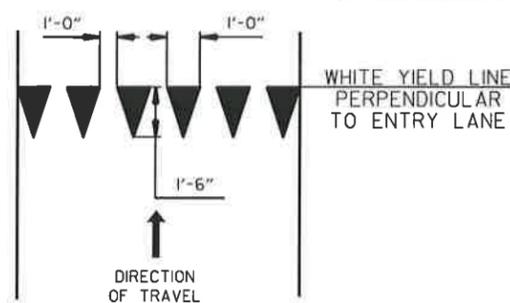
SOLID LINE STRIPING ON ASPHALT PAVEMENT



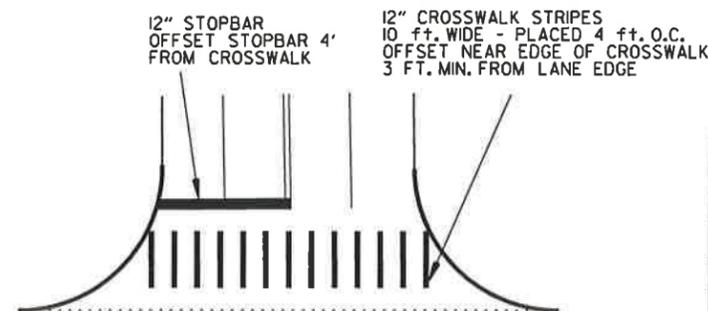
ASPHALT PAVEMENT

CONCRETE PAVEMENT

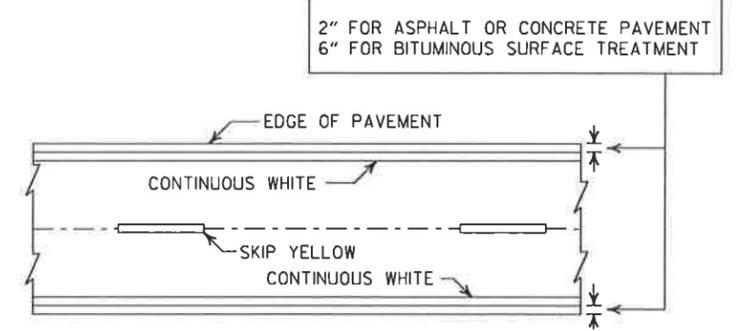
STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL



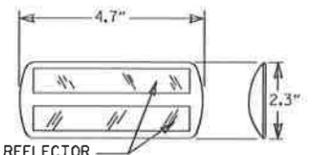
CROSSWALK AND STOPBAR DETAILS



PAVEMENT EDGE LINE MARKING

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

TYPE II RED/CLEAR OR YELLOW/YELLOW



PRISMATIC REFLECTOR

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.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAV'T. 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
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

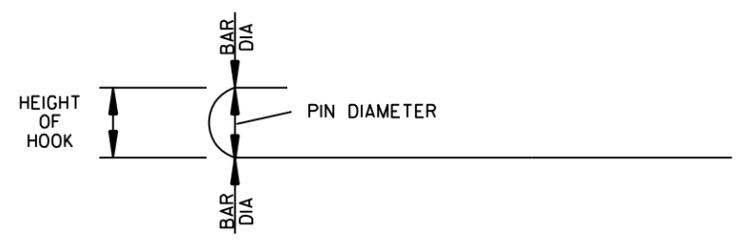
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

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

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

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



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

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

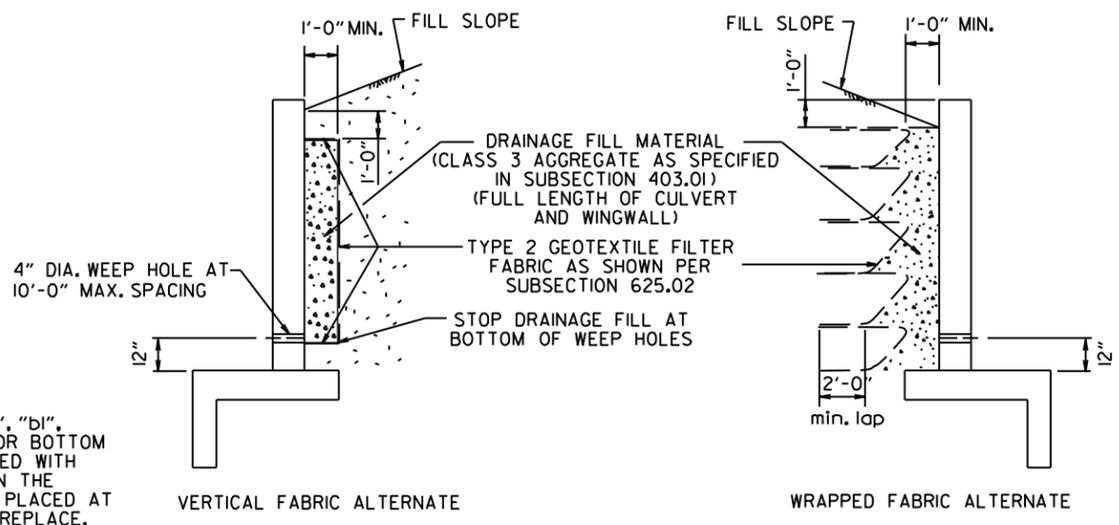
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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

REPLACEMENT BAR LENGTHS TABLE

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

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. REINFORCING STEEL SHALL BE AASHTO M 31OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

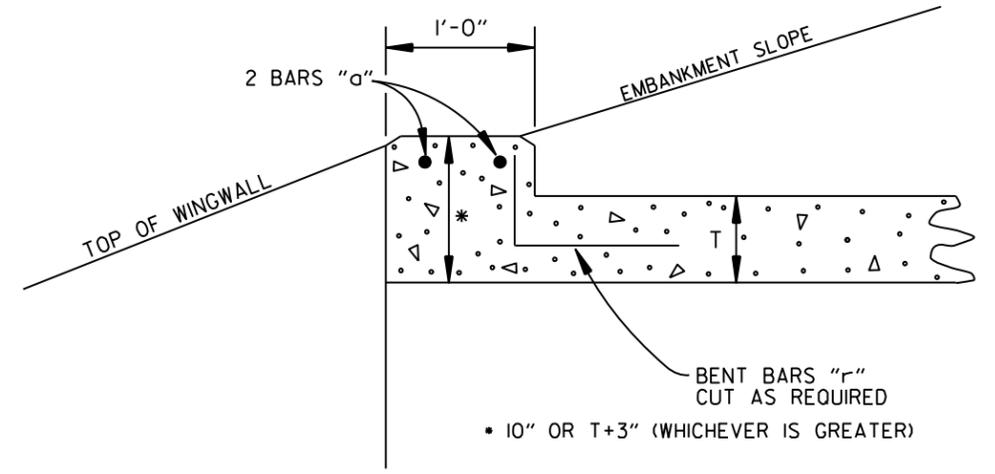
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSIMANUAL SHALL BE MINUS ZERO TO PLUS 1/2 INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

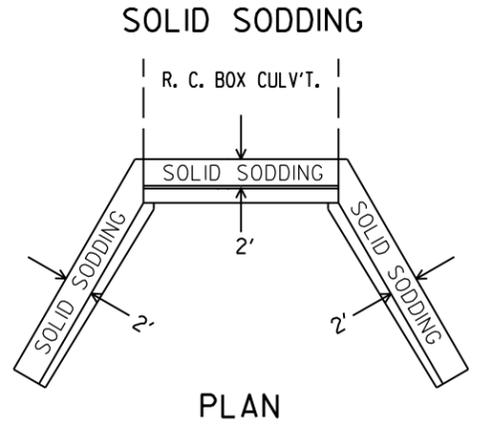
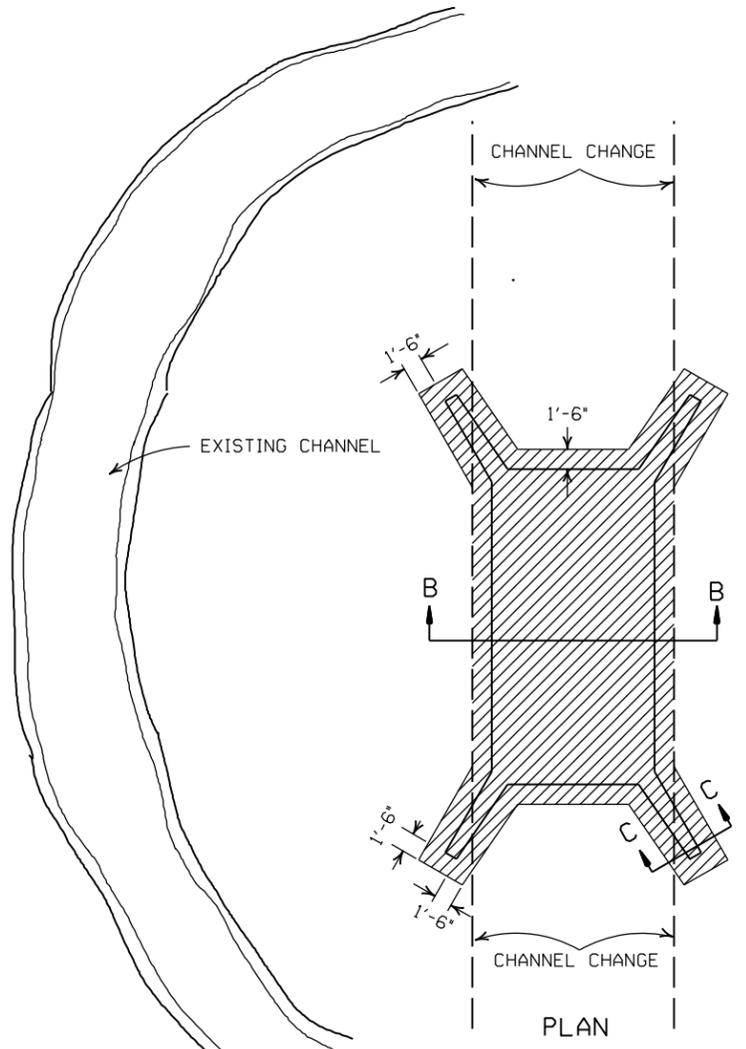
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

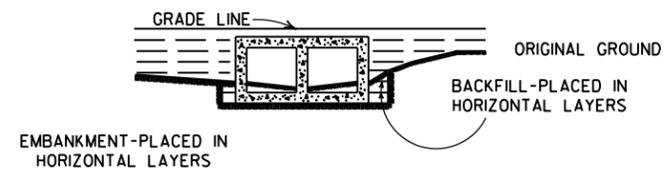
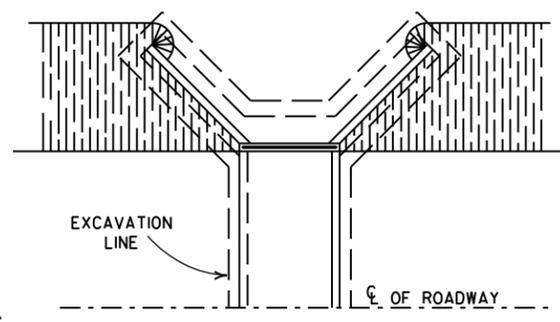
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1

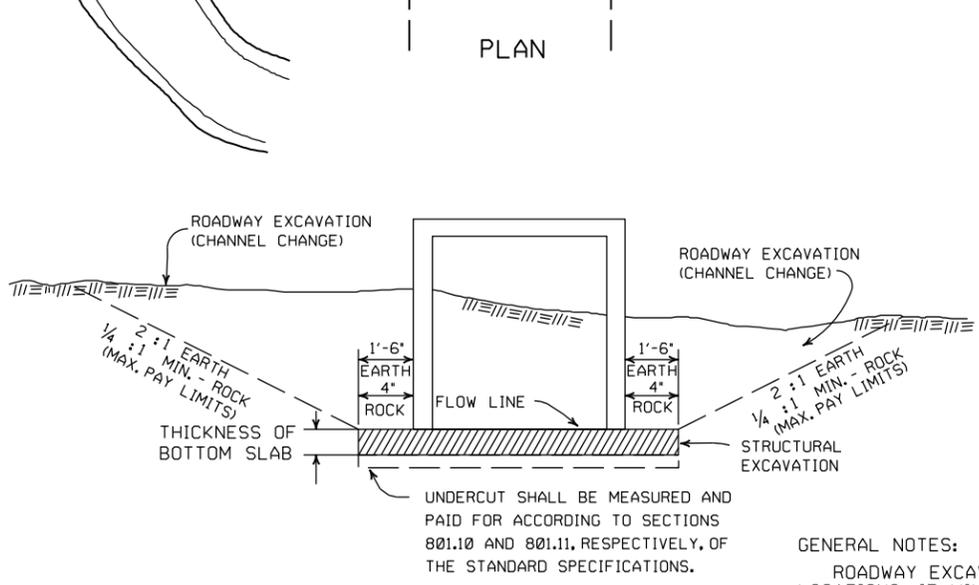
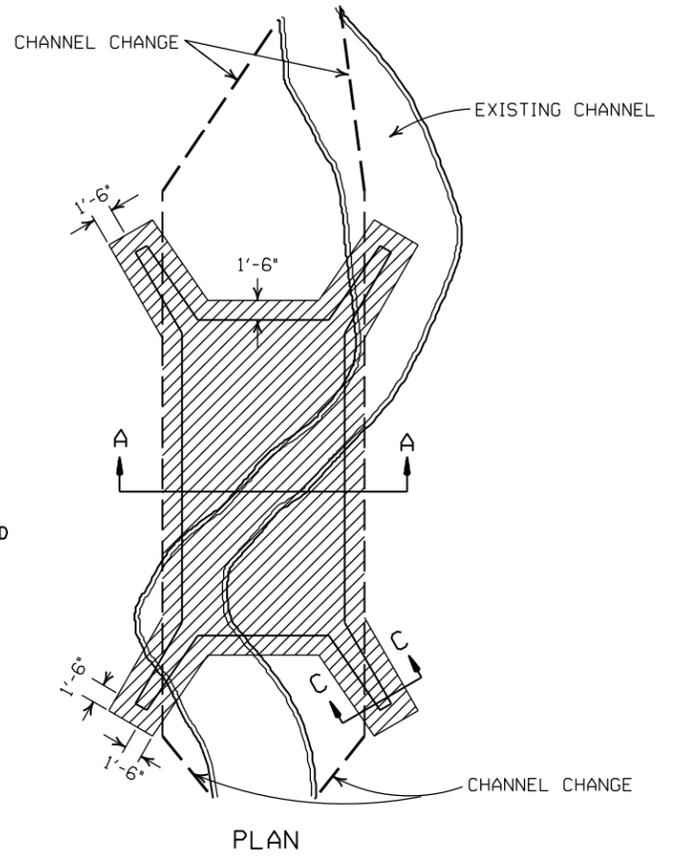


SOLID SODDING
 PLAN
 PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

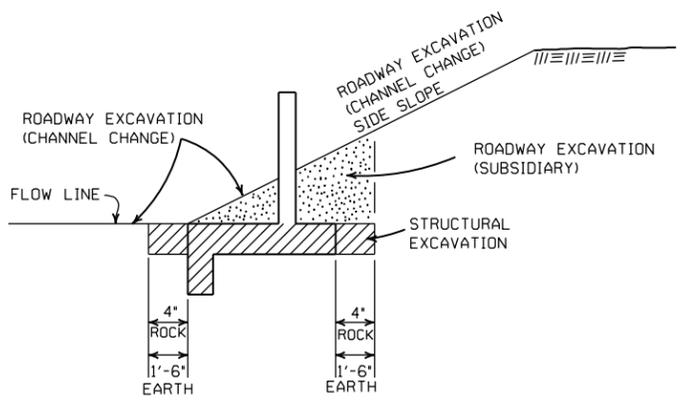
NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



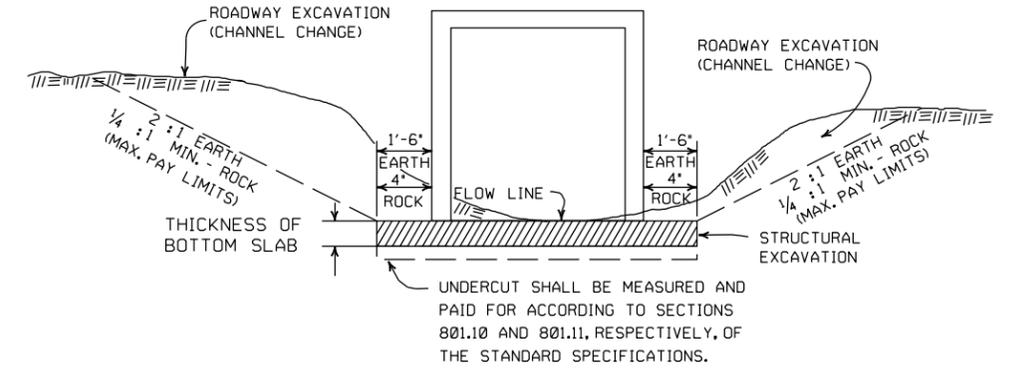
LONGITUDINAL SECTION
 BACKFILL DETAILS FOR BOX CULVERT



SECTION B-B
 DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A
 DETAILS THROUGH EXISTING CHANNELS

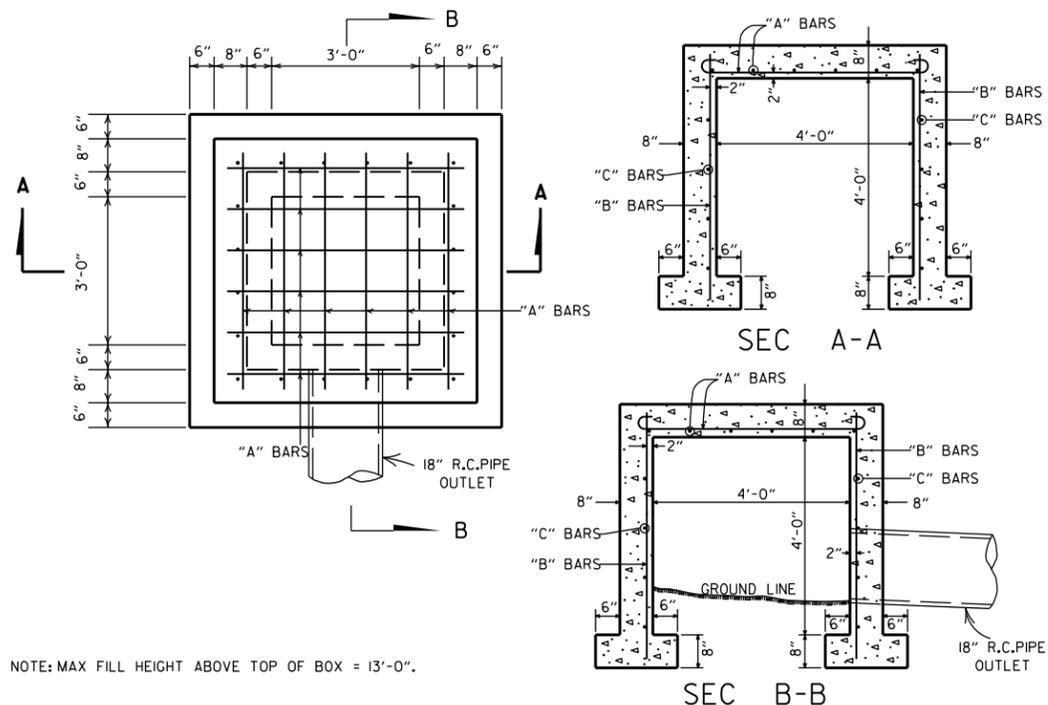
GENERAL NOTES:
 ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.
 EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.
 ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

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

ARKANSAS STATE HIGHWAY COMMISSION

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

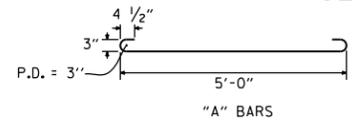
STANDARD DRAWING RCB-2



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

STEEL SCHEDULE

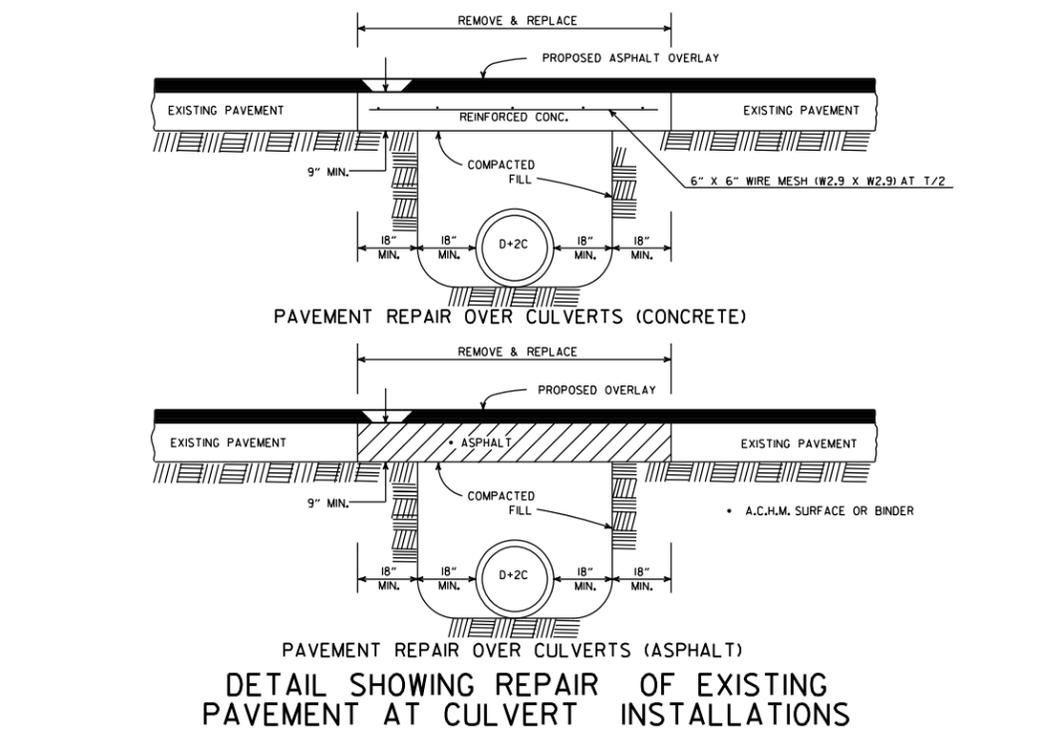
BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"



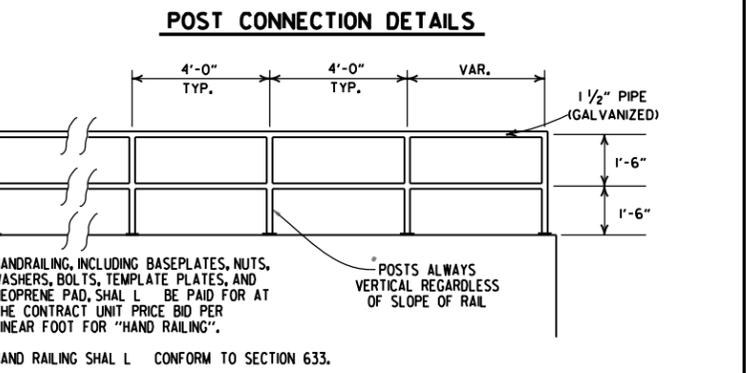
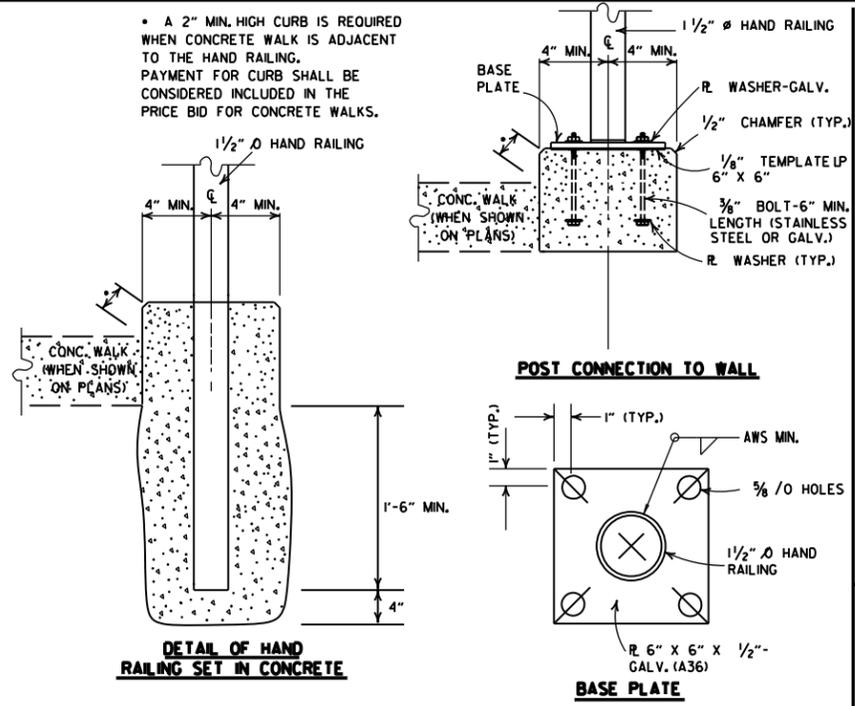
QUANTITIES
CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

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.

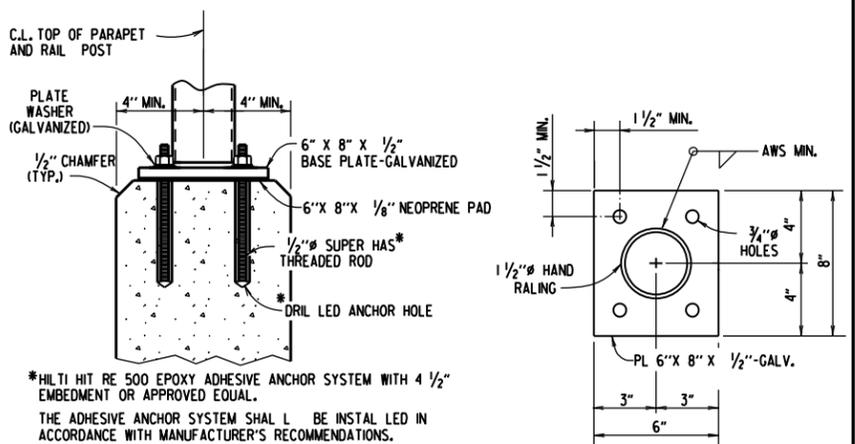
REINFORCED CONCRETE SPRING BOX



DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

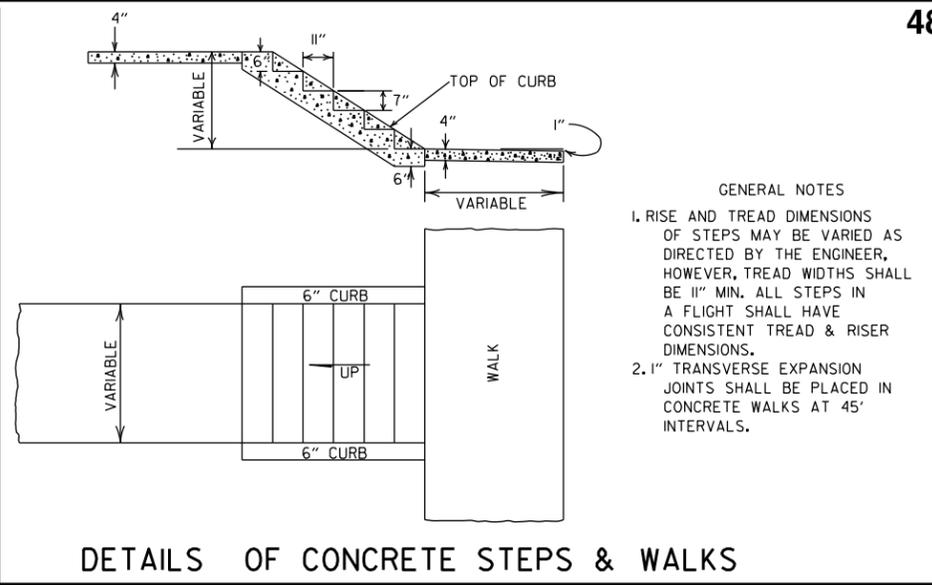


HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 1/2" EMBEDMENT OR APPROVED EQUAL.
THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

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
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	8-15-91
8-15-91	DELETED HDWL MODIFICATION DETAIL	11-8-90
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-30-89
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	665-11-17-88
11-17-88	V. BARS BEHIND ARROW	649-7-15-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	
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

ADVANCE DISTANCES (XXXX)

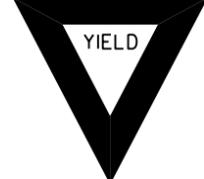
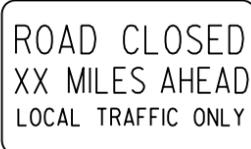
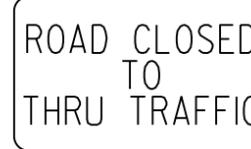
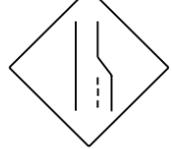
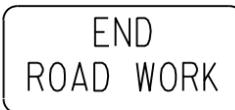
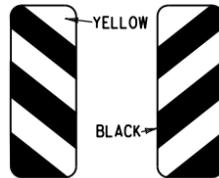
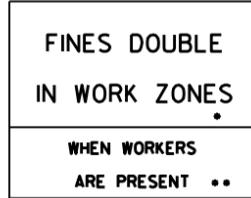
500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

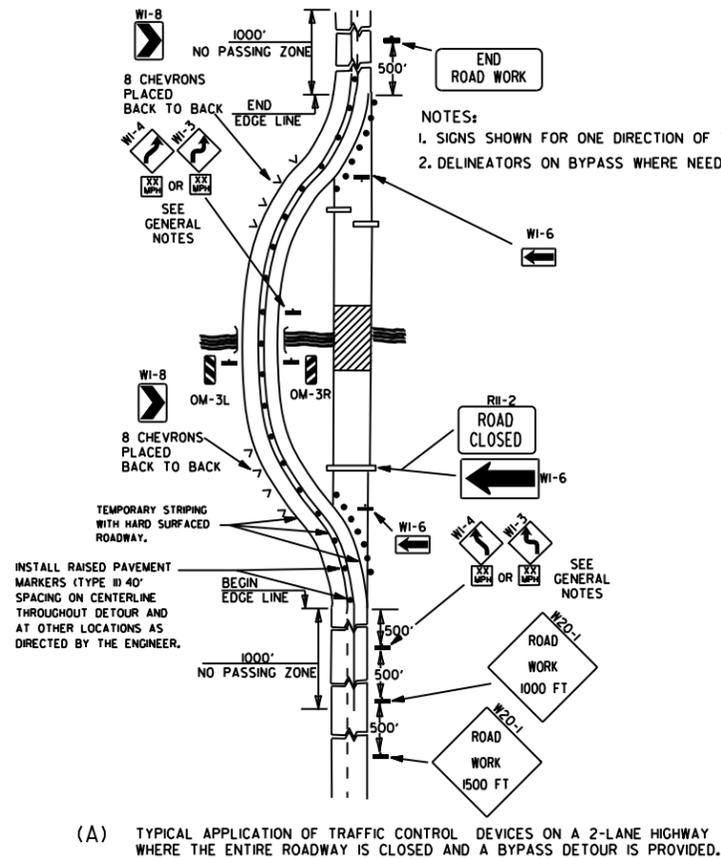
GENERAL NOTES:

- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
- EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
- POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
- ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
- R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

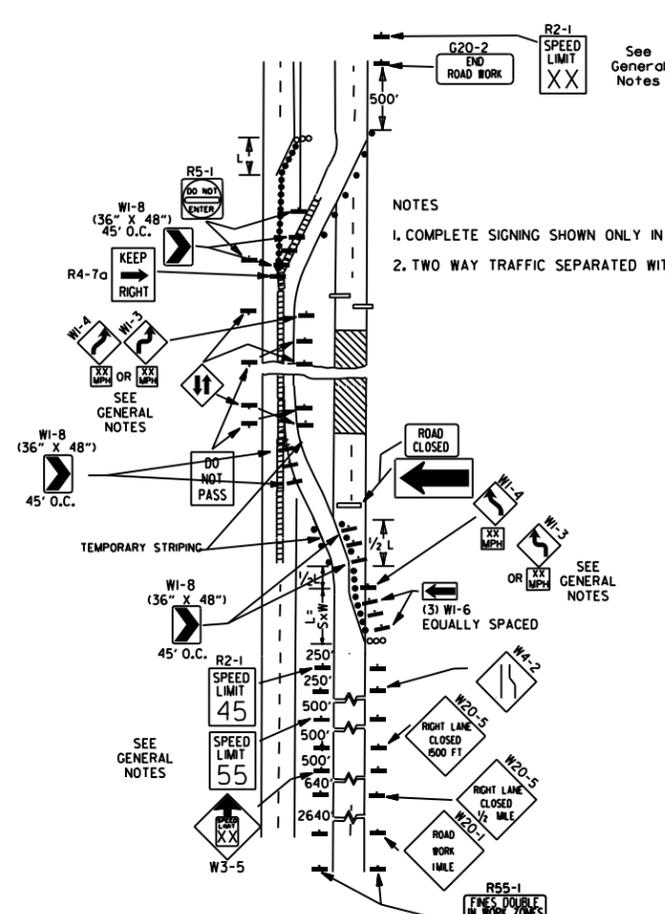
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

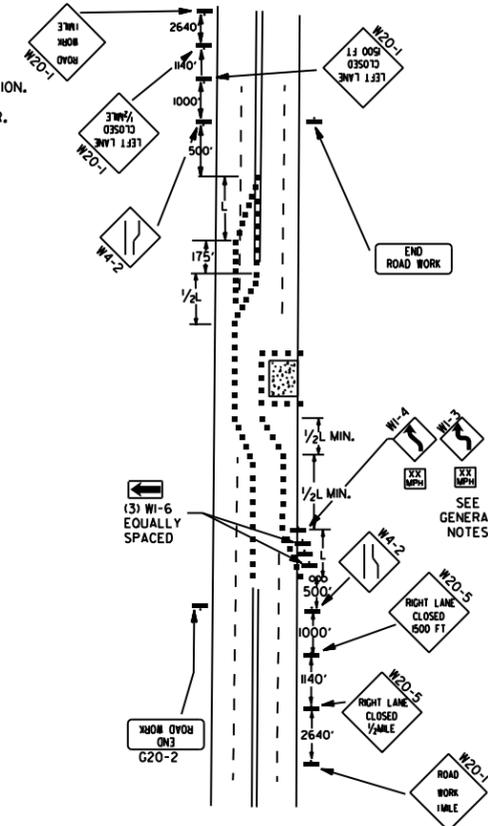
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY.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



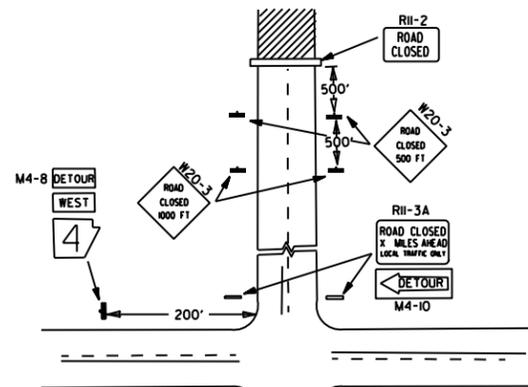
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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

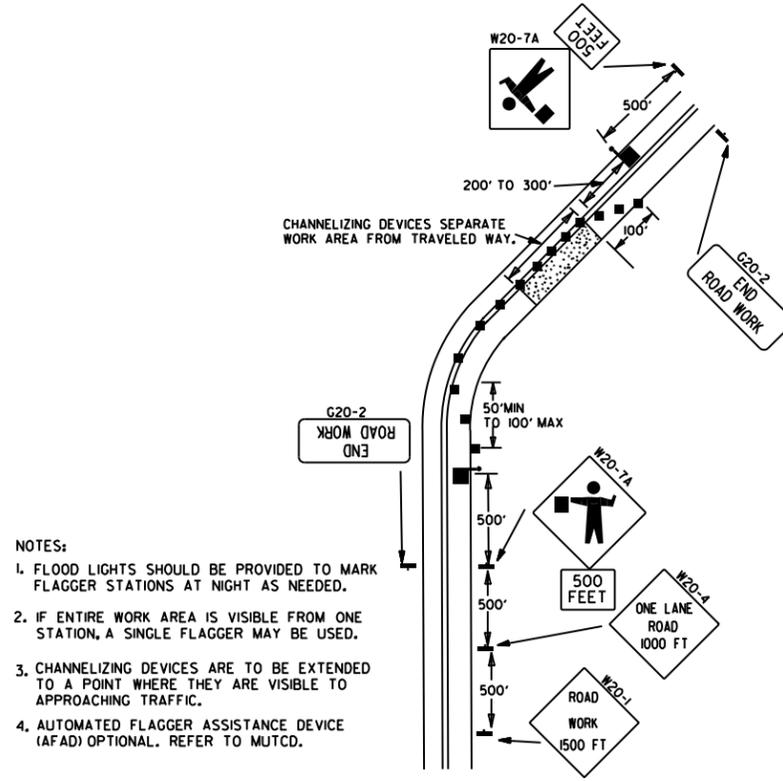


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

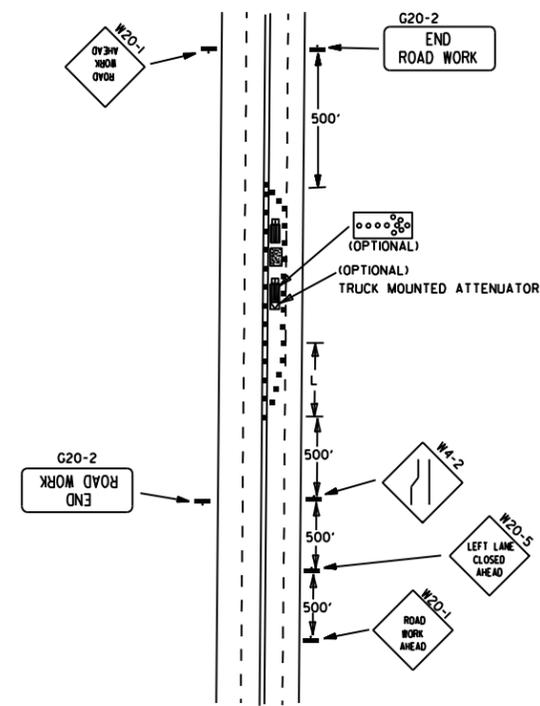


- NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

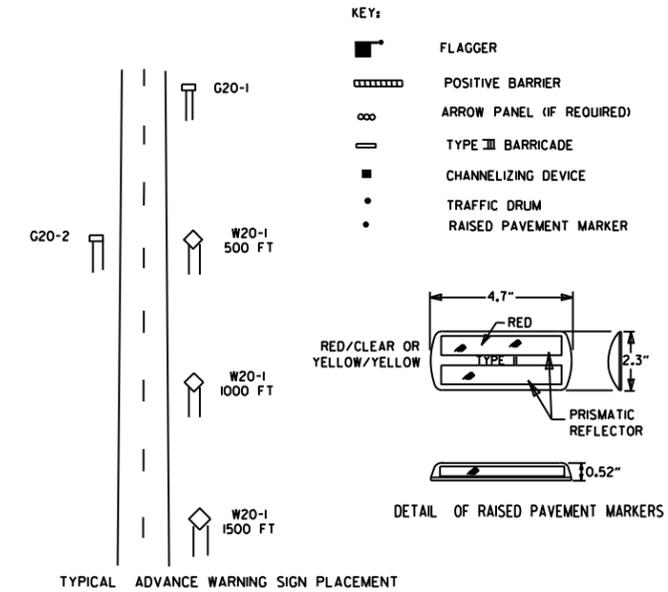
(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



(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.

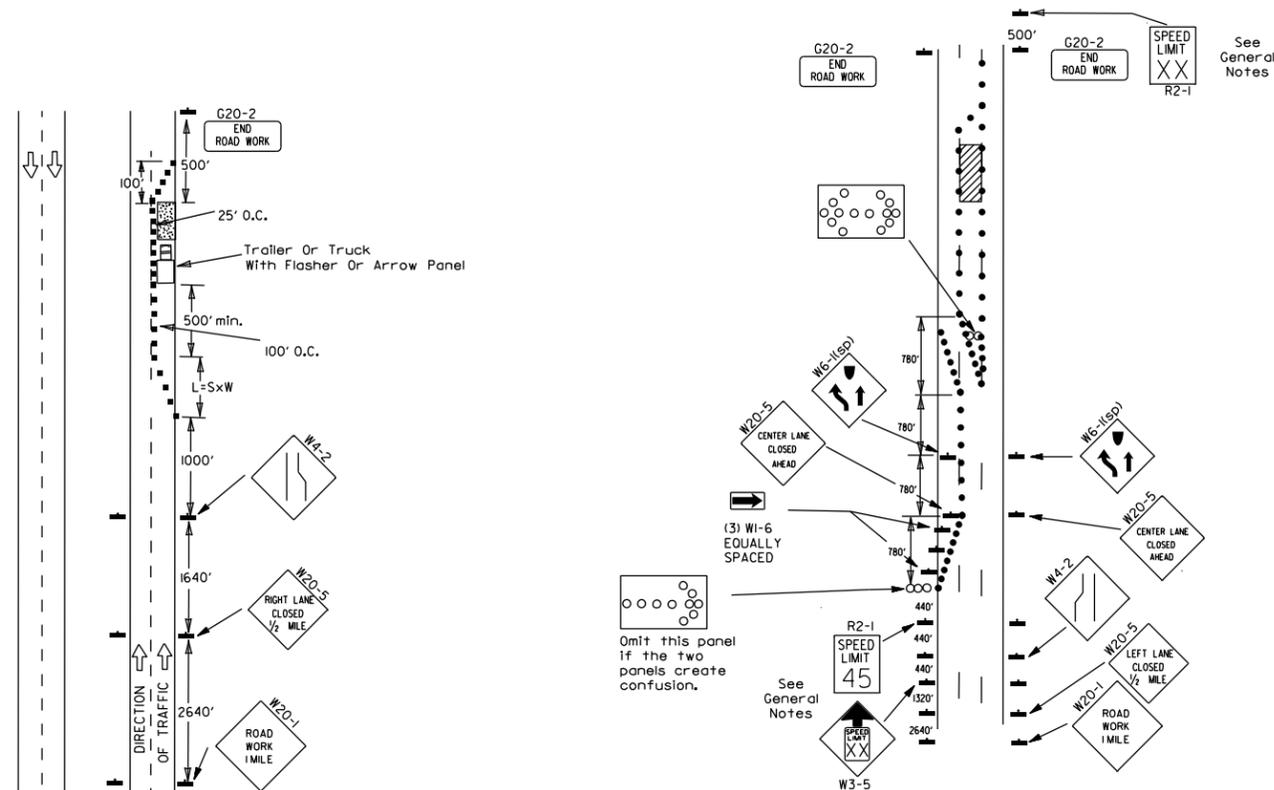


TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L= MINIMUM LENGTH OF TAPER.
 S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W= WIDTH OF OFFSET.

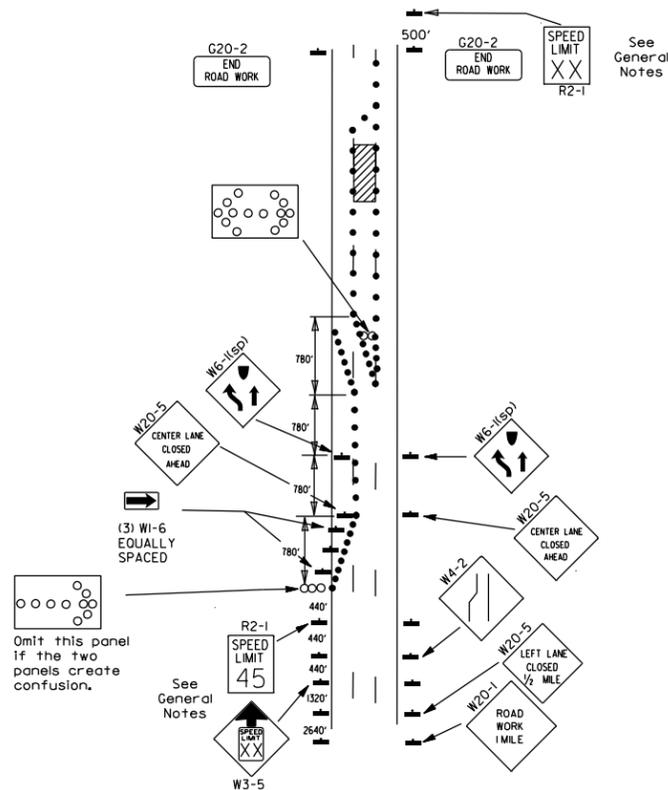
- GENERAL NOTES:
 1. ADVISORY SPEED POSTED ON WI-3 OR WI-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE, USE WI-4 WHEN SPEED IS GREATER THAN 30MPH AND WI-3 WHEN 30MPH OR LESS.
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(K55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(KXX) 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-(K65) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(KXX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER, REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	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 WI-4A	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

Channelizing devices



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

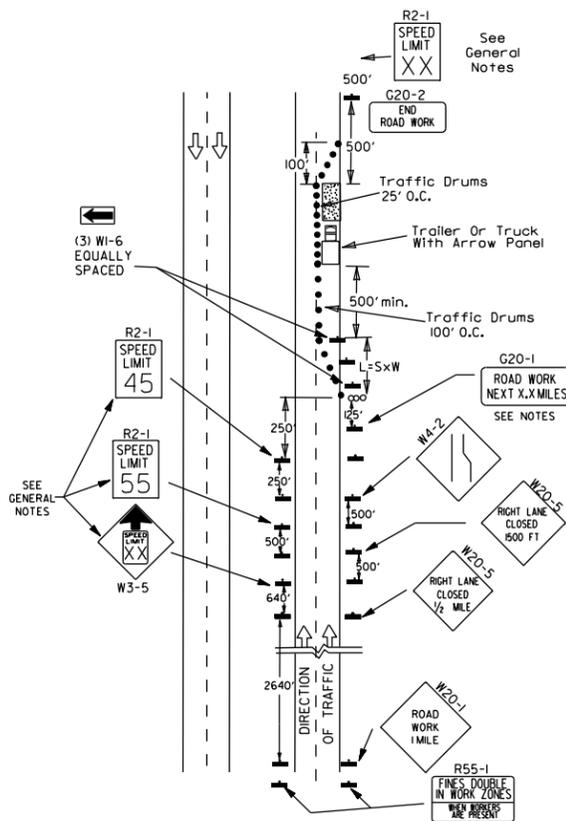


(B) Typical application - 3-lane one-way roadway where center lane is closed.

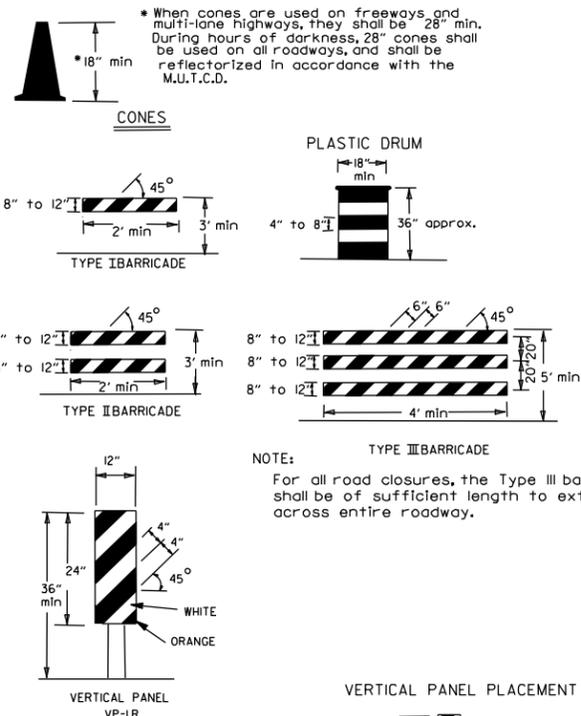
- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

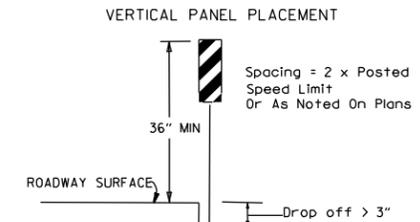
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1(45) speed limit signs shall be installed at a maximum of 1/2 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(65) shall be omitted. Additional R2-1(55) speed limit signs shall be installed at a maximum of 1/2 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(1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



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



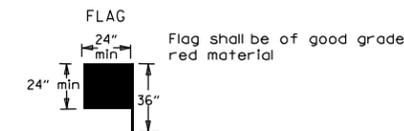
NOTE:
For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.



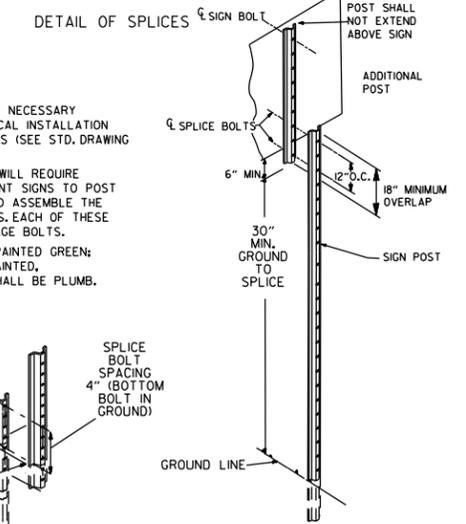
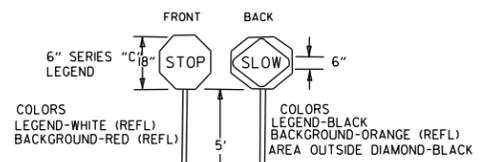
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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

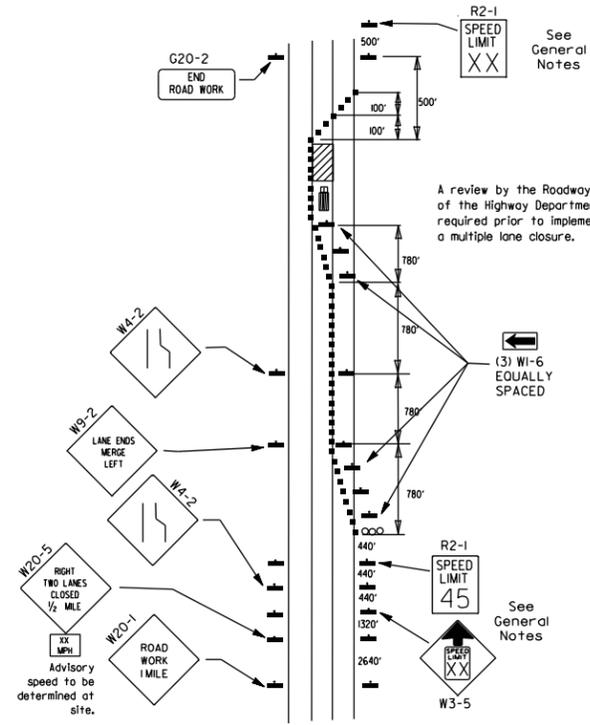
* When shown on the plans concrete barrier will be used.
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP SLOW PADDLE



- 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.

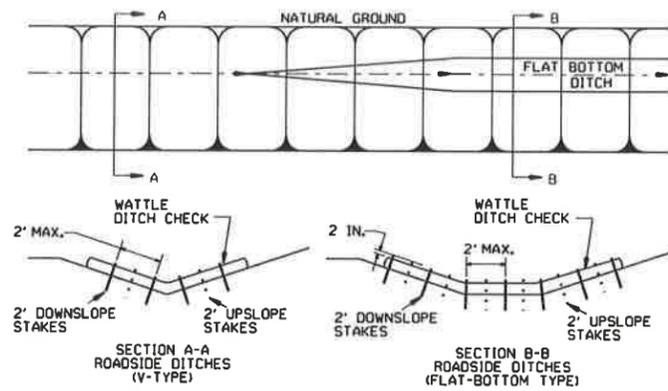


(D) Typical application - closing multiple lanes of a multi-lane highway.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

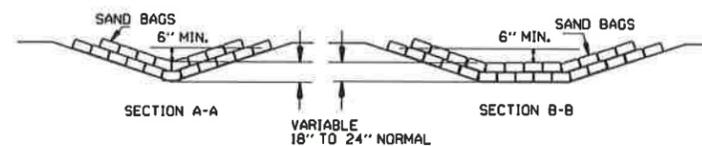
GENERAL NOTES

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

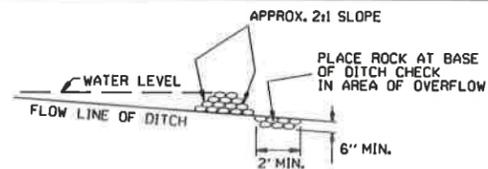


WATTLE DITCH CHECK (E-1)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW.

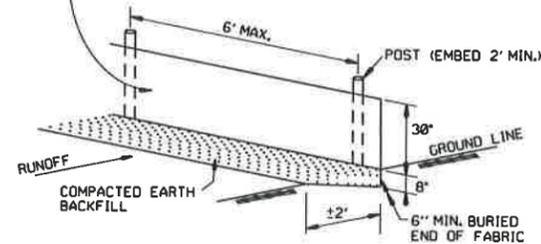


SAND BAG DITCH CHECK (E-5)

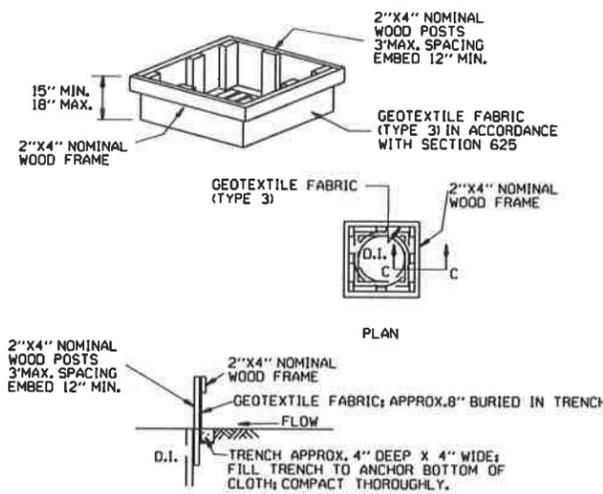


ROCK DITCH CHECK (E-6)

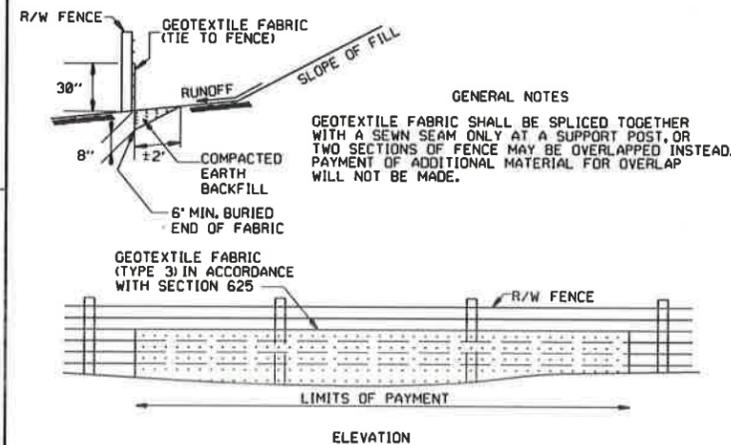
GENERAL NOTES
 GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625
 GEOTEXTILE FABRIC SHALL BE SPICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)

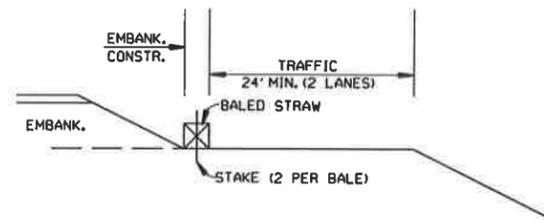


DROP INLET SILT FENCE (E-7)

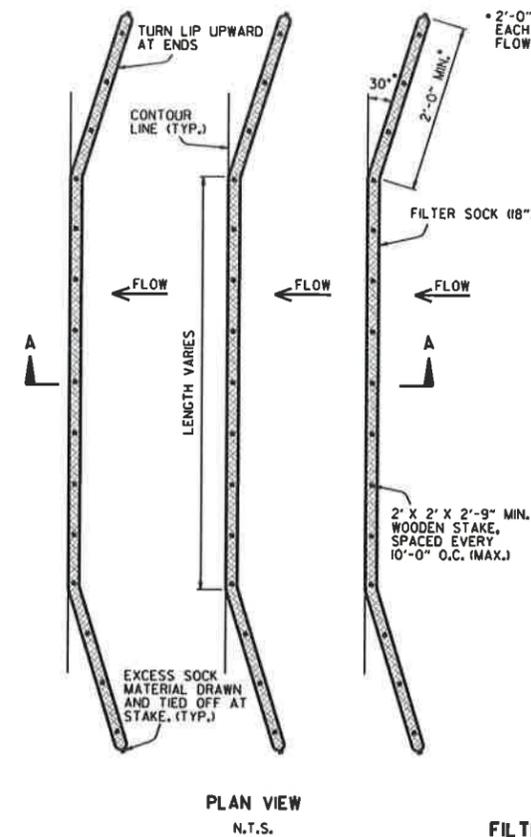


SILT FENCE ON R/W FENCE (E-4)

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



BALED STRAW FILTER BARRIER (E-2)

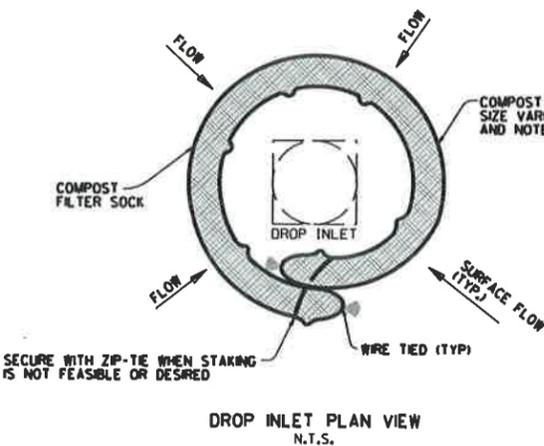


PLAN VIEW
N.T.S.

FILTER SOCK ALONG SLOPE (E-3)

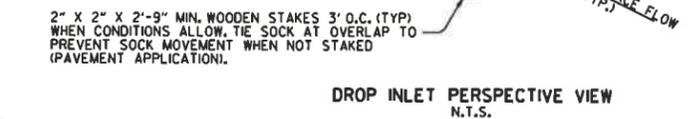
NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.
3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18")."
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.
5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.



DROP INLET PLAN VIEW
N.T.S.

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)



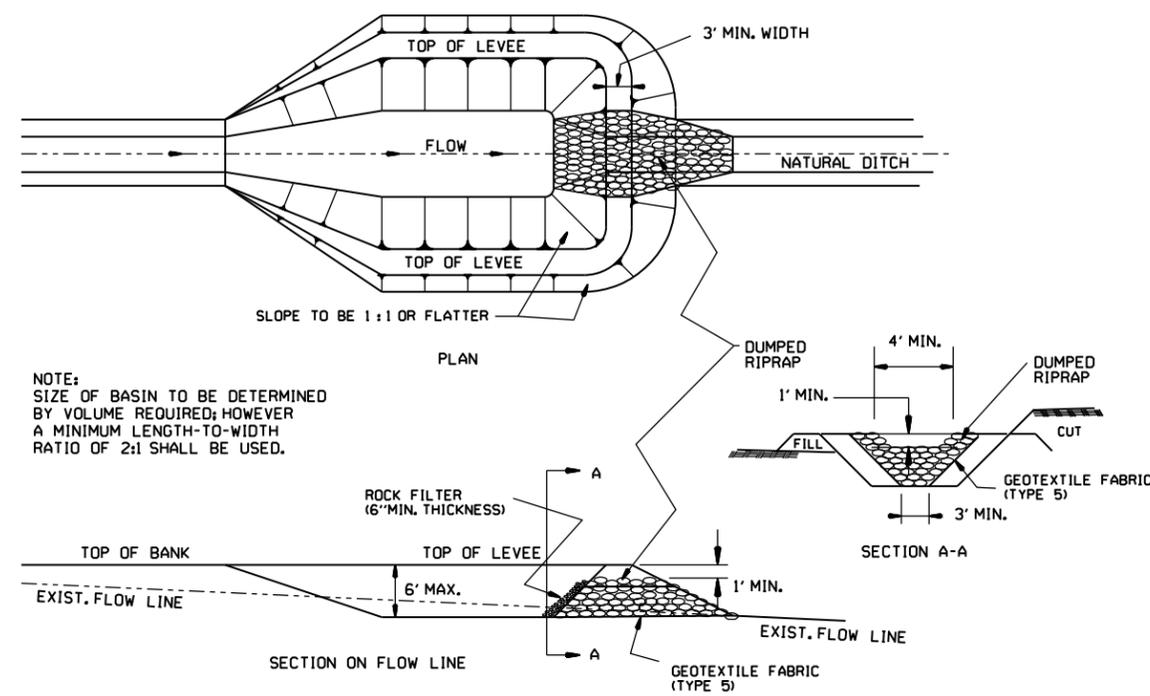
DROP INLET PERSPECTIVE VIEW
N.T.S.

NOTES:

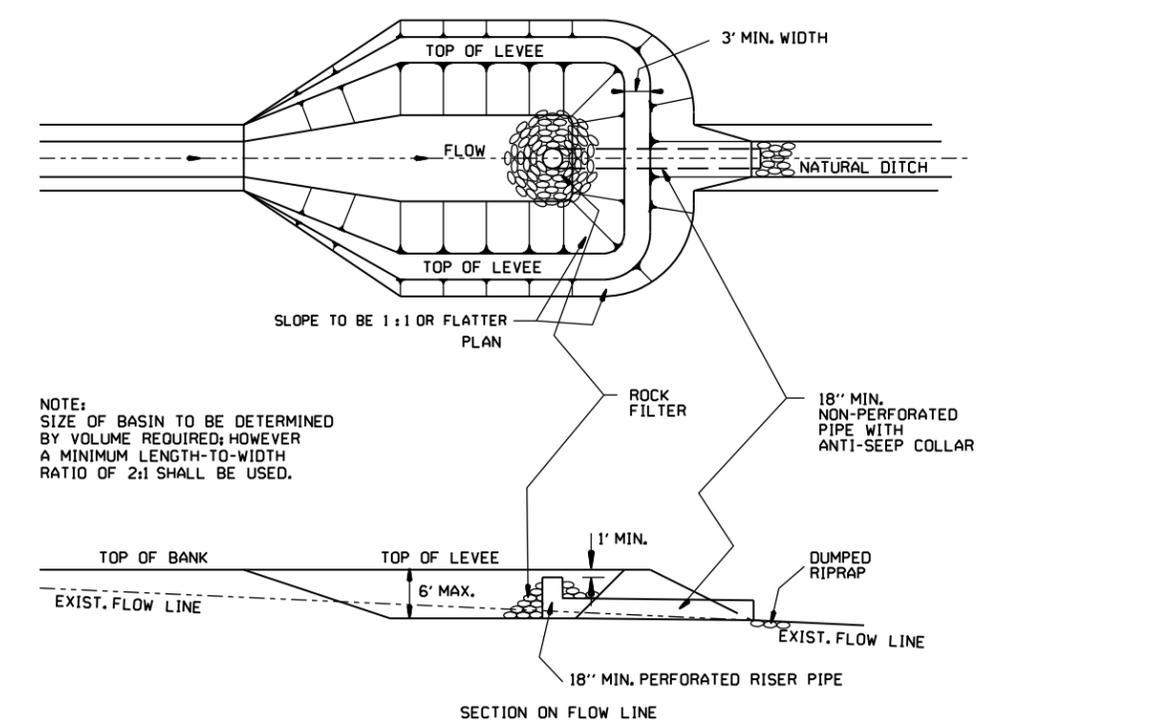
1. OVERLAP ENDS OF SOCK (1" MIN. 3" MAX.).
2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

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

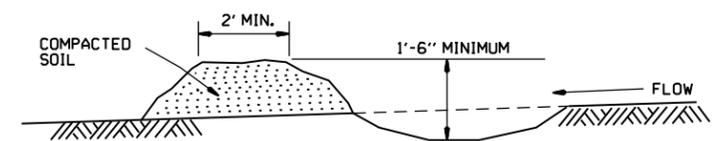
ARKANSAS STATE HIGHWAY COMMISSION
 TEMPORARY EROSION CONTROL DEVICES
 STANDARD DRAWING TEC-1



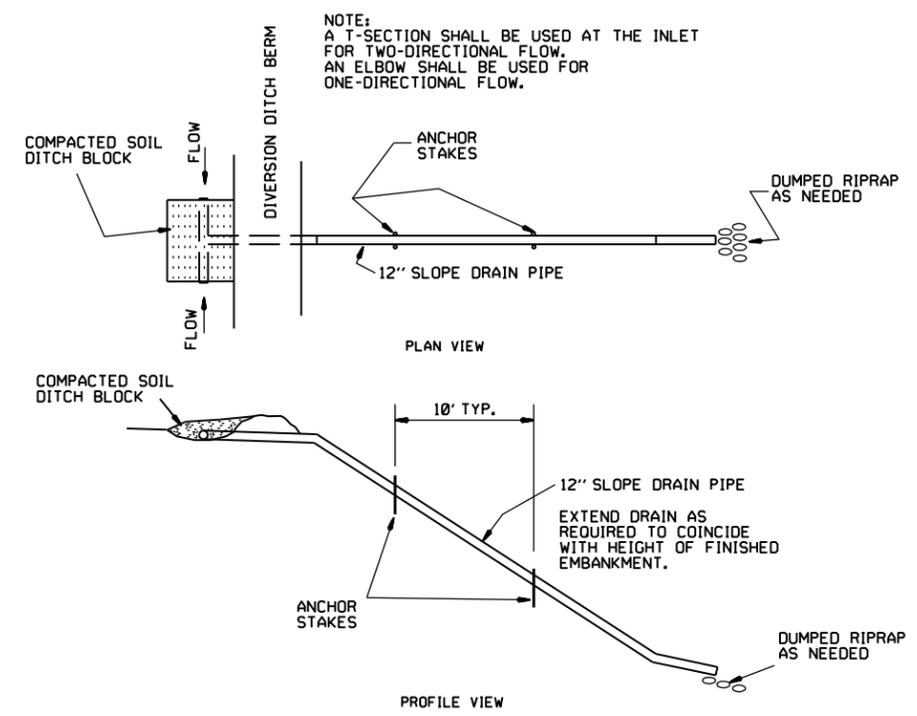
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



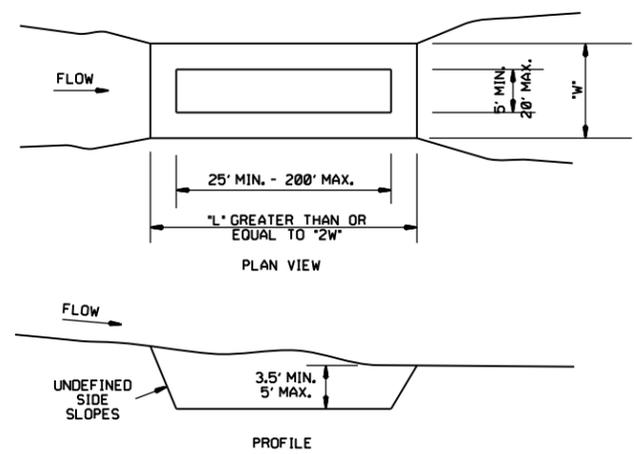
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

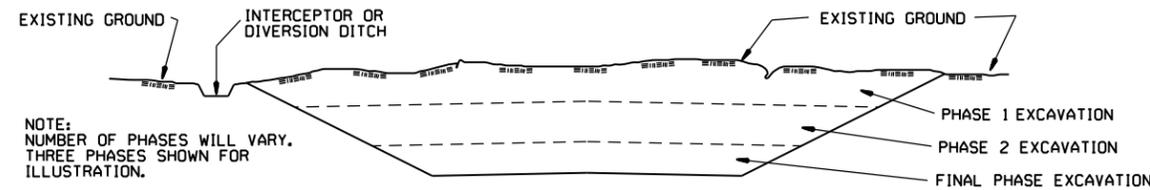
		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



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

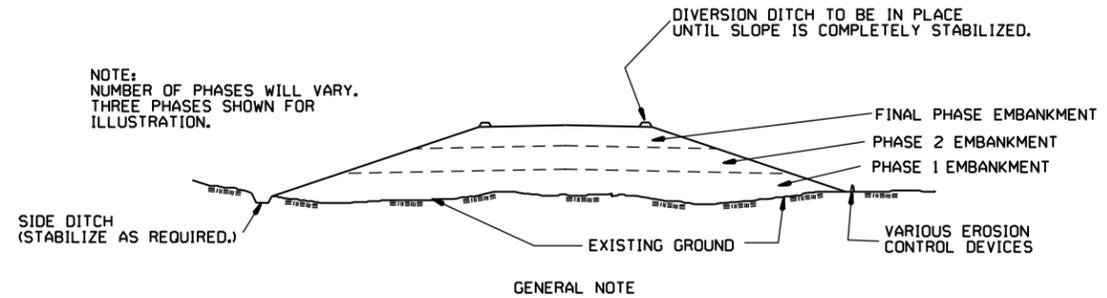
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



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

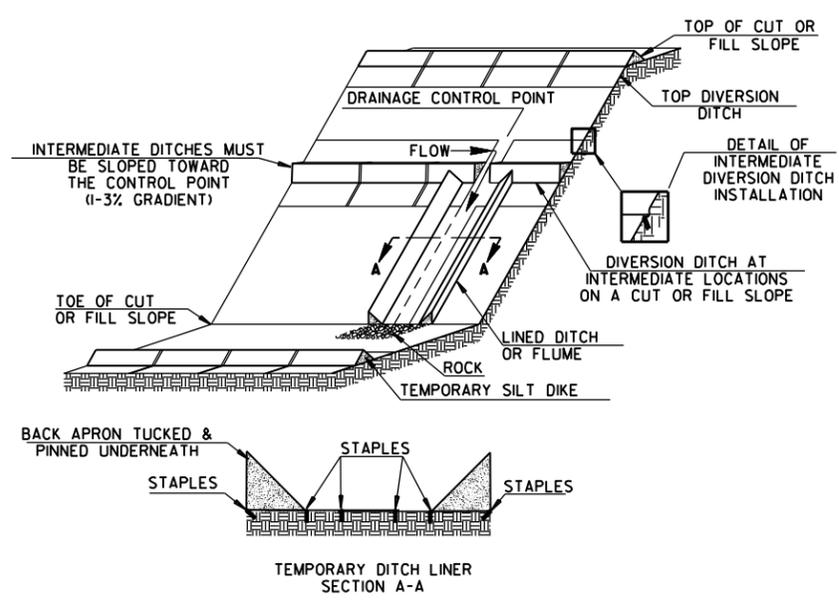
GENERAL NOTE

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

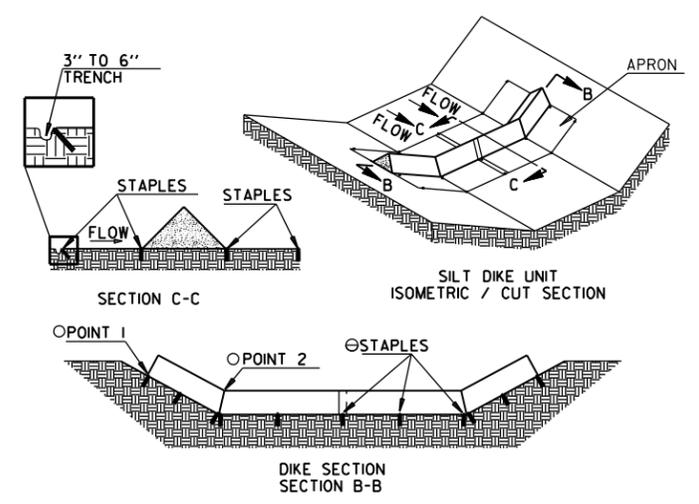
CONSTRUCTION SEQUENCE

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

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
11-03-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED
			STANDARD DRAWING TEC-3

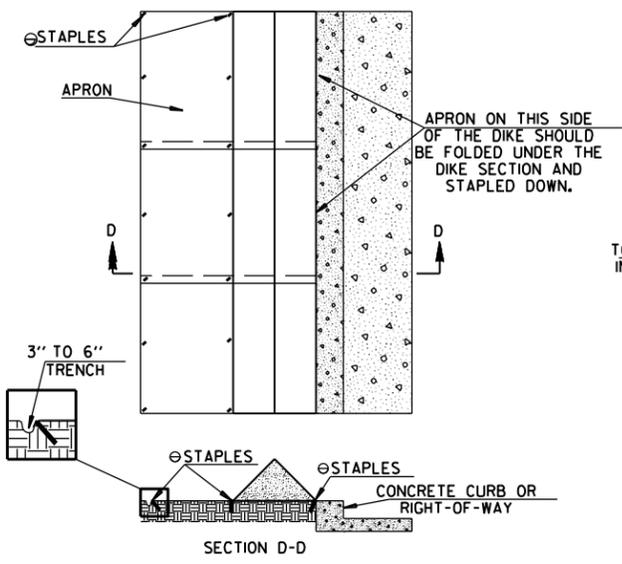


TRIANGULAR SILT DIKE INSTALLATION FOR DIVERSION DITCH AND/OR DITCH LINER

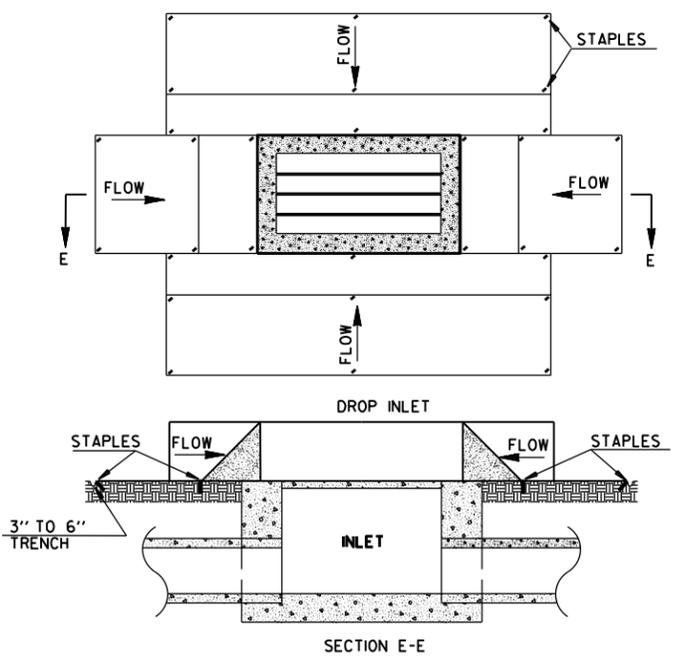


TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

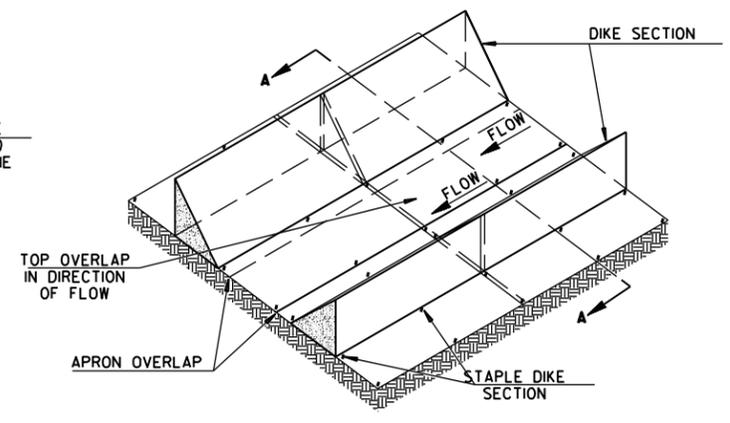
○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
⊗ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION FOR CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION FOR DROP INLETS

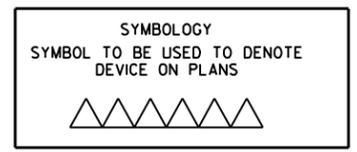


TRIANGULAR SILT DIKE INSTALLATION FOR TEMPORARY DITCH LINER

GENERAL NOTES

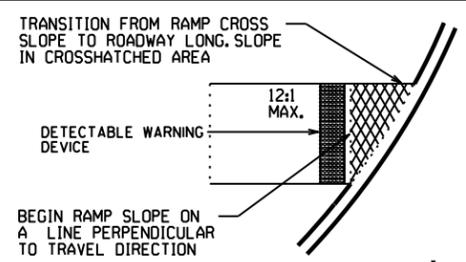
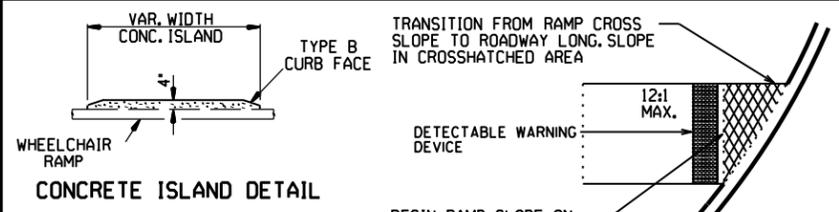
1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED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



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

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
7-26-12 12-15-11 DATE	REVISED GENERAL NOTE 2. ISSUED	REVISION	FILMED
			STANDARD DRAWING TEC-4

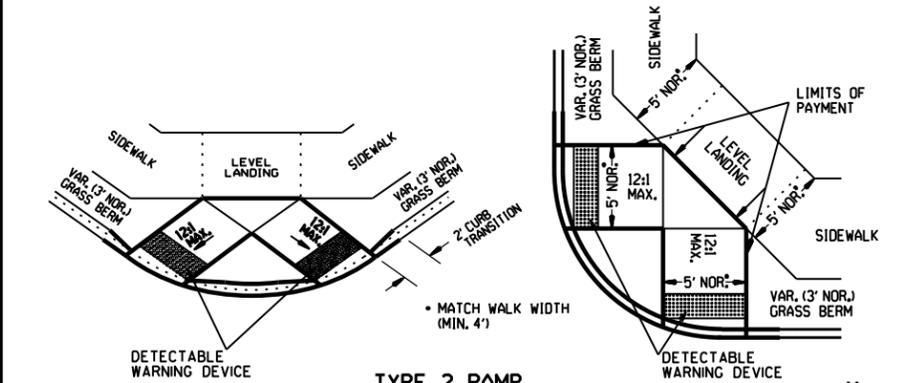
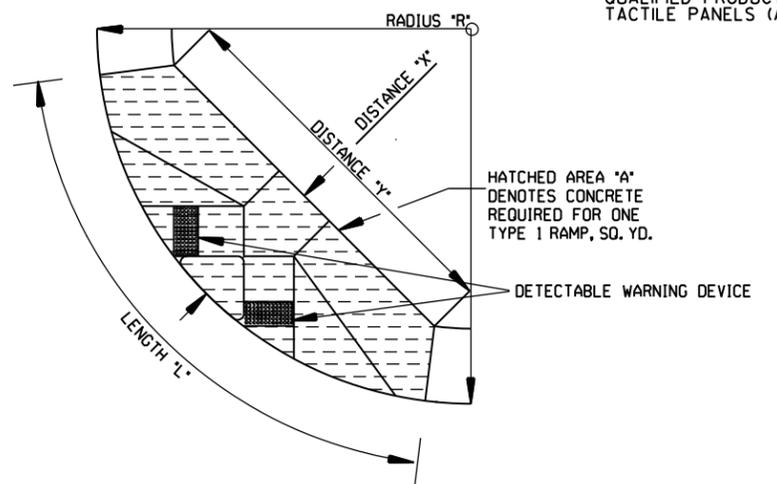
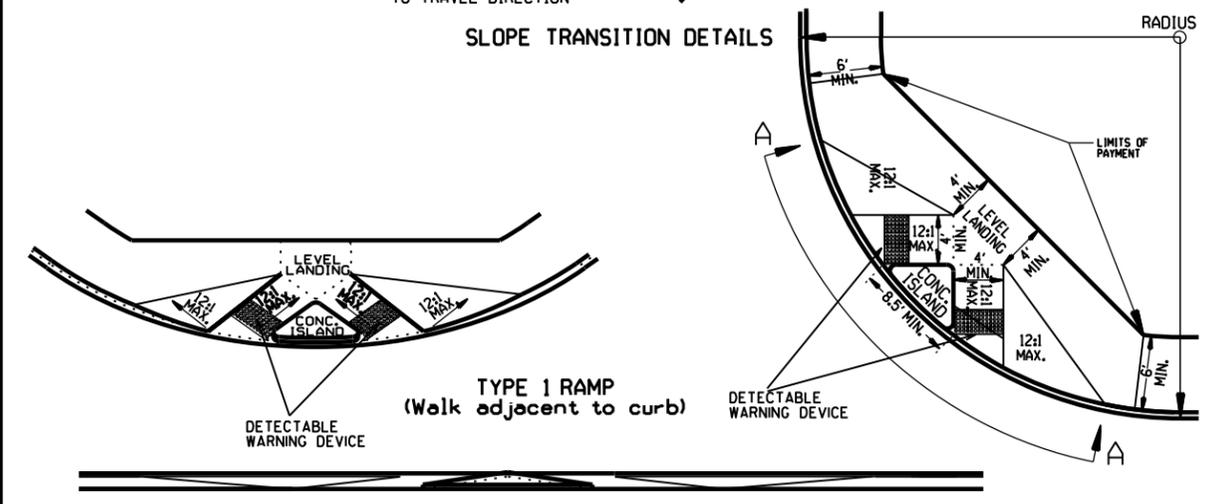
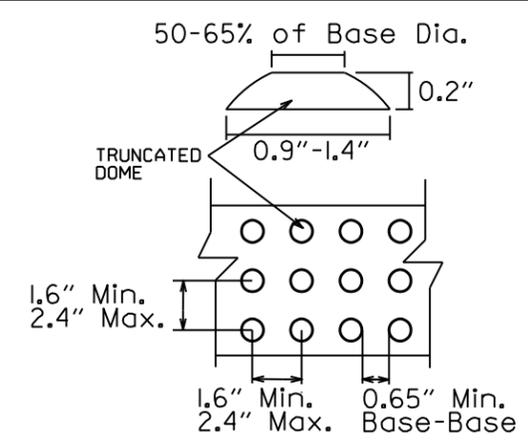


TYPE 1 RAMP DIMENSIONS AND QUANTITIES

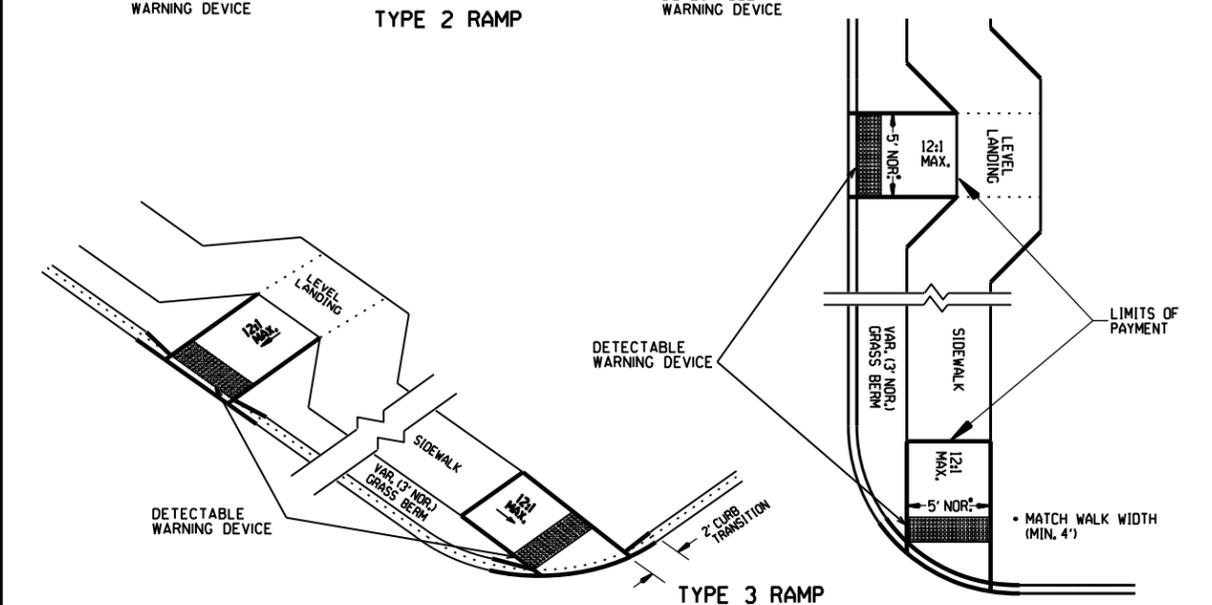
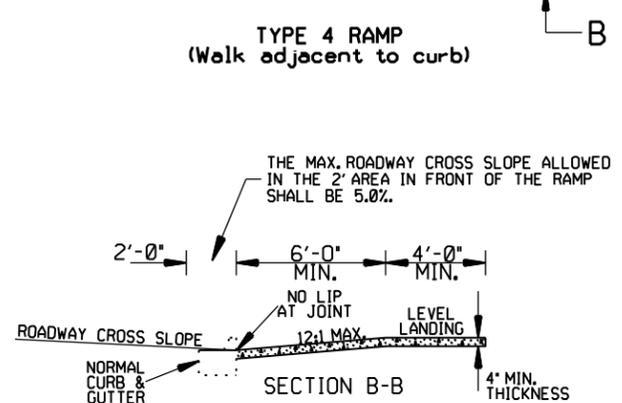
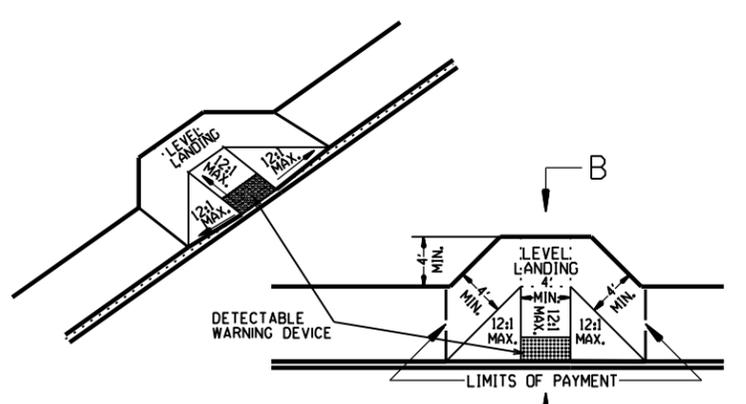
RADIUS "R"	DISTANCE "X"	DISTANCE "Y"	LENGTH "L"	RAMP AREA "A"
FEET	FEET	FEET	FEET	SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35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



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

RAMP SELECTION CRITERIA

CHOICE	TYPE	LOCATION
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
1-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD SLOPE TRANS. & REV. ISL. DIMS.	
1-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM 8:1 TO 12:1 MAX. SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCL. "CONC. ISLD." IN PAY ITEM	-----
6-02-76	ISSUED-P.H.D.	299-7-28-76
DATE	REVISION	DATE FILM

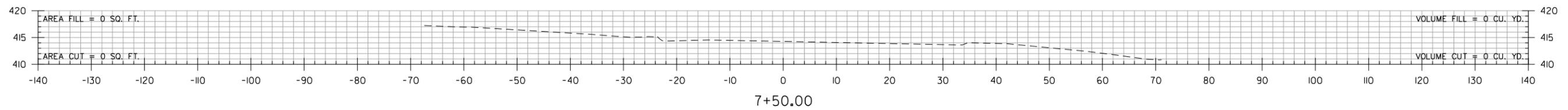
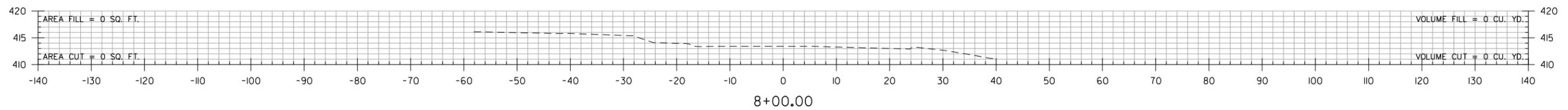
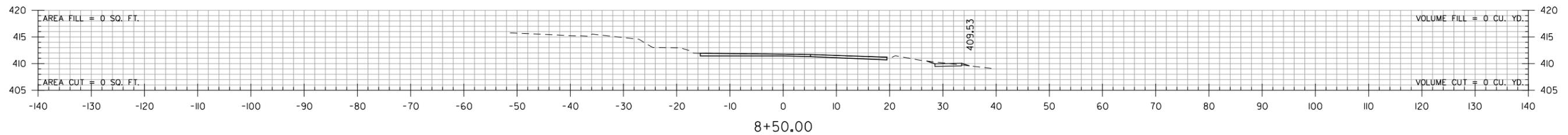
ARKANSAS STATE HIGHWAY COMMISSION

**WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS**

STANDARD DRAWING WR-1



STA. 8+75 BEGIN JOB 061295
MARYLAND AVE. (WEST)



STA. 7+50 TO STA. 8+85

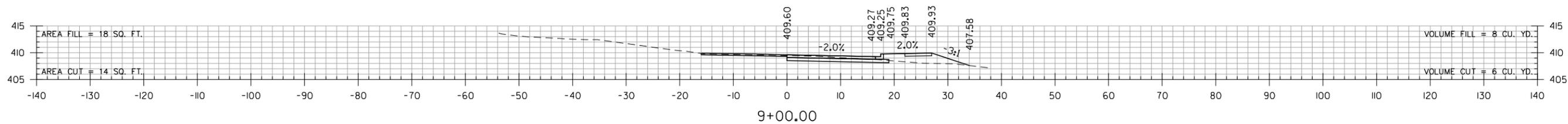
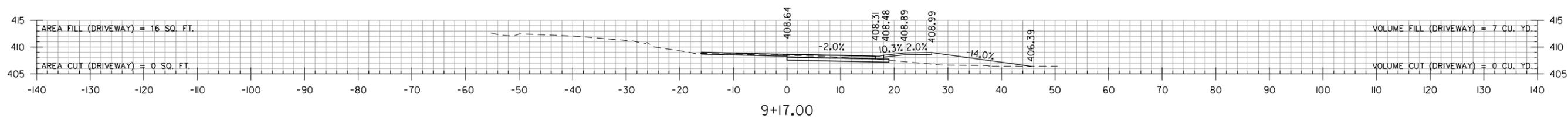
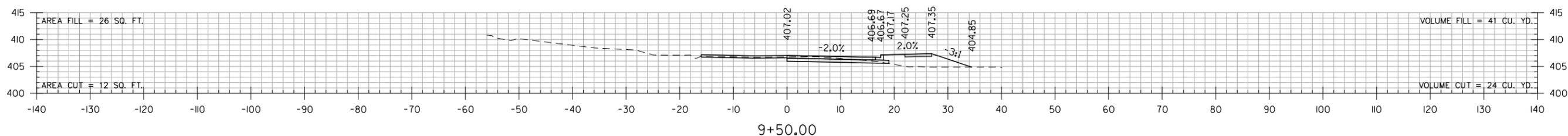
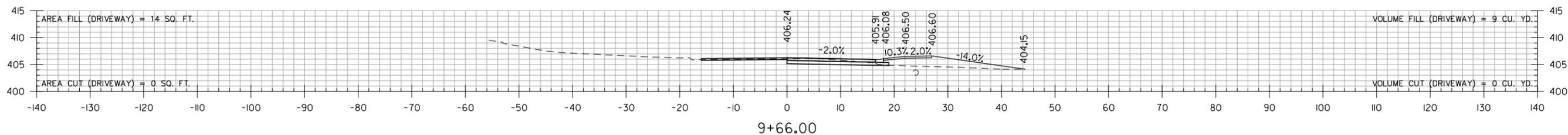
REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS
JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER
SHEET NUMBER **57**



STA. 9+00 TO STA. 9+66

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

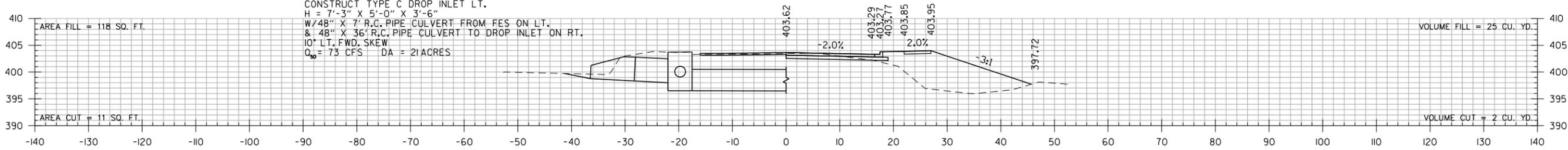
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DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **58**



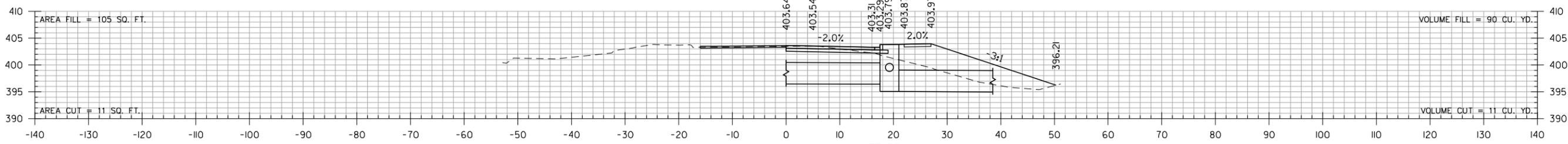
STA. 10+82 IN PLACE
 24" X 10' RCP CULVERT, DROP INLET LT.
 & 34" X 42' RCP CULVERT - REMOVE
 24" X 144' RCP CULVERT FROM WEST - RETAIN
 CONSTRUCT TYPE C DROP INLET LT.
 H = 7'-3" X 5'-0" X 3'-6"
 W/ 48" X 7' R.C. PIPE CULVERT FROM FES ON LT.
 & 48" X 36' R.C. PIPE CULVERT TO DROP INLET ON RT.
 10' LT. FWD. SKEW
 Q₅₀ = 73 CFS DA = 21 ACRES



10+83 LT.
 48' FES
 INV. = 398.75

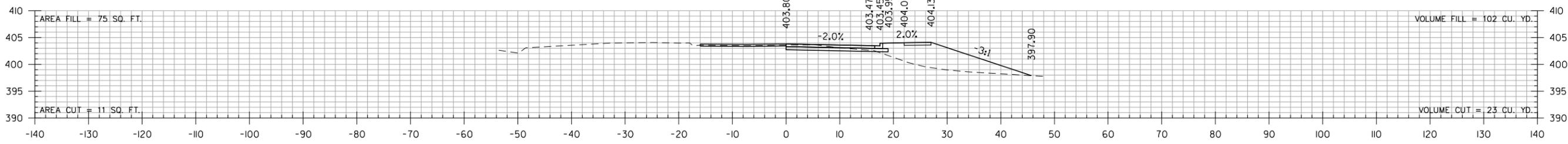
10+83 LT.
 TOP = 403.77
 INV. = 399.07 WEST (RETAIN EXISTING)
 INV. = 398.00 NORTH
 INV. = 396.52 SOUTH

STA. 10+77 CONSTRUCT
 TYPE C DROP INLET W/ 8' EXT. ON RT.
 H = 8'-9" X 5'-0" X 2'-6"
 W/ 48" X 25' R.C. PIPE
 CULVERT TO FES ON RT.
 9' LT. FWD SKEW



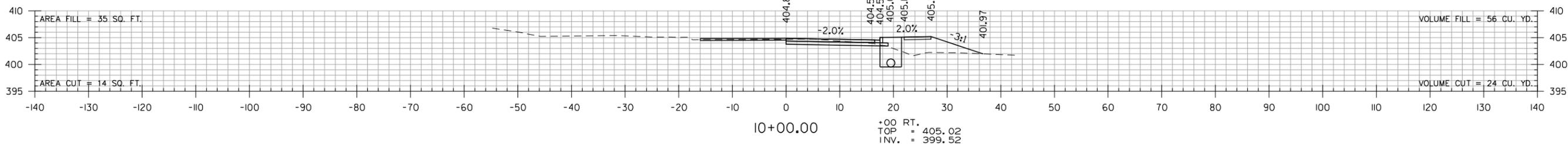
10+77 RT.
 TOP = 403.79
 INV. = 398.80 WEST
 INV. = 396.40 NORTH
 INV. = 395.04 SOUTH

10+72 RT.
 48' FES
 INV. = 394.97



10+50.00

STA. 10+00 CONSTRUCT
 DROP INLET W/ 8' EXT. ON RT.
 H = 5'-6" W/ 18" X 73' PIPE
 CULVERT TO DROP INLET ON RT.
 TYPE M0 INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



10+00 RT.
 TOP = 405.02
 INV. = 399.52

STA. 10+00 TO STA. 10+83

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

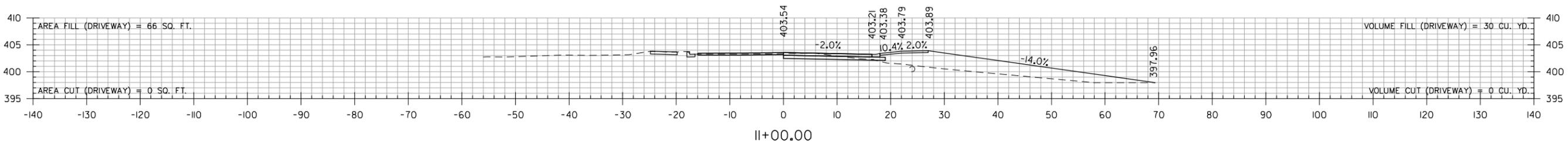
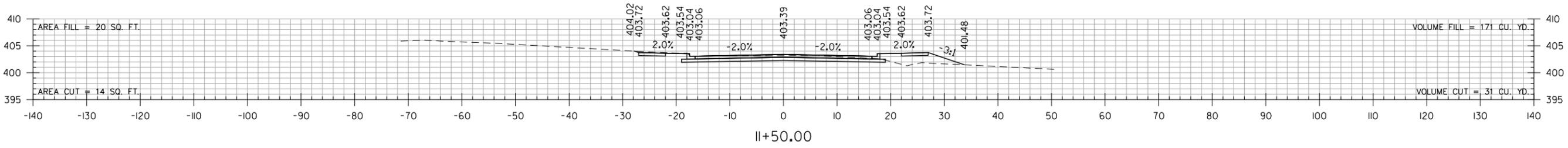
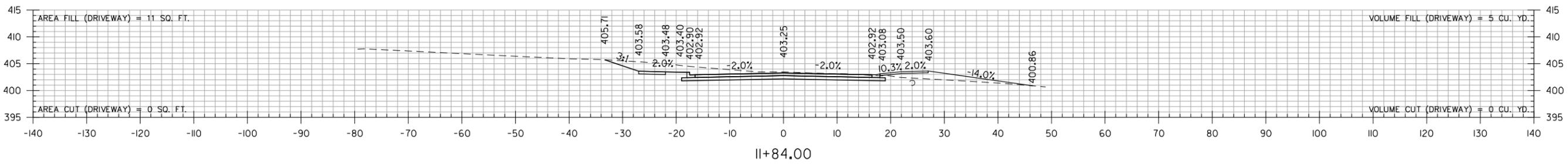
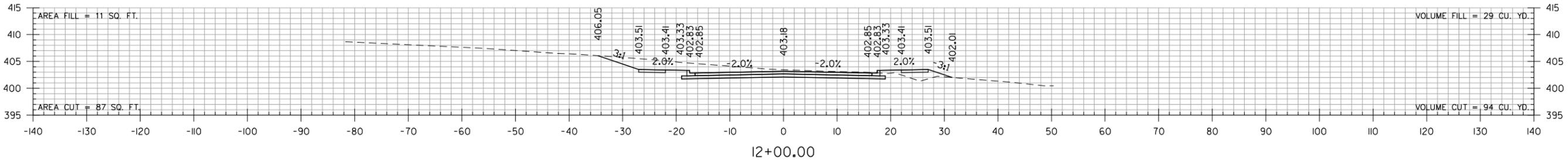
MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **59**



STA. 11+00 TO STA. 12+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

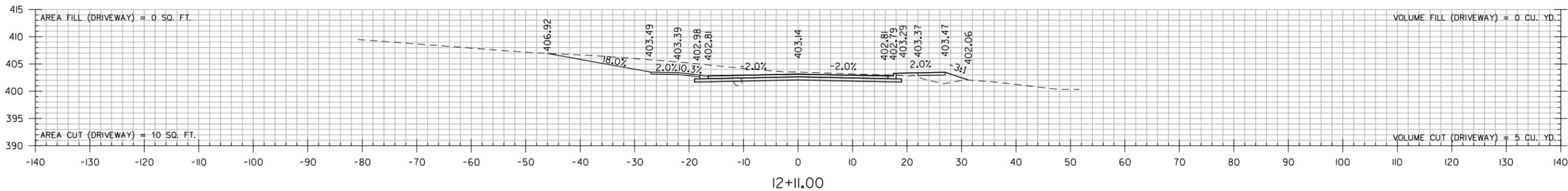
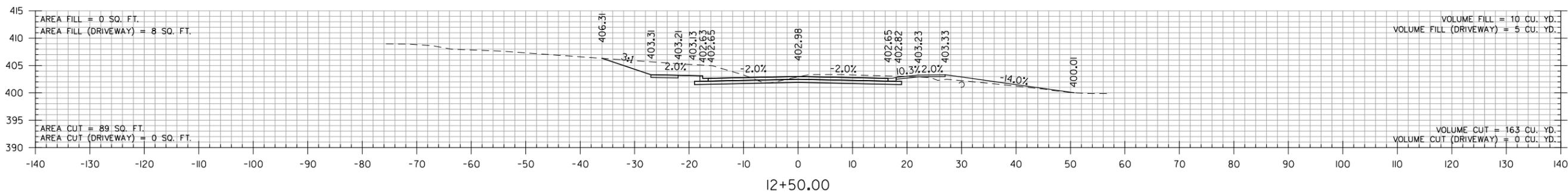
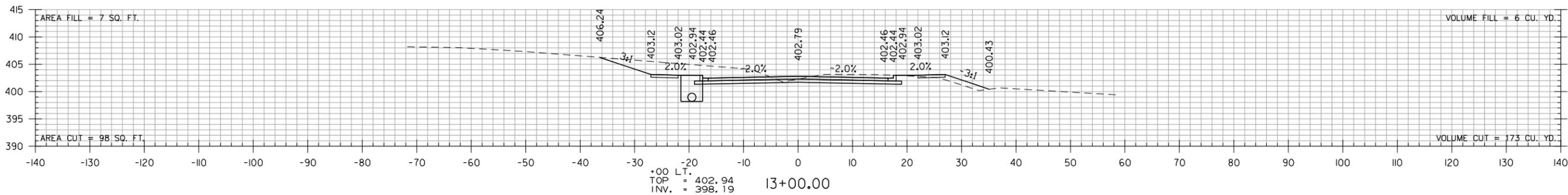
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DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **60**

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STA. 13+00 CONSTRUCT
 DROP INLET W/ 4' EXT. ON LT.
 H = 4'-9" W/18" X 100' PIPE
 CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 12+11 TO STA. 13+00

REV.	DATE	DESCRIPTION	BY



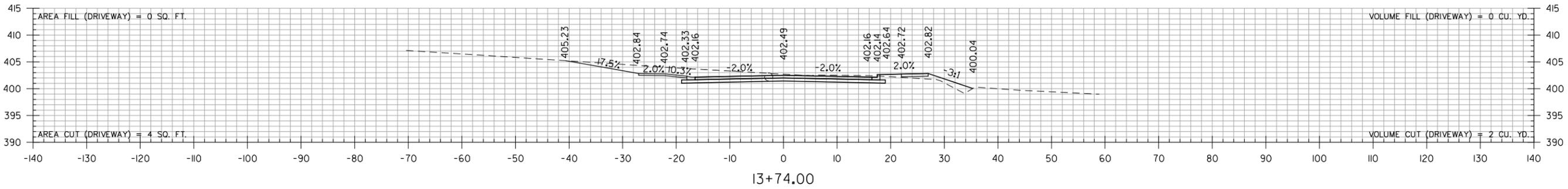
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

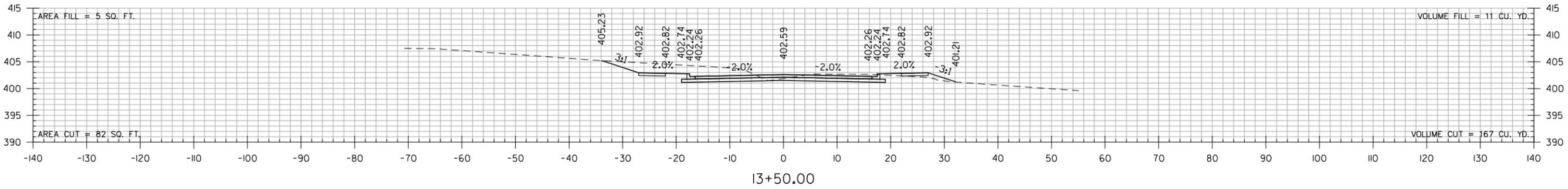
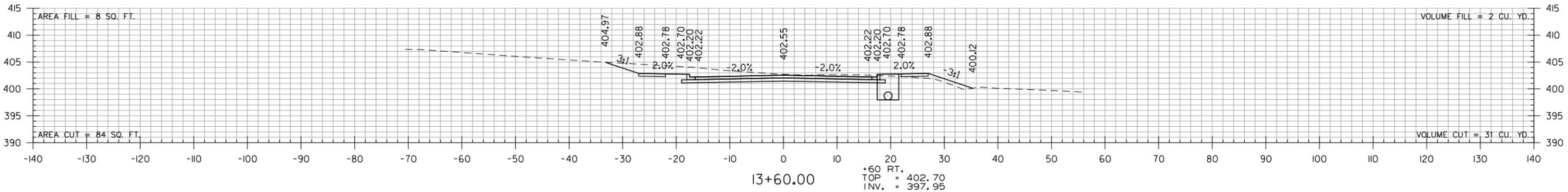
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 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **61**



STA. 13+60 CONSTRUCT
 DROP INLET W/ 8' EXT. ON RT.
 H = 4'-9" W/18" X 97' PIPE
 CULVERT TO DROP INLET ON RT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 13+50 TO STA. 13+74

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REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

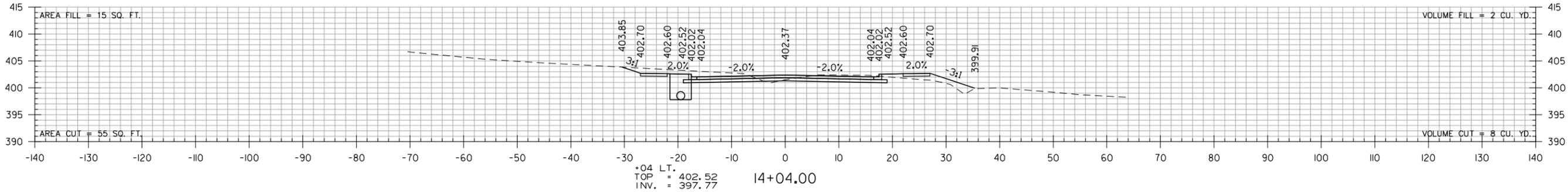
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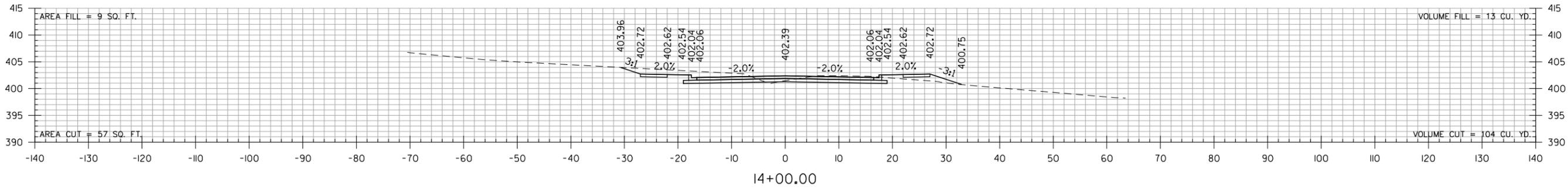
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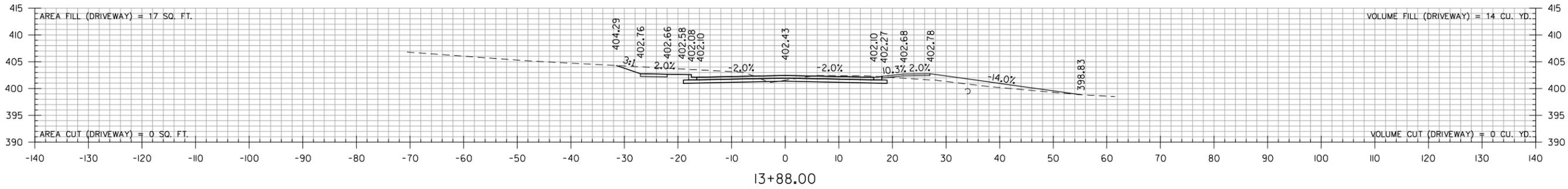
STA. 14+04 CONSTRUCT
 DROP INLET W/ 4' EXT. ON LT.
 H = 4'-9" W/18" X 53' PIPE
 CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+04 LT.
 TOP = 402.52
 INV. = 397.77
 14+04.00



14+00.00



13+88.00

STA. 13+88 TO STA. 14+04

REV.	DATE	DESCRIPTION	BY



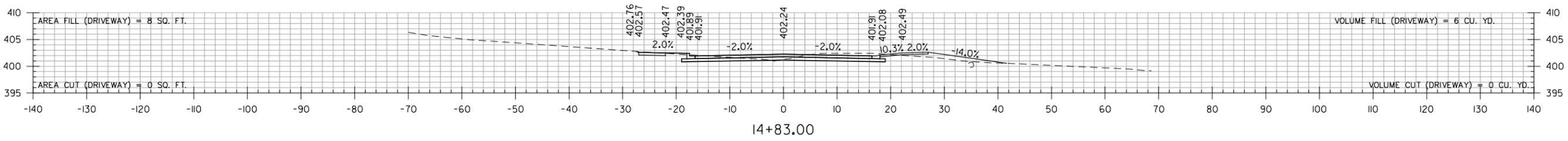
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

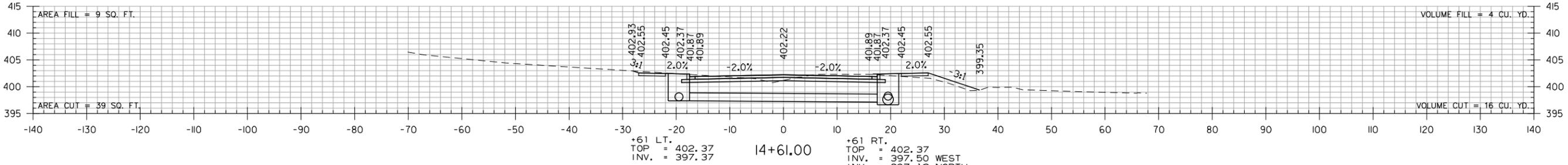
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SHEET NUMBER **63**



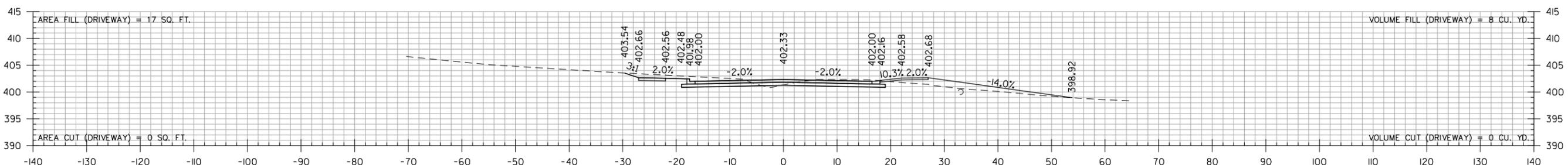
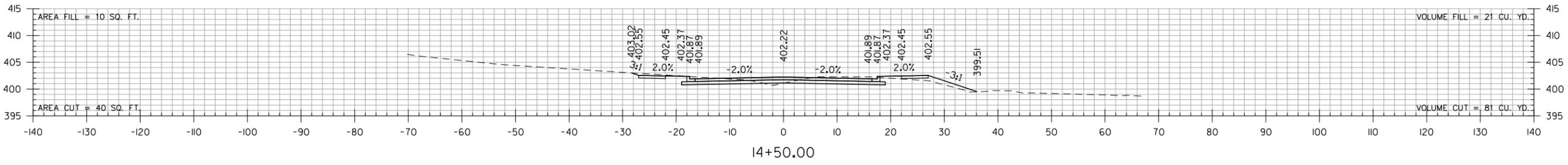
STA. 14+61 CONSTRUCT
 DROP INLET W/ DUAL 4' EXTS. ON LT.
 H = 5'-0" W/18" X 36' R.C. PIPE
 CULVERT TO DROP INLET ON RT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 14+61 CONSTRUCT
 DROP INLET W/ 4' EXT. ON RT.
 H = 5'-9" W/24" X 4' R.C. PIPE
 CULVERT TO BOX CULVERT ON RT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+61 LT.
 TOP = 402.37
 INV. = 397.37

+61 RT.
 TOP = 402.37
 INV. = 397.50 WEST
 INV. = 397.12 NORTH
 INV. = 396.62 EAST



STA. 14+15 TO STA. 14+83

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

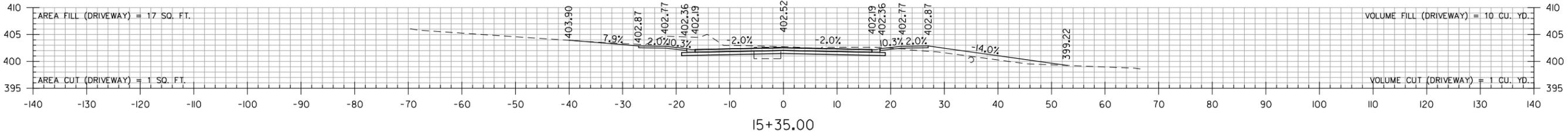
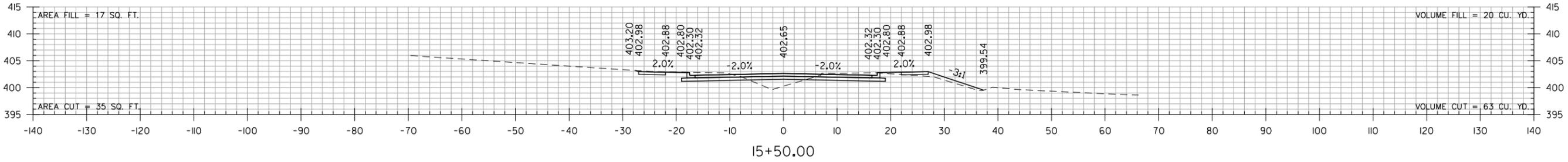
MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

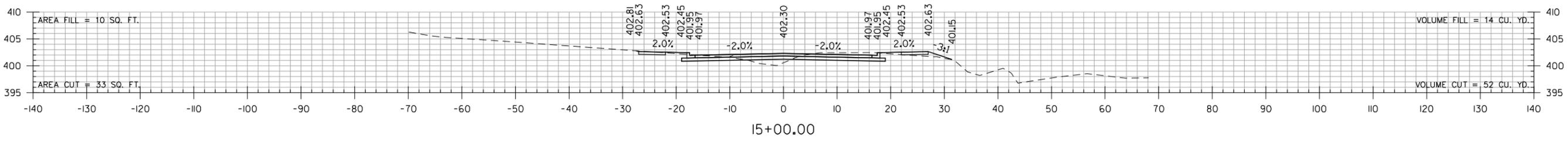
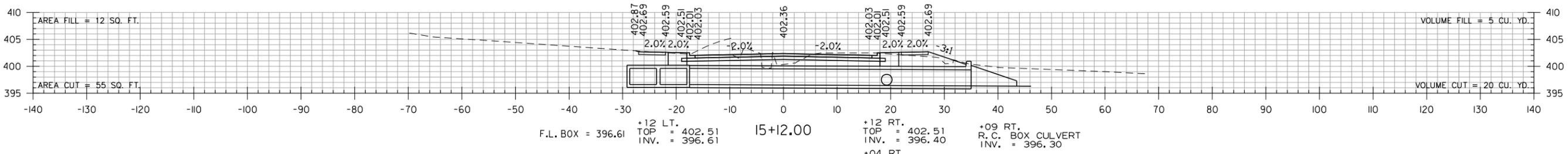
SHEET NUMBER **64**



STA. 15+12 CONSTRUCT
DROP INLET W/ 4' EXT. ON LT.
H = 2'-4"
CONSTRUCT ON NEW R.C. BOX CULVERT
TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 15+12 CONSTRUCT
DROP INLET ON RT.
H = 2'-6"
CONSTRUCT ON NEW R.C. BOX CULVERT
TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 17+41, 35' LT. TO STA. 15+09, 35' RT.
CONSTRUCT DBL. 5' X 3' X 302'
PRECAST R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
Q₅₀ = 172 CFS DA = 84 ACRES



STA. 15+00 TO STA. 15+50

REV.	DATE	DESCRIPTION	BY



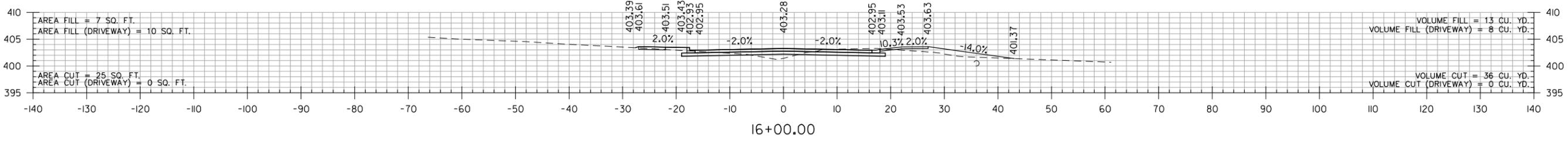
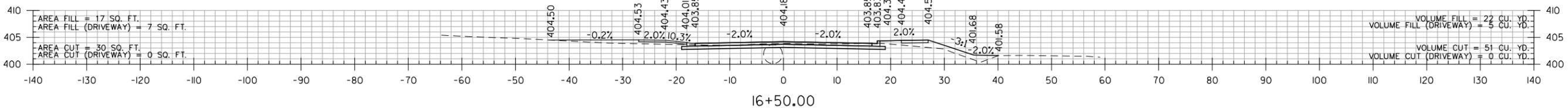
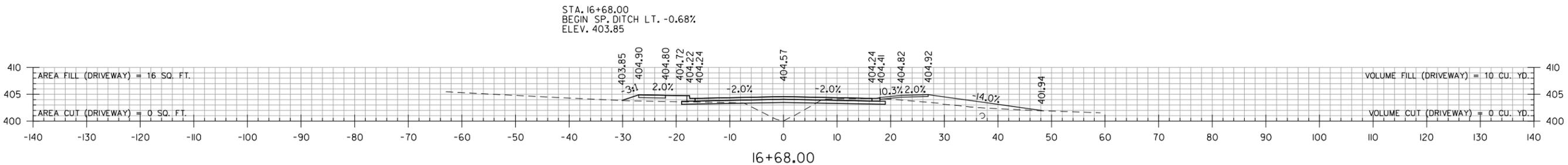
CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **65**



STA. 15+65 CONSTRUCT
DROP INLET W/ 8' EXT. ON LT.
H = 2'-7"

CONSTRUCT ON NEW R.C. BOX CULVERT
TYPE C DROP INLET = 4'-0" X 2'-6"

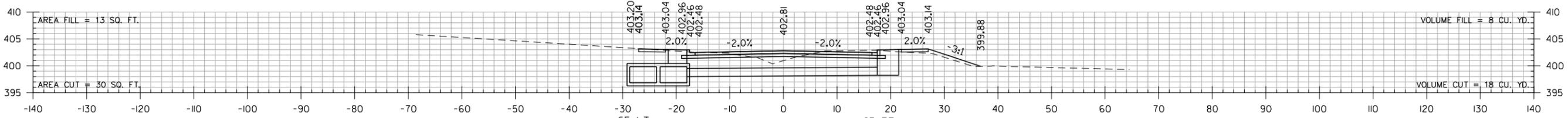
STA. 15+65 CONSTRUCT
DROP INLET W/ 4' EXT. ON RT.
H = 4'-9" W/ 18" X 36" R.C. PIPE
CULVERT TO BOX CULVERT ON LT.
TYPE MO INLET = 4' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"

F.L. BOX = 396.82

+65 LT.
TOP = 402.96
INV. = 398.00 SOUTH
INV. = 396.82 EAST, WEST

15+65.00

+65 RT.
TOP = 402.96
INV. = 398.21



STA. 15+65 TO STA. 16+68

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

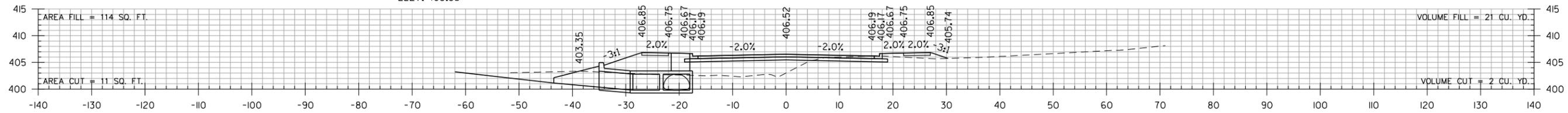
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STA. 17+41, 35' LT. TO STA. 15+09, 35' RT.
 CONSTRUCT DBL. 5' X 3' X 302'
 PRECAST R.C. BOX CULVERT
 WITH 3^d WINGS LT. & RT.
 Q₅₀ = 172 CFS DA = 84 ACRES

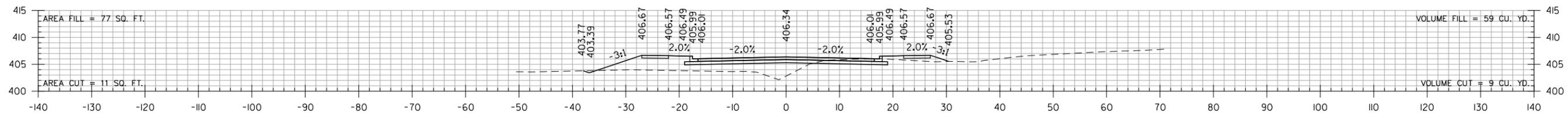
STA. 17+41 CONSTRUCT
 DROP INLET W/ 4' EXT. ON LT.
 H = 3'-3"
 CONSTRUCT ON NEW R.C. BOX CULVERT
 TYPE C DROP INLET = 4'-0" X 2'-6"



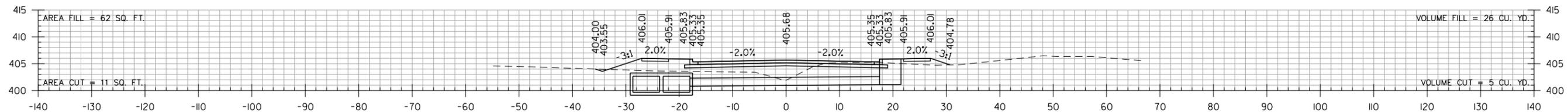
+41 LT.
 R.C. BOX CULVERT
 INV. = 401.12

+41 LT.
 TOP = 406.67
 INV. = 399.80

+46 LT.
 TIE IN TO R.C.
 BOX CULVERT
 INV. = 399.80

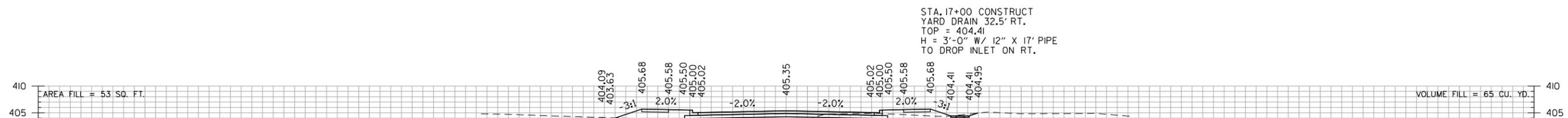


STA. 17+12 CONSTRUCT
 DROP INLET W/ 8' EXT. ON RT.
 H = 4'-9" W/ 18" X 36' R.C. PIPE
 CULVERT TO BOX CULVERT ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+12 LT.
 INV. = 400.80

+12 RT.
 TOP = 405.83
 INV. = 401.08



STA. 17+00 CONSTRUCT
 YARD DRAIN 32.5' RT.
 TOP = 404.41
 H = 3'-0" W/ 12" X 17' PIPE
 TO DROP INLET ON RT.

+00 RT.
 TOP = 404.41
 INV. = 401.41

STA. 17+00 TO STA. 17+41

12/19/2016 8:03:52 AM
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REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

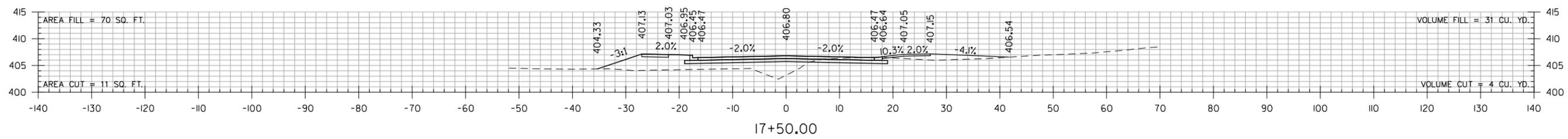
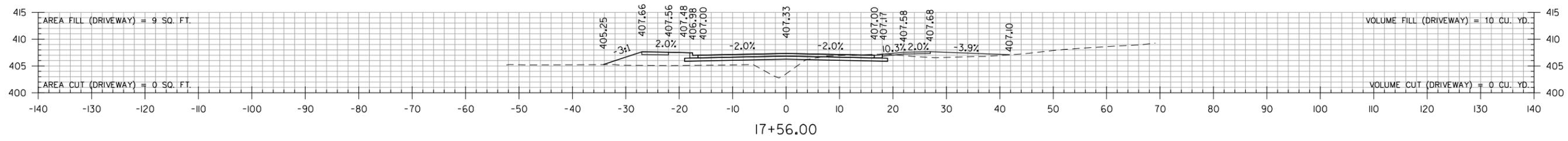
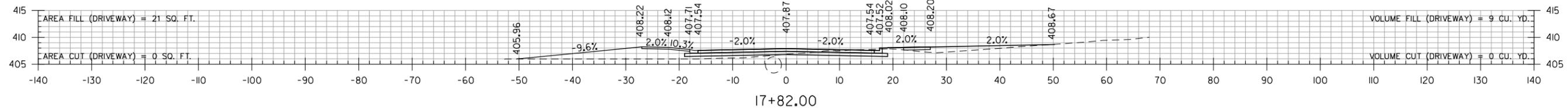
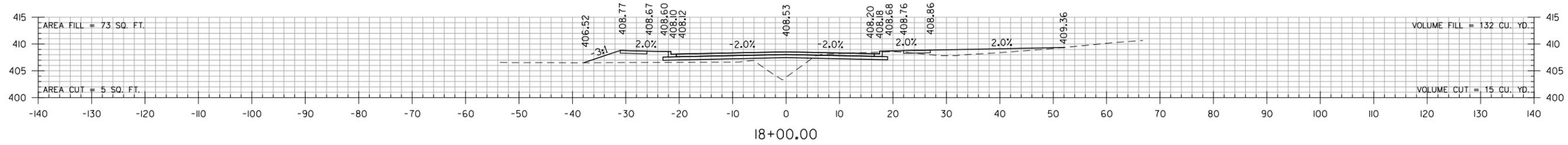
MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **67**



STA. 17+50 TO STA. 18+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

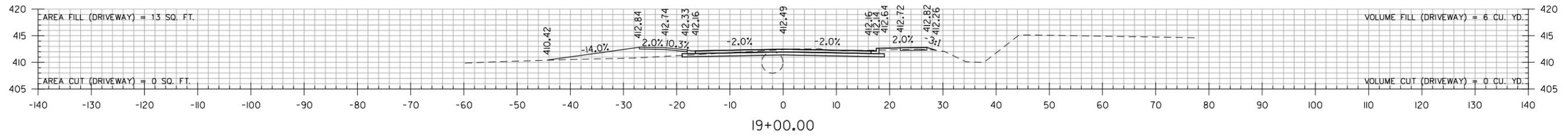
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

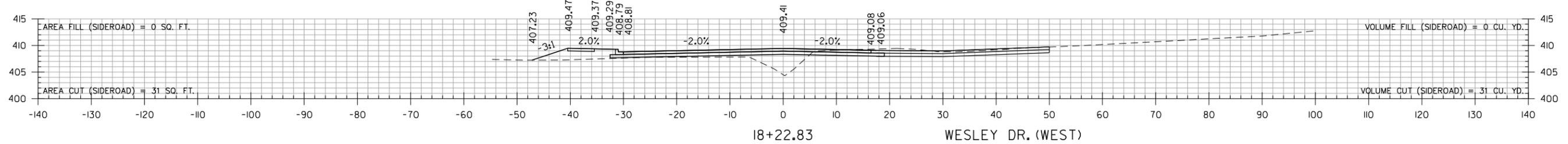
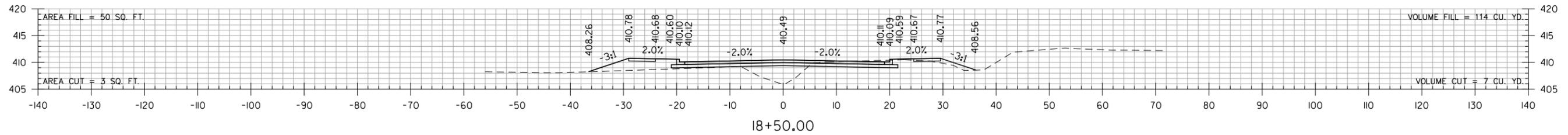
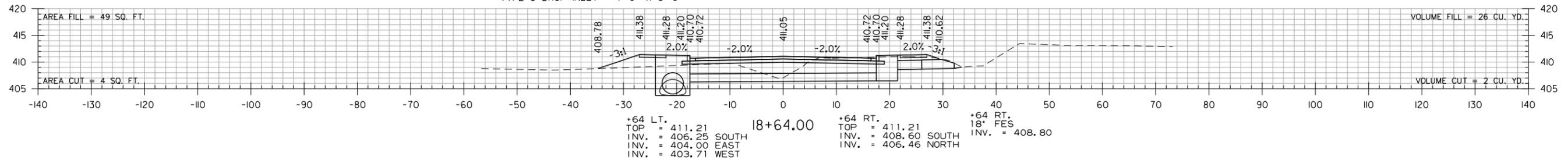
DRAWING NUMBER

SHEET NUMBER **68**



STA. 18+64 CONSTRUCT
DROP INLET ON LT.
H = 7'-6" W/ 36" X 59" X 116' ARCH R.C. PIPE
CULVERT TO BOX CULVERT ON LT.
TYPE C DROP INLET = 4'-0" X 5'-6"

STA. 18+64 CONSTRUCT
DROP INLET ON RT.
H = 4'-9" W/ 8' EXT. AND 18" X 6' R.C. PIPE
CULVERT FROM FES ON LT. AND
18" X 36' R.C. PIPE CULVERT TO
DROP INLET ON RT.
TYPE MD INLET = 4' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 18+23 TO STA. 19+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

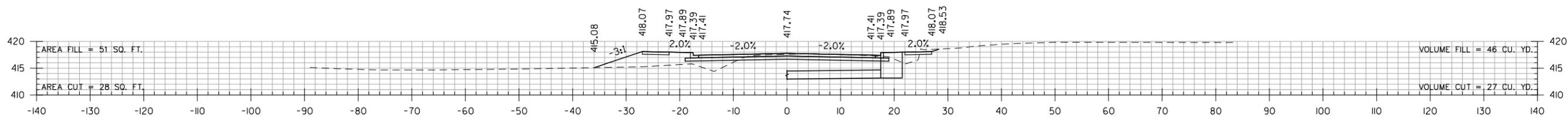
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

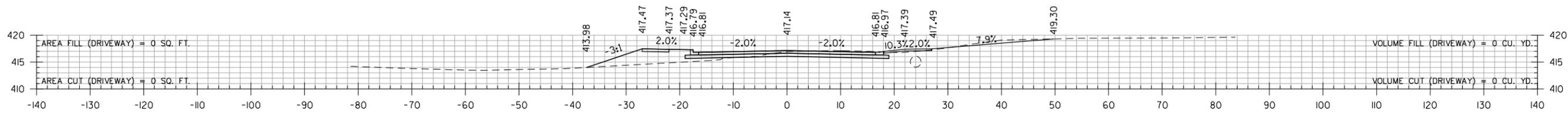
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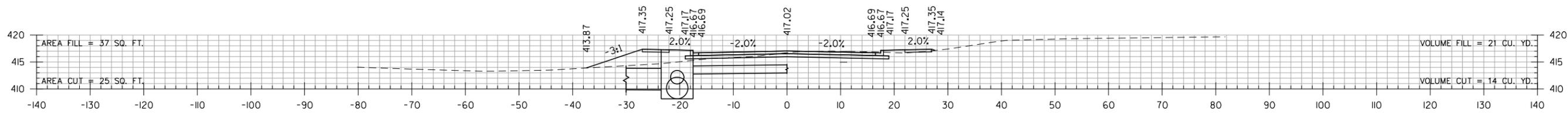
20+45.00
+45 RT.
TOP = 417.89
INV. = 413.14

STA. 20+45 CONSTRUCT
DROP INLET ON RT.
H = 4'-9" W/ 8' EXT. AND 18" X 46'
R.C. PIPE CULVERT TO DROP INLET ON LT.
TYPE M0 INLET = 4' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"



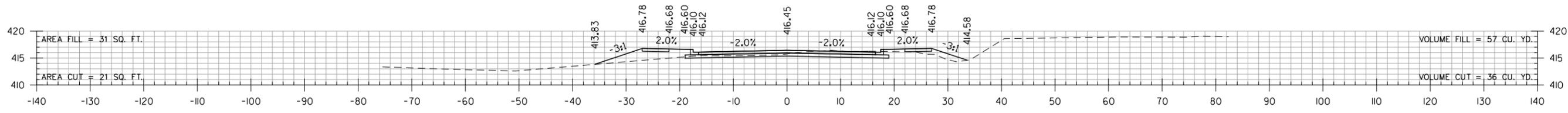
20+21.00

STA. 20+18 CONSTRUCT
DROP INLET ON LT.
H = 9'-0" W/ 48" X 152' R.C. PIPE
CULVERT TO DROP INLET ON LT.
RETAIN EXISTING 48" C.M. PIPE FROM NORTH
TYPE C DROP INLET = 6'-0" X 5'-0"

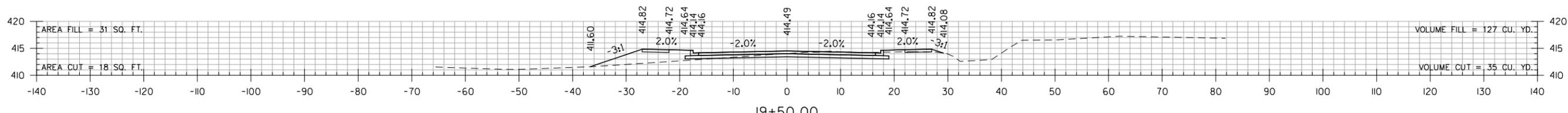


20+18.00

+17.50 LT.
TOP = 417.17
INV. = 412.75 SOUTH
INV. = 410.90 EAST
INV. = 409.8 NORTH (RETAIN EXISTING)
INV. = 408.17 WEST



20+00.00



19+50.00

STA. 19+50 TO STA. 20+45

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

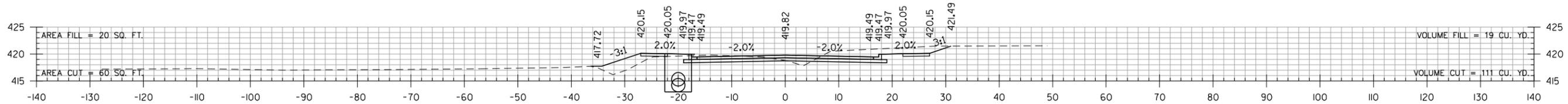
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DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **70**

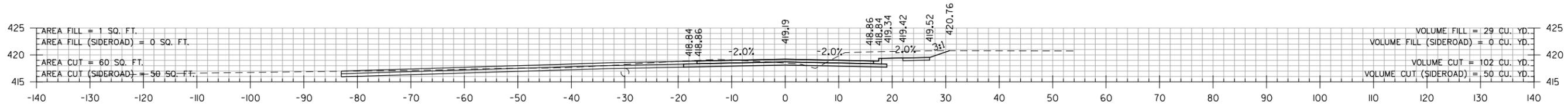


STA. 22+00 CONSTRUCT
 DROP INLET ON LT.
 H = 7'-0" W/ 30" X 174' R.C. PIPE
 CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 5' DIA.
 TYPE C DROP INLET = 4'-0" X 3'-6"



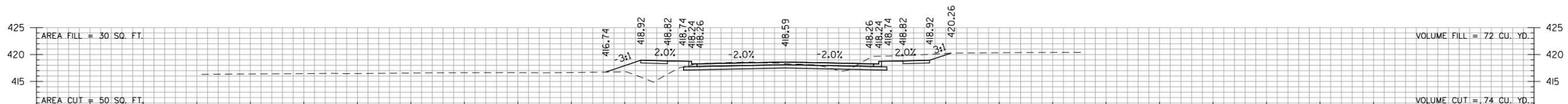
+00 LT.
 TOP = 419.97
 INV. = 414.05 EAST
 INV. = 412.97 WEST

22+00.00

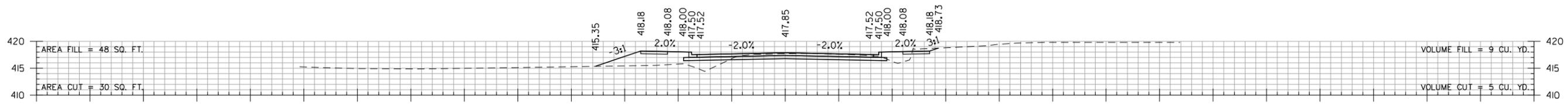


SPRING GROVE DR. (WEST)

21+50.00



21+00.00



20+50.00

STA. 20+50 TO STA. 22+00

REV.	DATE	DESCRIPTION	BY



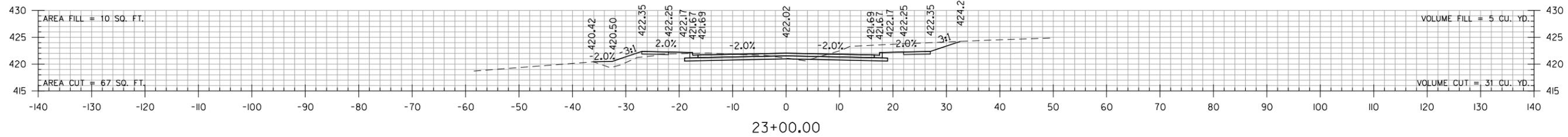
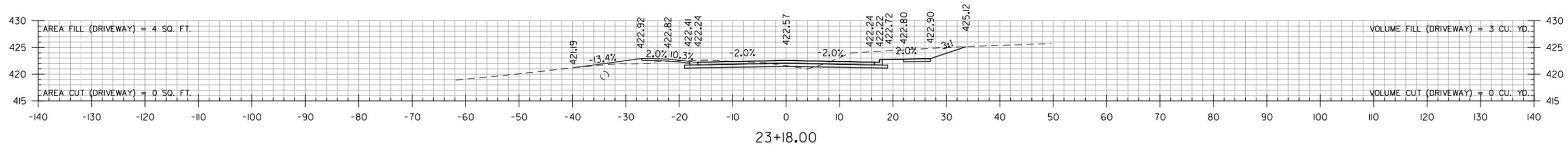
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
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 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

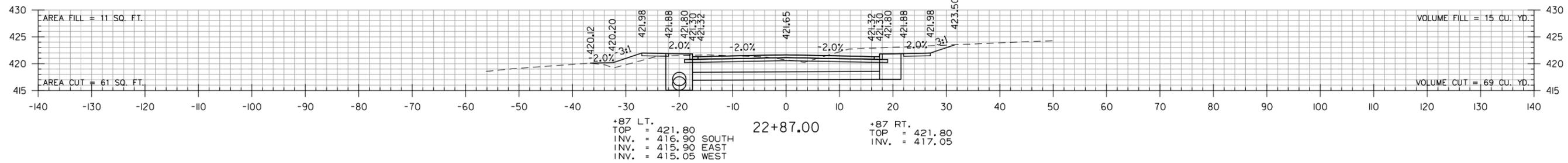
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SHEET NUMBER **71**



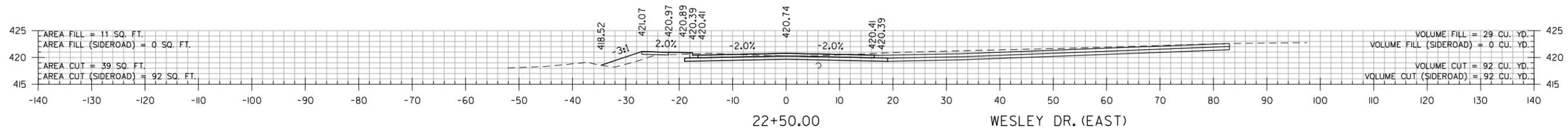
STA. 22+87 CONSTRUCT
 DROP INLET ON LT.
 H = 6'-9" W/ 8' EXT. AND 30" X 83'
 PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 5' DIA.
 TYPE C DROP INLET = 4'-0" X 3'-6"

STA. 22+87 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-9" W/ 8' EXT. AND 18" X 36'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+87 LT.
 TOP = 421.80
 INV. = 416.90 SOUTH
 INV. = 415.05 EAST
 INV. = 415.05 WEST

+87 RT.
 TOP = 421.80
 INV. = 417.05



WESLEY DR. (EAST)

STA. 22+50 TO STA. 23+18

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

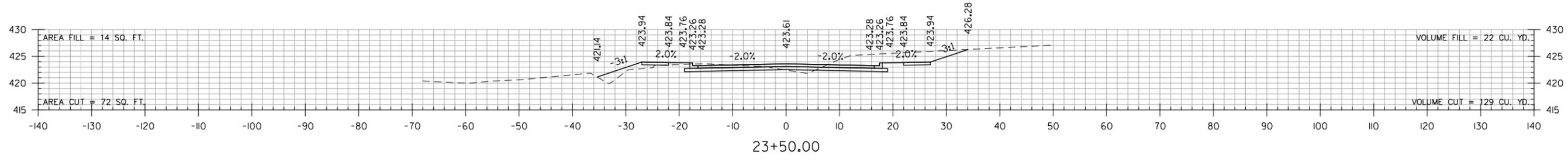
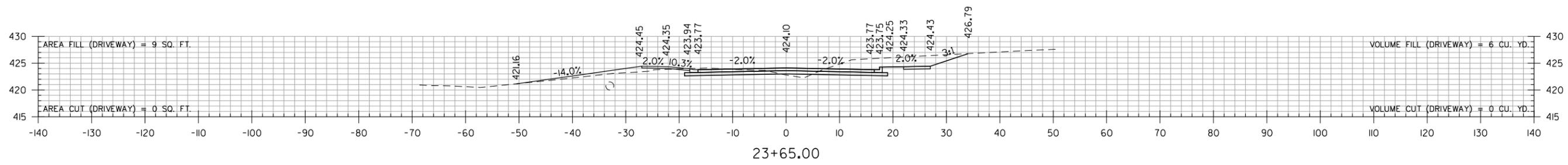
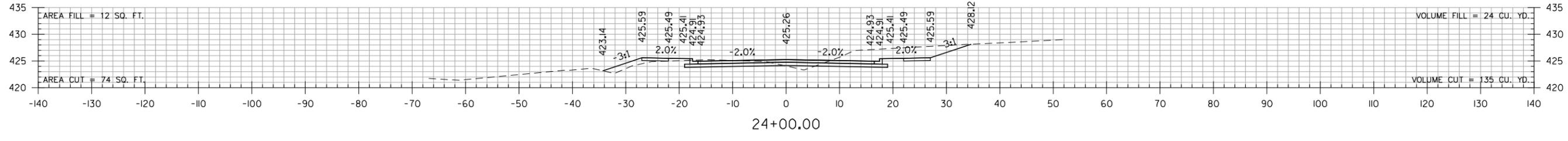
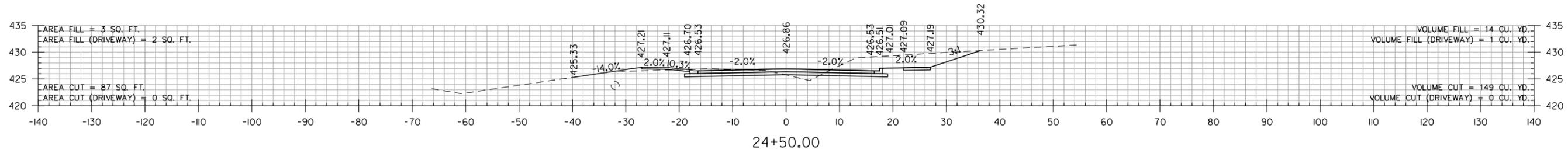
MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **72**



STA. 23+50 TO STA. 24+50

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

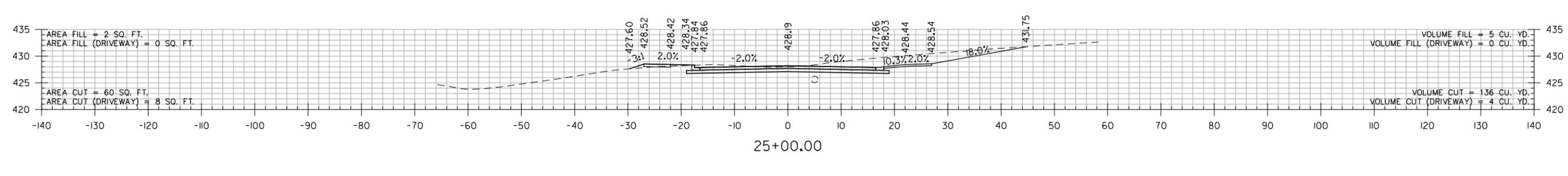
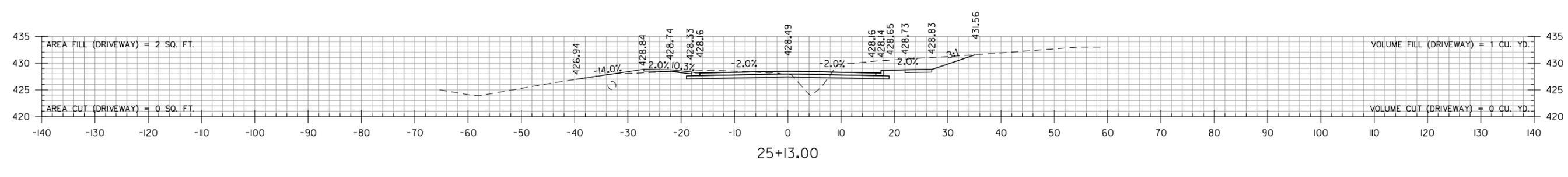
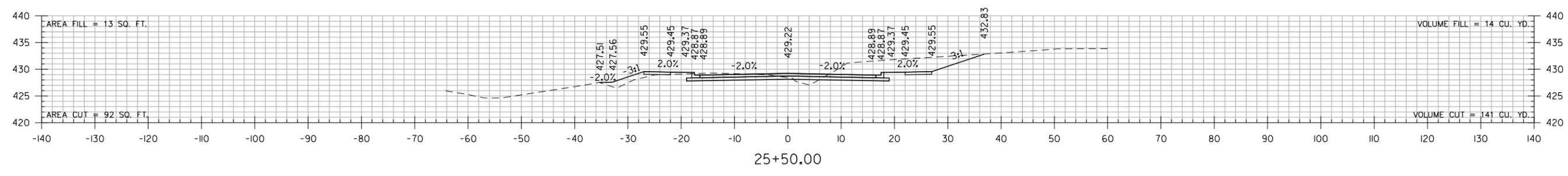
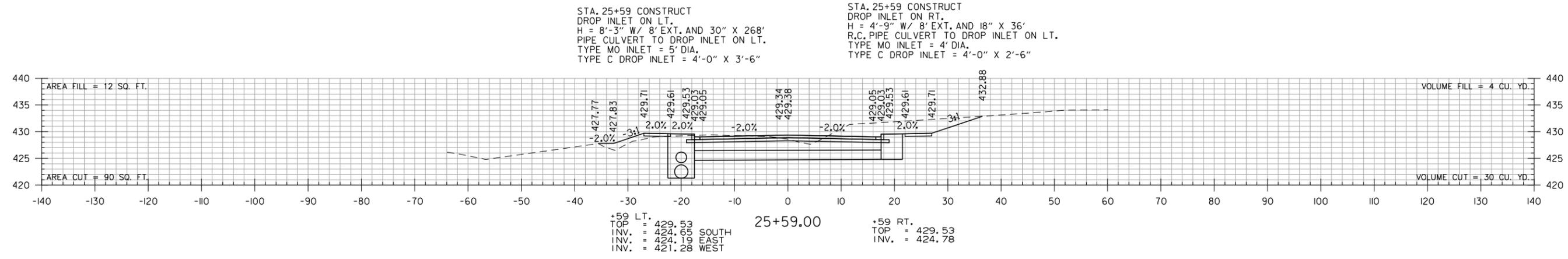
CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

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STA. 25+00 TO STA. 25+59

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

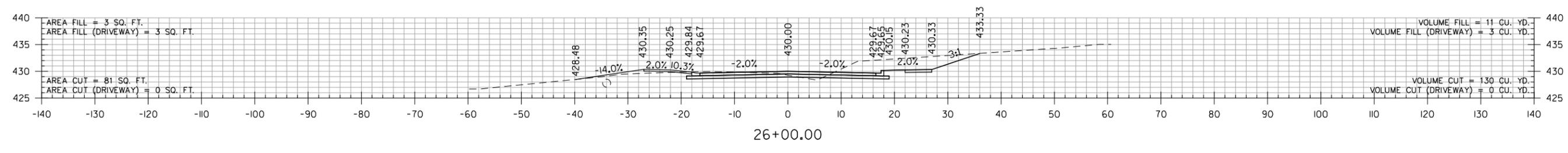
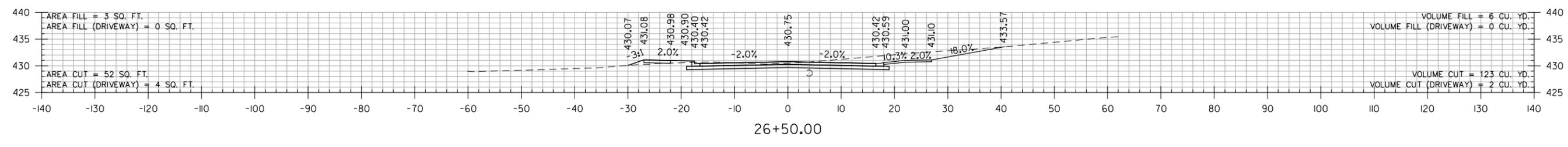
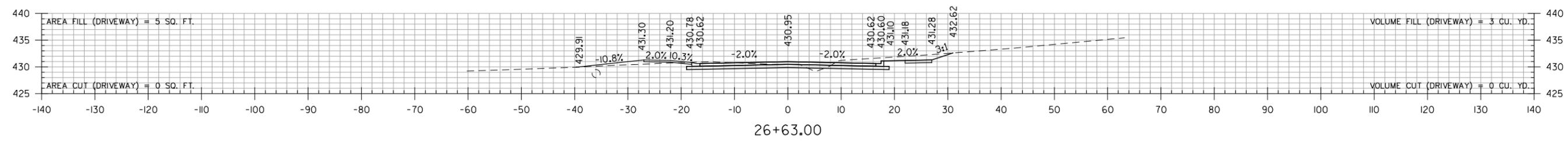
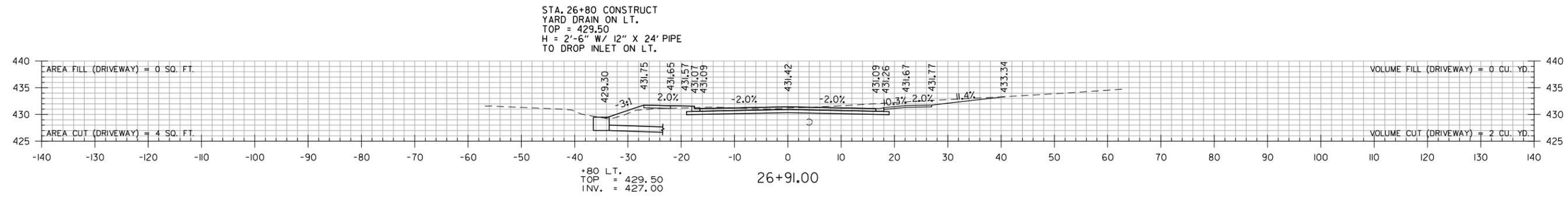
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JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **74**

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STA. 26+00 TO STA. 26+91

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

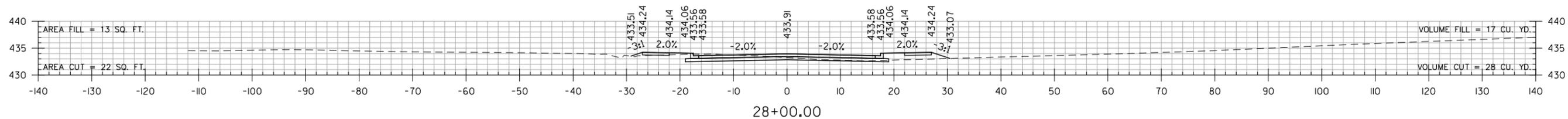
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DATE: DEC, 2016
DESIGNED BY: TEM
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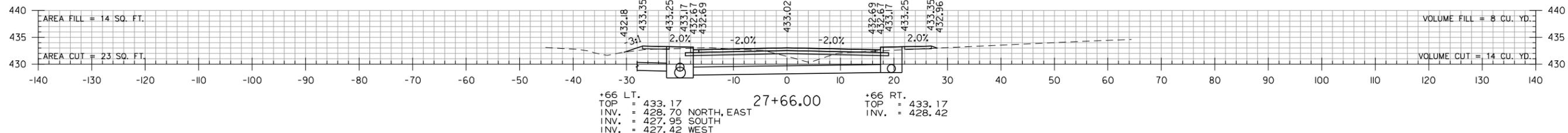
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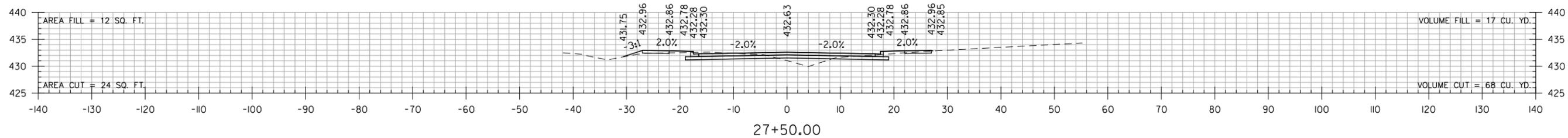
STA. 27+66 CONSTRUCT
 DROP INLET ON LT.
 H = 5'-9" W/ 8' EXT. AND 24" X 62'
 PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 5' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 27+66 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-9" W/ 8' EXT. AND 18" X 36'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"

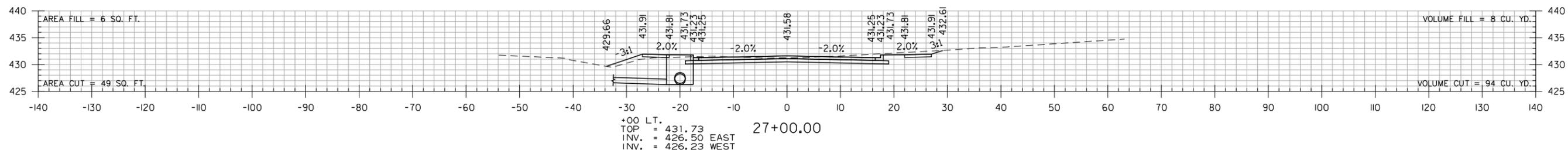


+66 LT.
 TOP = 433.17
 INV. = 428.70 NORTH, EAST
 INV. = 427.95 SOUTH
 INV. = 427.42 WEST

+66 RT.
 TOP = 433.17
 INV. = 428.42



STA. 27+00 CONSTRUCT
 DROP INLET ON LT.
 H = 5'-6" W/ 24" X 137'
 PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 5' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+00 LT.
 TOP = 431.73
 INV. = 426.50 EAST
 INV. = 426.23 WEST

STA. 27+00 TO STA. 28+00

REV.	DATE	DESCRIPTION	BY



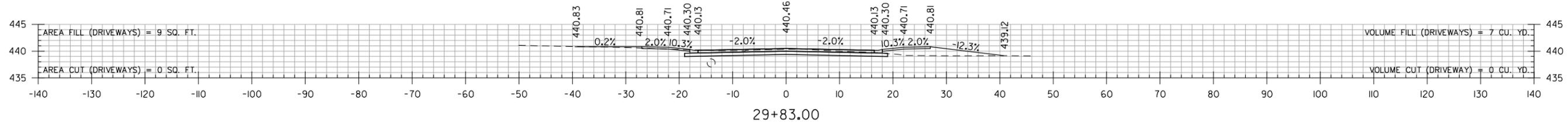
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
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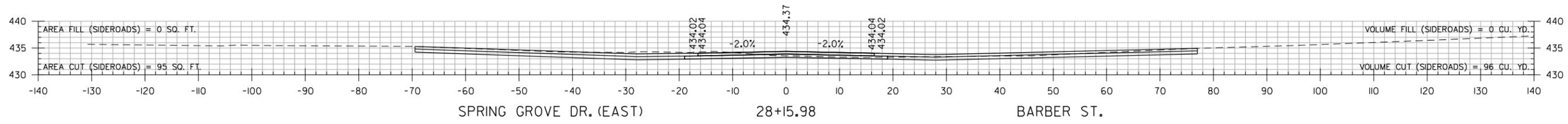
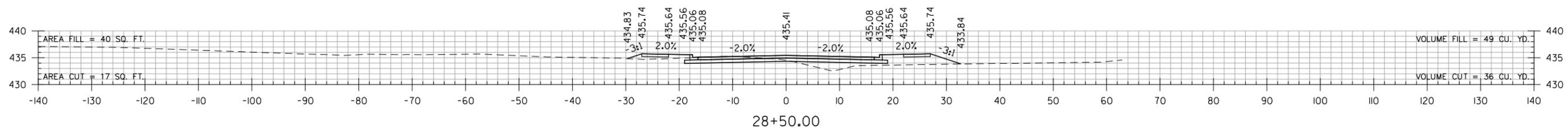
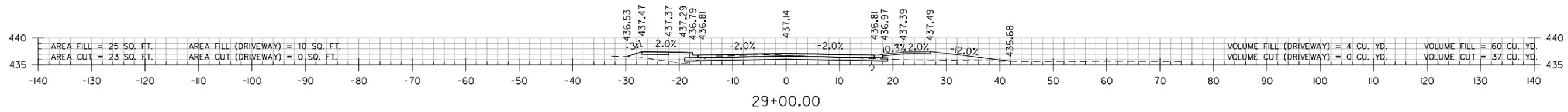
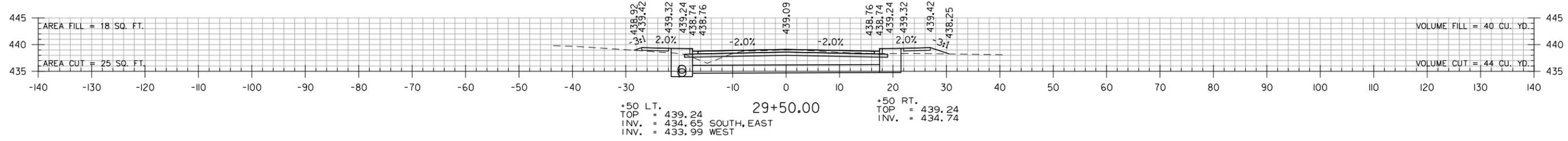
DRAWING NUMBER

SHEET NUMBER **76**



STA. 29+50 CONSTRUCT
 DROP INLET ON LT.
 H = 5'-3" W/ 4' EXT. AND 18" X 179'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 29+50 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-6" W/ 4' EXT. AND 18" X 36'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



SPRING GROVE DR. (EAST) 28+15.98 BARBER ST.

STA. 28+16 TO STA. 29+83

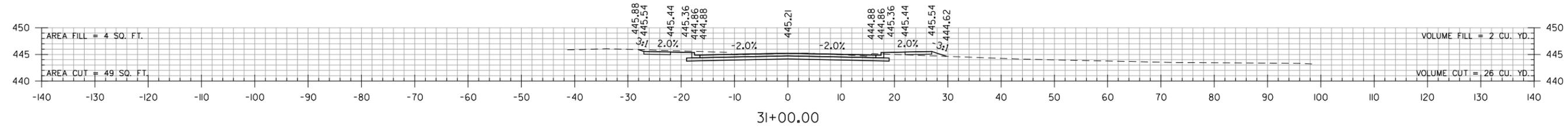
REV.	DATE	DESCRIPTION	BY



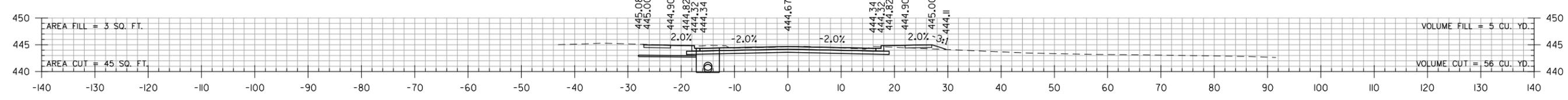
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS
 JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
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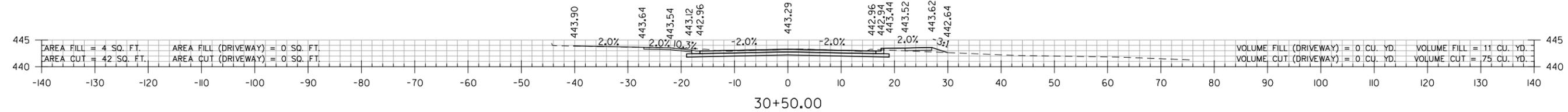
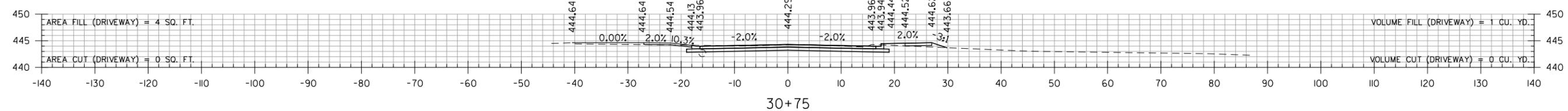
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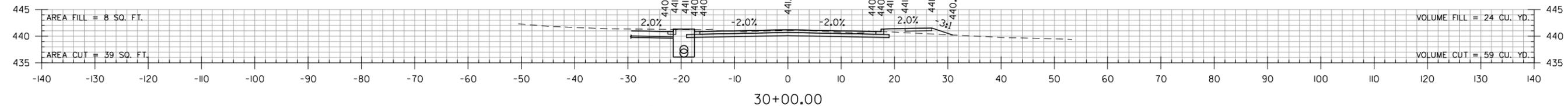
STA. 30+85 CONSTRUCT
TYPE ST JUNCTION BOX ON LT.
W/ PEDESTRIAN GRATE AND FRAME
H = 4'-6" X 3'-0" X 3'-0"
W/ 18" X 79" R.C. PIPE CULVERT
TO DROP INLET ON LT.
RETAIN 3" PVC PIPE FROM NORTH



+85 LT.
TOP = 444.37
INV. = 442.69 NORTH (RETAIN EXISTING)
INV. = 440.40 EAST
INV. = 439.87 WEST



STA. 30+03 CONSTRUCT
DROP INLET ON LT.
H = 5'-3" W/ THROATED BACK OPENING
AND 18" X 50' PIPE CULVERT TO
DROP INLET ON LT.
AND 6" X 73' NON-METALLIC CONDUIT FROM
EXIST. 3" PVC PIPE ON LEFT (SEE SPECIAL DETAILS)
TYPE C DROP INLET = 4'-0" X 2'-6"



+03 LT.
TOP = 441.50
INV. = 439.60 NORTH
INV. = 436.75 EAST
INV. = 436.60 WEST

STA. 30+00 TO STA. 31+00

REV.	DATE	DESCRIPTION	BY



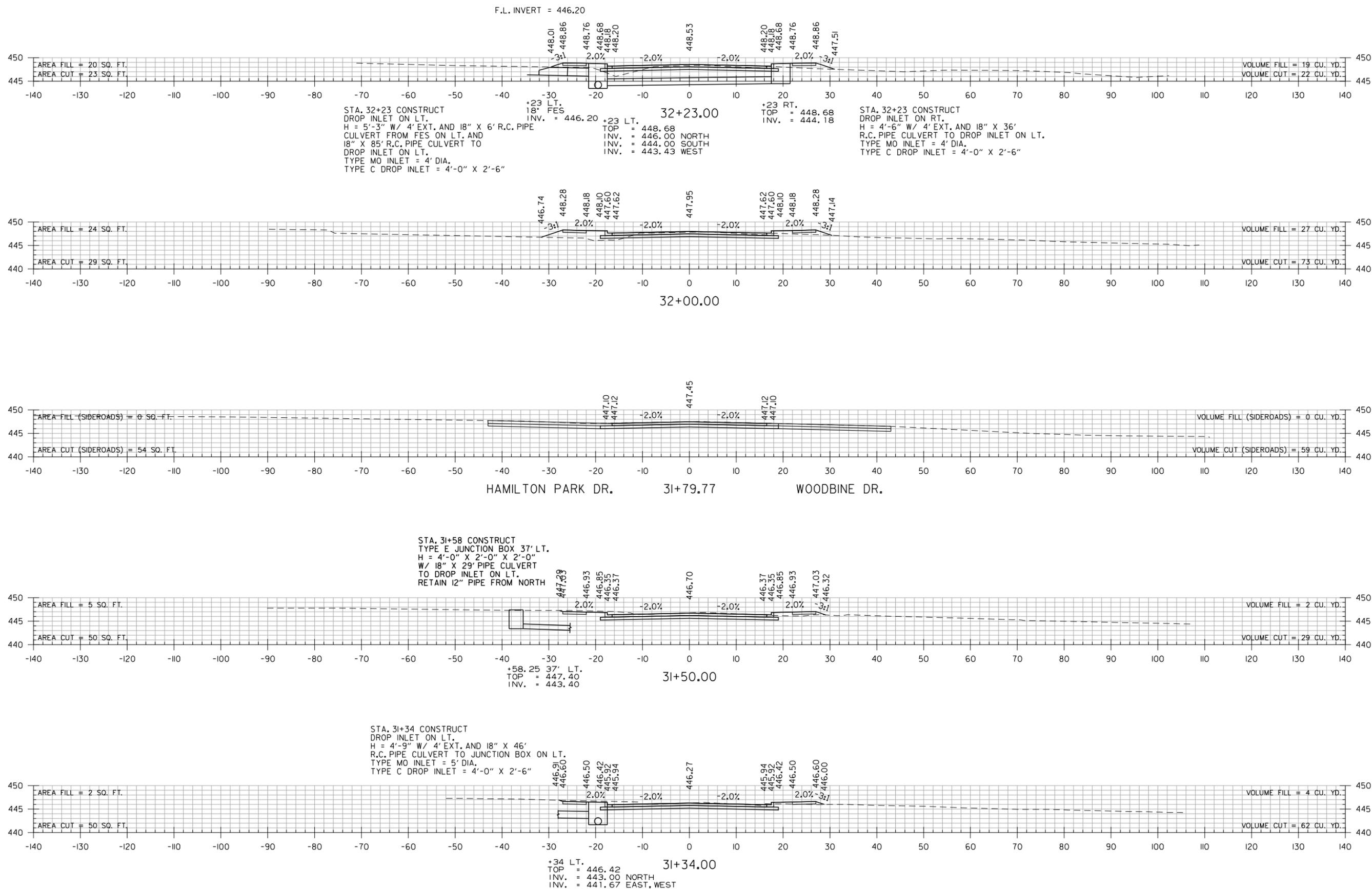
CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
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DRAWING NUMBER

SHEET NUMBER **78**



STA. 31+34 TO STA. 32+23

REV.	DATE	DESCRIPTION	BY



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 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

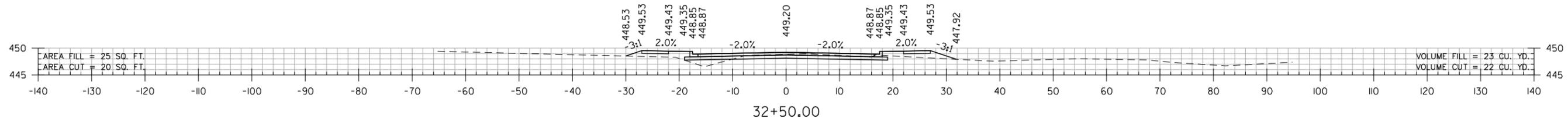
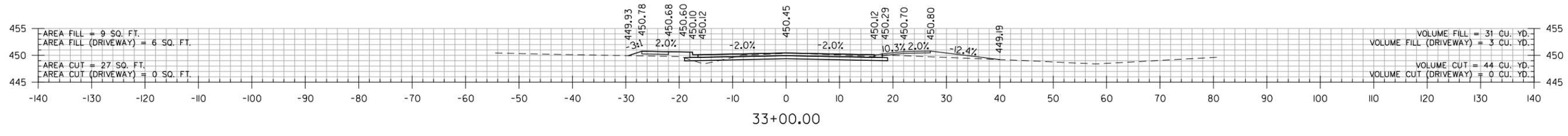
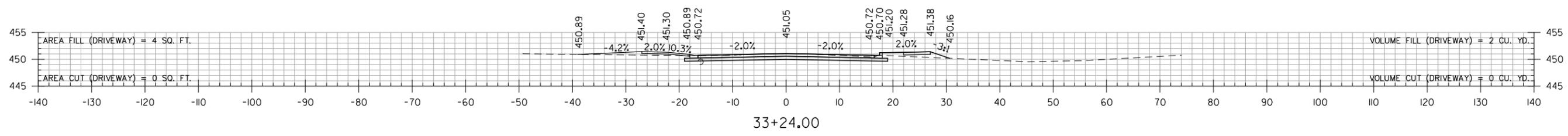
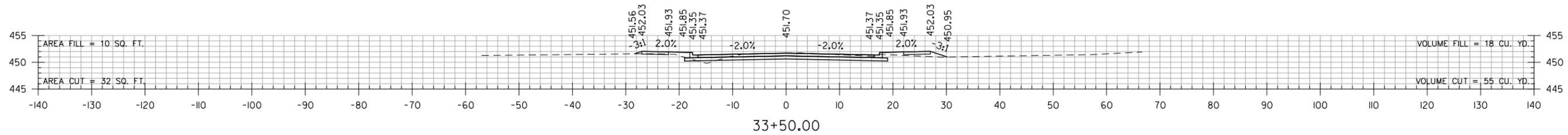
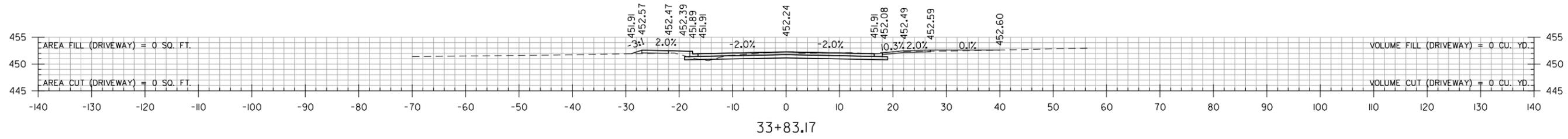
CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
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SHEET NUMBER **79**

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STA. 32+50 TO STA. 33+83

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

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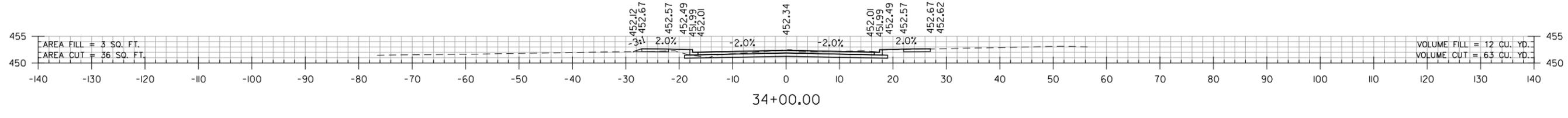
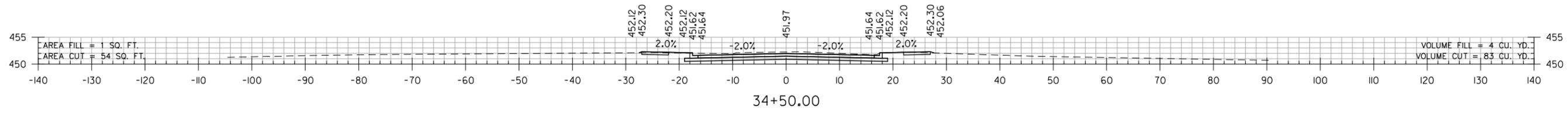
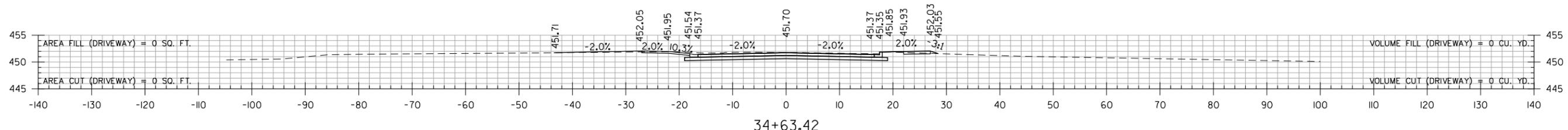
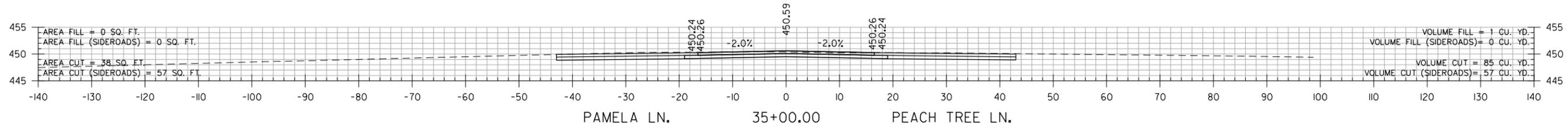
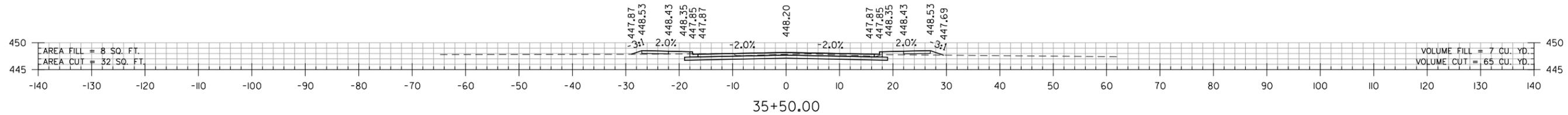
CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **80**

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STA. 34+00 TO STA. 35+50

REV.	DATE	DESCRIPTION	BY



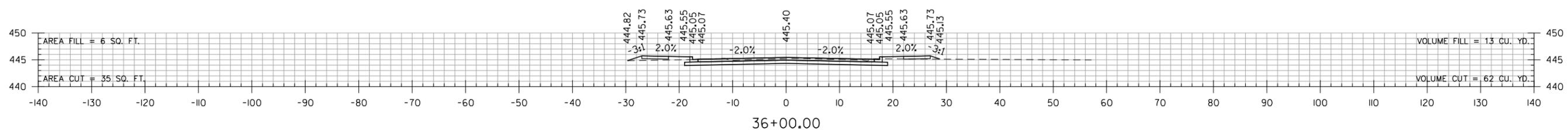
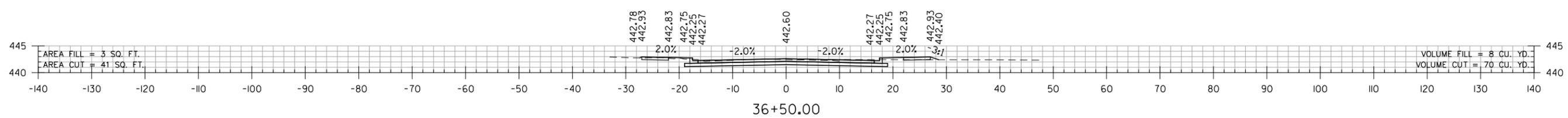
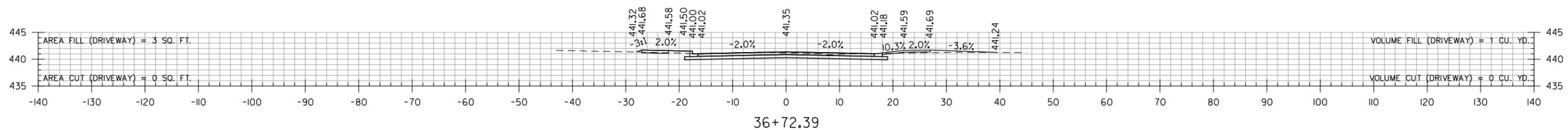
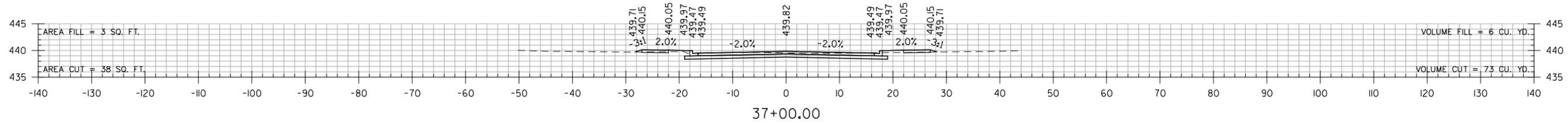
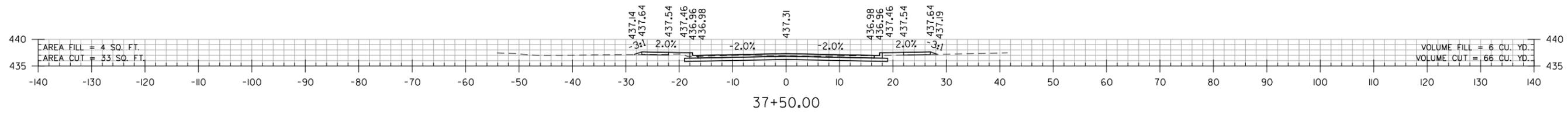
CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **81**



STA. 36+00 TO STA. 37+50

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

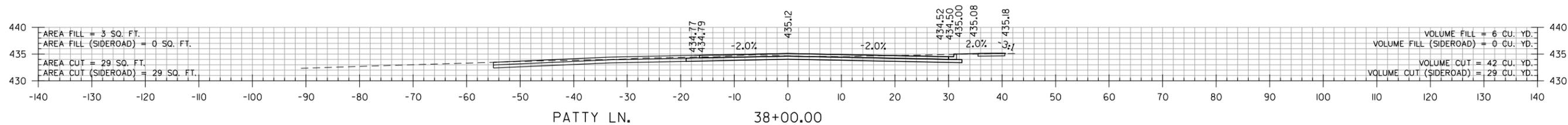
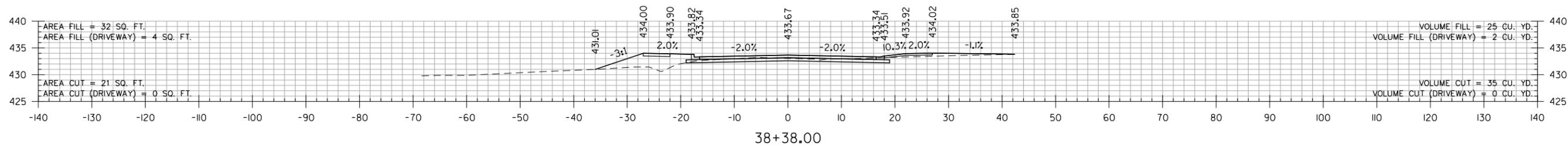
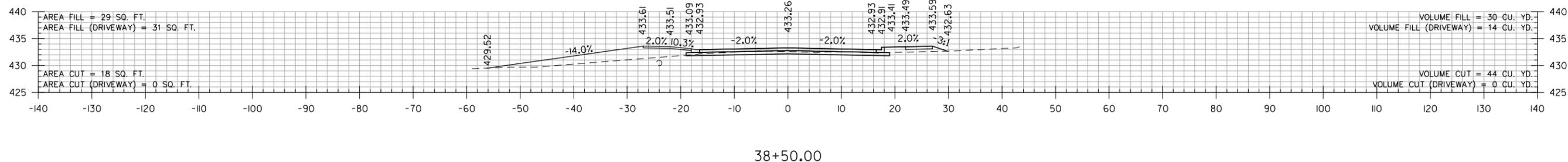
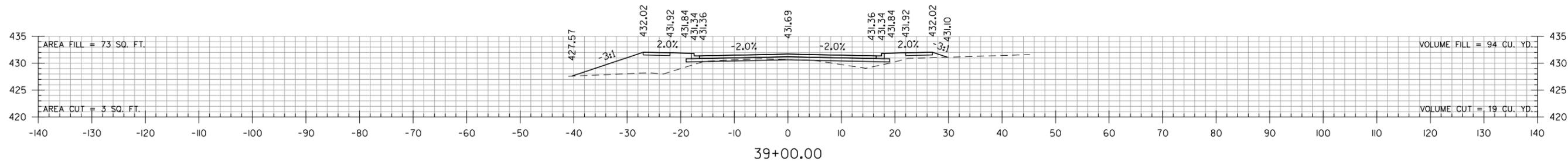
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

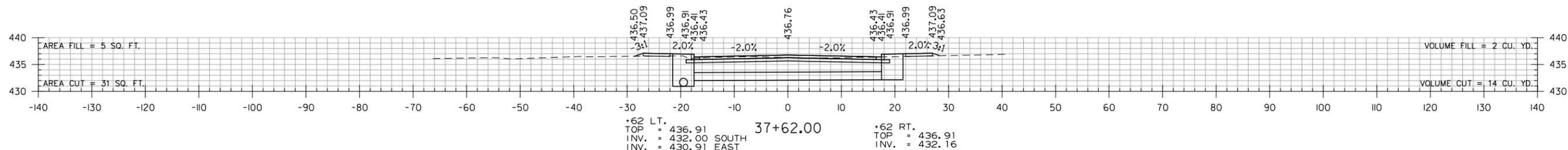
DRAWING NUMBER

SHEET NUMBER **82**



STA. 37+62 CONSTRUCT
DROP INLET ON LT.
H = 6'-0" W/ 4' EXT. AND 18" X 317'
R.C. PIPE CULVERT TO DROP INLET ON LT.
TYPE M0 INLET = 4' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 37+62 CONSTRUCT
DROP INLET ON RT.
H = 4'-9" W/ 4' EXT. AND 18" X 36'
R.C. PIPE CULVERT TO DROP INLET ON LT.
TYPE M0 INLET = 4' DIA.
TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 37+62 TO STA. 39+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

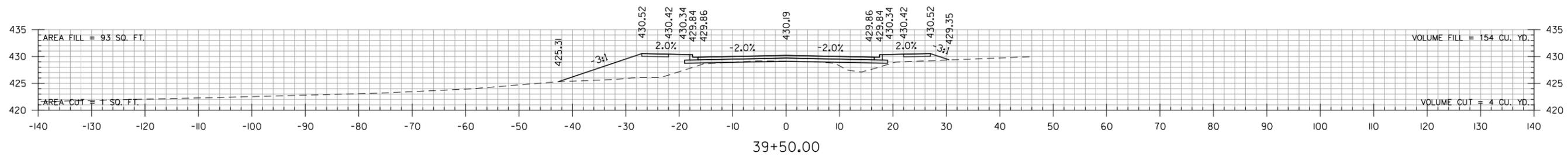
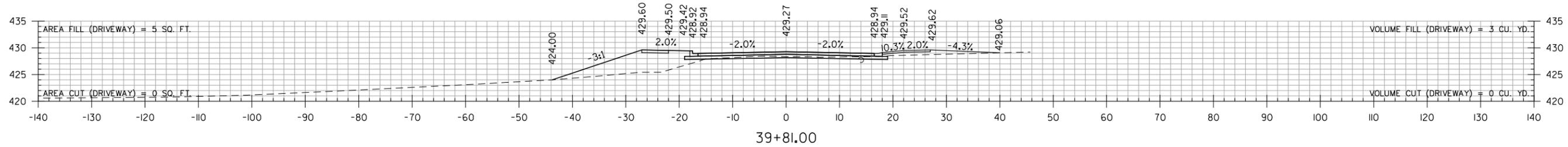
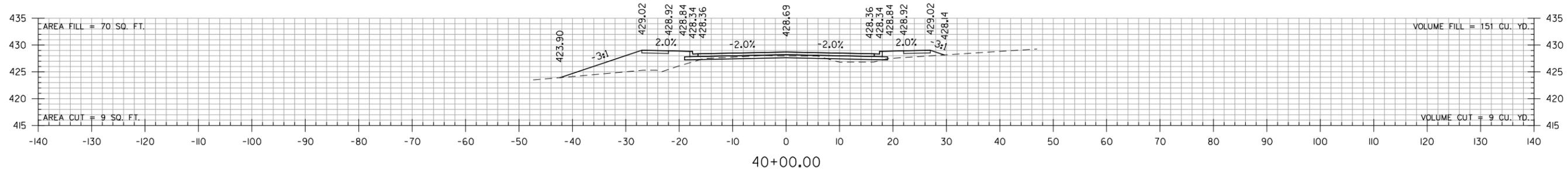
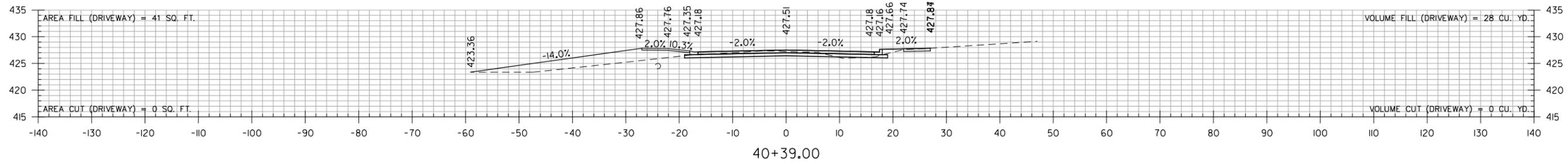
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **83**



STA. 39+50 TO STA. 40+39

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

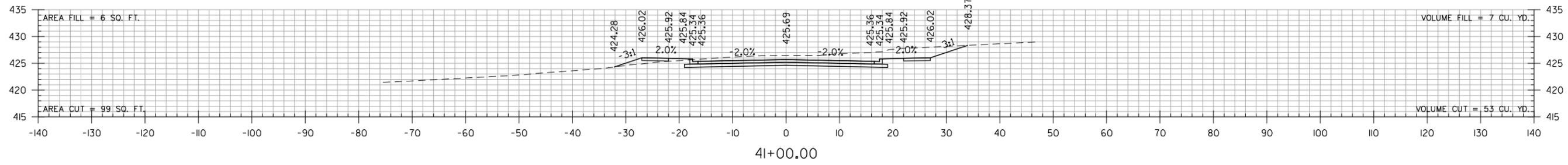
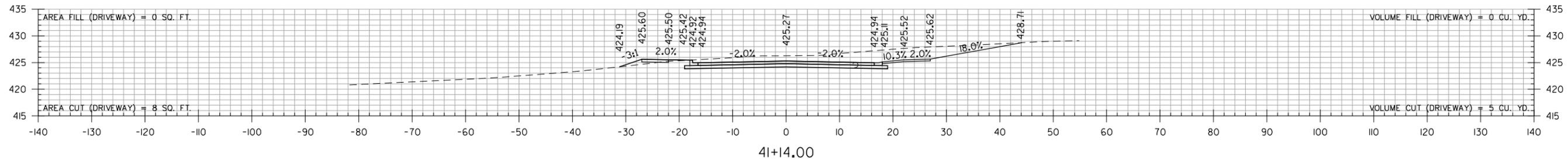
MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
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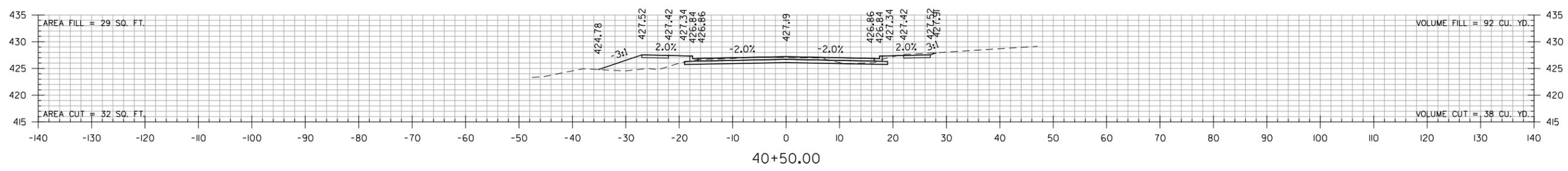
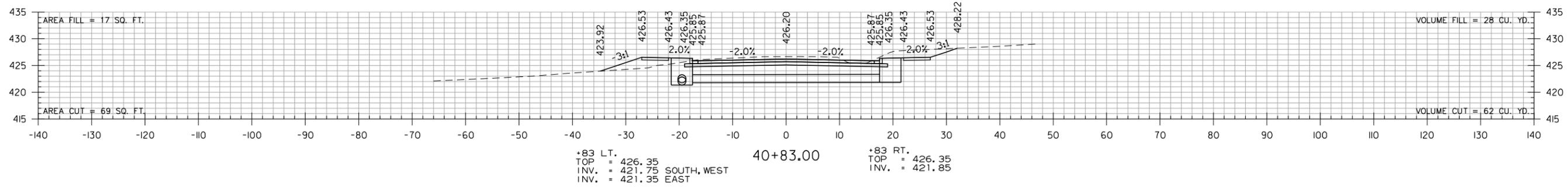
DRAWING NUMBER

SHEET NUMBER **84**



STA. 40+83 CONSTRUCT
 DROP INLET ON LT.
 H = 5'-0" W/ 4' EXT. AND 18" X 185'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"

STA. 40+83 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-6" W/ 8' EXT. AND 18" X 36'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 40+50 TO STA. 41+14

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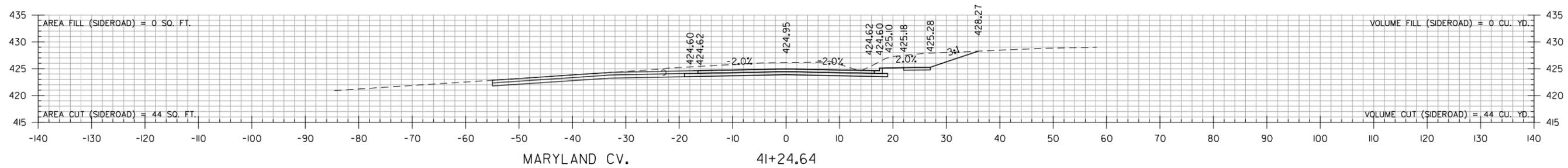
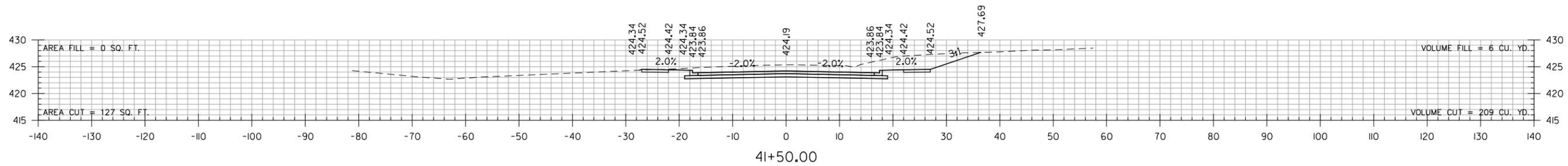
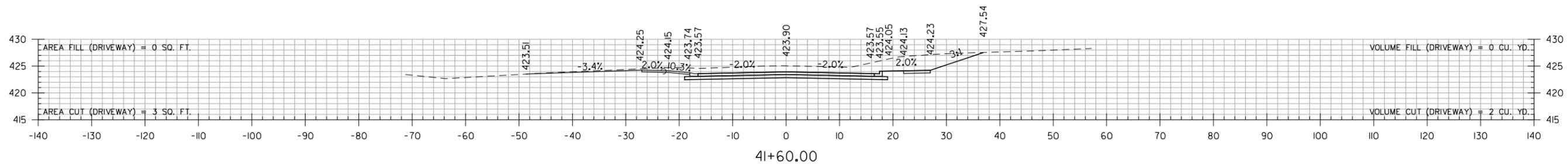
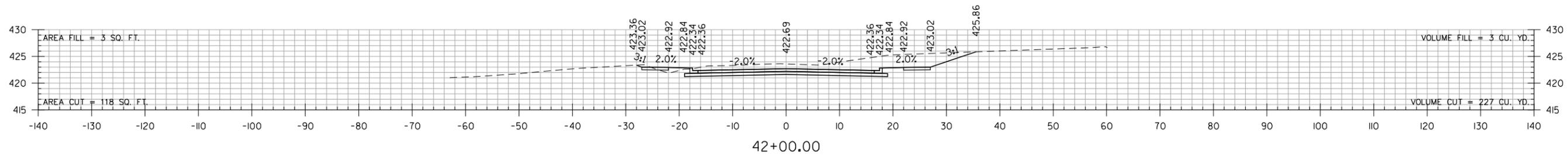
MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
 DATE: DEC, 2016
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DRAWING NUMBER

SHEET NUMBER **85**



STA. 41+25 TO STA. 42+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

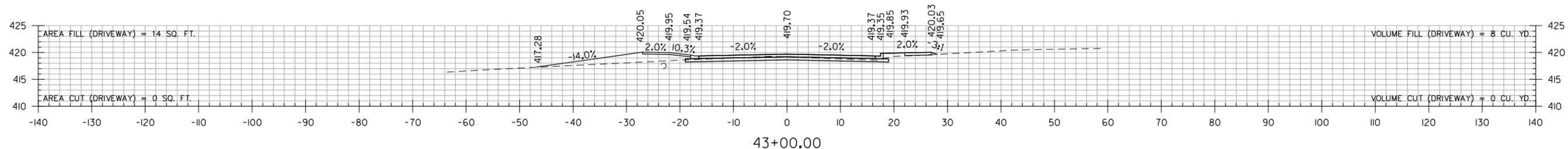
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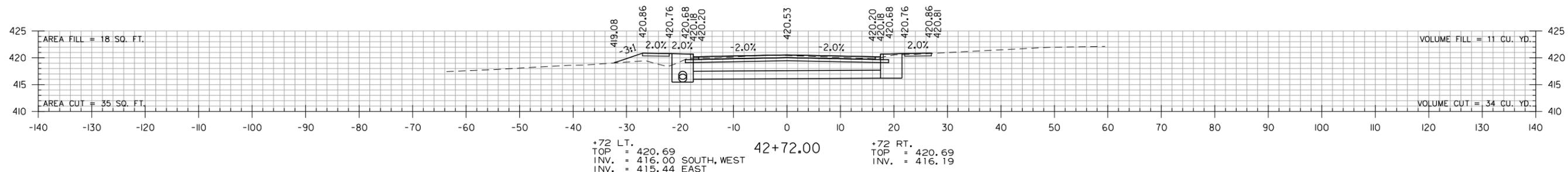
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STA. 42+72 CONSTRUCT
 DROP INLET ON LT.
 H = 5'-3" W/ 4' EXT. AND 24" X 24"
 PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"

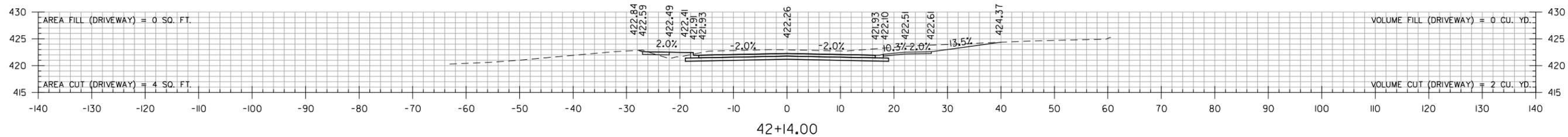
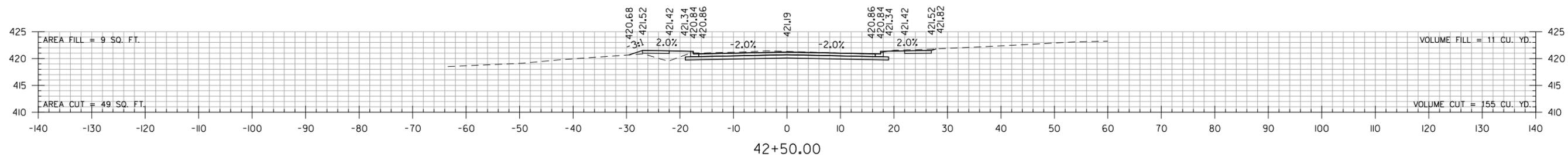
STA. 42+72 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-6" W/ 8' EXT. AND 18" X 36"
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+72 LT.
 TOP = 420.69
 INV. = 416.00 SOUTH, WEST
 INV. = 415.44 EAST

42+72.00

+72 RT.
 TOP = 420.69
 INV. = 416.19



STA. 42+14 TO STA. 43+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

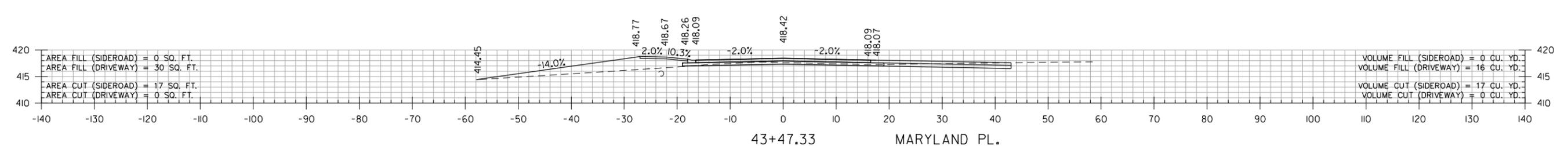
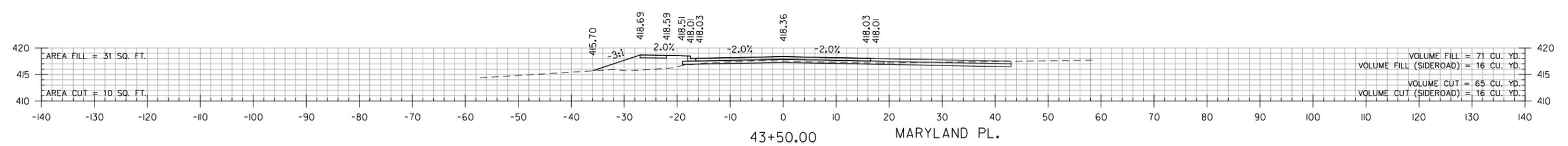
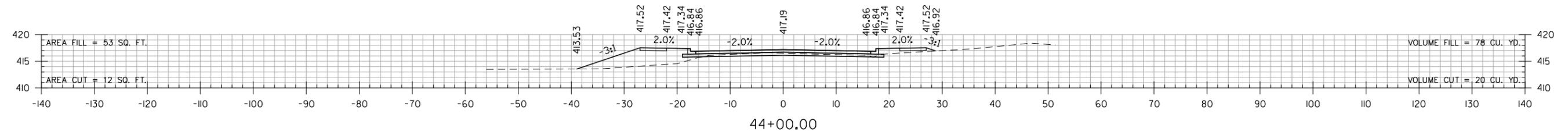
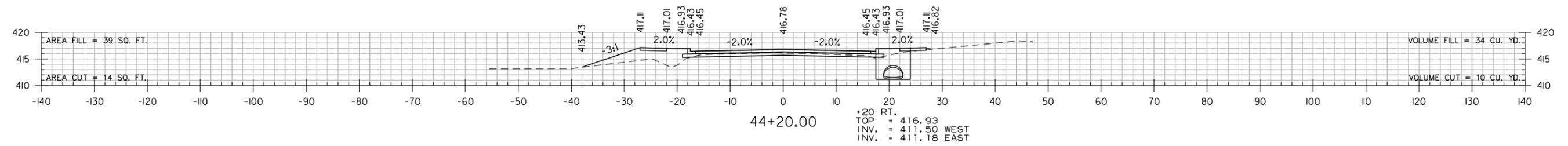
JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **87**



STA. 44+20 IN PLACE
 DBL. 12" X 38' RCP CULVERT, 14" X 38' RCP CULVERT,
 & DROP INLET RT. - REMOVE
 36" X 87' RCP CULVERT FROM WEST - REMOVE
 CONSTRUCT TYPE C DROP INLET W/ 8' EXT. ON RT.
 H = 5'-9" X 4'-0" X 5'-6"
 TYPE MO INLET = 6' DIA.
 W/ 27" X 44" X 65' ARCH PIPE CULVERT
 TO DROP INLET ON RT.



REV.	DATE	DESCRIPTION	BY

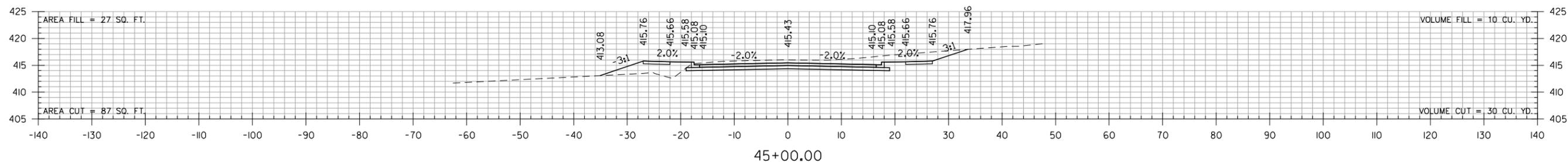


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 PULASKI COUNTY, ARKANSAS
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CROSS SECTIONS
 JOB NO.: 12017400
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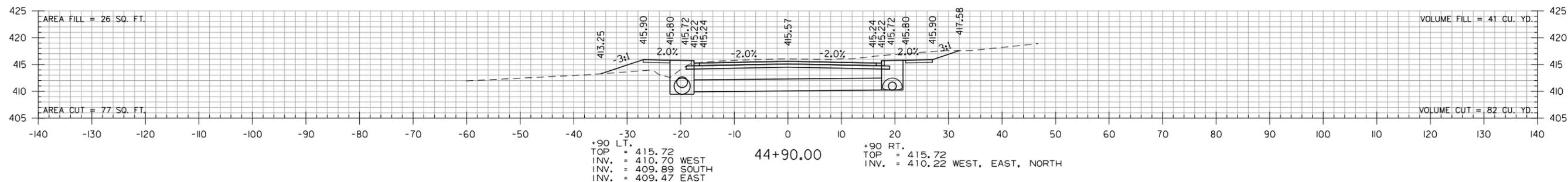
DRAWING NUMBER
 SHEET NUMBER **88**

STA. 43+47 TO STA. 44+20



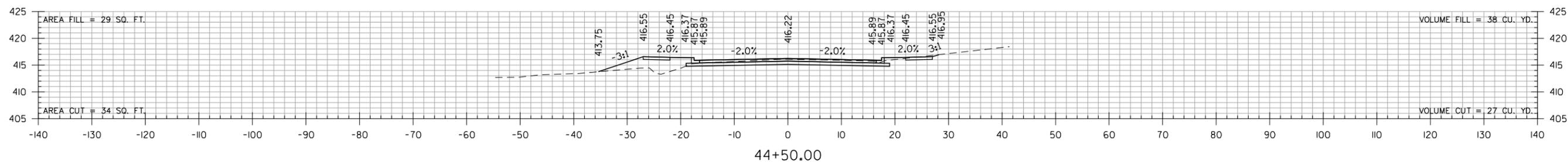
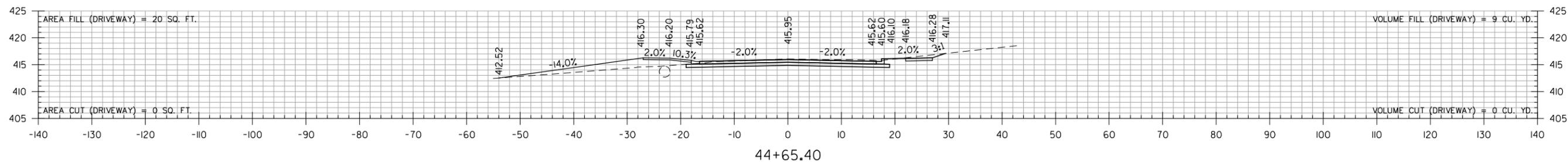
STA. 44+90 CONSTRUCT
 DROP INLET ON LT.
 H = 6'-3" W/ 4' EXT. AND 36" X 146'
 PIPE CULVERT TO DROP INLET ON LT.
 TYPE C DROP INLET = 4'-6" X 3'-8"

STA. 44+90 CONSTRUCT
 DROP INLET ON RT.
 H = 5'-6" W/ 8' EXT. AND 27" X 44" X 36'
 R.C. ARCH PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 6' DIA.
 TYPE C DROP INLET = 4'-6" X 4'-6"



+90 LT.
 TOP = 415.72
 INV. = 410.70 WEST
 INV. = 409.89 SOUTH
 INV. = 409.47 EAST

+90 RT.
 TOP = 415.72
 INV. = 410.22 WEST, EAST, NORTH



STA. 44+50 TO STA. 45+00

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
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CROSS SECTIONS

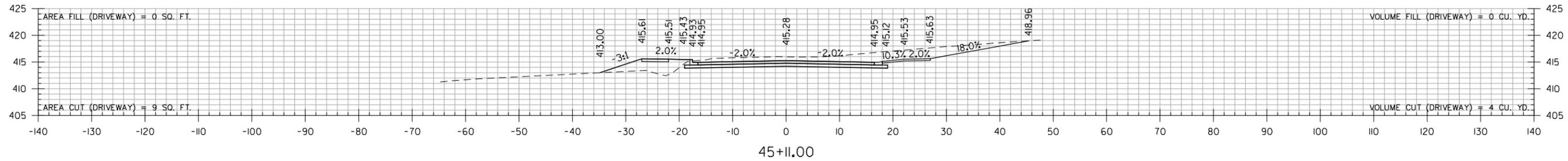
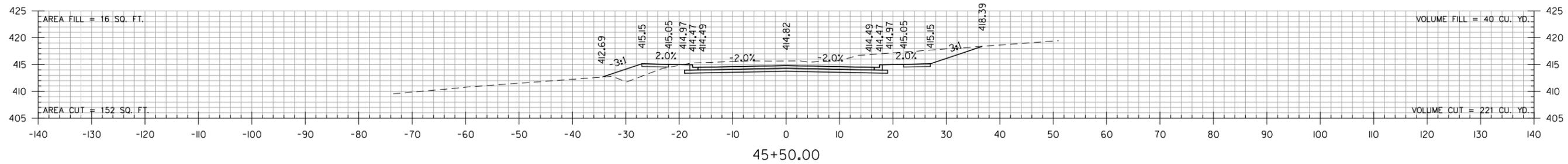
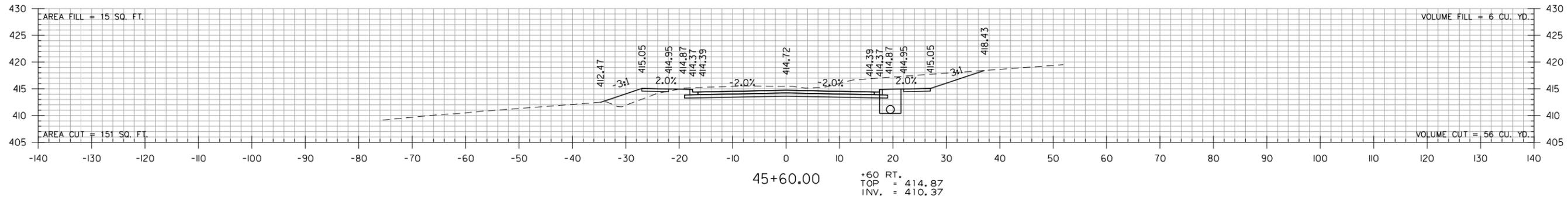
JOB NO.: 12017400
 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **89**



STA. 45+60 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-6" W/ 8' EXT. AND 18" X 64'
 PIPE CULVERT TO DROP INLET ON RT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 45+11 TO STA. 45+60

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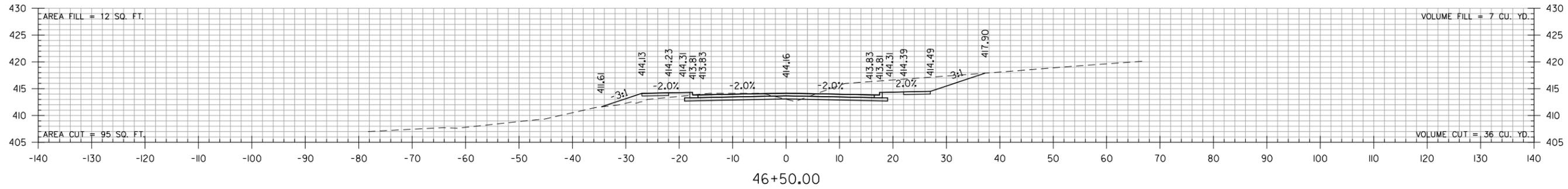
CITY OF SHERWOOD
 PULASKI COUNTY, ARKANSAS
 MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

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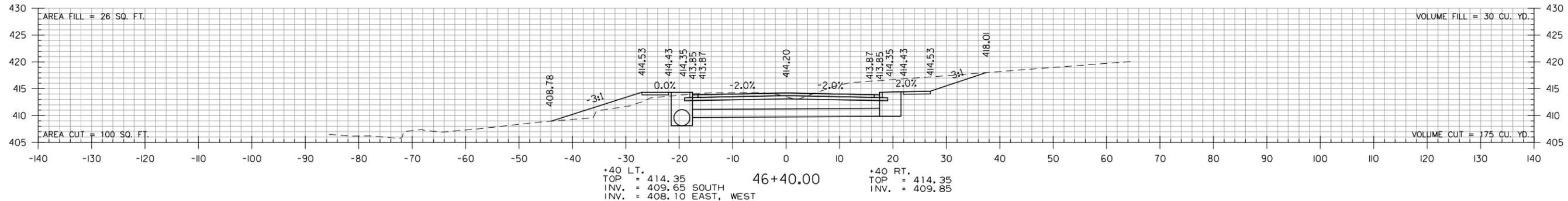
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SHEET NUMBER **90**



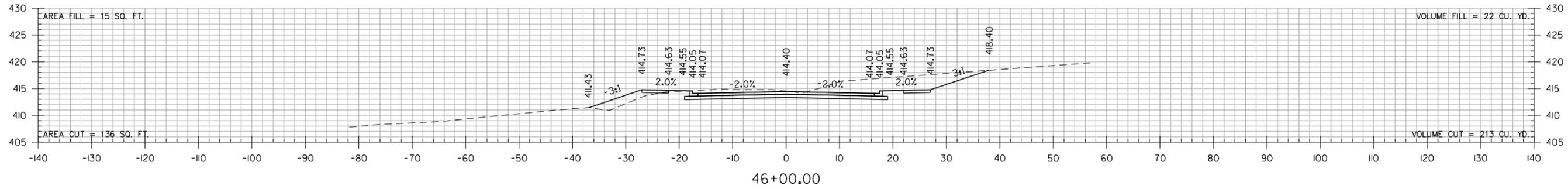
STA. 46+40 CONSTRUCT
 DROP INLET ON LT.
 H = 6'-3" W/ 4' EXT. AND 36" X 125'
 PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 5' DIA.
 TYPE C DROP INLET = 4'-0" X 3'-8"

STA. 46+40 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-6" W/ 4' EXT. AND 18" X 36'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



+40 LT.
 TOP = 414.35
 INV. = 409.65
 INV. = 408.10 SOUTH EAST, WEST

+40 RT.
 TOP = 414.35
 INV. = 409.85



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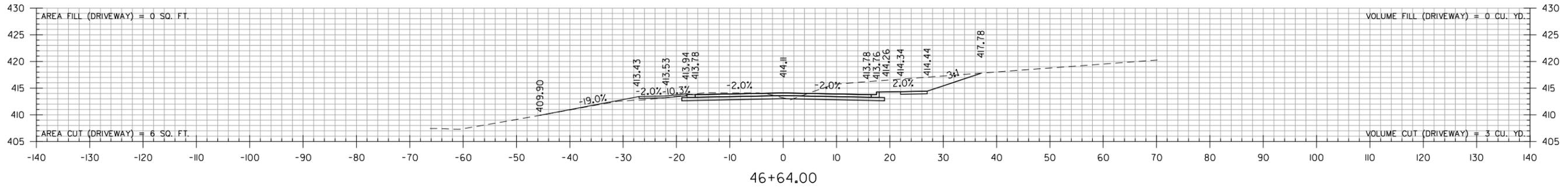
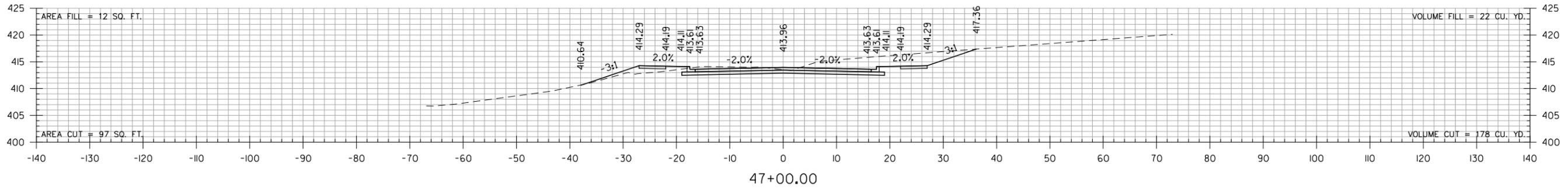
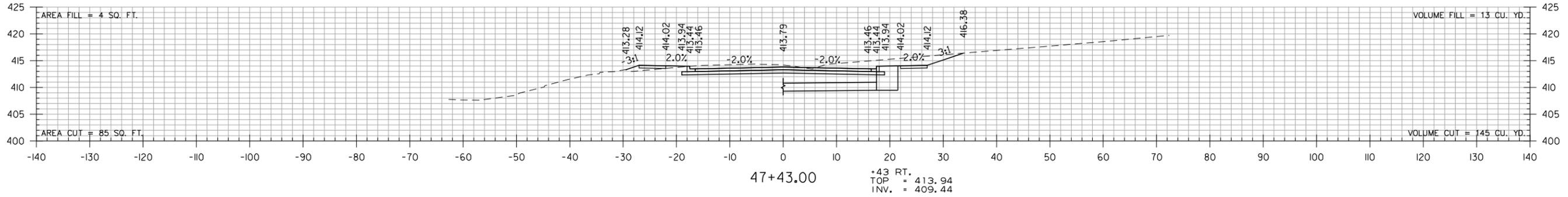
DRAWING NUMBER

SHEET NUMBER **91**

STA. 46+00 TO STA. 46+50



STA. 47+43 CONSTRUCT
 DROP INLET ON RT.
 H = 4'-6" W/ 8' EXT. AND 18" X 44'
 R.C. PIPE CULVERT TO DROP INLET ON LT.
 TYPE MO INLET = 4' DIA.
 TYPE C DROP INLET = 4'-0" X 2'-6"



STA. 46+64 TO STA. 47+43

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 PULASKI COUNTY, ARKANSAS

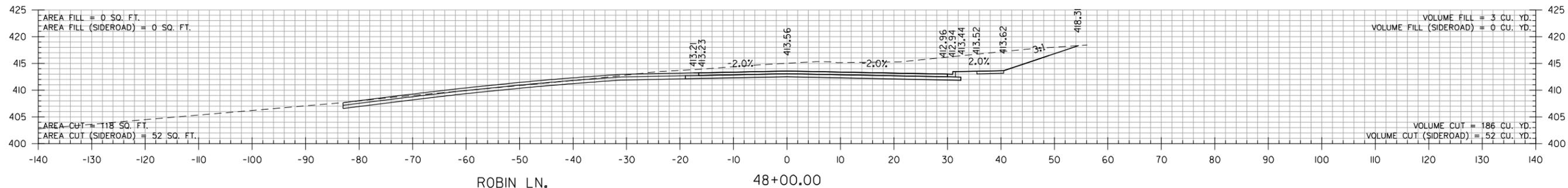
MARYLAND AVENUE
 IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

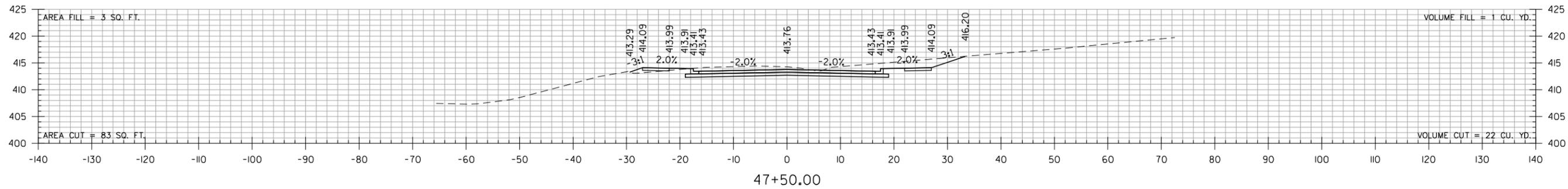
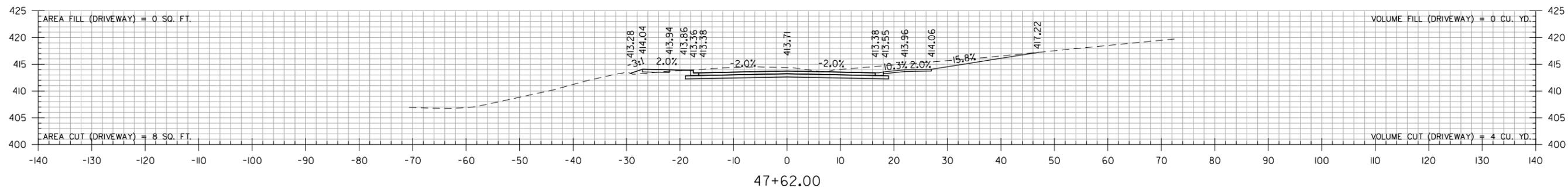
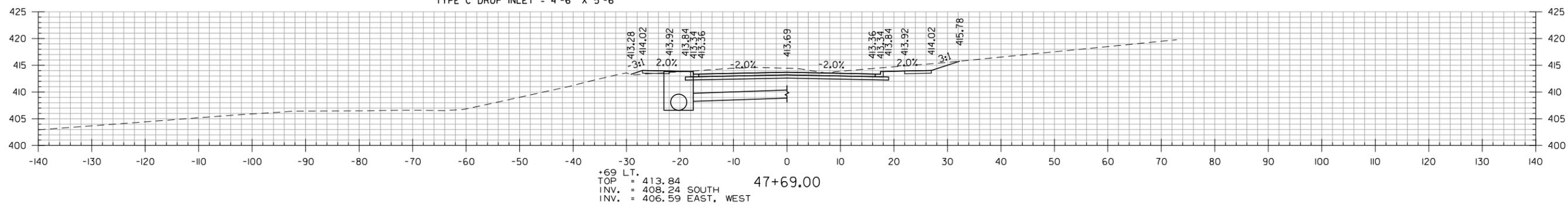
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 DATE: DEC, 2016
 DESIGNED BY: TEM
 DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **92**



STA. 47+69 CONSTRUCT
DROP INLET ON LT.
H = 7'-3" W/ 4' EXT. AND 36" X 35"
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO INLET = 4' DIA.
TYPE C DROP INLET = 4'-6" X 5'-6"



STA. 47+50 TO STA. 48+00

REV.	DATE	DESCRIPTION	BY



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PULASKI COUNTY, ARKANSAS

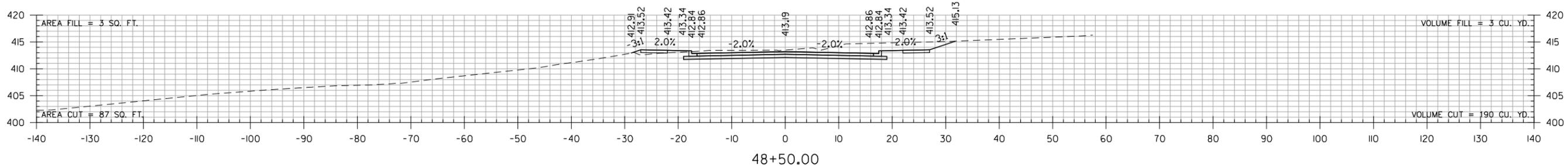
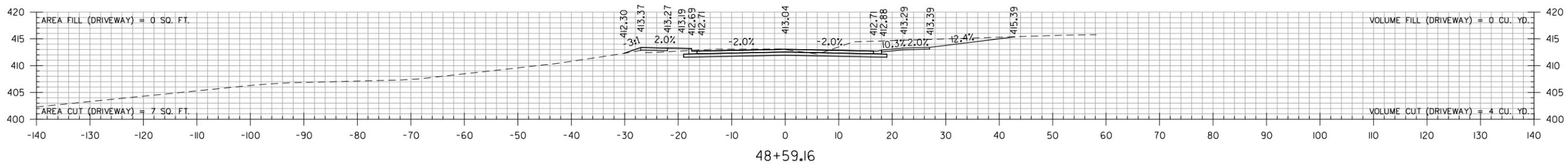
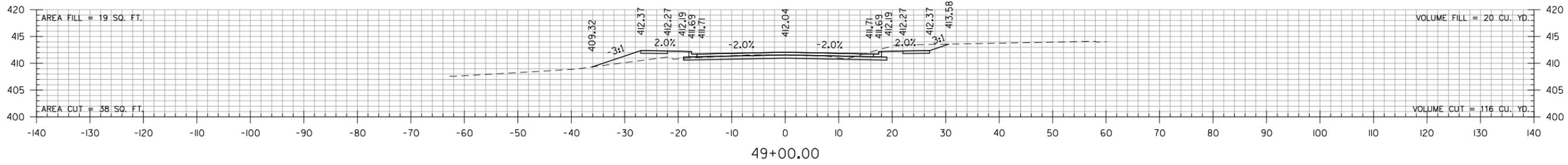
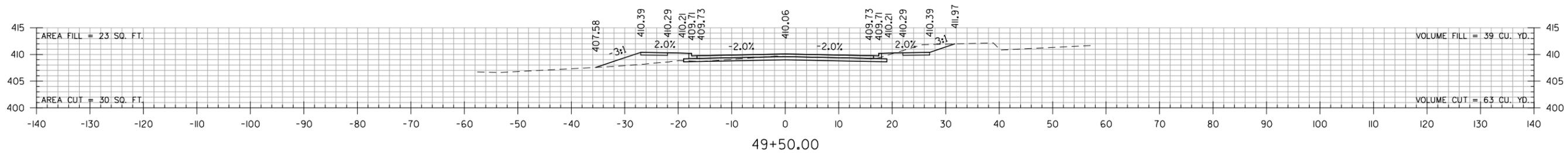
MARYLAND AVENUE
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CROSS SECTIONS

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DESIGNED BY: TEM
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SHEET NUMBER **93**



STA. 48+50 TO STA. 49+50

REV.	DATE	DESCRIPTION	BY



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PULASKI COUNTY, ARKANSAS

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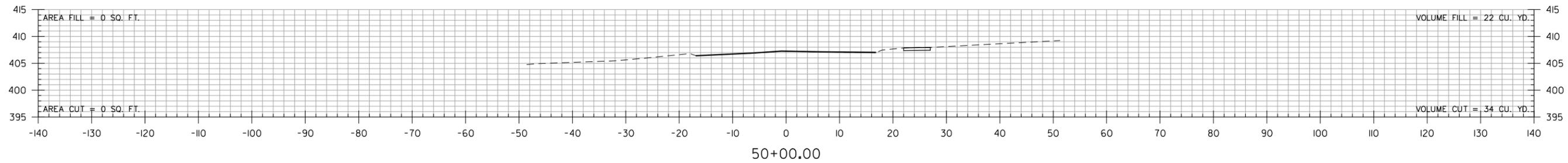
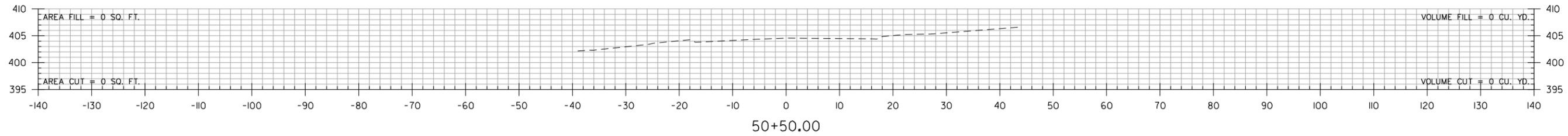
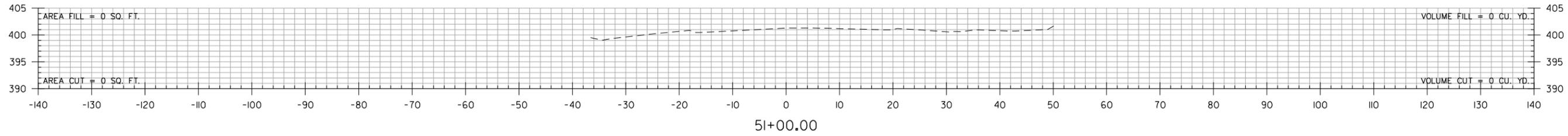
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DATE: DEC, 2016
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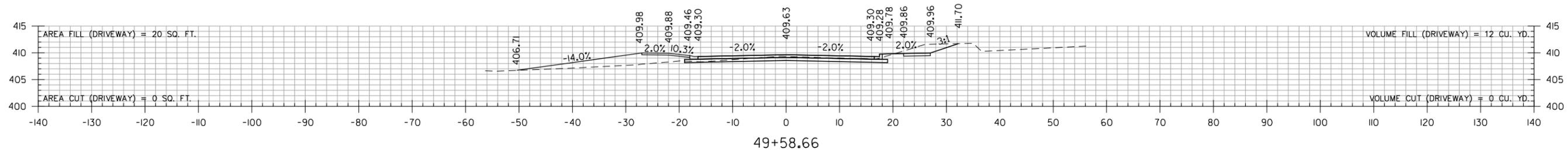
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SHEET NUMBER **94**

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STA. 49+79.30 END MARYLAND AVE. (WEST)



STA. 49+59 TO STA. 51+00

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PULASKI COUNTY, ARKANSAS
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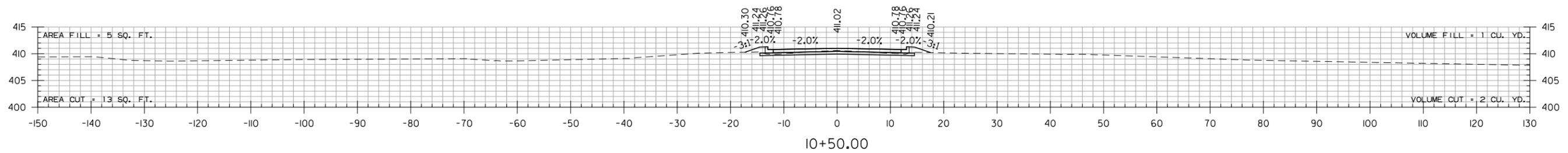
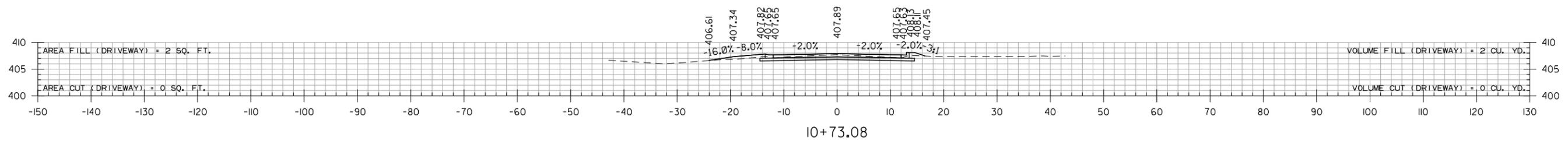
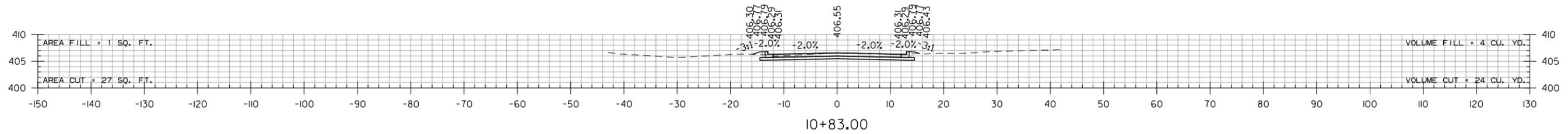
CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

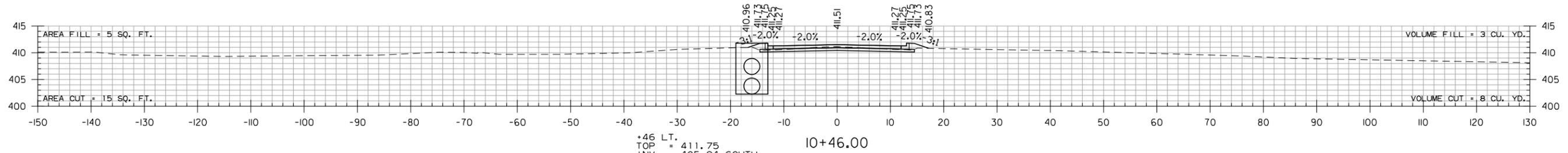
DRAWING NUMBER

SHEET NUMBER **95**

STA. 10+83.00 END ROBIN LN.



STA. 10+46 CONSTRUCT
TYPE E JUNCTION BOX 16.5' LT.
H = 9'-9" X 4'-0" X 5'-0"
W/ 36" X 12' R.C. PIPE
CULVERT TO DROP INLET ON LT.



+46 LT.
TOP = 411.75
INV. = 405.94 SOUTH
INV. = 402.26 NORTH

STA. 10+17.50 BEGIN ROBIN LN.

ROBIN LANE
STA. 10+46 TO STA. 10+83

REV.	DATE	DESCRIPTION	BY



CITY OF SHERWOOD
PULASKI COUNTY, ARKANSAS

MARYLAND AVENUE
IMPROVEMENTS AND EXTENSION

CROSS SECTIONS

JOB NO.: 12017400
DATE: DEC, 2016
DESIGNED BY: TEM
DRAWN BY: AMS

DRAWING NUMBER

SHEET NUMBER **96**